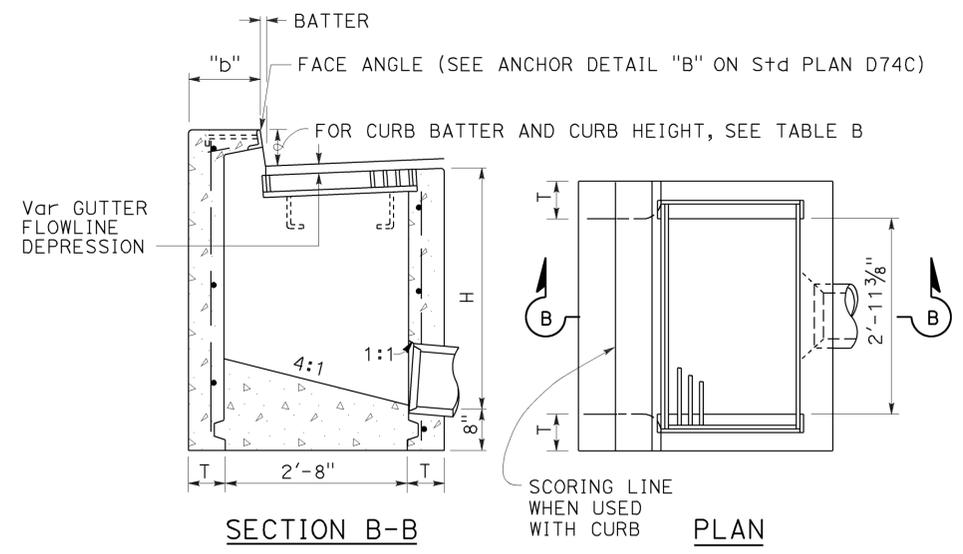


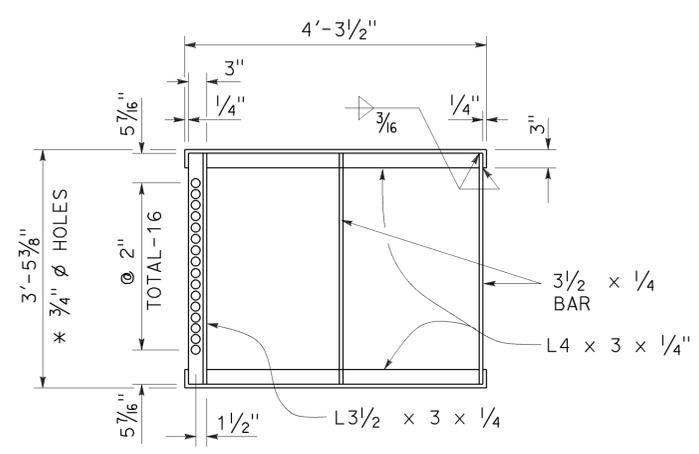
TO ACCOMPANY PLANS DATED 3-28-16

NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 @ 18"± centers placed 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom.
- 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 top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Step inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- 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.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and shall slope toward the outlet pipe as shown.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- 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.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet and concrete poured in one continuous operation. Precast inlets shall have mortared pipe connections conforming to details for Type GCP inlets on Revised Standard Plan RSP D75B. See Standard Specifications for mortar composition.

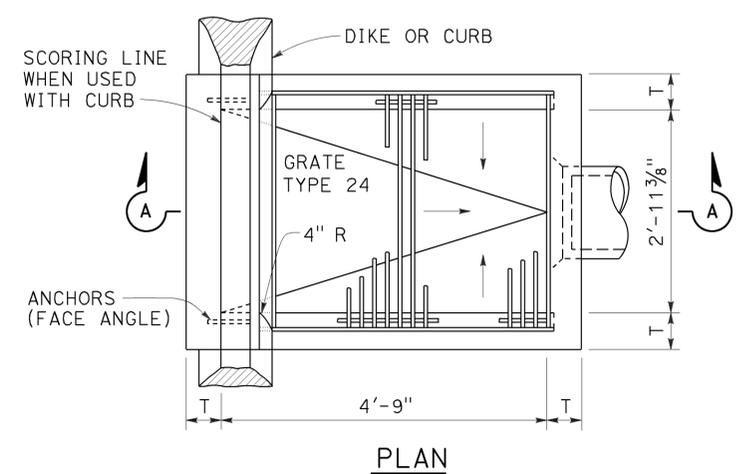


TYPE GO

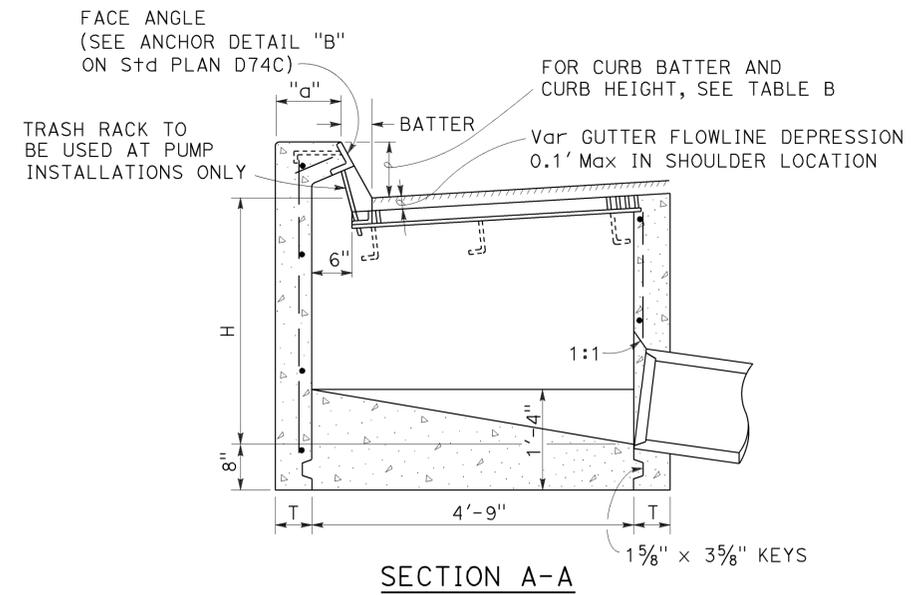


* 3/4" ø Holes required only with trash rack

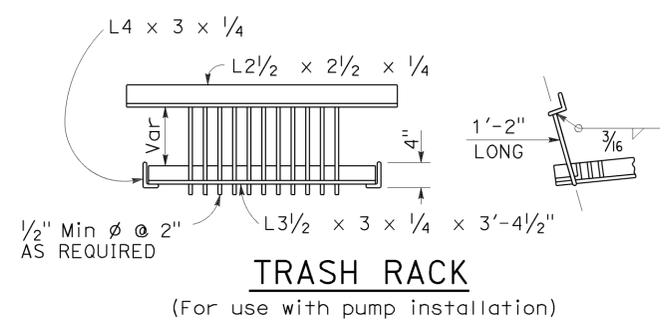
GRATE FRAME FOR TYPE GDO INLET



TYPE GDO



SECTION A-A



TRASH RACK

(For use with pump installation)

TABLE A

CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	H=3'-0" (CY)	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
GO	1.24	0.245	3.39	0.346
GDO	1.62	0.322	4.36	0.446

Table based on 8" floor slab, and curb type giving highest quantity of concrete. No deductions or adjustments are to be made to these quantities because of pipe openings, different floor alternatives or different curb type.

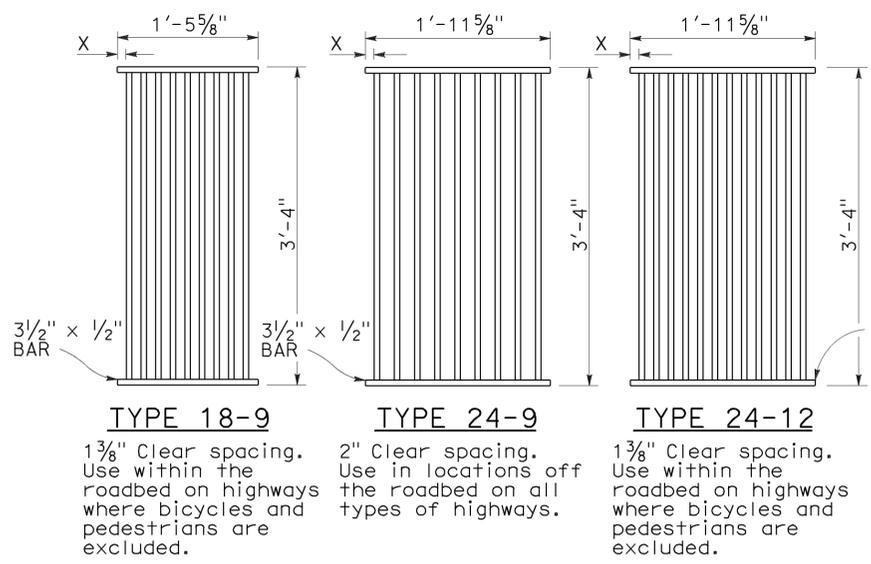
TABLE B

CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1 1/2"	T+7 1/2"	T+6 1/2"
A1-8	8"	2"	T+7"	T+6"
B1-6	6"	4"	T+5"	T+4"
TYPE A DIKE	6"	3"	T+6"	T+5"

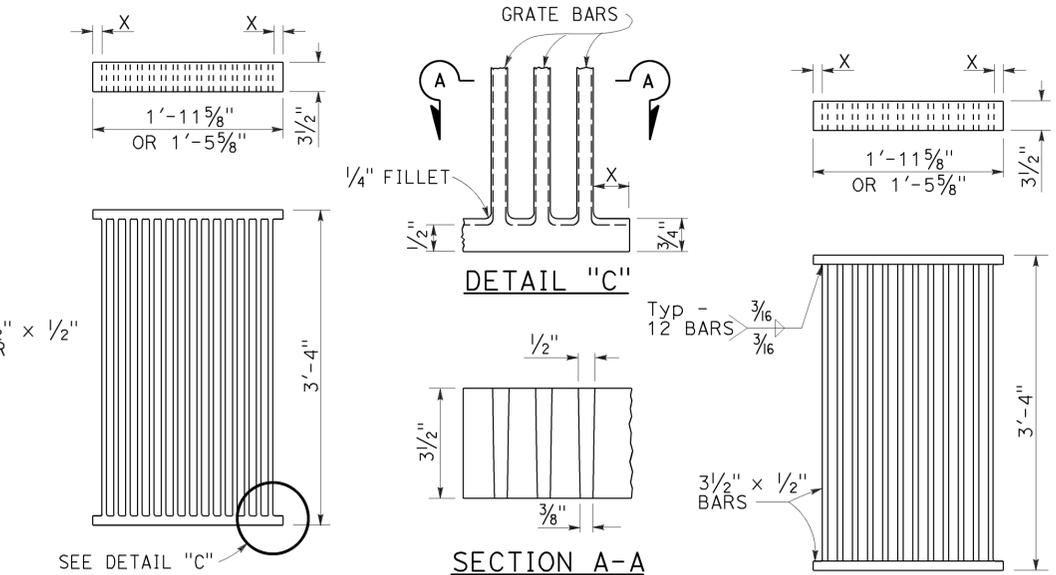
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
 NO SCALE

RSP D74B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D74B DATED MAY 20, 2011 - PAGE 159 OF THE STANDARD PLANS BOOK DATED 2010.

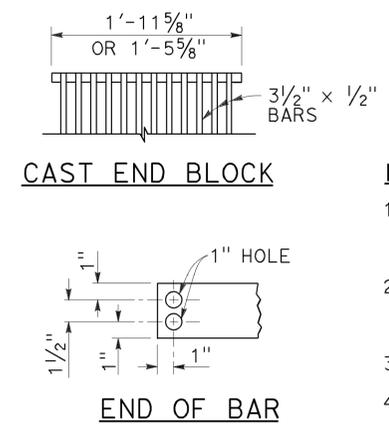
2010 REVISED STANDARD PLAN RSP D74B



RECTANGULAR GRATE DETAILS
(See table below)

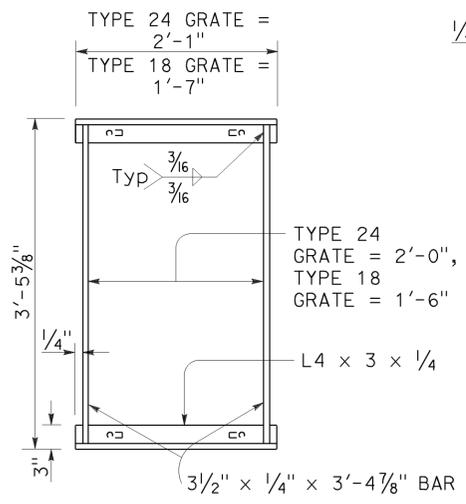


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE
ALTERNATIVE WELDED GRATE

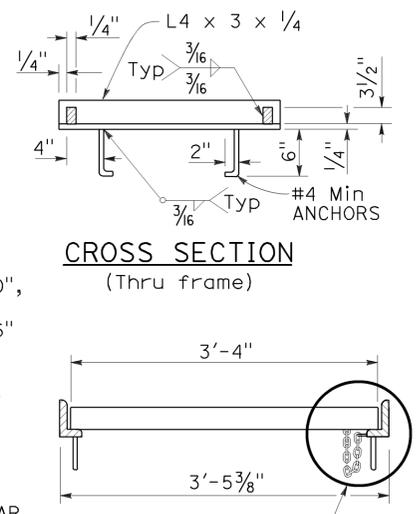


CAST END BLOCK
END OF BAR

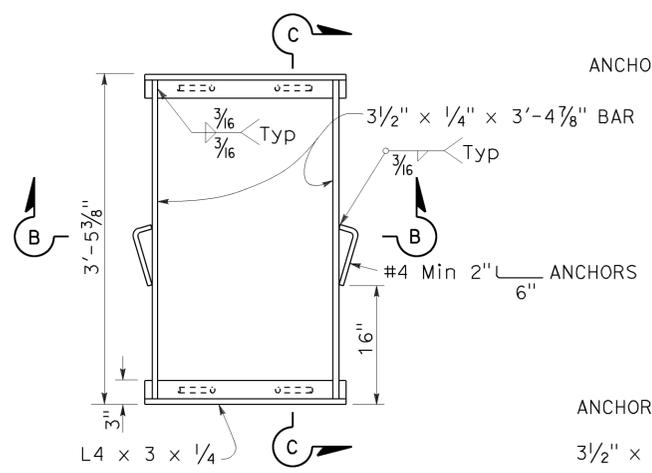
- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 - Rounded top of bars optional on all grates.
 - Pipe inlets with a grate 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.



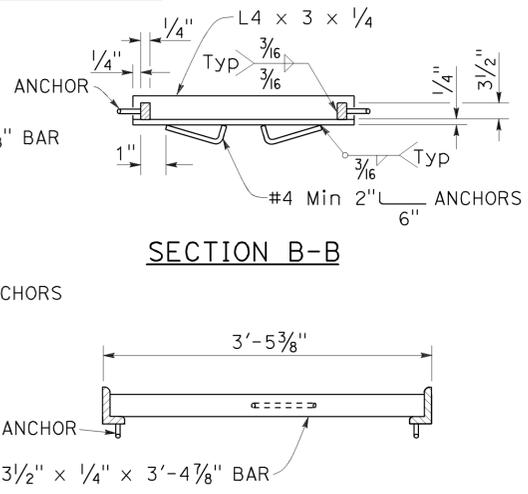
TYPICAL FRAME



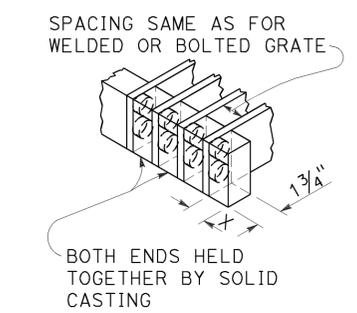
CROSS SECTION
(Thru frame)
LONGITUDINAL SECTION
(Thru frame and grate)



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

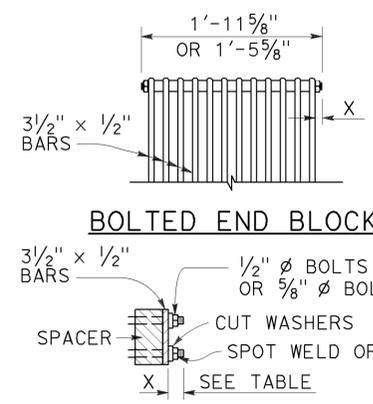
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

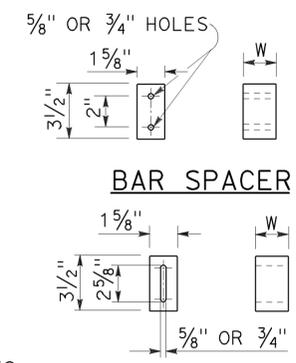
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

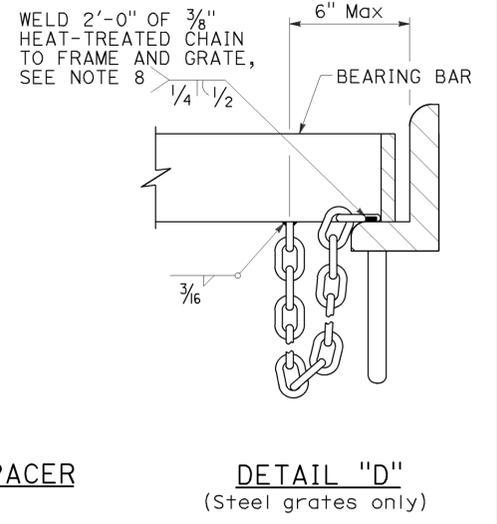
INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



BOLTED END BLOCK
BOLTING DETAIL
ALTERNATIVE BOLTED GRATE



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



DETAIL "D"
(Steel grates only)

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

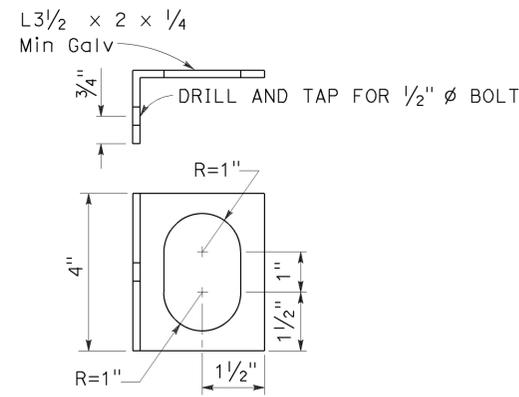
Dist	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET	TOTAL
04	Alameda	205	0.071	0.071	No.	SHEETS
04	Alameda	205	0.071	0.071	603	676
04	Alameda	205	0.071	0.071	603	676

REGISTERED CIVIL ENGINEER
 Bruce D. Swanger
 No. C61257
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA

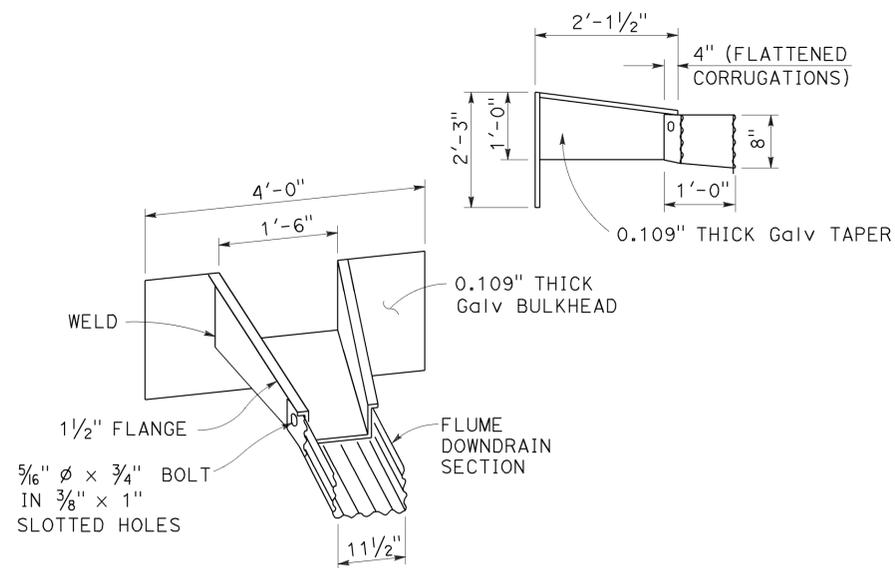
October 30, 2015
 PLANS APPROVAL DATE

TO ACCOMPANY PLANS DATED 3-28-16

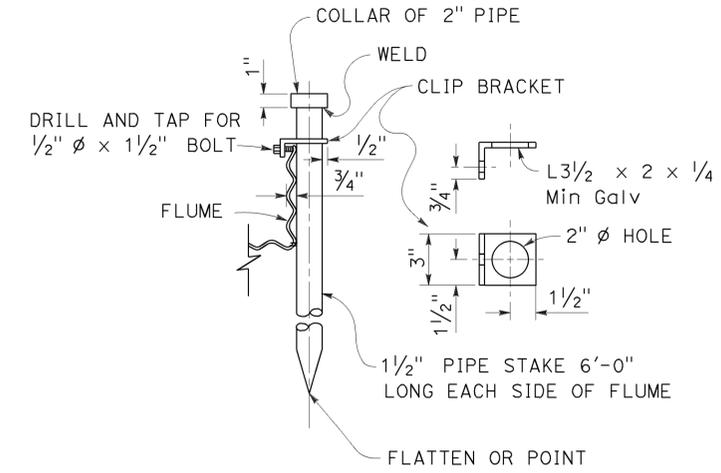
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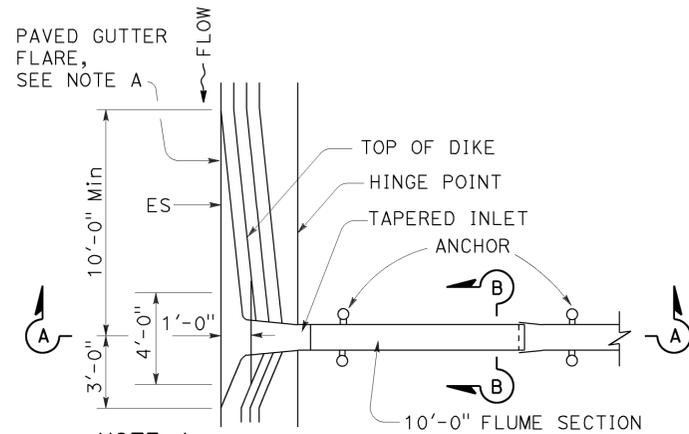
ALTERNATIVE CLIP BRACKET DETAIL



TAPERED INLET



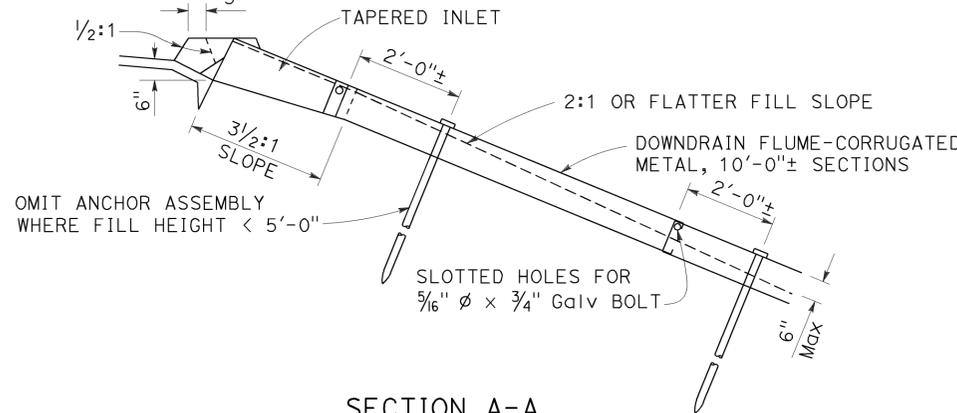
PIPE STAKE ANCHOR DETAIL



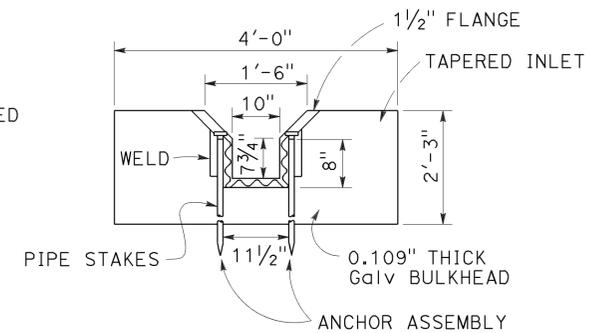
NOTE A
 In sag location, use 10'-0" length of paved gutter flare on both sides of inlet.

PLAN

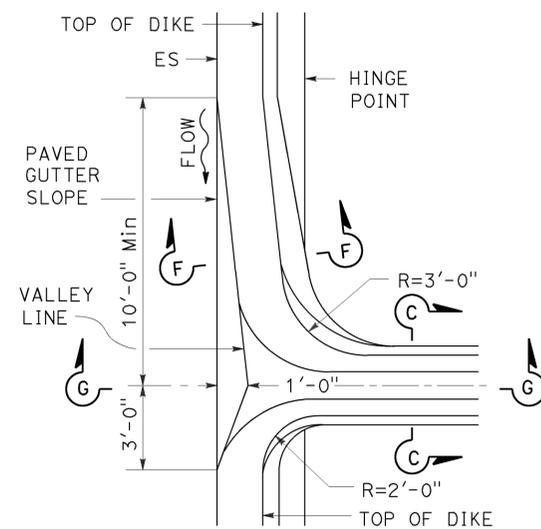
TAPERED INLET AND FLUME DOWNDRAIN



SECTION A-A

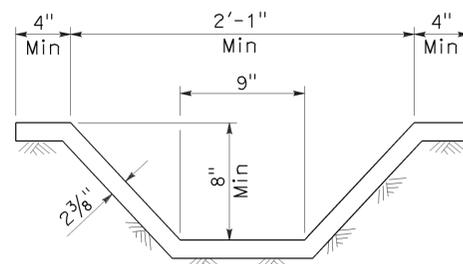


SECTION B-B



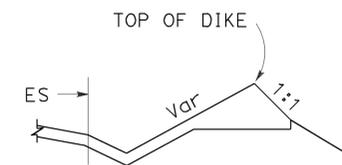
PLAN
MOUNTABLE DIKE

HOT MIX ASPHALT OVERSIDE DRAINS

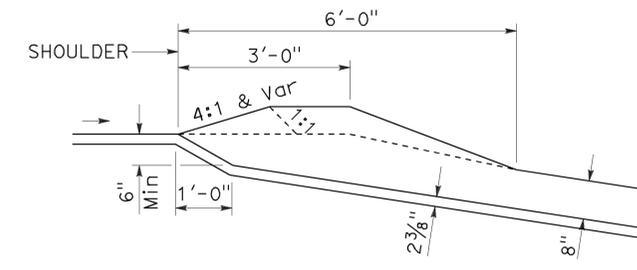


SECTION C-C

NOTE:
 1. Cross section of slope ditch may be semicircular, vee or trapezoidal.



SECTION F-F



SECTION G-G

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
OVERSIDE DRAINS
 NO SCALE

RSP D87D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D87D DATED MAY 20, 2011 - PAGE 185 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D87D

2010 REVISED STANDARD PLAN RSP D87D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04 00	Alameda San Joaquin	205 9880	0.071 13.5715.4	604	676

Raymond Don Tsztoo
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Raymond Don Tsztoo
No. C37332
Exp. 6-30-16
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 3-28-16

ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAND THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE			
				CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP	
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"	7"	0.064"-0.168"		0.052"													
	1 1/2' x 1/4"	8"-10"	7"	0.064"-0.168"		0.060"-0.164"		0.064"	0.060"										
ANNULAR	2 2/3" x 1/2"	THROUGH 24"	12"	0.064"-0.168"		0.060"-0.164"		0.064"	0.060"										
HUGGER	2 2/3" x 1/2" REROLLED END	THROUGH 24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"	32 ksi								

NOTES:

- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 7" measured along the length of the pipe.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAND THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE			
				SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"	12"	0.064"-0.168"		0.060"-0.164"		0.064"	0.060"										
HUGGER	2 2/3" x 1/2" * REROLLED END	24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"	32 ksi								

* See Note 11.

11. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 7
DOWNDRAIN**

NO SCALE

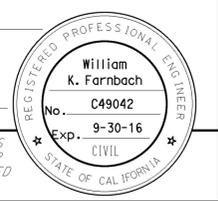
RSP D97G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D97G DATED MAY 20, 2011 - PAGE 202 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D97G

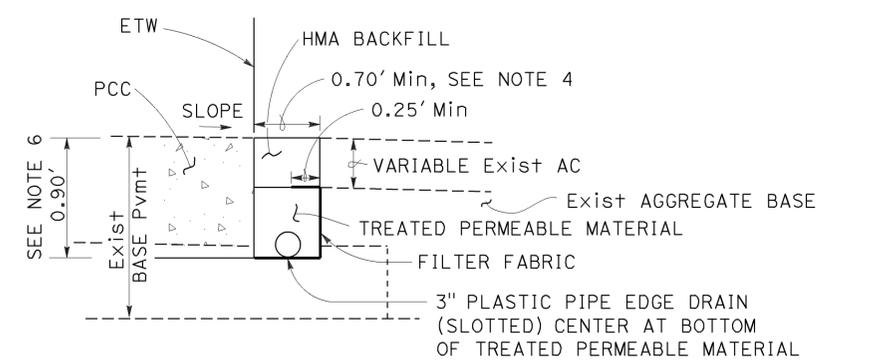
2010 REVISED STANDARD PLAN RSP D97G

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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10	SJ	0800	13.5/18.4		

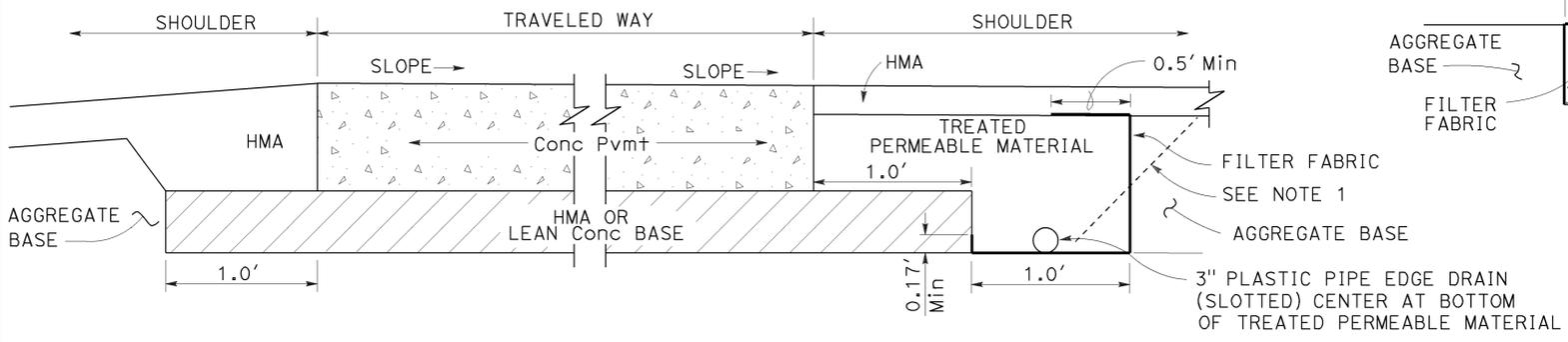
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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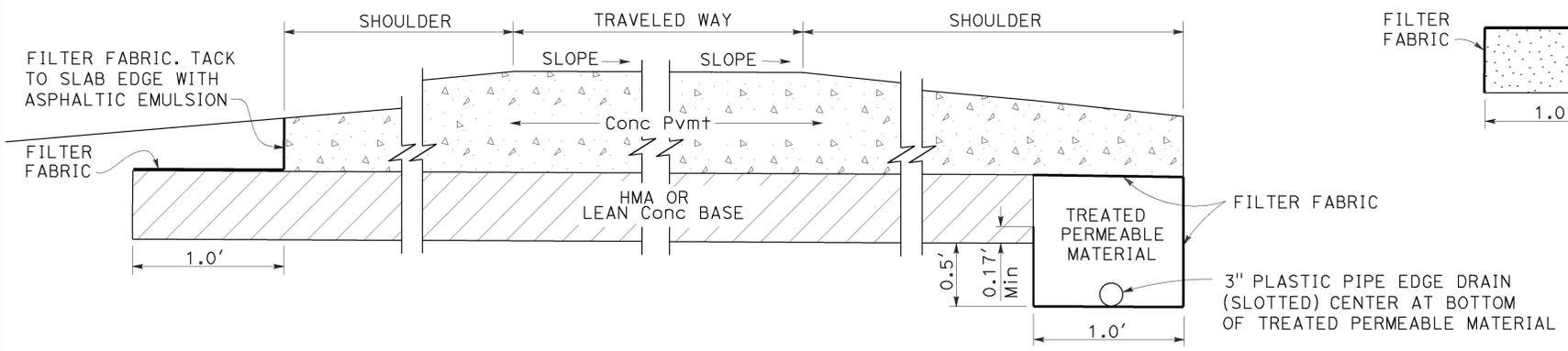
TO ACCOMPANY PLANS DATED 3-28-16



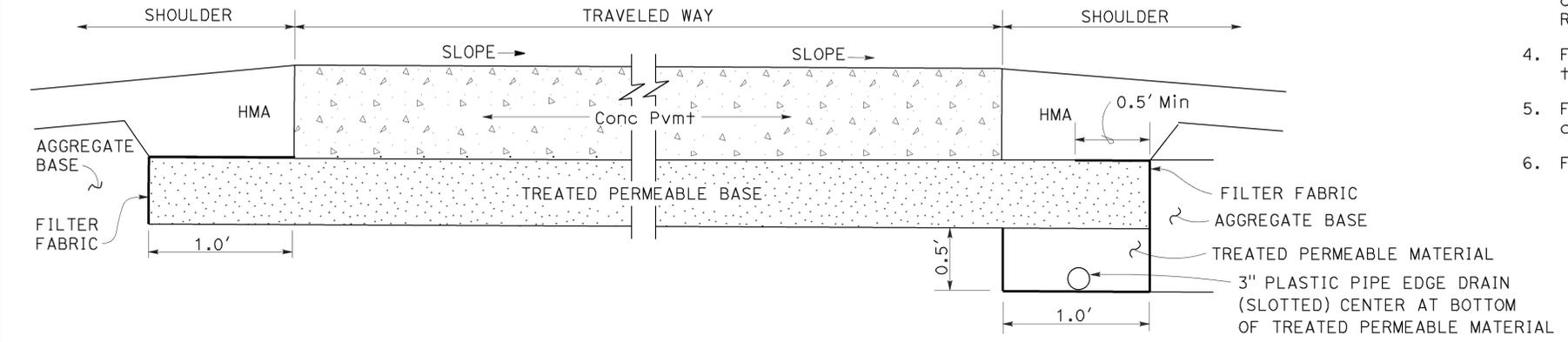
TYPE 1 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(For existing highway facility)



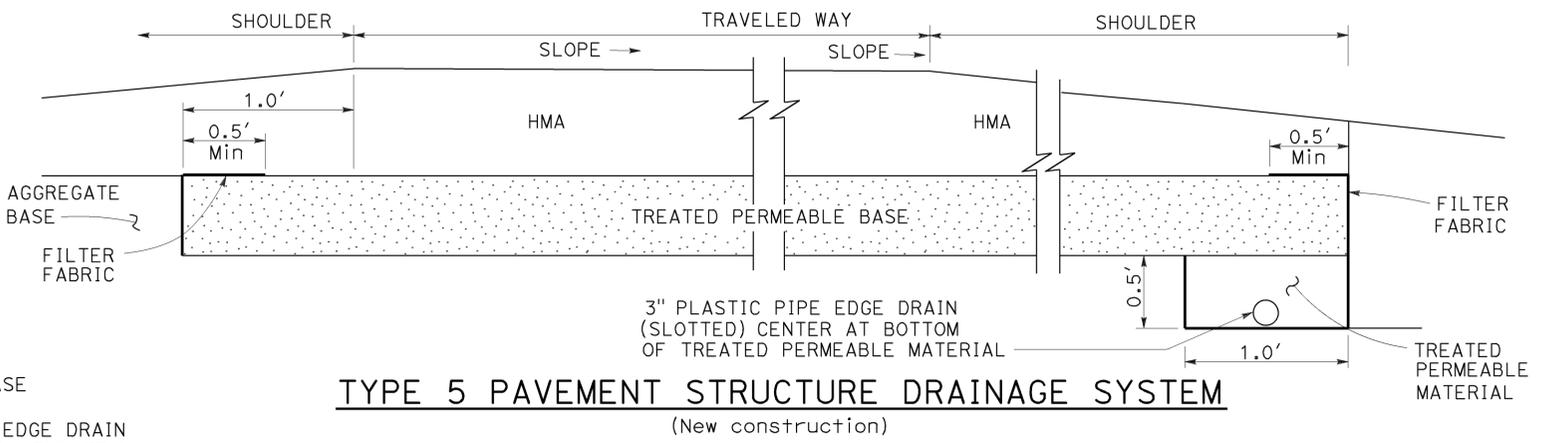
TYPE 2 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



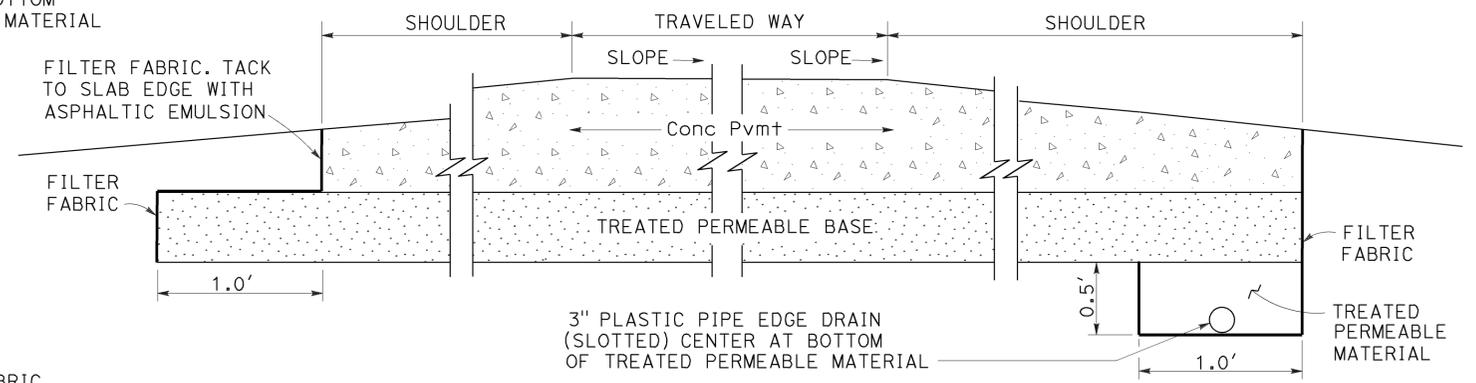
TYPE 3 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 4 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 5 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 6 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)

NOTES:

1. At the Contractor's option, on new construction, the vertical jointline (including the filter fabric) between the treated permeable material and the shoulder base/subgrade material may be rotated about its midpoint to a slope not flatter than 1:1 as shown by the dashed lines.
2. See the project plans and typical cross sections for pavement structure details.
3. The plan layout for pavement structure drainage collector and outlet systems for new concrete pavement and new hot mix asphalt pavement is the same as that shown on Revised Standard Plan RSP D99B.
4. For plastic pipe edge drain diameter larger than 3", the minimum trench width shall be equal to the outside diameter of the plastic pipe plus 4".
5. For plastic pipe edge drain diameters larger than 3", all details for 3" plastic pipe edge drain shall apply.
6. For pavements thicker than 0.75', the minimum trench depth is 1.0'.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT STRUCTURE DRAINAGE SYSTEM DETAILS
NO SCALE

RSP D99A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99A DATED MAY 20, 2011 - PAGE 211 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP D99A

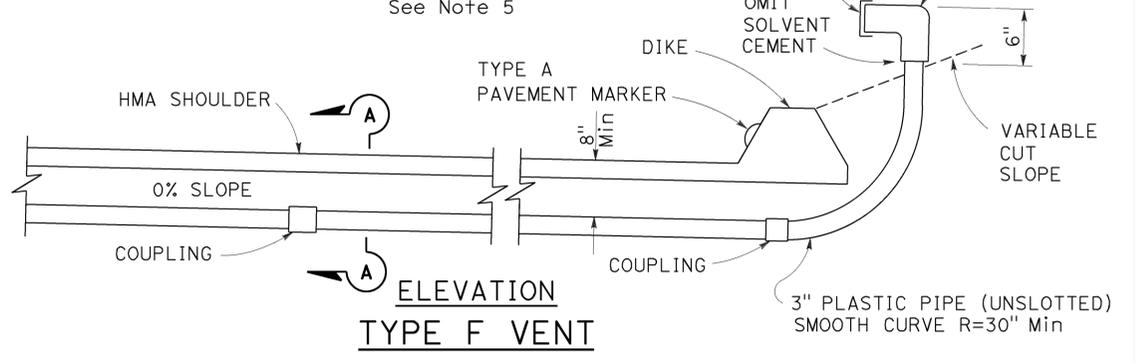
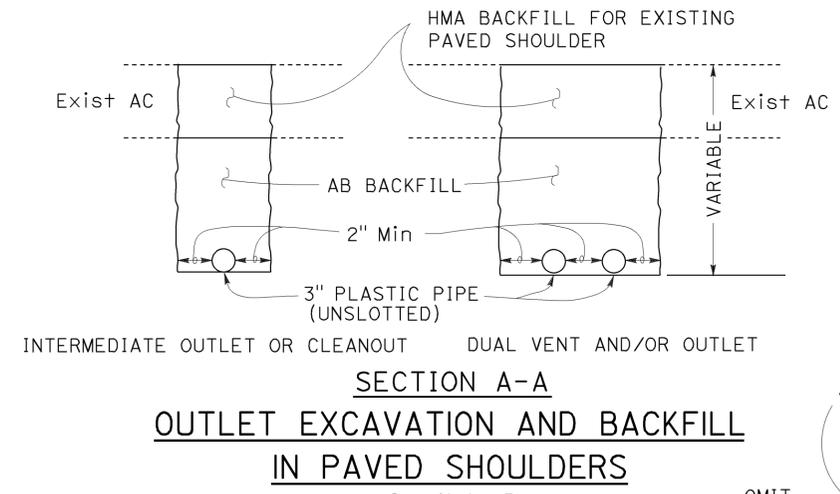
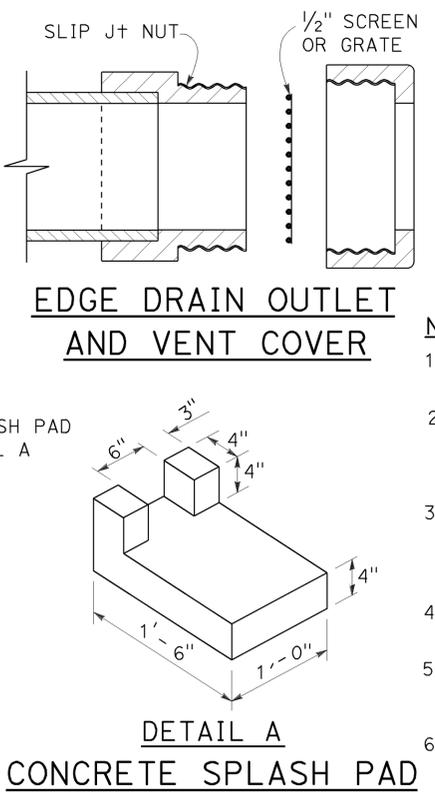
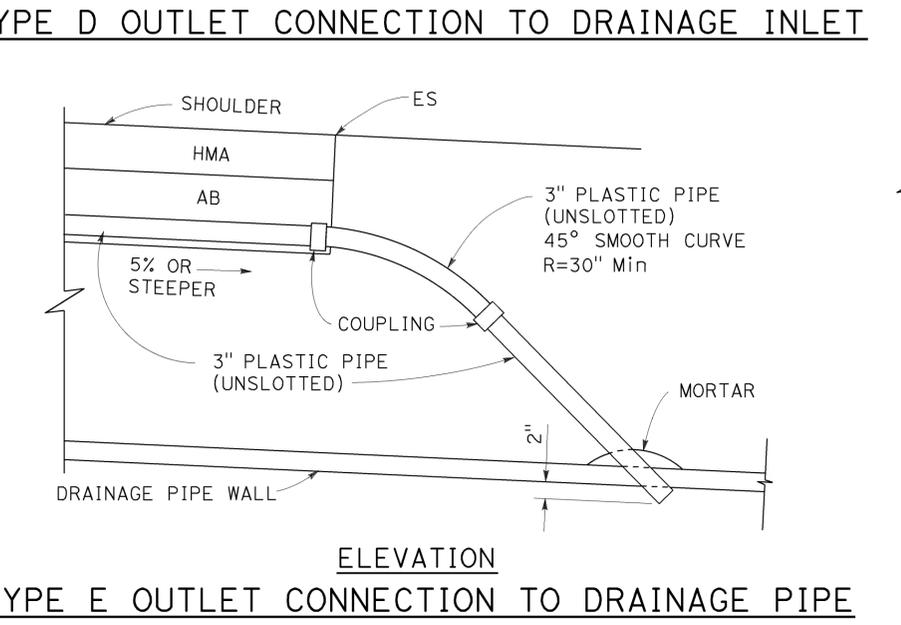
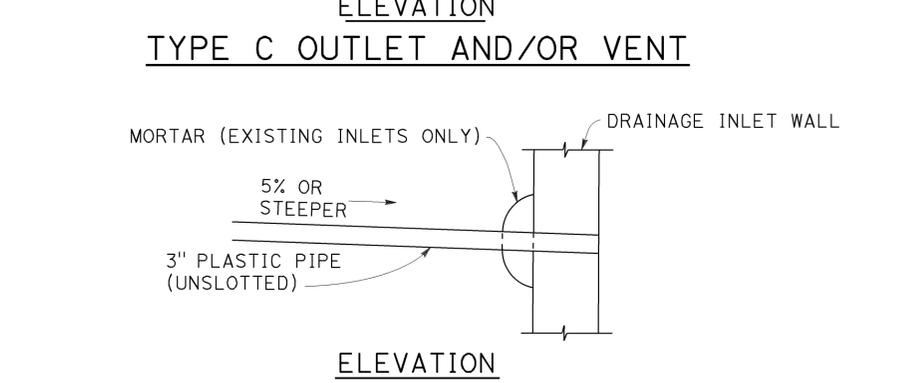
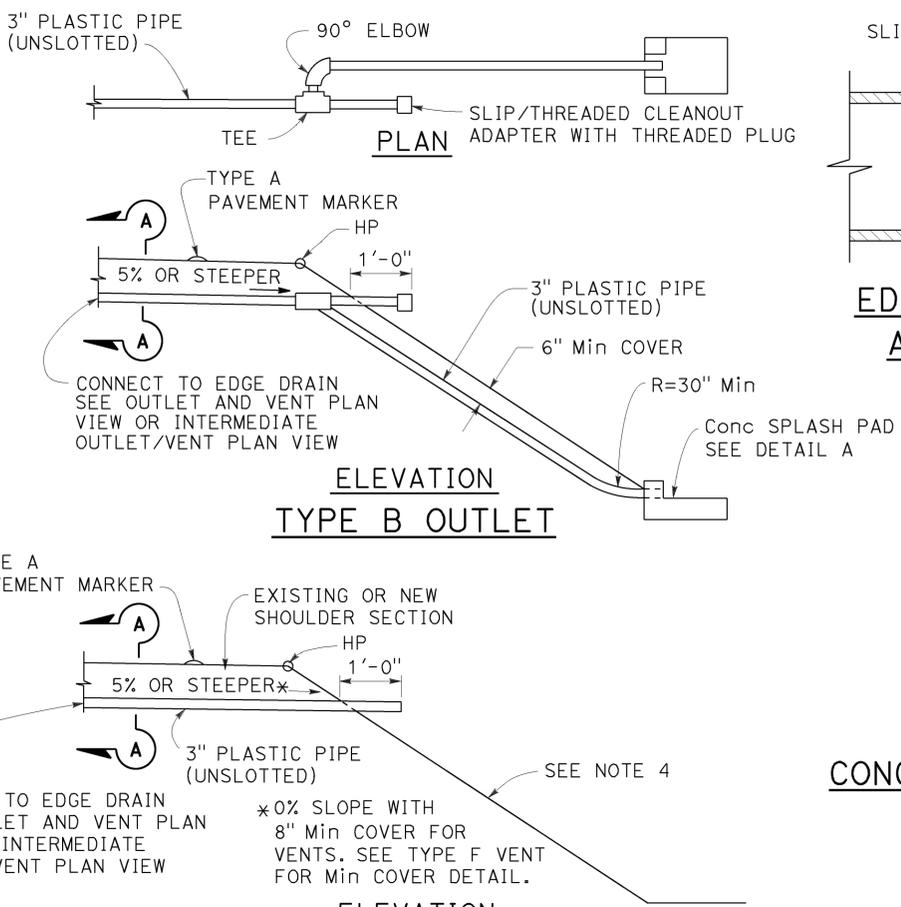
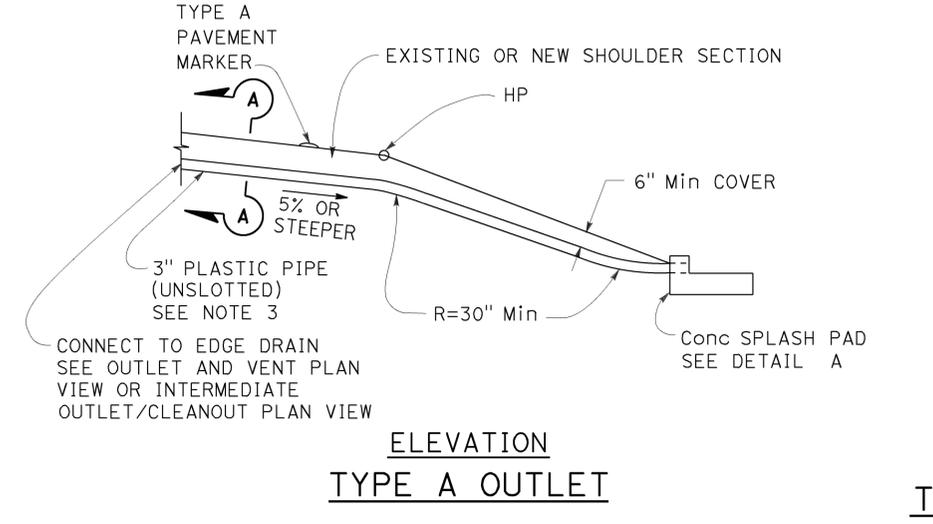
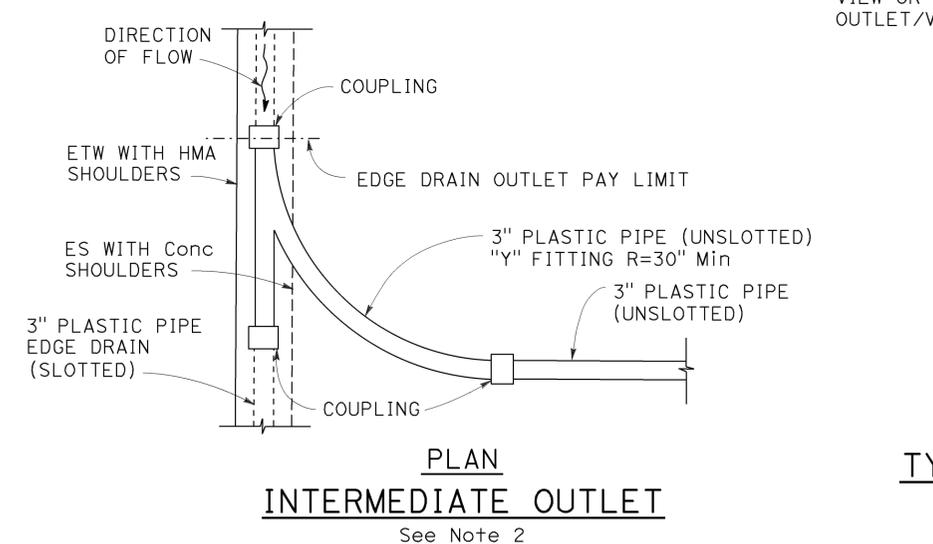
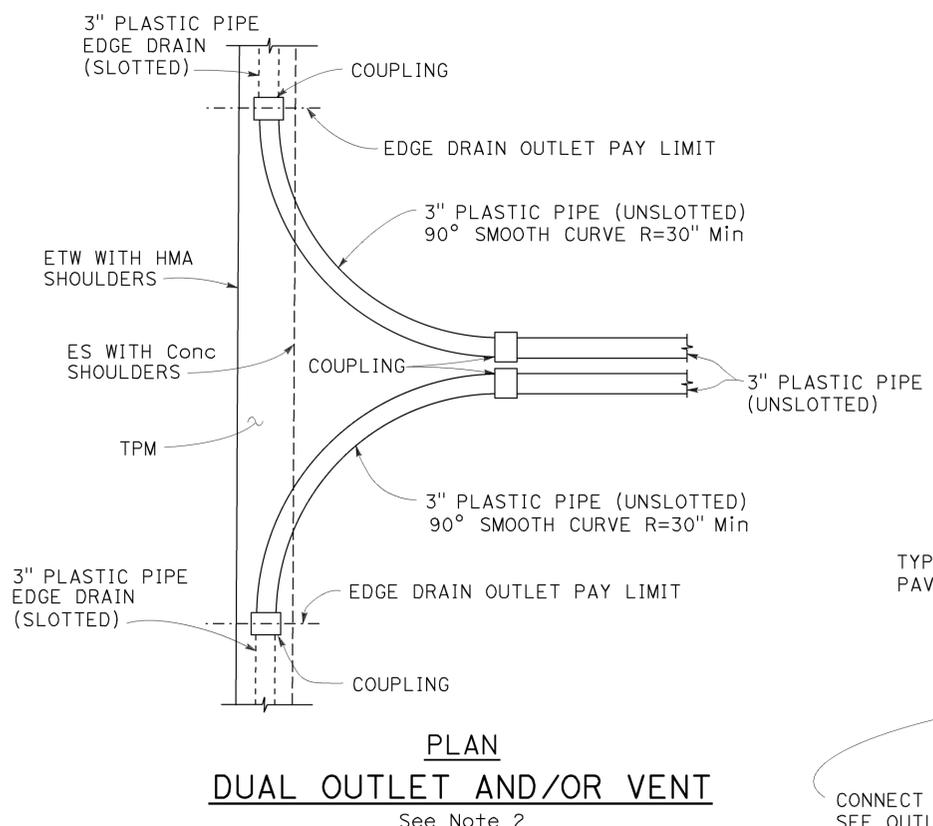
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0/26.0	606	676
10	Alameda	205	13.5/18.4		

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-16
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

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2010 REVISED STANDARD PLAN RSP D99B



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 3-28-16

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

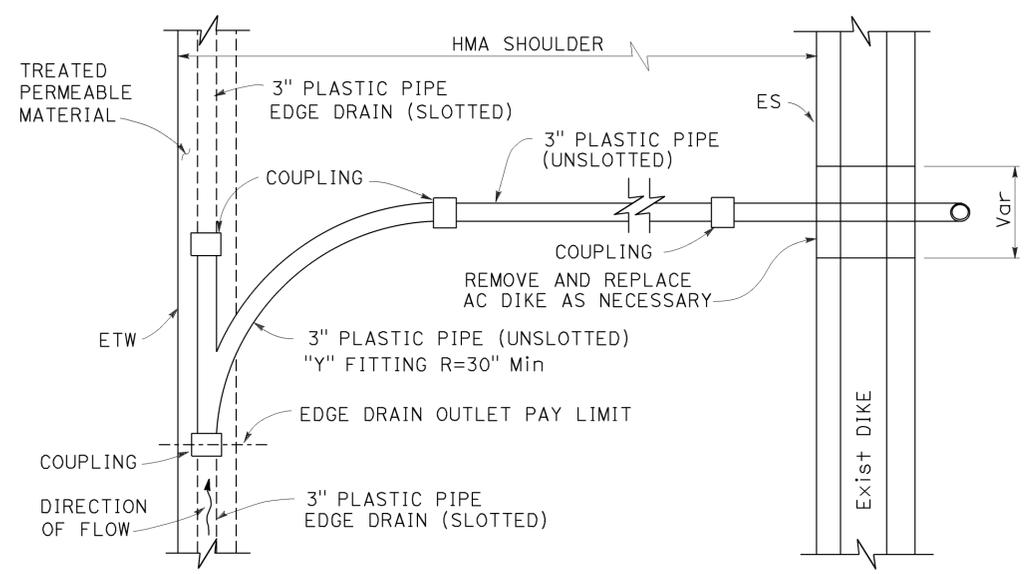
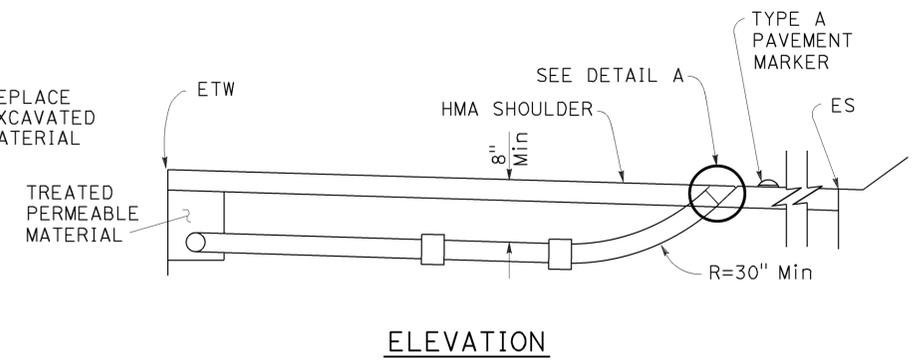
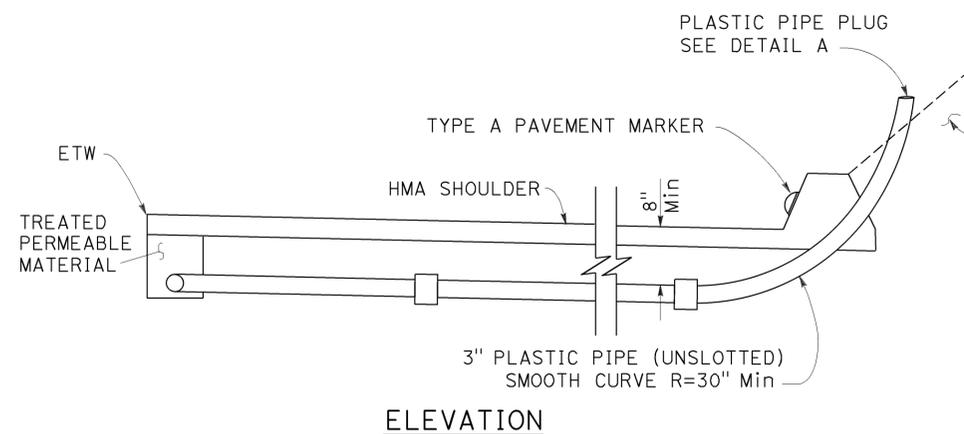
RSP D99B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99B DATED MAY 20, 2011 - PAGE 212 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D99B

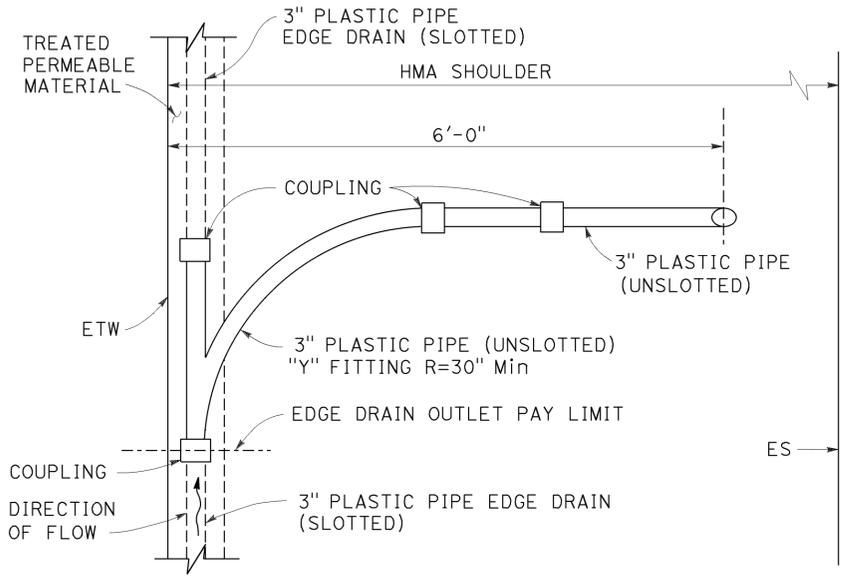
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04 10	Alameda San Joaquin	205 0880	0.0/8.0 26.1/30.3	607	676

William K. Farnbach
 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.

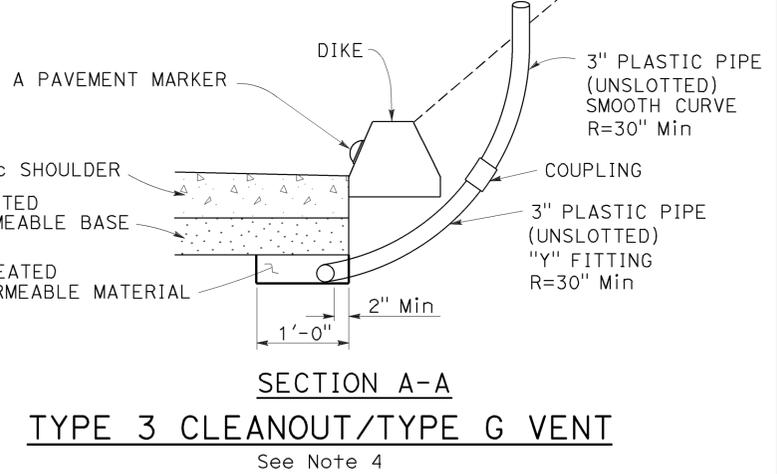
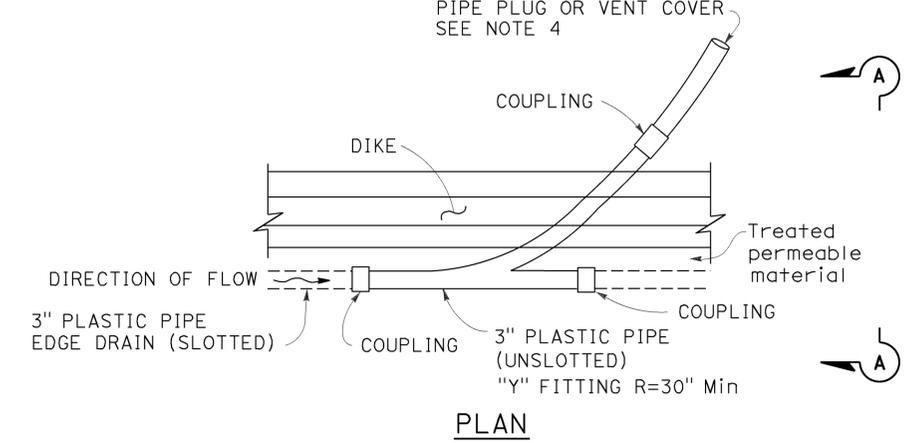
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-16
 CIVIL
 STATE OF CALIFORNIA



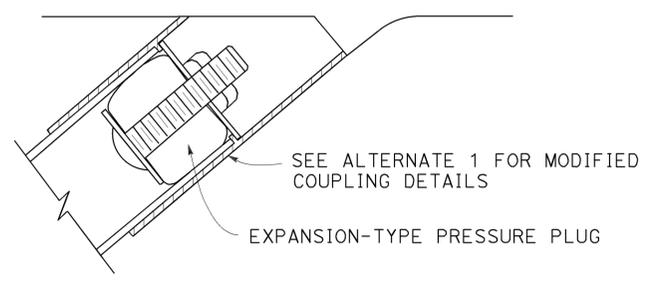
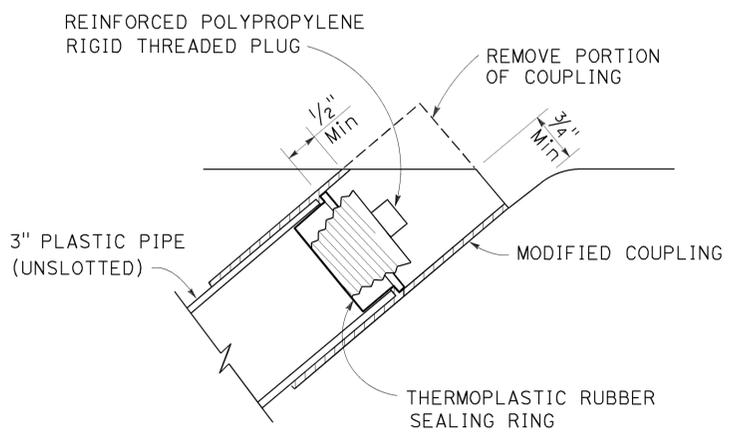
TYPE 1 CLEANOUT
See Note 2



TYPE 2 CLEANOUT
See Note 2



TYPE 3 CLEANOUT/TYPE G VENT
See Note 4



DETAIL A
PLASTIC PIPE PLUG
See Note 3

NOTES:

1. See project plans for location and type of cleanout or vent installations.
2. The position of slotted plastic pipe and limits of treated permeable material shown are for the Type 1 structural section drainage system shown on Revised Standard Plan RSP D99A.
3. Other types of plugs may be substituted with the Engineer's approval.
4. The Type 3 cleanout and Type G vent is for use with concrete shoulders. The Type 6 structural section drainage system from Revised Standard Plan RSP D99A is shown. Use plastic pipe plug shown in Detail A with Type 3 cleanouts. Use vent cover shown on Revised Standard Plan RSP D99B with Type G vents.

