

INDEX OF PLANS

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

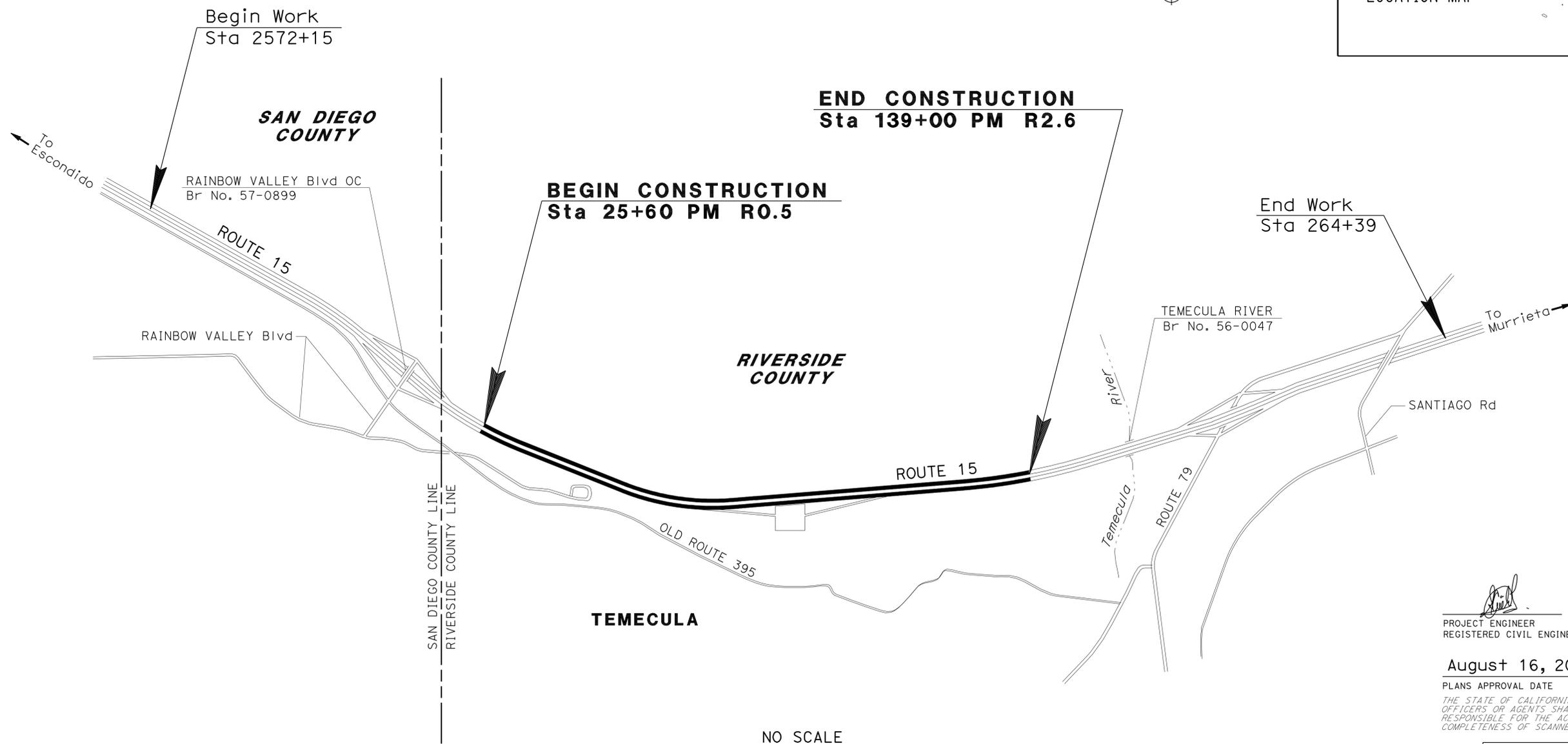
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACIM-015-5(154)54E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN RIVERSIDE COUNTY
NEAR THE CITY OF TEMECULA
FROM 0.5 MILE NORTH OF SAN DIEGO COUNTY LINE
TO 0.4 MILE SOUTH OF TEMECULA RIVER BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	1	55



NO SCALE

PROJECT MANAGER	JASON BENNECKE
DESIGN ENGINEER	HANNAH NGUYEN

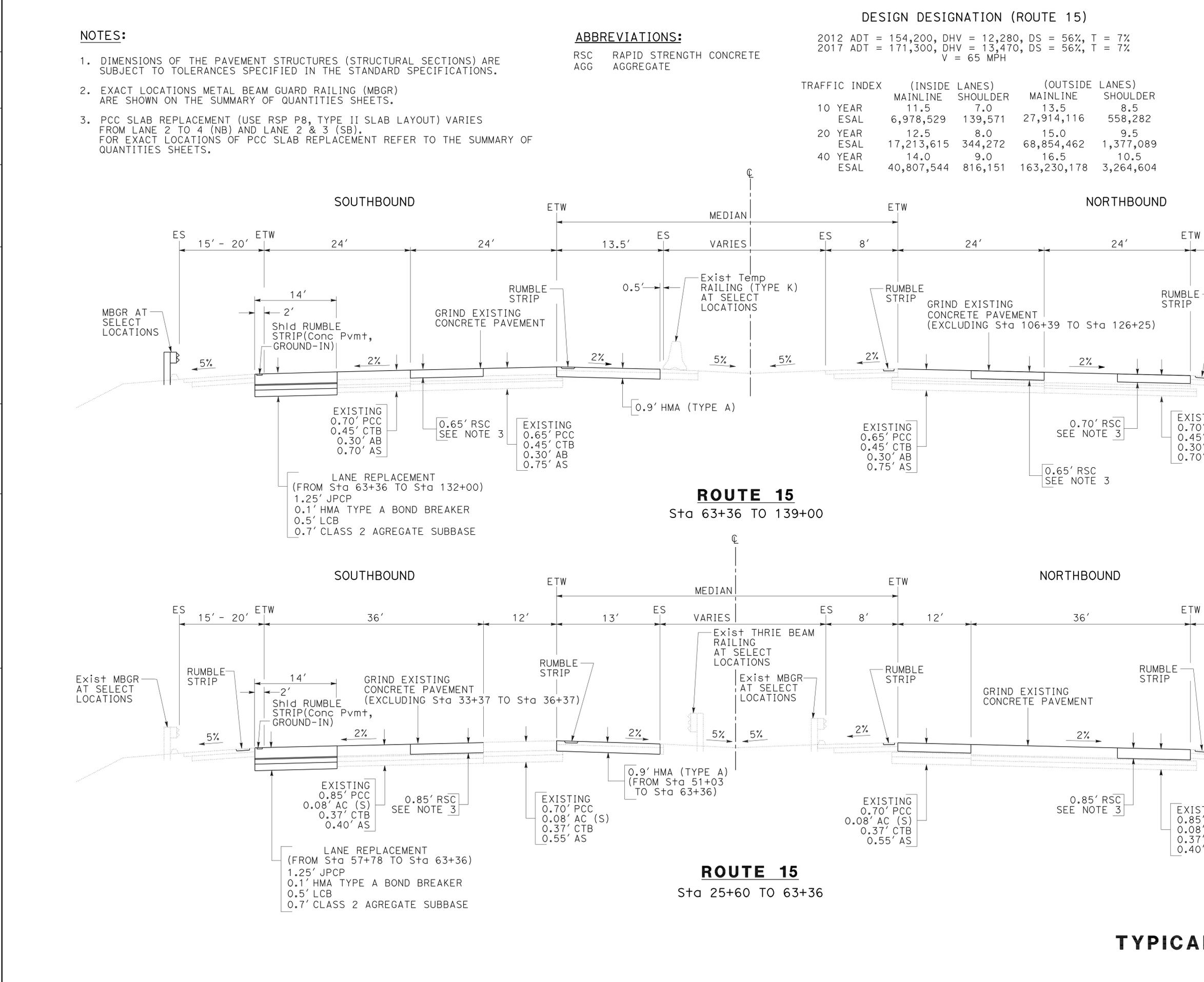
6-15-10
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
 August 16, 2010
 PLANS APPROVAL DATE

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

CONTRACT No.	08-OK 3004
PROJECT ID	08 00000339



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN



NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- EXACT LOCATIONS METAL BEAM GUARD RAILING (MBGR) ARE SHOWN ON THE SUMMARY OF QUANTITIES SHEETS.
- PCC SLAB REPLACEMENT (USE RSP P8, TYPE II SLAB LAYOUT) VARIES FROM LANE 2 TO 4 (NB) AND LANE 2 & 3 (SB). FOR EXACT LOCATIONS OF PCC SLAB REPLACEMENT REFER TO THE SUMMARY OF QUANTITIES SHEETS.

ABBREVIATIONS:

RSC RAPID STRENGTH CONCRETE
 AGG AGGREGATE

DESIGN DESIGNATION (ROUTE 15)

2012 ADT = 154,200, DHV = 12,280, DS = 56%, T = 7%
 2017 ADT = 171,300, DHV = 13,470, DS = 56%, T = 7%
 V = 65 MPH

	(INSIDE LANES)		(OUTSIDE LANES)	
	MAINLINE	SHOULDER	MAINLINE	SHOULDER
10 YEAR	11.5	7.0	13.5	8.5
ESAL	6,978,529	139,571	27,914,116	558,282
20 YEAR	12.5	8.0	15.0	9.5
ESAL	17,213,615	344,272	68,854,462	1,377,089
40 YEAR	14.0	9.0	16.5	10.5
ESAL	40,807,544	816,151	163,230,178	3,264,604

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	2	55

6-15-10
 REGISTERED CIVIL ENGINEER DATE

8-16-10
 PLANS APPROVAL DATE

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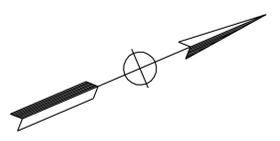
SERGIO E. AVILA
 No. 60951
 Exp. 12-31-10
 CIVIL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	3	55

6-15-10
 REGISTERED CIVIL ENGINEER DATE
 8-16-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SERGIO E. AVILA
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 Exp. 12-31-10
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- LEGEND:**
- PCC LANE REPLACEMENT
 - SHOULDER RECONSTRUCTION
 - SHOULDER WIDENING
 - PCC RANDOM SLABS REPLACEMENT (FOR REFERENCE ONLY)
EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER
 - DIRECTION OF TRAFFIC

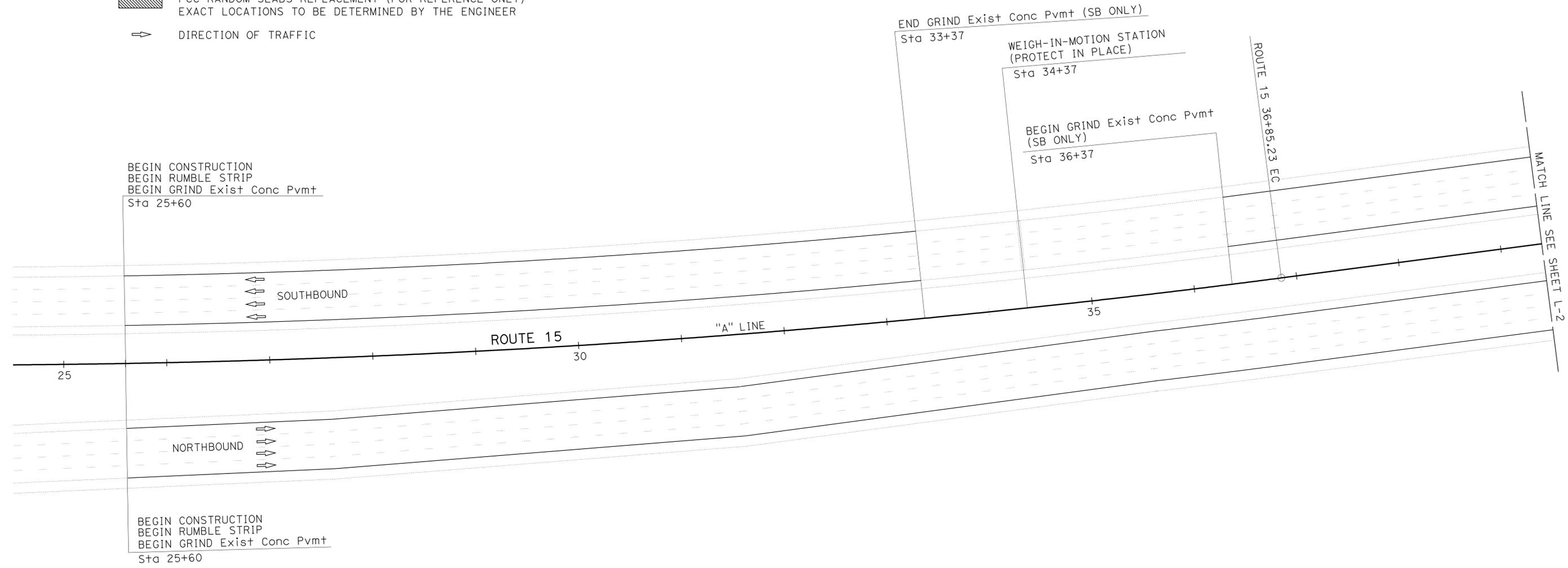
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Caltrans
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FUNCTIONAL SUPERVISOR
 SERGIO E. AVILA

CALCULATED/DESIGNED BY
 CHECKED BY

HANNAH NGUYEN
 SERGIO E. AVILA

REVISED BY
 DATE REVISED



LAYOUT
 SCALE: 1" = 50'
L-1

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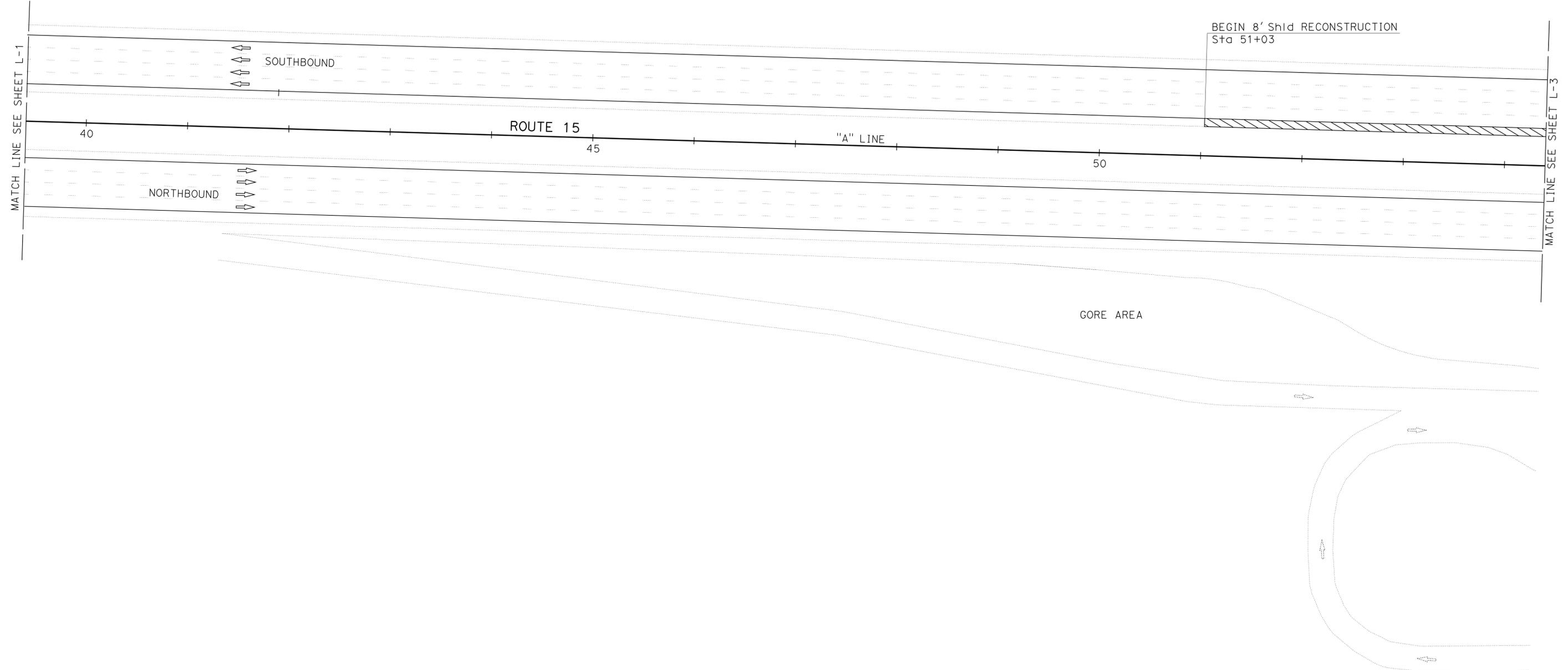
REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	4	55

REGISTERED CIVIL ENGINEER DATE 6-15-10
 PLANS APPROVAL DATE 8-16-10

REGISTERED PROFESSIONAL ENGINEER
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LAYOUT

SCALE: 1" = 50'

L-2

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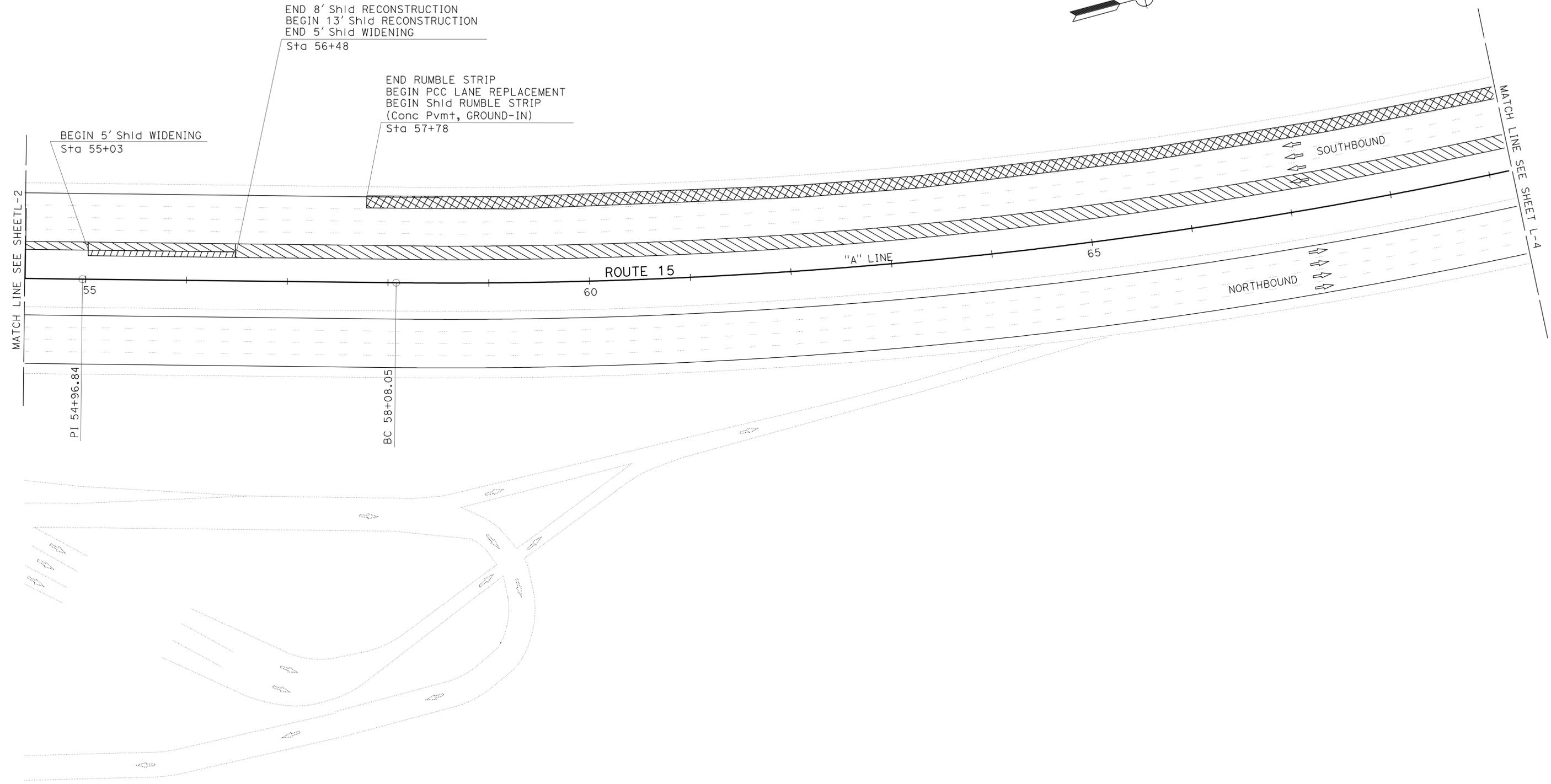
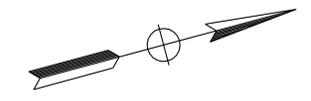
REVISED BY
 DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	5	55

REGISTERED CIVIL ENGINEER DATE 6-15-10
 PLANS APPROVAL DATE 8-16-10

REGISTERED PROFESSIONAL ENGINEER
 SERGIO E. AVILA
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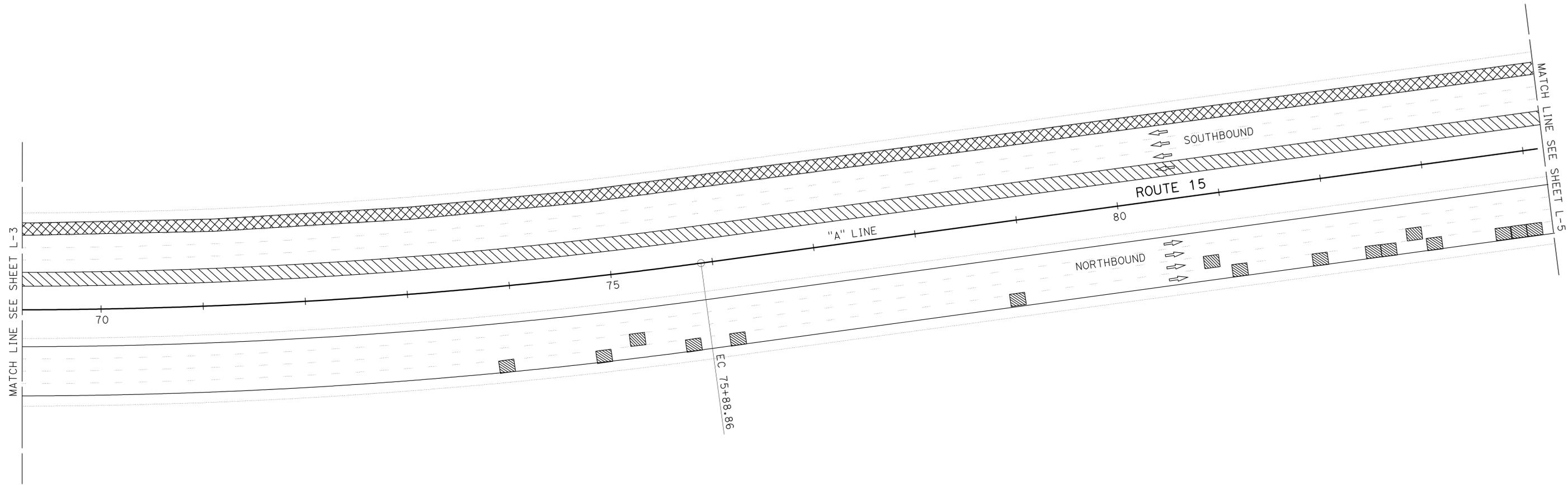


LAYOUT

SCALE: 1" = 50'

L-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	6	55
			6-15-10	REGISTERED CIVIL ENGINEER DATE	
			8-16-10	PLANS APPROVAL DATE	
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DESIGN		CHECKED BY	DATE REVISED

LAYOUT

SCALE: 1" = 50'

L-4

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Caltrans DESIGN

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 SERGIO E. AVILA

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 CHECKED BY

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 SERGIO E. AVILA

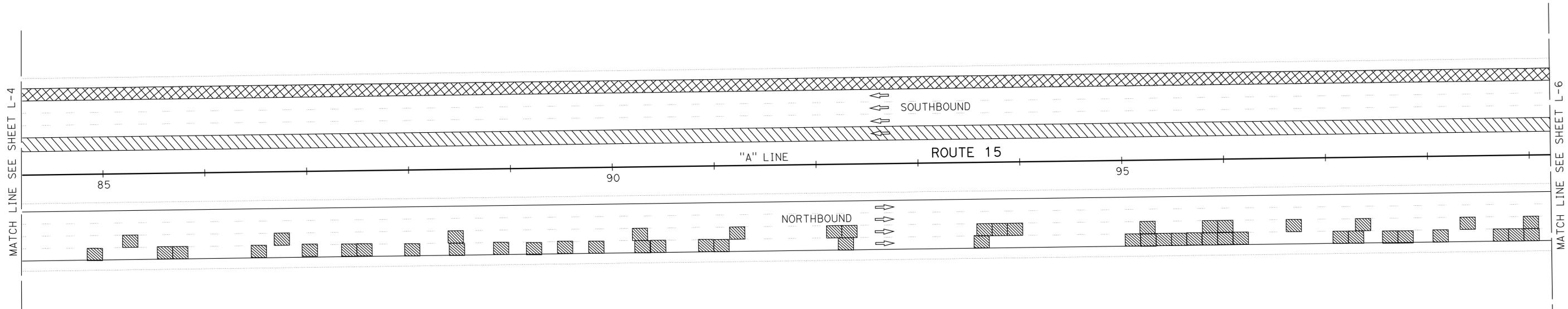
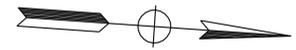
REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	7	55

REGISTERED CIVIL ENGINEER DATE 6-15-10
 8-16-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SERGIO E. AVILA
 No. 60951
 Exp. 12-31-10
 CIVIL
 STATE OF CALIFORNIA

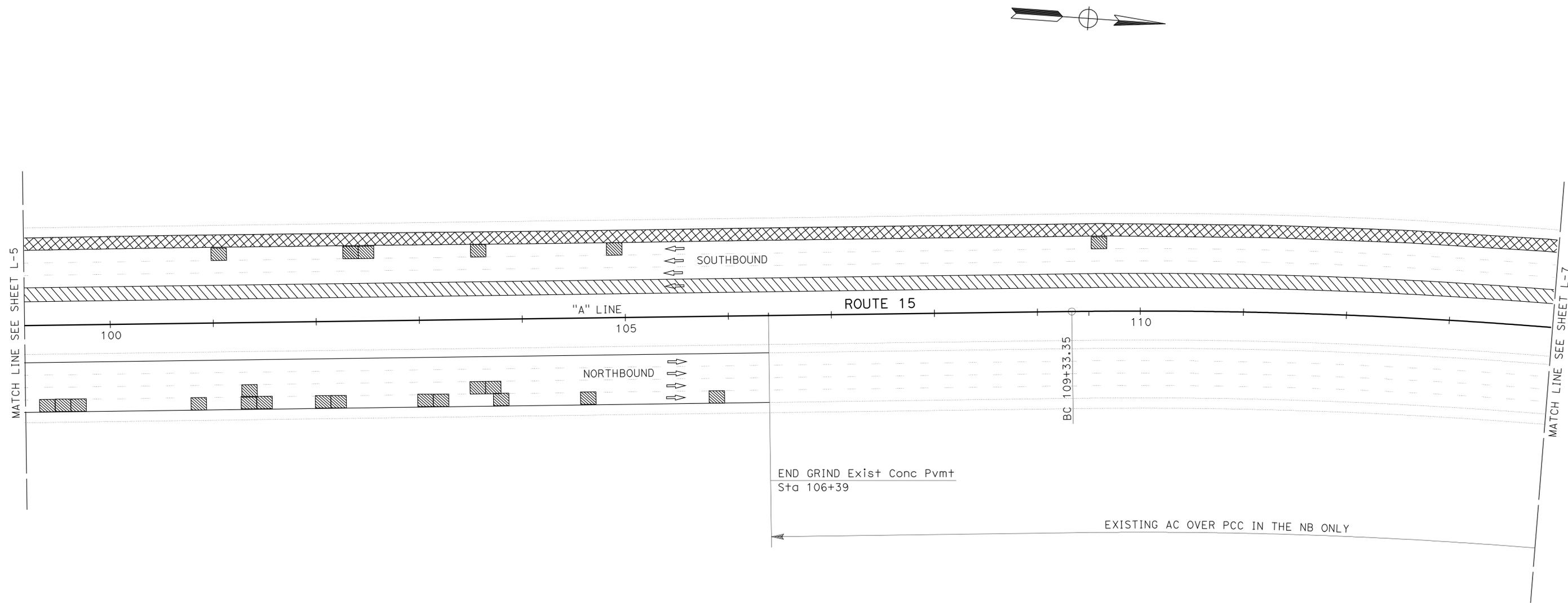
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LAYOUT
 SCALE: 1" = 50' **L-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	8	55
			6-15-10	REGISTERED CIVIL ENGINEER DATE	
			8-16-10	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>					

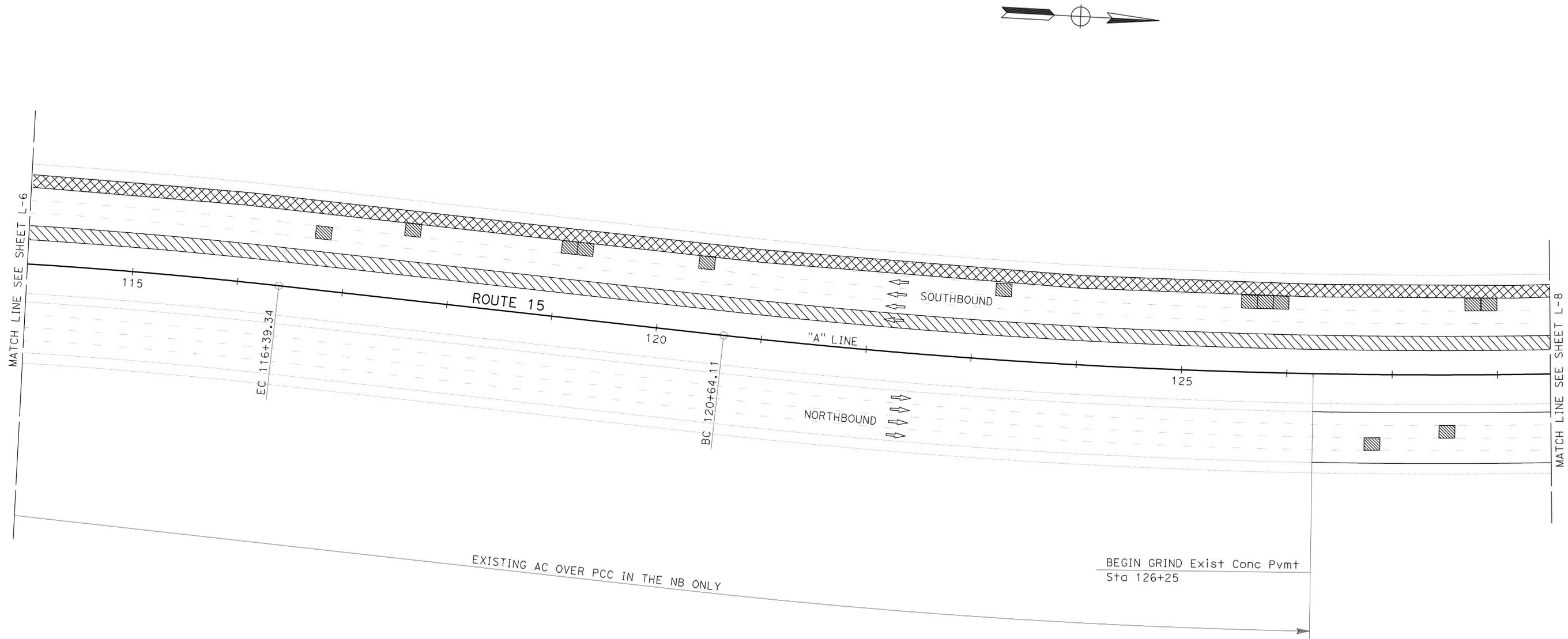
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Caltrans	SERGIO E. AVILA	SERGIO E. AVILA	HANNAH NGUYEN
DESIGN		CHECKED BY	DATE REVISOR



LAYOUT
SCALE: 1" = 50'
L-6

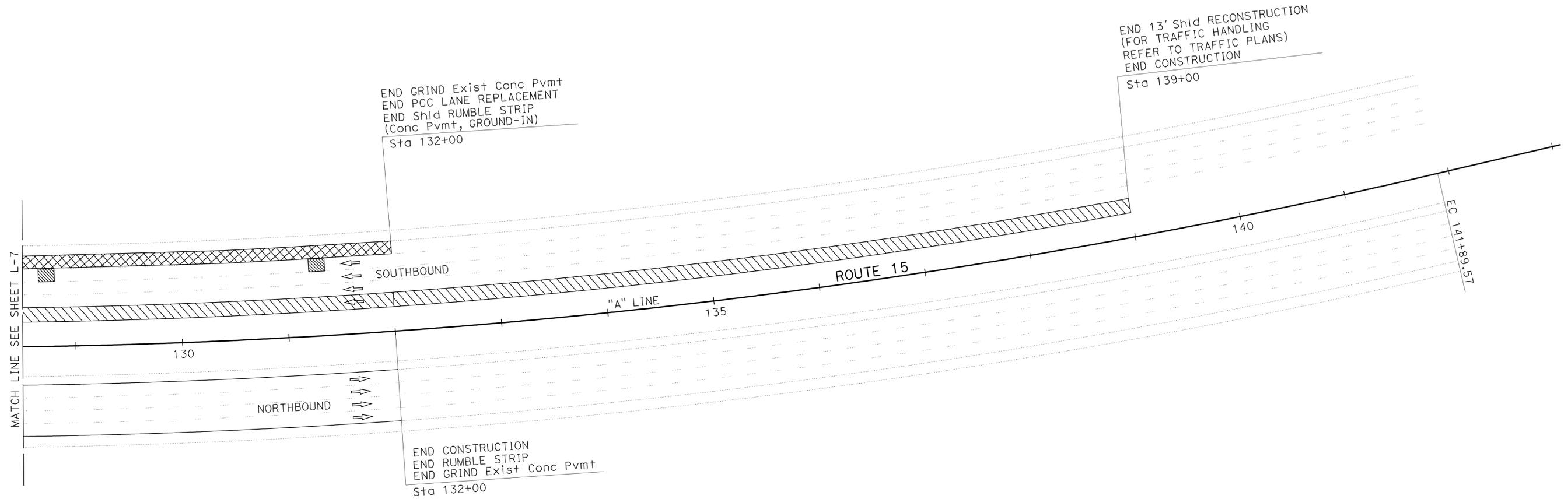
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	9	55
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			8-16-10	PLANS APPROVAL DATE	
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DESIGN			SERGIO E. AVILA
			DATE REVISOR



LAYOUT
SCALE: 1" = 50' **L-7**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	10	55
			6-15-10	REGISTERED CIVIL ENGINEER DATE	
			8-16-10	PLANS APPROVAL DATE	
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HANNAH NGUYEN	SERGIO E. AVILA
REVISED BY	DATE REVISED

LAYOUT

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

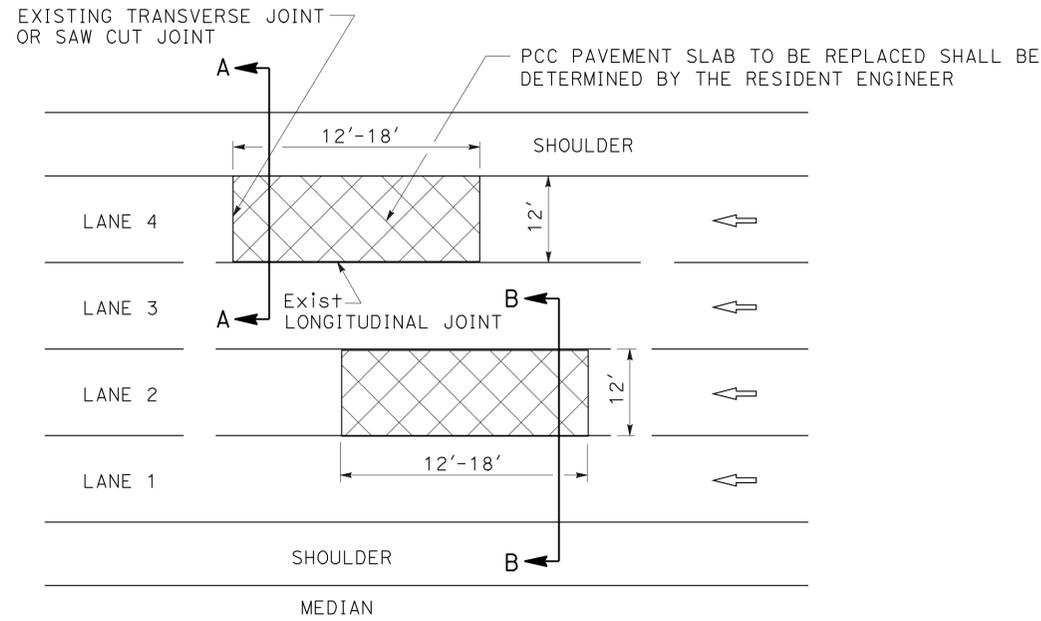
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08	Riv	15	R0.5/R2.6	11	55
			6-15-10	DATE	
			8-16-10	PLANS APPROVAL DATE	
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NOTES:

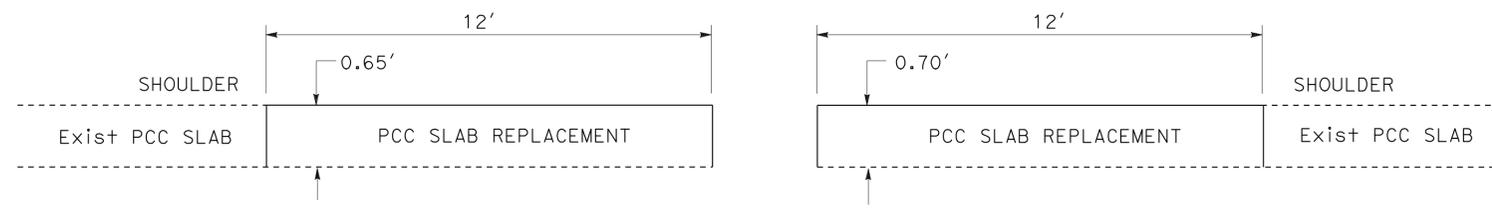
- FOR LOCATIONS OF THE PCC SLAB REPLACEMENT, SEE SHEET Q-1.
- LENGTH OF PCC SLAB VARIES FROM 12' TO 18'.

