

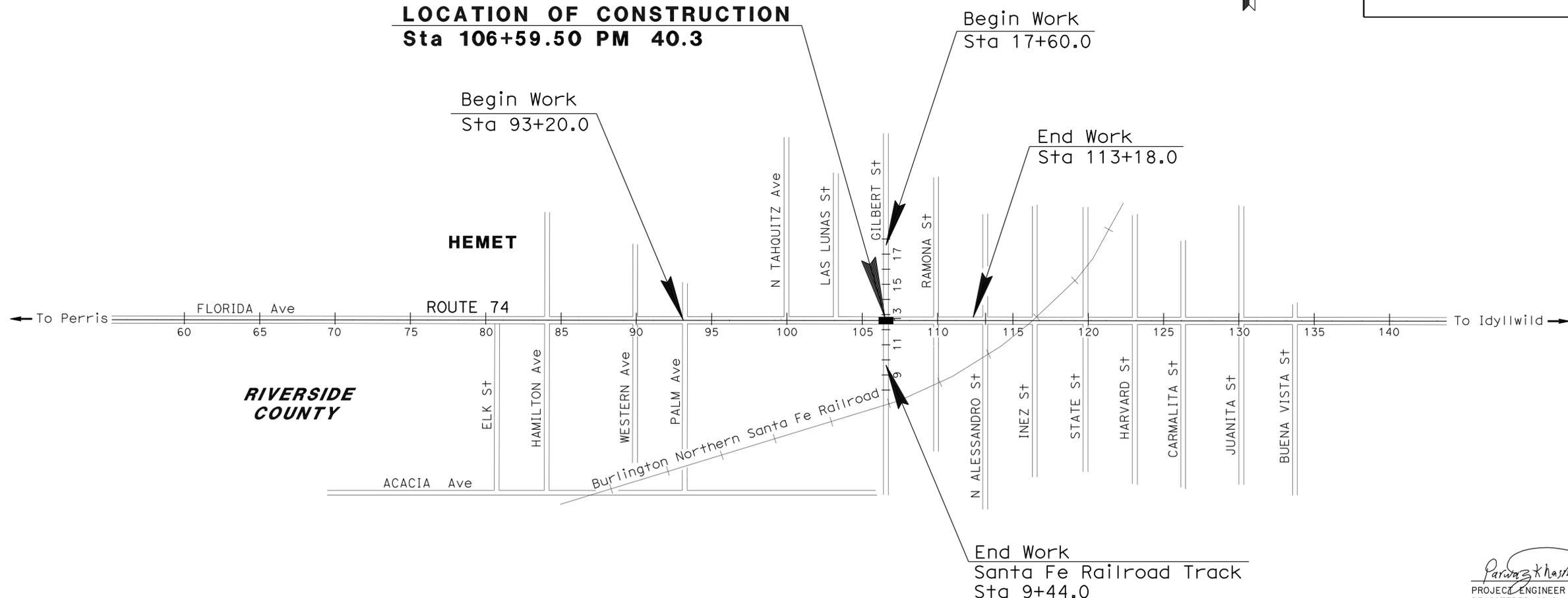
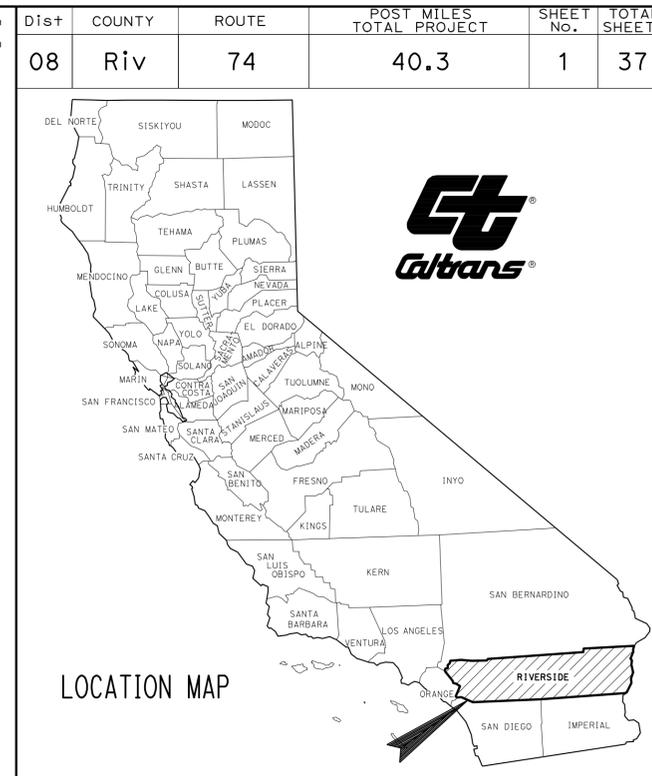
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	LAYOUT
4	CONSTRUCTION DETAILS
5-6	UTILITY PLANS
7	CONSTRUCTION AREA SIGNS
8	PAVEMENT DELINEATION
9	PAVEMENT DELINEATION AND SIGN QUANTITIES
10	SUMMARY OF QUANTITIES
11-18	ELECTRICAL PLANS
19-37	REVISED AND NEW STANDARD PLANS

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

STATE OF CALIFORNIA **ACHSNHG-P074(057)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN RIVERSIDE COUNTY
IN HEMET
AT GILBERT STREET

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



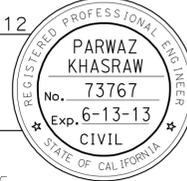
PROJECT MANAGER
CHARLES CHEN

DESIGN ENGINEER
PARWAZ KHASRAW

Parwaz Khasraw 4-23-12
 PROJECT ENGINEER REGISTERED CIVIL ENGINEER DATE

June 4, 2012
 PLANS APPROVAL DATE

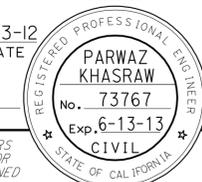
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

NO SCALE

DATE PLOTTED => 14-NOV-2012 TIME PLOTTED => 09:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	2	37
 REGISTERED CIVIL ENGINEER			4-23-12	DATE	
6-4-12 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:

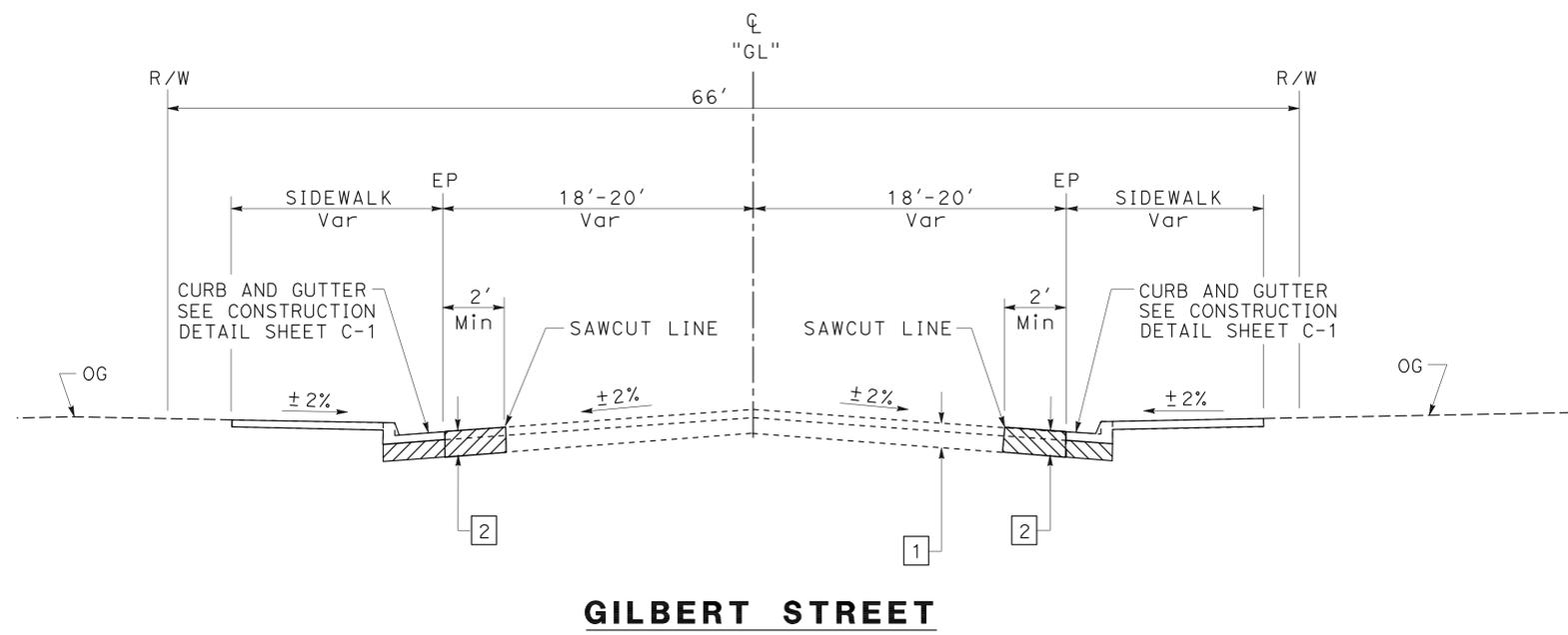
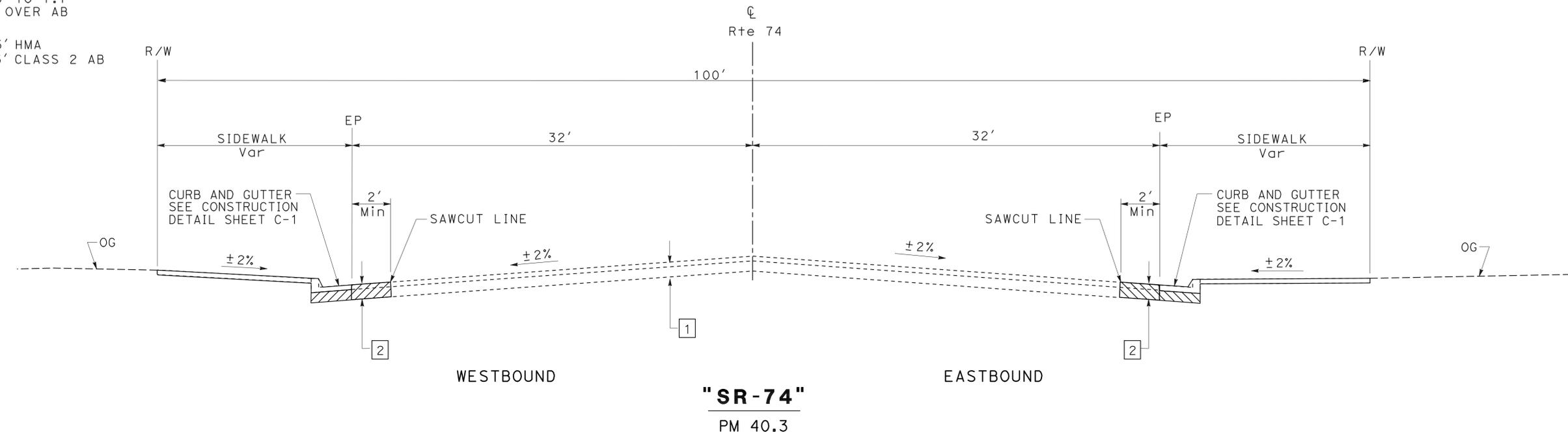
- DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- FOR LOCATION OF REPLACED CURB RAMPS, SIDEWALK, CURB AND GUTTER SEE LAYOUT SHEET (L-1).

LEGEND:

- 1 EXISTING (Var)
0.5' TO 1.1'
AC OVER AB
- 2 0.5' HMA
0.5' CLASS 2 AB

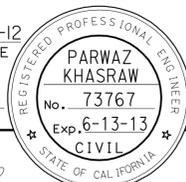
DESIGN DESIGNATION (I-15)

ADT (2009) 32,200
 ADT (2031) 50,400
 DHV (2009) 2,520
 DHV (2031) 4,570
 D=60%
 T=12%
 V=35 mph



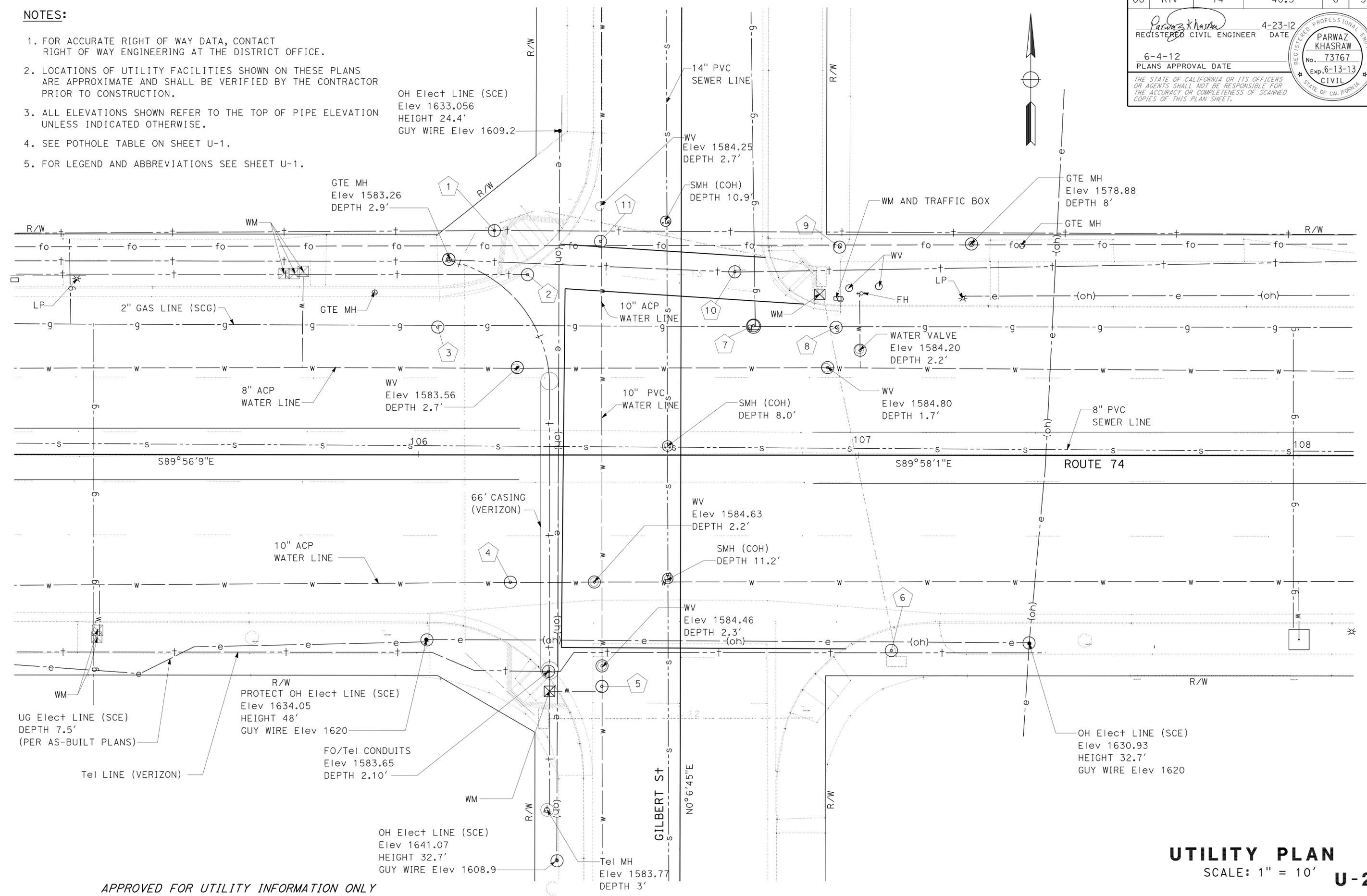
TYPICAL CROSS SECTION
NO SCALE **X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 BEHZAD SEDIGHT
 BEHZAD SEDIGHT
 AYSHA HABIB
 PARWAZ KHASRAW
 REVISOR BY
 DATE REVISOR
 CALCULATED BY
 DESIGNED BY
 CHECKED BY
 FUNCTIONAL SUPERVISOR
 BEHZAD SEDIGHT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	6	37
 REGISTERED CIVIL ENGINEER			4-23-12	DATE	
6-4-12 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.
- LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL ELEVATIONS SHOWN REFER TO THE TOP OF PIPE ELEVATION UNLESS INDICATED OTHERWISE.
- SEE POTHOLE TABLE ON SHEET U-1.
- FOR LEGEND AND ABBREVIATIONS SEE SHEET U-1.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHT
 CALCULATED/DESIGNED BY: AYSHA HABIB
 CHECKED BY: PARWAZ KHASRAW
 REVISED BY: DATE
 REVISIONS:

APPROVED FOR UTILITY INFORMATION ONLY

UTILITY PLAN
 SCALE: 1" = 10' U-2

LAST REVISION: DATE PLOTTED => 14-NOV-2012
 04-23-12 TIME PLOTTED => 09:26

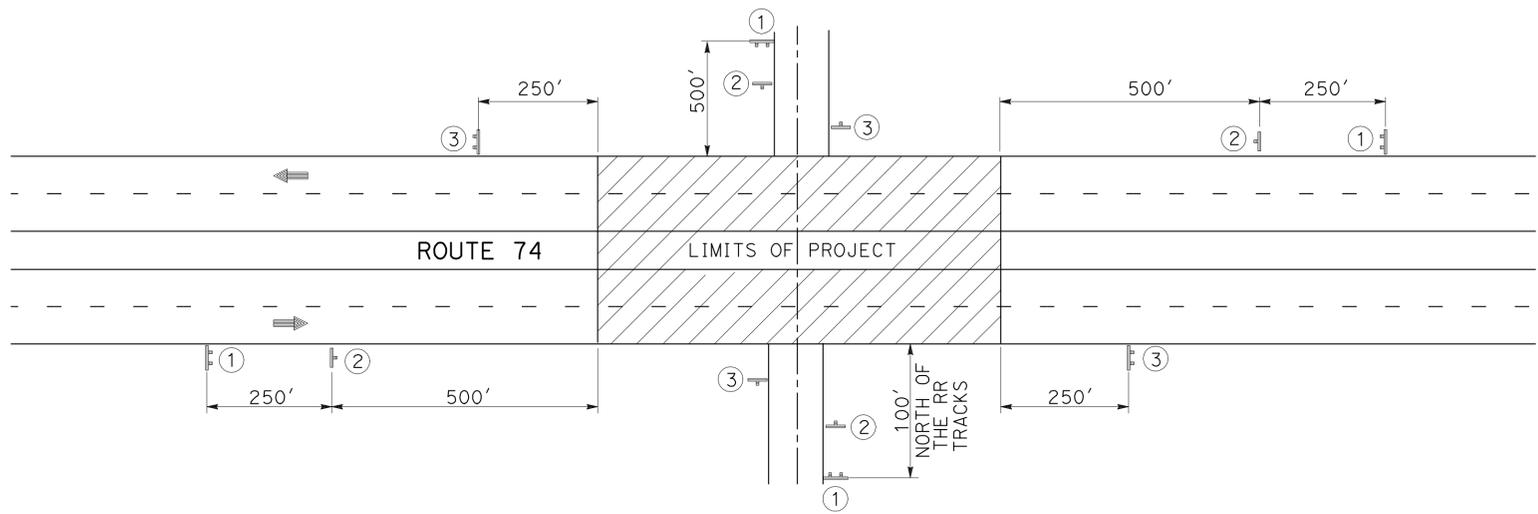
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	7	37

M.M. Kamgar Registered Civil Engineer 4-23-12 DATE

6-4-12 PLANS APPROVAL DATE

MEHDI KAMGAR No. 58039 Exp. 6-30-14 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.



TYPICAL INSTALLATION OF STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				
1		C40 (CA)	72" X 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 4" x 6"	4
2	W20-1		36" X 36"	ROAD WORK AHEAD	1 - 4" x 6"	4
3	G20-2		36" X 18"	END ROAD WORK	1 - 4" x 6"	4

NOTE:
 1. EXACT SIGN LOCATION WILL BE DETERMINED BY THE ENGINEER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: W. WASSER
 CALCULATED/DESIGNED BY: W. WASSER
 CHECKED BY: W. WASSER
 REVISOR: MEHDI KAMGAR
 DATE: 4-23-12

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGN
 NO SCALE
CS-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	8	37

M.M. Kamgar		4-23-12
REGISTERED CIVIL ENGINEER	DATE	
6-4-12		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	MEHDI KAMGAR
No.	58039
Exp.	6-30-14
CIVIL	

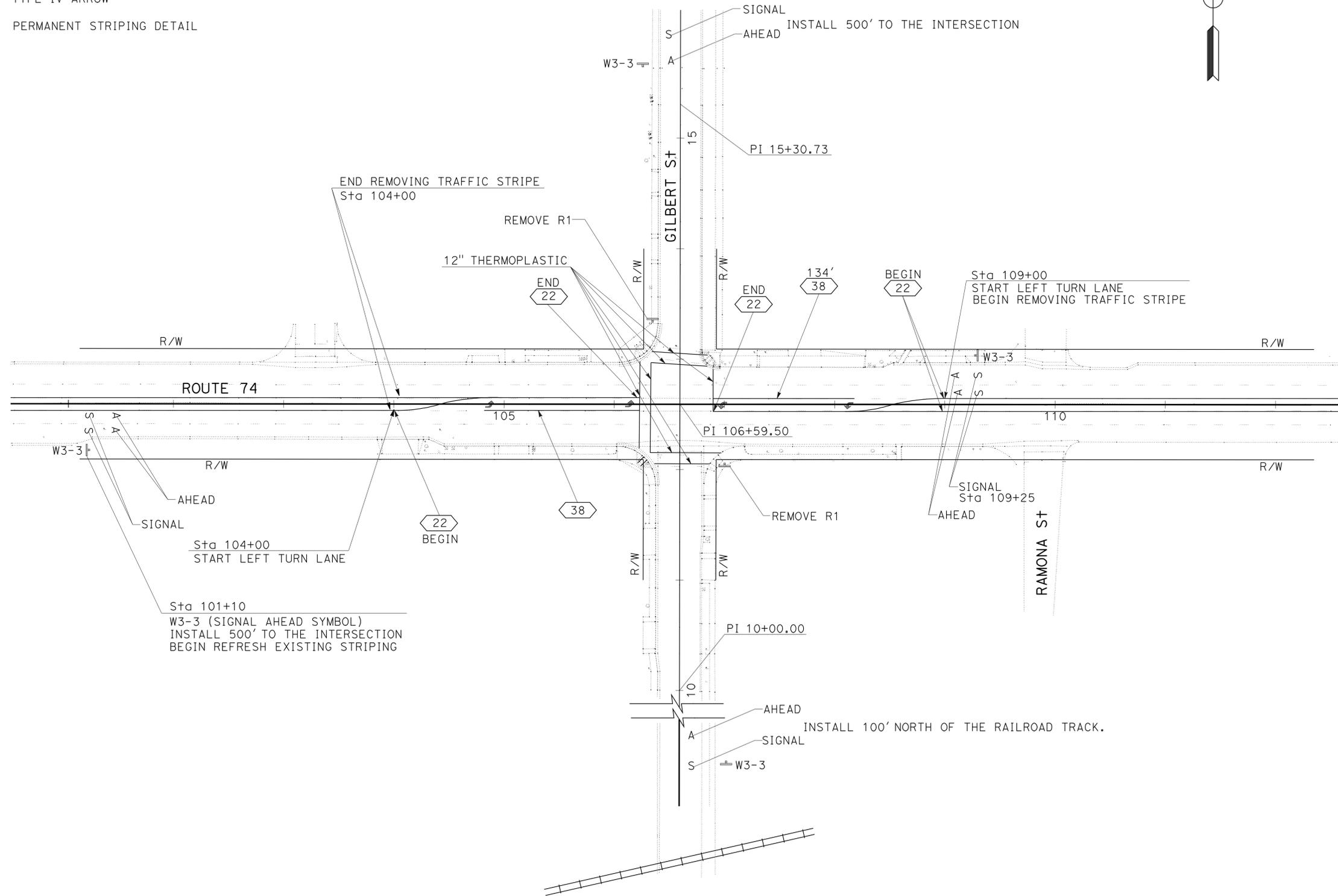
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

LEGEND:

-  TYPE IV ARROW
-  PERMANENT STRIPING DETAIL

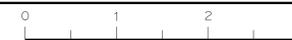


PAVEMENT DELINEATION

SCALE: 1" = 50'

PD-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	9	37

M.M. Kamgar Registered Civil Engineer
 4-23-12 DATE
 6-4-12 PLANS APPROVAL DATE

MEHDI KAMGAR
 No. 58039
 Exp. 6-30-14
 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.

