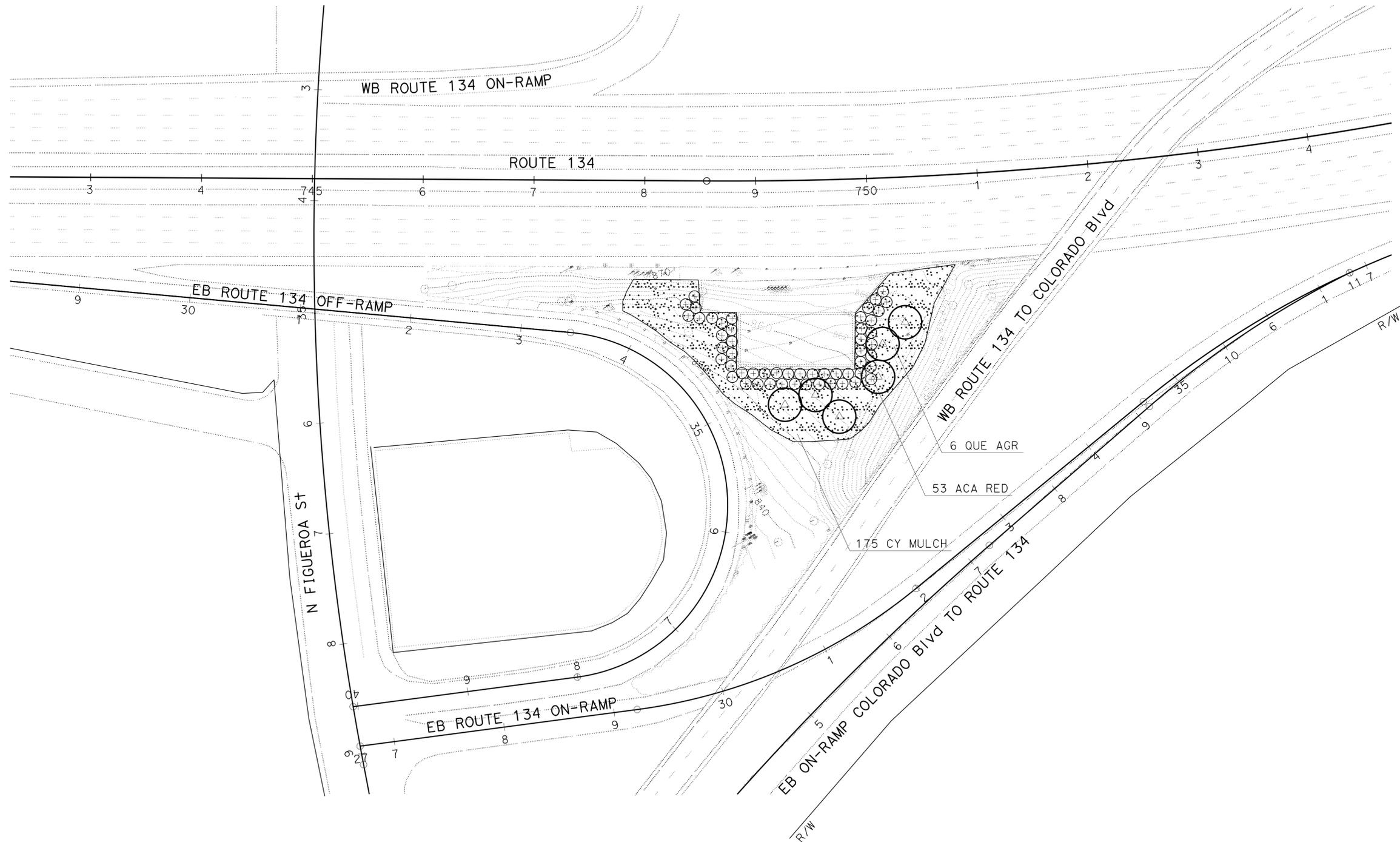
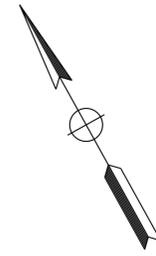


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	201	291
 LICENSED LANDSCAPE ARCHITECT 6-2-14 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
					

**NOTES:**

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED-DESIGNED BY	RICH KESTER	REVISED BY
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	JENNIFER TAIRA	CHECKED BY	GLEN LEVSTIK	DATE REVISED

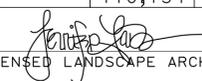
APPROVED FOR PLANTING WORK ONLY

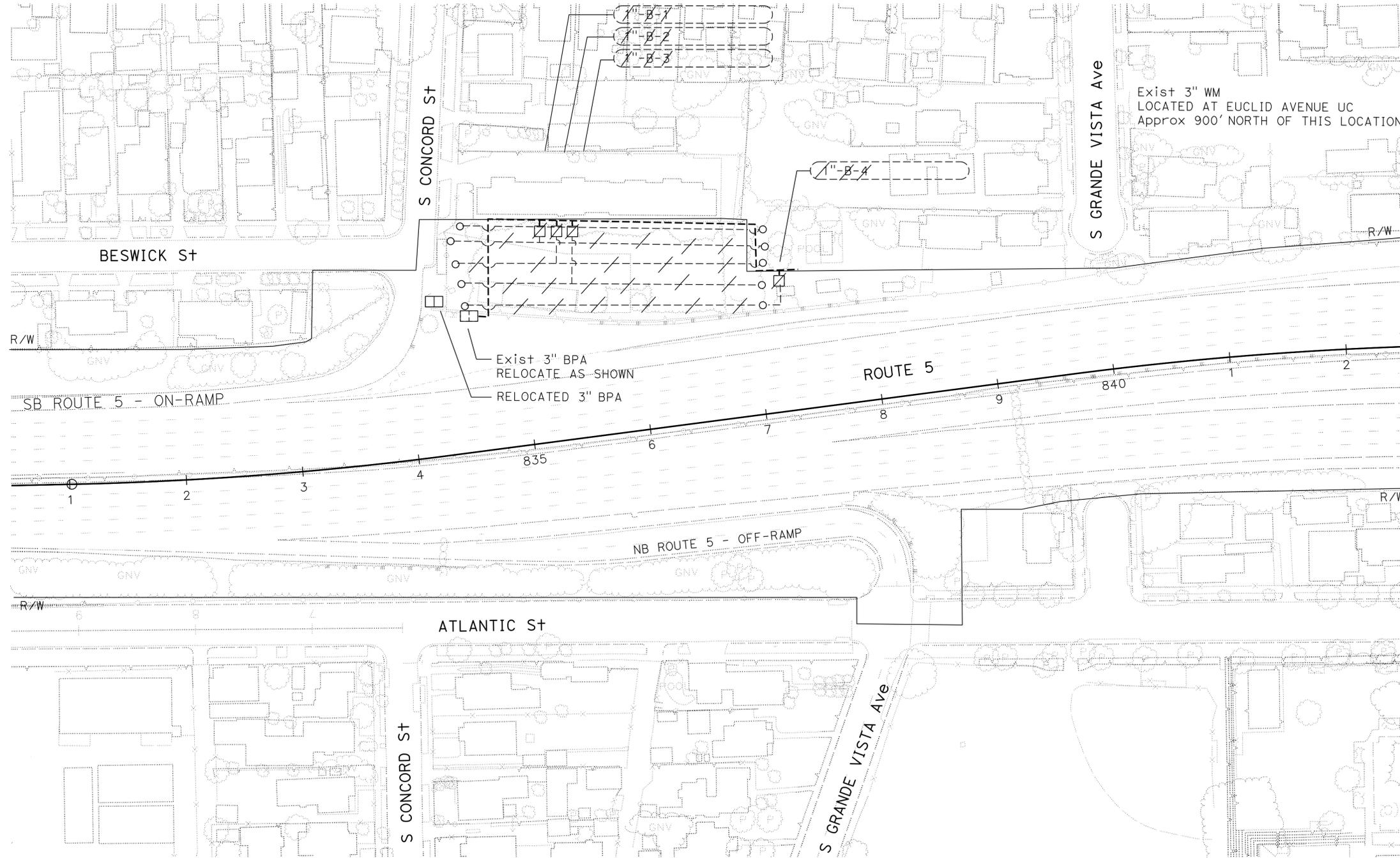
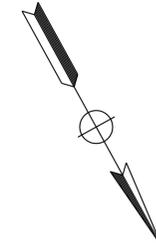
**PLANTING PLAN**  
 SCALE: 1" = 50'  
**PP-15**



**NOTE:**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	202	291
 LICENSED LANDSCAPE ARCHITECT 6-2-14 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>					
					



CALCULATED-DESIGNED BY	REVISOR	REVISION
CHECKED BY	RICH KESTER	
SENIOR LANDSCAPE ARCHITECT	GLEN LEVSTIK	
LANDSCAPE ARCHITECT		
DEPARTMENT OF TRANSPORTATION		
LANDSCAPE ARCHITECTURE	JENNIFER TAIRA	

**IRRIGATION PLAN**  
SCALE: 1" = 50'  
**IP-1**

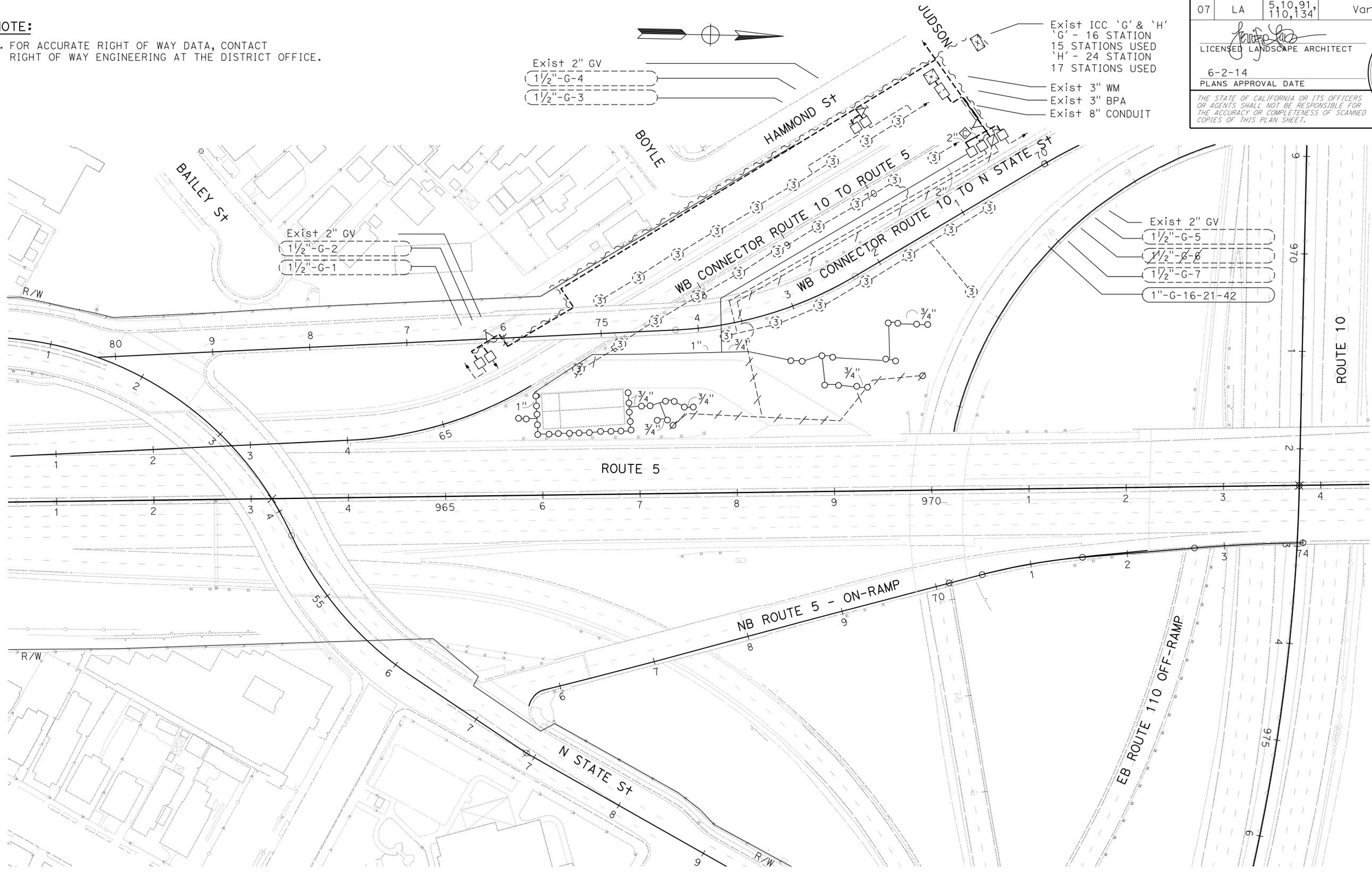
APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION DATE PLOTTED => 12-SEP-2014  
00-00-00 TIME PLOTTED => 07:25

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	203	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 JENNIFER TAIRA  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 RICH KESTER  
 GEORGE OLGUIN  
 REVISED BY  
 DATE REVISED

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-2**

APPROVED FOR IRRIGATION WORK ONLY

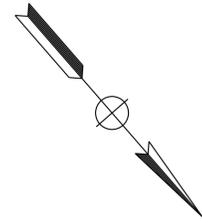
LAST REVISION: DATE PLOTTED => 12-SEP-2014  
 00-00-00 TIME PLOTTED => 07:25



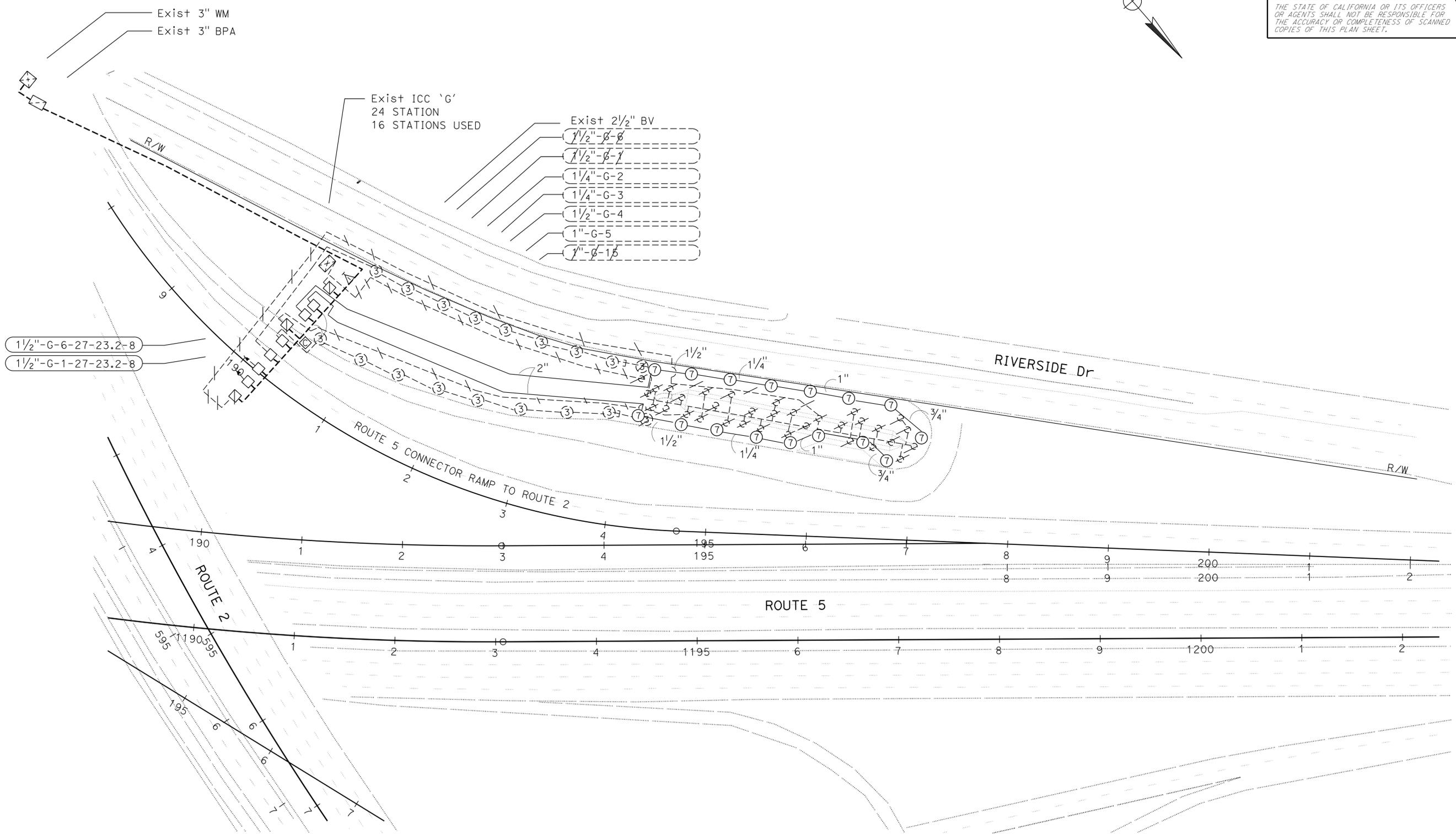
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	205	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 RICH KESTER  
 GLEN LEVSTIK  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JENNIFER TAIRA



**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-4**

APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION   
 DATE PLOTTED => 12-SEP-2014   
 00-00-00   
 TIME PLOTTED => 07:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	206	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT JENNIFER TAIRA  
 CALCULATED/DESIGNED BY CHECKED BY  
 RICH KESTER GLEN LEVSTIK  
 REVISED BY DATE REVISED

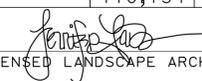
**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-5**

APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION DATE PLOTTED => 12-SEP-2014  
 00-00-00 TIME PLOTTED => 07:25

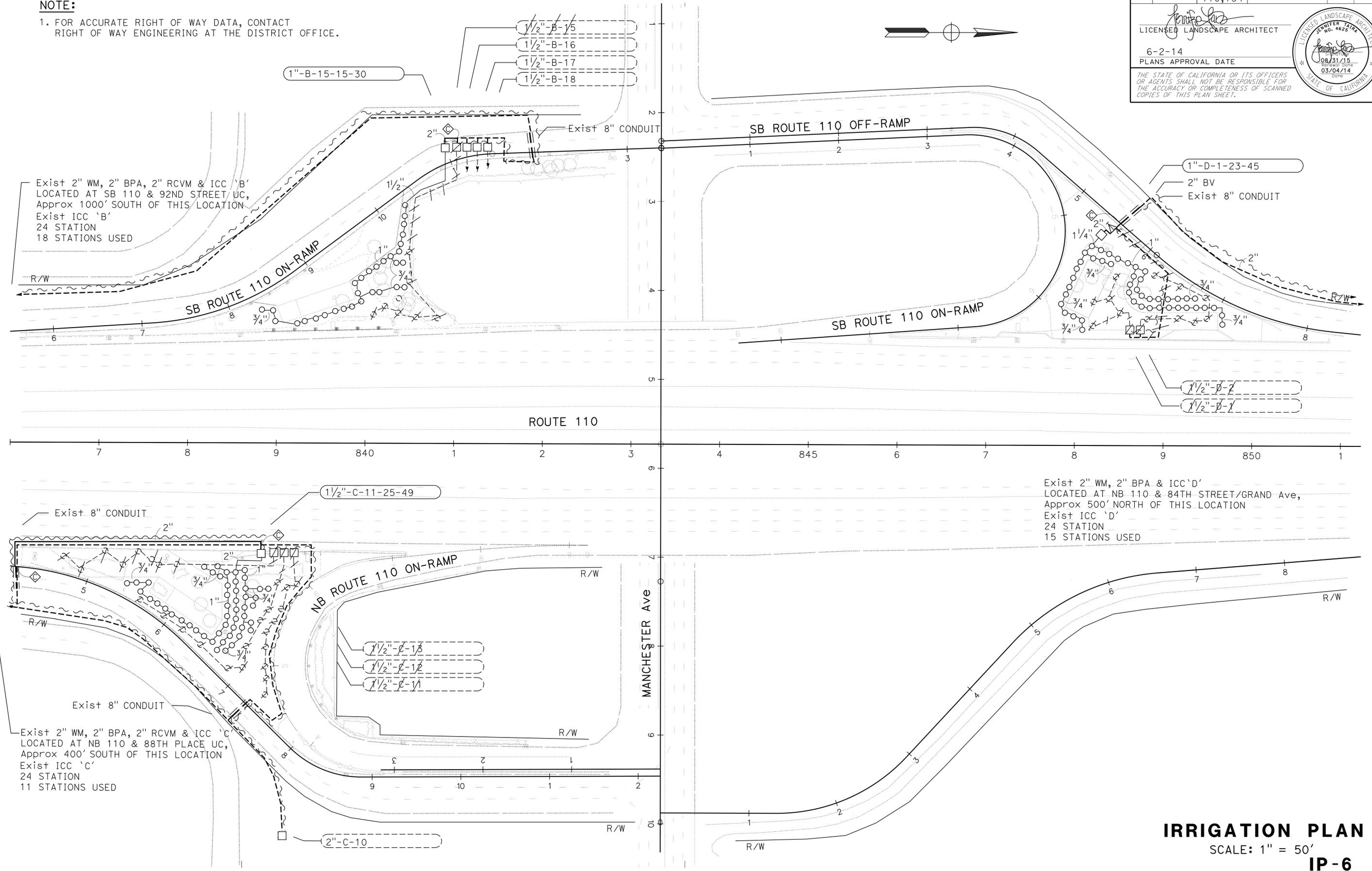
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	207	291

 LICENSED LANDSCAPE ARCHITECT		
6-2-14 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>		

**NOTE:**

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA  
 RICH KESTER  
 GLEN LEVSTIK  
 CALCULATED/DESIGNED BY: JENNIFER TAIRA  
 CHECKED BY:  
 REVISED BY: DATE REVISED:  
 USERNAME => s121614  
 DGN FILE => 725902sp006.dgn

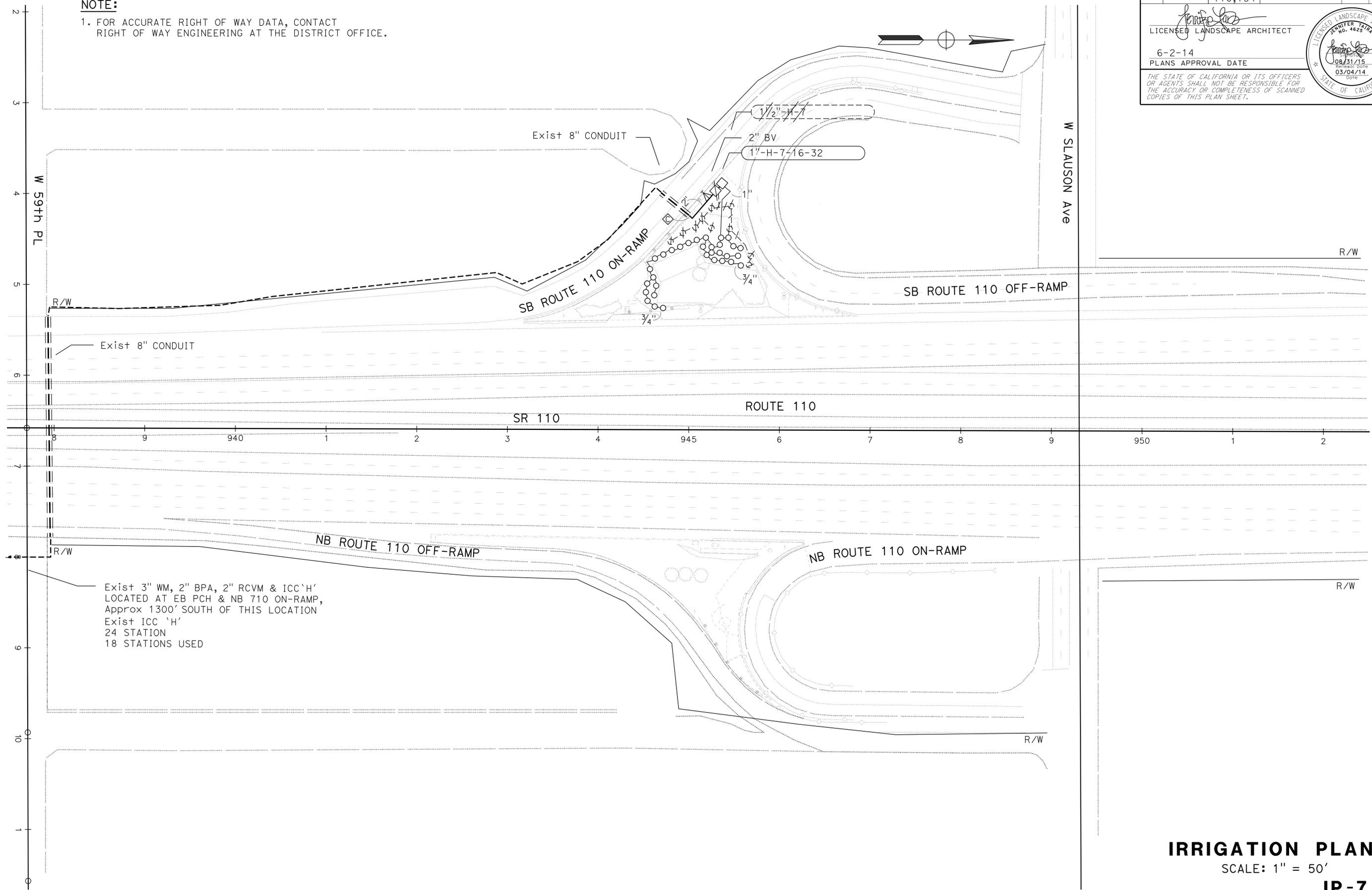
APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-6**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134'	Var	208	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



Exist 3" WM, 2" BPA, 2" RCVM & ICC 'H'  
 LOCATED AT EB PCH & NB 710 ON-RAMP,  
 Approx 1300' SOUTH OF THIS LOCATION  
 Exist ICC 'H'  
 24 STATION  
 18 STATIONS USED

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-7**

APPROVED FOR IRRIGATION WORK ONLY

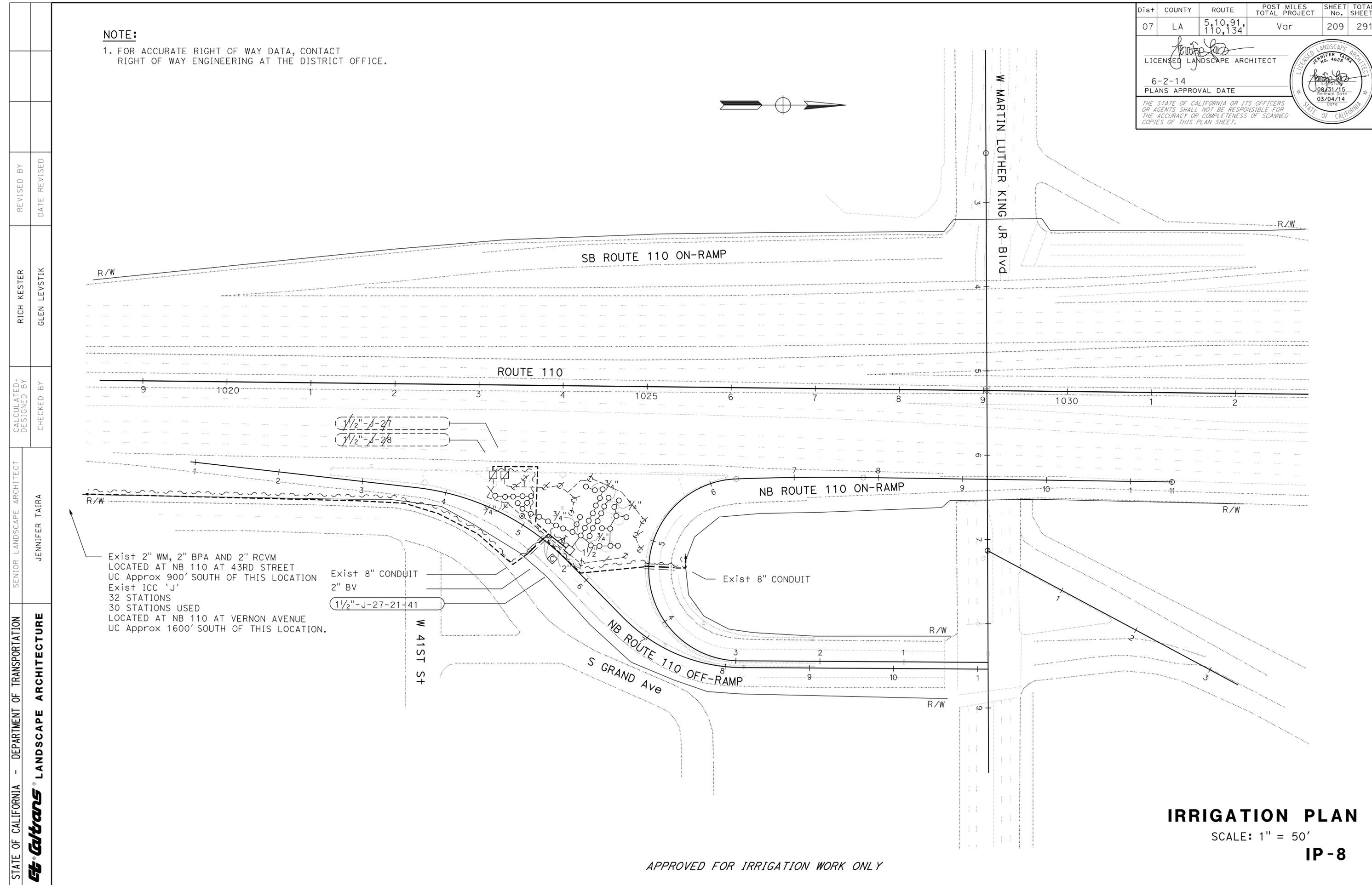
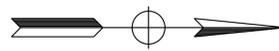
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CHECKED BY	DESIGNED BY	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	JENNIFER TAIRA	GLEN LEVSTIK	RICH KESTER		

LAST REVISION DATE PLOTTED => 12-SEP-2014 00-00-00 TIME PLOTTED => 07:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	209	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	RICH KESTER	REVISOR BY	REVISOR DATE
		JENNIFER TAIRA	CHECKED BY	GLEN LEVSTIK		

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-8**

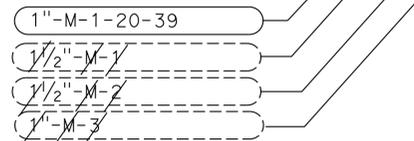
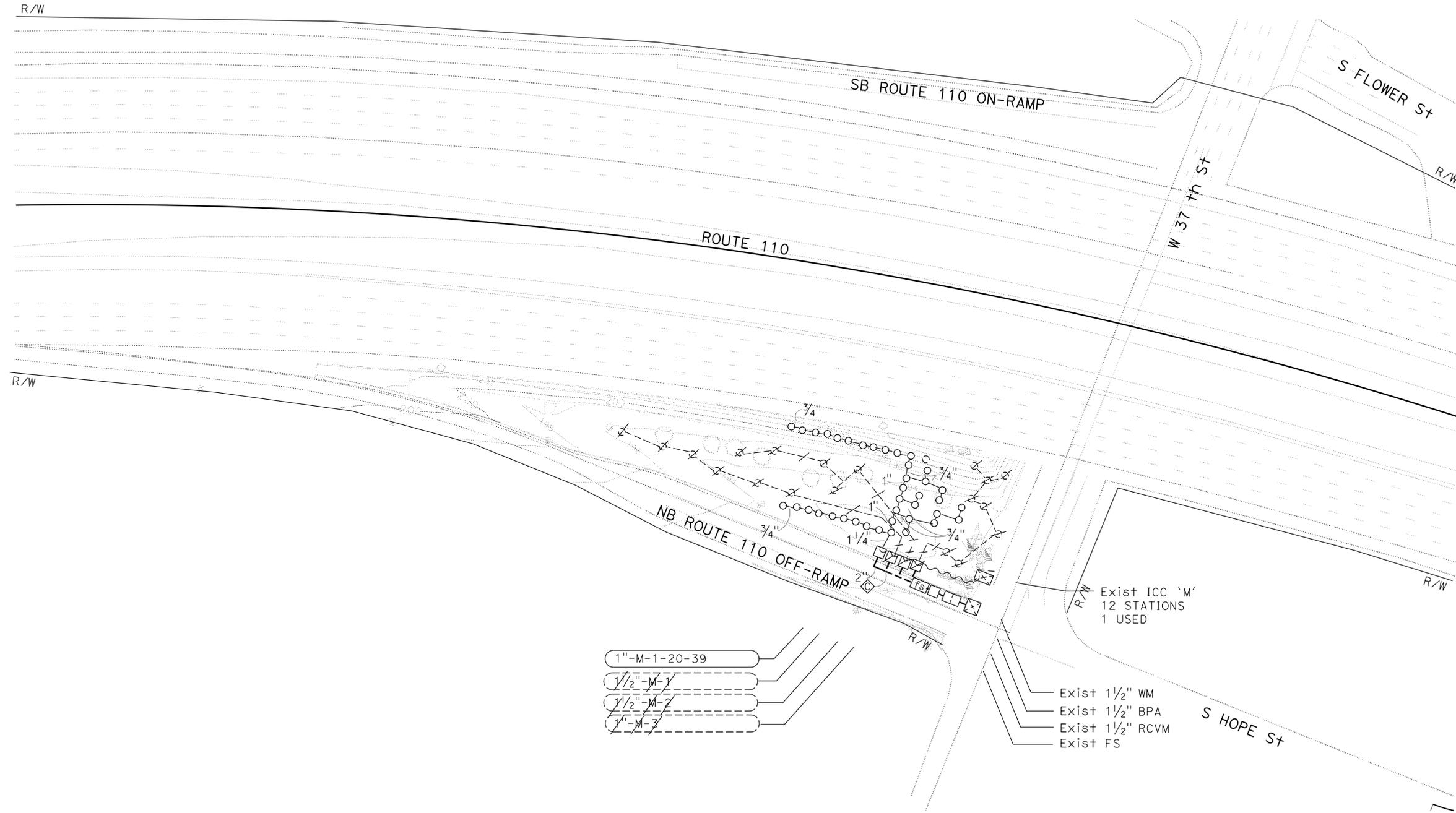
APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION DATE PLOTTED => 12-SEP-2014 00-00-00 TIME PLOTTED => 07:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	210	291
 LICENSED LANDSCAPE ARCHITECT					
6-2-14			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>					

**NOTE:**

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



R/W Exist ICC 'M'  
12 STATIONS  
1 USED

Exist 1/2" WM  
Exist 1/2" BPA  
Exist 1/2" RCVM  
Exist FS

**IRRIGATION PLAN**  
SCALE: 1" = 50'  
**IP-9**

APPROVED FOR IRRIGATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	RICH KESTER	REVISOR BY	
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	JENNIFER TAIRA	CHECKED BY	GLEN LEVSTIK	DATE REVISED	

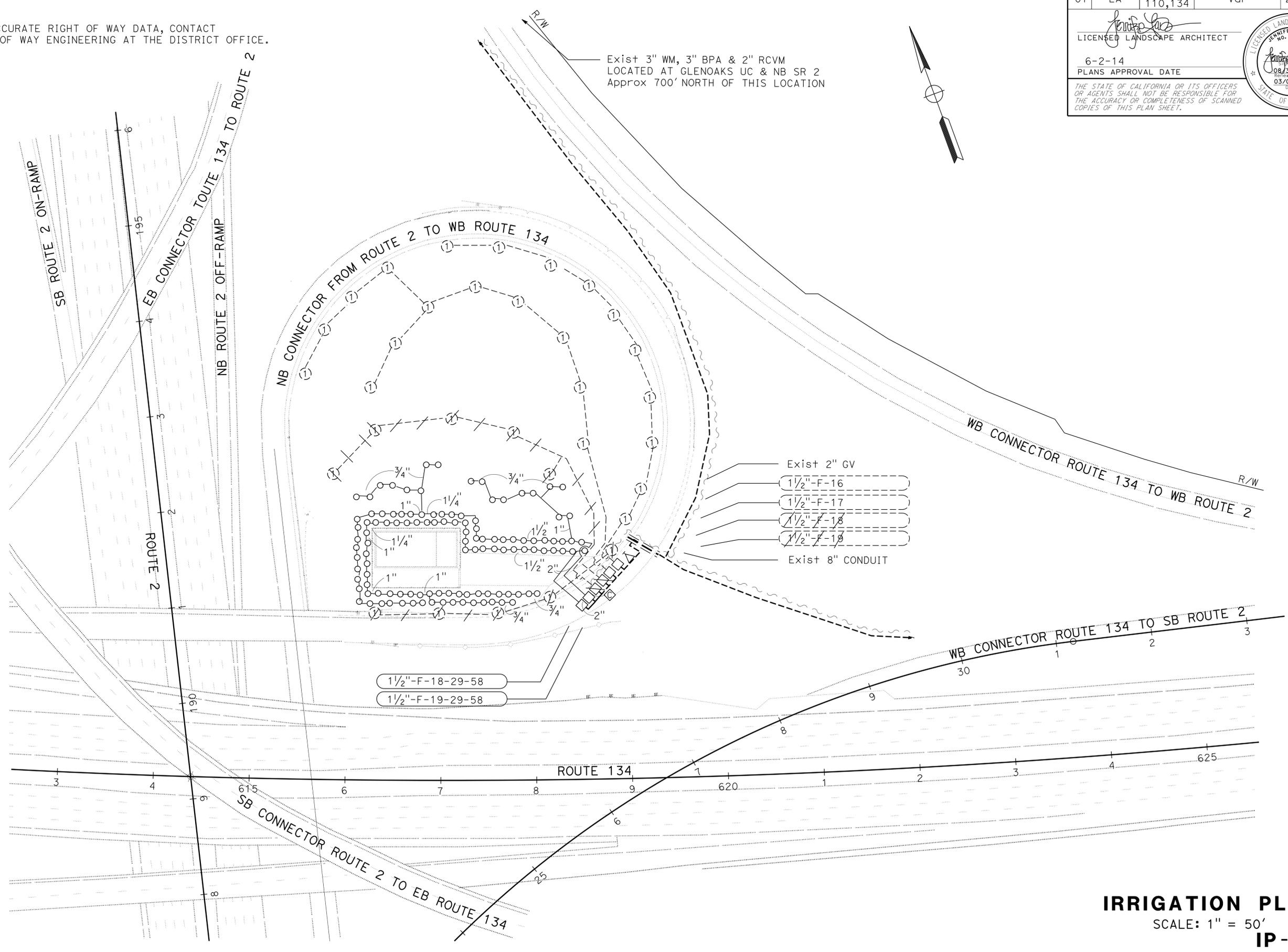




Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	212	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED-DESIGNED BY	RICH KESTER	REVISED BY
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	JENNIFER TAIRA	CHECKED BY	GLEN LEVSTIK	DATE REVISED

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-11**

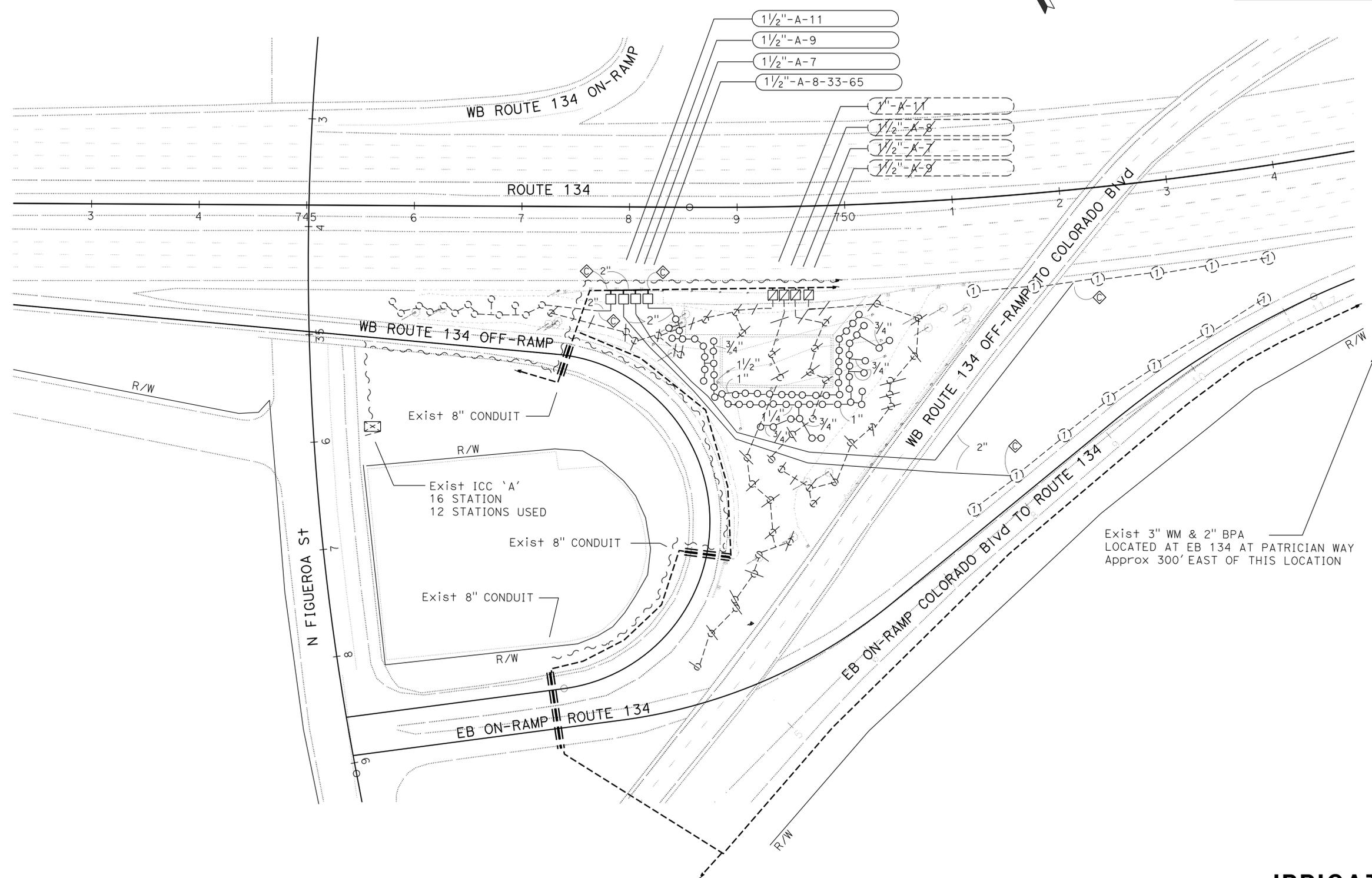
APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION: 00-00-00 DATE PLOTTED => 12-SEP-2014 TIME PLOTTED => 07:26

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	213	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA  
 CHECKED BY: GLEN LEVSTIK  
 DESIGNED BY: RICH KESTER  
 REVISIONS: (None listed)

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP-12**

LAST REVISION:    DATE PLOTTED => 12-SEP-2014    TIME PLOTTED => 07:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 RICH KESTER  
 GLEN LEVSTIK  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	214	291

  
 LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE  
  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**SUBTOTALS PER VALVE ON LATERAL SUPPLY SIDE OF CONTROL VALVE**

DESCRIPTION	UNIT	VALVE OR ASSEMBLY NUMBER																											SUBTOTALS	UNIT	DESCRIPTION
		G-16	A-8	G-6	G-1	P-1	P-2	P-3	P-4	P-5	P-6	B-15	C-11	D-1	H-7	J-27	M-1	E-10	F-18	F-19	A-7	A-8	A-9								
PLASTIC PIPE SUPPLY LINE SCHEDULE 40	¾ INCH	LF	540	200	88	80	575	—	—	—	—	400	245	467	446	239	465	293	80	233	500	—	376	—	5227	LF	¾ INCH				
	1 INCH	LF	147	150	80	63	85	—	—	—	—	160	76	70	10	86	—	40	45	45	34	—	50	—	1141	LF	1 INCH				
	1¼ INCH	LF	—	—	80	67	140	—	—	—	—	70	—	—	15	—	—	10	30	180	185	—	126	—	903	LF	1¼ INCH				
	1½ INCH	LF	—	65	40	40	40	—	—	—	—	60	80	—	—	—	15	—	—	50	55	—	61	—	506	LF	1½ INCH				
	2 INCH	LF	378	205	400	365	192	215	628	852	15	60	—	75	—	—	—	—	—	100	55	434	116	544	4634	LF	2 INCH				
SPRINKLER ASSEMBLY	RISER (GEAR DRIVEN)	EA	—	—	8	8	—	—	—	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	22	EA	RISER (GEAR DRIVEN)				
	RISER	EA	42	48	—	—	76	—	—	—	—	76	30	49	45	32	41	39	—	58	58	—	65	—	659	EA	RISER				

**IRRIGATION QUANTITIES**  
**IQ-1**

LAST REVISION DATE PLOTTED => 15-SEP-2014 00-00-00 TIME PLOTTED => 15:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	215	291

LICENSED LANDSCAPE ARCHITECT  
 6-2-14  
 PLANS APPROVAL DATE

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

**SUBTOTALS PER PLAN SHEET ON MAIN SUPPLY SIDE OF CONTROL VALVE**

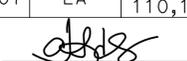
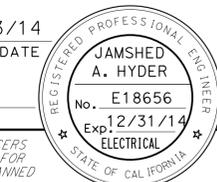
DESCRIPTION	UNIT	SHEET NUMBER												SUBTOTALS
		IP-2	IP-3	IP-4	IP-5	IP-6	IP-7	IP-8	IP-9	IP-10	IP-11	IP-12		
VALVES AND ASSEMBLIES RCV	1 INCH	EA	1	—	—	1	2	1	—	1	1	—	—	7
	1½ INCH	EA	—	1	2	5	1	—	1	—	—	2	4	16
	2 INCH	EA	—	—	—	1	1	1	1	—	—	—	—	4
PLASTIC PIPE SUPPLY LINE SCHEDULE 40	2 INCH	LF	10	5	5	423	305	47	23	10	40	20	20	908

**TOTAL QUANTITIES**

TOTALS	UNIT	DESCRIPTION
7	EA	1 INCH
16	EA	1½ INCH
4	EA	2 INCH
5542	LF	2 INCH
506	LF	1½ INCH
903	LF	1¼ INCH
1141	LF	1 INCH
5227	LF	¾ INCH
22	EA	RISER (GEAR DRIVEN)
659	EA	RISER

NOTE: TOTALS FOR SCHEDULE 40 SUPPLY LINES INCLUDE LATERAL, MAIN, AND IRRIGATION CONDUIT.

**IRRIGATION QUANTITIES  
 IQ-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	216	291
			2/3/14		
REGISTERED ELECTRICAL ENGINEER			DATE		
6-2-14			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>					
					

**NOTE:**

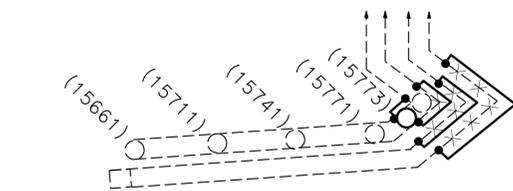
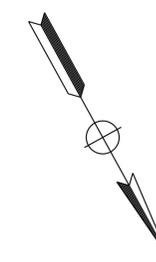
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)**

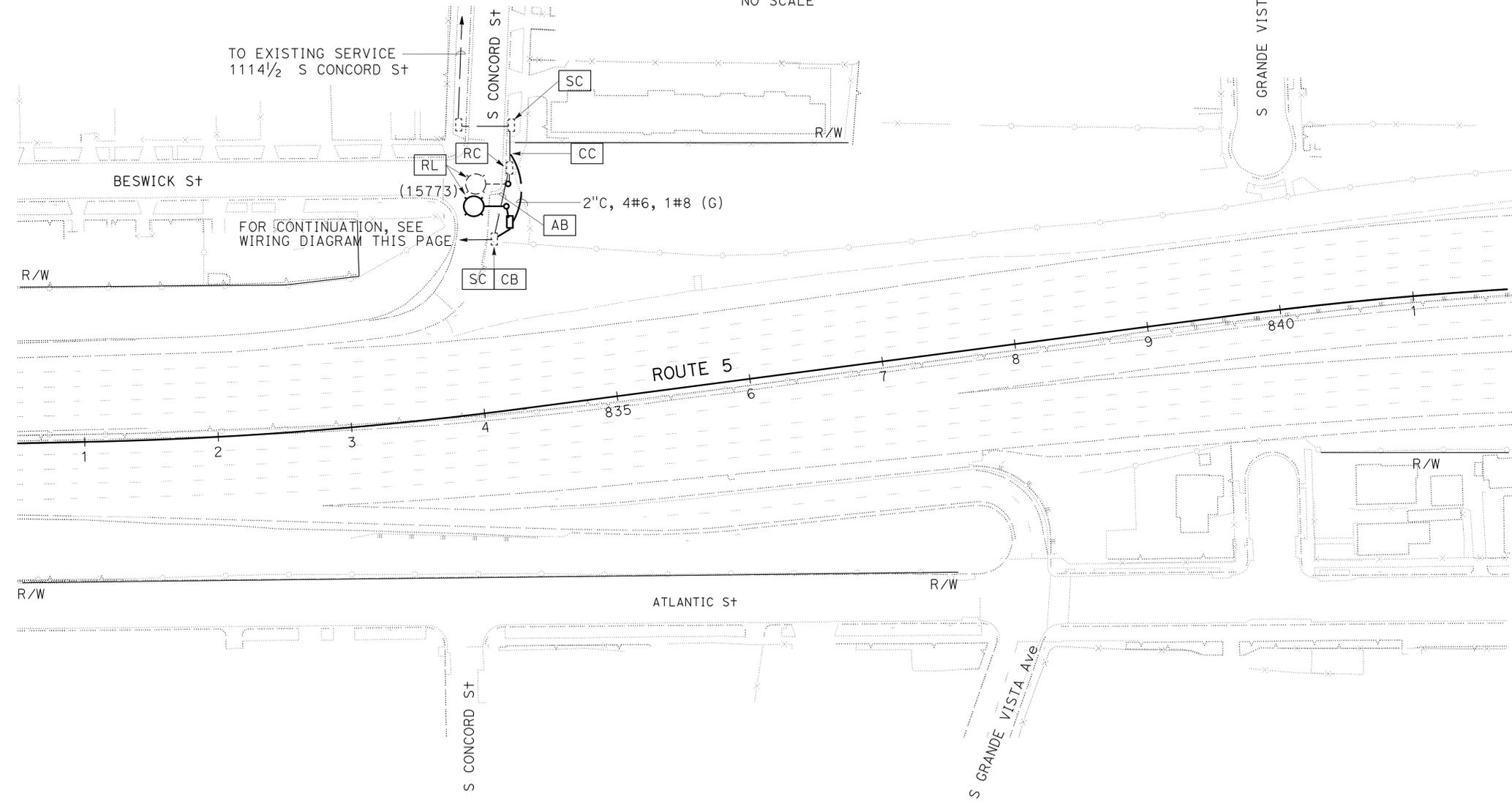
- EXISTING WIRING TO REMAIN
- \* \* EXISTING WIRING TO BE REMOVED
- No. 6 CONDUCTOR TO BE INSTALLED
- SPLICE
- EXISTING LUMINAIRE TO REMAIN
- RELOCATED LUMINAIRE

120/240 V, TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:

- 100 A , 240 V, 2P, CB, MAIN BREAKER
- 30 A, 240 V, 2P, CB, LIGHTING
- 30 A, 240 V, 2P, CB, SIGN LIGHTING
- 20 A, 120 V, 1P, RAMP METERING
- Ctid: 07-53-005-R-15.772
- ADDRESS: 1114½ S CONCORD ST



SIGN No. 15651  
**WIRING DIAGRAM**  
NO SCALE



**MODIFY LIGHTING  
AND SIGN ILLUMINATION**  
SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**E-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: JAMSHED HYDER  
 CHECKED BY: FARID REKABI  
 REVISED BY: DATE REVISED:

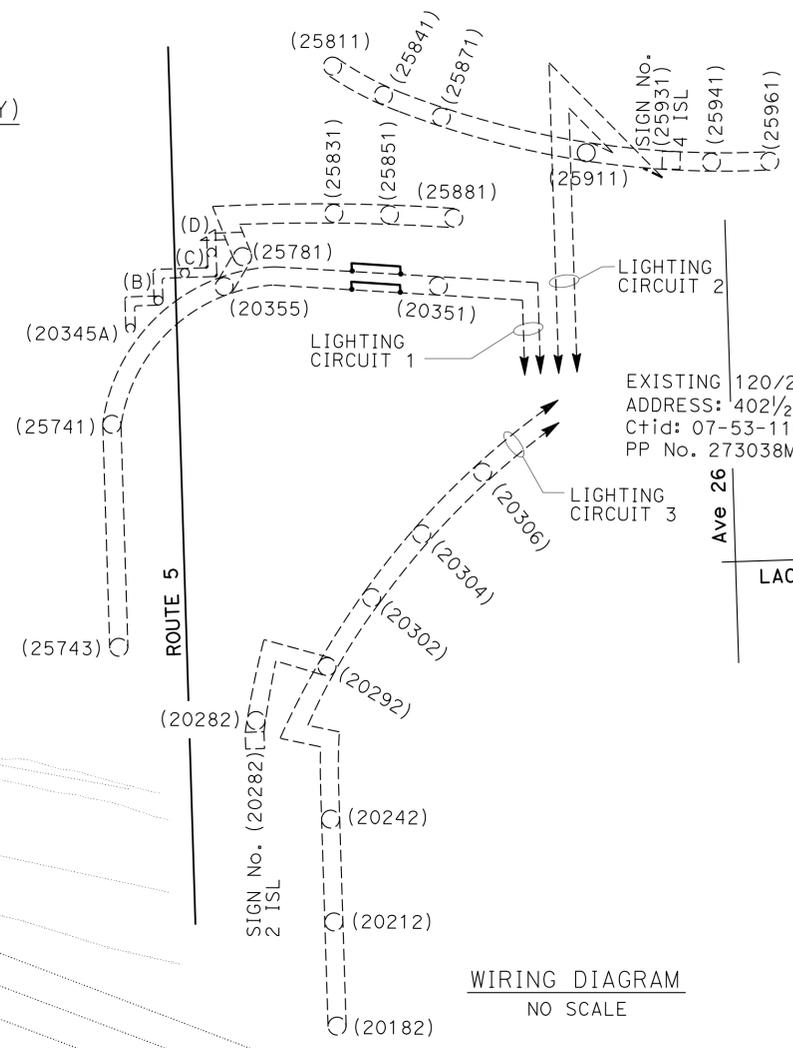
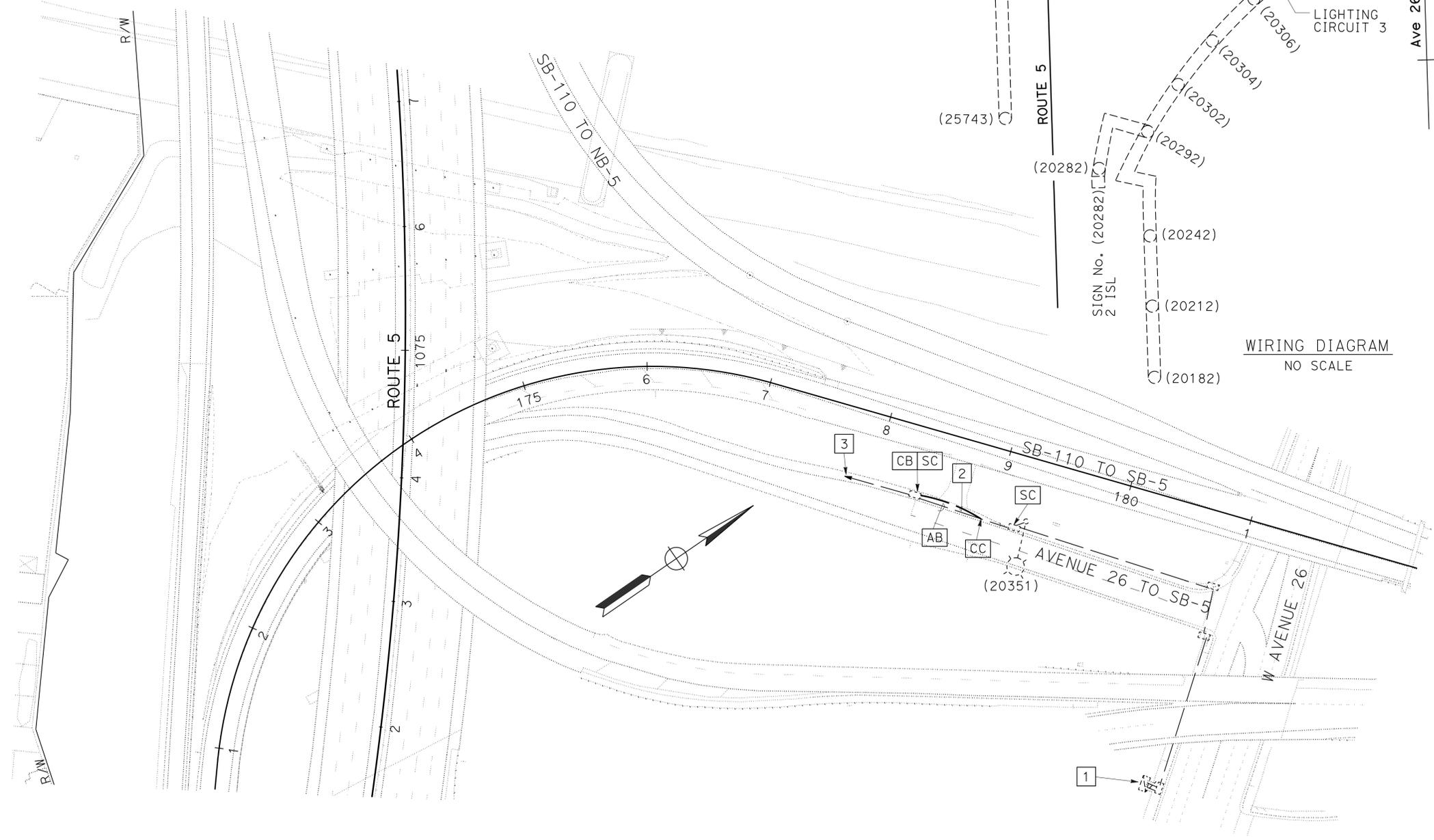
**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND: (THIS SHEET ONLY)**

- 1 EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
 200 A, 240 V, 2P, CB-MAIN  
 6-30 A, 240 V, 2P, CB-RM  
 30 A, 120 V, 1P, CB-CCTV  
 15 A, 120 V, 1P, CB-PEC  
 ADDRESS: 402½ AVENUE 26  
 Ctid: 07-53-110-041.680
- 2 2"C, 2#6, 1#8 (G).
- 3 FOR CONTINUATION, SEE WIRING DIAGRAM THIS PAGE.

**WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)**

- EXISTING WIRING TO REMAIN
- ×× EXISTING WIRING TO BE REMOVED
- No. 6 CONDUCTOR TO BE INSTALLED
- SPLICE
- EXISTING LUMINAIRE TO REMAIN
- EXISTING SIGN TO REMAIN



EXISTING 120/240 V SERVICE  
 ADDRESS: 402½ AVENUE 26  
 Ctid: 07-53-110-041.680  
 PP No. 273038M

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	217	291

2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

**JAMSHED A. HYDER**  
 No. E18656  
 Exp. 12/31/14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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

**MODIFY LIGHTING AND SIGN ILLUMINATION**  
 SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**NOTES:**

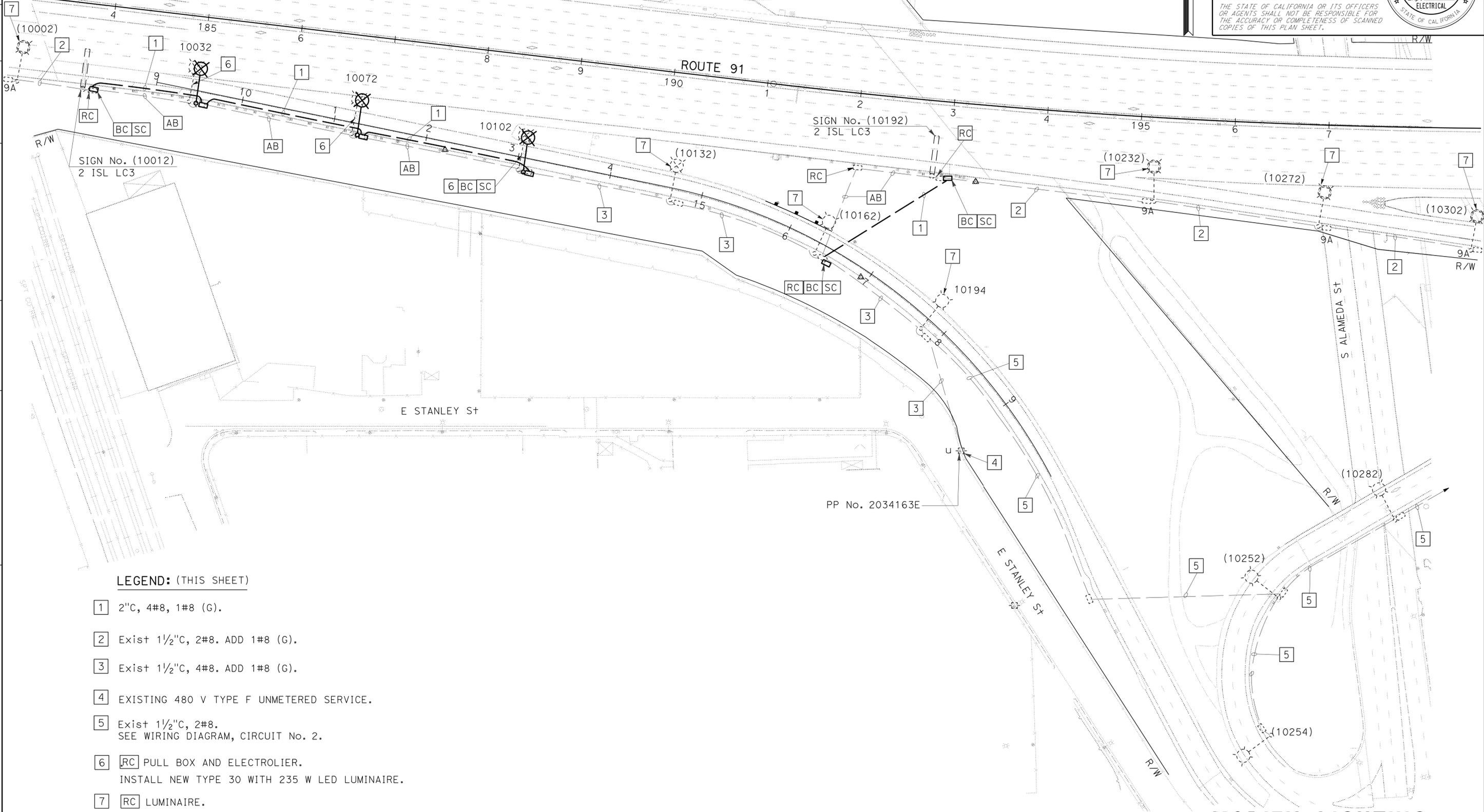
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR WIRING DIAGRAM, SEE SHEET E-10.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	218	291

*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA



**LEGEND: (THIS SHEET)**

- 1 2"C, 4#8, 1#8 (G).
- 2 Exist 1 1/2"C, 2#8. ADD 1#8 (G).
- 3 Exist 1 1/2"C, 4#8. ADD 1#8 (G).
- 4 EXISTING 480 V TYPE F UNMETERED SERVICE.
- 5 Exist 1 1/2"C, 2#8. SEE WIRING DIAGRAM, CIRCUIT No. 2.
- 6 [RC] PULL BOX AND ELECTROLIER. INSTALL NEW TYPE 30 WITH 235 W LED LUMINAIRE.
- 7 [RC] LUMINAIRE. INSTALL 235 W LED LUMINAIRE.

