

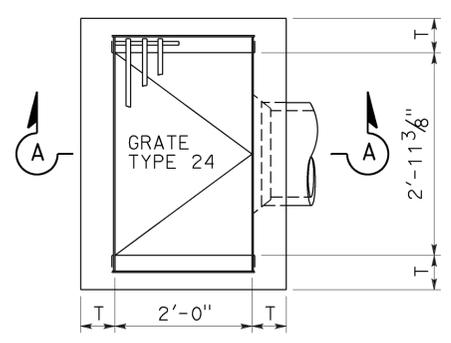
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	201	265

REGISTERED CIVIL ENGINEER
 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.

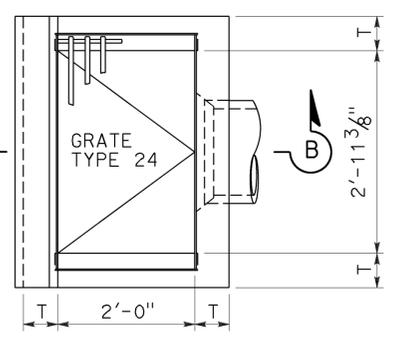
TO ACCOMPANY PLANS DATED 7-1-16

NOTE:
 1. For notes and Table 2, See Revised Standard Plan RSP D72C.

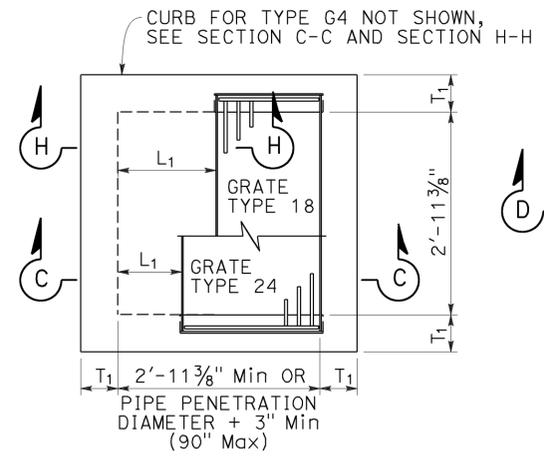
	T ₁	Vert BARS
L ₁ AND L ₂ < 2'-10"	9"	#4 @ 12
L ₁ OR L ₂ > 2'-10"	12"	#5 @ 12



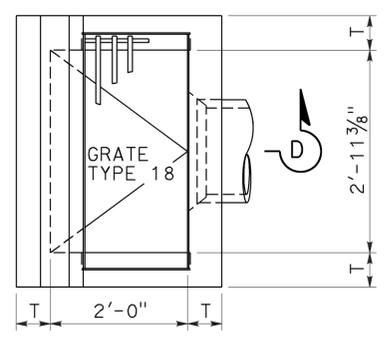
PLAN TYPE G1



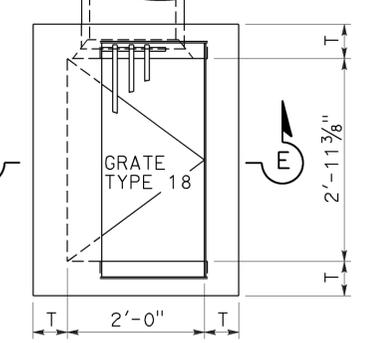
PLAN TYPE G3



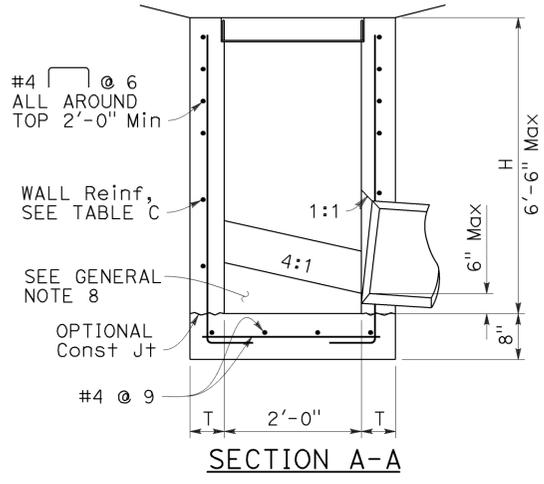
PLAN STANDARD TYPE G2 OR G4



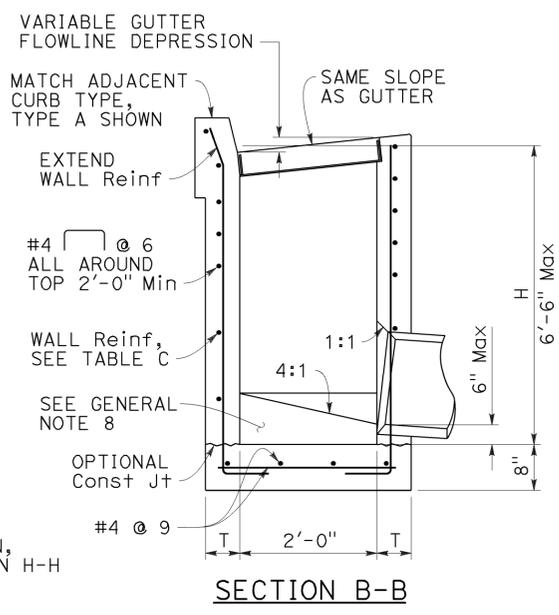
PLAN TYPE G5



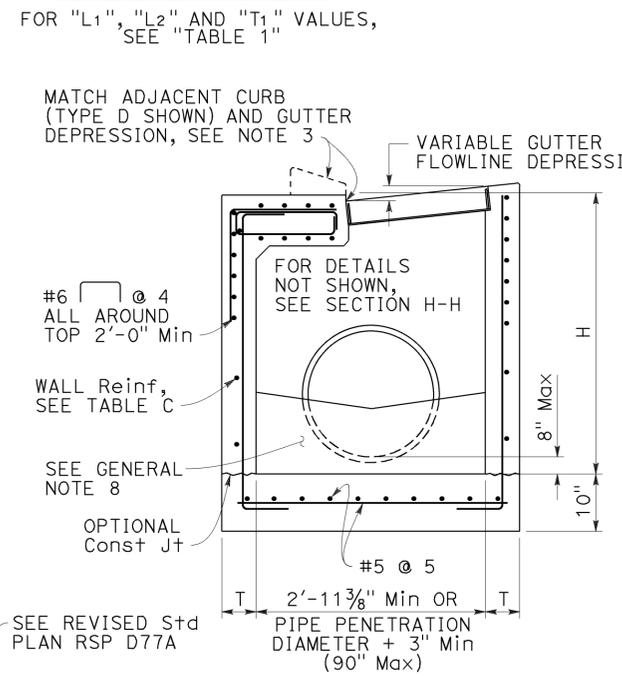
PLAN TYPE G6



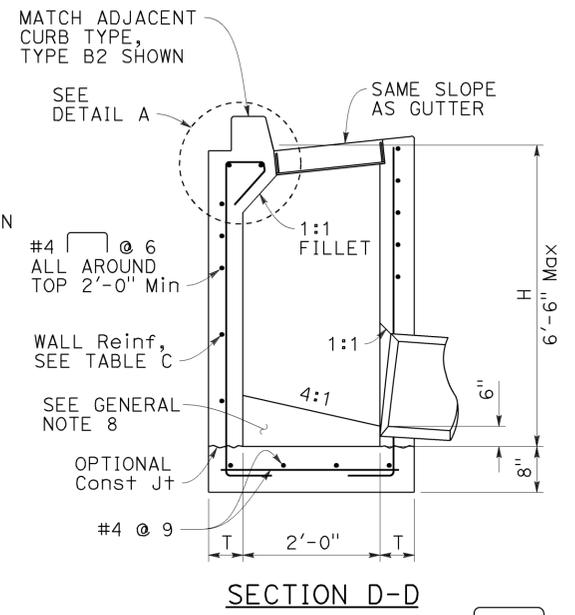
SECTION A-A



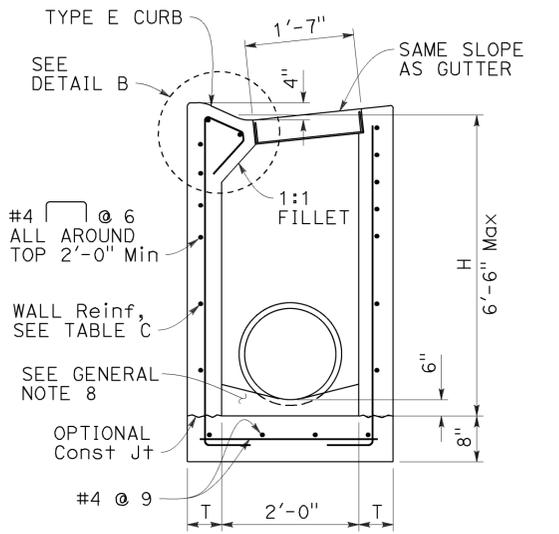
SECTION B-B



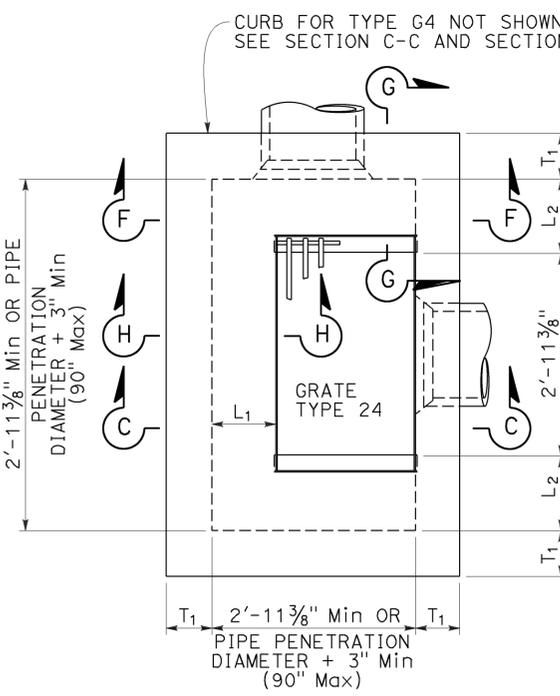
SECTION C-C



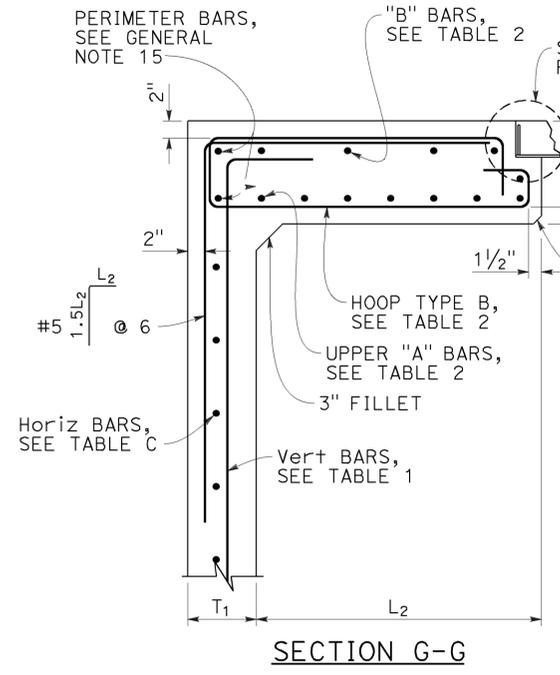
SECTION D-D



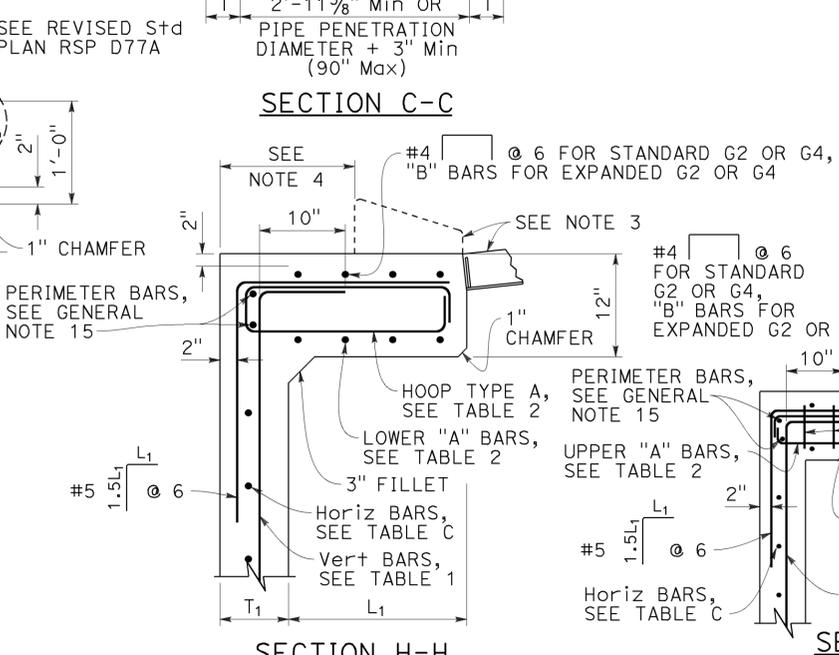
SECTION E-E



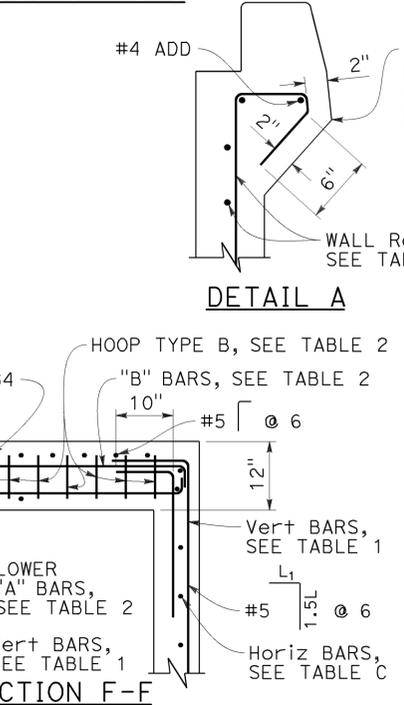
PLAN EXPANDED TYPE G2 OR G4



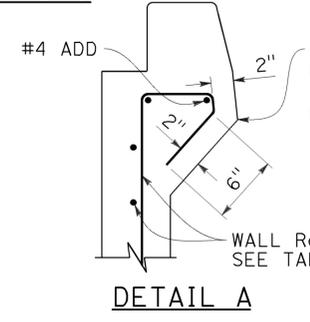
SECTION G-G



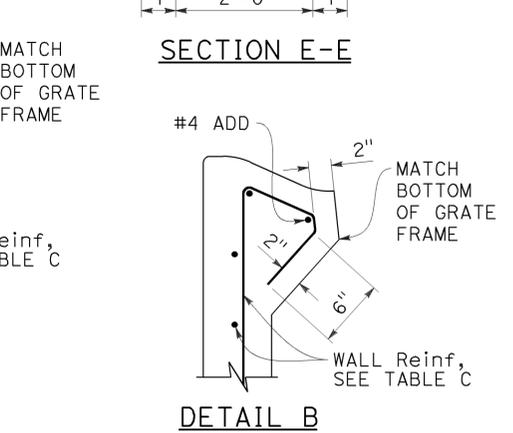
SECTION H-H



SECTION F-F



DETAIL A



DETAIL B

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
 TYPES G1, G2, G3,
 G4, G5 AND G6**
 NO SCALE

RSP D72A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72B

2010 REVISED STANDARD PLAN RSP D72B

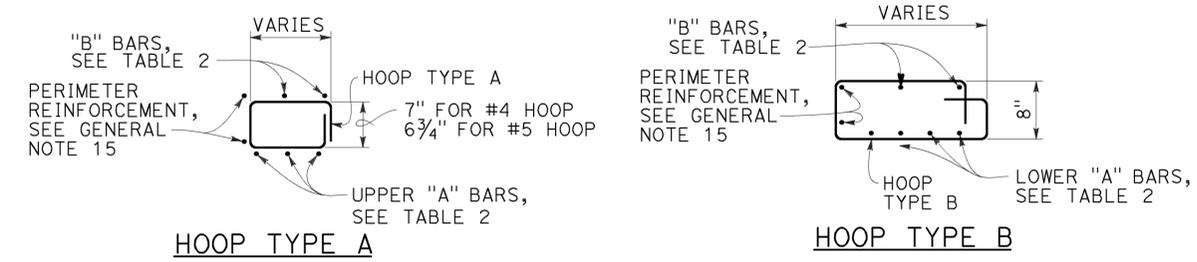
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	202	265


 REGISTERED CIVIL ENGINEER
 July 15, 2016
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TO ACCOMPANY PLANS DATED 7-1-16



NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables and quantities.
2. Type G4 inlet can use Gate Type 18 or 24. Type G2 inlet uses Gate Type 24.
3. Type G4 inlet details are similar to Type G2 inlet details, except for the addition of a curb and sloped grate to match the adjacent curb and gutter depression.
4. Dimension will vary with different grates, curb types, box width and wall thickness.

TABLE 2 - TOP SLAB REINFORCEMENT

	W/ CURB	W/O CURB
"A" BARS	#4 @ 5 (2 BARS Min)	#5 @ 5 (3 BARS Min)
"B" BARS	#4 @ 10 (2 BARS Min)	#4 @ 12 (2 BARS Min)
HOOPS ("A" & "B")	#4 @ 5	#5 @ 5

ROTATE "A" AND "B" BARS SO HOOKED ENDS WILL MAINTAIN 2" CLEAR COVERAGE.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CIP DRAINAGE INLETS
TYPES G1, G2, G3,
G4, G5 AND G6
 NO SCALE

RSP D72C DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72C

2010 REVISED STANDARD PLAN RSP D72C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	203	265

 REGISTERED CIVIL ENGINEER		
July 15, 2016 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>		

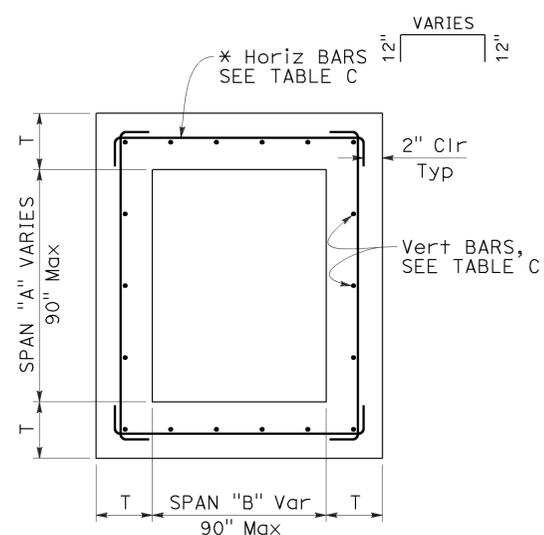
GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D72G.
- Wall reinforcement must be placed in the center of the wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Reinforcement spacing is in inches unless otherwise noted.
- Steps - None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout fill on top of the bottom slab. The additional volume to achieve the 4:1 slope may also be achieved by casting the bottom slab and fill as a composite concrete element.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Revised Standard Plans RSP A87A and RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Cast-in-place (CIP) inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation.
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.

DESIGN NOTES:

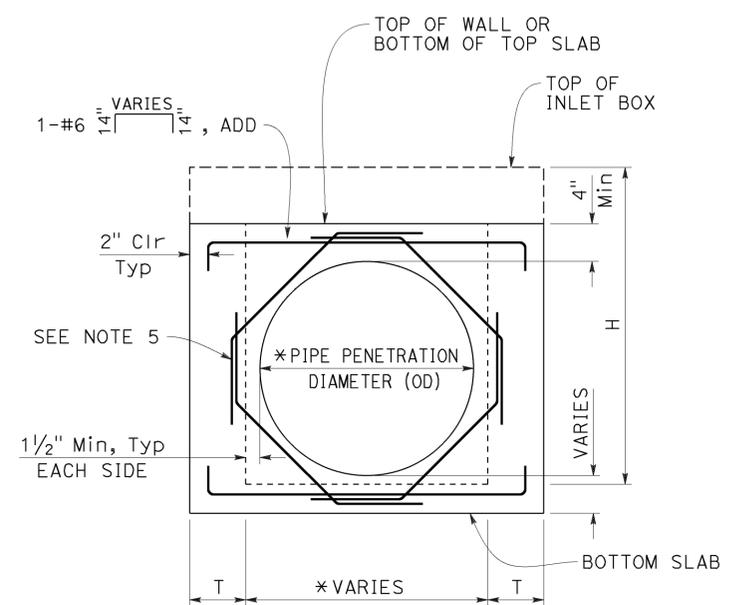
- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2): HL-93, consists of design truck or tandem, and design lane load. Dynamic Load Allowance, IM = 33%. Multiple Presence Factor, m = 1.0. Design lane load was excluded in Top Slab design. A wheel load of 8 kips without impact factor was used for top slabs that are above a curb.
- Earth Load:
Vertical pressure = 140 pcf
Lateral pressure:
= 100 pcf for walls with flat embankment
= 140 pcf For walls with slope embankment, 1.5:1 Max
- Downdrag: $\phi = 34^\circ$ and $\gamma_E = 120$ pcf.
- Buoyancy: $\gamma_w = 62.4$ pcf to finished grade
- Reinforced Concrete: $f'_c = 3.6$ ksi, $f_y = 60.0$ ksi.
- Soil pressures shown are factored per AASHTO LRFD and include self-weight, live load and downdrag.

TO ACCOMPANY PLANS DATED 7-1-16



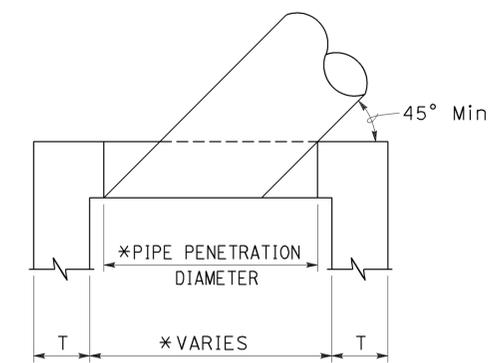
TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS



TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"



SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

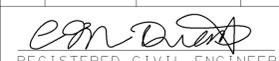
CIP DRAINAGE INLET NOTES
NO SCALE

RSP D72F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72F

2010 REVISED STANDARD PLAN RSP D72F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	204	265


 REGISTERED CIVIL ENGINEER
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TO ACCOMPANY PLANS DATED 7-1-16

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)
G1	0.95	0.220	SEE NOTE 2	SEE NOTE 2
G2*	2.00	0.411	5.11	0.525
G3	1.03	0.220	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	2.02	0.411	5.14	0.525
G4 (TYPE 24)*	1.99	0.411	5.10	0.525
G5	1.02	0.220	SEE NOTE 2	SEE NOTE 2
G6	1.04	0.220	SEE NOTE 2	SEE NOTE 2
OS	1.53	0.278	5.08	0.504
OL7	2.06	0.278	6.17	0.566
OL10	2.85	0.278	6.85	0.566
OL14	3.81	0.278	7.78	0.566
OL21	5.71	0.278	9.62	0.566
GOL7	2.48	0.313	6.89	0.630
GOL10	3.41	0.313	7.85	0.630
GT1	1.72	0.248	SEE NOTE 2	SEE NOTE 2
GT2	2.93	0.530	7.73	0.762
GT3	1.74	0.348	SEE NOTE 2	SEE NOTE 2
GT4	2.83	0.530	7.62	0.762
GO	1.26	0.245	4.90	0.506
GDO	1.74	0.322	6.33	0.647

* Quantities are based on the minimum interior dimensions.

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)	H=8'-1" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)
G1	118	22.20	SEE NOTE 2	SEE NOTE 2
G2*	729	86.48	1794	171.79
G3	118	22.20	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	647	86.48	1675	171.79
G4 (TYPE 24)*	647	86.48	1675	171.79
G5	118	22.20	SEE NOTE 2	SEE NOTE 2
G6	118	22.20	SEE NOTE 2	SEE NOTE 2
OS	245	49.88	1057	120.77
OL7	458	50.53	1324	126.75
OL10	729	50.53	1595	126.75
OL14	982	50.53	1849	126.75
OL21	1453	50.53	2320	126.75
GOL7	644	83.57	1969	148.79
GOL10	883	83.57	2208	148.79
GT1	486	96.91	SEE NOTE 2	SEE NOTE 2
GT2	1040	117.08	2543	233.37
GT3	486	96.91	SEE NOTE 2	SEE NOTE 2
GT4	1001	117.08	2556	237.88
GO	308	32.44	1013	96.56
GDO	519	57.09	1654	165.66

* Quantities are based on the minimum interior dimensions.

INLET	CURB USED IN QUANTITIES
G1	-
G2	-
G3	A1-6
G4 (Type 18)	A1-6
G4 (Type 24)	A1-6
G5	B1-4
G6	1/2E
OS	-
OL7	-
OL10	-
OL14	-
OL21	-
GOL7	-
GOL10	-
GT1	D-6
GT2	E
GT3	A2-8
GT4	A2-8
GO	-
GDO	-

TYPE	H≤8 (T=6",UON)		8<H≤20 (T=11",UON)	
	HORIZ	VERTICAL	HORIZ	VERTICAL
OS	#4 @ 8	#4 @ 6	#5 @ 6	#6 @ 4.5
OL	#4 @ 6	#4 @ 6	#5 @ 6	#6 @ 4.5
GOL	#5 @ 6	#5 @ 8	#6 @ 5	#6 @ 4.5
G1 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G2	T=9" #5 @ 5	#5 @ 5	T=11" #6 @ 4	#6 @ 4.5
G3 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G4	T=9" #5 @ 5	#5 @ 5	T=11" #6 @ 4	#6 @ 4.5
G5 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G6 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
GT1 (H≤6-6")	#5 @ 6	#5 @ 6	-	-
GT2	T=8" #5 @ 6	#5 @ 6	#6 @ 4	#6 @ 4.5
GT3 (H≤6-6")	#5 @ 6	#5 @ 6	-	-
GT4	T=8" #5 @ 6	#5 @ 6	#6 @ 4	#6 @ 4.5
GO	#4 @ 9	#4 @ 6	#4 @ 6	#6 @ 4.5
GDO	#4 @ 6	#4 @ 6	#5 @ 4	#6 @ 4.5

SOIL PRESSURE BELOW BASE SLAB (ksf)		
TYPE	H=8'-0"	8'-0" < H ≤ 20'-0"
OS	2.93	5.56
OL*	2.93	5.56
GOL*	2.50	5.06
G1	3.67	-
G2	2.99	5.91
G3	3.67	-
G4	2.99	5.91
G5	3.67	-
G6	3.67	-
GT1	3.66	-
GT2	3.91	6.07
GT3	3.86	-
GT4	3.91	6.07
GO	3.42	6.11
GDO	2.52	6.95

* Main Box

NOTES:

1. No deduction or adjustment was made to the quantities of concrete and reinforcement for pipe openings, floor alternatives or curb type.
2. Maximum allowable height is 6'-6".
3. Quantities are approximate and for design purposes only.
4. Design is based on envelope of level and sloped ground.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET TABLES

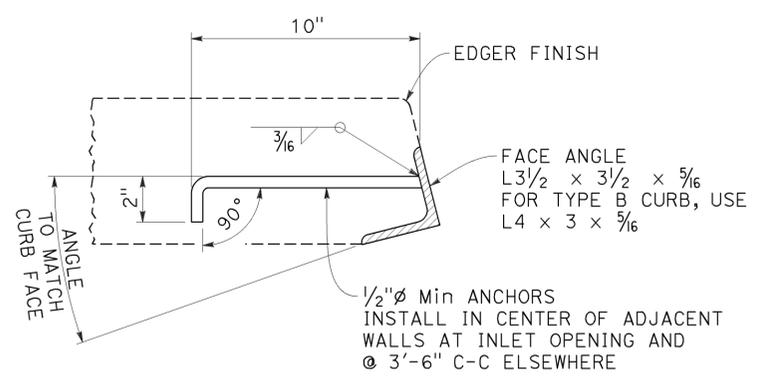
NO SCALE

RSP D72G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

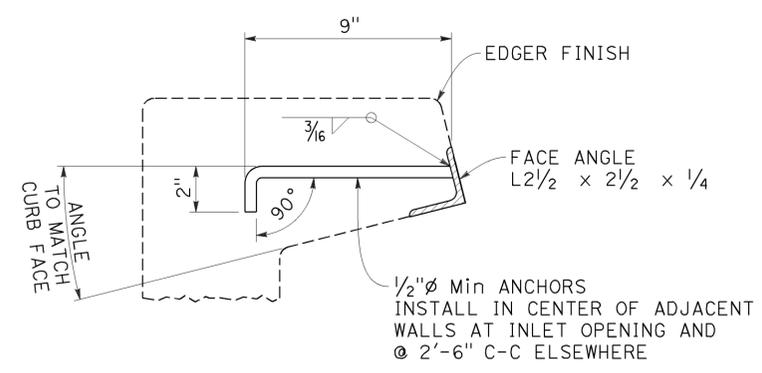
REVISED STANDARD PLAN RSP D72G

2010 REVISED STANDARD PLAN RSP D72G

FACE ANGLE DETAIL "A"	
LENGTH OF CURB OPENING	No. OF ANCHORS
3'-6" OR LESS	2
7'-0"	3
10'-0"	4
14'-0"	5
21'-0"	7



DETAIL "A"

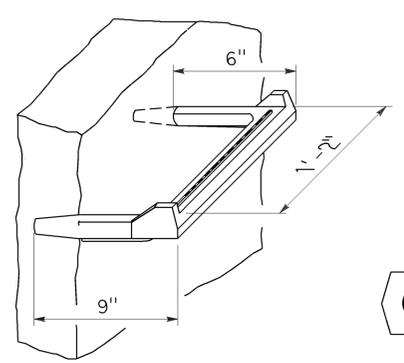


DETAIL "B"

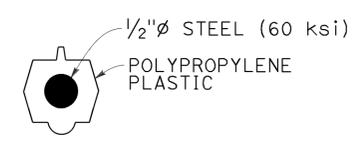
FACE ANGLE AND ANCHOR

NOTE:

1. When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.

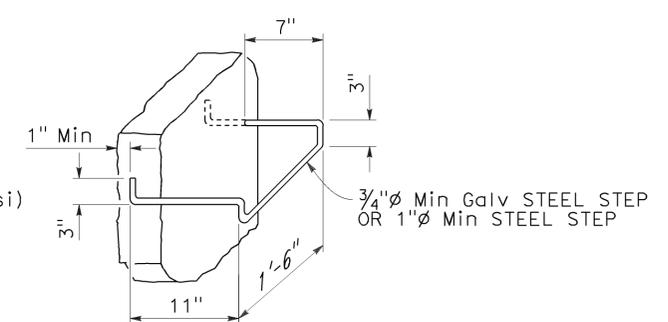


STEP INSERT

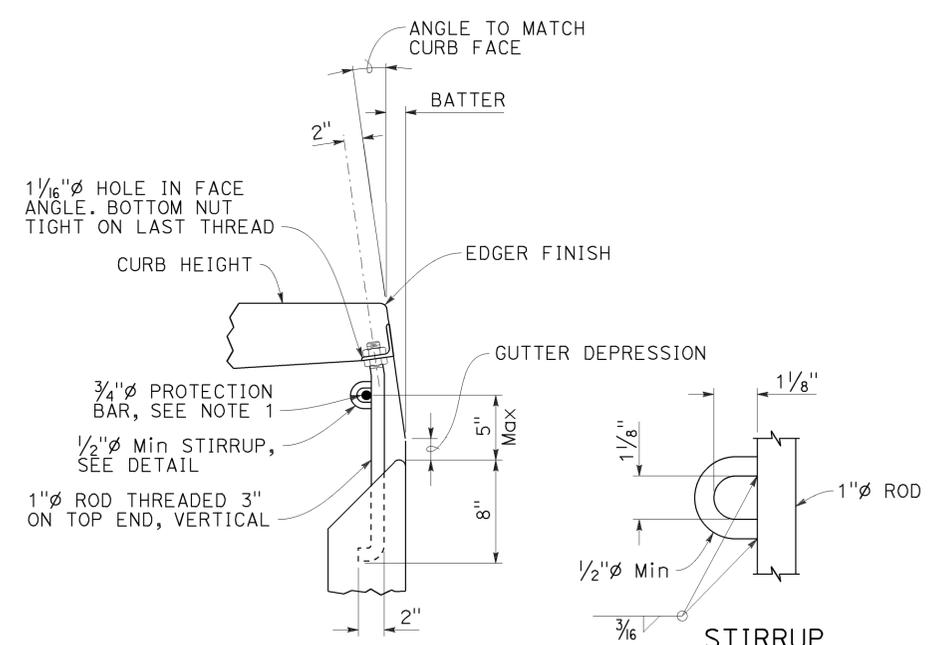


TYPICAL SECTION
(STEP INSERT)

STEP DETAILS



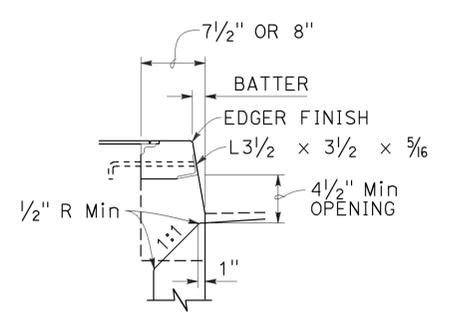
BAR STEP



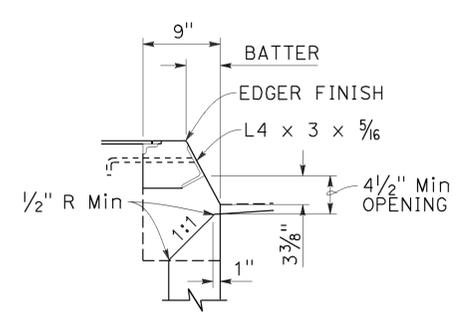
DETAIL "C"

CURB SUPPORT

CURB SUPPORTS SHALL BE EVENLY SPACED AND MINIMAL IN NUMBER SUCH THAT MAXIMUM SPAN OF UNSUPPORTED CURB IS 7'-0".



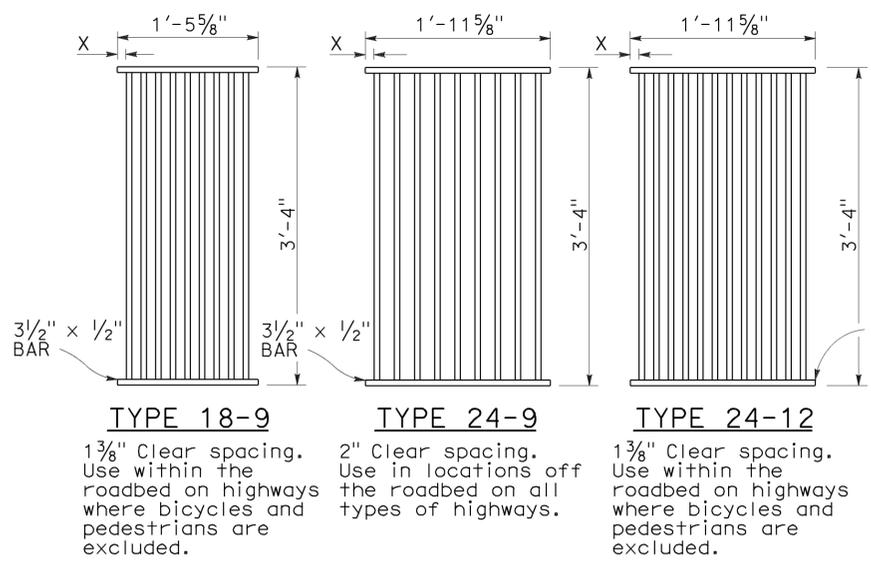
TYPE A CURBS



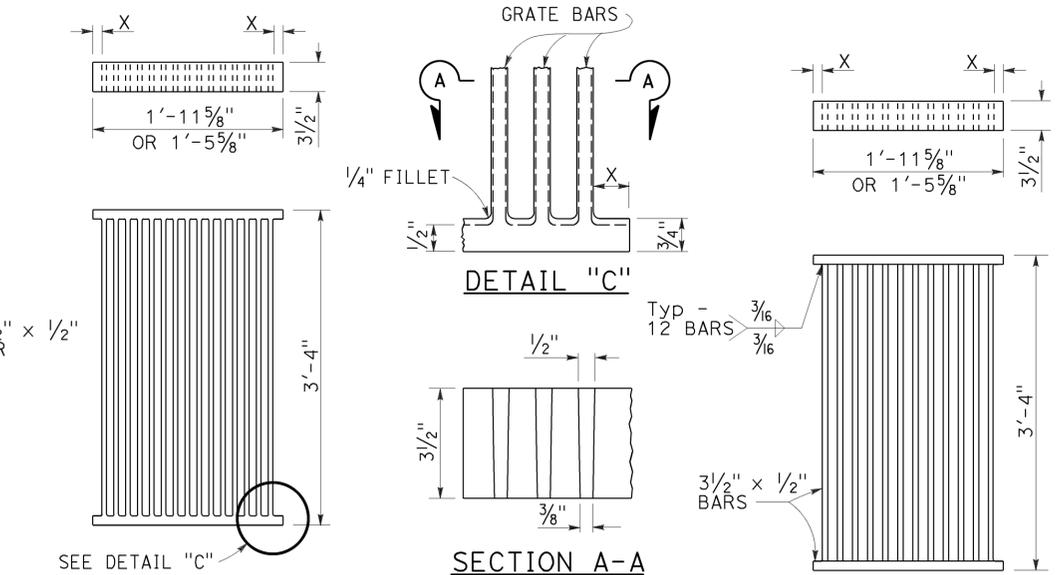
TYPE B CURBS

CURB OPENING DETAILS

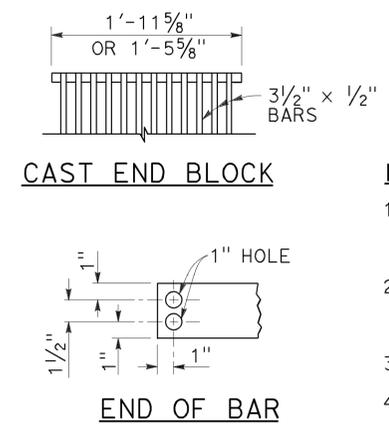
2010 REVISED STANDARD PLAN RSP D74



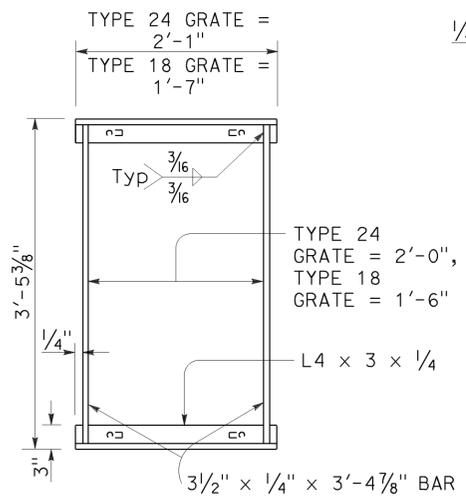
RECTANGULAR GRATE DETAILS
(See table below)



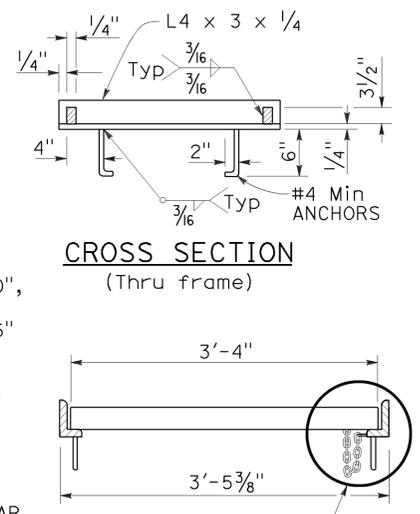
ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE
ALTERNATIVE WELDED GRATE



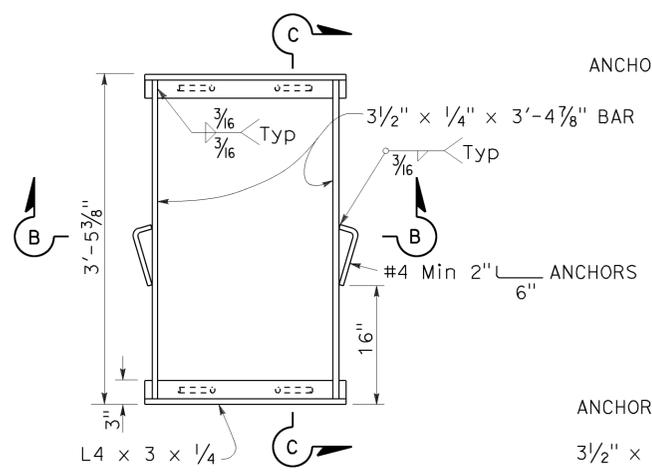
CAST END BLOCK
END OF BAR



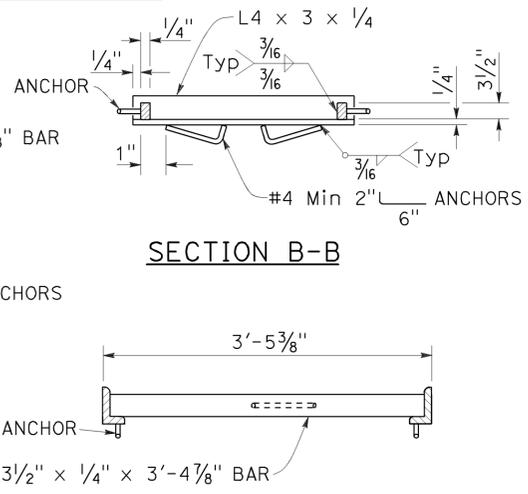
TYPICAL FRAME



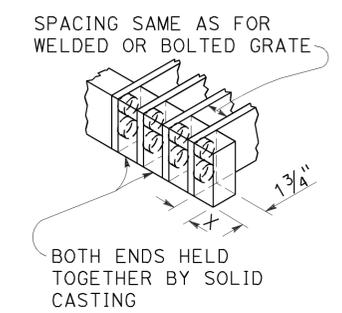
CROSS SECTION (Thru frame)
LONGITUDINAL SECTION (Thru frame and grate)



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



SECTION B-B
SECTION C-C



ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE

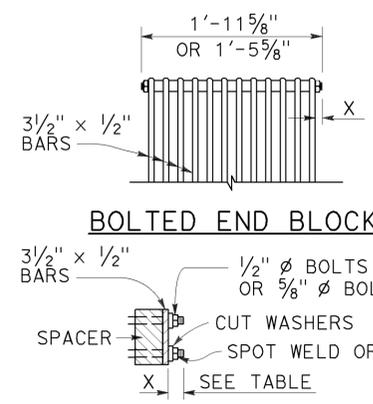
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

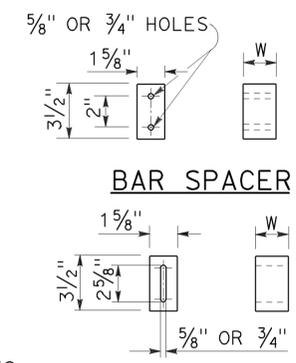
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

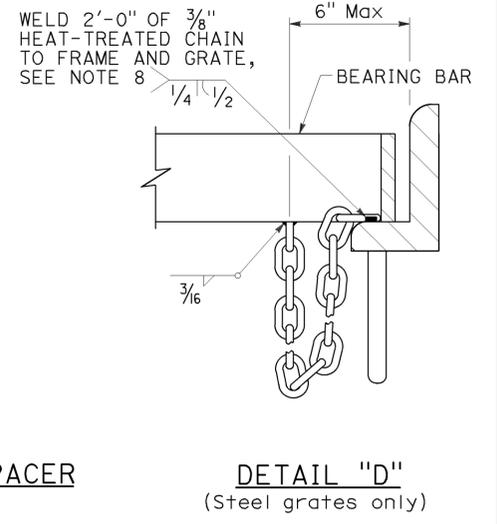
INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



BOLTED END BLOCK
BOLTING DETAIL
ALTERNATIVE BOLTED GRATE



BAR SPACER
ALTERNATIVE SPACER
W = 1 3/8" or 2"



DETAIL "D"
(Steel grates only)

- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 - Rounded top of bars optional on all grates.
 - Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
 - Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 - Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 - Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
 - Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.

GRATE DETAILS No. 1
NO SCALE

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

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

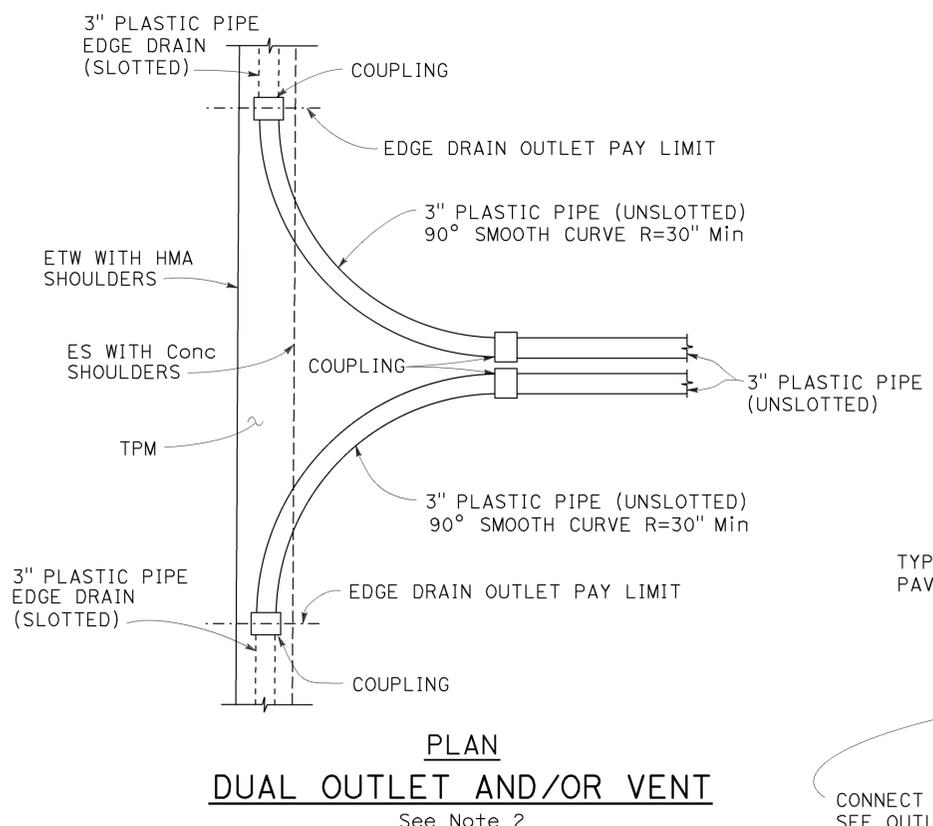
REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

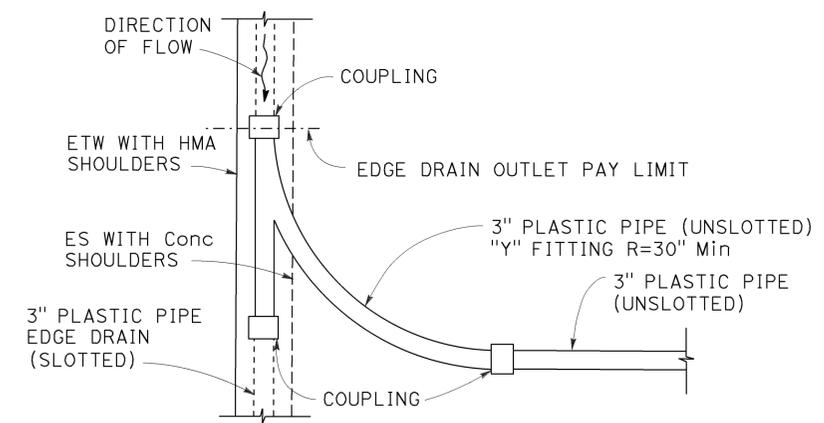
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	207	265

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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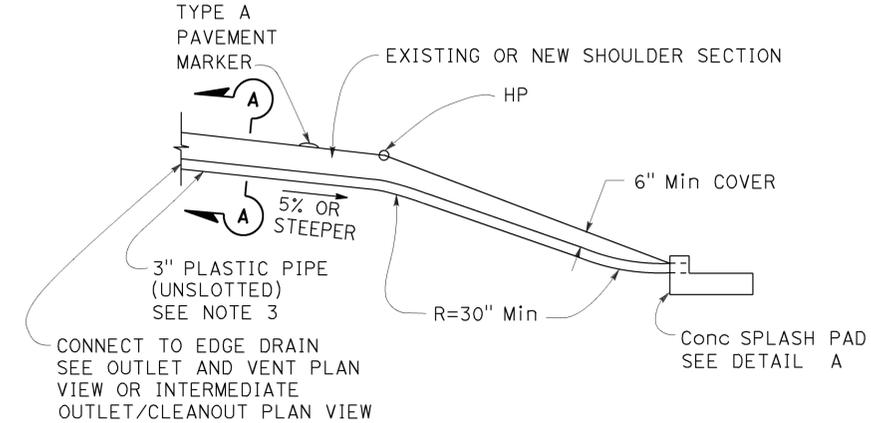
2010 REVISED STANDARD PLAN RSP D99B



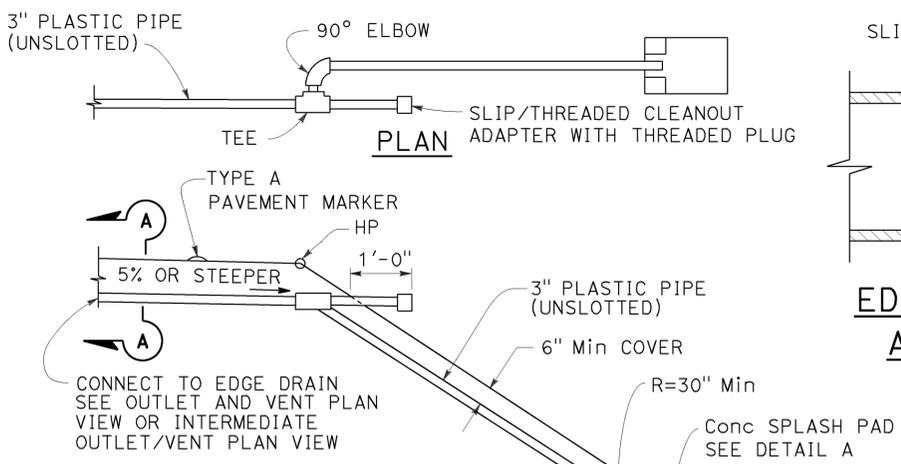
PLAN
DUAL OUTLET AND/OR VENT
See Note 2



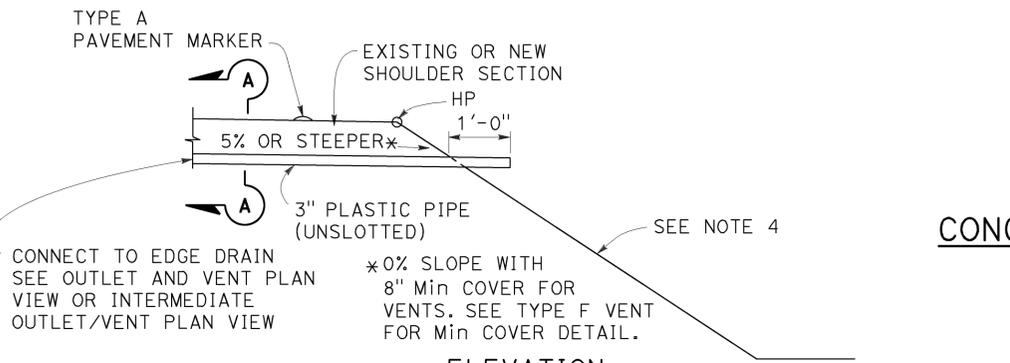
PLAN
INTERMEDIATE OUTLET
See Note 2



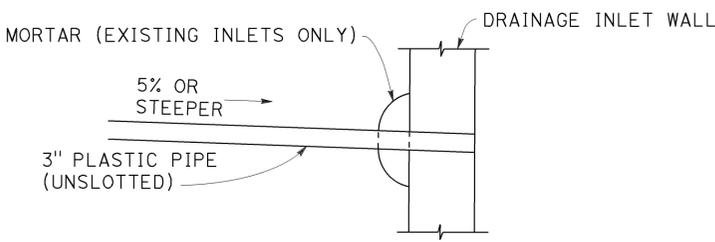
ELEVATION
TYPE A OUTLET



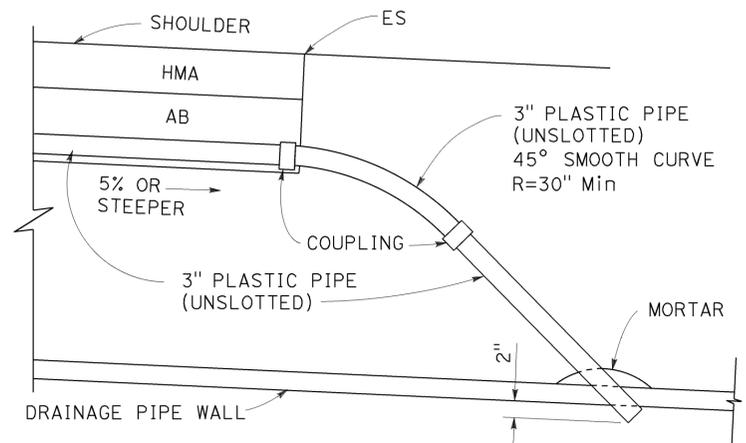
ELEVATION
TYPE B OUTLET



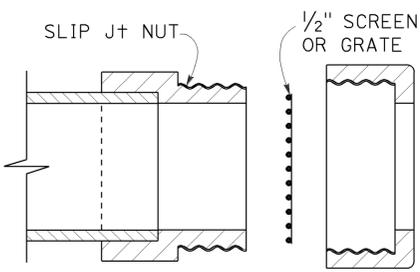
ELEVATION
TYPE C OUTLET AND/OR VENT



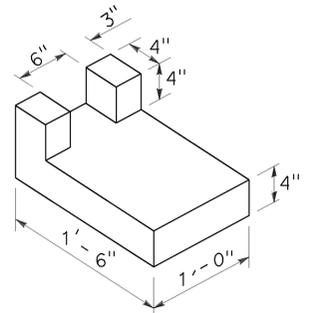
ELEVATION
TYPE D OUTLET CONNECTION TO DRAINAGE INLET



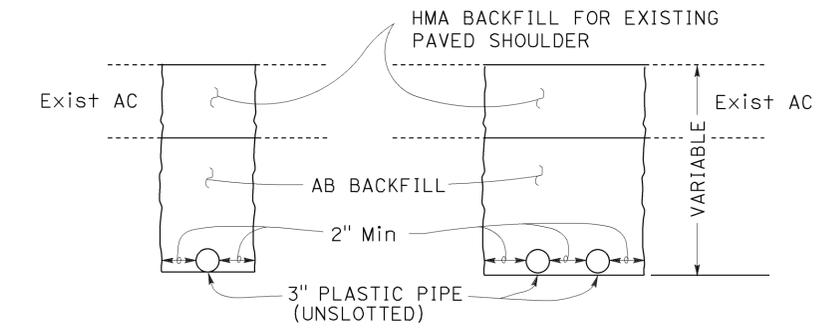
ELEVATION
TYPE E OUTLET CONNECTION TO DRAINAGE PIPE



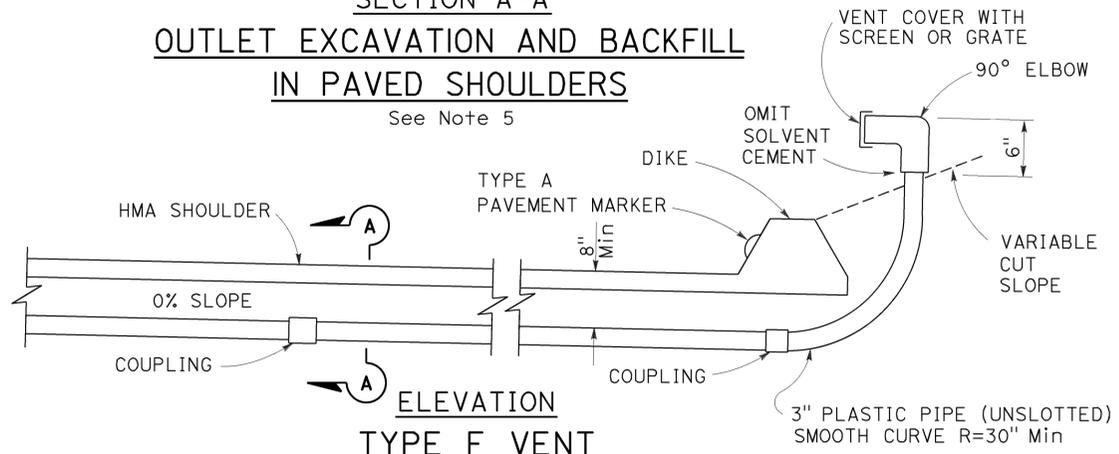
EDGE DRAIN OUTLET AND VENT COVER



DETAIL A
CONCRETE SPLASH PAD



SECTION A-A
OUTLET EXCAVATION AND BACKFILL IN PAVED SHOULDERS
See Note 5



ELEVATION
TYPE F VENT

- NOTES:**
1. See project plans for location and type of outlet and/or vent installations.
 2. The position of slotted plastic pipe and limits of treated permeable material shown are for the Type 1 pavement structure drainage system shown on Revised Standard Plan RSP D99A.
 3. The maximum length of plastic pipe outlet shall be 50'-0" measured from the longitudinal centerline of the collector trench to the pipe outlet. For pipe lengths greater than 50'-0" use Type B outlets.
 4. See project plans for slope protection details at Type C pipe outlets.
 5. Backfill with aggregate base from outside edge paved shoulder to hinge point and backfill with native material in slope area.
 6. See Revised Standard Plan RSP D99C for Type G vent detail used with concrete shoulders.