PAVEMENT DELINEATION QUANTITIES

DETAIL No.	REMOVE PAVEMENT MARKER	PAVEMENT MARKERS		THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)		THERMOPLASTIC TRAFFIC STRIPE
		RETROREFLECTIVE		4" WHITE	4" YELLOW	8" WHITE
		TYPE G	TYPE D			
	EA	EA		LF		LF
12	42	42		2000		
22	118		118			
32	78		78		1414	
38	12	12			1248	276
SUBTOTAL	250	54	196	2000	2662	276
TOTAL	250	250		4662		276

THERMOPLASTIC PAVEMENT MARKING

ITEMS	QUANTITY	
	EA	SQFT
TYPE IV	4	60
SIGNAL	6	192
AHEAD	6	186
12" X-WALK		320
TOTAL		758

REMOVE PAVEMENT MARKING	
STOP	SQFT
	44

REMOVE ROADSIDE SIGN	
R-1	EA
	2

REMOVE YELLOW TRAFFIC STRIPE	
DETAIL 32	LF
	890

NOTE:

1. REMOVE ALL THE EXISTING PAVEMENT MARKERS WITHIN THE PROJECT LIMIT AND INSTALL NEW MARKERS AND REFRESH THE EXISTING STRIPES.

SIGN PANEL MATERIAL SUMMARY

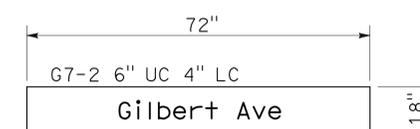
SHEET No.	FURNISH SINGLE SHEET ALUMINIUM SIGN			SINGLE FACED	DOUBLE FACED	BACKGROUND SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	GRAFFITI FILM PREMIUM	ROADSIDE SINGLE-SHEET		INSTALL SIGN MAST ARM HANGER ASSEMBLY (N)	INSTALL SIGN STRAP AND SADDLE BRACKET METHOD	NUMBER OF POSTS AND SIZE	DESCRIPTION/REMARKS	
	SIGN CODE		SIGN SIZE L X D								SIGN AREA (SQFT)	FRAMED ALUMINIUM 0.07"					UNFRAMED ALUMINIUM 0.063"
	FEDERAL	CALIFORNIA															
PD-1	W3-3		36" X 36"	36	4	YELLOW	III	BLACK	VII	X		X			1- 4" X 6"	SIGNAL AHEAD SYMBOL	
E-2		R73-3(CA)	36" X 36"	18	2	WHITE	III	BLACK	VII	X		X	X			NO U TURN/LEFT TURN ARROW	
E-2	R9-3		12" X 18"	3	2	WHITE	III	BLACK	VII	X		X	X			NO PEDESTRIAN CROSSING	
E-2	R9-3a		24" X 24"	8	2	WHITE	III	BLACK	VII	X		X	X			NO PED CROSSING SYMBOL	
E-2		R49(CA)	42" X 18"	10.5	2	WHITE	III	BLACK	VII	X		X			BARRICADE	NO PED CROSSING SYMBOL USE CROSSWALK	
E-2	SPECIAL 1		72" X 18"	18	2	GREEN	III	WHITE	VII	X	X		X			Florida Ave	
E-2	SPECIAL 2		72" X 18"	18	2	GREEN	III	WHITE	VII	X	X		X			Gilbert Ave	
TOTAL				111.5													

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



SPECIAL 1

STREET NAME SIGN FOR THE MAST ARM WITH BORDER. INSTALL ON POLE FACING (FNBT),(FSBT) ON GILBERT Ave WITH CITY LOGO.



SPECIAL 2

STREET NAME SIGN FOR THE MAST ARM WITH BORDER. INSTALL ON POLE FACING (FEBT),(FWBT) ON Rte 74 WITH CITY LOGO.

PAVEMENT DELINEATION AND SIGN QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans®
 TRAFFIC DESIGN
 W. WASSER
 FUNCTIONAL SUPERVISOR
 W. WASSER
 CHECKED BY
 CALCULATED/DESIGNED BY
 MEHDI KAMGAR
 W. WASSER
 REVISOR BY
 DATE REVISOR

LAST REVISION DATE PLOTTED => 14-NOV-2012 04:23:12 TIME PLOTTED => 09:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	10	37

Parwaz Khasraw
 REGISTERED CIVIL ENGINEER DATE 4-23-12
 6-4-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 PARWAZ KHASRAW
 No. 73767
 Exp. 6-13-13
 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.

ROADWAY QUANTITIES

LOCATION	CURB RAMP CASE (N)	REMOVE ASPHALT CONCRETE	REMOVE CONCRETE (CURB, GUTTER, & SIDEWALK)	MINOR CONCRETE (CURB, SIDEWALK, & CURB RAMP)	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	CLASS 2 AGGREGATE BASE	PEDESTRIAN BARRICADE (TYPE I)	CURB RAMP DETECTABLE WARNING SURFACE	ADJUST WATER METER TO GRADE	ADJUST WATER VALVE COVER	ADJUST MANHOLE TO GRADE	ADJUST TRAFFIC BOX TO GRADE	HOT MIX ASPHALT (TYPE A)
		SQFT	CY	CY	SQYD	CY	EA	SQFT	EA	EA	EA	EA	TON
NW QUADRANT OF ROUTE 74 AND GILBERT S+	A	155.0	12.0	12.0	17.0	2.0				1	1		6
NE QUADRANT OF ROUTE 74 AND GILBERT S+	A	72.0	4.0	4.0	8.0	5.0	1		1			1	3
SW QUADRANT OF ROUTE 74 AND GILBERT S+	A	138.0	20.0	20.0	16.0	12.0			1	1			6
SE QUADRANT OF ROUTE 74 AND GILBERT S+	A						1	12.0					
TOTAL		365.0	36.0	36.0	41.0	19.0	2	12.0	2	2	1	1	15

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	REVISION
Caltrans	BEHZAD SEDIGHI	AYSHA HABIB	PARWAZ KHASRAW
DESIGN	CALCULATED/DESIGNED BY	CHECKED BY	REVISOR
			DATE
			REVISION

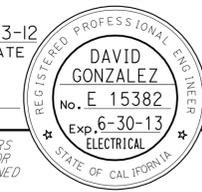
SUMMARY OF QUANTITIES

Q-1

LAST REVISION | DATE PLOTTED => 14-NOV-2012
 04-23-12 | TIME PLOTTED => 09:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	11	37

 4-23-12
 REGISTERED ELECTRICAL ENGINEER DATE
 6-4-12
 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.

GENERAL NOTES:

1. ALL 1-A SIGNAL STANDARD FOUNDATIONS SHALL BE THE ANCHOR BOLTS WITH SLEEVE NUTS AS PER ES-7B DETAIL.
2. VIDEO DETECTION ZONES SHALL BE ESTABLISHED IN THE FIELD BY THE ENGINEER.
3. FOR SIGN DETAILS SEE SHEET PDQ-1.

PROJECT NOTES:

1. INSTALL 120/240 V, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE
 METER A: 100 A, 240 V, 2P, CB (MAIN BREAKER)
 (TC-1) 50 A, 120 V, 1P, CB (SIGNAL)
 CALTRANS ID No. (CTID): 08-56-074-0-040.300-M
 490 W. FLORIDA Ave, HEMET, CA
 METER B: 100 A, 240 V, 2P, CB (MAIN BREAKER)
 (LS-3) 30 A, 120 V, 1P, CB (INTERSECTION LTG)
 15 A, 120 V, 1P, CB (PEC CONTROL)
 CALTRANS ID No. (CTID): 08-56-074-0-040.301-M
 492 W. FLORIDA Ave, HEMET, CA
2. INSTALL STATE-FURNISHED MODEL 2070L CONTROLLER ASSEMBLY WITH MODEL 2070-6A INTERNAL MODEM. THE CONTRACTOR SHALL SUPPLY CDMA WIRELESS MODEM PACKAGE (W/ETHERNET CONNECTION) TO THE ENGINEER.
3. INSTALL EXTERNAL BBS CABINET ON MODIFIED FOUNDATION AS PER SHEET E-7. INSTALL BBS BATTERIES AND STATE-FURNISHED BBS COMPONENTS IN EXTERNAL BBS CABINET. CONNECT AS PER SHEET E-5 OR E-6.
4. INSTALL R73-3 (CA) SIGN AS PER ES-7N, DETAIL U.
5. INSTALL RETROREFLECTIVE SHEETING STREET NAME SIGN.
6. INSTALL VIVDS CAMERA AS PER DETAIL ON SHEET E-8, DETAIL B.
7. INSTALL R9-3 AND R9-3a.

ABBREVIATIONS:

VIVDS = VIDEO IMAGE VEHICLE DETECTION SYSTEM
 VDC = VIDEO DETECTION CAMERA
 PPBP = PEDESTRIAN PUSH BUTTON POST

**PROJECT NOTES,
 ABBREVIATIONS AND LEGEND**

E-1



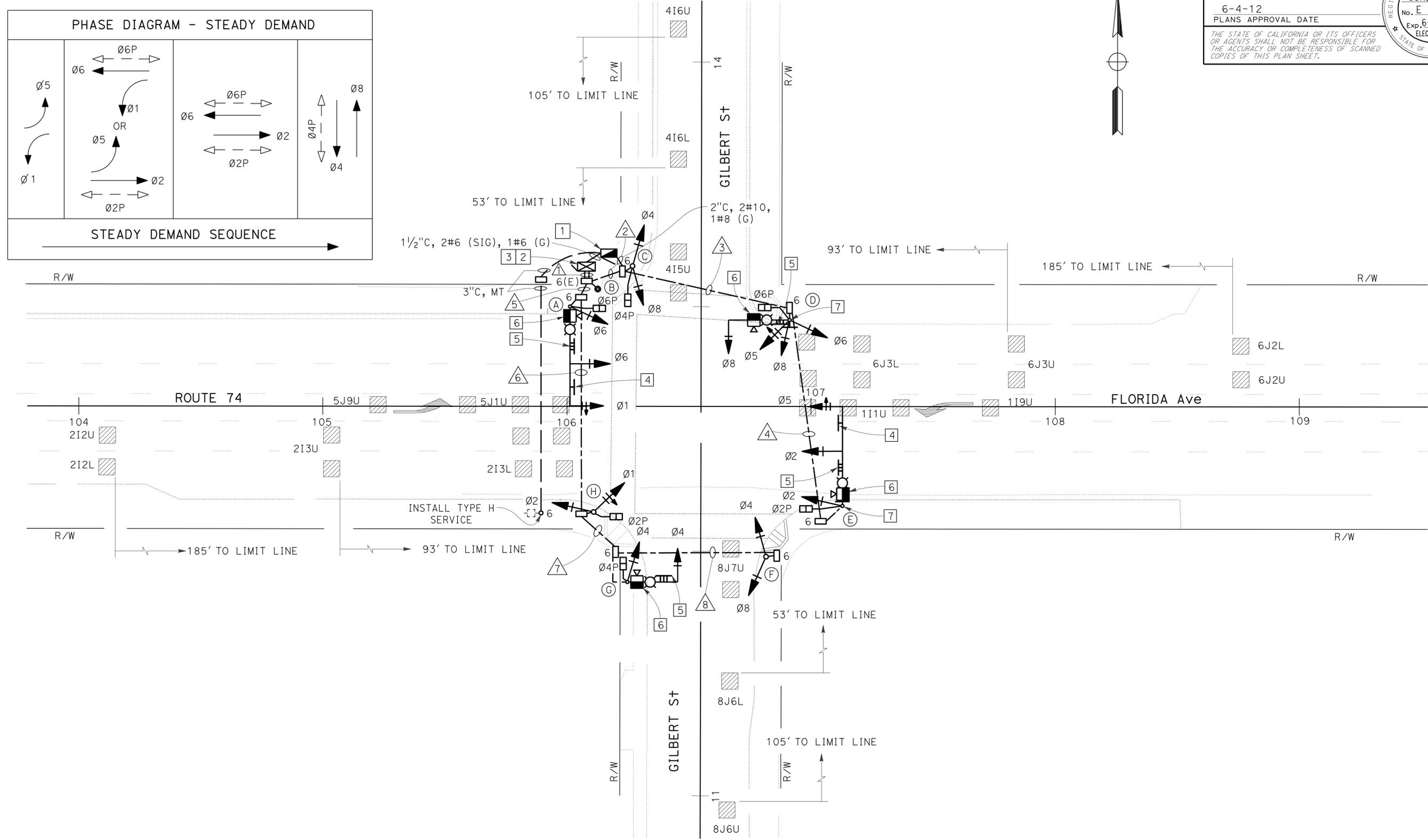
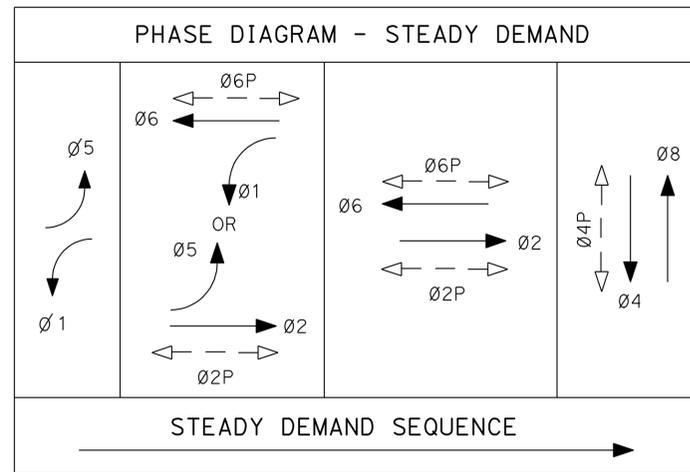
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	12	37

REGISTERED ELECTRICAL ENGINEER	DATE
DAVID GONZALEZ	4-23-12
PLANS APPROVAL DATE	
6-4-12	

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NOTE:

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A

FUNCTIONAL SUPERVISOR: DAVID GONZALEZ
 CALCULATED/DESIGNED BY: DAVID GONZALEZ
 CHECKED BY:
 HARRY UMEMOTO
 DAVID GONZALEZ
 REVISED BY: DATE REVISION

APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING

SCALE: 1" = 20'

E-2



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	13	37

 4-23-12
 REGISTERED ELECTRICAL ENGINEER DATE

6-4-12
 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
DAVID GONZALEZ
 No. E 15382
 Exp. 6-30-13
 ELECTRICAL
 STATE OF CALIFORNIA

CONDUIT AND CONDUCTOR SCHEDULE

CABLE, AWG, AND DLC SCHEDULE		CONDUIT RUN NUMBER							
CABLE TYPE	Standard PHASE	1	2	3	4	5	6	7	8
VEH-PED 12CSC	(A) 1,6,6P	1				1			
	(B) 4	1							
	(C) 4,8,4P	2	2	1					
	(D) 5,6,8,6P	2	2	2	1				
	(E) 2,5,2P	1	1	1	1				
	(F) 4,8,	2	2	1		2	1	2	1
	(G) 4,4P	2	1	1		1	1	1	1
	(H) 1,2, 2P	4	1	1		1	1	1	1
PPB 3CSC	TOTAL	10	6	5	2	3	1	5	3
AWG	CIRCUIT								
#10	LUMINAIRE		2	2	2	2	2	2	
#8	GROUND	1	1	1	1	1	1	1	1
	VIVIDS PWR CABLE	4	2	2	1	2	1	1	
	VIVIDS VIDEO CABLE	4	2	2	1	2	1	1	
	CONDUIT SIZE	2-3"C	3"C						

POLE AND EQUIPMENT SCHEDULE

No.	STANDARD		VEH SIG MTG		PED SIGNAL MTG	PPB		HPS LUM (W)	SPECIAL REQUIREMENTS	VIVIDS CAMERA ON LMA	
	TYPE	SMA (F+)	LMA (F+)	MAST ARM		POLE	Ø				ARROW
(A)	61A-5-100	60	15	2-MAS	SV-1-T	SP-1-T	-	-	310	SNS	YES
(B)	PPBP	-	-	-	-	-	4	←	-	-	-
(C)	1-A	-	-	-	TV-2-T	SP-1-T	6	→	-	-	-
(D)	19-4-100	25	10	1-MAS	SV-3-T	SP-1-T	6	→	200	SNS	YES
(E)	26-4-100	45	6	2-MAS	SV-1-T	SP-1-T	-	-	200	SNS	YES
(F)	1-A	-	-	-	TV-2-T	-	2	→	-	-	-
(G)	19-3-100	20 *	10	1-MAS	SV-1-T	SP-1-T	2	←	200	SNS	YES
(H)	1-A	-	-	-	TV-2-T	SP-1-T	4	→	-	-	-

* MODIFIED SMA LENGTH

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A

FUNCTIONAL SUPERVISOR: DAVID GONZALEZ
 CALCULATED/DESIGNED BY: HARRY UMEMOTO
 CHECKED BY: DAVID GONZALEZ
 REVISED BY: DAVID GONZALEZ
 DATE REVISED:

APPROVED FOR ELECTRICAL WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	14	37

REGISTERED ELECTRICAL ENGINEER	DATE
<i>David Gonzalez</i>	4-23-12
PLANS APPROVAL DATE	
6-4-12	

REGISTERED PROFESSIONAL ENGINEER
DAVID GONZALEZ
No. E. 15382
Exp. 6-30-13
ELECTRICAL

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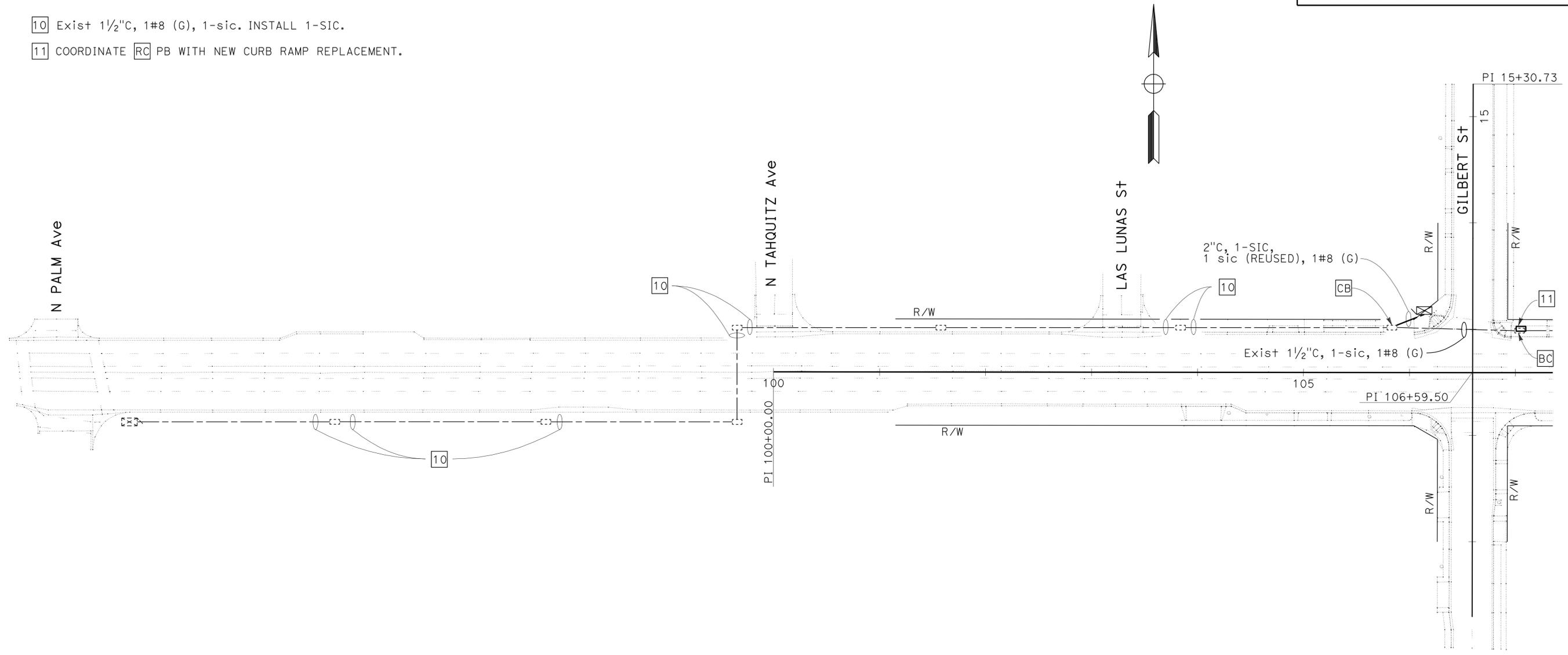
NOTE:

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

PROJECT NOTE (THIS SHEET ONLY):

- 10 Exist 1 1/2"C, 1#8 (G), 1-sic. INSTALL 1-SIC.
- 11 COORDINATE RC PB WITH NEW CURB RAMP REPLACEMENT.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans ELECTRICAL DESIGN A	DAVID GONZALEZ	DAVID GONZALEZ	HARRY UMEMOTO
		CHECKED BY	DAVID GONZALEZ
			DAVID GONZALEZ



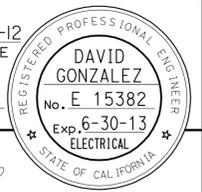
APPROVED FOR ELECTRICAL WORK ONLY

SIGNAL INTERCONNECT

SCALE: 1" = 50'

E-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	15	37
REGISTERED ELECTRICAL ENGINEER			DATE	4-23-12	
PLANS APPROVAL DATE			6-4-12		
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.					

