

INDEX OF PLANS

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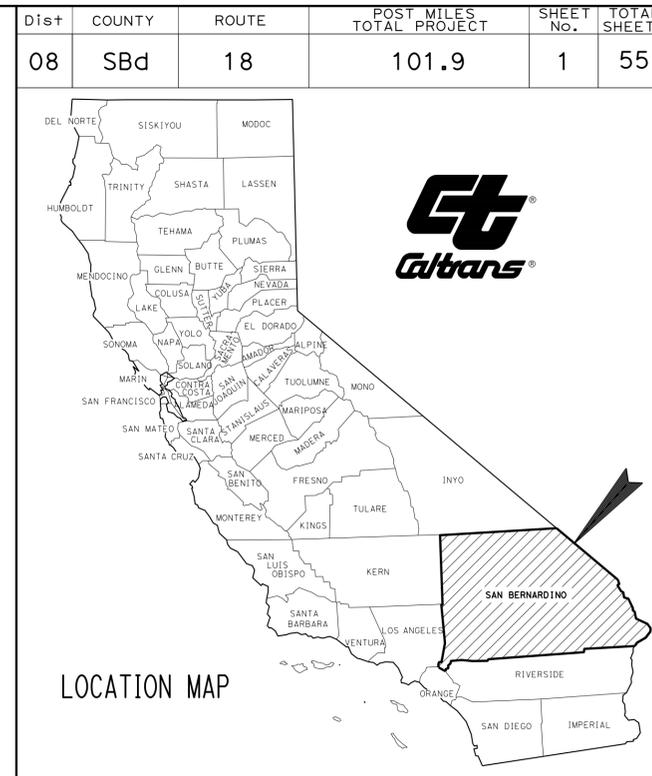
INDEX OF STRUCTURE PLANS

SHEET No.	DESCRIPTION
48-55	ROTATING POLE LAYOUT AND DETAILS

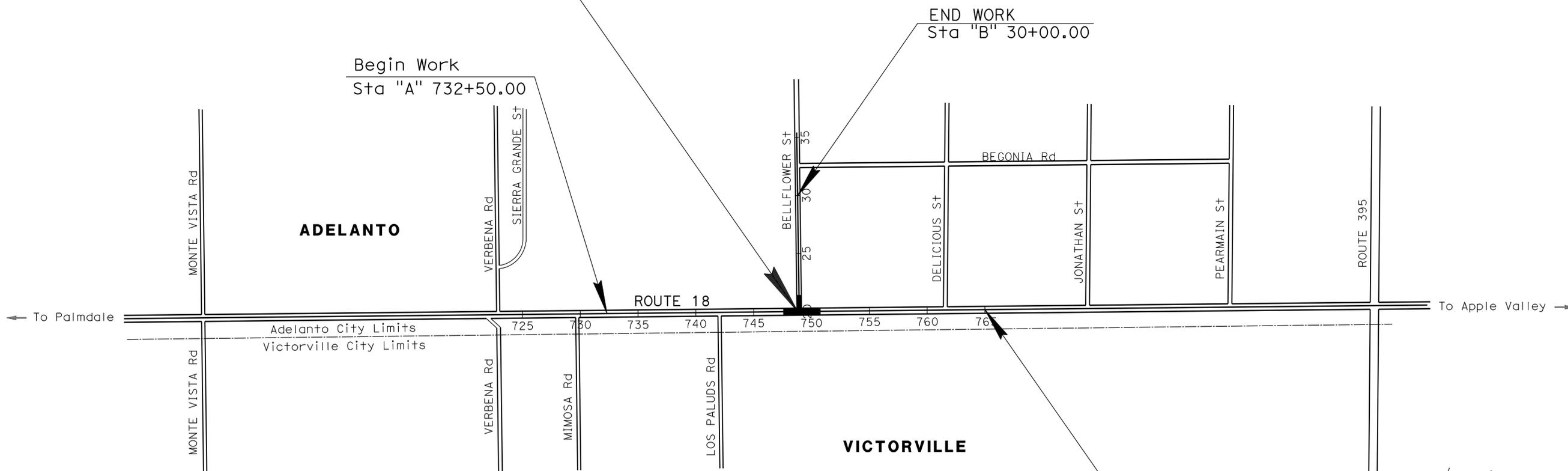
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK

STATE OF CALIFORNIA **ACHSNHPG-P018(048)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SAN BERNARDINO COUNTY
IN ADELANTO
AT BELLFLOWER STREET

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATION OF CONSTRUCTION
Sta "A" 748+93.77 PM 101.9



NO SCALE

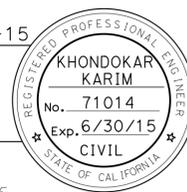
PROJECT MANAGER
CHARLES CHEN

DESIGN ENGINEER
GEORGE MORHIG

Khondokar Karim 1-29-15
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER

January 29, 2015
 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.



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

CONTRACT No.	08-0P9804
PROJECT ID	0800020091

DATE PLOTTED => 14-APR-2015 TIME PLOTTED => 1:34:47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 GEORGE MORHIG

CALCULATED/DESIGNED BY
 CHECKED BY

KHONDOKAR KARIM
 GEORGE MORHIG

REVISED BY
 DATE REVISED

ROUTE 18
DESIGN DESIGNATION

ADT (2016)	9,500	D	52%
ADT (2036)	15,100	T	6%
DHV	1,740	V	55 mph
ESAL	3,295,518	TI ₂₀	10.5

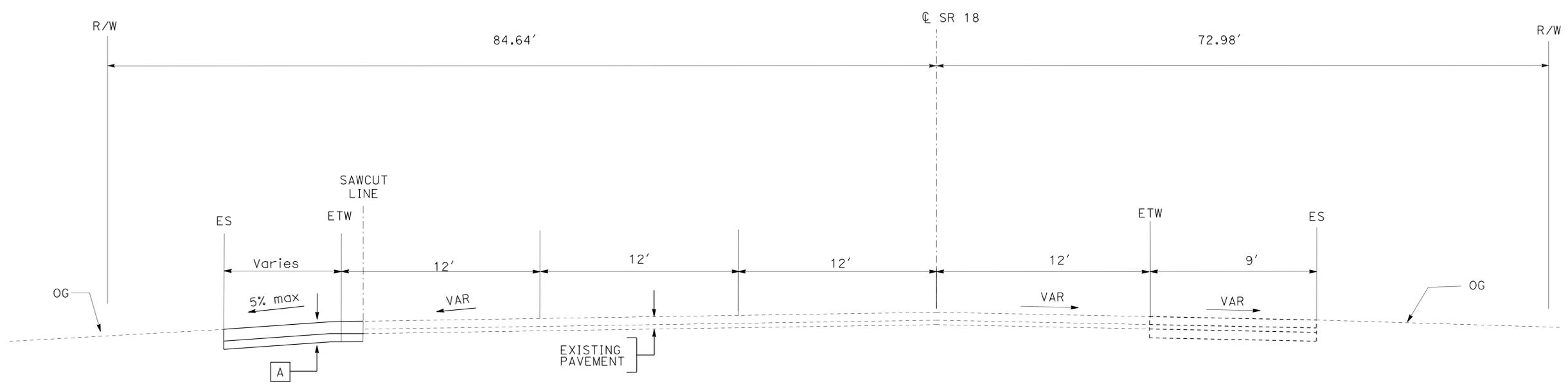
PAVEMENT CLIMATE REGION
 DESERT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	2	55

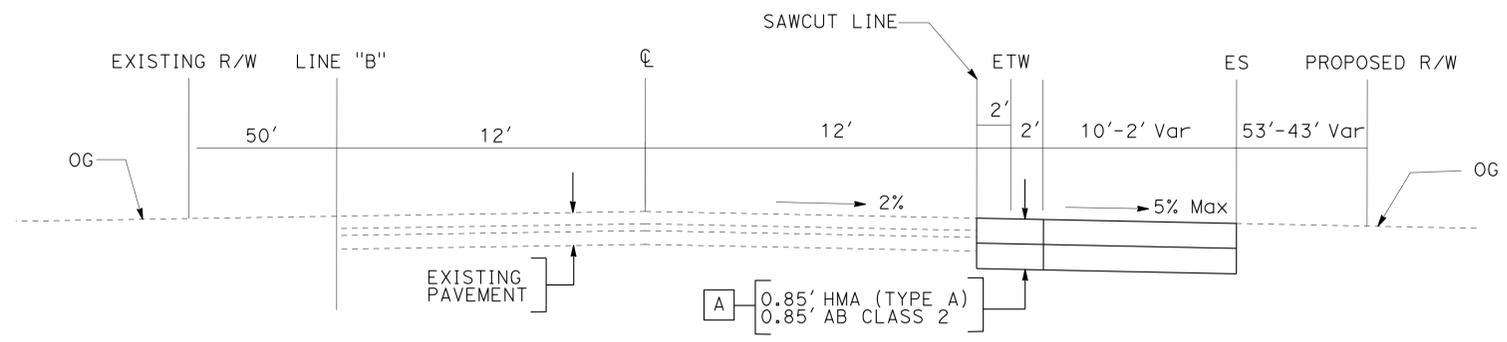
REGISTERED CIVIL ENGINEER DATE 1-29-15
 PLANS APPROVAL DATE 1-29-15

KHONDOKAR KARIM
 No. 71014
 Exp. 6/30/15
 CIVIL

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



STA 750+00 to STA 751+19.43
ROUTE 18



BELLFLOWER STREET
 Sta 21+13.00 TO Sta 22+65.34 LINE "B"

TYPICAL CROSS SECTIONS
 NO SCALE
X-1

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 GEORGE MORHIG

CALCULATED-DESIGNED BY
 CHECKED BY

KHONDOKAR KARIM
 GEORGE MORHIG

REVISED BY
 DATE REVISED

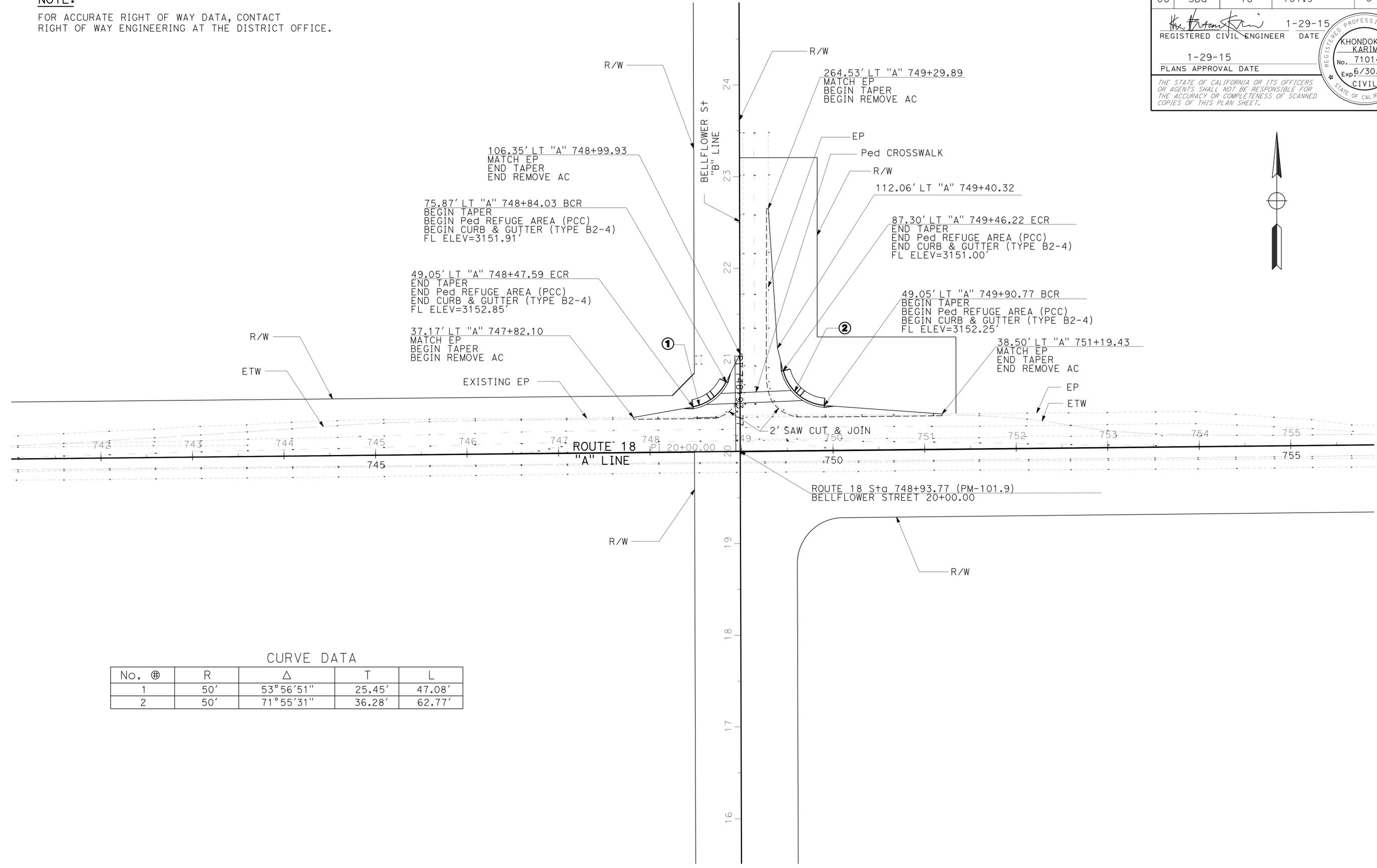
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	3	55

1-29-15
 REGISTERED CIVIL ENGINEER DATE
 1-29-15
 PLANS APPROVAL DATE

KHONDOKAR KARIM
 No. 71014
 Exp. 6/30/15
 CIVIL

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CURVE DATA

No. ⊕	R	Δ	T	L
1	50'	53° 56' 51"	25.45'	47.08'
2	50'	71° 55' 31"	36.28'	62.77'

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 GEORGE MORHIG

CALCULATED/DESIGNED BY
 CHECKED BY

KHONDOKAR KARIM
 GEORGE MORHIG

REVISED BY
 DATE REVISED

NOTE:

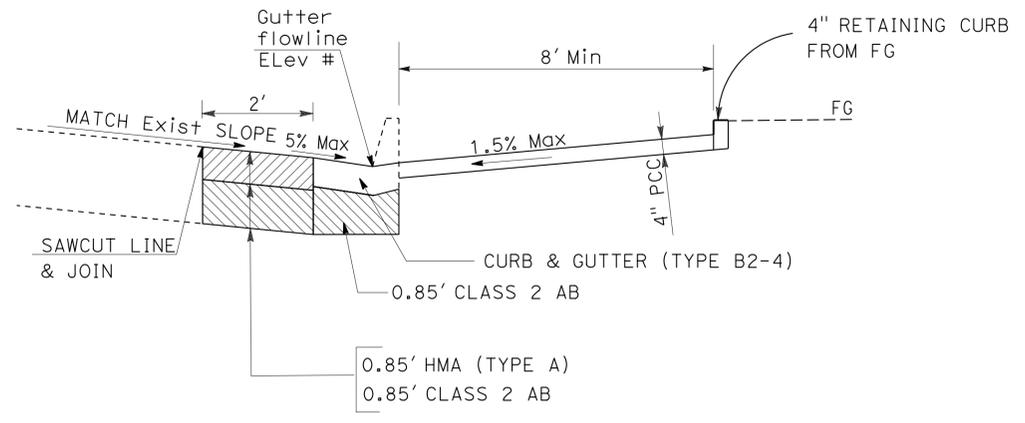
AS PER REVISED STANDARD PLAN A88A, SEE NOTE 10 RAISED TRUNCATED DOME PATTERN (IN LINE) FOR DETECTABLE WARNING SURFACE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	4	55

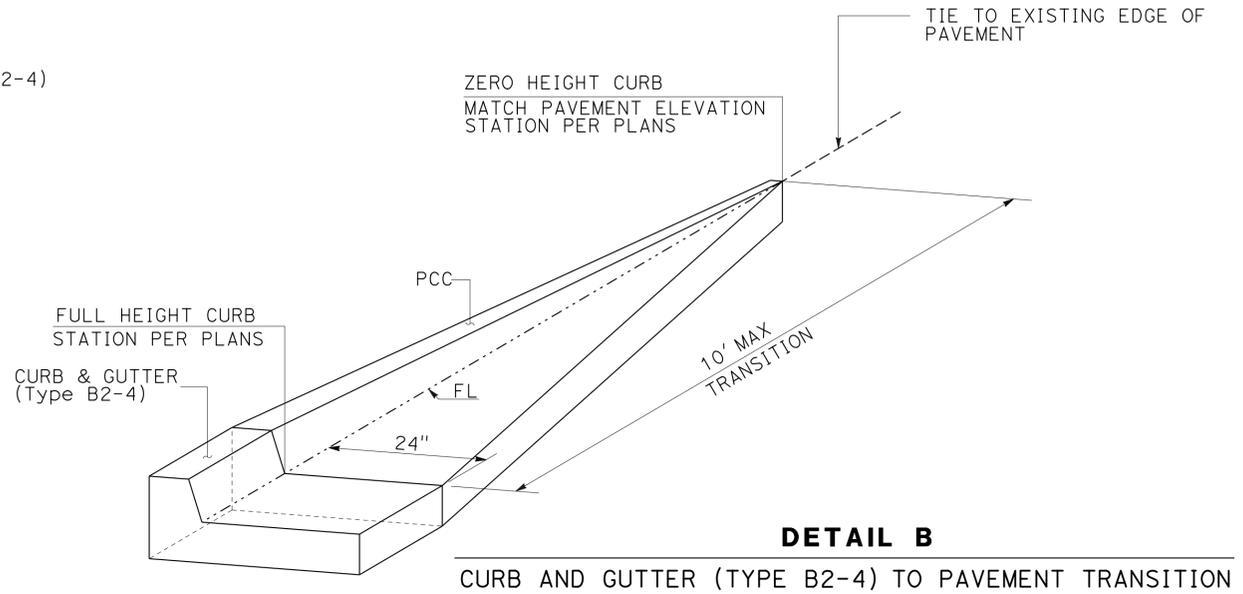
REGISTERED CIVIL ENGINEER DATE 1-29-15
 1-29-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 KHONDOKAR KARIM
 No. 71014
 Exp. 6/30/15
 CIVIL
 STATE OF CALIFORNIA

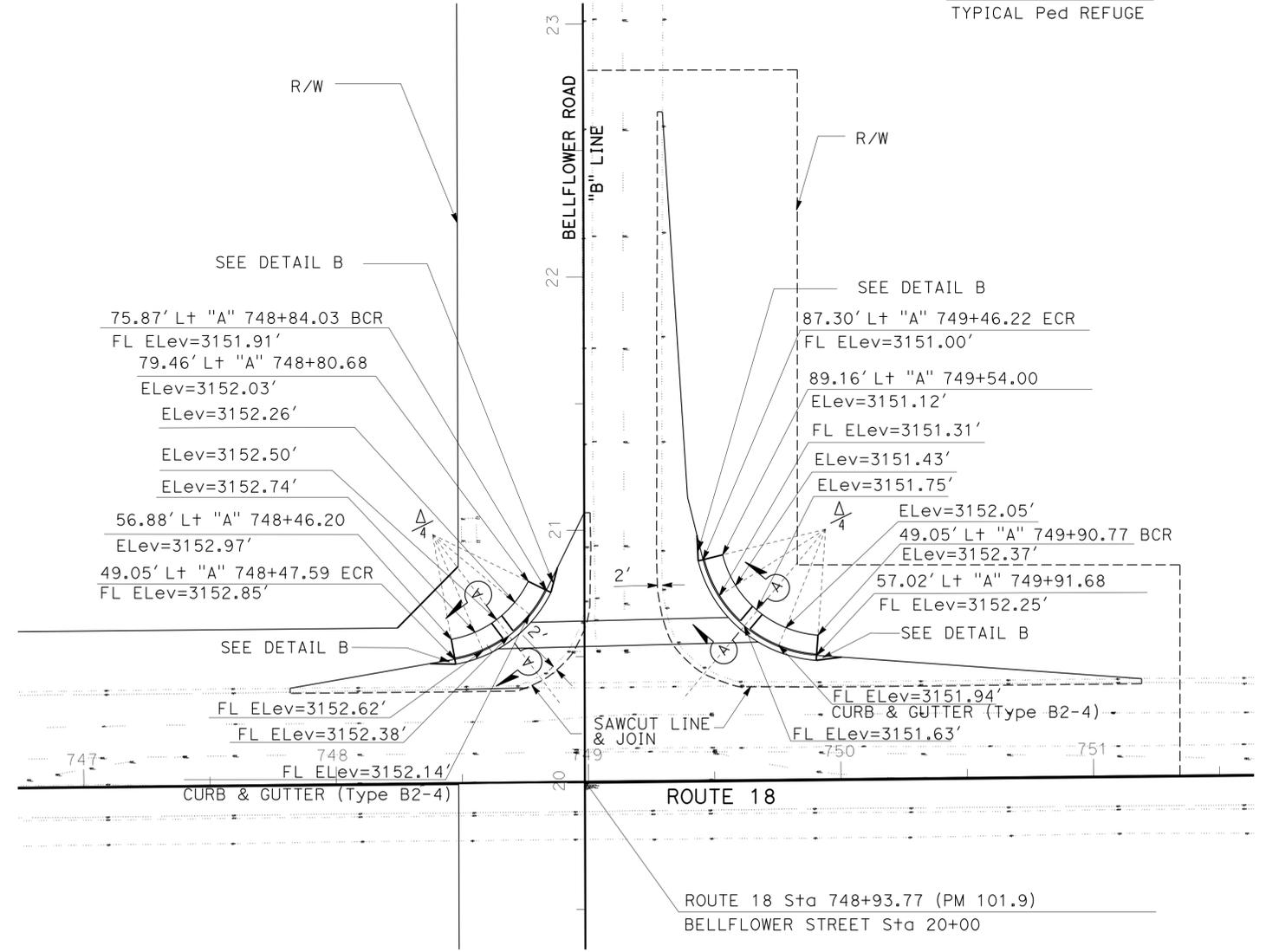
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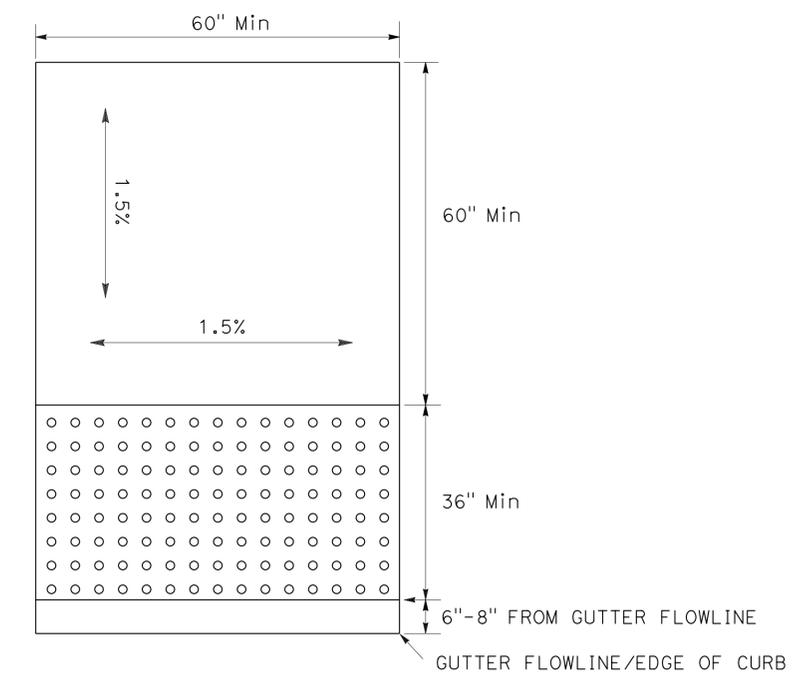
SECTION A-A
 TYPICAL Ped REFUGE



DETAIL B
 CURB AND GUTTER (TYPE B2-4) TO PAVEMENT TRANSITION



INTERSECTION DETAIL



PEDESTRIAN REFUGE AREA
 (PLAN VIEW)

CONSTRUCTION DETAILS
 NO SCALE
C-1

LAST REVISION DATE PLOTTED => 14-APR-2015 01-29-15 TIME PLOTTED => 13:47

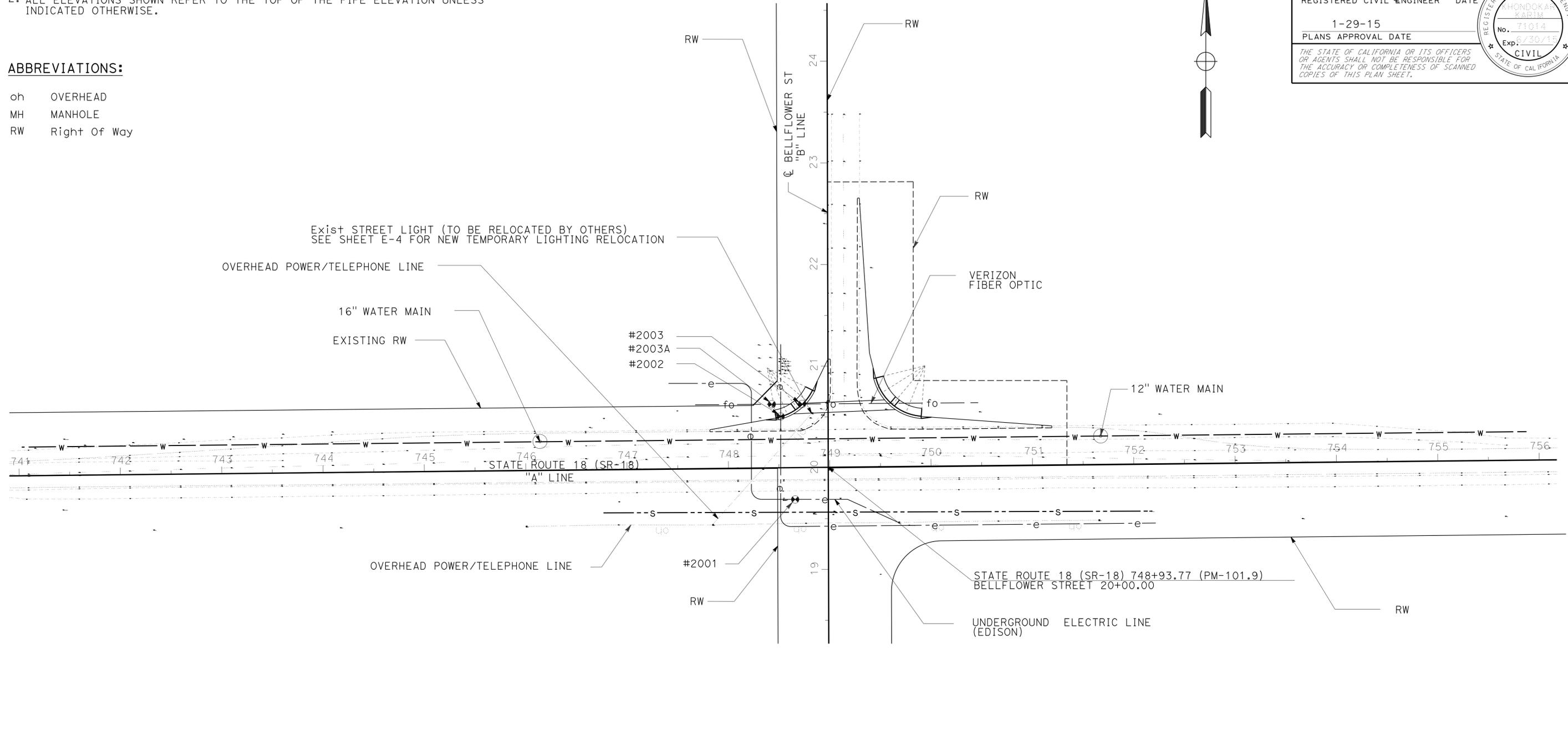
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	5	55
 REGISTERED CIVIL ENGINEER			1-29-15	DATE	
1-29-15 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- ALL ELEVATIONS SHOWN REFER TO THE TOP OF THE PIPE ELEVATION UNLESS INDICATED OTHERWISE.

ABBREVIATIONS:

- oh OVERHEAD
- MH MANHOLE
- RW Right Of Way

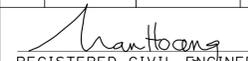
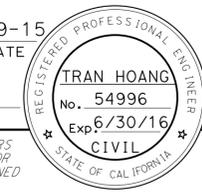


POTHOLE LOCATION TABLE					
NO.	UTILITY	NORTHING	EASTING	ELEVATION	DEPTH
2001	UNDERGROUND ELECTRICAL (EDISON)	2,007,254.20	6,737,266.18	3149.58	4.2
2002	UNDERGROUND ELECTRICAL (EDISON)	2,007,335.83	6,737,251.83	3148.11	5.2
2003	FIBER OPTIC (VERIZON)	2,007,348.01	6,737,273.11	3148.66	4.1
2003A	FIBER OPTIC (VERIZON)	2,007,347.86	6,737,243.14	3150.18	3.7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: GEORGE MORHIG
 CALCULATED/DESIGNED BY: GEORGE MORHIG
 REVISIONS: KHONDOKAR KARIM, GEORGE MORHIG
 REVISED BY: DATE REVISION

UTILITY PLAN

SCALE: 1" = 50' **U-1**

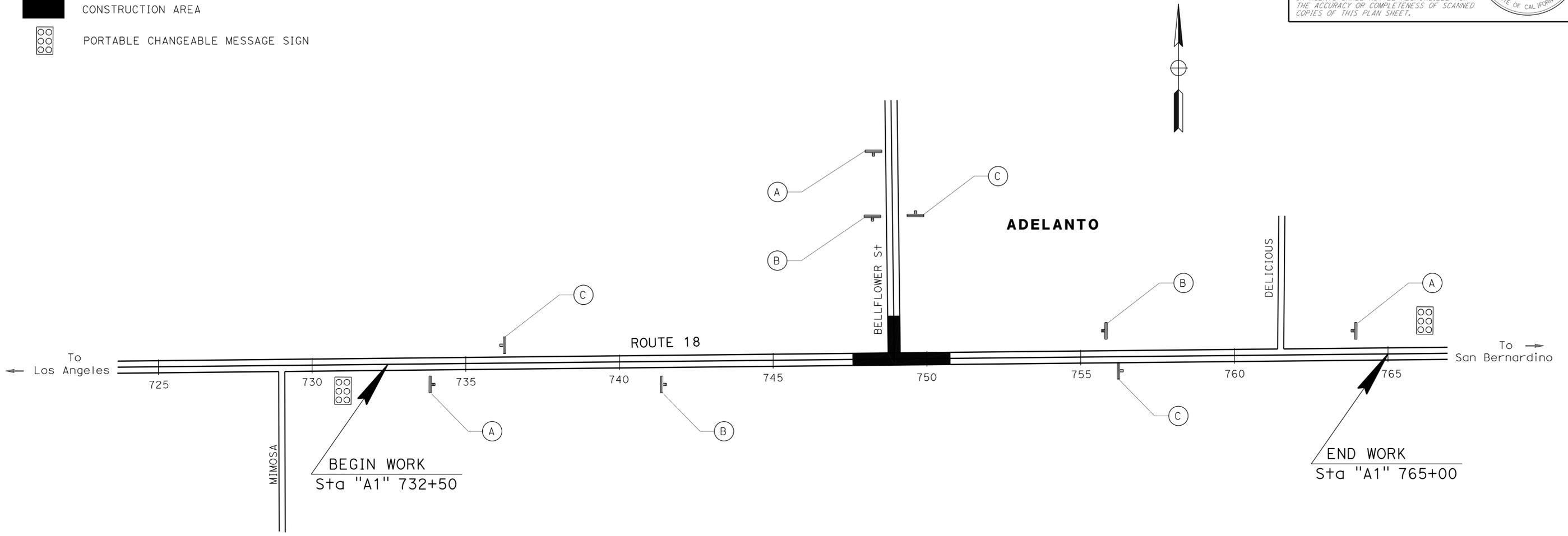
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	6	55
 REGISTERED CIVIL ENGINEER DATE 1-29-15					
1-29-15 PLANS APPROVAL DATE			<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

NOTES:

- LOCATIONS OF ALL CONSTRUCTION AREA SIGNS, AND PCMS ARE APPROXIMATE. EXACT LOCATIONS OF THE CONSTRUCTION AREA SIGNS AND PCMS WILL BE DETERMINED BY THE ENGINEER.
- REFER TO STANDARD PLANS RSP T11, AND RSP T13, FOR TRAFFIC CONTROL REQUIREMENT DURING CONSTRUCTION.

LEGEND:

-  CONSTRUCTION AREA
-  PORTABLE CHANGEABLE MESSAGE SIGN



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	W20-1	C23(CA)	48" X 48"	ROAD WORK AHEAD	1 - 6" X 6"	3
(B)	-	C30A(CA)	30" X 30"	SHOULDER CLOSED	1 - 6" X 6"	3
(C)	G20-2	C14(CA)	48" X 24"	END ROAD WORK	1 - 4" X 6"	3

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

(EA)
2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR
WILLIAM E. WASSER

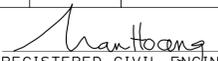
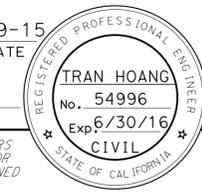
CALCULATED/DESIGNED BY
CHECKED BY

TRAN HOANG
HORMUZD SETHNA

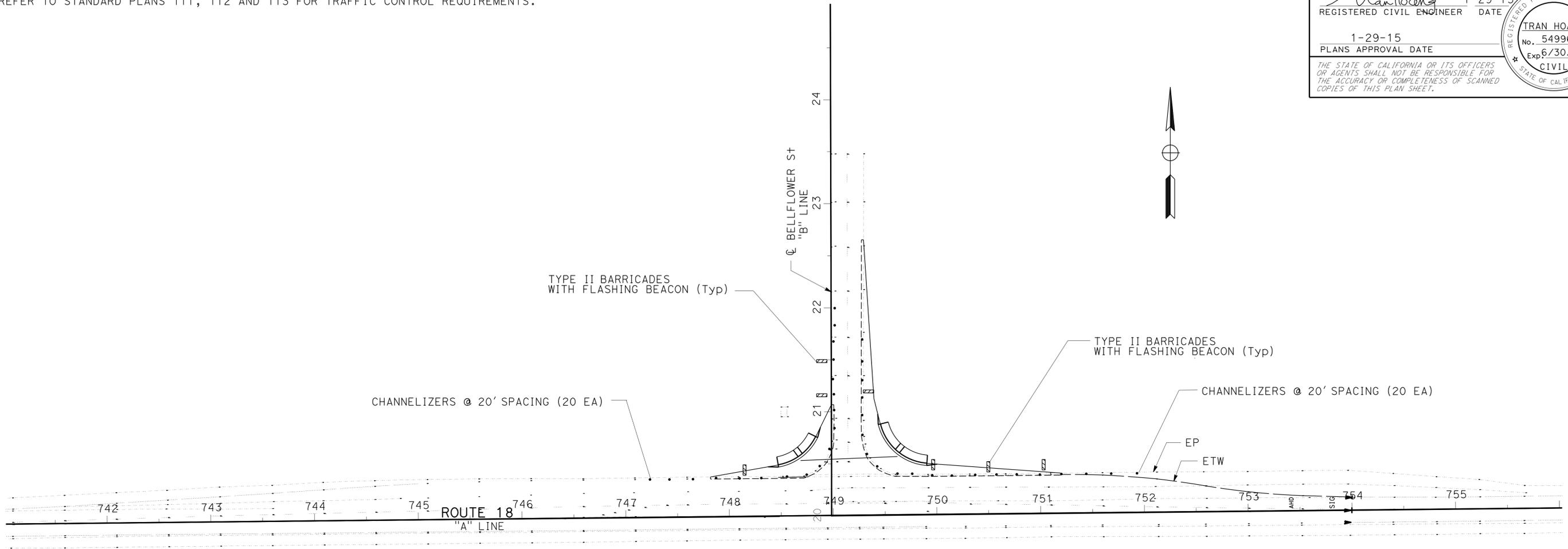
REVISED BY
DATE REVISED

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	7	55
 REGISTERED CIVIL ENGINEER			1-29-15	DATE	
1-29-15 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:
REFER TO STANDARD PLANS T11, T12 AND T13 FOR TRAFFIC CONTROL REQUIREMENTS.