**MODIFY LIGHTING AND SIGN ILLUMINATION**  
 SCALE: 1" = 50'  
**E-3**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** **TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 LIEN VO: OHANNES ANSERLIAN  
 CALCULATED/DESIGNED BY: [ ]  
 CHECKED BY: [ ]  
 REVISED BY: [ ] DATE REVISED: [ ]

LAST REVISION DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: [ ]  
 CHECKED BY: [ ]  
 LIEN VO: OHANNES ANSERLIAN  
 REVISOR: [ ]  
 DATE: [ ]

**NOTES:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.  
 2. FOR WIRING DIAGRAM, SEE SHEET E-11.

**LEGEND: (THIS SHEET ONLY)**

1 Exist 2"C, 2#8. ADD 1#8 (G).  
 2 2"C, 2#8, 1#8 (G).  
 3 EXISTING 120/240 V METERED TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 2P, CB MAIN BEAKER  
 1-40 A, 240 V, 2P, CB (LIGHTING)  
 1-15 A, 120 V, 1P, CB (LIGHTING CONTROL)  
 1-60 A, 2PNO CONTACTOR (Fwy LIGHTING CONTROL)  
 1-15 A, 1P TEST SWITCH (Fwy LIGHTING)  
 1 PHOTOELECTRIC UNIT (Fwy LIGHTING CONTROL) CIRCUIT 14A  
 Ctid: 07-053-110-R-015.820  
 ADDRESS: 430 W 88TH PI

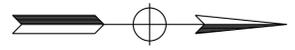
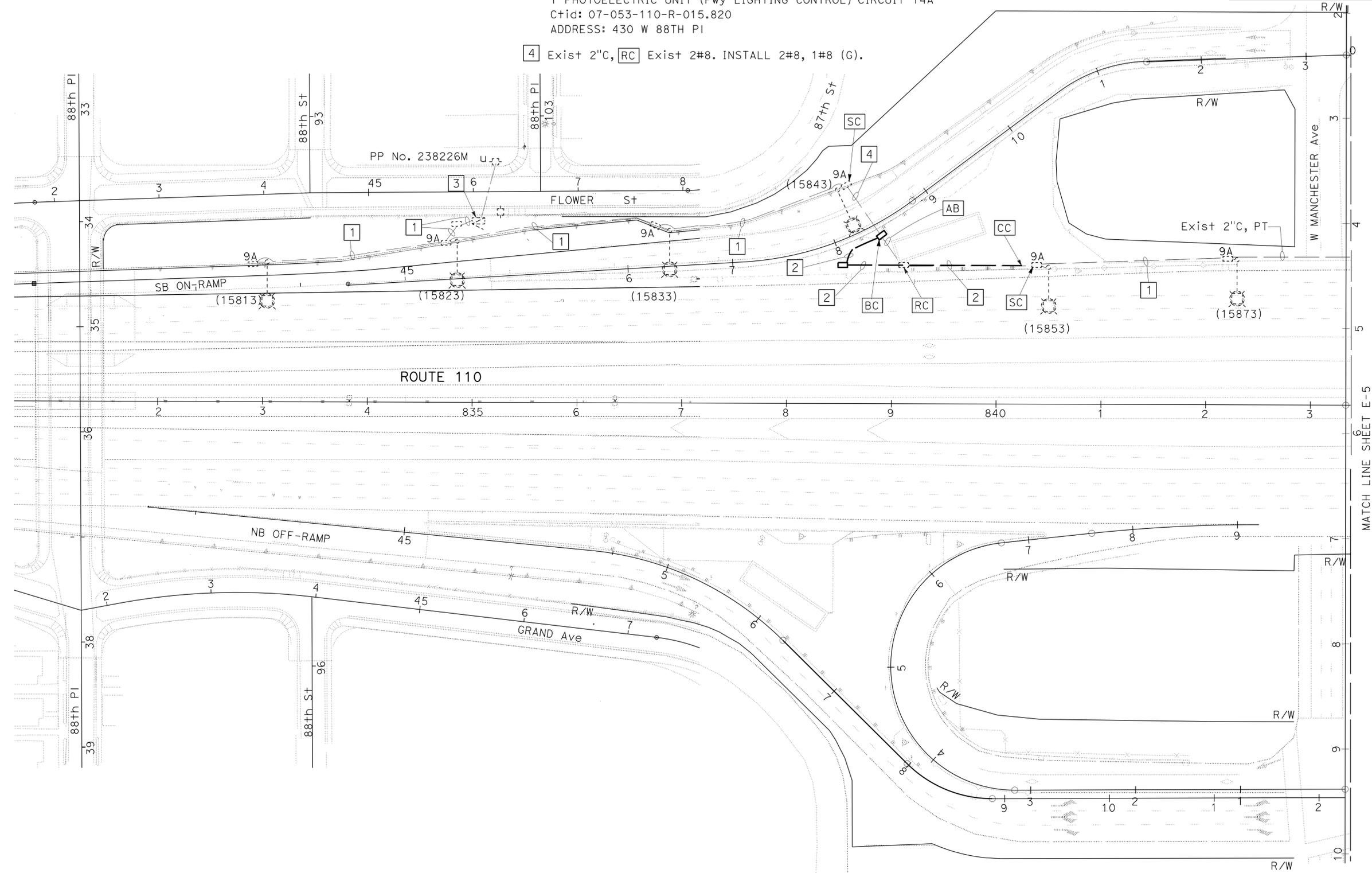
4 Exist 2"C, RC Exist 2#8. INSTALL 2#8, 1#8 (G).

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	219	291

OHANNES ANSERLIAN  
 REGISTERED ELECTRICAL ENGINEER  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL

6-2-14  
 PLANS APPROVAL DATE

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



APPROVED FOR ELECTRICAL WORK ONLY

**MODIFY LIGHTING AND SIGN ILLUMINATION**  
 SCALE: 1" = 50'  
**E-4**

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR WIRING DIAGRAM, SEE SHEET E-11.

**LEGEND: (THIS SHEET ONLY)**

- 2"C, 4#6, 2#8, 1#8 (G).
- EXISTING 120/240 V METERED TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
100 A, 240 V, 2P, CB MAIN BEAKER  
1-40 A, 240 V, 2P, CB (LIGHTING)  
1-30 A, 240 V, 2P, CB (SIGN LIGHTING)  
1-15 A, 120 V, 1P, CB (LIGHTING CONTROL)  
1-60 A, 2PNO CONTACTOR (Fwy LIGHTING CONTROL)  
1-15 A, 1P TEST SWITCH (Fwy LIGHTING)  
1 PHOTOELECTRIC UNIT (Fwy LIGHTING CONTROL)  
Ctid: 07-053-110-R-016.140  
ADDRESS: 8455 S FLOWER ST  
PP No. 239608M
- ADD 1#8 (G).

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	220	291

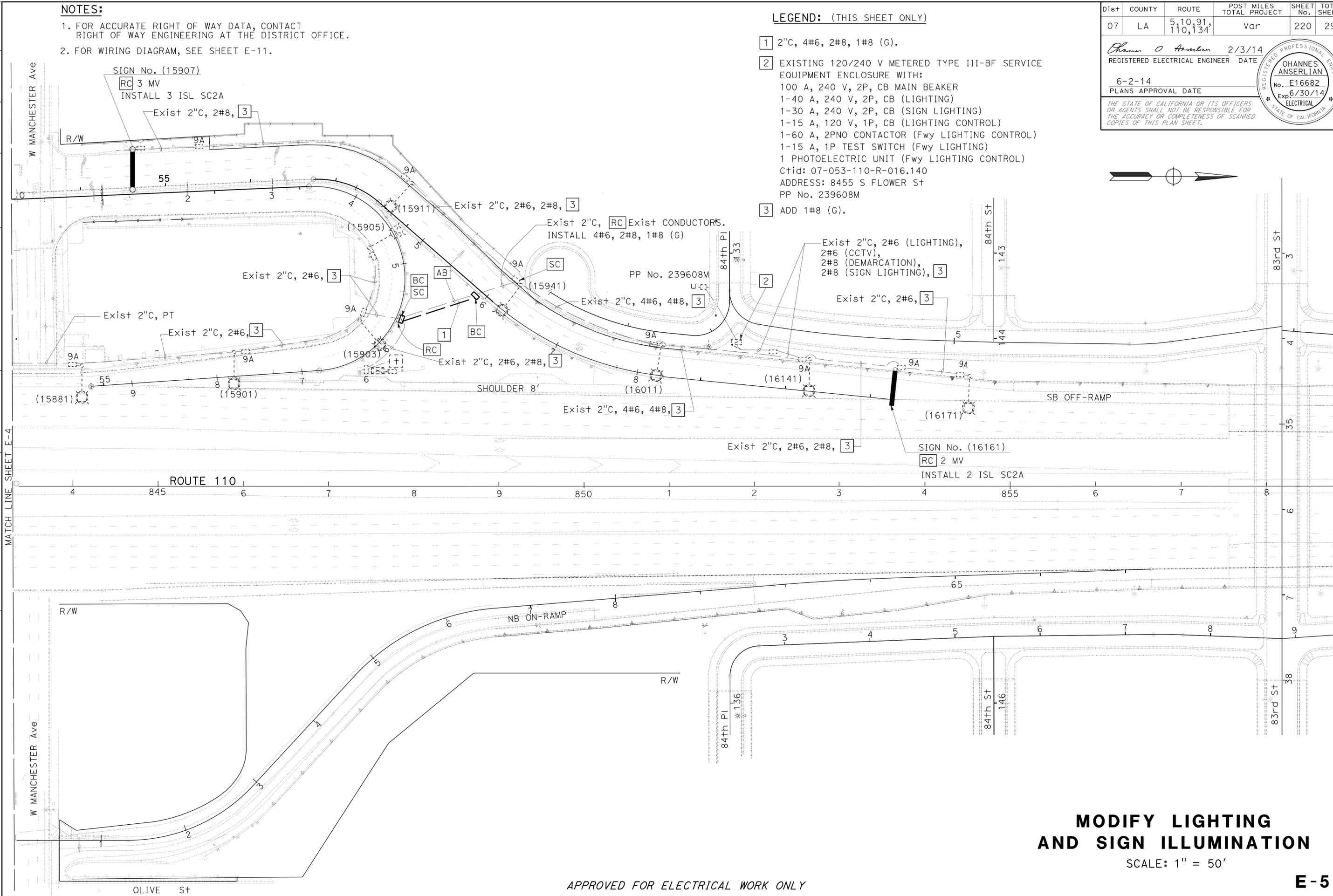
*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** **TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 LIEN VO: OHANNES ANSERLIAN  
 REVISED BY: DATE REVISED:



**MODIFY LIGHTING AND SIGN ILLUMINATION**  
SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**E-5**

LAST REVISION: DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	221	291

*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA

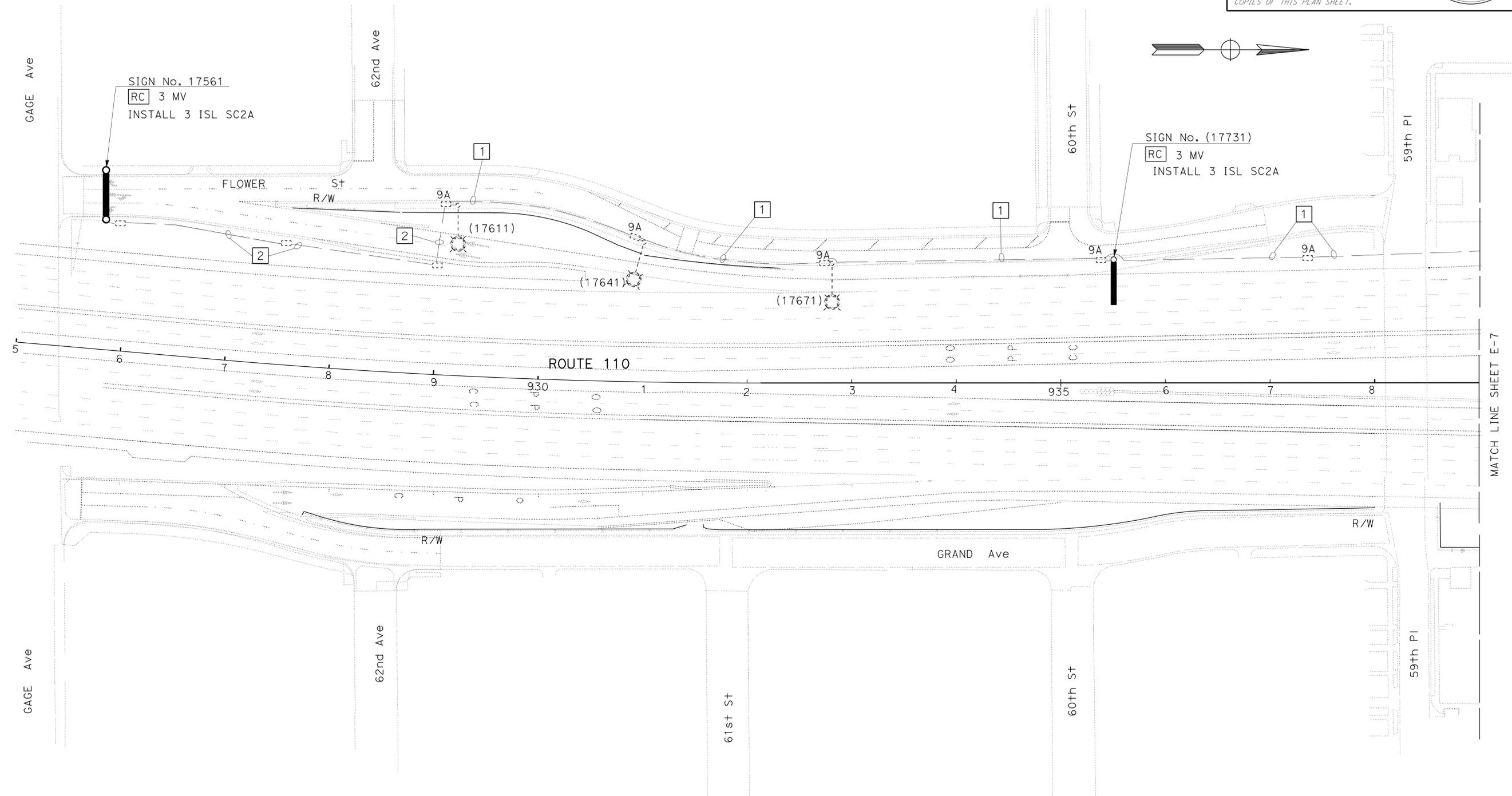
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. FOR WIRING DIAGRAM, SEE SHEET E-12.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND: (THIS SHEET ONLY)**

- 1 Exist 2"C, 4#6. ADD 1#8 (G).
- 2 Exist 2"C, 2#6. ADD 1#8 (G).



MATCH LINE SHEET E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
<b>Caltrans</b>	LIEN VO	OHANNES ANSERLIAN
FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	CHECKED BY
OSWALD ELIZONDO		
<b>TRAFFIC DESIGN</b>		

**MODIFY LIGHTING AND SIGN ILLUMINATION**

SCALE: 1" = 50'

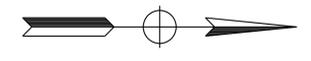
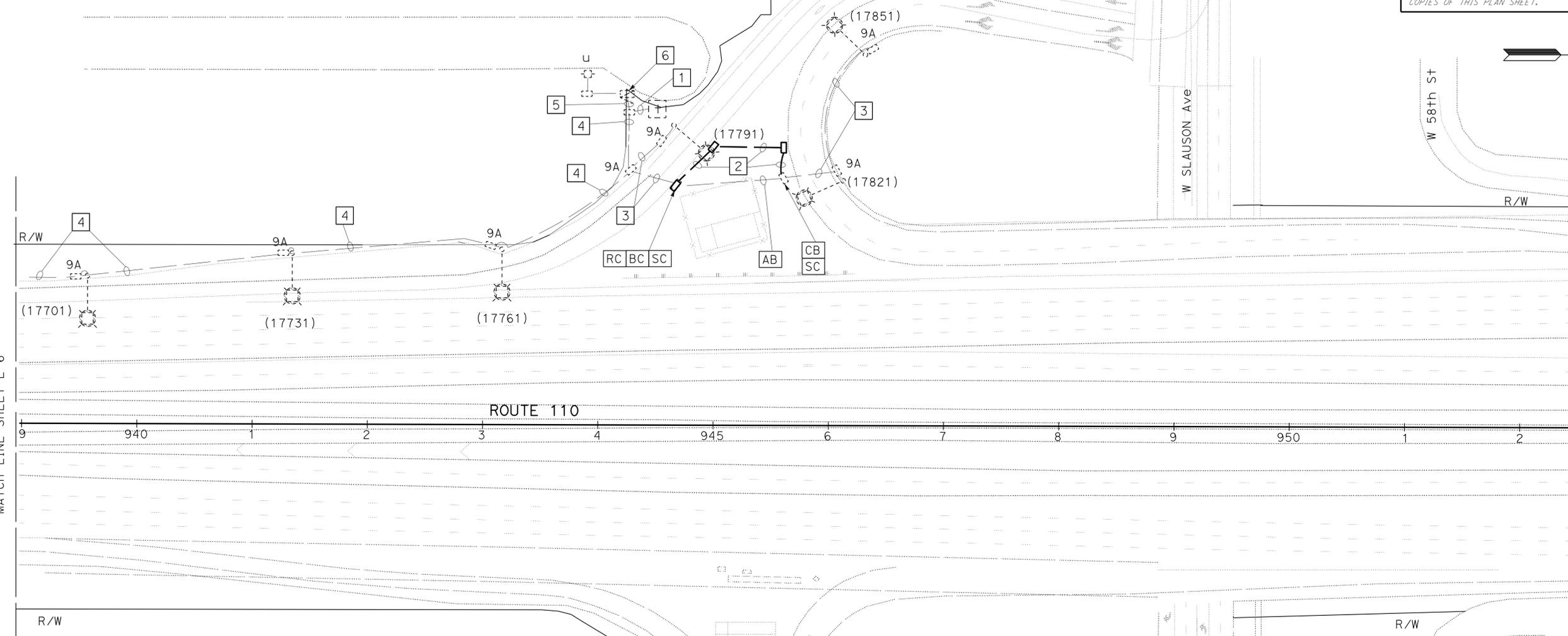
APPROVED FOR ELECTRICAL WORK ONLY

**E-6**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	222	291
<i>Ohannes Anserlian</i> 2/3/14 REGISTERED ELECTRICAL ENGINEER DATE					
6-2-14			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- FOR WIRING DIAGRAM, SEE SHEET E-12.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



MATCH LINE SHEET E-6



**LEGEND: (THIS SHEET ONLY)**

- 1 Exist 1"C, 2#10. ADD 1#8 (G).
- 2 2"C, 2#6, 1#8 (G).
- 3 Exist 2"C, 2#6. ADD 1#8 (G).
- 4 Exist 2"C, 4#6. ADD 1#8 (G).
- 5 Exist 2"C, 4#10, 8#6. ADD 1#8 (G).
- 6 EXISTING 120/240 V METERED TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 2P, CB MAIN BREAKER  
 1-40 A, 240 V, 2P, CB (LIGHTING)  
 1-40 A, 240 V, 2P, CB (SIGN LIGHTING)  
 1-15 A, 120 V, 1P, CB (LIGHTING CONTROL)  
 1-15 A, 120 V, 1P, TEST SWITCH (LIGHTING)  
 Ctid: 07-053-110-R-017.781  
 ADDRESS: 5946 S FLOWER ST

**MODIFY LIGHTING AND SIGN ILLUMINATION**

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

**E-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LIEN VO	REVISOR
<b>Caltrans</b> TRAFFIC DESIGN	OHANNES ANSERLIAN	DATE
FUNCTIONAL SUPERVISOR	CHECKED BY	DATE
OSWALD ELIZONDO		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	223	291

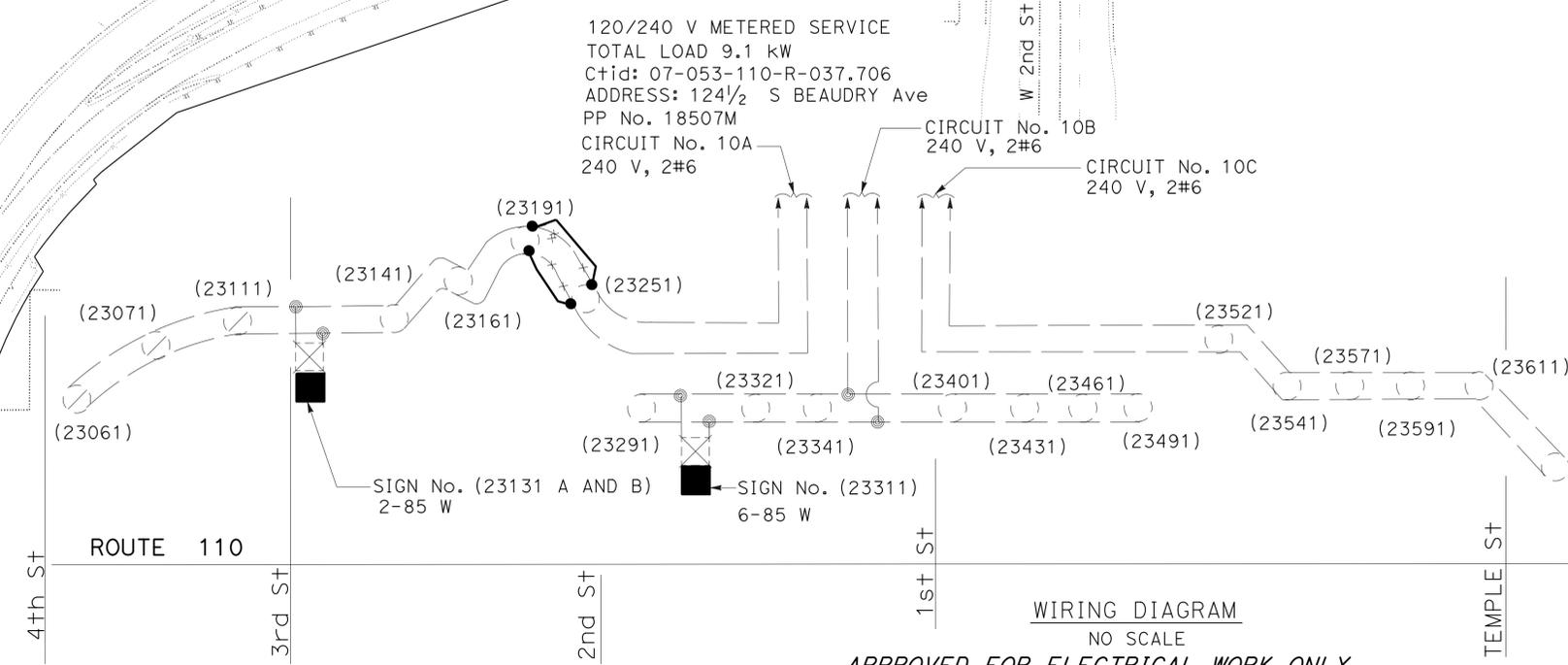
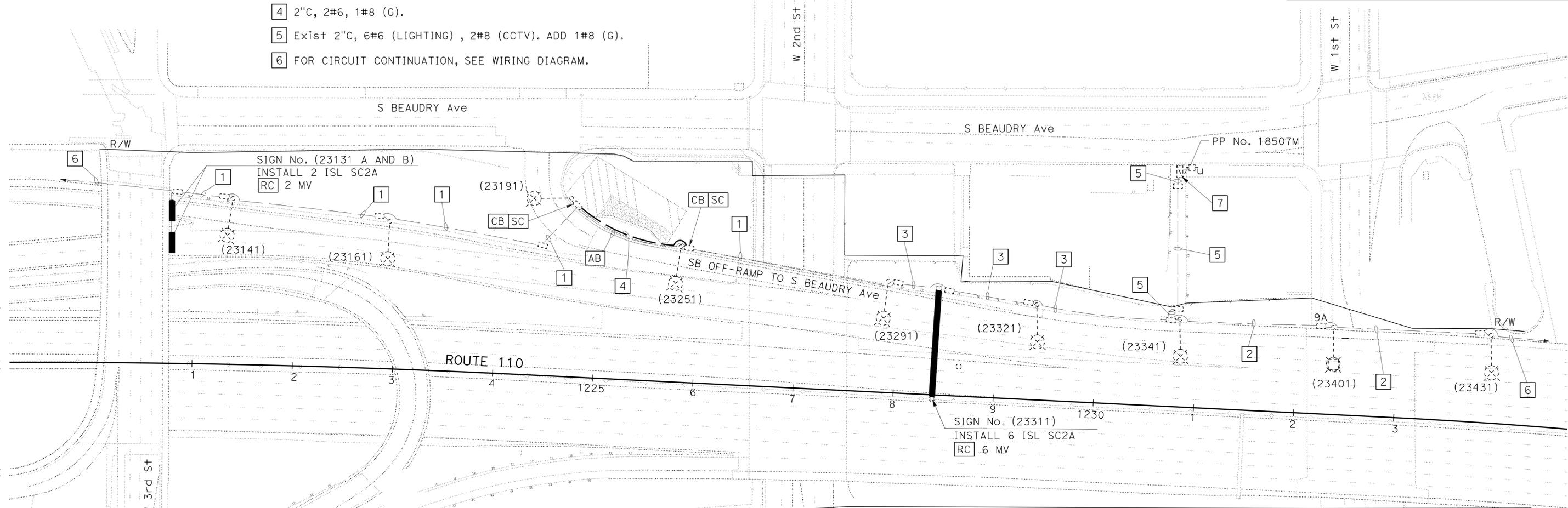
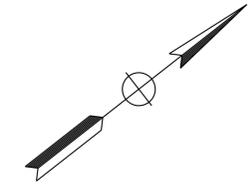
O'Hannes Anselian 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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

- LEGEND: (THIS SHEET ONLY)**
- 1 Exist 2"C, 2#6. ADD 1#8 (G).
  - 2 Exist 2"C, 4#6. ADD 1#8 (G).
  - 3 Exist 2"C, 4#6. ADD 1#8 (G).
  - 4 2"C, 2#6, 1#8 (G).
  - 5 Exist 2"C, 6#6 (LIGHTING), 2#8 (CCTV). ADD 1#8 (G).
  - 6 FOR CIRCUIT CONTINUATION, SEE WIRING DIAGRAM.

7 Exist 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, MAIN CIRCUIT BREAKER  
 3-30 A, 240 V, 2P, CB (LIGHTING)  
 1-TYPE V PHOTOELECTRIC UNIT  
 1-30 A, 120 V, 1P, CB (CCTV)  
 Ctid: 07-053-110-R-037.706  
 ADDRESS: 124 1/2 S BEAUDRY Ave



**WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)**

- EXISTING LAMP
- EXISTING 200 W LAMP
- EXISTING SPLICE
- SPLICE CONDUCTOR
- EXISTING CONDUCTORS
- RC CONDUCTOR
- NEW CONDUCTOR
- RC SIGN LAMP AND BALLAST
- NEW 85 W ISL LAMP

**MODIFY LIGHTING AND SIGN ILLUMINATION**  
 SCALE: 1" = 50' **E-8**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 LIEN VO: OHANNES ANSERLIAN  
 REVISIONS: [Blank]

USERNAME => s121614  
 DGN FILE => 725902ua008.dgn

RELATIVE BORDER SCALE 1" = 10' INCHES

UNIT 1878

PROJECT NUMBER & PHASE

07130000461

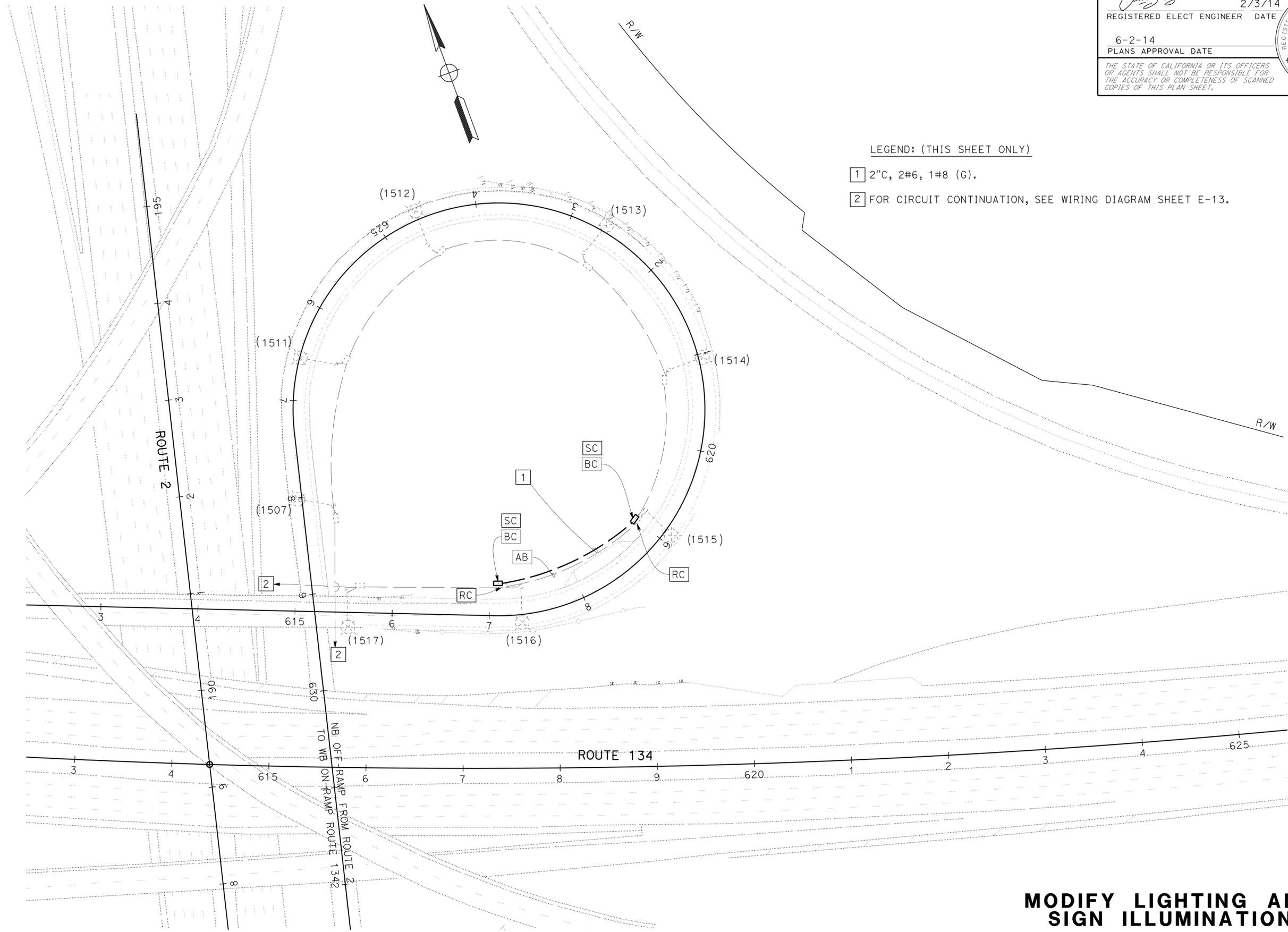
LAST REVISION: DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:27

**NOTE:**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134'	Var	224	291
			2/3/14		
REGISTERED ELECT ENGINEER			DATE		
6-2-14			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>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR
<b>Caltrans</b> TRAFFIC DESIGN	OSWALD ELIZONDO	CHECKED BY	OSWALD ELIZONDO
			DATE REVISED



**LEGEND: (THIS SHEET ONLY)**

- 1 2"C, 2#6, 1#8 (G).
- 2 FOR CIRCUIT CONTINUATION, SEE WIRING DIAGRAM SHEET E-13.

**MODIFY LIGHTING AND SIGN ILLUMINATION**

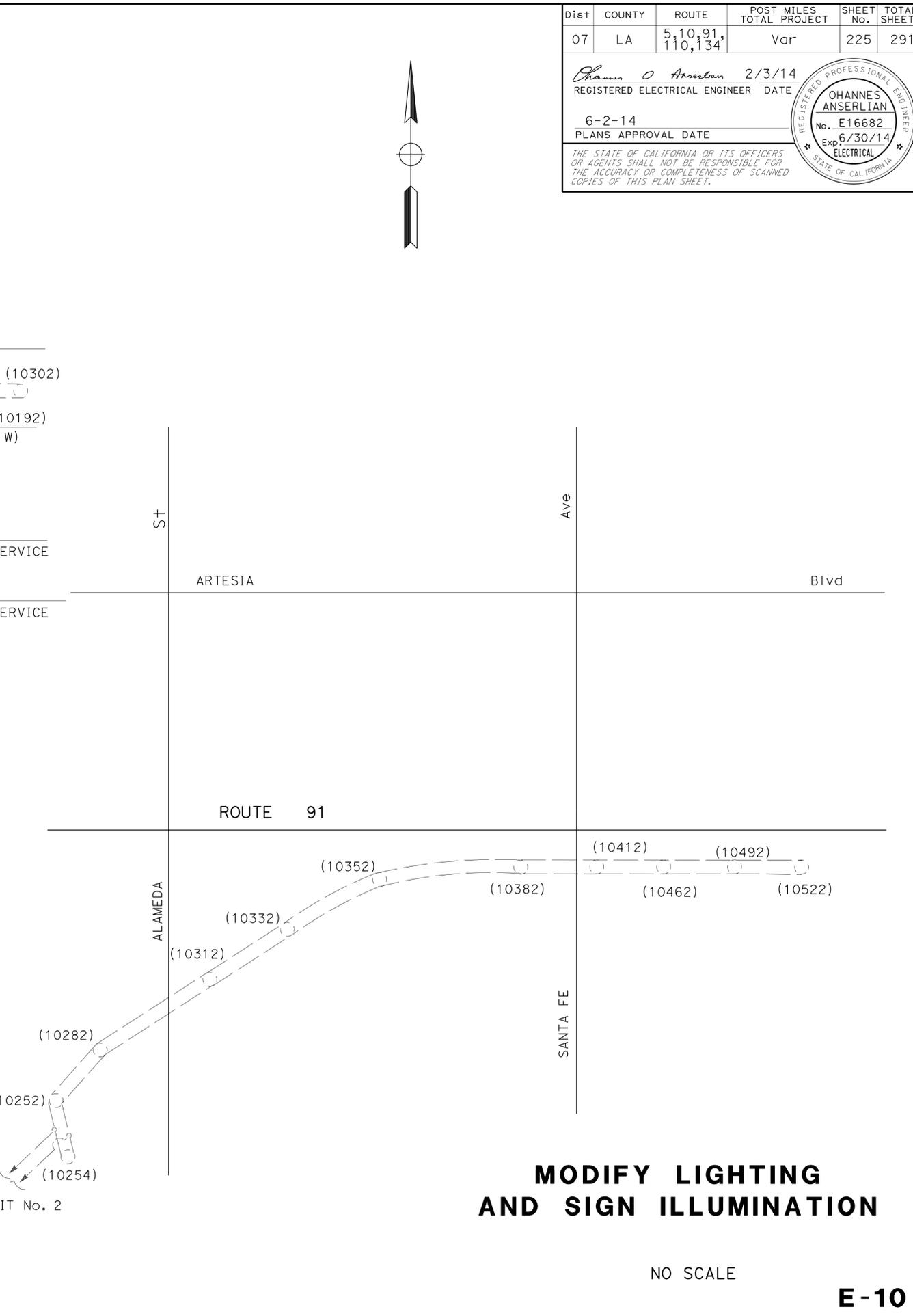
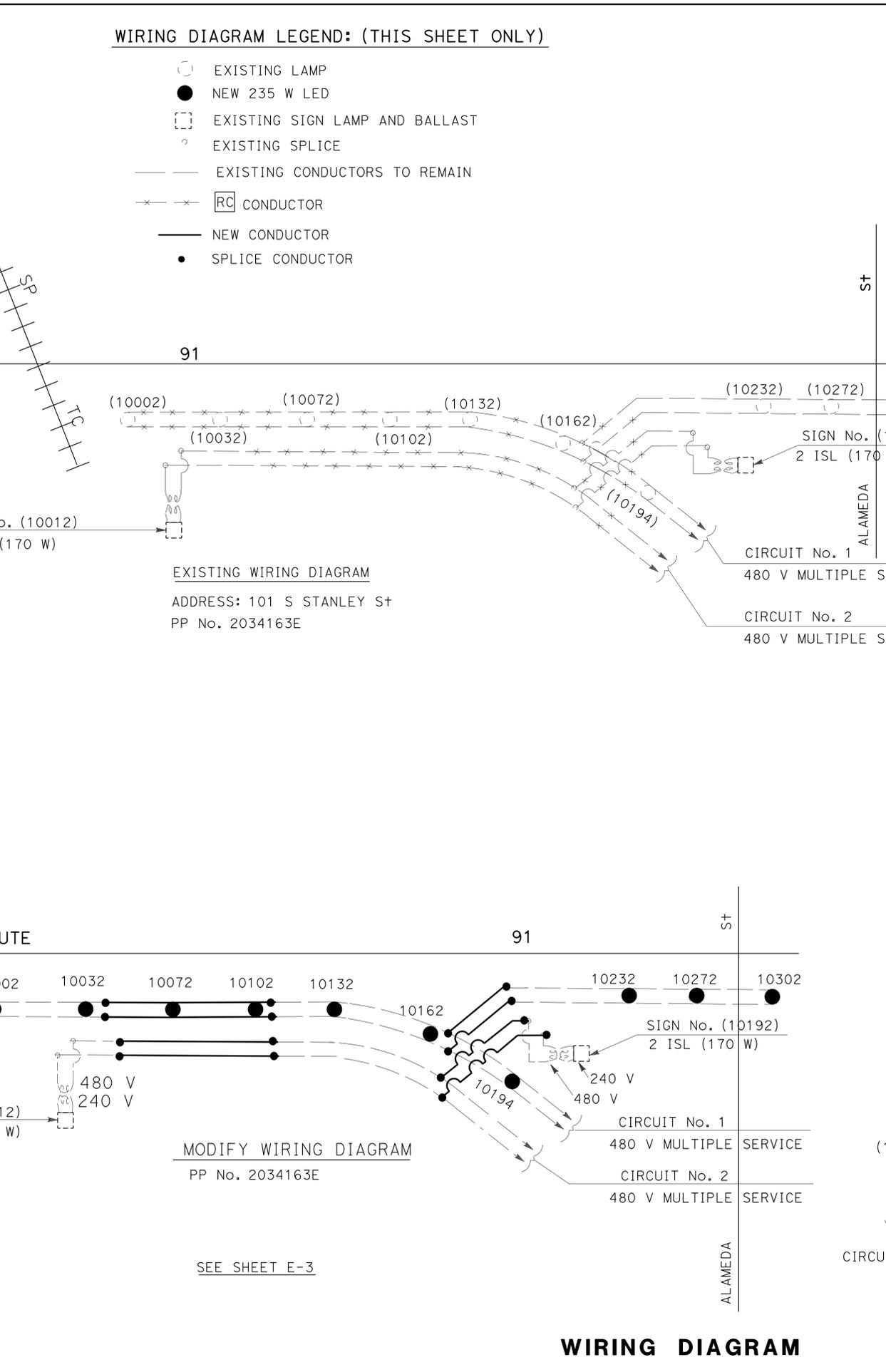
SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 LIEN VO: OHANNES ANSERLIAN  
 REVISOR: OHANNES ANSERLIAN  
 CALCULATED/DESIGNED BY: OHANNES ANSERLIAN  
 CHECKED BY: OHANNES ANSERLIAN  
 REVISOR: OHANNES ANSERLIAN  
 DATE: 2/3/14

ROUTE 91  
 ALAMEDA St  
 ARTESIA Ave  
 ROUTE 91  
 ALAMEDA St  
 SANTA FE Ave



**WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)**

- EXISTING LAMP
- NEW 235 W LED
- EXISTING SIGN LAMP AND BALLAST
- EXISTING SPLICE
- EXISTING CONDUCTORS TO REMAIN
- x-x- RC CONDUCTOR
- NEW CONDUCTOR
- SPLICE CONDUCTOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	225	291

OHANNES ANSERLIAN  
 REGISTERED ELECTRICAL ENGINEER  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL

2/3/14  
 DATE

6-2-14  
 PLANS APPROVAL DATE

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

LAST REVISION DATE PLOTTED => 12-SEP-2014 01-27-14 TIME PLOTTED => 07:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	226	291

*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

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

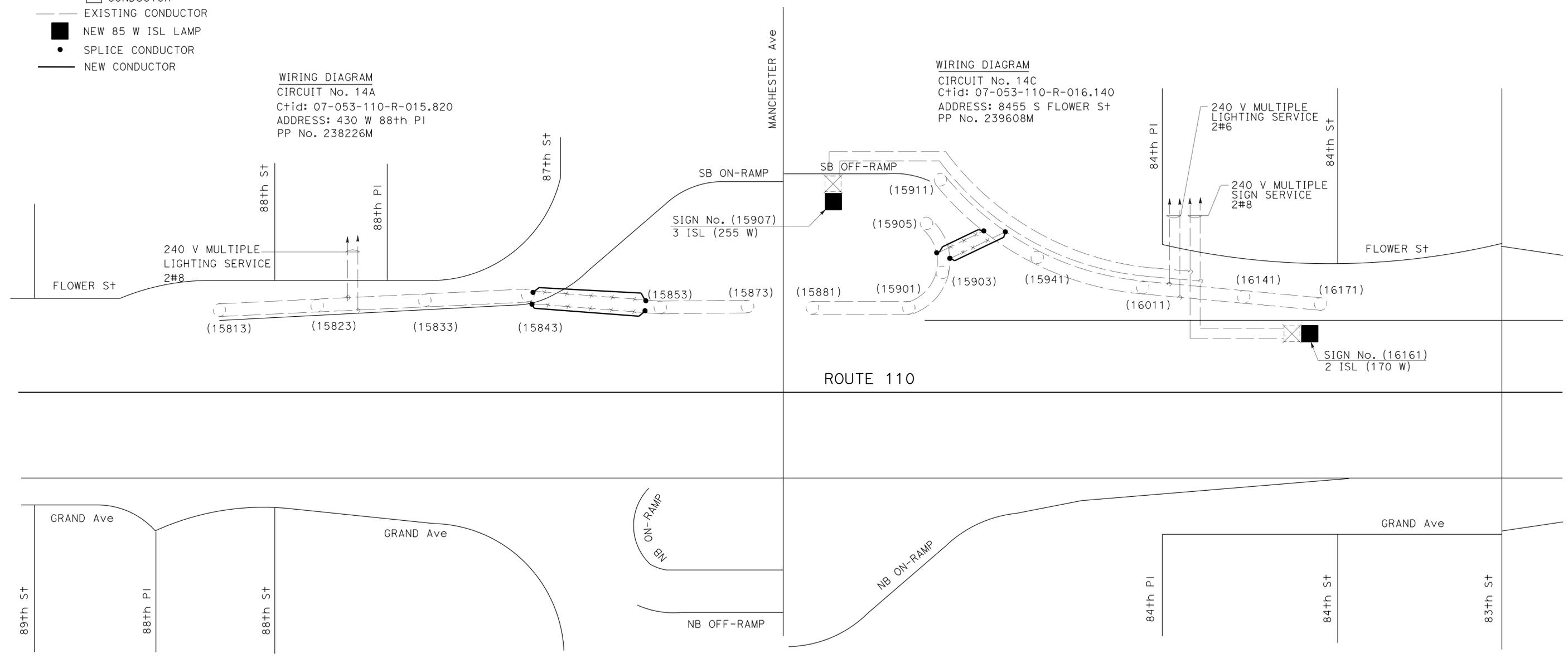
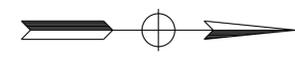
REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA

**WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)**

- EXISTING LAMP
- SIGN LAMP AND BALLAST
- EXISTING SPLICE
- RC CONDUCTOR
- EXISTING CONDUCTOR
- NEW 85 W ISL LAMP
- SPLICE CONDUCTOR
- NEW CONDUCTOR

**WIRING DIAGRAM**  
 CIRCUIT No. 14A  
 Ctid: 07-053-110-R-015.820  
 ADDRESS: 430 W 88th PI  
 PP No. 238226M

**WIRING DIAGRAM**  
 CIRCUIT No. 14C  
 Ctid: 07-053-110-R-016.140  
 ADDRESS: 8455 S FLOWER ST  
 PP No. 239608M



SEE SHEETS E-4 AND E-5

**WIRING DIAGRAM**

**MODIFY LIGHTING AND SIGN ILLUMINATION**

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** **TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 LIEN VO: OHANNES ANSERLIAN  
 REVISED BY: [blank] DATE REVISED: [blank]

LAST REVISION: DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:27

WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)

-  EXISTING LAMP
-  SIGN LAMP AND BALLAST
-  EXISTING SPLICE
-  CONDUCTOR
-  EXISTING CONDUCTOR
-  NEW CONDUCTOR
-  INSTALL 85 W ISL LAMP
-  SPLICE CONDUCTOR

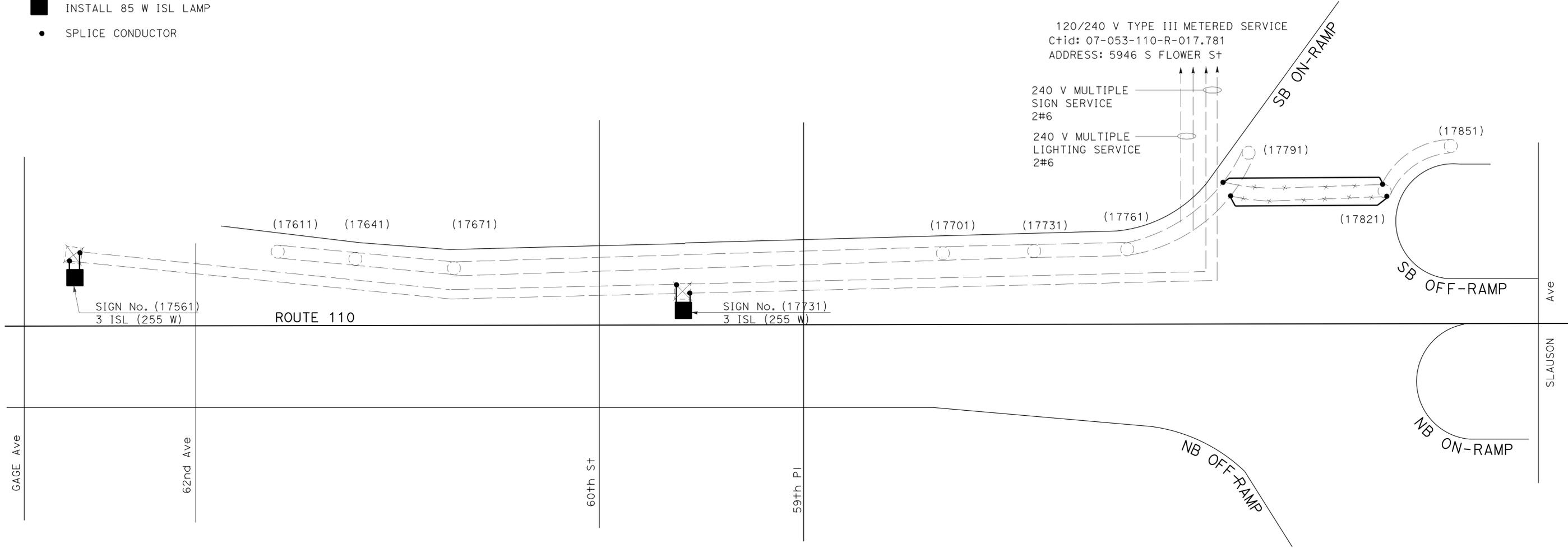
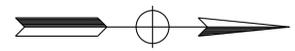
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	227	291

*Ohannes O Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE

6-2-14  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA



SEE SHEETS E-6 AND E-7

(WIRING DIAGRAM)

MODIFY LIGHTING AND SIGN ILLUMINATION

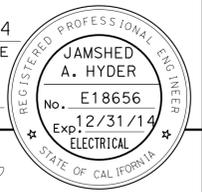
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY CHECKED BY  
 LIEN VO OHANNES ANSERLIAN  
 REVISED BY DATE REVISED

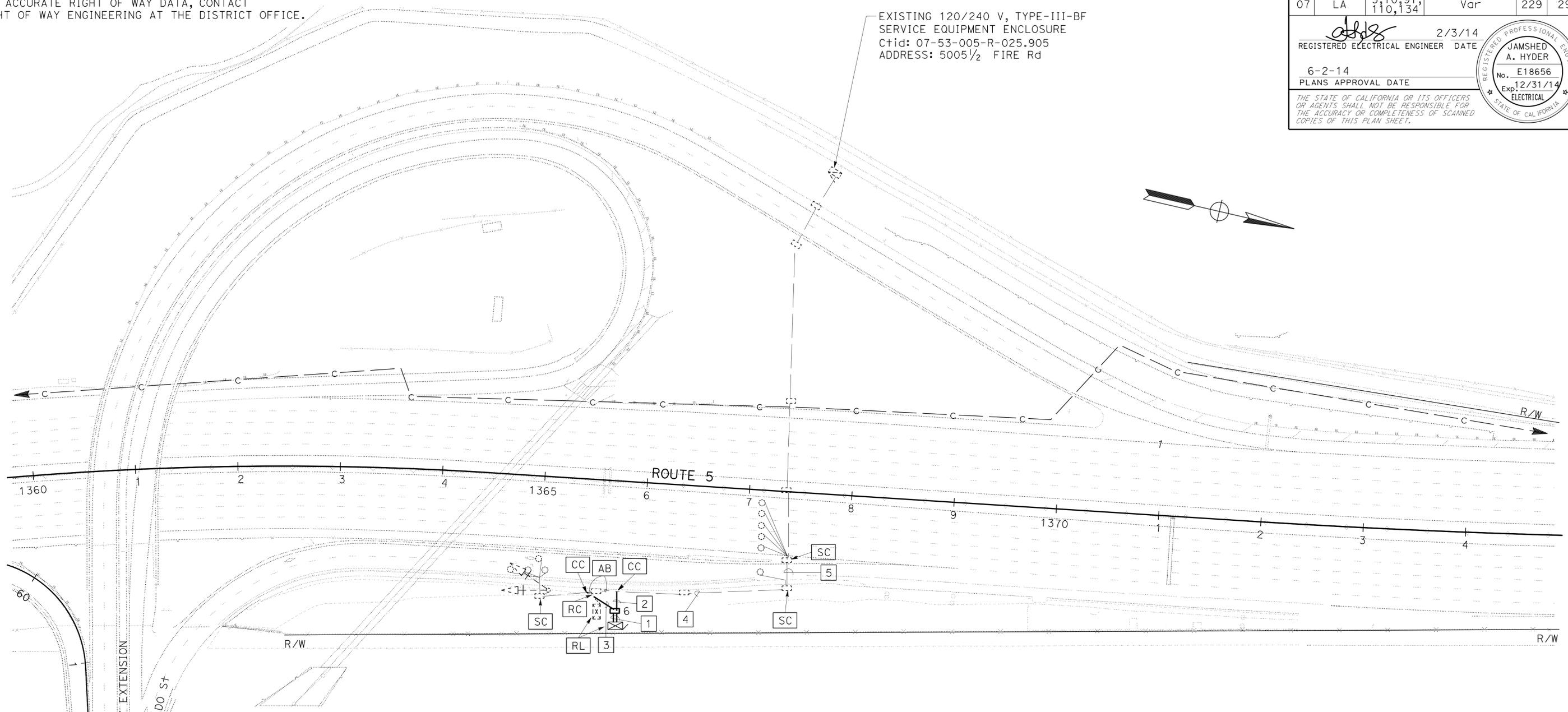


NOTE:  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	229	291
			REGISTERED ELECTRICAL ENGINEER	DATE	
			<i>ahs</i>	2/3/14	
			PLANS APPROVAL DATE		
			6-2-14		
<p>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.</p>					



EXISTING 120/240 V, TYPE-III-BF  
SERVICE EQUIPMENT ENCLOSURE  
Ctid: 07-53-005-R-025.905  
ADDRESS: 5005 1/2 FIRE Rd



- LEGEND: (THIS SHEET ONLY)
- 1 2-3"C, 2#6, 6#14, 1#10, 1#8 (G), 9 DLC.
  - 2 2"C, 2#6, 1#8 (G), 6 DLC.
  - 3 2"C, 6#14, 1#10, 1#8 (G), 3 DLC.
  - 4 EXISTING 2"C, 6 DLC, 2#6, 1#8 (G). RC 2#6, 6 DLC. ADD 2#6, 6 DLC, 1#8 (G).
  - 5 EXISTING 2"C, 5 DLC, 2#6, 1#8 (G). RC 2#6, 5 DLC. ADD 5 DLC, 2#6, 1#8 (G).

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: FARID REKABI  
 CHECKED BY: JAMSHED HYDER  
 REVISED BY: DATE REVISION

**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

**E-14**

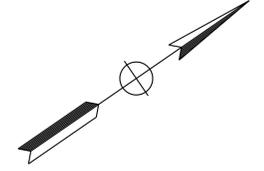
APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION | DATE PLOTTED => 12-SEP-2014  
 00-00-00 | TIME PLOTTED => 07:27

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

**LEGEND: (THIS SHEET ONLY)**

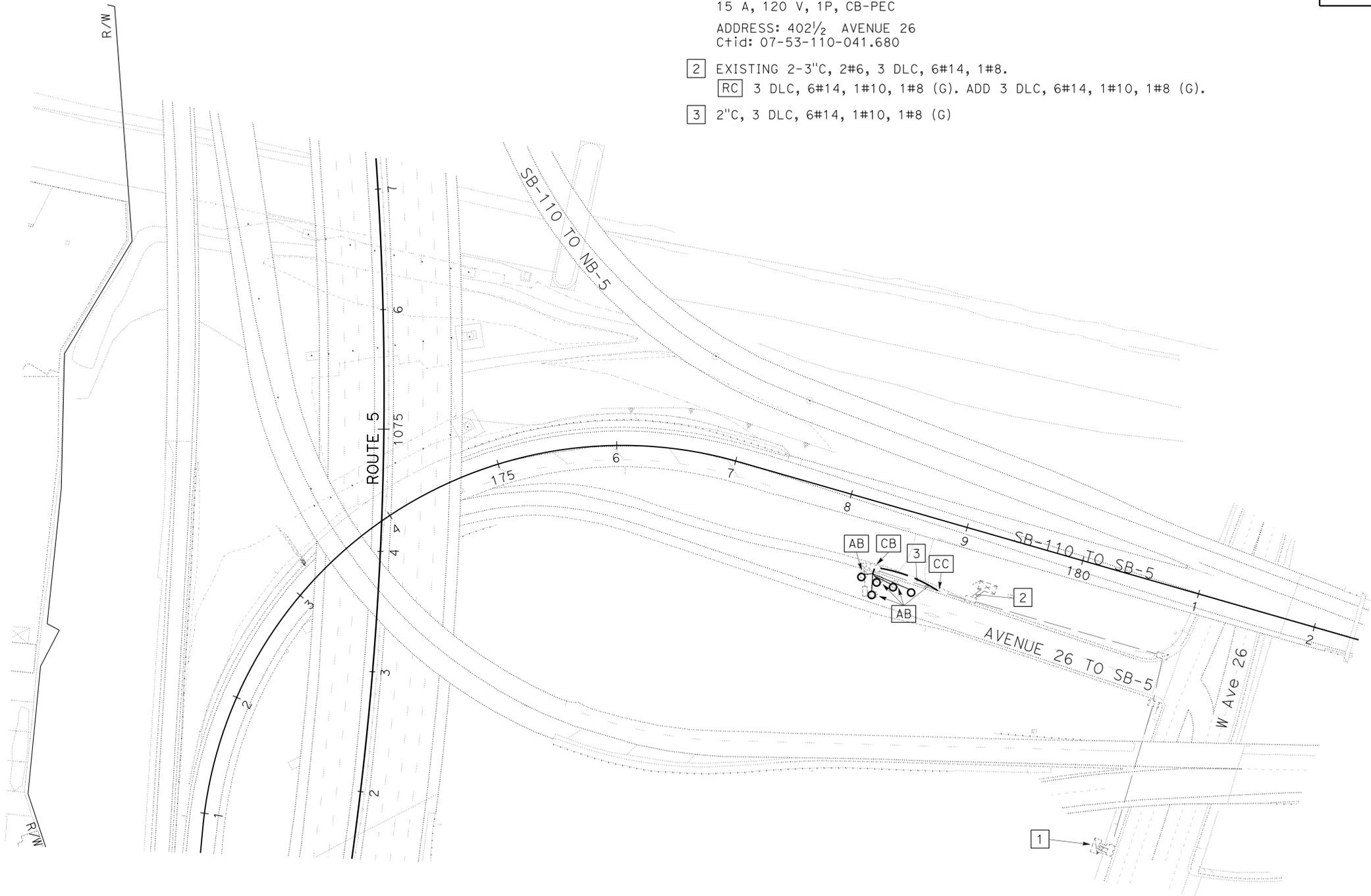
- 1 EXISTING TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
 200 A, 240 V, 2P, CB-MAIN  
 6-30 A, 240 V, 2P, CB-RM  
 30 A, 120 V, 1P, CB-CCTV  
 15 A, 120 V, 1P, CB-PEC  
 ADDRESS: 402 1/2 AVENUE 26  
 CtId: 07-53-110-041.680
- 2 EXISTING 2-3"C, 2#6, 3 DLC, 6#14, 1#8.  
 RC 3 DLC, 6#14, 1#10, 1#8 (G). ADD 3 DLC, 6#14, 1#10, 1#8 (G).
- 3 2"C, 3 DLC, 6#14, 1#10, 1#8 (G)



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	230	291

REGISTERED ELECTRICAL ENGINEER: **JAMSHED A. HYDER**  
 No. E18656  
 Exp. 12/31/14  
 DATE: 2/3/14  
 PLANS APPROVAL DATE: 6-2-14

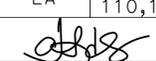
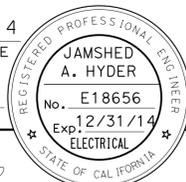
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

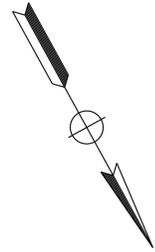


**MODIFY RAMP METERING SYSTEM**

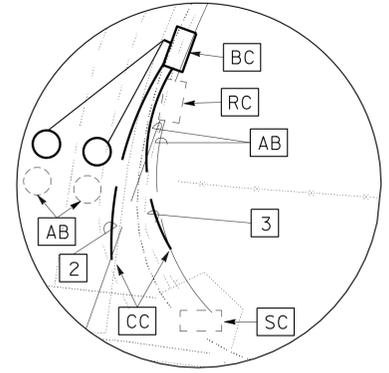
SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

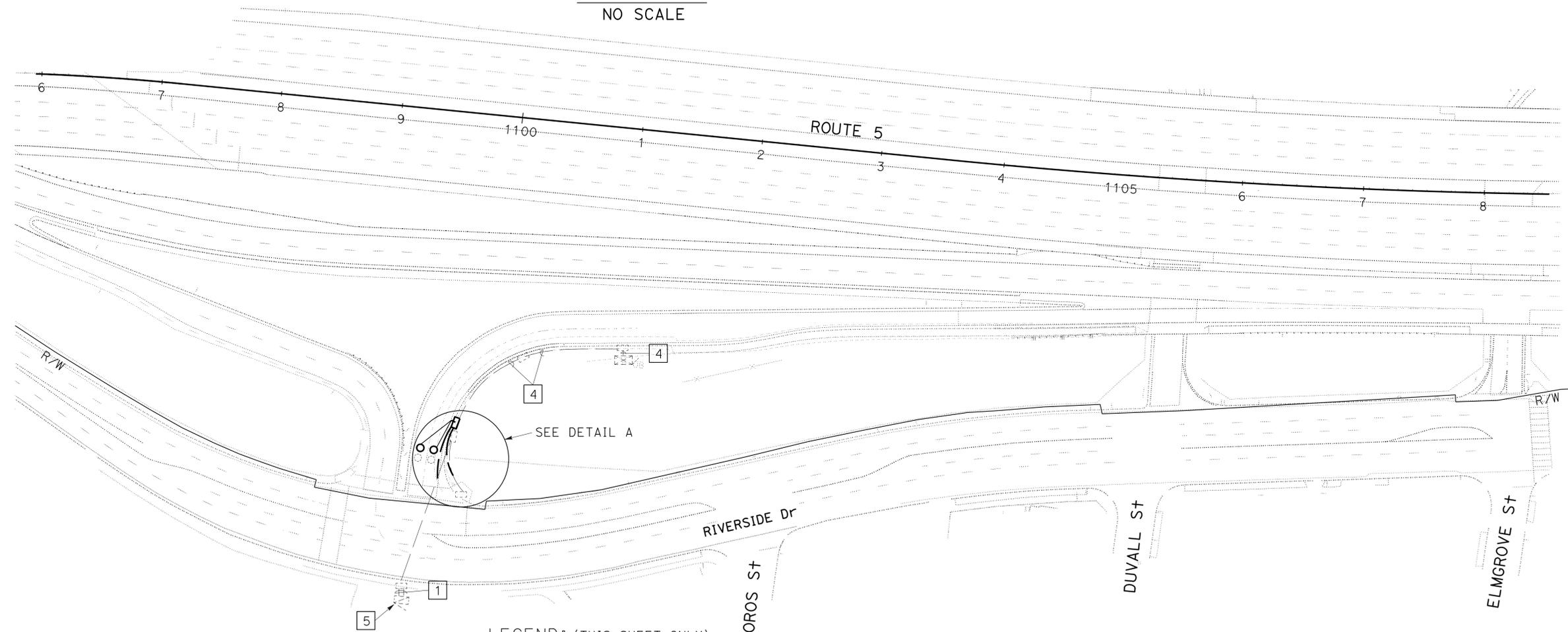
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	231	291
			2/3/14		
REGISTERED ELECTRICAL ENGINEER			DATE		
6-2-14			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



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



**DETAIL A**  
NO SCALE



- LEGEND: (THIS SHEET ONLY)**
- 1 EXISTING 1 1/2" C, RC 2#8. ADD 2#6, 1#8 (G).
  - 2 1 1/2" C, 2#6, 1#8 (G).
  - 3 1 1/2" C, 5#14, 1#8 (G).
  - 4 RC 2 DLC, 2#8. ADD 2#6, 2 DLC, 5#14, 1#8 (G).
  - 5 EXISTING 120/240 V SERVICE  
PP No. 262466M  
ADDRESS: 1002 1/2 W BLAKE Ave  
Ctid: 07-53-005R-020.790

**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

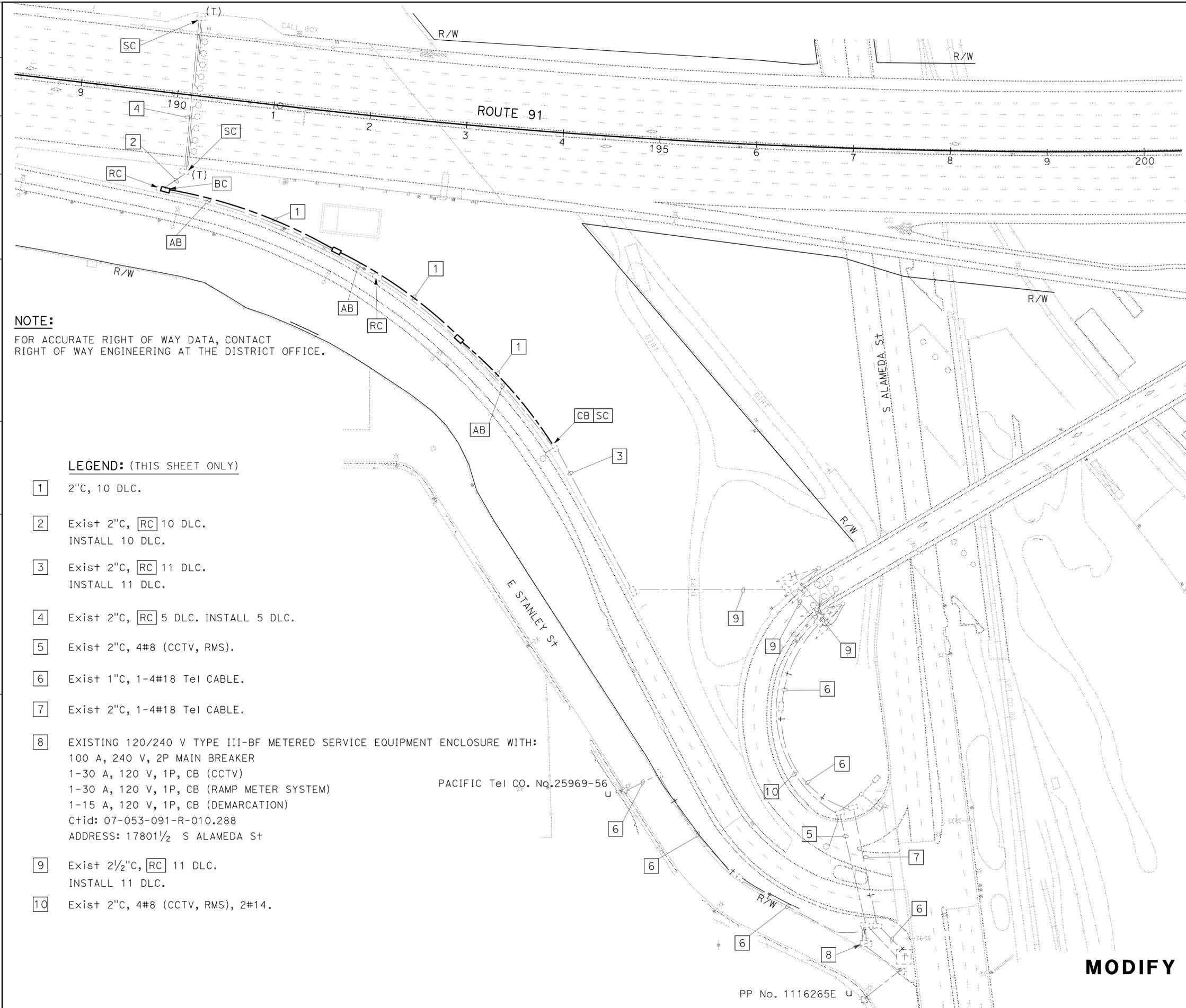
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FARID REKABI	CALCULATED/DESIGNED BY	FUNCTIONAL SUPERVISOR	TRAFFIC DESIGN
	JAMSHED HYDER	CHECKED BY	OSWALD ELIZONDO	
REVISOR	DATE	REVISOR	DATE	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	232	291

*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA



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

- LEGEND: (THIS SHEET ONLY)**
- 1 2"C, 10 DLC.
  - 2 Exist 2"C, RC 10 DLC. INSTALL 10 DLC.
  - 3 Exist 2"C, RC 11 DLC. INSTALL 11 DLC.
  - 4 Exist 2"C, RC 5 DLC. INSTALL 5 DLC.
  - 5 Exist 2"C, 4#8 (CCTV, RMS).
  - 6 Exist 1"C, 1-4#18 Tel CABLE.
  - 7 Exist 2"C, 1-4#18 Tel CABLE.
  - 8 EXISTING 120/240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 2P MAIN BREAKER  
 1-30 A, 120 V, 1P, CB (CCTV)  
 1-30 A, 120 V, 1P, CB (RAMP METER SYSTEM)  
 1-15 A, 120 V, 1P, CB (DEMARCATON)  
 Ctid: 07-053-091-R-010.288  
 ADDRESS: 17801 1/2 S ALAMEDA ST
  - 9 Exist 2 1/2"C, RC 11 DLC. INSTALL 11 DLC.
  - 10 Exist 2"C, 4#8 (CCTV, RMS), 2#14.

