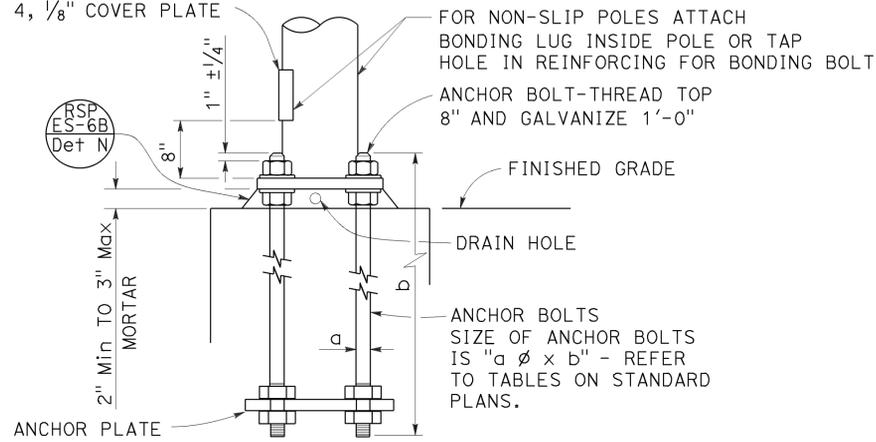


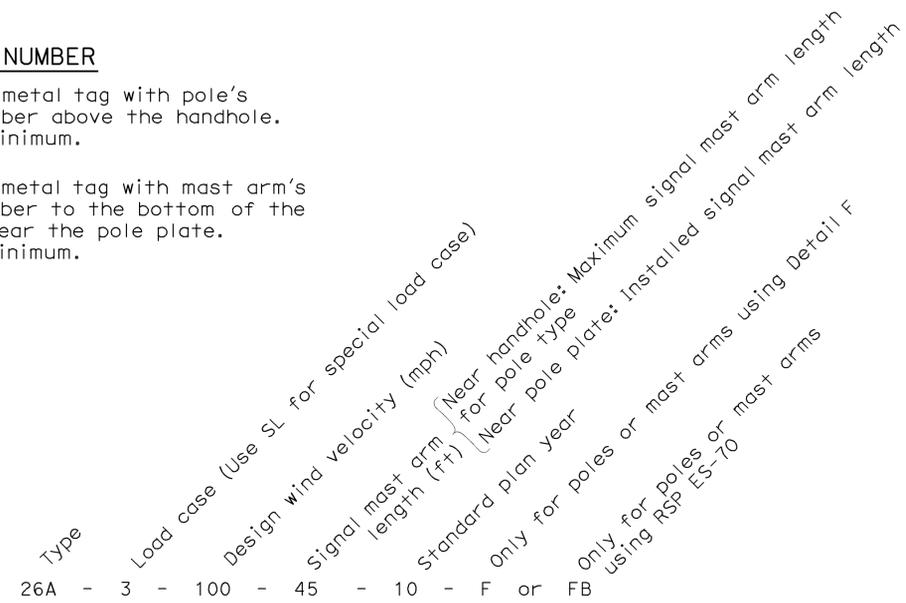
4" x 6 1/2" ROUNDED RECTANGLE HANDHOLE REINFORCED WITH RING WELDED TO OUTSIDE OF POLE. SEE NOTE 4, 1/8" COVER PLATE



**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.



SAMPLE IDENTIFICATION NUMBER

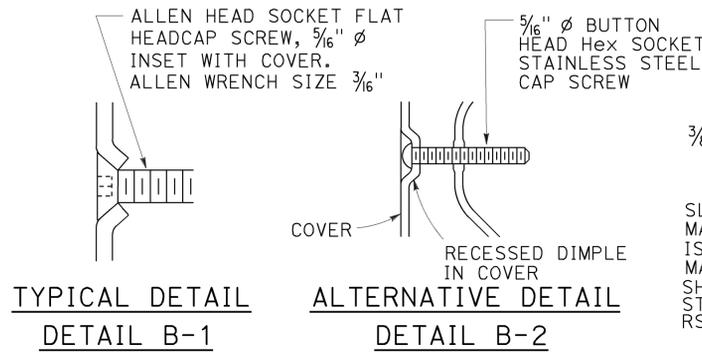
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	501	515

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 15, 2016
PLANS APPROVAL DATE

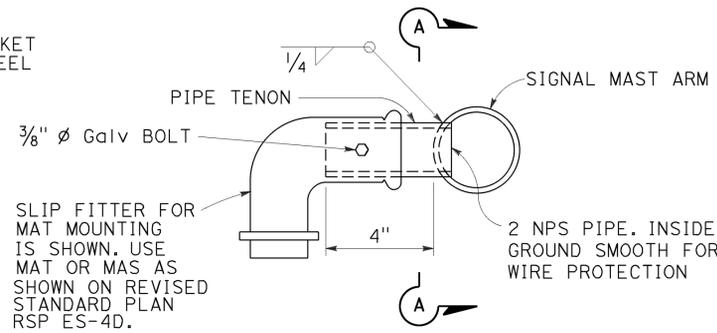
Stanley P. Johnson
No. CS7793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-1-16

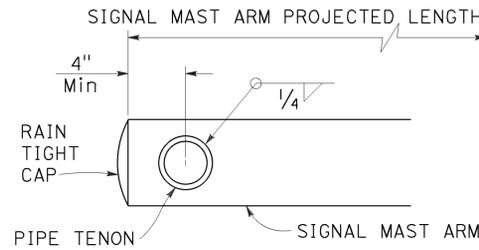


**TYPICAL DETAIL
DETAIL B-1**

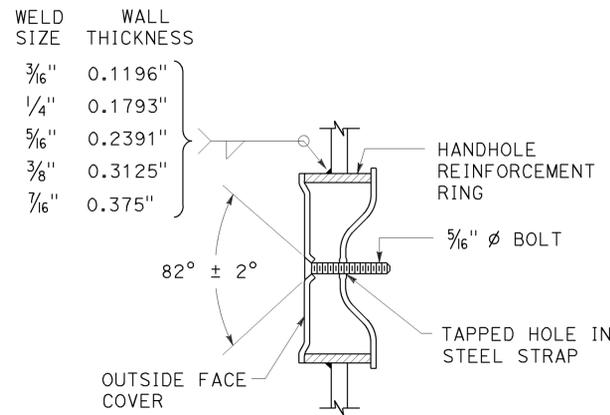
**ALTERNATIVE DETAIL
DETAIL B-2**



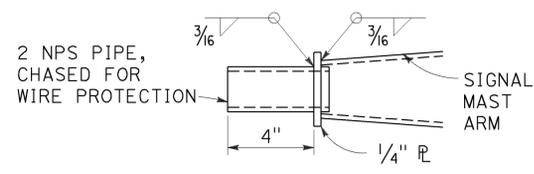
**SIDE TENON
DETAIL S-1**



SECTION A-A



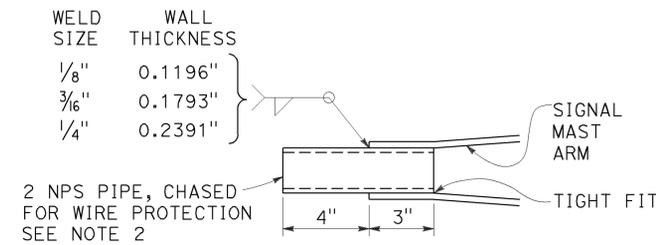
**TAMPER RESISTANT HANDHOLE COVER
DETAIL B**



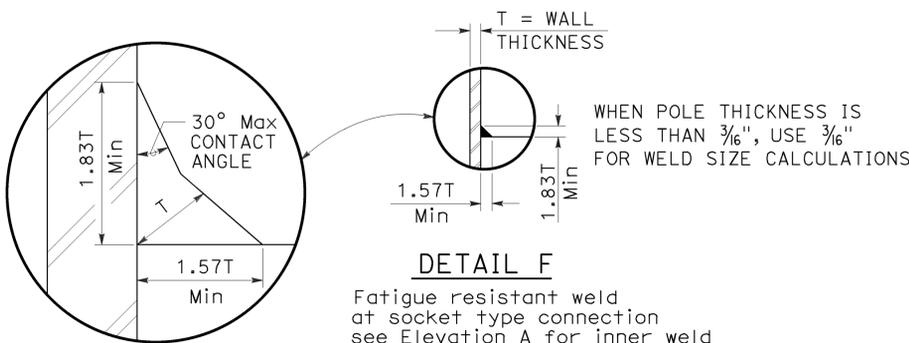
**TIP TENON
DETAIL TL**

This detail supersedes Detail S when so designated

**PIPE TENONS
DETAIL S**

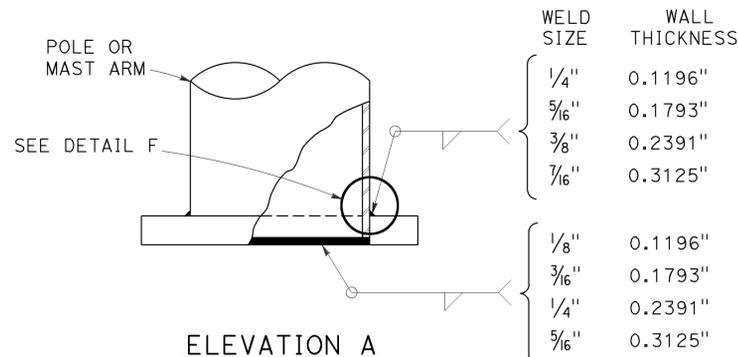


**TIP TENON
DETAIL TS**



DETAIL F

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



ELEVATION A

NOTES:

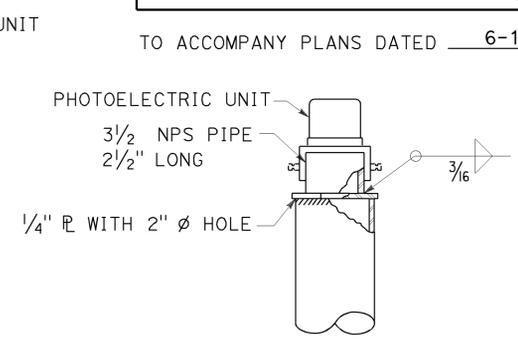
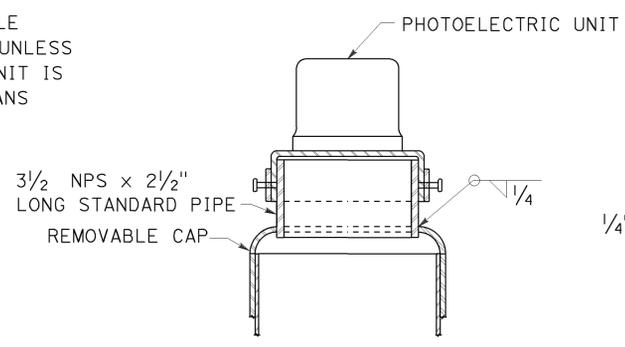
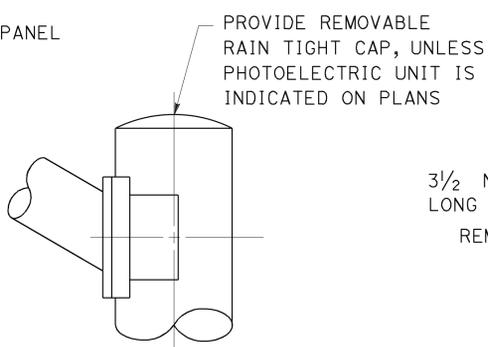
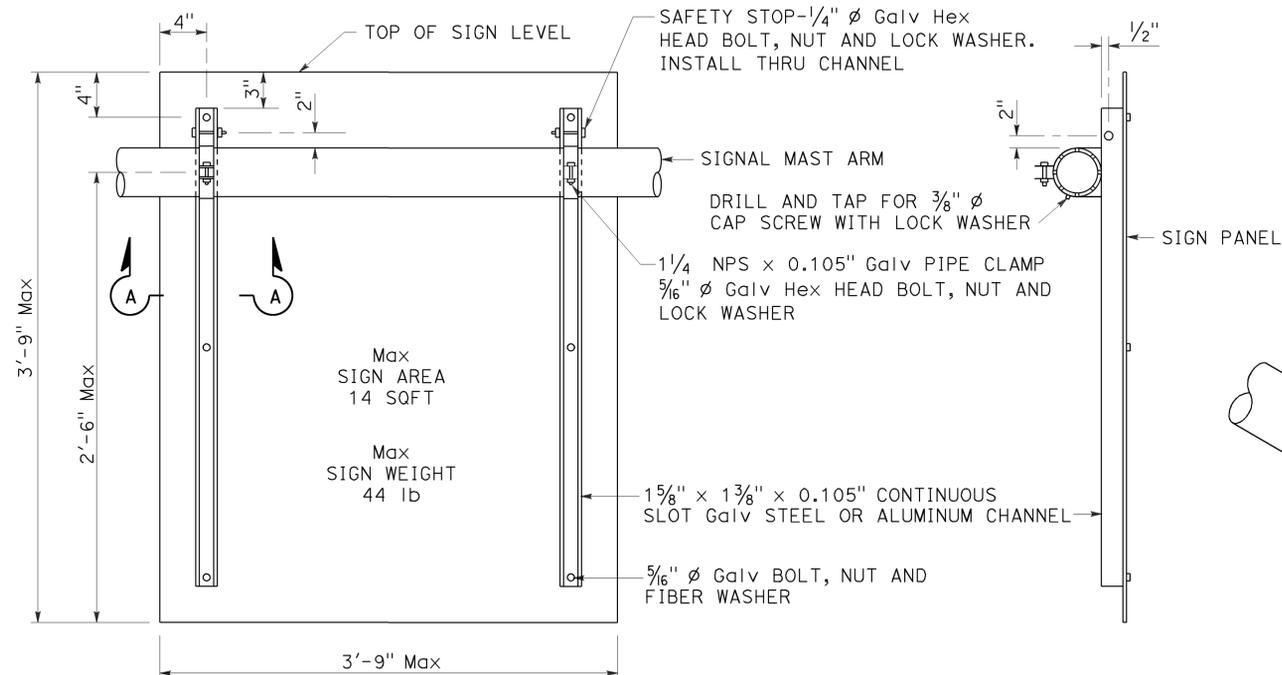
1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. 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

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.