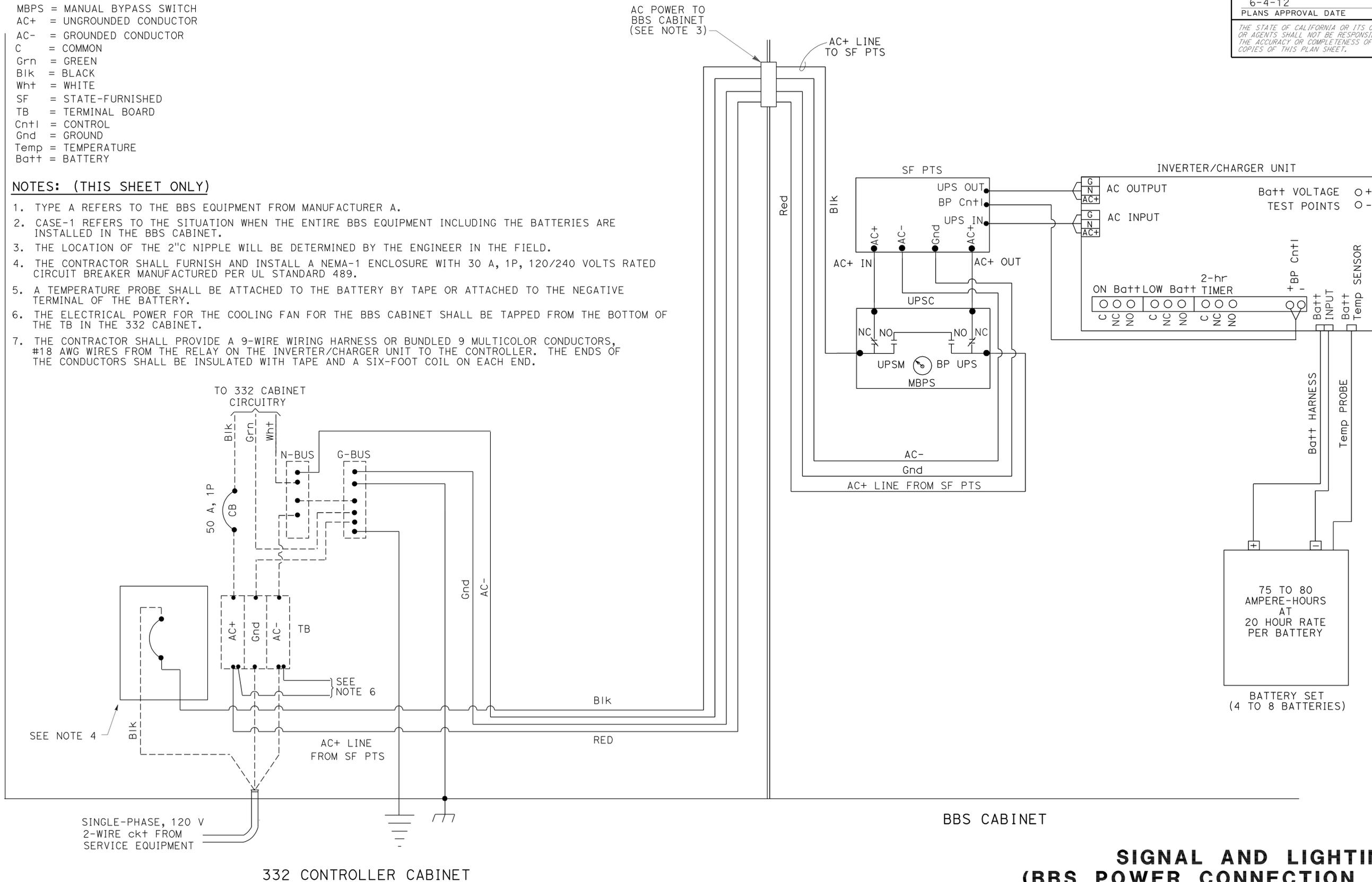


LEGEND: (THIS SHEET ONLY)

- 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
- Wh+ = WHITE
- SF = STATE-FURNISHED
- TB = TERMINAL BOARD
- Cn+I = CONTROL
- Gnd = GROUND
- Temp = TEMPERATURE
- Bat+ = BATTERY

NOTES: (THIS SHEET ONLY)

1. TYPE A REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER A.
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.

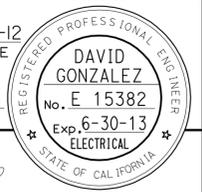


**SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM)
(TYPE A, CASE-1)**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A
 FUNCTIONAL SUPERVISOR: DAVID GONZALEZ
 CALCULATED/DESIGNED BY: DAVID GONZALEZ
 CHECKED BY: DAVID GONZALEZ
 REVISOR: HARRY UMEMOTO
 DATE: DAVID GONZALEZ

LAST REVISION: DATE PLOTTED => 14-NOV-2012 TIME PLOTTED => 09:15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	16	37
REGISTERED ELECTRICAL ENGINEER			DATE	4-23-12	
PLANS APPROVAL DATE			6-4-12		
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.					

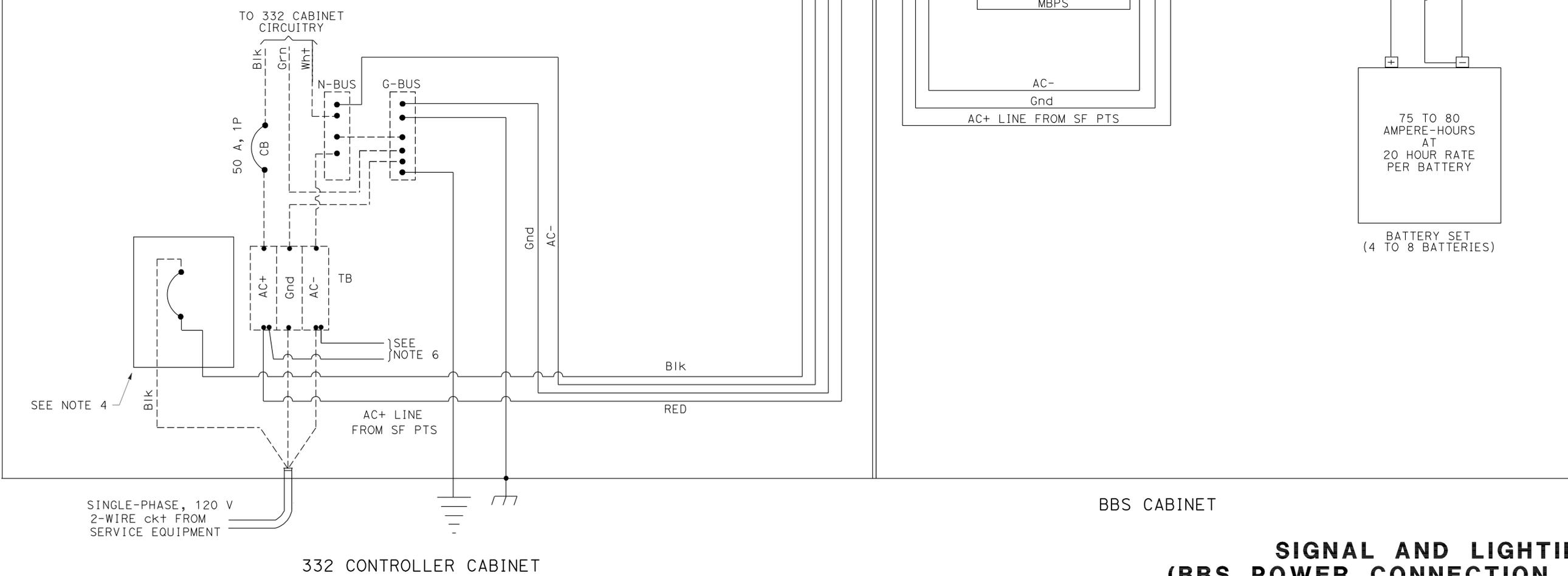


LEGEND: (THIS SHEET ONLY)

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

GENERAL 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" 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.



**SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM)
(TYPE B, CASE-1)**

E-6

APPROVED FOR ELECTRICAL WORK ONLY



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A
 FUNCTIONAL SUPERVISOR: DAVID GONZALEZ
 CALCULATED/DESIGNED BY: DAVID GONZALEZ
 CHECKED BY: DAVID GONZALEZ
 REVISIONS: HARRY UMEMOTO, DAVID GONZALEZ
 REVISOR: HARRY UMEMOTO, DAVID GONZALEZ
 DATE: [REDACTED], [REDACTED]

LAST REVISION: [REDACTED]
 DATE PLOTTED => 14-NOV-2012
 TIME PLOTTED => 09:15

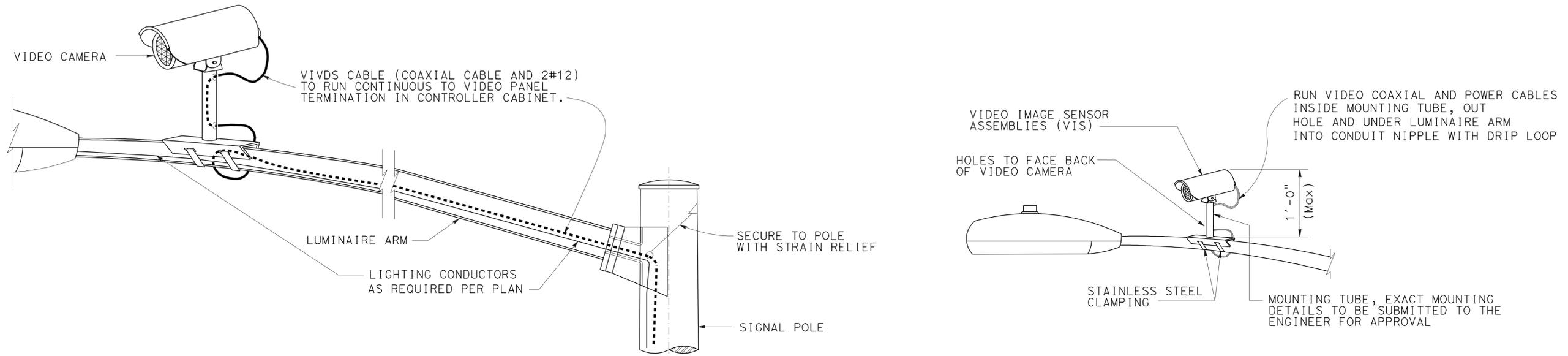
ABBREVIATION:

VIVDS - VIDEO IMAGE VIDEO DETECTION SYSTEM

NOTES:

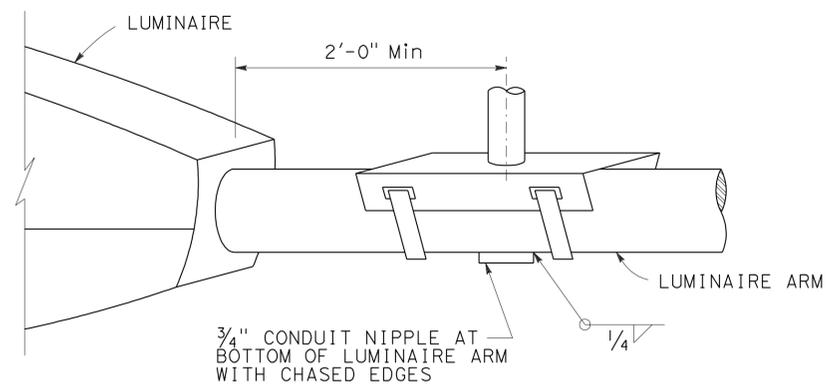
1. ALL METALLIC CONDUITS, BOLTS, STRAPS AND MISC HARDWARE SHALL BE GALVANIZED.
2. ELEMENTS (TOTAL VIVDS ASSEMBLY) SHALL HAVE A MAXIMUM WEIGHT OF 10 LBS AND A MAXIMUM EFFECTIVE PRESSURE AREA OF 1 SQUARE FOOT.
3. MAXIMUM OF 2 VIVDS ELEMENTS ADDED PER TRAFFIC SIGNAL STRUCTURE. MAXIMUM OF 1 ELEMENT PER ARM (LUMINAIRE ARM OR TRAFFIC SIGNAL ARM). THIS DETAIL SHOWN APPLIES ONLY TO NEWLY INSTALLED POLES DESIGNED ACCORDING TO STANDARD PLANS.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	Riv	74	40.3	18	37
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER DATE 5/31/12			No. C72910 Exp. 12/31/12 CIVIL		
PLANS APPROVAL DATE 6-4-12			REGISTERED PROFESSIONAL ENGINEER ELISEO LOPEZ STATE OF CALIFORNIA		
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VIDEO CAMERA MOUNTING DETAILS

NO SCALE



DETAIL A

NO SCALE

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

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>E LOPEZ</i>	CHECKED <i>J DATILES</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A	BRIDGE NO.	N/A	VIDEO CAMERA MOUNTING DETAILS SIGNAL AND LIGHTING SYSTEM	SES-1
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>J DATILES</i>			POST MILE			
	QUANTITIES	BY	CHECKED						

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3620

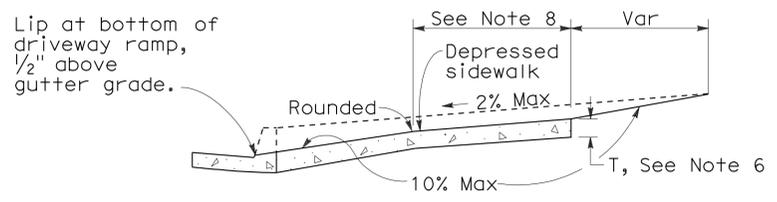
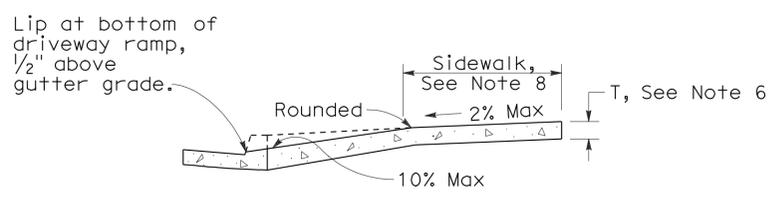
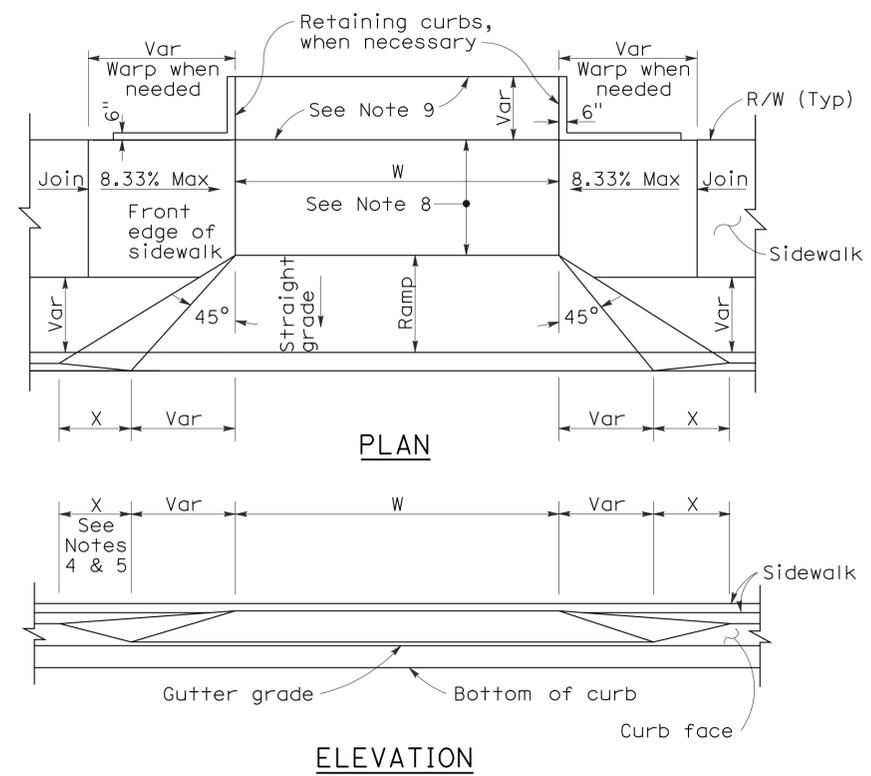
PROJECT NUMBER & PHASE: 0800000468-1

CONTRACT NO.: 08-0M2101

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET OF



CASE A
Typical driveway, sidewalk not depressed

CASE B
Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

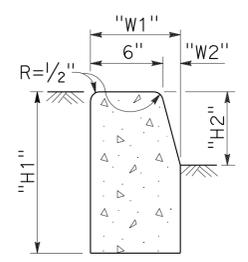
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

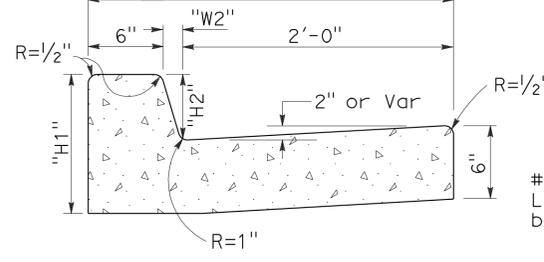
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4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

To accompany plans dated 6-4-12

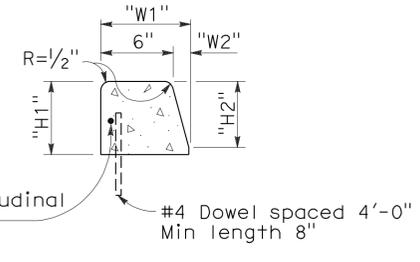
DRIVEWAYS



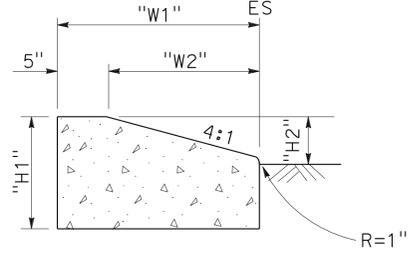
TYPE A1 CURBS
See Table A



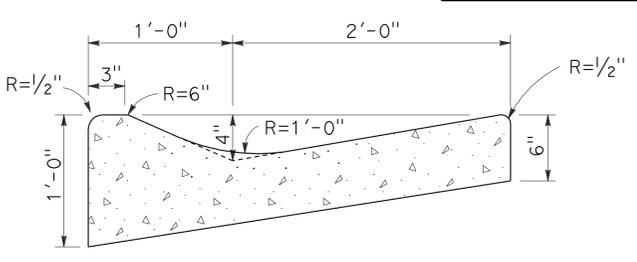
TYPE A2 CURBS
See Table A



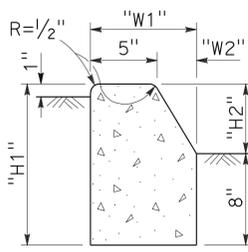
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



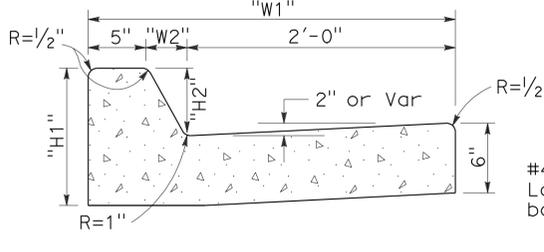
TYPE D CURBS
See Table A



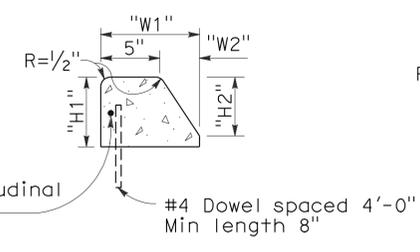
TYPE E CURB



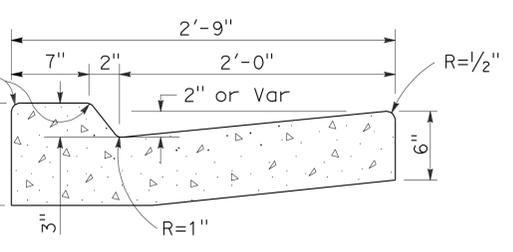
TYPE B1 CURBS
See Table A



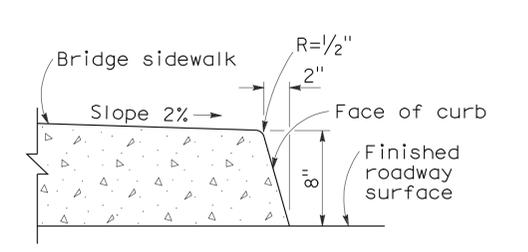
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

NOTES:

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

CURBS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

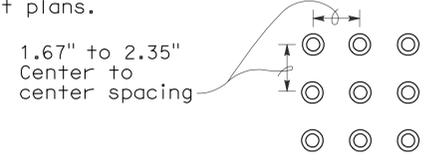
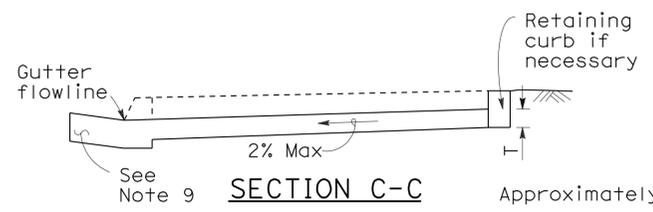
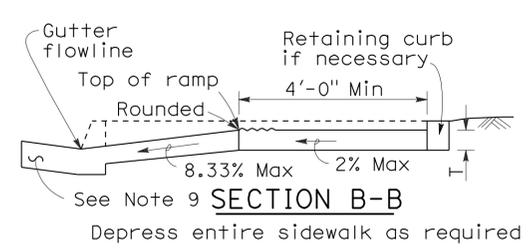
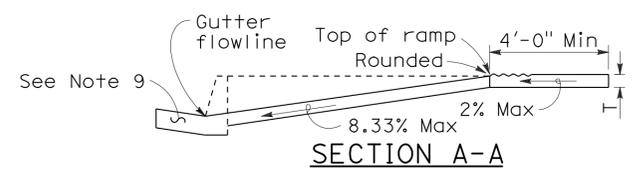
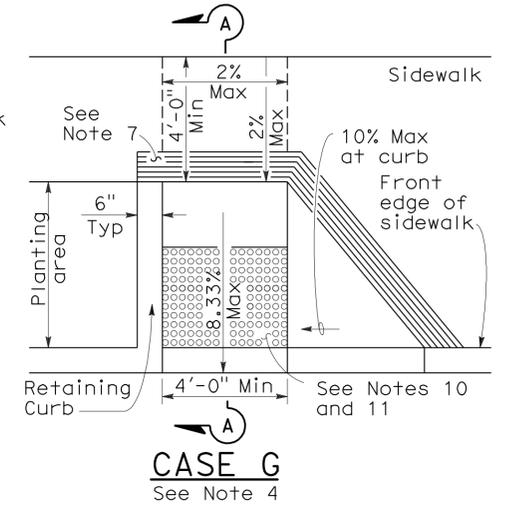
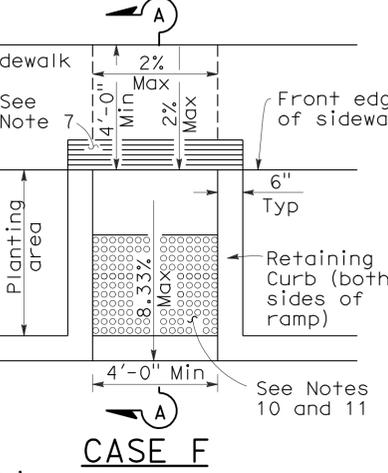
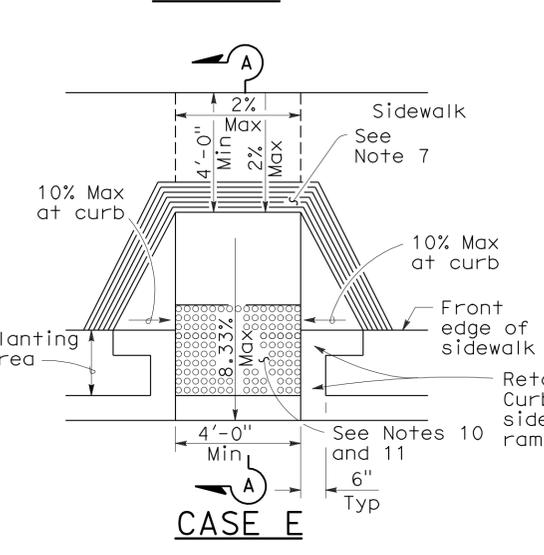
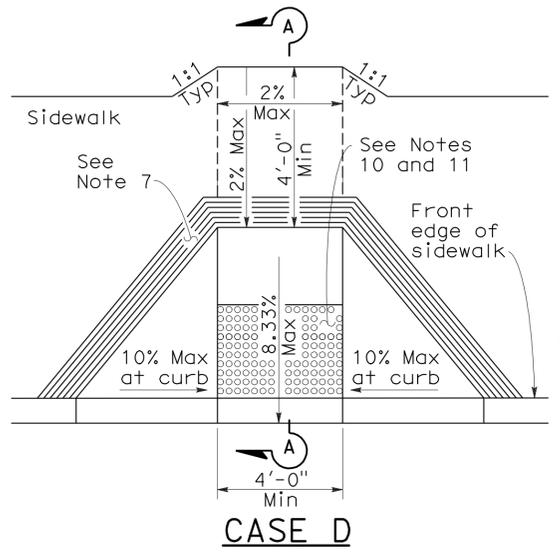
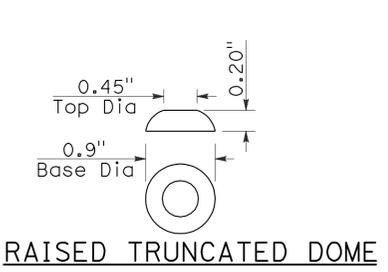
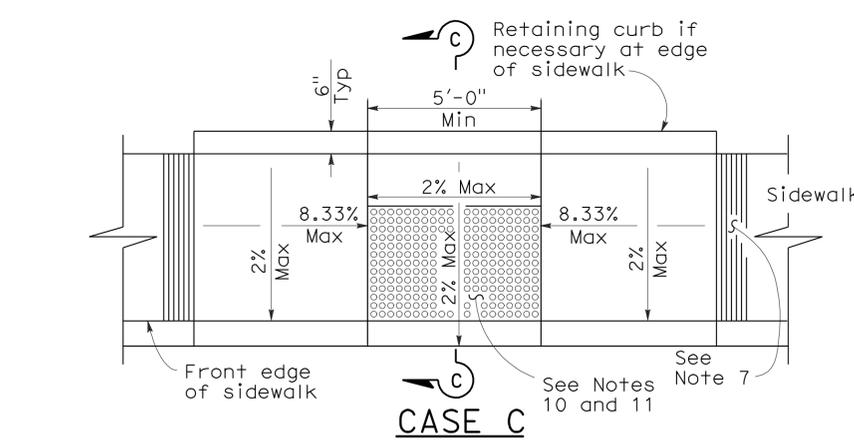
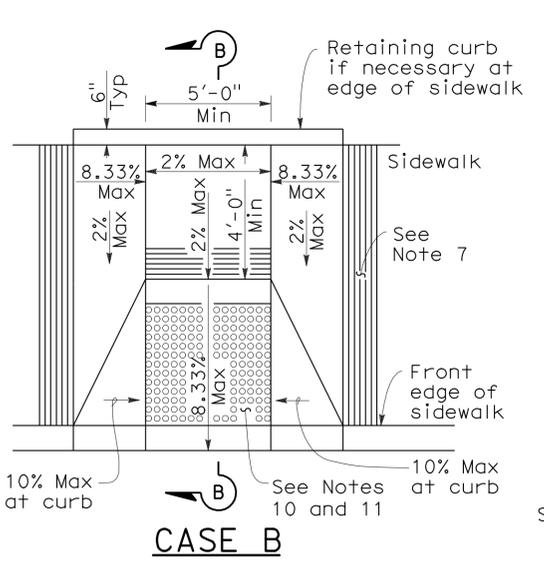
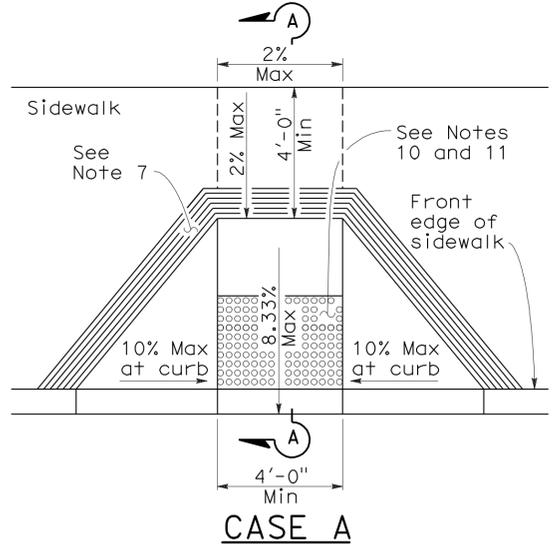
CURBS AND DRIVEWAYS

NO SCALE

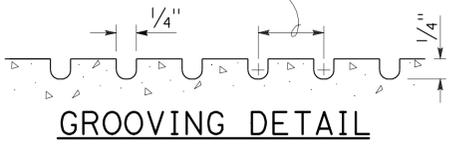
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	20	37

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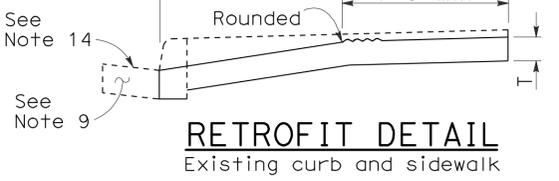
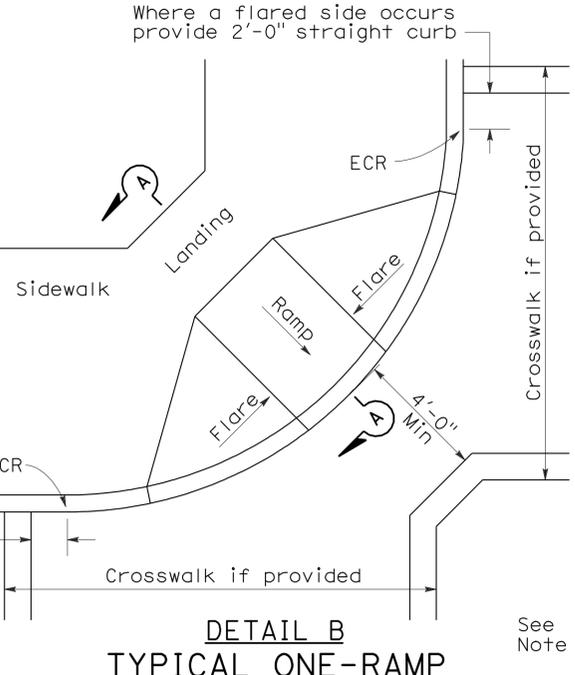
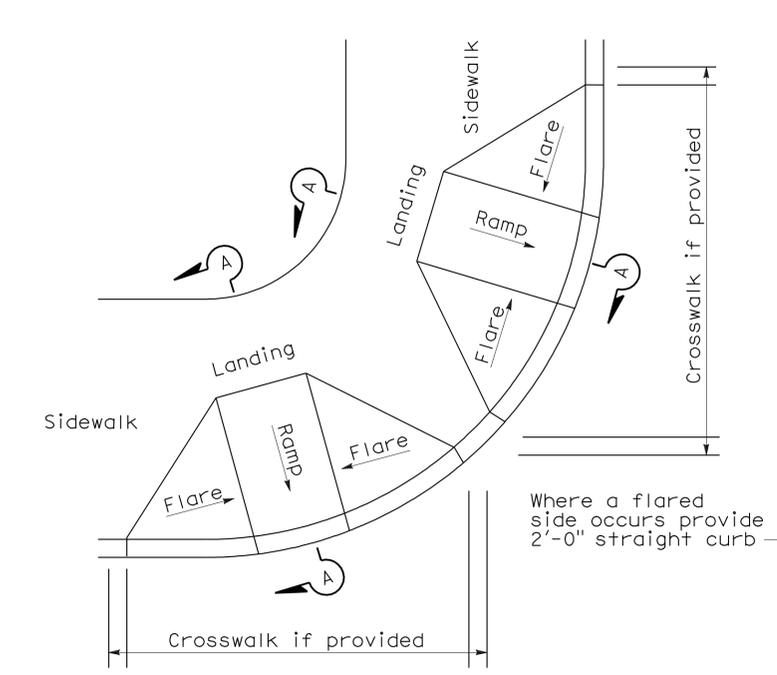
REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



DETECTABLE WARNING SURFACE



CURB RAMP DETAILS
NO SCALE



NOTES:

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

TYPICAL TWO-RAMP CORNER INSTALLATION
See Note 1

TYPICAL ONE-RAMP CORNER INSTALLATION
See Notes 1 and 3

RETROFIT DETAIL
Existing curb and sidewalk

REVISED STANDARD PLAN RSP A88A

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

2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	21	37

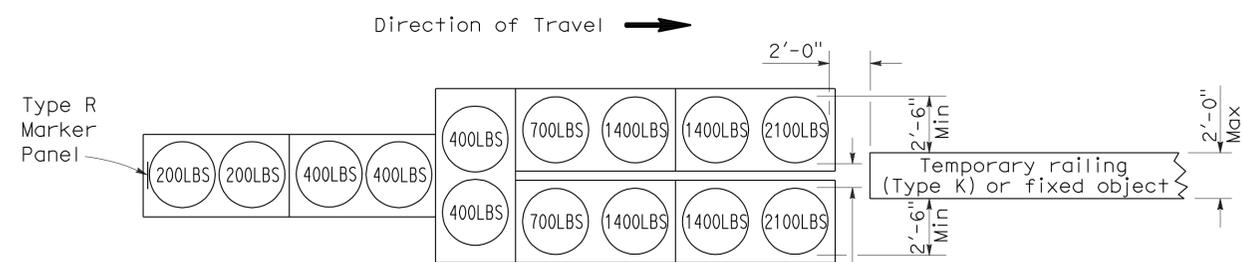
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

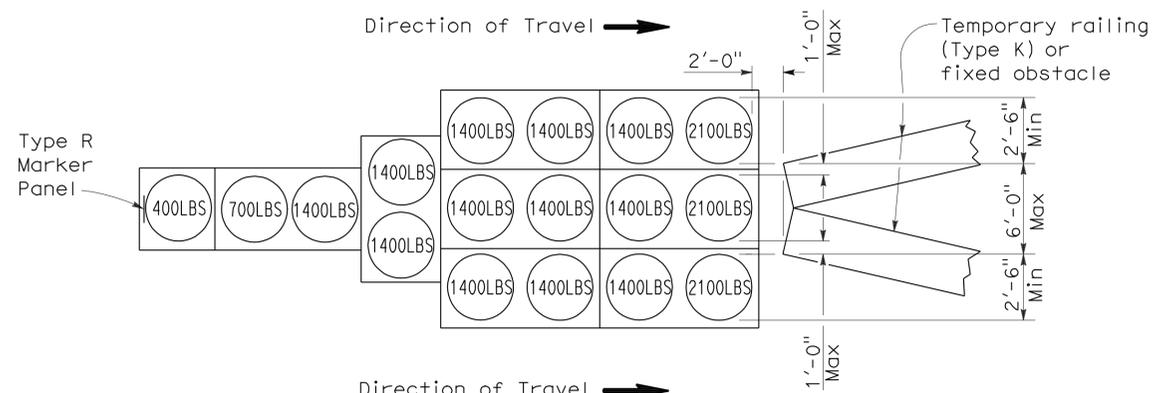
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To accompany plans dated 6-4-12



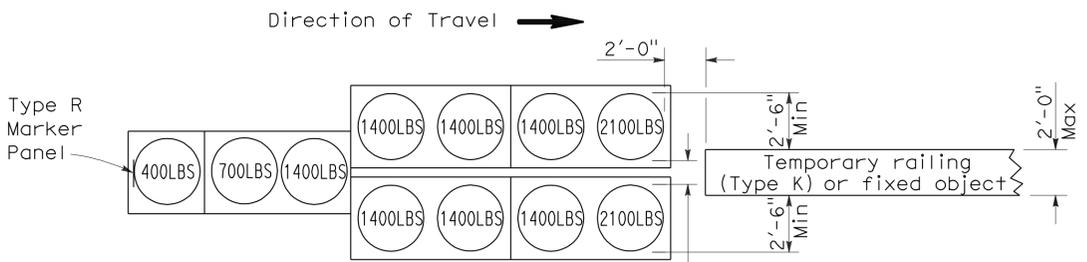
ARRAY 'TU14'

Approach speed 45 mph or more



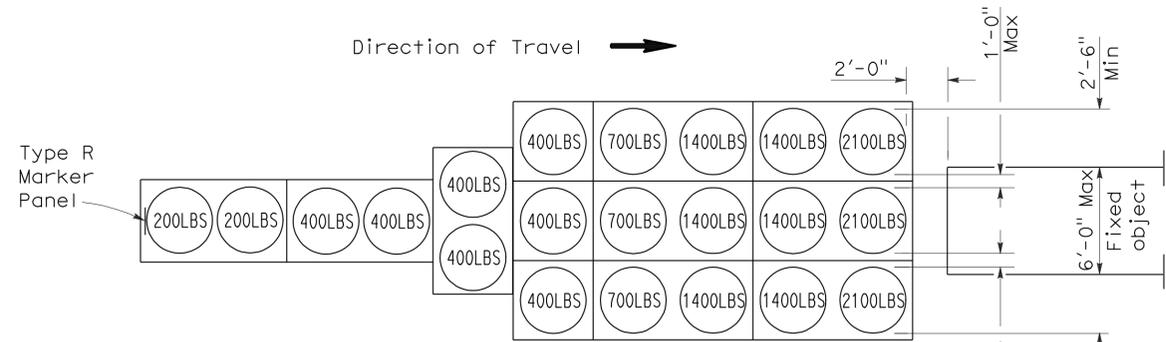
ARRAY 'TU17'

Approach speed less than 45 mph



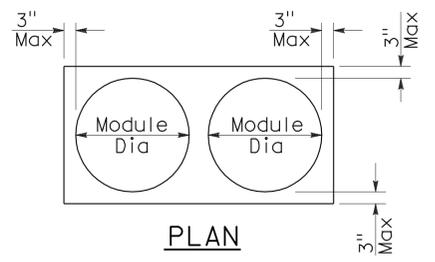
ARRAY 'TU11'

Approach speed less than 45 mph

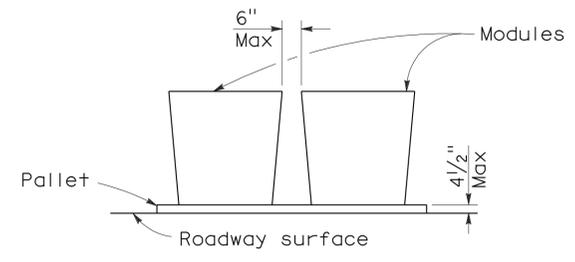


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

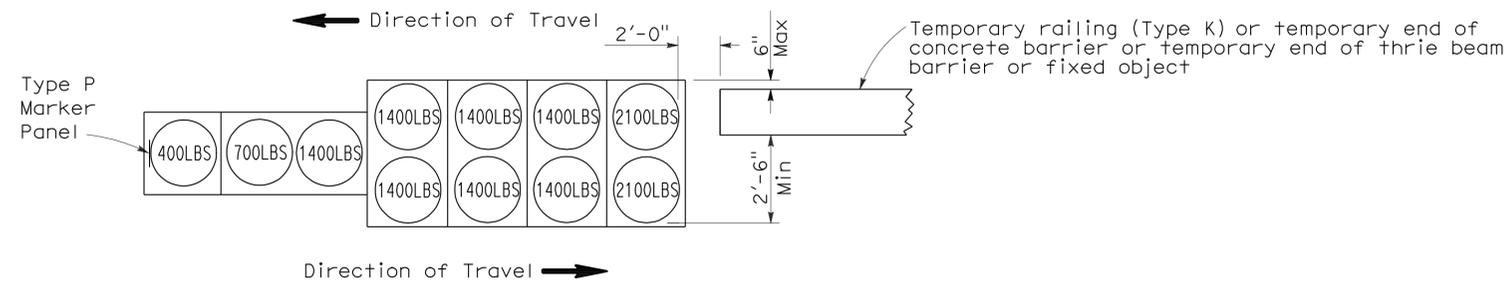
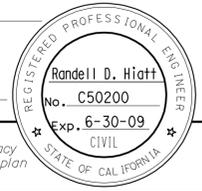
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	22	37

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

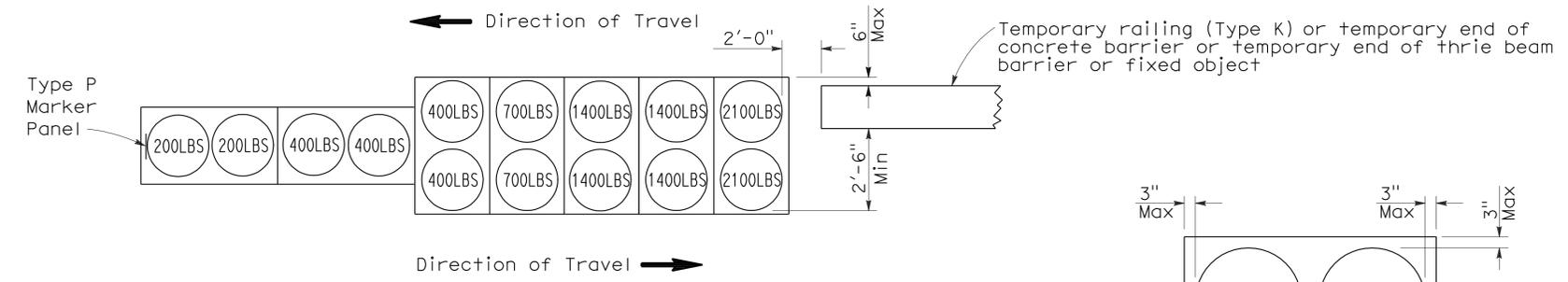
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 6-4-12



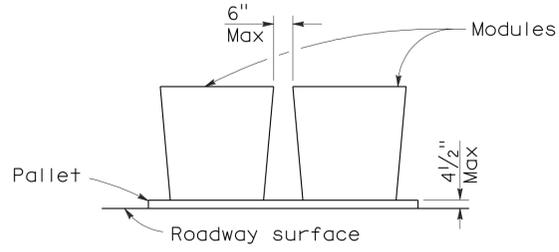
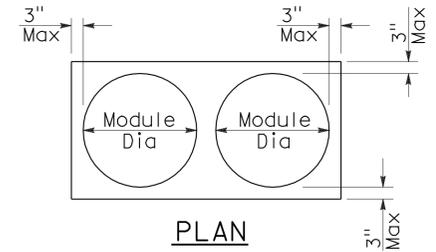
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	23	37

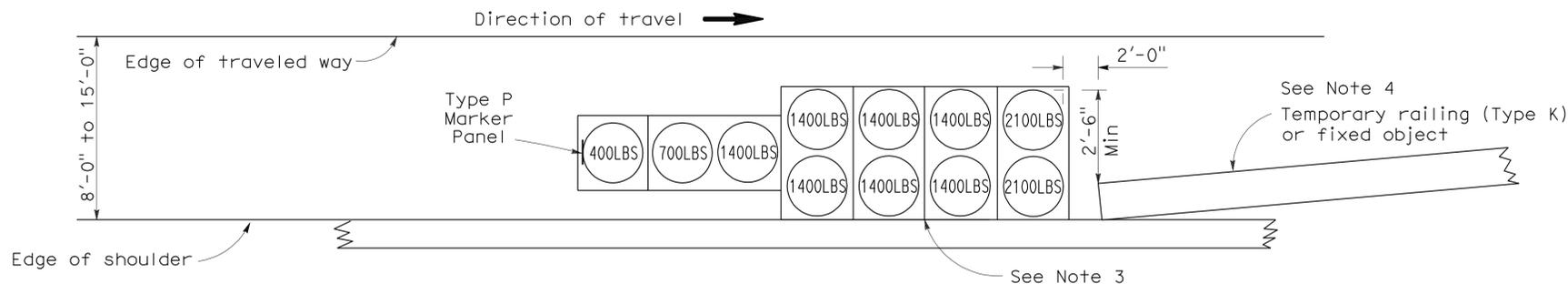
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

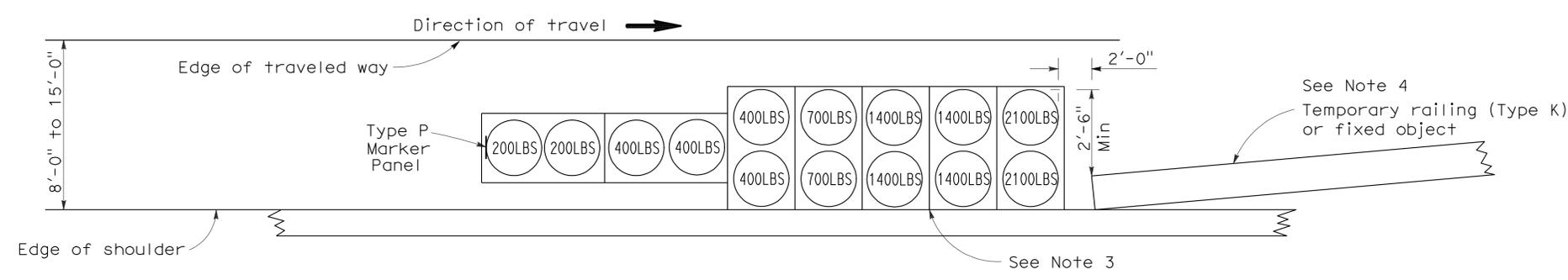
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 6-4-12



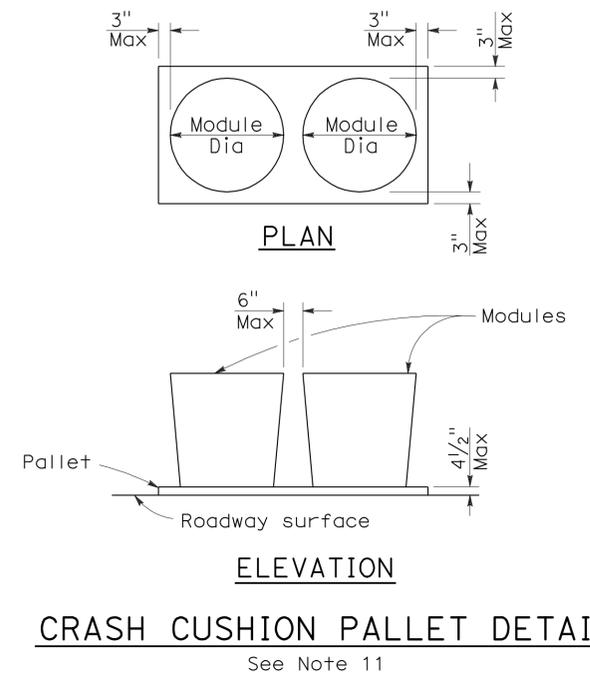
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	74	40.3	24	37

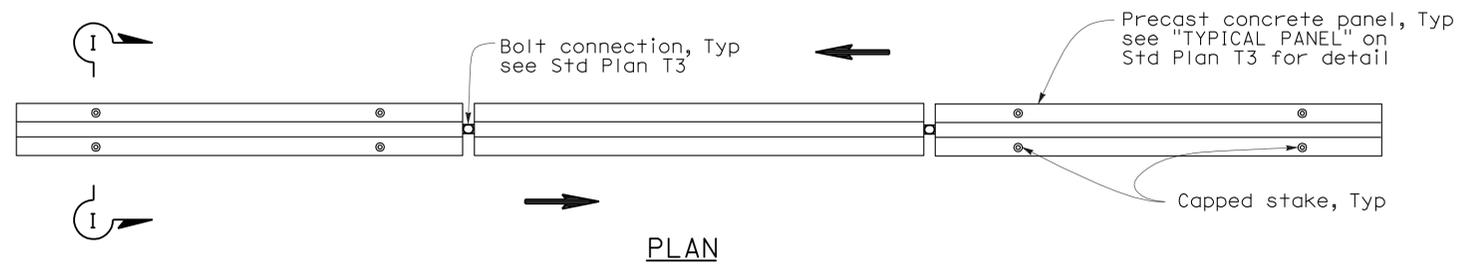
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

