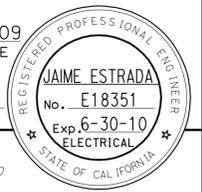


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	103	271

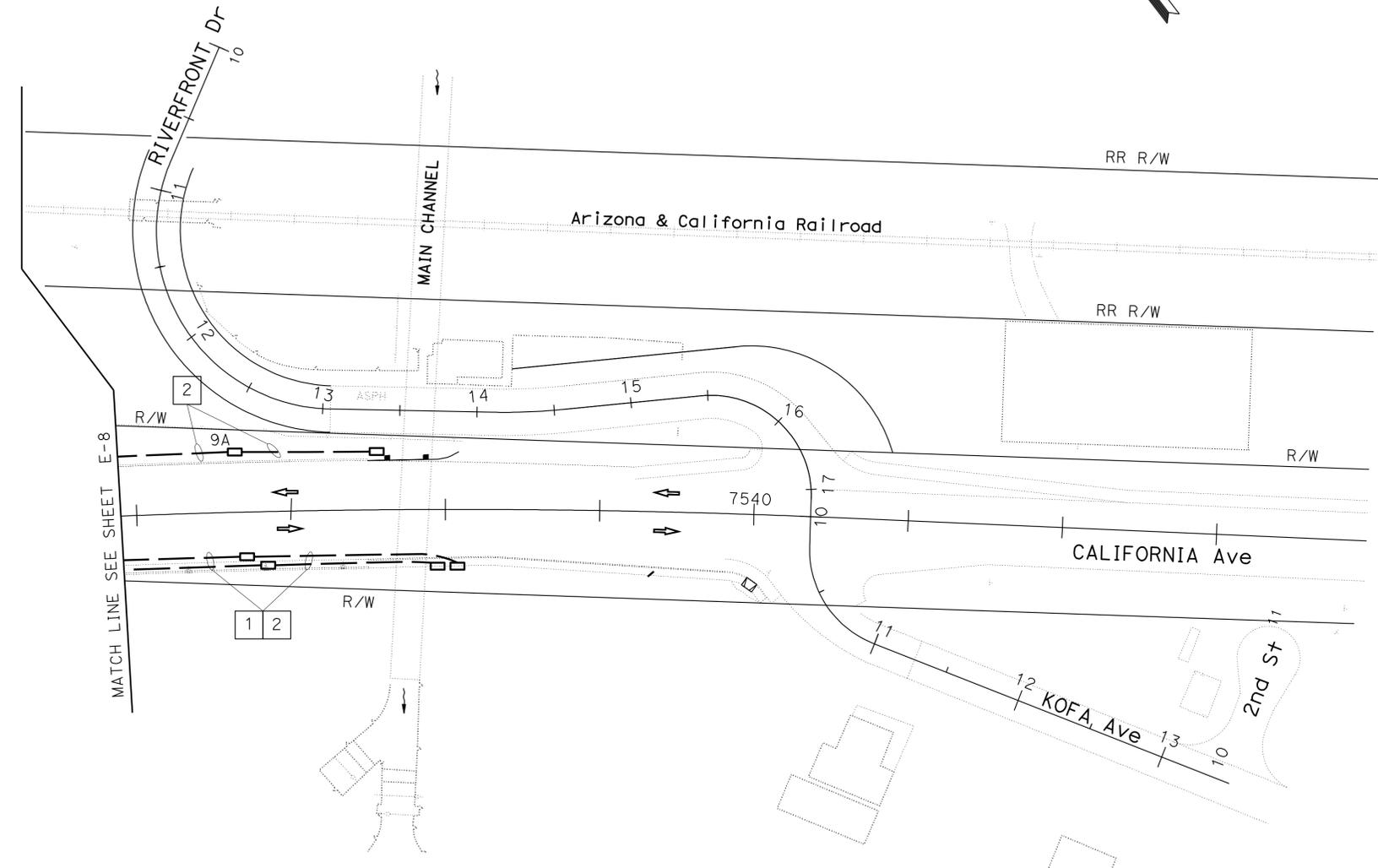
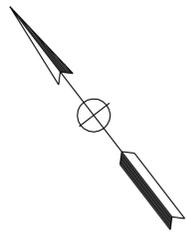
<i>Jaime Estrada</i>	9-24-09
REGISTERED ELECTRICAL ENGINEER	DATE
6-14-10	
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



NOTES:

- FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- SEE SHEET E-7 FOR NOTES.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans ELECTRICAL DESIGN B	FERDINAND DE LA CRUZ	CHECKED BY	JAIME ESTRADA	
			FERDINAND DE LA CRUZ	

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



USERNAME => trlenard
DGN FILE => 837870Ua009.dgn

HIGHWAY LIGHTING

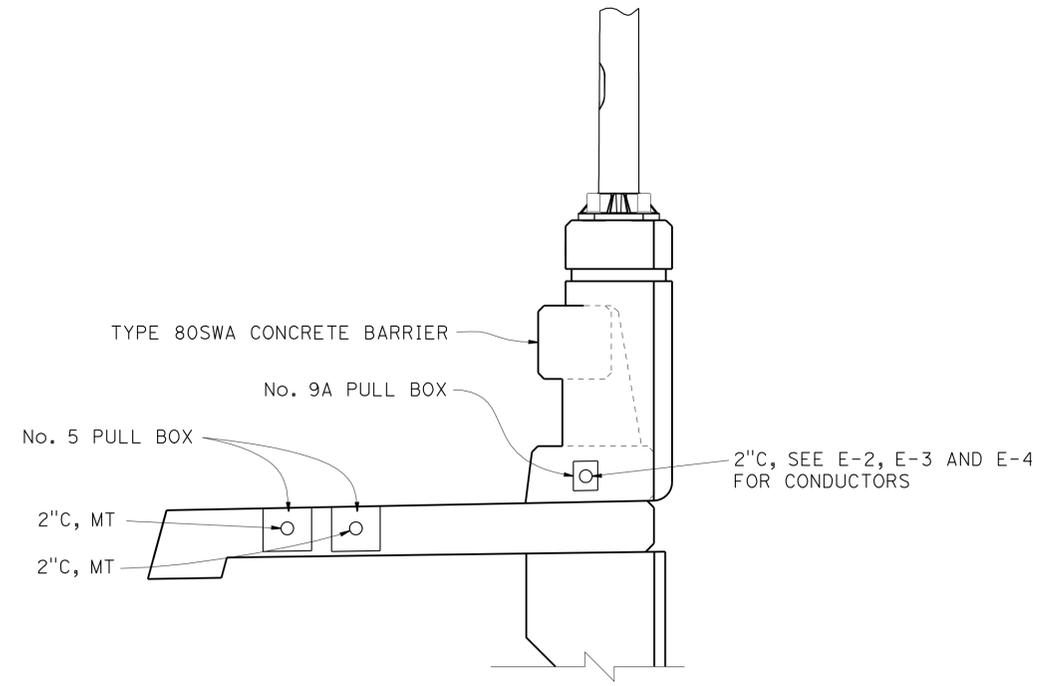
SCALE: 1" = 50'

E-9

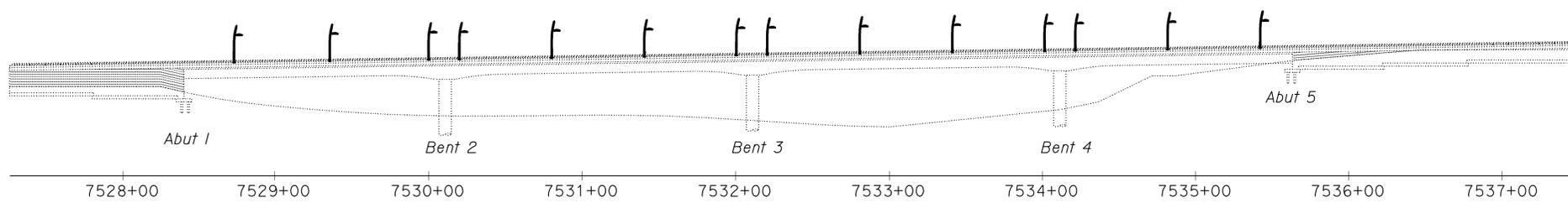
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	104	271
 REGISTERED ELECTRICAL ENGINEER DATE 9-24-09					
6-14-10 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

PROJECT NOTES THIS SHEET ONLY:

1. EXPANSION-DEFLECTION FITTINGS (DETAIL XY) IN ES-9B SHALL BE USED AT ALL EXPANSION JOINTS.
2. ALL BRIDGE CONDUITS SHALL TERMINATE IN No. 5 PULL BOXES AT BOTH ENDS OF THE BRIDGE APPROACH.
3. ALL PULL BOXES IN SIDEWALK SHALL BE No. 5. MAXIMUM DISTANCE BETWEEN PULL BOXES SHALL BE 180'.
4. SEE SHEET E-13 FOR LUMINAIRE PLACEMENT DETAILS.

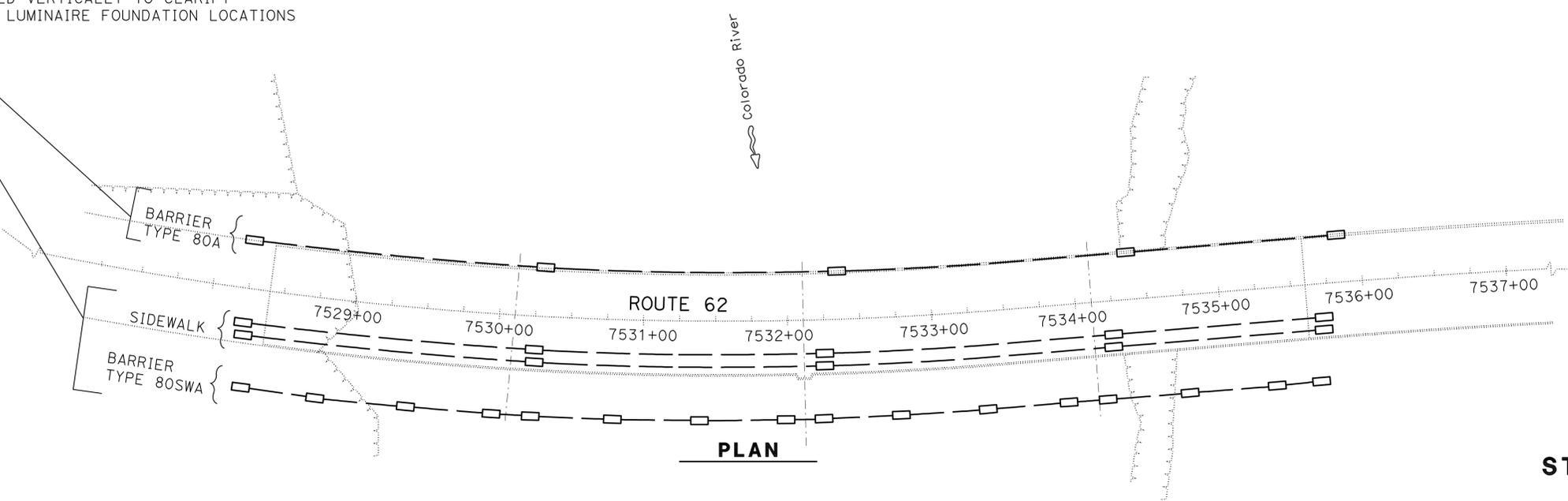


BRIDGE SECTION CONCRETE BARRIER TYPE 80SWA



ELEVATION

EXPANDED VERTICALLY TO CLARIFY PB AND LUMINAIRE FOUNDATION LOCATIONS



PLAN

**HIGHWAY LIGHTING
STRUCTURE ELECTRICAL DETAILS
(BRIDGE No. 54-1272)**

NO SCALE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
CALCULATED/DESIGNED BY: FERDINAND DE LA CRUZ
CHECKED BY:
REVISOR: JAIME ESTRADA
DATE: FERDINAND DE LA CRUZ

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	105	271

<i>Jaime Estrada</i>	9-24-09
REGISTERED ELECTRICAL ENGINEER	DATE
6-14-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	
JAIME ESTRADA	
No. E18351	
Exp. 6-30-10	
ELECTRICAL	
STATE OF CALIFORNIA	

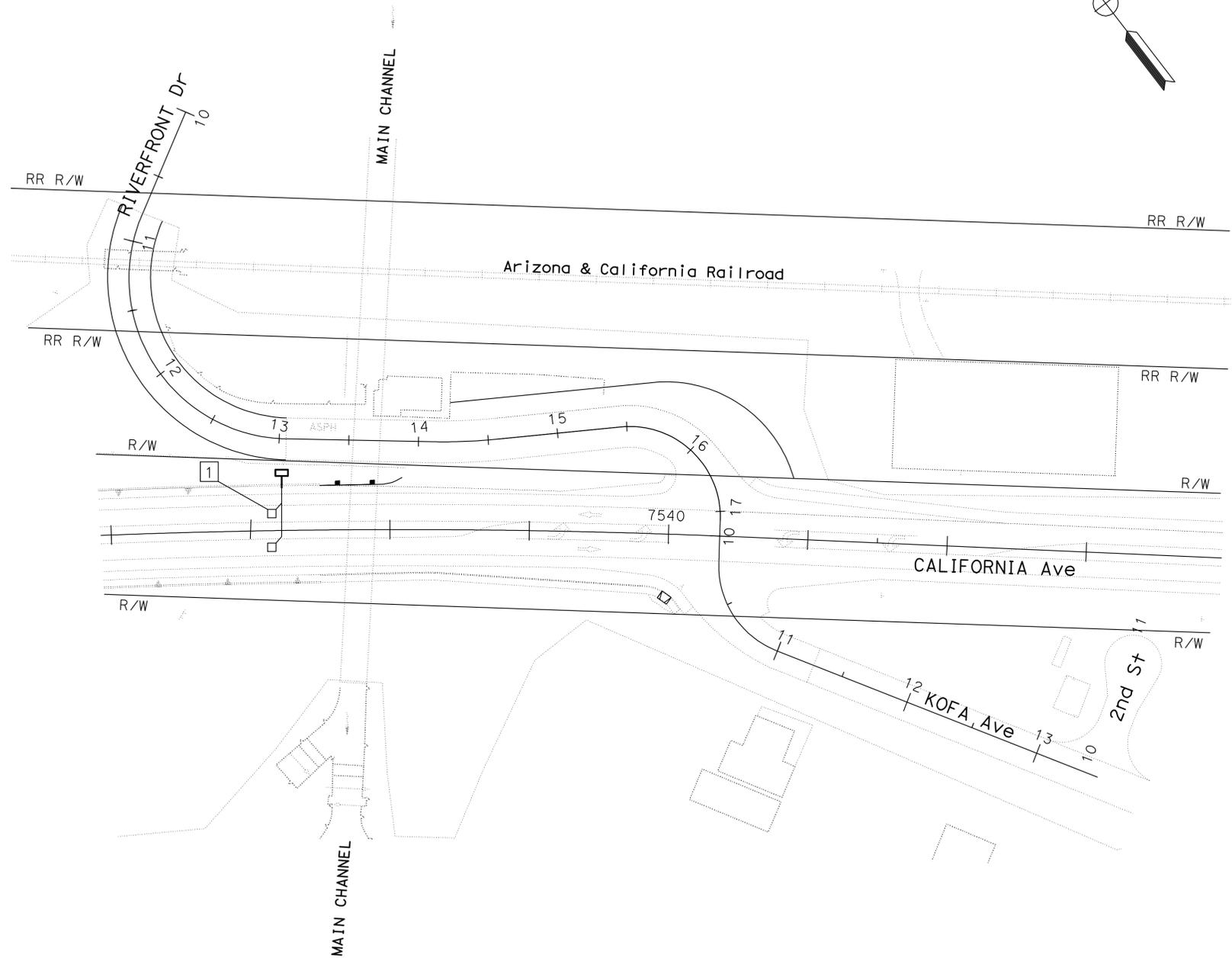
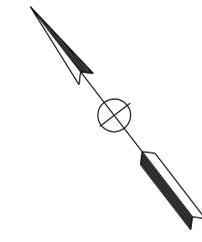
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

PROJECT NOTE: (THIS SHEET ONLY)

- 1 SEE PLAN SHEET E-12 FOR DETECTOR LOOPS FOR TRAFFIC COUNTERS INSTALLATION.

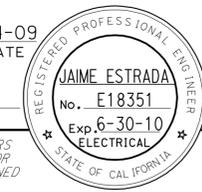


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans ELECTRICAL DESIGN B	FERDINAND DE LA CRUZ	CHECKED BY	JAIME ESTRADA	
			FERDINAND DE LA CRUZ	

INDUCTIVE LOOP DETECTOR
SCALE: 1" = 50'
E-11

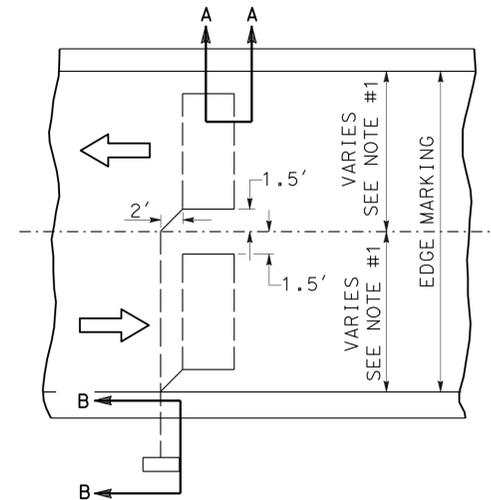
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	106	271
			9-24-09		
REGISTERED ELECTRICAL ENGINEER			DATE		
6-14-10			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
					

NOTES:

1. THE LOOP SHALL BE ALIGNED IN THE CENTER OF THE TRAVEL LANE AND MAINTAIN 6 FEET IN LENGTH. FOR LANES WIDER THAN 12 FEET; ADJUST THE WIDTH OF THE LOOP WITH THE FOLLOWING FORMULA: LOOP WIDTH = LANE WIDTH - 3 FEET.
2. THE CUTS SHALL BE MADE PARALLEL AND PERPENDICULAR TO THE LANE STRIPING AND THE TRAFFIC FLOW.
3. BACKFILL WITH EXCAVATED MATERIAL AND THOROUGHLY TAMP. ALL EXCAVATED MATERIAL NOT REUSED SHALL BE PROPERTY DISPOSED OF BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER NO LESS THAN 14 WORKING DAYS PRIOR TO THE INSTALLATION OF THE LOOP DETECTORS.
5. THE BEND IN THE WIRE AT ANY ONE POINT SHALL NOT EXCEED 45 DEGREES.
6. THE WIRE SHALL BE HELD IN PLACE DURING INSTALLATION BY STRIPS OF POLYETHYLENE FOAM SEALANT BACKERS TWO INCHES IN LENGTH, PLACED APPROXIMATELY TWO FEET APART.
7. WIRES CROSSING PAVEMENT JOINTS SHALL BE PROTECTED WITH PLASTIC SLEEVING EXTENDING A MINIMUM OF FOUR INCHES EACH SIDE OF THE JOINT.
8. FINAL TESTING WILL BE CONDUCTED BY THE DATA SECTION OF THE TRANSPORTATION PLANNING DIVISION OF ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) AFTER THE WORK IS COMPLETE



LOOP INSTALLATION IN UNDIVIDED HIGHWAY

A- PRELIMINARY TEST:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING TESTS ON EACH LOOP IN THE PRESENCE OF THE ENGINEER BOTH BEFORE AND AFTER THE SEALANT HAS BEEN POURED AND HARDENED:

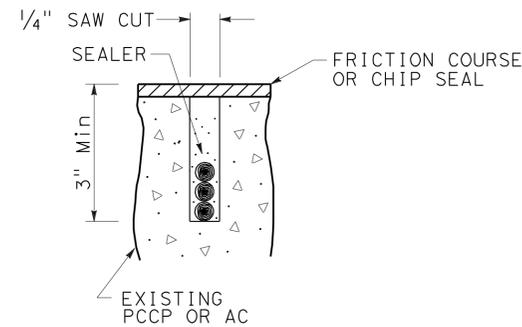
1. INSULATION RESISTANCE TO GROUND: THE INSULATION RESISTANCE TO GROUND FOR EACH LOOP SHALL BE MEASURED WITH A MEGOHM METER CONNECTED TO EITHER LOOP LEAD-IN AND TO THE NEAREST RELIABLE ELECTRICAL GROUND, SUCH AS A METAL LIGHT POLE OR FIRE HYDRANT, OR TO A METAL ROD DRIVEN THREE FEET INTO THE GROUND BETWEEN THE ROADWAY AND THE PULL BOX. THE INSULATION TO GROUND SHALL NOT MEASURE LESS THAN 50 MEGOHMS AT 500 VOLTS DC.
2. SERIES RESISTANCE: THE SERIES RESISTANCE OF EACH SIX-BY-SIX FOOT LOOP, MEASURED BY AN OHMMETER, SHALL BE BETWEEN 0.1 AND 0.5 OHM AND THE MAXIMUM RESISTANCE OF ANY SIZE LOOP INCLUDING LEADS-INS SHALL NOT EXCEED 10 OHMS.

THE CONTRACTOR SHALL SUBMIT TWO COPIES OF THE COMPLETE PRELIMINARY TESTING RESULTS TO THE ENGINEER.

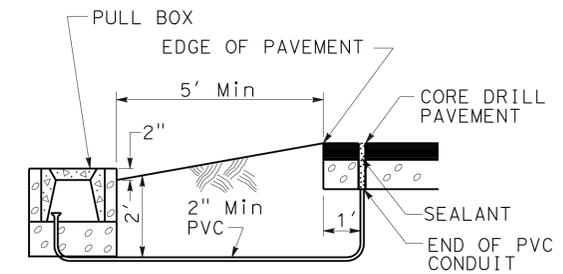
B- FINAL TEST:

IN ADDITION TO REPEATING THE PRELIMINARY TESTS AND RECORDING THE RESULTS, THE FOLLOWING TESTS WILL BE MADE:

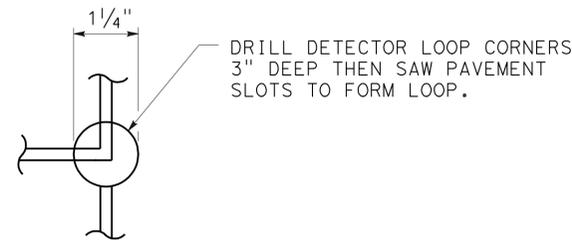
1. INDUCTANCE: THE INDUCTANCE OF EACH LOOP WILL BE MEASURED WITH AN INDUCTANCE TESTER. THE INDUCTANCE FOR A SIX-BY-SIX FOOT LOOP WITH AN 11-FOOT LEAD-IN SHALL BE IN THE RANGE BETWEEN 50 AND 80 MICROHENRIES. THE INDUCTANCE MAY BE GREATER WITH LARGER LOOPS AND LONGER LEAD-INS BUT IN NO CASE SHALL THE TOTAL INDUCTANCE EXCEED 700 MICROHENRIES.
2. OPERATION TEST: A KNOWN WORKING LOOP DETECTOR WILL BE CONNECTED TO EACH LOOP AND THE RESPONSE OBSERVED UNDER WORKING CONDITIONS.



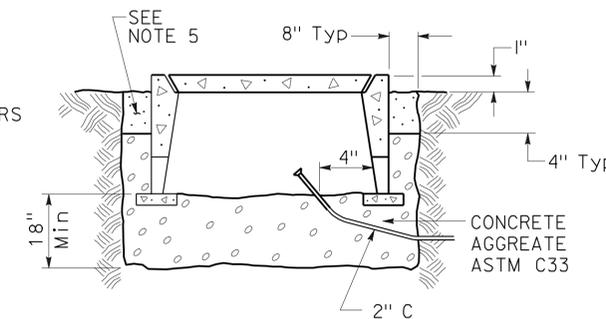
LOOP INSTALLATIONS SECTION A-A



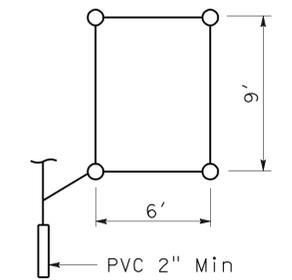
SECTION B-B WITHOUT CURB & GUTTER



DRILLING DETAIL



TYPICAL PULL BOX INSTALLATION



SAW CUT LOOP DETAIL

INDUCTIVE LOOP DETECTOR DETAILS NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => trlenard
DGN FILE => 837870Ua012.dgn

CU 08396

EA 378701

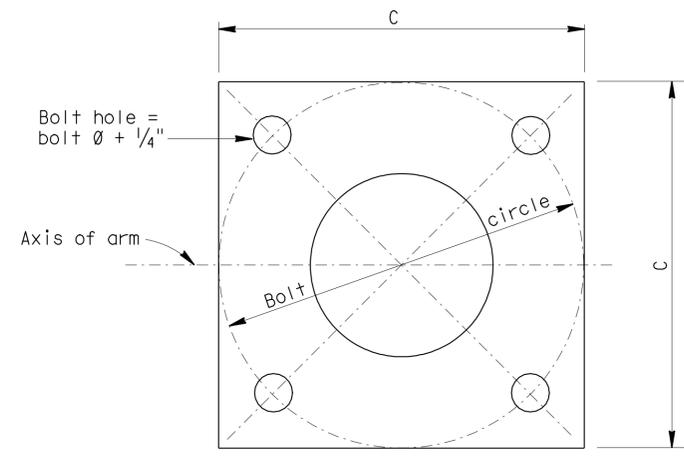
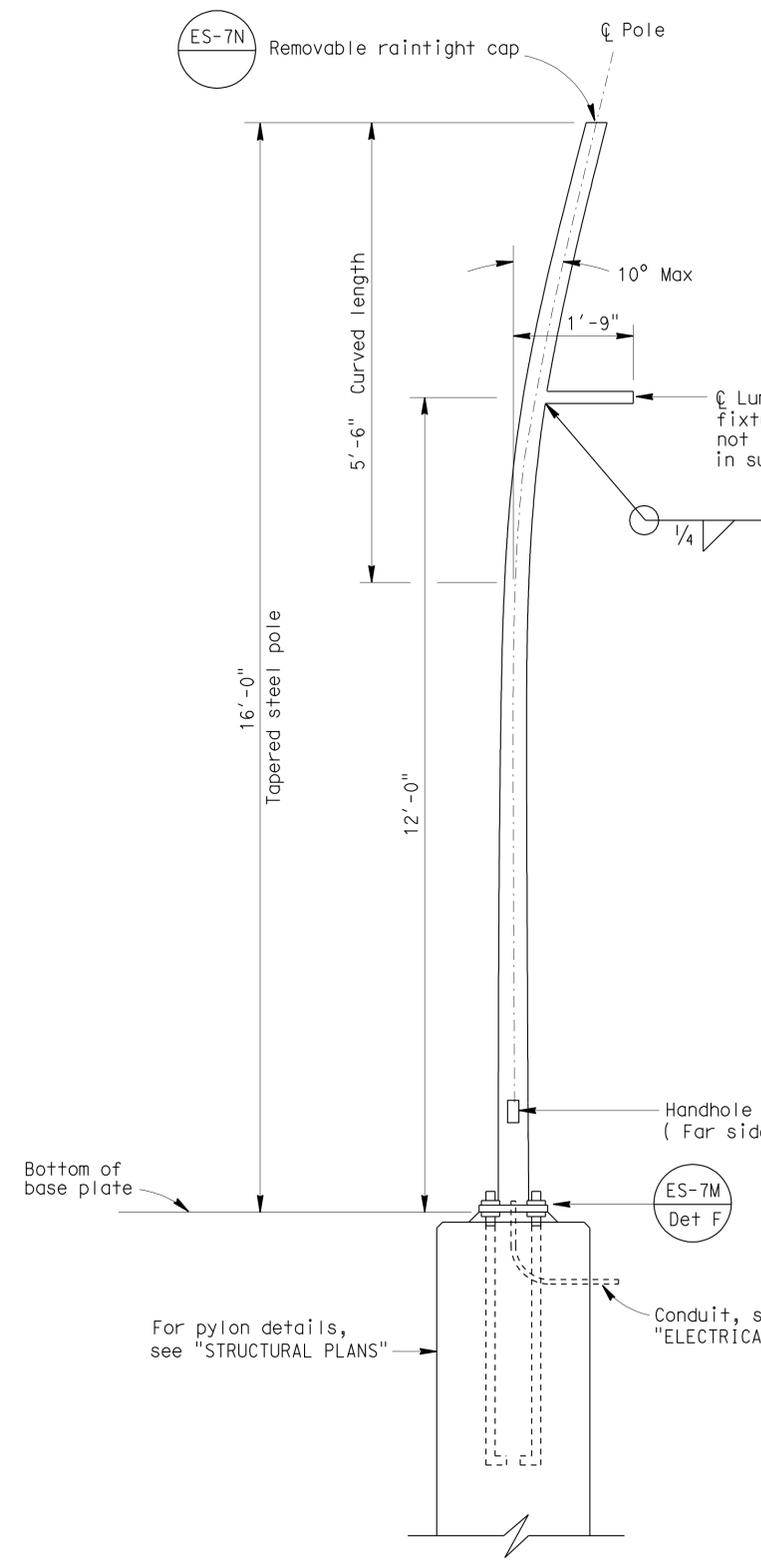
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY CHECKED BY
 JAIME ESTRADA FERDINAND DE LA CRUZ
 REVISED BY DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	Sbd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	107	271


 REGISTERED CIVIL ENGINEER
 6-14-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 SUONG T. VU
 No. C055212
 Exp. 6/30/10
 CIVIL
 STATE OF CALIFORNIA

LUMINAIRE ARM DATA		POLE DATA			BASE PLATE DATA			
Min OD	NOMINAL THICKNESS	Min OD		WALL THICKNESS	C	BOLT CIRCLE	THICKNESS	ANCHOR BOLTS SIZE
		BASE	TOP					
2 3/8"	0.1196"	6"	4"	0.1196"	1'-0"	1'-0"	1"	1"Ø x 3'-0" x 4"



BASE PLATE

NOTES:

- The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
- All steel shall be galvanized after fabrication. All exposed galvanized surfaces shall be painted.
- Specifications
 Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.
 Loading
 Wind loadings: 100 mph
 Unit stresses
 Structural steel: fy = 48,000 psi tapered steel pole
 fy = 36,000 psi unless otherwise noted

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans SPECIAL DESIGNS BRANCH
 PROJECT ENGINEER SUONG VU
 CALCULATED/DESIGNED BY CHECKED BY
 S. VU R. HEZAR
 DATE 11/12/08 11/12/08
 DETAILS QUANTITIES
 R. YEE SUONG VU

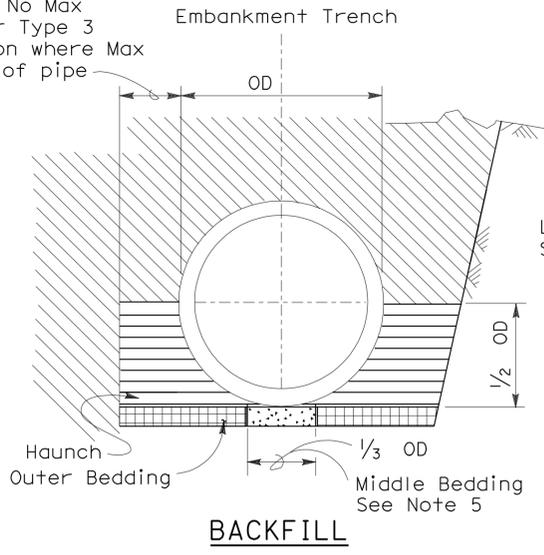
**HIGHWAY LIGHTING
 DECORATIVE LIGHTING POLE
 STRUCTURAL DETAILS**
 NO SCALE



To accompany plans dated 6-14-10

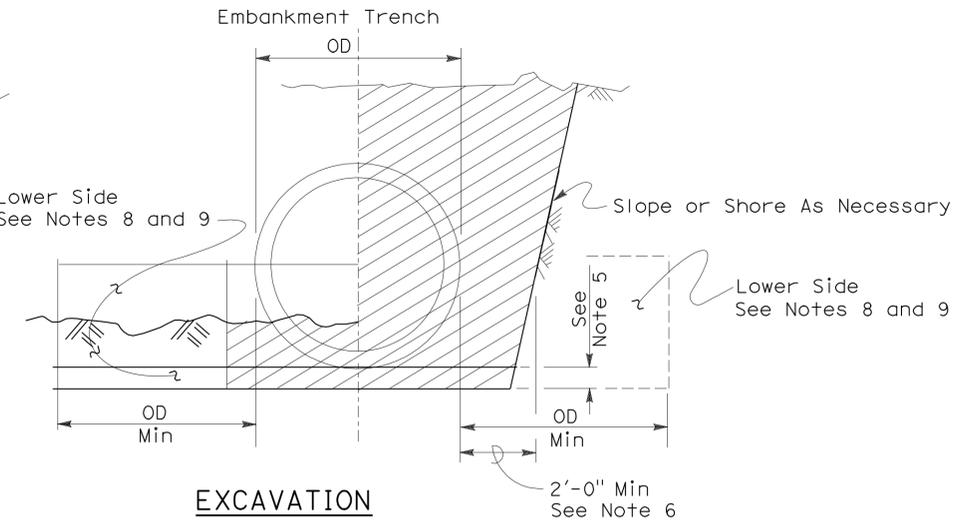
2006 REVISED STANDARD PLAN RSP A62DA

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.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	110	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

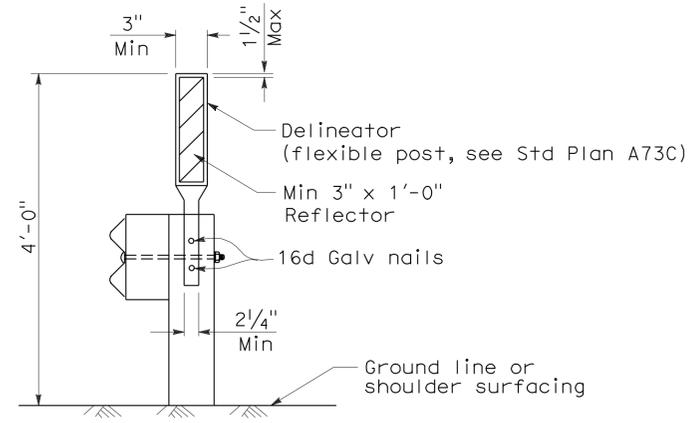
June 6, 2008
PLANS APPROVAL DATE

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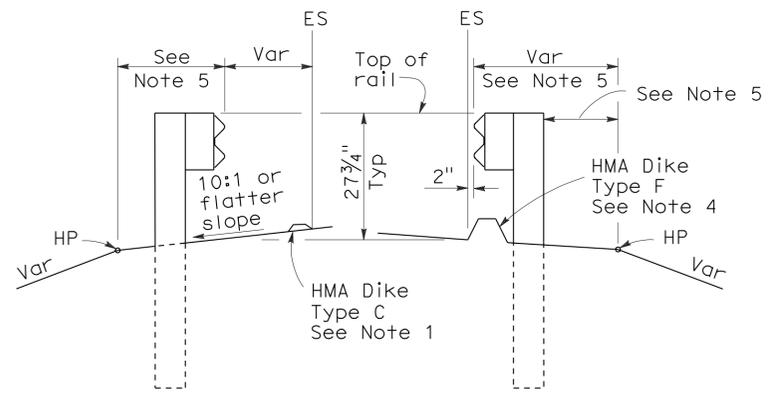
To accompany plans dated 6-14-10

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 Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



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 JUNE 6, 2008 SUPERSEDES 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

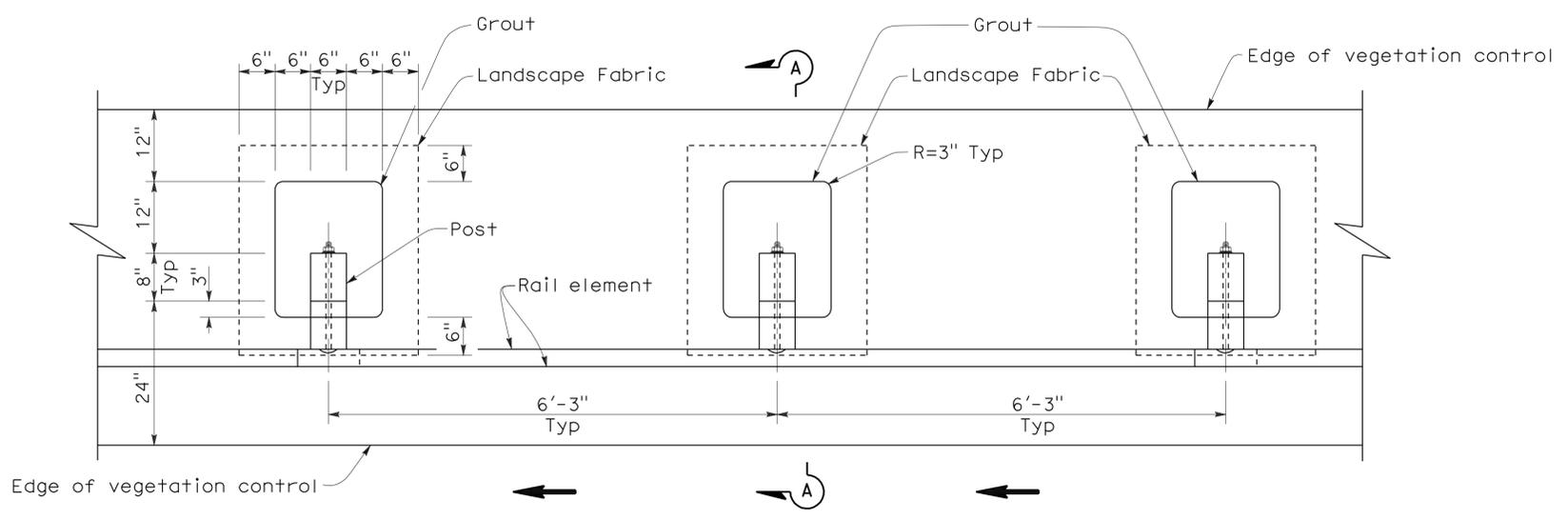
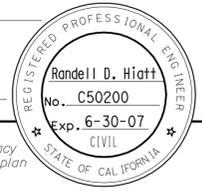
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	111	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

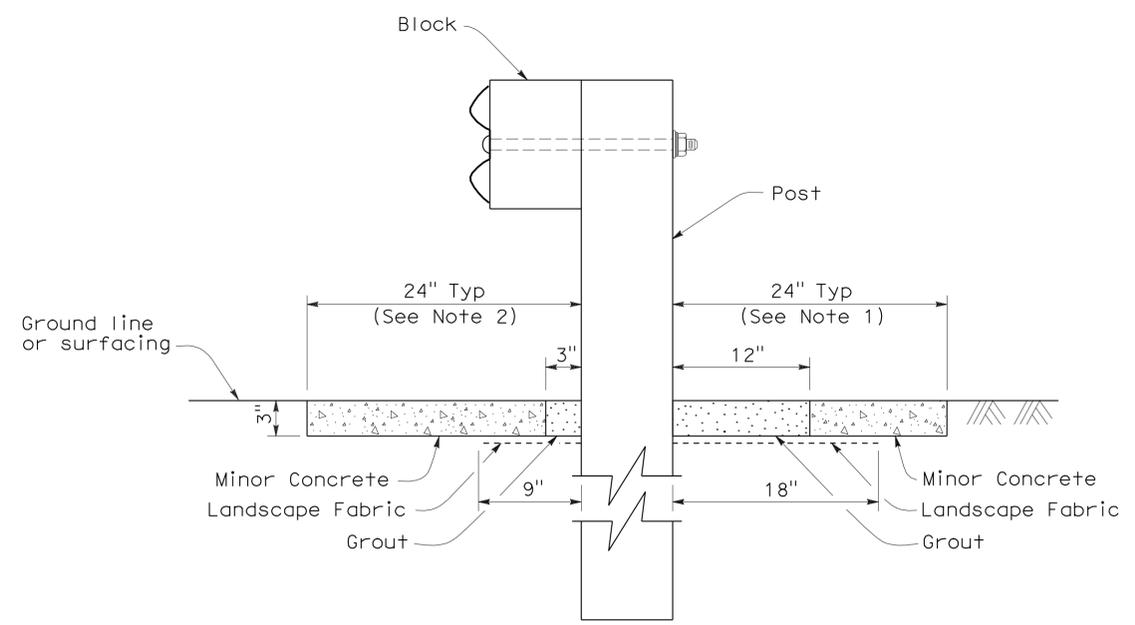
October 20, 2006
PLANS APPROVAL DATE

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To accompany plans dated 6-14-10



PLAN



SECTION A-A

NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ← .

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION**

NO SCALE

NSP A77C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C5

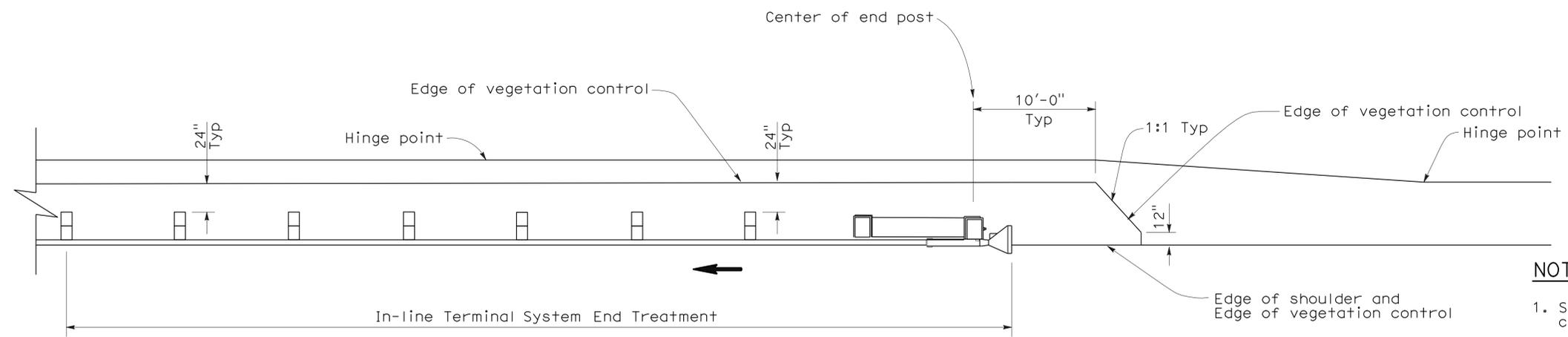
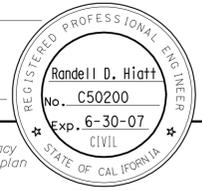
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	112	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

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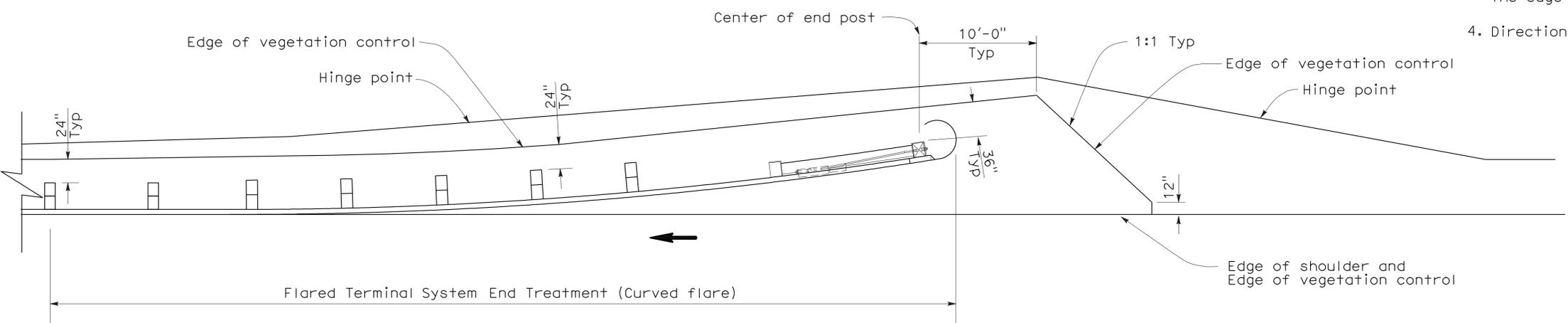
To accompany plans dated 6-14-10



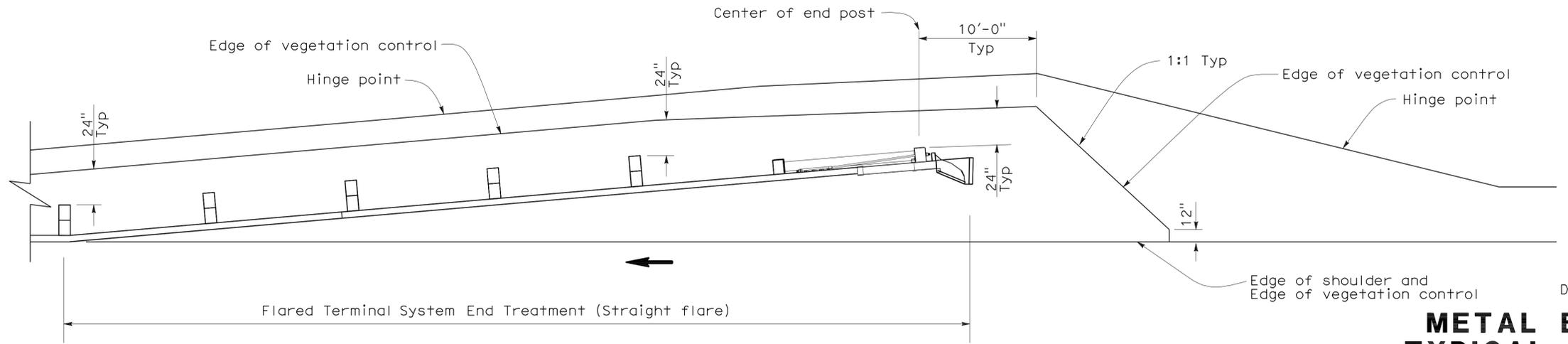
PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



PLAN



PLAN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
FOR TERMINAL SYSTEM END TREATMENTS**

NO SCALE
NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C6

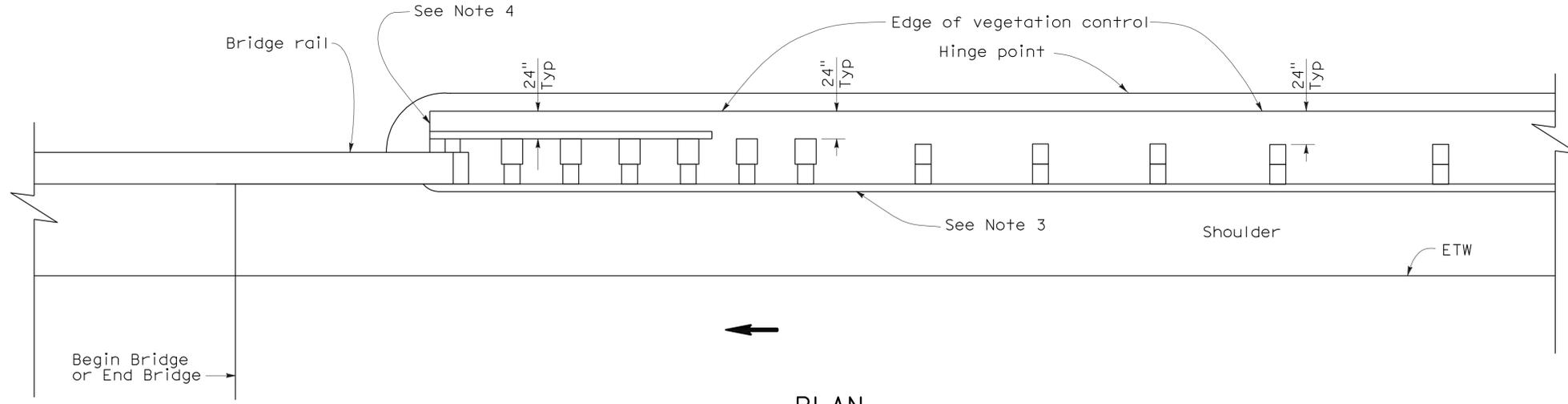
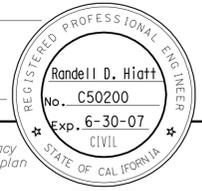
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	113	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

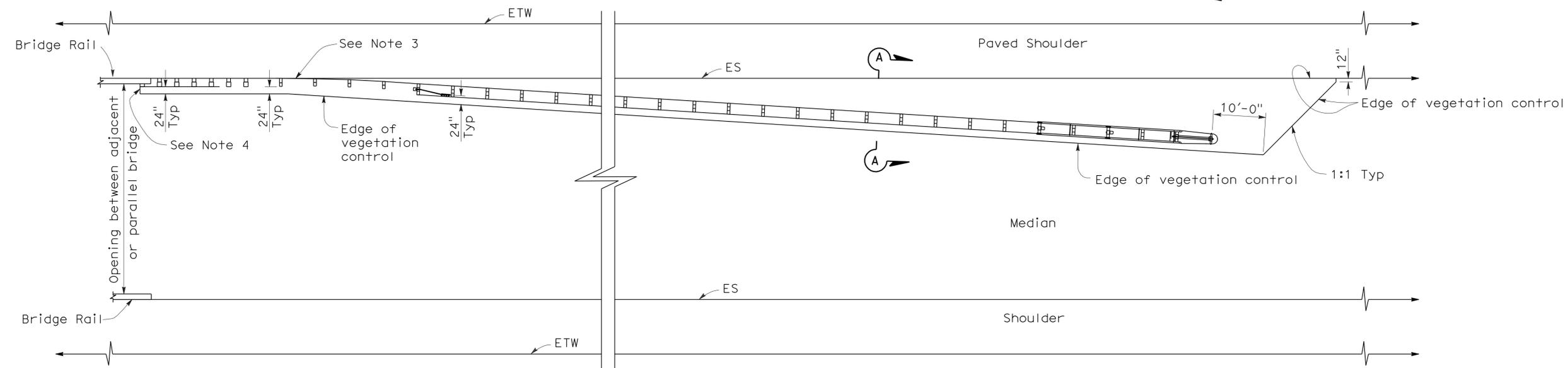
October 20, 2006
PLANS APPROVAL DATE

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To accompany plans dated 6-14-10



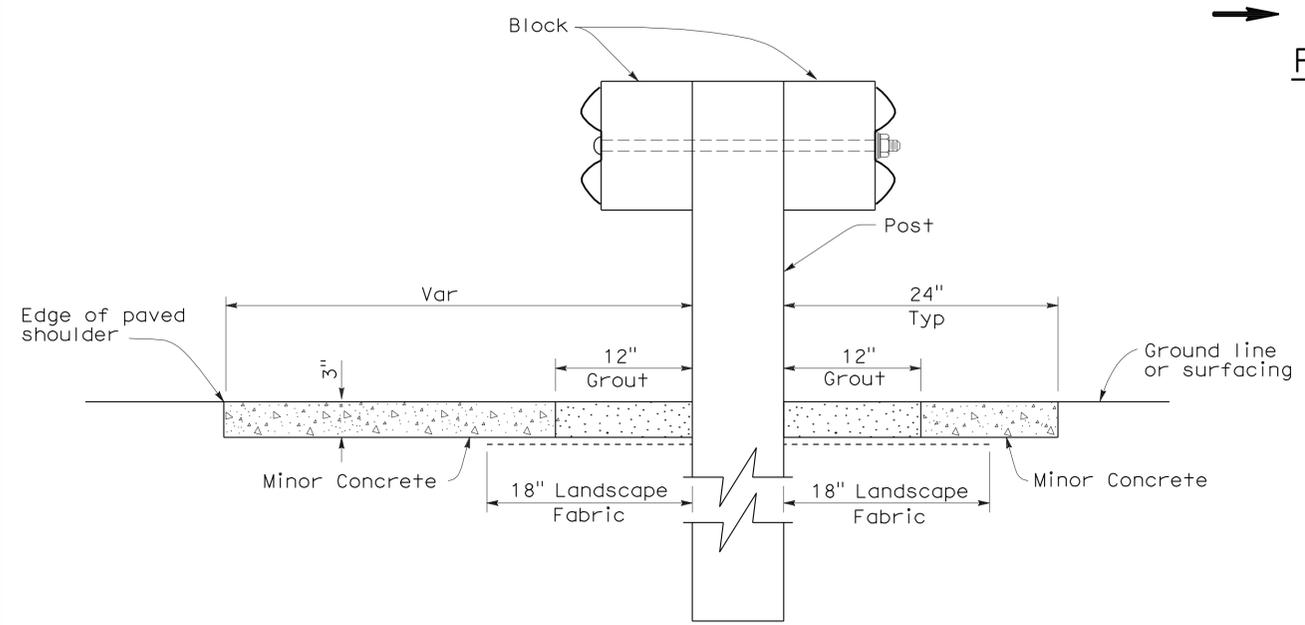
PLAN



PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. End vegetation control at end of backside rail element.
5. Direction of adjacent traffic indicated by ←.



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
AT STRUCTURE APPROACH
AND DEPARTURE**

NO SCALE
NSP A77C7 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C7

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ←.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	114	271

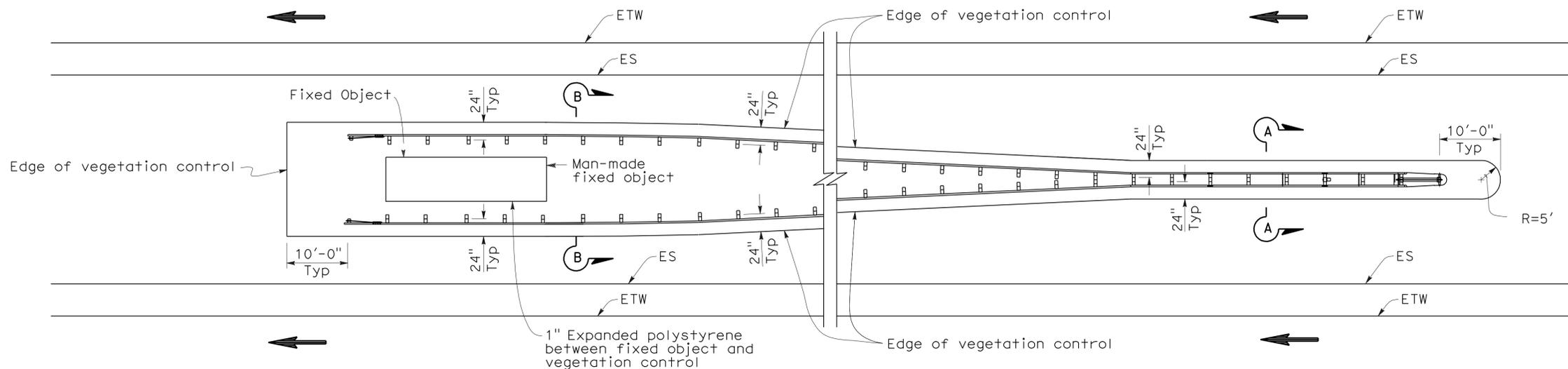
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

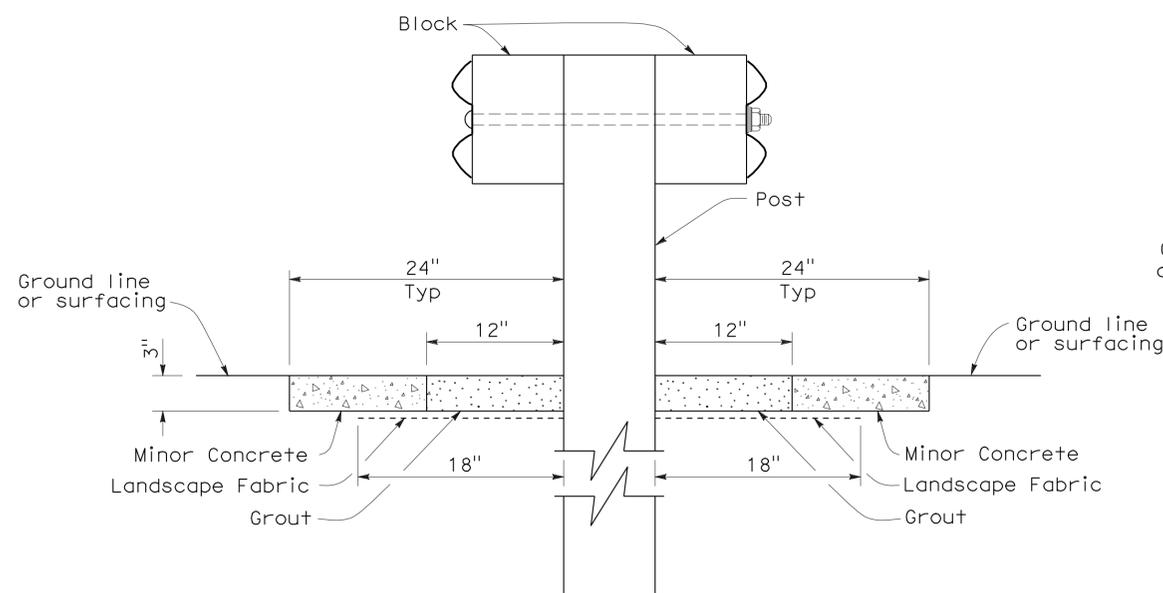
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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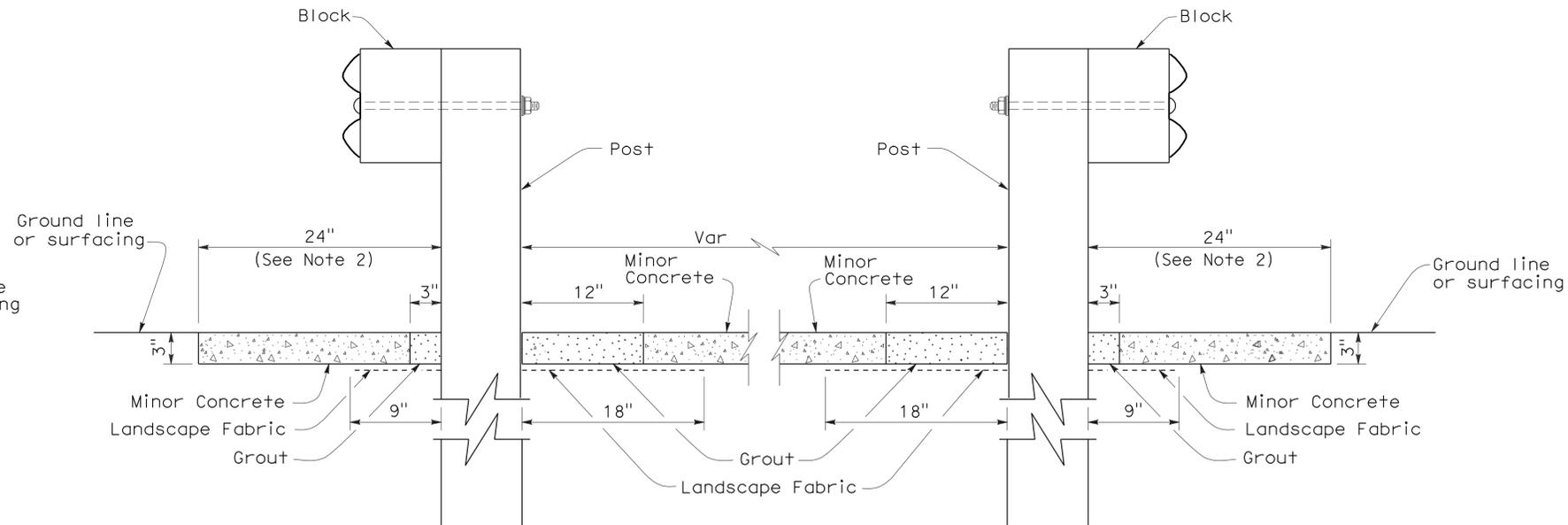
To accompany plans dated 6-14-10



PLAN
FIXED OBJECT(S) BETWEEN SEPARATE ROADBEDS
(ONE-WAY TRAFFIC)



SECTION A-A



SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
AT FIXED OBJECT**

NO SCALE

NSP A77C10 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C10

2006 NEW STANDARD PLAN NSP A77C10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	115	271

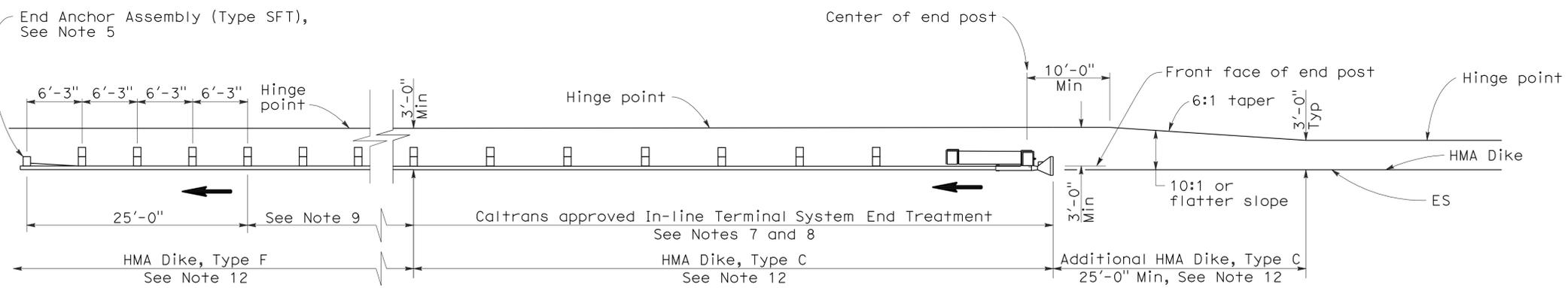
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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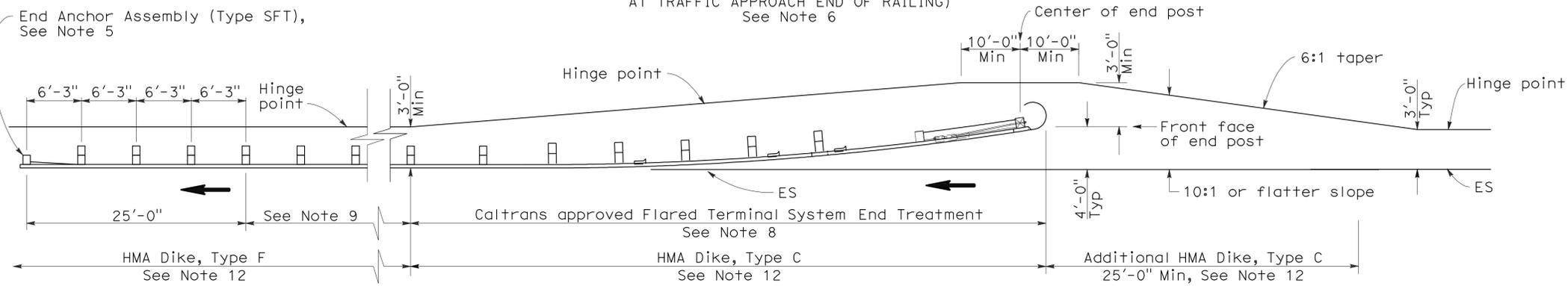
To accompany plans dated 6-14-10

2006 REVISED STANDARD PLAN RSP A77E1



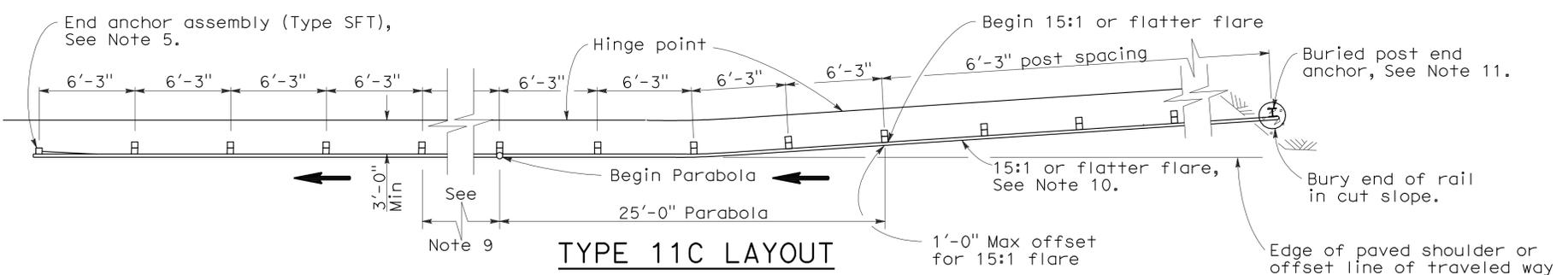
TYPE 11A LAYOUT

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



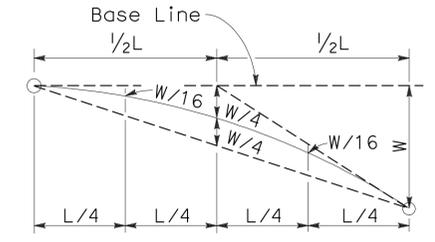
TYPE 11B LAYOUT

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

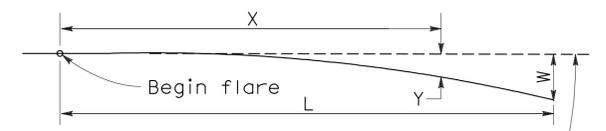


TYPE 11C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

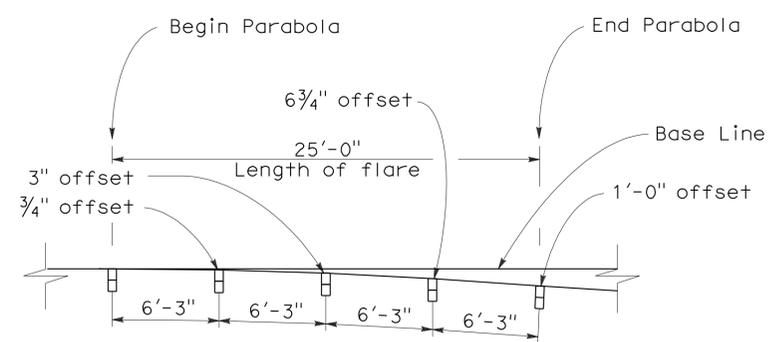


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	116	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

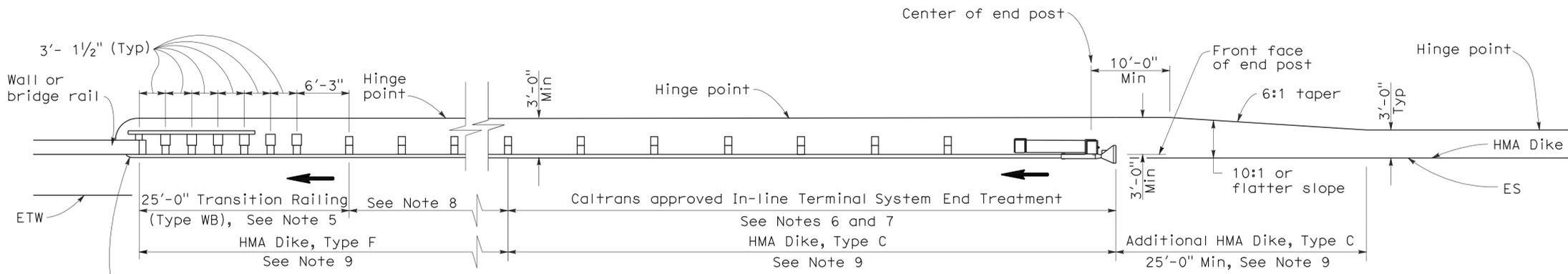
June 6, 2008
PLANS APPROVAL DATE

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

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To accompany plans dated 6-14-10

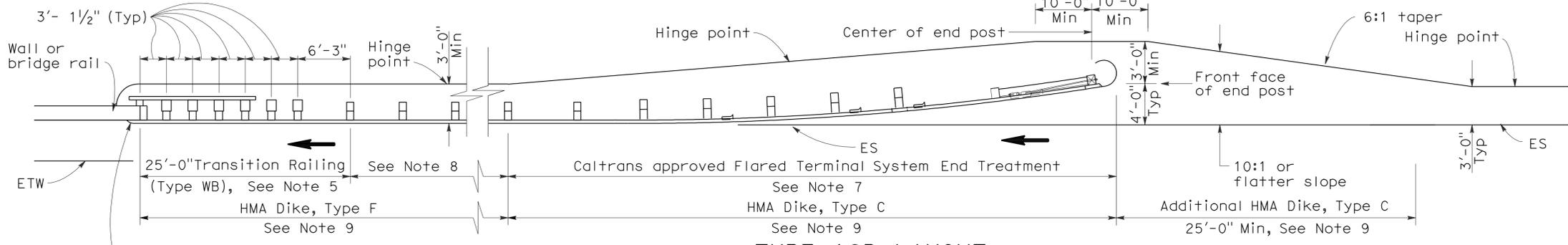
2006 REVISED STANDARD PLAN RSP A77F1



TYPE 12A LAYOUT

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

See Notes 12 and 13.



TYPE 12B LAYOUT

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

See Notes 12 and 13.

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.

REVISED STANDARD PLAN RSP A77F1

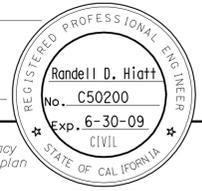
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	117	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

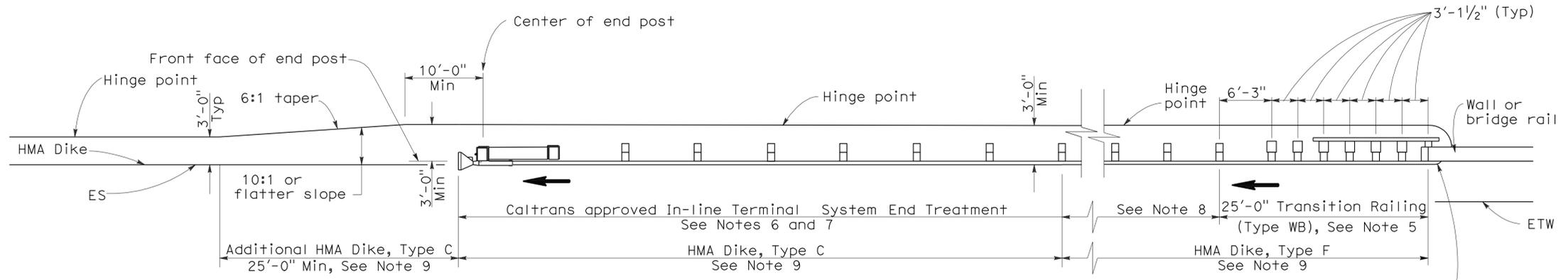
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 6-14-10

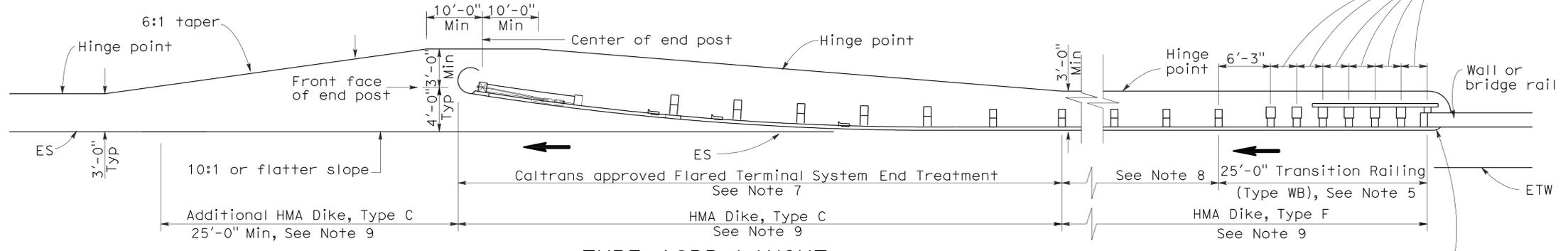


2006 REVISED STANDARD PLAN RSP A77F4



TYPE 12AA LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 10



TYPE 12BB LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 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 notched recycled 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 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System 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.
- Dependent on site conditions (embankment height, side slopes, 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 treatments.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of typical connections to bridge rail, see Connection Detail CC on Revised Standard Plan RSP A77J2 and Connection Detail HH on Standard Plans A77K2.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP A77F4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F4
DATED MAY 1, 2006 - PAGE 57 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	118	271

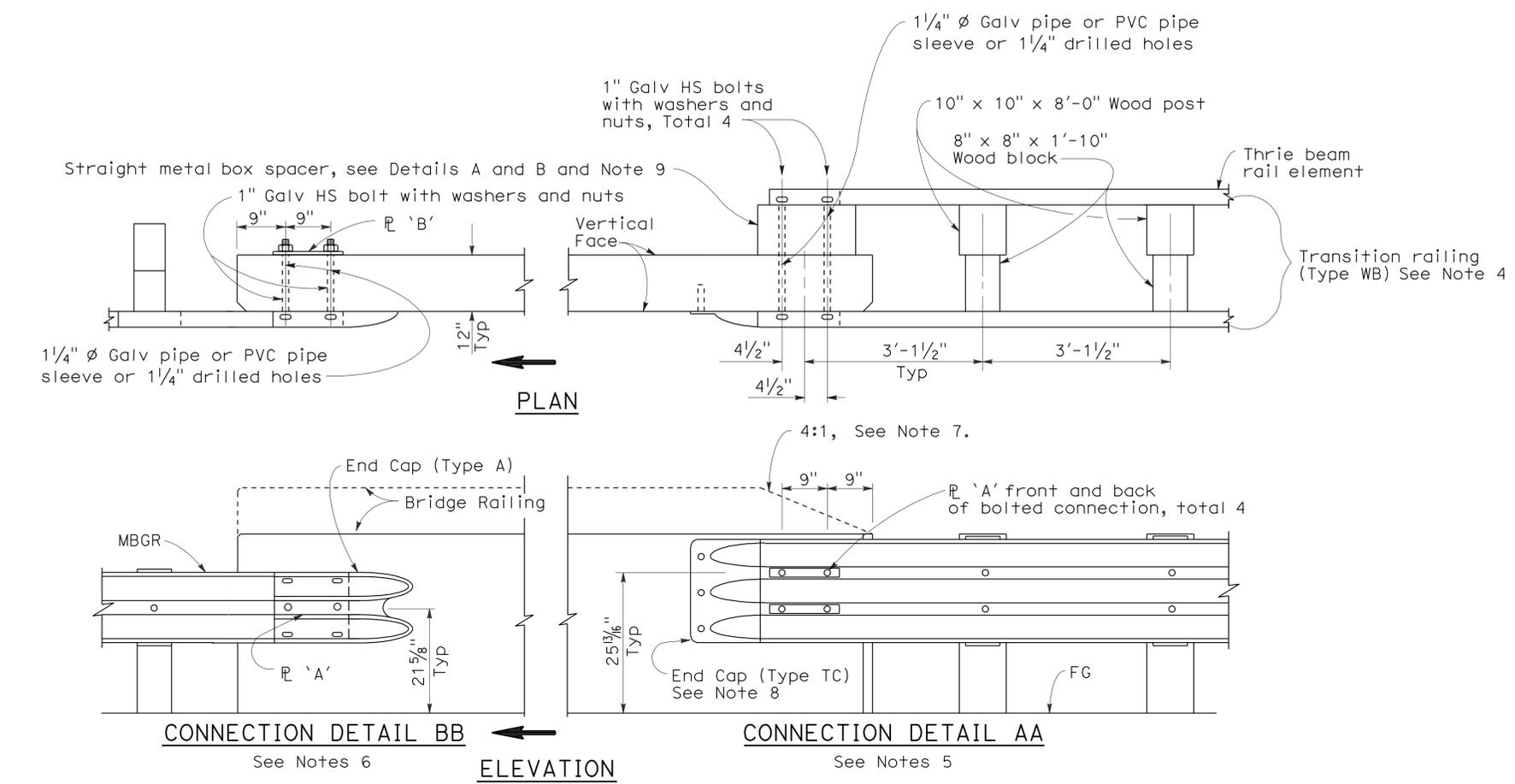
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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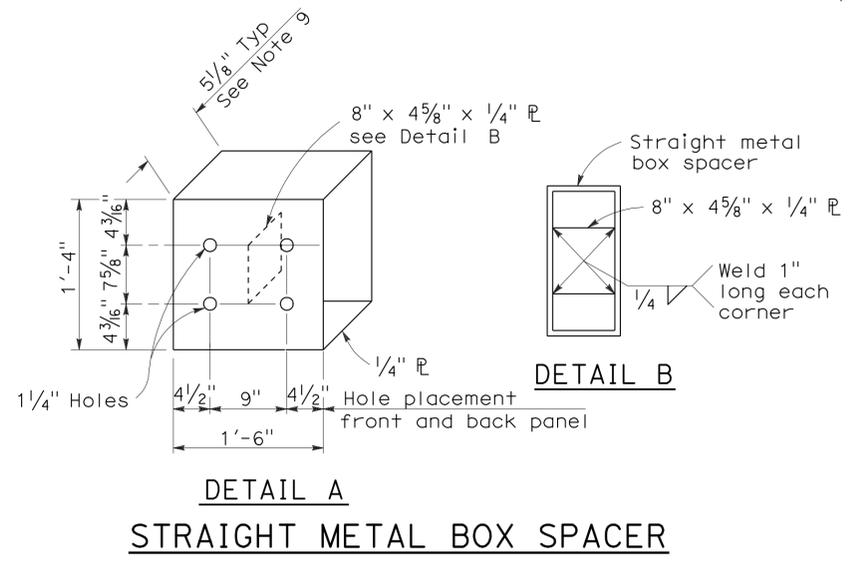
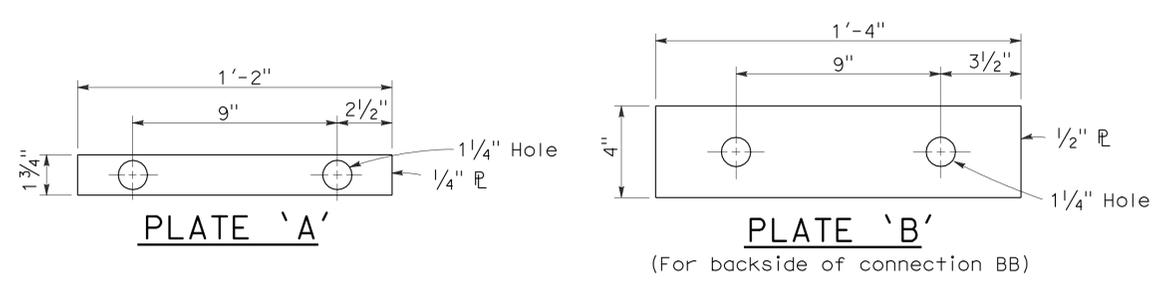
To accompany plans dated 6-14-10



GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77J2 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 \rightarrow .
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 BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD 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, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
8. For details of End Cap (Type TC), see Standard Plan A77J4.
9. 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 JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J1 DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77J1

2006 REVISED STANDARD PLAN RSP A77J1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	119	271

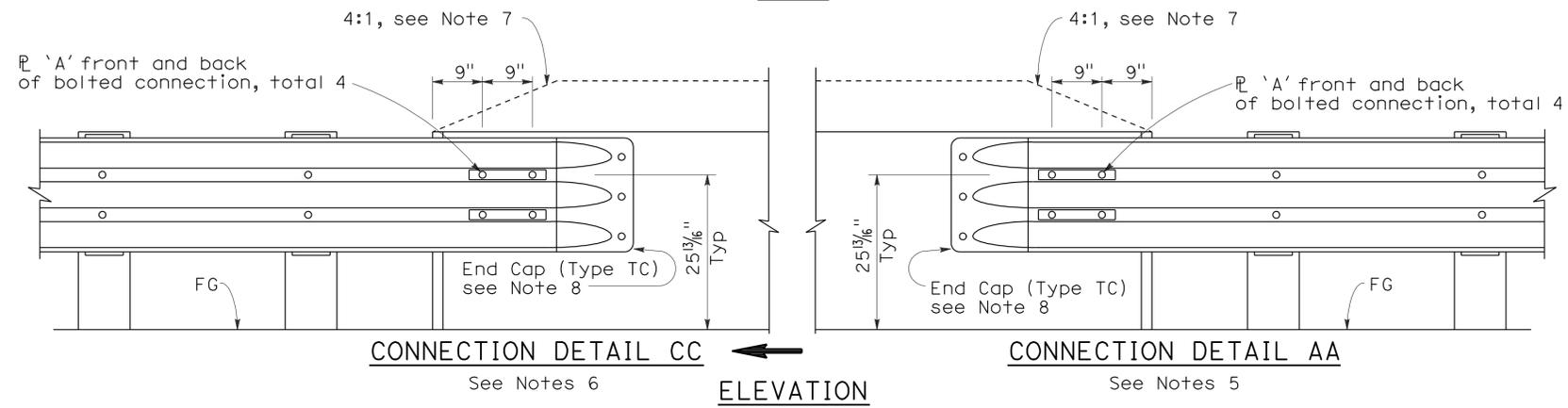
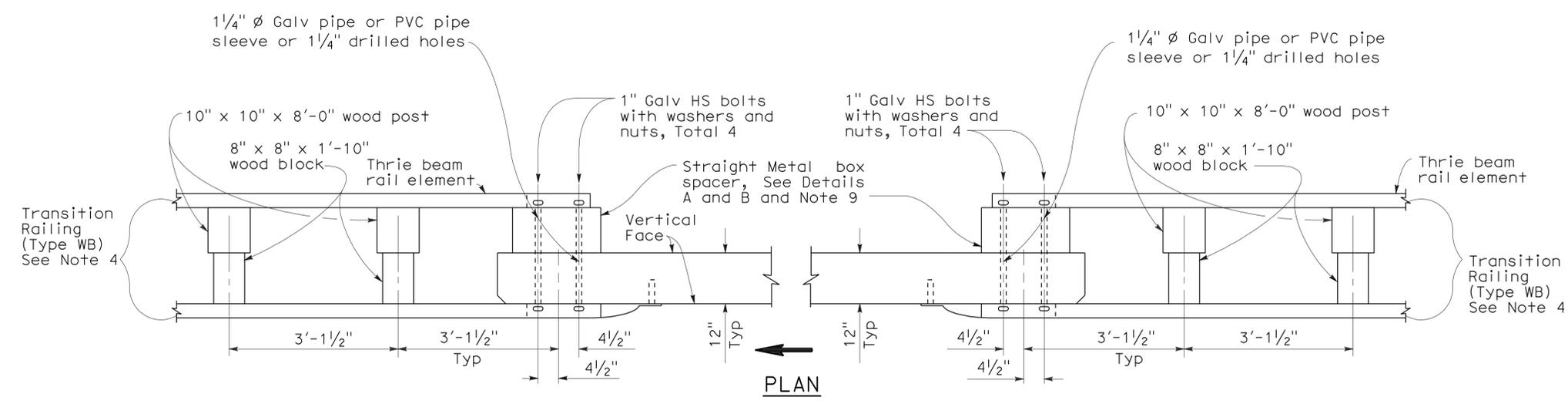
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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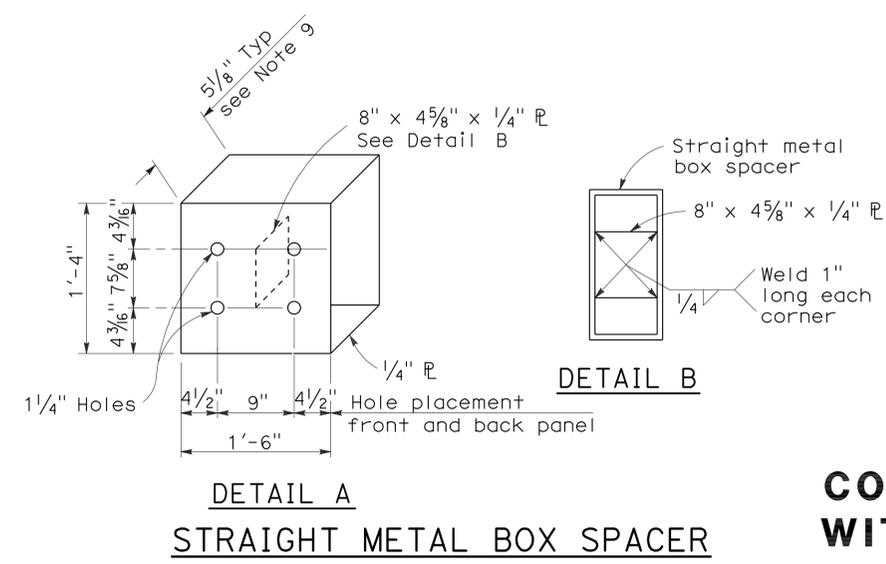
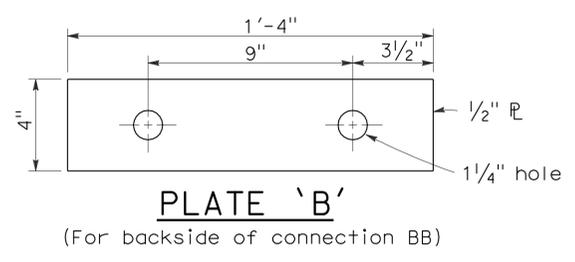
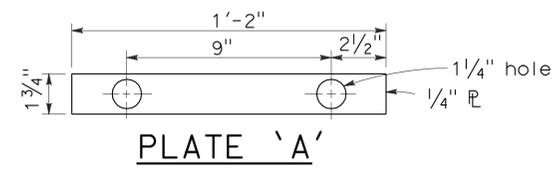
To accompany plans dated 6-14-10



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.