REAR VIEW

SIDE VIEW

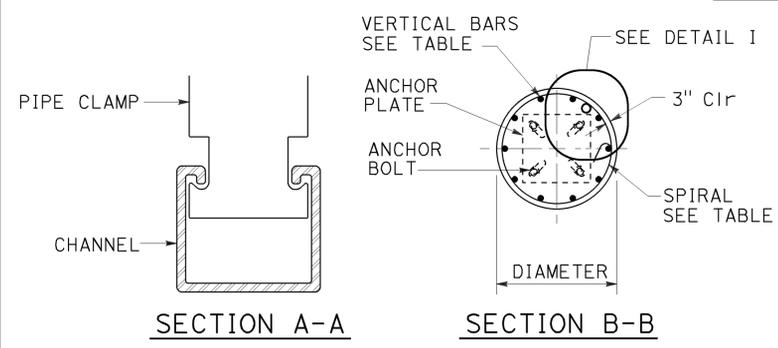
STANDARD TOP
DETAIL B-1

MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2

ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3

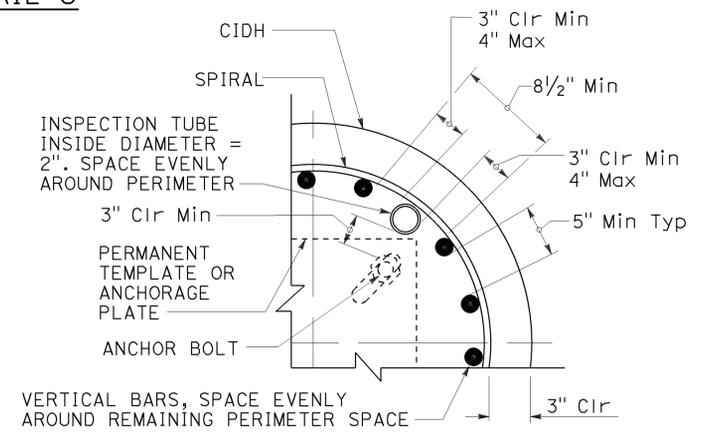
POLE TOP DETAILS
DETAIL B

SIGN MOUNTING DETAILS
DETAIL U



SECTION A-A

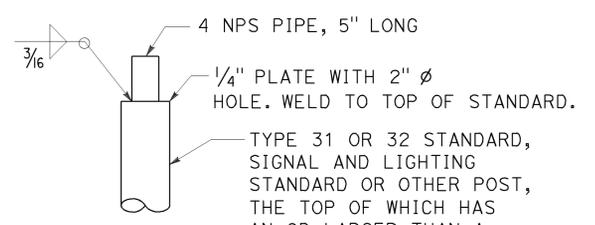
SECTION B-B



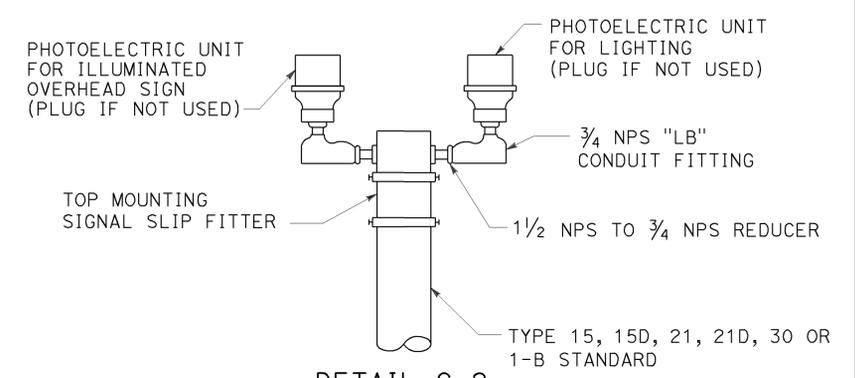
INSPECTION TUBE PLACEMENT
DETAIL I

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

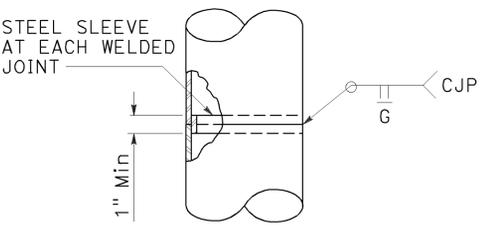
* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.



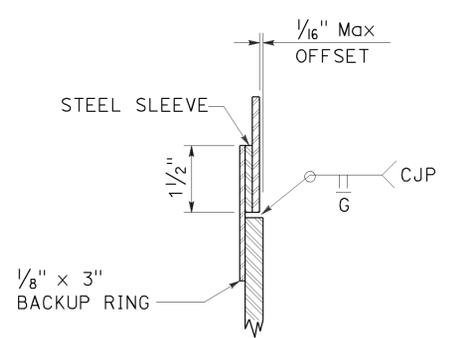
DETAIL C-1



DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

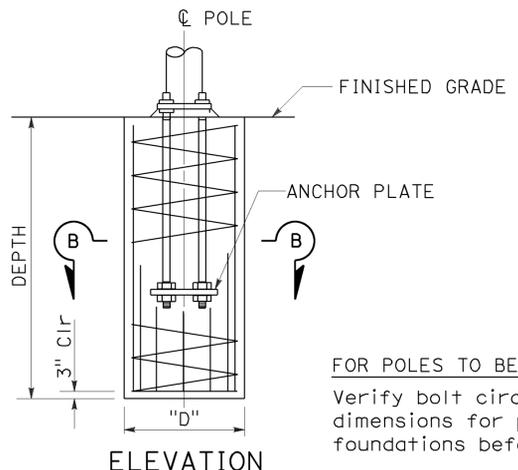


FOR UNIFORM TUBE THICKNESS
DETAIL T-1



AT TUBE THICKNESS CHANGE
DETAIL T-2

POLE SPLICES
DETAIL T



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

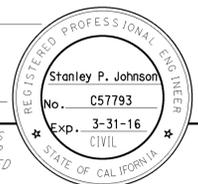
FOR POLES TO BE INSTALLED ON EXISTING FOUNDATION:
 Verify bolt circles, anchor bolt sizes and dependent dimensions for poles to be installed on existing foundations before fabricating the poles.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD,
 DETAIL No. 2)**

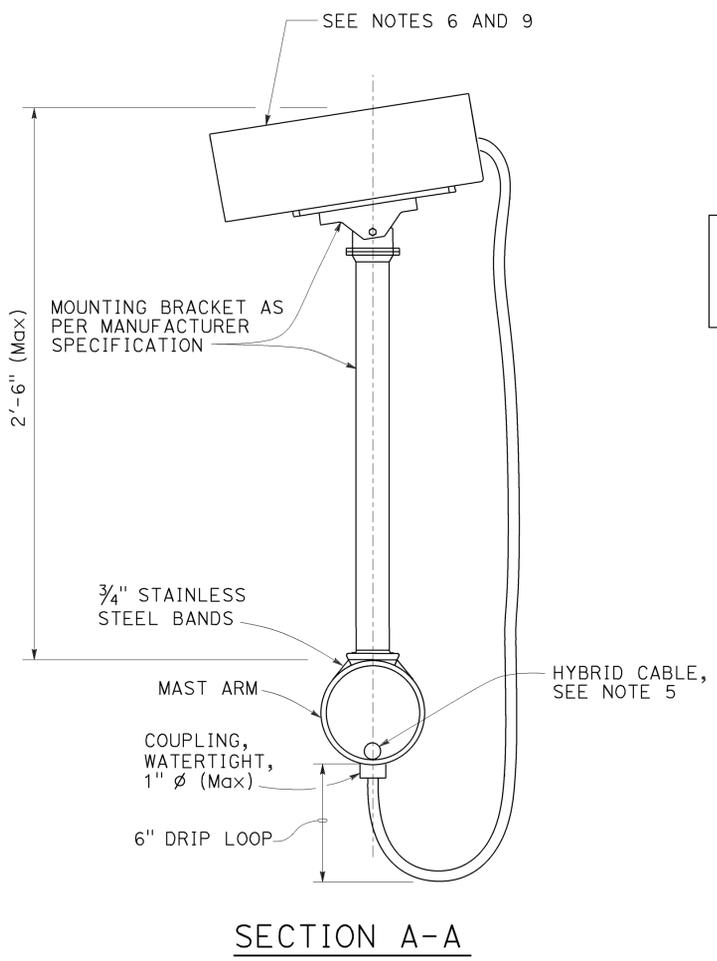
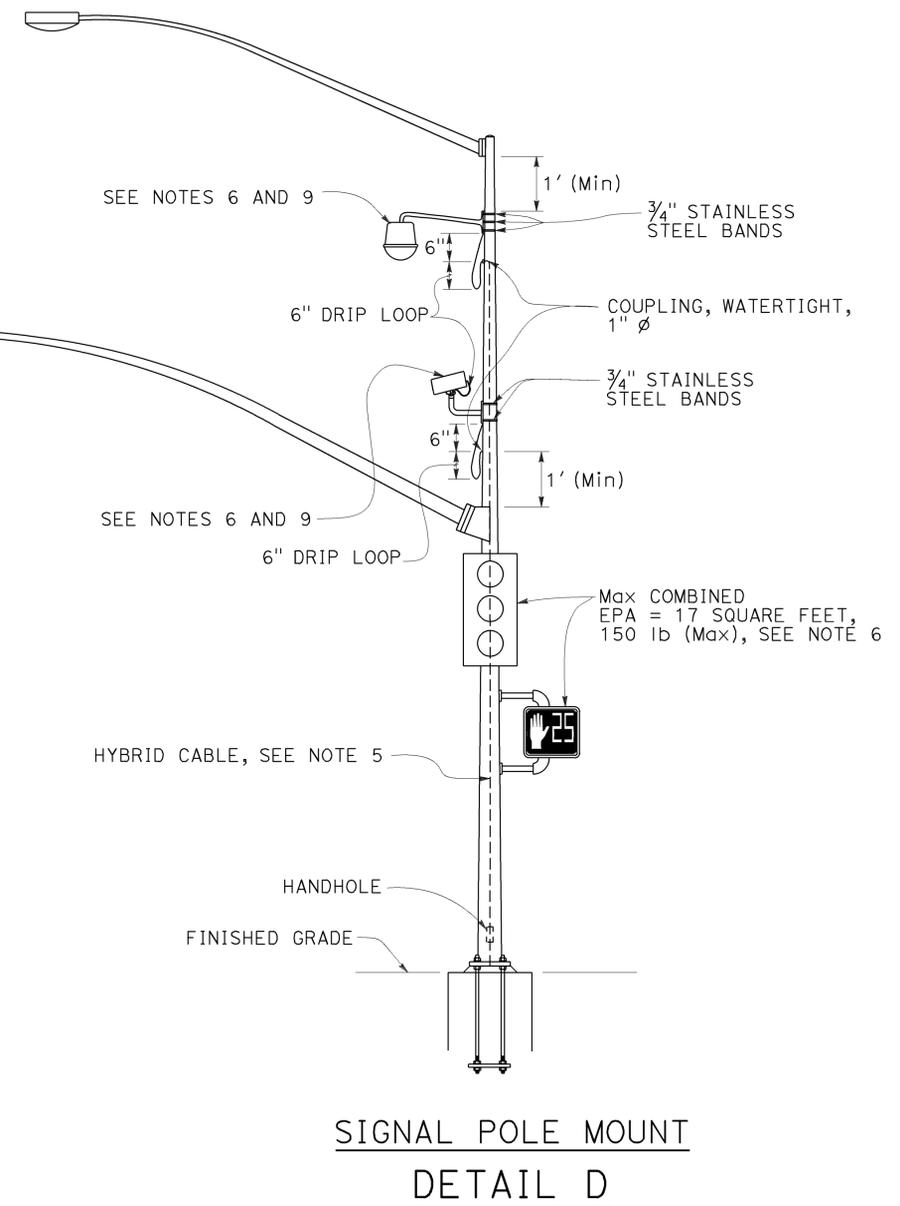
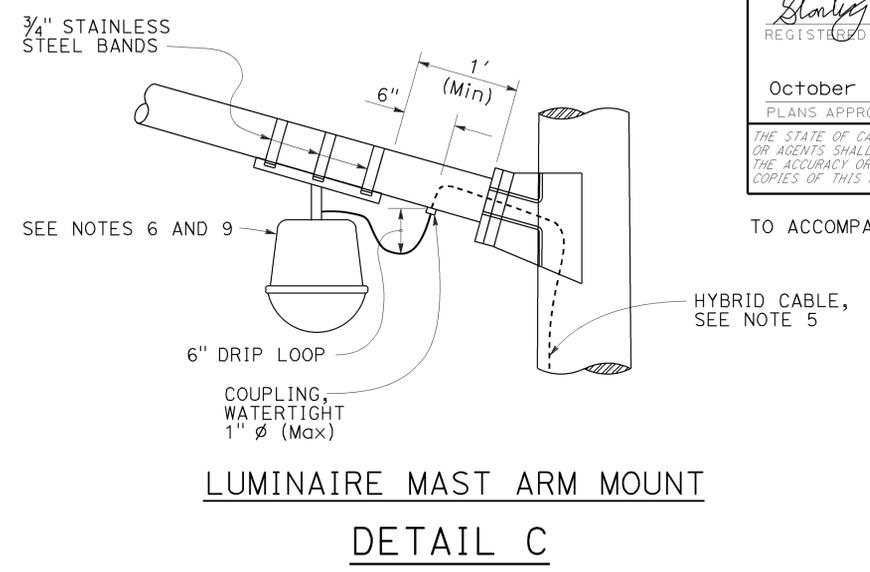
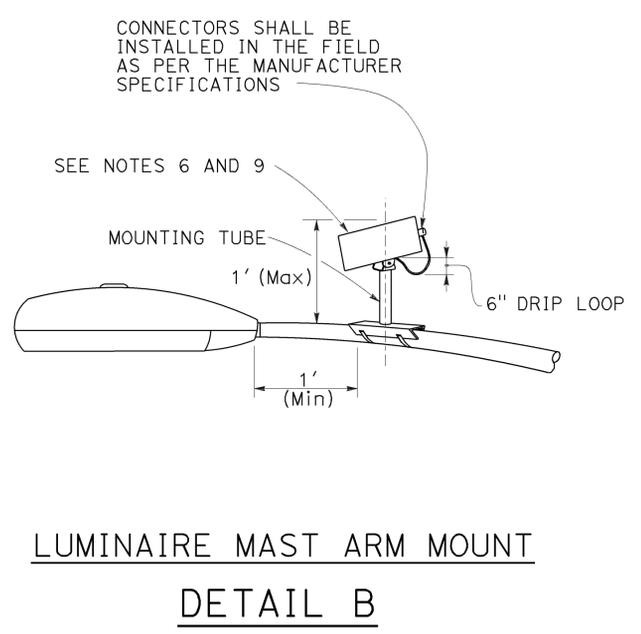
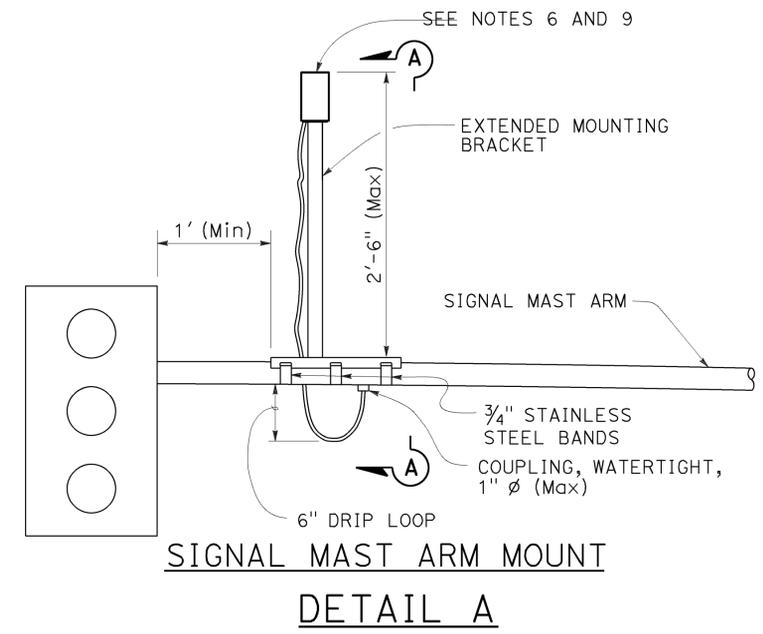
NO SCALE
 RSP ES-7N DATED JULY 15, 2016 SUPERSEDES RSP ES-7N DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7N DATED MAY 20, 2011 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-7N

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	503	515
 REGISTERED CIVIL 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 6-1-16



NOTES:

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet with 10 lb Max.
7. Maximum of two miscellaneous attachments per traffic signal standard.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