TO ACCOMPANY PLANS DATED 7-1-16

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EDGE DRAIN OUTLET AND VENT DETAILS
NO SCALE

RSP D99B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99B DATED MAY 20, 2011 - PAGE 212 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D99B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	208	265

Gregory A. Balzer
LICENSED LANDSCAPE ARCHITECT

July 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 7-1-16

A

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

B

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

C

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

D

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

E

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

F

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

G

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

H

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

I

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

L

L LENGTH

M

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

N

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

O

O/C ON CENTER
 OD OUTSIDE DIAMETER
 OL OVERLAP

P

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

Q

Q QUARTER CIRCLE
 QCV QUICK COUPLING VALVE

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

R

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

S

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

T

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

U

UG UNDERGROUND

W

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

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

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

REVISED STANDARD PLAN RSP H1

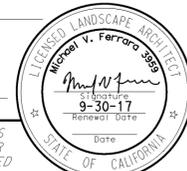
2010 REVISED STANDARD PLAN RSP H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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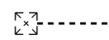
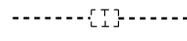
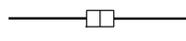
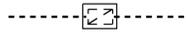
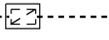
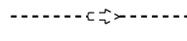
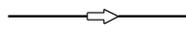
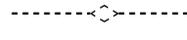
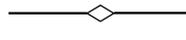
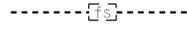
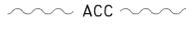
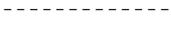
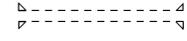
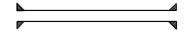
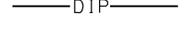
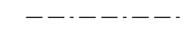
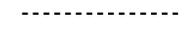
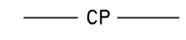
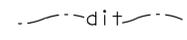

 LICENSED LANDSCAPE ARCHITECT

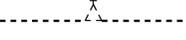
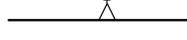
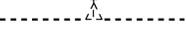
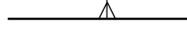
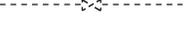
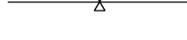
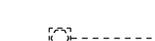
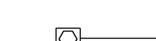
July 15, 2016
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 7-1-16

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

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



* 2 1/2" - A - 2b - 40 - 60

VALVE CODE

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**LANDSCAPE AND EROSION
CONTROL SYMBOLS**

NO SCALE

RSP H2 DATED JULY 15, 2016 SUPERSEDES RSP H2 DATED NOVEMBER 15, 2013 AND RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

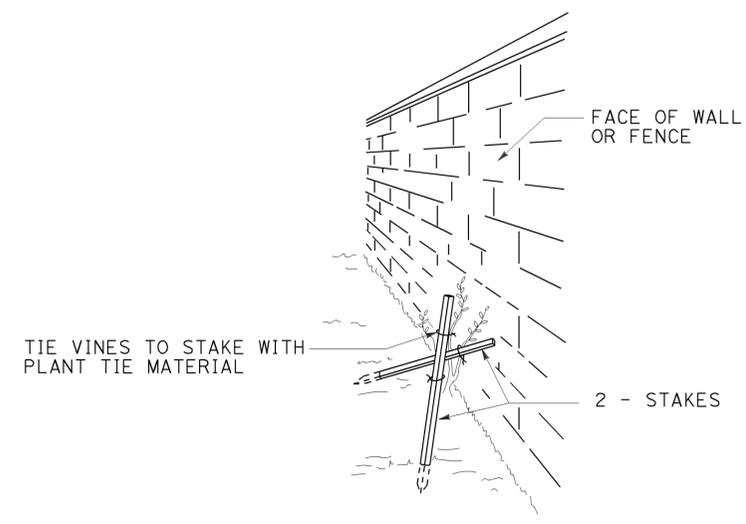
REVISED STANDARD PLAN RSP H2

2010 REVISED STANDARD PLAN RSP H2

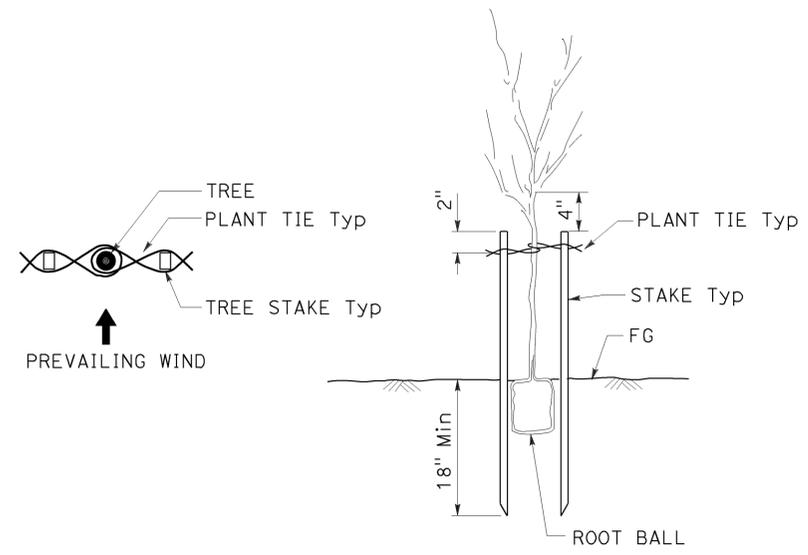
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	210	265

Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
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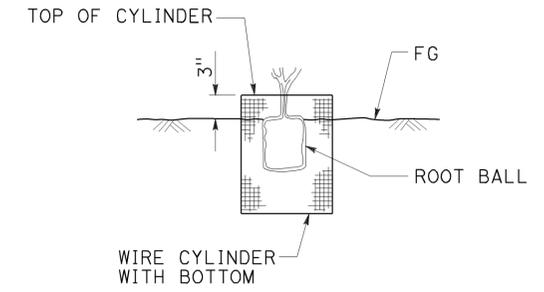
TO ACCOMPANY PLANS DATED 7-1-16



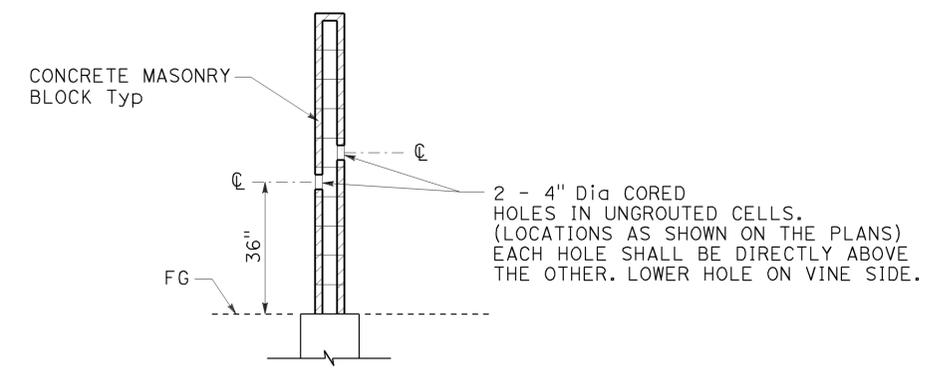
PERSPECTIVE VINE STAKING



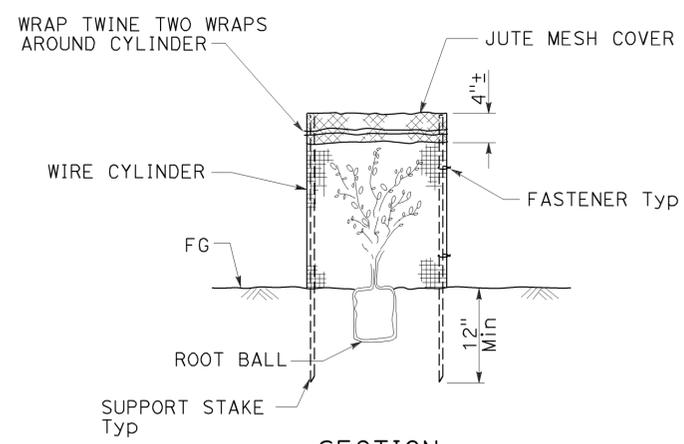
TREE STAKING



SECTION ROOT PROTECTOR



SECTION CORE HOLE (VINE)



SECTION FOLIAGE PROTECTOR

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

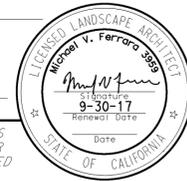
RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H4

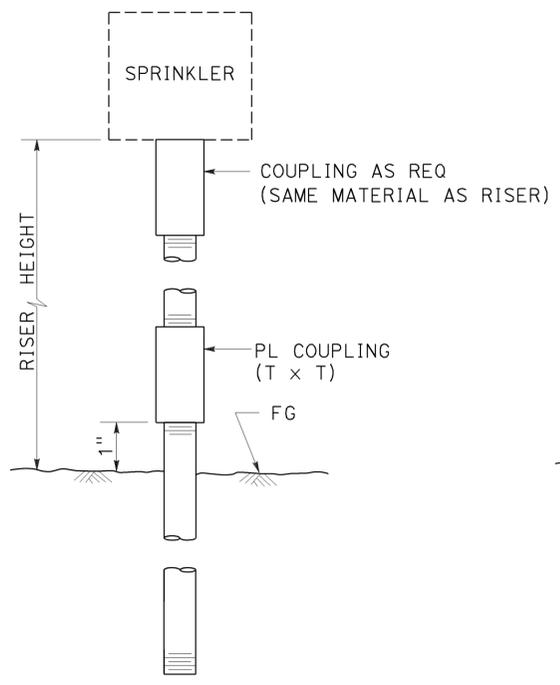
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	211	265

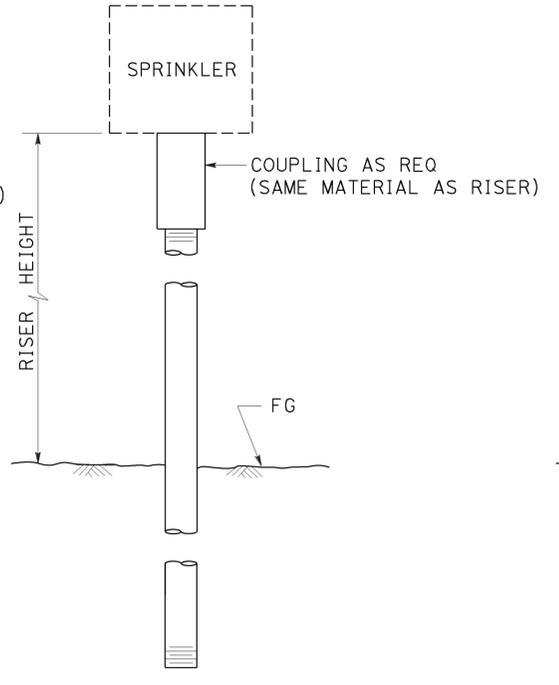
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



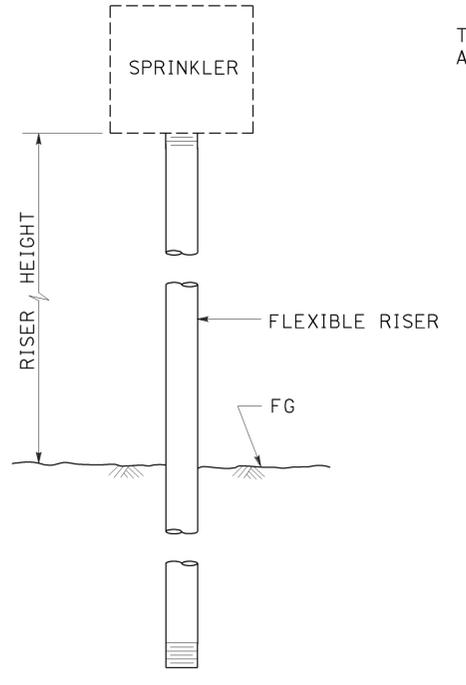
TO ACCOMPANY PLANS DATED 7-1-16



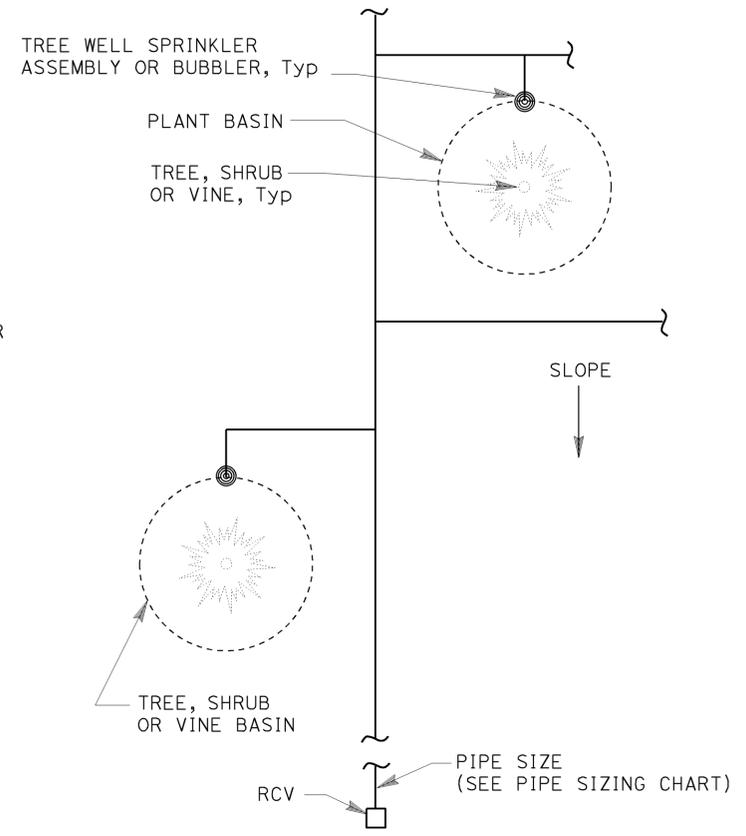
ELEVATION
RISER TYPE I



ELEVATION
RISER TYPE II



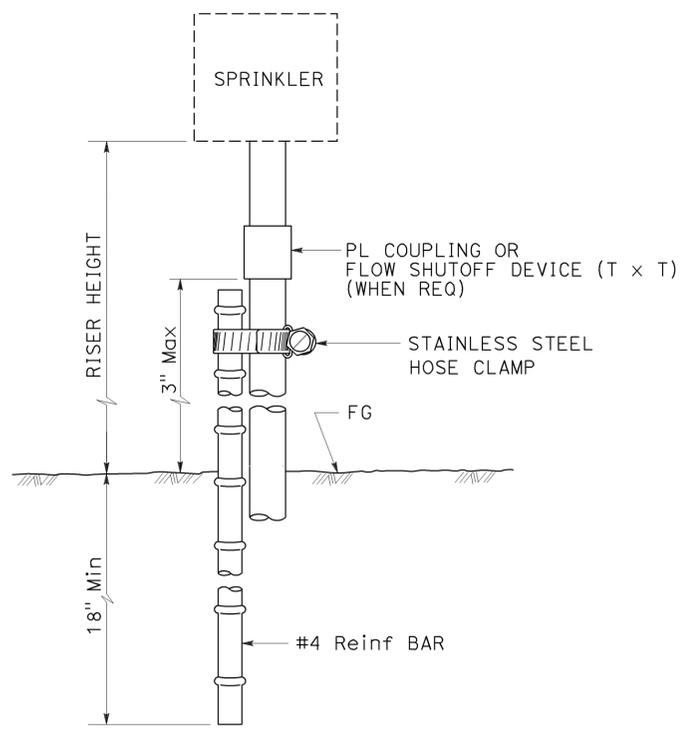
ELEVATION
RISER TYPE III



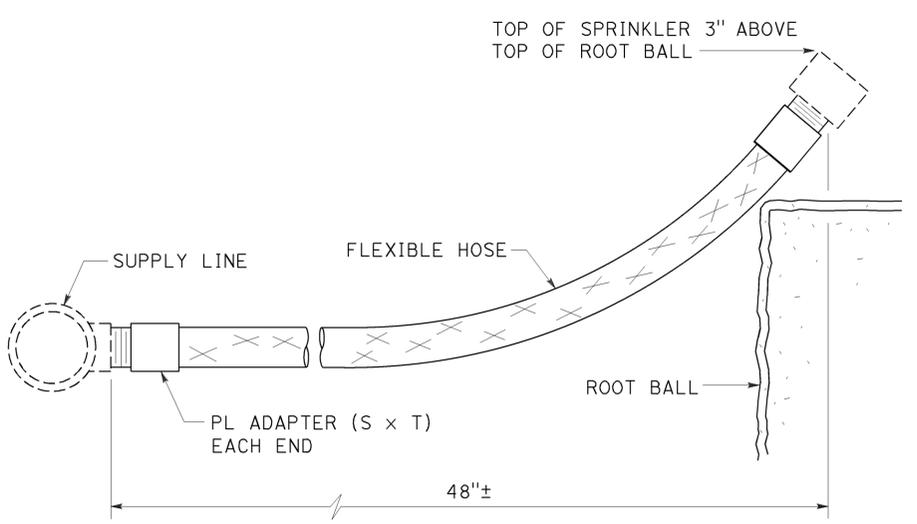
PLAN

NOTES:

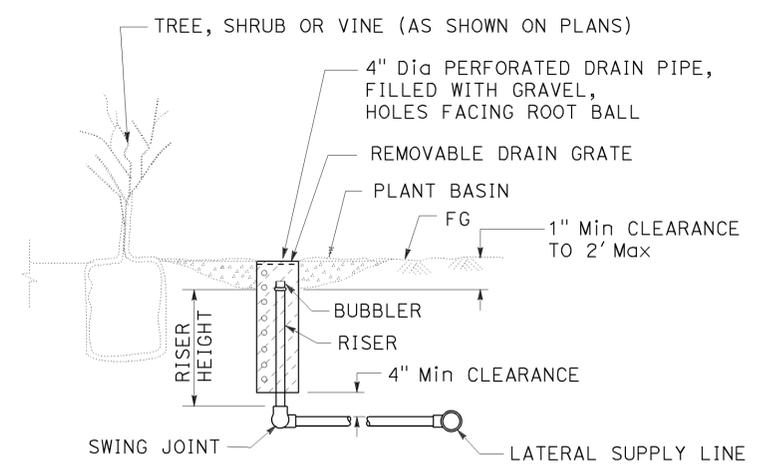
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



ELEVATION
RISER TYPE IV



ELEVATION
RISER TYPE V



SECTION
TREE WELL SPRINKLER ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**LANDSCAPE DETAILS
(RISER SPRINKLER ASSEMBLY)**
NO SCALE

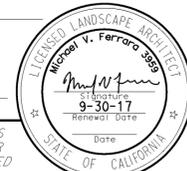
RSP H5 DATED JULY 15, 2016 SUPERSEDES RSP H5 DATED JULY 19, 2013 AND STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H5

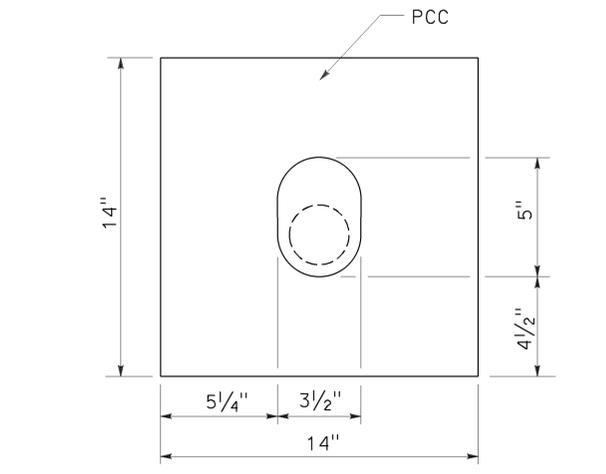
2010 REVISED STANDARD PLAN RSP H5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	212	265

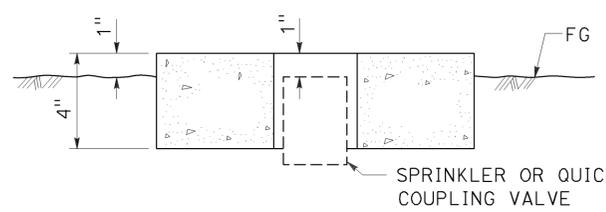
July 15, 2016
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



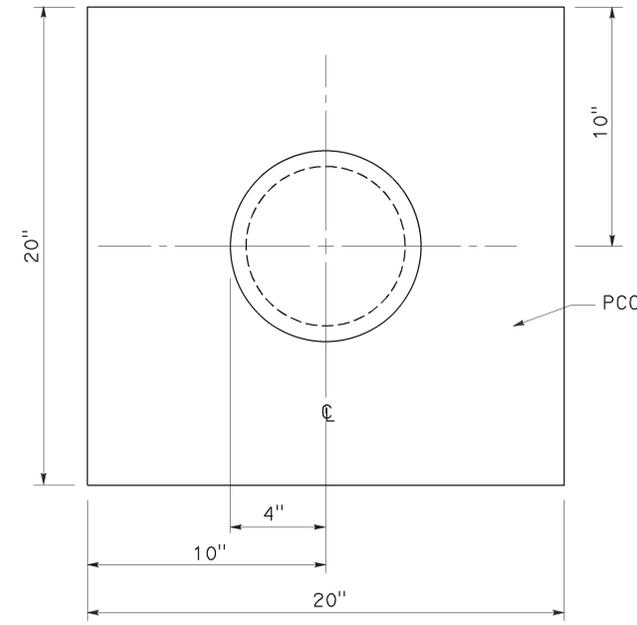
TO ACCOMPANY PLANS DATED 7-1-16



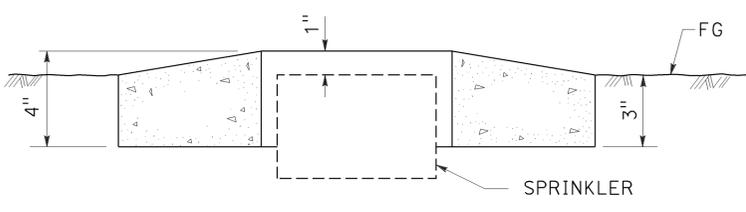
PLAN



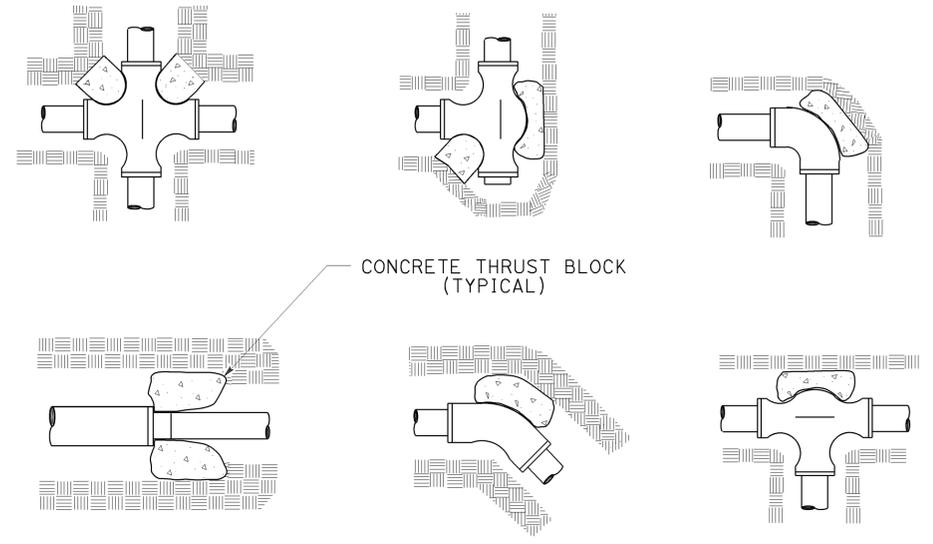
SECTION
SPRINKLER PROTECTOR TYPE I



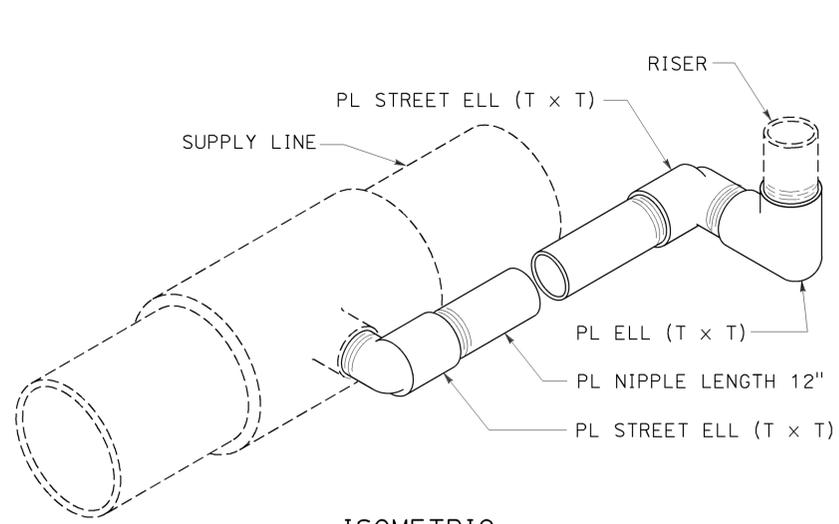
PLAN



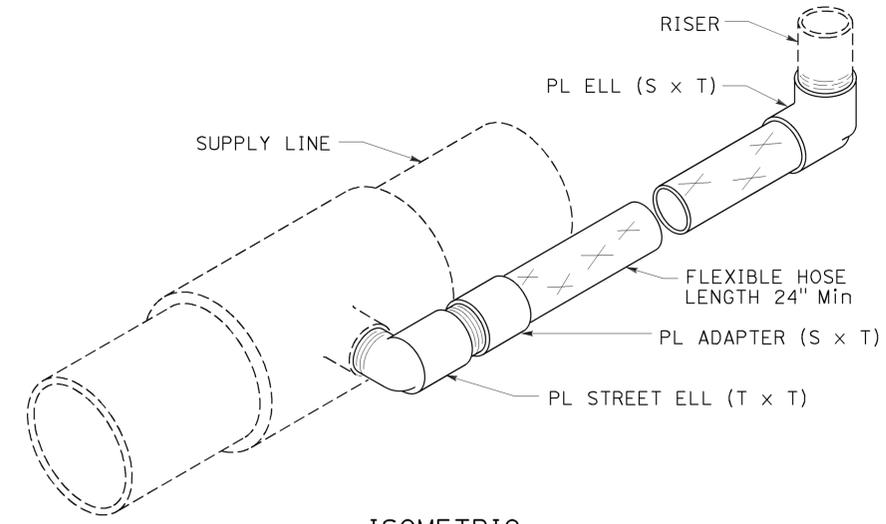
SECTION
SPRINKLER PROTECTOR TYPE II



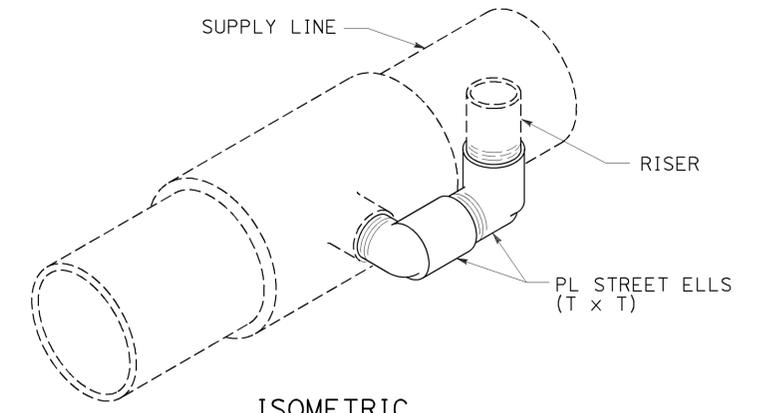
TYPICAL THRUST BLOCKS



ISOMETRIC
SWING JOINT TYPE I



ISOMETRIC
SWING JOINT TYPE II



ISOMETRIC
SWING JOINT TYPE III

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
(SWING JOINT AND PROTECTOR)
NO SCALE

RSP H6 DATED JULY 15, 2016 SUPERSEDES RSP H6 DATED JULY 19, 2013 AND STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H6

2010 REVISED STANDARD PLAN RSP H6

TO ACCOMPANY PLANS DATED 7-1-16

TABLE 1

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

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

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

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

TABLE 2

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

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph
 ** - Longitudinal buffer space or flagger station spacing
 *** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

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

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

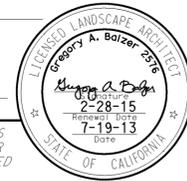
RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T9

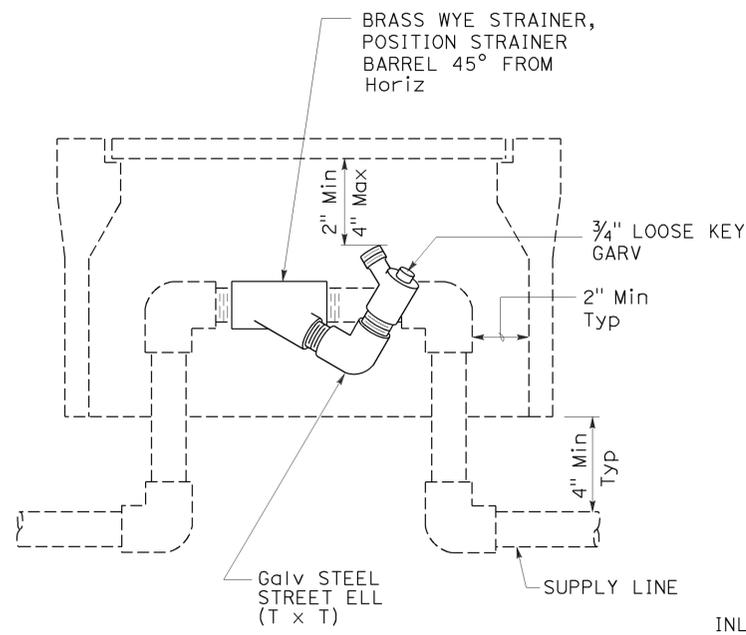
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	214	265

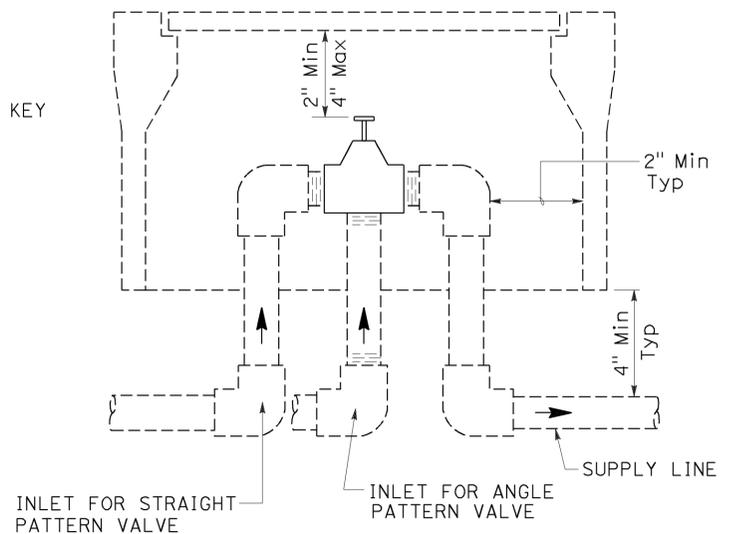
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



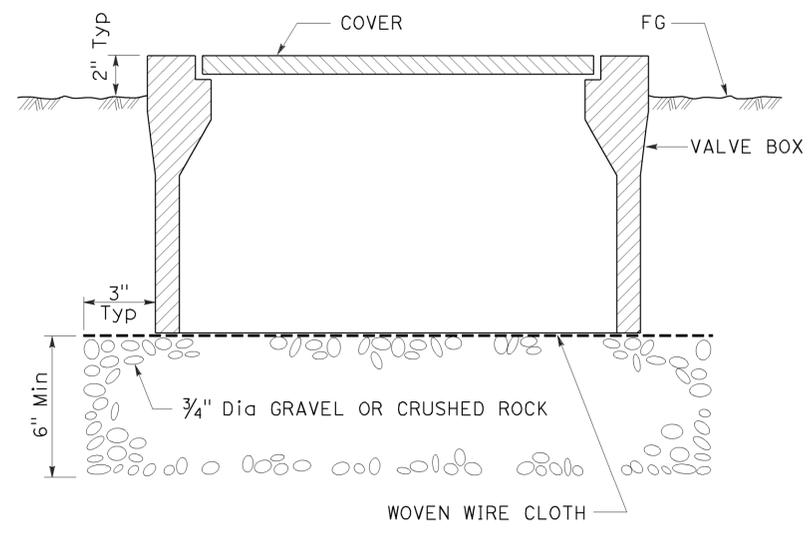
TO ACCOMPANY PLANS DATED 7-1-16



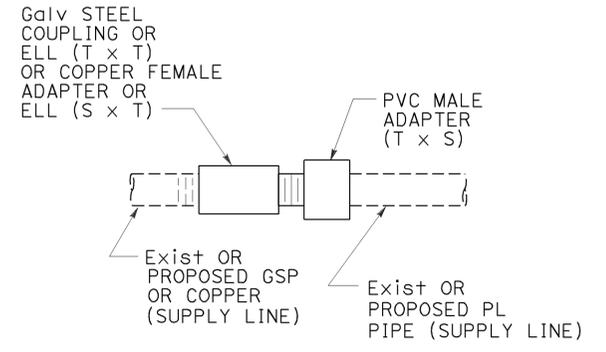
ELEVATION
WYE STRAINER ASSEMBLY



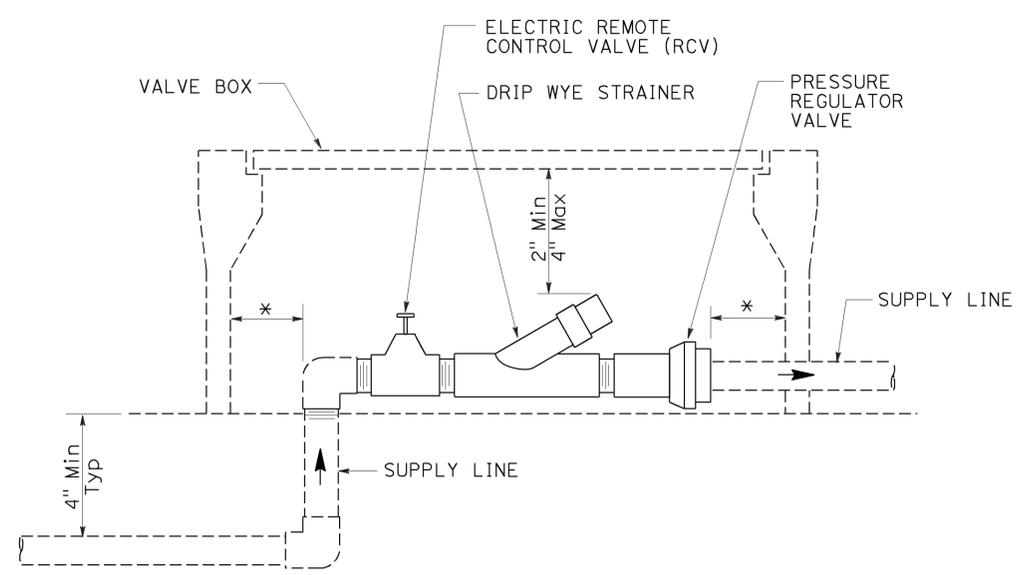
ELEVATION
VALVE



SECTION
VALVE BOX



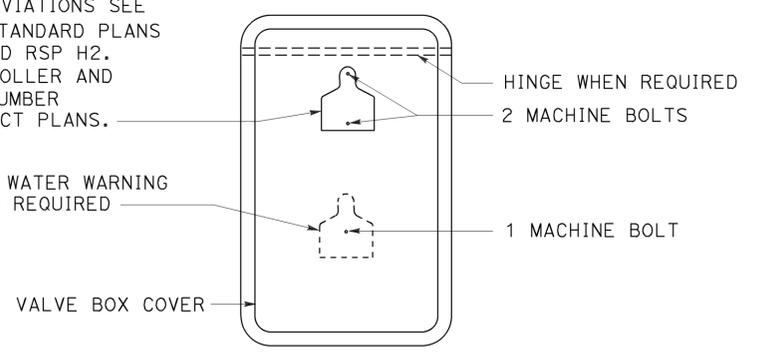
GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE



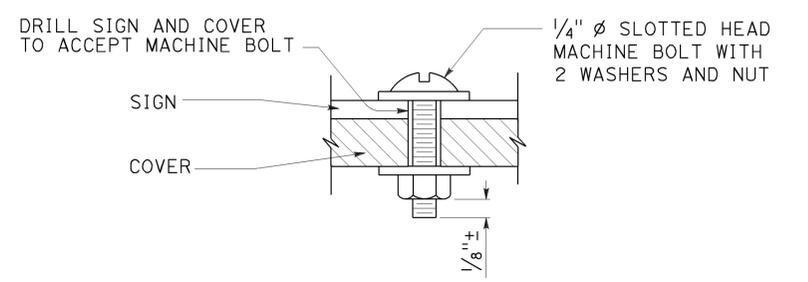
ELEVATION
DRIP VALVE ASSEMBLY

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

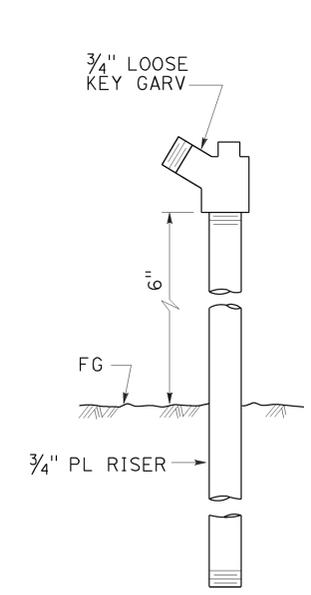
RECYCLED WATER WARNING
SIGN WHEN REQUIRED



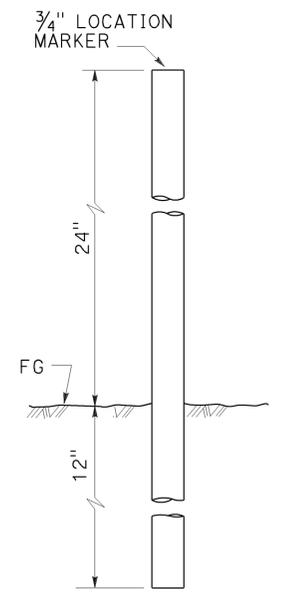
PLAN



SECTION
VALVE BOX IDENTIFICATION



ELEVATION
GARDEN VALVE ASSEMBLY



ELEVATION
LOCATION MARKER

GARDEN VALVE ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE DETAILS

NO SCALE

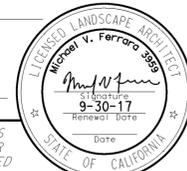
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H7

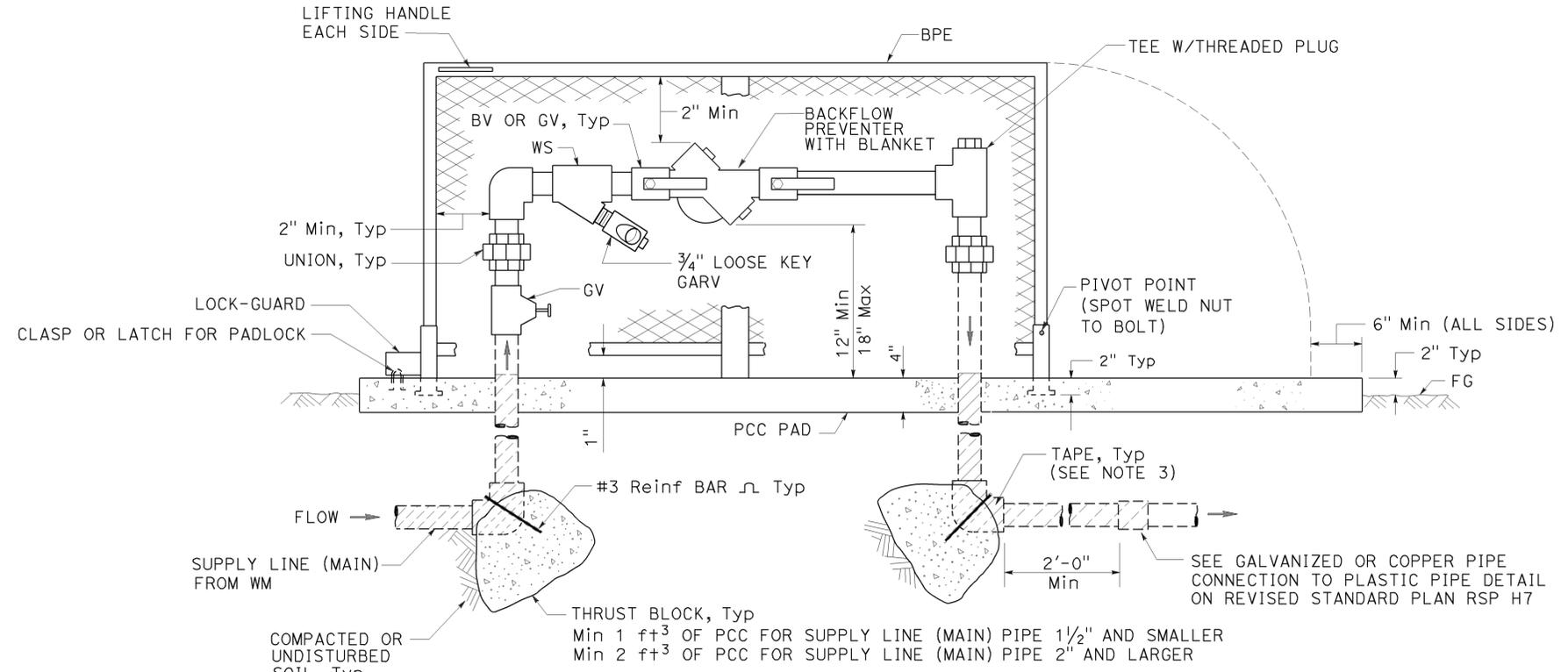
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	215	265

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.



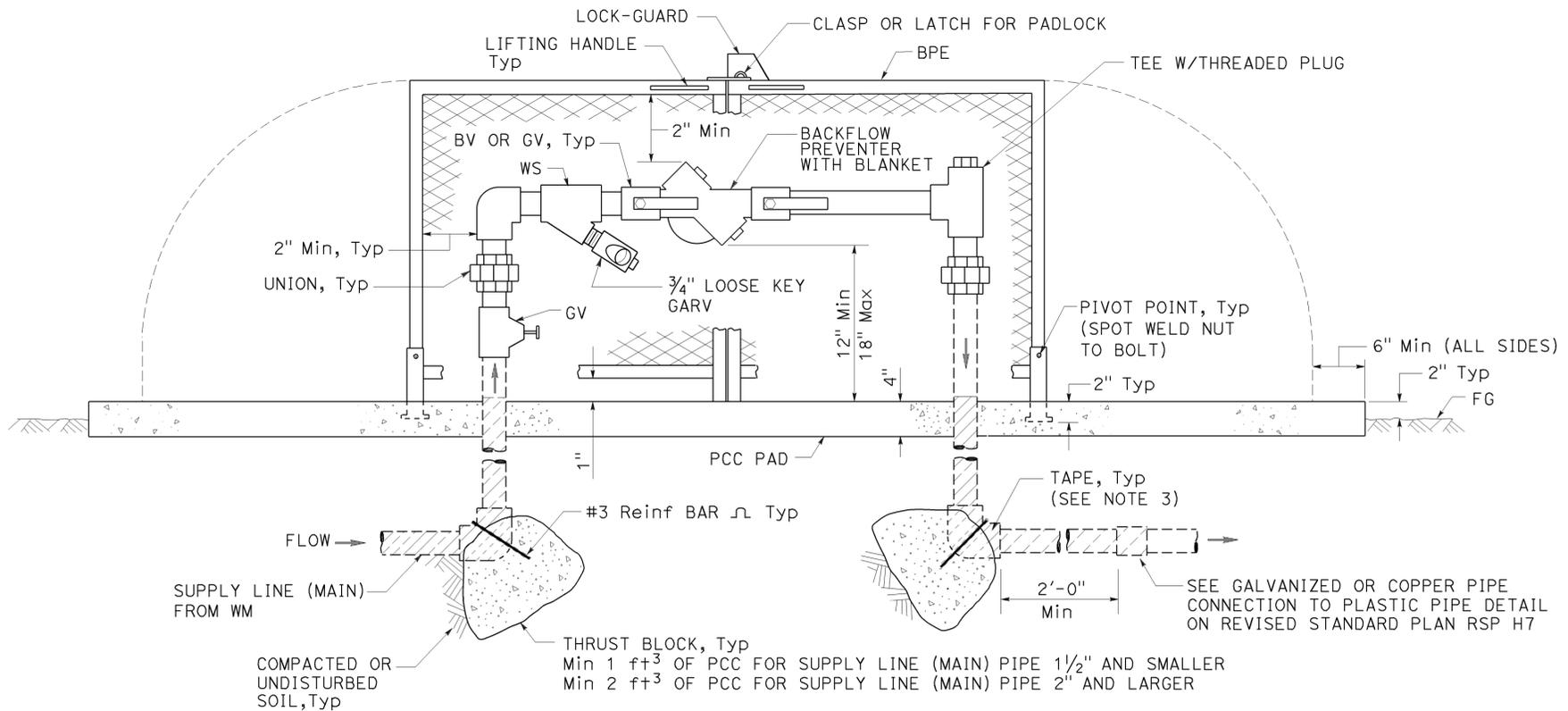
TO ACCOMPANY PLANS DATED 7-1-16



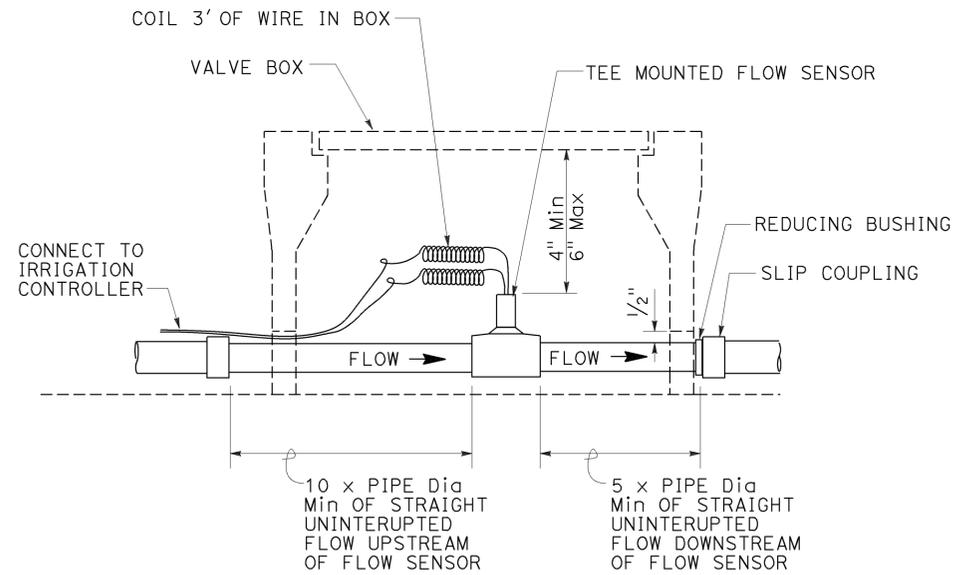
ELEVATION
BACKFLOW PREVENTER ASSEMBLY
 IN ONE PIECE ENCLOSURE

NOTES:

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. All metal in contact with soil and Portland Cement Concrete must be wrapped with 2" wide plastic backed adhesive polyethylene tape 20 mil thick with 1/2" overlap.



ELEVATION
BACKFLOW PREVENTER ASSEMBLY
 IN TWO PIECE ENCLOSURE



SECTION
FLOW SENSOR

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS

NO SCALE

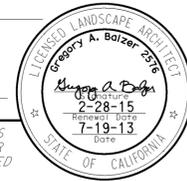
RSP H8 DATED OCTOBER 30, 2015 SUPERSEDES RSP H8 DATED JULY 19, 2013 AND STANDARD PLAN H8 DATED MAY 20, 2011 - PAGE 225 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H8

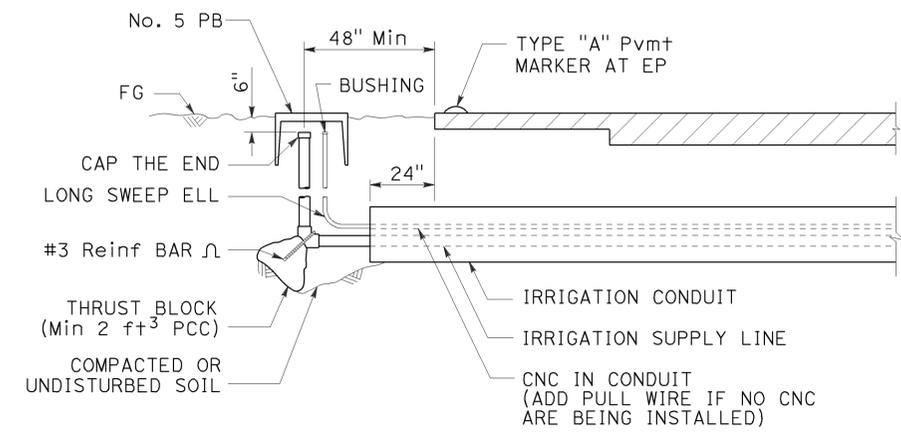
2010 REVISED STANDARD PLAN RSP H8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	216	265

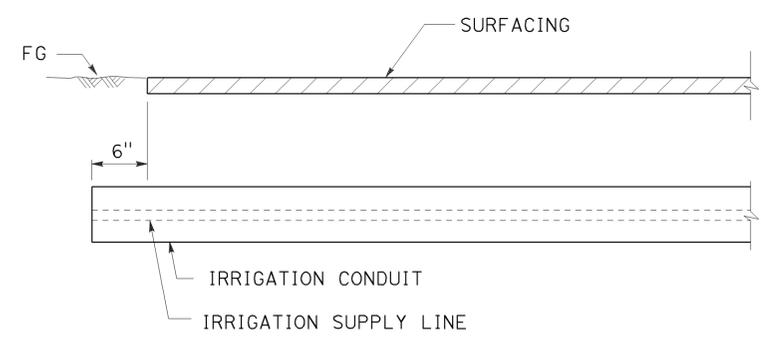
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



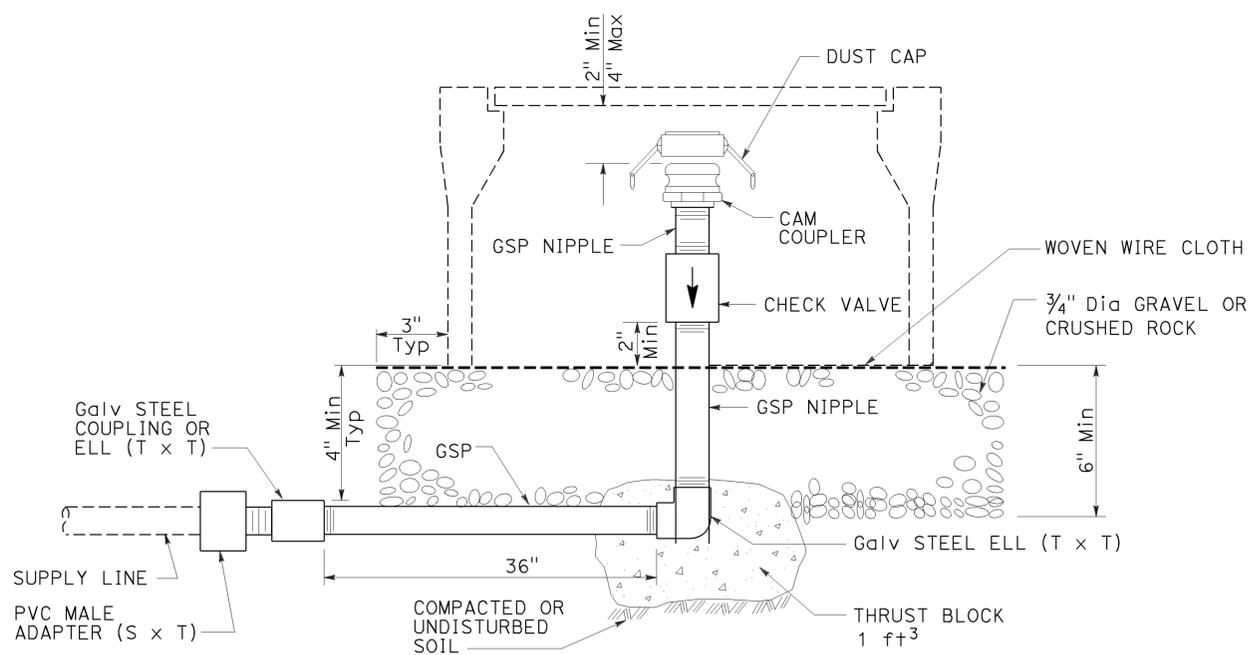
TO ACCOMPANY PLANS DATED 7-1-16



SECTION
IRRIGATION CONDUIT
UNDER TRAVELED WAY



SECTION
IRRIGATION CONDUIT
UNDER SIDEWALKS, DRIVEWAYS AND PATHS



ELEVATION
CAM COUPLER ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
NO SCALE

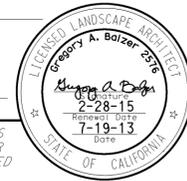
RSP H9 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H9 DATED MAY 20, 2011 - PAGE 226 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H9

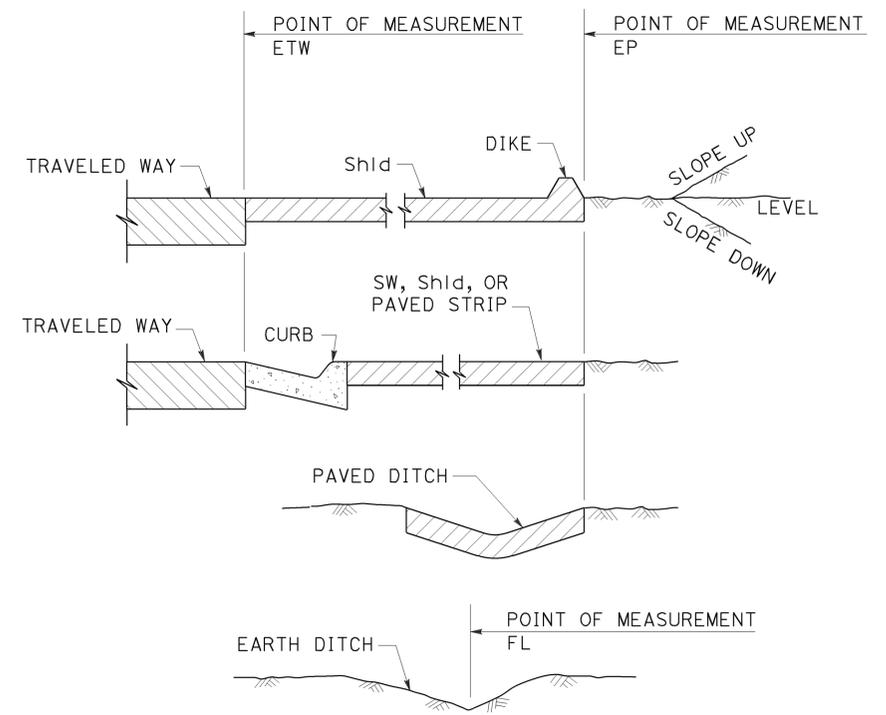
2010 REVISED STANDARD PLAN RSP H9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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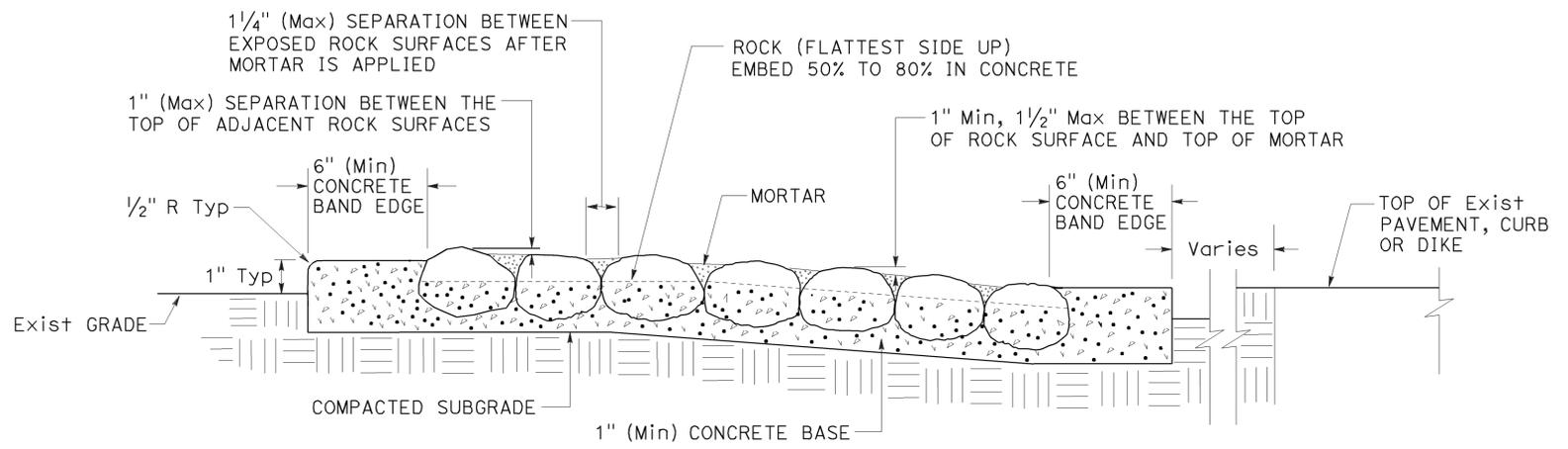
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



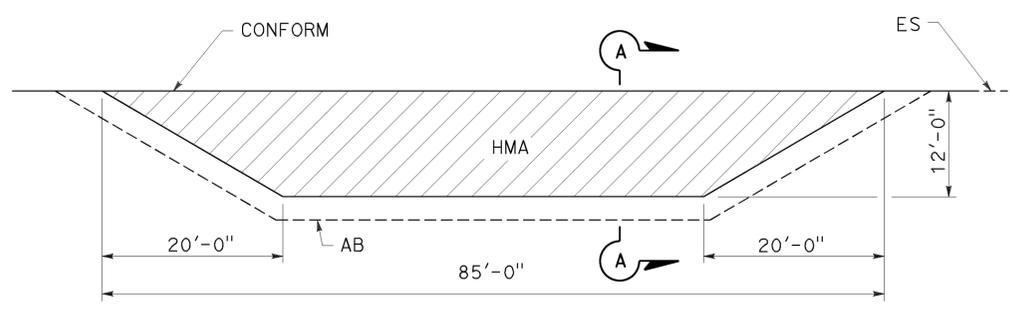
TO ACCOMPANY PLANS DATED 7-1-16



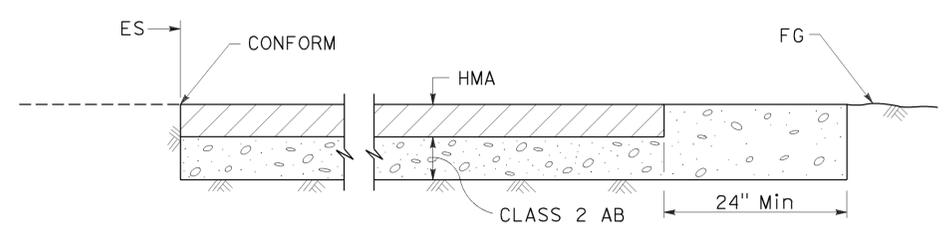
**SECTION
POINTS OF MEASUREMENT**



**SECTION
ROCK BLANKET**



PLAN



**SECTION A-A
MAINTENANCE VEHICLE PULLOUT**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

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

REVISED STANDARD PLAN RSP H9A

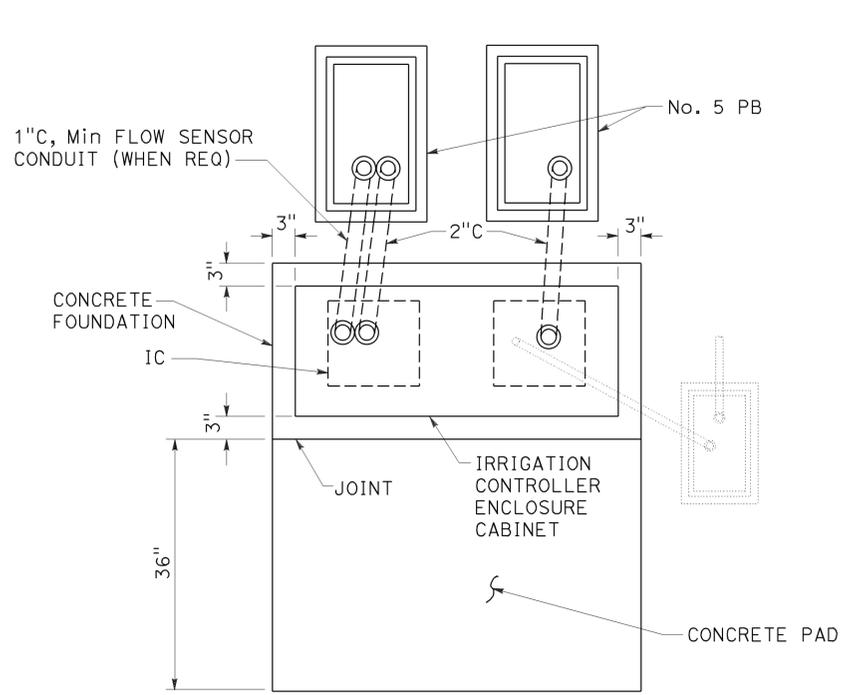
2010 REVISED STANDARD PLAN RSP H9A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	218	265

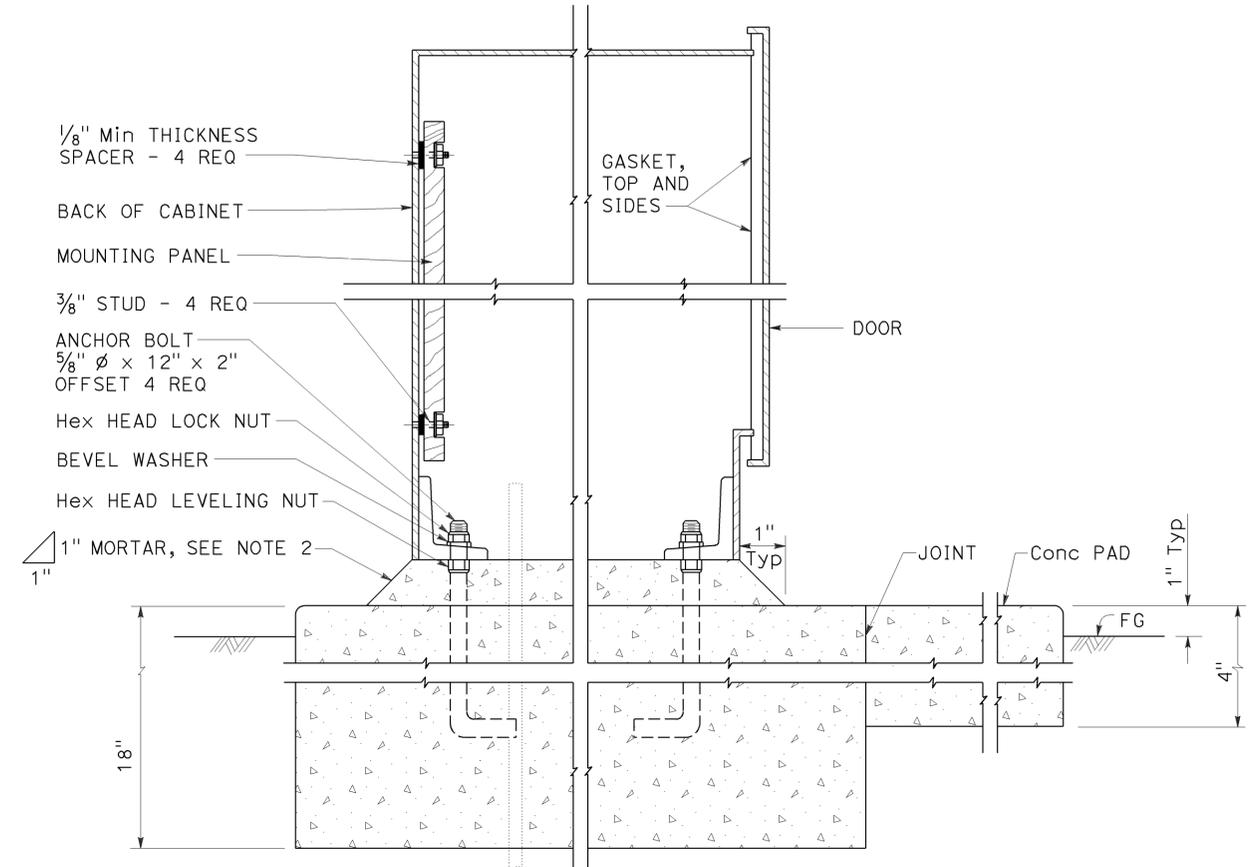
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TO ACCOMPANY PLANS DATED 7-1-16



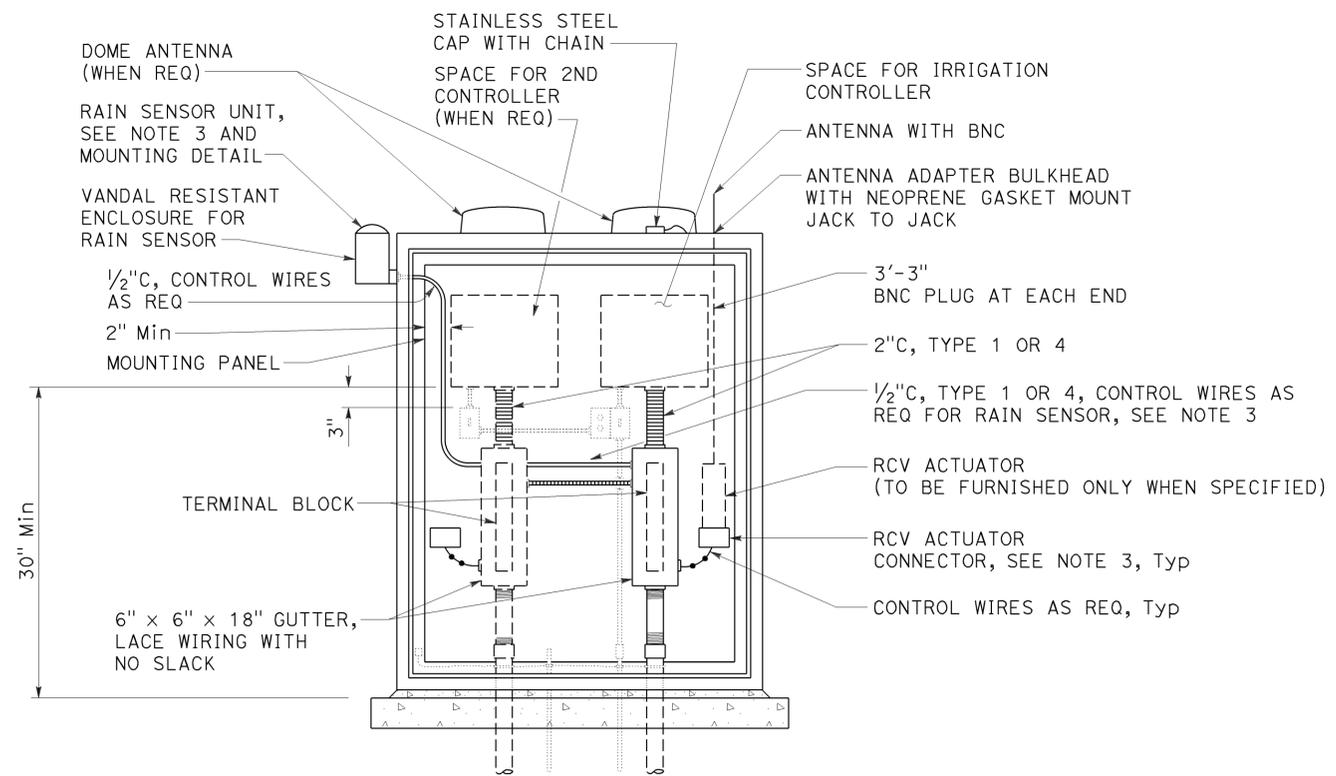
PLAN



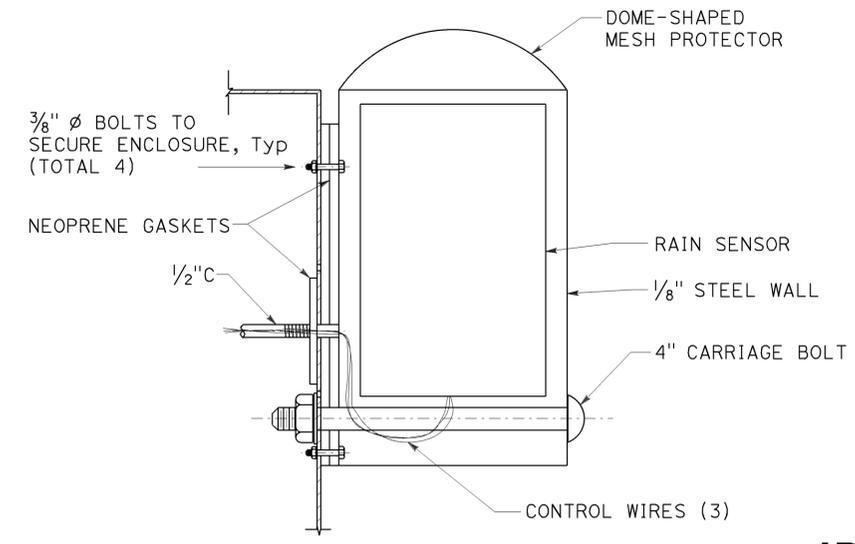
CABINET SECTION

NOTES:

- All dimensions are nominal.
- Mortar shall be 1-part cement, 2-parts plaster sand.
- Rain sensor unit and remote control valve actuator connectors to be provided when specified.
- See project plans for location and number of irrigation controllers for each cabinet. Install the cabinet with the back facing the direction of oncoming traffic in the nearest traffic lane.
- The electrical items shown in dropout are not labeled. See Revised Standard Plan RSP ES-3H for electrical requirements.