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

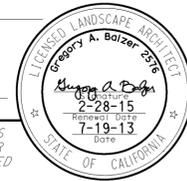
RSP D99C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99C DATED MAY 20, 2011 - PAGE 213 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D99C

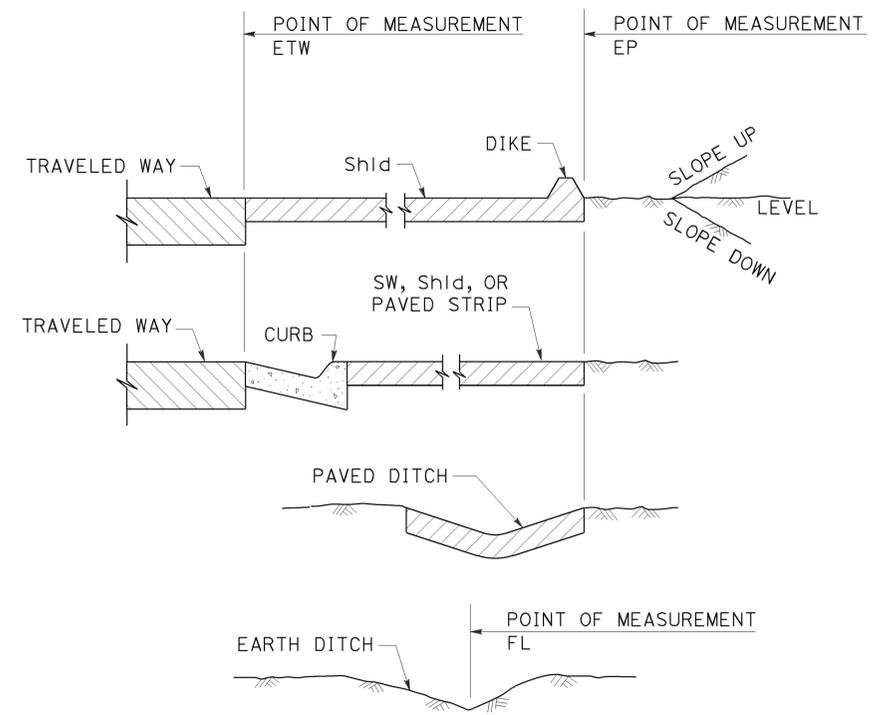
2010 REVISED STANDARD PLAN RSP D99C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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04	Alameda	205	0.0/8.0	608	676
04	Alameda	205	0.0/8.0	608	676

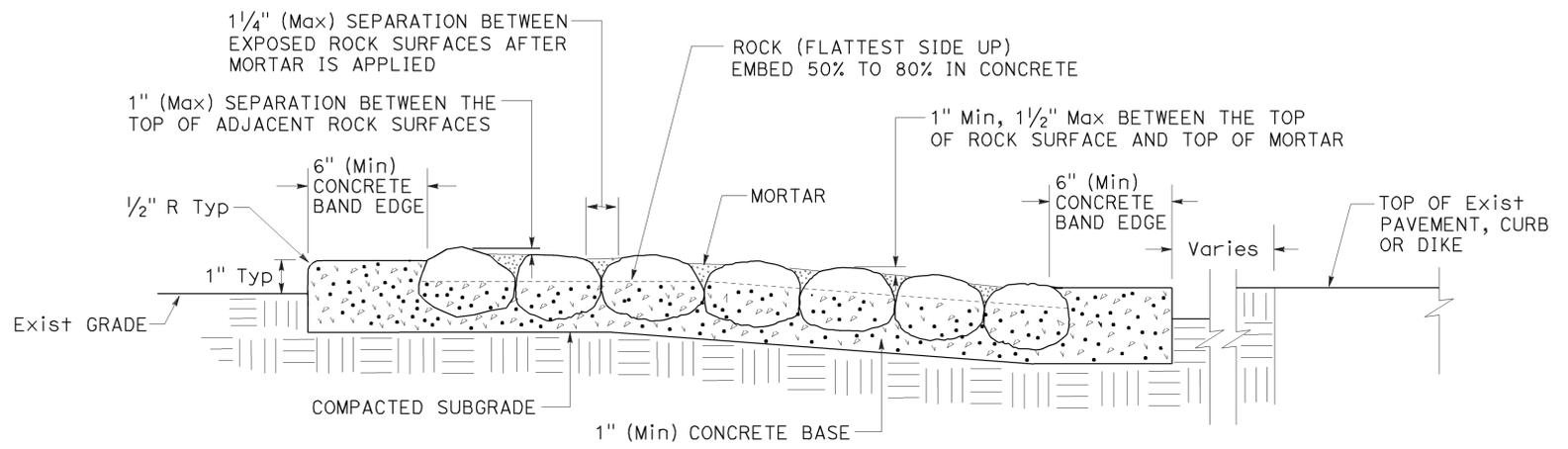
Greg A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



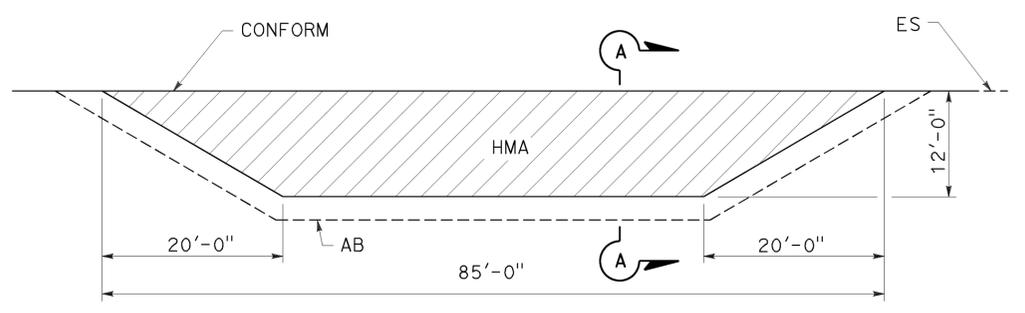
TO ACCOMPANY PLANS DATED 3-28-16



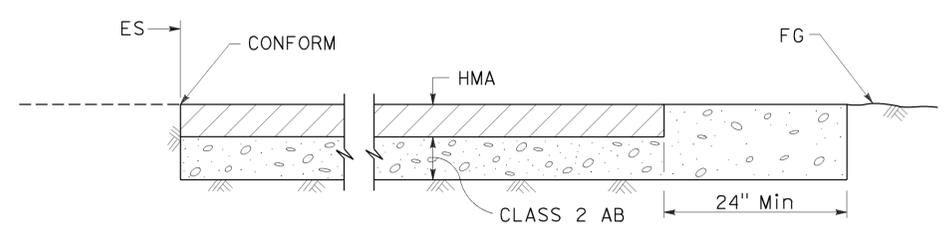
SECTION POINTS OF MEASUREMENT



SECTION ROCK BLANKET



PLAN



SECTION A-A MAINTENANCE VEHICLE PULLOUT

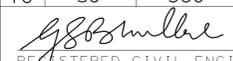
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

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
04 00	Alameda San Joaquin	205 1880	0.0/8.0, 26.1/30.3 13.5/15.4	609	676


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 3-28-16

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
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.

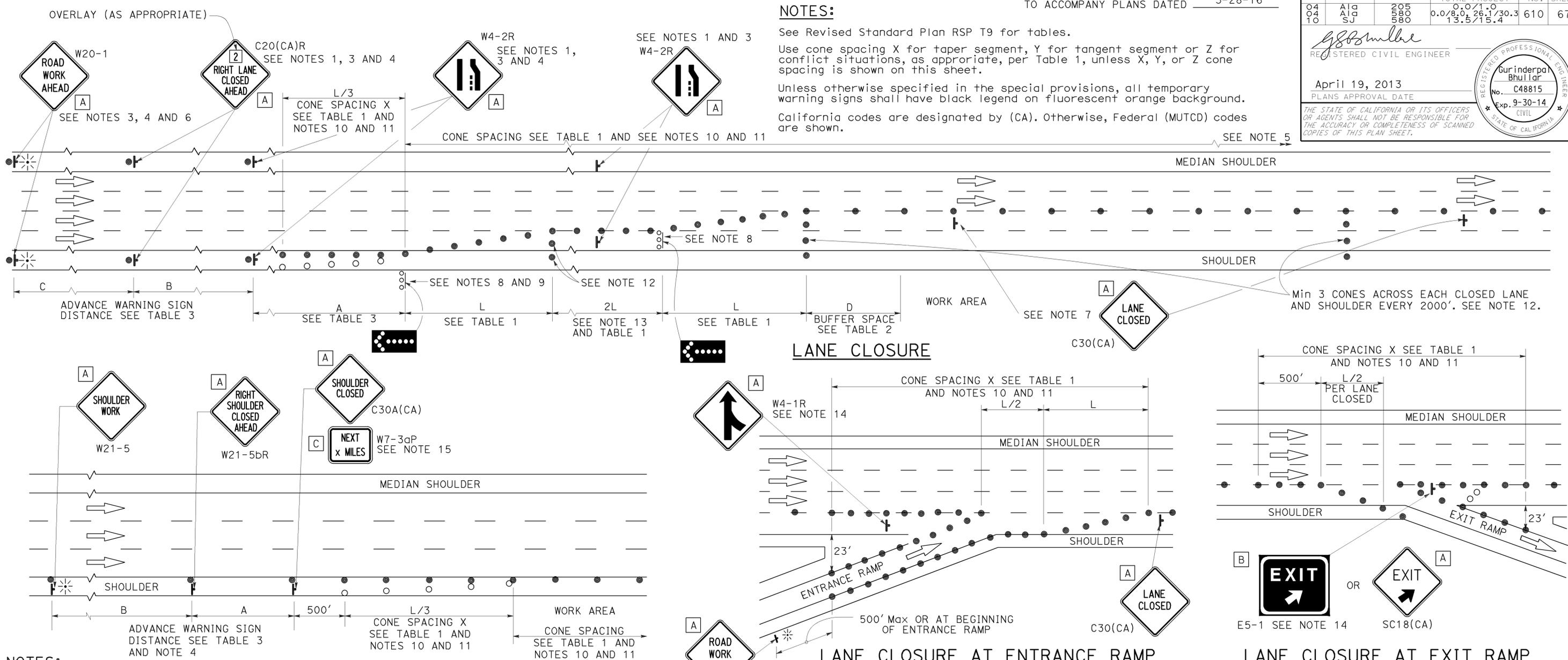
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	610	676
10	Santa Clara	580	0.0/71.0	610	676
			13.5/71.4		

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.

2010 REVISED STANDARD PLAN RSP T10



- NOTES:**
1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
 2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
 3. Duplicate sign installations are not required:
 - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
 4. 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.
 5. 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**
6. 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.
 7. Place a C30(CA) sign every 2000' throughout length of lane closure.
 8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
 9. 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.
 10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

12. 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.
13. 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.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. 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"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**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

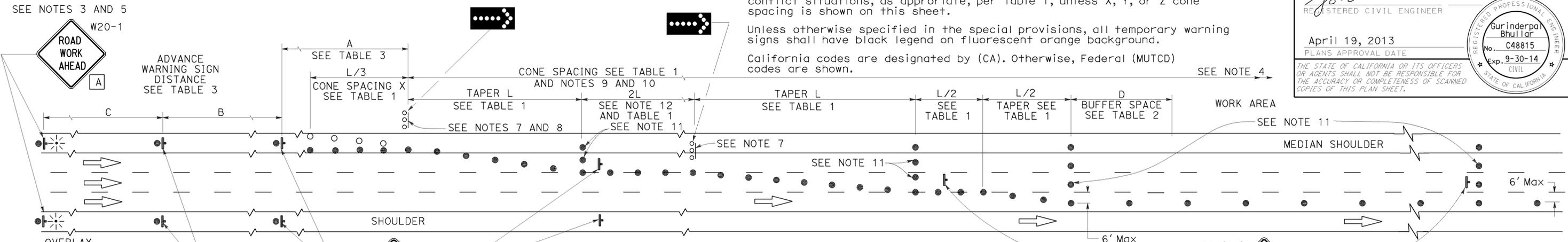
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04 00	Alameda San Joaquin	205 9880	0.0/8.0 26.1/30.3	611	676

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

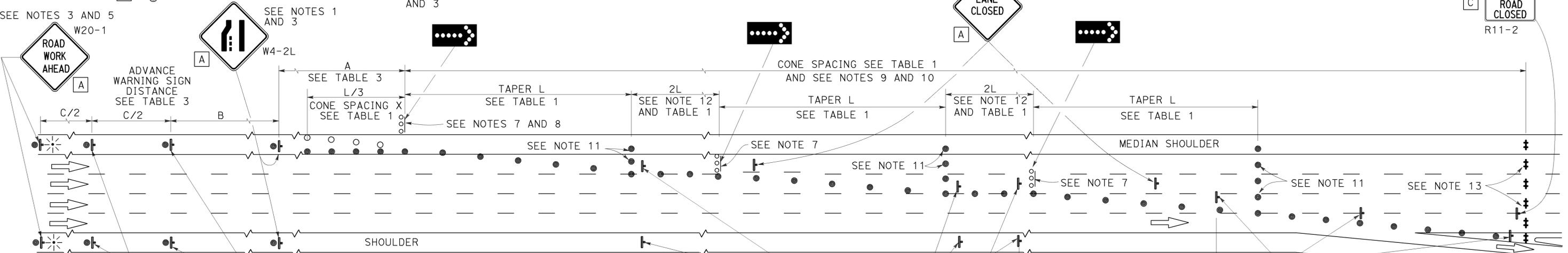
April 19, 2013
 PLANS APPROVAL DATE

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
04 10	Alameda San Joaquin	205 9880	0.0/0.71 13.5/28.4	612	676

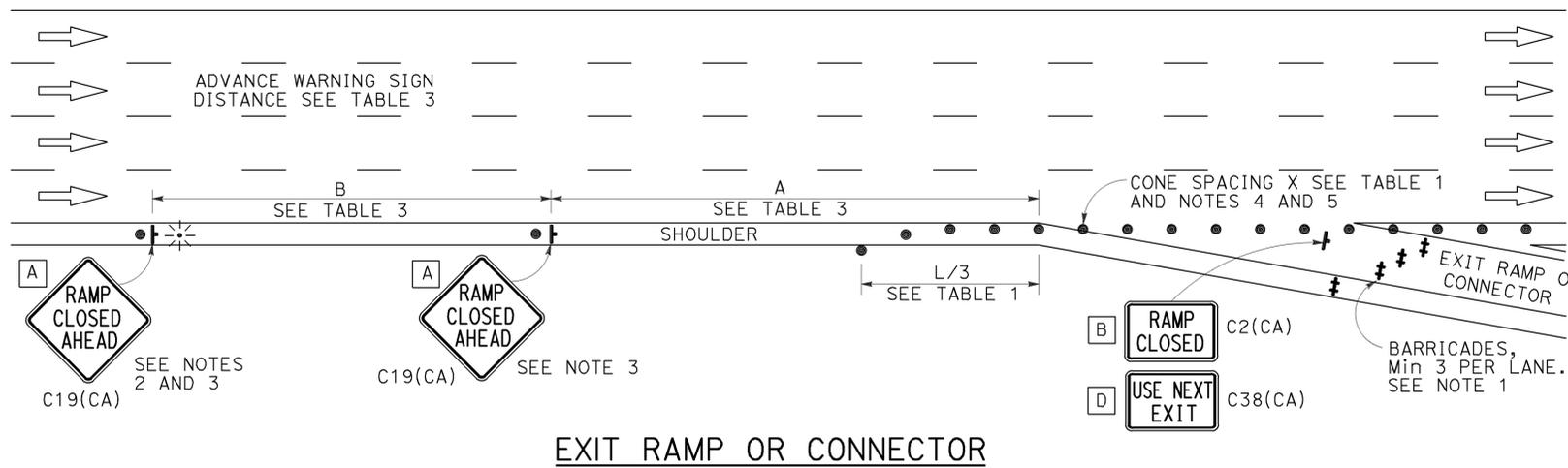
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

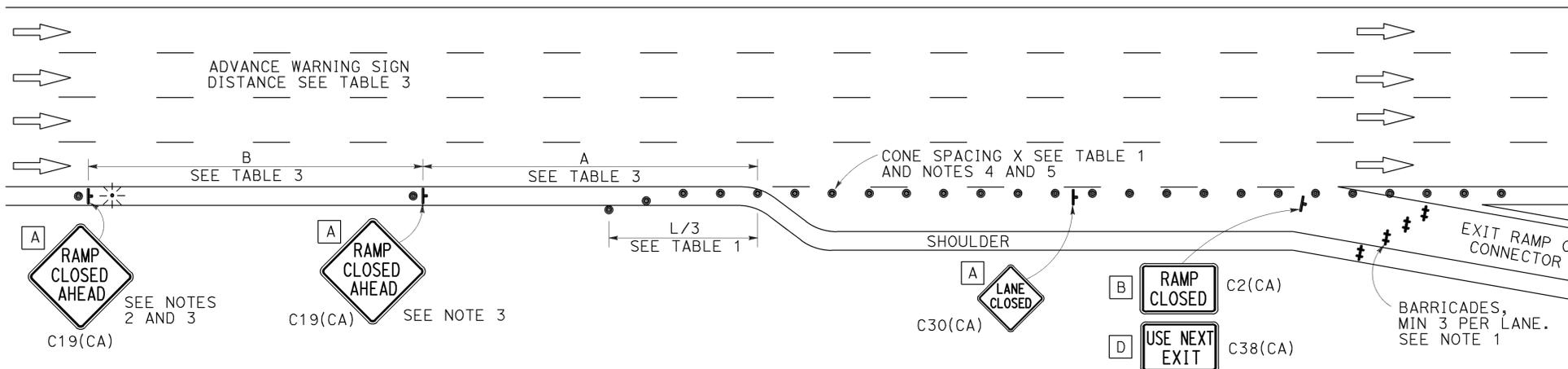
TO ACCOMPANY PLANS DATED 3-28-16

NOTES:

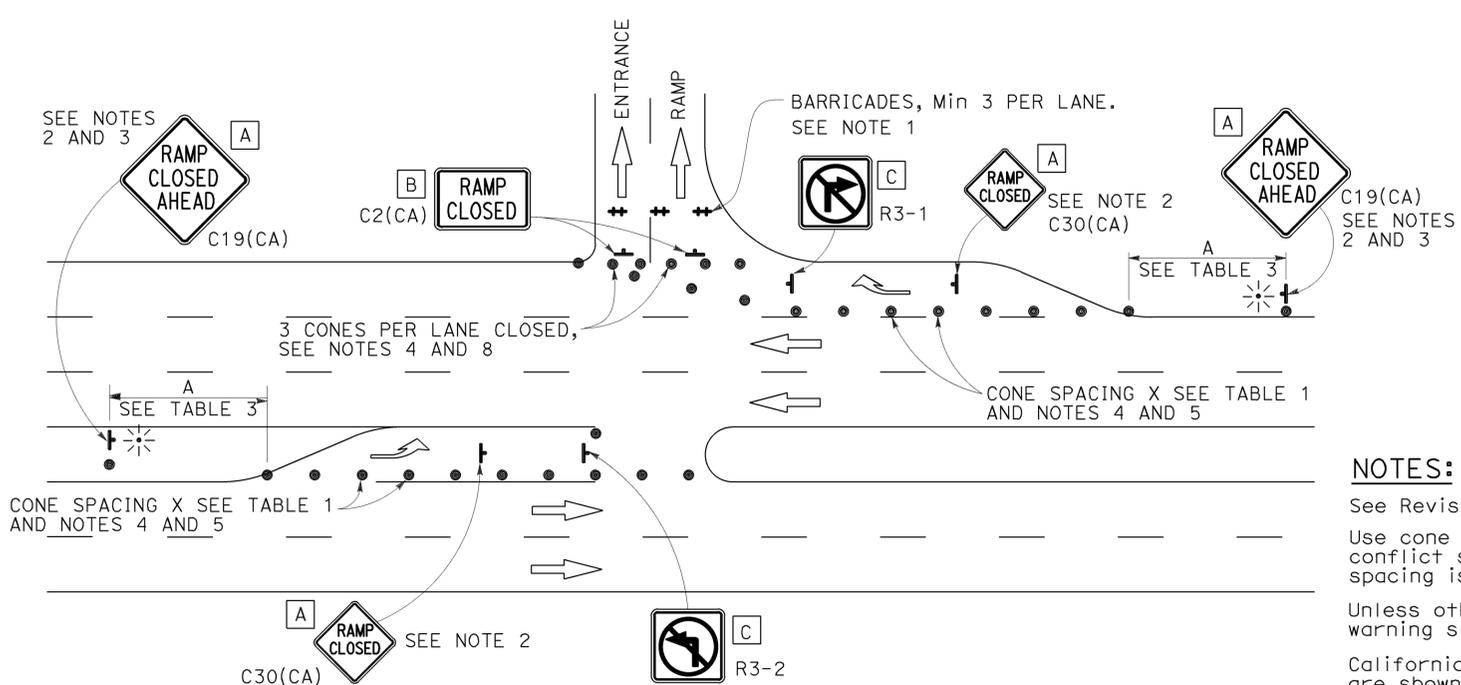
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed 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.



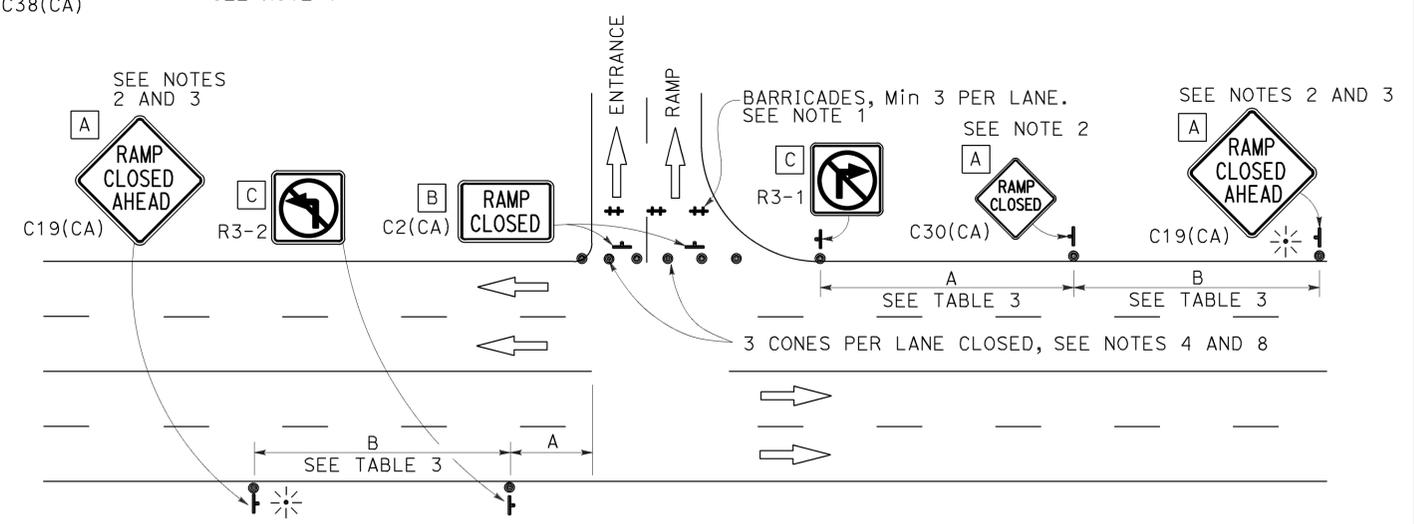
EXIT RAMP OR CONNECTOR



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.

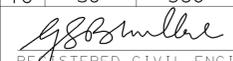
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURE**
 NO SCALE

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

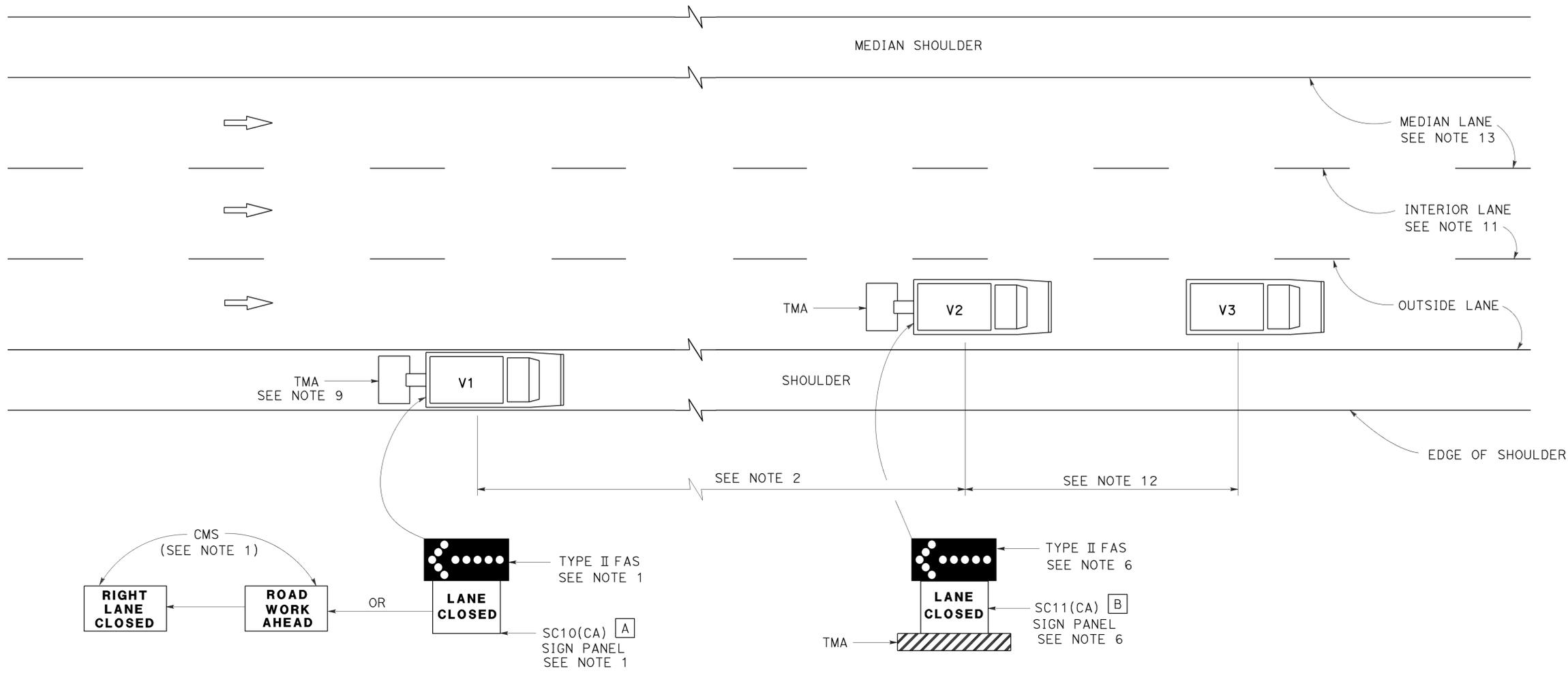
2010 REVISED STANDARD PLAN RSP T14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04 00	Alb Alj Sj	205 1580	0.0/81.0 13.5/75.4	613	676


 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 3-28-16



SIGN PANEL SIZE (Min)

- A 66" x 36"
- B 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
-  FLASHING ARROW SIGN (FAS)
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

NOTES:

1. Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
13. When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15 DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T15

2010 REVISED STANDARD PLAN RSP T15

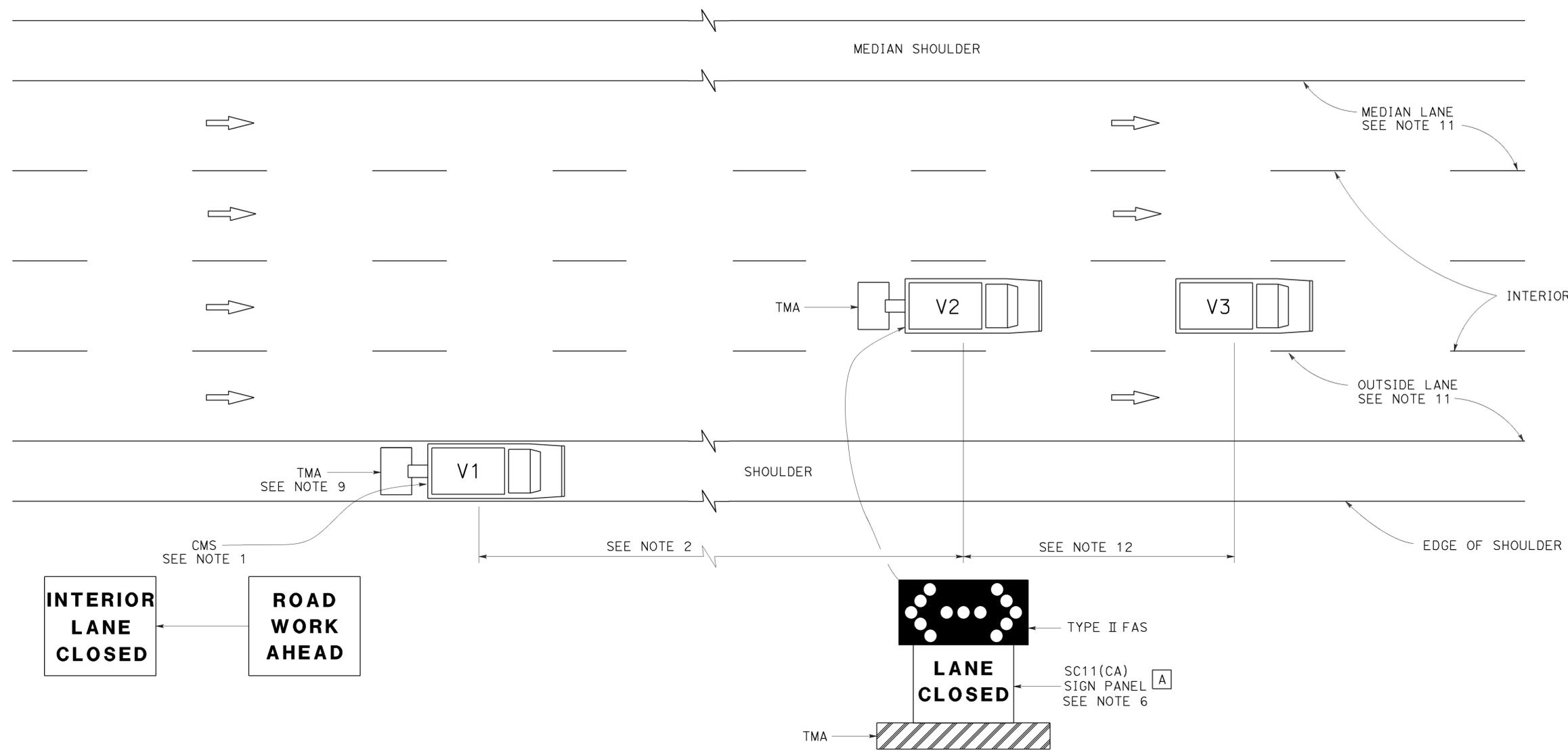
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	614	676
00	Alameda	205	0.0/8.0	614	676
			13.5/215.4		

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.

TO ACCOMPANY PLANS DATED 3-28-16



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on median lane or outside lane of multilane highways, use Revised Standard Plan T15.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR MOVING LANE CLOSURE
 ON MULTILANE HIGHWAYS**
 NO SCALE

RSP T16 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T16 DATED MAY 20, 2011 - PAGE 244 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T16

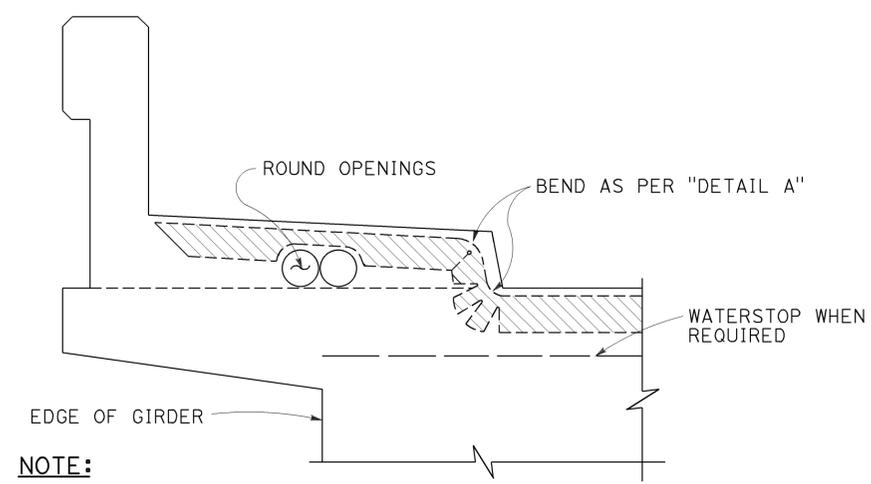
2010 REVISED STANDARD PLAN RSP T16

Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	0.071	615	676
00	SJ	UNB	13.571		
			TOTAL PROJECT		
			0.071		
			13.571		

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.

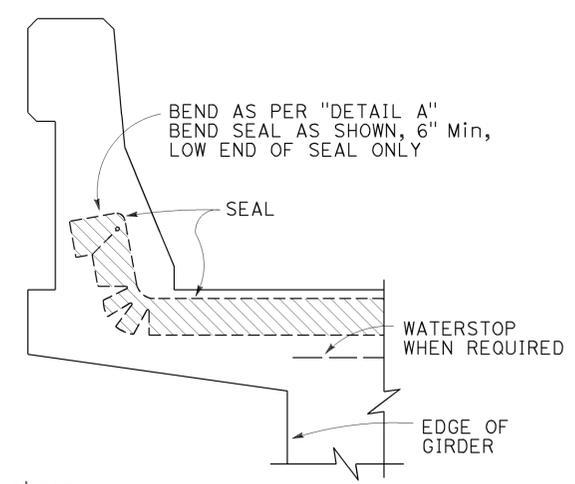
REGISTERED PROFESSIONAL ENGINEER
Efthymios Delis
 No. C51434
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 3-28-16

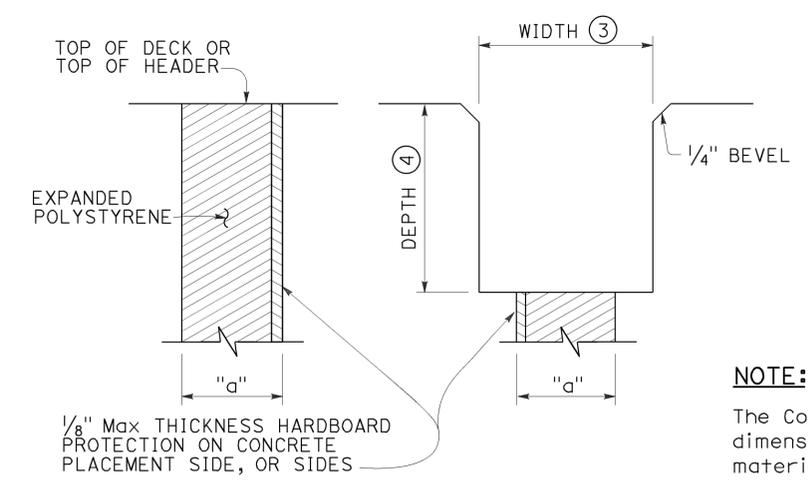


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



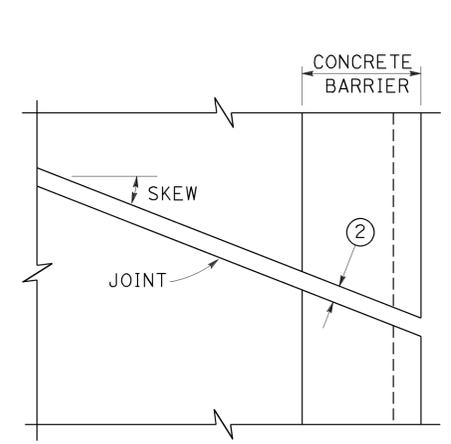
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

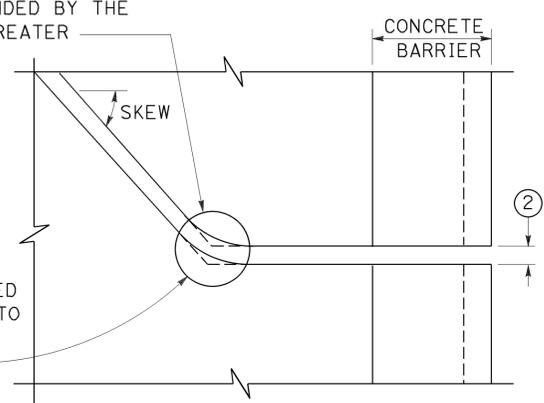
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



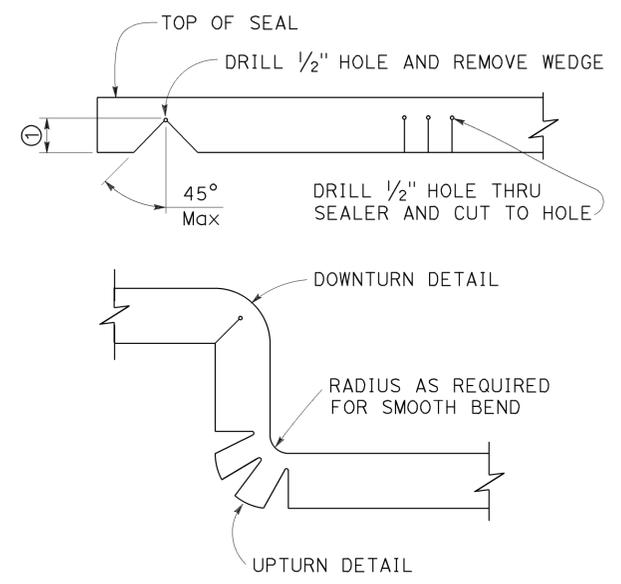
PLAN OF JOINT (SKEW ≤ 20°)

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.



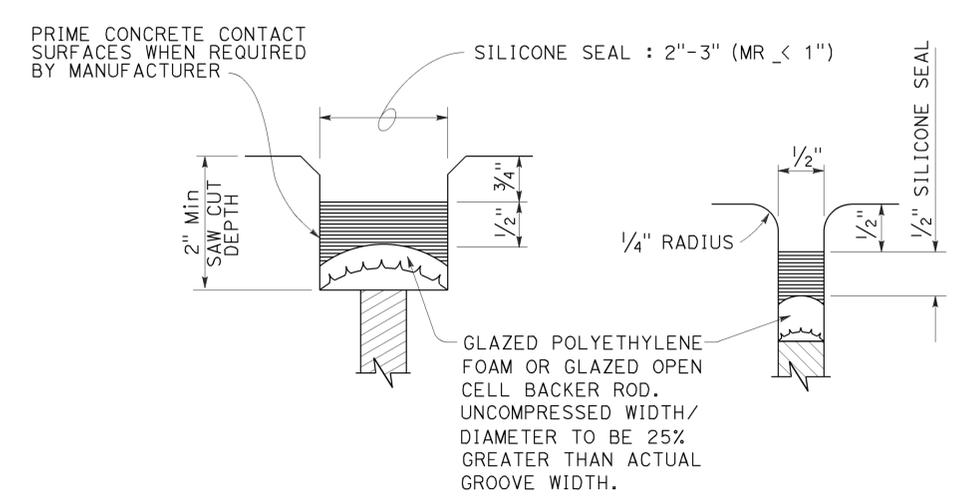
DETAIL A

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"

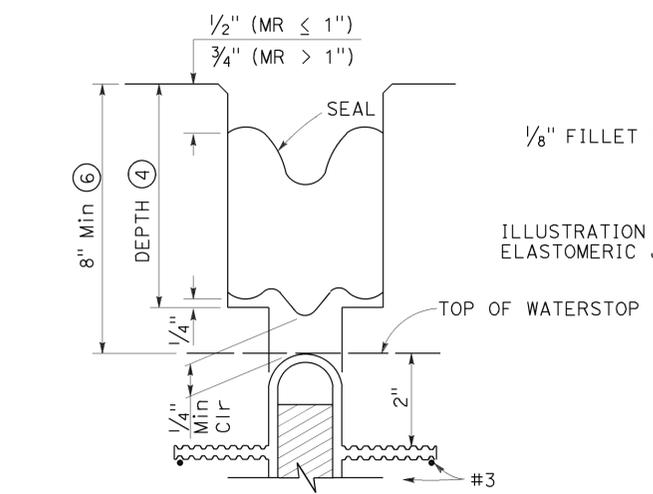


TYPE A SEAL

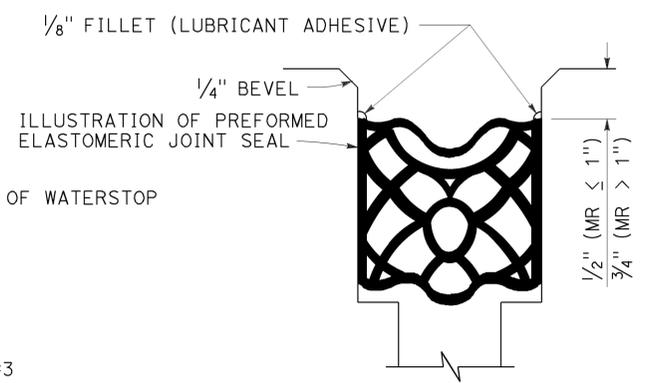
Movement rating : Silicone = 1" Max

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")

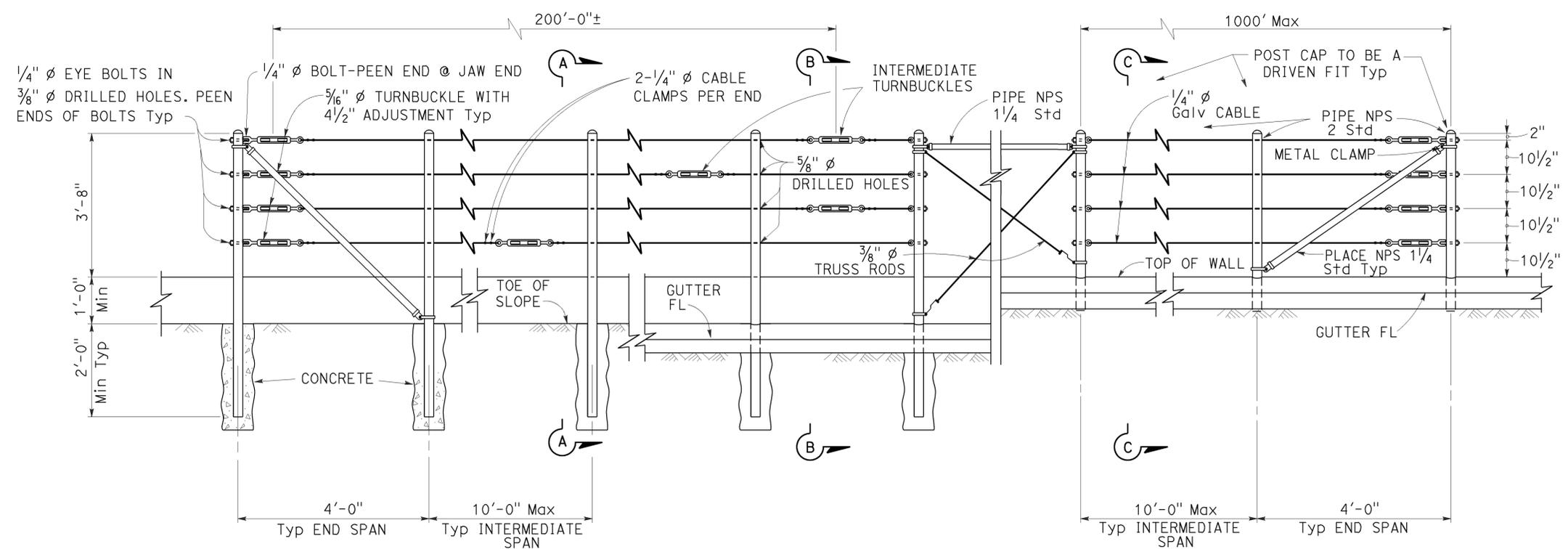
NO SCALE
 RSP B6-21 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 20, 2011 - PAGE 283 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP B6-21

Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	0.071	616	676
04	Alameda	205	0.071	616	676
00	SJ	0880	13.5715.4	30.3	

REGISTERED CIVIL ENGINEER
 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.

Tillat Satter
 No. C42892
 Exp. 3-31-12
 CIVIL
 STATE OF CALIFORNIA

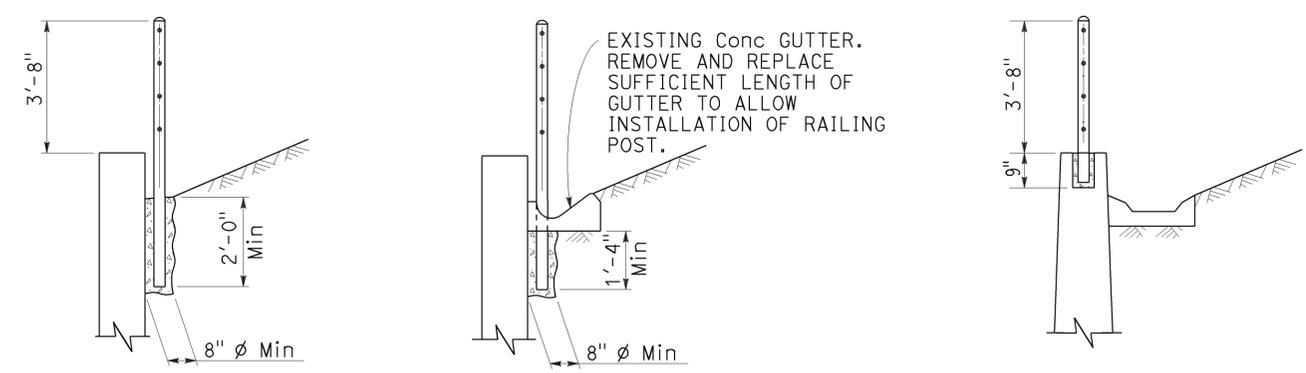


EXISTING WALL (WITHOUT GUTTER) Existing
RETAINING WALL (WITH GUTTER) Existing
RETAINING WALL (WITH GUTTER) New construction

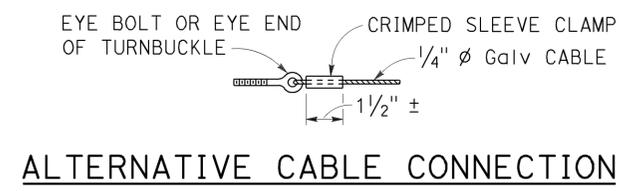
ELEVATION

NOTES:

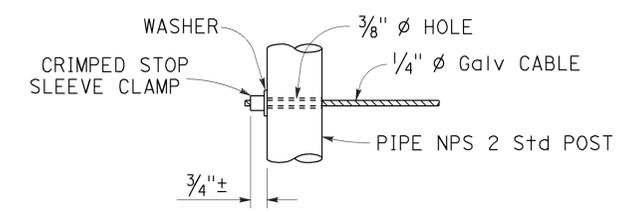
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining 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.



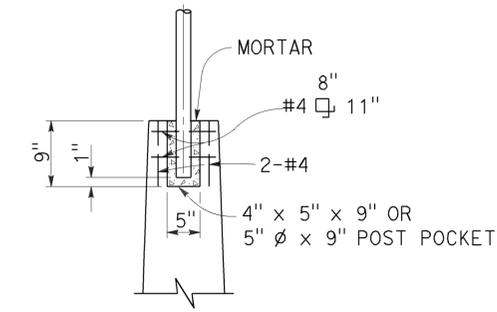
SECTION A-A Existing
SECTION B-B Existing
SECTION C-C New construction



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:

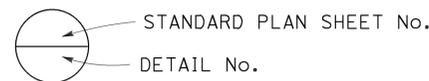
Space all walkway brackets maintaining uniform spacing where possible. Maximum spacing shall not exceed 5'-6".

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:

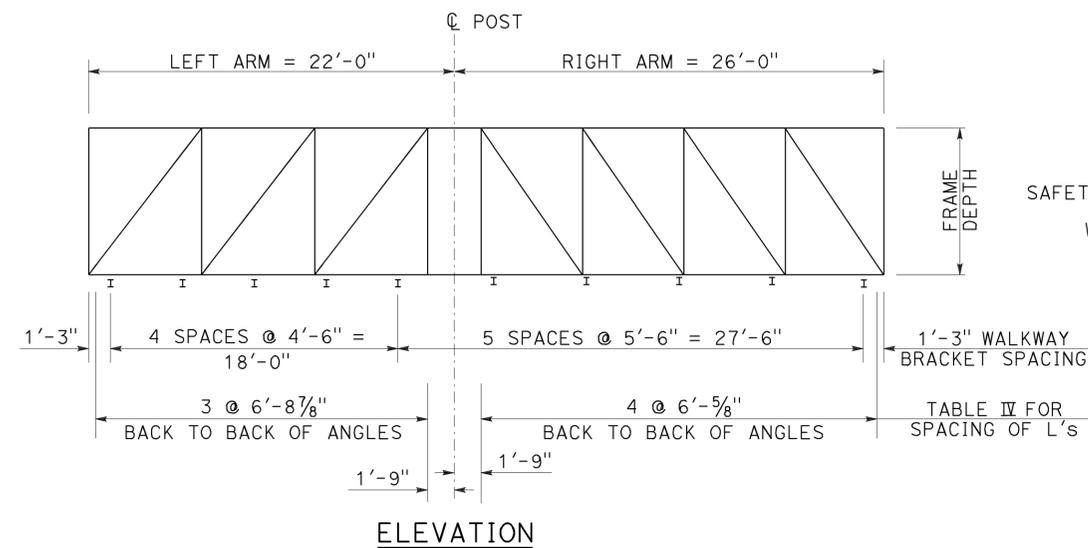
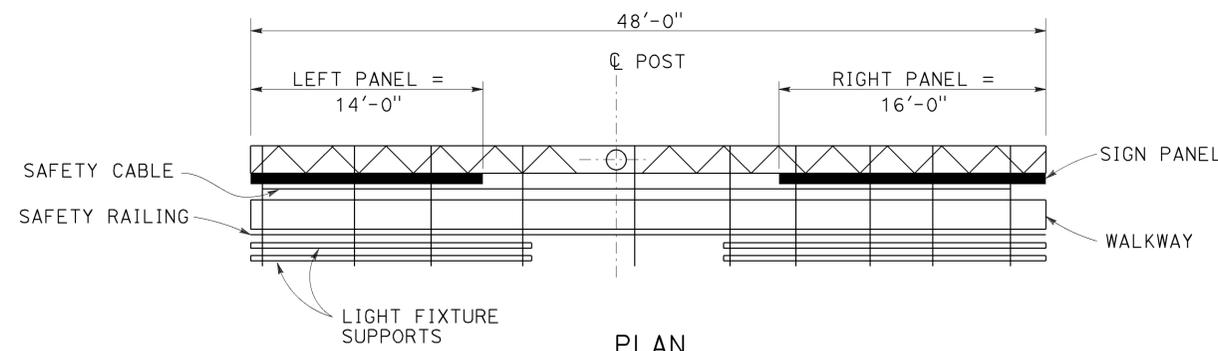
STRUCTURAL STEEL: $f_y = 36,000$ psi
 REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3600$ psi
 FOOTING SOIL PRESSURE: 2.5 ksf (spread footing)

MINIMUM CLEARANCE

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

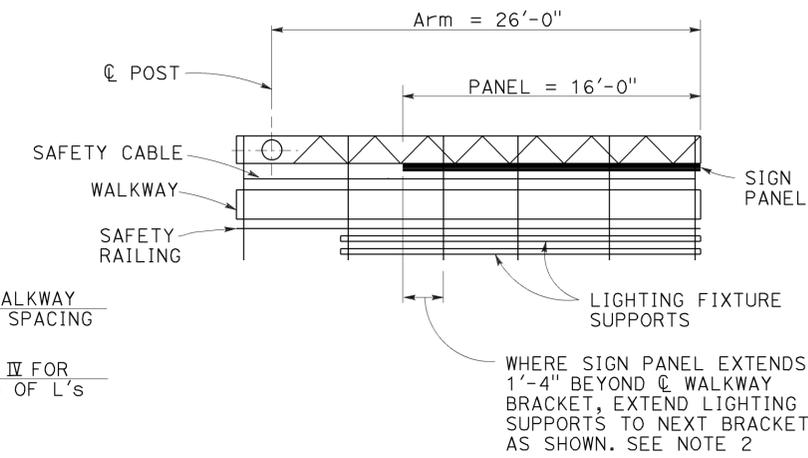
WELDING:

All welding continuous unless otherwise noted on the plans.



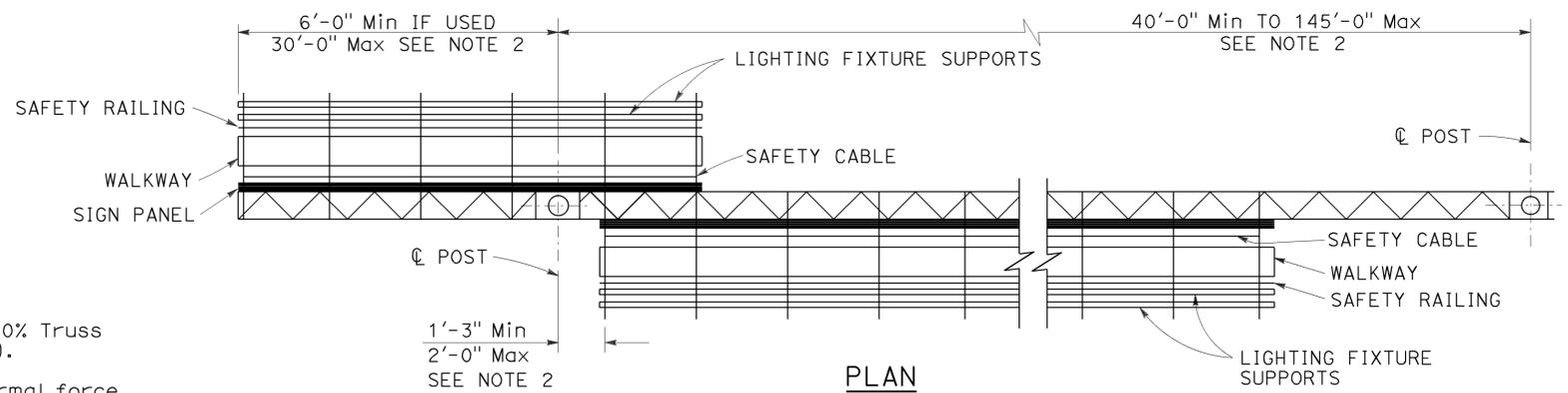
UNBALANCED SINGLE POST TYPE

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
04	Alameda	205	0.0/8.0/26.0/30.3	617	676
00	Alameda	205	13.5/215.4		

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

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 3-28-16

2010 REVISED STANDARD PLAN RSP S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	618	676
10	SJ	UNB	13.5/15.4		

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

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:

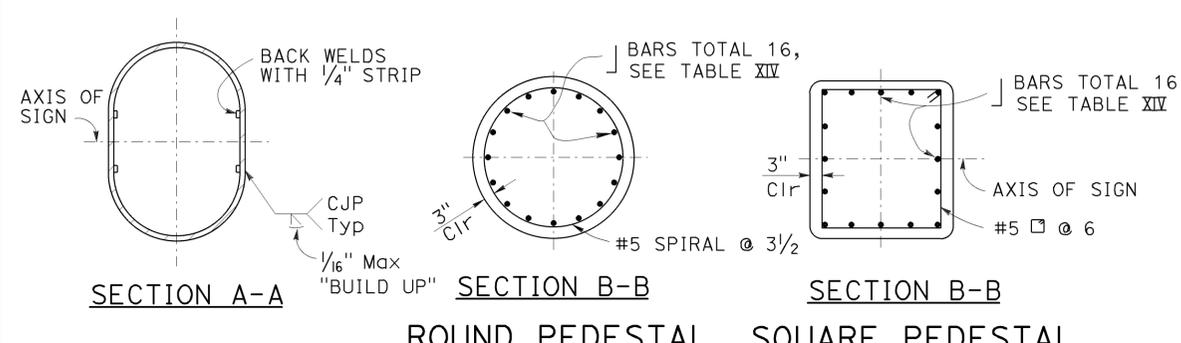
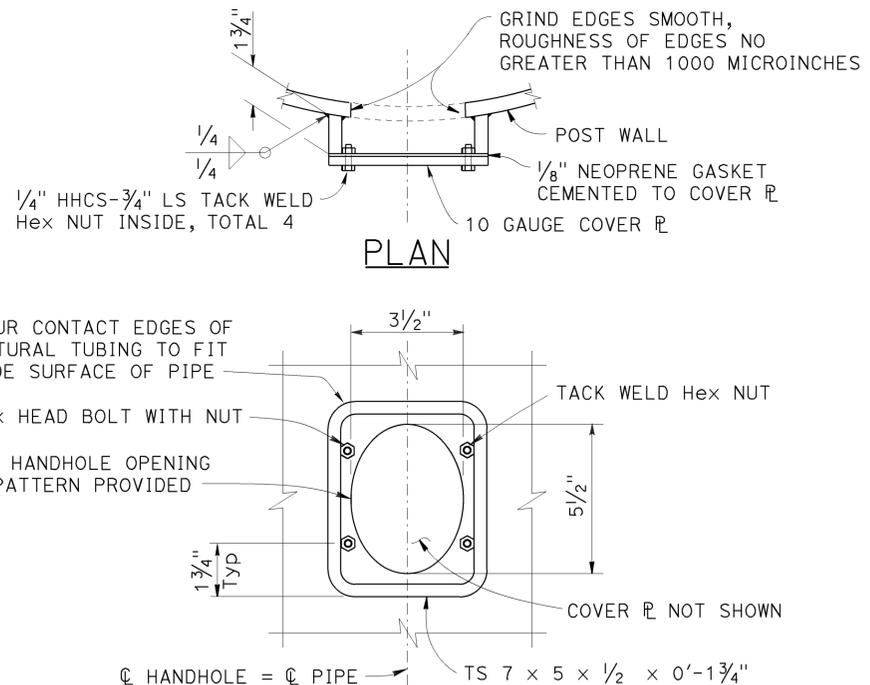
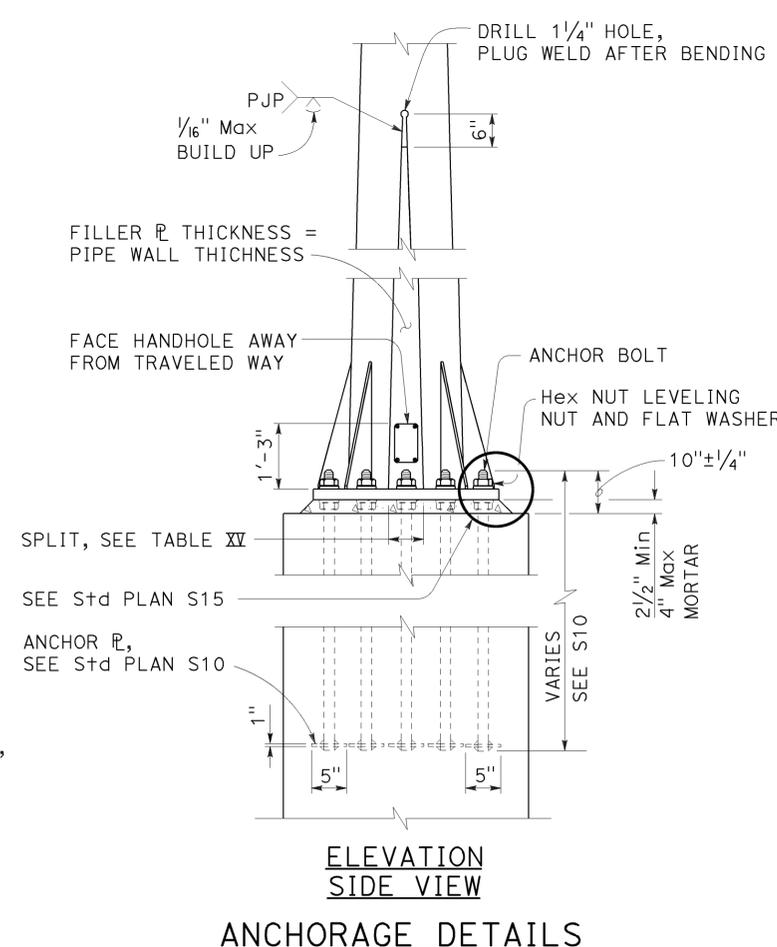
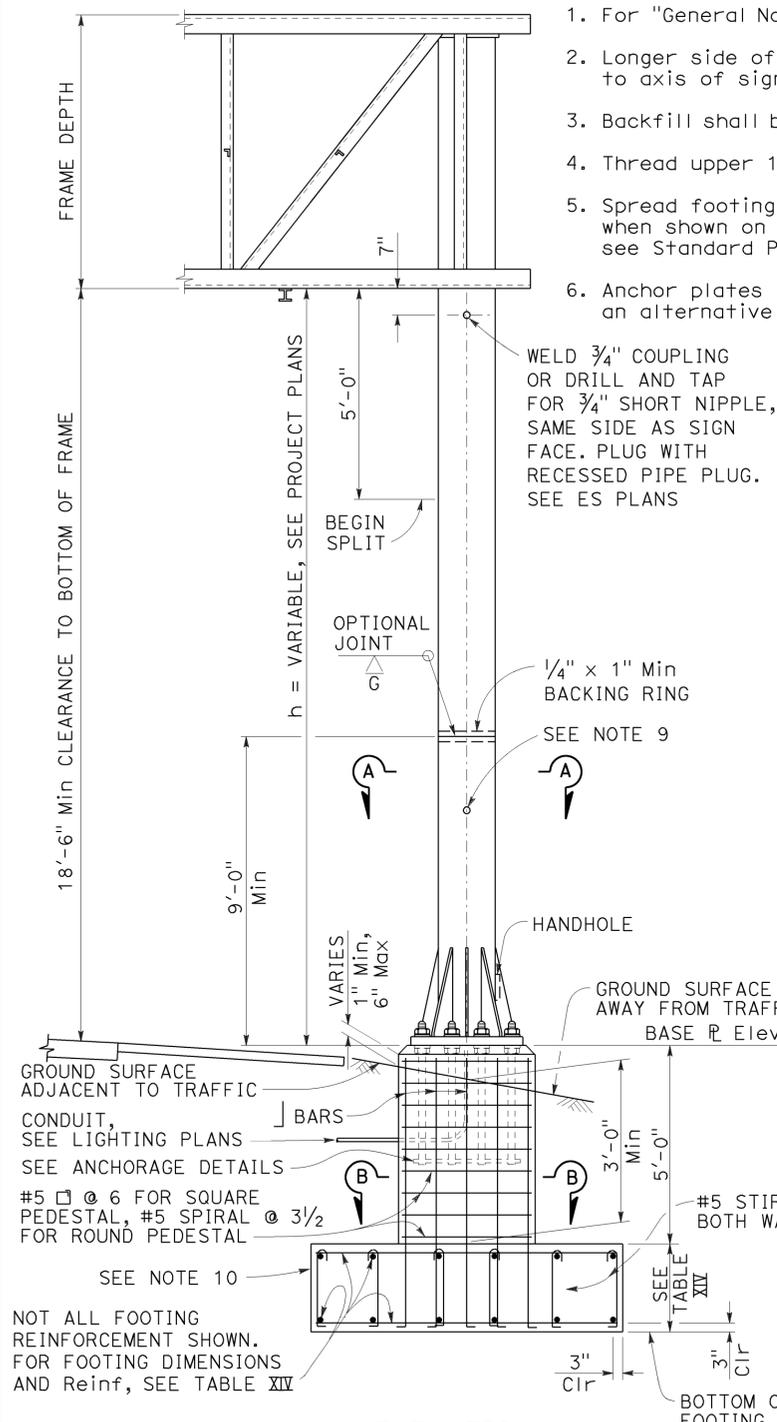
- For "General Notes", see Revised Standard Plan RSP S1.
- Longer side of post and footing (longitudinal) shall be normal to axis of sign.
- Backfill shall be in place prior to erection of post.
- Thread upper 10" of anchor bolts and galvanize upper 1'-0".
- Spread footing with square pedestal shown, use pile foundation when shown on the Project Plans. For pile foundation details, see Standard Plan S15.
- Anchor plates may be retained with Hex nut or formed head as an alternative to details shown.

- When foundation is located on a steep slope with exposed face of concrete adjacent to traffic, see "Detail C" on Standard Plan S15.
- Slope protection required when indicated on Project Plans.
- Weld coupling or drill and tap for 1/2" C chase nipple, perpendicular to sign panel axis away from approaching traffic. Plug with recessed pipe plug. See Standard Plan ES-15C.
- Excavate to neat lines and place concrete against undisturbed material.

