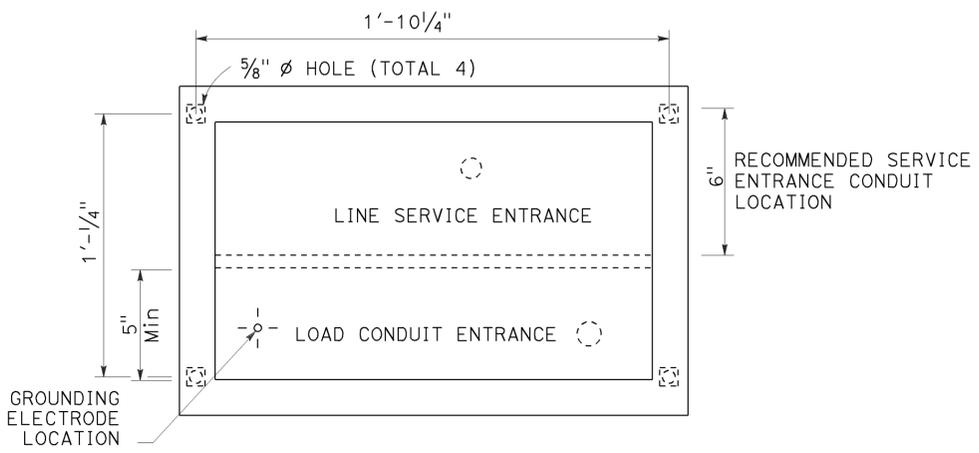
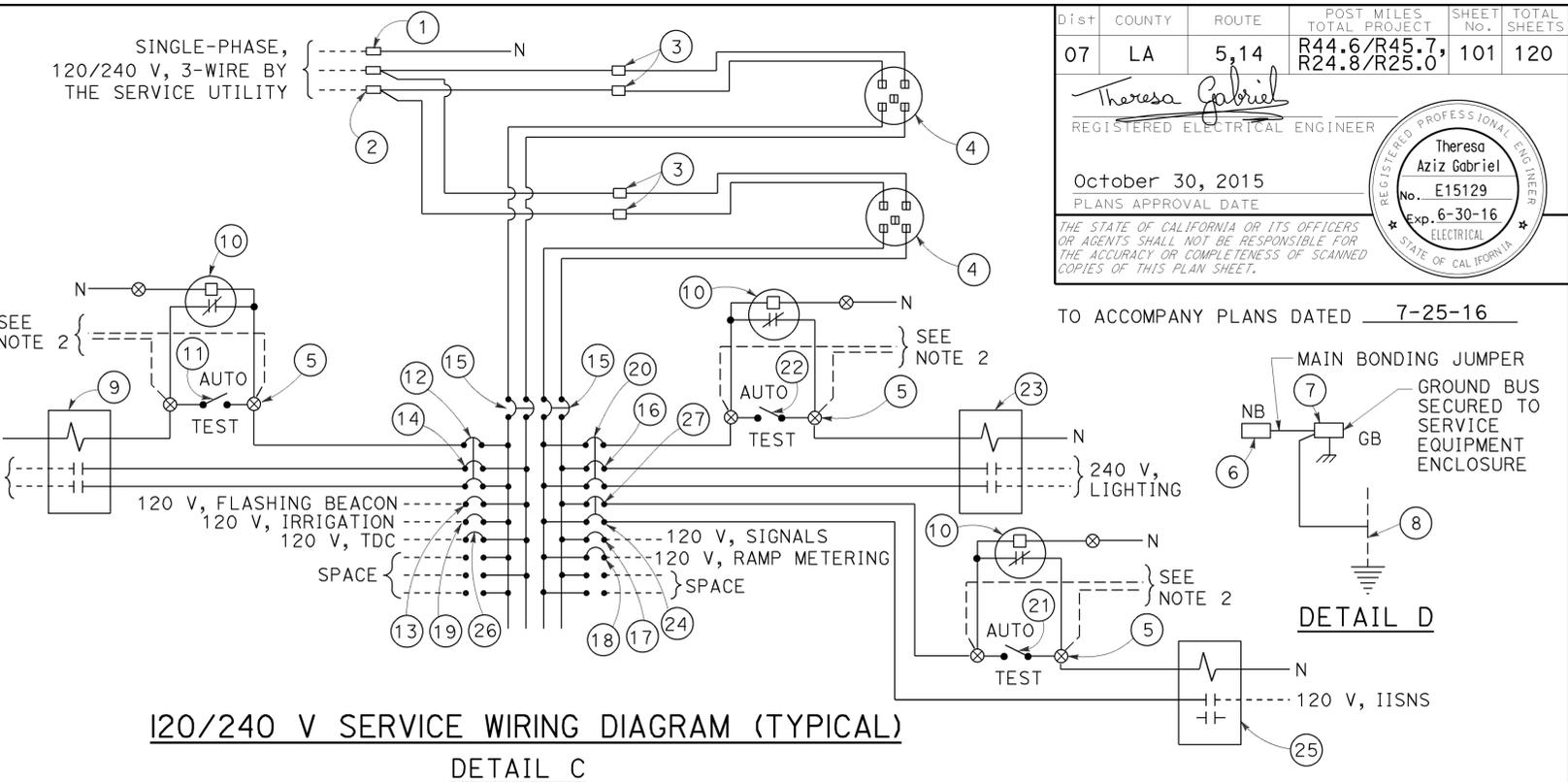


FRONT VIEW
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)
DETAIL A



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE
DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)
DETAIL C

TYPE III-C SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)					
ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG		⑭	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
②	LANDING LUG		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	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
⑨	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	㉒	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
⑩	PHOTOELECTRIC UNIT (NOTE 4)	PEU	㉓	60 A, 2P, NO 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, 2P, NO CONTACTOR	IISNS
⑬	15 A, 120 V, 1P, CB	FLASHING BEACON	㉖	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATON CABINET
			㉗	15 A, 120 V, 1P, CB	IISNS CONTROL

- NOTES:**
- 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 ① and ⑥ shall be isolated from the service equipment enclosure.
 - Type I photoelectric control shall be used unless otherwise indicated on the plans.
 - Item ⑫, ⑳ and ㉗ shall be ganged operated CB.

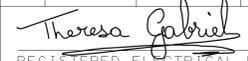
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT ENCLOSURE AND
TYPICAL WIRING DIAGRAM
TYPE III-C SERIES)**

NO SCALE

RSP ES-2F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2F DATED MAY 20, 2011 - PAGE 433 OF THE STANDARD PLANS BOOK DATED 2010.

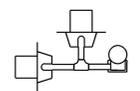
2010 REVISED STANDARD PLAN RSP ES-2F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7, R24.8/R25.0	102	120
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

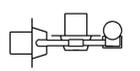


TO ACCOMPANY PLANS DATED 7-25-16

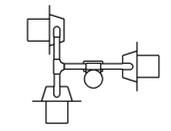
2010 REVISED STANDARD PLAN RSP ES-4A



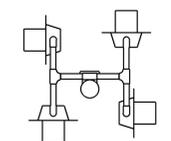
SV-2-TD



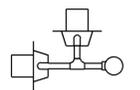
SV-2-TC



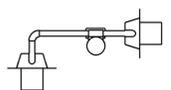
SV-3-TC



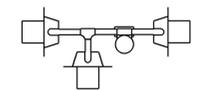
SV-4-TC



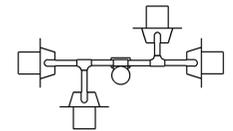
SV-2B



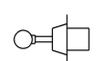
SV-2-TB



SV-3-TB



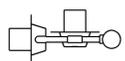
SV-4-TB



SV



SV-1



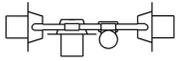
SV-2A



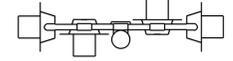
SV-1-T



SV-2-TA



SV-3-TA



SV-4-TA

SIDE MOUNTINGS

PLAN VIEW OF OTHER
SIDE MOUNTINGS

ABBREVIATIONS:

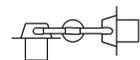
- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

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



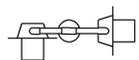
TV-1



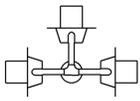
TV-2



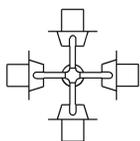
TV-1-T



TV-2-T



TV-3-T



TV-4-T

TOP MOUNTINGS

PLAN VIEW OF
TOP MOUNTINGS

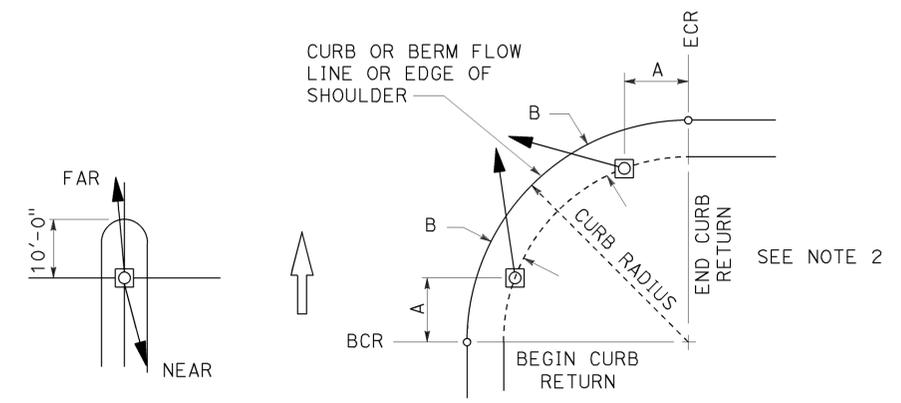
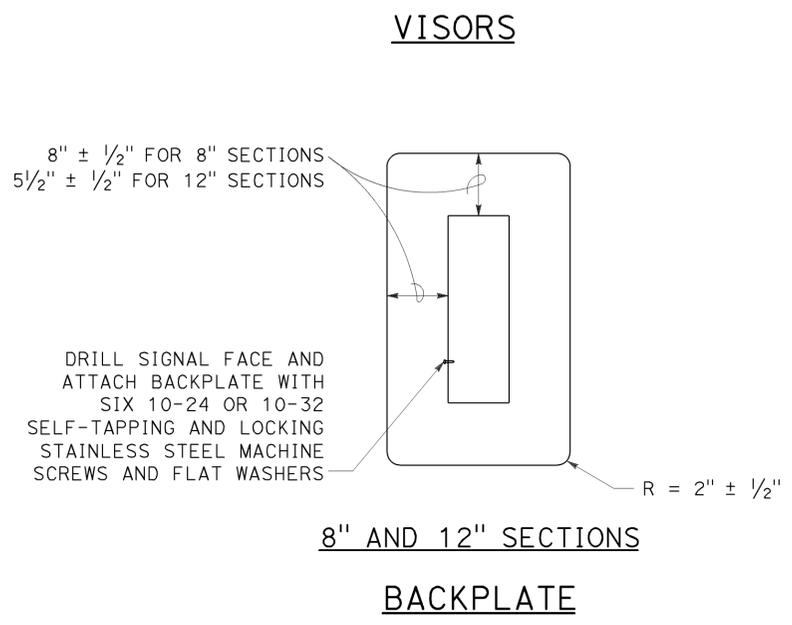
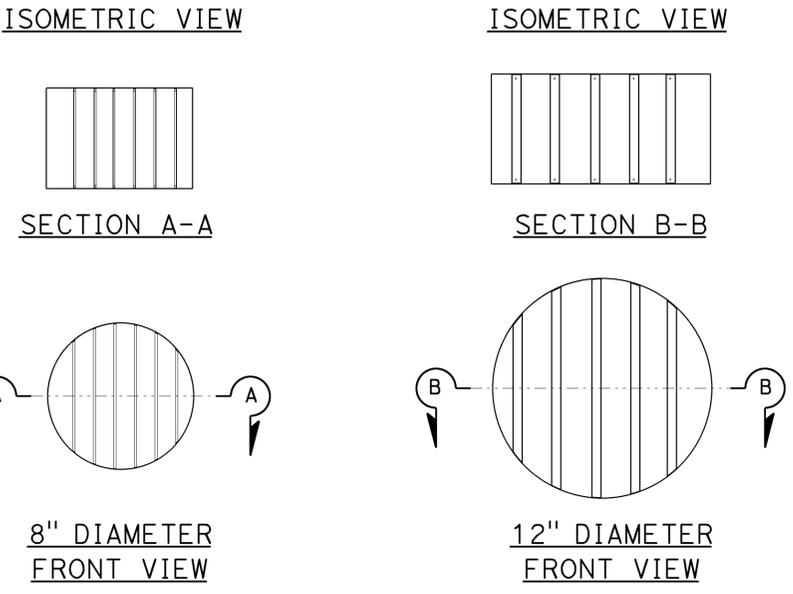
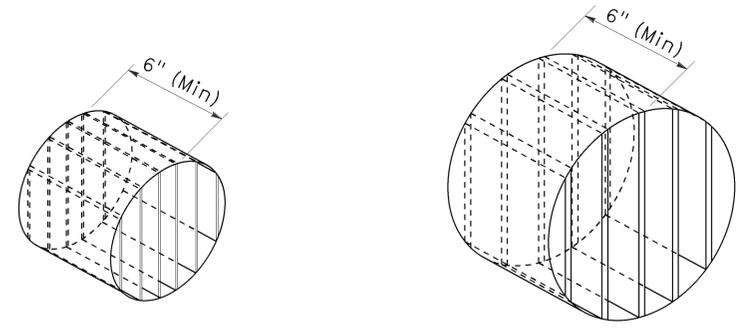
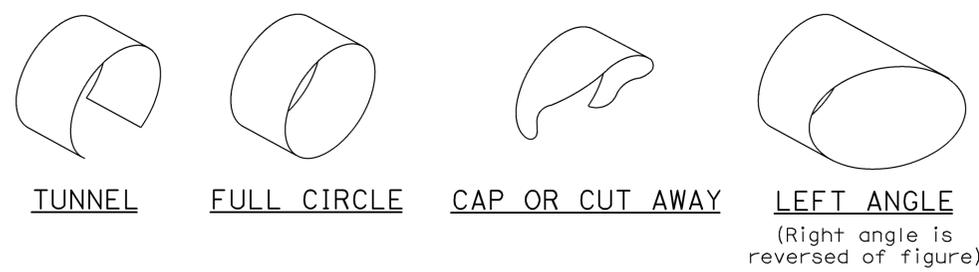
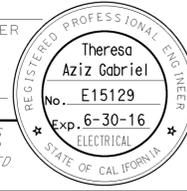
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4A DATED JULY 19, 2013 AND
STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	103	120
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER October 30, 2015 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
TO ACCOMPANY PLANS DATED <u>7-25-16</u>					

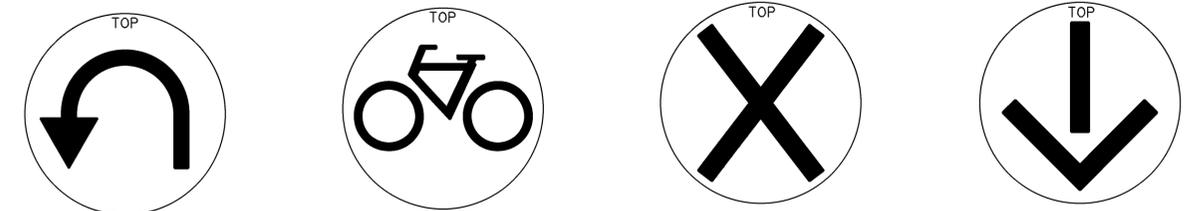
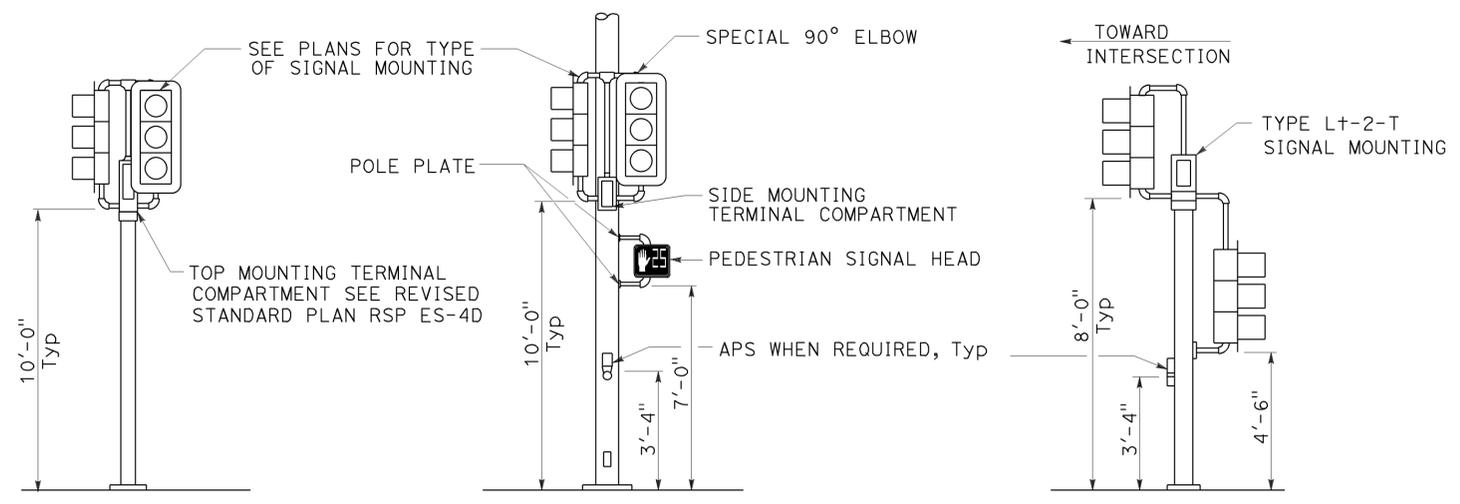


- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule.

DIRECTIONAL LOUVER

Directional louvers shall be oriented and secured in place with one plated brass machine screw and nut.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



SIGNAL FACES

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4C DATED JULY 19, 2013 AND STANDARD PLAN ES-4C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4C

2010 REVISED STANDARD PLAN RSP ES-4C

TYPICAL SIGNAL HEAD INSTALLATIONS

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

Normally used on standards with luminaire or signal mast arm

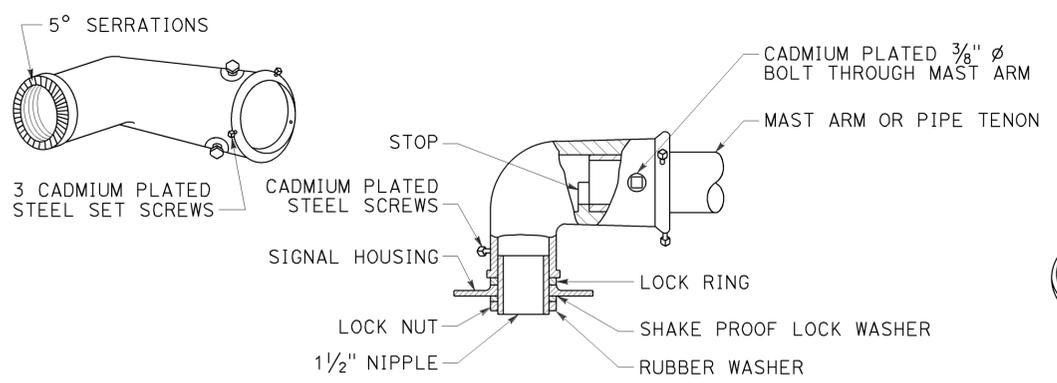
Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7, R24.8/R25.0	104	120

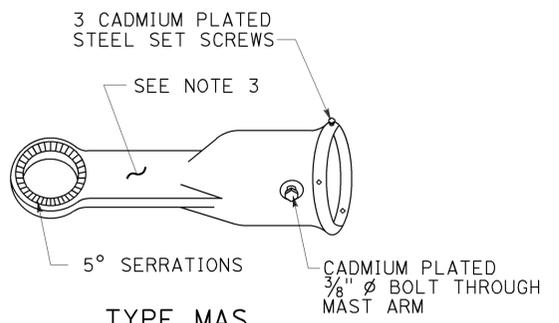
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



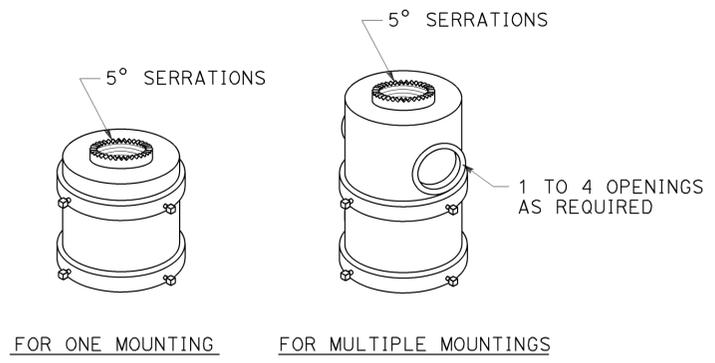
TO ACCOMPANY PLANS DATED 7-25-16



TYPE MAT
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.

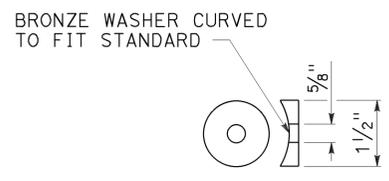


TYPE MAS
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.

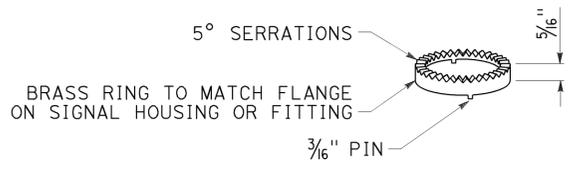


TOP MOUNTINGS
For 4 NPS pipe, see Note 2.