PACIFIC Tel CO. No. 25969-56

PP No. 1116265E U

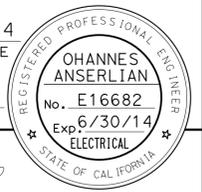
**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

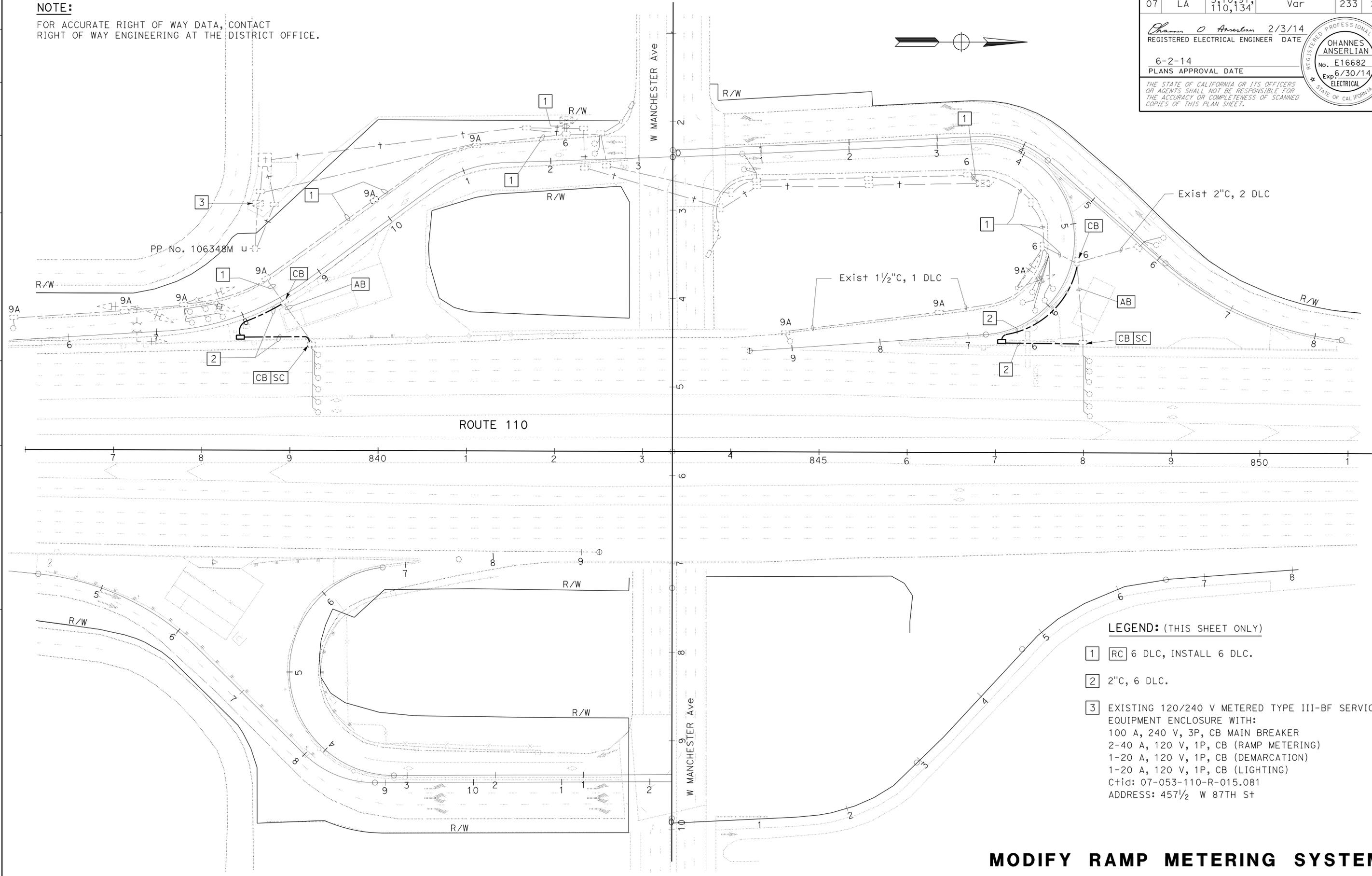
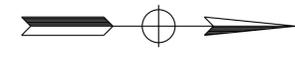
**E-17**

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	233	291
<i>Ohannes Anserlian</i> 2/3/14 REGISTERED ELECTRICAL ENGINEER DATE					
6-2-14 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



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



- LEGEND: (THIS SHEET ONLY)**
- 1 [RC] 6 DLC, INSTALL 6 DLC.
  - 2 2" C, 6 DLC.
  - 3 EXISTING 120/240 V METERED TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 3P, CB MAIN BREAKER  
 2-40 A, 120 V, 1P, CB (RAMP METERING)  
 1-20 A, 120 V, 1P, CB (DEMARCATON)  
 1-20 A, 120 V, 1P, CB (LIGHTING)  
 Ctid: 07-053-110-R-015.081  
 ADDRESS: 457 1/2 W 87TH ST

**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

**E-18**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LIEN VO	REVISOR
<b>Caltrans</b>	OHANNES ANSERLIAN	DATE
TRAFFIC DESIGN	OHANNES ANSERLIAN	REVISION
FUNCTIONAL SUPERVISOR	CHECKED BY	DATE
OSWALD ELIZONDO		

USERNAME => s121614  
 DGN FILE => 725902ua018.dgn

RELATIVE BORDER SCALE  
 IS IN INCHES



UNIT 1878

PROJECT NUMBER & PHASE

07130000461

BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:28

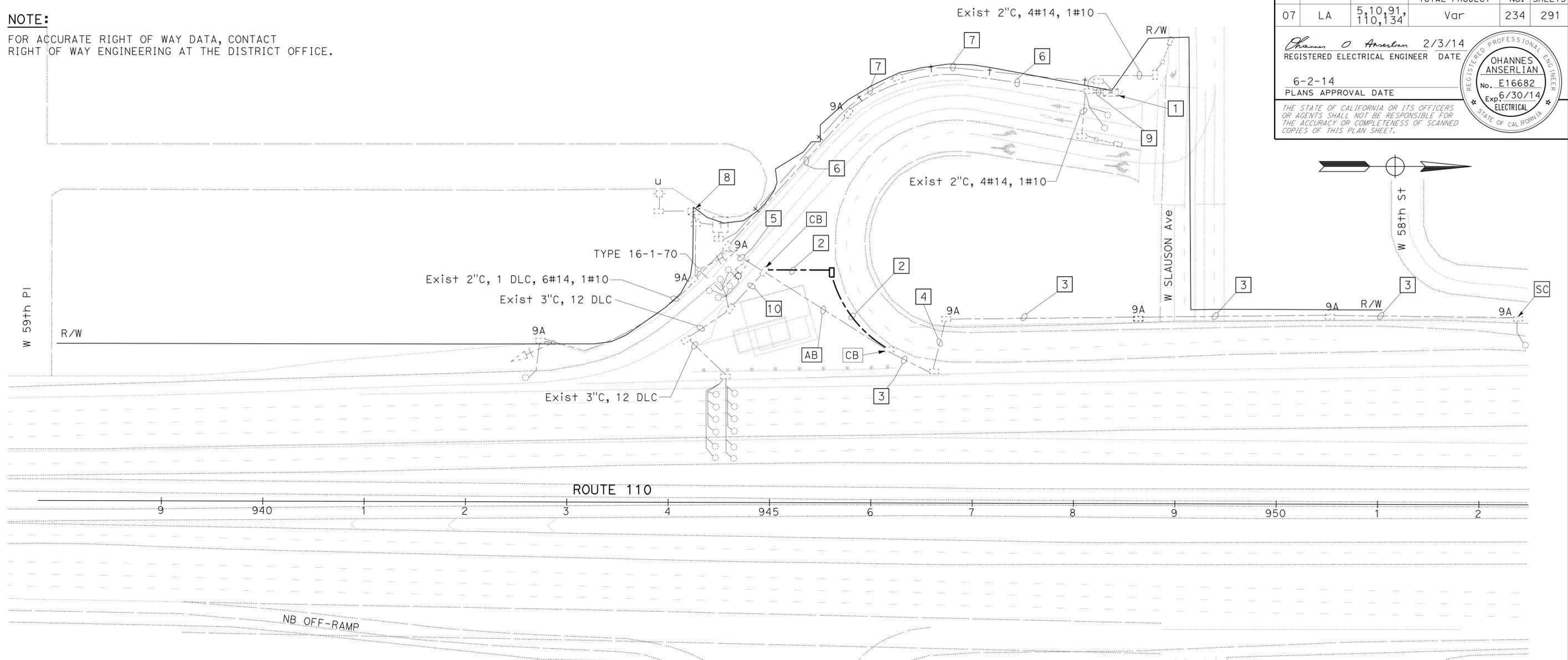
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	234	291

*Ohannes Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 6-2-14  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
**OHANNES ANSERLIAN**  
 No. E16682  
 Exp. 6/30/14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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



- R/W **LEGEND: (THIS SHEET ONLY)**
- 1 Exist MODEL 170 CONTROLLER ASSEMBLY.
  - 2 2\"C, 1 DLC.
  - 3 Exist 1 1/2\"C, [RC] 1 DLC. INSTALL 1 DLC.
  - 4 Exist 2\"C, [RC] 1 DLC. INSTALL 1 DLC.
  - 5 Exist 3 1/2\" C, 17 DLC. [RC] 1 DLC. INSTALL 1 DLC.
  - 6 Exist 2-3\"C, 18 DLC. [RC] 1 DLC. INSTALL 1 DLC.
  - 7 Exist 1\"C, 1-4#18 TELEPHONE CABLE.
  - 8 EXISTING 120/240 V METERED TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 2P, CB MAIN BREAKER  
 1-30 A, 120 V, 1P, CB (RAMP METERING)  
 1-20 A, 120 V, 1P, CB (DEMARCATON)  
 Ctid: 07-053-110-R-017.871  
 ADDRESS: 5946 1/2 S FLOWER ST
  - 9 Exist 2-3\"C, 20 DLC. [RC] 1 DLC. INSTALL 1 DLC.
  - 10 Exist 3 1/2\"C, 16 DLC.

APPROVED FOR ELECTRICAL WORK ONLY

**MODIFY RAMP METERING SYSTEM**

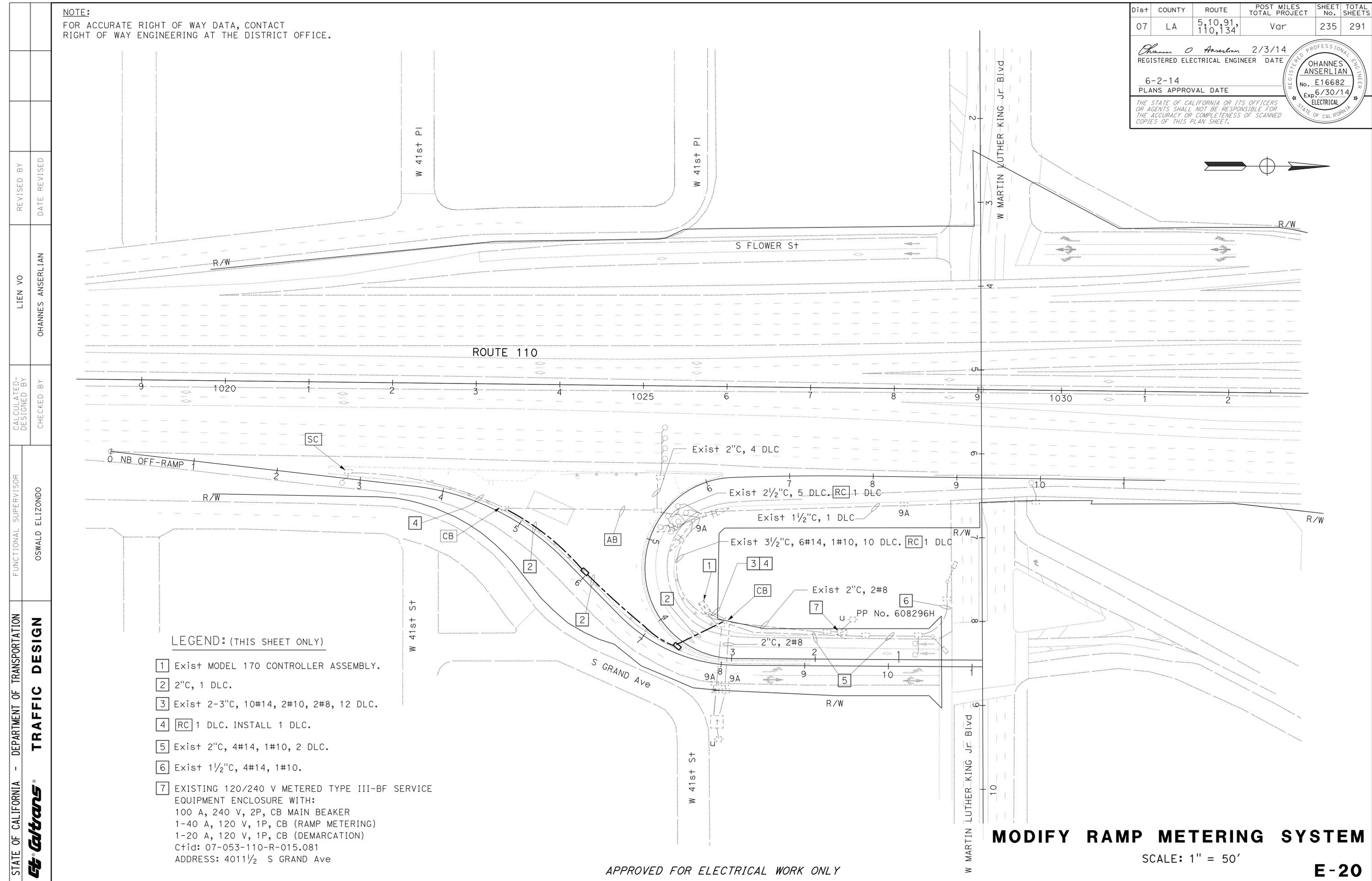
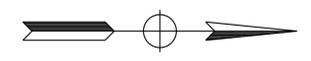
SCALE: 1" = 50'

**E-19**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LIEN VO	REVISOR	DATE
<b>Caltrans</b> <b>TRAFFIC DESIGN</b>	OHANNES ANSERLIAN		
FUNCTIONAL SUPERVISOR	CHECKED BY		
OSWALD ELIZONDO			

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	235	291
<i>Ohannes O Anserlian</i> 2/3/14 REGISTERED ELECTRICAL ENGINEER DATE					
6-2-14			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>					



LEGEND: (THIS SHEET ONLY)

- 1 Exist MODEL 170 CONTROLLER ASSEMBLY.
- 2 2"C, 1 DLC.
- 3 Exist 2-3"C, 10#14, 2#10, 2#8, 12 DLC.
- 4 RC 1 DLC. INSTALL 1 DLC.
- 5 Exist 2"C, 4#14, 1#10, 2 DLC.
- 6 Exist 1/2"C, 4#14, 1#10.
- 7 EXISTING 120/240 V METERED TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH:  
 100 A, 240 V, 2P, CB MAIN BEAKER  
 1-40 A, 120 V, 1P, CB (RAMP METERING)  
 1-20 A, 120 V, 1P, CB (DEMARCATON)  
 C+id: 07-053-110-R-015.081  
 ADDRESS: 4011 1/2 S GRAND Ave

APPROVED FOR ELECTRICAL WORK ONLY

**MODIFY RAMP METERING SYSTEM**

SCALE: 1" = 50'

**E-20**

LAST REVISION DATE PLOTTED => 12-SEP-2014  
 01-27-14 TIME PLOTTED => 07:28

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	236	291

*John O Anserlian* 2/3/14  
 REGISTERED ELECTRICAL ENGINEER DATE

6-2-14  
 PLANS APPROVAL DATE

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ITEMS SHOWN IN TABLES ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

### MODIFY LIGHTING AND SIGN ILLUMINATION

Sheet No.	PB-5 (EA)	2" C (LF)	#6 (LF)	#8 (LF)	#8 (G) (LF)	ISL LIGHTING FIXTURES (EA)	LED LUMINAIRE (EA)	TYPE 30 S+d (EA)	TYPE 30 S+d FOUNDATION (EA)	TYPE 15 S+d FOUNDATION (EA)
E-1	1	60	120	—	60	—	—	—	—	1
E-2	—	50	80	—	80	—	—	—	—	—
E-3	6	800	—	4,400	2,200	—	10	3	3	—
E-4	2	200	—	600	1,600	—	—	—	—	—
E-5	2	100	600	200	2,000	5	—	—	—	—
E-6	—	—	—	—	1,500	6	—	—	—	—
E-7	3	100	240	—	1,600	—	—	—	—	—
E-8	—	150	300	—	150	8	—	—	—	—
E-9	2	200	400	—	200	—	—	—	—	—

### MODIFY RAMP METERING SYSTEM

Sheet No.	DLC (LF)	PB-5 (EA)	PB-6 (EA)	1 1/2" C (LF)	3" C (LF)	2" C (LF)	#14 (LF)	#6 (LF)	#8 (G) (LF)	LOOPS (EA)
E-14	400	—	1	—	20	50	100	—	200	—
E-15	200	—	—	—	—	50	600	—	100	5
E-16	500	1	—	100	—	—	500	600	250	2
E-17	11,000	3	—	—	—	470	—	—	—	—
E-18	6,300	2	—	—	—	400	—	—	—	—
E-19	1,400	1	—	—	—	160	—	—	—	—
E-20	600	2	—	—	—	300	—	—	—	—

## ELECTRICAL QUANTITIES

**E-21**

	<b>M</b>	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	<b>N</b>	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	<b>O</b>	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	<b>P</b>	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	<b>P continued</b>	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	<b>S</b>	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	<b>T</b>	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	<b>T continued</b>	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	
	<b>U</b>	
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	
	<b>V</b>	
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
	<b>W</b>	
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWL	WINGWALL LAYOUT LINE	
	<b>X</b>	
X Sec	CROSS SECTION	
Xing	CROSSING	
	<b>Y</b>	
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	237	291

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Grace M. Tsushima  
 No. C49814  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 6-2-14

**UNIT OF MEASUREMENT SYMBOLS:**

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

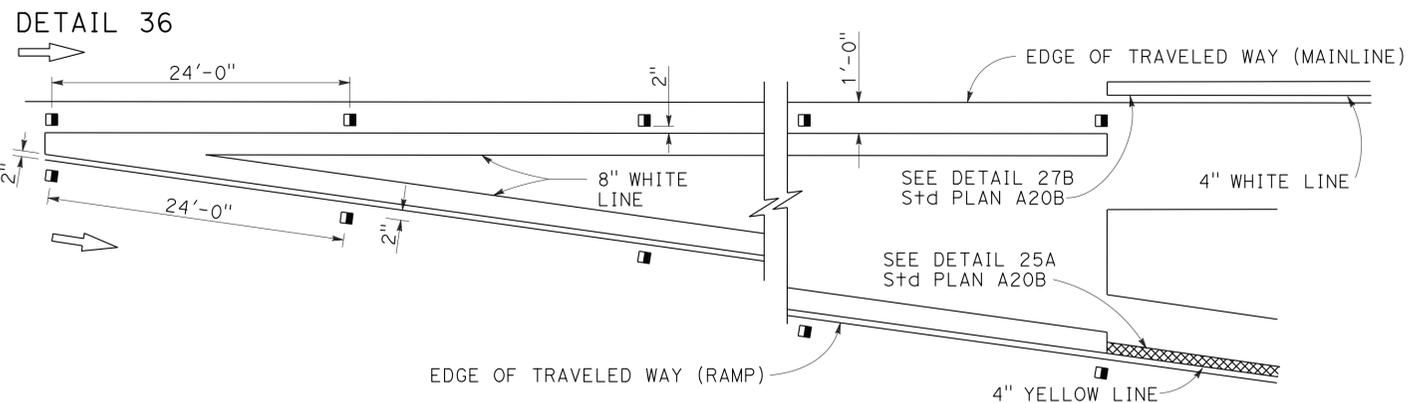
**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

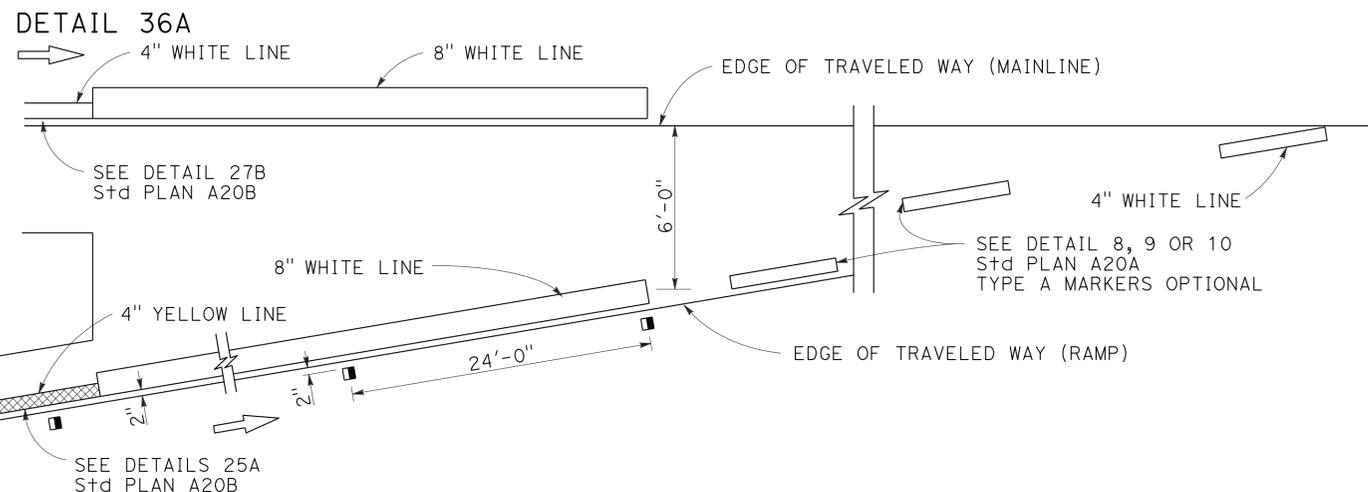
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

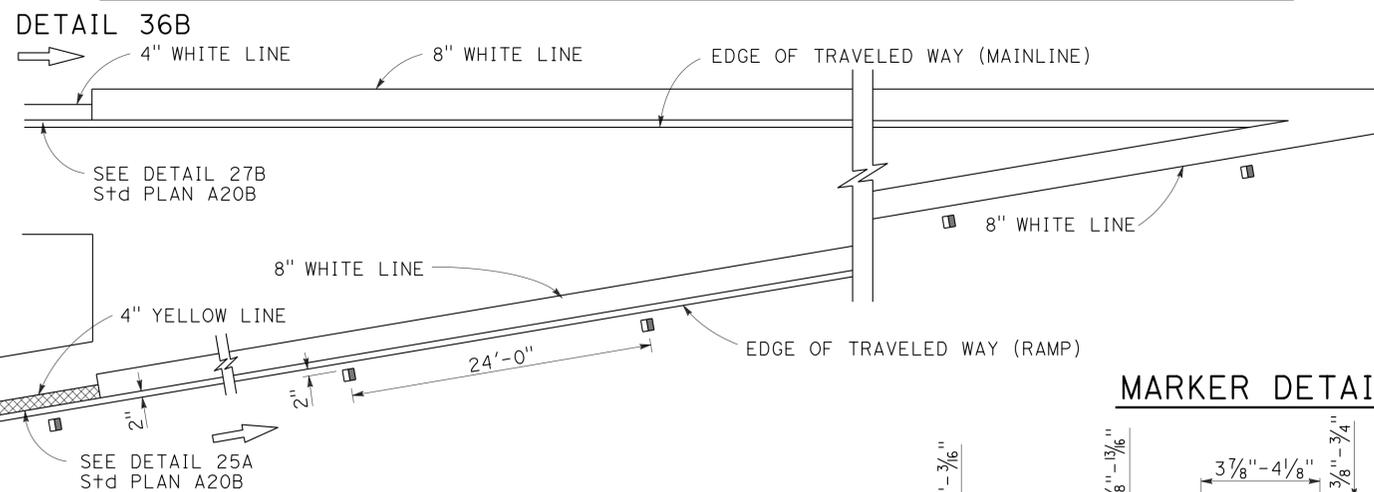
### EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

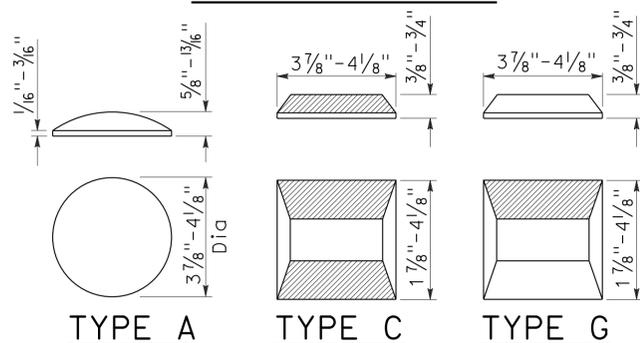


### MARKER DETAILS

#### LEGEND:

#### MARKERS

- TYPE A WHITE NON-REFLECTIVE
- ◻ TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE



RETROREFLECTIVE FACE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	238	291

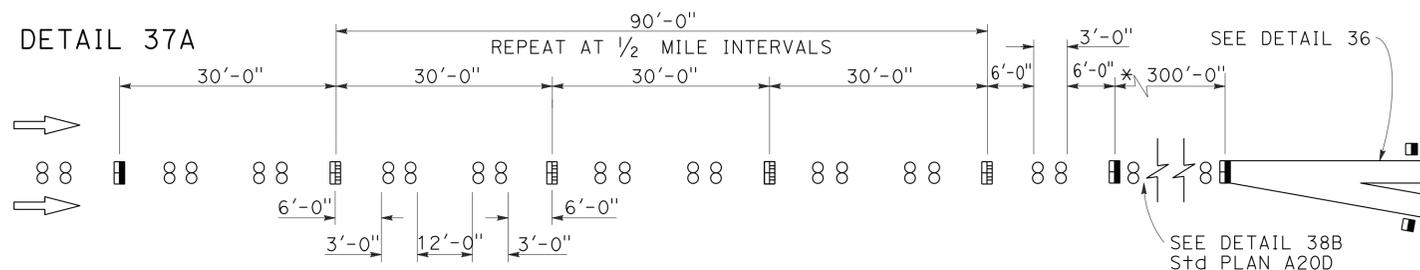
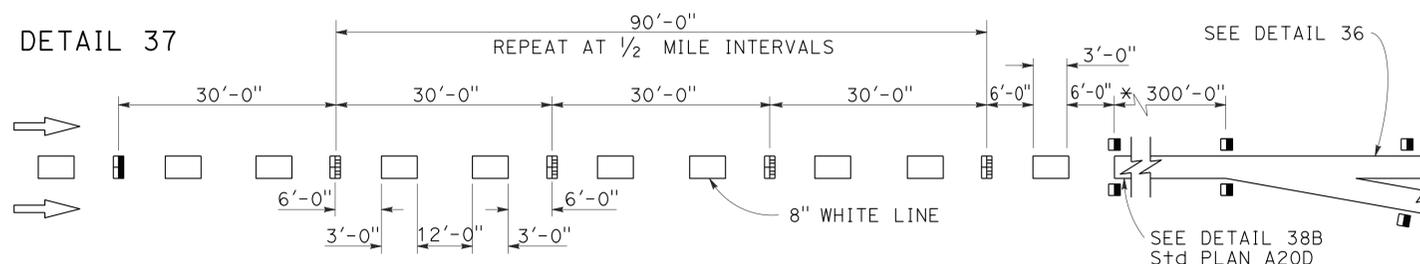
REGISTERED CIVIL ENGINEER  
 Roberto L. McLaughlin  
 No. C40375  
 Exp. 3-31-15  
 CIVIL  
 STATE OF CALIFORNIA

July 19, 2013  
 PLANS APPROVAL DATE

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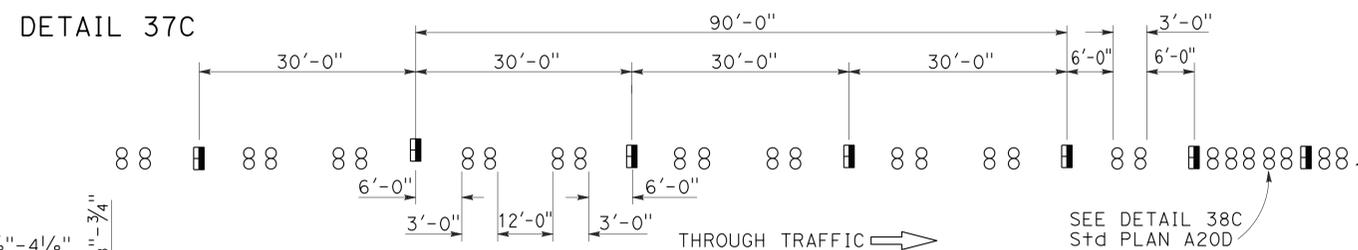
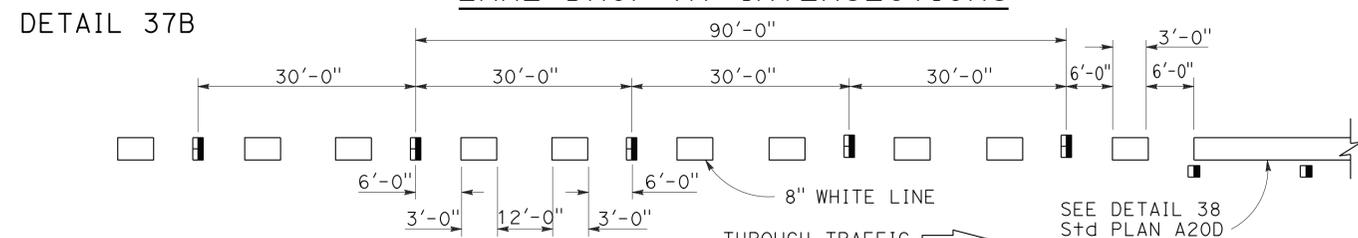
TO ACCOMPANY PLANS DATED 6-2-14

### LANE DROP AT EXIT RAMP



\* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

### LANE DROP AT INTERSECTIONS



### STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

### REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	239	291

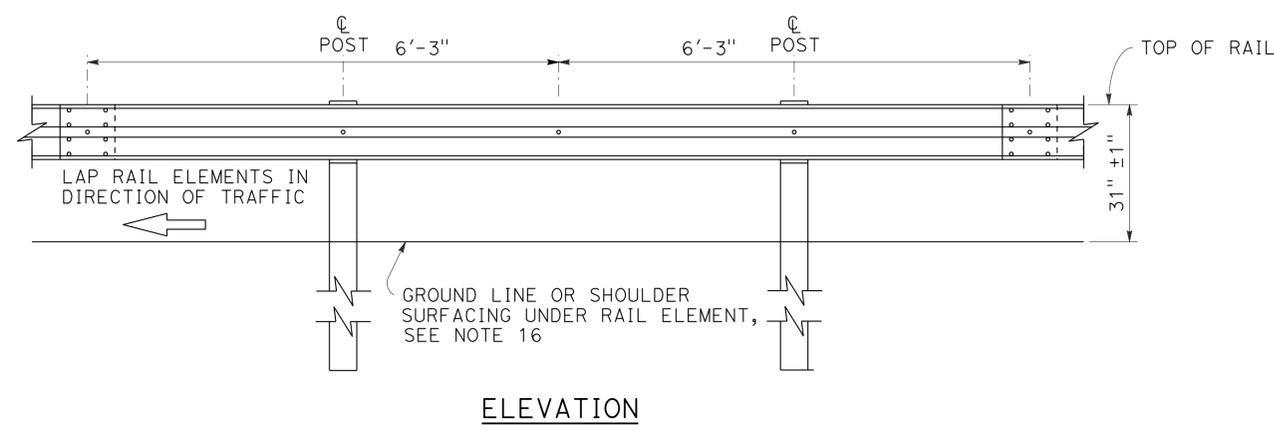
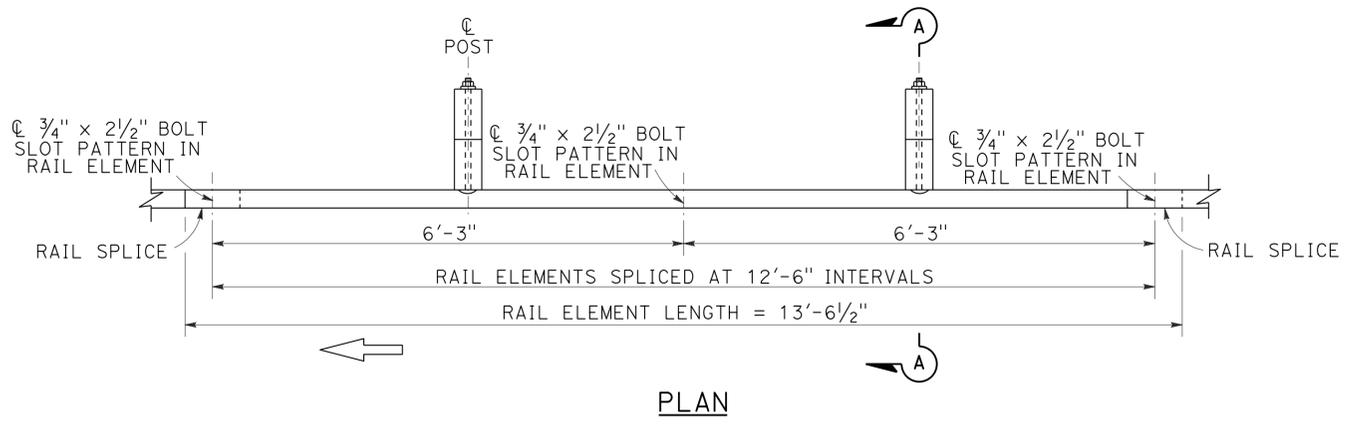
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

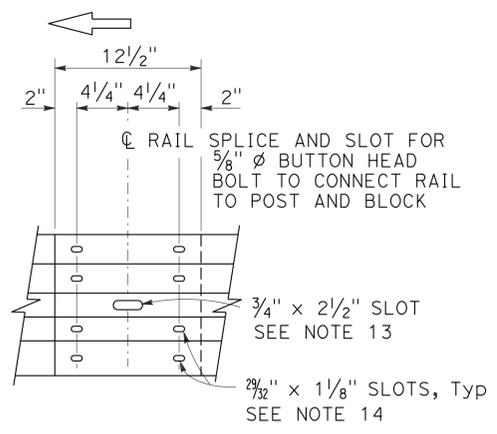
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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

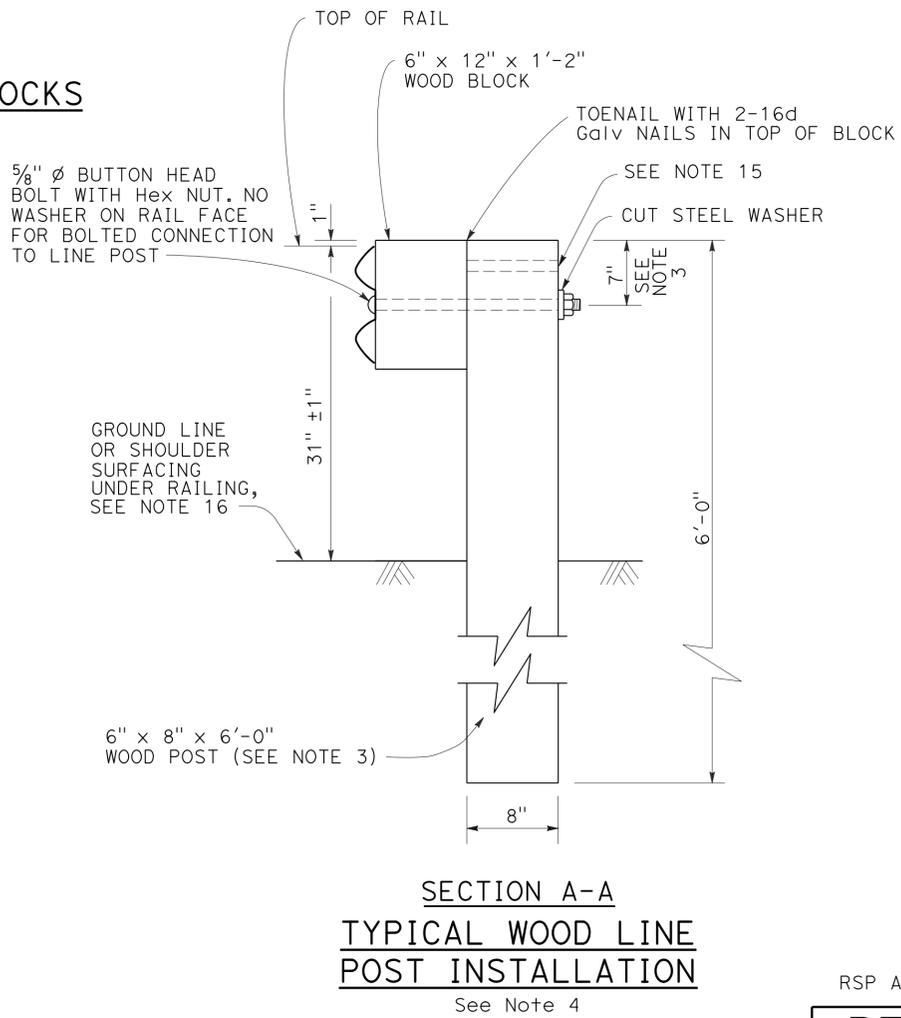
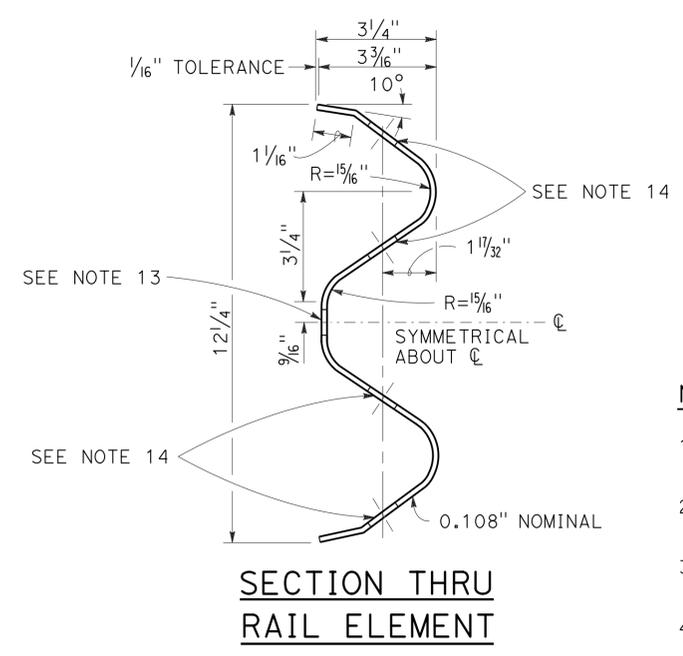
TO ACCOMPANY PLANS DATED 6-2-14



**MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS**



- Connect the over lapped end of the rail elements with  $\frac{5}{8}$ "  $\phi$  x  $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the  $\frac{23}{32}$ " x  $1\frac{1}{8}$ " slots and bolted together with  $\frac{5}{8}$ "  $\phi$  recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



**NOTES:**

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
STANDARD RAILING SECTION  
(WOOD POST WITH  
WOOD BLOCK)**

NO SCALE

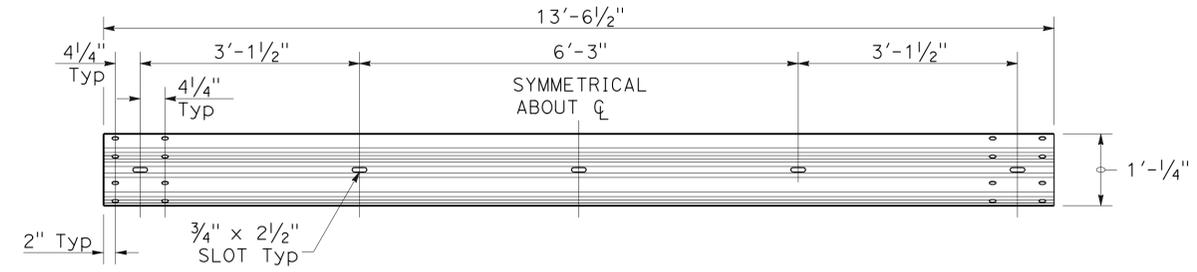
RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77L1**

2010 REVISED STANDARD PLAN RSP A77L1



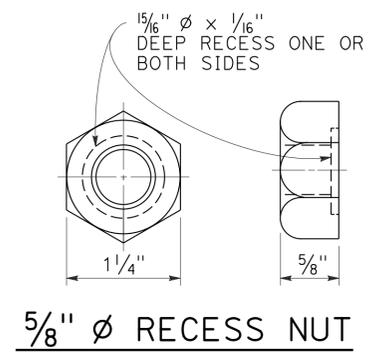
TO ACCOMPANY PLANS DATED 6-2-14



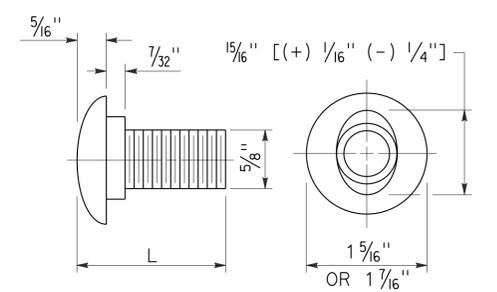
**TYPICAL RAIL ELEMENT**

**NOTE:**

1. Slotted holes for splice bolts to overlap ends of rail element.



**5/8" Ø RECESS NUT**

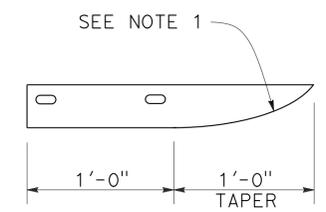


**5/8" Ø BUTTON HEAD BOLT**

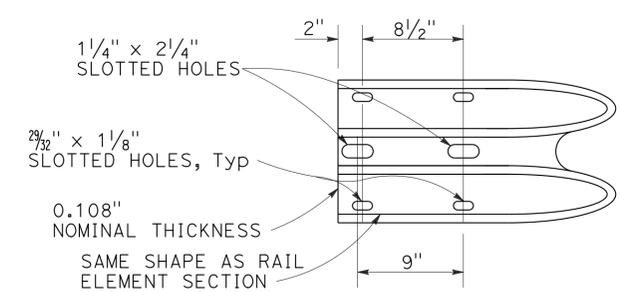
**BUTTON HEAD BOLT**

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

\*\* For nested rail applications.



**PLAN**



**ELEVATION  
END CAP  
(TYPE A)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77M1**

2010 REVISED STANDARD PLAN RSP A77M1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	241	291

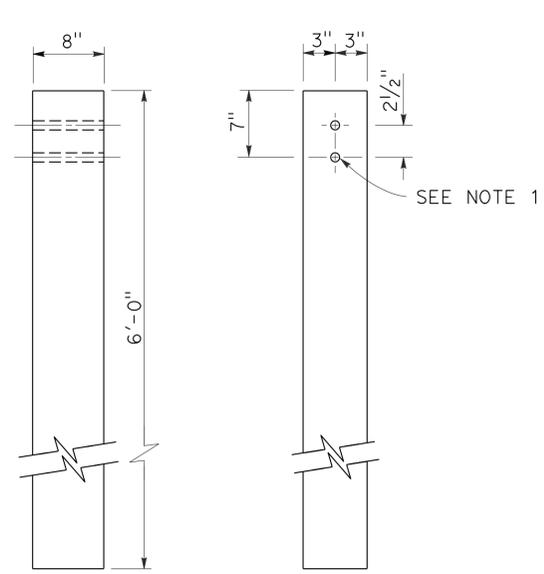
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

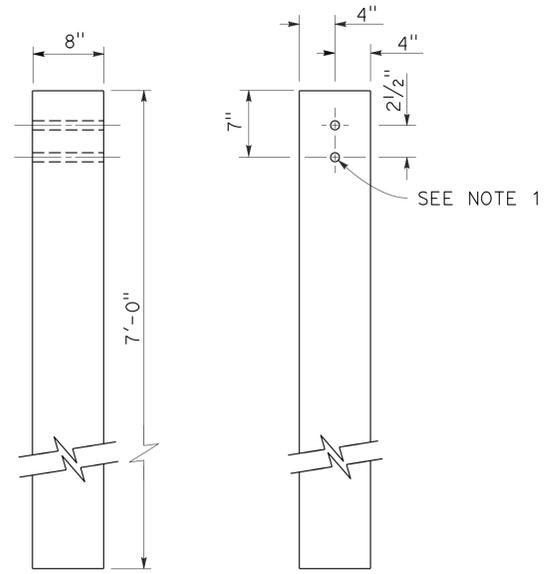
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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

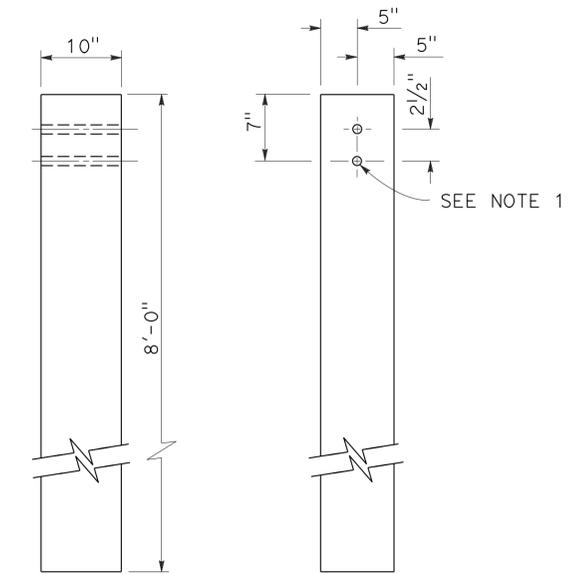
TO ACCOMPANY PLANS DATED 6-2-14



SIDE      FRONT  
**6" x 8" WOOD POST**  
See Note 3



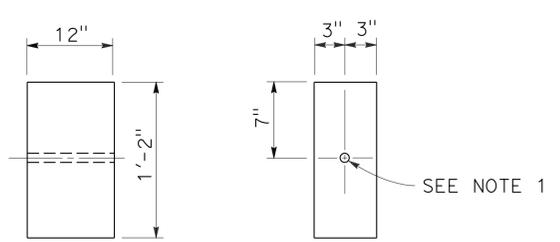
SIDE      FRONT  
**8" x 8" WOOD POST**  
See Note 4



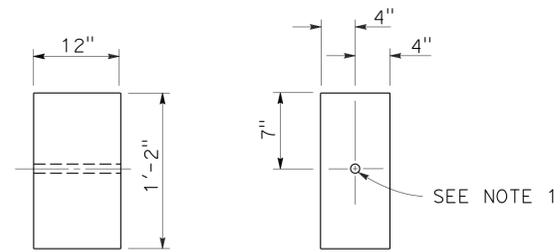
SIDE      FRONT  
**10" x 10" WOOD POST**  
See Note 5

**NOTES:**

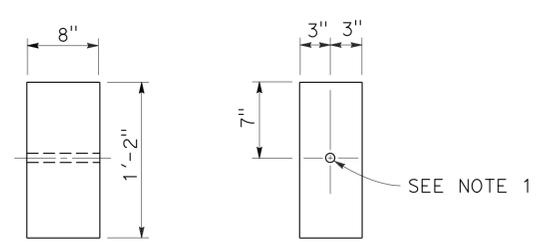
1. All holes in wood posts and blocks shall be 3/4" Dia ± 1/16".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



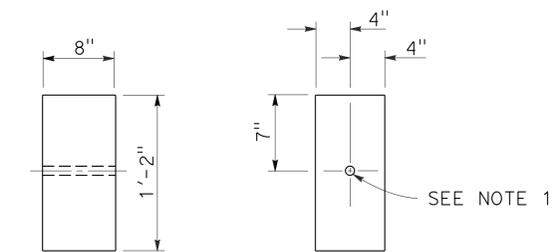
SIDE      FRONT  
**6" x 12" WOOD BLOCK**  
See Note 3



SIDE      FRONT  
**8" x 12" WOOD BLOCK**



SIDE      FRONT  
**6" x 8" WOOD BLOCK**  
Only for use with metal beam guard rail see Note 6



SIDE      FRONT  
**8" x 8" WOOD BLOCK**  
Only for use with metal beam guard rail see Note 6

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
WOOD POST AND  
WOOD BLOCK DETAILS**

NO SCALE

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N1**

2010 REVISED STANDARD PLAN RSP A77N1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	242	291

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

November 15, 2013  
PLANS APPROVAL DATE

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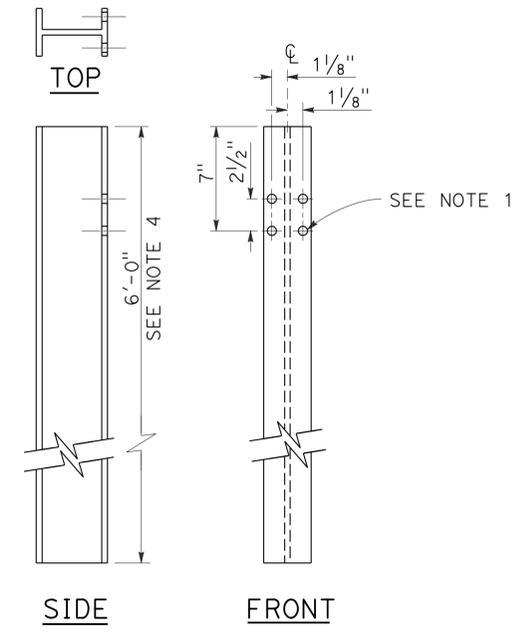
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

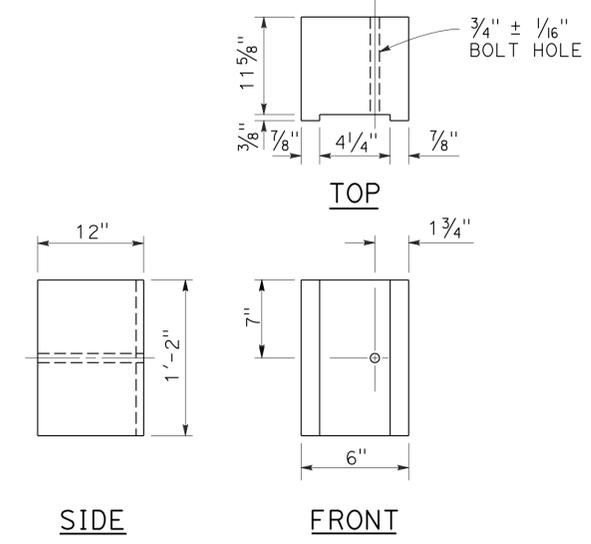
**NOTES:**

1. All holes in steel post shall be  $\frac{13}{16}$ " Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

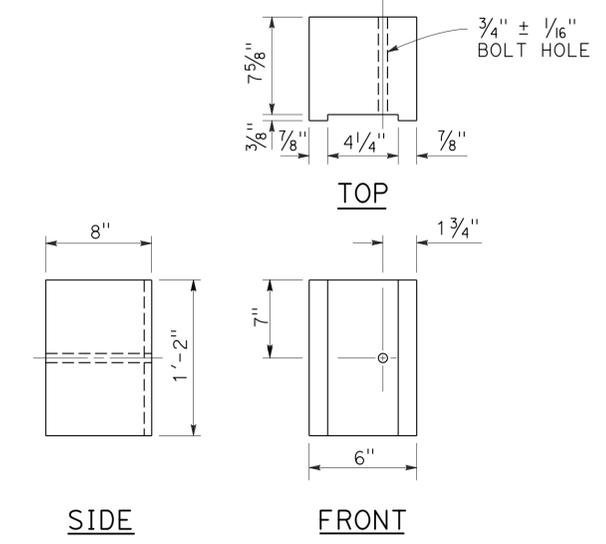
2010 REVISED STANDARD PLAN RSP A77N2



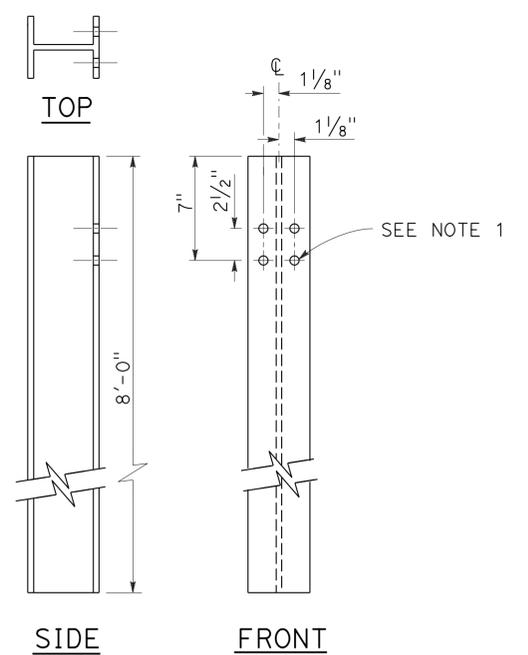
**W6 x 9 OR W6 x 8.5  
STEEL POST**  
See Note 4



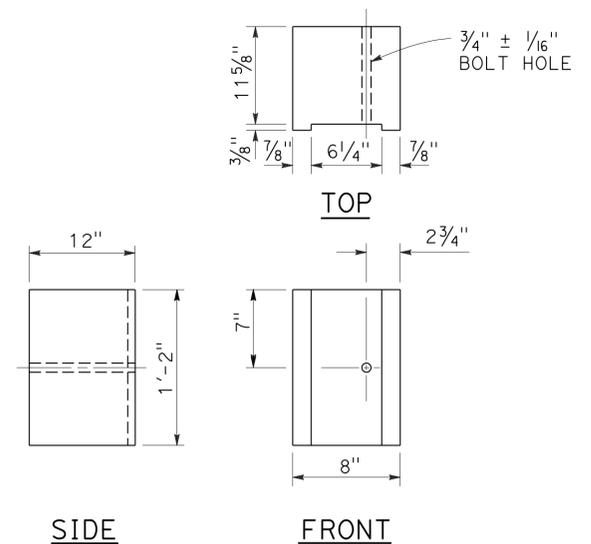
**6" x 12"  
NOTCHED WOOD BLOCK**  
See Notes 2 and 3



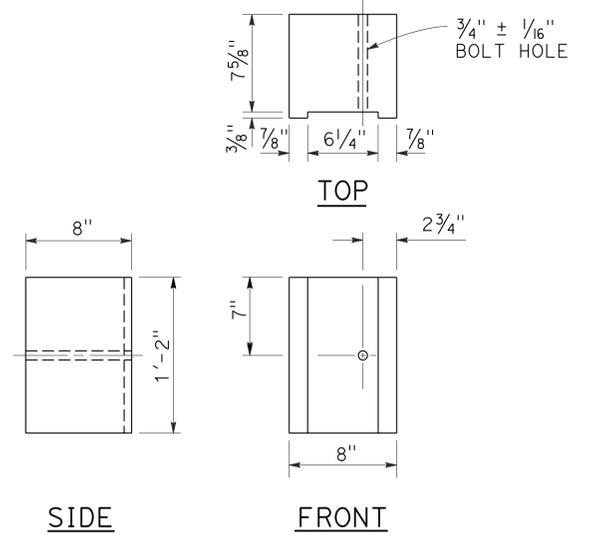
**6" x 8"  
NOTCHED WOOD BLOCK**  
Only for use with metal beam guard railing. See Note 5



**W6 x 15  
STEEL POST**  
See Note 6



**8" x 12"  
NOTCHED WOOD BLOCK**  
See Notes 2 and 3



**8" x 8"  
NOTCHED WOOD BLOCK**  
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
STEEL POST AND  
NOTCHED WOOD BLOCK DETAILS**

NO SCALE

RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	243	291

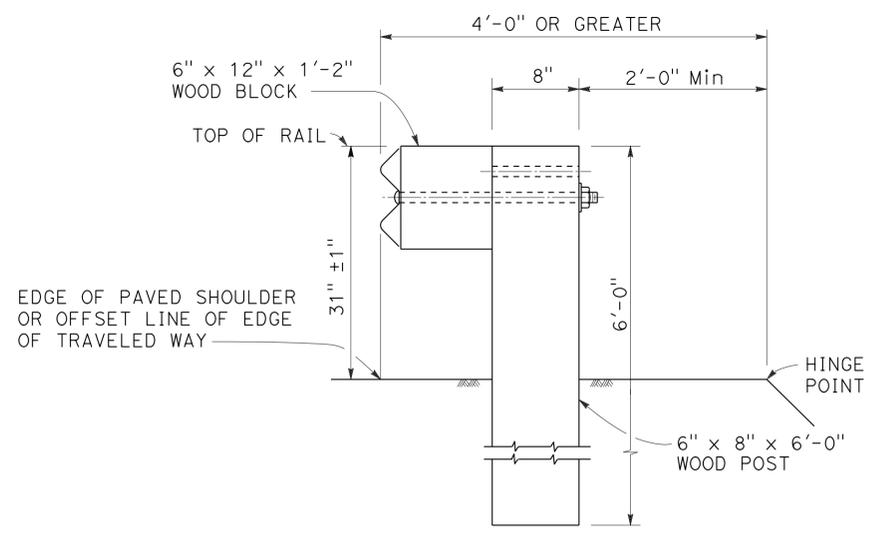
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

November 15, 2013  
PLANS APPROVAL DATE

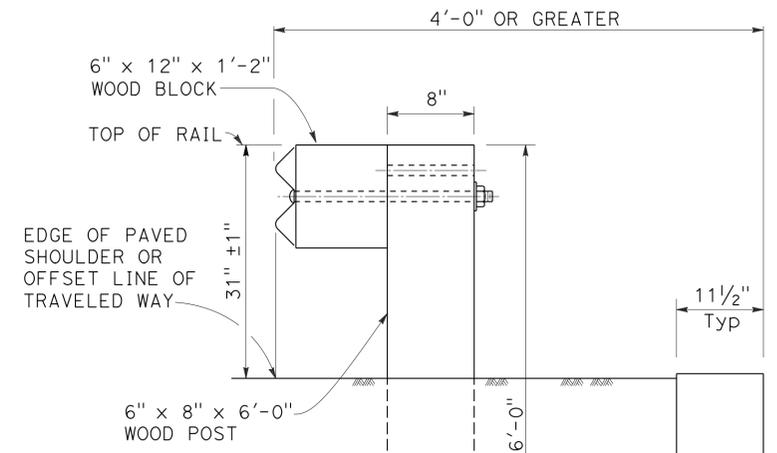
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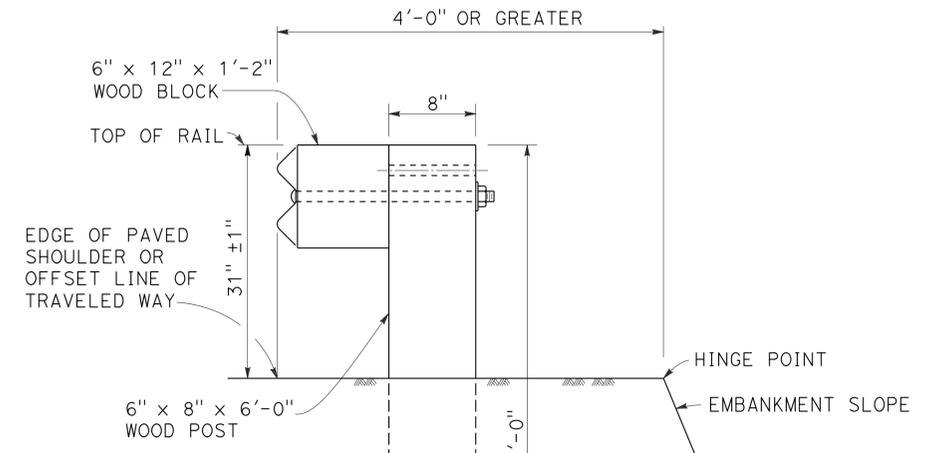
TO ACCOMPANY PLANS DATED 6-2-14



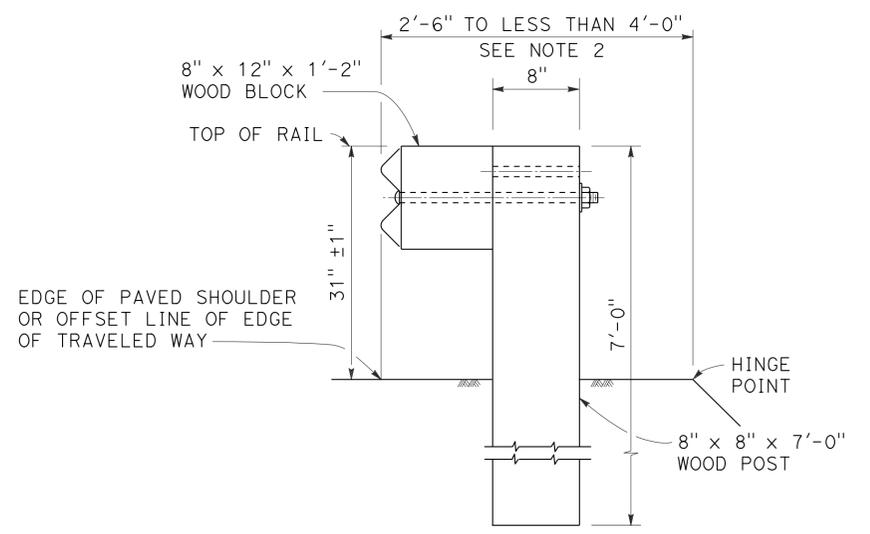
**DETAIL A**  
**TYPICAL ROADWAY**  
**INSTALLATION**  
See Note 1



**DETAIL C**



**DETAIL D**



**DETAIL B**  
**NARROW ROADWAY**  
**INSTALLATION**  
See Note 1

**POST EMBEDMENT**

**INSTALLATION AT EARTH RETAINING WALLS**

**NOTES:**

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM**  
**TYPICAL LINE POST**  
**EMBEDMENT AND**  
**HINGE POINT OFFSET DETAILS**

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N3**

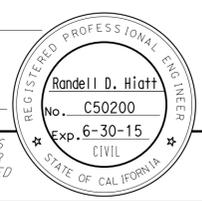
2010 REVISED STANDARD PLAN RSP A77N3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	244	291