TO ACCOMPANY PLANS DATED 3-28-16

TABLE XIV

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS-TRUSS
TWO POST TYPE
POST TYPES I-S THROUGH VII-S**

NO SCALE

RSP S9 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN S9 DATED MAY 20, 2011 - PAGE 342 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S9

2010 REVISED STANDARD PLAN RSP S9

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
Cntl	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
04	Alameda	205	0.0/8.0/13.5	619	676
10	SJ	1980	0.0/26.0/30.3		

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa Gabriel
REGISTERED PROFESSIONAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL

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 3-28-16

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
04	Alameda	205	0.0/8.0	620	676
00	SJ	UNB80	0.0/71.0 13.5/15.4		

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 3-28-16

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

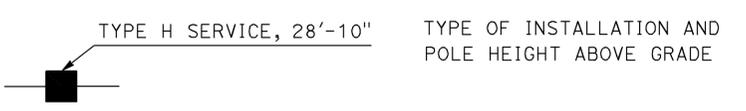
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

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



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

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

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

NO SCALE

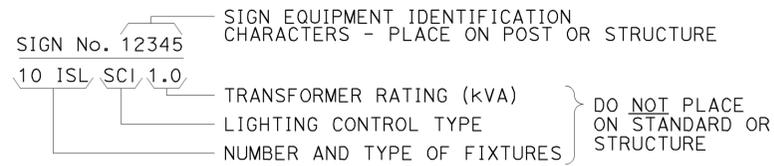
RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

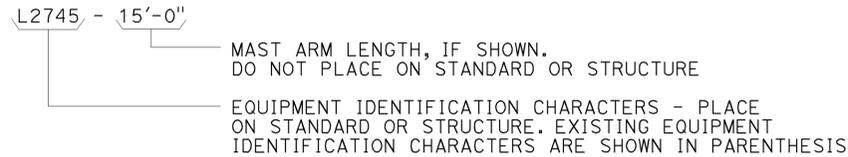
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

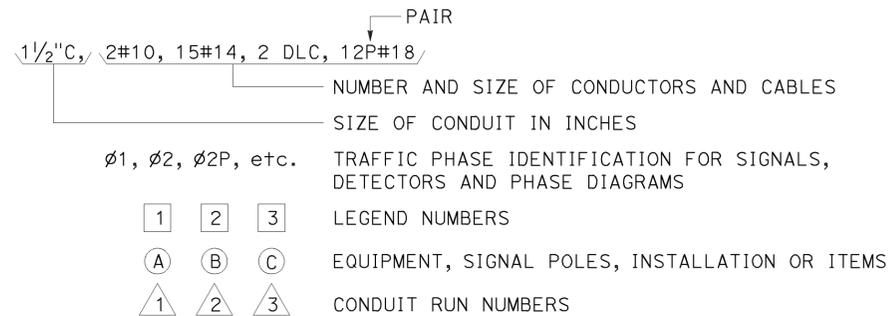
ILLUMINATED SIGN IDENTIFICATION:



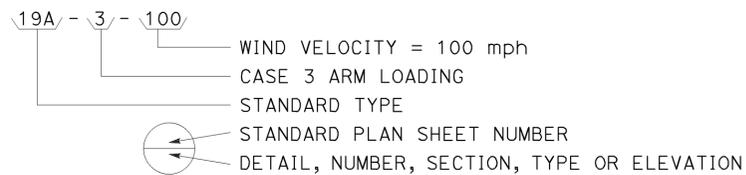
ELECTROLIER OR EQUIPMENT IDENTIFICATION:



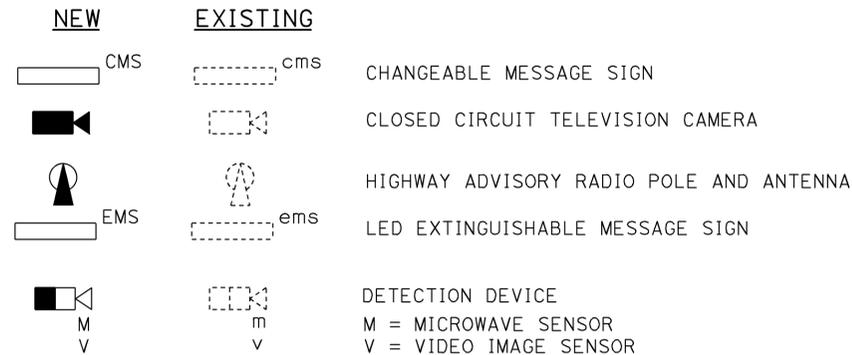
CONDUIT AND CONDUCTOR IDENTIFICATION:



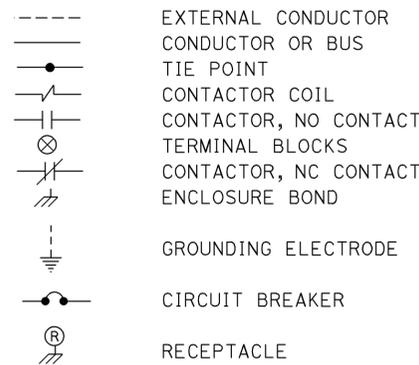
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



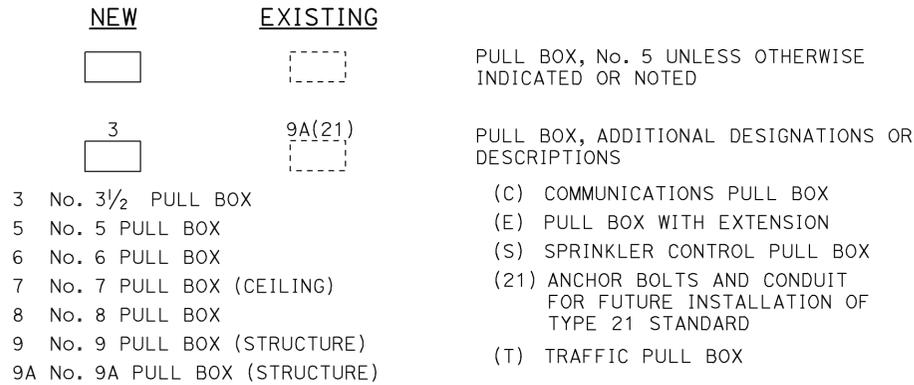
MISCELLANEOUS EQUIPMENT



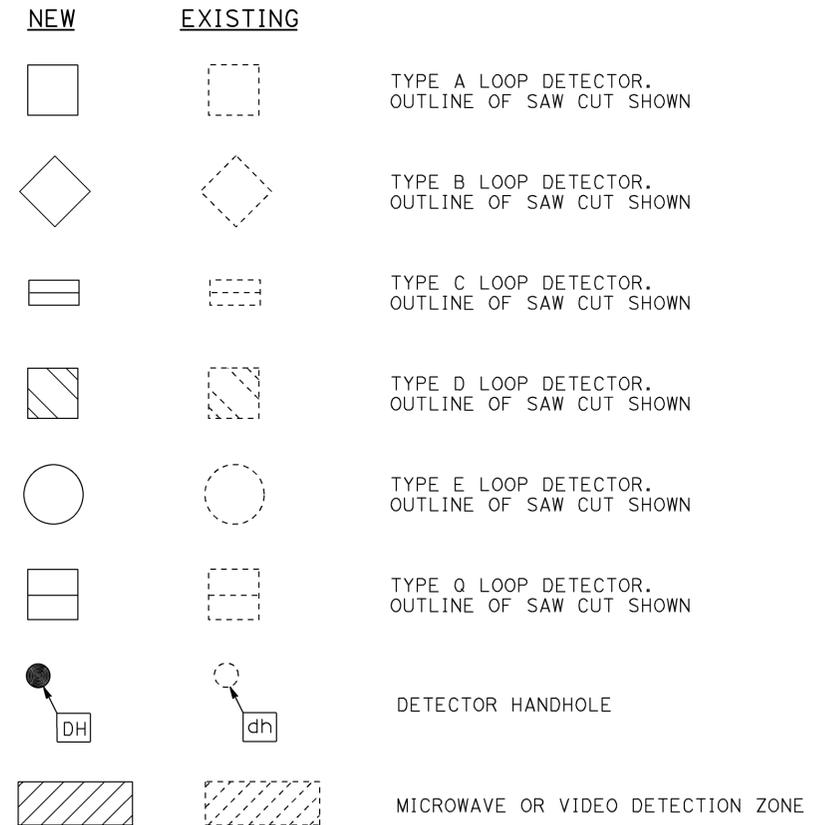
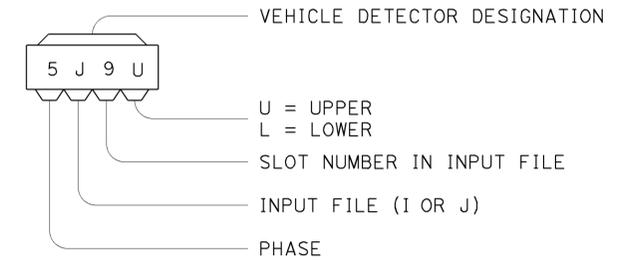
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED APRIL 15, 2016 SUPERSEDES RSP ES-1C
DATED OCTOBER 30, 2015 AND 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

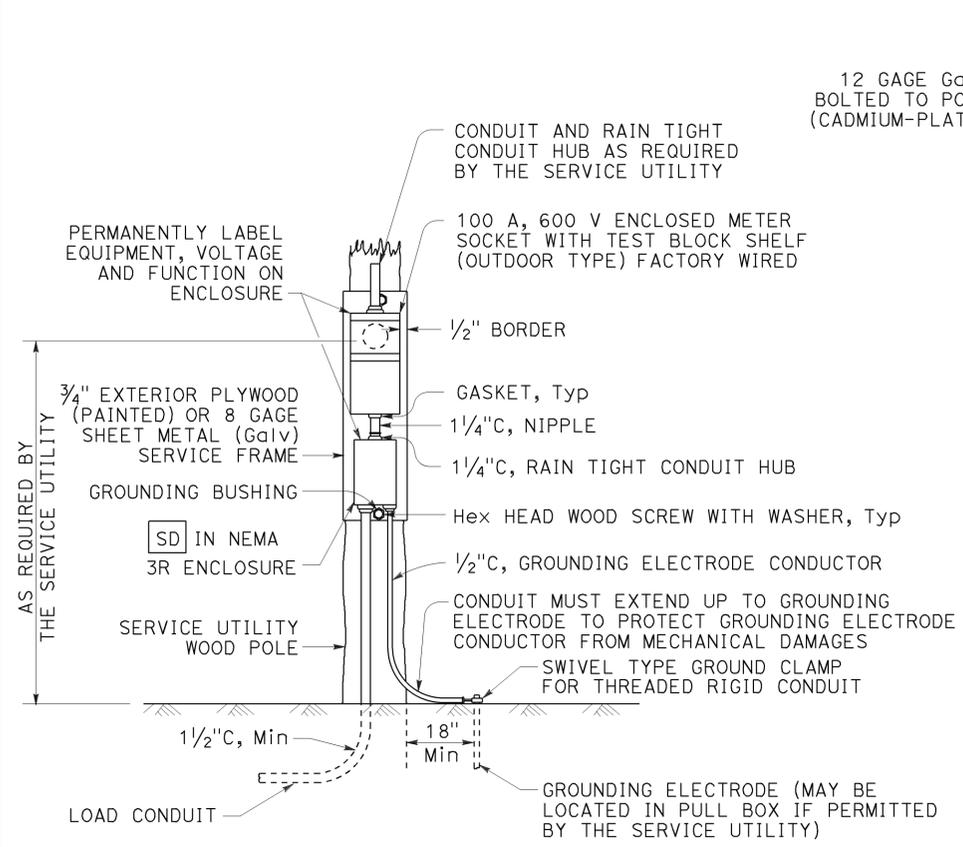
Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	TOTAL PROJECT	No.	SHEETS
00	Alameda	UNB	0.0/8.0/26.1/30.3	622	676
		UNB	13.5/18.4		

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

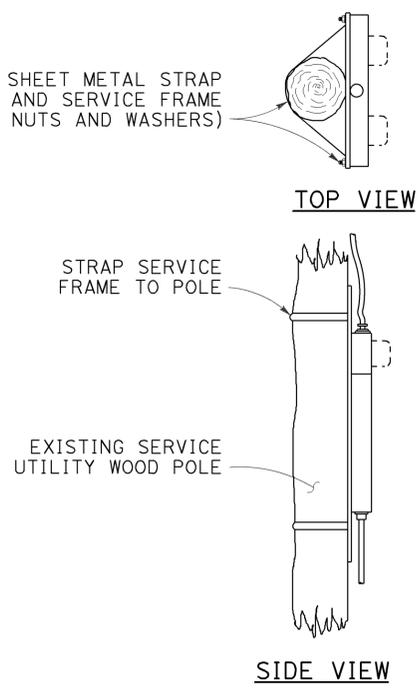
October 30, 2015
PLANS APPROVAL DATE

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

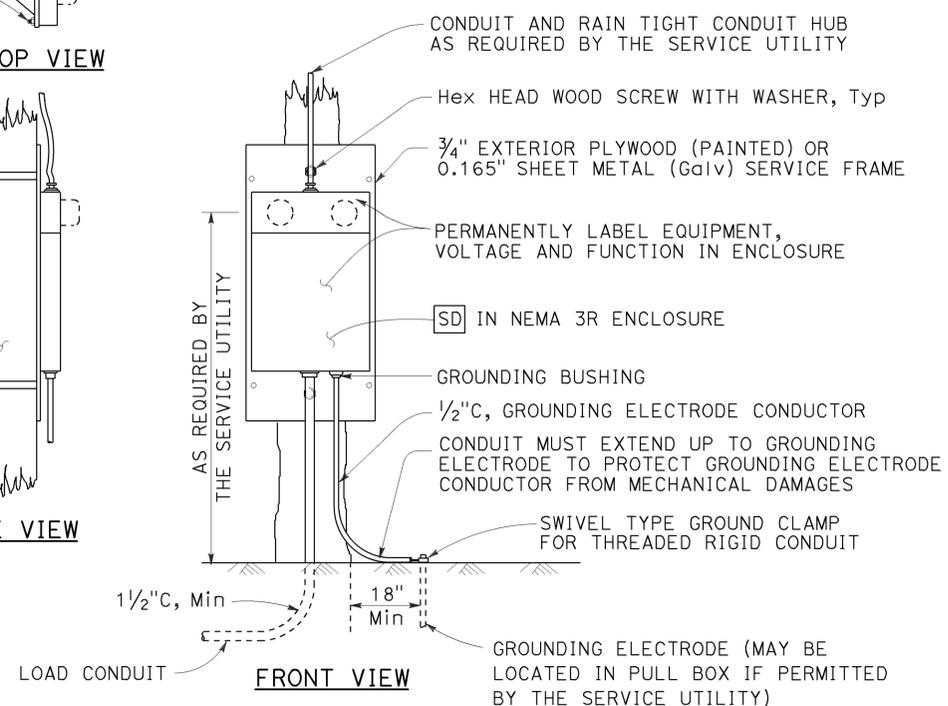
TO ACCOMPANY PLANS DATED 3-28-16



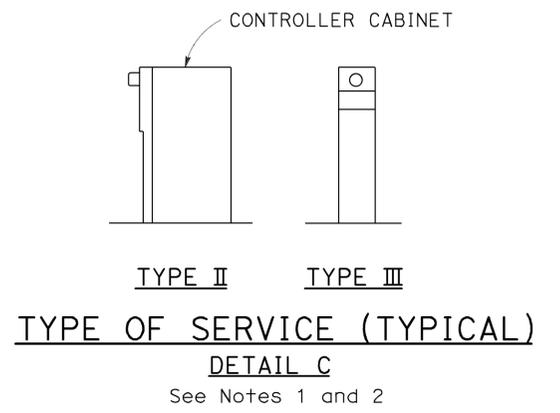
TYPE SCE-1
DETAIL A



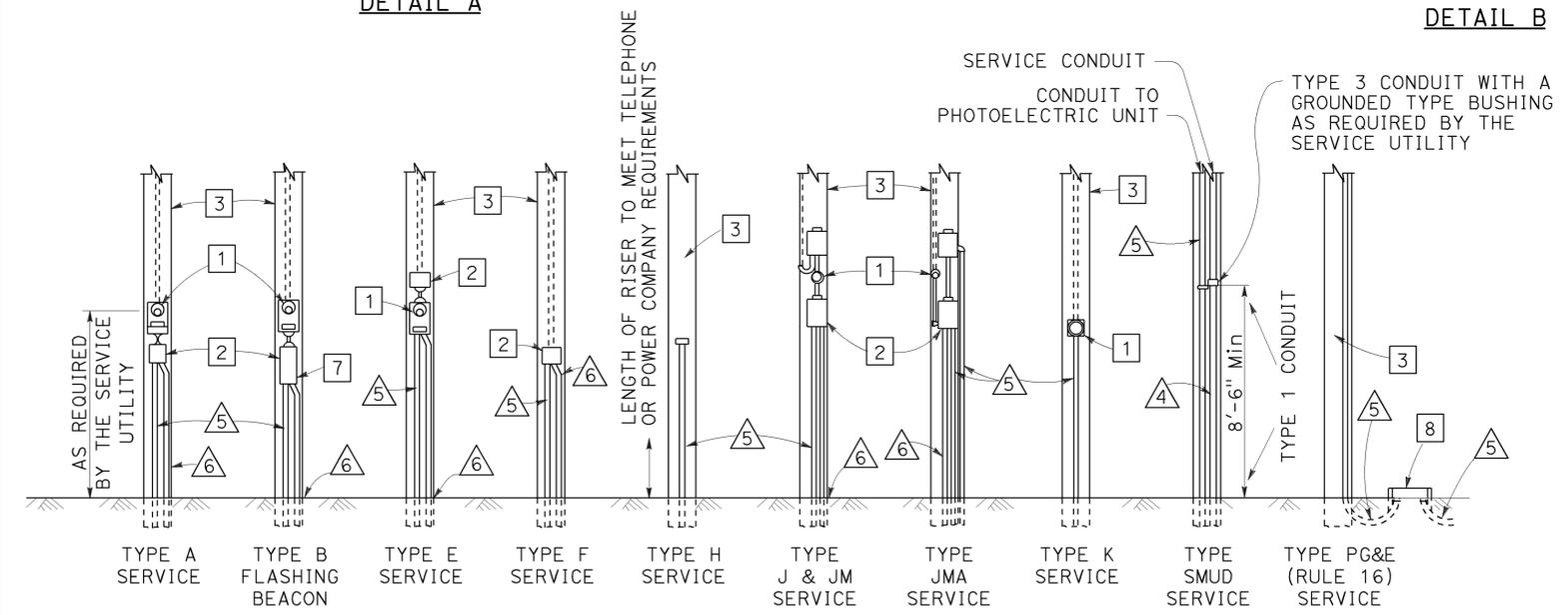
TOP VIEW
SIDE VIEW



TYPE SCE-2
DETAIL B

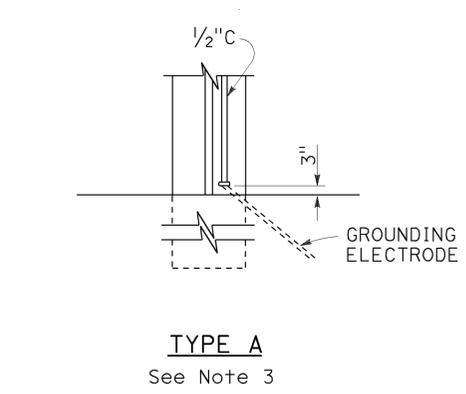


TYPE II **TYPE III**
TYPE OF SERVICE (TYPICAL)
DETAIL C
See Notes 1 and 2

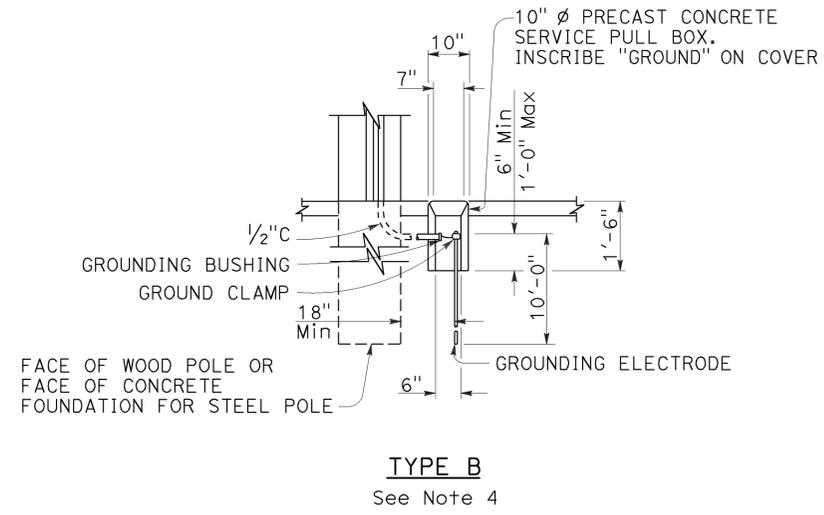


POLE MOUNTED SERVICE INSTALLATIONS
DETAIL D

- LEGEND:**
- 1 METER SOCKET.
 - 2 SERVICE ENCLOSURE WITH A MINIMUM 60 A RATED MAIN CIRCUIT BREAKER, UNLESS OTHERWISE SHOWN.
 - 3 A. UTILITY OWNED POLE. THE SERVICE UTILITY WILL FURNISH AND INSTALL REQUIRED SERVICE RISER, PEU WITH CONDUCTORS AND OTHER EQUIPMENT AS NEEDED.
B. STATE OWNED POLE. THE CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED SERVICE RISER AND EQUIPMENT.
 - 4 2" C, SERVICE CONDUIT MUST HAVE A GROUNDED TYPE BUSHING INSTALLED AT UPPER END OF THE METALLIC POLE RISER CONDUIT. A GROUNDING CONDUCTOR MUST BE ATTACHED TO THE BUSHING, CARRIED THROUGH THE CONDUIT RUN AND ATTACHED TO THE SERVICE EQUIPMENT ENCLOSURE'S GROUNDING ELECTRODE.
 - 5 CONDUIT, LENGTH AND SIZE AS REQUIRED.
 - 6 1/2" C, 1#6. SEE DETAIL E.
 - 7 FLASHING BEACON CONTROL ASSEMBLY.
 - 8 SERVICE PULL BOX, No. 5 UNLESS OTHERWISE NOTED, FURNISHED AND INSTALLED BY THE CONTRACTOR. SERVICE UTILITY SHALL DETERMINE THE EXACT LOCATION.



SERVICE GROUNDING
DETAIL E



- NOTES:**
1. Type II service equipment enclosure mounted on the side of a controller cabinet.
 2. Type III complete free-standing service equipment enclosure.
 3. Ground clamp and required fittings must be accessible. Conduit must extend to protect grounding electrode conductor from mechanical damage.
 4. Use where service utility requires 18" clearance between grounding electrode and the pole or service equipment enclosure. Installation shown is for sidewalk or paved areas. In unpaved areas, omit special service pull box and locate ground clamp above ground or locate ground clamp in nearest pull box.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT)

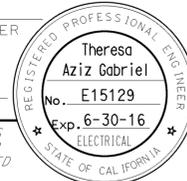
NO SCALE

RSP ES-2A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2A DATED MAY 20, 2011 - PAGE 428 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-2A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alb	205	0.0/71.0	623	676
04	Alb	205	0.0/80.0		
00	SJ	1980	13.5/15.4		

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



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TO ACCOMPANY PLANS DATED 3-28-16

NOTES:

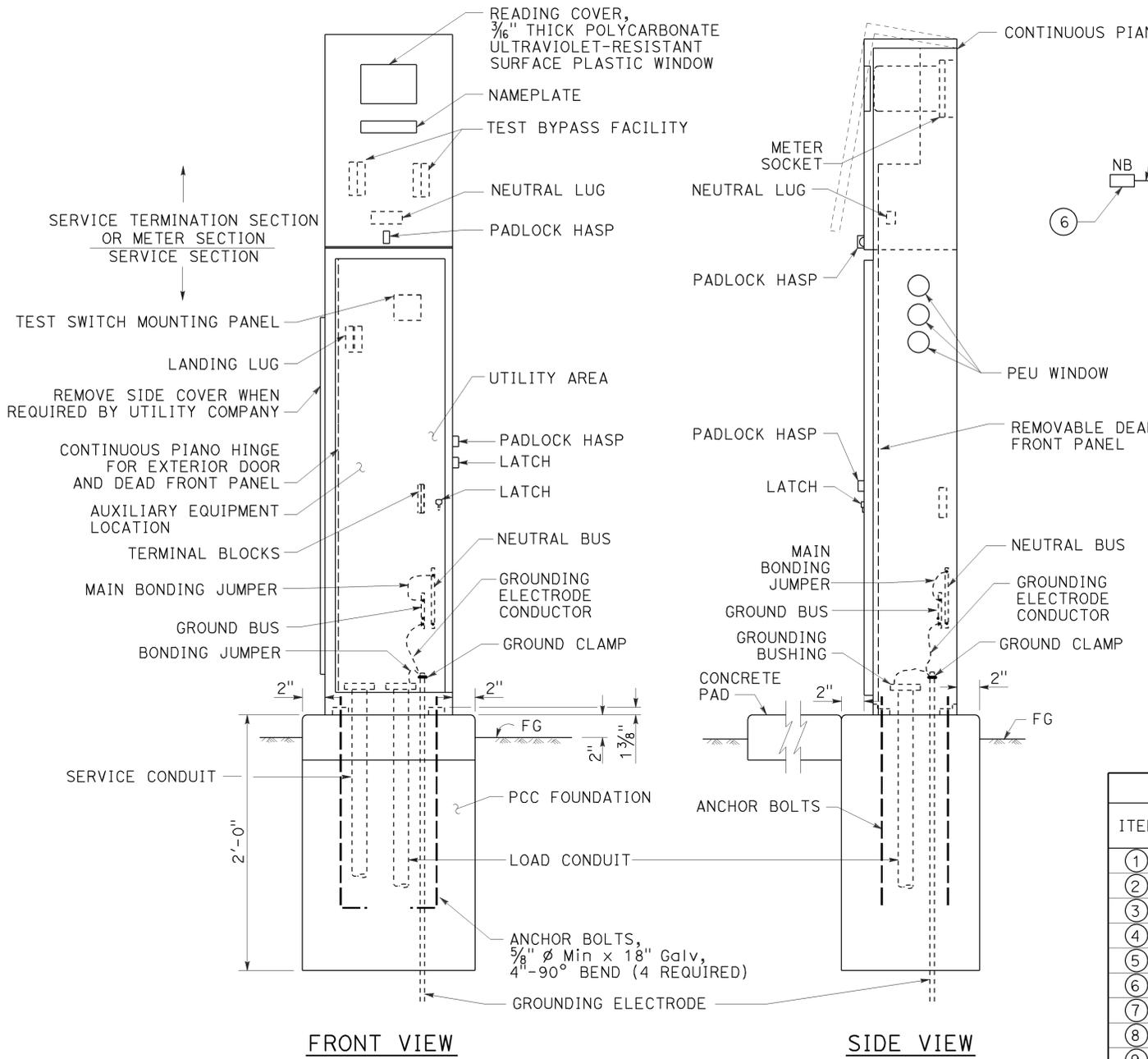
1. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
2. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
3. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
4. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
5. Type III-AR and Type III-BR service equipment enclosure shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT ENCLOSURE
 NOTES TYPE III SERIES)**
 NO SCALE

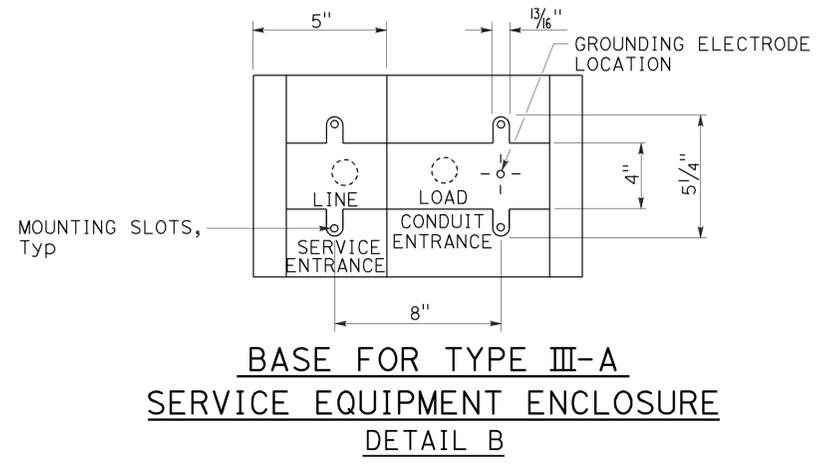
RSP ES-2C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2C DATED MAY 20, 2011 - PAGE 430 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2C

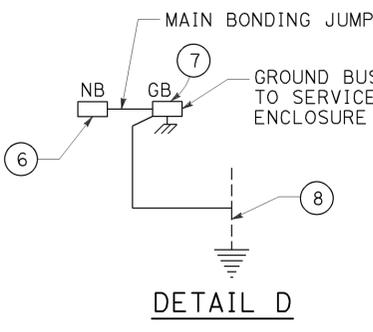
2010 REVISED STANDARD PLAN RSP ES-2C



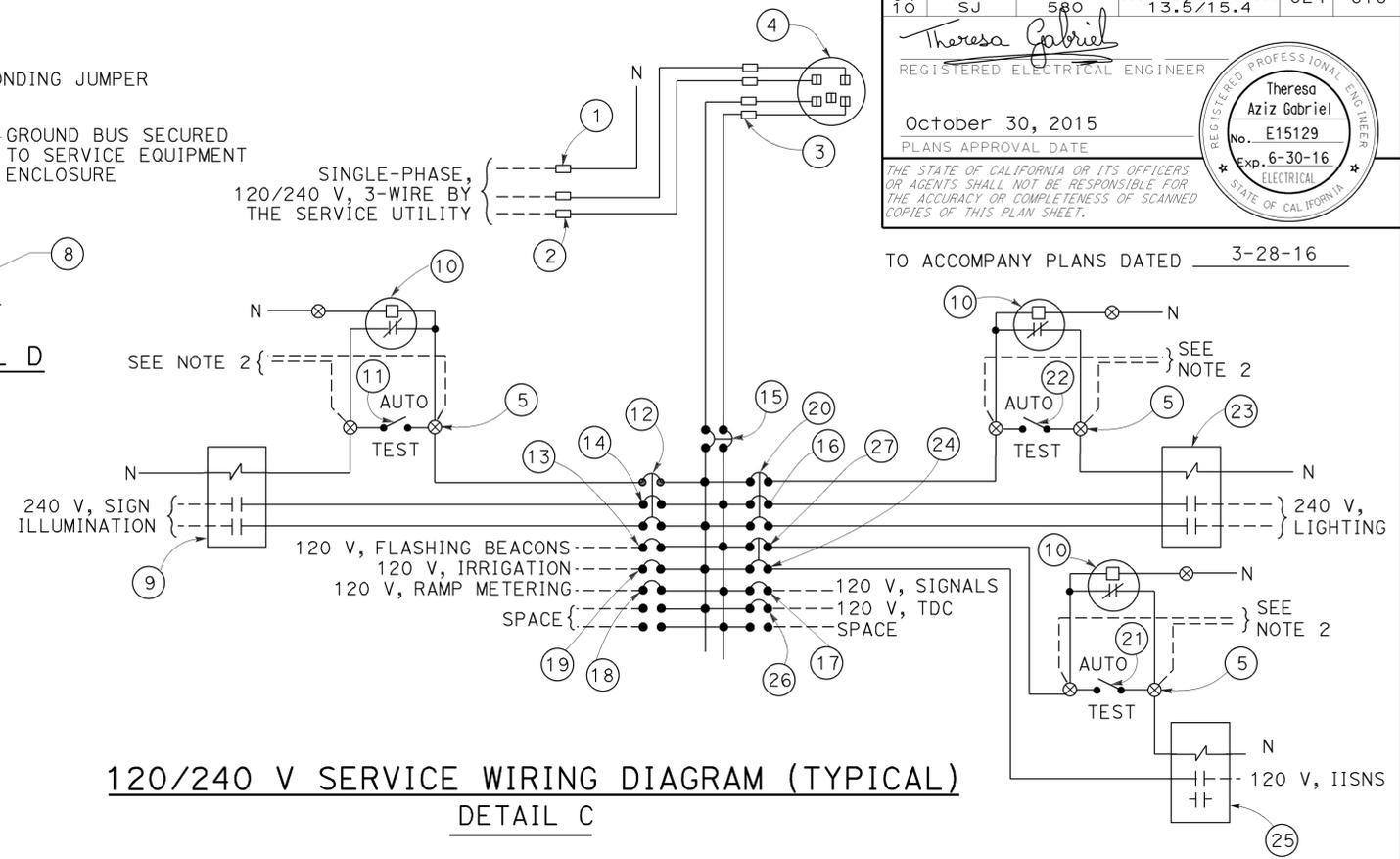
TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)
DETAIL A



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE
DETAIL B



DETAIL D



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

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG		⑭	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
②	LANDING LUG		⑮	100 A, 240 V, 2P, CB	MAIN BREAKER
③	TEST BYPASS FACILITY		⑯	30 A, 240 V, 2P, CB	LIGHTING
④	METER SOCKET AND SUPPORT		⑰	50 A, 120 V, 1P, CB	SIGNALS
⑤	TERMINAL BLOCKS		⑱	30 A, 120 V, 1P, CB	RAMP METERING
⑥	NEUTRAL BUS		⑲	20 A, 120 V, 1P, CB	IRRIGATION
⑦	GROUND BUS		⑳	15 A, 120 V, 1P, CB	LIGHTING CONTROL
⑧	GROUNDING ELECTRODE		㉑	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
⑨	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	㉒	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
⑩	PHOTOELECTRIC UNIT (NOTE 4)	PEU	㉓	60 A, 2P, NO CONTACTOR	LIGHTING
⑪	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH	㉔	15 A, 120 V, 1P, CB	IISNS
⑫	15 A, 120 V, 1P, CB	SIGN ILLUMINATION CONTROL	㉕	30 A, 2P, NO CONTACTOR	IISNS
⑬	15 A, 120 V, 1P, CB	FLASHING BEACON	㉖	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATON CABINET
			㉗	15 A, 120 V, 1P, CB	IISNS CONTROL

NOTES:

- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items ① and ⑥ shall be isolated from the service equipment enclosure.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.
- Item ⑫, ⑳ and ㉗ shall be ganged operated CB.

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

RSP ES-2D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2D DATED MAY 20, 2011 - PAGE 431 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2D

2010 REVISED STANDARD PLAN RSP ES-2D

NOTES:

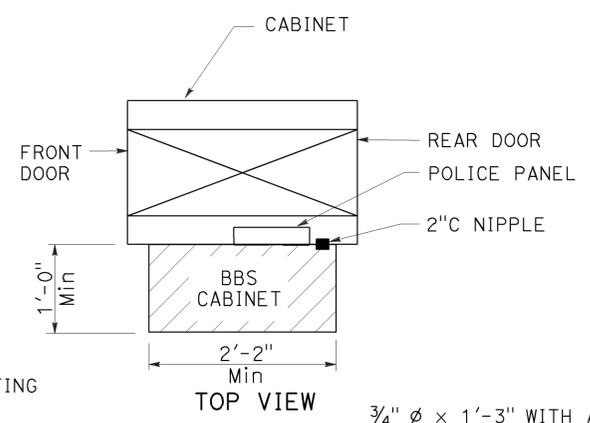
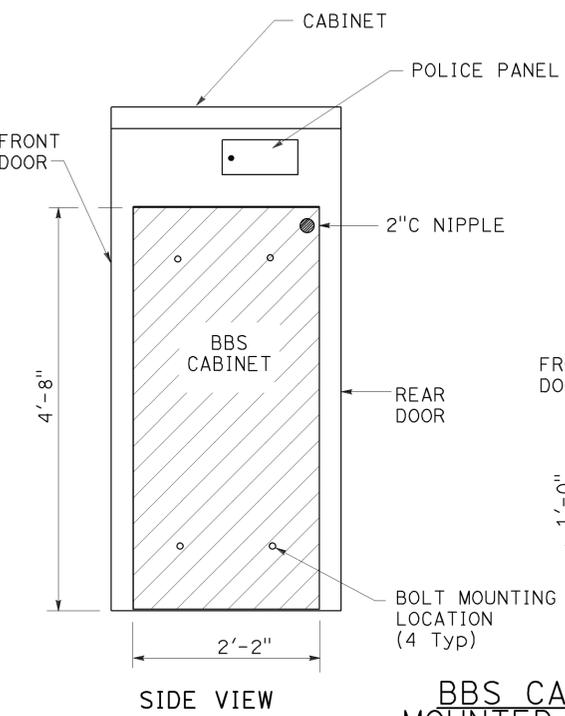
1. Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
2. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
3. Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
4. Telephone interconnect conductors shall be enclosed in a 3/4" or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	625	676
00	SJ	1580	26.1/30.3		

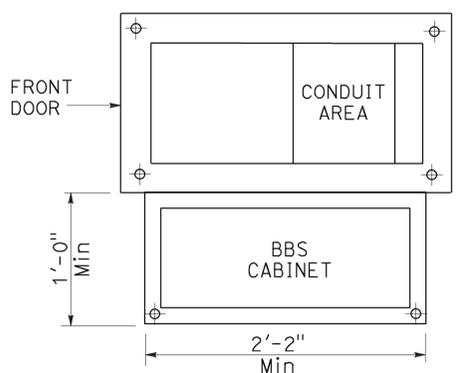
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 3-28-16



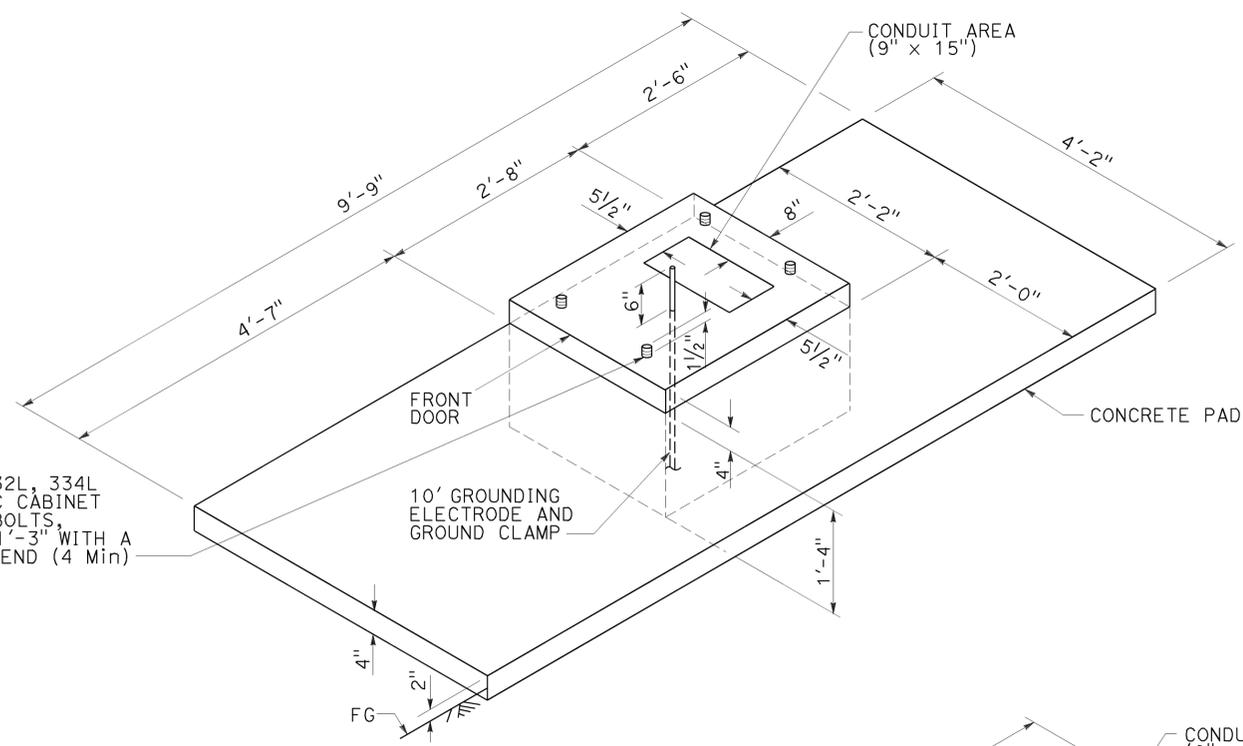
BBS CABINET MOUNTED TO THE MODEL 332L CABINET



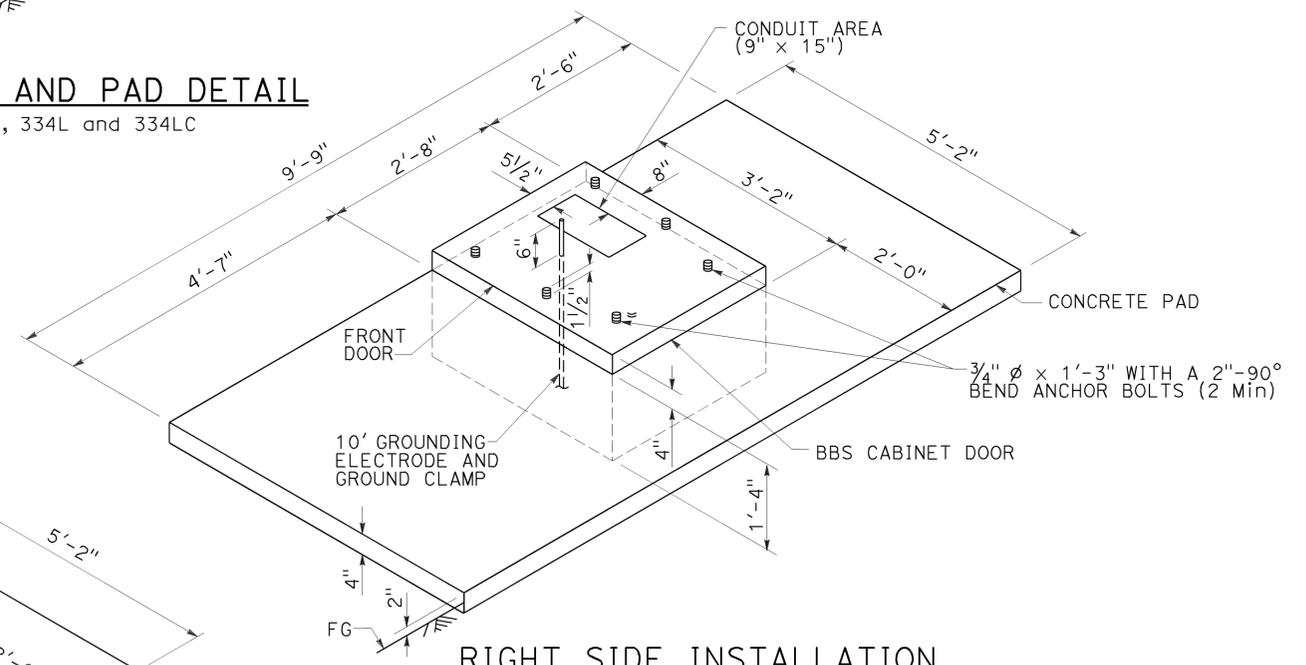
BASE PLAN FOR BBS MOUNTED TO THE MODEL 332L CABINET

(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

MODEL 332L, 334L OR 334LC CABINET ANCHOR BOLTS, 3/4" Ø x 1'-3" WITH A 2"-90° BEND (4 Min)

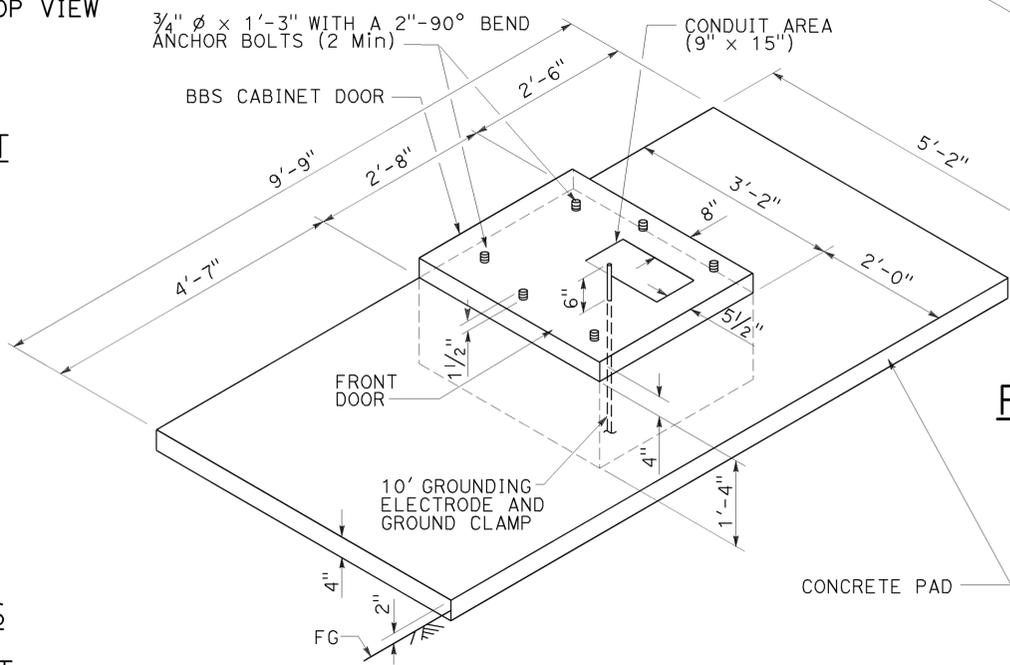


FOUNDATION AND PAD DETAIL
Model 332L, 334L and 334LC



RIGHT SIDE INSTALLATION DETAIL B

MODIFIED MODEL 332L CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM



LEFT SIDE INSTALLATION DETAIL A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET FOUNDATION AND PAD DETAILS)

NO SCALE

RSP ES-3C DATED APRIL 15, 2016 SUPERSEDES RSP ES-3C DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-3C DATED MAY 20, 2011 - PAGE 437 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-3C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	626	676
00	SJ	UNB80	13.571		

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 3-28-16

PLAN VIEW OF OTHER SIDE MOUNTINGS

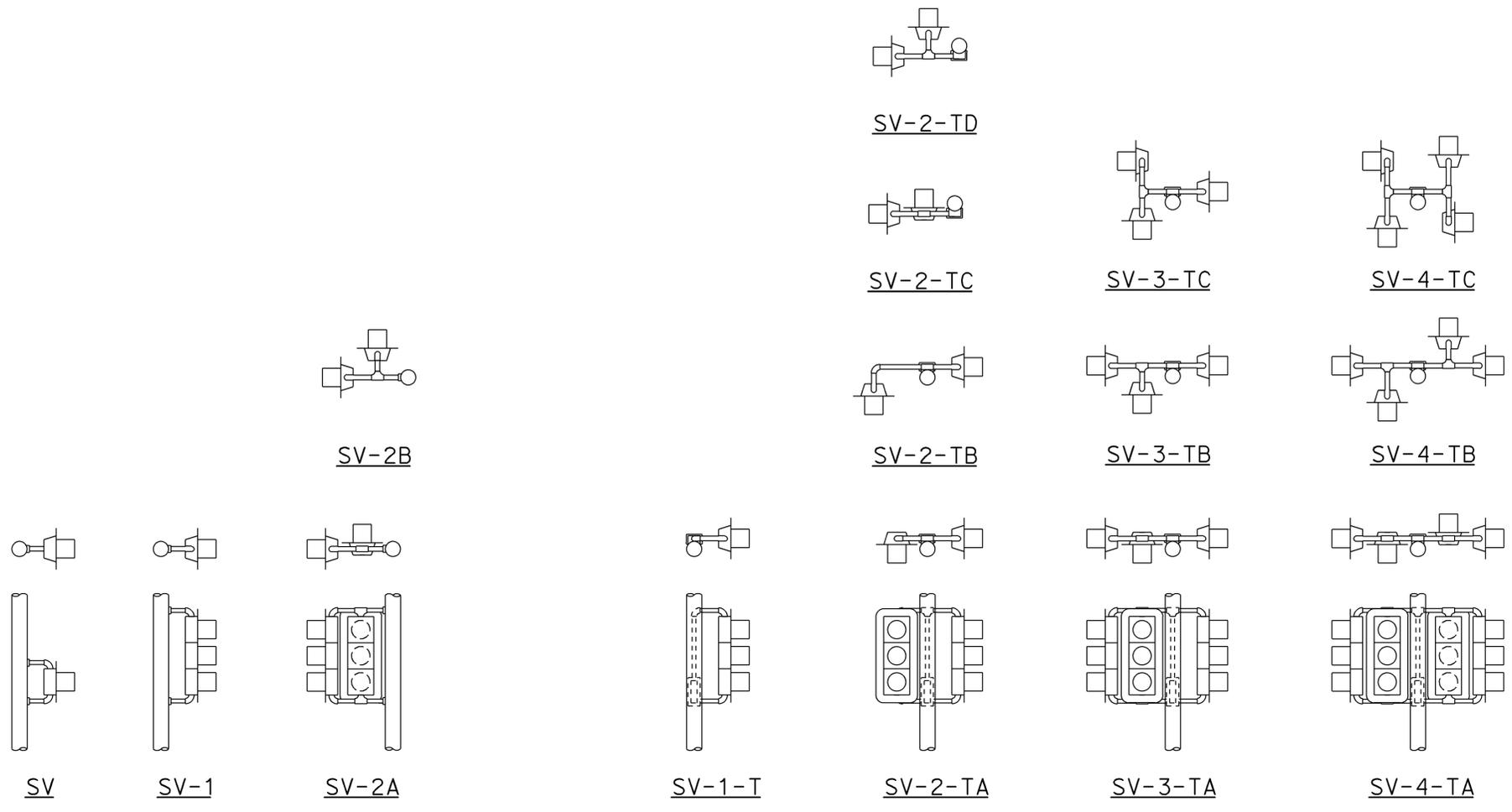
ABBREVIATIONS:

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

NOTES:

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

PLAN VIEW OF TOP MOUNTINGS



SIDE MOUNTINGS

TOP MOUNTINGS

**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4A

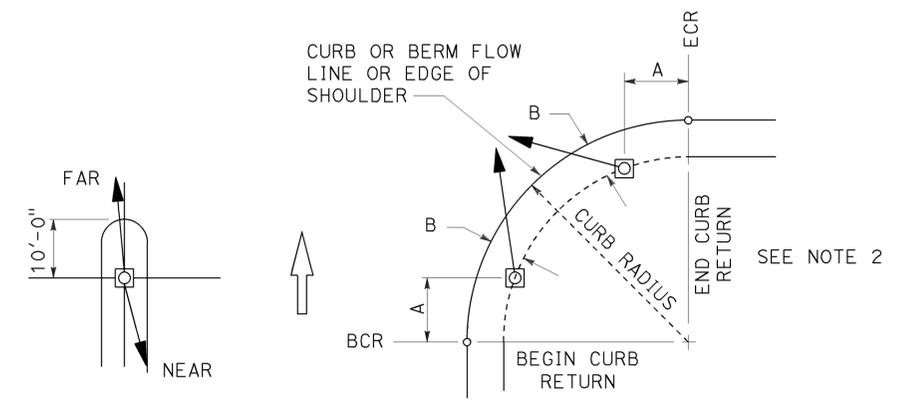
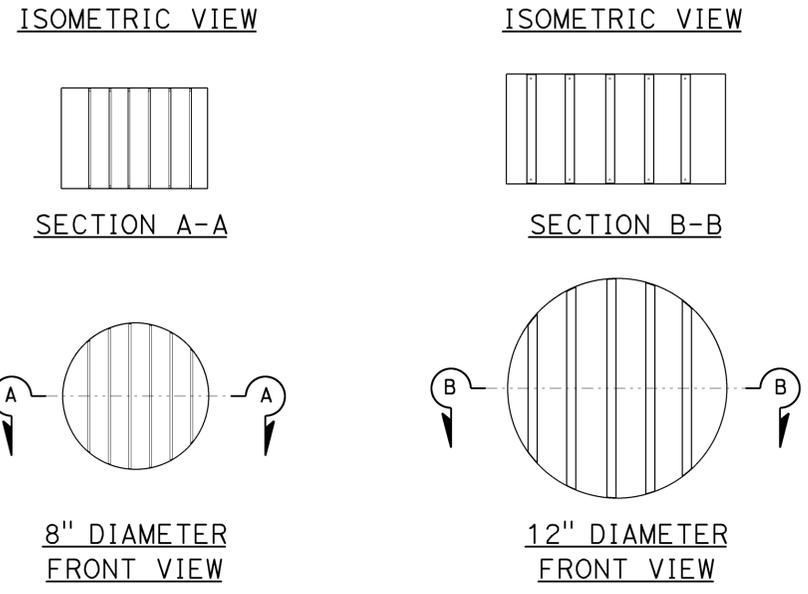
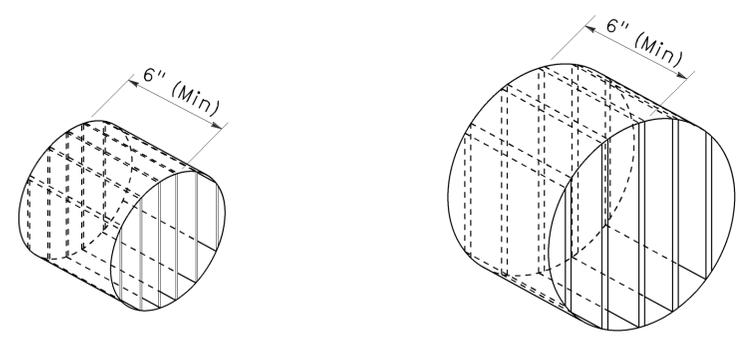
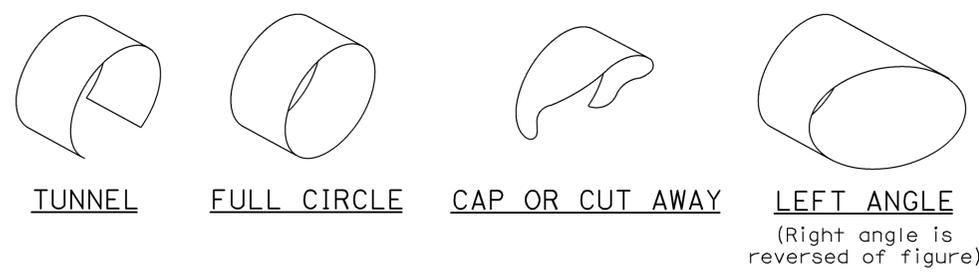
2010 REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alb	205	0.071	627	676
04	Alb	UNB80	0.071		
00	SJ	UNB80	13.5715.4		

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 3-28-16

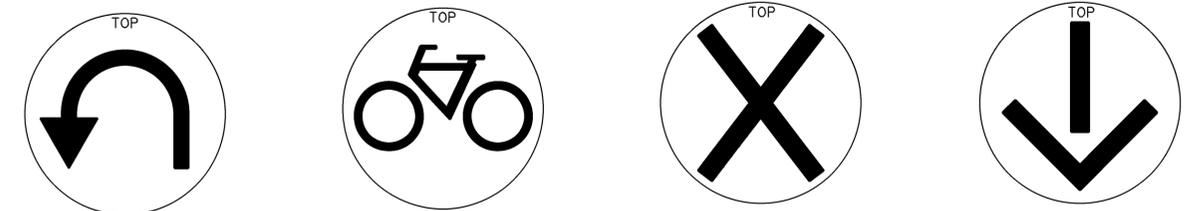
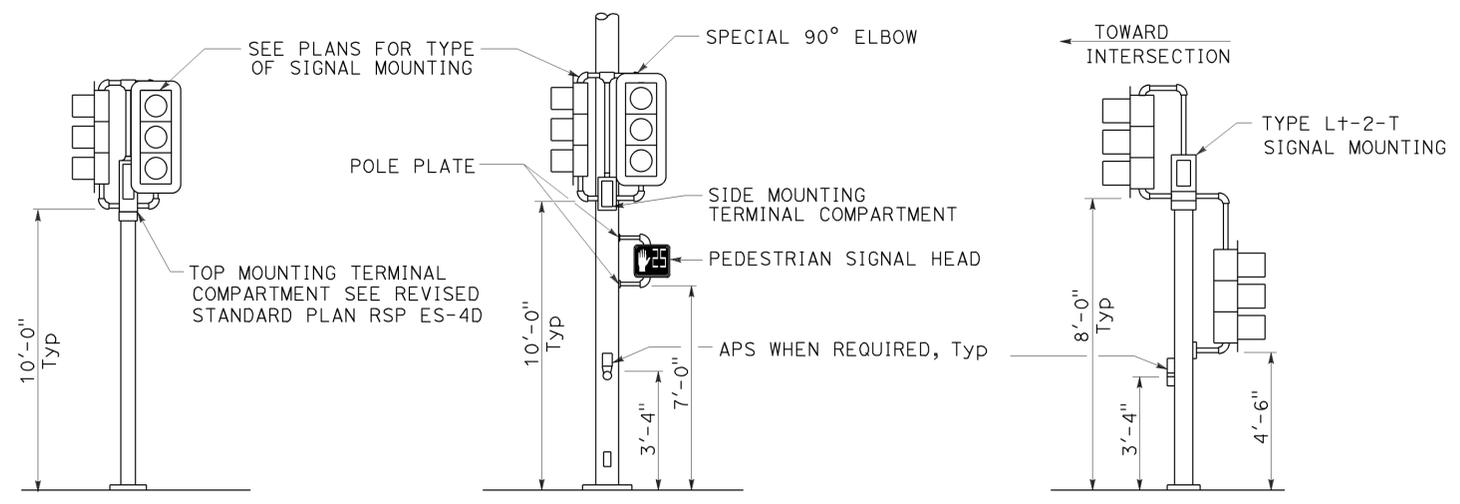


- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule.

DIRECTIONAL LOUVER

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

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4C

TYPICAL SIGNAL HEAD INSTALLATIONS

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

Normally used on standards with luminaire or signal mast arm

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

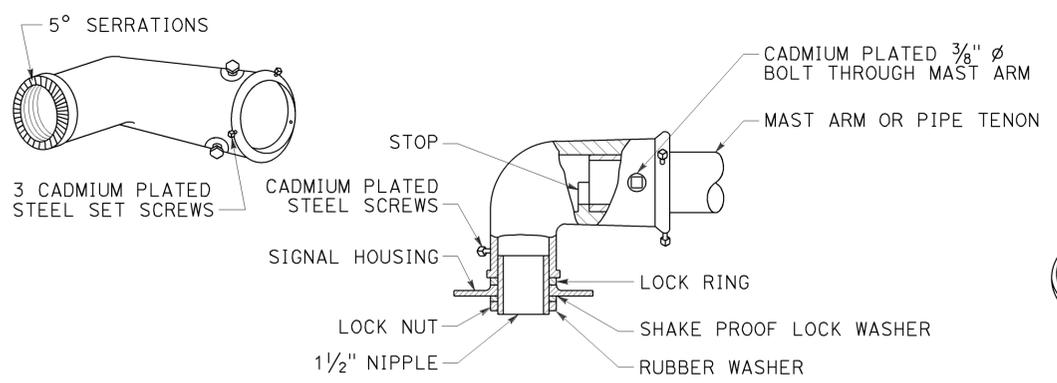
2010 REVISED STANDARD PLAN RSP ES-4C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	628	676
00	SJ	UNB80	13.5715.4		

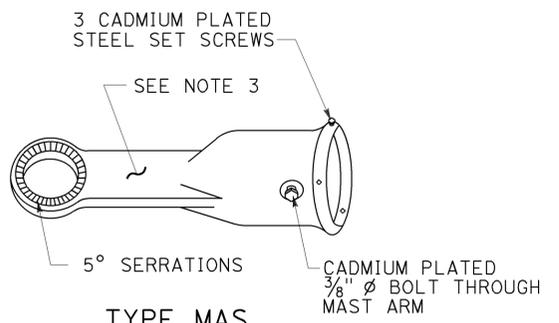
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



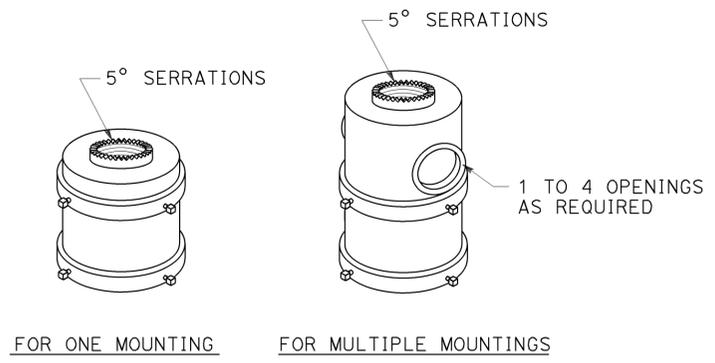
TO ACCOMPANY PLANS DATED 3-28-16



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

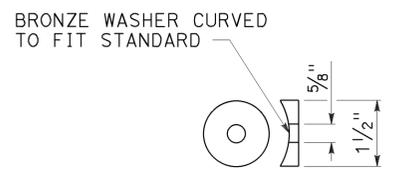


TYPE MAS
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.

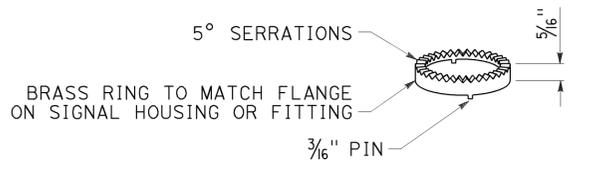


TOP MOUNTINGS
For 4 NPS pipe, see Note 2.

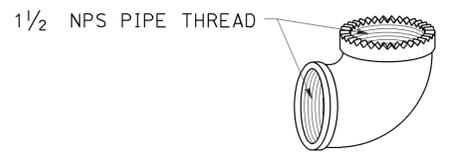
SIGNAL SLIP FITTERS



DETAIL C



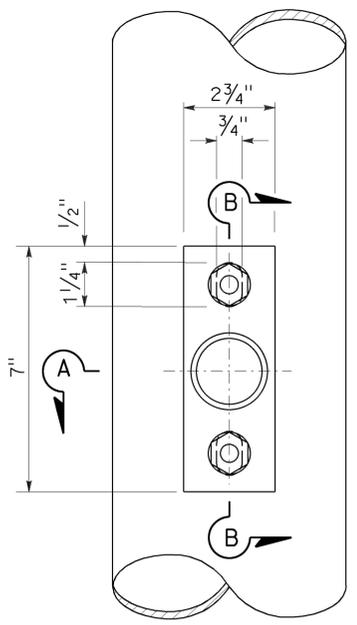
LOCK RING
Use where locking ring is not integral with signal housing or fitting.