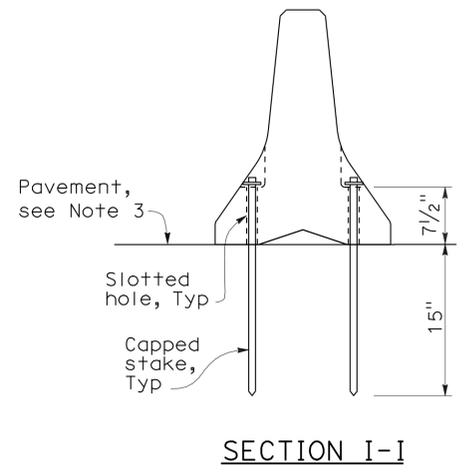
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 6-4-12



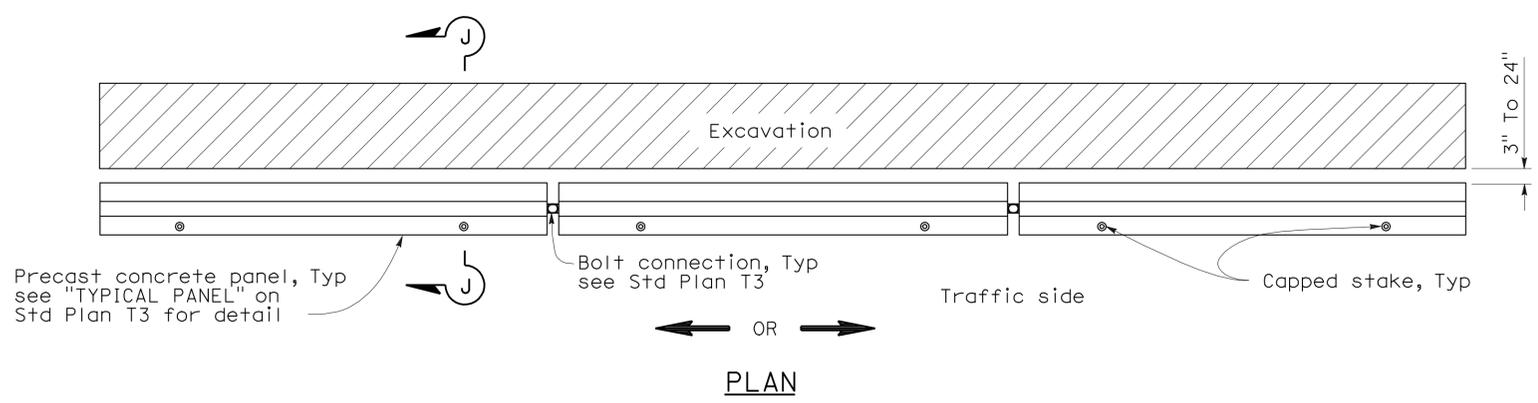
RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1



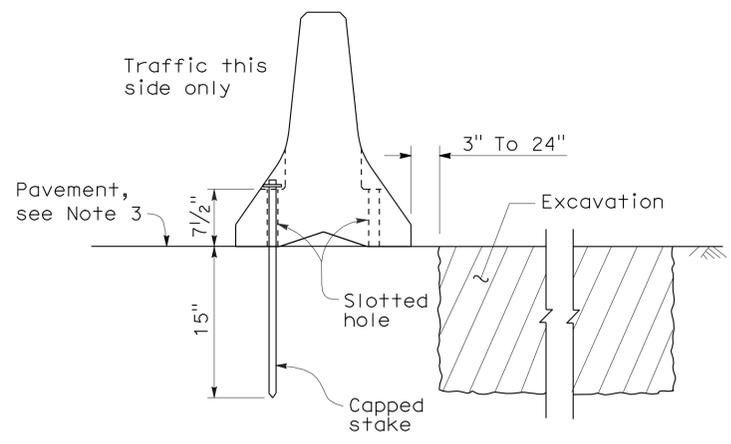
NOTES:

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by \Rightarrow .

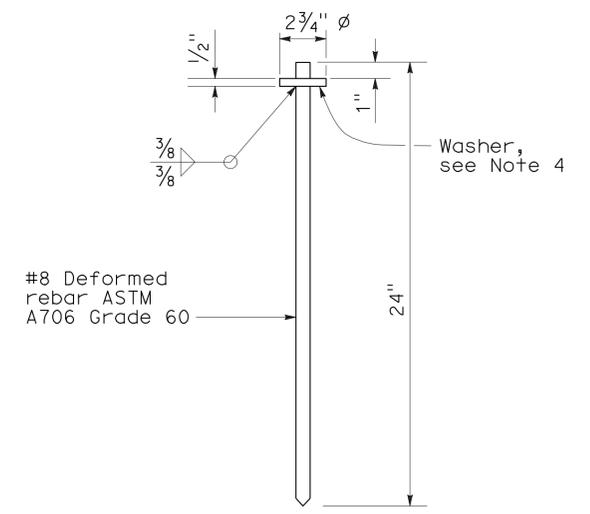
SECTION I-I



RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION
See Note 2



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY RAILING
(TYPE K)**
NO SCALE

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

2006 NEW STANDARD PLAN NSP T3A

ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

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

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	25	37

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 6-4-12

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	26	37

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

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 6-4-12

CONDUIT

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

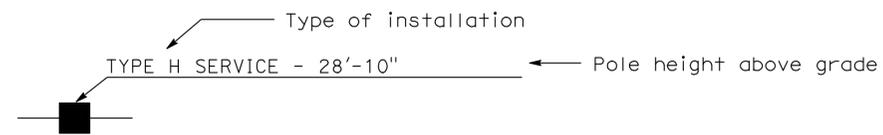
SIGNAL EQUIPMENT

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

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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

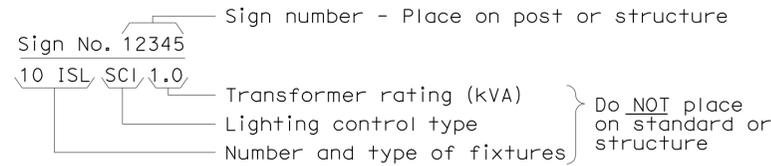
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

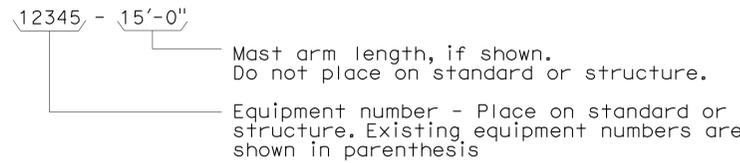
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

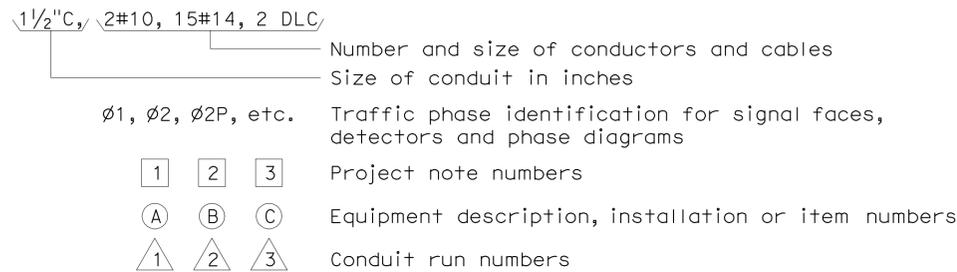
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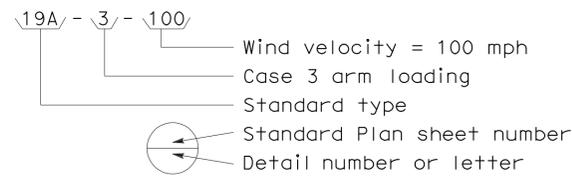
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



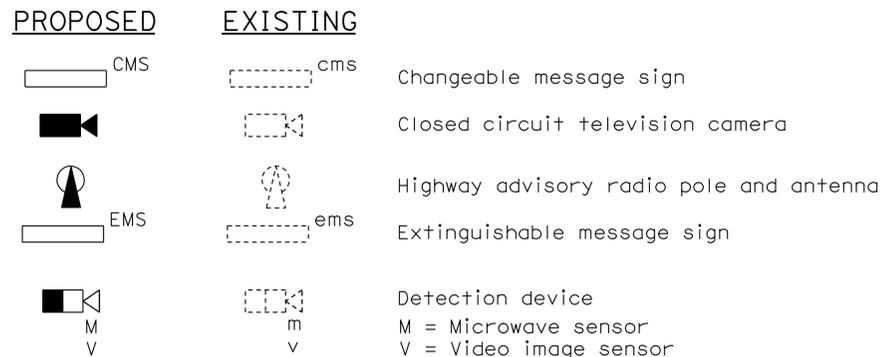
CONDUIT AND CONDUCTOR IDENTIFICATION:



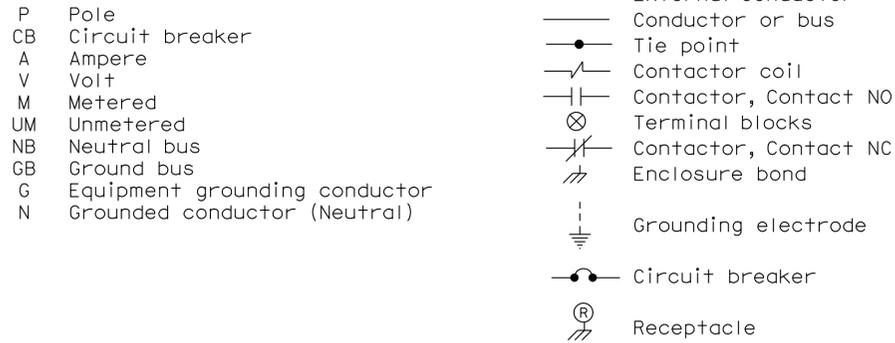
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



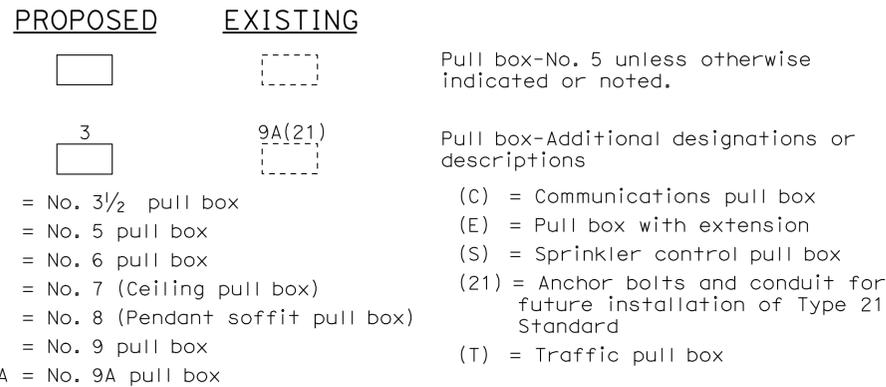
MISCELLANEOUS EQUIPMENT



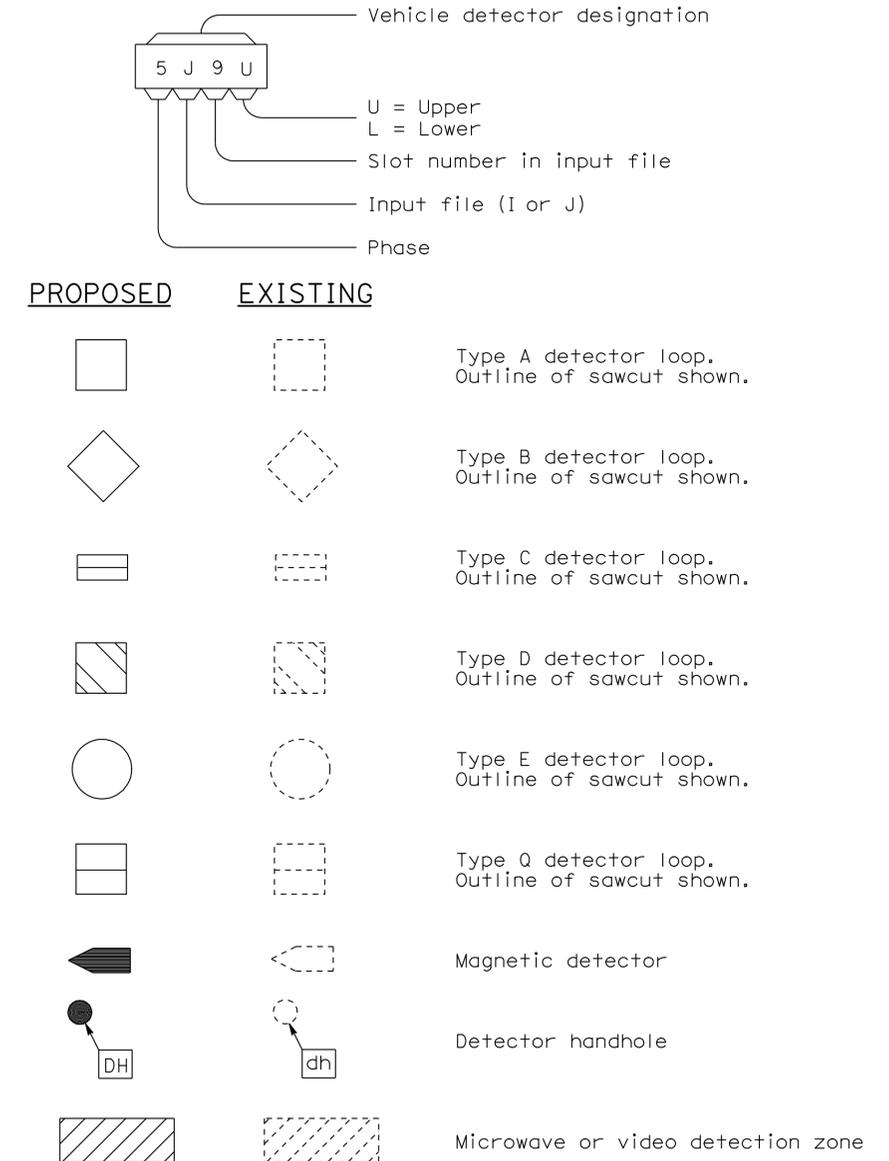
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



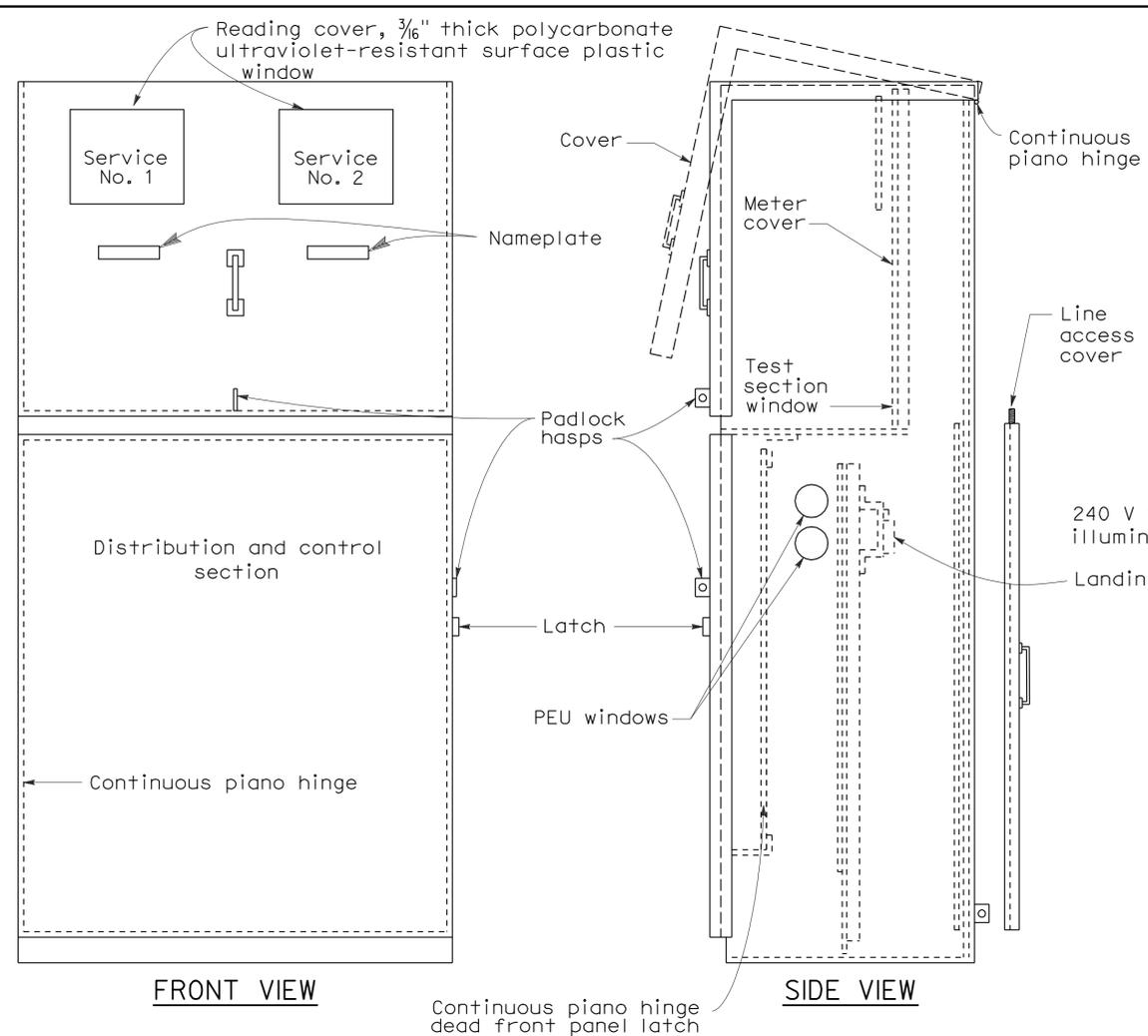
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

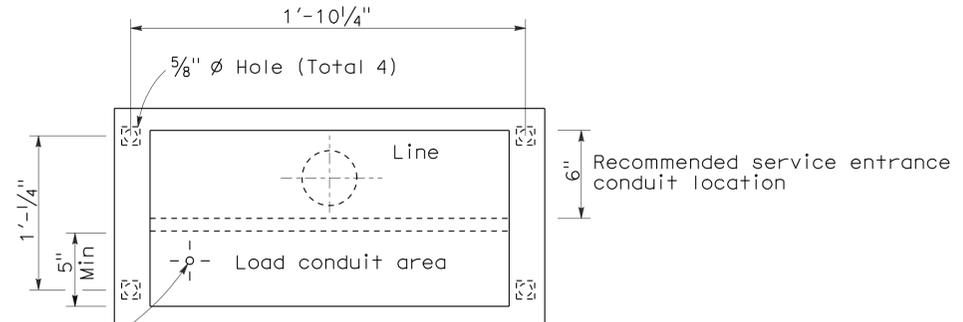
RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

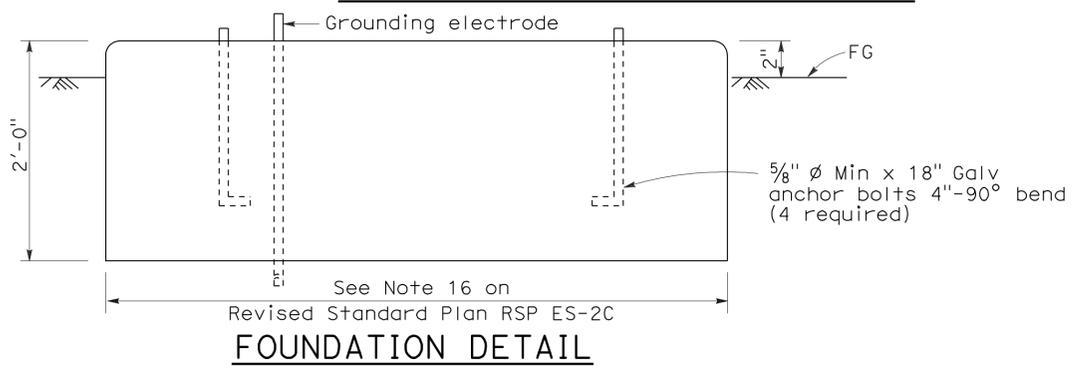
2006 REVISED STANDARD PLAN RSP ES-1C



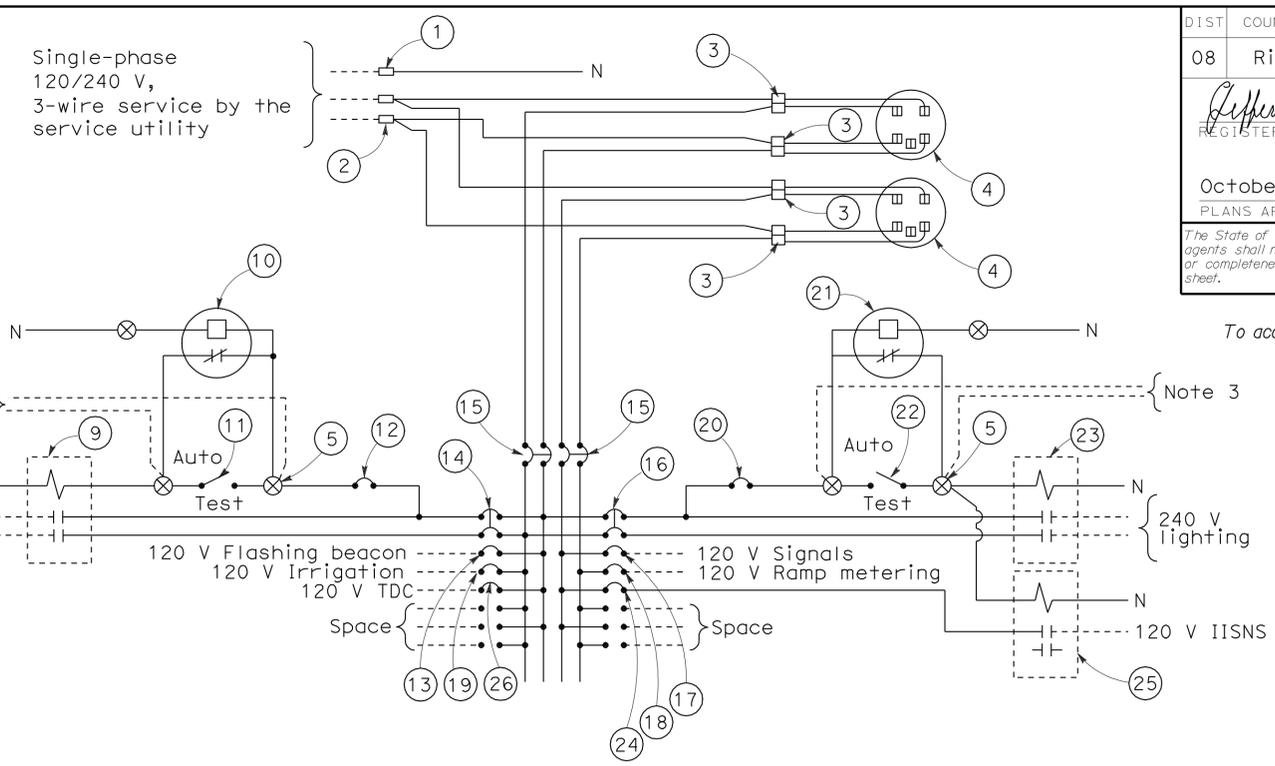
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