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

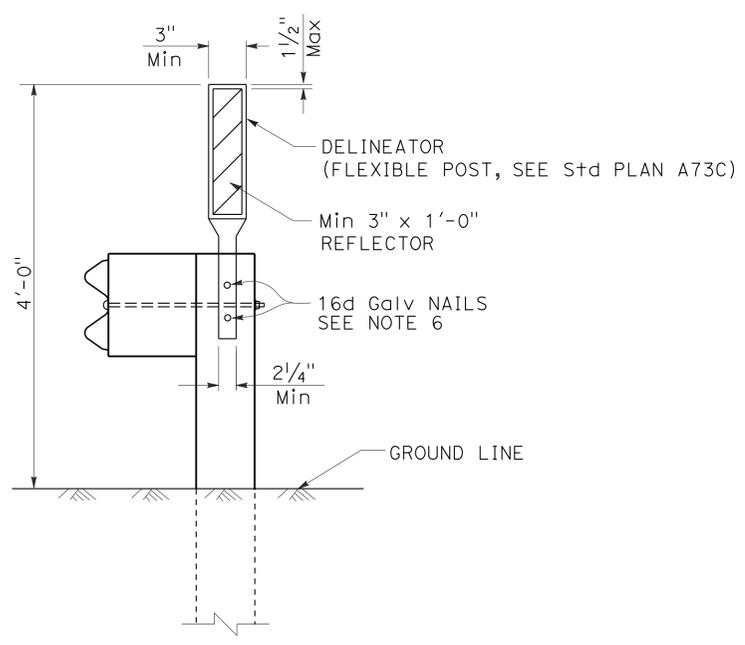
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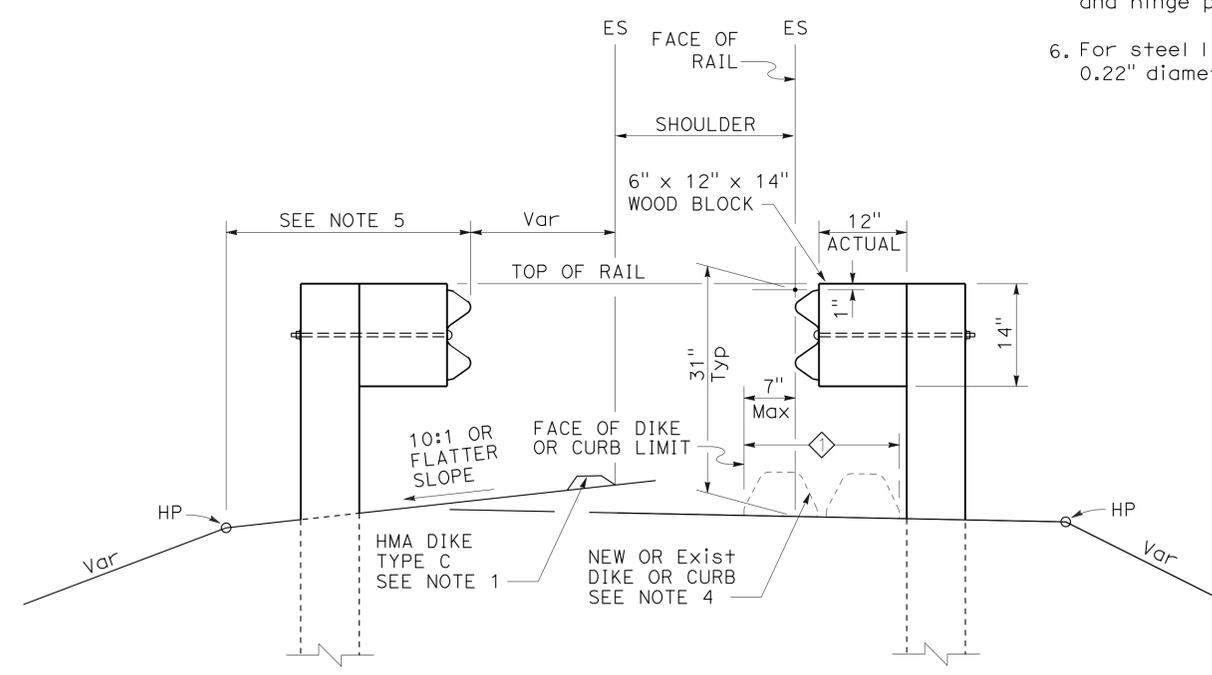
TO ACCOMPANY PLANS DATED 6-2-14

**NOTES:**

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



**MGS DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL RAILING DELINEATION  
AND DIKE POSITIONING DETAILS**  
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N4**

2010 REVISED STANDARD PLAN RSP A77N4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	245	291

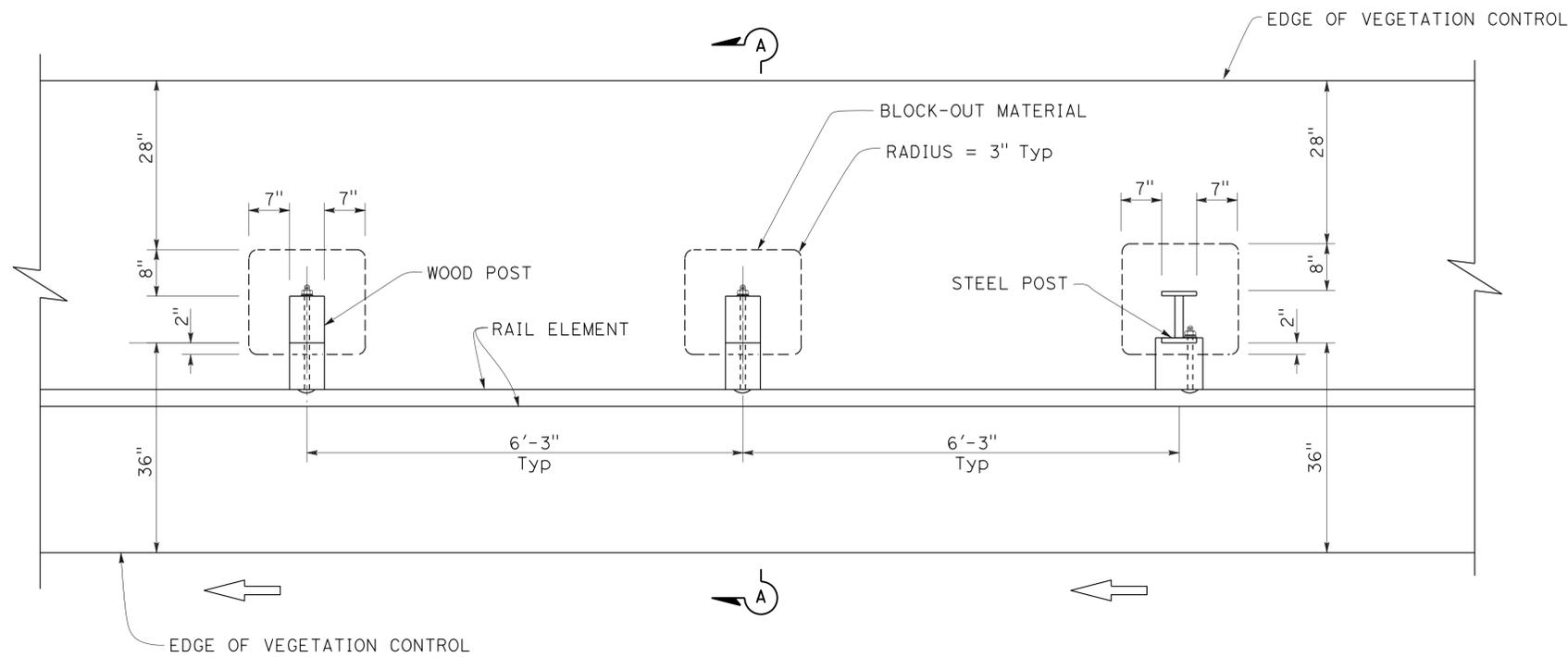
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

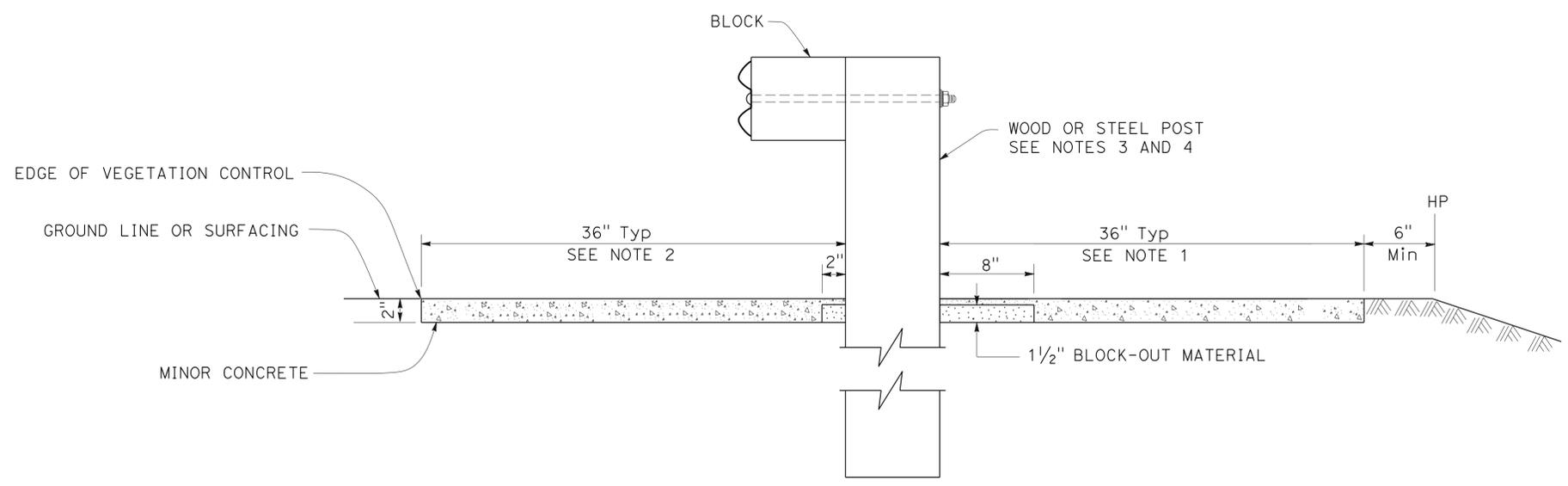
TO ACCOMPANY PLANS DATED 6-2-14



PLAN

NOTES:

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood post sizes, see Revised Standard Plan RSP A77N1.
4. For steel post sizes, see Revised Standard Plan RSP A77N2.
5. For details not shown, see Revised Standard Plans RSP A77L1 and RSP A77L2.



SECTION A-A

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
STANDARD RAILING SECTION**

NO SCALE

RSP A77N5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N5**

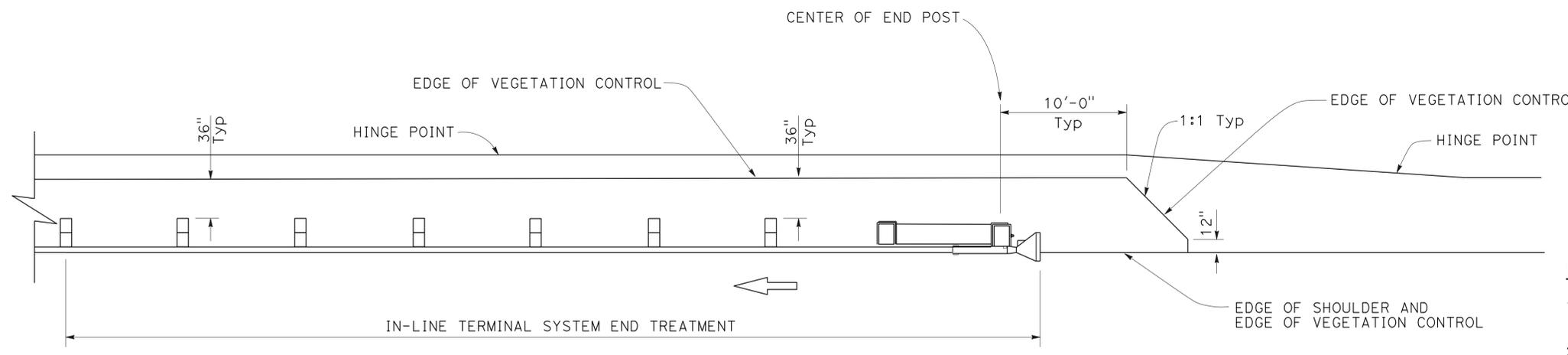
2010 REVISED STANDARD PLAN RSP A77N5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	246	291

RANDALL D. HIATT  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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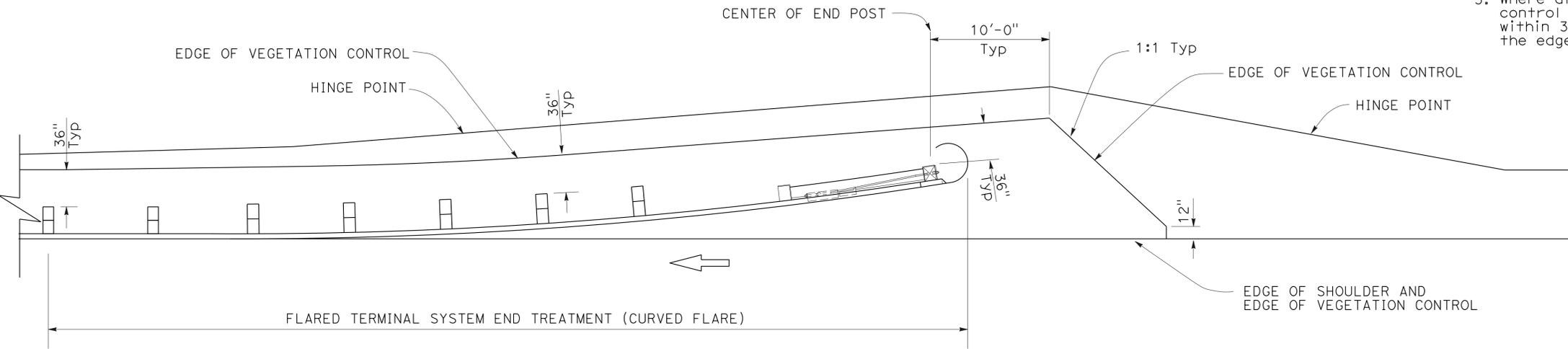
TO ACCOMPANY PLANS DATED 6-2-14



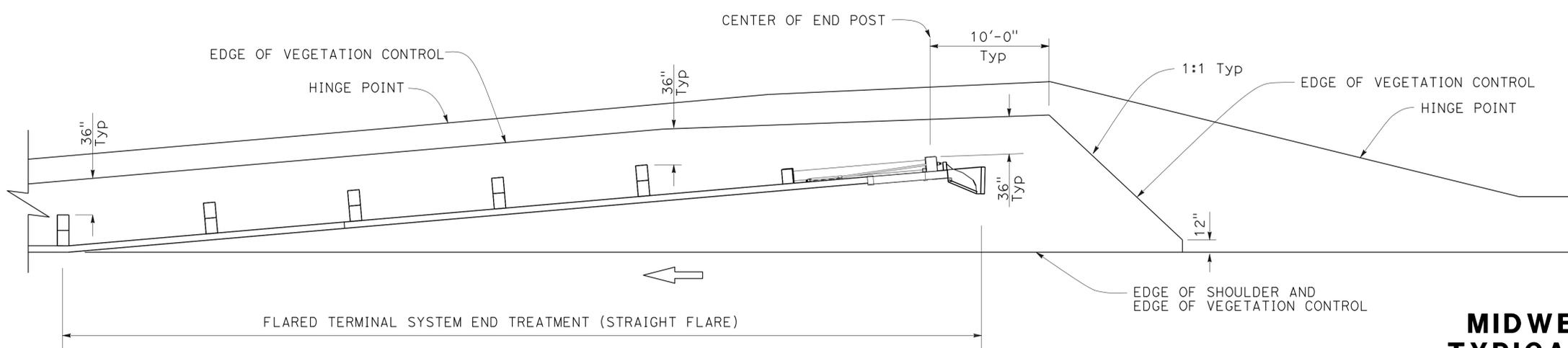
PLAN

**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.



PLAN



PLAN

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
 TYPICAL VEGETATION CONTROL  
 FOR TERMINAL SYSTEM END TREATMENTS**  
 NO SCALE

RSP A77N6 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N6**

2010 REVISED STANDARD PLAN RSP A77N6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	247	291

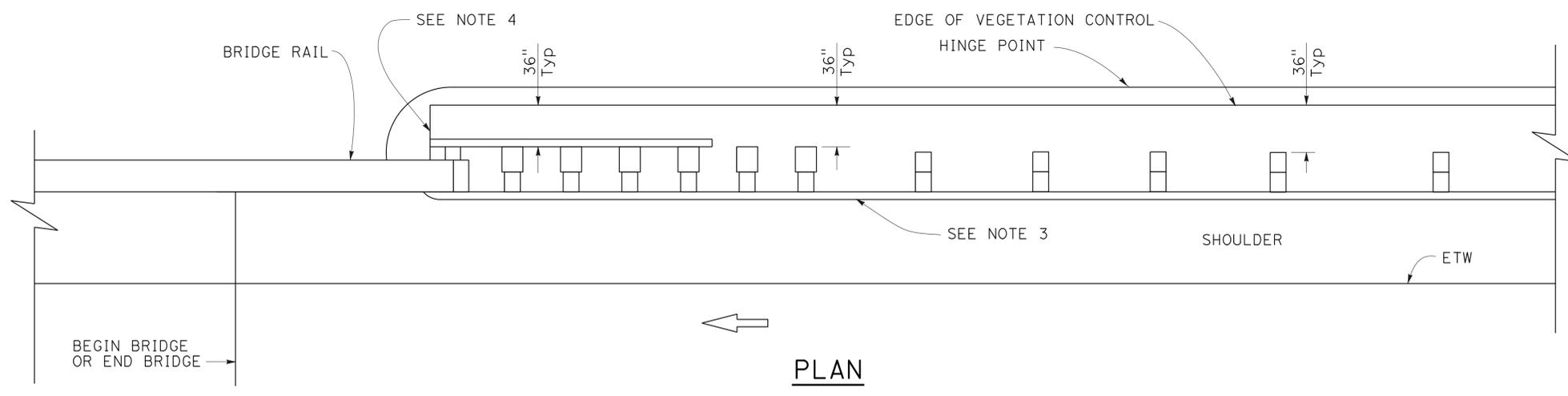
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

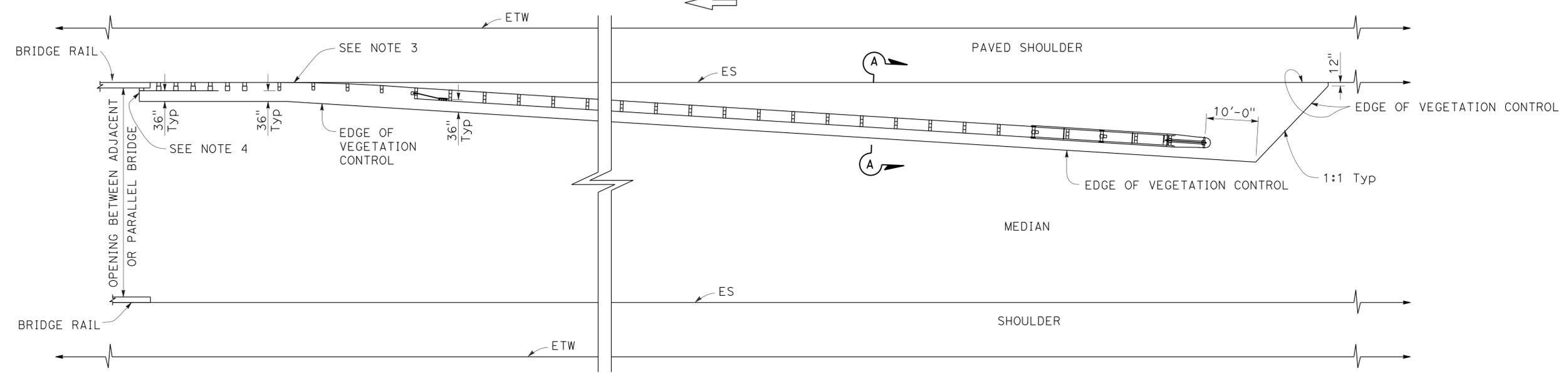
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TO ACCOMPANY PLANS DATED 6-2-14

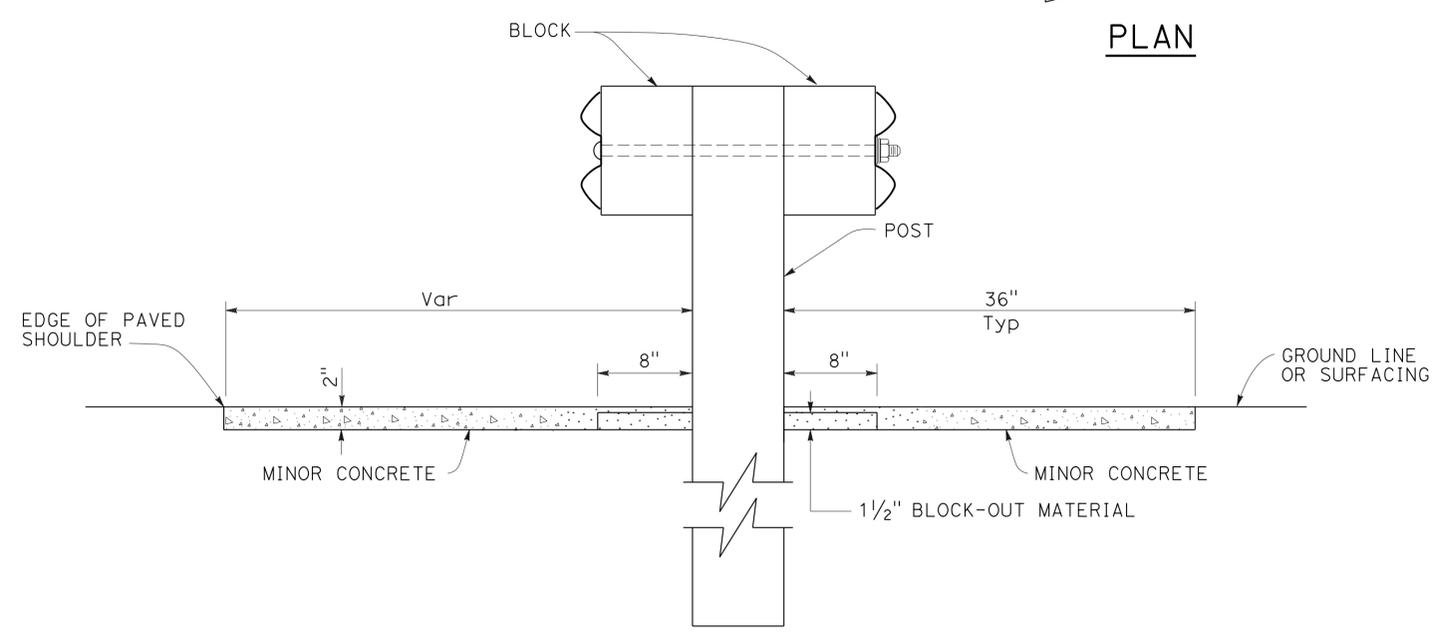
2010 REVISED STANDARD PLAN RSP A77N7



**PLAN**



**PLAN**



**SECTION A-A**

**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
4. End vegetation control at end of backside rail element.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
AT STRUCTURE APPROACH**

NO SCALE

RSP A77N7 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

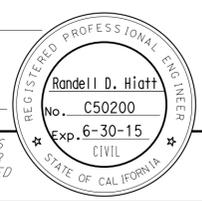
**REVISED STANDARD PLAN RSP A77N7**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	248	291

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

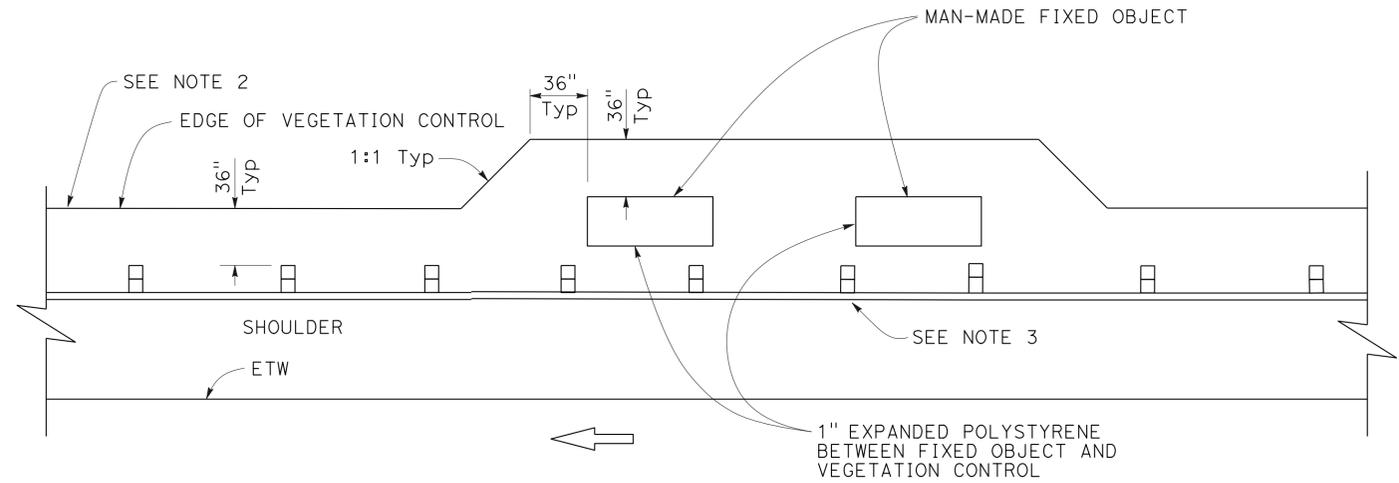
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TO ACCOMPANY PLANS DATED 6-2-14

**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.



**PLAN**  
Fixed object(s) on shoulder

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
AT FIXED OBJECT**

NO SCALE

RSP A77N8 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N8**

2010 REVISED STANDARD PLAN RSP A77N8

**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	249	291

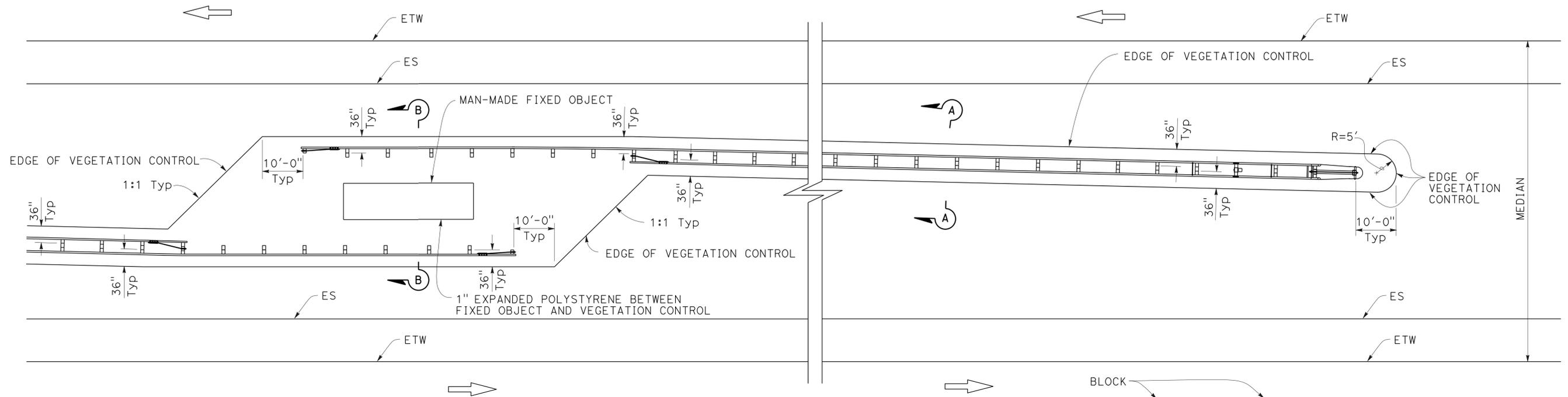
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

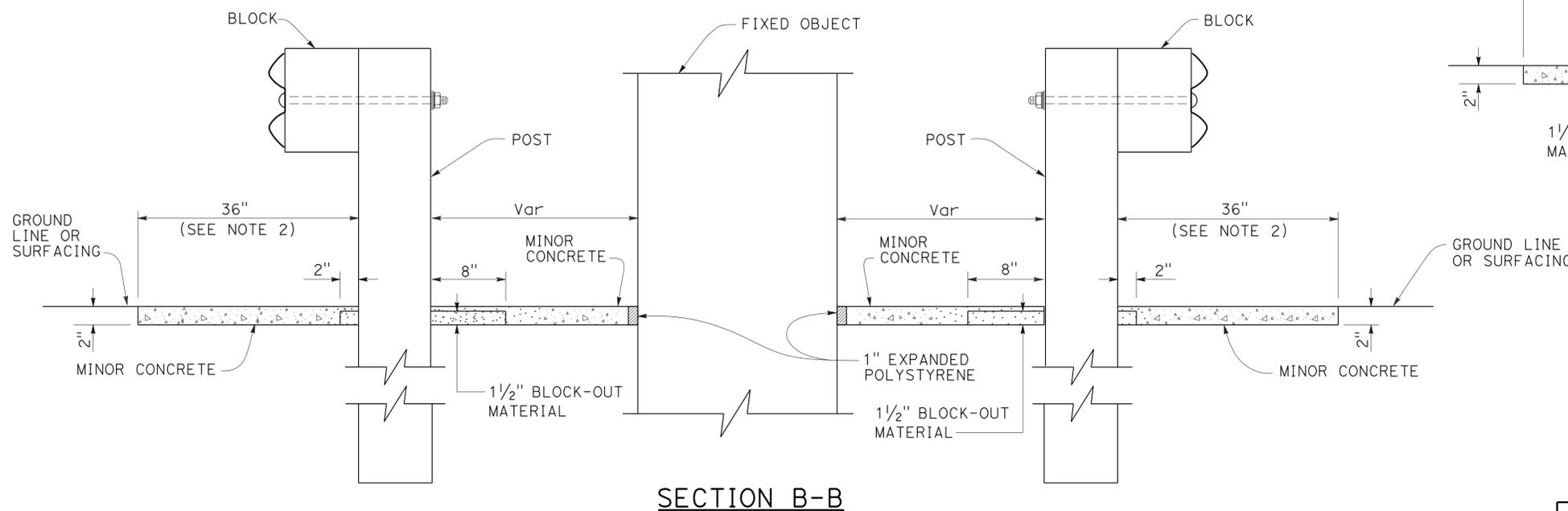
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TO ACCOMPANY PLANS DATED 6-2-14

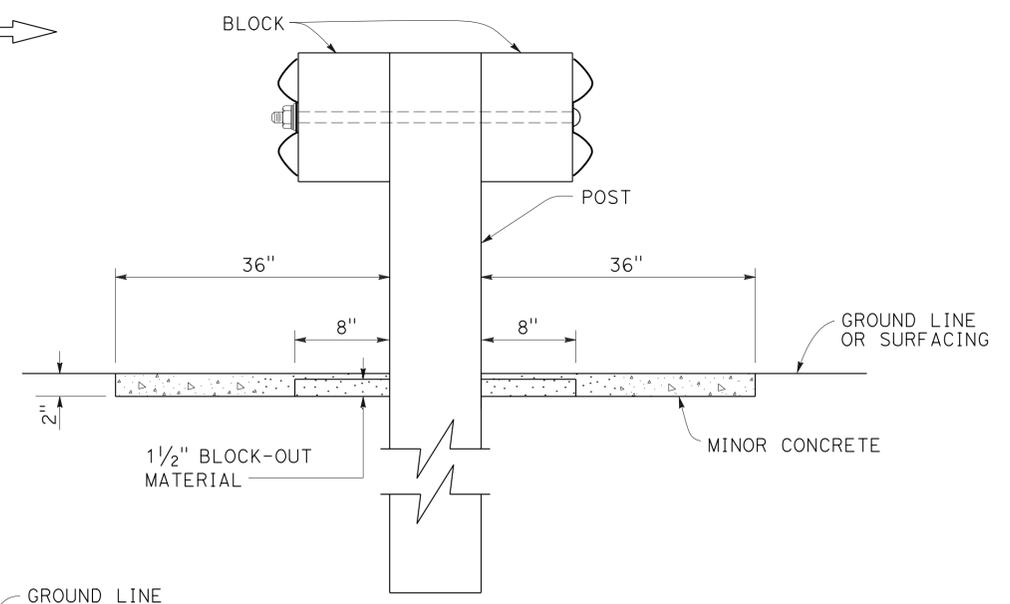


**PLAN**

Fixed object(s) in median



**SECTION B-B**



**SECTION A-A**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
AT FIXED OBJECT**

NO SCALE

RSP A77N9 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N9**

2010 REVISED STANDARD PLAN RSP A77N9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	250	291

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

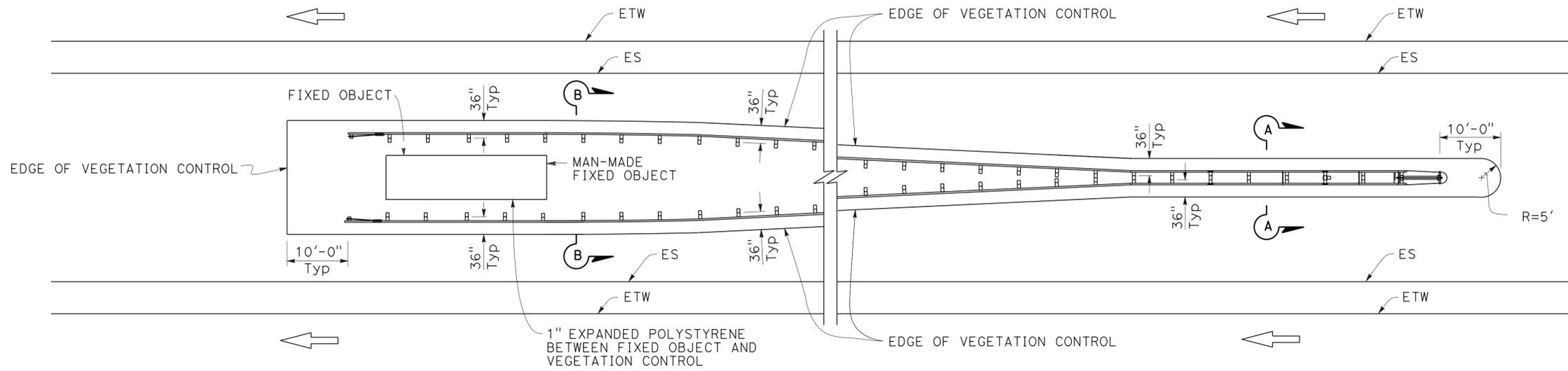
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REGISTERED PROFESSIONAL ENGINEER  
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STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

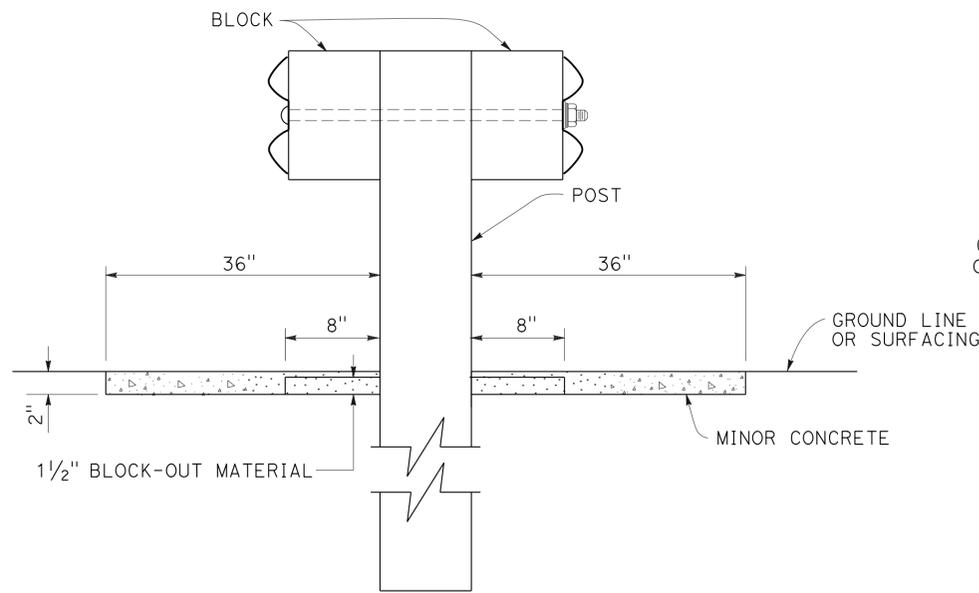
**NOTES:**

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.

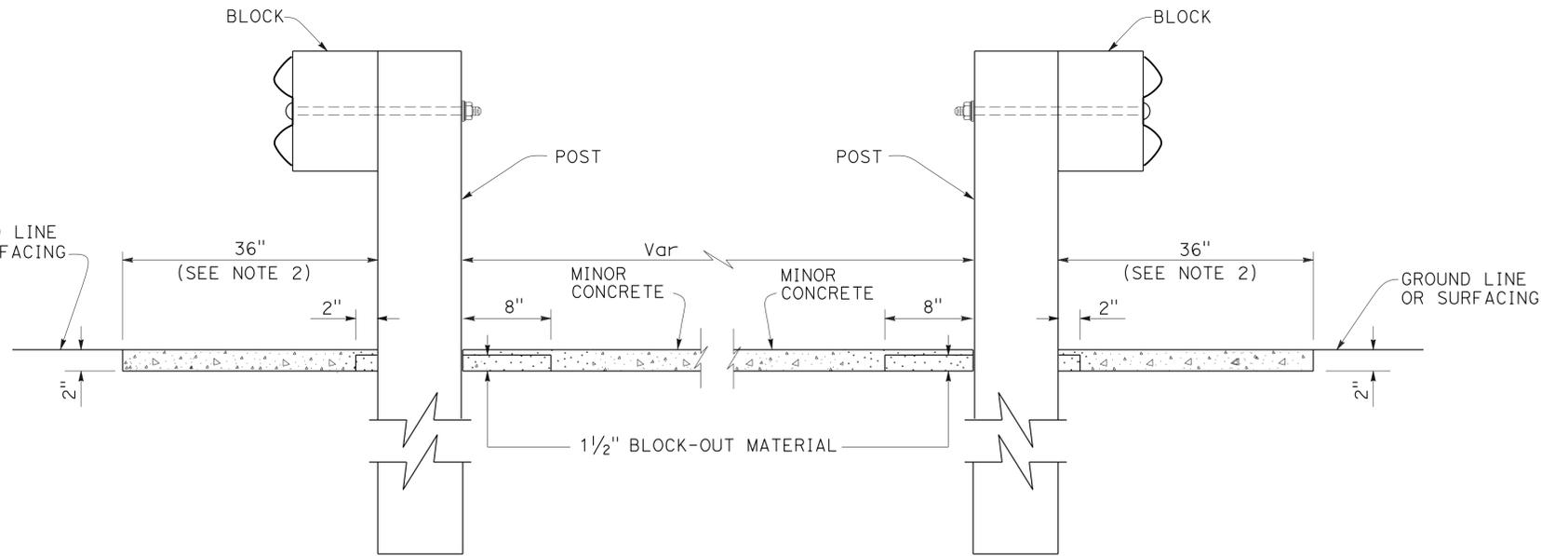


**PLAN**

Fixed object(s) between separate roadbeds  
(One-Way Traffic)



**SECTION A-A**



**SECTION B-B**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TYPICAL VEGETATION CONTROL  
AT FIXED OBJECT**

NO SCALE

RSP A77N10 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N10**

2010 REVISED STANDARD PLAN RSP A77N10

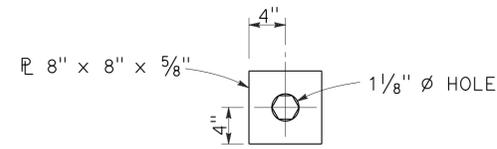
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	251	291

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

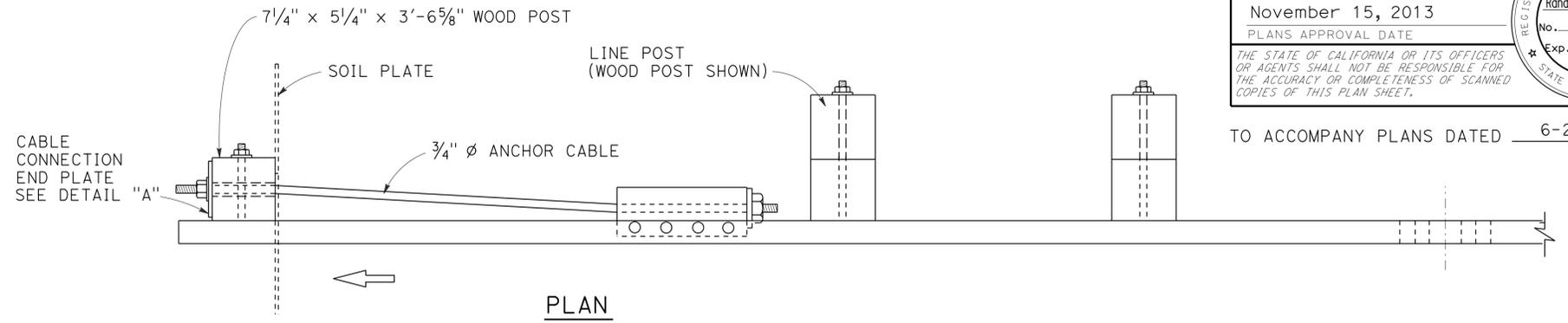
November 15, 2013  
PLANS APPROVAL DATE

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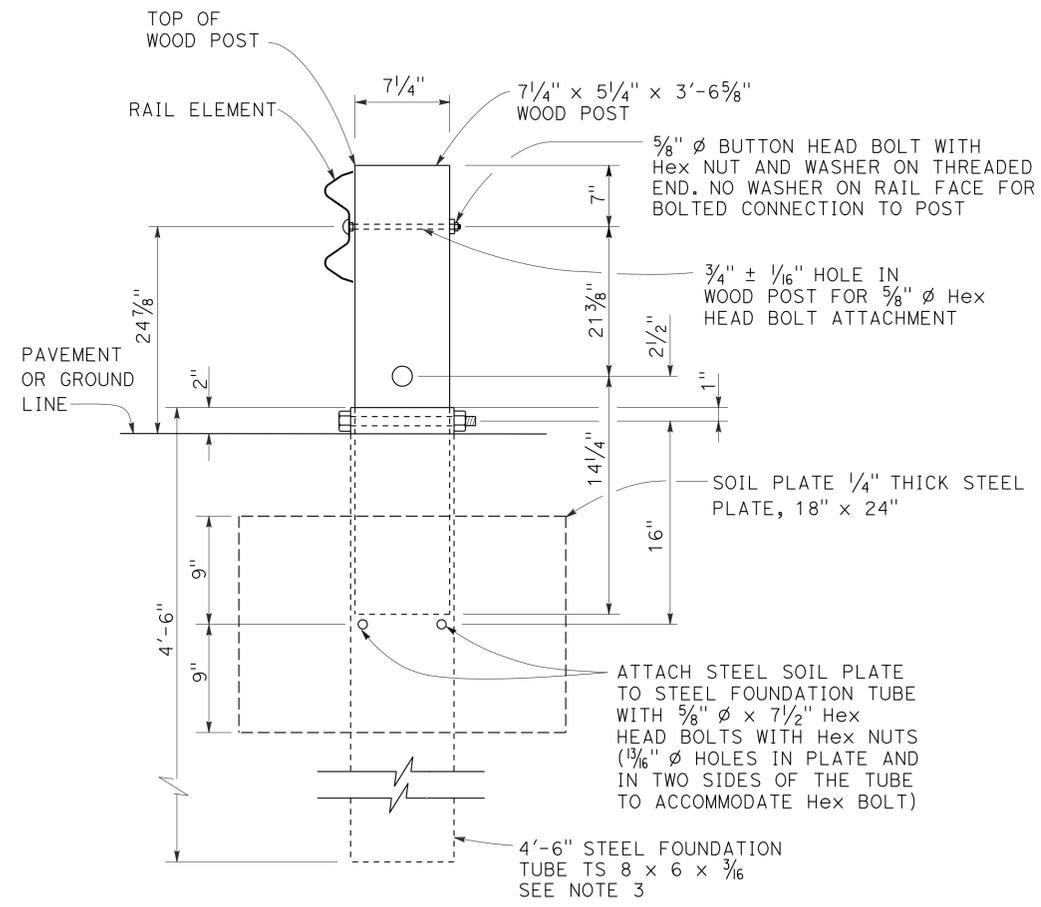
TO ACCOMPANY PLANS DATED 6-2-14



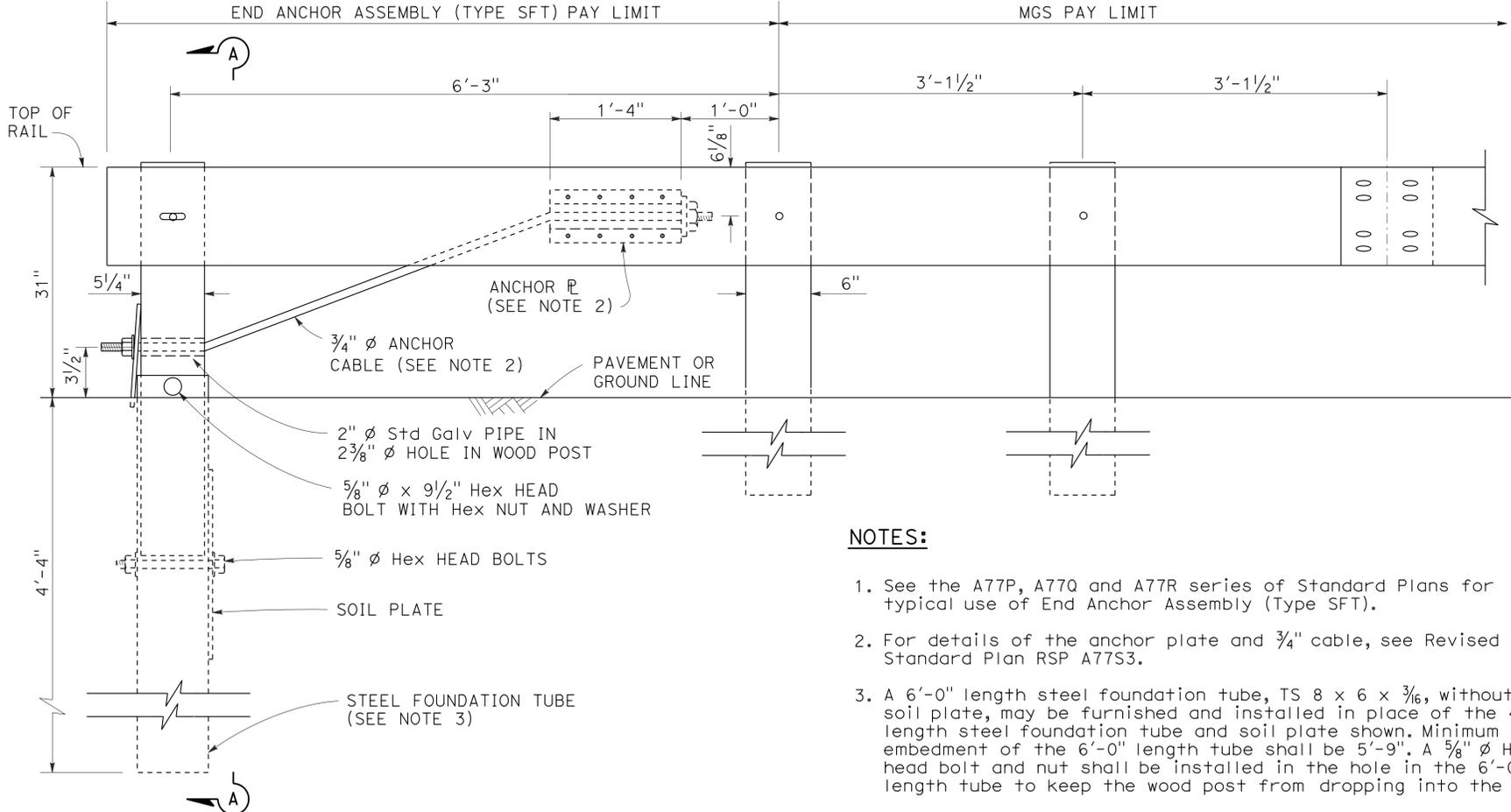
**DETAIL "A"**  
**CABLE CONNECTION**  
**END PLATE**



**PLAN**



**SECTION A-A**



**ELEVATION**

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

**NOTES:**

1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter Hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM**  
**END ANCHOR ASSEMBLY**  
**(TYPE SFT)**

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77S1**

2010 REVISED STANDARD PLAN RSP A77S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	252	291

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

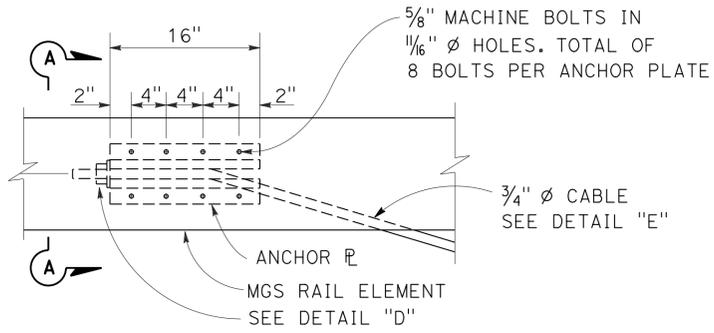
November 15, 2013  
PLANS APPROVAL DATE

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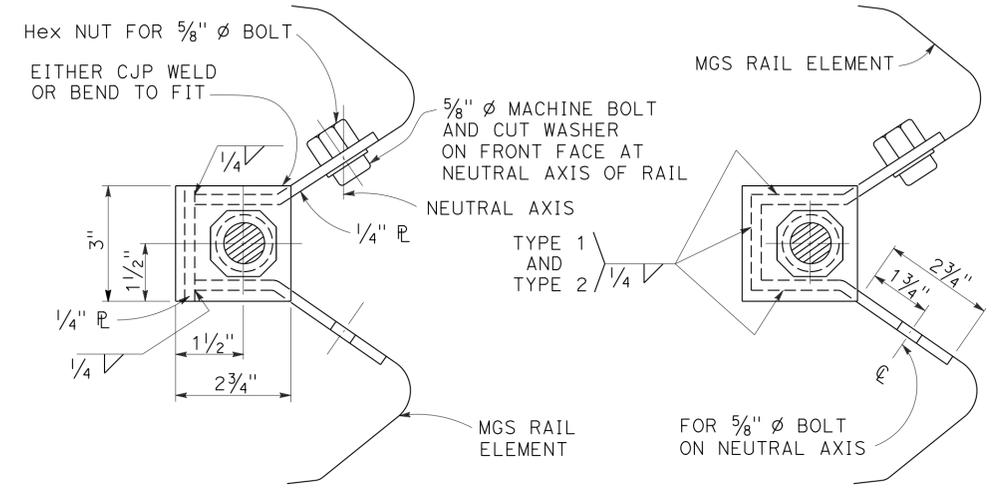
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

**NOTE:**  
See Revised Standard Plans RSP A77S1, RSP A77S2 and RSP A77T1 for typical use of anchor cable and anchor plate.

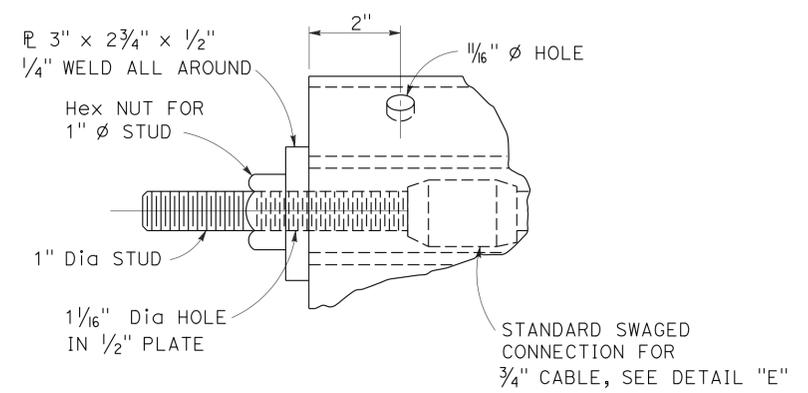


**ANCHOR PLATE DETAIL**  
(MGS shown, TBB similar)

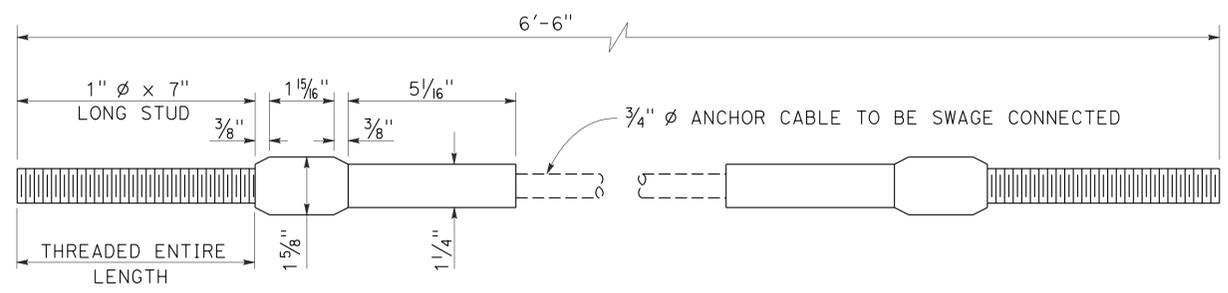


**NOTE:**  
Dimensioning applies to both types.

**SECTION A-A (ALTERNATIVE TYPE 1)**      **SECTION A-A (ALTERNATIVE TYPE 2)**



**DETAIL "D"**



**ANCHOR CABLE WITH SWAGED FITTING AND STUD**  
**DETAIL "E"**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL RAILING  
ANCHOR CABLE AND  
ANCHOR PLATE DETAILS**

NO SCALE

RSP A77S3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S3 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77S3**

2010 REVISED STANDARD PLAN RSP A77S3

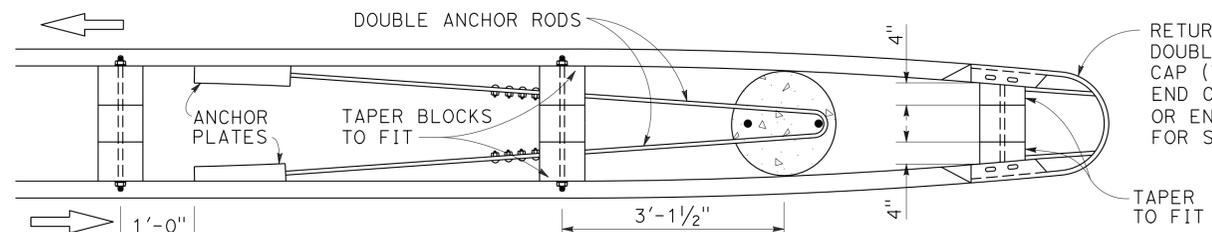
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	253	291

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

November 15, 2013  
PLANS APPROVAL DATE

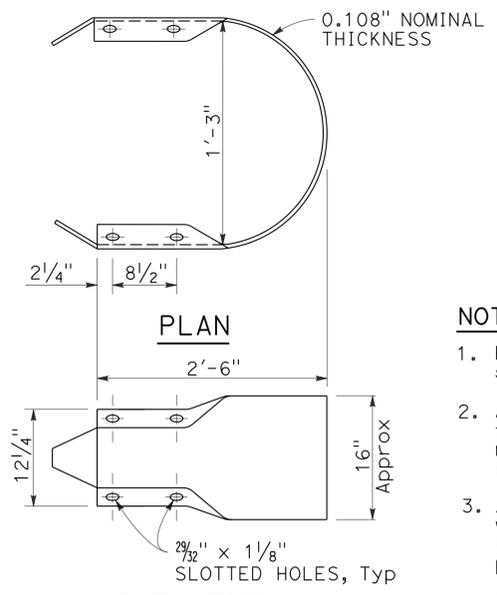
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No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA



**PLAN**  
See Note 4

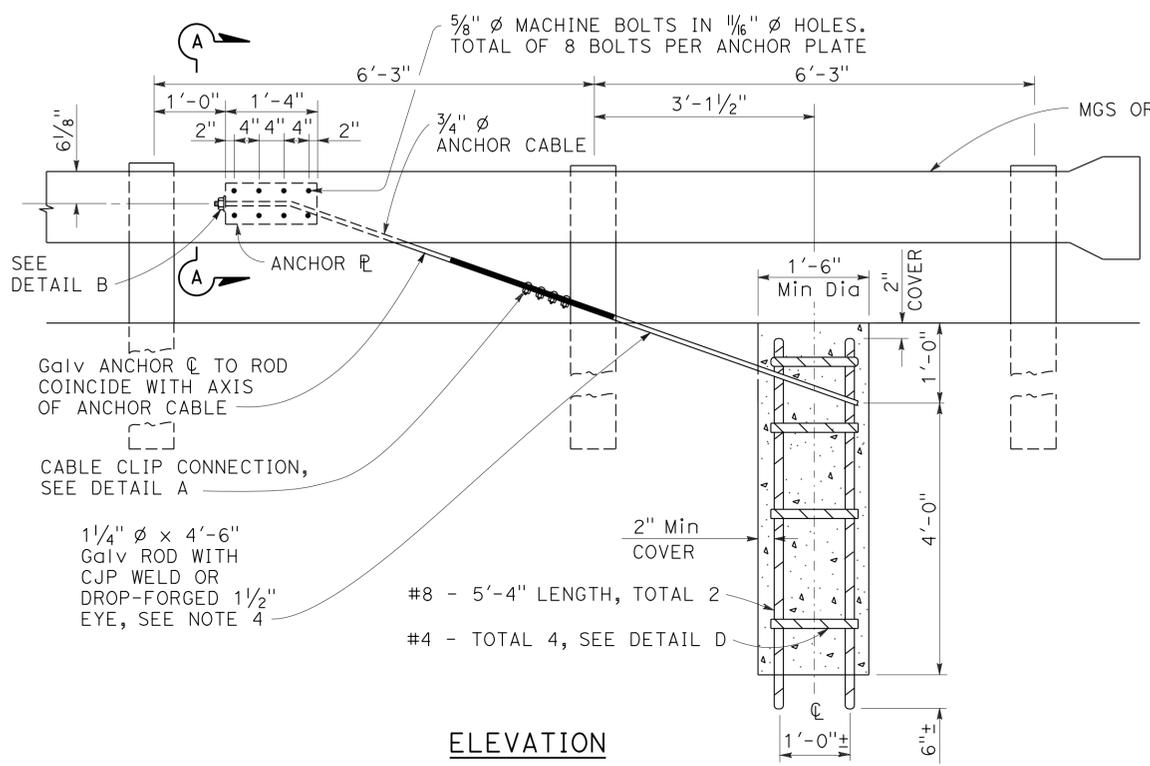
RETURN CAP (TYPE TA) FOR DOUBLE THRIE BEAM OR RETURN CAP (TYPE A) FOR DOUBLE MGS.  
END CAP (TYPE A) FOR SINGLE MGS OR END CAP (TYPE TC) FOR SINGLE THRIE BEAM



**ELEVATION**  
**RETURN CAP**  
**(TYPE A)**

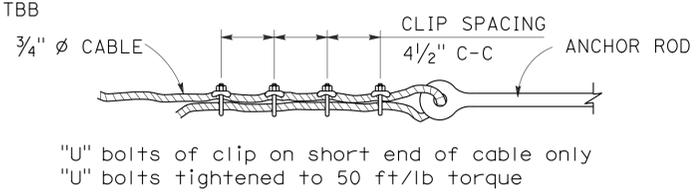
TO ACCOMPANY PLANS DATED 6-2-14

- NOTES:**
- For typical use of this type of end anchor, see Revised Standard Plan RSP A78E2.
  - Anchor cable to be parallel to railing for straight runs of rail. Anchor cable may have angle point at anchor plate if railing is curved.
  - Anchor rod hooks to be in contact with anchor reinforcement when concrete is placed. Wire ties may be used to position anchor rods.
  - Single sided railing installations require only one anchor plate, anchor rod and anchor cable. Single sided railing will not have a rail element or blockouts on backside of line posts as shown in the plan view.



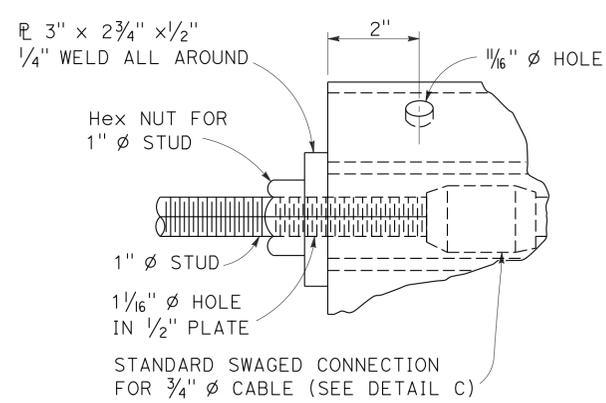
**ELEVATION**  
**END ANCHOR ASSEMBLY**  
**(TYPE CA)**

(Wood post, MGS shown, details similar for Thrie Beam Barrier.)

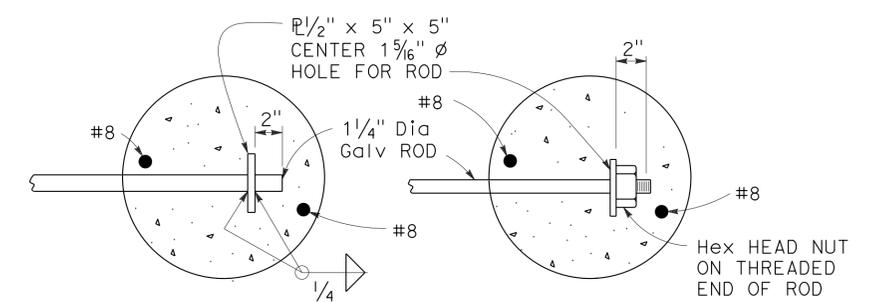


**DETAIL A**  
**CABLE CLIP CONNECTION**

"U" bolts of clip on short end of cable only  
"U" bolts tightened to 50 ft/lb torque

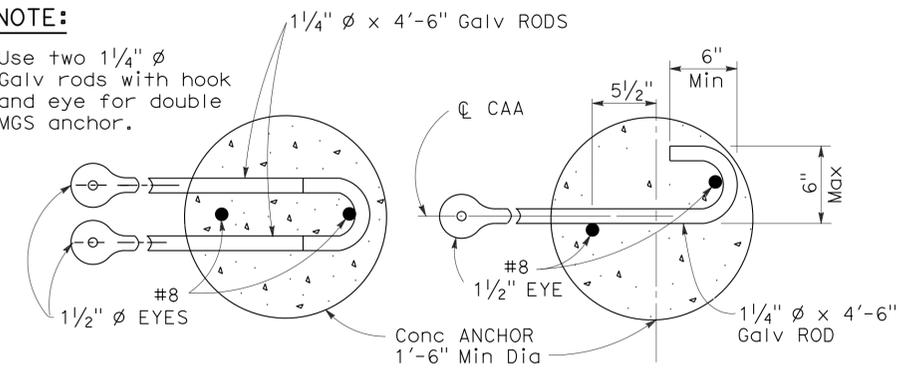


**DETAIL B**

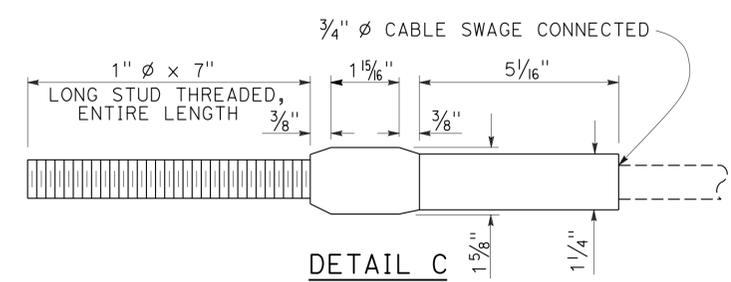


**OPTIONAL ENDS ON SINGLE ANCHOR ROD**  
(Not to be used for double anchors)

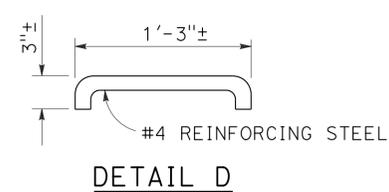
**NOTE:**  
Use two 1/4 inch diameter Galv rods with hook and eye for double MGS anchor.