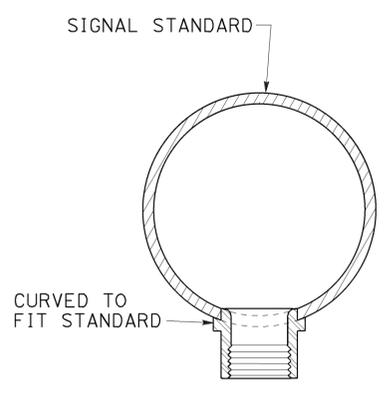
SPECIAL 90° ELBOW
One for each signal head, except those with special slip fitter mounting

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

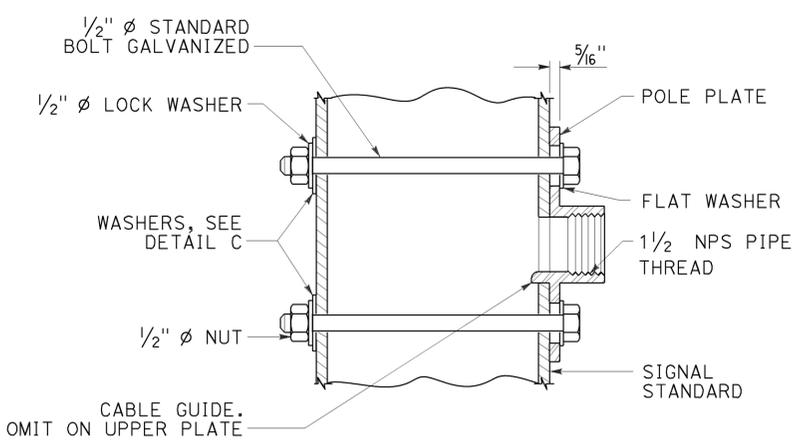
MISCELLANEOUS MOUNTING HARDWARE



TOP VIEW

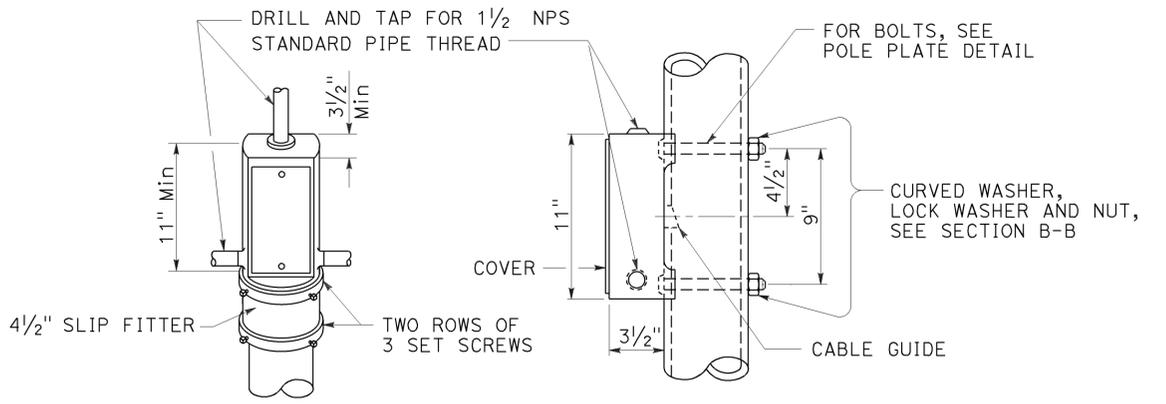


SECTION A-A



SECTION B-B

POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT



TOP MOUNTING

SIDE MOUNTING

TERMINAL COMPARTMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4D

2010 REVISED STANDARD PLAN RSP ES-4D

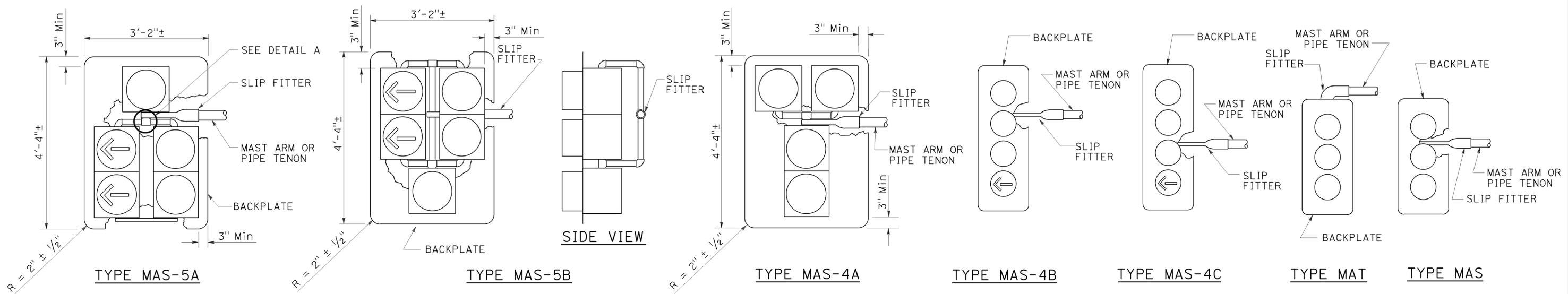
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	629	676
00	SJ	UNB80	0.0/71.0 13.5/15.4		

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

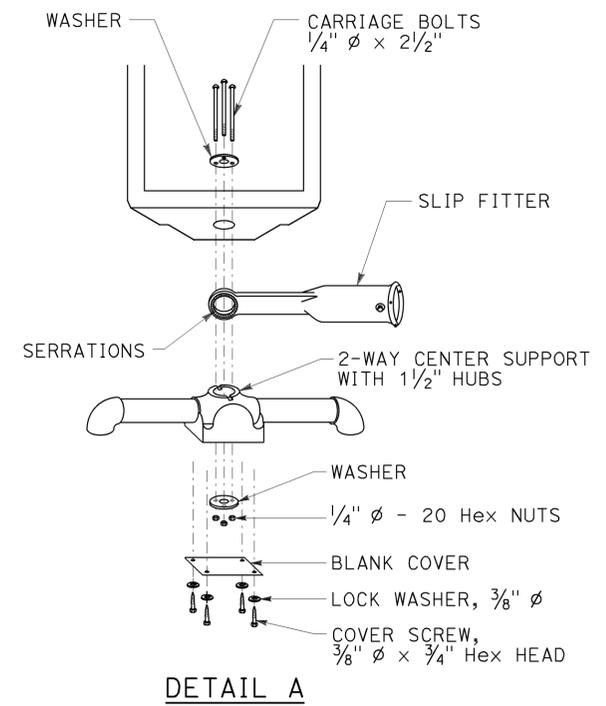
October 30, 2015
 PLANS APPROVAL DATE

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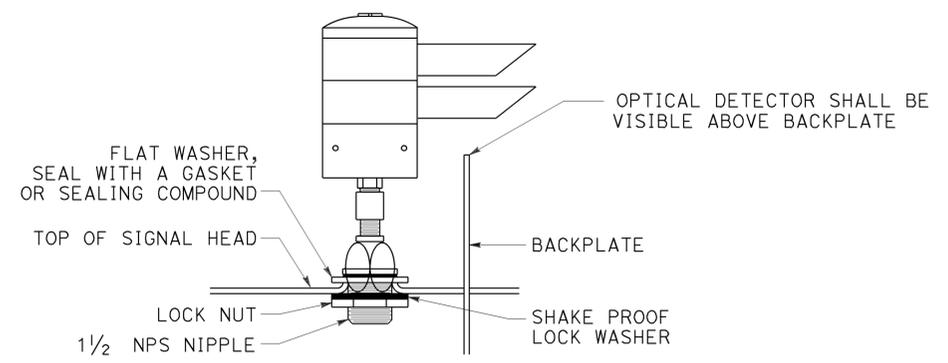
TO ACCOMPANY PLANS DATED 3-28-16



MAST ARM MOUNTINGS



DETAIL A



OPTICAL DETECTOR MOUNTING FOR EMERGENCY VEHICLE DETECTION

DETAIL B

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

NO SCALE

RSP ES-4E DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4E DATED JULY 19, 2013 AND STANDARD PLAN ES-4E DATED MAY 20, 2011 - PAGE 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	630	676
00	SJ	UNBID	13.5715.4		

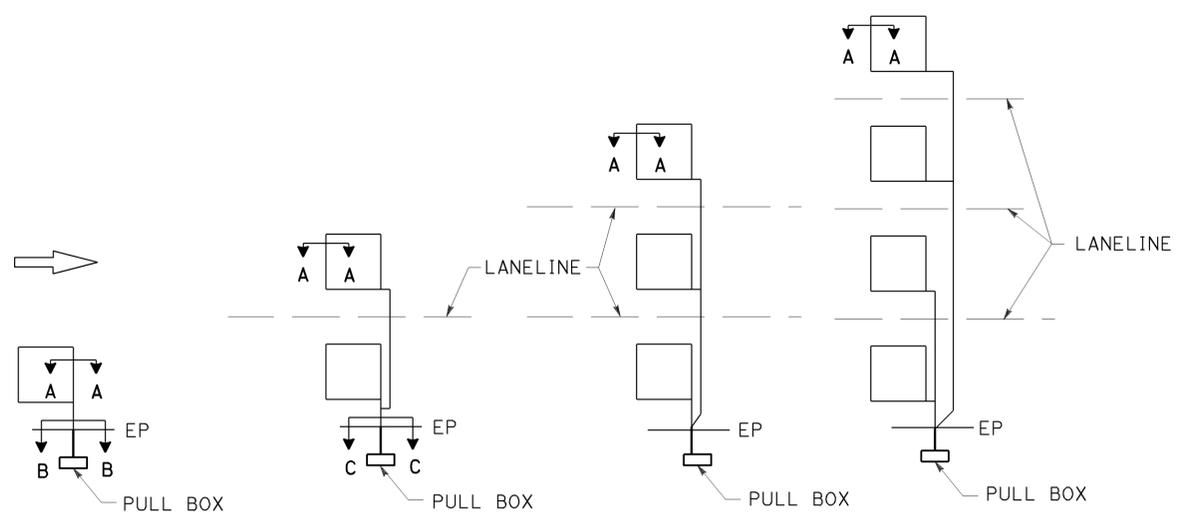
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

April 15, 2016
PLANS APPROVAL DATE

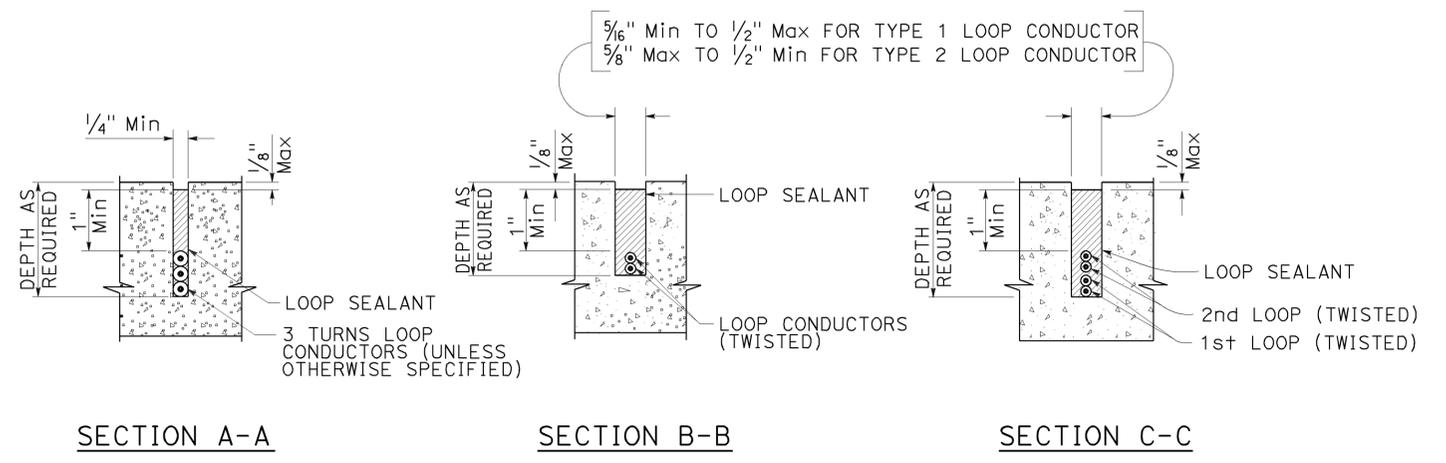
Theresa Aziz Gabriel
REGISTERED PROFESSIONAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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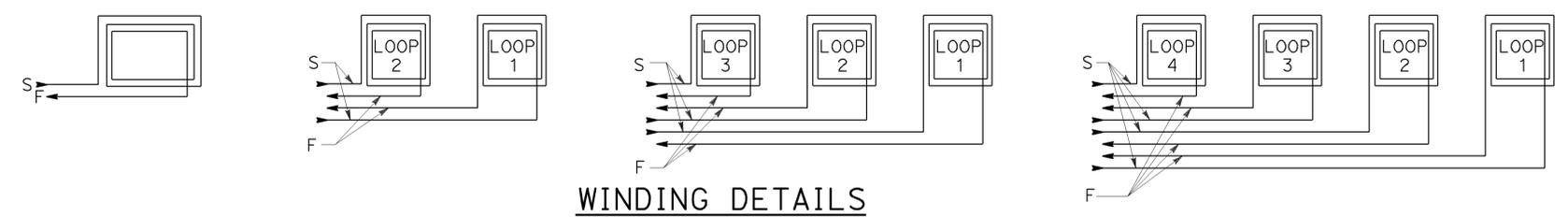
TO ACCOMPANY PLANS DATED 3-28-16



SAW CUT DETAILS
Type A loop detector configurations illustrated

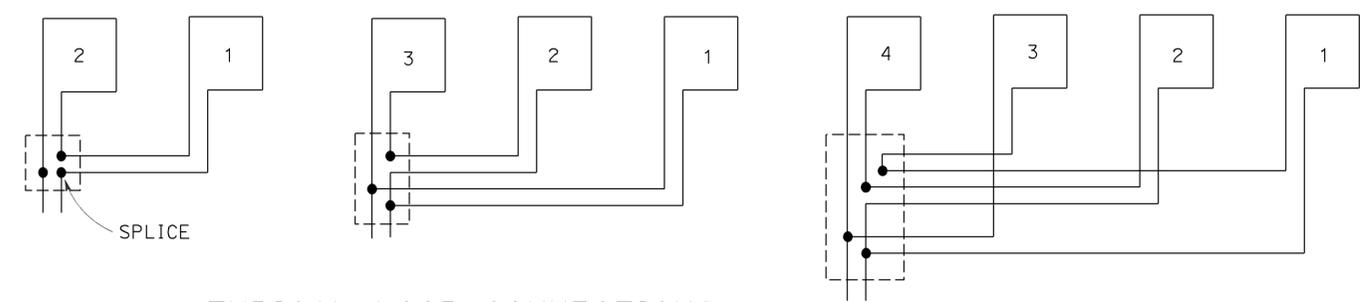


SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS

ABBREVIATIONS:
S - START
F - FINISH



TYPICAL LOOP CONNECTIONS
Dashed lines represent the pull box

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LOOP DETECTORS)**
NO SCALE

RSP ES-5A DATED APRIL 15, 2016 SUPERSEDES RSP ES-5A DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-5A DATED MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.

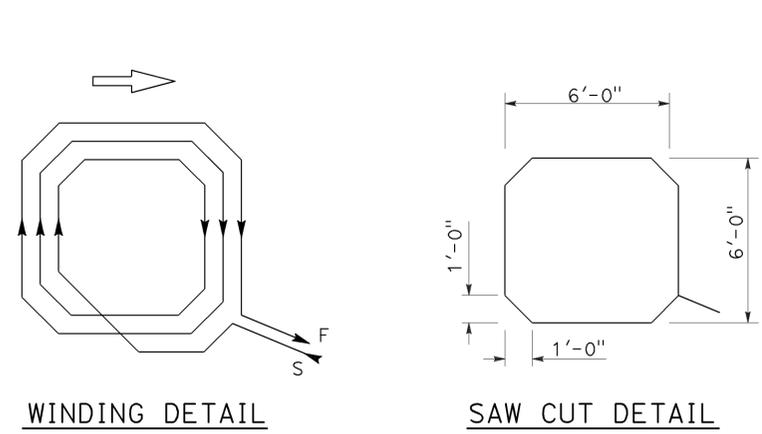
REVISED STANDARD PLAN RSP ES-5A

2010 REVISED STANDARD PLAN RSP ES-5A

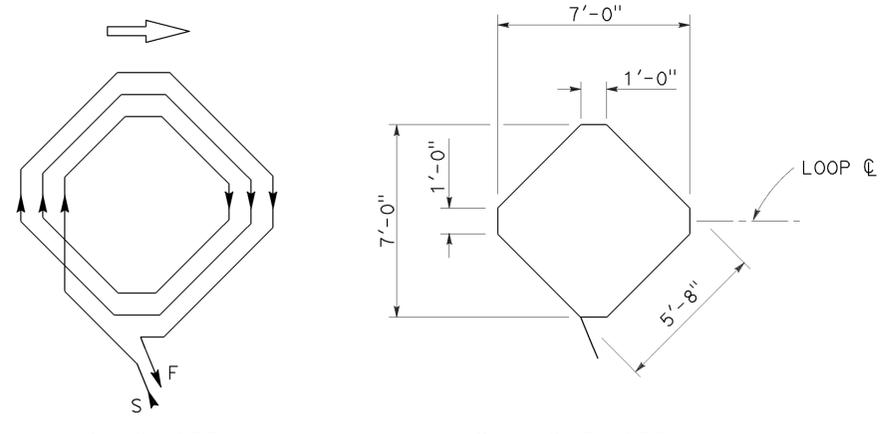
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alb	205	0.0/8.0	631	676
04	Alb	205	0.0/8.0	631	676
00	SJ	UNB	13.5/15.4		

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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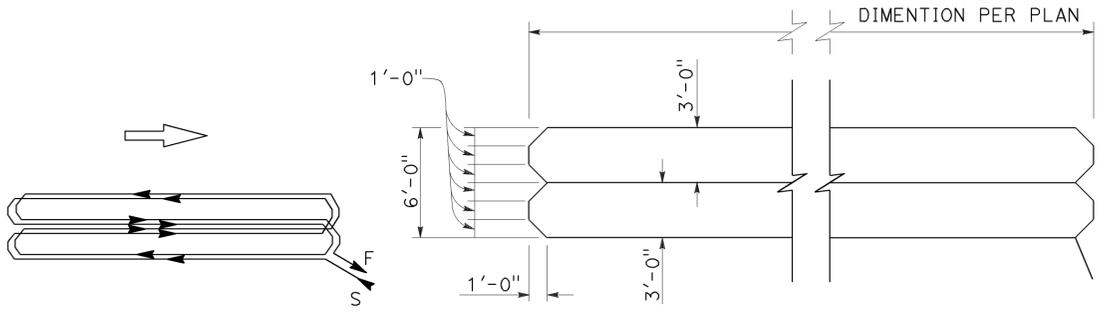
TO ACCOMPANY PLANS DATED 3-28-16



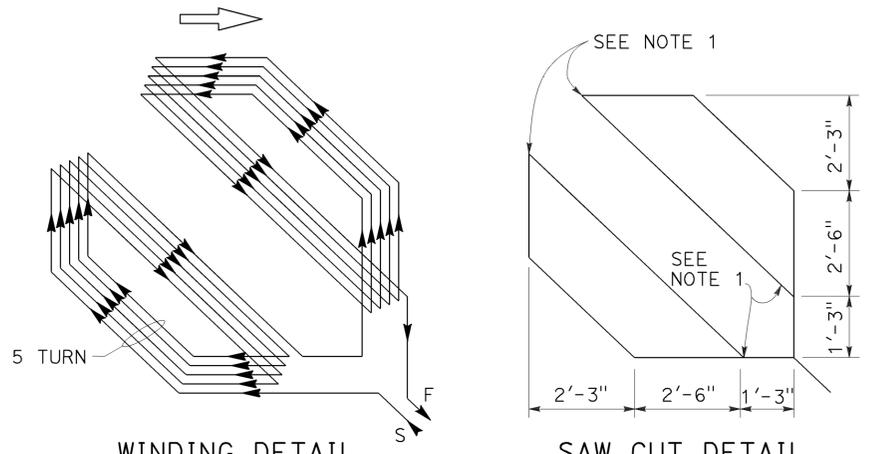
WINDING DETAIL SAW CUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



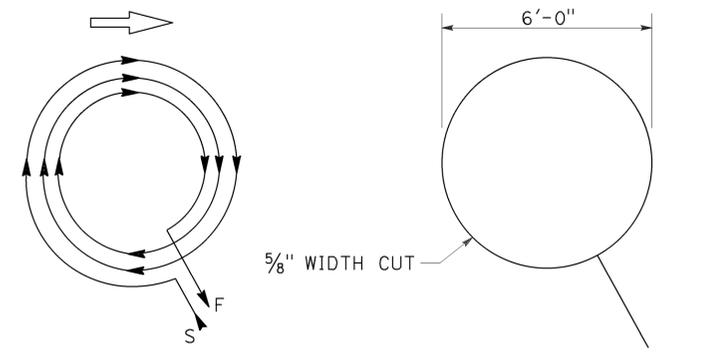
WINDING DETAIL SAW CUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



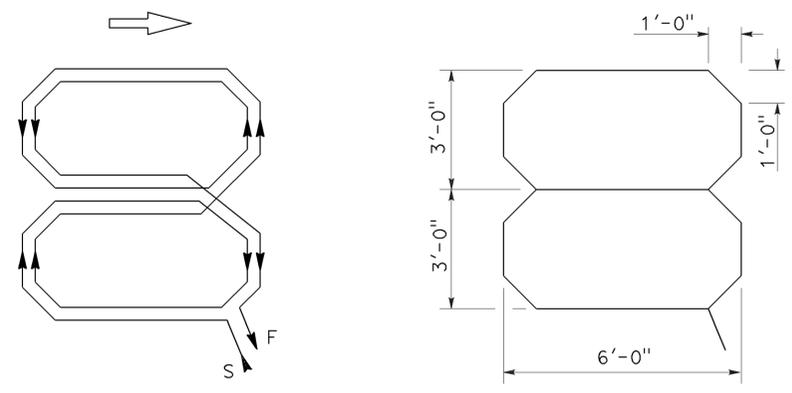
WINDING DETAIL SAW CUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



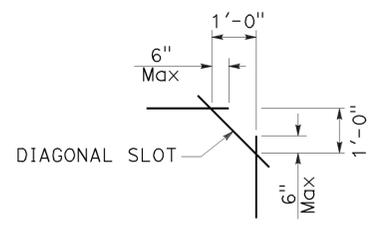
WINDING DETAIL SAW CUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL SAW CUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL SAW CUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (DETECTORS)**
 NO SCALE

- NOTES:**
1. Round corners of acute angle saw cuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.
 3. Use Type D loops for limit line detection and bicycle lanes.

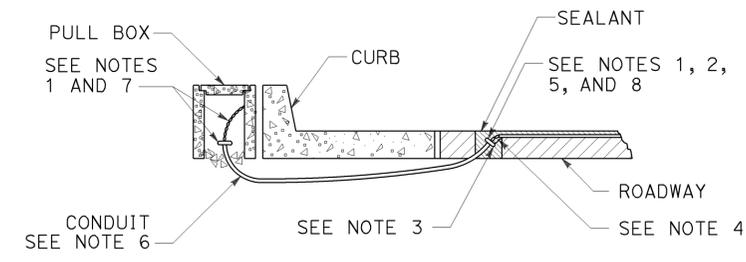
RSP ES-5B DATED APRIL 15, 2016 SUPERSEDES RSP ES-5B DATED OCTOBER 30, 2015 AND RSP ES-5B DATED JULY 19, 2013 AND STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-5B

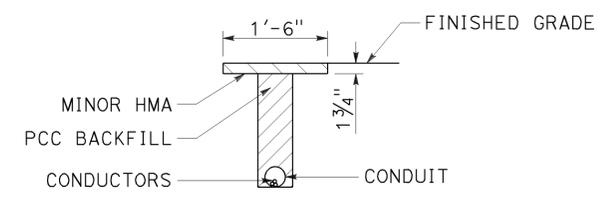
Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	TOTAL PROJECT	No.	SHEETS
90	SJ	UNB80	0.0/8.0, 26.1/30.3	632	676
			13.5/15.4		
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER Theresa Aziz Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					
October 30, 2015					
PLANS APPROVAL 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 3-28-16

2010 REVISED STANDARD PLAN RSP ES-5D

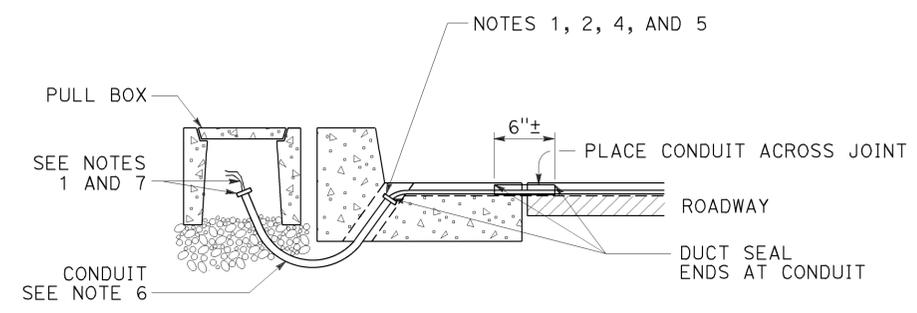


TYPE A
CURB TERMINATION DETAIL

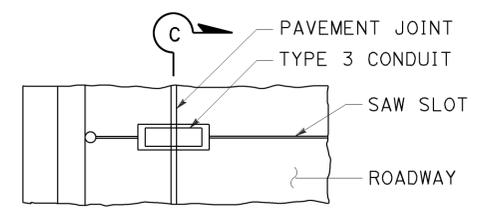


"T" TRENCH
DETAIL T

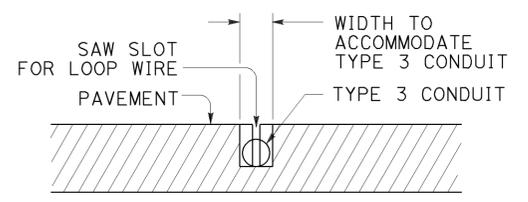
5/16" x 1 1/2" SCREW (BRASS, STAINLESS STEEL OR OTHER NON-CORRODING MATERIAL)



CROSS SECTION

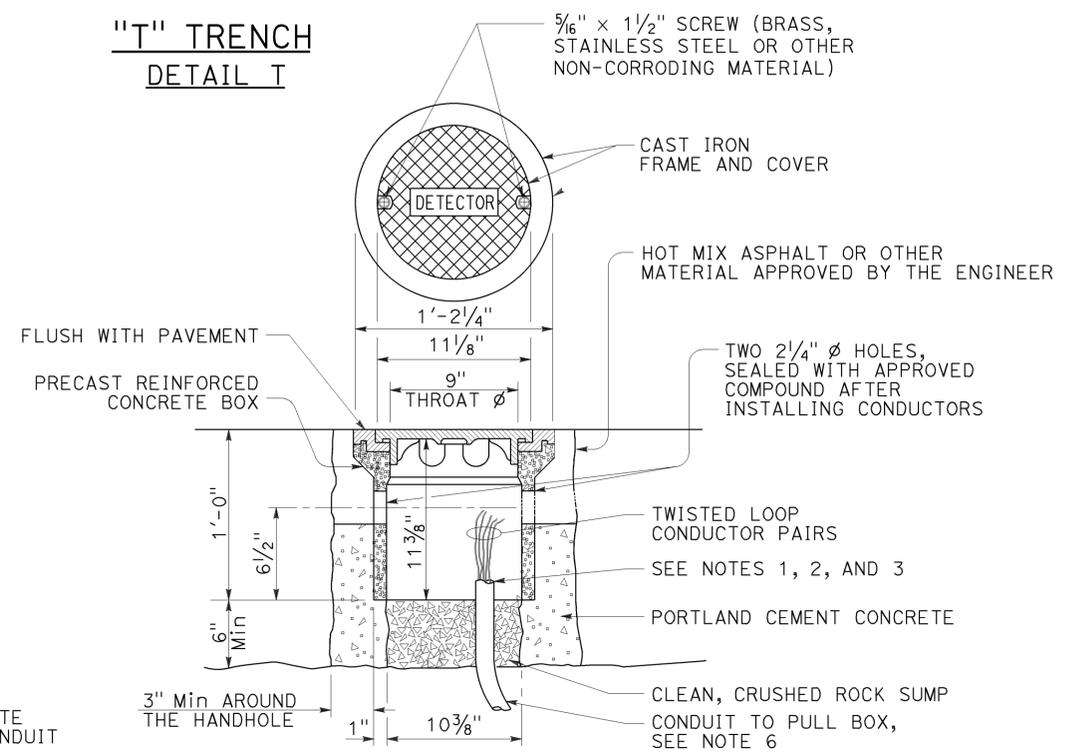


PLAN VIEW

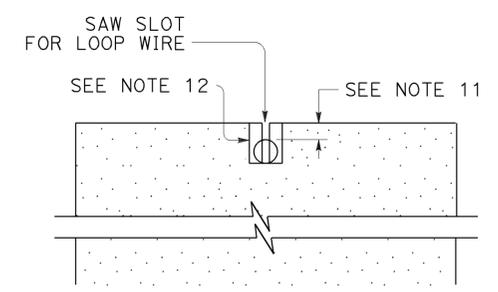


SECTION C-C

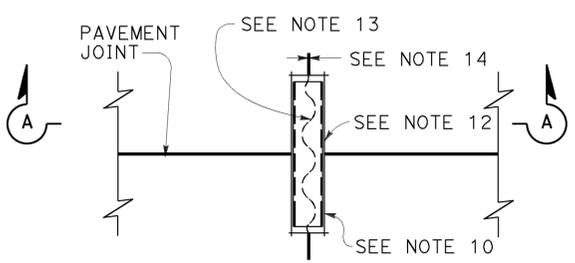
TYPE B
CURB TERMINATION DETAIL



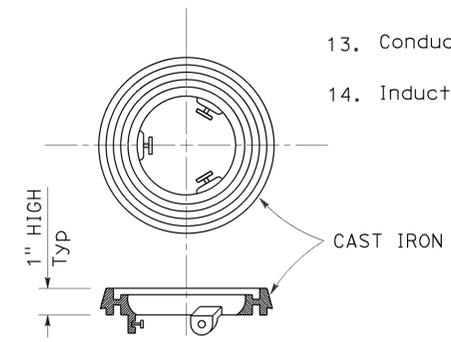
DETECTOR HANDHOLE DETAIL



SECTION A-A



PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING

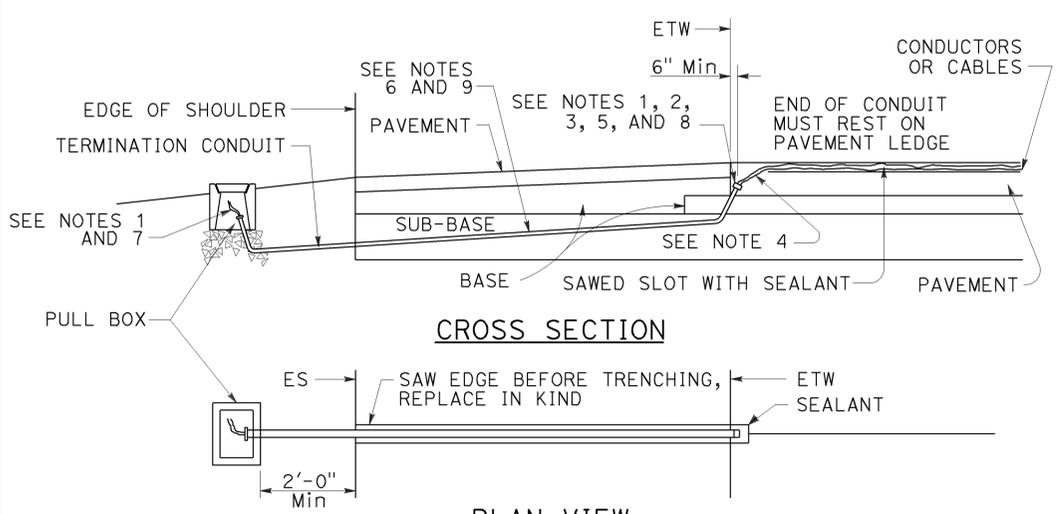
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(CURB AND SHOULDER TERMINATION,
TRENCH, AND HANDHOLE DETAILS)

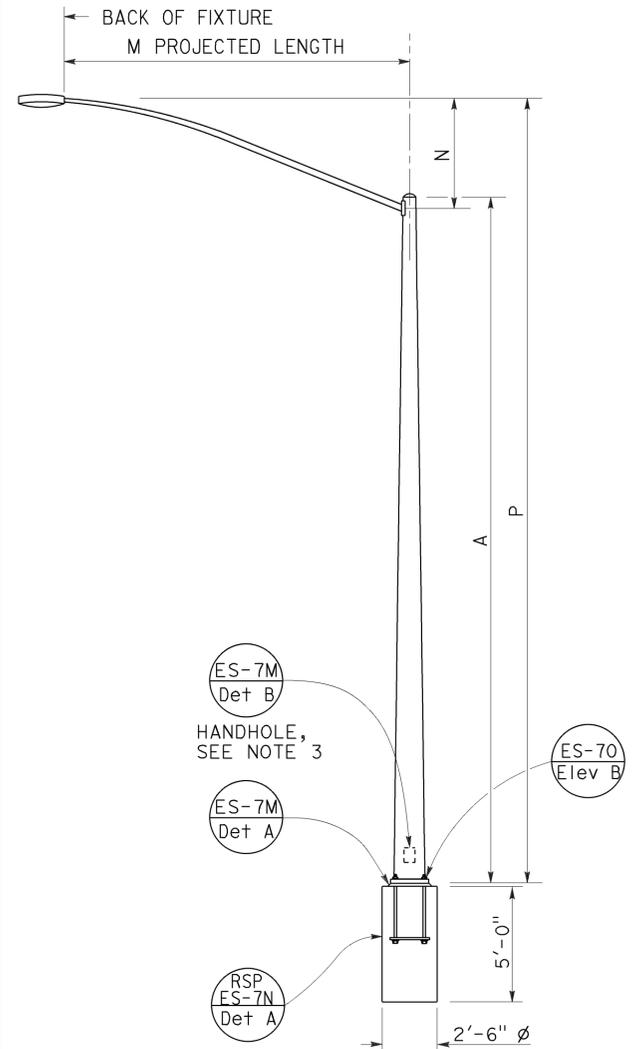
NO SCALE

RSP ES-5D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5D DATED JULY 19, 2013 AND STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

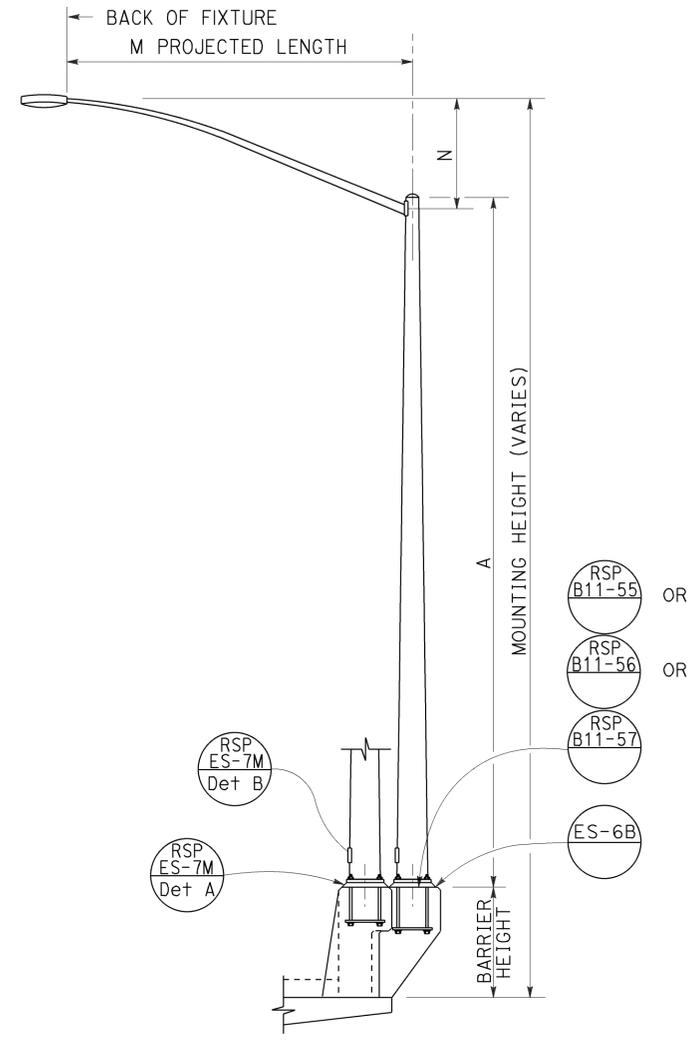
REVISED STANDARD PLAN RSP ES-5D



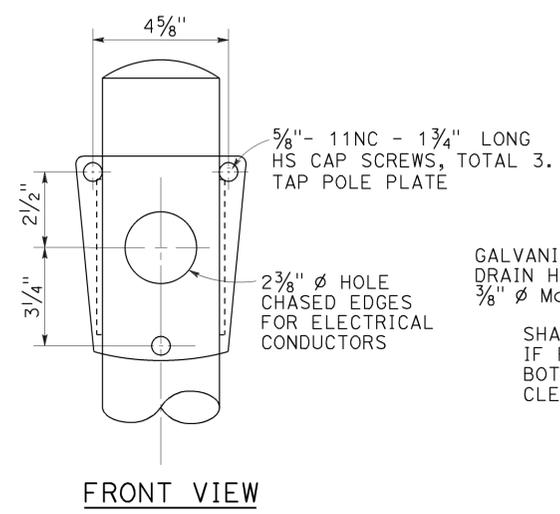
CROSS SECTION
PLAN VIEW
SHOULDER TERMINATION DETAILS



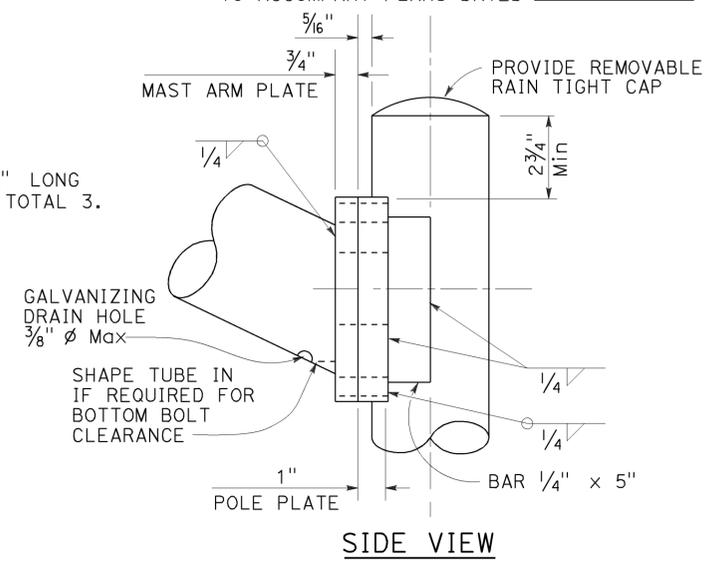
**TYPE 15 AND TYPE 21
ELEVATION A**



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

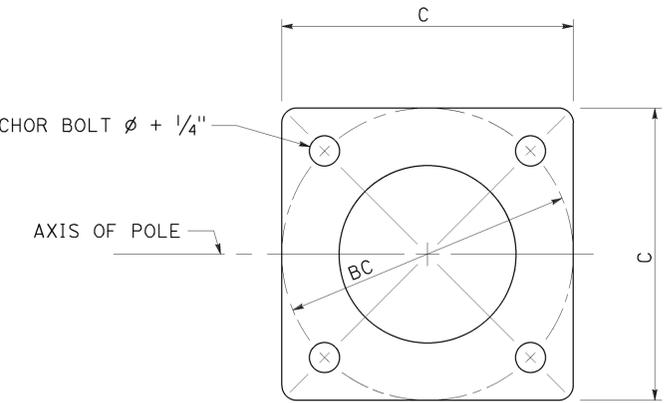


FRONT VIEW



SIDE VIEW

**LUMINAIRE MAST ARM CONNECTION
DETAIL R**



**BASE PLATE
DETAIL A**

POLE TYPE	POLE DATA			BASE PLATE DATA			
	A HEIGHT	Min OD BASE	WALL THICKNESS TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE
15	30'-0"	8"	3 11/16"	1'-0"	1'-0"	2"	1" ϕ x 3'-0" *
21	35'-0"	8 5/8"	3 3/16"	1'-0"	1'-0"	2"	1 1/4" ϕ x 3'-0" *

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

LUMINAIRE MAST ARM DATA					
M PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15	TYPE 21
6'-0"	2'-0" \pm	3 1/4"	0.1196"	31'-6" \pm	36'-6" \pm
8'-0"	2'-6" \pm	3 1/2"		32'-0" \pm	37'-0" \pm
10'-0"	3'-3" \pm	3 3/8"		32'-9" \pm	37'-9" \pm
12'-0"	4'-3" \pm	3 7/8"		33'-9" \pm	38'-9" \pm
15'-0"	4'-9" \pm	4 1/4"		34'-3" \pm	39'-3" \pm

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

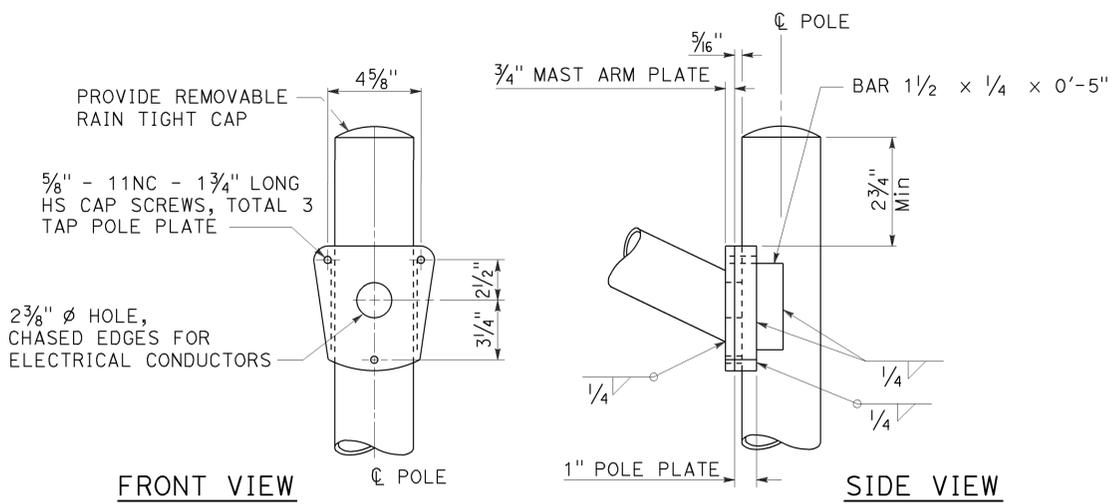
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 15 AND 21)**

NO SCALE

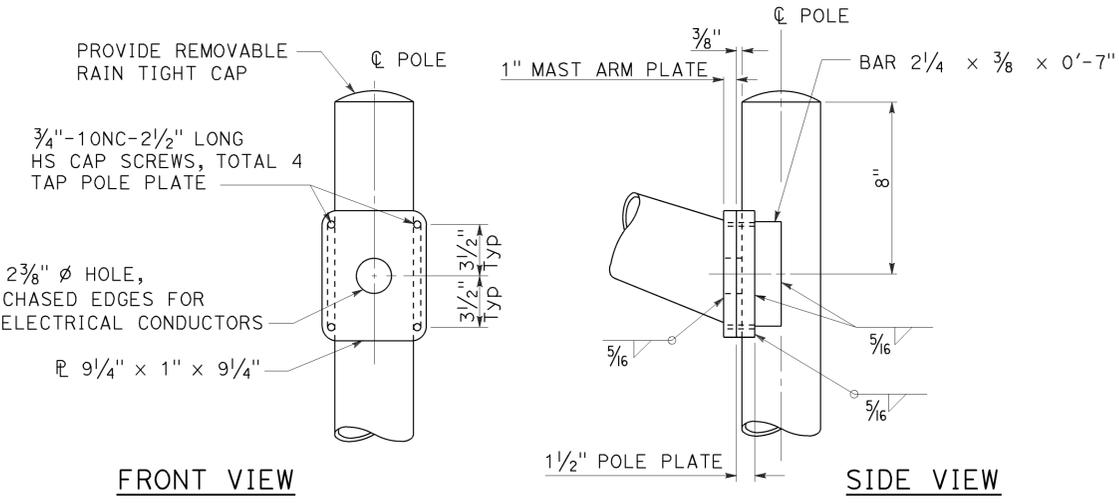
RSP ES-6A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6A DATED MAY 20, 2011 - PAGE 452 OF THE STANDARD PLANS BOOK DATED 2010.

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 3/4"	38'-0"±
* 12'-0"		4 1/4"	39'-0"±
** 20'-0"	0.1793"	5"	37'-0"±

* TYPE 30
 ** TYPE 31



**TYPE 30
DETAIL A**

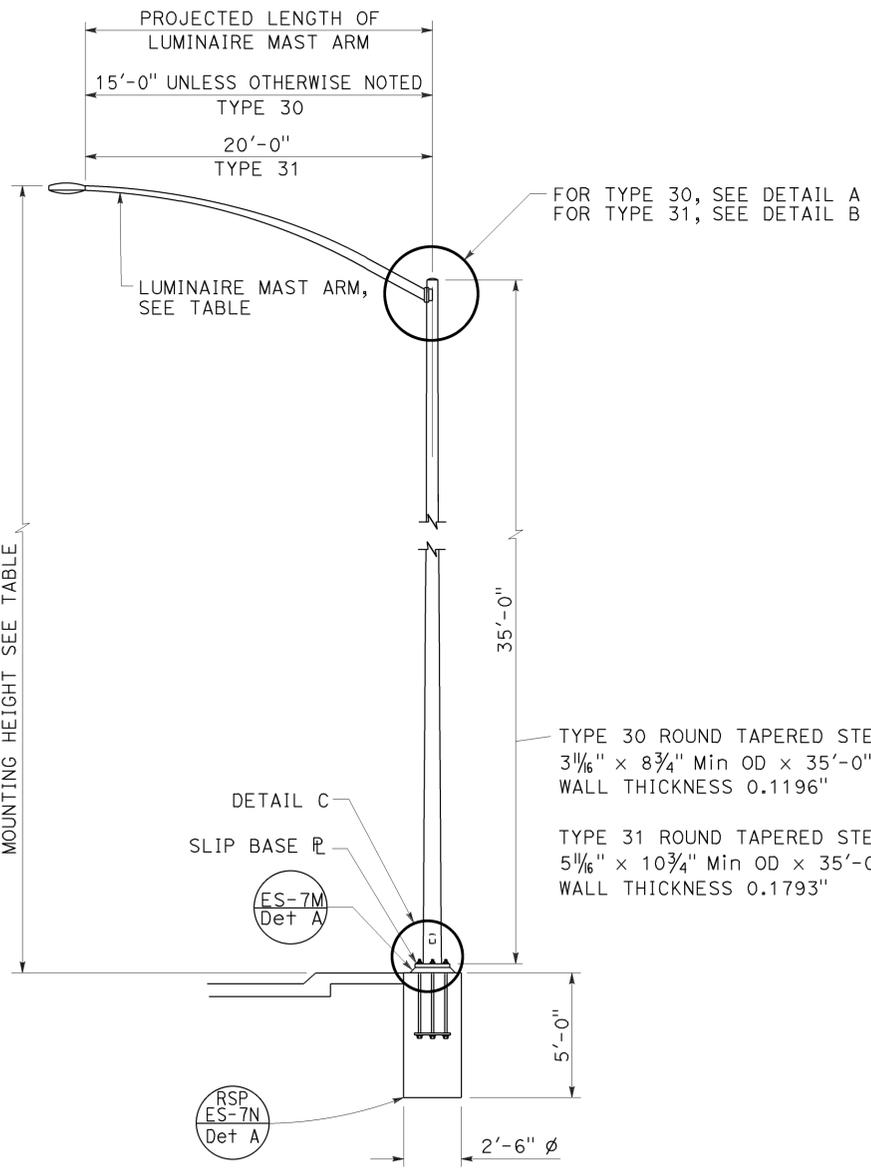


**TYPE 31
DETAIL B**

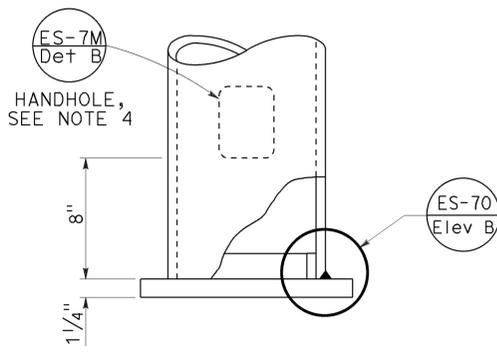
NOTES:

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 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.

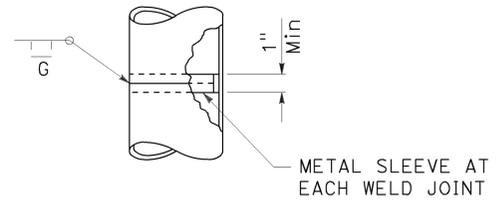
TO ACCOMPANY PLANS DATED 3-28-16



ELEVATION A



DETAIL C



POLE SPLICE

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD,
 TYPES 30 AND 31)**

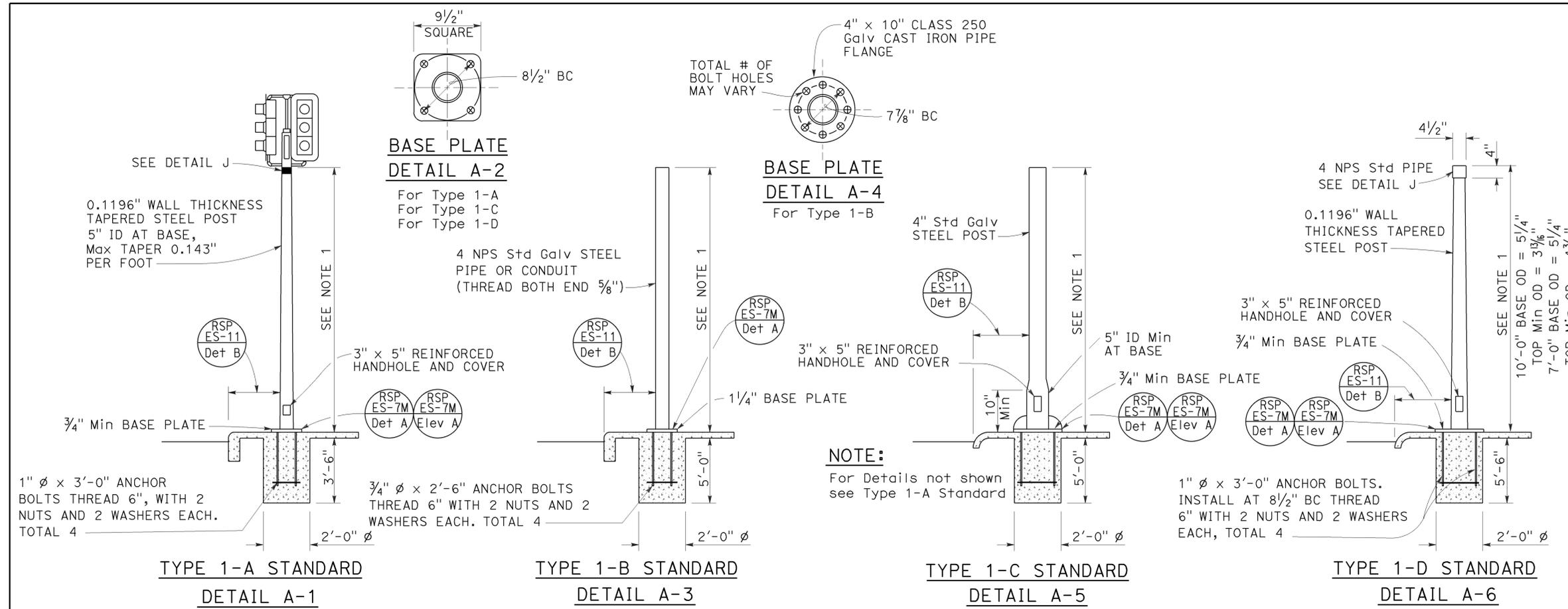
NO SCALE

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

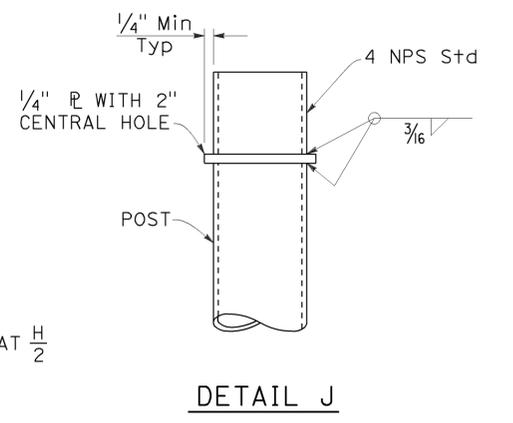
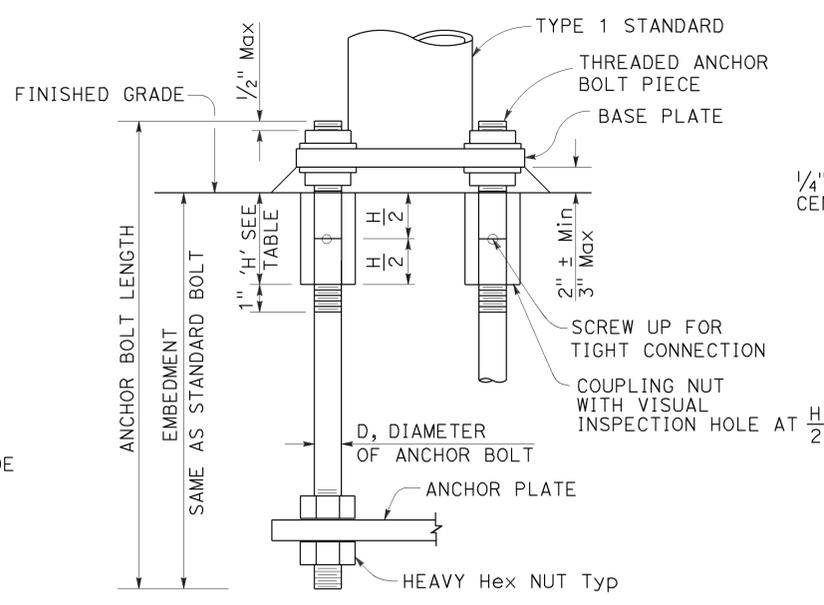
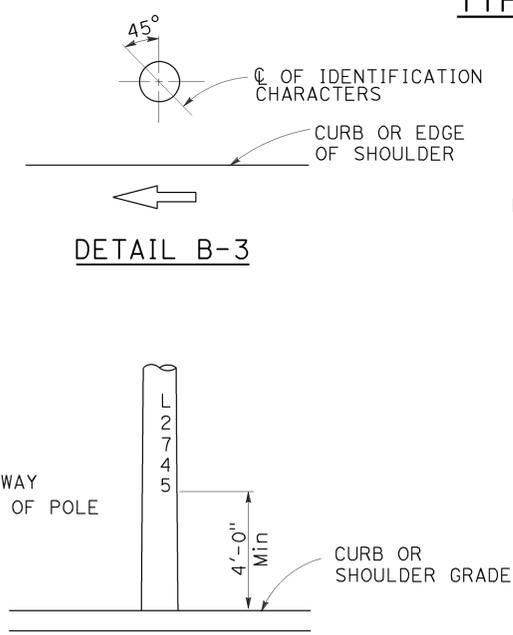
2010 REVISED STANDARD PLAN RSP ES-6E

TO ACCOMPANY PLANS DATED 3-28-16

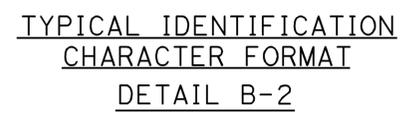
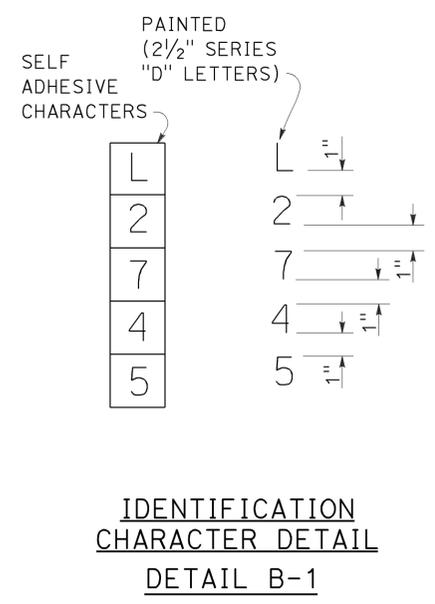
- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless shorter pole is noted on project plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
 - Anchor bolts shall be bonded to conduit or grounding conductor.
 - For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
 - Pour foundation concrete against undisturbed soil.
 - For standards with handhole, locate in the downstream side of traffic.
 - Coupling nuts to be used only when shown or specified on project plans.



**TYPE 1 SIGNAL STANDARDS
DETAIL A**



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



**LOCATION OF EQUIPMENT IDENTIFICATION CHARACTERS
ON STANDARDS AND POSTS**

DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE
RSP ES-7B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7B DATED MAY 20, 2011 - PAGE 463 OF THE STANDARD PLANS BOOK DATED 2010.

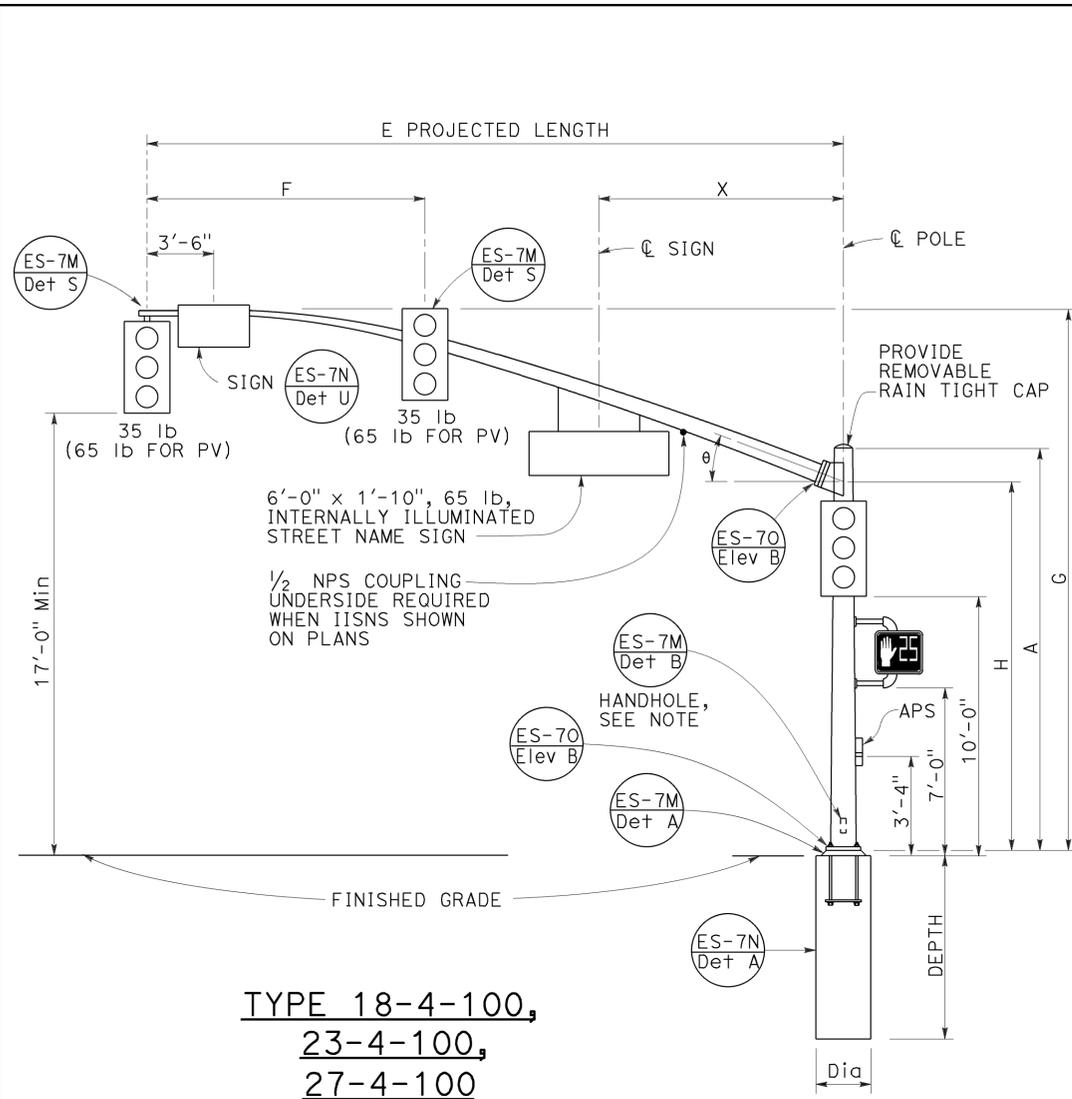
2010 REVISED STANDARD PLAN RSP ES-7B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	637	676
10	SJ	1880	0.0/26.0		
			13.5/18.4		

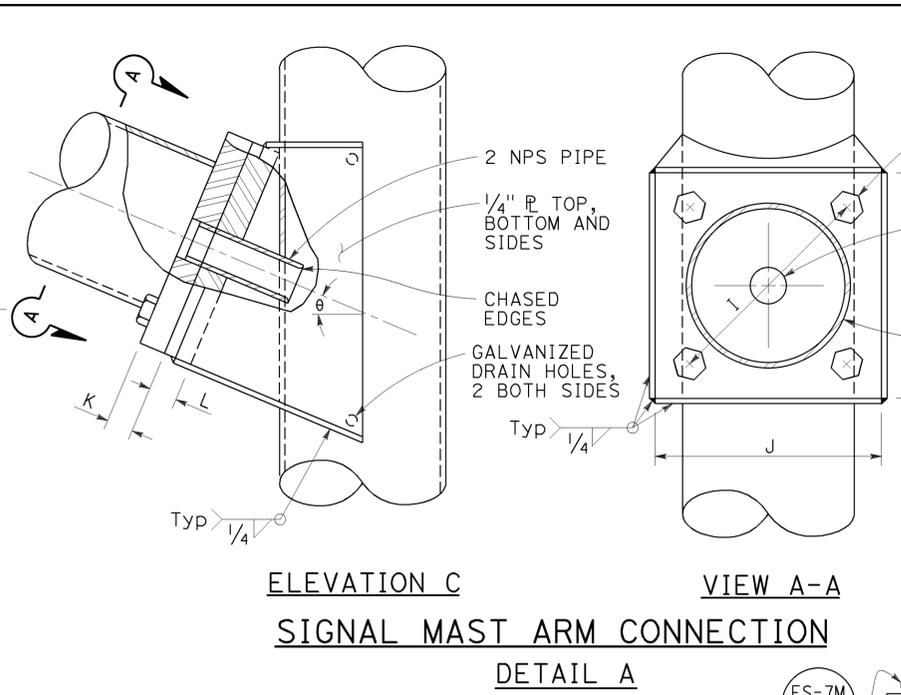
October 30, 2015
PLANS APPROVAL DATE

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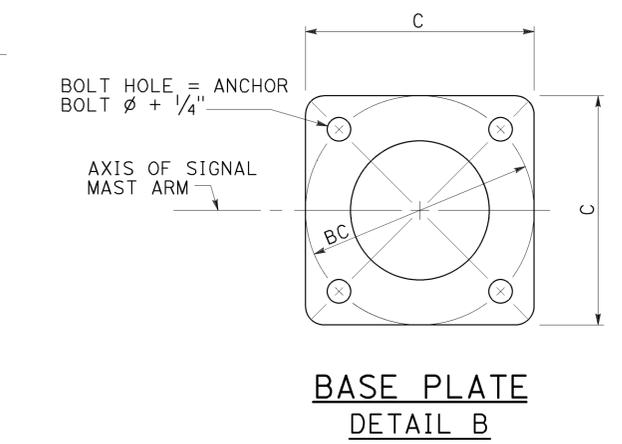
TO ACCOMPANY PLANS DATED 3-28-16



**TYPE 18-4-100,
23-4-100,
27-4-100
ELEVATION A**

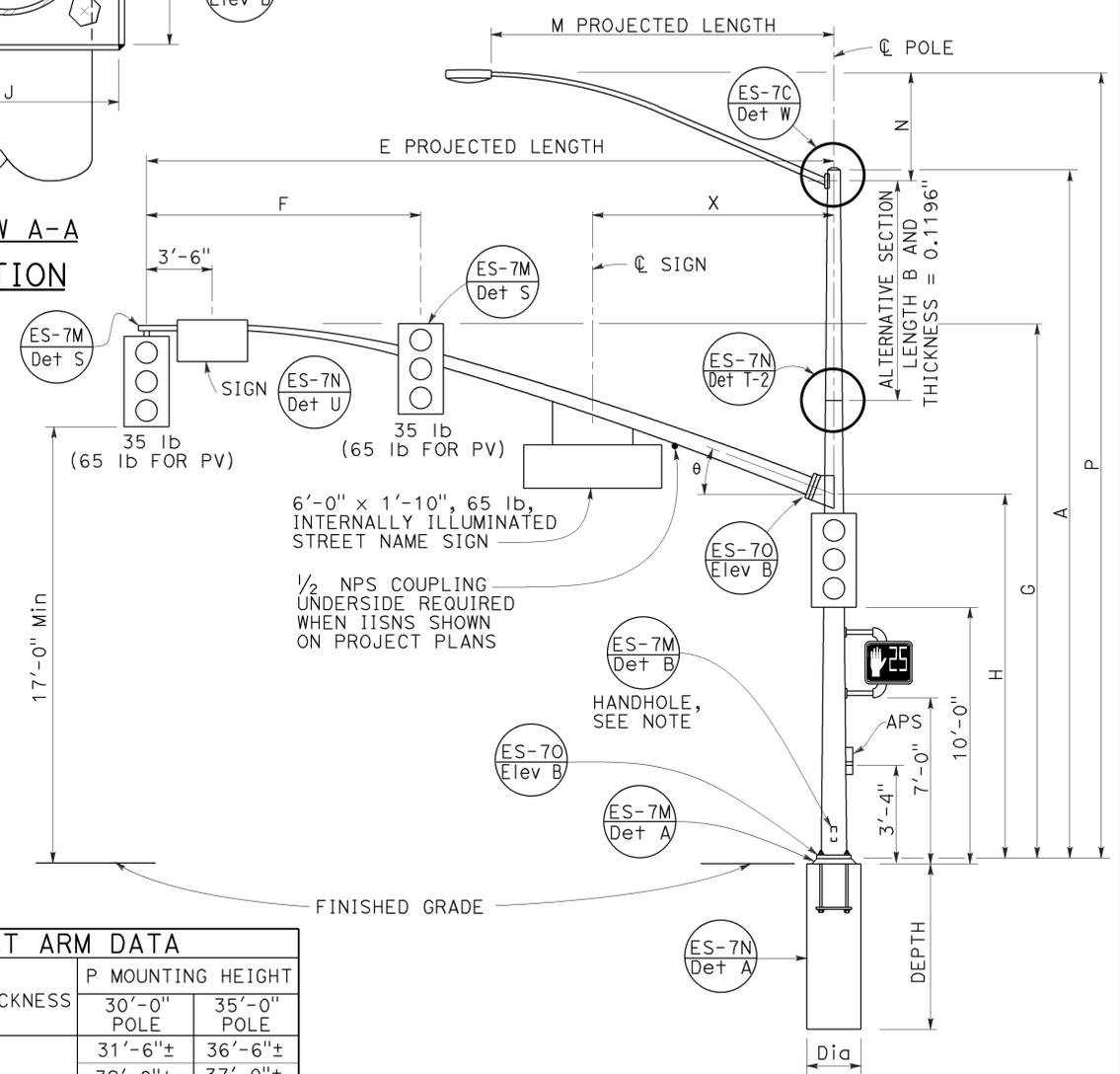
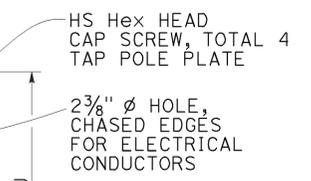


**ELEVATION C
VIEW A-A
SIGNAL MAST ARM CONNECTION
DETAIL A**



**BASE PLATE
DETAIL B**

NOTE:
Handhole shall be located on the downstream side of traffic.