ELEVATION



RAIN SENSOR UNIT

IRRIGATION CONTROLLER ENCLOSURE CABINET

NO SCALE

RSP H10 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN H10 DATED MAY 20, 2011 - PAGE 227 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H10

2010 REVISED STANDARD PLAN RSP H10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	219	265

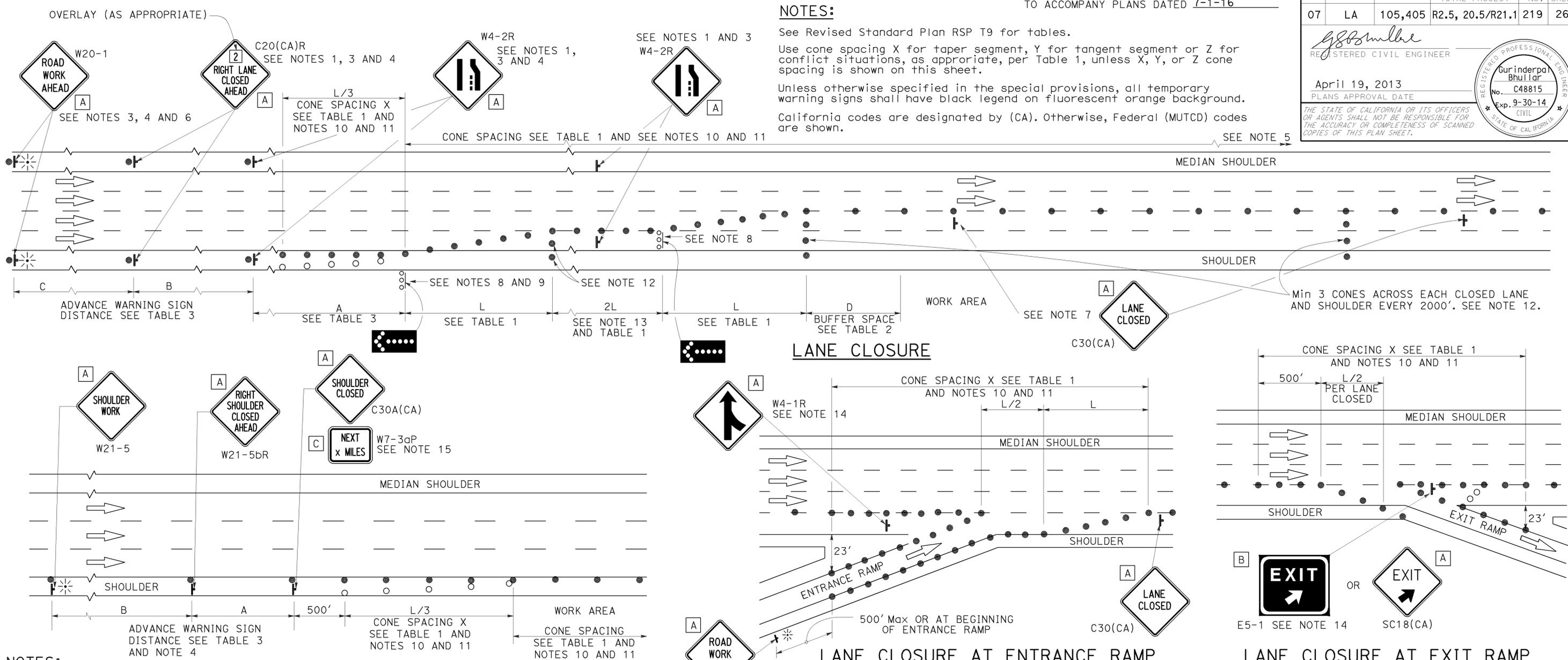
REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

TO ACCOMPANY PLANS DATED 7-1-16

NOTES:

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



NOTES:

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

SHOULDER CLOSURE

- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

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

LEGEND

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

SIGN PANEL SIZE (Min)

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

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	220	265

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

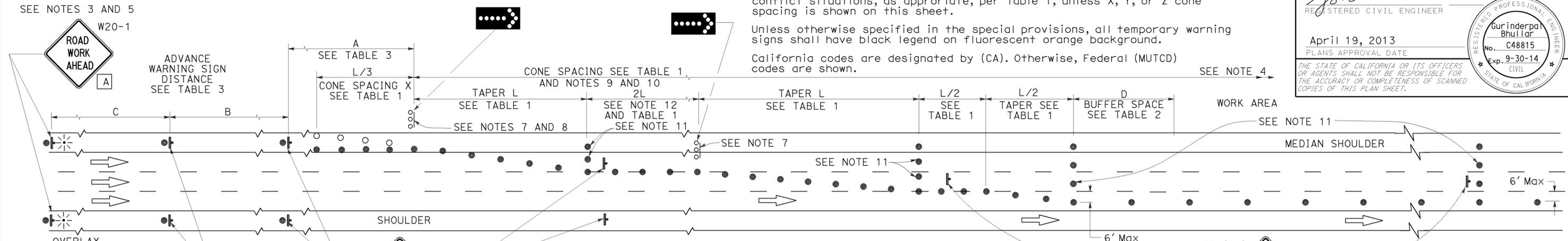
April 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: See Revised Standard Plan RSP T9 for tables.

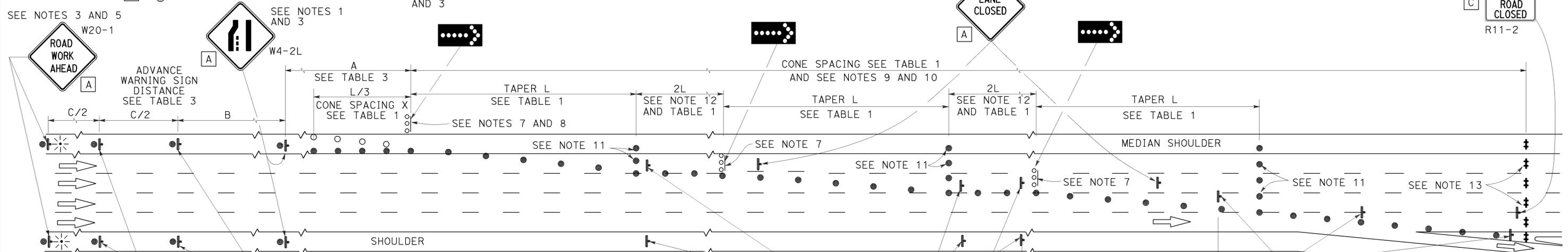
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



LANE CLOSURE WITH PARTIAL SHOULDER USE



COMPLETE CLOSURE

- NOTES:**
- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
 - At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
 - Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" X 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
 - A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
 - If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT ___ MILES", use a C20(CA) sign for the first advance warning sign.
 - Place a C30(CA) sign every 2000' throughout length of lane closure.
 - One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
 - A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
 - All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 - Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
 - Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure With Partial Shoulder Use" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
 - Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
 - A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
 - When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

SIGN PANEL SIZE (Min)

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10A

2010 REVISED STANDARD PLAN RSP T10A

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

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

LEGEND

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	221	265

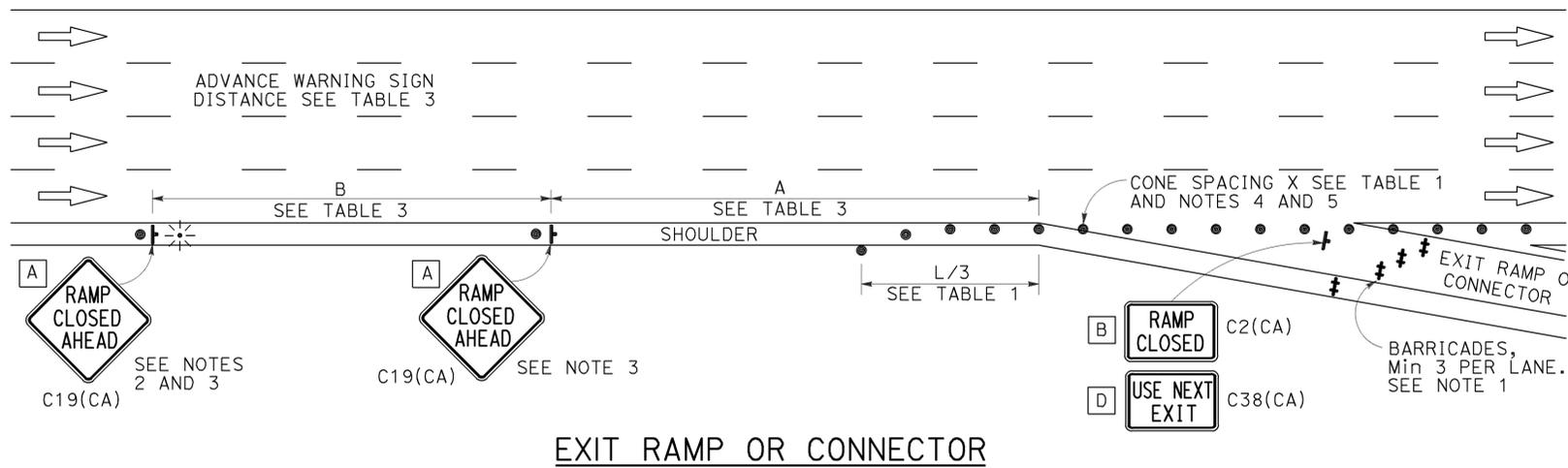
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

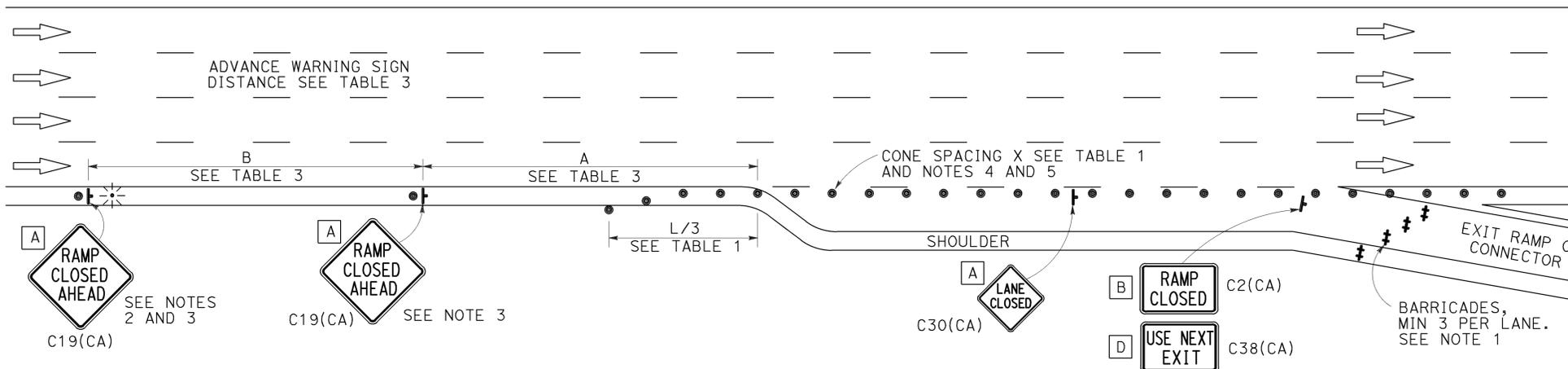
TO ACCOMPANY PLANS DATED 7-1-16

NOTES:

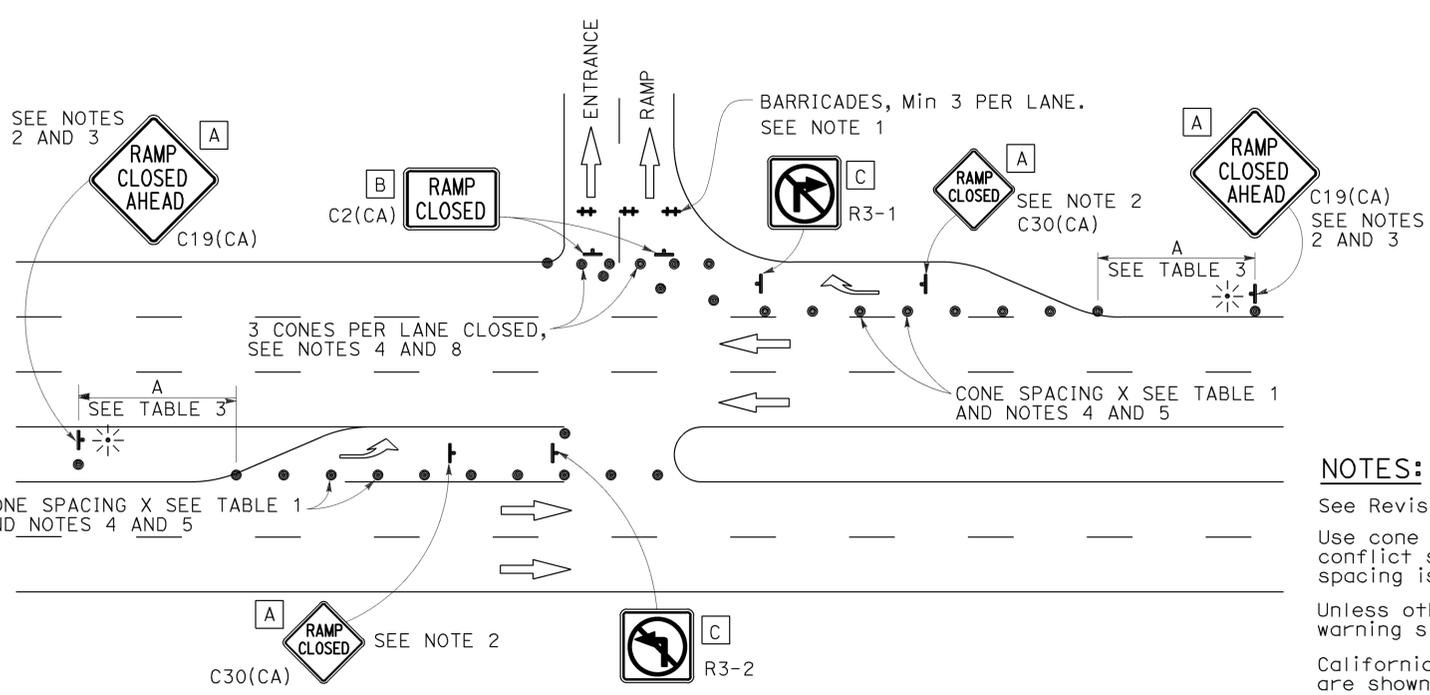
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



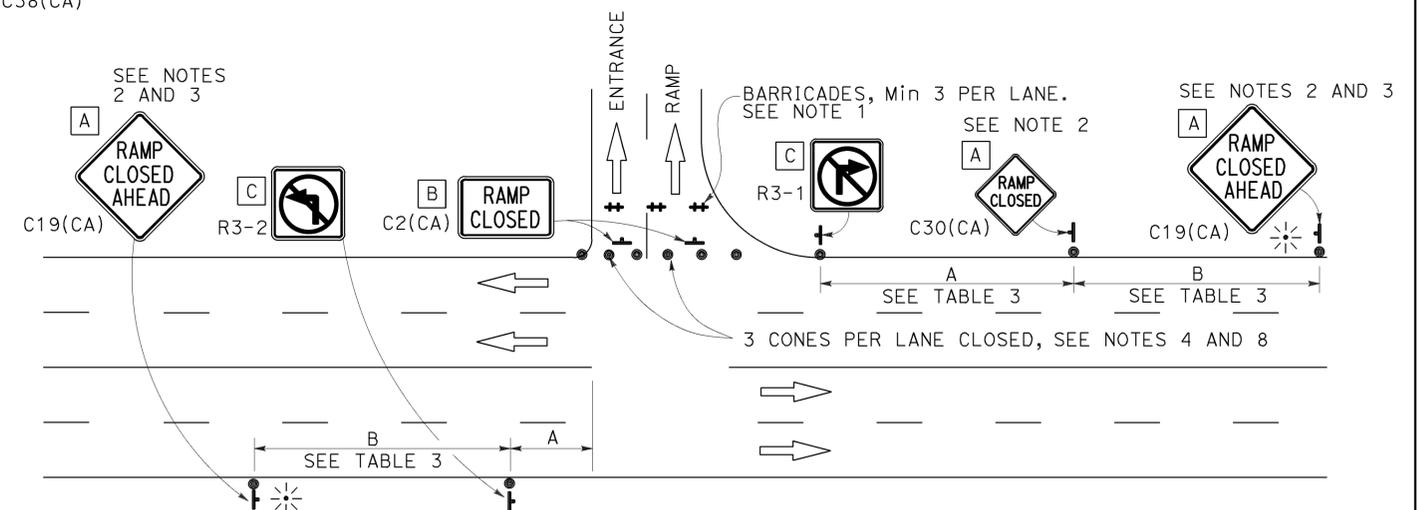
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

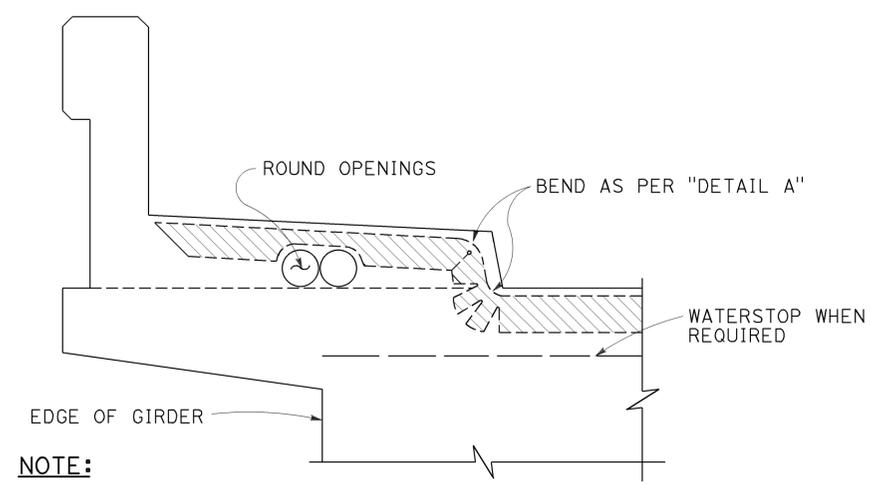
- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning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

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

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

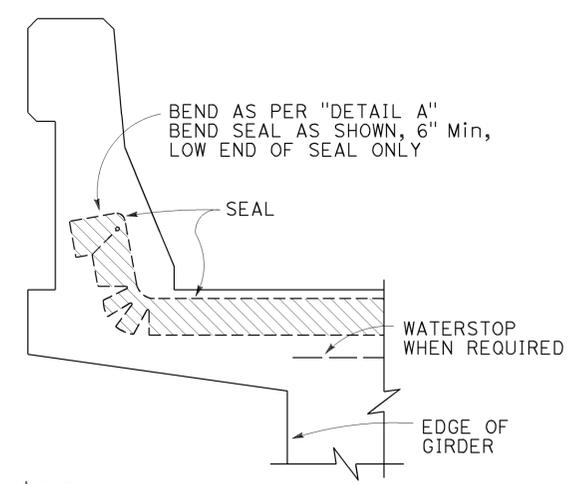
2010 REVISED STANDARD PLAN RSP T14

TO ACCOMPANY PLANS DATED 7-1-16

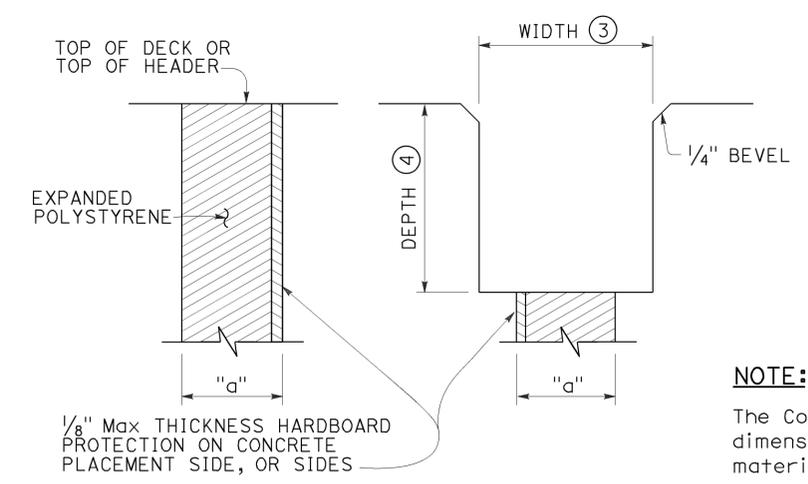


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



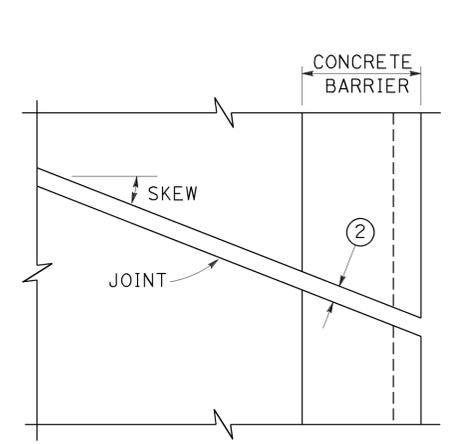
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

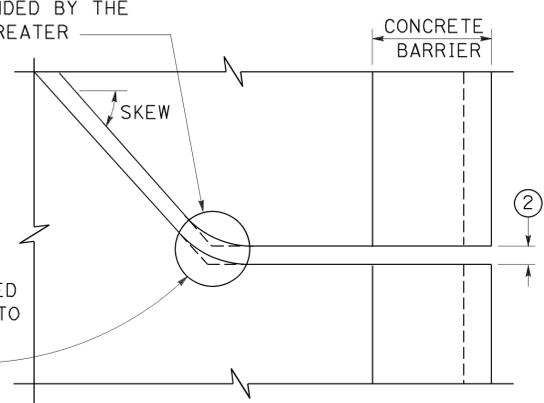
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



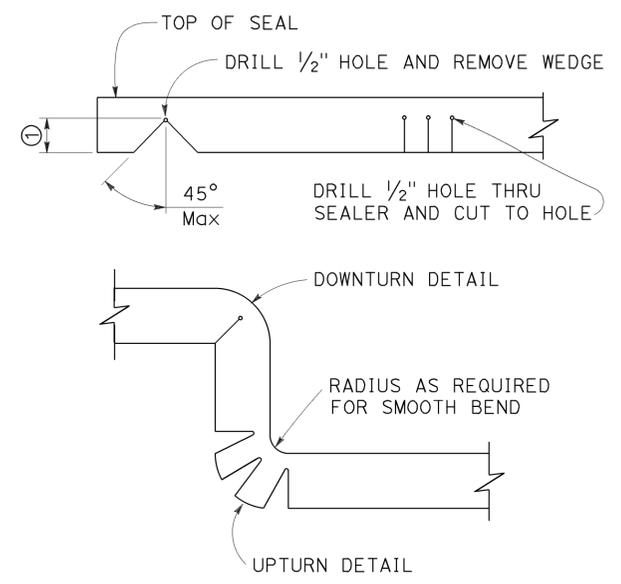
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ RADIUS TO BE 4 TIMES UNCOMPRESSED WIDTH OF SEAL OR AS RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS GREATER



PLAN OF JOINT (SKEW > 20°)

IN LIEU OF SAW CUTTING, THIS AREA MAY BE BLOCKED OUT AND RECONSTRUCTED TO MATCH SAW CUTTING ON BOTH SIDES.

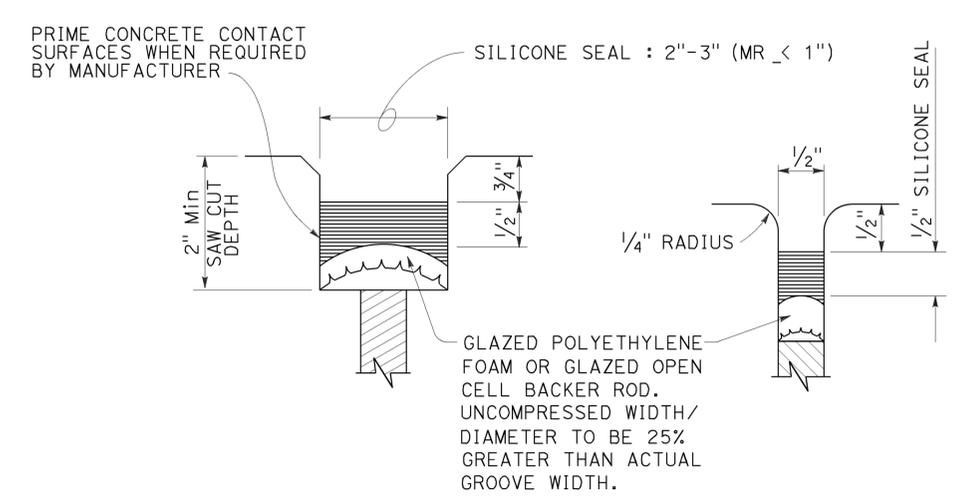


DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.
 - A sidewalk joint shall be covered by an expansion joint armor.

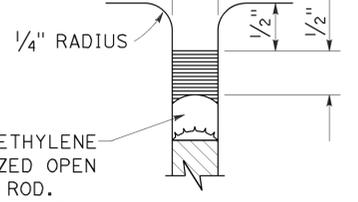
DIMENSIONS "a" OF JOINT REQUIRED

MOVEMENT RATING (MR) (5)	BRIDGE TYPE	"a" DIMENSION		
		DECK CONCRETE PLACED		
		WINTER	FALL-SPRING	SUMMER
2"	ALL EXCEPT CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	ALL EXCEPT CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	ALL EXCEPT CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	ALL EXCEPT CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"



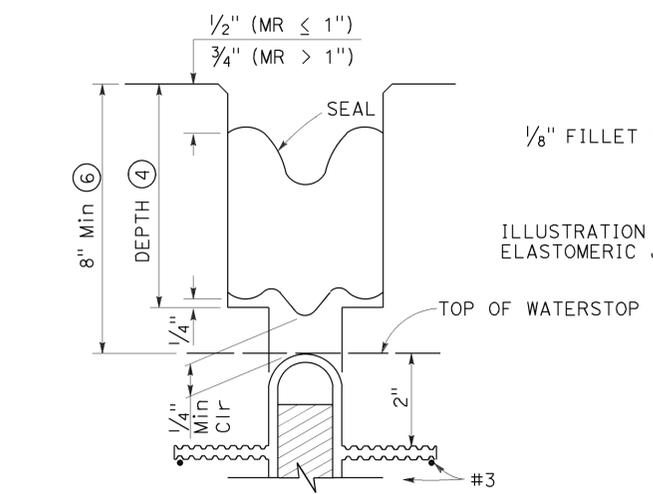
TYPE A SEAL

Movement rating : Silicone = 1" Max

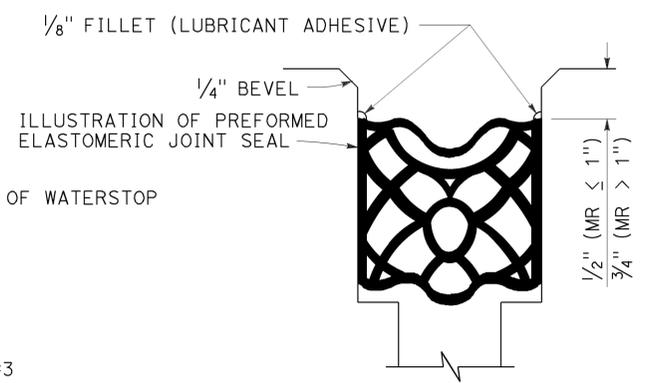


TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)



TYPE B SEAL

Movement Rating ≤ 2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")

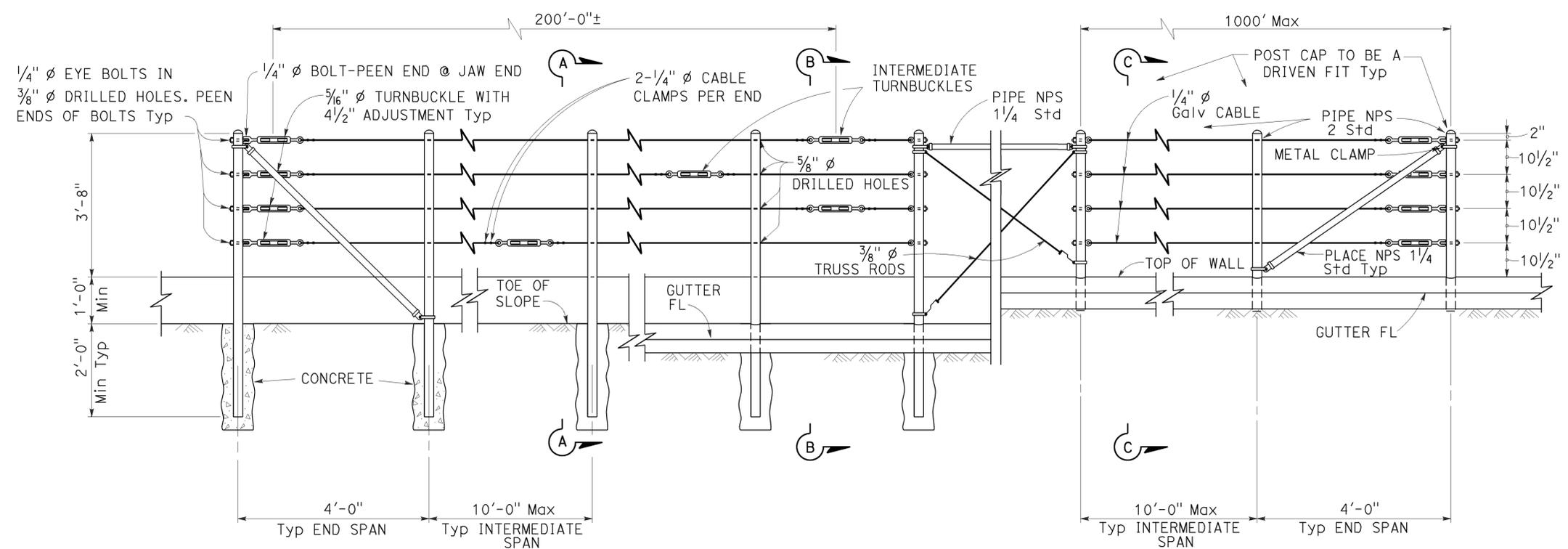
NO SCALE
 RSP B6-21 DATED OCTOBER 30, 2015 SUPERSEDES
 STANDARD PLAN B6-21 DATED MAY 20, 2011 -
 PAGE 283 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	223	265

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

October 21, 2011
 PLANS APPROVAL DATE

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

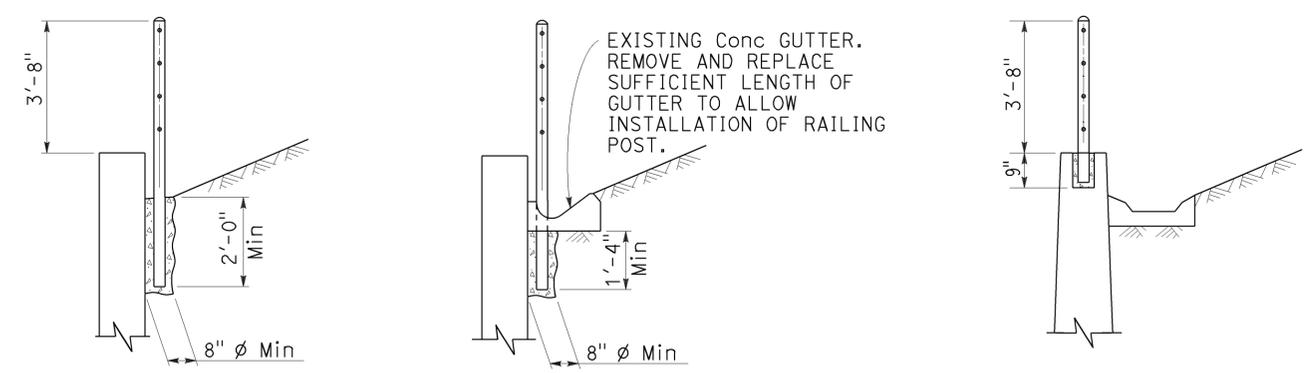


EXISTING WALL (WITHOUT GUTTER) Existing
RETAINING WALL (WITH GUTTER) Existing
RETAINING WALL (WITH GUTTER) New construction

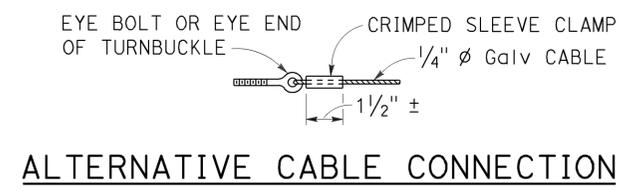
ELEVATION

NOTES:

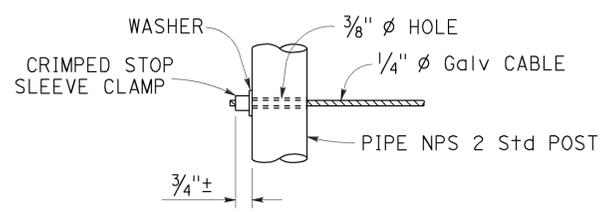
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining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



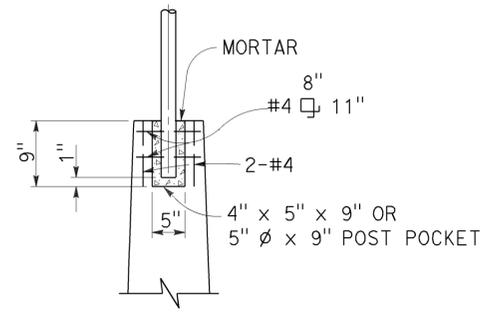
SECTION A-A Existing
SECTION B-B Existing
SECTION C-C New construction



ALTERNATIVE CABLE CONNECTION



ALTERNATIVE DEAD END ANCHORAGE



POST POCKET

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CABLE RAILING

NO SCALE

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

REVISED STANDARD PLAN RSP B11-47

2010 REVISED STANDARD PLAN RSP B11-47

INSTRUCTIONS TO FABRICATOR

PROJECT PLANS SHOW:

1. Sign structure location.
2. Length of structure frame.
3. Panel size and locations on structure.
4. Walkway length for two post signs.
5. Post type and height to bottom of frame.
6. Base plate elevation.
7. Footing elevation or location of pile foundation.
8. Photoelectric unit location if required.

REFER TO THE FOLLOWING STANDARD PLANS FOR DETAILS NOT SHOWN ON PROJECT PLANS:

Sheet No. SHEET NAME

- S1 Overhead Signs-Truss, Instructions and Examples
- S2 Overhead Signs-Truss, Single Post Type, Post Types II to IX
- S3 Overhead Signs-Truss, Single Post Type, Base Plate and Anchorage Details
- S4 Overhead Signs-Truss, Single Post Type, Structural Frame Members Details No. 1
- S5 Overhead Signs-Truss, Single Post Type, Structural Frame Members Details No. 2
- S6 Overhead Signs-Truss, Gusset Plate Details
- S8 Overhead Signs-Truss, Single Post Type, Round Pedestal Pile Foundation
- S9 Overhead Signs-Truss, Two Post Type, Post Types I-S through VII-S
- S10 Overhead Signs-Truss, Two Post Type, Base Plate and Anchorage Details
- S11 Overhead Signs-Truss, Two Post Type, Structural Frame Members
- S12 Overhead Signs-Truss, Structural Frame Details
- S13 Overhead Signs-Truss, Frame Juncture Details
- S15 Overhead Signs-Truss, Two Post Type, Round Pedestal Pile Foundation
- S16 Overhead Signs, Walkway Details No. 1
- S17 Overhead Signs, Walkway Details No. 2
- S17A Overhead Signs, Walkway Details No. 3
- S18 Overhead Signs, Walkway Safety Railing Details
- S19 Overhead Signs-Truss, Sign Mounting Details, Laminated Panel-Type A
- S20 Overhead Signs, Steel Frames, Removable Sign Panel Frames
- S21 Overhead Signs, Removable Sign Panel Frames, Mounting Details
- S22 Overhead Signs-Truss, Removable Sign Panel Frames, 9'-2" and 10'-0" Sign Panels

WALKWAY BRACKETS:

Space all walkway brackets maintaining uniform spacing where possible. Maximum spacing shall not exceed 5'-6".

LIGHTING FIXTURE SUPPORTS:

Where distance from walkway bracket to end of sign panel exceeds 1'-4", extend lighting fixture supports to next walkway bracket. See Example No. 2.

WALKWAY AND SAFETY RAILING:

Walkway to be continuous for entire length of frame for single post signs. For two post signs, see Project Plans. Safety railing to protect entire walkway, but continuous for no more than 11'-0" in one unit.



NOTES:

1. Signs are shown and dimensioned looking in the direction of traffic. Double faced signs are shown and dimensioned looking ahead along stationing.
2. Mandatory dimension limit.

GENERAL NOTES:

LOADING:

WIND LOADING:

Normal to face of sign: 40.3 psf on 100% Truss surface area (i.e. 100% panel coverage).
 Transverse to face of sign: 20% of normal force.

WALKWAY LOADING:

Dead load +500 LB concentrated live load.

UNIT STRESSES:

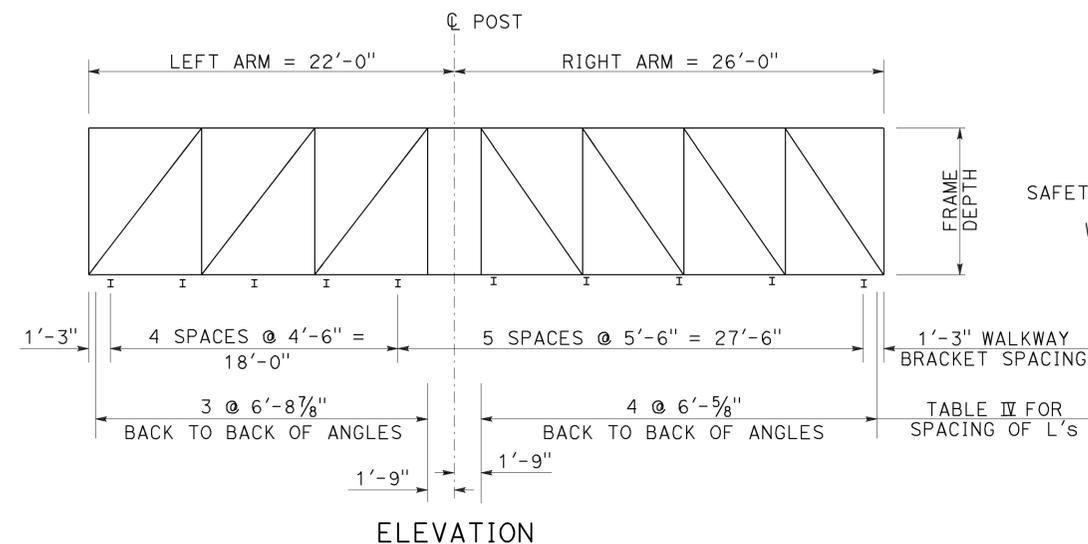
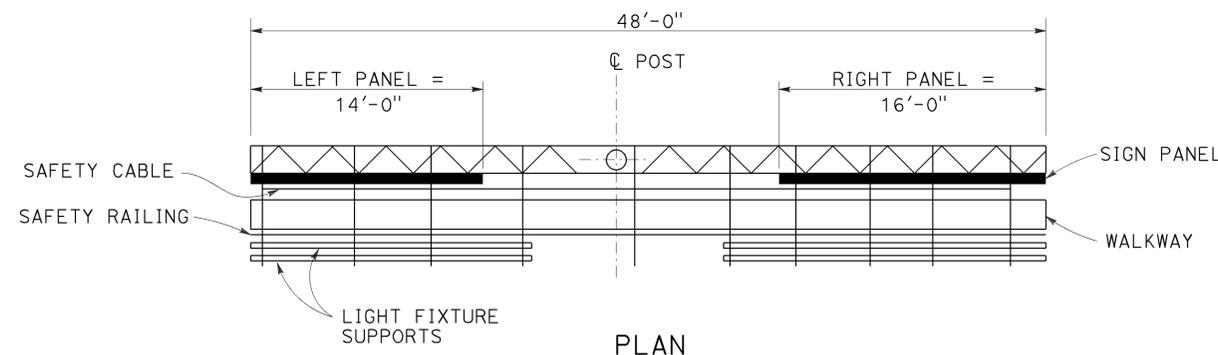
STRUCTURAL STEEL: $f_y = 36,000$ psi
 REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3600$ psi
 FOOTING SOIL PRESSURE: 2.5 ksf (spread footing)

MINIMUM CLEARANCE

Vertical roadway clearance 18'-0" (bottom of walkway system)

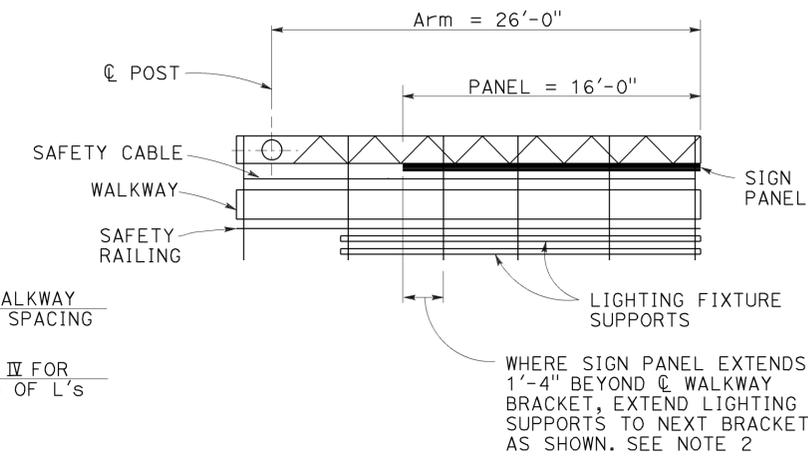
WELDING:

All welding continuous unless otherwise noted on the plans.



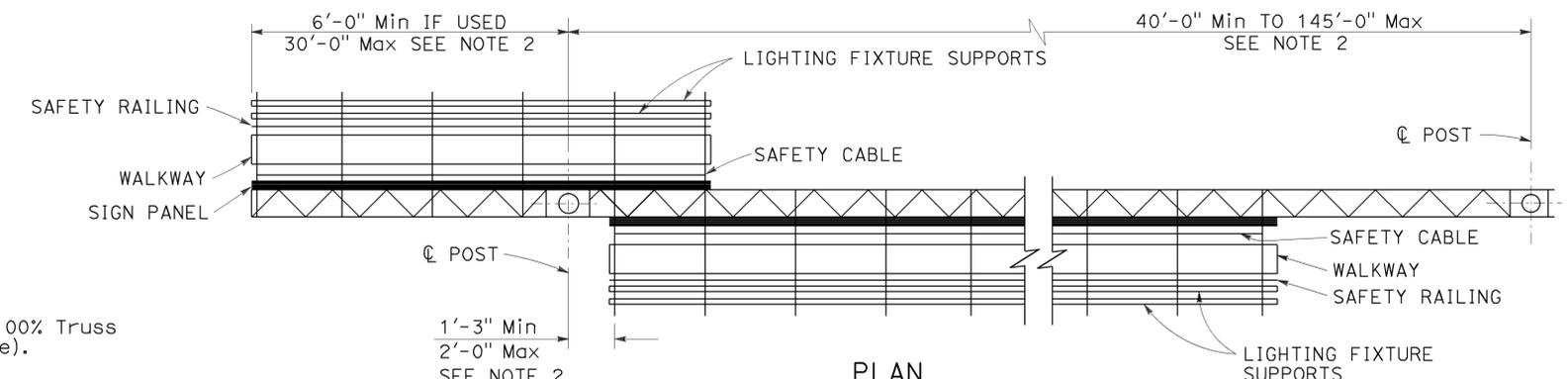
UNBALANCED SINGLE POST TYPE

Example No. 1



CANTILEVER SINGLE POST TYPE

Example No. 2



TWO POST TYPE WITH CANTILEVER (PART DOUBLE-FACED)

Example No. 3

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGNS-TRUSS INSTRUCTIONS AND EXAMPLES

NO SCALE

RSP S1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S1 DATED MAY 20, 2011 - PAGE 334 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	225	265

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER

July 19, 2013
 PLANS APPROVAL DATE

Stanley P. Johnson
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 7-1-16

2010 REVISED STANDARD PLAN RSP S1

TABLE XV

POST TYPE	PIPE		CAP PLATE SIZE FOR CHORD L's 5 x 5	CAP PLATE SIZE FOR CHORD L's 6 x 6	ROUND PEDESTAL					SQUARE PEDESTAL					SPREAD FOOTING						
	NPS	THICKNESS			PEDESTAL SIZE Dia	VERTICAL EQUALLY SPACED TOTAL	J-BARS BAR SIZE	SPIRAL BAR SIZE	PITCH	PEDESTAL SIZE SQUARE	VERTICAL EQUALLY SPACED TOTAL	J-BARS BAR SIZE	# OF BARS EA FACE	HOOP BAR SIZE	SPACING	(SEE NOTE 2)					
	REINFORCEMENT		WIDTH													LONGITUDINAL		FOOTING STIRRUPS			
II	14	1/2"	2'-0" x 2'-0" x 1"	2'-2" x 2'-2" x 1"	5'-3"	16	#10	#5	3 1/2"	5'-3"	16	#10	5	#5	3 1/2"	12'-0" x 14'-0" x 2'-6"	14-#6		14-#7	13-#9	13-#9
III	16		2'-2" x 2'-2" x 1"	2'-4" x 2'-4" x 1"												12'-0" x 14'-0" x 2'-6"	15-#6	15-#7			
IV	18		2'-4" x 2'-4" x 1"	2'-6" x 2'-6" x 1"												12'-0" x 14'-0" x 2'-6"	15-#6	15-#7			
V	20		2'-6" x 2'-6" x 1"	2'-8" x 2'-8" x 1"												13'-0" x 14'-0" x 2'-6"	15-#6	15-#7	14-#9	14-#9	
VI	24		2'-10" x 2'-10" x 1"	3'-0" x 3'-0" x 1"	5'-9"		#11			5'-9"		#11				13'-0" x 16'-0" x 2'-6"	17-#7	17-#7		14-#11	
VII	24	3/4"														13'-0" x 17'-0" x 2'-6"	18-#7	18-#7			
VIII	24	3/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			
IX	24	3/32"														13'-0" x 18'-0" x 2'-6"	19-#7	19-#7			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	226	265

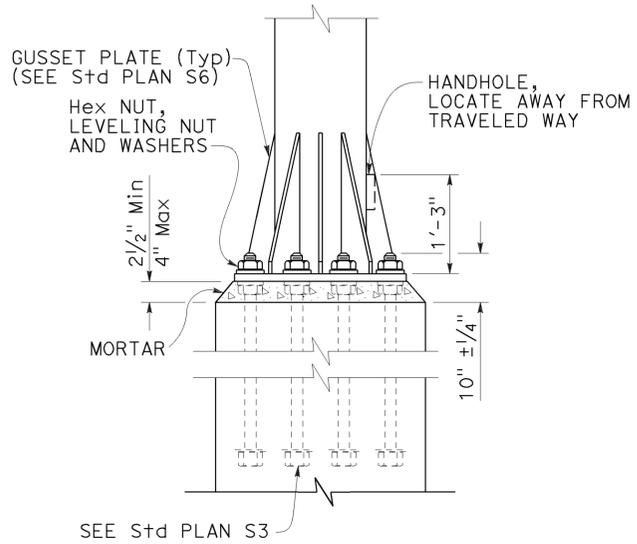
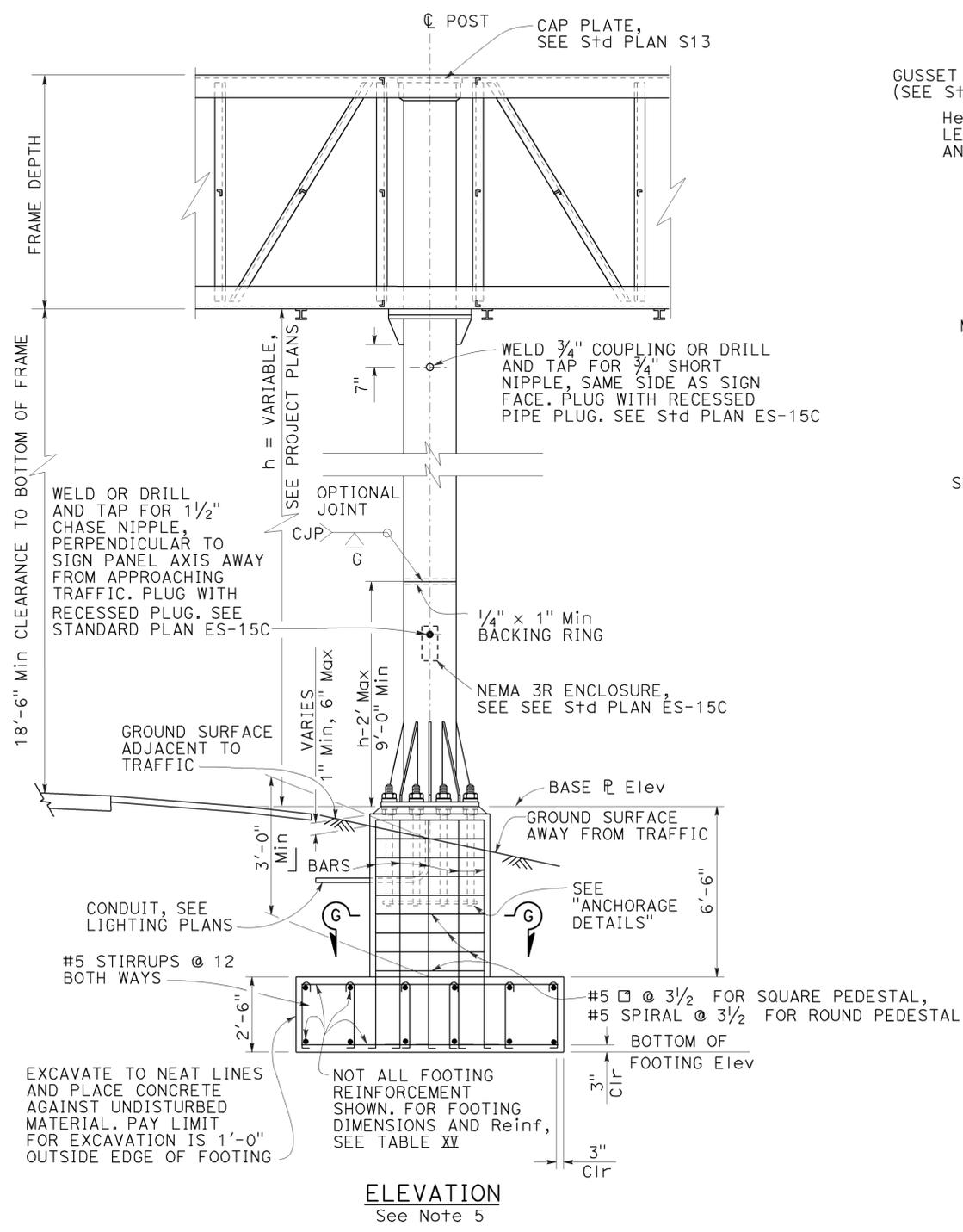
Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

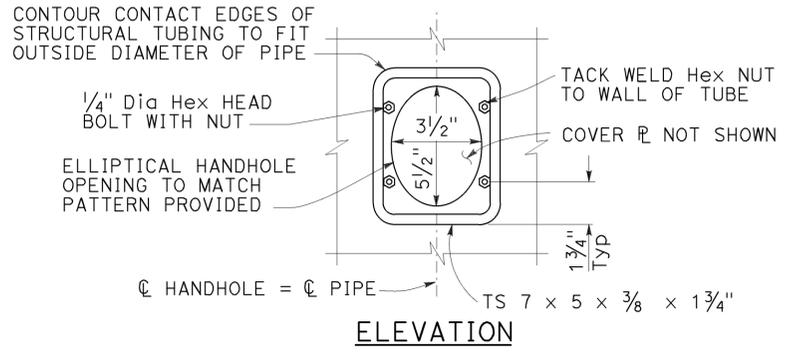
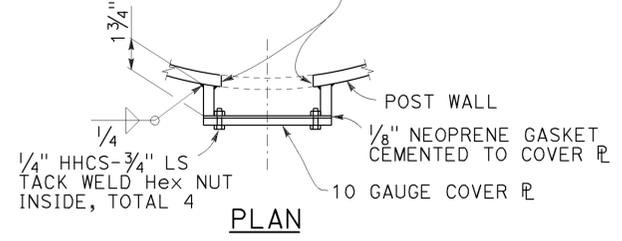
Stanley P. Johnson
REGISTERED PROFESSIONAL ENGINEER
No. C57793
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 7-1-16



ELEVATION ANCHORAGE DETAILS

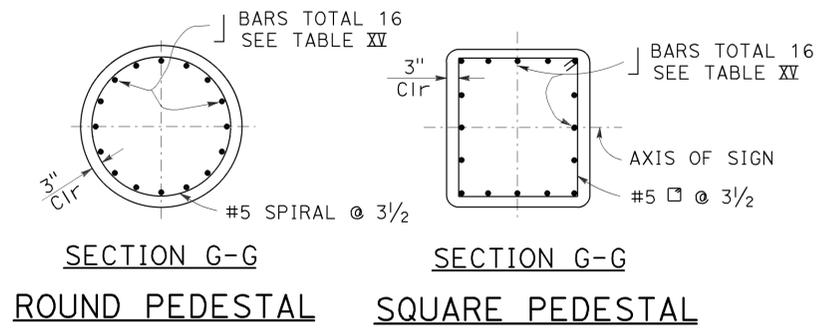
GRIND EDGES SMOOTH, ROUGHNESS OF EDGES NO GREATER THAN 1000 MICROINCHES



TYPICAL DETAILS OF HANDHOLE AND COVER

NOTES:

- For "General Notes", see Revised Standard Plan RSP S1.
- Longer side of footing (longitudinal) shall be normal to axis of sign.
- Backfill shall be in place prior to erection of post.
- Thread upper 10" of anchor bolts and galvanize upper 1'-0".
- Spread footing with square pedestal foundation shown, use Pile Foundation when shown on the Project Plans. For pile foundation details, see Standard Plan S8.
- Anchor plates may be retained with hexagon nut or formed head as alternatives to details shown.
- On single post sign structures, the post shall be raked out of plumb, with the use of the leveling nuts to make the bottom of the sign frame level.
- At final position of post all top and bottom nuts shall be tightened against base plate.
- When foundation is located on a steep slope with exposed face of concrete adjacent to traffic, see "Detail C" on Standard Plan S8, as applicable.
- Slope protection required when indicated on the Project Plans.