TYPE II BARRICADE
(EA)
7

TEMPORARY FLASHING BEACON
(EA)
7

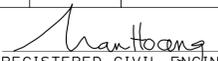
CHANNELIZERS (SURFACE MOUNTED)
(EA)
40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: WILLIAM E. WASSER
 TRAN HOANG
 HORMUZD SETHNA
 REVISIONS: (Empty table)
 REVISIONS: (Empty table)

APPROVED FOR TRAFFIC HANDLING WORK ONLY

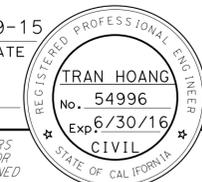
TRAFFIC HANDLING PLANS
NO SCALE **TH-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	9	55

 1-29-15
 REGISTERED CIVIL ENGINEER DATE

1-29-15
 PLANS APPROVAL DATE

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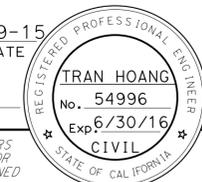
PAVEMENT DELINEATION QUANTITIES

LOCATION	DIRECTION	DETAIL No./ MARKING DETAIL	REMOVE THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER (RETROREFLECTIVE)		THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)			THERMOPLASTIC PAVEMENT MARKING
				TYPE D	TYPE G	4in	4in	8in	
						YELLOW	WHITE	WHITE	
			SQFT	EA	LF			SQFT	
STATION 745+00 TO STA 748+50	EB	27B						380	
STATION 745+00 TO STA 747+50	EB	29 (X2)		22		500			
STATION 747+50 TO STA 748+50	EB	22		10		100			
STATION 745+00 TO STA 748+50	EB	2 TYPE IV ARROWS							30
STATION 750+00 TO STA 754+00	EB	27B					400		
STATION 750+00 TO STA 754+00	EB	29 (x2)		36		400			
STATION 747+20 TO STA 748+40	EB	38			6			120	
STATION 745+00 TO STA 749+00	EB	CROSS-HATCH							72
STATION 741+00	EB	SIGNAL							32
STATION 741+00	EB	AHEAD							31
STATION 748+40	EB	LIMIT LINE							25
STATION 745+00 TO STA 749+00	WB	11					400		
STATION 745+00 TO STA 749+00	WB	27B					400		
STATION 745+00 TO STA 749+00	WB	2 TYPE VI ARROWS							84
STATION 750+00 TO STA 751+80	WB	38			9		180		
STATION 750+00 TO STA 754+00	WB	27B					400		
STATION 750+00 TO STA 754+00	WB	2 TYPE IV ARROWS							30
STATION 759+50	WB	LIMIT LINE							30
STATION 756+00	WB	SIGNAL (X2)							32
STATION 756+00	WB	AHEAD (X2)							31
STATION 750+00 TO STA 754+00	WB	X-HATCH							70
STATION 20+50 TO STA 25+00	SB	27B (X2)					900		
STATION 20+50 TO STA 25+00	SB	22		40		450			
STATION 20+50	SB	LIMIT LINE	20						15
STATION 20+50	SB	X-WALK							150
STATION 25+00	SB	SIGNAL							32
STATION 25+00	SB	AHEAD							31
STATION 25+00	SB	STOP	50						
STATION 21+20	SB	TYPE IV(L)&(R) ARROWS							30
SUBTOTAL			70	108	15	1450	3060	120	725
GRAND TOTAL			70	123		4630			725

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC DESIGN
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 HORMUZD SETHNA
 WILLIAM E. WASSER

PAVEMENT DELINEATION QUANTITIES PDQ-1

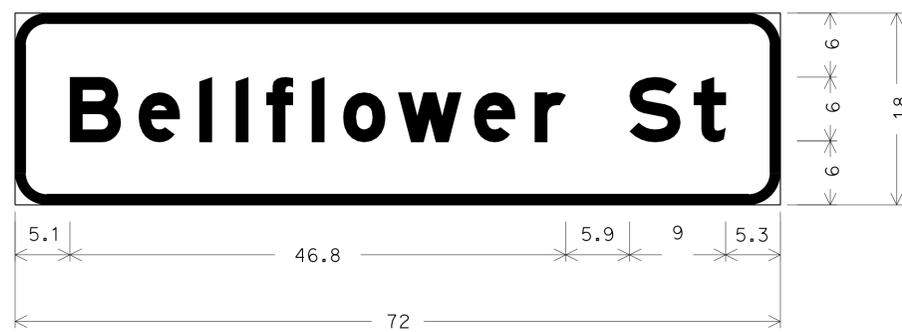
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 01-29-15 TIME PLOTTED => 13:47

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	10	55
					
			REGISTERED CIVIL ENGINEER DATE 1-29-15		
			PLANS APPROVAL DATE 1-29-15		
					
<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:

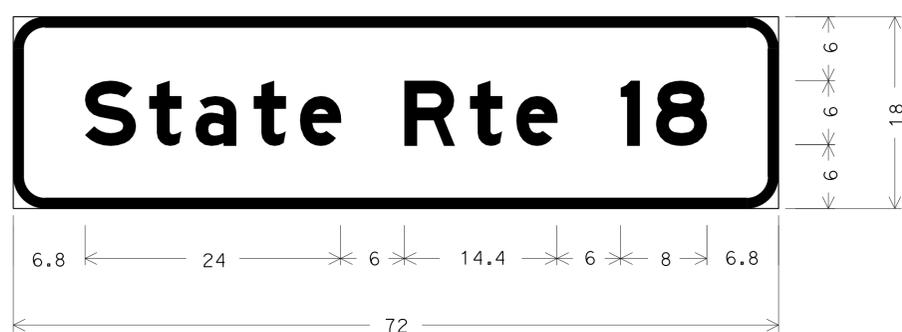
1. ALL DIMENSIONS SHOWN ON THIS SHEET ARE IN INCHES.
2. DOUBLE FACED HAS THE SAME MESSAGE ON BOTH SIDES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAN HOANG	REVISOR BY
Caltrans	HORMUZD SETHNA	DATE REVISED
TRAFFIC DESIGN		
FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	CHECKED BY
WILLIAM E. WASSER		



SIGN NO. G & I (DOUBLE FACED)

3.0" RADIUS, 1.0" BORDER, WHITE ON GREEN; (BELLFLOWER ST) 16" E (M)



SIGN NO. K (SINGLE FACED)

3.0" RADIUS, 1.0" BORDER, WHITE ON GREEN; (ROUTE 18) 16" E (M)

SIGN DETAILS
NO SCALE **SD-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	11	55

1-29-15
 REGISTERED CIVIL ENGINEER DATE
 1-29-15
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NOTE:
POST LENGTHS GIVEN ARE APPROXIMATE. EXACT LENGTH TO BE DETERMINED BY THE ENGINEER.

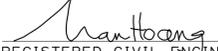
ROADSIDE SIGN QUANTITIES

SIGN No.	SIGN CODE	POST LENGTH	POST SIZE	ROADSIDE SIGN (WOOD POST)			INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	INSTALL SIGN (MAST ARM HANGER ASSEMBLY)	REMOVE ROADSIDE SIGN PANEL	TREATED WOOD WASTE	REMARKS			
				ONE POST	REMOVE	RESET									
				EA	EA	EA									
A	W3-3	16	X	1	-	-	-	-	-	-	-	-			
B	W3-1	-	-	-	1	-	-	-	-	-	140	-			
C	W3-3	16	X	1	-	-	-	-	-	-	-	-			
D	W9-1	-	-	-	-	1	-	-	1	-	-	EXISTING W75(CA) LANE ENDS MERGE LEFT TO BE REMOVED			
E	G-SPECIAL	-	-	-	1	-	-	-	-	-	140	EXISTING STREET NAME SIGN			
F	W3-3	16	X	1	-	-	-	-	-	-	-	REMOVE W3-1PANEL & INSTALL W3-3 PANEL ON SAME POST			
G	G7(CA) SPECIAL	-	-	-	-	-	-	1	-	-	-	BELLFLOWER RD			
H	R3-18	-	-	-	-	-	-	1	-	-	-	-			
I	G7(CA) SPECIAL	-	-	-	-	-	-	1	-	-	-	BELLFLOWER RD			
J	R3-4	-	-	-	-	-	-	1	-	-	-	-			
K	G7(CA) SPECIAL	-	-	-	-	-	-	1	-	-	-	STATE RTE 18			
L	R3-4	-	-	-	-	-	-	1	-	-	-	-			
M	RI-1 & W4-4P	-	-	-	1	-	-	-	-	-	140	-			
N	R60-B(CA)	-	-	-	-	-	-	1	-	-	-	-			
TOTAL							3	3	1	1	4	3	1	420	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 TRAN HOANG
 HORMUZD SETHNA
 TRAN HOANG
 HORMUZD SETHNA
 WILLIAM E. WASSER
 FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISED

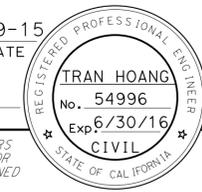
SIGN QUANTITIES SQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	12	55

 1-29-15
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1-29-15
 PLANS APPROVAL DATE

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



NOTE:

NOTE: CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA); OTHERWISE, FEDERAL SIGN CODES ARE SHOWN

LEGEND:

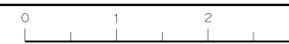
L = LENGTH OF SIGN
 D = DEPTH OF SIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR WILLIAM E. WASSER
 CALCULATED/DESIGNED BY CHECKED BY
 TRAN HOANG HORMUZD SETHNA
 REVISED BY DATE REVISED

SIGN PANEL MATERIAL SUMMARY

SIGN No.	SIGN CODE	SIGN DIMENSION L x D (in x in) OR AS SPECIFIED	SINGLE FACED	DOUBLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM	ROADSIDE	
					SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE		PREMIUM	SINGLE-SHEET
											UNFRAMED ALUMINUM
A	W3-3	36 X 36	X	-	YELLOW	IX	-	-	X	0.080 inch	SQFT
C	W3-3	36 X 36	X	-	YELLOW	IX	-	-	X	9.0	9.0
D	W9-1	36 X 36	X	-	YELLOW	IX	-	-	X	9.0	9.0
F	W3-3	36 X 36	X	-	YELLOW	IX	-	-	X	9.0	9.0
G	G7 (CA) SPECIAL	72 X 18	-	X	GREEN	IV	WHITE	IV	X	9.0	9.0
H	R3-18	36 X 36	X	-	WHITE	IX	-	-	X	9.0	9.0
I	G7 (CA) SPECIAL	72 X 218	-	X	GREEN	IV	WHITE	IV	X	9.0	9.0
J	R3-4	36 X 36	X	-	WHITE	IX	-	-	X	9.0	9.0
K	G7 (CA) SPECIAL	72 X 18	X	-	GREEN	IV	WHITE	IV	X	9.0	9.0
L	R3-4	36 X 36	X	-	WHITE	IX	-	-	X	9.0	9.0
N	R60-B(CA)	54 X 48	X	-	WHITE	IX	-	-	X	18.0	18.0
SHEET TOTAL (SQFT)										108.0	
GRAND TOTAL (SQFT)										108.0	

**SIGN QUANTITIES
SQ-2**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	13	55

1-29-15
 REGISTERED CIVIL ENGINEER DATE
 1-29-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 KHONDOKAR KARIM
 No. 71014
 Exp. 6/30/15
 CIVIL
 STATE OF CALIFORNIA

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CURB & GUTTER AND PEDESTRIAN REFUGE AREA QUANTITIES

LOCATION	MINOR CONCRETE		(N)	
	CURB RAMP	CURB & GUTTER (TYPE B2-4)	CURB RAMP DETECTABLE WARNING SURFACE	REMOVE ASPHALT CONCRETE SURFACING
	CY	CY	SF	SQFT
NORTHWEST OF HWY 18 & BELLFLOWER ST	4	4	15	800
NORTHEAST OF HWY 18 & BELLFLOWER ST	8	5	15	341
TOTAL	12	9	30	1141

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

PAVEMENT STRUCTURE QUANTITIES

LOCATION	HOT MIX ASPHALT (TYPE A)	CLASS 2 AGGREGATE BASE
	TON	CY
NORTH-EAST OF HWY-18 & BELLFLOWER ST	248	25.0
NORTH-WEST OF HWY-18 & BELLFLOWER ST	119	12.0
TOTAL	367	37.0

EARTHWORK QUANTITIES

	EARTH EXCAVATION
	CY
ROADWAY EXCAVATION	220
TOTAL	220

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

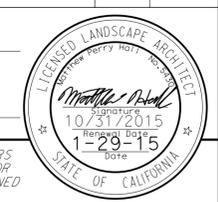
ITEM	UNIT	QUANTITY
TEMPORARY SOIL BINDER	SY	1260
TEMPORARY CONSTRUCTION ENTRANCE	EA	2

SUMMARY OF QUANTITIES
Q-1

LAST REVISION DATE PLOTTED => 14-APR-2015 01-29-15 TIME PLOTTED => 13:47

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	14	55


 LICENSED LANDSCAPE ARCHITECT
 1-29-15
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
 SENIOR LANDSCAPE ARCHITECT STEVEN MAGALLANES
 CALCULATED/DESIGNED BY CHECKED BY
 LORENA SALVADOR MATTHEW HALL
 REVISED BY DATE REVISED

EROSION CONTROL

SEQUENCE	ITEM	MATERIALS		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	HYDROMULCH	BFM FIBER	WOOD	3000 LB/ACRE
		BFM TACKIFIER	ORGANIC	

EROSION CONTROL LOCATION TABLE

LOCATION			TYPE 1 HYDROMULCH (SQFT)	REMARKS
STATION	L+	R+		
"A" 747+82.10 TO "A" 748+99.93	X		383.50	ALL DSA
"A" 751+19.43 TO "A" 749+29.89	X		383.50	ALL DSA
TOTAL			770	

APPROVED FOR EROSION CONTROL WORK ONLY

EROSION CONTROL PLAN EC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B

FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 REVISIONS: 12-14 (FD)
 CHECKED BY: SANDY TUNG
 DESIGNED BY: FERDINAND DE LA CRUZ
 REVISIONS: 12-14 (FD)
 CALCULATED/DESIGNED BY: SANDY TUNG
 CHECKED BY: FERDINAND DE LA CRUZ

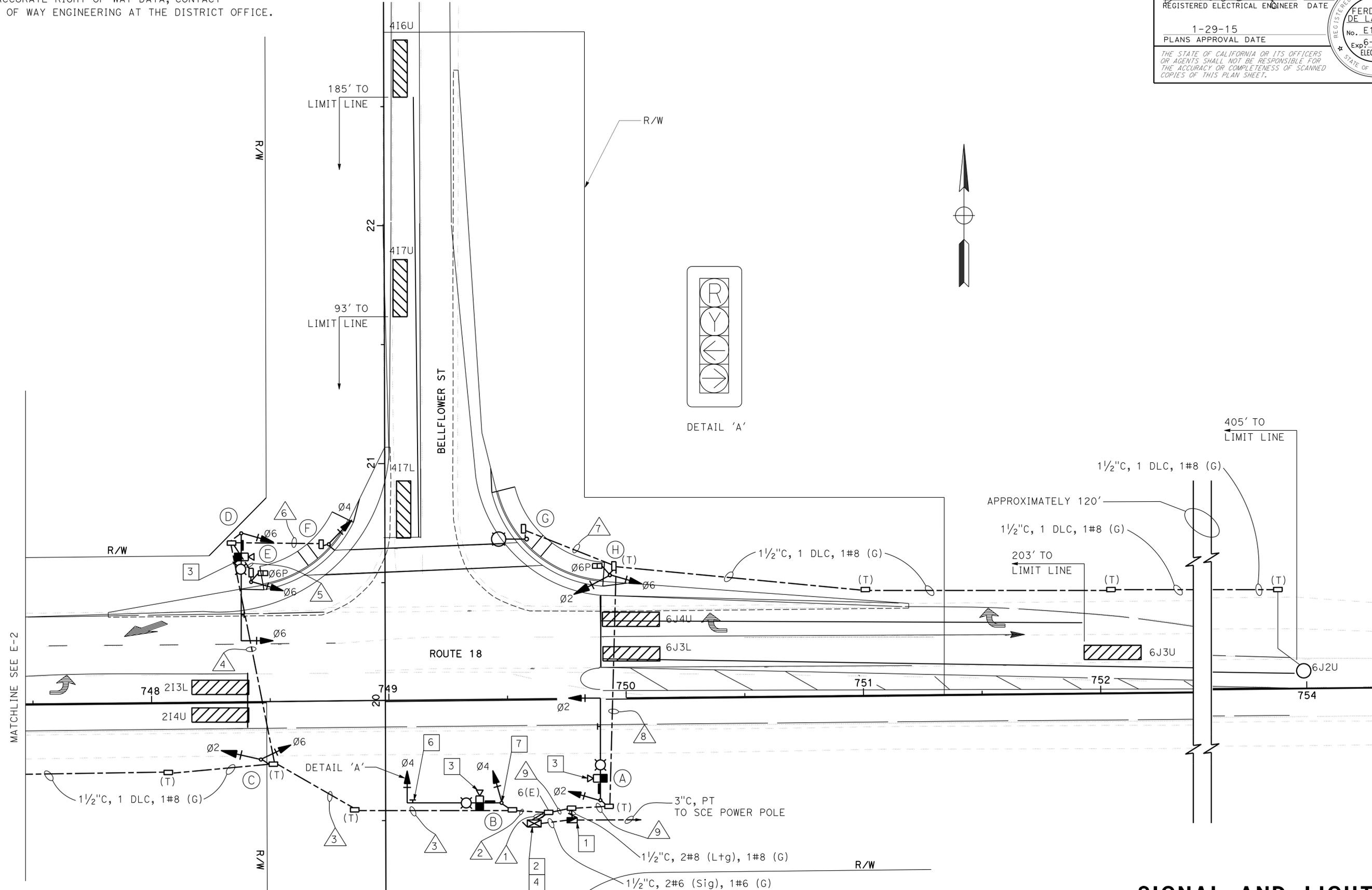
NOTES:
 1. REFER TO SHEET E-3 FOR PROJECT LEGEND AND DETAILS.
 2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	15	55

REGISTERED ELECTRICAL ENGINEER: *Ferdinand De La Cruz* 1-29-15
 DATE: 1-29-15
 PLANS APPROVAL DATE: 1-29-15

REGISTERED PROFESSIONAL ENGINEER: FERDINAND DE LA CRUZ
 No. E17215
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

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APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING
 SCALE: 1" = 20' **E-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN B

FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ

CALCULATED/DESIGNED BY
 CHECKED BY

SANDY TUNG
 FERDINAND DE LA CRUZ

REVISED BY
 DATE REVISED

FD
 12-14

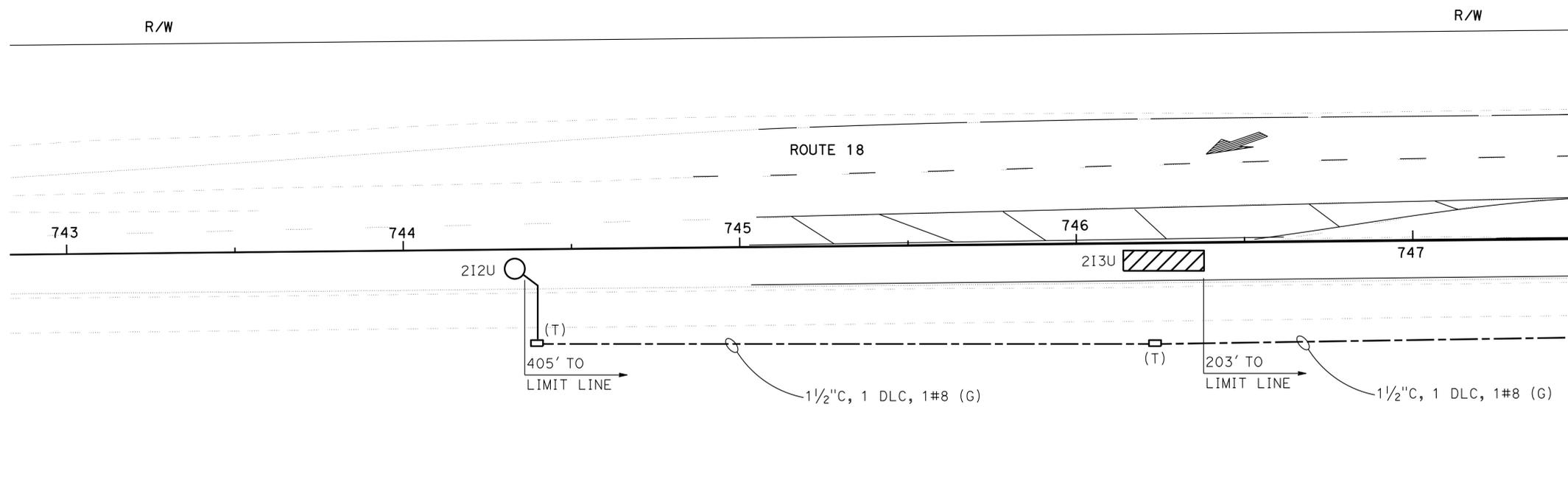
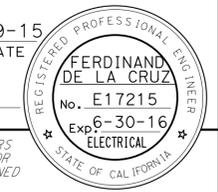
NOTES:

1. REFER TO SHEET E-3 FOR PROJECT LEGEND AND DETAILS.
2. 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
08	SBd	18	101.9	16	55

1-29-15
 REGISTERED ELECTRICAL ENGINEER DATE
 1-29-15
 PLANS APPROVAL DATE

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MATCHLINE SEE E-1

SIGNAL AND LIGHTING

SCALE: 1" = 20'

E-2

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	17	55

1-29-15
REGISTERED ELECTRICAL ENGINEER DATE

1-29-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
FERDINAND DE LA CRUZ
No. E17215
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

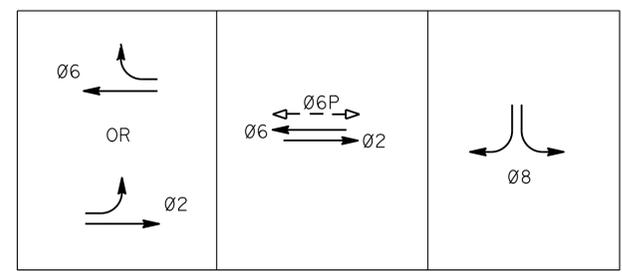
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

- INSTALL 120/240V, 1Ø, 3 WIRE, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:
 METER A: 100 A, 240 V, 2P, CB. MAIN BREAKER (TC-1)
 50 A, 120 V, 1P, CB. (SIG)
 METER B: 100 A, 240 V, 2P, CB. MAIN BREAKER (LS-3)
 15 A, 240 V, 2P, CB. (LIGHTING)
 15 A, 120 V, 1P, CB. (LIGHTING CONTROL)
- INSTALL DEPARTMENT FURNISHED MODEL 2070L CONTROLLER ASSEMBLY WITH TYPE 332L CABINET AND BATTERY BACKUP SYSTEM. REFER TO SHEET E-4 FOR FOUNDATION DETAILS.
- INSTALL VIVDS CAMERA PER ES-7R, DETAIL B.
- INSTALL LONG TERM EVOLUTION (LTE) MODEM IN CONTROLLER CABINET.
- FOR SIGN DETAILS AND STREET NAME SIGNS, SEE PD, SD AND SQ PLAN SHEETS.
- INSTALL R60B(CA) SIGN.
- REVERSE POLE.

ABBREVIATIONS:

- SCE - SOUTHERN CALIFORNIA EDISON
 TC-1 - SCE TRAFFIC CONTROL RATE
 LS-3 - SCE LIGHTING RATE



PHASE DIAGRAM
STEADY DEMAND SEQUENCE

CONDUCTOR AND CONDUIT SCHEDULE

CABLE SCHEDULE			CONDUIT RUN AND SIZE													
CABLE TYPE	S + d	PHASE	1	2	3	4	5	6	7	8	9					
VEH-PED 12CSC	Ⓐ	2	1								1					
	Ⓑ	4	1	1												
	Ⓒ	2,6	2	2	2											
	Ⓓ	6	1	1	1	1										
	Ⓔ	6,6P	1	1	1	1	1									
PPB 3CSC	Ⓕ	4	6	1	1	1	1	1	1							
	Ⓖ	6	1							1	1					
	Ⓕ	2,6,6P	2							2	2					
		TOTAL	9	2	6	5	3	1	0	1	0	1	2	1	3	1
AWG	CIRCUIT															
#8	LIGHTING		2	2	2				2	2	2					
#8	GROUND	1	1	1	1	1	1	1	1	1	1					
VIVID POWER CABLE			3	2	1	1					1	1				
VIVID VIDEO CABLE			3	2	1	1					1	1				
DETECTORS-TYPE B DLC																
PHASE																
Ø2			1	1	1											
Ø6			1								1					
TOTAL			2	1	1						1	1				
CONDUIT SIZE			2-4"	4"	4"	2"	2"	2"	4"	4"	2"					

POLE and EQUIPMENT SCHEDULE

No.	STANDARD			VEH Mast Arm	SIG POLE	MTG	PED SIG M+g	PPB		LED LUM	SPECIAL REQUIREMENTS
	TYPE	SMA	LMA					Ø	ARROW		
Ⓐ	26A-4-100	45'	15'	MAS	SV-1-T					235 W	D3-1 SIGN (BELLFLOWER RD) R3-4 SIGN [5]
Ⓑ	26A-4-100	40'	15'	MAS	SV-1-T					235 W	D3-1 SIGN (STATE RTE 18) R3-4 SIGN. REVERSE POLE [5]
Ⓒ	1-A				TV-2-T						
Ⓓ	26A-4-100	45'	15'	MAS	SV-1-T					235 W	D3-1 SIGN (BELLFLOWER RD) R3-4 SIGN [5]
Ⓔ	1-A				TV-1-T	SP-1-T					
Ⓕ	1-A				TV-1-T		6	→			
Ⓖ	15TS						4	←	165 W		
Ⓕ	1-A				TV-2-T	SP-1-T					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 SANDY TUNG
 FERDINAND DE LA CRUZ
 FERDINAND DE LA CRUZ
 ELECTRICAL DESIGN B

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING
SCALE: 1" = 20' **E-3**

LAST REVISION DATE PLOTTED => 14-APR-2015 1:34:47
 01-29-15 TIME PLOTTED => 1:34:47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B

FUNCTIONAL SUPERVISOR FERDINAND DE LA CRUZ	CHECKED BY	REVISOR BY SANDY TUNG	DATE 01-15
DESIGNED BY	DESIGNED BY	DATE	DATE

NOTES: (THIS SHEET ONLY)

1. INSTALL TEMPORARY LIGHTING BEFORE SCE LIGHTING IS REMOVED.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

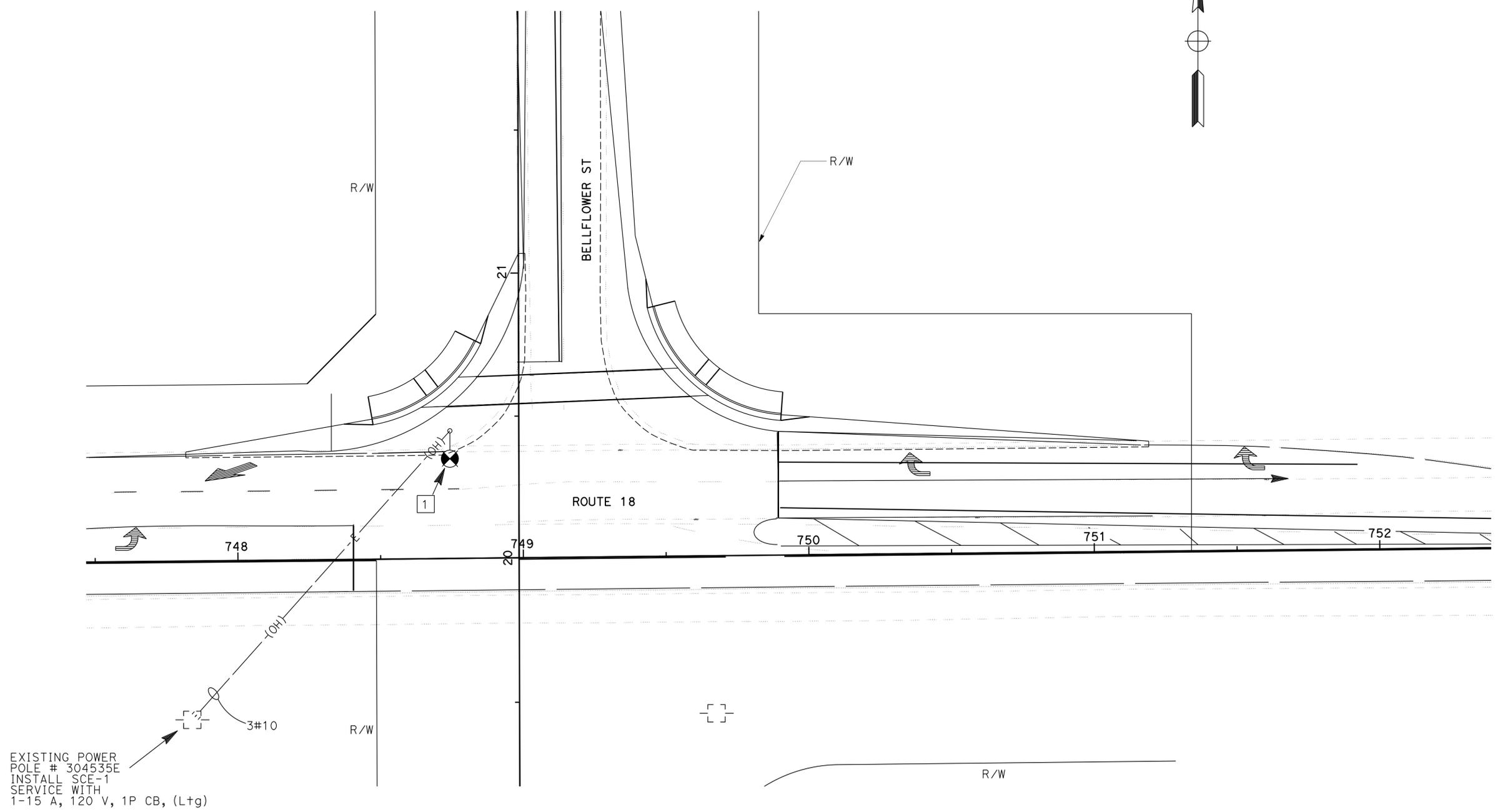
1. INSTALL TYPE LC-1 CONTROL AS PER ES-15D.
INSTALL LIGHTING STANDARD TYPE 31 WITH 235 W LED LUMINAIRE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	18	55

REGISTERED ELECTRICAL ENGINEER DATE 1-29-15
 1-29-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 FERDINAND DE LA CRUZ
 No. E17215
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

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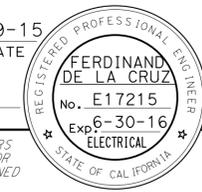


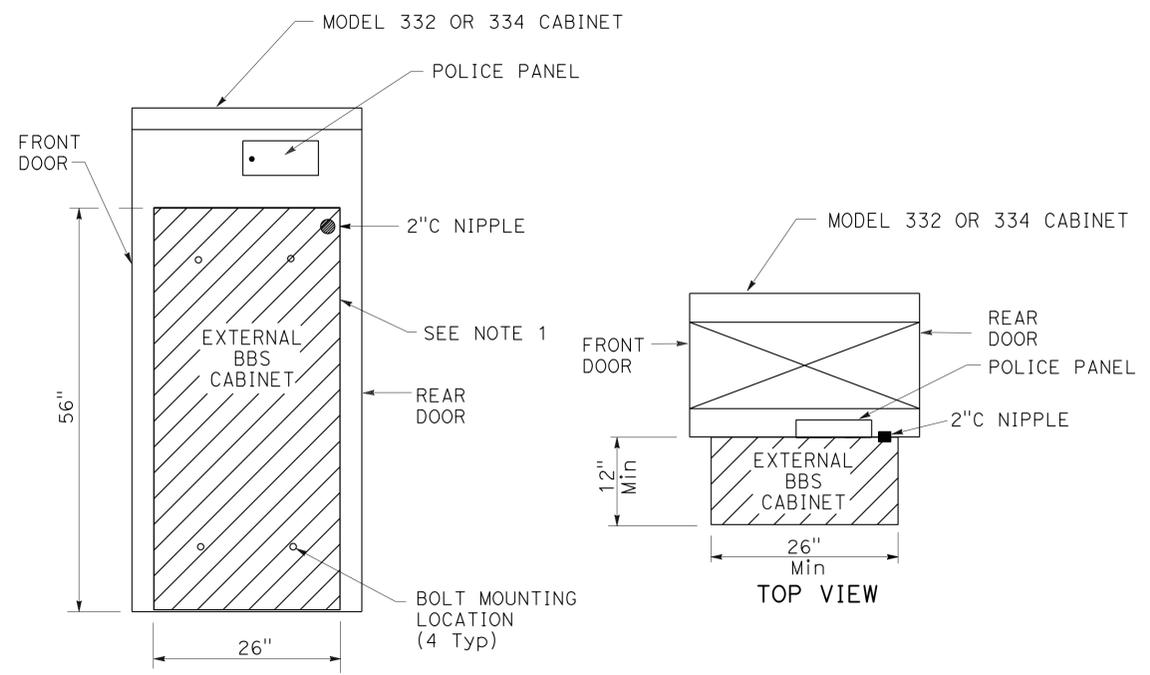
APPROVED FOR ELECTRICAL WORK ONLY

LIGHTING (TEMPORARY)

SCALE: 1" = 20'

E-4

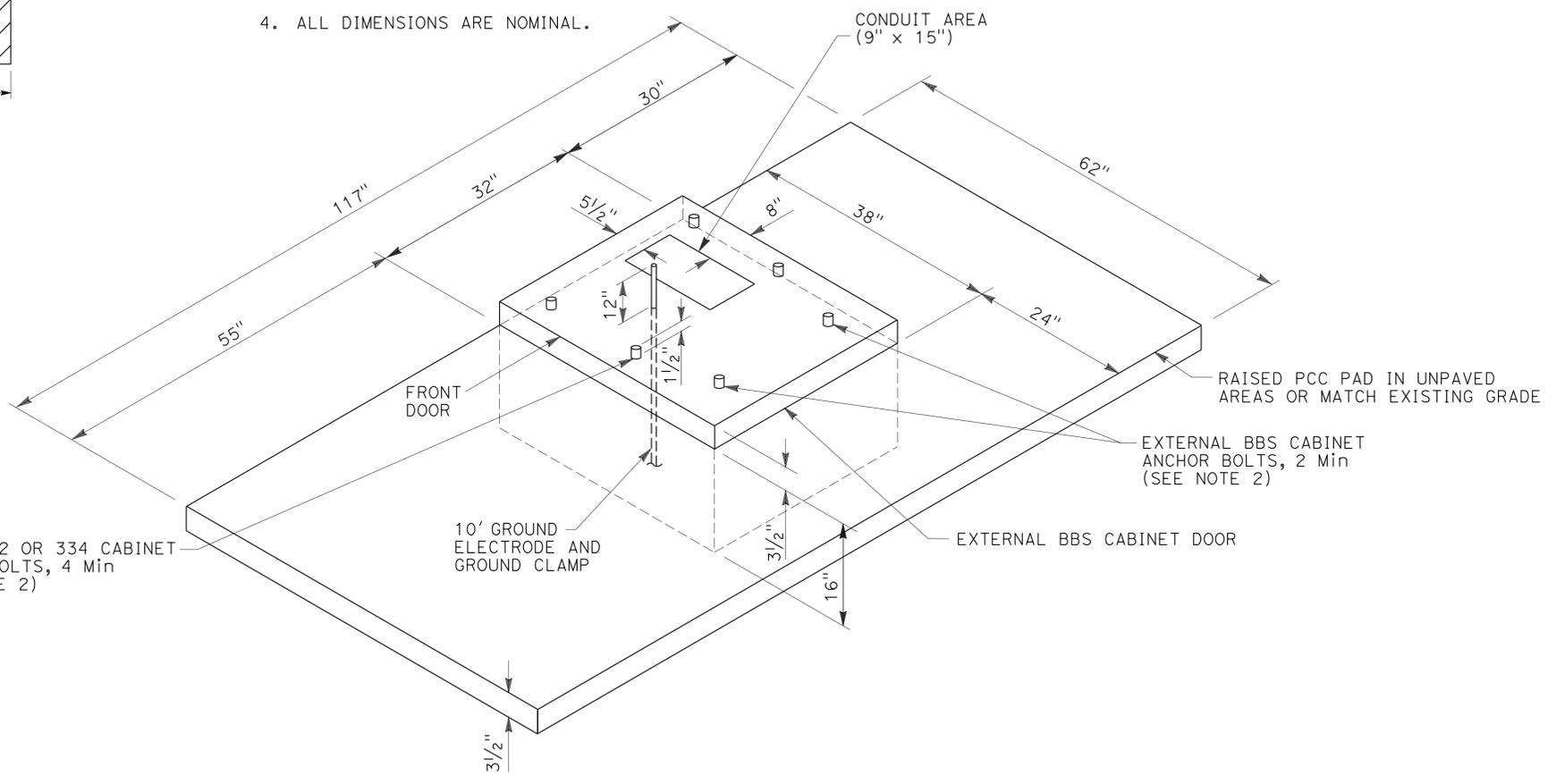
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	19	55
			1-29-15	REGISTERED ELECTRICAL ENGINEER DATE	
1-29-15 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332 OR 334 CABINET

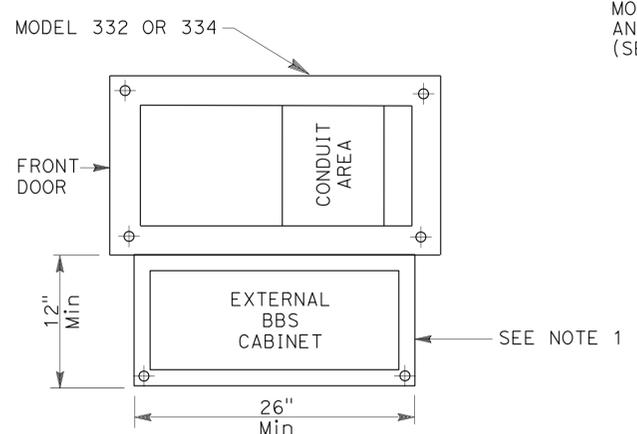
NOTES: (THIS SHEET ONLY)

1. THE EXTERNAL BBS CABINET SHALL BE MOUNTED TO THE MODEL 332 OR 334 CABINET WITH FOUR 18-8 STAINLESS STEEL HEX HEAD, FULLY-THREADED, 3/8"-16 X 1" BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR 3/8" BOLTS AND ARE 18-8 STAINLESS STEEL, 1" OUTSIDE DIAMETER, ROUND, AND FLAT; AND ONE K-LOCK NUT PER BOLT THAT IS 18-8 STAINLESS STEEL AND A HEX-NUT. THE ENGINEER WILL HAVE TO APPROVE THE BOLT MOUNTING LOCATION PRIOR TO INSTALLATION.
2. THE ANCHOR BOLTS SHALL BE 3/4" Dia X 15" WITH A 2"-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION SHALL DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE THE ANCHOR BOLTS AND ITS LOCATION IN THE FOUNDATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BBS CABINET PRIOR TO CONSTRUCTING THE FOUNDATION OF THE MODIFIED PORTION OF THE STD MODEL 332 AND 334 CABINET FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANY NECESSARY DEVIATIONS PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE NOMINAL.