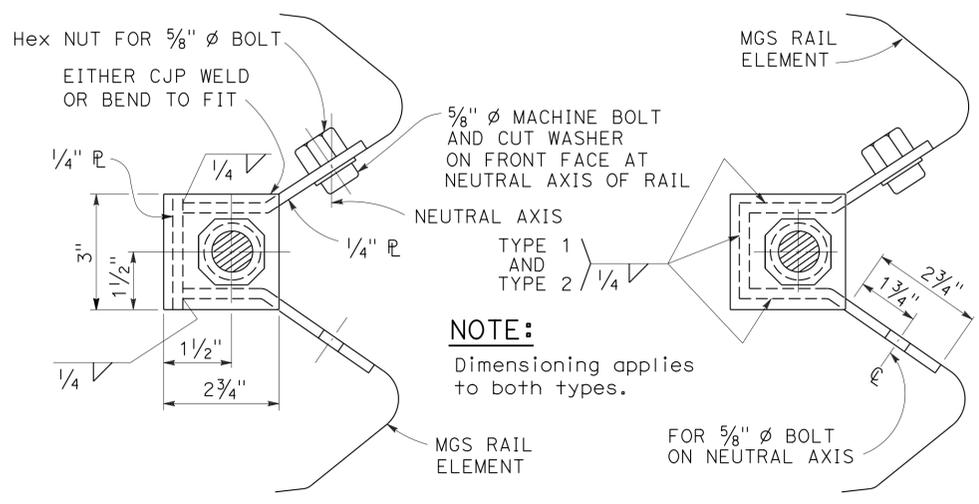
**DOUBLE ANCHOR**  
**SINGLE ANCHOR**  
**ANCHOR RODS**



**DETAIL C**  
**ANCHOR CABLE WITH**  
**SWAGED FITTING AND STUD**



**DETAIL D**



**SECTION A-A**  
(Alternative Type 1)  
**SECTION A-A**  
(Alternative Type 2)  
**ANCHOR PLATE DETAILS**

**NOTE:**  
Dimensioning applies to both types.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP A77T1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77T1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77T1**

2010 REVISED STANDARD PLAN RSP A77T1

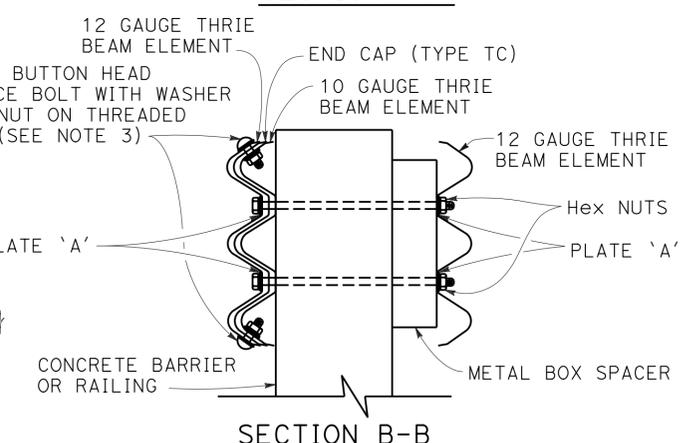
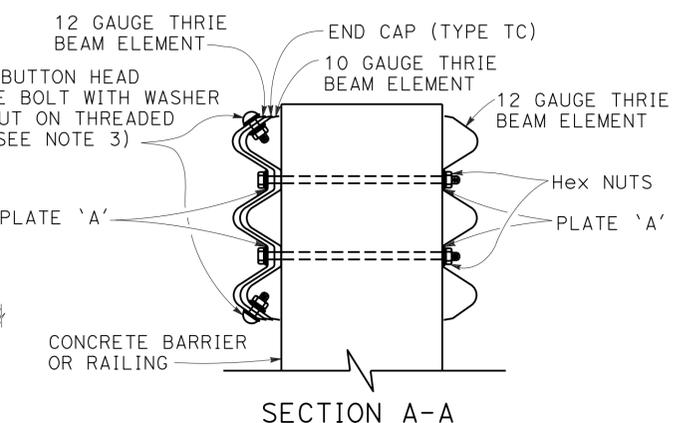
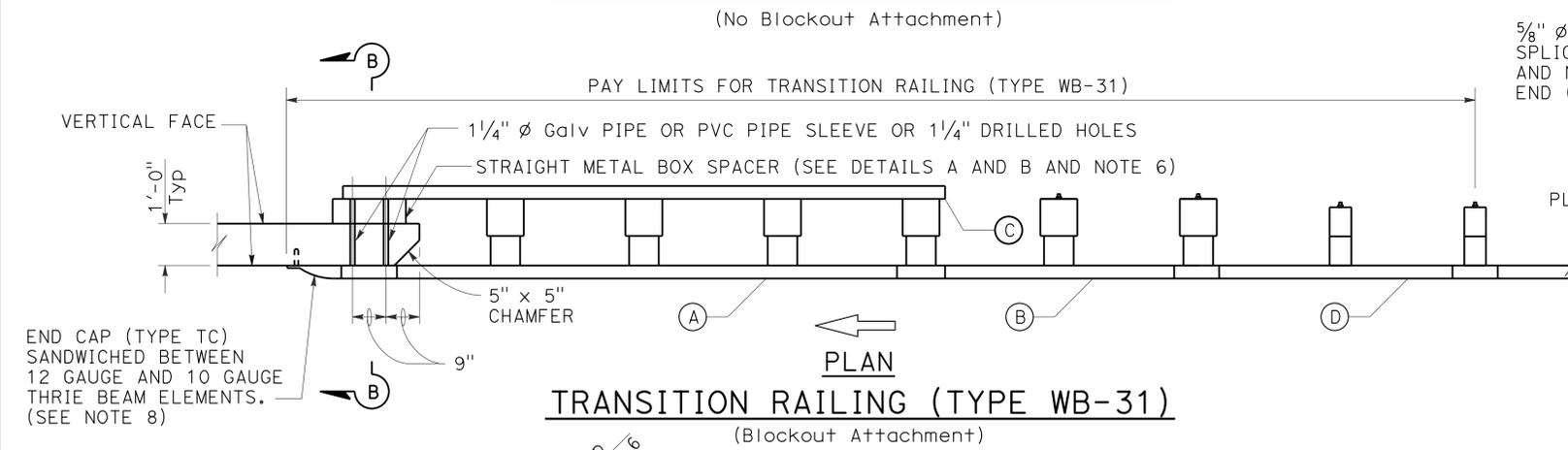
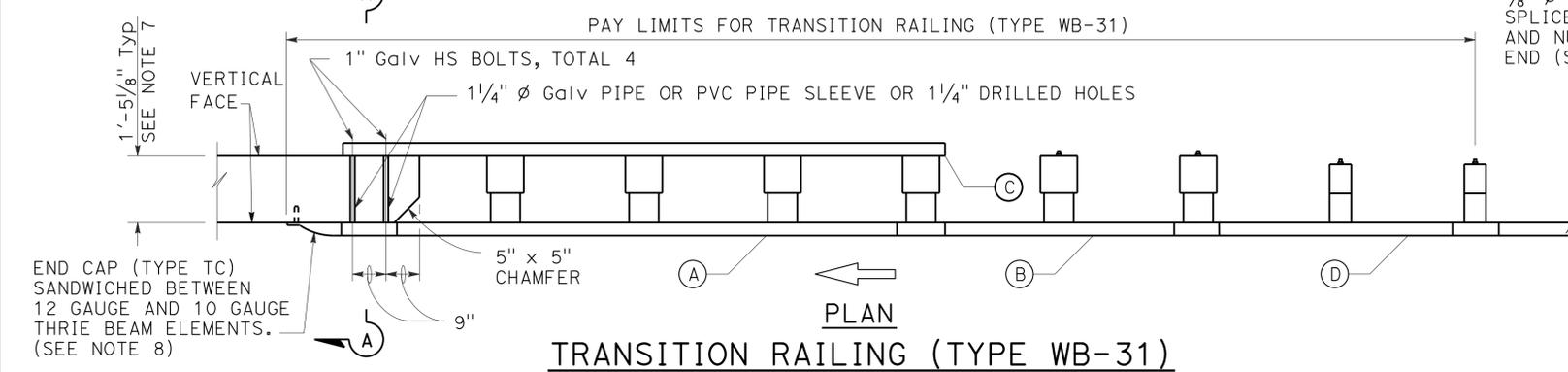
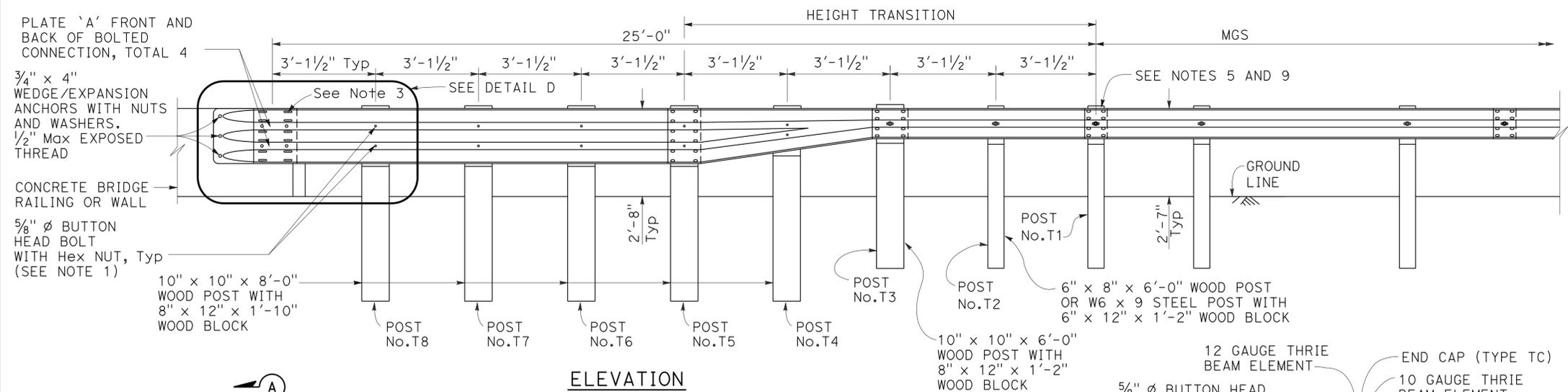
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	254	291

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

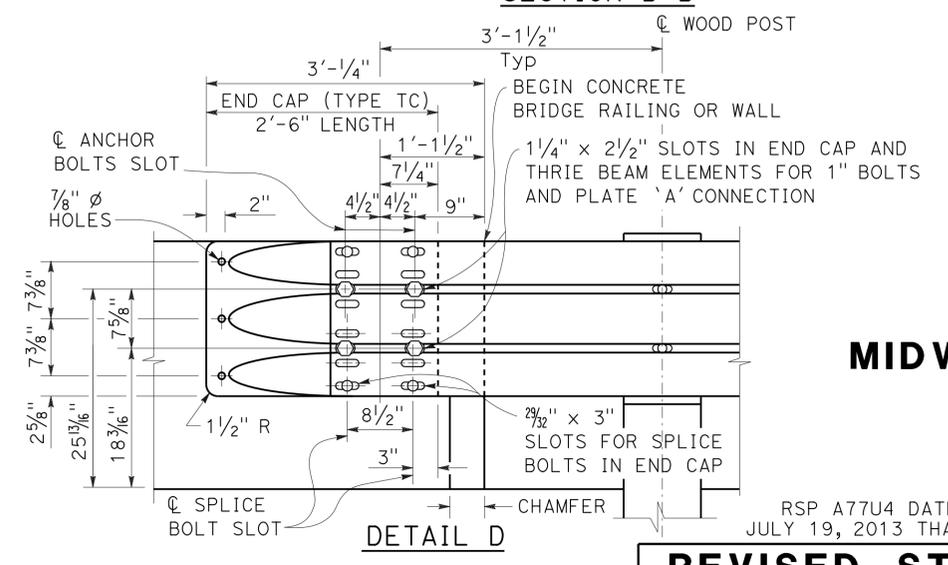
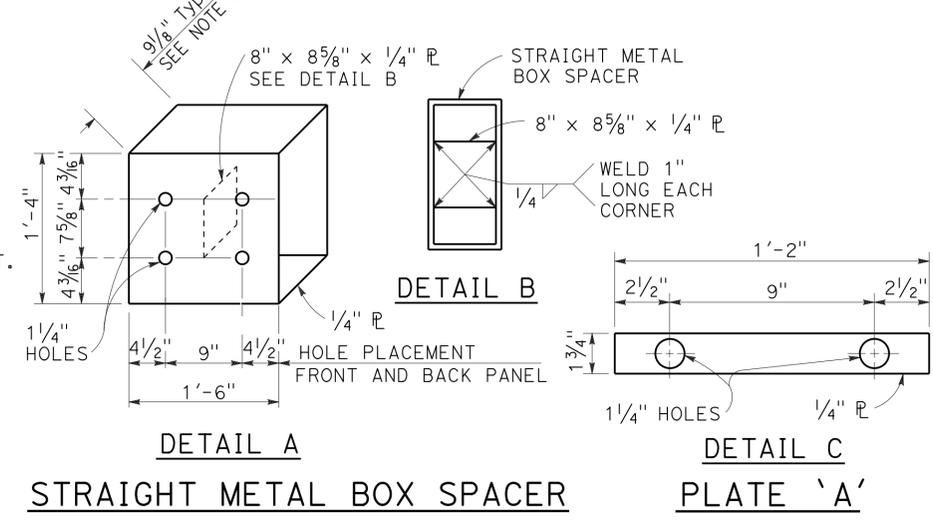
November 15, 2013  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
  - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
  - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
  - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3/2" LENGTH)
- 10 GAUGE = 0.138" THICK  
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED 6-2-14
1. Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4"  $\phi$ . Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
  4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
  5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
  6. The depth of the metal box spacer varies from the 9/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
  9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TRANSITION RAILING  
(TYPE WB-31)**

NO SCALE

RSP A77U4 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77U4**

2010 REVISED STANDARD PLAN RSP A77U4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	255	291

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

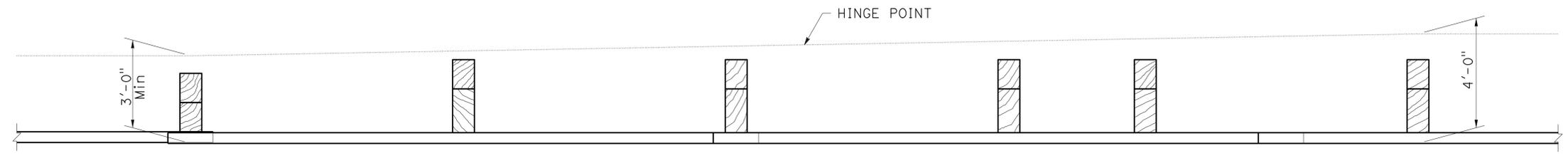
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

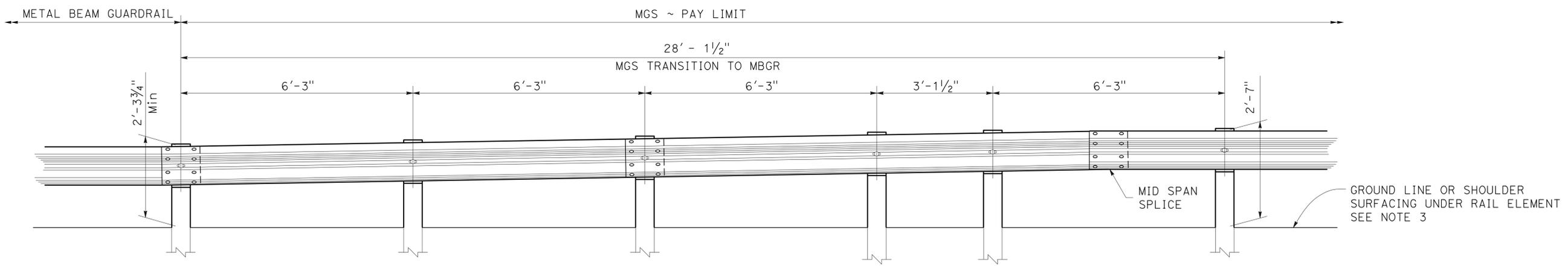
TO ACCOMPANY PLANS DATED 6-2-14

**NOTES:**

1. Refer to Revised Standard Plans RSP A77L1 and RSP A77L2 for component details for MGS not shown on this plan.
2. All posts for any standard barrier run shall be of the same type: Wood or Steel.
3. Install posts in soil.



PLAN



ELEVATION

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TRANSITION TO METAL BEAM GUARDRAIL**

NO SCALE

RSP A77U5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

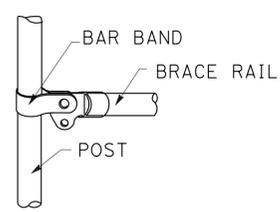
**REVISED STANDARD PLAN RSP A77U5**

2010 REVISED STANDARD PLAN RSP A77U5

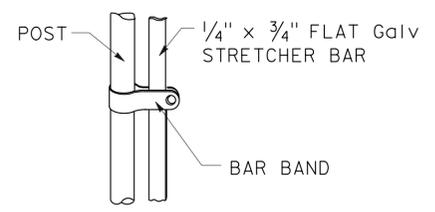
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	256	291

Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 October 19, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

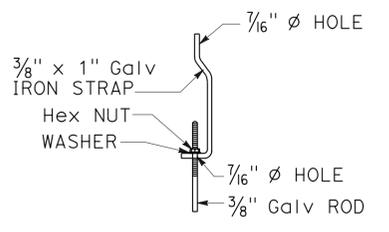
REGISTERED PROFESSIONAL ENGINEER  
 Glenn DeCou  
 No. C34547  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA



**BRACE RAIL**



**STRETCHER BAR**

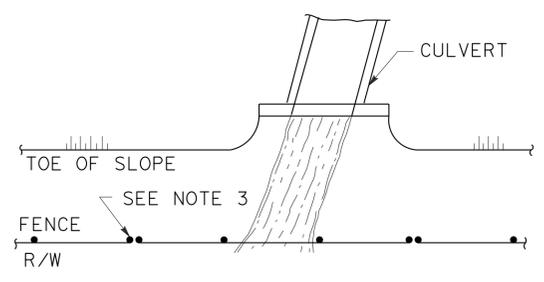


**TRUSS TIGHTENER**

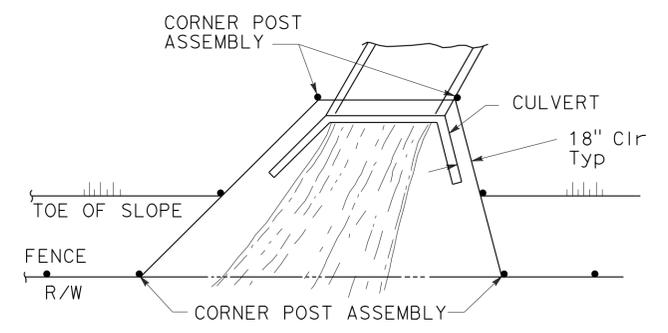
**NOTES:**

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

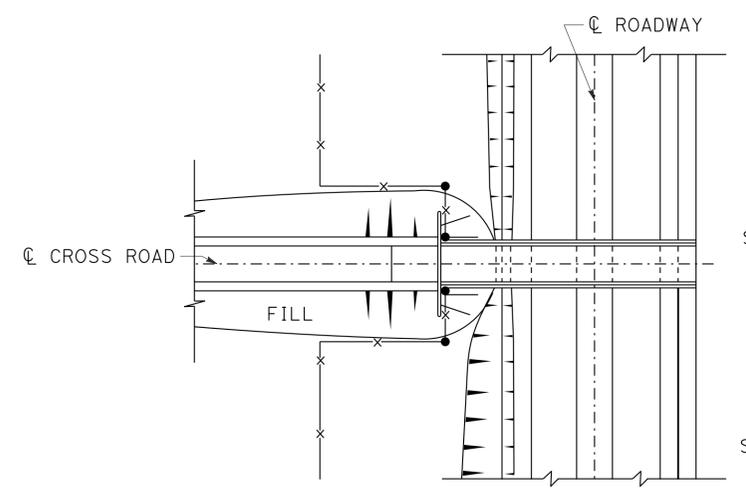
TO ACCOMPANY PLANS DATED 6-2-14



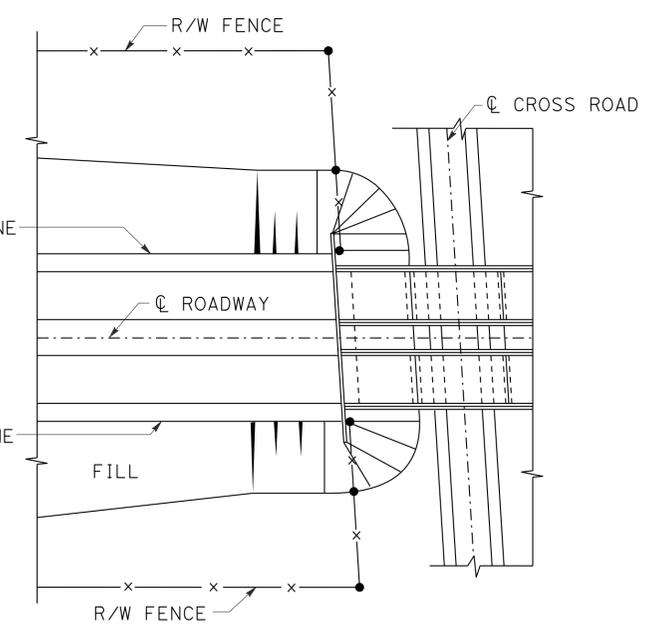
**PLAN**



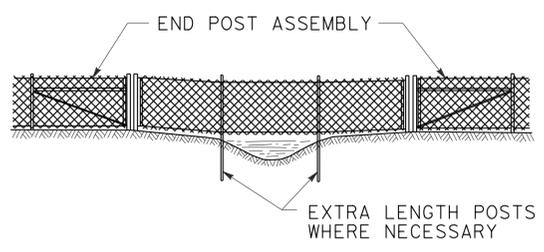
**PLAN**



**PLAN OF ROADWAY - OVERCROSSING**

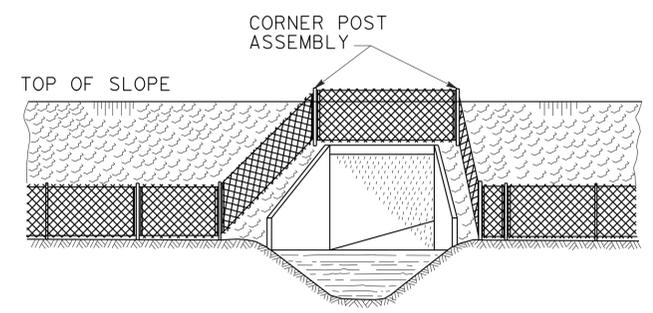


**PLAN OF ROADWAY - UNDERCROSSING**



**ELEVATION**

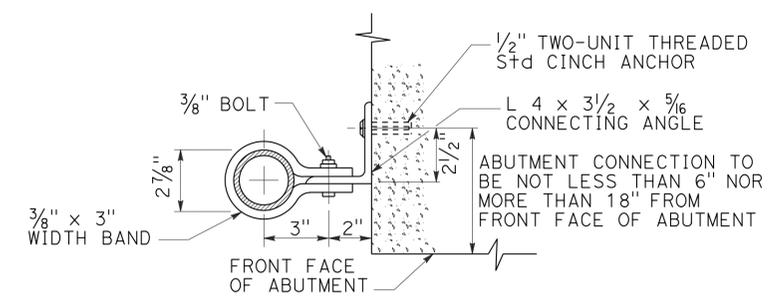
**INSTALLATION OVER STREAM**



**ELEVATION**

**INSTALLATION AROUND HEADWALL**

See Note 4



**ABUTMENT CONNECTION**

**TYPICAL INSTALLATION AT BRIDGES**

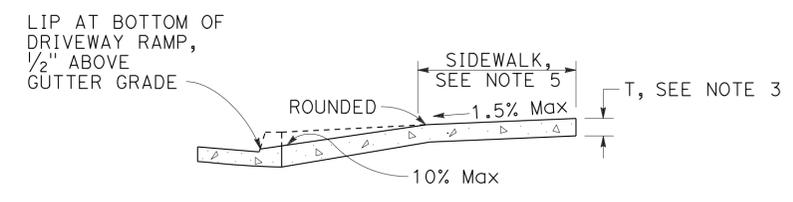
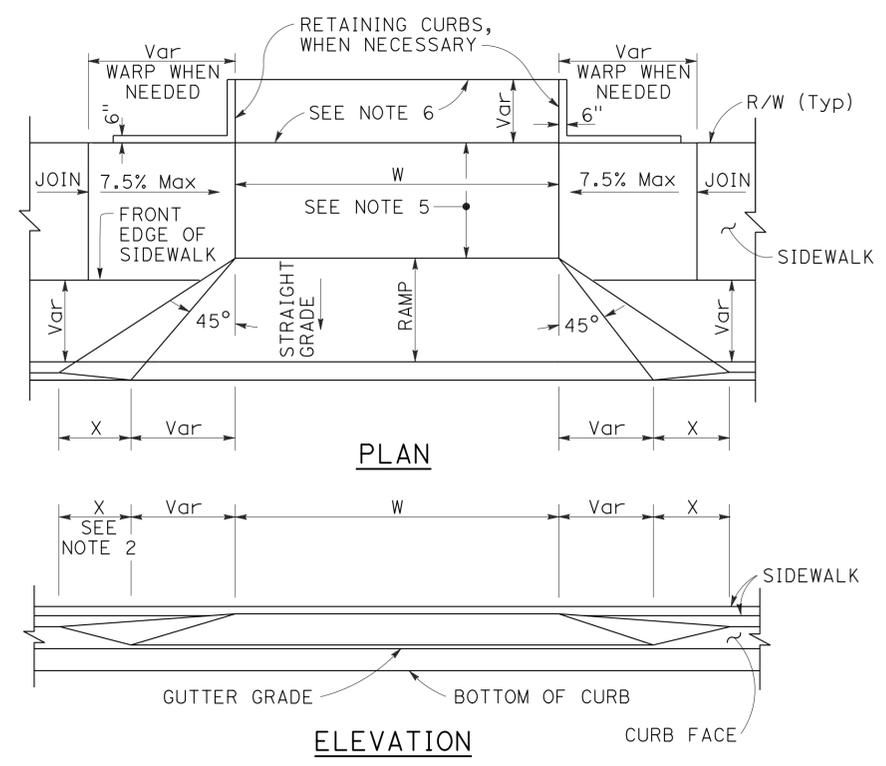
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE DETAILS**  
 NO SCALE

RSP A85B DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A85B DATED MAY 20, 2011 - PAGE 114 OF THE STANDARD PLANS BOOK DATED 2010.

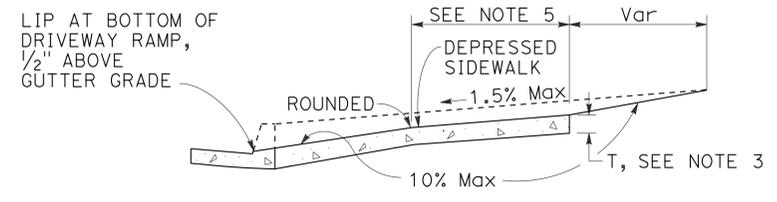
**REVISED STANDARD PLAN RSP A85B**

2010 REVISED STANDARD PLAN RSP A85B

TO ACCOMPANY PLANS DATED 6-2-14



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



**CASE B**  
Driveway with depressed sidewalk

**SECTIONS**

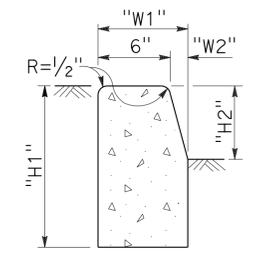
**TABLE A**

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

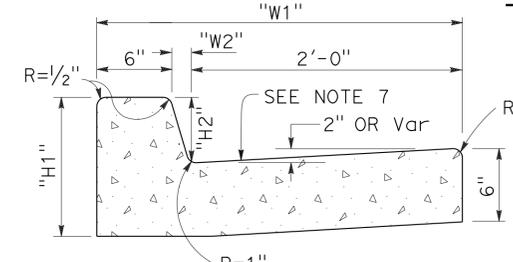
**CURB QUANTITIES**

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

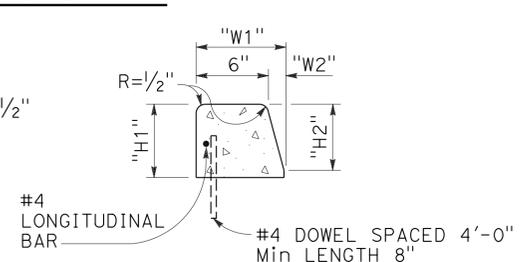
**DRIVEWAYS**



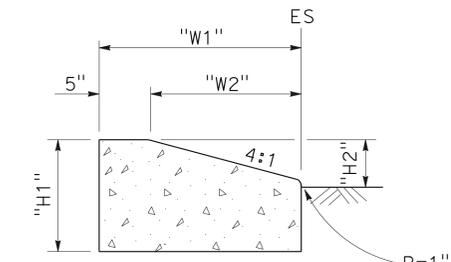
**TYPE A1 CURBS**  
See Table A



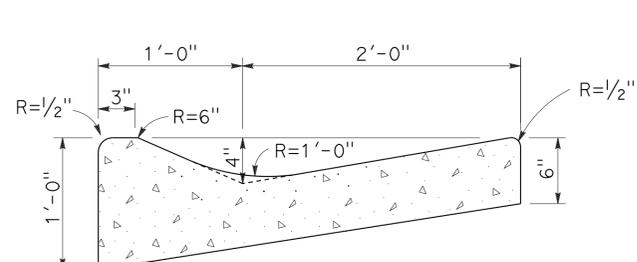
**TYPE A2 CURBS**  
See Table A



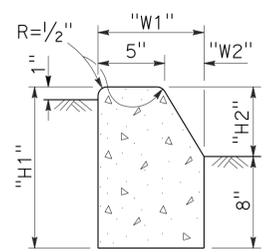
**TYPE A3 CURBS**  
Superimposed on existing pavement  
See Table A



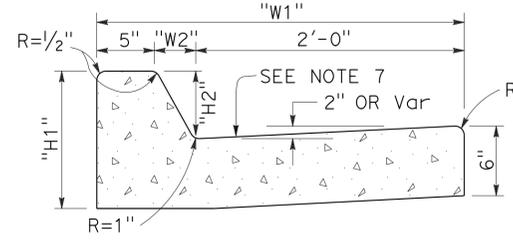
**TYPE D CURBS**  
See Table A



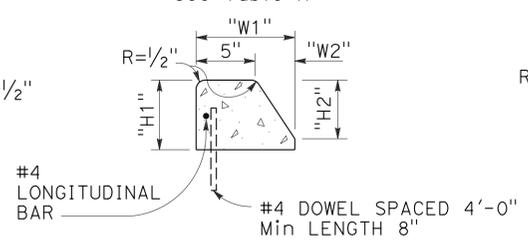
**TYPE E CURB**



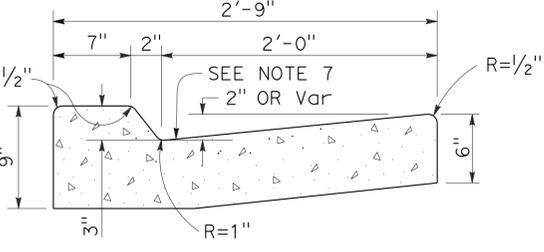
**TYPE B1 CURBS**  
See Table A



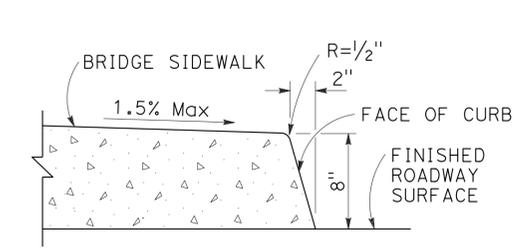
**TYPE B2 CURBS**  
See Table A



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



**TYPE B4 CURBS**



**TYPE H CURB**  
On Bridges

**CURBS**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CURBS AND DRIVEWAYS**

NO SCALE

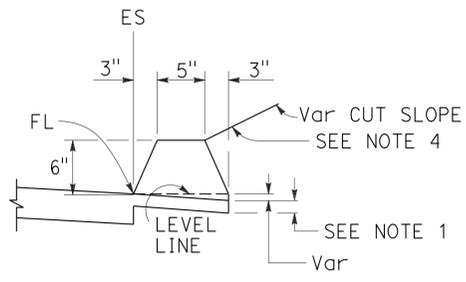
RSP A87A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87A DATED MAY 20, 2011 - PAGE 119 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A87A**

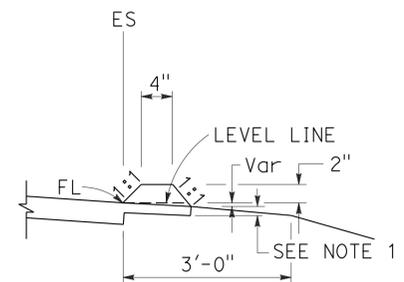
2010 REVISED STANDARD PLAN RSP A87A



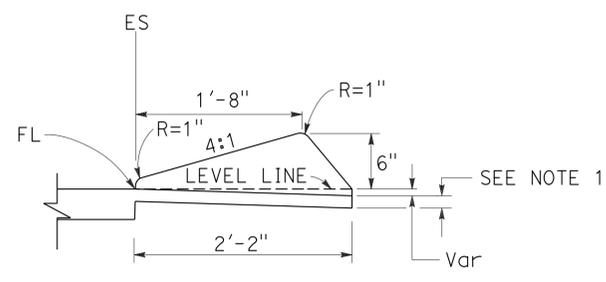
TO ACCOMPANY PLANS DATED 6-2-14



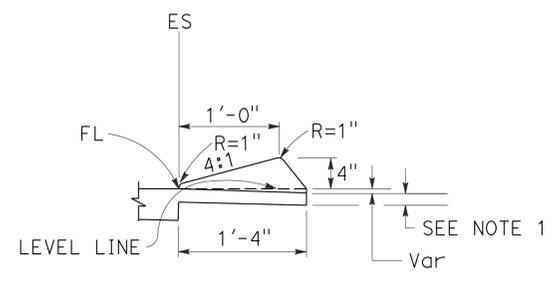
**TYPE A**  
See Note 3



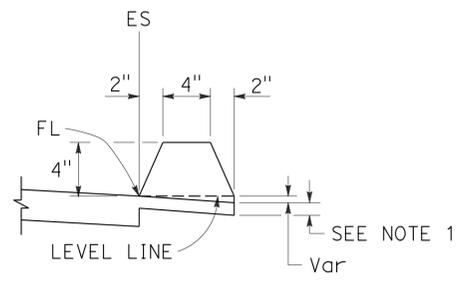
**TYPE C**



**TYPE D**

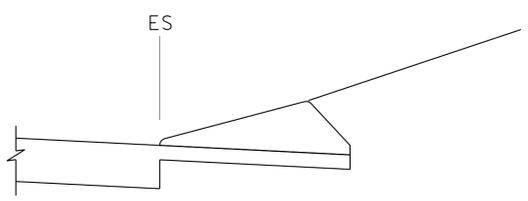


**TYPE E**

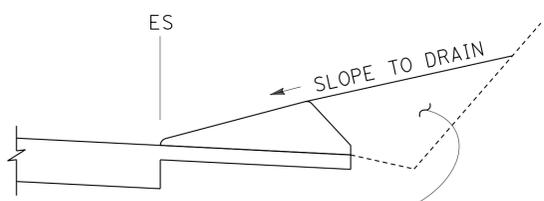


**TYPE F**  
See Note 5

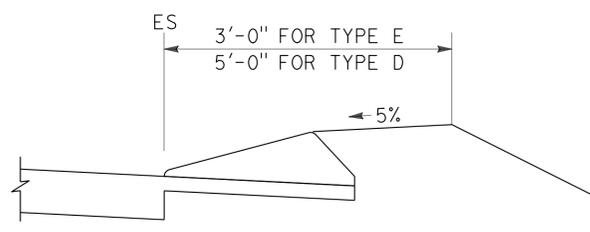
**DIKES**



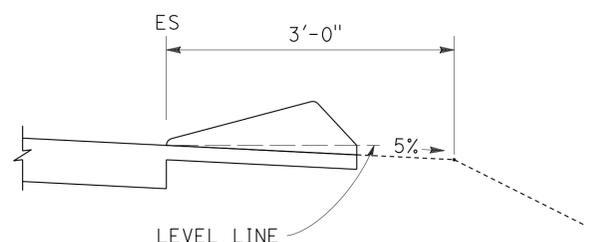
**CASE C-1**  
Cut Slope



**CASE C-2**  
Cut Slope



**CASE F**



**CASE R**  
See Note 2

**TYPE D AND E BACKFILL DETAILS**

**NOTES:**

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

**DIKE QUANTITIES**

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**HOT MIX ASPHALT DIKES**

NO SCALE

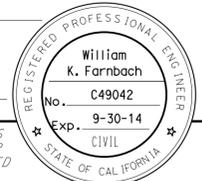
RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A87B**

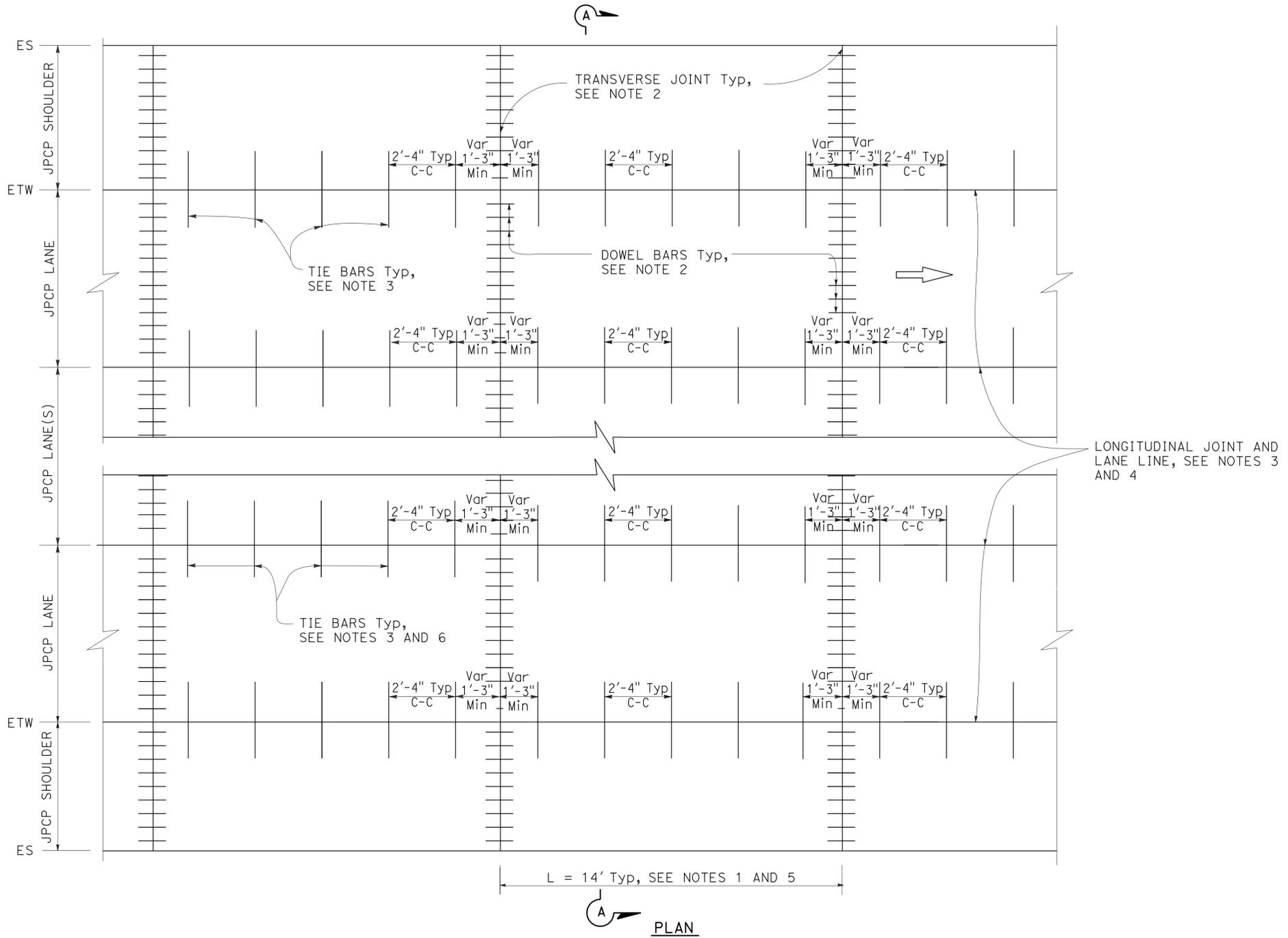
2010 REVISED STANDARD PLAN RSP A87B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	259	291

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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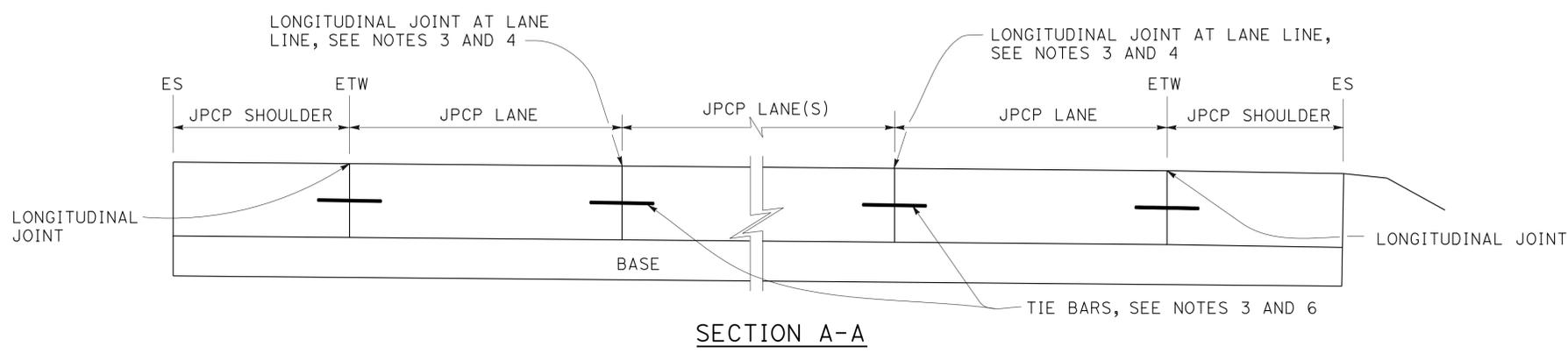


TO ACCOMPANY PLANS DATED 6-2-14



**NOTES:**

1. Transverse joint spacing may be adjusted to no less than 10' and no more than 14' to conform to bridges, change in pavement type, and hardened concrete pavement.
2. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
3. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
4. For additional longitudinal joint layout details, see Revised Standard Plan RSP P18.
5. For joint layout at intersections, see Project Plans.
6. For dowel bars at longitudinal joint. see Revised Standard Plan RSP P18.



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**JOINTED PLAIN  
 CONCRETE PAVEMENT  
 NEW CONSTRUCTION**  
 NO SCALE

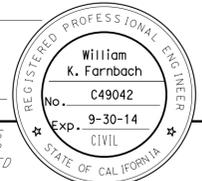
RSP P1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P1  
 DATED MAY 20, 2011 - PAGE 125 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P1**

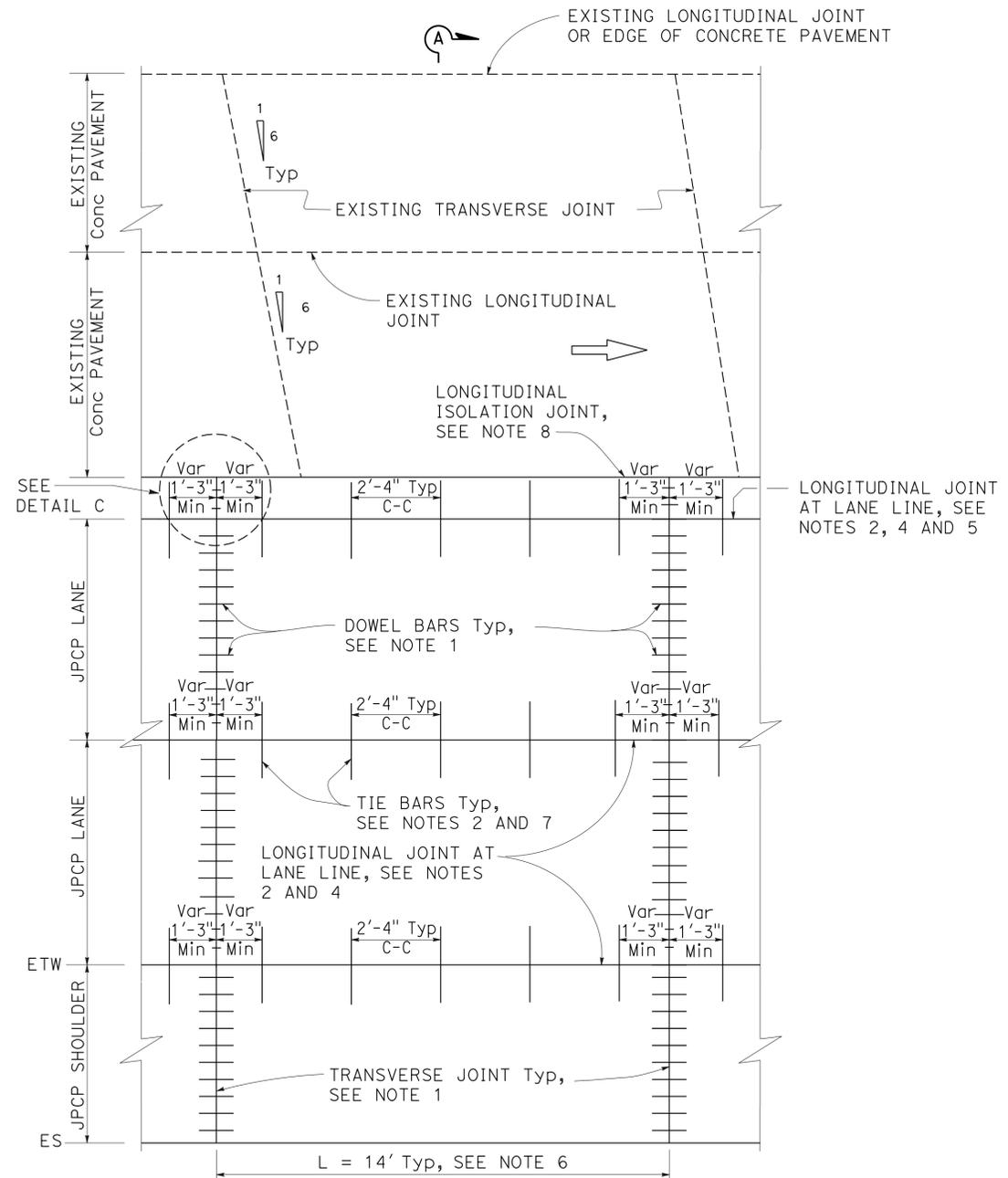
2010 REVISED STANDARD PLAN RSP P1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	260	291

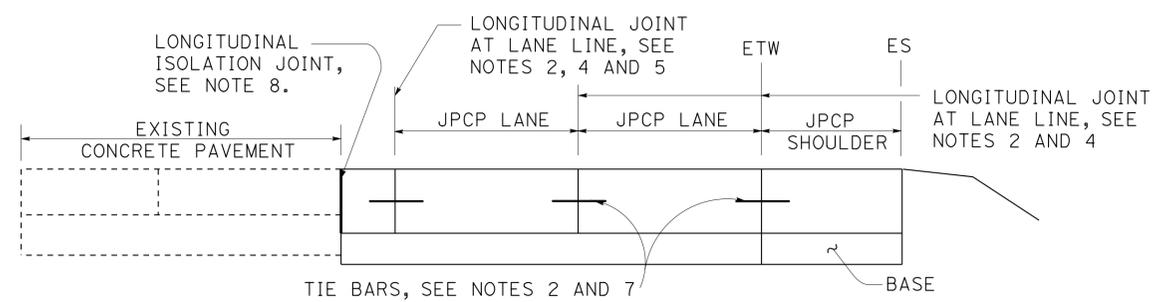
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



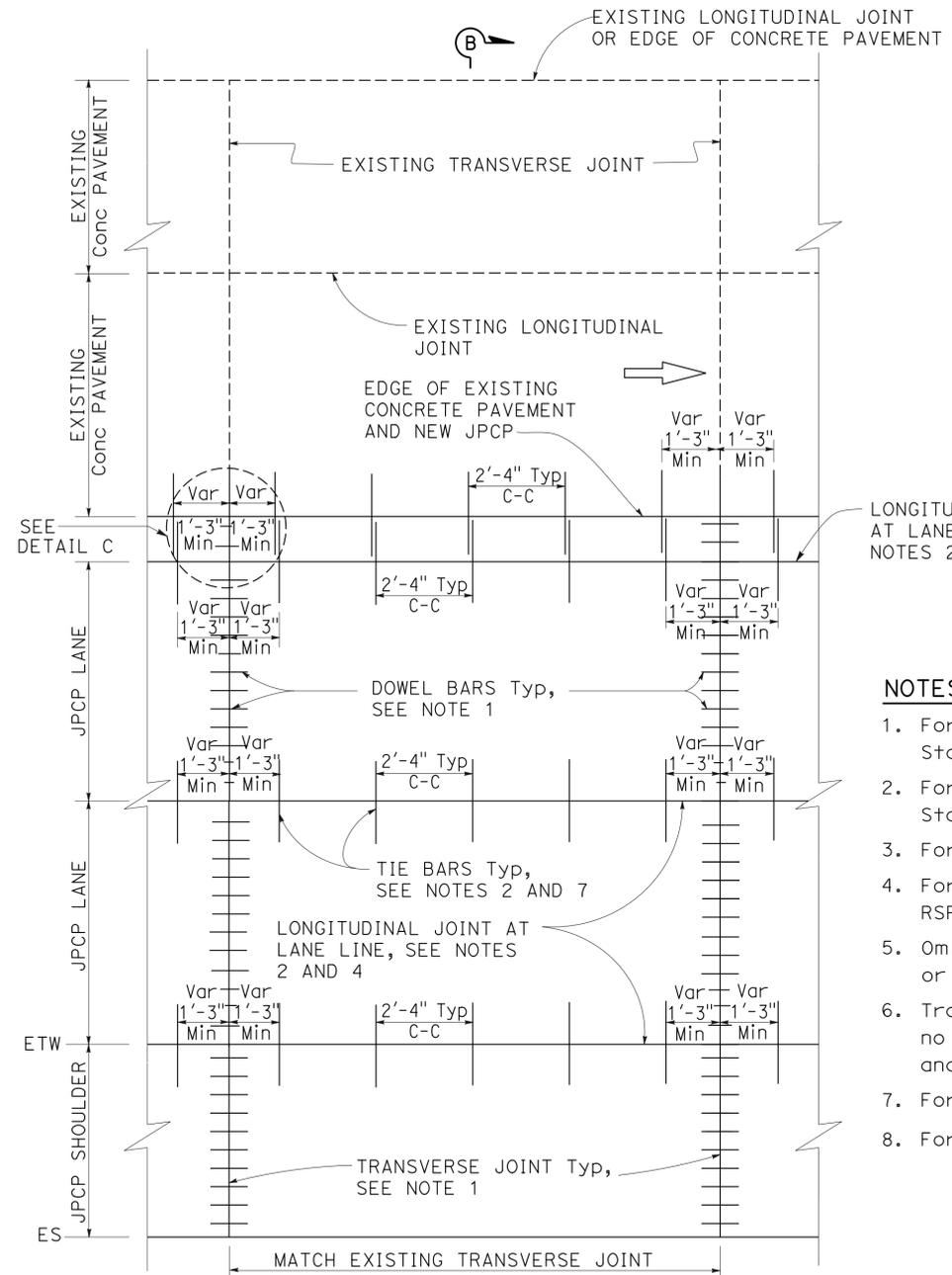
TO ACCOMPANY PLANS DATED 6-2-14



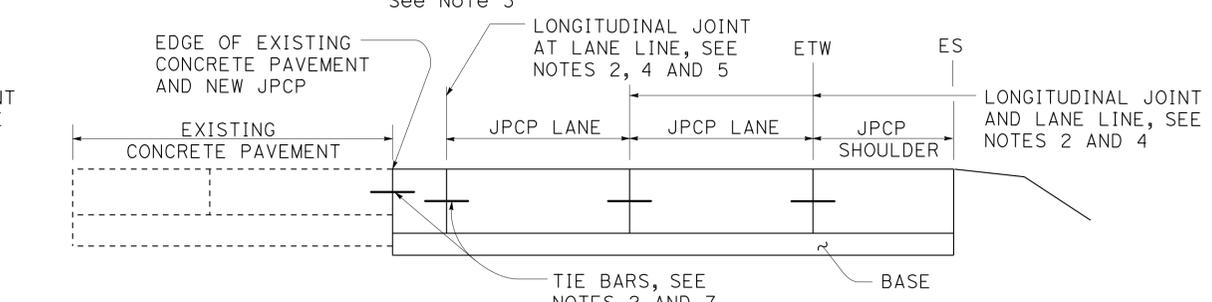
**PLAN**  
**ISOLATED**  
See Note 3



**SECTION A-A**



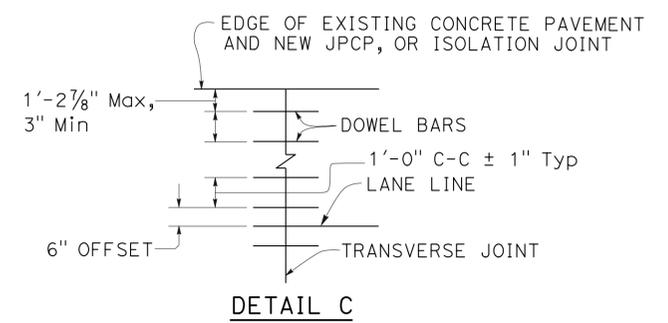
**PLAN**  
**TIED**  
See Note 3



**SECTION B-B**

**NOTES:**

1. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
2. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
3. For joint layout at intersections, see Project Plans.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. Omit longitudinal joint when edge of new concrete pavement is 3'-3" or less from JPCP lane line.
6. Transverse joint spacing may be adjusted to no less than 10' and no more than 15'-6" to conform to bridges, change in pavement type and existing pavement.
7. For dowel bars at longitudinal joint, see Revised Standard Plan RSP P18.
8. For isolation joints, see Detail A on Revised Standard Plan RSP P18.



**DETAIL C**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

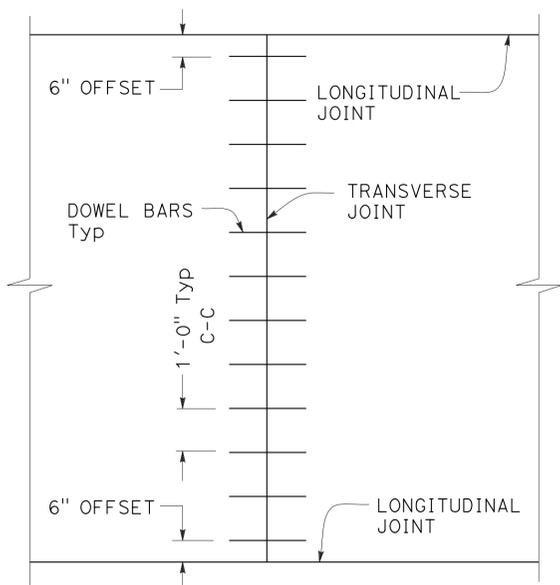
**JOINTED PLAIN  
CONCRETE PAVEMENT  
LANE & SHOULDER  
ADDITION OR  
REPLACEMENT**

NO SCALE

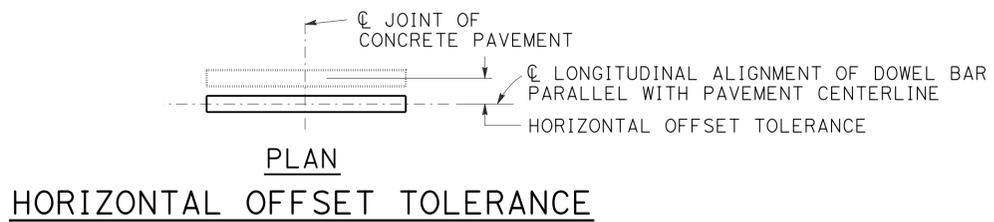
RSP P3A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P3A**

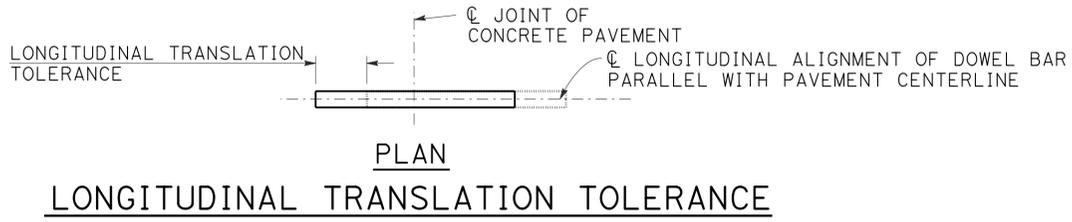
2010 REVISED STANDARD PLAN RSP P3A



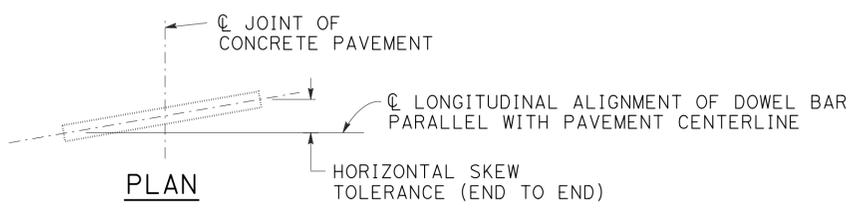
**TRANSVERSE JOINT  
DOWEL BAR LAYOUT**



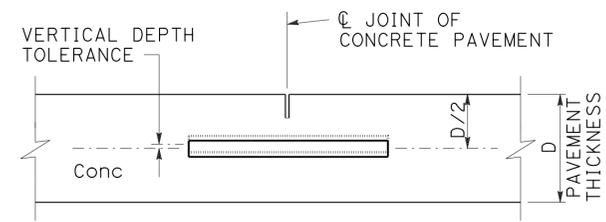
**HORIZONTAL OFFSET TOLERANCE**



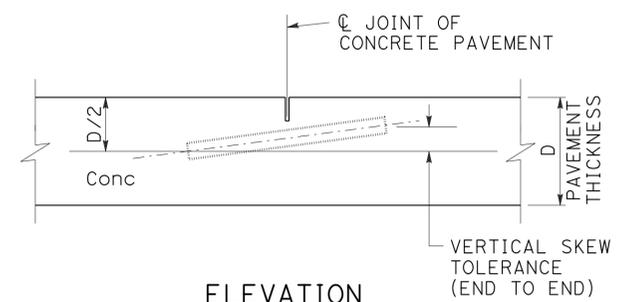
**LONGITUDINAL TRANSLATION TOLERANCE**



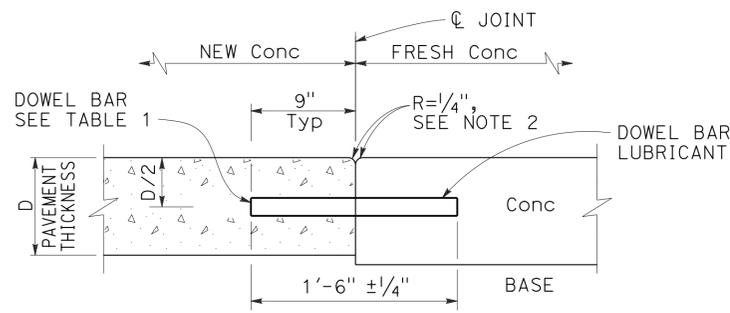
**HORIZONTAL SKEW TOLERANCE**



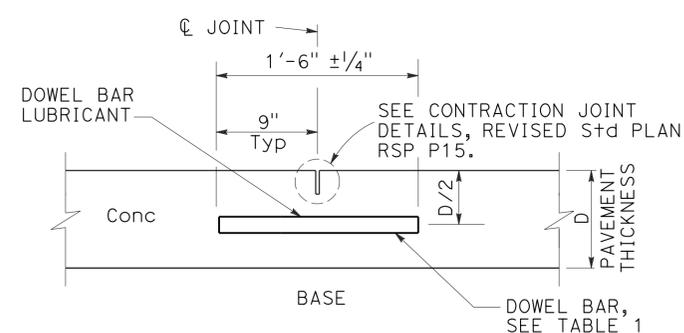
**ELEVATION  
VERTICAL DEPTH TOLERANCE**



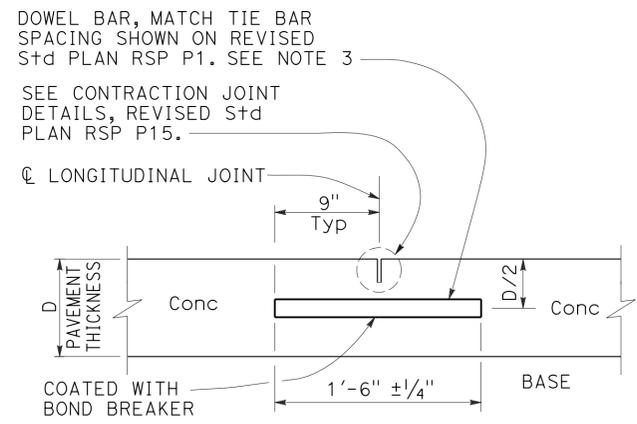
**ELEVATION  
VERTICAL SKEW TOLERANCE**



**TRANSVERSE  
CONSTRUCTION JOINT DETAIL**

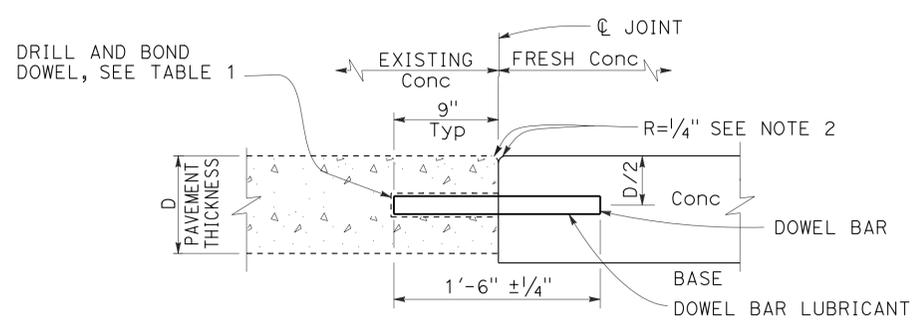


**TRANSVERSE CONTRACTION JOINT**

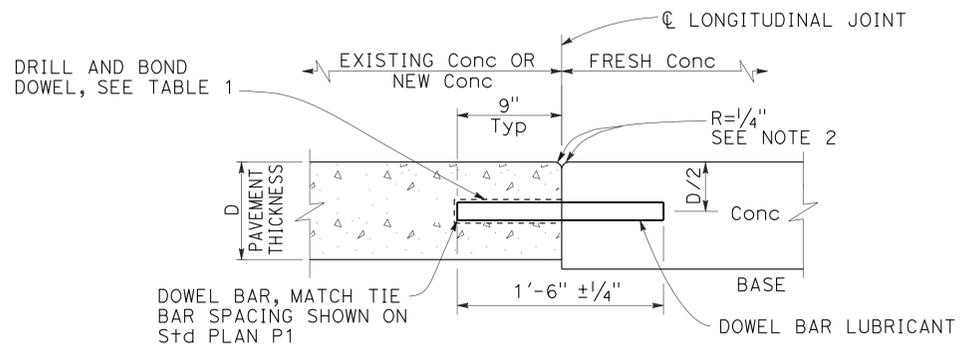


**LONGITUDINAL CONTRACTION  
JOINT WITH DOWEL BARS**

See Revised S+D Plan RSP P18



**TRANSVERSE CONSTRUCTION JOINT  
FOR EXISTING CONCRETE PAVEMENT**



**LONGITUDINAL CONSTRUCTION JOINT  
WITH DOWEL BARS**

See Revised S+D Plan RSP P18

TO ACCOMPANY PLANS DATED 6-2-14

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
  2. Where fresh concrete pavement is placed against new concrete or existing concrete pavement, rounding the corner of the existing concrete pavement is not required.
  3. May also use 3/4" Dia dowel bars 2'-4" ± 1/4" in length. Center the length of dowel bars at the centerline of longitudinal joint.