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

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

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

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION								
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	BOTTOM	TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	Dia	DEPTH	REINFORCED	
18-4-100	4	100	17'-0"	12 1/8"	9 1/16"	0.3125"	NONE	9 1/8"	7 1/16"	1'-7"	1'-5 1/2"	3"	2" ø x 42"	NONE	25'-0", 30'-0"	3'-0"	11'-0"	YES	
19-4-100			30'-0"		7 1/16"		10'-0"		7 1/16"										
19A-4-100			35'-0"		6 15/16"		15'-0"		6 15/16"										
23-4-100			17'-0"	9 9/16"	NONE	0.3125"	9 1/8"	7 1/16"	1'-7"	1'-5 1/2"	3"	2" ø x 42"	NONE	35'-0"	3'-0"	11'-0"	YES		
24-4-100			30'-0"	7 1/16"	10'-0"													7 1/16"	
24A-4-100			35'-0"	6 15/16"	15'-0"													6 15/16"	
26-4-100			30'-0"	8 3/16"	14"	10 1/16"	0.3125"	9 5/8"	7 1/16"	23"	21"	2 1/2" ø x 42"	6'-15' 12'-0"	40'-0", 45'-0"	3'-6"	12'-0"	YES		
26A-4-100			35'-0"	7 7/16"														10'-0"	8 3/16"
27-4-100			17'-0"	10 1/16"														NONE	NONE

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

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

RSP ES-7F DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7F DATED JULY 19, 2013 AND ES-7F DATED MAY 20, 2011 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7F

2010 REVISED STANDARD PLAN RSP ES-7F

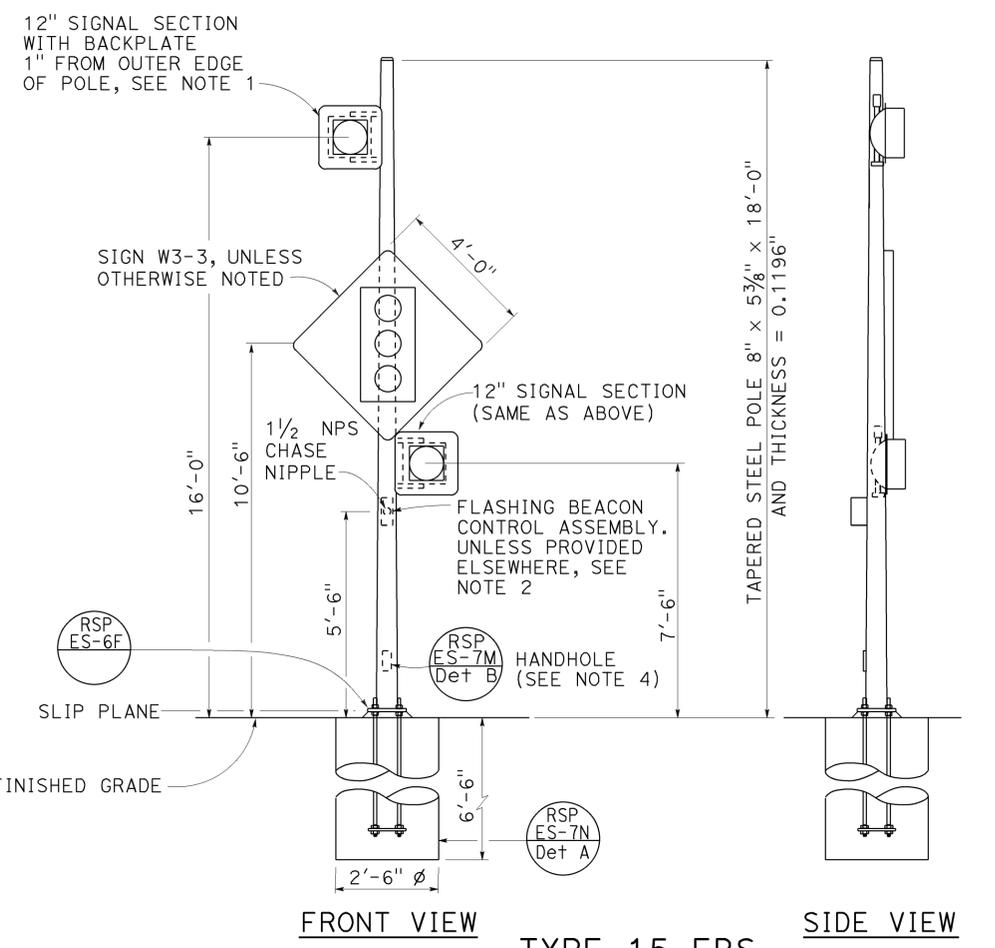
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	638	676
10	SJ	1880	13.5715.4		

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
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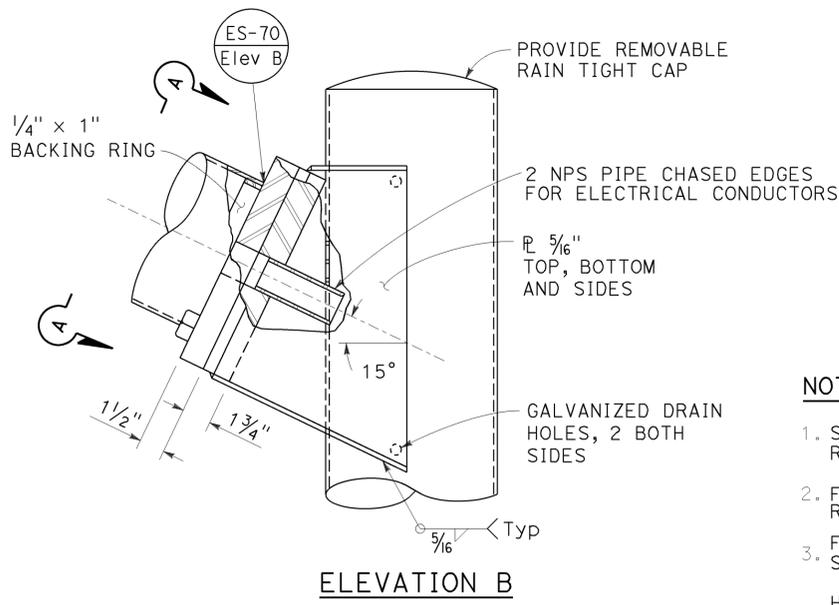
TO ACCOMPANY PLANS DATED 3-28-16

NOTES:

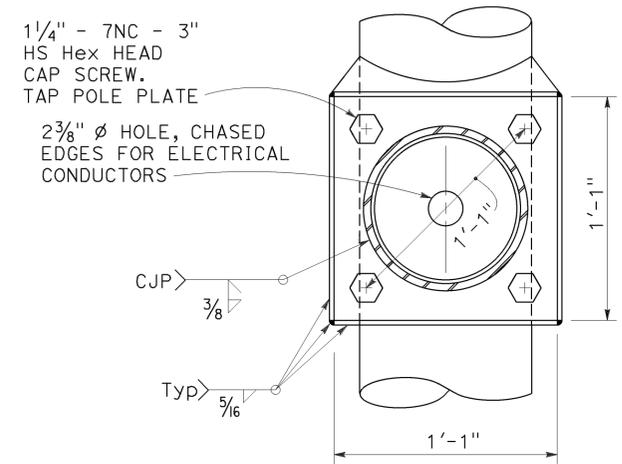
1. See Revised Standard Plans RSP ES-4A and RSP ES-4D for attachment fitting details.
2. For wiring diagram, see Revised Standard Plan RSP ES-14B.
3. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.



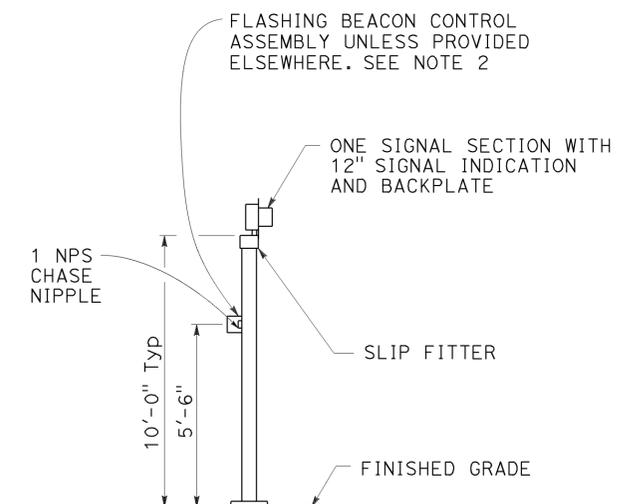
TYPE 15-FBS
FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



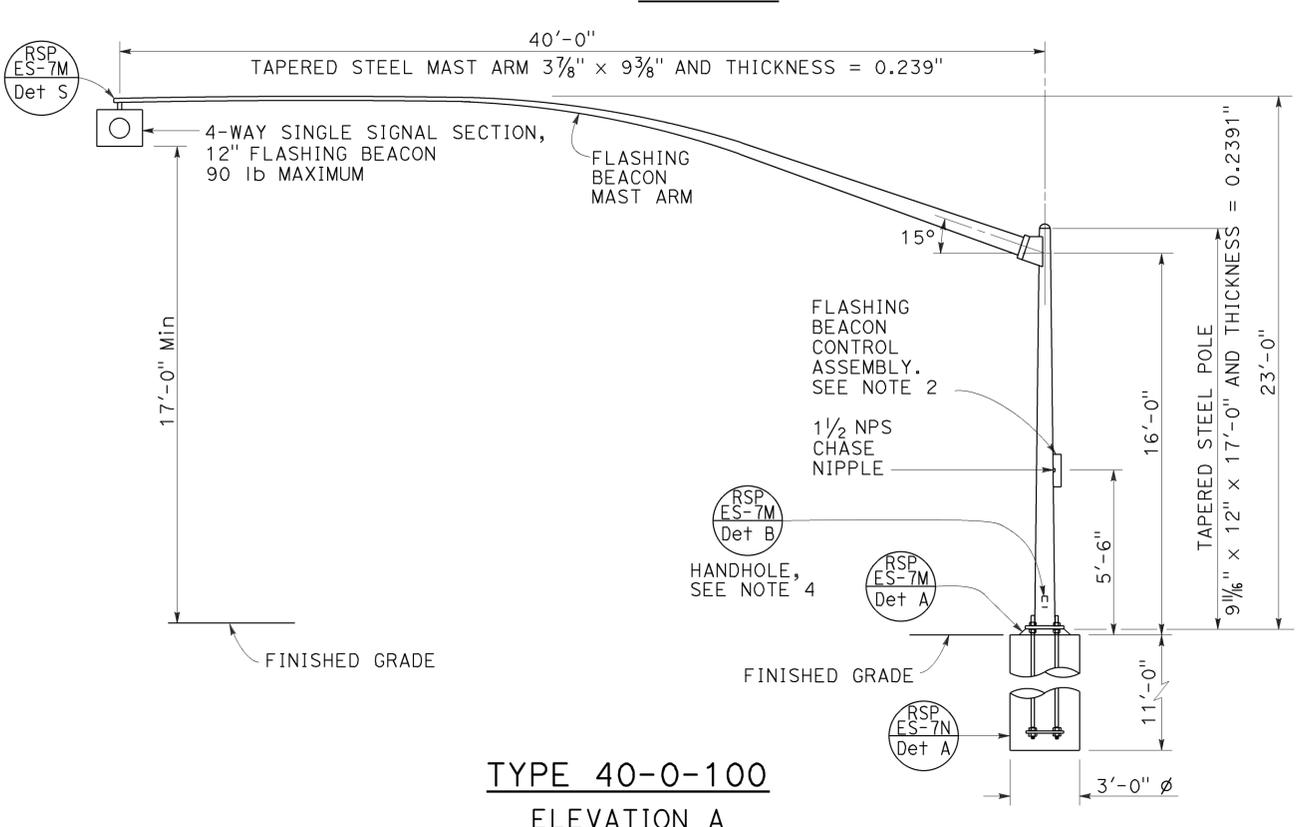
ELEVATION B



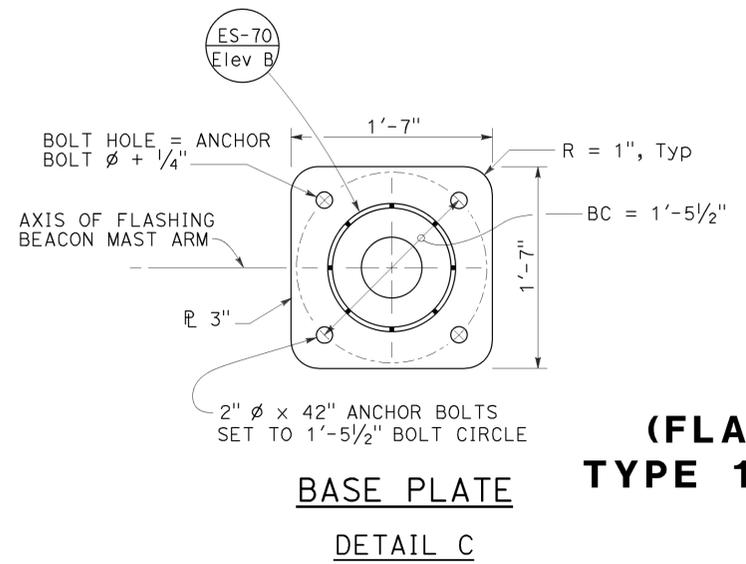
VIEW A-A
FLASHING BEACON MAST ARM CONNECTION DETAIL
DETAIL B



TYPE 1-A, 1-B, 1-C, AND 1-D
FLASHING BEACON INSTALLATION
DETAIL D
 See Note 5



TYPE 40-0-100
ELEVATION A



BASE PLATE
DETAIL C

ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1, TYPE 15-FBS, AND TYPE 40 STANDARD)

NO SCALE

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

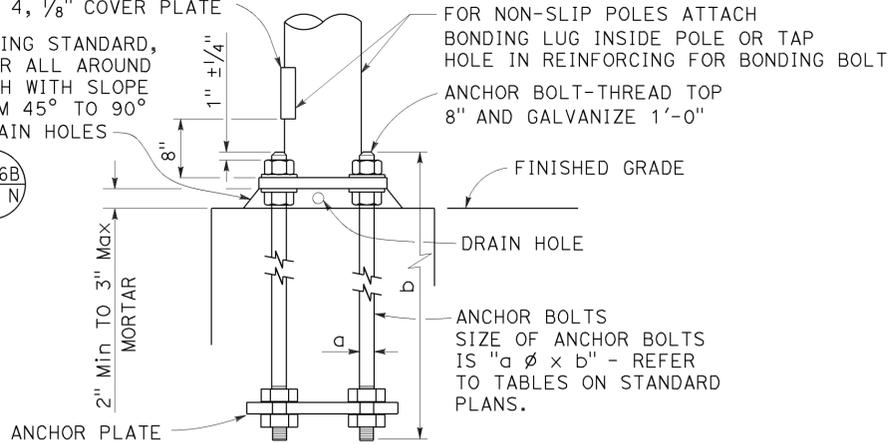
REVISED STANDARD PLAN RSP ES-7J

2010 REVISED STANDARD PLAN RSP ES-7J

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

AFTER PLUMBING STANDARD, PLACE MORTAR ALL AROUND BOLTS. FINISH WITH SLOPE RANGING FROM 45° TO 90° INCLUDES DRAIN HOLES

4 SIDES ES-6B Det N



HANDHOLE AND ANCHORAGE
DETAIL A

IDENTIFICATION NUMBER

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	639	676
04	Alameda	580	0.071		
00			13.571		

October 30, 2015
PLANS APPROVAL DATE

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C57793
Exp. 3-31-16
CIVIL

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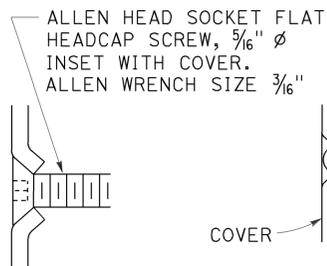
TO ACCOMPANY PLANS DATED 3-28-16

Type 26A - 3 - 100 - 45 - 10 - F or FB
Load case (Use SL for special load case)
Design wind velocity (mph)
Signal mast arm length (ft)
Standard plan year
Near handhole: Maximum signal mast arm length for pole type
Near pole plate: Installed signal mast arm length
Only for poles or mast arms using Detail F
Only for poles or mast arms using ES-70

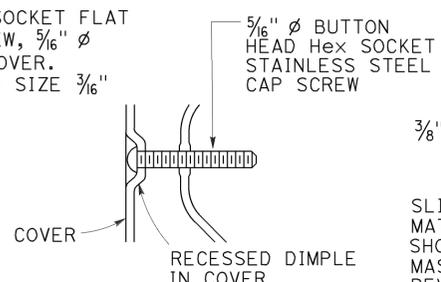
SAMPLE IDENTIFICATION NUMBER

NOTES:

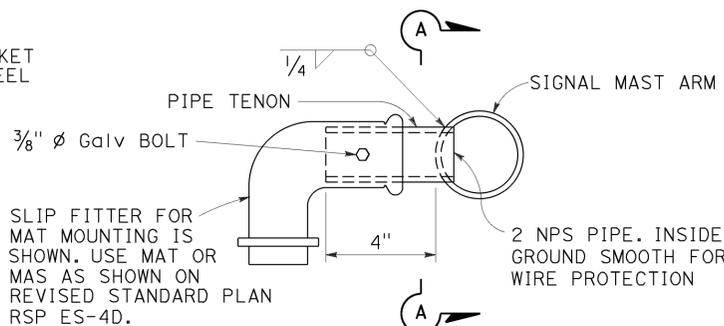
1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer.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



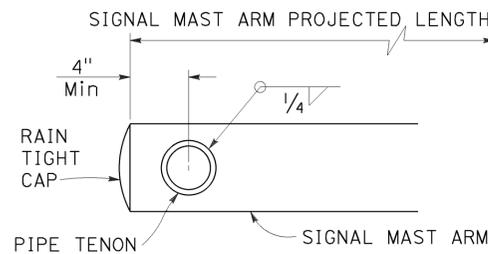
TYPICAL DETAIL
DETAIL B-1



ALTERNATIVE DETAIL
DETAIL B-2



SIDE TENON
DETAIL S-1

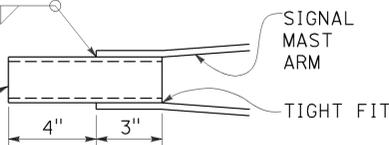


SECTION A-A

PIPE TENONS
DETAIL S

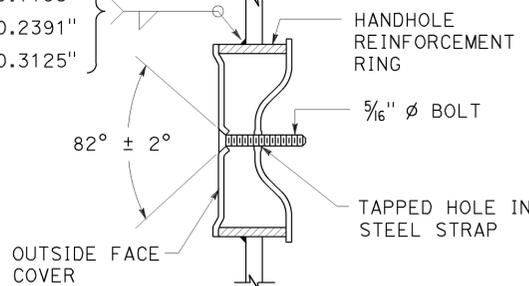
WELD SIZE	WALL THICKNESS
1/8"	0.1196"
3/16"	0.1793"
1/4"	0.2391"

2 NPS PIPE, CHASED FOR WIRE PROTECTION SEE NOTE 2

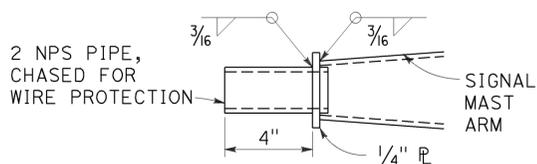


TIP TENON
DETAIL TS

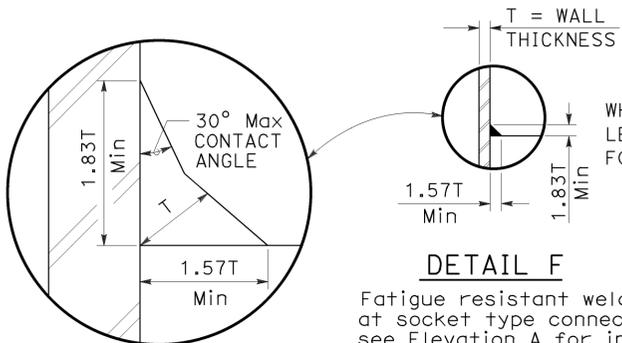
WELD SIZE	WALL THICKNESS
3/16"	0.1196"
1/4"	0.1793"
5/16"	0.2391"
3/8"	0.3125"



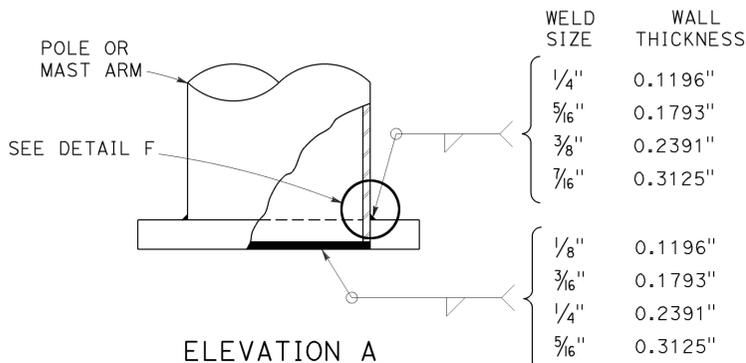
TAMPER RESISTANT HANDHOLE COVER
DETAIL B



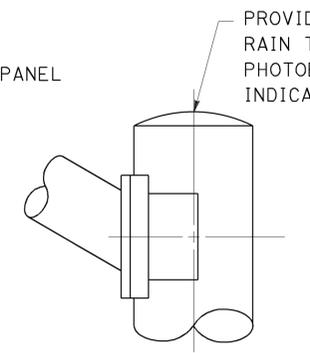
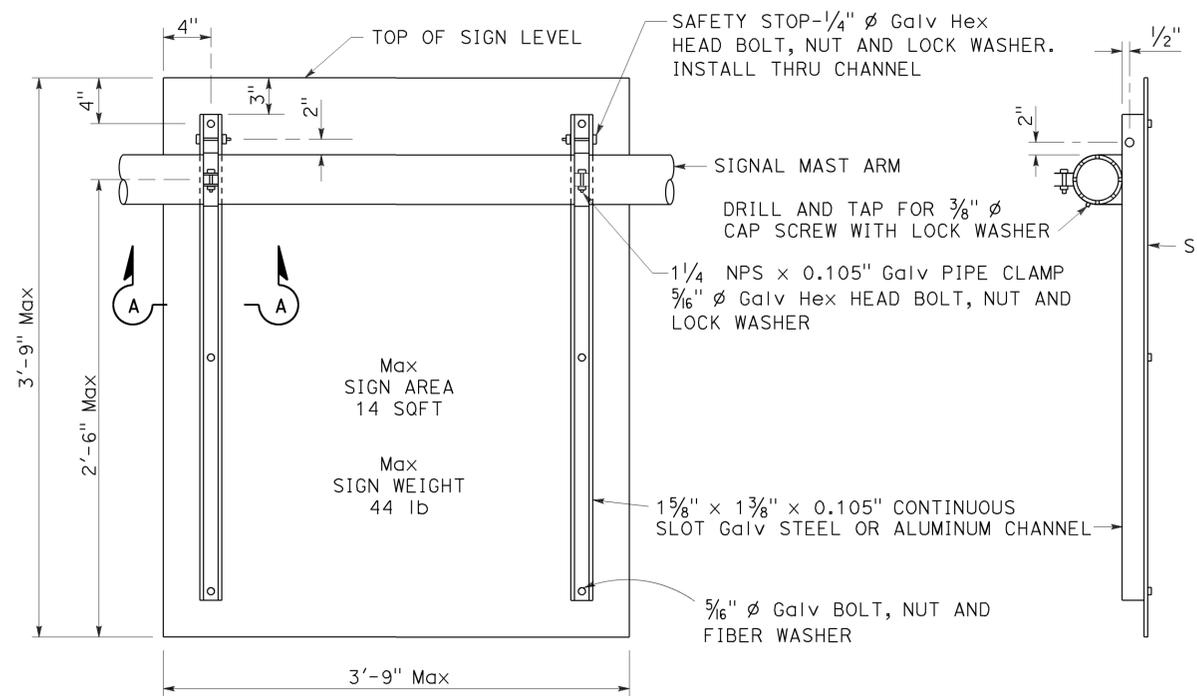
TIP TENON
DETAIL TL
This detail supersedes Detail S when so designated



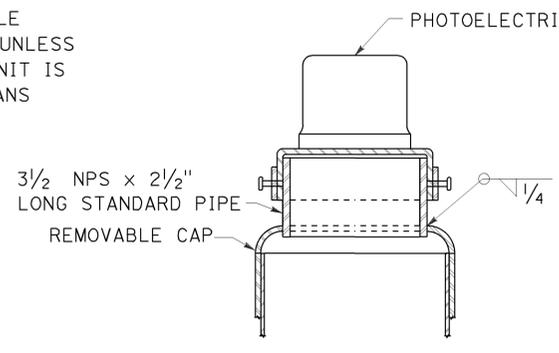
DETAIL F
Fatigue resistant weld at socket type connection see Elevation A for inner weld



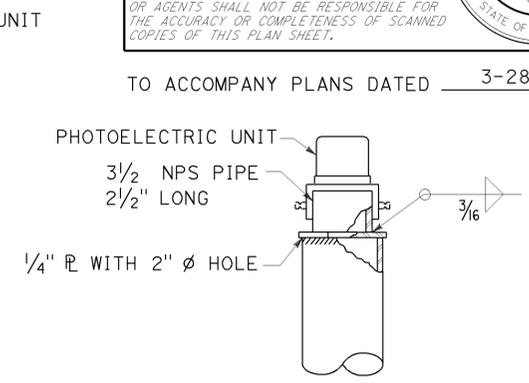
ELEVATION A



STANDARD TOP
DETAIL B-1



MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2



ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3

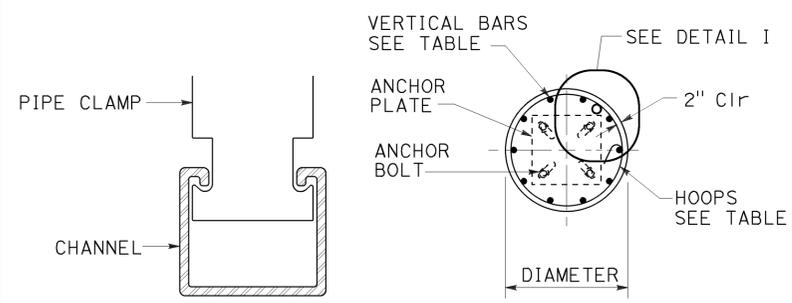
POLE TOP DETAILS
DETAIL B

TO ACCOMPANY PLANS DATED 3-28-16

REAR VIEW

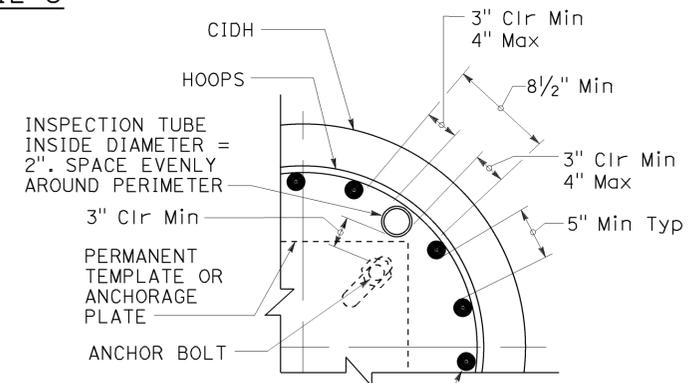
SIDE VIEW

SIGN MOUNTING DETAILS
DETAIL U



SECTION A-A

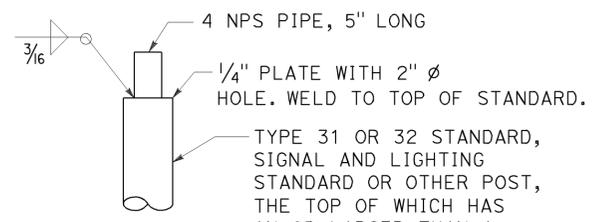
SECTION B-B



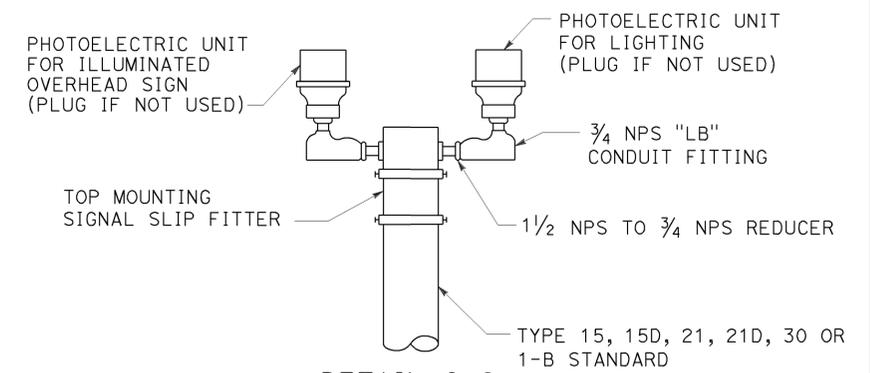
INSPECTION TUBE PLACEMENT
DETAIL I

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

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



DETAIL C-1



DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

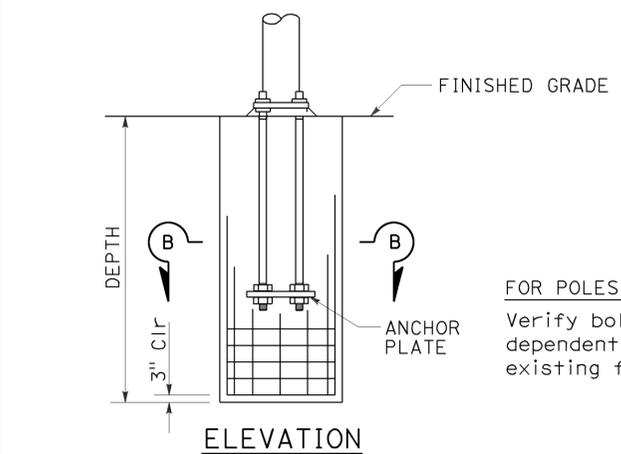
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

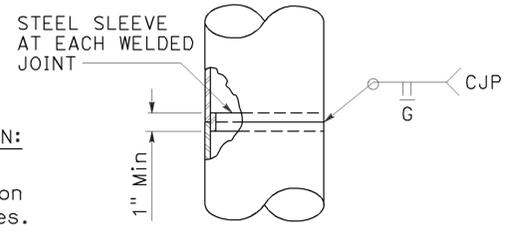
RSP ES-7N DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7N DATED MAY 20, 2011 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7N

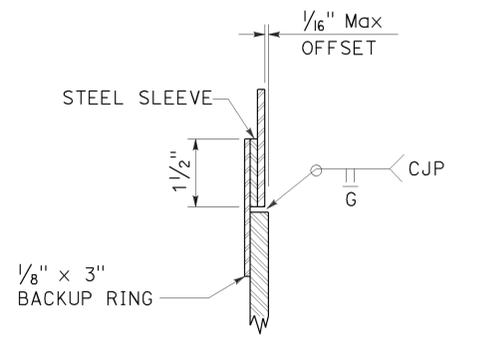


ELEVATION

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



FOR UNIFORM TUBE THICKNESS
DETAIL T-1



AT TUBE THICKNESS CHANGE
DETAIL T-2

POLE SPLICES
DETAIL T

2010 REVISED STANDARD PLAN RSP ES-7N

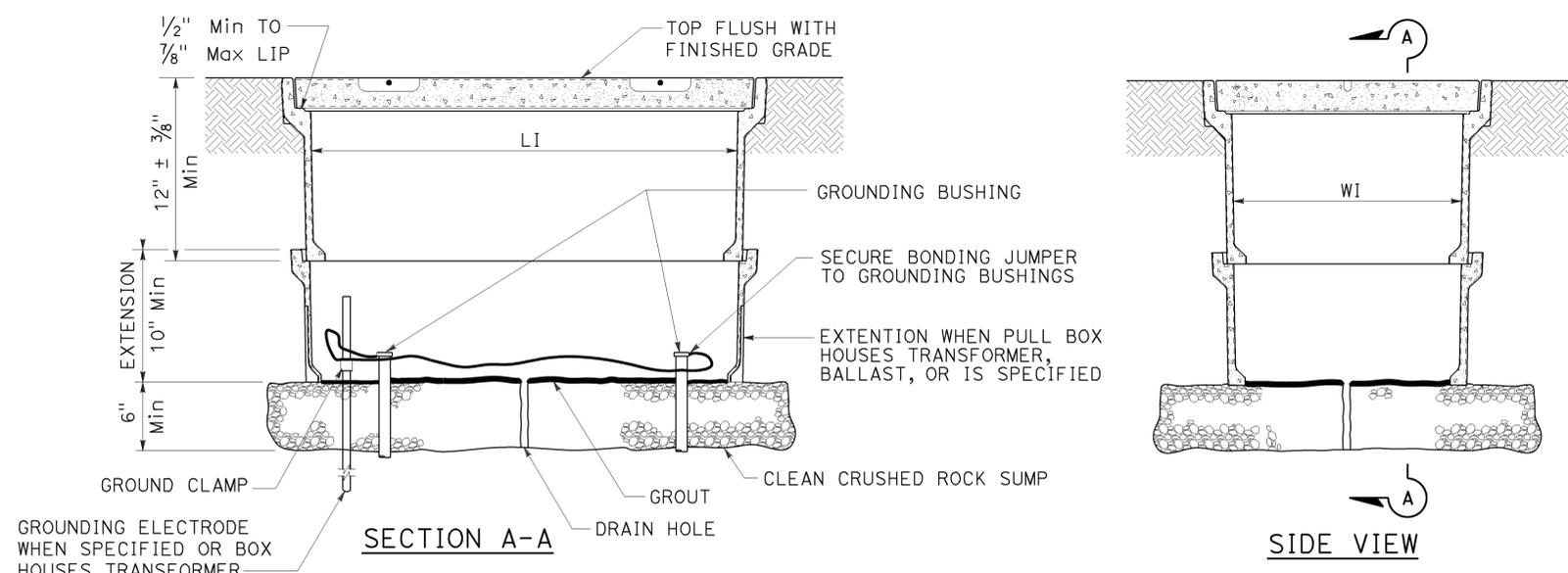
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	641	676
04	San Joaquin	UNB80	26.1/30.3		
			13.5/15.4		

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

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

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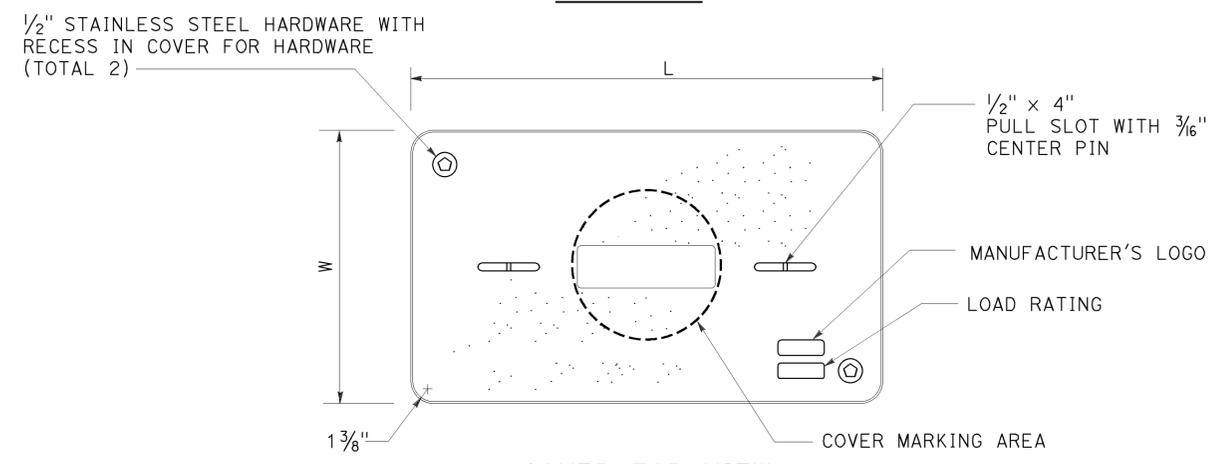
TO ACCOMPANY PLANS DATED 3-28-16



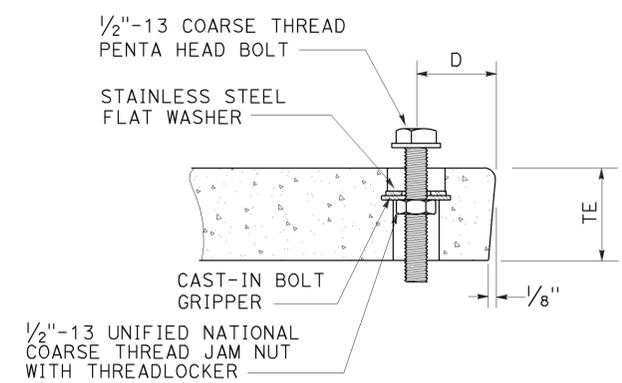
INSTALLATION DETAILS
DETAIL A

NOTES:

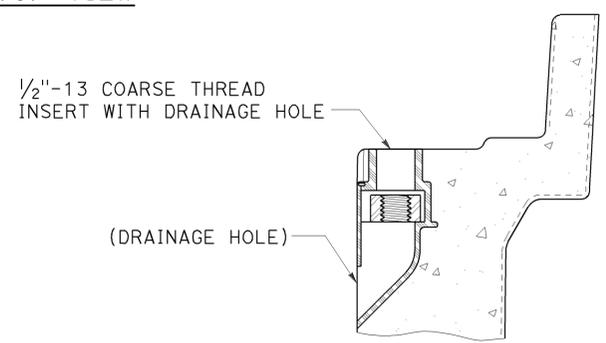
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male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



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

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

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

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

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	642	676
00	SJ	UNBRO	0.0/80.26	13.5/30.3	15.4

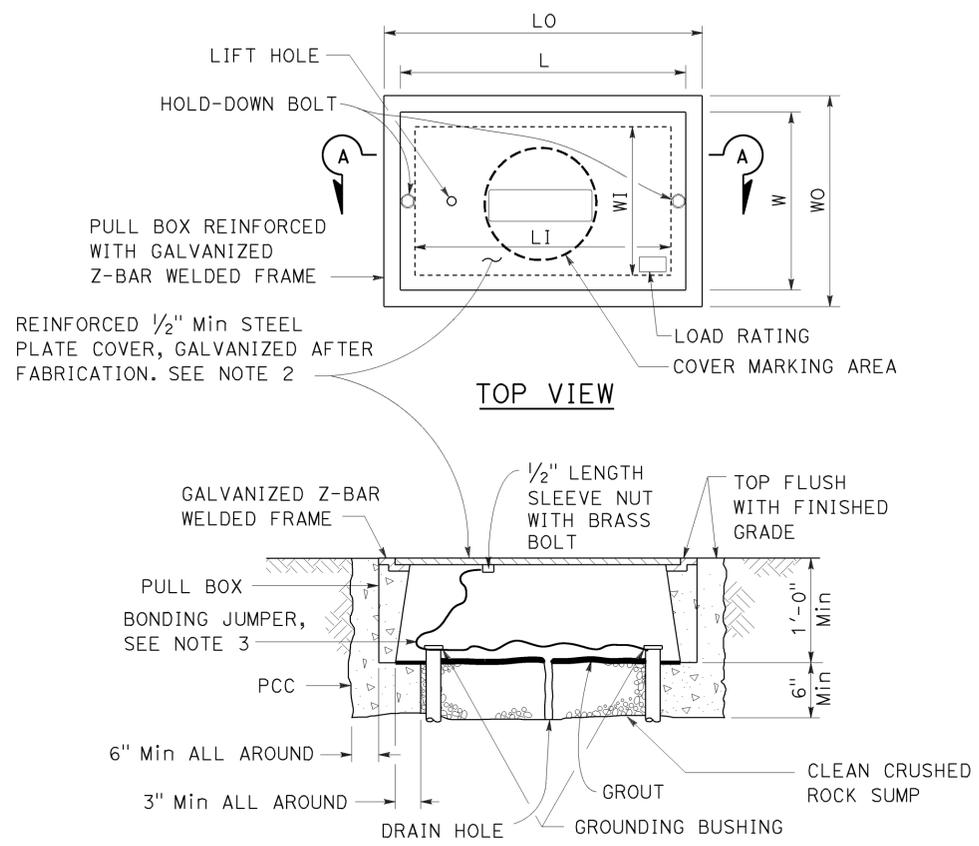
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

April 15, 2016
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 3-28-16



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

NOTES:

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

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

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

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

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

REVISED STANDARD PLAN RSP ES-8B

2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	0.0/8.0	643	676
90	SJ	5880	0.0/26.0		
			13.5/18.4		

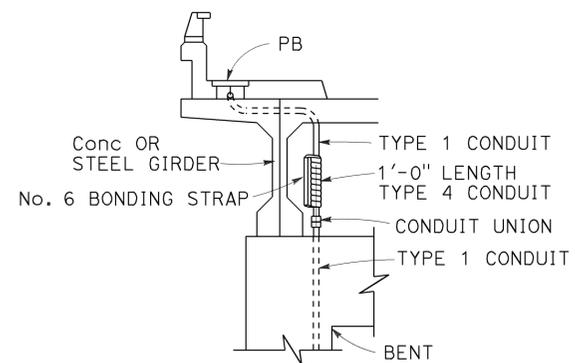
Jagwinder & Co.
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

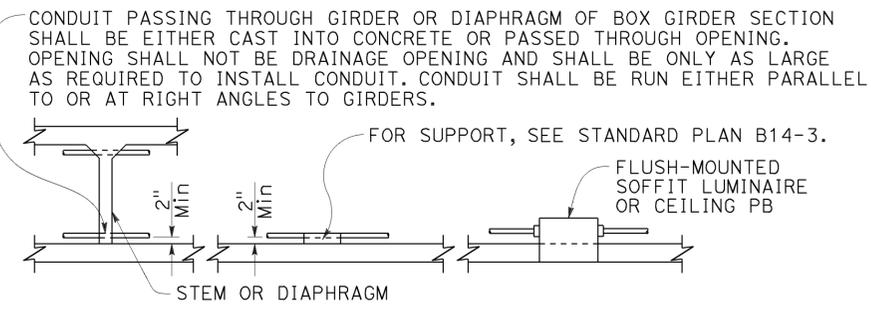
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REGISTERED PROFESSIONAL ENGINEER
Jagwinder S. Gill
No. E18551
Exp. 12-31-16
ELECTRICAL
STATE OF CALIFORNIA

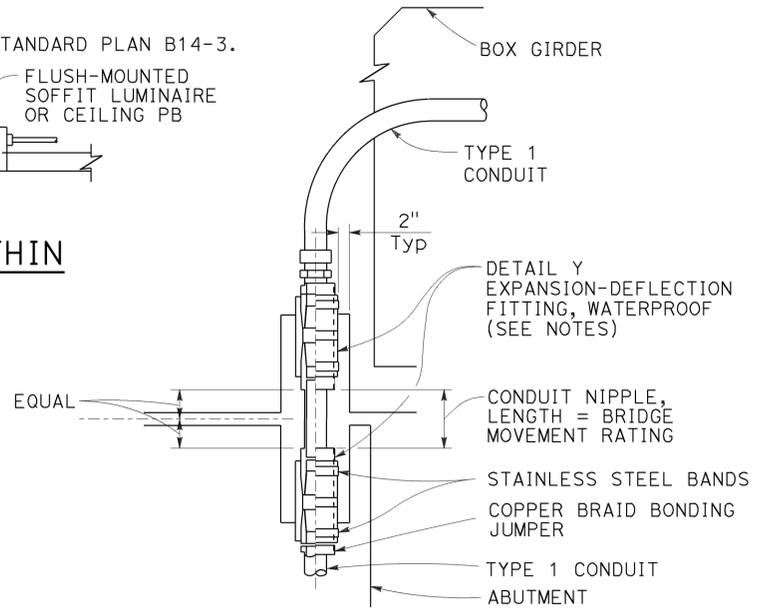
TO ACCOMPANY PLANS DATED 3-28-16



CONDUIT RISER CONNECTION
DETAIL R

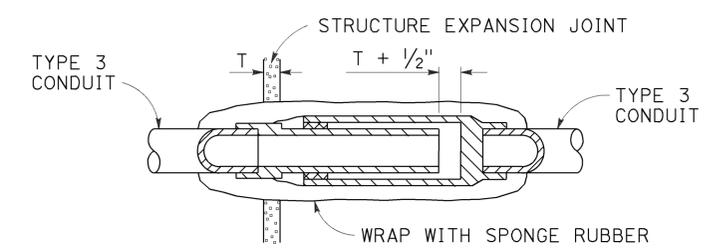


CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS
DETAIL S



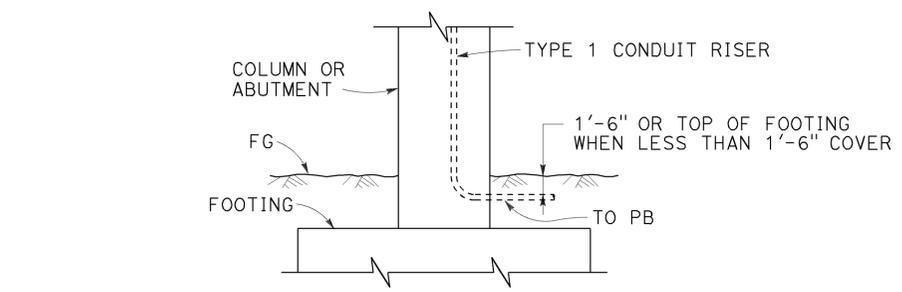
- NOTES:**
1. Fitting and pocket required only where movement can occur between girder and abutment.
 2. Fill pocket around fitting with resilient waterproof compound.

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

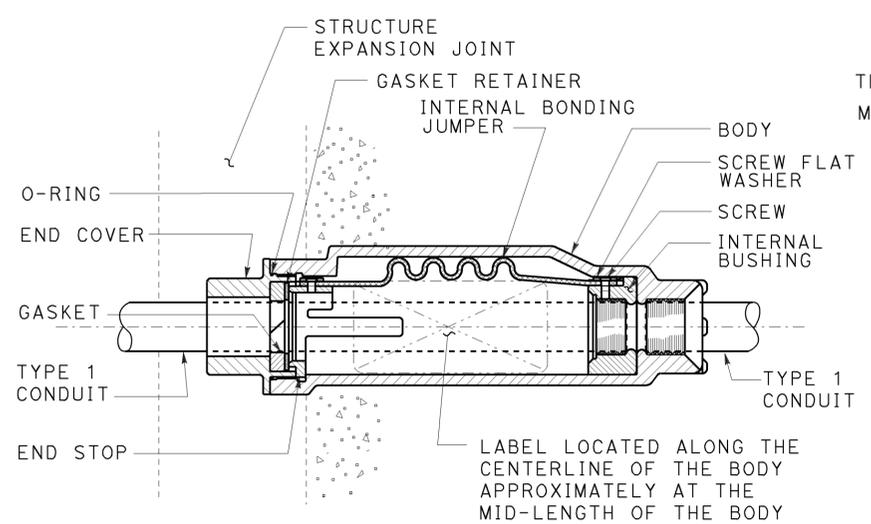


NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL
DETAIL V

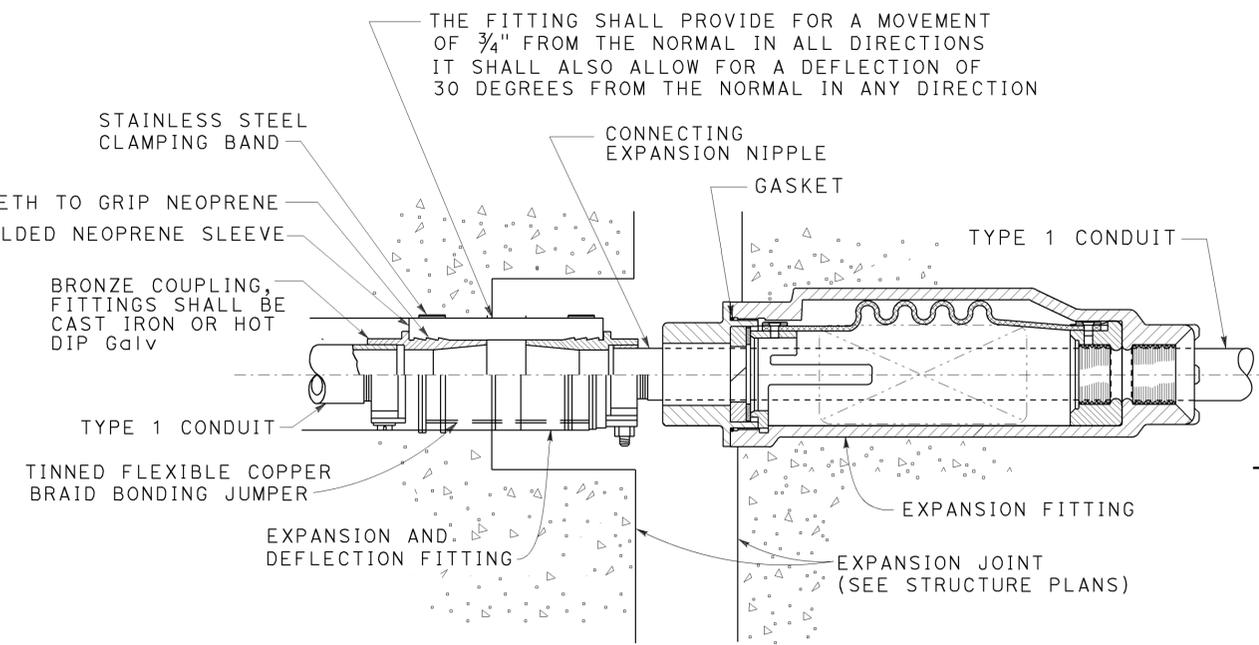
To be used only when shown or specified on Project Plans



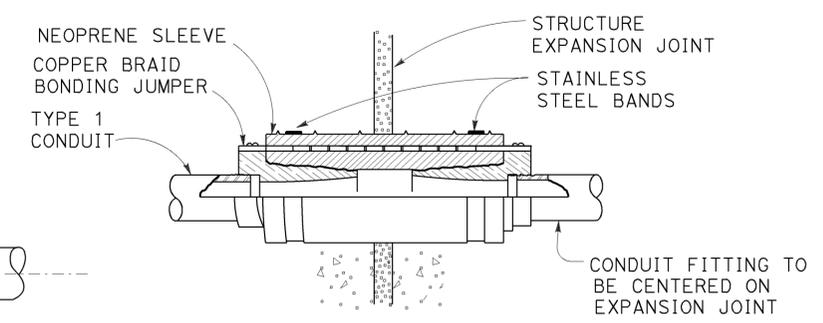
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT
DETAIL T



CONDUIT EXPANSION FITTING
DETAIL X



COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION
DETAIL XY



CONDUIT EXPANSION-DEFLECTION FITTING
DETAIL Y

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

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

REVISED STANDARD PLAN RSP ES-9B

2010 REVISED STANDARD PLAN RSP ES-9B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	644	676
04	Alameda	205	0.071		
00	SJ	1580	13.5715.4		

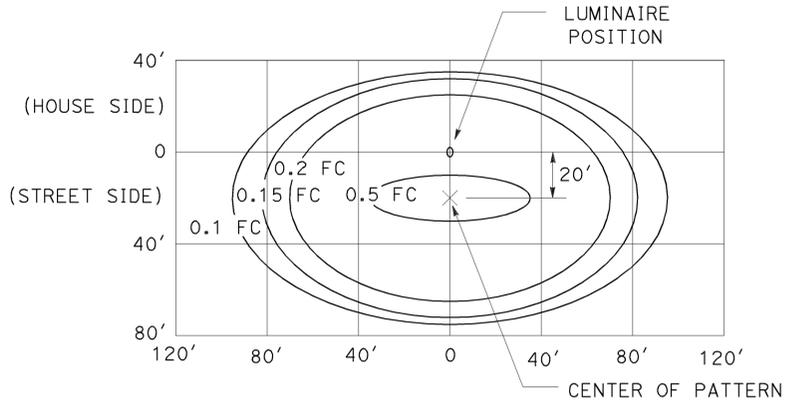
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

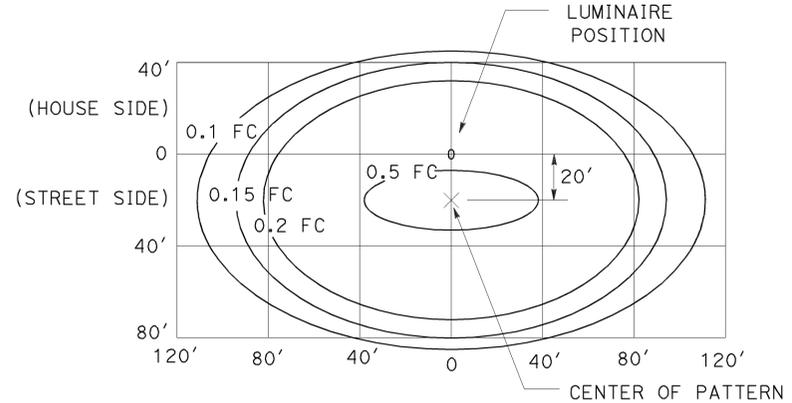
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TO ACCOMPANY PLANS DATED 3-28-16

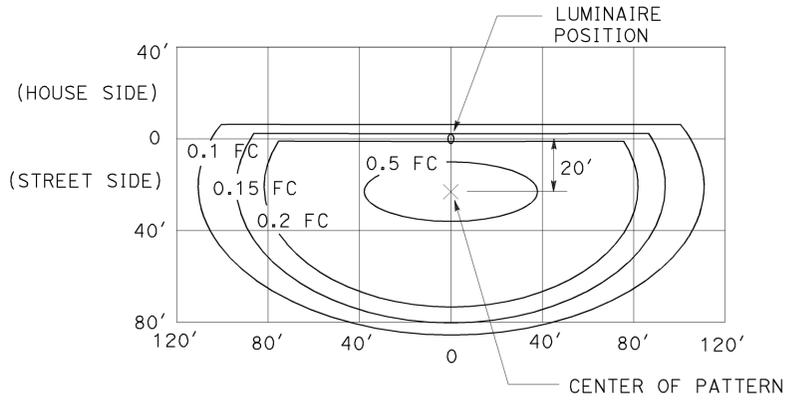
NOTE:
Curves represent the minimum footcandle (FC).



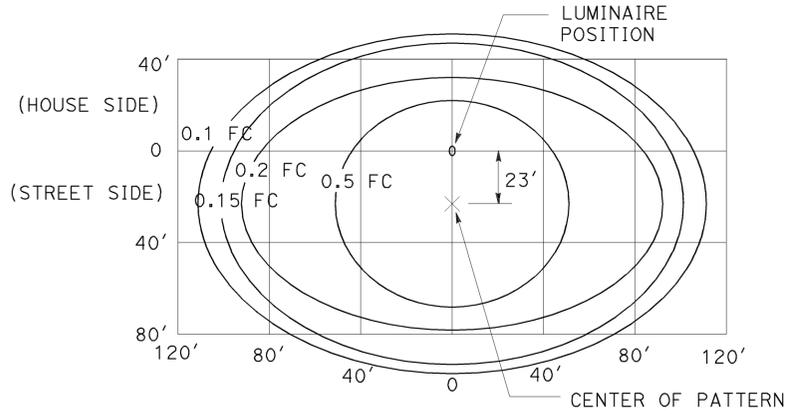
LED LUMINAIRE 165 W
34' Mounting Height



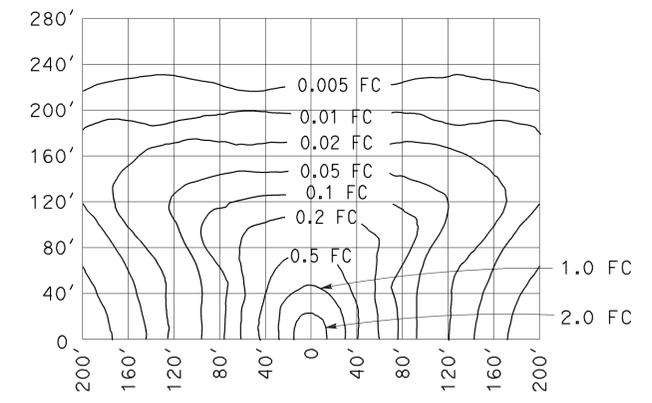
LED LUMINAIRE 235 W
40' Mounting Height



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

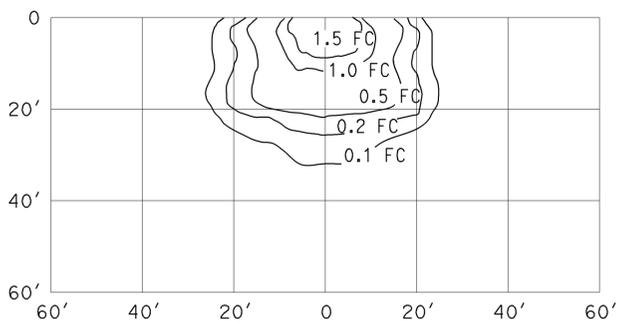
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	645	676
04	Alameda	205	0.071	645	676
04	Alameda	205	0.071	645	676

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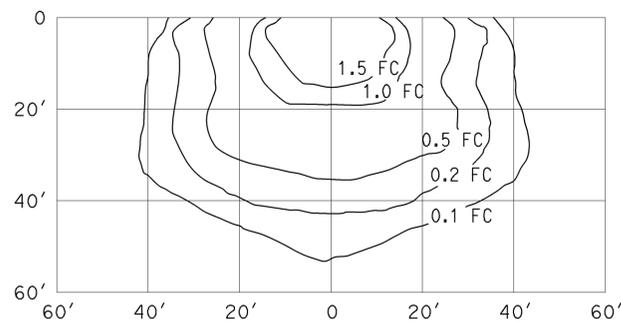


TO ACCOMPANY PLANS DATED 3-28-16

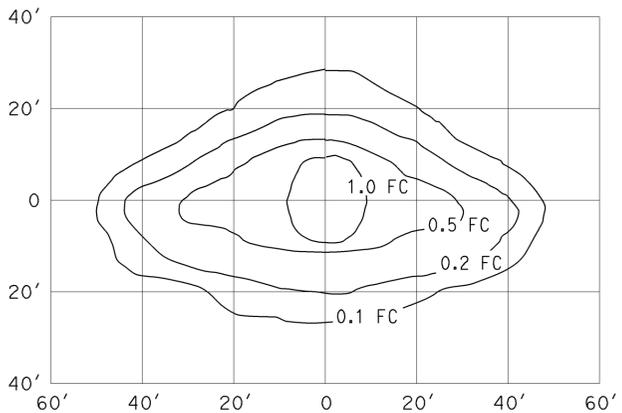
NOTE:
Curves represent the minimum footcandle (FC).



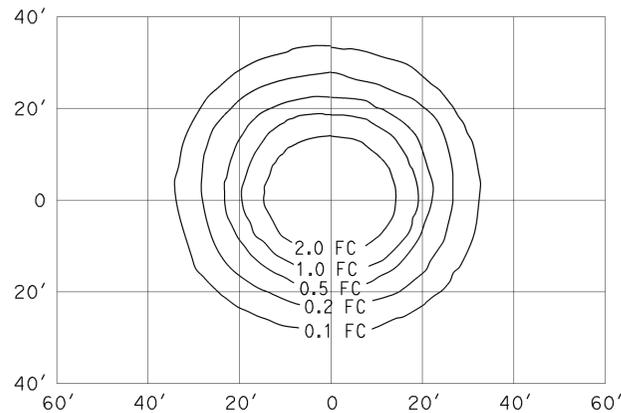
**HIGH-PRESSURE SODIUM
WALL-MOUNTED LUMINAIRE 70 W**
 15' Mounting Height
 ANSI Designation S62
 Lamp operated at 5,800 lm



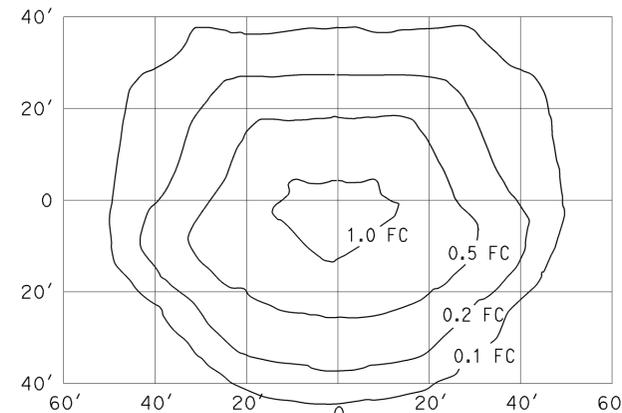
**HIGH-PRESSURE SODIUM
WALL-MOUNTED LUMINAIRE 100 W**
 15' Mounting Height
 ANSI Designation S54
 Lamp operated at 9,500 lm



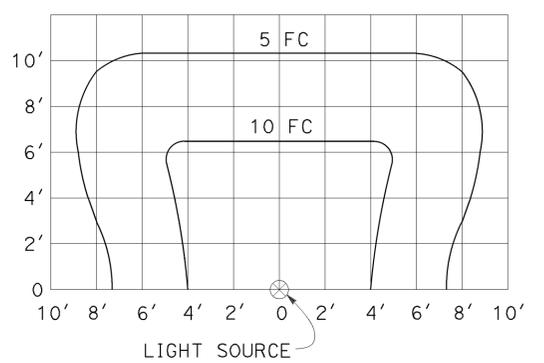
**HIGH-PRESSURE SODIUM
PENDANT SOFFIT LUMINAIRE 70 W
TYPE III SHORT**
 17' Mounting Height
 ANSI Designation S62
 Lamp operated at 5,800 lm



**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**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

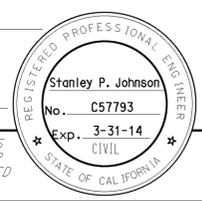
**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

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.