MODIFIED MODEL 332 AND 334 CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM (BBS)

(FOR DIMENSIONS AND DETAILS NOT SHOWN AND ADDITIONAL NOTES, SEE SHEET ES-3C OF THE STANDARD PLANS FOR MODEL 332 AND 334 CABINETS)



BASE PLAN FOR BBS MOUNTED TO THE MODEL 332 OR 334 CABINET

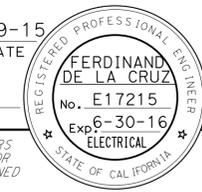
(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE SHEET A6-1 TO A6-4, CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

BBS FOUNDATION DETAILS

APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL DETAILS
NO SCALE **E-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 SANDY TUNG
 REVISOR: FERDINAND DE LA CRUZ
 DATE: 12-14
 FD

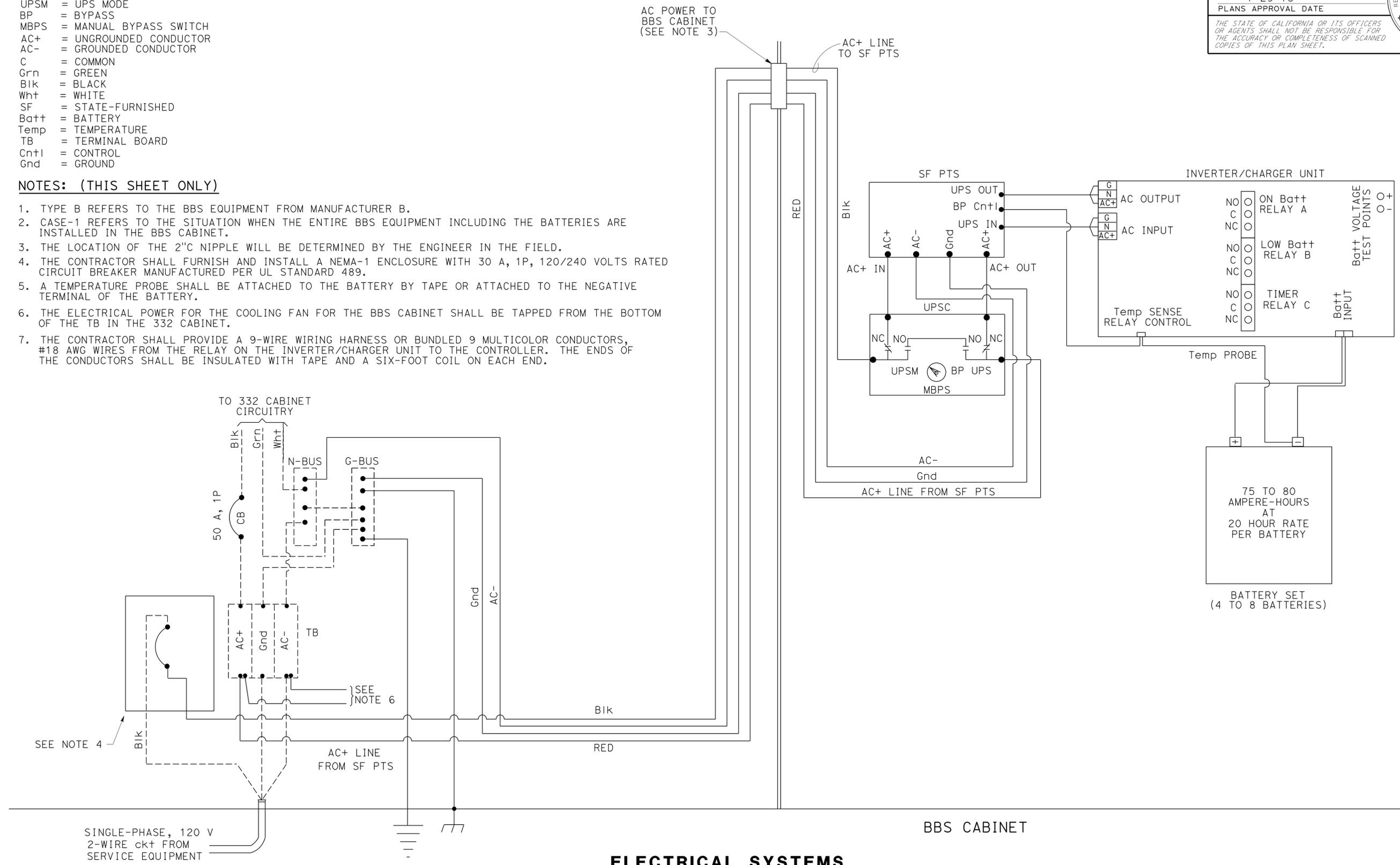
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	20	55
 REGISTERED ELECTRICAL ENGINEER DATE 1-29-15					
1-29-15 PLANS APPROVAL DATE			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		

LEGEND: (THIS SHEET ONLY)

- PTS = POWER TRANSFER SWITCH
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
- UPSM = UPS MODE
- BP = BYPASS
- MBPS = MANUAL BYPASS SWITCH
- AC+ = UNGROUNDED CONDUCTOR
- AC- = GROUNDED CONDUCTOR
- C = COMMON
- Grn = GREEN
- Blk = BLACK
- Wht = WHITE
- SF = STATE-FURNISHED
- Batt = BATTERY
- Temp = TEMPERATURE
- TB = TERMINAL BOARD
- Cntl = CONTROL
- Gnd = GROUND

NOTES: (THIS SHEET ONLY)

1. TYPE B REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER B.
2. CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
3. THE LOCATION OF THE 2" C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE 332 CABINET.
7. THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, #18 AWG WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.



**ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM,
TYPE B, CASE-1)**

APPROVED FOR ELECTRICAL WORK ONLY

**ELECTRICAL DETAILS
NO SCALE
E-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 DESIGNED BY: SANDY TUNG
 CHECKED BY: FERDINAND DE LA CRUZ
 REVISIONS: 12-14 (FD)
 REVISIONS: 12-14 (FD)
 REVISIONS: 12-14 (FD)

USERNAME => s110420
DGN FILE => 0800020091u006.dgn

RELATIVE BORDER SCALE IS IN INCHES



UNIT 2292

PROJECT NUMBER & PHASE 08000200910

BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 14-APR-2015
 01-29-15 TIME PLOTTED => 13:47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY
 CHECKED BY
 SANDY TUNG
 FERDINAND DE LA CRUZ
 REVISED BY
 DATE REVISED
 FD
 12-14

NOTE:

THE QUANTITIES SHOWN IN TABLES ARE NOT SEPARATE PAY ITEMS, FOR INFORMATION ONLY.
 FOR COMPLETE ELECTRICAL WORK, SEE ELECTRICAL PLAN SHEETS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	22	55

1-29-15
 REGISTERED ELECTRICAL ENGINEER DATE
 1-29-15
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
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SIGNAL AND LIGHTING

SHEET No.	2 "C TYPE 3	3"C TYPE 3	4"C TYPE 3	No. 5 PB	No. 6 PB	No. 8 (G)	No. 6 CONDUCTOR	No. 8 CONDUCTOR	3 CSC CABLE	12 CSC CABLE	DLC CABLE	VIVIDS POWER CABLE	VIVIDS VIDEO CABLE	TYPE E LOOPS	1/2"C TYPE 3
E-1	150	250	200	8	2	600	200	1200	1500	1500	3100	550	550	1	150
E-2				2		600					3100			1	150

SHEET No.	TYPE III-CF SERVICE ENCLOSURE	SERVICE ENCLOSURE FOUNDATION	MODEL 332 CABINET	MODEL 332 CABINET FOUNDATION	1A POLES	15TS POLES	26A-4-100 POLES	FOUNDATION 1A	STANDARD FOUNDATION CASE 4	BATTERY BACK-UP SYSTEM				
E-1	1	1	1	1	4	1	3	4	4	1				

**ELECTRICAL QUANTITIES
 E-8**

APPROVED FOR ELECTRICAL WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	23	55

Grace M. Tsushima
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 1-29-15

UNIT OF MEASUREMENT SYMBOLS:

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

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:

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 ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	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.

REVISED STANDARD PLAN RSP A10B

	M
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
	N
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
	O
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
	P
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

	P continued
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
	Q
Qty	QUANTITY
	R
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

	S
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
ℒ	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
	T
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

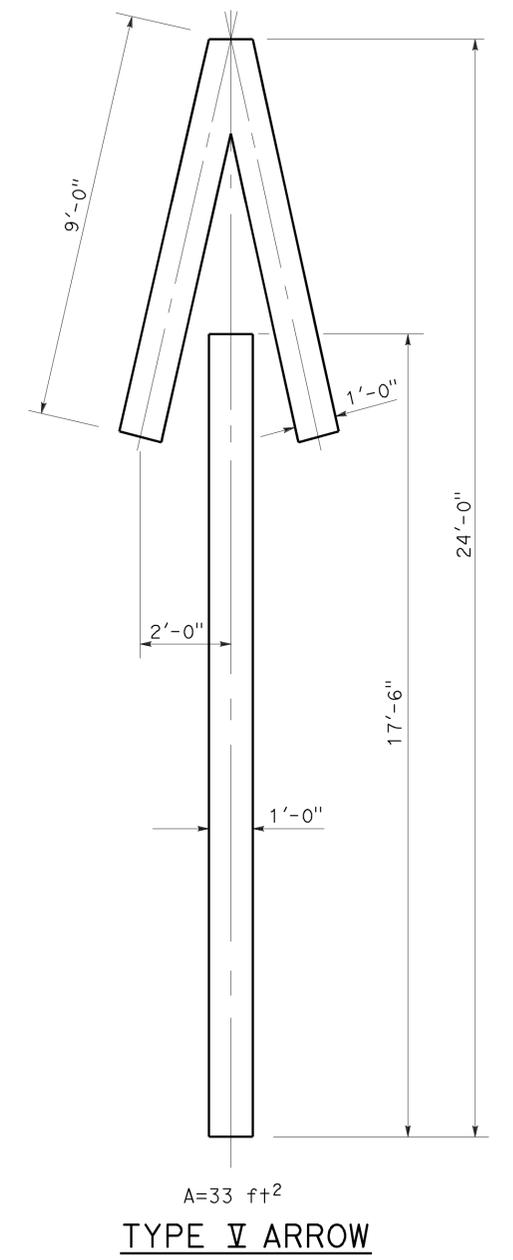
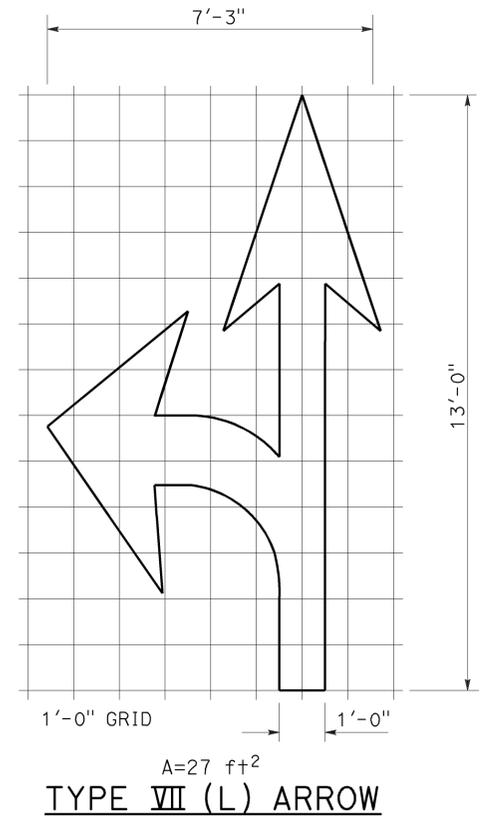
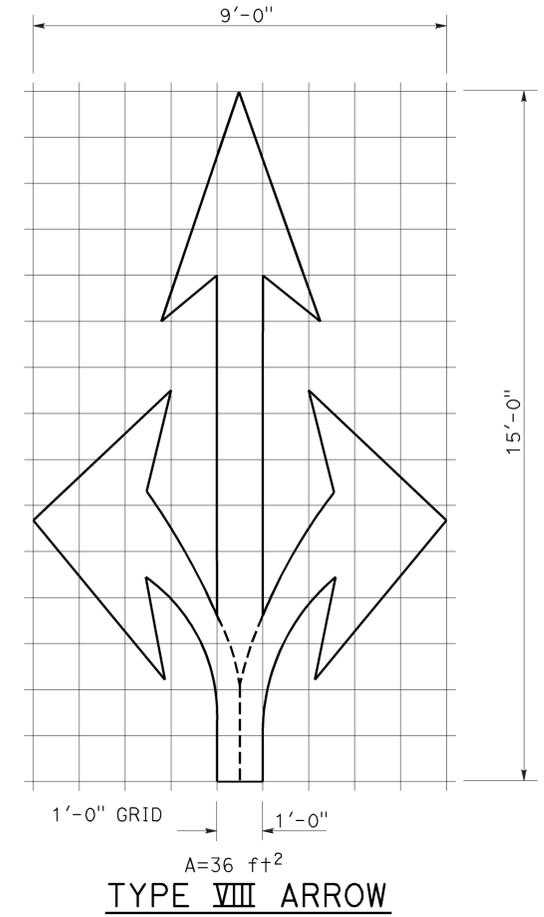
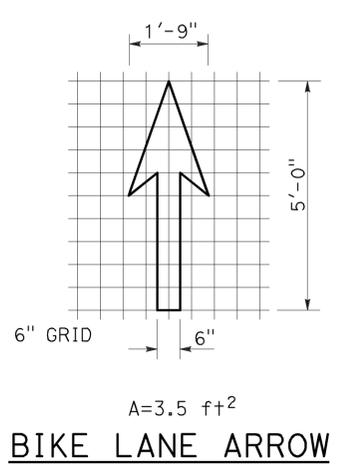
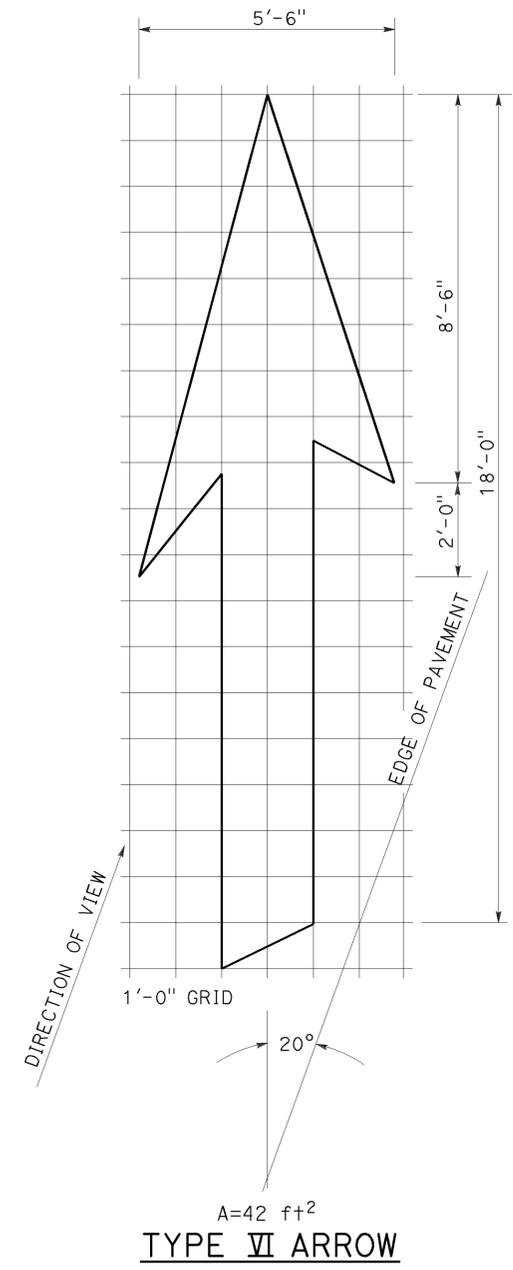
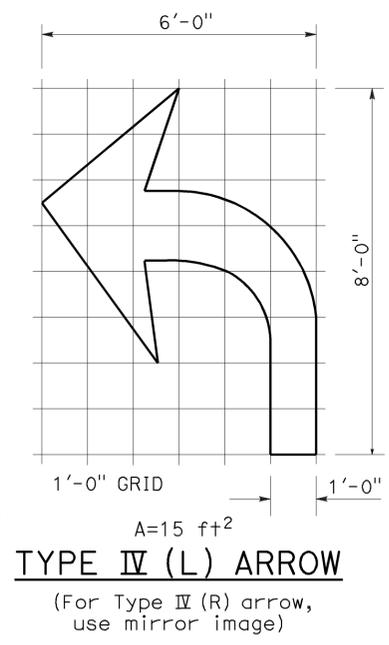
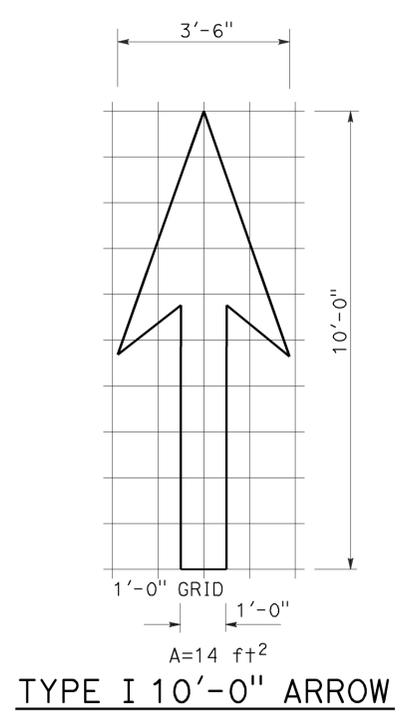
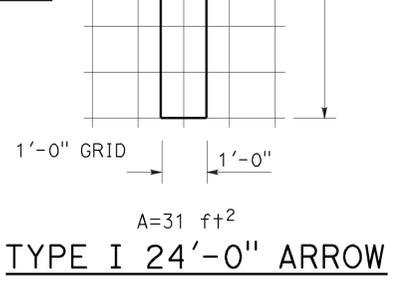
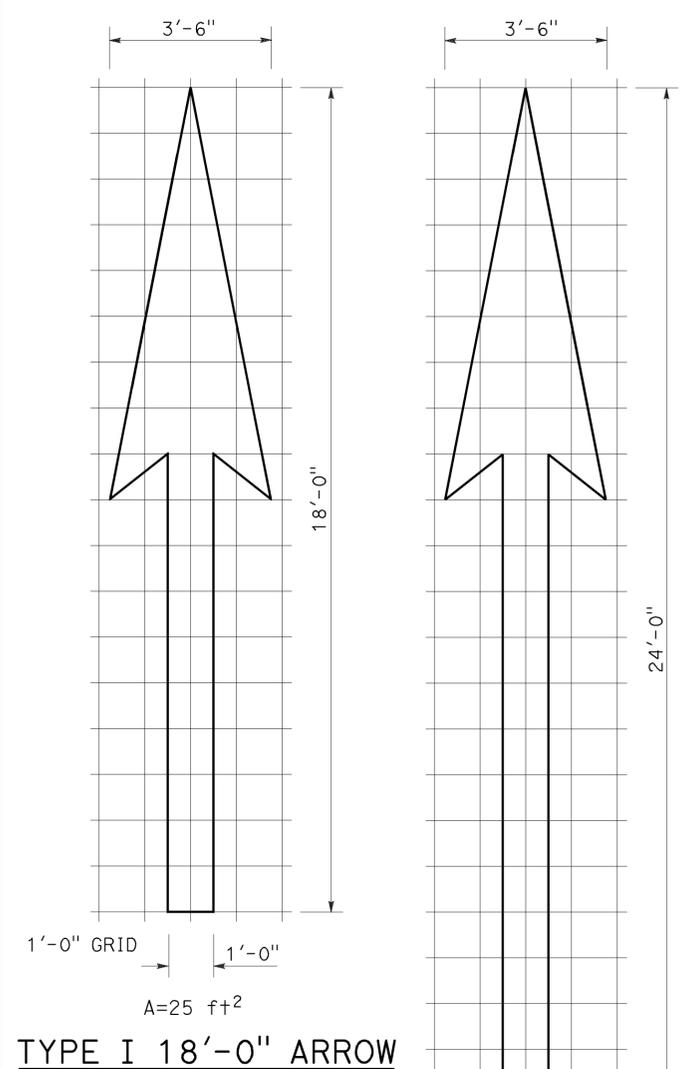
	T continued
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL
	U
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
	V
V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME
	W
W	WEST, WIDTH
WB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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	24	55

Robert L. McLaughlin
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Roberta L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 1-29-15



NOTE:
Minor variations in dimensions may be accepted by the Engineer.

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

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

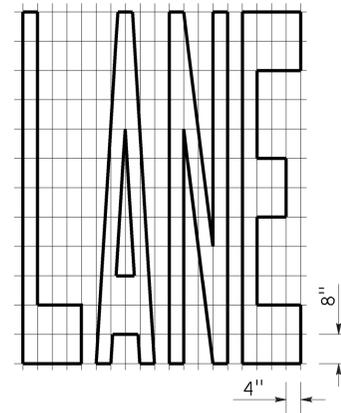
Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

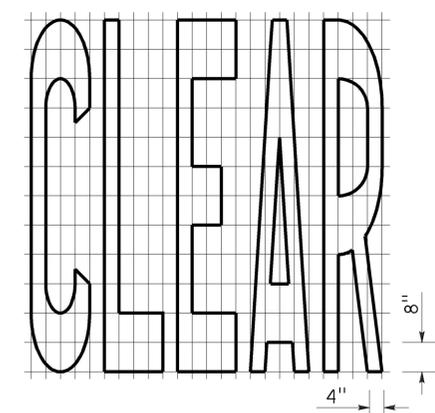
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REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

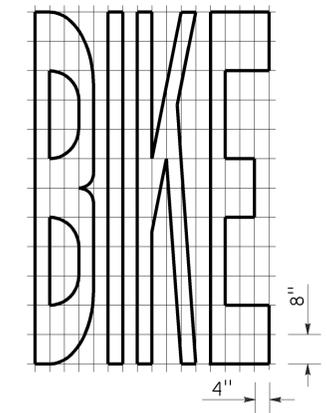
TO ACCOMPANY PLANS DATED 1-29-15



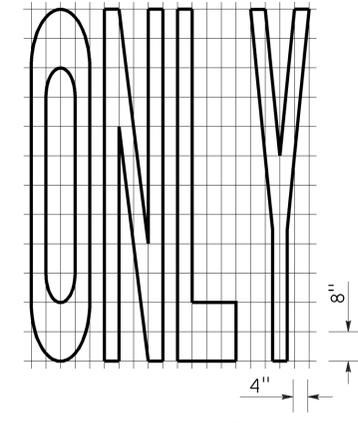
A=24 ft²



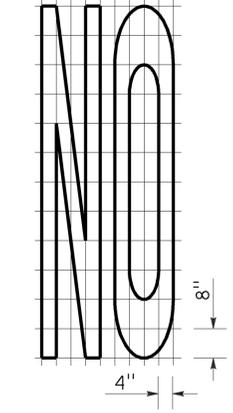
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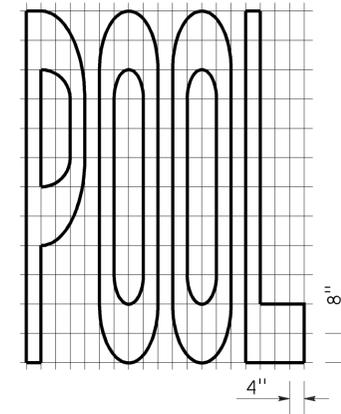
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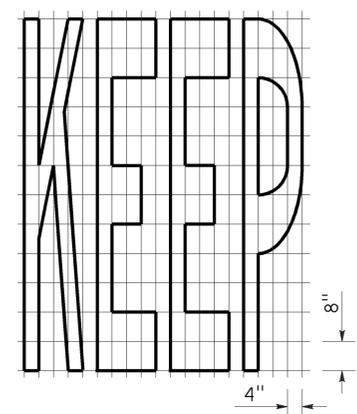
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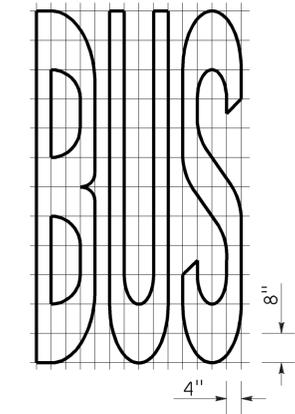
A=14 ft²



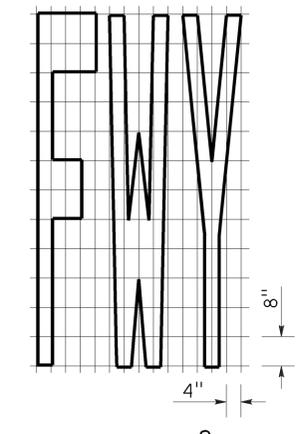
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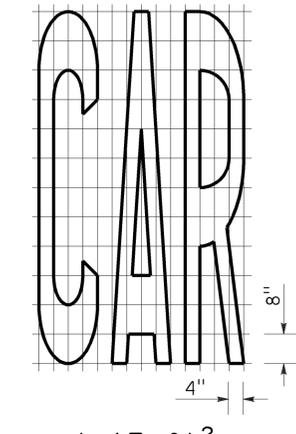
A=24 ft²



A=20 ft²

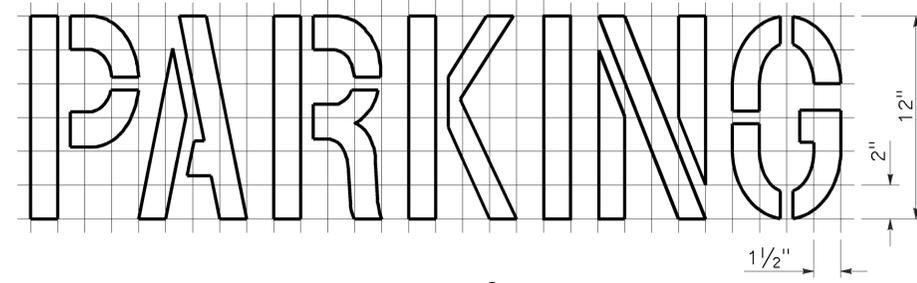
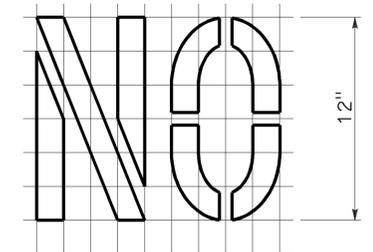


A=16 ft²

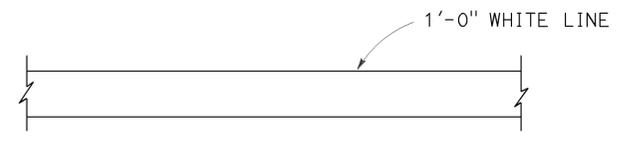


A=17 ft²

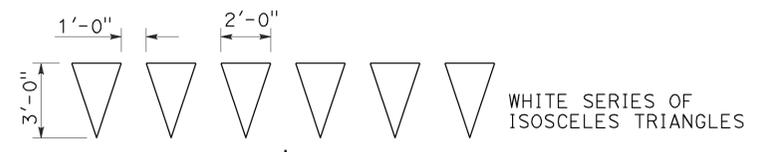
WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES**

NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	26	55

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

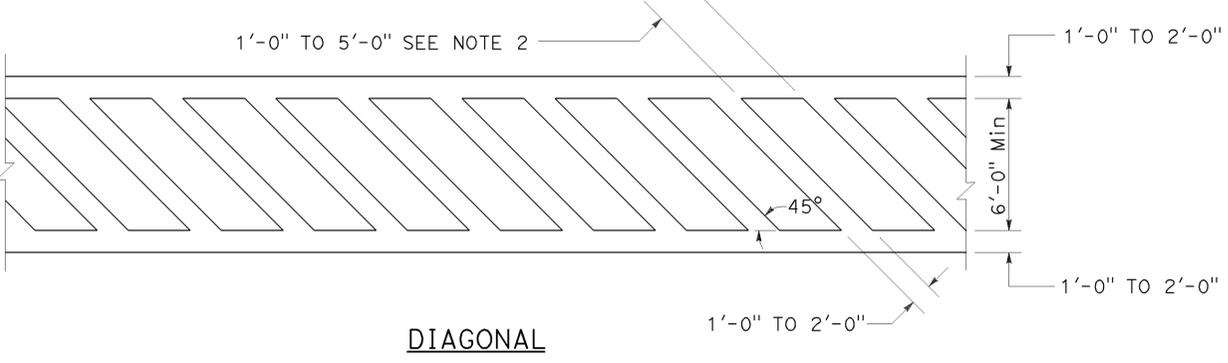
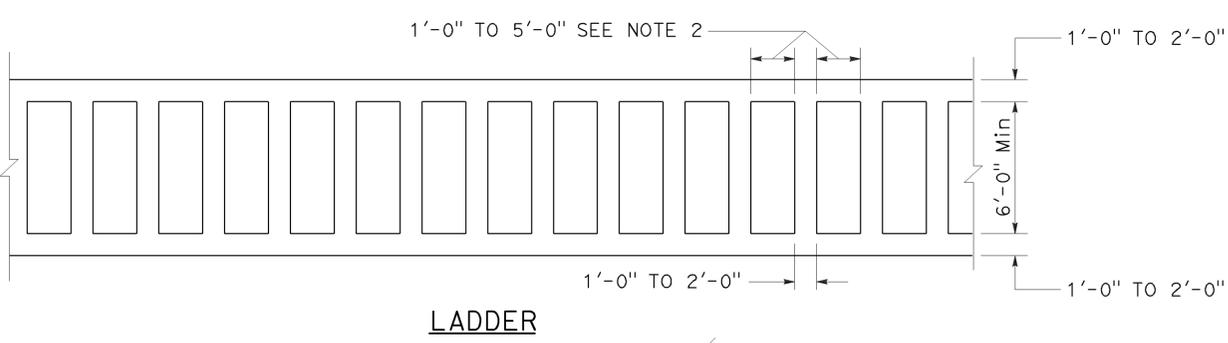
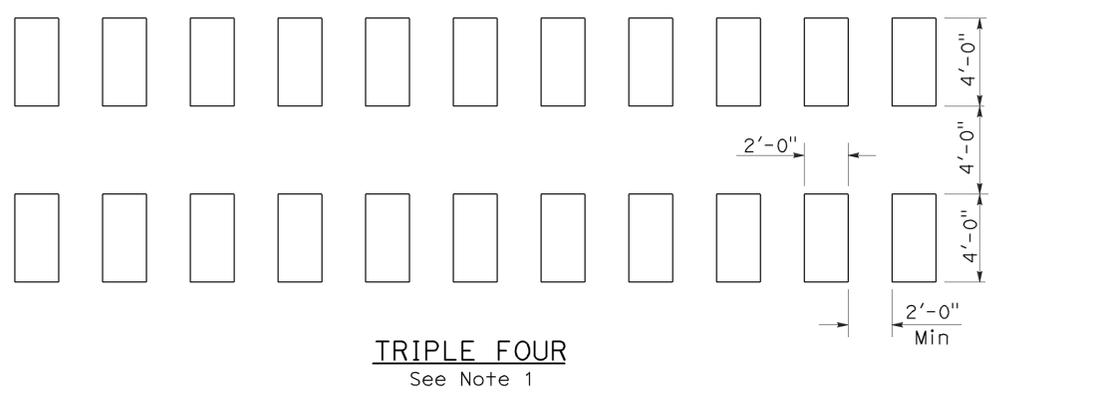
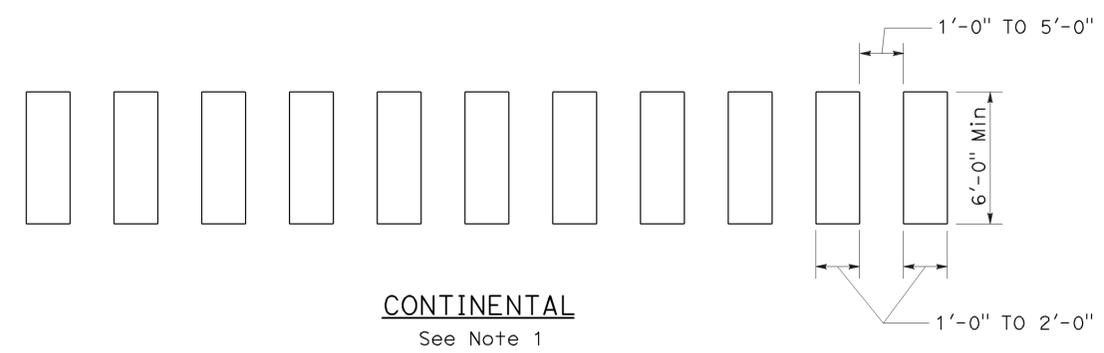
July 20, 2012
PLANS APPROVAL DATE

Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
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 1-29-15

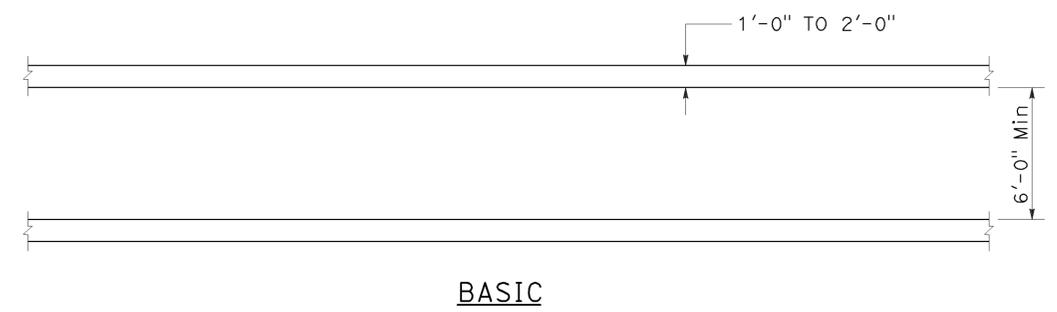
2010 REVISED STANDARD PLAN RSP A24F



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



BASIC

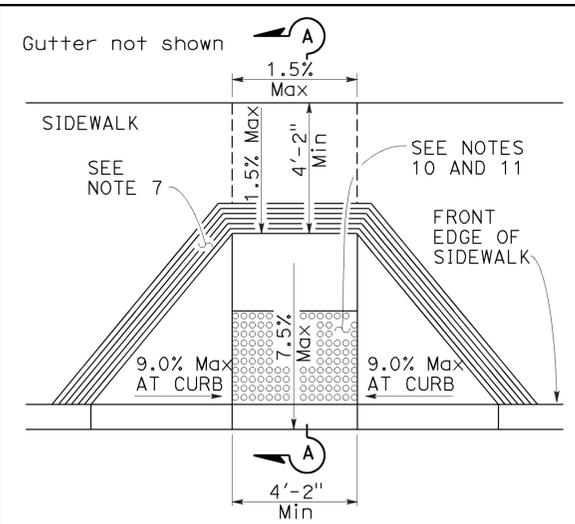
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
CROSSWALKS**

NO SCALE
RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED 2010.