**TABLE 1**

DOWEL BAR DIAMETER TABLE			
PAVEMENT THICKNESS	0.65'	> 0.65' - 0.85'	> 0.85'
MINIMUM DOWEL * BAR DIAMETER	1"	1 1/4"	1 1/2"

\* The drilled hole diameter must be 1/8" to 3/16" larger than the bar diameter.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT  
DOWEL BAR  
DETAILS**

NO SCALE

RSP P10 DATED JULY 19, 2013 SUPERSEDES RSP P10 DATED APRIL 20, 2012 AND STANDARD PLAN P10 DATED MAY 20, 2011 - PAGE 131 OF THE STANDARD PLANS BOOK DATED 2010.

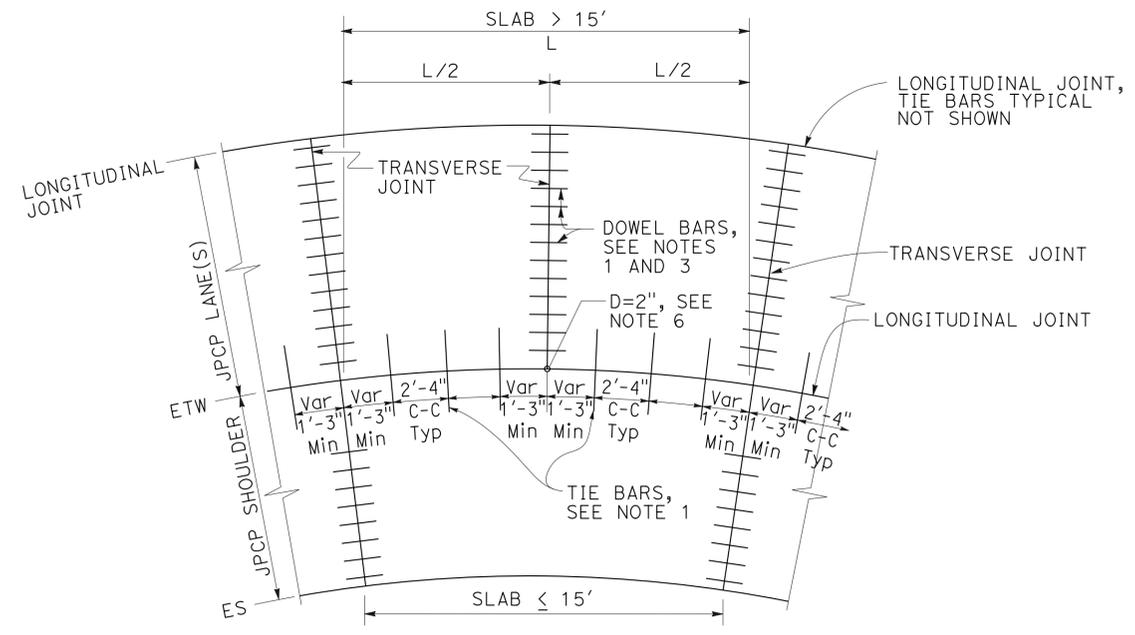
2010 REVISED STANDARD PLAN RSP P10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	262	291

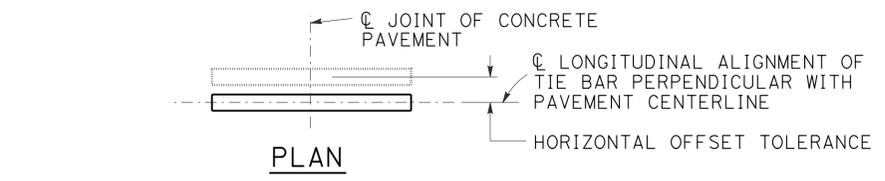
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

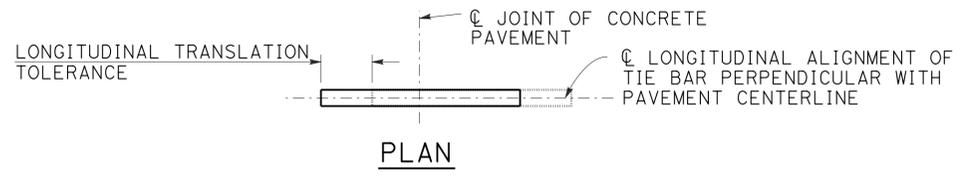
TO ACCOMPANY PLANS DATED 6-2-14



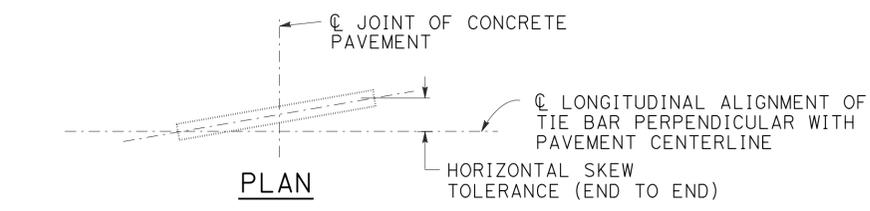
**TIE BAR LAYOUT IN CURVED LANES**



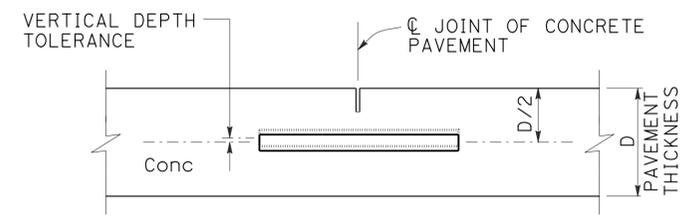
**HORIZONTAL OFFSET TOLERANCE**



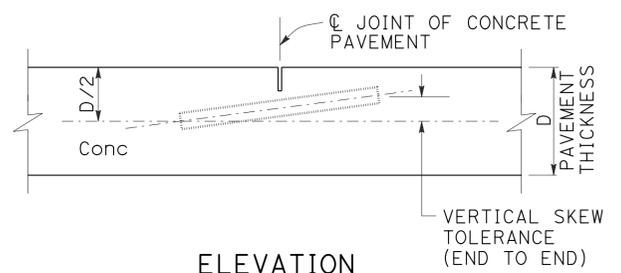
**LONGITUDINAL TRANSLATION TOLERANCE**



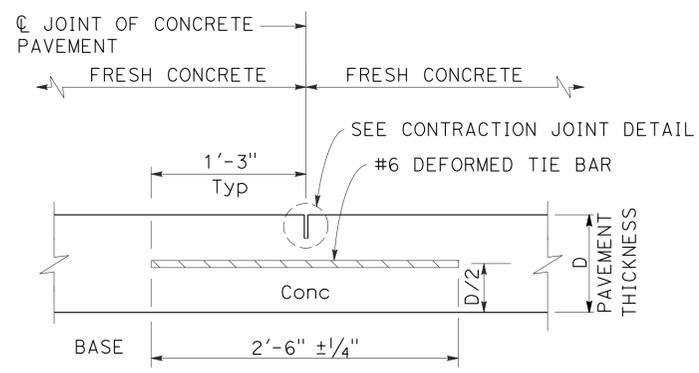
**HORIZONTAL SKEW TOLERANCE**



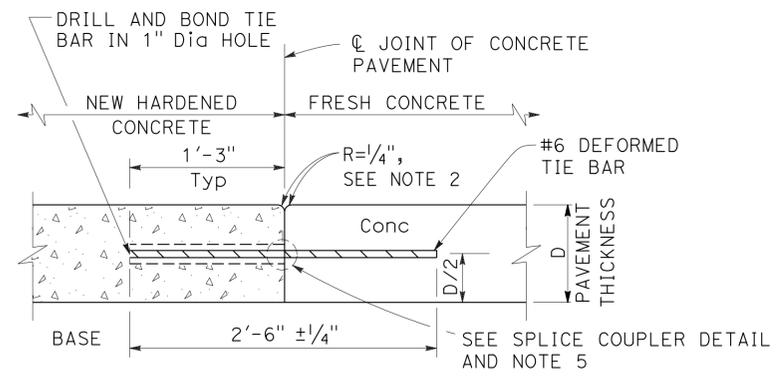
**ELEVATION VERTICAL DEPTH TOLERANCE**



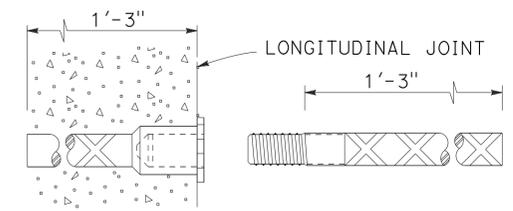
**ELEVATION VERTICAL SKEW TOLERANCE**



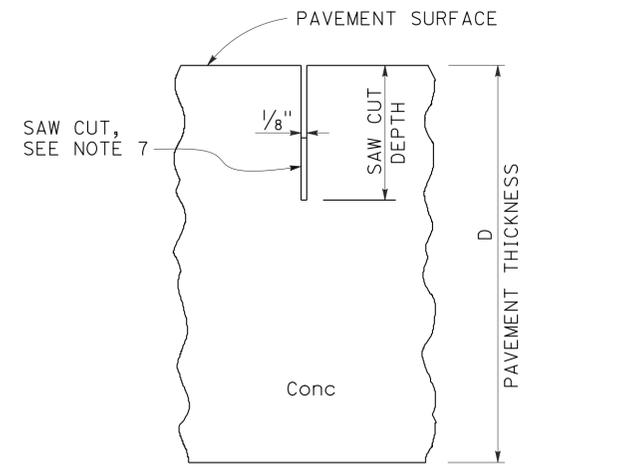
**LONGITUDINAL CONTRACTION JOINT**



**LONGITUDINAL CONSTRUCTION JOINT**



**ALTERNATIVE SPLICE COUPLER**



**CONTRACTION JOINT DETAIL**

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar and tie bar placement and locations.
  2. Where new pavement is placed against existing concrete pavement, rounding the corner is not required.
  3. For dowel bar sizes, See Revised Standard Plan RSP P10.
  4. Tie bar details apply to inside widenings.
  5. Use either drill and bond or splice couplers.
  6. Full depth drilled hole. Fill hole with filler material.
  7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

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

RSP P15 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P15**

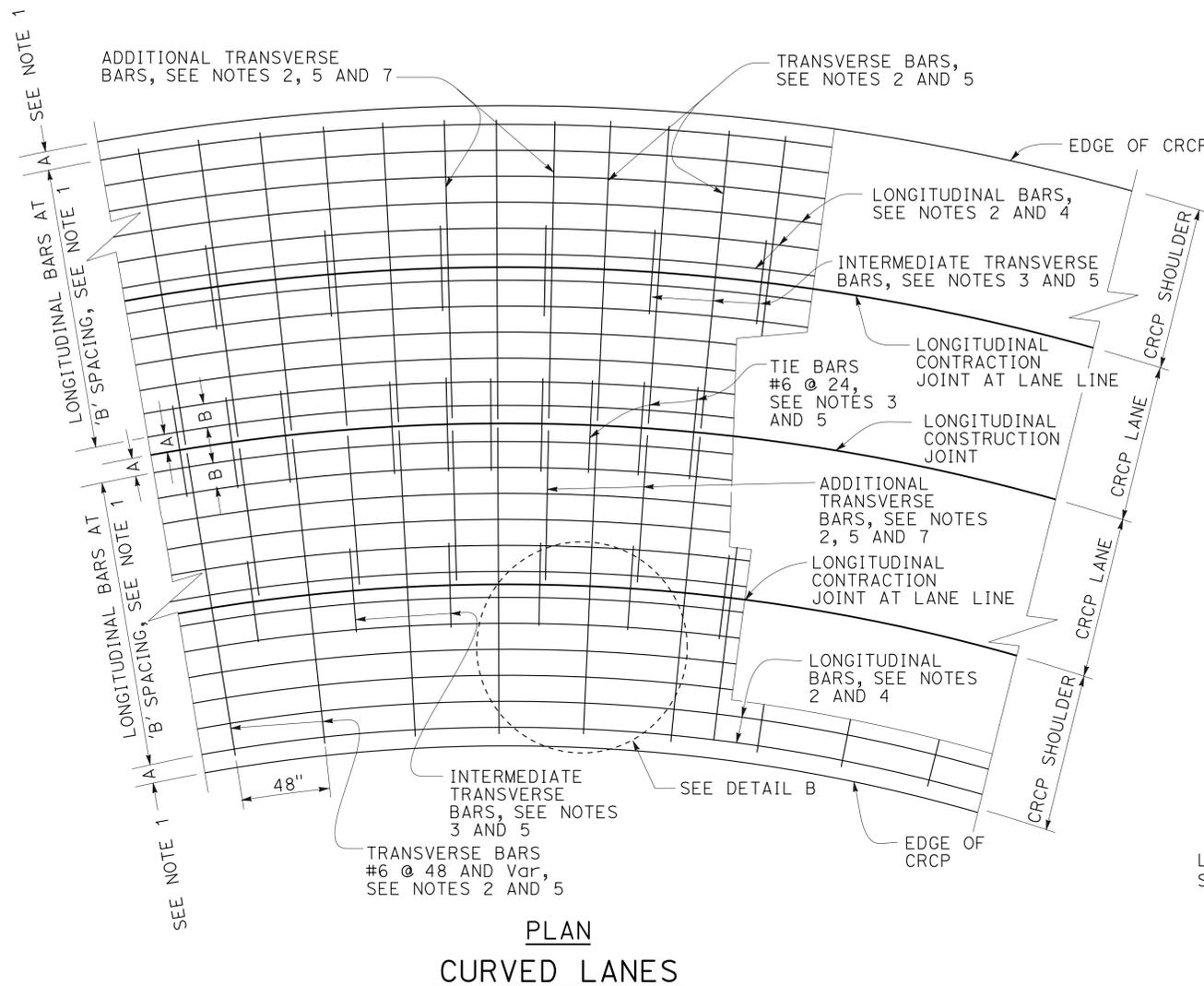
2010 REVISED STANDARD PLAN RSP P15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	263	291

William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

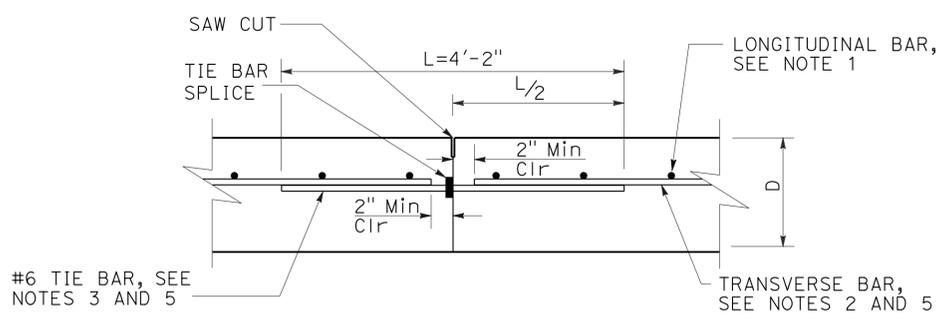
TO ACCOMPANY PLANS DATED 6-2-14



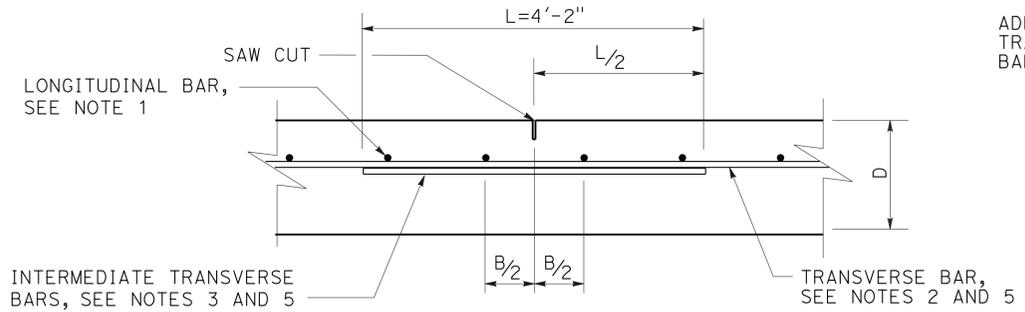
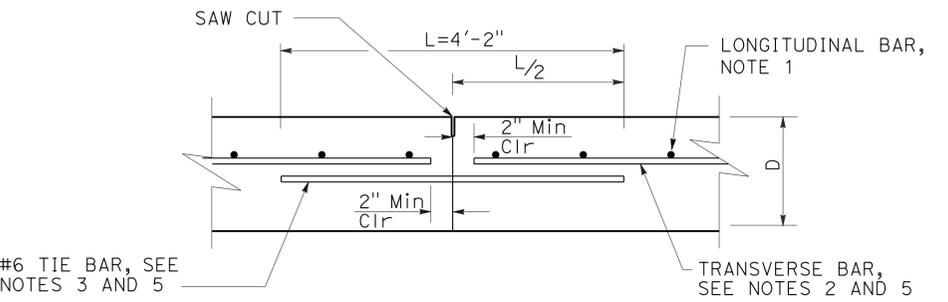
**PLAN CURVED LANES**

- NOTES:**
1. For longitudinal bar spacing and clearances, see Table 1 on Revised Standard Plan RSP P4.
  2. The length of lap splices for bar reinforcement must be at least 25".
  3. Place tie bars and intermediate transverse bars parallel to and in the same plane as the transverse bars.
  4. Place longitudinal bars parallel to roadway curvature.
  5. Place transverse bars, additional transverse bars, tie bars and intermediate transverse bars perpendicular to the pavement curvature.
  6. For additional longitudinal bars detail, see Detail A on Revised Standard Plans RSP P14.
  7. Place additional transverse bars where required, see Detail B.
  8. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

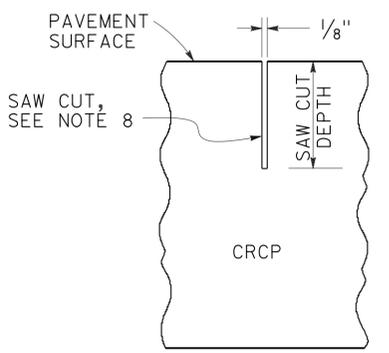
**ABBREVIATION:**  
D = Thickness of CRCP



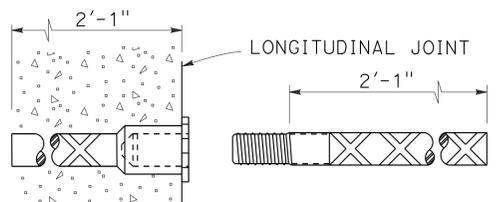
**LONGITUDINAL CONSTRUCTION JOINT**



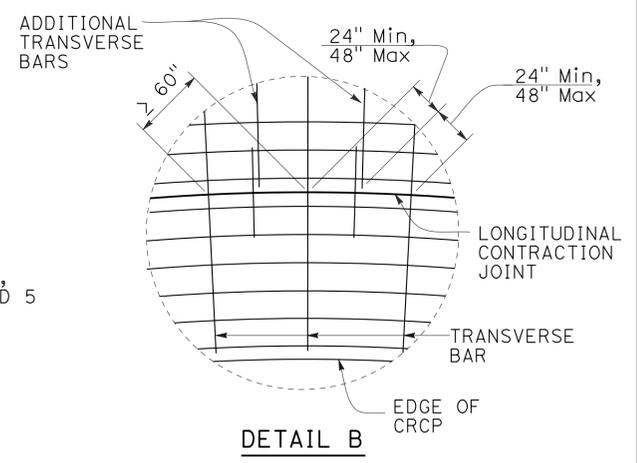
**LONGITUDINAL CONTRACTION JOINT**



**CONTRACTION JOINT SAW CUT DETAIL**



**TIE BAR SPLICE COUPLER DETAIL**



**DETAIL B**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

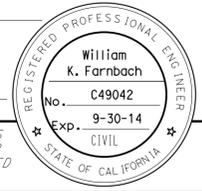
**CONTINUOUSLY REINFORCED CONCRETE PAVEMENT TIE BARS AND JOINT DETAILS**

NO SCALE

RSP P16 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P16**

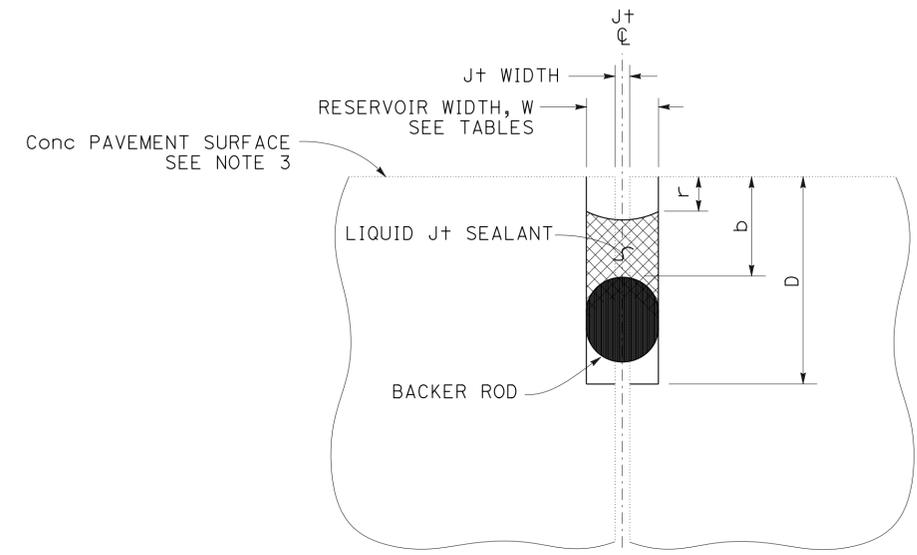
2010 REVISED STANDARD PLAN RSP P16



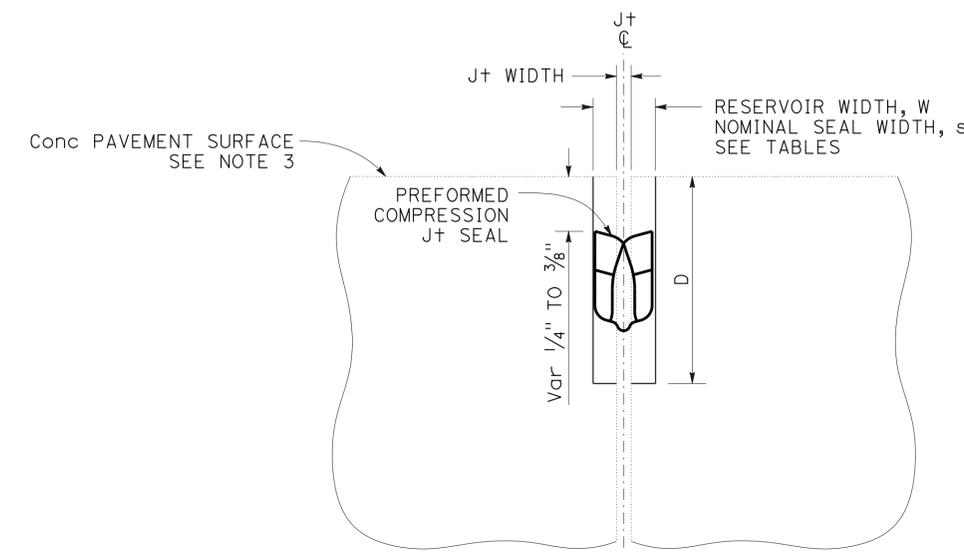
TO ACCOMPANY PLANS DATED 6-2-14

**NOTES:**

1. Details do not apply to isolation joints and longitudinal construction joints.
2. Tie bars, dowel bars, and bar reinforcement are not shown.
3. Depths are measured from the final concrete pavement surface elevation after any grinding.



**LIQUID JOINT SEALANT**



**PREFORMED COMPRESSION JOINT SEAL**

Const SEASON	Min RESERVOIR WIDTH * W ± 1/16"
WINTER	1/4"
SPRING	3/8"
SUMMER	
FALL	

\* Minimum reservoir width for replace joint seal = existing joint width + 1/8"

RESERVOIR WIDTH W ± 1/16"	LIQUID JOINT SEALANT DIMENSIONS					
	BACKER ROD NOMINAL Dia *	DEPTHS (ASPHALT RUBBER) **		DEPTHS (SILICONE)		
		RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RECESS r ± 1/16"
1/4"	3/8"	1 3/4"	7/8"	1 3/8"	1/2"	1/4"
3/8"	1/2"	1 7/8"	7/8"	1 1/2"	1/2"	1/4"
1/2"	3/4"	2"	7/8"	1 3/4"	9/16"	5/16"
5/8"	7/8"	2 1/4"	1"	2"	5/8"	5/16"
3/4"	1"	2 3/4"	1 1/8"	2 1/4"	3/4"	3/8"
7/8"	1 1/4"	3"	1 1/4"	2 1/2"	13/16"	3/8"
1"	1 1/2"	3 1/4"	1 3/8"	2 5/8"	7/8"	3/8"
1 1/8"	1 1/2"	3 1/2"	1 1/2"	2 13/16"	1"	1/2"

\* Larger diameter backer rods may be substituted according to manufacturer recommendations if reservoir depth is increased equivalently.

\*\* Asphalt rubber sealant recess depth "r" varies from 1/4" to 3/8"

RESERVOIR WIDTH W ± 1/16"	PREFORMED COMPRESSION JOINT SEAL DIMENSIONS	
	NOMINAL SEAL WIDTH s	RESERVOIR DEPTH D ± 1/4"
1/4"	7/16"	1 1/4"
3/8"	11/16"	1 7/16"
1/2"	13/16"	1 11/16"
5/8"	1"	1 7/8"
3/4"	1 1/4"	2 1/8"
7/8"	1 5/8"	2 5/8"
1"	1 9/8"	2 9/8"
1 1/8"	2"	2 7/8"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**JOINT SEALS**

NO SCALE

RSP P20 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P20 DATED MAY 20, 2011 - PAGE 136 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP P20

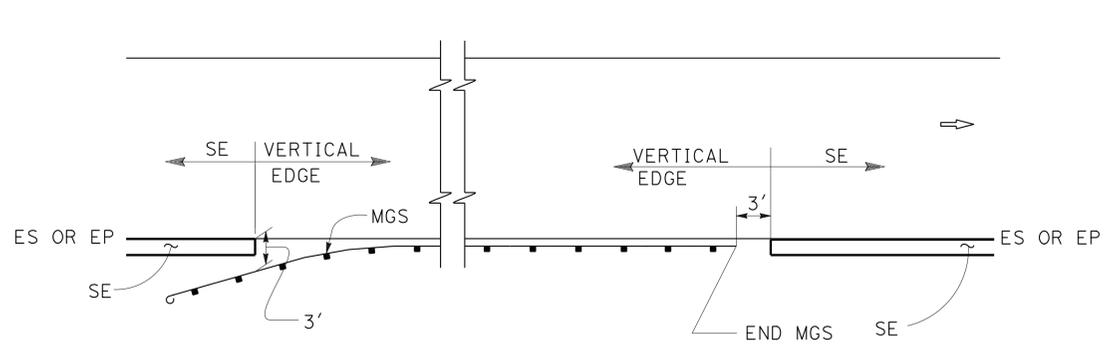
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	265	291

REGISTERED CIVIL ENGINEER  
 November 15, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

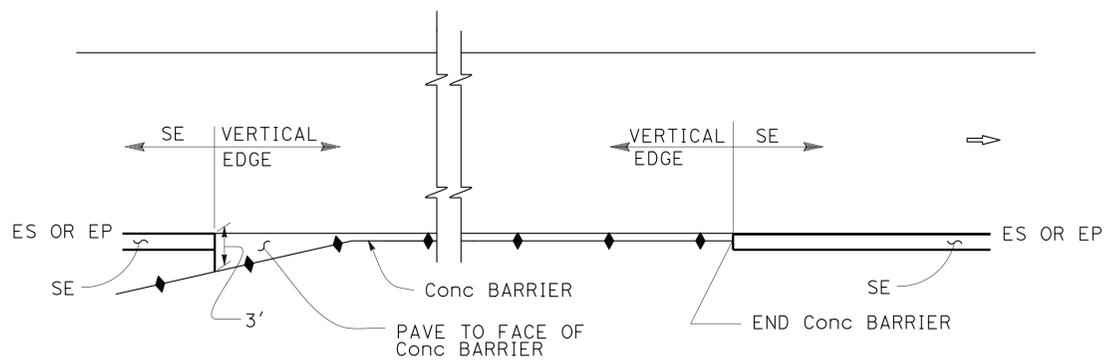
REGISTERED PROFESSIONAL ENGINEER  
 Cornelis M. Hakim  
 No. C55610  
 Exp. 12-31-14  
 CIVIL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

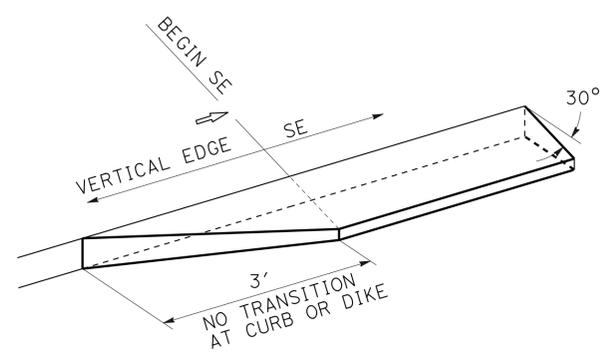
**ABBREVIATIONS:**  
SE SAFETY EDGE



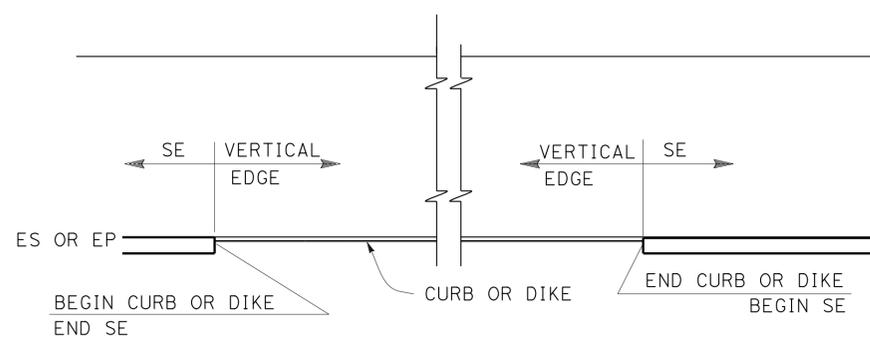
**MGS**



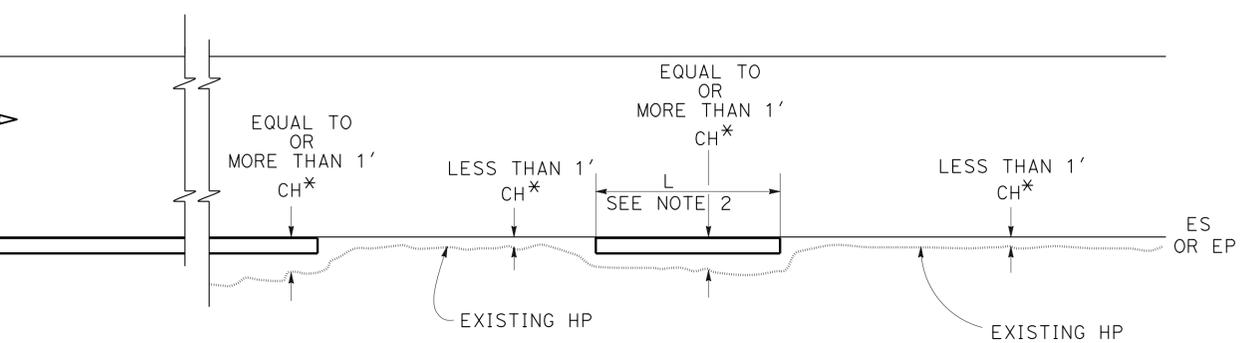
**CONCRETE BARRIER**



**TRANSITION DETAIL FOR CONCRETE ONLY**

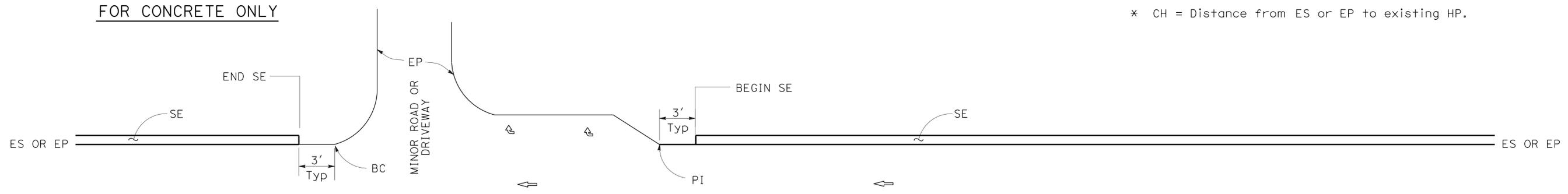


**CURB OR DIKE**



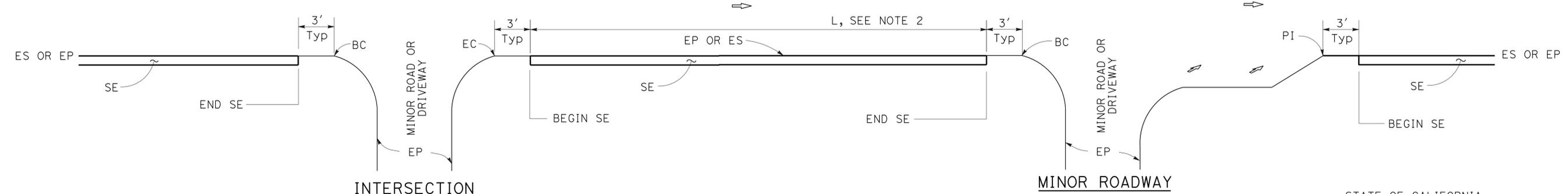
**NARROW SIDE SLOPE**

\* CH = Distance from ES or EP to existing HP.



**STATE ROUTE**

**STATE ROUTE**



**INTERSECTION**

**DRIVEWAY AND INTERSECTION**

**MINOR ROADWAY OR DRIVEWAY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT EDGE TREATMENTS**

NO SCALE

**NOTES:**

1. For details not shown, see Revised Standard Plans RSP P75 and RSP P76.
2. Safety edge is optional when L is less than 30'.

RSP P74 DATED NOVEMBER 15, 2013 SUPERSEDES RSP P74 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP P74

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	266	291

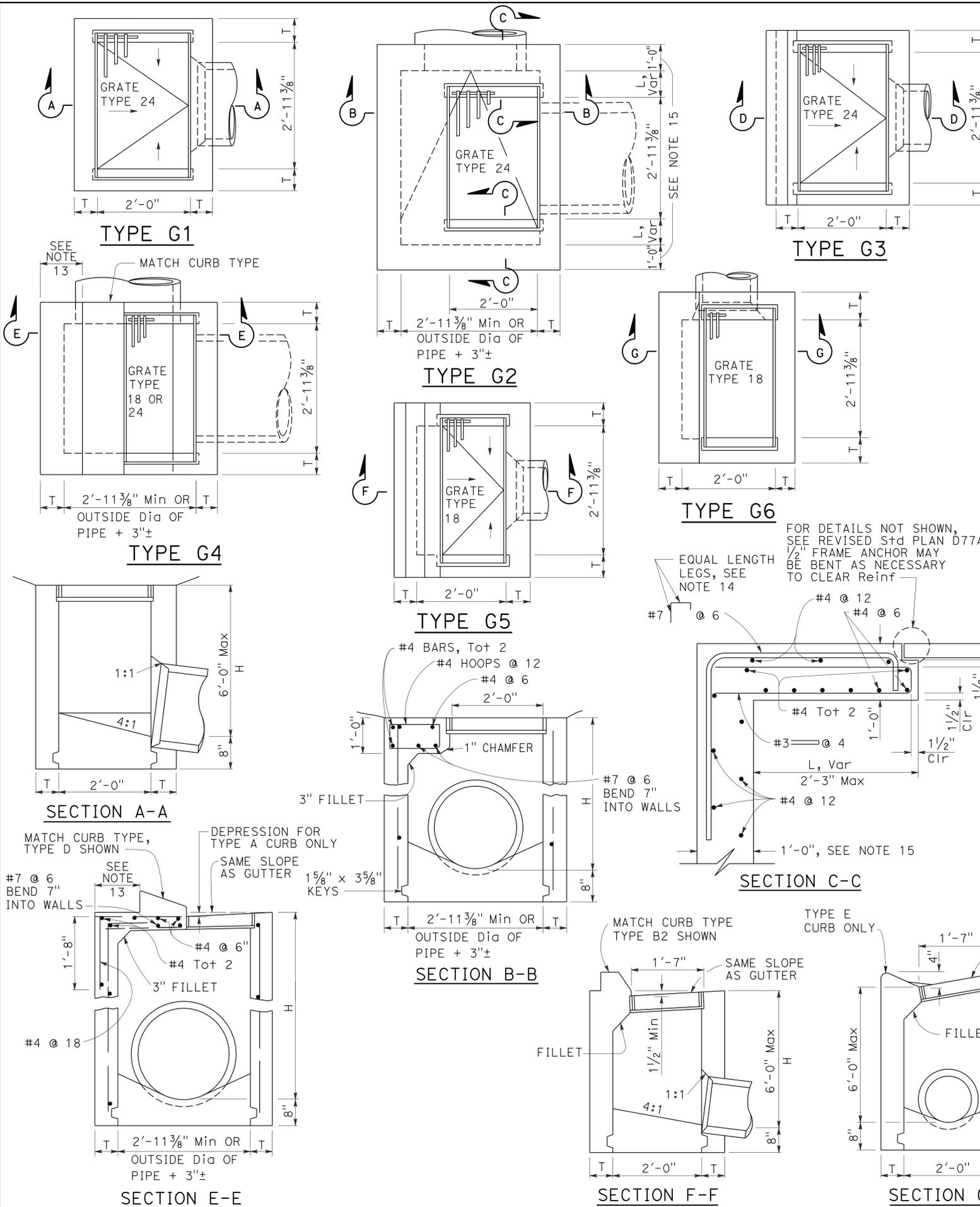
Glenn DeCou  
REGISTERED CIVIL ENGINEER

October 19, 2012  
PLANS APPROVAL DATE

Glenn DeCou  
No. C34547  
Exp. 9-30-13  
CIVIL  
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER

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



**NOTES:**

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round bottom.
- Steps-None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- Details shown apply to both metal and concrete pipe.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- This dimension will vary with different grates, curbs types, box width and wall thickness.
- Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
- Where "L" is 6" or less, wall thickness shall be as shown in Table A.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

**TABLE A**

TYPE	CONCRETE QUANTITIES			
	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
G-1	0.95	0.220	See Note A	SEE NOTE A
G-2*	1.31	0.255	3.50	0.357
G-3	1.03	0.220	See Note A	SEE NOTE A
G-4* (TYPE 24)	1.27	0.255	3.48	0.357
G-4* (TYPE 18)	1.30	0.255	3.50	0.357
G-5	1.02	0.220	SEE NOTE A	SEE NOTE A
G-6	1.04	0.220	SEE NOTE A	SEE NOTE A

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. \* QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

**NOTE A:**

Maximum allowable height 6'-0".

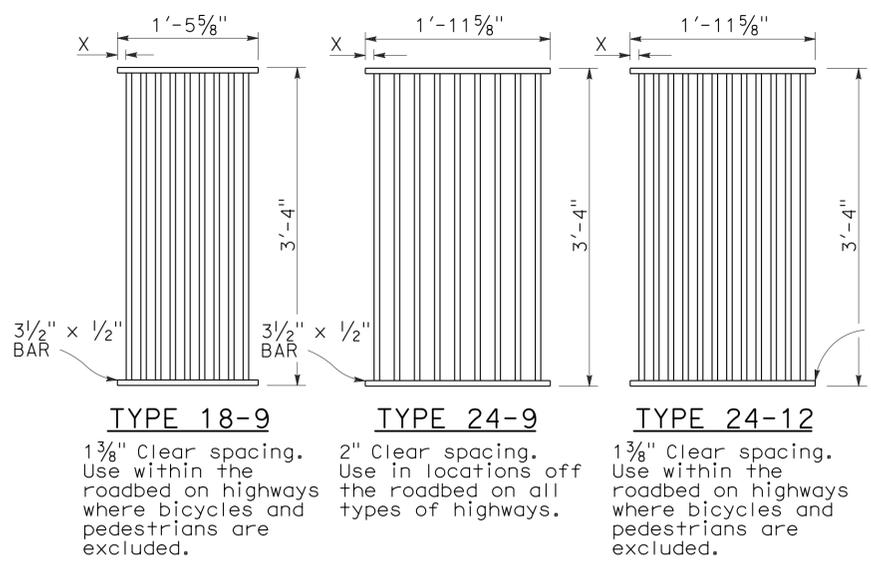
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**DRAINAGE INLETS**  
NO SCALE

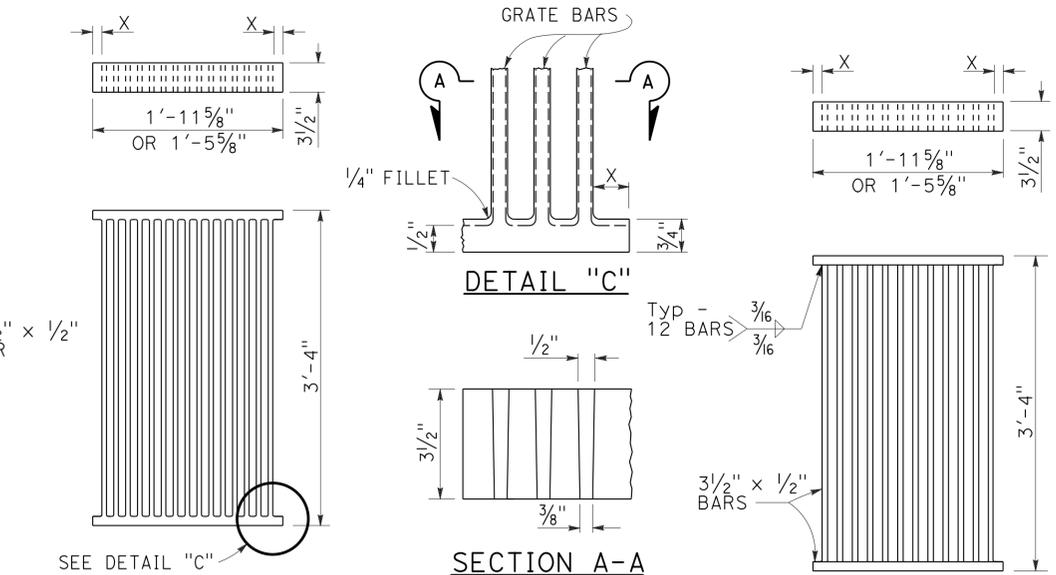
RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D73**

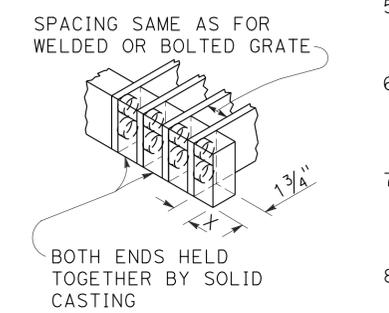
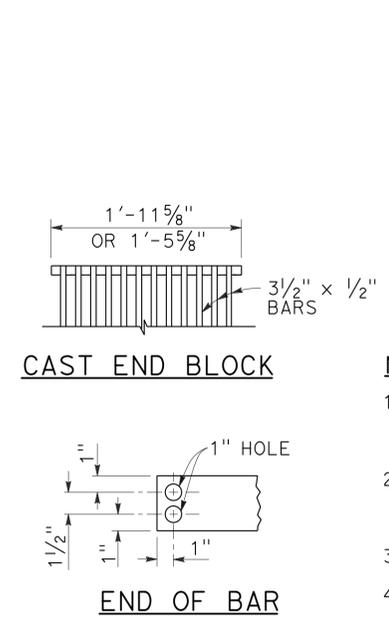
2010 REVISED STANDARD PLAN RSP D73



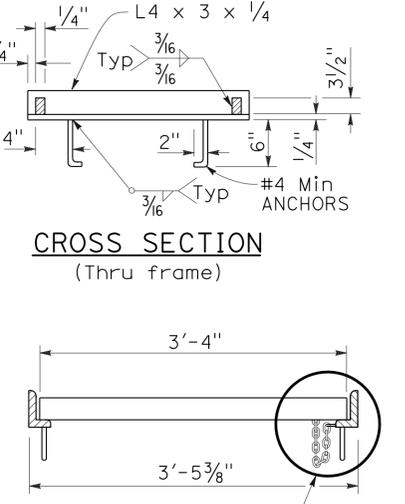
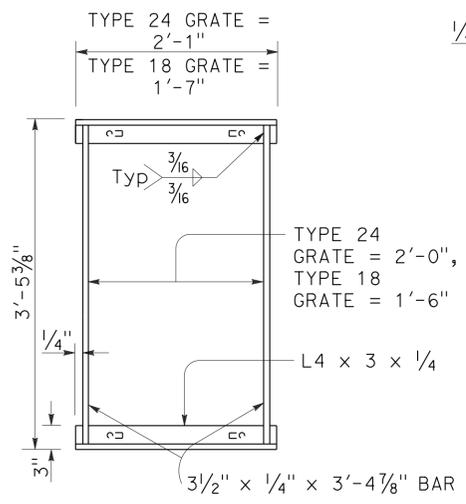
**RECTANGULAR GRATE DETAILS**  
(See table below)



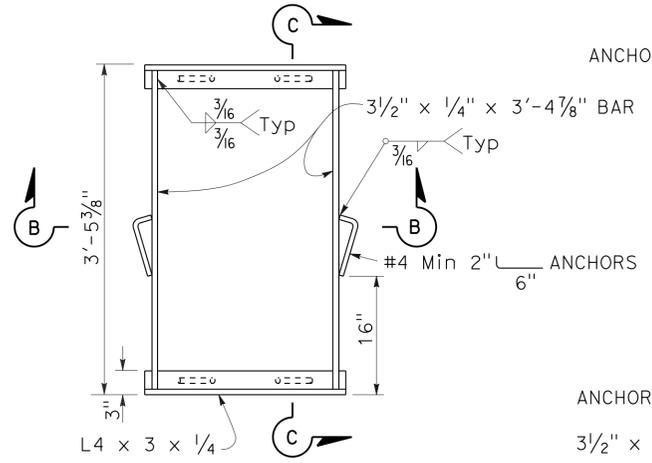
**ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE**



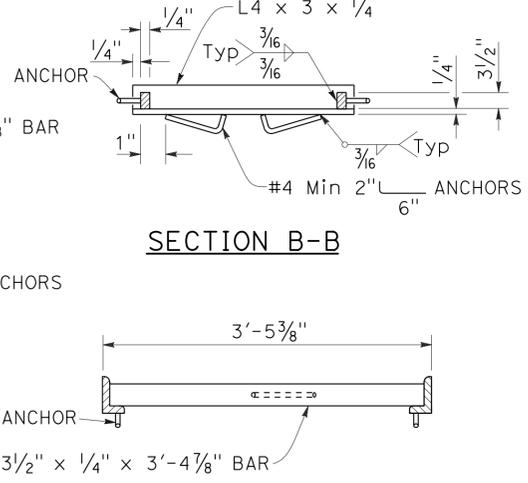
**ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE**



**LONGITUDINAL SECTION (Thru frame and grate)**



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



**SECTION B-B**

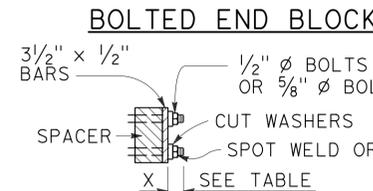
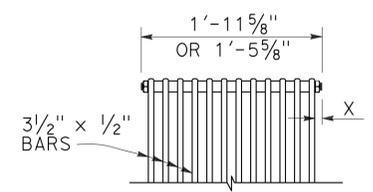
**RECTANGULAR FRAME DETAILS**  
(For all rectangular grates)

**GRATE BAR SPACING TABLE**

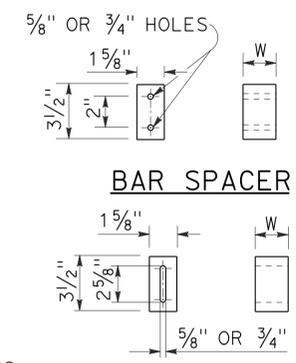
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

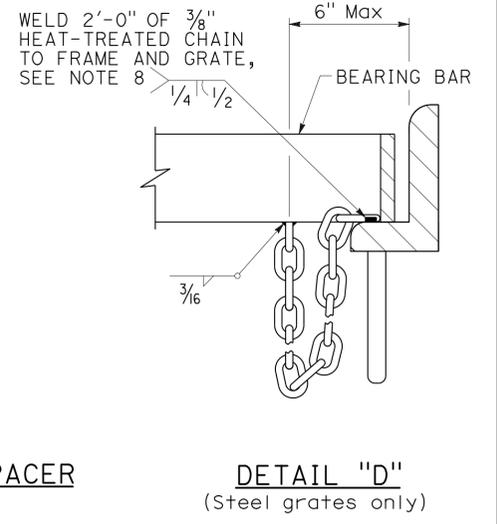
INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



**ALTERNATIVE BOLTED GRATE**



**ALTERNATIVE SPACER**



**GRATE DETAILS No. 1**  
NO SCALE

**BASIS FOR Misc IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS**  
(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D77A**

2010 REVISED STANDARD PLAN RSP D77A



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	269	291

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT

July 19, 2013  
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 6-2-14

**A**

**AB** AGGREGATE BASE  
**ABS** ACRYLONITRILE-BUTADIENE-STYRENE  
**AC** ASPHALT CONCRETE  
**ACC** ARMOR-CLAD CONDUCTORS  
**Adj** ADJACENT/ADJUSTABLE  
**AIC** AUXILIARY IRRIGATION CONTROLLER  
**Ait** ALTERNATIVE  
**AMEND** AMENDMENT  
**ARV** AIR RELEASE VALVE  
**AUTO** AUTOMATIC  
**AUX** AUXILIARY  
**AVB** ATMOSPHERIC VACUUM BREAKER

**B**

**B&B** BALLED AND BURLAPPED  
**B/B** BRASS/BRONZE  
**B/B/PL** BRASS/BRONZE/PLASTIC  
**B/PL** BRASS/PLASTIC  
**BFM** BONDED FIBER MATRIX  
**Bit C+D** BITUMINOUS COATED  
**BP** BOOSTER PUMP  
**BPA** BACKFLOW PREVENTER ASSEMBLY  
**BPE** BACKFLOW PREVENTER ENCLOSURE  
**BV** BALL VALVE

**C**

**C** CONDUIT  
**CAP** CORRUGATED ALUMINUM PIPE  
**CARV** COMBINATION AIR RELEASE VALVE  
**CB** COUPLING BAND  
**CCA** CAM COUPLER ASSEMBLY  
**CEC** CONTROLLER ENCLOSURE CABINET  
**CHDPE** CORRUGATED HIGH DENSITY POLYETHYLENE  
**CL** CHAIN LINK  
**CNC** CONTROL AND NEUTRAL CONDUCTORS  
**Conc** CONCRETE  
**CP** COPPER PIPE  
**CS** COMPOST SOCK  
**CSP** CORRUGATED STEEL PIPE  
**CST** CENTER STRIP  
**CV** CHECK VALVE

**D**

**Dia** DIAMETER  
**DIP** DUCTILE IRON PIPE  
**DIT** DRIP IRRIGATION TUBING  
**DG** DECOMPOSED GRANITE  
**DN** DIAMETER NOMINAL  
**DVA** DRIP VALVE ASSEMBLY

**E**

**EC** EROSION CONTROL  
**ECTC** EROSION CONTROL TECHNOLOGY COUNCIL  
**Elect** ELECTRIC/ELECTRICAL  
**Elev** ELEVATION  
**ELL** ELBOW  
**ENCL** ENCLOSURE  
**EP** EDGE OF PAVEMENT  
**ES** EDGE OF SHOULDER  
**EST** END STRIP  
**ESTB** ESTABLISHMENT  
**ETW** EDGE OF TRAVELED WAY

**F**

**F** FULL CIRCLE  
**F/P** FULL/PART CIRCLE  
**FCV** FLOW CONTROL VALVE  
**FERT** FERTILIZER  
**FG** FINISHED GRADE  
**FH** FLEXIBLE HOSE  
**FIPT** FEMALE IRON PIPE THREAD  
**FIS** FERTILIZER INJECTOR SYSTEM  
**FL** FLOW LINE  
**FR** FIBER ROLL  
**FS** FLOW SENSOR  
**FSC** FLOW SENSOR CABLE  
**FV** FLUSH VALVE

**G**

**Galv** GALVANIZED  
**GARV** GARDEN VALVE  
**GARVA** GARDEN VALVE ASSEMBLY  
**GM** GRAVEL MULCH  
**GPH** GALLONS PER HOUR  
**GPM** GALLONS PER MINUTE  
**GSP** GALVANIZED STEEL PIPE  
**GV** GATE VALVE

**H**

**H** HALF CIRCLE  
**HDPE** HIGH DENSITY POLYETHYLENE  
**HP** HORSEPOWER/HINGE POINT  
**HPL** HIGH PRESSURE LINE  
**Hwy** HIGHWAY

**I**

**IC** IRRIGATION CONTROLLER  
**ICC** IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET  
**ID** INSIDE DIAMETER  
**IFS** IRRIGATION FILTRATION SYSTEM  
**IPS** IRON PIPE SIZE  
**IPT** IRON PIPE THREAD  
**Irr** IRRIGATION

**L**

**L** LENGTH  
**Max** MAXIMUM  
**MBGR** METAL BEAM GUARD RAILING  
**MCV** MANUAL CONTROL VALVE  
**MIC** MASTER IRRIGATION CONTROLLER  
**Min** MINIMUM  
**MIPT** MALE IRON PIPE THREAD  
**Misc** MISCELLANEOUS  
**M+I** MATERIAL  
**MVP** MAINTENANCE VEHICLE PULLOUT

**N**

**NCN** NO COMMON NAME  
**NL** NOZZLE LINE  
**No.** NUMBER  
**NPT** NATIONAL PIPE THREAD

**O**

**O/C** ON CENTER  
**OD** OUTSIDE DIAMETER  
**OL** OVERLAP

**P**

**P** PART CIRCLE  
**PB** PULL BOX  
**PCC** PORTLAND CEMENT CONCRETE  
**PE** POLYETHYLENE  
**PK+** PACKET  
**PL** PLASTIC  
**PLS** PURE LIVE SEED  
**PLT** PLANT/PLANTING  
**PLT ESTB** PLANT ESTABLISHMENT  
**PM** POST MILE  
**PR** PRESSURE RATED  
**PRLV** PRESSURE RELIEF VALVE  
**PRV** PRESSURE REGULATING VALVE  
**PVC** POLYVINYL CHLORIDE  
**Pvmt** PAVEMENT

**Q**

**Q** QUARTER CIRCLE  
**QCV** QUICK COUPLING VALVE

**NOTE:**  
 For additional abbreviations, see Standard Plans A10A and A10B.

**R**

**R** RADIUS  
**RCP** REINFORCED CONCRETE PIPE  
**RCV** REMOTE CONTROL VALVE  
**RCVM** REMOTE CONTROL VALVE (MASTER)  
**RCVMF** REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR  
**RCVP** REMOTE CONTROL VALVE W/PRESSURE REGULATOR  
**RCW** RECYCLED WATER  
**RECP** ROLLED EROSION CONTROL PRODUCT  
**REQ** REQUIRED  
**RICS** REMOTE IRRIGATION CONTROL SYSTEM  
**R/W** RIGHT OF WAY

**S**

**S** SLIP  
**SCH** SCHEDULE  
**SF** STATE-FURNISHED  
**Shld** SHOULDER  
**Sq** SQUARE  
**SST** SIDE STRIP  
**Sta** STATION  
**Std** STANDARD  
**SW** SIDEWALK/SOUND WALL

**T**

**T** THIRD CIRCLE/THREAD  
**TLS** TRUCK LOADING STANDPIPE  
**TQ** THREE QUARTER CIRCLE  
**TRM** TURF REINFORCEMENT MAT  
**TT** TWO-THIRDS CIRCLE  
**TWSA** TREE WELL SPRINKLER ASSEMBLY  
**Typ** TYPICAL

**U**

**UG** UNDERGROUND

**W**

**W** WIDTH  
**W/** WITH  
**WM** WATER METER  
**WS** WYE STRAINER  
**WSA** WYE STRAINER ASSEMBLY  
**WSP** WELDED STEEL PIPE  
**WWM** WELDED WIRE MESH

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION CONTROL ABBREVIATIONS**  
 NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

2010 REVISED STANDARD PLAN RSP H1

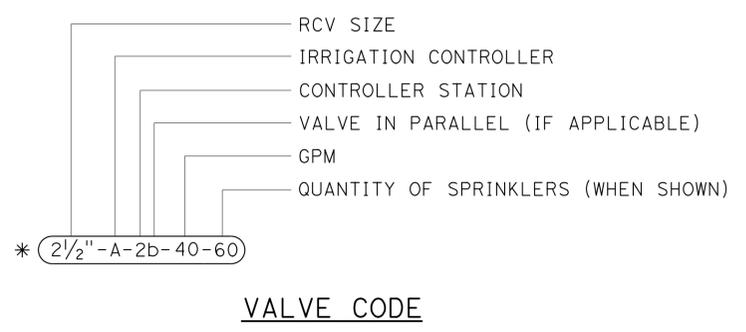
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	270	291

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 November 15, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-2-14

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE) IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		EXTEND IRRIGATION CONDUIT
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



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

RSP H2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

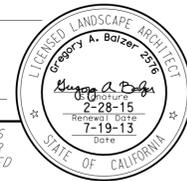
**REVISED STANDARD PLAN RSP H2**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION CONTROL SYMBOLS**  
NO SCALE

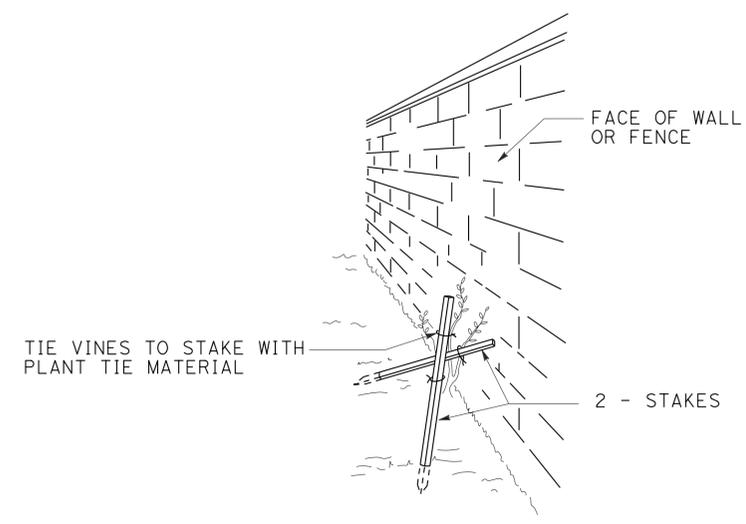
2010 REVISED STANDARD PLAN RSP H2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	271	291

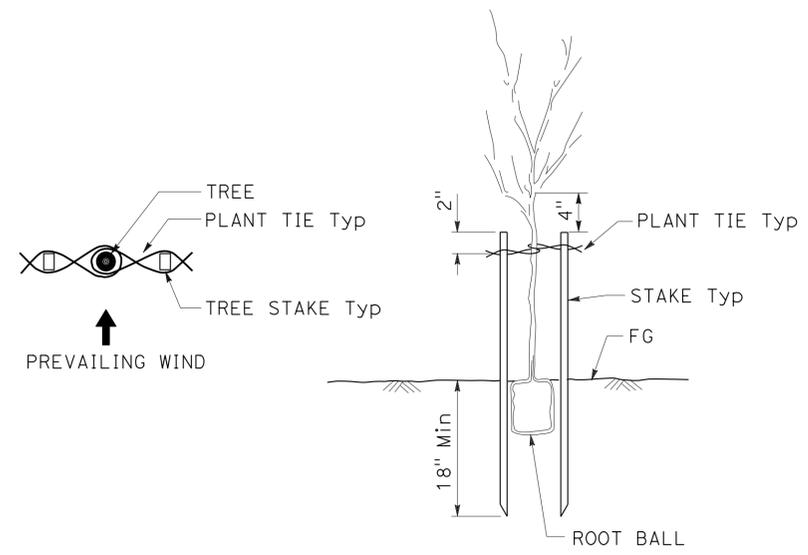
July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



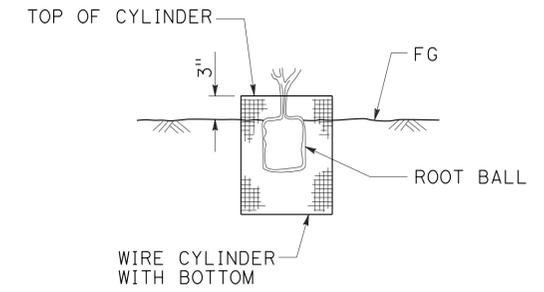
TO ACCOMPANY PLANS DATED 6-2-14



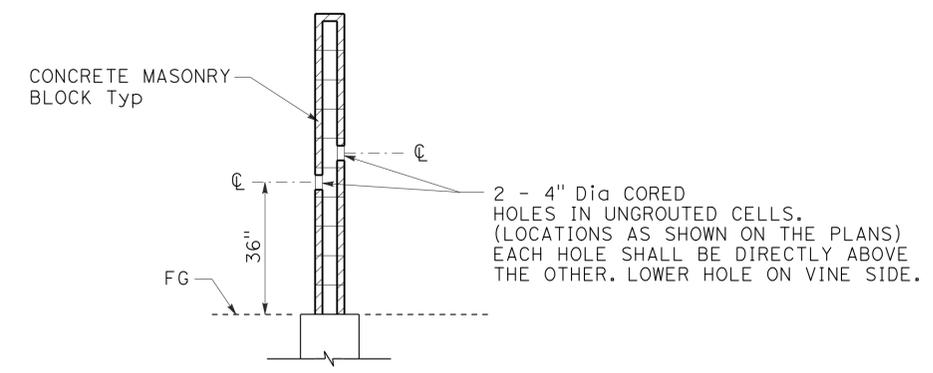
PERSPECTIVE VINE STAKING



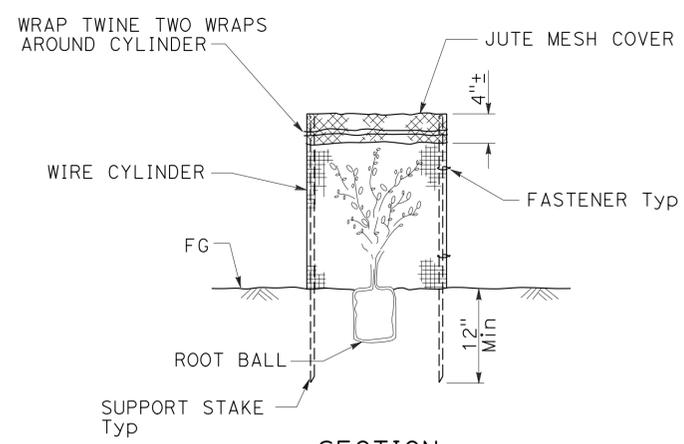
TREE STAKING



SECTION ROOT PROTECTOR



SECTION CORE HOLE (VINE)



SECTION FOLIAGE PROTECTOR

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

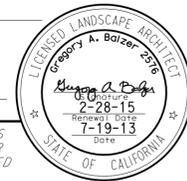
RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H4**

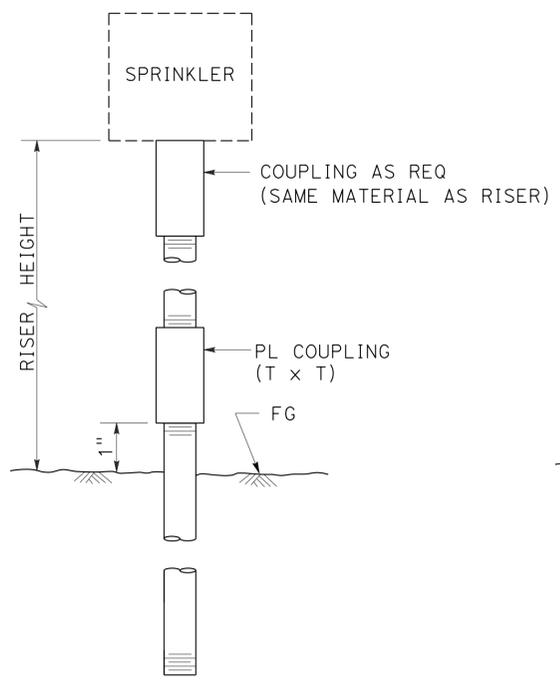
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	272	291