STATE OF CALIFORNIA
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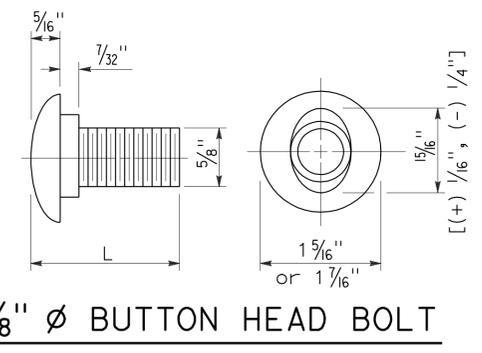
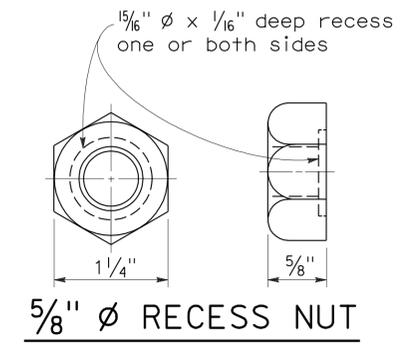
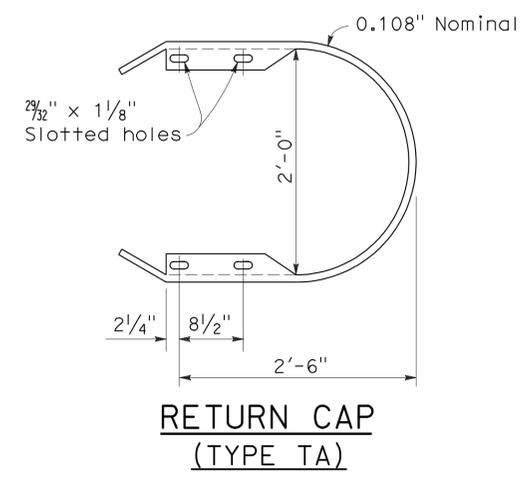
METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.2

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.

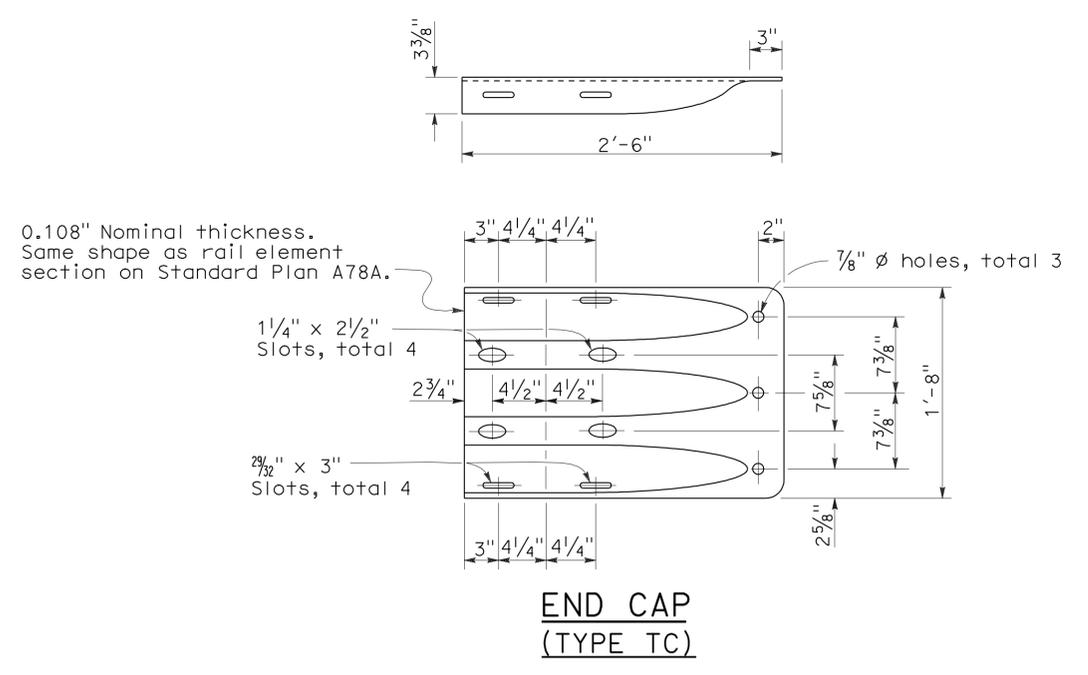
REVISED STANDARD PLAN RSP A77J2

2006 REVISED STANDARD PLAN RSP A77J2

To accompany plans dated 6-14-10



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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**THREE 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
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	122	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

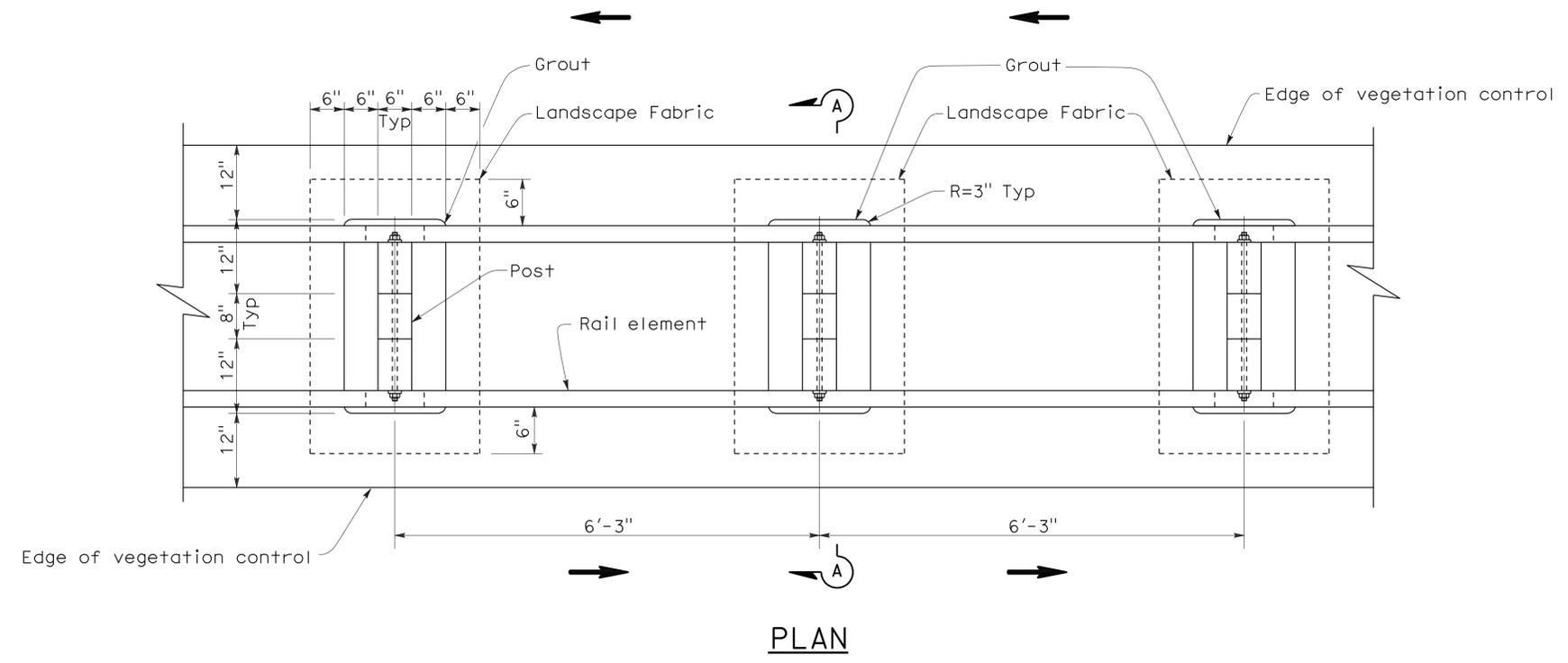
October 20, 2006
PLANS APPROVAL DATE

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

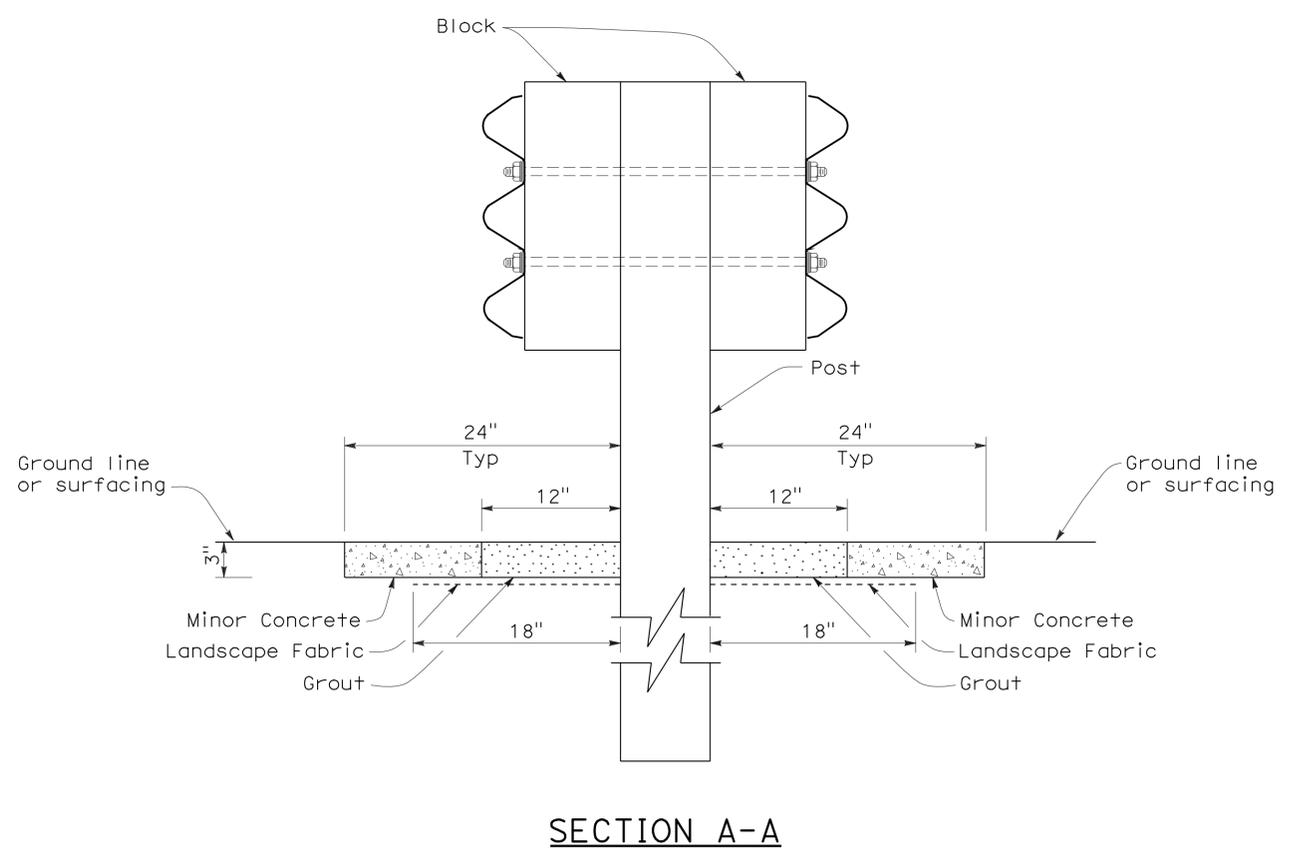
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To accompany plans dated 6-14-10

2006 NEW STANDARD PLAN NSP A78C4



NOTE:
1. Direction of adjacent traffic indicated by →.



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DEPARTMENT OF TRANSPORTATION

**DOUBLE THRIE BEAM BARRIER
TYPICAL VEGETATION CONTROL
STANDARD BARRIER RAILING SECTION**

NO SCALE
NSP A78C4 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

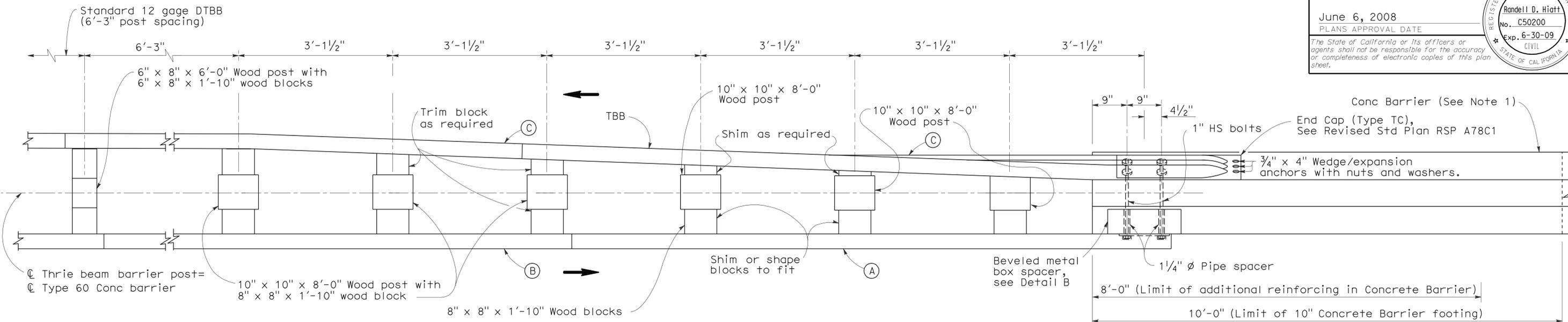
NEW STANDARD PLAN NSP A78C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	123	271

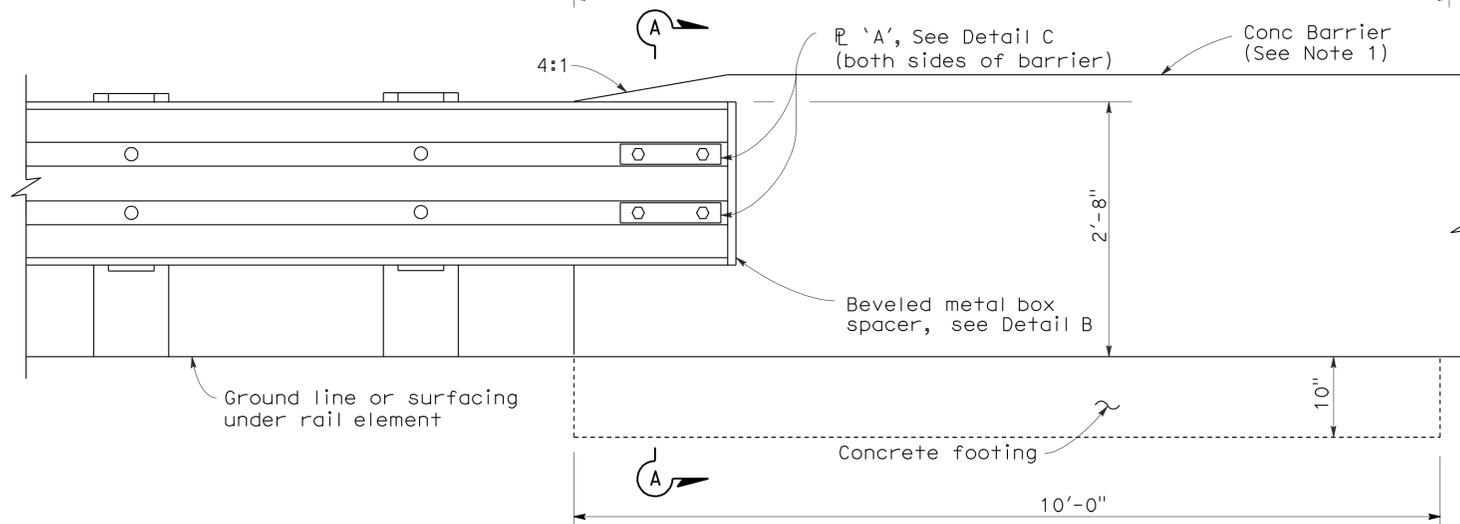
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

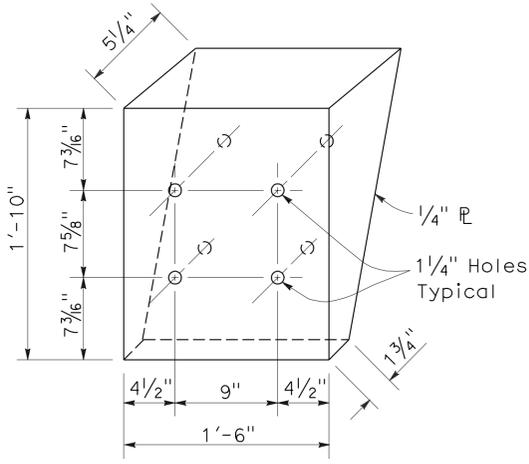
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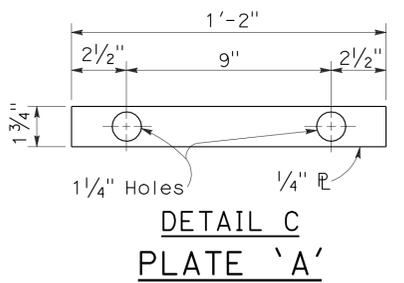
PLAN



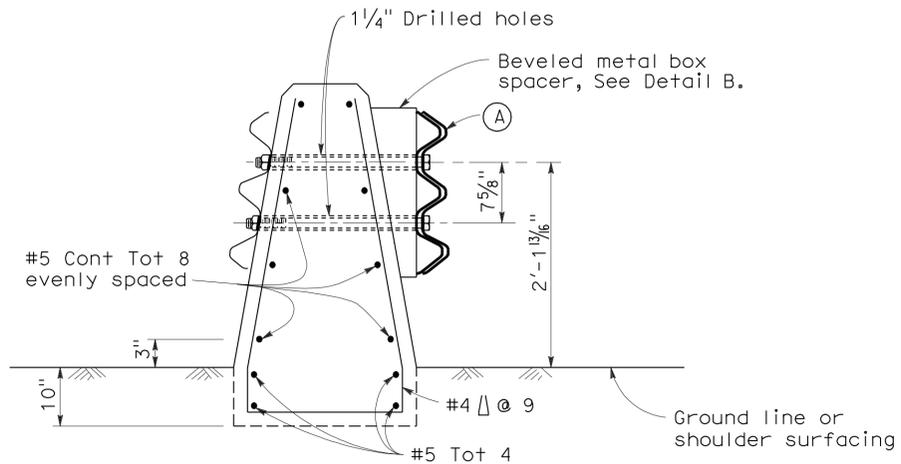
ELEVATION



DETAIL B
Beveled metal box spacer
See Note 3



DETAIL C
PLATE 'A'



SECTION A-A
(Type 60 Conc Barrier shown)

- 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. For details of Concrete Barrier Type 60, see Revised Standard Plan RSP A76A. Thrie beam barrier connections to Concrete Barrier Type 60S and Type 60G are similar to details shown on this plan.
 2. For additional thrie beam barrier details, see Standard Plan A78A, Revised Standard Plans RSPs A78B and A78C1, and Standard Plan A78C2.
 3. Where beveled metal box spacer is installed, place 1 1/4" ϕ x 3 1/4" and 1 1/4" ϕ x 2" pipe spacers on 1" HS bolts passing through interior of box.
 4. Direction of traffic indicated by \rightarrow .

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

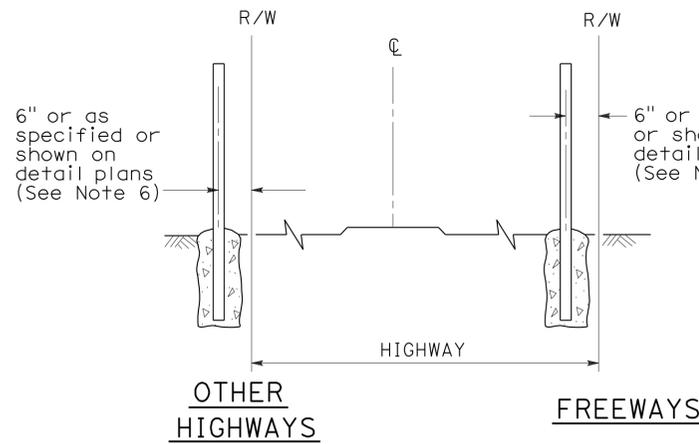
DOUBLE THRIE BEAM BARRIER CONNECTION TO CONCRETE BARRIER

NO SCALE

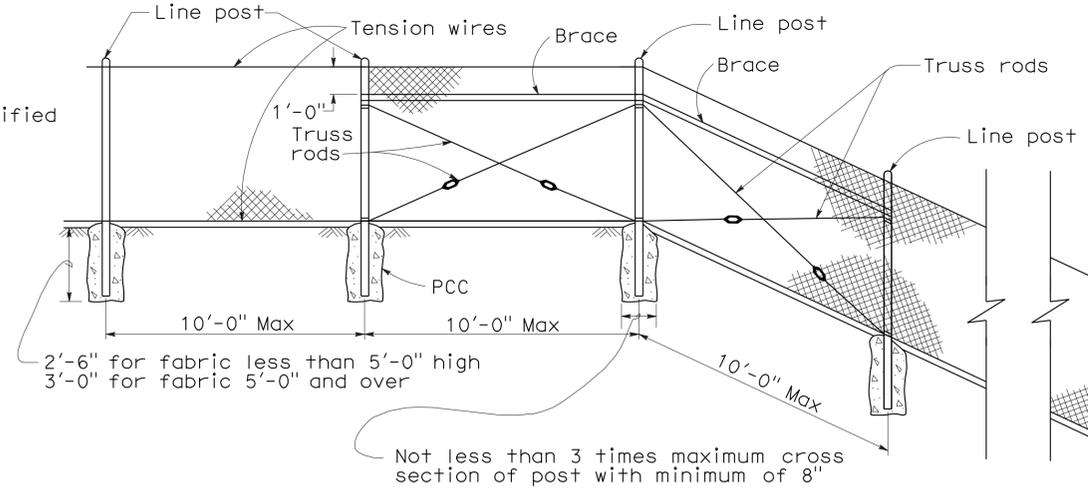
RSP A781 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A781
DATED MAY 1, 2006 - PAGE 96 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A781

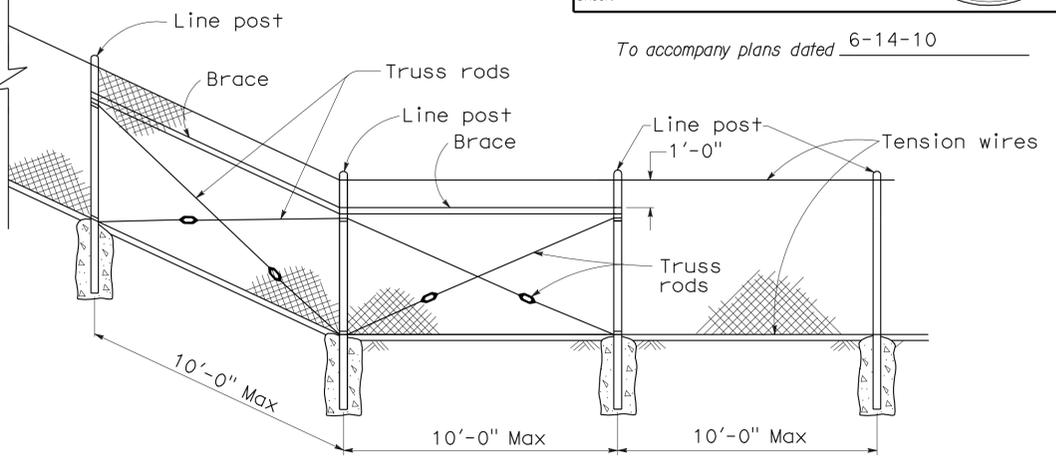
2006 REVISED STANDARD PLAN RSP A781



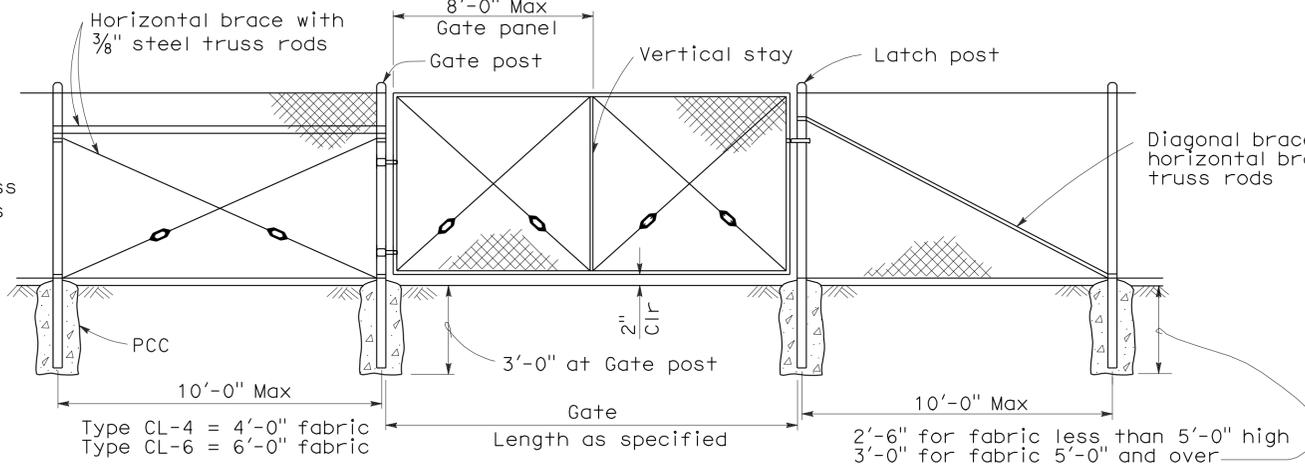
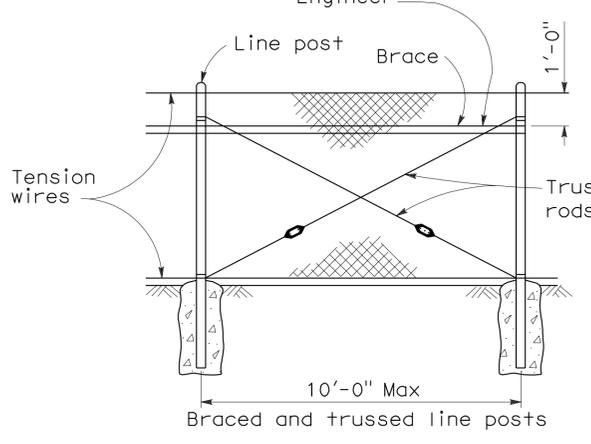
FENCE LOCATION



CHAIN LINK FENCE ON SHARP BREAK IN GRADE



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



CHAIN LINK GATE INSTALLATION

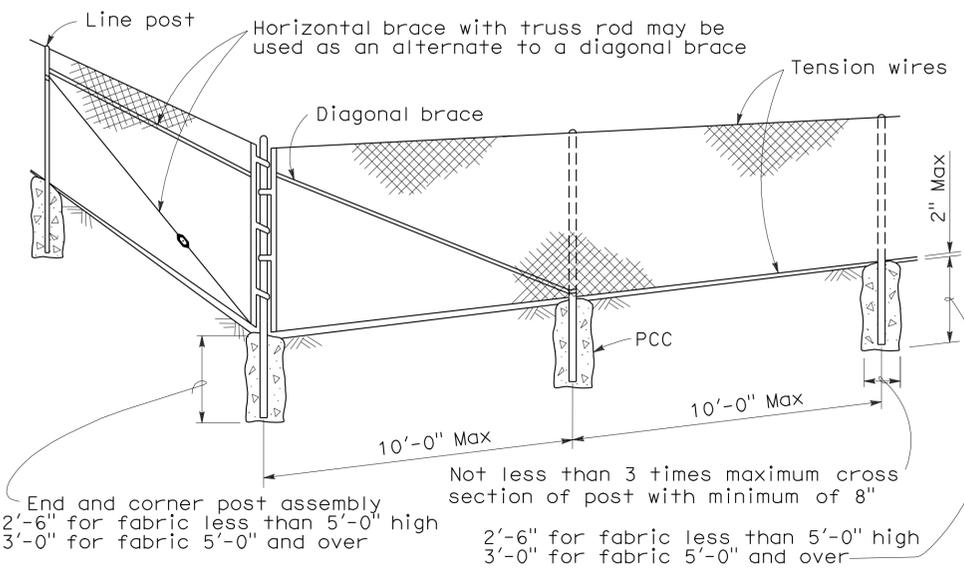
GATE POST			
FENCE HEIGHT	GATE WIDTHS	NOMINAL ID	WEIGHT PER FOOT
6'-0" and Less	Up thru 6'-0"	2 1/2"	4.95 LB
	Over 6'-0" thru 12'-0"	4"	10.79 LB
	Over 12'-0" thru 18'-0"	5"	14.62 LB
	Over 18'-0" to 24'-0" Max	6"	18.97 LB
Over 6'-0"	Up thru 6'-0"	3"	7.58 LB
	Over 6'-0" thru 12'-0"	5"	14.62 LB
	Over 12'-0"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

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

NOTES:

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

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



CORNER POST

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
 NO SCALE

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

REVISED STANDARD PLAN RSP A85

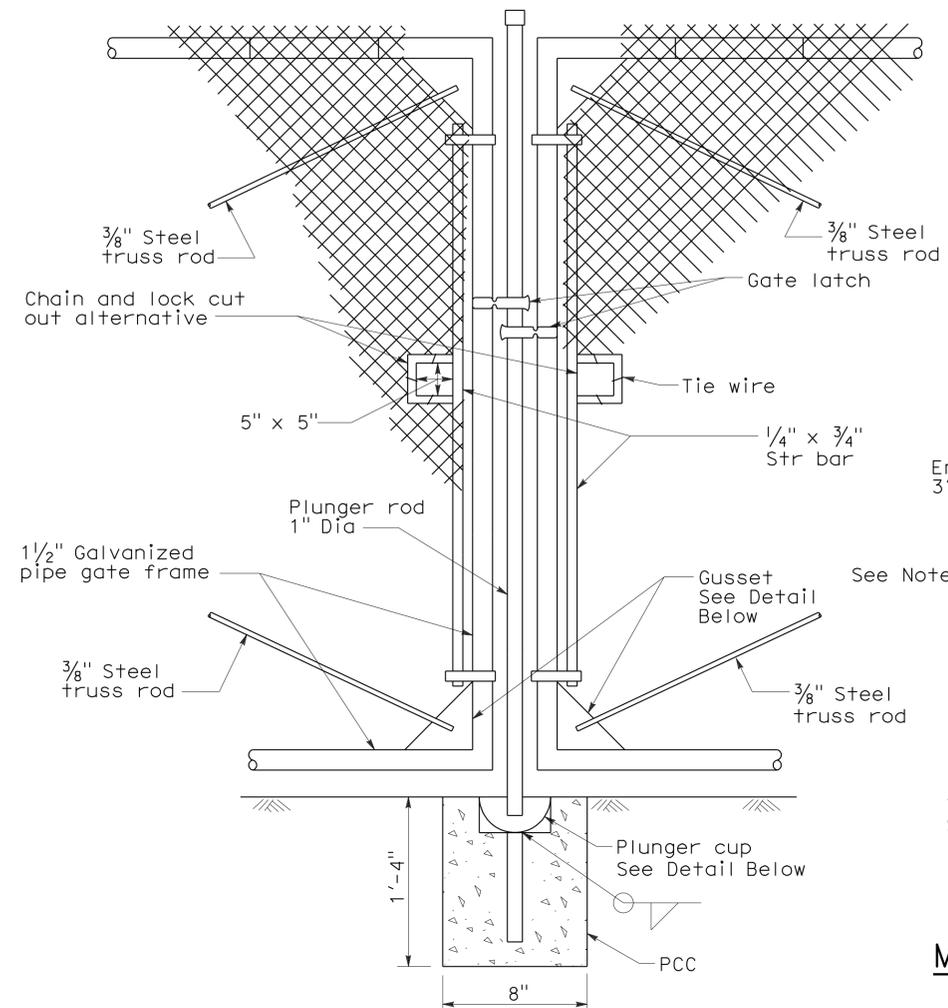
2006 REVISED STANDARD PLAN RSP A85

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	125	271

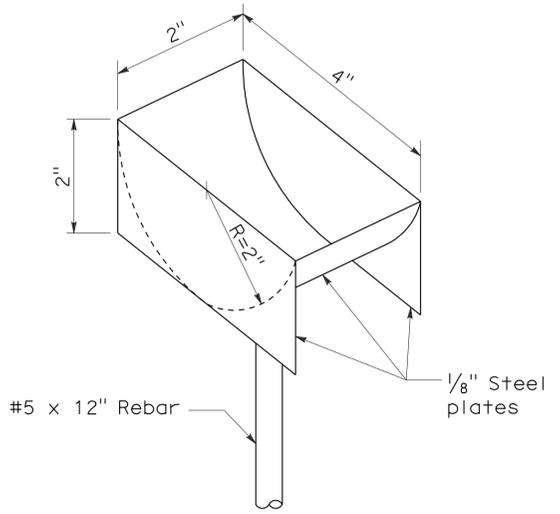
Glenn DeCou
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
 REGISTERED PROFESSIONAL ENGINEER
 Glenn DeCou
 No. C34547
 Exp. 9-30-09
 CIVIL
 STATE OF CALIFORNIA

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

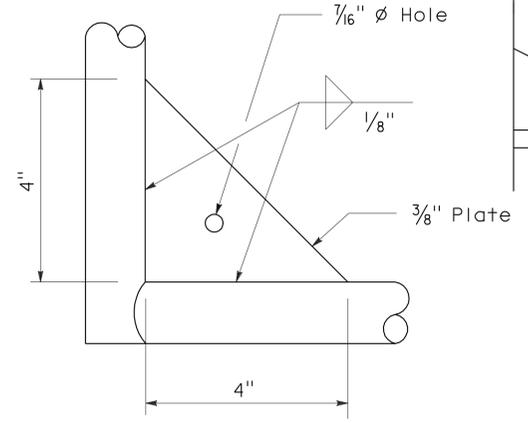
To accompany plans dated 6-14-10



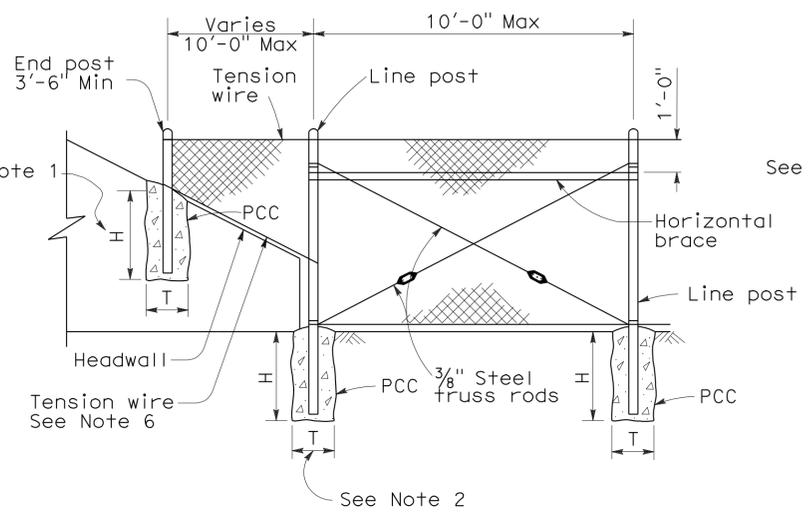
**TYPICAL DOUBLE GATE
REMOVABLE CENTER POST**



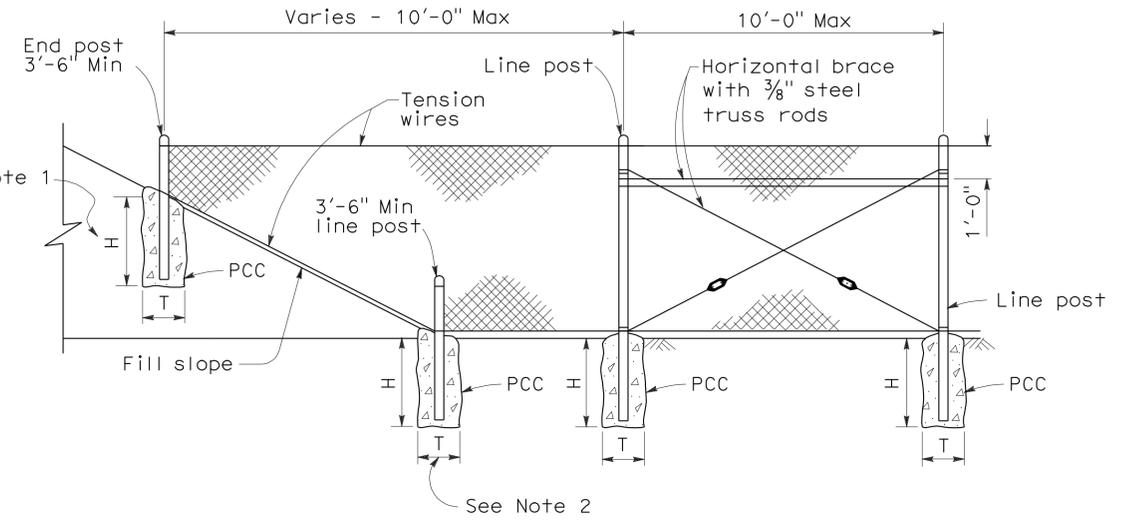
PLUNGER CUP DETAIL



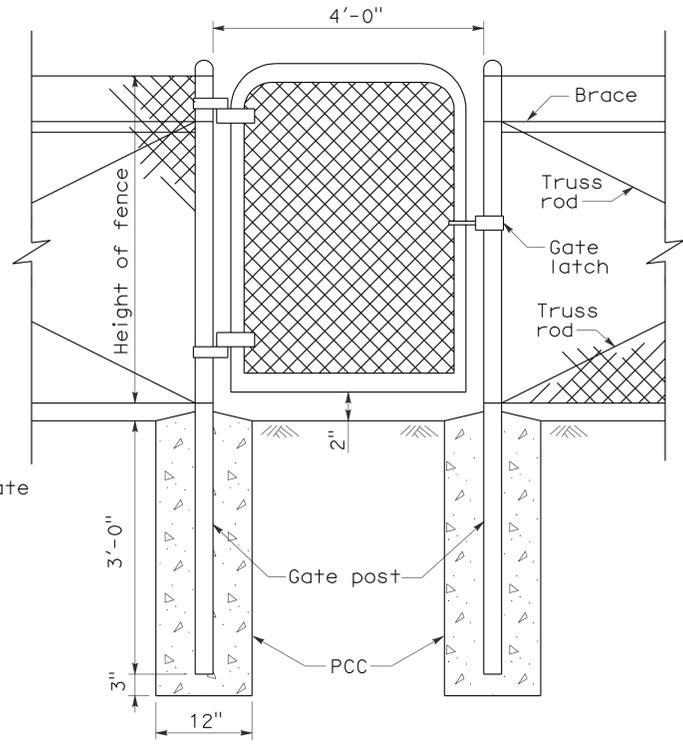
GUSSET DETAIL



METHOD OF TYING FENCE TO HEADWALL



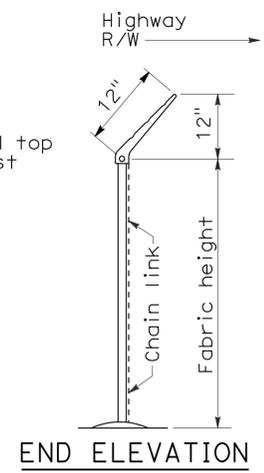
METHOD OF ERECTING FENCE FOR FILL SLOPE



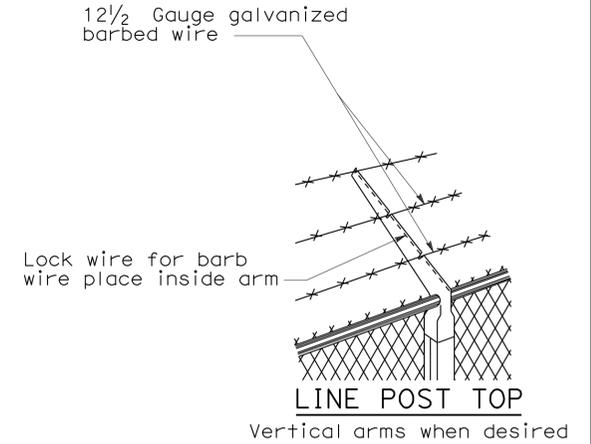
WALK GATE



POST TOP END



BARBED WIRE POST TOP
See Note 3



LINE POST TOP

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

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

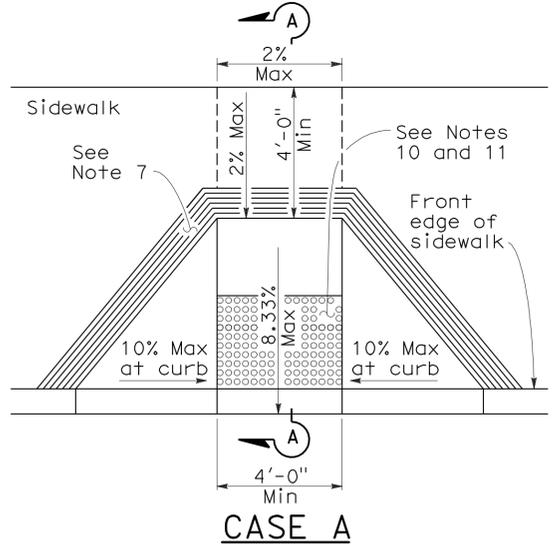
NEW STANDARD PLAN NSP A85A

2006 NEW STANDARD PLAN NSP A85A

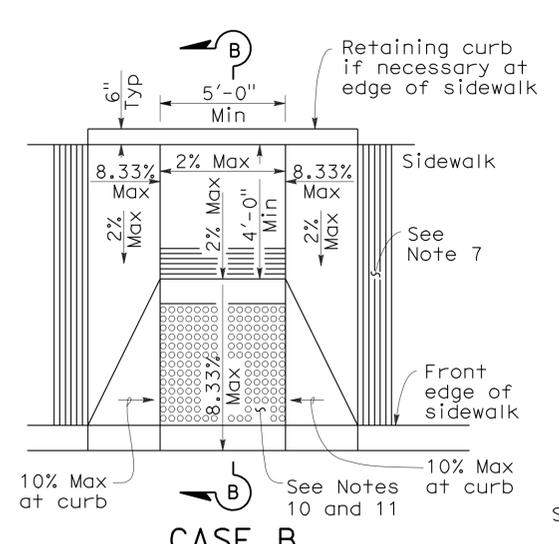
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	126	271

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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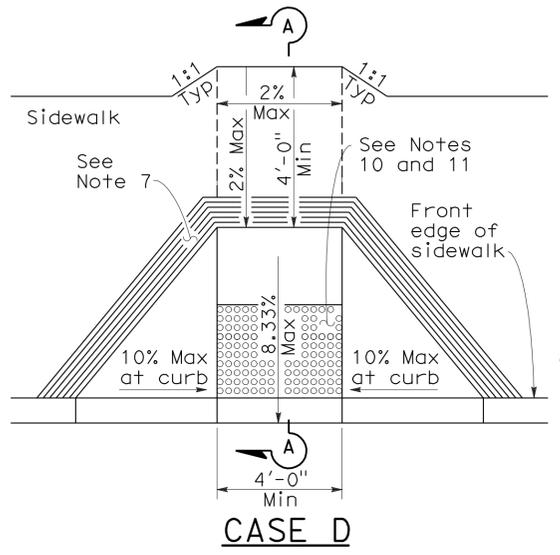
REGISTERED PROFESSIONAL ENGINEER
 Hector David Cordova
 No. C41957
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA



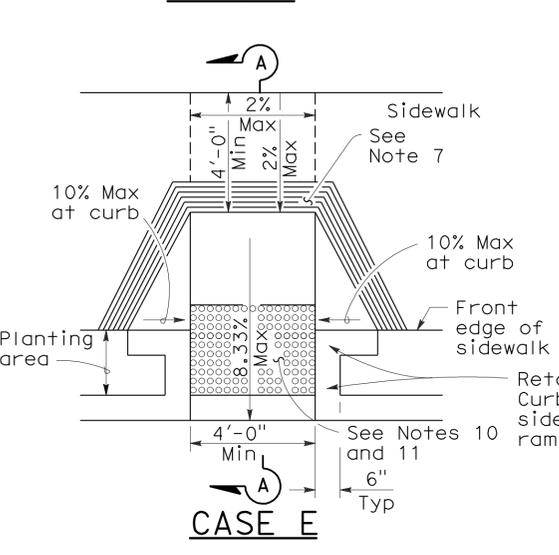
CASE A



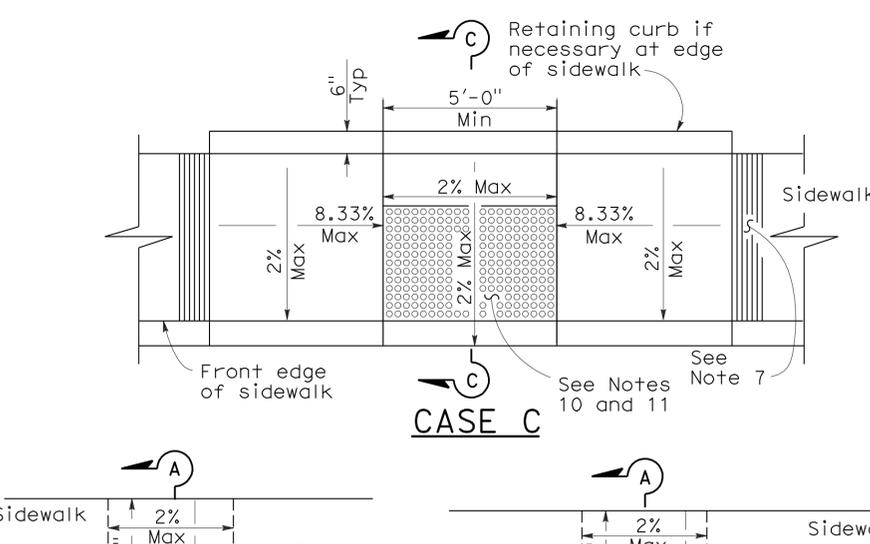
CASE B



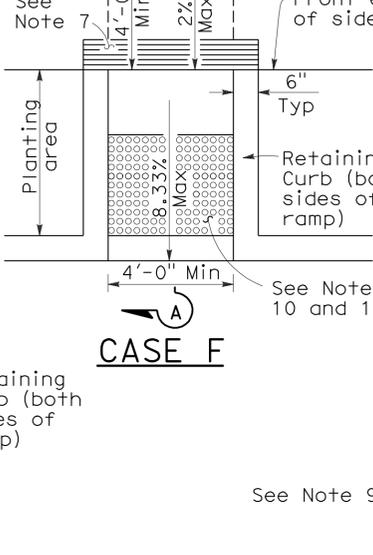
CASE C



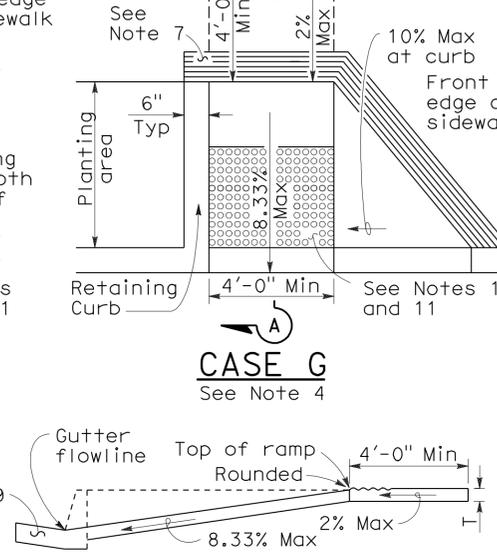
CASE D



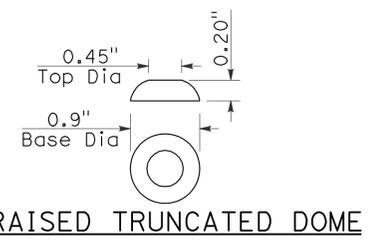
CASE E



CASE F



CASE G

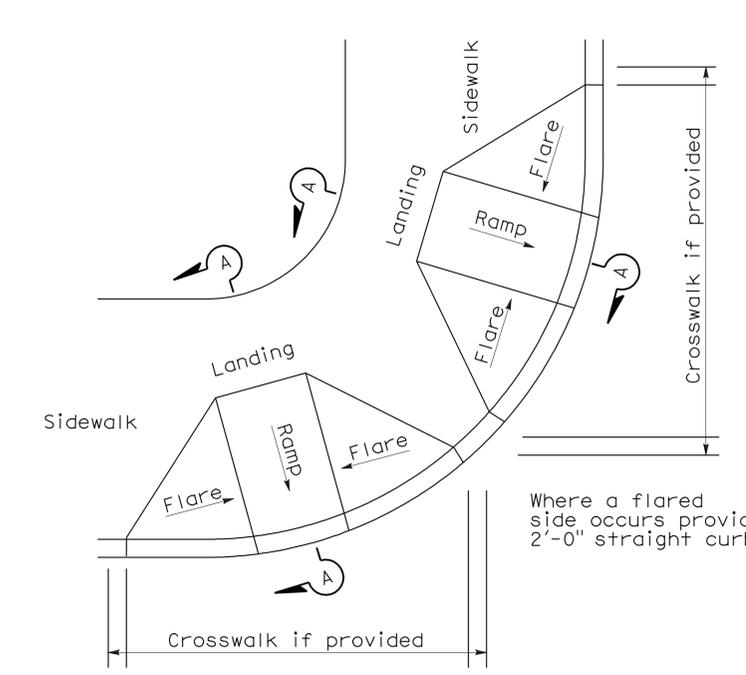


RAISED TRUNCATED DOME

NOTES:

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
- Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
- Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.

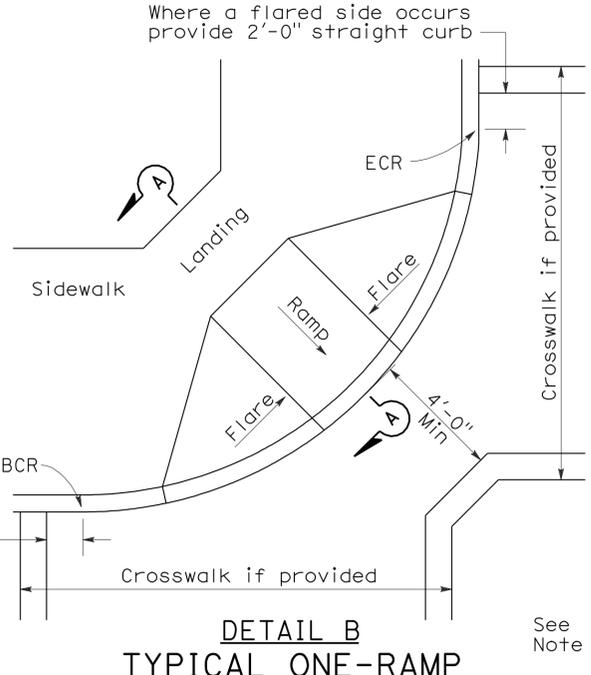
To accompany plans dated 6-14-10



DETAIL A

TYPICAL TWO-RAMP CORNER INSTALLATION

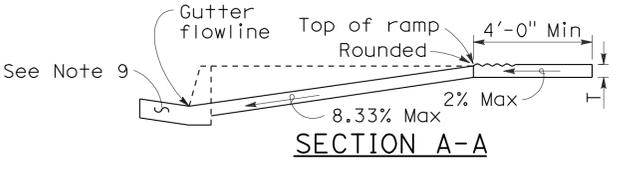
See Note 1



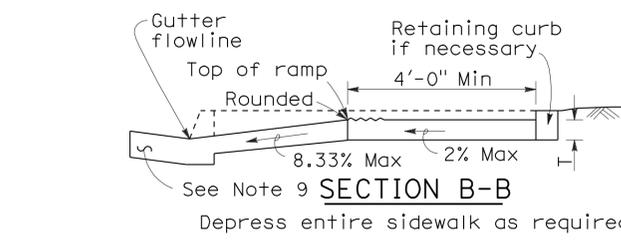
DETAIL B

TYPICAL ONE-RAMP CORNER INSTALLATION

See Notes 1 and 3

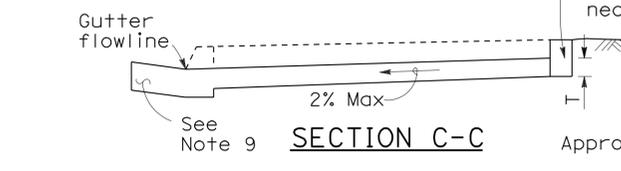


SECTION A-A



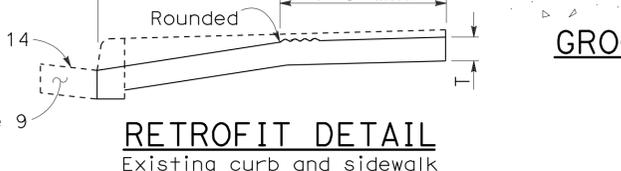
SECTION B-B

Depress entire sidewalk as required



SECTION C-C

See Note 9



RETROFIT DETAIL

Existing curb and sidewalk



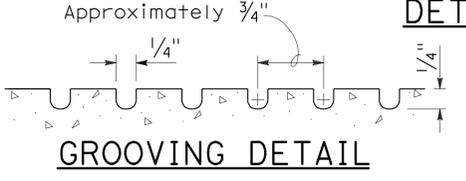
RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

See Note 10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS

NO SCALE



GROOVING DETAIL

RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A88A

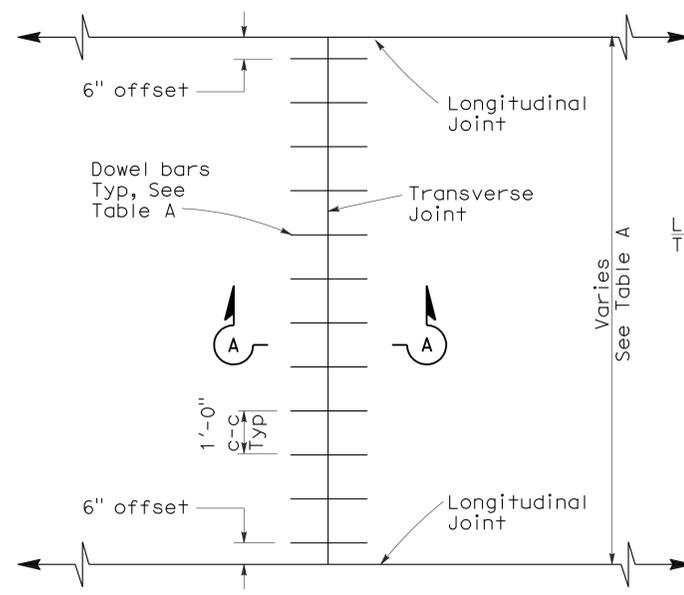
2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	127	271

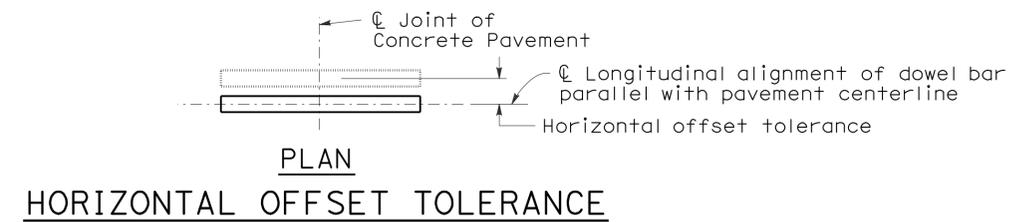
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-10
 STATE OF CALIFORNIA

May 15, 2009
 PLANS APPROVAL DATE

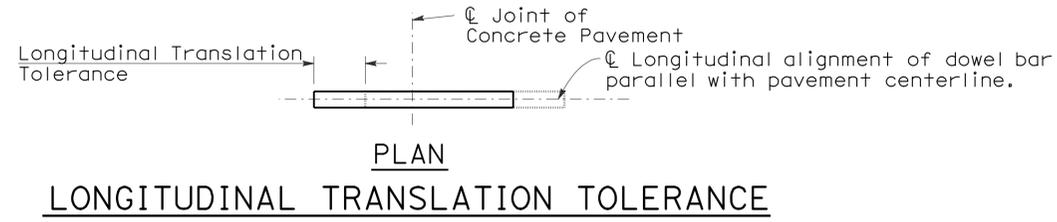
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



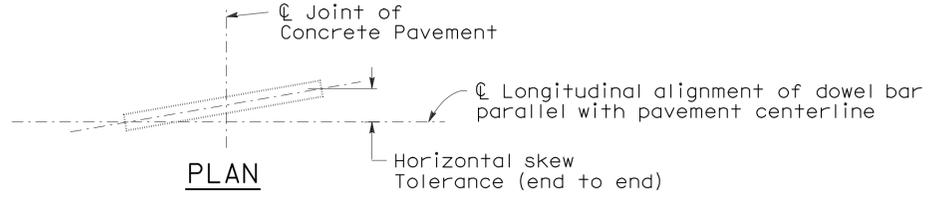
TRANSVERSE JOINT DOWEL BAR LAYOUT



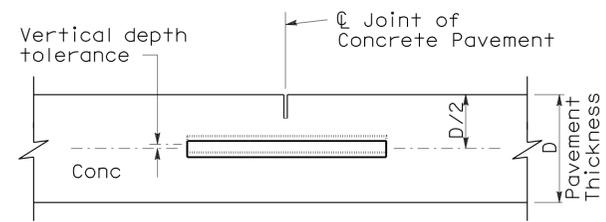
HORIZONTAL OFFSET TOLERANCE



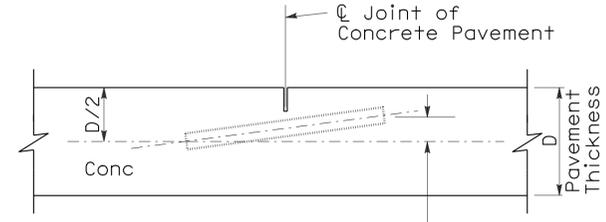
LONGITUDINAL TRANSLATION TOLERANCE



HORIZONTAL SKEW TOLERANCE



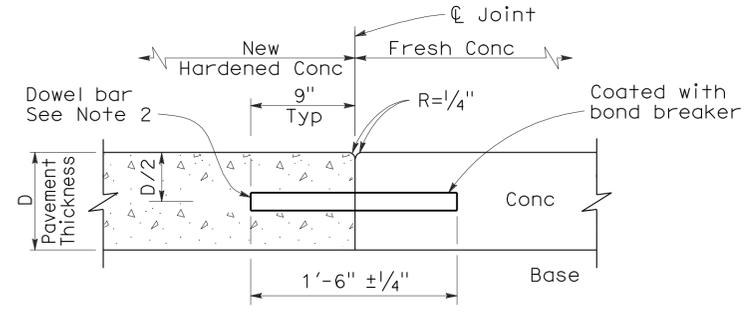
VERTICAL DEPTH TOLERANCE



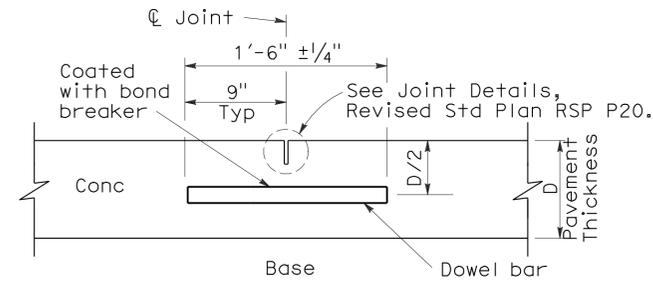
VERTICAL SKEW TOLERANCE

To accompany plans dated 6-14-10

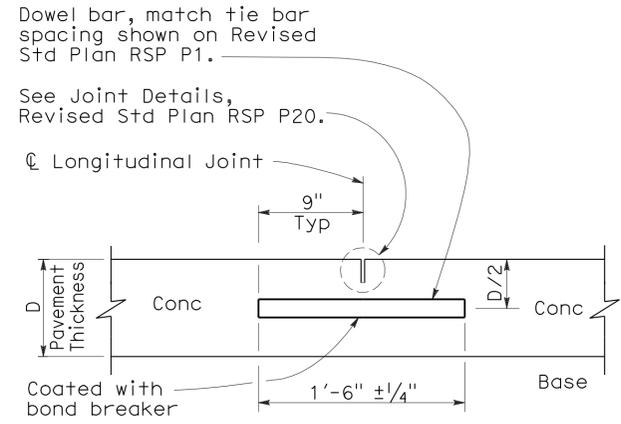
- NOTES:**
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
 - 1 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1 1/4" Dia smooth dowel bars.
 - For widths not shown, see Project Plans.
 - If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the 1/4" radius, as shown.



SECTION A-A TRANSVERSE CONSTRUCTION JOINT DETAIL



TRANSVERSE CONTRACTION JOINT

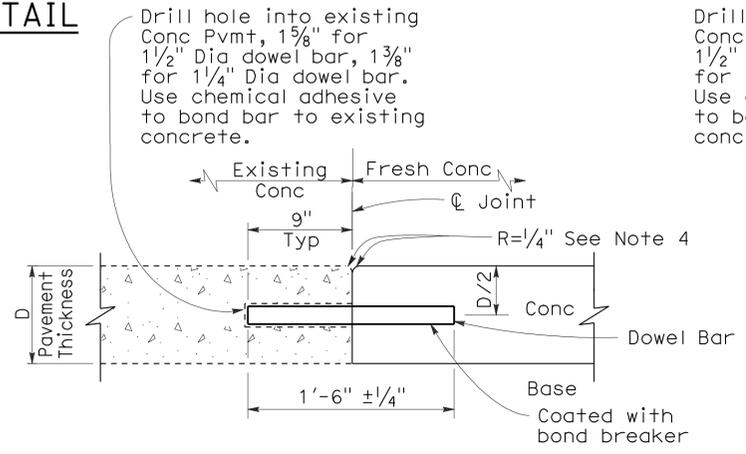


LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

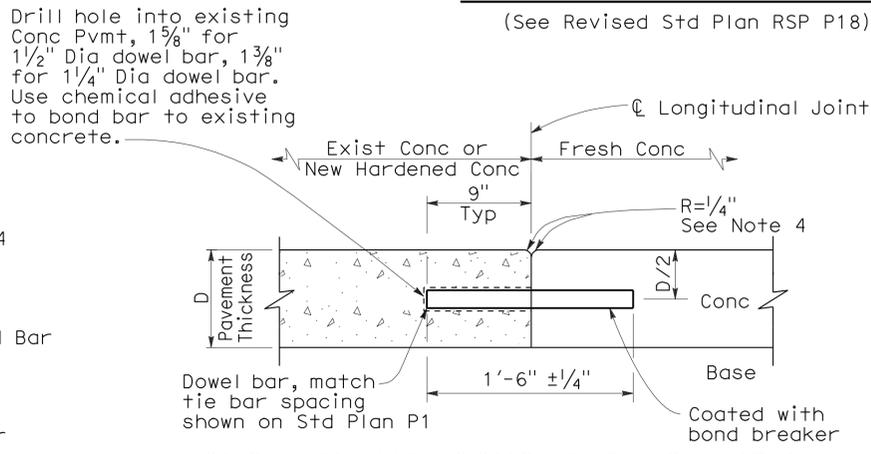
TABLE A (See Note 3)

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



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT
(Drill and bond locations)

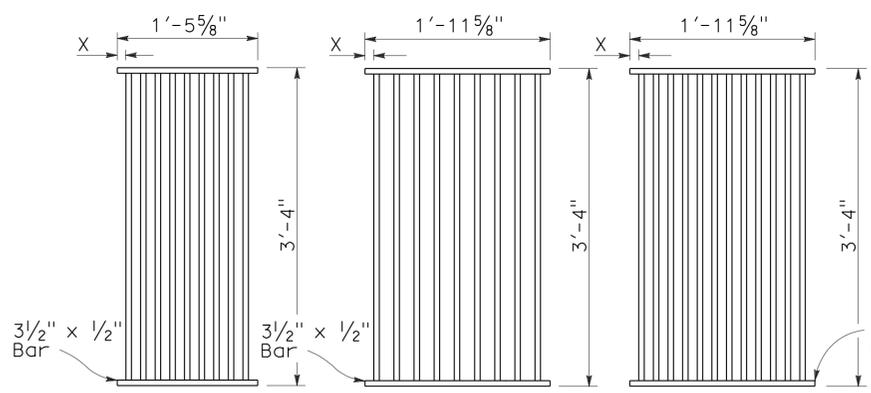


LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS
(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-DOWEL BAR DETAILS
NO SCALE

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

2006 REVISED STANDARD PLAN RSP P10

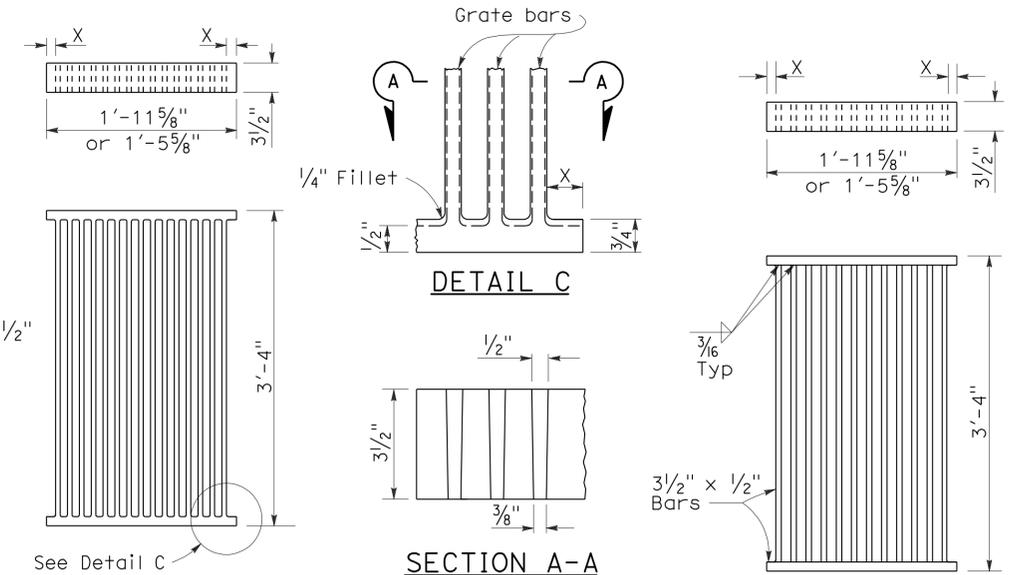


RECTANGULAR GRATE DETAILS
(See table below)

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

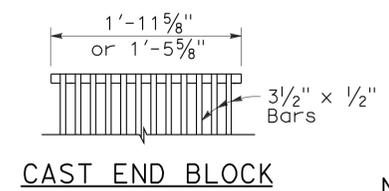
TYPE 24-9
2" Clear spacing. Use in locations on all types of highways.

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

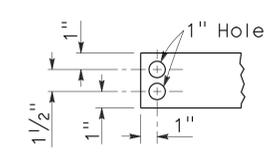


ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE

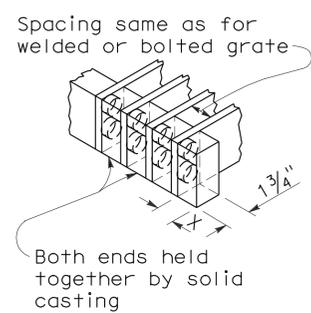
ALTERNATIVE WELDED GRATE



CAST END BLOCK

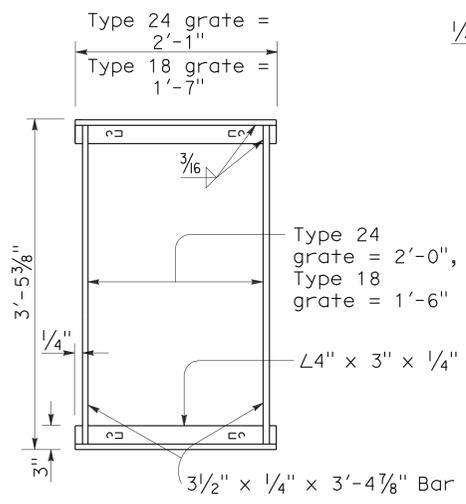


END OF BAR

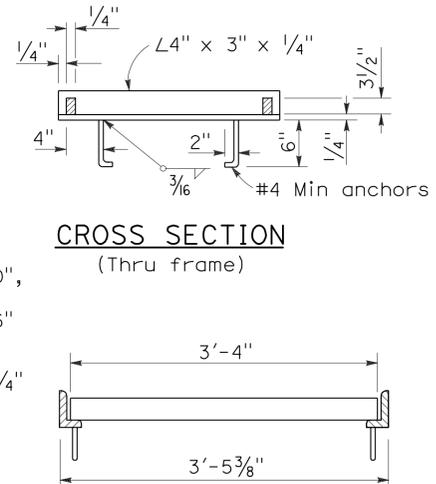


ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE

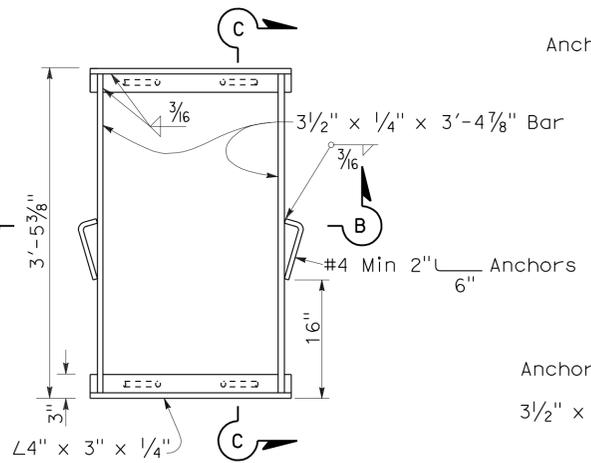
- NOTES:**
1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 2. Contractor has the option of using cast nodular iron, cast steel, welded, bolted, or cast end block grate.
 3. See Special Provisions for requirements pertaining to galvanizing or asphalt 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).



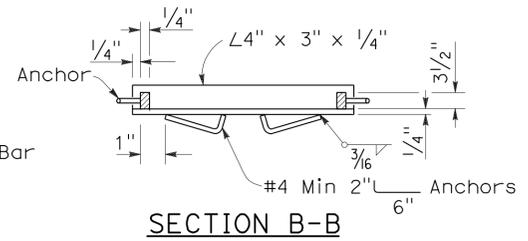
TYPICAL FRAME



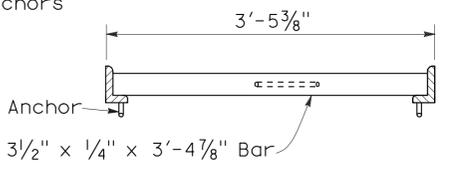
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME



SECTION B-B



SECTION C-C

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

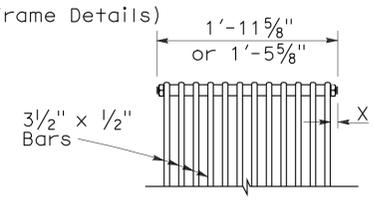
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

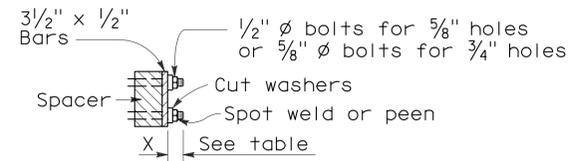
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

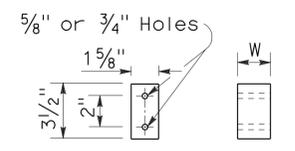


BOLTED END BLOCK

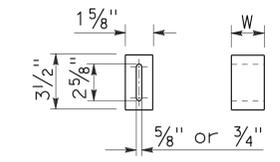


BOLTING DETAIL

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)

ANNULAR AND HELICAL PROFILE

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

SPIRAL RIB PROFILE

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

* See Note 14.

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

- NOTES:** To accompany plans dated 6-14-10
- All ferrous metal coupling band connection hardware shall be galvanized or electro-plated in accordance with the Standard Specifications.
 - For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
 - Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
 - Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
 - Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
 - Dimensions, thicknesses and strengths shown are minimum.
 - For pipe arches use same width band as for round pipe of equal periphery.
 - Fillet welds of equivalent strength may be substituted for spot welds or rivets.
 - Spot welds shall develop minimum required strength of strap.
 - Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
 - In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
 - Two piece bands are required for pipes greater than 42" diameter.
 - The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

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

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

REVISED STANDARD PLAN RSP D97E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	129	271

Raymond Don Tsztou
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
Raymond Don Tsztou
No. C37332
Exp. 6-30-08
CIVIL
STATE OF CALIFORNIA

2006 REVISED STANDARD PLAN RSP D97E

ANNULAR AND HELICAL PROFILE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	130	271

Raymond Don Tsztso
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAND THICKNESS				ANGLE							
				CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No. - Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP	
TWO PIECE INTEGRAL FLANGE	1 1/2" x 1/4"	6"-10"	7"	0.064"-0.079"	0.060"	0.064"	0.060"							2-3/8"	2-3/8"				
UNIVERSAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.064"-0.138"	0.060"-0.135"	0.064"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-60"	16 1/4"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"	DOUBLE 0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"	2" x 2" x 1/4"	4-1/2"	4-1/2"	5-3/8"	5-3/8"		
		42"-60"	12"	0.109"-0.168"	0.135"-0.164"	0.064"	0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"	5-3/8"	5-3/8"		
		66"-84"	24"	0.109"-0.168"	0.164"	0.064"	0.105"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"	7-3/8"	5-1/2"		
		42"-54"	12"		0.060"-0.105"		0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"		
		48"-60"	14"	0.064"-0.079"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"		5-1/2"	
		48"-60"	14"	0.109"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	5-3/8"			
		66"-120"	25"	0.064"-0.109"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	5-1/2"	5-1/2"	9-3/8"			
		42"-60"	14"		0.060"-0.105"		0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"		5-3/8"		
		42"-60"	14"		0.135"		0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"		5-3/8"		
		66"-96"	25"		0.060"-0.135"		0.060"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		7-3/8"		
		96"-108"	25"		0.135"		0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		7-3/8"		
		THROUGH 36"	12"	0.064"-0.138"	0.060"-0.135"	0.064"	0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		42"-54"	12"		0.060"-0.105"		0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"		
		42"-60"	12"	0.064"-0.079"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"		5-1/2"	
		42"-60"	12"	0.109"-0.168"	0.135"-0.164"	0.064"	0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"	5-3/8"	5-3/8"		
		66"-84"	24"	0.109"-0.168"		0.064"						2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"	7-3/8"	5-3/8"		
		66"-72"	24"		0.164"		0.105"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		5-3/8"		
		48"-60"	14"	0.064"-0.079"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"		5-1/2"	
		48"-60"	14"	0.109"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	5-3/8"			
		66"-120"	25"	0.064"-0.109"		0.064"						2" x 2" x 3/16"	2" x 2" x 3/16"	5-1/2"	5-1/2"	9-3/8"			
		42"-60"	14"		0.060"-0.105"		0.060"					2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"		5-3/8"		
		42"-60"	14"		0.135"		0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	3-1/2"	3-1/2"		5-3/8"		
		66"-96"	25"		0.060"-0.135"		0.060"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		7-3/8"		
		96"-108"	25"		0.135"		0.075"					2" x 2" x 1/4"	2" x 2" x 1/4"	5-1/2"	5-1/2"		7-3/8"		
		THROUGH 48"	10 1/2"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		54"-66"	10 1/2"	0.109"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		THROUGH 54"	10 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		THROUGH 60"	10 1/2"	0.138"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		66"-72"	10 1/2"	0.138"		0.109"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		THROUGH 72"	10 1/2"	0.168"		0.109"		DOUBLE 0.109"	1/2"	7/8"	45 ksi								
		48"-84"	10 1/2"	0.109"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		48"-90"	10 1/2"	0.064"-0.079"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		96"-102"	10 1/2"	0.079"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
		90"-120"	10 1/2"	0.109"		0.109"		DOUBLE 0.109"	1/2"	7/8"	45 ksi								

To accompany plans dated 6-14-10

NOTES:

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

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAND THICKNESS				ANGLE						
				SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP		
ANNULAR	2 2/3" x 1/2" *	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.064"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		42"-60"	12"	0.064"-0.079"	0.075"-0.105"	0.064"	0.075"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		42"-60"	12"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"		3-1/2"		5-3/8"		
		66"-84"	24"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 1/4"		5-1/2"		7-3/8"		
HUGGER	2 2/3" x 1/2" *	24"-54"	10 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi							
		24"-48"	10 1/2"	0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi							
		54"-66"	10 1/2"	0.109"		0.064"		Double 0.079"	1/2"	7/8"	32 ksi							

* See Note 13.

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

CORRUGATED METAL PIPE COUPLING DETAILS No. 6 POSITIVE JOINT

NO SCALE

RSP D97F DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97F DATED MAY 1, 2006 - PAGE 188 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97F

2006 REVISED STANDARD PLAN RSP D97F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	131	271

Raymond Don Tsztso
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Raymond Don Tsztso
REGISTERED PROFESSIONAL ENGINEER
No. C37332
Exp. 6-30-08
CIVIL
STATE OF CALIFORNIA

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ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)			ANGLE							
				PIPE WALL THICKNESS		BAND THICKNESS		STRAP THICKNESS	BOLTS Dia	BAR Dia	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP				CSP	CAP	CSP	CAP	CSP	CAP	CSP	
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"	7"	0.064"-0.168"		0.052"												
	1 1/2' x 1/4"	8"-10"	7"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"											
ANNULAR	2 2/3" x 1/2"	THROUGH 24"	12"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"											
HUGGER	2 2/3" x 1/2" REROLLED END	THROUGH 24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"								

- NOTES: To accompany plans dated 6-14-10
- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
 - For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
 - Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
 - Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
 - Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
 - Dimensions, thicknesses and strengths shown are minimum.
 - For pipe arches use same width band as for round pipe of equal periphery.
 - Fillet welds of equivalent strength may be substituted for spot welds or rivets.
 - Spot welds shall develop minimum required strength of strap.
 - Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
 - For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 7" measured along the length of the pipe.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAR AND STRAP (SSRP ONLY)			ANGLE							
				PIPE WALL THICKNESS		BAND THICKNESS		STRAP THICKNESS	BOLTS Dia	BAR Dia	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				SSRP	ASRP	SSRP	ASRP				SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"	12"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"											
HUGGER	2 2/3" x 1/2" * REROLLED END	24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"								

* See Note 12.