LEGEND:

- REPLACE PCC SLAB
- DIRECTION OF TRAFFIC



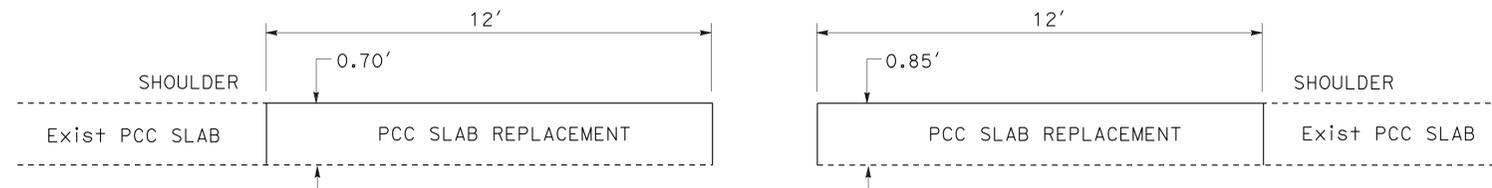
**REPLACING CONCRETE PAVEMENT SLAB
TYPICAL PLAN**



SECTION B-B
INSIDE LANES
(LANES No. 1 & 2)

SECTION A-A
OUTSIDE LANES
(LANES No. 3 & 4)

Sta 63+36 TO 132+00



SECTION B-B
INSIDE LANE
(LANE No. 1)

SECTION A-A
OUTSIDE LANES
(LANES No. 2, 3 & 4)

Sta 25+60 TO 63+36

CONSTRUCTION DETAILS

NO SCALE

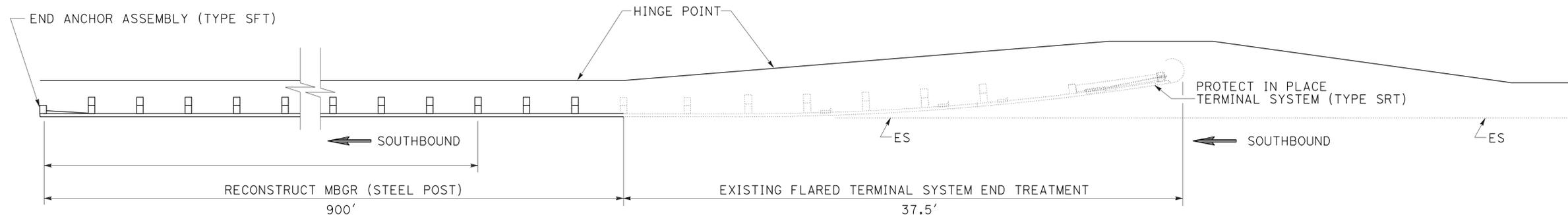
C-1

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 CALCULATED/DESIGNED BY: SERGIO E. AVILA
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 SERGIO E. AVILA
 REVISED BY: DATE
 REVISOR: DATE

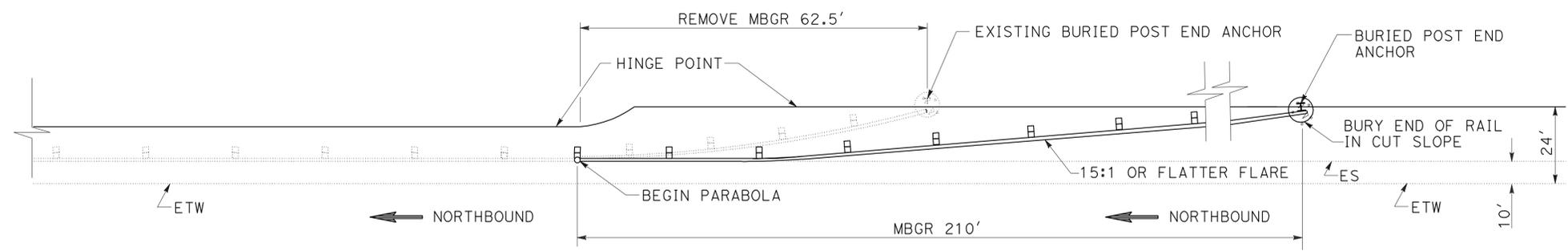
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08	Riv	15	R0.5/R2.6	12	55
			6-15-10	REGISTERED CIVIL ENGINEER DATE	
			8-16-10	PLANS APPROVAL DATE	
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NOTE:

1. FOR VEGETATION CONTROL (MINOR CONCRETE) SEE NEW STD PLANS NSP A77C5



RECONSTRUCT MBGR IN THE SB NEAR Sta 108+24



REPLACE MBGR IN THE NB NEAR Sta 84+48
 (EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)

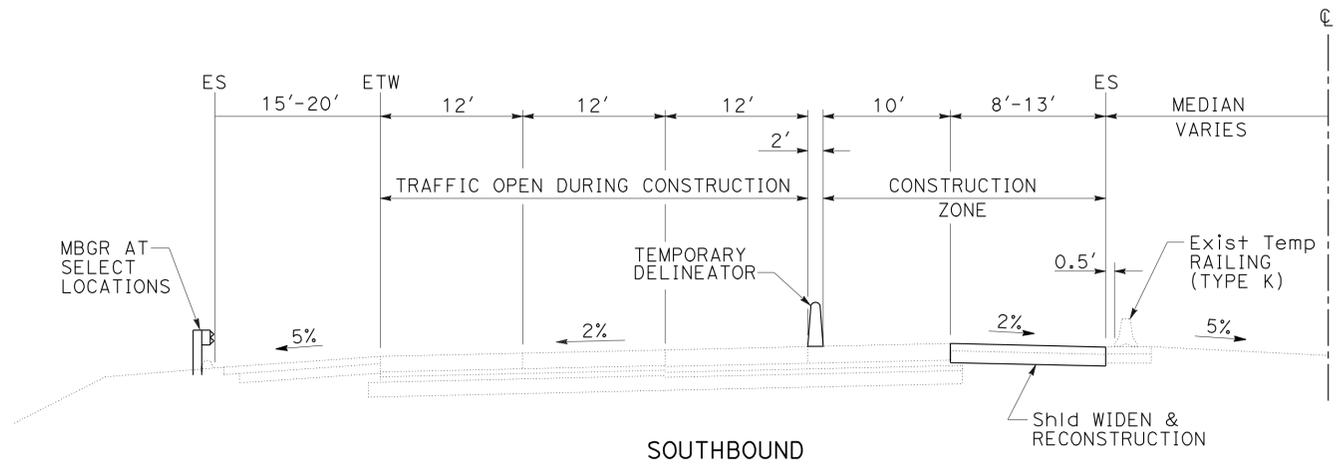
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Caltrans
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 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CALCULATED/DESIGNED BY: HANNAH NGUYEN
 CHECKED BY: SERGIO E. AVILA
 REVISED BY: HANNAH NGUYEN
 DATE REVISED: SERGIO E. AVILA

LAST REVISION: 06-15-10
 DATE PLOTTED => 17-AUG-2010
 TIME PLOTTED => 10:33

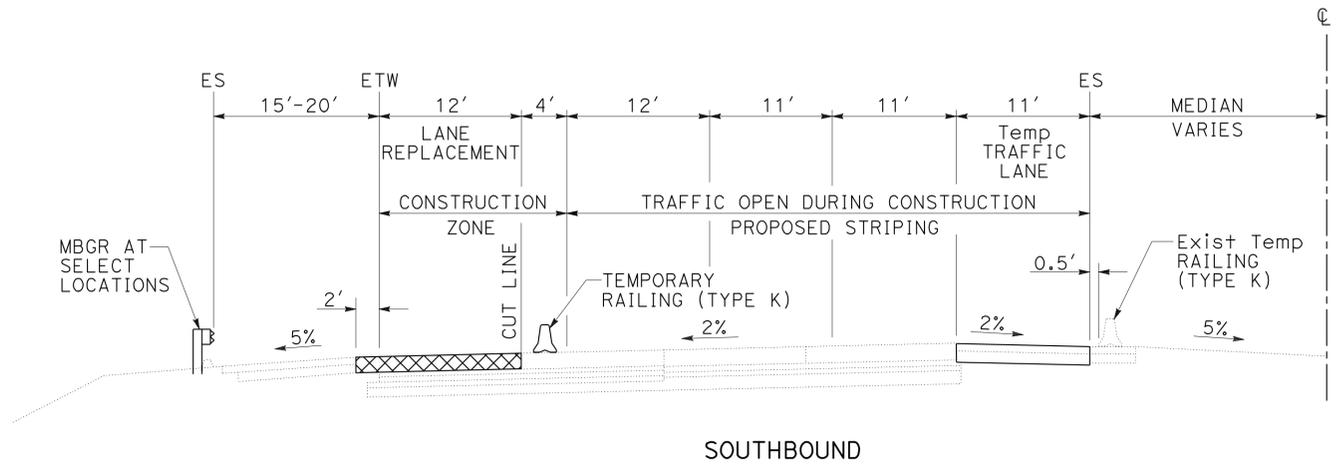
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	13	55
			6-15-10	REGISTERED CIVIL ENGINEER DATE	
			8-16-10	PLANS APPROVAL DATE	
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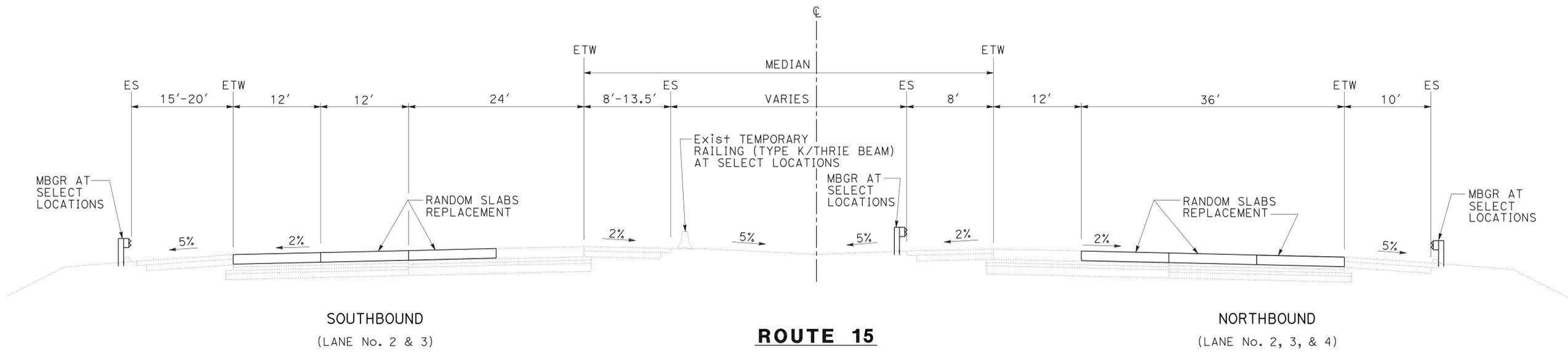
LEGEND:
 WORK AREA



ROUTE 15
 Sta 51+03 TO 139+00
STAGE CONSTRUCTION 1
 (NIGHT WORK)



ROUTE 15
 Sta 57+78 TO 132+00
STAGE CONSTRUCTION 2



ROUTE 15
 Sta 26+40 TO 132+00
STAGE CONSTRUCTION 3
 RANDOM SLABS REPLACEMENT &
 GRIND EXIST PAVEMENT
 (NIGHT WORK)

STAGE CONSTRUCTION
 NO SCALE
SC-1

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 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CALCULATED/DESIGNED BY: SERGIO E. AVILA
 CHECKED BY:
 HANNAH NGUYEN
 REVISED BY: SERGIO E. AVILA
 DATE REVISED:

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY



USERNAME => trpierce
 DGN FILE => 80k300ma001.dgn

CU 08230

EA 0K3001

BORDER LAST REVISED 4/11/2008

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	14	55

<i>Thanh Trinh</i> 6-15-10	
REGISTERED CIVIL ENGINEER	DATE
8-16-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	THANH TRINH
No. 41189	
Exp. 3-31-11	
CIVIL	

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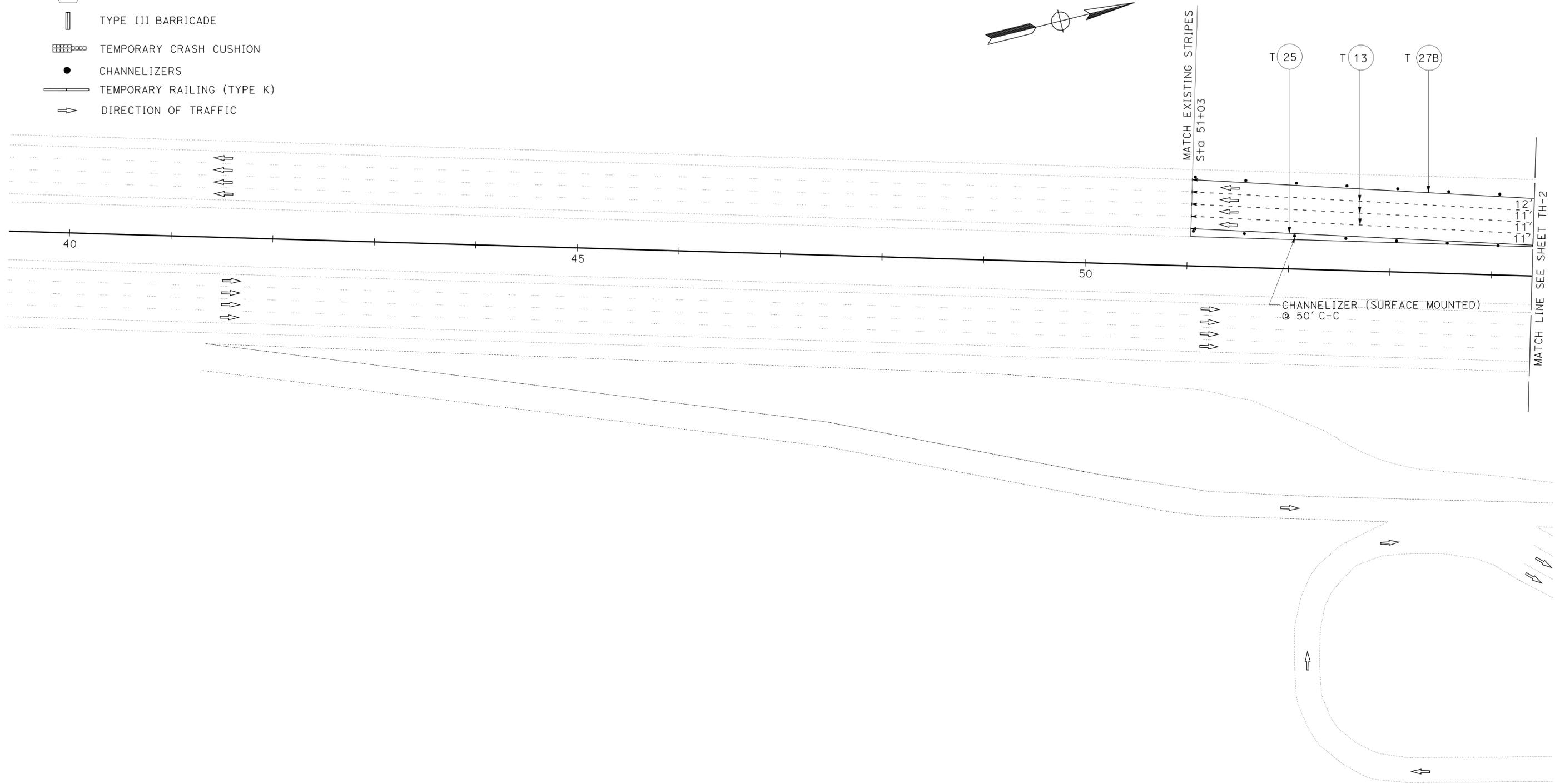
LEGEND:

- T (XX) TEMPORARY TRAFFIC STRIPE
- CHANGE STRIPING DETAIL
- WORK AREA
- (XX) TRAFFIC HANDLING SIGN
- TYPE III BARRICADE
- TEMPORARY CRASH CUSHION
- CHANNELIZERS
- TEMPORARY RAILING (TYPE K)
- DIRECTION OF TRAFFIC
- ONE POST SIGN
- TWO POST SIGN

NOTES:

1. FOR WORK DONE ON SHOULDER WIDEN RECONSTRUCTION AT STAGE CONSTRUCTION 1, AND RANDOM SLABS REPLACEMENT AT STAGE CONSTRUCTION 3, USE STANDARD PLAN T10 FOR TRAFFIC HANDLING.
2. TO CLOSE WEIGHT STATION ON NORTHBOUND, USE STANDARD PLAN T14.
3. PLACE TEMPORARY RAILING TYPE K FROM Sta 57+28 TO Sta 140+00 ON SOUTHBOUND AT STAGE CONSTRUCTION 2.

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CHECKED BY
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DATE
REVISION



**STAGE 2
TRAFFIC HANDLING PLAN
SCALE: 1" = 50'
TH-1**

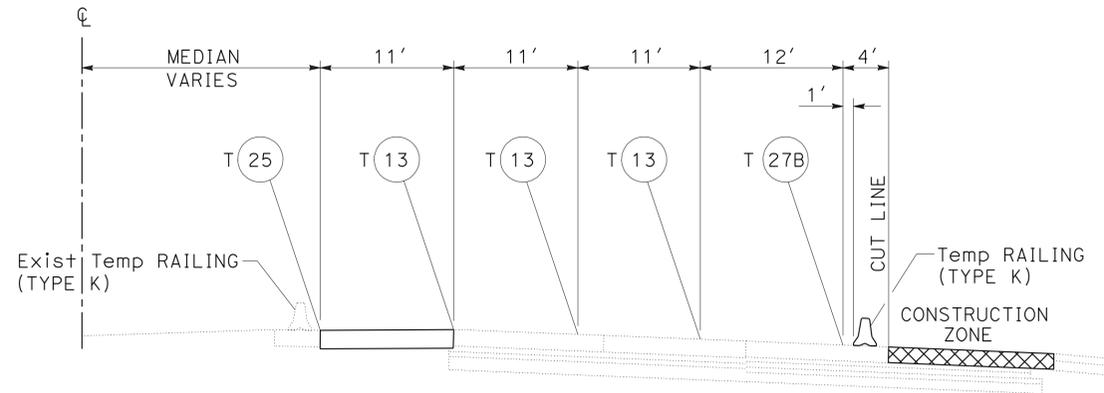
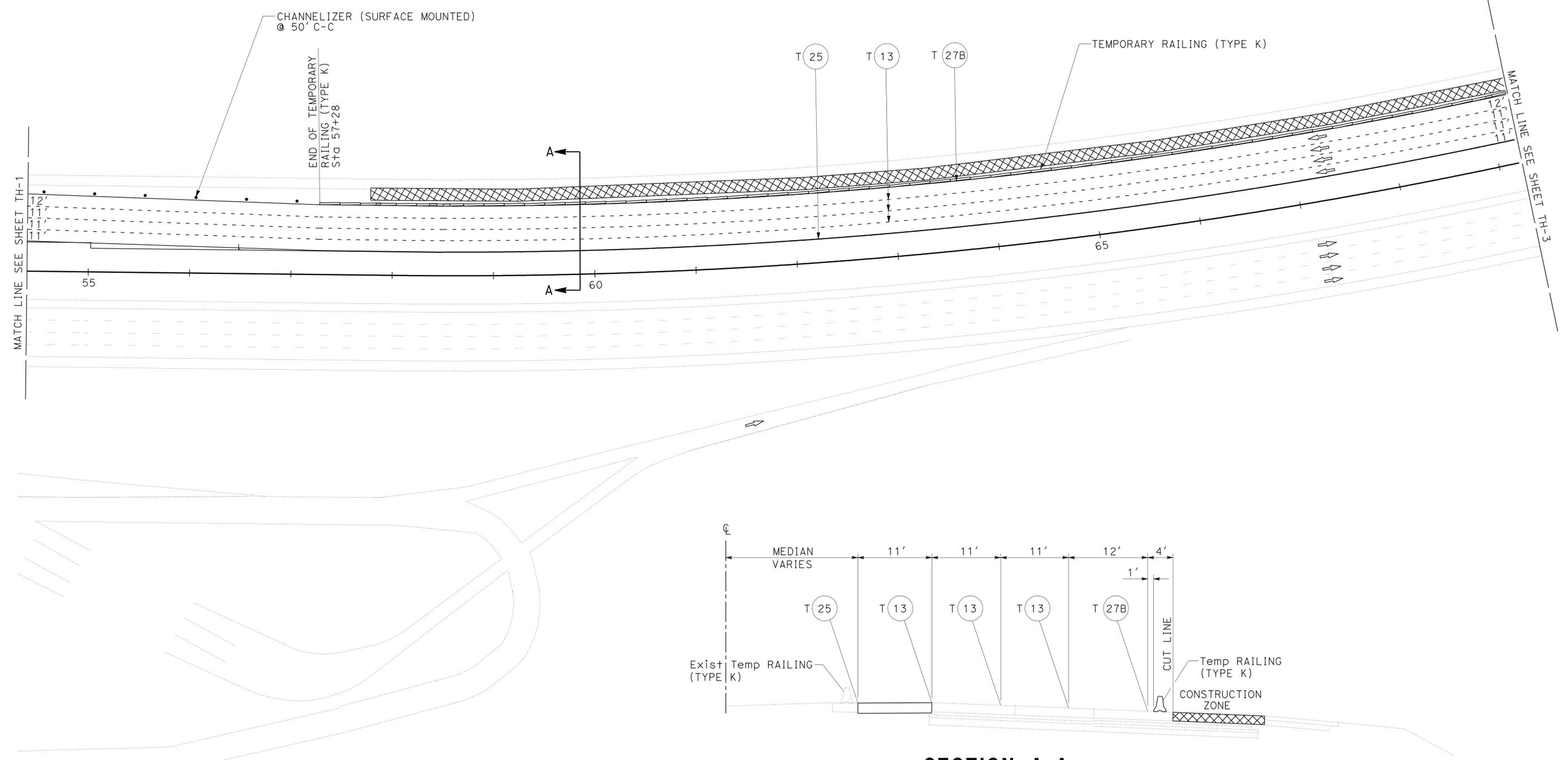
THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

LAST REVISION DATE PLOTTED => 17-AUG-2010 06-15-10 TIME PLOTTED => 10:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	15	55
			6-15-10	DATE	
			8-16-10	PLANS APPROVAL DATE	
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Caltrans TRAFFIC DESIGN A	BILL WASSER	THANH TRINH	KEVIN NGUYEN
		CHECKED BY	DATE REVISED



STAGE 2
TRAFFIC HANDLING PLAN
 SCALE: 1" = 50'
TH-2

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY



USERNAME => trmartin
 DGN FILE => 80k300md002.dgn

CU 08380 EA 0K3001

BORDER LAST REVISED 4/11/2008

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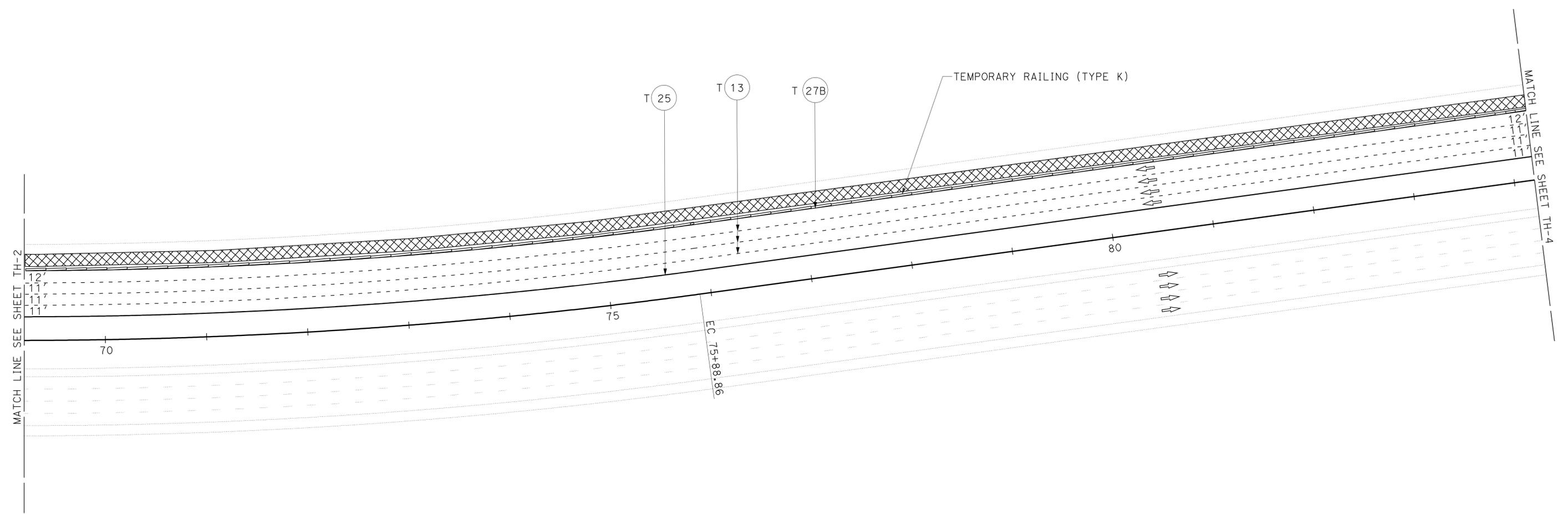
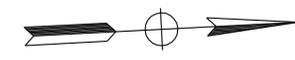
FUNCTIONAL SUPERVISOR BILL WASSER	CALCULATED-DESIGNED BY CHECKED BY	KEVIN NGUYEN THANH TRINH	REVISED BY DATE	REVISED BY DATE
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	16	55

Thanh Trinh 6-15-10
 REGISTERED CIVIL ENGINEER DATE
 8-16-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. 41189
 Exp. 3-31-11
 CIVIL
 STATE OF CALIFORNIA

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THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

STAGE 2
TRAFFIC HANDLING PLAN
 SCALE: 1" = 50'
TH-3

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Caltrans TRAFFIC DESIGN A

FUNCTIONAL SUPERVISOR
 BILL WASSER

CALCULATED-DESIGNED BY
 CHECKED BY

KEVIN NGUYEN
 THANH TRINH

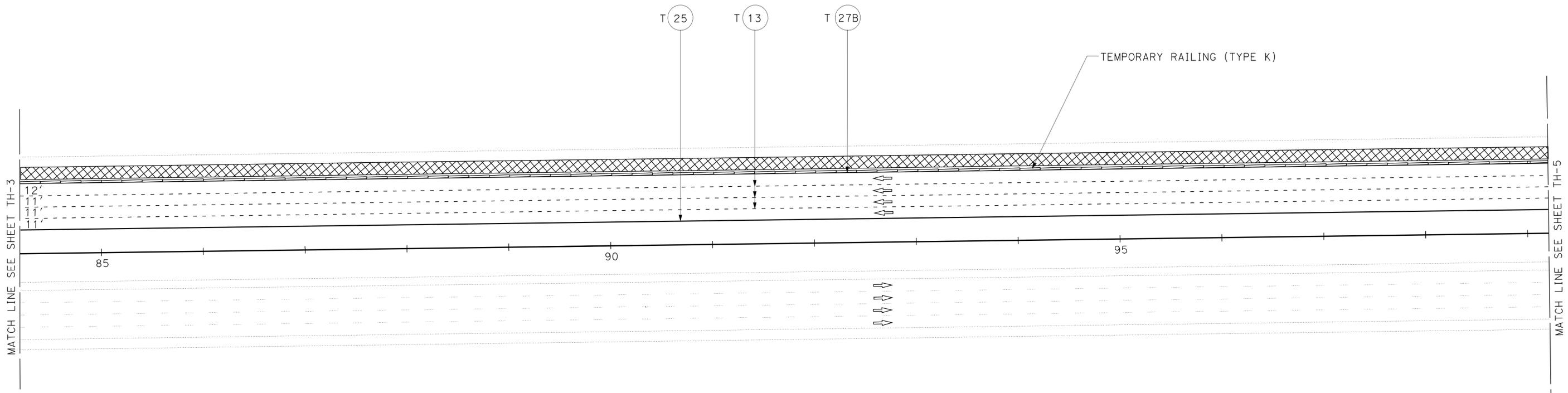
REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	17	55

Thanh Trinh 6-15-10
 REGISTERED CIVIL ENGINEER DATE
 8-16-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 THANH TRINH
 No. 41189
 Exp. 3-31-11
 CIVIL
 STATE OF CALIFORNIA

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STAGE 2
TRAFFIC HANDLING PLAN
 SCALE: 1" = 50'
TH-4

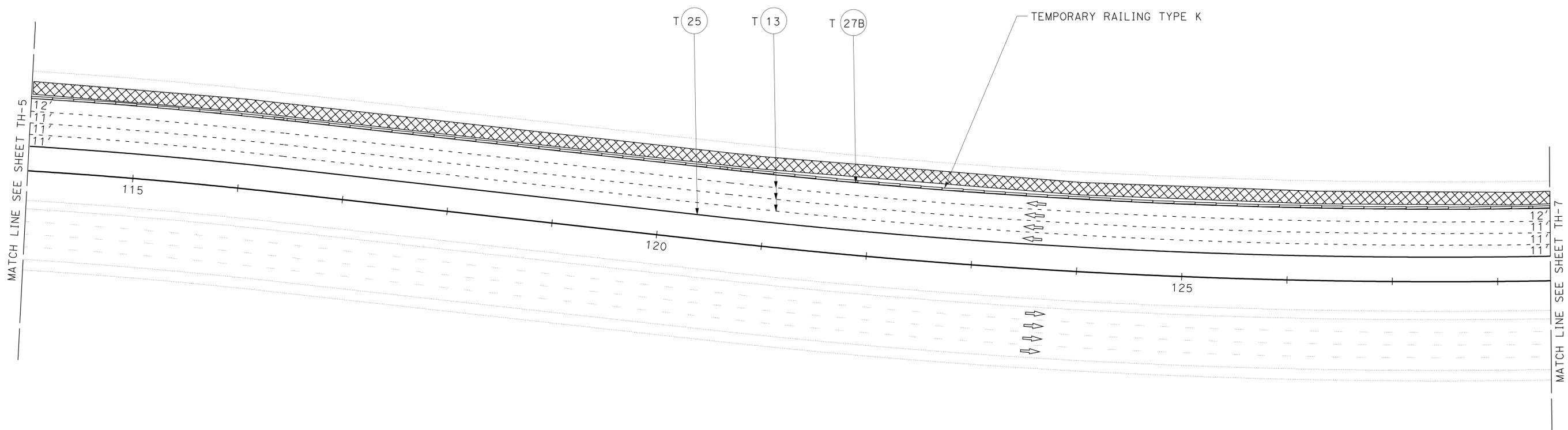
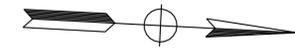
THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	19	55

Thanh Trinh 6-15-10
 REGISTERED CIVIL ENGINEER DATE
 8-16-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
THANH TRINH
 No. 41189
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN A	BILL WASSER	CHECKED BY	DATE REVISED
		KEVIN NGUYEN	
		THANH TRINH	

STAGE 2
TRAFFIC HANDLING PLAN
 SCALE: 1" = 50'
TH-6

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY



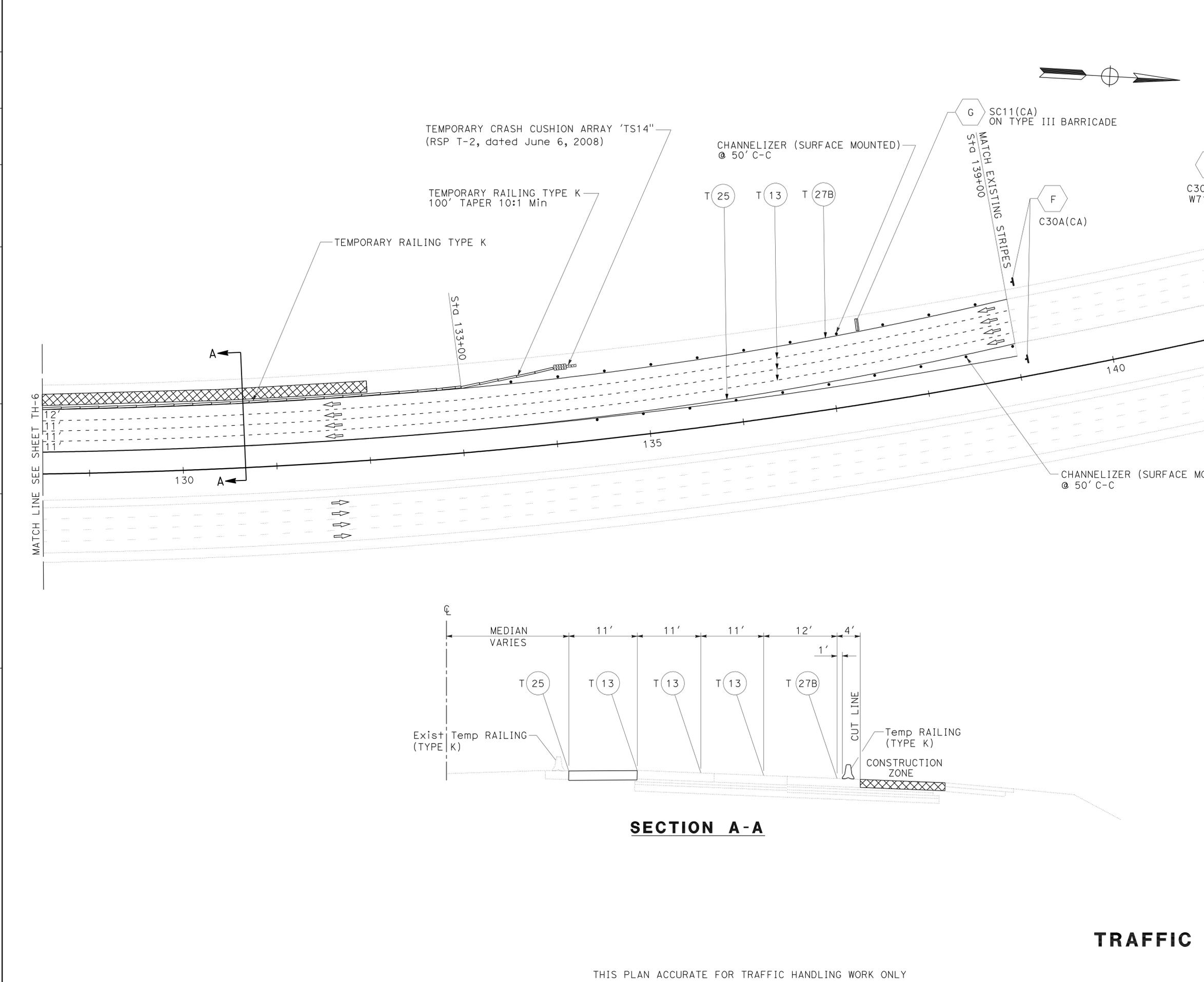
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 EA 0K3001