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

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

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

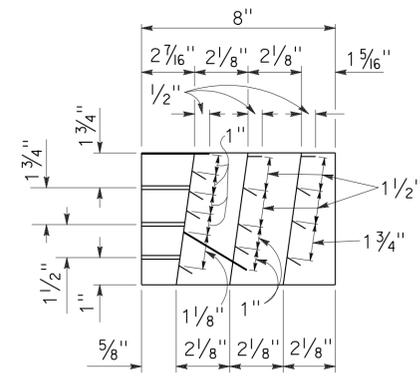
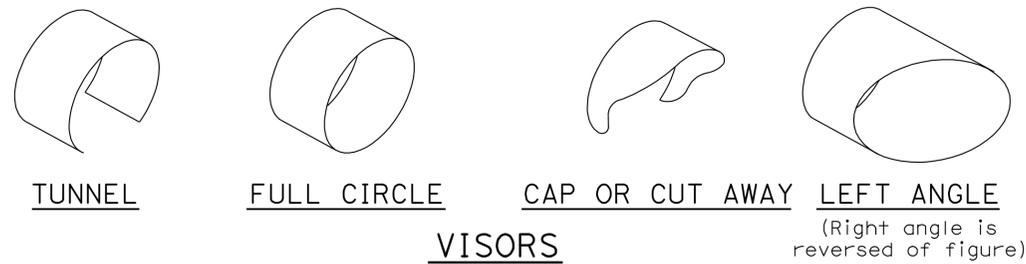
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM
 TYPE III - C SERIES)**
 NO SCALE

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

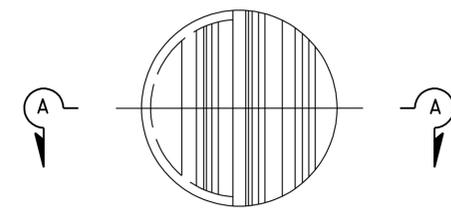
2006 REVISED STANDARD PLAN RSP ES-2F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	29	37

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

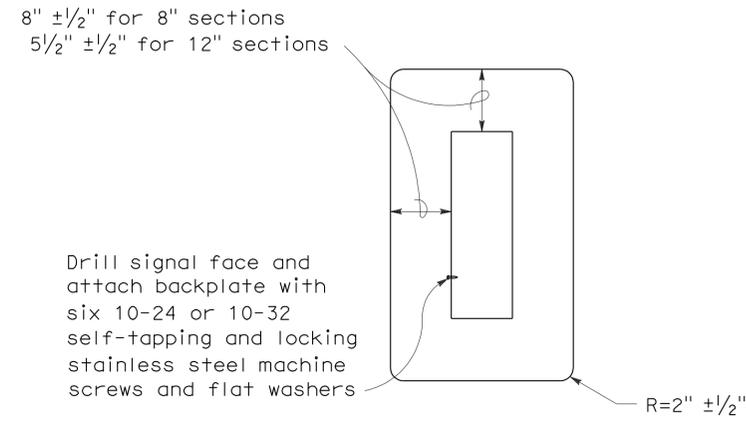


SECTION A-A



FRONT VIEW
DIRECTIONAL LOUVER

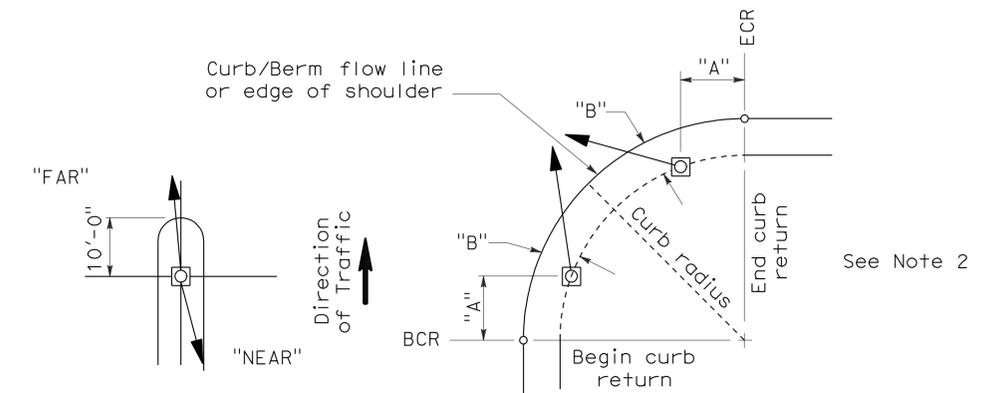
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



8" AND 12" SECTIONS

BACKPLATE

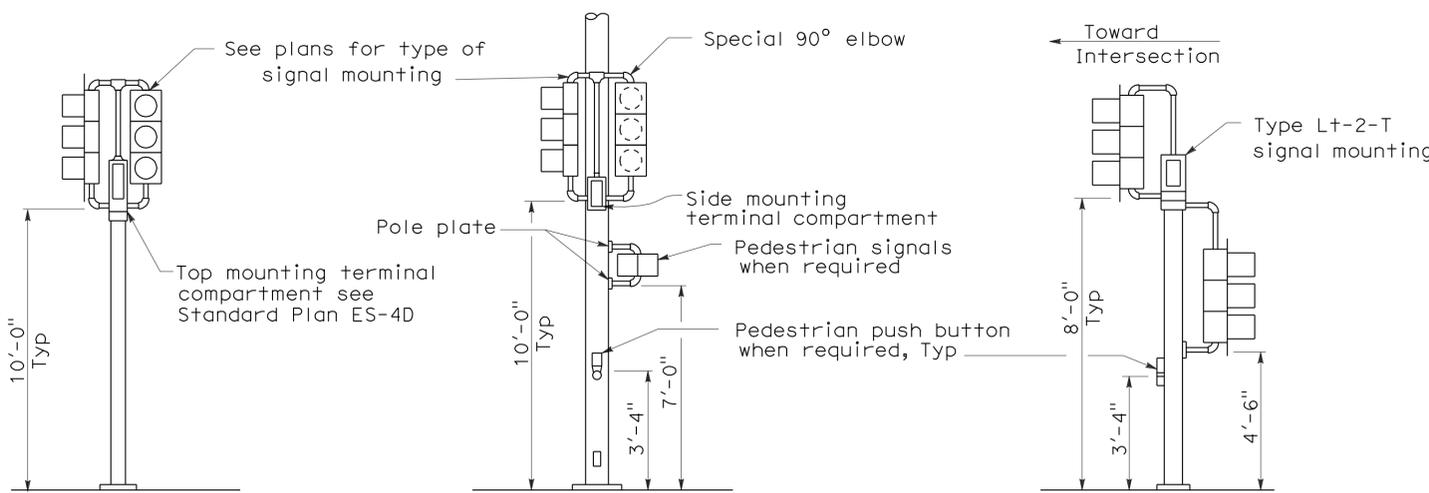
1/16" minimum thickness
 3001-14 aluminum, or plastic when specified



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.

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

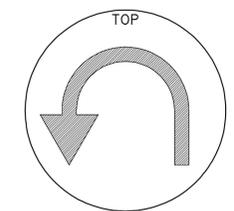
SIDE MOUNTED SIGNALS (SV AND SP)

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

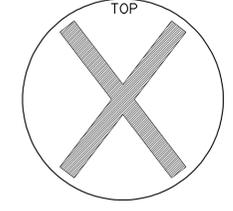
TYPICAL SIGNAL INSTALLATIONS



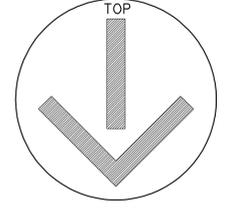
U-TURN SIGNAL FACE



BICYCLE SIGNAL FACE



LANE CONTROL SIGNAL FACE



LANE CONTROL SIGNAL FACE

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

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

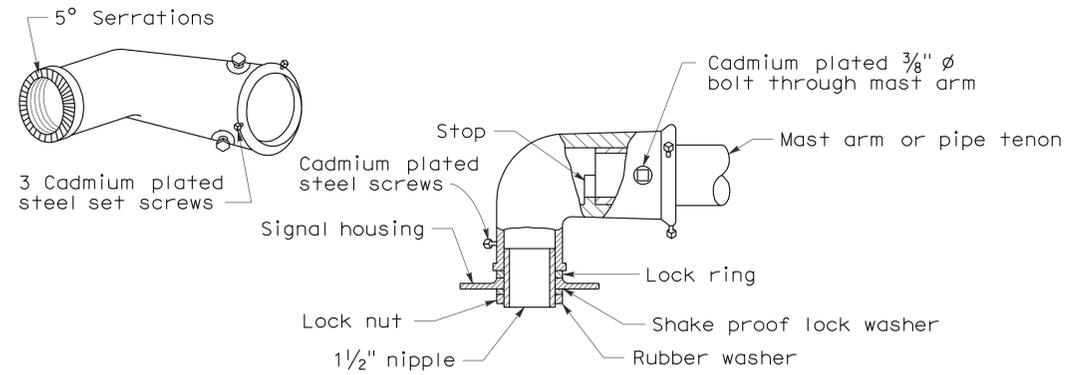
REVISED STANDARD PLAN RSP ES-4C

2006 REVISED STANDARD PLAN RSP ES-4C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	30	37

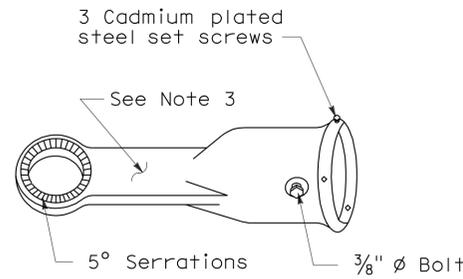
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12



MAST ARM MOUNTING - TYPE "MAT"

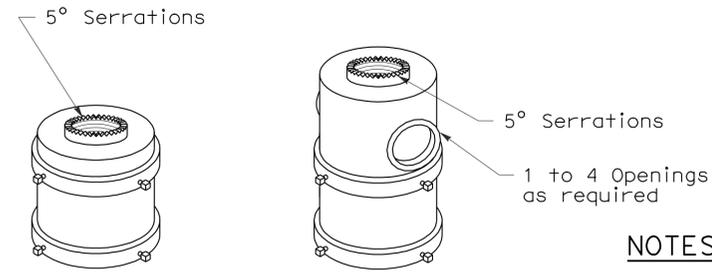
For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.

SIGNAL SLIP FITTERS



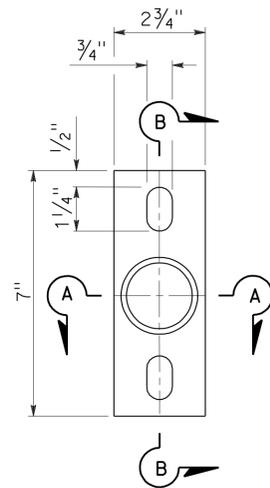
For one mounting For multiple mountings

TOP MOUNTINGS

For 4 NPS pipe, see Note 2.

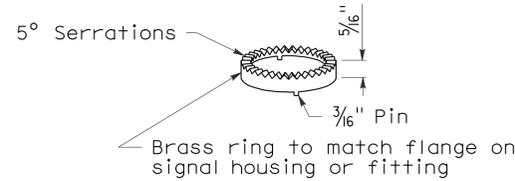
NOTES:

- After mast arm signal has been plumbed and secured, drill 7/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 3/8" diameter galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
- (a) Threaded top mounted slip fitter openings shall be 1/2" NPS.
(b) Serrations in fittings shall match those on bottom of signal heads or in lock ring.
(c) Top opening shall be offset when backplate is used.
- Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of 1/2".



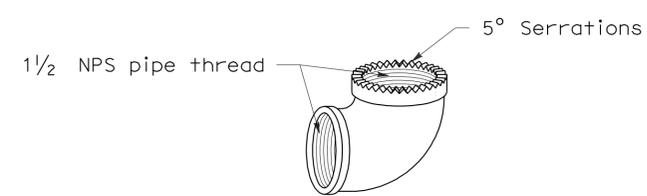
POLE PLATE

For side mountings



LOCK RING

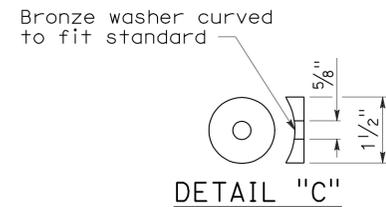
Use where locking ring is not integral with signal housing or fitting.



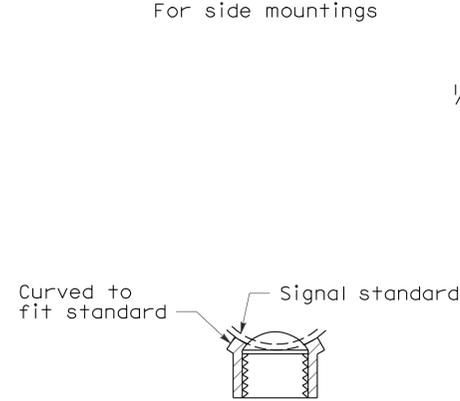
SPECIAL 90° ELBOW

One for each signal head, except those with special slip fitter mounting

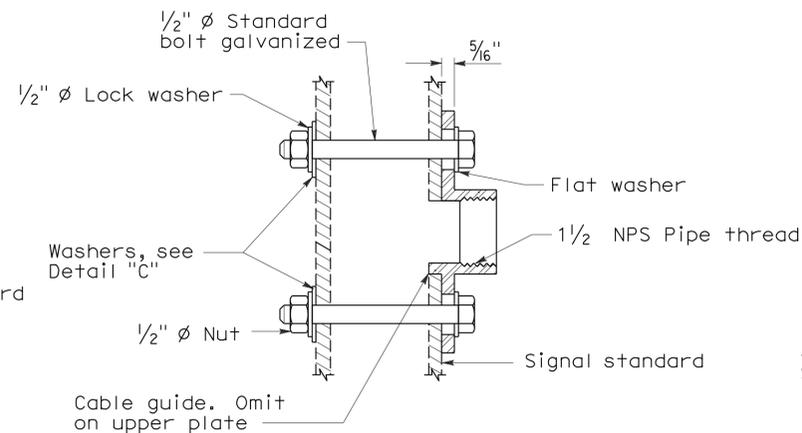
MISCELLANEOUS MOUNTING HARDWARE



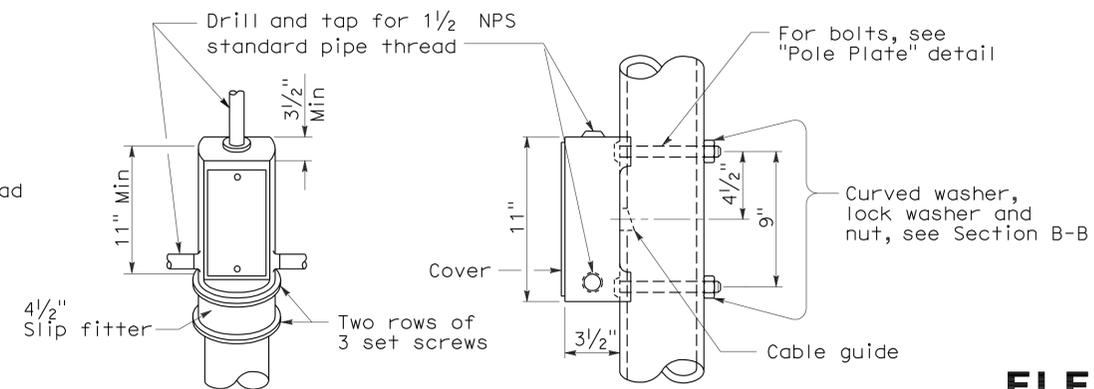
DETAIL "C"



SECTION A-A



SECTION B-B



TOP MOUNTING

SIDE MOUNTING

TERMINAL COMPARTMENTS

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4D

2006 REVISED STANDARD PLAN RSP ES-4D

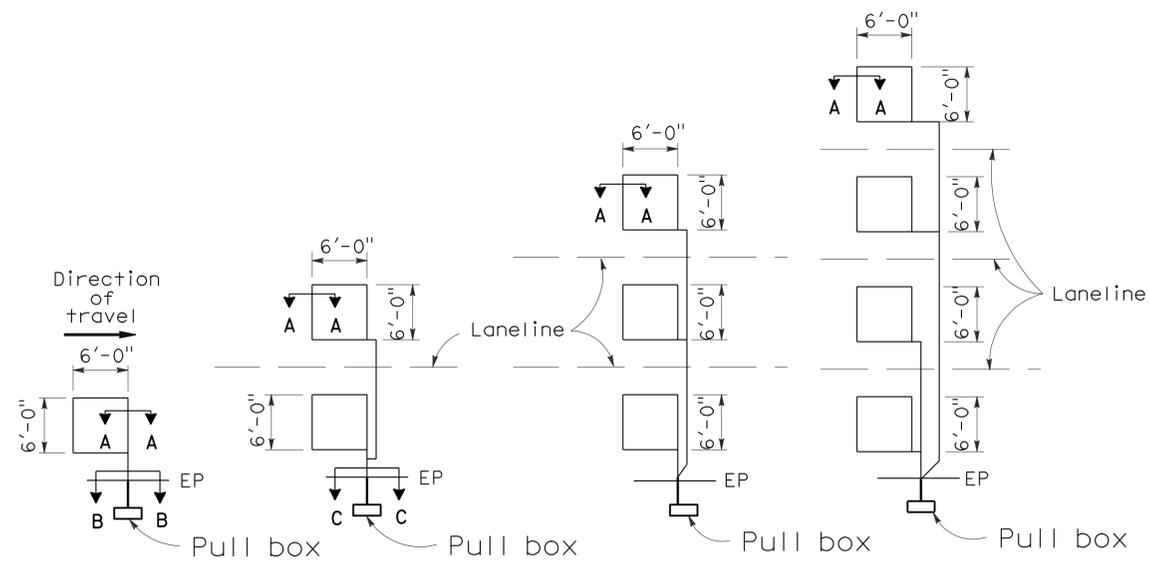
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	31	37

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

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

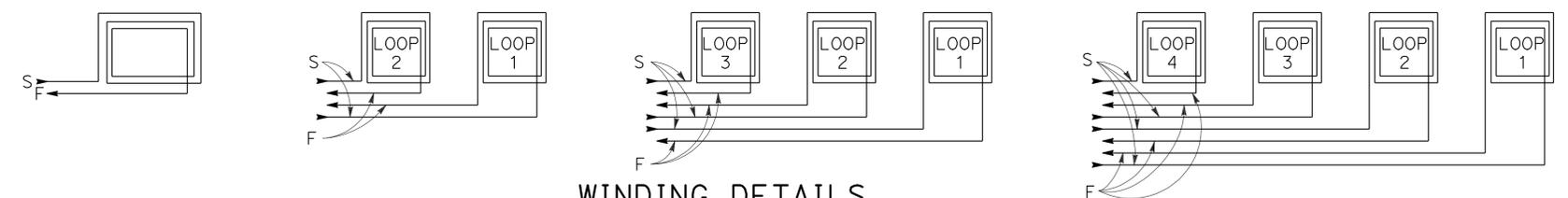
LOOP INSTALLATION PROCEDURE

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



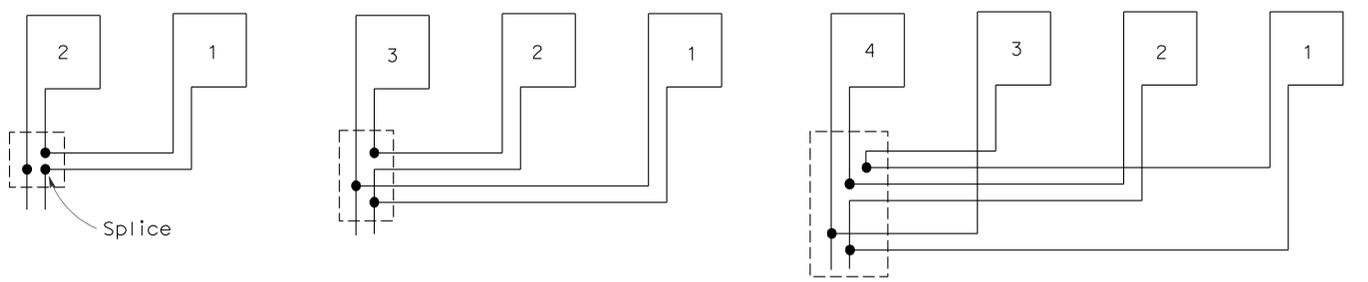
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION
SAWCUT DETAILS

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



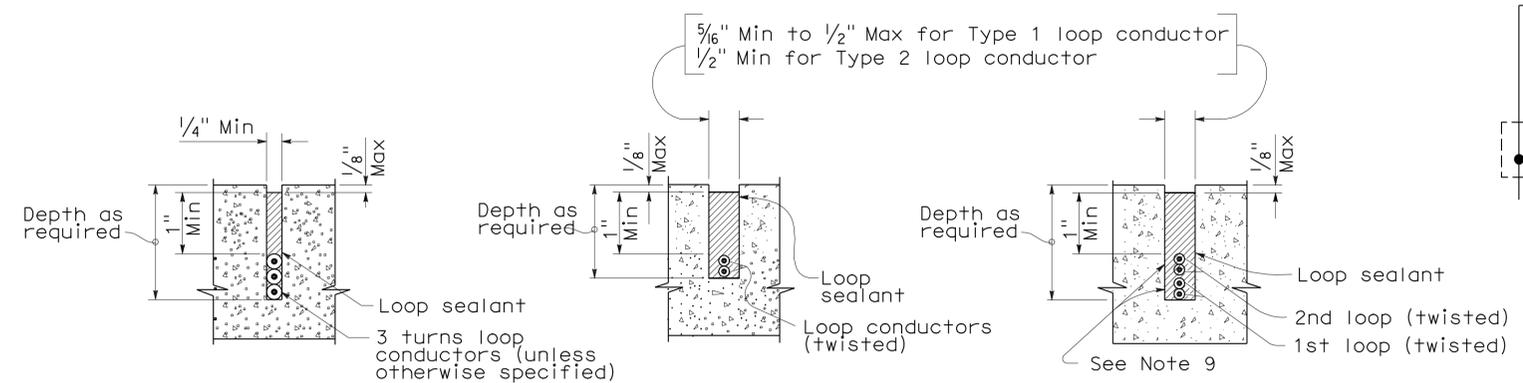
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