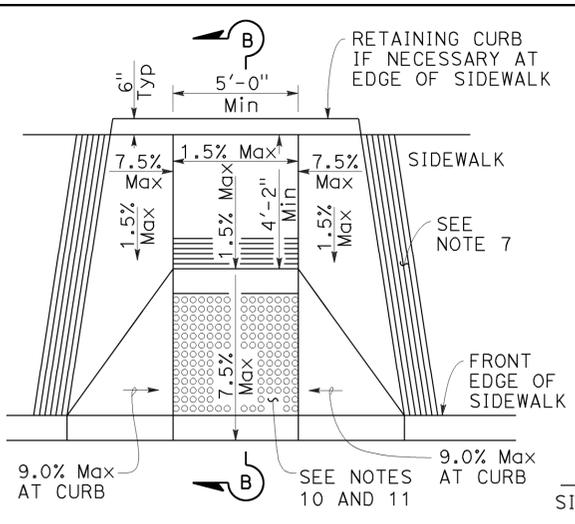
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SbD	18	101.9	27	55

H. David Cordova
 REGISTERED CIVIL ENGINEER
 No. C41957
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

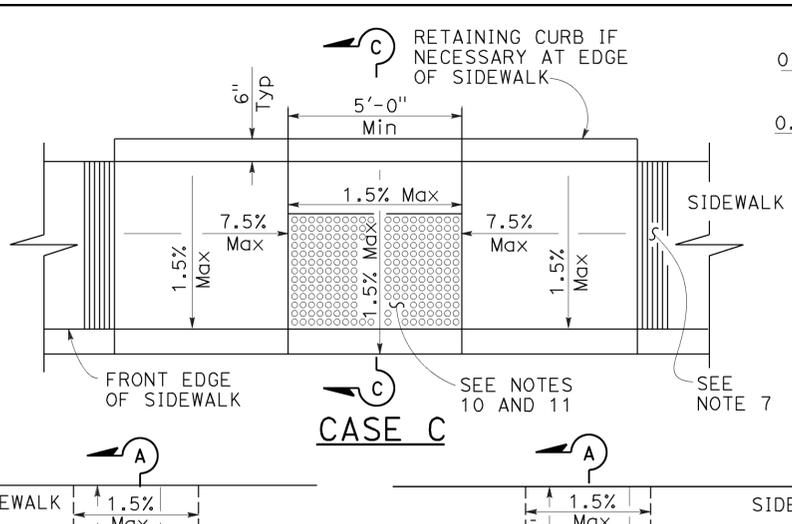
March 21, 2014
 PLANS APPROVAL DATE
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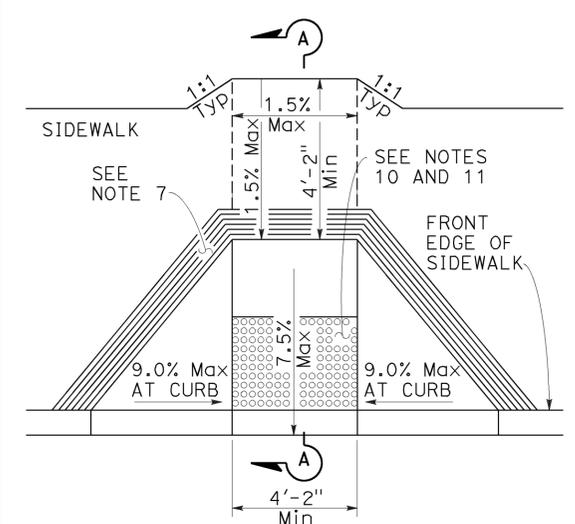
CASE A



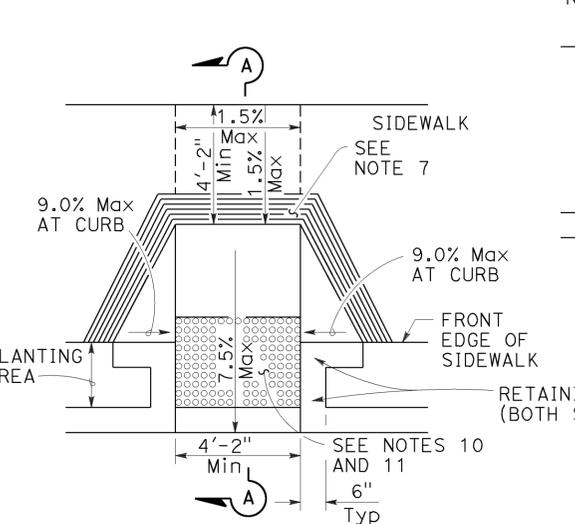
CASE B



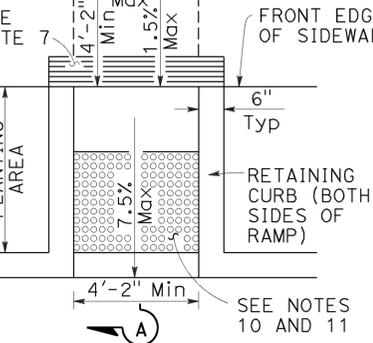
CASE C



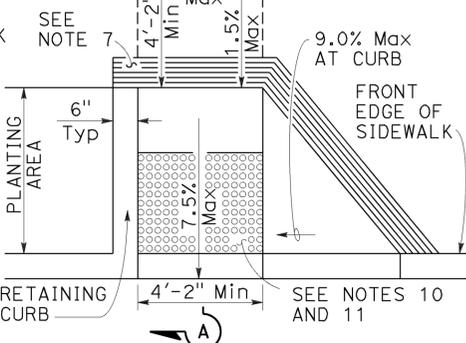
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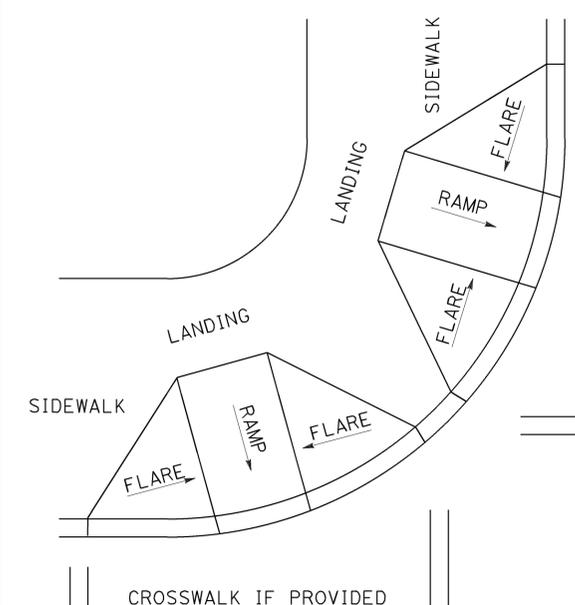
CASE E



CASE F



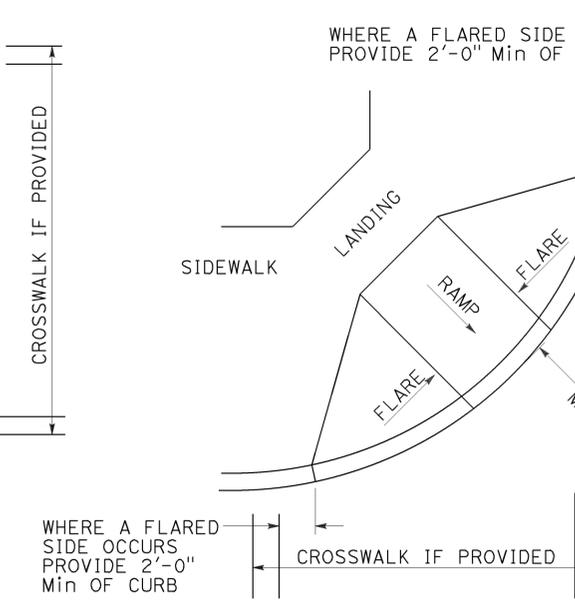
CASE G



DETAIL A

TYPICAL TWO-RAMP CORNER INSTALLATION

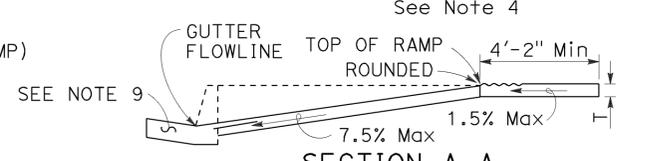
See Note 1



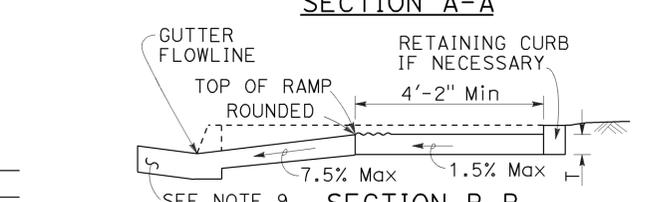
DETAIL B

TYPICAL ONE-RAMP CORNER INSTALLATION

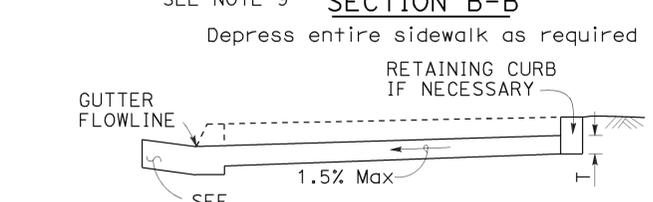
See Notes 1 and 3



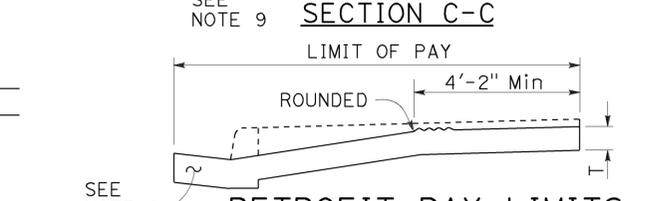
SECTION A-A



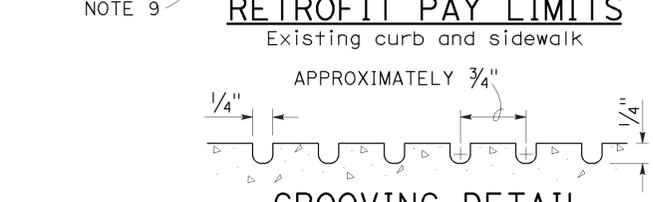
SECTION B-B



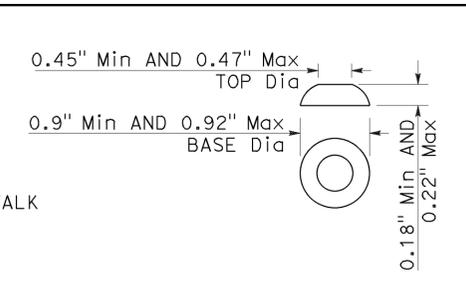
SECTION C-C



RETROFIT PAY LIMITS



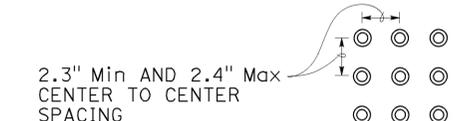
GROOVING DETAIL



RAISED TRUNCATED DOME

NOTES:

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush (no lip) and free of abrupt changes.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1:20 (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide curb ramp. Detectable Warning Surfaces shall conform to the requirements in the Standard Specifications.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3 1/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



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

See Note 10

CURB RAMP DETAILS
NO SCALE

RSP A88A DATED MARCH 21, 2014 SUPERSEDES RSP A88A DATED JULY 19, 2013 AND STANDARD PLAN A88A DATED MAY 20, 2011 - PAGE 121 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A88A

2010 REVISED STANDARD PLAN RSP A88A

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
Ck+	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
08	SBd	18	101.9	28	55

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 1-29-15

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
Ω	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
μ	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
08	SBd	18	101.9	29	55

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 1-29-15

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

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)

SIGNAL EQUIPMENT Cont

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

SERVICE EQUIPMENT

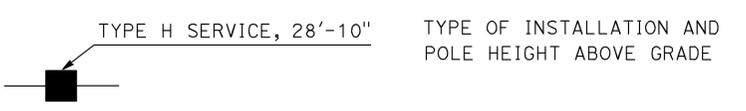
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		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

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



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

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

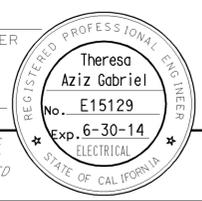
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

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

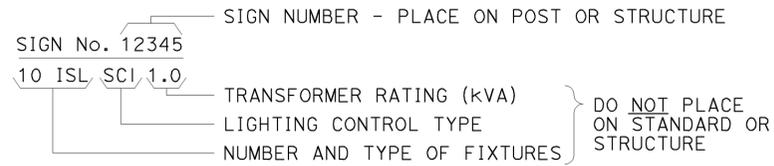
2010 REVISED STANDARD PLAN RSP ES-1B



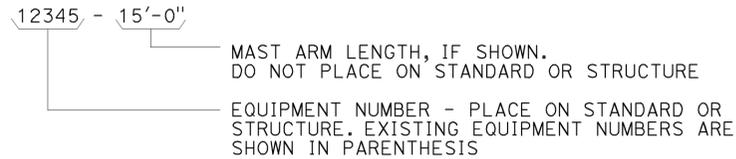
TO ACCOMPANY PLANS DATED 1-29-15

EQUIPMENT IDENTIFICATION

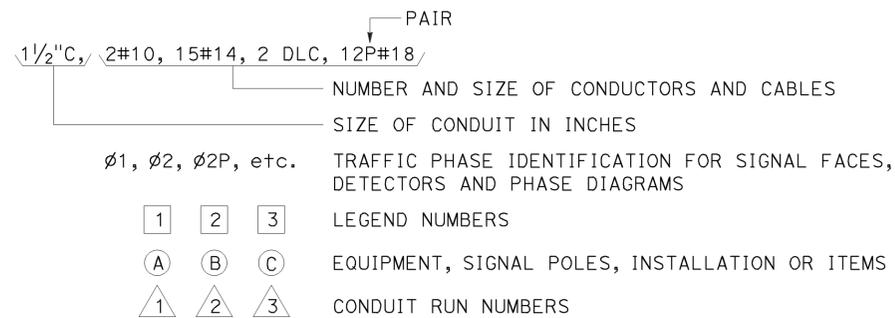
ILLUMINATED SIGN IDENTIFICATION NUMBER:



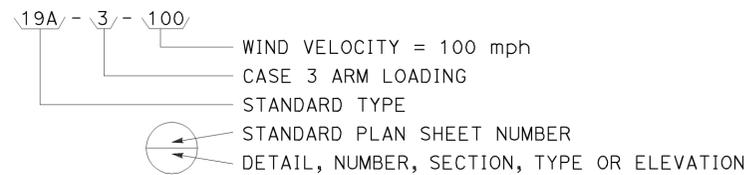
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



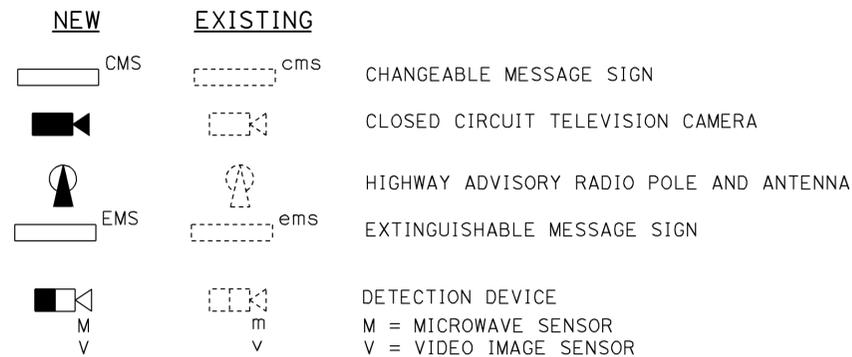
CONDUIT AND CONDUCTOR IDENTIFICATION:



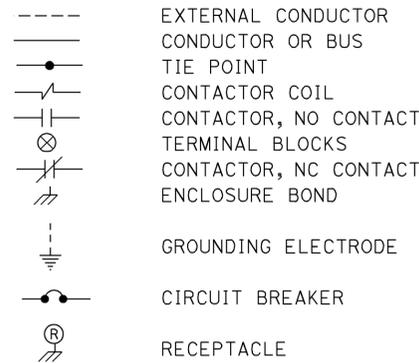
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



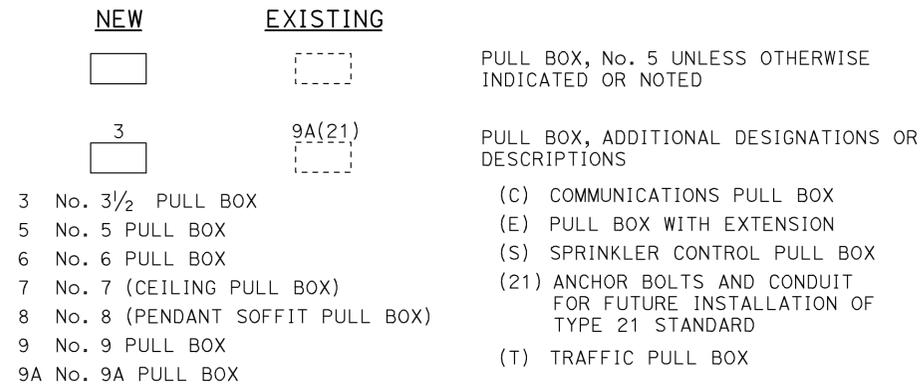
MISCELLANEOUS EQUIPMENT



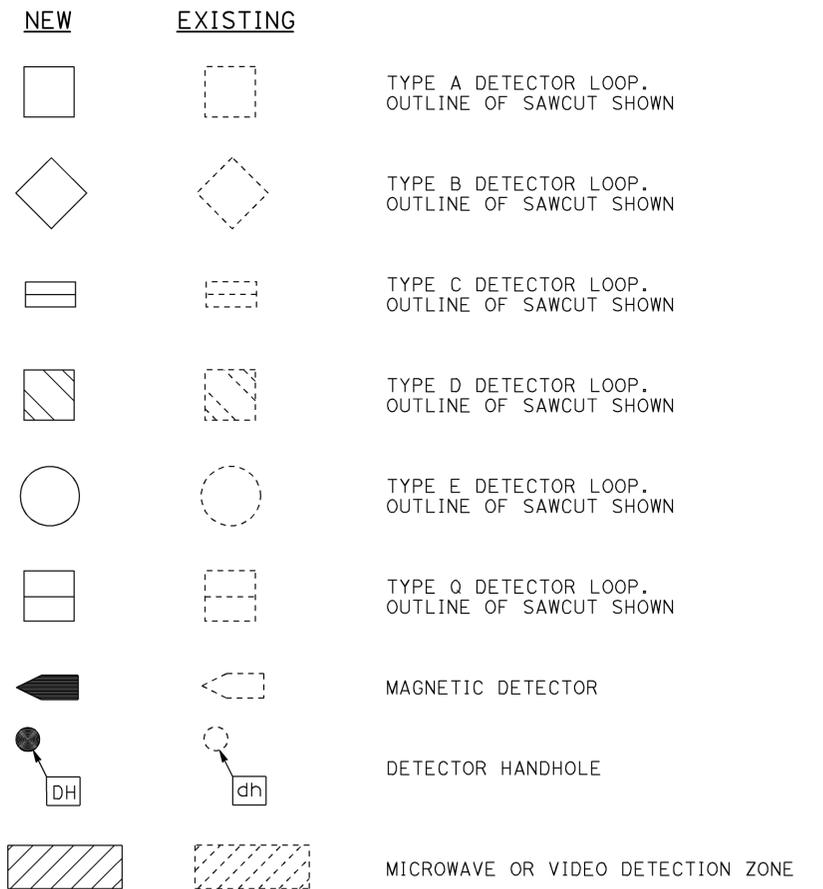
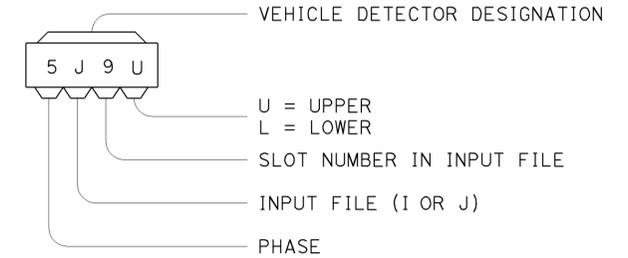
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

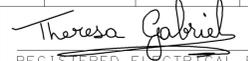
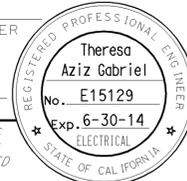
ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

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
08	SBd	18	101.9	30	55
 REGISTERED ELECTRICAL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
					
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TO ACCOMPANY PLANS DATED 1-29-15

PLAN VIEW OF OTHER
SIDE MOUNTINGS

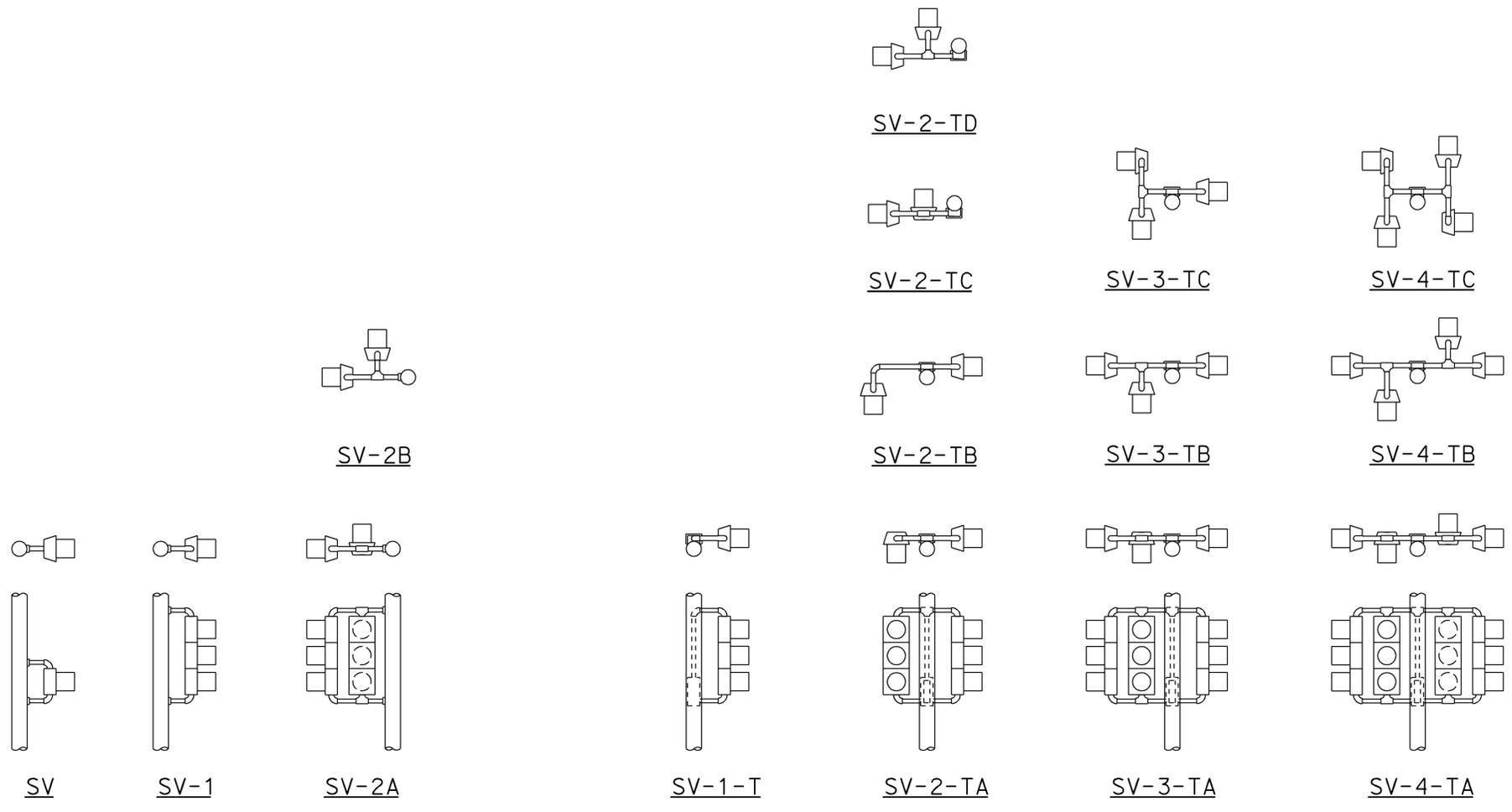
ABBREVIATIONS:

- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

PLAN VIEW OF
TOP MOUNTINGS



SIDE MOUNTINGS

TOP MOUNTINGS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(VEHICULAR SIGNAL HEADS
AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4A
DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4A

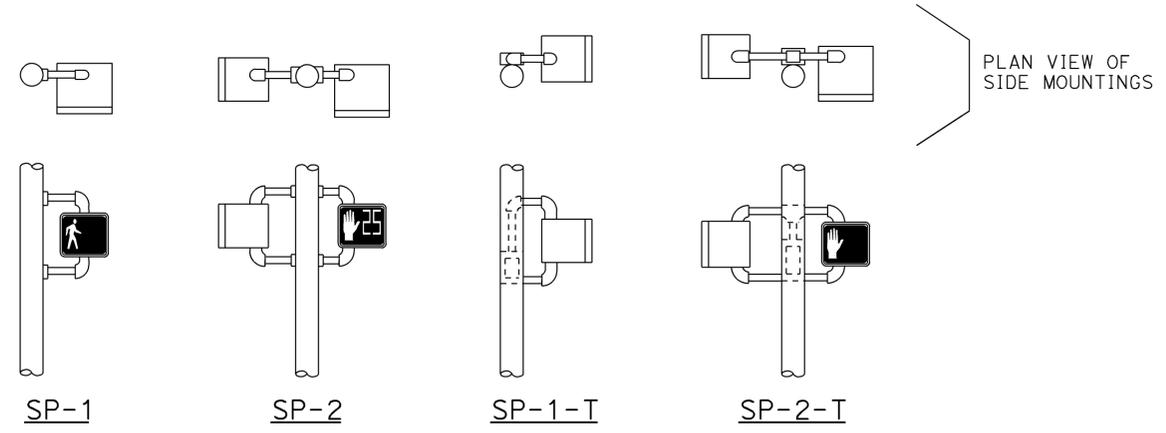
2010 REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	32	55

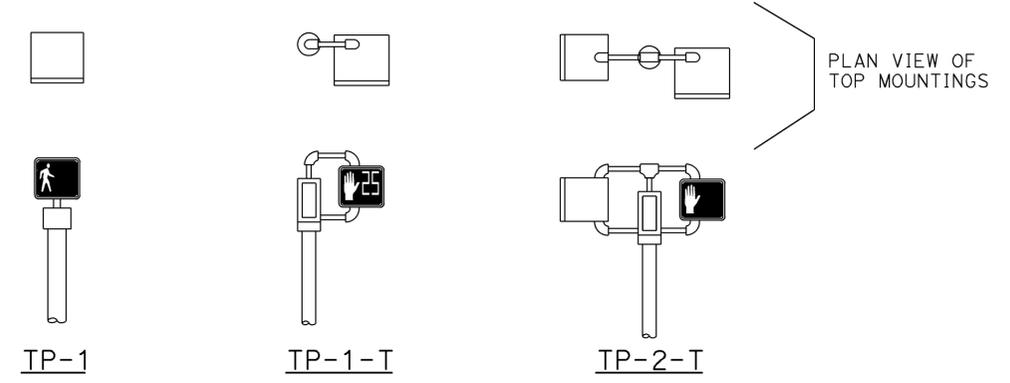
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 17, 2014
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 1-29-15



SIDE MOUNTINGS



TOP MOUNTINGS

PEDESTRIAN SIGNALS AND MOUNTINGS

DETAIL A

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Standard Plan ES-4D for attachment fittings details.

ABBREVIATIONS:

- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



PERSON WALKING INTERVAL FLASHING UPRaised HAND INTERVAL STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN

DETAIL B



PERSON WALKING INTERVAL STEADY UPRaised HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN

DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(PEDESTRIAN SIGNAL)**

NO SCALE

RSP ES-4B DATED OCTOBER 17, 2014 SUPERSEDES RSP ES-4B DATED JULY 19, 2013 AND STANDARD PLAN ES-4B DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4B

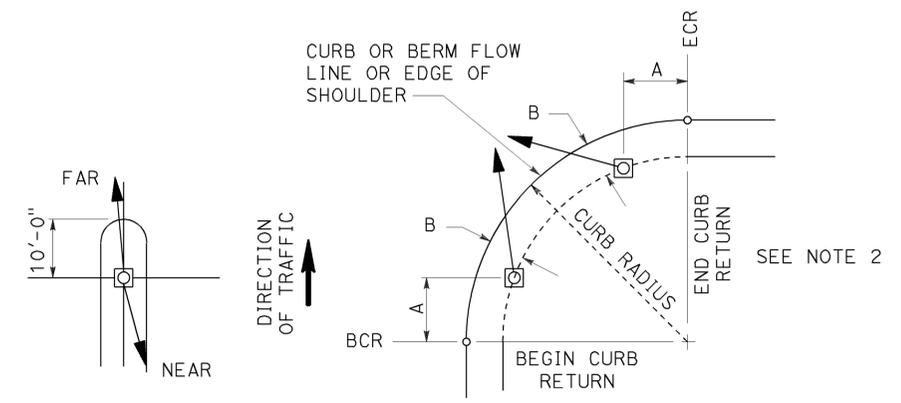
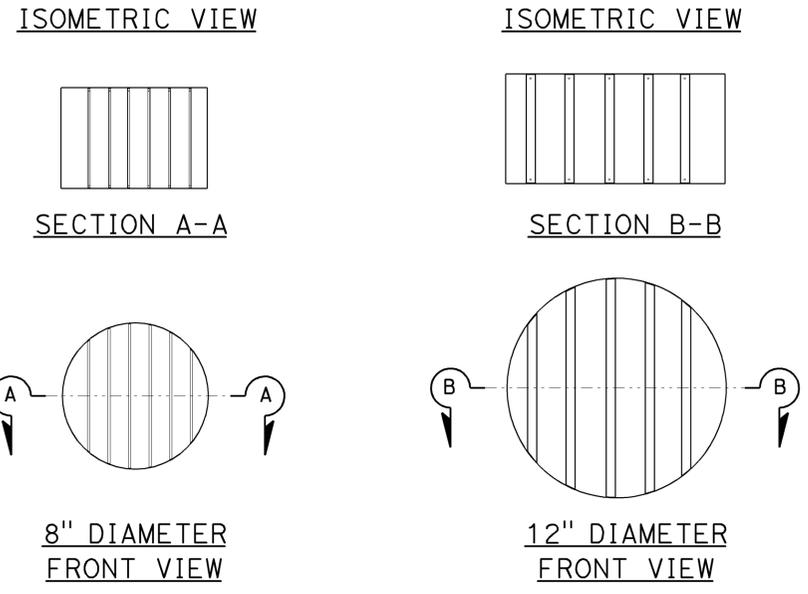
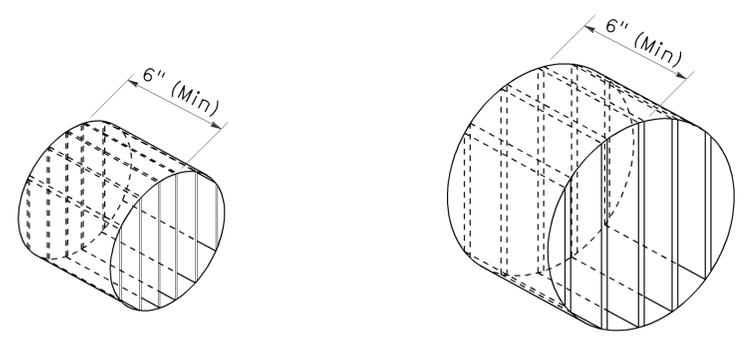
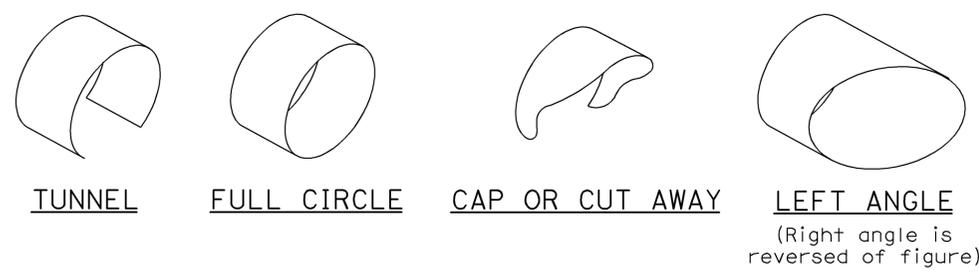
2010 REVISED STANDARD PLAN RSP ES-4B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	33	55

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

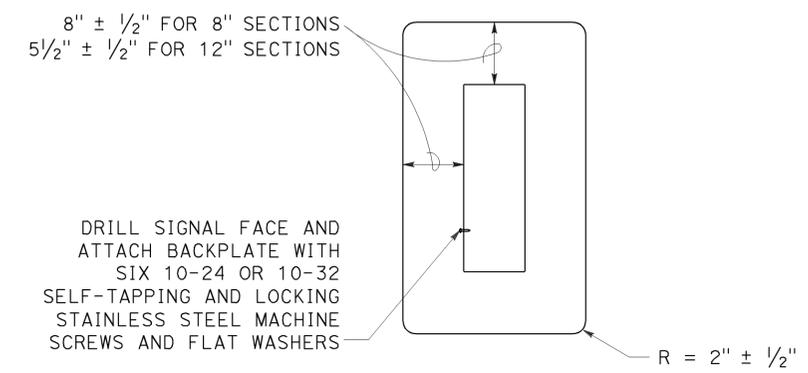
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TO ACCOMPANY PLANS DATED 1-29-15



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.