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LAST REVISION | DATE PLOTTED => 17-AUG-2010
 06-15-10 | TIME PLOTTED => 10:56

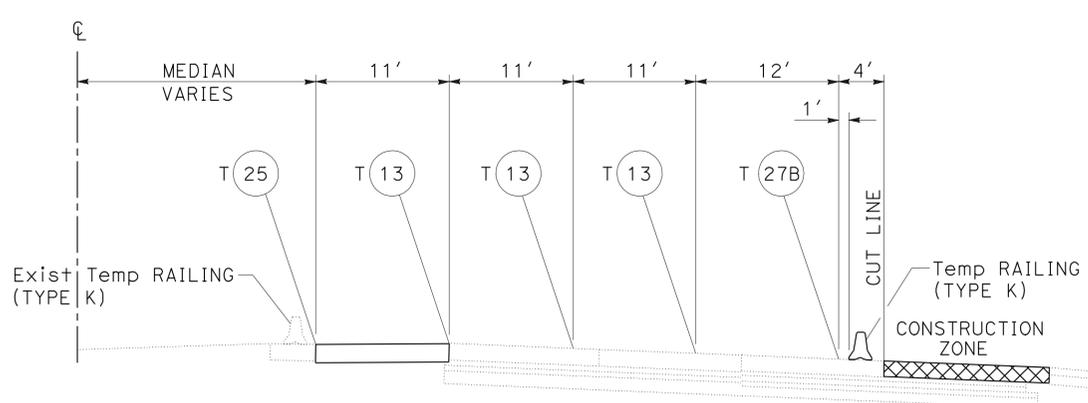
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN A



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	20	55

Thanh Trinh 6-15-10
REGISTERED CIVIL ENGINEER DATE
8-16-10
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 No. 41189
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THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

STAGE 2
TRAFFIC HANDLING PLAN
SCALE: 1" = 50'
TH-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN A

FUNCTIONAL SUPERVISOR
 BILL WASSER

CALCULATED/DESIGNED BY
 CHECKED BY

KEVIN NGUYEN
 THANH TRINH

REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	21	55

Thanh Trinh 6-15-10
 REGISTERED CIVIL ENGINEER DATE

8-16-10
 PLANS APPROVAL DATE

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TEMPORARY PAVEMENT DELINEATION

TRAFFIC STRIPE DETAIL No.	LENGTH	TEMPORARY TRAFFIC STRIPE (PAINT)		TEMPORARY PAVEMENT MARKER		
		4" YELLOW	4" WHITE	(NONREFLECTIVE)	(REFLECTIVE)	
		LF	LF	TYPE A	TYPE G	TYPE H
13				EA	EA	
25	8797	8797				552
27B	8797		8797			
SUBTOTAL		8797	8797	2208	1104	
TOTAL		17594		3312		

RAILING, CRASH CUSHION MODULE

TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION MODULE
LF	EA
7672	14

CHANNELIZER, TYPE III BARRICADE

CHANNELIZER (SURFACE MOUNTED)	TYPE III BARRICADE
EA	EA
41	1

TRAFFIC HANDLING QUANTITIES THQ-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	22	55

Thanh Trinh 6-15-10
 REGISTERED CIVIL ENGINEER DATE

8-16-10
 PLANS APPROVAL DATE

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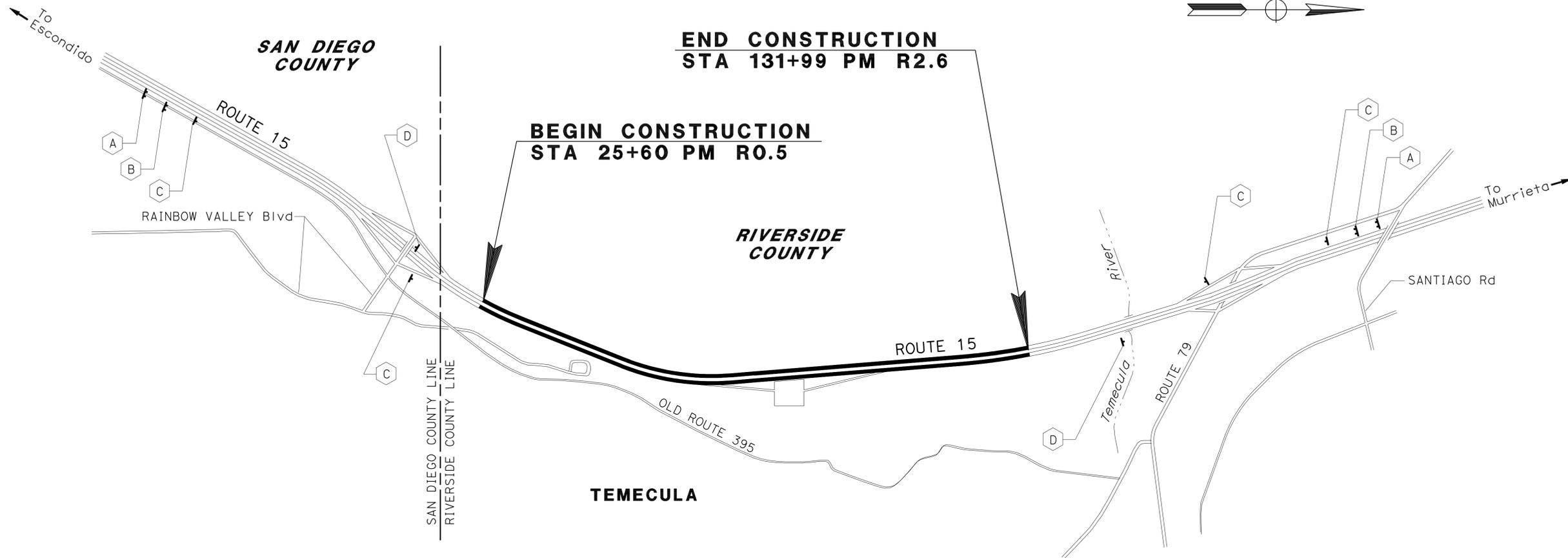
REGISTERED PROFESSIONAL ENGINEER
 No. 41189
 Exp. 3-31-11
 CIVIL
 STATE OF CALIFORNIA

LEGEND:

- WORK AREA
- ⊥ CONSTRUCTION AREA SIGN (ONE POST)
- ⊥ CONSTRUCTION AREA SIGN (TWO POST)
- (X) CONSTRUCTION AREA SIGN LETTER

NOTES:

1. CONSTRUCTION AREA SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. USE STANDARD PLAN T10 FOR TRAFFIC CONTROL SYSTEM ON MAINLINE, AND STANDARD PLAN T14 FOR TRAFFIC CONTROL SYSTEM AT THE WEIGHT STATION ON NB.
3. EXACT SIGN AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) LOCATIONS TO BE DETERMINED BY THE ENGINEER.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SHEET No.	SIGN No. (X)	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS (N)	REMARKS
CS-1	A	C40(CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	2	
CS-1	B	G20-1	90" x 48"	ROAD WORK NEXT 3 MILES	2 - 4" x 4"	2	
CS-1	C	W20-1	48" x 48"	ROAD WORK AHEAD		4	
CS-1	D	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 4"	2	
TH-7	E	C30A(CA)	48" x 48"	SHOULDER CLOSED	2 - 6" x 6"	1	BLACK ON ORANGE
		W71(CA)	54" x 28"	NEXT 1 3/4 MILES			
TH-7	F	C30A(CA)	48" x 48"	SHOULDER CLOSED	1 - 6" x 6"	2	
TH-7	G	SC11(CA)	42" x 30"	LANE CLOSED			MOUNTED ON TYPE III BARRICADE

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

PORTABLE CHANGEABLE MESSAGE SIGNS

EA
2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN A

REVISOR	DATE	REVISION
KEVIN NGUYEN		
THANH TRINH		
CALCULATED/DESIGNED BY	CHECKED BY	
BILL WASSER		
FUNCTIONAL SUPERVISOR		
REVISOR	DATE	REVISION

THIS PLAN IS ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	24	55


 6-15-10
 REGISTERED CIVIL ENGINEER DATE

8-16-10
 PLANS APPROVAL DATE

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NOTES:

1. STATIONS ARE APPROXIMATE FOR EACH PCC SLAB REPLACEMENT. PCC PAVEMENT SLAB TO BE REPLACED SHALL BE DETERMINED BY THE RESIDENT ENGINEER.
2. QUANTITIES ARE BASED ON PCC PAVEMENT SLAB AVERAGE LENGTH OF 15', WIDTH OF 12', AND VARIES DEPTH OF 0.65' TO 0.85'. (SEE CONSTRUCTION DETAILS C-1) .

REPLACE CONCRETE PAVEMENT - SLABS LOCATION TABLE

SOUTHBOUND

STATION "A" LINE		No. OF SLABS (N)			
FROM	TO	LANE 1	LANE 2	LANE 3	TOTAL
132+00	126+72			4	4
126+72	121+44			4	4
121+44	116+16		1	4	5
116+16	110+88				
110+88	105+60			1	1
105+60	100+32			5	5
57+78	132+00	LANE No. 4 -LANE REPLACEMENT *			

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
 (*) LANE REPLACEMENT IN LANE No. 4 (SB) FROM STA 57+78 TO 132+00

NORTHBOUND

STATION "A" LINE		No. OF SLABS (N)				
FROM	TO	LANE 1	LANE 2	LANE 3	LANE 4	TOTAL
26+40	68+64					
68+64	73+92					
73+92	79+20			1	5	6
79+20	84+48			2	8	10
84+48	89+76			3	12	15
89+76	95+04			7	7	14
95+04	100+32			7	16	23
100+32	105+60			3	10	13
105+60	106+39				3	3
126+25	126+72		1	1		2
126+72	132+00					

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

PAVEMENT QUANTITIES

STATION "A" LINE		DIRECTION	GRIND EXISTING CONCRETE PAVEMENT SQYD	REPLACE CONCRETE PAVEMENT	SLAB FILLING		DOWEL BAR (DRILL & BOND) EA	REPAIR SPALLED JOINTS SQYD	RUMBLE STRIP STA	SHOULDER RUMBLE STRIP (CONCRETE PAVEMENT, GROUND-IN INDENTATIONS) STA
FROM	TO			(RAPID STRENGTH CONCRETE) CY	NUMBER OF FILLING SLABS (N) EA	CRACK FILLING (N) LN MI				
25+60	132+00	SB	55,147	88	8	0.02	198	3	138	74
25+60	132+00	NB	46,154	401	15	0.04	816	2	213	-
TOTAL			101,301	489			1014	5	351	74

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

SUMMARY OF QUANTITIES Q-1

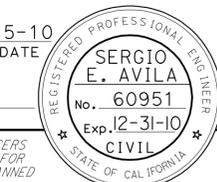
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CALCULATED/DESIGNED BY: HANNAH NGUYEN
 CHECKED BY: SERGIO E. AVILA
 REVISED BY: [] DATE REVISED: []

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	25	55


 6-15-10
 REGISTERED CIVIL ENGINEER DATE

8-16-10
 PLANS APPROVAL DATE

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PAVEMENT QUANTITIES

STATION "A" LINE	DIRECTION	WORK DESCRIPTION	ROADWAY EXCAVATION	HOT MIX ASPHALT (TYPE A)	TACK COAT	LANE REPLACEMENT						
						JOINTED PLAIN CONCRETE PAVEMENT	HOT MIX ASPHALT TYPE A (BOND BREAKER)	LEAN CONCRETE BASE	CLASS 2 AGGREGATE SUBBASE	SEAL ISOLATION JOINT	SEAL PAVEMENT JOINT	
FROM	TO		CY	TON	TON	CY	TON	CY	CY	LF	LF	
57+78	132+00	SB	LANE REPLACEMENT	9814	-	5	4811	754	1924	2694	7422	7697
51+03	139+00	SB	Shld WIDENING & RECONSTRUCTION	3745	7341	15	-	-	-	-	-	-
TOTAL			13,559	7341	20	4811	754	1924	2694	7422	7697	

EROSION CONTROL

STATION TO STATION "A" LINE	DIRECTION	EROSION CONTROL TYPE 1		
		MULCH	EROSION CONTROL (DRY SEED) (SQFT)	EROSION CONTROL (POLYESTER STABILIZED FIBER MATRIX) (SQFT)
		CY	(SQFT)	(SQFT)
25+60 TO 52+80	SB/NB	75	16250	16250
52+80 TO 79+20	SB/NB	75	16250	16250
79+20 TO 105+60	SB/NB	75	16250	16250
105+60 TO 132+00	SB/NB	75	16250	16250
TOTAL		300	65000	65000

METAL BEAM GUARDRAIL

STATION "A" LINE	DIRECTION	REMOVE MBGR	MBGR (STEEL POST)	RECONSTRUCT MBGR	END ANCHOR ASSEMBLY (TYPE SFT)	VEGETATION CONTROL (MINOR CONCRETE)
Approx AT		LF	LF	LF	EA	SQYD
108+24	SB	-	-	900	1	467
84+48	NB	62.5	210	-	-	-
TOTAL		62.5	210	900	1	467

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

TEMPORARY FIBER ROLL	TEMPORARY GRAVEL BAG BERM	TEMPORARY COVER	TEMPORARY DRAINAGE INLET PROTECTION
LF	LF	SQYD	EA
2300	1800	2500	18

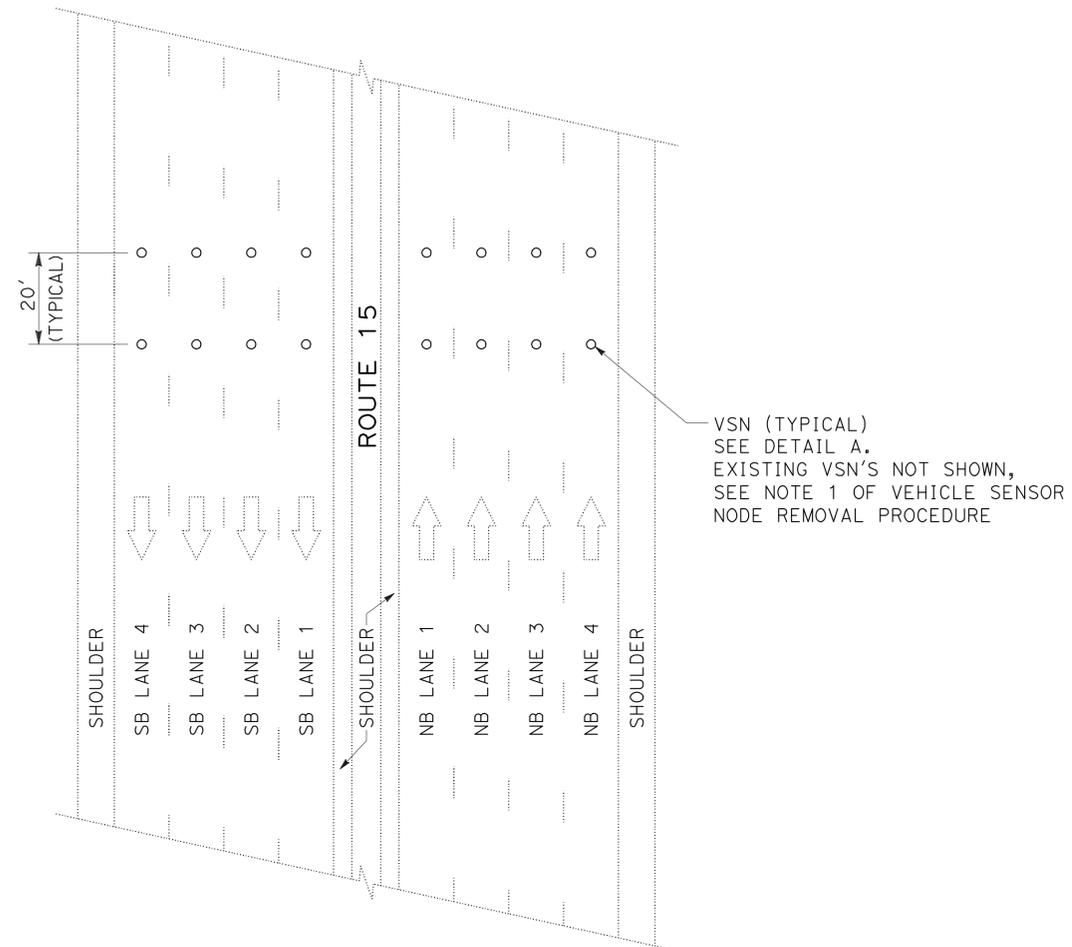
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CALCULATED/DESIGNED BY: SERGIO E. AVILA
 CHECKED BY:
 HANNAH NGUYEN
 REVISED BY: SERGIO E. AVILA
 DATE REVISED:

ABBREVIATION:

VSN = VEHICLE SENSOR NODE

GENERAL NOTES: (THIS SHEET ONLY)

1. POSTMILE LOCATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL VEHICLE SENSOR NODES.
2. **RS** EXISTING VEHICLE SENSOR NODES THAT ARE SHOWN TO BE REPLACED.



TYPICAL LAYOUT

VEHICLE SENSOR NODE LOCATIONS

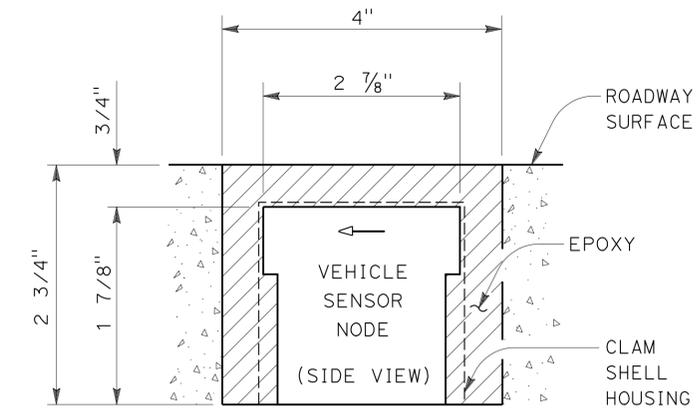
LOCATION	COUNTY	ROUTE	POSTMILE	APPROXIMATE LOCATION	QUANTITY
①	Riv	15	0.5	NORTH OF RAINBOW VALLEY BOULEVARD OC	16
②			1.6	NORTH OF RAINBOW TRUCK INSPECTION STATION	16
③			2.2	SOUTH OF ROUTE 15/79 SEPARATION	16
TOTAL					48

VEHICLE SENSOR NODE INSTALLATION PROCEDURE:

1. PRIOR TO VSN INSTALLATION, RECORD SENSOR'S IDENTIFICATION, LANE NUMBER AND LOCATION IN LANE.
2. FILL THE HOLE ABOUT 1/4 FULL OF SENSOR EPOXY ADHESIVE (POLYUREA SEALANT).
3. INSTALL A VSN SENSOR, WITH A 'CLAM SHELL' HOUSING, IN THE CORED HOLE AND DO NOT ALLOW THE SENSOR TO BE TILTED.
4. ORIENT THE SENSOR WITH THE ARROW POINTING IN THE DIRECTION OF TRAFFIC. IF NEEDED, THE EPOXY SHOULD STILL HAVE SOME WORKING TIME SO THAT THE SENSOR CAN BE ROTATED TO THE CORRECT POSITION.
5. PUSH THE SENSOR DOWN FLAT ON THE BOTTOM OF THE HOLE TO INSURE A BOND UNDERNEATH THE SENSOR WITH THE EPOXY ADHESIVE.
6. FILL THE HOLE WITH THE REMAINING EPOXY SUFFICIENT TO COVER THE SENSOR AS SHOWN IN 'DETAIL A'. THE FINAL EPOXY POUR SHALL BE LEVEL WITH THE SURFACE OF THE ROAD.
7. DO NOT LET THE EPOXY SIT FOR MORE THAN 30 SECONDS BETWEEN THE FIRST AND SECOND APPLICATIONS.
8. THE INSTALLATION PAVEMENT TEMPERATURE SHOULD BE GREATER THAN +32° FAHRENHEIT.
9. DEPENDING ON AMBIENT TEMPERATURE AND HUMIDITY, ADHESIVE DRYING TIME WILL VARY FROM 5 TO 15 MINUTES. VERIFY HARDNESS OF EPOXY BEFORE REOPENING THE LANE TO TRAFFIC.
10. RECORD THE DISTANCES BETWEEN EACH VSN SENSOR PAIR WITHIN A LANE.

VEHICLE SENSOR NODE REMOVAL PROCEDURE:

1. THE NEW VSN'S SHALL BE INSTALLED IN THE SAME LOCATION AS THE EXISTING VSN'S.
2. THE REMOVAL OF THE EXISTING VSN'S SHALL BE AS PER THE MANUFACTURERS RECOMMENDATION FOR SALVAGING THE VSN'S IN PCC.



DETAIL A
VEHICLE SENSOR NODE
INSTALLED IN ROADWAY

VEHICLE SENSOR NODE REPLACEMENT

NO SCALE

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A
 FUNCTIONAL SUPERVISOR: DAVID A. GONZALEZ
 CALCULATED/DESIGNED BY: [blank]
 CHECKED BY: [blank]
 BRUCE W. LUTTON
 MICHAEL APANTE
 REVISOR: [blank]
 DATE: [blank]

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CU 08395

EA 0K3001

BORDER LAST REVISED 4/11/2008

LAST REVISION: [blank]
 DATE PLOTTED => 30-AUG-2010
 TIME PLOTTED => 08:48

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	27	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

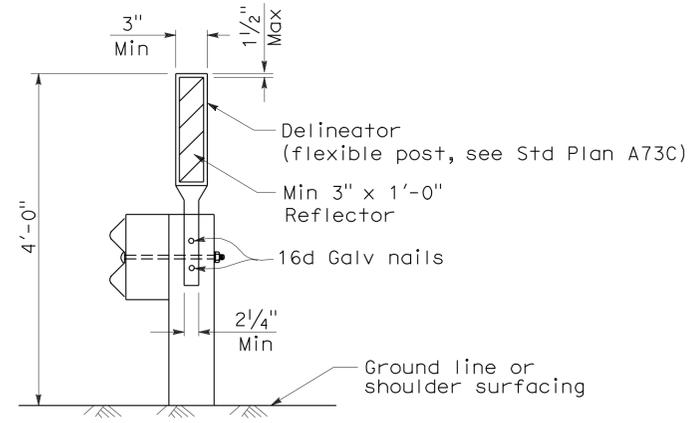
June 6, 2008
PLANS APPROVAL DATE

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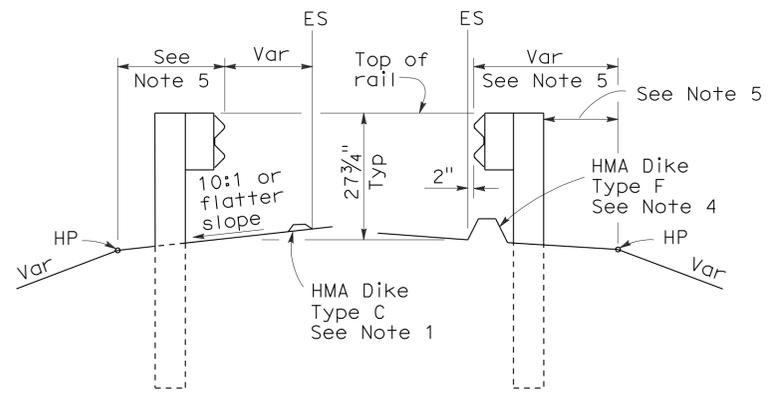
To accompany plans dated 8-16-10

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	Riv	15	R0.5/R2.6	28	55

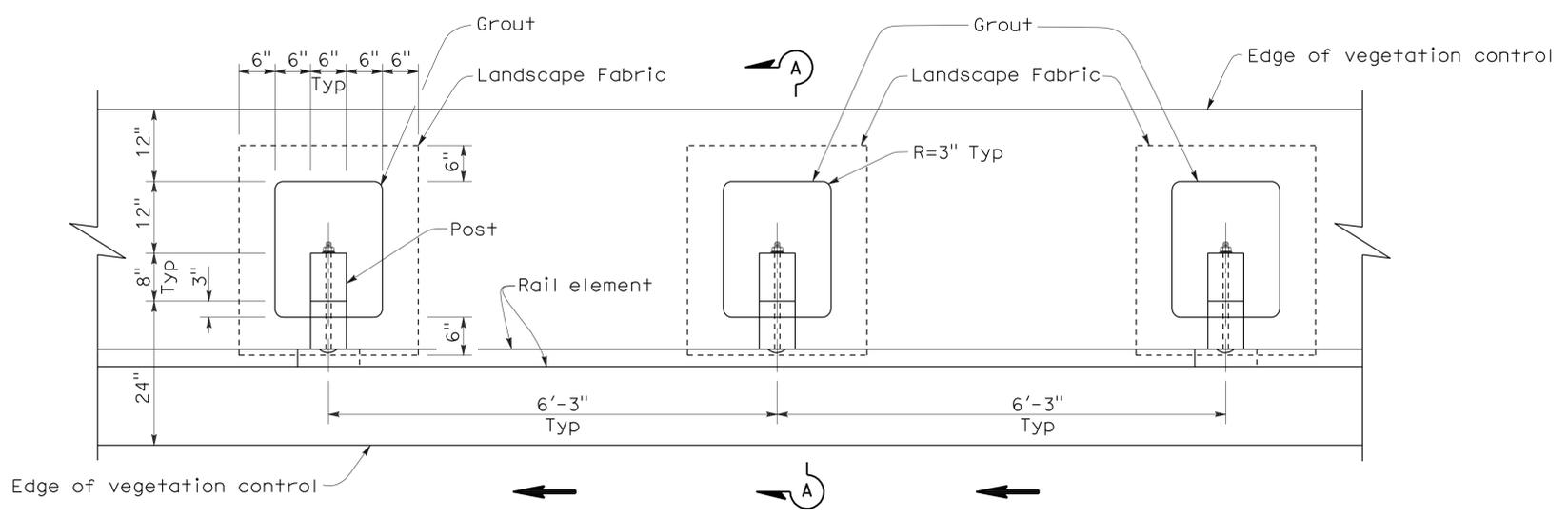
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

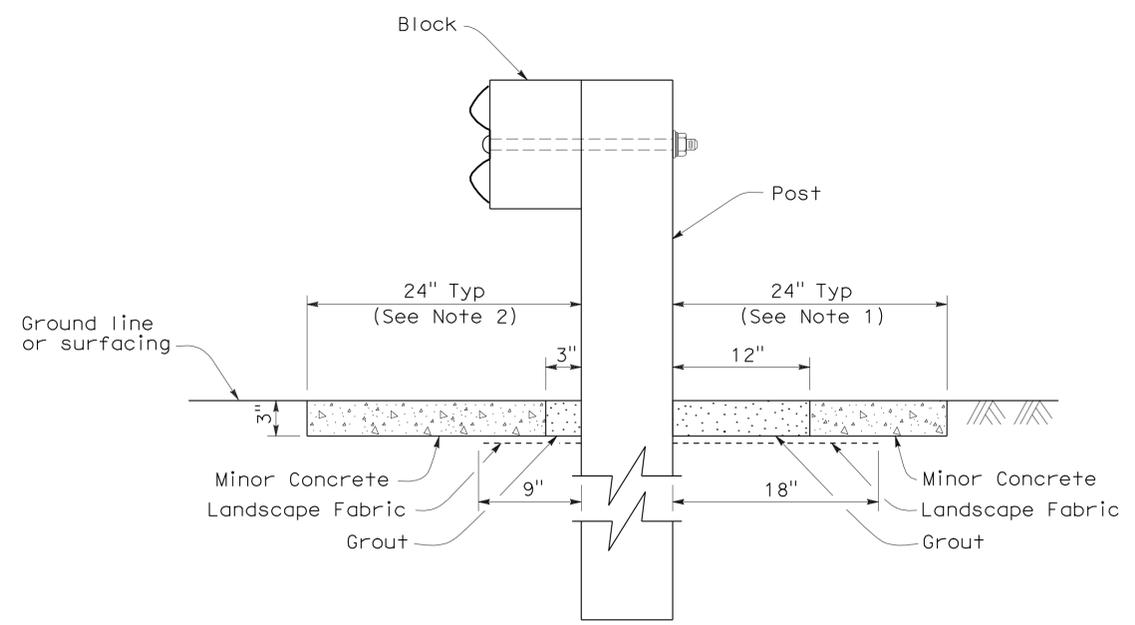
Randell D. Hiatt
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No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 8-16-10



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.

NEW STANDARD PLAN NSP A77C5

2006 NEW STANDARD PLAN NSP A77C5

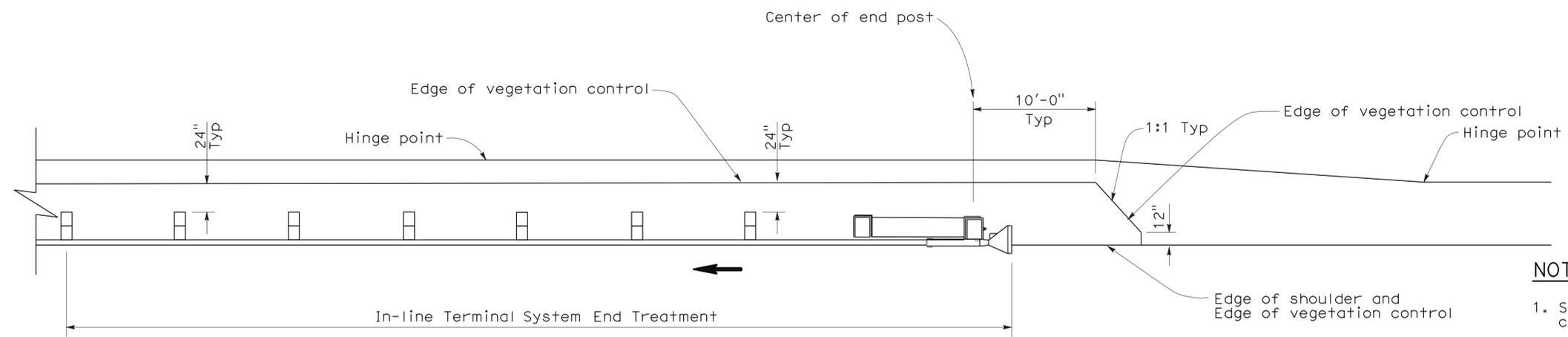
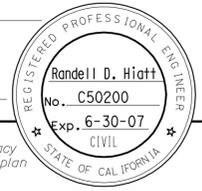
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	29	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

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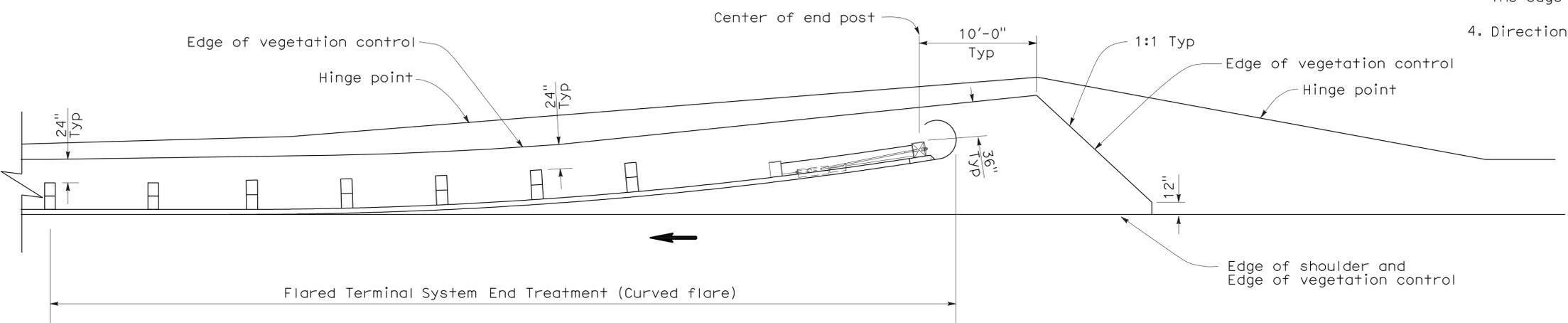
To accompany plans dated 8-16-10



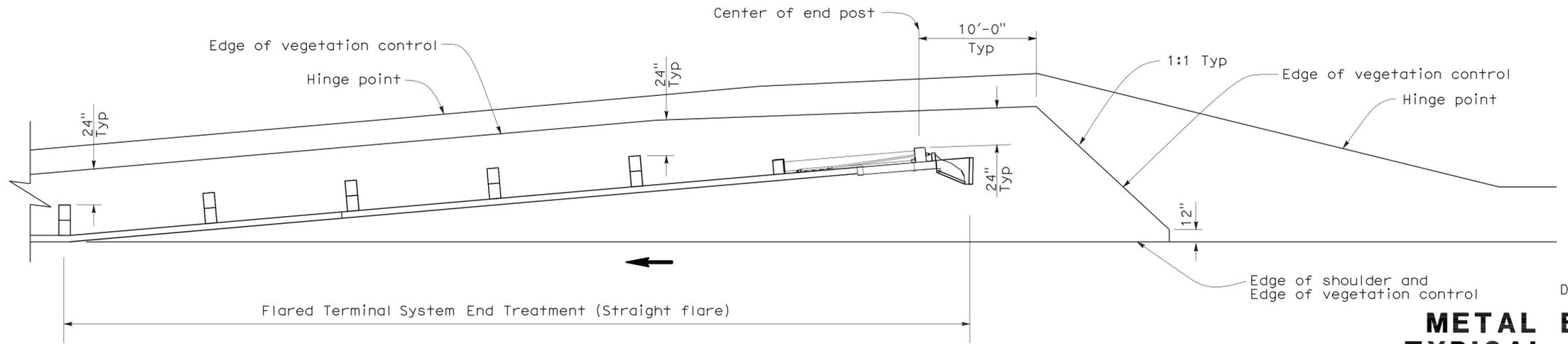
PLAN

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	Riv	15	R0.5/R2.6	30	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