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 7
DOWNDRAIN**

NO SCALE

RSP D97G DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97G
DATED MAY 1, 2006 - PAGE 189 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97G

2006 REVISED STANDARD PLAN RSP D97G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	132	271

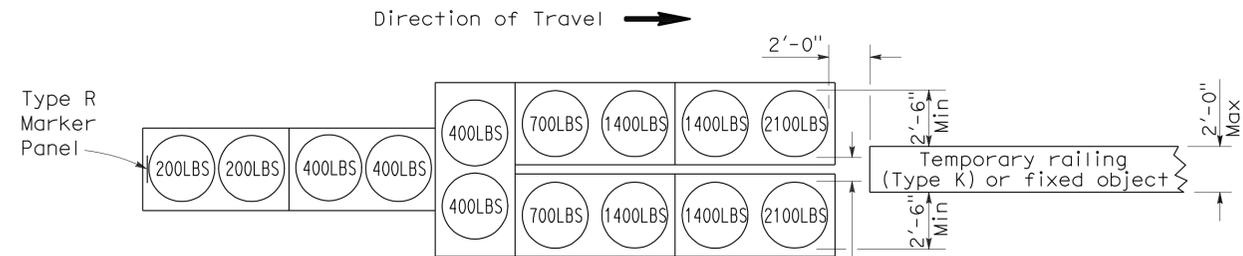
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

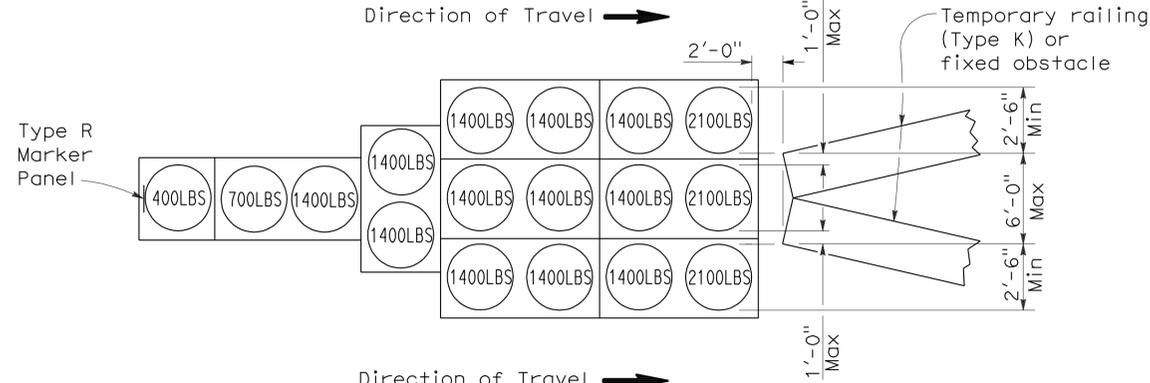
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To accompany plans dated 6-14-10



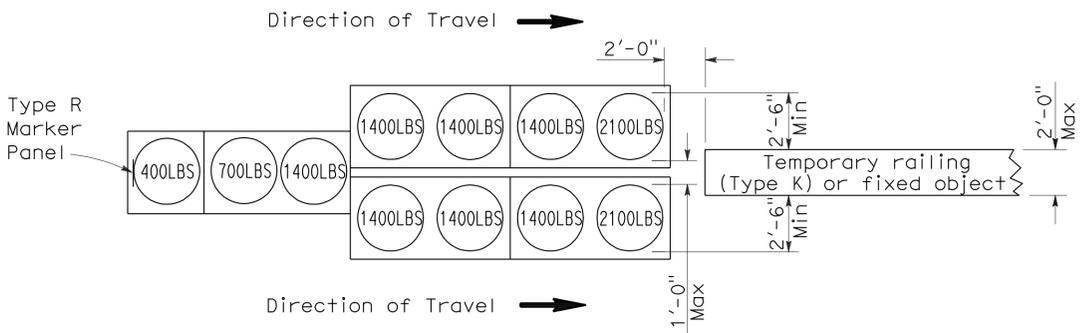
ARRAY 'TU14'

Approach speed 45 mph or more



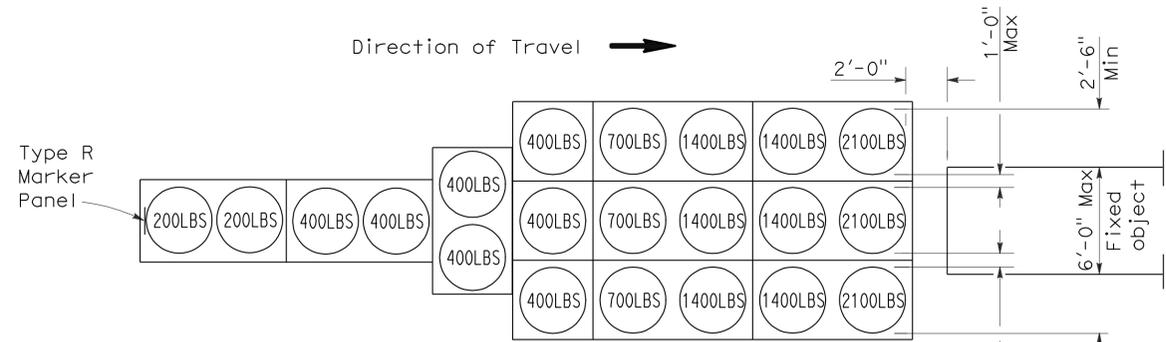
ARRAY 'TU17'

Approach speed less than 45 mph



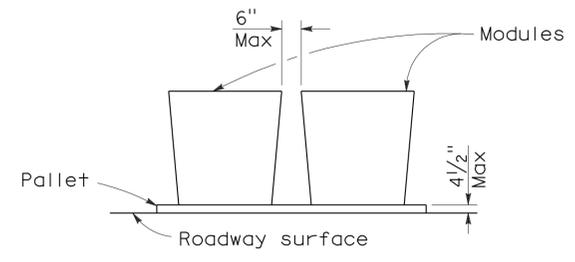
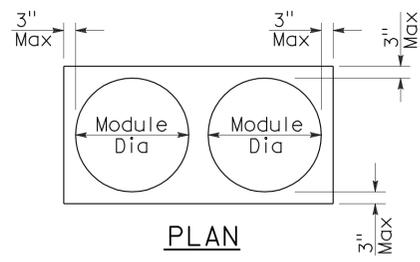
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



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
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	133	271

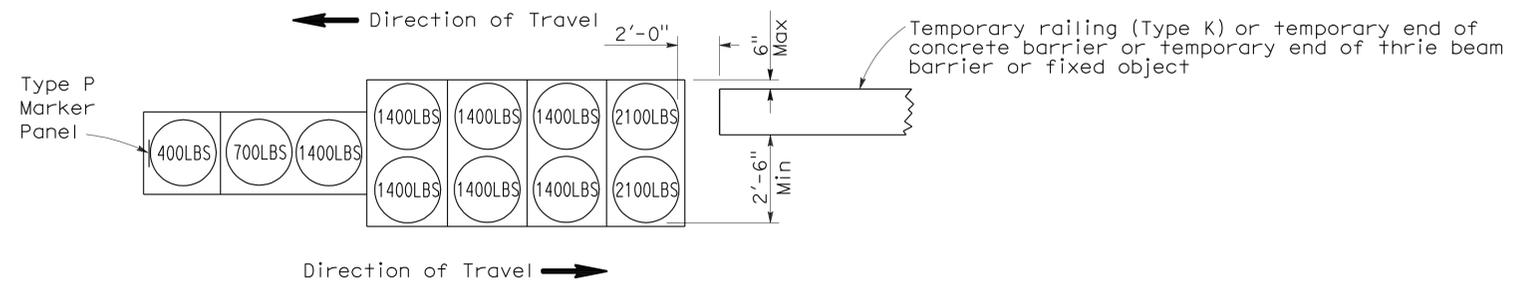
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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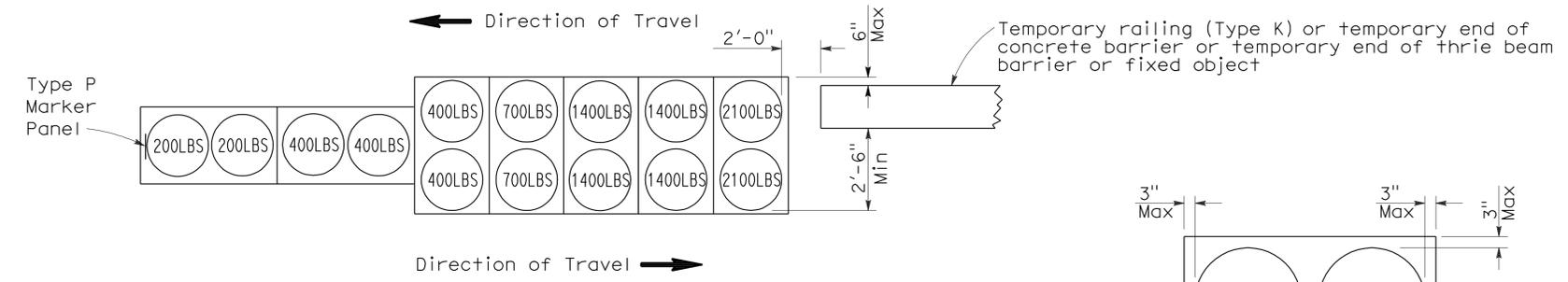
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 6-14-10



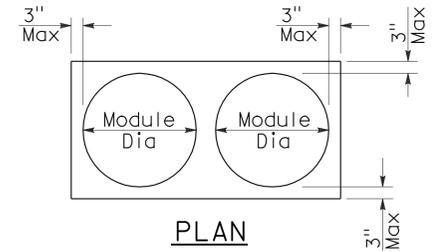
ARRAY 'TB11'

Approach speed less than 45 mph

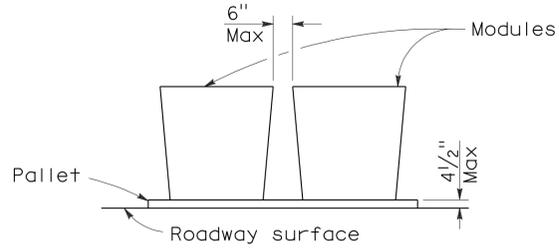


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

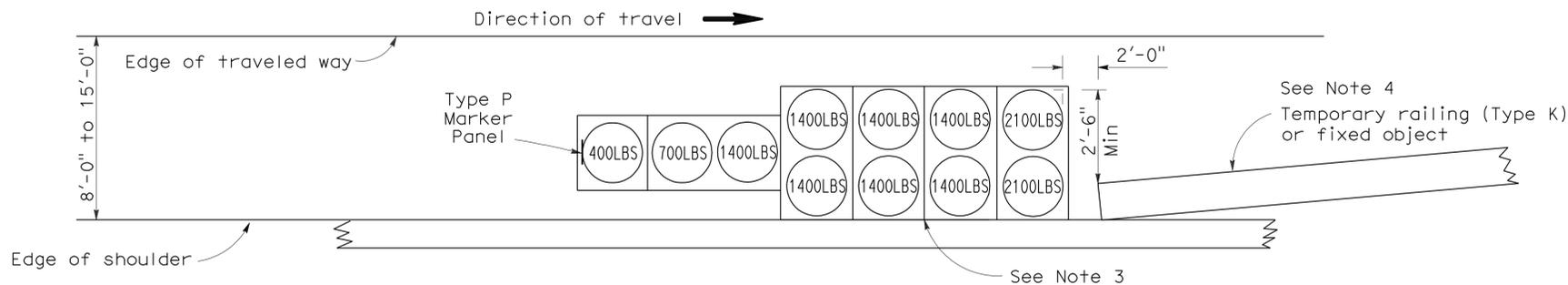
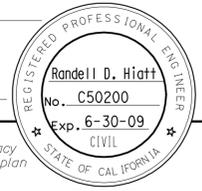
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	134	271

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

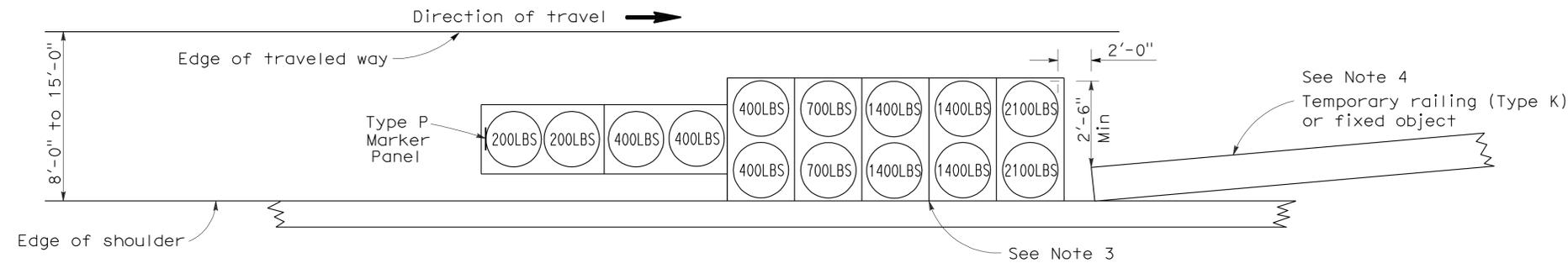
June 6, 2008
PLANS APPROVAL DATE

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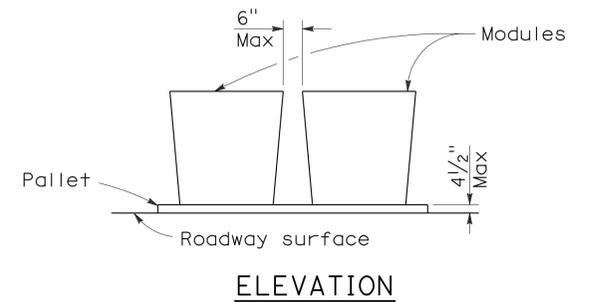
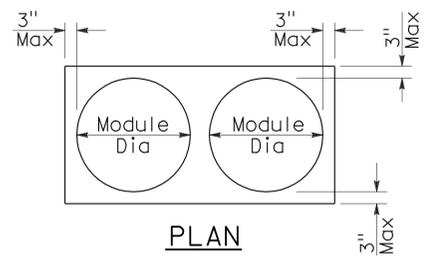
To accompany plans dated 6-14-10



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:

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- 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

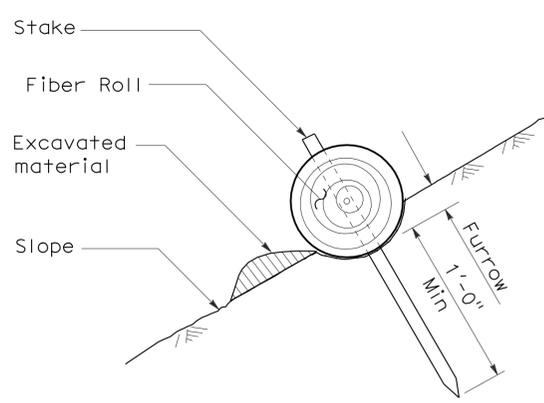
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	136	271

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 6-14-10

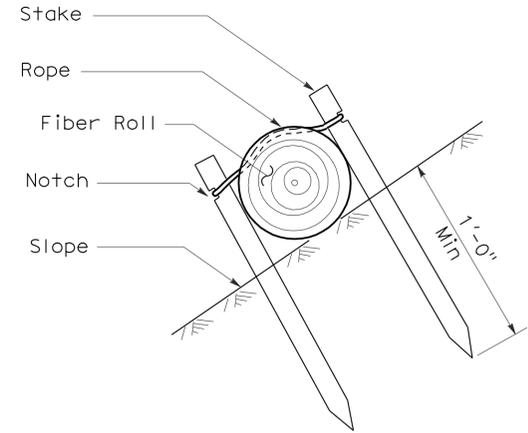
NOTES:

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.



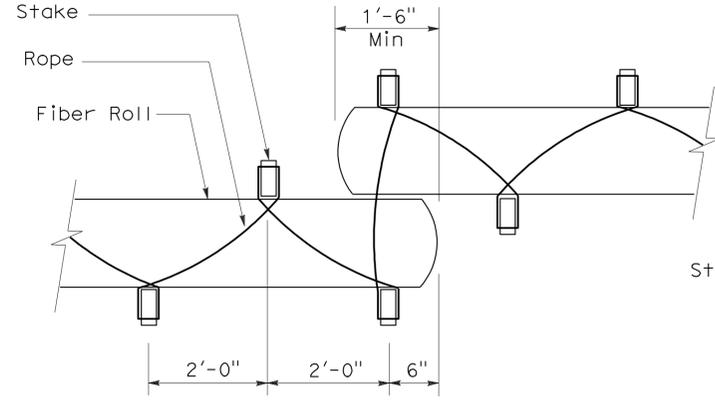
SECTION

TEMPORARY FIBER ROLL (TYPE 1)



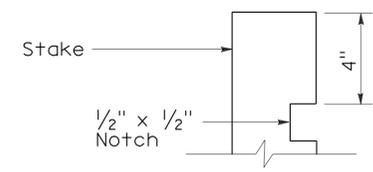
SECTION

TEMPORARY FIBER ROLL (TYPE 2)



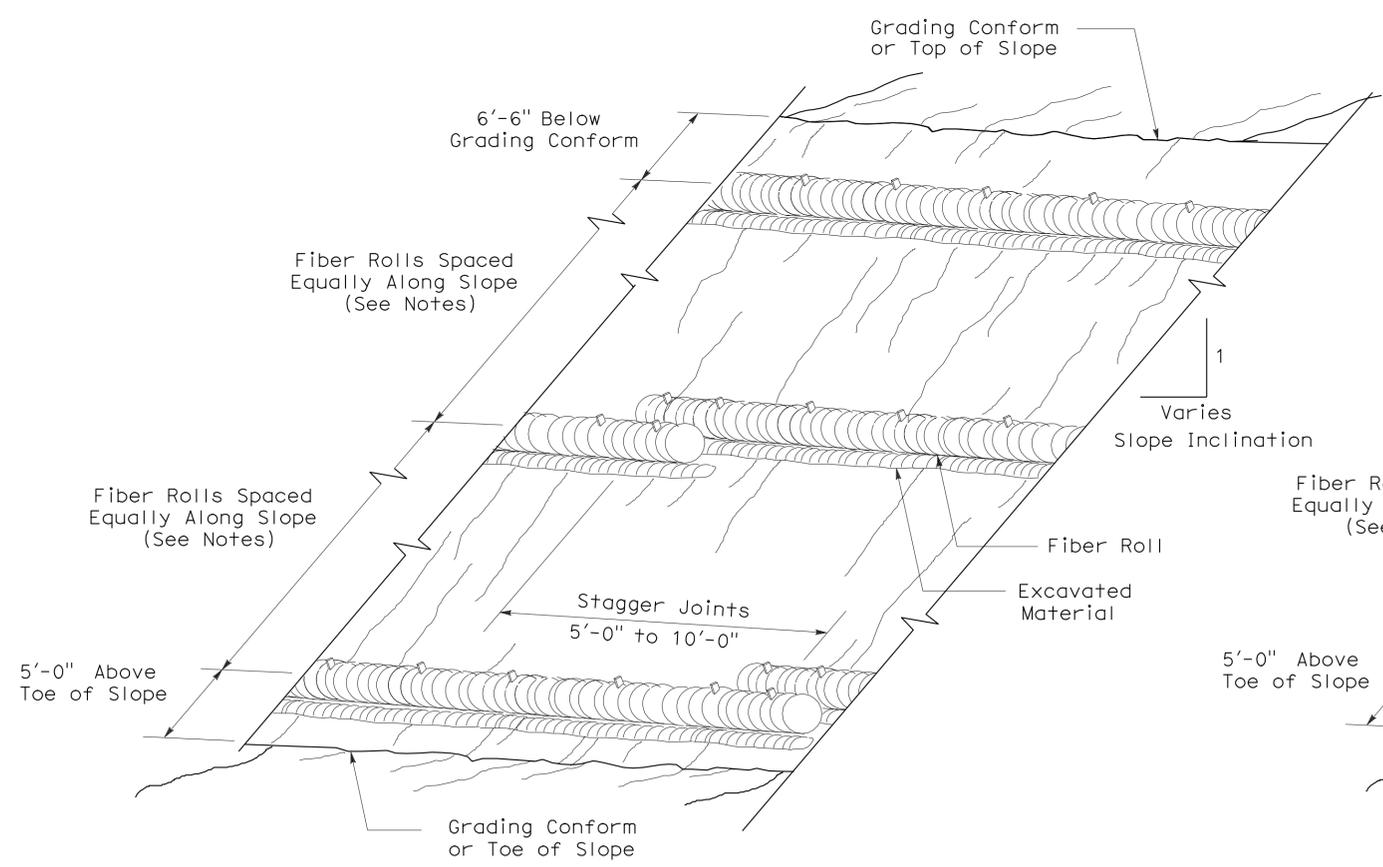
PLAN

TEMPORARY FIBER ROLL (TYPE 2)



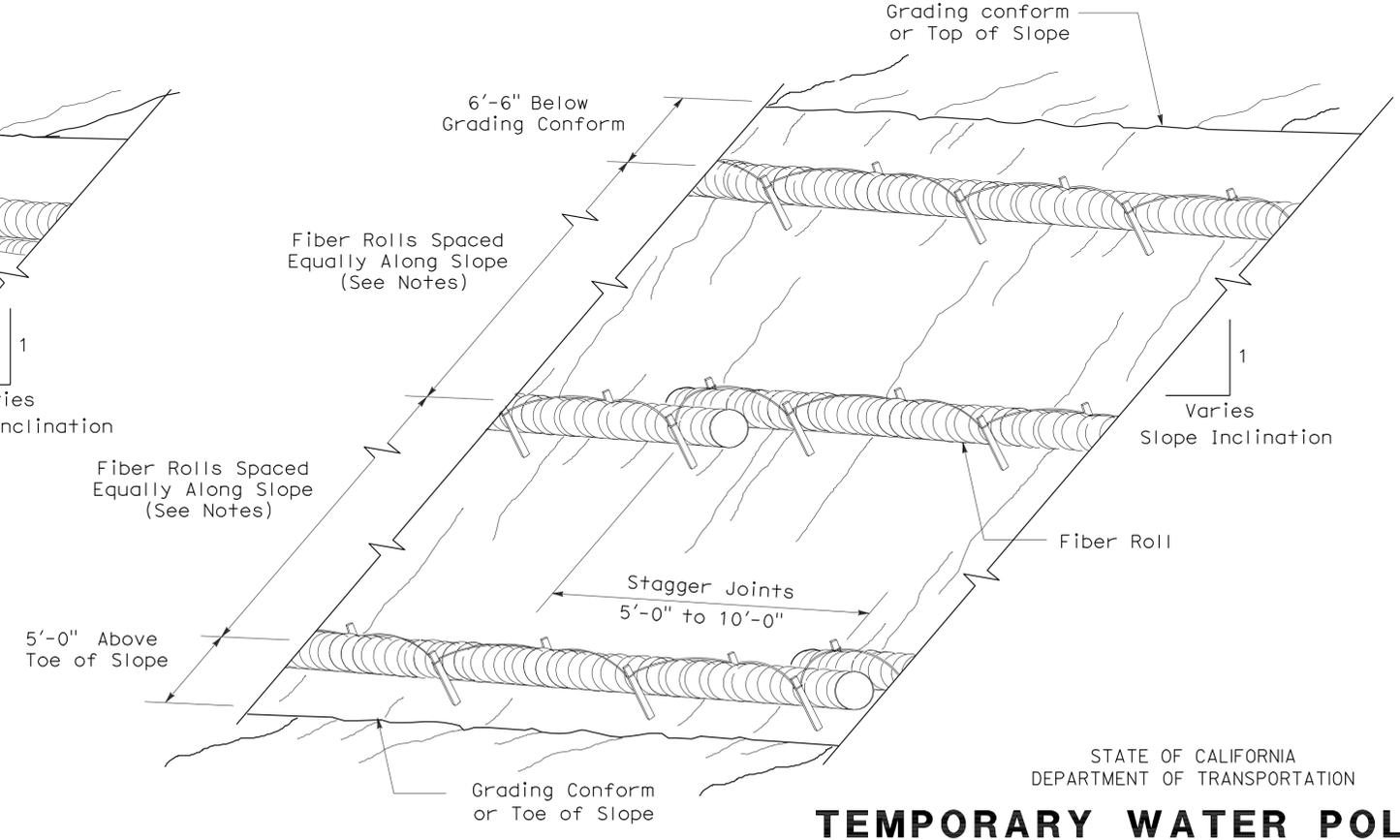
ELEVATION

STAKE NOTCH DETAIL



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.

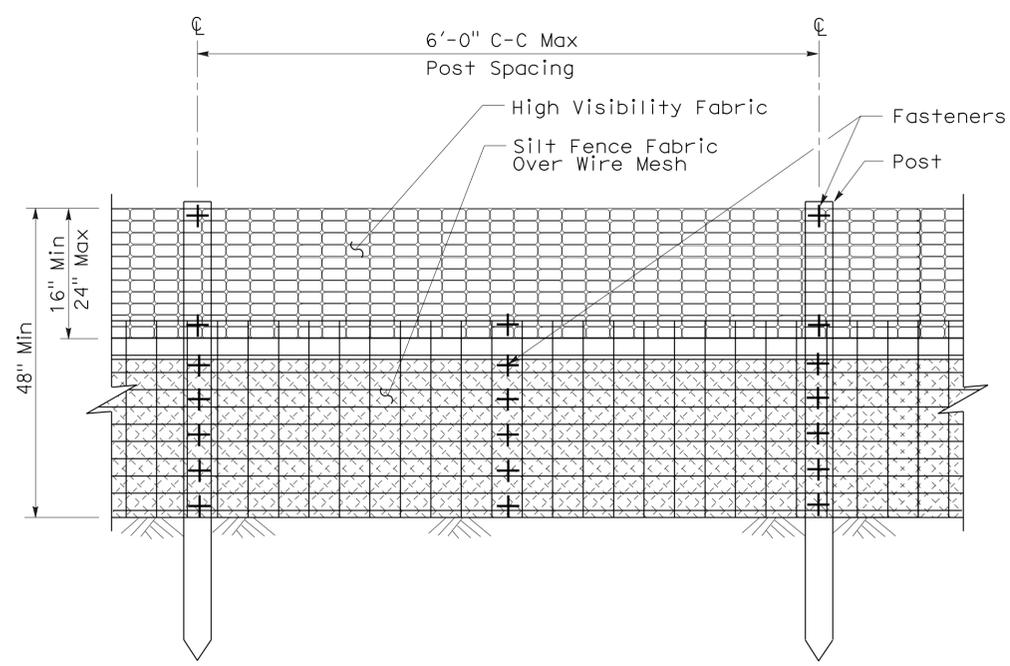
REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

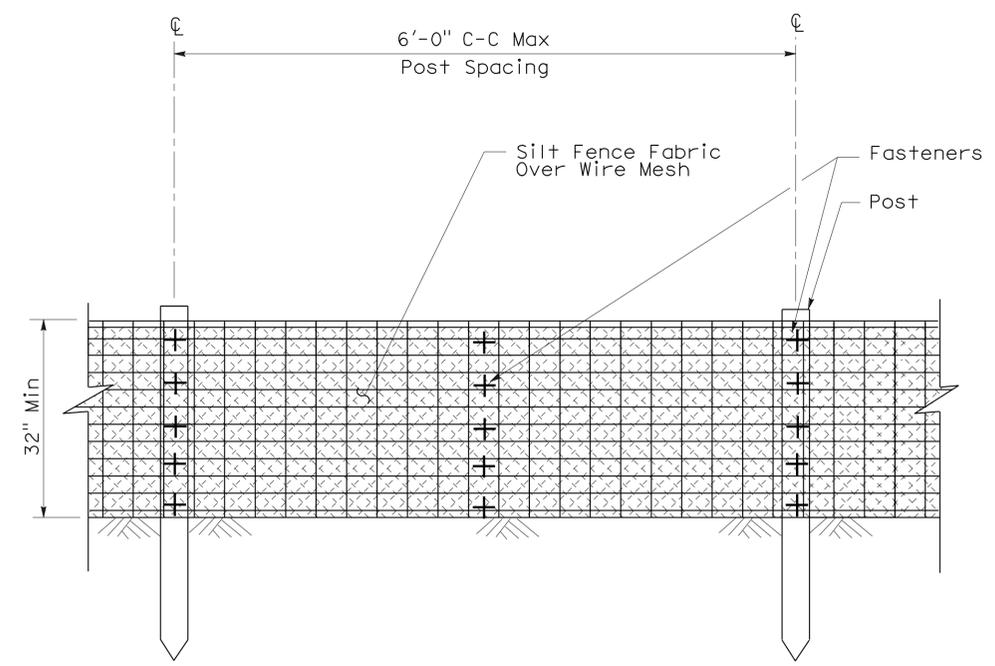
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	137	271

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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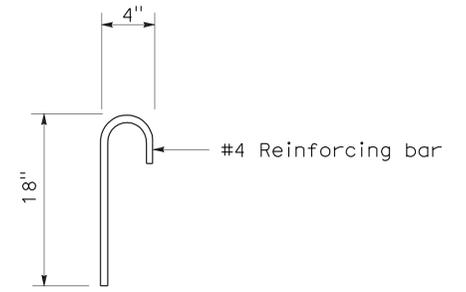
To accompany plans dated 6-14-10



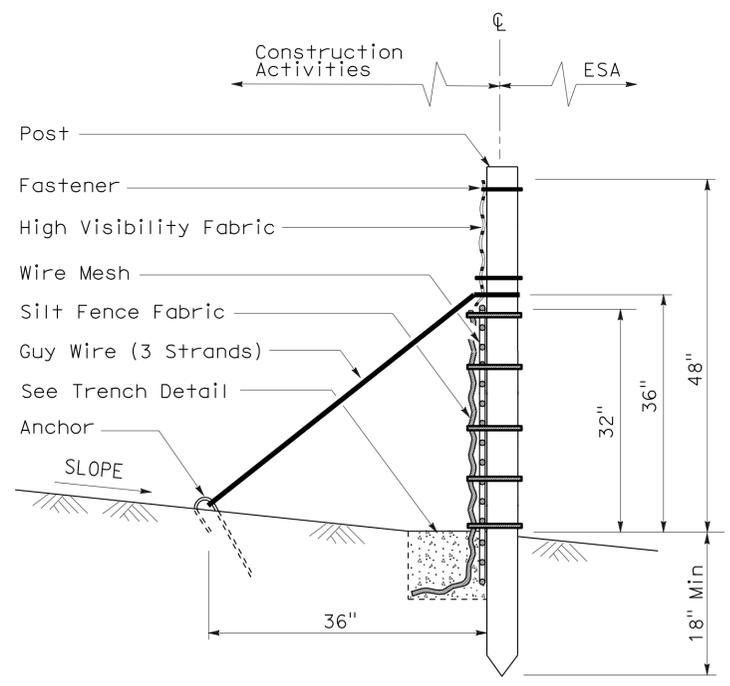
ELEVATION



ELEVATION

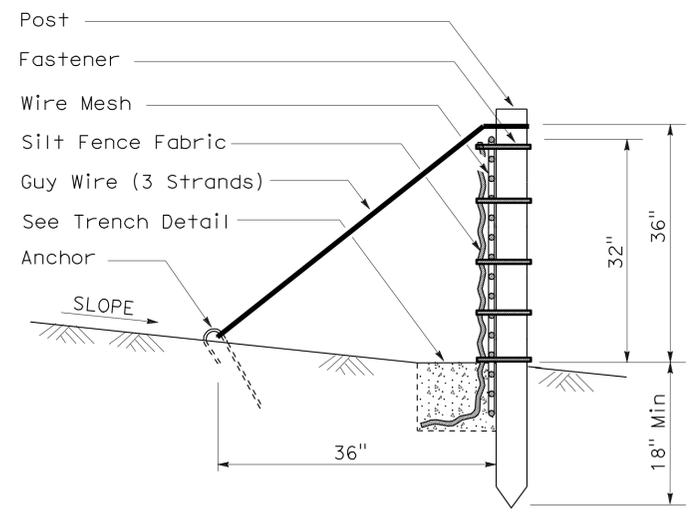


ANCHOR



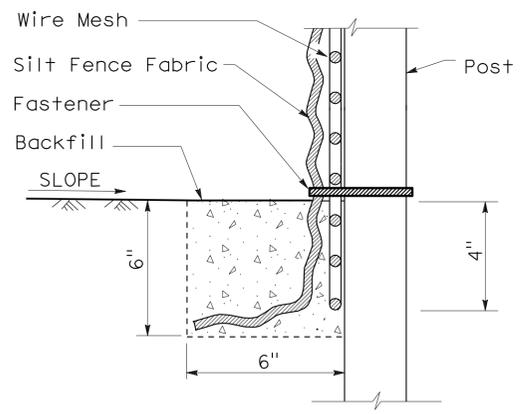
SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 1)



SECTION

TEMPORARY REINFORCED SILT FENCE (TYPE 2)



SECTION
TRENCH DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY REINFORCED SILT FENCE)
 NO SCALE
 NSP T60 DATED APRIL 3, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T60

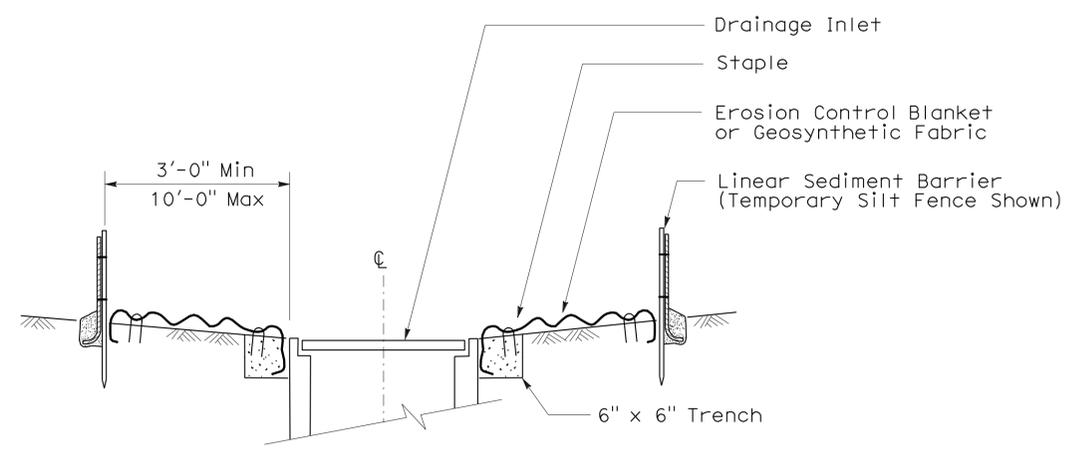
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	138	271

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE

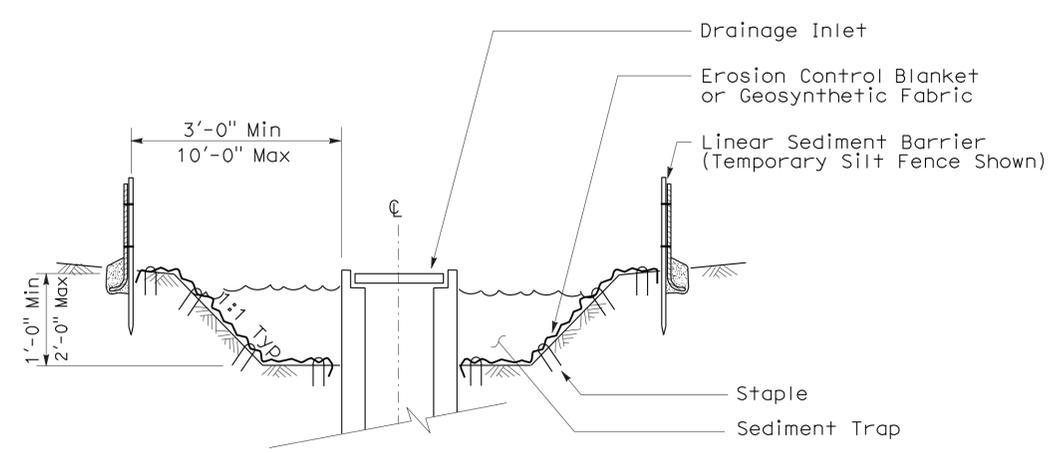
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-14-10

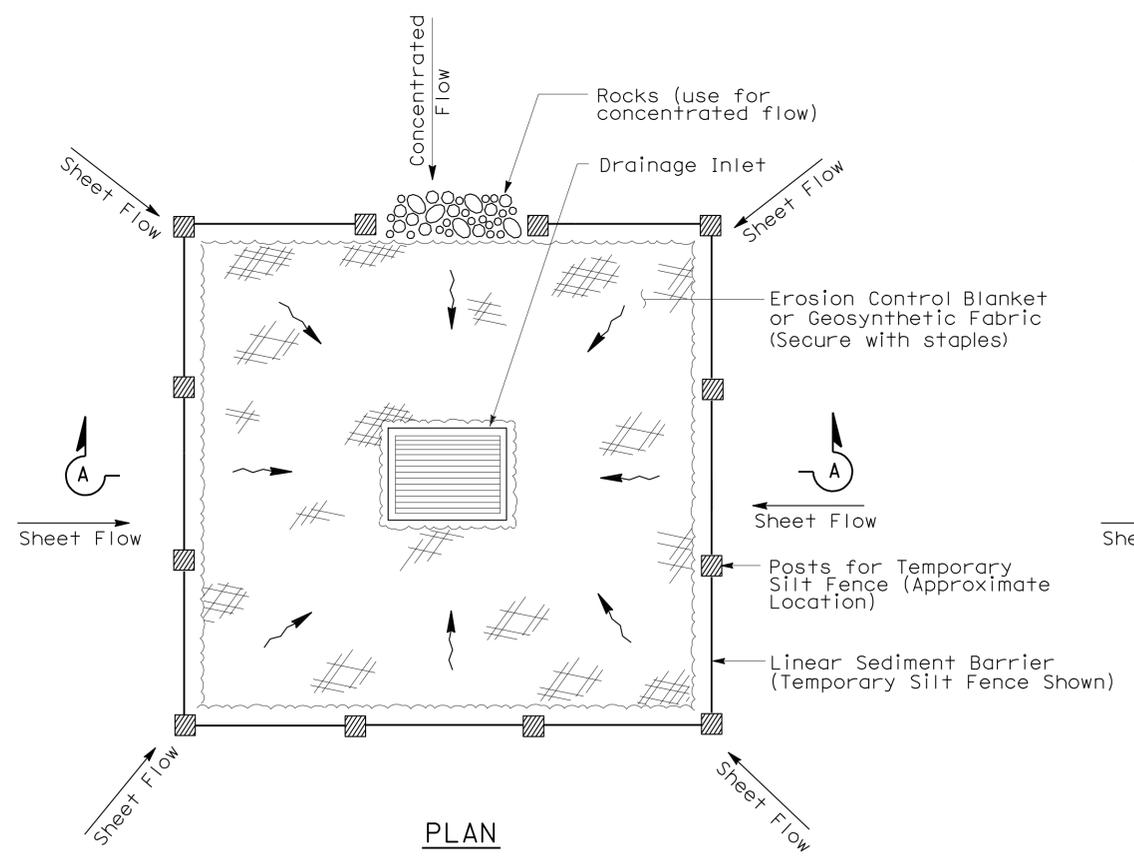
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
 2. Dimensions may vary to fit field conditions.



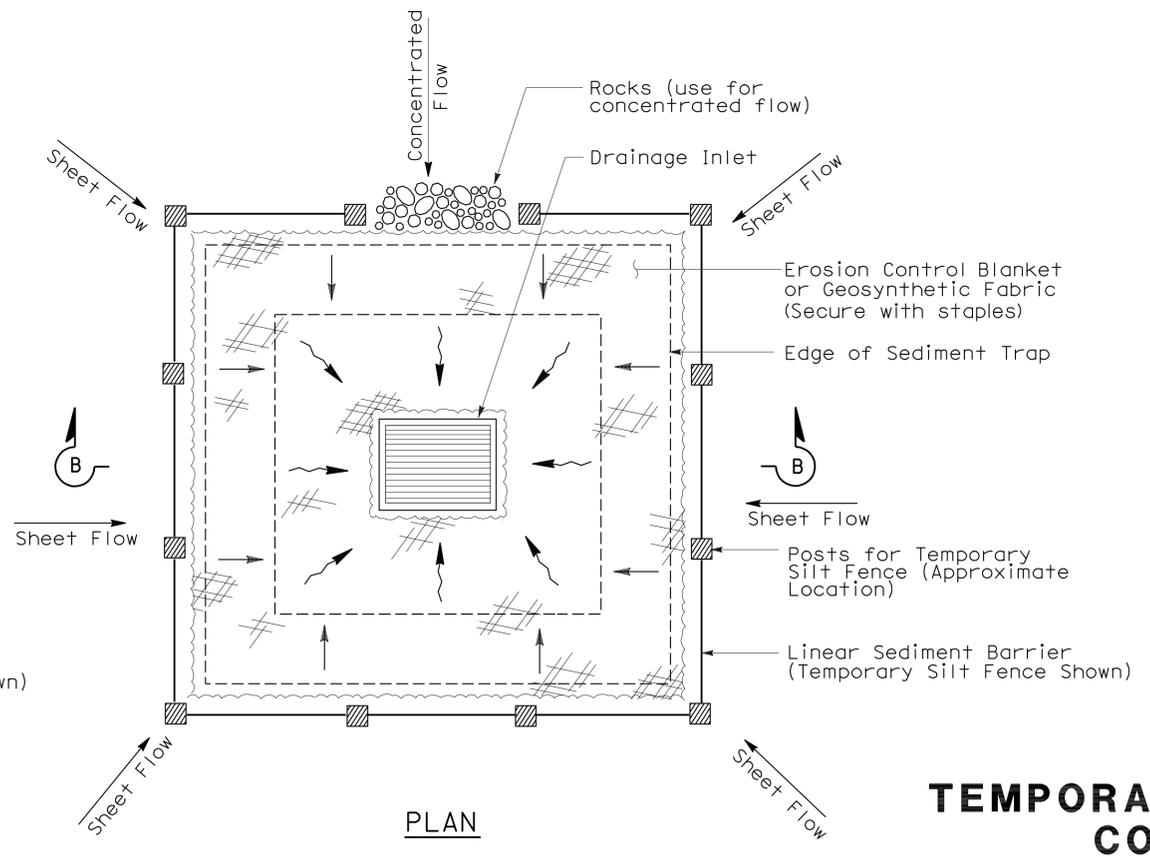
SECTION A-A



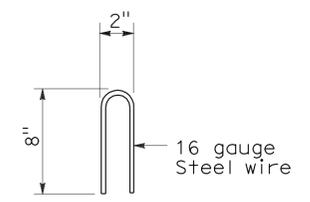
SECTION B-B



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)

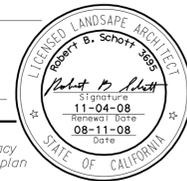
NO SCALE

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

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	139	271

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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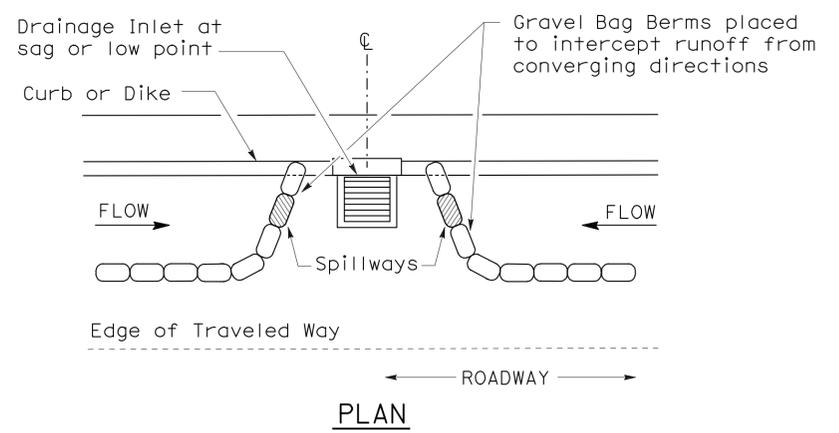


To accompany plans dated 6-14-10

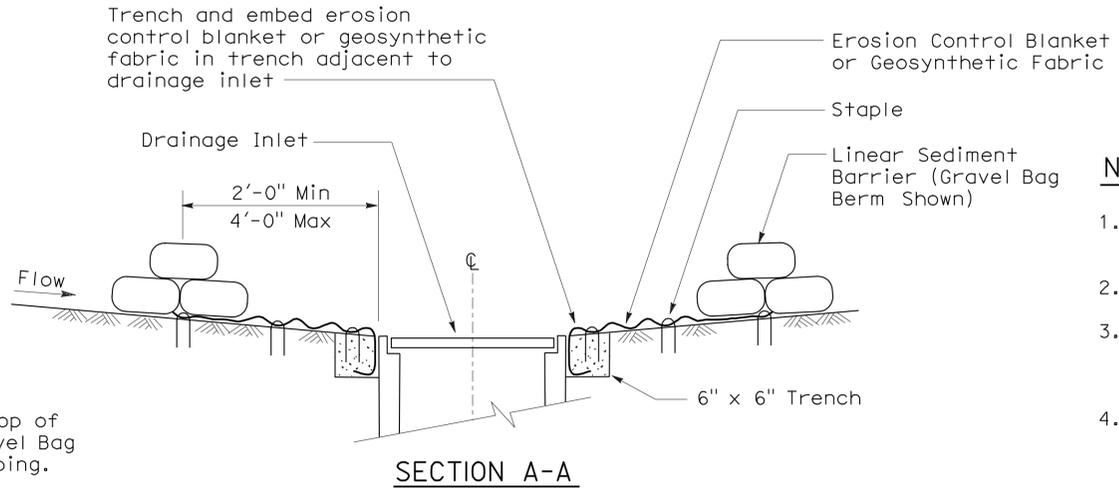
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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



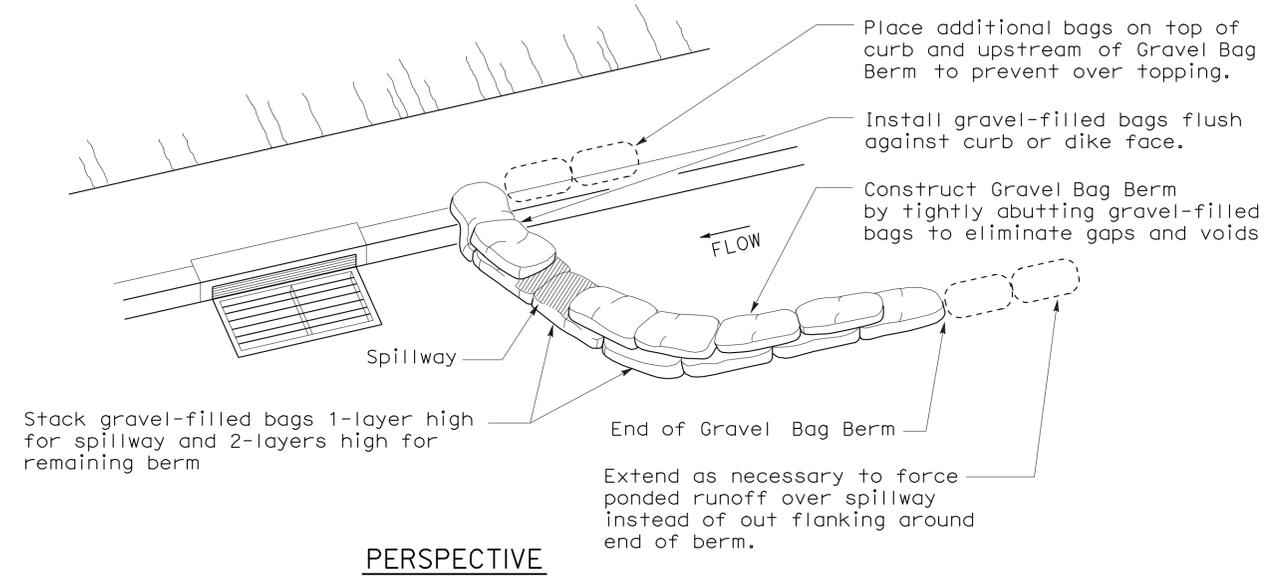
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



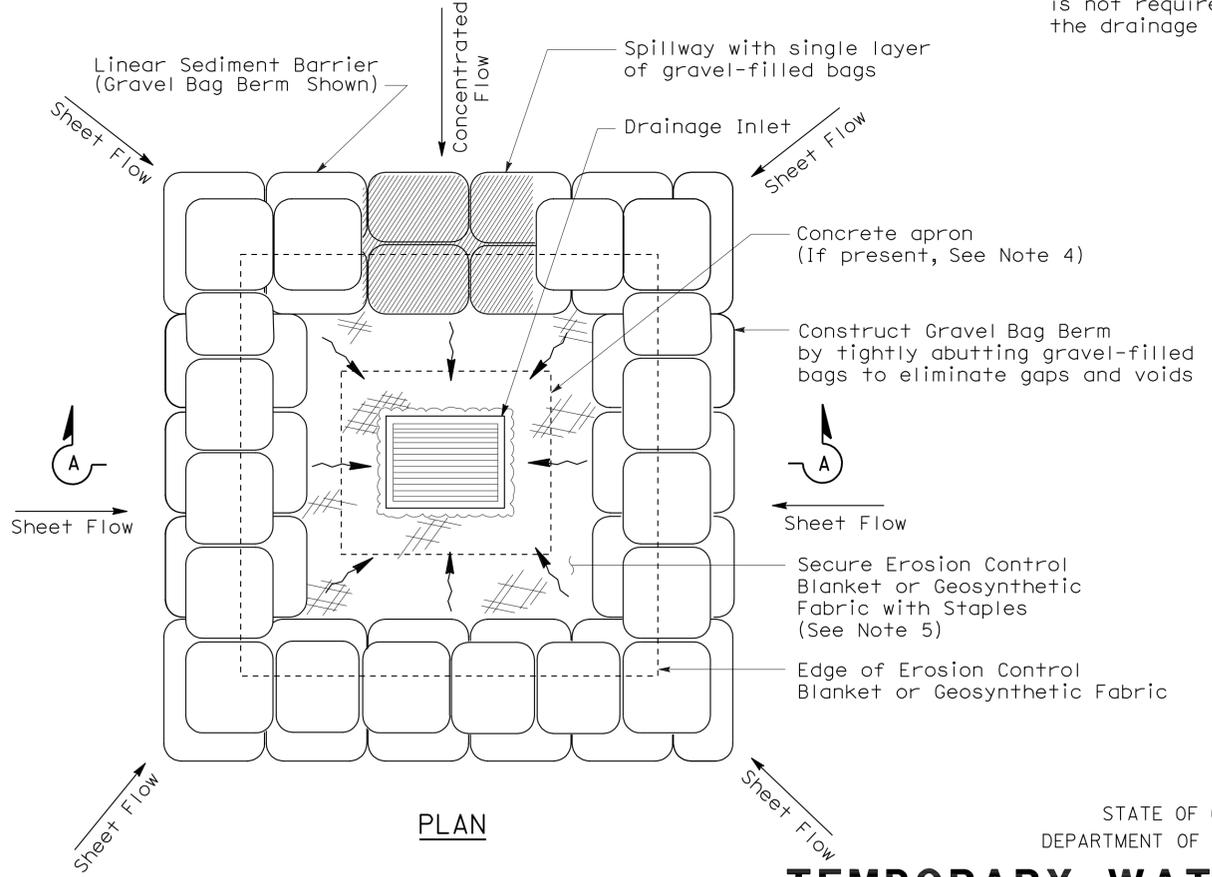
SECTION A-A

NOTES:

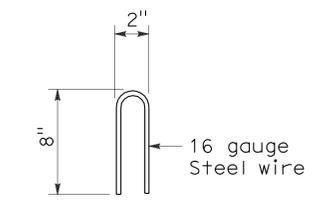
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



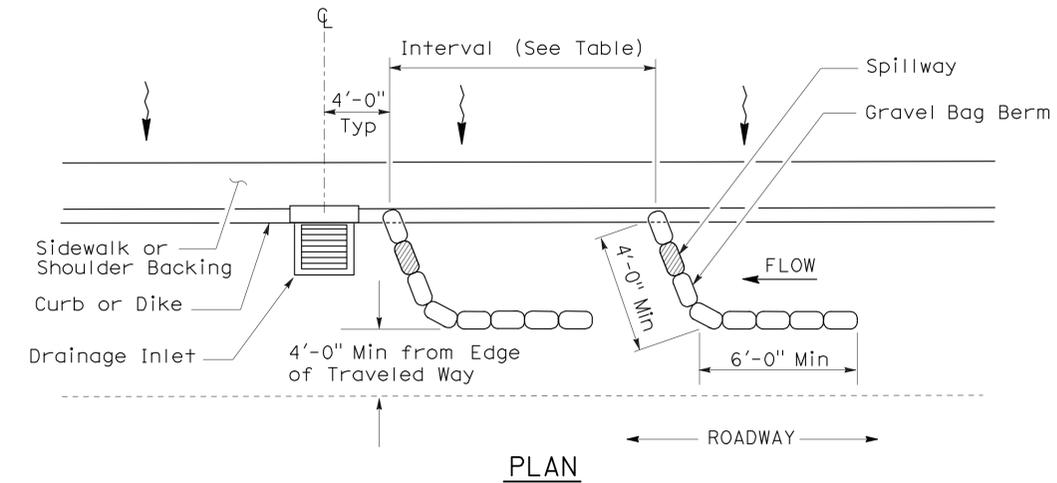
PERSPECTIVE



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



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

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.

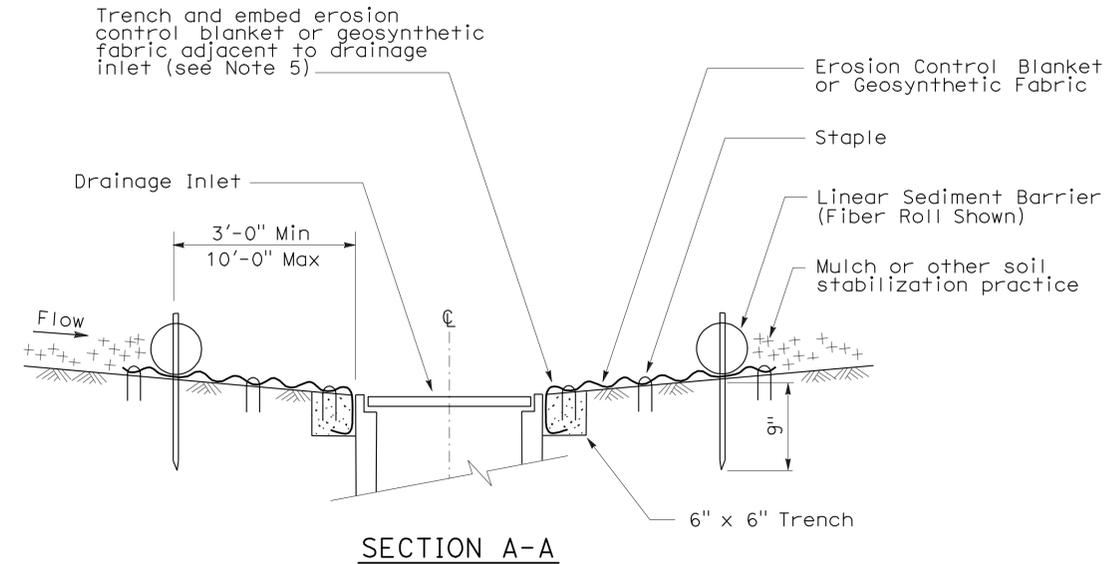
2006 NEW STANDARD PLAN NSP T62

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	140	271

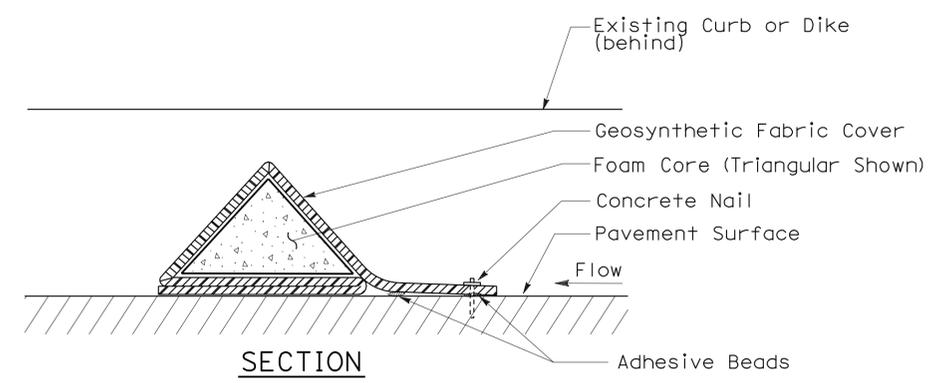
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

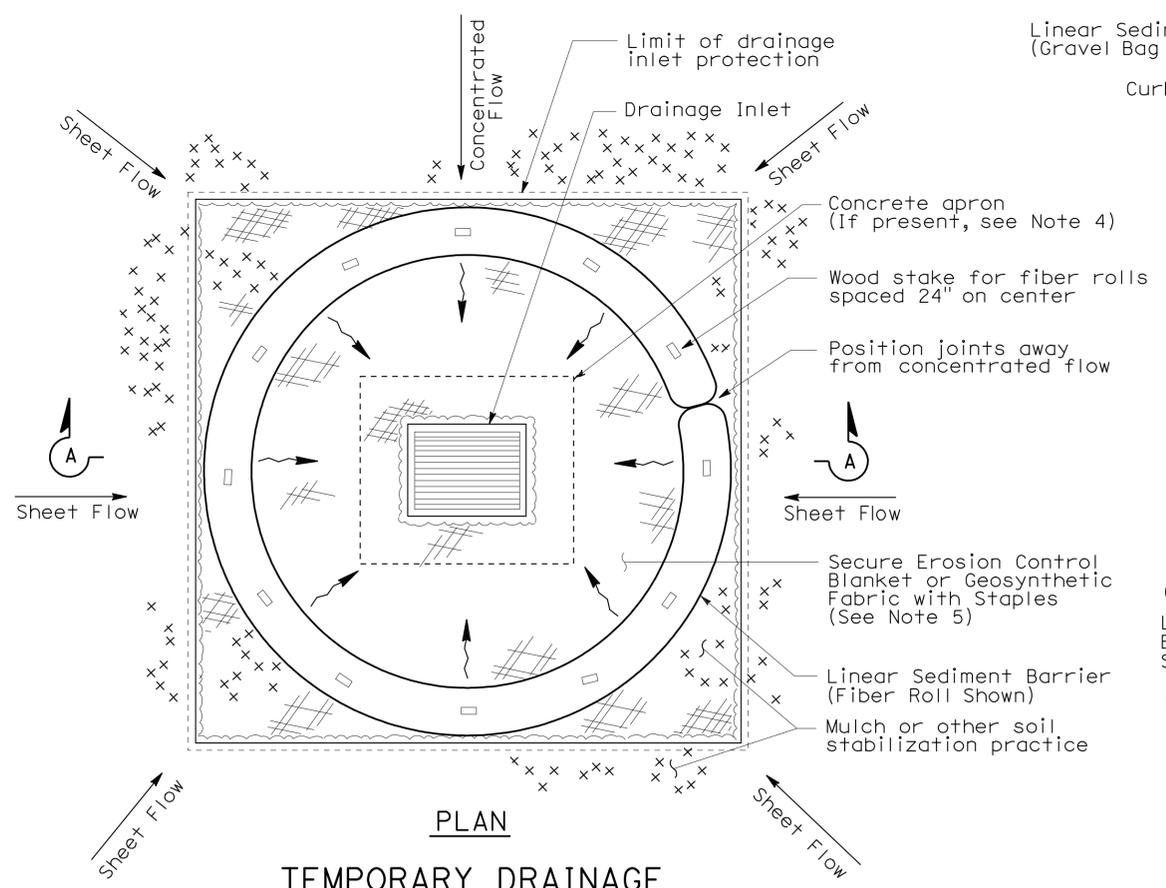


SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

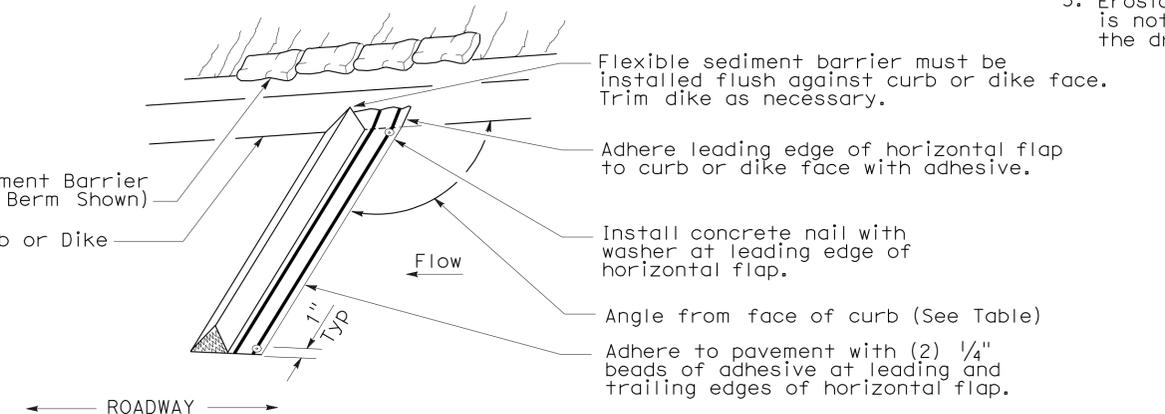
NOTES:

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.

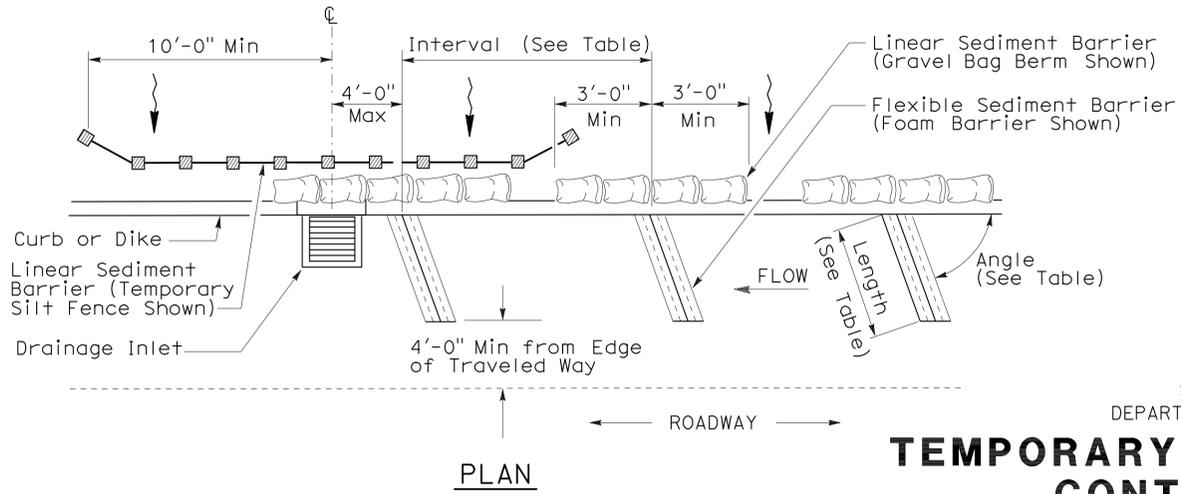
To accompany plans dated 6-14-10



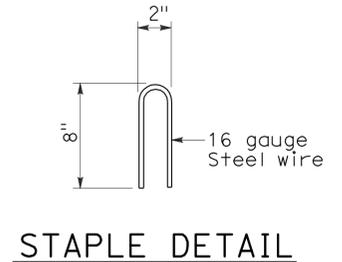
PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



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



STAPLE DETAIL

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

2006 NEW STANDARD PLAN NSP T63

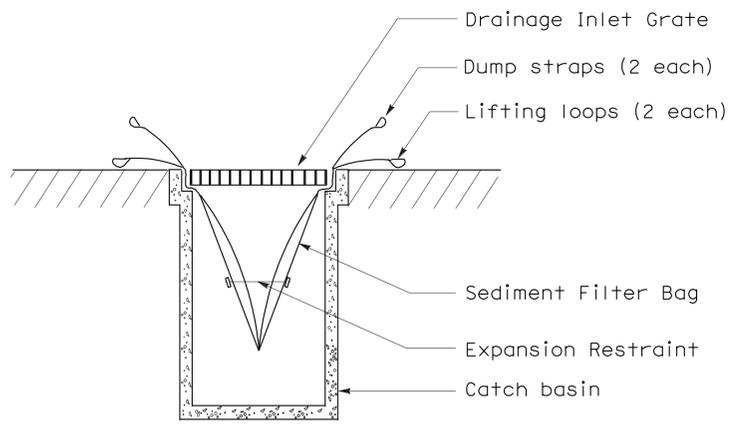
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	141	271

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

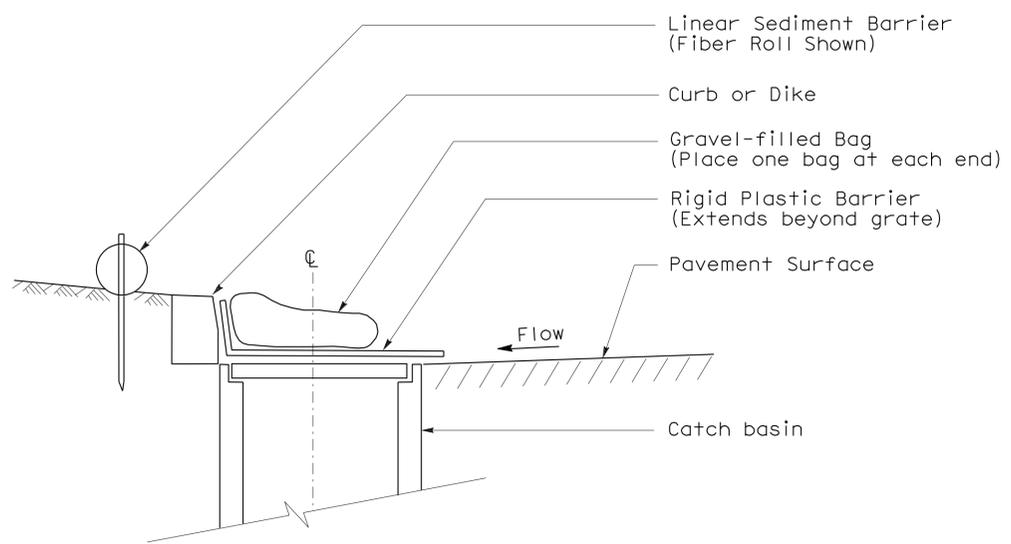
August 15, 2008
 PLANS APPROVAL DATE

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.

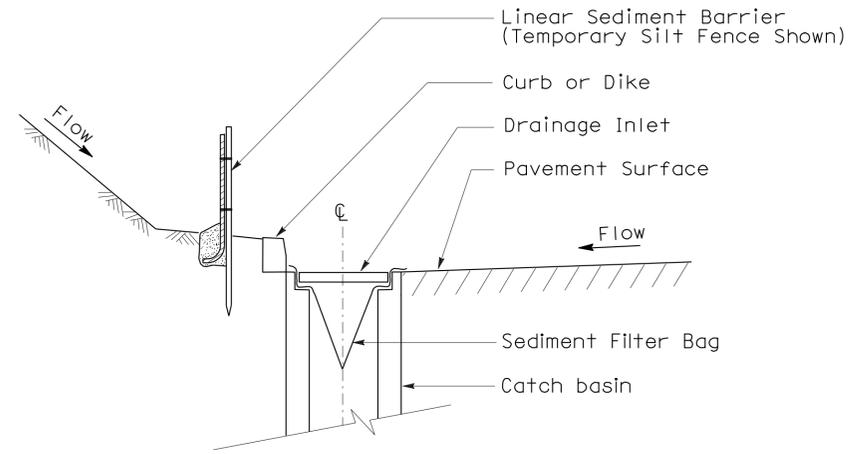
To accompany plans dated 6-14-10



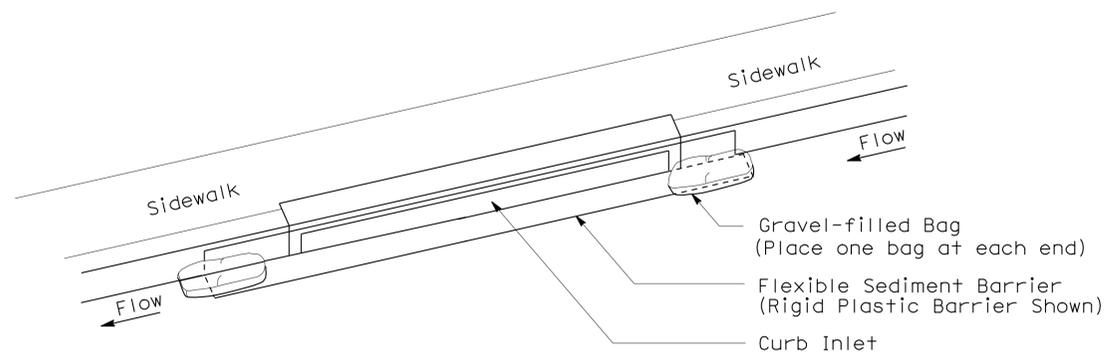
SECTION B-B
SEDIMENT FILTER BAG DETAIL



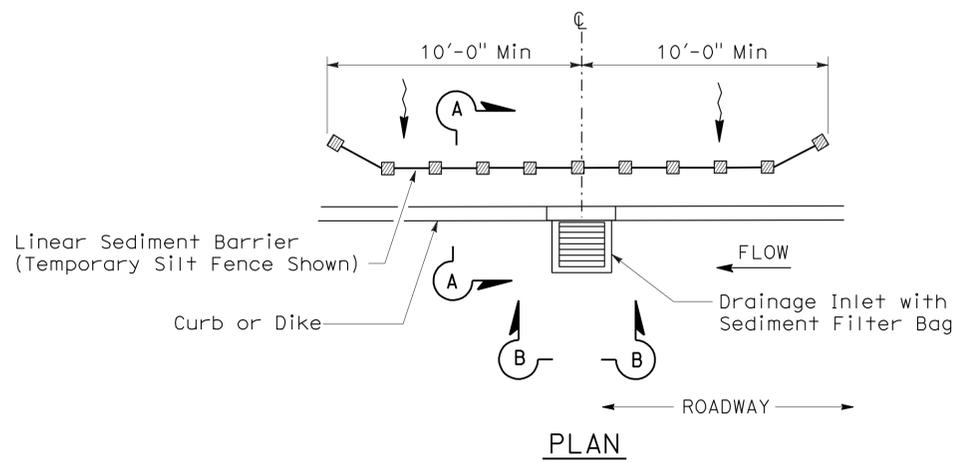
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



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
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	142	271

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

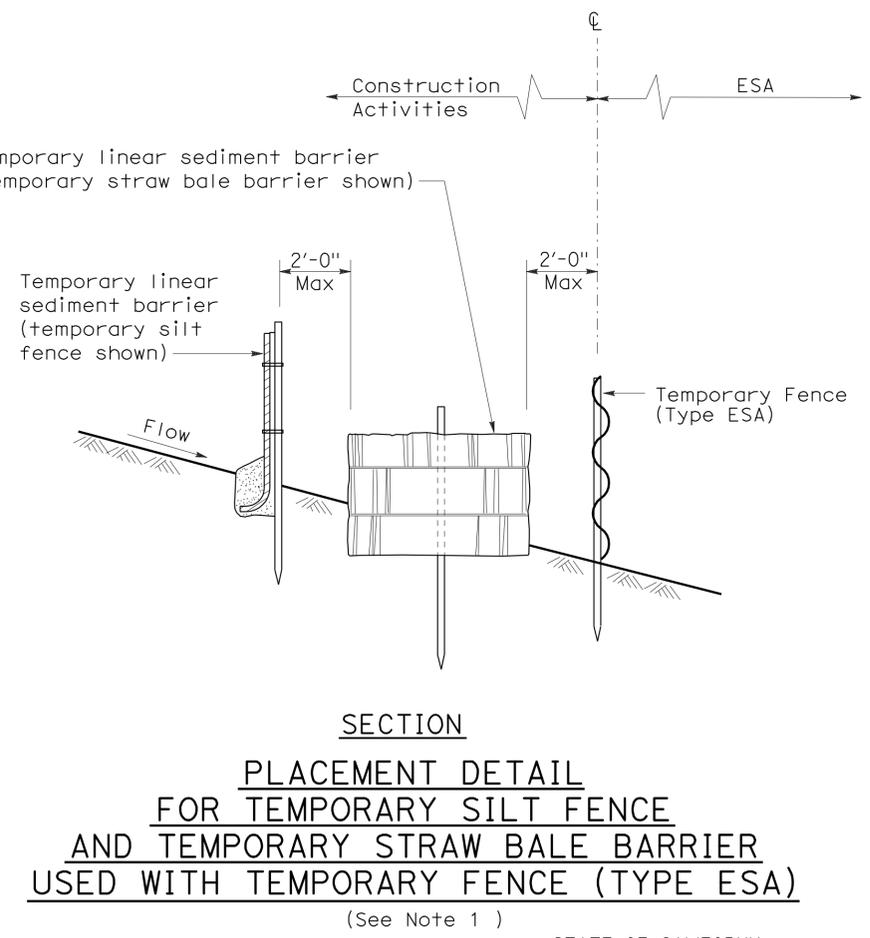
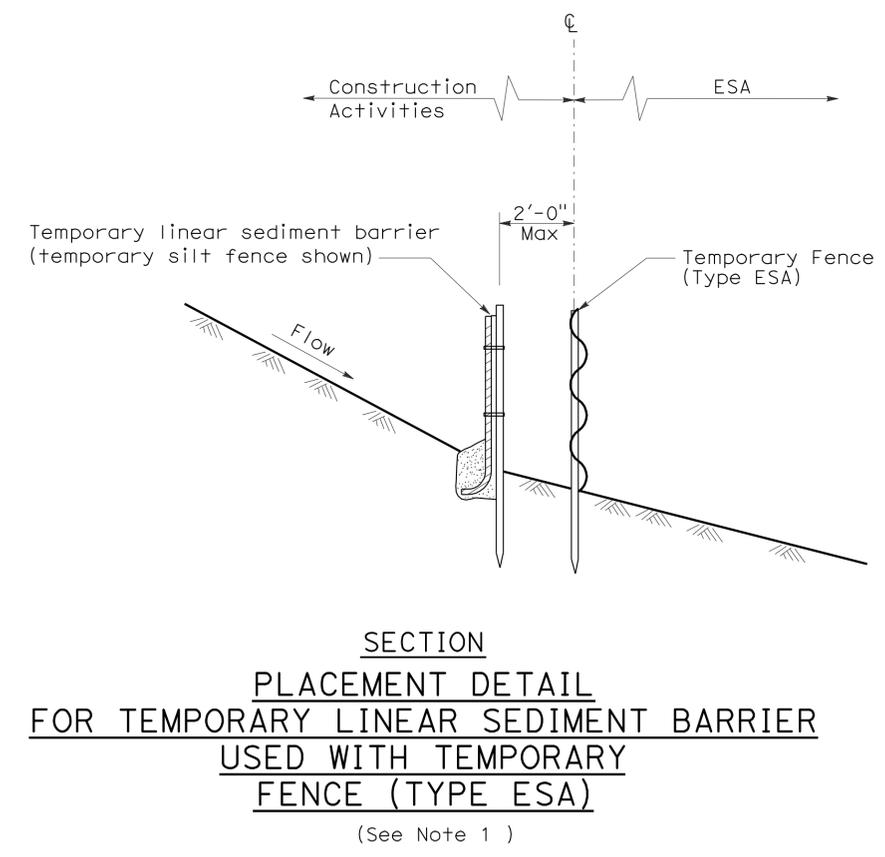
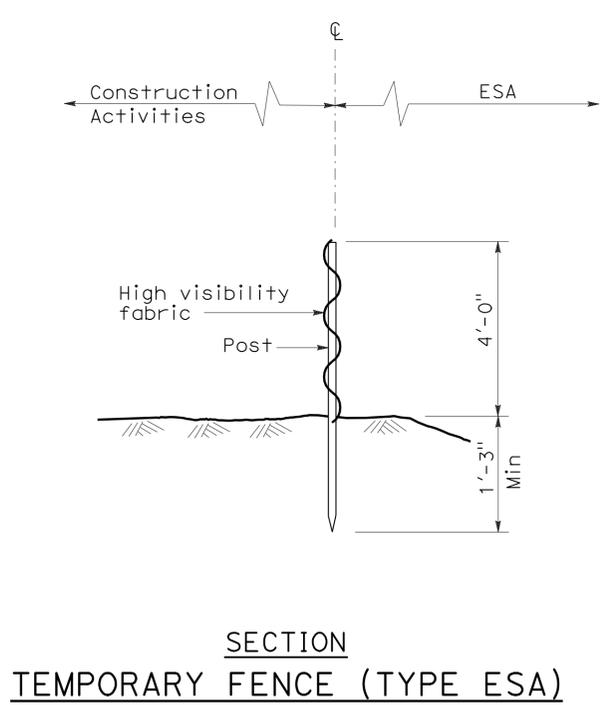
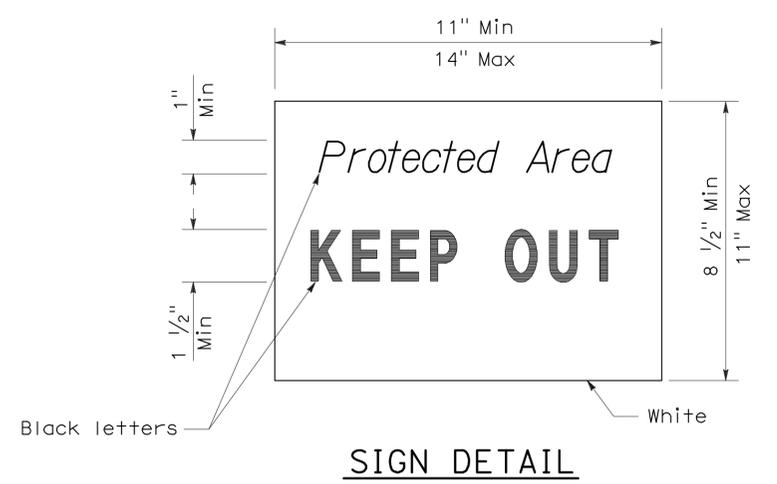
April 3, 2009
PLANS APPROVAL DATE

Robert B. Schott
Signature
11-30-10
Renewal Date
2-25-09
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 6-14-10

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS
[TEMPORARY FENCE (TYPE ESA)]
NO SCALE

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

NEW STANDARD PLAN NSP T65

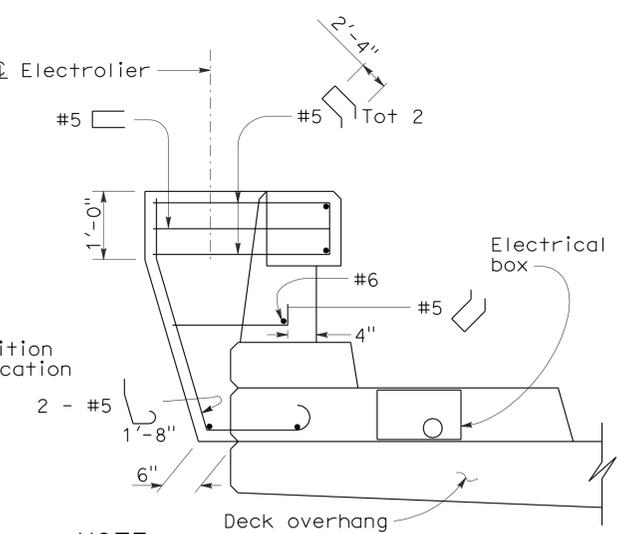
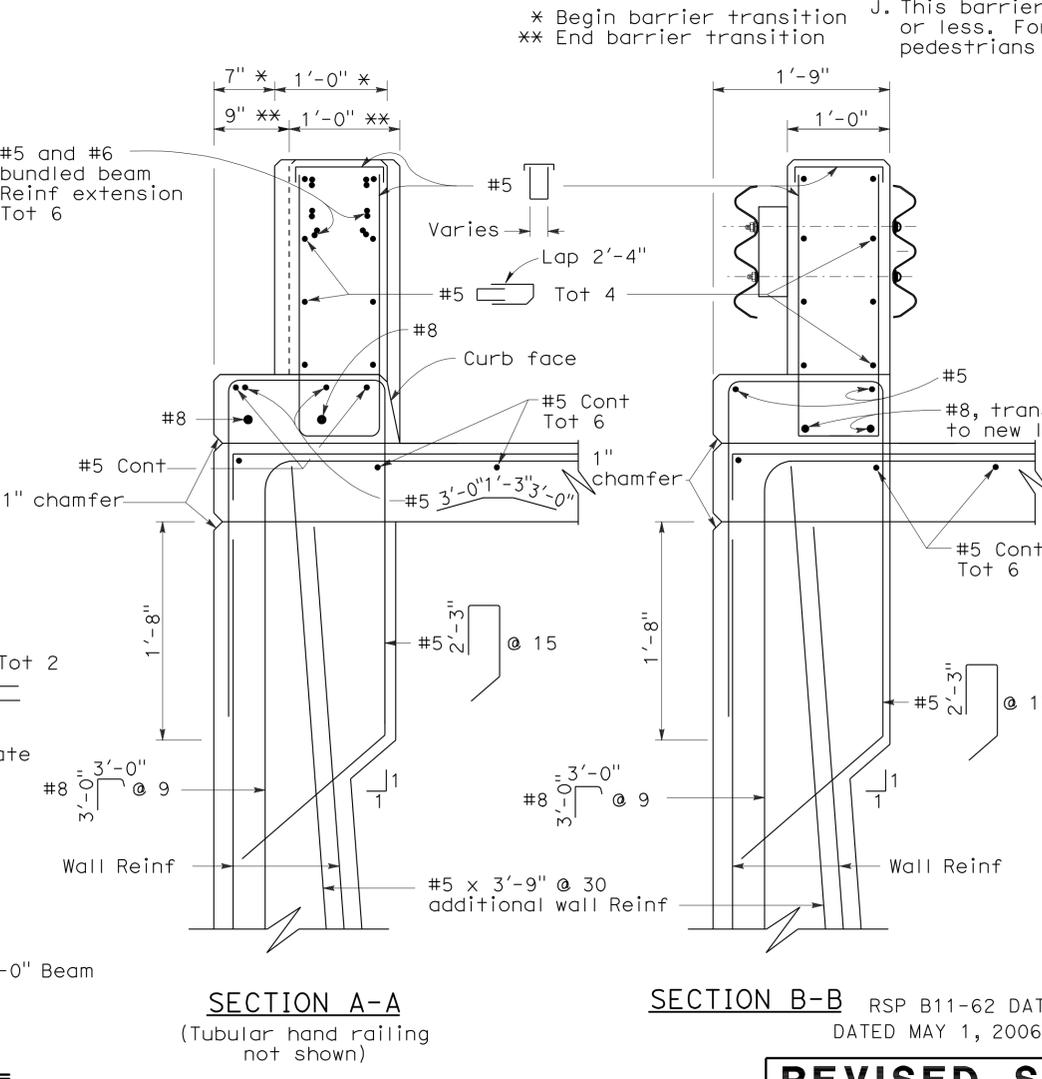
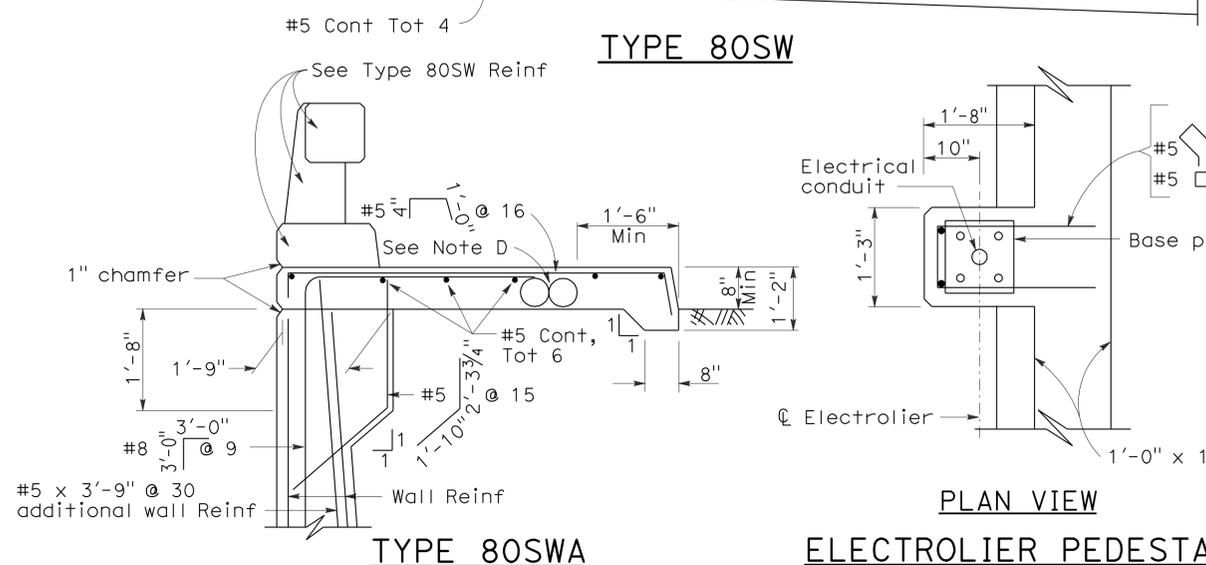
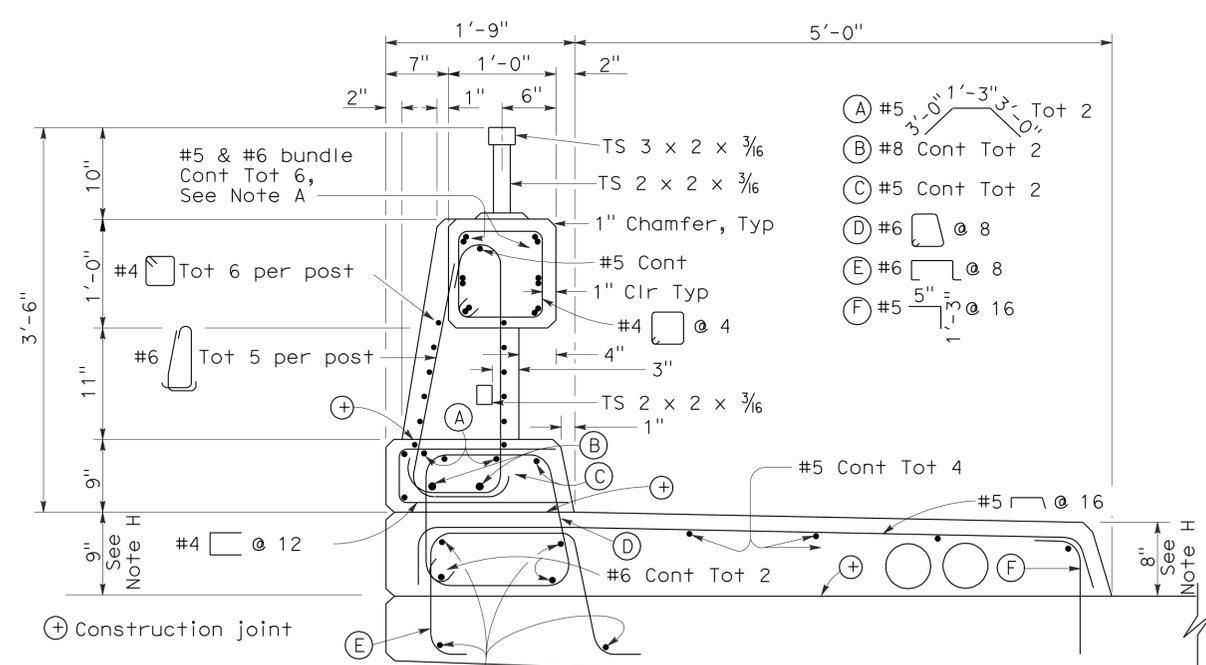
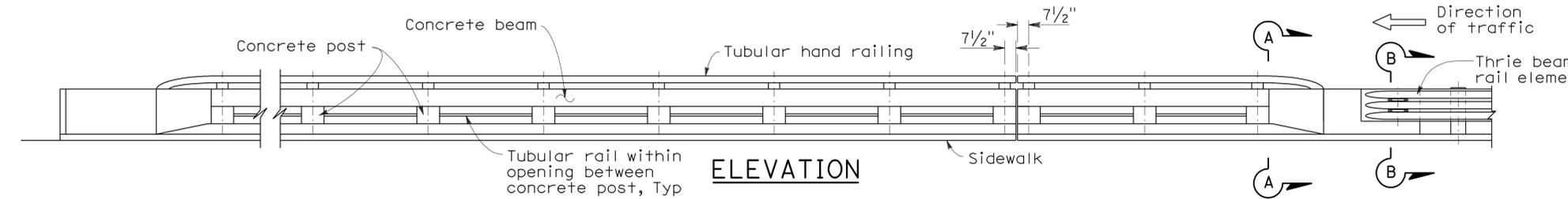
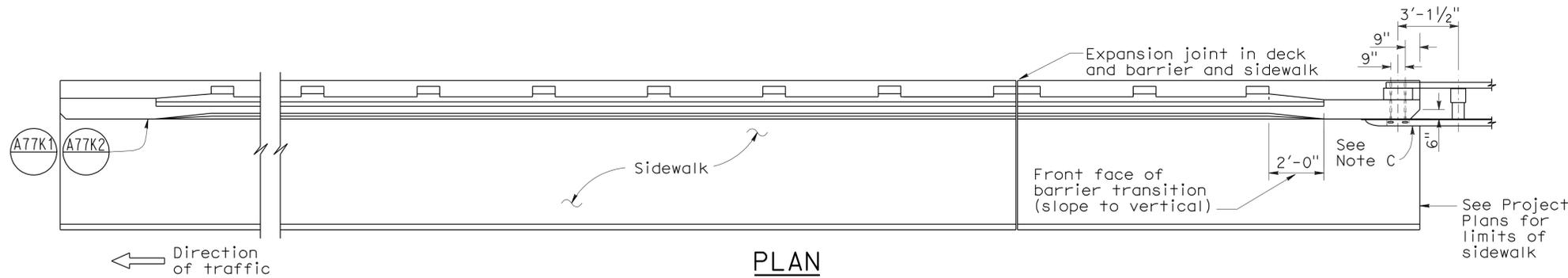
2006 NEW STANDARD PLAN NSP T65

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	144	271

REGISTERED CIVIL ENGINEER	
January 18, 2008	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	
Tillot Satter	
No. C42892	
Exp. 03-31-08	
CIVIL	
STATE OF CALIFORNIA	

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- NOTES:**
- A. No lap splicing allowed on the longitudinal rail reinforcing. Splicing shall be staggered.
 - B. For electrical details, see Revised Standard Plans RSP ES-9A and RSP ES-9C and Standard Plans ES-9B, ES-9D and ES-9E. See Project Plans for electrical layout.
 - C. For typical metal railing connection details not shown, see Standard Plans A77K1 and A77K2.
 - D. A minimum of two - 5" round openings are required for future utilities in addition to those on other plan sheets. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down.
 - E. Chain link railing is not allowed on Type 80SW Barrier.
 - F. Walls are to be backfilled before railing is placed.
 - G. Terminate all longitudinal curb, sidewalk, and deck reinforcement in standard 90° hooks.
 - H. Dimensions will vary with cross slope and with certain thickness of surfacing.
 - I. Expansion joint to match deck joint, see Standard Plan B11-63 for expansion joint details.
 - J. This barrier is to be used only for speeds of 45 MPH or less. For speeds greater than 45 MPH, pedestrians should be protected by a separation traffic barrier.