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

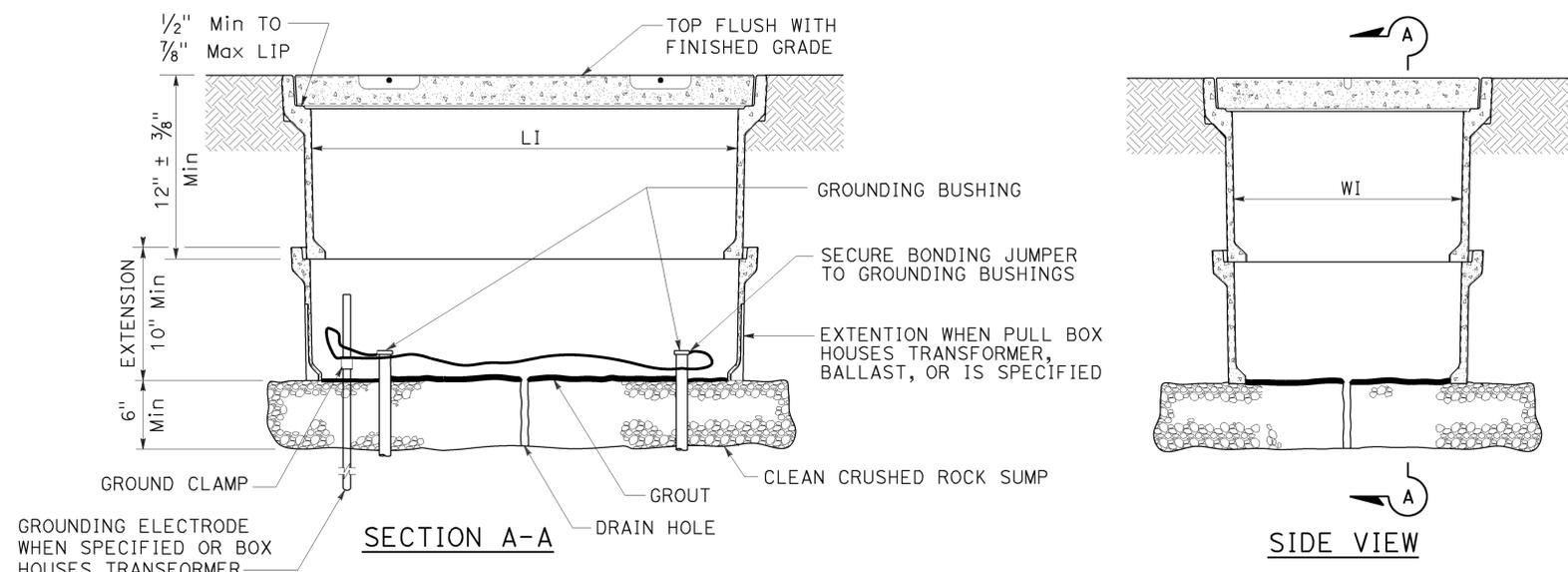
RSP ES-7R DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7R DATED JULY 19, 2013 AND STANDARD PLAN ES-7R DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7R

2010 REVISED STANDARD PLAN RSP ES-7R

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	0.0/41.8	504	515
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					
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.					

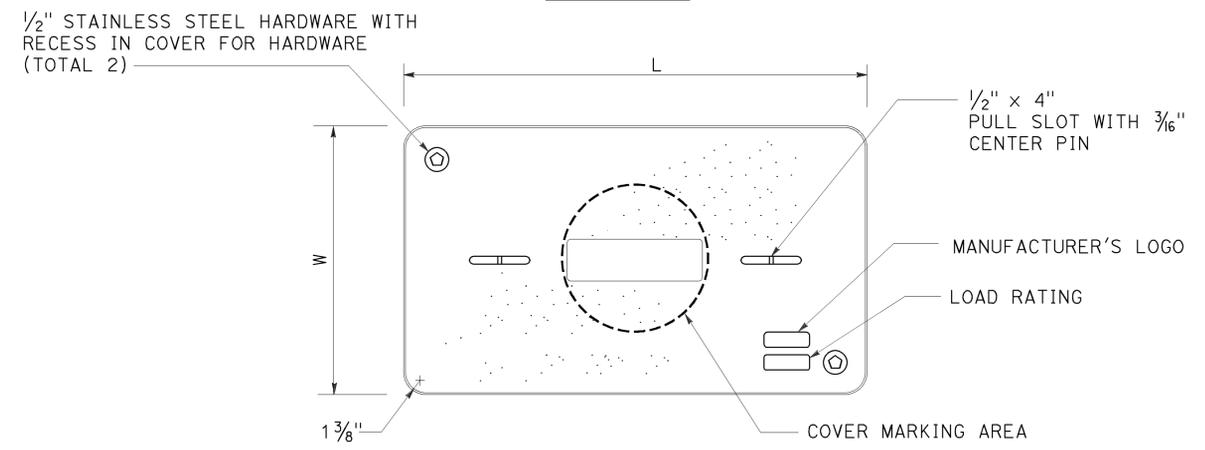
TO ACCOMPANY PLANS DATED 6-1-16



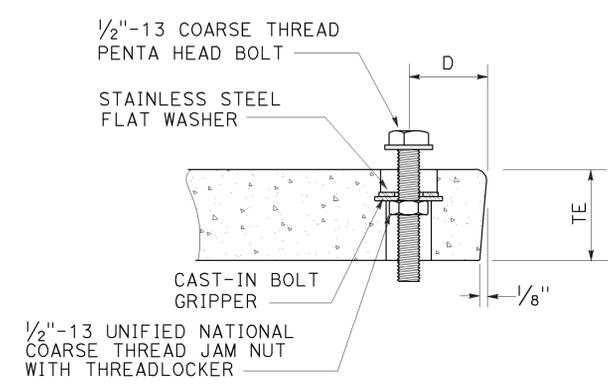
INSTALLATION DETAILS
DETAIL A

NOTES:

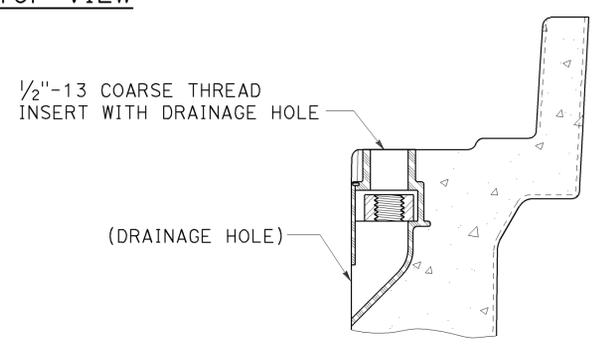
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male 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.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

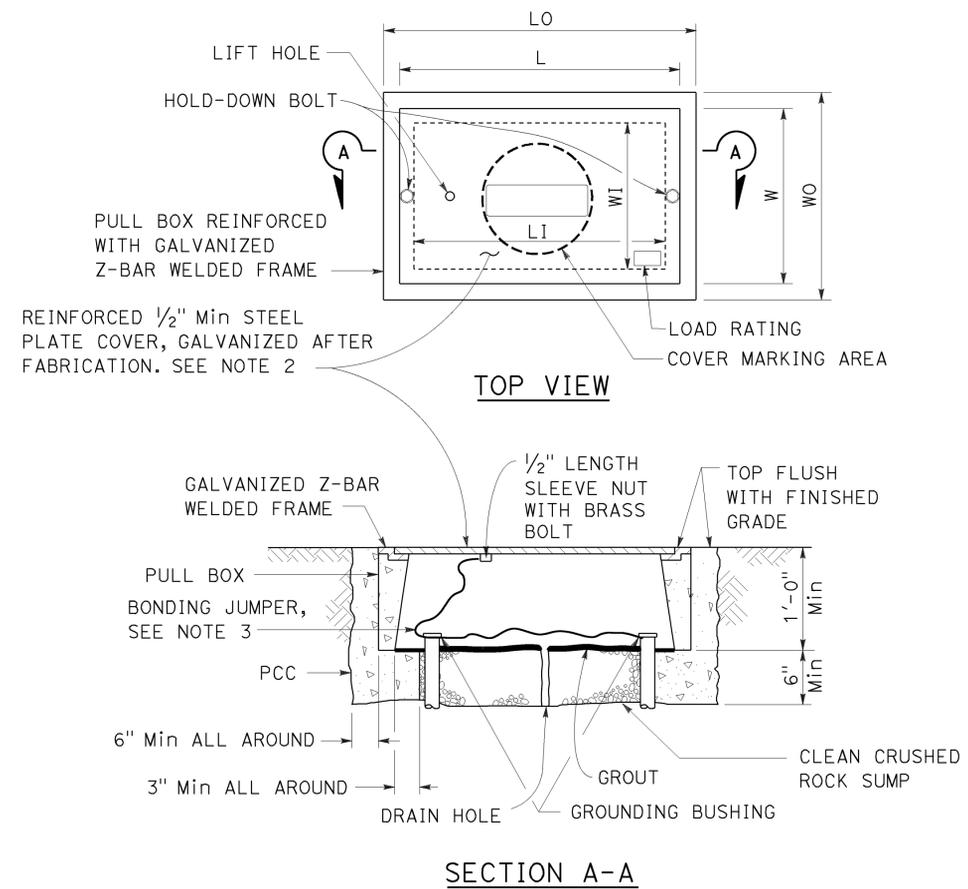
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	15	0.0/41.8	505	515

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 6-1-16



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

NOTES:

1. Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
2. Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
3. Bonding jumper for metal covers shall be 3' long, minimum.
4. 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.
5. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8".

PULL BOX	PULL BOX						COVER	
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	LO	LI	WO	WI	L **	W **
No. 3 1/2(T)	1 1/2"	1'-0"	1'-10" - 1'-11"	1'-5" - 1'-6 1/2"	1'-3" - 1'-4"	10" - 1'-0"	1'-8" - 1'-8 1/2"	1'-1" - 1'-2"
No. 5(T)	1 3/4"	1'-0"	2'-5" - 2'-6"	2'-0" - 2'-1"	1'-6" - 1'-7"	1'-1" - 1'-2"	2'-3" - 2'-3 1/2"	1'-4" - 1'-4 1/2"
No. 6(T)	2"	1'-0"	2'-11" - 3'-1"	2'-6" - 2'-7"	1'-10" - 2'-0"	1'-5" - 1'-6"	2'-9" - 2'-9 1/2"	1'-8" - 1'-8 1/2"

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

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

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

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B

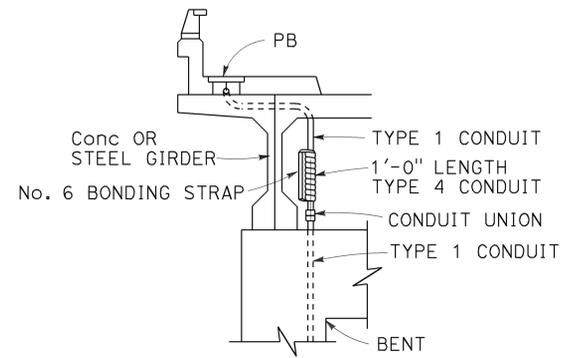
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	506	515

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

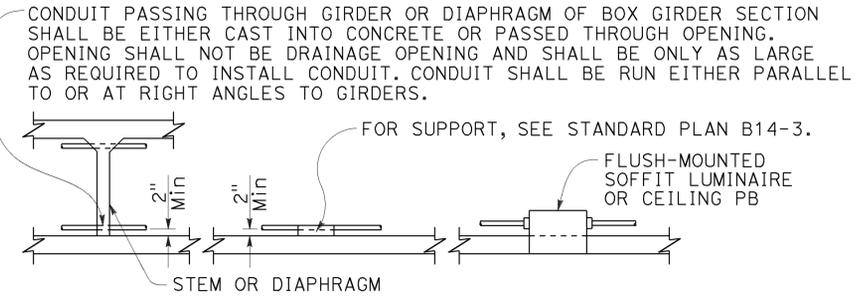
October 30, 2015
 PLANS APPROVAL DATE

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.