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

ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

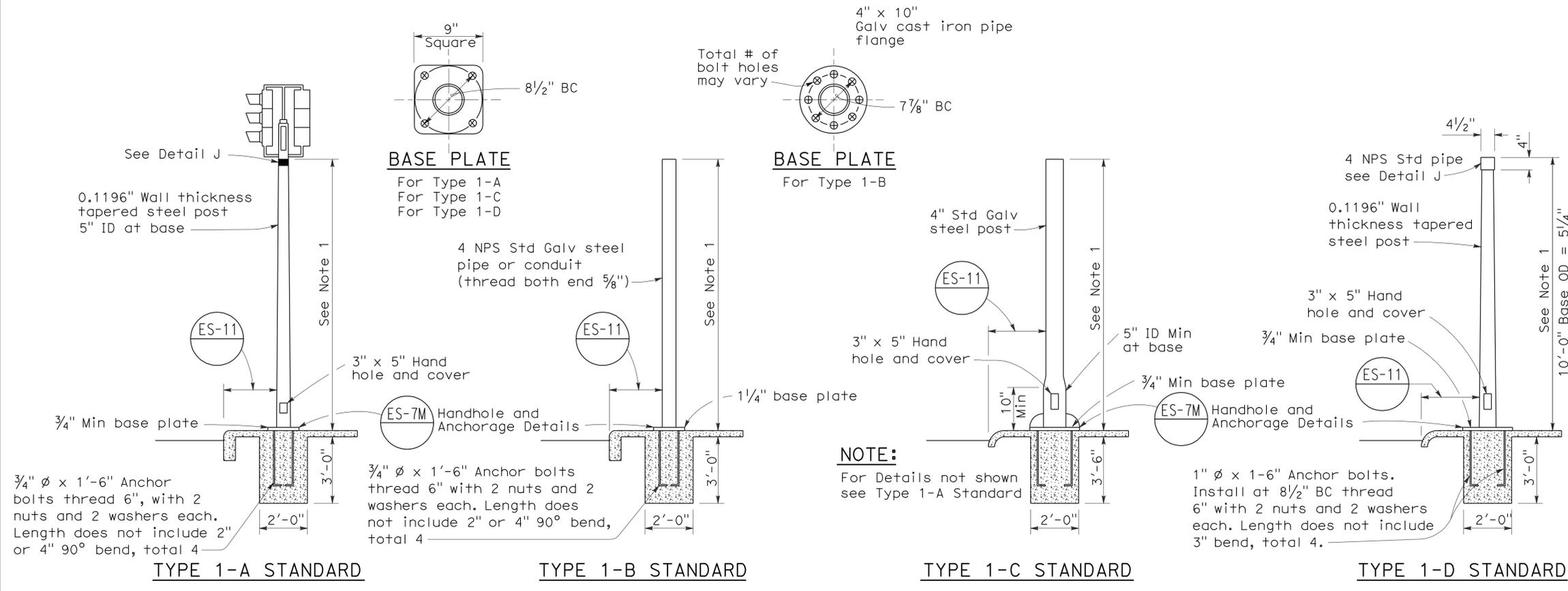
RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	32	37

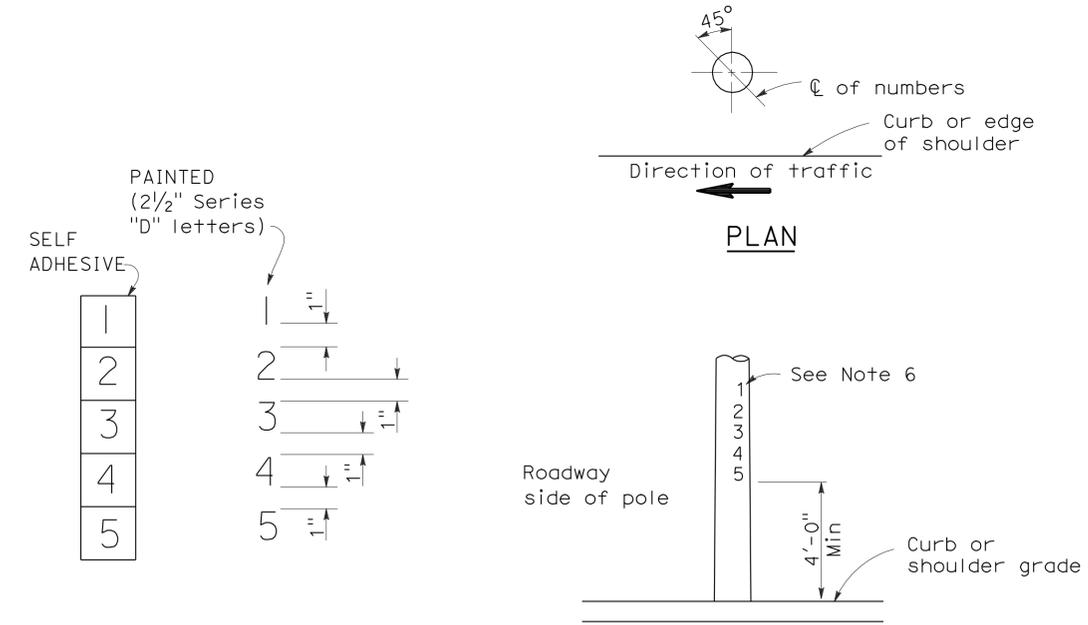
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 6-4-12

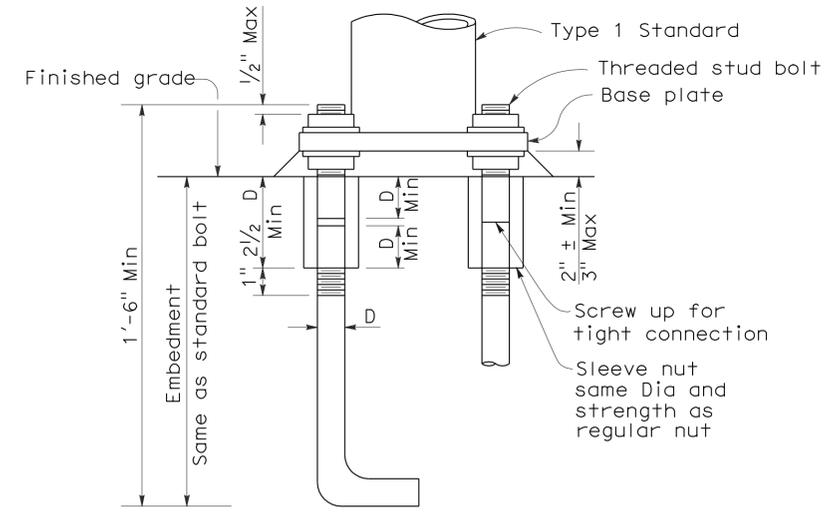


- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
 - Anchor bolts shall be bonded to conduit or grounding conductor.
 - Conduit between standard and adjacent pull box shall be 2" minimum.
 - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

TYPE 1 SIGNAL STANDARDS

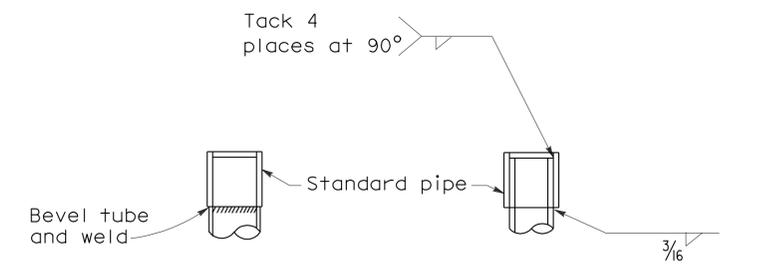


LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



ANCHOR BOLTS WITH SLEEVE NUTS

Sleeve nuts to be used only when shown or specified on Project Plans
 D = Diameter of anchor bolt



DETAIL J

Tube may be inserted into pipe or butted as required

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)

NO SCALE

RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

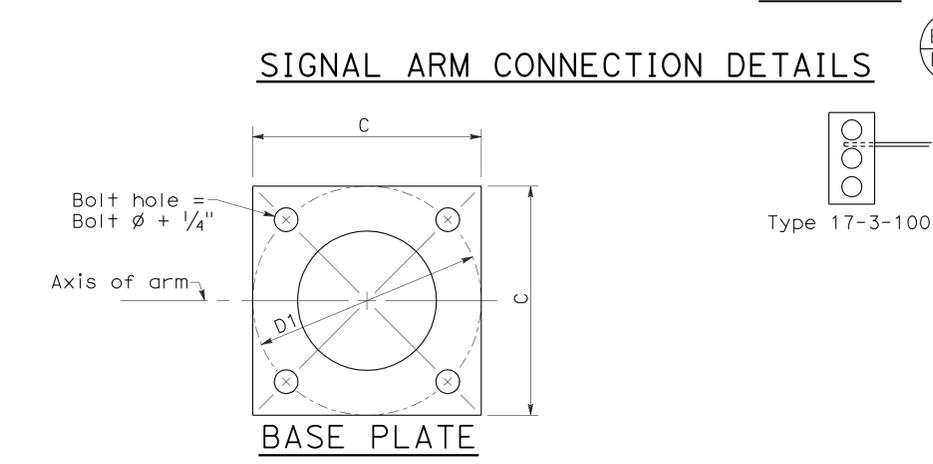
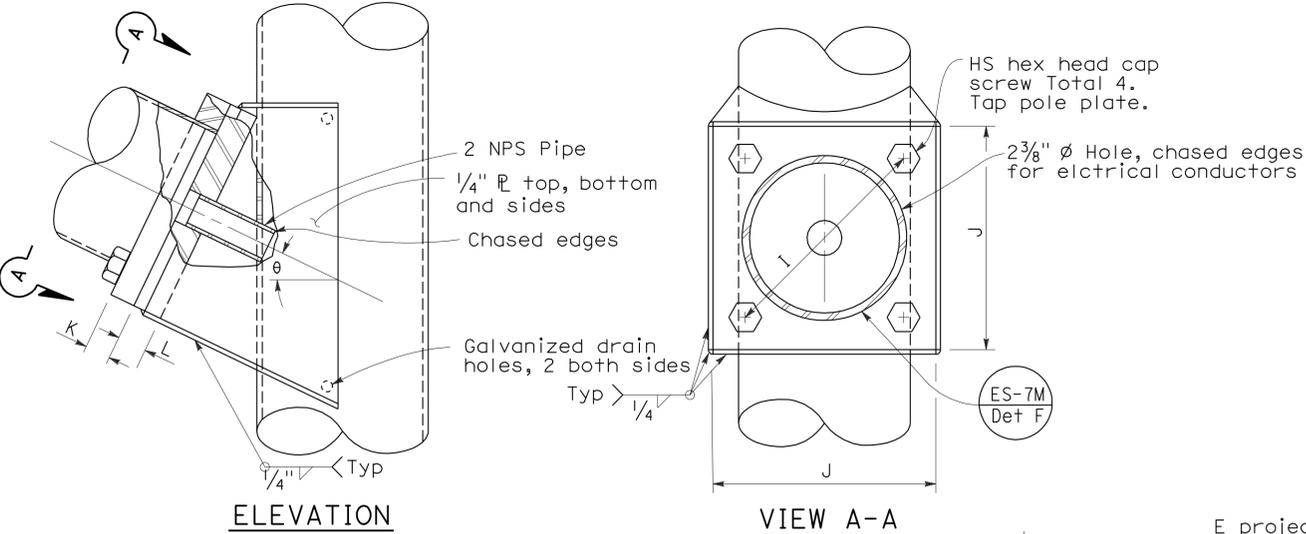
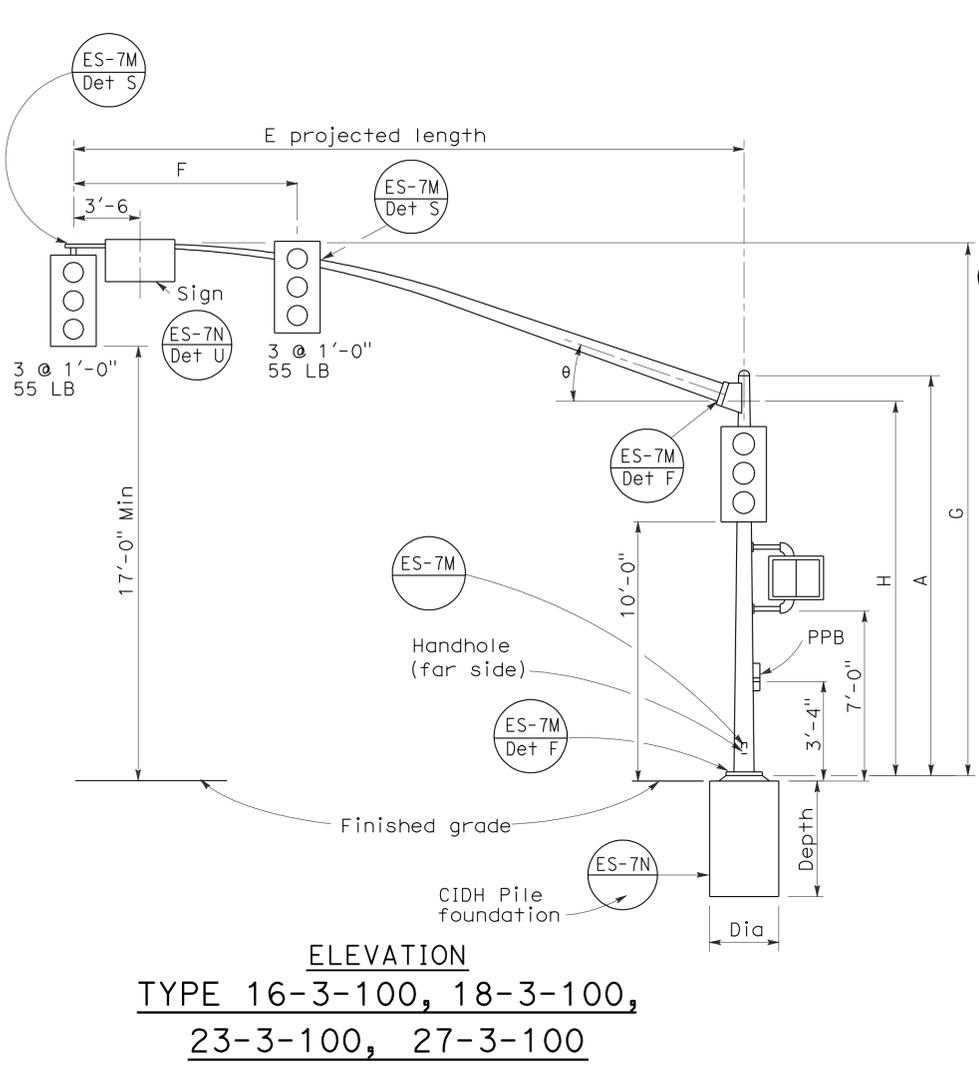
REVISED STANDARD PLAN RSP ES-7B

2006 REVISED STANDARD PLAN RSP ES-7B

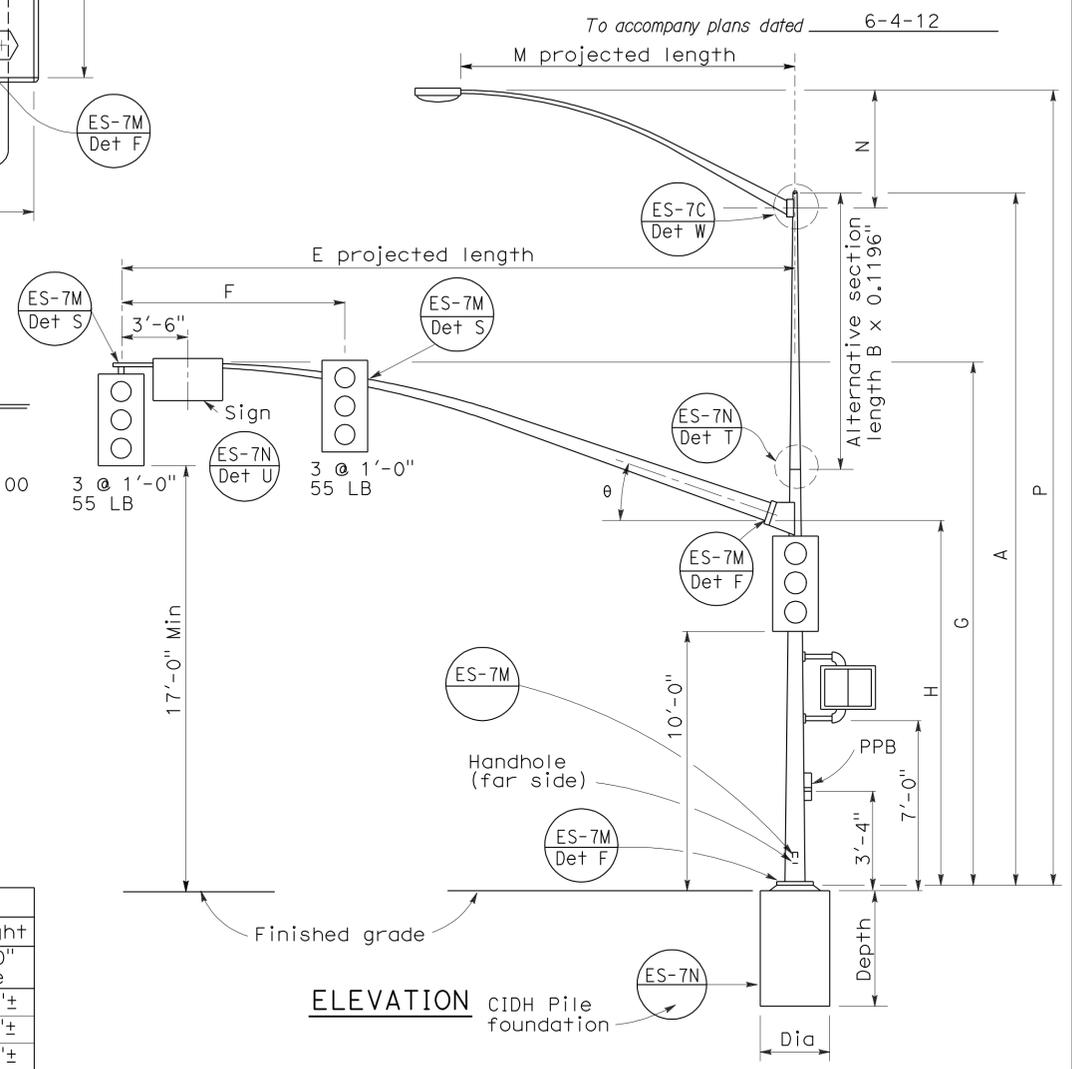
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	33	37

REGISTERED CIVIL ENGINEER
 Jeffrey B. Woody
 No. C41260
 Exp. 3-31-07
 CIVIL
 STATE OF CALIFORNIA

June 30, 2006
 PLANS APPROVAL DATE
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ELEVATION
 TYPE 16-3-100, 18-3-100,
 23-3-100, 27-3-100



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

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 Arm R Thickness	L Pole R Thickness	θ
15'-0"	8'-0"	21'-8"±	17'-6"	6 5/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"		21'-8"±		7"							
25'-0"		22'-8"±		7 5/8"							
30'-0"	12'-0"			8"							
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"	13"	1'-1"	1 1/2"	1 3/4"	21°	
40'-0"				9 3/8"							
45'-0"	15'-0"	23'-8"±		10 1/16"							

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height Pole	P Mounting Height Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

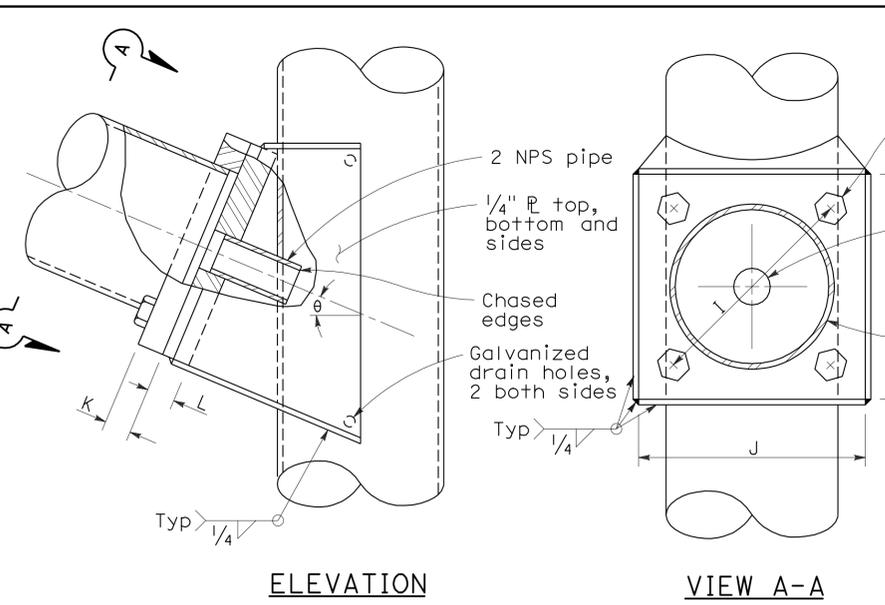
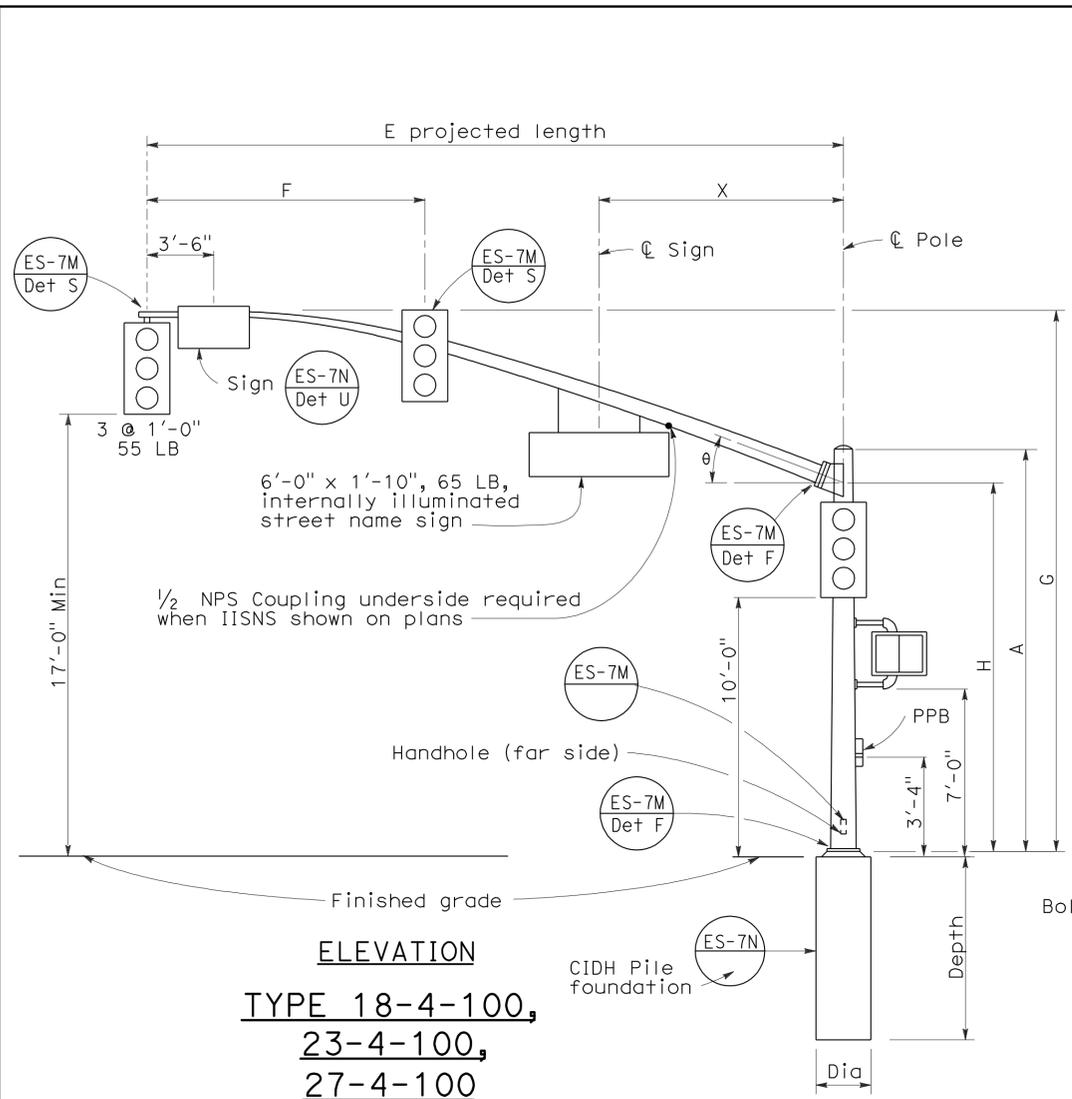
Pole Type	Load Case	Wind Velocity mph	POLE DATA				BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C			D1 Bolt Circle	Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-3-100	3	100	18'-6"	10 3/4"	8 1/4"	0.1793"	None			1'-6"	1'-5 1/2"	1 1/2"	2"ø x 42" x 6"	3'-0"	9'-0"	Yes		
17-3-100			30'-0"		6 5/8"	10'-0"	8"	7 5/8"	None									6'-15' 12'-0"
18-3-100			17'-0"	8 7/16"	None			None									None	25'-0", 30'-0"
19-3-100			30'-0"	7 7/8"	10'-0"	9 1/4"	7 7/8"	None									6'-15' 12'-0"	30'-0"
19A-3-100			35'-0"	7 3/16"	15'-0"	9 1/4"	7 3/16"	None									6'-15' 15'-0"	
23-3-100			17'-0"	9 5/8"	None			None									None	
24-3-100			30'-0"	7 7/8"	10'-0"	9 1/4"	7 7/8"	None									6'-15' 12'-0"	35'-0"
24A-3-100			35'-0"	7 3/16"	15'-0"	9 1/4"	7 3/16"	None									6'-15' 15'-0"	
26-3-100			30'-0"	8"	10'-0"	9 3/8"	8"	None									6'-15' 12'-0"	40'-0", 45'-0"
26A-3-100			35'-0"	7 5/16"	15'-0"	9 3/8"	7 5/16"	None									6'-15' 15'-0"	
27-3-100			17'-0"	9 3/4"	None			None									None	

□ Indicates arm length to be used unless otherwise noted on plans.