NOTE:
Pedestal design for 1'-0" base plate.

BARRIER MODIFICATION FOR ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 80SW (SHEET 1 OF 3)

NO SCALE

2006 REVISED STANDARD PLAN RSP B11-62

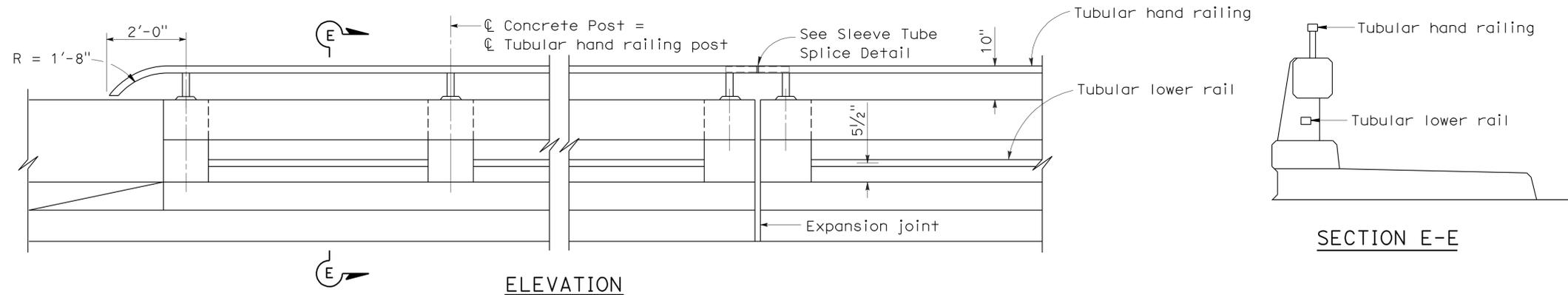
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	145	271

REGISTERED CIVIL ENGINEER
 Tiltat Satter
 No. C42892
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA

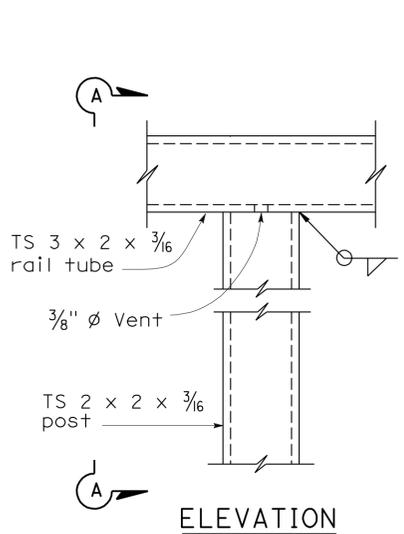
October 5, 2007
 PLANS APPROVAL DATE

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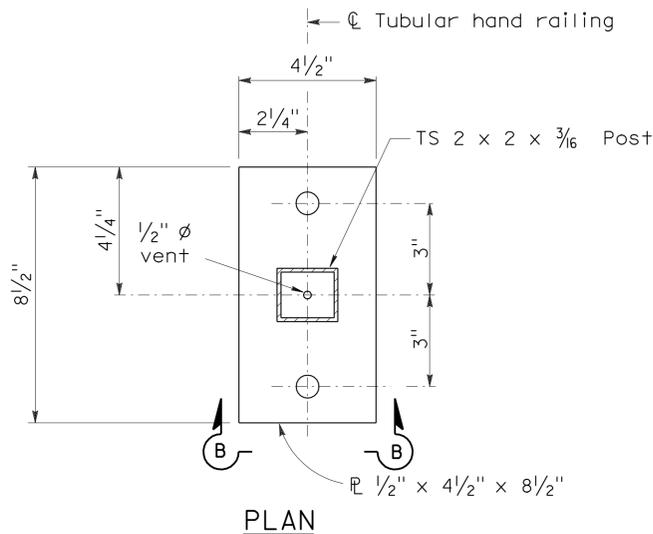
To accompany plans dated 6-14-10



SECTION E-E

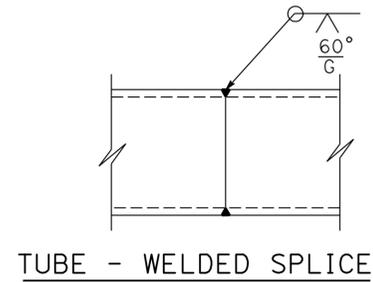


ELEVATION

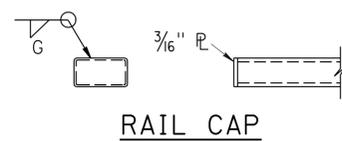


PLAN

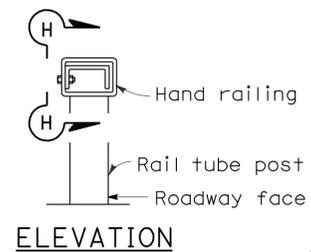
This plate detail is restricted to Tubular hand railing (TS 2 x 2 x 3/16 post)



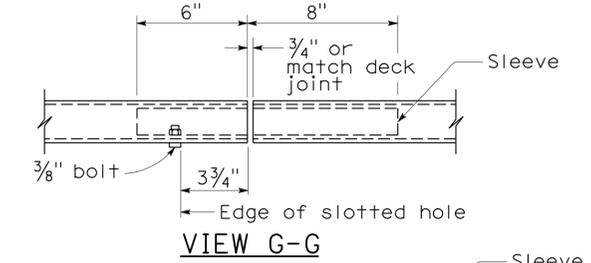
TUBE - WELDED SPLICE



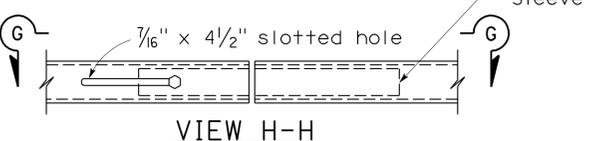
RAIL CAP



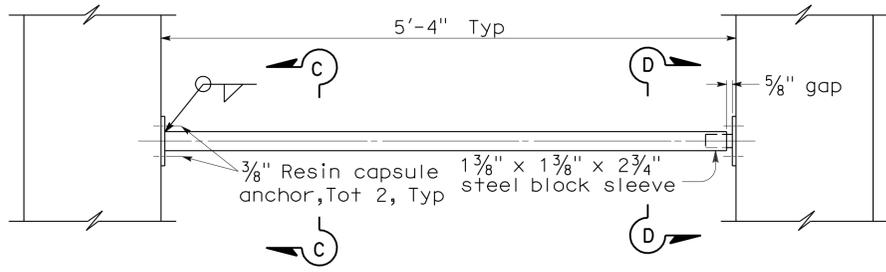
ELEVATION



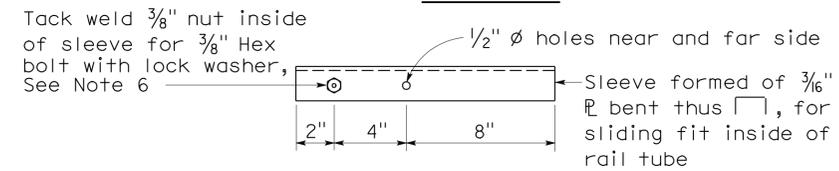
VIEW G-G



VIEW H-H



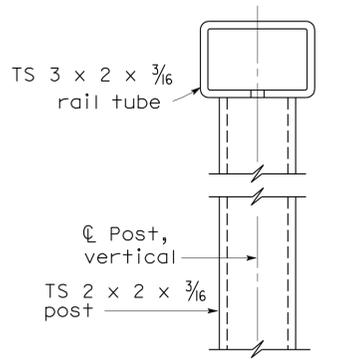
LOWER RAIL DETAIL



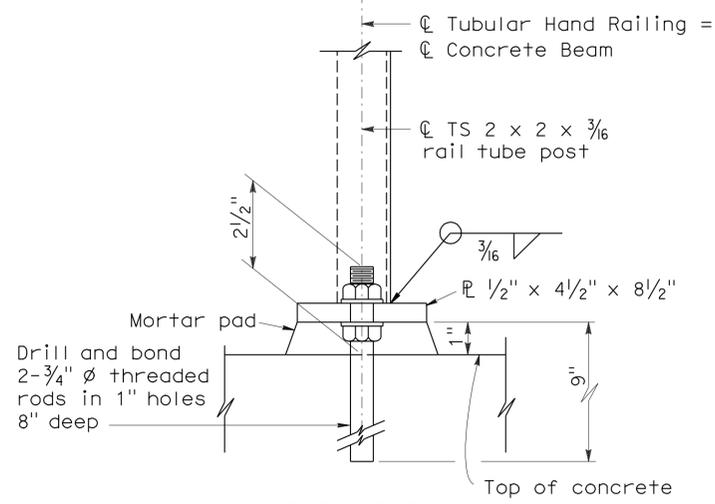
SLEEVE TUBE SPLICE DETAIL

NOTES:

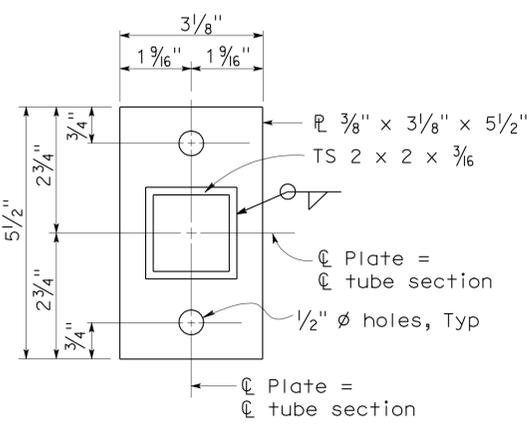
- Galvanize rail assembly after fabrication.
- Posts shall be normal to railing.
- Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length accordingly.
- Top rail tube shall be continuous over not less than two posts except a short length is permitted near deck or wall joints, electroliers, or other rail discontinuities.
- See project plans for limits of Tubular Hand railing.
- 3/8" nut tack welded to sleeve may be replaced by drilled and tapped hole in sleeve.



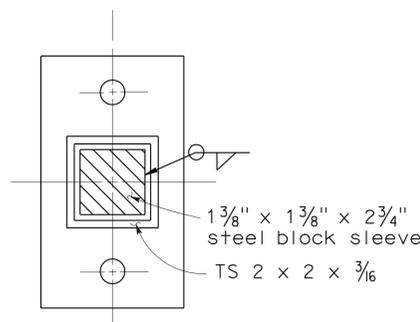
SECTION A-A



ELEVATION SECTION B-B



SECTION C-C



SECTION D-D

TUBULAR RAILING CONNECTION DETAILS

See Section C-C for details not shown RSP B11-64 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B11-64 DATED MAY 1, 2006 - PAGE 280 OF THE STANDARD PLANS BOOK DATED MAY 2006.

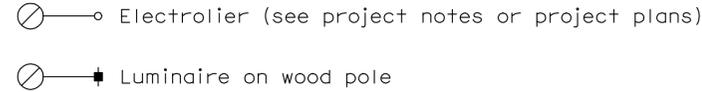
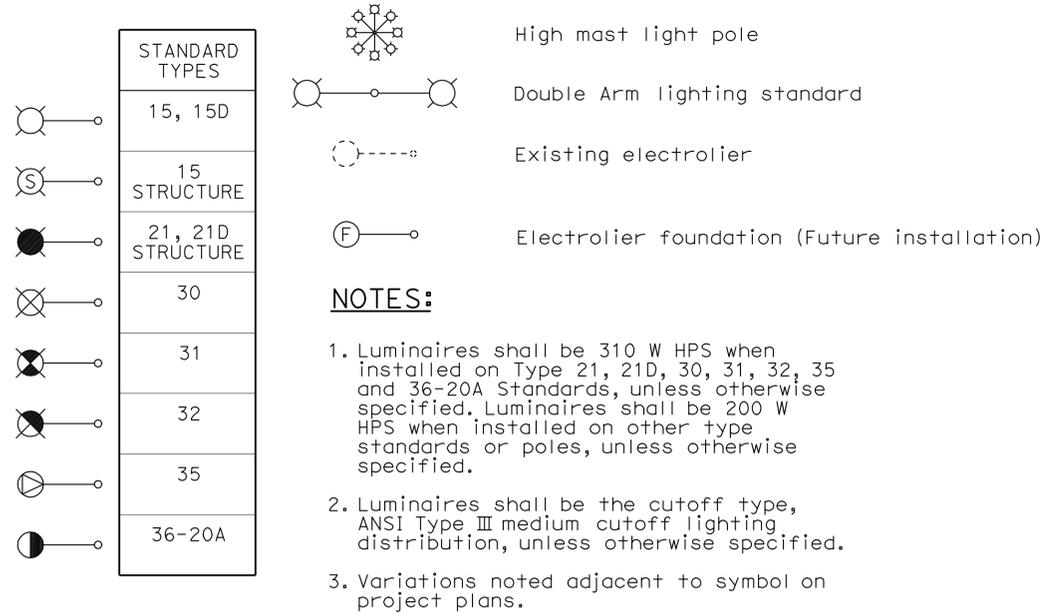
REVISED STANDARD PLAN RSP B11-64

2006 REVISED STANDARD PLAN RSP B11-64

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
 TYPE 80SW
 (SHEET 3 OF 3)**

NO SCALE

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, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
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

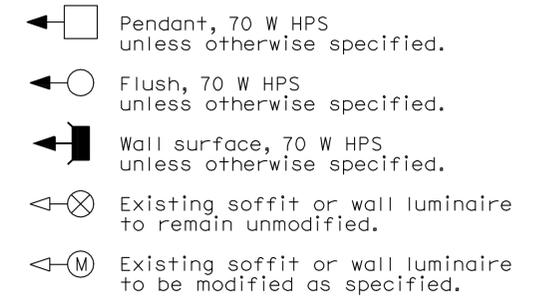
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	146	271

REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 6-14-10

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
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	147	271

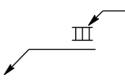
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-14-10

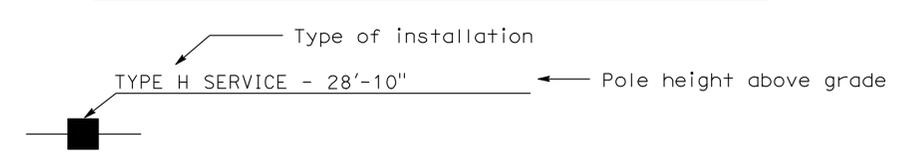
CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH	---oh	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

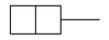
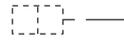
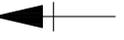
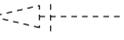
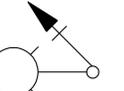
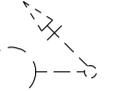
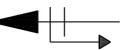
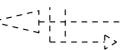
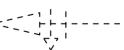
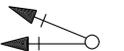
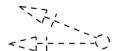
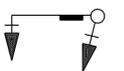
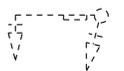
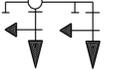
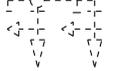
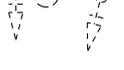
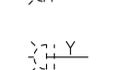
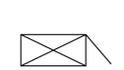
POLE-MOUNTED SERVICE DESIGNATION



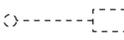
ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT

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 lowered "LG" indicates lowered 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

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

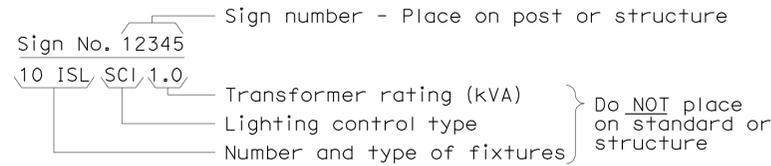
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

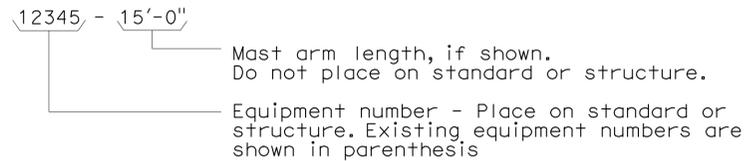
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

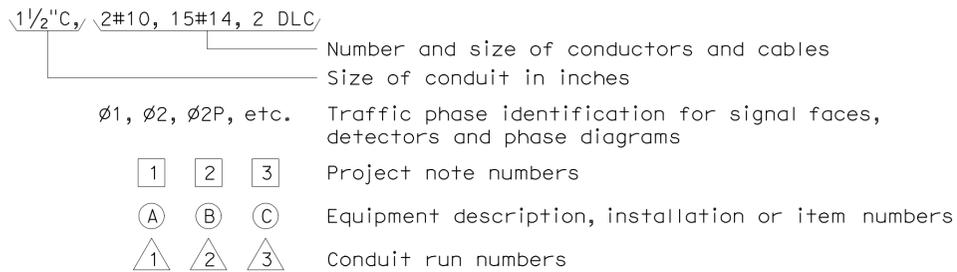
ILLUMINATED SIGN IDENTIFICATION NUMBER:



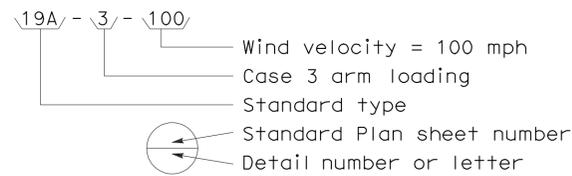
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



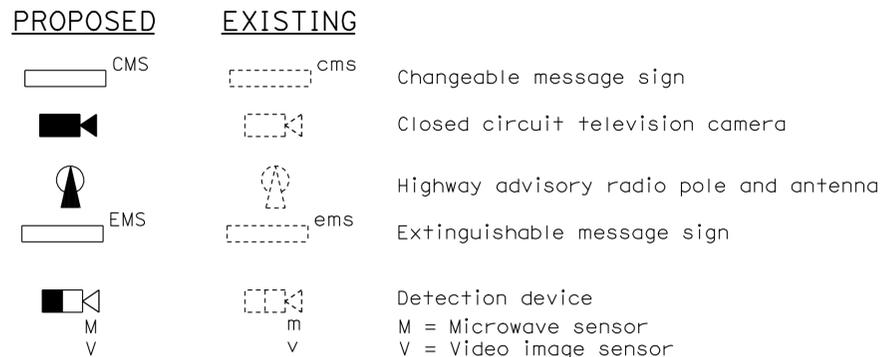
CONDUIT AND CONDUCTOR IDENTIFICATION:



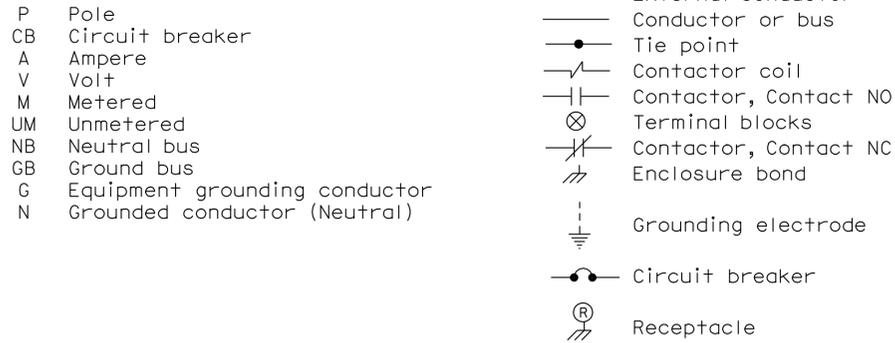
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



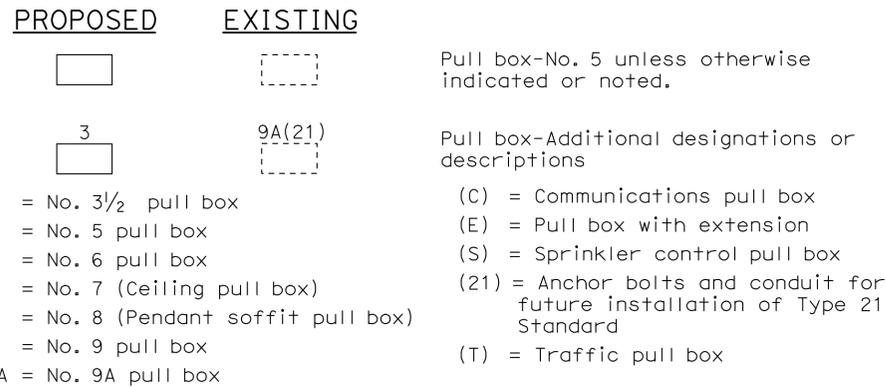
MISCELLANEOUS EQUIPMENT



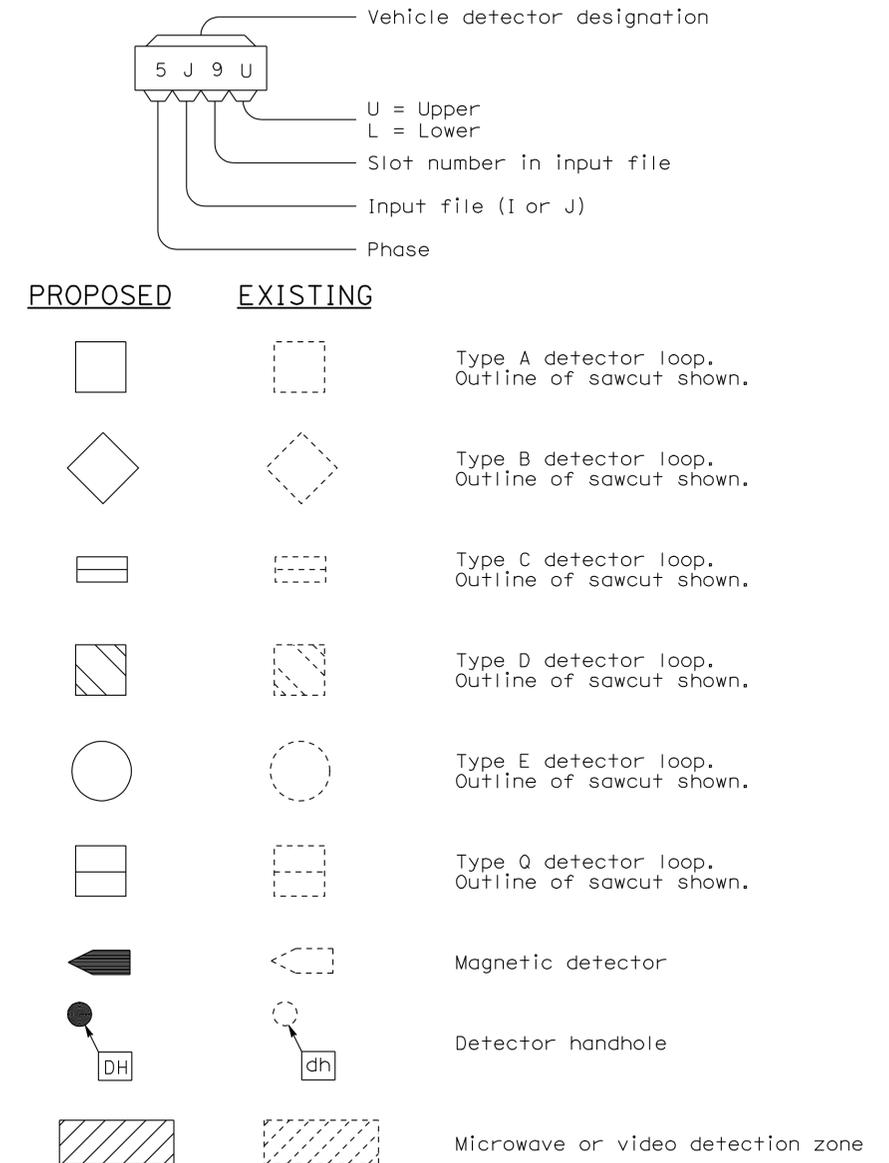
WIRING DIAGRAM LEGEND



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
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	149	271

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

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

NOTES-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 $\frac{7}{16}$ ".
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)."

To accompany plans dated 6-14-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

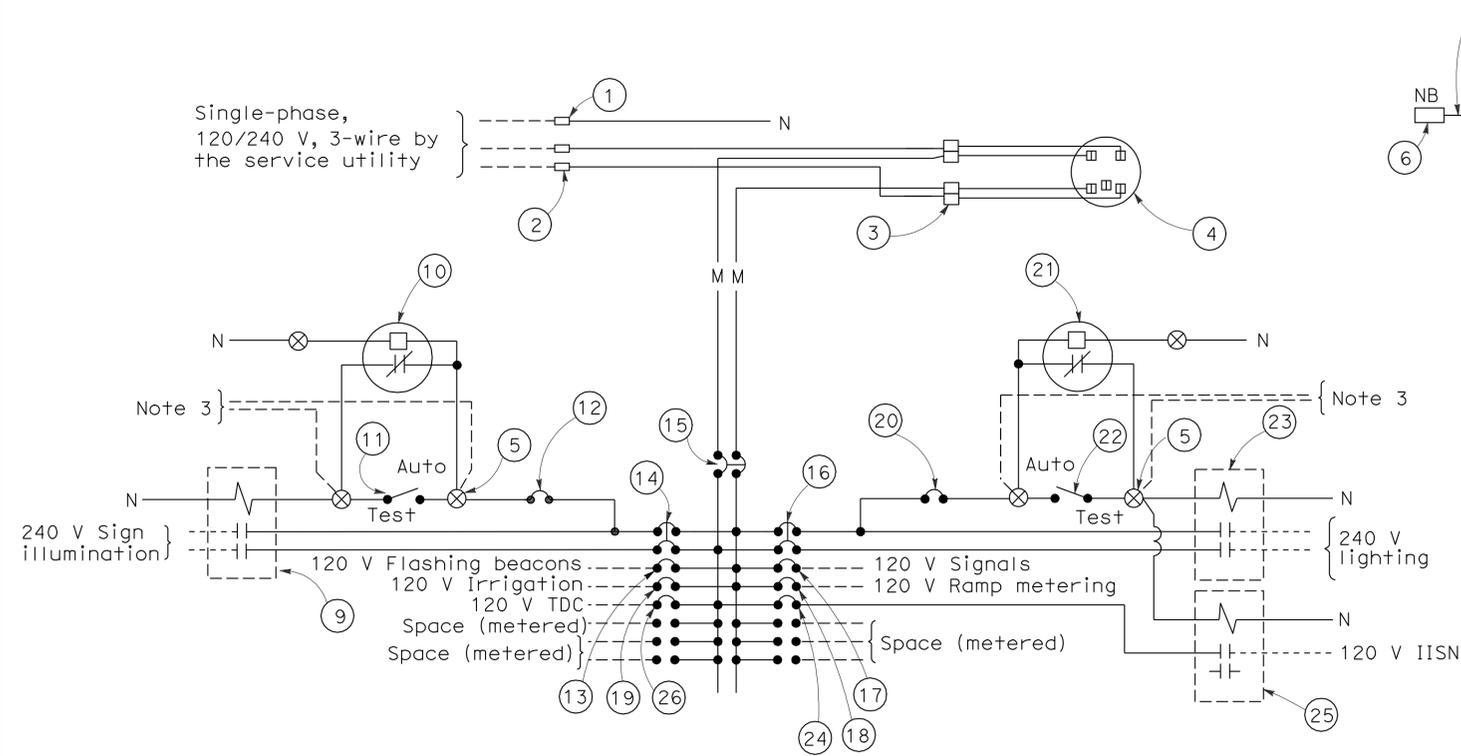
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT NOTES
TYPE III SERIES)**

NO SCALE

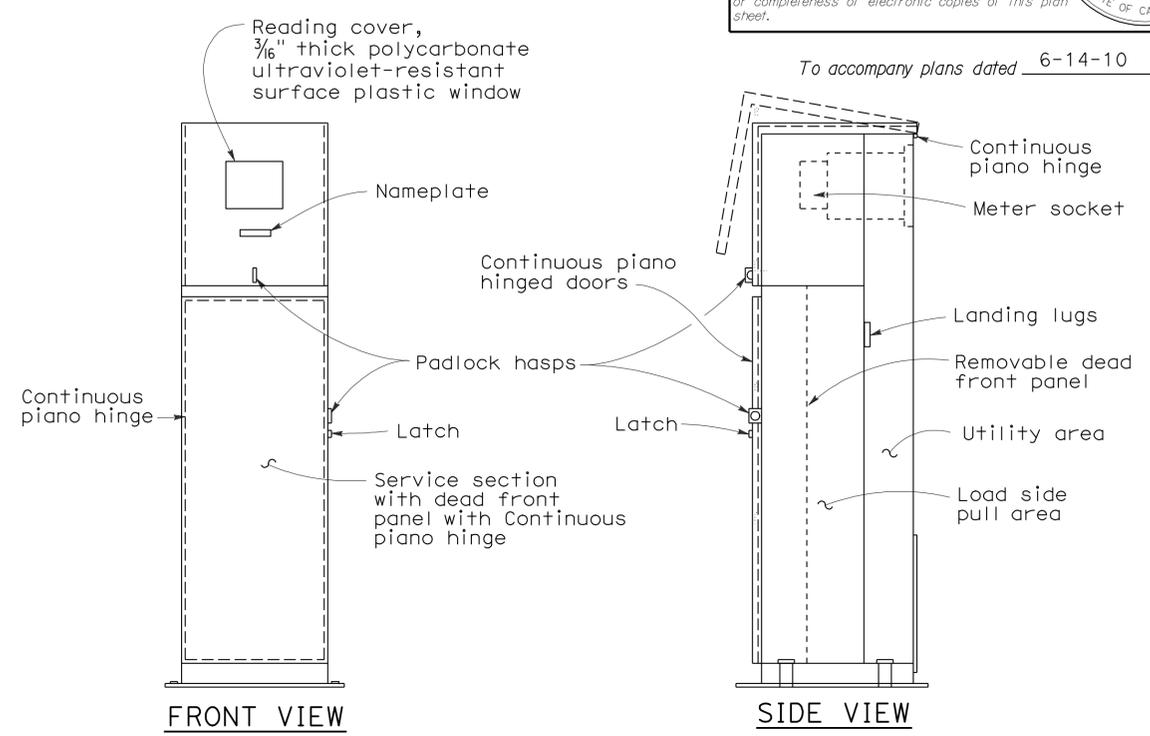
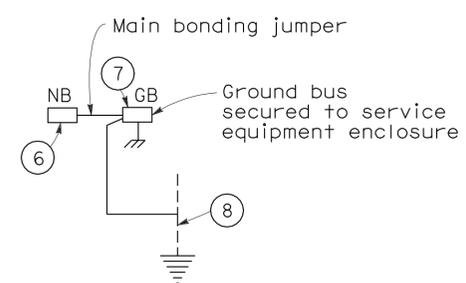
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

2006 REVISED STANDARD PLAN RSP ES-2C



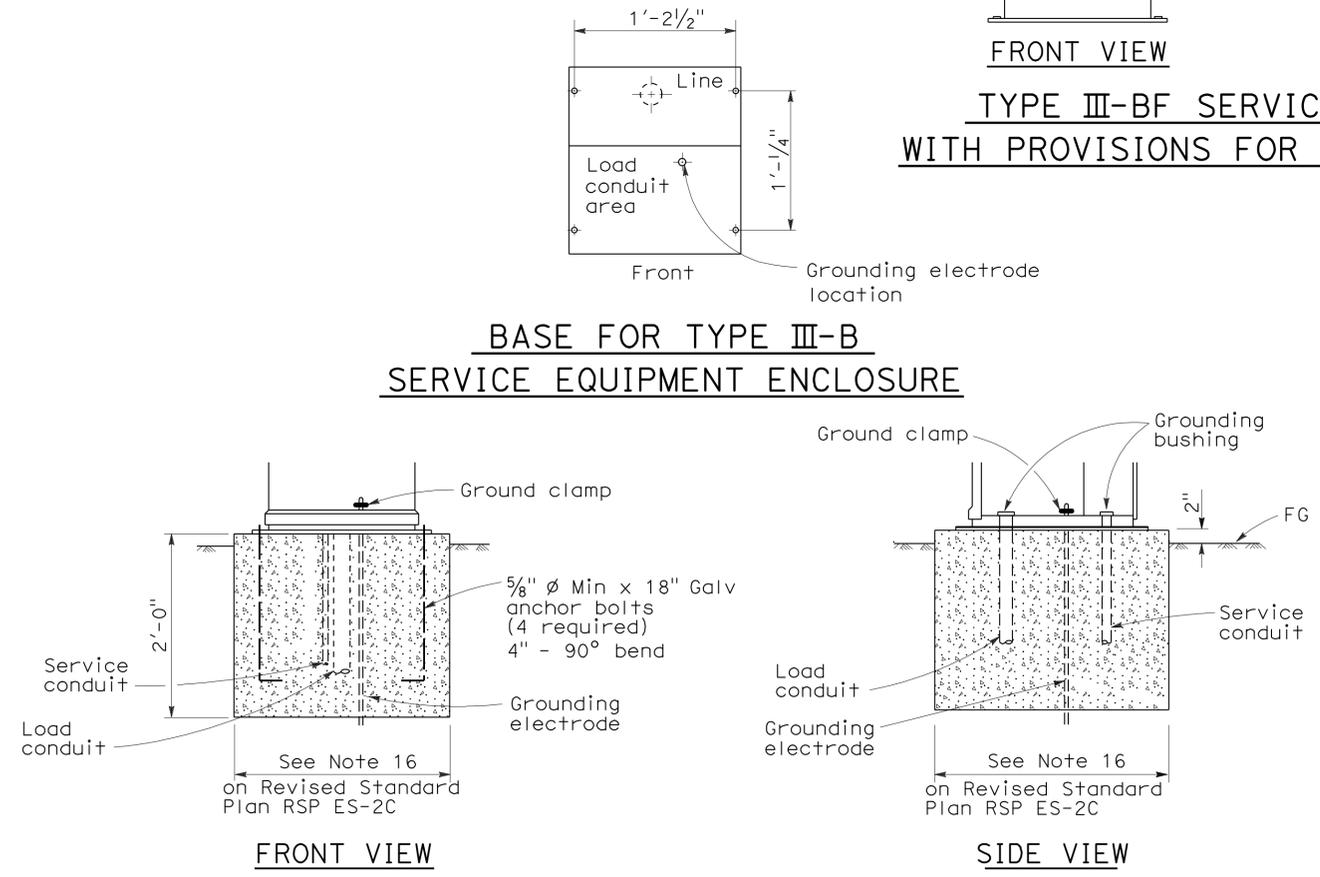
120/240 V SERVICE WIRING DIAGRAM (TYPICAL)



TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)

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

BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE



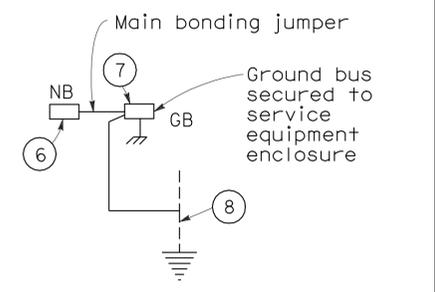
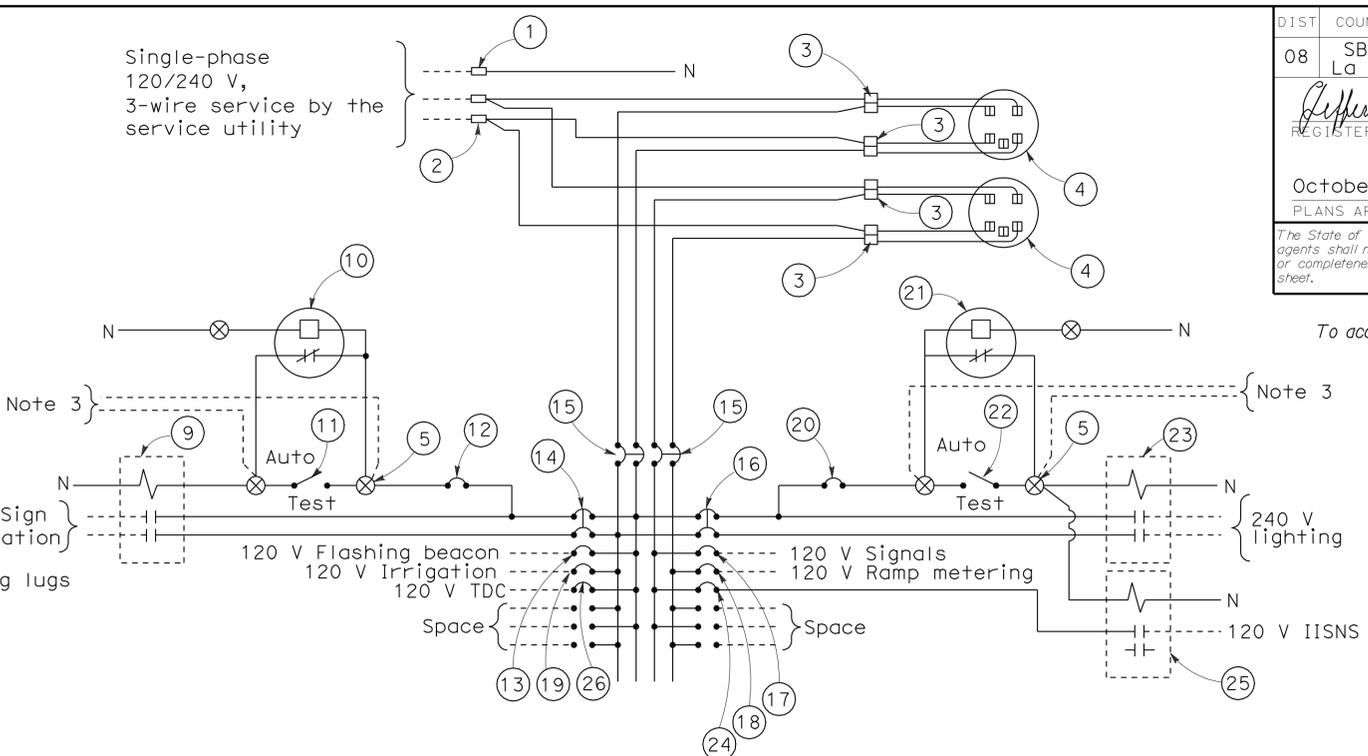
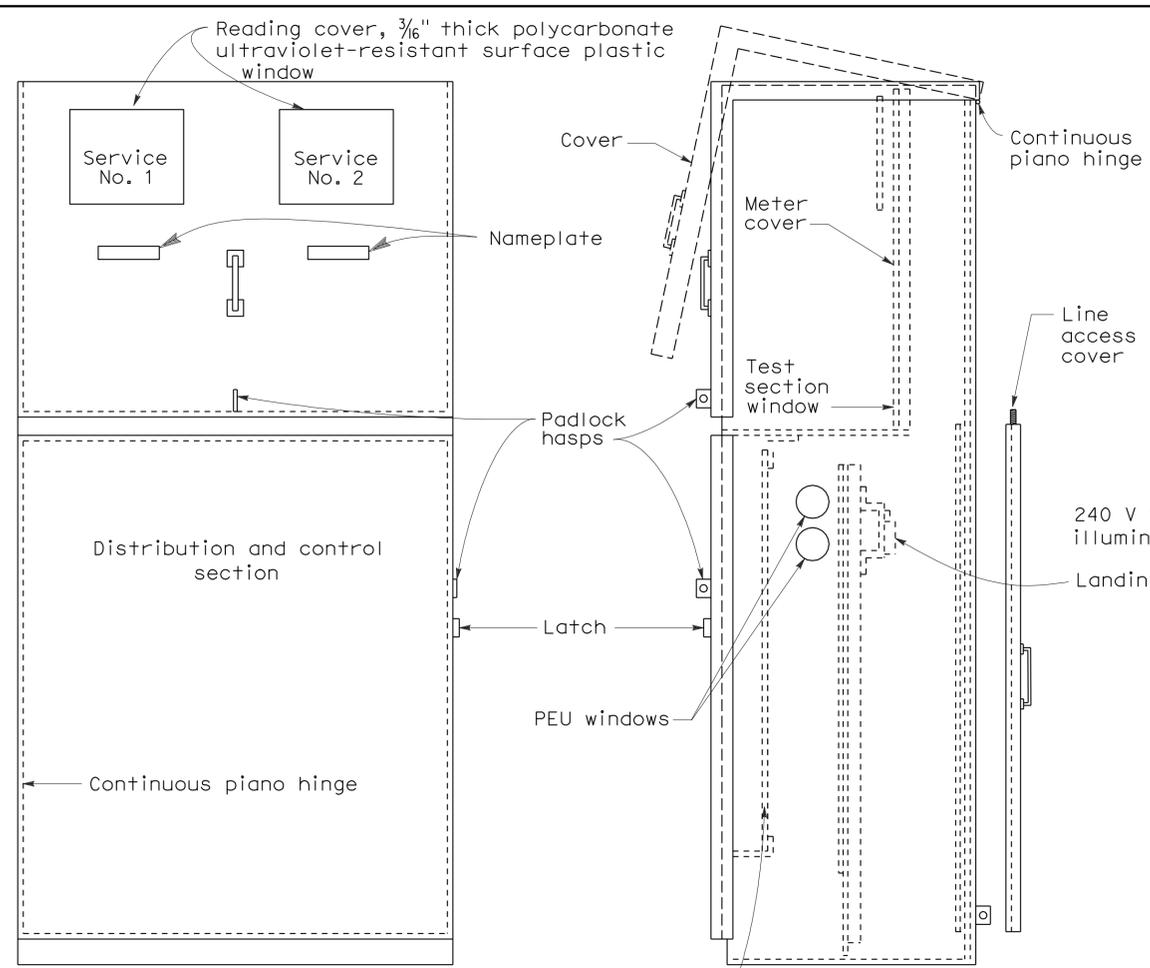
TYPE III-B SERVICE EQUIPMENT ENCLOSURE FOUNDATION DETAILS

- 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-B SERIES)
 NO SCALE

RSP ES-2E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2E DATED MAY 1, 2006 - PAGE 407 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-2E



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

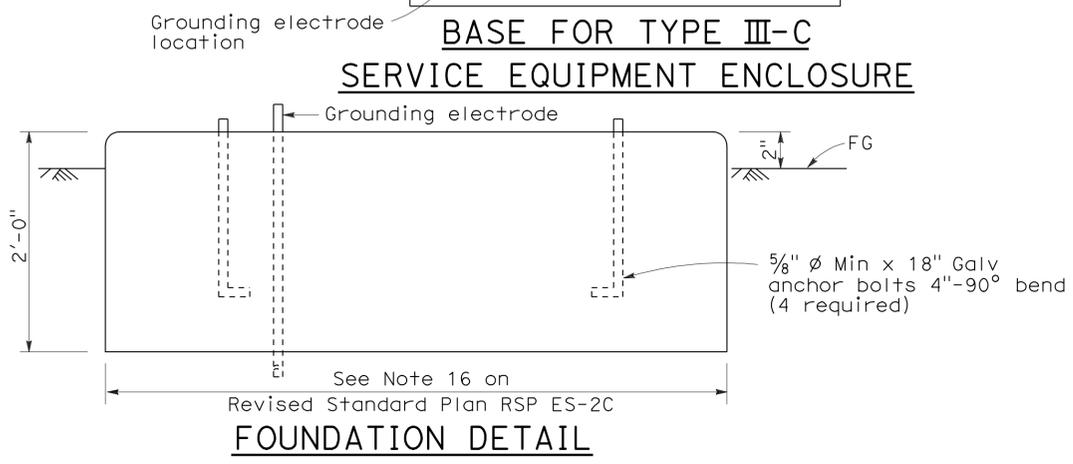
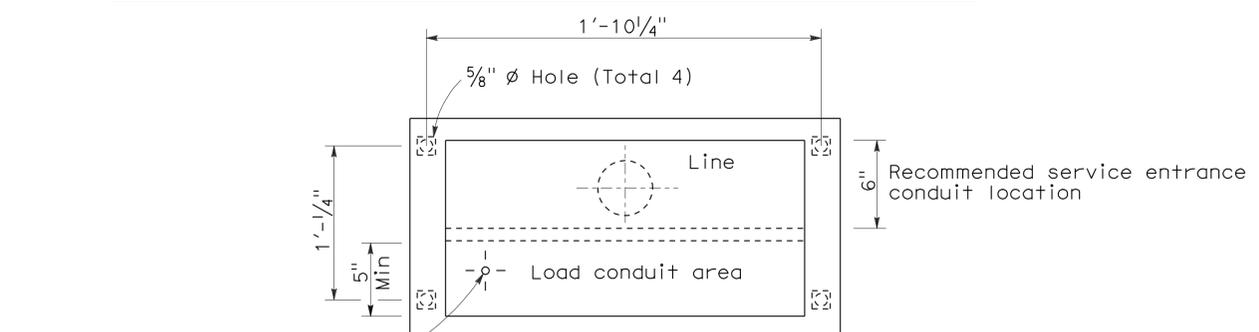
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 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.

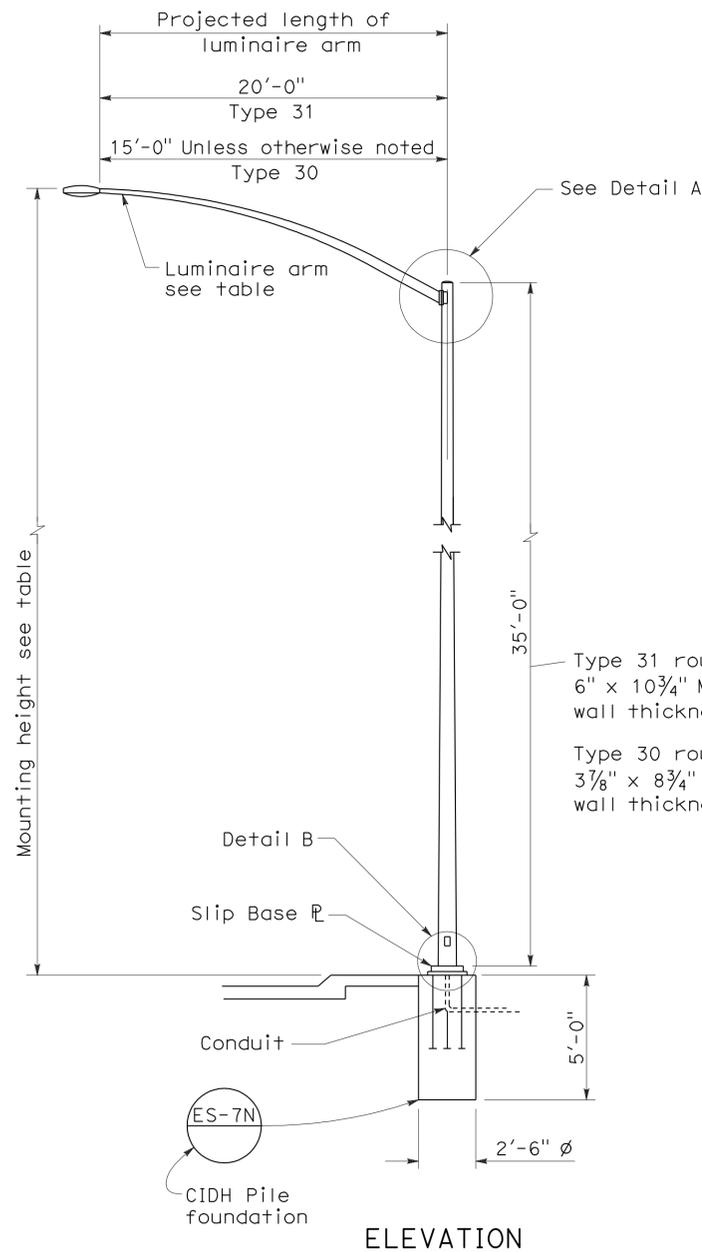


2006 REVISED STANDARD PLAN RSP ES-2F

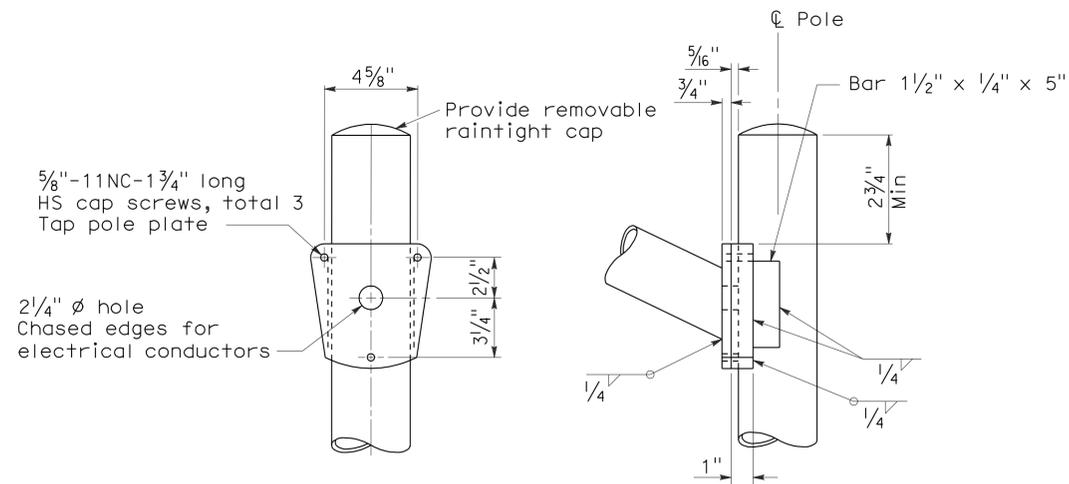
LUMINAIRE ARM DATA

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3 1/4"	36'-9"±
8'-0"		3 1/2"	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"±

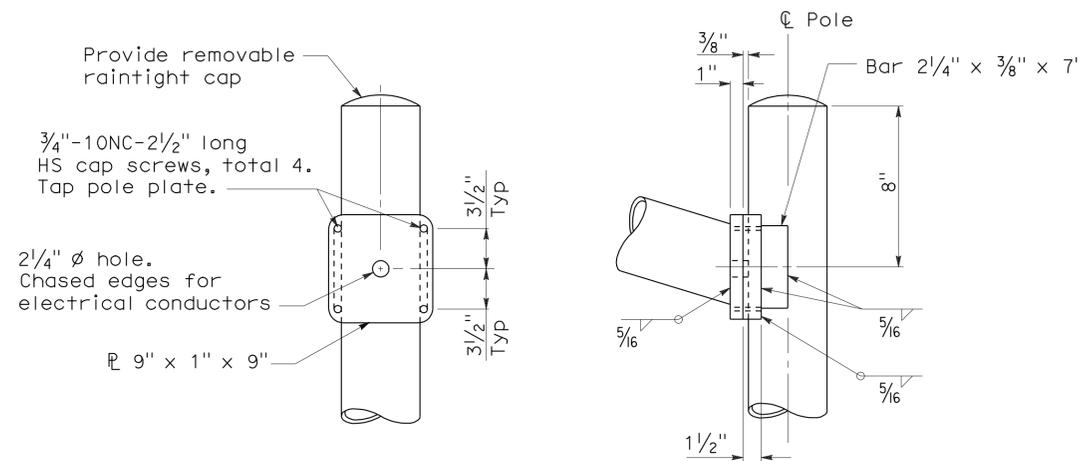
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



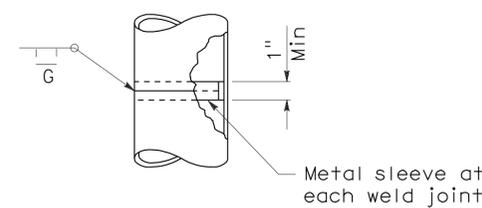
ELEVATION



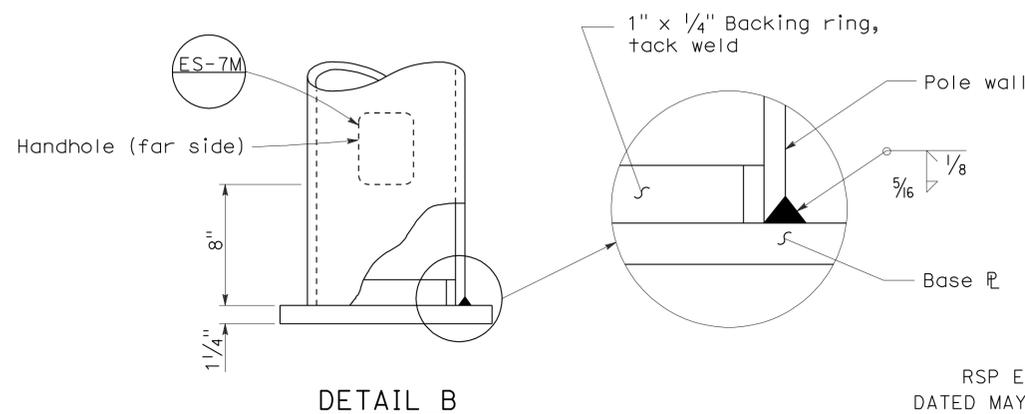
DETAIL A - TYPE 30



DETAIL A - TYPE 31

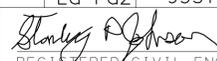


POLE SPLICE



DETAIL B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	152	271


 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 6-14-10

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

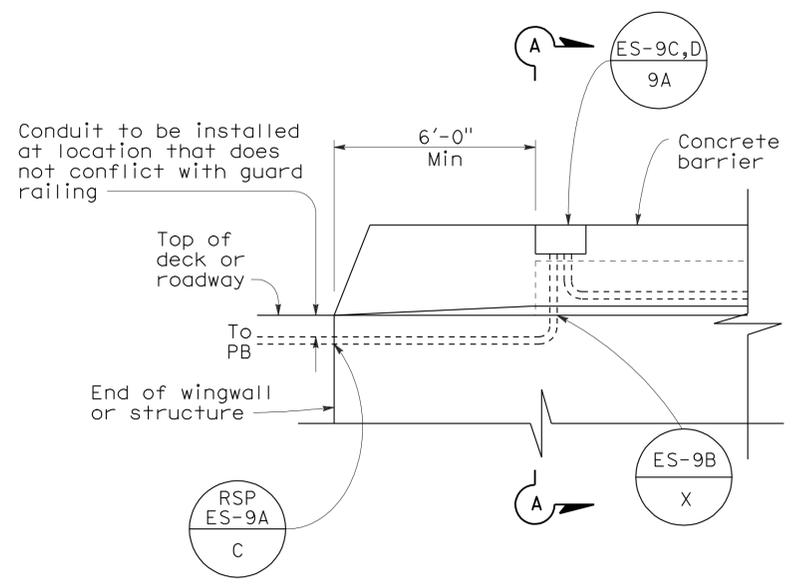
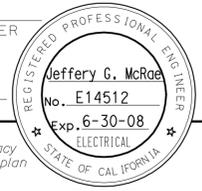
2006 REVISED STANDARD PLAN RSP ES-6E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	153	271

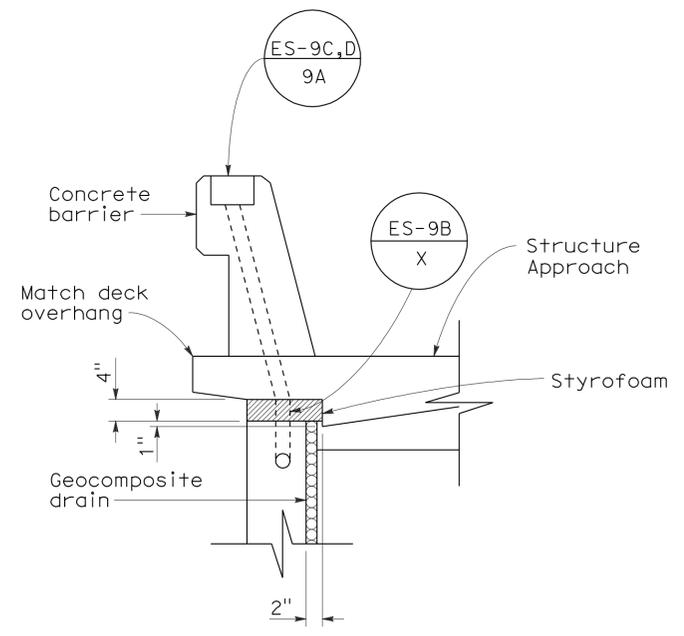
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 6-14-10

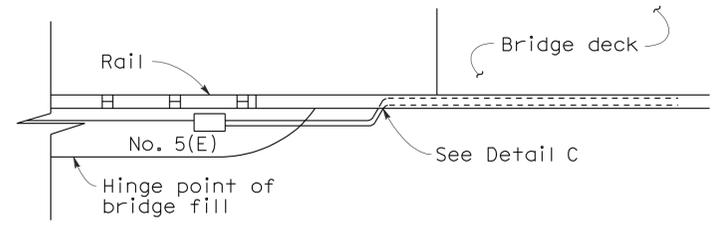


SIDEVIEW

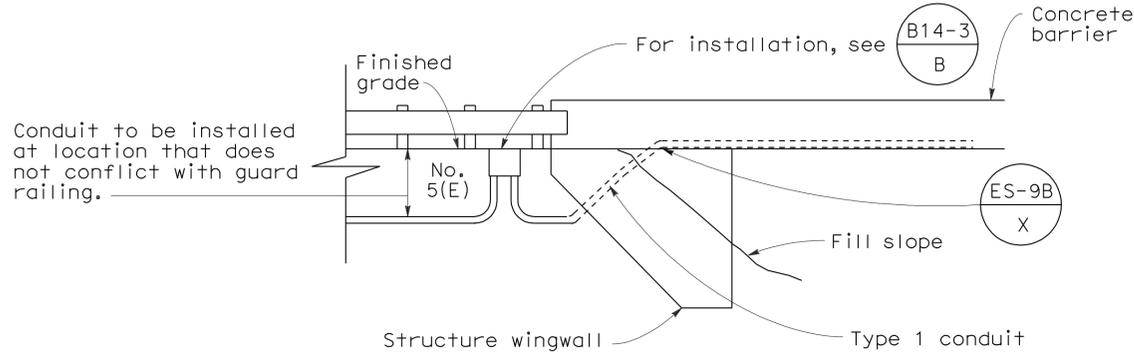


SECTION A-A

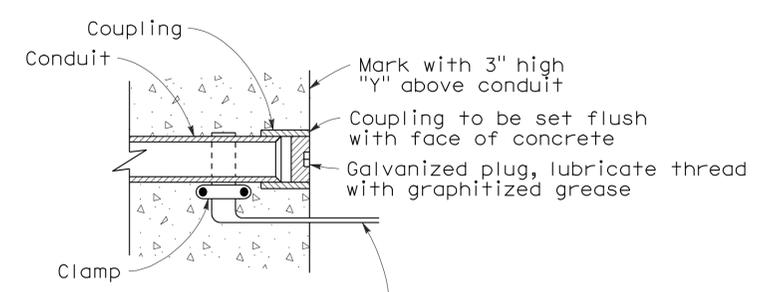
**DETAIL A
CONDUIT TERMINATION**



TOP VIEW



**SIDE VIEW
DETAIL I
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

2006 REVISED STANDARD PLAN RSP ES-9A

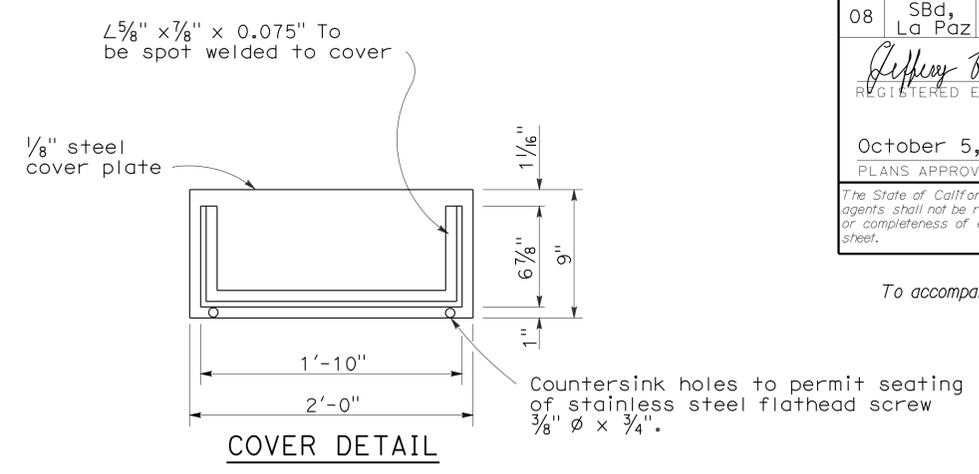
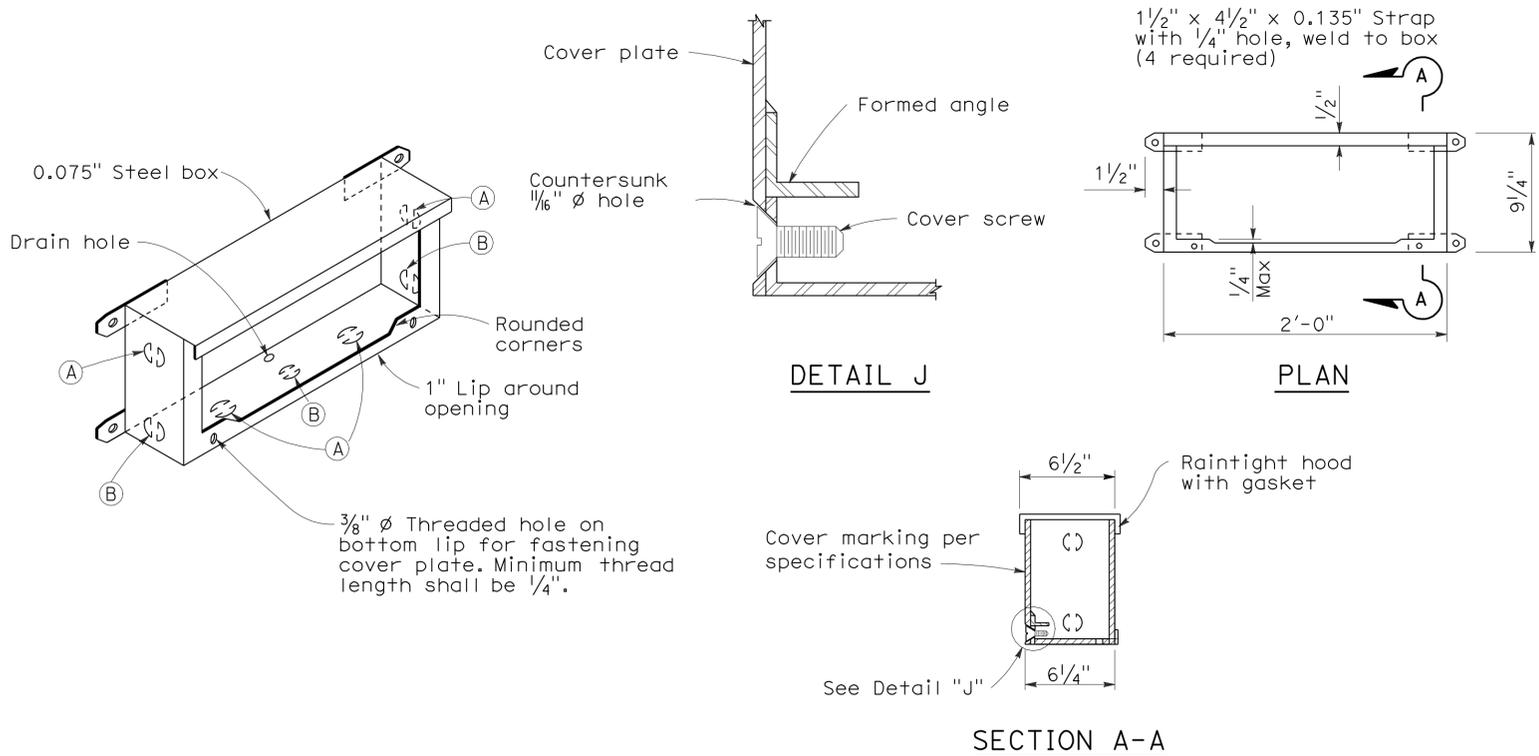
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	154	271

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

October 5, 2007
 PLANS APPROVAL DATE

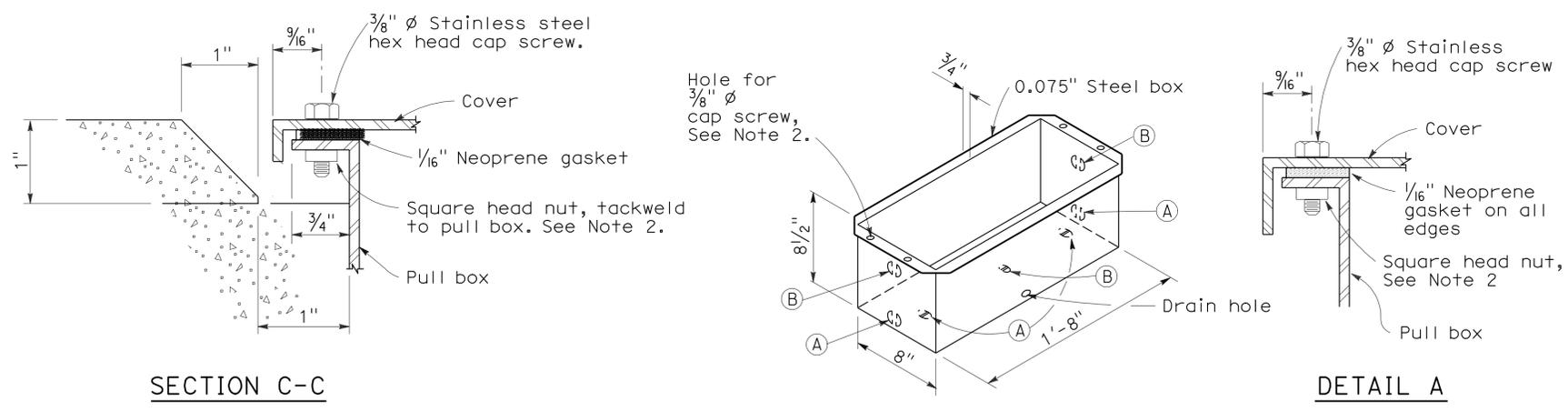
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To accompany plans dated 6-14-10



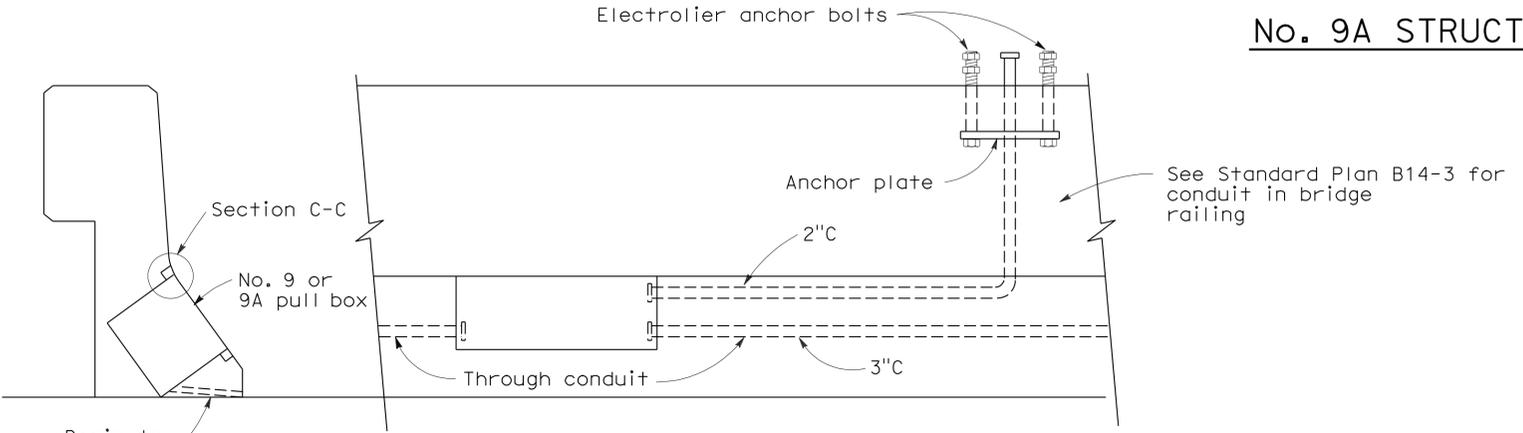
INSTALLATION NOTE:
 Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

No. 9 STRUCTURE PULL BOX



- NOTES:** No. 9 and 9A Pull Box
- Corner joints shall be lapped and secured by spot welding or riveting.
 - Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
 - Pound knockouts flat after punching.
 - Multiple size knockouts shall not be permitted.
 - Pull box covers shall be marked as shown on Standard Plan ES-8.

No. 9A STRUCTURE PULL BOX



INSTALLATION IN SLOPING PARAPETS

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.

- KNOCKOUT SCHEDULE**
No. 9 AND 9A PULL BOX
- (A) 2"C, 1 each end, 2 on bottom.
 - (B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE
 RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C
 DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-9C

Return Period	Discharge (CFS)	* Water Surface Elev	** Permanent Vert Clr	Temporary Vert Clr
500 Years	74,000	358.9'	-	-
100 Years	40,000	352.4'	-	-
Daily High Water	19,000	346.9'	24'-8"	21'-4"
Ordinary High Water	11,020	344.0'	27'-6"	24'-2"

For "Quantities", see "GENERAL PLAN NO. 2" sheet

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	155	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

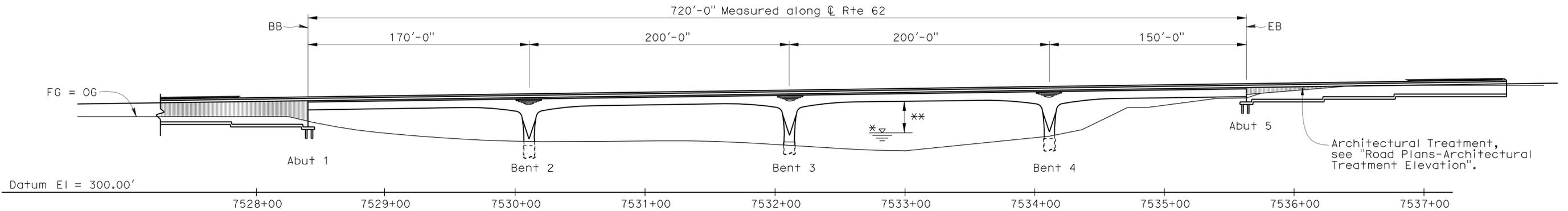
6-14-10
PLANS APPROVAL DATE

David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

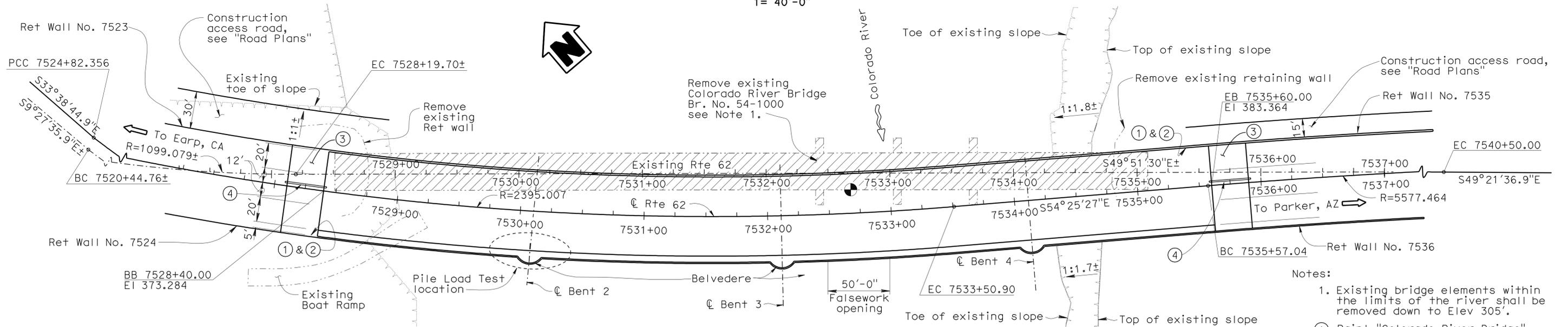
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PROFILE GRADE
No Scale



ELEVATION
1= 40'-0"



PLAN
1= 40'-0"

Rte 62	Rte 62	Existing Rte 62
$\Delta = 20^\circ 46' 42''$	$\Delta = 5^\circ 3' 51''$	$\Delta = 40^\circ 23' 53.4'' \pm$
$R = 2395.007'$	$R = 5577.464'$	$R = 1099.079' \pm$
$T = 439.099'$	$T = 246.644'$	$T = 404.363' \pm$
$L = 868.551'$	$L = 492.967'$	$L = 774.940' \pm$

For "TYPICAL SECTION", see "GENERAL PLAN NO. 2" sheet.

For "GENERAL NOTES", "PILE DATA TABLE", "INDEX TO PLANS" and "HYDROLOGIC/HYDRAULIC SUMMARY", see "INDEX TO PLANS" sheet.

For "STANDARD PLANS LIST", see "DECK CONTOURS" sheet.