SECTION G-G ROUND PEDESTAL SECTION G-G SQUARE PEDESTAL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS-TRUSS
SINGLE POST TYPE
POST TYPES II THROUGH IX**
NO SCALE

RSP S2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S2 DATED MAY 20, 2011 - PAGE 335 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S2

2010 REVISED STANDARD PLAN RSP S2

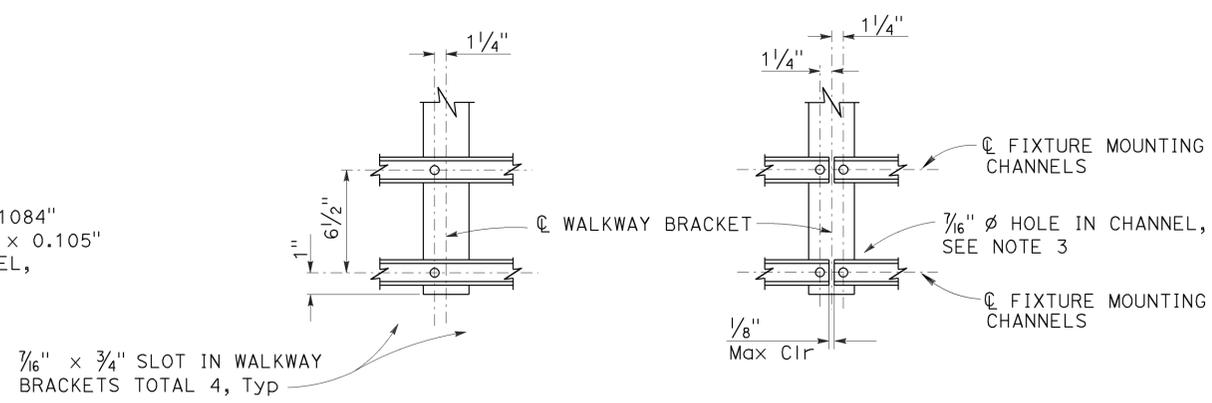
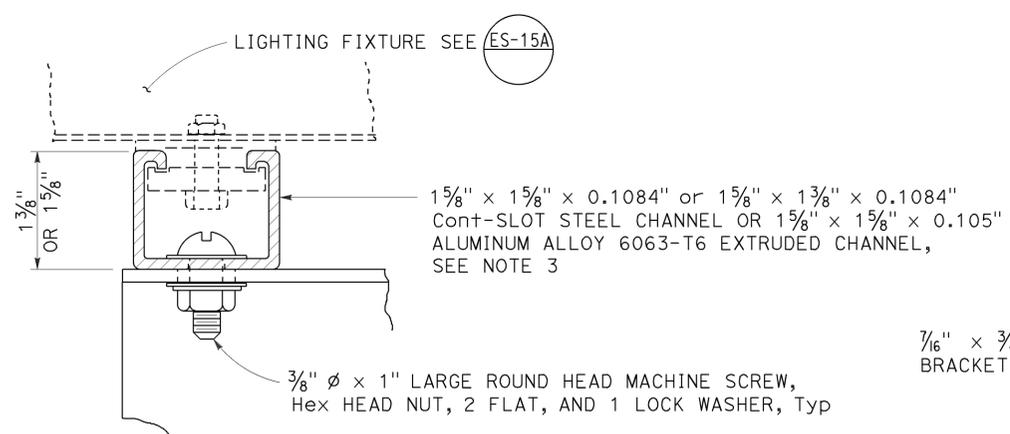
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	227	265

REGISTERED CIVIL ENGINEER
Jeffrey B. Woody
 No. C41260
 Exp. 3-31-17
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

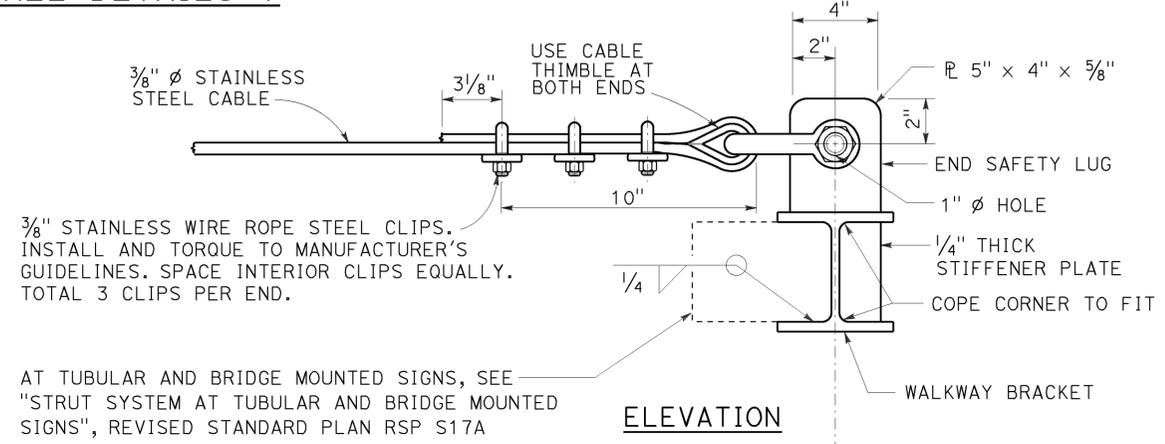
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-1-16



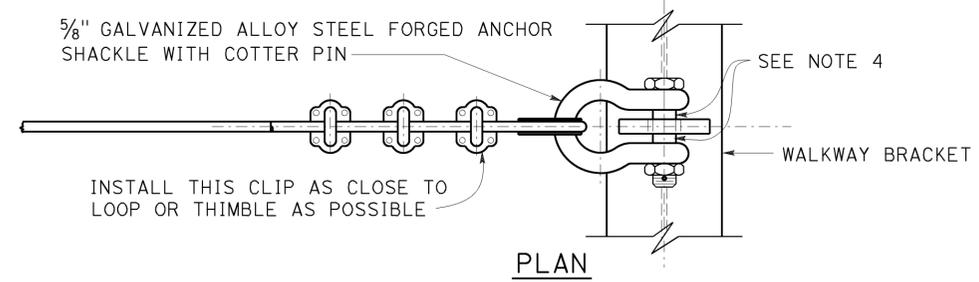
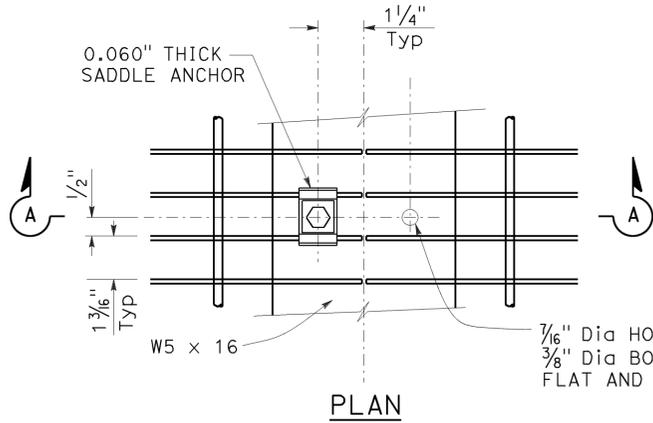
TYPICAL CONNECTION CONNECTION AT SPLICE
 LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 2

LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 1

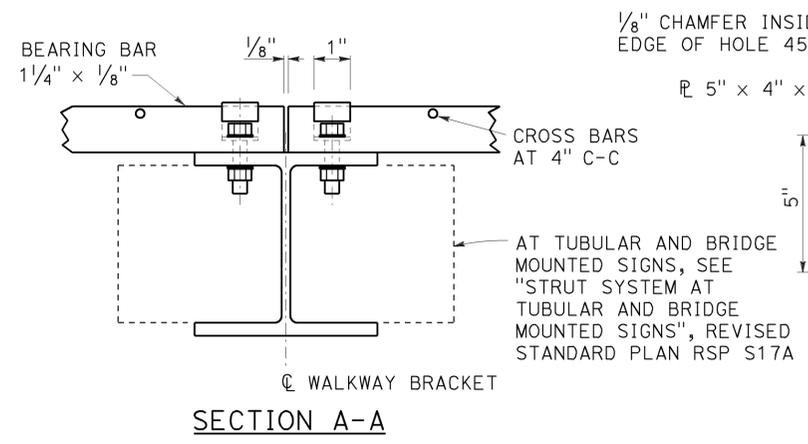


NOTES:

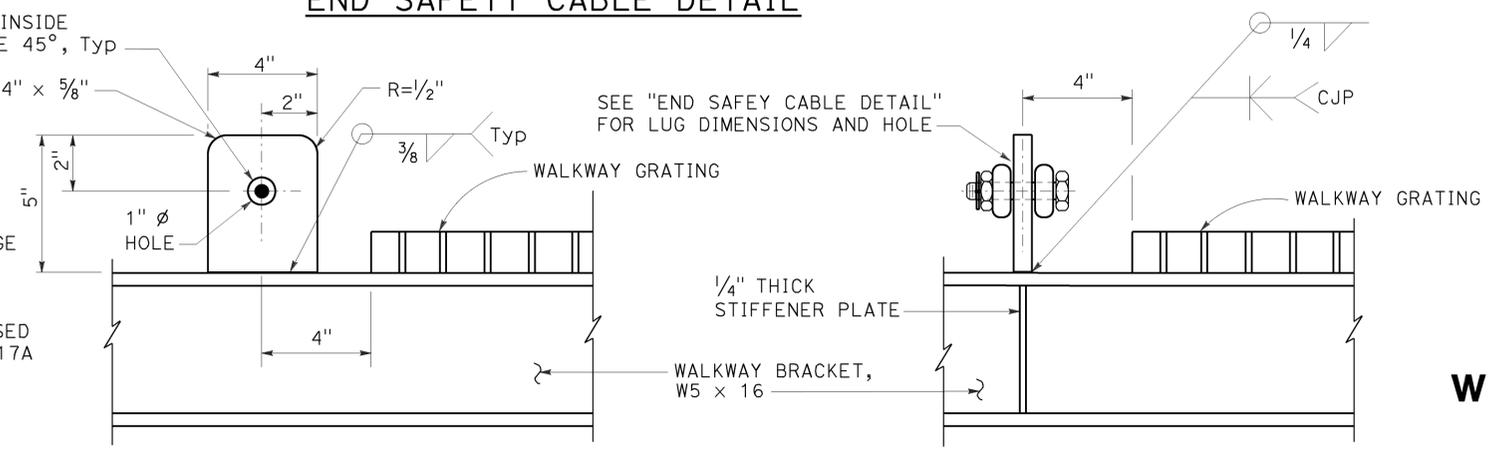
1. Welded type grating shall have 1 1/4" x 1/8" bearing bars at 1 3/16" centers with 1/4" diameter (or equal) cross bars at 4" centers. If mechanical lock grating is used, it shall be equal in strength to the welded type. Alternate hold-down clips may be submitted for approval.
2. Walkway grating and light fixture mounting channels to be continuous (no splices) over as many walkway brackets as practical and consistent with fabrication, ease of handling and assembly.
3. Contractor may substitute 1 5/8" x 1 5/8" x .1084" cont-slot steel channel with pre-punched slots not larger than 1 3/16" x 3". Slots shall be at bottom of channel and shall be parallel to channel. Slots shall be spaced not closer than 4" center to center.
4. Place an equal amount of washers on each side to align cable with end lug without restricting shackle bolt rotation or contacting cable.



END SAFETY CABLE DETAIL



WALKWAY GRATING DETAILS
 Shown at splice



INTERIOR SAFETY LUG DETAIL
 (At every walkway bracket between exterior walkway brackets)

END SAFETY LUG DETAIL
 (At exterior walkway brackets)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS
 WALKWAY DETAILS No. 2**

NO SCALE

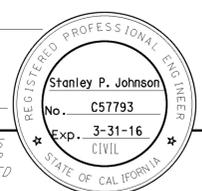
RSP S17 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN S17 DATED MAY 20, 2011 - PAGE 350 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S17

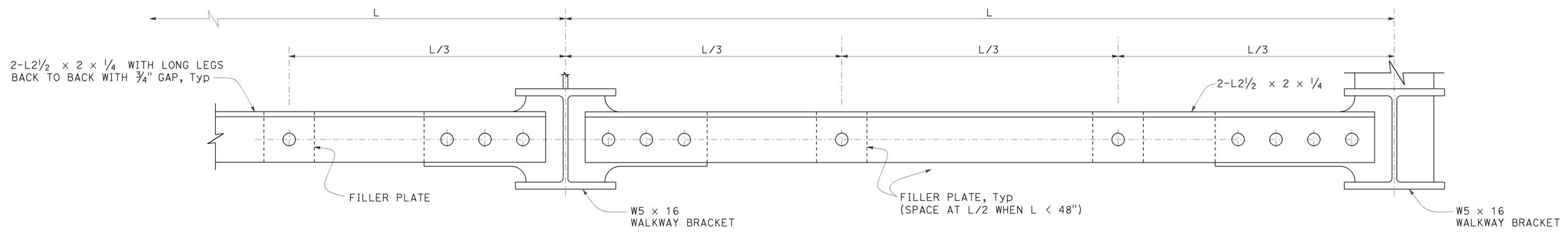
2010 REVISED STANDARD PLAN RSP S17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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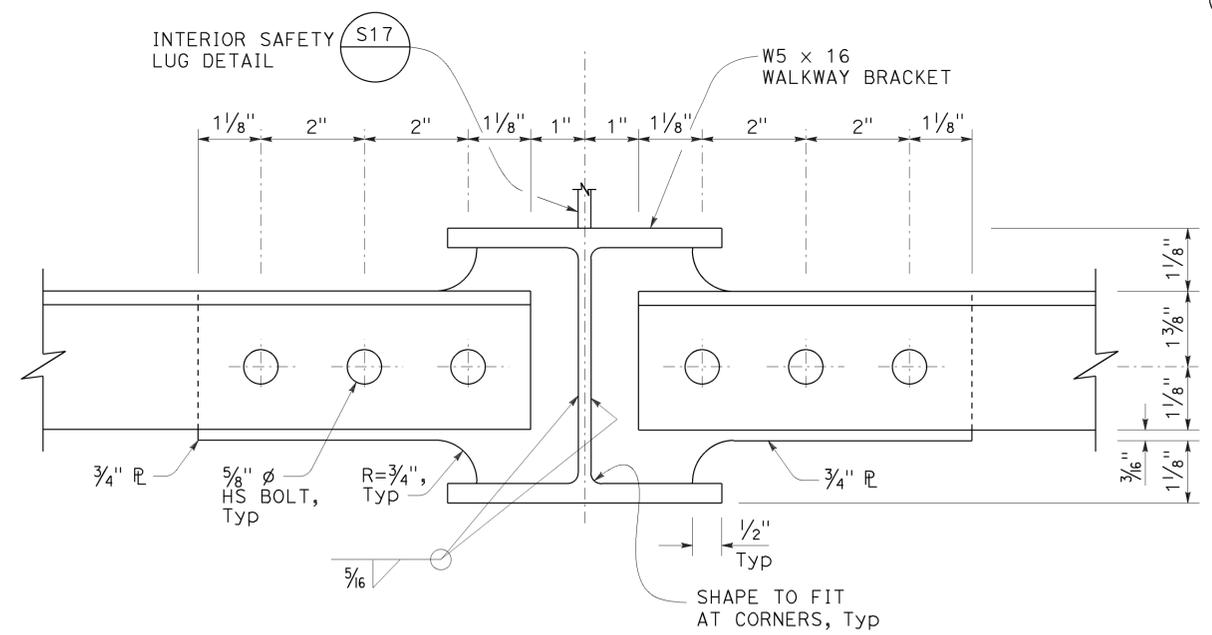
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



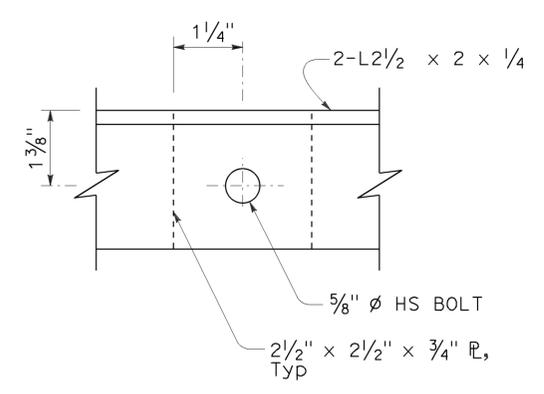
TO ACCOMPANY PLANS DATED 7-1-16



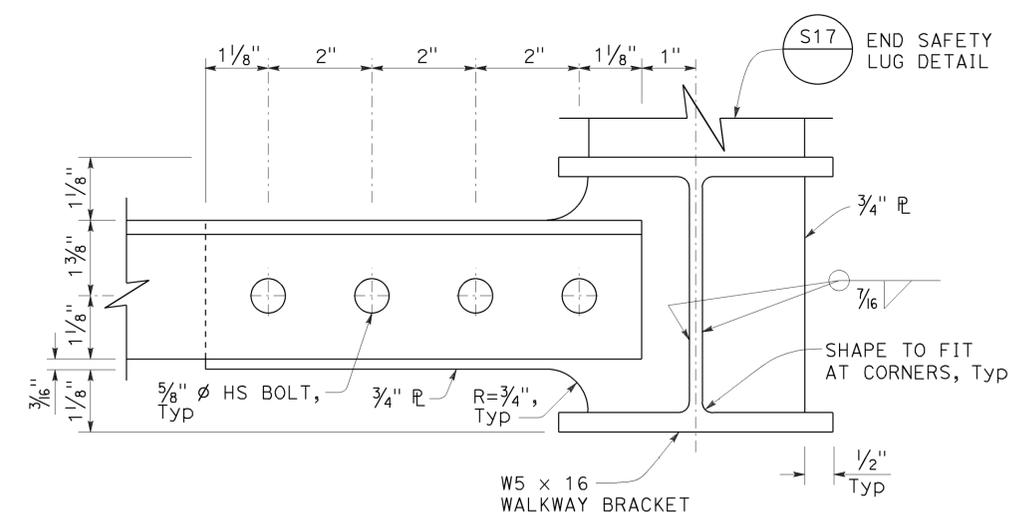
STRUT SYSTEM AT TUBULAR AND BRIDGE MOUNTED SIGNS
 (Continuous between end safety lug locations)



INTERIOR SAFETY LUG LOCATION



FILLER PLATE



END SAFETY LUG LOCATION

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**OVERHEAD SIGNS
 WALKWAY DETAILS No. 3**
 NO SCALE

RSP S17A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN S17A DATED MAY 20, 2011 - PAGE 351 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S17A

2010 REVISED STANDARD PLAN RSP S17A

LEGEND:

AB	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
BP	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
CF	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
DH	DETECTOR HANDHOLE
FA	FOUNDATION TO BE ABANDONED
IS	INSTALL SIGN ON SIGNAL MAST ARM
NS	NO SLIP BASE ON STANDARD
PEC	PHOTOELECTRIC CONTROL
PEU	PHOTOELECTRIC UNIT
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
RE	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
RL	RELOCATE EQUIPMENT
RR	REMOVE AND REUSE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUCTORS
SD	SERVICE DISCONNECT
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

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

MISCELLANEOUS ELECTROLIERS

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

NOTES:

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

STANDARD ELECTROLIER

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	229	265
 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>					
 REGISTERED PROFESSIONAL ENGINEER Theresa Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					

TO ACCOMPANY PLANS DATED 7-1-16

SOFFIT AND WALL-MOUNTED LUMINAIRES

- PENDANT SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH-MOUNTED SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL-MOUNTED LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:

Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	230	265

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 7-1-16

CONDUIT

SIGNAL EQUIPMENT

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

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

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

SERVICE EQUIPMENT

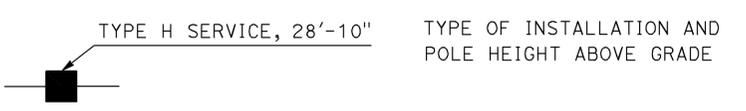
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

NEW	EXISTING	
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

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

ILLUMINATED OVERHEAD SIGN

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

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

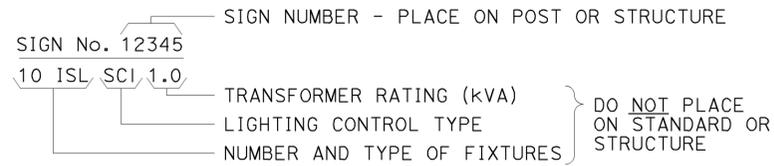
RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

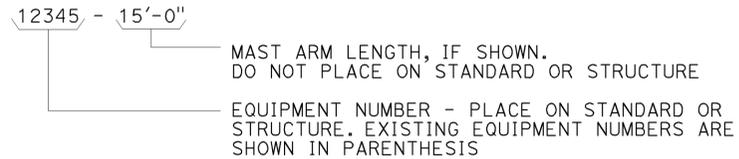
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

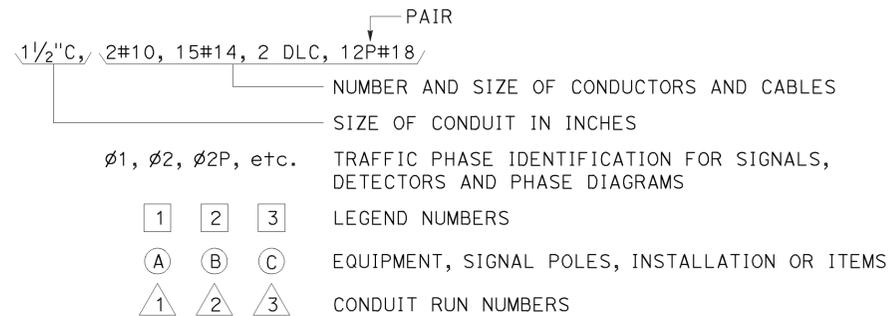
ILLUMINATED SIGN IDENTIFICATION NUMBER:



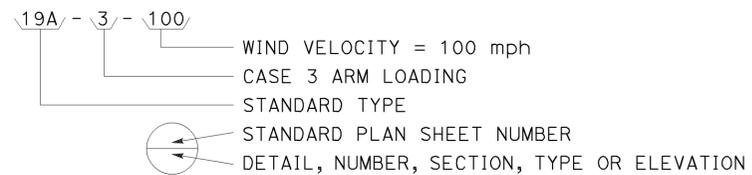
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



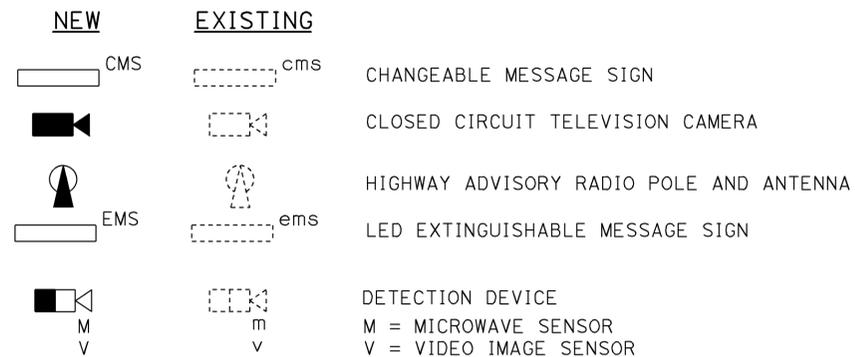
CONDUIT AND CONDUCTOR IDENTIFICATION:



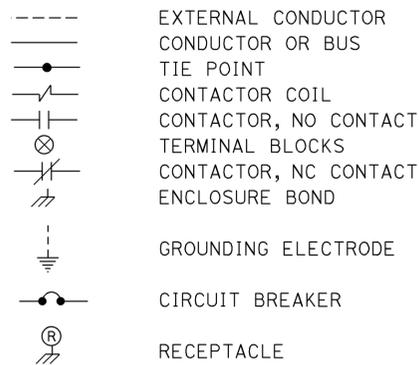
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



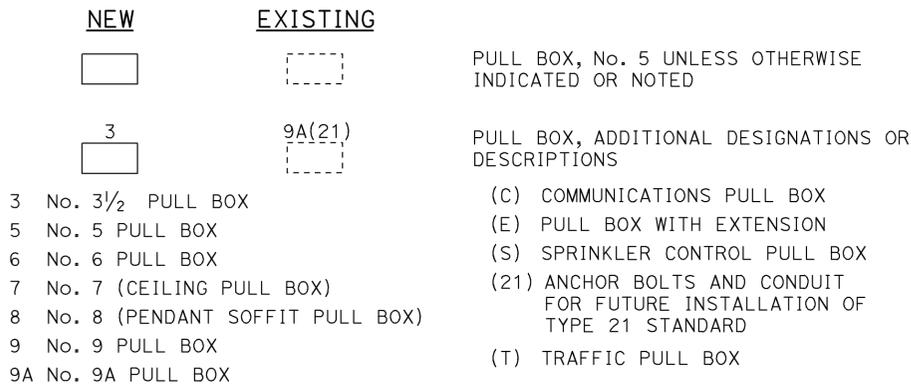
MISCELLANEOUS EQUIPMENT



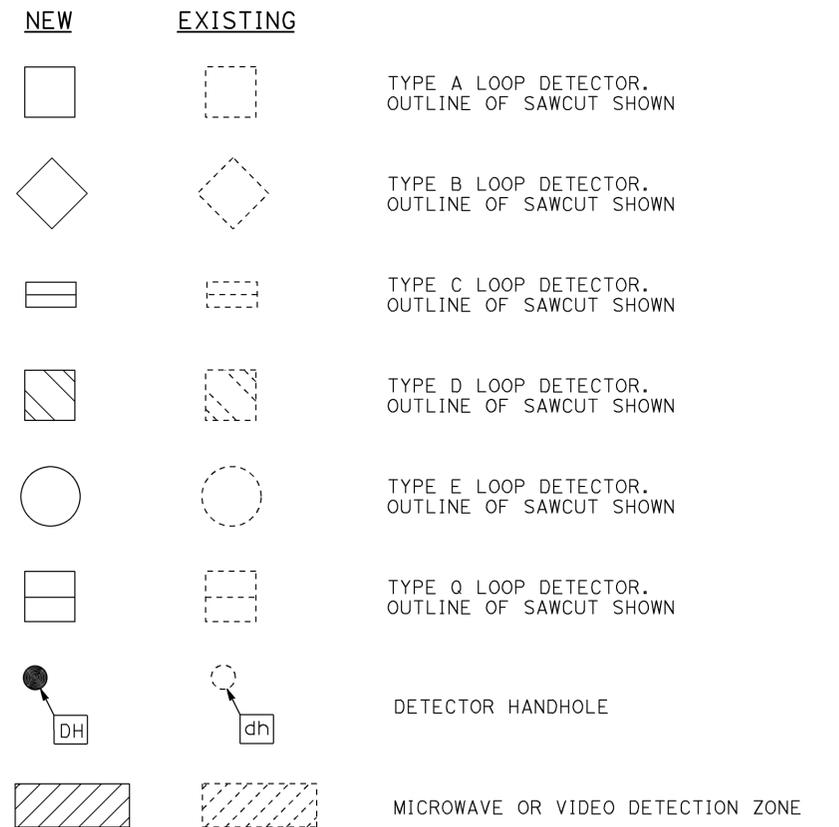
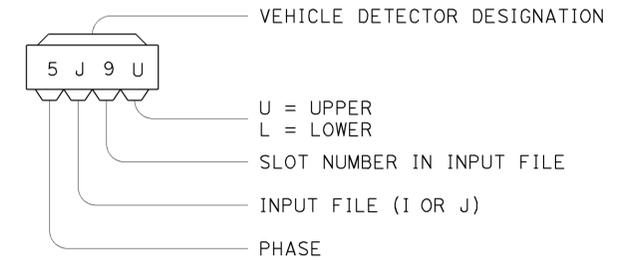
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

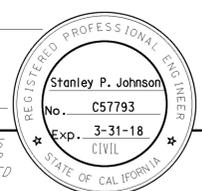
ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

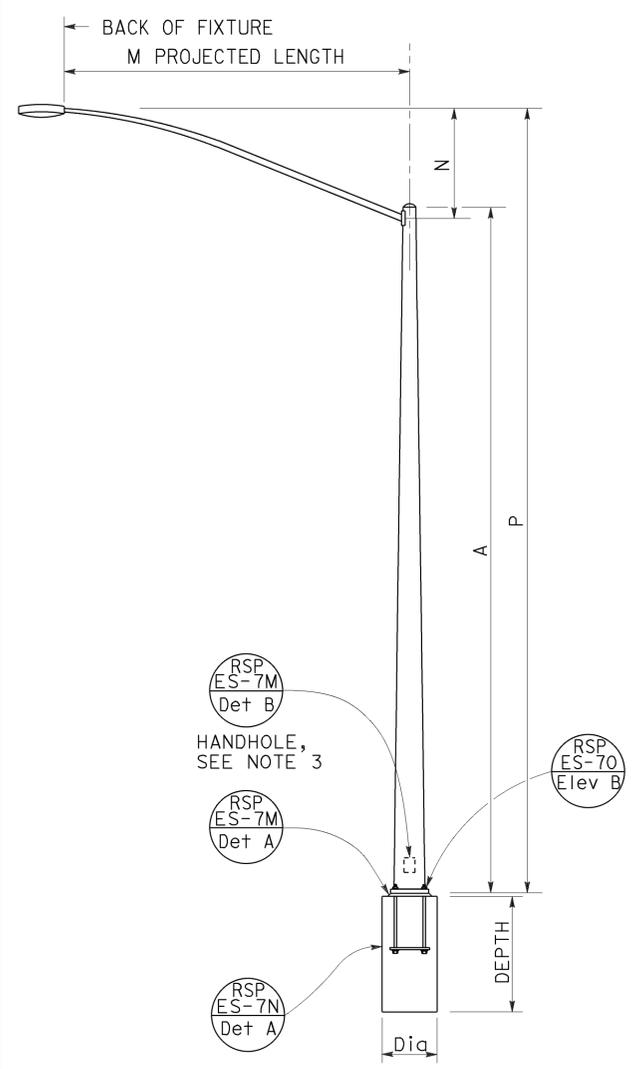
RSP ES-1C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1C DATED JULY 19, 2013 AND STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

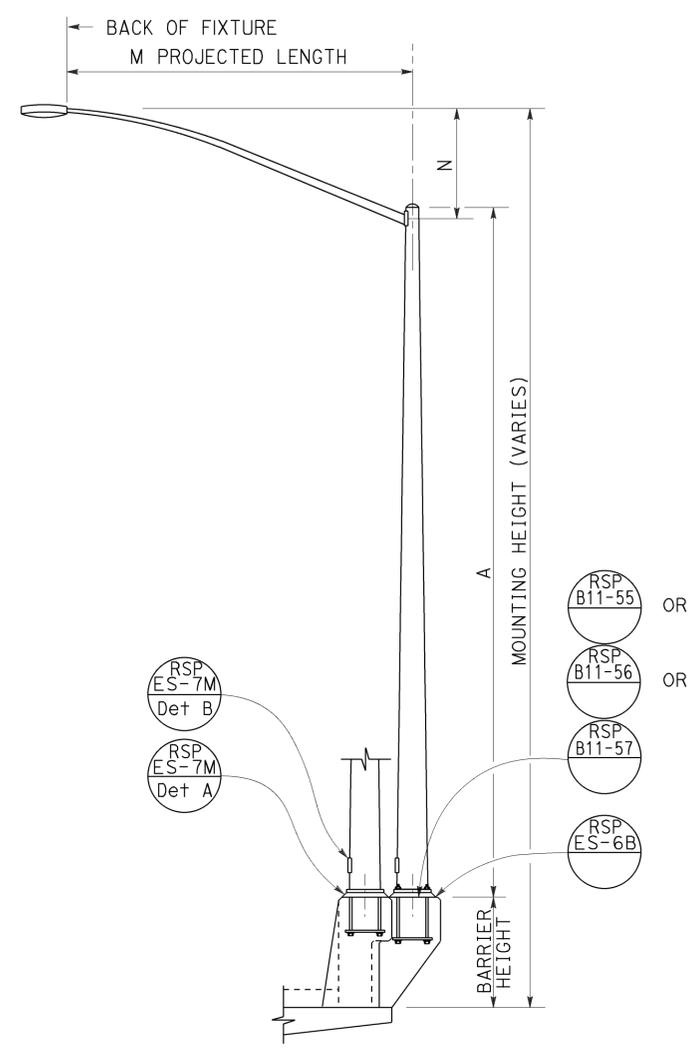
2010 REVISED STANDARD PLAN RSP ES-1C



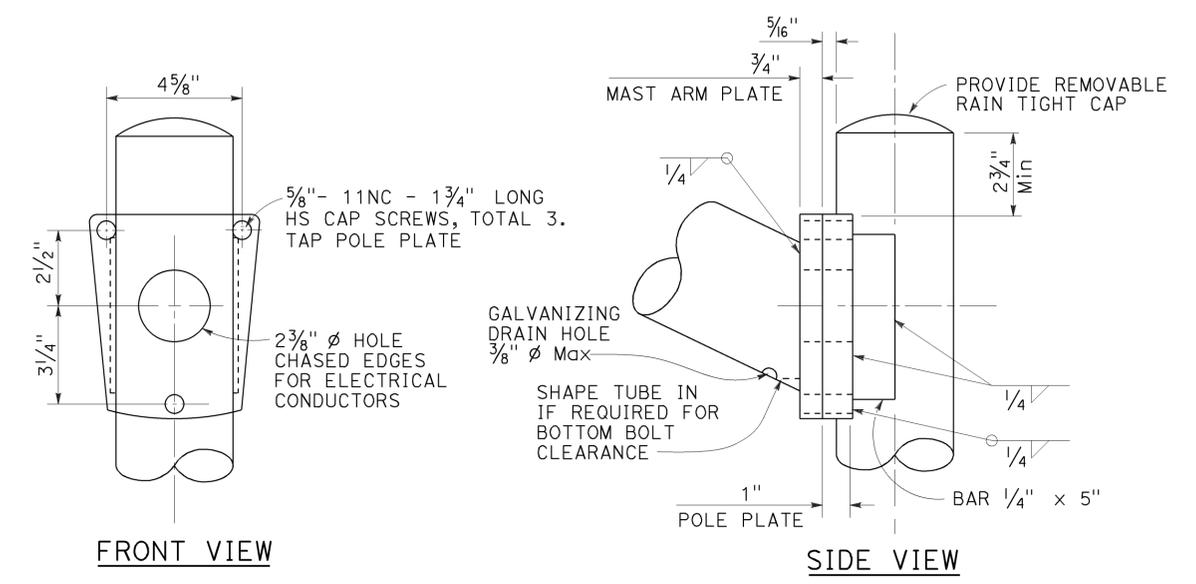
TO ACCOMPANY PLANS DATED 7-1-16



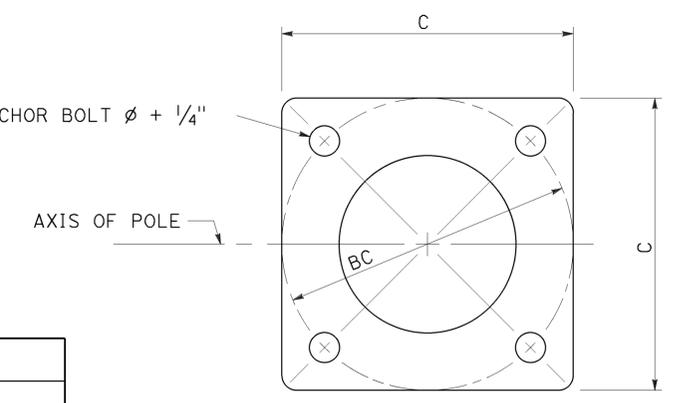
**TYPE 15 AND TYPE 21
ELEVATION A**



**TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED
ELEVATION B**



**LUMINAIRE MAST ARM CONNECTION
DETAIL R**



**BASE PLATE
DETAIL A**

POLE TYPE	POLE DATA			BASE PLATE DATA			CIDH PILE FOUNDATION		
	A HEIGHT	Min OD BASE	WALL THICKNESS TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Diq	DEPTH
15	30'-0"	8"	0.1196"	1'-0"	1'-0"	1 1/2"	1" Ø x 36" *	2'-6"	6'-0"
21	35'-0"	8 5/8"	0.1793"	1'-0"	1'-0"	2"	1 1/4" Ø x 36" *	2'-6"	7'-0"

* FOR BARRIER RAIL BOLTS, SEE REVISED STANDARD PLAN RSP ES-6B.

M PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15	TYPE 21
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"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

NOTES:

- Indicates mast arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Revised Standard Plan RSP ES-6F.
- Handhole shall be located on the downstream side of traffic.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

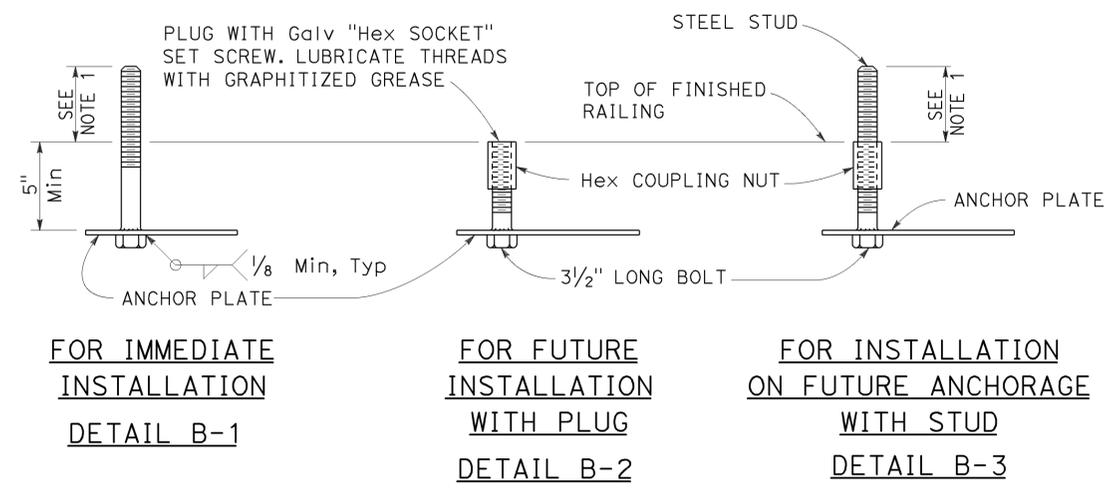
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD,
 TYPES 15 AND 21)**
 NO SCALE

RSP ES-6A DATED JULY 15, 2016 SUPERSEDES RSP ES-6A
 DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6A DATED MAY 20, 2011 -
 PAGE 452 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-6A



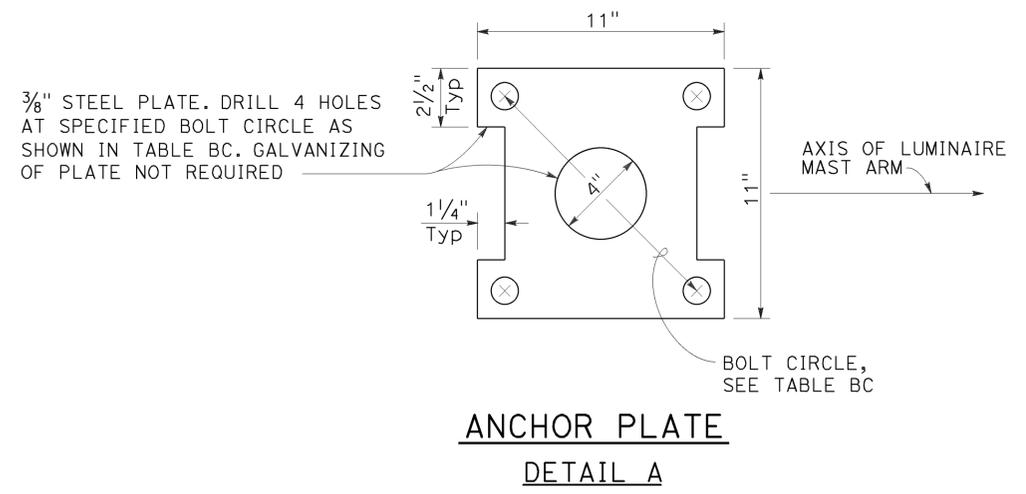
TO ACCOMPANY PLANS DATED 7-1-16



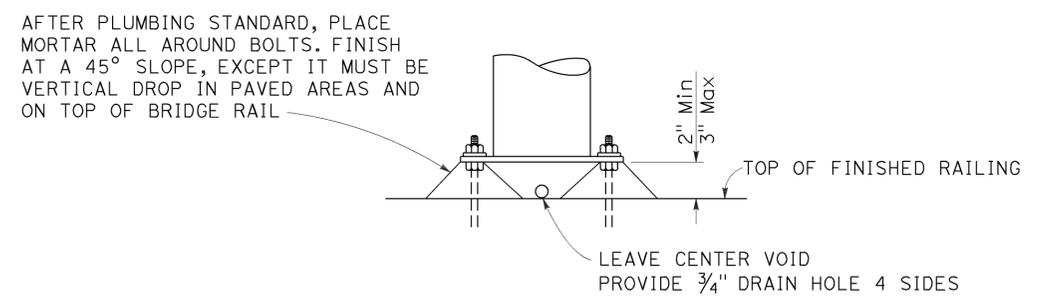
ELECTROLIER ANCHORAGES
DETAIL B

NOTES:

1. Anchor bolt or stud length shall be such that thread extends 1/2" maximum above nut on level base plate after grouting. See Detail N.
2. Electrolier anchor bolts shall be held in position for pouring by means of anchor plates and suitable templates. Deviation from the true position, vertical and height shall not exceed 1/16".
3. See railing sheets for reinforcement and structural details at electroliers and pull boxes.



TYPE	BC = BOLT CIRCLE	ANCHOR BOLT DIAMETER	COUPLING NUT BASIC LENGTH	SET SCREW LENGTH DETAIL B-2
15	1'-0"	1"	3"	1 1/2"
21	1'-0"	1 1/4"	3 3/4"	1 7/8"



GROUTING AT ELECTROLIER
DETAIL N

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTROLIER ANCHORAGE AND
GROUTING FOR
TYPE 15 AND TYPE 21
BARRIER RAIL MOUNTED)

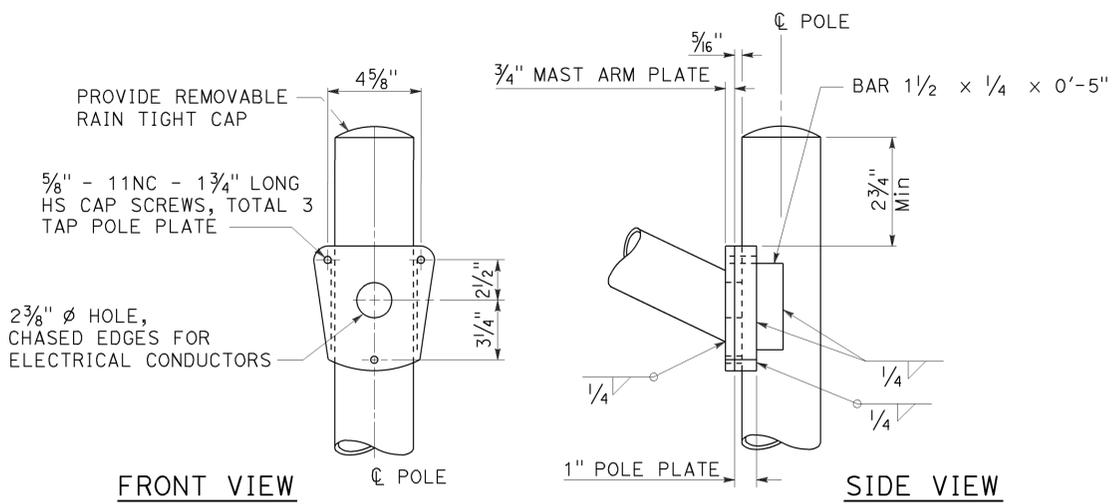
NO SCALE

RSP ES-6B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6B DATED MAY 20, 2011 - PAGE 453 OF THE STANDARD PLANS BOOK DATED 2010.

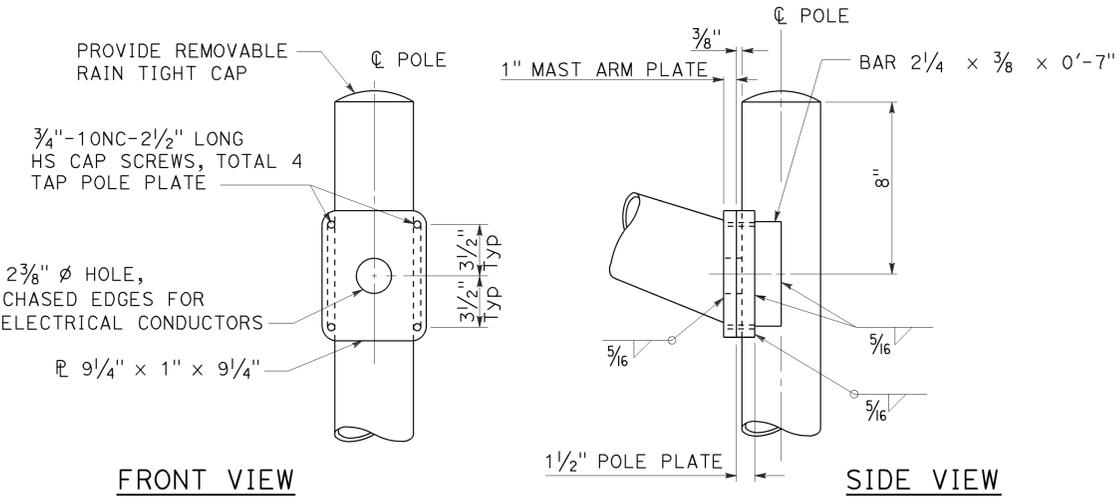
2010 REVISED STANDARD PLAN RSP ES-6B

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"±

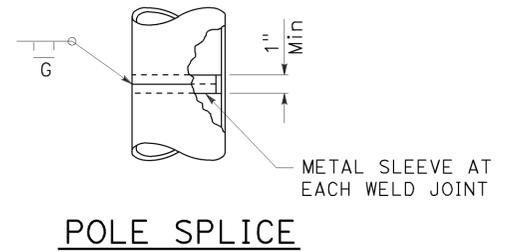
* TYPE 30
** TYPE 31



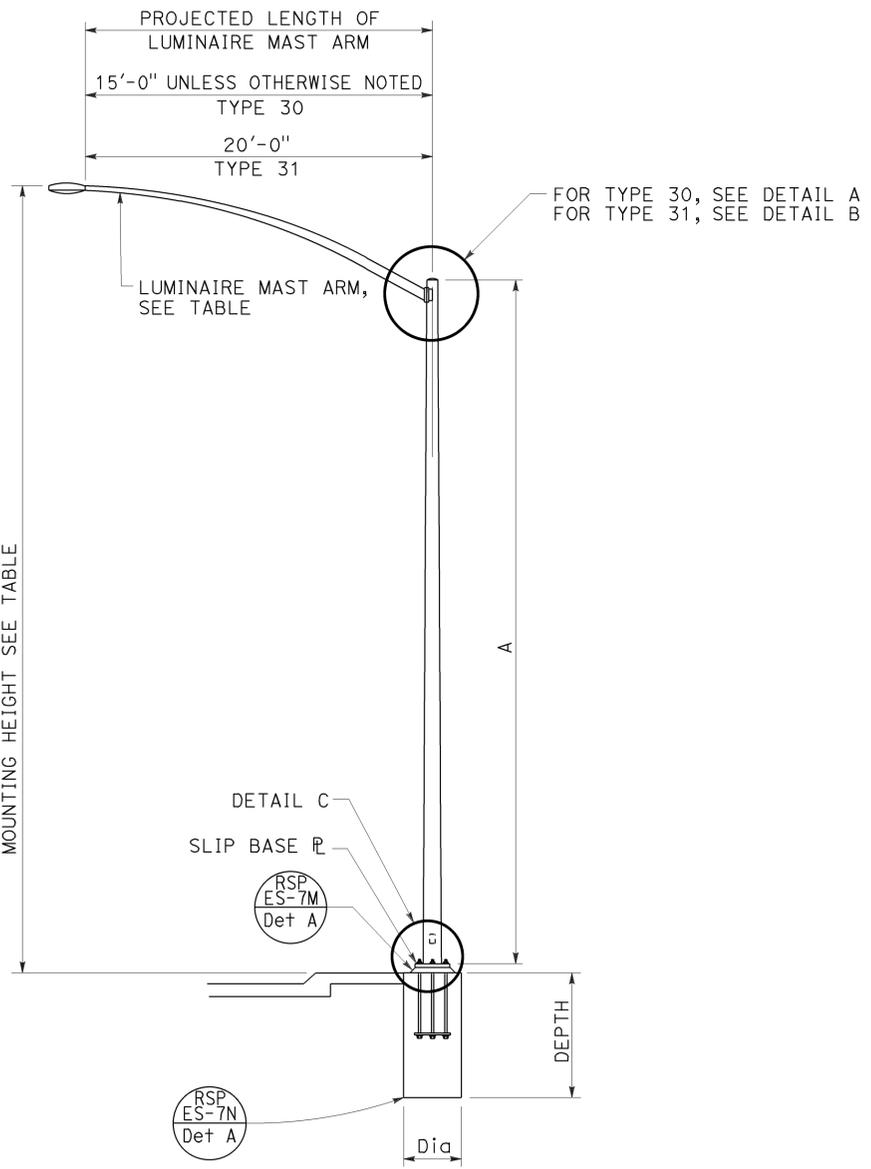
**TYPE 30
DETAIL A**



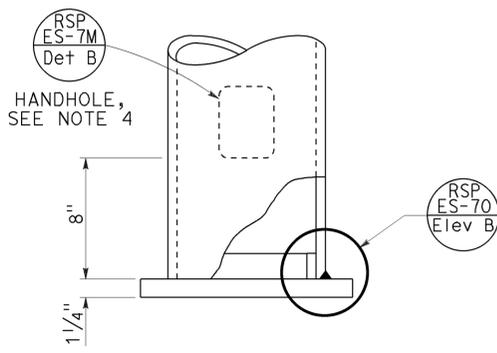
**TYPE 31
DETAIL B**



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.

TO ACCOMPANY PLANS DATED 7-1-16

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 1/8"	0.1196"	2'-6" 7'-0"
31		10 3/4"	5 1/8"	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.

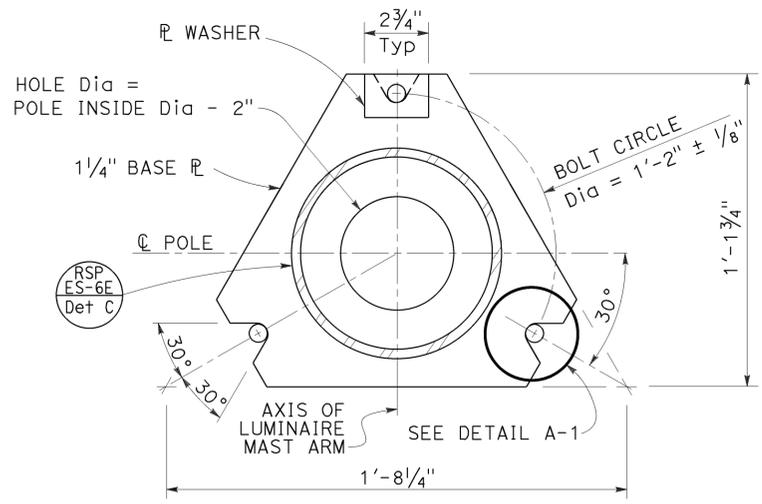
2010 REVISED STANDARD PLAN RSP ES-6E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	235	265

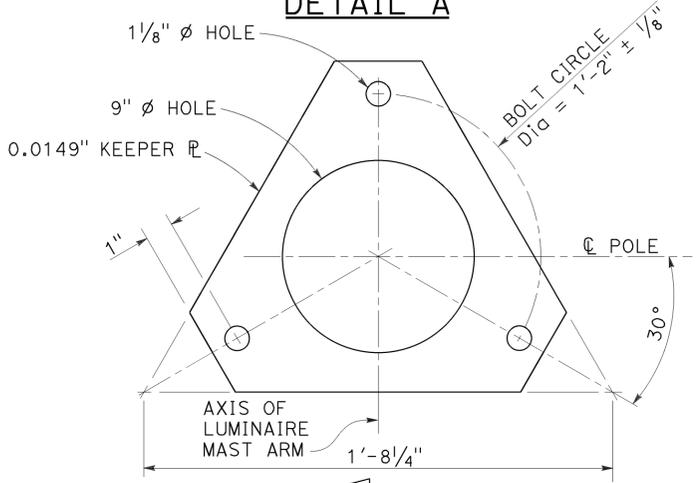
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

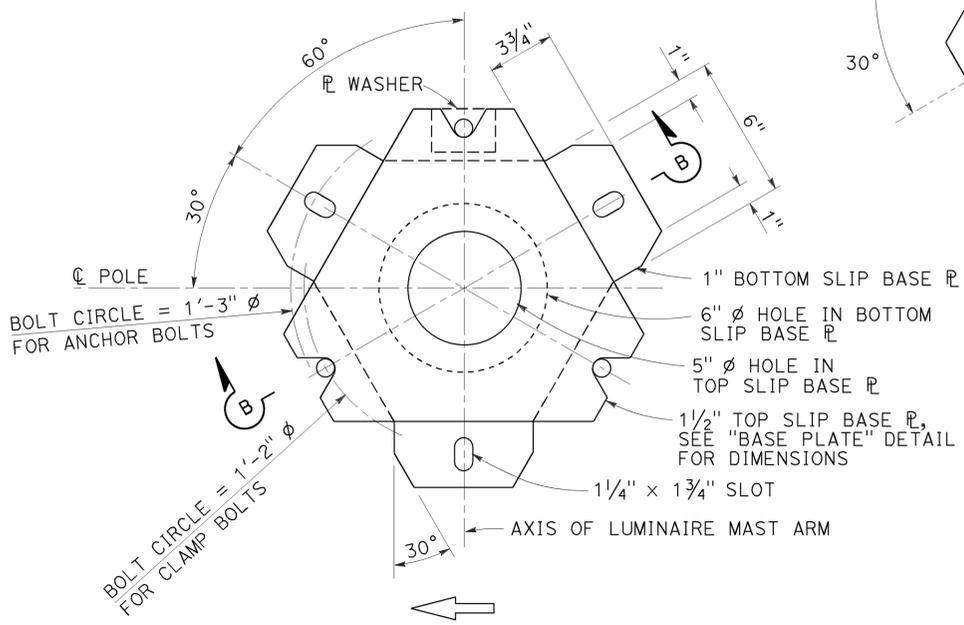
2010 REVISED STANDARD PLAN RSP ES-6F



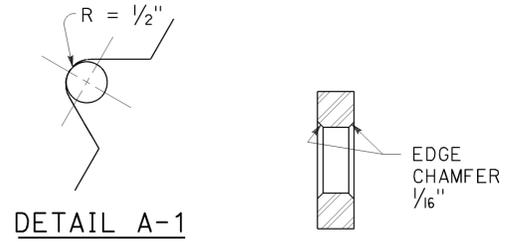
**BASE PLATE
DETAIL A**



**KEEPER PLATE
DETAIL B**

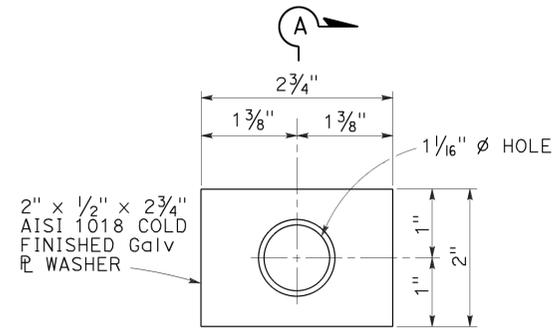


**BOTTOM PLATE
DETAIL C**

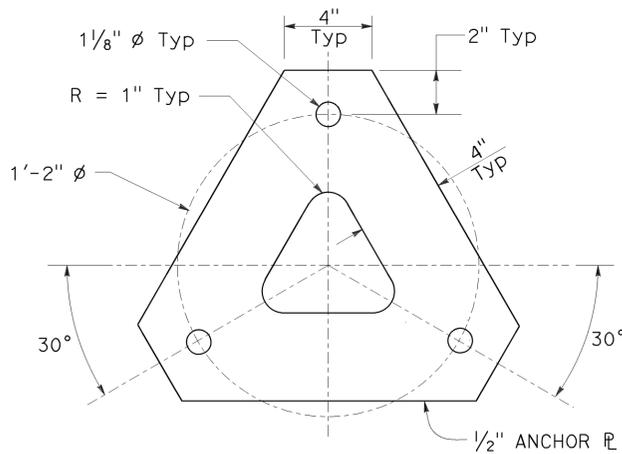


DETAIL A-1

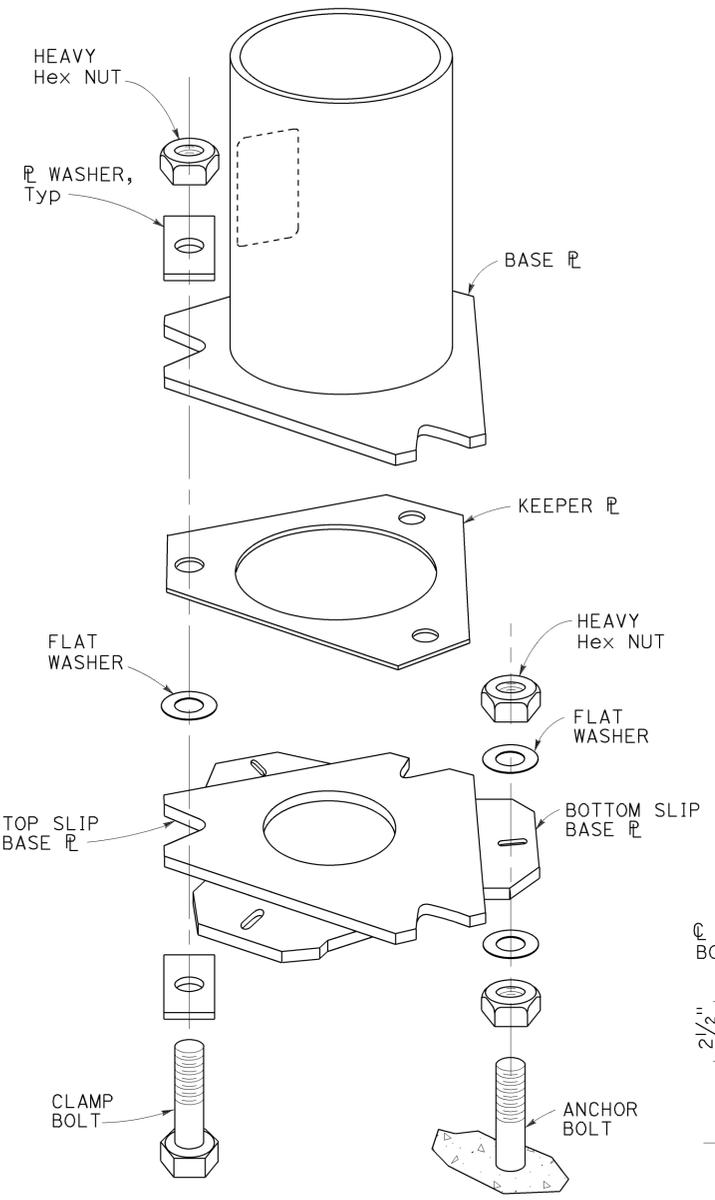
SECTION A-A



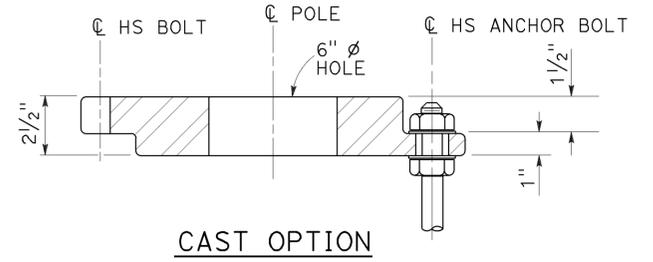
**PLATE WASHER
DETAIL D**



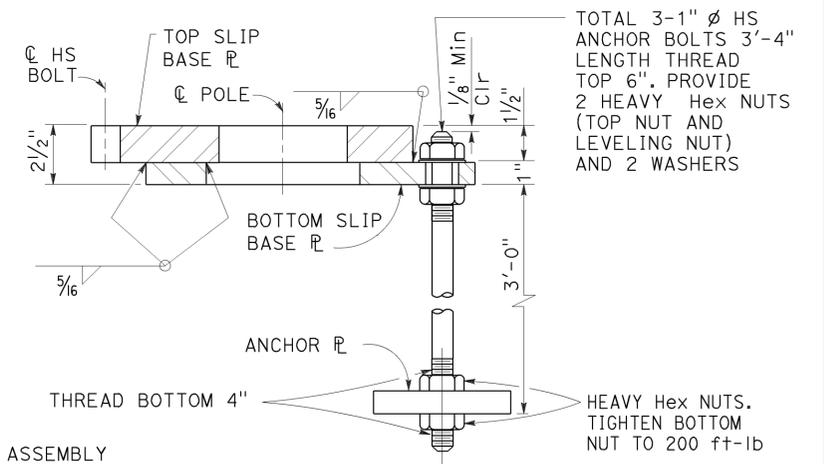
**ANCHOR PLATE
DETAIL E**



**SLIP BASE DETAIL
DETAIL F**

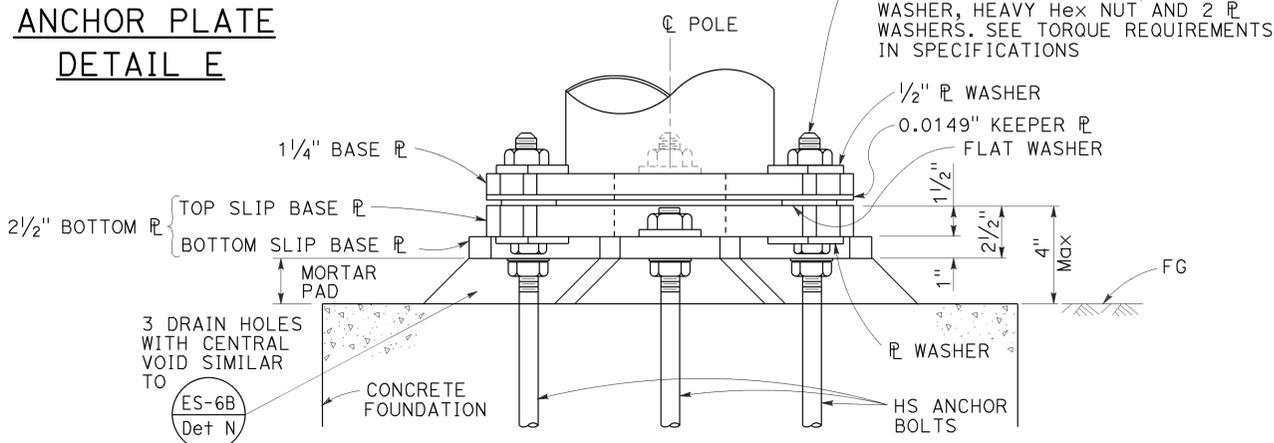


CAST OPTION



WELDED OPTION

SECTION B-B



**SLIP BASE
ELEVATION A**

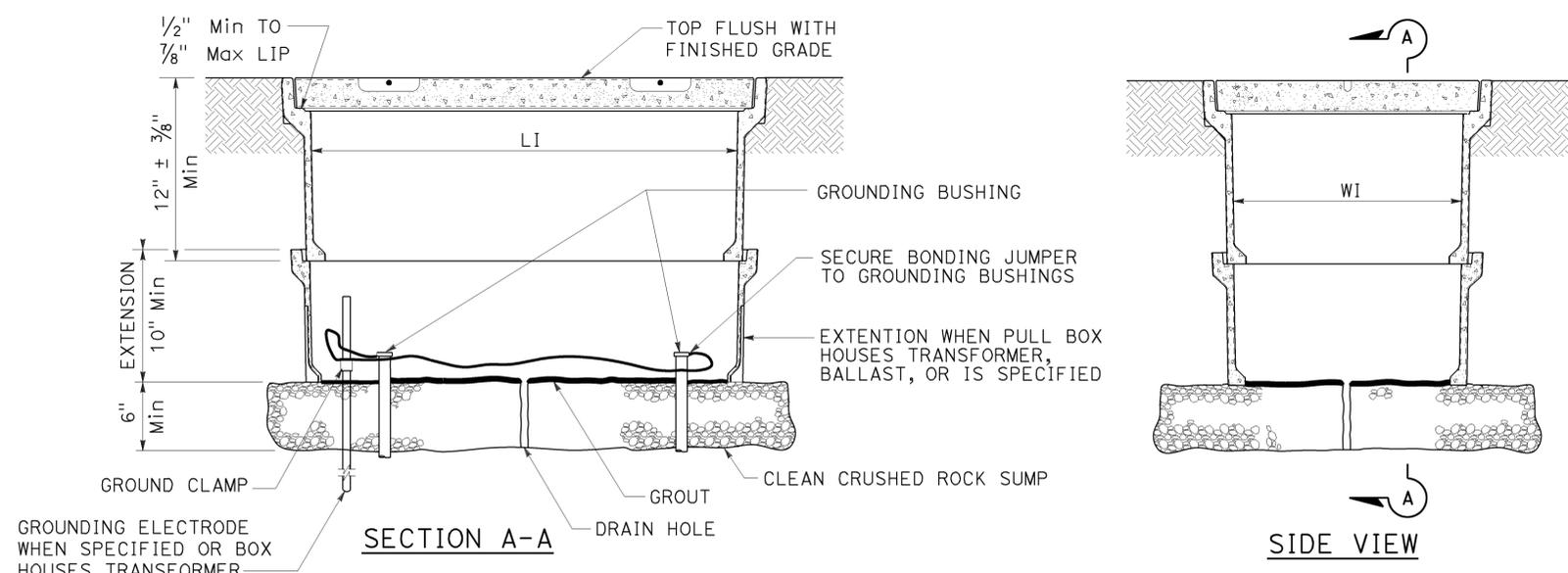
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
SLIP BASE PLATE)**