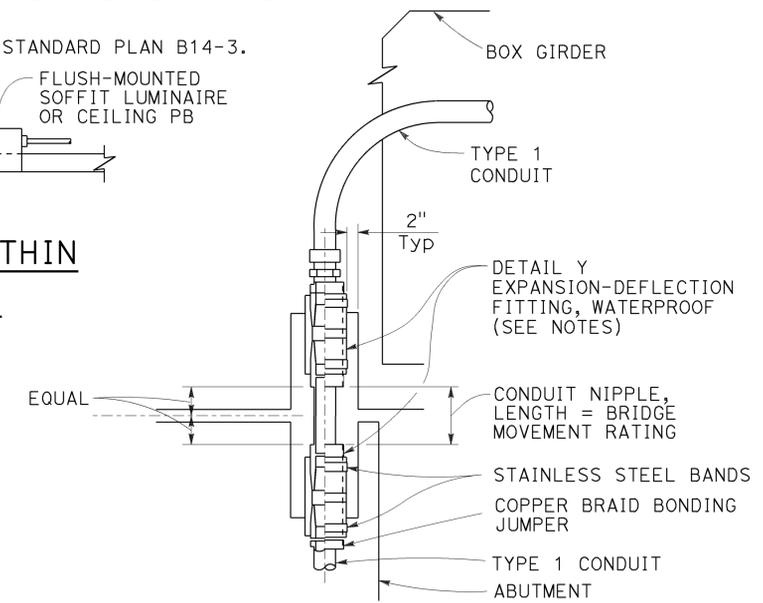
TO ACCOMPANY PLANS DATED 6-1-16



CONDUIT RISER CONNECTION
 DETAIL R

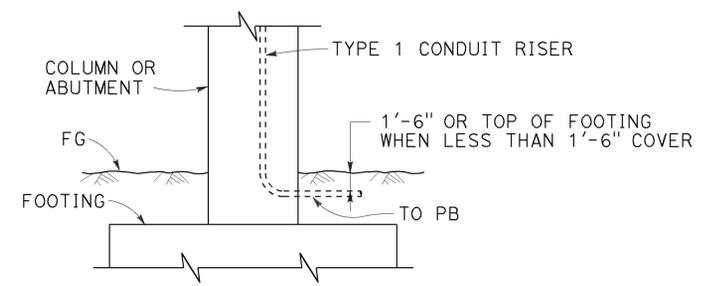


CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS
 DETAIL S

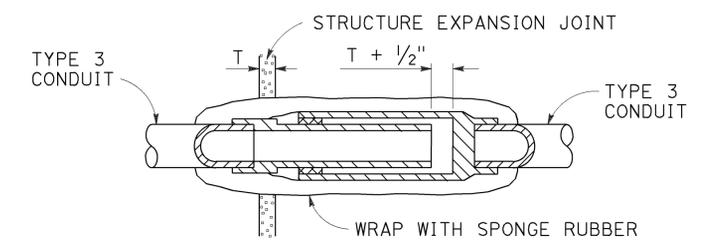


CONDUIT RISER CONNECTION AT COLUMN, ABUTMENT OR STRUCTURE WING WALL
 DETAIL U

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

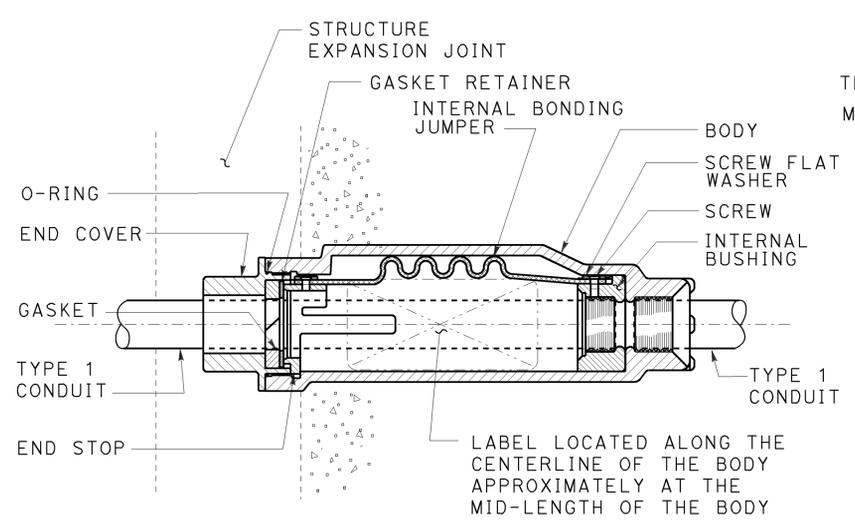


LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT
 DETAIL T

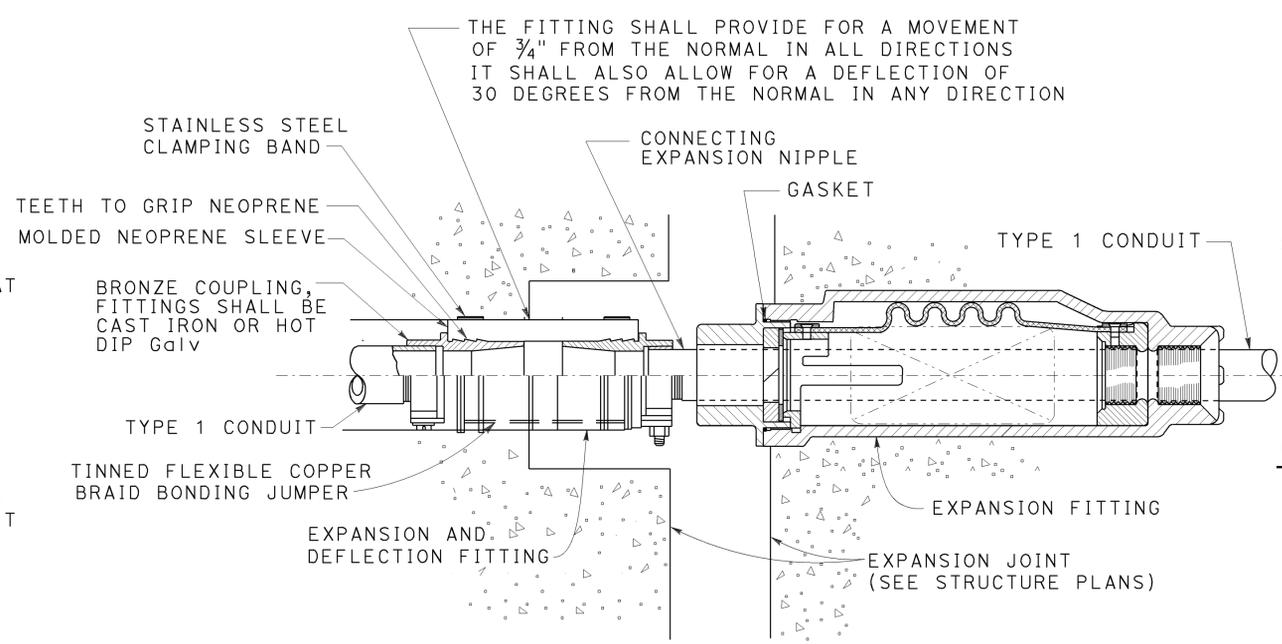


NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL
 DETAIL V

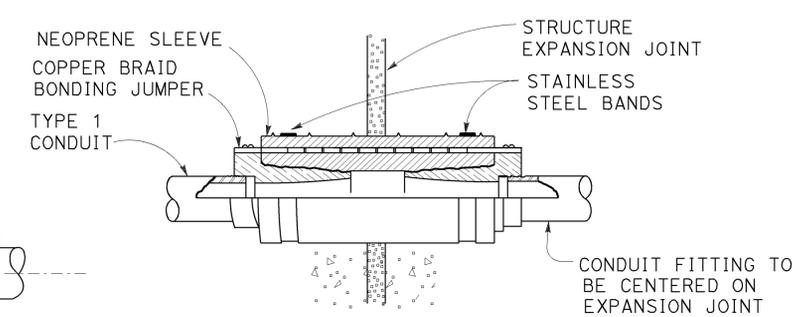
To be used only when shown or specified on Project Plans



CONDUIT EXPANSION FITTING
 DETAIL X



COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION
 DETAIL XY

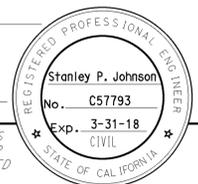


CONDUIT EXPANSION-DEFLECTION FITTING
 DETAIL Y

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

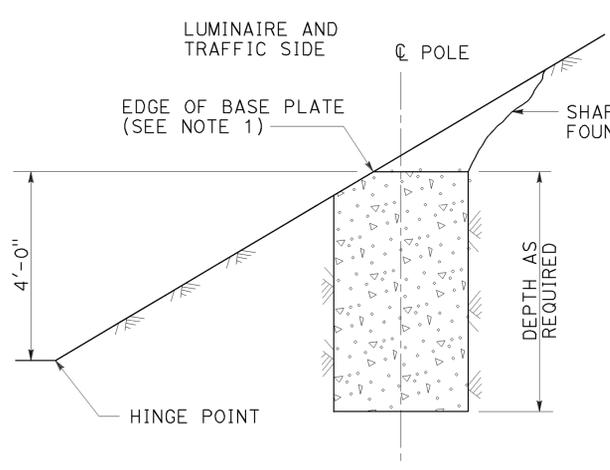
RSP ES-9B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9B DATED MAY 20, 2011 - PAGE 482 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-9B

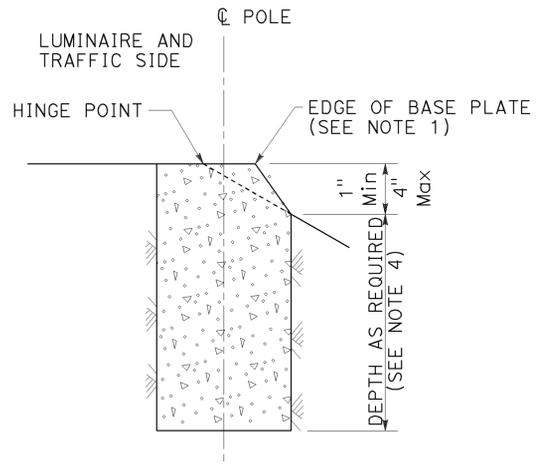


TO ACCOMPANY PLANS DATED 6-1-16

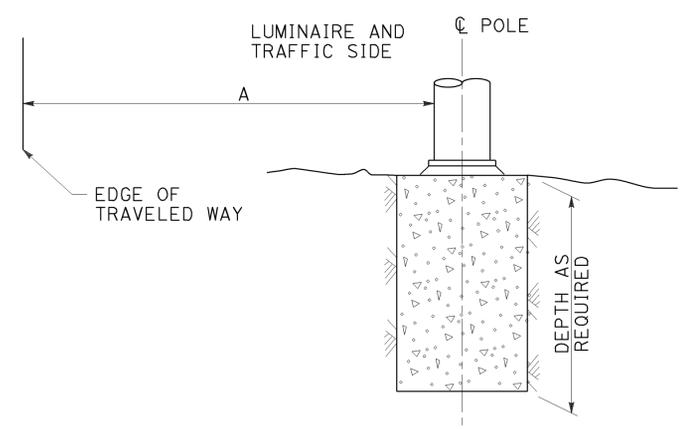
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



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



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

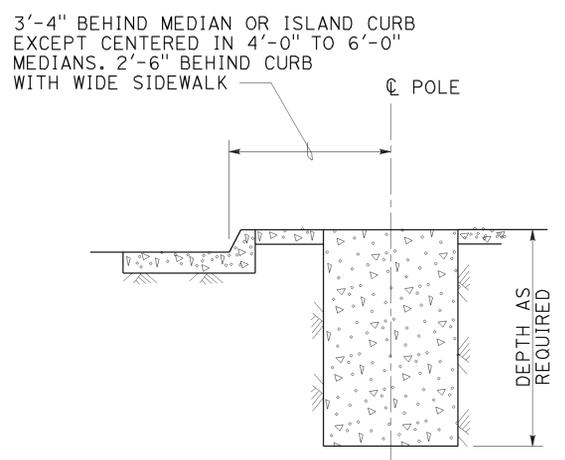


**FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3**
See Note 2

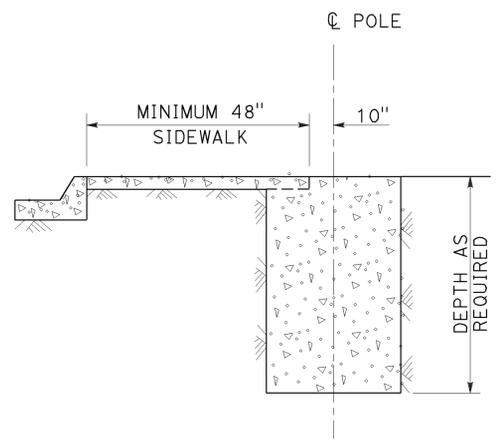
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A**

NOTES:

- 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

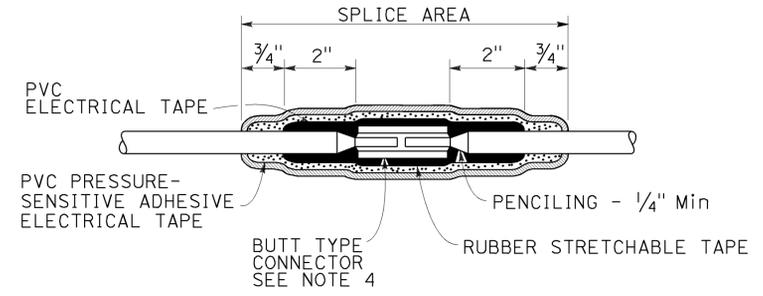
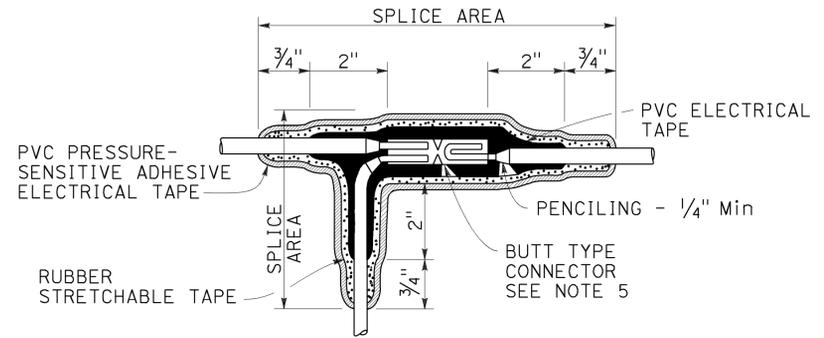
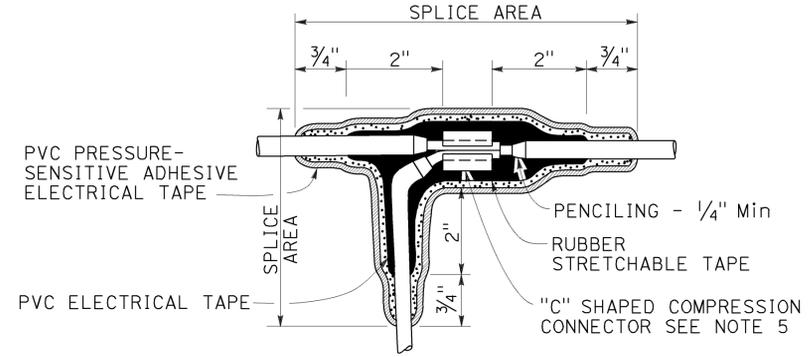
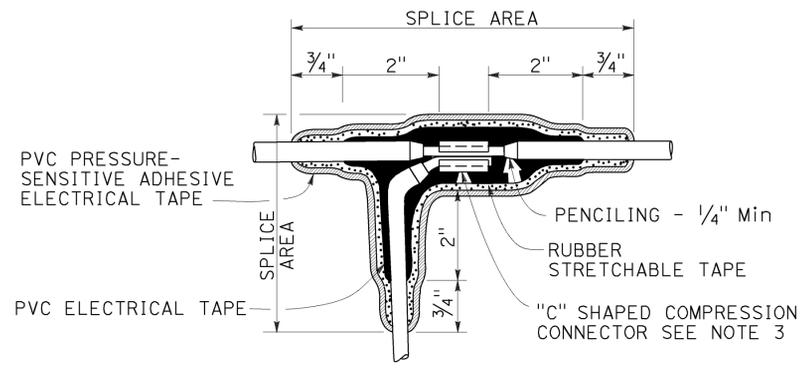
**FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B**

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.

2010 REVISED STANDARD PLAN RSP ES-11

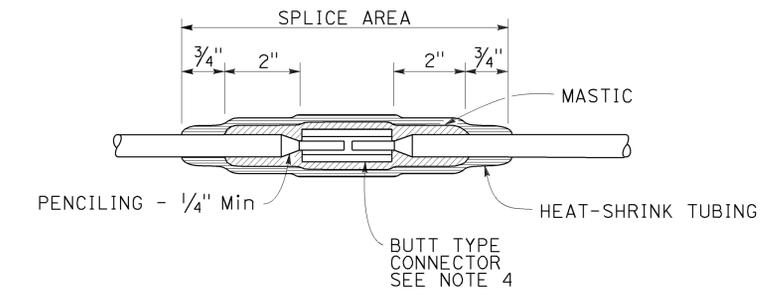
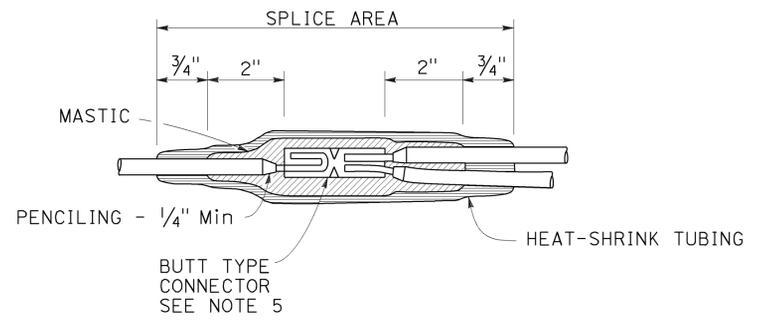
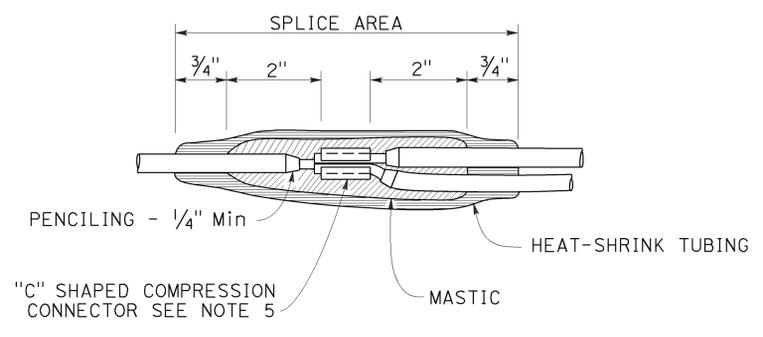
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	508	515
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
April 15, 2016 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
TO ACCOMPANY PLANS DATED <u>6-1-16</u>					



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
08	Riv	15	0.0/41.8	509	515

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.