- Notes:
- Existing bridge elements within the limits of the river shall be removed down to Elev 305'.
 - Paint "Colorado River Bridge"
 - Paint "Br. No. 54-1272"
 - Structure Approach Slab Type N(30S)
 - Welded Steel Casing (bridge) for future utility opening.
- Indicates location of min vert clr
--- Indicates existing
▨ Indicates limits of bridge removal

David Soon DESIGN ENGINEER	DESIGN	BY David Soon	CHECKED Mahmoud Fustok	LOAD AND RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 AND P-15 PERMIT VEHICLE
	DETAILS	BY Sandra McNealy/Y. Feng	CHECKED Mahmoud Fustok	LAYOUT	BY David Soon
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD	SPECIFICATIONS	BY Kevin Ellingson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO. 54-1272
POST MILE 142.3

COLORADO RIVER BRIDGE (REPLACE)
GENERAL PLAN NO. 1

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN NO. 1
2.	GENERAL PLAN NO. 2
3.	INDEX TO PLANS
4.	DECK CONTOURS
5.	FOUNDATION PLAN NO. 1
6.	FOUNDATION PLAN NO. 2
7.	ABUTMENT LAYOUT NO. 1
8.	ABUTMENT LAYOUT NO. 2
9.	ABUTMENT DETAILS NO. 1
10.	ABUTMENT DETAILS NO. 2
11.	ABUTMENT DETAILS NO. 3
12.	BENT LAYOUT
13.	BENT DETAILS NO. 1
14.	BENT DETAILS NO. 2
15.	PILE LOAD TEST DETAILS NO. 1
16.	PILE LOAD TEST DETAILS NO. 2
17.	PILE LOAD TEST DETAILS NO. 3
18.	BRIDGE GEOMETRICS NO. 1
19.	BRIDGE GEOMETRICS NO. 2
20.	TYPICAL SECTION NO. 1
21.	TYPICAL SECTION NO. 2
22.	TYPICAL SECTION NO. 3
23.	BELVEDERE LAYOUT
24.	BELVEDERE DETAILS
25.	GIRDER LAYOUT NO. 1
26.	GIRDER LAYOUT NO. 2
27.	CAMBER DIAGRAM
28.	GIRDER REINFORCEMENT NO. 1
29.	GIRDER REINFORCEMENT NO. 2
30.	PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 1
31.	PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 2
32.	JOINT SEAL - ABUTMENT DETAILS
33.	STRUCTURE APPROACH TYPE N(30S)
34.	STRUCTURE APPROACH DRAINAGE DETAILS
35.	CONCRETE BARRIER LAYOUT NO. 1
36.	CONCRETE BARRIER LAYOUT NO. 2
37.	CONCRETE BARRIER DETAILS NO. 1
38.	CONCRETE BARRIER DETAILS NO. 2
39.	CONCRETE BARRIER DETAILS NO. 3
40.	CONCRETE BARRIER DETAILS NO. 4
41.	TUBULAR BICYCLE RAILING
42.	MISCELLANEOUS LAYOUT
43.	LOG OF TEST BORINGS 1 OF 8
44.	LOG OF TEST BORINGS 2 OF 8
45.	LOG OF TEST BORINGS 3 OF 8
46.	LOG OF TEST BORINGS 4 OF 8
47.	LOG OF TEST BORINGS 5 OF 8
48.	LOG OF TEST BORINGS 6 OF 8
49.	LOG OF TEST BORINGS 7 OF 8
50.	LOG OF TEST BORINGS 8 OF 8

PILE DATA TABLE - BENTS and PILE LOAD TEST

Location	Pile Type	Top of Driven Steel Shell & Pipe Pile Elevation (ft)	Total Normal Resistance of CIDH w/Driven Steel Shell (kips)		Nominal Resistance (Driven Steel Shell) (kips)		Driven Shell Specified Tip Elev (ft)	CIDH Design Tip Elev (ft)	CIDH Specified Tip Elev (ft)	Steel Shell Nominal Driving Resistance (kips)
			Compression	Tension	Compression	Tension				
Bent 2 Rt col (Load Test Pile)	108" dia x 1 3/8" Driven Steel Shell	358.0	N/A	N/A	5,500	0	219.0 (1) & (5)	N/A	N/A	8,492 (3)
Anchor Piles	48" dia x 1 1/2" Steel Pipe Piles	357.0	N/A	N/A	N/A	4,000	208.5	N/A	N/A	3,584 (4)
Bent 2	96" CIDH w/ 108" dia x 1 3/8" Driven Steel Shell	340.0	9,220	0	7,130	0	205.5	186.5 (a) 202.0 (d)	186.5 (a)	8,492 (3)
Bent 3	96" CIDH w/ 108" dia x 1 3/8" Driven Steel Shell	341.0	8,860	0	3,550	0	228.4	190.4 (a) 206.0 (d)	190.4 (a)	5,464 (3)
Bent 4	96" CIDH w/ 108" dia x 1 3/8" Driven Steel Shell	343.0	8,860	0	0	0	292.0	222.0 (a) 230.0 (d)	220.0 (a)	2,805 (3)

Notes :

- Design Tip Elevations are controlled by (a) Compression (Strength Limit), (b) Tension, (c) Settlement, (d) Lateral Load.
- (1) Specified Tip Elevation for Pile Load Test Only.
- (2) The CIDH Specified Tip Elevation shall not be raised.
- (3) Nominal Driving Resistance values are based on the Estimated Maximum Driving Resistance values stated in the Revised Driveability Study from the Foundation Testing Branch, dated April 30, 2009.
- (4) Nominal Driving Resistance values for the Anchor Piles are based on the Estimated Maximum Driving Resistance values stated in the Driveability Study - Anchor Piles memorandum from the Foundation Testing Branch, dated April 30, 2009.
- (5) Before Pile Load Test, clean out inside of Test Pile to Elev 228.0'. Maintain hydrostatic head inside Test Pile equal to river water surface. Slurry or water may be used inside the test pile during Pile Load Test

**GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN**

DESIGN: AASHTO LRFD Specifications, 3rd edition w/ Interims through 2006 and Caltrans Amendments, V3.06.01 except for foundation resistance factors and geotechnical resistances.

DESIGN (abutment design & foundation resistance factors): BRIDGE DESIGN SPECIFICATIONS - April 2000 (LFD) (1996 AASHTO with Interims and Revisions by Caltrans)

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.4 dated June 2006.

DEAD LOAD: Includes 35 psf for future wearing surface.

LIVE LOADING: HL93 and P-15 permit design vehicle.

SEISMIC LOADING: SDC ARS Curve for Soil Profile D (M=6.5 ± .25) (Peak Rock Acceleration = 0.2g)

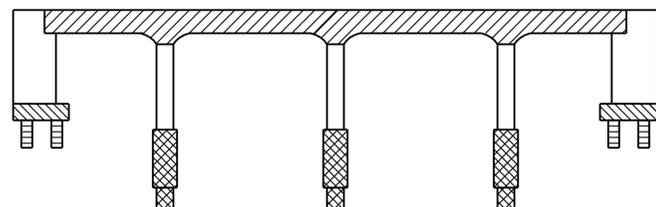
REINFORCED CONCRETE:

$f_y = 60$ ksi
 $f'_c = 3.6$ ksi
 $n = 8$

STRUCTURAL STEEL - Driven Steel Shell
 $F_y = 45$ ksi
ASTM A252
Grade 3

PRESTRESSED CONCRETE: See "Prestressing Notes" on "GIRDER LAYOUT NO. 1" sheet.

ADDITIONAL LIMIT STATE: Extreme Event II, Check Flood for Bridge Scour(Q500): Design of bridge foundations to withstand Q500 flow and scour and remain stable with no reserve.



- Structural Concrete, Bridge
- Structural Concrete, Bridge Footing
- Structural Concrete, Bridge (5,000 psi at 28 days)
- CIDH Pile w/ Driven Steel Shell
- CIDH Pile

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

PILE DATA TABLE - ABUTMENTS

Location	Pile Type	Pile Cut-Off Elevation (ft)	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension		
Abut 1 Stage 2	24 inch CIDH	348.25	354	0	276.2 (a) 307.6 (d)	276.2 (a)
Abut 1 Stage 3	24 inch CIDH	344.75	364	0	272.5 (a) 303.5 (d)	272.5 (a)
Abut 5 Stage 2	24 inch CIDH	363.25	440	0	323.0 (a) 330.2 (d)	323.0 (a)
Abut 5 Stage 3	24 inch CIDH	363.25	462	0	323.0 (a) 330.2 (d)	323.0 (a)

Notes : Design tip elevations for Abutments are controlled by:
(a) Compression, (b) Tension, (c) Settlement, and (d) Lateral Load.

HYDROLOGIC/HYDRAULIC SUMMARY

Drainage Area: 180.000 mi ²	
Control Point-Parker Dam	
Existing Thalweg Elevation = 327.8 ft	
Discharge	
Ordinary High Water discharge	11,020 ft ³ /s
Maximum daily discharge	19,000 ft ³ /s
100 year discharge	40,000 ft ³ /s
500 year discharge	74,000 ft ³ /s
Water surface elevations	
Ordinary High Water discharge (11,020 cfs)	344.0 ft
Maximum daily discharge (19,000 cfs)	346.9 ft
100 year discharge (40,000 cfs)	352.4 ft
500 year discharge (74,000 cfs)	358.9 ft
Velocities	
100 year discharge (40,000 cfs)	4.9 ft/s
500 year discharge (74,000 cfs)	6.0 ft/s
Scour	
Estimated Degradation in 75 years (0.30 foot per year)	22.5 ft
Long term estimated scour elevation in 75 years	305.3 ft
Pier scour depth 100 year discharge (40,000 cfs)	13.9 ft
Pier scour depth 500 year discharge (74,000 cfs)	15.3 ft
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation. Addendums may be necessary as Foundation Reports are completed.	

Notes: 1. All elevations are based on NVGD29.

DESIGN BY DS / EO / JJ CHECKED Mahmoud Fustok DETAILS BY S.McNealy / G.Dickerson CHECKED Mahmoud Fustok QUANTITIES BY E. Ortega CHECKED WH / GD / RD / DD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE) INDEX TO PLANS
			POST MILE 142.3	
			REVISION DATES 10-12-06 5-11-09 5-12-09 6-12-09 10-28-09 3-12-09 3-22-09 4-16-09 4-20-09	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 3 OF 50

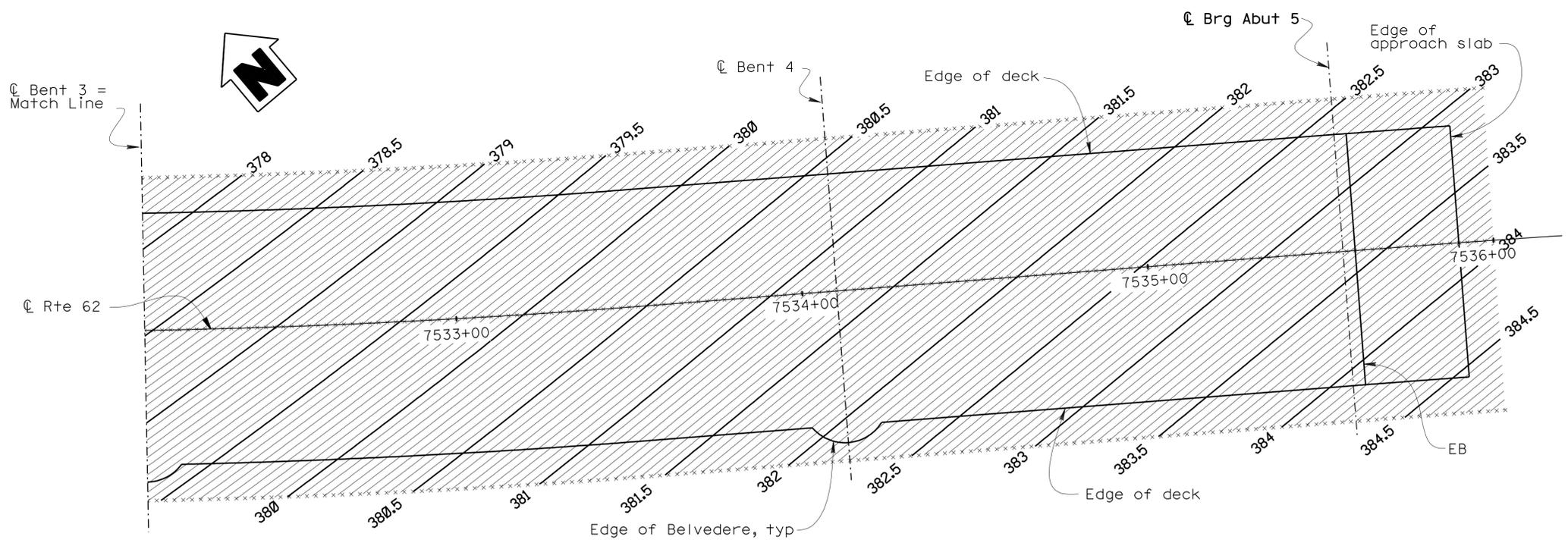
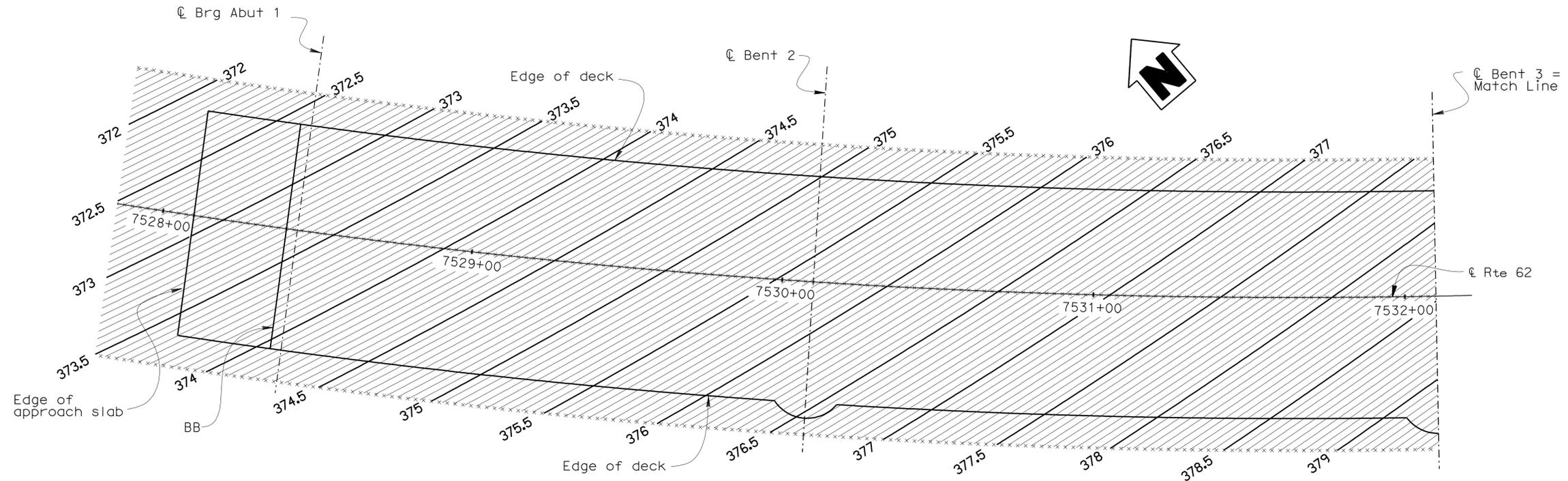
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6 142.6/142.9	158	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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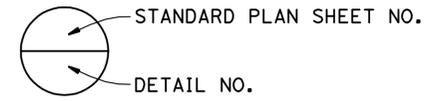


STANDARD PLANS DATED MAY 2006

- A10A ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
- A10B ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
- A10C SYMBOLS (SHEET 1 OF 2)
- A10D SYMBOLS (SHEET 2 OF 2)
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
- B0-1 BRIDGE DETAILS
- B0-5 BRIDGE DETAILS
- B0-13 BRIDGE DETAILS
- B7-1 BOX GIRDER DETAILS
- B7-7 DECK DRAIN - TYPE D-3
- B7-8 DECK DRAINAGE DETAILS
- B7-10 UTILITY OPENING - BOX GIRDER
- B7-11 UTILITY DETAILS
- B8-5 CAST-IN-PLACE PRESTRESSED GIRDER DETAILS
- RSP B11-60 CONCRETE BARRIER TYPE 80 (SHEET 1 OF 2)
- B11-61 CONCRETE BARRIER TYPE 80 (SHEET 2 OF 2)
- RSP B11-62 CONCRETE BARRIER TYPE 80 (SHEET 1 OF 3)
- B11-63 CONCRETE BARRIER TYPE 80 (SHEET 2 OF 3)
- RSP B11-64 CONCRETE BARRIER TYPE 80 (SHEET 3 OF 3)
- B14-3 COMMUNICATION AND SPRINKLER CONTROL CONDUITS (CONDUIT LESS THAN 4")
- B14-5 WATER SUPPLY LINE (DETAILS) (PIPE SIZE LESS THAN 4")
- RSP ES-9C ELECTRICAL SYSTEMS (ELECTRICAL DETAILS, STRUCTURE INSTALLATIONS)
- ES-9D ELECTRICAL SYSTEMS (ELECTRICAL DETAILS, STRUCTURE INSTALLATIONS)

PLAN
1" = 20'

Notes:
 * - Indicates 2'-6" intervals along station line
 Contours do not include camber.
 Contour interval = 0.05'



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) DECK CONTOURS
	DETAILS	BY Bruno Jenko / Y. Feng	CHECKED Mahmoud Fustok			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 08 EA 378701		DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 4 OF 50

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim

CURVE DATA				
NO	R	Δ	T	L
(A)	1099.079	40°23'54"	404.363	774.940
(B)	2395.007	20°46'42"	439.098	868.551

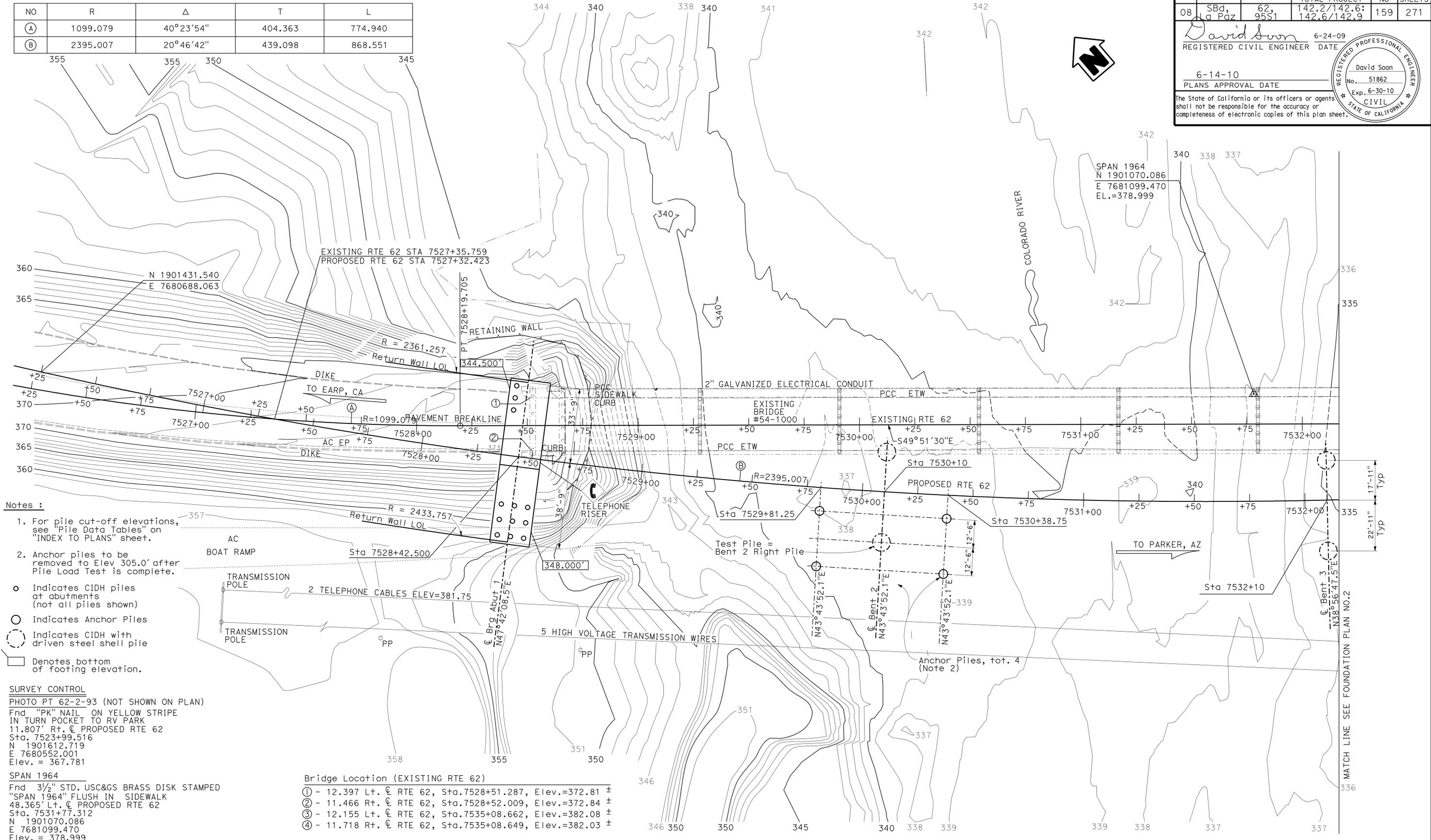
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
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REGISTERED PROFESSIONAL ENGINEER
 David Soon
 No. 51862
 Exp. 6-30-10
 CIVIL
 STATE OF CALIFORNIA



- Notes :
- For pile cut-off elevations, see "Pile Data Tables" on "INDEX TO PLANS" sheet.
 - Anchor piles to be removed to Elev. 305.0' after Pile Load Test is complete.
- Indicates CIDH piles at abutments (not all piles shown)
 - Indicates Anchor Piles
 - Indicates CIDH with driven steel shell pile
 - Denotes bottom of footing elevation.

SURVEY CONTROL
 PHOTO PT 62-2-93 (NOT SHOWN ON PLAN)
 Fnd "PK" NAIL ON YELLOW STRIPE IN TURN POCKET TO RV PARK
 11.807' Rt. C PROPOSED RTE 62
 Sta. 7523+99.516
 N 1901612.719
 E 7680552.001
 Elev. = 367.781

SPAN 1964
 Fnd 3/2" STD. USC&GS BRASS DISK STAMPED
 "SPAN 1964" FLUSH IN SIDEWALK
 48.365' Lt. C PROPOSED RTE 62
 Sta. 7531+77.312
 N 1901070.086
 E 7681099.470
 Elev. = 378.999

Bridge Location (EXISTING RTE 62)

①	- 12.397 Lt. C RTE 62, Sta. 7528+51.287, Elev.=372.81 ±
②	- 11.466 Rt. C RTE 62, Sta. 7528+52.009, Elev.=372.84 ±
③	- 12.155 Lt. C RTE 62, Sta. 7535+08.662, Elev.=382.08 ±
④	- 11.718 Rt. C RTE 62, Sta. 7535+08.649, Elev.=382.03 ±

PRELIMINARY INVESTIGATION SECTION				DESIGN BY David Soon	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE) FOUNDATION PLAN NO. 1
SCALE 1"=20'	VERT. DATUM NGVD29	PHOTOGRAMMETRY AS OF:	DETAILS BY J. Zhou/Y. Feng/G. Dickerson	CHECKED Mahmoud Fustok	POST MILE 142.3				
ALIGNMENT TIES DIST. TRAVERSE SHEET	SURVEYED BY DISTRICT	CHECKED BY T. GILLET 03/2006	QUANTITIES BY E. Ortega	CHECKED WH / CD / RD / DD					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV.10-27-05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 08	EA 378701	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 5 OF 50
		9-08-06 9-18-06 5-29-08 12-22-08 3-17-09 4-28-09 4-23-09 4-27-09 5-11-09 6-15-09	

DATE PLOTTED => 17-JUN-2010 10:26 USERNAME => hflim

CURVE DATA				
NO	R	Δ	T	L
①	5577.464	5°3'51"	246.640	492.959

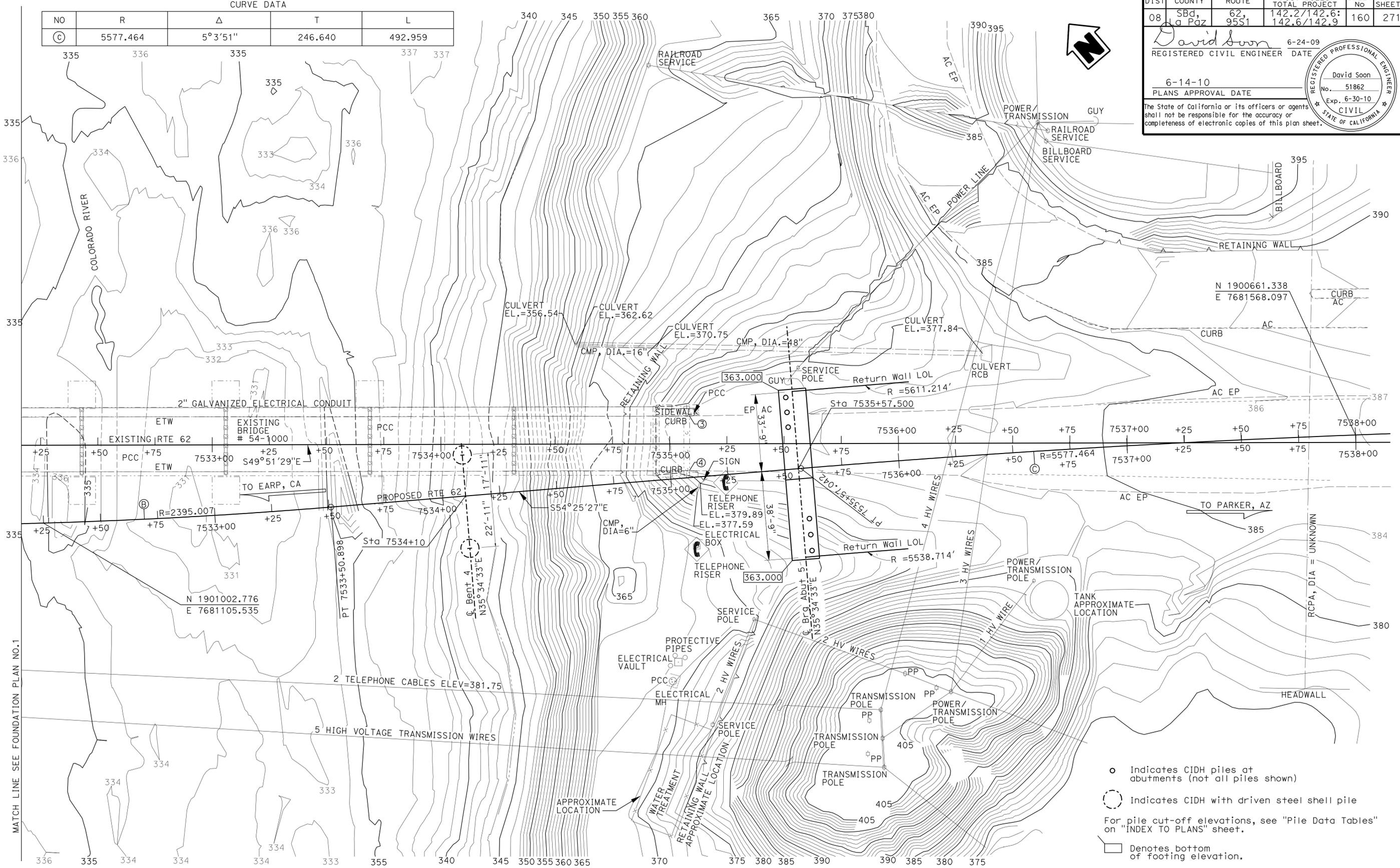
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	160	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

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David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA



MATCH LINE SEE FOUNDATION PLAN NO.1

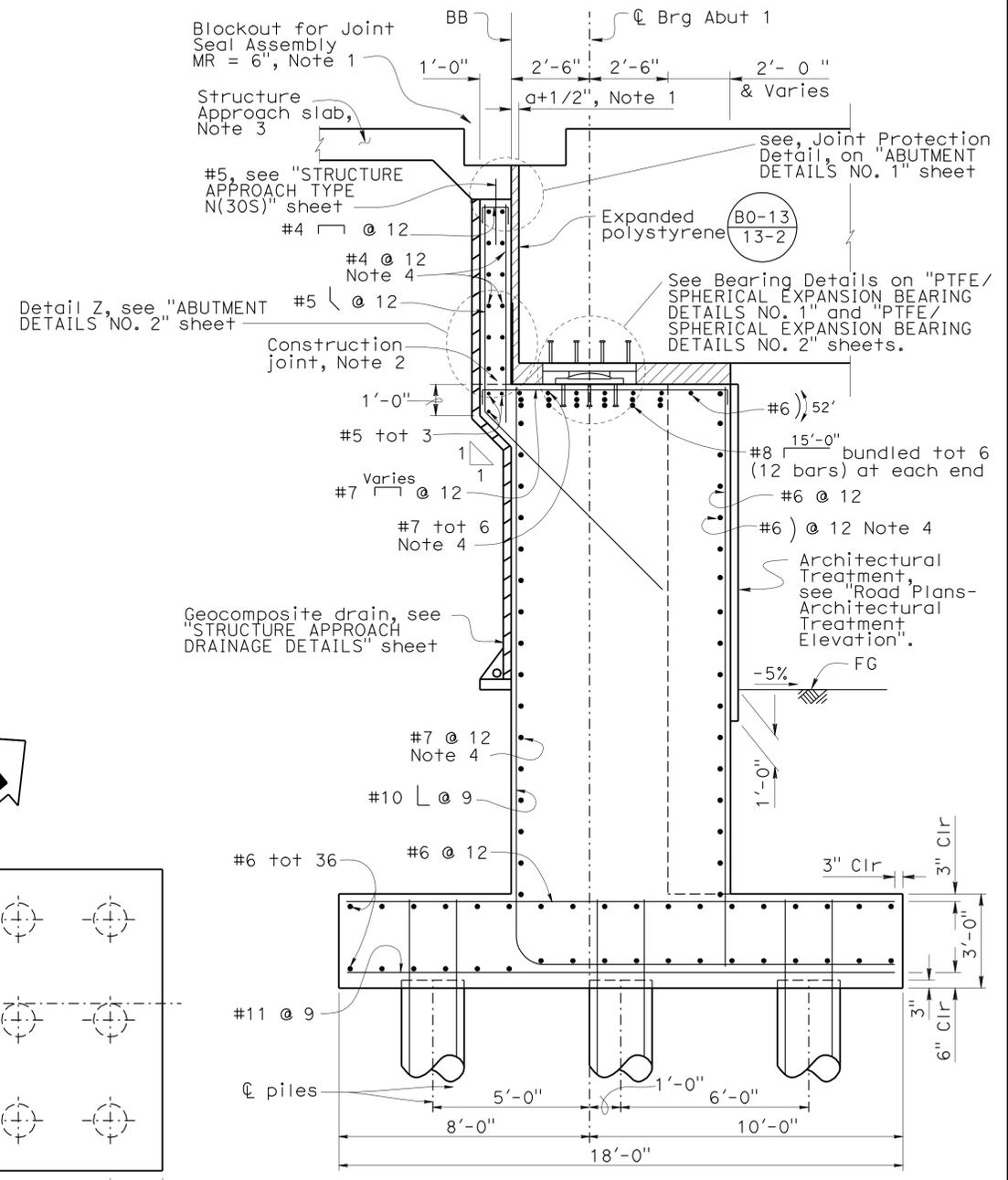
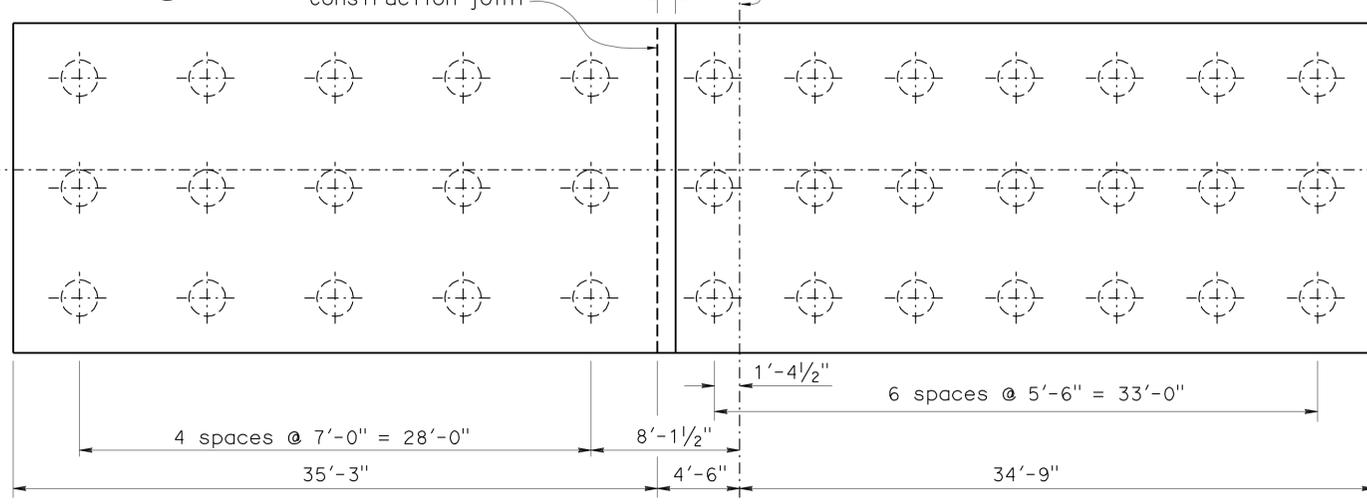
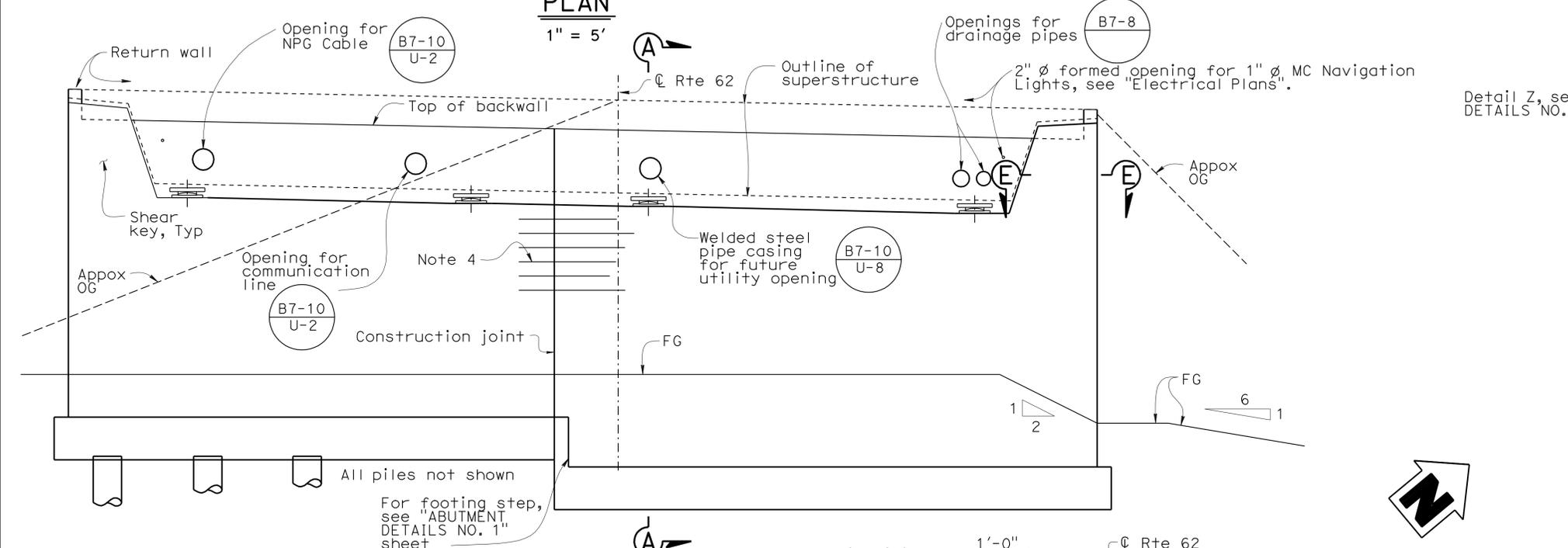
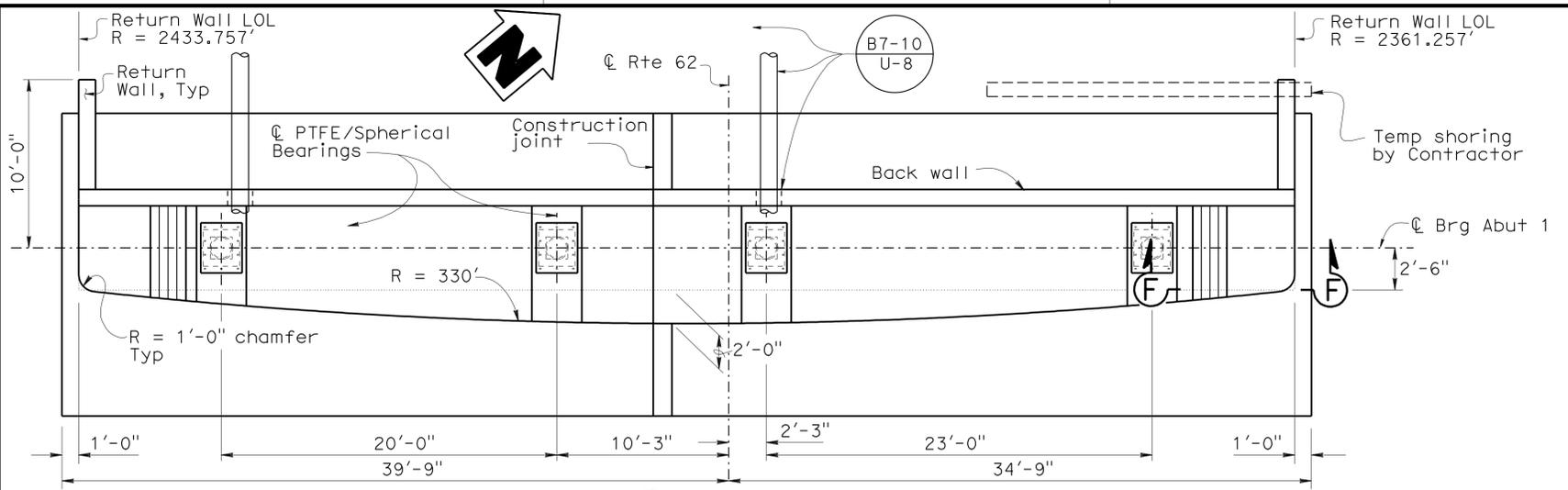
DATE PLOTTED => 17-JUN-2010 USERNAME => fpl1m

- Indicates CIDH piles at abutments (not all piles shown)
- ⊙ Indicates CIDH with driven steel shell pile
- For pile cut-off elevations, see "Pile Data Tables" on "INDEX TO PLANS" sheet.
- Denotes bottom of footing elevation.

PRELIMINARY INVESTIGATION SECTION				DESIGN	By David Soon	CHECKED	Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) FOUNDATION PLAN NO. 2															
SCALE	VERT. DATUM	PHOTOGRAMMETRY	AS OF:	DETAILS	By Jinrong Zhou / Y. Feng	CHECKED	Mahmoud Fustok			POST MILE	142.3																
1"=20'	HORZ. DATUM	SURVEYED	BY DISTRICT	QUANTITIES	By E. Ortega	CHECKED	WH / GD / RD / DD																				
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV.10-27-05)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)																
								9-08-06		9-18-06		5-29-08		12-23-08		3-17-09		4-20-09		5-11-09		6-15-09		SHEET	6	OF	50

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	161	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10					
PLANS APPROVAL DATE					
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- NOTES:
- See "JOINT SEAL - ABUTMENT DETAILS" sheet.
 - Backwall to be placed after stressing.
 - For Structure approach slab, see "STRUCTURE APPROACH TYPE N(30S)" sheet.
 - Extend Stage 2 reinforcement 2'-6" into Stage 3 construction.
 - For Section E-E and Section F-F, see "ABUTMENT DETAILS NO. 2" sheet.



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY Dhvani Desai	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) ABUTMENT LAYOUT NO. 1
	DETAILS	BY A. Valdez / G. Dickerson	CHECKED Rakesh Deo			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	REVISION DATES	
SHEET 7 OF 50								

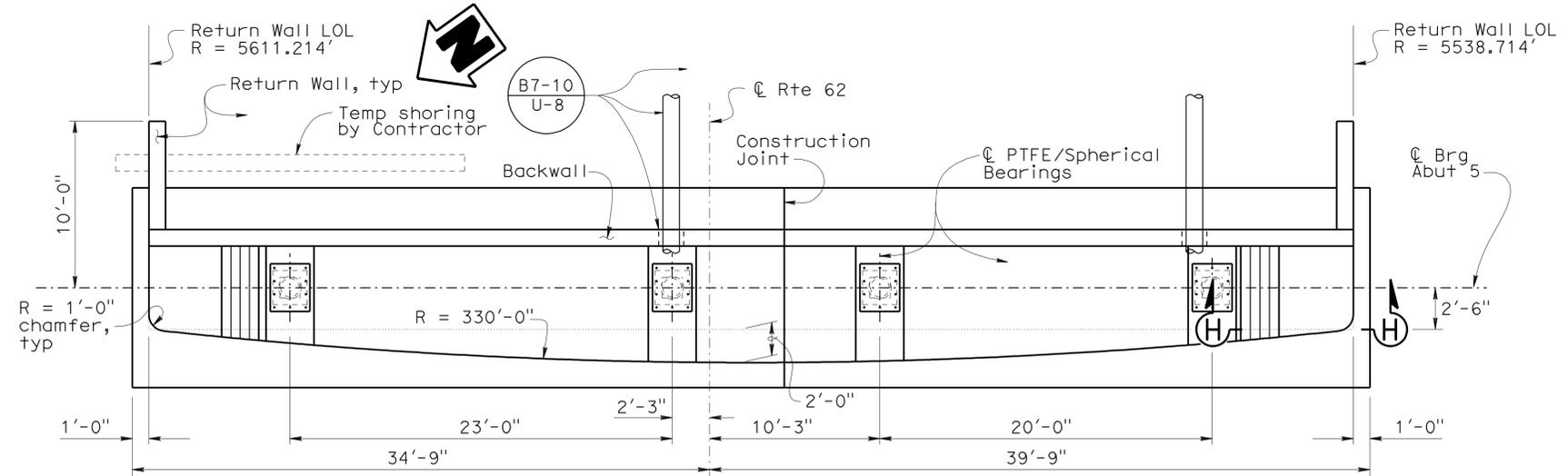
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	162	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

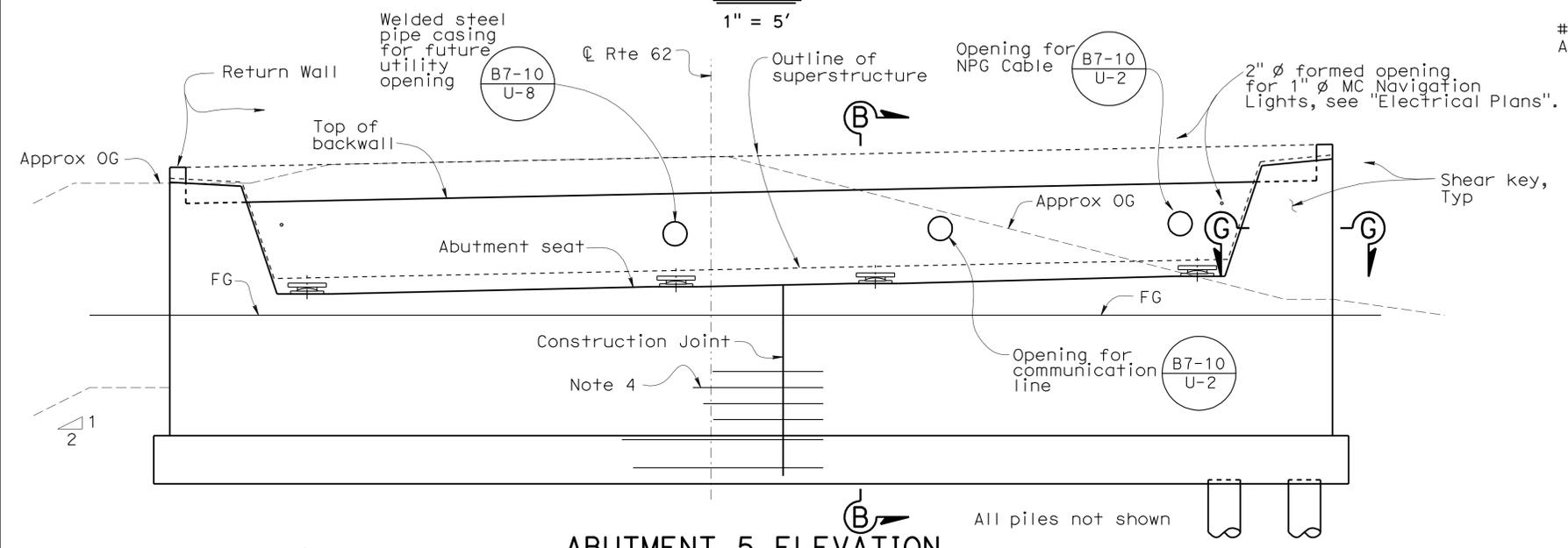
6-14-10
PLANS APPROVAL DATE

David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

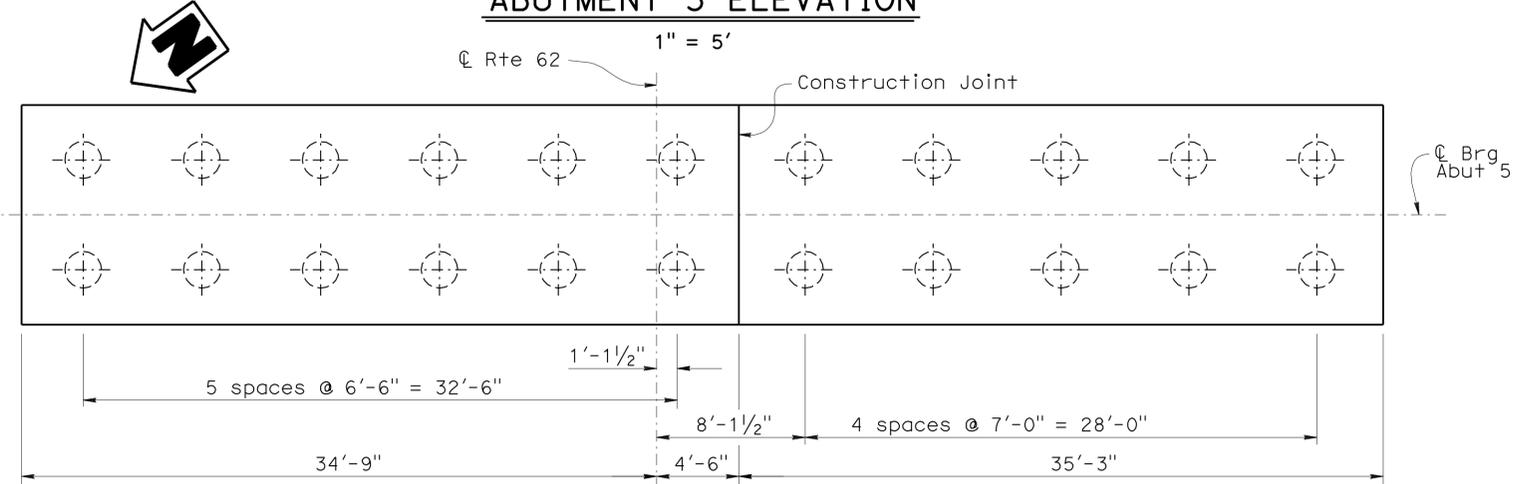
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PLAN
1" = 5'



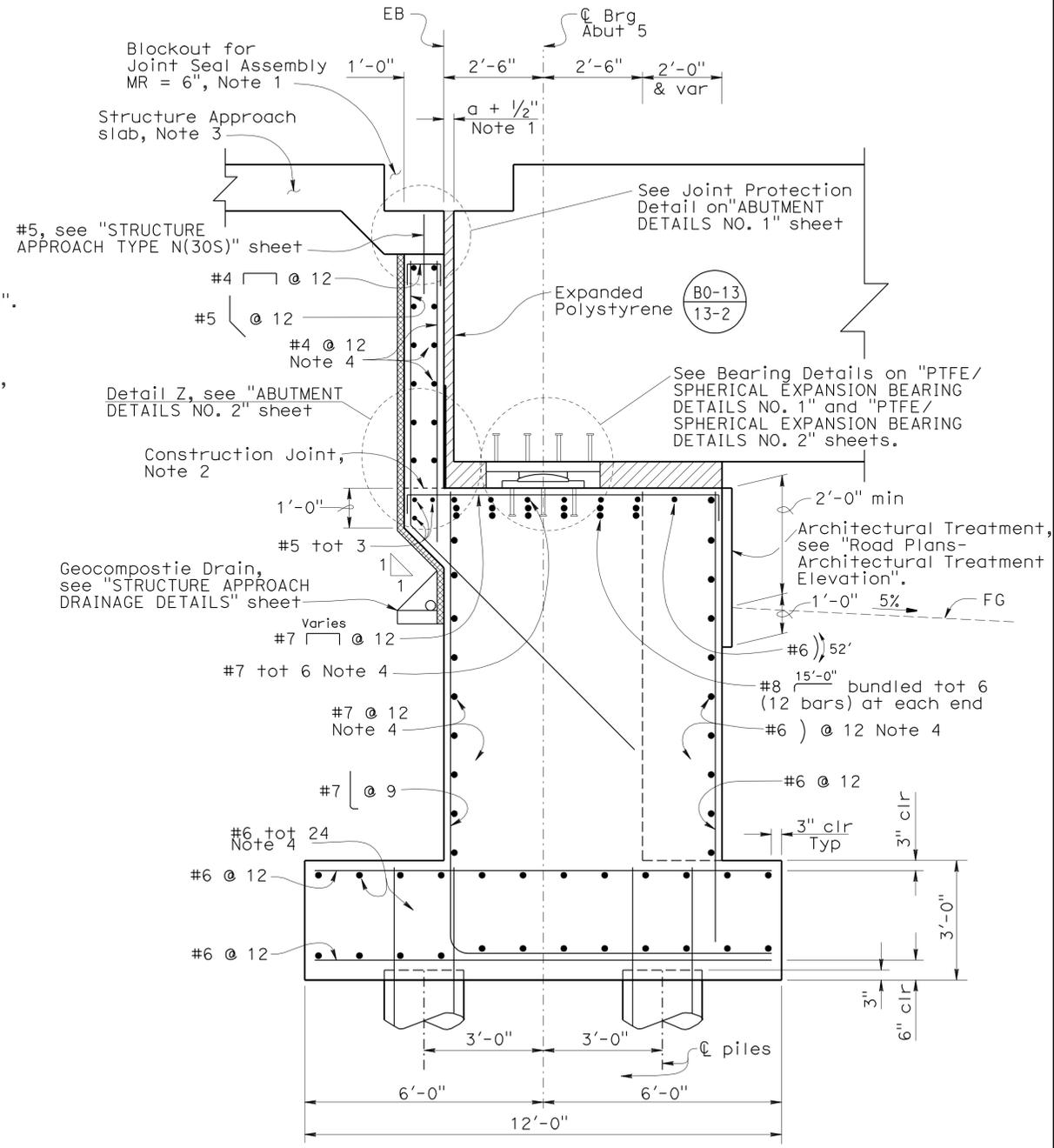
ABUTMENT 5 ELEVATION
1" = 5'



FOOTING PLAN
1" = 5'

Notes :

1. See "JOINT SEAL - ABUTMENT DETAILS" sheet.
2. Backwall to be placed after stressing.
3. For Structure Approach Slab, see "STRUCTURE APPROACH TYPE N(30S)" sheet.
4. Extend stage 2 reinforcement 2'-6" into stage 3 construction.
5. For Section G-G and Section H-H, see "ABUTMENT DETAILS NO. 2" sheet.

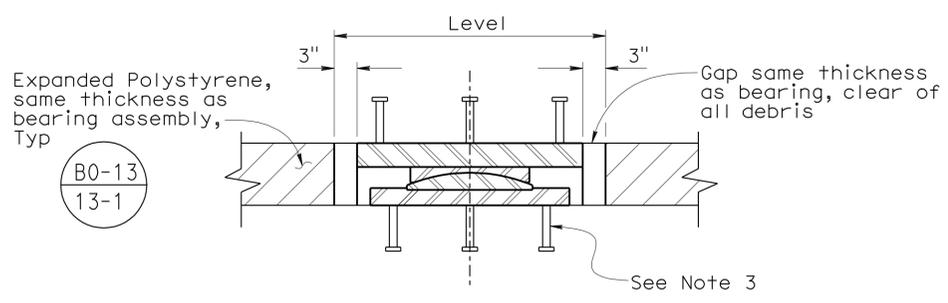


SECTION B-B
1/2" = 1'

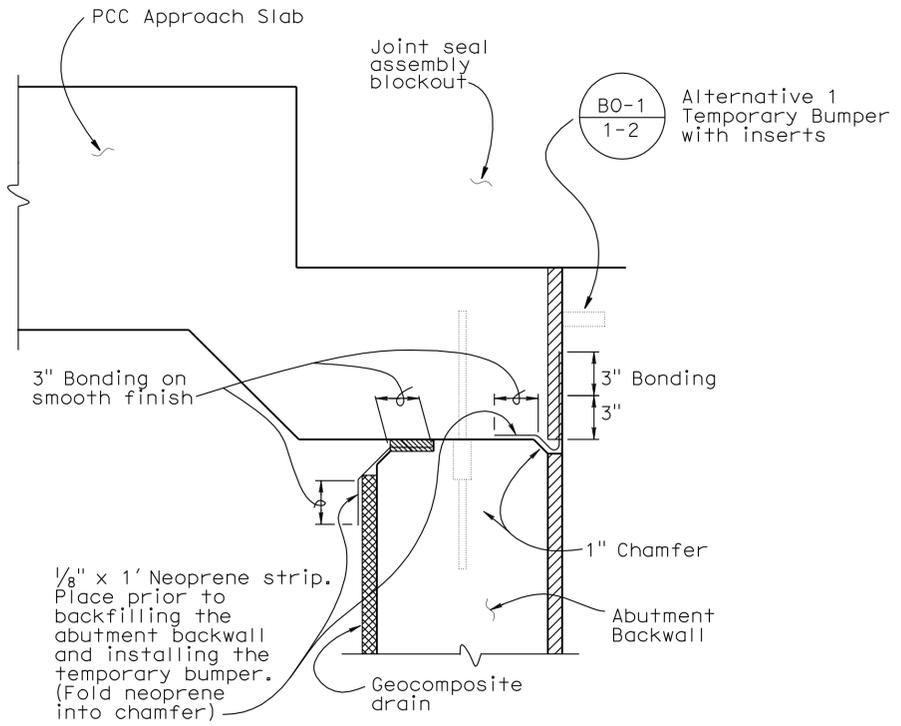
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Dhvani Desai	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) ABUTMENT LAYOUT NO. 2		
	DETAILS	BY A. Valdez / G. Dickerson	CHECKED Rakesh Deo			POST MILE	142.3			
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD							
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	10-14-08 4-23-09 5-23-09 5-27-09 5-29-09 6-18-09 10-28-09 3-24-09 4-18-09	SHEET 8 OF 50

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim TIME PLOTTED => 10:30

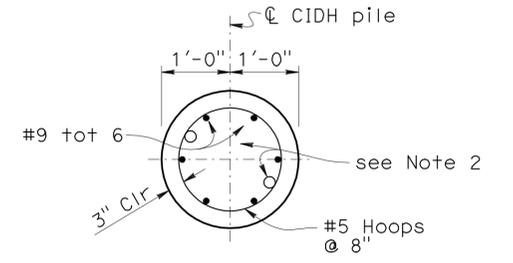
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	163	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10				PLANS APPROVAL DATE	
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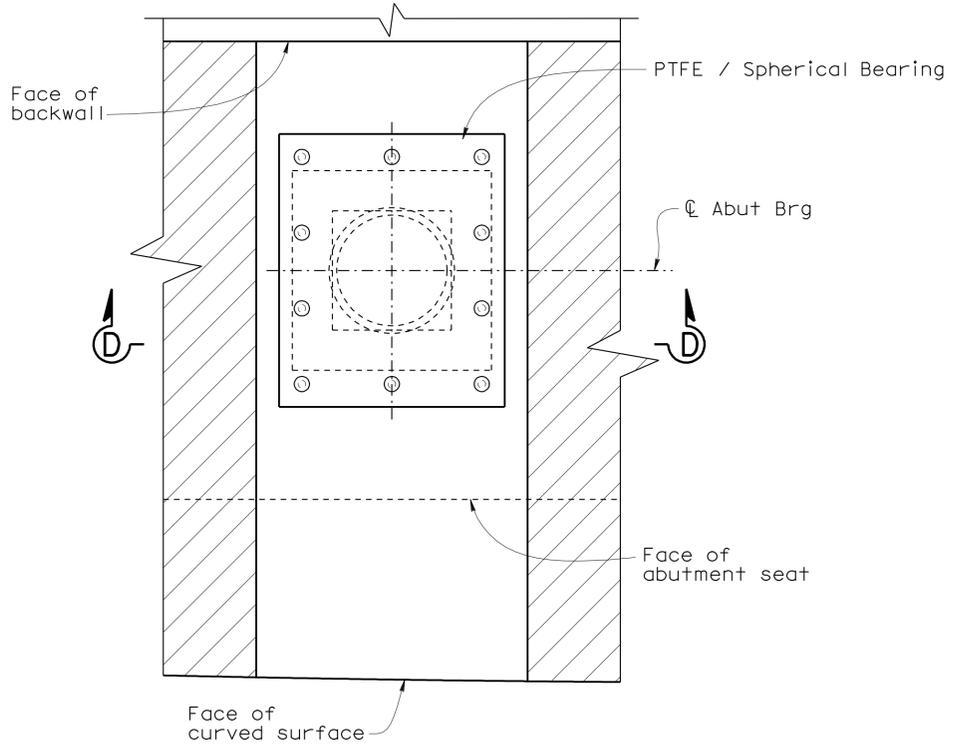
SECTION D-D



JOINT PROTECTION DETAIL



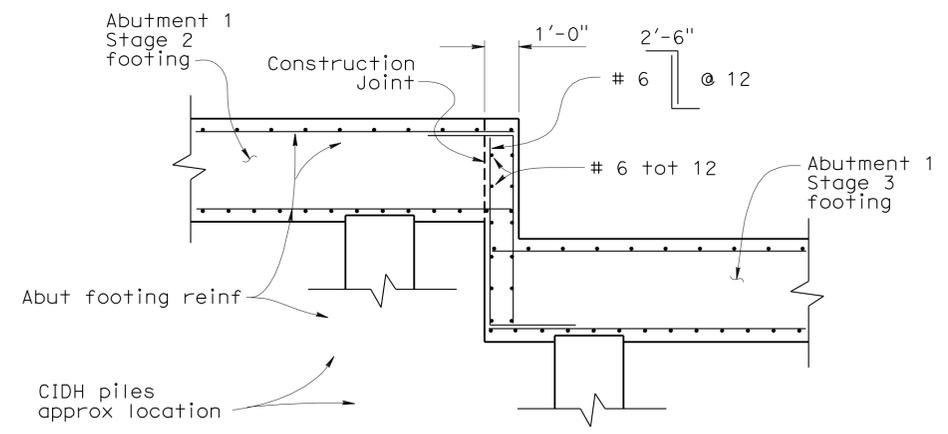
SECTION C-C



PLAN

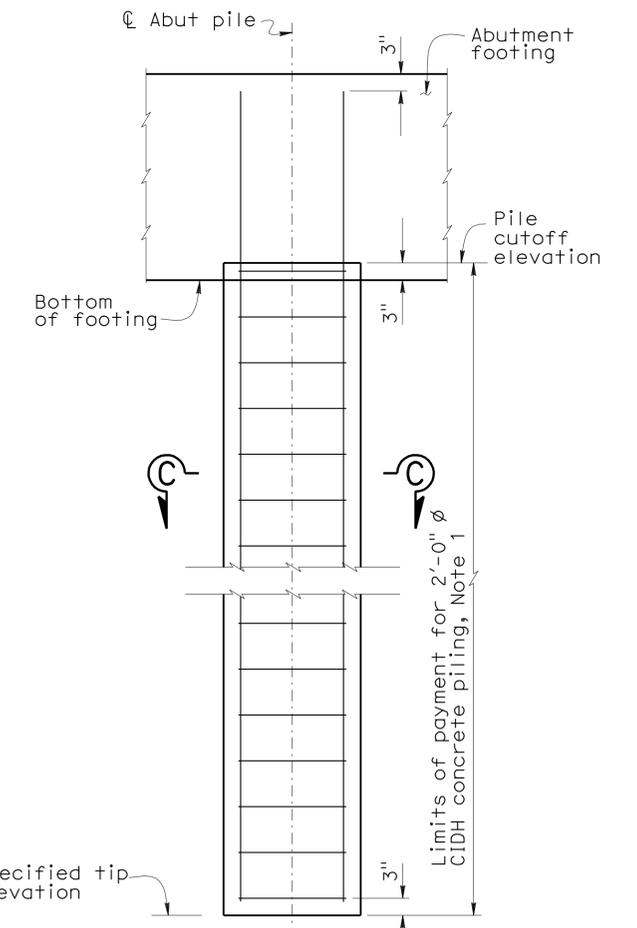
BEARING SEAT DETAILS

1" = 1'-0"
Abut 1 shown, Abut 5 similar



FOOTING STEP DETAIL

3/8" = 1'



ABUTMENT PILE ELEVATION

3/4" = 1'

- NOTES:
- Lapped splices not allowed in longitudinal pile reinforcement.
 - 2" ID inspection tubes for CIDH pile, total 2 equally spaced.
 - For stud layout and stud detail, see "PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 2" sheet.
 - For PTFE/Spherical Expansion Bearing details, see "PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 1" and "PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 2" sheets.

Indicates Expanded Polystyrene

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY D. Desai / D. Soon	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) ABUTMENT DETAILS NO. 1			
	DETAILS	BY A. Valdez / G. Dickerson	CHECKED Rakesh Deo			POST MILE	142.3				
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	REVISION DATES		10-14-08 5-26-09 5-27-09 5-28-09 6-15-09 4-18-09 4-16-09 5-1-09		
FILE => 54-1272-f-abtdt01.dgn								SHEET	9	OF	50

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim TIME PLOTTED => 10:30

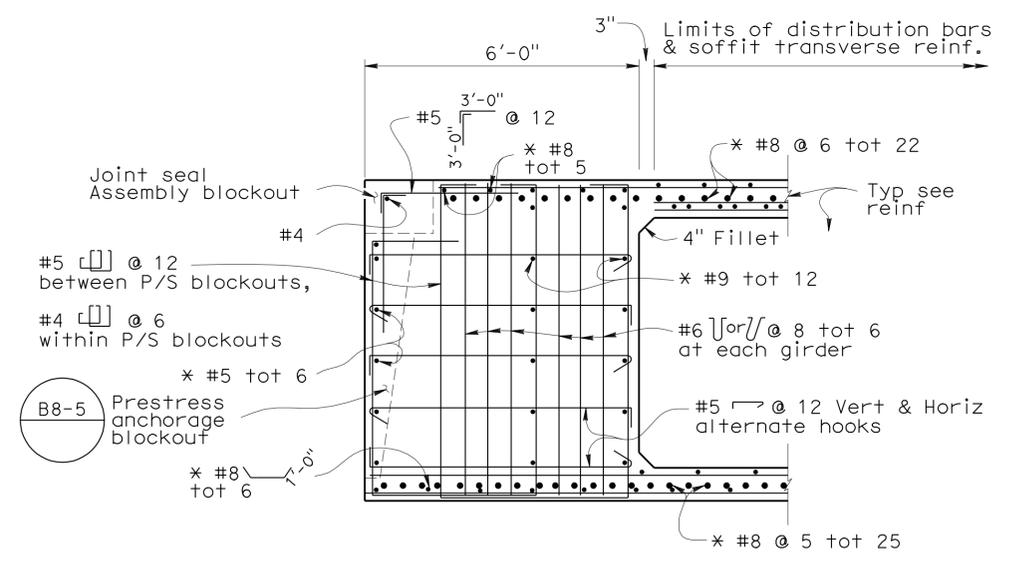
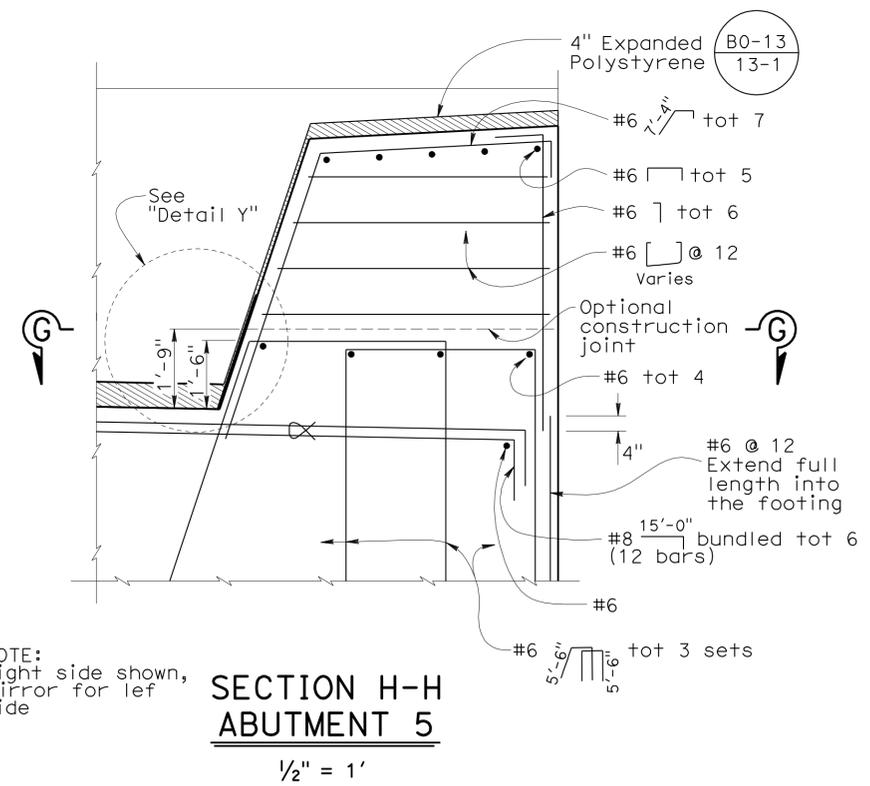
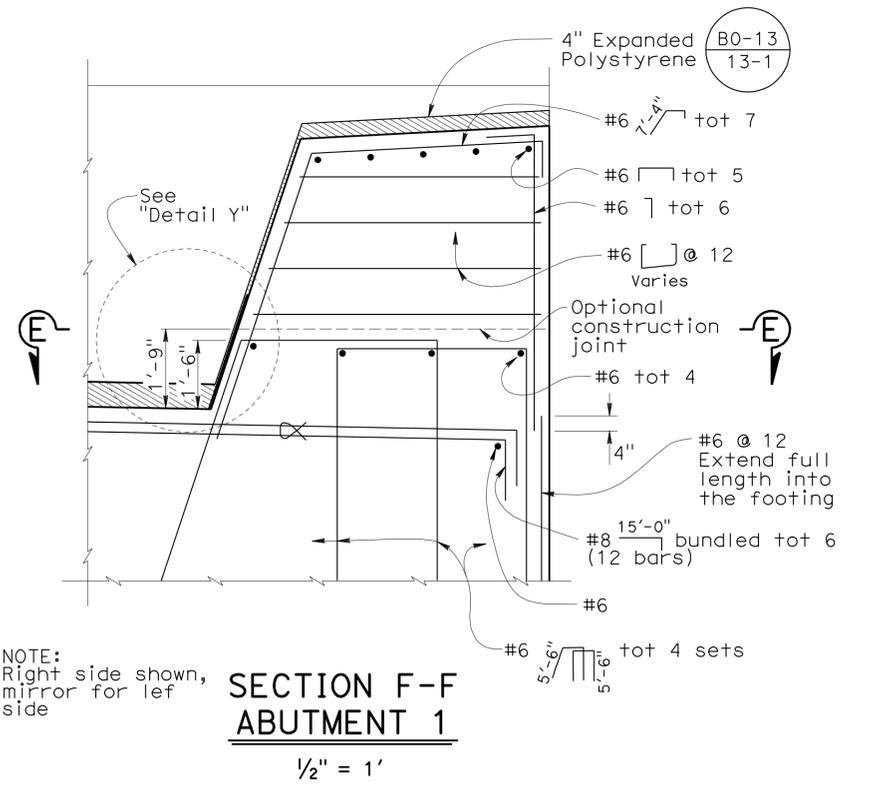
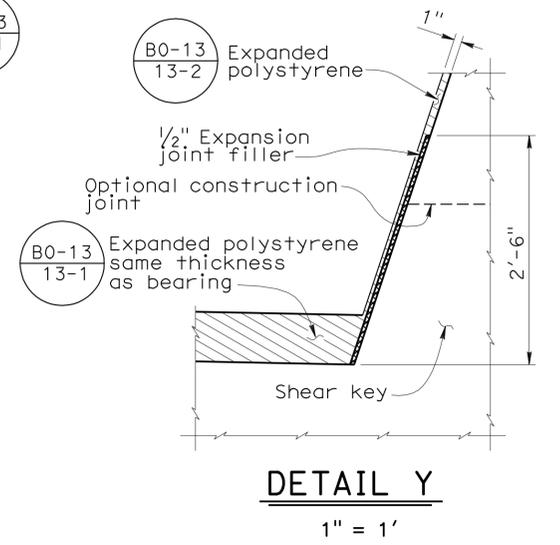
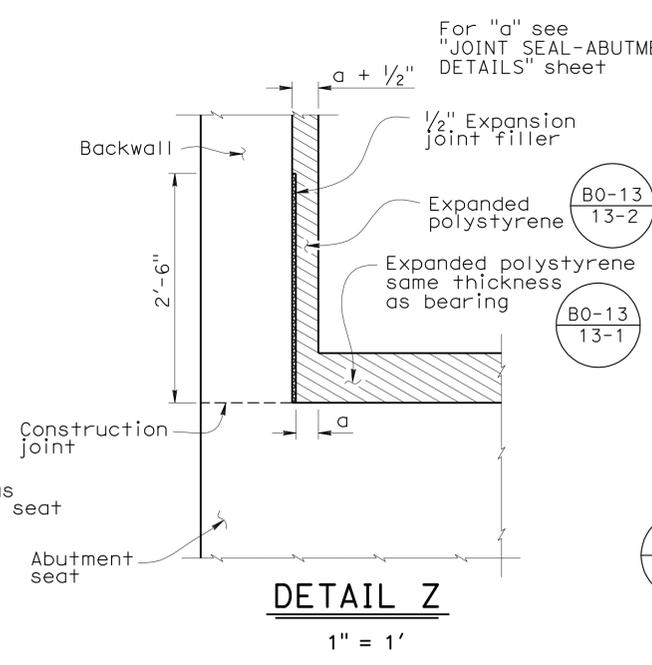
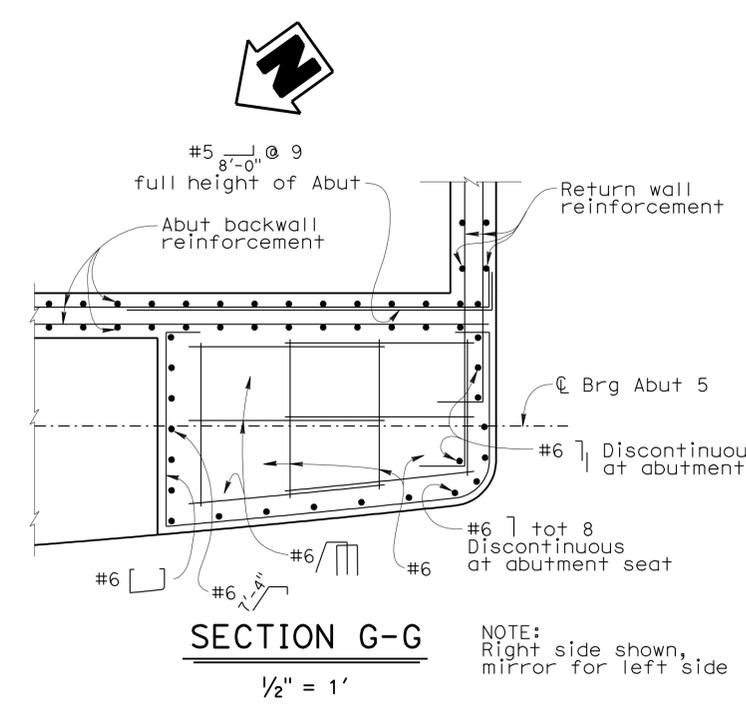
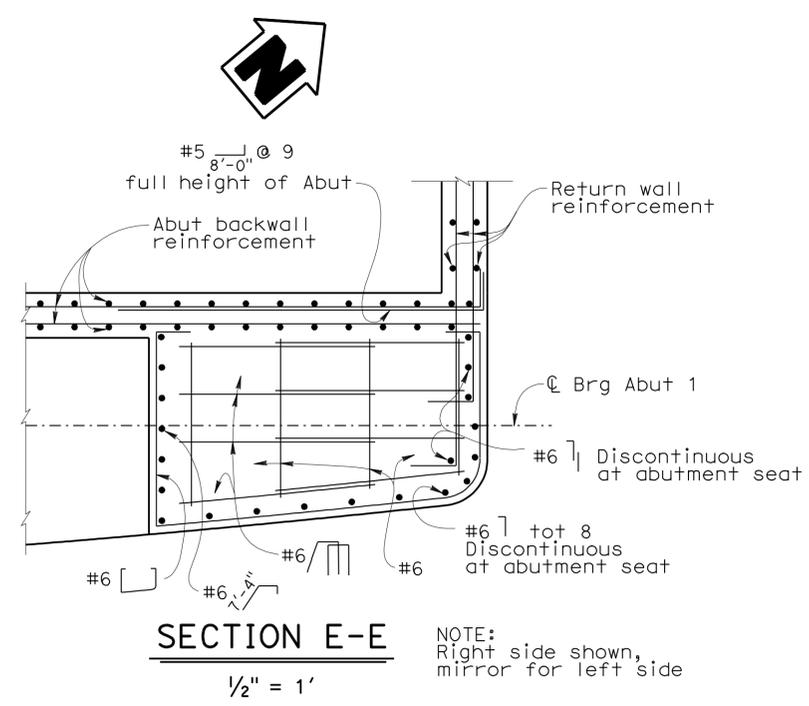
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	164	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

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* Reinforcement to be service spliced in the closure pour. Splices staggered @ 1'-6"

Utility Openings in end diaphragm:

- For location and size of openings, see "ELEVATION" detail on "BENT LAYOUT" sheet.
- For additional reinforcement see B7-10 U-3

SHEAR KEY

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Dhwani Desai / D. Soon	CHECKED Rakesh Deo / E. Ortega	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) ABUTMENT DETAILS NO. 2
	DETAILS	BY A. Valdez / G. Dickerson	CHECKED Rakesh Deo / E. Ortega			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD					

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 08
EA 378701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

10-14-08	4-15-09	5-14-09	5-28-09	5-27-09	5-28-09	6-15-09	10-28-09
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SHEET 10 OF 50

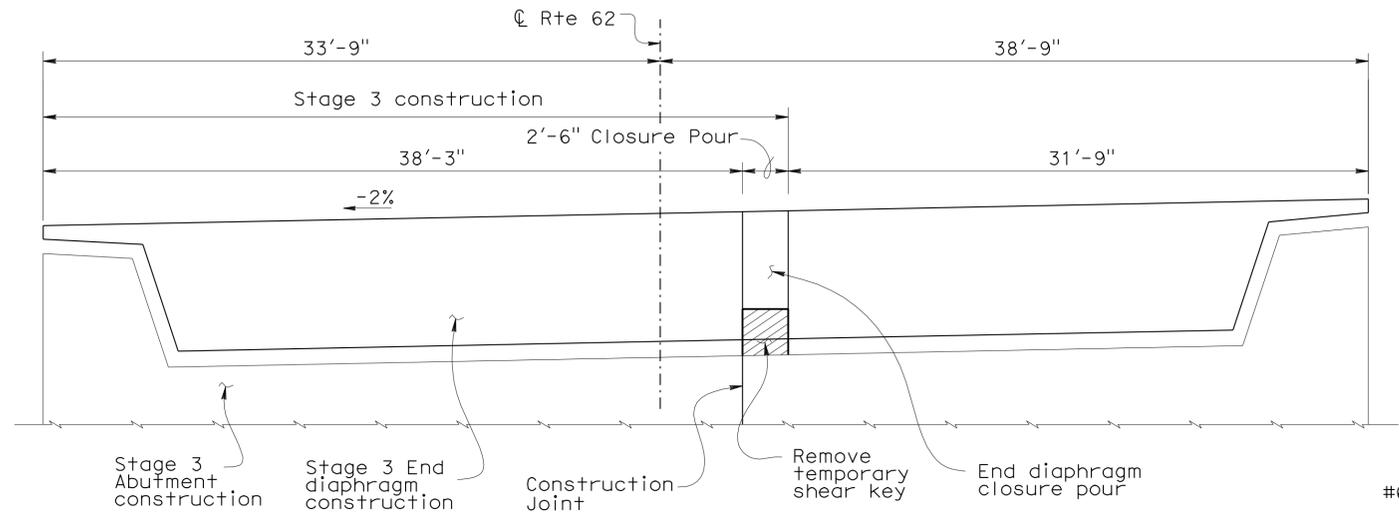
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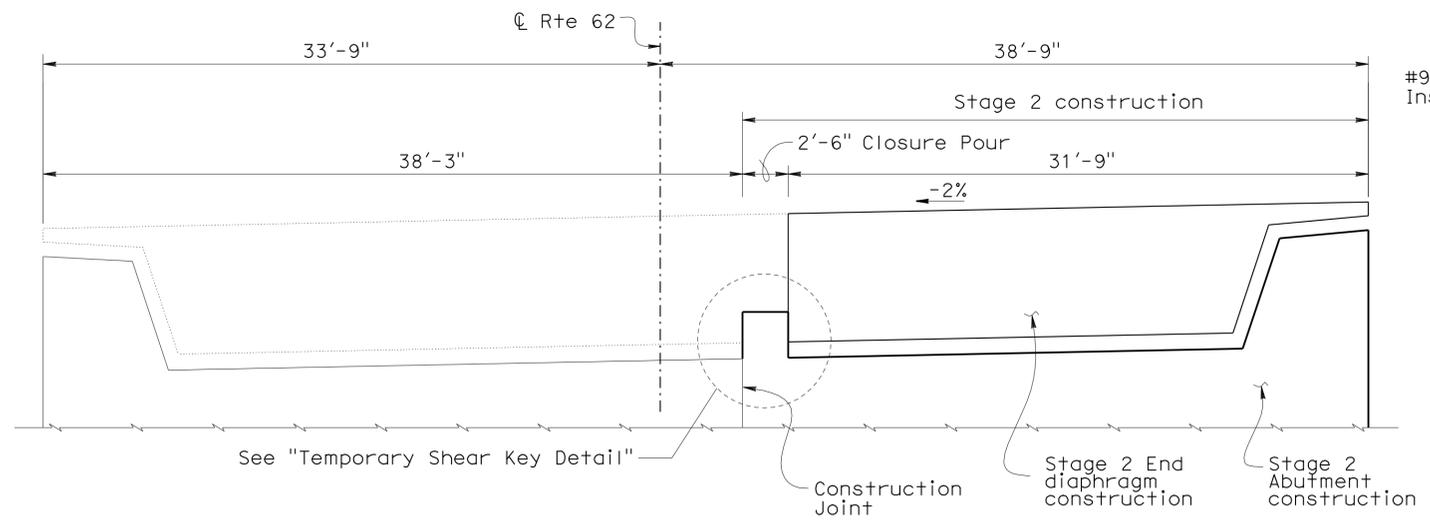
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	165	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
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 No. 51862
 Exp. 6-30-10
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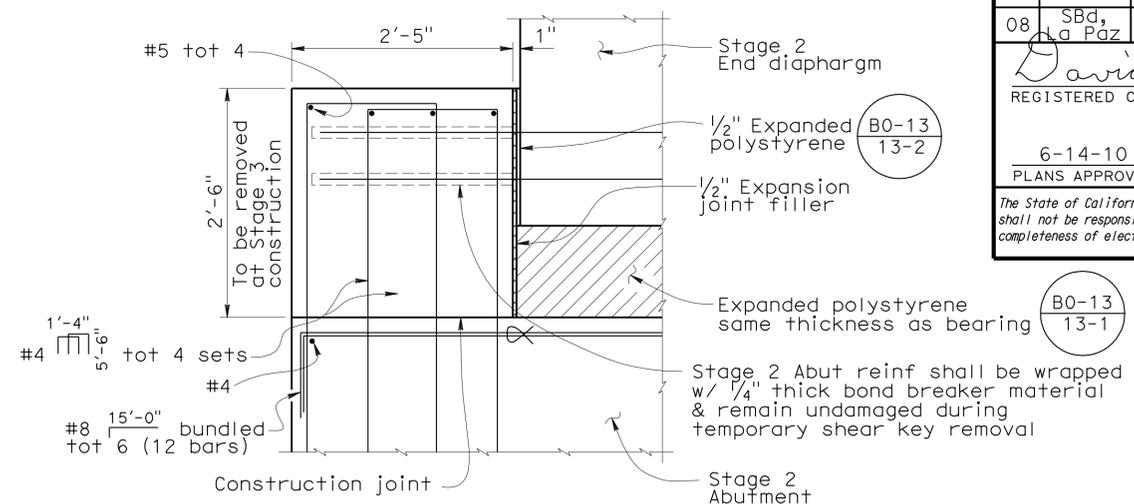
STAGE 3 CONSTRUCTION