NO SCALE

RSP ES-6F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6F DATED MAY 20, 2011 - PAGE 457 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6F

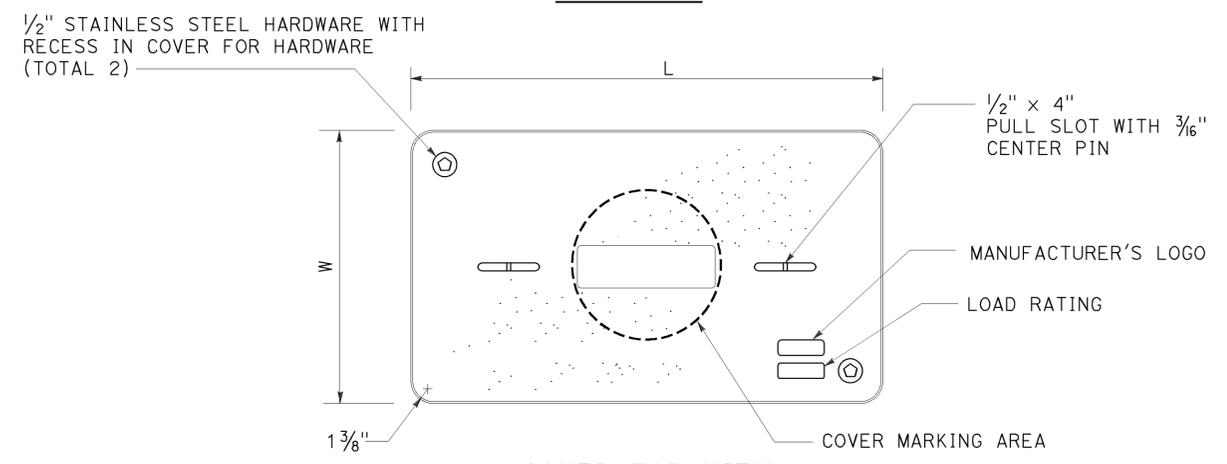
TO ACCOMPANY PLANS DATED 7-1-16



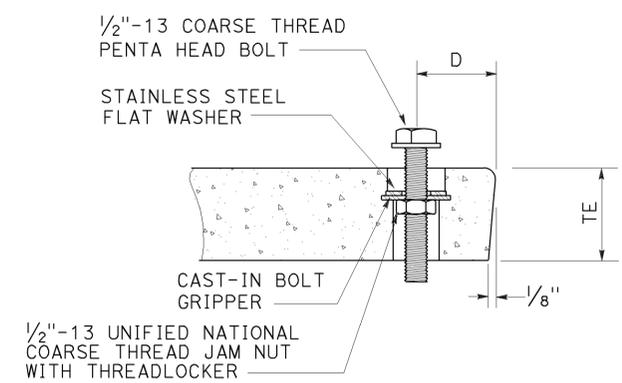
INSTALLATION DETAILS
DETAIL A

NOTES:

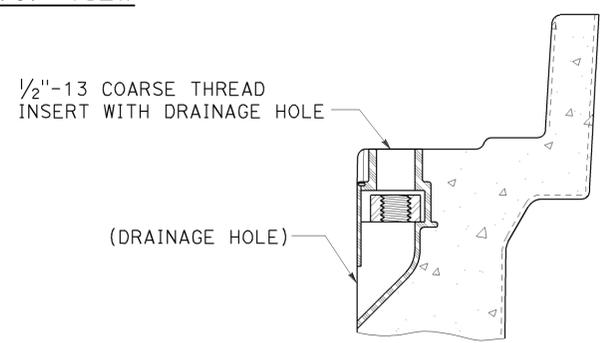
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male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

2010 REVISED STANDARD PLAN RSP ES-8A

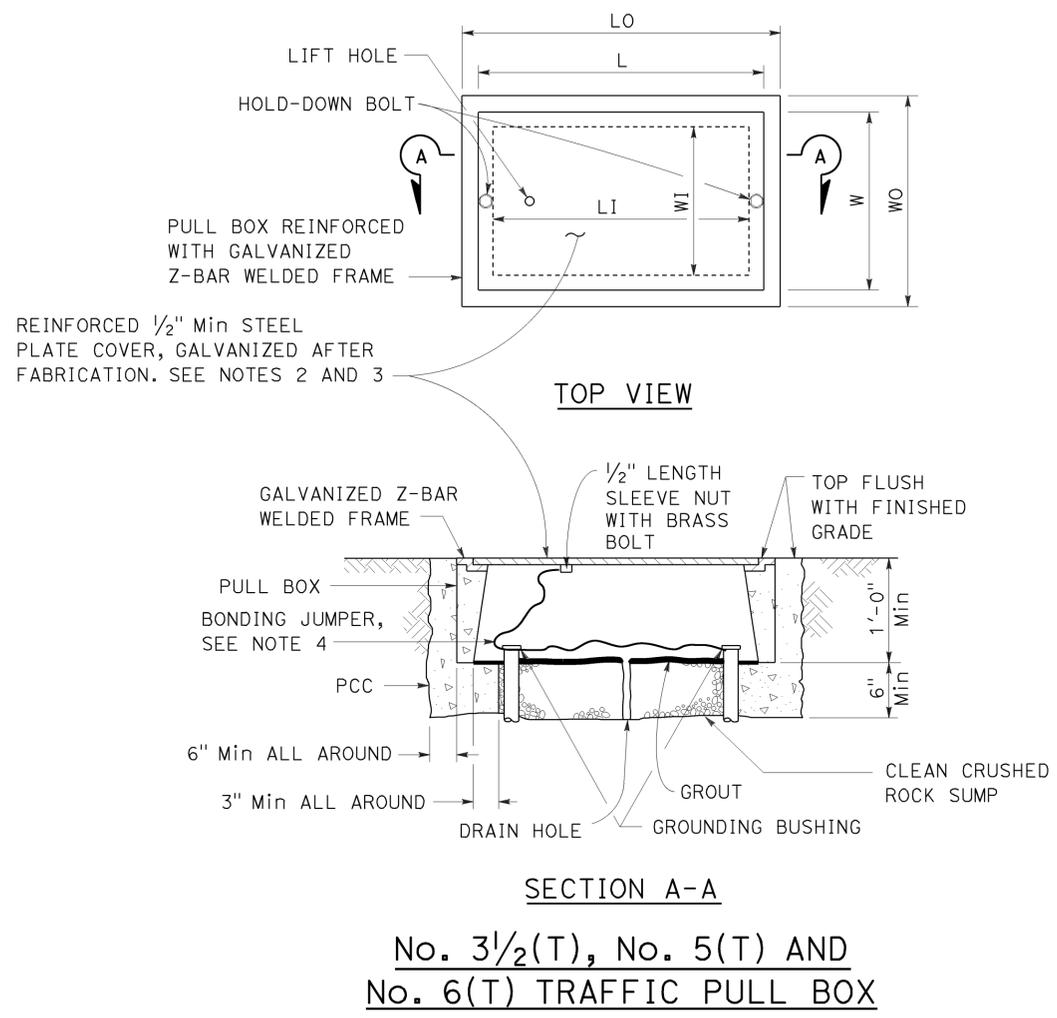
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	237	265

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 7-1-16



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. Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
 - A) No. 3 1/2(T) pull box.
 - 1) "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - 2) "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - B) No. 5(T) or 6(T) pull box.
 - 1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - 2) "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - 3) "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - 4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - 5) "RAMP METER" - Ramp meter circuits.
 - 6) "COUNT STATION" - Count or speed monitor circuits.
 - 7) "COMMUNICATION" - Communication circuits.
 - 8) "TOS COMMUNICATIONS" - TOS communications line.
 - 9) "TOS POWER" - TOS power.
 - 10) "TDC POWER" - Telephone demarcation cabinet power.
 - 11) "CCTV" - Closed circuit television circuits.
 - 12) "TMS" - Traffic monitoring station circuits.
 - 13) "CMS" - Changeable message sign circuits.
 - 14) "HAR" - Highway advisory radio circuits.
 - 15) "BOOSTER PUMP" - Booster pump circuit.
4. Bonding jumper for metal covers shall be 3' long, minimum.
5. 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.
6. 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 OCTOBER 30, 2015 SUPERSEDES RSP ES-8B DATED JULY 19, 2013 AND RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

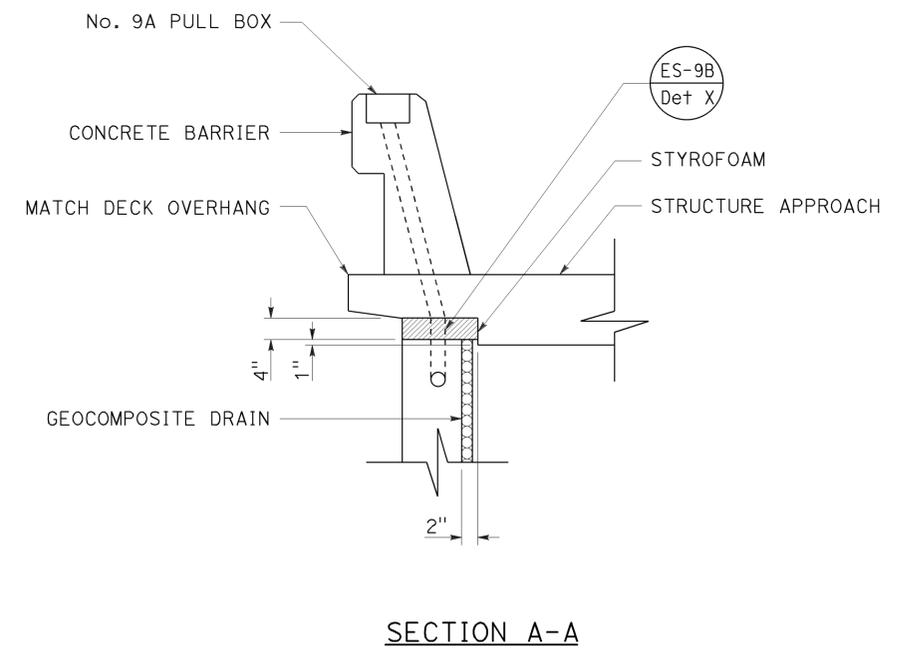
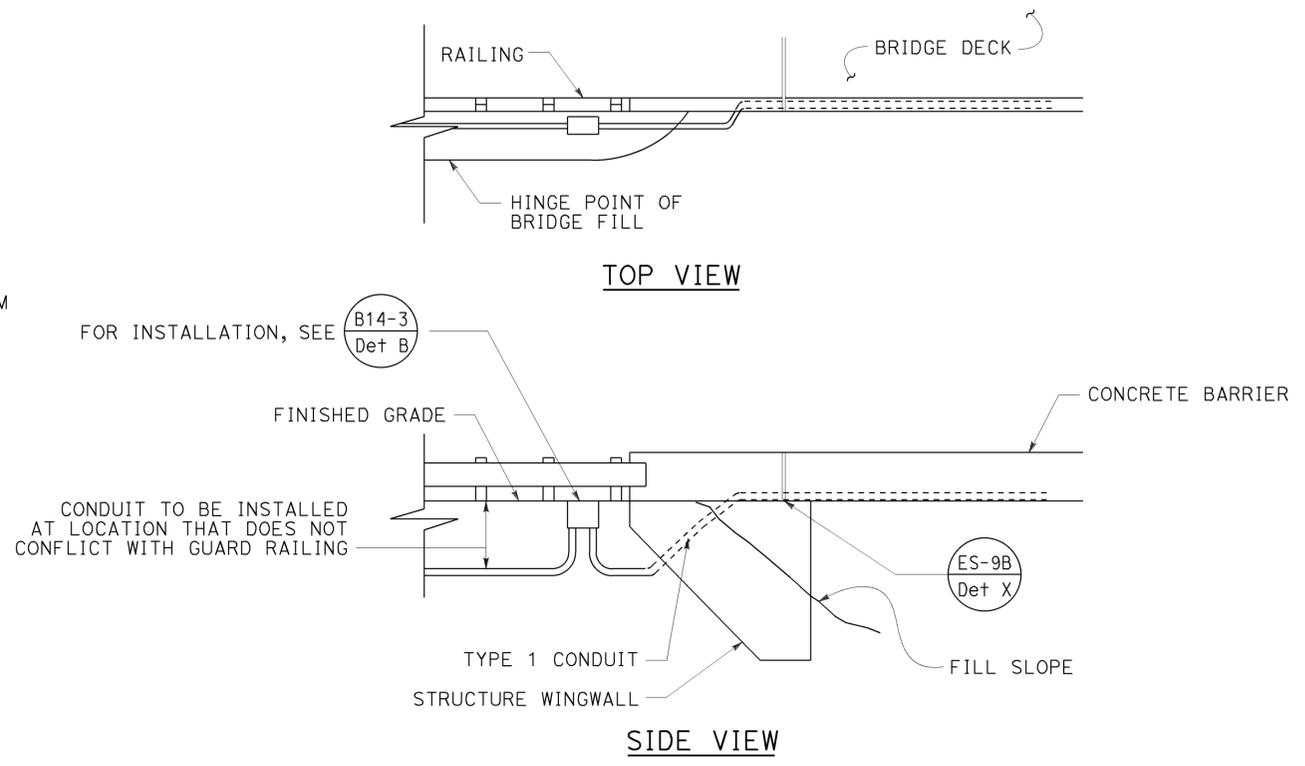
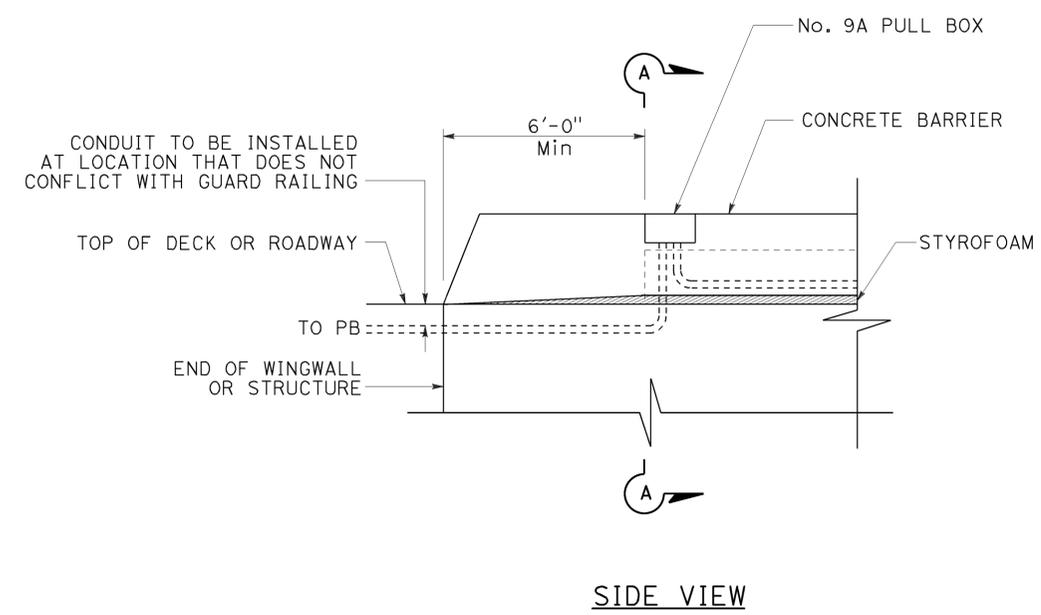
2010 REVISED STANDARD PLAN RSP ES-8B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	238	265

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

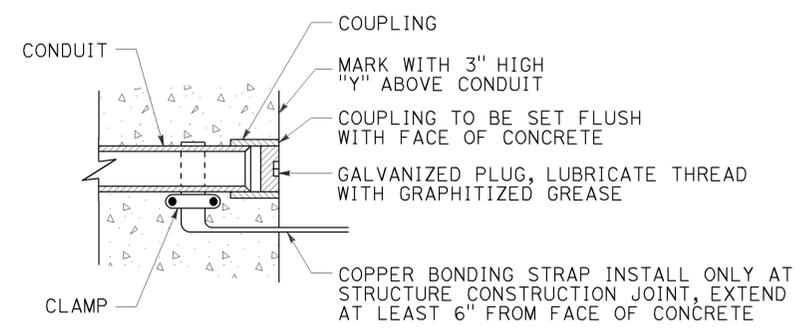
October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-1-16



**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

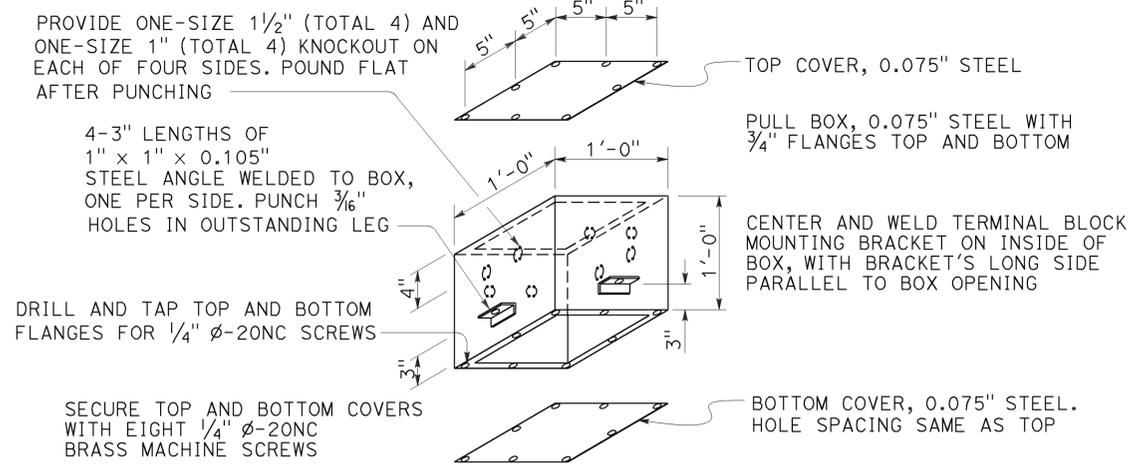
RSP ES-9A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9A DATED MAY 20, 2011 - PAGE 481 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9A

2010 REVISED STANDARD PLAN RSP ES-9A

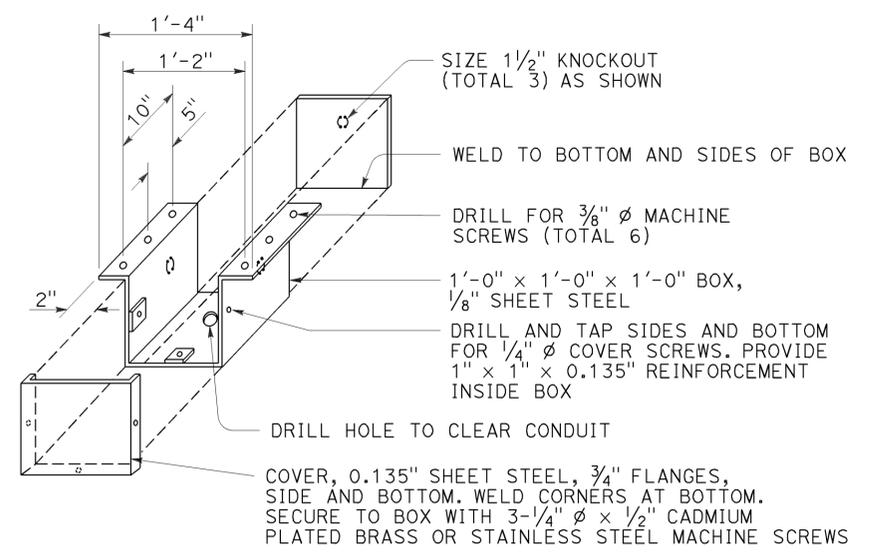
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	239	265

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.



No. 7 PULL BOX (CEILING)

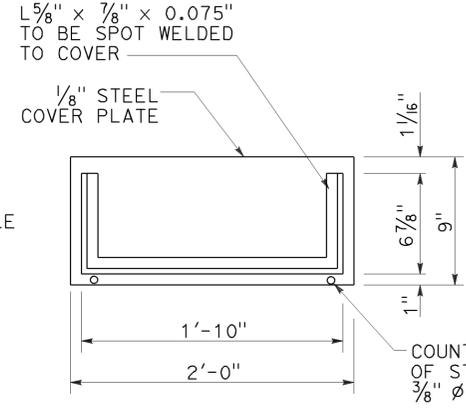
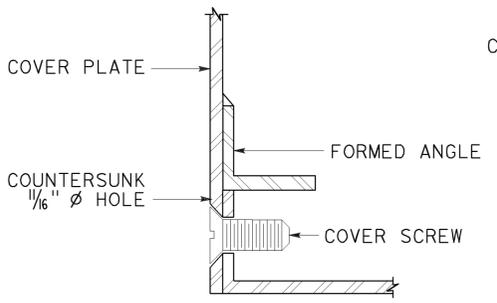
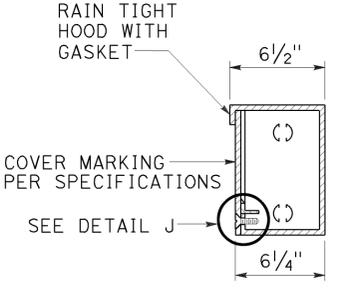
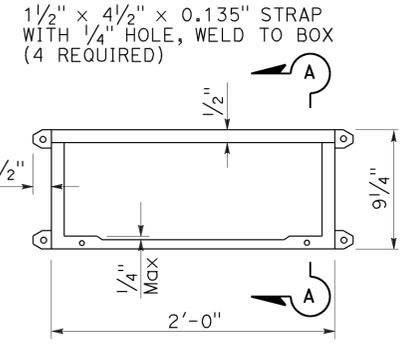
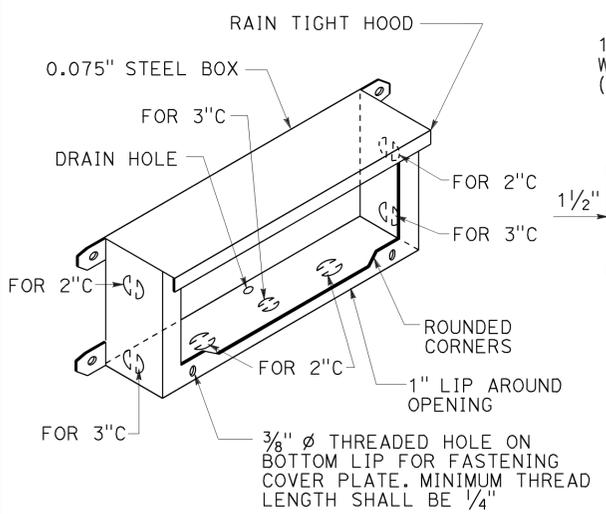
See Note 6



No. 8 PULL BOX

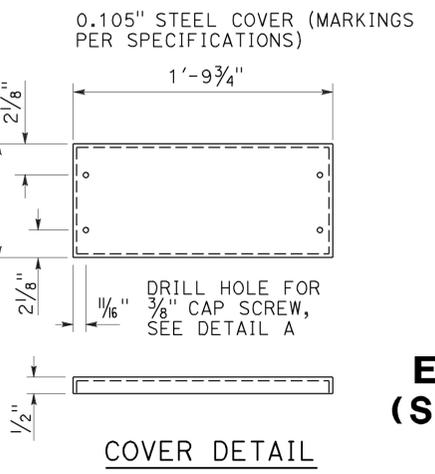
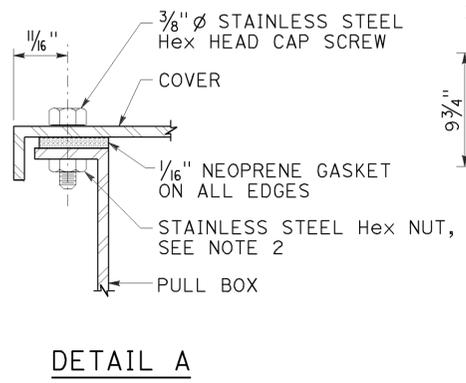
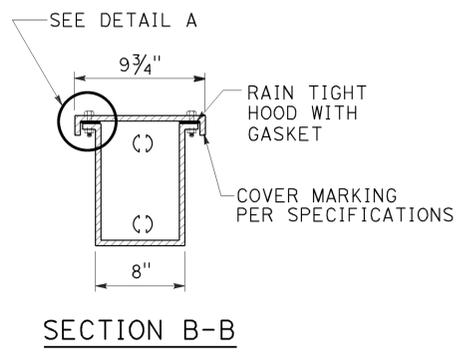
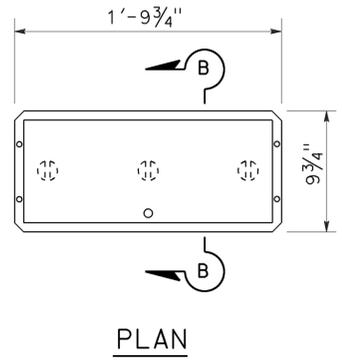
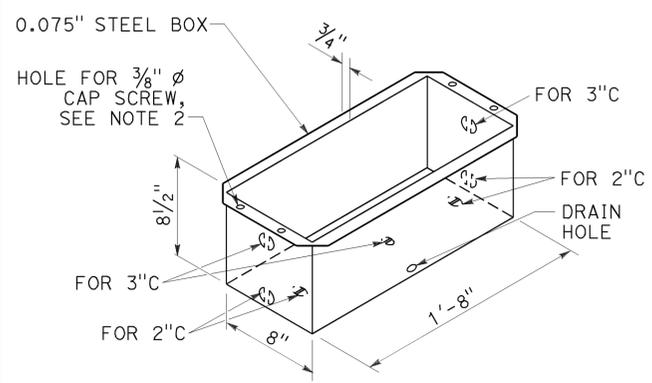
NOTES:

- 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.



No. 9 PULL BOX (STRUCTURE)

See Note 7



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.

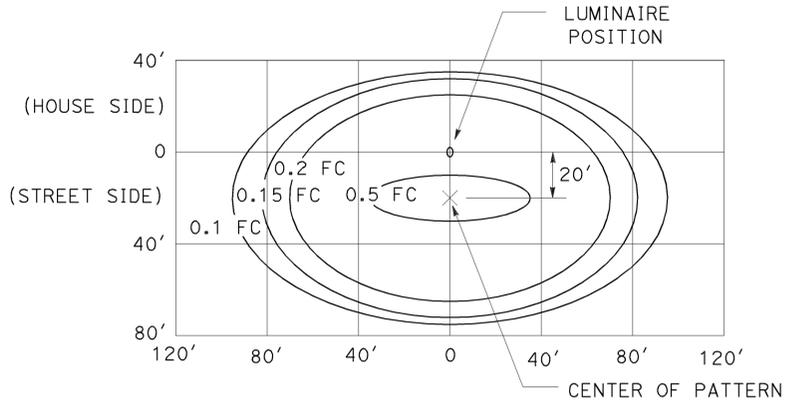
2010 REVISED STANDARD PLAN RSP ES-9C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	240	265
<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>					

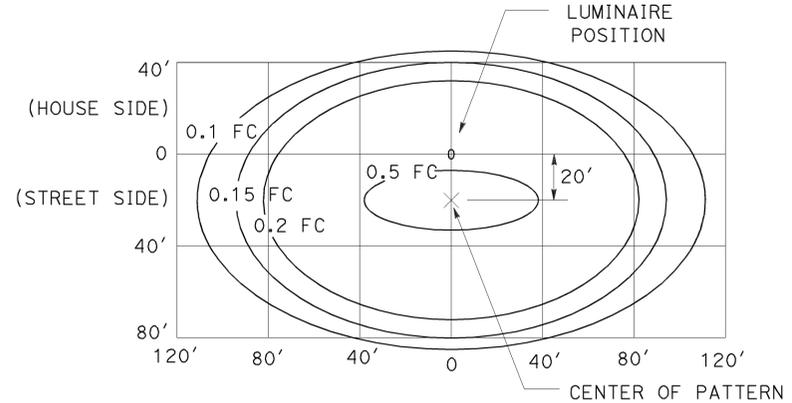


TO ACCOMPANY PLANS DATED 7-1-16

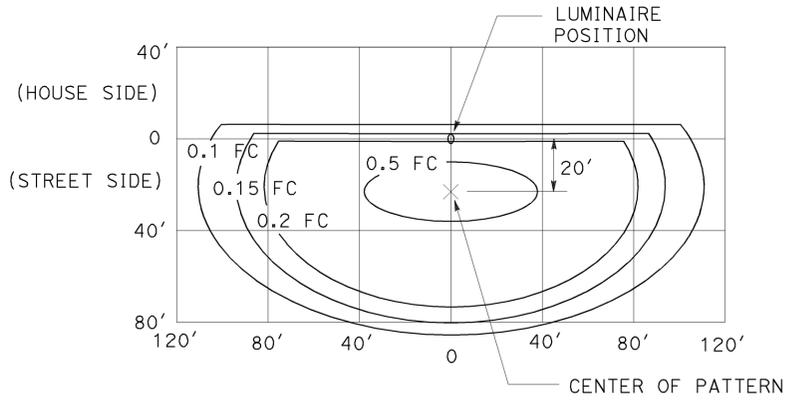
NOTE:
Curves represent the minimum footcandle (FC).



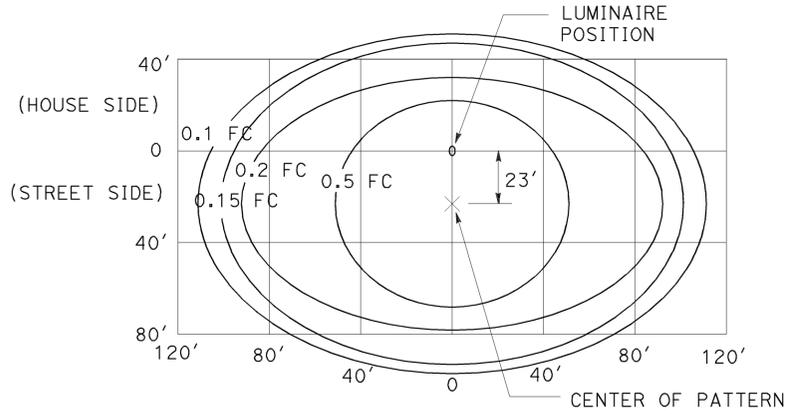
LED LUMINAIRE 165 W
34' Mounting Height



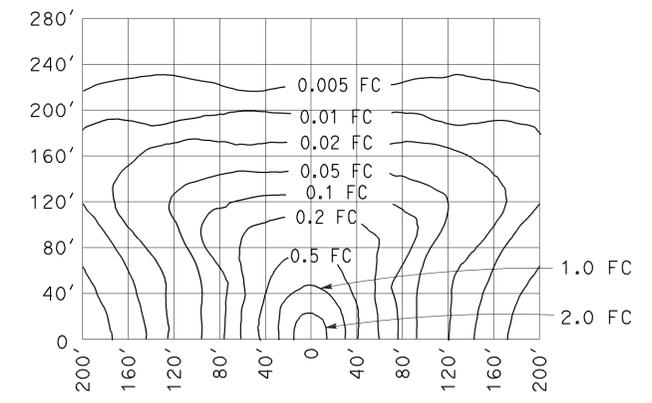
LED LUMINAIRE 235 W
40' Mounting Height



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

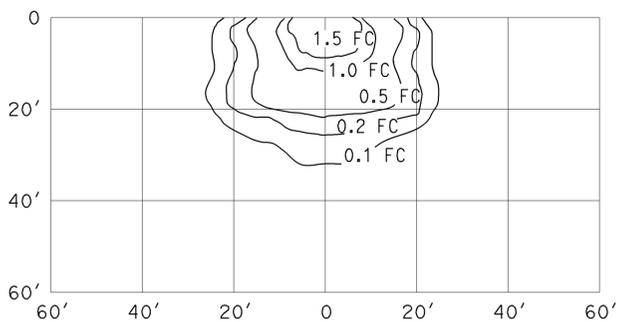
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	241	265

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE

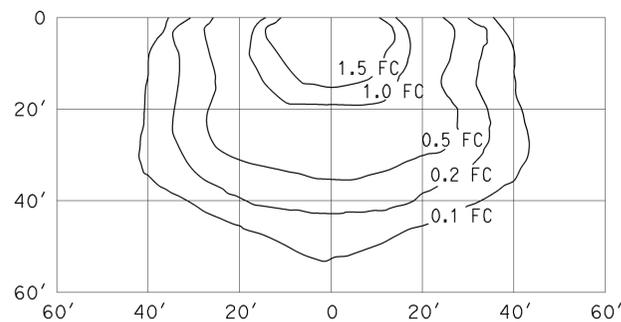
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-1-16

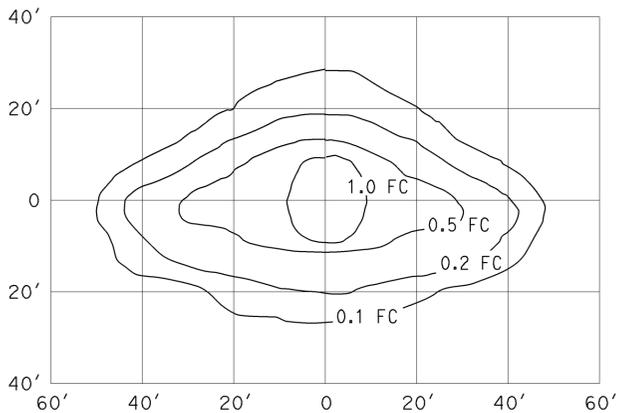
NOTE:
Curves represent the minimum footcandle (FC).



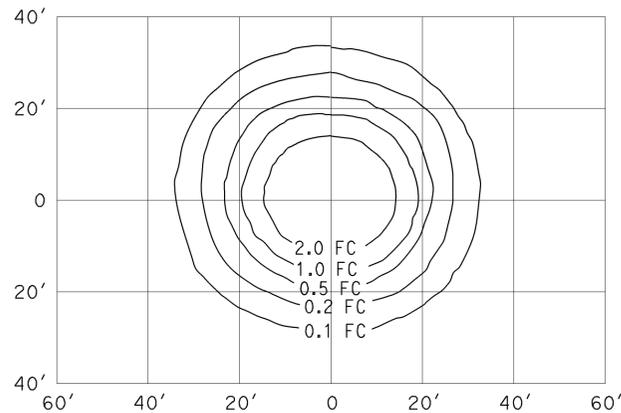
**HIGH-PRESSURE SODIUM
WALL-MOUNTED LUMINAIRE 70 W**
15' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm



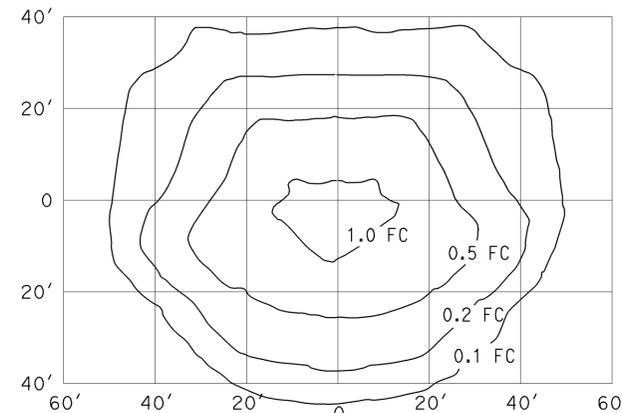
**HIGH-PRESSURE SODIUM
WALL-MOUNTED LUMINAIRE 100 W**
15' Mounting Height
ANSI Designation S54
Lamp operated at 9,500 lm



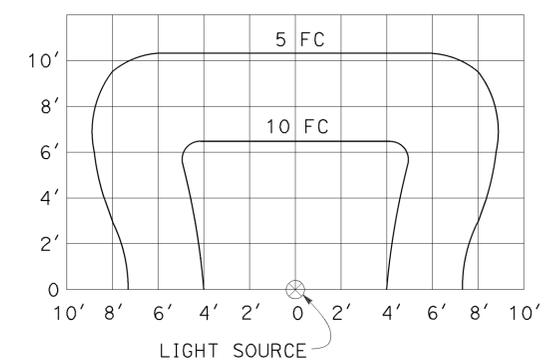
**HIGH-PRESSURE SODIUM
PENDANT SOFFIT LUMINAIRE 70 W
TYPE III SHORT**
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm



**HIGH-PRESSURE SODIUM
PENDANT SOFFIT LUMINAIRE 70 W**
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm



**HIGH-PRESSURE SODIUM
FLUSH-MOUNTED SOFFIT LUMINAIRE 70 W**
17' Mounting Height
ANSI Designation S62
Lamp operated at 5,800 lm



**INDUCTION SIGN
LIGHTING FIXTURE 85 W**

2010 REVISED STANDARD PLAN RSP ES-10B

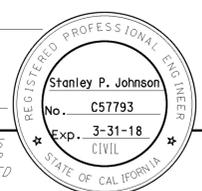
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

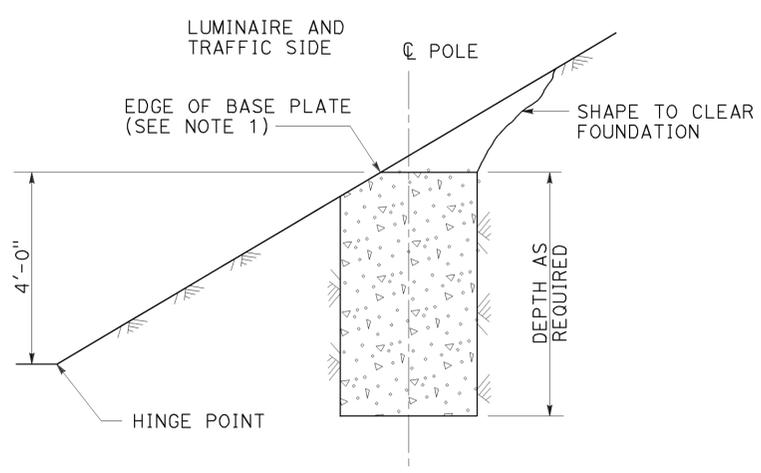
RSP ES-10B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-10B DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-10B

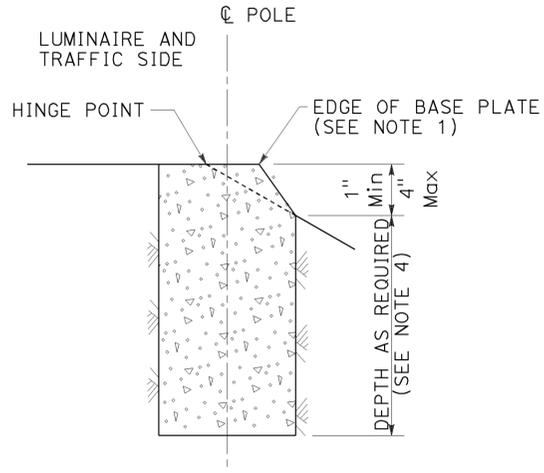


TO ACCOMPANY PLANS DATED 7-1-16

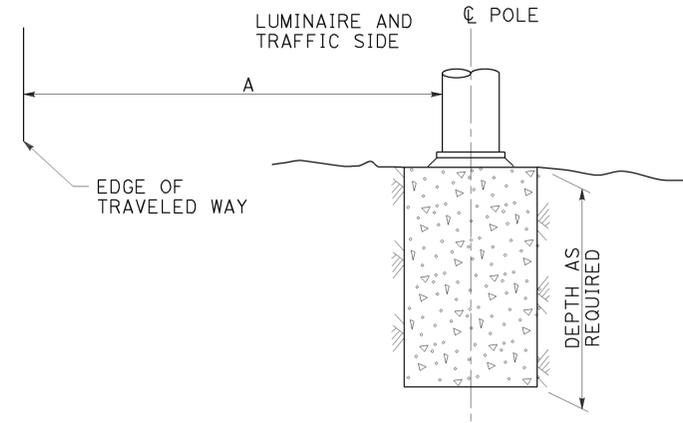
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



**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

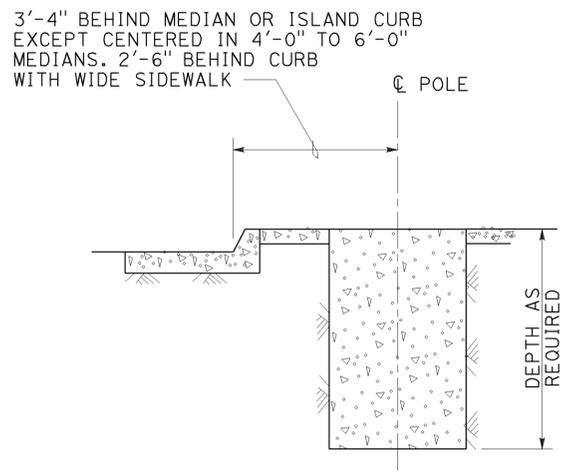


**FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3**
See Note 2

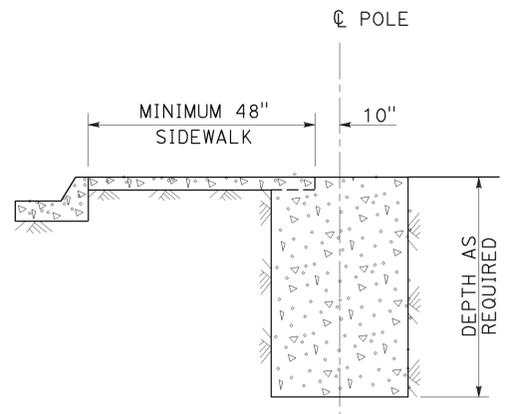
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A**

NOTES:

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



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



**NARROW SIDEWALK
DETAIL B-2**
Less than 7' wide

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

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

RSP ES-11 DATED JULY 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

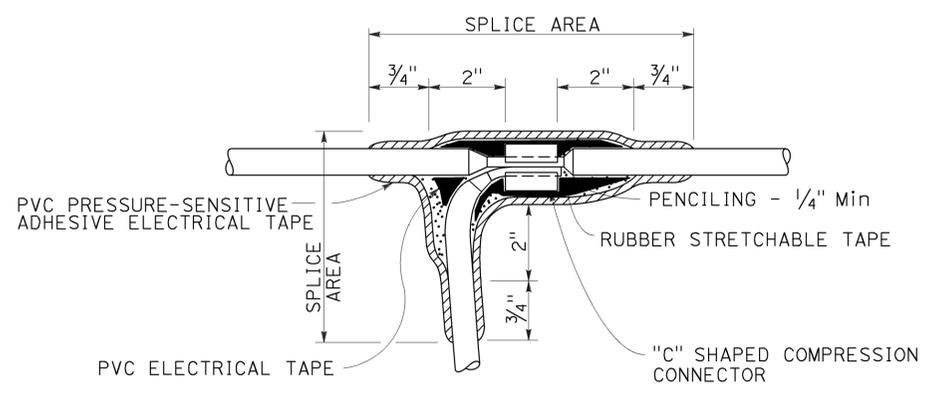
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	243	265

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

October 30, 2015
 PLANS APPROVAL DATE

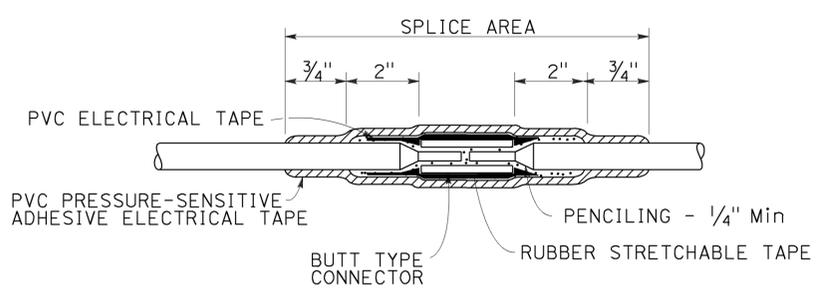
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-1-16



TYPE C SPLICE

See Note 3

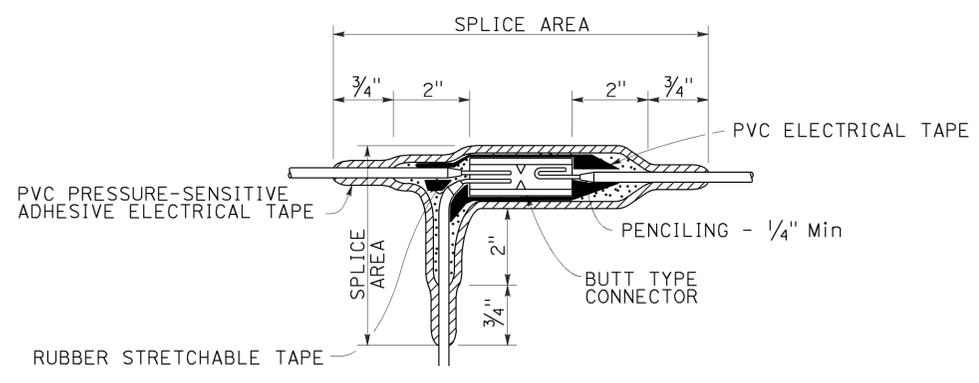


TYPE S SPLICE

See Note 4

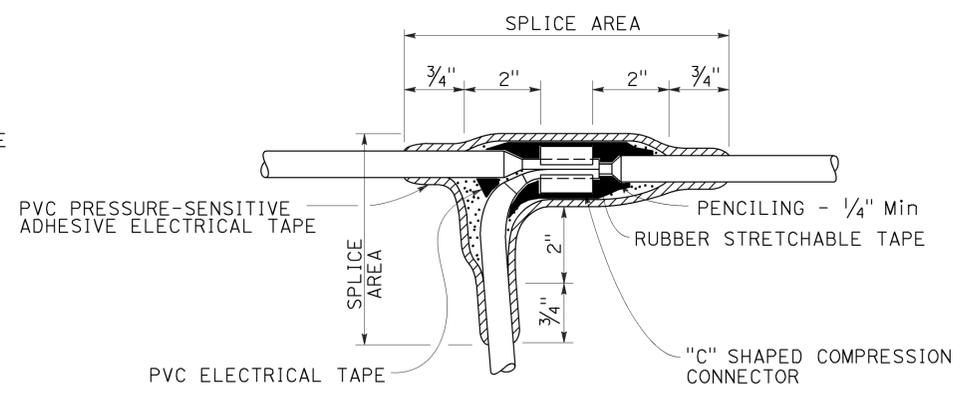
NOTES:

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.



TYPE ST SPLICE

See Note 5



TYPE T SPLICE

See Note 5

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SPlicing DETAILS)**

NO SCALE

RSP ES-13A DATED OCTOBER 30, 2015 SUPERSEDES 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	105,405	R2.5, 20.5/R21.1	244	265

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

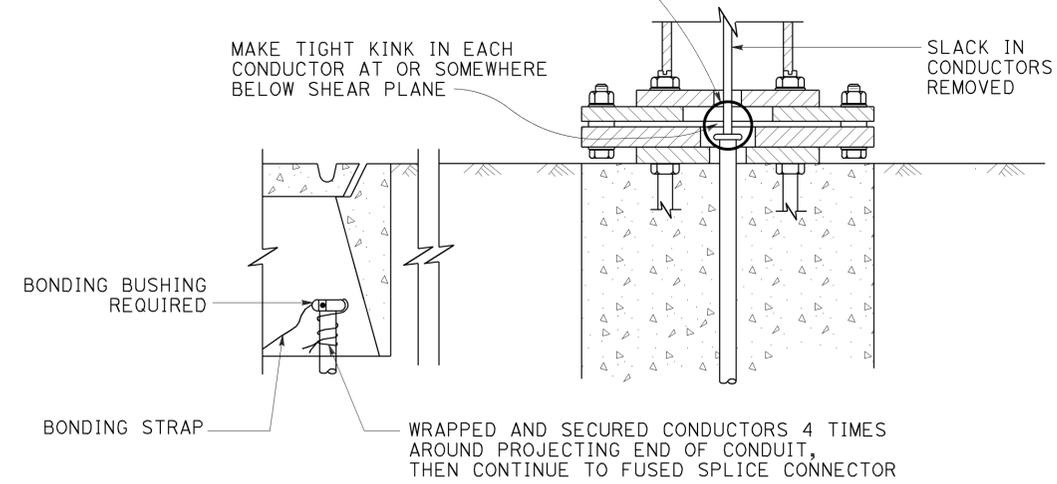
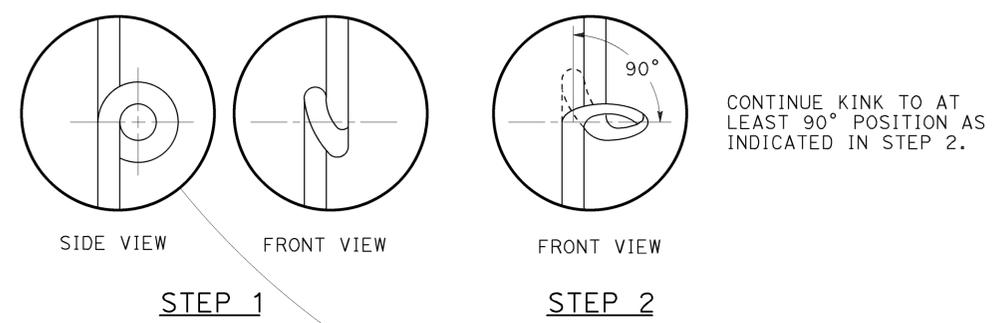
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 7-1-16

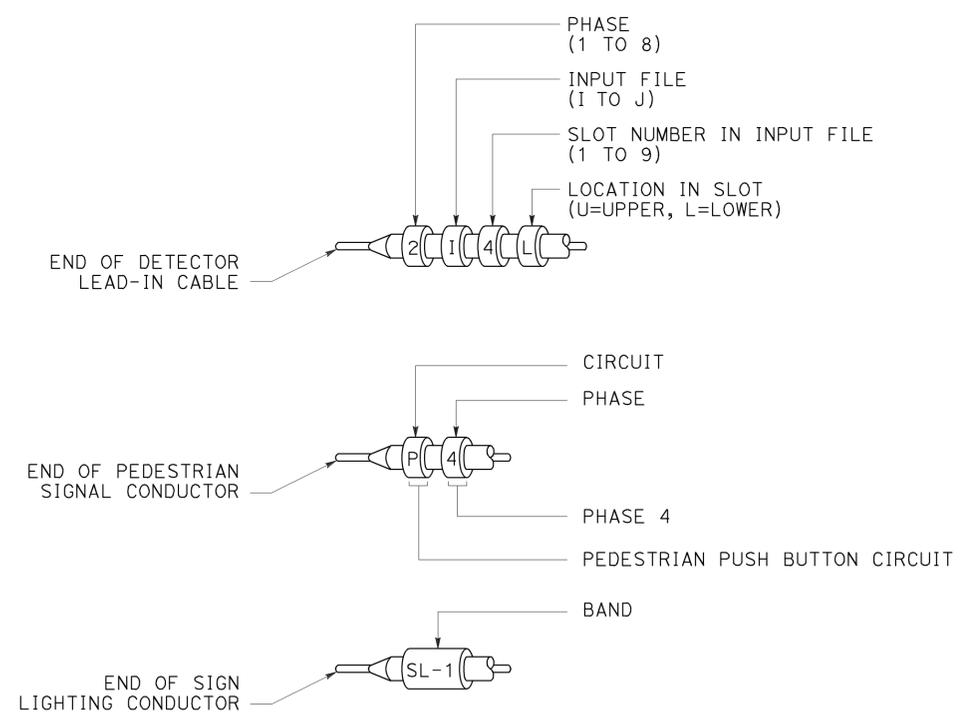
CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING						
		HPS LAMP BALLAST		LOW PRESSURE SODIUM BALLAST	INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	180 W	85 W	1 KVA	2 KVA	3 KVA
120 V	250 V	5 A	5 A	5 A	5 A	10 A	20 A	30 A
240 V	250 V	5 A	5 A	5 A	5 A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

2010 REVISED STANDARD PLAN RSP ES-13B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	245	265

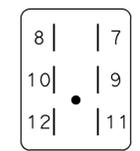
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE

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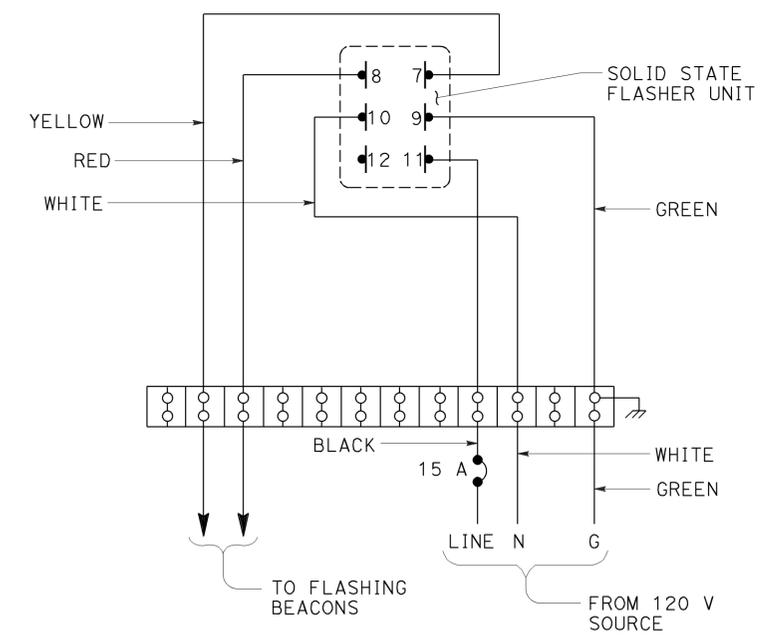
TO ACCOMPANY PLANS DATED 7-1-16

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

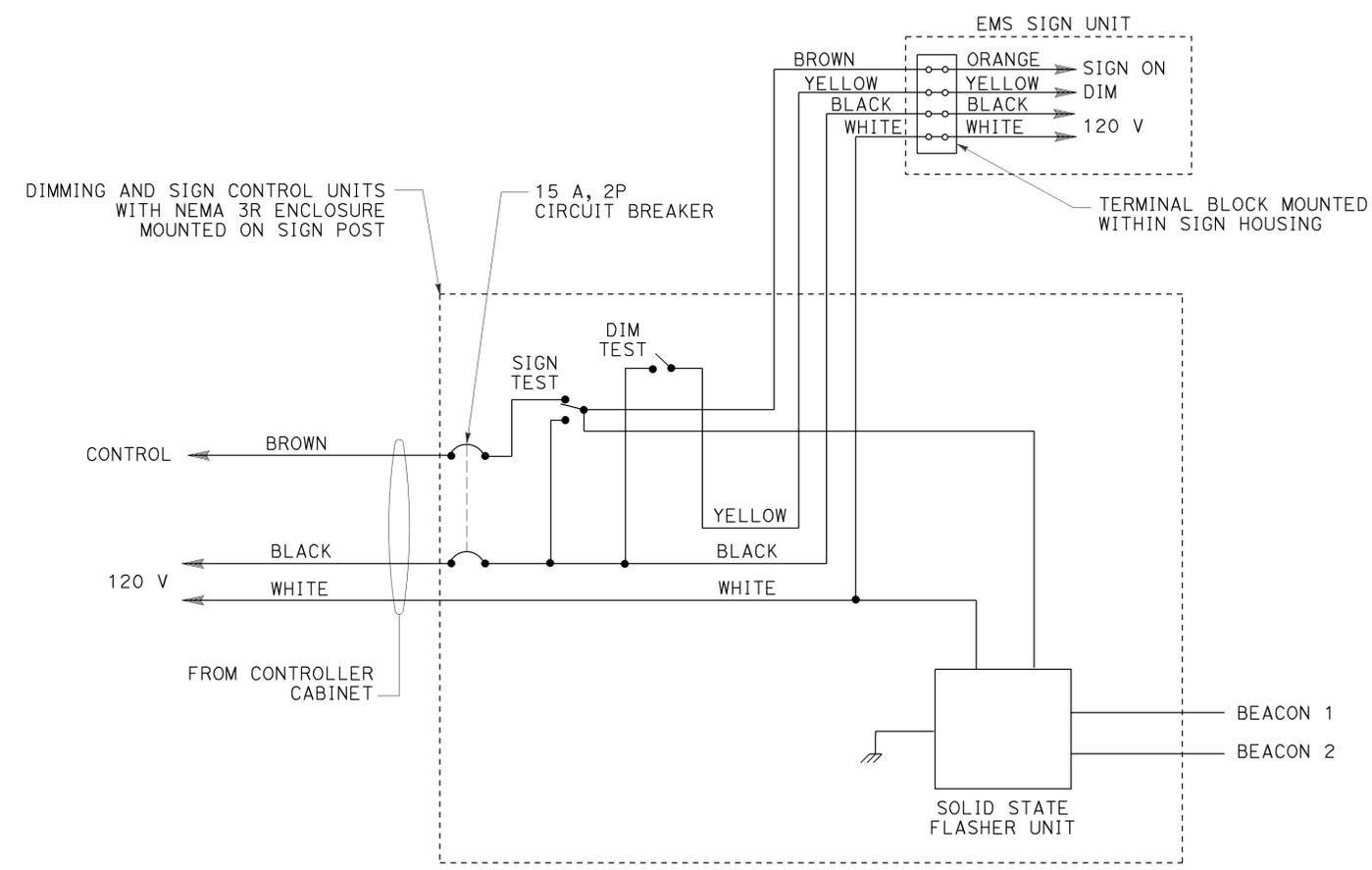
PIN	CIRCUIT	PIN	CIRCUIT
7	LOAD	10	NEUTRAL
8	LOAD	11	LINE
9	CHASSIS GROUND	12	NOT USED



**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

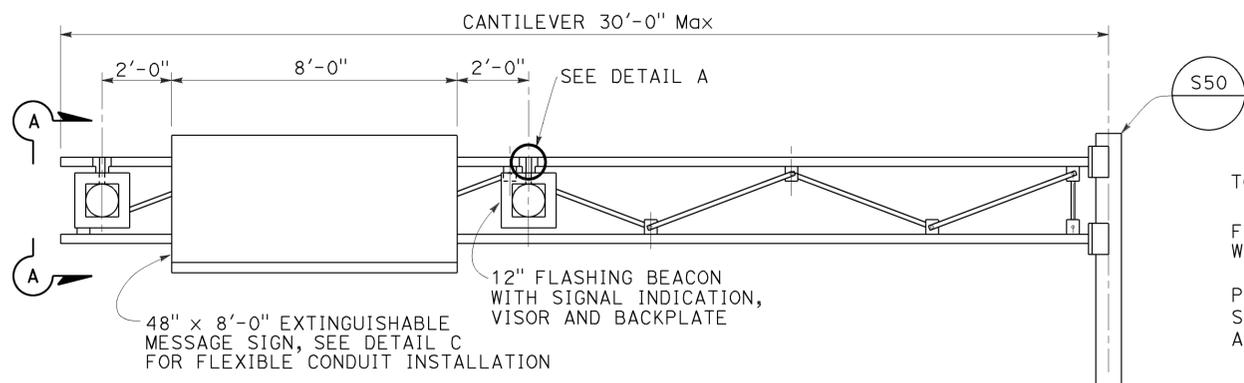
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	246	265

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.

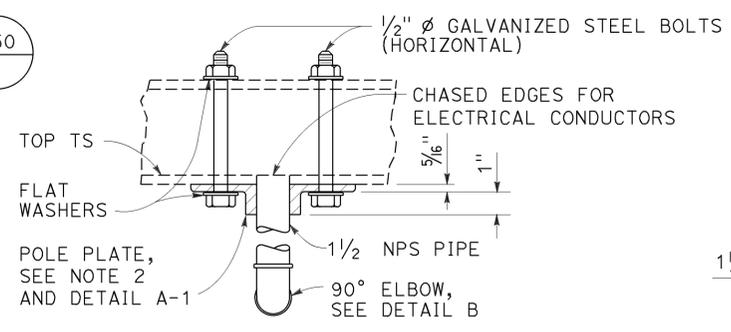
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 7-1-16

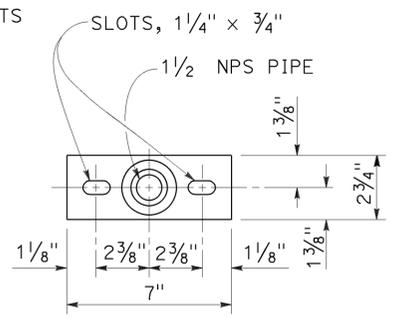
- NOTES:**
1. Pole plate shall be bronze or galvanized ductile iron.
 2. For structure information, see Standard Plan S50.
 3. Wind loading (3-second gust): 100 mph.
 4. Handhole shall be located on the downstream side of traffic.