VISORS



8" AND 12" SECTIONS

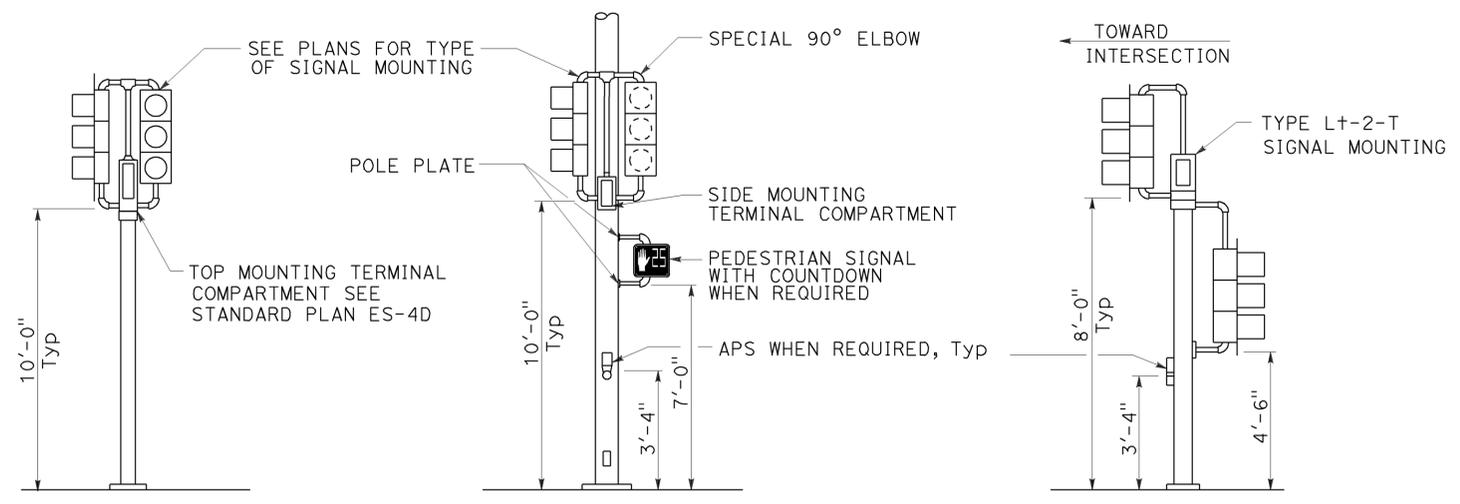
BACKPLATE

1/16" minimum thickness
 3001-14 aluminum or plastic when specified

DIRECTIONAL LOUVER

Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

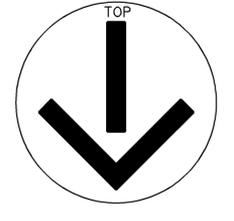
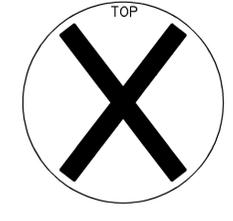
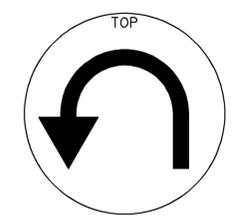
Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans



SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-4C

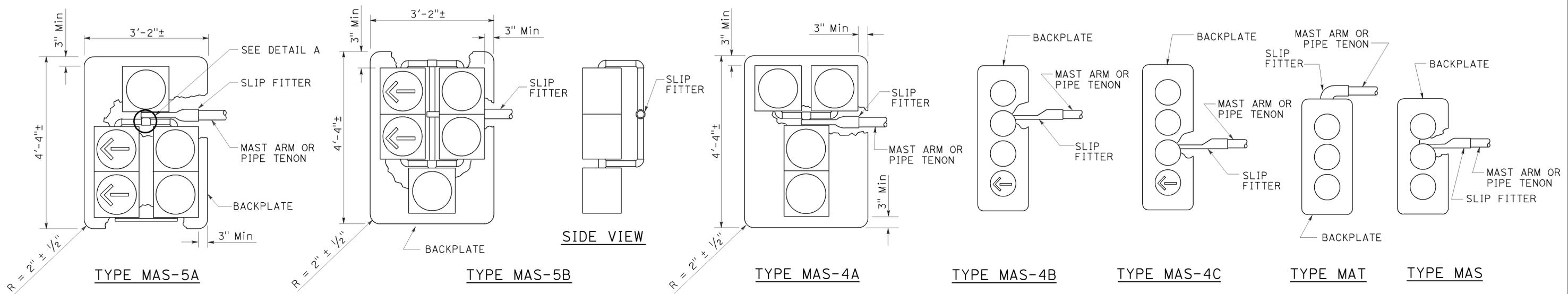
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	34	55

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

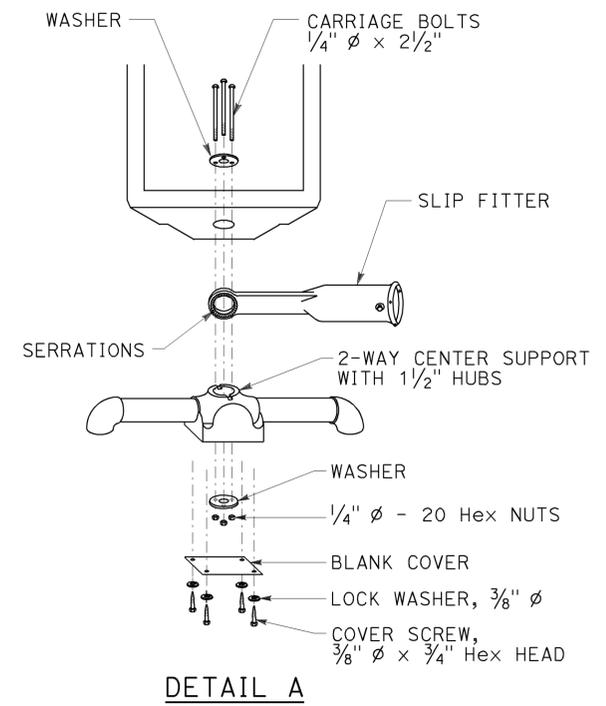
REGISTERED PROFESSIONAL ENGINEER
 Theresa
 Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

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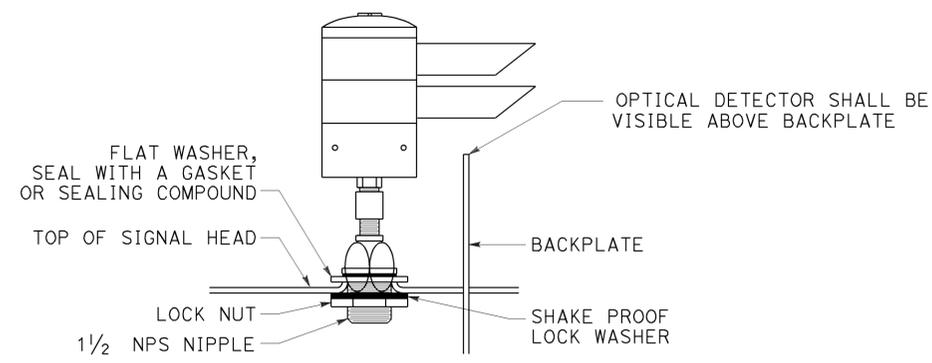
TO ACCOMPANY PLANS DATED 1-29-15



MAST ARM MOUNTINGS



DETAIL A



DETAIL B

**OPTICAL DETECTOR MOUNTING FOR
EMERGENCY VEHICLE DETECTION SYSTEM**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (VEHICULAR SIGNAL HEADS AND
 OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	35	55

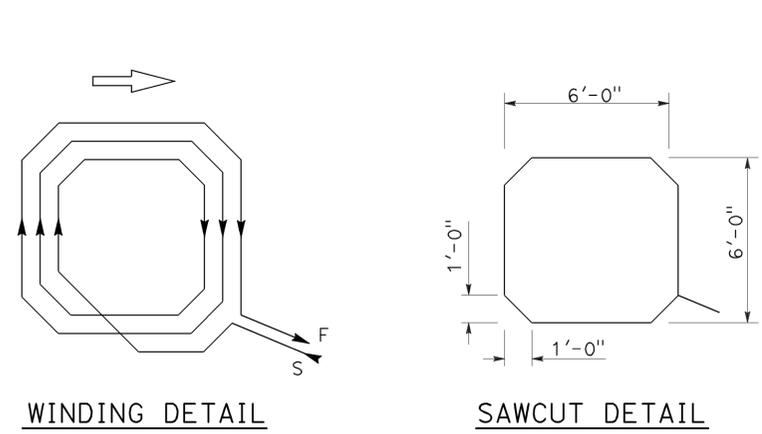
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

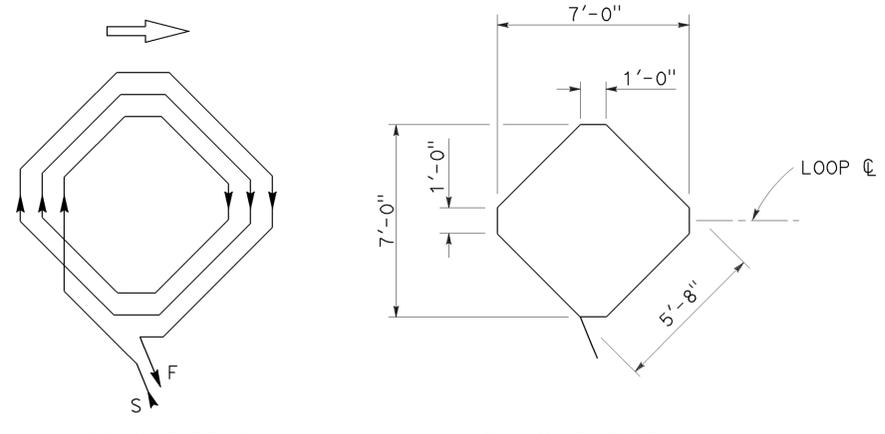
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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.

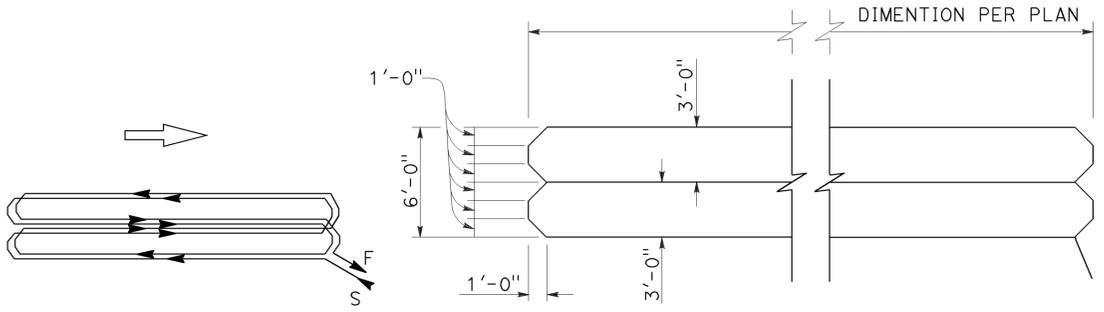
TO ACCOMPANY PLANS DATED 1-29-15



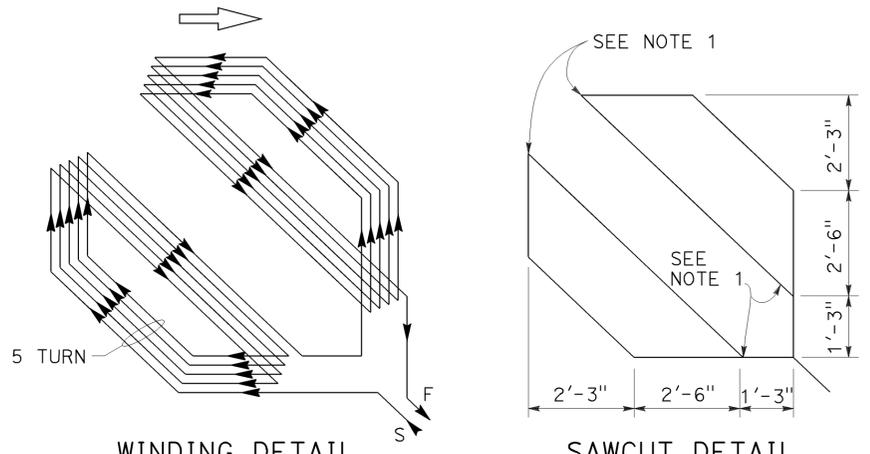
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



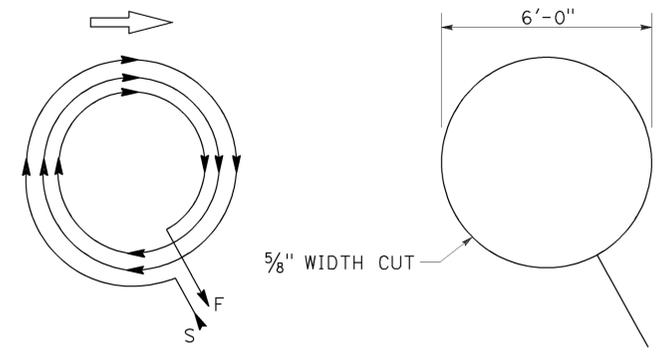
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



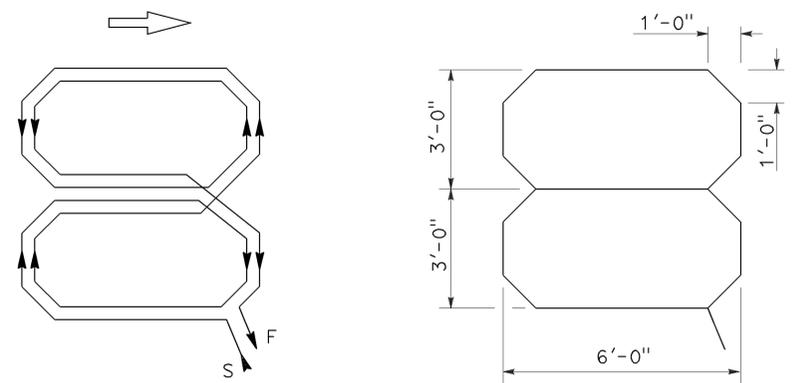
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



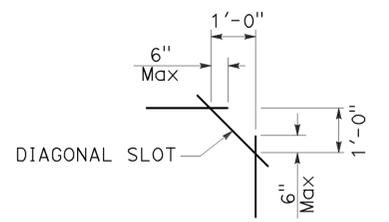
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



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**

- 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.

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.

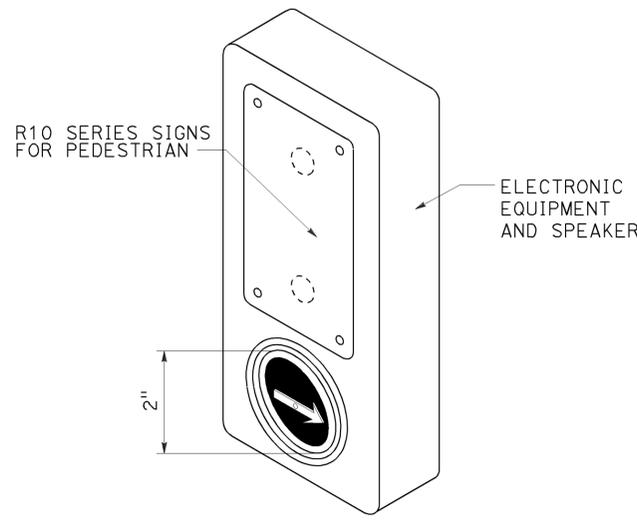
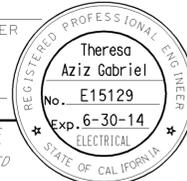
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	36	55

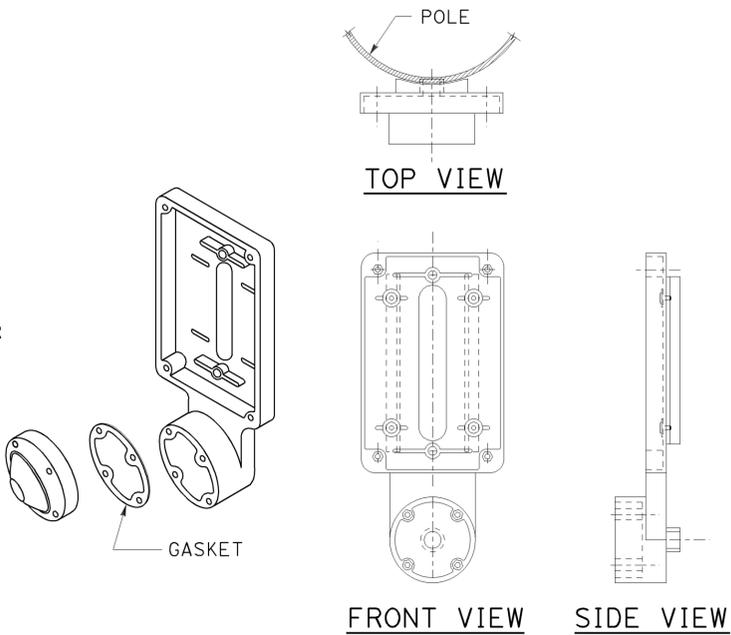
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

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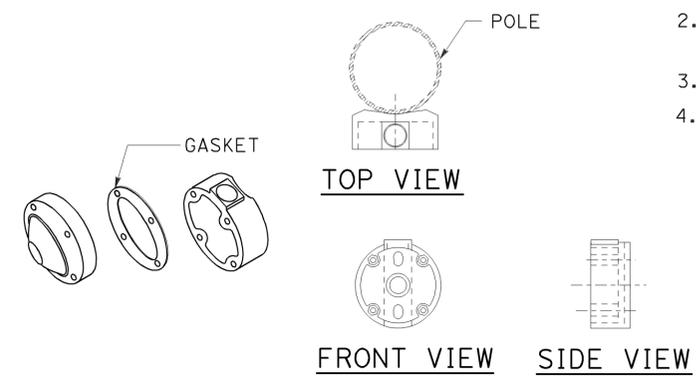
TO ACCOMPANY PLANS DATED 1-29-15



ACCESSIBLE PEDESTRIAN SIGNAL
DETAIL A
 (See note 1 to 4)

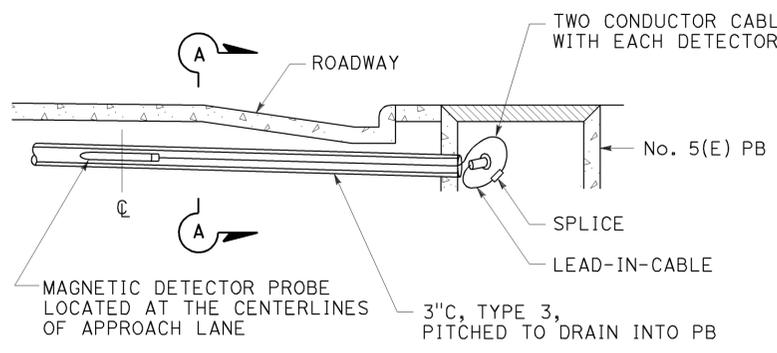
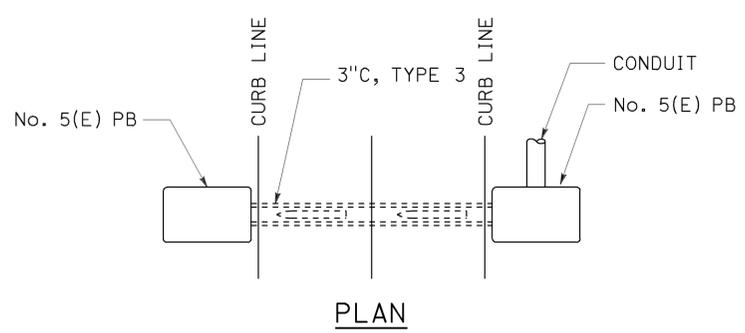


TYPE B PUSH BUTTON ASSEMBLY
DETAIL B
 (See note 1 to 4)

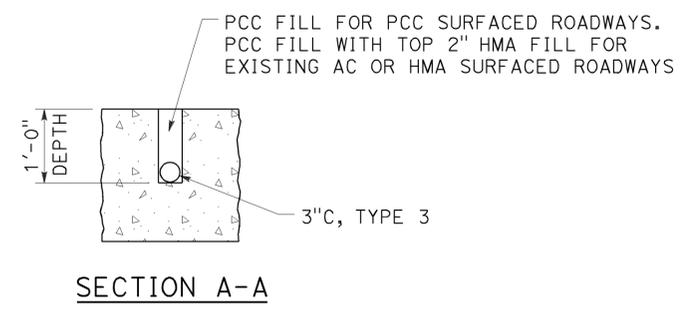


TYPE C PUSH BUTTON ASSEMBLY
DETAIL C
 (See note 1 to 4)

- NOTES:**
1. Back casting shape to fit curvature of pole.
 2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
 3. Install push button on crosswalk side of standard.
 4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



MAGNETIC VEHICLE DETECTOR
INSTALLATION DETAILS
DETAIL D



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ACCESSIBLE PEDESTRIAN SIGNAL,
PUSH BUTTON ASSEMBLIES AND
MAGNETIC VEHICLE DETECTOR)
 NO SCALE

RSP ES-5C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5C
 DATED MAY 20, 2011 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5C

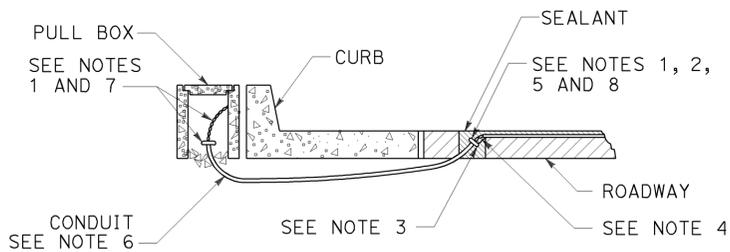
2010 REVISED STANDARD PLAN RSP ES-5C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	37	55

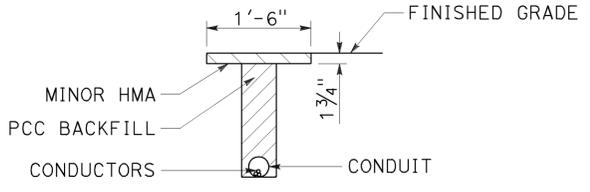
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



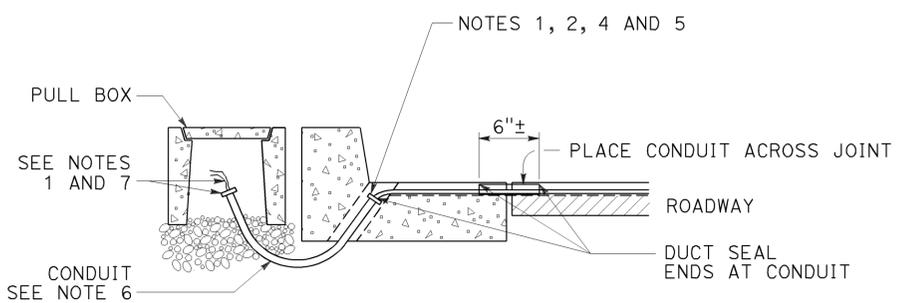
TO ACCOMPANY PLANS DATED 1-29-15



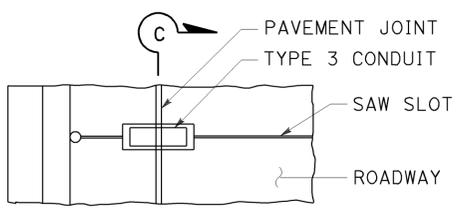
TYPE A
CURB TERMINATION DETAIL



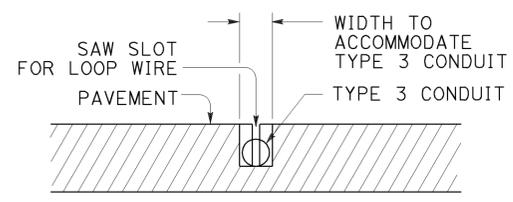
"T" TRENCH
DETAIL T



CROSS SECTION

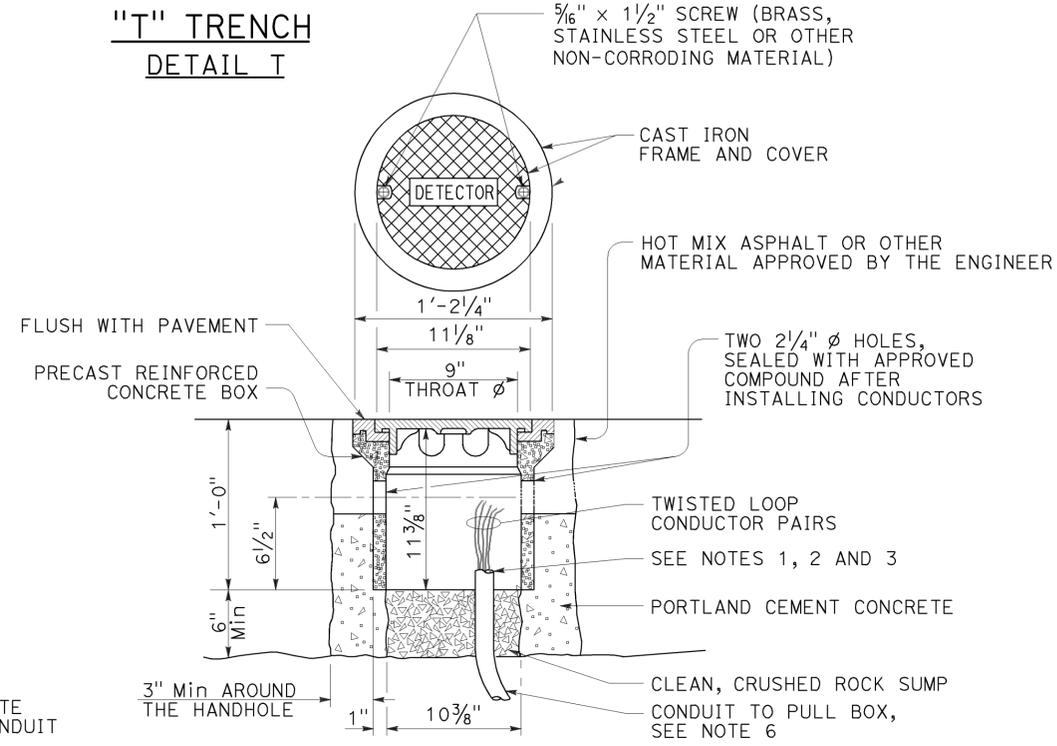


PLAN VIEW

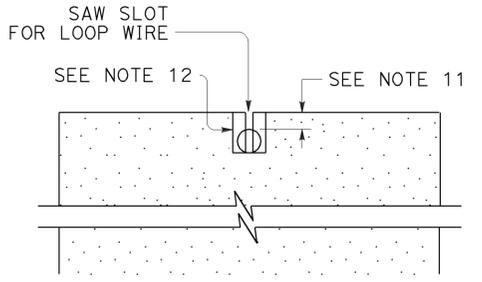


SECTION C-C

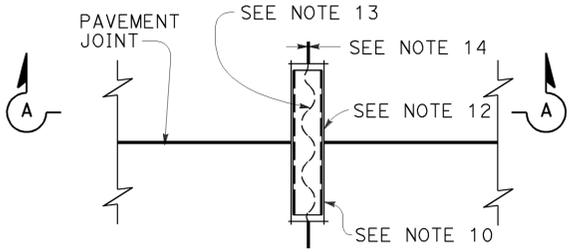
TYPE B
CURB TERMINATION DETAIL



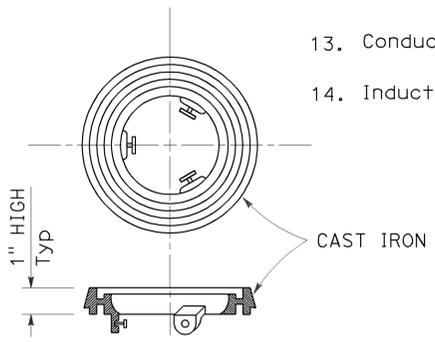
DETECTOR HANDHOLE DETAIL



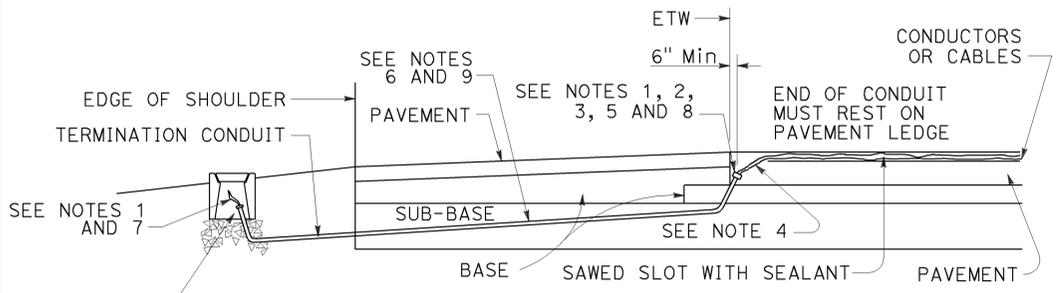
SECTION A-A



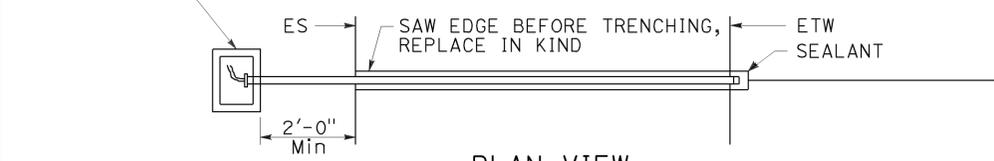
PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING



CROSS SECTION



PLAN VIEW
SHOULDER TERMINATION DETAILS

NOTES:

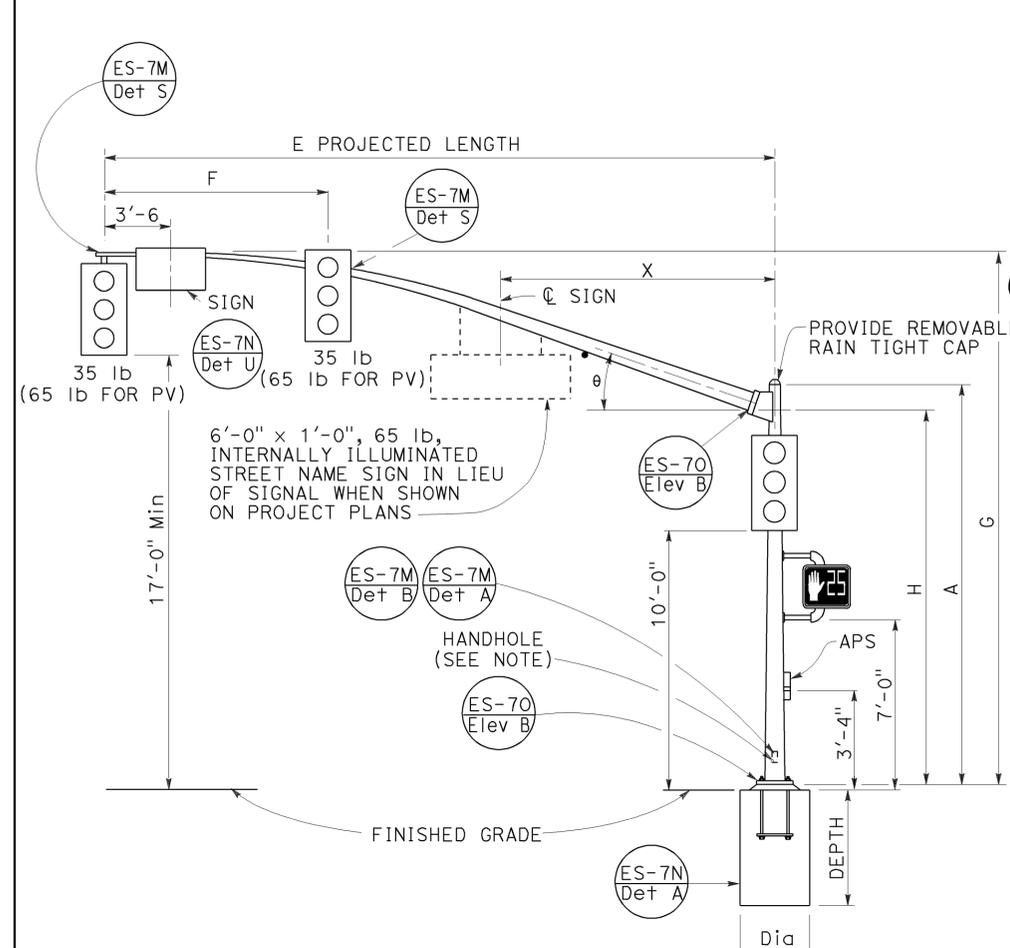
- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
 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