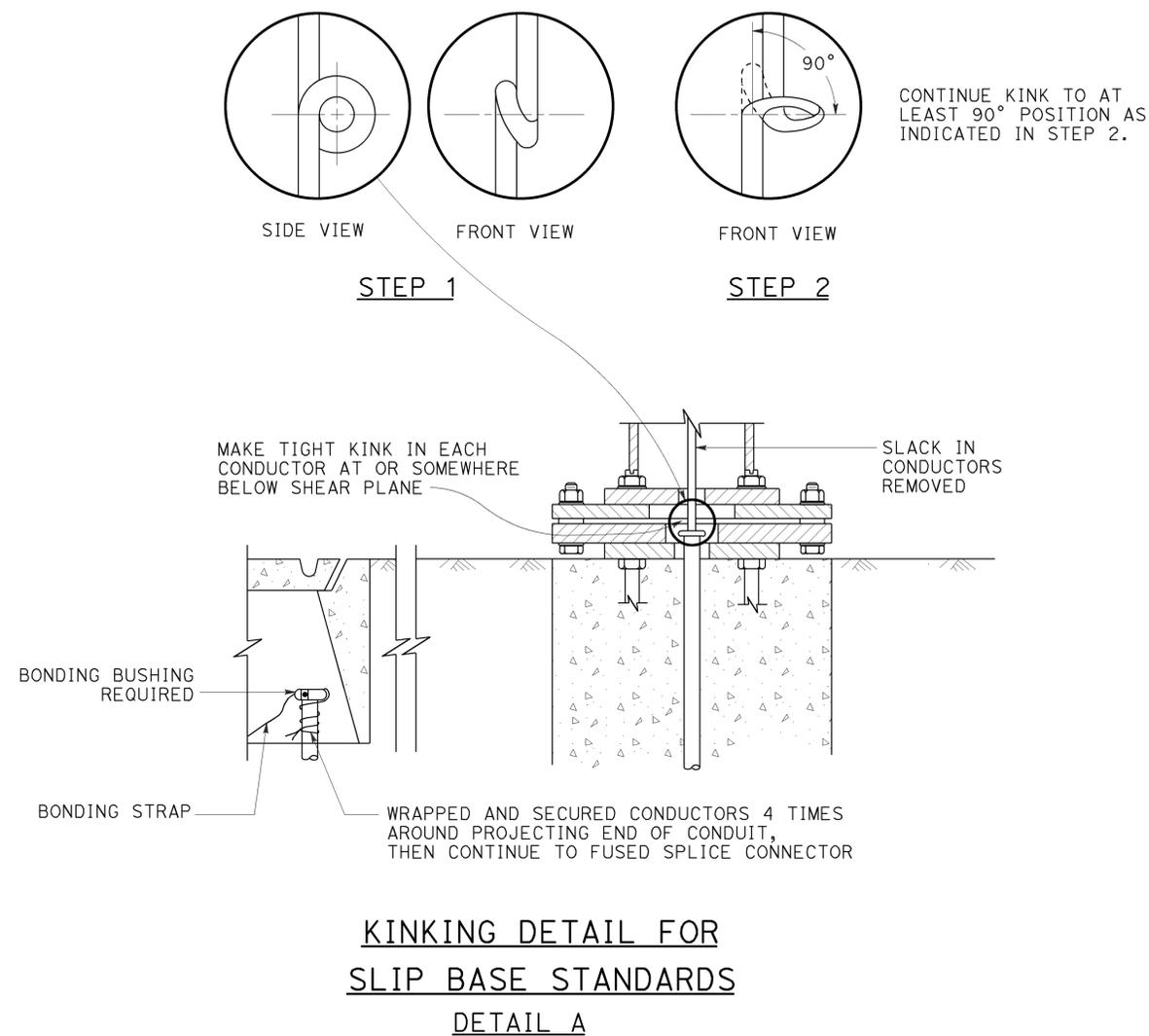
TO ACCOMPANY PLANS DATED 6-1-16

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

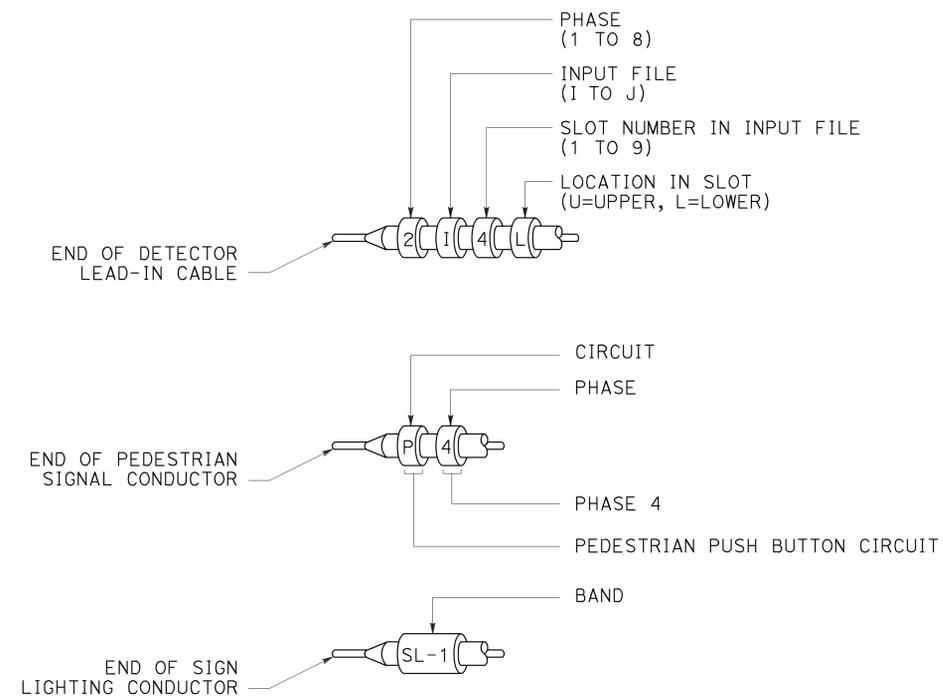
NOTES:

1. Primary lines of multiple ballasts shall be provided with fused connectors. Fuse ratings shall be as noted above.
2. 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.

REVISED STANDARD PLAN RSP ES-13B

2010 REVISED STANDARD PLAN RSP ES-13B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	510	515

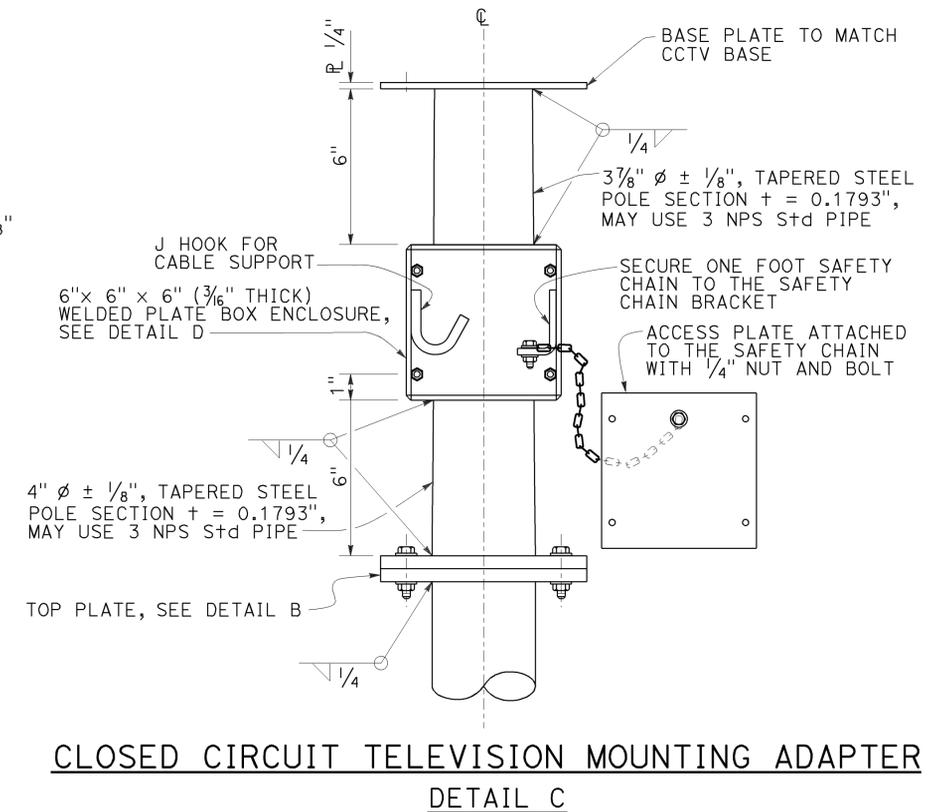
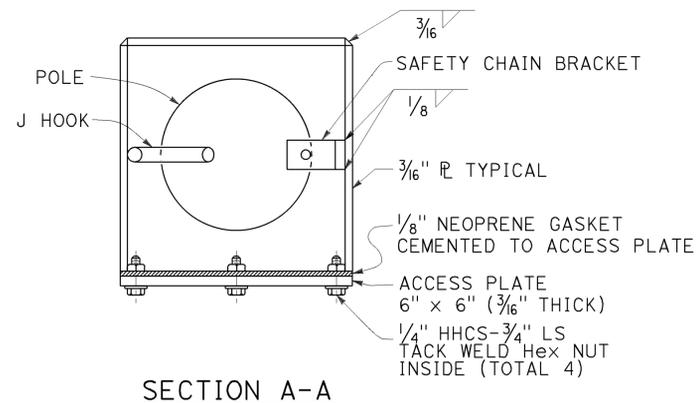
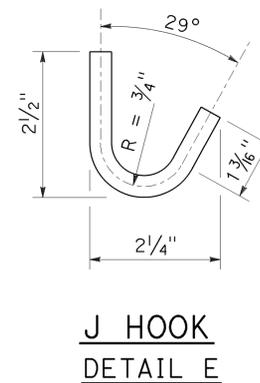
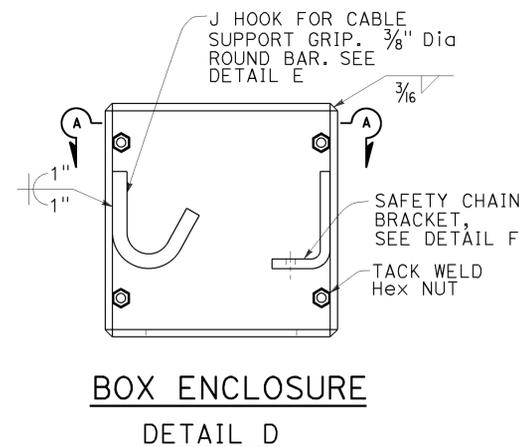
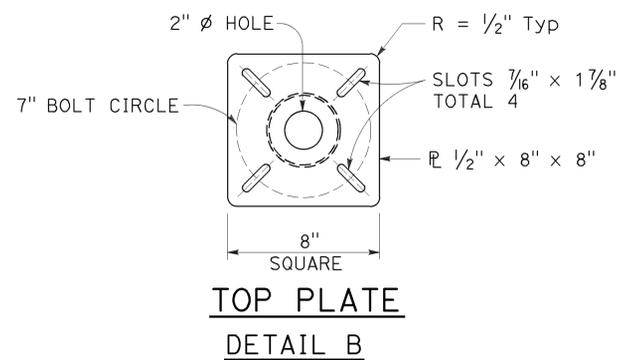
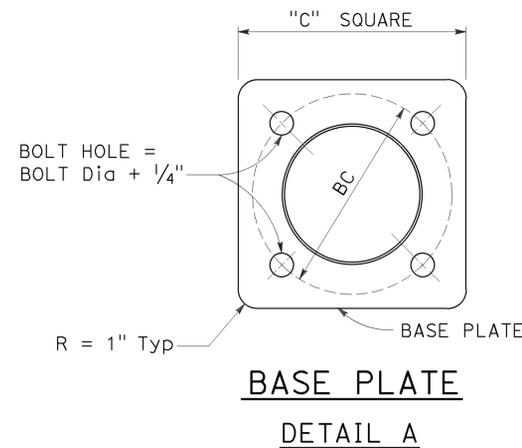
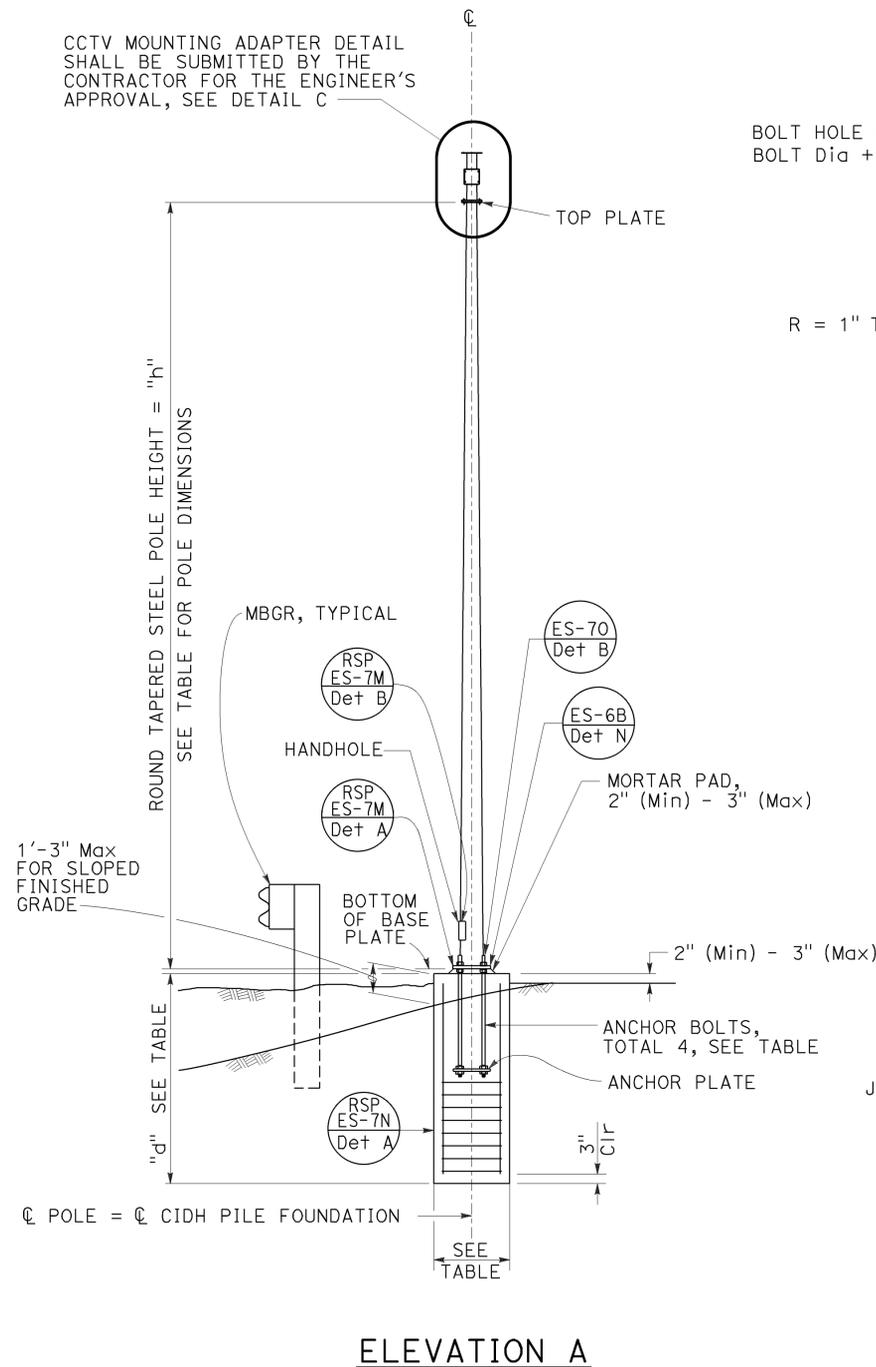
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH	
	HEIGHT "h"	Min OD		THICKNESS	"c"	THICKNESS	ANCHOR BOLT SIZE	BC = BOLT CIRCLE	Dia	"d"
		BASE	TOP							
CCTV 25	25'	7 ³ / ₈ "	3 ³ / ₄ "	0.1793"	1'-1"	1"	1/2" ϕ x 36"	11 ¹ / ₂ "	2'-6"	7'-0"
CCTV 30	30'	8"			1'-1 ¹ / ₂ "			1'-0"		7'-6"
CCTV 35	35'	8 ⁵ / ₈ "			1'-2"			1'-1"		8'-0"
CCTV 40	40'	9 ³ / ₈ "			1'-3"			1'-1 ¹ / ₂ "		8'-6"
CCTV 45	45'	10"			1'-2"			1'-2"		