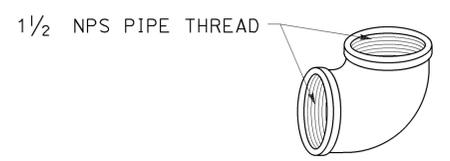
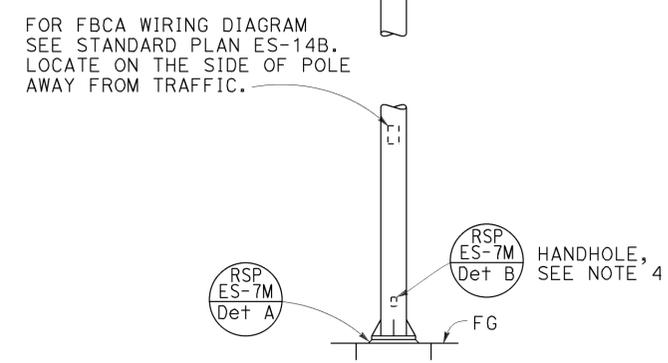
EMS WITH FLASHING BEACONS
ELEVATION A



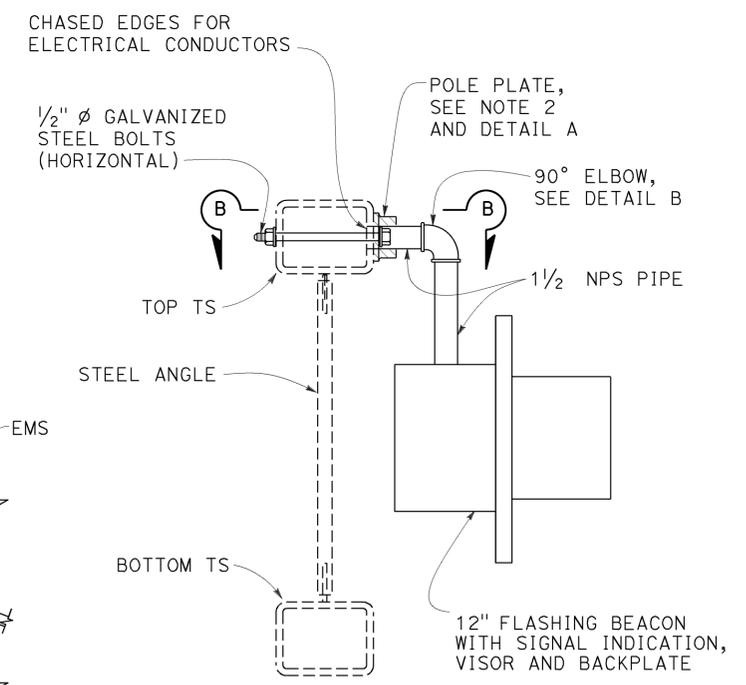
TOP VIEW SECTION B-B
POLE PLATE DETAIL A



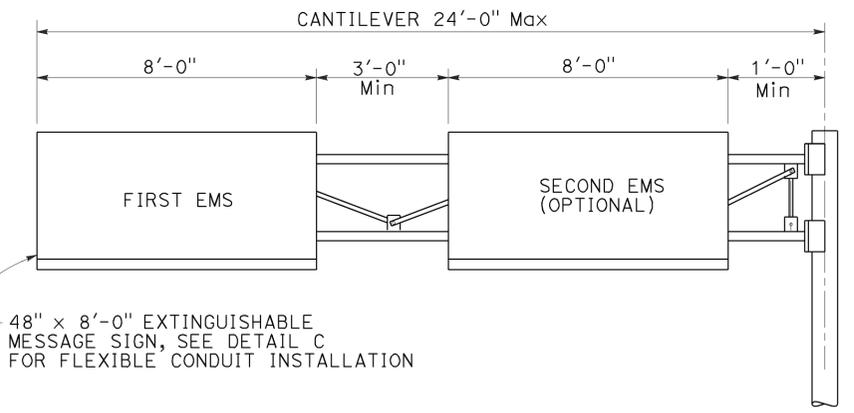
DETAIL A-1



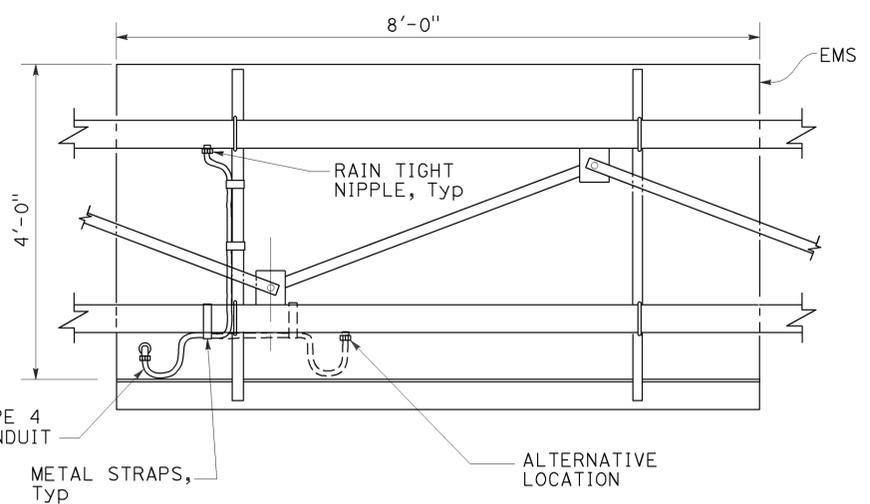
90° ELBOW DETAIL B



SECTION A-A



EMS WITHOUT FLASHING BEACONS
ELEVATION B



FLEXIBLE CONDUIT INSTALLATION
DETAIL C
Back view of sign

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(EXTINGUISHABLE MESSAGE
SIGN ON A FULL CANTILEVER)**
NO SCALE

RSP ES-14C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-14C DATED JULY 19, 2013 AND STANDARD PLAN ES-14C DATED MAY 20, 2011 - PAGE 495 OF THE STANDARD PLANS BOOK DATED 2010.

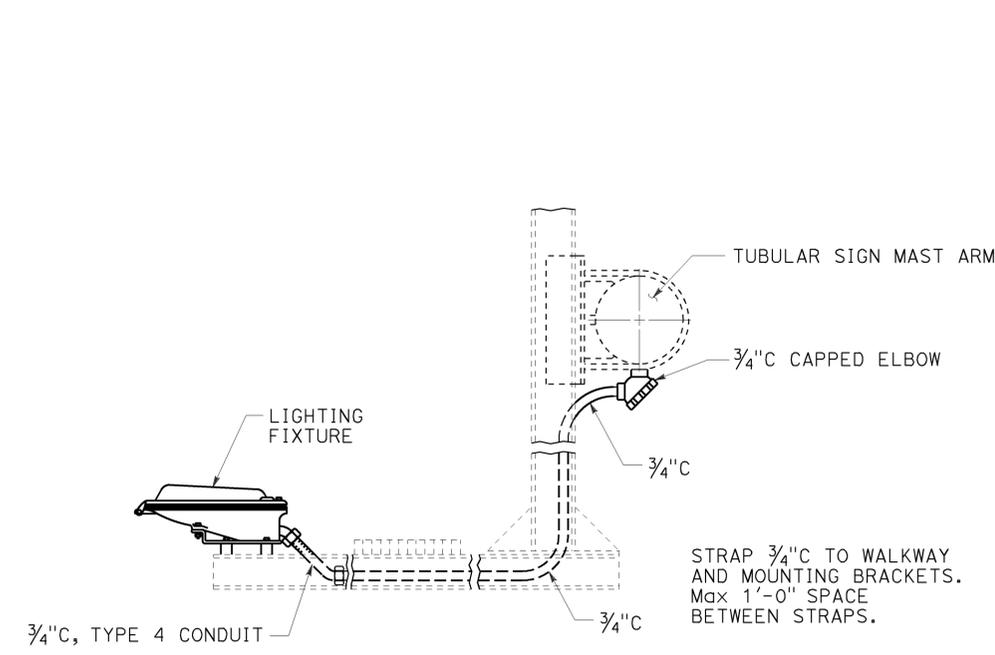
2010 REVISED STANDARD PLAN RSP ES-14C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	247	265

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.

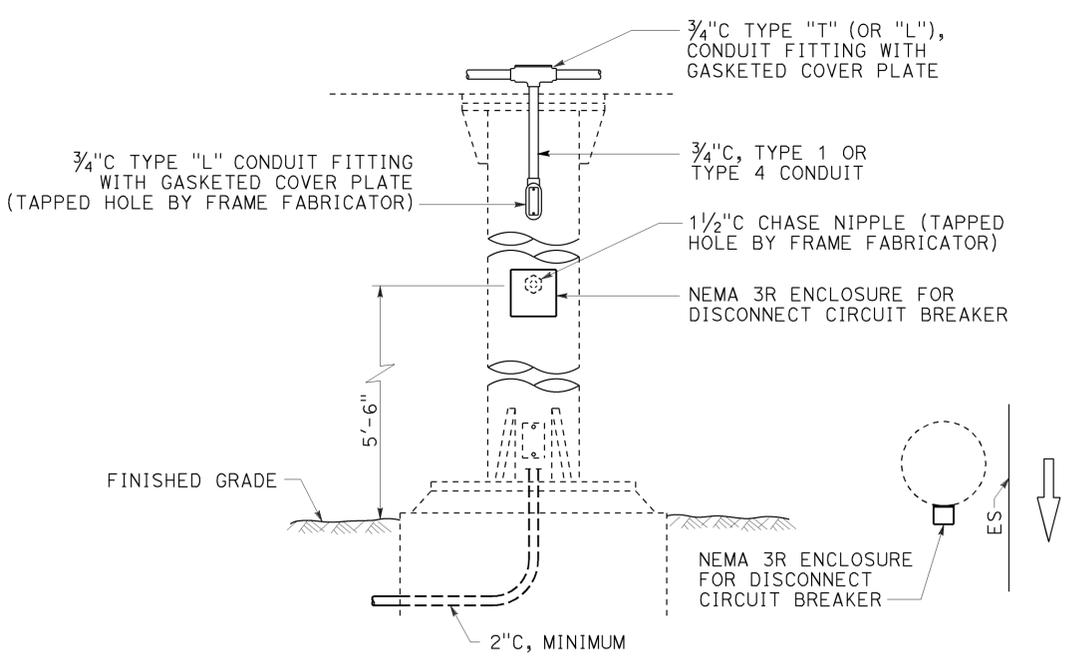


TO ACCOMPANY PLANS DATED 7-1-16



TYPICAL SIGN ILLUMINATION EQUIPMENT INSTALLATION FOR OVERHEAD SIGNS TUBULAR

DETAIL A

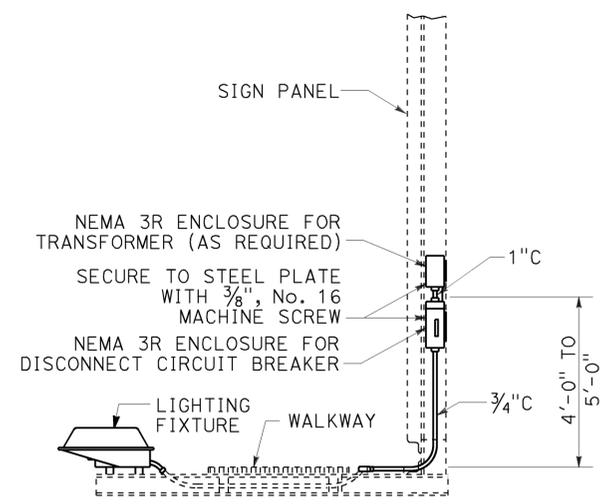


TYPICAL SIGN ILLUMINATION EQUIPMENT INSTALLATION FOR OVERHEAD SIGNS ROUND POST

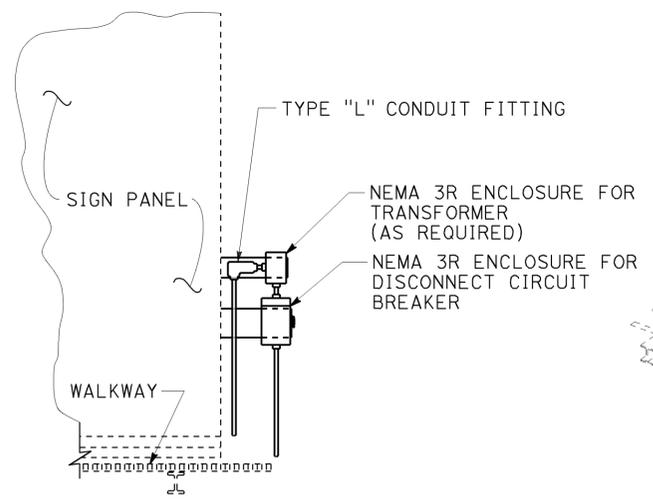
DETAIL B

NOTES:

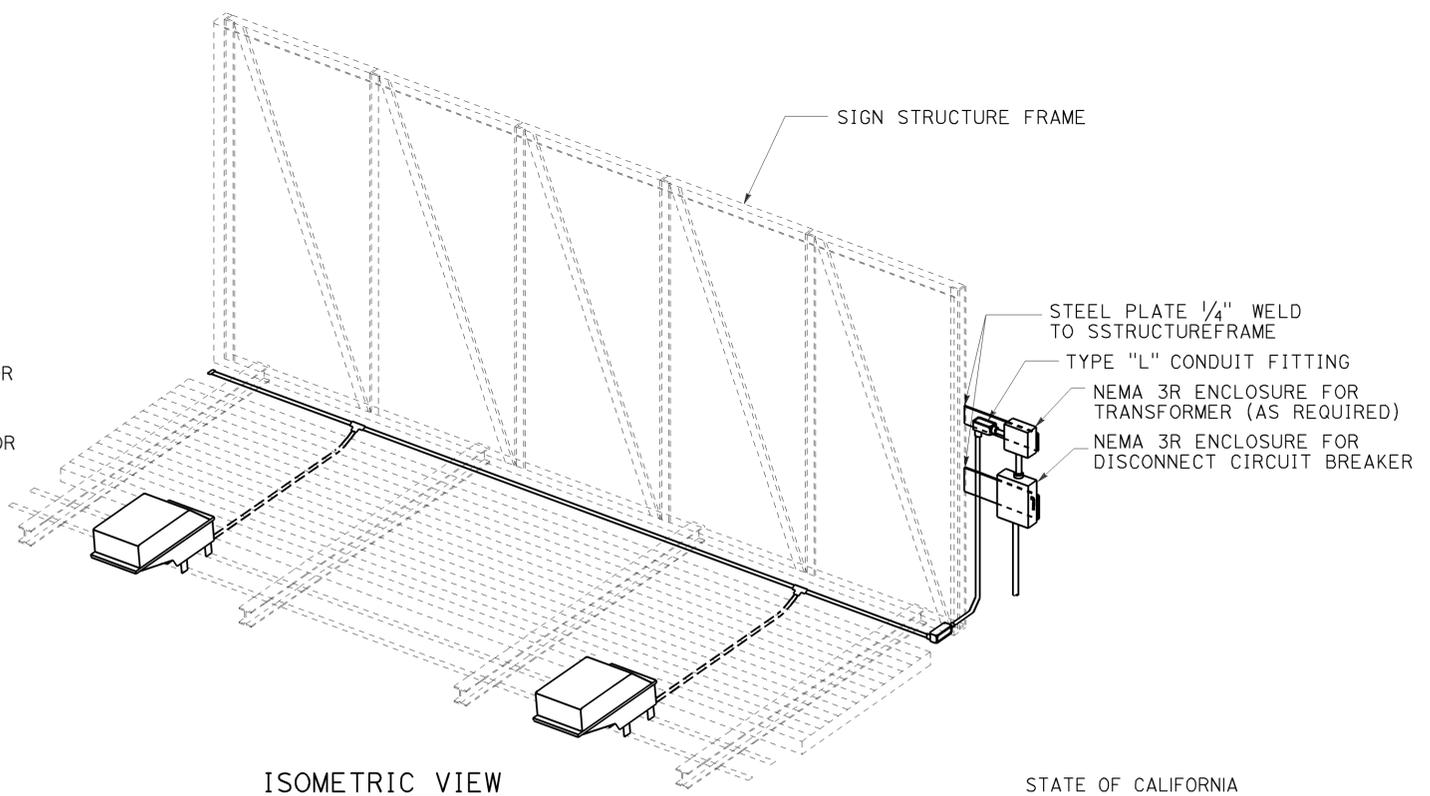
1. Type 4 conduit shall be secured to the nearest walkway bracket using one-hole galvanized malleable iron or steel straps and brass machine screws tapped into the bracket.
2. See Overhead Signs Standard Plans for overhead signs and frame juncture details for photoelectric unit installation.
3. Enclosures and straps shall be secured by 3/8" maximum size screws.
4. The Contactor and test switch enclosures shall be readily accessible from the sign walkway.



SIDE VIEW



FRONT VIEW



ISOMETRIC VIEW

TYPICAL SIGN ILLUMINATION EQUIPMENT INSTALLATION FOR OVERHEAD SIGNS BRIDGE MOUNTED

DETAIL C
See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGN ILLUMINATION EQUIPMENT)**

NO SCALE

RSP ES-15C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-15C DATED MAY 20, 2011 - PAGE 498 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-15C

2010 REVISED STANDARD PLAN RSP ES-15C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5, 20.5/R21.1	248	265
<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>					

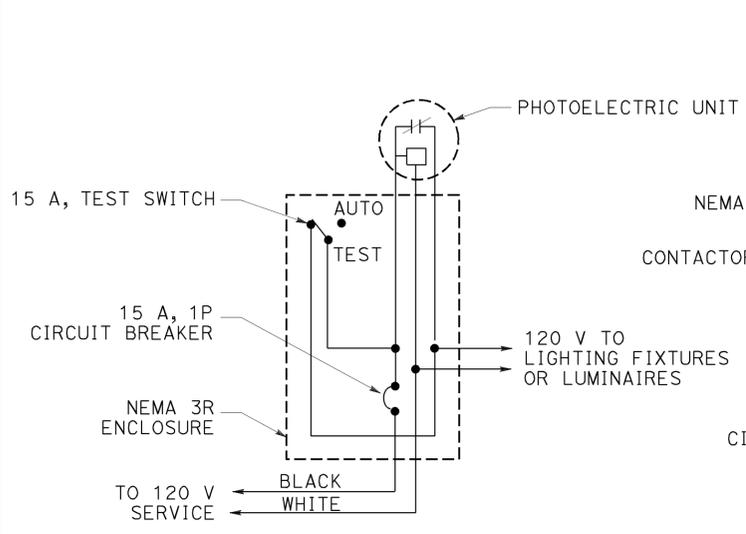


TO ACCOMPANY PLANS DATED 7-1-16

2010 REVISED STANDARD PLAN RSP ES-15D

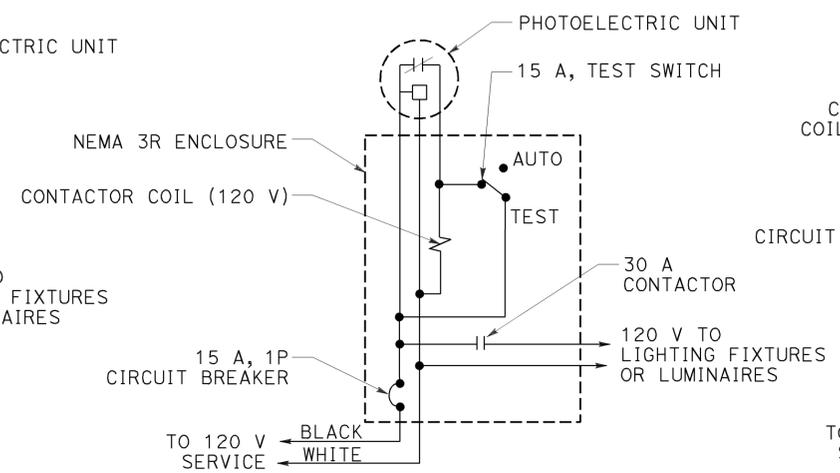
NOTE:

Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC controls respectively except test switch and wiring are not required.



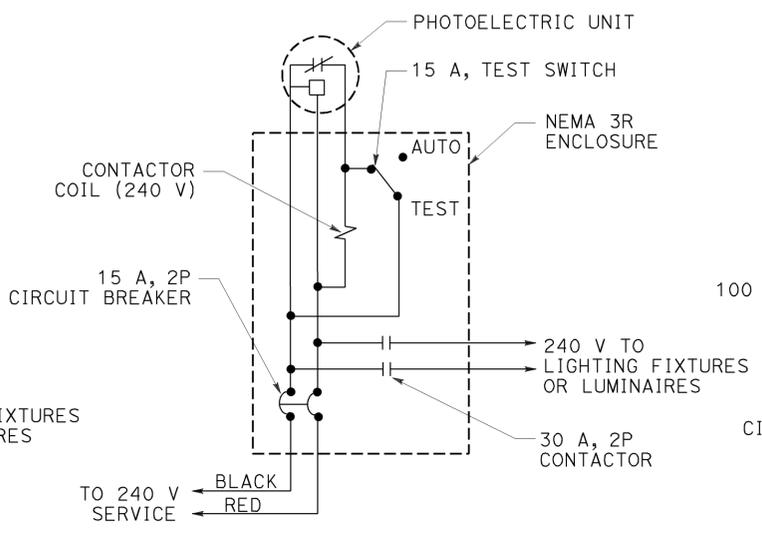
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 1000 W load.



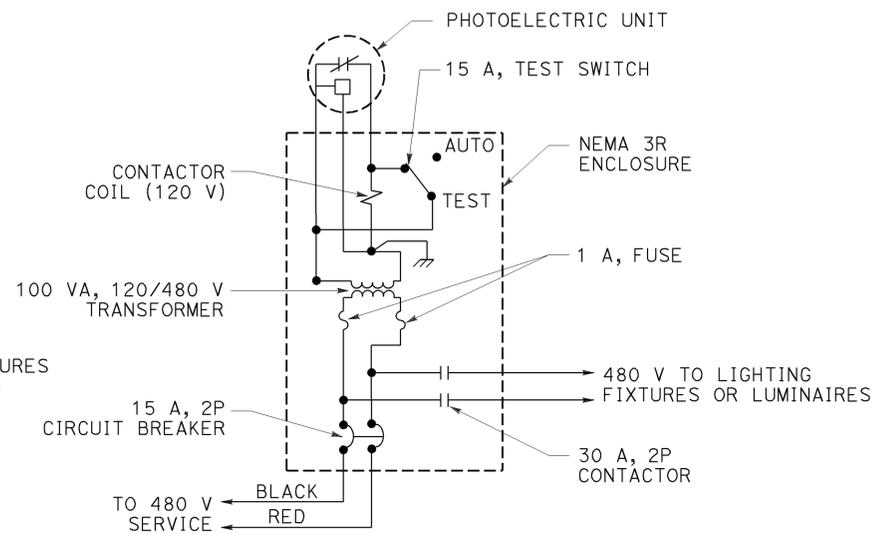
TYPE LC2 CONTROL

For 120 V unswitched circuit



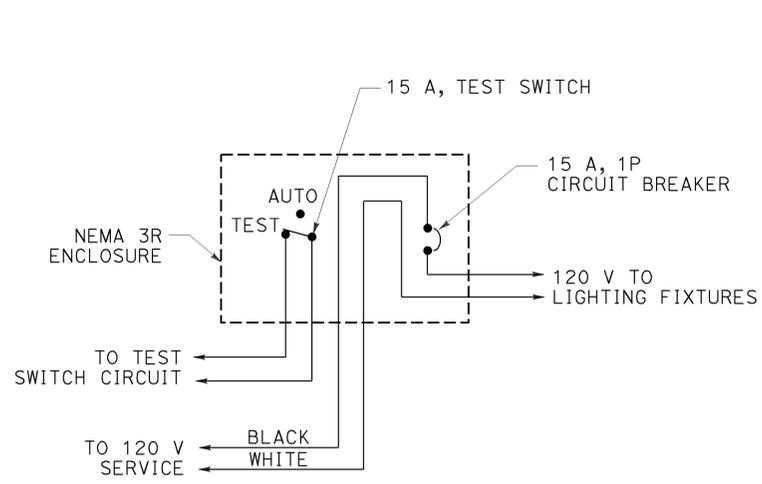
TYPE LC3 CONTROL

For 240 V unswitched circuits



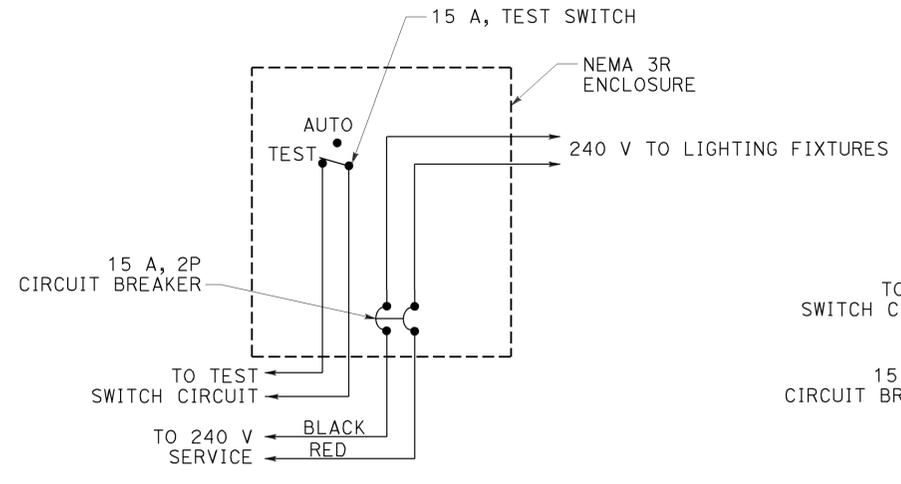
TYPE LC4 CONTROL

For 480 V unswitched circuits



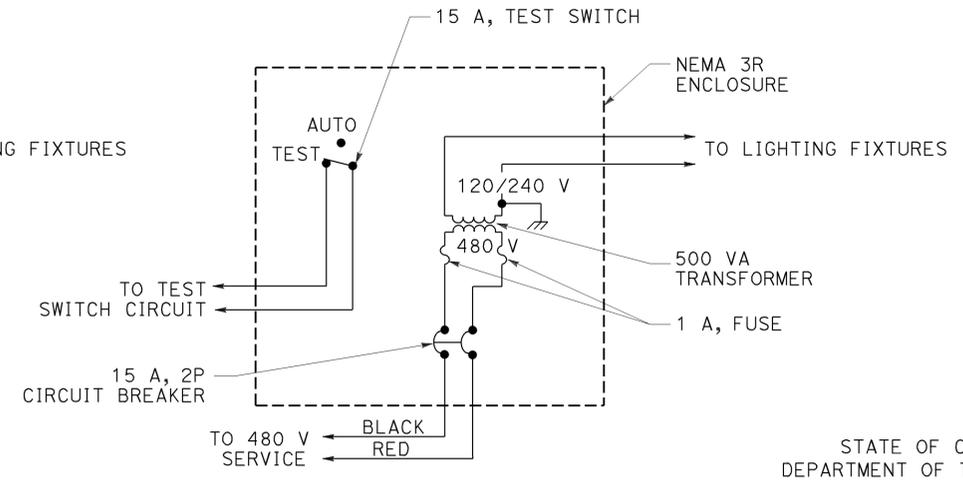
TYPE SC1 CONTROL

For 120 V switched circuit, see Note 1 for Type SC1A



TYPE SC2 CONTROL

For 240 V switched circuit, see Note 1 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 1 for Type SC3A

ELECTRICAL SYSTEMS (LIGHTING AND SIGN ILLUMINATION CONTROL)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP ES-15D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-15D DATED MAY 20, 2011 - PAGE 499 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-15D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	249	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE

7-1-16
 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.

STANDARD PLANS DATED 2010

SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11-55	CONCRETE BARRIER TYPE 732

INDEX TO PLANS

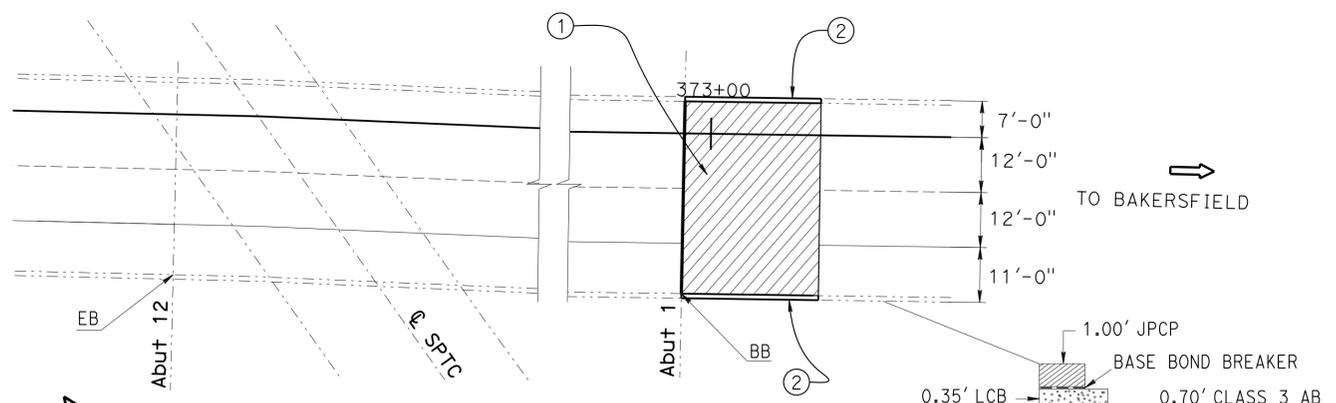
SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	JOINT SEAL DETAILS
4	STRUCTURE APPROACH TYPE R(30S)
5	STRIP JOINT SEAL ASSEMBLY - MAXIMUM MOVEMENT RATING = 4"

LEGEND

- Indicates location of joint seal removal and placement of new joint seal
- Indicates existing structures
- Indicates location and limits of new structure approach
- ① Structure Approach Slab Type R(30S)
- ② Concrete Barrier Type 732 (Mod)

NOTE:

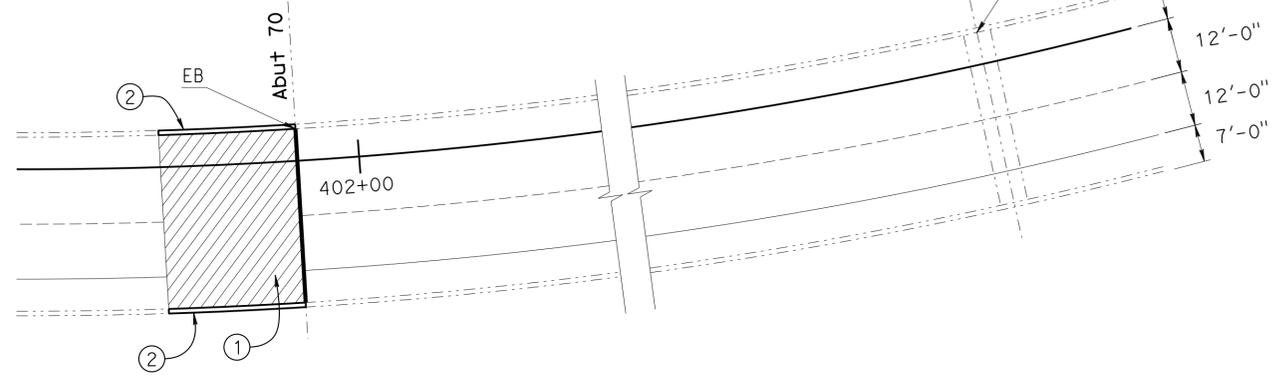
1. All dimensions shown are approximate.
2. All pavement sections feature this Proposed Pavement Section.
3. SEG: Subgrade Enhancement Geotextile



N405-105 CONNECTOR OH BRIDGE No. 53-1238G
 1" = 20'-0"
 PM 20.176

QUANTITIES

STRUCTURE EXCAVATION	93	CY
STRUCTURE BACKFILL	70	CY
CLASS 3 AGGREGATE BASE (CY)	23	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	59	CY
CLEAN EXPANSION JOINT	42	LF
JOINT SEAL (MR 1 1/2")	42	LF
CONCRETE BARRIER (TYPE 732 MODIFIED)	60	LF

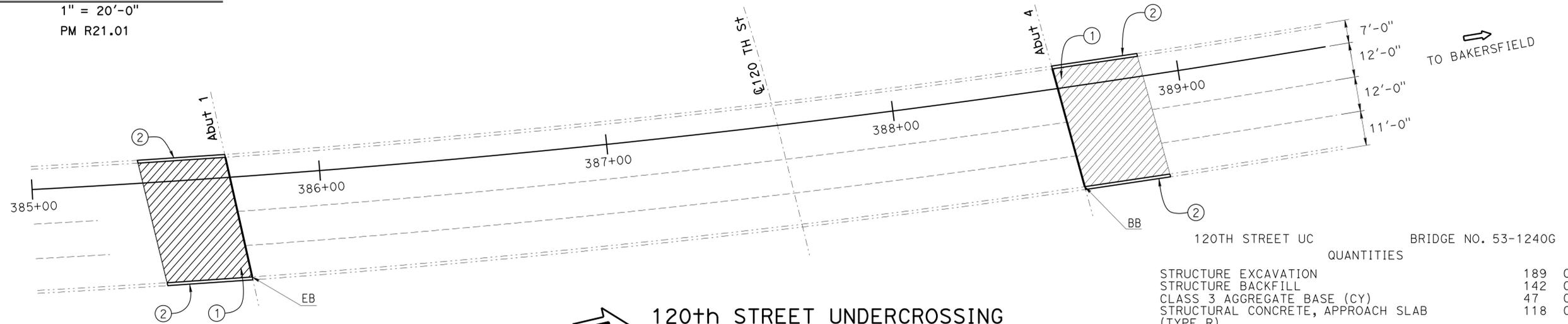


N405-W105 CONNECTOR SEPARATION BRIDGE No. 53-2442G
 1" = 20'-0"
 PM R21.01

N405-W105 CONNECTOR SEPARATION BRIDGE No. 53-2442G
 QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION A

	LUMP SUM
STRUCTURE EXCAVATION	85 CY
STRUCTURE BACKFILL	64 CY
CLASS 3 AGGREGATE BASE (CY)	21 CY
STRUCTURAL CONCRETE, BRIDGE	1 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	54 CY
CLEAN EXPANSION JOINT	38 LF
JOINT SEAL ASSEMBLY (MR 3")	38 LF
BAR REINFORCING STEEL (BRIDGE)	79 LB
CONCRETE BARRIER (TYPE 732 MODIFIED)	60 LF



120th STREET UNDERCROSSING BRIDGE No. 53-1240G
 1" = 20'-0"
 PM 20.734

QUANTITIES

STRUCTURE EXCAVATION	189	CY
STRUCTURE BACKFILL	142	CY
CLASS 3 AGGREGATE BASE (CY)	47	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	118	CY
CLEAN EXPANSION JOINT	86	LF
JOINT SEAL (MR 1 1/2")	43	LF
JOINT SEAL (MR 2")	43	LF
CONCRETE BARRIER (TYPE 732 MODIFIED)	120	LF

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

MICHAEL POPE DESIGN ENGINEER	DESIGN	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 18	BRIDGE NO.	VARIOUS	ROUTE N405-105 APPROACH AND DEPARTURE SLAB REPLACEMENT PROJECT GENERAL PLAN NO. 1	
	DETAILS	BY MINH TRAN	CHECKED MATTHEW SCHOTT	LAYOUT	BY DAVID P. MURRAY			CHECKED MATTHEW SCHOTT	POST MILE		VARIOUS
	QUANTITIES	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	SPECIFICATIONS	BY XIAODONG CHEN			CHECKED MINGXIA PAN	PLANS AND SPECS COMPARED		VARIOUS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

UNIT: 3603
 PROJECT NUMBER & PHASE: 0713000241 1 CONTRACT NO.: 07-3X8701

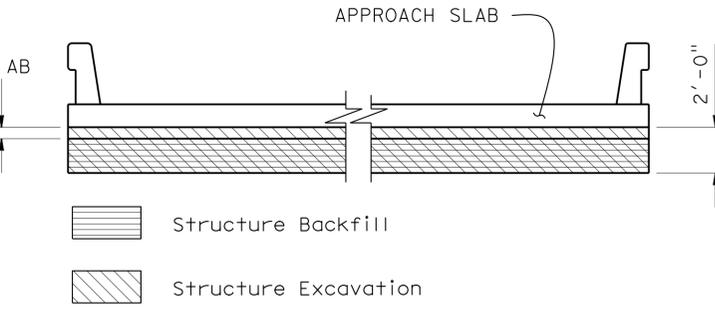
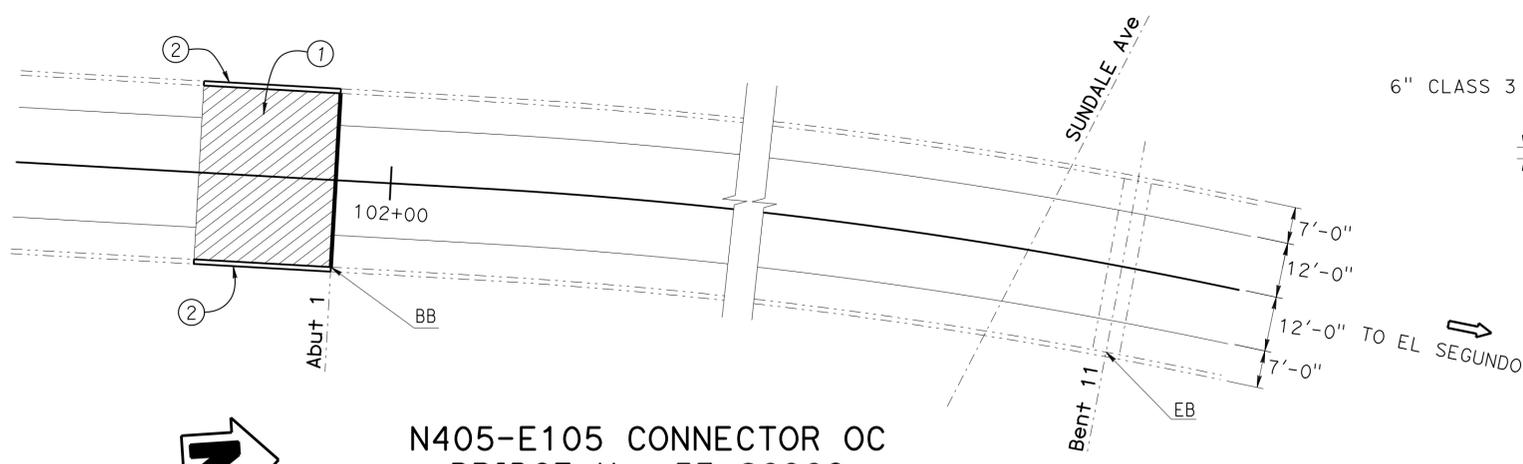
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
09/25/14 12/07/15 04/05/16	1	5

FILE => 07-3X8701_slab01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	250	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE
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OVER EXCAVATION LIMITS
 1/4" = 1'-0"

N405-E105 CONNECTOR OC
BRIDGE No. 53-2696G
 1" = 20'-0"
 PM R21.02

N405-E105 CONNECTOR OC BRIDGE NO. 53-2696G

QUANTITIES

	LUMP SUM
BRIDGE REMOVAL (PORTION), LOCATION B	
STRUCTURE EXCAVATION	85 CY
STRUCTURE BACKFILL	64 CY
CLASS 3 AGGREGATE BASE (CY)	21 CY
STRUCTURAL CONCRETE, BRIDGE	2 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	52 CY
CLEAN EXPANSION JOINT	38 LF
JOINT SEAL ASSEMBLY (MR 4")	38 LF
BAR REINFORCING STEEL (BRIDGE)	79 LB
CONCRETE BARRIER (TYPE 732 MODIFIED)	60 LF

LEGEND

- Indicates location of joint seal removal and placement of new joint seal
- Indicates existing structures
- ▨ Indicates location and limits of new structure approach
- ① Structure Approach Slab Type R(30S)
- ② Concrete Barrier Type 732 (Mod)

NOTES:

1. All dimensions shown are approximate.
2. Over excavation limits apply to all structures.

APPROACH SLAB/JOINT SEAL TABLE

Bridge Name	Bridge Number	Approx Depth to Clean Exp Joint (in)	Slab Location	Skew Angle	Movement Rating (in)	Joint Seal Length (ft)	Joint Seal Type
N405-105 CONNECTOR OH	53-1238G	87	NB Depart	0°±	1.5	42.0±	B
120th STREET UNDERCROSSING	53-1240G L/R	66	NB Approach	9°45'±	1.5	43.0±	B
			NB Depart	8°16'±	2.0	43.0±	B
N405-W105 CONNECTOR SEPARATION	53-2442G	84	NB Approach	3°29'±	3.0	38.0±	Strip
N405-E105 CONNECTOR OC	53-2696G	72	NB Approach	0°±	4.0	38.0±	Strip

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:

AASHTO LRFD Bridge Design Specifications, 6th edition with the California Amendments, preface dated January 2014

DEAD LOAD

Includes 35 psf for future wearing surface

LIVE LOAD

HL93 and permit design load

REINFORCED CONCRETE

fy = 60 ksi
 f'c = 3.6 ksi
 n = 9

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

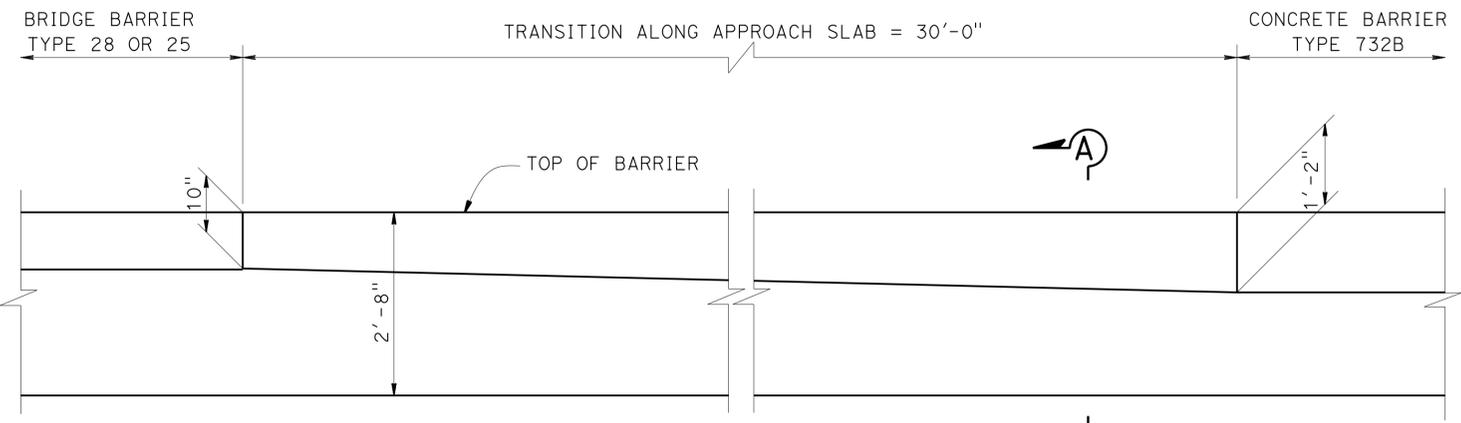
MICHAEL POPE DESIGN ENGINEER	DESIGN	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 18	BRIDGE NO.	VARIOUS	ROUTE N405-105 APPROACH AND DEPARTURE SLAB REPLACEMENT PROJECT GENERAL PLAN NO. 2
	DETAILS	BY MINH TRAN	CHECKED MATTHEW SCHOTT	LAYOUT	BY DAVID P. MURRAY			POST MILE	VARIOUS	
	QUANTITIES	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	SPECIFICATIONS	BY XIAODONG CHEN			PLANS AND SPECS COMPARED	MINGXIA PAN	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3603 PROJECT NUMBER & PHASE: 0713000241 1 CONTRACT NO.: 07-3X8701
 DISREGARD PRINTS BEARING EARLIER REVISION DATES: 12/08/15 03/08/16 04/05/16
 REVISION DATES SHEET OF: 2 5

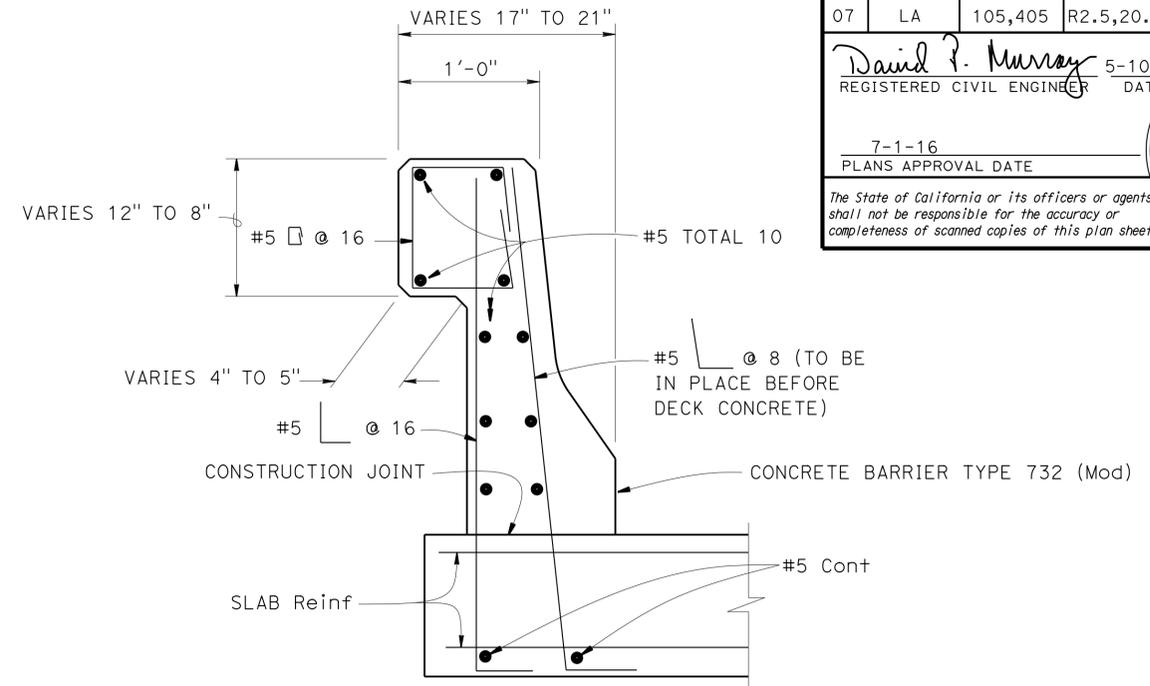
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	251	265

David P. Murray
 REGISTERED CIVIL ENGINEER
 DATE 5-10-16
 PLANS APPROVAL DATE 7-1-16
 No. 71259
 Exp. 12/31/2017
 CIVIL
 STATE OF CALIFORNIA

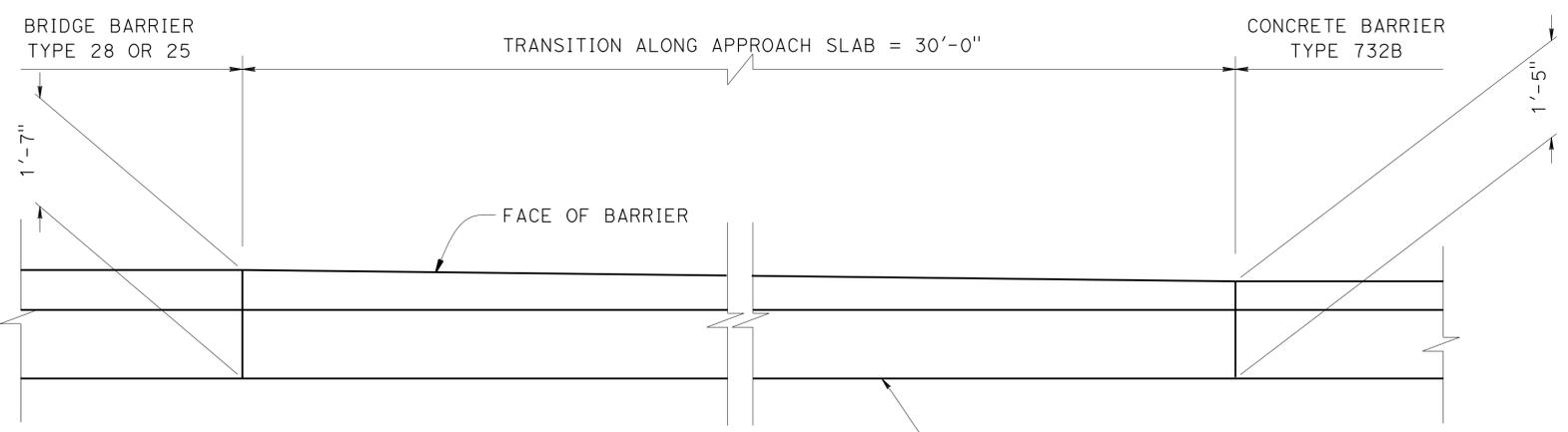
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.



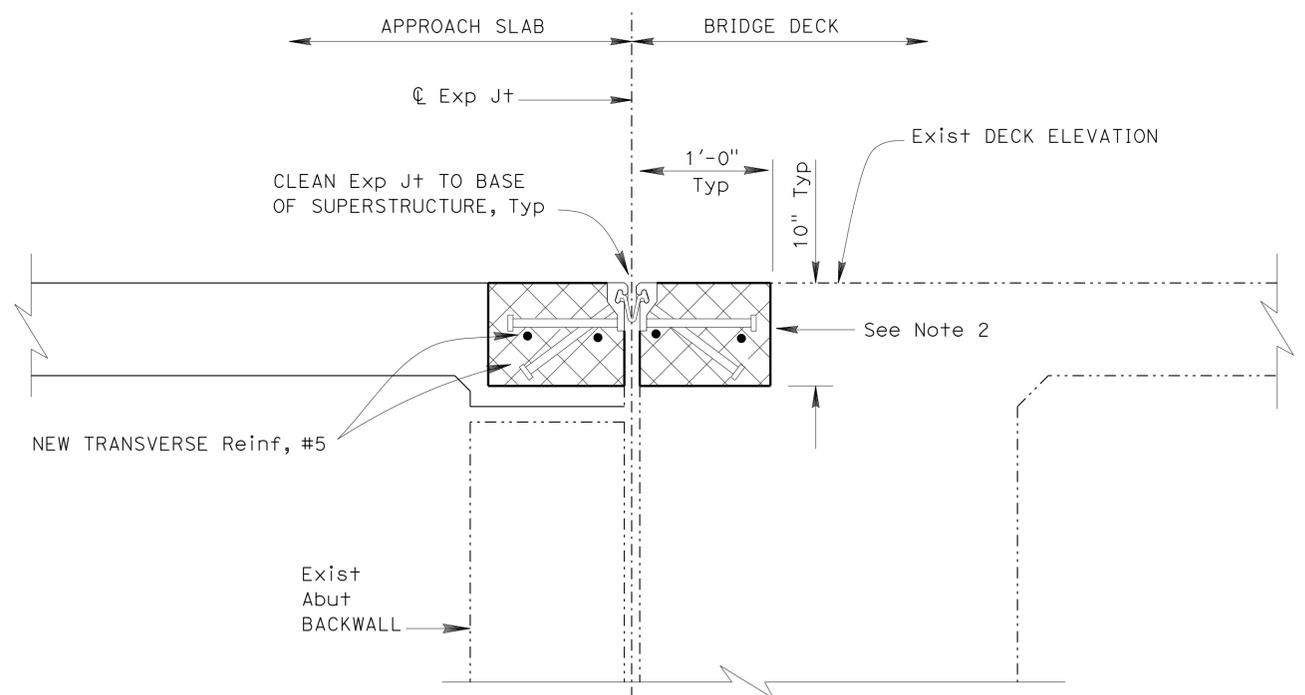
TRANSITION DETAILS-ELEVATION
TYPE 732B TO TYPE 28/25
 3/4" = 1'-0"



SECTION A-A (B11-55)
 1 1/2" = 1'-0"



TRANSITION DETAILS-PLAN
TYPE 732B TO TYPE 28/25
 3/4" = 1'-0"



ABUTMENT DETAILS
MR ≥ 2 1/2" (SEE NOTE 1)
 NO SCALE

- NOTES:**
- Strip seal detail applies to 53-2442G and 53-2696G only
 - "BRIDGE DECK" side of strip seal detail shows BRIDGE REMOVAL (PORTION)

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

MICHAEL POPE DESIGN ENGINEER	DESIGN	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
	DETAILS	BY MINH TRAN	CHECKED MATTHEW SCHOTT	LAYOUT	BY DAVID P. MURRAY
	QUANTITIES	BY DAVID P. MURRAY	CHECKED MATTHEW SCHOTT	SPECIFICATIONS	BY XIAODONG CHEN

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 18	BRIDGE NO.	VARIOUS	ROUTE N405-105 APPROACH AND DEPARTURE SLAB REPLACEMENT PROJECT MISCELLANEOUS DETAILS
		POST MILE	VARIOUS	
		VARIOUS	VARIOUS	

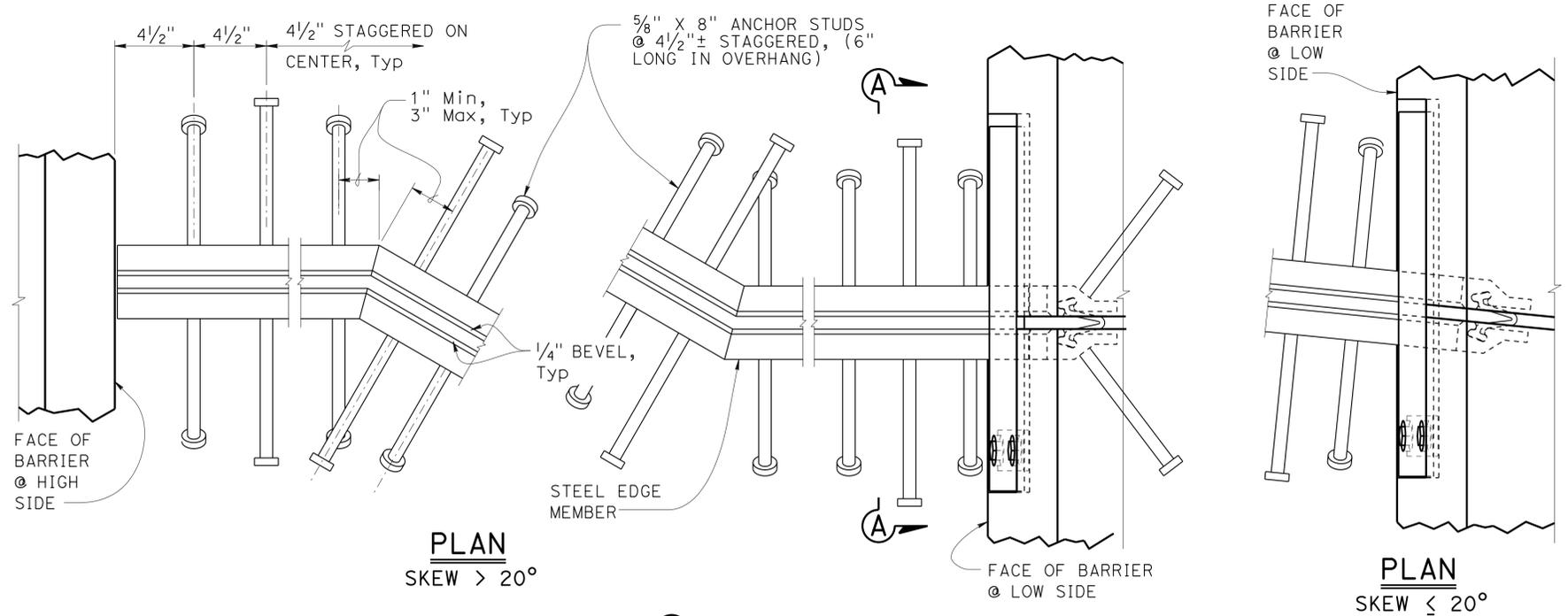
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	252	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE

7-1-16
 PLANS APPROVAL DATE

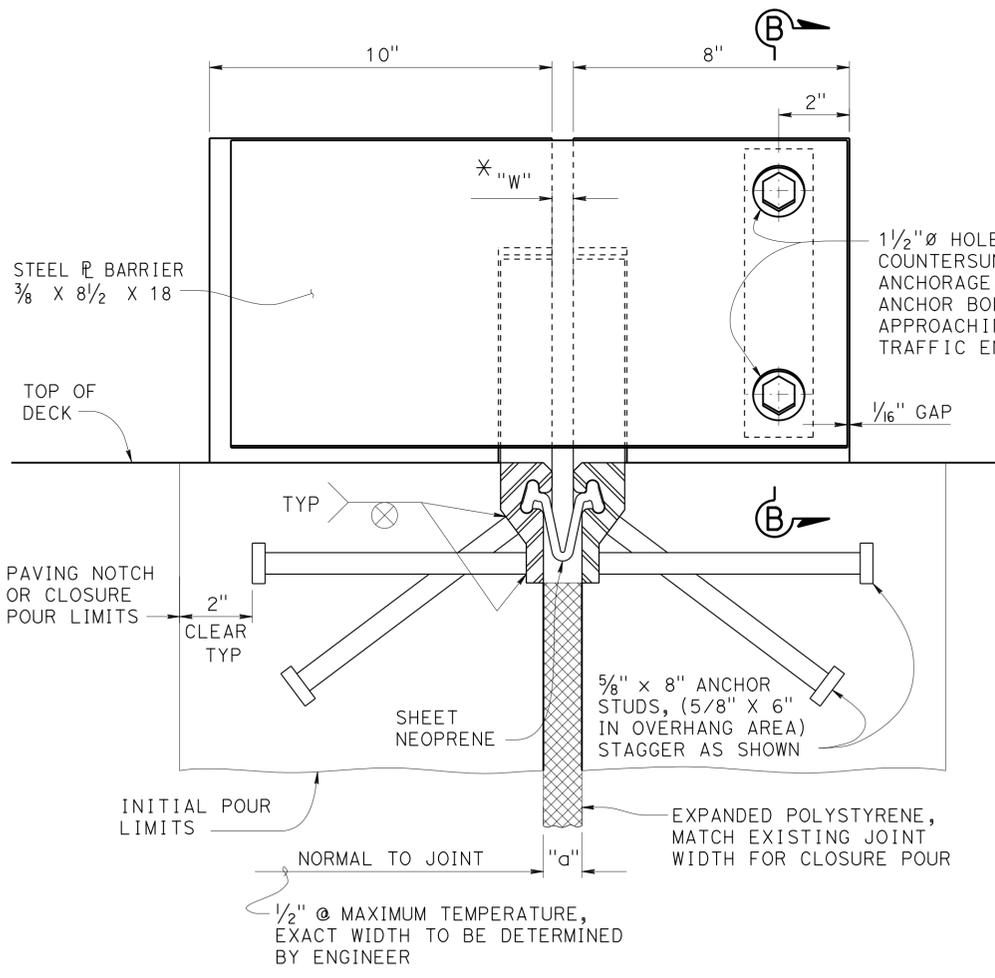
David P. Murray
 No. 71259
 Exp. 12/31/2017
 CIVIL
 STATE OF CALIFORNIA

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SCHEMATIC STEEL EDGE MEMBER

- NOTES:
- Alternatively, fillet or complete penetration welds may be used at anchor studs.
 - Alternate types of anchor studs may be permitted subject to the authorization by the Engineer.
 - Joint seal assembly to be used in conjunction with closure pour. (See other sheets for limits). Closure pour shall not be placed until final deck surface is within the tolerances specified.
 - Use joint at crown of roadway, at any change in traverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication.
 - Sheet Neoprene shall be fabricated in one continuous piece and shall be fabricated to bend around corners. Field splices of the neoprene are not allowed.
 - Insert assembly or expansion anchorage for 5/8" x 1 3/4" bolts. Use installation bolts extended 1/2" minimum past nut and coat with bond breaker, after concrete has cured, remove installation bolts, install HS bolts and sheet neoprene.
 - Sidewalk Detail similar to Barrier Detail on low side at both sides if the roadway is crowned or if the difference in elevation between the ends of the seal is 0.5' or less.
 - a_c, a_s , are the thermal expansion coefficients for concrete and steel respectively.
 - Anchor studs shall conform to ASTM 108.