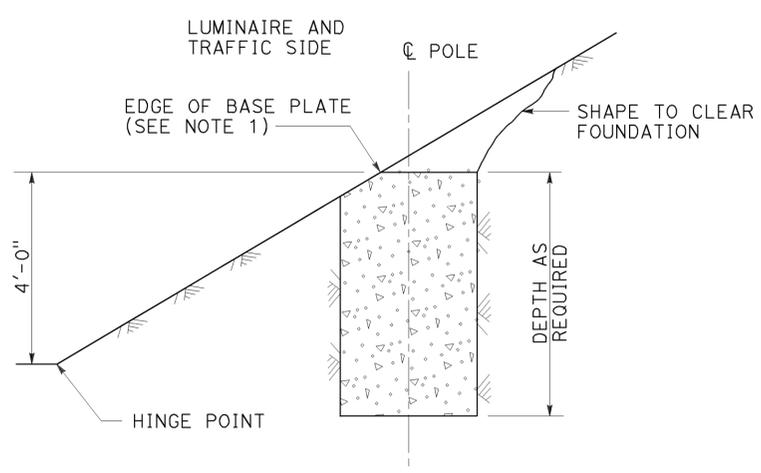
REVISED STANDARD PLAN RSP ES-10B

2010 REVISED STANDARD PLAN RSP ES-10B

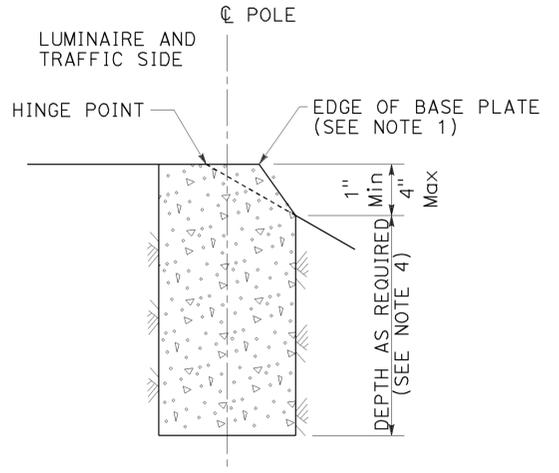


TO ACCOMPANY PLANS DATED 3-28-16

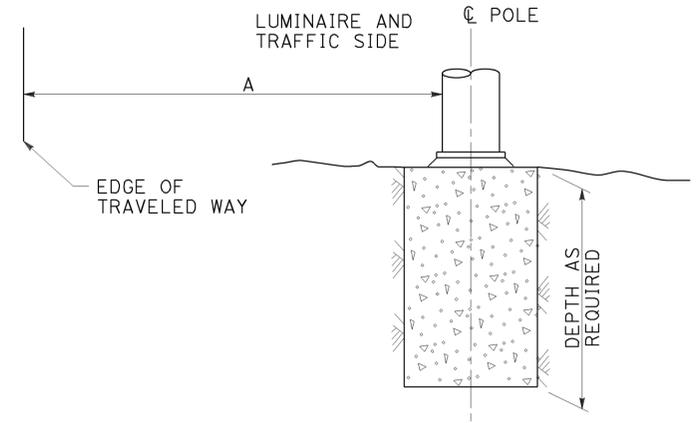
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



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



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

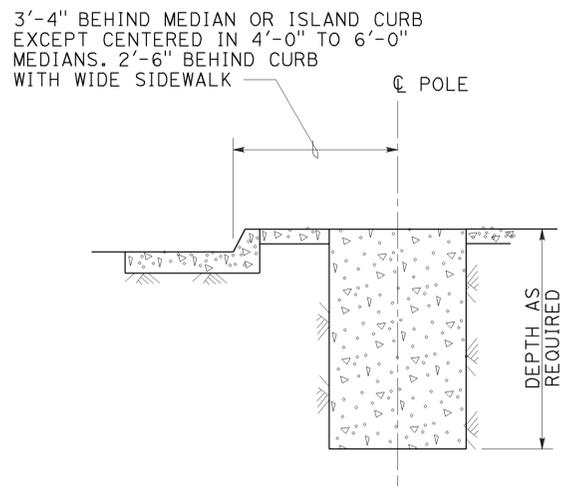


**FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3**
See Note 2

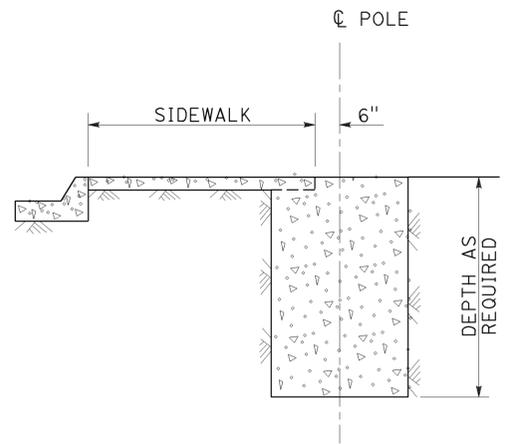
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A**

NOTES:

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



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



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

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

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

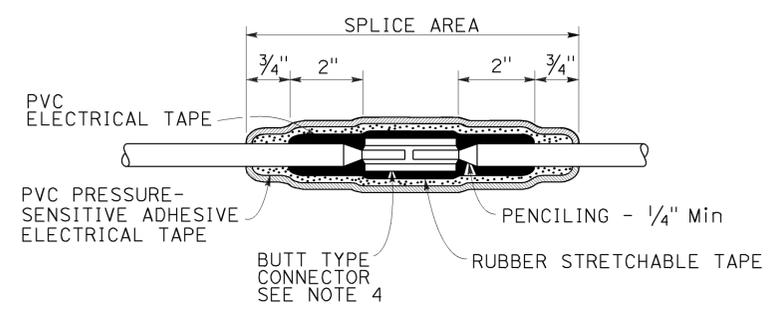
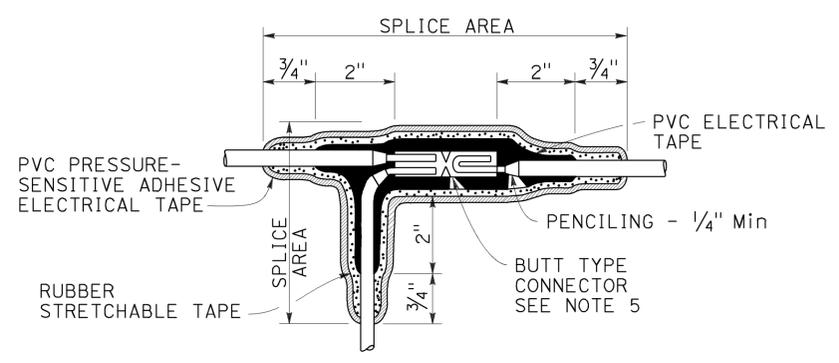
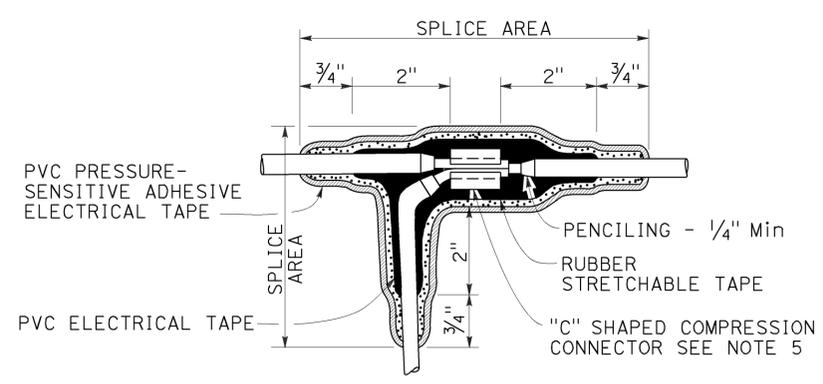
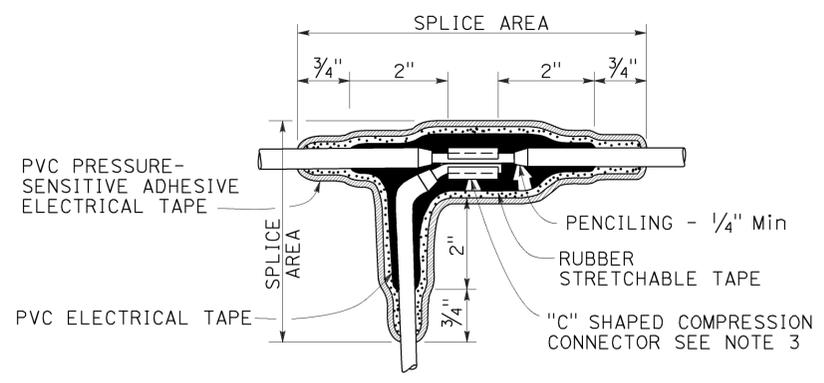
RSP ES-11 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-11 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	647	676
04	Alameda	205	0.071		
00	SJ	1580	13.5715.4		

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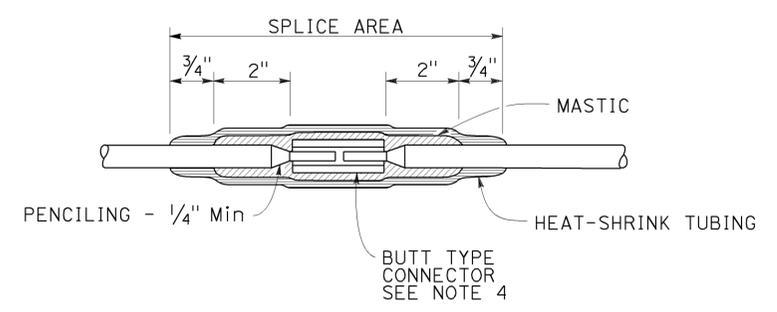
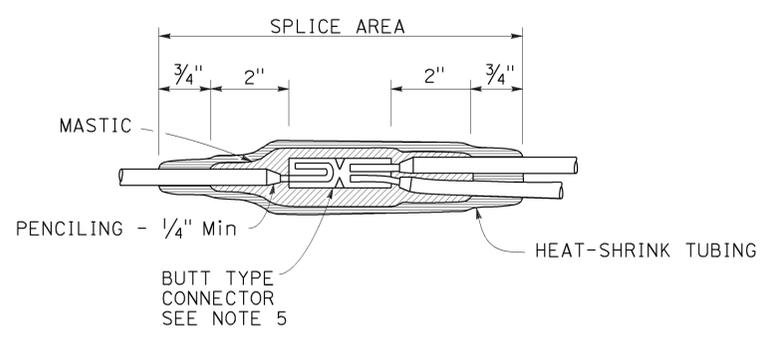
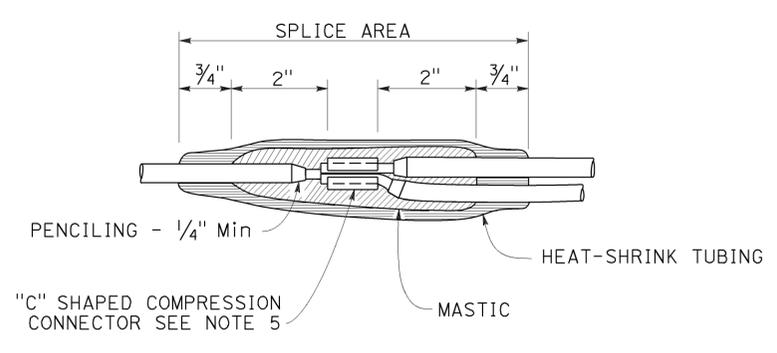


TO ACCOMPANY PLANS DATED 3-28-16



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

TYPICAL SPLICE INSULATION METHOD B



TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING

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

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

REVISED STANDARD PLAN RSP ES-13A

2010 REVISED STANDARD PLAN RSP ES-13A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	648	676
04	Alameda	205	0.0/80.0		
00	SJ	1880	13.5/30.3		

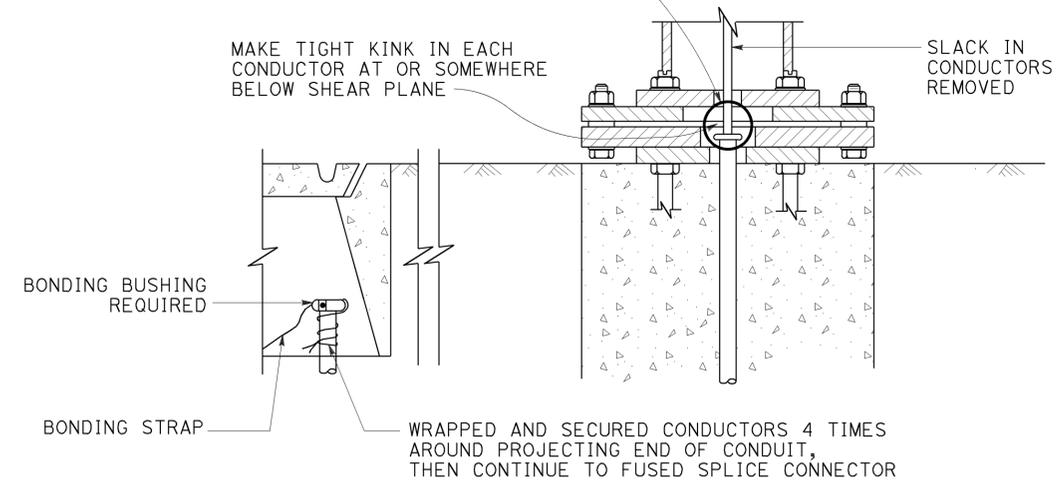
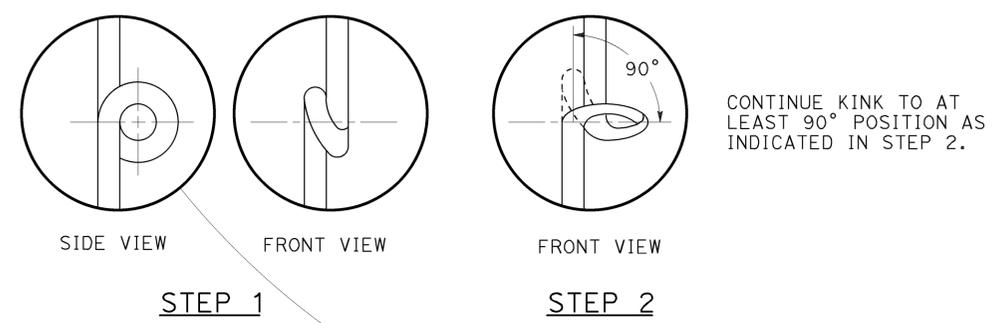
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 April 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 3-28-16

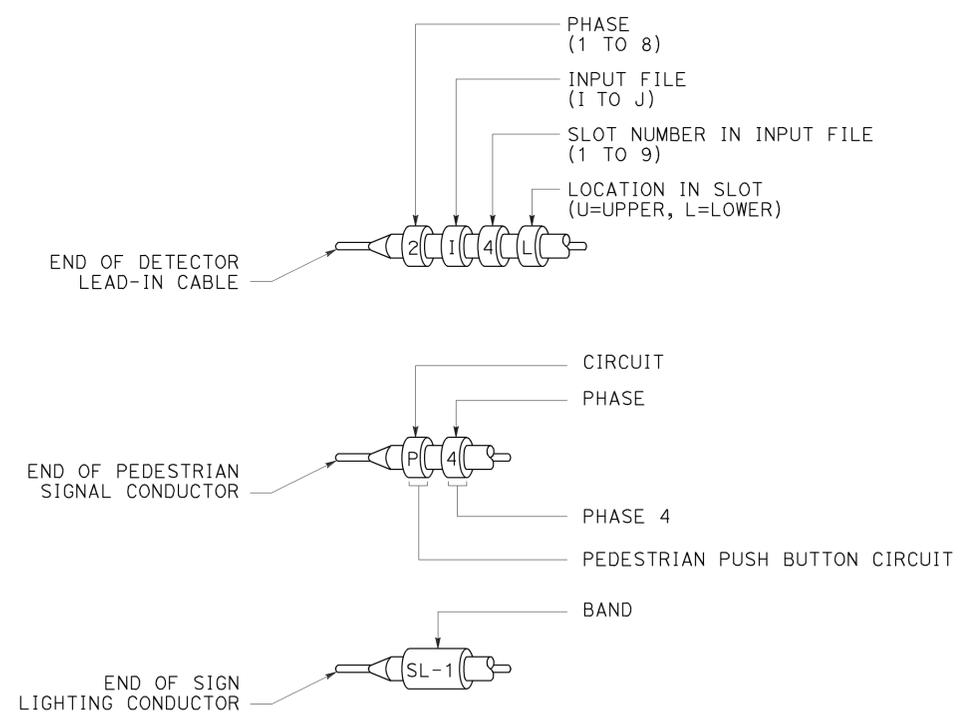
CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING						
		HPS LAMP BALLAST		LOW PRESSURE SODIUM BALLAST	INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	180 W	85 W	1 KVA	2 KVA	3 KVA
120 V	250 V	5 A	5 A	5 A	5 A	10 A	20 A	30 A
240 V	250 V	5 A	5 A	5 A	5 A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

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

FUSE RATINGS FOR FUSED CONNECTORS



KINKING DETAIL FOR SLIP BASE STANDARDS
DETAIL A



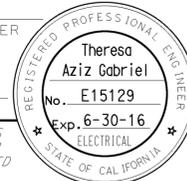
TYPICAL BANDING DETAILS
DETAIL B

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

NO SCALE

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

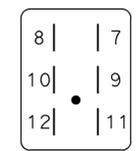
2010 REVISED STANDARD PLAN RSP ES-13B



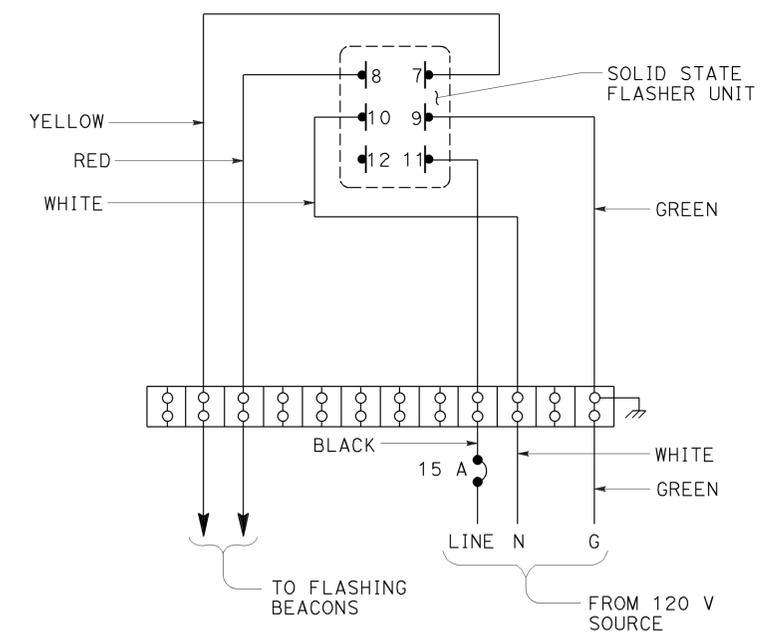
TO ACCOMPANY PLANS DATED 3-28-16

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

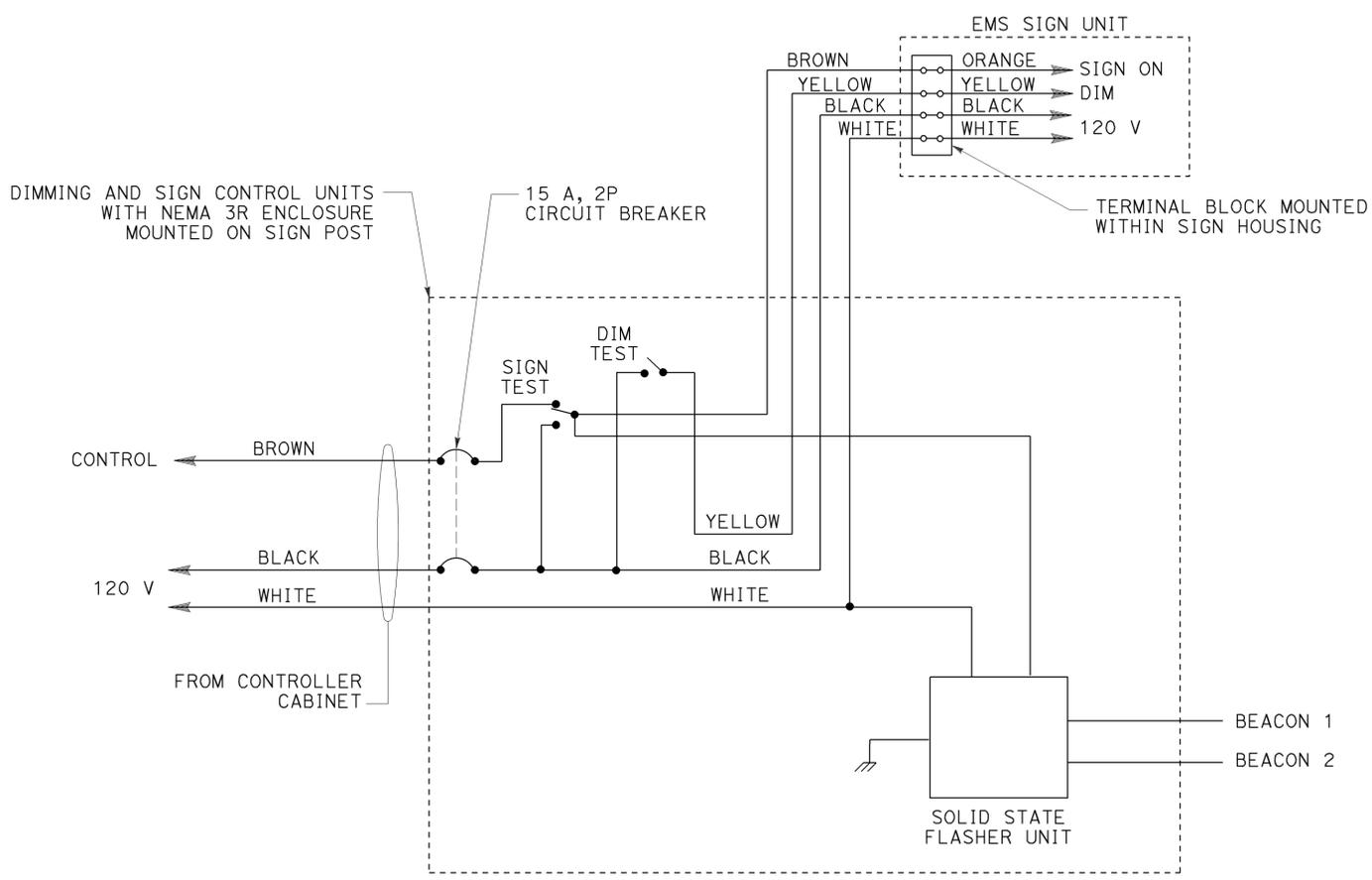
PIN	CIRCUIT	PIN	CIRCUIT
7	LOAD	10	NEUTRAL
8	LOAD	11	LINE
9	CHASSIS GROUND	12	NOT USED



**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.

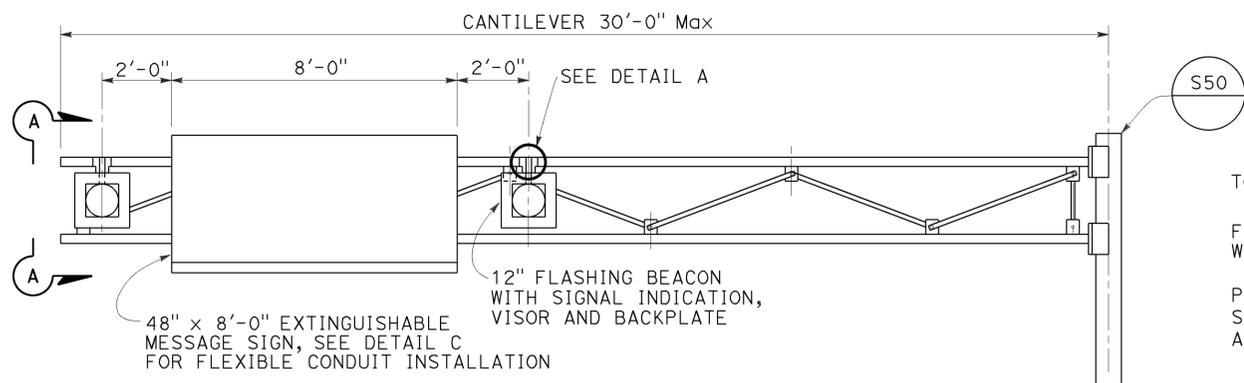
2010 REVISED STANDARD PLAN RSP ES-14B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	650	676
00	SJ	UNB	13.5/18.4		

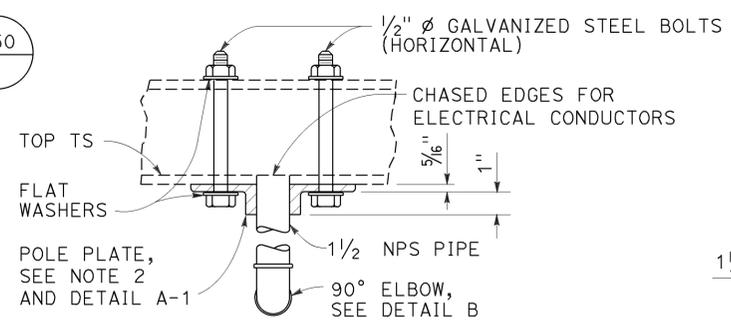
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-16
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

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

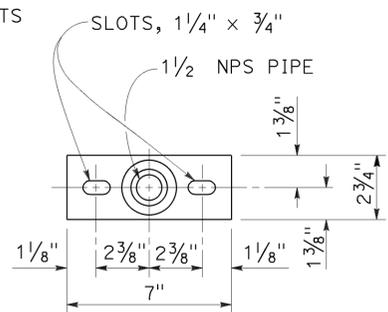


FOR FBCA WIRING DIAGRAM SEE STANDARD PLAN ES-14B. LOCATE ON THE SIDE OF POLE AWAY FROM TRAFFIC.

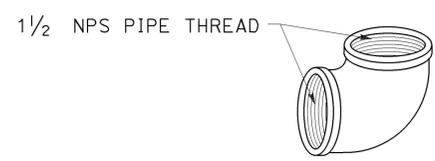
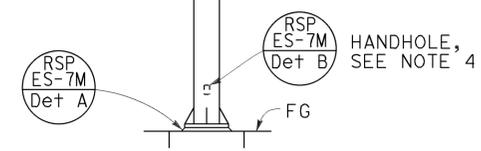


TOP VIEW SECTION B-B

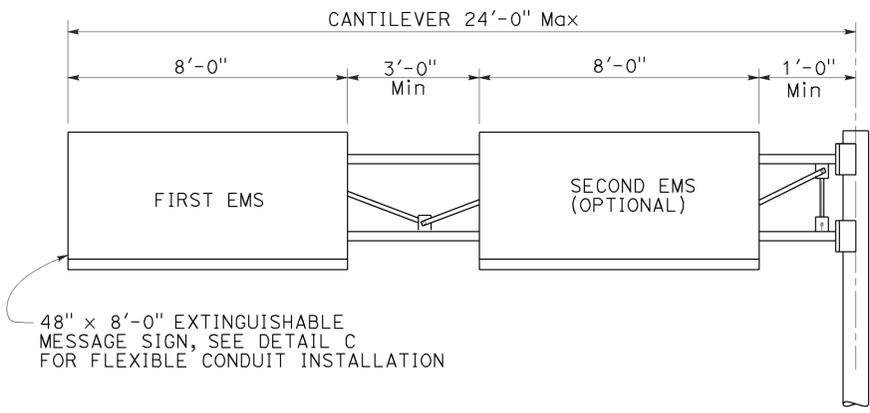
POLE PLATE DETAIL A



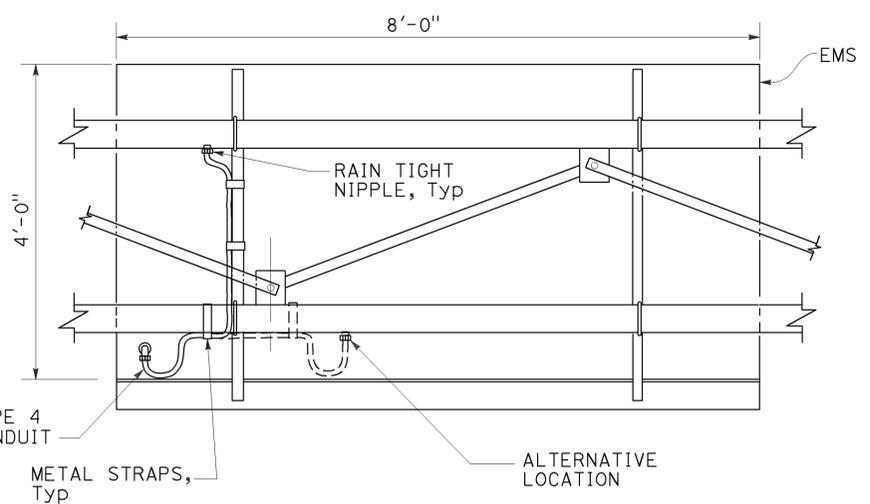
DETAIL A-1



EMS WITH FLASHING BEACONS ELEVATION A

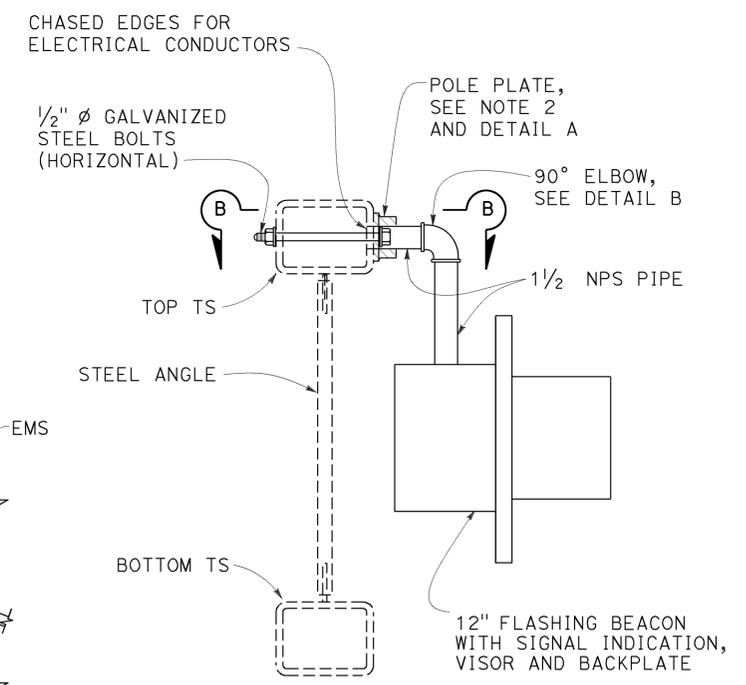


EMS WITHOUT FLASHING BEACONS ELEVATION B



FLEXIBLE CONDUIT INSTALLATION

DETAIL C Back view of sign



SECTION A-A

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.

REVISED STANDARD PLAN RSP ES-14C

2010 REVISED STANDARD PLAN RSP ES-14C

Dist	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
04	Alameda	205	0.0/0.71	651	676
00	SJ	UNB80	13.5/15.4		

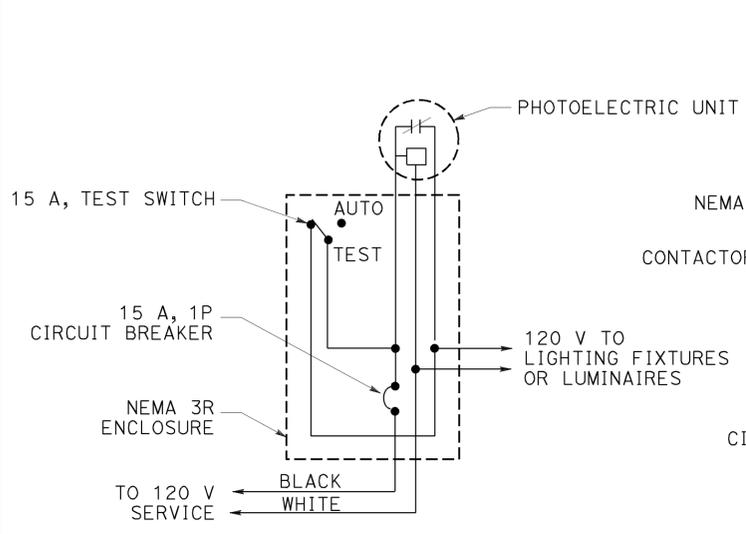
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 3-28-16

2010 REVISED STANDARD PLAN RSP ES-15D

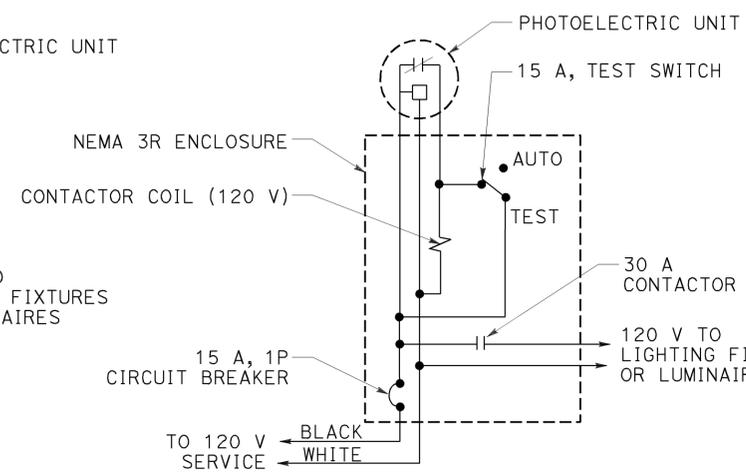
NOTE:

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



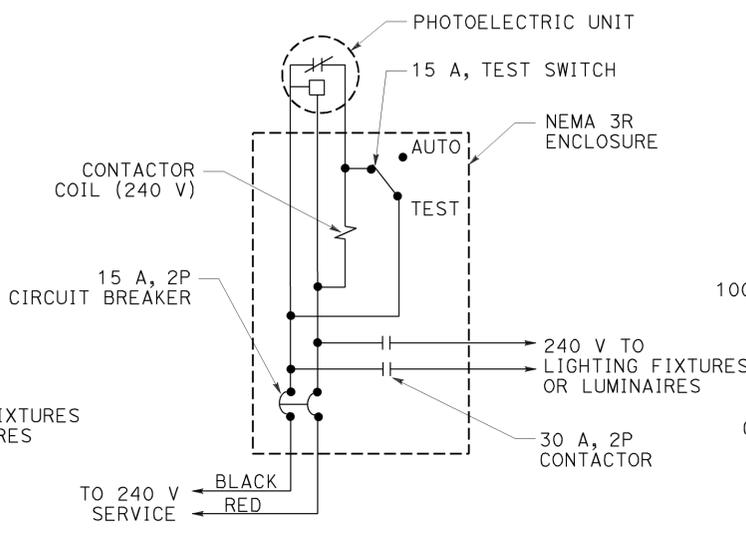
TYPE LC1 CONTROL

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



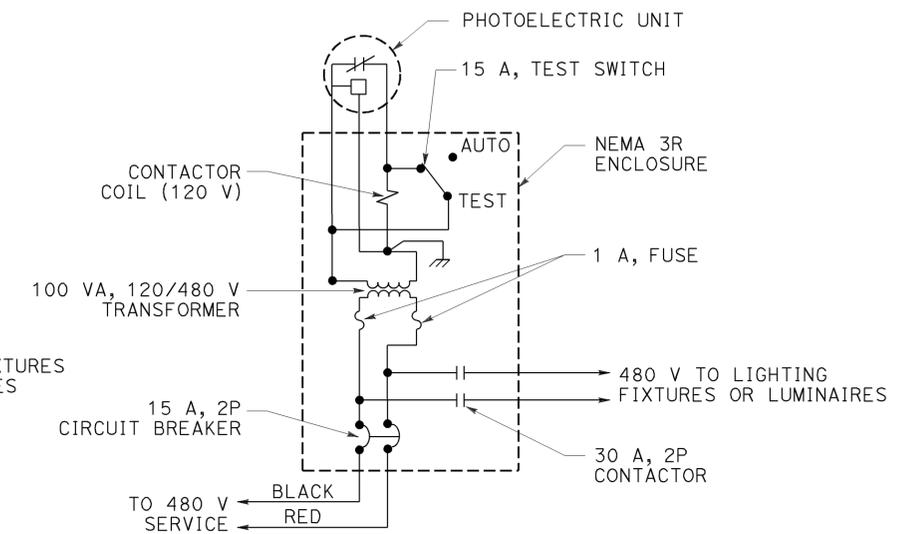
TYPE LC2 CONTROL

For 120 V unswitched circuit



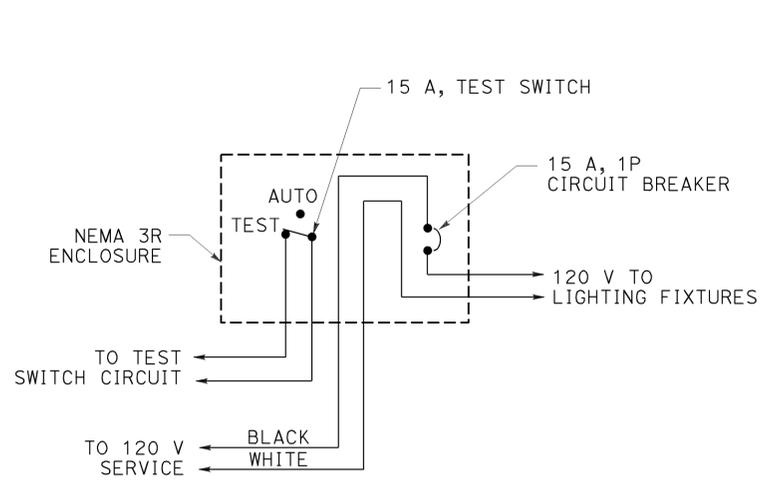
TYPE LC3 CONTROL

For 240 V unswitched circuits



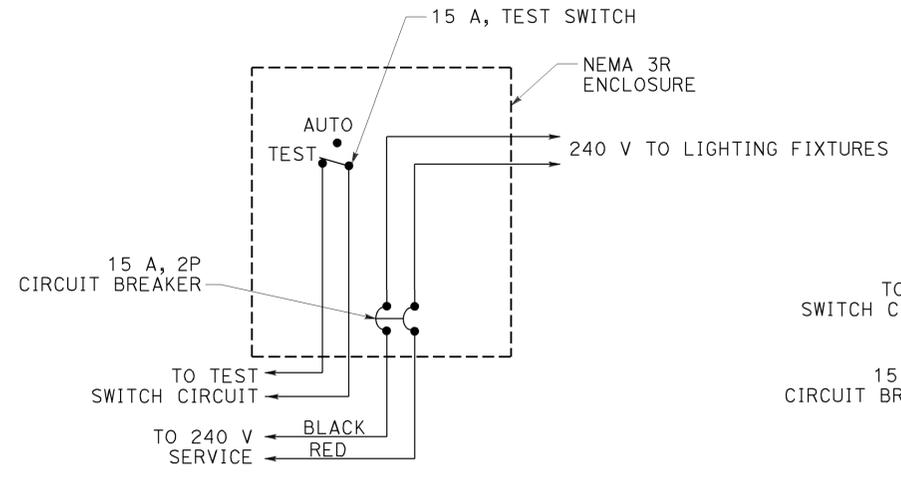
TYPE LC4 CONTROL

For 480 V unswitched circuits



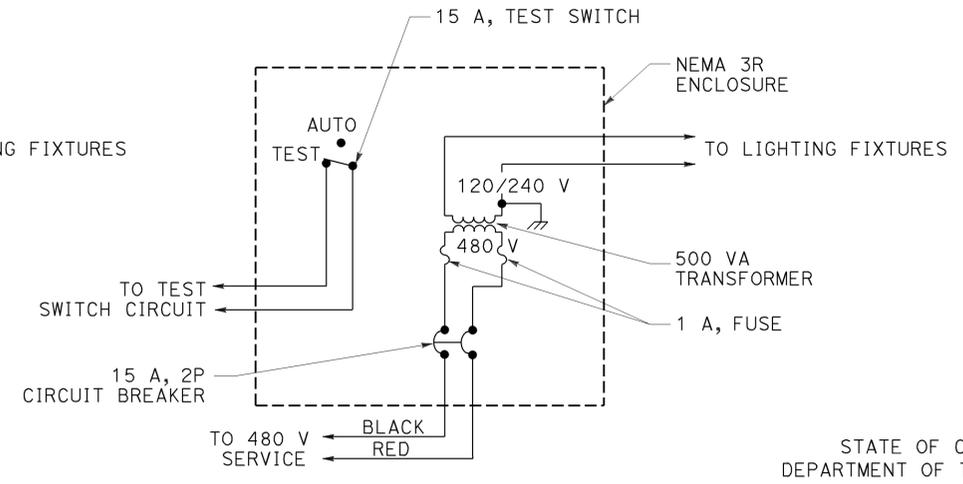
TYPE SC1 CONTROL

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
04	Alameda	205	0.0/21.0	652	676
10	San Joaquin	580	0.0/8.0, 26.1/30.3, 13.5/15.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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

LEGEND:

— Indicates new structure

--- Indicates existing structure

▨ Indicates limits of new Structure Approach Slab Type R (30D)

NOTES:

(A) Limits of Paving Notch extension

(B) Limits of clean Expansion Joint Seal

(C) Limits of install new Joint Seal

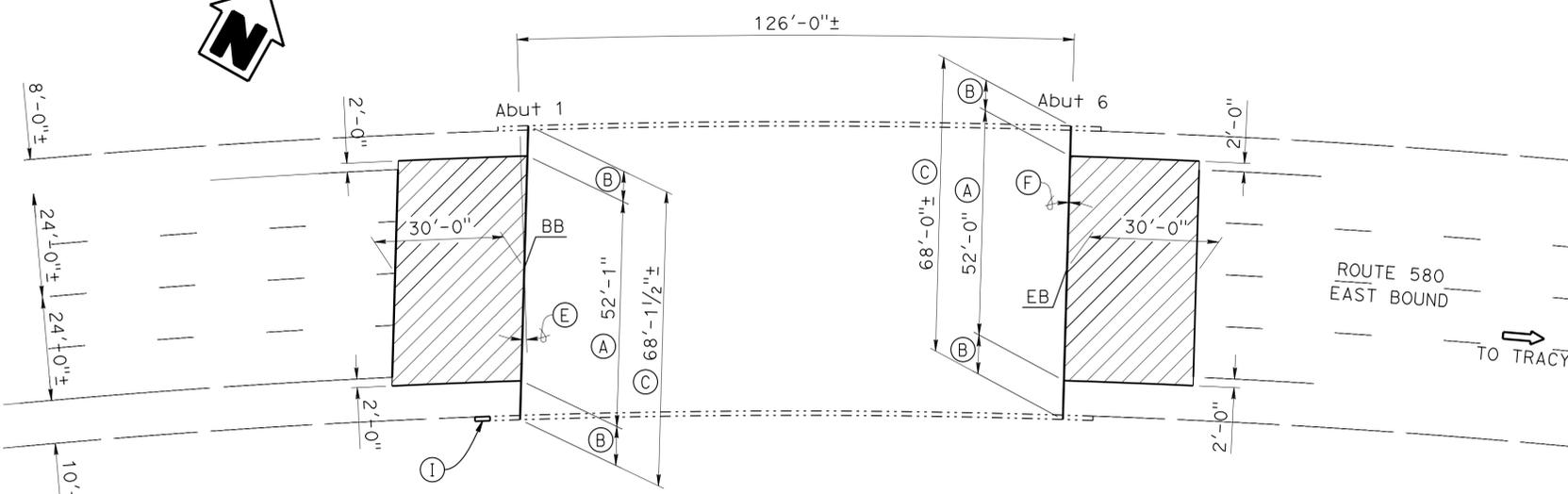
(E) 3°21'± Skew

(F) -0°12'± Skew

(G) 21°15'± Skew

(H) 17°16'± Skew

(I) Concrete Barrier Transition, see "TYPE 1 BARRIER (CASE 1)" sheet on "Concrete Barrier Transition Plans"



REDMOND OVERHEAD
 BRIDGE No. 33-0124L, ROUTE 580, PM 3.91
 1" = 20'

QUANTITIES

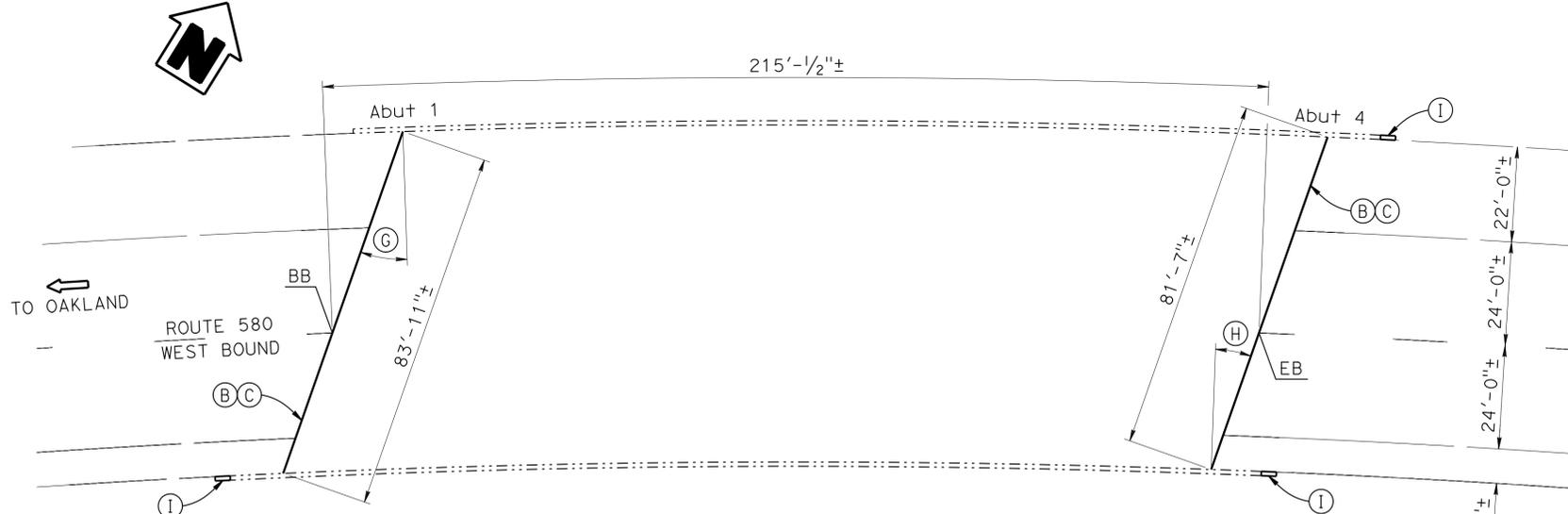
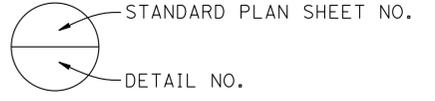
AGGREGATE BASE (APPROACH SLAB)	15	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	142	CY
PAVING NOTCH EXTENSION	78	CF
CLEAN EXPANSION JOINT	32	LF
JOINT SEAL (MR 1/2")	136	LF

INDEX TO PLANS

SHEET NO	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	GENERAL PLAN NO. 4
5	GENERAL PLAN NO. 5
6	GENERAL PLAN NO. 6
7	JOINT SEAL DETAILS
8	DECK DETAILS
9	STRUCTURE APPROACH TYPE R (30S)
10	STRUCTURE APPROACH TYPE R (30D)

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)
RSP A76A	CONCRETE BARRIER TYPE 60
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



STONE CUT OVERHEAD
 BRIDGE No. 33-0123R, ROUTE 580, PM 3.98
 1" = 20'

QUANTITIES

CLEAN EXPANSION JOINT	166	LF
JOINT SEAL (MR 1")	166	LF

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

JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Muthanna Omran	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/ 205 IMPROVEMENTS GENERAL PLAN NO. 1
	DETAILS	BY Franklin Maagma/Tony Cotton	CHECKED Joey Aquino	LAYOUT	BY Muthanna Omran			CHECKED Danny Kao	
	QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas	PLANS AND SPECS COMPARED Darwin A. Vargas	POST MILE	VARIES	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3578
 PROJECT NUMBER & PHASE: 0415000066-1 CONTRACT NO.: 04-3G59U4
 DISREGARD PRINTS BEARING EARLIER REVISION DATES: 11-24-15 01-17-16 12-24-15 SHEET 1 OF 10

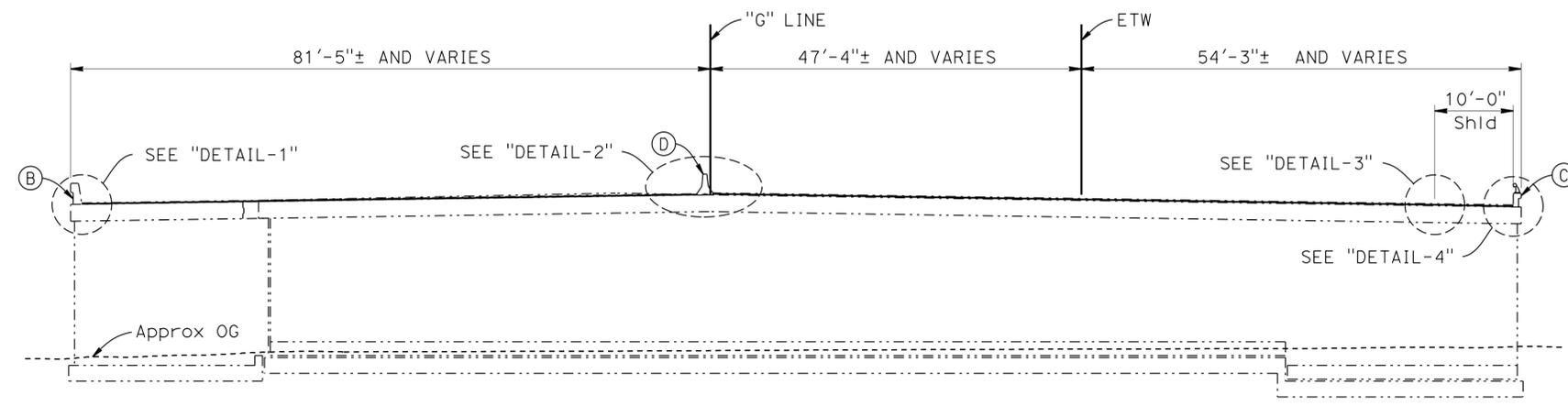
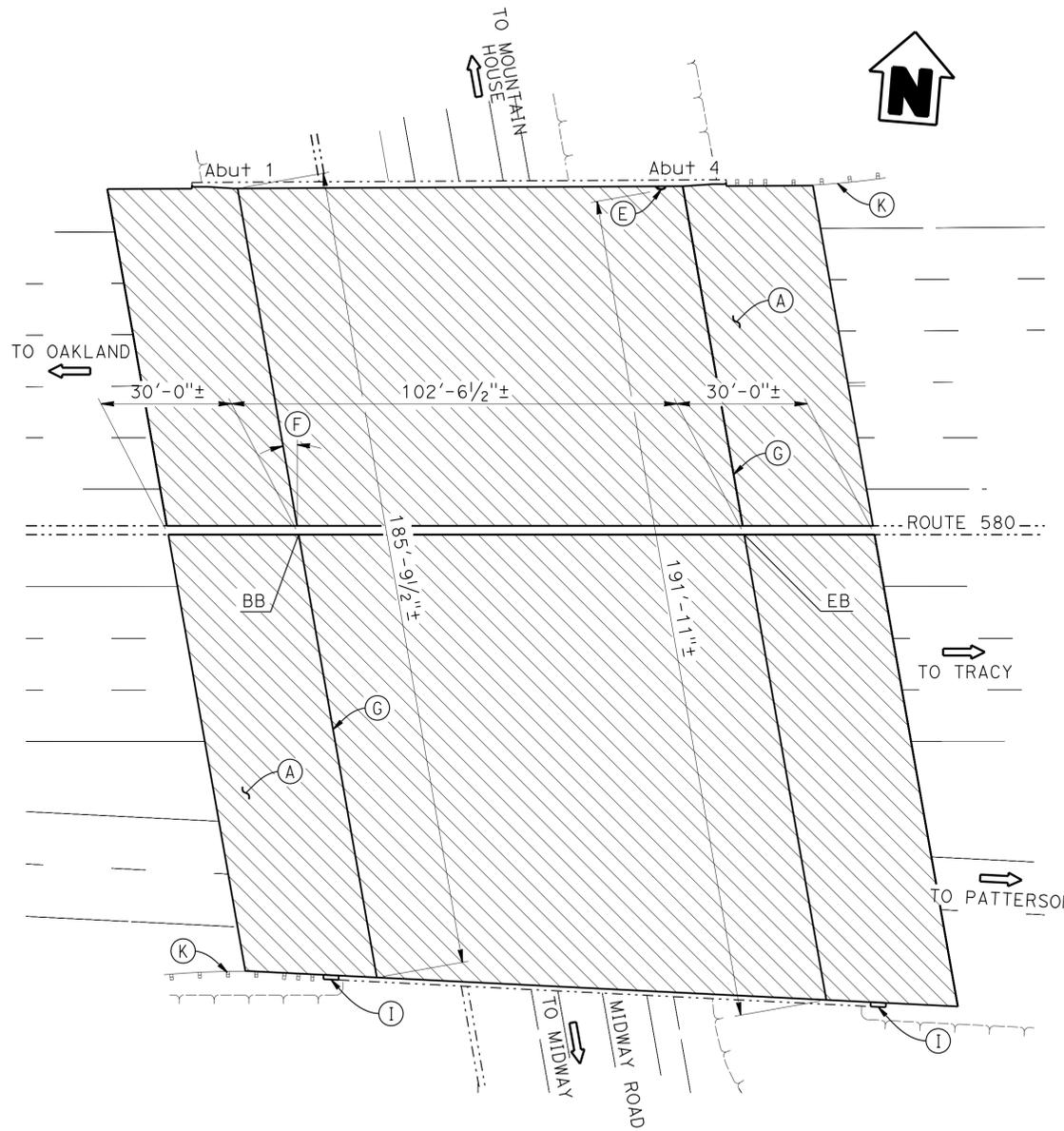
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 04-3g59u1-a-gp01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	653	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/15.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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



TYPICAL SECTION
 $\frac{3}{32}'' = 1' - 0''$

LEGEND:

- Indicates new structure
- - - - - Indicates existing structure
- Indicates limits of removal of existing 2"± thick asphalt concrete overlay (not all surface area covered by AC), prepare concrete bridge deck surface, remove unsound concrete and patch with rapid setting concrete and place new polyester concrete overlay (see "DECK DETAILS" sheet)

NOTES:

1. For "DETAIL-1", "DETAIL-2", "DETAIL-3", and "DETAIL-4", see "DECK DETAILS" sheet
- (A) Existing Structure Approach slab
- (B) Existing Concrete Barrier, Type 732
- (C) Existing Barrier Railing, Type 1
- (D) Existing concrete median barrier
- (E) Existing drainage inlet to remain
- (F) 10°02'13"± Skew, Typical
- (G) Existing Joint Seal (Asphaltic Plug Joint Seal with bridging plate) to be removed and replaced with new Joint Seal Type A (MR=1/2")
- (I) Concrete Barrier Transition, see "TYPE 1 BARRIER (CASE 1)" sheet on "Concrete Barrier Transition Plans"
- (K) Existing MBGR, see "Roadway Plans"

MIDWAY ROAD UNDERCROSSING
 BRIDGE No. 33-0195, ROUTE 580, PM 0.92
 1" = 20'

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

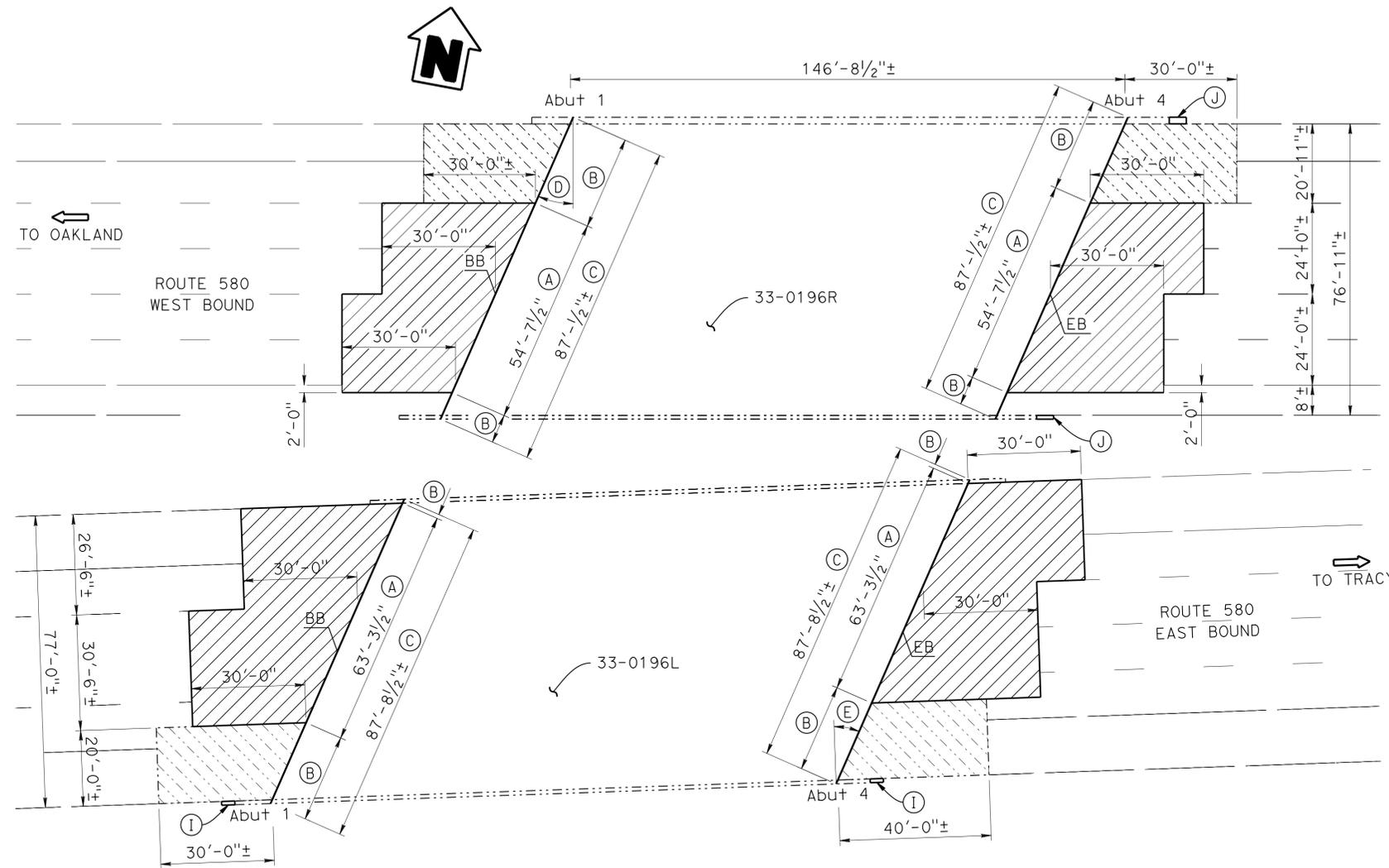
QUANTITIES	
RAPID SETTING CONCRETE (PATCH)	101 CF
REMOVE ASPHALT CONCRETE SURFACING	29,234 SQFT
REMOVE UNSOUND CONCRETE	101 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	29,738 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	2,300 CF
PLACE POLYESTER CONCRETE OVERLAY	29,738 SQFT
CLEAN EXPANSION JOINT	378 LF
JOINT SEAL (MR 1/2")	378 LF

JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Alireza Yazdani	CHECKED Muthanna Omran	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/ 205 IMPROVEMENTS GENERAL PLAN NO. 2				
	DETAILS	BY Franklin Magma/Min Yu	CHECKED Muthanna Omran	LAYOUT	BY Alireza Yazdani			CHECKED Muthanna Omran		VARIOUS			
	QUANTITIES	BY Alireza Yazdani	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas	PLANS AND SPECS COMPARED Darwin A. Vargas	POST MILE						
						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3578	PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2	OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	654	676
10	San Joaquin	580	0.0/8.0, 26.1/30.3, 13.5/15.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 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.