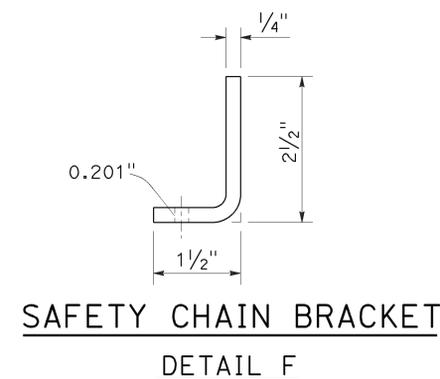
TO ACCOMPANY PLANS DATED 6-1-16

CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL C



NOTES:

1. Verify controlling field dimensions before ordering or fabricating any material.
2. During pole installation, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
3. Wind Loadings (3-second gust): 100 mph
4. Unit Stresses (Structural Steel):
 - a. fy = 55,000 psi (tapered steel tube and anchor bolts)
 - b. fy = 50,000 psi (unless otherwise noted)
5. Unit Stresses (Reinforced Concrete):
 - a. f'c = 3,625 psi
 - b. fy = 60,000 psi



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION,
 25' TO 45' POLE)**
 NO SCALE

RSP ES-16B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-16B DATED MAY 20, 2011 - PAGE 501 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16B

2010 REVISED STANDARD PLAN RSP ES-16B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	15	0.0/41.8	511	515

Stanley P. Johnson
 REGISTERED CIVIL 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
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-1-16

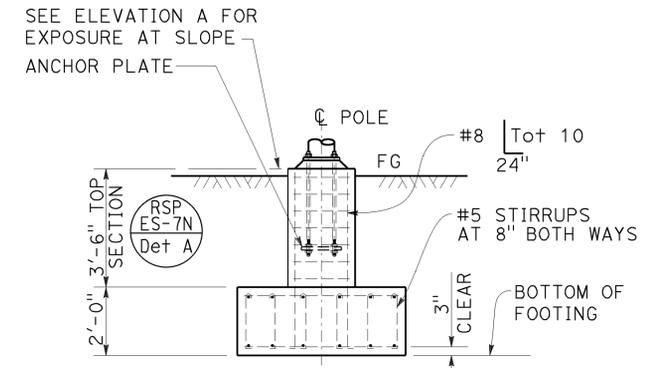
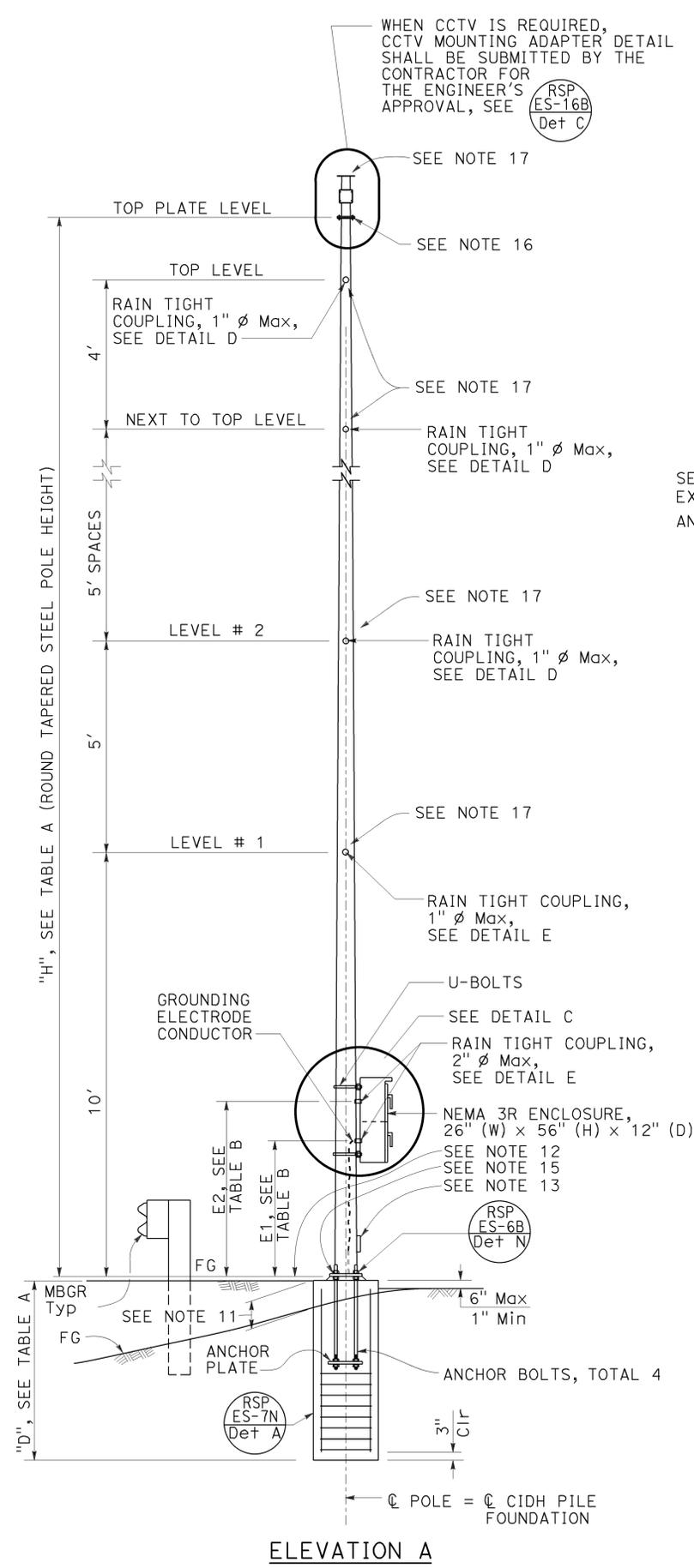
POLE TYPE	POLE DATA			BASE PLATE DATA			"D" 2'-6" ϕ CIDH Pile	
	HEIGHT "H"	Min OD	THICKNESS	"C" THICKNESS	ANCHOR BOLTS SIZE	BC = BOLT CIRCLE	LEVEL GROUND	UP TO 2:1
VDS 30	30'	8"		1'-1 1/2"		1'-1 1/2"	11'-0"	13'-0"
VDS 35	35'	8 5/8"	3 7/8"	0.1793"	1'-2"	1 1/2" ϕ x 3'-0"	1'-2"	11'-0"
VDS 40	40'	9 3/8"			1'-3"		1'-3"	12'-0"

POLE TYPE	COUPLING	
	E1(Max)	E2(Max)
VDS 30		
VDS 35	3'-6"	4'-9"
VDS 40		

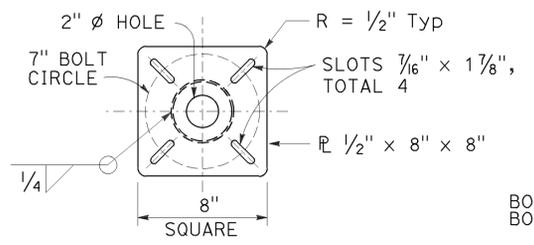
SPREAD FOOTING		
GROUND LEVEL	FOOTING SIZE (LENGTH x WIDTH x DEPTH)	REINFORCEMENT TOP & BOTTOM
UP TO 2:1	10'-0" x 10'-0" x 2'-0"	15 - #5 EW

LOCATION	MAXIMUM TOTAL EPA PER LEVEL (SQARE FEET)	MAXIMUM TOTAL WEIGHT (lb)
LEVEL #1		
LEVEL #2	14	200
LEVEL #3	10 ***	
LEVEL #4 (VDS 35 AND VDS 40 ONLY)		
LEVEL #5 (VDS 40 ONLY)		
NEXT TO TOP LEVEL	2.5	50
TOP LEVEL		
ON TOP PLATE LEVEL **		

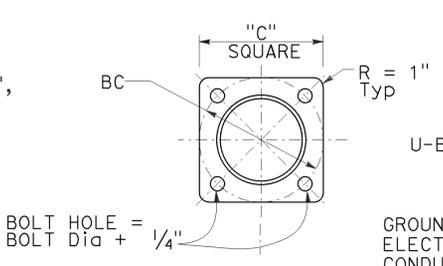
* MAXIMUM HORIZONTAL EXTENT BEYOND POLE FACE IS 4 FEET.
 ** MAXIMUM EXTENT ABOVE TOP PLATE IS 3 FEET.
 *** 14 IF LEVEL #1 IS ZERO.



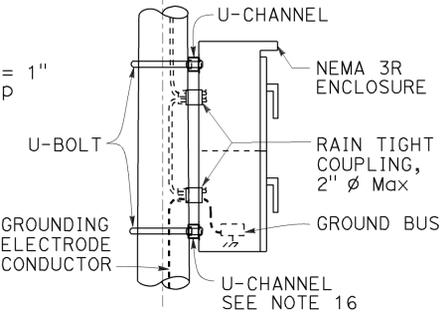
ALTERNATIVE FOOTING ELEVATION B



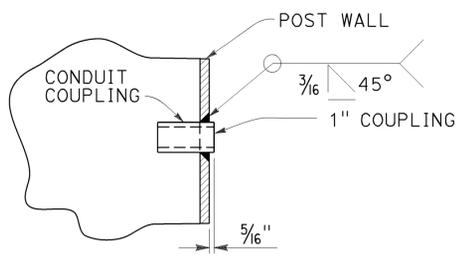
TOP PLATE DETAIL A



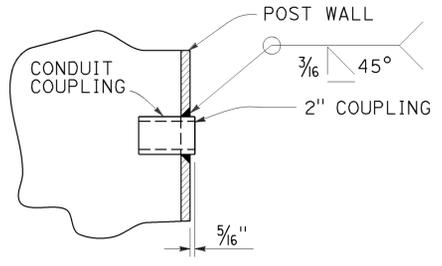
BASE PLATE DETAIL B



DETAIL C



1" COUPLING DETAIL D



2" COUPLING DETAIL E

NOTES:

- All steel shall be galvanized after fabrication.
- The foundation shall be treated as level ground condition if the slope inclination is flatter than 4 : 1 (Horizontal : Vertical)
- For devices mounted and mounting heights, see TABLE B.
- Design Specification: AASHTO Standard Specification for structural support for highway signs, luminaires and traffic signal dated 2001.
- Wind Loadings: 100 mph (3-second gust)
- Unit Stresses (Structural Steel):
 - fy = 55,000 psi (tapered steel tube)
 - fy = 50,000 psi (unless otherwise noted)
- Anchor bolts: fy = 55,000 psi
- Unit Stresses (Reinforced Concrete):
 - f'c = 3,600 psi
 - fy = 60,000 psi
- Verify all controlling field dimensions before ordering of fabricating any material.
- When no barriers are used, the NEMA 3R enclosure shall be located on the downstream side and perpendicular to the roadway.
- 1'-3" (Max) for sloped finished grade.
- Bottom of base plate.
- Handhole. RSP ES-7M Det B, RSP ES-7M Det A
- Top plate. Install a blank flange on the top plate when closed circuit television is not used.
- RSP ES-70 Elev B
- U-channel with bracket.
- Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum each level, see Table D for limitations.

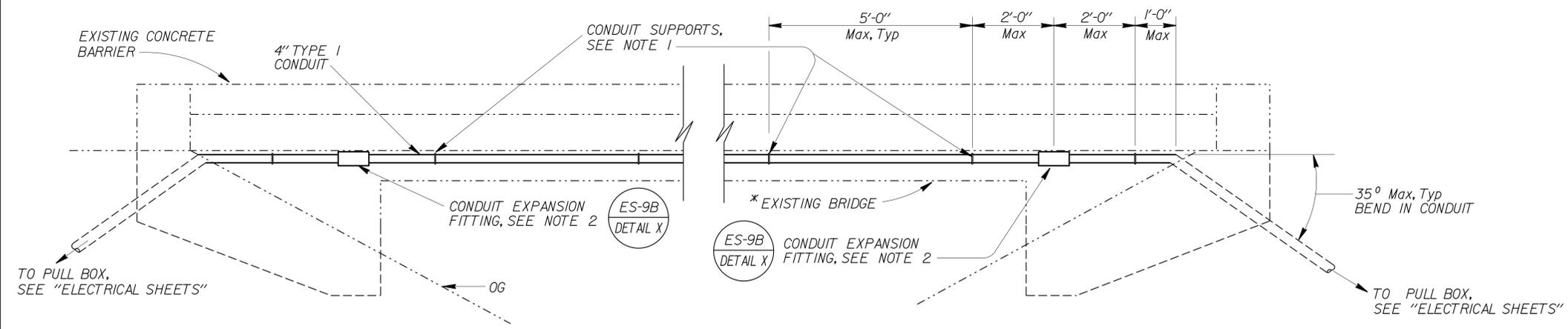
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION WITH
 VEHICLE DETECTION SYSTEM,
 30' TO 40' POLE)**
 NO SCALE

RSP ES-16D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-16D DATED JULY 19, 2013 AND STANDARD PLAN ES-16D DATED MAY 20, 2011 - PAGE 503 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16D

2010 REVISED STANDARD PLAN RSP ES-16D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	R.V.	15	RO.0/41.8	512	515
WONS <i>WONS</i> 5/31/16 REGISTERED CIVIL ENGINEER DATE			REGISTERED PROFESSIONAL ENGINEER JUAN J. JAUREGUI JR. No. C63939 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA		
6/1/16 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.					