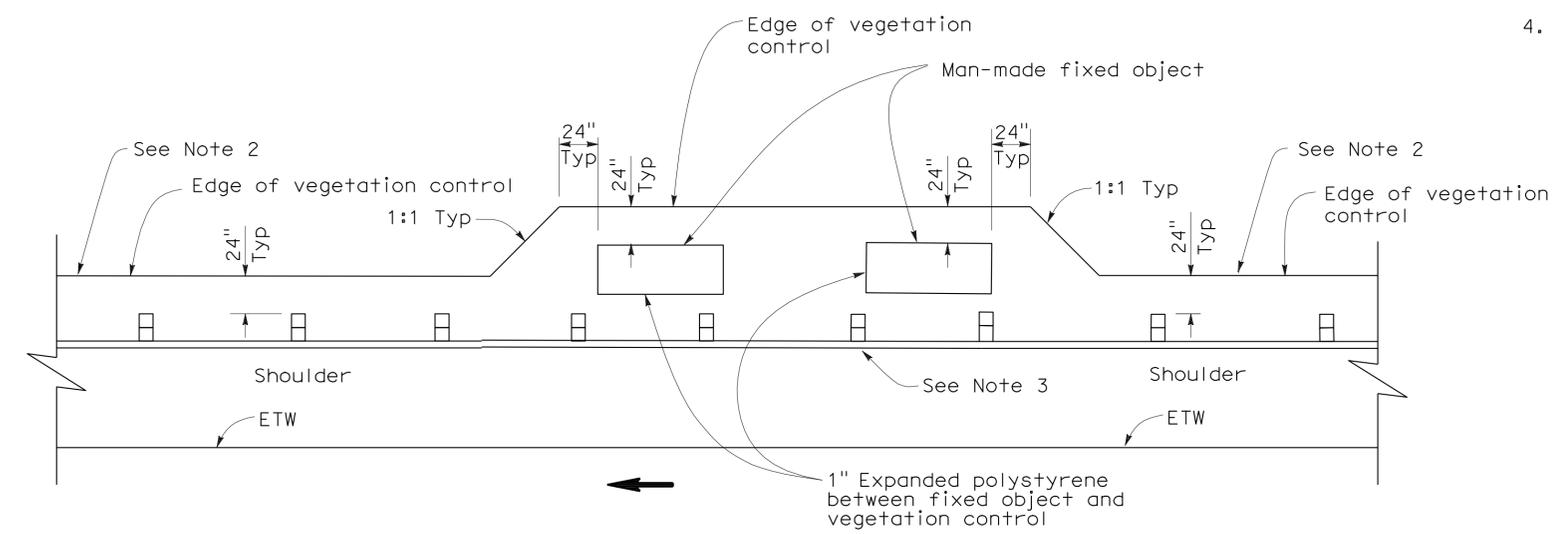
October 20, 2006
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To accompany plans dated 8-16-10

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
FIXED OBJECT(S) ON SHOULDER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE
NSP A77C8 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C8

2006 NEW STANDARD PLAN NSP A77C8

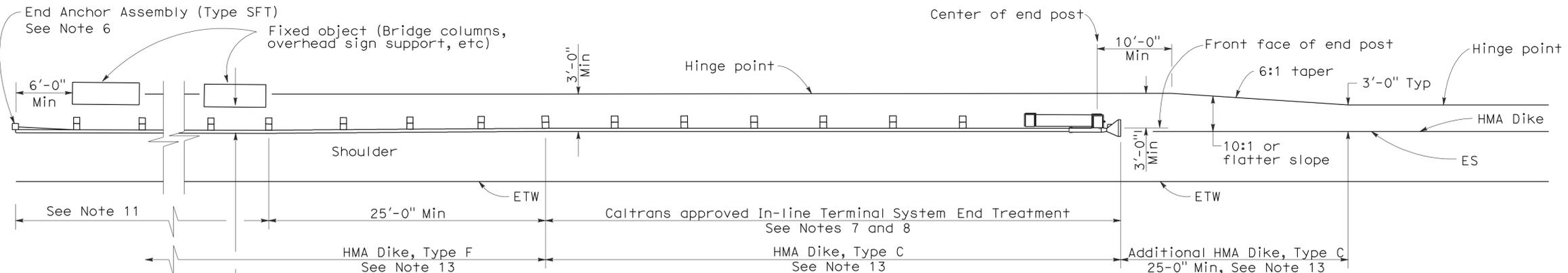
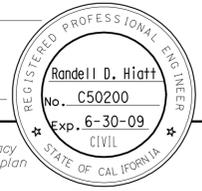
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	31	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

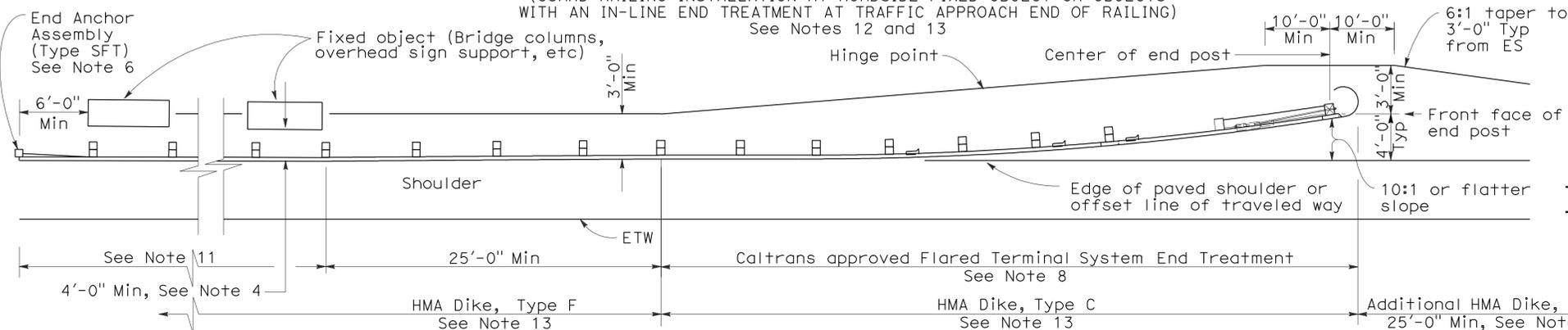
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To accompany plans dated 8-16-10



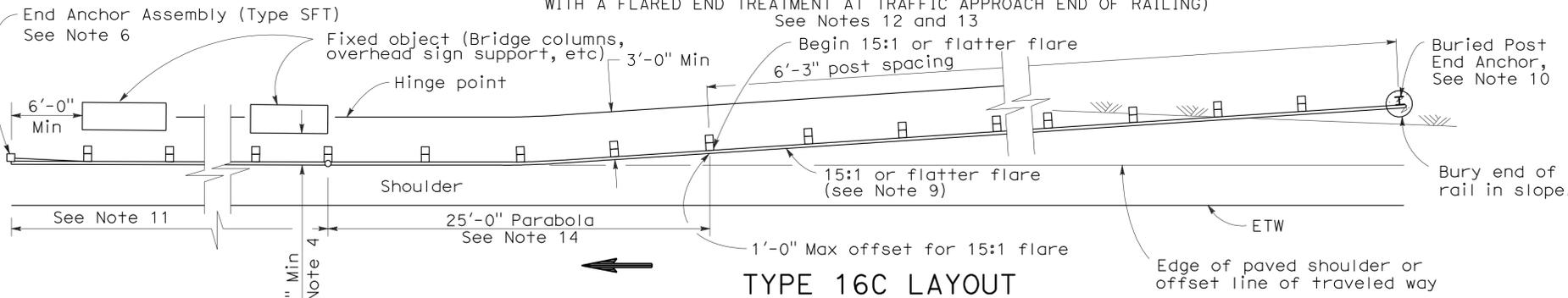
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 7 and 8



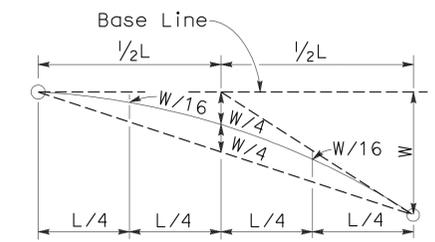
TYPE 16B LAYOUT

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

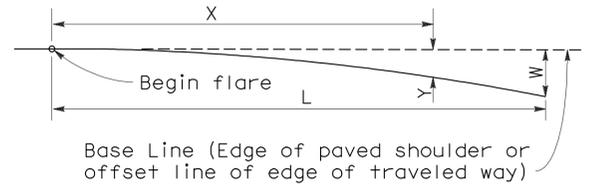


TYPE 16C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

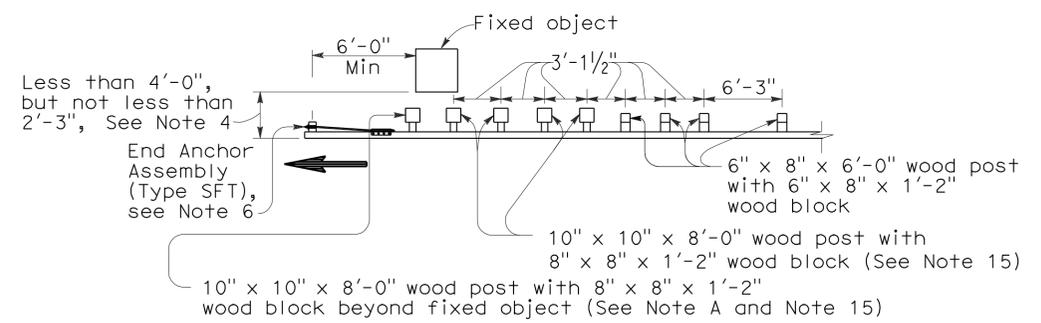


Base Line (Edge of paved shoulder or offset line of edge of traveled way)
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



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

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

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

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

NO SCALE
RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	32	55

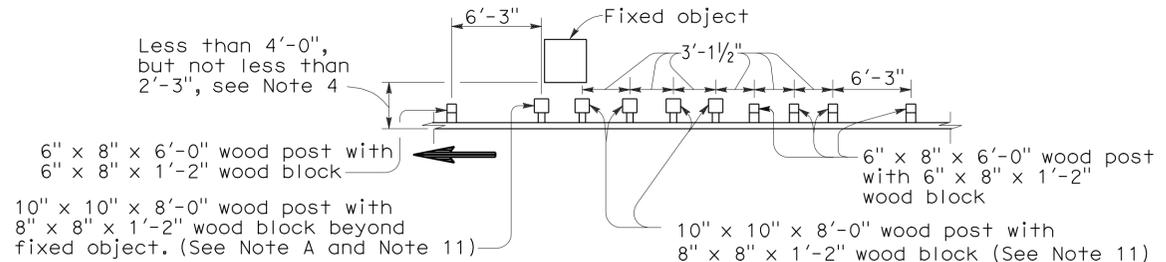
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

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

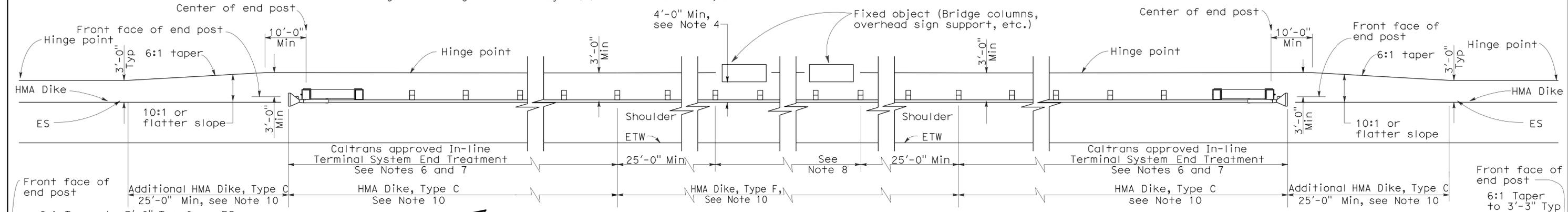
To accompany plans dated 8-16-10



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

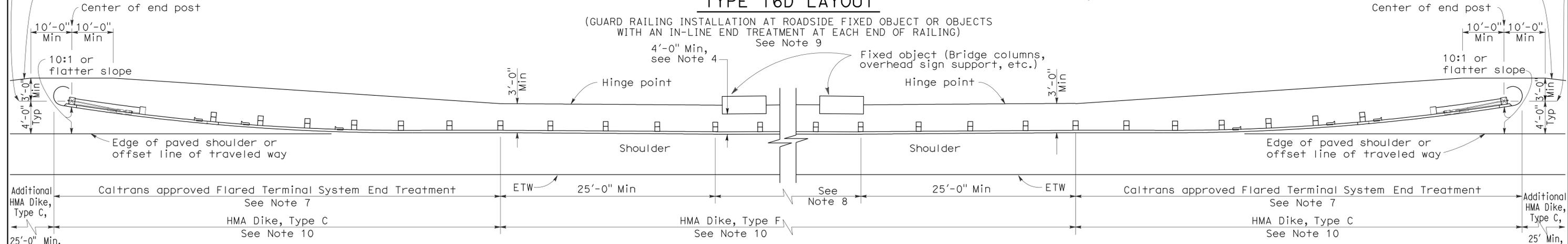
STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

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



TYPE 16D LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT EACH END OF RAILING)



TYPE 16E LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT EACH END OF RAILING)

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3", except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.

- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS
NO SCALE

RSP A77G4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G4 DATED MAY 1, 2006 - PAGE 62 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G4

2006 REVISED STANDARD PLAN RSP A77G4

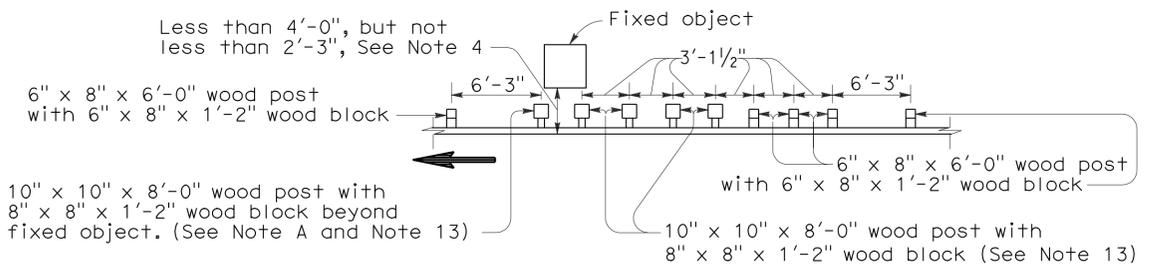
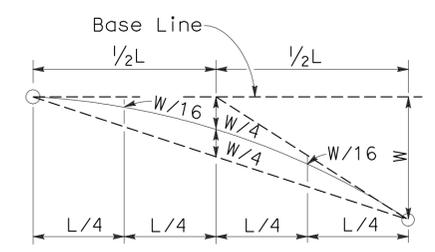
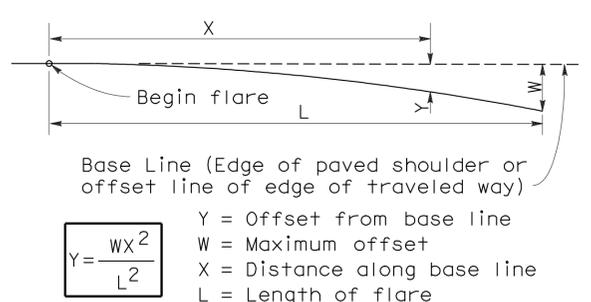
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	33	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 8-16-10



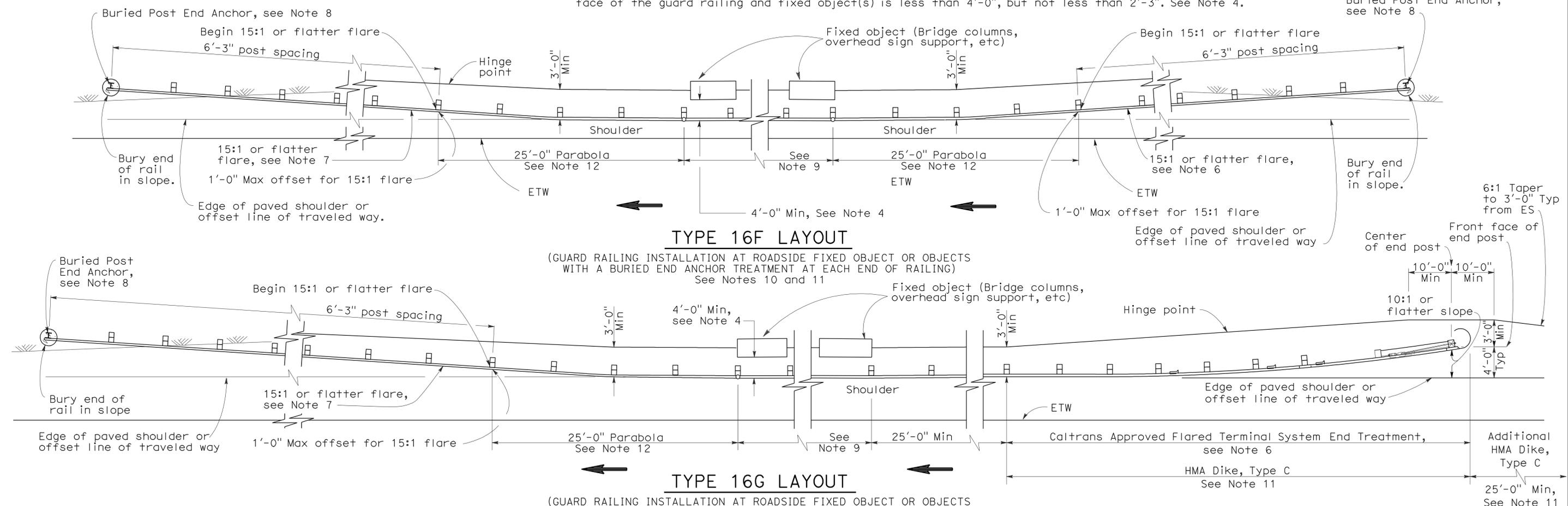
NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

PARABOLIC FLARE OFFSETS

TYPICAL PARABOLIC LAYOUT

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

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



NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 8" 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.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare for the buried post anchor 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 details, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used on highways where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.

- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**

NO SCALE

RSP A77G5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G5
DATED MAY 1, 2006 - PAGE 63 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G5

2006 REVISED STANDARD PLAN RSP A77G5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	34	55

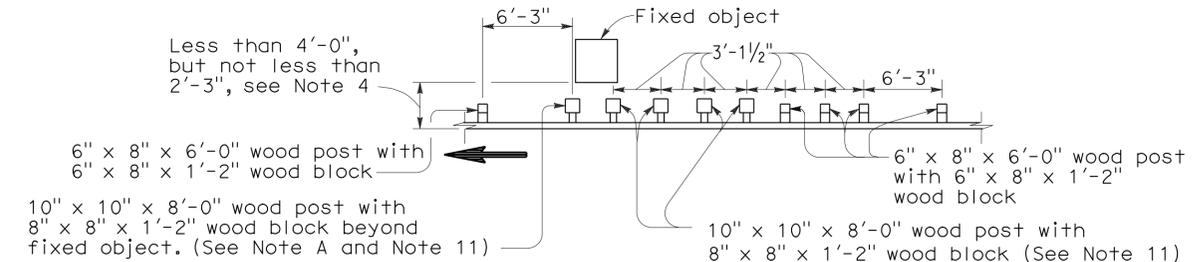
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
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Exp. 6-30-09
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STATE OF CALIFORNIA

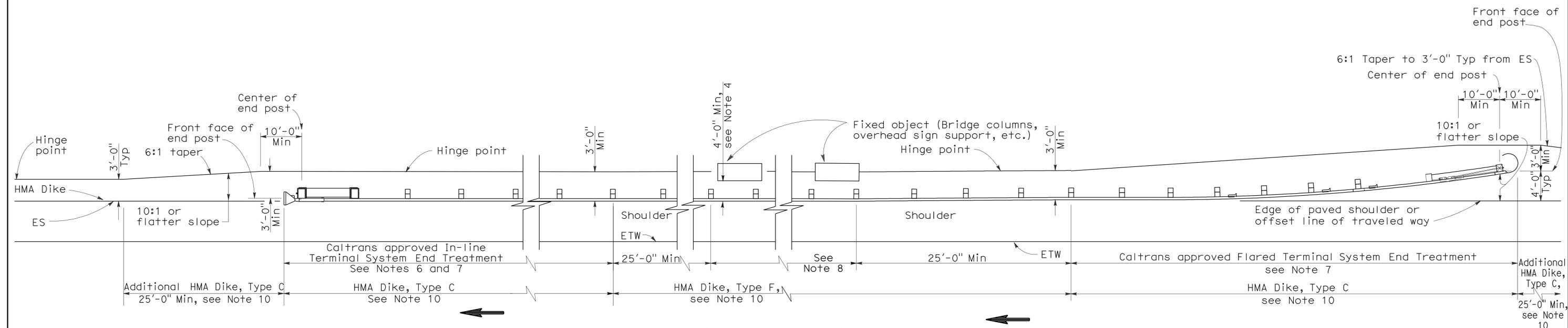
To accompany plans dated 8-16-10



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

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

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



TYPE 16H LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AND AN IN-LINE TREATMENT AT THE ENDS OF RAILING) See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object, located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by → .

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

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

NO SCALE
RSP A77G6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G6
DATED MAY 1, 2006 - PAGE 64 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G6

2006 REVISED STANDARD PLAN RSP A77G6

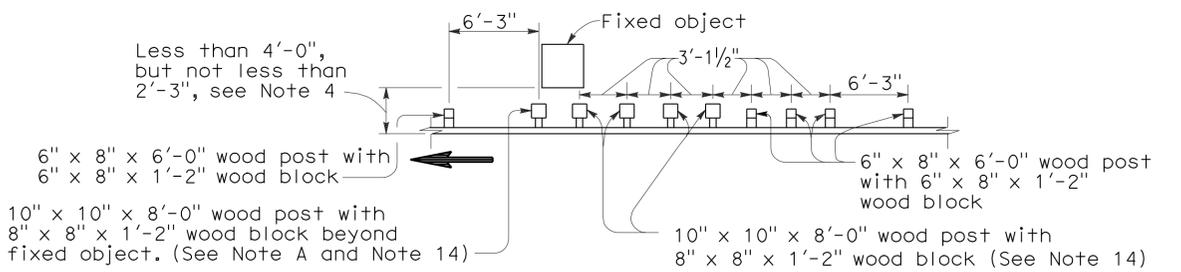
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	35	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

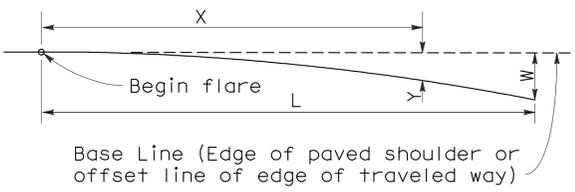
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To accompany plans dated 8-16-10



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

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

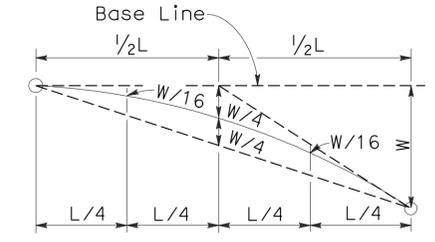


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

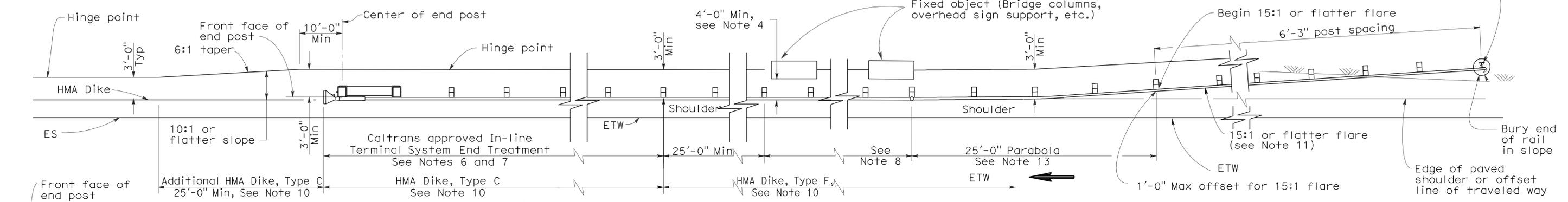
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



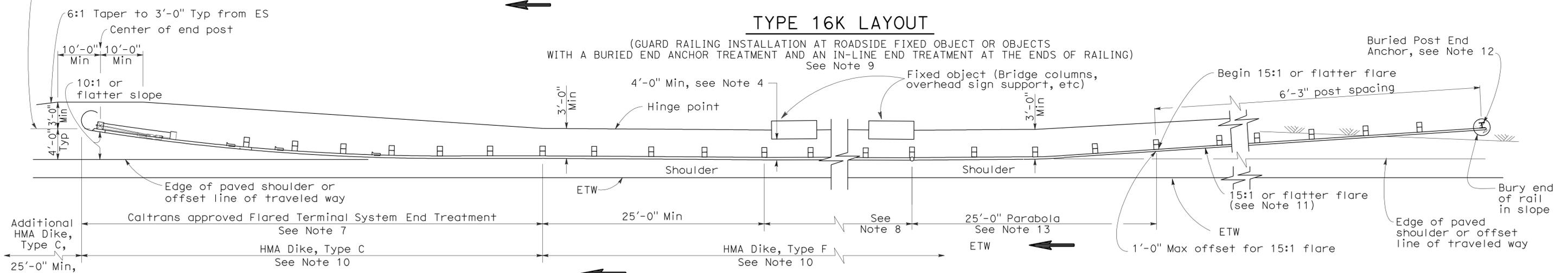
TYPICAL PARABOLIC LAYOUT

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



TYPE 16K LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AND AN IN-LINE END TREATMENT AT THE ENDS OF RAILING) See Note 9



TYPE 16L LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING) See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare for the buried post anchor 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 Buried Post End Anchor details, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard RSP Plan A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

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

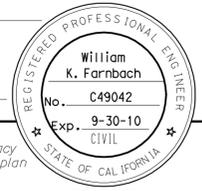
NO SCALE
RSP A77G8 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G8
DATED MAY 1, 2006 - PAGE 66 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G8

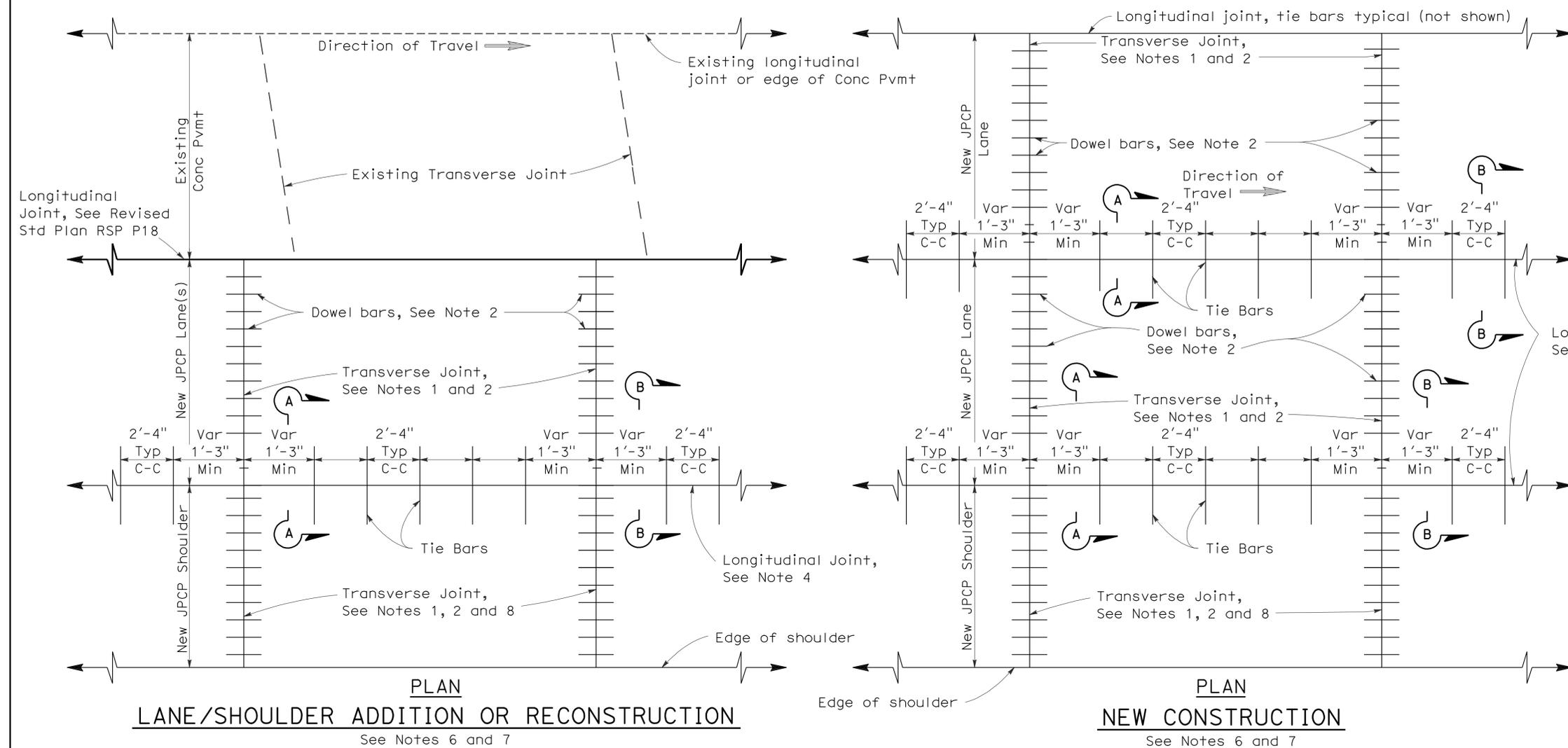
2006 REVISED STANDARD PLAN RSP A77G8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	36	55

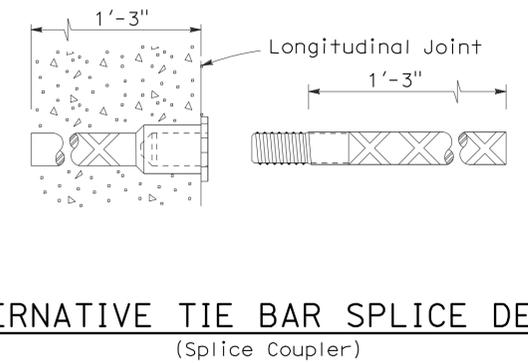
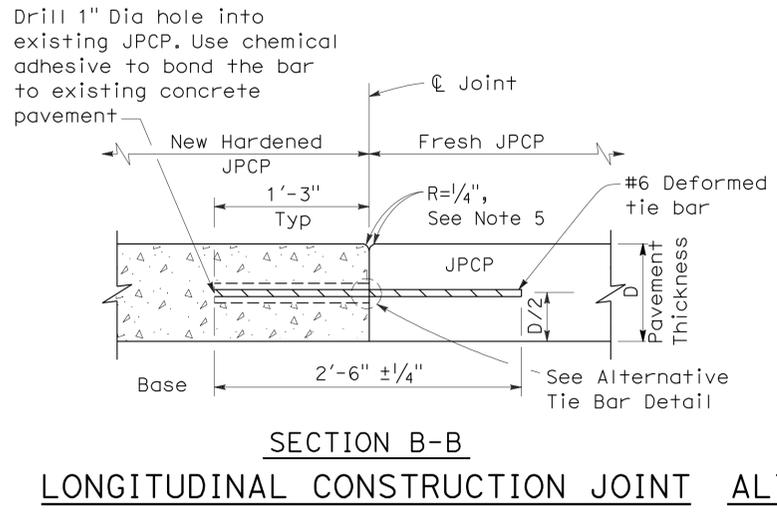
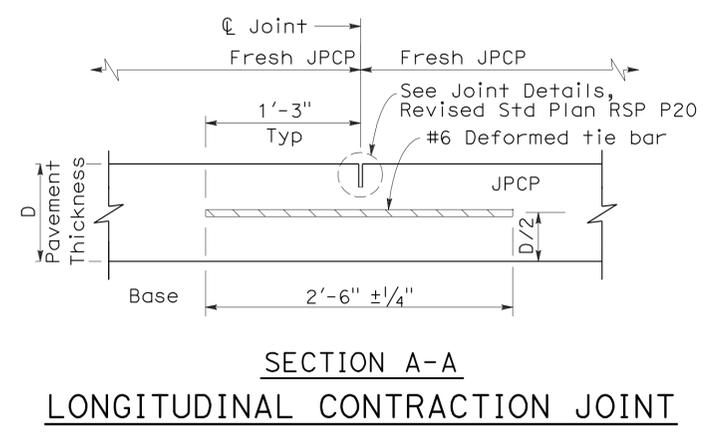
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 8-16-10



- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
 3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
 4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
 5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
 6. Joint spacing patterns do not apply to intersections.
 7. Details can also apply to inside widening.
 8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINTED PLAIN CONCRETE PAVEMENT
 NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1 DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

2006 REVISED STANDARD PLAN RSP P1

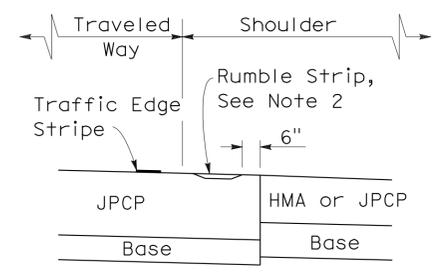
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	37	55

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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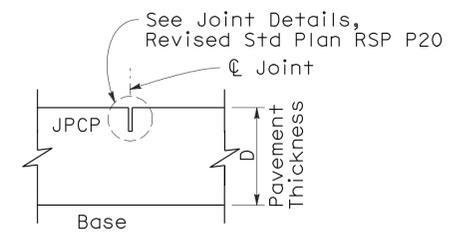
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 8-16-10

- NOTES:**
- Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 - For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
 - Joint spacing patterns do not apply to intersections.