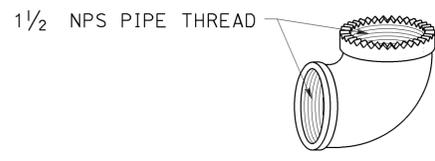
SIGNAL SLIP FITTERS



DETAIL C



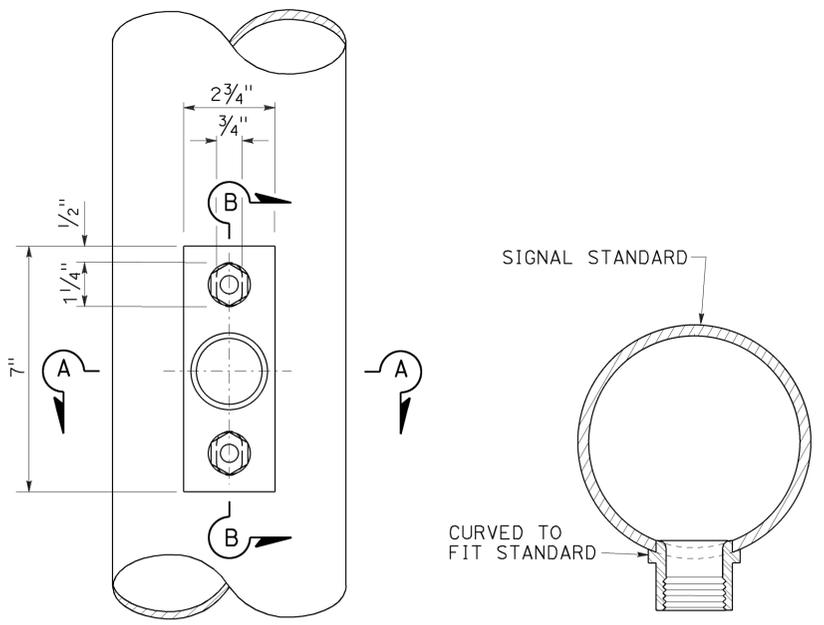
LOCK RING
Use where locking ring is not integral with signal housing or fitting.



SPECIAL 90° ELBOW
One for each signal head, except those with special slip fitter mounting

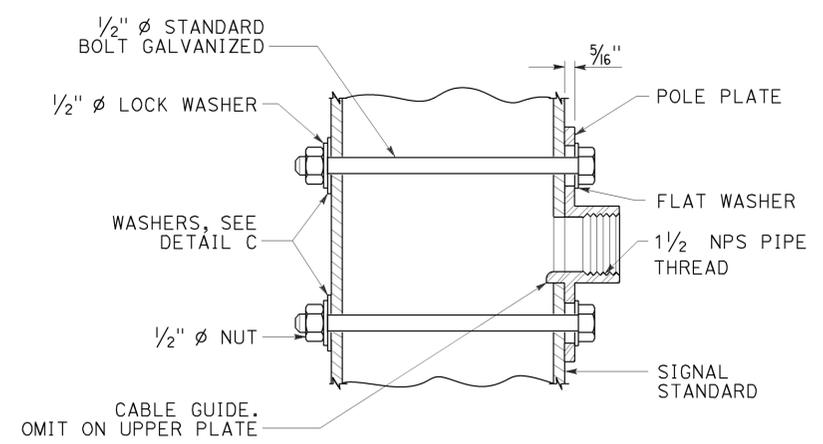
- NOTES:**
- After mast arm signal has been plumbed and secured, drill $\frac{1}{16}$ " hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated $\frac{3}{8}$ " ϕ galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
 - (A) Threaded top mounted slip fitter openings shall be $1\frac{1}{2}$ 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 $\frac{1}{2}$ ".

MISCELLANEOUS MOUNTING HARDWARE

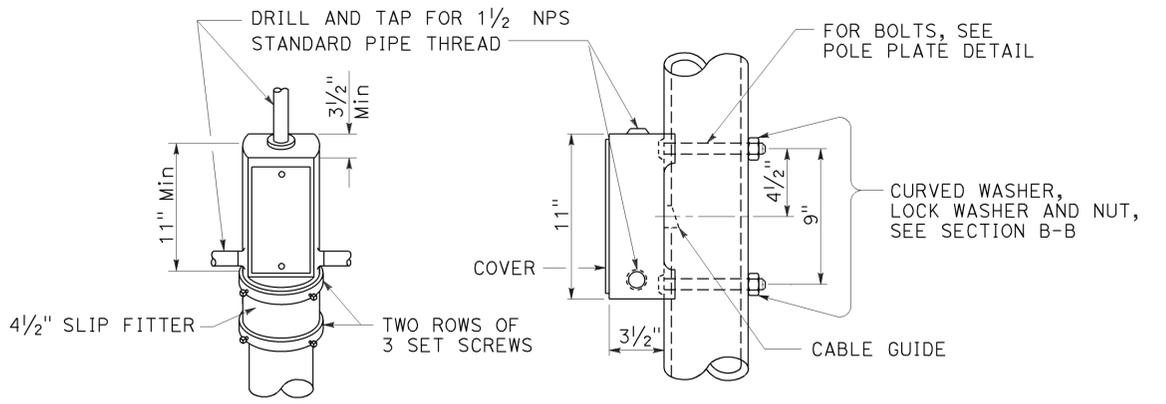


TOP VIEW **SECTION A-A**

POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT



SECTION B-B



TOP MOUNTING **SIDE MOUNTING**
TERMINAL COMPARTMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)
NO SCALE

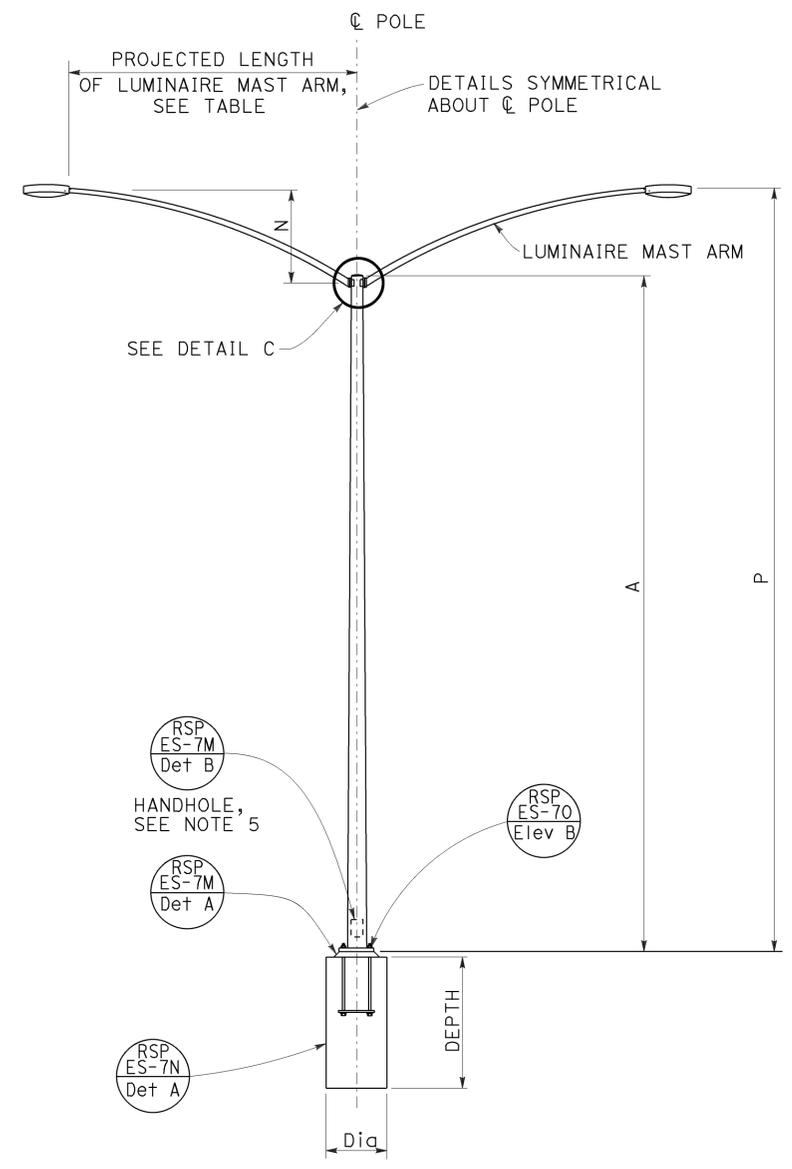
RSP ES-4D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 20, 2011 - PAGE 446 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-4D

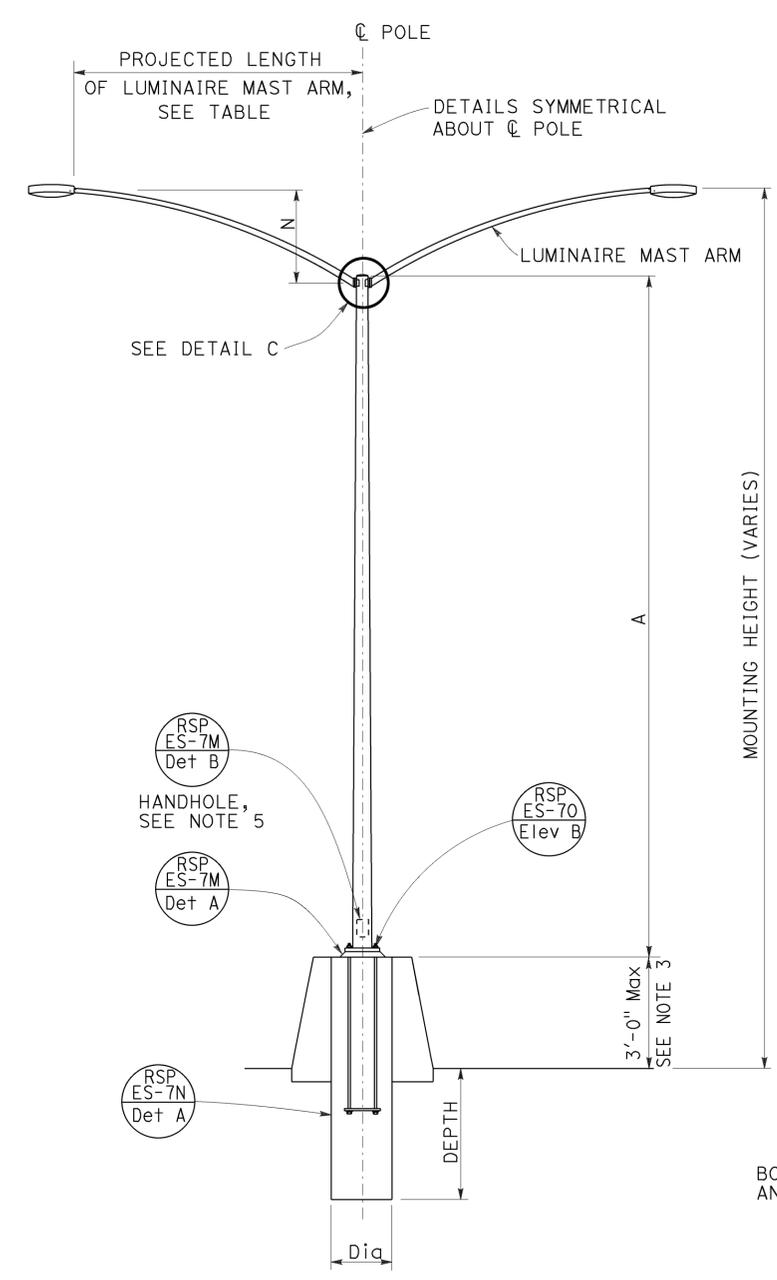
NOTES:

1. Indicates mast arm length to be used unless otherwise noted on the plans.
2. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
3. See Concrete Barrier Details Type 60E and 60SE.
4. For locations with one arm, plug unused cap screw holes and chased outlet with galvanized cap screws and knockout plug.
5. Handhole shall be located perpendicular to the luminaire mast arm and as directed by the Engineer.

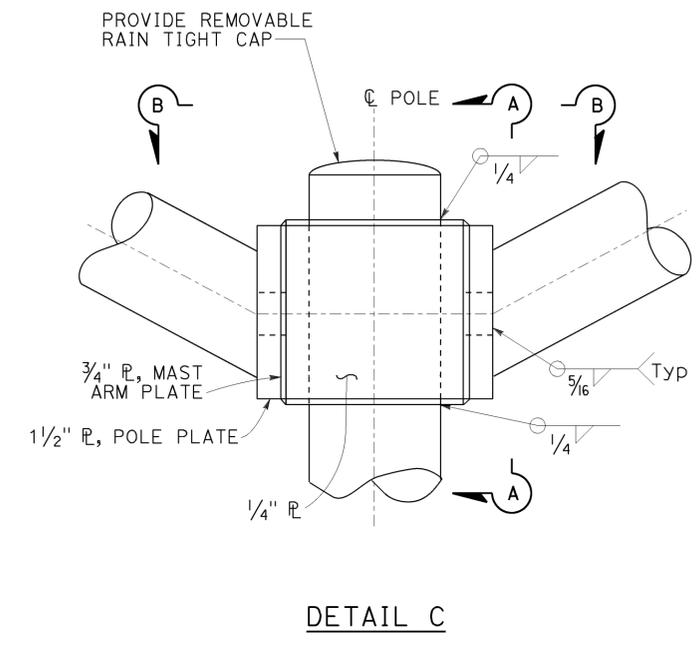
TO ACCOMPANY PLANS DATED 7-25-16



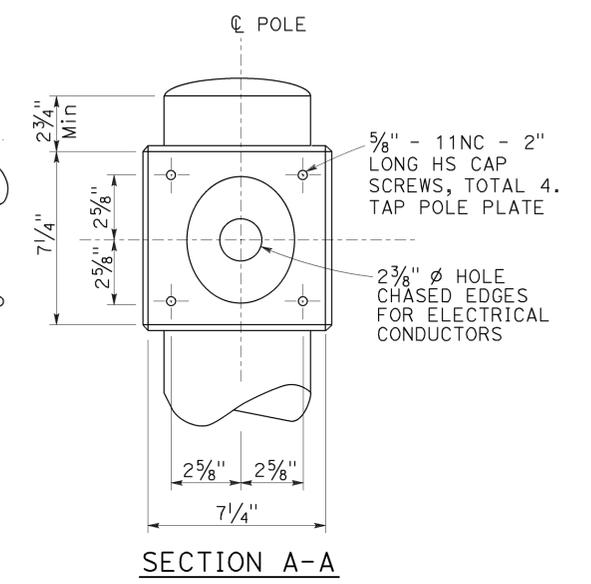
**TYPE 15D AND TYPE 21D
ELEVATION A**



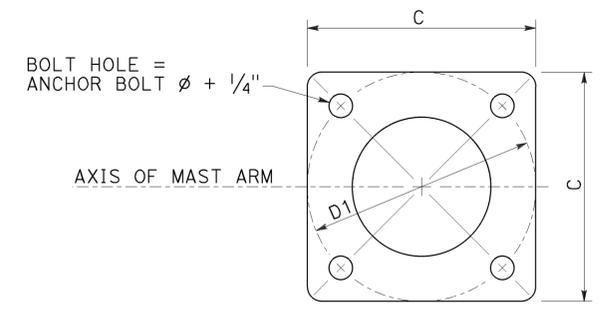
**TYPE 15D AND TYPE 21D
MEDIAN BARRIER MOUNTED
ELEVATION B**



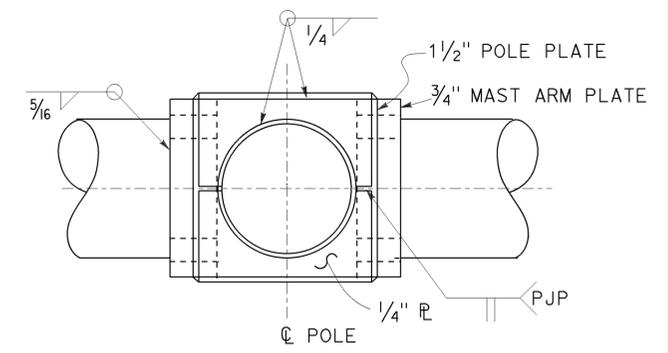
DETAIL C



SECTION A-A



**BASE PLATE
DETAIL B**



SECTION B-B

POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION	
	A HEIGHT	Min OD BASE	Min OD TOP	Min THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Diq	DEPTH
15D	30'-0"	8"	3 1/16"	0.1793"	1'-0"	1'-0"	1 1/2"	1 1/4" Ø x 42"	2'-6"	7'-0"
21D	35'-0"	8 5/8"	3 1/16"	0.1793"	1'-0"	1'-0"	1 1/2"	1 1/4" Ø x 42"	2'-6"	7'-0"

LUMINAIRE MAST ARM DATA					
PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15D	TYPE 21D
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 3/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±

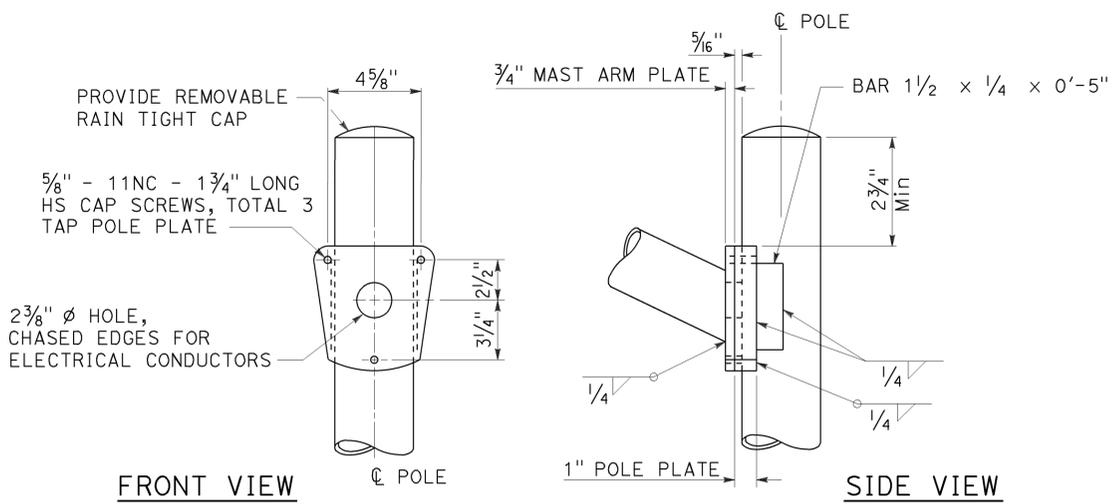
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD,
 TYPES 15D AND 21D,
 DOUBLE LUMINAIRE MAST ARM)**

NO SCALE
 RSP ES-6D DATED JULY 15, 2016 SUPERSEDES RSP ES-6D
 DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6D DATED MAY 20, 2011 -
 PAGE 455 OF THE STANDARD PLANS BOOK DATED 2010.