STAGE 2 CONSTRUCTION

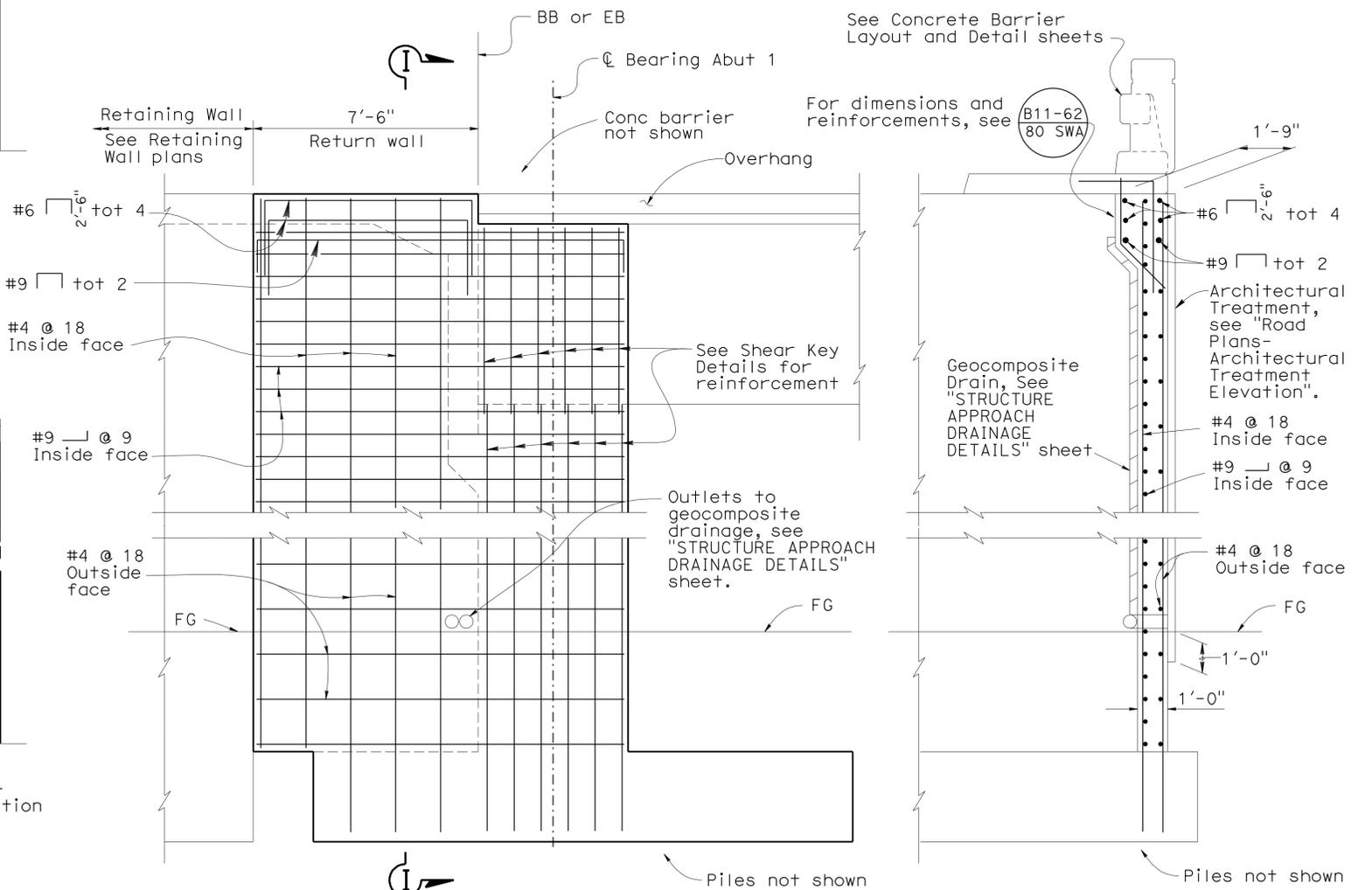
END DIAPHRAGM CONSTRUCTION STAGING

1" = 5' Abutment 5 shown, Abutment 1 similar



TEMPORARY SHEAR KEY DETAIL

1" = 1'



RETURN WALL ELEVATION

3/8" = 1' Abut 1 Right shown, others similar

SECTION I-I

3/8" = 1'

DESIGN	BY D. Soon / D. Desai	CHECKED Rakesh Deo
DETAILS	BY A. Valdez/G. Dickerson	CHECKED Rakesh Deo
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH **7**

BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
 ABUTMENT DETAIL NO. 3

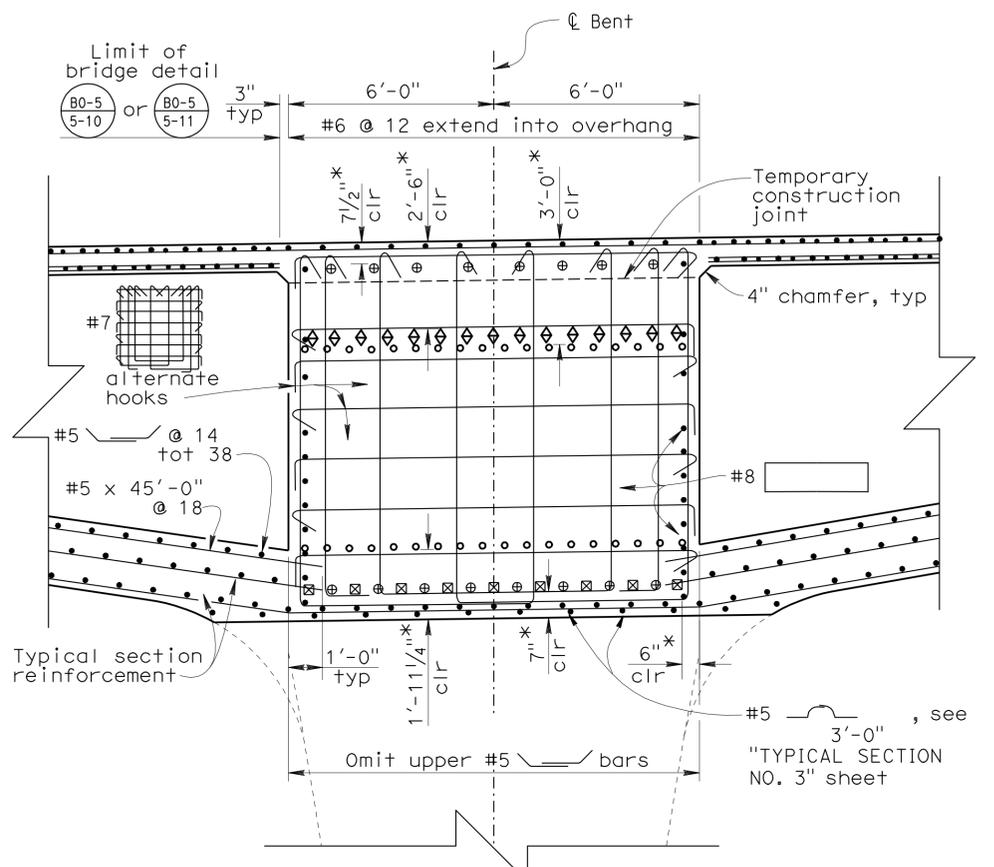
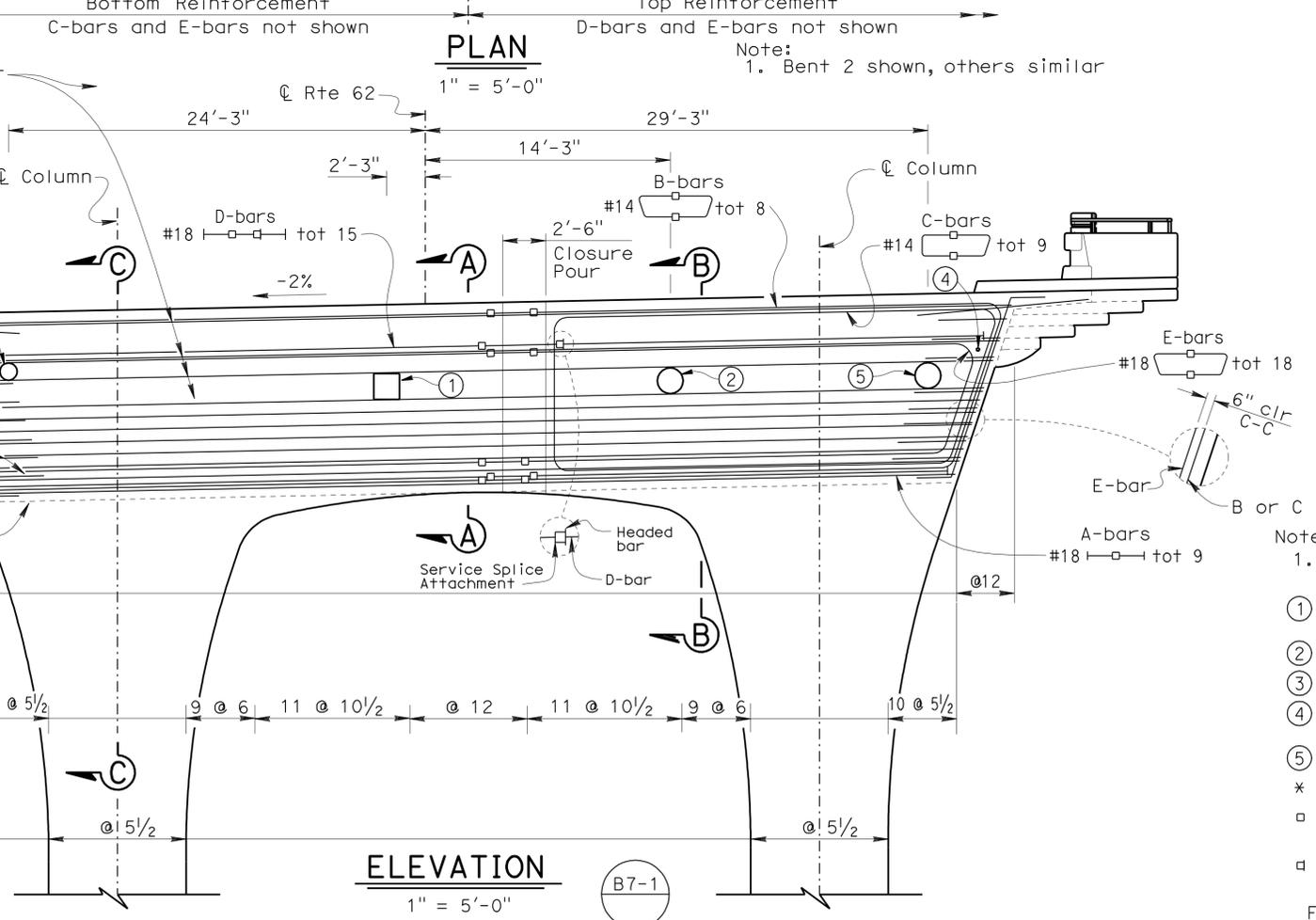
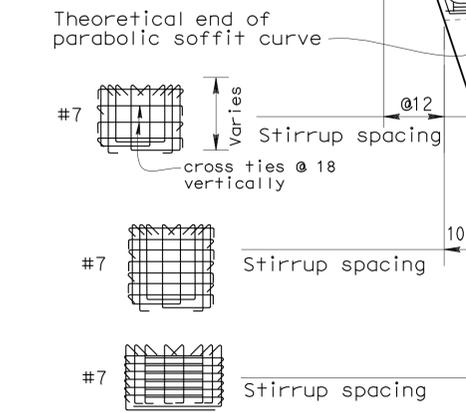
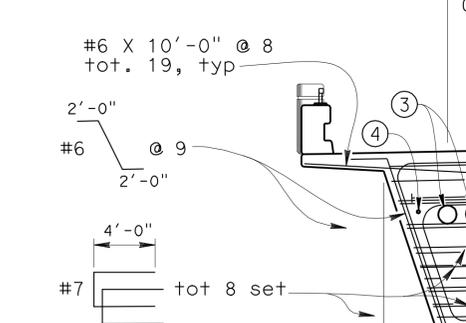
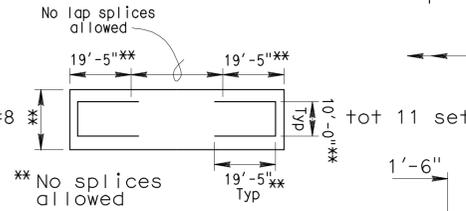
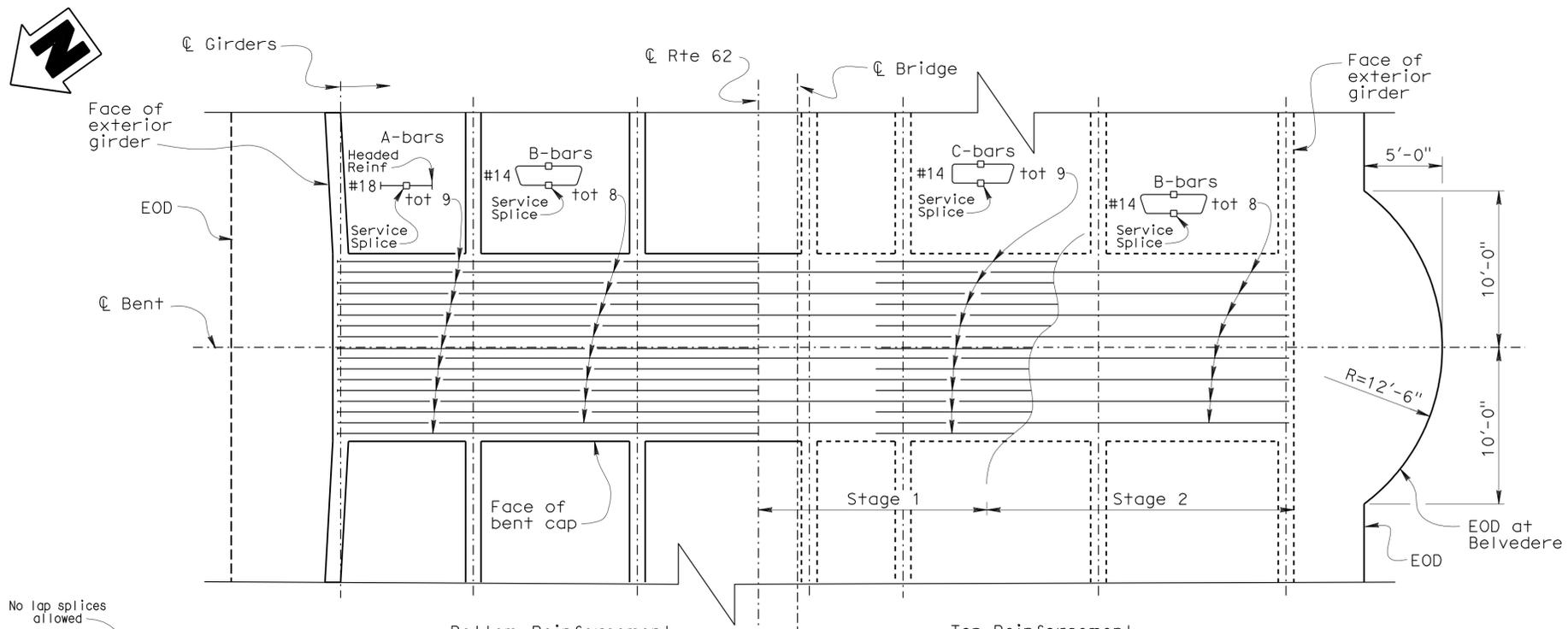
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	166	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

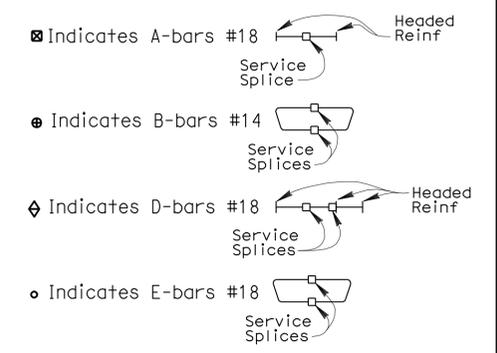
6-14-10
PLANS APPROVAL DATE

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- Notes:
- Lap splices prohibited in bent cap reinforcement.
 - 1'-6" x 1'-6" Future Utility Opening. (B7-10)
 - Verizon communication line, 1'-6" ϕ opening.
 - Deck Drainage pipes.
 - 2" ϕ formed opening for 1" ϕ MC Navigation Lights, see "Electrical Plans".
 - NPG Cable 1'-6" ϕ Opening
 - * Clearance to main cap reinforcement.
 - - Indicates service splices to be staggered by 2'-6".
 - - Indicates headed bar with service splice attachment for Stage 1 D-bars.
- For "SECTION B-B" and "SECTION C-C" see "BENT DETAILS NO. 1" sheet.



DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	COLORADO RIVER BRIDGE (REPLACE) BENT LAYOUT
DETAILS	BY Gerald Dickerson	CHECKED Mahmoud Fustok			54-1272	
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			POST MILE 142.3	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

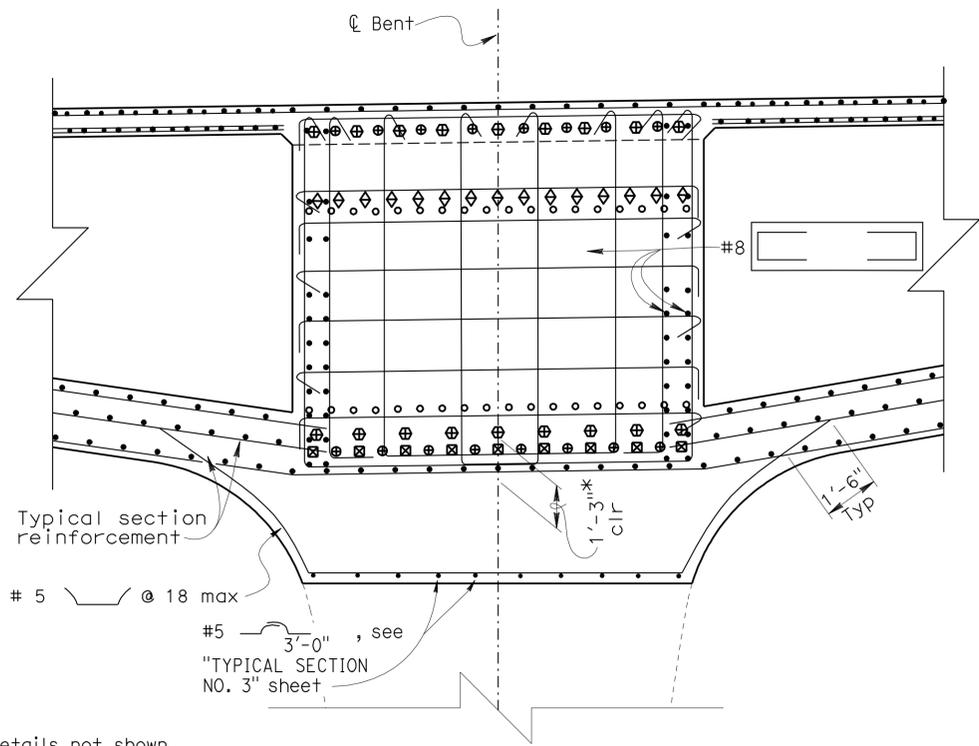
CU 08
EA 378701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	10-16-06	5-13-09	5-13-09	6-18-09	10-28-09	4-16-09	4-20-09	4-23-09	5-11-09
SHEET	12								
OF	50								

FILE => 54-1272-h-b_1o01.dgn

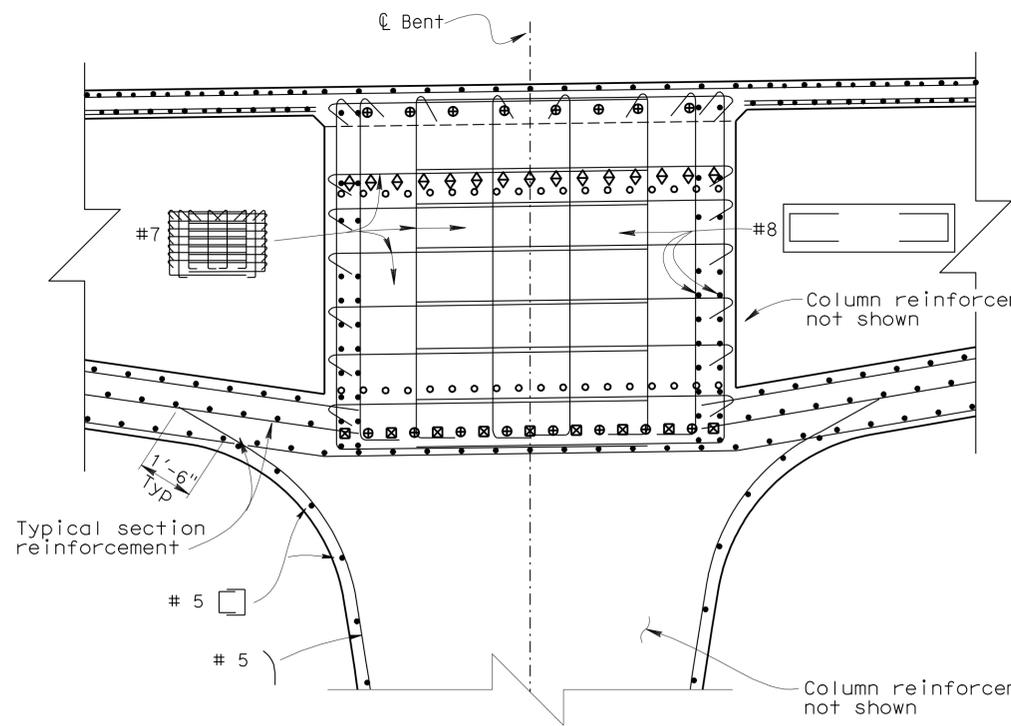
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	167	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 PLANS APPROVAL DATE					
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- ⊠ Indicates A-bars #18
Service Splice
Headed Reinf
- ⊙ Indicates B-bars #14
Service Splices
- ⊕ Indicates C-bars #14 tot 9 Stage 1
Service Splices
- ⊡ Indicates D-bars #18
Service Splices
Headed Reinf
- Indicates E-bars #18
Service Splices

For details not shown, see "SECTION A-A" and "ELEVATION" on "BENT LAYOUT" sheet.

SECTION B-B
3/8" = 1'-0"



- ⊠ Indicates A-bars #18
Service Splice
Headed Reinf
- ⊙ Indicates B-bars #14
Service Splices
- ⊡ Indicates D-bars #18
Service Splices
Headed Reinf
- Indicates E-bars #18
Service Splices

For details not shown, see "SECTION A-A" and "ELEVATION" on "BENT LAYOUT" sheet.

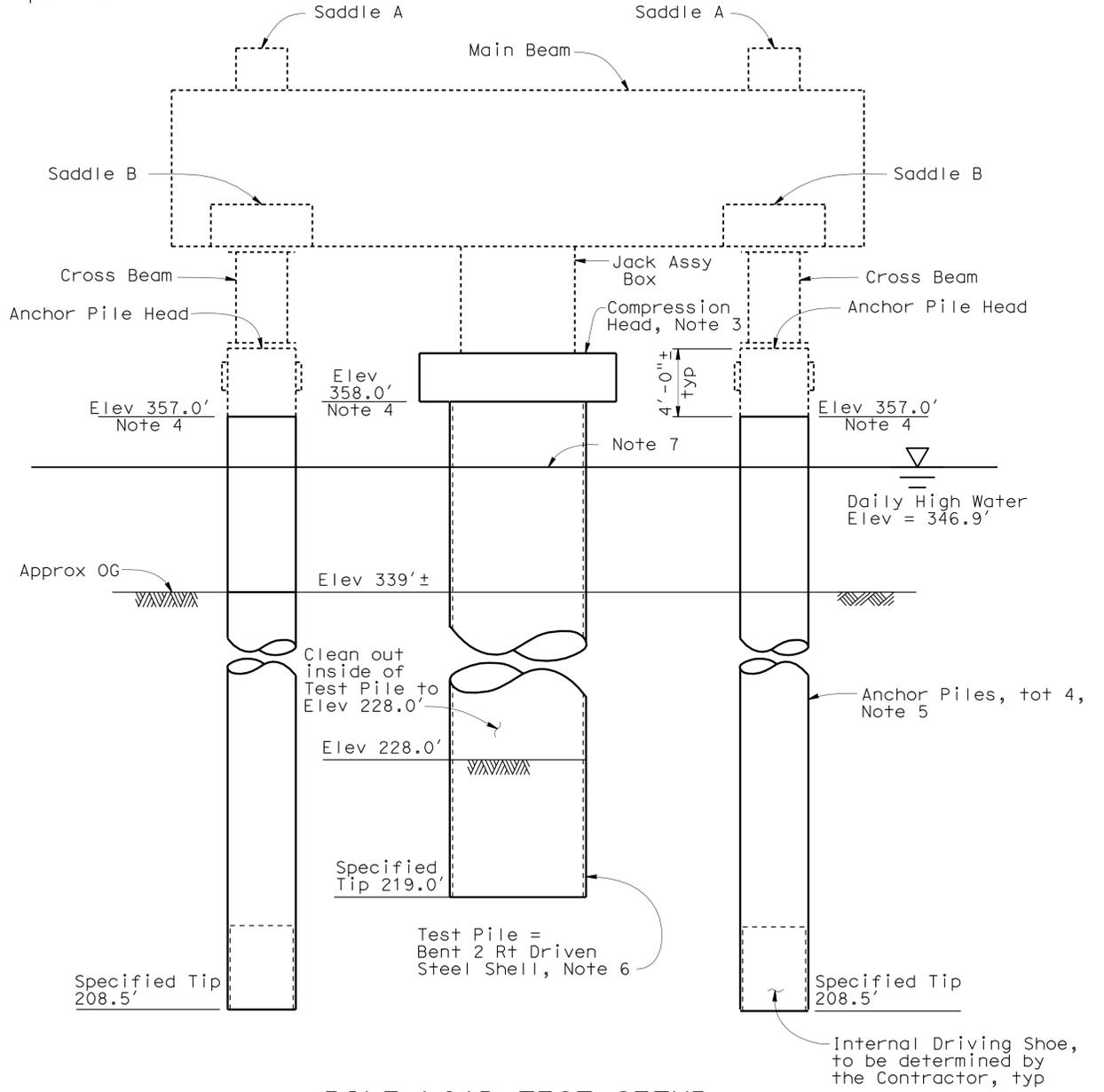
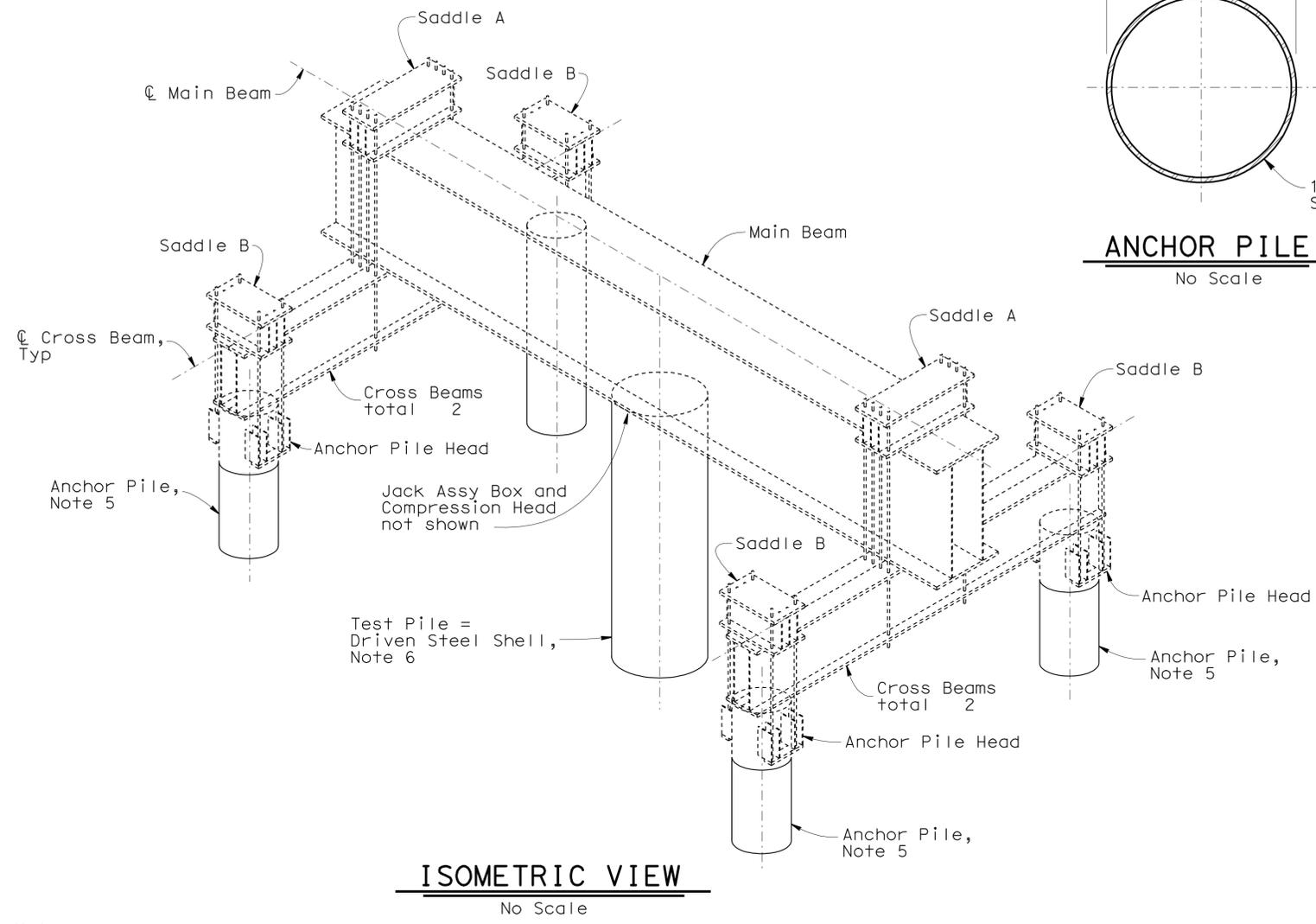
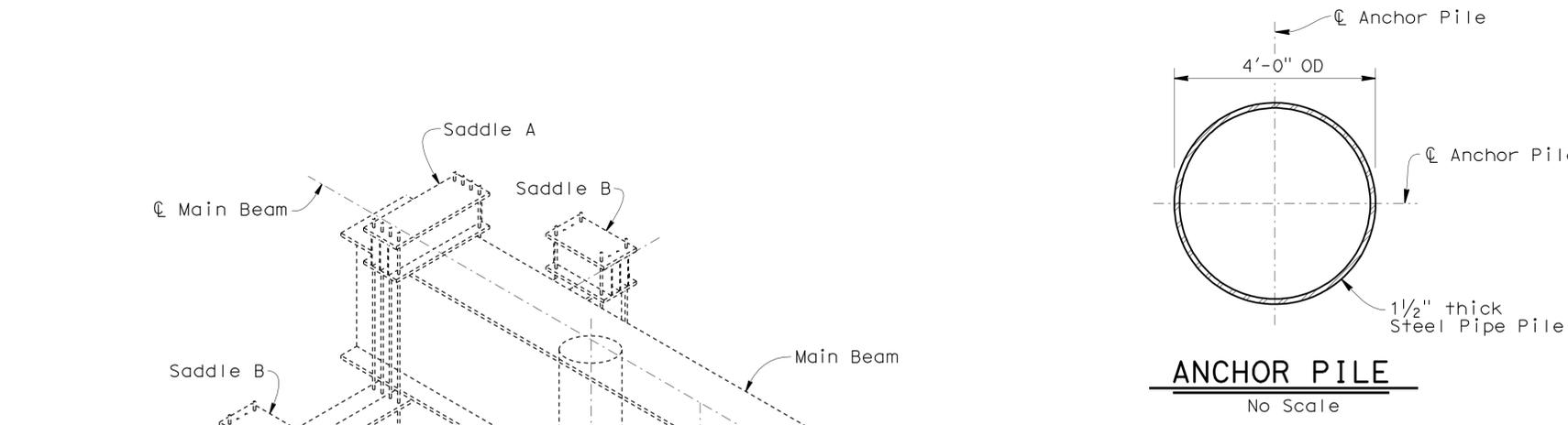
SECTION C-C
3/8" = 1'-0"

NOTES :

1. Lap splices prohibited in bent cap reinforcement.
- * Clearance to main cap reinforcement.
- - Indicates service splices to be staggered 2'-6".
- ⊡ - Indicates headed bar with service splice attachment for Stage 1 D-bars.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) BENT DETAILS NO. 1
	DETAILS	BY G. Dickerson/A. Valdez	CHECKED Mahmoud Fustok			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 10-16-06, 6-15-09, 12-16-08, 12-24-08, 1-3-09, 2-22-09, 4-20-09, 5-11-09, 5-18-09	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	SHEET 13 OF 50		USERNAME => hrlim DATE PLOTTED => 17-JUN-2010 TIME PLOTTED => 10:31	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	169	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 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.					



- Notes :
- For location of Test Pile and Anchor Piles see "FOUNDATION PLAN NO. 1" sheet.
 - Anchor Pile Heads, Cross Beams, Main Beam, Jacking Assembly, Saddle A and Saddle B to be furnished by the State.
 - Test Pile Compression Head shall be provided by the Contractor. Upon completion of Pile Load Test, the Test Pile Compression Head shall become property of the State.
 - Top of Test Pile Elevation and Top of Anchor Pile Elevation subject to change by the Engineer. Verify all pile top elevations with the Engineer prior to cutting to final length for load testing.
 - Upon completion of Pile Load Test:
 - Anchor Piles to be removed to Elev 305.0'
 - Anchor Pile voids to be backfilled to O.G. with Class 1/4T rock slope protection material.
 - Test Pile to be incorporated into Bent 2 Right Driven Steel Shell, upon completion of Pile Load Test.
 - Slurry or water elevation inside the Test Pile to match river water elevation.
- - Indicates items furnished by the State.

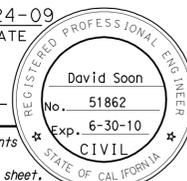
DESIGN	BY David Soon	CHECKED Wendy Hou
DETAILS	BY Gerald Dickerson	CHECKED Wendy Hou
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

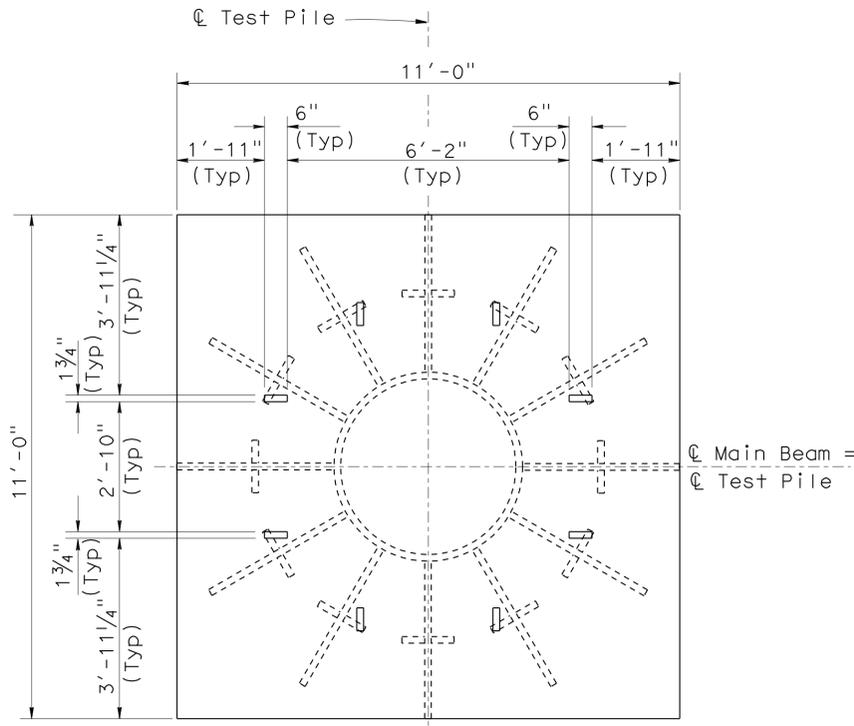
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO.	54-1272
POST MILE	142.3

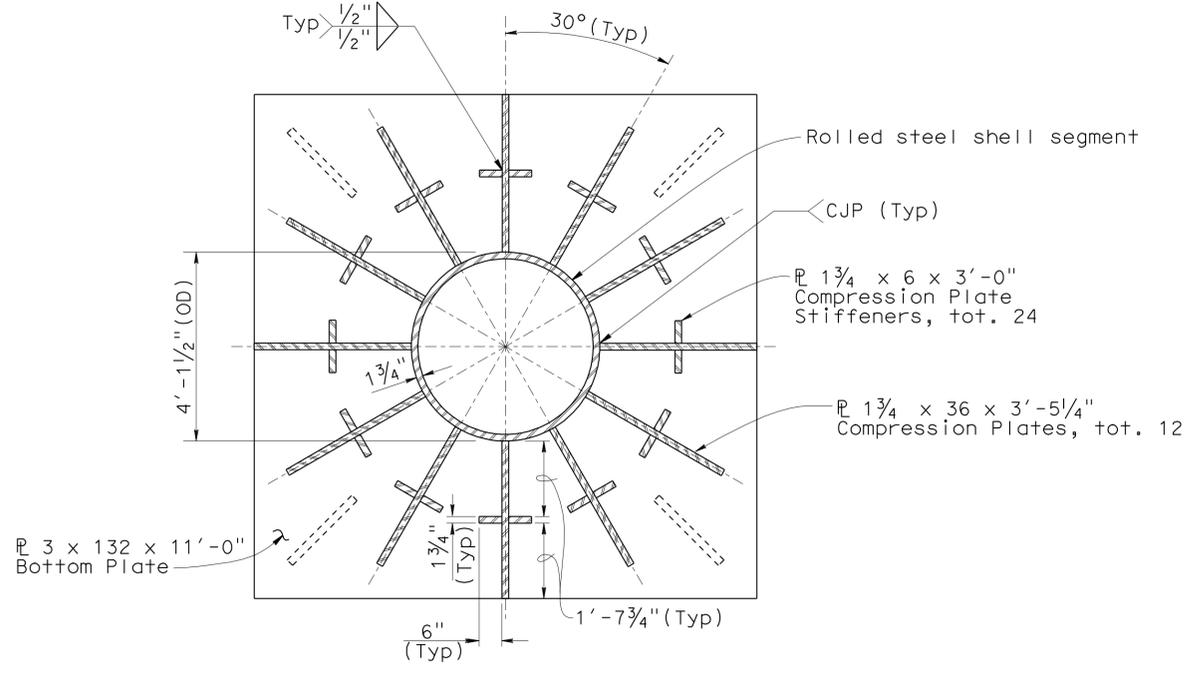
COLORADO RIVER BRIDGE (REPLACE)
PILE LOAD TEST DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	170	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 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.	



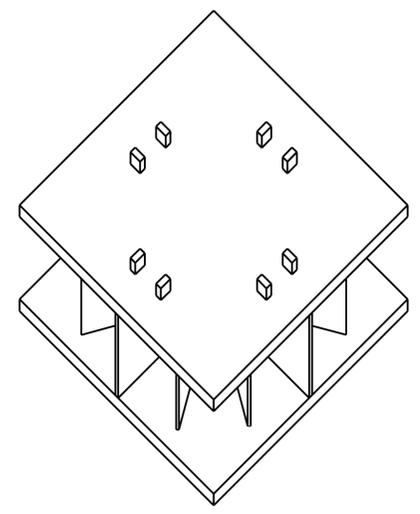
PLAN

1/2" = 1'-0"



SECTION A-A

1/2" = 1'-0"



TEST PILE COMPRESSION HEAD

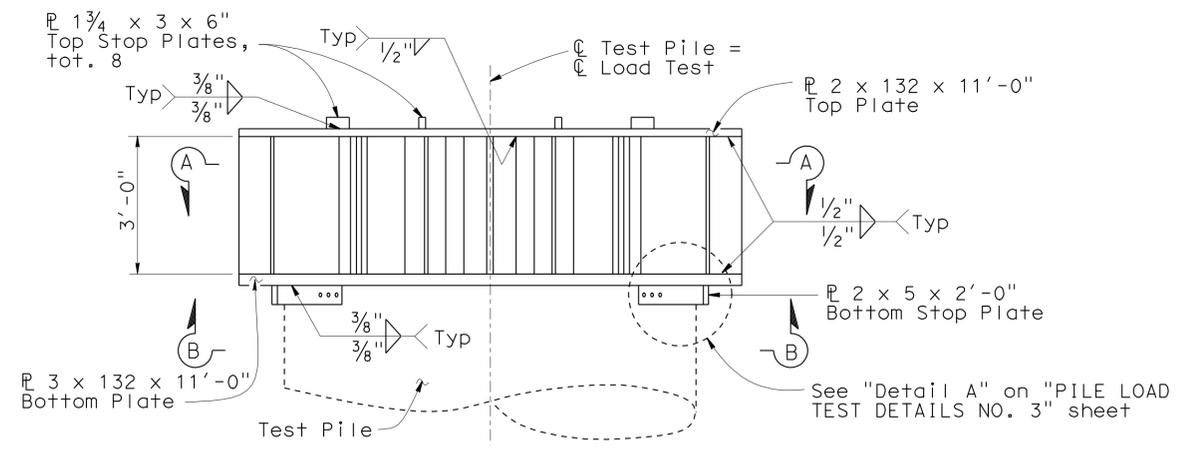
Isometric

**GENERAL NOTES
LOAD FACTOR DESIGN**

- DESIGN: AASHTO LRFD Specifications, 3rd edition w/ Interims though 2006 and Caltrans Amendments, V3.06.01.
- LIVE LOADING: 8000 kips Test Pile Jacking Load (Compression)
- STRUCTURAL STEEL:
- ASTM A709 Gr 50: $F_y = 50$ ksi
 - Top Plate & Bottom Plate: ASTM A514 Grade Q Gr 90: $F_y = 90$ ksi
 - Rolled Steel Shell Segment: ASTM A252 Grade 3: $F_y = 45$ ksi

Notes :

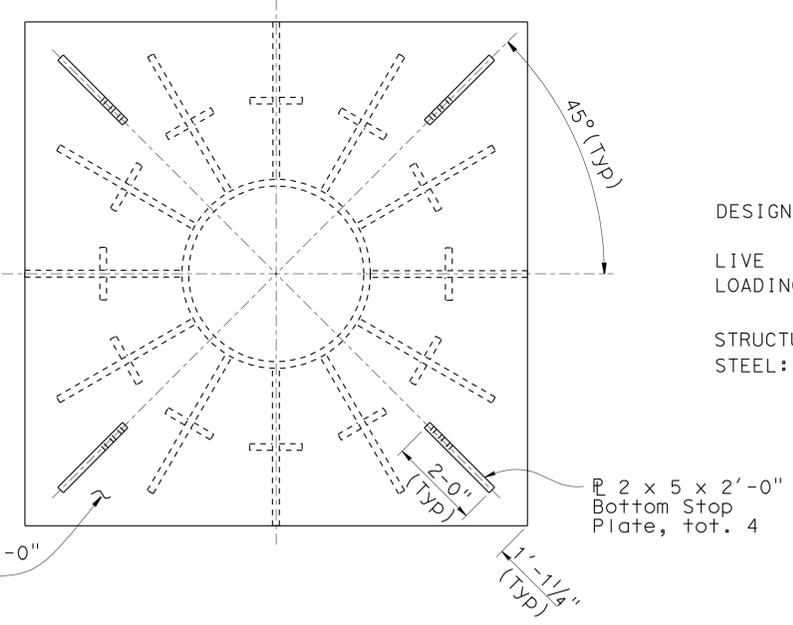
- Test Pile Compression Head shall be provided by the Contractor. Upon completion of Pile Load Test, the Test Pile Compression Head shall become property of the State.
- All exposed surfaces of Test Pile Compression Head shall be cleaned and painted after manufacture.



ELEVATION

1/2" = 1'-0"

TEST PILE COMPRESSION HEAD



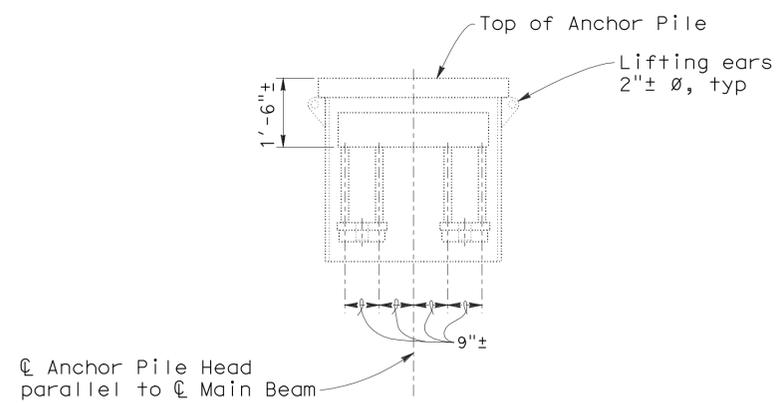
SECTION B-B

1/2" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY David Soon	CHECKED Wendy Hou	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) PILE LOAD TEST DETAILS NO. 2
	DETAILS	BY Gerald Dickerson	CHECKED Wendy Hou			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	REVISION DATES	
SHEET 16 OF 50								

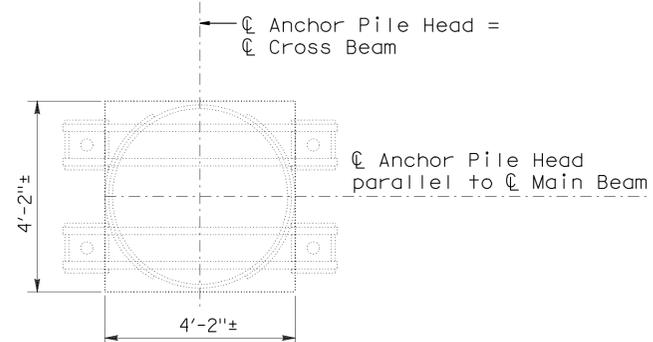
DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	171	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10				PLANS APPROVAL DATE	
<i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</i>					

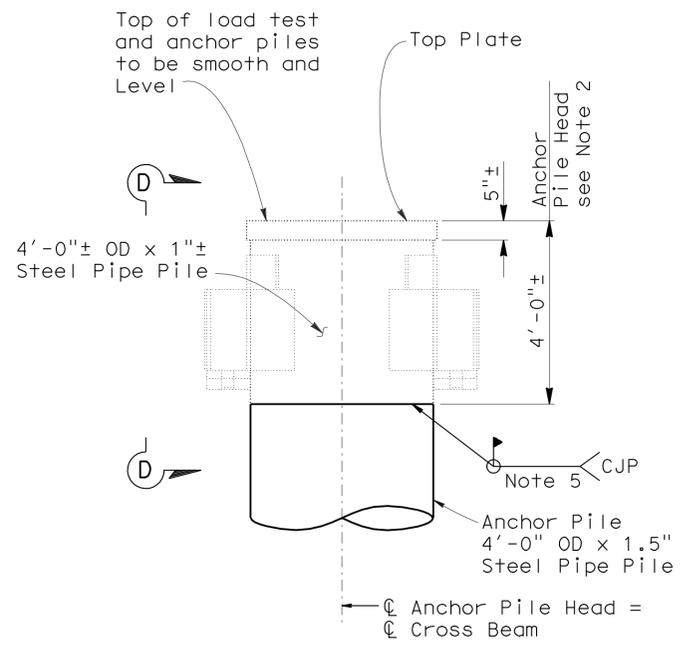


VIEW D-D
1/2" = 1'-0"

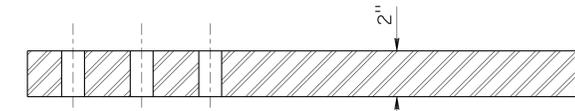
- NOTES:
1. Test Pile Compression Head shall be provided by the Contractor. Upon completion of Pile Load Test, the Test Pile Compression Head shall become property of the State.
 2. Four Anchor Pile Heads required for load test to be furnished by the State.
 3. Anchor Pile Head shall be aligned with C Cross Beams, see "ISOMETRIC VIEW" on "PILE LOAD TEST DETAILS NO. 1" sheet.
 4. Anchor Pile Head prepare surface and complete joint penetration weld by Contractor.
 5. CJP weld by Contractor.
 6. For location of "DETAIL A", see "PILE LOAD TEST DETAILS NO. 2" sheet.



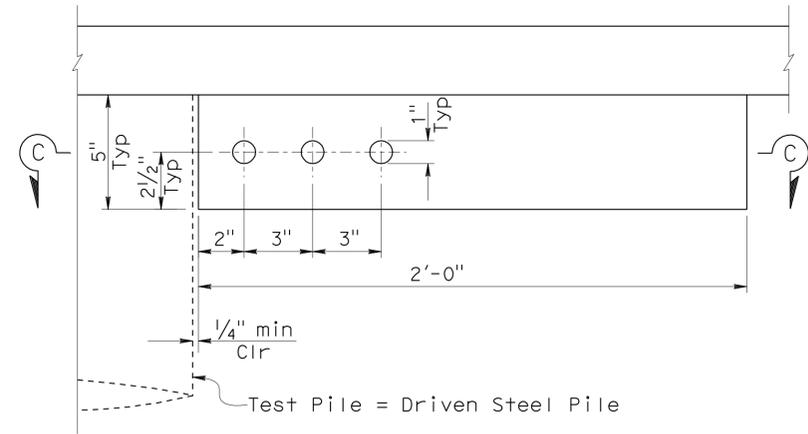
PLAN
1/2" = 1'-0"



ELEVATION
1/2" = 1'-0"



SECTION C-C
9'-0" \varnothing Test Pile



DETAIL A
3" = 1'-0"

ANCHOR PILE HEAD
(See Note 2)

DESIGN	BY David Soon	CHECKED Wendy Hou
DETAILS	BY Gerald Dickerson	CHECKED Wendy Hou
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

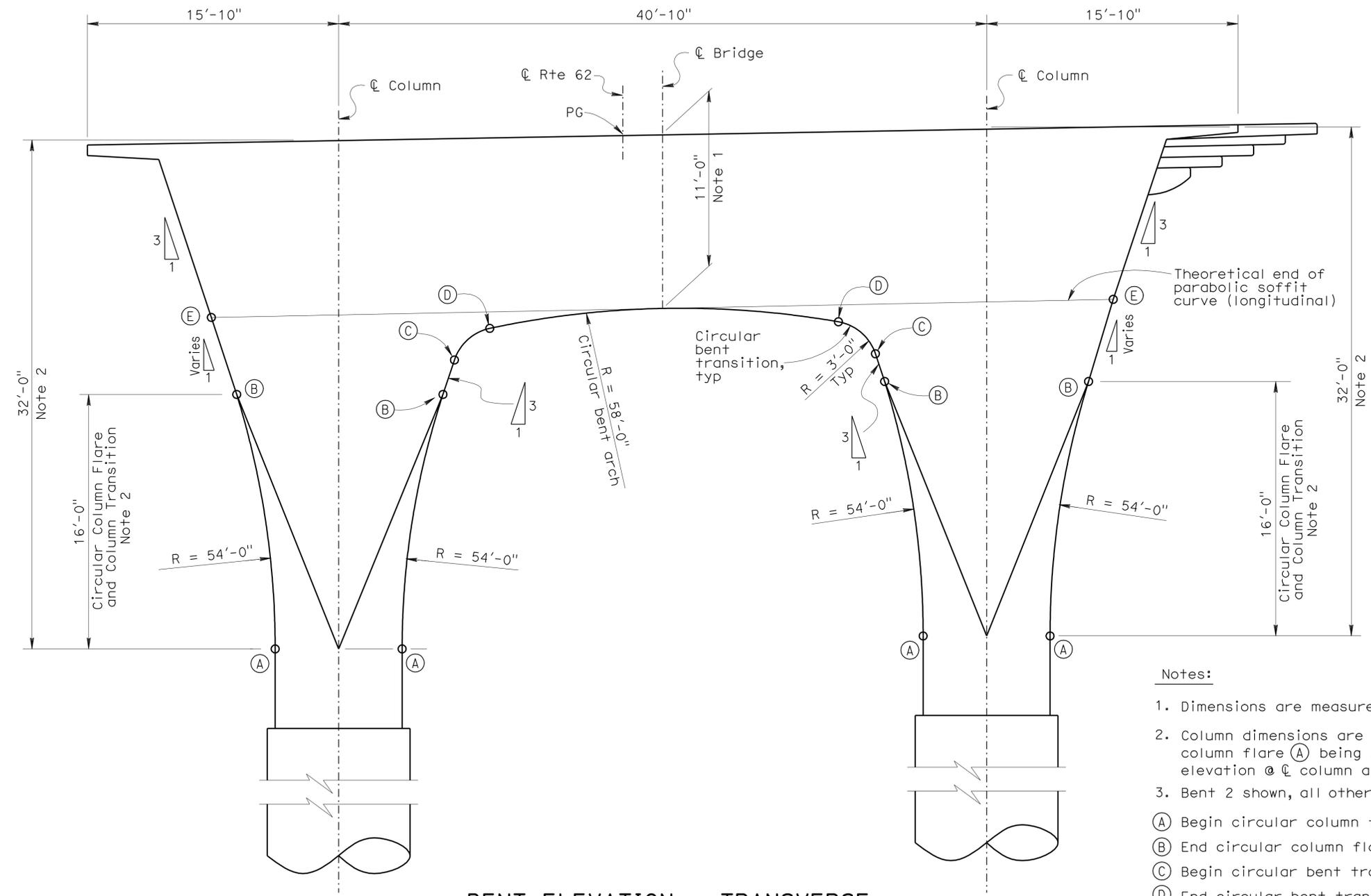
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
PILE LOAD TEST DETAILS NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBd, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	172	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 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.					



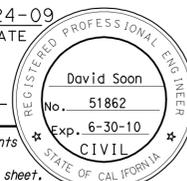
- Notes:
- Dimensions are measured from top of deck.
 - Column dimensions are based on begin circular column flare (A) being 32'-0" below deck elevation @ \varnothing column and \varnothing bent.
 - Bent 2 shown, all others similar.
- (A) Begin circular column flare.
 - (B) End circular column flare.
 - (C) Begin circular bent transition.
 - (D) End circular bent transition = begin/end circular bent arch.
 - (E) Sloping exterior girder to exterior column transition.

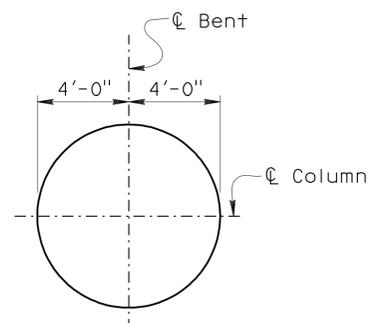
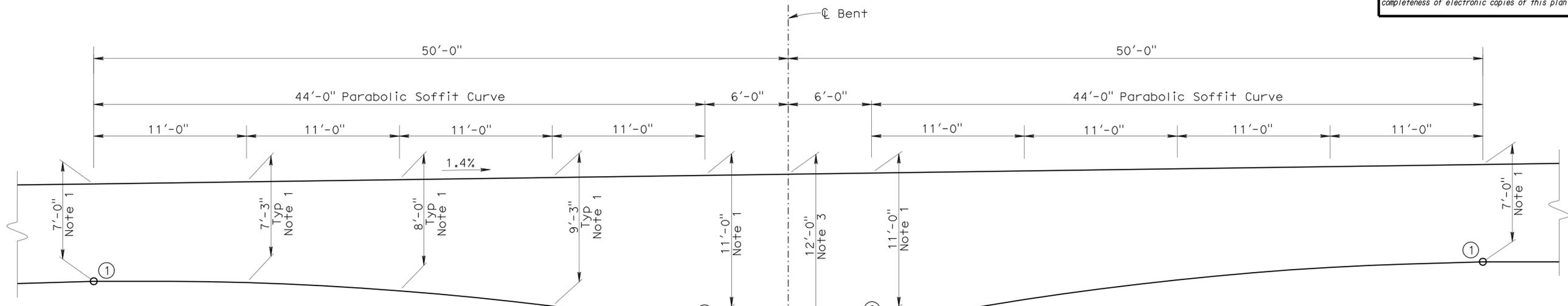
BENT ELEVATION - TRANSVERSE

1/4" = 1'-0"

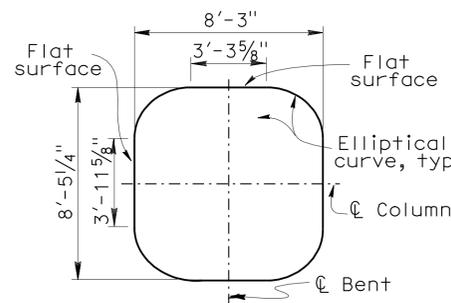
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) BRIDGE GEOMETRICS NO. 1
	DETAILS	BY Gerald Dickerson	CHECKED Mahmoud Fustok			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 10-16-06, 08-26-08, 09-03-08, 09-25-08, 12-16-08, 4-16-09, 5-11-09, 6-15-09	

DATE PLOTTED => 17-JUN-2010 TIME PLOTTED => 10:31 USERNAME => hrlim

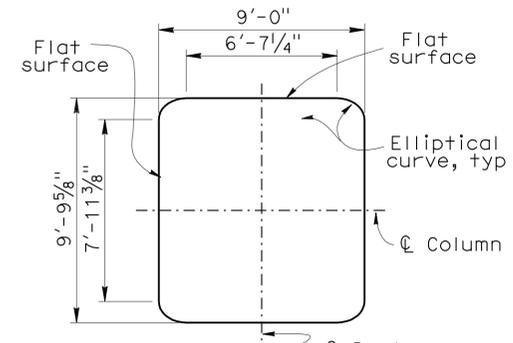
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, La Paz	62, 95S1	142.2/142.6 142.6/142.9	173	271
David Soon 6-24-09				REGISTERED CIVIL ENGINEER DATE	
6-14-10				PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



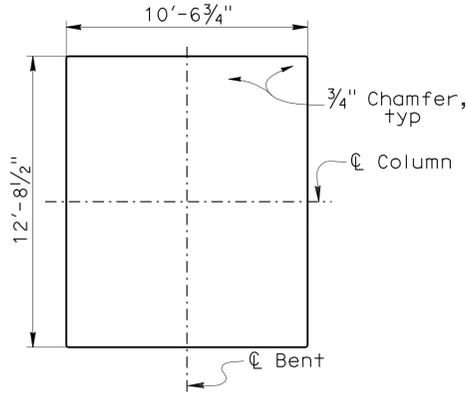
SECTION A-A
1/4" = 1'-0"



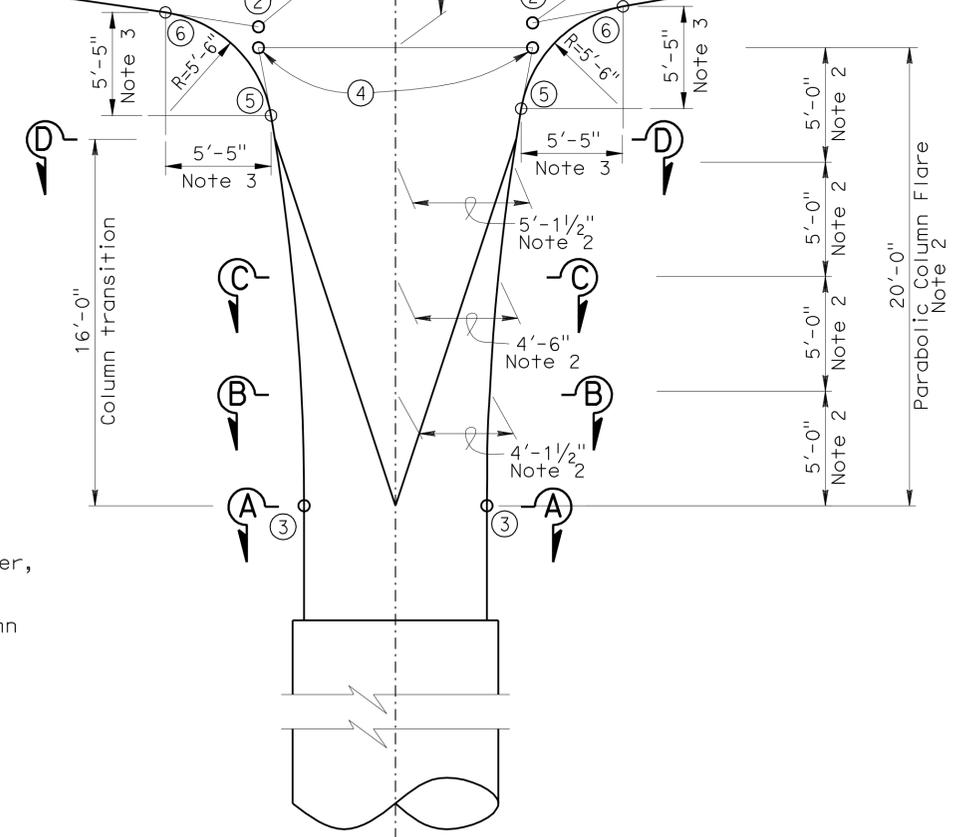
SECTION B-B
1/4" = 1'-0"



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



SECTION D-D
1/4" = 1'-0"



BENT ELEVATION - LONGITUDINAL
1/4" = 1'-0"

- Notes:**
- Dimensions are measured from top of deck. Top of deck elevation varies with profile grade and deck cross-slope.
 - Column dimensions are based on theoretical end of parabolic column curve (4) being 12'-0" below deck elevation @ centerline of column and centerline of bent.
 - Dimensions shown are for centerline of column location. Dimension varies due to profile grade and deck cross-slope.
 - Bent 2 shown, all others similar.
- (1) Begin parabolic soffit curve.
 (2) Theoretical end of parabolic soffit curve.
 (3) Begin parabolic column curve.
 (4) Theoretical end of parabolic column curve.
 (5) Begin radius, tangent to parabolic column curve.
 (6) End radius, tangent to parabolic soffit curve.

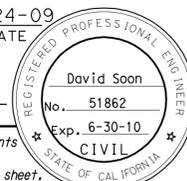
DESIGN	BY David Soon	CHECKED Mahmoud Fustok
DETAILS	BY Gerald Dickerson	CHECKED Mahmoud Fustok
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

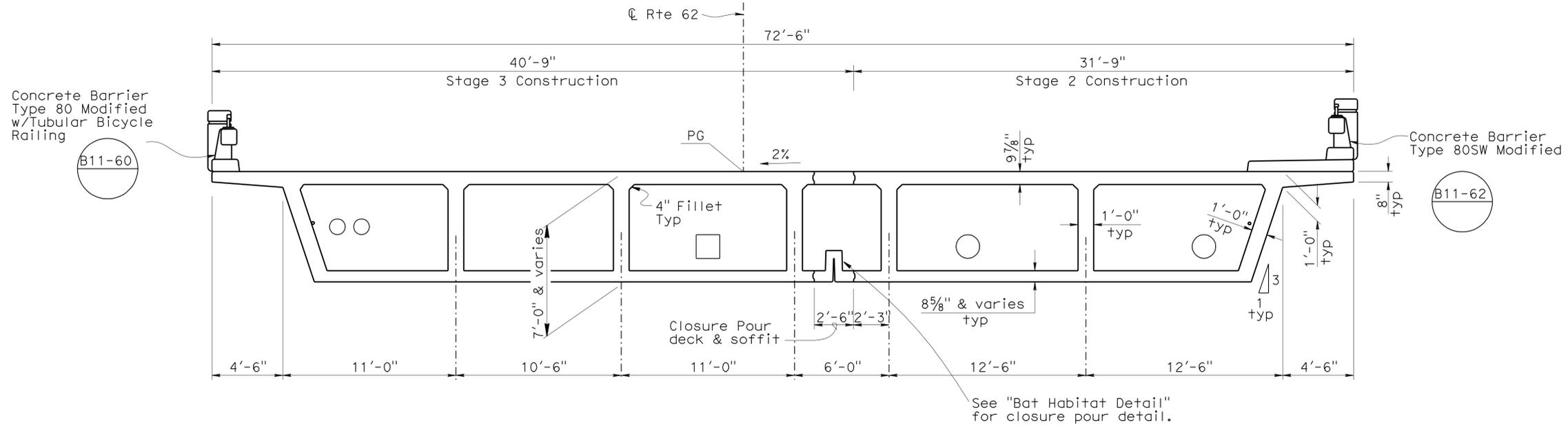
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

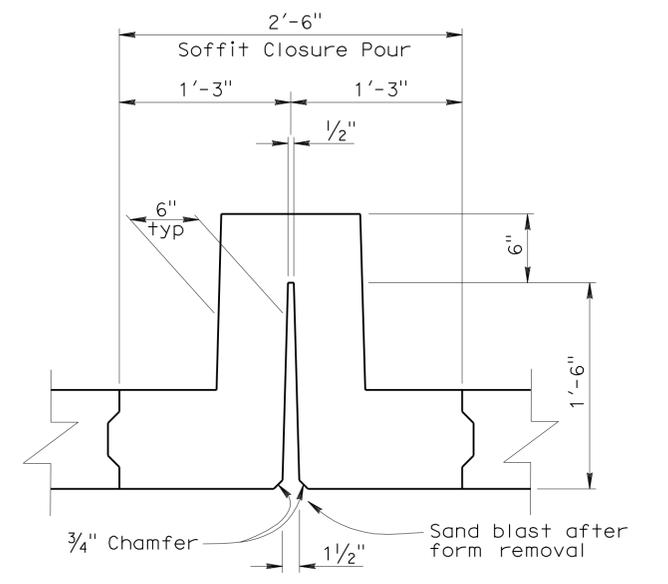
BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
BRIDGE GEOMETRICS NO. 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	174	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10				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.					

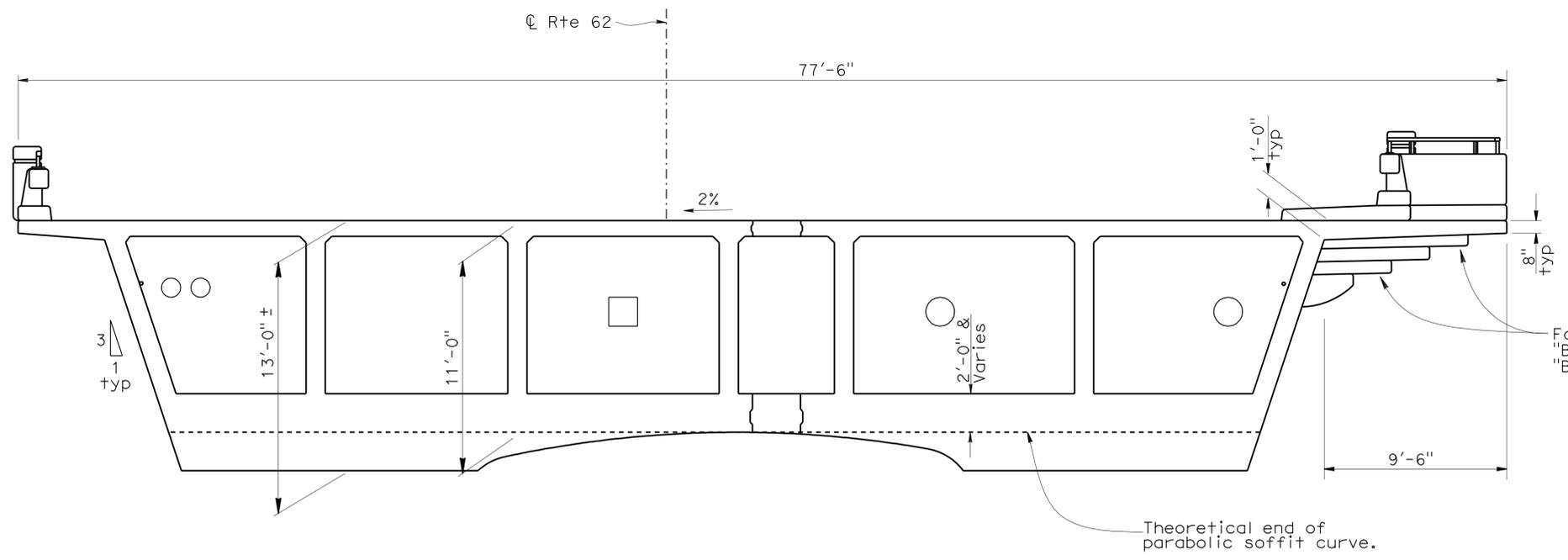


TYPICAL SECTION AT MID-SPAN
 $\frac{1}{4}'' = 1'-0''$



BAT HABITAT DETAIL
 $1-1/2'' = 1'-0''$

Note:
 For limits of Habitat Box, see "MISCELLANEOUS LAYOUT" sheets.

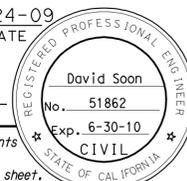


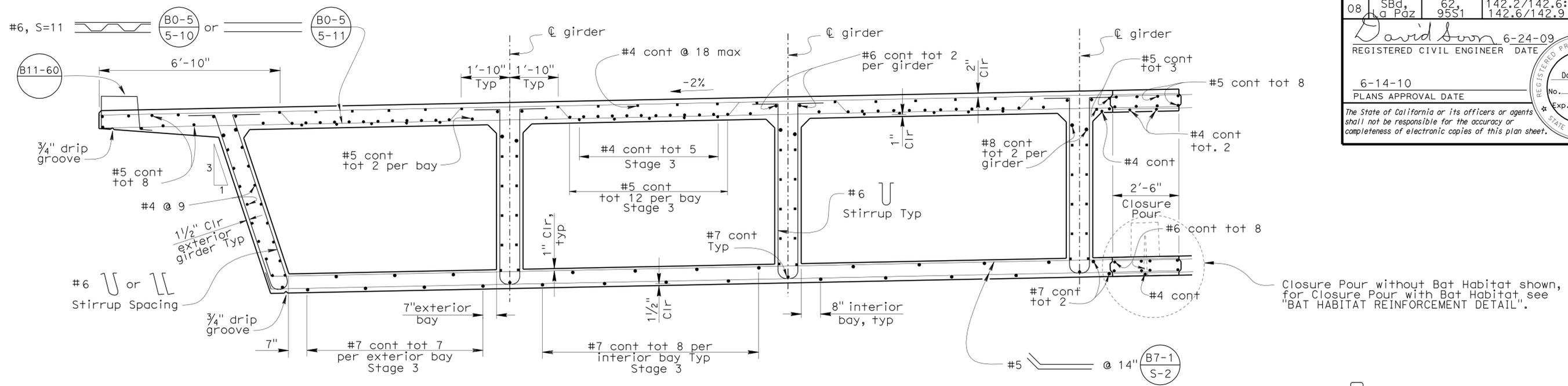
TYPICAL SECTION AT BENT
 $\frac{1}{4}'' = 1'-0''$

For Belvedere see "BELVEDERE LAYOUT" and "BELVEDERE DETAILS" sheets

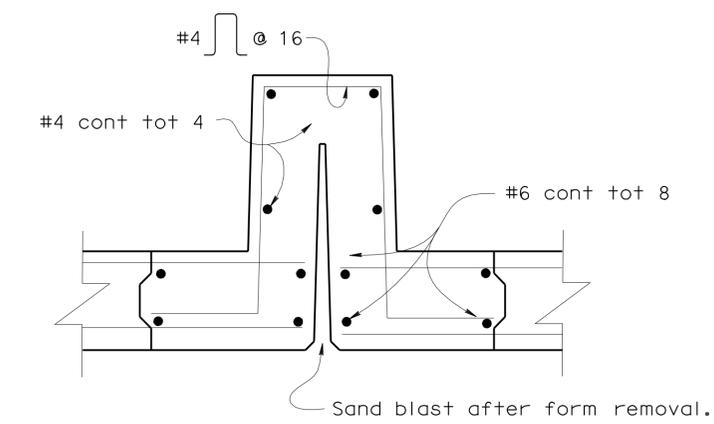
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) TYPICAL SECTION NO. 1	
	DETAILS	BY SM / GD / YF	CHECKED Mahmoud Fustok			POST MILE	142.3		
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 10-16-06, 10-17-08, 10-23-08, 12-16-08, 5-11-09, 5-28-09, 6-18-09, 10-28-09		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	FILE => 54-1272-j-t+s01.dgn	SHEET	20	OF	50

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	175	271
David Soon 6-24-09				REGISTERED CIVIL ENGINEER DATE	
6-14-10				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.					
					

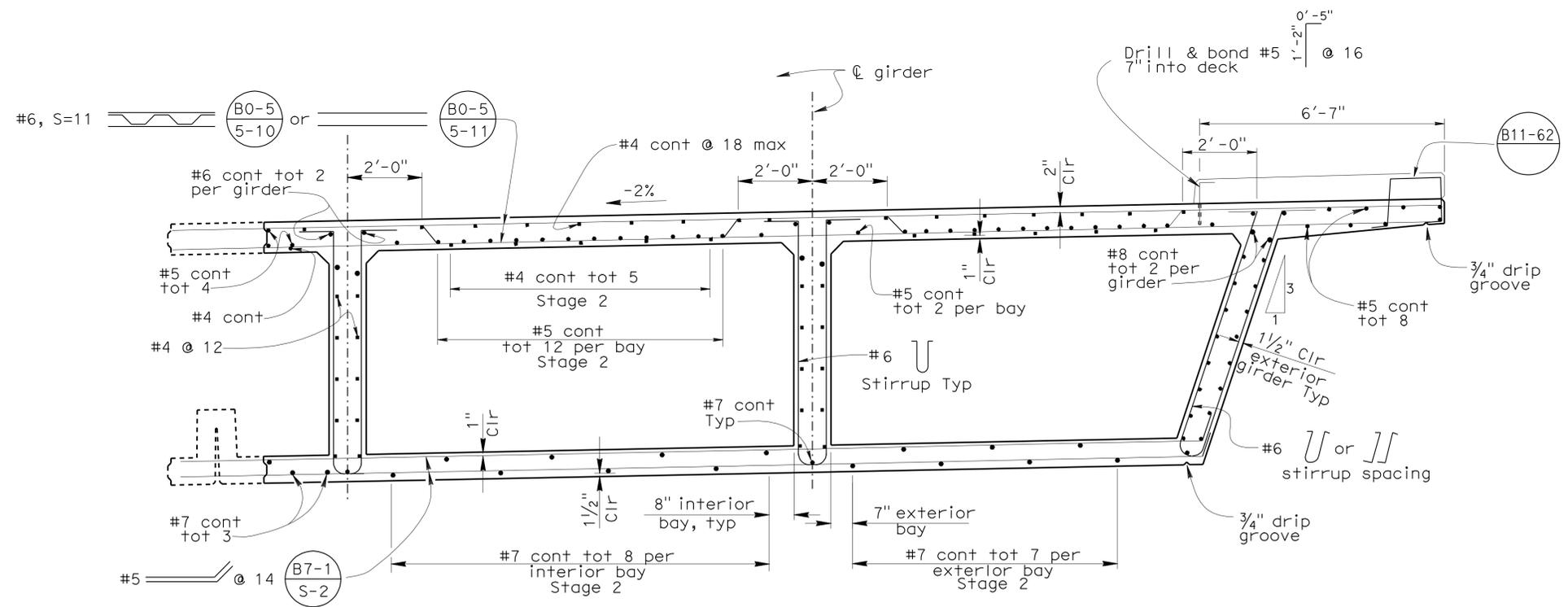


PART TYPICAL SECTION B0-5 B7-1 B8-5
1/2" = 1'-0"



BAT HABITAT REINFORCEMENT DETAIL
1-1/2" = 1'-0"

Note:
For limits of Bat Habitat, see "MISCELLANEOUS LAYOUT" sheets.



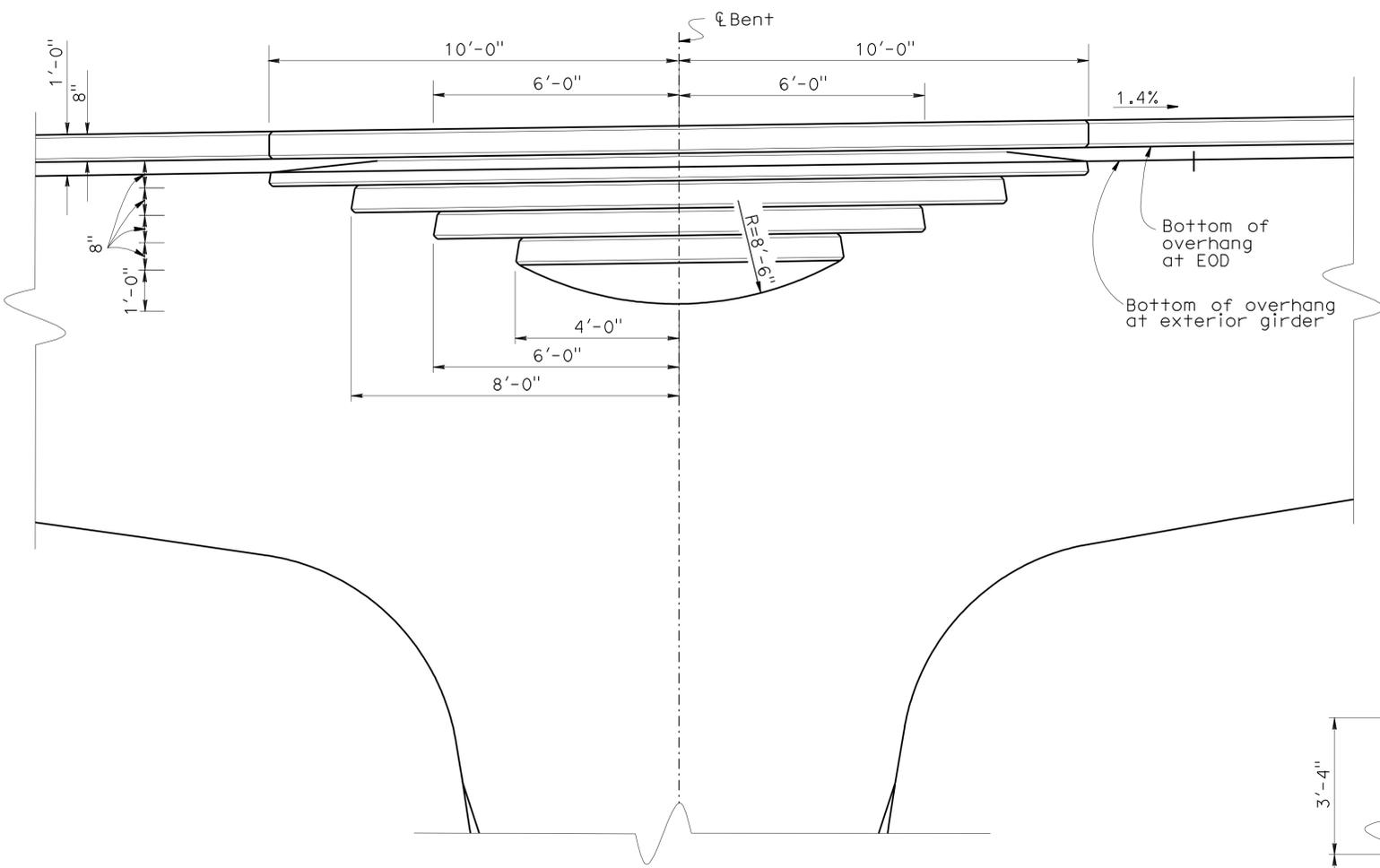
PART TYPICAL SECTION B0-5 B7-1 B8-5
1/2" = 1'-0"

DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	COLORADO RIVER BRIDGE (REPLACE) TYPICAL SECTION NO. 2														
	DETAILS BY SD / GD / YJ	CHECKED Mahmoud Fustok			54-1272															
	QUANTITIES BY E. Ortega	CHECKED WH / GD / RD / DD			142.3															
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <th colspan="7">REVISION DATES</th> </tr> <tr> <td>10-16-06</td> <td>8-8-08</td> <td>10-3-08</td> <td>10-23-08</td> <td>12-16-08</td> <td>5-14-09</td> <td>6-15-09</td> </tr> </table>	REVISION DATES							10-16-06	8-8-08	10-3-08	10-23-08	12-16-08	5-14-09	6-15-09
REVISION DATES																				
10-16-06	8-8-08	10-3-08	10-23-08	12-16-08	5-14-09	6-15-09														
				FILE => 54-1272-j-t+s02.dgn	SHEET 21	OF 50														

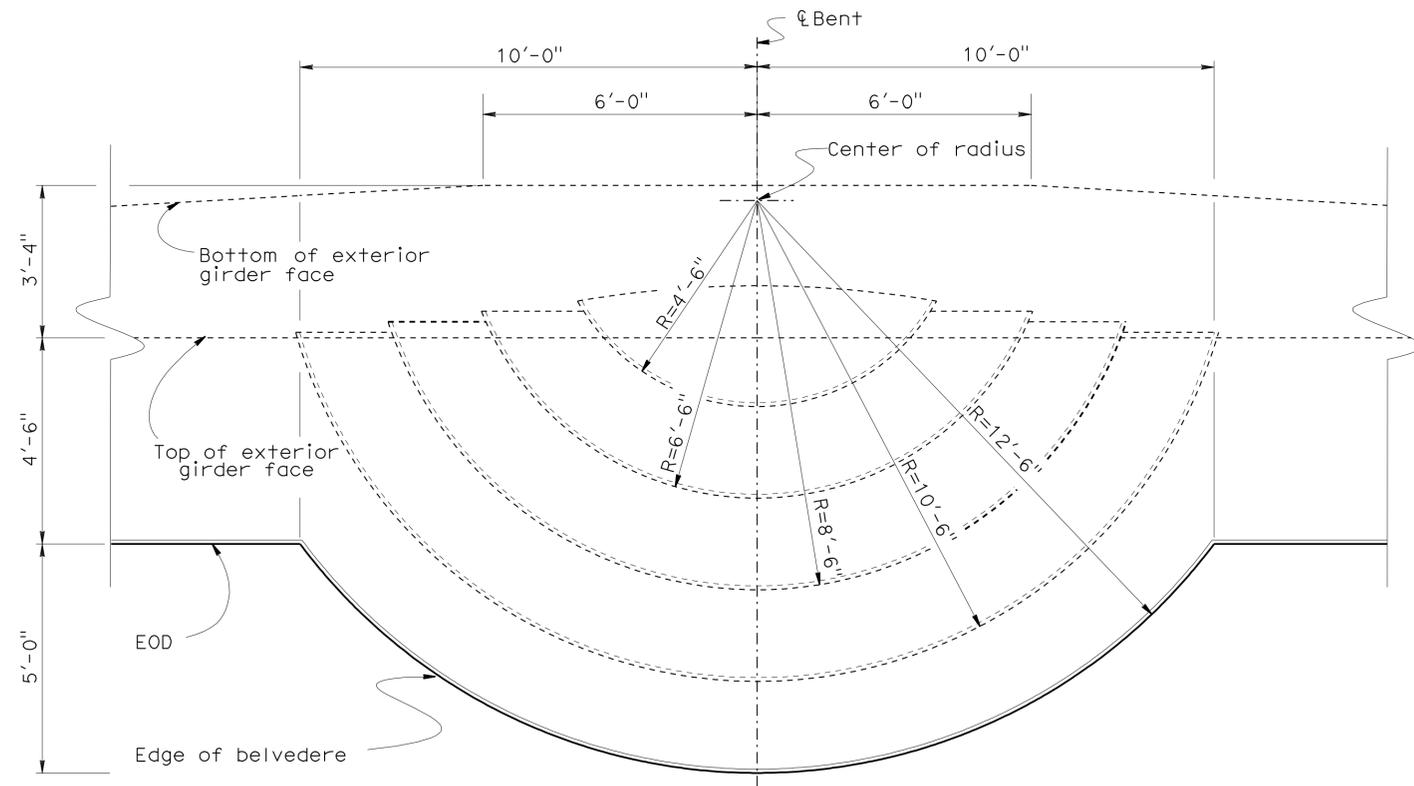
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	177	271
David Soon 6-24-09				REGISTERED CIVIL ENGINEER	DATE
6-14-10				PLANS APPROVAL DATE	
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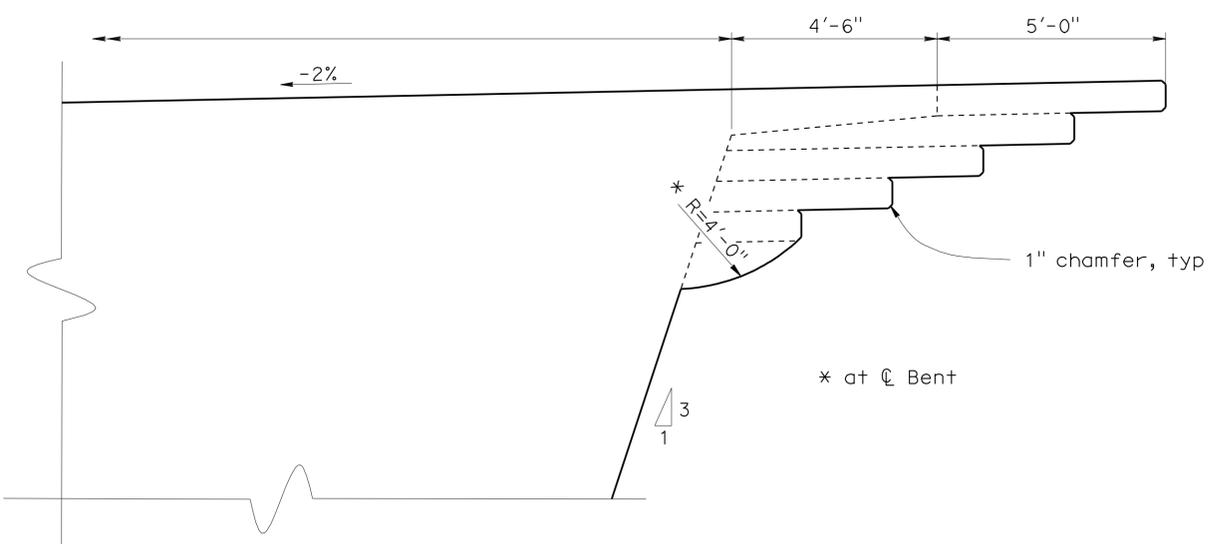
- Notes:
- Concrete railing not shown.
 - Bent 2 shown, others similar.