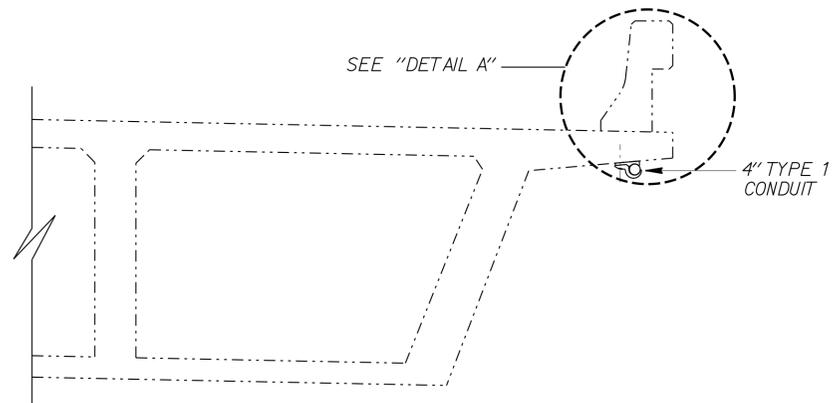


**FIBER OPTIC CONDUIT MOUNTED ON BRIDGE
ELEVATION**

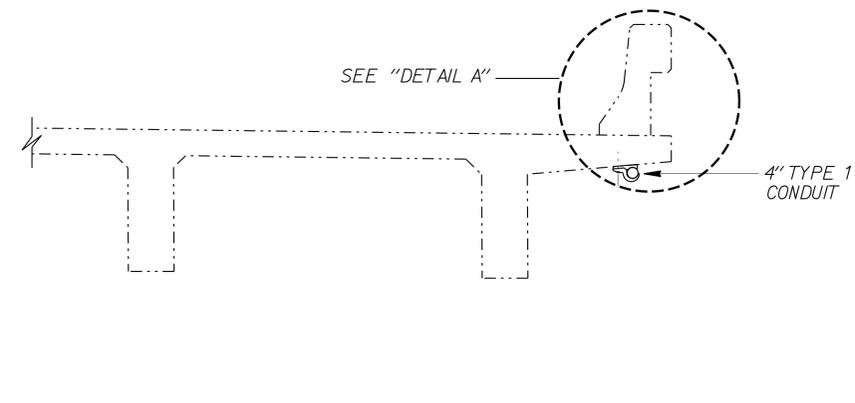
* BRIDGE TYPE AND CONFIGURATION MAY VARY

NOTES:

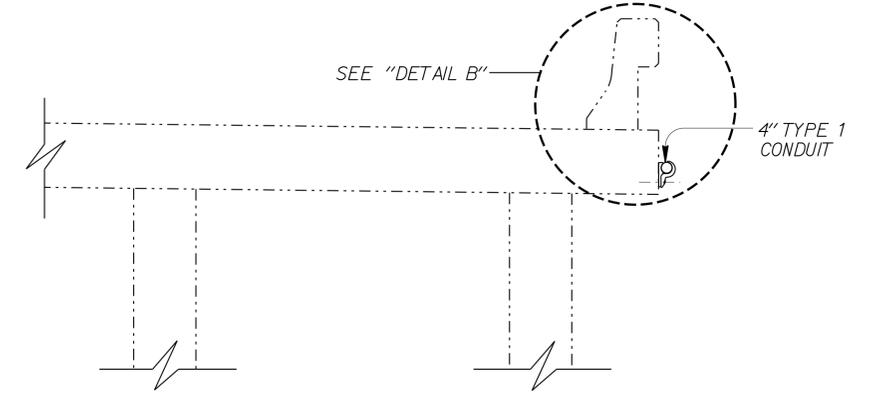
1. Conduit supports to be spaced at 5 foot maximum except at expansion joints, the spacing is 2 foot maximum, and at conduit bends the spacing is 1 foot maximum.
2. Locate conduit expansion fitting adjacent to existing bridge expansion joint.
3. For reinforced concrete box culverts mount conduit similar to "CONCRETE SLAB BRIDGE" details, unless otherwise noted.
4. For "DETAIL A" and "DETAIL B", see "MISCELLANEOUS DETAILS" sheet.



CONCRETE BOX GIRDER BRIDGE



CONCRETE "T" GIRDER BRIDGE



CONCRETE SLAB BRIDGE

TYPICAL SECTIONS

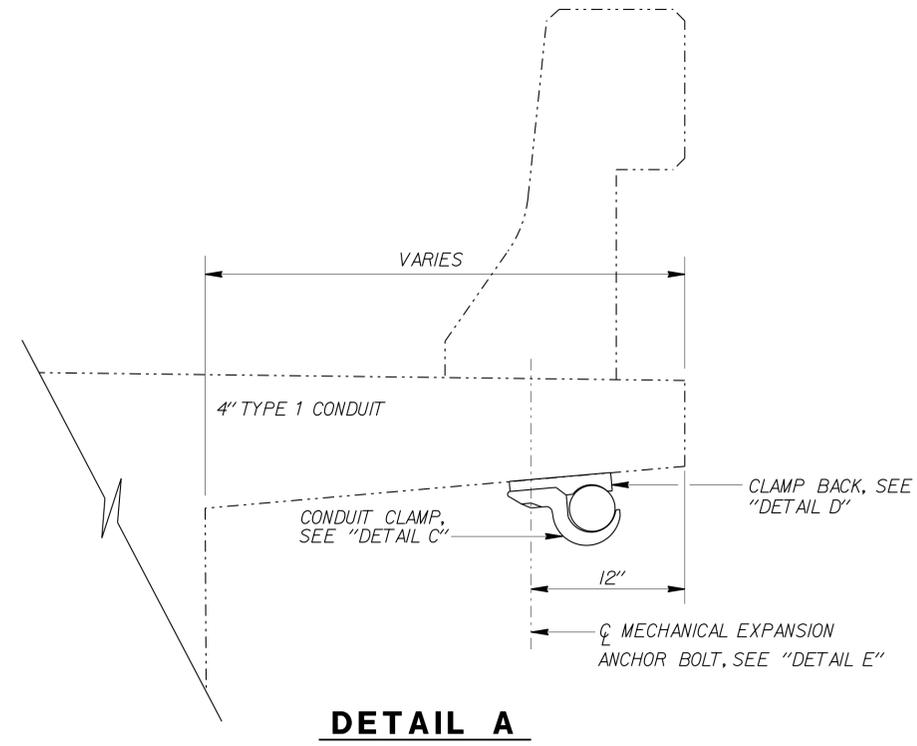
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



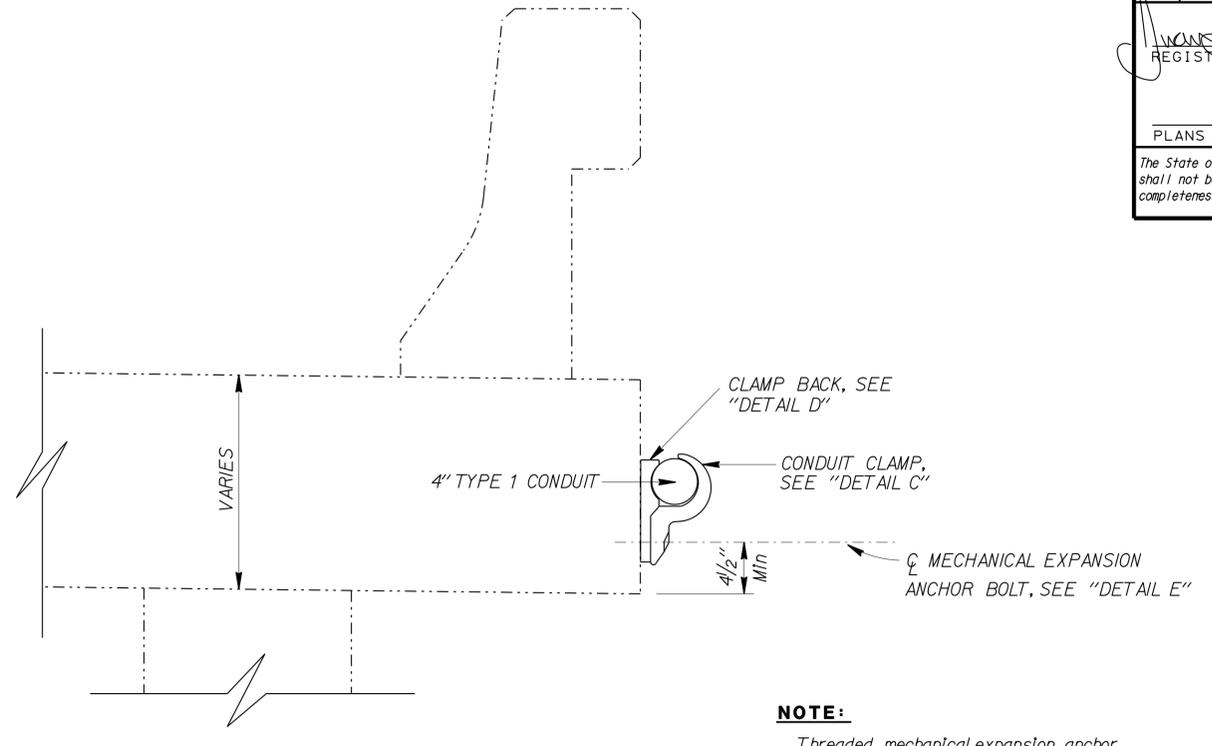
BRANCH CHIEF JEFF WOODY	DESIGN BY	JUAN JAUREGUI	CHECKED	ARLENA GUTIERREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A	BRIDGE NO.	FIBER OPTIC CONDUIT MOUNTED ON BRIDGE ELEVATION AND TYPICAL SECTIONS	SES-1	
	DETAILS BY	R. YEE	CHECKED	JUAN JAUREGUI			POST MILE			Various
					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3619	CONTRACT No.: 08-067704		
					0 1 2 3		PROJECT ID & PHASE: 0814000175	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 11/20/15 11/24/15 4/13/16 4/27/16	SHEET 1 OF 4

USERNAME => s102458 DATE PLOTTED => 19-SEP-2016 TIME PLOTTED => 12:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	Riv	15	RO.0/41.8	513	515
REGISTERED CIVIL ENGINEER			DATE	5/31/16	
PLANS APPROVAL DATE			6/1/16		
REGISTERED PROFESSIONAL ENGINEER JUAN J. JAUREGUI JR. No. C63939 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

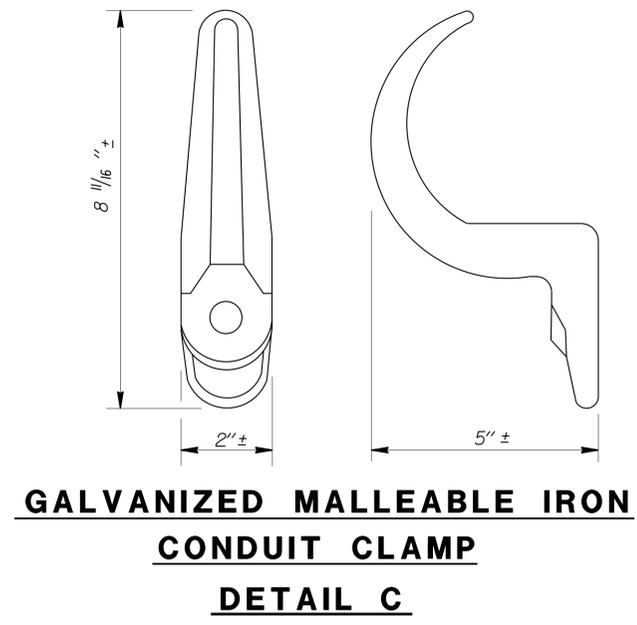


DETAIL A

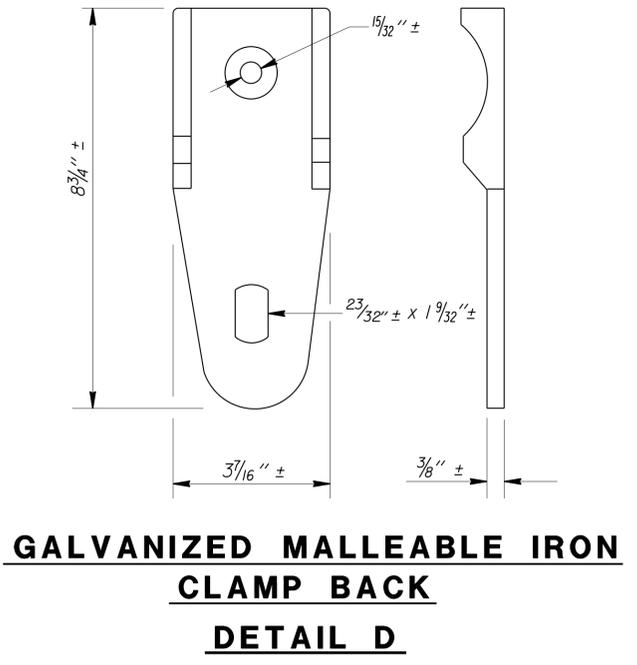


DETAIL B

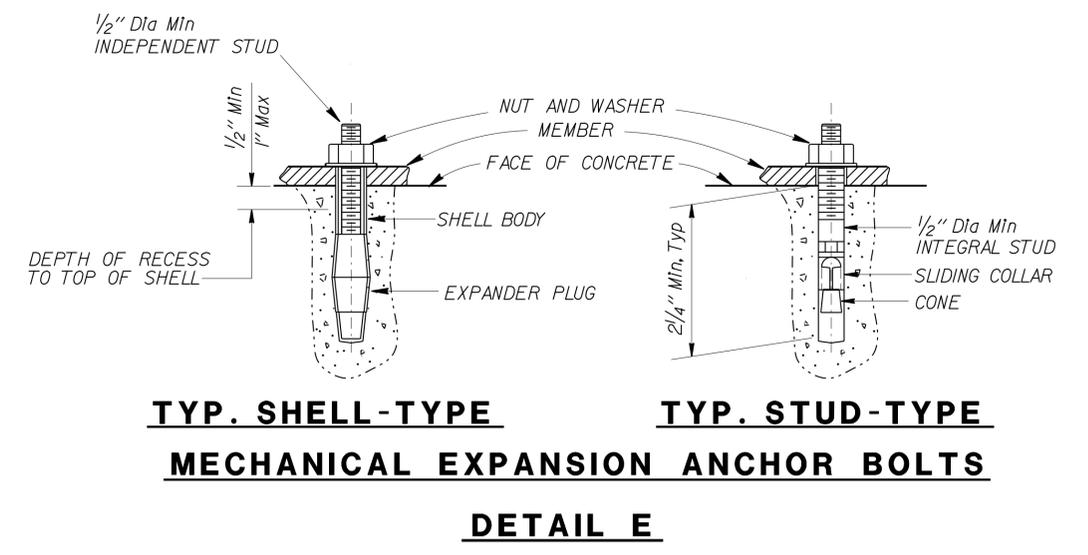
NOTE:
Threaded mechanical expansion anchor must be galvanized.



GALVANIZED MALLEABLE IRON CONDUIT CLAMP
DETAIL C



GALVANIZED MALLEABLE IRON CLAMP BACK
DETAIL D



TYP. SHELL-TYPE MECHANICAL EXPANSION ANCHOR BOLTS
TYP. STUD-TYPE MECHANICAL EXPANSION ANCHOR BOLTS
DETAIL E

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

BRANCH CHIEF **JEFF WOODY**

DESIGN	BY	CHECKED
	JUAN JAUREGUI	ARLENA GUTIERREZ
DETAILS	BY	CHECKED
	R. YEE	JUAN JAUREGUI
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **A**

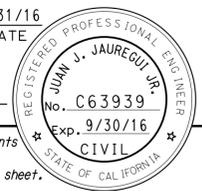
NO SCALE

BRIDGE NO.	Various
POST MILE	Various

FIBER OPTIC CONDUIT MOUNTED ON BRIDGE
MISCELLANEOUS DETAILS

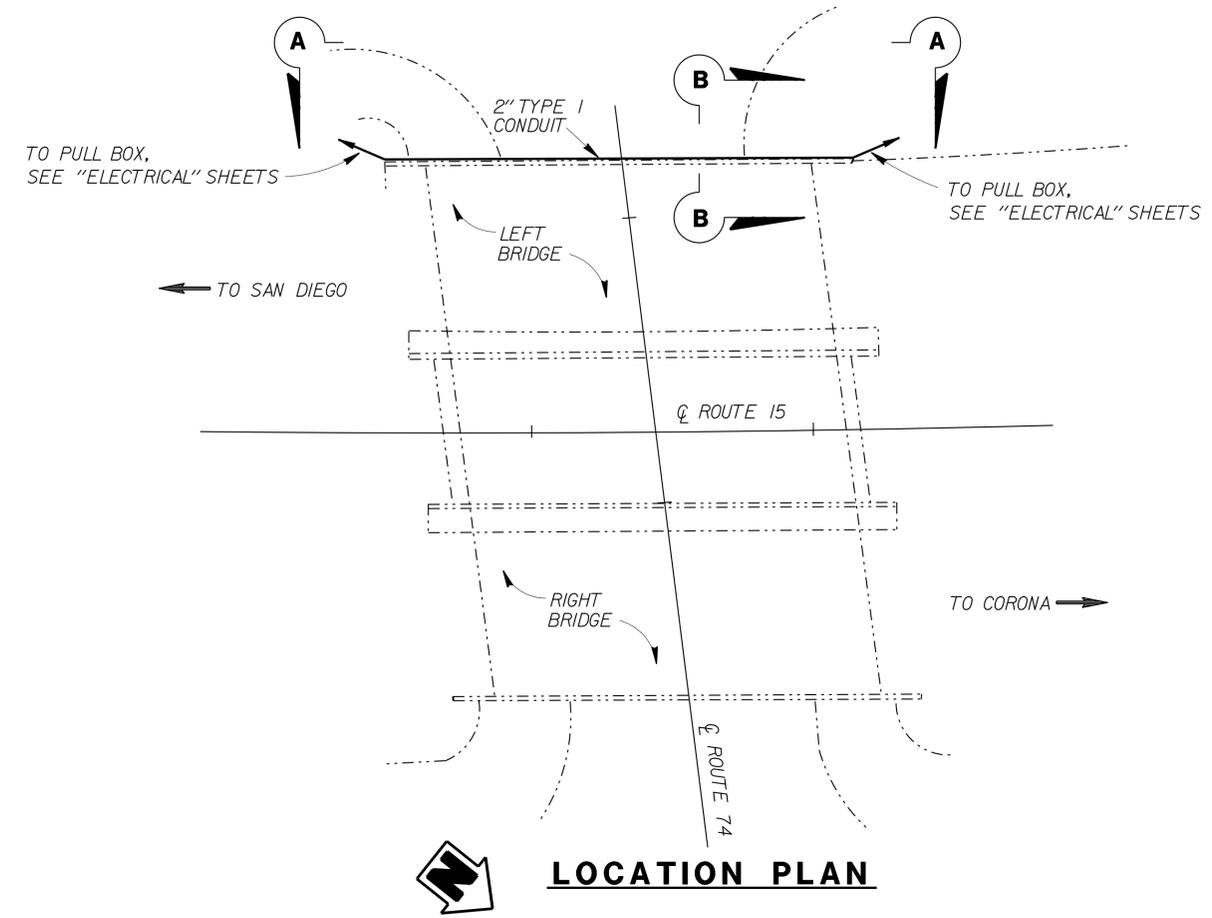
SES-2
SHEET 2 OF 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	Riv	15	RO.0/41.8	514	515
REGISTERED CIVIL ENGINEER			DATE	5/31/16	
PLANS APPROVAL DATE			6/1/16		
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.					