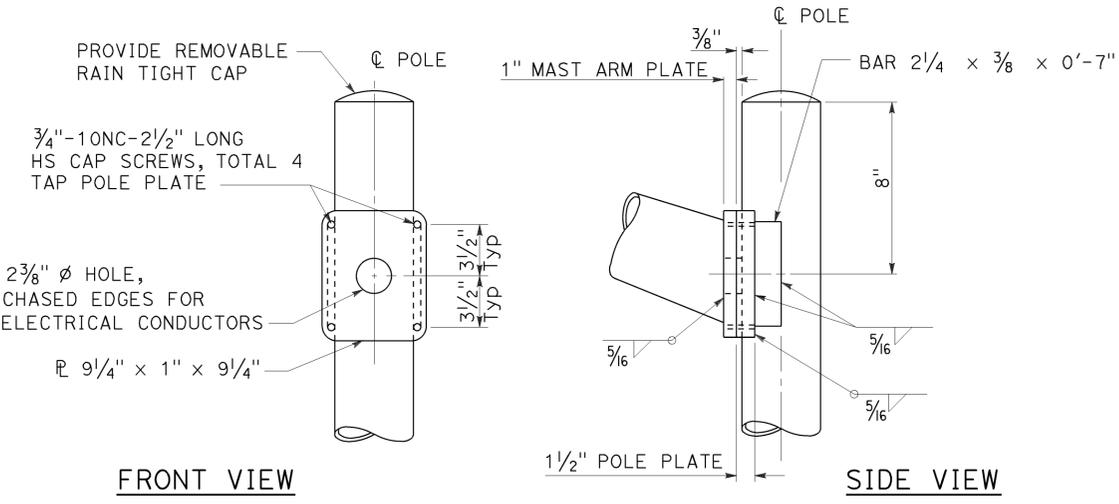
2015 REVISED STANDARD PLAN RSP ES-6D

LUMINAIRE MAST ARM DATA			
PROJECTED LENGTH	THICKNESS	MINIMUM OD AT POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3 1/4"	36'-9"±
* 8'-0"		3 1/2"	37'-3"±
* 10'-0"		3 7/8"	38'-0"±
* 12'-0"		4 1/4"	39'-0"±
** 20'-0"	0.1793"	5"	37'-0"±

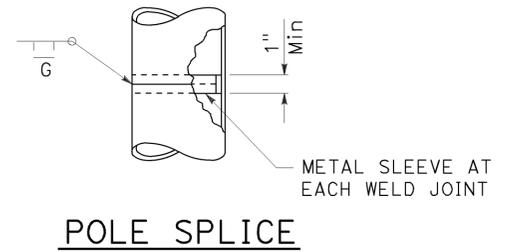
* TYPE 30
** TYPE 31



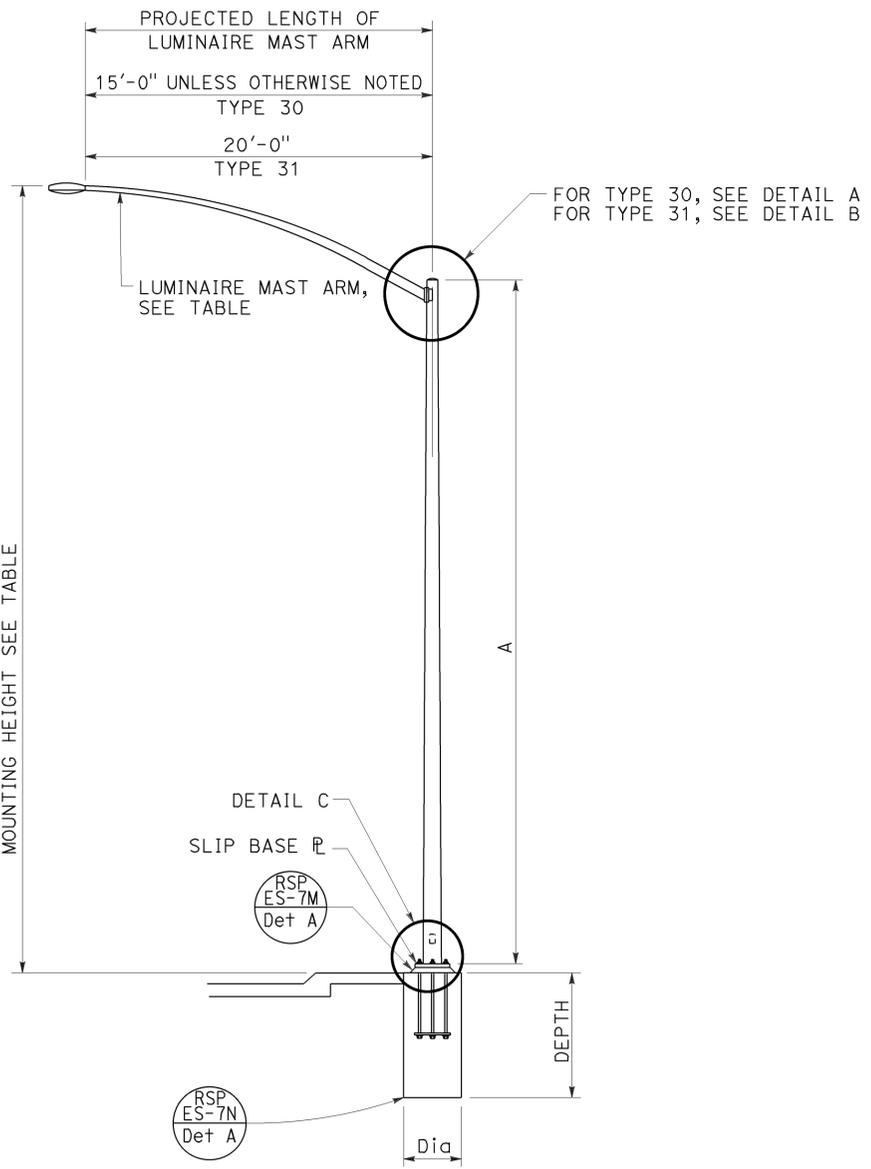
TYPE 30
DETAIL A



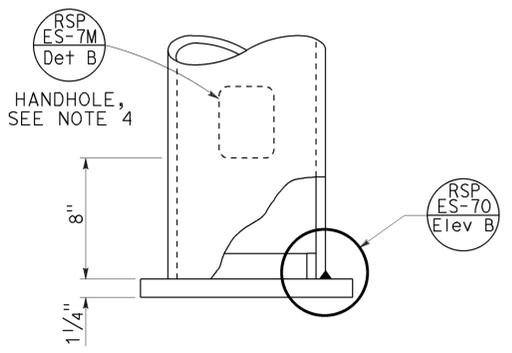
TYPE 31
DETAIL B



POLE SPLICE



ELEVATION A



DETAIL C

NOTES:

1. For slip base plate details, see Revised Standard Plan RSP ES-6F.
2. For Type 30 fixed base use Type 15 base plate and foundation shown on Revised Standard Plan RSP ES-6A. Use 1/4" Dia x 3'-6" anchor bolts.
3. For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Revised Standard Plan RSP ES-6G.
4. Handhole shall be located on the downstream side of traffic.
5. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

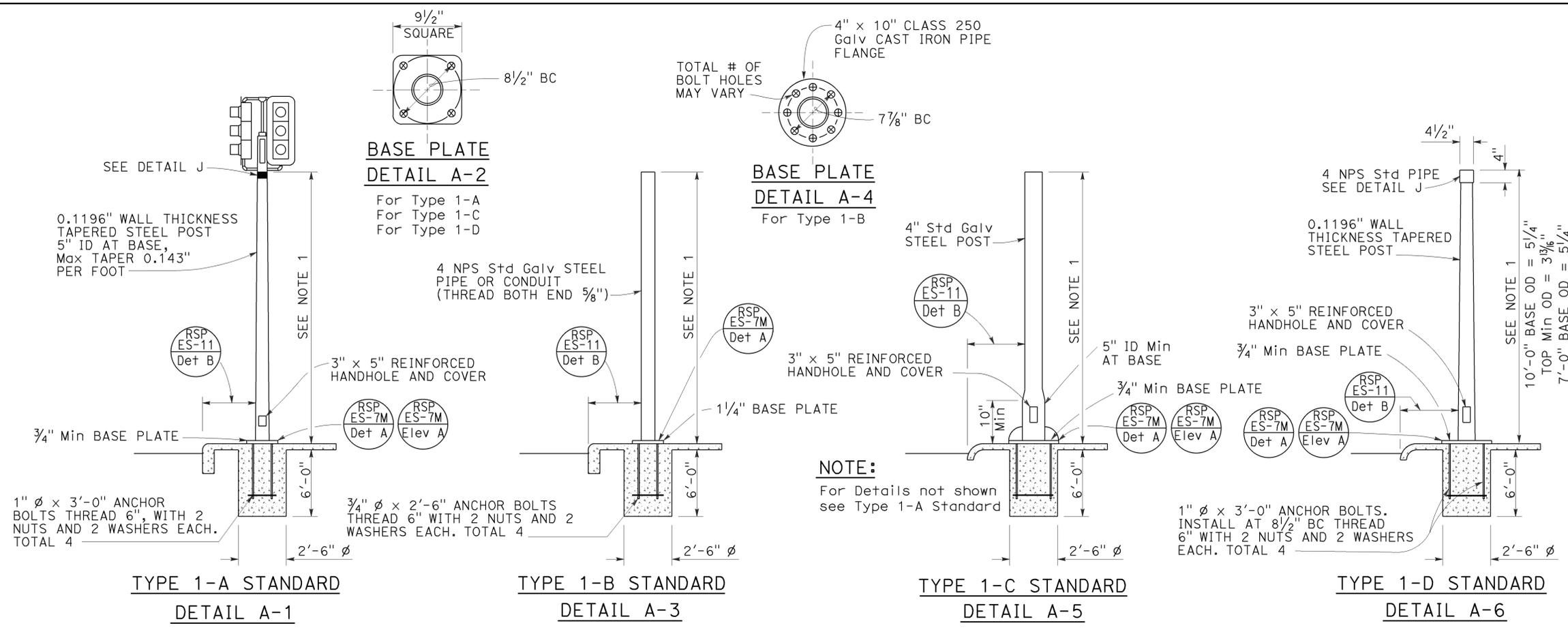
POLE TYPE	POLE DATA			CIDH PILE FOUNDATION	
	A HEIGHT	Min OD BASE	Min OD TOP	Min THICKNESS	Di a DEPTH
30	35'-0"	8 3/4"	3 1/16"	0.1196"	2'-6" 7'-0"
31		10 3/4"	5 1/16"	0.1793"	3'-0" 8'-0"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 30 AND 31)**
NO SCALE

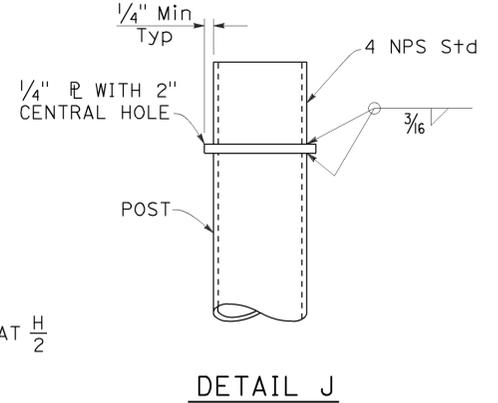
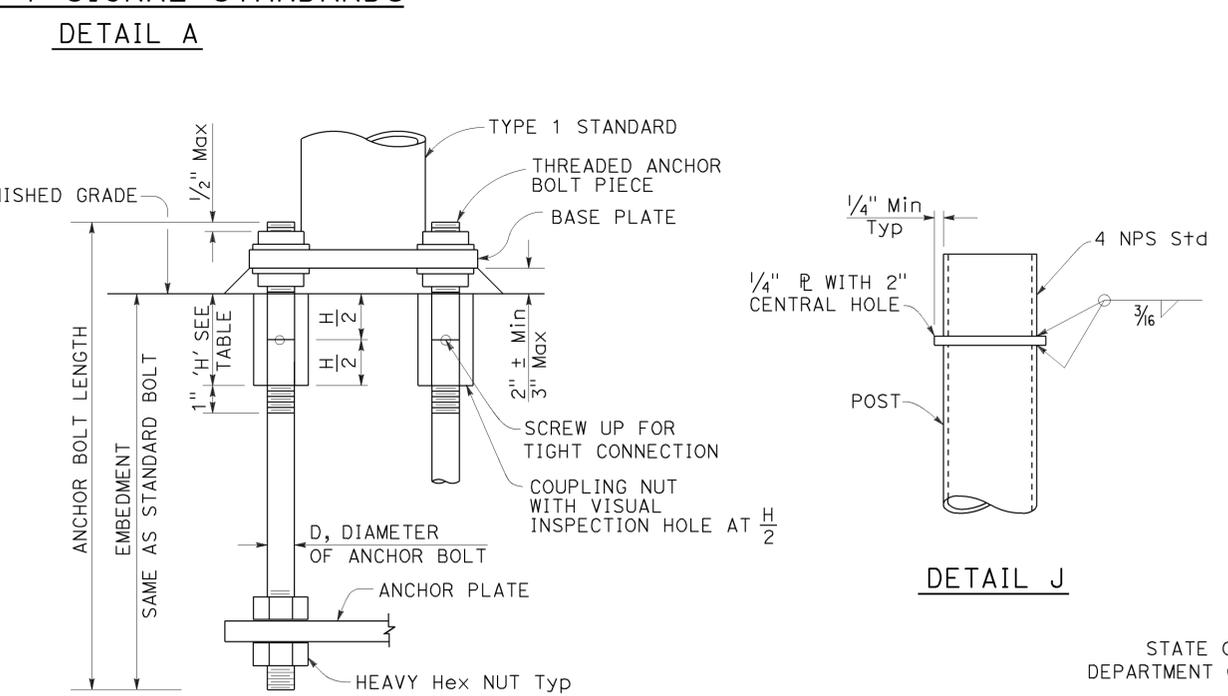
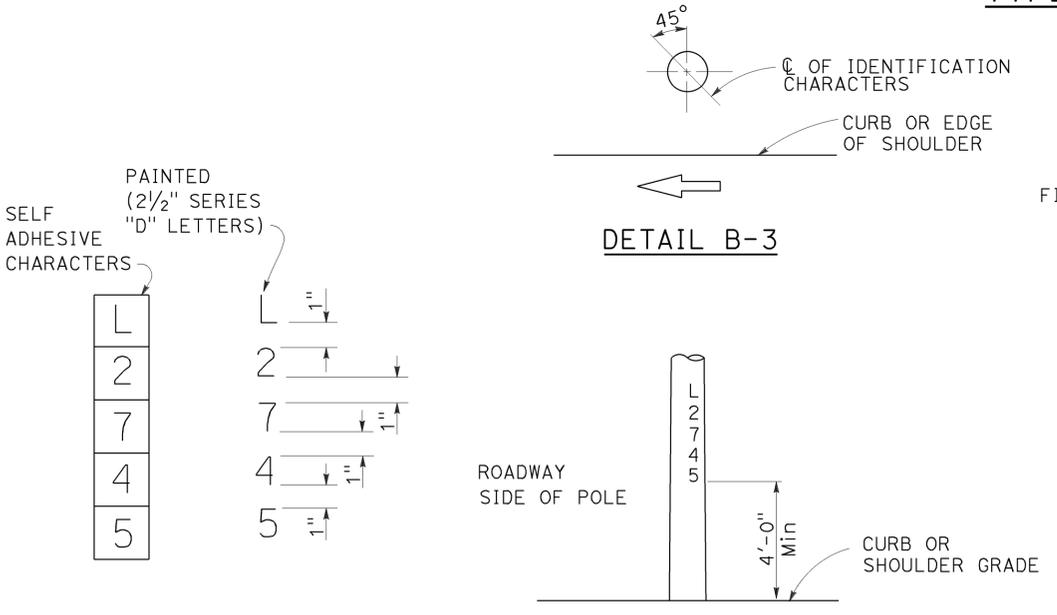
RSP ES-6E DATED JULY 15, 2016 SUPERSEDES RSP ES-6E DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6E DATED MAY 20, 2011 - PAGE 456 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-6E

2010 REVISED STANDARD PLAN RSP ES-7B



- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless shorter pole is noted on project 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.
 - For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
 - Pour foundation concrete against undisturbed soil.
 - For standards with handhole, locate in the downstream side of traffic.
 - Coupling nuts to be used only when shown or specified on project plans.



BOLT DIAMETER	NUT TABLE THICKNESS 'H'
3/4"	2 1/4"
1"	3"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE 1
AND EQUIPMENT IDENTIFICATION CHARACTERS)**

NO SCALE

RSP ES-7B DATED JULY 15, 2016 SUPERSEDES RSP ES-7B DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7B DATED MAY 20, 2011 - PAGE 463 OF THE STANDARD PLANS BOOK DATED 2010.

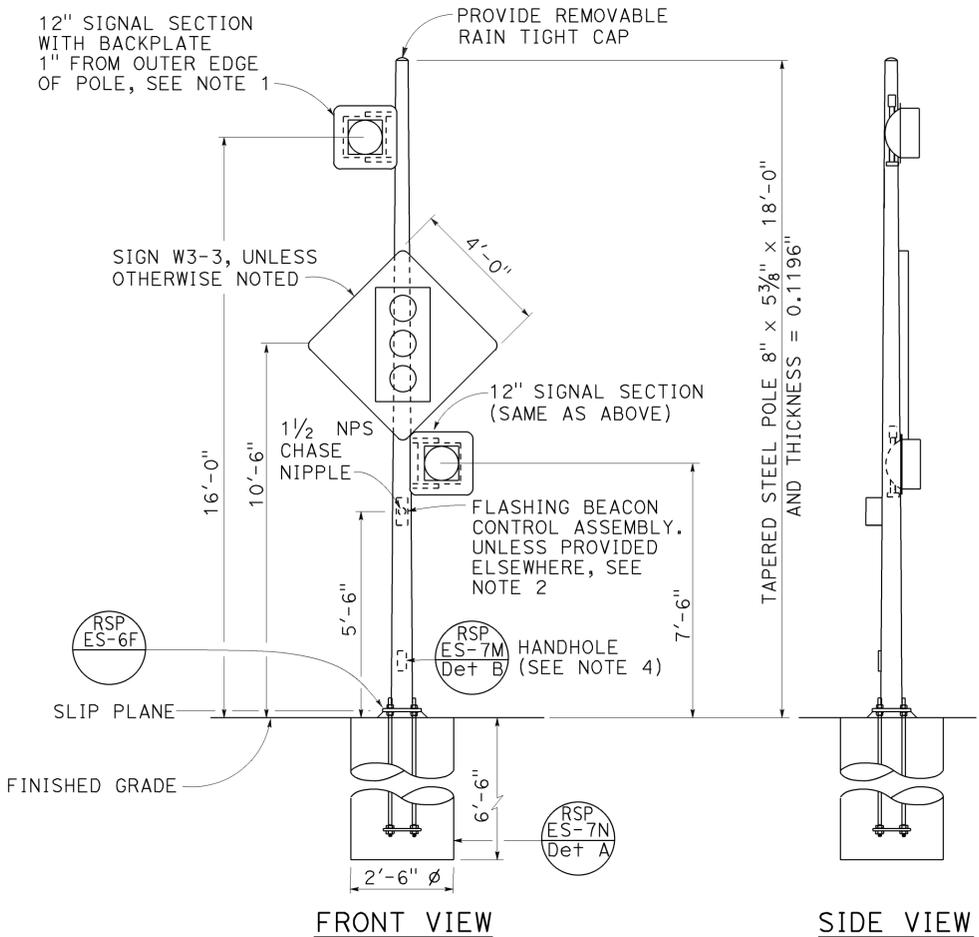
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	108	120

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

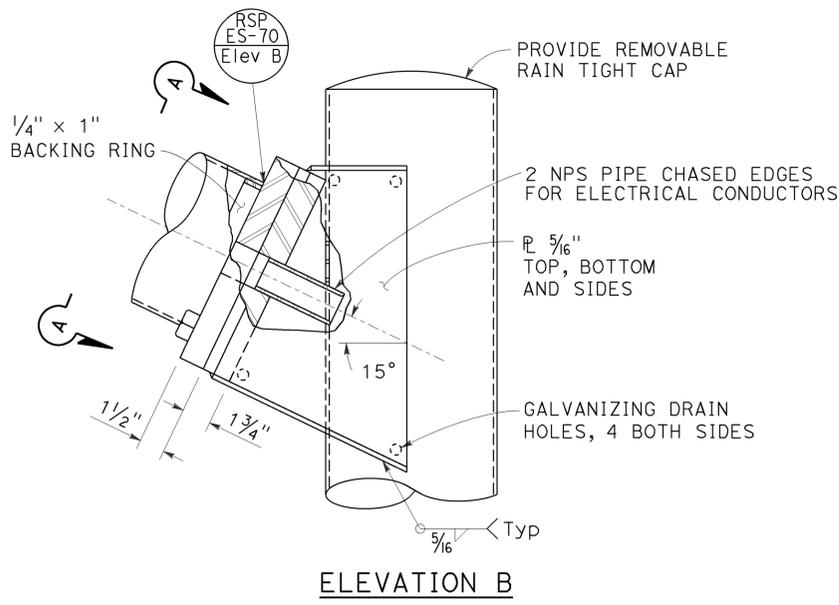
July 15, 2016
 PLANS APPROVAL DATE

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

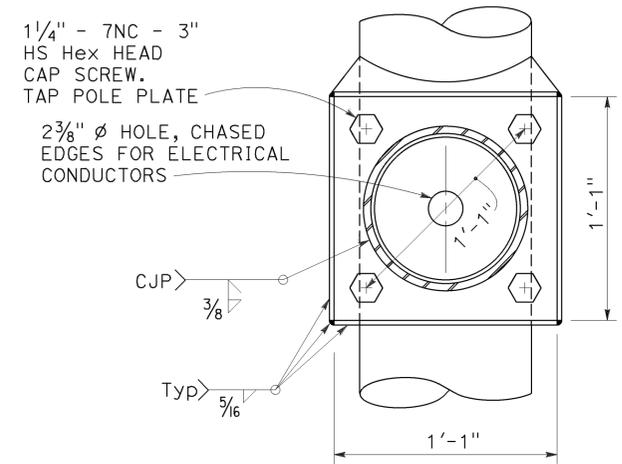
TO ACCOMPANY PLANS DATED 7-25-16



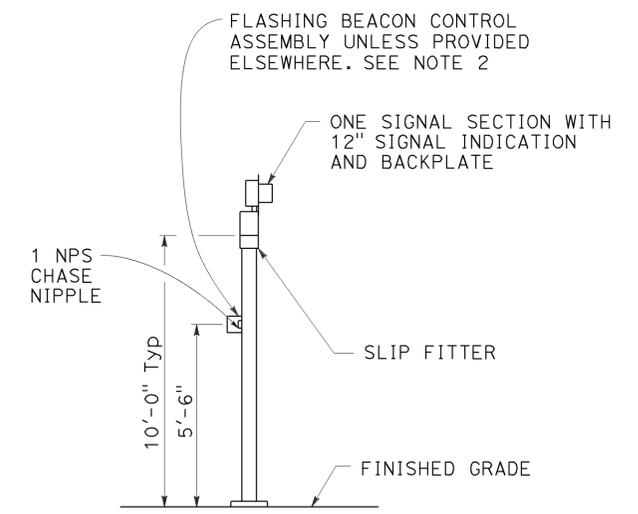
FRONT VIEW SIDE VIEW
TYPE 15-FBS
FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