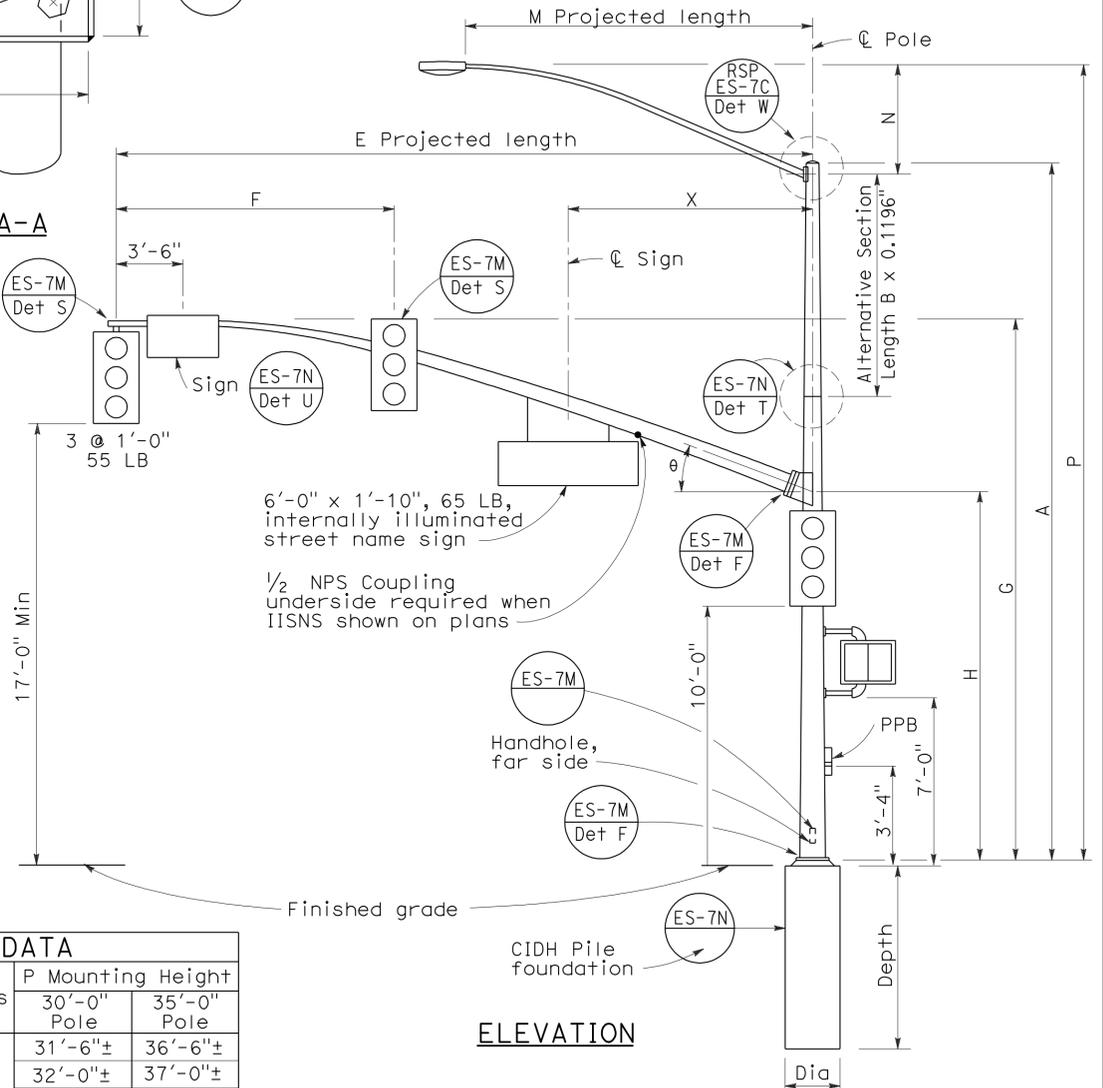
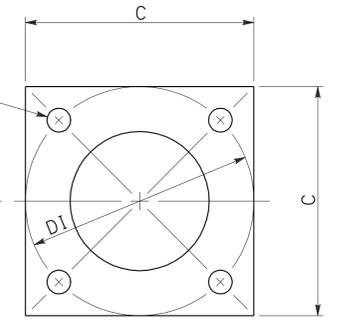
REVISED STANDARD PLAN RSP ES-7E

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD
 CASE 3 ARM LOADING
 WIND VELOCITY=100 MPH
 ARM LENGTHS 15' TO 45')**
 NO SCALE
 RSP ES-7E DATED JUNE 30, 2006 SUPERSEDES STANDARD PLAN DATED MAY 1, 2006 -
 PAGE 441 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7E



SIGNAL ARM CONNECTION DETAILS



ELEVATION

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 Arm P Thickness	L Pole P Thickness	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 5/16"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	8"										
35'-0"	14'-0"	23'-0"±		8 1/16"		13 1/2"		1 1/2"	21°			
40'-0"	15'-0"	9 3/8"										
45'-0"	15'-0"	23'-8"±	10 1/4"	15°	13'-0"							

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	4"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

Pole Type	Load Case	Wind Velocity mph	A Height			Min OD	Thickness	Alternative Section		
			Base	Top	B Length			Bottom	Top	
18-4-100	4	100	17'-0"	9"	12"	0.2391"	None	9 3/8"	8"	
19-4-100			30'-0"	8"			10'-0"			8"
19A-4-100			35'-0"	7 5/16"			15'-0"			7 5/16"
23-4-100			17'-0"	9"			None			None
24-4-100			30'-0"	8"	10'-0"	8"				
24A-4-100			35'-0"	7 5/16"	15'-0"	7 5/16"				
26-4-100			30'-0"	8"	10'-0"	8 3/8"				
26A-4-100			35'-0"	7 5/16"	15'-0"	9 3/4"				
27-4-100			17'-0"	9 3/4"	None	None				

C	DI Bolt Circle	Thickness	Anchor Bolts	
			Size	Reinforced
1'-6"	1'-6"	1 1/2"	2" Ø x 42" x 6"	Yes

**TYPE 19-4-100, 19A-4-100,
 24-4-100, 24A-4-100,
 26-4-100, 26A-4-100**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD
 CASE 4 ARM LOADING
 WIND VELOCITY=100 MPH
 ARM LENGTHS 25' TO 45')**
 NO SCALE

RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 - PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

□ Indicates arm length to be used unless otherwise noted on plans.

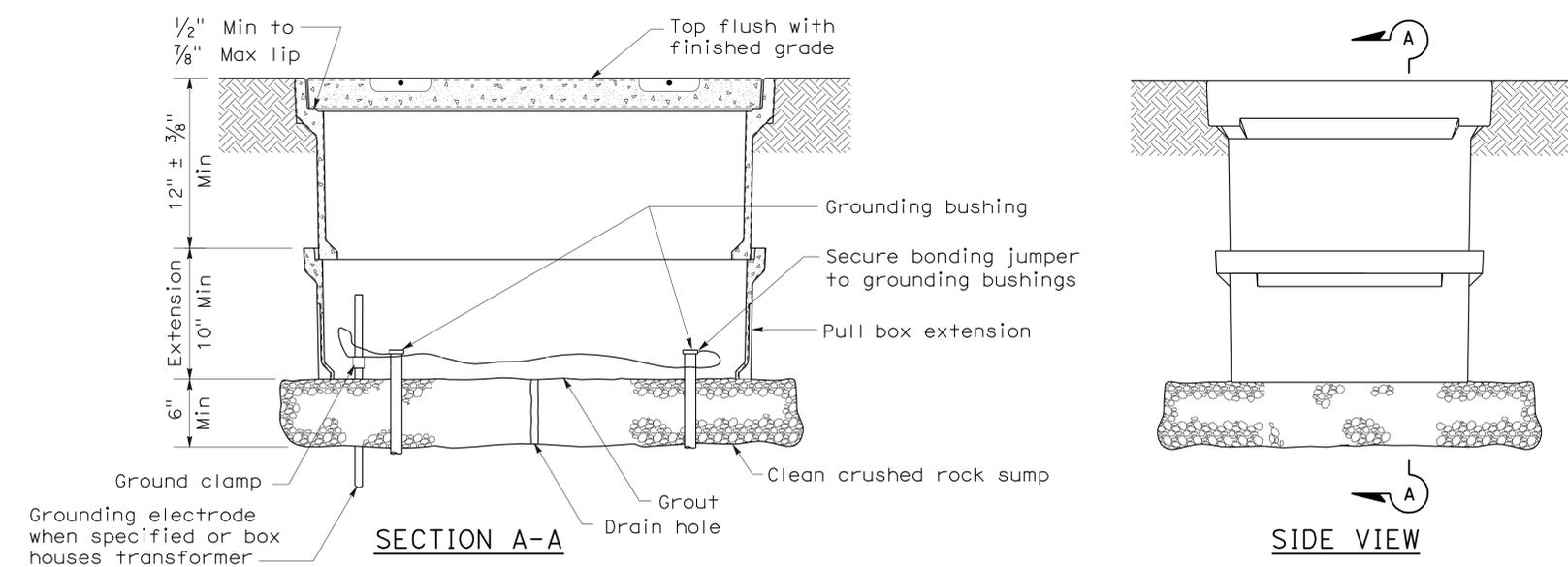
REVISED STANDARD PLAN RSP ES-7F

2006 REVISED STANDARD PLAN RSP ES-7F

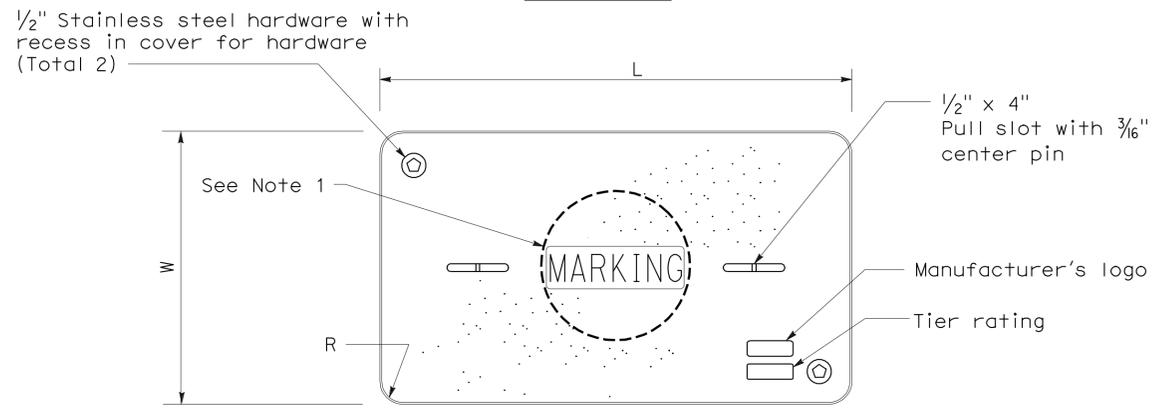
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	35	37

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 January 20, 2012
 PLANS APPROVAL DATE
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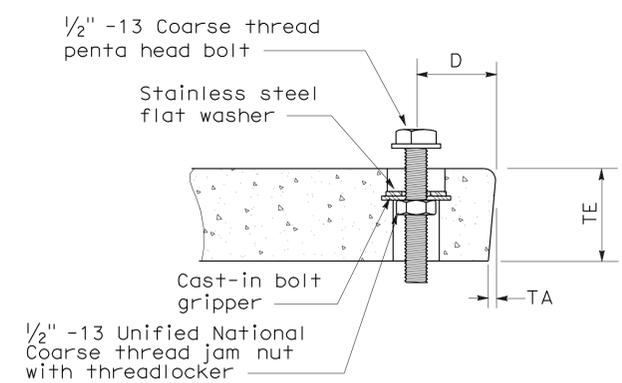
To accompany plans dated 6-4-12



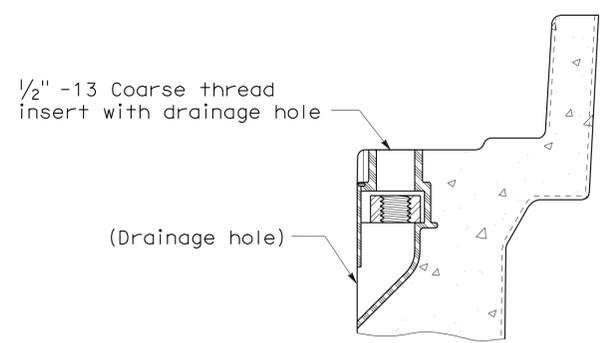
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
(Or similar)



TYPICAL THREADED INSERT
(Or similar)

NOTES ON PULL BOXES:

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

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

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

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

2006 NEW STANDARD PLAN NSP ES-8A

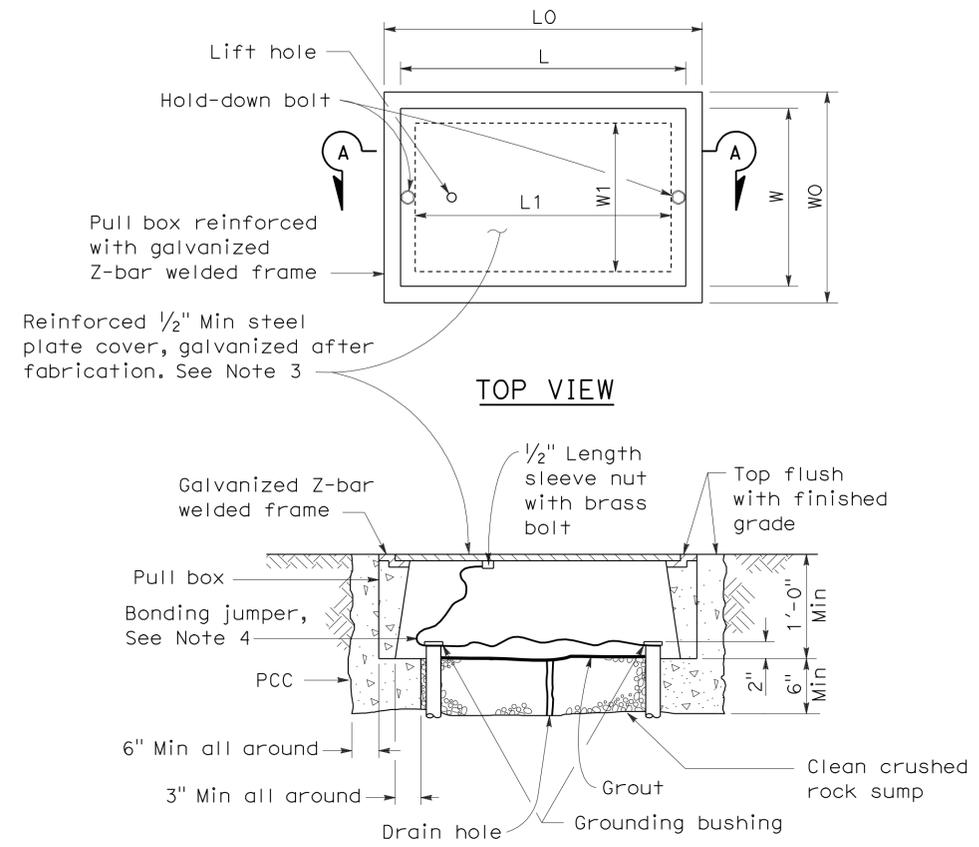
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	36	37

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

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

To accompany plans dated 6-4-12

2006 NEW STANDARD PLAN NSP ES-8B



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

NOTES ON PULL BOXES:

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

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

* Excluding conduit web ** Top dimension

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

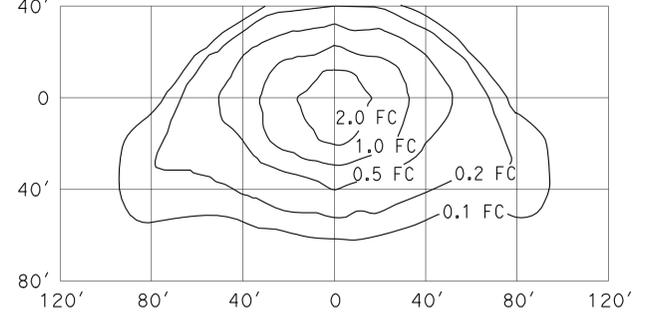
NSP ES-8B DATED JANUARY 20, 2012 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	74	40.3	37	37

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE
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To accompany plans dated 6-4-12

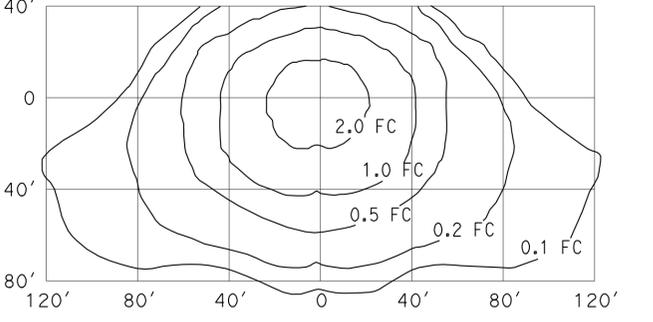
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

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

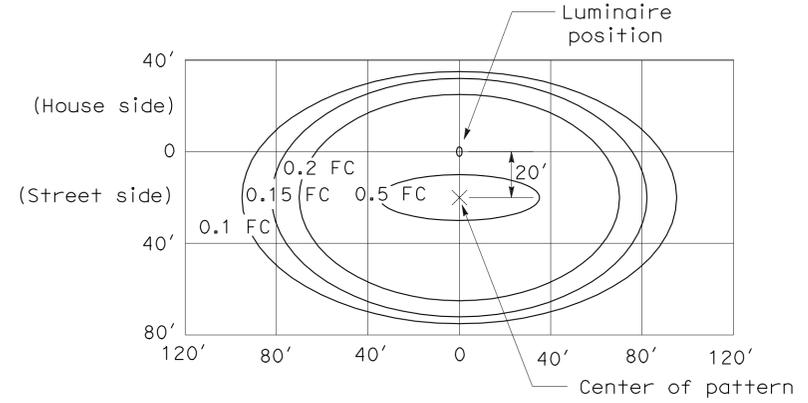
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

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

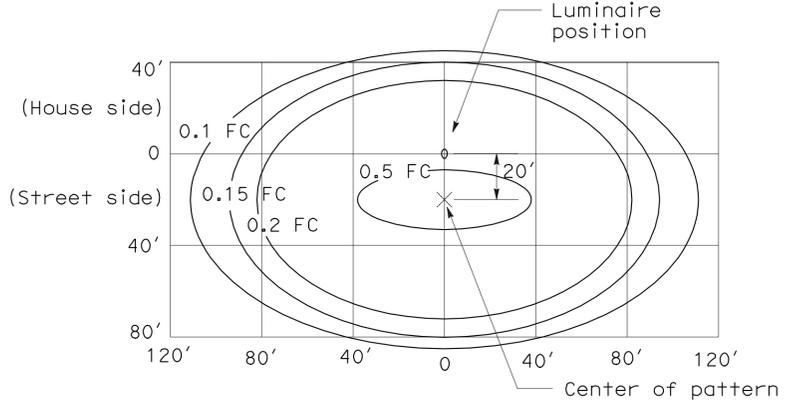
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 1

200-W HPS Equivalent at 34' Mounting Height

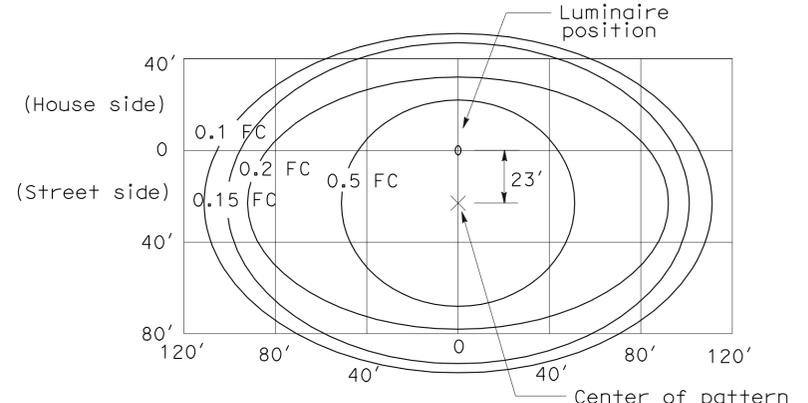
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 2

310-W HPS Equivalent at 40' Mounting Height

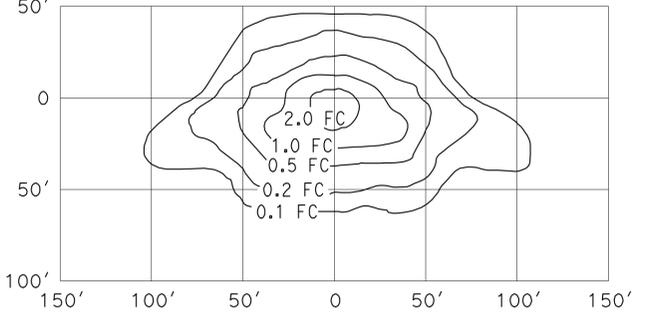
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4

400-W HPS Equivalent at 40' Mounting Height

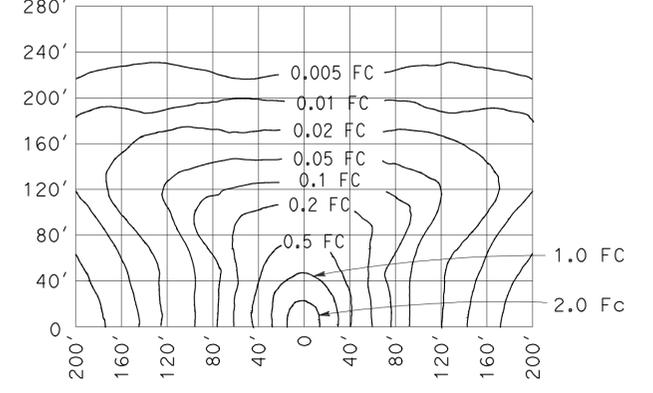
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

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

ISOFOOTCANDLE CURVE - MINIMUM



LOW PRESSURE SODIUM LUMINAIRE

40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

NSP ES-10A DATED JULY 20, 2012 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP ES-10A

2006 NEW STANDARD PLAN NSP ES-10A