ELEVATION
1/2"=1'-0"



PLAN
1/2"=1'-0"



TYPICAL SECTION
1/2"=1'-0"

DESIGN	BY David Soon	CHECKED Mahmoud Fustok
DETAILS	BY Yingjue Feng	CHECKED Mahmoud Fustok
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

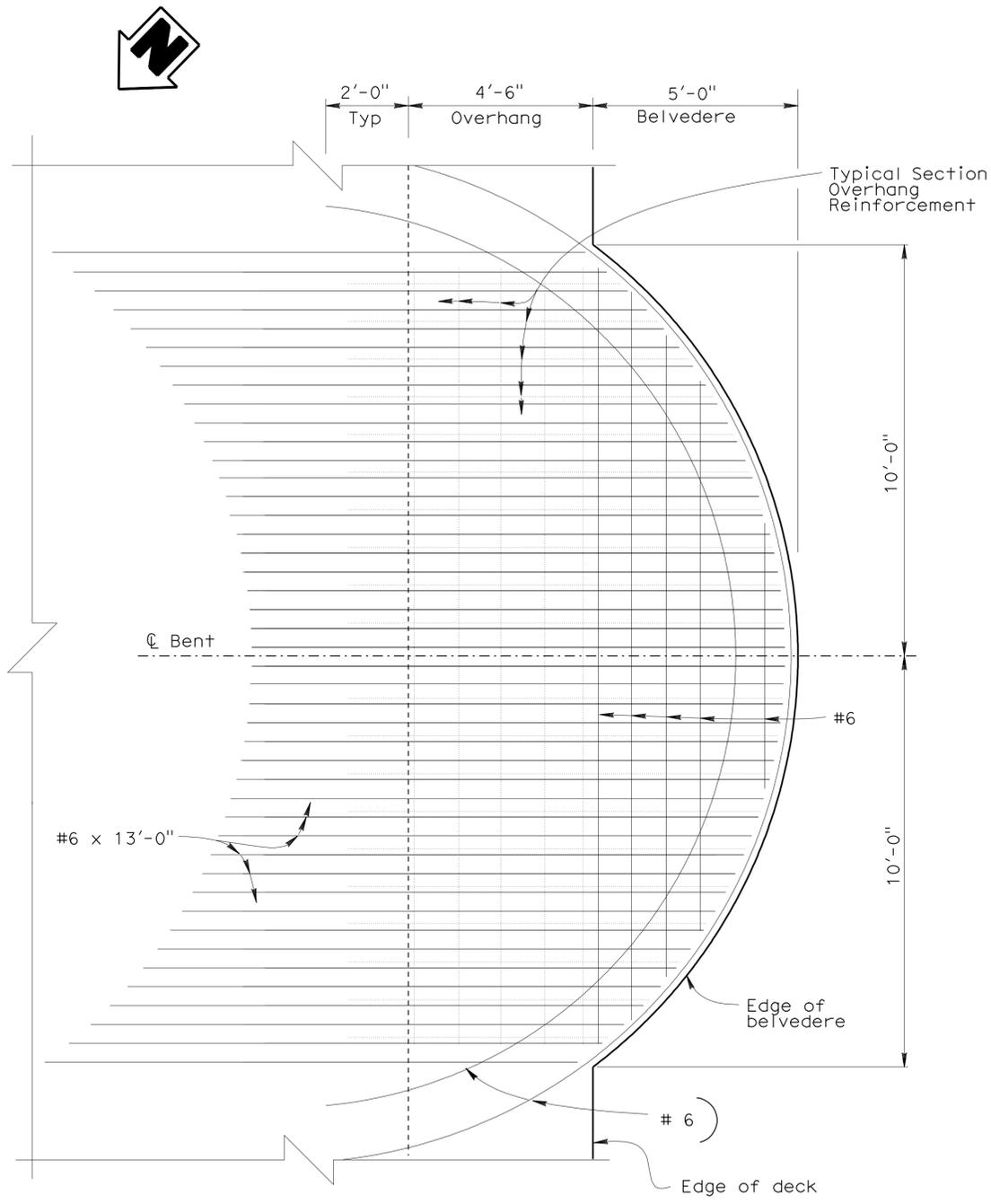
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

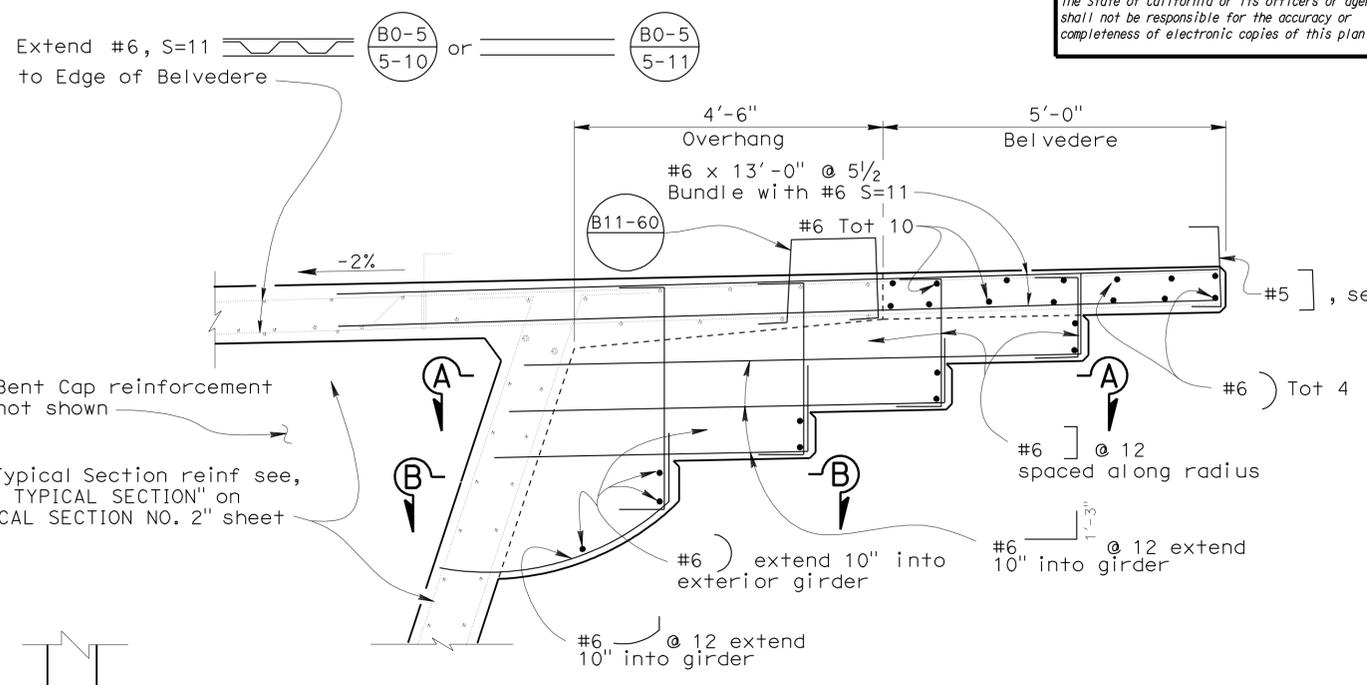
BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
BELVEDERE LAYOUT

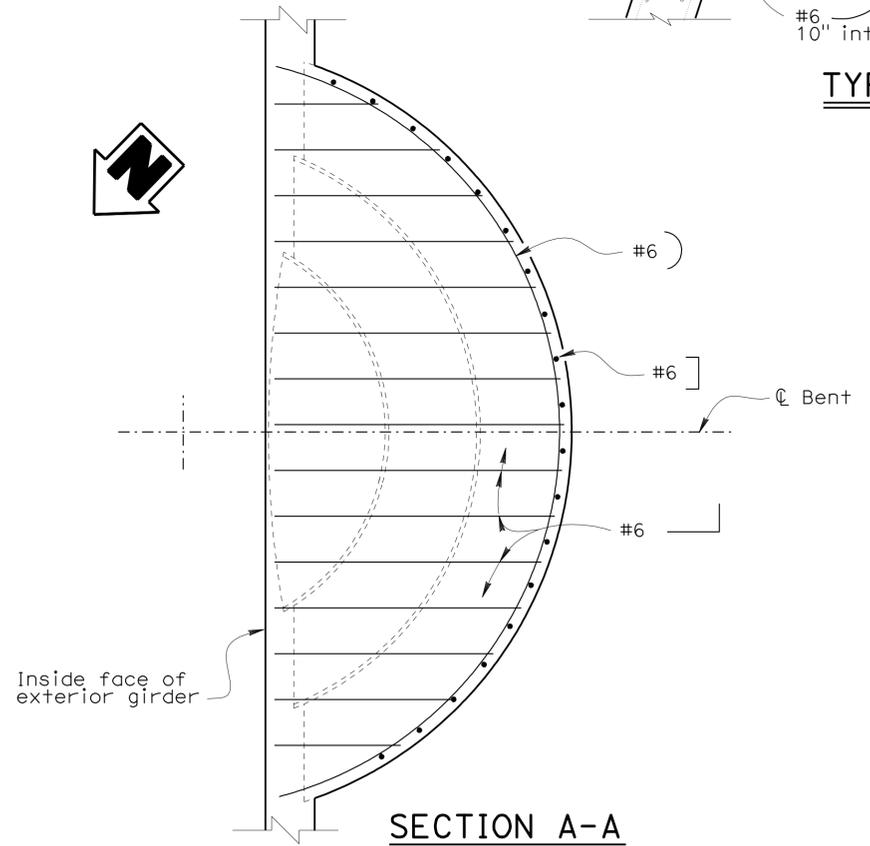
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	178	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



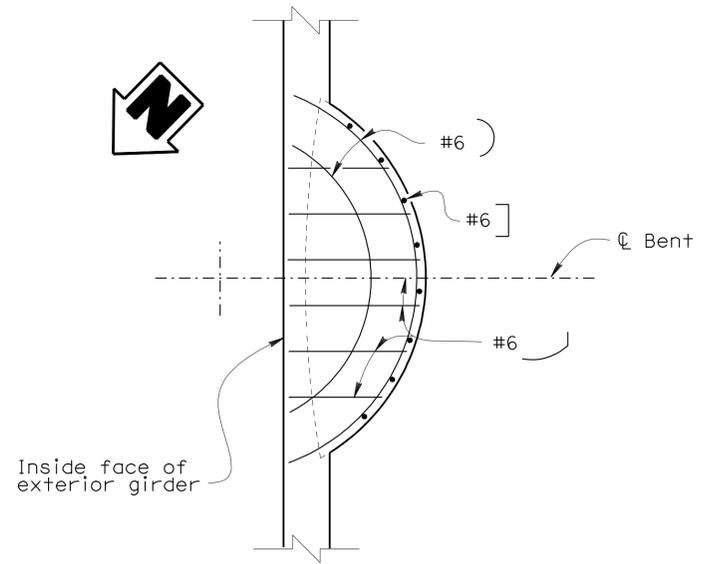
PLAN
1/2"=1'-0"



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



SECTION A-A
1/2"=1'-0"



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

DESIGN	BY David Soon	CHECKED Mahmoud Fustok
DETAILS	BY Bruno Jenko	CHECKED Mahmoud Fustok
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
BELVEDERE DETAILS

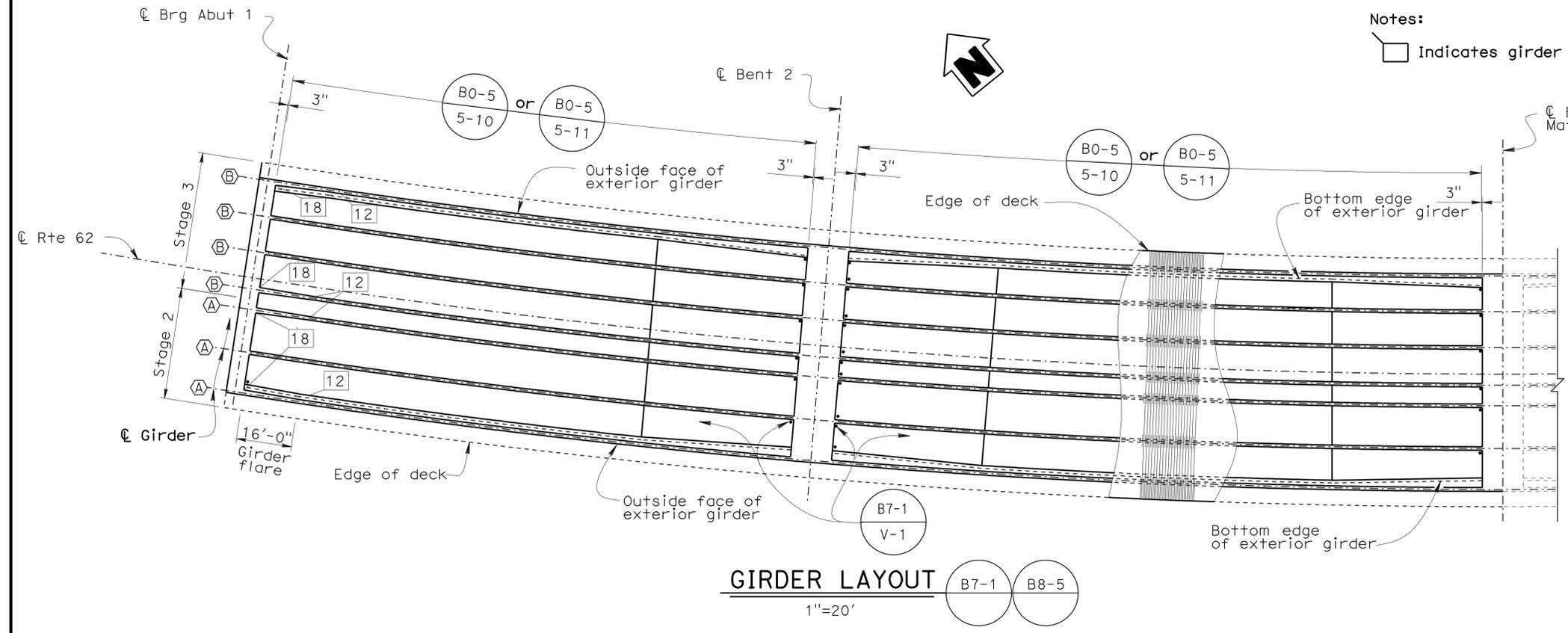
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6; 142.6/142.9	179	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

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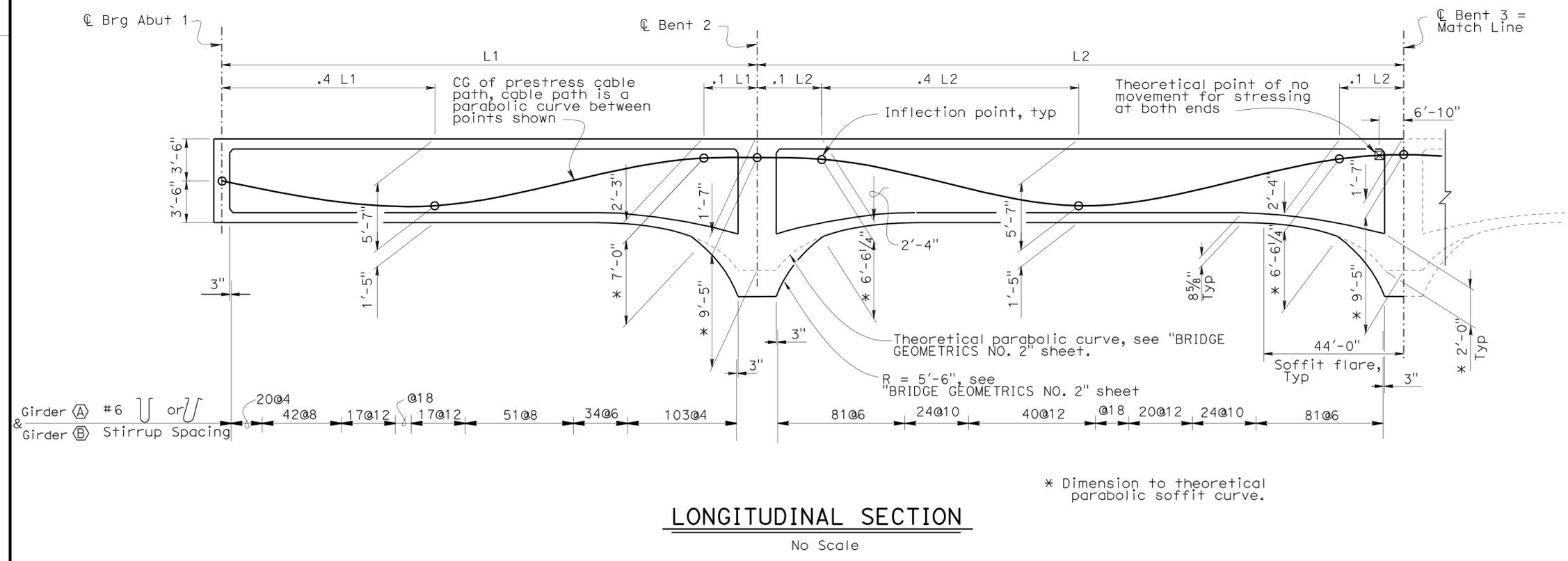
REGISTERED PROFESSIONAL ENGINEER
David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA



Notes:
□ Indicates girder stem width in inches.

GIRDER LAYOUT
1"=20'
B7-1 B8-5

STAGE 2 PRESTRESSING NOTES
270 KSI Low Relaxation Strand:
P_{jack} = 8,400 kips
Anchor Set = 3/8 in
Total Number of Girders = 3 (A) Girders
Friction curvature coefficient $\mu = 0.200$
Friction wobble coefficient $K = 0.000200/ft$
Difference in prestress force between girders shall not exceed 5%.
Concrete: $f'_c = 5.0$ ksi @ 28 days
 $f'_{ci} = 3.6$ ksi @ time of stre
Contractor shall submit elongation calculations based on initial stress at
 $\lambda = 0.8390$ times jacking stress.
Two end stressing from Abutment 1 and 5



LONGITUDINAL SECTION
No Scale

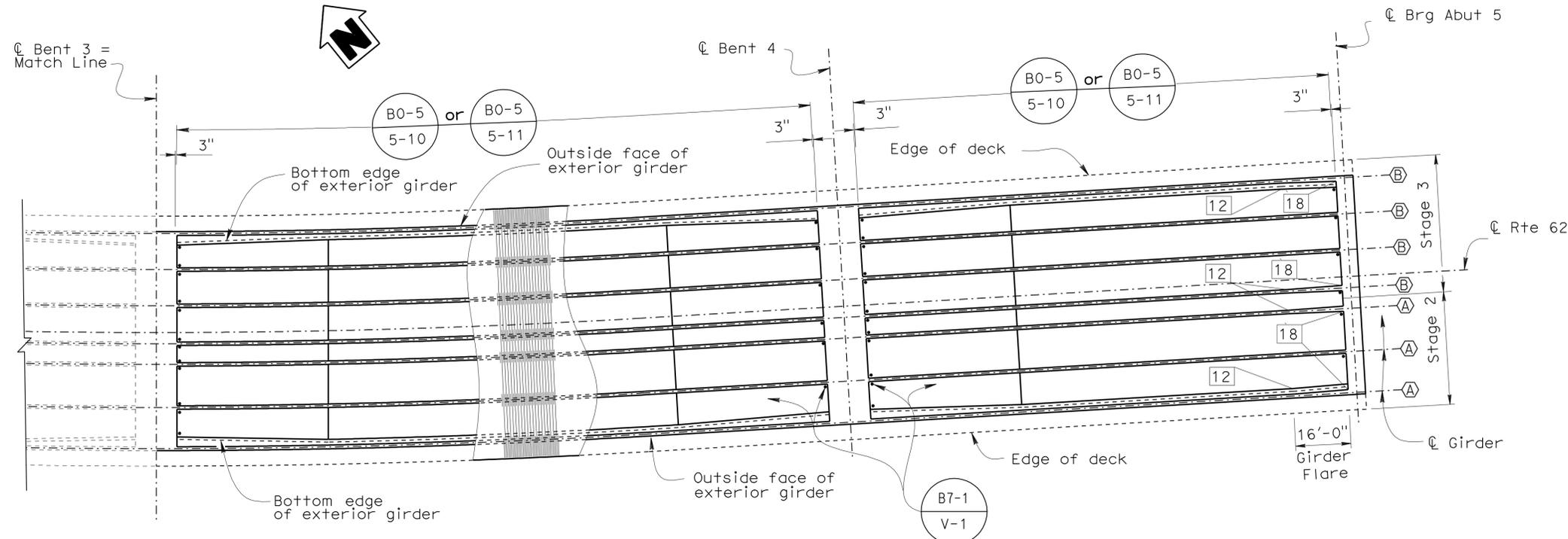
STAGE 3 PRESTRESSING NOTES
270 KSI Low Relaxation Strand:
P_{jack} = 11,200 kips
Anchor Set = 3/8 in
Total Number of Girders = 4 (B) Girders
Friction curvature coefficient $\mu = 0.200$
Friction wobble coefficient $K = 0.000200/ft$
Difference in prestress force between girders shall not exceed 5%.
Concrete: $f'_c = 5.0$ ksi @ 28 days
 $f'_{ci} = 3.6$ ksi @ time of stressing
Contractor shall submit elongation calculations based on initial stress at
 $\lambda = 0.8390$ times jacking stress.
Two end stressing from Abutment 1 and 5

DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	COLORADO RIVER BRIDGE (REPLACE)			
	DETAILS BY B. Jenko / Y. Feng	CHECKED Mahmoud Fustok			54-1272				
	QUANTITIES BY E. Ortega	CHECKED WH / GD / RD / DD			POST MILE		142.3		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)						EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	7-26-08 12-16-08 5-11-09	SHEET 25 OF 50

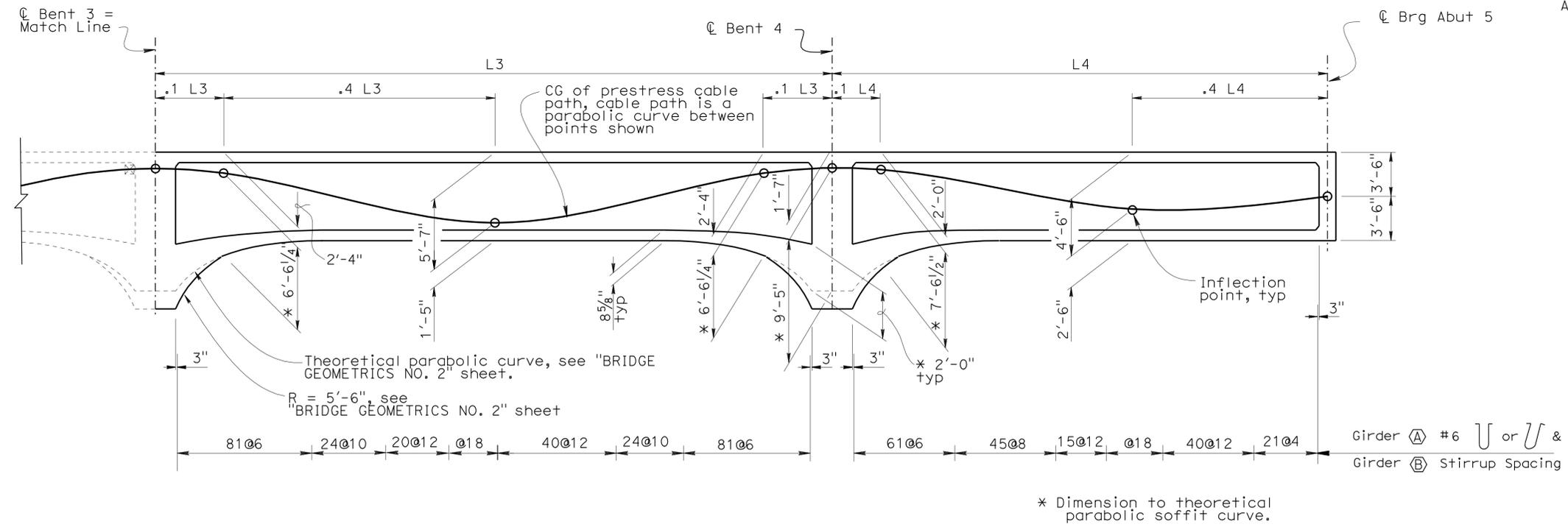
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08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	180	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 David Soon
 No. 51862
 Exp. 6-30-10
 CIVIL
 STATE OF CALIFORNIA



GIRDER LAYOUT
1"=20'



LONGITUDINAL SECTION
No Scale

Falsework Release

Alternative 1:
Falsework shall be released as soon as permitted by the specifications. Closure pour shall not be placed sooner than 60 days after the falsework has been released.

Alternative 2:
Falsework shall not be released less than 28 days after the last concrete has been placed. Closure pour shall not be placed sooner than 14 days after the falsework has been released.

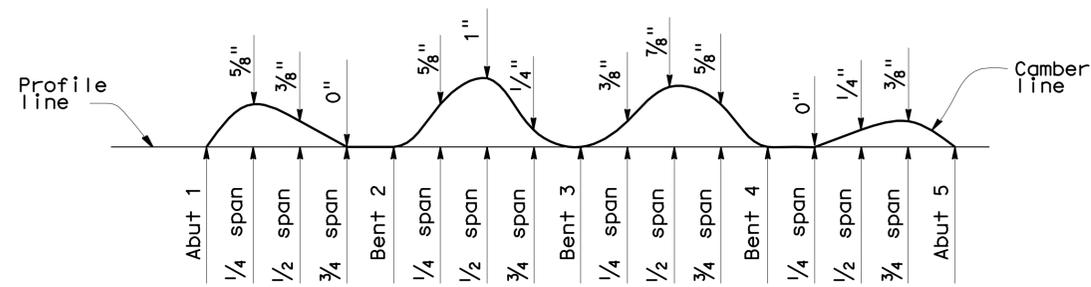
When Falsework Released Alternative 2 is used, camber values are 0.75 times those shown.

Notes:
□ Indicates girder stem width in inches.

DESIGN BY DS / EO / JJ CHECKED Mahmoud Fustok DETAILS BY B. Jenko / Y. Feng CHECKED Mahmoud Fustok QUANTITIES BY E. Ortega CHECKED WH / GD / RD / DD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE) GIRDER LAYOUT NO. 2
			POST MILE 142.3	
			REVISION DATES 7-28-08 10-24-08 12-1-08 12-16-08 1-2-09 5-11-09	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES

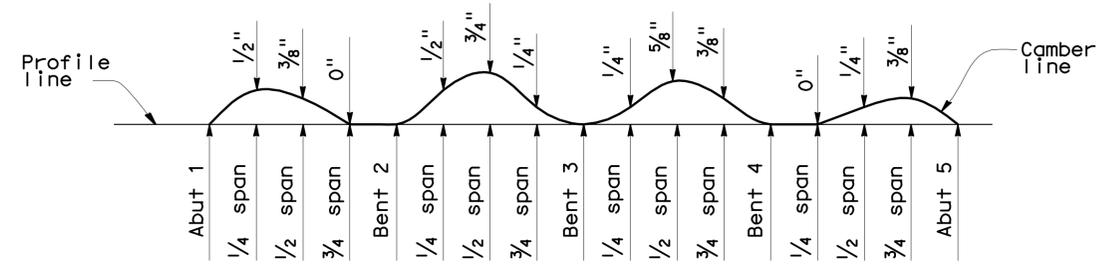
USERNAME => hrlim DATE PLOTTED => 17-JUN-2010 TIME PLOTTED => 10:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	181	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 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.					



CAMBER DIAGRAM A GIRDERS STAGE 2
NO SCALE

Does not include allowance for falsework settlement



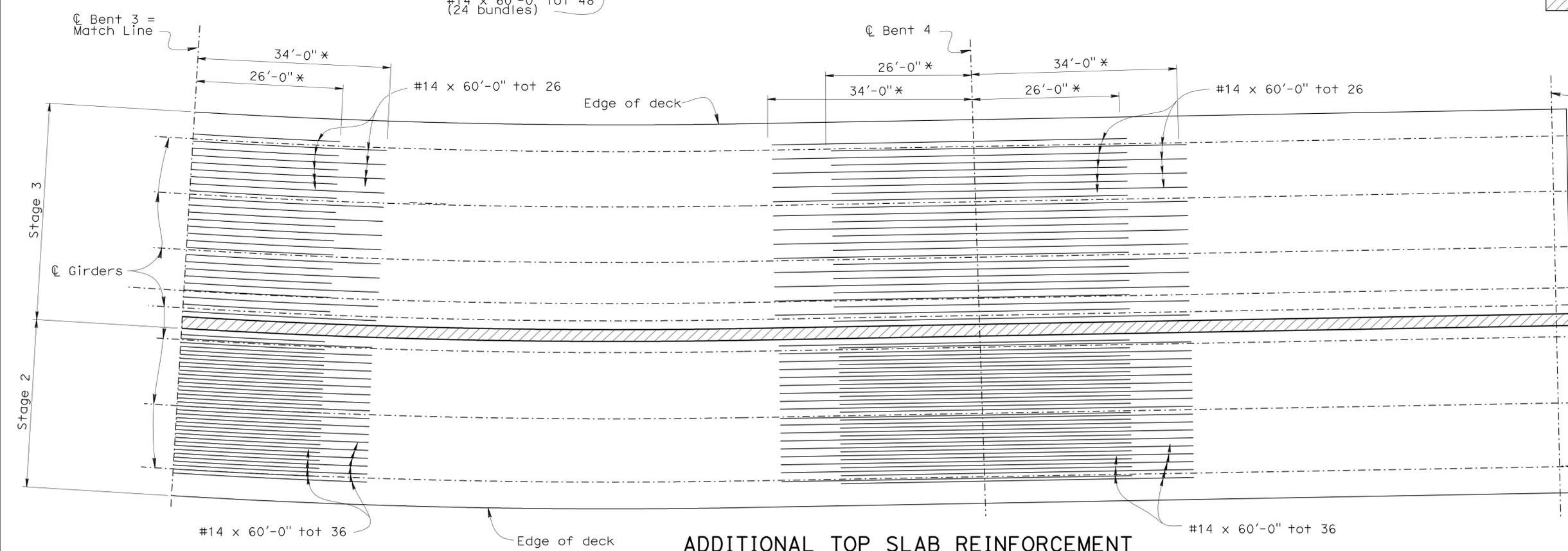
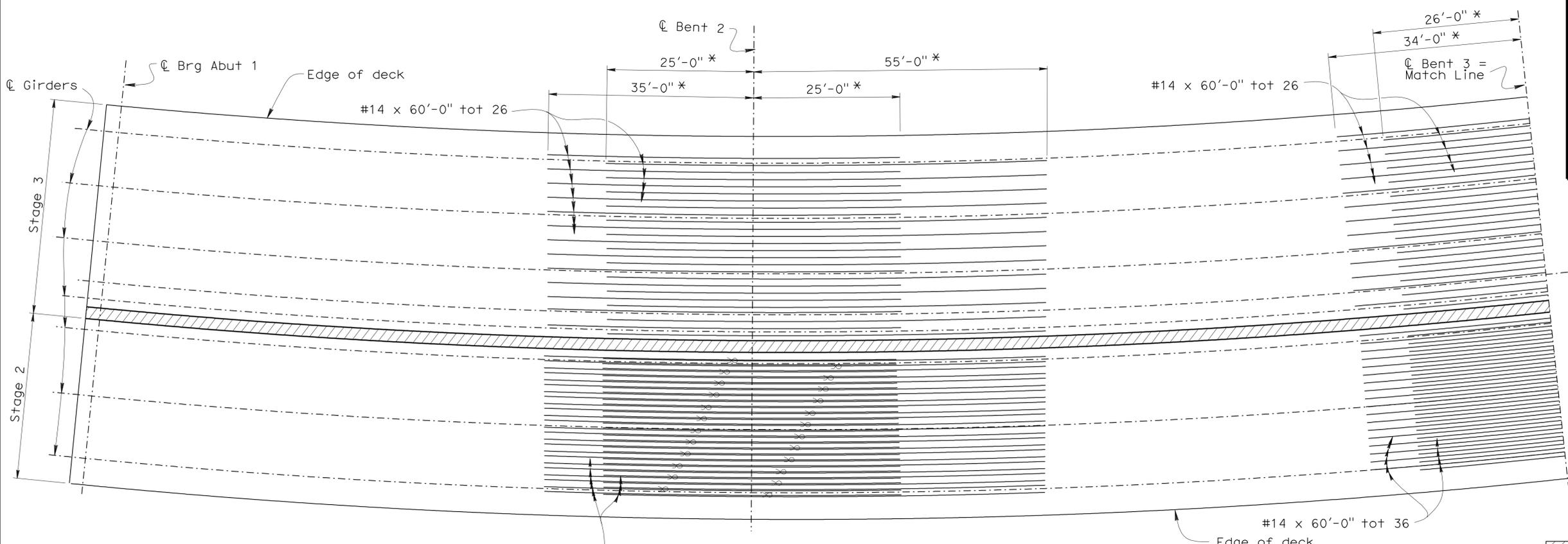
CAMBER DIAGRAM B GIRDERS STAGE 3
NO SCALE

Does not include allowance for falsework settlement

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY DS / E0 / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) CAMBER DIAGRAM								
	DETAILS	BY B. Jenko/G. Dickerson	CHECKED Mahmoud Fustok			POST MILE	142.3									
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD													
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <th colspan="2">REVISION DATES</th> </tr> <tr> <td>7-28-08</td> <td>10-24-08</td> </tr> <tr> <td>12-16-08</td> <td>4-16-09</td> </tr> <tr> <td>4-23-09</td> <td>5-11-09</td> </tr> </table>	REVISION DATES		7-28-08	10-24-08	12-16-08	4-16-09	4-23-09	5-11-09
REVISION DATES																
7-28-08	10-24-08															
12-16-08	4-16-09															
4-23-09	5-11-09															
							SHEET 27	OF 50								

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	182	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
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☉ Rte 62



Notes:

- Lap splices not allowed in additional reinforcement.
 - Reinf bars to be space equally within each bay.
- * - Indicates "No Splice Zone".
- Indicates closure pour
- Indicates bundles

☉ Brg Abut 5

☉ Rte 62



ADDITIONAL TOP SLAB REINFORCEMENT

No scale

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY DS / EO / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) GIRDER REINFORCEMENT NO. 1
	DETAILS	BY Bruno Jenko	CHECKED Mahmoud Fustok			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			REVISION DATES		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
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 DISREGARD PRINTS BEARING EARLIER REVISION DATES: 7-26-08, 8-13-08, 12-16-08, 2-28-09, 5-11-09, 6-15-09
 SHEET 28 OF 50

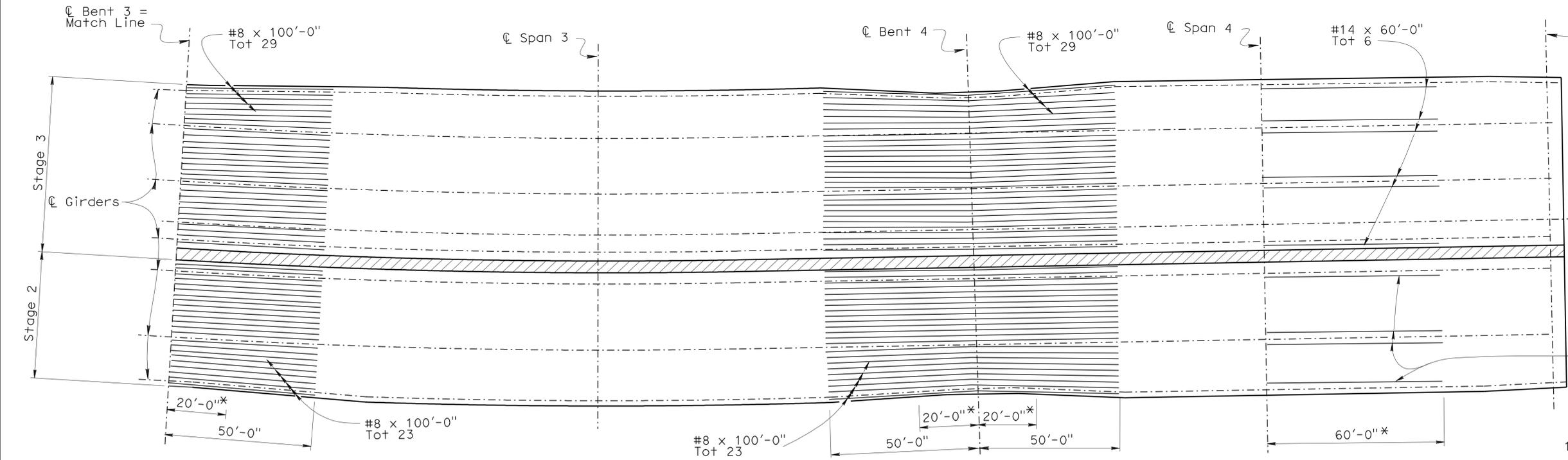
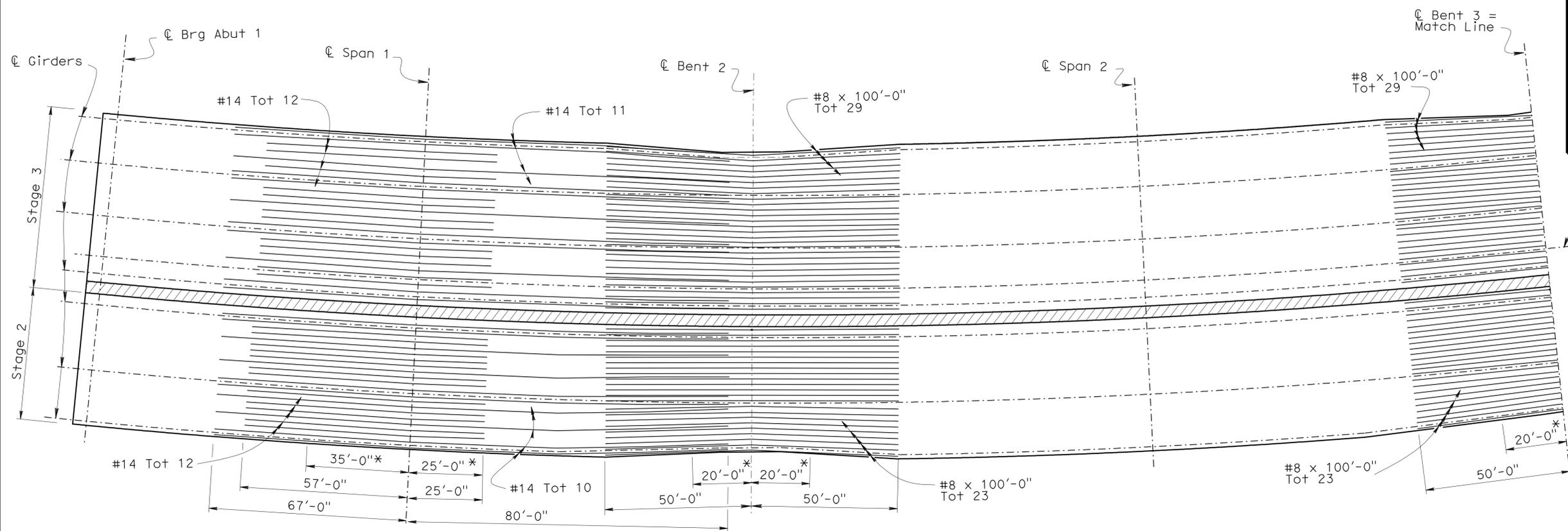
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	183	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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ADDITIONAL BOTTOM SLAB REINFORCEMENT
No scale

- Notes:
- Lap splices not allowed in additional reinforcement.
 - Reinf bars to be space equally within each bay.
- * - Indicates "No Splice Zone".
 // - Indicates closure pour
 ∞ - Indicates bundles

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY DS / E0 / JJ	CHECKED Mahmoud Fustok	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) GIRDER REINFORCEMENT NO. 2				
	DETAILS	BY Bruno Jenko	CHECKED Mahmoud Fustok			POST MILE	142.3					
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		<table border="1"> <tr> <td>8-8-08</td> <td>8-13-08</td> <td>12-16-08</td> <td>1-2-09</td> <td>2-28-09</td> <td>5-14-09</td> <td>6-15-09</td> </tr> </table>	8-8-08	8-13-08	12-16-08
8-8-08	8-13-08	12-16-08	1-2-09	2-28-09	5-14-09	6-15-09						

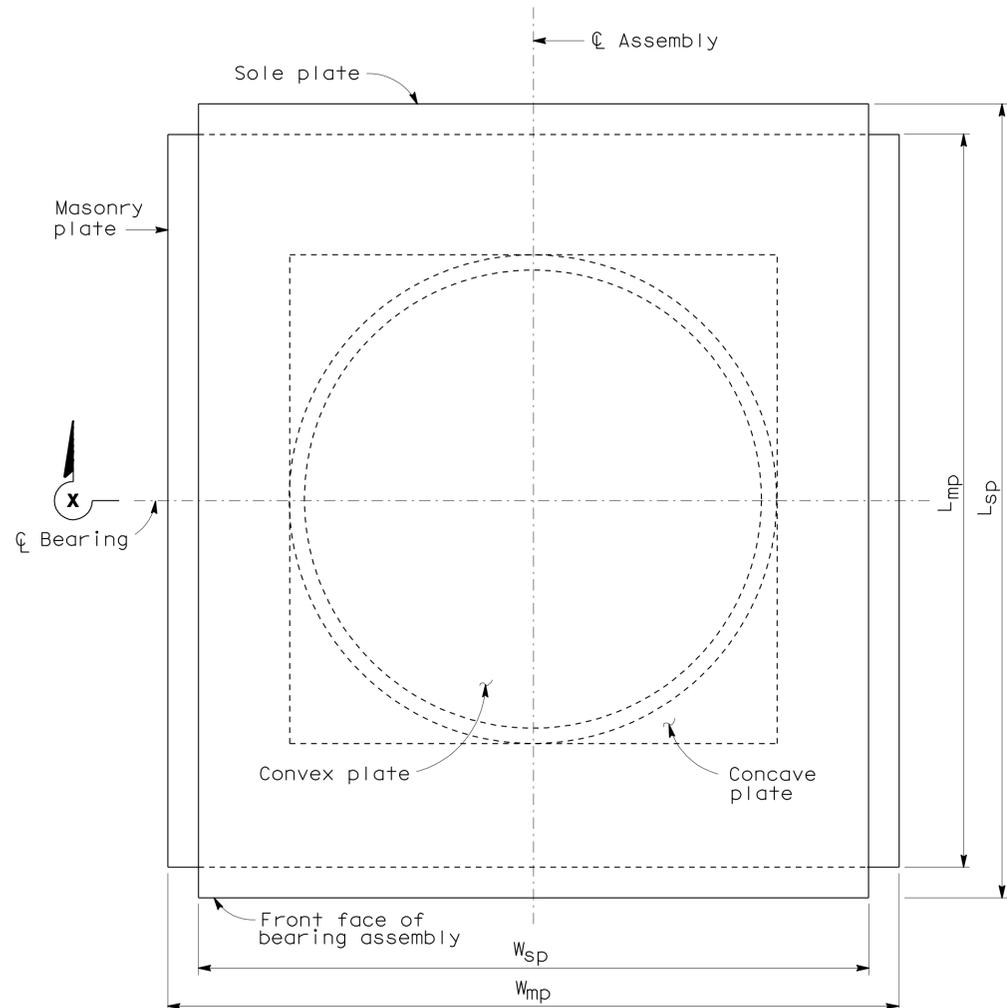
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

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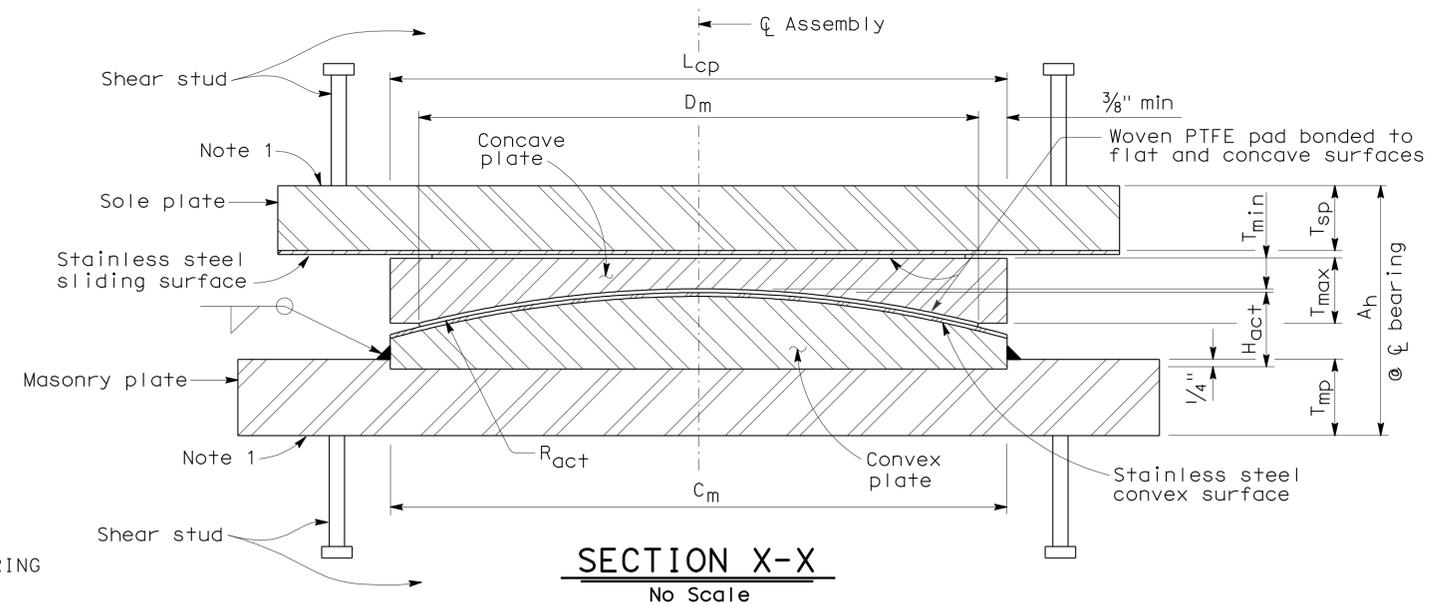
DATE PLOTTED => 17-JUN-2010 TIME PLOTTED => 10:33 USERNAME => hrlim

EXPANSION BEARING TABLE

LOCATION	MAXIMUM VERTICAL LOAD (kips)	MINIMUM DEAD LOAD (kips)	DESIGN ROTATION (Degrees)	CONCAVE PLATE						CONVEX PLATE		MASONRY PLATE			SOLE PLATE			ASSEMBLY HEIGHT
				WIDTH / LENGTH	FLAT PTFE AREA	DIAMETER	SPHERICAL RADIUS	MINIMUM THICKNESS	MAXIMUM THICKNESS	DIAMETER	MAXIMUM THICKNESS	WIDTH	LENGTH	THICKNESS	WIDTH	LENGTH	THICKNESS	
				L _{cp}	A _{PTFE}	D _m	R _{act}	T _{min}	T _{max}	C _m	H _{act}	W _{mp}	L _{mp}	T _{mp}	W _{sp}	L _{sp}	T _{sp}	
Abut 1	729	333	2	15 5/8	162.56	14 1/2	29 3/8	3/4	2	16 1/2	2	26 1/8	26 1/8	2 1/4	29 5/8	35 3/4	3 1/8	8 1/8
Abut 5	652	287	2	14 5/8	147.02	13 1/2	26 1/2	3/4	1 7/8	15 3/8	2	24 3/4	24 3/4	2 1/4	28 5/8	34 3/8	3	8



PLAN
No Scale



SECTION X-X
No Scale

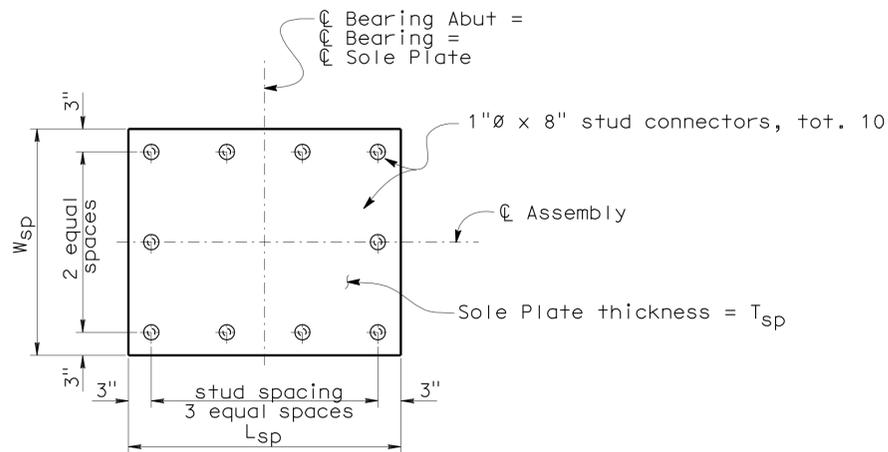
- NOTES:**
- For anchorage details, see "PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 2" sheet.
 - All units in inches unless otherwise noted.
 - All dimensions shown are steel only unless otherwise noted.
 - H_{act} includes stainless steel.
 - A_h includes PTFE, substratum and stainless steel, (Varies).
 - R_{act} is to sliding surface.
 - Use four bearings for Abutment 1 and four bearings for Abutment 5.

▨ - Indicates stainless steel sliding surface.

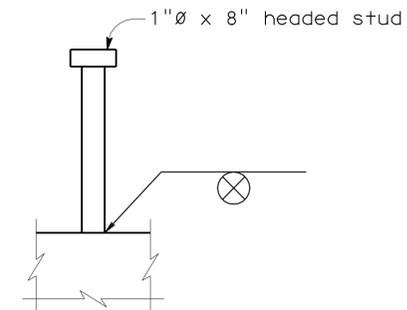
STANDARD DRAWING FILE NO. xs9-010e APPROVED BY <u>T. DELIS</u> RESPONSIBLE TECHNICAL SPECIALIST APPROVAL DATE <u>6-12-08</u> RELEASED BY <u>ROBERTO LACALLE</u> RESPONSIBLE OFFICE CHIEF RELEASE DATE <u>6-12-08</u>			DESIGN BY <u>Dhvani Desai</u> CHECKED <u>Rakesh Deo</u> DETAILS BY <u>Gerald Dickerson</u> CHECKED <u>Rakesh Deo</u> QUANTITIES BY <u>E. Ortega</u> CHECKED <u>WH / GD / RD / DD</u>		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7		BRIDGE NO. <u>54-1272</u> POST MILE <u>142.3</u>		SPECIAL DETAIL COLORADO RIVER BRIDGE (REPLACE) PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 1	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. 01/11/08) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					CU 08 EA 378701		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY) 12-04-08 6-15-09 1-2-09 2-18-09 2-23-09 5-6-09 5-11-09 5-27-09 5-27-09 SHEET 30 OF 50	

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlm

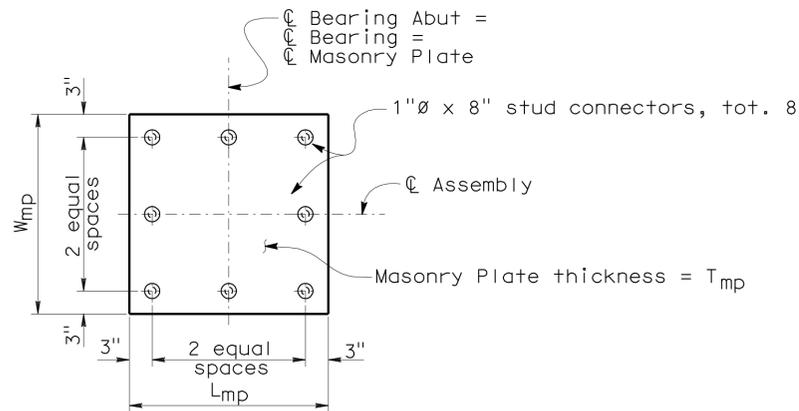
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd, La Paz	62, 95S1	142.2/142.6 142.6/142.9	185	271
David Soon 6-24-09 REGISTERED ENGINEER - CIVIL					
PLANS APPROVAL DATE 6-14-10					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



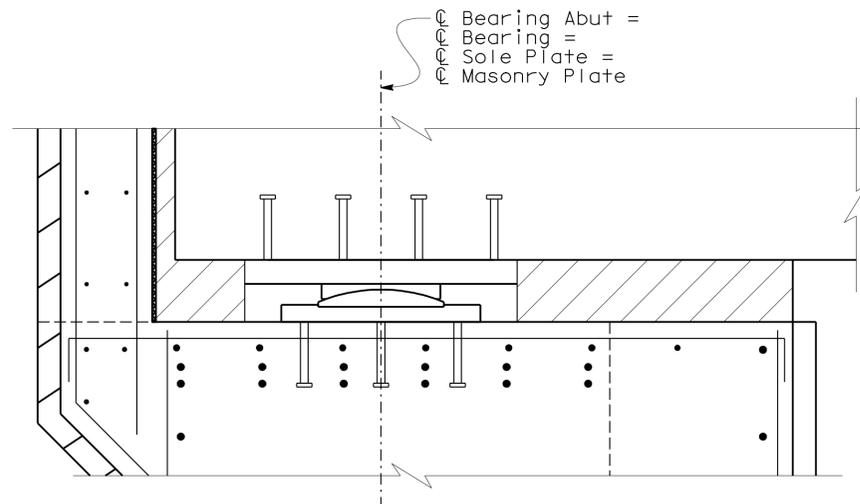
SOLE PLATE
1" = 1'-0"



STUD DETAIL
No Scale



MASONRY PLATE
1" = 1'-0"



BEARING DETAIL
1" = 1'-0"

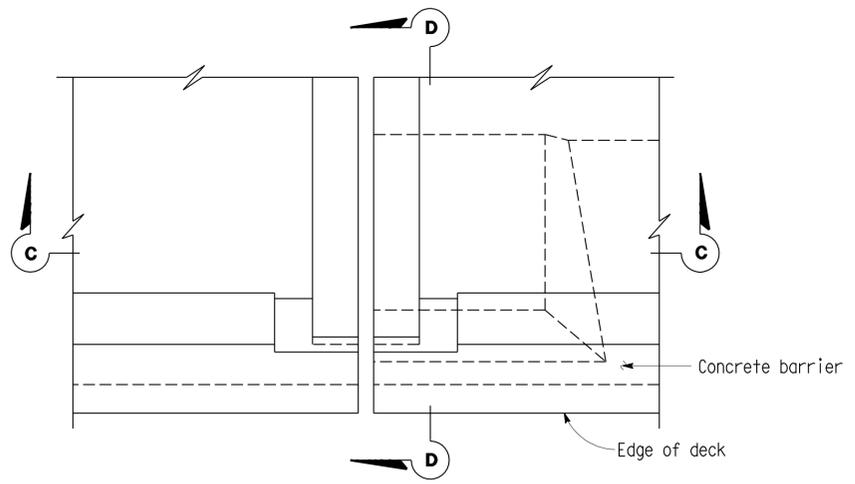
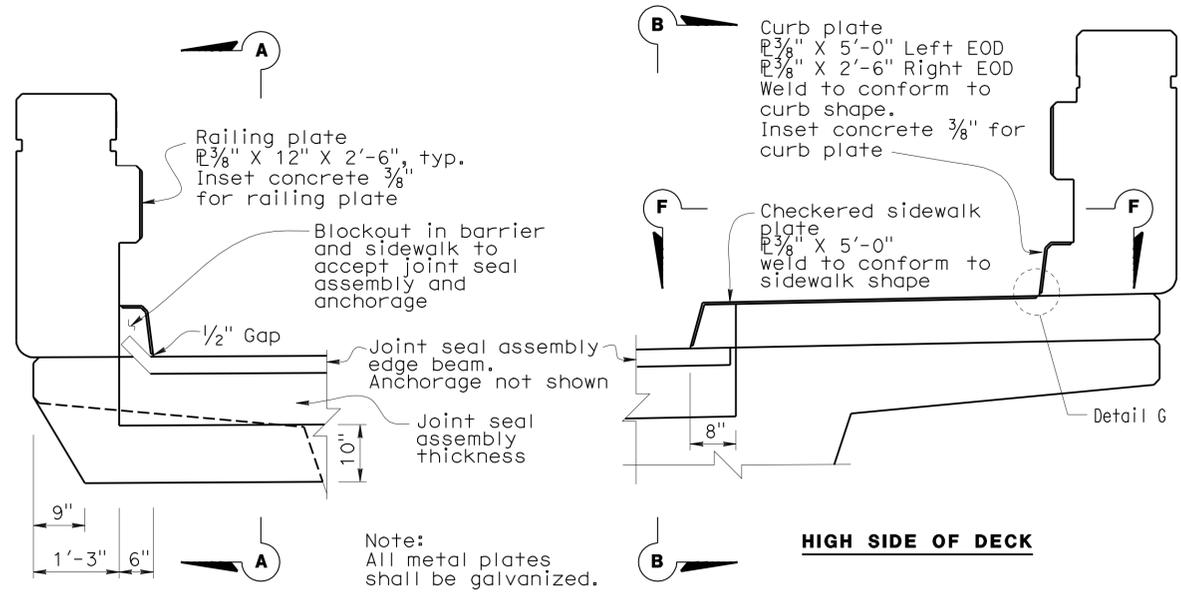
- Notes :
- Masonry and Sole Plates shall be placed level.
 - Abut 1 PTFE/Spherical Expansion Bearing shown, Abut 5 similar.

SPECIAL DETAIL	
BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE)
POST MILE 142.3	PTFE/SPHERICAL EXPANSION BEARING DETAILS NO. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY Dhvani Desai	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272
	DETAILS	BY Gerald Dickerson	CHECKED Rakesh Deo			POST MILE	142.3
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	

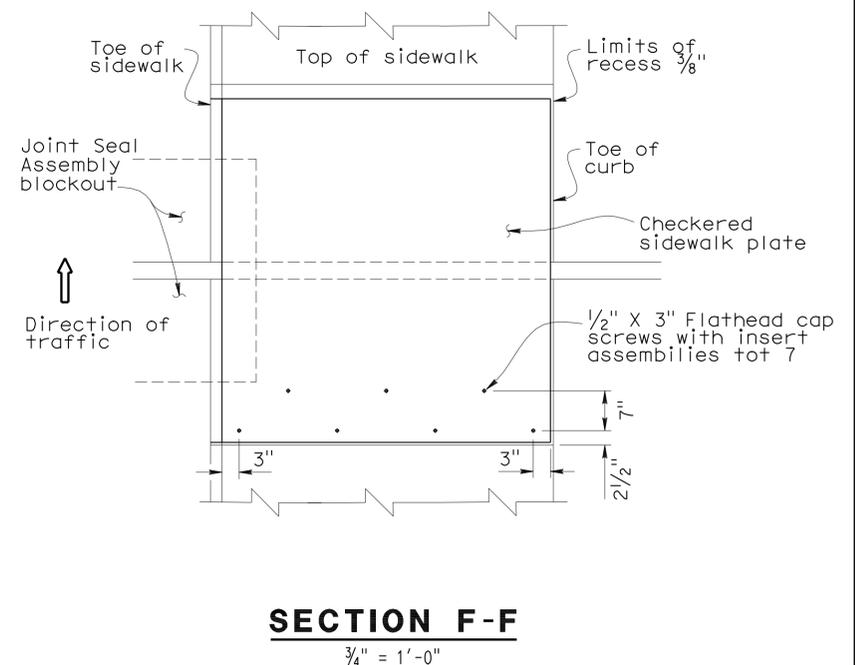
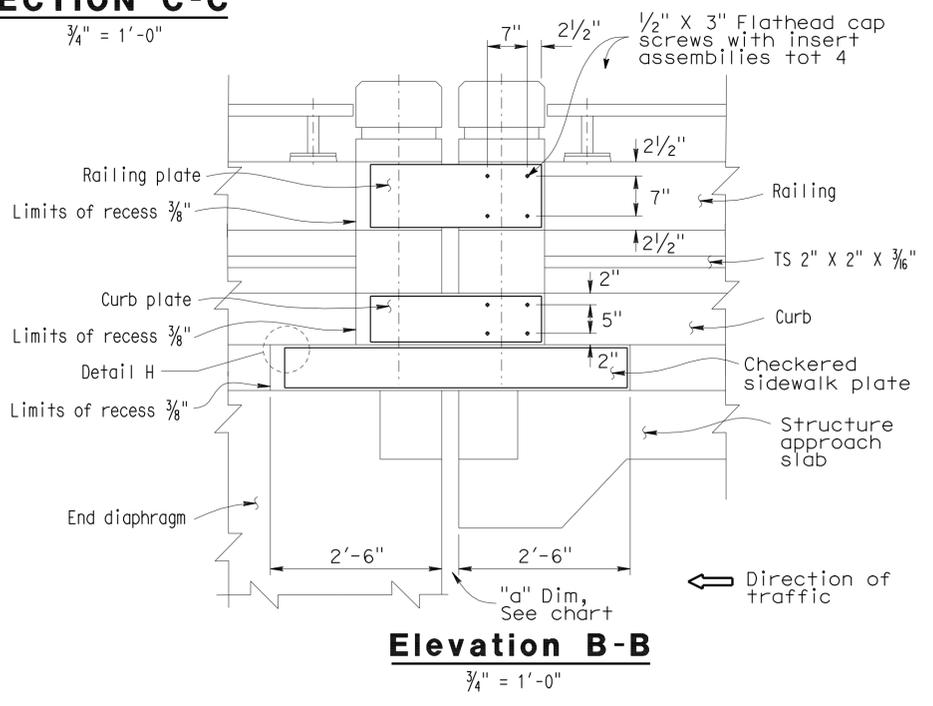
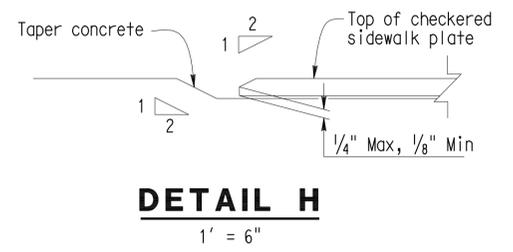
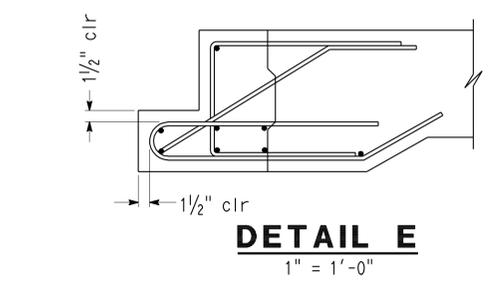
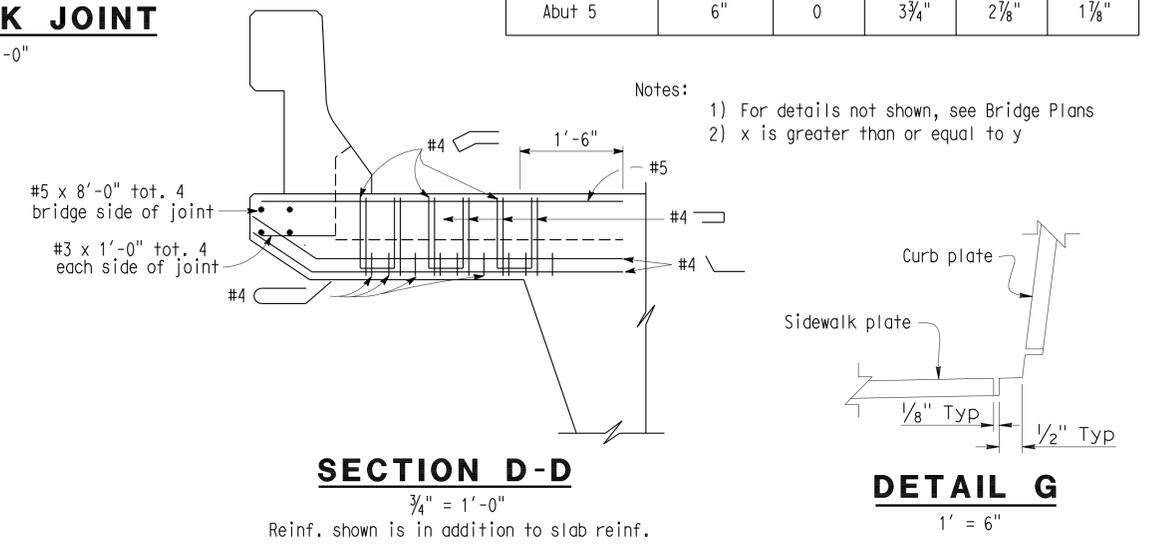
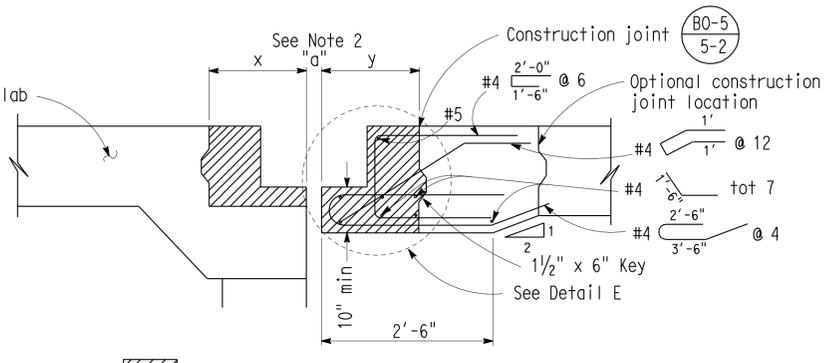
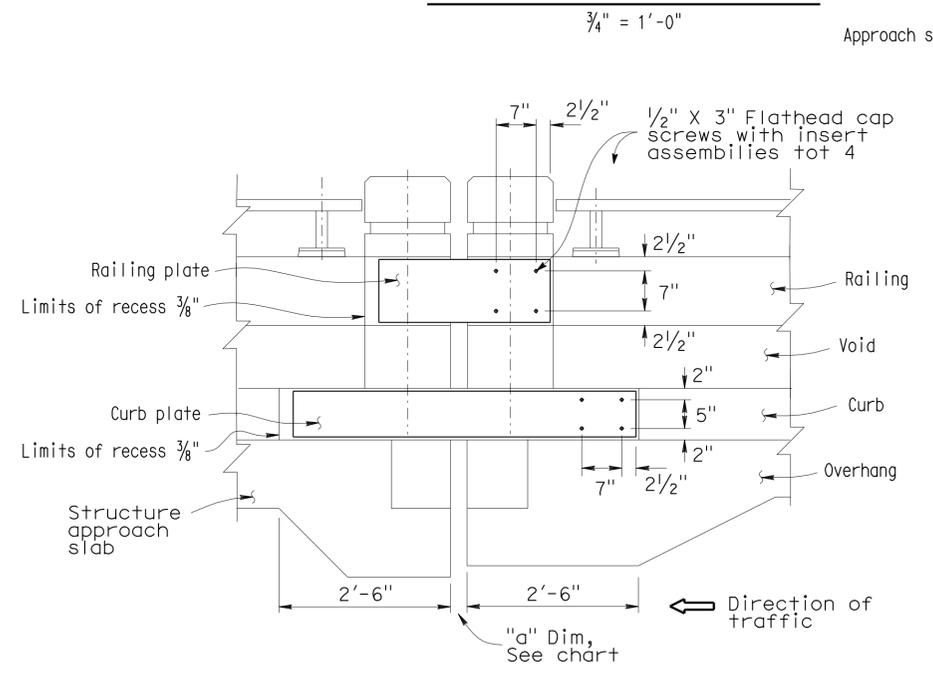
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 2-18-09 2-23-09 4-9-09 4-16-09 5-6-09 5-11-09 5-28-09 5-27-09 6-15-09	SHEET 31 OF 50
-------------------------------------------------	------------------------------------------------------------------------------------------------------------------	----------------

DATE PLOTTED => 17-JUN-2010 USERNAME => h11m



JOINT INFORMATION		"a" DIMENSIONS			
LOCATION	MOVEMENT RATING (M.R.)	SKEW	WINTER	SPRING & FALL	SUMMER
Abut 1	6"	0	3 3/4"	2 7/8"	1 7/8"
Abut 5	6"	0	3 3/4"	2 7/8"	1 7/8"

SEAL INSTALLATION



DESIGN	BY David Soon	CHECKED M. Fustok/E. Ortega
DETAILS	BY Anthony Valdez	CHECKED M. Fustok/E. Ortega
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
JOINT SEAL - ABUTMENT DETAILS

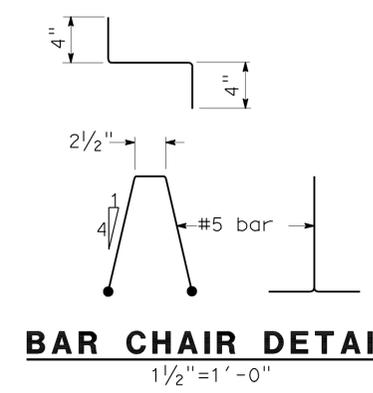
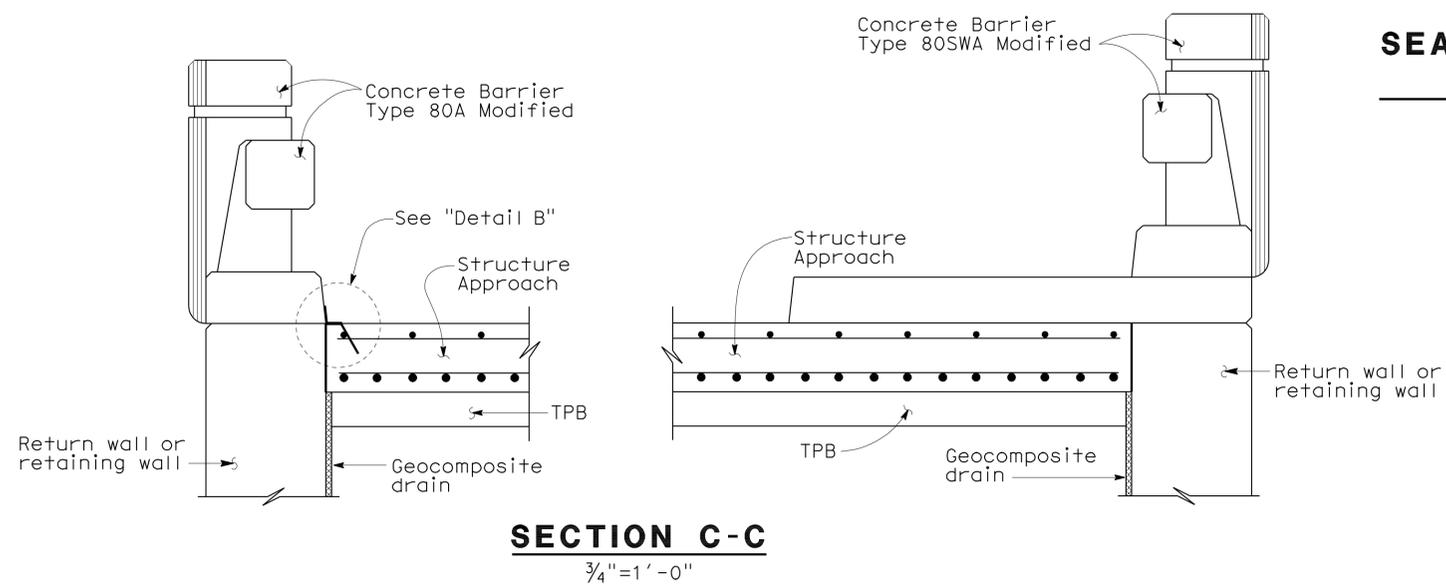
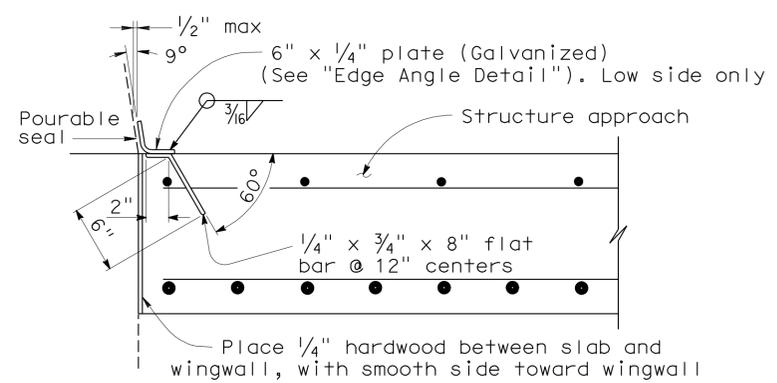
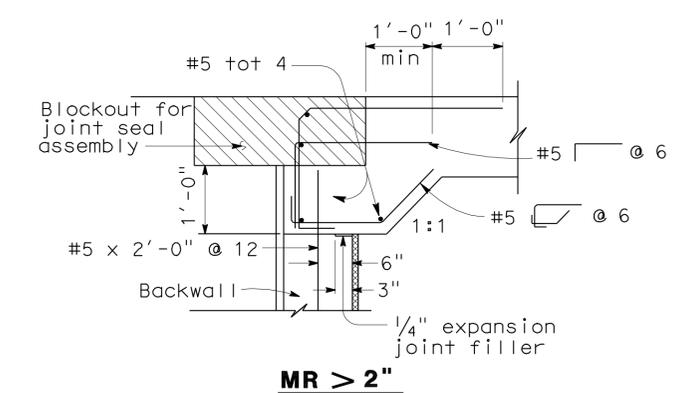
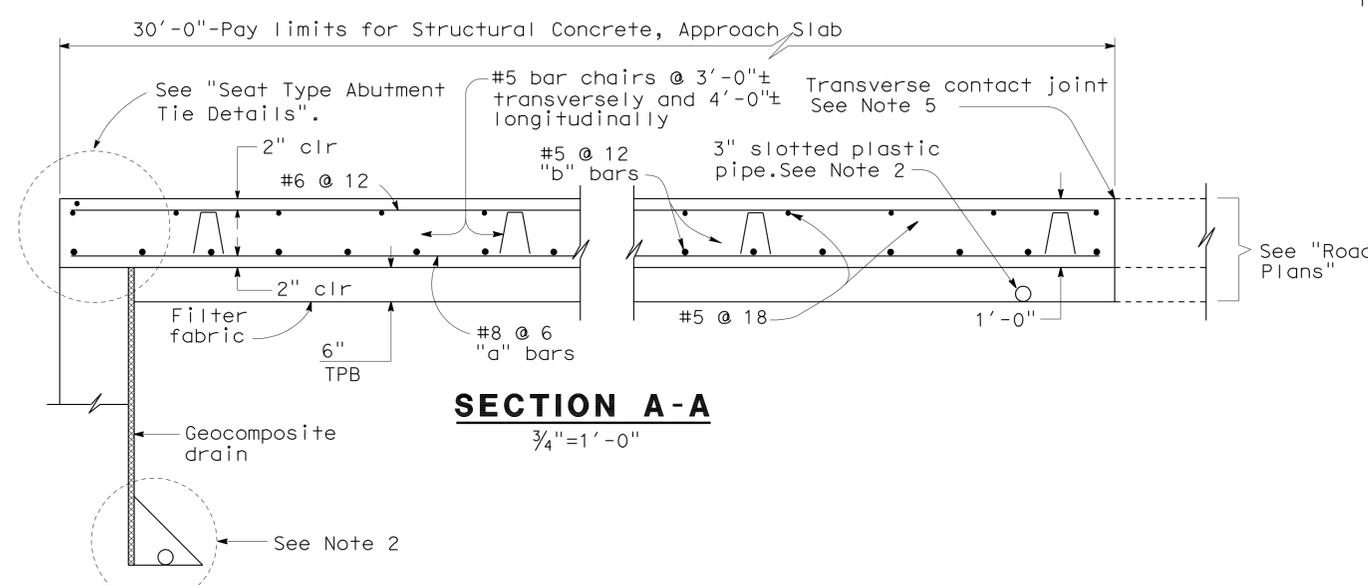
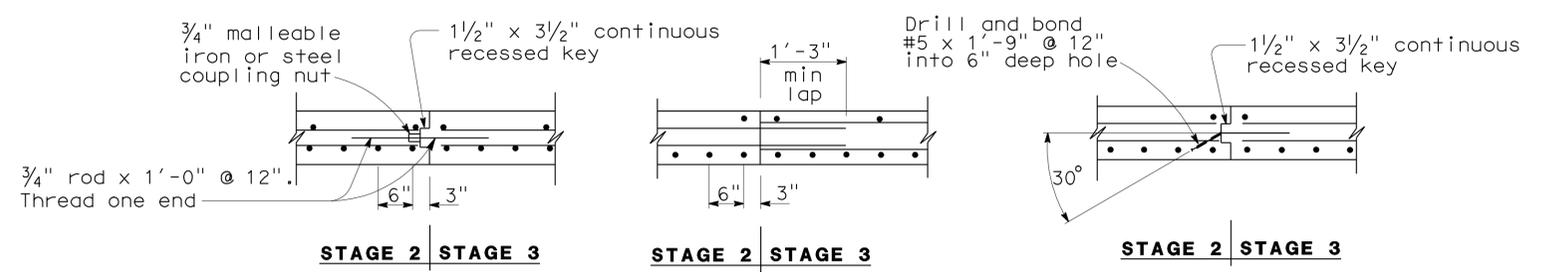
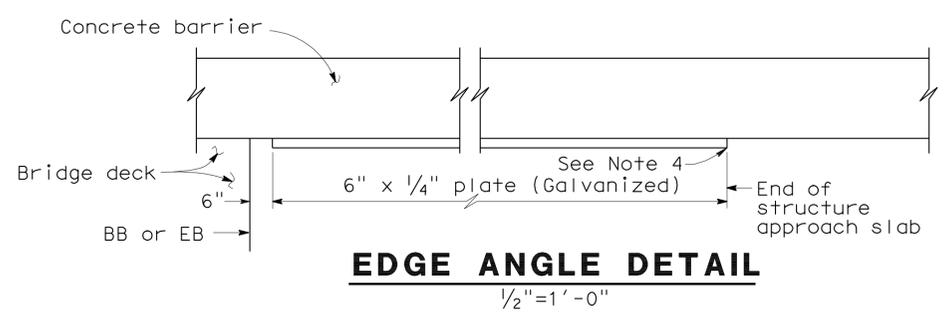
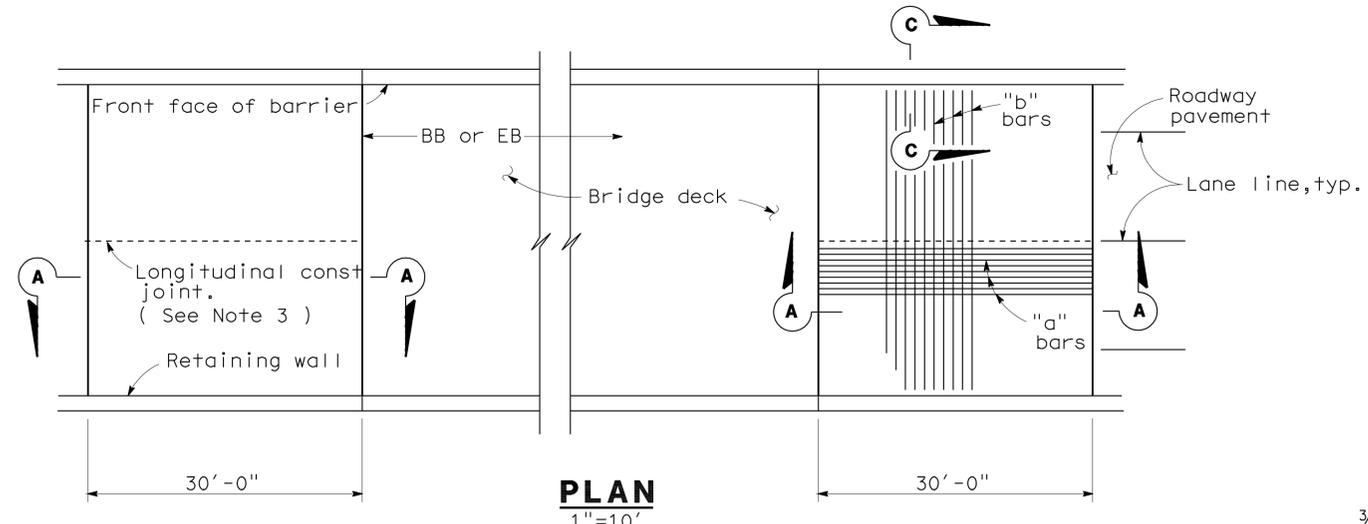
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	187	271

David Soon 6-24-09
REGISTERED CIVIL ENGINEER DATE

6-14-10
PLANS APPROVAL DATE

David Soon
No. 51862
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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- NOTES:**
- For details not shown, see Structure Plans.
 - For drainage details, see "STRUCTURE APPROACH DRAINAGE DETAILS" sheet.
 - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
 - End plate at end of structure approach.
 - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
- Remove all polystyrene.