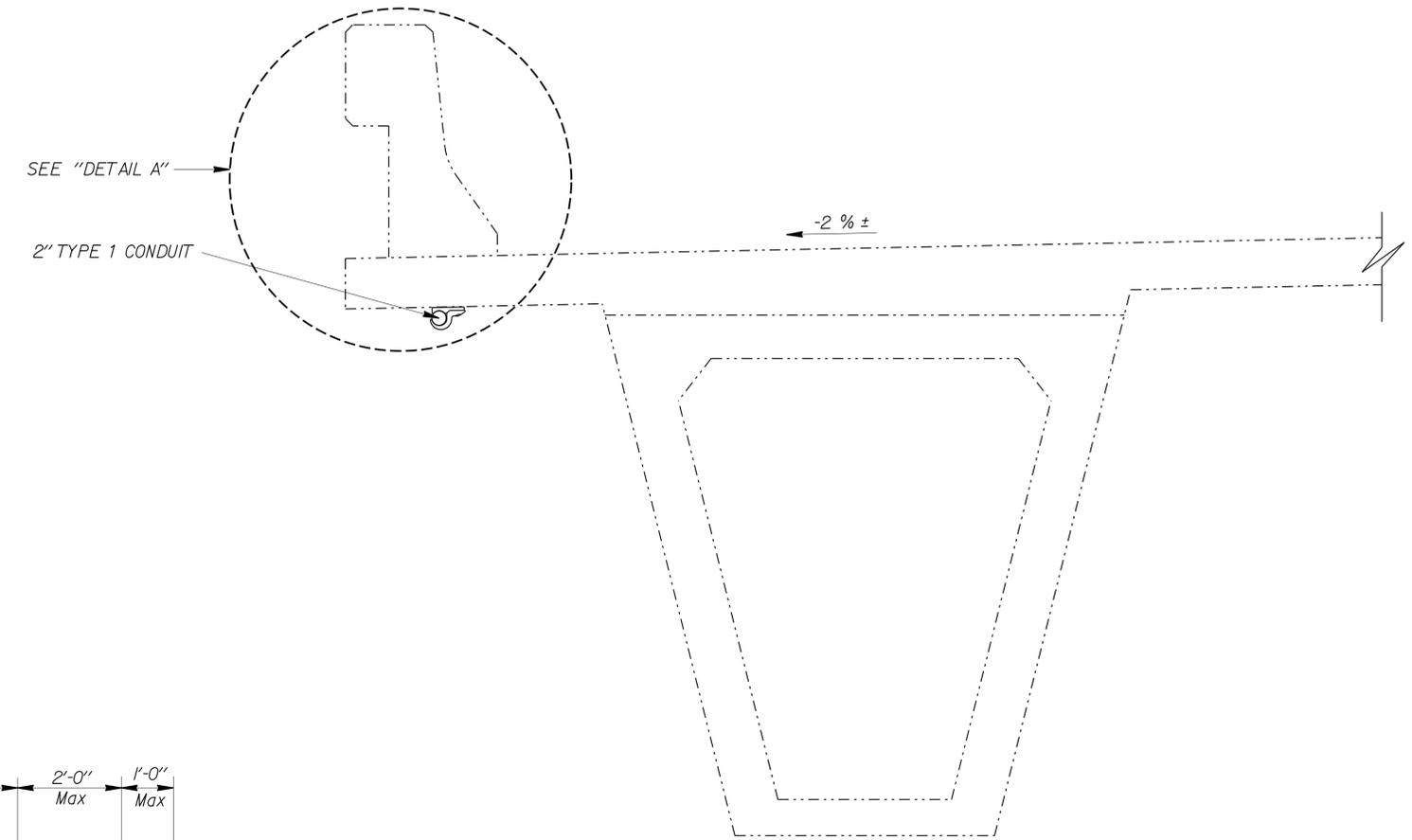


NOTES:

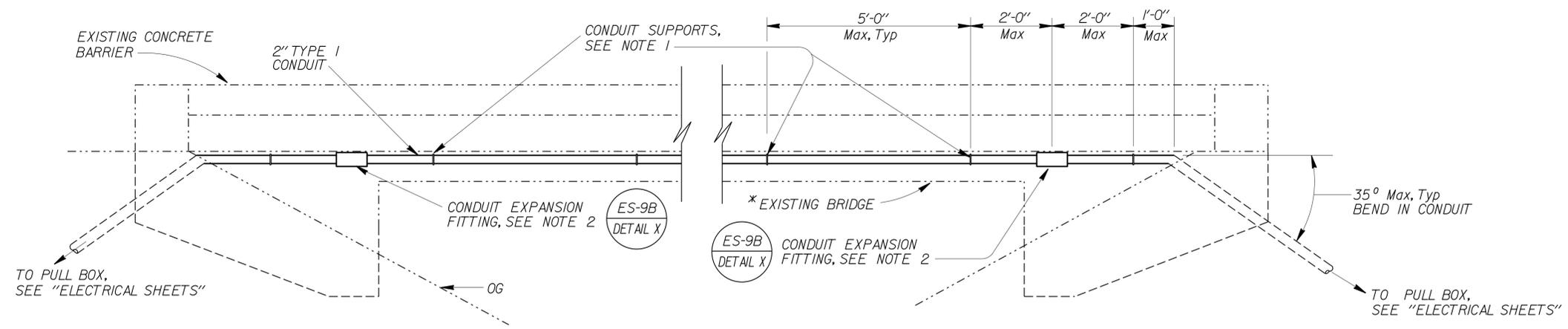
1. Conduit supports to be spaced at 5 foot maximum except at expansion joints, the spacing is 2 foot maximum, and at conduit bends the spacing is 1 foot maximum.
2. Locate conduit expansion fitting adjacent to existing bridge expansion joint.
3. For fiber optic conduit, see sheet SES-1.
4. For "DETAIL A", see "MISCELLANEOUS DETAILS" sheet.



LOCATION PLAN



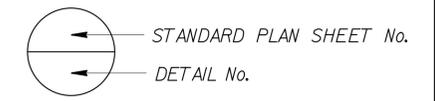
LEFT BRIDGE SECTION B-B



ELECTRICAL CONDUIT MOUNTED ON BRIDGE SECTION A-A

* BRIDGE TYPE AND CONFIGURATION MAY VARY

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



BRANCH CHIEF **JEFF WOODY**

DESIGN	BY	JUAN JAUREGUI	CHECKED	ARLENA GUTIERREZ
DETAILS	BY	R. YEE	CHECKED	JUAN JAUREGUI
QUANTITIES	BY		CHECKED	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **A**

NO SCALE

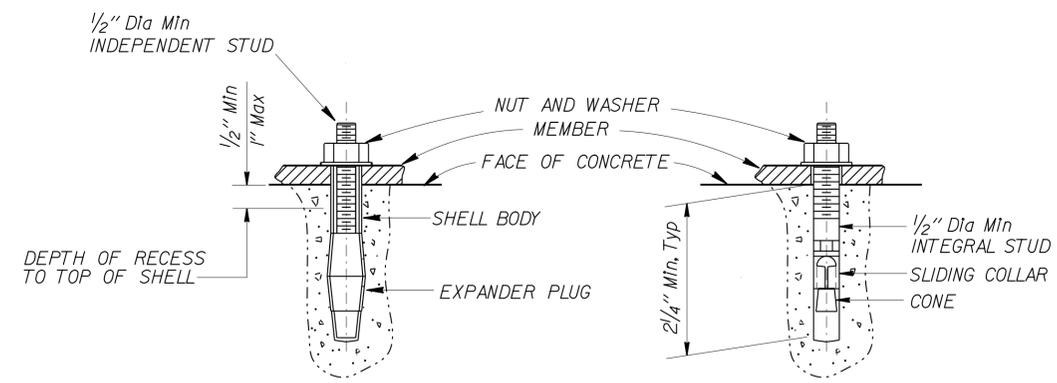
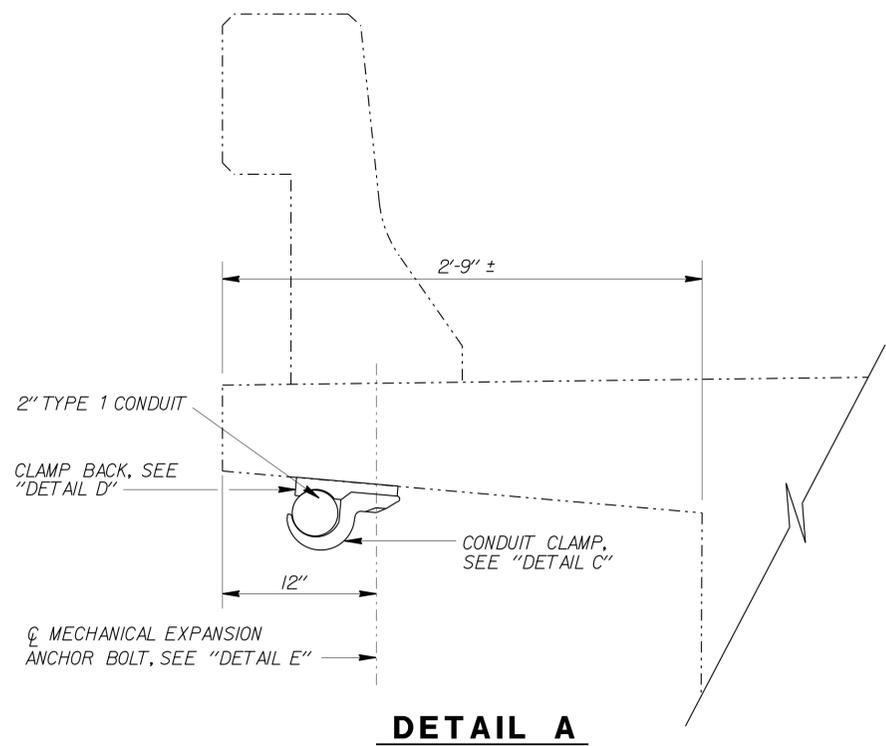
BRIDGE NO.	56-0723L
POST MILE	22.3

ROUTE 15/74 SEPARATION
LOCATION PLAN AND SECTIONS

SES-3

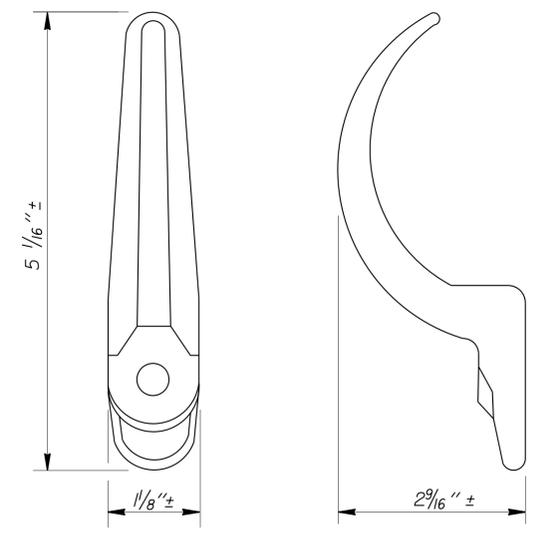
USERNAME => s102458 DATE PLOTTED => 19-SEP-2016 TIME PLOTTED => 12:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
08	Riv	15	RO.0/41.8	515	515
REGISTERED CIVIL ENGINEER			DATE	5/31/16	
PLANS APPROVAL DATE			6/1/16		
REGISTERED PROFESSIONAL ENGINEER JUAN J. JAUREGUI JR. No. C63939 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

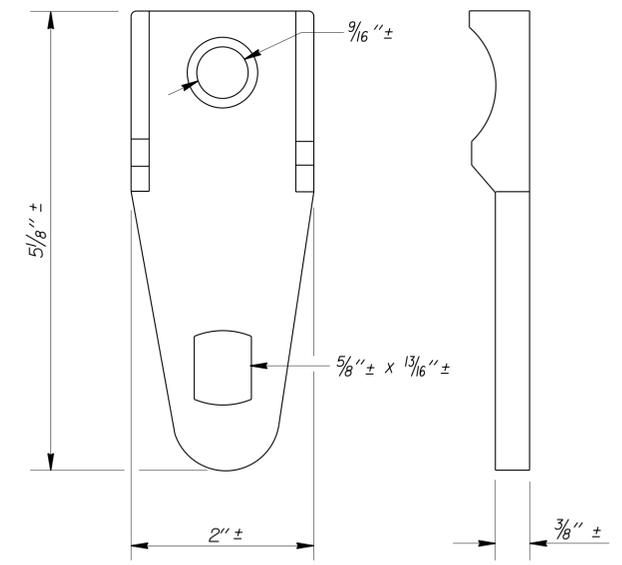


TYP. SHELL-TYPE **TYP. STUD-TYPE**
MECHANICAL EXPANSION ANCHOR BOLTS
DETAIL E

NOTE:
 Threaded mechanical expansion anchor must be galvanized.

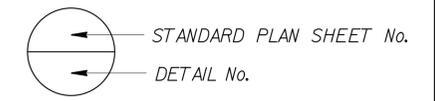


GALVANIZED MALLEABLE IRON
CONDUIT CLAMP
DETAIL C



GALVANIZED MALLEABLE IRON
CLAMP BACK
DETAIL D

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



BRANCH CHIEF JEFF WOODY	DESIGN BY JUAN JAUREGUI	CHECKED ARLENA GUTIERREZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH A	BRIDGE NO. 56-0723L	ROUTE 15/74 SEPARATION ELECTRICAL CONDUIT MOUNTING DETAILS	SES-4
	DETAILS BY R. YEE	CHECKED JUAN JAUREGUI			POST MILE 22.3		
QUANTITIES BY		CHECKED	UNIT: 3619 PROJECT ID & PHASE: 0814000175		CONTRACT No.: 08-067704		SHEET 4 OF 4