DETAIL "A"



**SECTION C-C
TRANSVERSE/LONGITUDINAL JOINT**
(no dowel bars/tie bars)

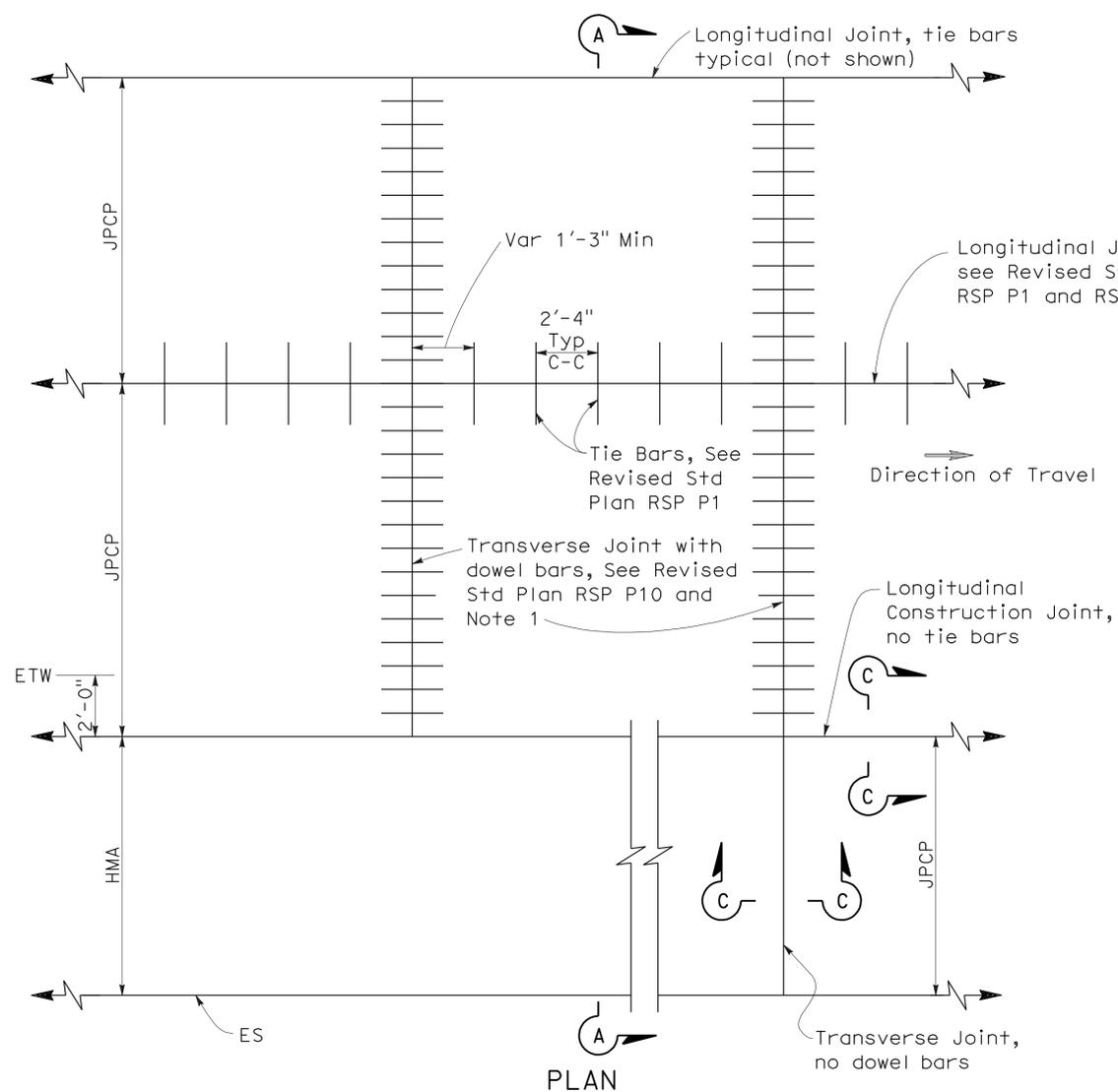
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE
PAVEMENT-WIDENED SLAB DETAILS**

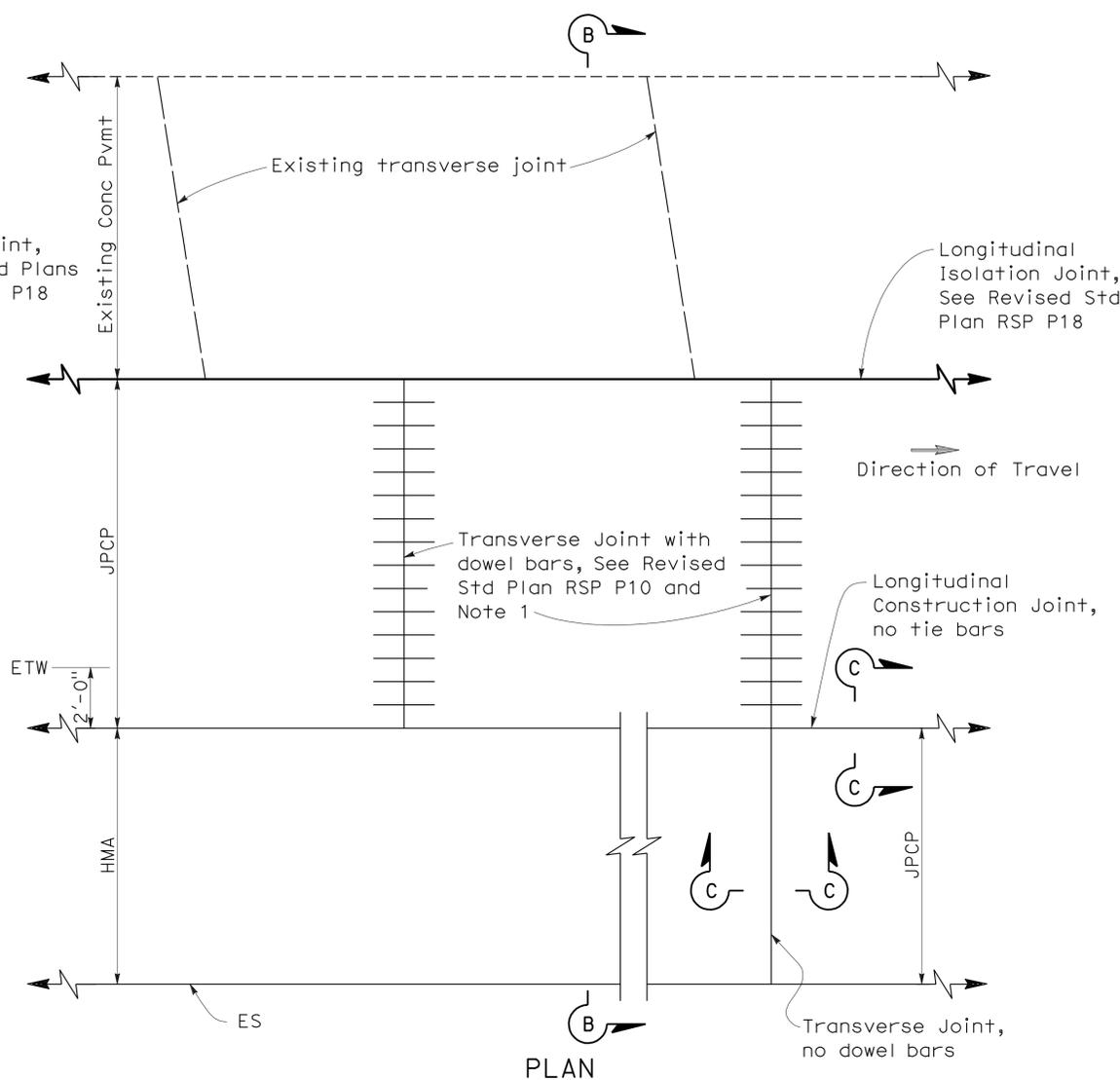
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

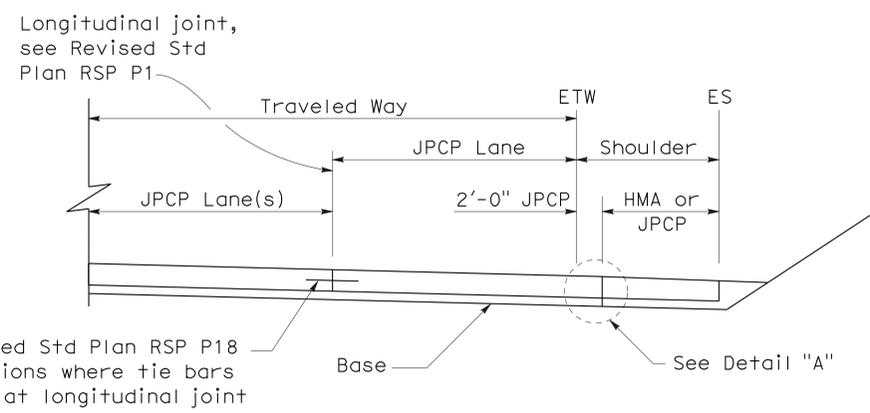
REVISED STANDARD PLAN RSP P2



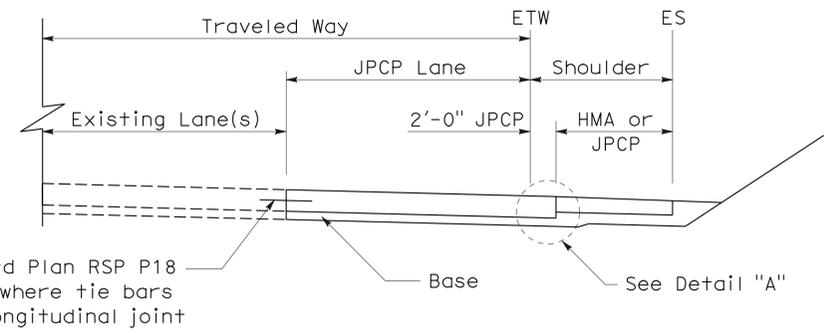
**PLAN
NEW CONSTRUCTION**



**PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION**



SECTION A-A



SECTION B-B

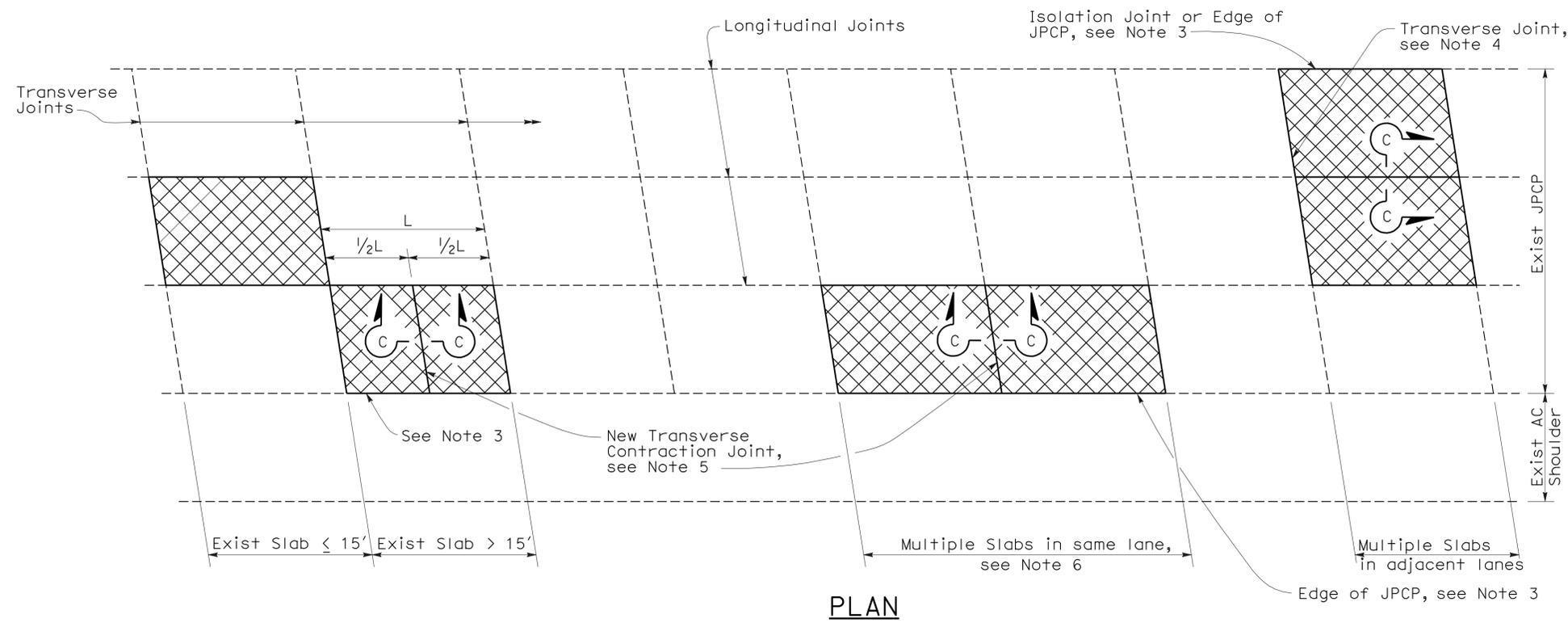
2006 REVISED STANDARD PLAN RSP P2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	38	55

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 May 15, 2009
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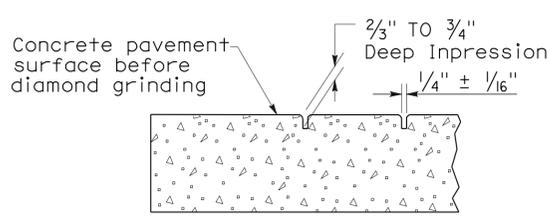
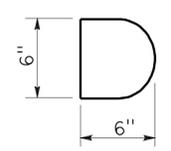
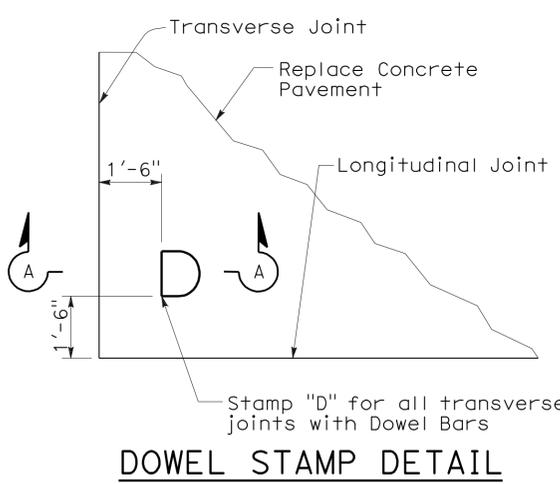
To accompany plans dated 8-16-10



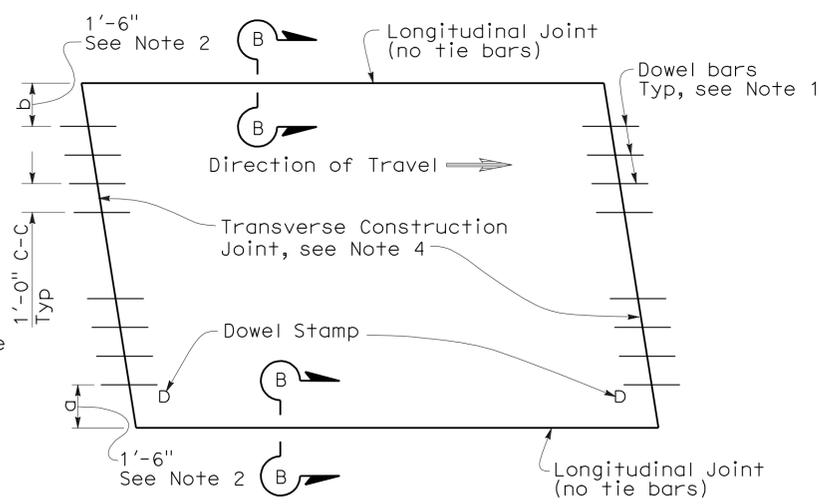
NOTES:

1. For details not shown, see Revised Standard Plan RSP P10.
2. Where the existing outer shoulder pavement is asphalt concrete pavement, the "a" dimension shall be 1'-0" and the "b" dimension shall be 2'-0".
3. Side forms shall be used where edge of pavement is adjacent to asphalt concrete.
4. For detail, see Transverse Construction Joint for existing concrete pavement detail on Revised Standard Plan RSP P10.
5. Transverse joint to match skew of existing joint. Omit dowel bars.
6. This Standard Plan only applicable when replacing multiple slabs in the same lane is less than 100'.

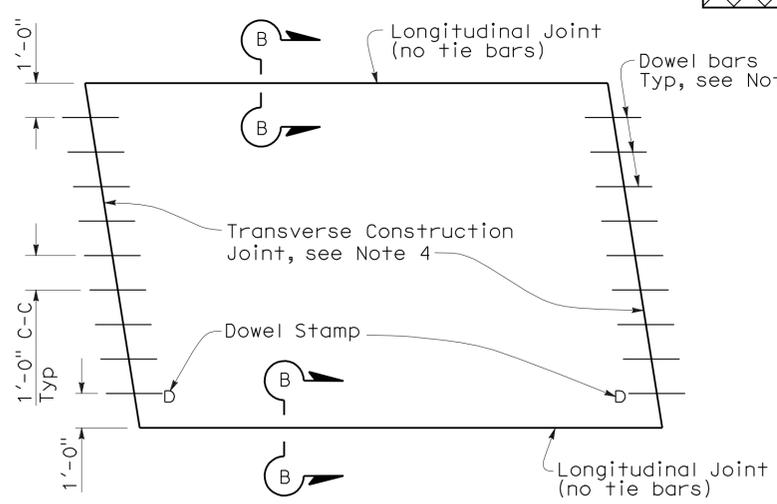
LEGEND



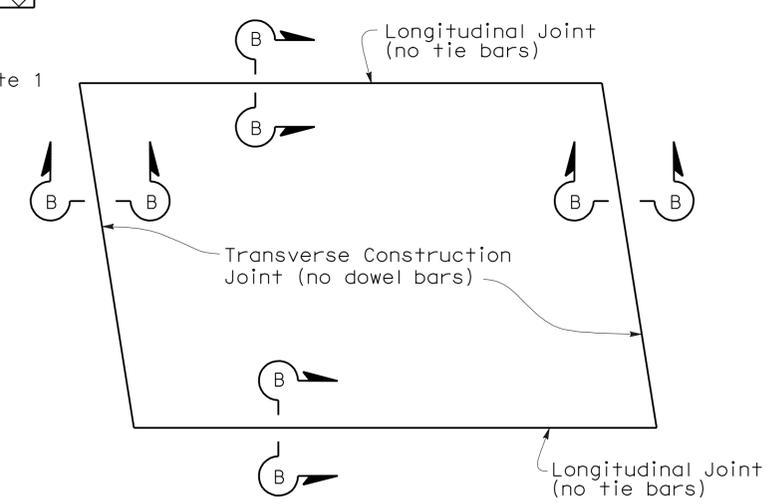
SECTION A-A



TYPE I
(traffic lane lines match longitudinal joints)

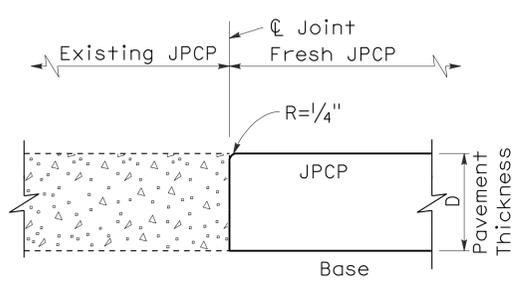


TYPE II
(traffic lane lines do not match longitudinal joints)

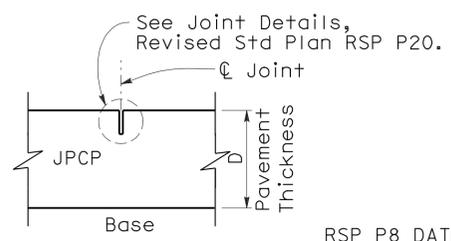


TYPE III
(for short term repairs < 5 yrs design life or for slab replacements with a cracking and seating operation)

SLAB LAYOUT



SECTION B-B



SECTION C-C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

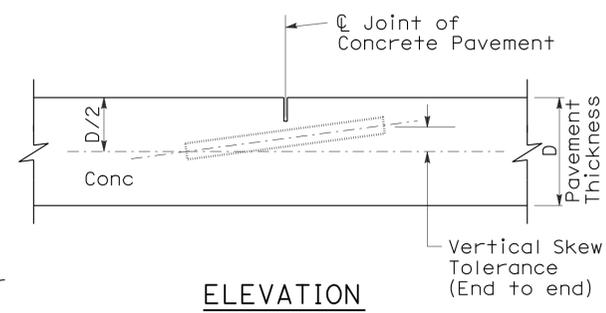
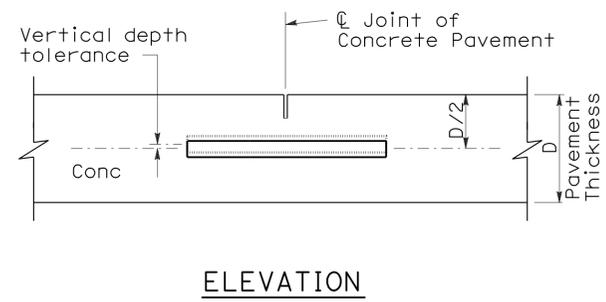
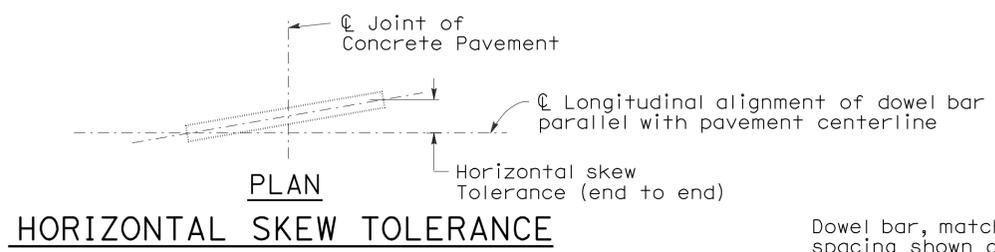
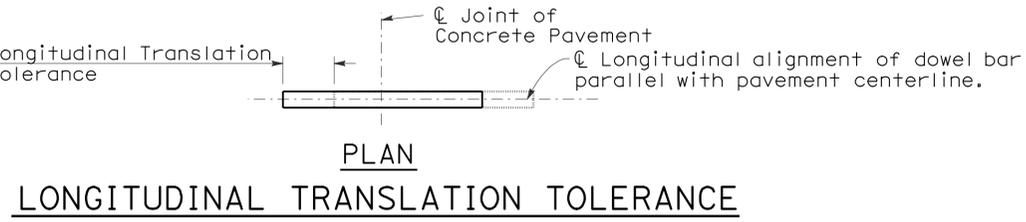
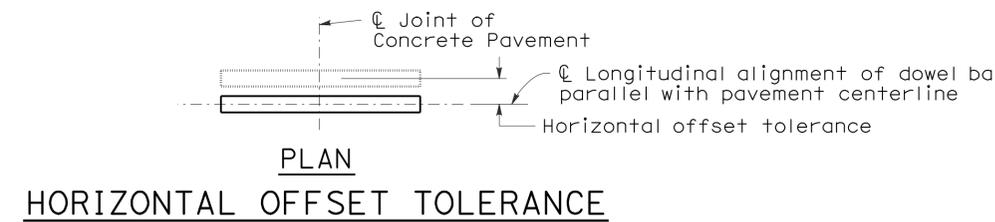
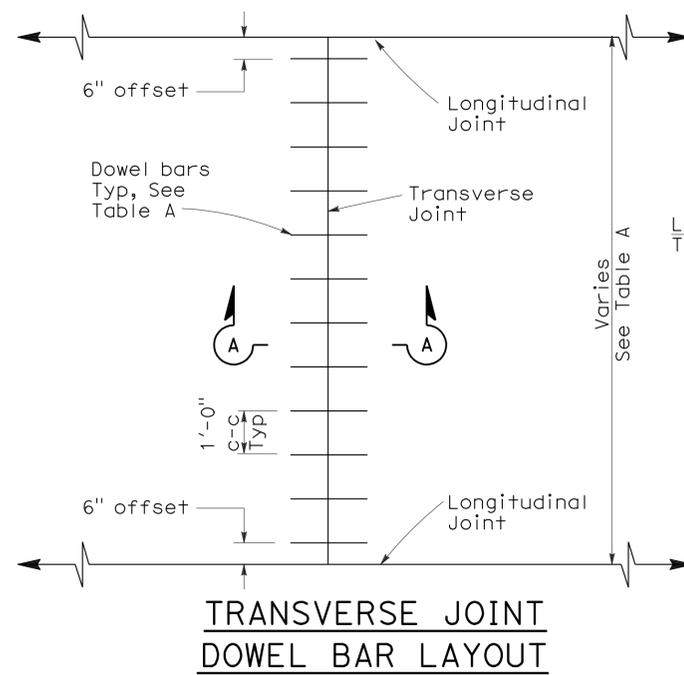
JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT

NO SCALE

RSP P8 DATED MAY 15, 2009 SUPERSEDES RSP P8 DATED SEPTEMBER 1, 2006 AND STANDARD PLAN P8 DATED MAY 1, 2006 - PAGE 123 OF THE STANDARD PLANS BOOK DATED MAY 2006.

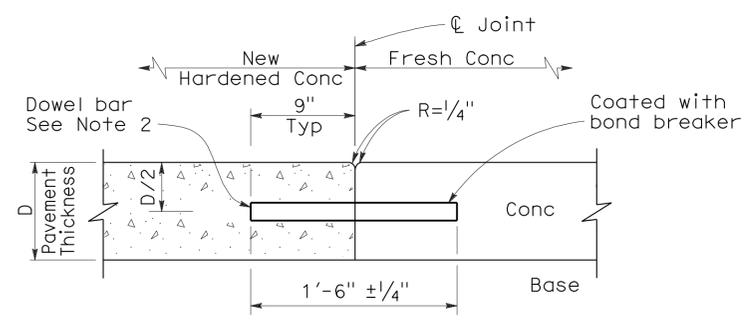
REVISED STANDARD PLAN RSP P8

2006 REVISED STANDARD PLAN RSP P8

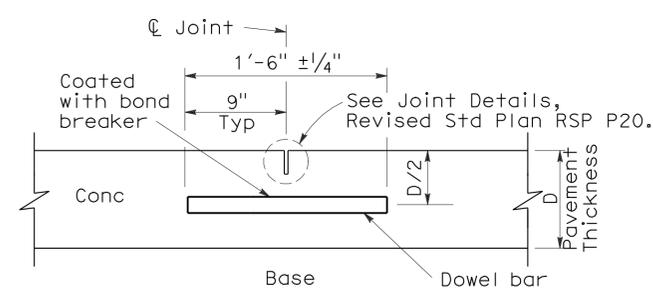


To accompany plans dated 8-16-10

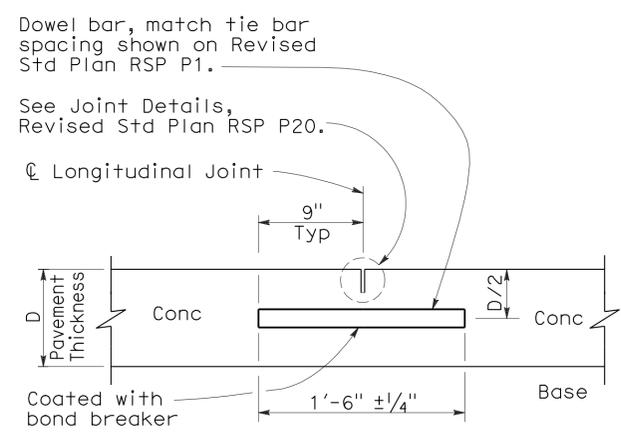
- NOTES:**
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
 - 1 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1 1/4" Dia smooth dowel bars.
 - For widths 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**

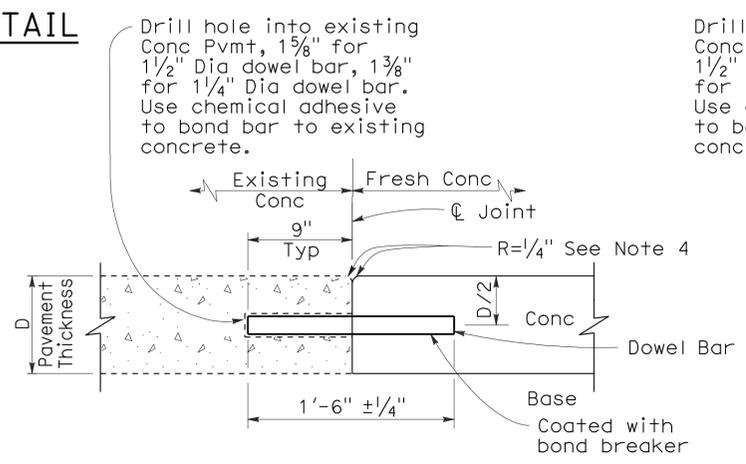


TRANSVERSE CONTRACTION JOINT

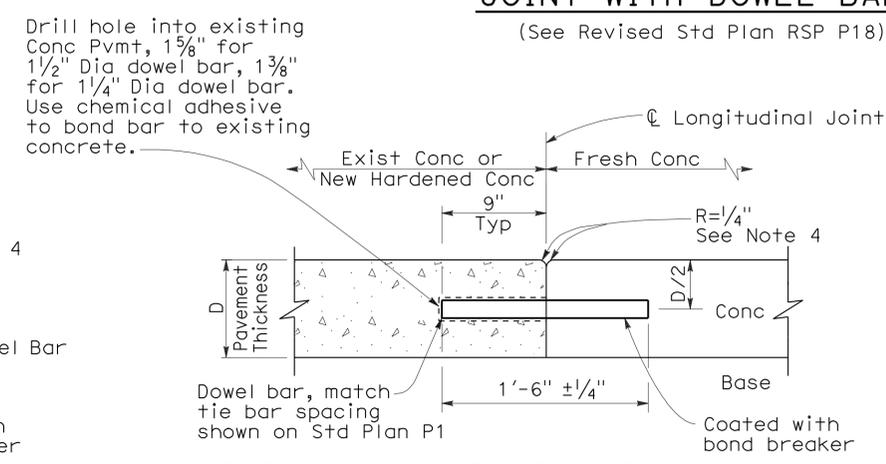


**LONGITUDINAL CONTRACTION
JOINT WITH DOWEL BARS**

(See Revised Std Plan RSP P18)



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



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

TABLE A (See Note 3)
Dowel Bar Transverse Spacing Table

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

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.

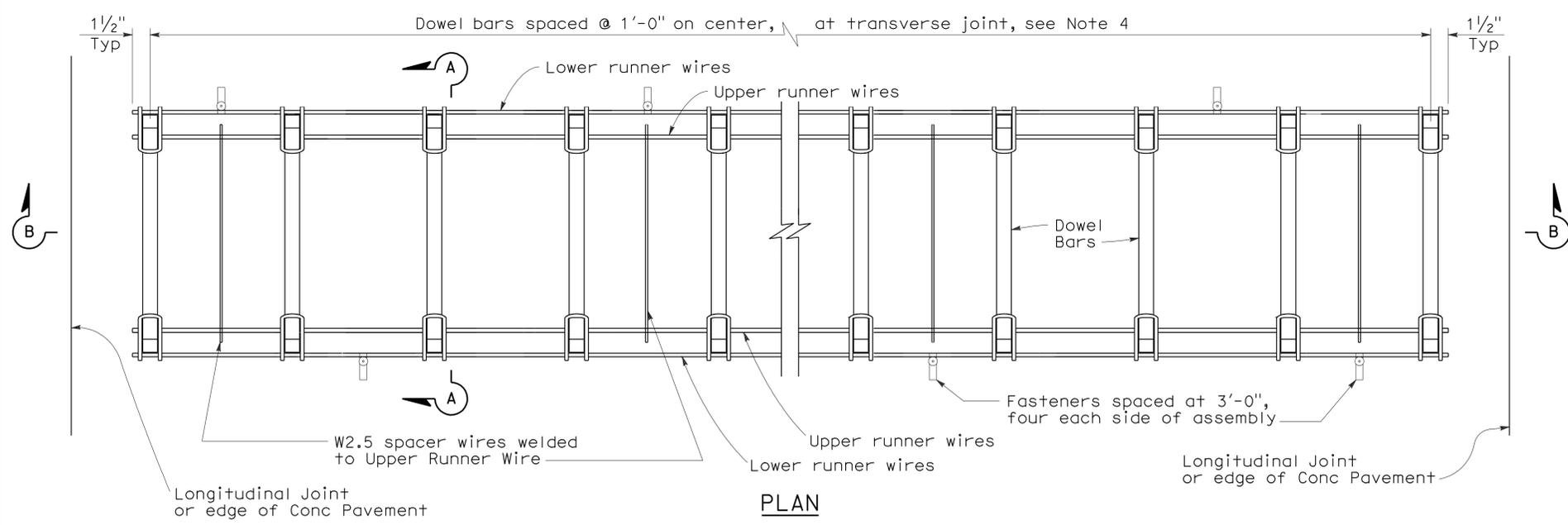
2006 REVISED STANDARD PLAN RSP P10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	40	55

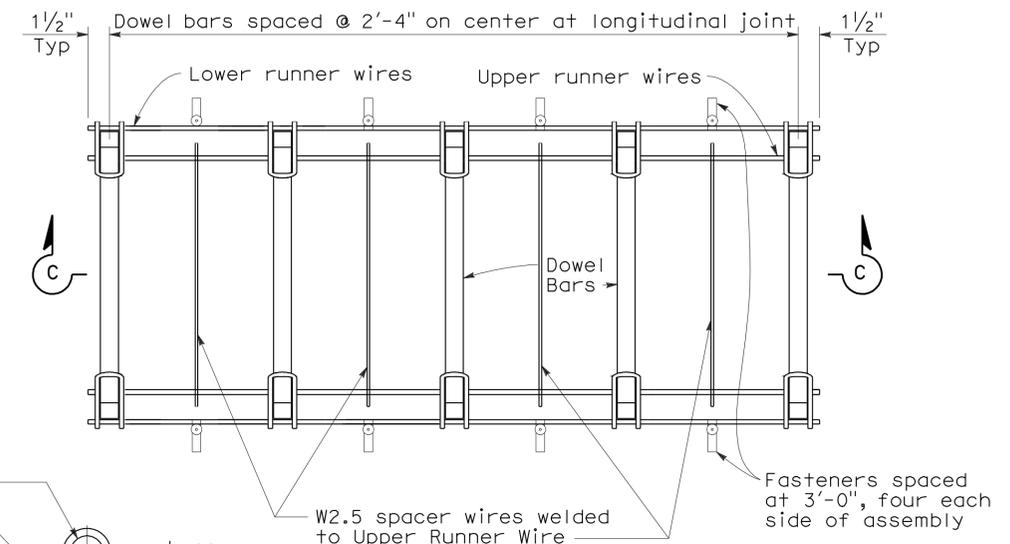
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

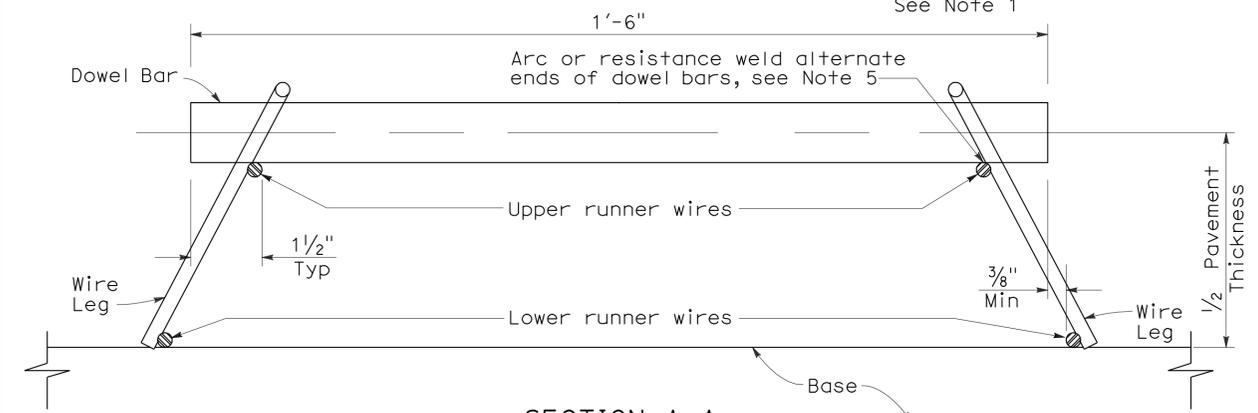
To accompany plans dated 8-16-10



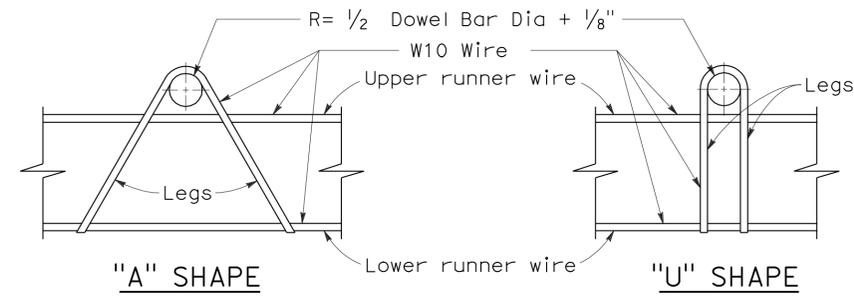
**PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)**



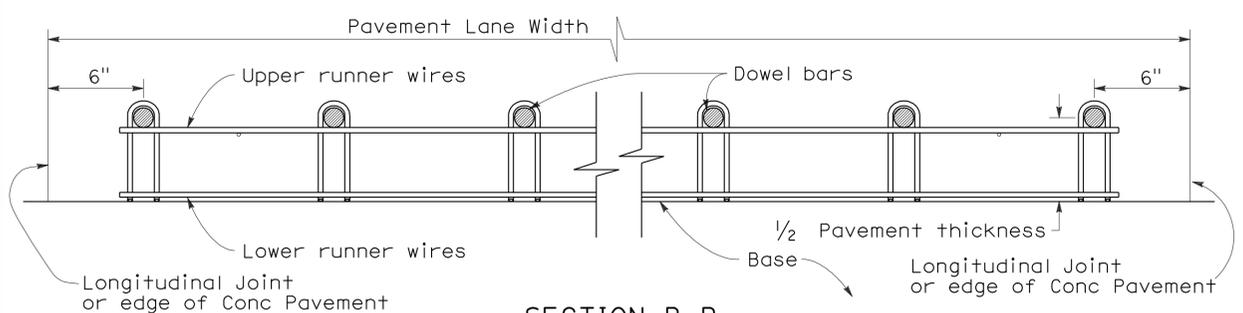
**PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)**