DESIGN	BY David Soon	CHECKED M. Fustok/E. Ortega	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) STRUCTURE APPROACH TYPE N(30S)
DETAILS	BY Gerald Dickerson	CHECKED M. Fustok/E. Ortega			POST MILE	142.3	
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			POST MILE	142.3	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

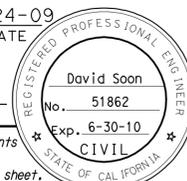
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

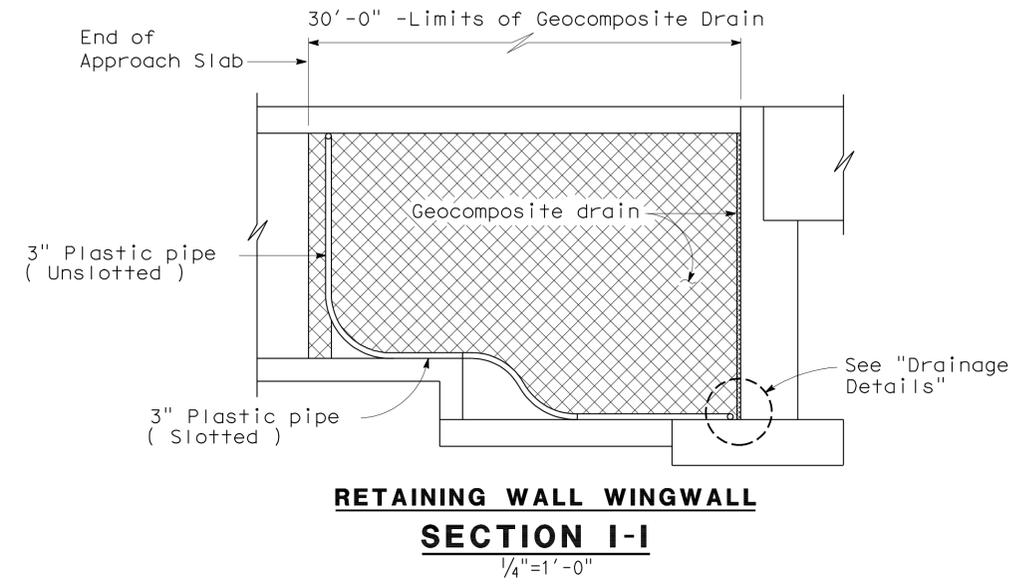
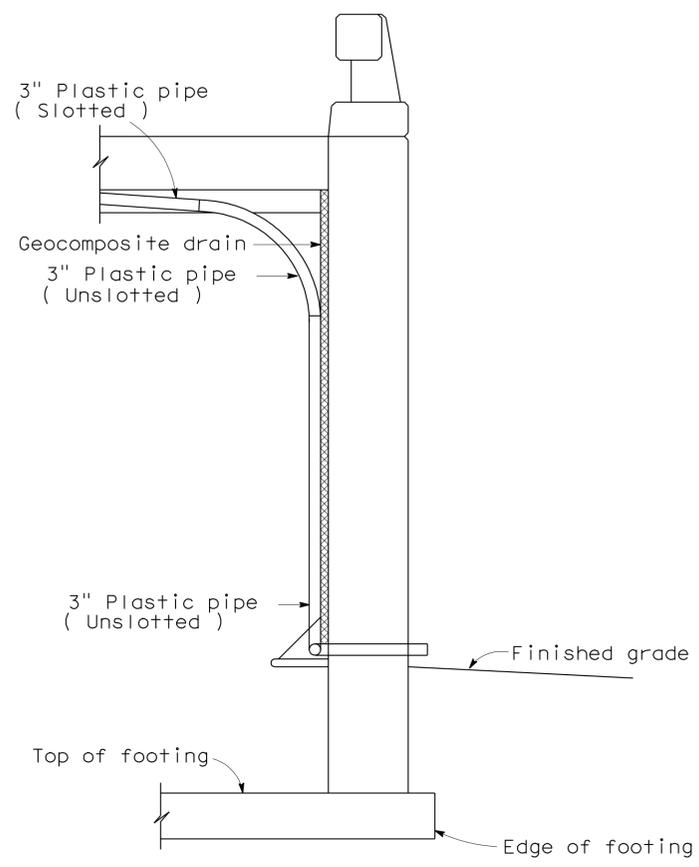
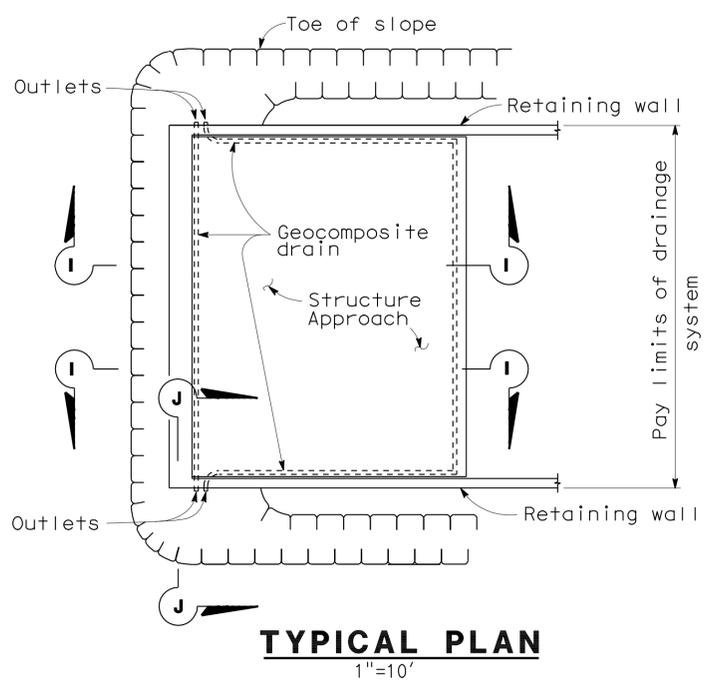
CU 08
EA 378701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

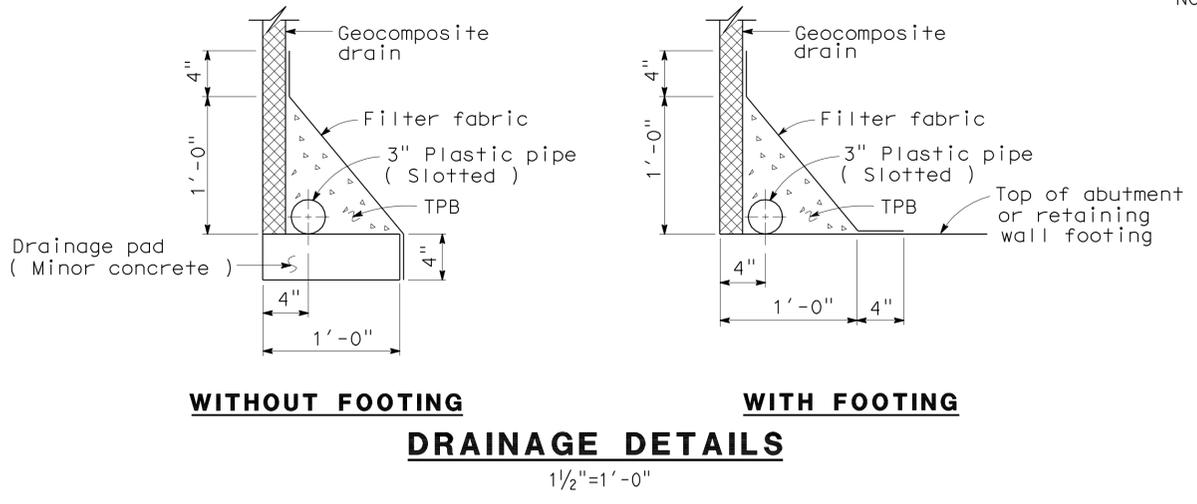
REVISION DATES	SHEET	OF
12-8-08 12-12-08 5-11-09 6-16-09	33	50

FILE => 54-1272-s1-san30s.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	188	271
David Soon 6-24-09				REGISTERED CIVIL ENGINEER	DATE
6-14-10				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.					



NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.

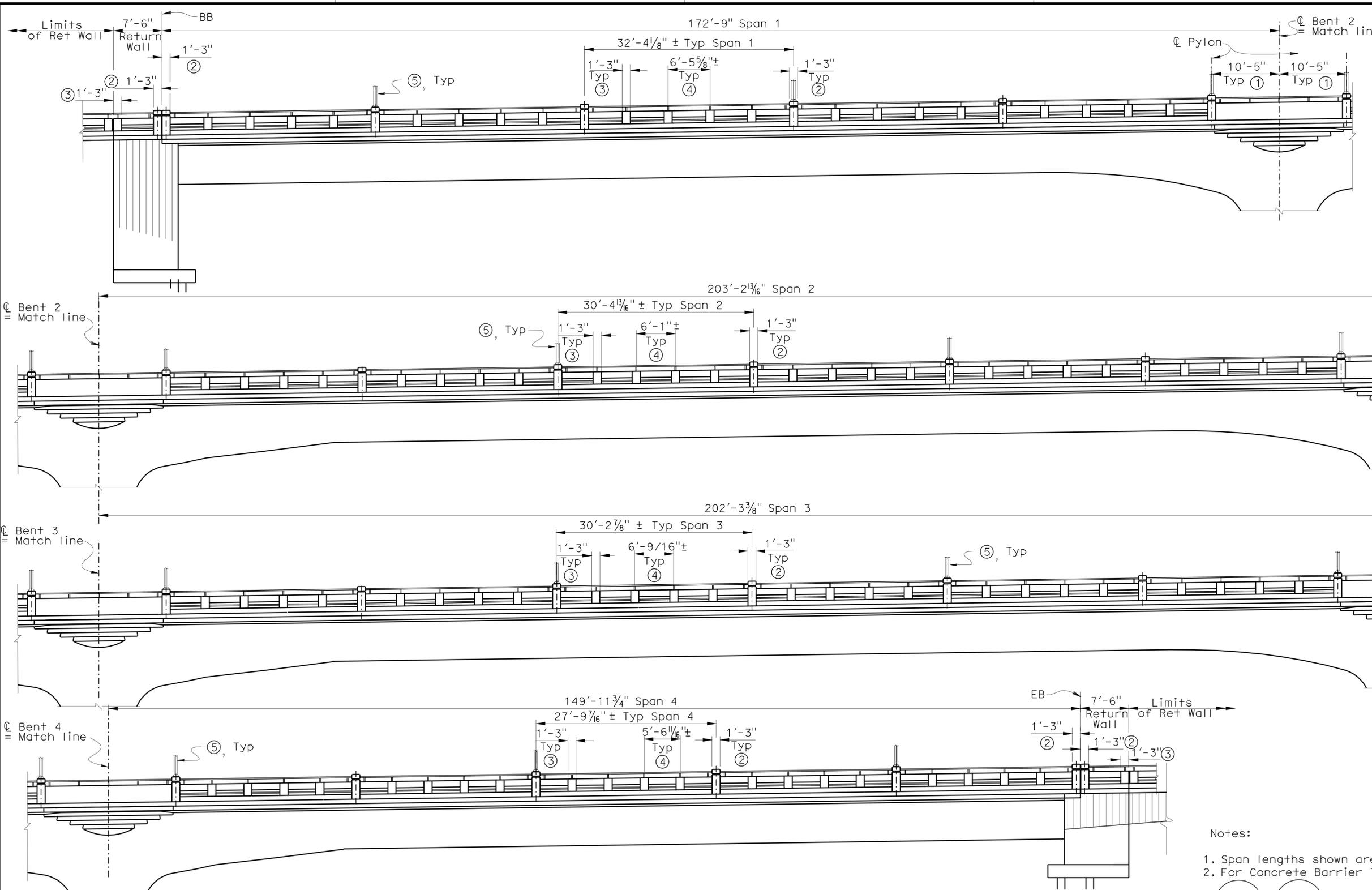


STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED M. Fustok/E. Ortega	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) STRUCTURE APPROACH DRAINAGE DETAILS	
	DETAILS	BY Gerald Dickerson	CHECKED M. Fustok/E. Ortega			POST MILE	142.3		
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 8-1-08, 12-3-08, 12-12-08, 5-11-09, 6-16-09		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	FILE => 54-1272-s2-sadd.dgn	SHEET	34	OF	50

DATE PLOTTED => 17-JUN-2010 USERNAME => hrlim

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	189	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
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DEVELOPED ELEVATION
CONCRETE BARRIER TYPE 80SW MODIFIED LAYOUT

- ① Belvedere
- ② Pylon
- ③ Concrete Barrier Type 80SW post
- ④ Concrete Barrier Type 80SW
- ⑤ Electrolier, see Road Plans.

1/8"=1'-0"
 Right EOD shown

- Notes:
- Span lengths shown are at right edge of deck.
 - For Concrete Barrier Type 80SW details, see **B11-62**, **B11-63**, and **B11-64**.
 - For Pylon details, see "CONCRETE BARRIER DETAILS NO. 1" and "CONCRETE BARRIER DETAILS NO. 2" sheets.
 - For Belvedere Concrete Barrier details, see "CONCRETE BARRIER DETAILS NO. 3" sheet.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) CONCRETE BARRIER LAYOUT NO. 1	
	DETAILS	BY B. Jenko / Y. Feng	CHECKED Rakesh Deo			POST MILE	142.3		
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 11-24-06, 6-16-09, 10-11-08, 10-20-08, 10-22-08, 10-23-08, 11-26-08, 12-12-08, 5-11-09		
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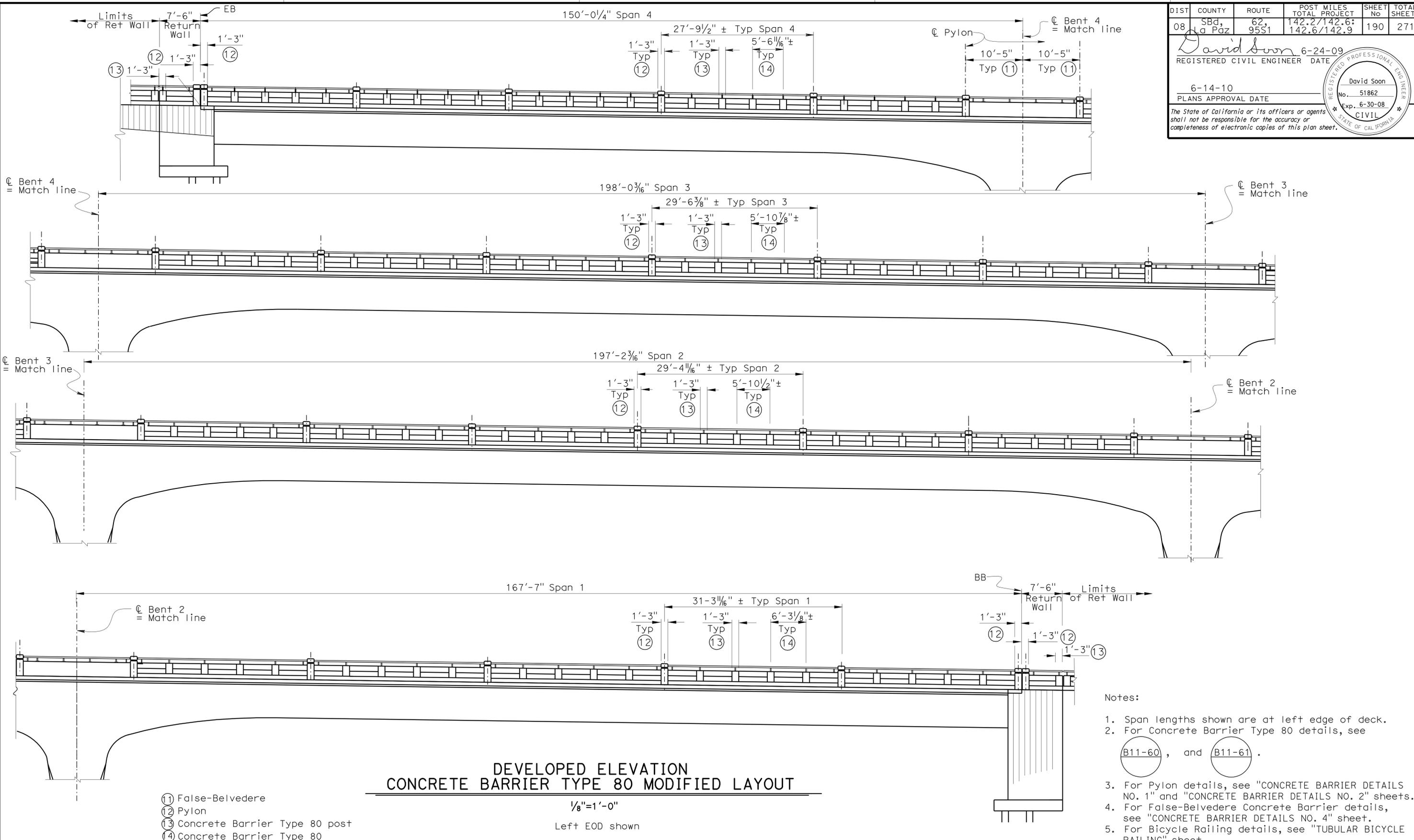
DATE PLOTTED => 17-JUN-2010
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 TIME PLOTTED => 10:34

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	190	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE

6-14-10
 PLANS APPROVAL DATE

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



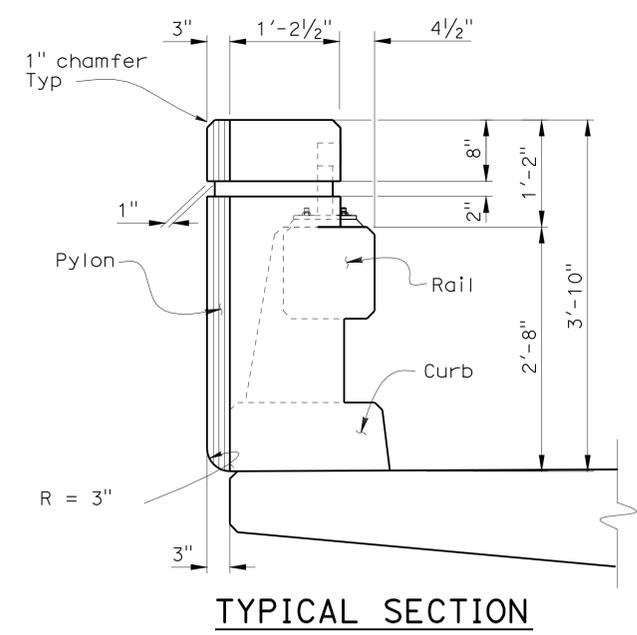
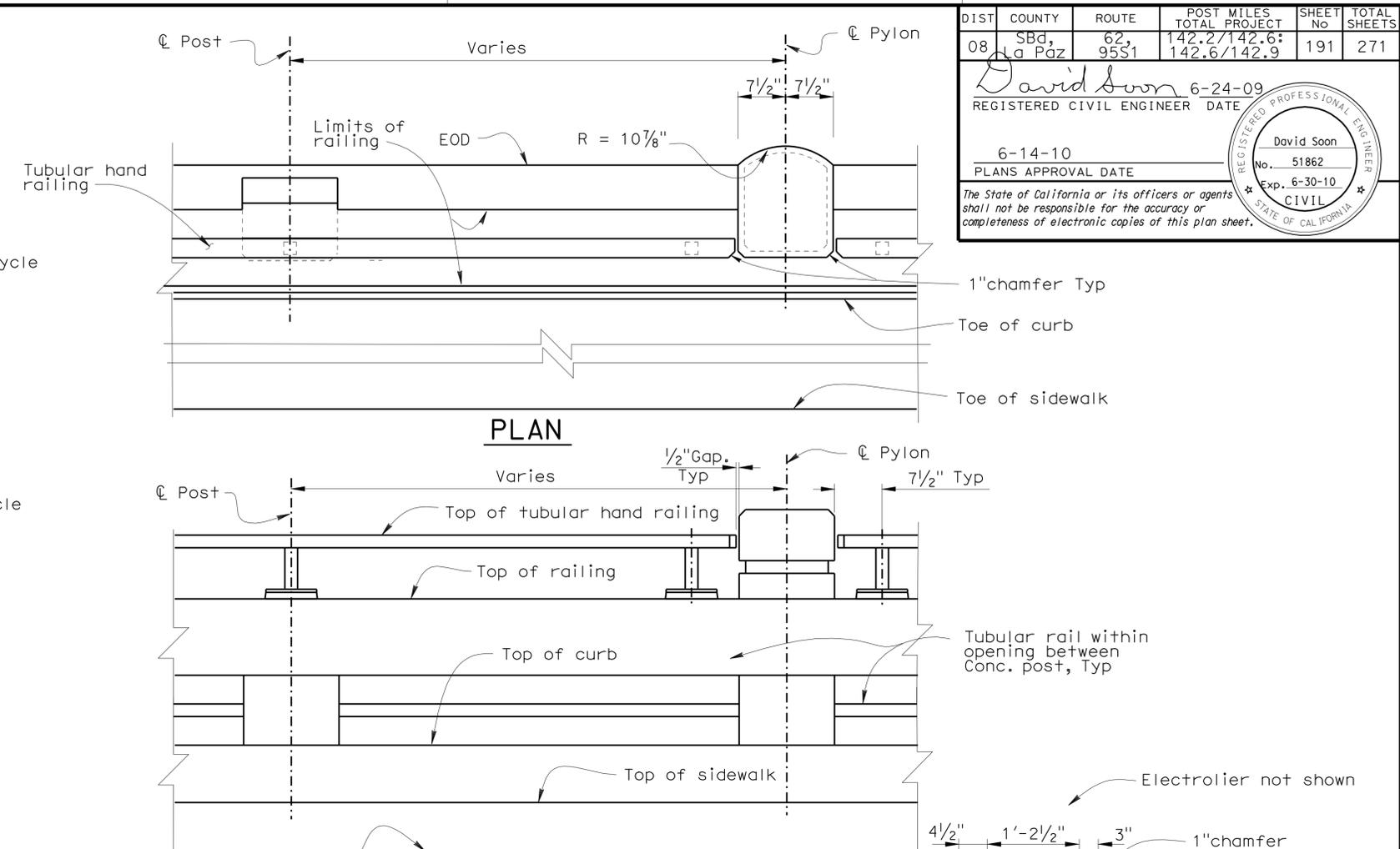
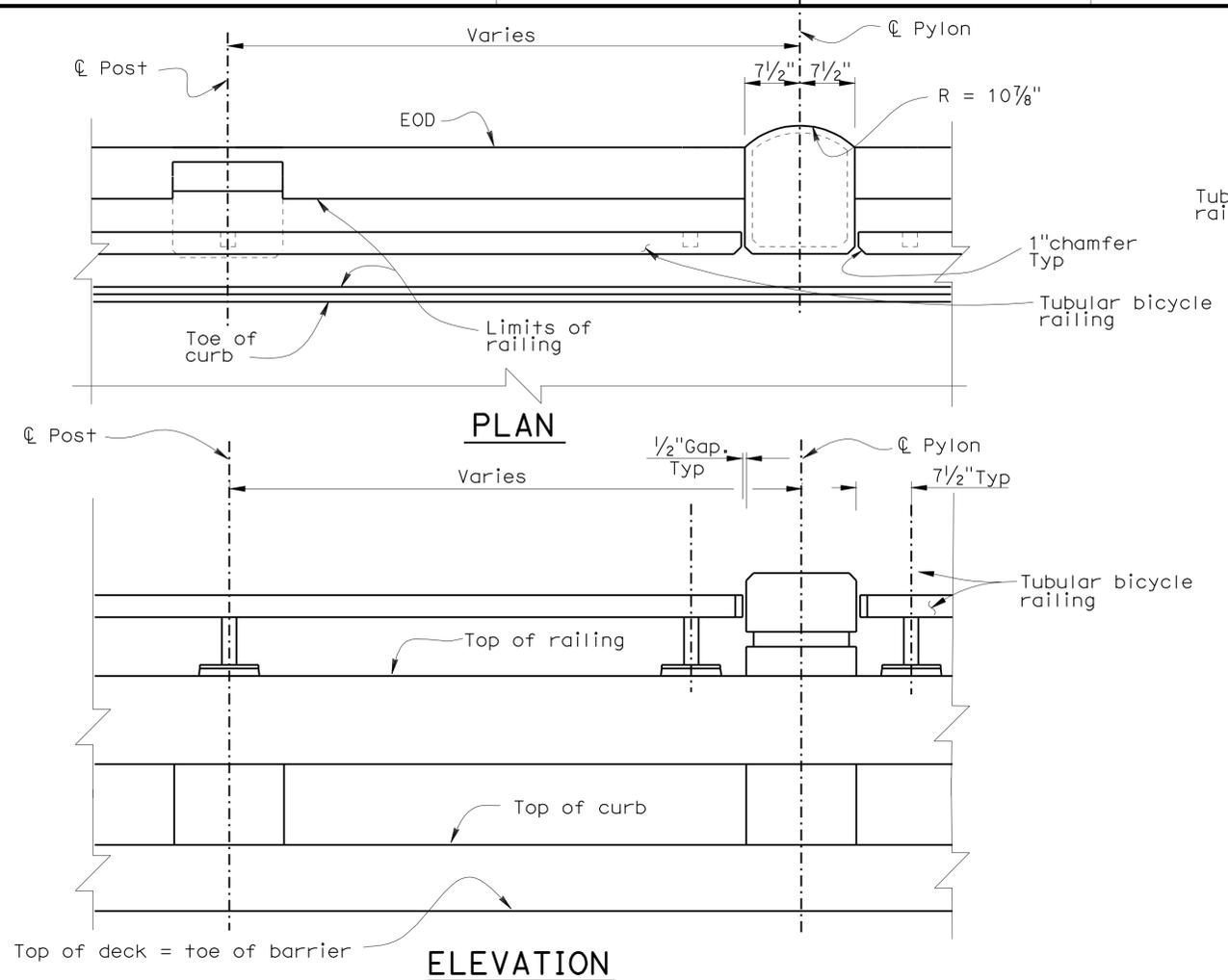
DESIGN	BY	David Soon	CHECKED	Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) CONCRETE BARRIER LAYOUT NO. 2	
	DETAILS	BY	Bruno Jenko / Y. Feng	CHECKED			Rakesh Deo	POST MILE		142.3
	QUANTITIES	BY	E. Ortega	CHECKED			WH / GD / RD / DD			

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 08 EA 378701 DISREGARD PRINTS BEARING EARLIER REVISION DATES

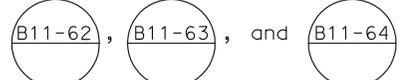
REVISION DATES								SHEET	OF	
11-24-06	10-12-08	10-14-08	10-11-08	10-20-08	10-23-08	11-26-08	12-12-08	5-11-09	36	50

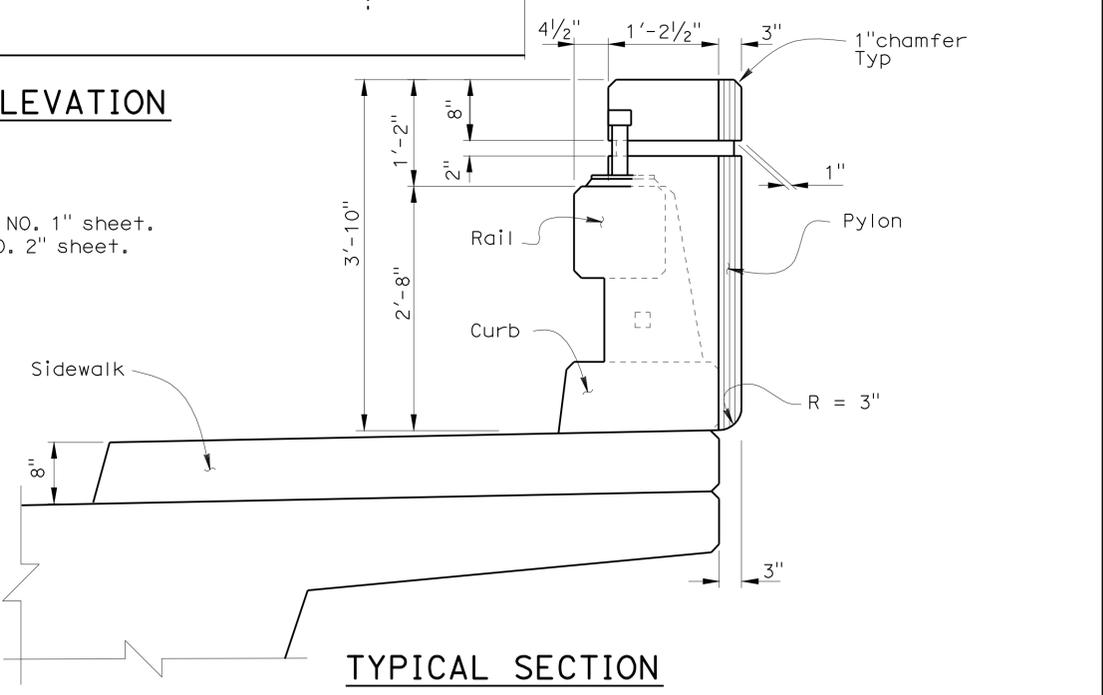
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	191	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 PLANS APPROVAL DATE					
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Notes:

1. For Concrete Barrier Type 80SW Modified layout, see "CONCRETE BARRIER LAYOUT NO. 1" sheet.
2. For Concrete Barrier Type 80 Modified layout, see "CONCRETE BARRIER LAYOUT NO. 2" sheet.
3. For Concrete Barrier Type 80SW details, see .
4. For Concrete Barrier Type 80 details, see .
5. For Pylon details not shown, see "CONCRETE BARRIER DETAILS NO. 2" sheet.
6. For Concrete Barrier details not shown, see "CONCRETE BARRIER DETAILS NO. 3" and "CONCRETE BARRIER DETAILS NO. 4" sheets.
7. For Bicycle Railing details, see "TUBULAR BICYCLE RAILING" sheet.



CONCRETE BARRIER TYPE 80 MODIFIED PYLON DETAIL

1" = 1'-0"

CONCRETE BARRIER TYPE 80SW MODIFIED PYLON DETAIL

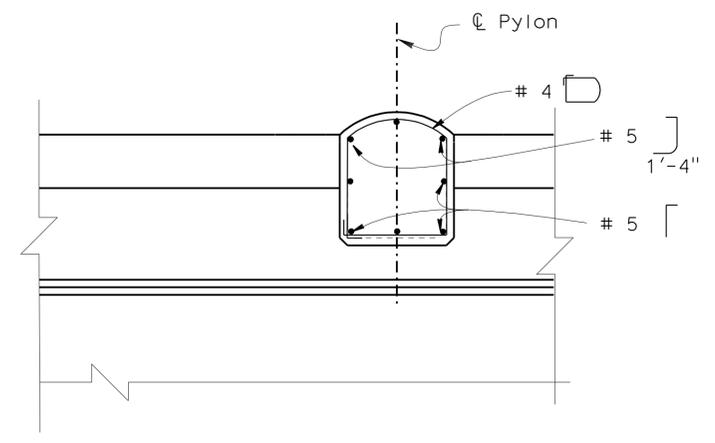
1" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN BY David Soon CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE) CONCRETE BARRIER DETAILS NO. 1
	DETAILS BY Bruno Jenko CHECKED Rakesh Deo		DESIGN BRANCH 7	POST MILE 142.3	
	QUANTITIES BY E. Ortega CHECKED WH / GD / RD / DD		CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				REVISION DATES 10-9-08 10-27-08 11-26-08 12-10-08 5-31-09 6-16-09	SHEET 37 OF 50

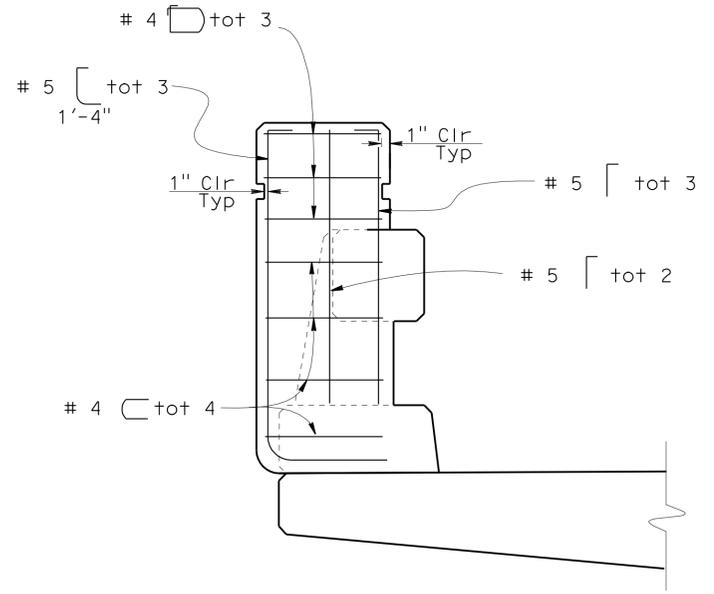
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBG, a Paz	62, 95S1	142.2/142.6 142.6/142.9	192	271

David Soon 6-24-09
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 David Soon
 No. 51862
 Exp. 6-30-10
 CIVIL
 STATE OF CALIFORNIA



PLAN
Bicycle Railing not shown



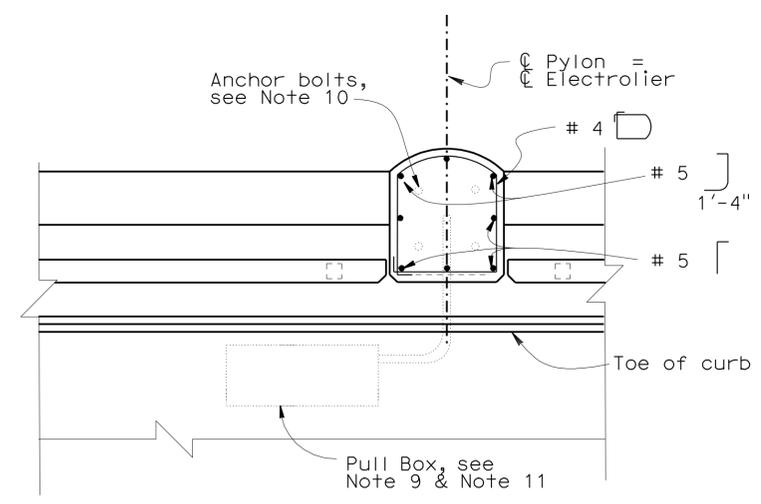
TYPICAL SECTION
Bicycle Railing not shown

CONCRETE BARRIER TYPE 80 MODIFIED PYLON DETAIL

1" = 1'-0"

Notes:

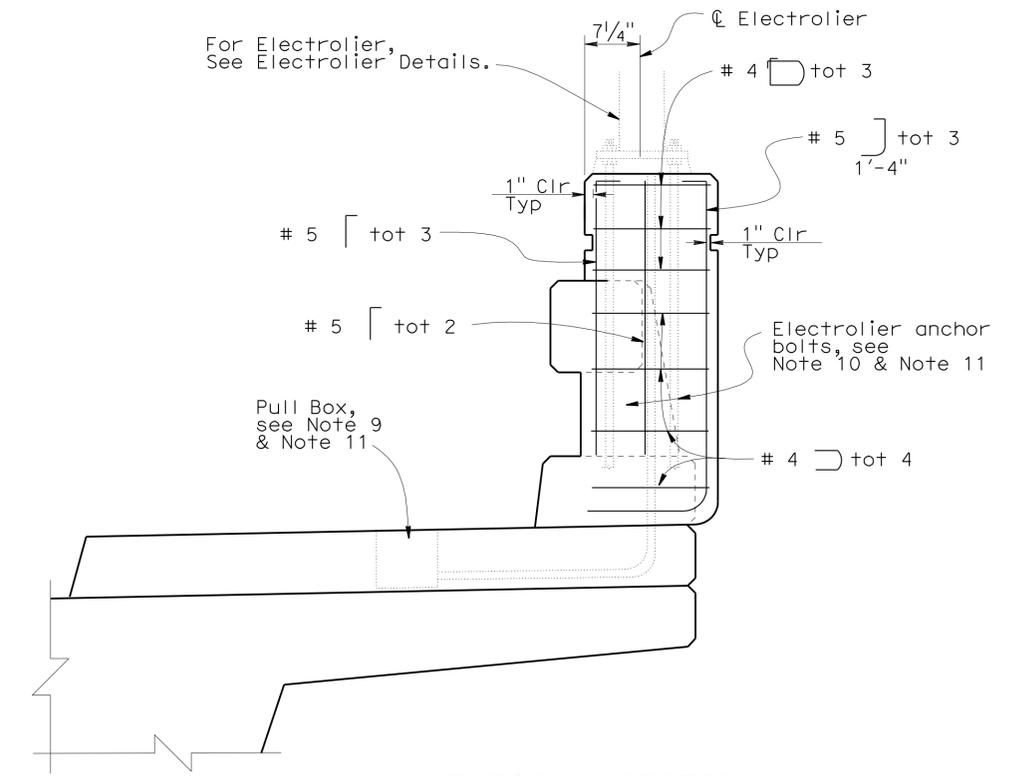
- For Concrete Barrier Type 80SW Modified layout, see "CONCRETE BARRIER LAYOUT NO. 1" sheet.
- For Concrete Barrier Type 80 Modified layout, see "CONCRETE BARRIER LAYOUT NO. 2" sheet.
- For Concrete Barrier Type 80SW details, see **B11-62**, **B11-63**, and **B11-64**.
- For Concrete Barrier Type 80 details, see **B11-60** and **B11-61**.
- For Pylon details not shown, see "CONCRETE BARRIER DETAILS NO. 1" sheet.
- For Concrete Barrier details not shown, see "CONCRETE BARRIER DETAILS NO. 3" and "CONCRETE BARRIER DETAILS NO. 4" sheets.
- For Bicycle Railing details, see "TUBULAR BICYCLE RAILING" sheet.
- Concrete Barrier Type 80 and Concrete Barrier Type 80SW reinforcement is continuous through pylons. This reinforcement is not shown.
- For electrical details see **ES9A**, **ES9B**, **ES9C** & **ES9D**.
- For anchor bolts size and placement, see Electrolier Details.
- Pull Box and anchor bolts only at electrolier locations.



PLAN

CONCRETE BARRIER TYPE 80SW MODIFIED PYLON DETAIL

1" = 1'-0"



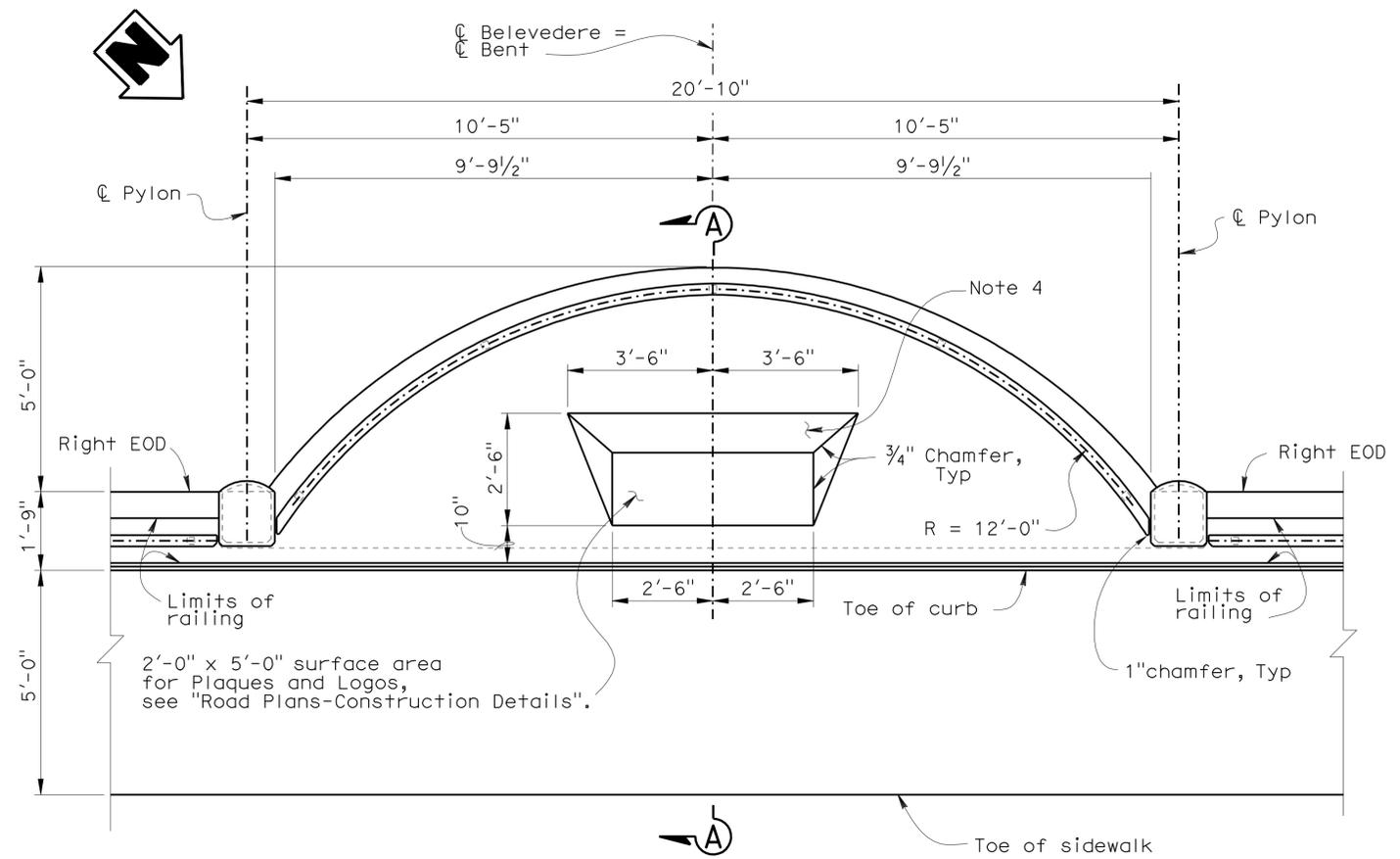
TYPICAL SECTION
Tubular Hand Railing not shown

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) CONCRETE BARRIER DETAILS NO. 2	
	DETAILS	BY Yingjue feng	CHECKED Rakesh Deo			POST MILE	142.3		
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD			REVISION DATES	12-17-08 1-2-09 4-16-09 5-11-09 6-16-09		
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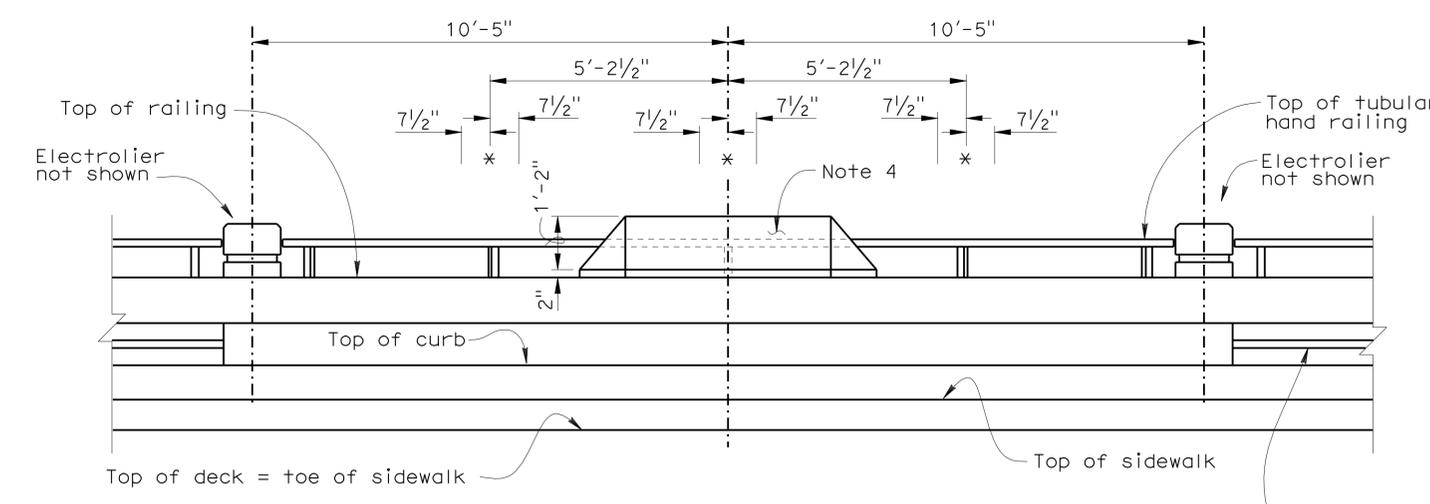
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	193	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10				PLANS APPROVAL DATE	
<i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</i>					

Notes:

- For Concrete Barrier Type 80SW Modified layout, see "CONCRETE BARRIER LAYOUT NO. 1" sheet.
- For Concrete Barrier Type 80SW details, see B11-62, B11-63, and B11-64.
- For Pylon details, see "CONCRETE BARRIER DETAILS NO. 1" and "CONCRETE BARRIER DETAILS NO. 2" sheets.
- Plaque and Logo support concrete and reinforcement at Bent 3 Belvedere only.
- Concrete Barrier Type 80SW reinforcement is continuous through Belvedere (Section A-A). This reinforcement is not shown.
- Concrete Barrier Type 80SW post reinforcement is located in Belvedere as shown in Elevation detail.

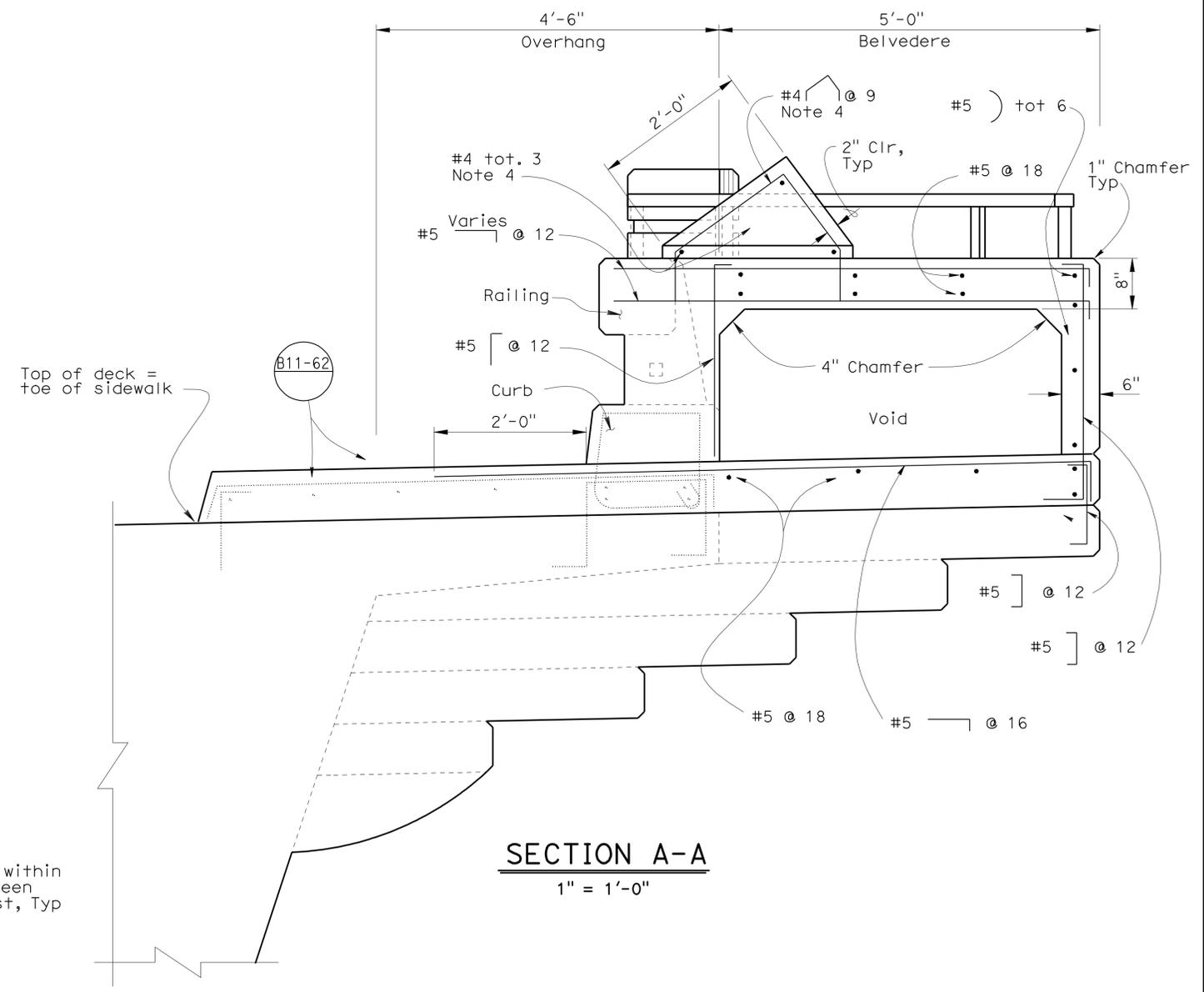


PLAN
1/2"=1'-0"



ELEVATION
1/2"=1'-0"

* post reinf #4 and #6



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

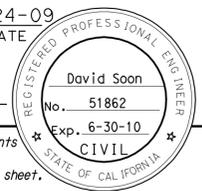
DESIGN	BY David Soon	CHECKED Rakesh Deo
DETAILS	BY Bruno Jenko	CHECKED Rakesh Deo
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

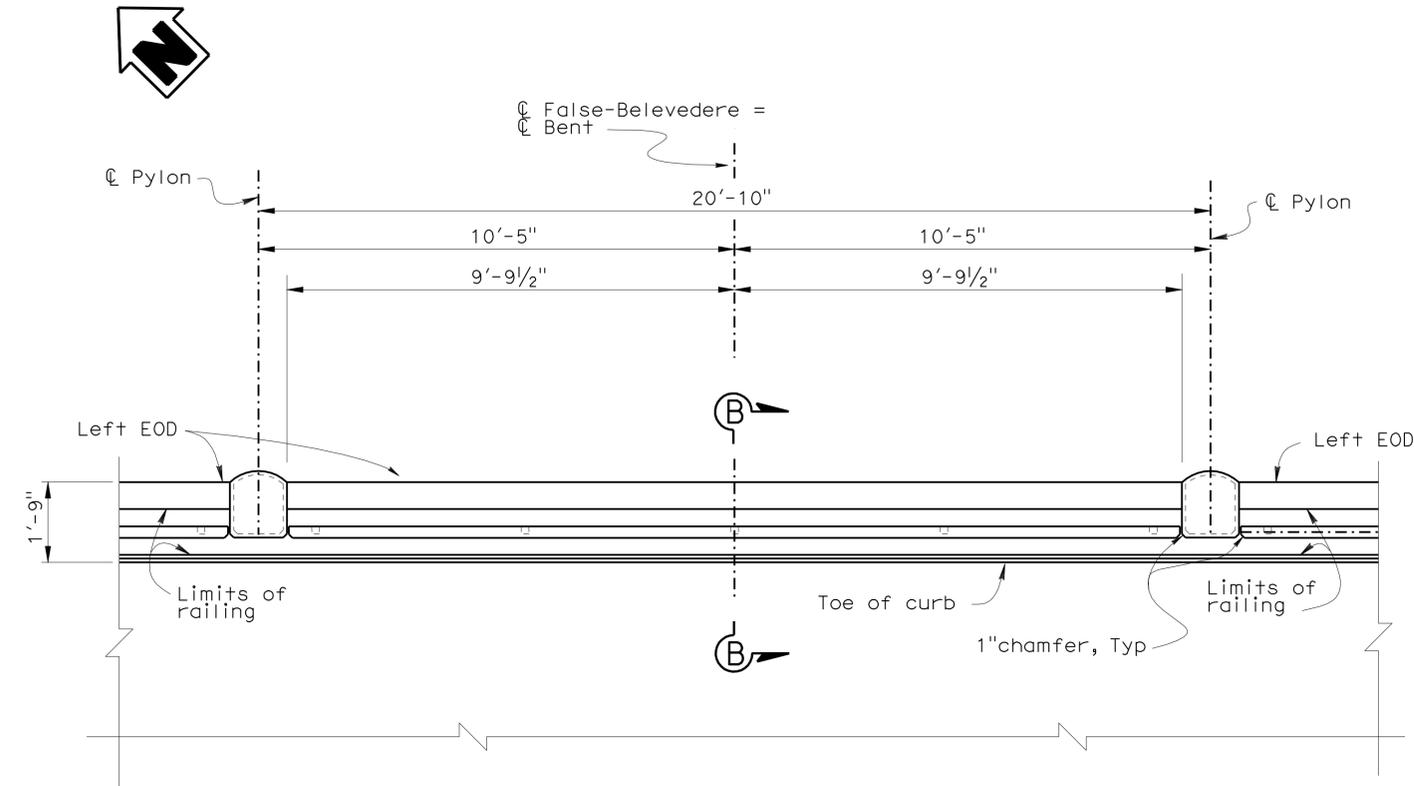
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

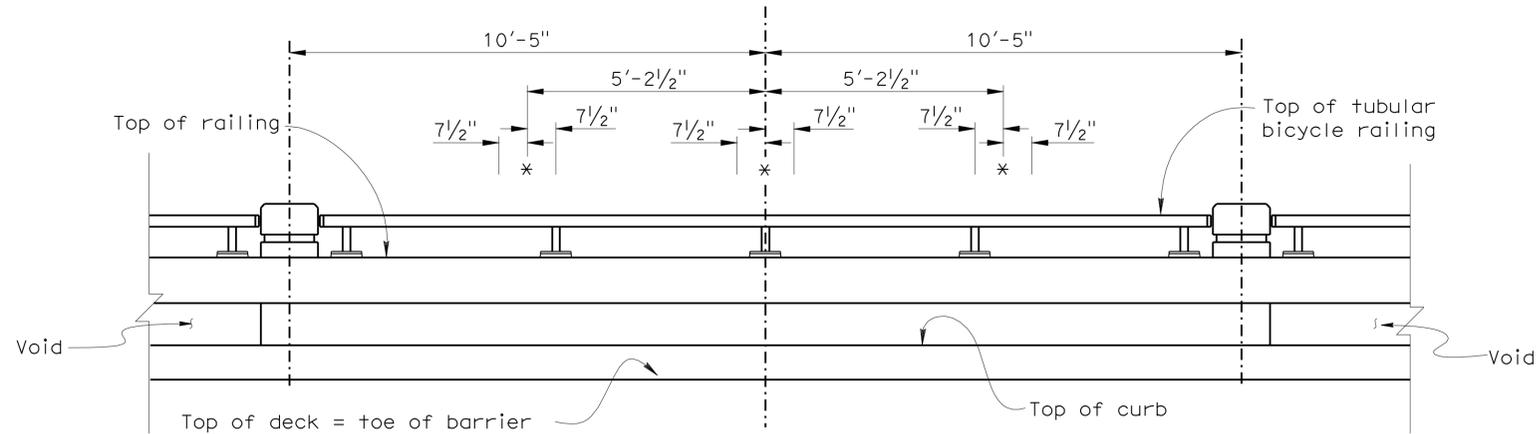
BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
CONCRETE BARRIER DETAILS NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	194	271
David Soon 6-24-09				REGISTERED CIVIL ENGINEER DATE	
6-14-10				PLANS APPROVAL DATE	
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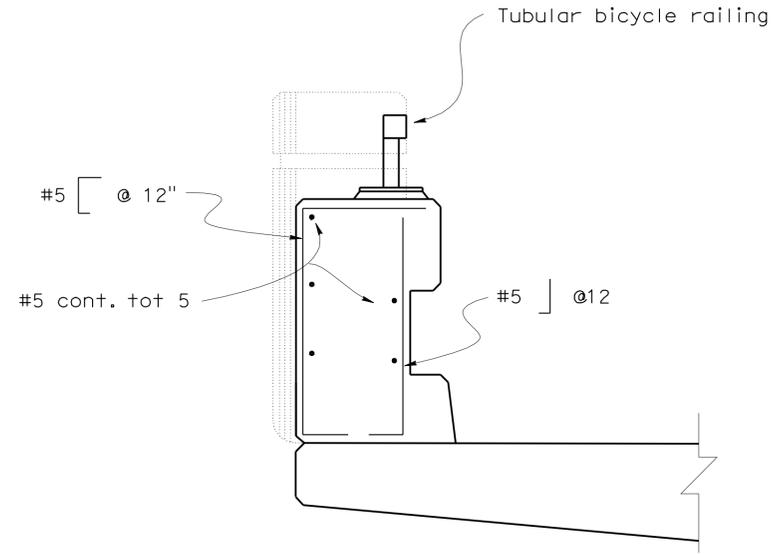


PLAN
1/2" = 1'-0"



ELEVATION
1/2" = 1'-0"

* B11-60 post reinf #4 and #6



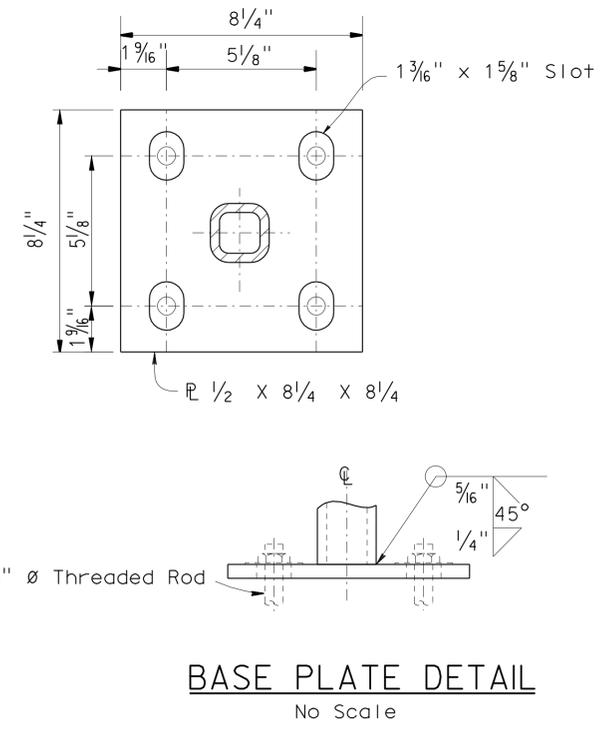
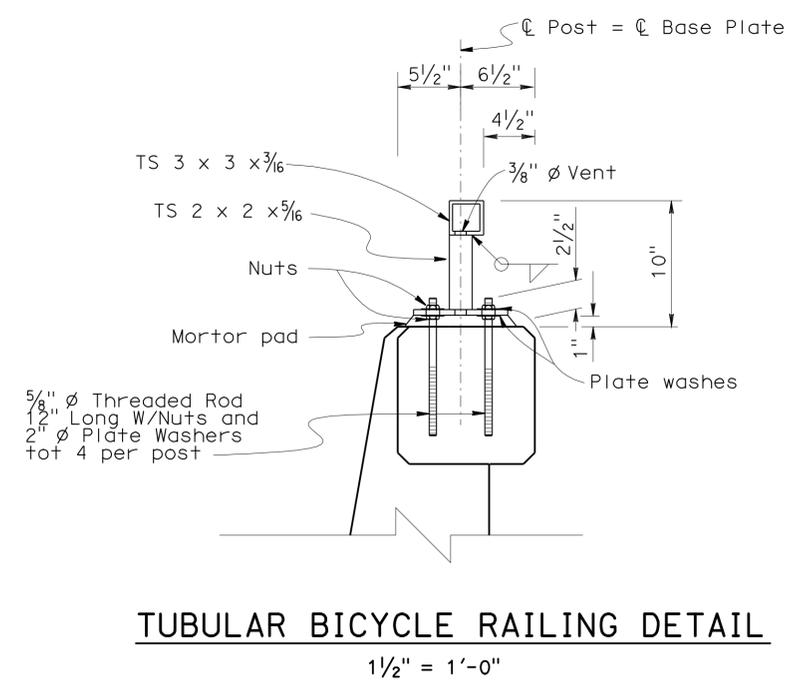
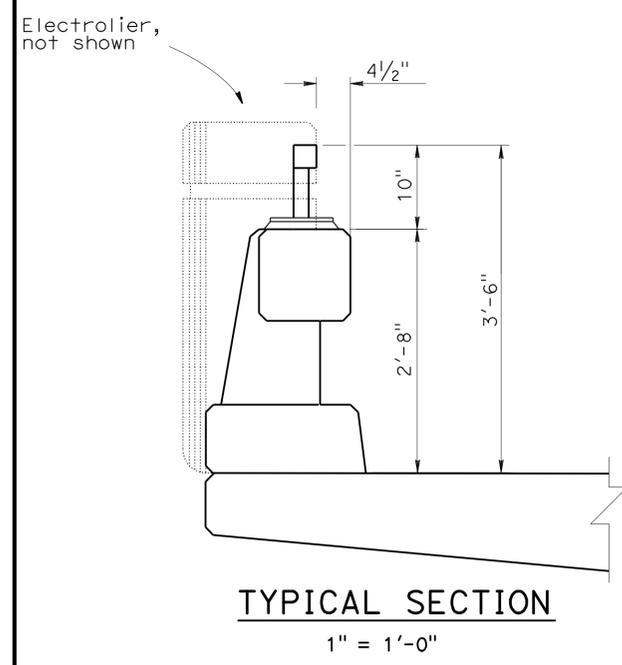
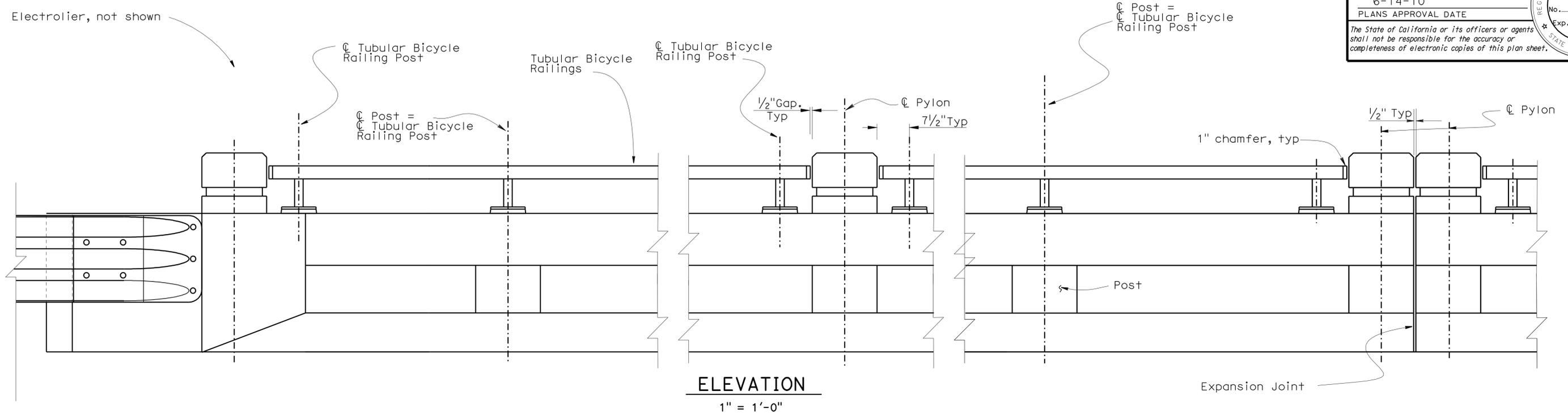
SECTION B-B
1" = 1'-0"

- Notes:
- For Concrete Barrier Type 80 Modified layout, see "CONCRETE BARRIER LAYOUT NO. 2" sheet.
 - For Concrete Barrier Type 80 details, see B11-60, and B11-61.
 - For Pylon details, see "CONCRETE BARRIER DETAILS NO. 1" and "CONCRETE BARRIER DETAILS NO. 2" sheets.
 - Concrete Barrier Type 80 reinforcement continuous through False-Belevedere (Section B-B). This reinforcement is not shown.
 - Concrete Barrier Type 80 post reinforcement is located in False-Belevedere as shown in Elevation detail. See *

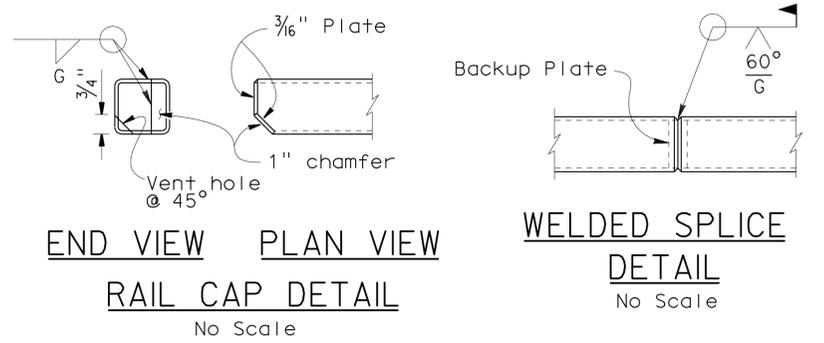
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)	DESIGN	BY David Soon	CHECKED Rakesh Deo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO.	54-1272	COLORADO RIVER BRIDGE (REPLACE) CONCRETE BARRIER DETAILS NO. 4
	DETAILS	BY Yingjue Feng	CHECKED Rakesh Deo			POST MILE	142.3	
	QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD					
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 08 EA 378701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
								SHEET 40 OF 50

USERNAME => frcg001 DATE PLOTTED => 17-JUN-2010 TIME PLOTTED => 10:16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, a Paz	62, 95S1	142.2/142.6: 142.6/142.9	195	271
David Soon 6-24-09 REGISTERED CIVIL ENGINEER DATE					
6-14-10 PLANS APPROVAL DATE					
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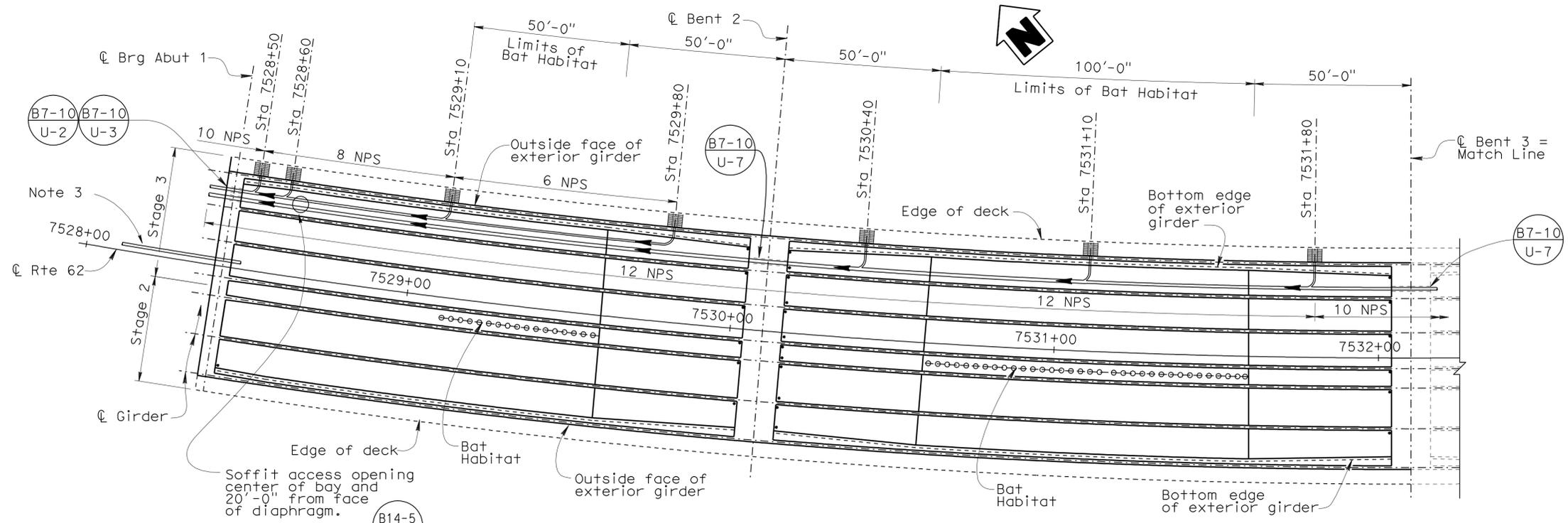


- Notes:
- Galvanize rail assembly after fabrication.
 - Post shall be normal to railing.
 - Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
 - For Concrete Barrier Type 80 Modified layout, see "CONCRETE BARRIER LAYOUT NO. 2" sheet.
 - For Concrete Barrier Type 80 details, see B11-60 and B11-61.
 - For Pylon details, see "CONCRETE BARRIER DETAILS NO. 1" and "CONCRETE BARRIER DETAILS NO. 2" sheets.
 - For False-Belvedere Concrete Barrier details, see "CONCRETE BARRIER DETAILS NO. 4" sheet.

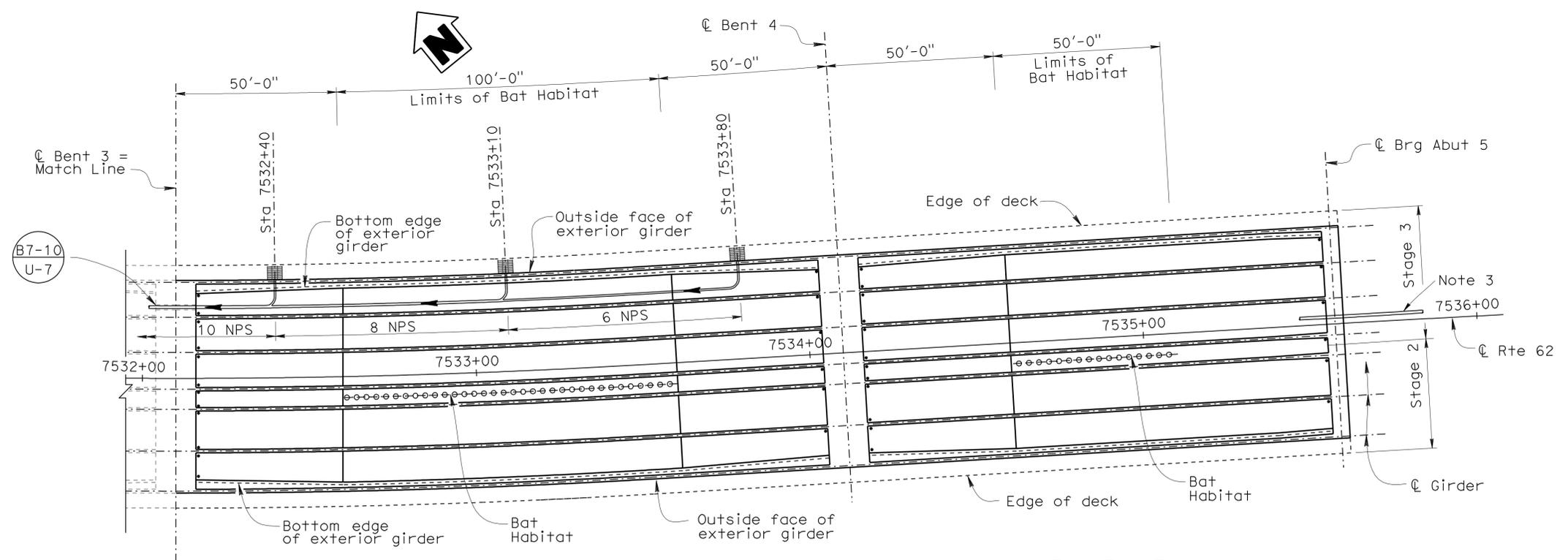


DESIGN BY David Soon CHECKED Rakesh Deo DETAILS BY Yingjue Feng CHECKED Rakesh Deo QUANTITIES BY E. Ortega CHECKED WH / GD / RD / DD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 54-1272	COLORADO RIVER BRIDGE (REPLACE) TUBULAR BICYCLE RAILING
			POST MILE 142.3	
			DISREGARD PRINTS BEARING EARLIER REVISION DATES 11-24-08 12-12-08 5-11-09 6-16-09	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 08 EA 378701	FILE => 54-1272-t-b1kr.dgn	SHEET 41 OF 50	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6: 142.6/142.9	196	271
David Soon				6-24-09	
REGISTERED CIVIL ENGINEER				DATE	
6-14-10					
PLANS APPROVAL DATE					
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LAYOUT B7-7 B7-8 B7-10
1"=20'



LAYOUT B7-7 B7-8 B7-10
1"=20'

- Notes :**
- - Indicates Deck Drain Type D-3. (B7-7)
 - ⊖⊖⊖ - Indicates Bat Habitat.
 - 1. For Bat Habitat details, see "TYPICAL SECTION NO. 1" and "TYPICAL SECTION NO. 2" sheets.
 - 2. Drain pipe -2% slope minimum.
 - 3. Welded Steel Casing (bridge) for future utility opening. (B7-10 U-8)

DESIGN	BY Mike Forrestal	CHECKED Dhvani Desai
DETAILS	BY Gerald Dickerson	CHECKED Dhvani Desai
QUANTITIES	BY E. Ortega	CHECKED WH / GD / RD / DD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

BRIDGE NO.	54-1272
POST MILE	142.3

COLORADO RIVER BRIDGE (REPLACE)
MISCELLANEOUS LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	SBD, La Paz	62, 95S1	142.2/142.6 142.6/142.9	198	271

2-18-09
PROFESSIONAL GEOLOGIST

6-14-10
PLANS APPROVAL DATE

PROFESSIONAL GEOLOGIST
 Mark Wilson
 No. 8164
 Exp. 06-30-10
 STATE OF CALIFORNIA

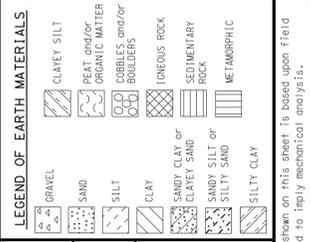
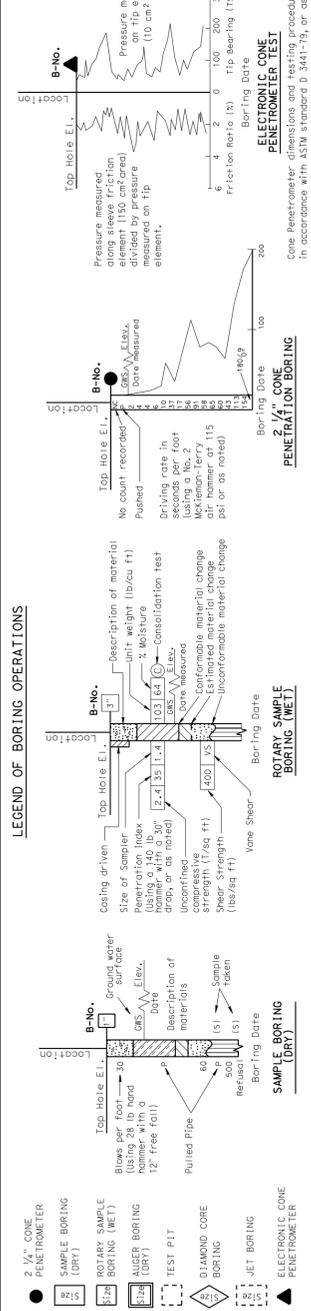
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FOR PLAN VIEW, SEE "LOG OF TEST BORINGS" 1 OF 8

23.50' Lt Sta 7528+23.5
C/L Rte 62



LEGEND OF BORING OPERATIONS



CONSISTENCY CLASSIFICATION FOR SOILS

According to the Standard Penetration Test

SPt No./in (Blows/foot)	Soil Consistency
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
51-70	Very Dense
71-100	Very Dense
101-150	Very Dense
151-200	Very Dense
201-300	Very Dense
301-400	Very Dense
401-500	Very Dense
501-600	Very Dense
601-700	Very Dense
701-800	Very Dense
801-900	Very Dense
901-1000	Very Dense

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	FIELD INVESTIGATION BY: M. Wilson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH	BRIDGE NO. 54-1272 POST MILE 142.3	COLORADO RIVER BRIDGE (REPLACE) LOG OF TEST BORINGS 2 OF 8
DRAWN BY W. Tang 11/2008	CHECKED BY M. Wilson					

CONSISTENCY CLASSIFICATION FOR SOILS		According to the Standard Penetration Test	
SPT No./blows/foot	Soil Description	Soil Consistency	Soil Penetration
0-4	Very Loose	Very Soft	< 2
5-10	Loose	Soft	2-4
11-30	Medium Dense	Medium Stiff	5-8
31-50	Dense	Stiff	9-15
51-70	Very Dense	Very Stiff	16-30
71-90		Hard	31-60
91-110		Very Hard	> 60

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

LEGEND OF EARTH MATERIALS	
	GRAVEL
	SAND
	SILTY SAND
	SILTY CLAY
	CLAYEY SILT
	ORGANIC MATTER
	COBBLES/BOULDERS
	IGNEOUS ROCK
	SEDIMENTARY ROCK
	METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

2 1/4" CORE SAMPLE BORING (DRY)
 Penetration Index, Unit weight, Moisture, Consolidation test, etc.

ROSTARY SAMPLE BORING (WET)
 Description of material, Unit weight, Moisture, Consolidation test, etc.

DIAMOND CORE BORING
 Description of materials, Sample taken, etc.

TEST PIT
 Description of materials, etc.

CONCRETE CORE BORING
 Description of materials, etc.

JET BORING
 Description of materials, etc.

ELECTRONIC CORE PENETROMETER
 Description of materials, etc.

ENGINEERING SERVICES	GEOTECHNICAL SERVICES
DRAWN BY: W. Tang 11/2008	CHECKED BY: M. Wilson

FIELD INVESTIGATION BY: M. Wilson

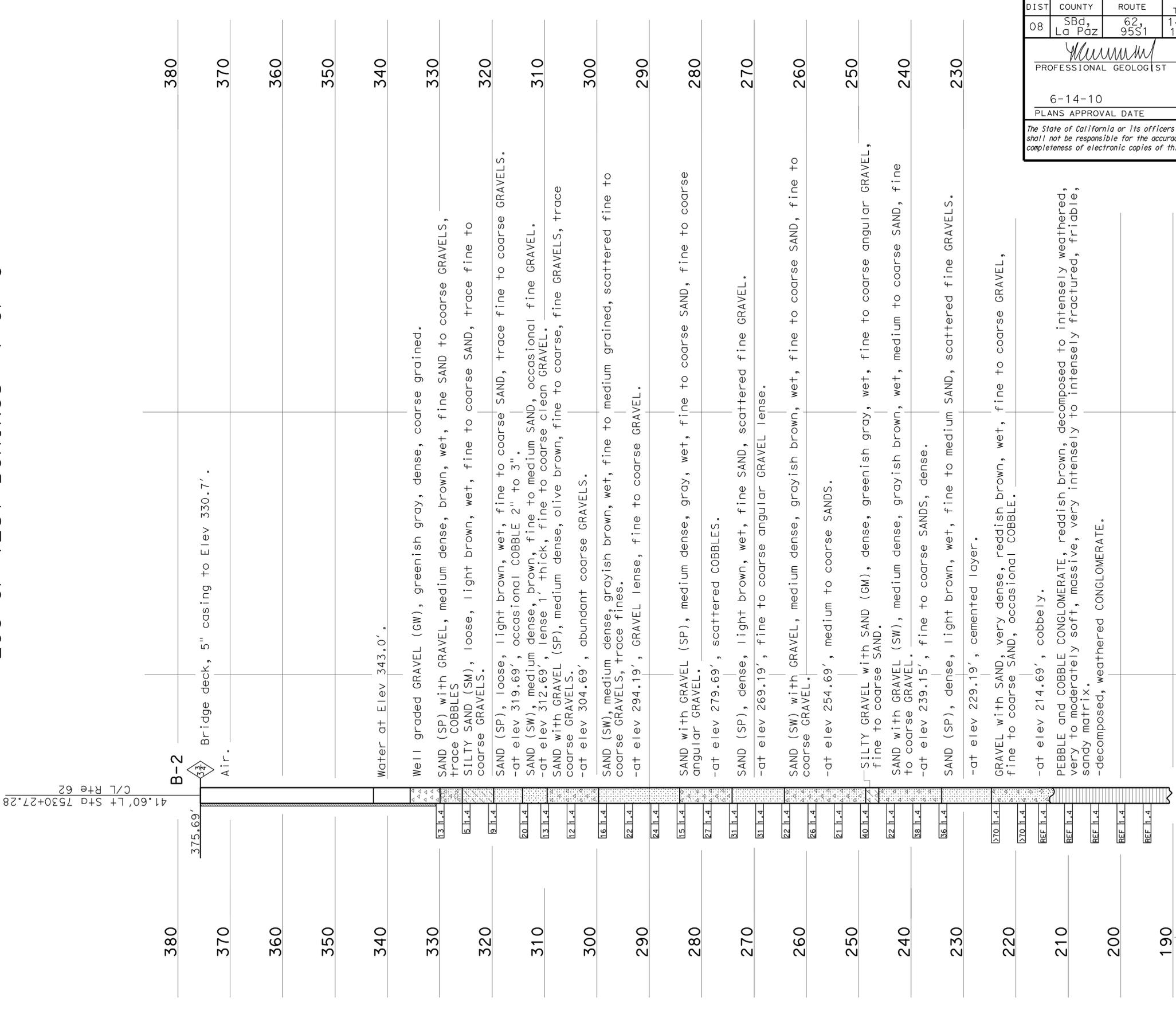
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH

BRIDGE NO. 54-1272
 POST MILE 142.3

COLORADO RIVER BRIDGE (REPLACE)
LOG OF TEST BORINGS 3 OF 8

FOR PLAN VIEW, SEE "LOG OF TEST BORINGS" 1 OF 8



DIST 08 COUNTY SBd, La Paz ROUTE 62, 95S1 POST MILES TOTAL PROJECT 142.2/142.6: 142.6/142.9 SHEET No 199 TOTAL SHEETS 271

2-18-09
 PROFESSIONAL GEOLOGIST
 Mark Wilson
 No. 8164
 Exp. 06-30-10
 STATE OF CALIFORNIA

6-14-10
 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.

PROFILE
 HOR. 1"=10'
 VER. 1"=10'

7530+00

7530+50

7530+00

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 08
 EA 378701

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET 45 OF 50