REGISTERED PROFESSIONAL ENGINEER
 ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA



- LEGEND:**
- Indicates new structure
 - - - - - Indicates existing structure
 - ▨ Indicates limits of new Structure Approach Slab Type R (30D)
 - ▤ Indicates limits of existing Approach Slab

- NOTES:**
- (A) Limits of Paving Notch extension
 - (B) Limits of clean Expansion Joint Seal
 - (C) Limits of install new Joint Seal
 - (D) 23°45'± Skew, Typical
 - (E) 25°45'± Skew, Typical
 - (I) Concrete Barrier Transition, see "TYPE 1 BARRIER (CASE 1)" sheet on "Concrete Barrier Transition Plans"
 - (J) Concrete Barrier Transition, see "TYPE 25 BARRIER" sheet on "Concrete Barrier Transition Plans"

GRANT LINE ROAD UNDERCROSSING
 BRIDGE No. 33-0196R/L, ROUTE 580, PM 1.48
 1" = 20'

QUANTITIES

AGGREGATE BASE (APPROACH SLAB)	35	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	351	CY
PAVING NOTCH EXTENSION	177	CF
CLEAN EXPANSION JOINT	114	LF
JOINT SEAL (MR 1/2")	352	LF

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

JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Muthanna Omran	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/ 205 IMPROVEMENTS GENERAL PLAN NO. 3
	DETAILS	BY Franklin Maagma/Tony Cotton	CHECKED Joey Aquino	LAYOUT	BY Muthanna Omran			CHECKED Danny Kao	
QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas	PLANS AND SPECS COMPARED	Darwin A. Vargas	VARIES		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3578	PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES
			REVISION DATES 11-24-15 01-17-16 01-19-15
			SHEET OF 3 10

FILE => 04-3g59u1-a-gp03.dgn

USERNAME => s128787 DATE PLOTTED => 06-JUN-2016 TIME PLOTTED => 15:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	655	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/15.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

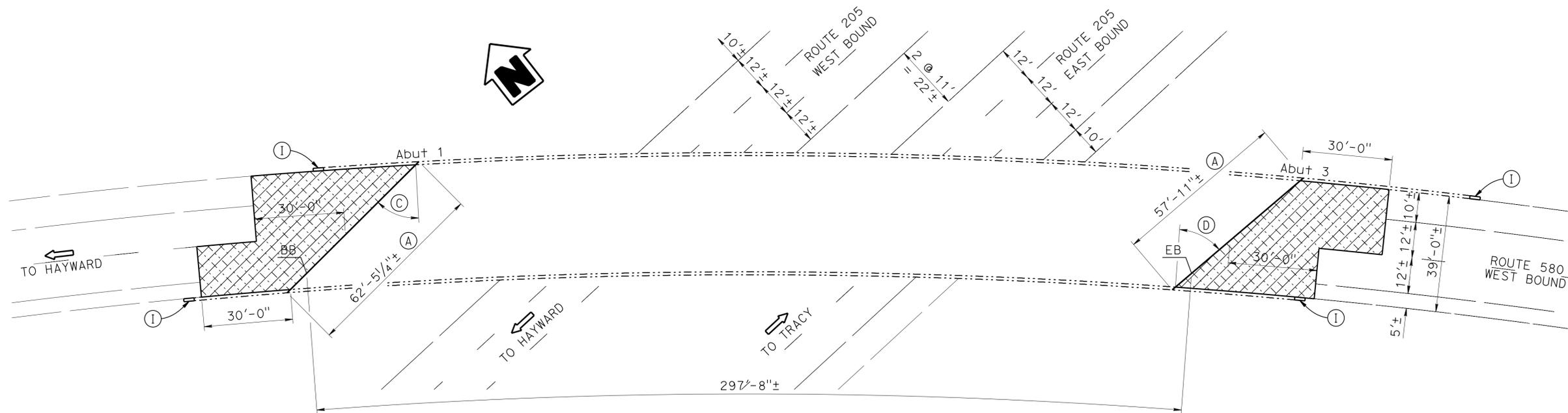
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

LEGEND:

- Indicates new structure
- - - - - Indicates existing structure
- ▨ Indicates limits of new Structure Approach Slab Type R (30S)
- ▧ Indicates limits of existing approach slab to be removed

NOTES:

- (A) Limits of install new Joint Seal
- (C) 48°19'± Skew
- (D) 45°28'± Skew
- (I) Concrete Barrier Transition, see "TYPE 1 BARRIER (CASE 1)" sheet on "Concrete Barrier Transition Plans"



ROUTE 580/205 SEPARATION
 BRIDGE No. 33-0346R, ROUTE 580, PM 0.39
 1" = 20'

QUANTITIES

AGGREGATE BASE (APPROACH SLAB)	14	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	142	CY
JOINT SEAL (MR 1")	121	LF

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

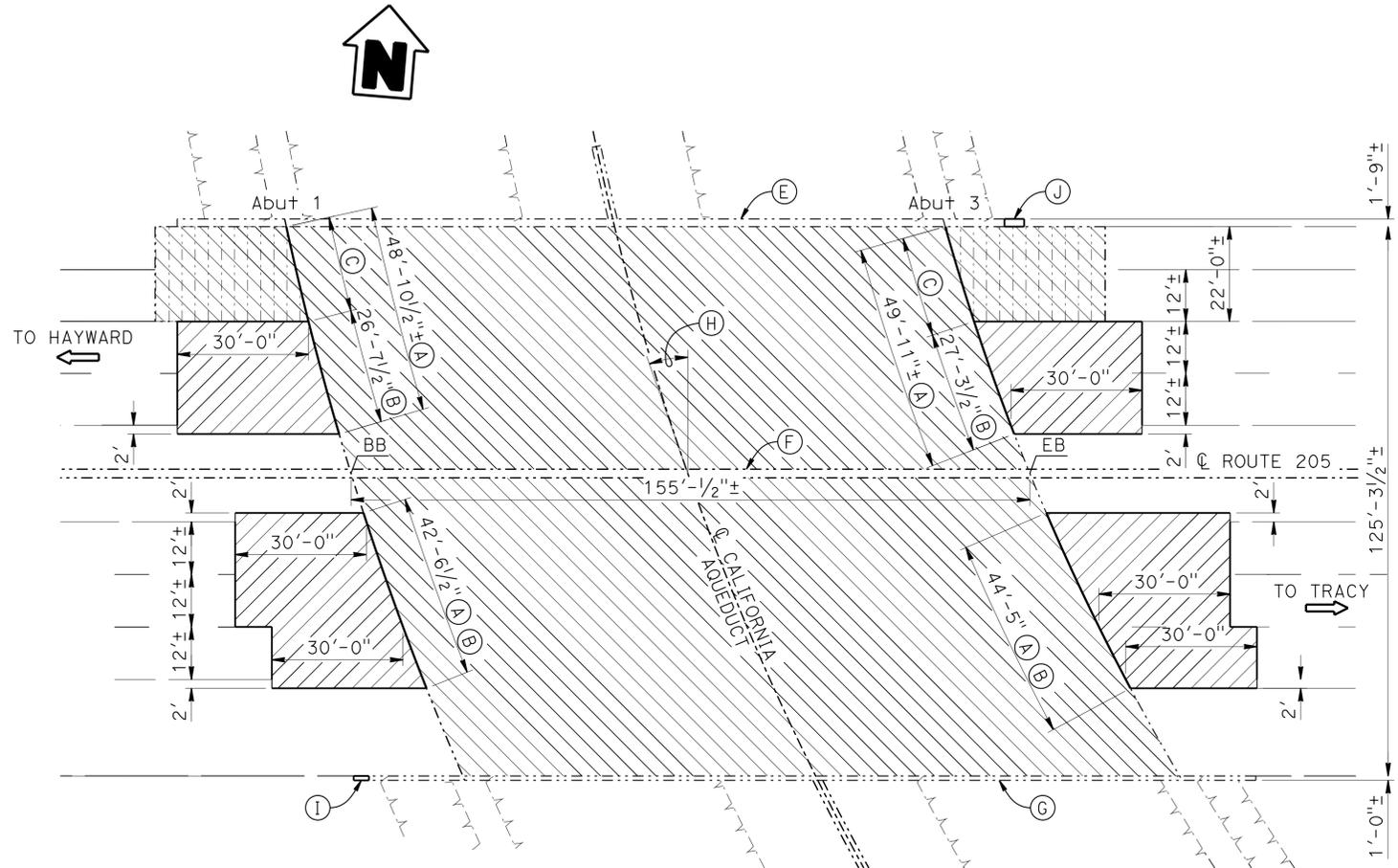
JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Muthanna Omran	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/205 IMPROVEMENTS GENERAL PLAN NO. 4					
	DETAILS	BY Franklin Maagma	CHECKED Joey Aquino	LAYOUT	BY Muthanna Omran			CHECKED Danny Kao		VARIOUS				
	QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas			PLANS AND SPECS COMPARED Darwin A. Vargas		POST MILE	VARIES			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3578	PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	REVISION DATES	SHEET 4 OF 10			
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)										DISREGARD PRINTS BEARING EARLIER REVISION DATES		11-24-15	01-19-15	12-24-15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	656	676
04	Alameda	580	0.0/8.0		
10	San Joaquin	580	26.1/30.3		
			13.5/15.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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CALIFORNIA AQUEDUCT BRIDGE
 BRIDGE No. 33-0402, ROUTE 205, PM 0.28
 1" = 20'

- LEGEND:
- Indicates new structure
 - - - - - Indicates existing structure
 - ▨ Indicates limits of new Structure Approach Type R(30D), furnish and place 3/4" new Polyester Concrete Overlay
 - ▤ Indicates limits of existing structure to remain
 - ▧ Indicates limits of removal of existing 3"± AC overlay, prepare concrete bridge deck surface, (remove unsound concrete and patch with rapid setting concrete), and place 3/4" new polyester concrete overlay

- NOTES:
- For "DECK REPAIR DETAIL", see "POLYESTER CONCRETE OVERLAY DETAILS" sheet
 - For work regarding the grade difference and transition between new and existing roadway, see "Roadway Plans"
- (A) Limits of new Joint Seal Type A, MR = 1/2"
 - (B) Limits of paving notch extension
 - (C) Remove existing Joint Seal (Asphaltic Plug with bridging plate), clean existing Expansion Joint
 - (E) Existing Concrete Barrier, Type 25
 - (F) Existing Concrete Barrier, Type 50
 - (G) Existing Concrete Barrier, Type 1
 - (H) 19°10'35"± Skew
 - (I) Concrete Barrier Transition, see "TYPE 1 BARRIER (CASE 1)" sheet on "Concrete Barrier Transition Plans"
 - (J) Concrete Barrier Transition, see "TYPE 25 BARRIER" sheet on "Concrete Barrier Transition Plans"

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	69	CF
REMOVE ASPHALT CONCRETE SURFACING	20,597	SQFT
REMOVE UNSOUND CONCRETE	69	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	20,597	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	1,557	CF
PLACE POLYESTER CONCRETE OVERLAY	24,907	SQFT
AGGREGATE BASE (APPROACH SLAB)	20	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	200	CY
PAVING NOTCH EXTENSION	106	CF
CLEAN EXPANSION JOINT	47	LF
JOINT SEAL (MR 1/2")	187	LF

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

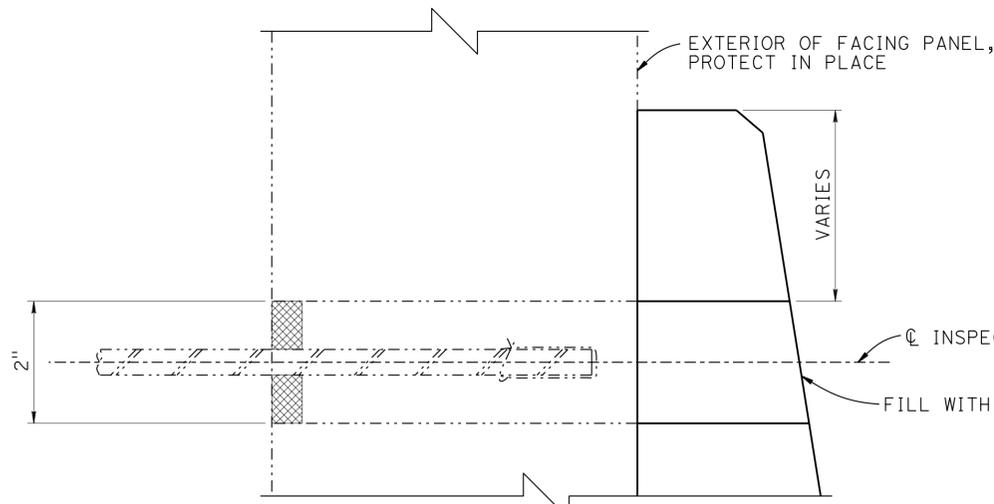
JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Alireza Yazdani	CHECKED Muthanna Omran	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/205 IMPROVEMENTS GENERAL PLAN NO. 5			
	DETAILS	BY Franklin Magma/Min Yu	CHECKED Muthanna Omran	LAYOUT	BY Alireza Yazdani			CHECKED Muthanna Omran		VARIOUS		
	QUANTITIES	BY Alireza Yazdani	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas			PLANS AND SPECS COMPARED Darwin A. Vargas		POST MILE		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3578	PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-365904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 5 OF 10

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 04-3g59u1-a-gp05.dgn

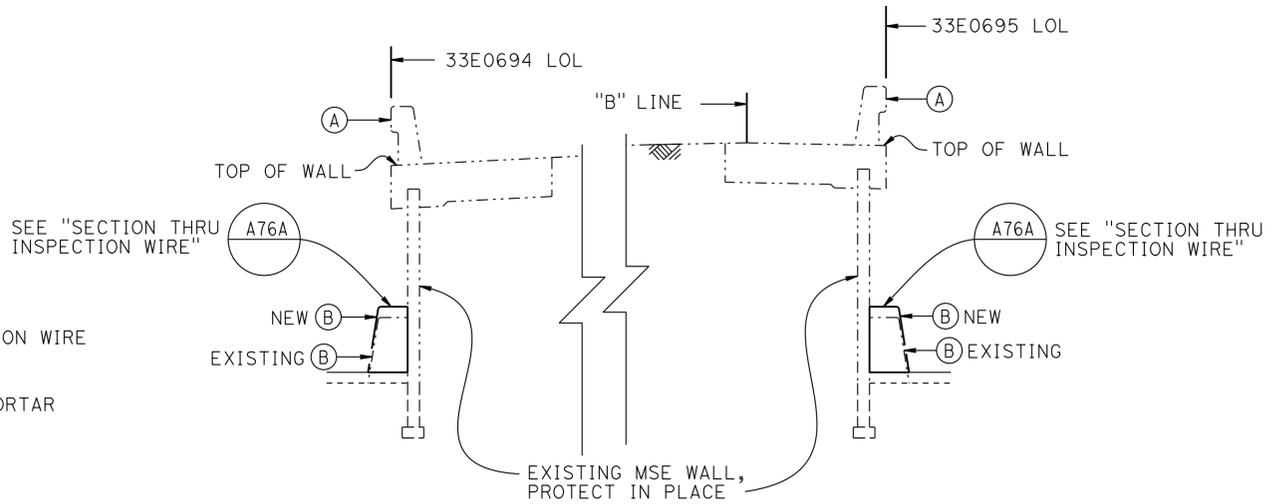
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	657	676
10	San Joaquin	580	0.0/8.0, 26.1/30.3, 13.5/15.4		

REGISTERED CIVIL ENGINEER: ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

03-01-16 DATE
 3-28-16 PLANS APPROVAL DATE
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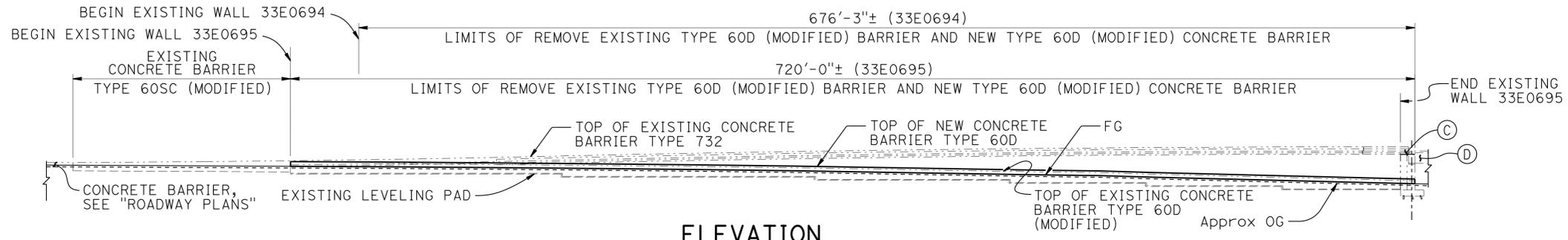
SECTION THRU INSPECTION WIRE
NO SCALE



TYPICAL SECTION
1/4" = 1'-0"

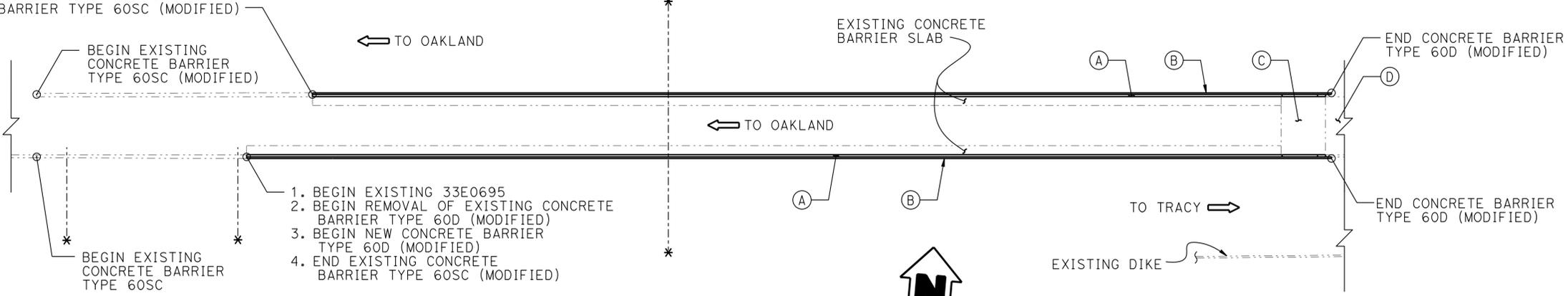
- LEGEND:**
- Indicates new structure
 - - - - Indicates existing structure
 - * Approximate location of existing drainage pipe and drainage inlet

- NOTES:**
- (A) Existing Concrete Barrier Type 732
 - (B) Concrete Barrier Type 60D (Modified)
 - (C) Existing Structure Approach Slab
 - (D) 580/205 Separation, Br No. 33-0693R



ELEVATION
BRIDGE Nos. 33E0694 AND 33E0695
1" = 40'

- BEGIN EXISTING 33E0694
- BEGIN REMOVAL OF EXISTING CONCRETE BARRIER TYPE 60D (MODIFIED)
- BEGIN NEW CONCRETE BARRIER TYPE 60D (MODIFIED)
- END EXISTING CONCRETE BARRIER TYPE 60SC (MODIFIED)



- BEGIN EXISTING 33E0695
- BEGIN REMOVAL OF EXISTING CONCRETE BARRIER TYPE 60D (MODIFIED)
- BEGIN NEW CONCRETE BARRIER TYPE 60D (MODIFIED)
- END EXISTING CONCRETE BARRIER TYPE 60SC (MODIFIED)

580/205 MSE WALL (BARRIER REPLACEMENT)
BRIDGE Nos. 33E0694 AND 33E0695
1" = 40'

QUANTITIES

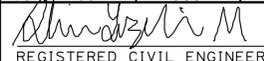
REMOVE CONCRETE BARRIER (TYPE 60D MODIFIED)	1,396 LF
CONCRETE BARRIER (TYPE 60D MODIFIED)	1,396 LF

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

JOSEPH E. DOWNING DESIGN ENGINEER	DESIGN	BY Muthanna Omran	CHECKED Joey Aquino	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/205 IMPROVEMENTS GENERAL PLAN NO. 6	
	DETAILS	BY Franklin Maagma	CHECKED Joey Aquino	LAYOUT	BY Muthanna Omran			CHECKED Danny Kao		VARIOUS
	QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran	SPECIFICATIONS	BY Darwin A. Vargas			PLANS AND SPECS COMPARED Darwin A. Vargas		VARIES

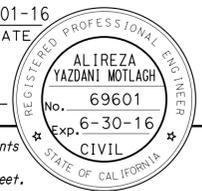
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3578
 PROJECT NUMBER & PHASE: 0415000066-1
 CONTRACT NO.: 04-3G59U4
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 11-24-15, 01-14-16, 01-19-16
 SHEET 6 OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	658	676
04	Alameda	580	0.0/8.0		
10	San Joaquin	580	26.1/30.3		
			13.5/15.4		

 03-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

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JOINT SEAL TABLE							
BRIDGE NAME	BRIDGE NUMBER	LOCATION		MINIMUM * MR (inch)	APPROXIMATE LENGTH (ft)	EXISTING WATER STOP	APPROXIMATE DEPTH TO CLEAN JOINT (inch)
STONE CUT OVERHEAD	33-0123R	Abut 1	BB	1	84	NO	12
		Abut 4	EB	1	82	NO	12
REDMOND OVERHEAD	33-0124L	Abut 1	BB	1/2	68	NO	12
		Abut 6	EB	1/2	68	NO	12
MIDWAY ROAD UNDERCROSSING	33-0195	Abut 1	BB	1/2	186	NO	12
		Abut 4	EB	1/2	192	NO	12
GRANT LINE ROAD UNDERCROSSING	33-0196R/L	Abut 1	BB	1/2	176	NO	12
		Abut 4	EB	1/2	176	NO	12
ROUTE 580/205 SEPARATION	33-0346R	Abut 1	BB	1	63	YES	6
		Abut 3	EB	1	58	YES	6
CALIFORNIA AQUEDUCT BRIDGE	33-0402	Abut 1	BB	1/2	92	NO	12
		Abut 3	EB	1/2	95	NO	12

* Rounded up to 1/2"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Muthanna Omran	CHECKED Joey Aquino	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	ROUTE 580/205 IMPROVEMENTS JOINT SEAL DETAILS		
	DETAILS	BY Franklin Maagma	CHECKED Joey Aquino			VARIOUS			
	QUANTITIES	BY Ghiath Taleb-Agha	CHECKED Muthanna Omran			VARIES			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3578 PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES			
				0	1	2	3	REVISION DATES 11-24-15 02-23-16 12-24-15	SHEET 7 OF 10

FILE => 04-3g59u1-j-jed*01.dgn

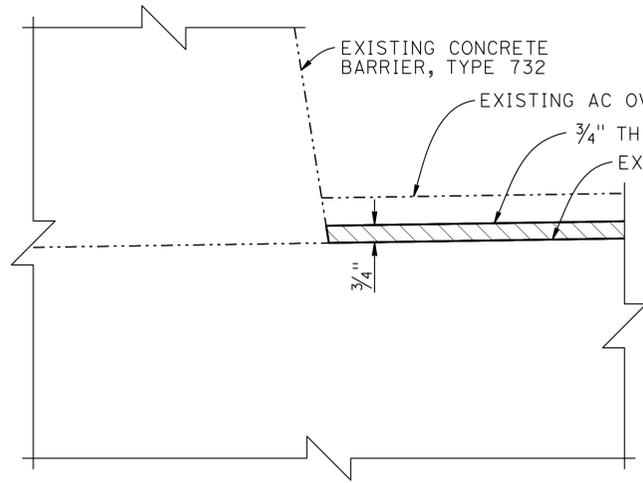
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	659	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/15.4		

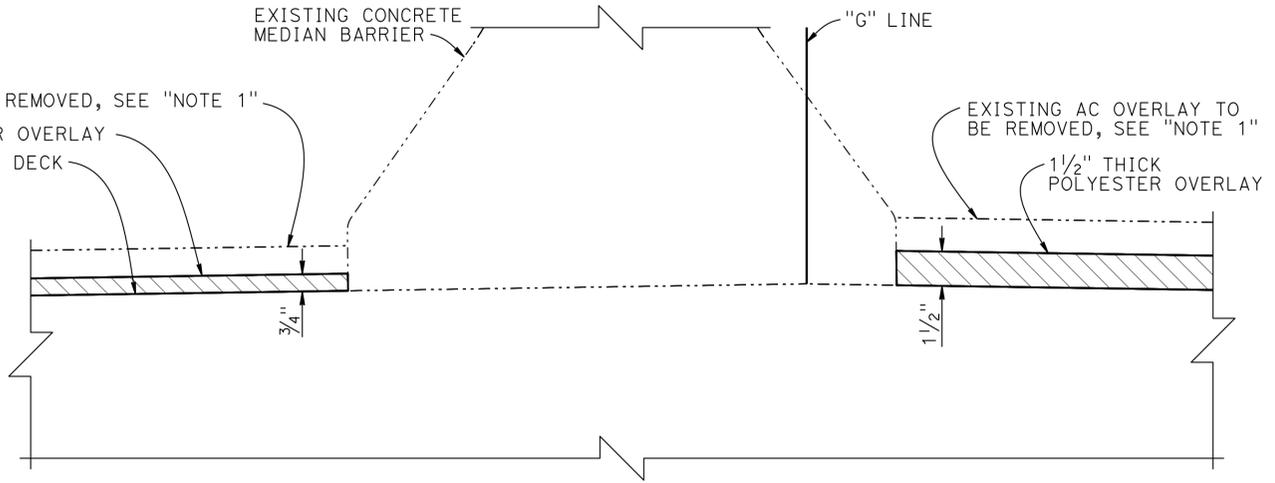
03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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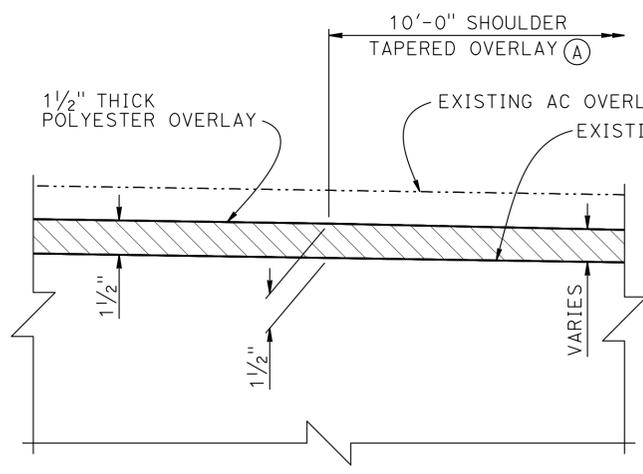


DETAIL 1
1" = 1'-0"

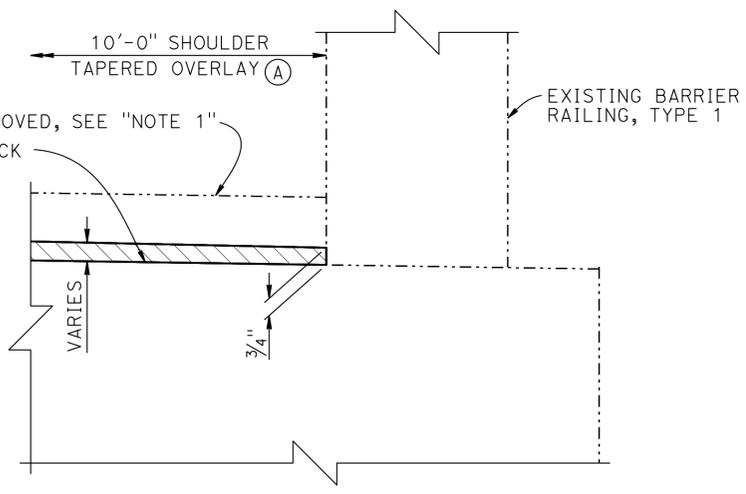


DETAIL 2
1" = 1'-0"

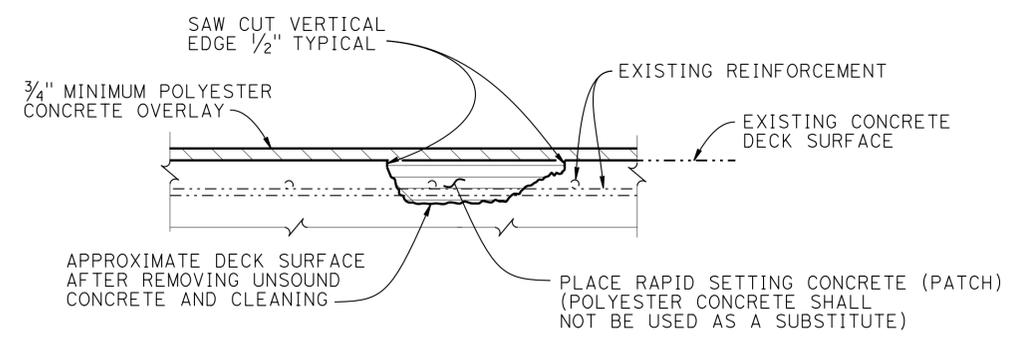
- LEGEND:**
- Indicates new structure
 - - - - - Indicates existing structure
 - [Hatched Box] Area of unsound concrete removal and place Rapid Set Concrete Patch
 - [Diagonal Lines Box] Polyester concrete overlay
- NOTES:**
- Part of shoulders on westbound next to barriers are not covered by AC overlay and their limits must be verified by contractor
- (A) 1/2" thick Polyester Overlay with thickness tapering over shoulder to 3/4"



DETAIL 3
1" = 1'-0"



DETAIL 4
1" = 1'-0"



DECK REPAIR DETAIL
NO SCALE

LOCATIONS TO BE DETERMINED BY THE ENGINEER. REINFORCEMENT MAY BE ENCOUNTERED DURING DECK CONCRETE REMOVAL

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

DESIGN	BY Alireza Yazdani	CHECKED Muthanna Omran
DETAILS	BY Franklin Maagma	CHECKED Muthanna Omran
QUANTITIES	BY Alireza Yazdani	CHECKED Muthanna Omran

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

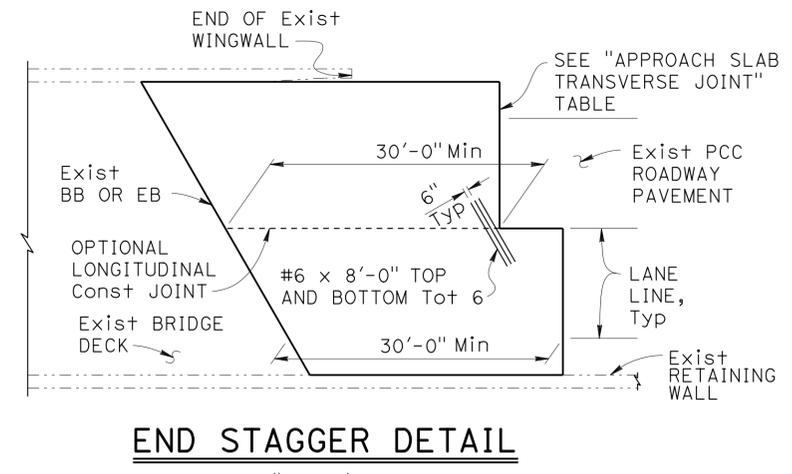
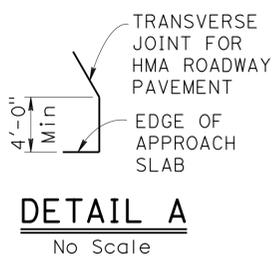
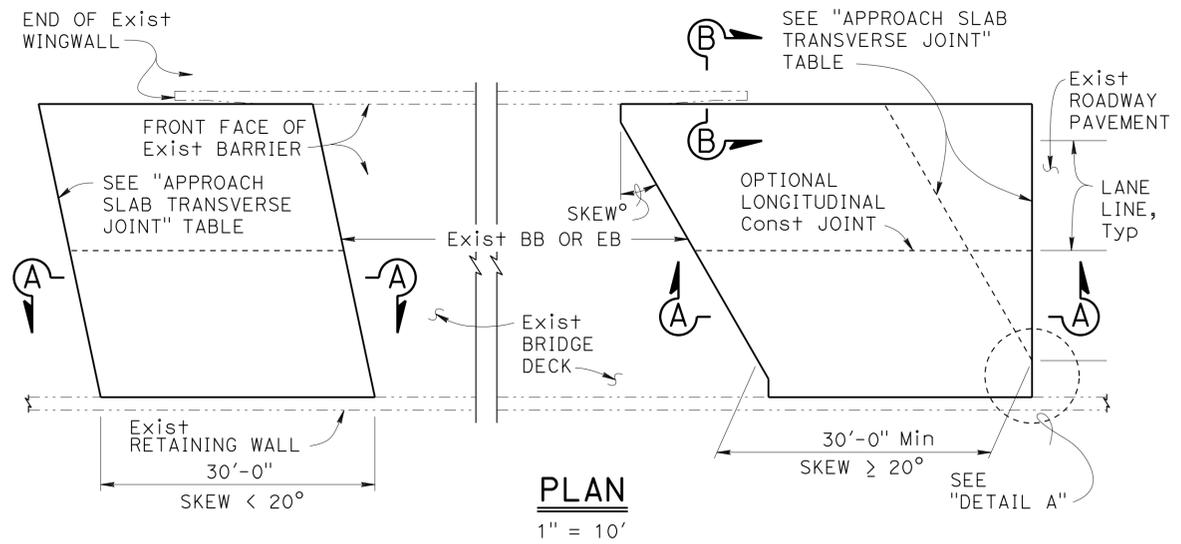
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	VARIOUS
POST MILE	VARIES

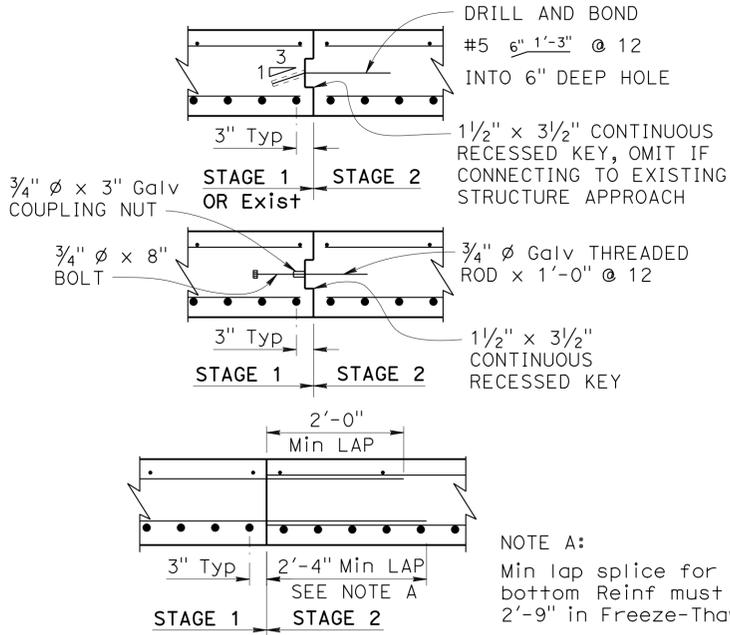
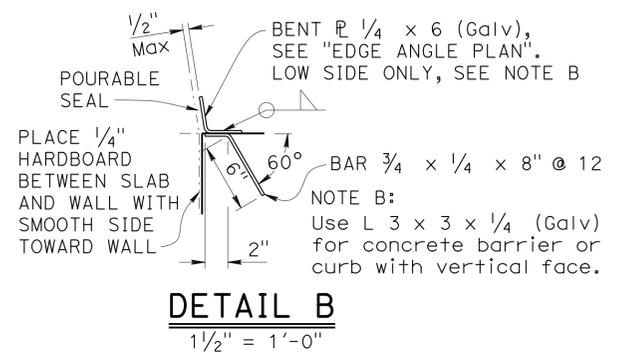
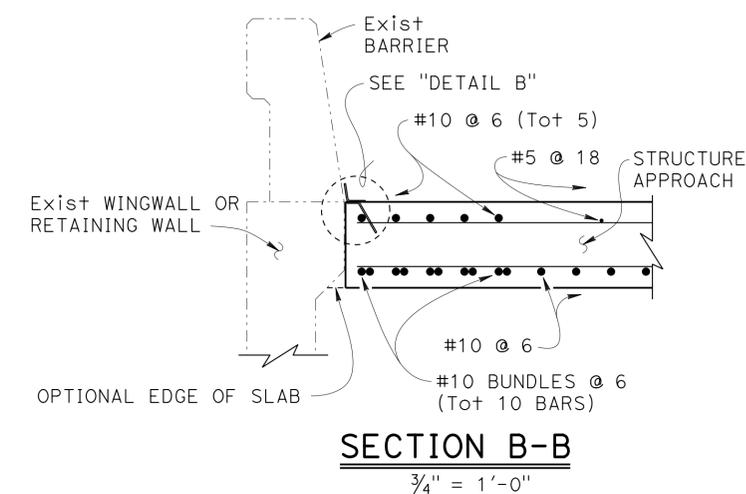
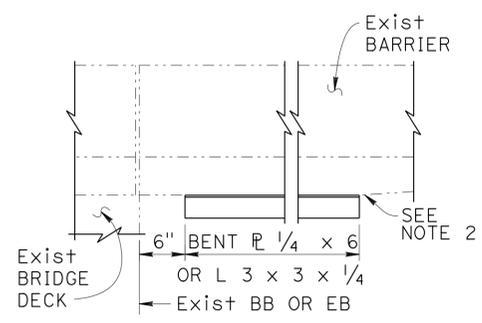
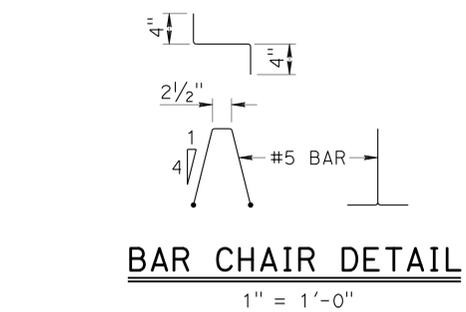
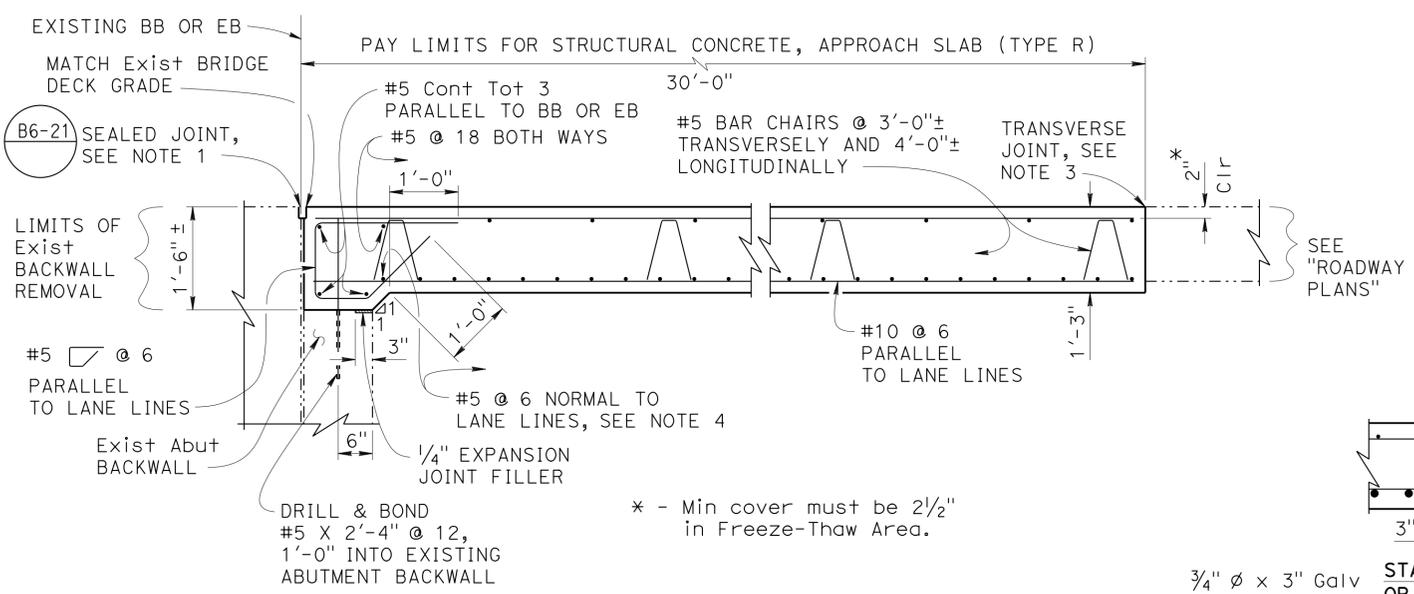
ROUTE 580/ 205 IMPROVEMENTS
DECK DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0	660	676
10	SJ	580	26.1/30.3		
			0.0/71.0		
			13.5/15.4		

REGISTERED CIVIL ENGINEER DATE 03-01-16
 ALIREZA YAZDANI MOTLAGH No. 69601 Exp. 6-30-16 CIVIL
 PLANS APPROVAL DATE 3-28-16
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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

- 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 CL roadway.

--- Indicates Existing Structure

STANDARD DRAWING	
FILE NO. xs3-130	APPROVAL DATE January 2015

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. VARIOUS POST MILE VARIES	ROUTE 580/205 IMPROVEMENTS STRUCTURE APPROACH TYPE R (30S)
---	----------------------------------	--	---

UNIT: 3578 PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 9 OF 10
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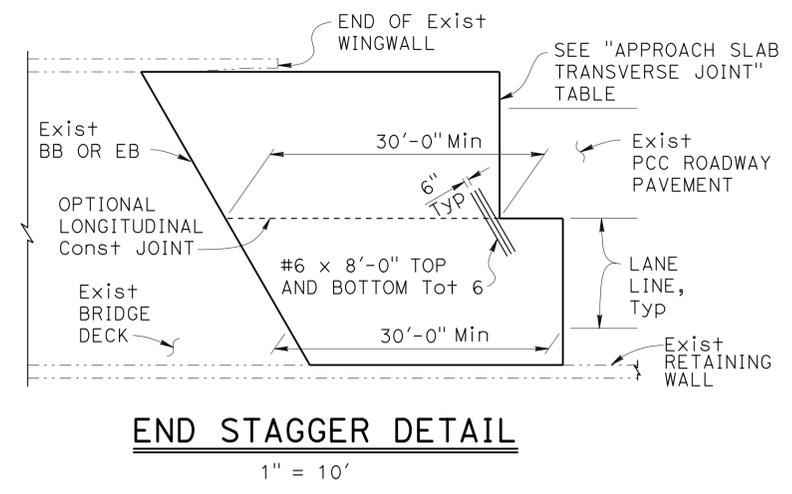
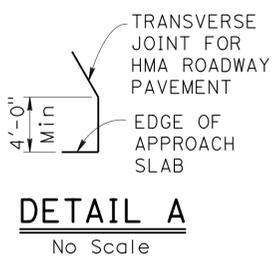
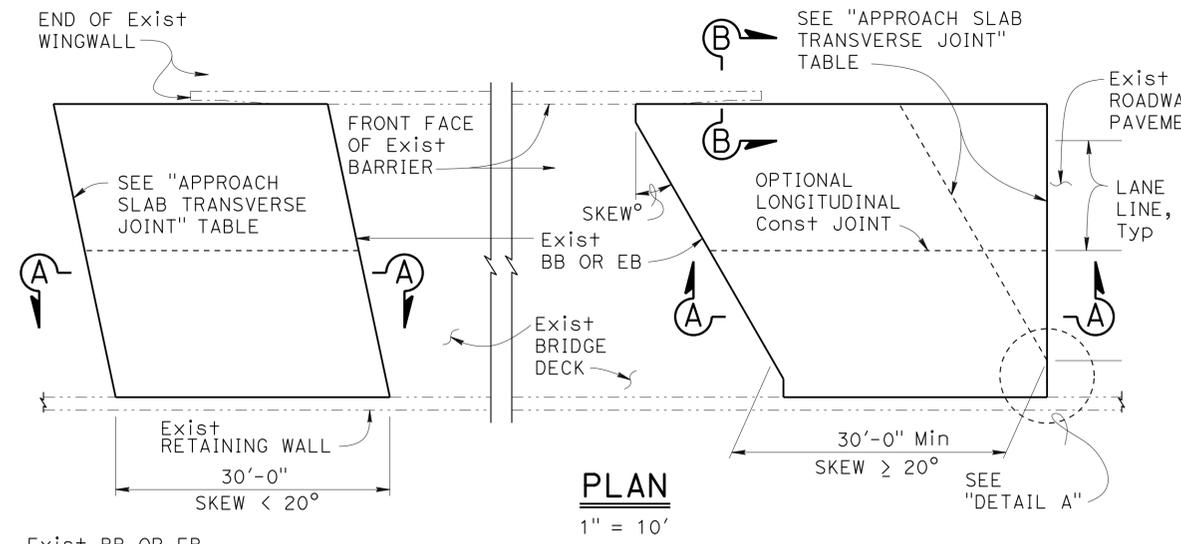
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	661	676
10	SJ	580	0.0/8.0, 26.1/30.3 13.5/15.4		

REGISTERED CIVIL ENGINEER
 ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

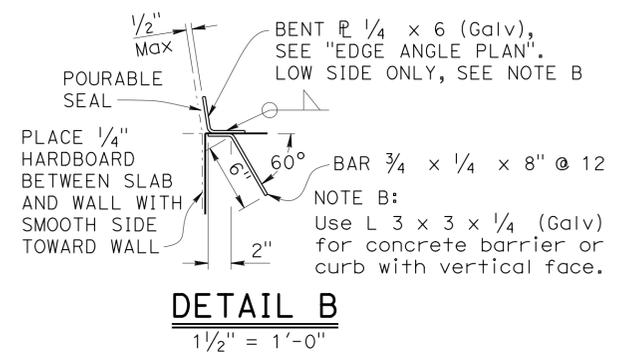
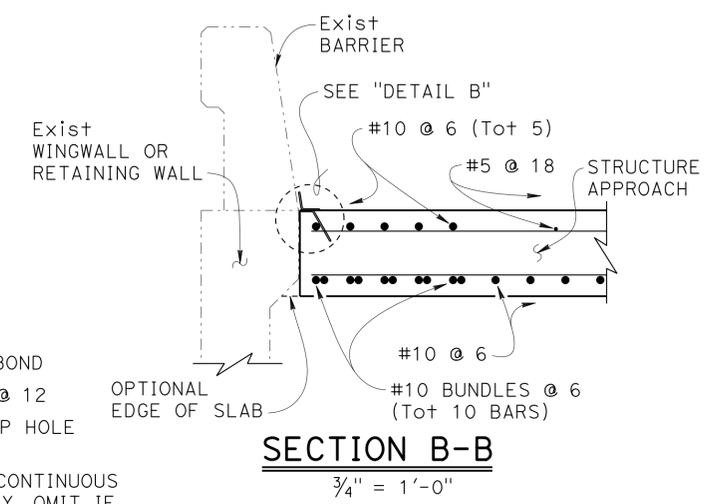
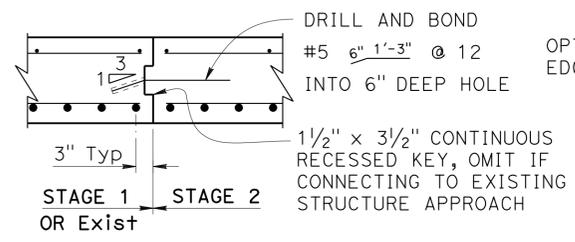
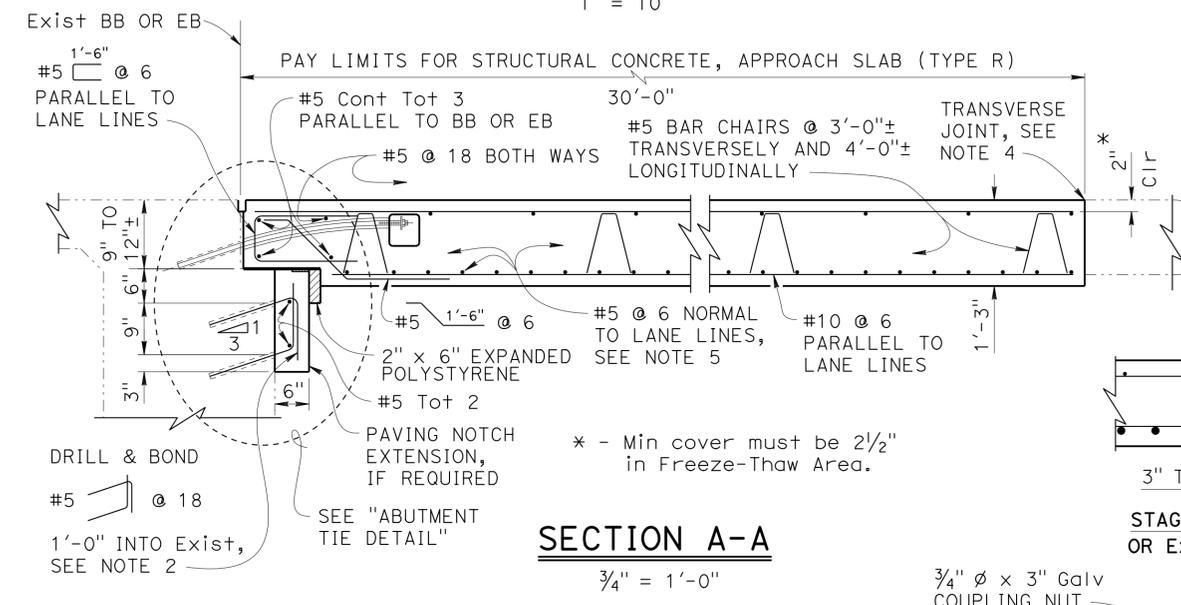
03-01-16
 DATE

3-28-16
 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

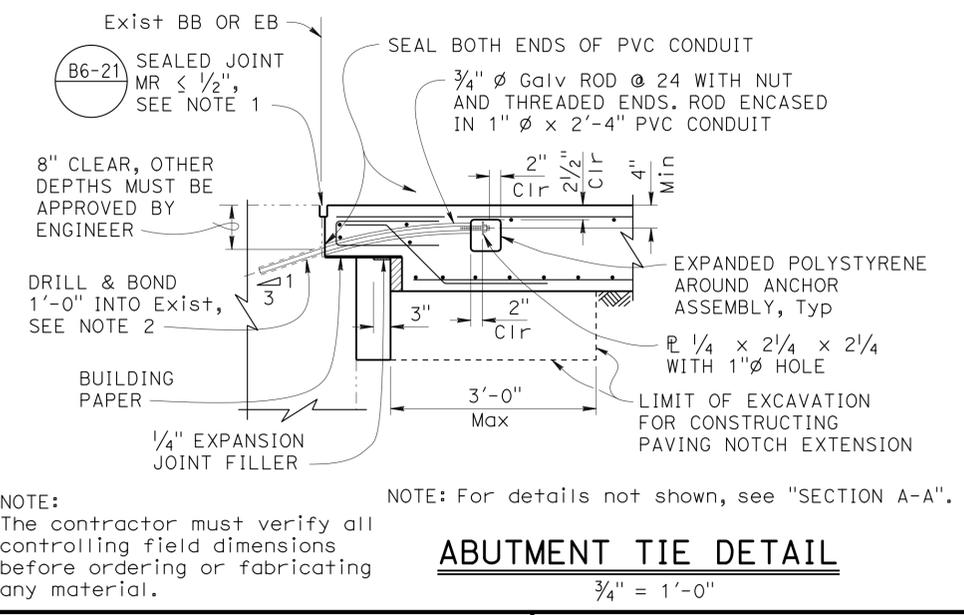
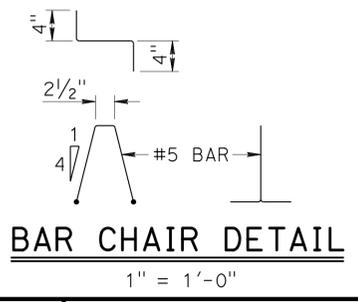
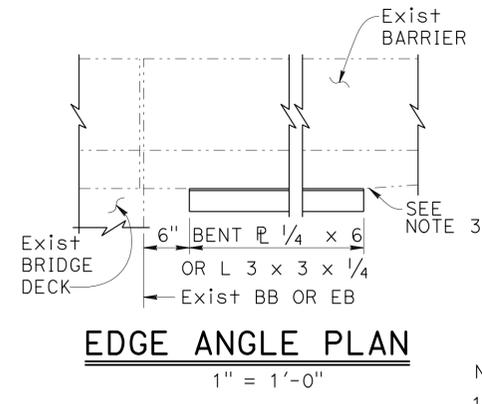
DESIGN: AASHTO LRFD Bridge Design Specifications, 2012 Edition with Caltrans Amendments, preface dated January 2014

LIMIT STATES: Service I, Strength I & II, Extreme II and Fatigue I ($\gamma_{FAT} = 1.0$)

DEAD LOAD: Includes 35 psf for future wearing surface

LIVE LOAD: HL93 and permit design load
 Equivalent strip width method: $W_1 = 12$ ft
 Slab span: $L_1 = 24.5$ ft

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



NOTE:
 The contractor must verify all controlling field dimensions before ordering or fabricating any material.

NOTE: For details not shown, see "SECTION A-A".

- NOTES:
- For details not shown, see other plan sheets. Adjust reinforcement to clear sawcut for sealed joint.
 - Space reinforcement to avoid existing prestress anchorages and other abutment reinforcement.
 - 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 ℓ roadway.
- Indicates Existing Structure

STANDARD DRAWING

FILE NO. **xs3-150**

APPROVAL DATE January 2015

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. VARIOUS
 POST MILE VARIES

ROUTE 580/205 IMPROVEMENTS
 STRUCTURE APPROACH TYPE R (30D)

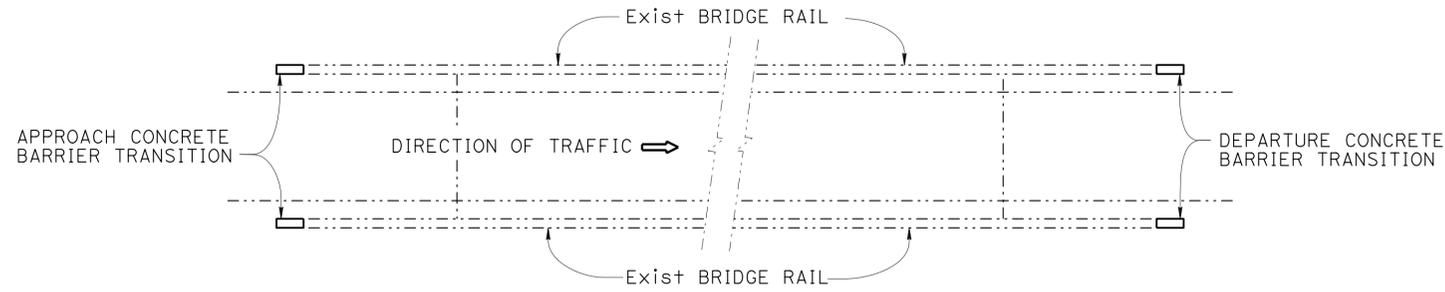
BRIDGE NO. VARIOUS
 POST MILE VARIES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071.0	662	676
04	San Joaquin	580	0.0/8.0, 26.1/30.3, 13.5/15.4		

YU SONG
 REGISTERED CIVIL ENGINEER
 No. C71687
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

2-25-16
 DATE
 3-28-16
 PLANS APPROVAL DATE

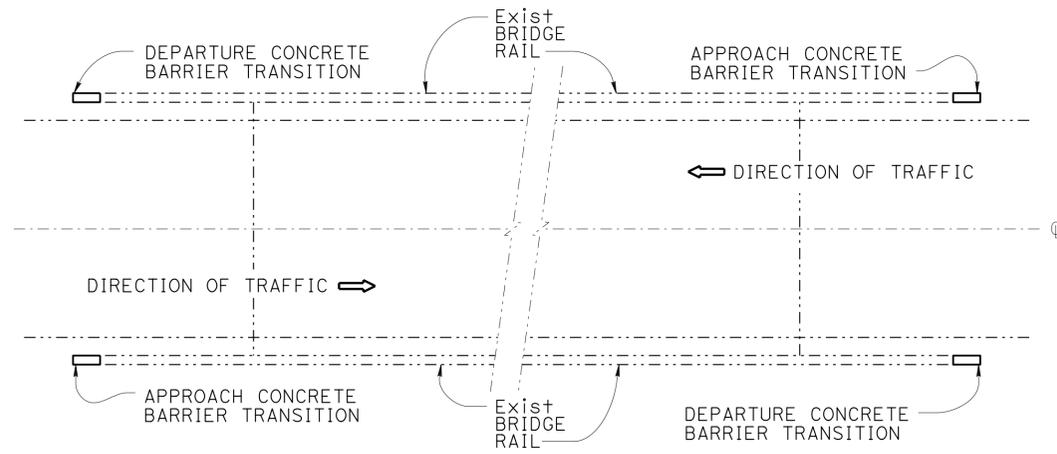
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ONE WAY BRIDGES
(PLAN A)
 NO SCALE

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN
2.	TYPE 1 BARRIER (CASE 1)
3.	TYPE 1 BARRIER (CASE 2)
4.	TYPE 25 BARRIER
5.	LOCATION TABLES



TWO WAY BRIDGES
(PLAN B)
 NO SCALE

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
RSP A77U1	MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No. 1
RSP A77U4	MIDWEST GUARDRAIL SYSTEM TRANSITION RAILING (TYPE WB-31)

QUANTITIES

CONCRETE BARRIER (TRANSITION)	82 LF
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THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Note:
 See "LOCATION TABLES" sheet for work locations.

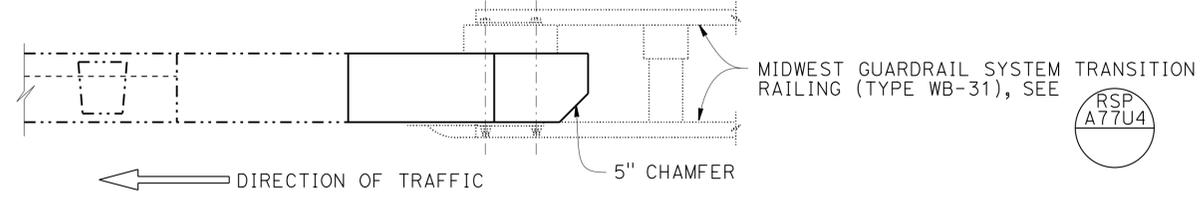
LEGEND:
 ----- INDICATES EXISTING STRUCTURE
 _____ INDICATES NEW STRUCTURE

DAVID NEUMANN BRANCH CHIEF	DESIGN	BY YU SONG	CHECKED AIMAN MALAK	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 B	BRIDGE NO.	CONCRETE BARRIER TRANSITION GENERAL PLAN			
	DETAILS	BY HUNG NGUYEN	CHECKED AIMAN MALAK	LAYOUT	BY YU SONG			CHECKED AIMAN MALAK		VARIABLES		
	QUANTITIES	BY YU SONG	CHECKED AIMAN MALAK	SPECIFICATIONS	BY DARWIN VARGAS			PLANS AND SPECS COMPARED DARWIN VARGAS		VARIABLES		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3619	PROJECT NUMBER & PHASE: 0415000066	CONTRACT NO.: 04-3059u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071.0	663	676
04	Alameda	580	0.078.0		
10	San Joaquin	580	26.130.3		
			13.5715.4		

YU SONG 2-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 YU SONG
 No. C71687
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

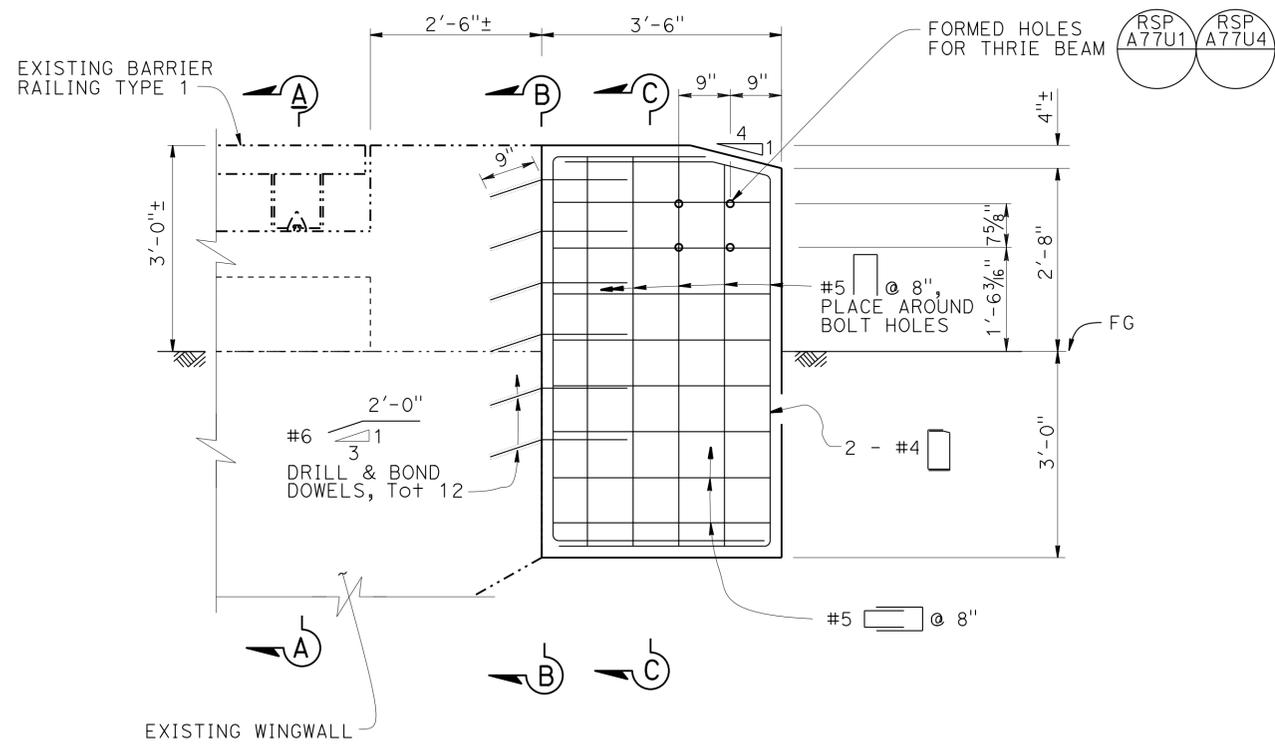
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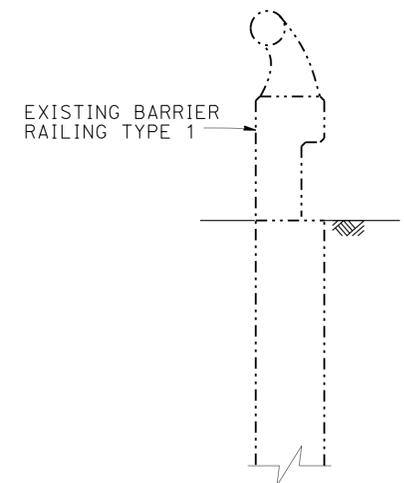
PLAN
NO SCALE

NOTES:

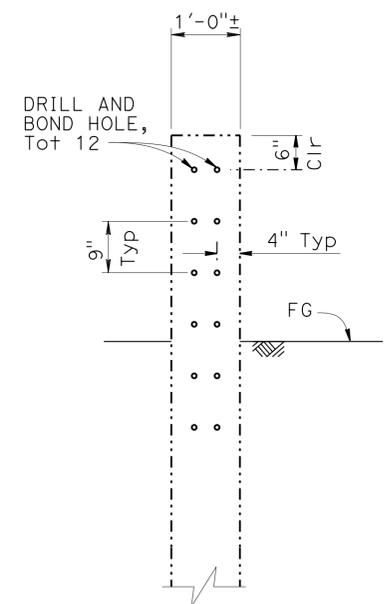
1. See "LOCATION TABLES" sheet for work location.
2. On West bound I-580 at I-580/205 separation (Bridge No. 33-0346R) right approach, relocate the electrical box to about 3 feet behind the proposed barrier transition prior to construction. See "ROADWAY PLANS".
3. On East bound I-580 at Grant Line Rd UC (Bridge No. 33-0196L) right approach and right departure, reconstruct the down drains behind the concrete barrier transition. See "ROADWAY PLANS".
4. Holes used for fastening existing MBGR must be mortar filled, unless holes were cast using pipe sleeves.
5. Existing barrier heights vary. Where existing barrier height is more than 2'-8", transition barrier height to 2'-8" @ 4:1 slope.
6. Only show concrete barrier transition at the right side of the approach end, other locations are similar.



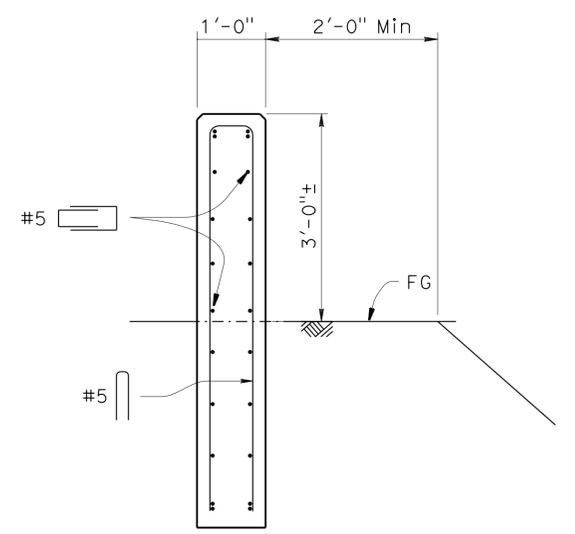
ELEVATION
 $\frac{3}{4}'' = 1'-0''$



SECTION A-A
 $\frac{3}{4}'' = 1'-0''$



SECTION B-B
 $\frac{3}{4}'' = 1'-0''$



SECTION C-C
 $\frac{3}{4}'' = 1'-0''$

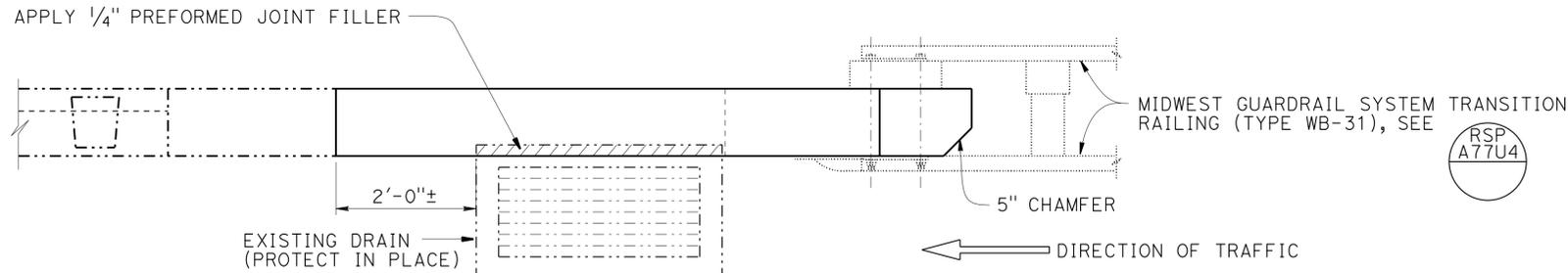
LEGEND:
 - - - - - Indicates existing
 _____ Indicates new structure

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

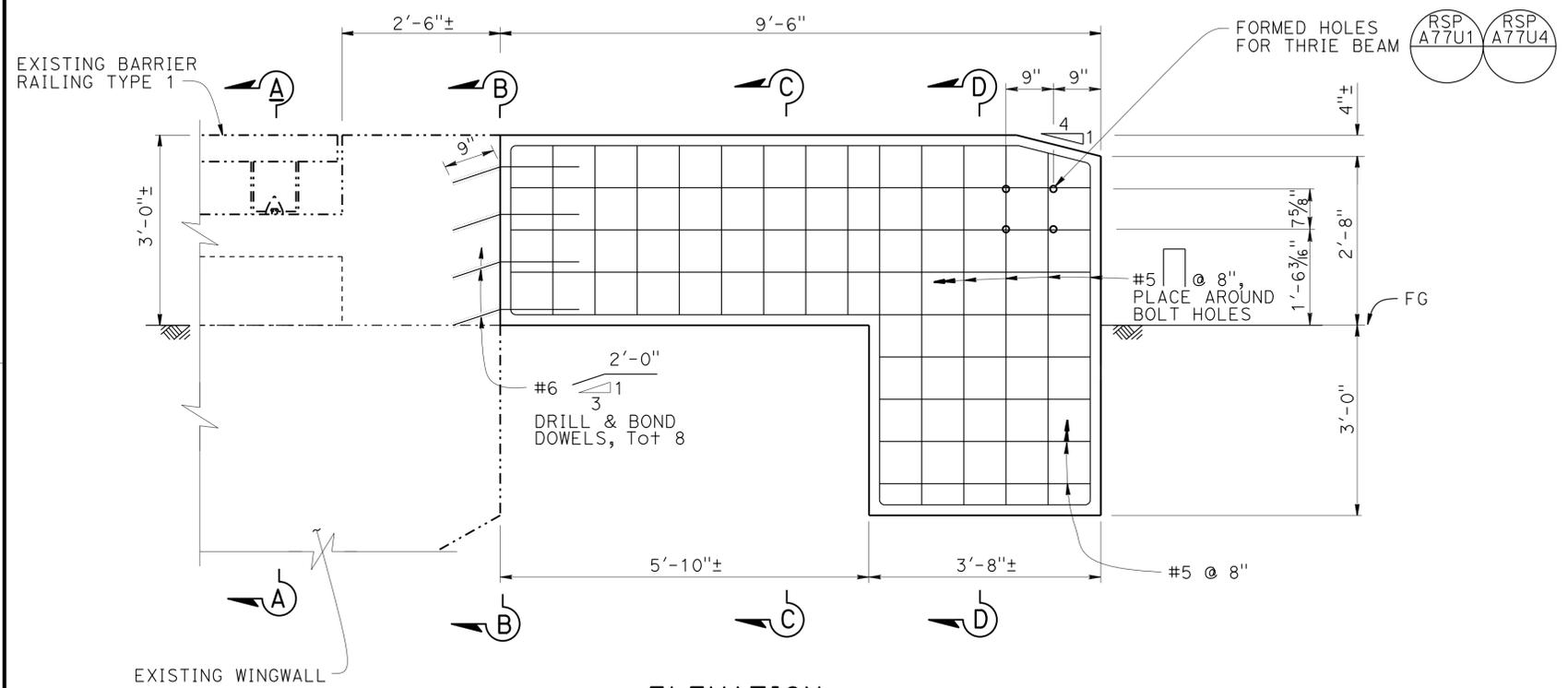
BRANCH CHIEF DAVID NEUMANN	DESIGN	BY YU SONG	CHECKED AIMAN MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	VARIABLES	CONCRETE BARRIER TRANSITION TYPE 1 BARRIER (CASE 1)		
	DETAILS	BY HUNG NGUYEN	CHECKED AIMAN MALAK			POST MILE	VARIABLES			
	QUANTITIES	BY YU SONG	CHECKED AIMAN MALAK							
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3619 PROJECT NUMBER & PHASE: 0415000066	CONTRACT NO.: 04-3059u1	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	664	676
04	Alameda	205	0.080		
04	Alameda	205	0.080		

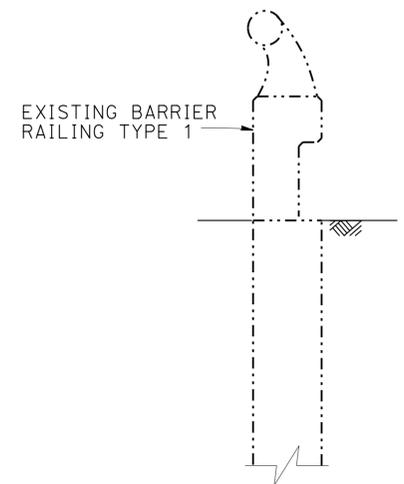
REGISTERED CIVIL ENGINEER **YU SONG** No. C71687 Exp. 12/31/17
 DATE 2-25-16
 PLANS APPROVAL DATE 3-28-16
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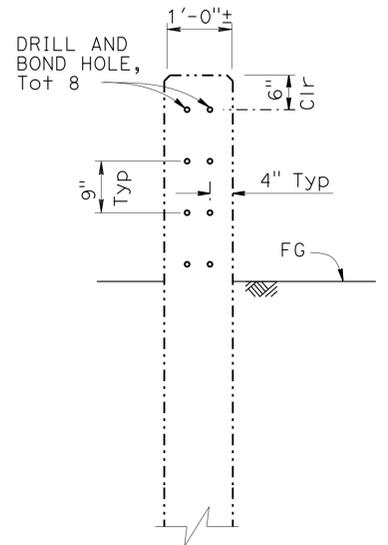
PLAN
NO SCALE



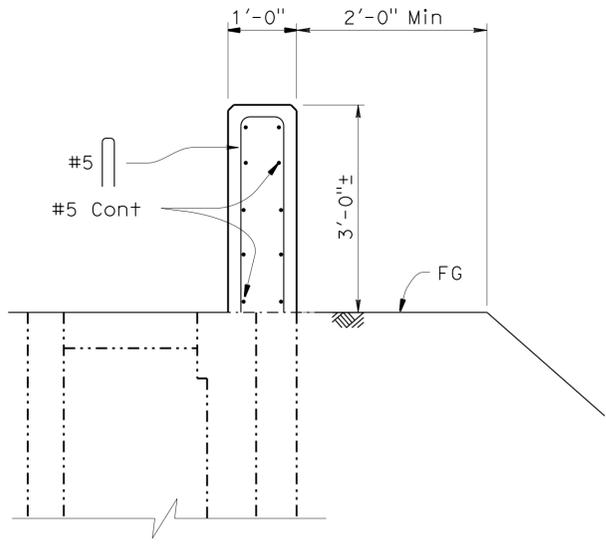
ELEVATION
3/4" = 1'-0"



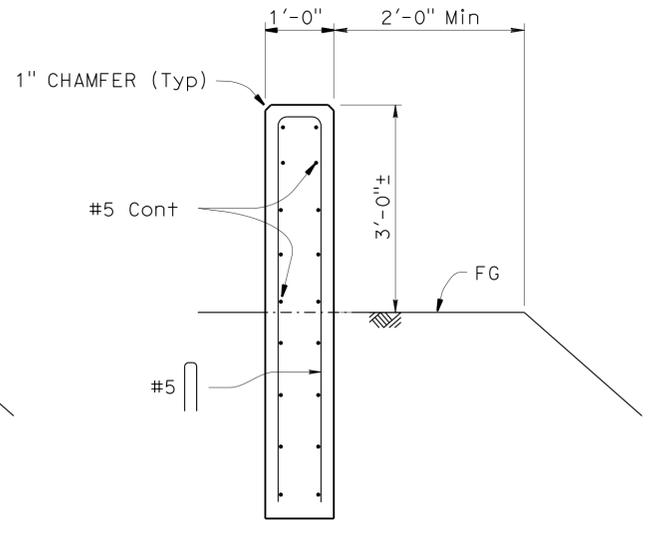
SECTION A-A
3/4" = 1'-0"



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



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



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

NOTES:

- See "LOCATION TABLES" sheet for work locations.
- Holes used for fastening existing MBGR must be mortar filled, unless holes were cast using pipe sleeves.
- Existing barrier heights vary. Where existing barrier height is more than 2'-8", transition barrier height to 2'-8" @ 4:1 slope.