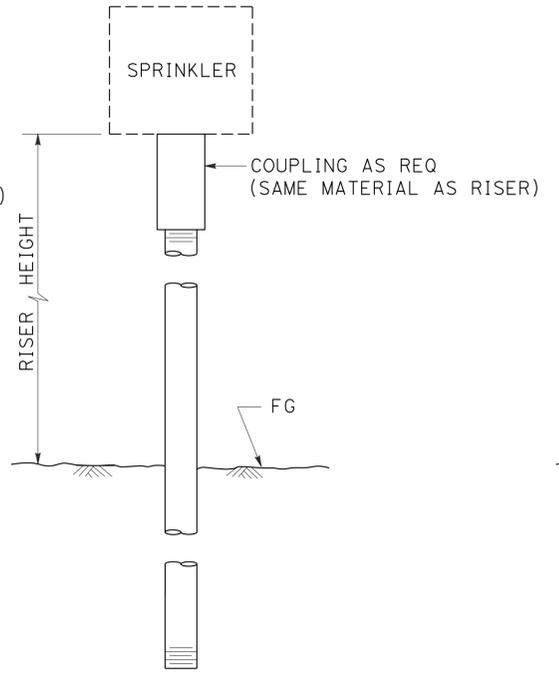
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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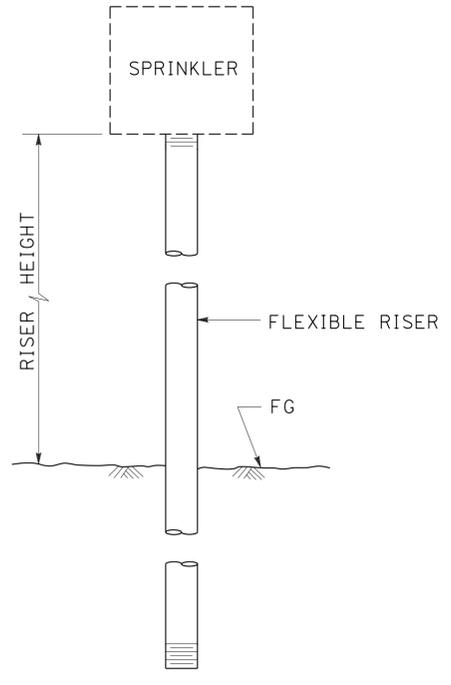
TO ACCOMPANY PLANS DATED 6-2-14



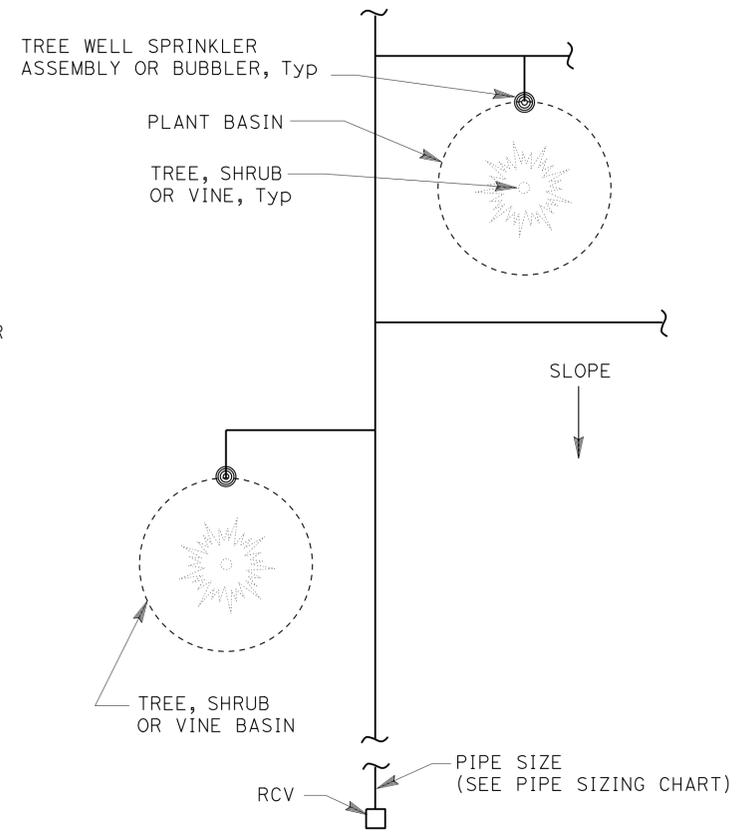
**ELEVATION**  
**RISER SPRINKLER**  
**ASSEMBLY TYPE I**



**ELEVATION**  
**RISER SPRINKLER**  
**ASSEMBLY TYPE II**



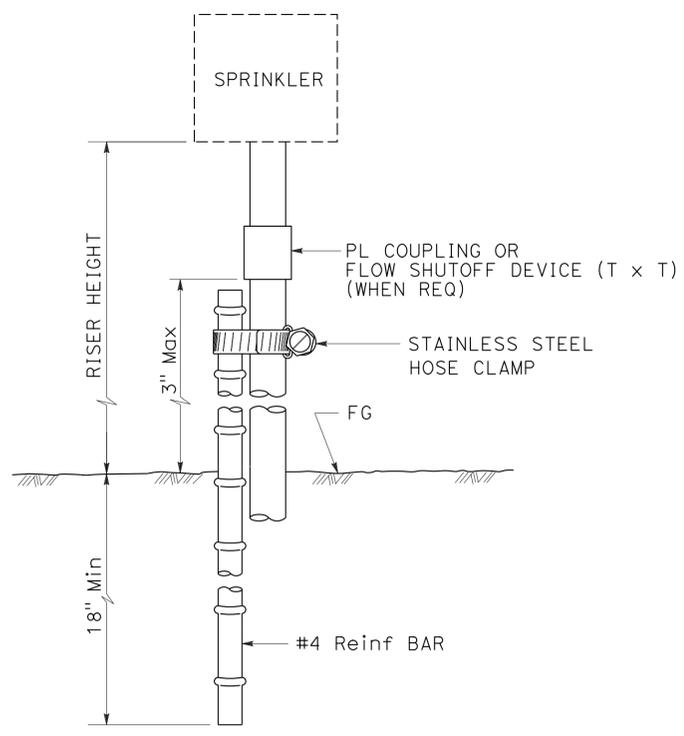
**ELEVATION**  
**RISER SPRINKLER**  
**ASSEMBLY TYPE III**



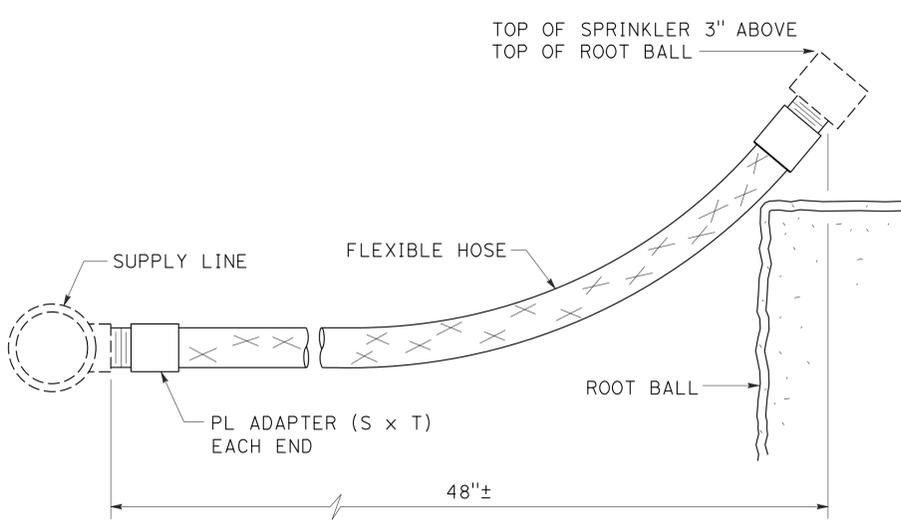
**PLAN**

**NOTES:**

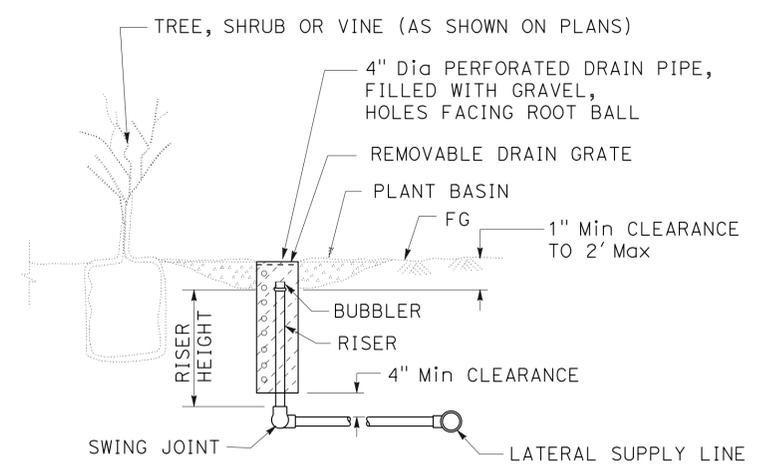
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



**ELEVATION**  
**RISER SPRINKLER**  
**ASSEMBLY TYPE IV**



**ELEVATION**  
**RISER SPRINKLER**  
**ASSEMBLY TYPE V**



**SECTION**  
**TREE WELL SPRINKLER ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**

NO SCALE

RSP H5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

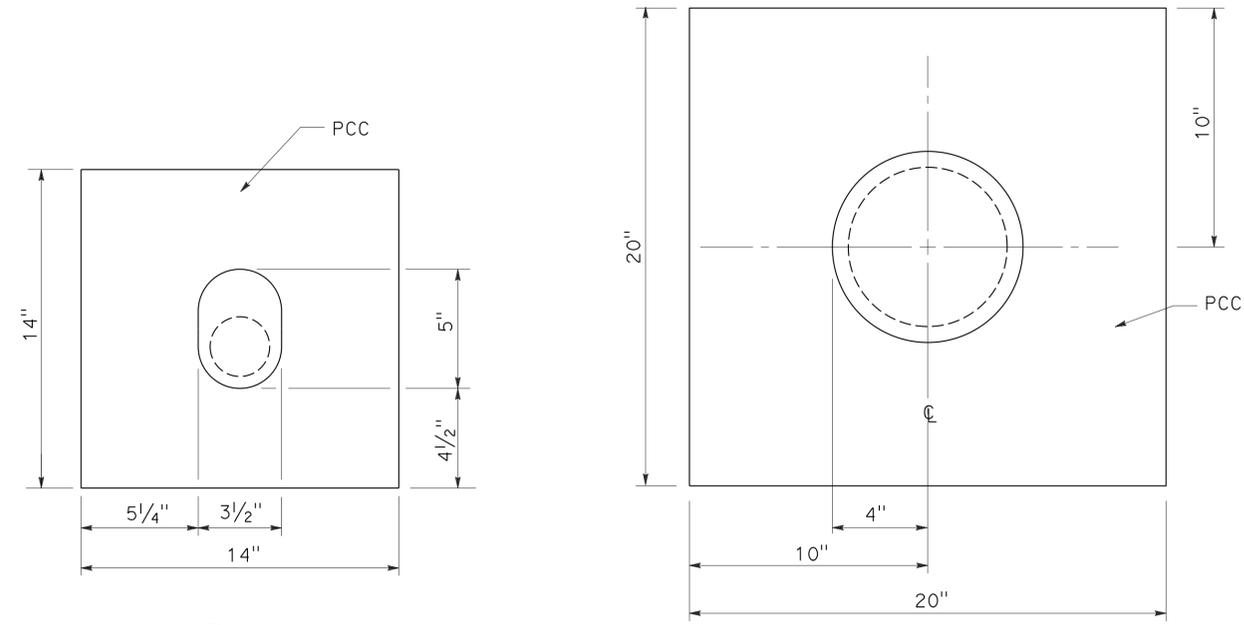
**REVISED STANDARD PLAN RSP H5**

**2010 REVISED STANDARD PLAN RSP H5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	273	291

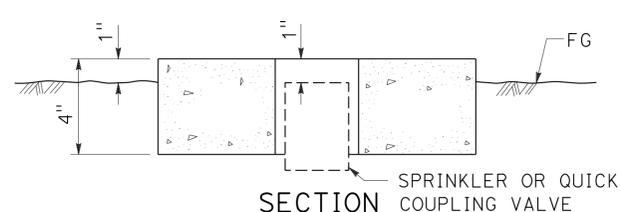
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-2-14

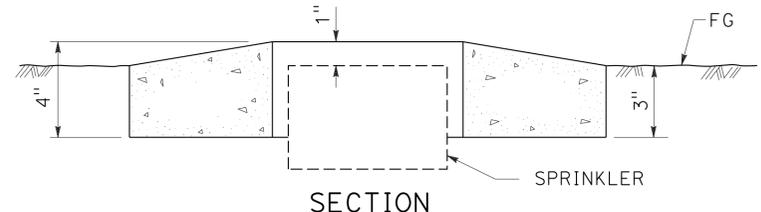


PLAN

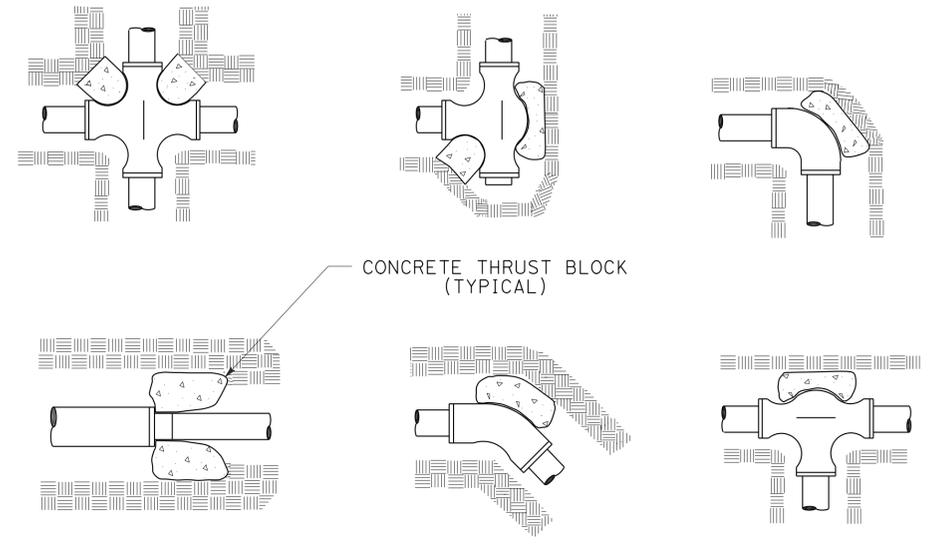
PLAN



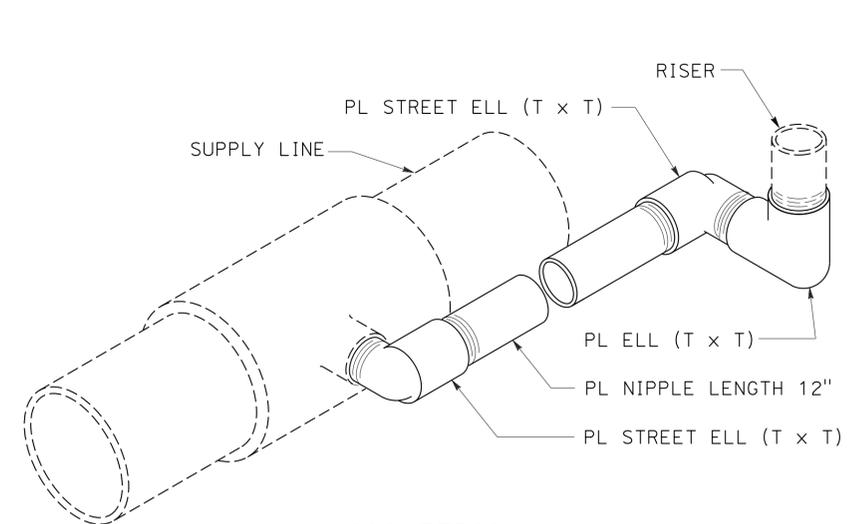
SECTION  
SPRINKLER PROTECTOR TYPE I



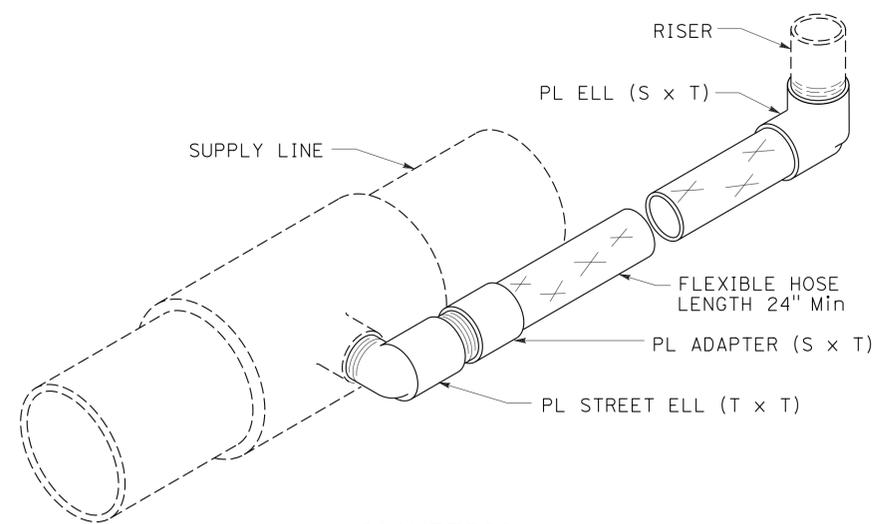
SECTION  
SPRINKLER PROTECTOR TYPE II



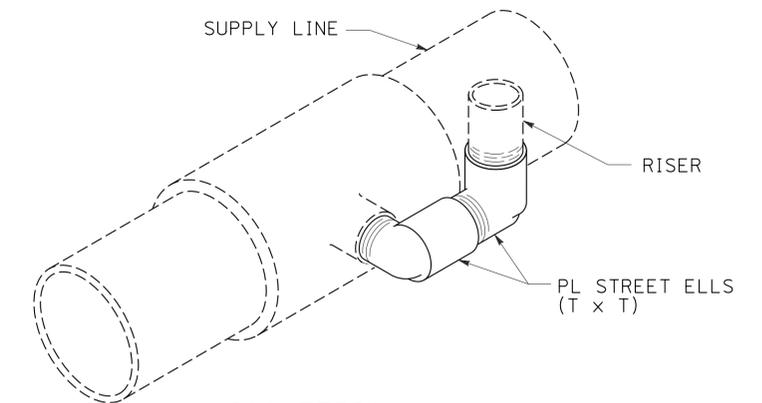
TYPICAL THRUST BLOCKS



ISOMETRIC  
POP-UP SPRINKLER ASSEMBLY TYPE I



ISOMETRIC  
POP-UP SPRINKLER ASSEMBLY TYPE II



ISOMETRIC  
POP-UP SPRINKLER ASSEMBLY TYPE III

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**

NO SCALE

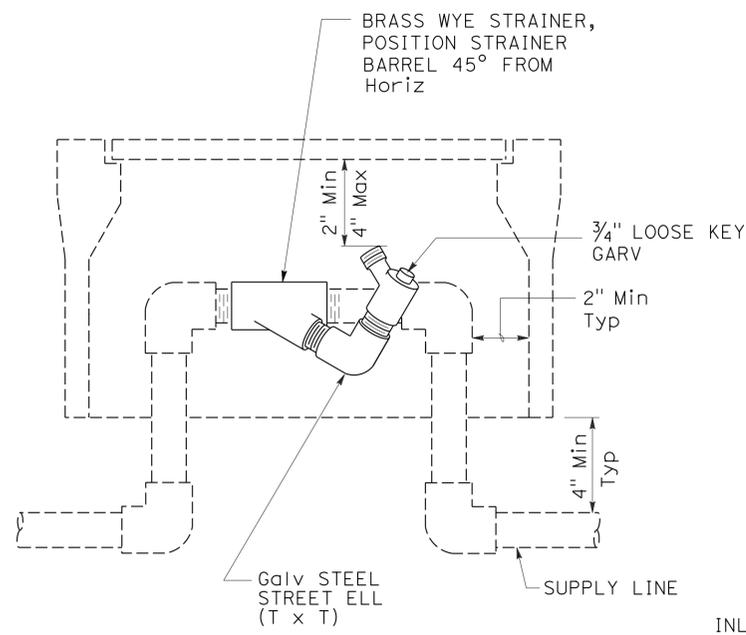
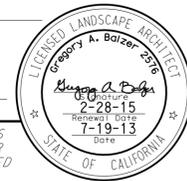
RSP H6 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H6**

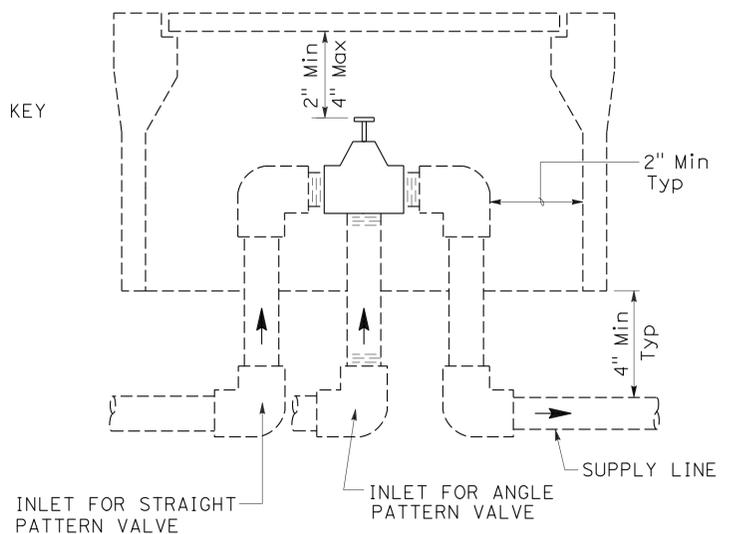
2010 REVISED STANDARD PLAN RSP H6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	274	291

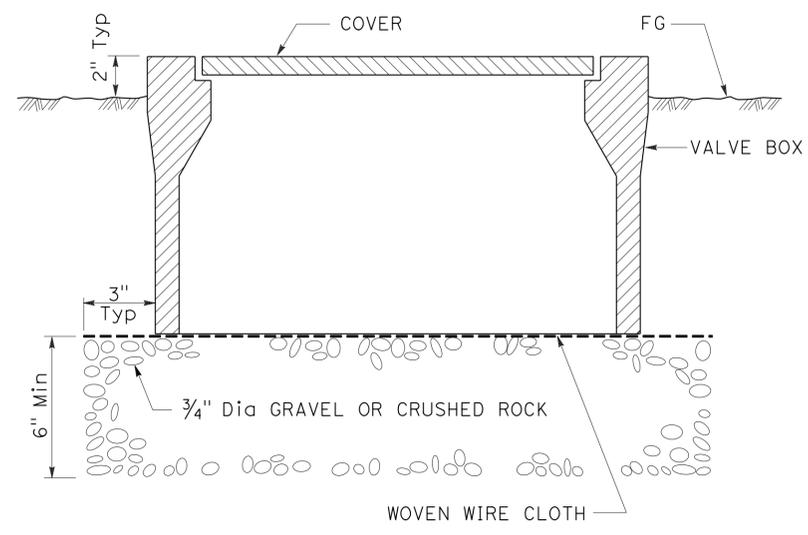
July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



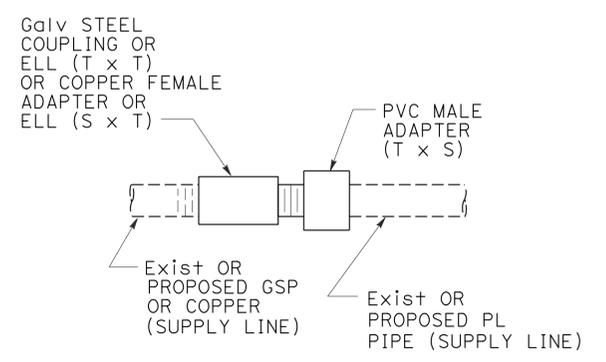
**ELEVATION**  
**WYE STRAINER ASSEMBLY**



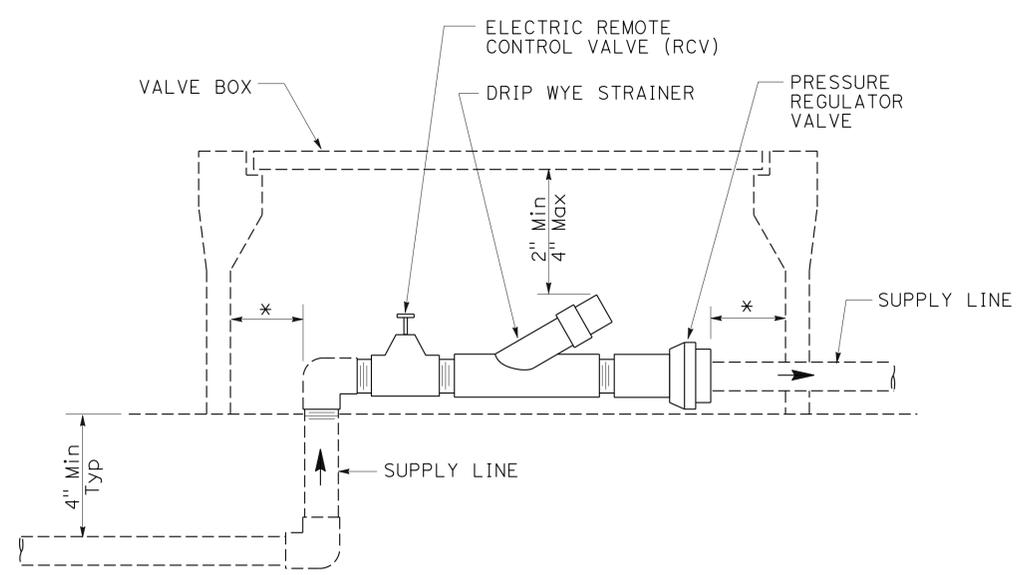
**ELEVATION**  
**VALVE**



**SECTION**  
**VALVE BOX**



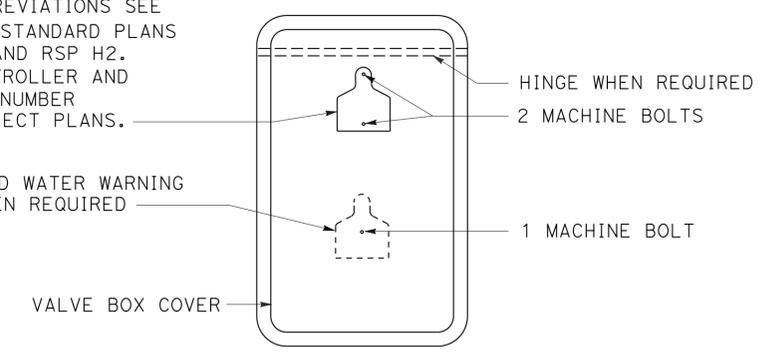
**GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE**



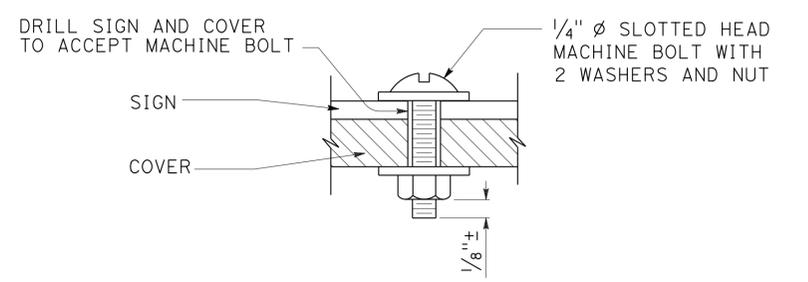
**ELEVATION**  
**DRIP VALVE ASSEMBLY**

IDENTIFICATION LABEL:  
FOR ABBREVIATIONS SEE  
REVISED STANDARD PLANS  
RSP H1 AND RSP H2.  
FOR CONTROLLER AND  
STATION NUMBER  
SEE PROJECT PLANS.

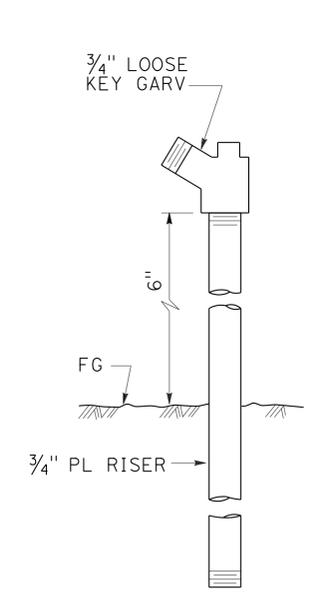
RECYCLED WATER WARNING  
SIGN WHEN REQUIRED



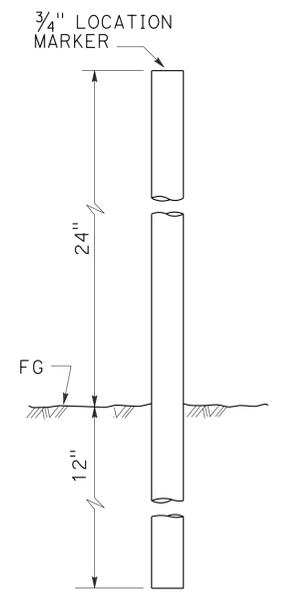
**PLAN**



**SECTION**  
**VALVE BOX IDENTIFICATION**



**ELEVATION**  
**GARDEN VALVE ASSEMBLY**



**ELEVATION**  
**LOCATION MARKER**

**GARDEN VALVE ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**LANDSCAPE DETAILS**

NO SCALE

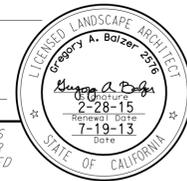
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7  
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H7**

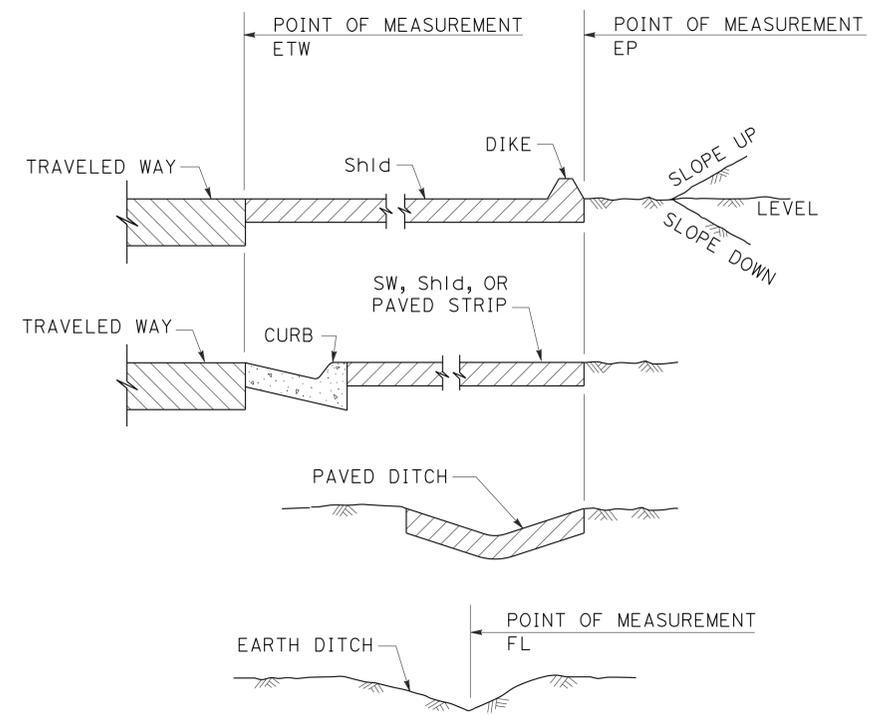
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	275	291

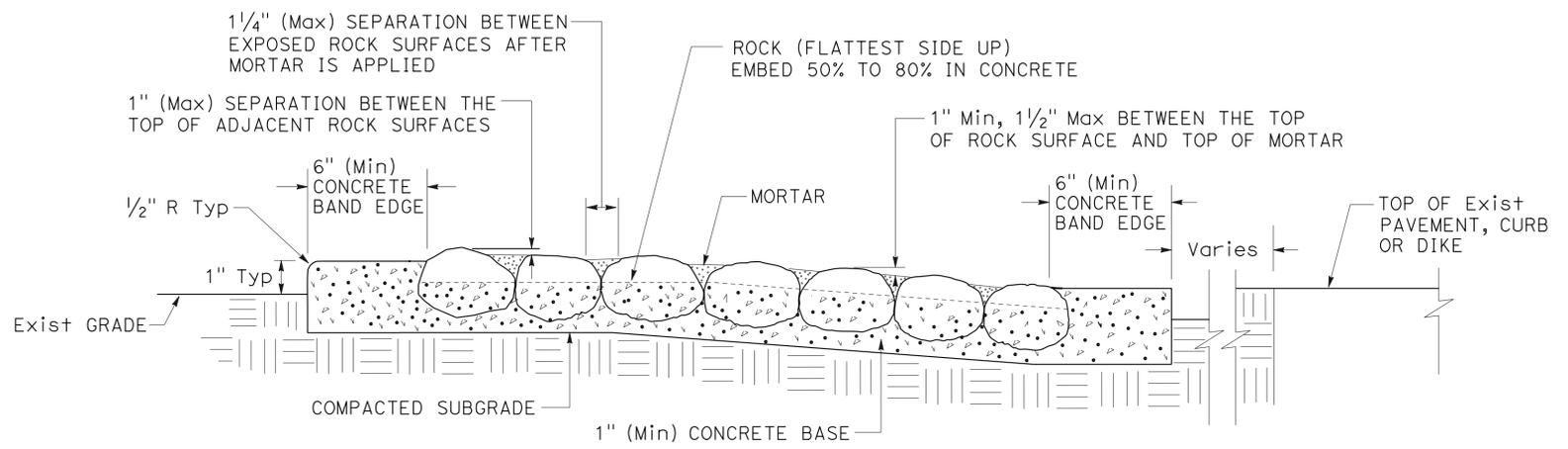
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



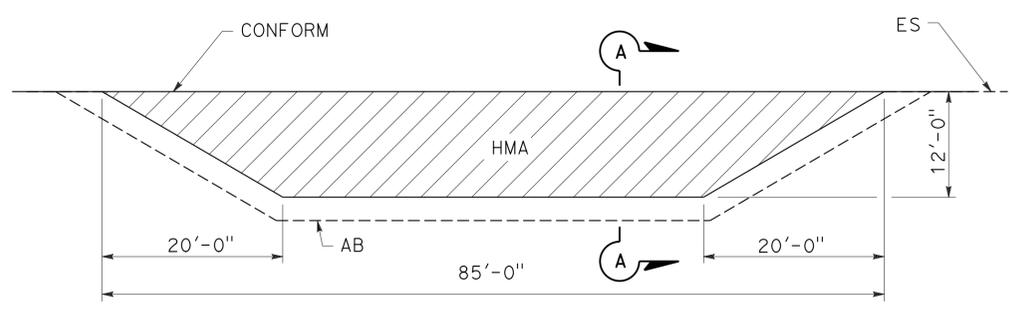
TO ACCOMPANY PLANS DATED 6-2-14



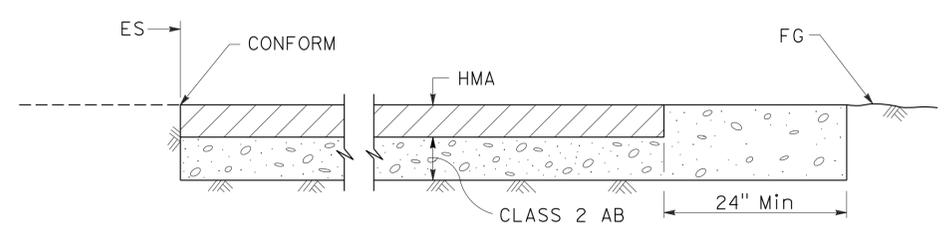
**SECTION  
POINTS OF MEASUREMENT**



**SECTION  
ROCK BLANKET**



**PLAN**



**SECTION A-A  
MAINTENANCE VEHICLE PULLOUT**

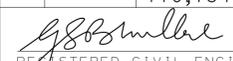
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
NO SCALE

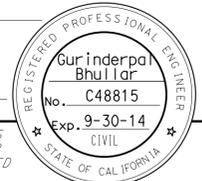
RSP H9A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H9A**

2010 REVISED STANDARD PLAN RSP H9A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	276	291

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TO ACCOMPANY PLANS DATED 6-2-14

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Longitudinal buffer space or flagger station spacing

\*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T9**

2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	277	291

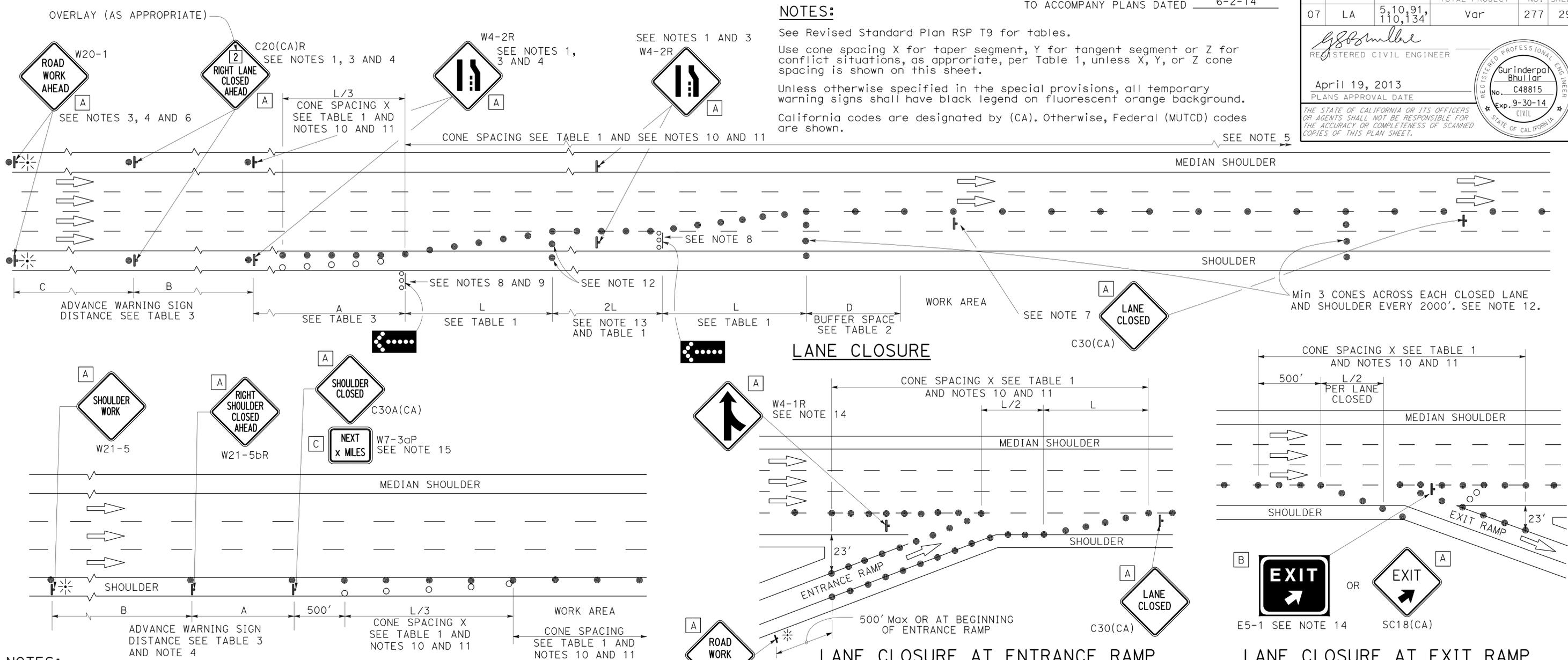
REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

**NOTES:**

See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.  
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



**NOTES:**

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
  - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
  - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

**SHOULDER CLOSURE**

6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) "NEXT x MILES" sign for the first advance warning sign.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

W20-1 SEE NOTE 4

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 72" x 60"
- C 36" x 30"

12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS**

NO SCALE

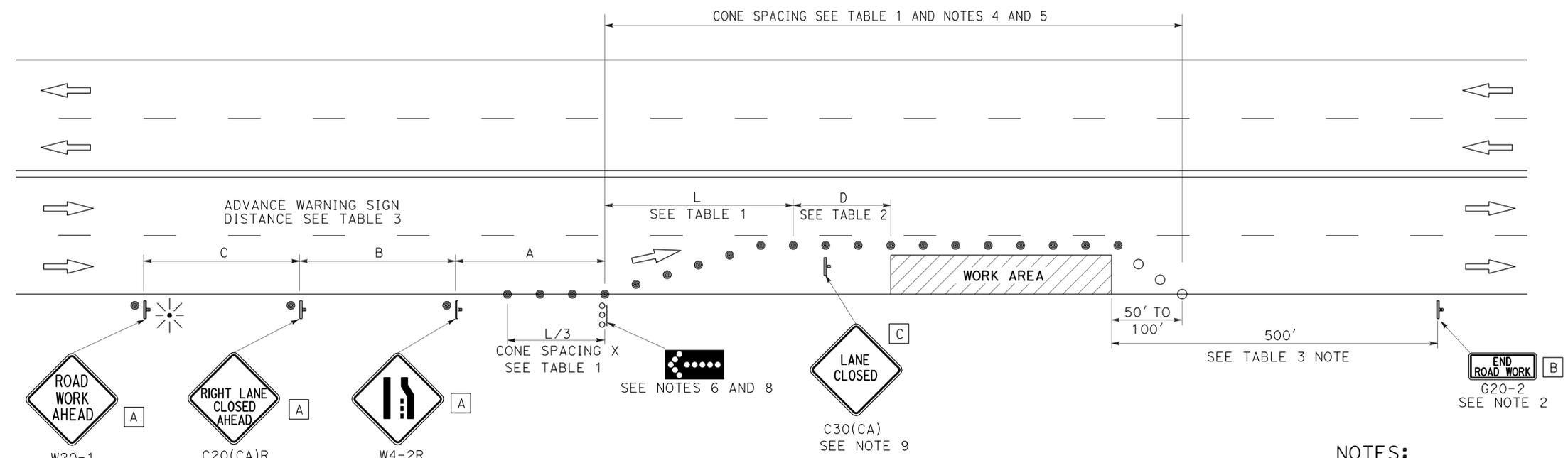
RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10



TO ACCOMPANY PLANS DATED 6-2-14



TYPICAL LANE CLOSURE

**NOTES:**

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

**NOTES:**

- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- ⌋ TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ☀ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
FOR LANE CLOSURE ON  
MULTILANE CONVENTIONAL  
HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T11**

2010 REVISED STANDARD PLAN RSP T11

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

## LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	279	291

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

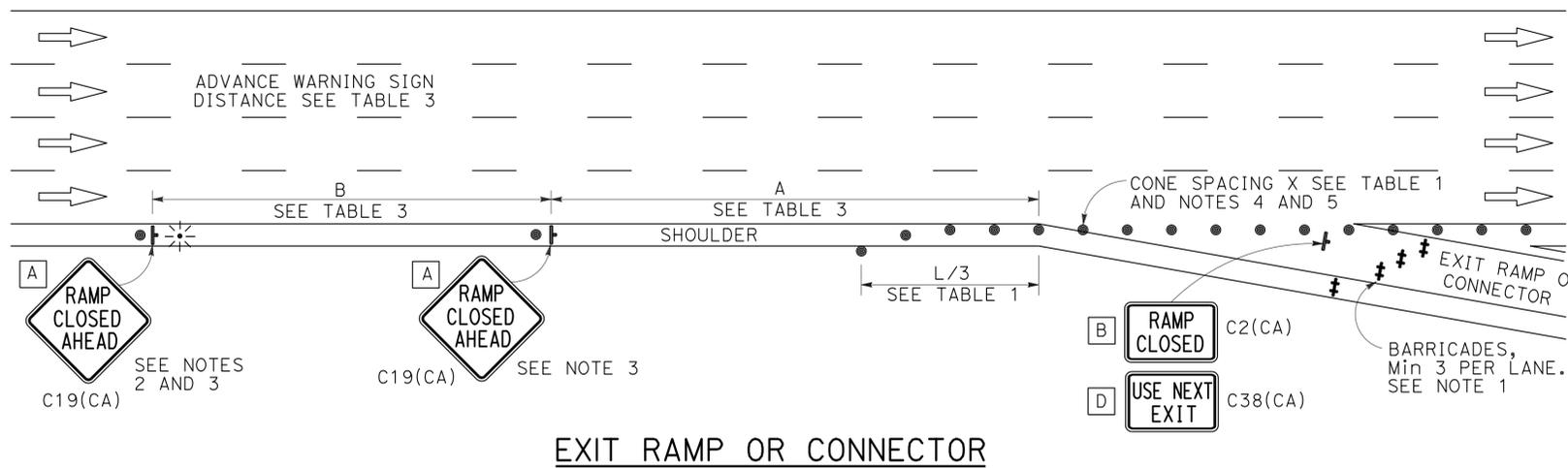
April 19, 2013  
 PLANS APPROVAL DATE

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

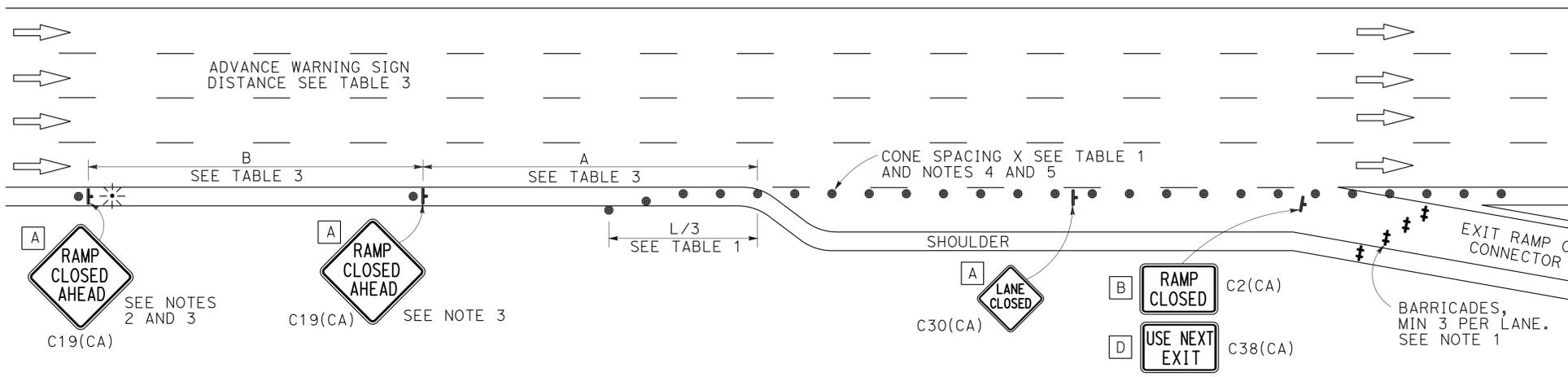
TO ACCOMPANY PLANS DATED 6-2-14

## NOTES:

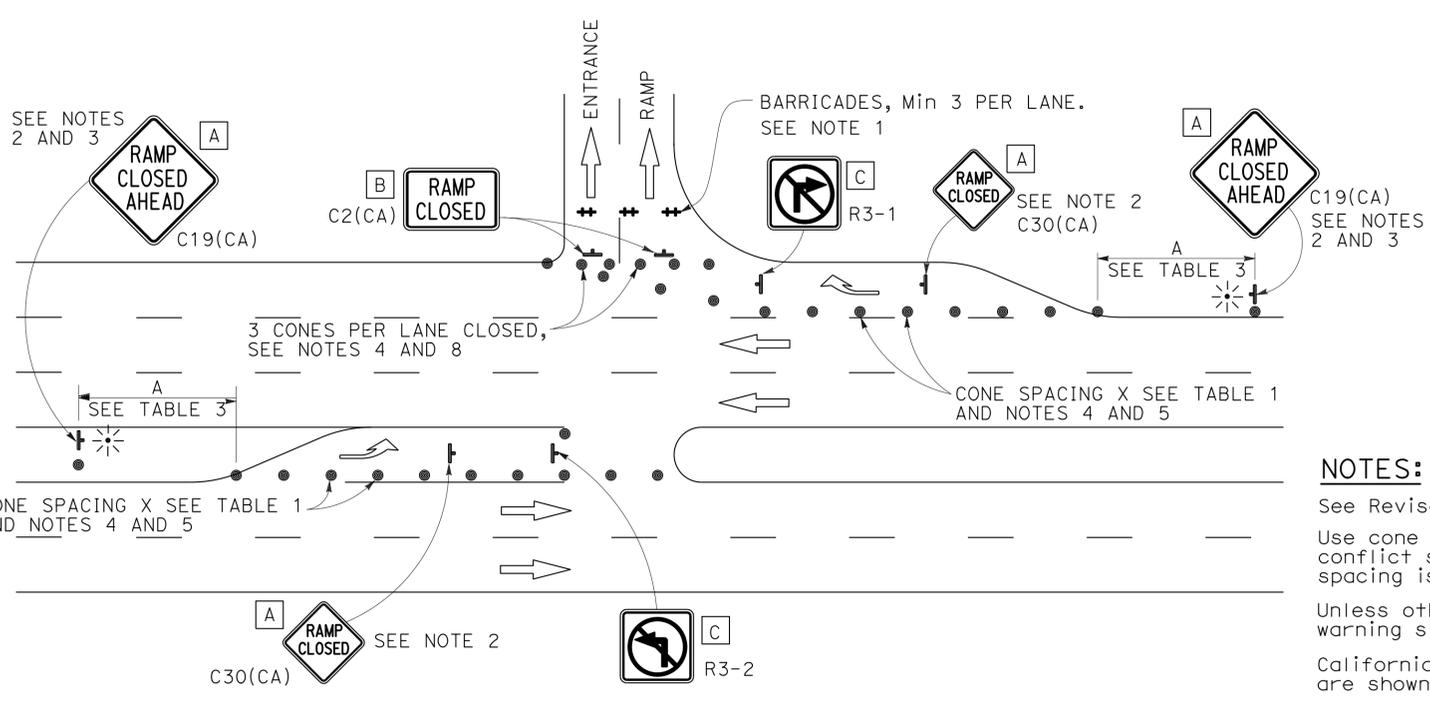
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
- Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
- All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
- At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
- The existing "EXIT" signs shall be covered during ramp closures.
- A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



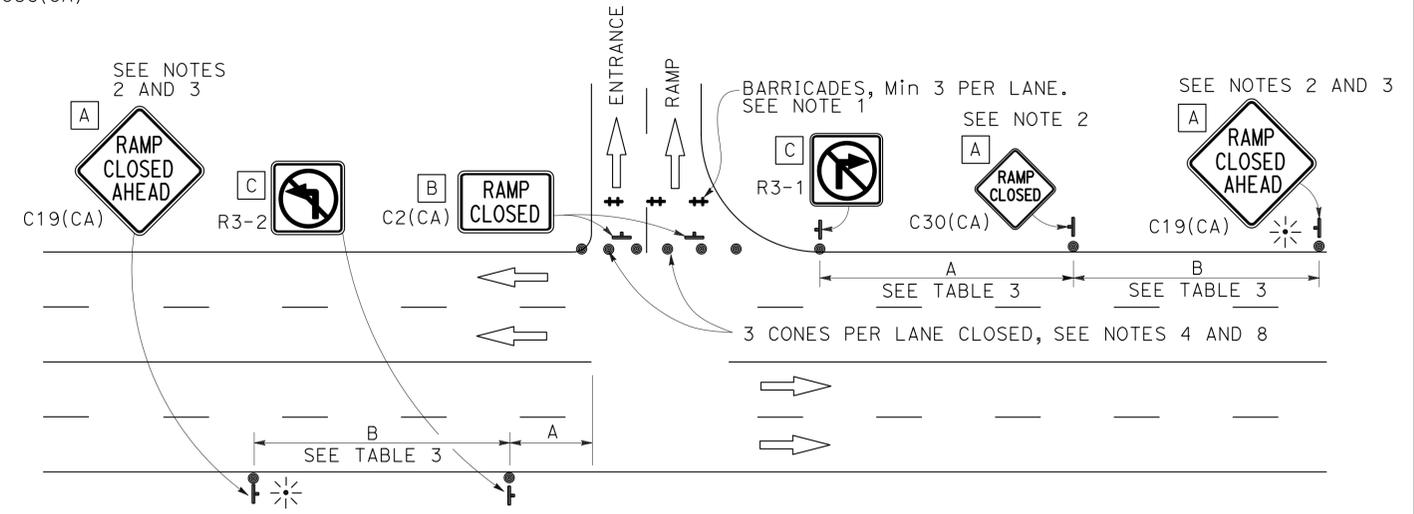
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR RAMP CLOSURE**  
 NO SCALE

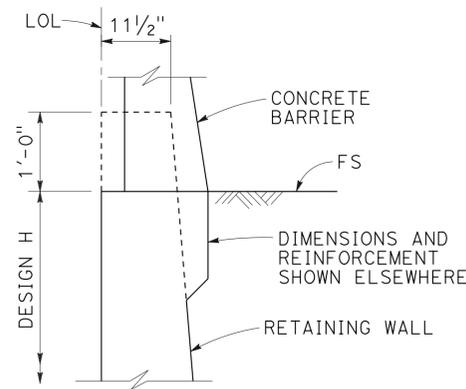
RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14  
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T14**

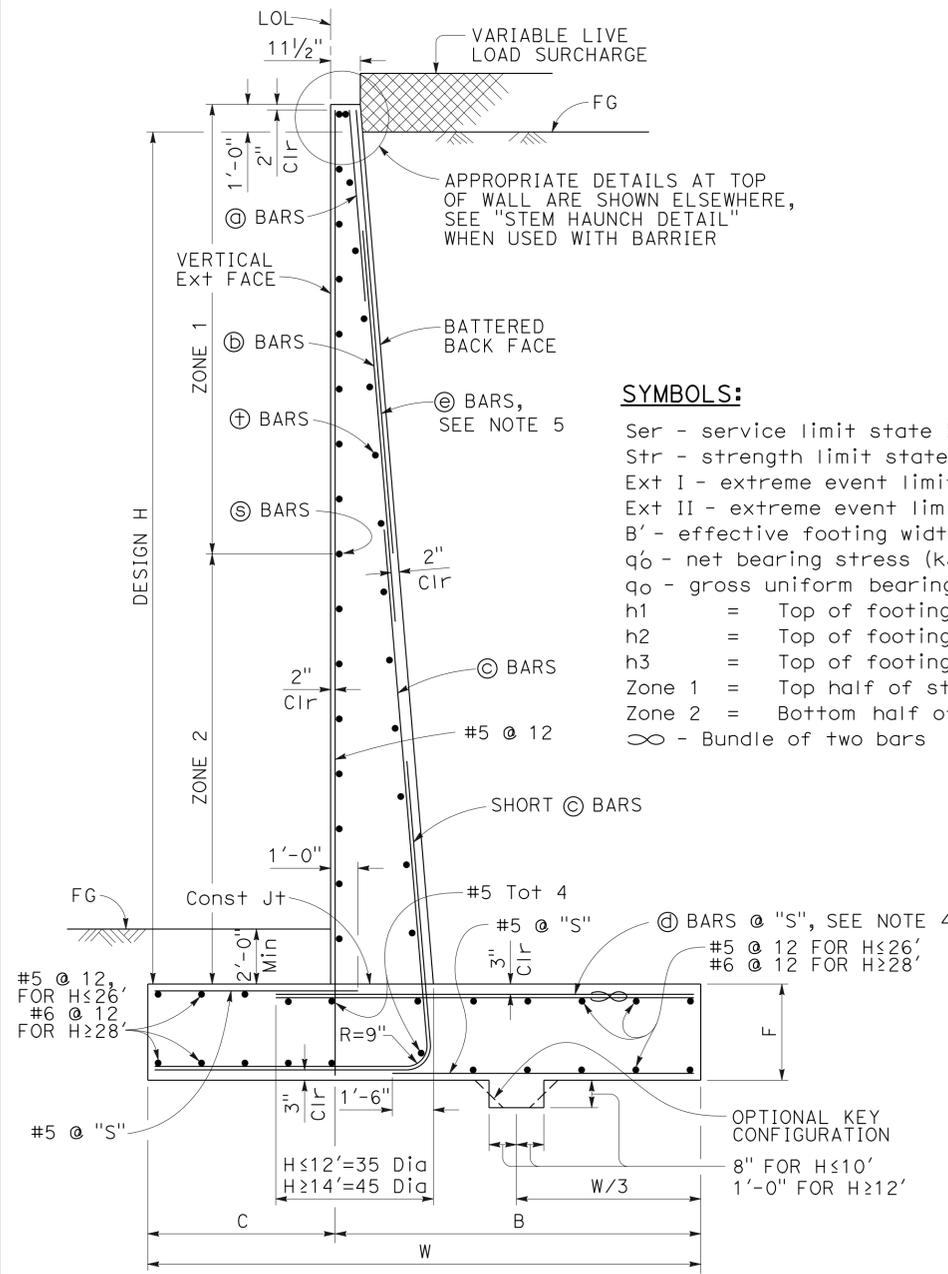
2010 REVISED STANDARD PLAN RSP T14

**DESIGN CONDITIONS:**

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

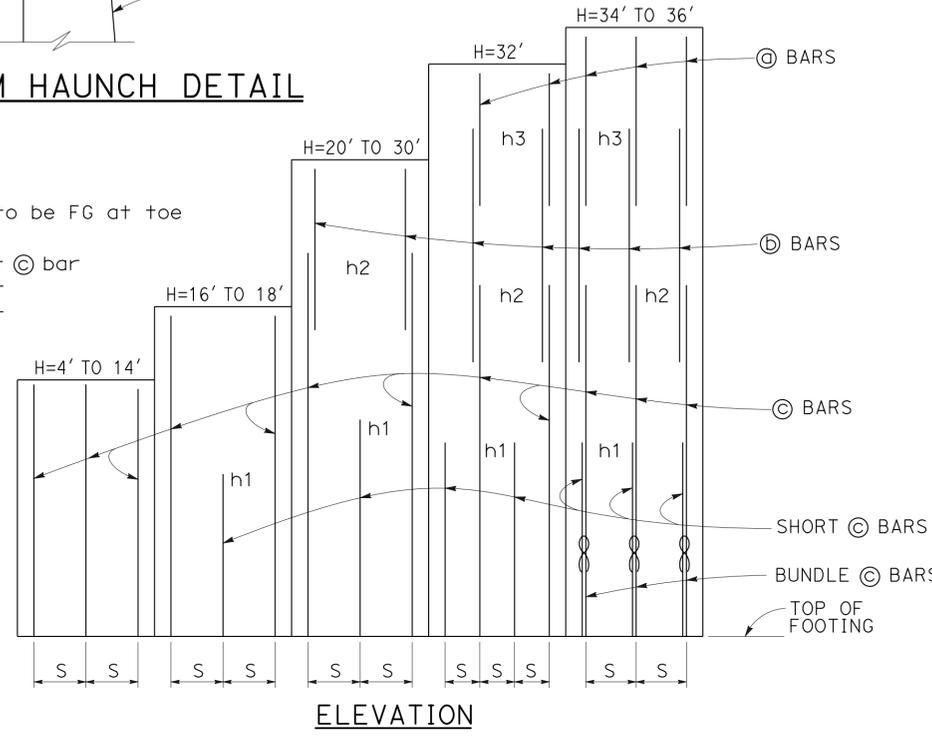


**STEM HAUNCH DETAIL**



**TYPICAL SECTION**

- NOTES:**
- For details not shown and drainage notes see .
  - For wall stem joint details see and .
  - At circled B bars:
    - H ≤ 6', no splices are allowed within 1'-8" above the top of footing.
    - H > 6', no splices are allowed within H/4 above the top of footing.
  - Bundle circled B bars for H = 34' & 36'.
  - Provide #6 @ 10" x 15'-0" circled B bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations. For H ≤ 14', hook circled B bar into footing and reduce bar length as needed to maintain Min Clr cover.



**ELEVATION**

**TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA**

DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	13'-3"	14'-6"	15'-9"	17'-1"	18'-5"	19'-10"	21'-2"	22'-7"	24'-0"
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-2"	7'-8"	8'-2"	9'-0"
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-9"	9'-6"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-8"	1'-9"	1'-9"	1'-11"	2'-2"	2'-5"	2'-10"	3'-3"	3'-6"	4'-0"	4'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	7/8: 12	1: 12	1: 12	1: 12
SPACING "S"	9"	9"	9"	9"	9"	7"	6"	5"	6"	6"	6"	6"	6"	6"	6"	10"	8"
circled B BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#7	#7	#6
circled C BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#9	#9	#8
circled D BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#11	#11	#11
circled E BARS	#5	#5	#6	#6	#6	#6	#9	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h1	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-1"	11'-0"	12'-1"	13'-0"	13'-0"	12'-7"	11'-6"
h2	-	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	19'-0"	18'-0"	20'-2"
h3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-2"	21'-10"	24'-0"
ZONE 1 circled S BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 circled S BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12
ZONE 1 circled T BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
ZONE 2 circled T BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ser: B', q <sub>o</sub>	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	11.0, 2.4	12.1, 2.5	13.2, 2.8	14.4, 2.9	15.5, 3.1	16.8, 3.3	18.0, 3.5	19.2, 3.7	20.6, 3.7
Str: B', q <sub>o</sub>	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	7.4, 3.8	8.2, 4.1	9.0, 4.4	9.9, 4.6	10.7, 4.9	11.7, 5.2	12.6, 5.4	13.6, 5.8	14.6, 5.9
Ext I: B', q <sub>o</sub>	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.6, 6.4	5.0, 6.9	5.3, 7.6	5.8, 8.1	6.1, 8.9	6.7, 9.4	7.1, 10.0	7.5, 10.7	8.2, 10.9
Ext II: B', q <sub>o</sub>	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	9.8, 3.0	11.2, 3.1	12.5, 3.2	13.9, 3.4	15.2, 3.6	16.7, 3.8	18.0, 4.0	19.3, 4.2	20.8, 4.3

**DESIGN NOTES:**

- TO ACCOMPANY PLANS DATED 6-2-14
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
- LS: Varied surcharge on level ground surface
- DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
- CT: 54 kip transverse force applied at H<sub>e</sub> = 32", distributed over 10 feet at the top of wall and 1:1 distribution down and outward. Distribution below footing taken no less than 40'.
- SEISMIC: k<sub>H</sub> = 0.2, k<sub>V</sub> = 0.0
- SOIL: φ = 34°, γ = 120 pcF
- REINFORCED CONCRETE: f'<sub>c</sub> = 3,600 psi  
f<sub>y</sub> = 60,000 psi
- LOAD COMBINATIONS AND LIMIT STATES:  
 Service I Q = 1.00DC+1.00EV+1.00EH+1.00LS  
 Strength I Q = αDC+βEV+ηEH+1.75LS  
 Extreme I Q = 1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE  
 Extreme II Q = 1.00DC+1.00EV+1.00EH+1.00CT
- Where:  
 Q: Force Effects  
 α: 1.25 or 0.90, Whichever Controls Design  
 β: 1.35 or 1.00, Whichever Controls Design  
 η: 1.50 or 0.90, Whichever Controls Design  
 DC: Dead Load of Structure Components  
 EH: Horizontal Earth Fill Pressure  
 EV: Vertical Earth Pressure from Earth Fill Weight  
 LS: Live Load Surcharge  
 EQE: Seismic Earth Pressure  
 EQD: Soil and Structural and Nonstructural Components Inertia  
 CT: Vehicular Collision Force

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**RETAINING WALL TYPE 1 (CASE 1)**  
 NO SCALE  
 RSP B3-1A DATED APRIL 20, 2012 SUPPLEMENTS THE  
 STANDARD PLANS BOOK DATED 2010.