ELEVATION B

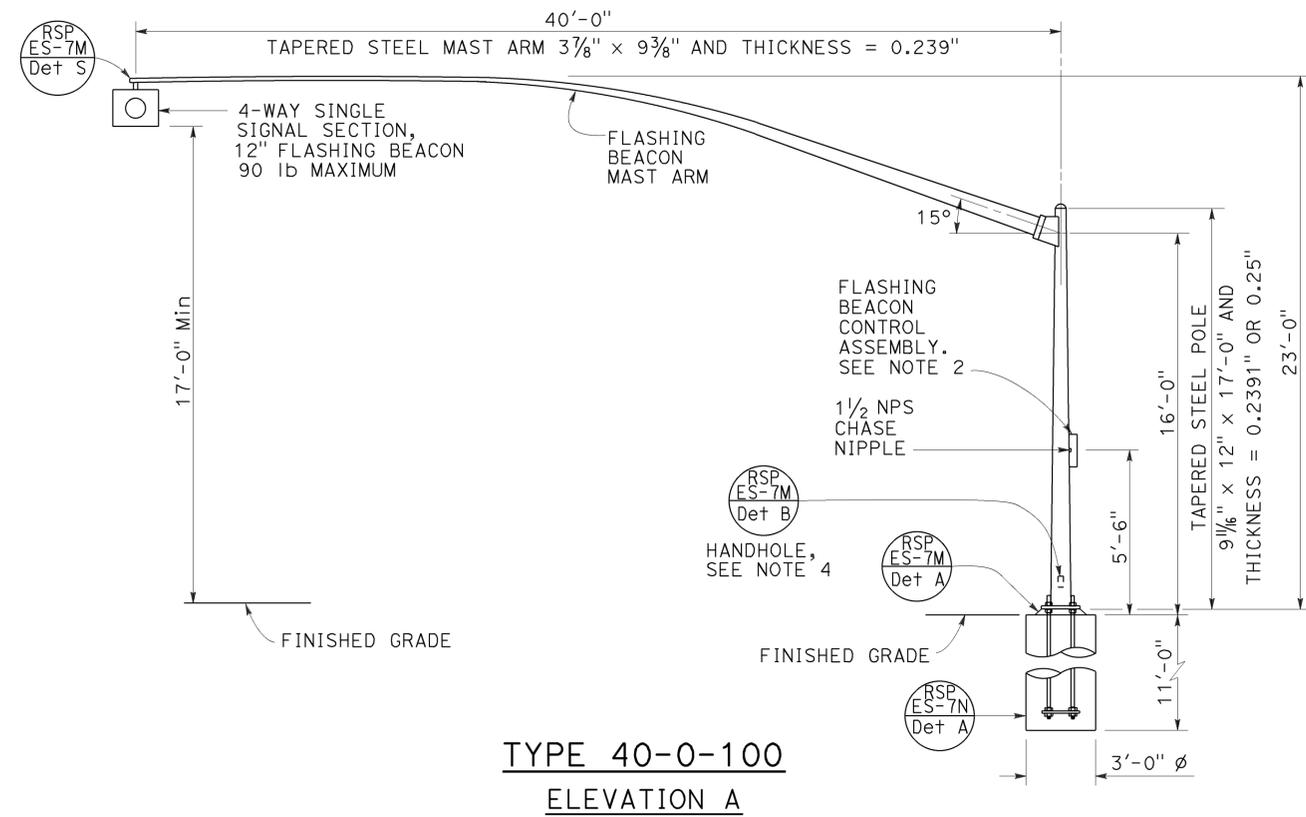


VIEW A-A
FLASHING BEACON MAST ARM CONNECTION DETAIL
DETAIL B

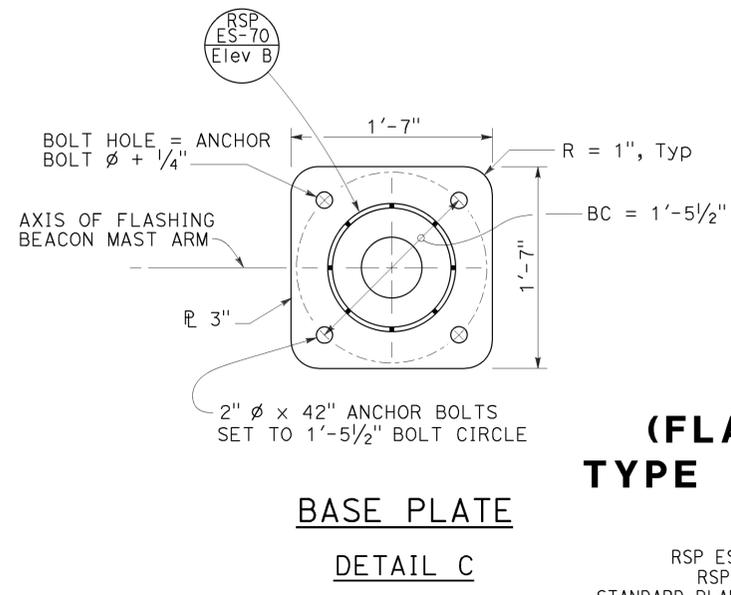


TYPE 1-A, 1-B, 1-C, AND 1-D
FLASHING BEACON INSTALLATION

DETAIL D
 See Note 5



TYPE 40-0-100
ELEVATION A



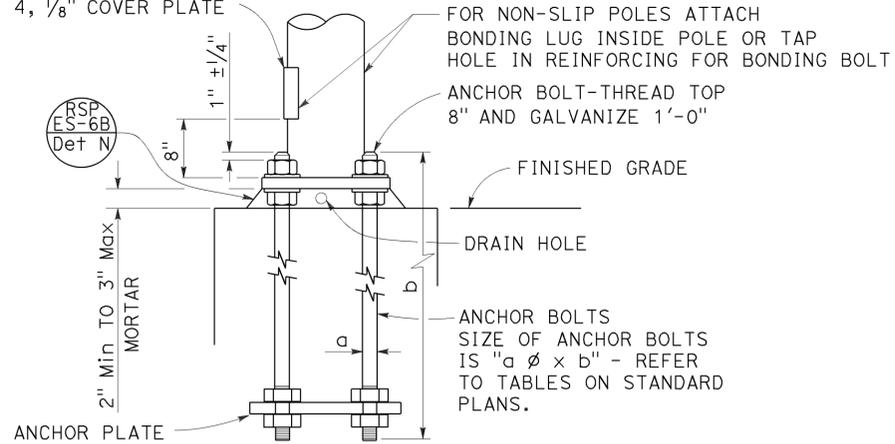
BASE PLATE
DETAIL C

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1, TYPE 15-FBS, AND TYPE 40 STANDARD)
 NO SCALE

RSP ES-7J DATED JULY 15, 2016 SUPERSEDES RSP ES-7J DATED APRIL 15, 2016 AND RSP ES-7J DATED OCTOBER 30, 2015 AND RSP ES-7J DATED JULY 19, 2013 AND STANDARD PLAN ES-7J DATED MAY 20, 2011 - PAGE 471 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-7J

4" x 6 1/2" ROUNDED RECTANGLE HANDHOLE REINFORCED WITH RING WELDED TO OUTSIDE OF POLE. SEE NOTE 4, 1/8" COVER PLATE



HANDHOLE AND ANCHORAGE
DETAIL A

IDENTIFICATION NUMBER

1. Attach a stamped metal tag with pole's identification number above the handhole. 1/4" high number, minimum.
2. Attach a stamped metal tag with mast arm's identification number to the bottom of the signal mast arm near the pole plate. 1/4" high number, minimum.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	109	120

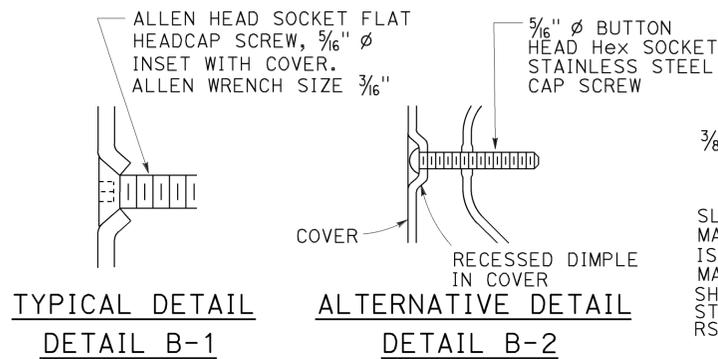
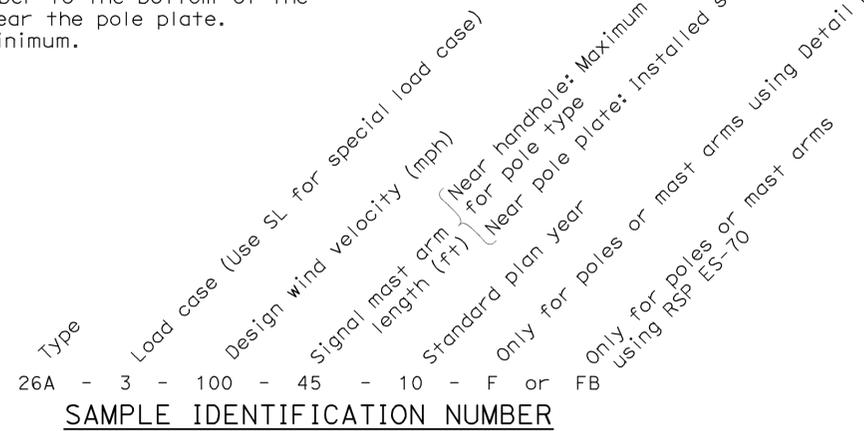
Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 15, 2016
PLANS APPROVAL DATE

Stanley P. Johnson
No. C57793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

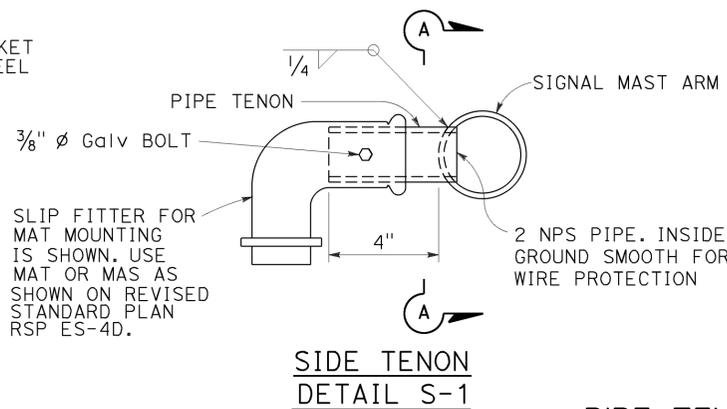
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-25-16

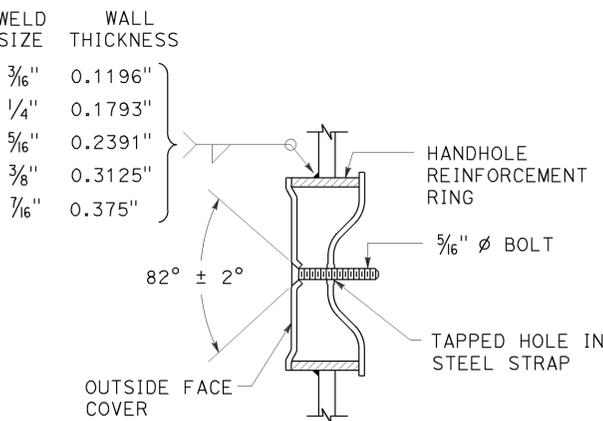


TYPICAL DETAIL
DETAIL B-1

ALTERNATIVE DETAIL
DETAIL B-2

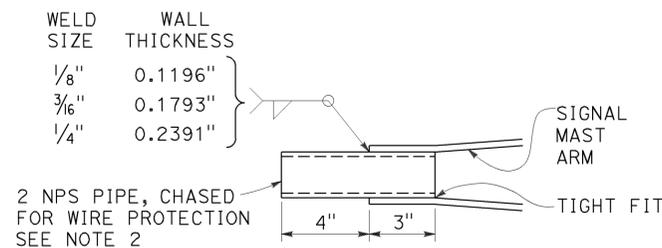


SIDE TENON
DETAIL S-1



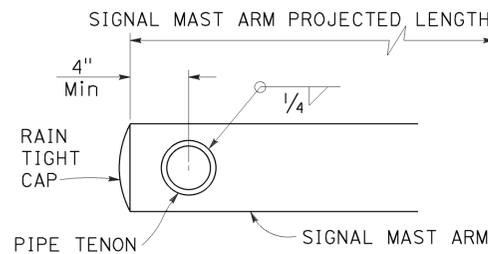
TAMPER RESISTANT HANDHOLE COVER
DETAIL B

PIPE TENONS
DETAIL S



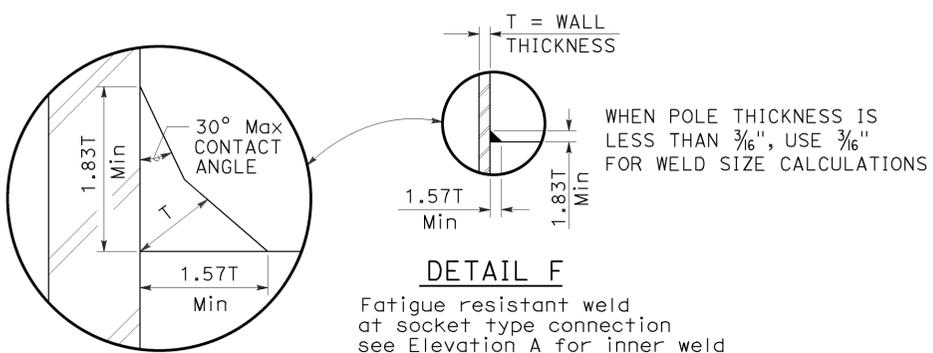
TIP TENON
DETAIL TL
This detail supersedes Detail S when so designated

SECTION A-A

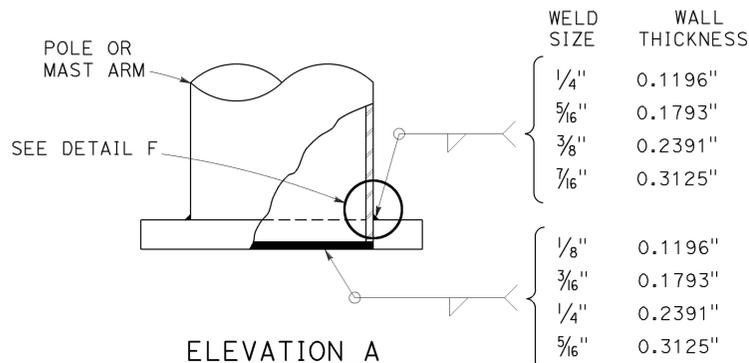


NOTES:

1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1196" to 0.2391" thick poles, 3/8" x 2" for 0.3125" to 0.375" thick poles.
5. Handholes shall be located on the downstream side of traffic.
6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plate.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.
9. Design: AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires, and Traffic Signals, 6th Edition. Basic Wind Speed = 100 mph (3 seconds gust). Yearly Mean Wind Velocity = 15.6 mph.
10. Materials (Structural steel):
fy = 55,000 psi (tapered steel tube and anchor bolts)
fy = 50,000 psi (unless otherwise noted)
11. Materials (Reinforced concrete):
f'c = 3,625 psi
fy = 60,000 psi



DETAIL F
Fatigue resistant weld at socket type connection see Elevation A for inner weld



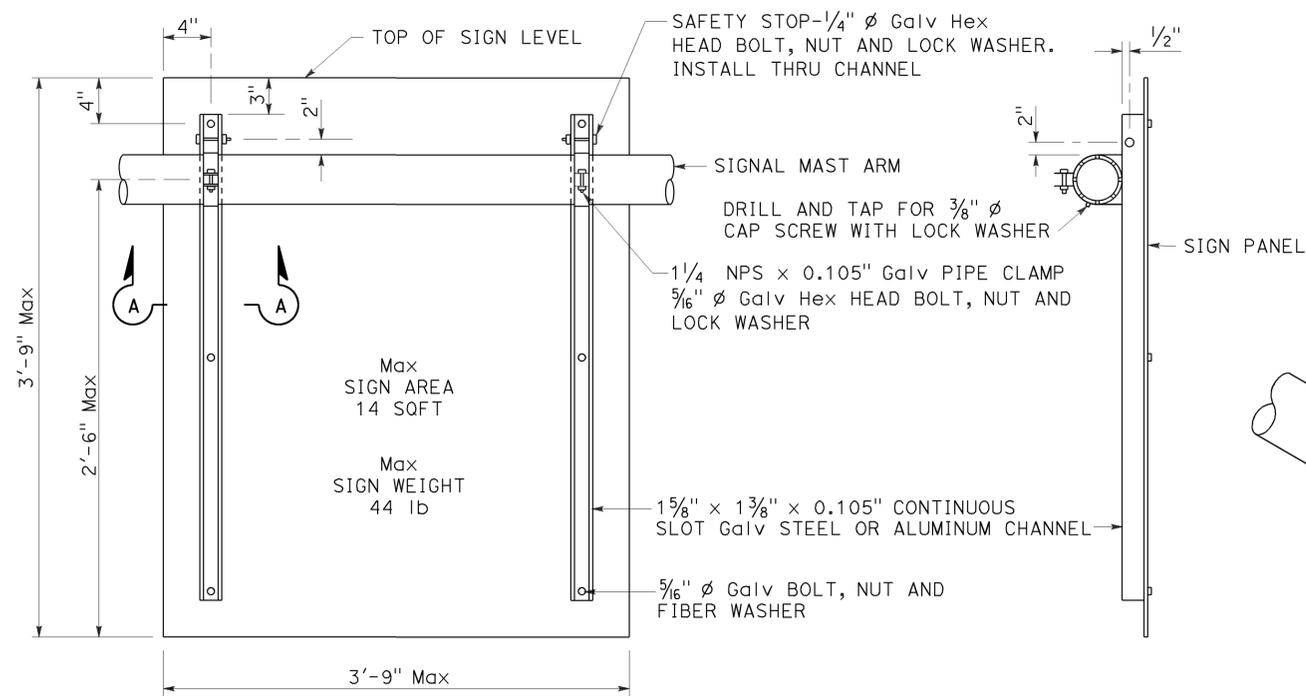
ELEVATION A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 1)
NO SCALE

RSP ES-7M DATED JULY 15, 2016 SUPERSEDES RSP ES-7M DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7M DATED MAY 20, 2011 - PAGE 474 OF THE STANDARD PLANS BOOK DATED 2010.

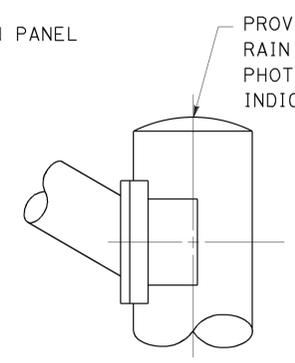
2010 REVISED STANDARD PLAN RSP ES-7N



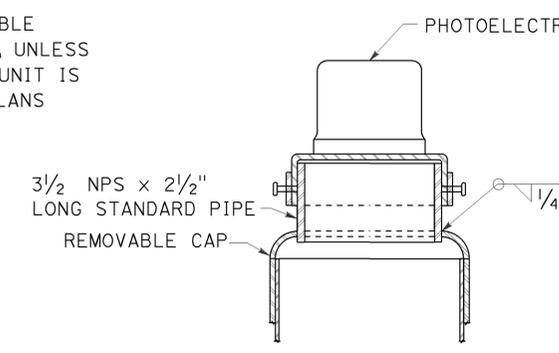
REAR VIEW

SIDE VIEW

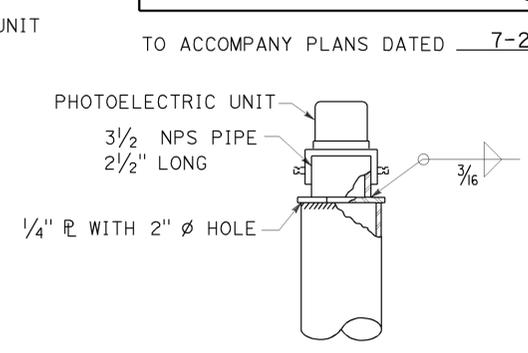
SIGN MOUNTING DETAILS
DETAIL U



STANDARD TOP
DETAIL B-1

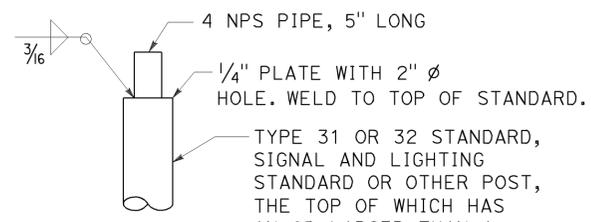


MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2

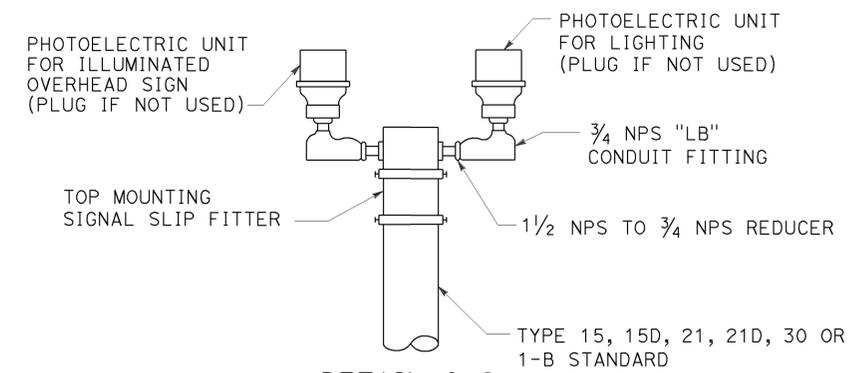


ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3

POLE TOP DETAILS
DETAIL B



DETAIL C-1



DETAIL C-2

DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

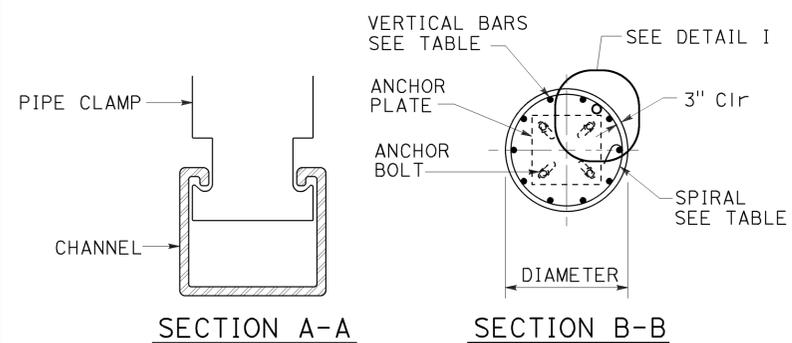
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 2)**

NO SCALE

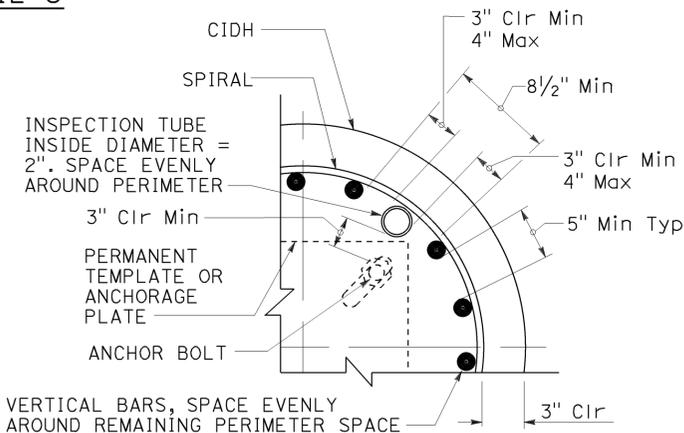
RSP ES-7N DATED JULY 15, 2016 SUPERSEDES RSP ES-7N DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7N DATED MAY 20, 2011 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7N



SECTION A-A

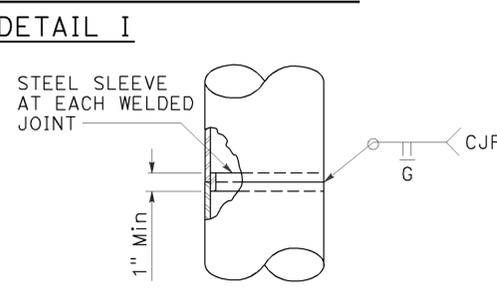
SECTION B-B



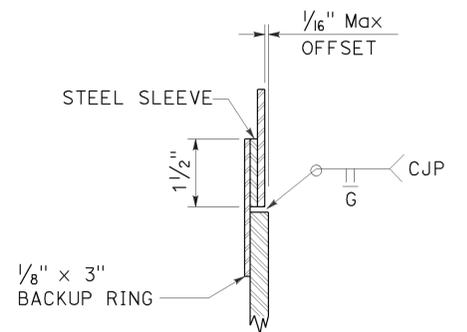
INSPECTION TUBE PLACEMENT
DETAIL I

CIDH DIAMETER	VERTICAL BARS	SPIRAL	INSPECTION TUBE
2 ft	8-#5	#4 AT 6	2
2.5 ft	10-#6		4*
3 ft	12-#7	#5 AT 6	4
3.5 ft	14-#8		5
4 ft	18-#9	2-#4 AT 7	5
4.5 ft	18-#9	2-#5 AT 7	6
5 ft	22-#10	2-#5 AT 7	6
6 ft	26-#11	2-#6 AT 7	7

* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.