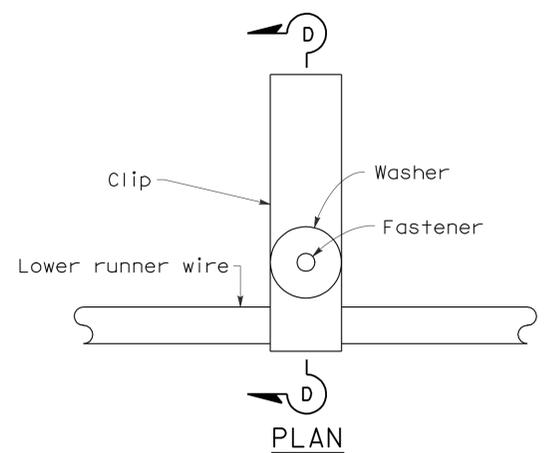
SECTION A-A



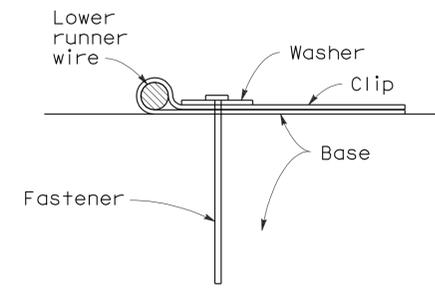
ASSEMBLY FRAME DETAILS



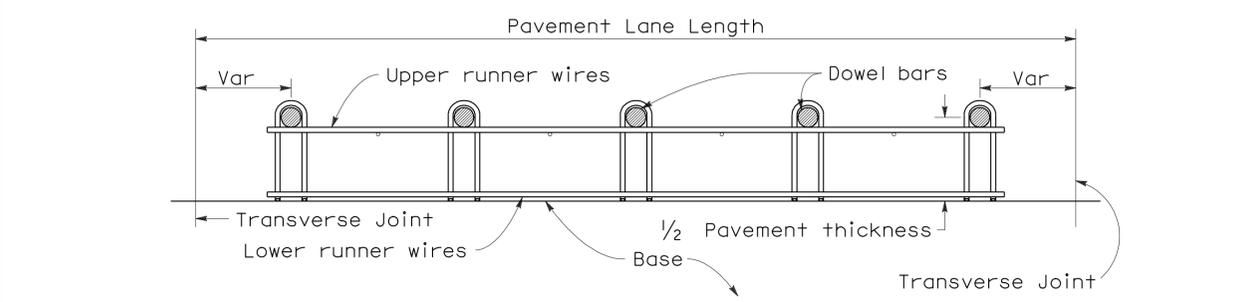
SECTION B-B



FASTENER DETAIL



SECTION D-D



SECTION C-C

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-
DOWEL BAR BASKET
DETAILS**

NO SCALE

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

REVISED STANDARD PLAN RSP P12

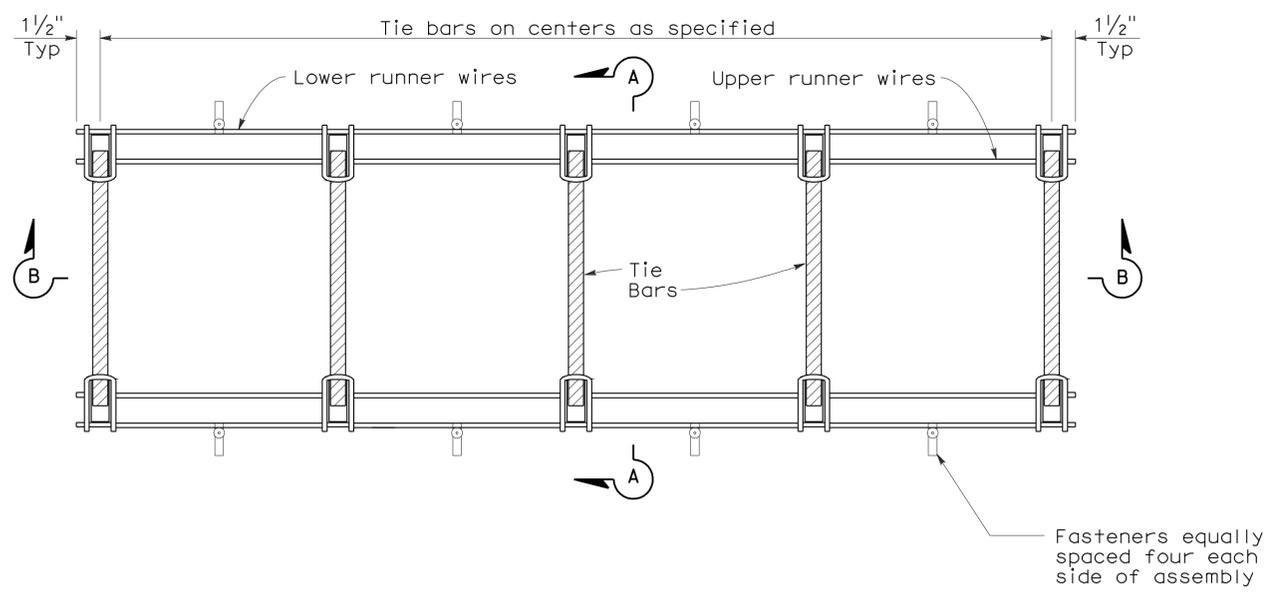
2006 REVISED STANDARD PLAN RSP P12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	41	55

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

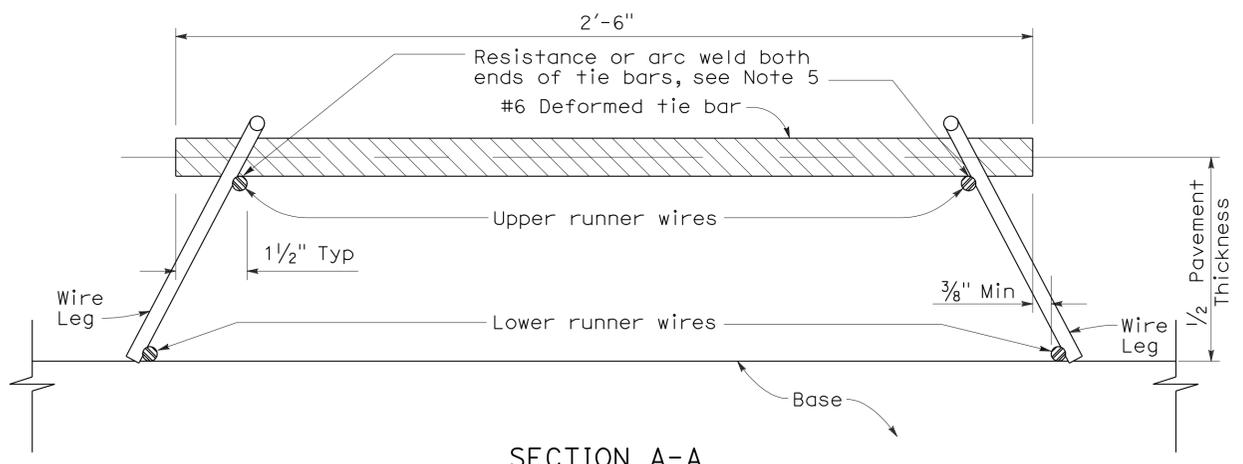
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To accompany plans dated 8-16-10

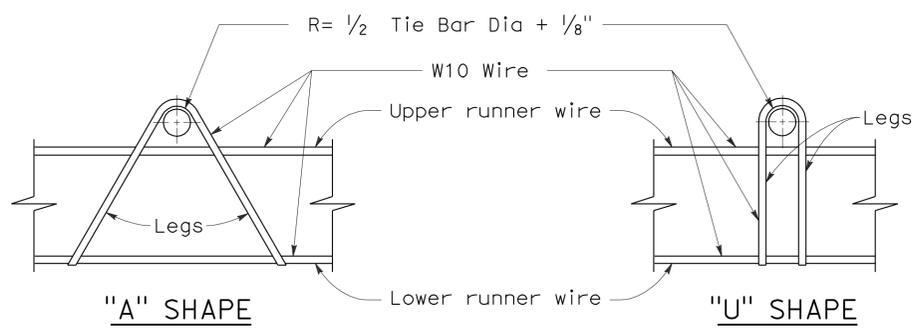


PLAN
TIE BAR BASKET
 (TIE BARS AT LONGITUDINAL JOINT)
 See Note 1

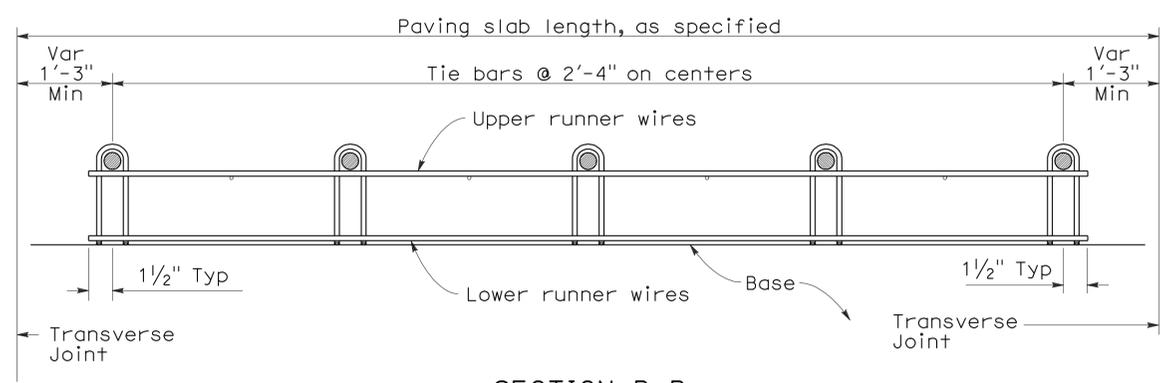
- NOTES:**
- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
 - Wire sizes shown are minimum required.
 - All wire intersections are to be resistance welded.
 - Not for use on nondoweled skewed jointed plain concrete pavement.
 - Weld may be at top or bottom of tie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



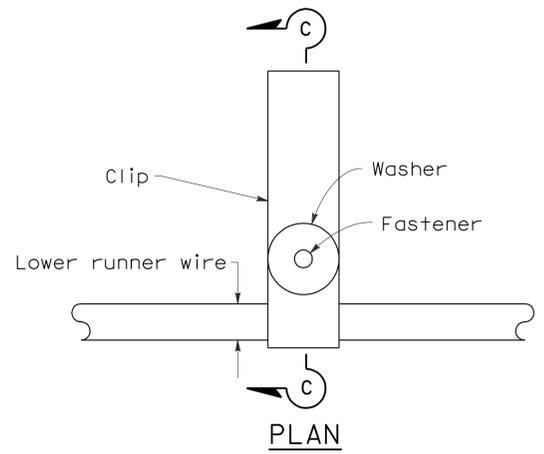
SECTION A-A



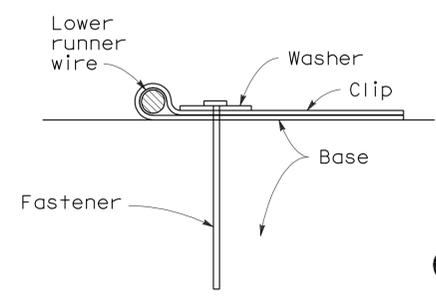
ASSEMBLY FRAME DETAILS



SECTION B-B
 See Note 1



PLAN



SECTION C-C

FASTENER DETAIL

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

NO SCALE

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

REVISED STANDARD PLAN RSP P17

2006 REVISED STANDARD PLAN RSP P17

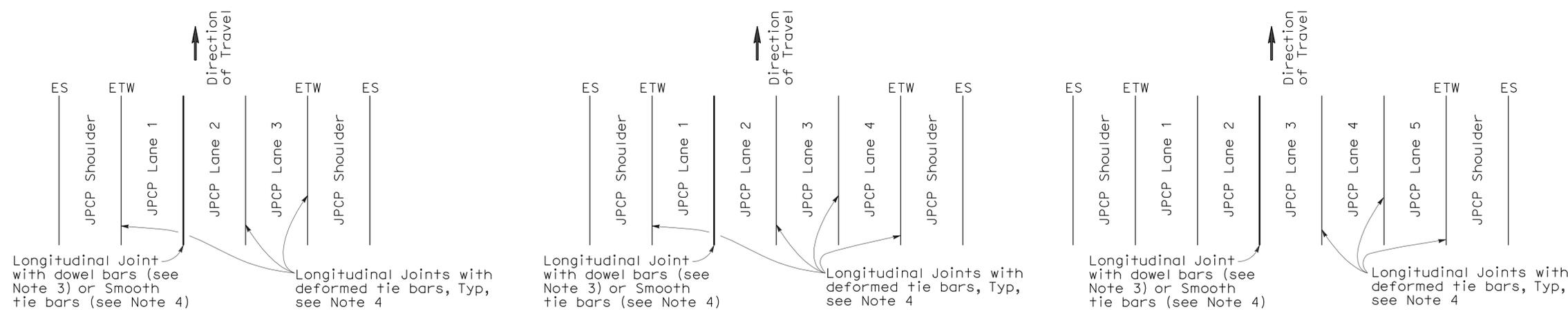
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	42	55

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

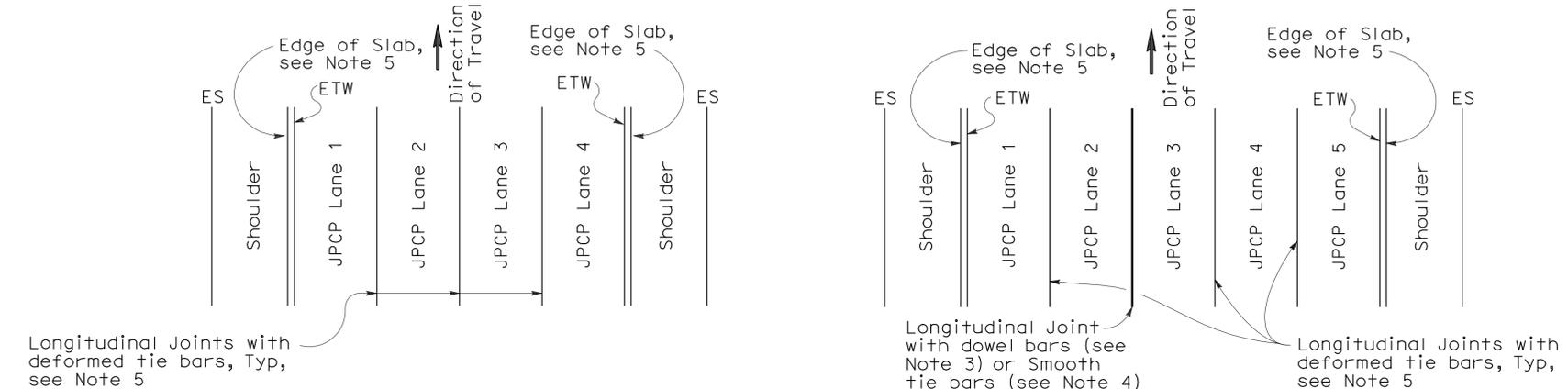
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 Exp. 9-30-10
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To accompany plans dated 8-16-10

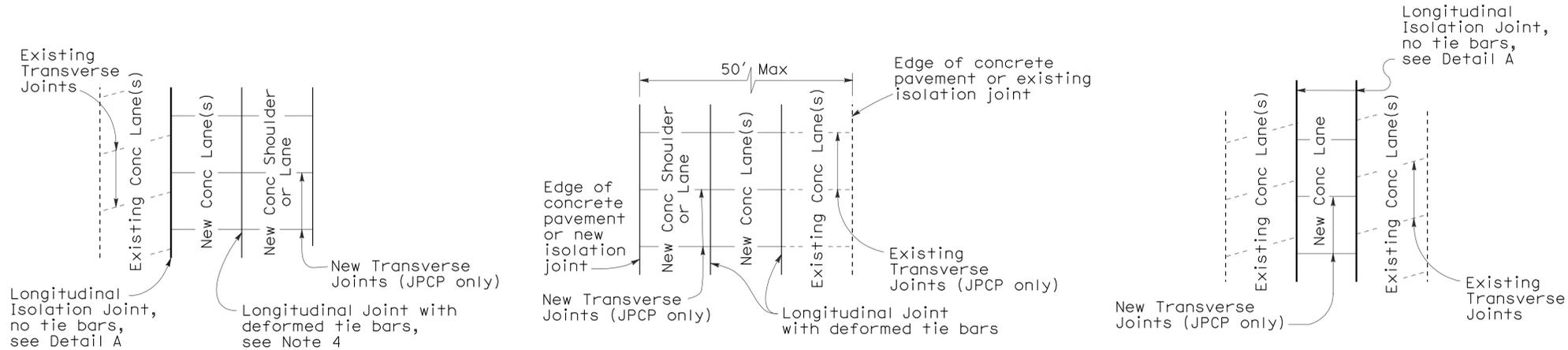


3 LANES WITH TIED CONCRETE SHOULDERS PLAN **4 LANES WITH TIED CONCRETE SHOULDERS PLAN** **5 LANES WITH TIED CONCRETE SHOULDERS PLAN**



4 LANES OR LESS WITH WIDENED SLAB PLAN **5 LANES WITH WIDENED SLAB PLAN**

NEW CONSTRUCTION
Location of Longitudinal Joints (For JPCP)



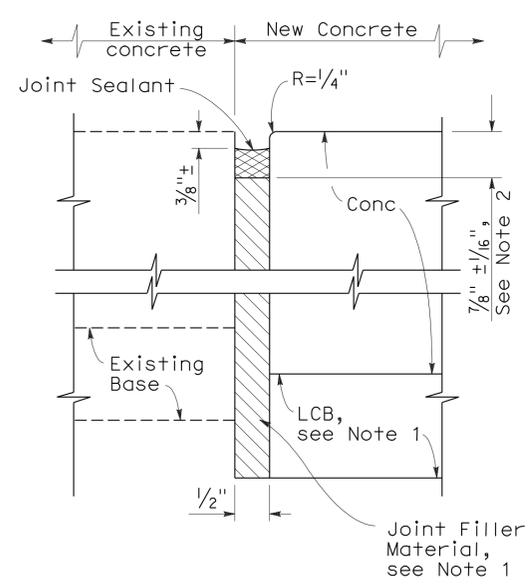
CASE 1 PLAN **CASE 2 PLAN** **CASE 3 (INTERIOR LANE REPLACEMENT) PLAN**

Transverse Joints do not align between new and existing Transverse Joints align between new and existing Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
(For JPCP and CRCP)

NOTES:

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



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL
NO SCALE

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

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

NOTE:

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

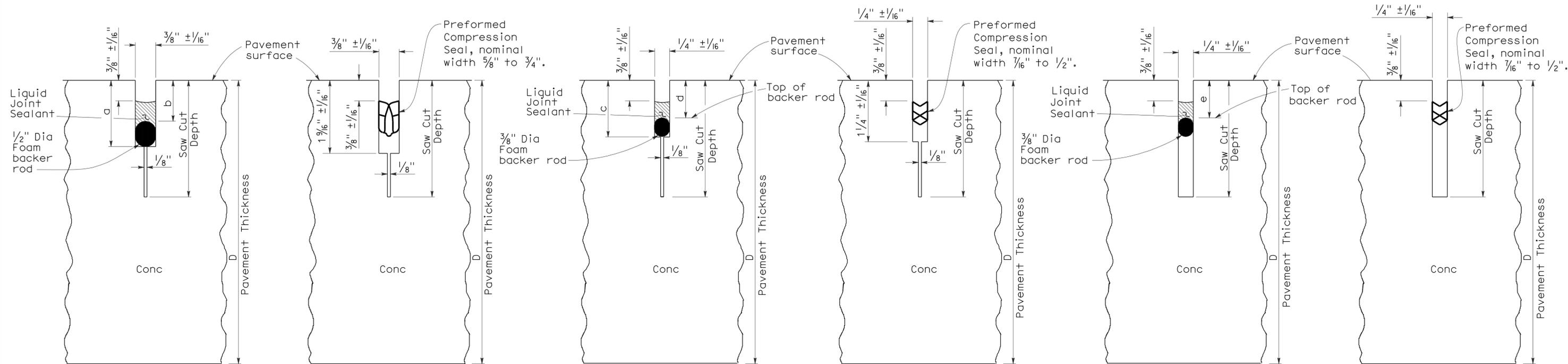
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	43	55

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

May 15, 2009
 PLANS APPROVAL DATE

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To accompany plans dated 8-16-10



LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL

TYPE A1 **TYPE A2** **TYPE B**

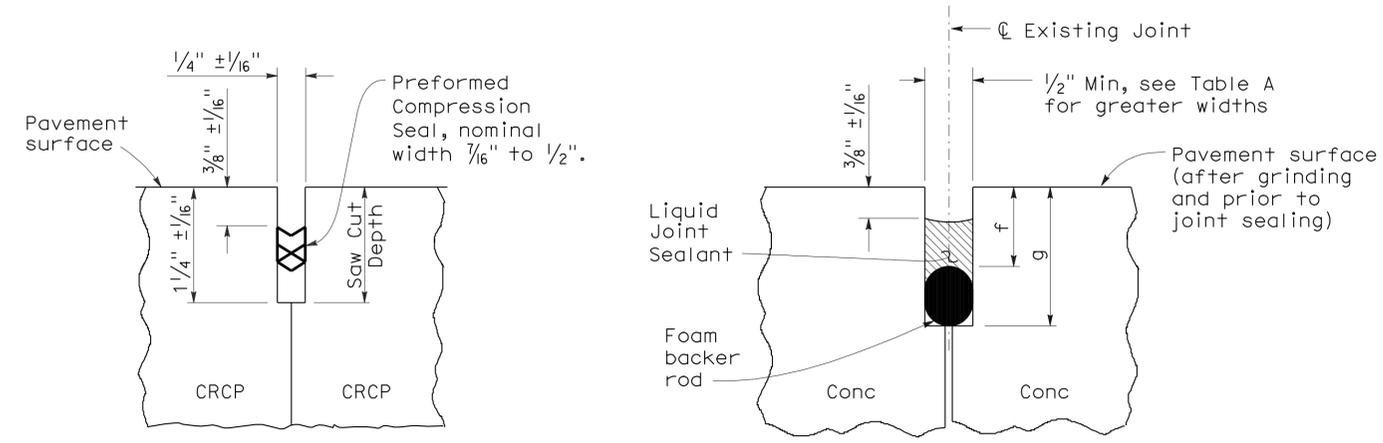
Transverse Contraction Joints Longitudinal Contraction Joints Longitudinal or Transverse Contraction Joint

LIQUID SEALANT RESERVOIR DEPTH

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

TABLE A (TYPE R JOINT)

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



COMPRESSION SEAL LIQUID SEALANT

TYPE C **TYPE R**

Transverse and Longitudinal Construction Joints (For CRCP) Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

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

REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	44	55

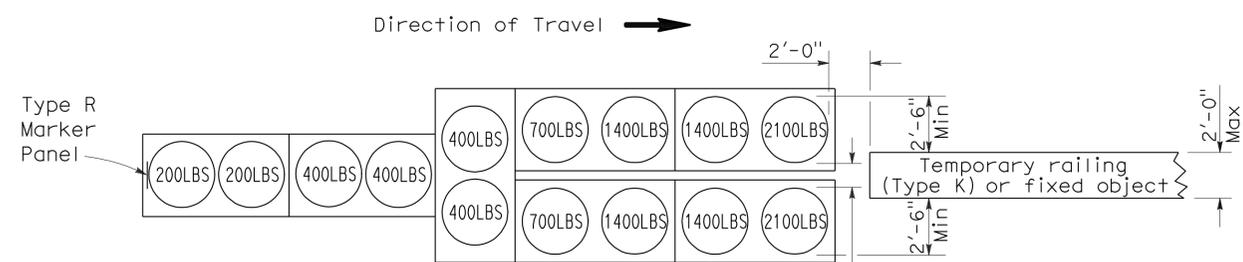
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

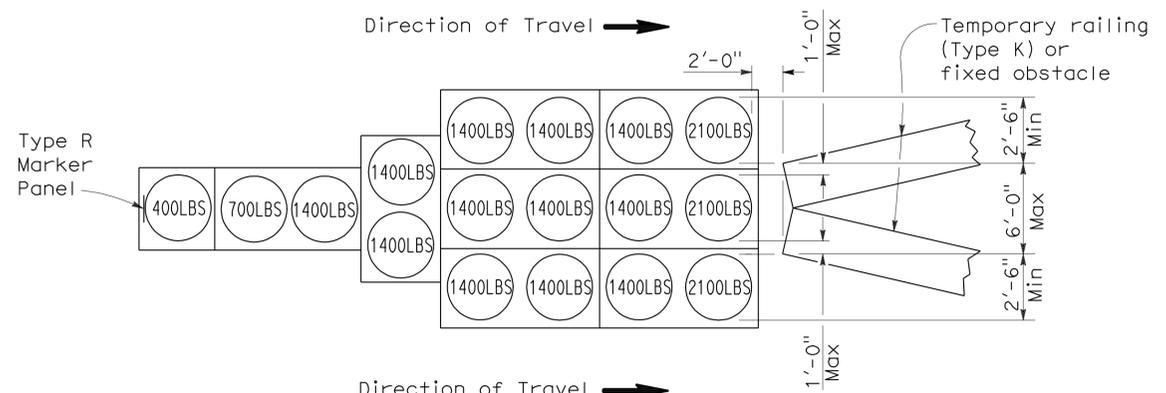
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 8-16-10



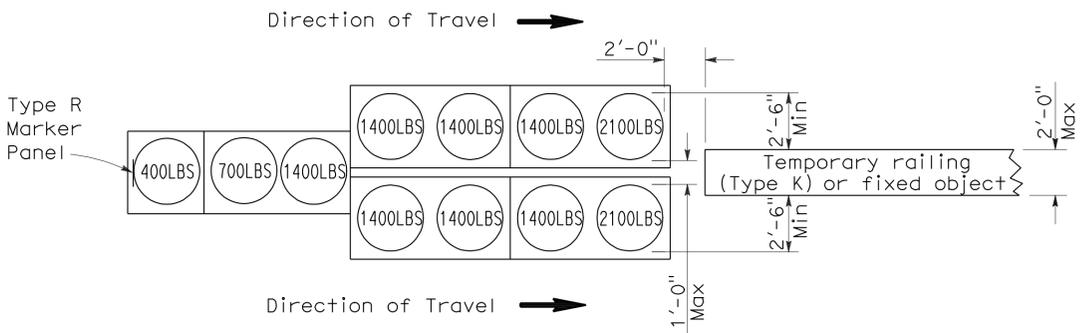
ARRAY 'TU14'

Approach speed 45 mph or more



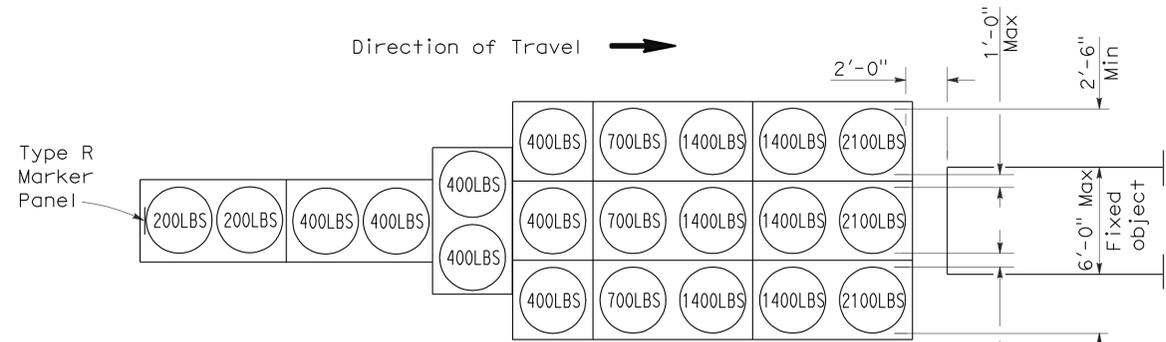
ARRAY 'TU17'

Approach speed less than 45 mph



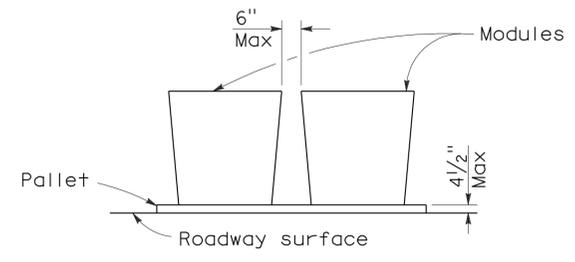
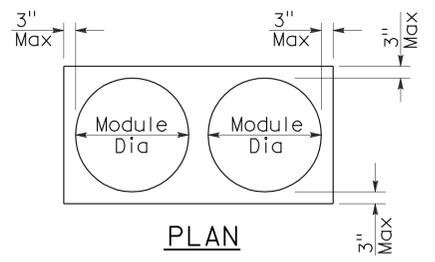
ARRAY 'TU11'

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	Riv	15	R0.5/R2.6	45	55

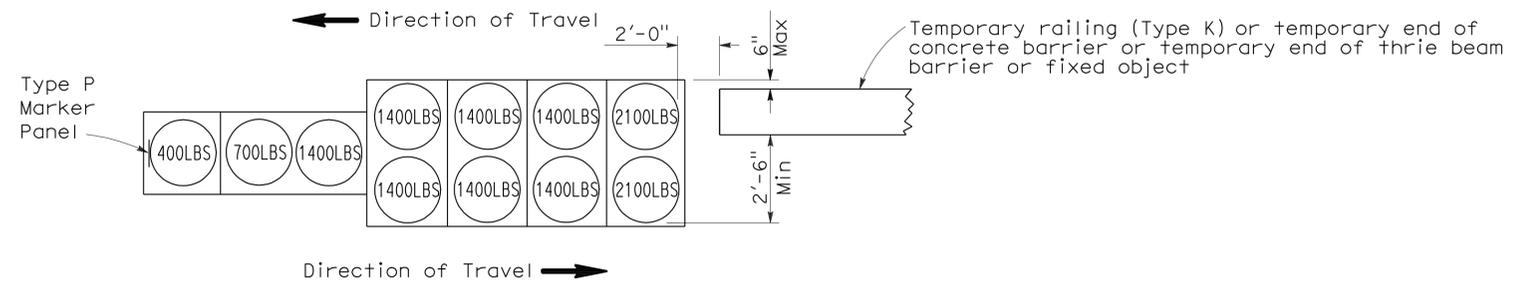
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

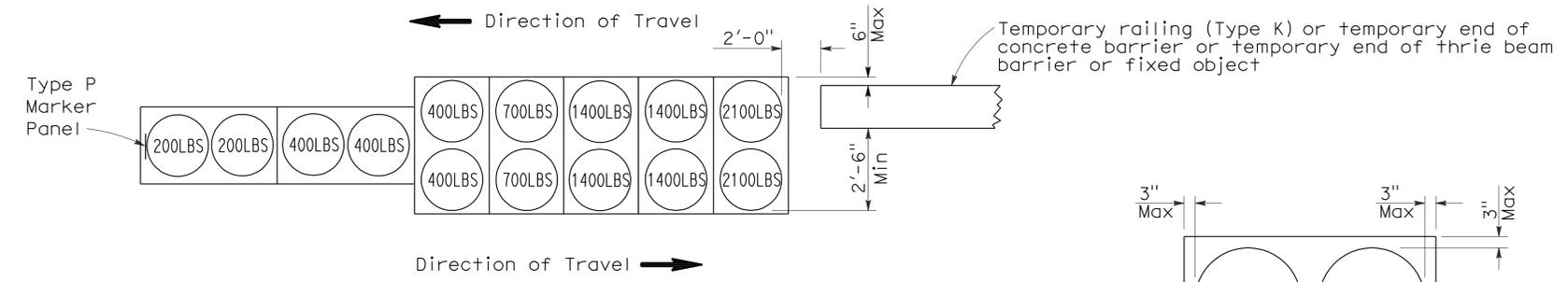
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 8-16-10



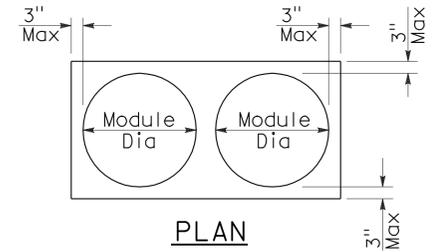
ARRAY 'TB11'

Approach speed less than 45 mph

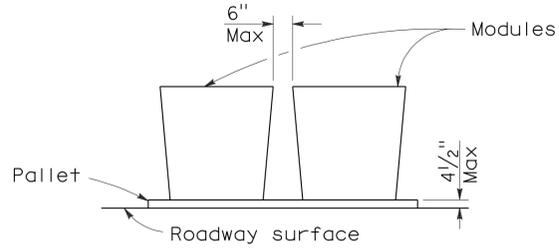


ARRAY 'TB14'

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

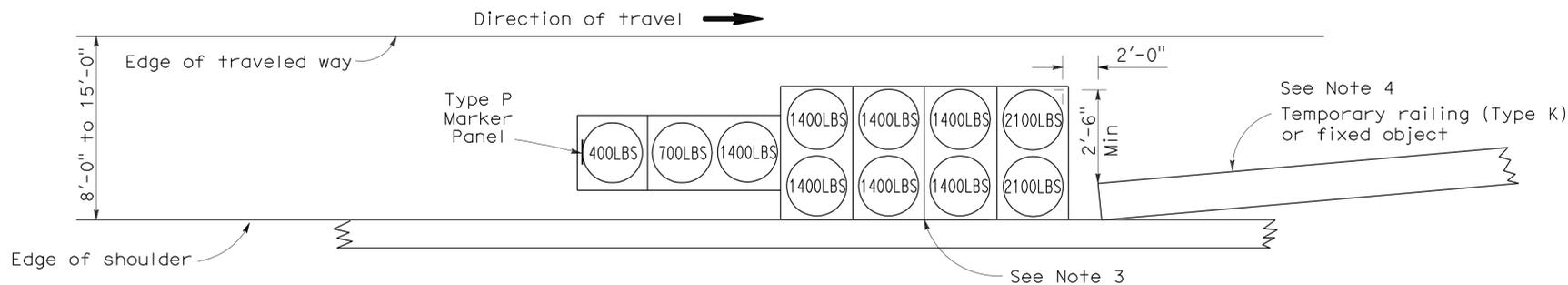
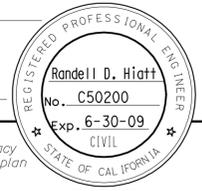
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	46	55

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

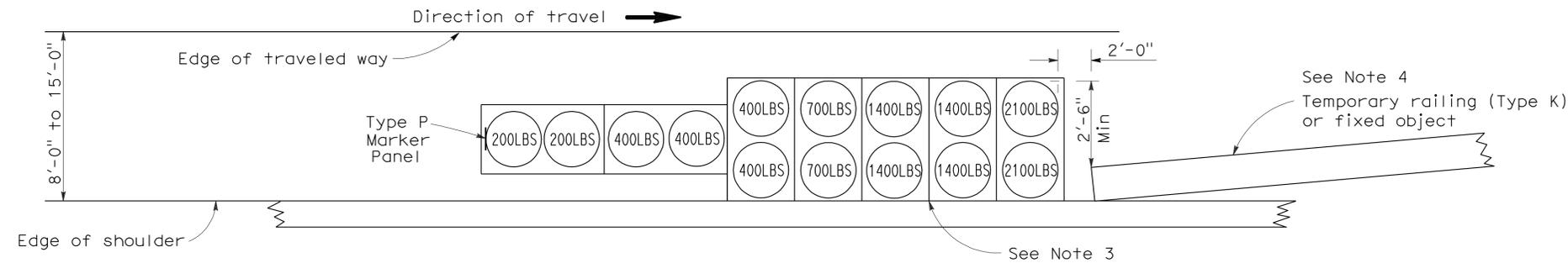
June 6, 2008
PLANS APPROVAL DATE

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

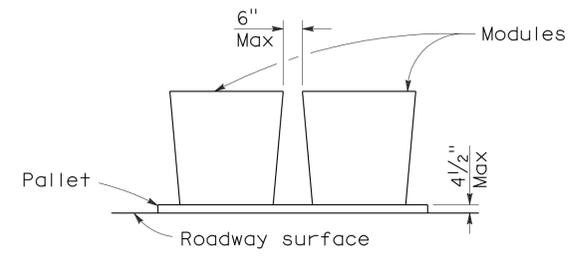
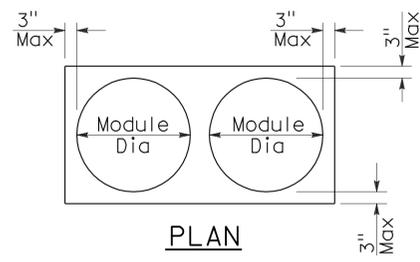
To accompany plans dated 8-16-10