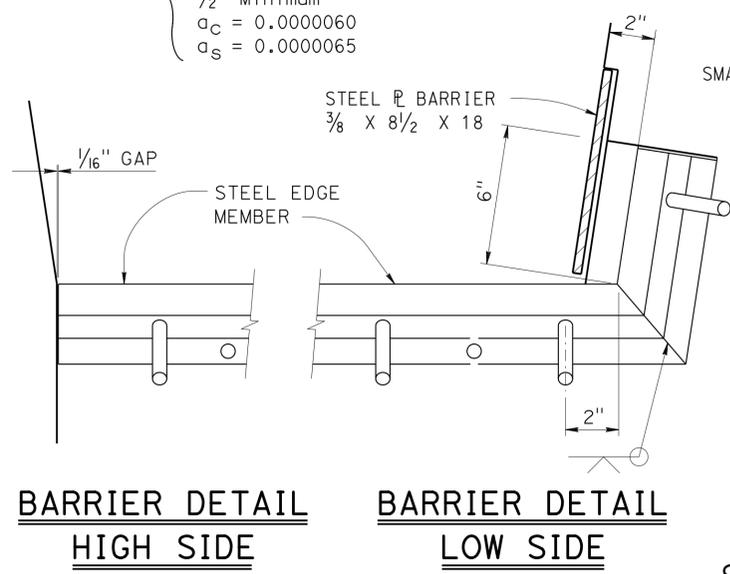


1

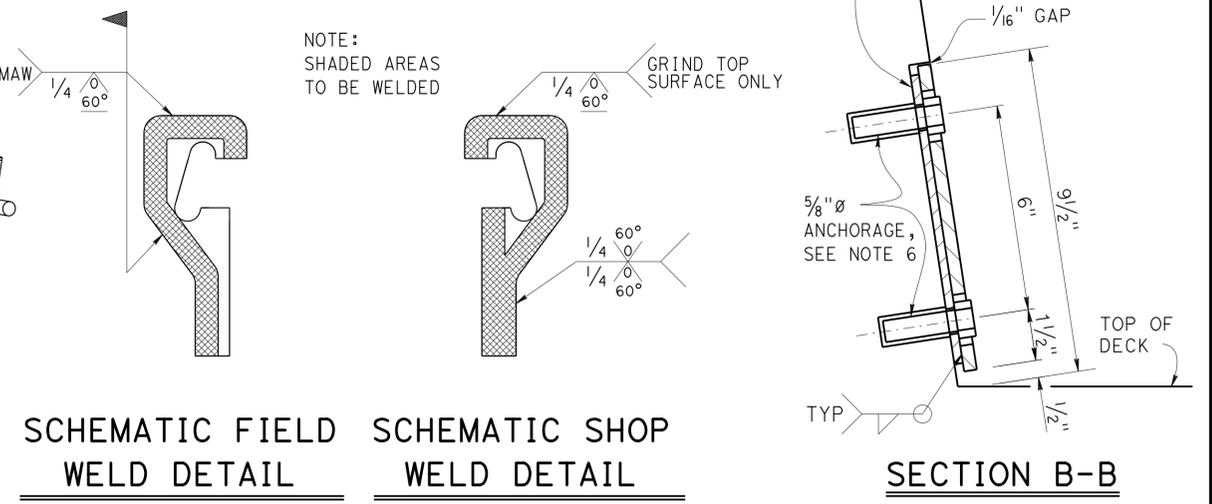
JOINT INFORMATION			"a" DIMENSIONS		
LOCATION	MOVEMENT RATING (MR)	SKEW	WINTER	SPRING & FALL	SUMMER

* TO SET MINIMUM JOINT OPENING "W"

$$"W" = \begin{cases} \frac{1}{2} + [(Max\ Str\ temperature\ in\ ^\circ F) - (actual\ Str\ temperature\ in\ ^\circ F)] * (a_c\ or\ a_s) * (12) * (contributory\ L\ in\ feet) \\ \frac{1}{2} \text{ Minimum} \\ a_c = 0.0000060 \\ a_s = 0.0000065 \end{cases}$$



NOTE: SHADED AREAS TO BE WELDED



SCHEMATIC FIELD WELD DETAIL SCHEMATIC SHOP WELD DETAIL

SPECIAL DETAILS

NO SCALE

REVISED STANDARD DRAWING

FILE NO. **xs8-010**

APPROVAL DATE July 2014

1 Detail omitted

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. VARIOUS
POST MILE VARIOUS

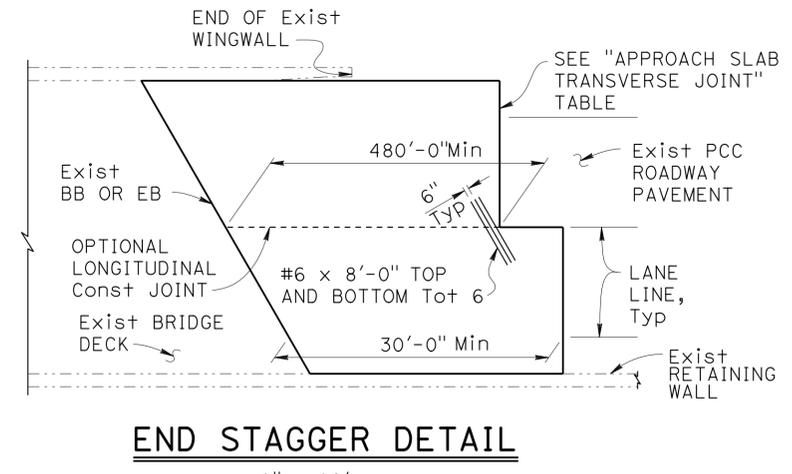
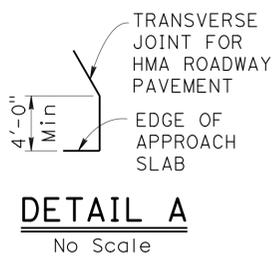
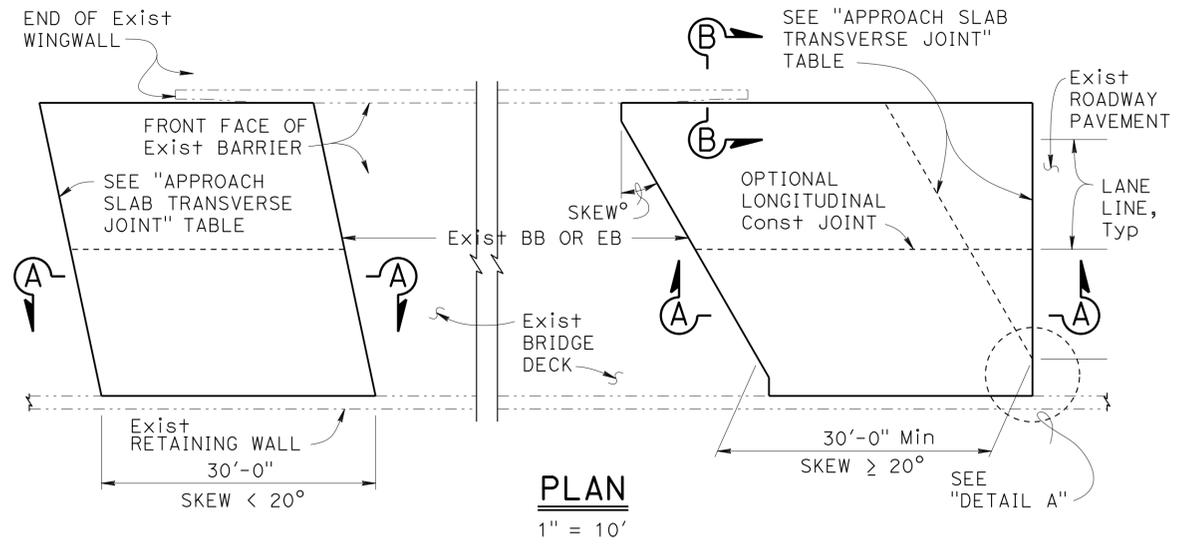
ROUTE N405-105 APPROACH AND DEPARTURE SLAB REPLACEMENT PROJECT

STRIP JOINT SEAL ASSEMBLY

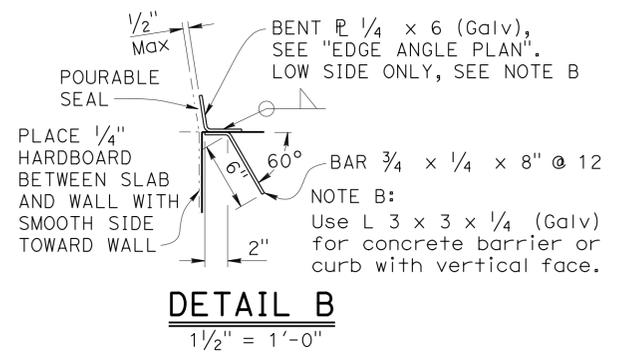
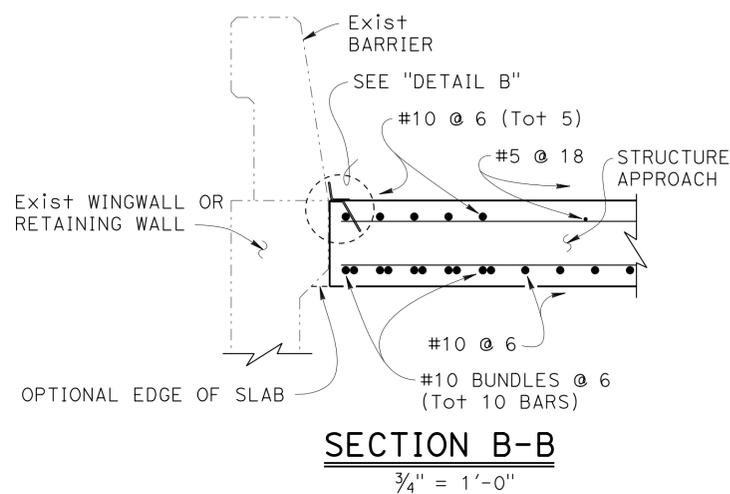
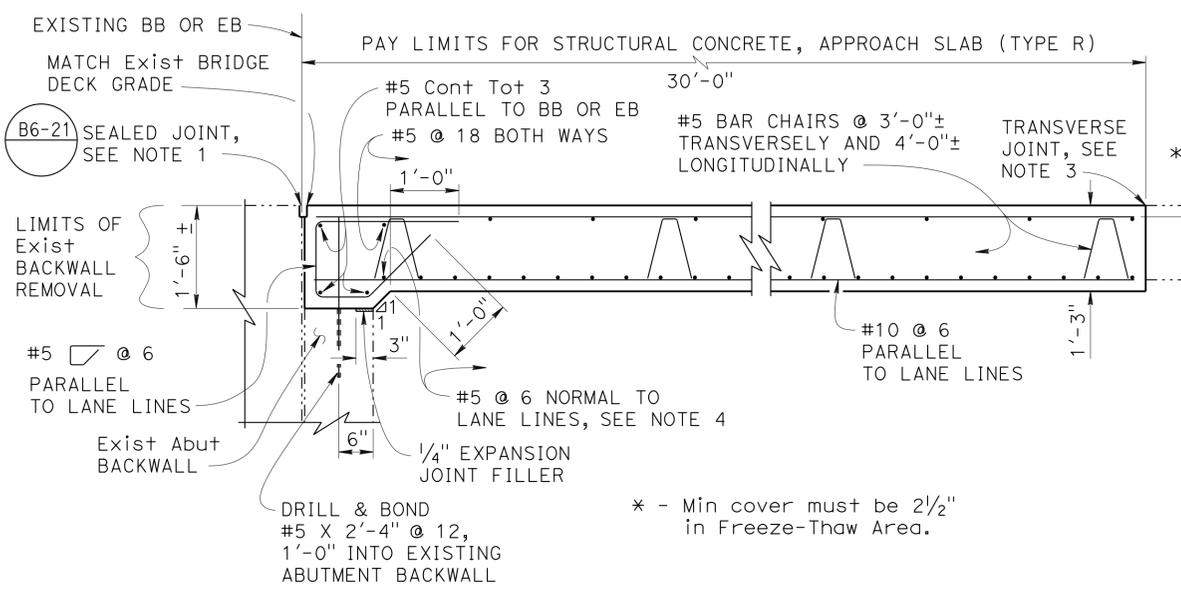
MAXIMUM MOVEMENT RATING = 4"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	253	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE
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APPROACH SLAB TRANSVERSE JOINT		
APPROACH SKEW	WITH HMA ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	PARALLEL TO BB OR EB	PARALLEL TO BB OR EB
20° - 45°	PARALLEL TO BB OR EB USE "DETAIL A"	STAGGER AT LANE LINES 24' TO 36' APART, SEE "END STAGGER DETAIL"
> 45°	PARALLEL TO BB OR EB USE "DETAIL A"	STAGGER AT EACH LANE LINE, SEE "END STAGGER DETAIL"

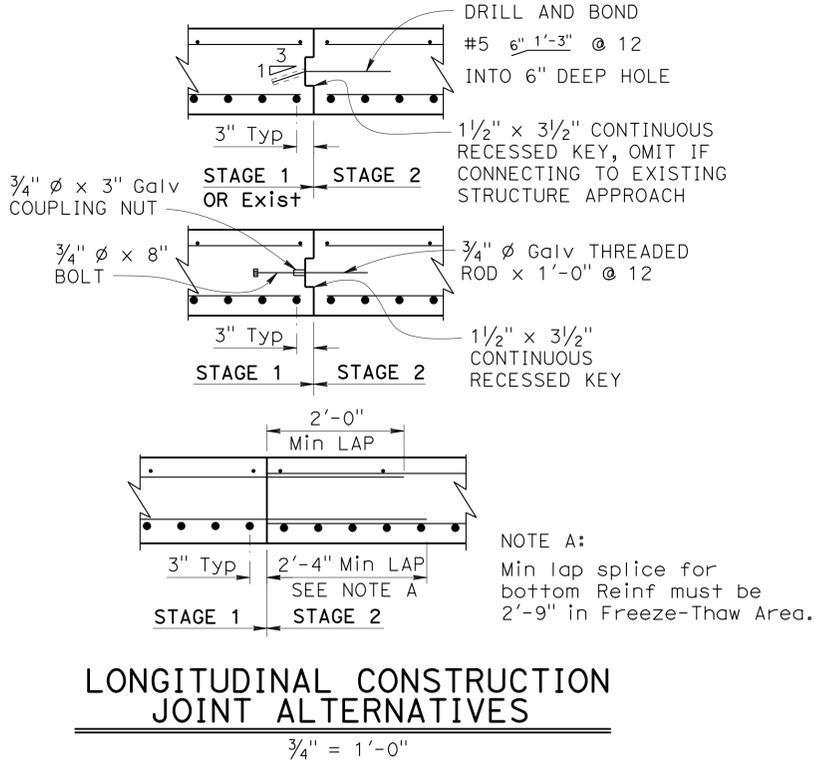
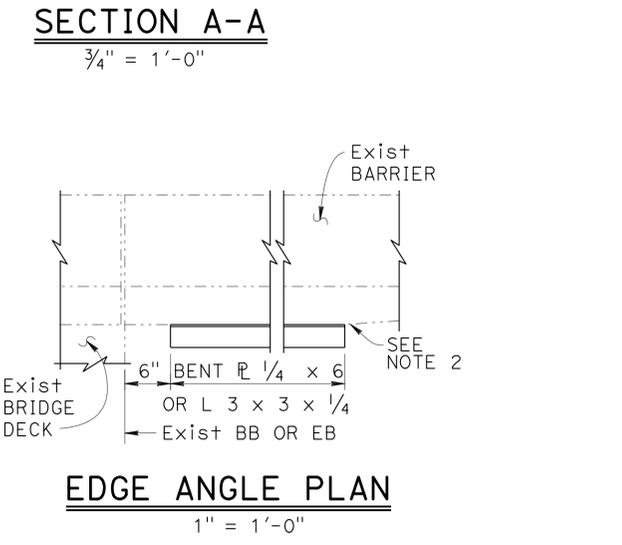
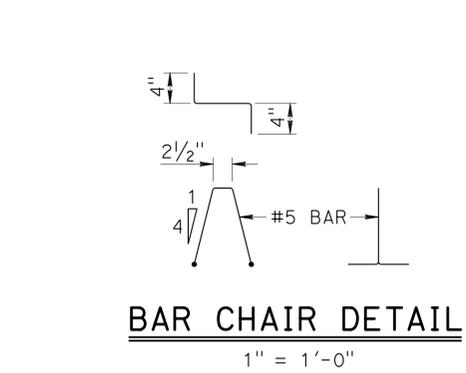


DESIGN NOTES

DESIGN: AASHTO LRFD Bridge Design Specifications, 2012 Edition with Caltrans Amendments, preface dated January 2014
 LIMIT STATES: Service I, Strength I & II, Extreme II and Fatigue I (γ_{FAT} = 1.0)
 DEAD LOAD: Includes 35 psf for future wearing surface
 LIVE LOAD: HL93 and permit design load
 Equivalent strip width method: W₁ = 12 ft
 Slab span: L₁ = 24.5 ft
 REINFORCED CONCRETE:
 f_y = 60 ksi
 f'c = 3.6 ksi
 n = 8

SPECIAL DETAILS

- NOTES:
- For joint protection details and other details not shown, see other plan sheets. Adjust reinforcement to clear sawcut for sealed joint.
 - End the plate or edge angle at beginning of barrier transition, end of wingwall, or end of structure approach as applicable.
 - Transverse Joint must be a minimum of 5'-0" from an existing or constructed weakened plane joint in approach PCC roadway pavement. Refer to Standard Plans P10 and P14.
 - At the Contractor's option, approach slab transverse reinforcement may be placed parallel to BB or EB. Spacing of transverse reinforcement is measured along C roadway.
- Indicates Existing Structure



REVISED STANDARD DRAWING

FILE NO. **xs3-130**

APPROVAL DATE January 2015

Design note has been modified

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. VARIOUS

ROUTE N405-105 APPROACH AND DEPARTURE SLAB REPLACEMENT PROJECT

POST MILE VARIOUS

STRUCTURE APPROACH TYPE R (30S)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	254	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE

David P. Murray
 No. 71259
 Exp. 12/31/2017
 CIVIL
 STATE OF CALIFORNIA

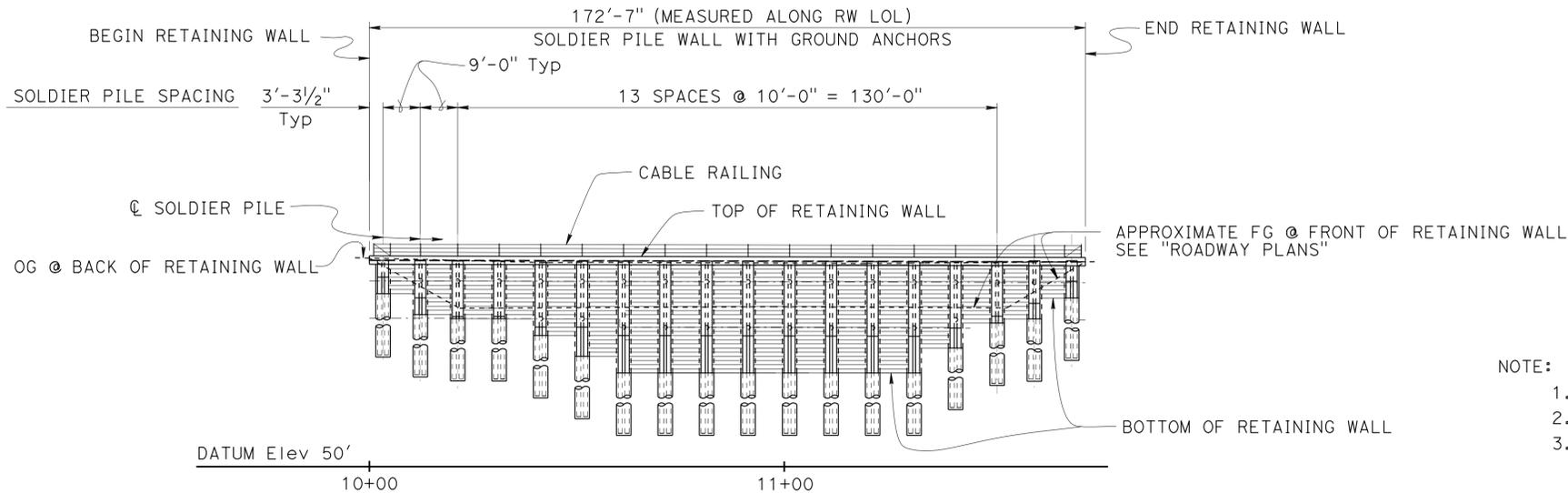
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

Sta 10+00.00 Elev 100.63' Sta 11+72.58 Elev 100.23'

-0.232%

PROFILE GRADE - TOP OF WALL

NO SCALE



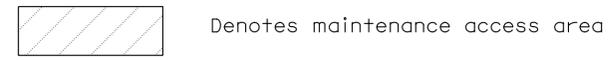
ELEVATION

1" = 20'-0"

NOTE:

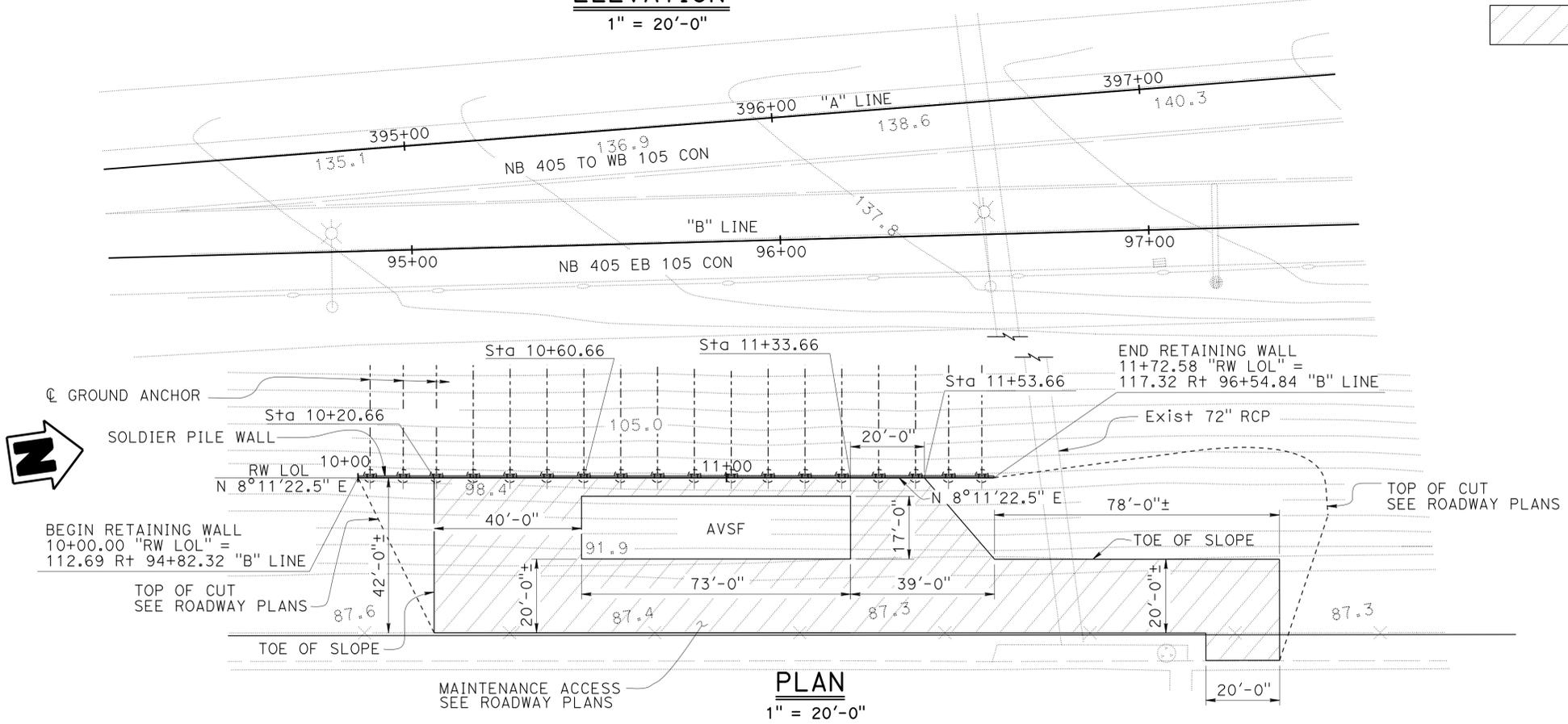
1. For location of Typical Sections, see "GENERAL PLAN No. 2" sheet.
2. For maintenance access and Austin Vault Sand Filter (AVSF) layout, see "ROADWAY PLANS".
3. For CONTOUR GRADING, see "ROADWAY PLANS".

LEGEND:



QUANTITIES

STRUCTURE EXCAVATION (SOLDIER PILE WALL)	79	CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	42	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	67	CY
LEAN CONCRETE BACKFILL	125	CY
GROUND ANCHOR (SUBHORIZONTAL)	27	EA
STEEL SOLDIER PILE (2 - HP 12 X 53)	535	LF
42" DRILLED HOLE	544	LF
STRUCTURAL CONCRETE, PILASTER	26	CY
STRUCTURAL CONCRETE, COPING	24	CY
BAR REINFORCING STEEL (PILASTER)	3,232	LB
BAR REINFORCING STEEL (COPING)	3,797	LB
BAR REINFORCING STEEL (GALVANIZED)	390	LB
TIMBER LAGGING	16	MFBM
CLEAN AND PAINT STEEL SOLDIER PILING		LUMP SUM
PREPARE AND STAIN CONCRETE	101	SQFT
ANTI-GRAFFITI COATING	2,411	SQFT
MINOR CONCRETE (GUTTER) (LF)	173	LF
CABLE RAILING	171	LF



PLAN

1" = 20'-0"

DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higuera	LOAD & RESISTANCE FACTOR DESIGN
DETAILS	BY S. Cholda	CHECKED V. Romo	LAYOUT
QUANTITIES	BY F. Feng	CHECKED V. Romo	SPECIFICATIONS
			BY S. Cholda
			BY Xiaodong Chen

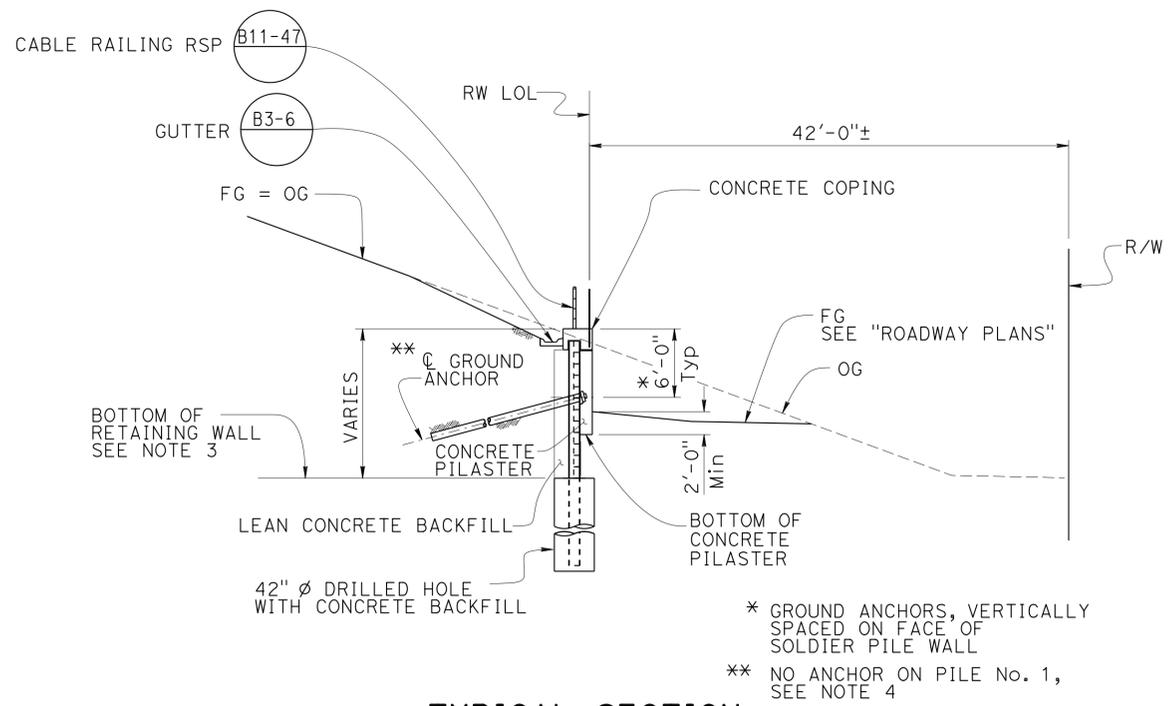
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 15

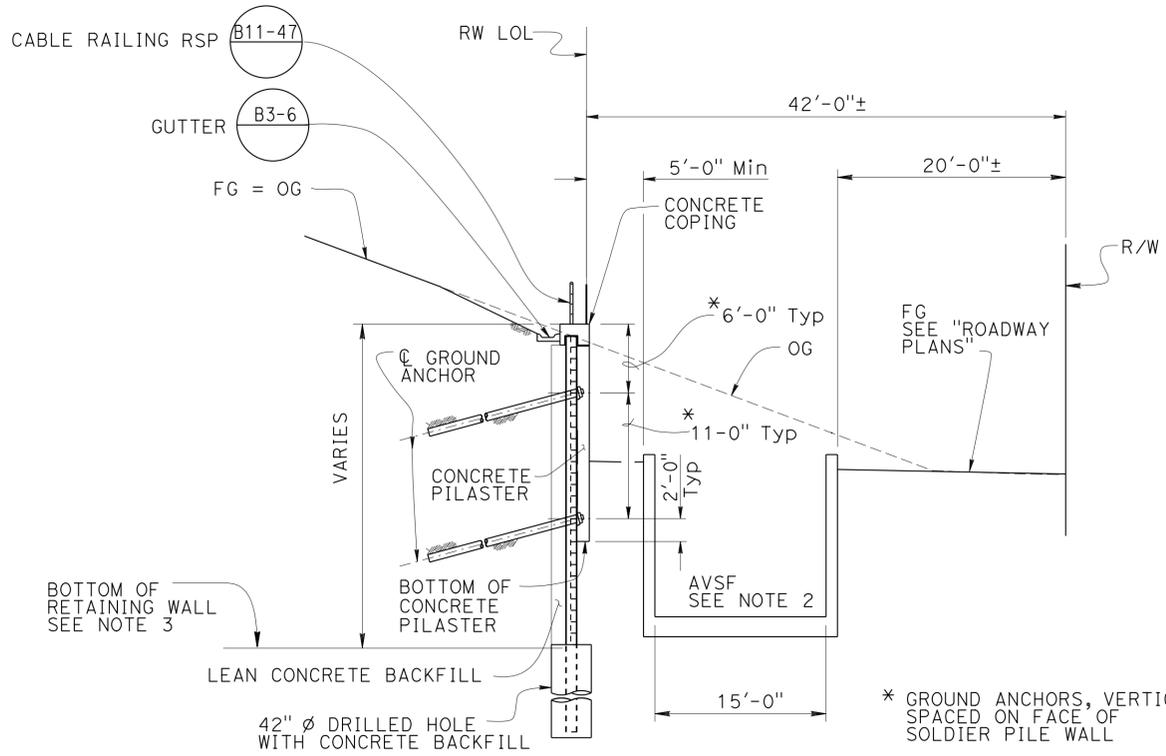
RETAINING WALL No. 95
GENERAL PLAN No. 1

BRIDGE NO. 53E0358
 POST MILE 20.8

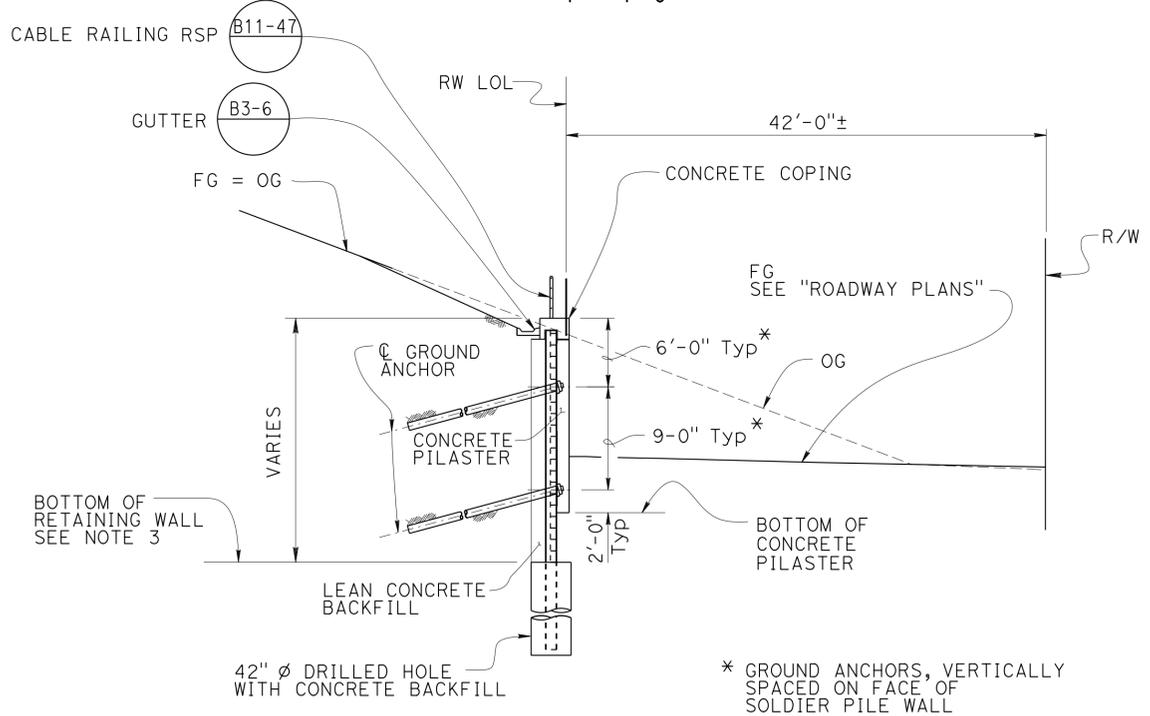
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	255	265
David P. Murray			5-10-16	DATE	
REGISTERED CIVIL ENGINEER			No. 71259		
7-1-16			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					



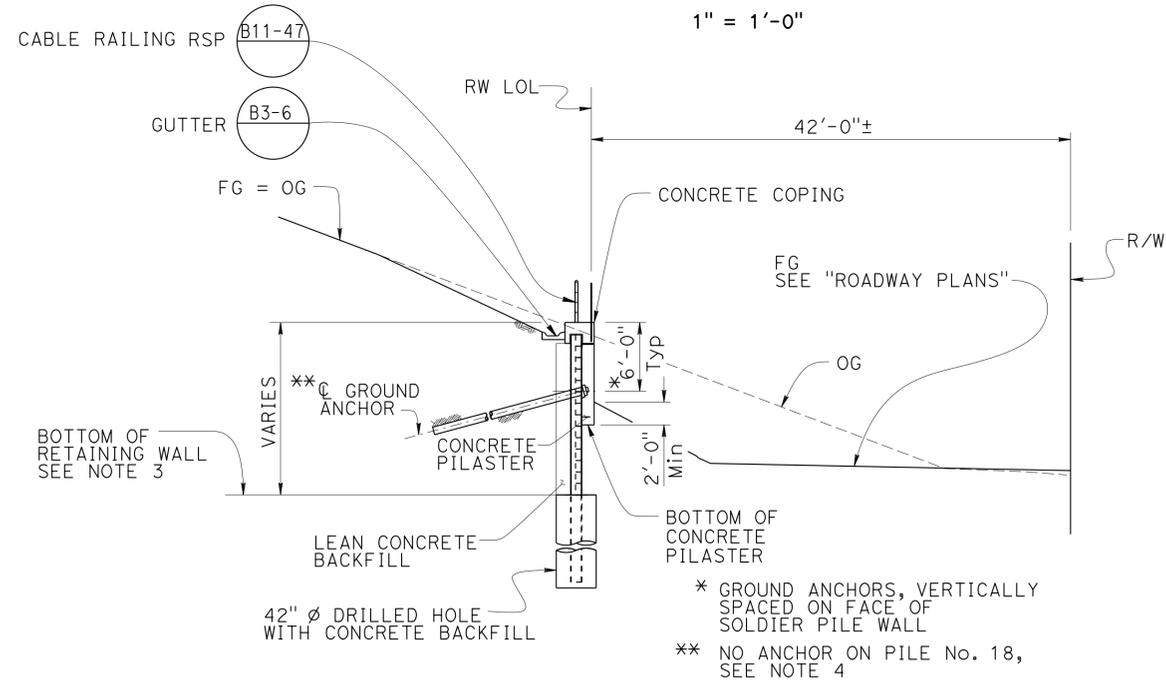
TYPICAL SECTION
 (FROM Sta 10+00.00 TO Sta 10+20.66)



TYPICAL SECTION
 (FROM Sta 10+60.66 TO Sta 11+33.66)



TYPICAL SECTION
 (FROM Sta 10+20.66 TO Sta 10+60.66) AND
 (FROM Sta 11+33.66 TO Sta 11+53.66)



TYPICAL SECTION
 (FROM Sta 11+53.66 TO Sta 11+72.58)

- Notes:
1. For "PREPARE AND STAIN PILASTER NOTCH", see "ARCHITECTURAL DETAILS" sheet
 2. For AVSF details, see "Roadway Plans".
 3. For Elev, see "SOLDIER PILE DATA TABLE" on "SOLDIER PILE DATA TABLE" sheet.
 4. For "PILE NUMBERS" see "STRUCTURE DETAILS No. 1" sheet.

X DESIGN ENGINEER	DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda	LOAD & RESISTANCE FACTOR DESIGN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	53E0358	RETAINING WALL No. 95 GENERAL PLAN No. 2		
	DETAILS	BY S. Cholda	CHECKED V. Romo	LAYOUT		BY S. Cholda			POST MILE	20.8
	QUANTITIES	BY F. Feng	CHECKED V. Romo	SPECIFICATIONS		BY Xiaodong Chen			PLANS AND SPECS CHECKED F. Feng	REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3604	PROJECT NUMBER & PHASE: 0713000241	CONTRACT NO.: 07-3X8704	DISREGARD PRINTS BEARING EARLIER REVISION DATES		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	256	265
David P. Murray REGISTERED CIVIL ENGINEER DATE 5-10-16					
7-1-16				PLANS APPROVAL DATE	
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INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	INDEX TO PLANS
4	SOLDIER PILE DATA TABLE
5	STRUCTURE DETAILS No. 1
6	STRUCTURE DETAILS No. 2
7	STRUCTURE DETAILS No. 3
8	STRUCTURE DETAILS No. 4
9	SOLDIER PILE WALL LAGGING DETAILS
10	ARCHITECTURAL DETAILS
11	SUB HORIZONTAL GROUND ANCHOR DETAILS
12	LOG OF TEST BORINGS

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications,
4th Edition with California Amendments.

SOIL
PARAMETERS:
(For determination of Design Lateral Earth Pressures for local stability Analysis)

Backfill unit weight (γ) = $\frac{120}{1b/ft^3}$
 Friction Angle (ϕ) = $\frac{33^\circ}{C} = \frac{0}{0}$
 Native Material Unit Weight (γ) = $\frac{115}{1b/ft^3}$
 Friction Angle (ϕ) = $\frac{0^\circ}{C} = \frac{0.6}{KSF}$

STRUCTURAL STEEL:
 $f_y = 50$ ksi

STRUCTURAL TIMBER:
Treated Douglas Fir, Grade No. 1 or better.
Timber to be full sawn

REINFORCED CONCRETE:
 $f'_c = 3.6$ ksi
 $f_y = 60$ ksi
 $n = 8$

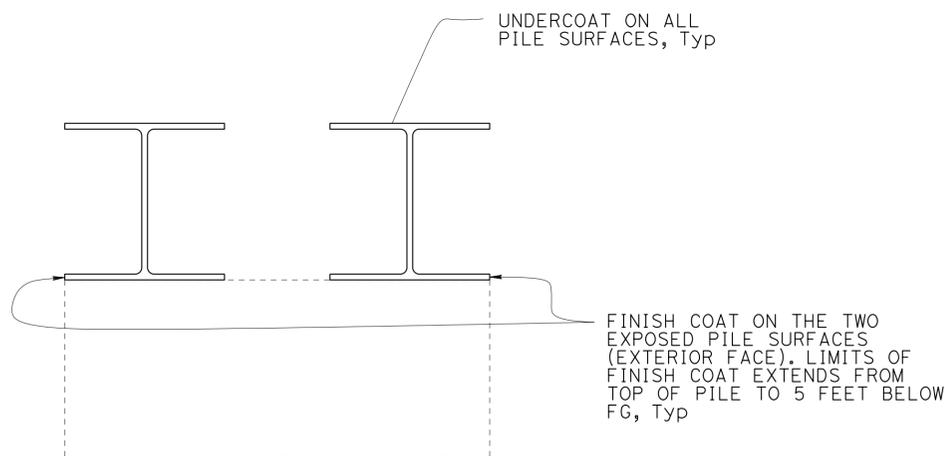
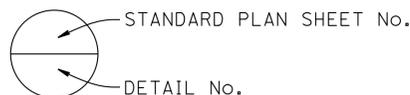
CONCRETE BACKFILL (DRILLED HOLE):
 $f'_c = 3.6$ ksi

PRESTRESSING STEEL (Ground Anchors):
See "SUB HORIZONTAL GROUND ANCHOR DETAILS" sheet.

SEISMIC
PARAMETERS: $PGA = 0.53$ g $k_h = 0.18$ $k_v = 0$

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
B3-6	RETAINING WALL DETAILS No. 2
RSP B11-47	CABLE RAILING

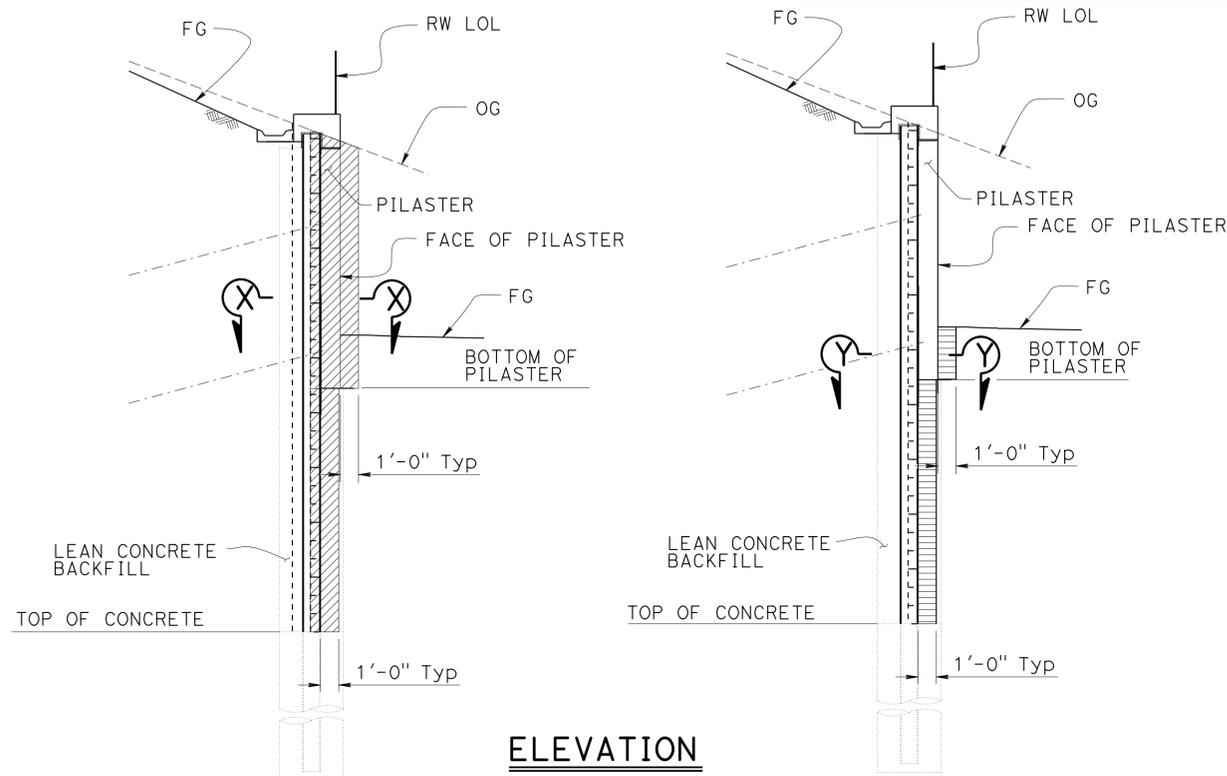


Note:

For vertical limits, see "LIMITS OF STEEL SOLDIER PILE AND CLEAN AND PAINT UNDERCOAT" on "SOLDIER PILE DATA TABLE" sheet.

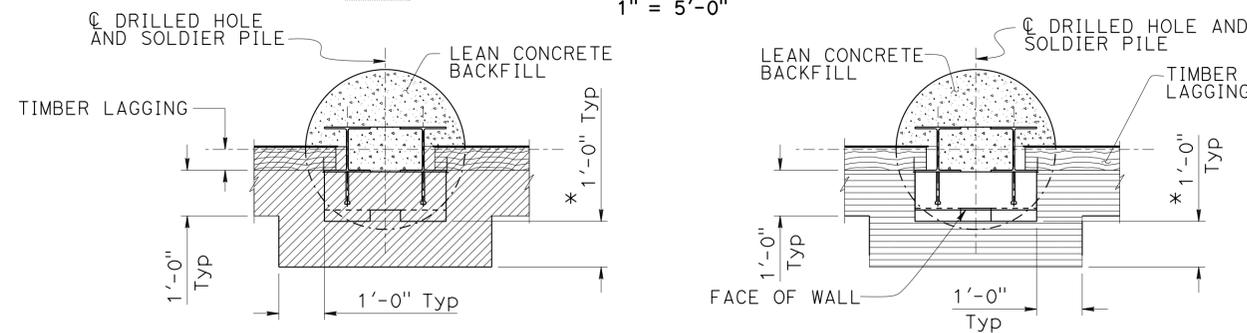
LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

NO SCALE



ELEVATION

1" = 5'-0"



SECTION X-X

1/2" = 1'-0"

EXCAVATION

SECTION Y-Y

1/2" = 1'-0"

BACKFILL

Limits of Structure Excavation

Limits of Structure Backfill

TYPICAL EXCAVATION AND BACKFILL

1" = 5'-0"

(Ground Anchors not shown for clarity)

DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda
DETAILS	BY S. Cholda	CHECKED V. Romo
QUANTITIES	BY F. Feng	CHECKED V. Romo

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO.	53E0358
POST MILE	20.8

RETAINING WALL No. 95
INDEX TO PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	257	265

David P. Murray 05/10/16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 David P. Murray
 No. 71259
 Exp. 12/31/2017
 CIVIL
 STATE OF CALIFORNIA

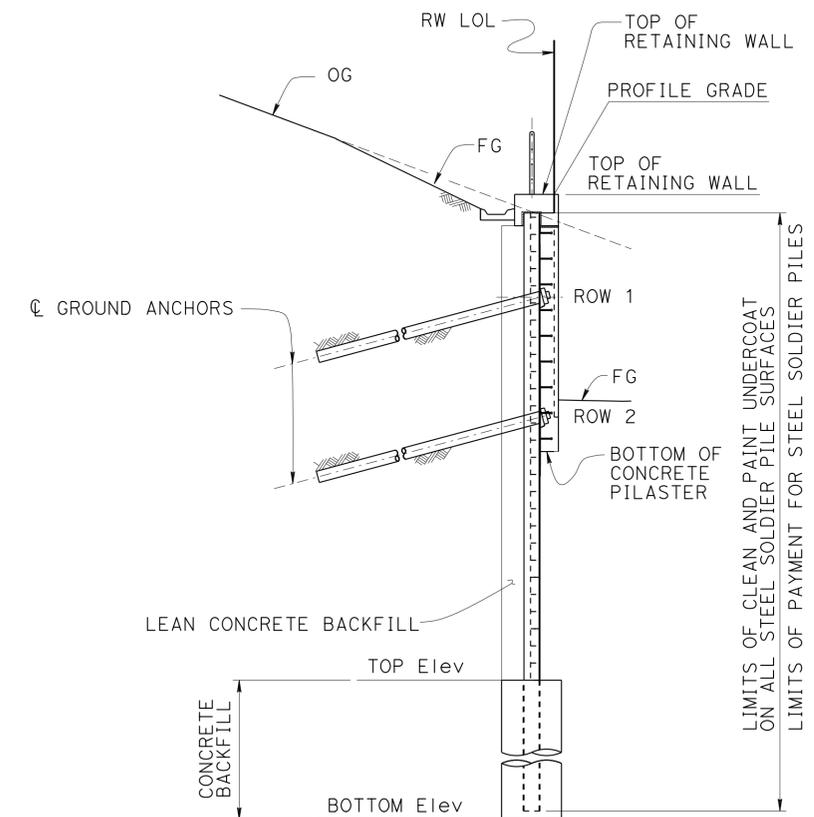
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SOLDIER PILE DATA TABLE														
PILE No.	PILE SIZE AND No. PILES	PROFILE GRADE ELEVATION (@ RW LOL)	STEEL SOLDIER PILE		NUMBER OF ANCHORS	GROUND ANCHORS								6 x 12 TIMBER LAGGING QUANTITY (EA)
			42" Ø DRILLED HOLE WITH CONCRETE BACKFILL			ROW 1				ROW 2				
			BOTTOM Elev (ft)	TOP Elev (ft)		UL	FDL	FTL*	LL	UL	FDL	FTL*	LL	
1	2-HP 12 x 53	100.62'	81.5	91.5	0	--	--	--	--	--	--	--	--	8
2	2-HP 12 x 53	100.60'	76.5	86.5	1	35	68	89	46	--	--	--	--	13
3	2-HP 12 x 53	100.58'	75.5	85.5	1	35	76	100	51	--	--	--	--	14
4	2-HP 12 x 53	100.56'	75.5	85.5	1	35	76	100	51	--	--	--	--	14
5	2-HP 12 x 53	100.53'	71.5	81.5	2	35	87	112	59	25	45	59	31	18
6	2-HP 12 x 53	100.51'	66.5	76.5	2	35	115	150	77	25	89	116	60	23
7	2-HP 12 x 53	100.49'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
8	2-HP 12 x 53	100.46'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
9	2-HP 12 x 53	100.44'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
10	2-HP 12 x 53	100.42'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
11	2-HP 12 x 53	100.39'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
12	2-HP 12 x 53	100.37'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
13	2-HP 12 x 53	100.35'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
14	2-HP 12 x 53	100.33'	62.5	72.5	2	35	146	190	98	25	129	170	87	27
15	2-HP 12 x 53	100.30'	68.5	78.5	2	35	102	133	69	25	65	86	44	21
16	2-HP 12 x 53	100.28'	74.5	84.5	1	35	80	105	54	--	--	--	--	15
17	2-HP 12 x 53	100.26'	75.5	85.5	1	35	70	94	47	--	--	--	--	14
18	2-HP 12 x 53	100.24'	80.5	90.5	0	--	--	--	--	--	--	--	--	9

* FTL controlled by seismic loading

NOTES:

1. UL: Unbonded Length, (ft) Distance from pile along anchor tendon inclined at 15° from horizontal.
 FDL: Factored Design Load
 FTL: Factored Test Load on ground anchor (kip)
 LL: Lock-Off Load (kip)
2. Excavation shall not extend more than 3 feet below a ground anchor elevation before the anchor has been tested and locked-off



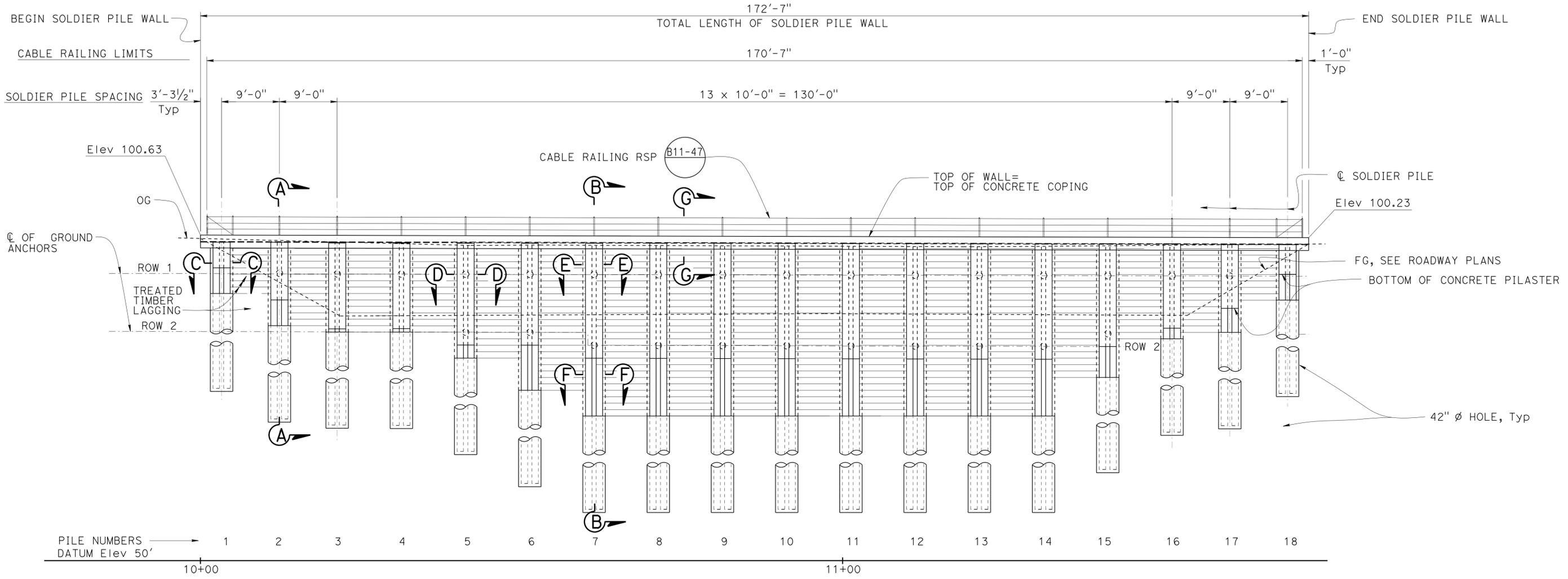
LIMITS OF STEEL SOLDIER PILE AND CLEAN AND PAINT UNDERCOAT

NO SCALE
(Single Row of Ground Anchor Sections similar)

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO.	RETAINING WALL No. 95 SOLDIER PILE DATA TABLE
	DETAILS	BY S. Cholda	CHECKED V. Romo			53E0358	
	QUANTITIES	BY F. Feng	CHECKED V. Romo			POST MILE 20.8	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3604 PROJECT NUMBER & PHASE: 0713000241	CONTRACT NO.: 07-3X8704	DISREGARD PRINTS BEARING EARLIER REVISION DATES
FILE => 53e0358-c-spd1.dgn						REVISION DATES	SHEET 4 OF 12

DATE PLOTTED => 27-JUL-2016 13:01 USERNAME => s125624

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	258	265
David P. Murray			05/10/16		
REGISTERED CIVIL ENGINEER			DATE		
7-1-16			PLANS APPROVAL DATE		
David P. Murray			REGISTERED PROFESSIONAL ENGINEER		
No. 71259			Exp. 12/31/2017		
CIVIL			STATE OF CALIFORNIA		
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ELEVATION
1/8" = 1'-0"

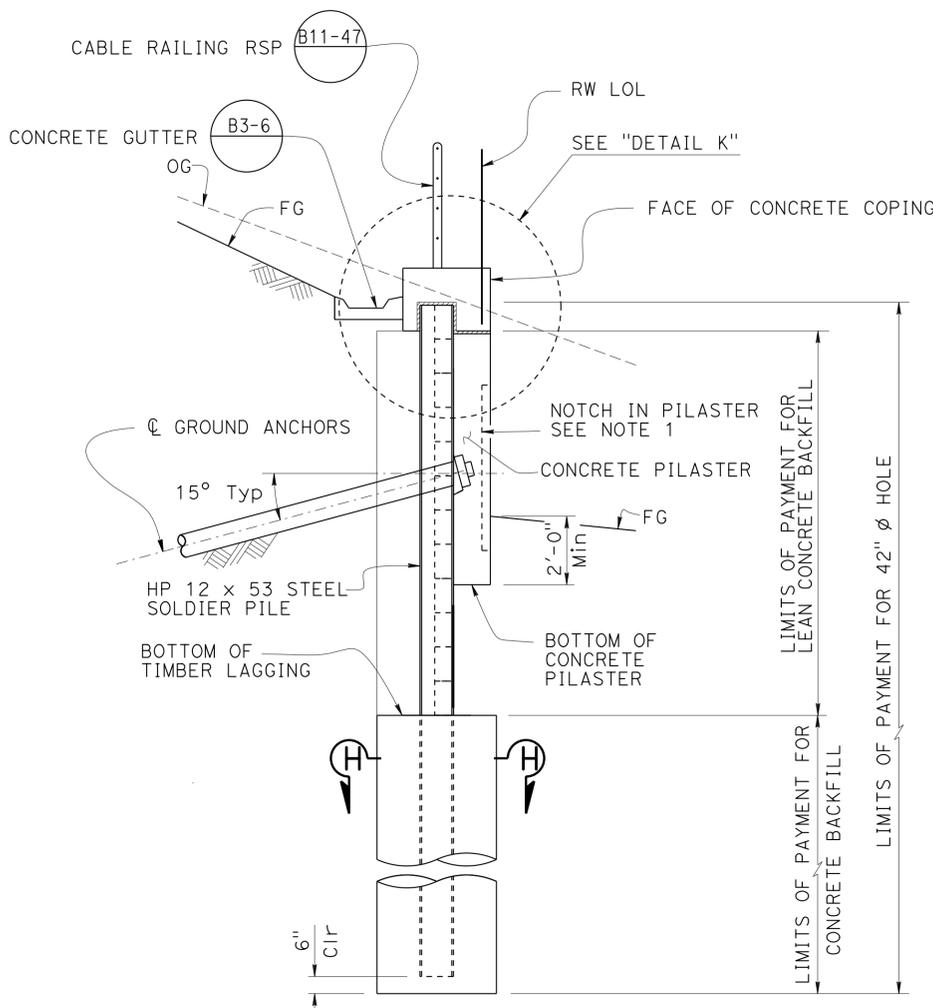
- NOTES:
1. For "SECTION A-A", "SECTION B-B", and "SECTION G-G", see "STRUCTURE DETAILS No. 2" sheet.
 2. For "SECTION C-C", "SECTION D-D", "SECTION E-E" and "SECTION F-F", see "STRUCTURE DETAILS No. 3" sheet.

DESIGN	BY	F. Feng/G. Hight	CHECKED	V. Romo/J. Higareda	BRIDGE NO.	53E0358	RETAINING WALL No. 95
	DETAILS	BY	S. Cholda	CHECKED			
QUANTITIES	BY	F. Feng	CHECKED	V. Romo	POST MILE	20.8	STRUCTURE DETAILS No. 1
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION				DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15			
UNIT: 3604 PROJECT NUMBER & PHASE: 0713000241				CONTRACT NO.: 07-3X8704		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		REVISION DATES	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				FILE => 53e0358-g-sde+01.dgn		SHEET 5 OF 12	

USERNAME => s125624
 DATE PLOTTED => 27-JUL-2016
 TIME PLOTTED => 13:01

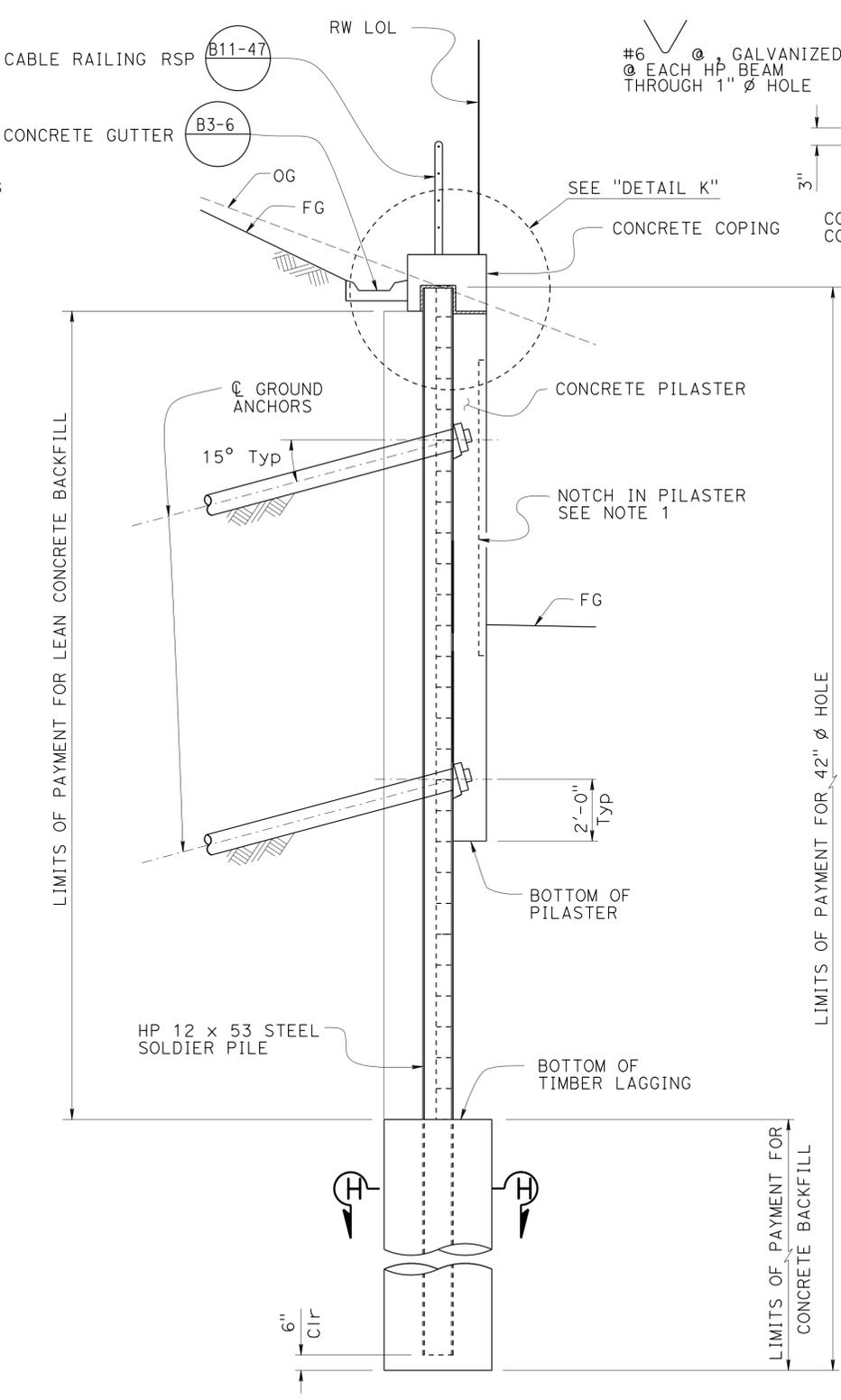
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	259	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE
 David P. Murray No. 71259 Exp. 12/31/2017 CIVIL STATE OF CALIFORNIA
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SECTION A-A
3/8" = 1'-0"

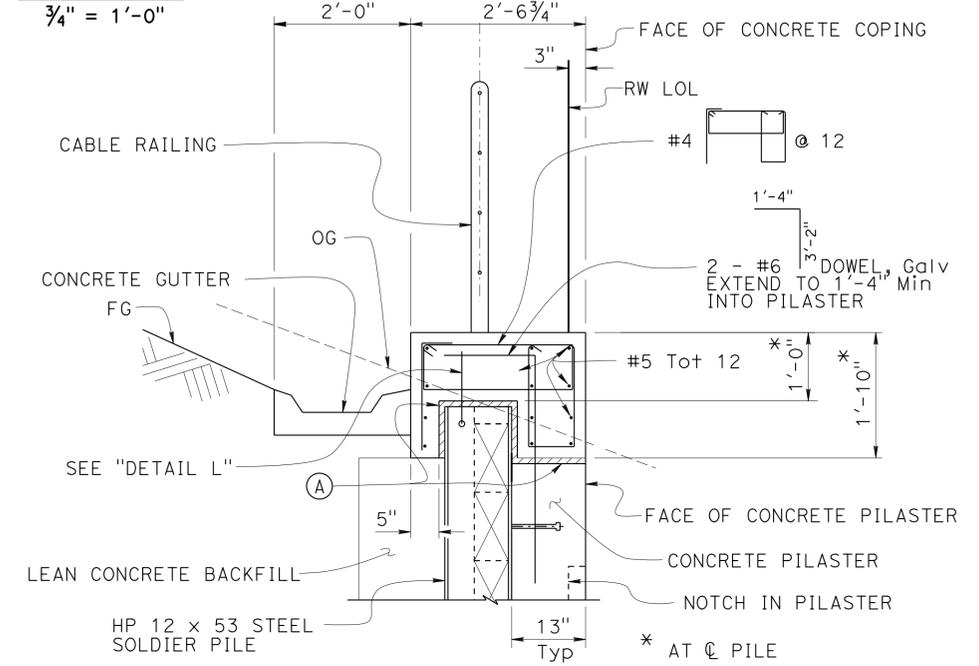
* TYPICAL FOR PILES 1 THROUGH 4, AND 16 THROUGH 18
 * PILES 1 AND 18 ARE CANTILEVERED WITHOUT GROUND ANCHORS



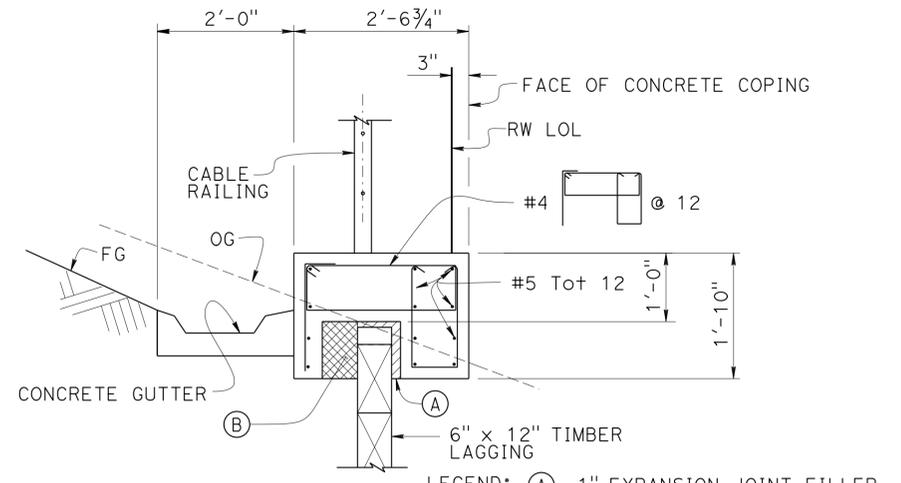
SECTION B-B
3/8" = 1'-0"

TYPICAL FOR PILES 5 THROUGH 15

DETAIL L
3/4" = 1'-0"

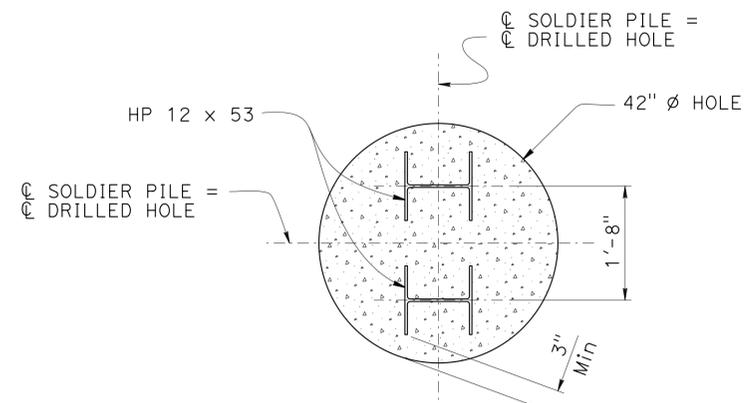


DETAIL K
3/4" = 1'-0"



SECTION G-G
3/4" = 1'-0"

NOTES:
 1. For "NOTCH IN PILASTER" details, see "ARCHITECTURAL DETAILS" sheet.