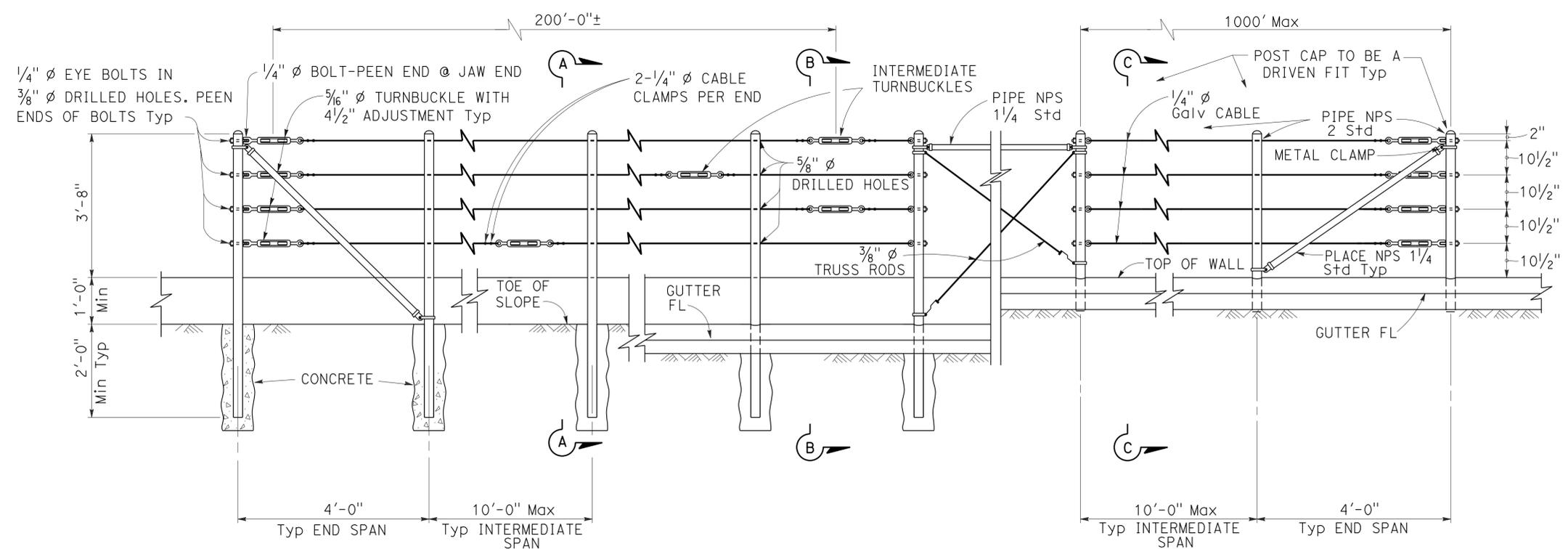
2010 REVISED STANDARD PLAN RSP B3-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	281	291

REGISTERED CIVIL ENGINEER  
 Tiltat Satter  
 No. C42892  
 Exp. 3-31-12  
 CIVIL  
 STATE OF CALIFORNIA

October 21, 2011  
 PLANS APPROVAL DATE

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

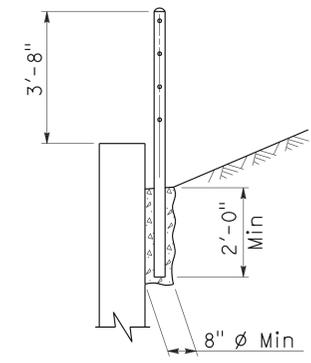


**EXISTING WALL (WITHOUT GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** New construction

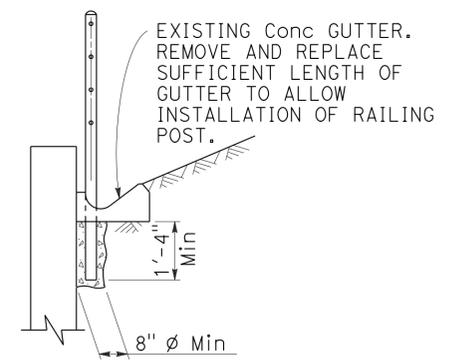
**ELEVATION**

**NOTES:**

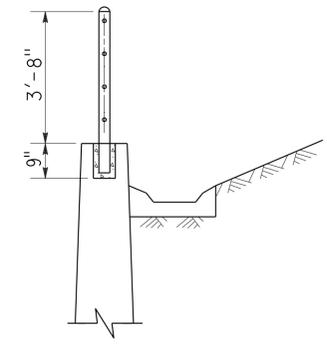
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining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



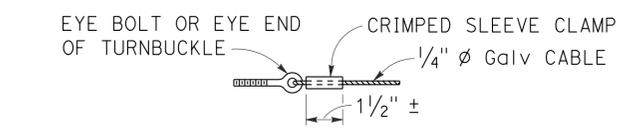
**SECTION A-A**  
Existing



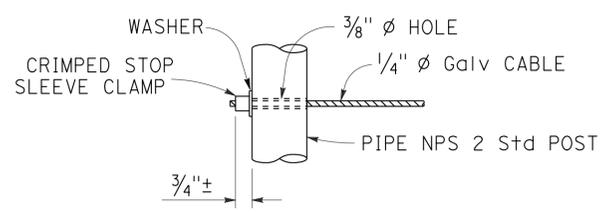
**SECTION B-B**  
Existing



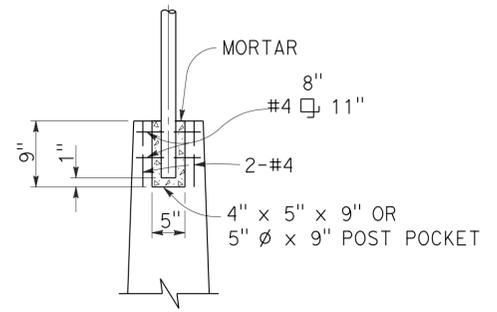
**SECTION C-C**  
New construction



**ALTERNATIVE CABLE CONNECTION**



**ALTERNATIVE DEAD END ANCHORAGE**



**POST POCKET**

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

NO SCALE

RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 20, 2011 - PAGE 293 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP B11-47**

2010 REVISED STANDARD PLAN RSP B11-47

**LEGEND:**

- 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 TAPE
- 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
- TSP** TELEPHONE SERVICE POINT

**ABBREVIATIONS**

- |       |   |       |                                      |
|-------|---|-------|--------------------------------------|
| APS   | ACCESSIBLE PEDESTRIAN SIGNAL            | M/M   | MULTIPLE TO MULTIPLE TRANSFORMER     |
| BBS   | BATTERY BACKUP SYSTEM                   | Mtg   | MOUNTING                             |
| BC    | BOLT CIRCLE                             | MV    | MERCURY VAPOR LIGHTING FIXTURE       |
| BPB   | BICYCLE PUSH BUTTON                     | MVDS  | MICROWAVE VEHICLE DETECTION SYSTEM   |
| C     | CONDUIT                                 | N     | NEUTRAL (GROUNDED CONDUCTOR)         |
| CB    | CIRCUIT BREAKER                         | NB    | NEUTRAL BUS                          |
| CCTV  | CLOSED CIRCUIT TELEVISION               | NC    | NORMALLY CLOSE                       |
| Ckt   | CIRCUIT                                 | NO    | NORMALLY OPEN                        |
| CMS   | CHANGEABLE MESSAGE SIGN                 | P     | CIRCUIT BREAKER'S POLE               |
| Ctid  | CALTRANS IDENTIFICATION                 | PB    | PULL BOX                             |
| Comm  | COMMUNICATION                           | PBA   | PUSH BUTTON ASSEMBLY                 |
| DLC   | LOOP DETECTOR LEAD-IN CABLE             | PEC   | PHOTOELECTRIC CONTROL                |
| EMS   | EXTINGUISHABLE MESSAGE SIGN             | Ped   | PEDESTRIAN                           |
| EVUC  | EMERGENCY VEHICLE UNIT CABLE            | PEU   | PHOTOELECTRIC UNIT                   |
| EVUD  | EMERGENCY VEHICLE UNIT DETECTOR         | PT    | CONDUIT WITH PULL TAPE               |
| FB    | FLASHING BEACON                         | RE    | RELOCATED EQUIPMENT                  |
| FBCA  | FLASHING BEACON CONTROL ASSEMBLY        | RM    | RAMP METERING                        |
| FBS   | FLASHING BEACON WITH SLIP BASE          | RWIS  | ROADSIDE WEATHER INFORMATION SYSTEM  |
| FO    | FIBER OPTIC                             | SB    | SLIP BASE                            |
| G     | EQUIPMENT GROUNDING CONDUCTOR           | SIC   | SIGNAL INTERCONNECT CABLE            |
| GB    | GROUND BUS                              | Sig   | SIGNAL                               |
| GFCI  | GROUND FAULT CIRCUIT INTERRUPTER        | SMA   | SIGNAL MAST ARM                      |
| HAR   | HIGHWAY ADVISORY RADIO                  | SNS   | STREET NAME SIGN                     |
| Hex   | HEXAGONAL                               | SP    | SERVICE POINT                        |
| HPS   | HIGH PRESSURE SODIUM                    | TDC   | TELEPHONE DEMARCATION CABINET        |
| IISNS | INTERNALLY ILLUMINATED STREET NAME SIGN | TMS   | TRAFFIC MONITORING STATION           |
| ISL   | INDUCTION SIGN LIGHTING                 | TOS   | TRAFFIC OPERATIONS SYSTEM            |
| LED   | LIGHT EMITTING DIODE                    | Veh   | VEHICLE                              |
| LMA   | LUMINAIRE MAST ARM                      | VIVDS | VIDEO IMAGE VEHICLE DETECTION SYSTEM |
| LPS   | LOW PRESSURE SODIUM                     | WIM   | WEIGH-IN-MOTION                      |
| Ltg   | LIGHTING                                | Xfmr  | TRANSFORMER                          |
| Lum   | LUMINAIRE                               |       |                                      |
| M     | METERED                                 |       |                                      |
| MAT   | MAST ARM MOUNTING TOP ATTACHMENT        |       |                                      |
| MAS   | MAST ARM MOUNTING SIDE ATTACHMENT       |       |                                      |

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91,110,134	Var	282	291

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

Theresa Aziz Gabriel  
No. E15129  
Exp. 6-30-14  
ELECTRICAL  
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 6-2-14

**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.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
$\Omega$	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
$\mu$	MICRO
P	PICO
Hz	HERTZ

**MISCELLANEOUS ELECTROLIERS**

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

- NOTES:**
- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
  - LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
  - Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

**STANDARD ELECTROLIER**

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)**

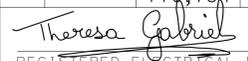
NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-1A**

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	283	291

  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

### CONDUIT

NEW	EXISTING	
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
		COMMUNICATION CONDUIT
		TELEPHONE CONDUIT
		FIRE ALARM CONDUIT
		FIBER OPTIC CONDUIT
		CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

### SIGNAL EQUIPMENT

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

### SERVICE EQUIPMENT

NEW	EXISTING	
		OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

### POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

### FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

### SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

### NOTES:

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

### ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

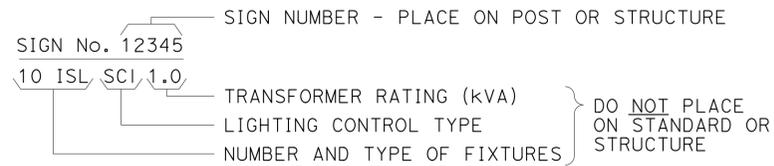
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP ES-1B

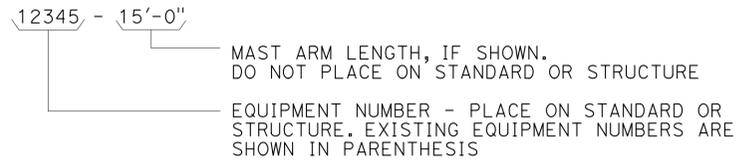
2010 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

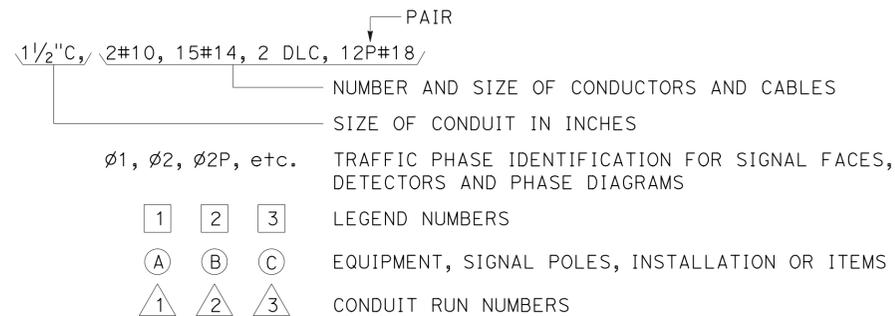
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



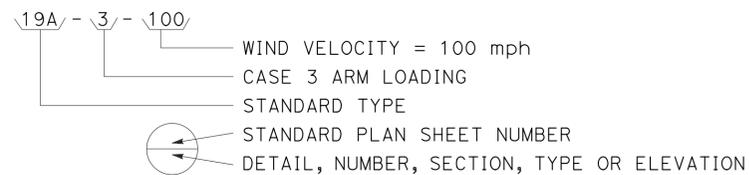
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



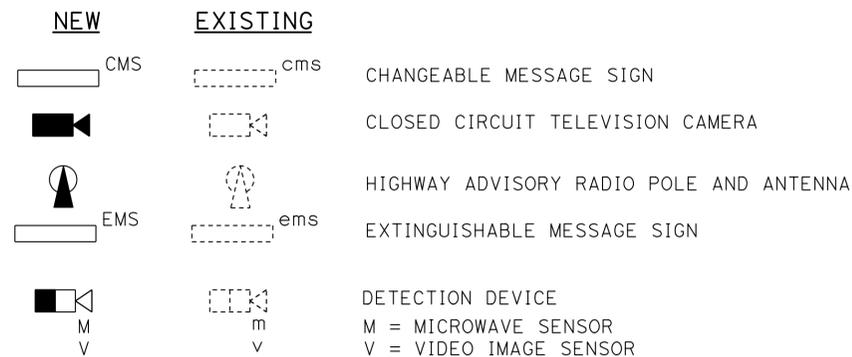
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



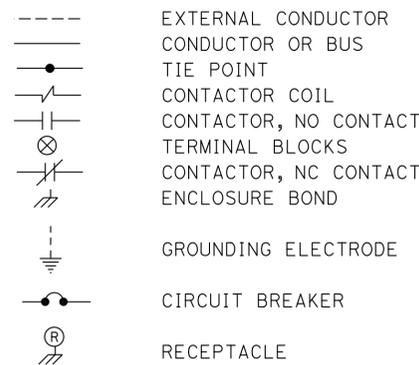
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



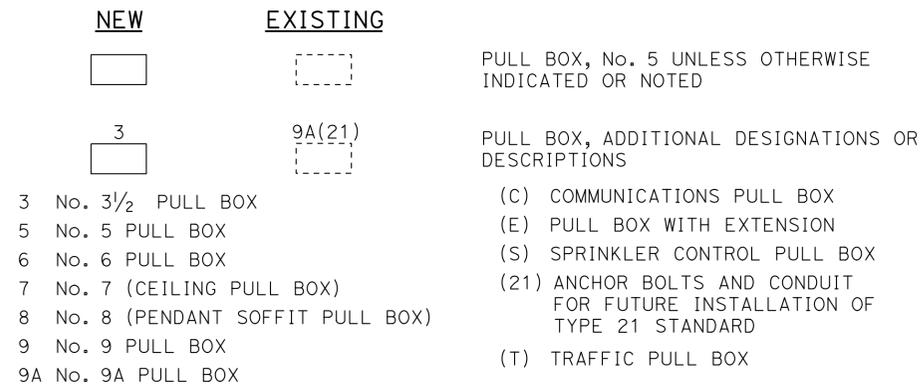
### MISCELLANEOUS EQUIPMENT



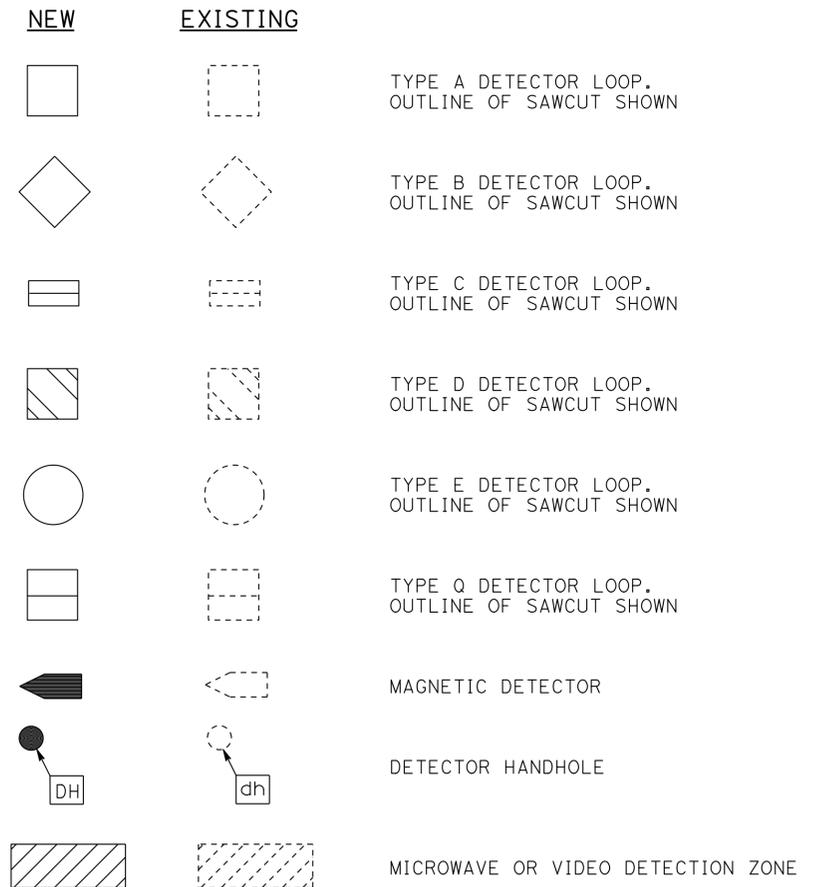
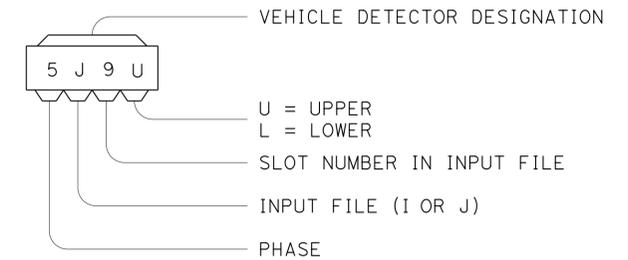
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

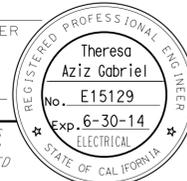
## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

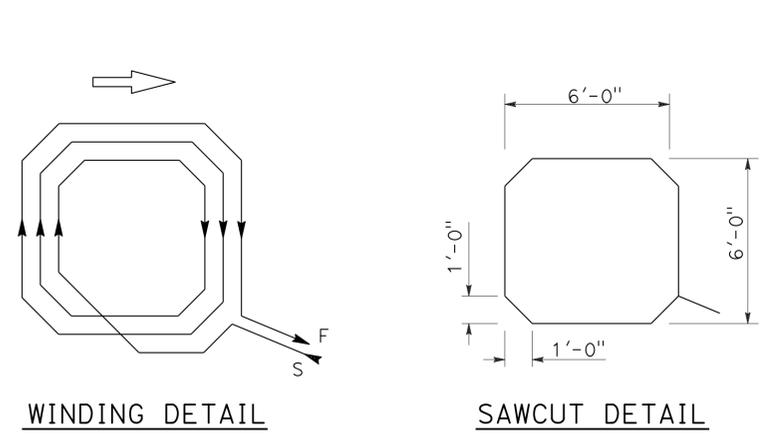
RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C  
DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-1C**

2010 REVISED STANDARD PLAN RSP ES-1C

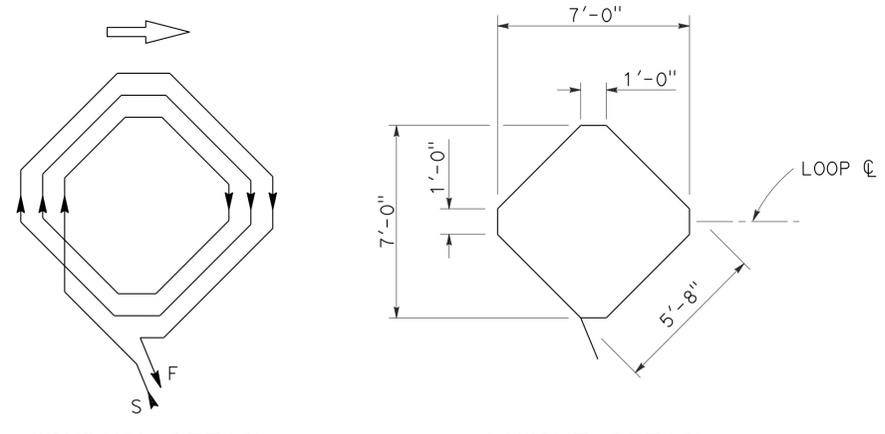
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	285	291
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER July 19, 2013 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
					

TO ACCOMPANY PLANS DATED 6-2-14



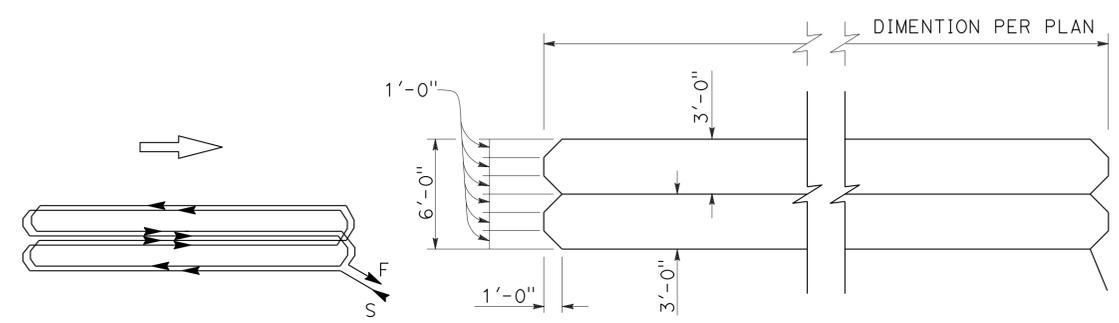
WINDING DETAIL SAWCUT DETAIL

TYPE A LOOP DETECTOR CONFIGURATION



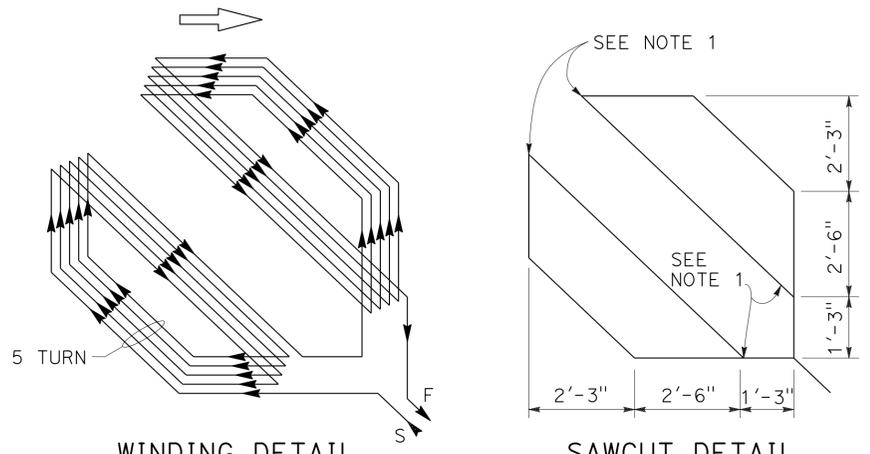
WINDING DETAIL SAWCUT DETAIL

TYPE B LOOP DETECTOR CONFIGURATION



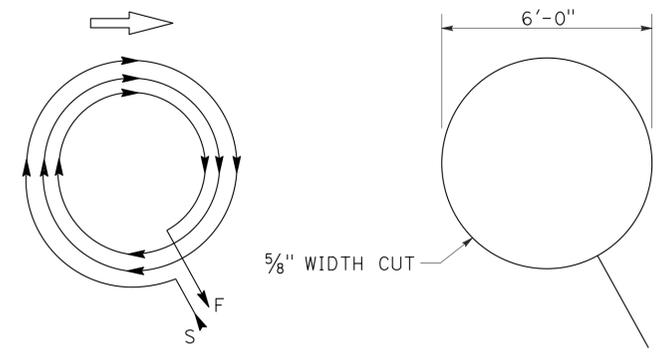
WINDING DETAIL SAWCUT DETAIL

TYPE C LOOP DETECTOR CONFIGURATION



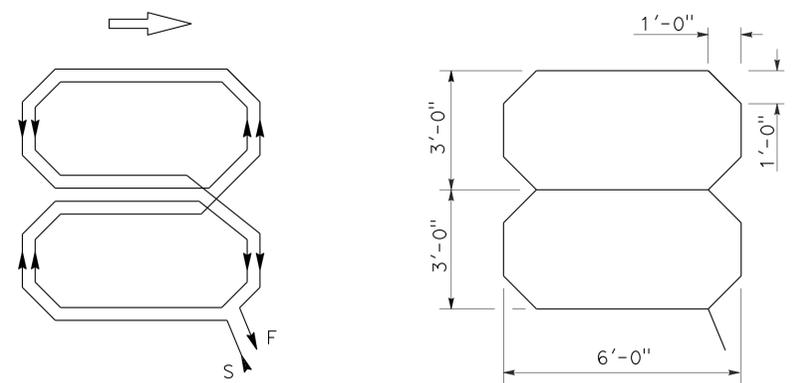
WINDING DETAIL SAWCUT DETAIL

TYPE D LOOP DETECTOR CONFIGURATION



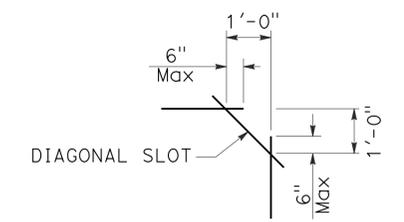
WINDING DETAIL SAWCUT DETAIL

TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL SAWCUT DETAIL

TYPE Q LOOP DETECTOR CONFIGURATION



PLAN VIEW OF DIAGONAL SLOT AT CORNERS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (DETECTORS)**

NO SCALE

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-5B**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
  2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

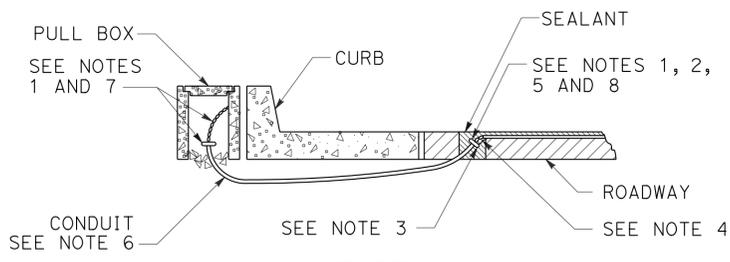
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	286	291

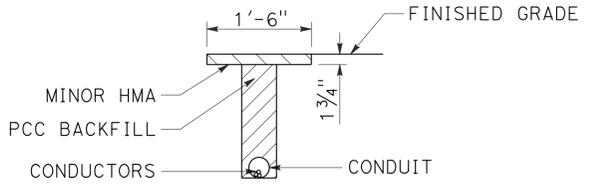
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



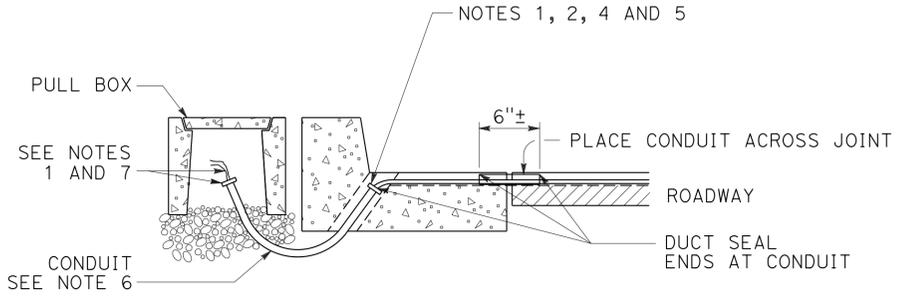
TO ACCOMPANY PLANS DATED 6-2-14



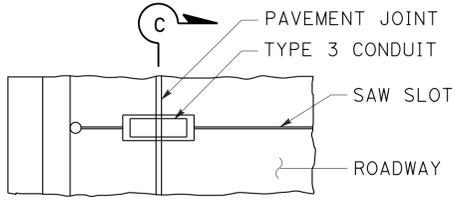
**TYPE A**  
**CURB TERMINATION DETAIL**



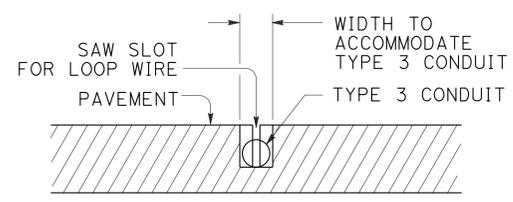
**"T" TRENCH**  
**DETAIL T**



**CROSS SECTION**

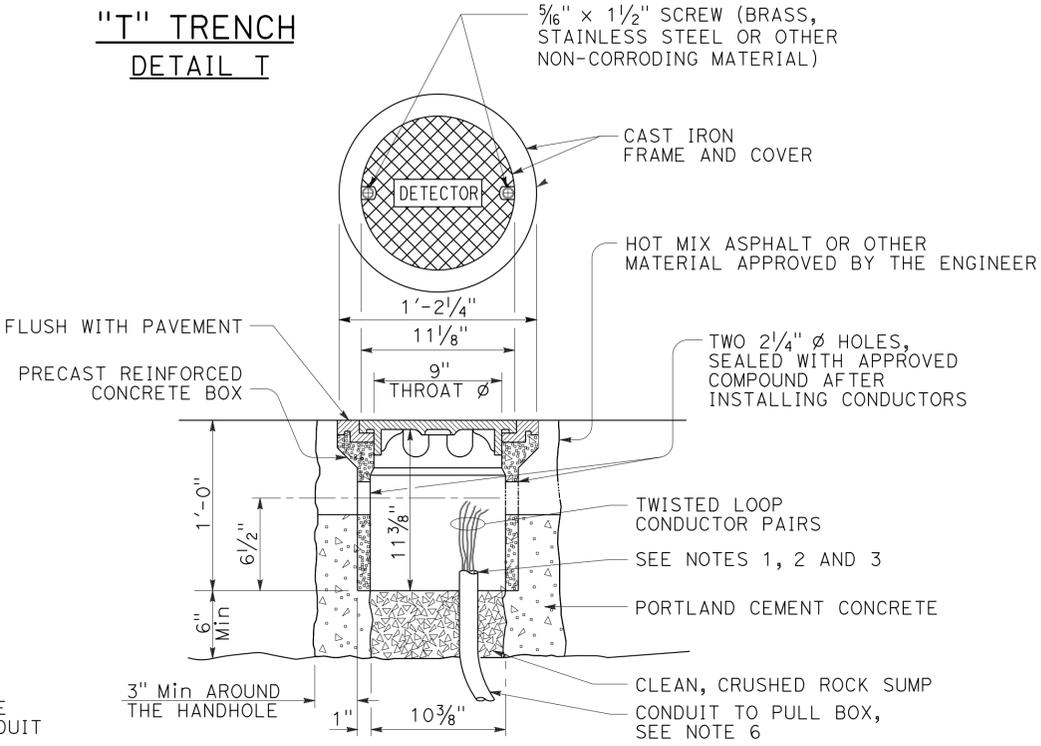


**PLAN VIEW**

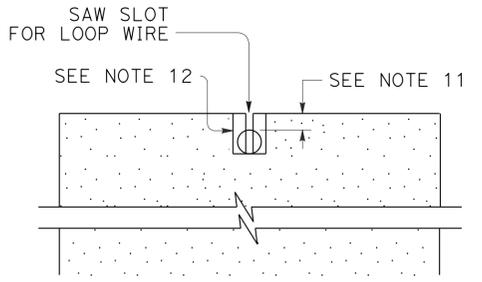


**SECTION C-C**

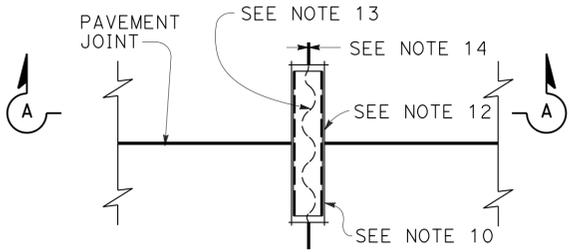
**TYPE B**  
**CURB TERMINATION DETAIL**



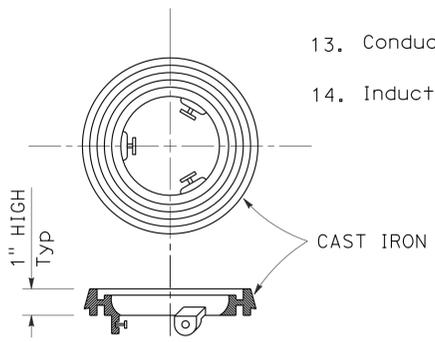
**DETECTOR HANDHOLE DETAIL**



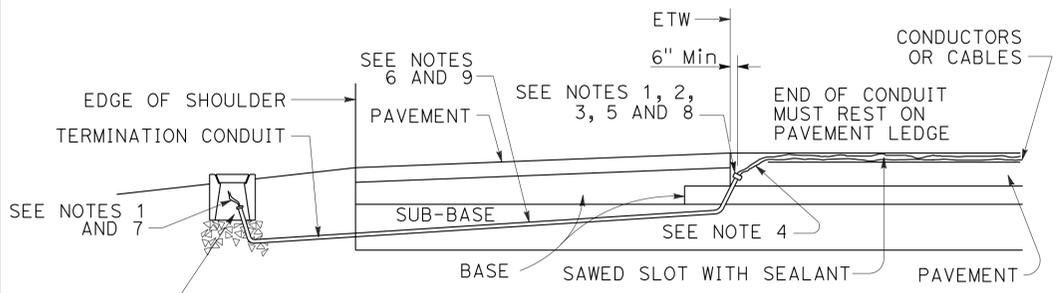
**SECTION A-A**



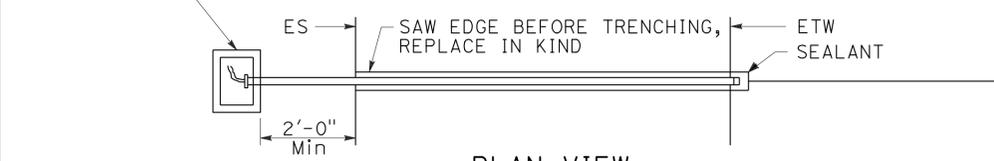
**PLAN VIEW**  
**TYPICAL LOOP LEAD-IN DETAIL**  
**AT PAVEMENT JOINT**



**LOCKING GRADE RING**



**CROSS SECTION**



**PLAN VIEW**  
**SHOULDER TERMINATION DETAILS**

**NOTES:**

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- |                     |                        |
|---------------------|------------------------|
| <u>Conduit size</u> | <u>Loop conductors</u> |
| 1"C minimum         | 1 to 2 pairs           |
| 1 1/2"C minimum     | 3 to 4 pairs           |
| 2"C minimum         | 5 or more pairs        |
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(CURB TERMINATION**  
**AND HANDHOLE)**  
NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D  
DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-5D**

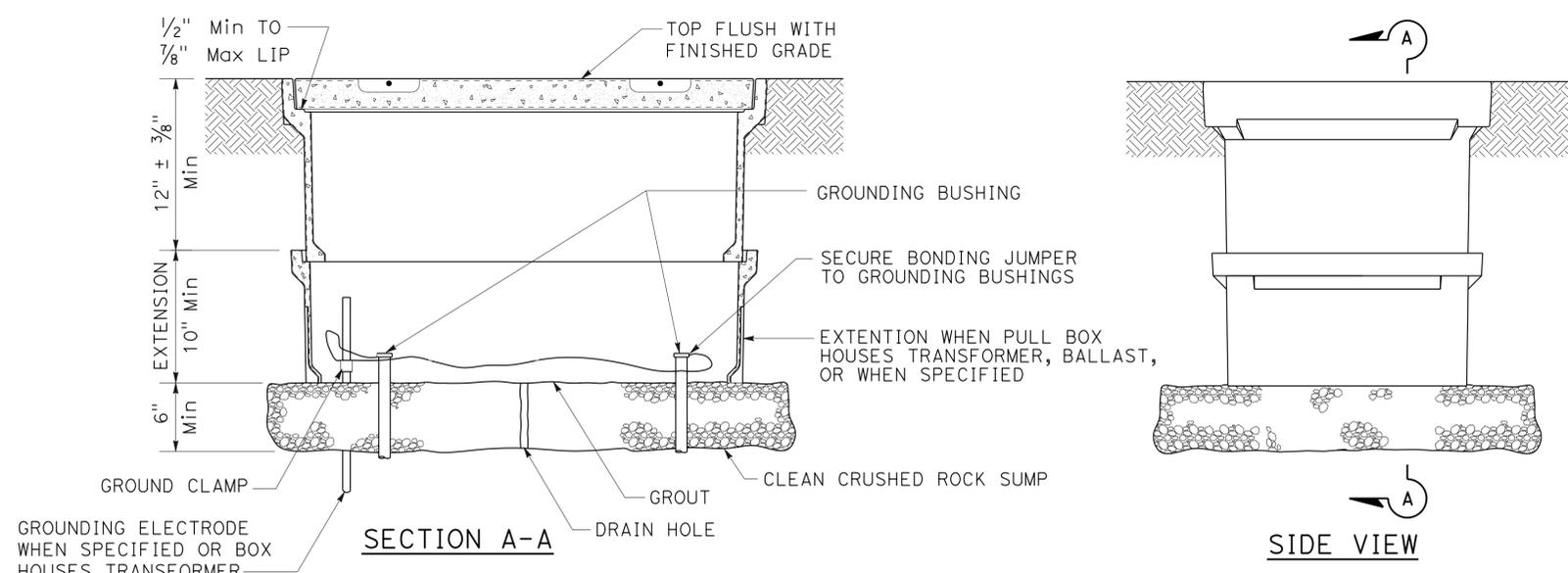
2010 REVISED STANDARD PLAN RSP ES-5D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	287	291

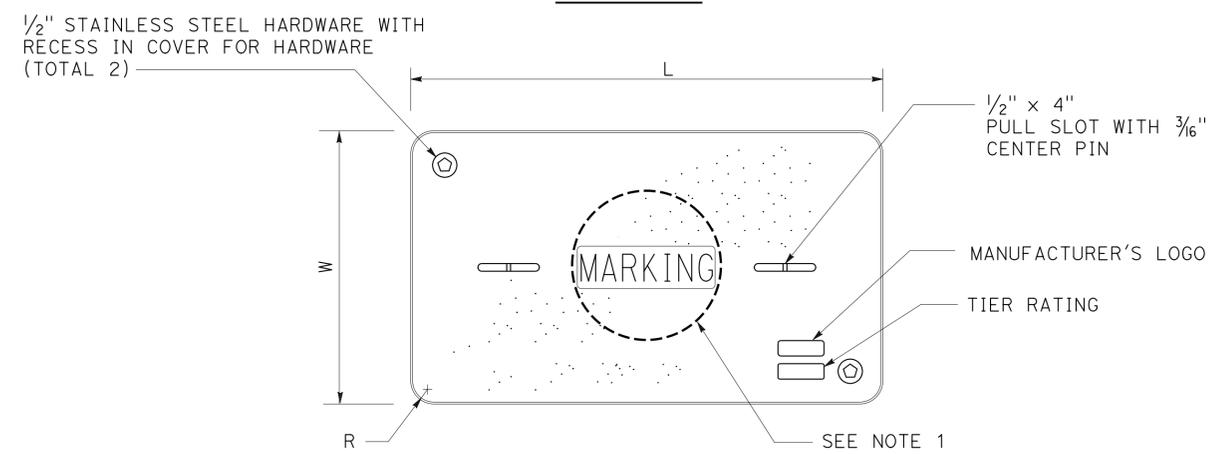
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

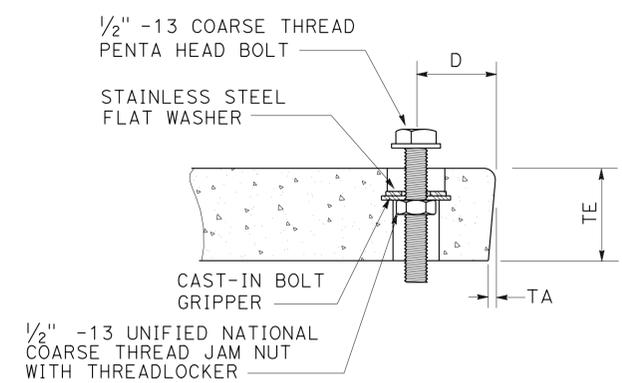
TO ACCOMPANY PLANS DATED 6-2-14



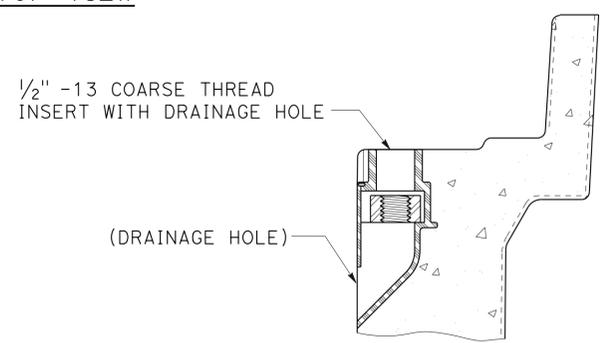
**INSTALLATION DETAILS**  
**DETAIL A**



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
**OR SIMILAR**



**TYPICAL THREADED INSERT**  
**OR SIMILAR**

**NOTES:**

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

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

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

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-8A**

2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	288	291

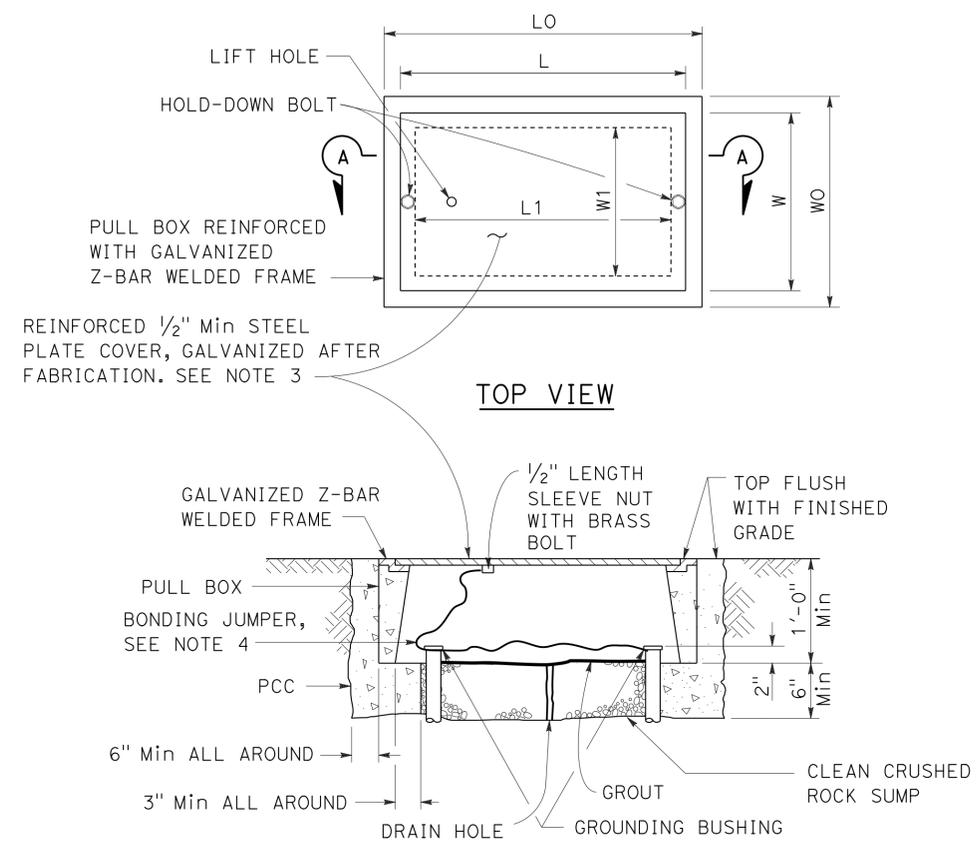
Theresa Gabriel  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

Theresa Aziz Gabriel  
No. E15129  
Exp. 6-30-14  
ELECTRICAL  
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 6-2-14



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

**NOTES:**

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

PULL BOX	PULL BOX						COVER				
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	W0	L0	L1	W1	L **	W **	R	EDGE THICKNESS	EDGE TAPER
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5"± 1"	1'-8 7/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	NONE
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	NONE

\* EXCLUDING CONDUIT WEB      \*\* TOP DIMENSION

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

RSP ES-8B DATED JULY 19, 2013 SUPERSEDES RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-8B

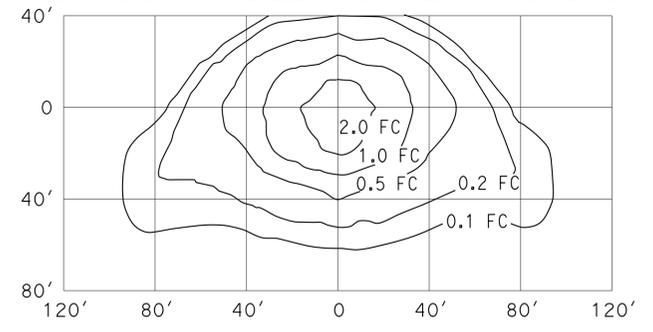
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	289	291

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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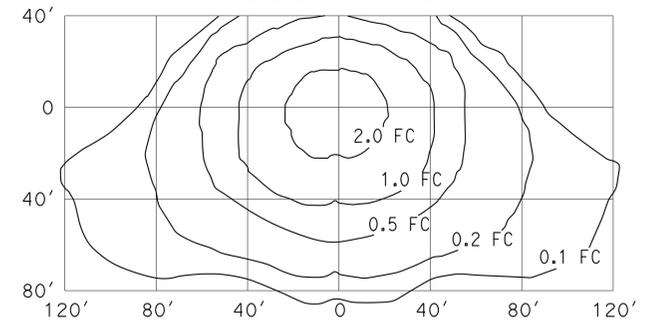
TO ACCOMPANY PLANS DATED 6-2-14

**ISOFOOTCANDLE CURVE - MINIMUM**



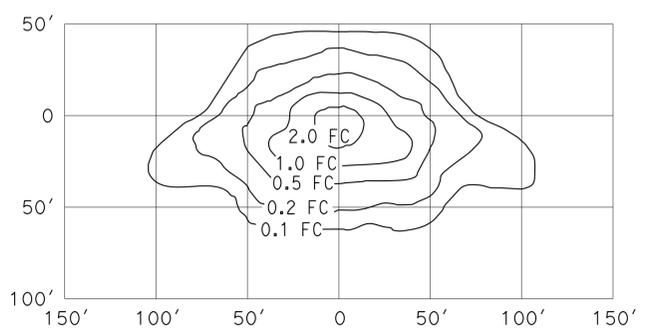
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 34' Mounting Height  
 Lamp operated at 22,000 lm  
 200-W high pressure sodium lamp  
 ANSI Designation S66

**ISOFOOTCANDLE CURVE - MINIMUM**



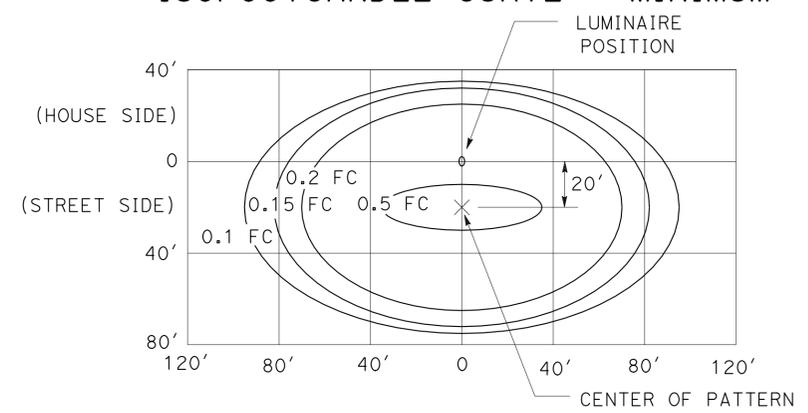
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 40' Mounting Height  
 Lamp operated at 37,000 lm  
 310-W high pressure sodium lamp  
 ANSI Designation S67

**ISOFOOTCANDLE CURVE - MINIMUM**



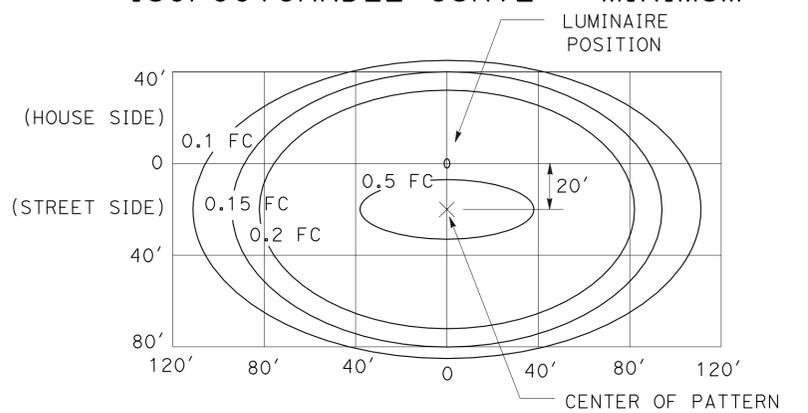
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 30' Mounting Height  
 Lamp operated at 16,000 lm  
 150-W high pressure sodium lamp  
 ANSI Designation S55

**ISOFOOTCANDLE CURVE - MINIMUM**



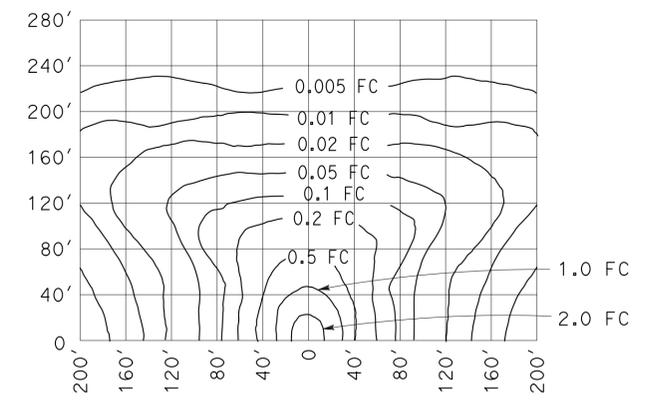
**LED LUMINAIRE ROADWAY 1**  
 165-W at 34' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



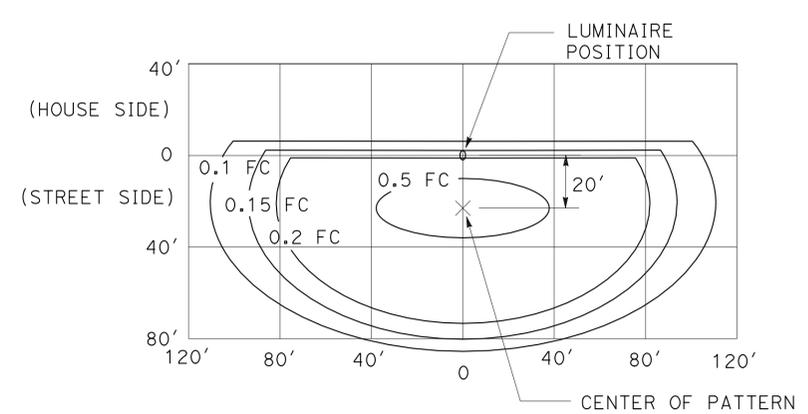
**LED LUMINAIRE ROADWAY 2**  
 235-W at 40' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



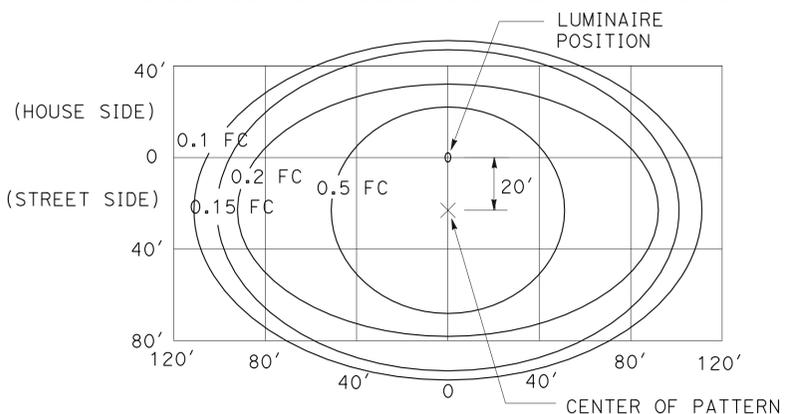
**LOW PRESSURE SODIUM LUMINAIRE**  
 40' Mounting Height  
 Lamp operated at 33,000 lm  
 180-W low pressure sodium lamp

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 3**  
 235-W at 40' Mounting Height  
 with back side control

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 4**  
 300-W at 40' Mounting Height

**ELECTRICAL SYSTEMS (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-10A

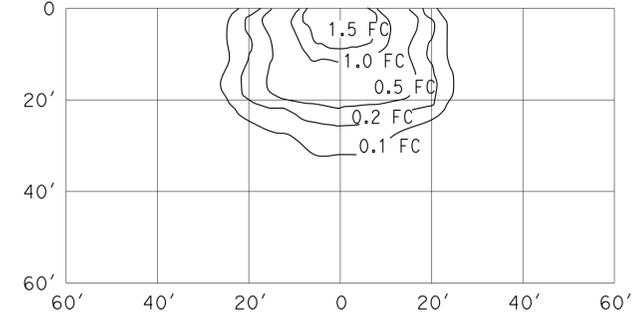
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,10,91, 110,134	Var	290	291

*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 July 20, 2012  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**Jeffery G. McRae**  
 REGISTERED PROFESSIONAL ENGINEER  
 No. E14512  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-2-14

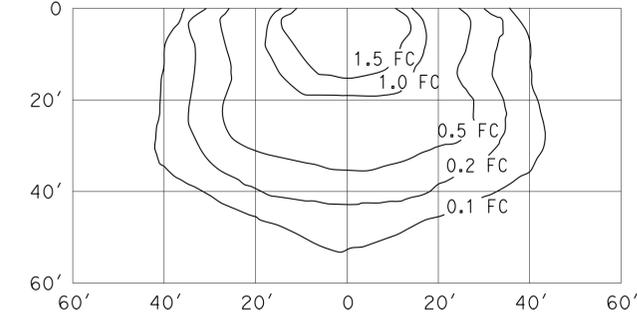
**ISOFOOTCANDLE CURVE - MINIMUM**



**WALL LUMINAIRE**

15' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

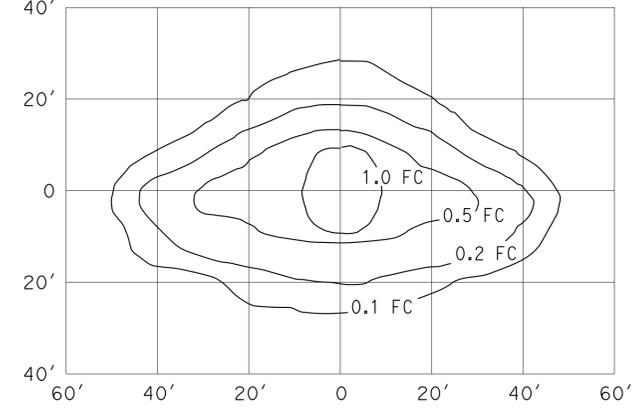
**ISOFOOTCANDLE CURVE - MINIMUM**



**WALL LUMINAIRE**

15' Mounting Height  
 Lamp operated at 9,500 lm  
 100-W high pressure sodium lamp  
 ANSI Designation S54

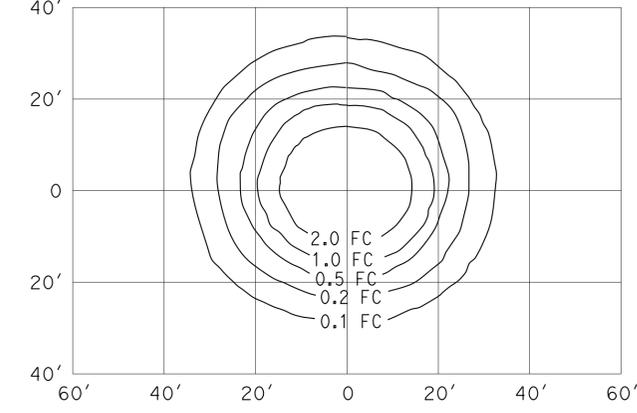
**ISOFOOTCANDLE CURVE - MINIMUM**



**PENDANT SOFFIT LUMINAIRE  
 TYPE III SHORT**

17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

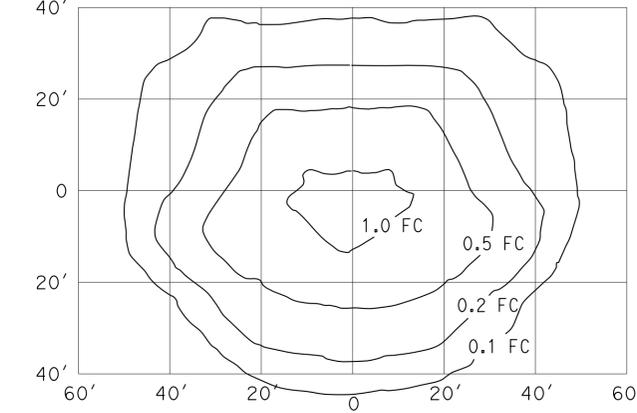
**ISOFOOTCANDLE CURVE - MINIMUM**



**PENDANT SOFFIT LUMINAIRE**

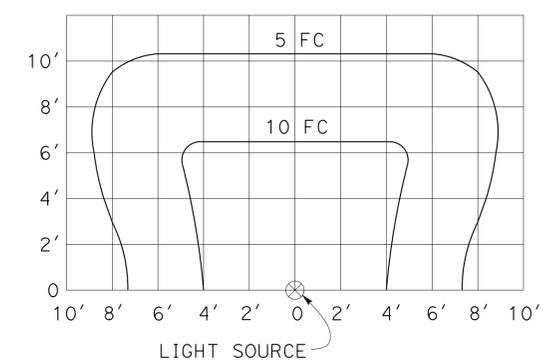
17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

**ISOFOOTCANDLE CURVE - MINIMUM**



**FLUSH SOFFIT LUMINAIRE**

17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62



**SIGN LIGHTING FIXTURE  
 ISOFOOTCANDLE DIAGRAM**

**NOTES:**

- Curves represent the minimum footcandle (FC) of initial illumination on a 10'-0" x 20'-0" panel.
- The FC shown are with the fixture attached to the light fixture mounting channel which places the center of the source 4'-8" in front of panel and 1'-0" below the bottom edge.
- Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

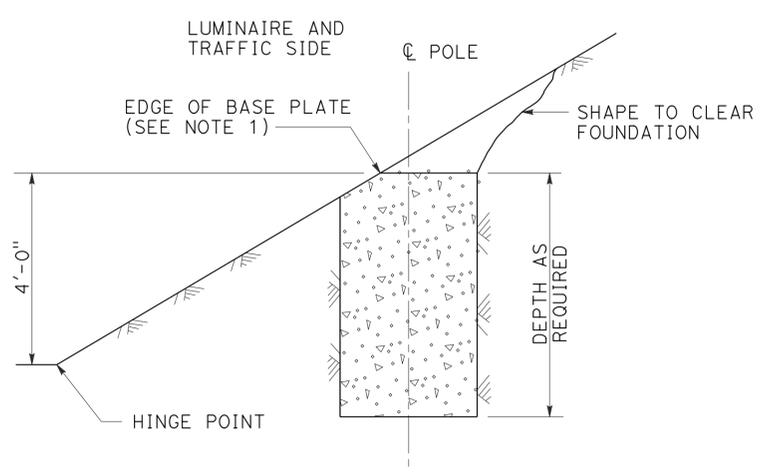
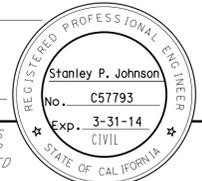
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**

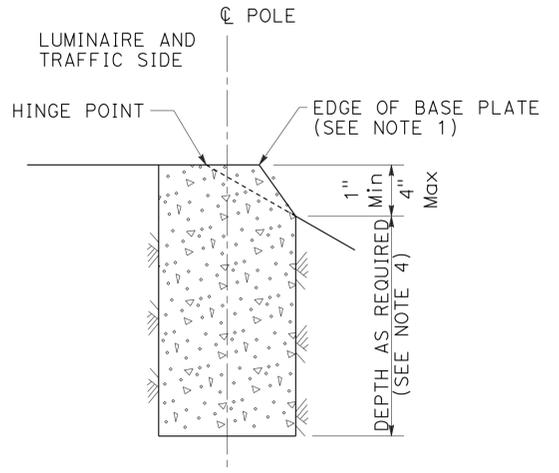
NO SCALE

RSP ES-10B DATED JULY 20, 2012 SUPPLEMENTS THE  
 STANDARD PLANS BOOK DATED 2010.

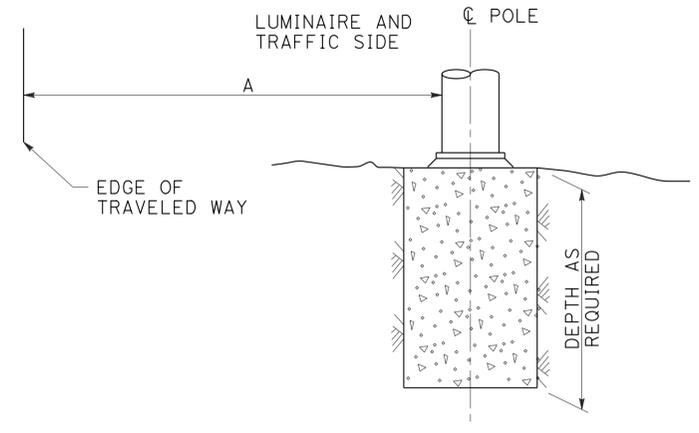
2010 REVISED STANDARD PLAN RSP ES-10B



CUT SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-1  
 See Note 2 and 3



FILL SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-2  
 See Note 2 and 3



FLAT SECTIONS, CUT OR FILL SLOPES  
4:1 OR FLATTER  
DETAIL A-3  
 See Note 2

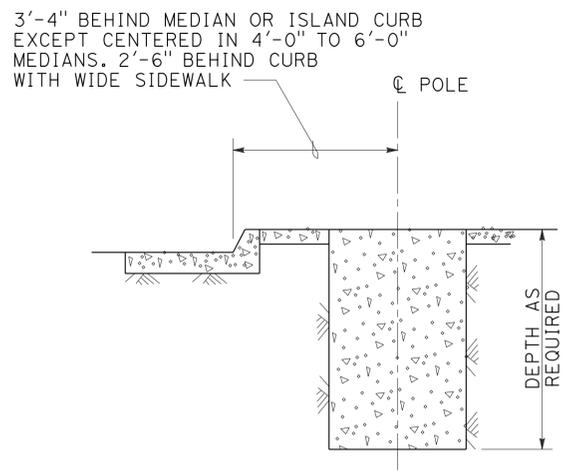
TO ACCOMPANY PLANS DATED 6-2-14

STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)

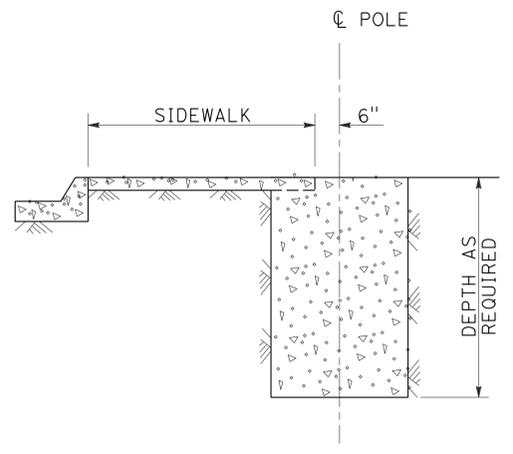
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT  
IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL A

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND  
OR WIDE SIDEWALK  
DETAIL B-1  
 7' Wide and wider



NARROW SIDEWALK  
DETAIL B-2  
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL B

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(FOUNDATION INSTALLATIONS)**  
 NO SCALE

RSP ES-11 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-11  
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.