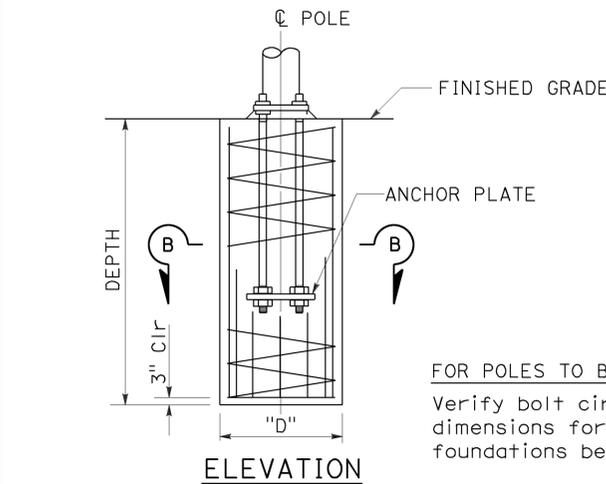


FOR UNIFORM TUBE THICKNESS
DETAIL T-1



AT TUBE THICKNESS CHANGE
DETAIL T-2

POLE SPLICES
DETAIL T

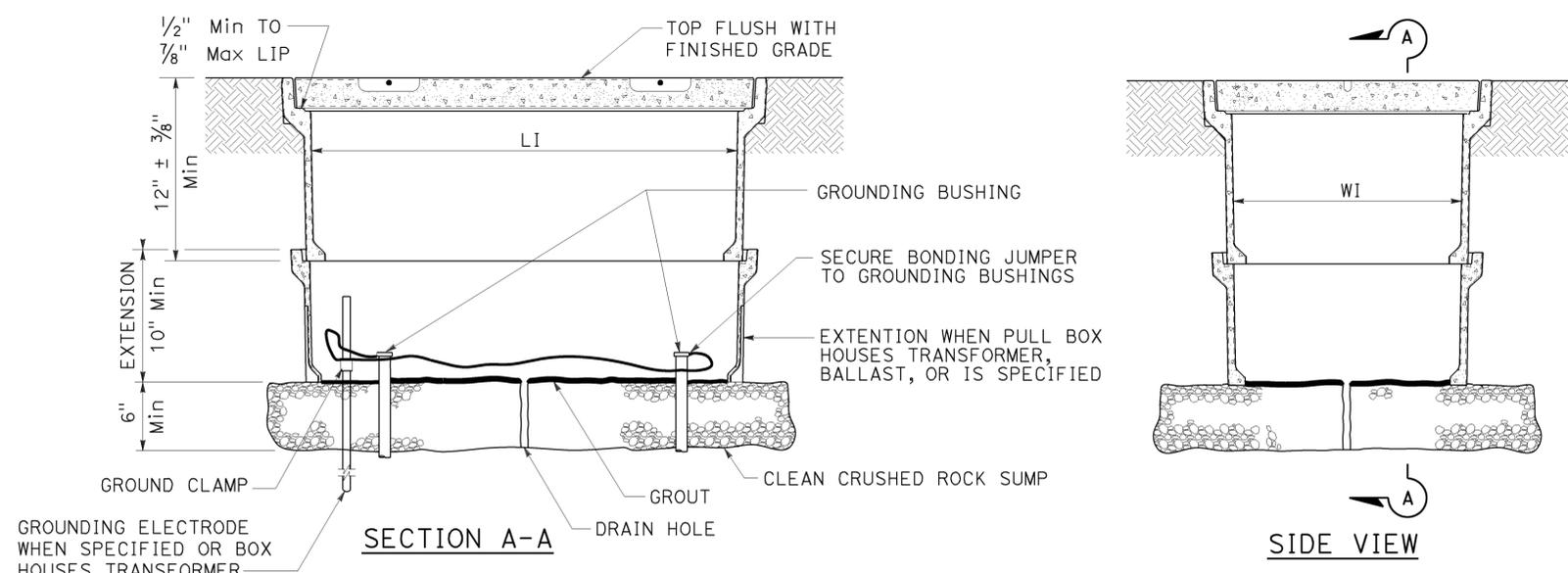


ELEVATION

CAST-IN-DRILLED-HOLE PILE FOUNDATION,
REINFORCED PILE
DETAIL A

FOR POLES TO BE INSTALLED ON EXISTING FOUNDATION:
Verify bolt circles, anchor bolt sizes and dependent dimensions for poles to be installed on existing foundations before fabricating the poles.

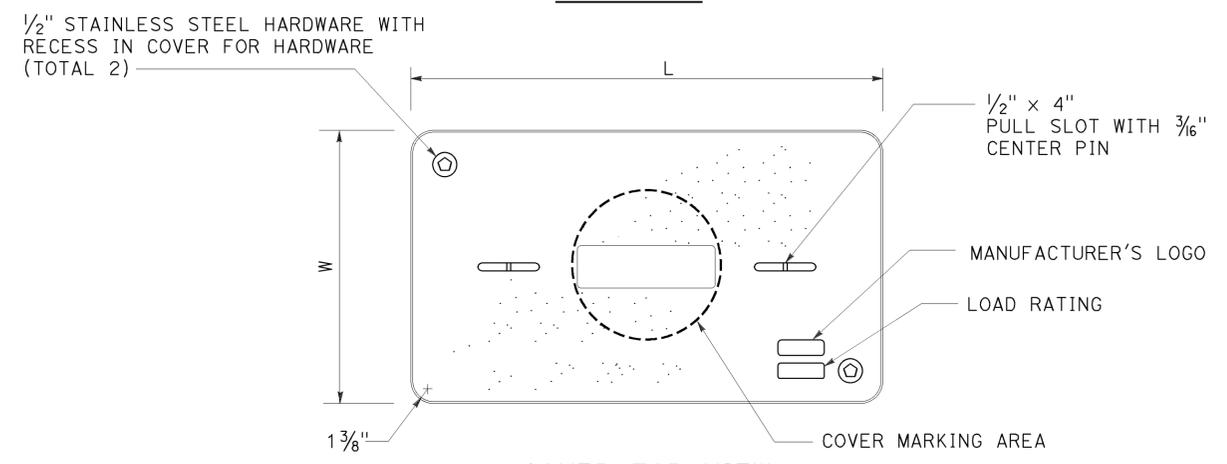
TO ACCOMPANY PLANS DATED 7-25-16



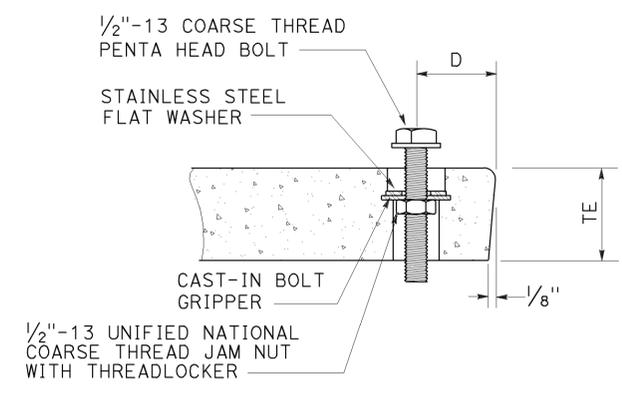
INSTALLATION DETAILS
DETAIL A

NOTES:

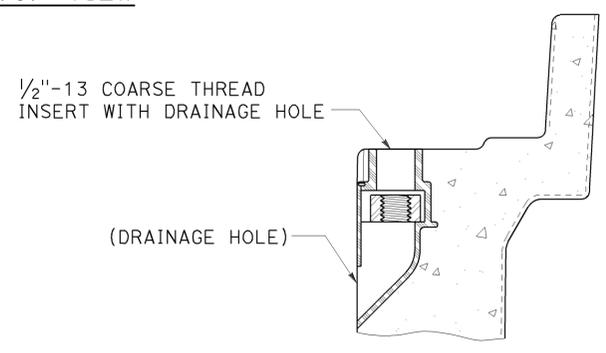
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
3. Dimensions for the cover for non-traffic pull box are nominal values.



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MINIMUM WEIGHT	LI Min	WI Min	TE	D	L	W	MINIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3"	9"	1 3/4"	1 3/4"	1'-3 1/4" - 1'-3 3/8"	10" - 10 1/8"	30 lb
No. 5	12"	10"	55 lb	1' - 8"	11"	2"	1 3/4"	1'-11 1/4"	1'-1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2'-6 1/2"	1'-5 1/2"	85 lb

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

RSP ES-8A DATED APRIL 15, 2016 SUPERSEDES RSP ES-8A DATED OCTOBER 30, 2015 AND RSP ES-8A DATED JULY 19, 2013 AND RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

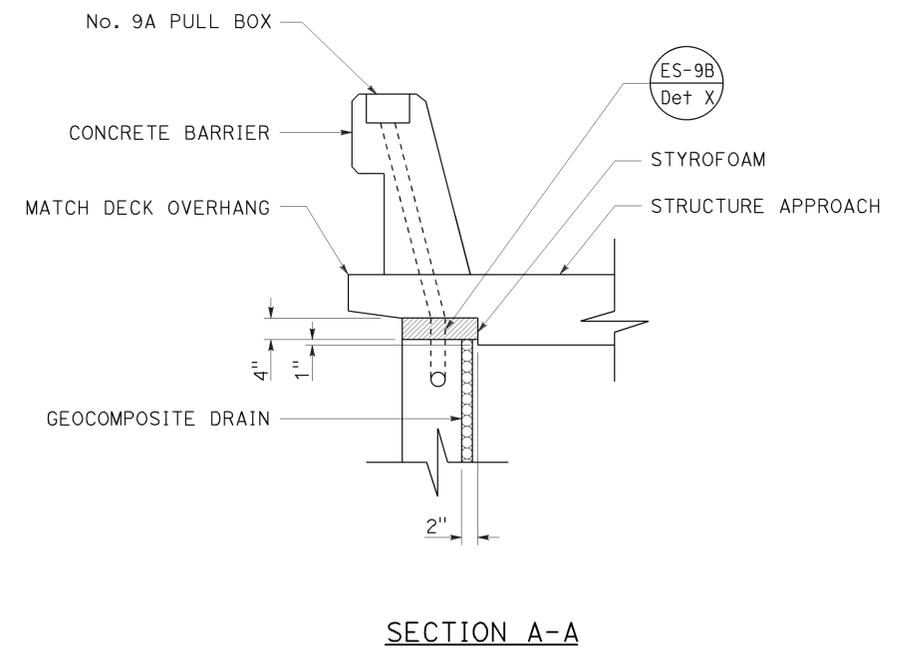
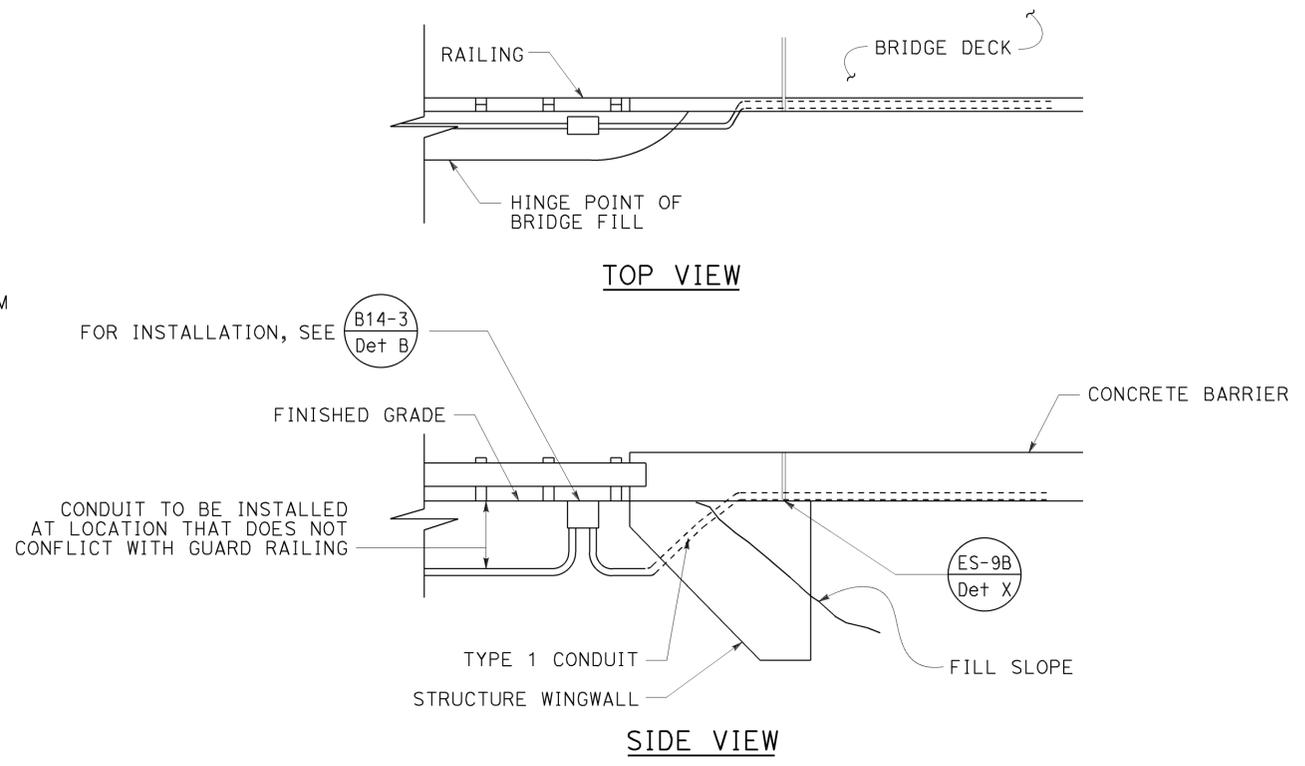
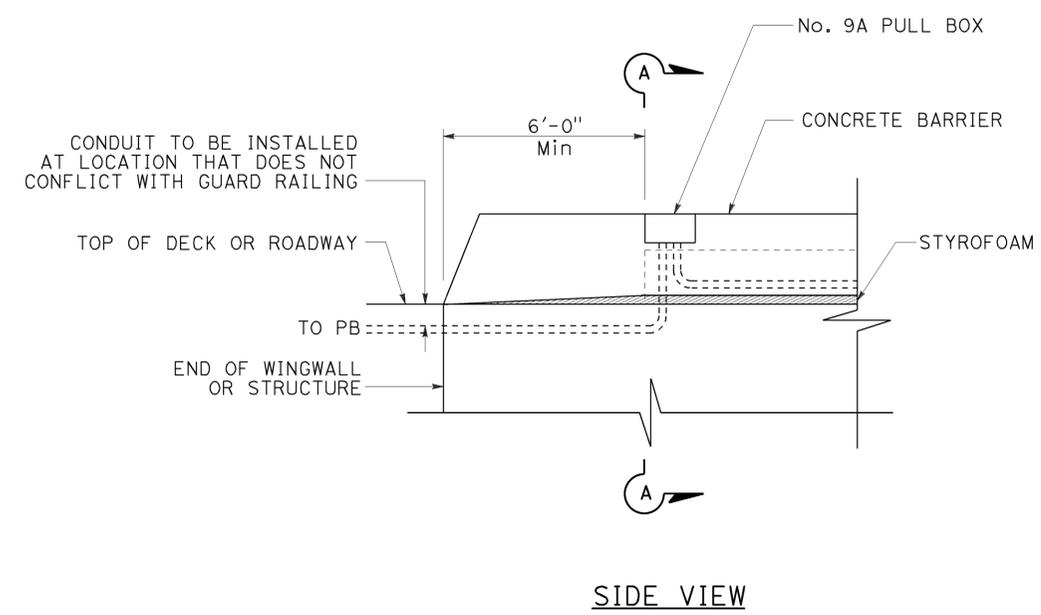
2010 REVISED STANDARD PLAN RSP ES-8A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	112	120

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

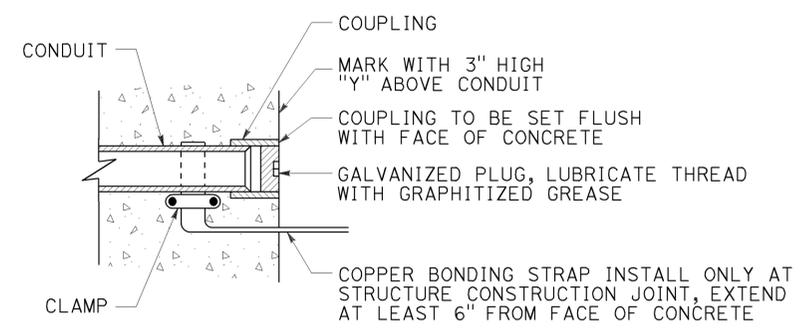
October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-25-16



**CONDUIT TERMINATION
DETAIL A**

**CONDUIT TERMINATION
DETAIL I**



**CONDUIT TERMINATION
DETAIL C**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(STRUCTURE PULL BOX
INSTALLATIONS)**

NO SCALE

RSP ES-9A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9A DATED MAY 20, 2011 - PAGE 481 OF THE STANDARD PLANS BOOK DATED 2010.