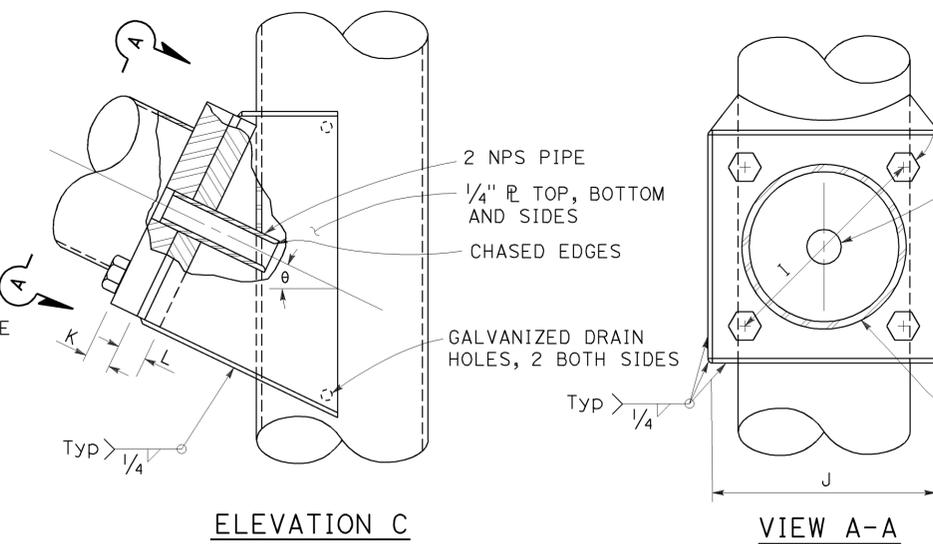
RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5D

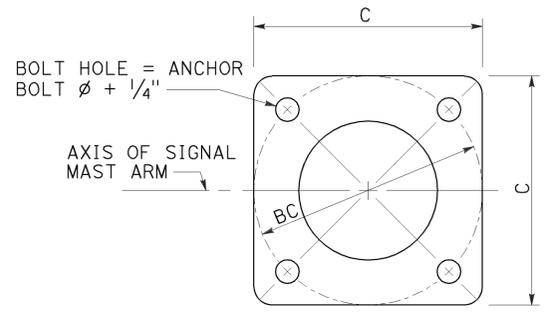
2010 REVISED STANDARD PLAN RSP ES-5D



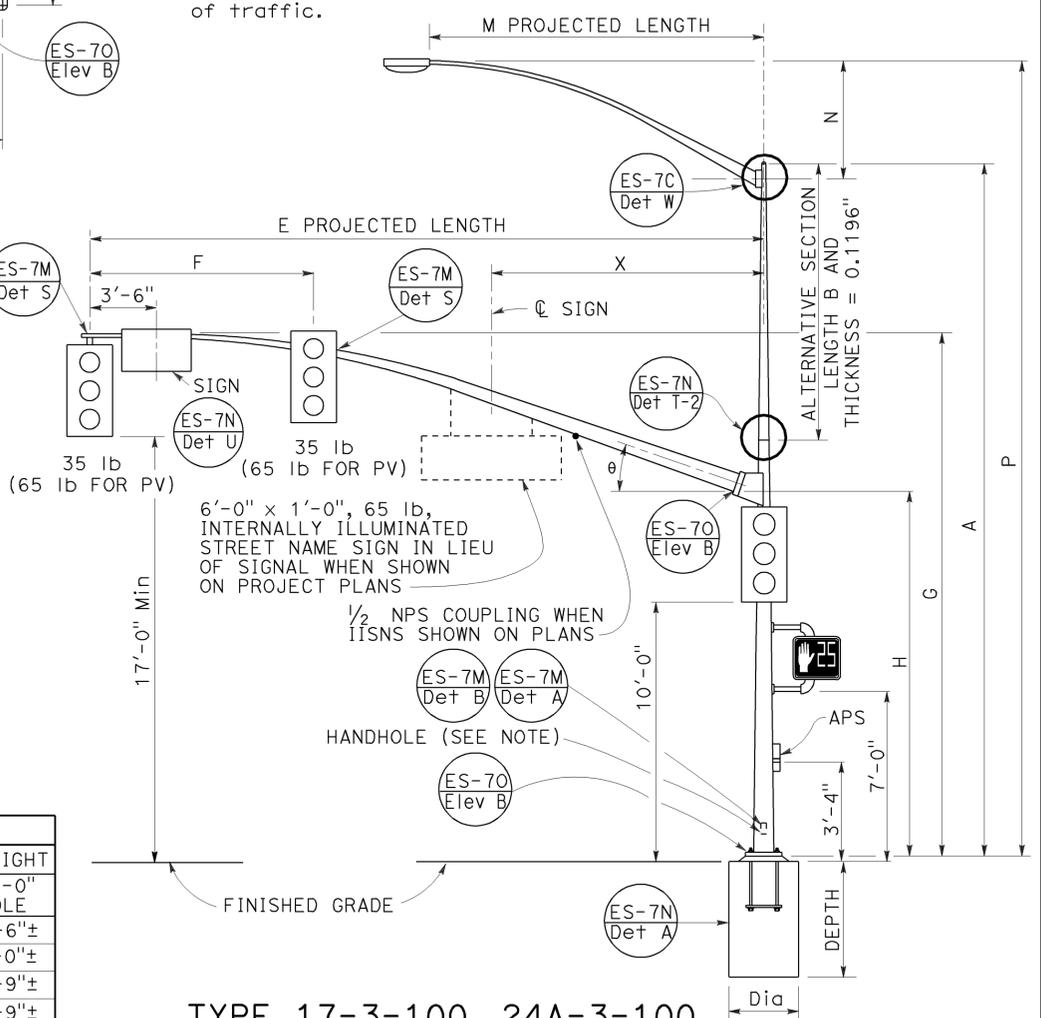
**TYPE 16-3-100, 18-3-100,
 23-3-100, 27-3-100**
ELEVATION A



**SIGNAL MAST ARM CONNECTION
 DETAIL A**



**BASE PLATE
 DETAIL B**



**TYPE 17-3-100, 24A-3-100,
 19-3-100, 26-3-100,
 19A-3-100, 26A-3-100, 24-3-100**
ELEVATION B

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM R THICKNESS	L POLE R THICKNESS	theta	X Max
15'-0"	8'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"							
20'-0"		21'-8"±		7 3/8"		12"		1'-0"	1 1/4"	1 1/2"	23°	
25'-0"		22'-8"±		7 3/8"								
30'-0"	12'-0"			8"				1 1/4"-7NC-3"				10'-6"
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"						21°	
40'-0"				9 3/8"		13"		1'-1"	1 1/2"	1 3/4"	15°	13'-0"
45'-0"	15'-0"	23'-8"±		10 1/16"								

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"±	3 1/4"		30'-0" POLE
8'-0"	2'-6"±	3 1/2"		35'-0" POLE
10'-0"	3'-3"±	3 7/8"	0.1196"	31'-6"±
12'-0"	4'-3"±			32'-0"±
15'-0"	4'-9"±	4 1/4"		36'-6"±
				37'-0"±
				32'-9"±
				37'-9"±
				33'-9"±
				38'-9"±
				34'-3"±
				39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION								
			A HEIGHT	Min OD		THICKNESS	ALTERNATIVE SECTION		C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	DIAMETER	DEPTH	REINFORCED		
				BASE	TOP		B LENGTH	BOTTOM										TOP	
16-3-100			18'-6"		8 1/16"	0.1793"	NONE												
17-3-100			30'-0"	10 3/4"	6 7/16"		10'-0"	7 7/8"	6 7/16"	1'-5 1/2"			1 1/2" phi x 42"	NONE	15'-0", 20'-0"		8'-6"		
18-3-100			17'-0"		8 9/16"		NONE							NONE			9'-6"		
19-3-100			30'-0"		7 1/16"		10'-0"	9 1/8"	7 1/16"					6'-15' 12'-0"	25'-0", 30'-0"				
19A-3-100			35'-0"		6 15/16"		15'-0"		6 15/16"					6'-15' 15'-0"					
23-3-100	3	100	17'-0"	1'-0"	9 9/16"	0.2391"	NONE			1'-7"	1'-5 1/2"	3"	2" phi x 42"	NONE			3'-0"	11'-0"	YES
24-3-100			30'-0"		7 1/16"		10'-0"	9 1/8"	7 1/16"					6'-15' 12'-0"	35'-0"				
24A-3-100			35'-0"		6 15/16"		15'-0"	9 1/8"	6 15/16"					6'-15' 15'-0"					
26-3-100			30'-0"		7 13/16"		10'-0"	9 1/4"	7 13/16"					6'-15' 12'-0"	40'-0", 45'-0"		3'-6"	12'-0"	
26A-3-100			35'-0"	1'-2"	7 1/16"	0.3125"	15'-0"	9 1/4"	7 1/16"	1'-11"	1'-9"		2 1/2" phi x 42"	6'-15' 15'-0"					
27-3-100			17'-0"		9 1/16"		NONE							NONE					

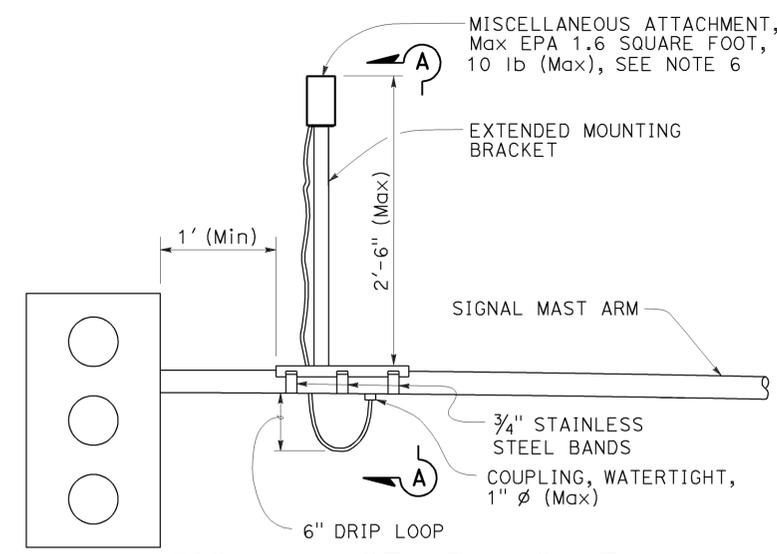
[] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

2010 REVISED STANDARD PLAN RSP ES-7E

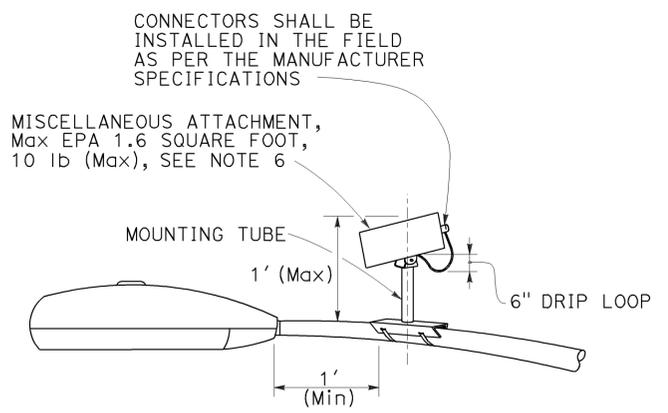
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 3 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 45')
 NO SCALE
 RSP 7E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN 7E
 DATED MAY 20, 2011 - PAGE 466 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	40	55
 REGISTERED CIVIL ENGINEER No. C57793 Exp. 3-31-14 CIVIL STATE OF CALIFORNIA					
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>					

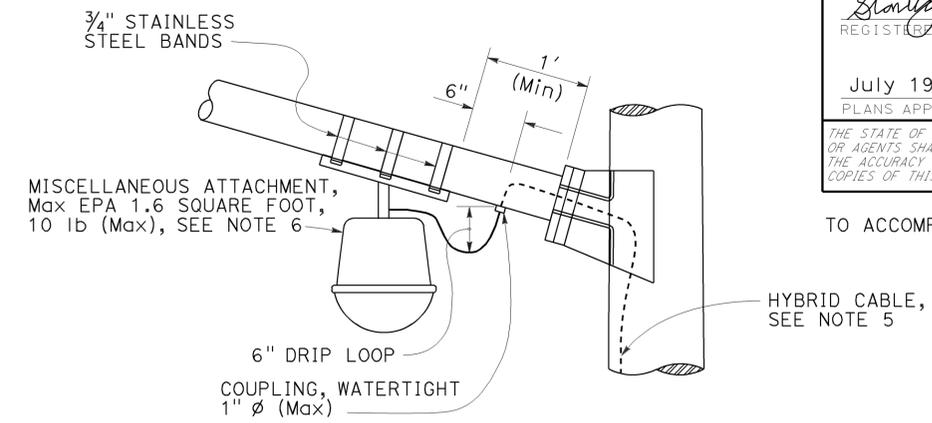
TO ACCOMPANY PLANS DATED 1-29-15



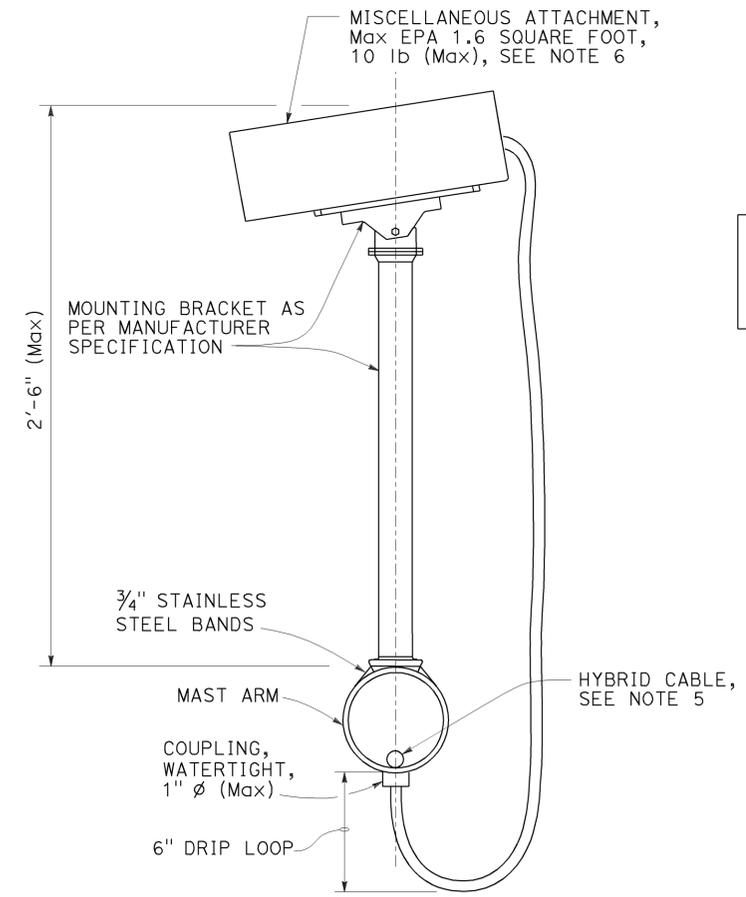
**SIGNAL MAST ARM MOUNT
DETAIL A**



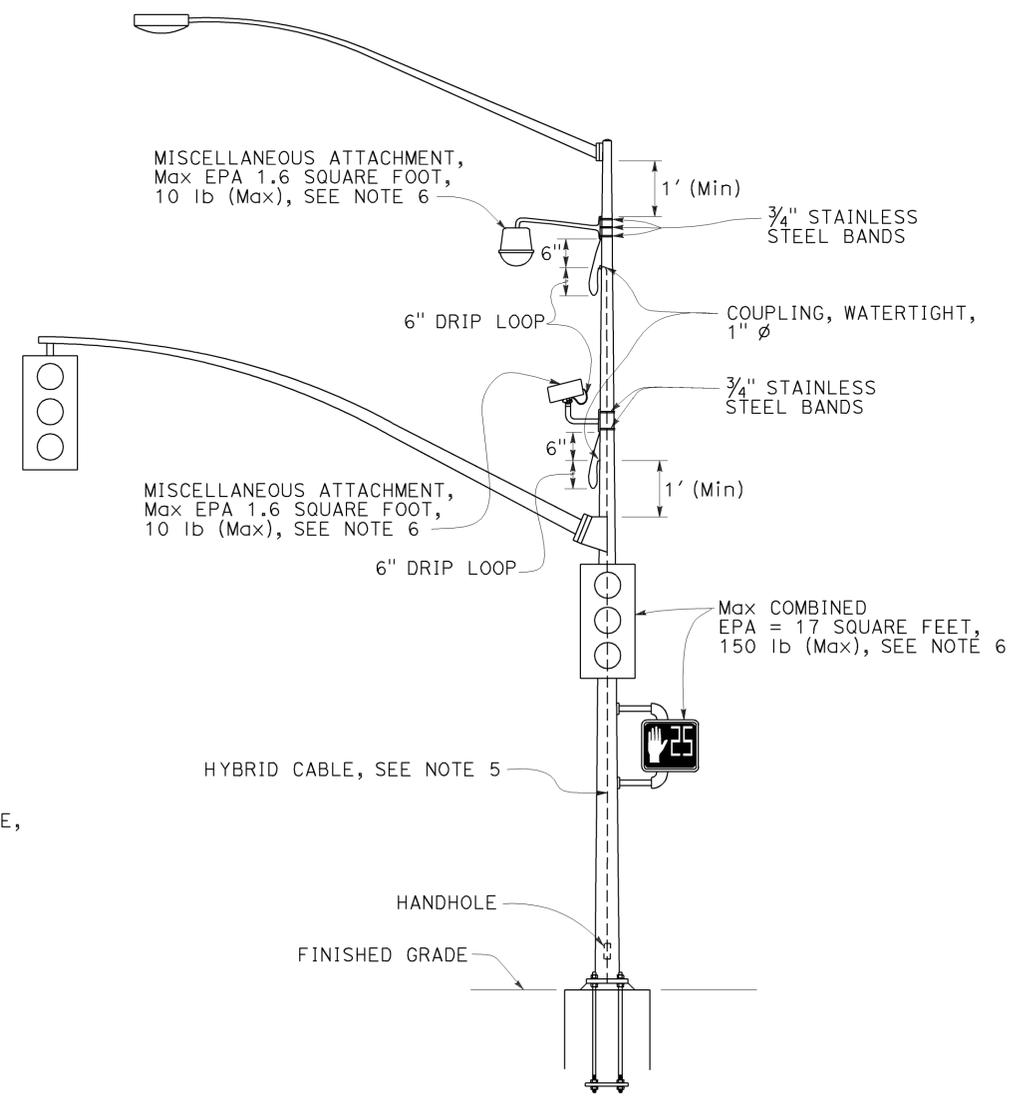
**LUMINAIRE MAST ARM MOUNT
DETAIL B**



**LUMINAIRE MAST ARM MOUNT
DETAIL C**



SECTION A-A



**SIGNAL POLE MOUNT
DETAIL D**

NOTES:

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet.
7. Maximum of two miscellaneous attachments per traffic signal structure.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

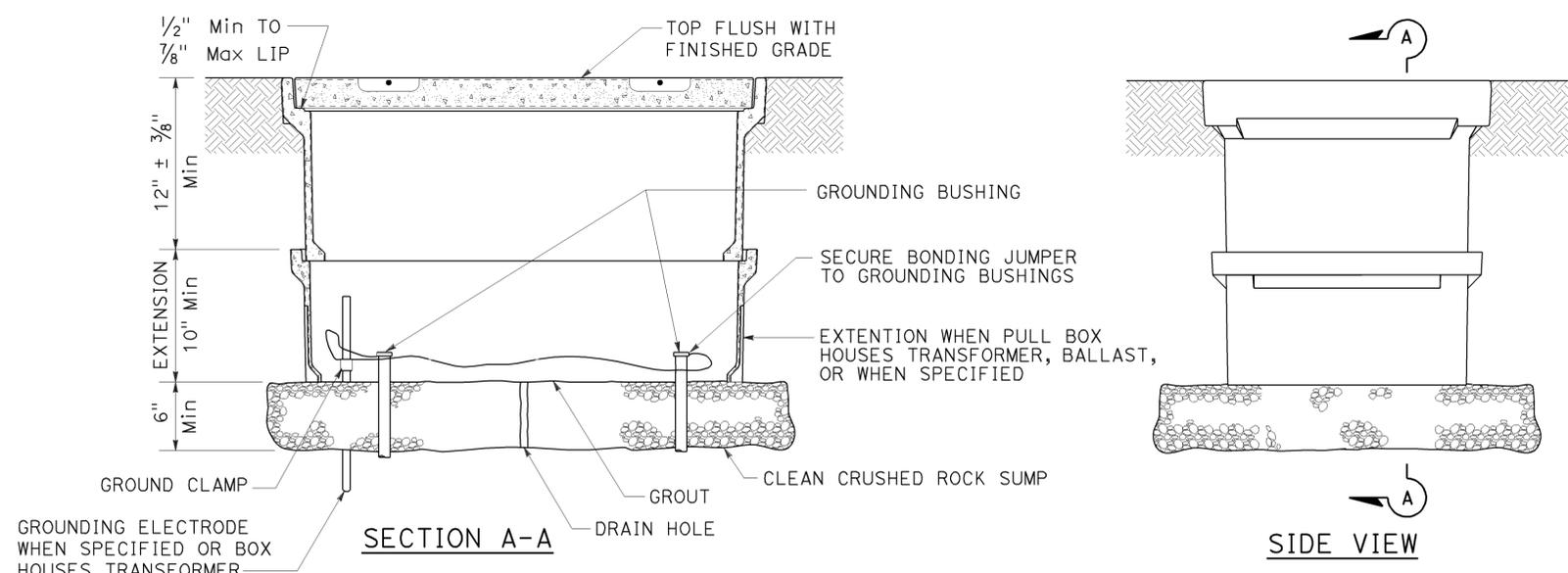
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING,
MISCELLANEOUS ATTACHMENT)**
NO SCALE

RSP ES-7R DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7R DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

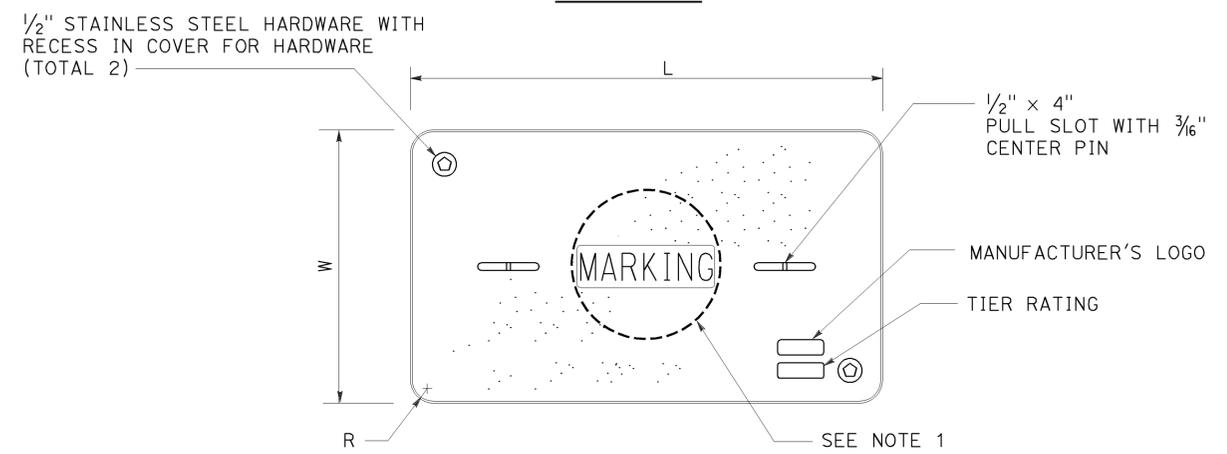
REVISED STANDARD PLAN RSP ES-7R

2010 REVISED STANDARD PLAN RSP ES-7R

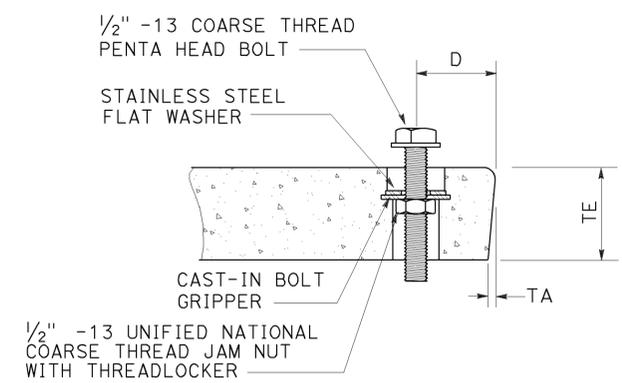
2010 REVISED STANDARD PLAN RSP ES-8A



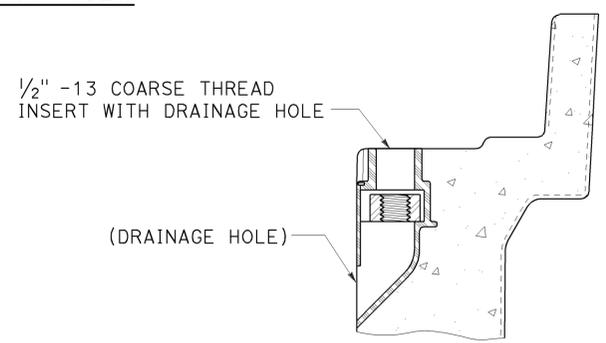
INSTALLATION DETAILS
DETAIL A



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.

TO ACCOMPANY PLANS DATED 1-29-15

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

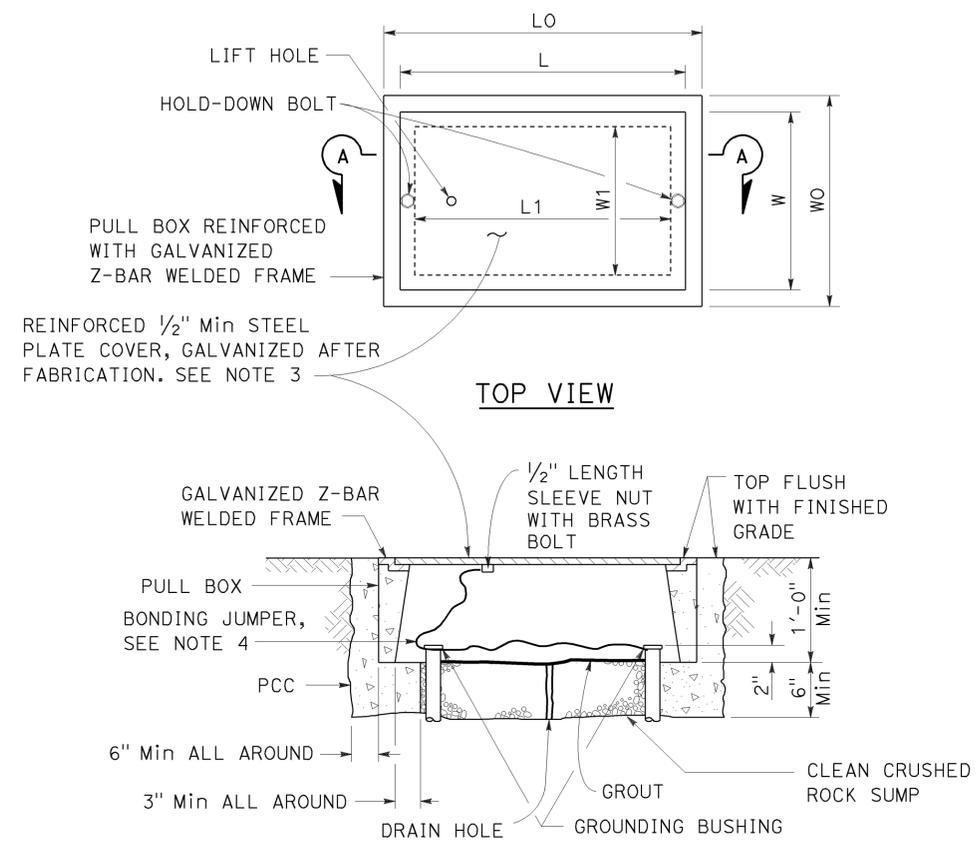
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	18	101.9	42	55

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 1-29-15



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 3/8"±	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

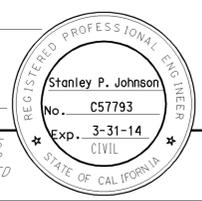
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (TRAFFIC PULL BOX)
 NO SCALE

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

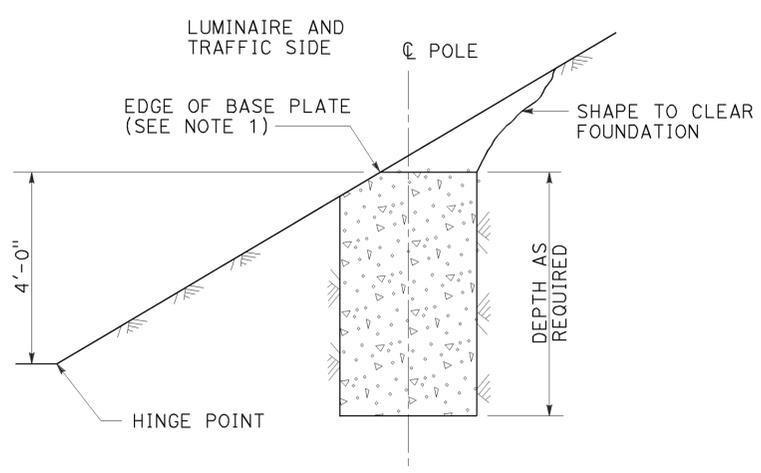
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	43	55


 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.

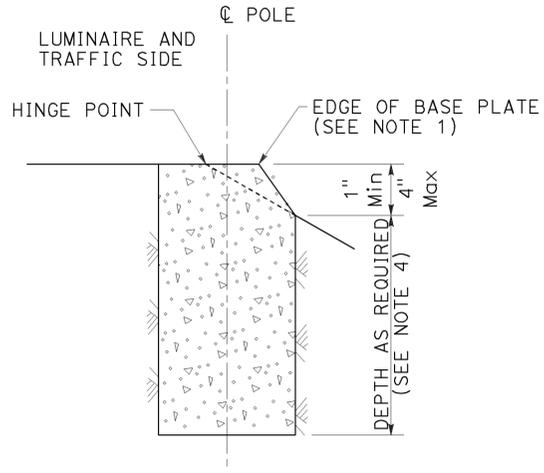


TO ACCOMPANY PLANS DATED 1-29-15

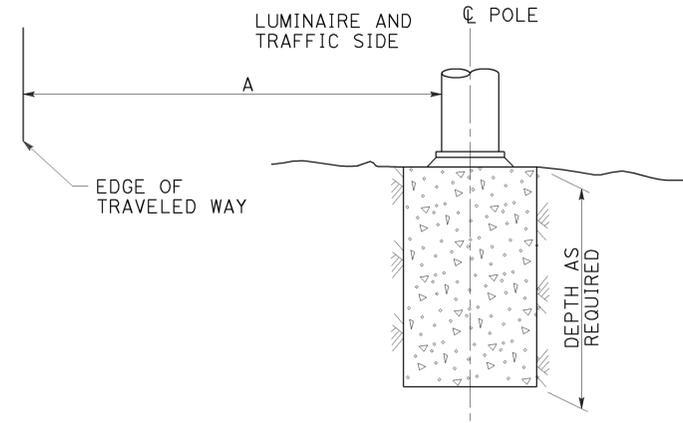
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



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

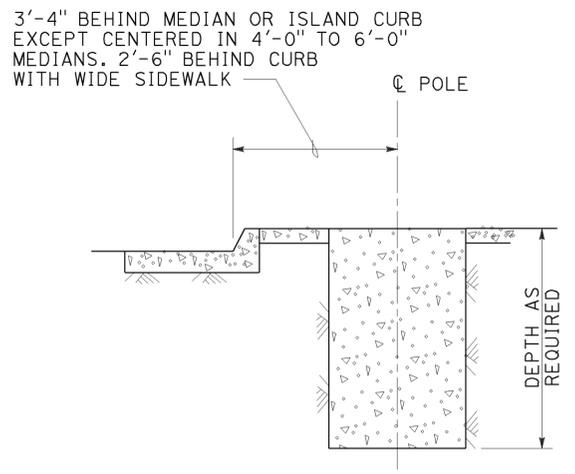


FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
 See Note 2

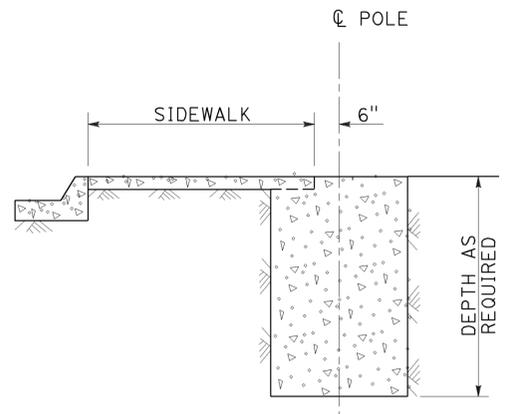
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

1. Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
2. Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
3. Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
4. 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.

REVISED STANDARD PLAN RSP ES-11

2010 REVISED STANDARD PLAN RSP ES-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	44	55

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 1-29-15

2010 REVISED STANDARD PLAN RSP H1

A

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

B

B&B BALLED AND BURLAPPED
 B/B BRASS/BRONZE
 B/B/PL BRASS/BRONZE/PLASTIC
 B/PL BRASS/PLASTIC
 BFM BONDED FIBER MATRIX
 Bit Ctd 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

M

Max MAXIMUM
 MBGR METAL BEAM GUARD RAILING
 MCV MANUAL CONTROL VALVE
 MIC MASTER IRRIGATION CONTROLLER
 Min MINIMUM
 MIPT MALE IRON PIPE THREAD
 Misc MISCELLANEOUS
 MtI 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
 Pkt+ 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
 Pvm+ 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

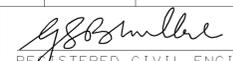
W WIDTH
 W/ WITH
 WM WATER METER
 WS WYE STRAINER
 WSA WYE STRAINER ASSEMBLY
 WSP WELDED STEEL PIPE
 WWM WELDED WIRE MESH

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.

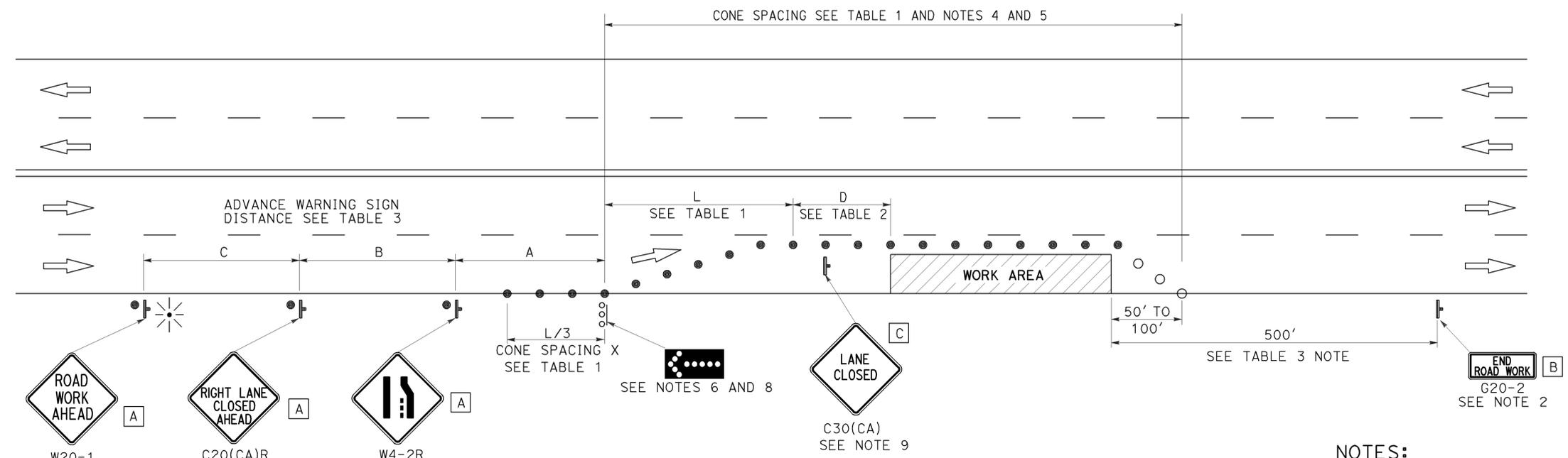
REVISED STANDARD PLAN RSP H1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	45	55


 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.