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

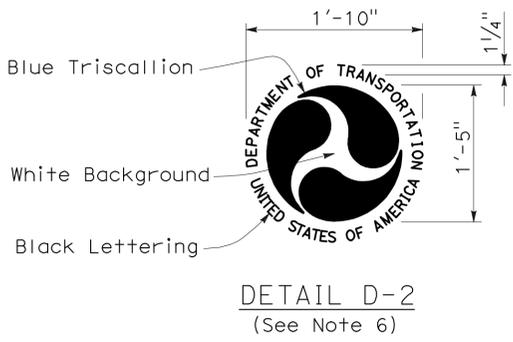
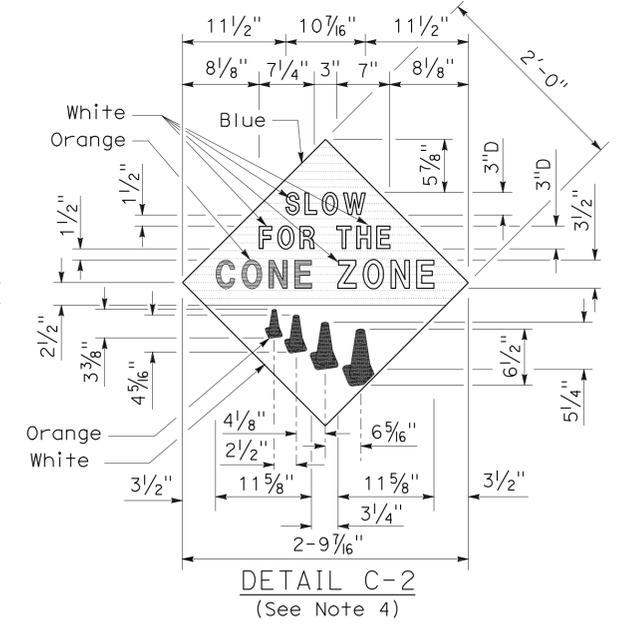
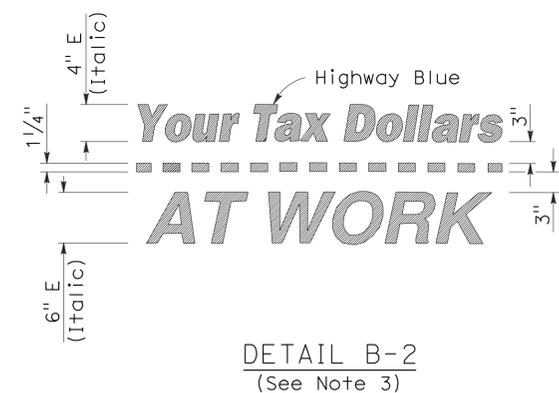
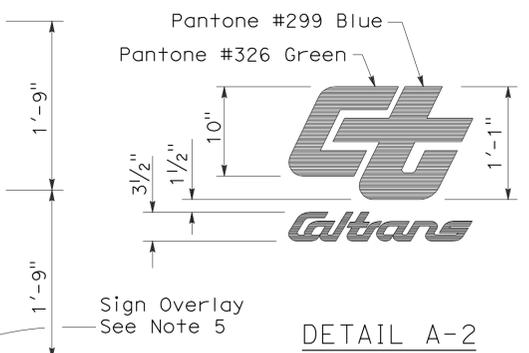
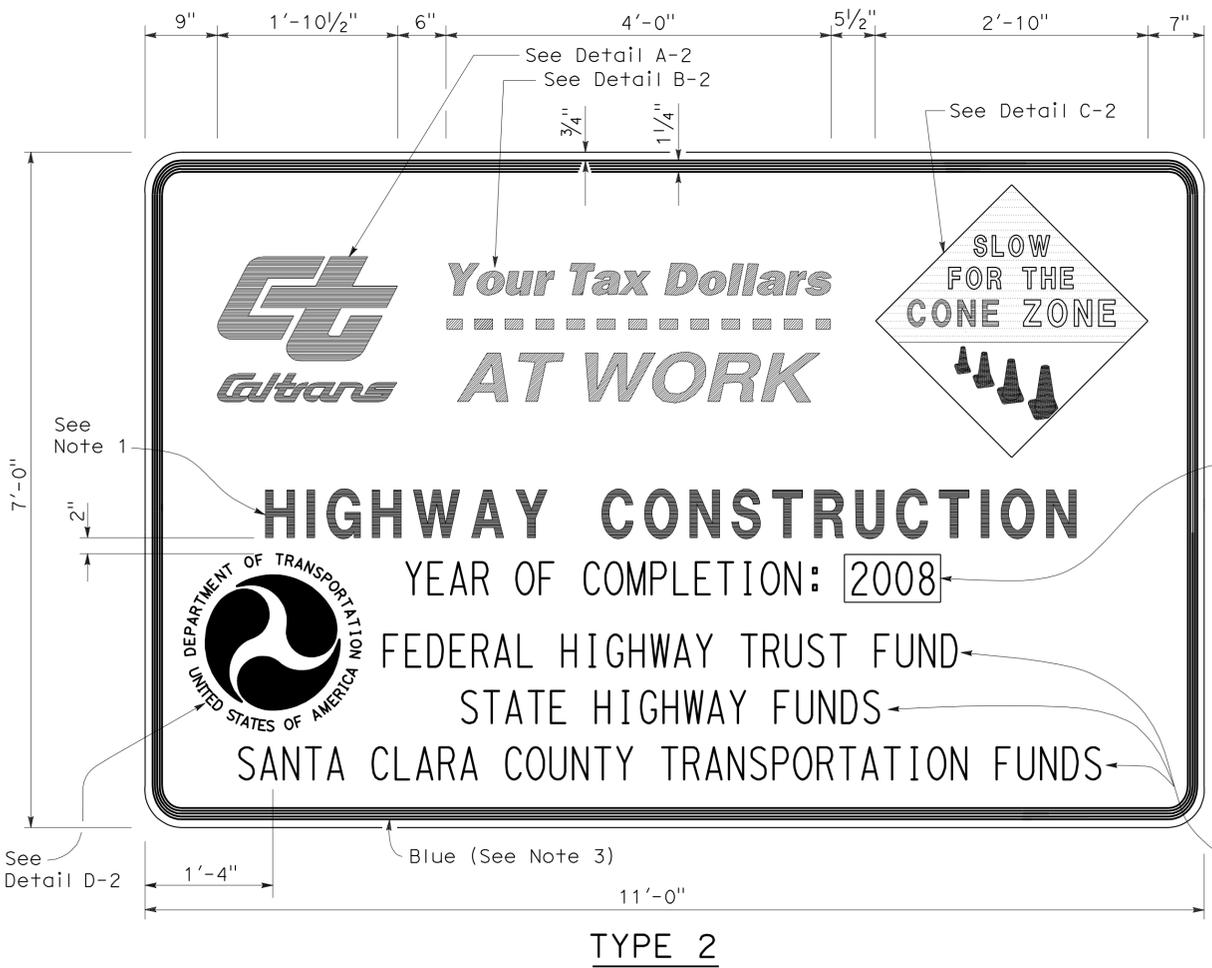
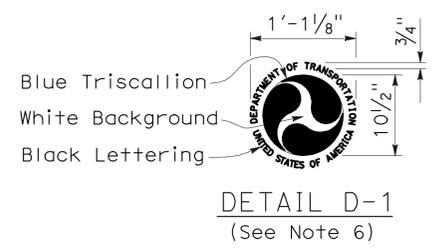
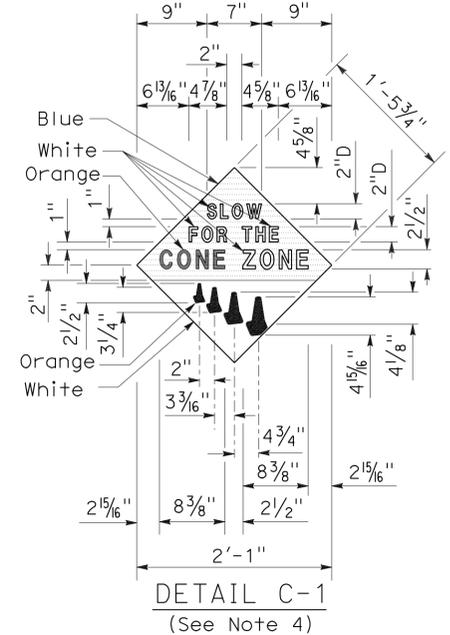
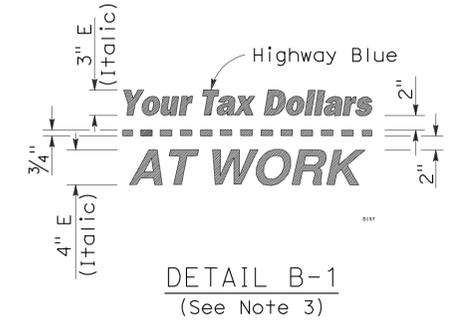
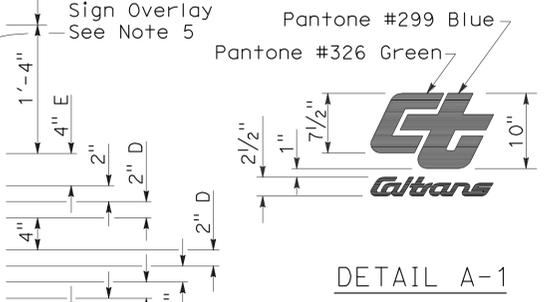
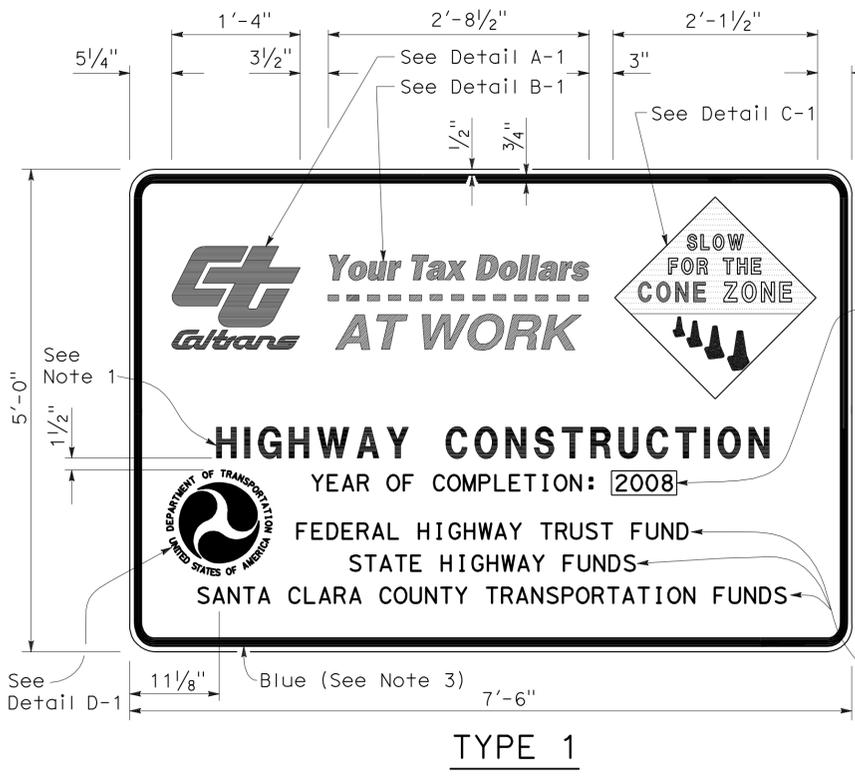
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	47	55

Craig W. Edwards
 REGISTERED CIVIL ENGINEER
 November 17, 2006
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 8-16-10

NOTES:

1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, "SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS

NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7 DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

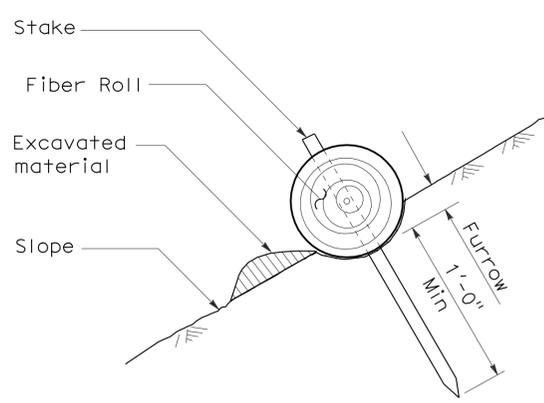
REVISED STANDARD PLAN RSP T7

2006 REVISED STANDARD PLAN RSP T7

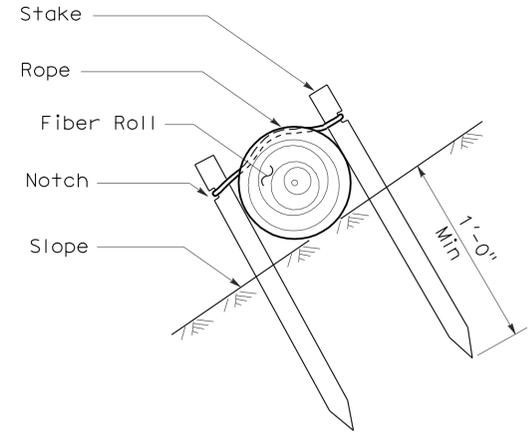
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	48	55

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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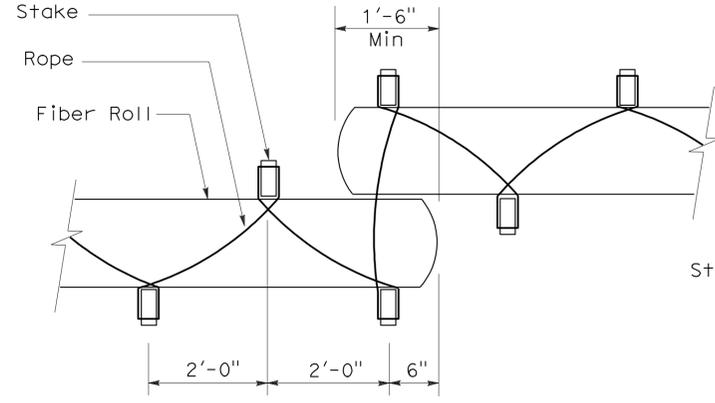
To accompany plans dated 8-16-10



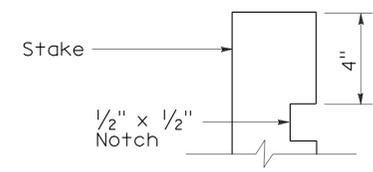
SECTION
TEMPORARY FIBER ROLL (TYPE 1)



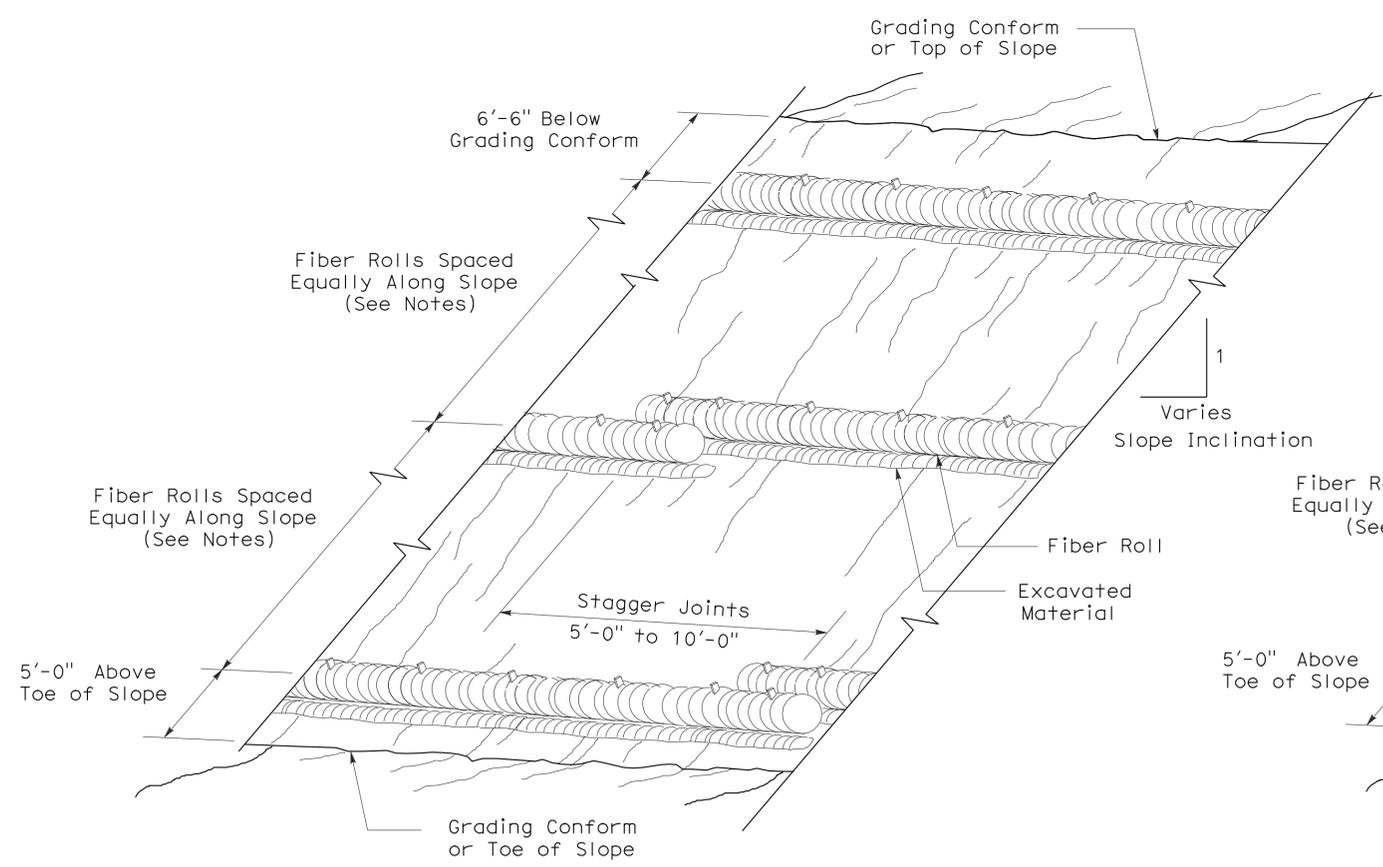
SECTION
TEMPORARY FIBER ROLL (TYPE 2)



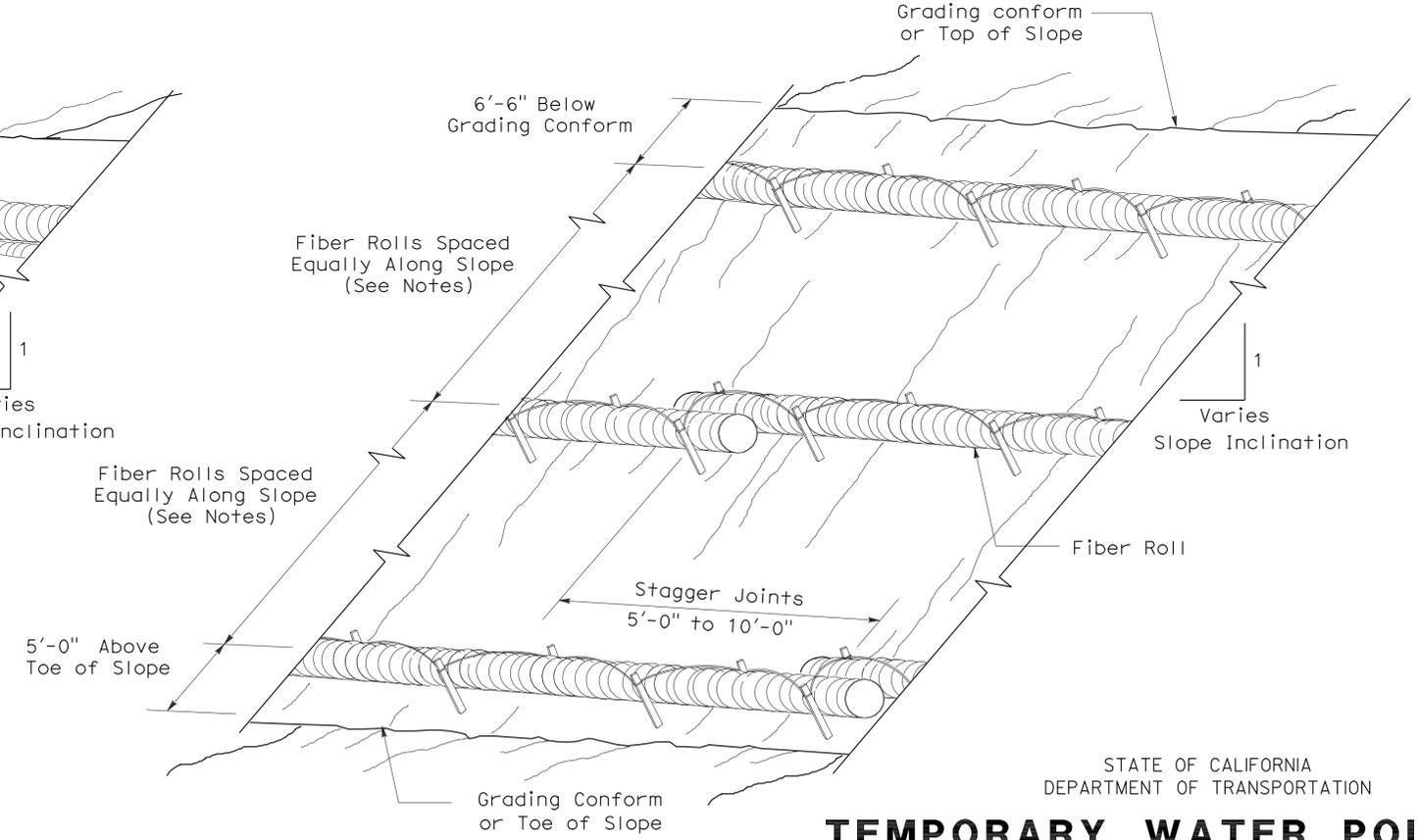
PLAN
ELEVATION
STAKE NOTCH DETAIL



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



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)
 NO SCALE

2006 REVISED STANDARD PLAN RSP T56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	49	55

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

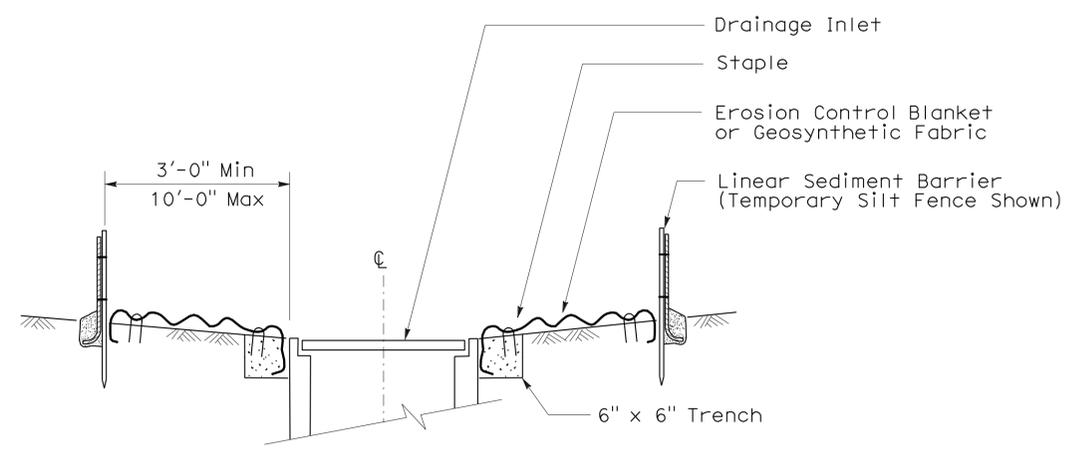
August 15, 2008
 PLANS Approval DATE

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.

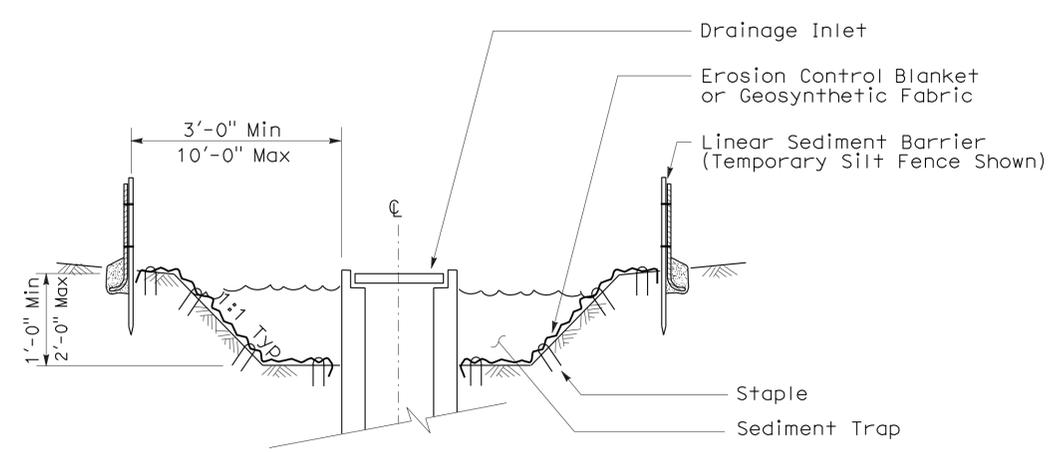
LICENSED LANDSCAPE ARCHITECT
 Robert B. Schott 2008
 Signature
 11-04-08
 Renewal Date
 08-11-08
 Date
 STATE OF CALIFORNIA

To accompany plans dated 8-16-10

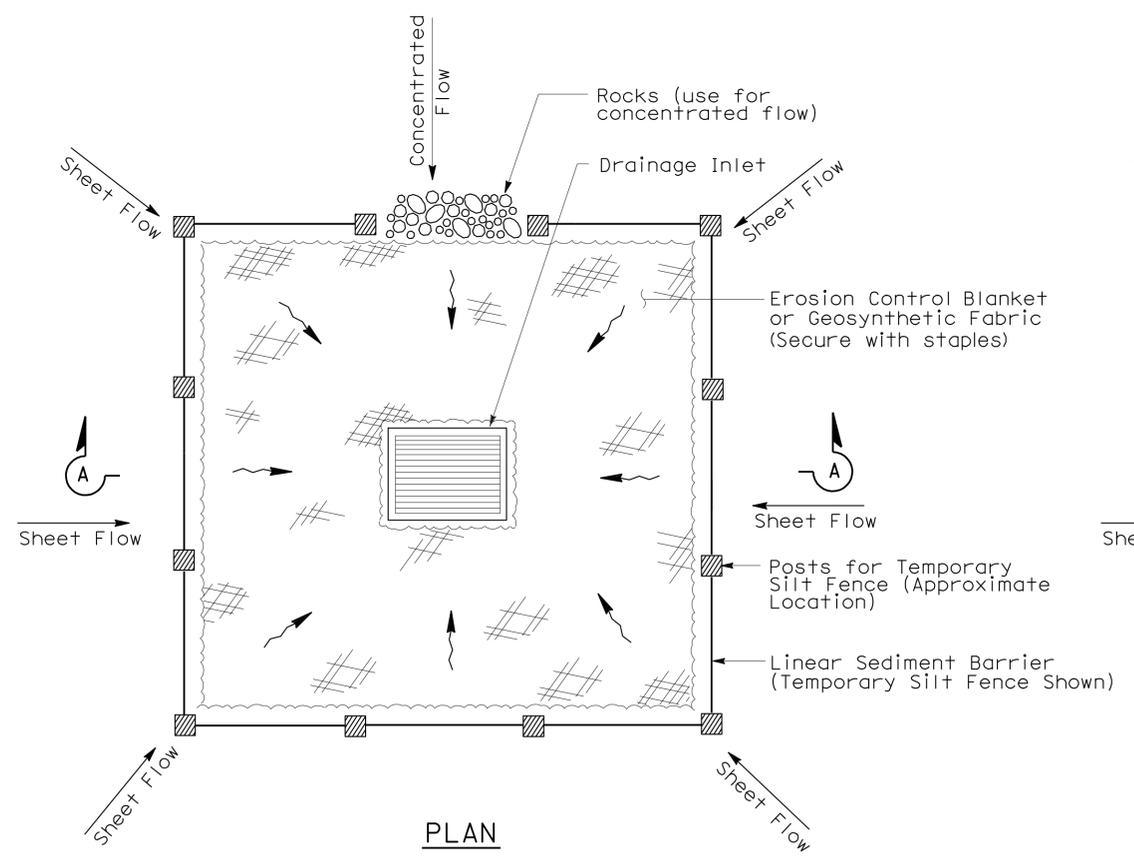
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



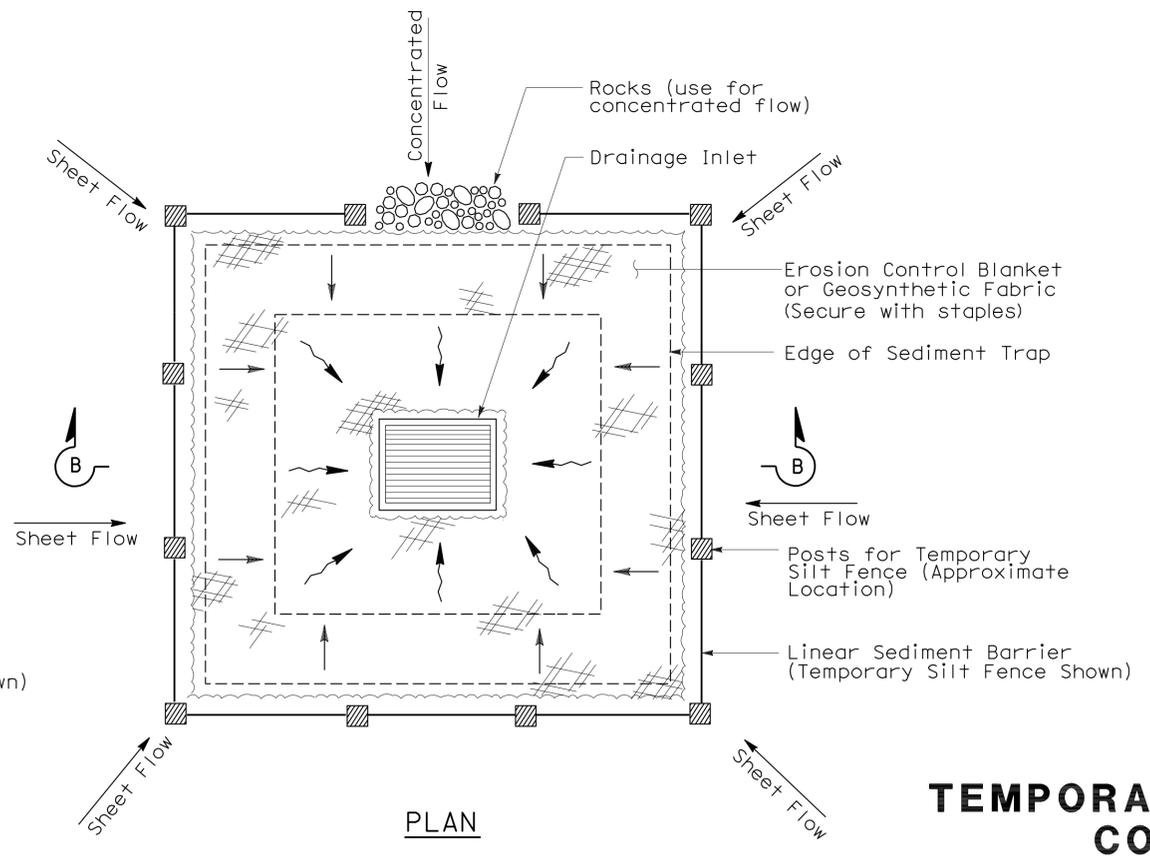
SECTION A-A



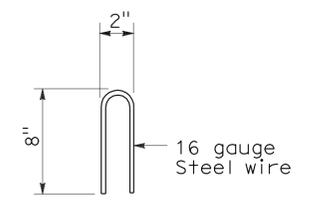
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



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



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

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

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	50	55

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

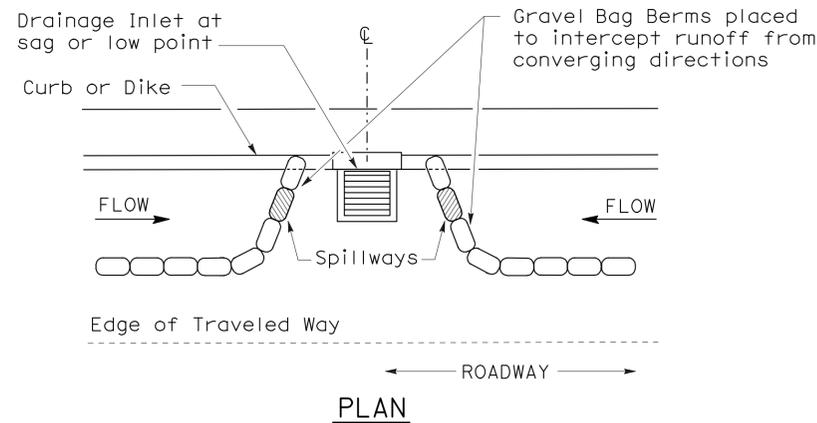
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

STATE OF CALIFORNIA
LICENSED LANDSCAPE ARCHITECT
Robert B. Schott
Signature
11-04-08
Renewal Date
08-11-08
Date

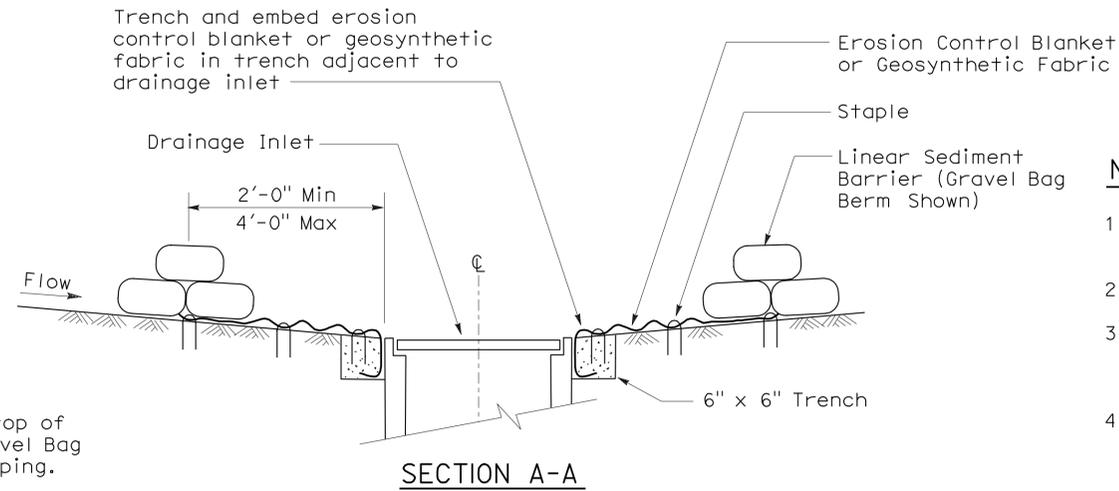
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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