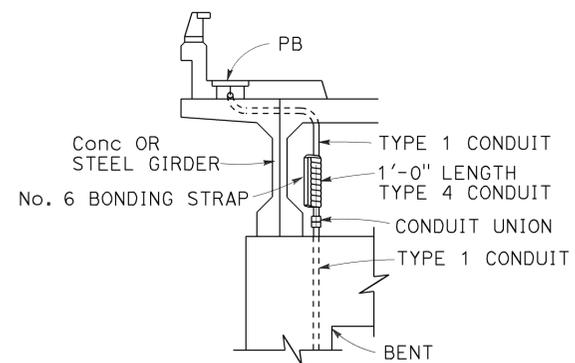
2010 REVISED STANDARD PLAN RSP ES-9A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	113	120

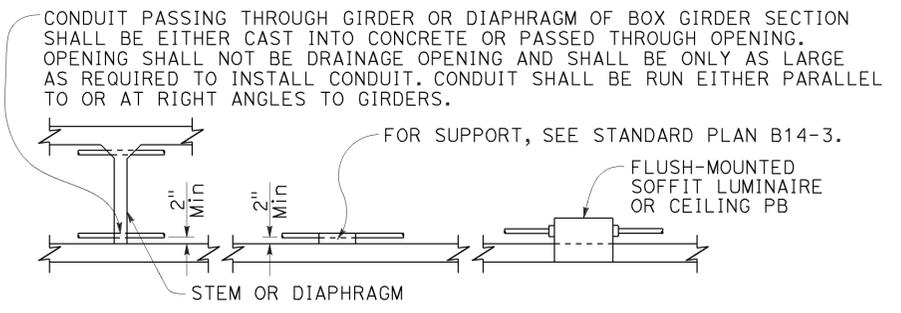
Jagswinder & Co.
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Jagswinder S. Gill
 No. E18551
 Exp. 12-31-16
 ELECTRICAL
 STATE OF CALIFORNIA

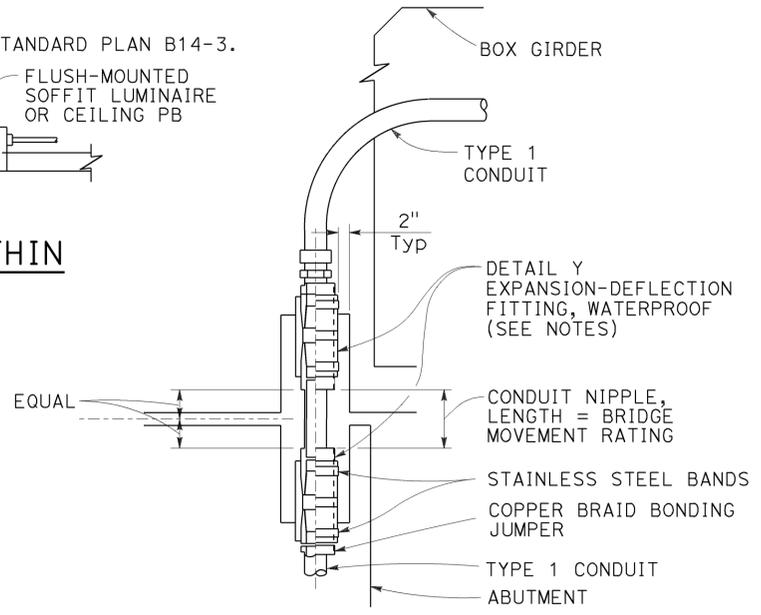
TO ACCOMPANY PLANS DATED 7-25-16



CONDUIT RISER CONNECTION
DETAIL R

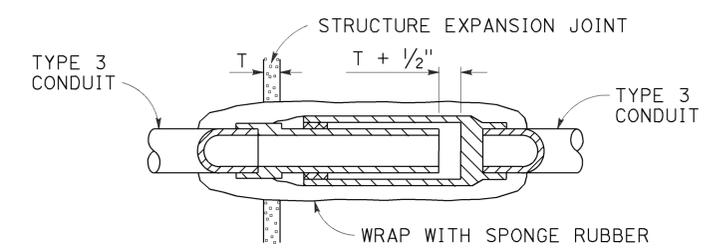


CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS
DETAIL S



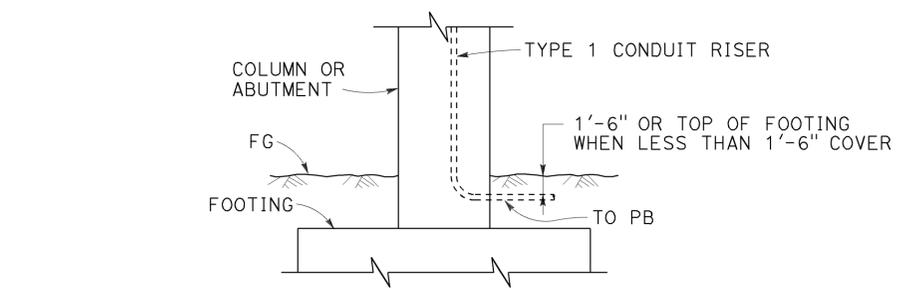
- NOTES:**
- Fitting and pocket required only where movement can occur between girder and abutment.
 - Fill pocket around fitting with resilient waterproof compound.

CONDUIT RISER CONNECTION AT COLUMN, ABUTMENT OR STRUCTURE WING WALL
DETAIL U

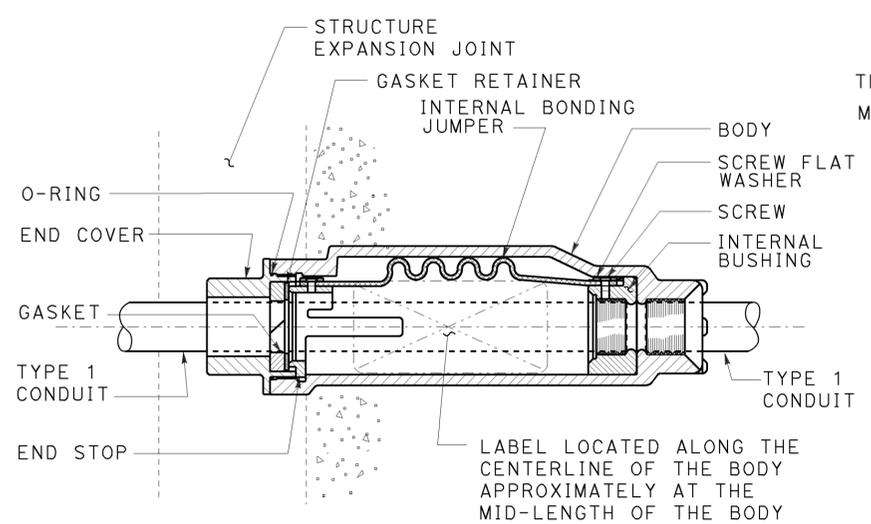


NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL
DETAIL V

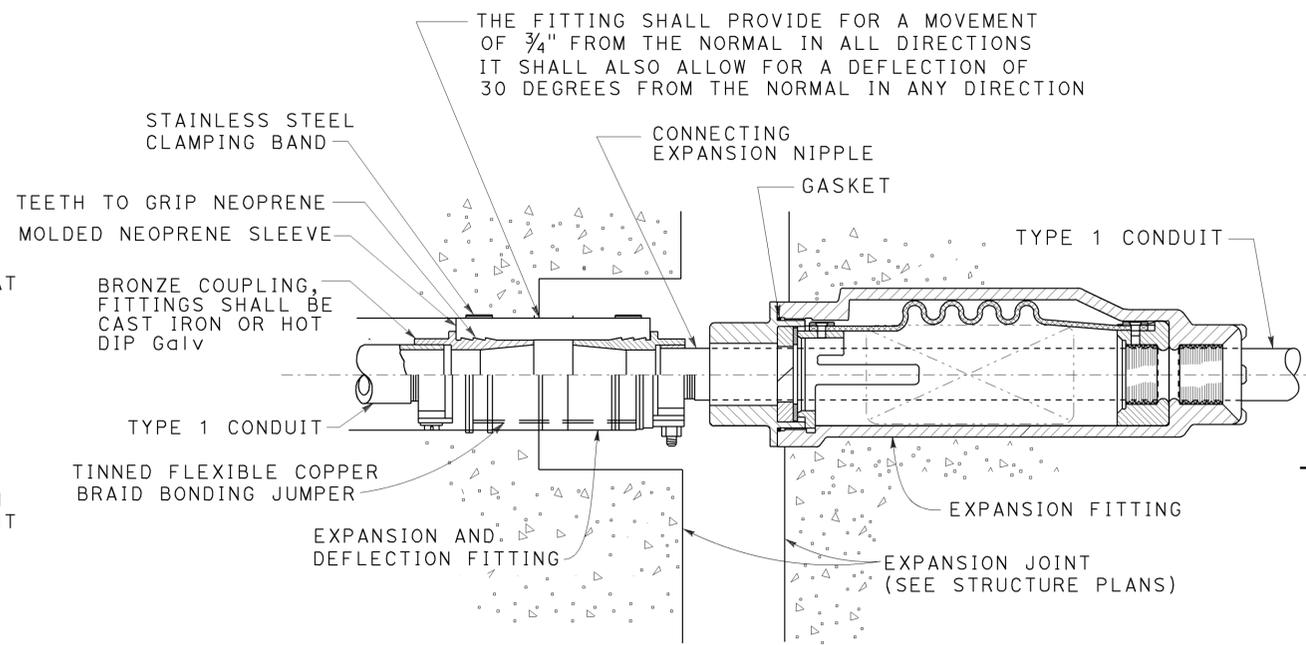
To be used only when shown or specified on Project Plans



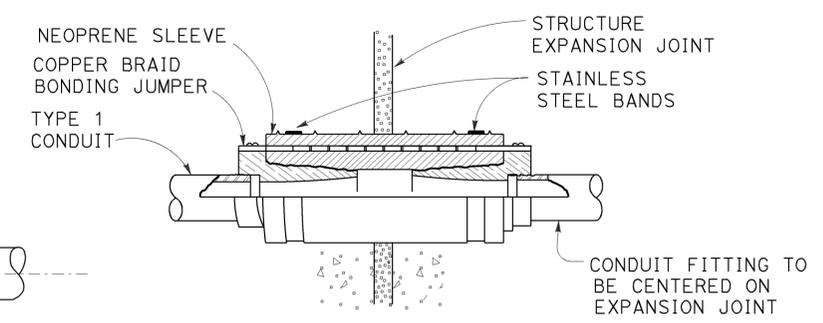
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT
DETAIL T



CONDUIT EXPANSION FITTING
DETAIL X



COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION
DETAIL XY



CONDUIT EXPANSION-DEFLECTION FITTING
DETAIL Y

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (CONDUIT RISER AND EXPANSION FITTING, STRUCTURE INSTALLATIONS)
NO SCALE

RSP ES-9B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9B DATED MAY 20, 2011 - PAGE 482 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9B

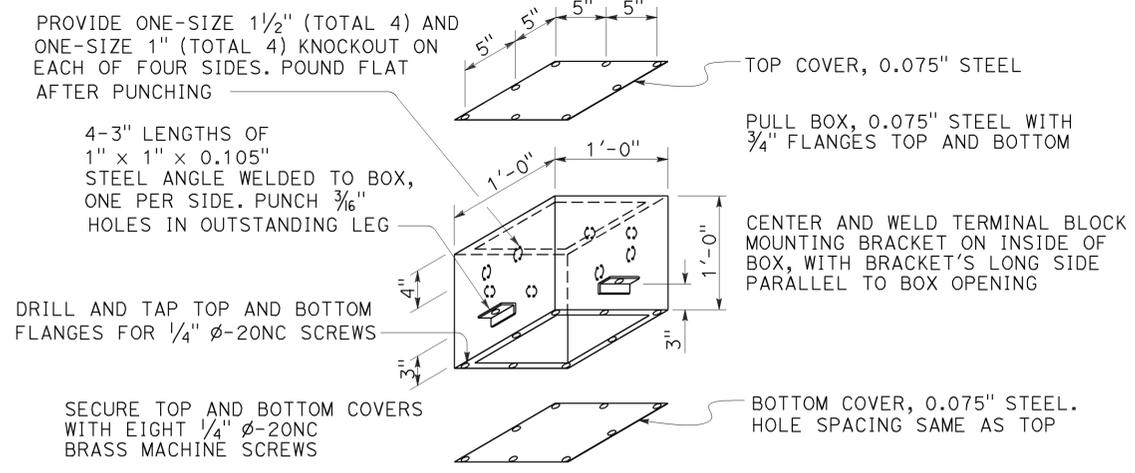
2010 REVISED STANDARD PLAN RSP ES-9B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	114	120

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
April 15, 2016
PLANS APPROVAL DATE

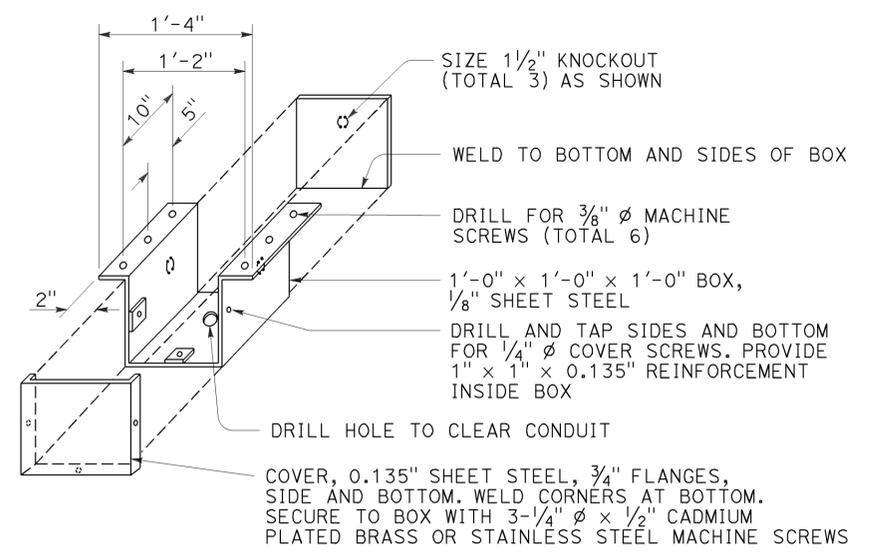
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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No. 7 PULL BOX (CEILING)

See Note 6

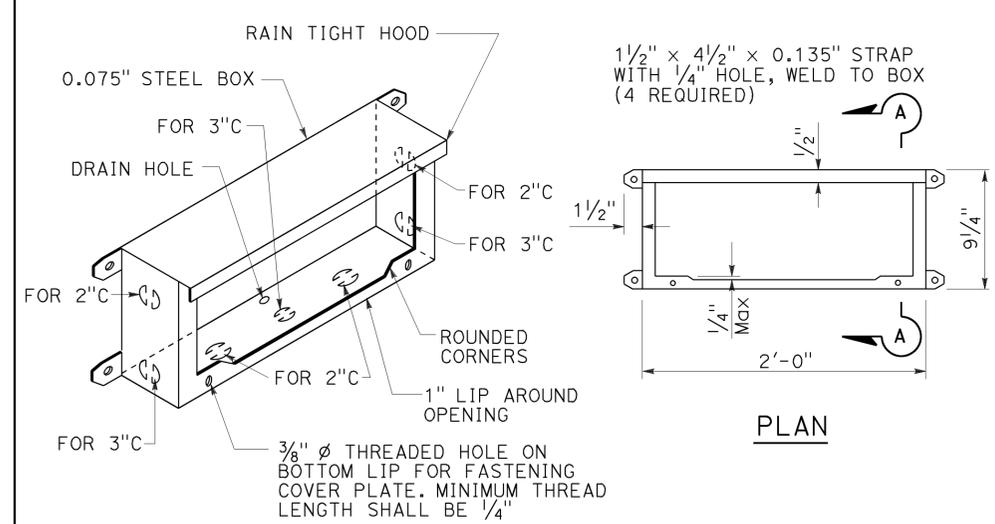


No. 8 PULL BOX

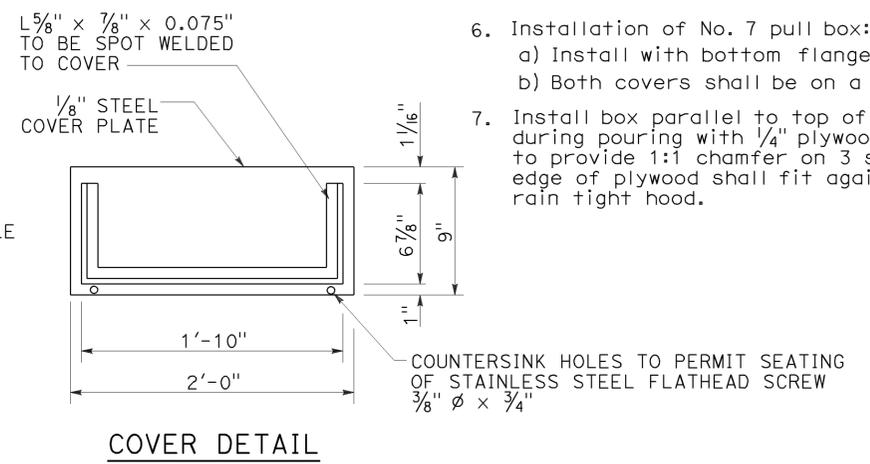
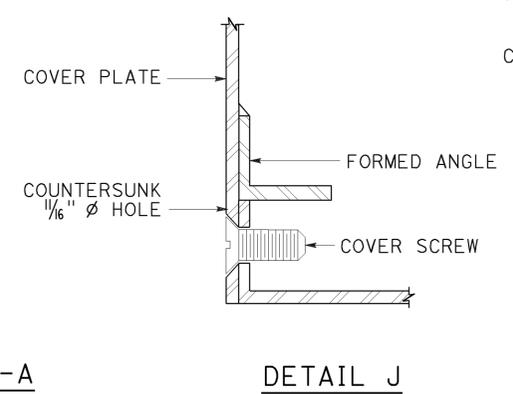
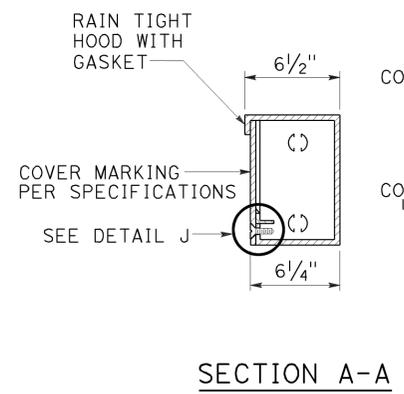
NOTES:

- Corner joints shall be lapped and secured by spot welding or riveting.
- Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld stainless steel Hex nut to bottom of flange (total 4)
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (total 2)
- Pound knockouts flat after punching.
- Multiple size knockouts (concentric) shall not be permitted.
- Pull box covers shall be marked as specified.
- Installation of No. 7 pull box:
 - Install with bottom flange flush with concrete.
 - Both covers shall be on a box during pouring.
- Install box parallel to top of railing. Cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of rain tight hood.

TO ACCOMPANY PLANS DATED 7-25-16

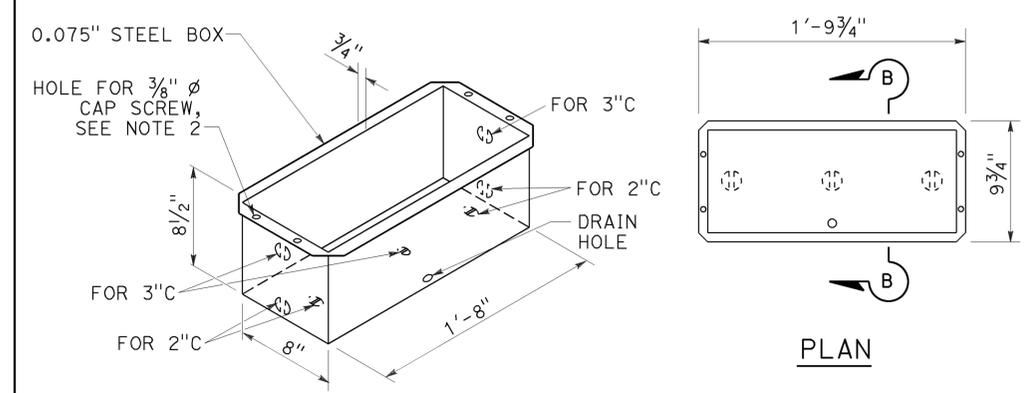


PLAN

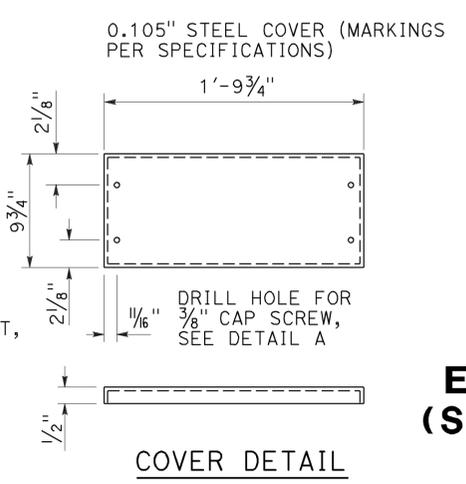
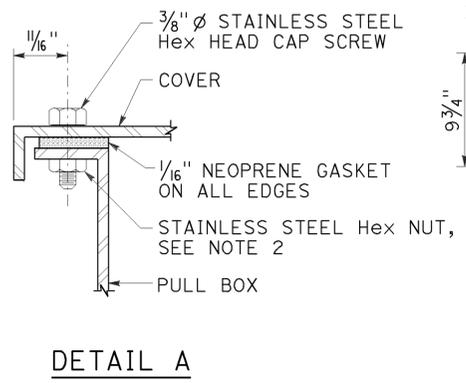
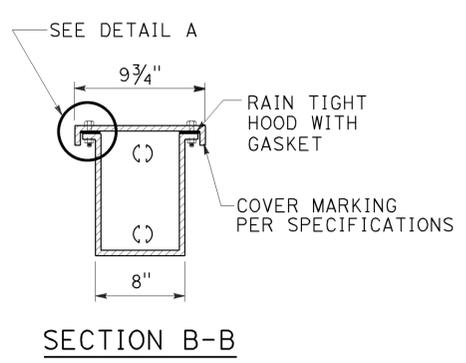


No. 9 PULL BOX (STRUCTURE)

See Note 7



PLAN



No. 9A PULL BOX (STRUCTURE)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(STRUCTURE PULL BOX)**

NO SCALE

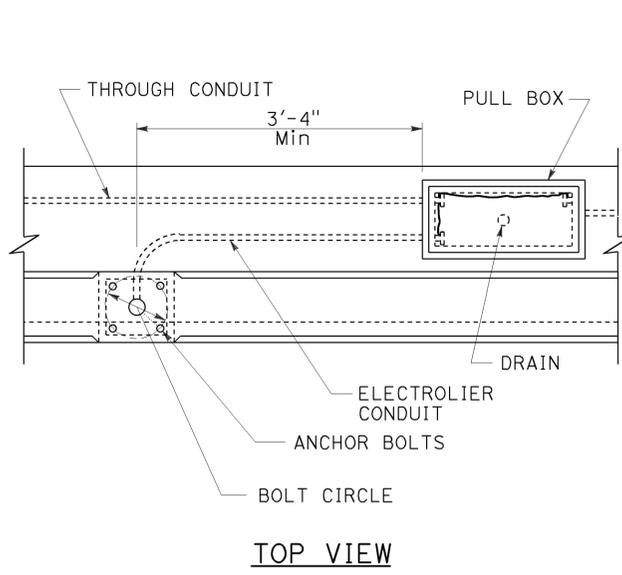
RSP ES-9C DATED APRIL 15, 2016 SUPERSEDES RSP ES-9C DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-9C DATED MAY 20, 2011 - PAGE 483 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-9C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	115	120