TO ACCOMPANY PLANS DATED 1-29-15



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:

1. 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.
2. 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.
3. 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.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. 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.
8. 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.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. 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

NOTES:

See Revised Standard Plan RSP T9 for tables.

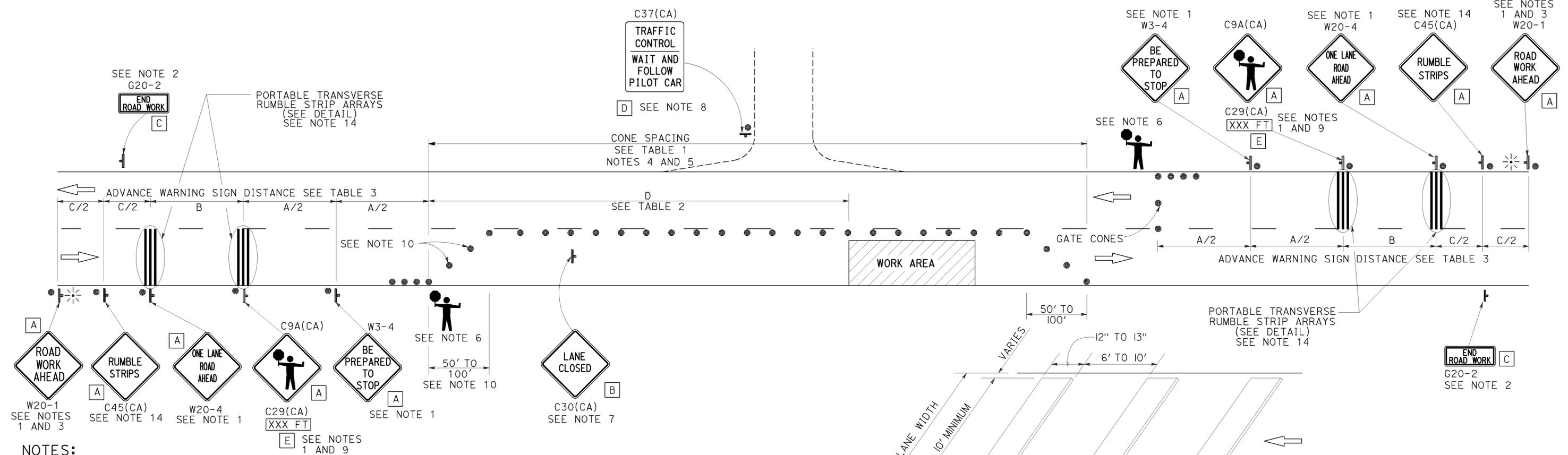
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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.

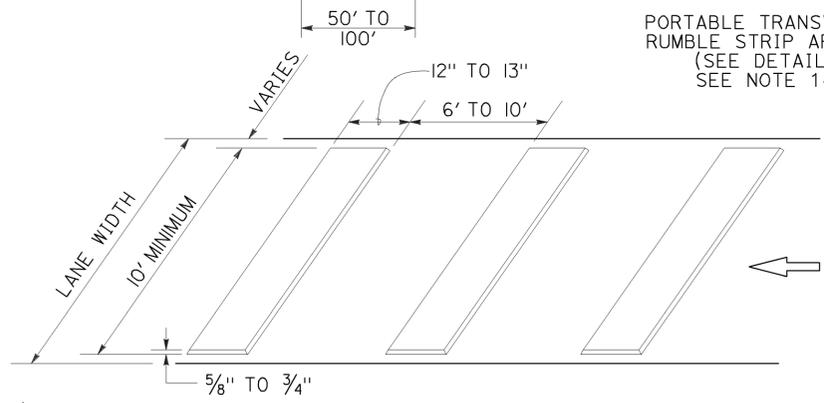
TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 1-29-15



- NOTES:**
- Each advance warning sign in each direction of travel 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 control 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 W20-4 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.
 - Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.

- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - Work duration occupies a location for four hours or less
 - Posted speed limit is below 45 MPH
 - Work is of emergency nature
 - Work zone is in snow or icy weather conditions



SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ PORTABLE FLASHING BEACON
- 👤 FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR LANE CLOSURE ON
TWO LANE CONVENTIONAL
HIGHWAYS**

NO SCALE

RSP T13 DATED OCTOBER 17, 2014 SUPERSEDES RSP T13 DATED JULY 18, 2014
AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED
MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP T13

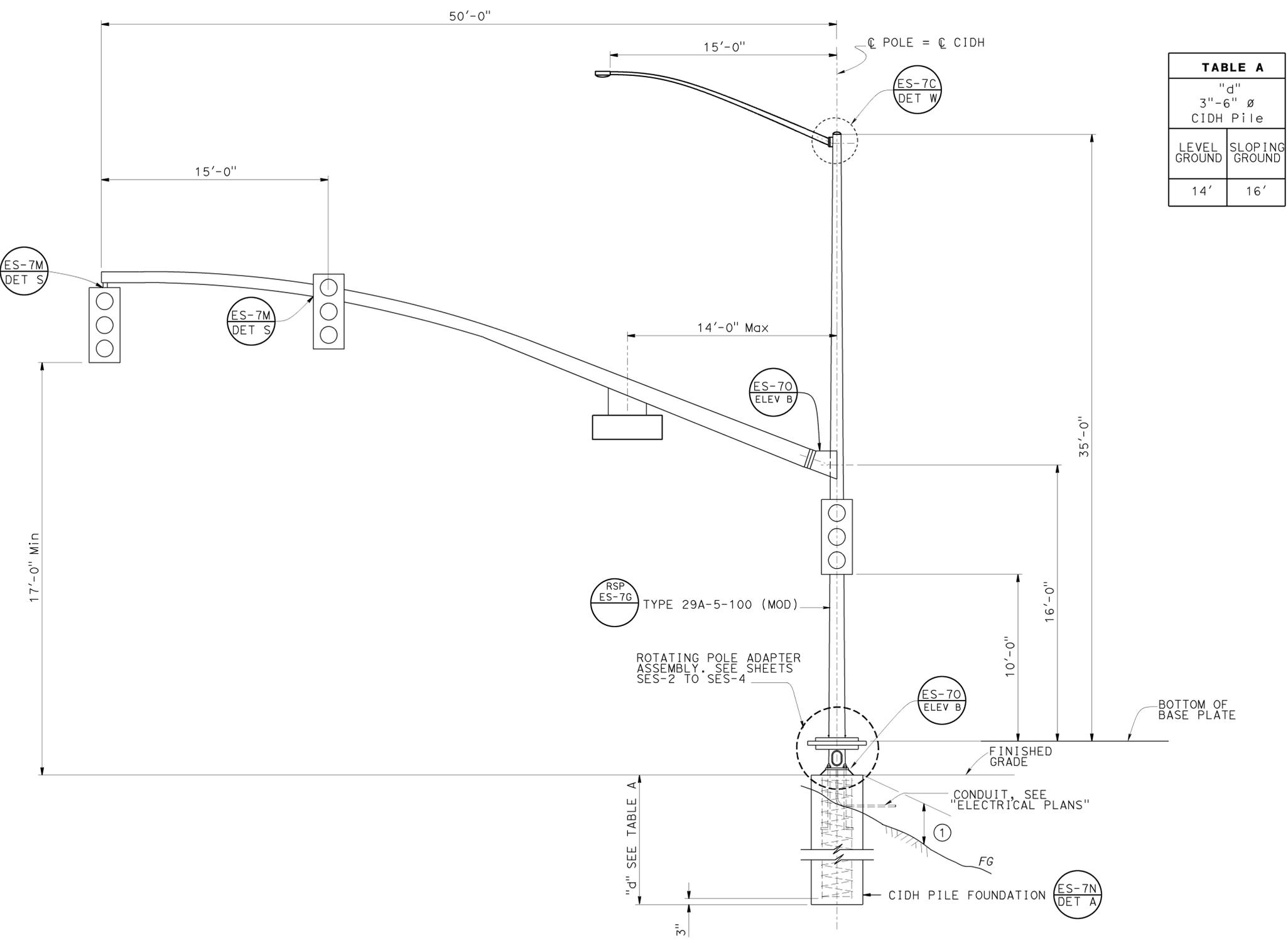


TABLE A	
"d" 3"-6" Ø CIDH Pile	
LEVEL GROUND	SLOPING GROUND
14'	16'

GENERAL NOTES:

SPECIFICATIONS
 Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition

LOADING
 Wind Loading: (3-sec gust) 100 mph

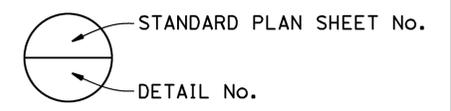
UNIT STRESSES
 Structural Steel: $f_y = 55,000$ psi tapered steel tube
 $f_y = 50,000$ psi unless otherwise noted.
 Anchor bolts: $f_y = 55,000$ psi
 Reinforced Concrete: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi

- NOTES:**
1. For rotating pole locations, see "ROADWAY PLANS".
 2. For Type 29A-5-100 (Mod) details not shown, see 2010 Revised Standard Plan ES-7G.
 3. All steel shall be galvanized after fabrication.
 4. During pole erection the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
 5. Foundation should be treated as level ground condition if slope inclination is flatter than 4H:1V.
 6. Engineer to determine final location of rotating pole.
 7. Foundation design is base on AASHTO LTS-5 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degrees and unit weight of soil used is 120 lbs/ft³.
 8. For details not shown, see "2010 STANDARD PLANS" and "2010 REVISED STANDARD PLANS".

① 1'-3" maximum for sloped finished grade

ELEVATION
TYPE 29A-5-100 (MOD)

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



BRANCH CHIEF JEFF WOODY	DESIGN BY E. LOPEZ	CHECKED M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	TYPE 29A-5-100 MODIFIED	SES-1	
	DETAILS BY T. NGUYEN	CHECKED E. LOPEZ			POST MILE 101.9			ROTATING POLE LAYOUT
	QUANTITIES BY	CHECKED			UNIT: 3619 PROJECT NUMBER & PHASE: 0800020091-1			

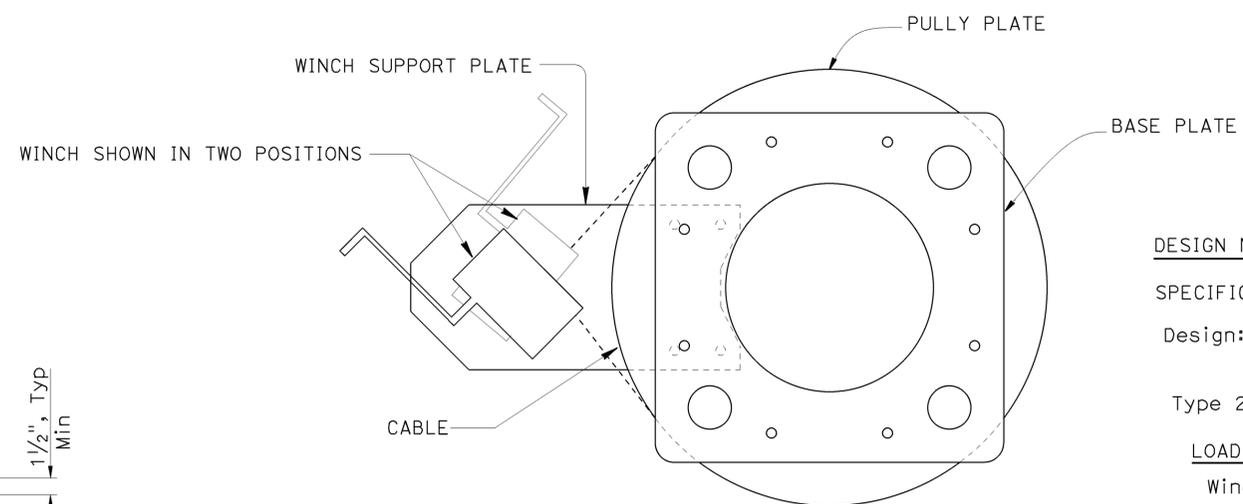
STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

NO SCALE

DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => 08-0p9801-ses1.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	49	55
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER			10-31-14	DATE	
1-29-15 PLANS APPROVAL DATE					
<i>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.</i>					



SECTION B-B
Showing winch and winch support plate position

DESIGN NOTES:

SPECIFICATIONS:

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition.

Type 29A-5-100 (Mod) To Be Used With Rotating Pole.

LOADING:

Wind Loading: (3-Sec Gust) 100 Mph

UNIT STRESSES FOR ROTATING POLE ADAPTER ASSEMBLY

$f_y = 55,000$ psi tapered steel tube
 $f_y = 50,000$ psi structural steel unless otherwise noted

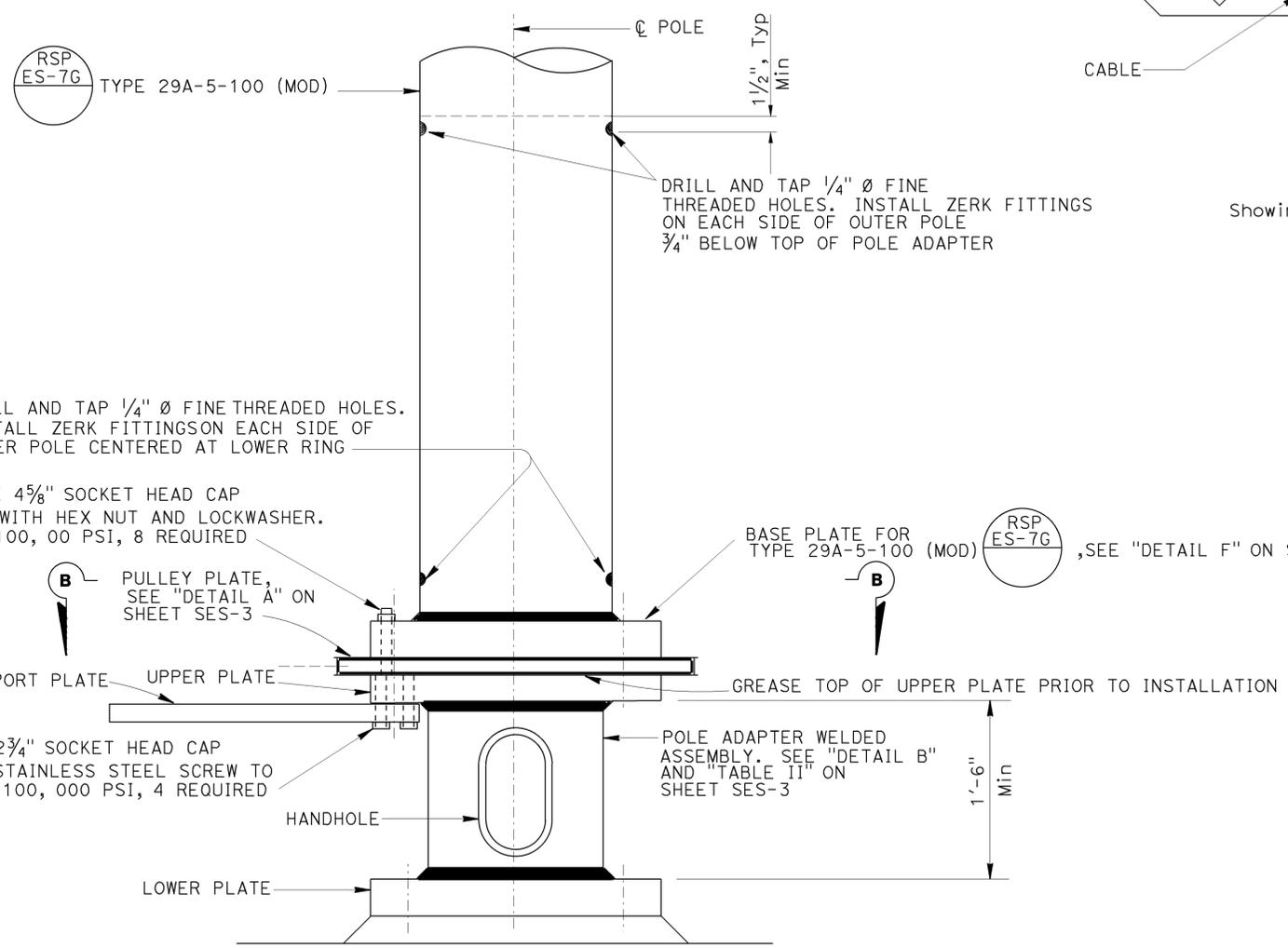
Anchor Bolts : $f_y = 55,000$ psi unless otherwise noted

GENERAL NOTES:

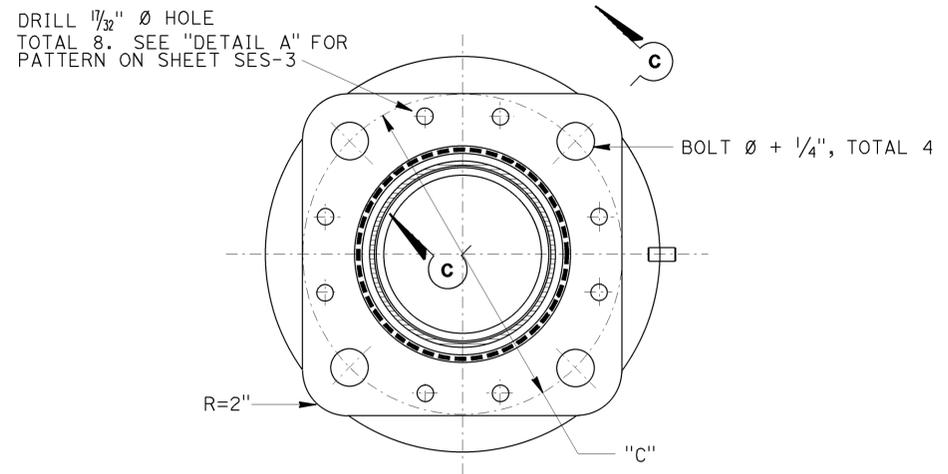
1. Washer assembly consists of two fiber, two flat and lock washers.
2. All steel shall be galvanized after fabrication unless otherwise noted.

NOTES:

- A. See "SECTION C-C" on sheet SES-3.
- B. For c dimension, see "table I" on sheet SES-4.
- C. For details not shown, see 2010 "STANDARD PLANS" and 2010 "REVISED STANDARD PLANS".



ROTATING POLE ASSEMBLY
(Some fasteners not shown)



SECTION B-B
(Bolts and nuts not shown)

NO SCALE

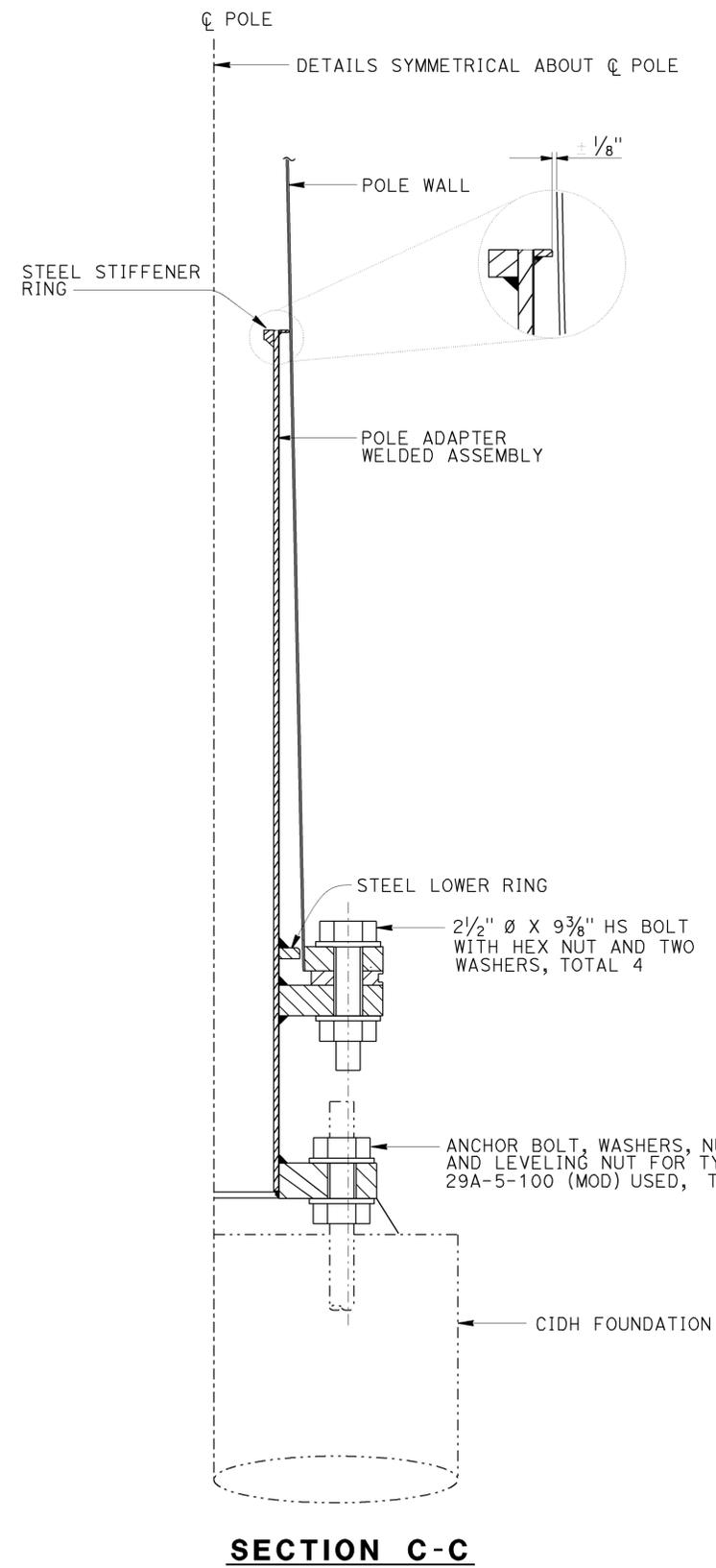
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JEFF WOODY	DESIGN	BY E. LOPEZ	CHECKED M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	TYPE 29A-5-100 MODIFIED	SES-2	
	DETAILS	BY T. NGUYEN	CHECKED E. LOPEZ			POST MILE			ROTATING POLE ADAPTER ASSEMBLY DETAILS NO. 1
	QUANTITIES	BY	CHECKED			101.9			

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	50	55

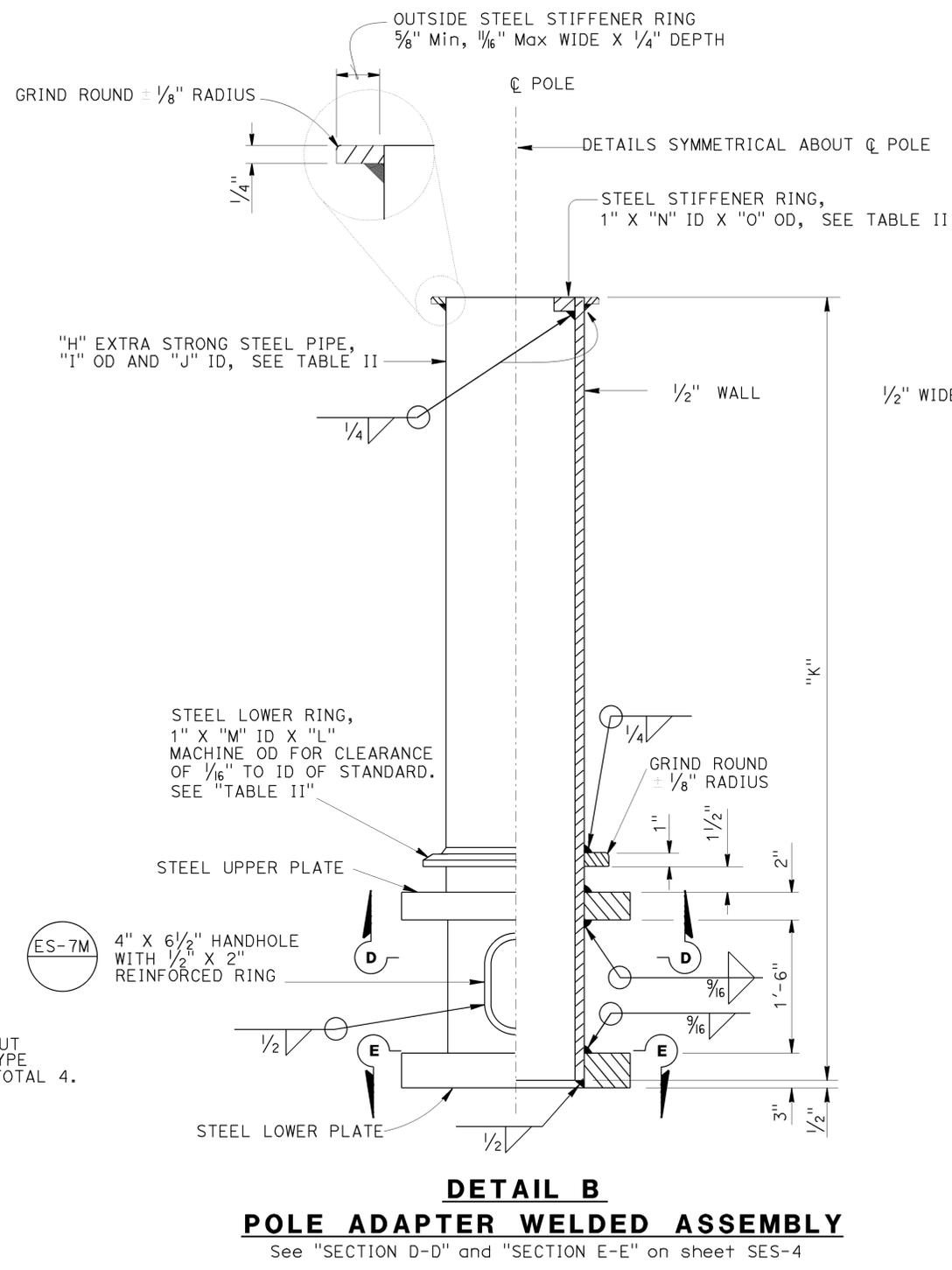
Eliseo Lopez
 REGISTERED CIVIL ENGINEER
 DATE 10/31/14
 PLANS APPROVAL DATE 1-29-15
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REGISTERED PROFESSIONAL ENGINEER
 ELISEO LOPEZ
 No. C72910
 Exp 12/31/14
 CIVIL
 STATE OF CALIFORNIA



SECTION C-C

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

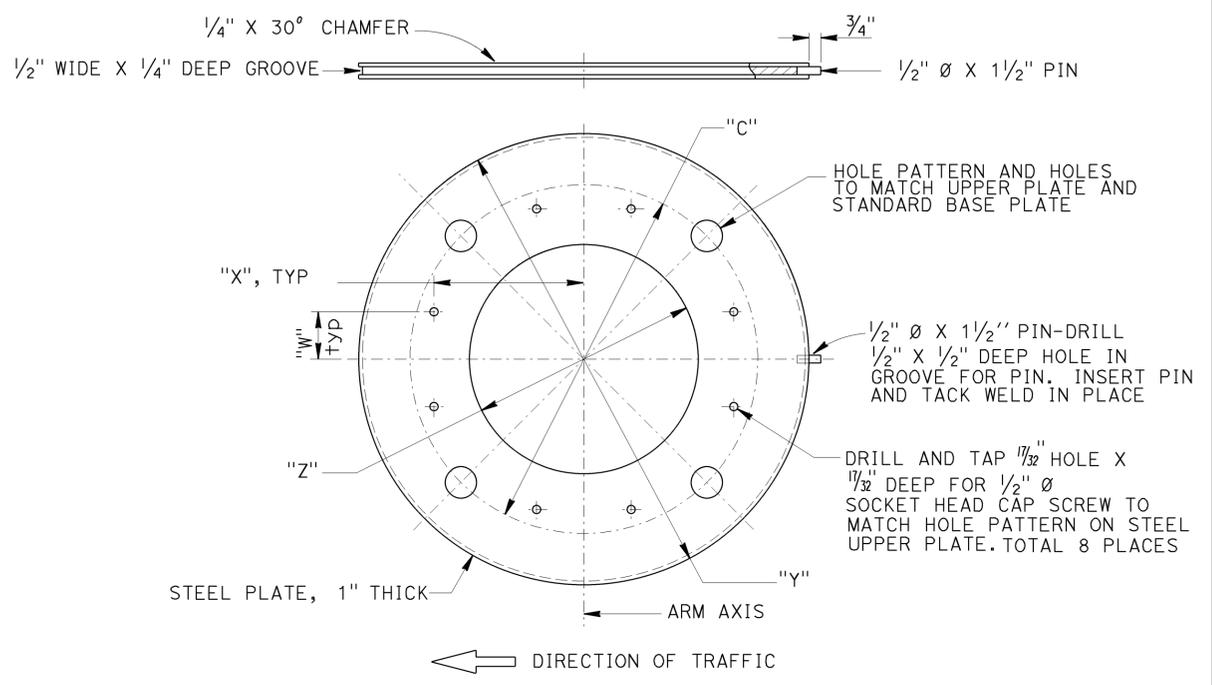


DETAIL B
POLE ADAPTER WELDED ASSEMBLY
 See "SECTION D-D" and "SECTION E-E" on sheet SES-4

TABLE II

SIGNAL & LIGHTING STANDARD (MOD)	POLE ADAPTER WELDED ASSEMBLY							
	XS PIPE				LOWER RING		STIFFENER RING	
	"H"	"I" (OD)	"J" (ID)	"K"	"L" (OD)	"M" (ID)	"N" (ID)	"O" (OD)
TYPE 29A-5-100	10"	10 3/4"	9 3/4"	9'-0"	12 1/8"	10 3/4"	8 3/4"	9 3/4"

ID = Inside diameter
 OD = Outside diameter



DETAIL A
PULLEY PLATE

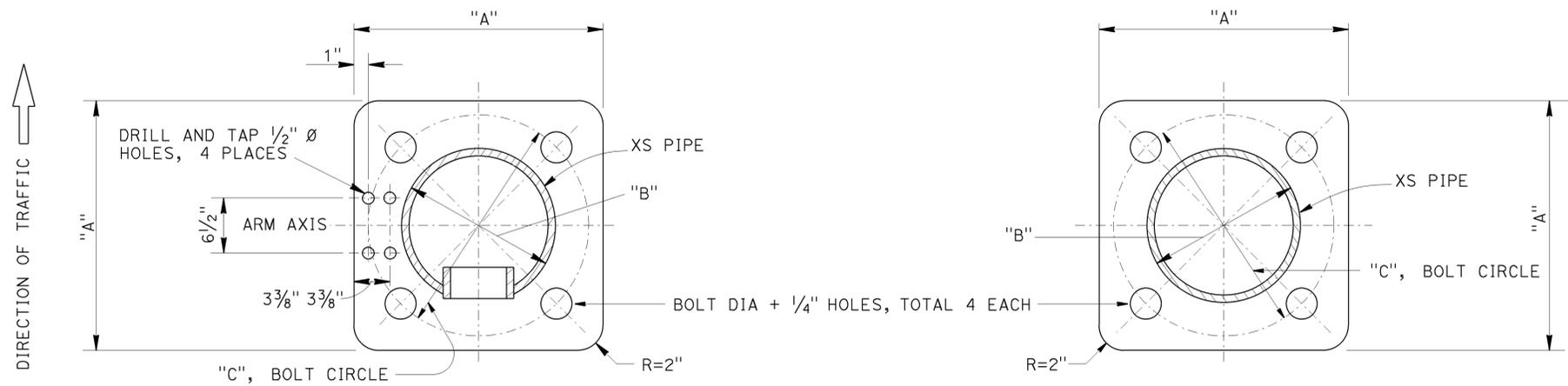
TABLE III

SIGNAL & LIGHTING STANDARD (MOD)	PULLEY PLATE DIMENSIONS			
	"W"	"X"	"Y"	"Z"
TYPE 29A-5-100	3"	9 1/2"	28 1/2"	14 1/2"

NO SCALE

BRANCH CHIEF JEFF WOODY	DESIGN	BY E. LOPEZ	CHECKED M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	TYPE 29A-5-100 MODIFIED ROTATING POLE ADAPTER ASSEMBLY DETAILS NO. 3	SES-3
	DETAILS	BY T. NGUYEN	CHECKED E. LOPEZ			POST MILE		
	QUANTITIES	BY	CHECKED			101.9		

STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 09-01-10)
 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 UNIT: 3619
 PROJECT NUMBER & PHASE: 0800020091-1
 CONTRACT NO.: 08-0P9801
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 10/21/14, 10/31/14, 11/4/14
 SHEET 3 OF 8
 FILE => 08-0p9801-ses3.dgn