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



PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

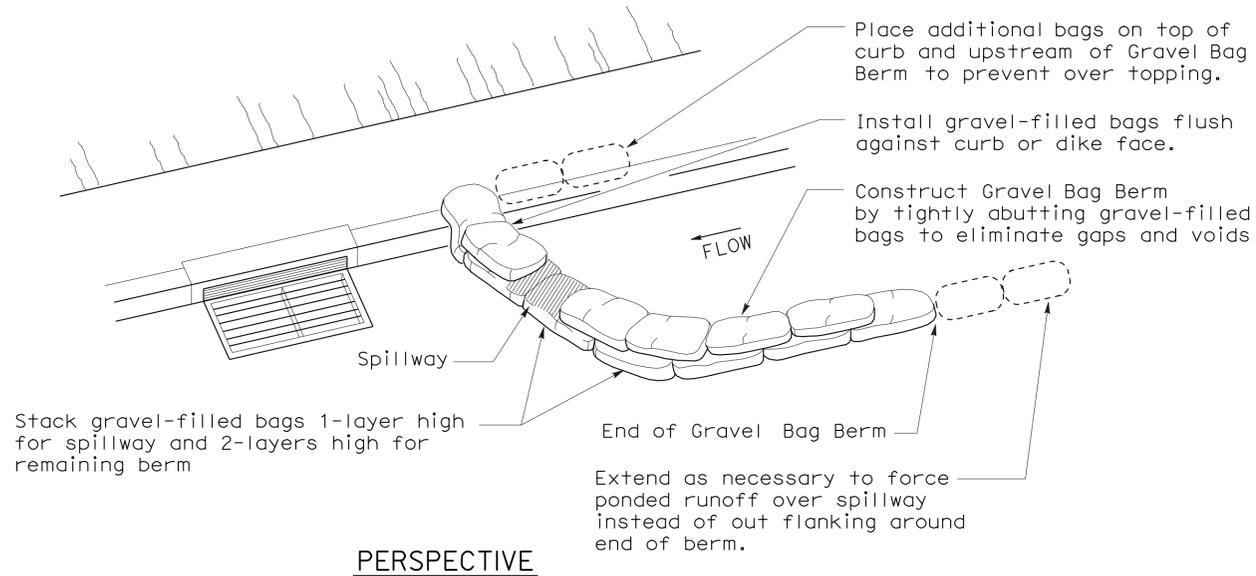


SECTION A-A

NOTES:

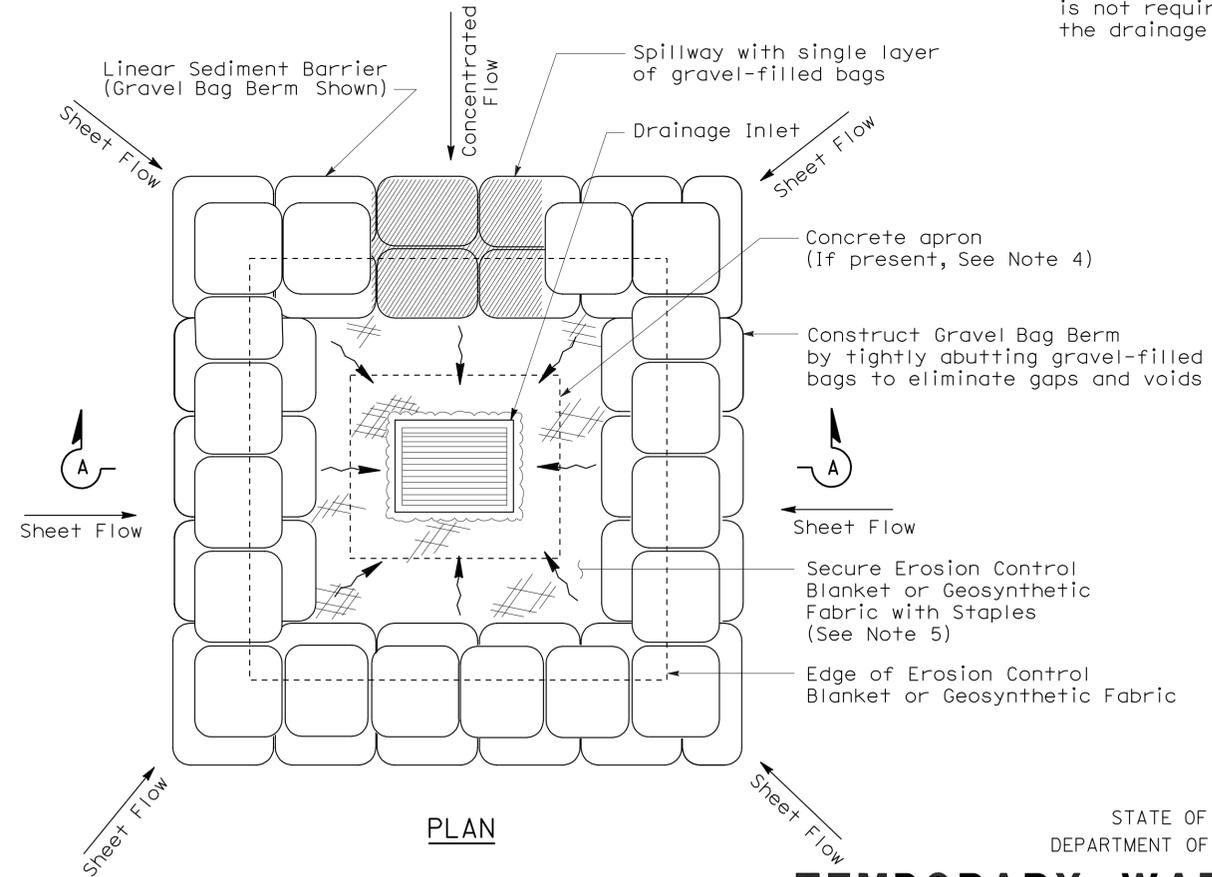
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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

To accompany plans dated 8-16-10



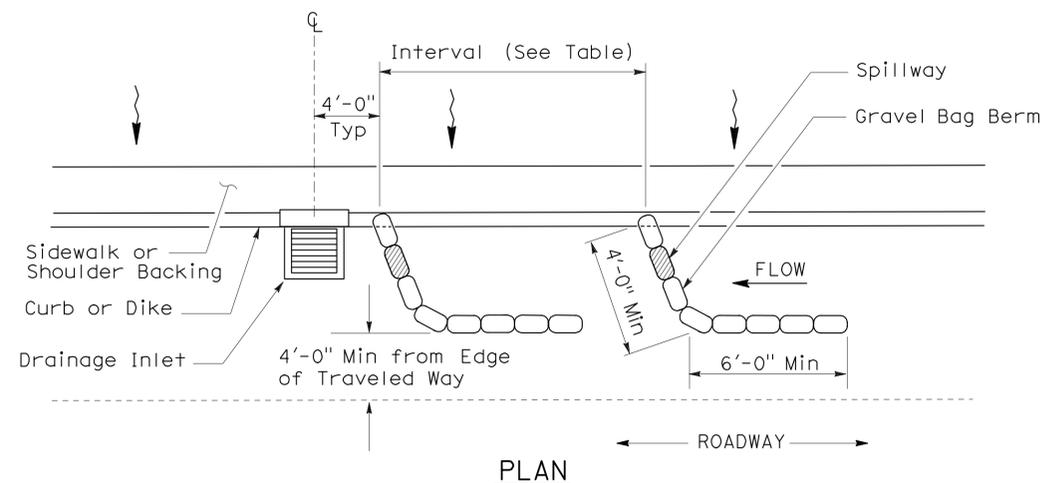
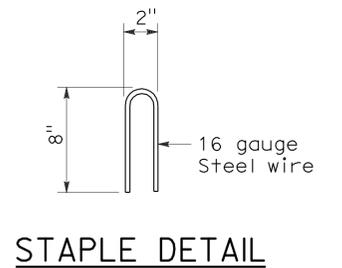
PERSPECTIVE

Stack gravel-filled bags 1-layer high for spillway and 2-layers high for remaining berm



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



PLAN

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

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

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

2006 NEW STANDARD PLAN NSP T62

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

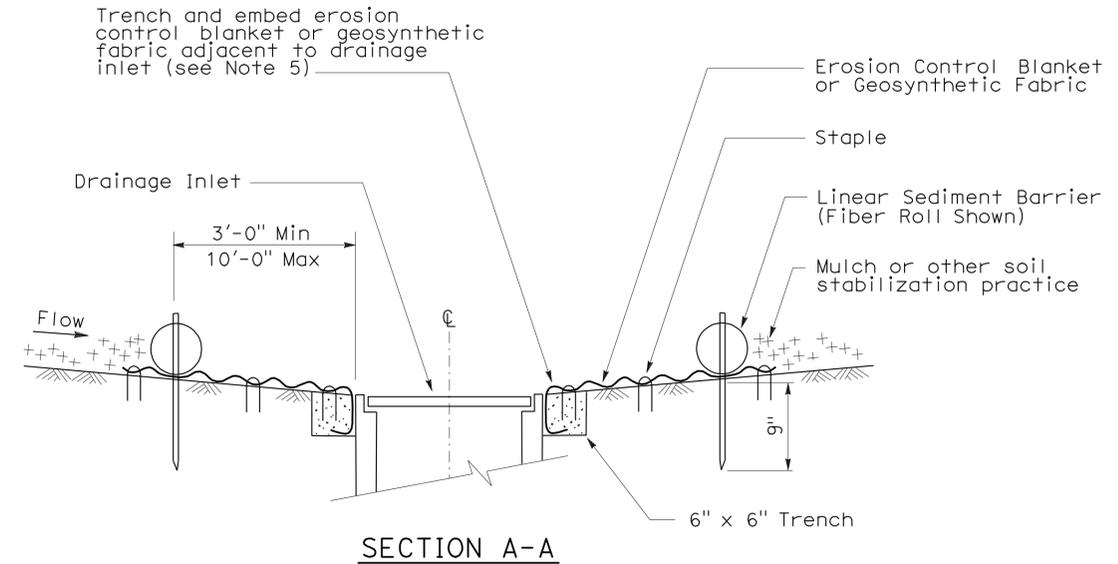
SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

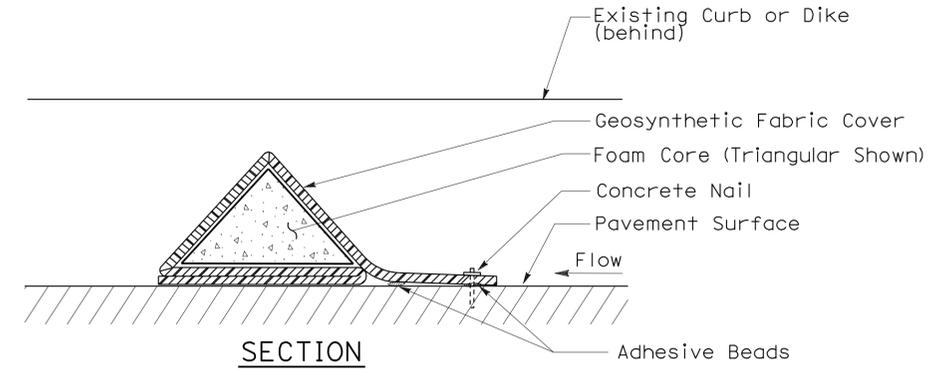
August 15, 2008
 PLANS APPROVAL DATE

To accompany plans dated 8-16-10

STATE OF CALIFORNIA
 LICENSED LANDSCAPE ARCHITECT
 Robert B. Schott
 Signature: 11-04-08
 Renewal Date: 08-11-08
 Date



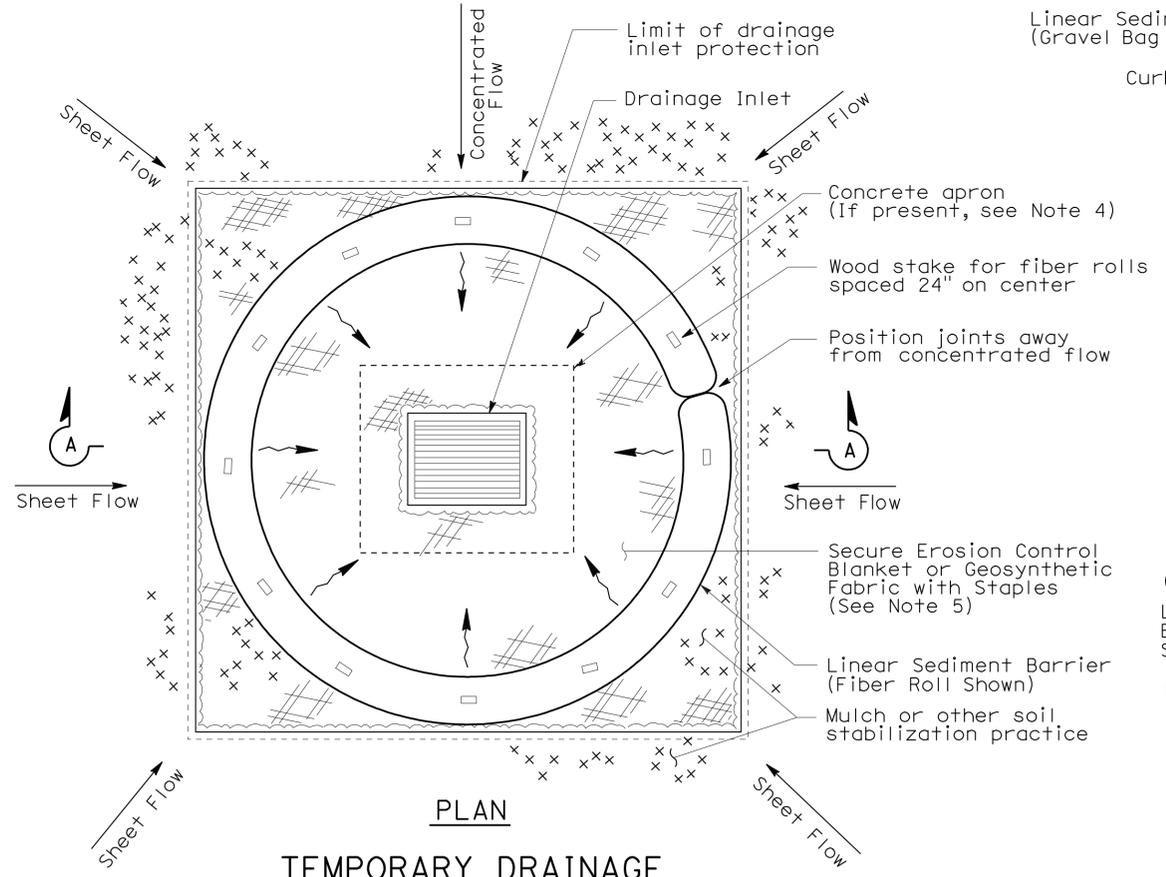
SECTION A-A



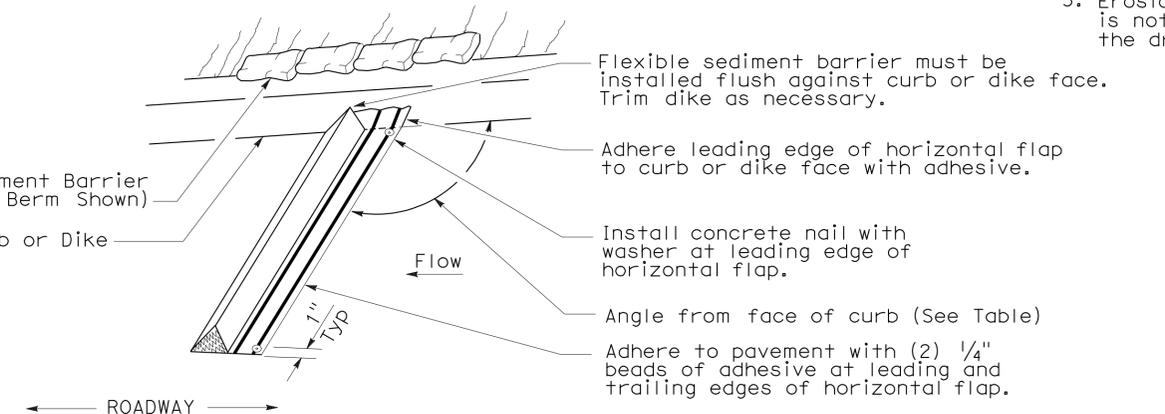
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

NOTES:

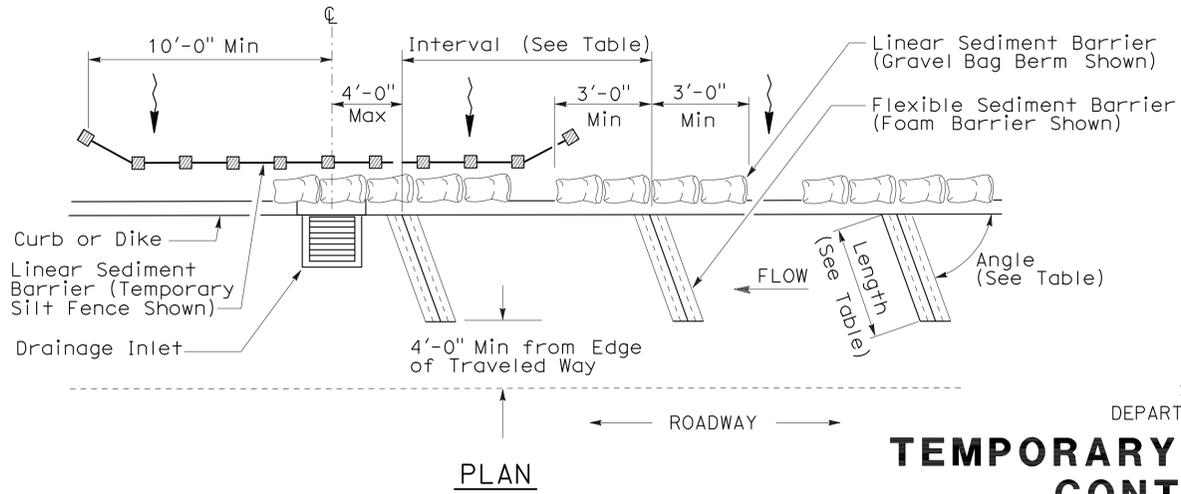
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



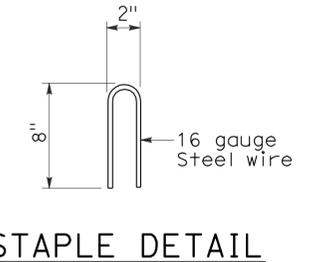
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



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



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

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

2006 NEW STANDARD PLAN NSP T63

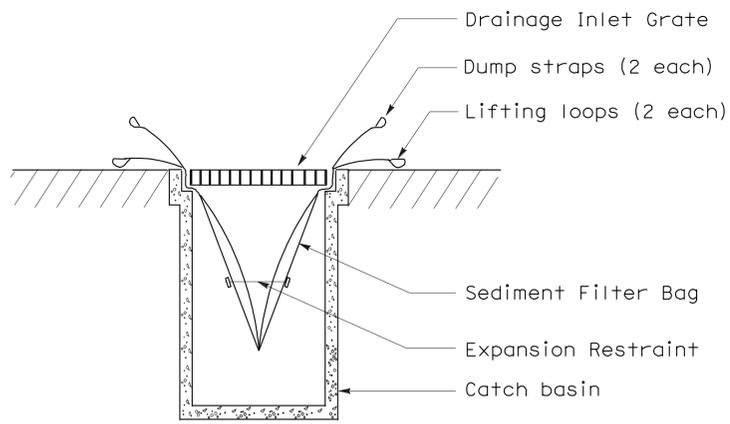
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	R0.5/R2.6	52	55

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

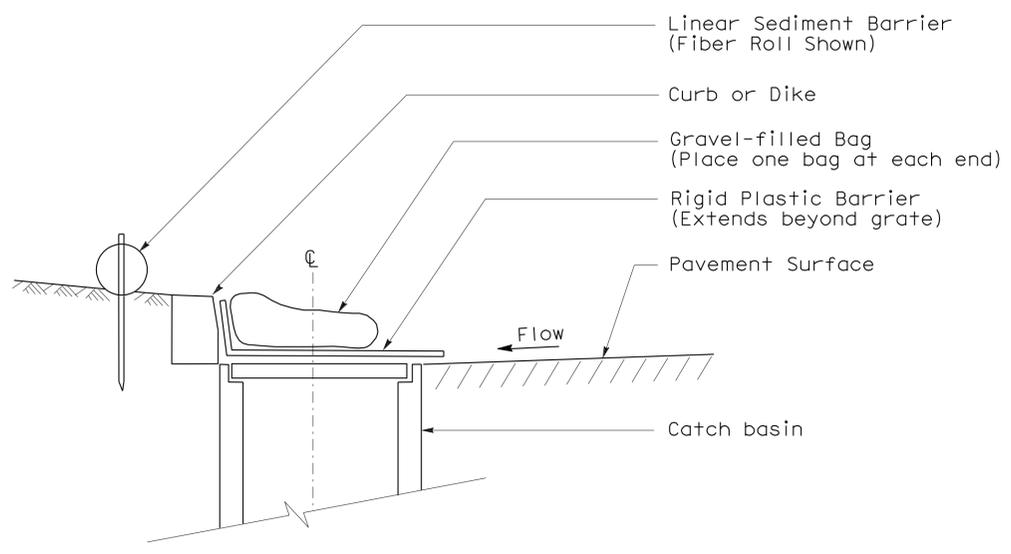
August 15, 2008
 PLANS APPROVAL DATE

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 Signature
 11-04-08
 Renewal Date
 08-11-08
 Date

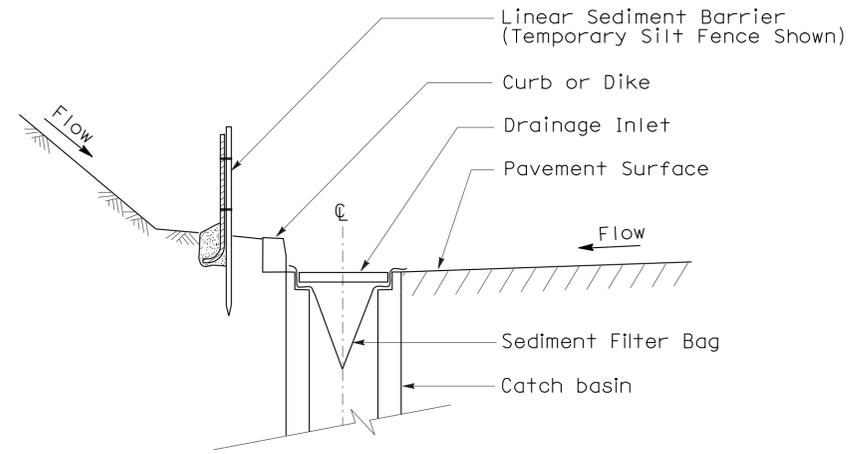
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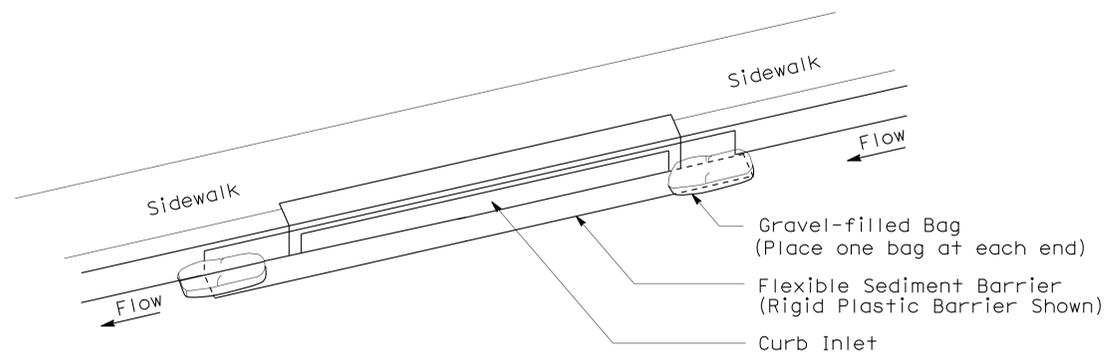
SECTION B-B
SEDIMENT FILTER BAG DETAIL



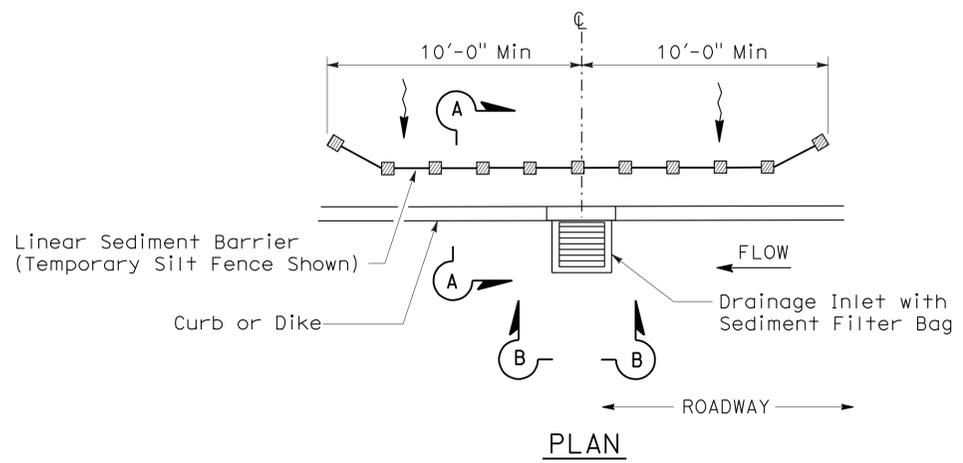
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



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.

To accompany plans dated 8-16-10

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

ELECTROLIERS

STANDARD TYPES	Symbol	Description
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		NOTES: 1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified. 2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified. 3. Variations noted adjacent to symbol on project plans.
32		
35		
36-20A		

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

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

PROPOSED	EXISTING	Description
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	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	53	55

REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 8-16-10

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

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

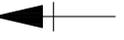
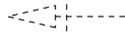
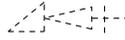
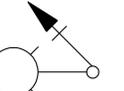
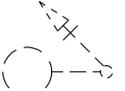
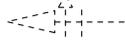
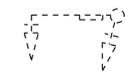
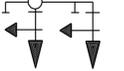
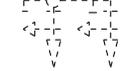
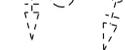
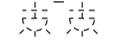
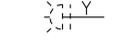
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	RO.5/R2.6	54	55

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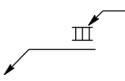
CONDUIT

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

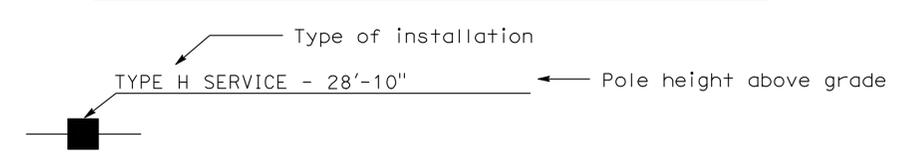
SIGNAL EQUIPMENT

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

SERVICE EQUIPMENT

PROPOSED	EXISTING	
---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 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

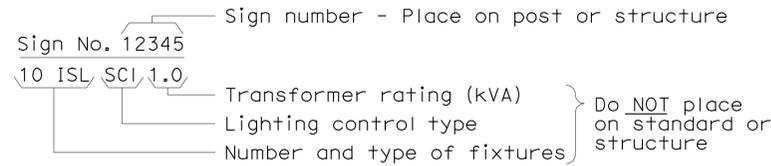
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

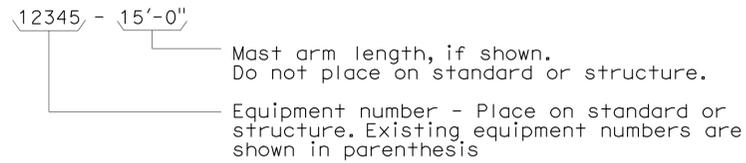
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EQUIPMENT IDENTIFICATION

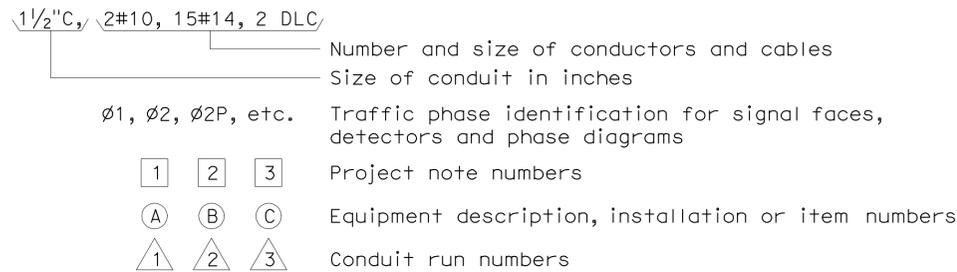
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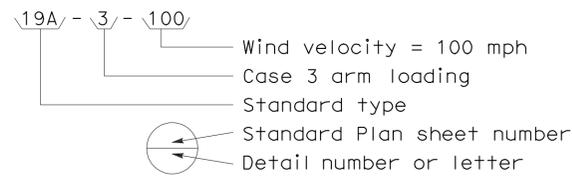
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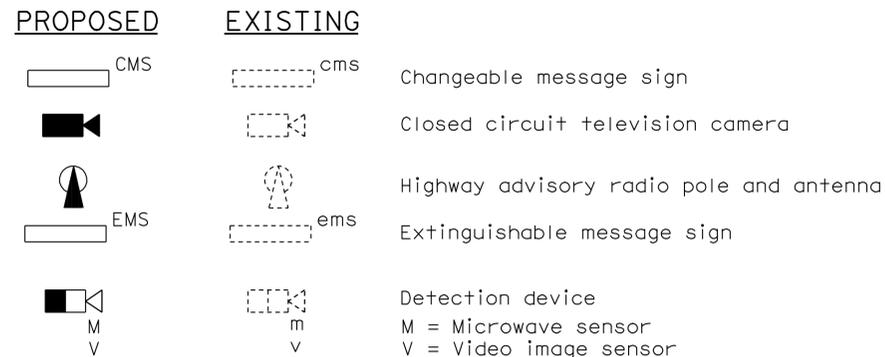
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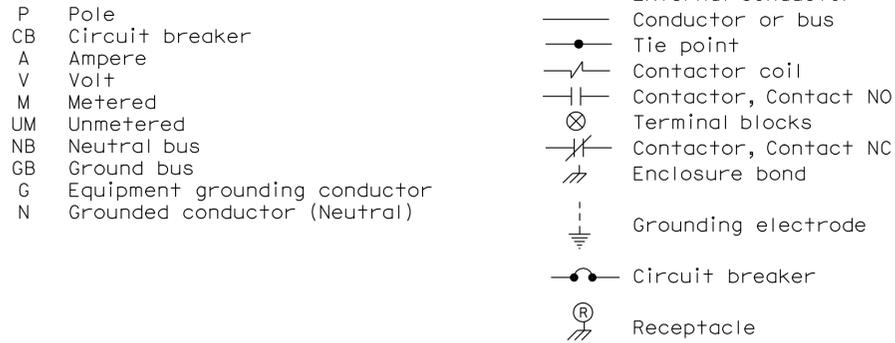
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



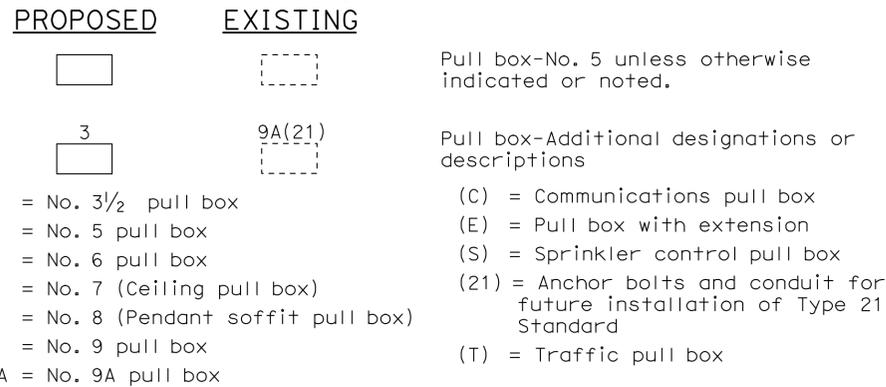
MISCELLANEOUS EQUIPMENT



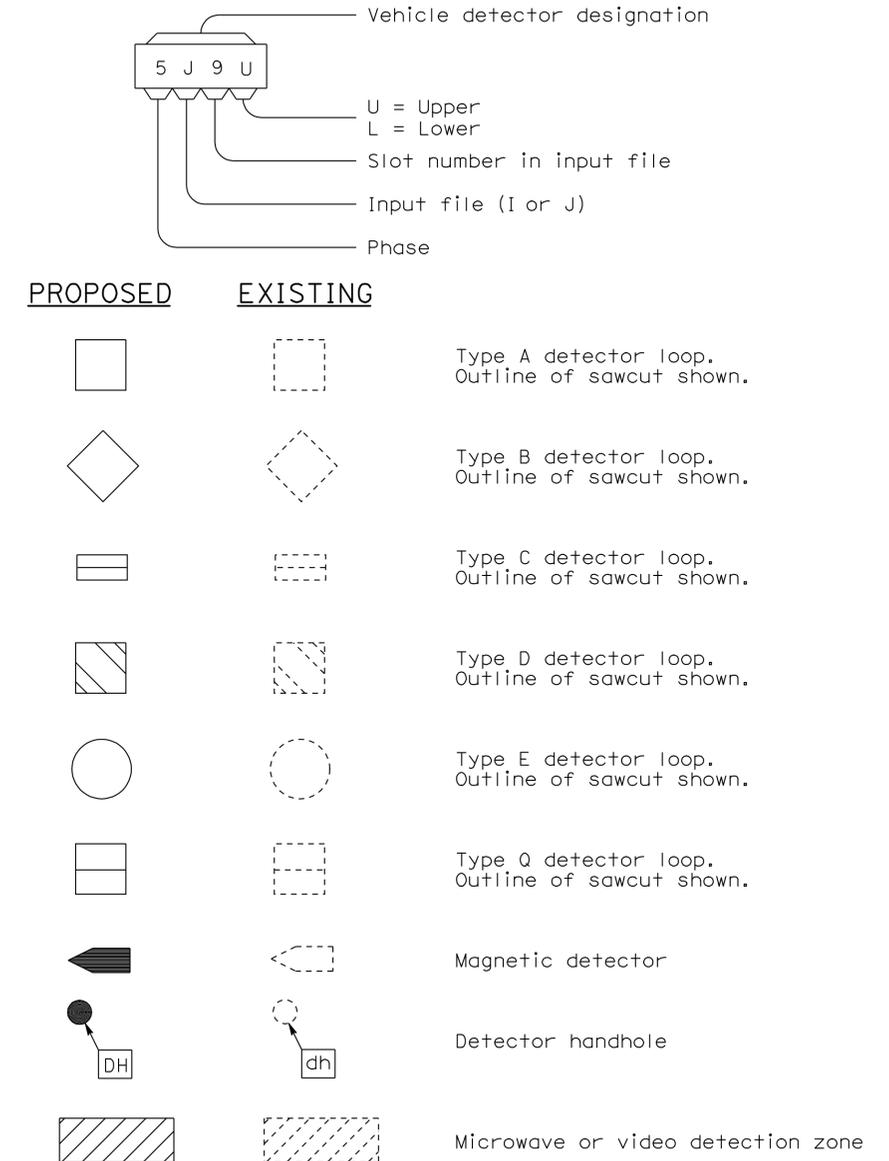
WIRING DIAGRAM LEGEND



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