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
April 15, 2016
PLANS APPROVAL DATE
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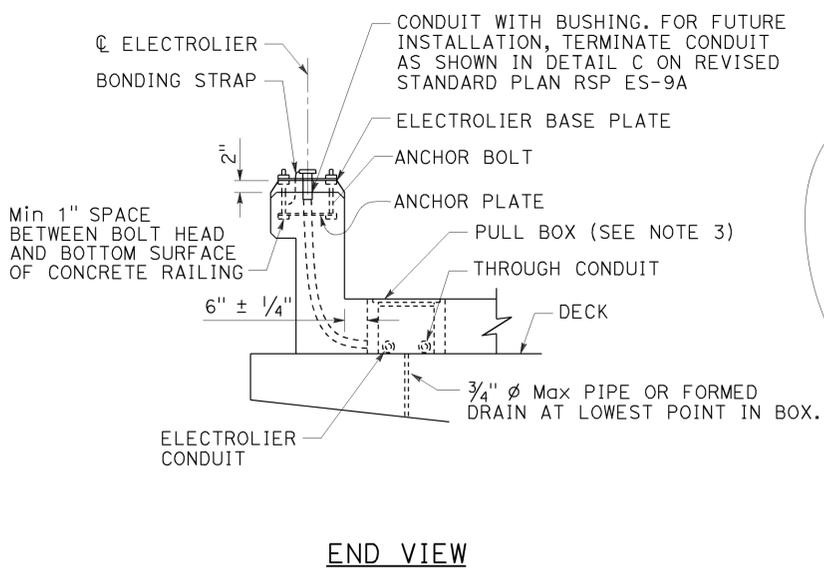
Theresa Gabriel
REGISTERED PROFESSIONAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA



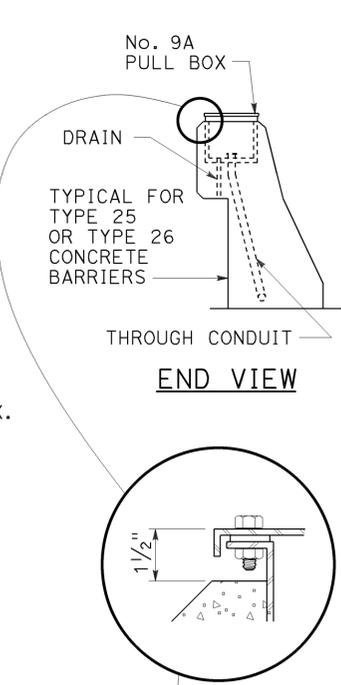
TOP VIEW

No. 3 1/2, 5, OR 6 PULL BOX INSTALLATION

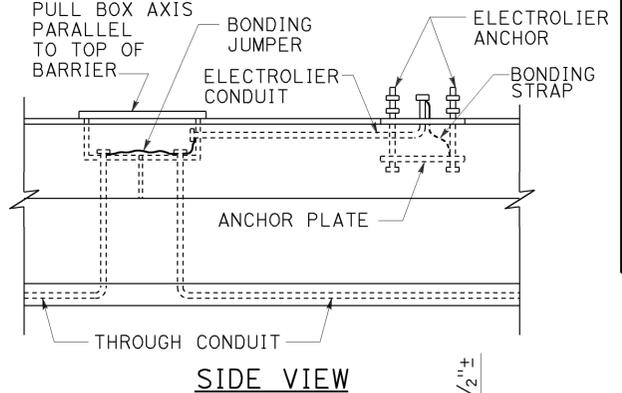
DETAIL A



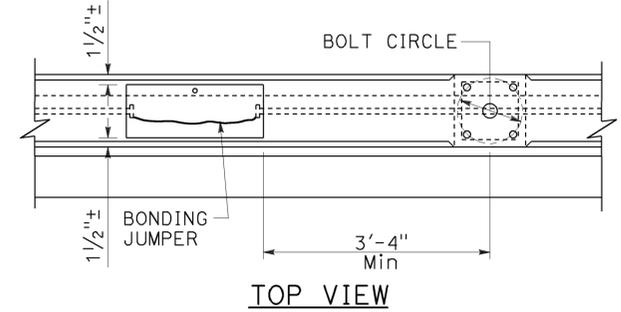
END VIEW



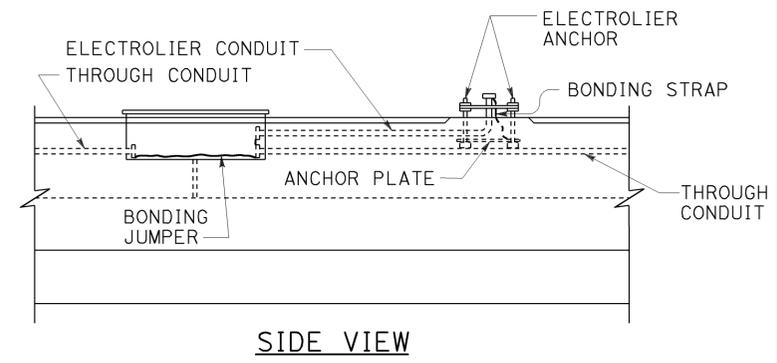
END VIEW



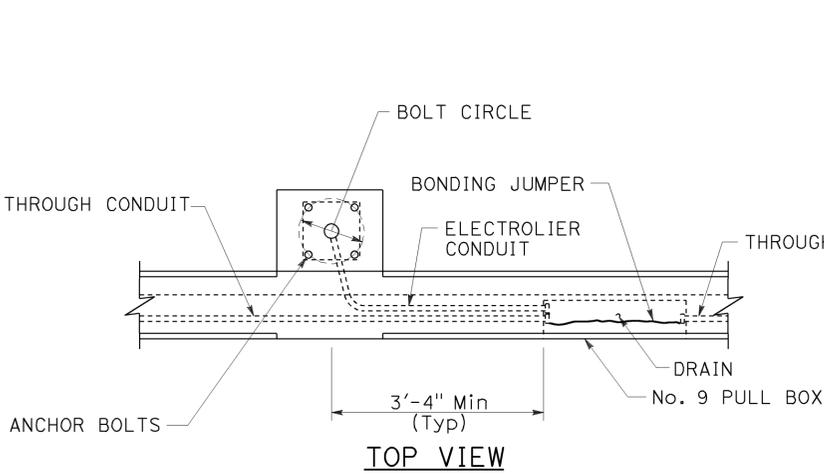
SIDE VIEW



TOP VIEW



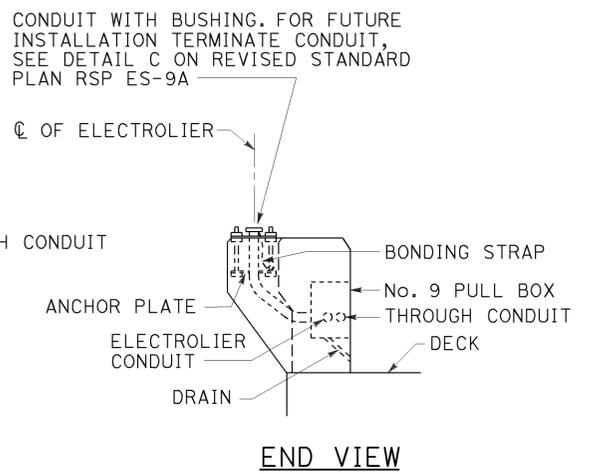
SIDE VIEW



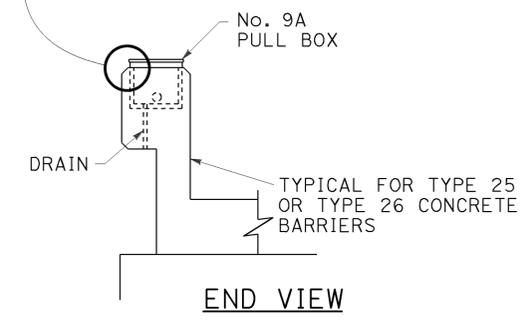
TOP VIEW

No. 9 PULL BOX INSTALLATION

DETAIL B



END VIEW



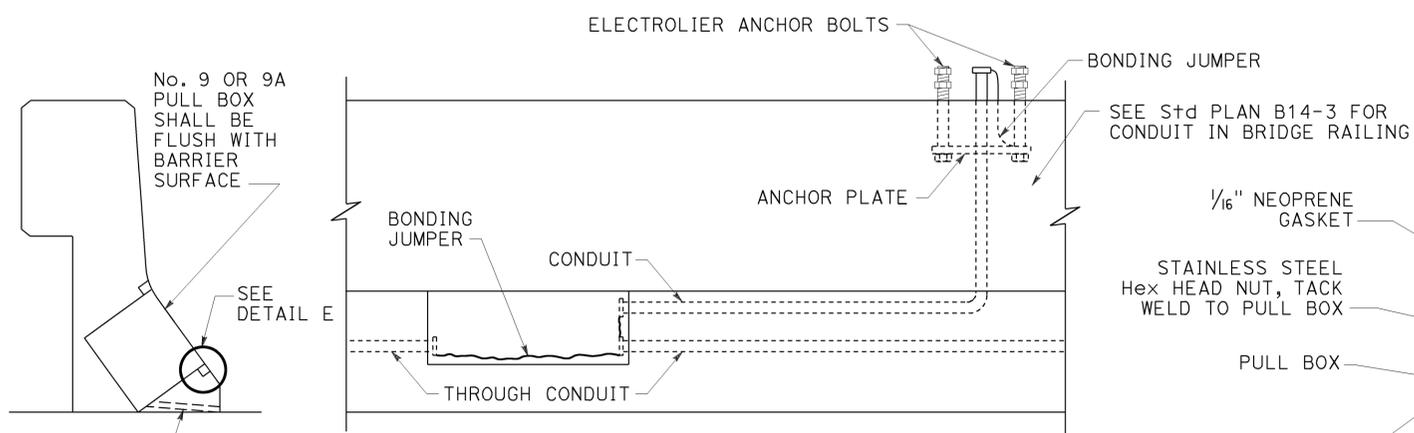
END VIEW

No. 9A PULL BOX INSTALLATION

DETAIL C

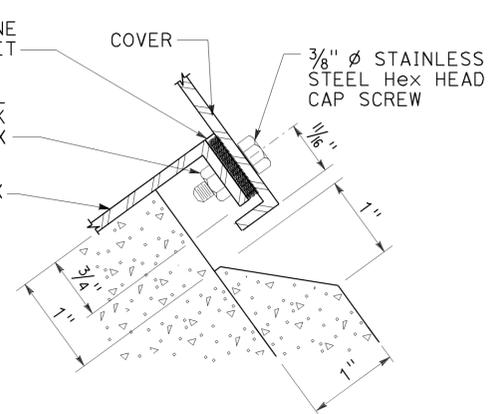
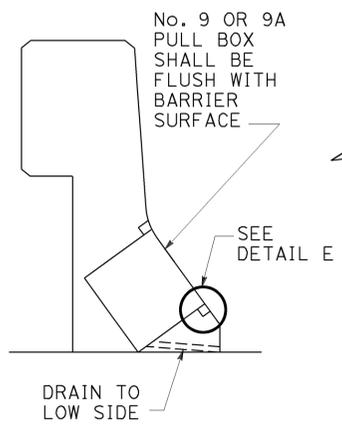
NOTES:

1. Axis of pull box shall be parallel to top of barrier, sidewalk or railing.
2. See railing sheet for reinforcement and structural details at electroliers and pull boxes.
3. Top of pull boxes in sidewalk areas shall be flush with sidewalk. Modify base of pull box as required.
4. Boxes inside of vertical barrier or railing shall be closed during pouring of PCC with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.
5. Use drain in center if box is horizontal, or at low end if box is inclined. When box is mounted in sloping parapet 1/2" elongated drain hole inside at center or near end as required for drainage.
6. For electrolier anchorage bolts and grouting details, see Revised Standard Plan RSP ES-6B.
7. See Standard Plan B14-3 for conduit in concrete barrier.



INSTALLATION IN SLOPING PARAPETS

DETAIL D



DETAIL E

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

RSP ES-9D DATED APRIL 15, 2016 SUPERSEDES RSP ES-9D
DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-9D DATED
MAY 20, 2011 - PAGE 484 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9D

2010 REVISED STANDARD PLAN RSP ES-9D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	116	120

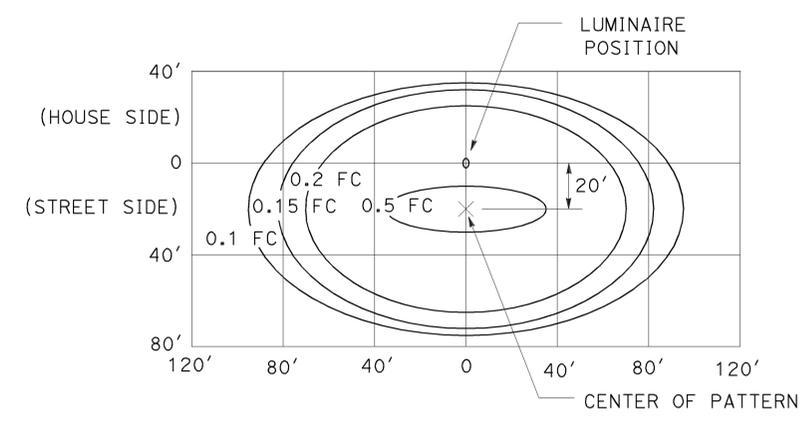
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

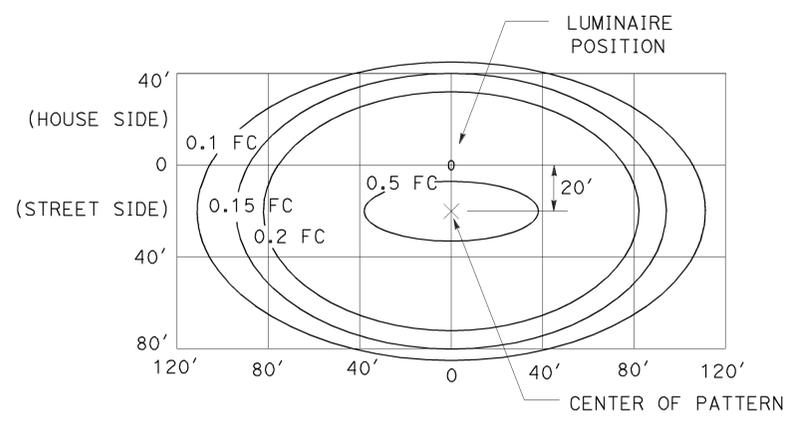
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TO ACCOMPANY PLANS DATED 7-25-16

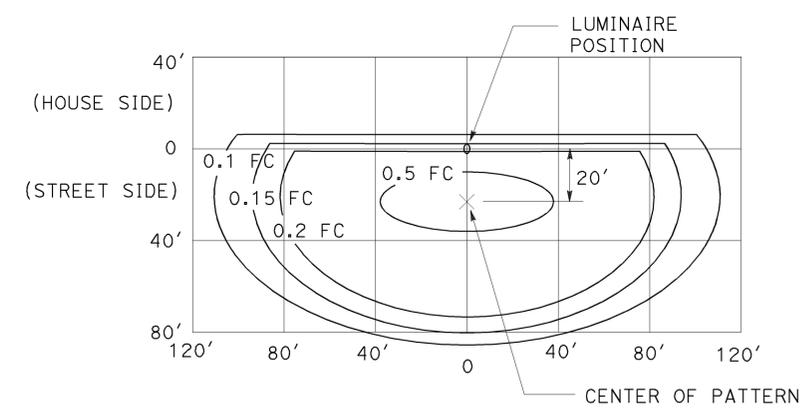
NOTE:
Curves represent the minimum footcandle (FC).



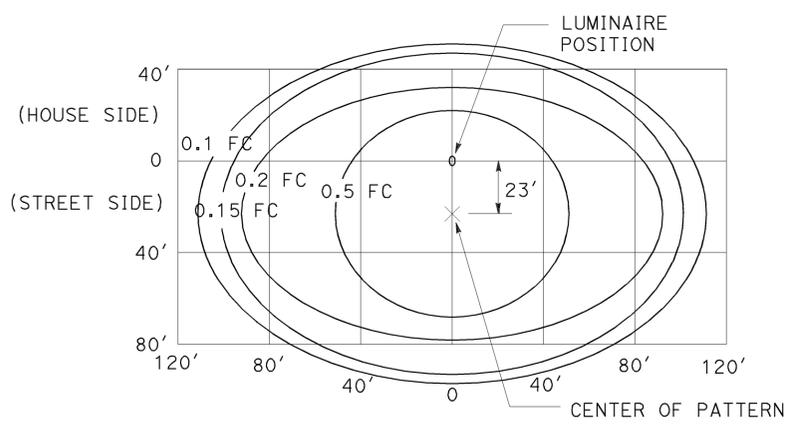
LED LUMINAIRE 165 W
34' Mounting Height



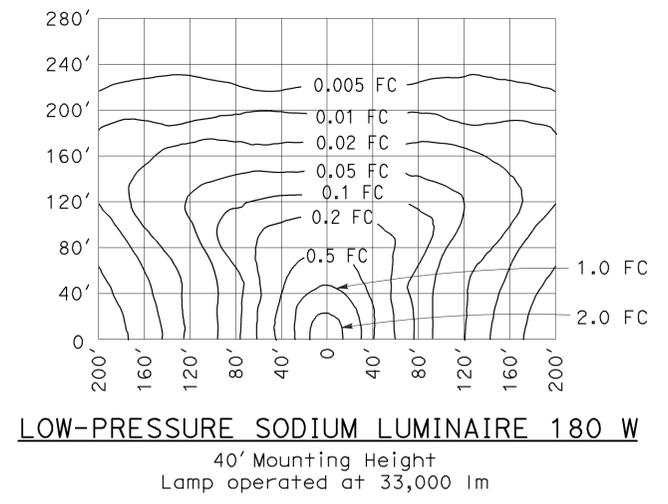
LED LUMINAIRE 235 W
40' Mounting Height



LED LUMINAIRE 235 W
40' Mounting Height
with back side control



LED LUMINAIRE 300 W
40' Mounting Height



LOW-PRESSURE SODIUM LUMINAIRE 180 W
40' Mounting Height
Lamp operated at 33,000 lm

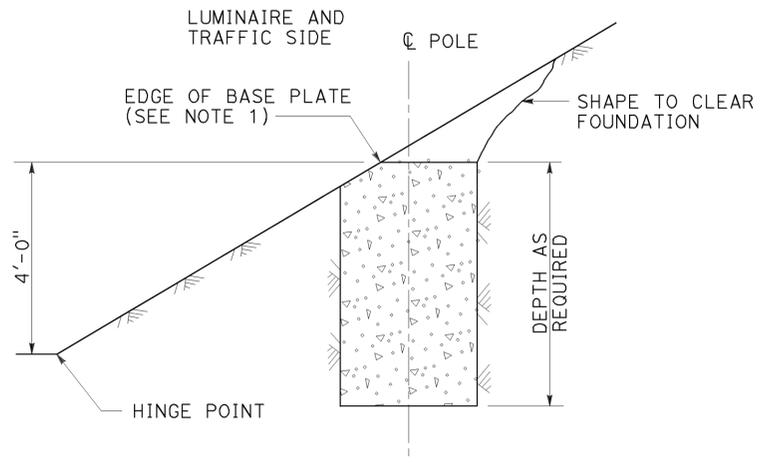
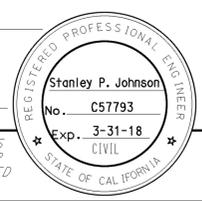
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

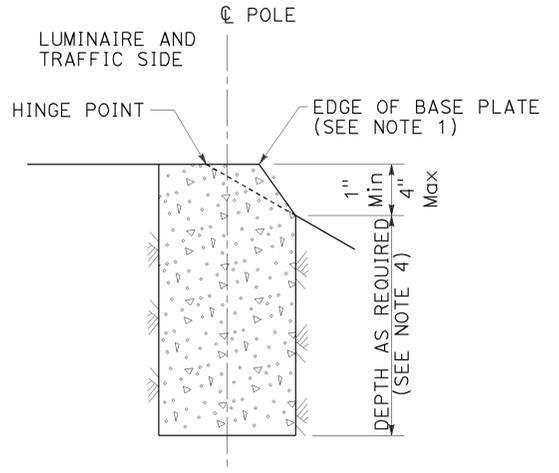
RSP ES-10A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-10A DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-10A