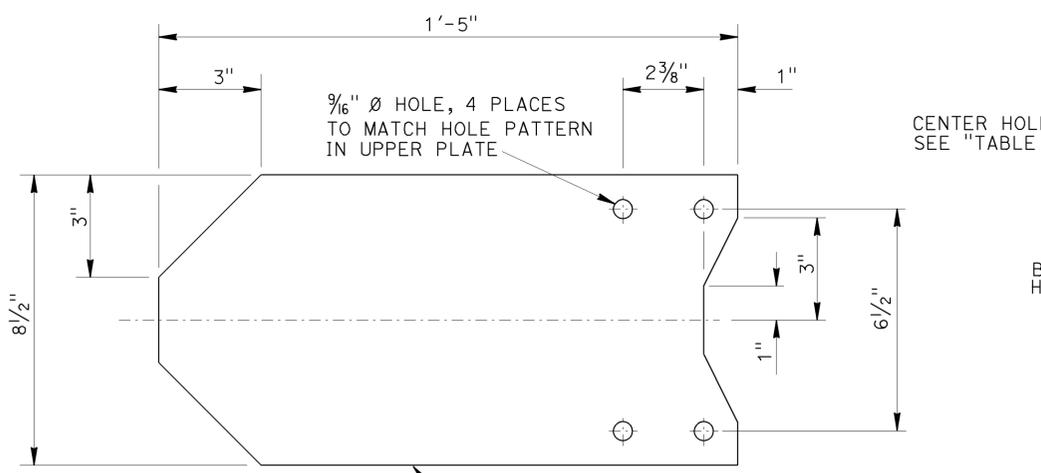
SECTION D-D

SECTION E-E

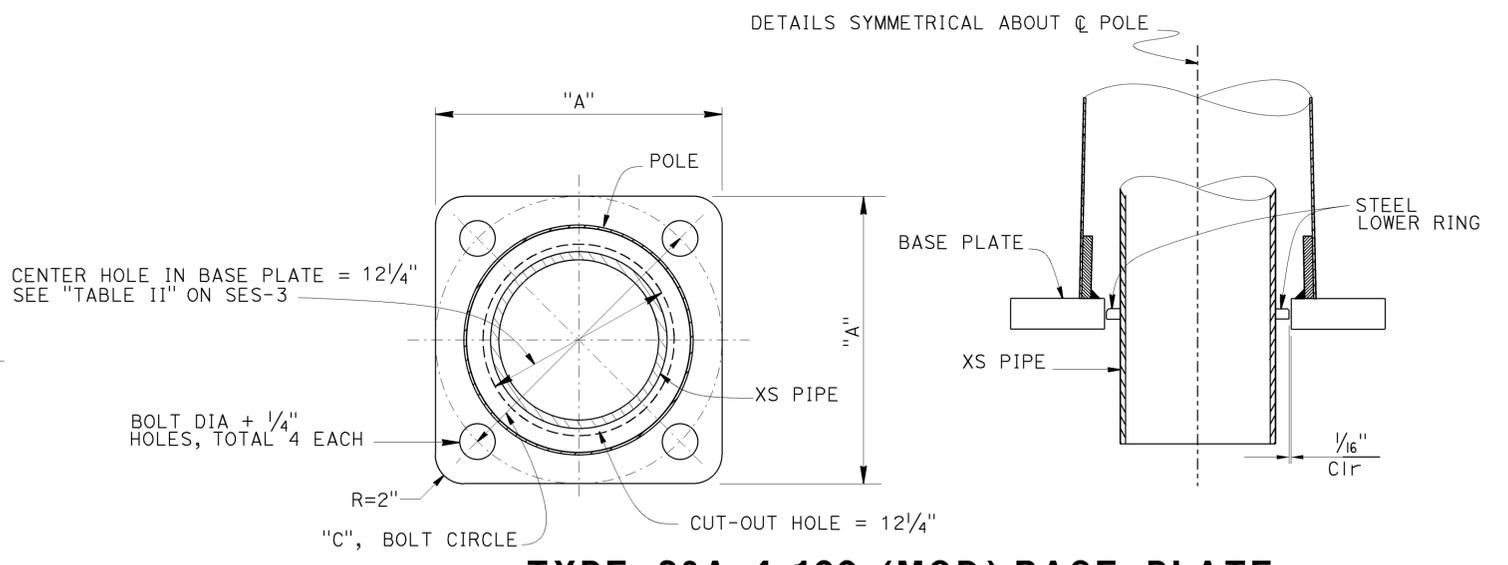
UPPER & LOWER PLATE

TABLE I

SIGNAL & LIGHTING STANDARD (MOD)	UPPER & LOWER PLATE DIMENSIONS		
	"A"	"B"	"C"
TYPE 29A-5-100	23"	10 ³ / ₄ "	21"



WINCH SUPPORT PLATE



TYPE 26A-4-100 (MOD) BASE PLATE

DETAIL F

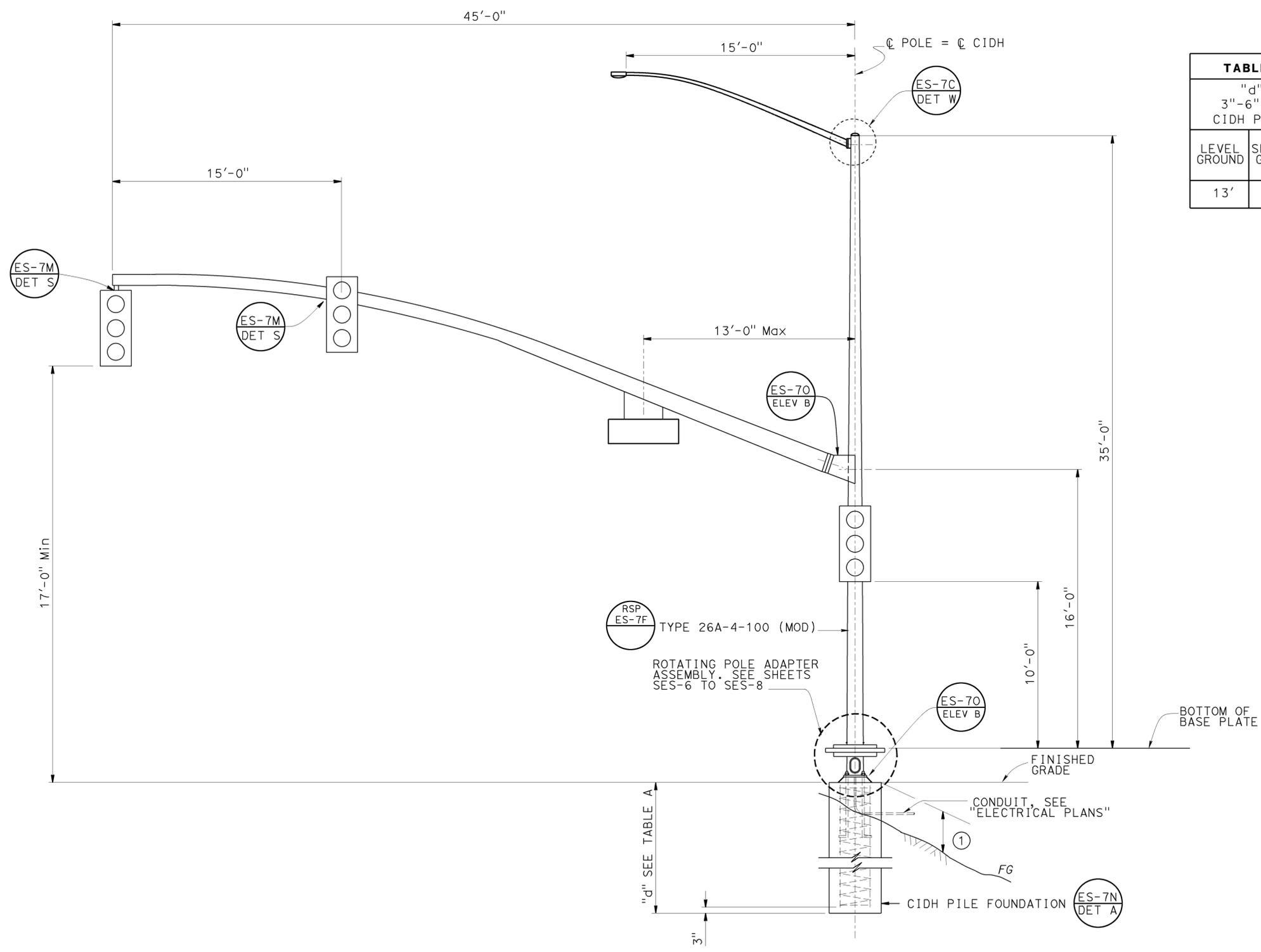
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTE:
SEE "DETAIL B" ON SHEET SES-3 FOR "SECTION D-D" AND "SECTION E-E" OF UPPER AND LOWER PLATE.

NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	52	55
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER			10-31-14	DATE	
1-29-15 PLANS APPROVAL DATE					
<i>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.</i>					

TABLE A	
"d" 3"-6" Ø CIDH Pile	
LEVEL GROUND	SLOPING GROUND
13'	15'



GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition

LOADING

Wind Loading: (3-sec gust) 100 mph

UNIT STRESSES

Structural Steel: $f_y = 55,000$ psi tapered steel tube
 $f_y = 50,000$ psi unless otherwise noted
 Anchor bolts: $f_y = 55,000$ psi unless otherwise noted
 Reinforced Concrete: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi

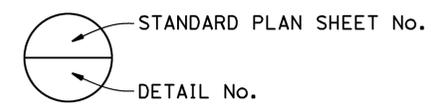
NOTES:

1. For rotating pole locations, see "ROADWAY PLANS".
2. For Type 26A-4-100 (Mod) details not shown, see 2010 Revised Standard Plan ES-7F.
3. All steel shall be galvanized after fabrication.
4. During pole erection the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
5. Foundation should be treated as level ground condition if slope inclination is flatter than 4H:1V.
6. Engineer to determine final location of rotating pole.
7. Foundation design is base on AASHTO LTS-5 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degrees and unit weight of soil used is 120 lbs/ft³.
8. For details not shown, see "2010 STANDARD PLANS" and "2010 REVISED STANDARD PLANS".

① 1'-3" maximum for sloped finished grade

**ELEVATION
TYPE 26A-4-100 (MOD)**

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



NO SCALE

BRANCH CHIEF	JEFF WOODY		DESIGN BY	E. LOPEZ	CHECKED	M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	TYPE 26A-4-100 MODIFIED		SES-5		
			DETAILS BY	T. NGUYEN	CHECKED	E. LOPEZ			POST MILE	ROTATING POLE LAYOUT				
		QUANTITIES BY		CHECKED			UNIT: 3619	PROJECT NUMBER & PHASE: 0800020091-1	CONTRACT NO.: 08-0P9801	REVISION DATES	SHEET	OF		
STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 09-01-10)										10/21/14	10/31/14	11/4/14	5	8

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

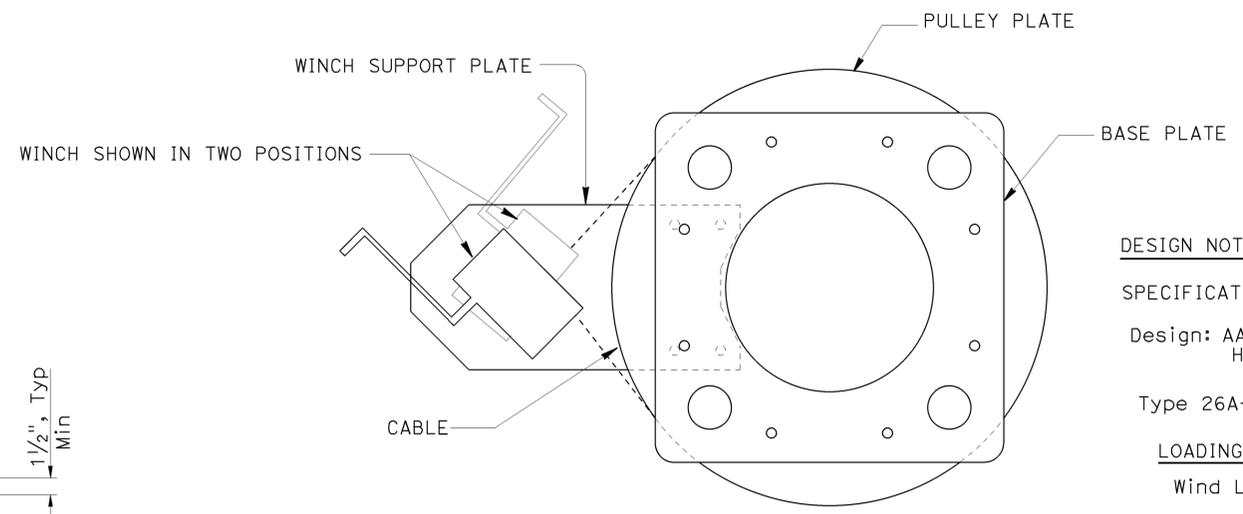


FILE => 08-0p9801-ses5.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s129055 DATE PLOTTED => 06-NOV-2014 TIME PLOTTED => 09:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	101.9	53	55
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER			10-31-14	DATE	
1-29-15 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>					



SECTION B-B
Showing winch and winch support plate position

DESIGN NOTES:

SPECIFICATIONS:

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition.

Type 26A-4-100 (Mod) To Be Used With Rotating Pole.

LOADING:

Wind Loading: (3-Sec Gust) 100 Mph

UNIT STRESSES FOR ROTATING POLE ADAPTER ASSEMBLY

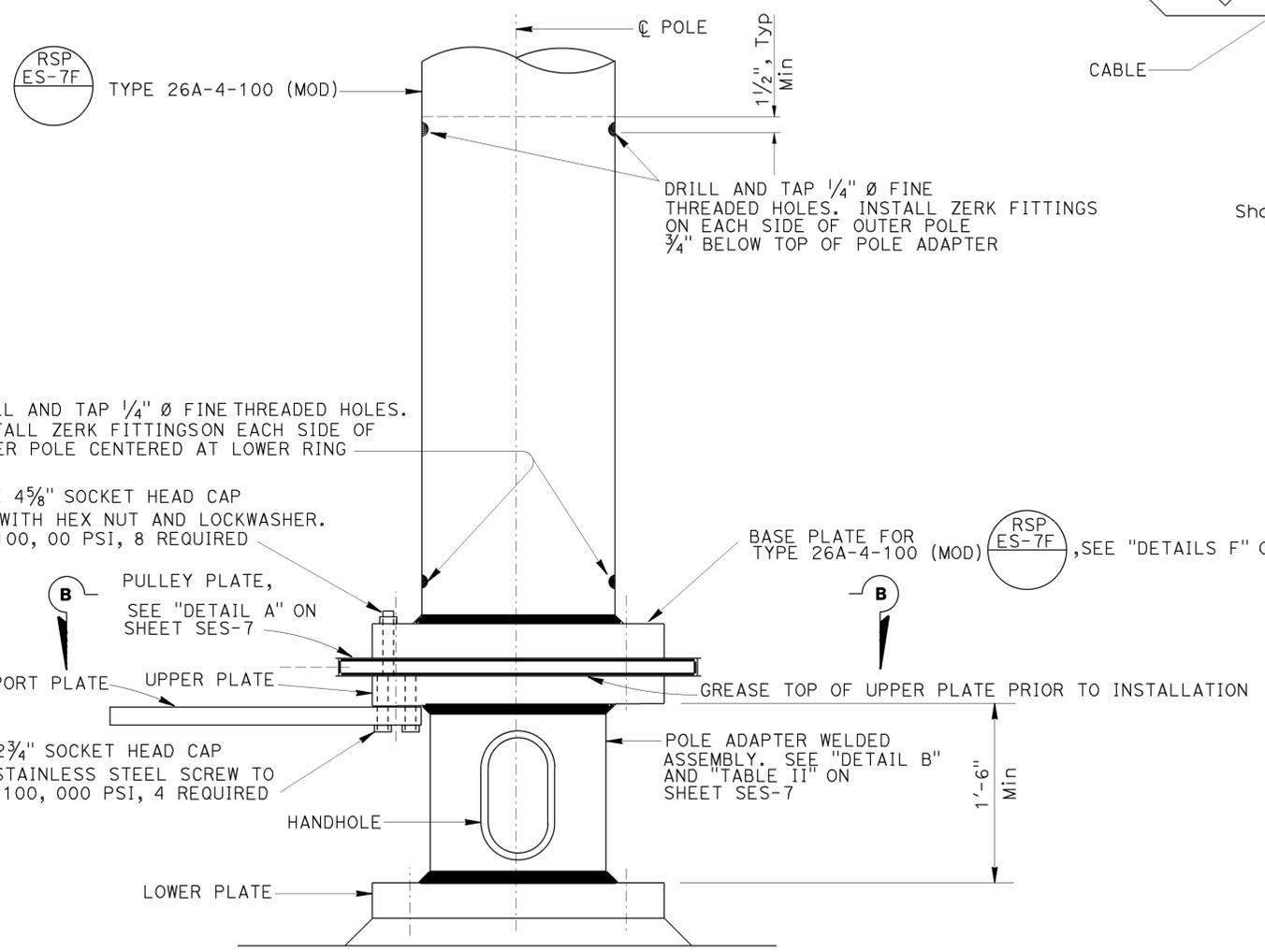
- fy = 50, 000 psi steel tube
- fy = 50, 000 psi structural steel unless otherwise noted
- Anchor Bolts: fy = 50, 000 psi unless otherwise noted

GENERAL NOTES:

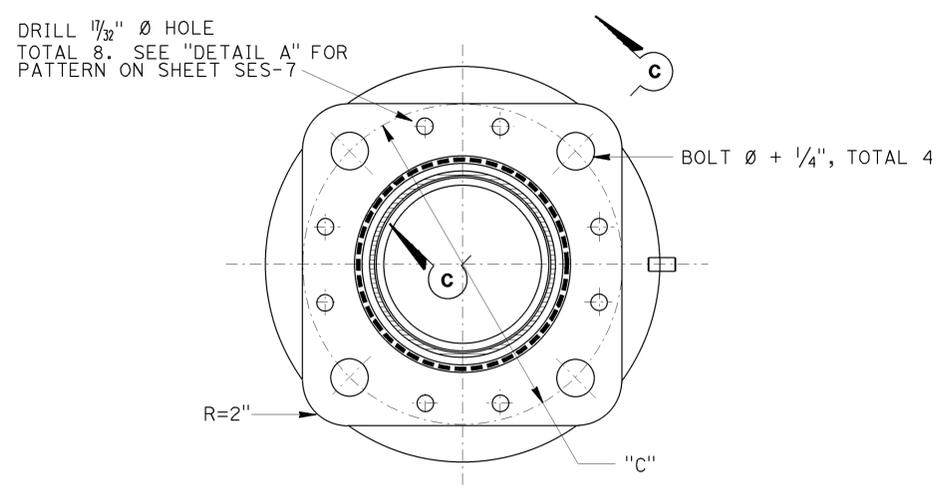
1. Washer assembly consists of two fiber, two flat and lock washers.
2. All steel shall be galvanized after fabrication unless otherwise noted.

NOTES:

- A. See "SECTION C-C" on sheet SES-7.
- B. For c dimension, see "table I" on sheet SES-8.
- C. For details not shown, see 2010 "STANDARD PLANS" and 2010 "REVISED STANDARD PLANS".



ROTATING POLE ASSEMBLY
(Some fasteners not shown)

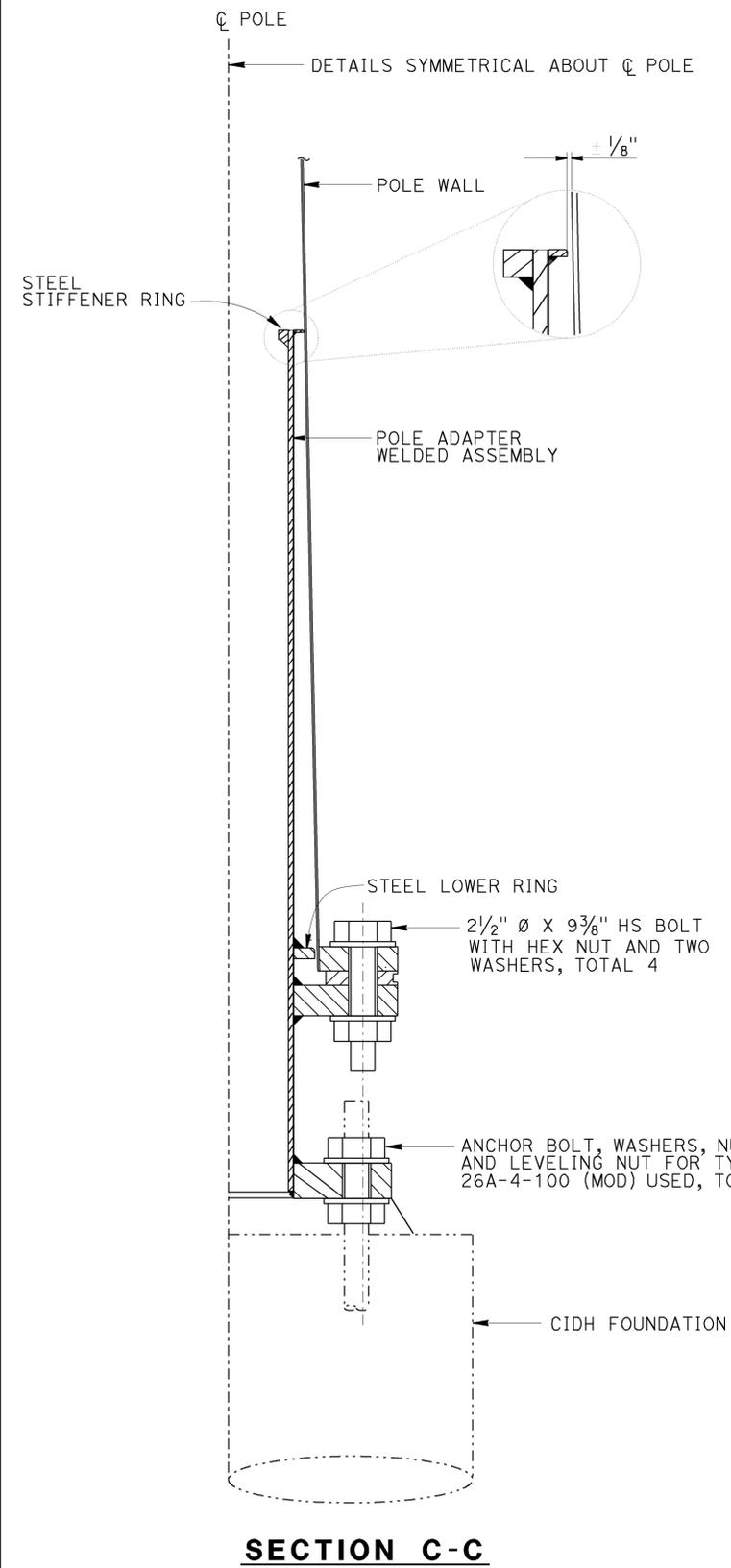


SECTION B-B
(Bolts and nuts not shown)

NO SCALE

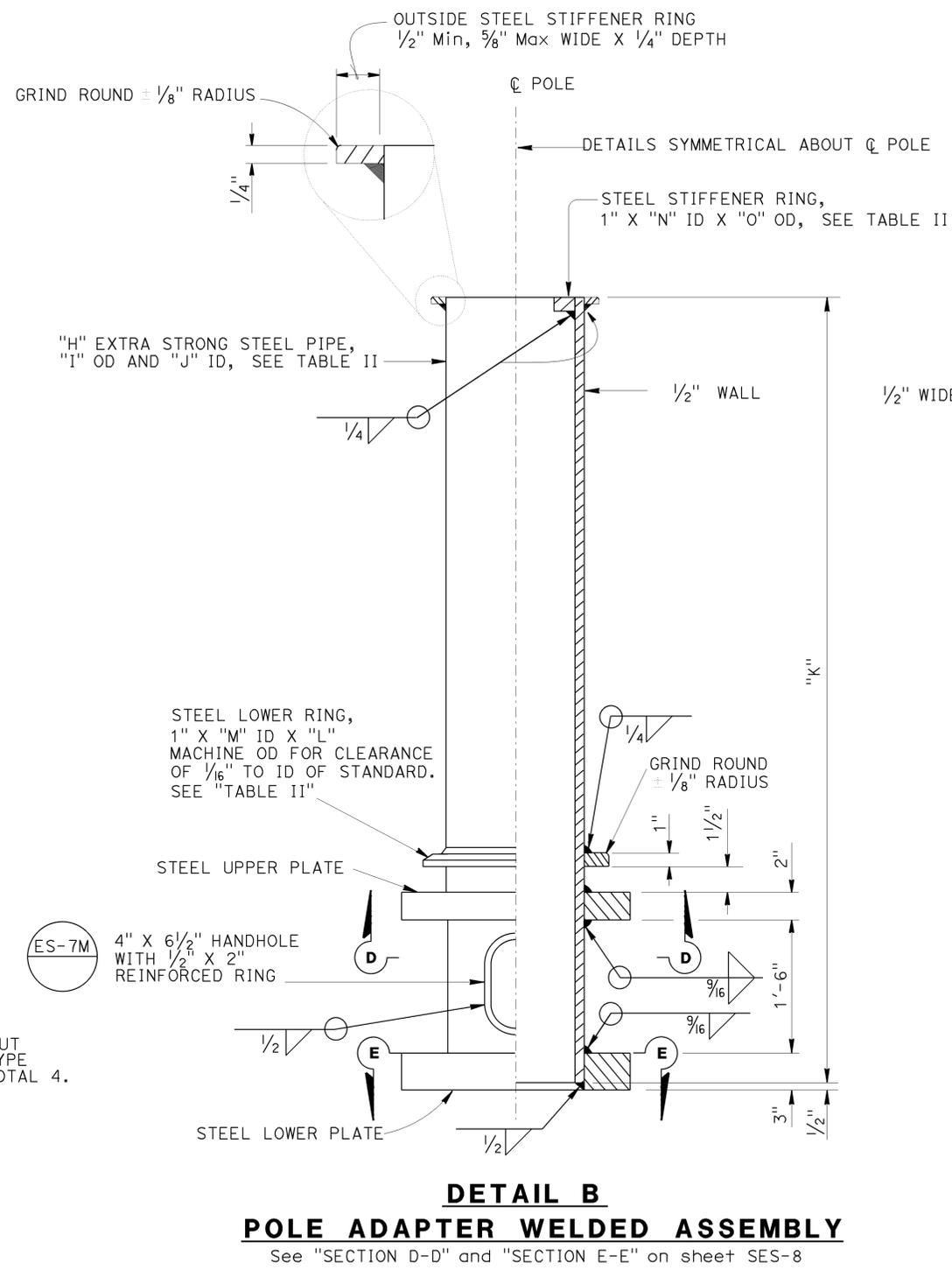
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JEFF WOODY	DESIGN	BY E. LOPEZ	CHECKED M. LICHA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	TYPE 26A-4-100 MODIFIED	SES-6	
	DETAILS	BY T. NGUYEN	CHECKED E. LOPEZ			POST MILE			ROTATING POLE ADAPTER ASSEMBLY DETAILS NO. 1
	QUANTITIES	BY	CHECKED			101.9			



SECTION C-C

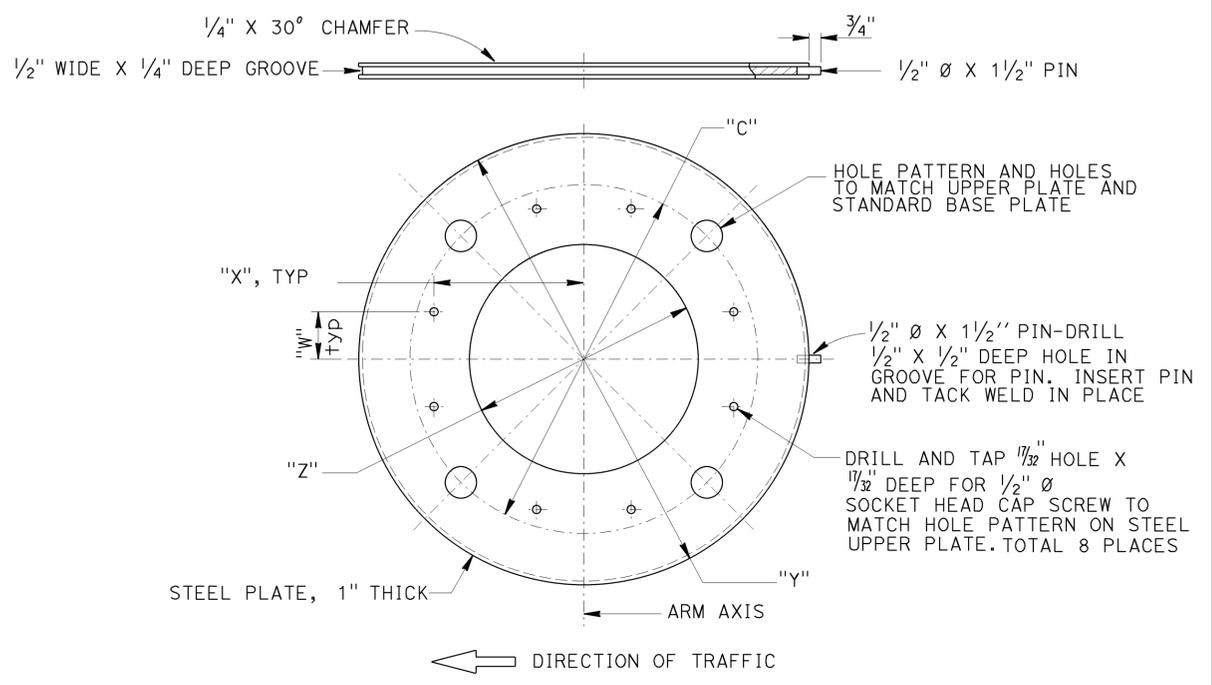
NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



DETAIL B
POLE ADAPTER WELDED ASSEMBLY
 See "SECTION D-D" and "SECTION E-E" on sheet SES-8

SIGNAL & LIGHTING STANDARD (MOD)	POLE ADAPTER WELDED ASSEMBLY							
	XS PIPE				LOWER RING		STIFFENER RING	
	"H"	"I" (OD)	"J" (ID)	"K"	"L" (OD)	"M" (ID)	"N" (ID)	"O" (OD)
TYPE 26A-4-100	10"	10 3/4"	9 3/4"	9'-0"	12 1/8"	10 3/4"	8 3/4"	9 3/4"

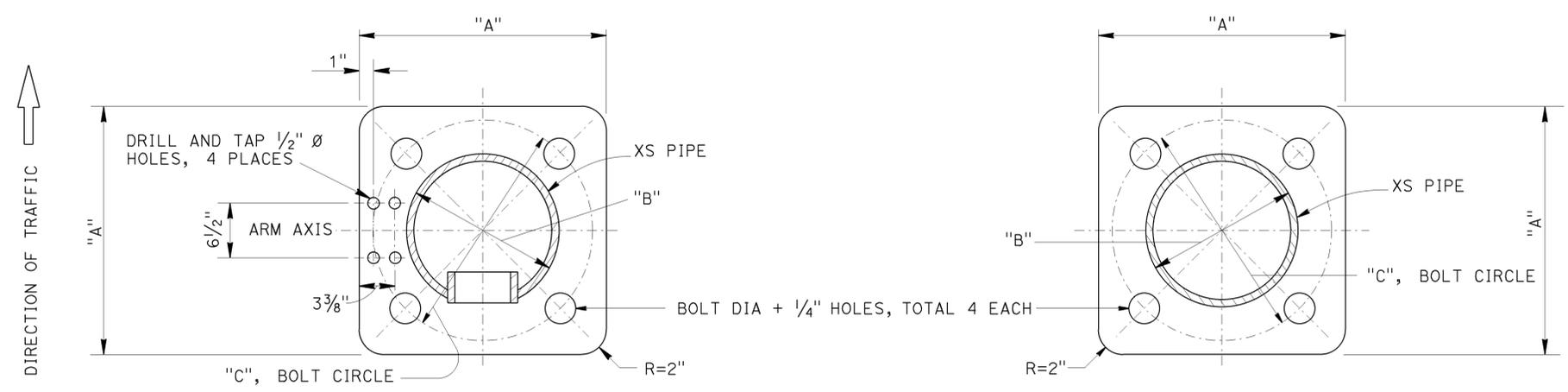
ID = Inside diameter
 OD = Outside diameter



DETAIL A
PULLEY PLATE

SIGNAL & LIGHTING STANDARD (MOD)	PULLEY PLATE DIMENSIONS			
	"W"	"X"	"Y"	"Z"
TYPE 26A-4-100	3"	9 1/2"	28 1/2"	14 1/2"

NO SCALE



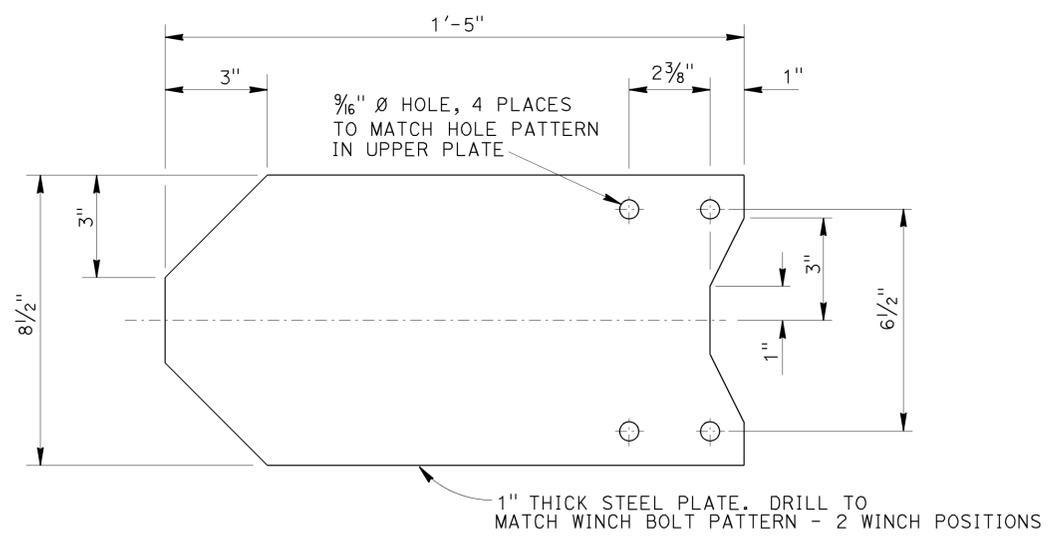
SECTION D-D

SECTION E-E

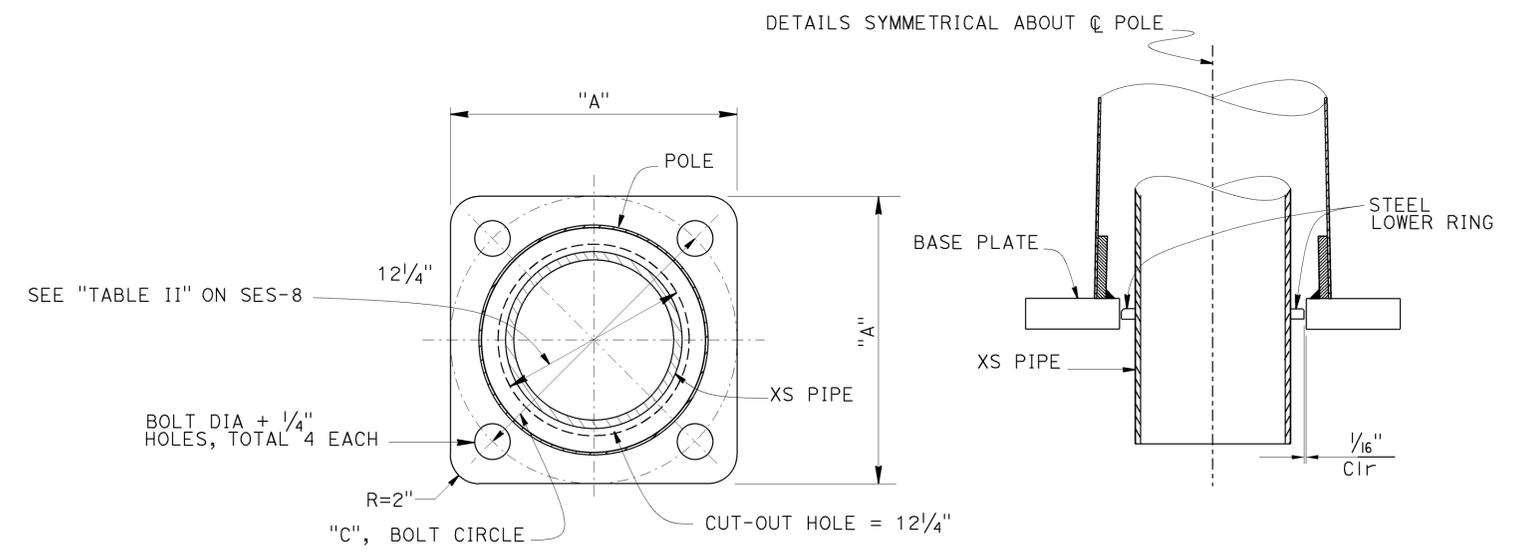
UPPER & LOWER PLATE

TABLE I

SIGNAL & LIGHTING STANDARD (MOD)	UPPER & LOWER PLATE DIMENSIONS		
	"A"	"B"	"C"
26A-4-100	23"	10 ³ / ₄ "	21"



WINCH SUPPORT PLATE



TYPE 26A-4-100 (MOD) BASE PLATE

DETAIL F

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

NOTE:
SEE "DETAIL B" ON SHEET SES-7 FOR "SECTION D-D" AND "SECTION E-E" OF UPPER AND LOWER PLATE.

NO SCALE