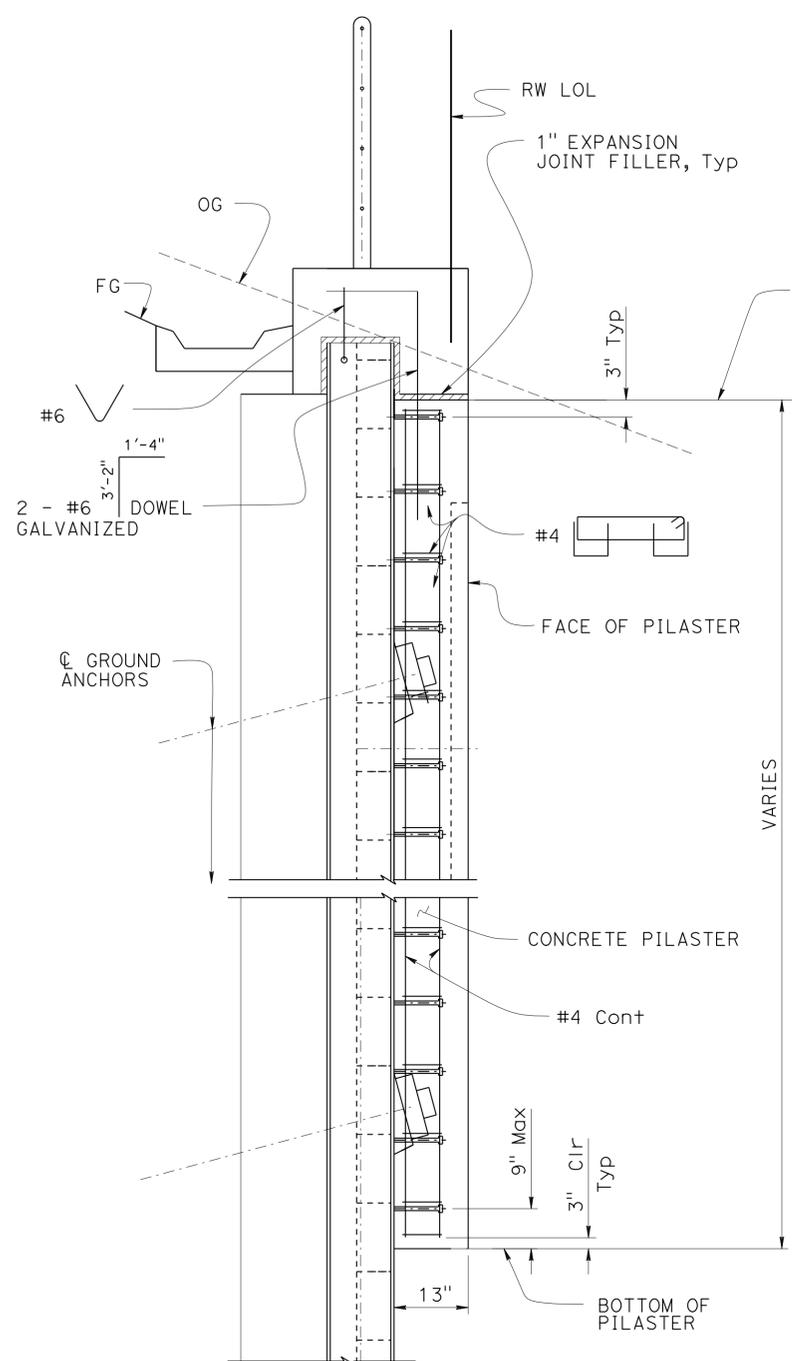


SECTION H-H
3/4" = 1'-0"

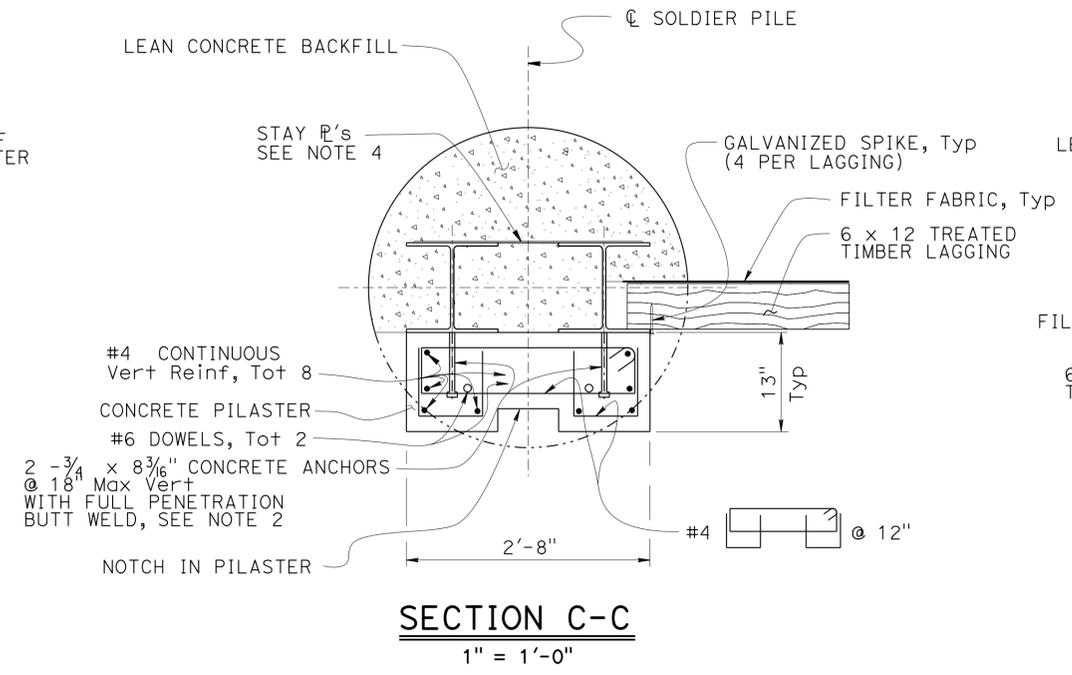
DESIGN	BY	F. Feng/G. Hight	CHECKED	V. Romo/J. Higarada	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO.	53E0358	RETAINING WALL No. 95		
	DETAILS	BY	S. Cholda	CHECKED			V. Romo	POST MILE		20.8	STRUCTURE DETAILS No. 2
	QUANTITIES	BY	F. Feng	CHECKED			V. Romo	UNIT: 3604		PROJECT NUMBER & PHASE: 0713000241	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	REVISION DATES	9-23-15 03-11-16 03-22-16 05-06-16	SHEET 6 OF 12		

DATE PLOTTED => 27-JUL-2016
 USERNAME => s125624
 TIME PLOTTED => 13:01

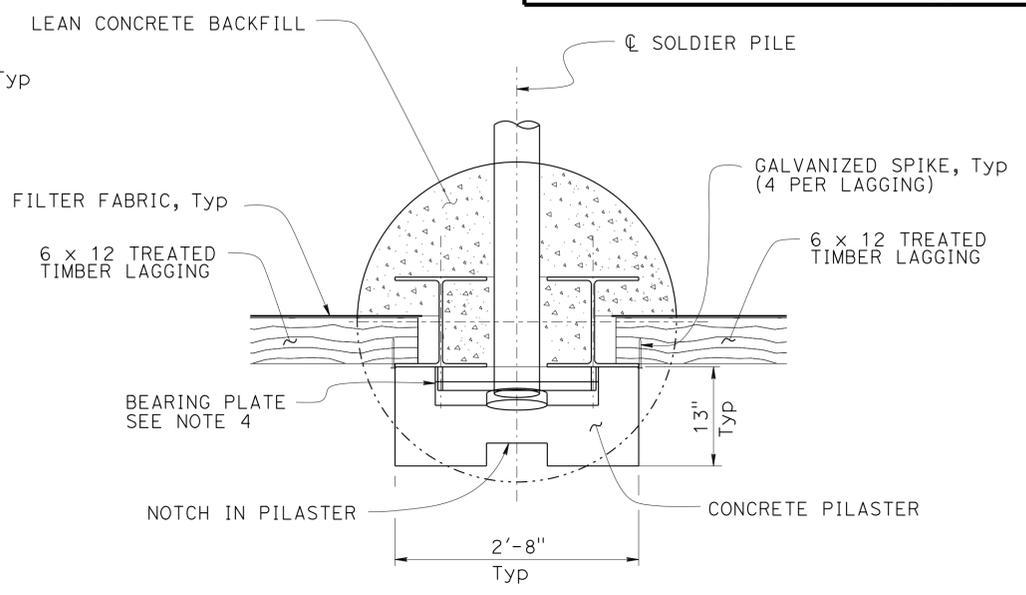
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	260	265
David P. Murray				5-10-16	
REGISTERED CIVIL ENGINEER				DATE	
7-1-16					
PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					



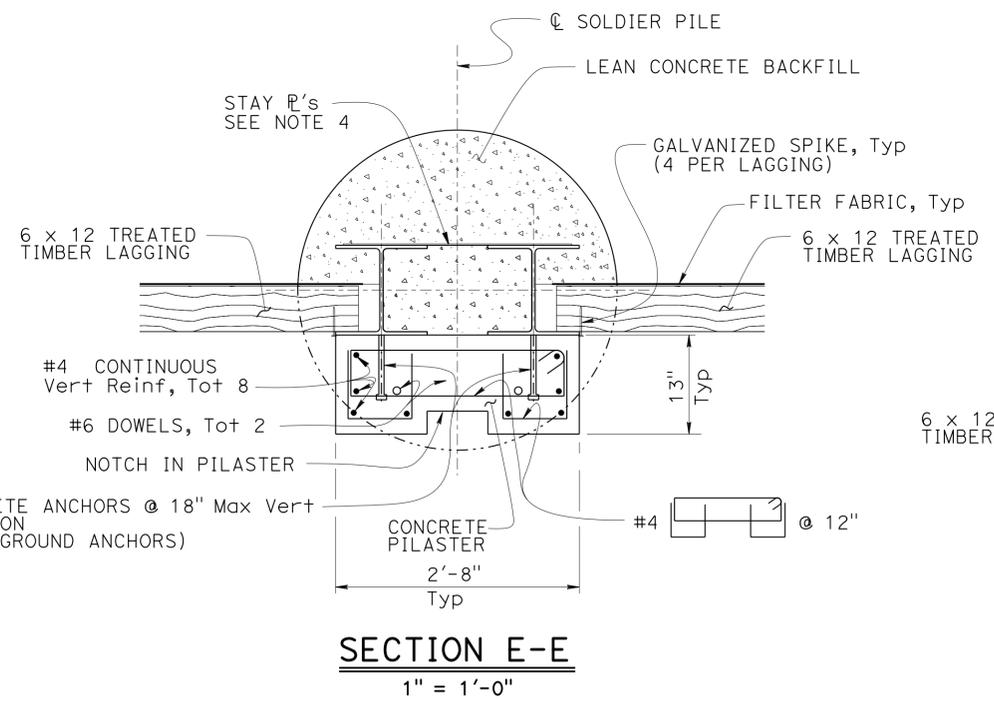
CONCRETE PILASTER DETAIL
3/4" = 1'-0"



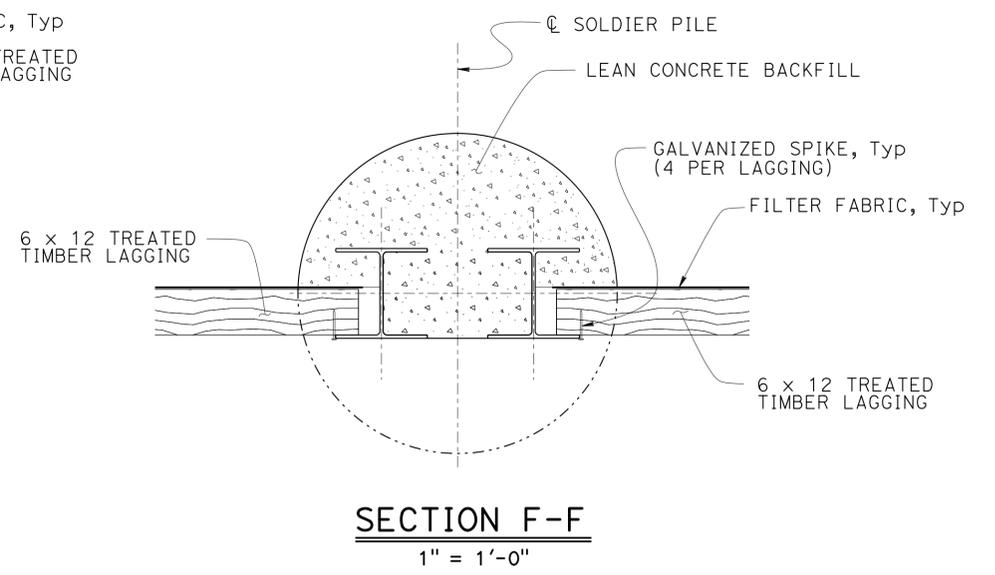
SECTION C-C
1" = 1'-0"



SECTION D-D
1" = 1'-0"



SECTION E-E
1" = 1'-0"



SECTION F-F
1" = 1'-0"

- NOTES:
1. Notch in Pilaster to be terminated 1'-0" below Finish Grade.
 2. Concrete Anchors to be shop welded
Minimum 2 placed at top and bottom within Pilaster as shown.
 3. Pilaster to be terminated 2'-0" below FG, except at pilasters with two ground anchors where pilaster is terminated 2'-0" below CL ground anchor
 4. For Anchor Bearing details, see "GROUND ANCHOR BEARING DETAILS - TYPICAL" on "STRUCTURE DETAILS NO. 4" sheet.

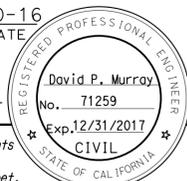
DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda
DETAILS	BY S. Cholda	CHECKED V. Romo
QUANTITIES	BY F. Feng	CHECKED V. Romo

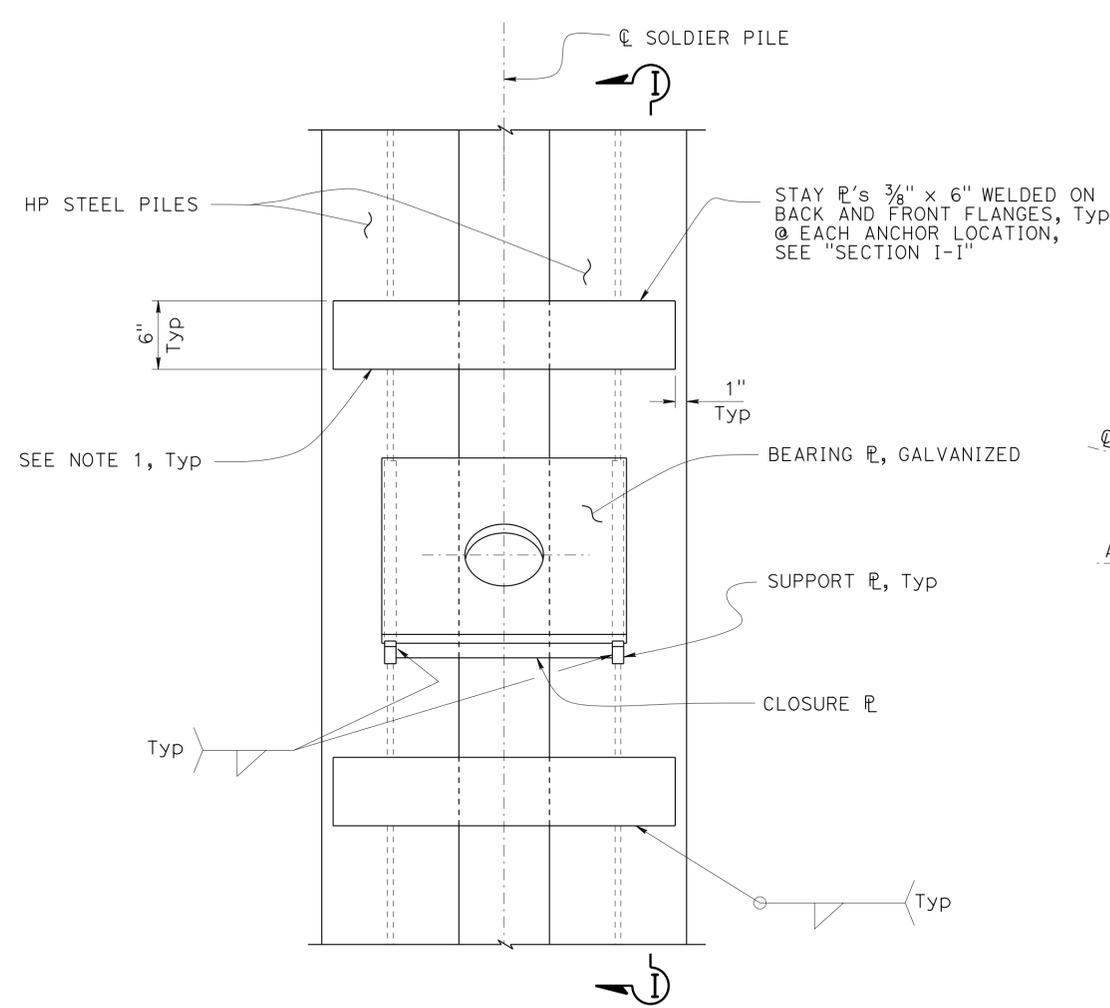
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 15

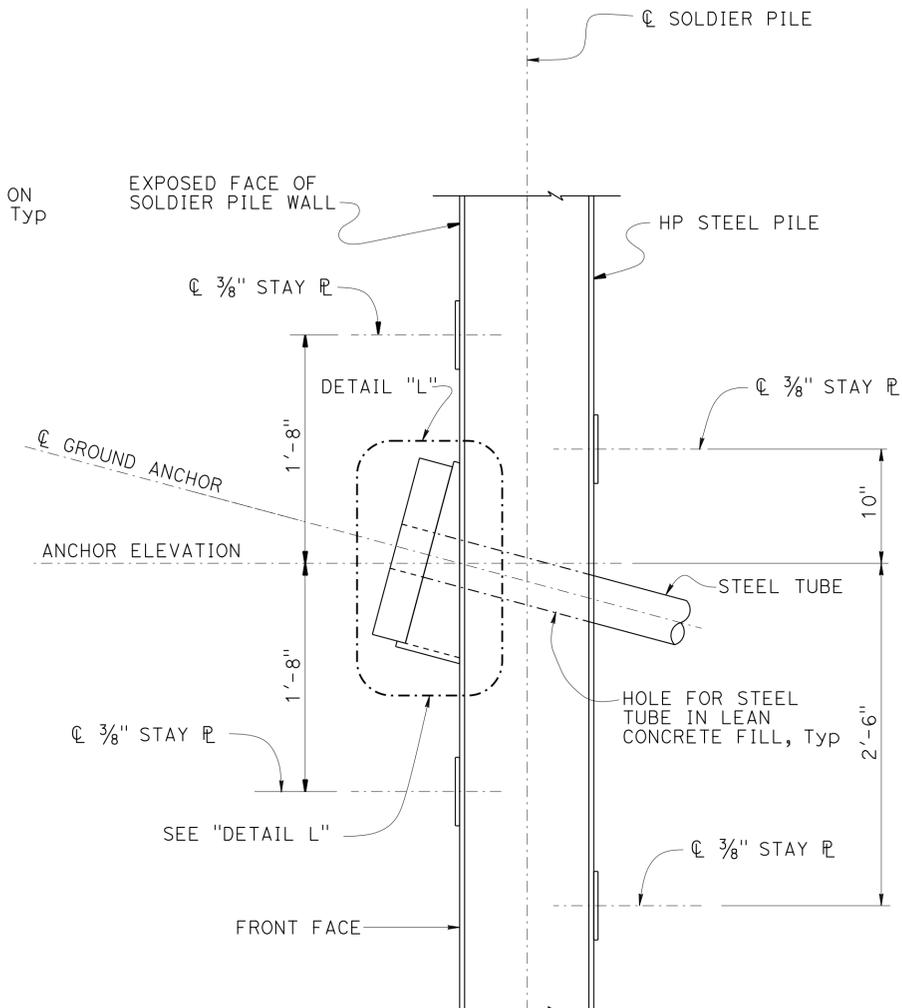
BRIDGE NO.	53E0358
POST MILE	20.8

RETAINING WALL No. 95
STRUCTURE DETAILS No. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	261	265
David P. Murray			5-10-16	REGISTERED CIVIL ENGINEER DATE	
7-1-16			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.					

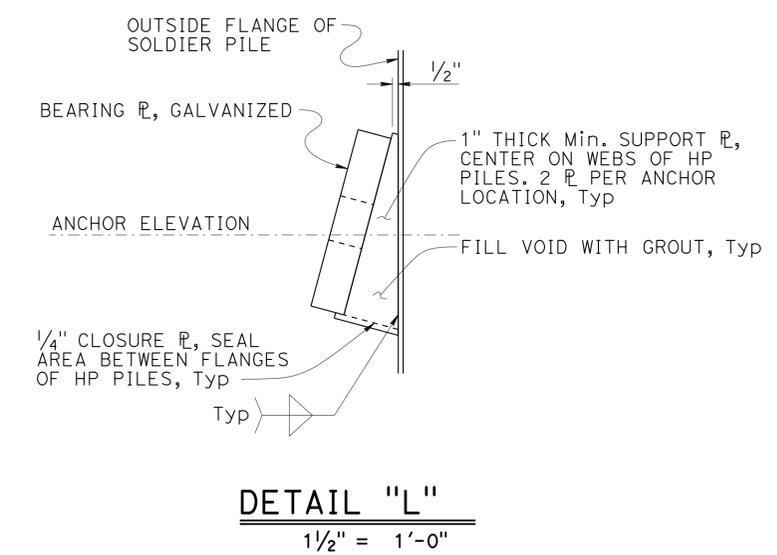


PART ELEVATION
1/2" = 1'-0"



SECTION I-I
1/2" = 1'-0"

- NOTES:
- Stay plates shall be installed prior to placement of Steel Soldier Piles in drilled holes.
 - Design of support plates to be determined by contractor.
 - Support and Closure plates to receive same undercoat treatment as Soldier Piles.
 - A minimum of 4 Stay Plates as shown in "SECTION I-I" to be welded at Soldier Piles 1 and 18. First Stay Plate to be located 2'-0" from top of steel beam.



DETAIL "L"
1/2" = 1'-0"

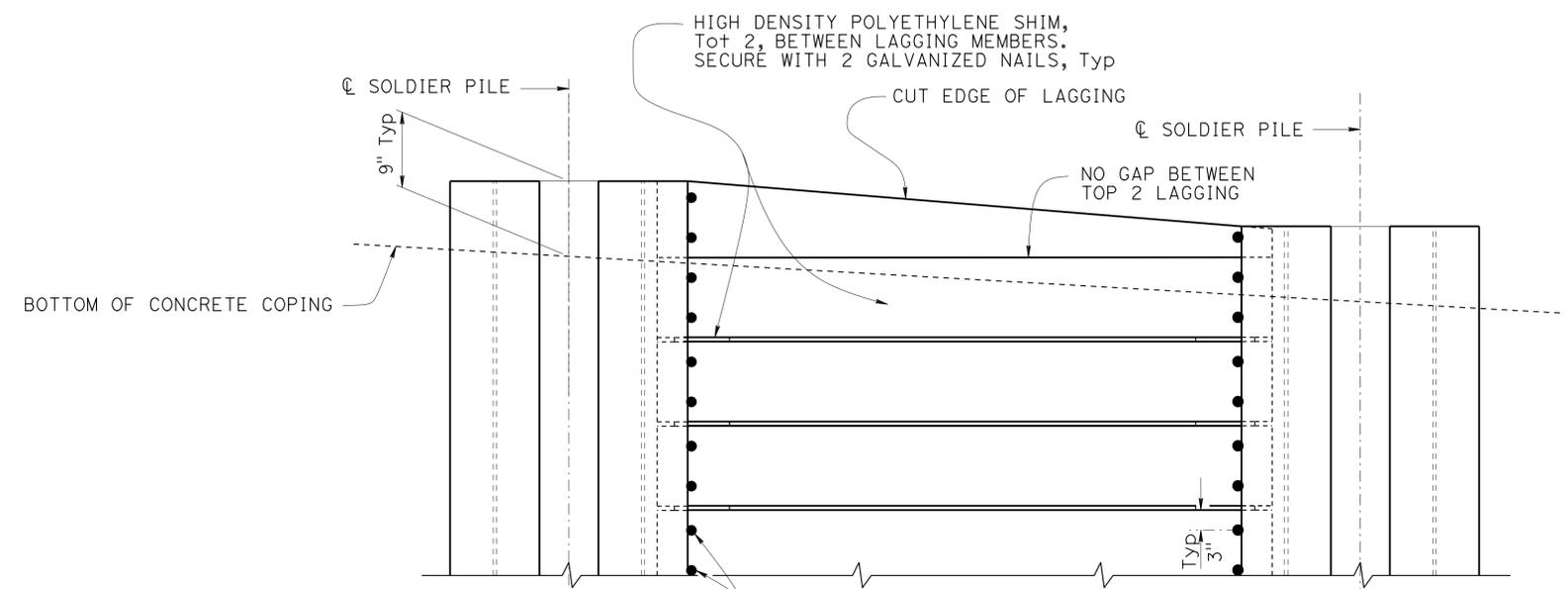
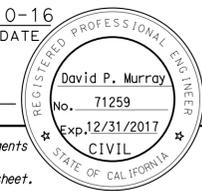
GROUND ANCHOR BEARING DETAIL - TYPICAL

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO.	53E0358	RETAINING WALL No. 95 STRUCTURE DETAILS No. 4	
	DETAILS	BY S. Cholda	CHECKED V. Romo			POST MILE	20.8		
	QUANTITIES	BY F. Feng	CHECKED V. Romo			UNIT: 3604	PROJECT NUMBER & PHASE: 0713000241		CONTRACT NO.: 07-3X8704
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 3-24-15 02-02-16 03-08-16 03-17-16	SHEET 8 OF 12

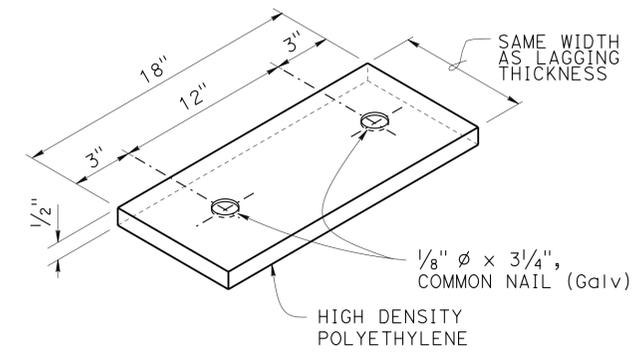
USERNAME => 8125624 DATE PLOTTED => 27-JUL-2016 TIME PLOTTED => 13:01

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	262	265

David P. Murray 5-10-16
 REGISTERED CIVIL ENGINEER DATE
 7-1-16
 PLANS APPROVAL DATE
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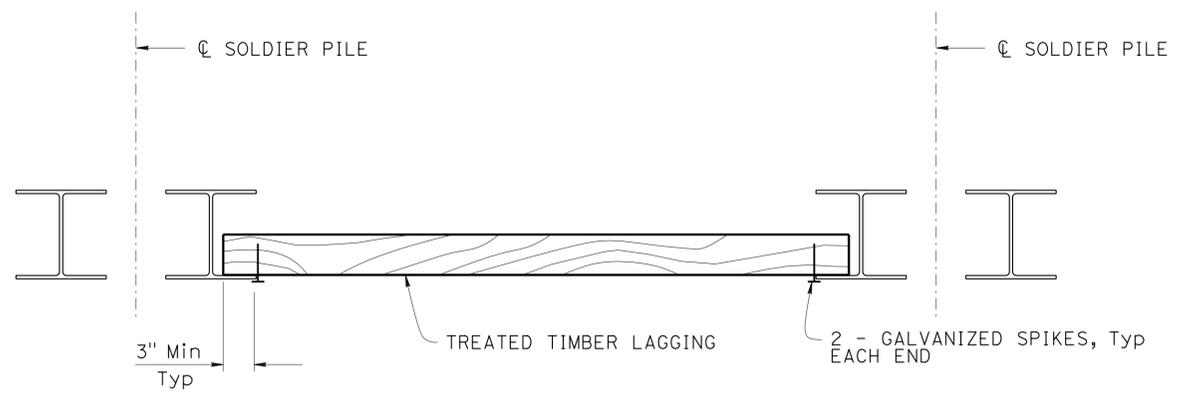


PART ELEVATION
LAGGING DETAILS
NO SCALE



SHIM DETAIL
NO SCALE

- NOTES:
1. No clipping of timber lagging corners allowed except for top member.
 2. Spikes shall not be bent



PART PLAN
NO SCALE

DESIGN	BY F. Feng/G. Hight	CHECKED V. Romo/J. Higareda
DETAILS	BY S. Cholda	CHECKED V. Romo
QUANTITIES	BY F. Feng	CHECKED V. Romo

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 15

BRIDGE NO.	53E0358
POST MILE	20.8

RETAINING WALL No. 95
SOLDIER PILE WALL LAGGING DETAILS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



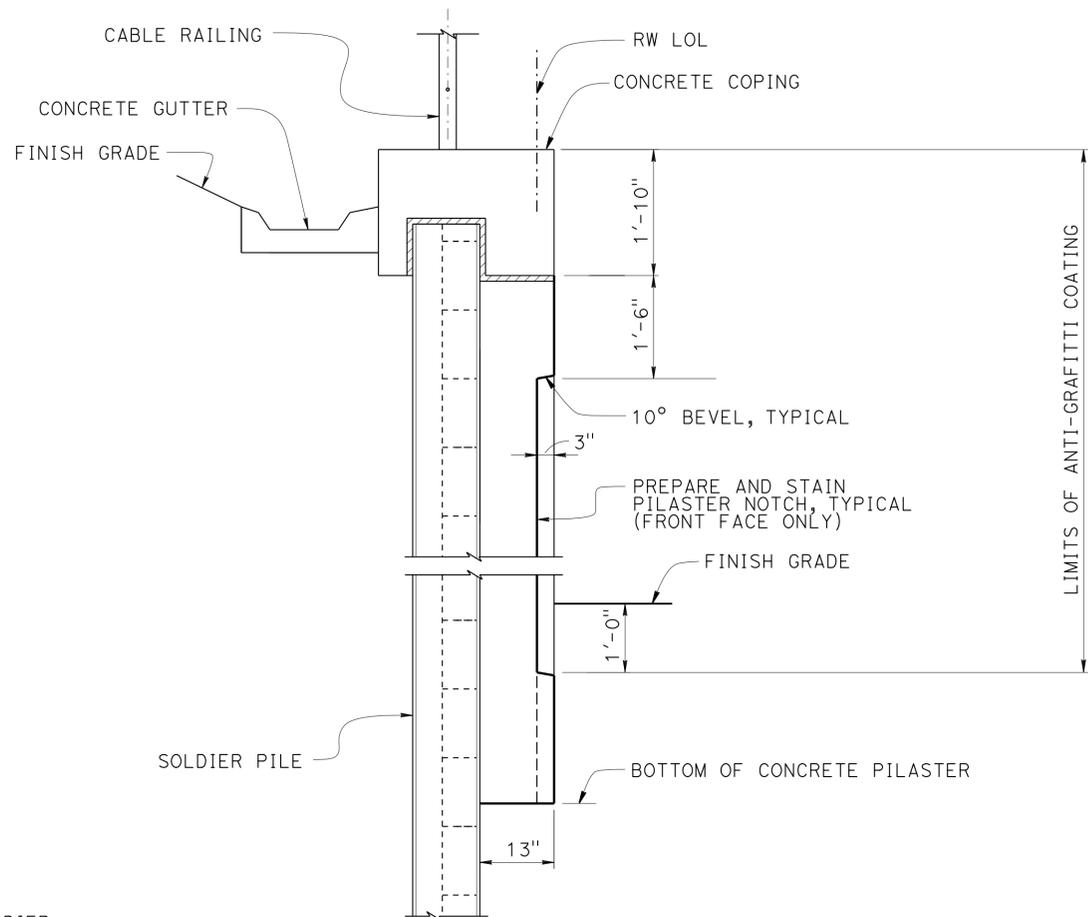
UNIT: 3604
 PROJECT NUMBER & PHASE: 0713000241

CONTRACT NO.: 07-3X8704

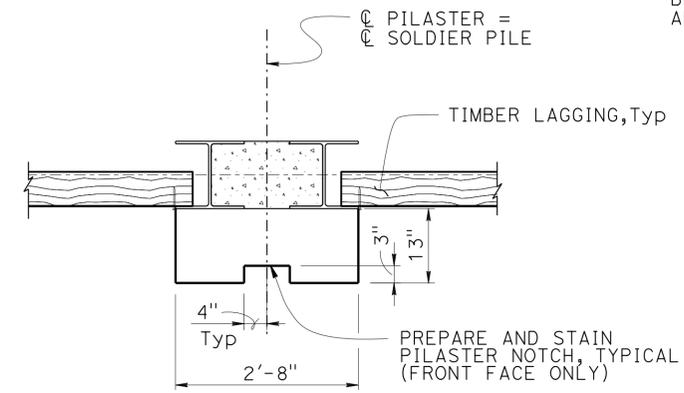
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
9-24-15 02-02-16 03-08-16 03-10-16	9	12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	263	265
David P. Murray				5-10-16	
REGISTERED CIVIL ENGINEER				DATE	
7-1-16				PLANS APPROVAL DATE	
David P. Murray				No. 71259	
				Exp. 12/31/2017	
				CIVIL	
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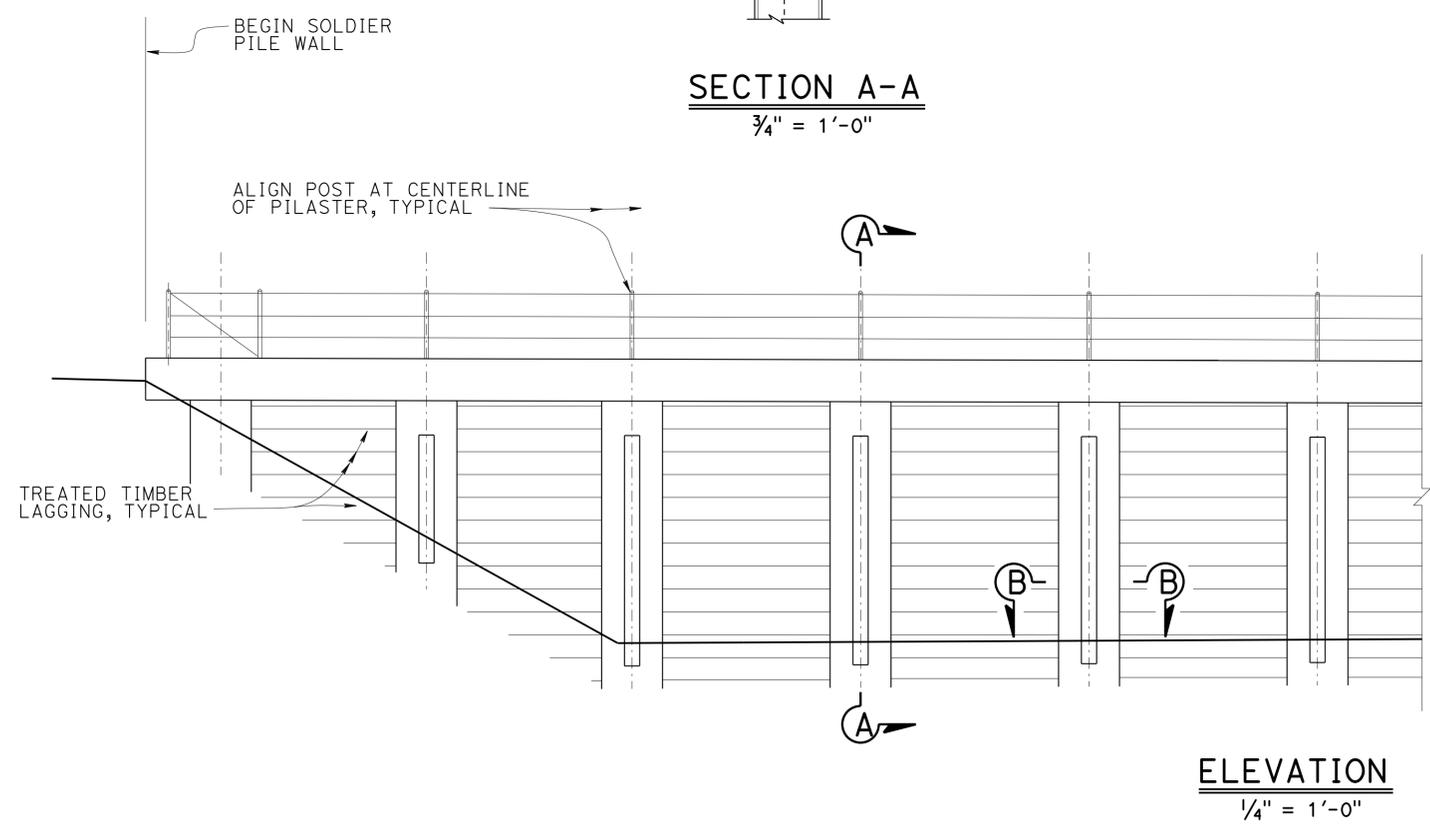


SECTION A-A
3/4" = 1'-0"

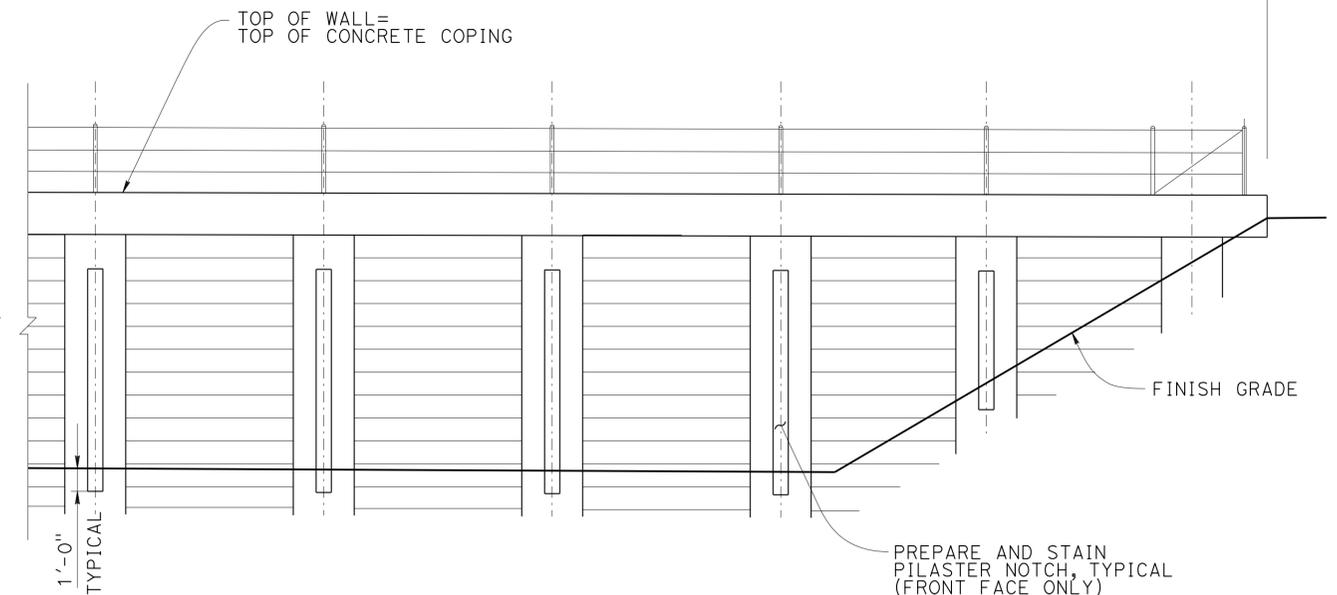


SECTION B-B
3/4" = 1'-0"

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



ELEVATION
1/4" = 1'-0"



STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY I. Tasabia	CHECKED V. Romo/J. Higareda	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 15	BRIDGE NO.	53E0358	RETAINING WALL No. 95						
	DETAILS	BY S. Cholda	CHECKED V. Romo			POST MILE	20.8		ARCHITECTURAL DETAILS					
	QUANTITIES	BY F. Feng	CHECKED V. Romo			UNIT: 3604	PROJECT NUMBER & PHASE: 0713000241			CONTRACT NO.: 07-3X8704				
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	3-18-15	03-08-16	03-17-16	05-06-16	SHEET 10 OF 12

FILE => 53e0358-k-archdet.dgn
DATE PLOTTED => 27-JUL-2016
TIME PLOTTED => 1:30:01

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	105,405	R2.5,20.5/R21.1	264	265

David P. Murray	5-10-16
REGISTERED CIVIL ENGINEER	DATE
7-1-16	
PLANS APPROVAL DATE	

David P. Murray	71259
Exp. 12/31/2017	CIVIL

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GENERAL NOTES

DESIGN:
AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.

PRESTRESSING STEEL:

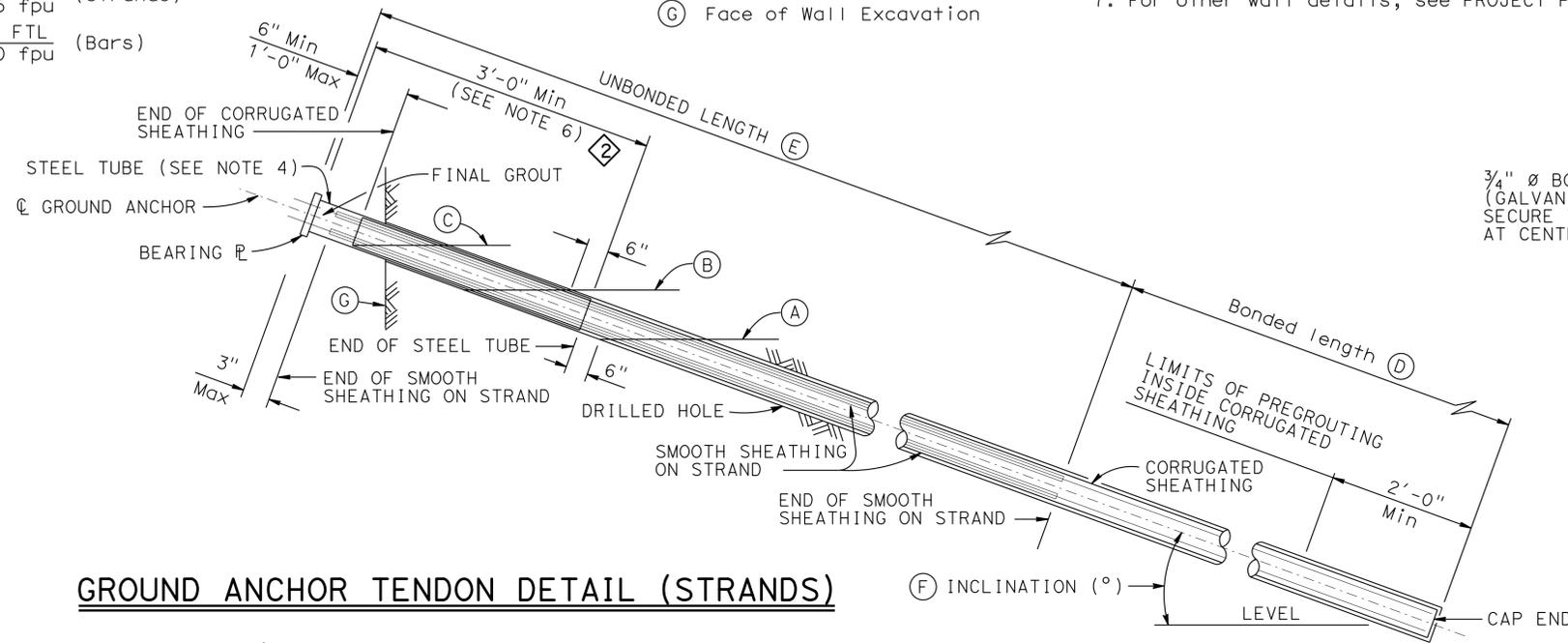
- Bars - 150 ksi
- Strand Tendons - 270 Ksi Low Relaxation steel
- FTL = Factored Test Load per anchor (Kips)
- fpu = Minimum tensile strength of prestressing steel
- As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)
- As(Min) = $\frac{1.0 \text{ FTL}}{0.75 \text{ fpu}}$ (Strands)
- As(Min) = $\frac{1.0 \text{ FTL}}{0.80 \text{ fpu}}$ (Bars)

NOTES:

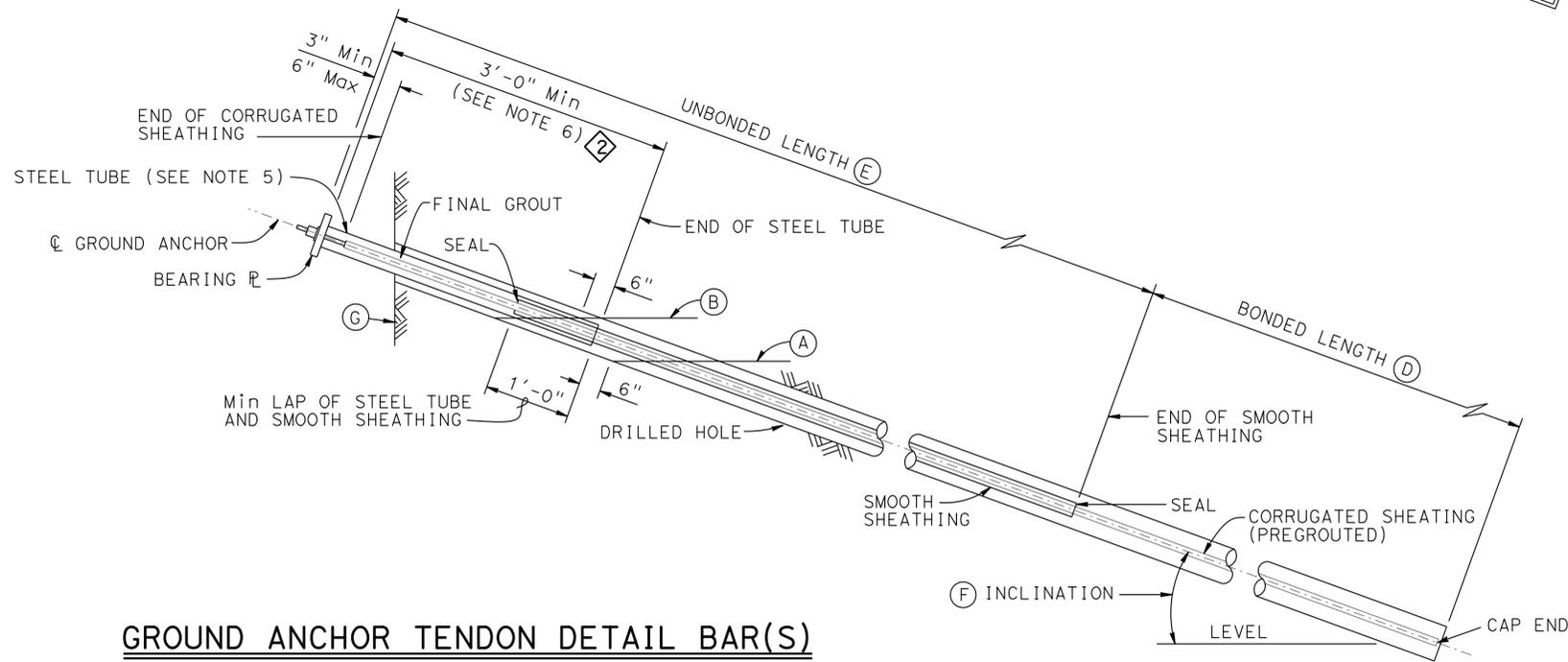
- (A) Level of initial grouting for drilled hole 6" in diameter or smaller
- (B) Level of secondary grouting
- (C) Level of initial grouting inside corrugated sheathing
- (D) Bonded length shall be determined by the contractor
- (E) For unbonded length, see PROJECT PLANS
- (F) For inclination, see PROJECT PLANS
- (G) Face of Wall Excavation

NOTES:

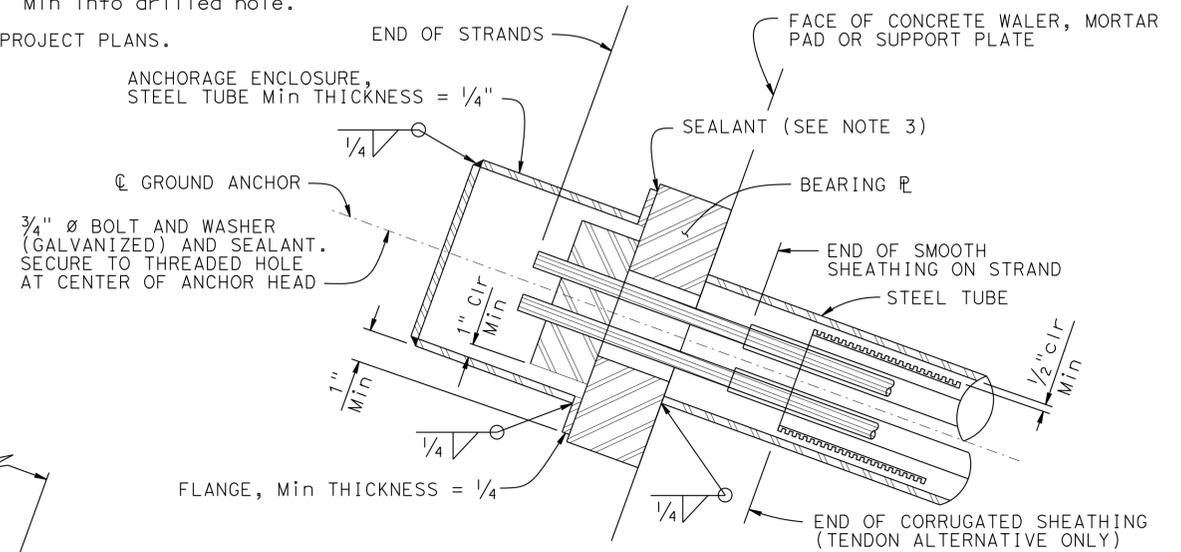
1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange.
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Inside diameter of steel tube to be 1" greater than outside diameter of corrugated sheathing. Galvanize after fabrication.
5. Steel tube (Min thickness = 1/4") welded to bearing plate. Inside diameter of steel tube to be 1" greater than outside diameter of smooth sheathing. Galvanize after fabrication.
6. The steel tube must extend 6" Min into drilled hole.
7. For other wall details, see PROJECT PLANS.



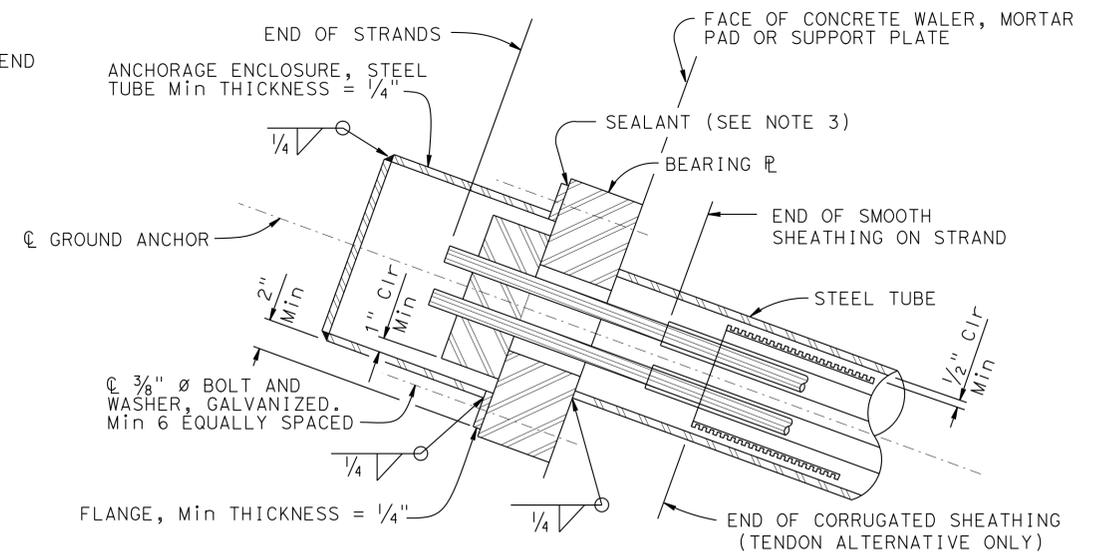
GROUND ANCHOR TENDON DETAIL (STRANDS)



GROUND ANCHOR TENDON DETAIL BAR(S)



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS

NO SCALE

STANDARD DRAWING	Modified Note
FILE NO. xs12-040	Added Note
APPROVAL DATE July 2014	

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 53E0358	RETAINING WALL No. 95
DEPARTMENT OF TRANSPORTATION		POST MILE 20.8	SUB HORIZONTAL GROUND ANCHOR DETAILS

UNIT: 3604	PROJECT NUMBER & PHASE: 0713000241	CONTRACT NO.: 07-3X8704	DISREGARD PRINTS BEARING EARLIER REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	REVISION DATES	SHEET 11 OF 12

6-24-14	10-08-15		
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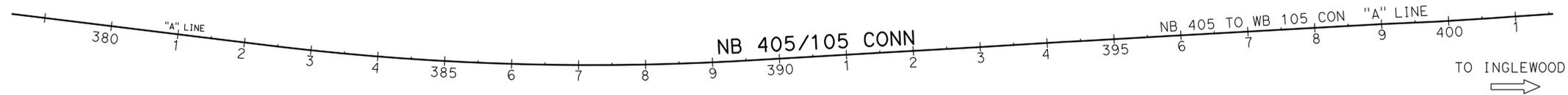
BENCH MARK

BM S445 Elev 106.46
 Found 2" diameter Brass CADT Disk
 in 2" iron pipe with concrete collar
 stamped "LA 405-21.2 UP 3" 1994"
 NAVD 88



A-15-003

8



A-15-001

8

PLAN

1" = 100'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	105, 405	R2.5, 20.5/R21.1	265	265

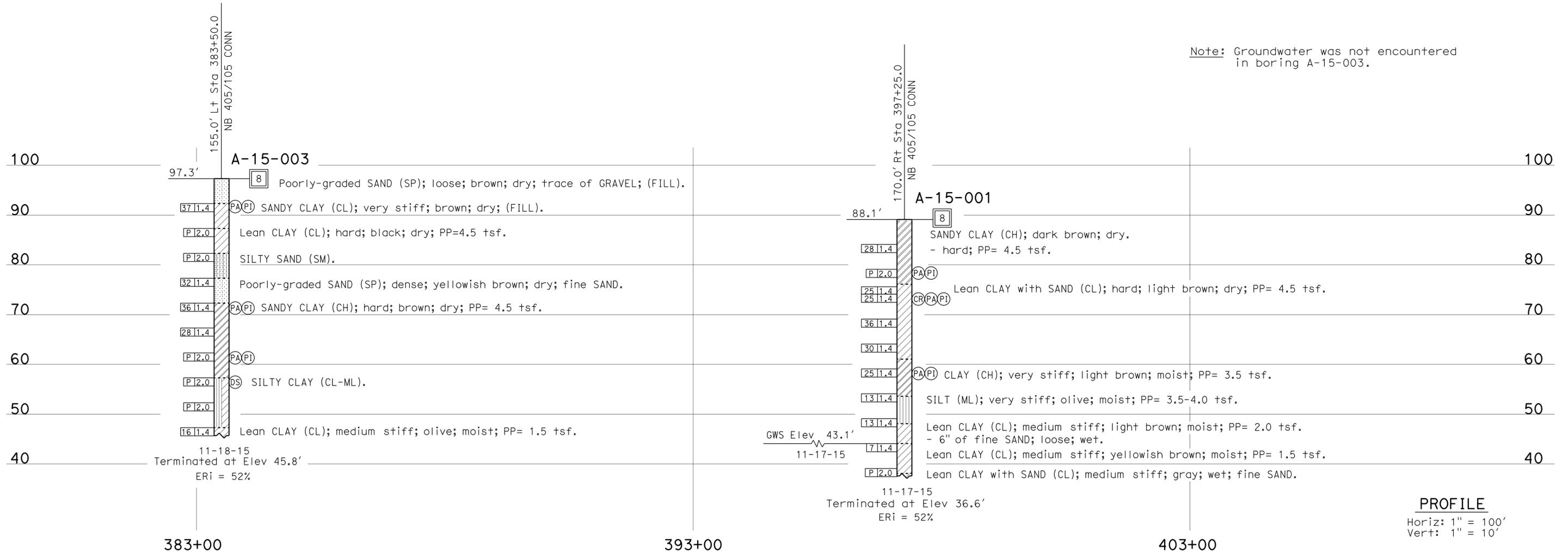
Sam Sukiasian 2-16-16
 REGISTERED GEOTECHNICAL ENGINEER
 No. G2681
 Exp. 6-30-16
 PLANS APPROVAL DATE 7-1-16

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

Note: Groundwater was not encountered in boring A-15-003.



USERNAME => S125624 DATE PLOTTED => 27-JUL-2016 TIME PLOTTED => 13:01

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		AVSF MAINTENANCE AREA (NO. 31 AND 32)	
FUNCTIONAL SUPERVISOR		DRAWN BY: F. Nguyen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		53E0358		LOG OF TEST BORINGS	
NAME: T. Liu		CHECKED BY: C. Harris		FIELD INVESTIGATION BY: H. Ngo		DESIGN BRANCH 15		POST MILE			
						20.8					
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		PROJECT NUMBER & PHASE: 07130002411		CONTRACT NO.: 07-3X8704		DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 12 OF 12	