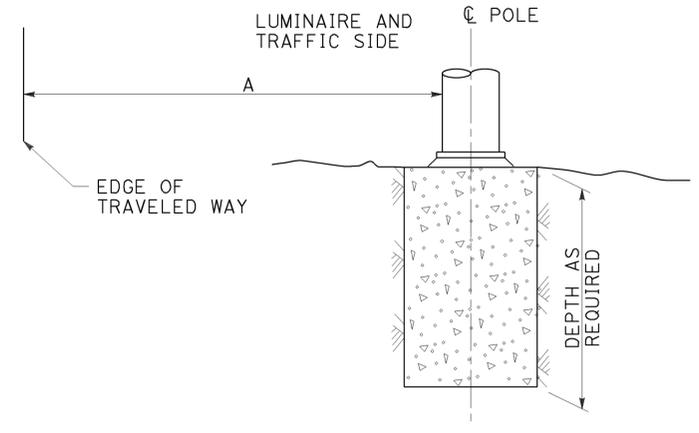
2010 REVISED STANDARD PLAN RSP ES-10A



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



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



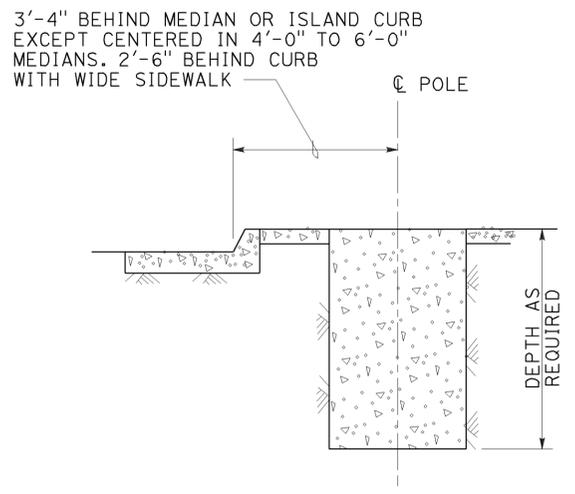
FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
 See Note 2

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

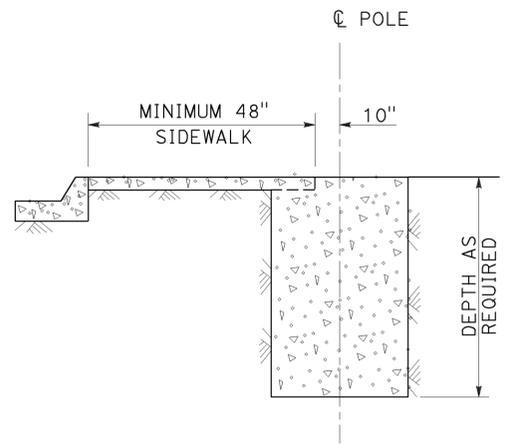
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

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



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



NARROW SIDEWALK
DETAIL B-2
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

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

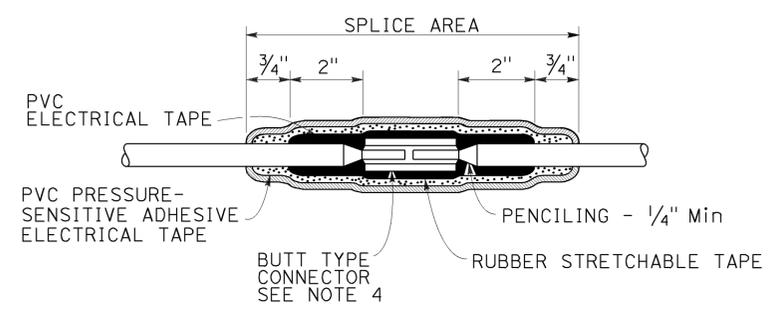
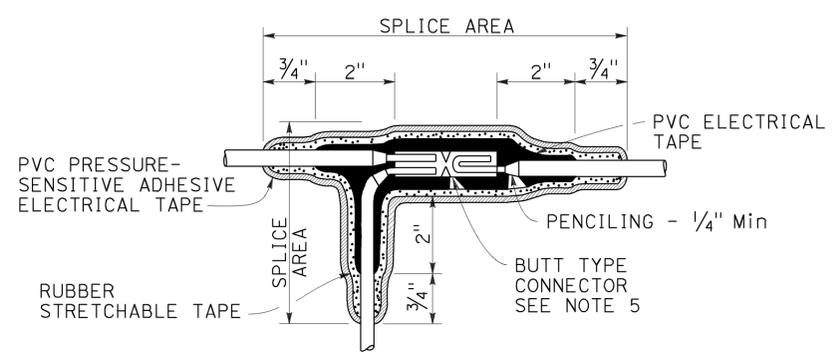
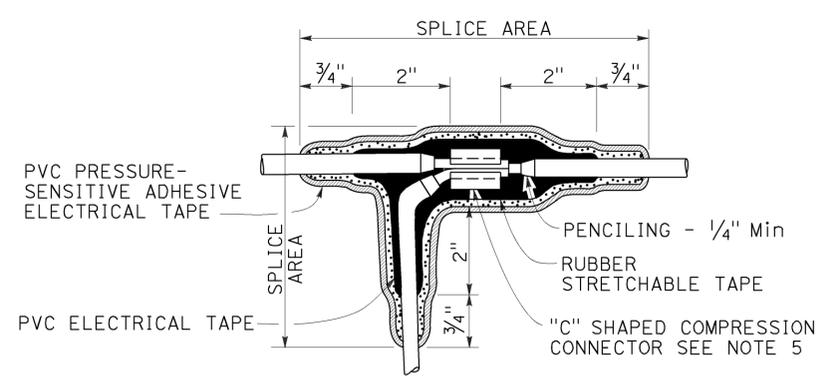
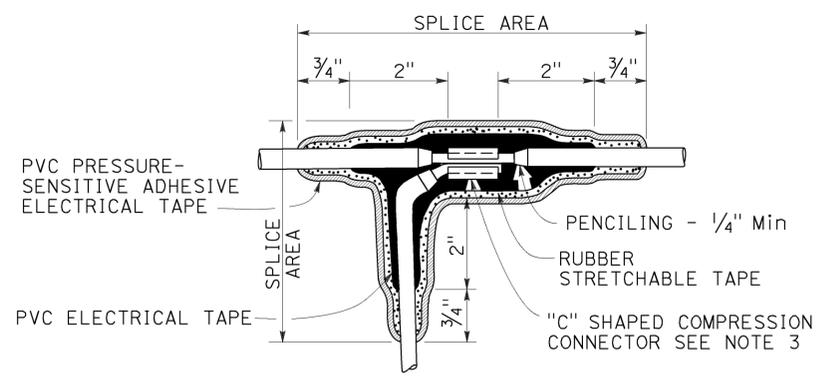
RSP ES-11 DATED JULY 15, 2016 SUPERSEDES RSP ES-11 DATED JULY 19, 2013 AND STANDARD PLAN ES-11 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7, R24.8/R25.0	118	120

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



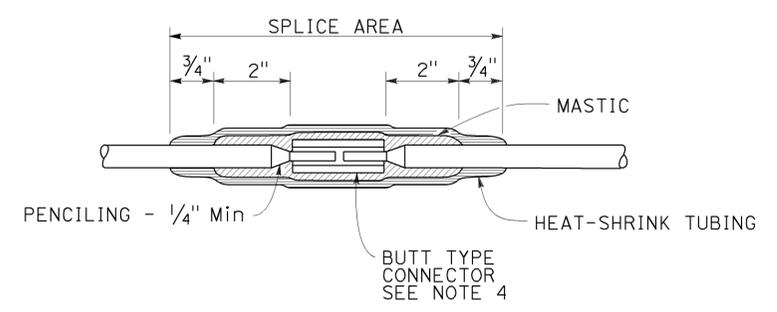
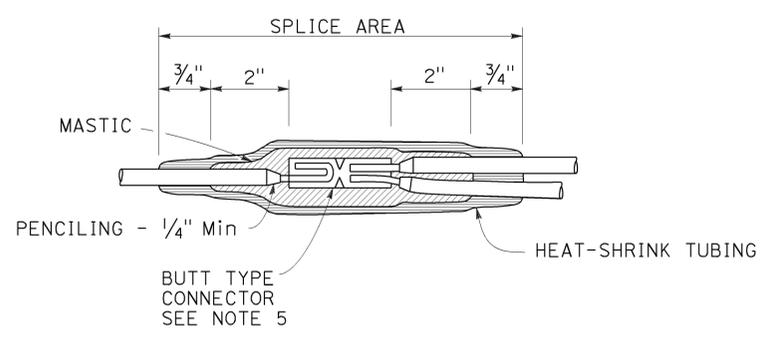
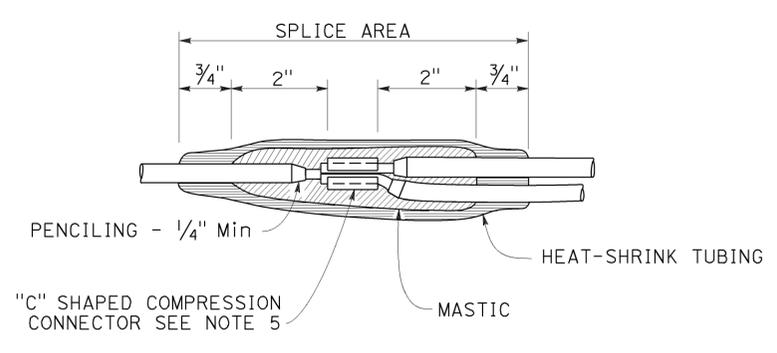
TO ACCOMPANY PLANS DATED 7-25-16



NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.

TYPICAL SPLICE INSULATION METHOD B



TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SPLICE INSULATION METHODS DETAILS)

NO SCALE
 RSP ES-13A DATED APRIL 15, 2016 SUPERSEDES RSP ES-13A DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-13A

2010 REVISED STANDARD PLAN RSP ES-13A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7 R24.8/R25.0	119	120

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE

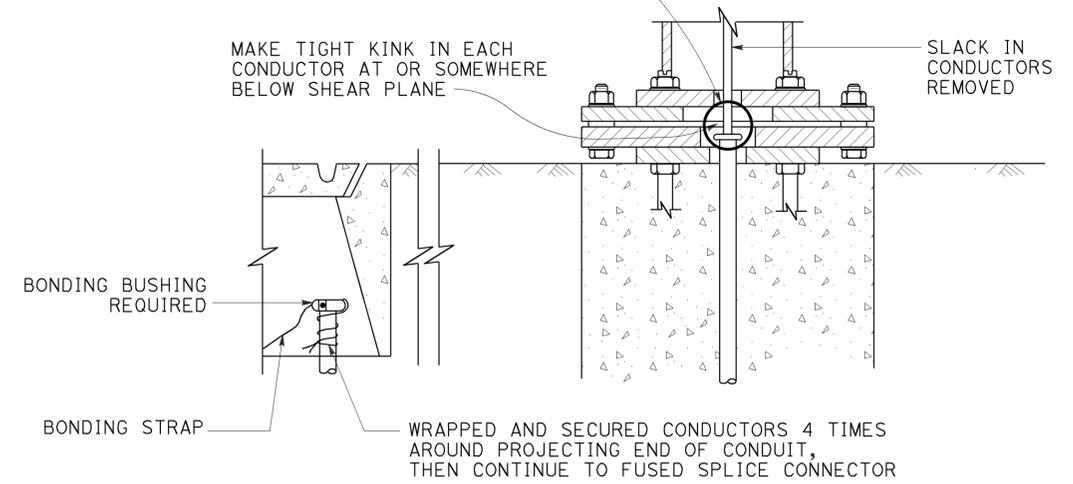
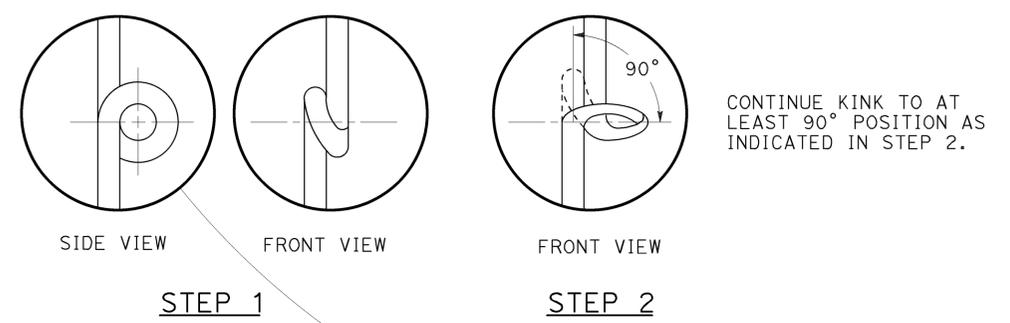
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-25-16

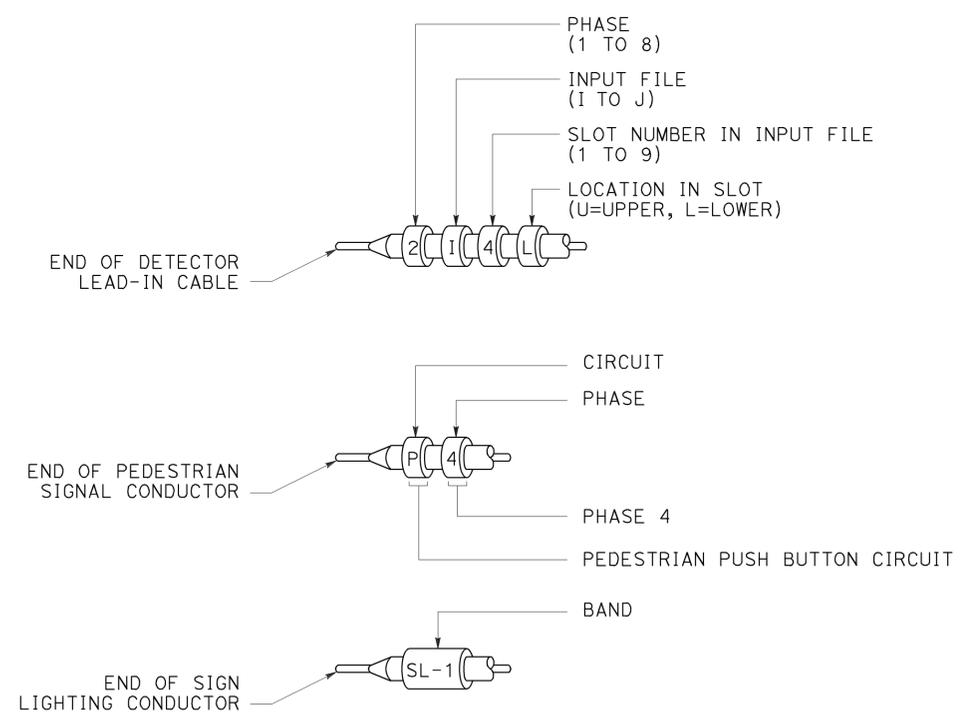
CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING						
		HPS LAMP BALLAST		LOW PRESSURE SODIUM BALLAST	INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	180 W	85 W	1 KVA	2 KVA	3 KVA
120 V	250 V	5 A	5 A	5 A	5 A	10 A	20 A	30 A
240 V	250 V	5 A	5 A	5 A	5 A	6 A	10 A	20 A
480 V	500-600 V	5 A	5 A	3 A	1 A (SEE NOTE 2)	3 A	6 A	10 A

- NOTES:**
- Primary lines of multiple ballasts shall be provided with fused connectors. Fuse ratings shall be as noted above.
 - See Revised Standard Plan RSP ES-15D, Type SC3 control.

FUSE RATINGS FOR FUSED CONNECTORS



KINKING DETAIL FOR SLIP BASE STANDARDS
DETAIL A



TYPICAL BANDING DETAILS
DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (FUSE RATING, KINKING AND BANDING DETAIL)**

NO SCALE

RSP ES-13B DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-13B DATED MAY 20, 2011 - PAGE 492 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-13B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14	R44.6/R45.7, R24.8/R25.0	120	120

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

April 15, 2016
PLANS APPROVAL DATE

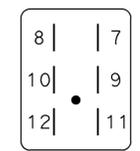
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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

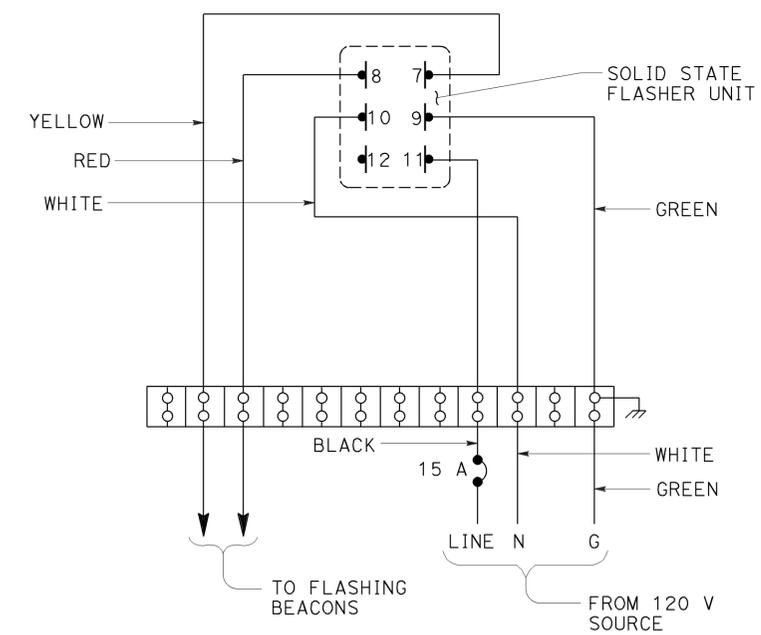
TO ACCOMPANY PLANS DATED 7-25-16

THE FLASHER SHALL MATE WITH A CINCH-JONES SOCKET S-406-SB OR EQUAL AND CONNECTED AS FOLLOWS:

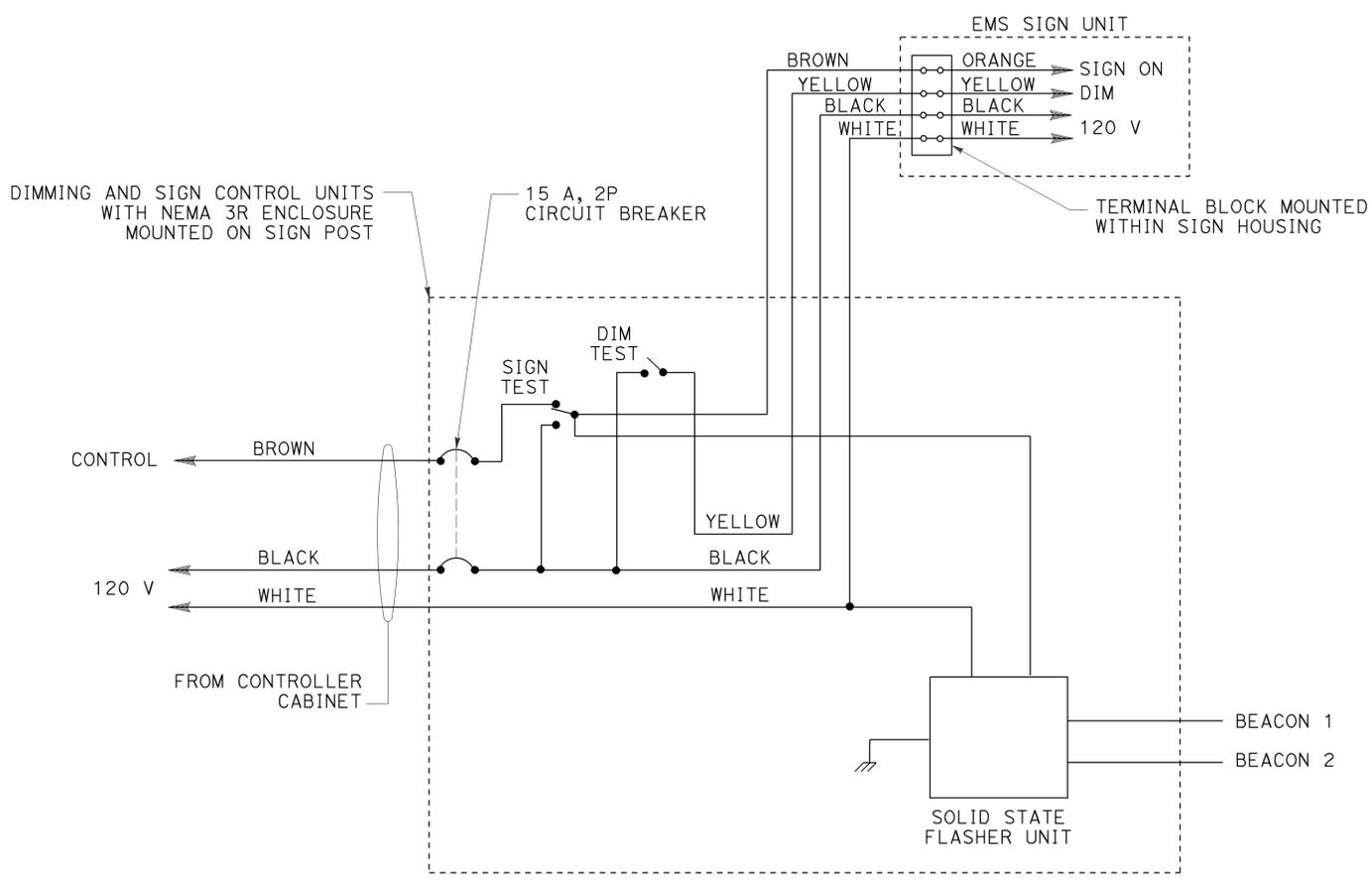
PIN	CIRCUIT	PIN	CIRCUIT
7	LOAD	10	NEUTRAL
8	LOAD	11	LINE
9	CHASSIS GROUND	12	NOT USED



**CONNECTOR SOCKET
SOLID STATE FLASHER UNIT**



**WIRING DIAGRAM
FLASHING BEACON CONTROL ASSEMBLY
DETAIL B**



**WIRING DIAGRAM
LED EXTINGUISHABLE MESSAGE SIGN
DETAIL A**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CONTROL ASSEMBLY
WIRING DIAGRAMS)**
NO SCALE

RSP ES-14B DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-14B DATED MAY 20, 2011 - PAGE 494 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-14B