LEGEND:

-----	Indicates existing
—————	Indicates new structure

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

BRANCH CHIEF DAVID NEUMANN	DESIGN BY YU SONG	CHECKED AIMAN MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. 33-0121R	CONCRETE BARRIER TRANSITION TYPE 1 BARRIER (CASE 2)
	DETAILS BY HUNG NGUYEN	CHECKED AIMAN MALAK			POST MILE R8.00	
	QUANTITIES BY YU SONG	CHECKED AIMAN MALAK				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3619 PROJECT NUMBER & PHASE: 0415000066 CONTRACT NO.: 04-3G59U1 DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-4-15 8-27-15	3	5

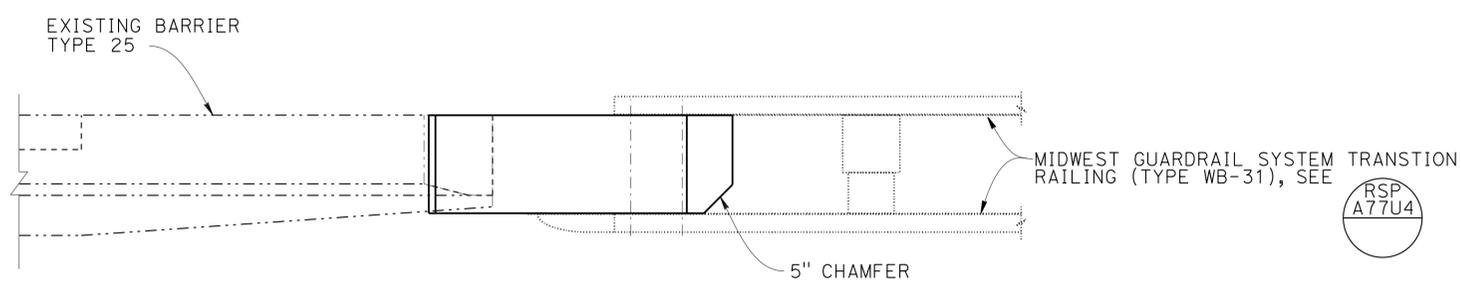
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/71.0	665	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/15.4		

YU SONG
 REGISTERED CIVIL ENGINEER
 No. C71687
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

2-25-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

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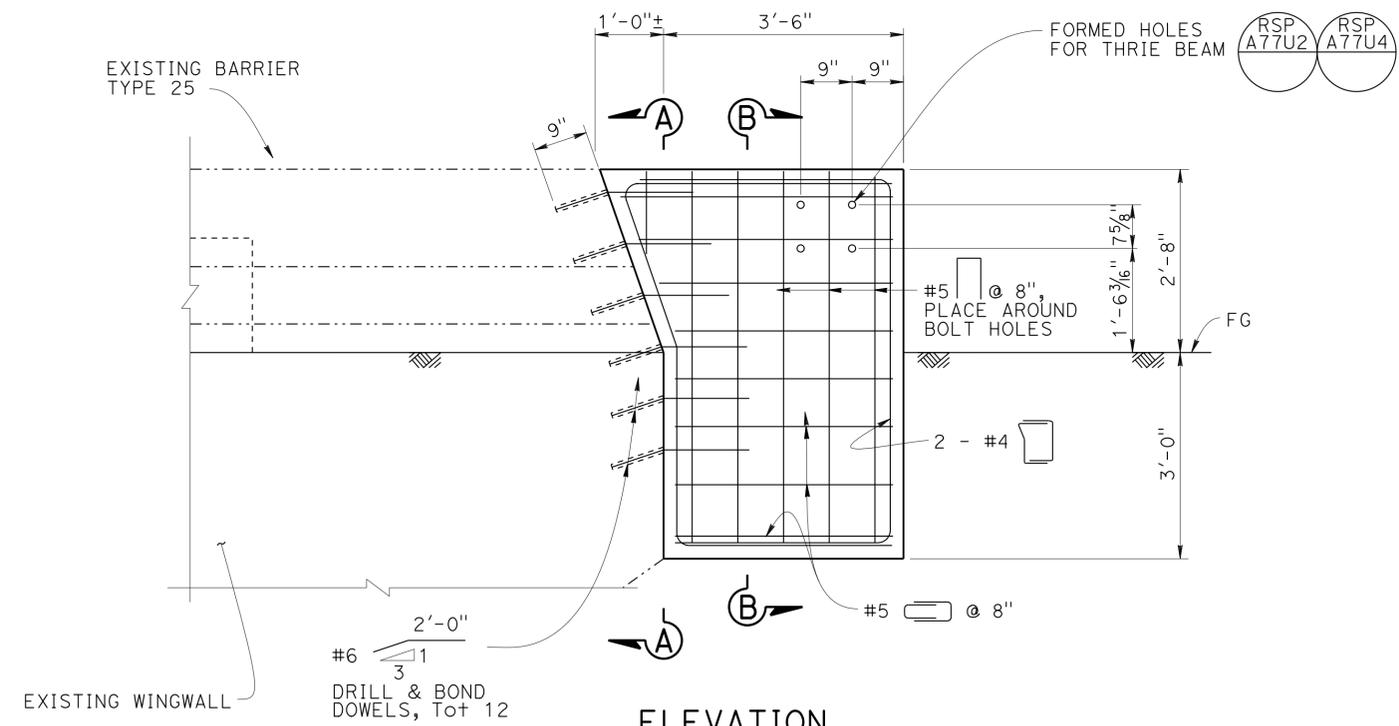


PLAN
NO SCALE

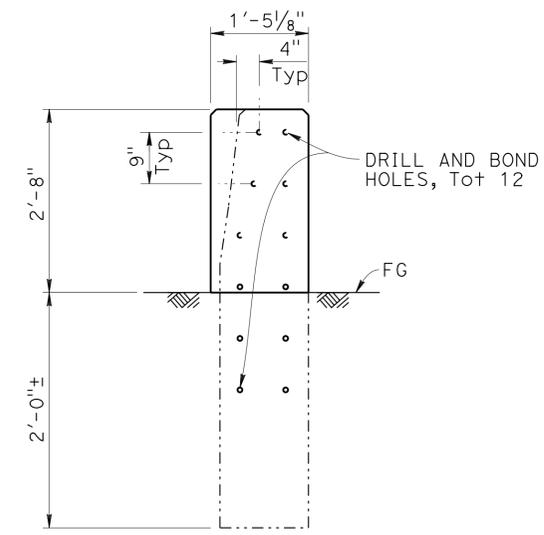
← DIRECTION OF TRAFFIC

NOTES:

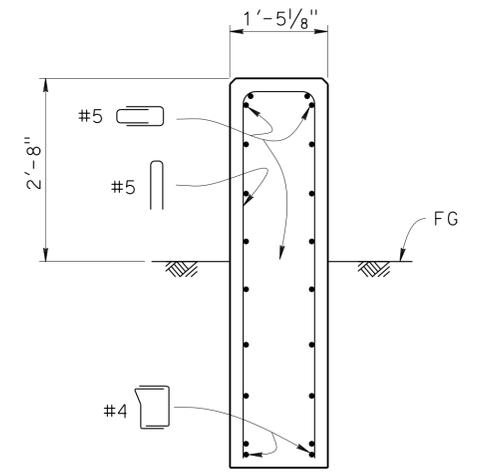
1. See "LOCATION TABLES" sheet for work locations.
2. Holes used for fastening existing MBGR must be mortar filled, unless holes were cast using pipe sleeves.
3. Existing barrier heights vary. Where existing barrier height is more than 2'-8", transition barrier height to 2'-8" @ 4:1 slope.
4. Only show concrete barrier transition at the right side of the approach end, other locations are similar.



ELEVATION
 $\frac{3}{4}" = 1'-0"$



SECTION A-A
 $\frac{3}{4}" = 1'-0"$



SECTION B-B
 $\frac{3}{4}" = 1'-0"$

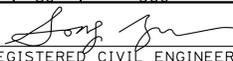
LEGEND:

- Indicates existing
- Indicates new structure

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

BRANCH CHIEF DAVID NEUMANN	DESIGN	BY YU SONG	CHECKED AAIMAN MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	VARIES	CONCRETE BARRIER TRANSITION TYPE 25 BARRIER
	DETAILS	BY HUNG NGUYEN	CHECKED AAIMAN MALAK			POST MILE	VARIES	
	QUANTITIES	BY YU SONG	CHECKED AAIMAN MALAK			VARIES		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071.0	666	676
04	Alameda	580	0.0/8.0, 28.1/30.3		
10	San Joaquin	580	13.5/15.4		

 2-25-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

YU SONG
 No. C71687
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

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LOCATION TABLE FOR TYPE 1 (CASE 1) CONCRETE BARRIER TRANSITION

BRIDGE No.	DESCRIPTION	ROUTE	POST MILE	DIRECTION	APPROACH END	DEPARTURE END	LENGTH	TOTAL LENGTH	GP TYPE
29-0299	Aqueduct Service Rd UC	205	L0.01	EB Right	1		3'-6"	3'-6"	A
33-0402	California Aqueduct	205	0.28	EB Right	1		3'-6"	3'-6"	B
33-0121R	Greenville OH	580	R8.00	WB Left	1		3'-6"	3'-6"	A
33-0123R	Stone Cut OH	580	R3.98R	WB Left	1	1	3'-6"	10'-6"	A
				WB Right	1		3'-6"		
33-0124L	Redmond OH	580	R3.91L	EB Right	1		3'-6"	3'-6"	A
33-0195	Midway Rd UC	580	L0.92L	EB Right	1	1	3'-6"	7'-0"	B
33-0196L	Grant Line Rd UC	580	R1.48	EB Right	1	1	3'-6"	7'-0"	A
33-0345R	Midway Rd UC (Connector)	580	L1.04R	WB Left	1		3'-6"	7'-0"	A
				WB Right	1		3'-6"		
33-0346R	Route 580/205 Separation, Truck Bypass	580	0.39R	WB Left	1	1	3'-6"	14'-0"	A
				WB Right	1	1	3'-6"		
33-0406	Altamont Sidehill Viaduct	580	R6.92	WB Right	1		3'-6"	3'-6"	B

LOCATION TABLE FOR TYPE 1 (CASE 2) CONCRETE BARRIER TRANSITION

BRIDGE No.	DESCRIPTION	ROUTE	POST MILE	DIRECTION	APPROACH END	DEPARTURE END	LENGTH	TOTAL LENGTH	GP TYPE
33-0121R	Greenville OH	580	R8.00	WB Right	1		9'-6"	9'-6"	A

LOCATION TABLE FOR TYPE 25 CONCRETE BARRIER TRANSITION

BRIDGE No.	DESCRIPTION	ROUTE	POST MILE	DIRECTION	APPROACH END	DEPARTURE END	LENGTH	TOTAL LENGTH	GP TYPE
33-0402	California Aqueduct	205	0.28	WB Right	1		4'-6"	4'-6"	B
33-0196R	Grant Line Rd UC	580	R1.48	WB Right	1		4'-6"	4'-6"	A

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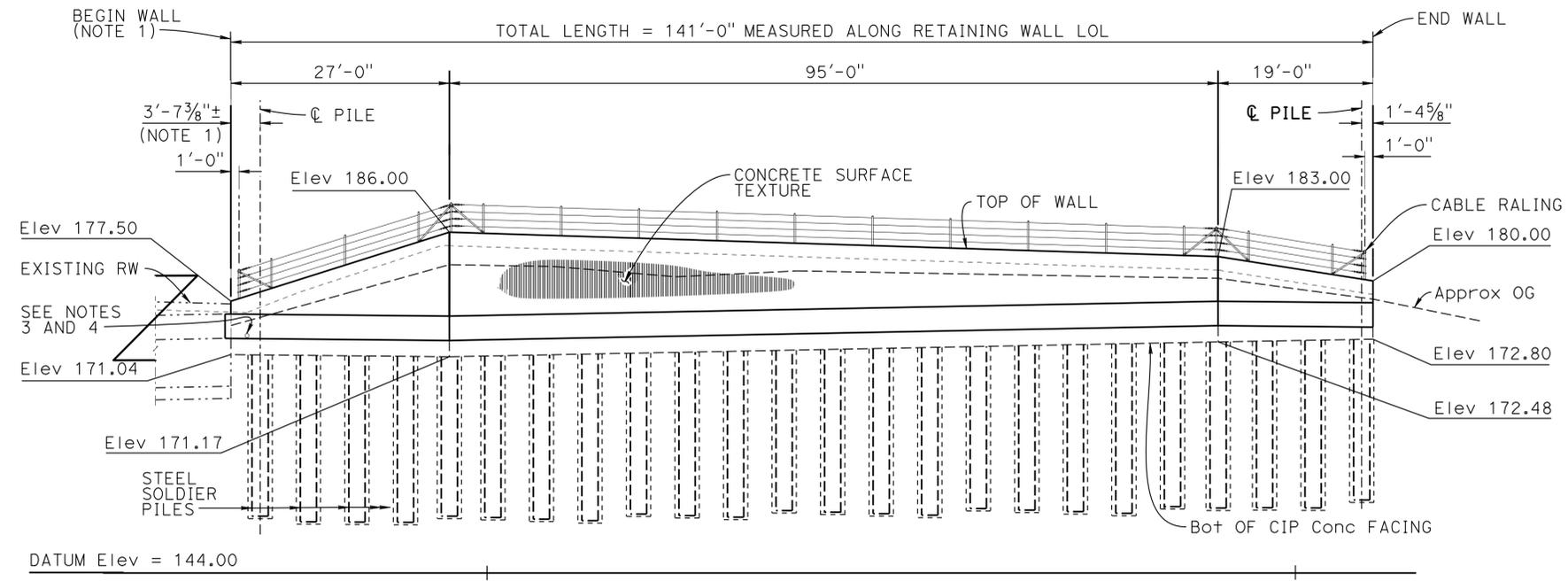
BRANCH CHIEF <u>DAVID NEUMANN</u>	DESIGN	BY YU SONG	CHECKED AIMAN MALAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	CONCRETE BARRIER TRANSITION LOCATION TABLES								
	DETAILS	BY HUNG NGUYEN	CHECKED AIMAN MALAK			VARIES									
	QUANTITIES	BY YU SONG	CHECKED AIMAN MALAK			VARIES									
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3		UNIT: 3619 PROJECT NUMBER & PHASE: 0415000066		CONTRACT NO.: 04-3G59u1		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES: 5-8-15, 8-27-15, 12-15-15		SHEET 5 OF 5	

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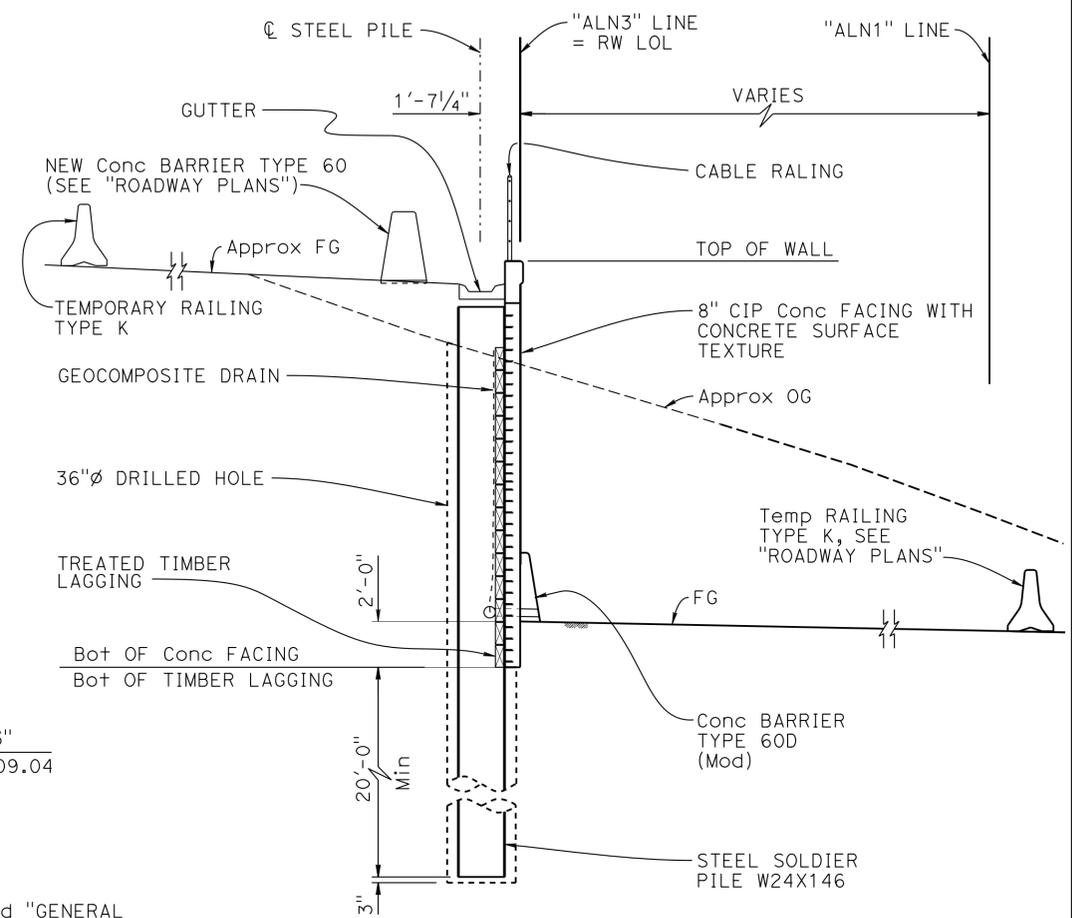
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0710	667	676
04	Alameda	580	0.0780, 26.1/30.3		
10	San Joaquin	580	13.5/215.4		

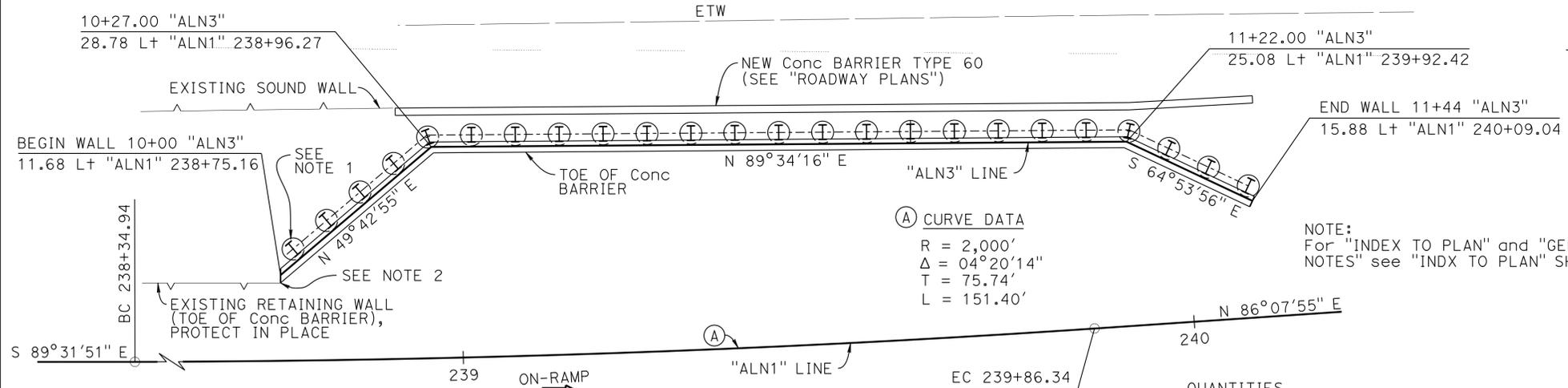
REGISTERED CIVIL ENGINEER: ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA
 DATE: 03-01-16
 PLANS APPROVAL DATE: 3-28-16
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DEVELOPED ELEVATION
1" = 10'



TYPICAL SECTION
1/4" = 1'-0"



PLAN
1" = 10'

(A) CURVE DATA

R = 2,000'
Δ = 04°20'14"
T = 75.74'
L = 151.40'

NOTE:
For "INDEX TO PLAN" and "GENERAL NOTES" see "INDX TO PLAN" SHEET

QUANTITIES

STRUCTURE EXCAVATION (SOLDIER PILE WALL)	103	CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	17	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	131	CY
LEAN CONCRETE BACKFILL	57	CY
STEEL SOLDIER PILE (W 24 X 146)	726	LF
36" DRILLED HOLE	718	LF
STRUCTURAL CONCRETE, RETAINING WALL	41	CY
FRACTURED RIB TEXTURE	1,025	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	8,969	LB
TIMBER LAGGING	8	MFBM
CLEAN AND PAINT STEEL SOLDIER PILING	LUMP	SUM
GEOCOMPOSITE DRAIN	159	SQFT
MINOR CONCRETE (GUTTER) (LF)	141	LF
CABLE RAILING	141	LF
CONCRETE BARRIER (TYPE 60D MODIFIED)	141	LF

- NOTES:
- The location of the pile next to the Existing Retaining Wall is approximate, Pothole the Existing Retaining Wall footing and obtain the actual hole/pile location from the Engineer to clear the existing footing
 - Conform toe of Concrete Barrier of New Wall to toe of Concrete Barrier of the Existing Retaining Wall, See "RETAINING WALL DETAIL NO 3" sheet
 - 6" Dia Plastic Pipe Wall Outlet, see "STANDARD PLAN B3-6"
 - Conform New Concrete Gutter to Existing Concrete Gutter at Begin Wall, and create a depression for draining through 6" Dia Plastic Pipe
 - Corner Piles (Sta 10+27.00 and 11+22.00) are shifted to accommodate Timber Laggings, see "RETAINING WALL DETAILS No 3" sheet

NOTE:
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DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	STROBRIDGE AVE ON-RAMP WALL GENERAL PLAN	
DETAILS	BY TONY COTTON	CHECKED TIN WIN	LAYOUT	BY ALIREZA YAZDANI M.			CHECKED DANNY KAO		33E0416
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN	SPECIFICATIONS	BY DARWIN A. VARGAS			PLANS AND SPECS COMPARED DARWIN A. VARGAS		POST MILE

DESIGN ENGINEER: JOSEPH E. DOWNING
 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
 UNIT: 3578
 PROJECT NUMBER & PHASE: 0415000066-1
 CONTRACT NO.: 04-3G59U4
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 05-29-14, 01-15-16, 02-24-16
 SHEET 1 OF 10

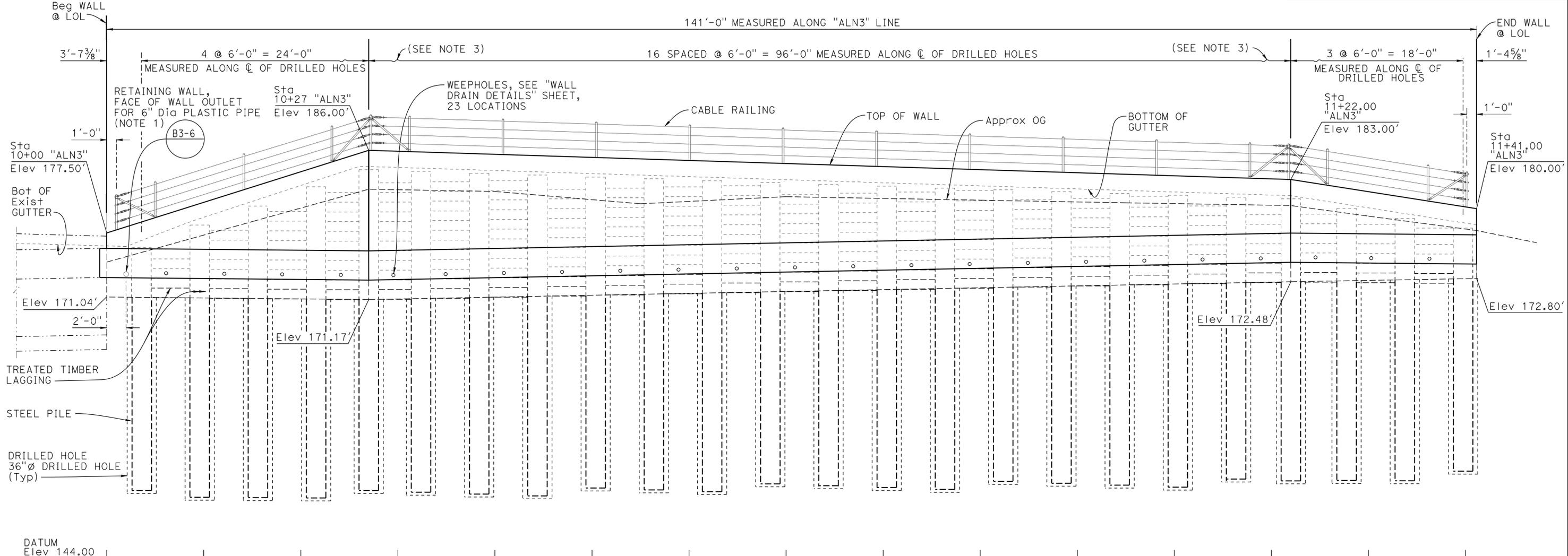
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10+00	174.50	177.50	10+35	181.86	185.75	10+75	181.14	184.48	11+15	180.43	183.22
10+05	175.89	179.07	10+40	181.77	185.59	10+80	181.05	184.33	11+20	180.34	183.06
10+10	177.28	180.65	10+45	181.68	185.43	10+85	180.96	184.17	11+22	180.30	183.00
10+15	178.67	182.22	10+50	181.59	185.27	10+90	180.87	184.01	11+25	179.90	182.53
10+20	180.06	183.80	10+55	181.50	185.12	10+95	180.78	183.85	11+30	179.23	181.74
10+25	181.44	185.37	10+60	181.41	184.96	11+00	180.69	183.69	11+35	178.56	180.95
10+27	182.00	186.00	10+65	181.32	184.80	11+05	180.60	183.54	11+41	177.75	180.00
10+30	181.95	185.91	10+70	181.23	184.64	11+10	180.51	183.38			

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0/8.0, 26.1/30.3	669	676
10	SJ	580	13.5/215.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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PILE No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
TOP OF PILE Elev	176.00	178.31	180.27	182.24	184.00	183.83	183.64	183.45	183.26	183.07	182.88	182.69	182.50	182.31	182.12	181.94	181.75	181.56	181.37	181.18	181.00	180.04	179.01	177.99
TIP OF PILE Elev	151.00	150.31	150.27	150.24	151.00	150.83	150.64	150.45	151.26	151.07	150.88	151.69	151.50	151.31	151.12	151.94	151.75	151.56	151.37	152.18	152.00	152.04	152.01	151.99
NUMBER OF TIMBER LAGGING BETWEEN PILES	5	7	9	11	12	12	12	11	11	11	11	10	10	10	10	9	9	9	8	8	7	6	6	

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

NOTES:

1. Create a Gutter depression for draining through 6" Dia Plastic pipe

DEVELOPED ELEVATION
 1" = 5'

2. Corner Piles (Sta 10+27.00 and 11+22.00) are shifted to accommodate Timber Laggings, see "RETAINING WALL DETAILS No 3" sheet

3. Developed Elevation is shown along "ALN3" line, measurements on this line are different than ones along C.L. of Dilled Holes at corner Piles (Sta 10+27 and 11+22)

DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	STROBRIDGE AVE ON-RAMP WALL STRUCTURE PLAN
DETAILS	BY TONY COTTON	CHECKED TIN WIN			33E0416	
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN			POST MILE 30.3	

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

UNIT: 3578 PROJECT NUMBER & PHASE: 0415000066-1 CONTRACT NO.: 04-3G59U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
03-23-15 02-24-16 12-23-15	3	10

FILE => 04-33e0416-c-sp01.dgn

CURVE DATA

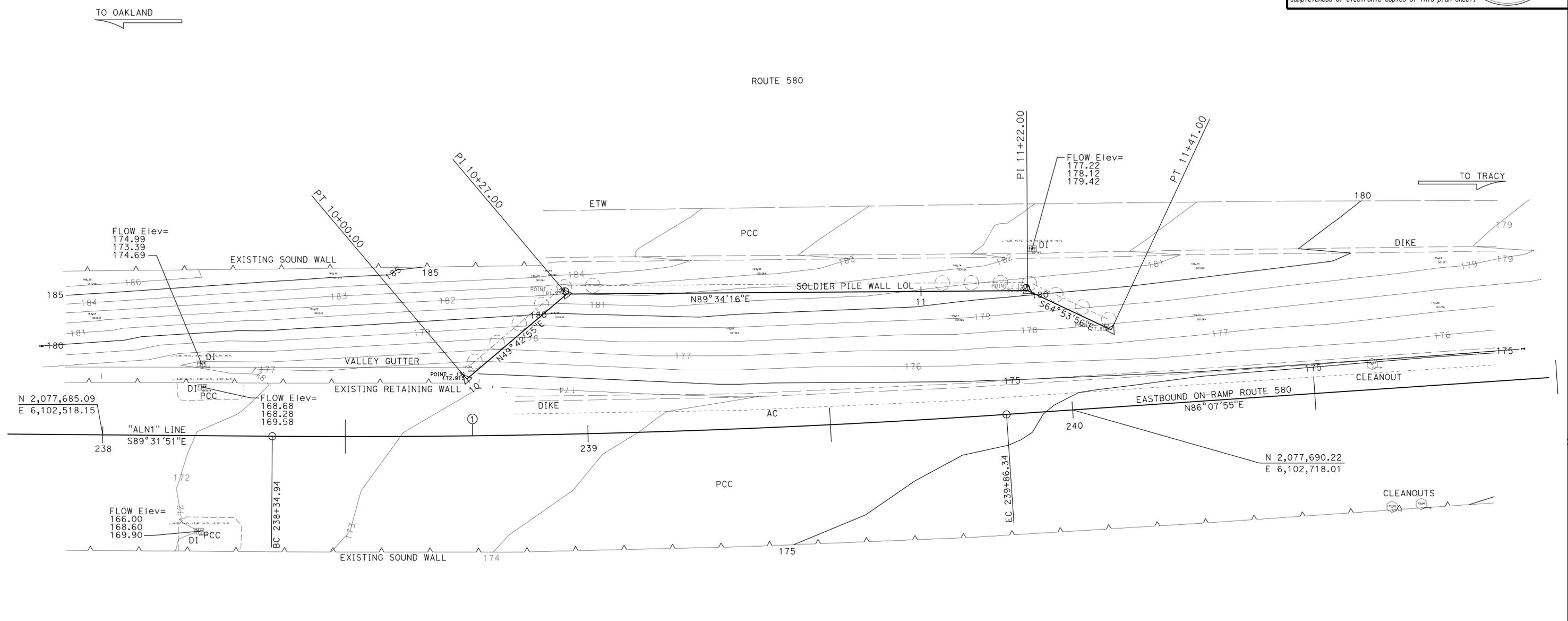
No.	R	Δ	T	L
1	2000.00	04°20'14"	75.74	151.40

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0710	670	676
04	Alameda	580	0.0780, 26.1/30.3		
10	San Joaquin	580	13.5/15.4		



 03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 ALLIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA



SURVEY CONTROL

WP5 (SUHV5) (NOT SHOWN ON PLAN)

Fnd PK/SHINER
21.62 Ft Rt "ALN1" LINE
Sta 236+37.27
N 2,077,664.80
E 6,102,355.25
Elev = 168.60

HY210 (PRHV210) (NOT SHOWN ON PLAN)

Fnd CUT X
11.56 Ft Lt "ALN1" LINE
Sta 241+19.65
N 2,077,709.82
E 6,102,836.61
Elev = 176.10

PRELIMINARY INVESTIGATION SECTION				DESIGN	BY X	CHECKED X	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	STROBRIDGE AVE ON-RAMP WALL FOUNDATION PLAN		
SCALE	VERT.DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS	BY X	CHECKED X	33E0416						
1"=10'	HORZ.DATUM NAD83	SURVEYED BY DISTRICT	QUANTITIES	BY X	CHECKED X	POST MILE 30.30						
ALIGNMENT TIES Dist TRAVERSE SHEET				DRAFTED BY T. ZOLNIKOV 08/2014	CHECKED BY S. SOU 08/2014		UNIT: 3578	PROJECT NUMBER & PHASE: 0415000066-1	CONTRACT NO.: 04-3G59U4	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 08/28/14 10/26/15 11-05-15	SHEET 4 OF 10

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

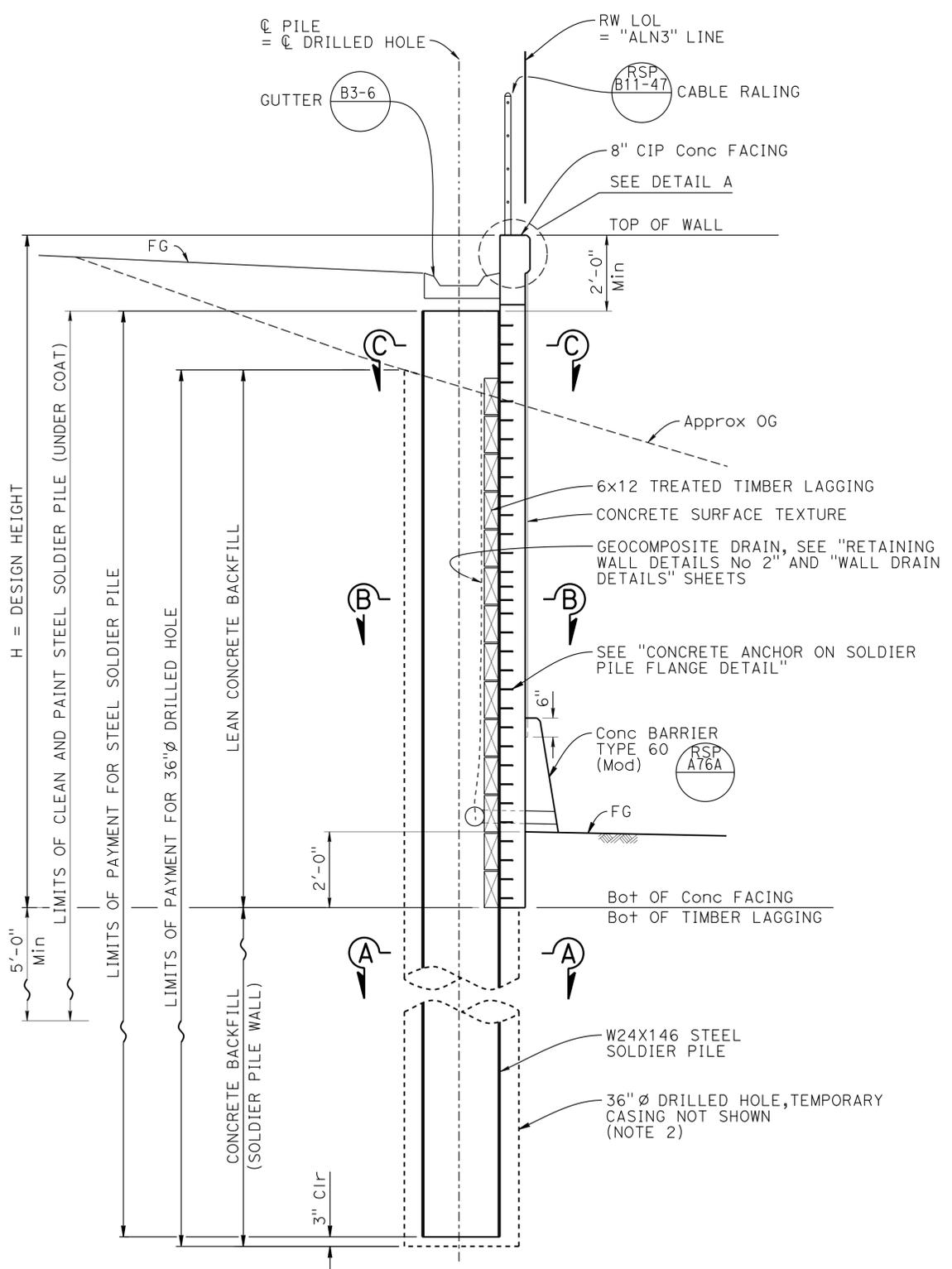
0 1 2 3

FILE => 04-33e0416-e fdat01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0710	671	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/215.4		

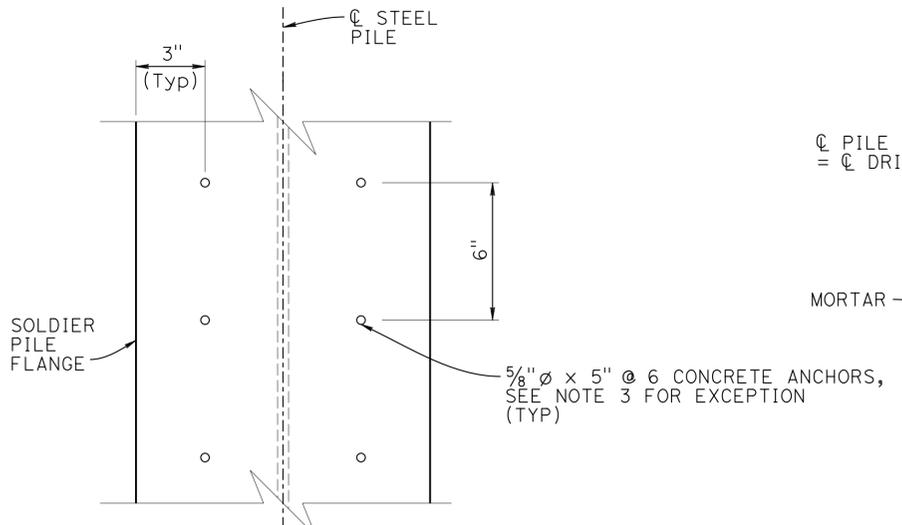
03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

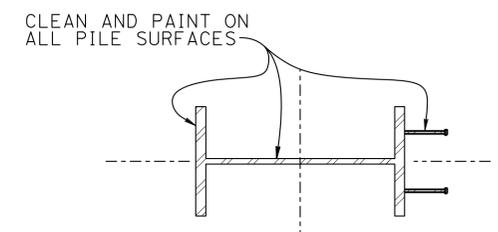


NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

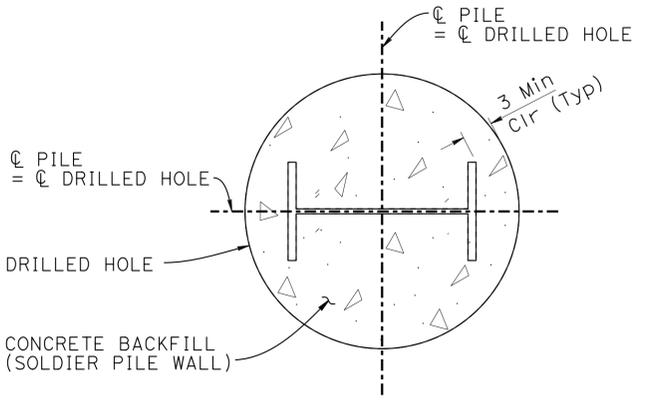
TYPICAL SECTION
1/2" = 1'-0"



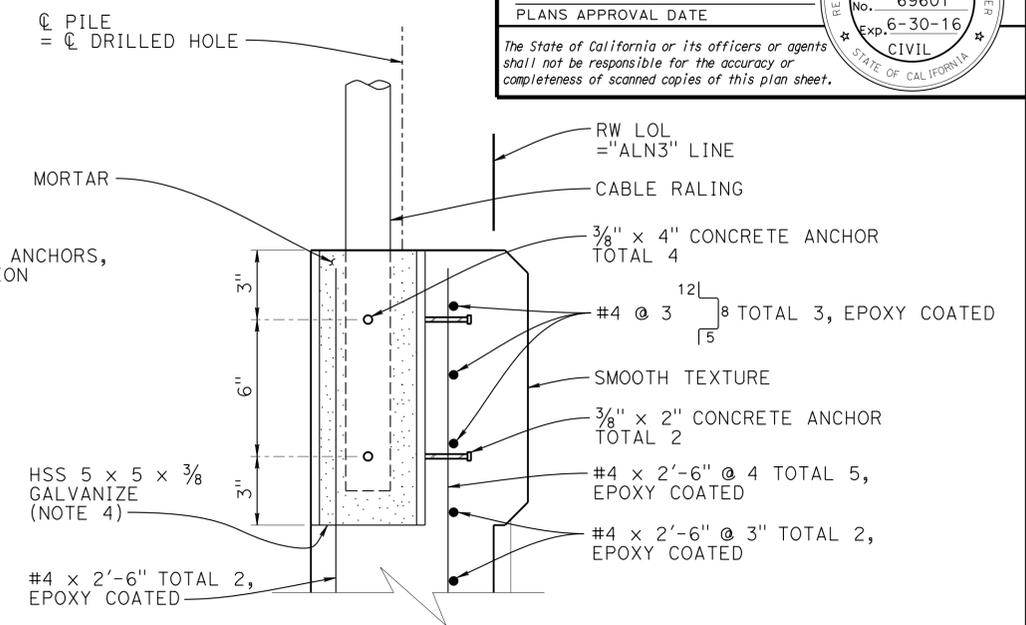
CONCRETE ANCHOR ON SOLDIER PILE FLANGE DETAIL
3" = 1'-0"



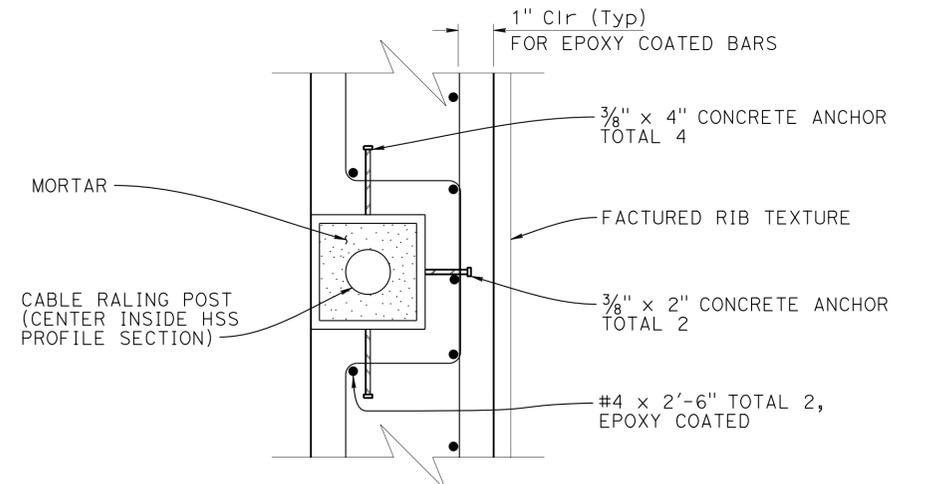
LIMITS OF CLEAN AND PAINT STEEL SOLDIER PILE
NO SCALE



SECTION A-A
1" = 1'-0"



DETAIL A
3" = 1'-0"



SECTION
3" = 1'-0"

- NOTE:
- For Sections B-B and C-C, See "RETAINING WALL DETAILS No. 2" sheet
 - Temporary Casing is required for drilled holes
 - 5/8" x 4" @ 6 Concrete Anchors are used on Corner Soldier Piles (Sta 10+27 and 11+22)
 - Align HSS tube vertically with Cable Railing Posts

DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN
DETAILS	BY TONY COTTON	CHECKED TIN WIN
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

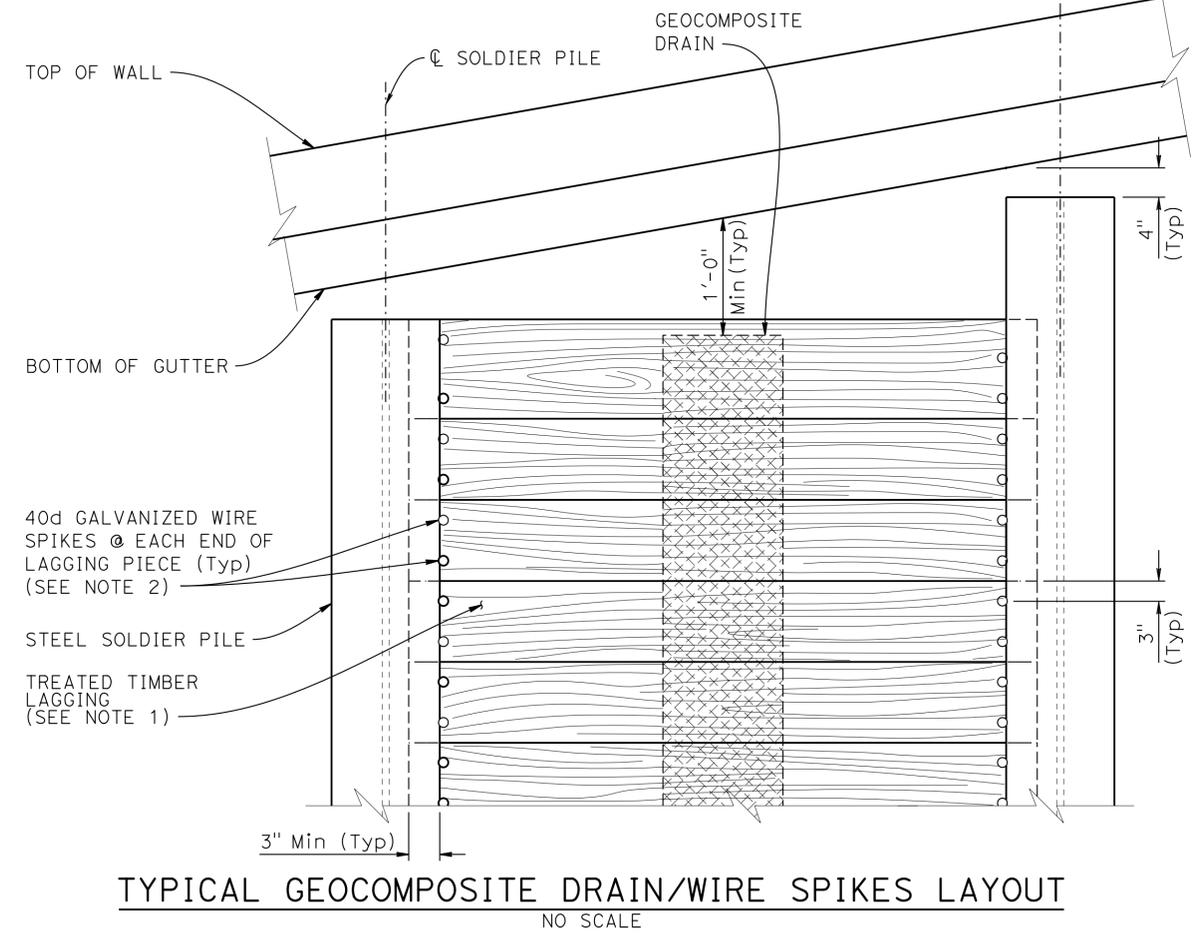
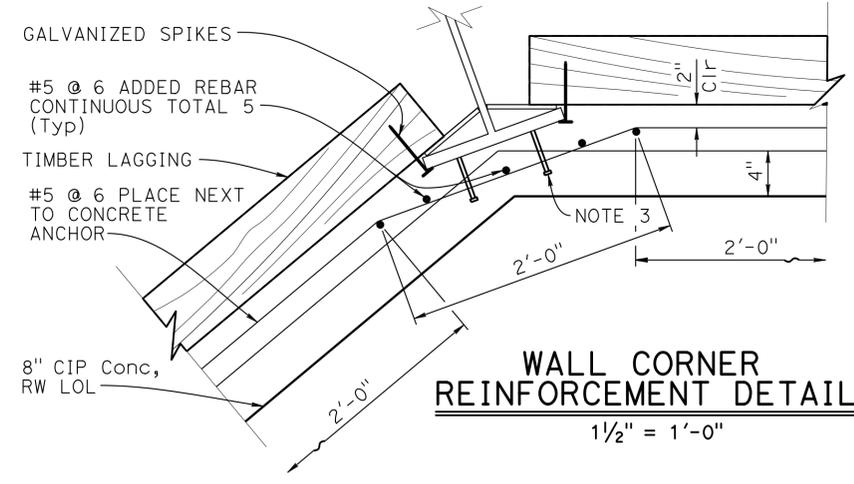
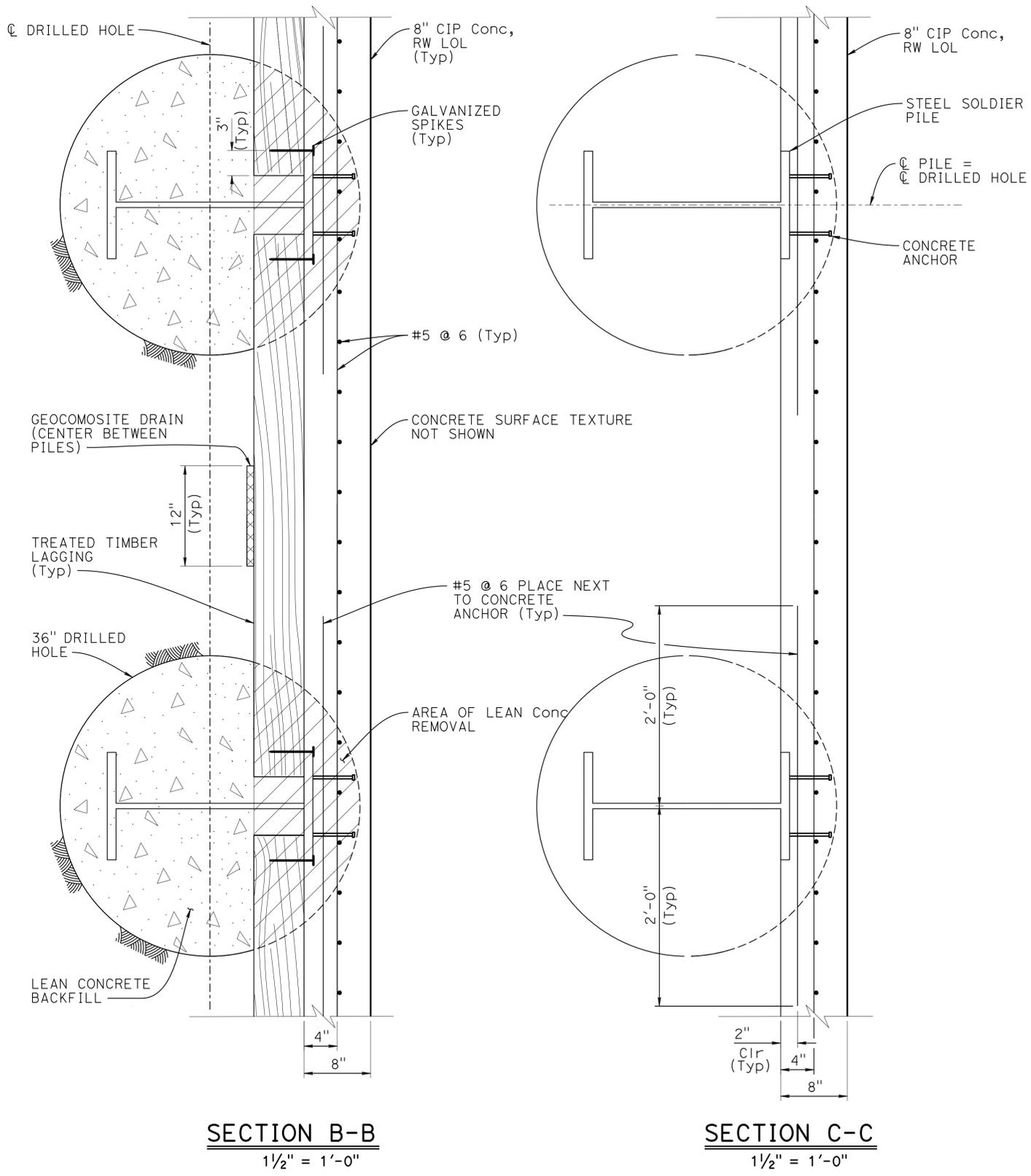
BRIDGE NO.	33E0416
POST MILE	30.3

STROBRIDGE AVE ON-RAMP WALL
RETAINING WALL DETAILS No. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0710	672	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	SJ	580	13.5/215.4		

03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

- No clipping of timber lagging corners allowed
- Spikes must not be bent
- 5/8" x 4" @ 6 Concrete Anchors are used on Corner Soldier Piles (Sta 10+27 and 11+22)
- Concrete Surface Texture is not shown on Sections and Details

LEGEND:



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

DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN
DETAILS	BY TONY COTTON	CHECKED TIN WIN
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 3

BRIDGE NO.	33E0416
POST MILE	30.3

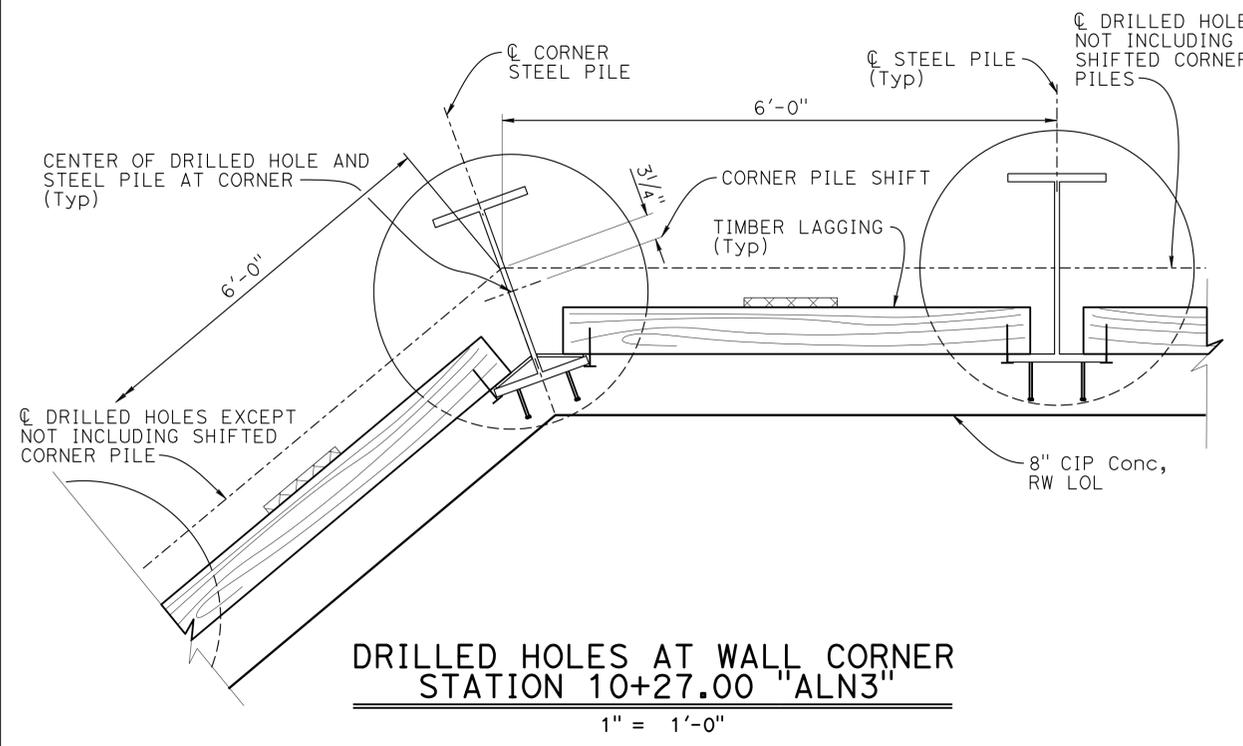
STROBRIDGE AVE ON-RAMP WALL
RETAINING WALL DETAILS No. 2

TIME PLOTTED => 10:23
 DATE PLOTTED => 04-JUN-2016
 USERNAME => s128787

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.071	673	676
04	Alameda	580	0.078		
10	San Joaquin	580	13.521		

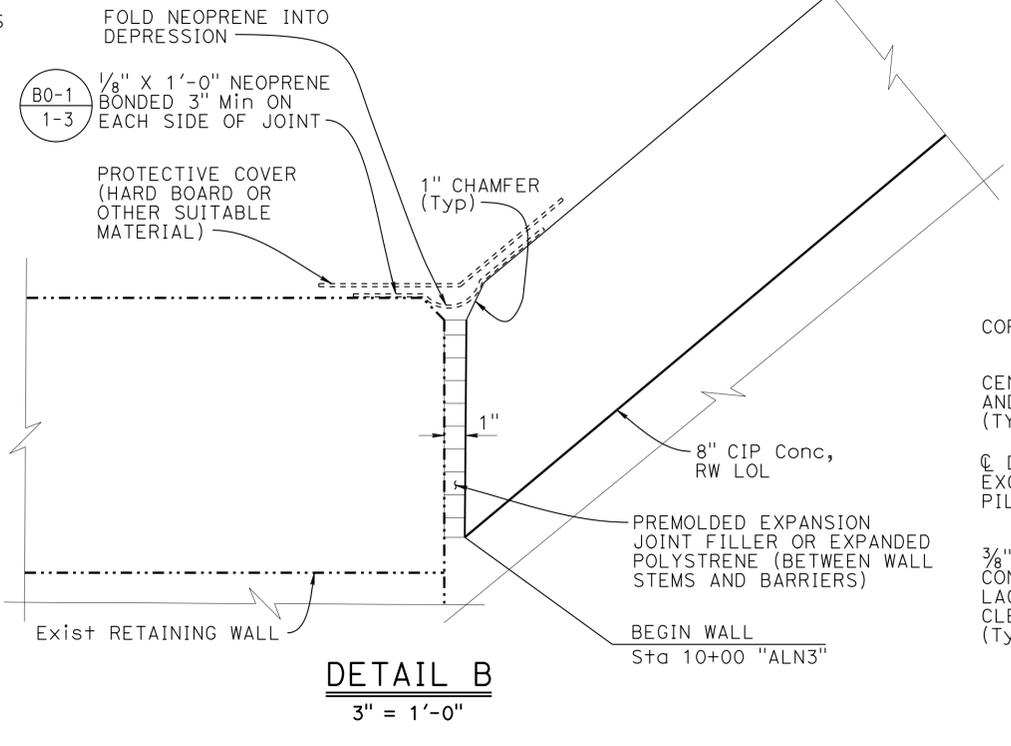
03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

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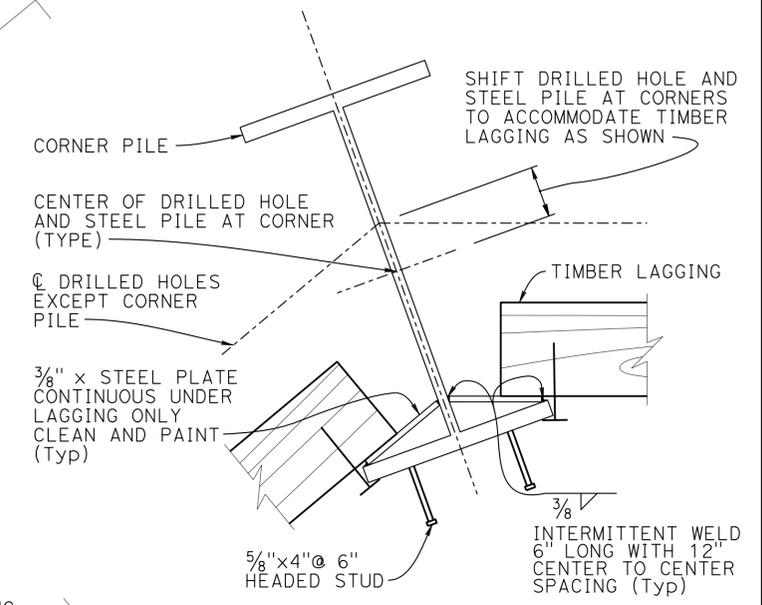
**DRILLED HOLES AT WALL CORNER
STATION 10+27.00 "ALN3"**

1" = 1'-0"

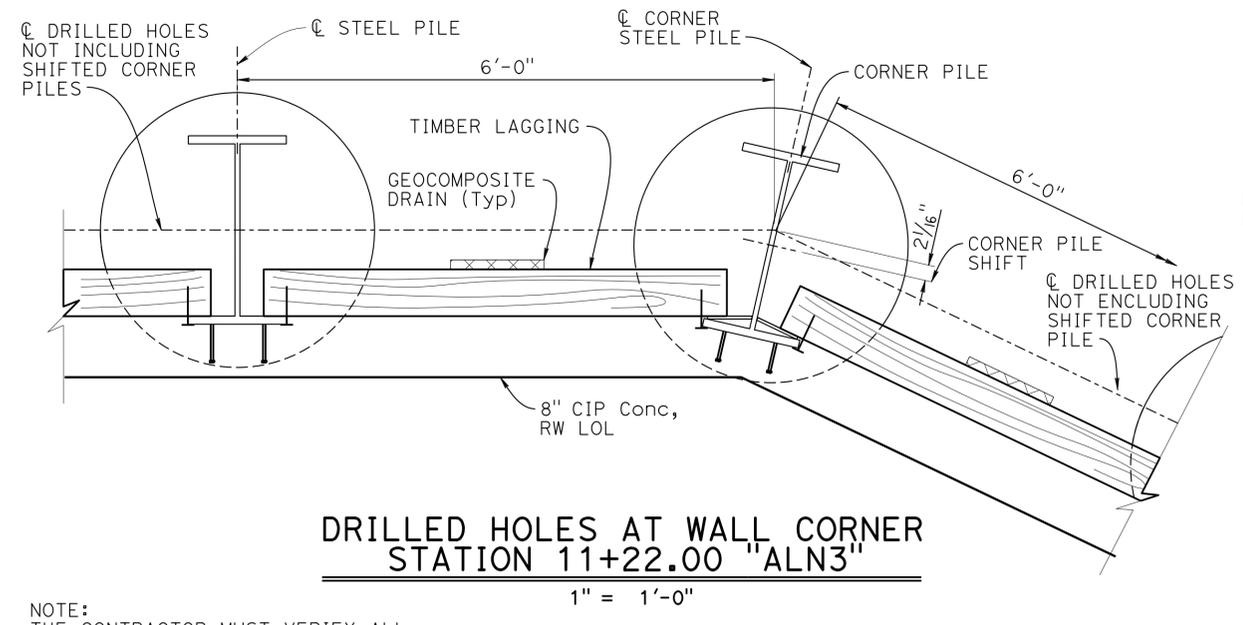


DETAIL B

3" = 1'-0"

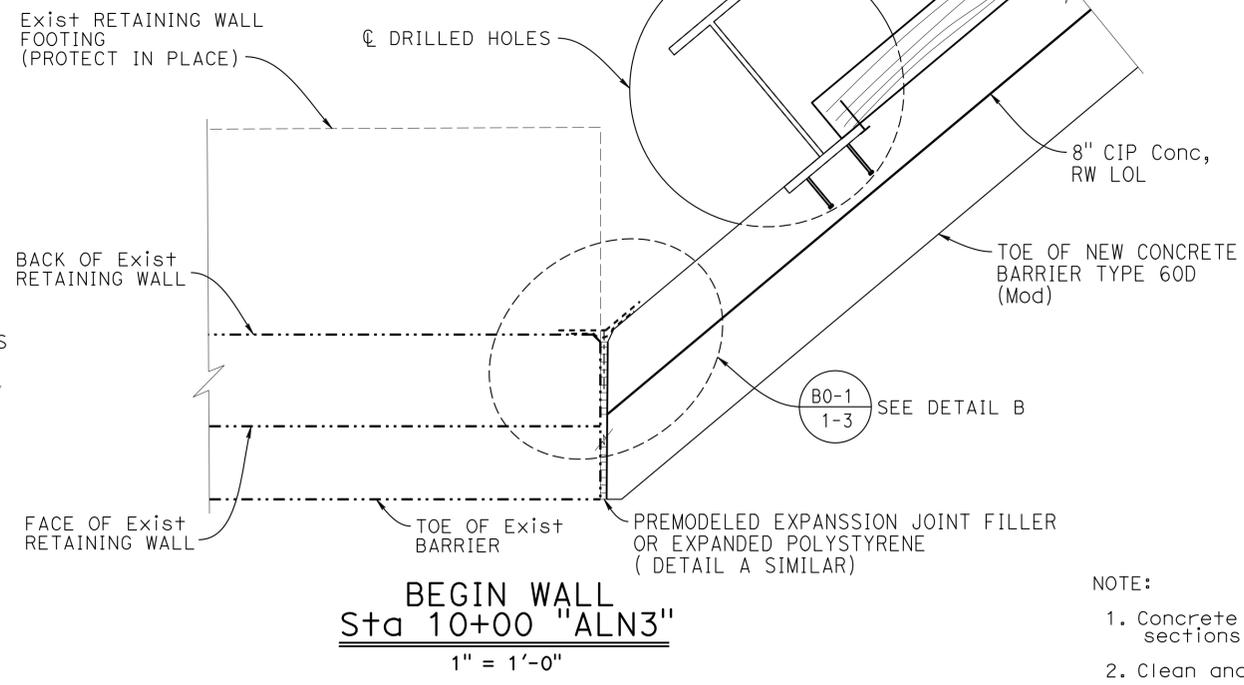


CORNER PILE DETAIL
NO SCALE



**DRILLED HOLES AT WALL CORNER
STATION 11+22.00 "ALN3"**

1" = 1'-0"



**BEGIN WALL
Sta 10+00 "ALN3"**

1" = 1'-0"

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

- NOTE:
- Concrete Surface Texture is not shown on sections and details
 - Clean and Paint 3/8" Steel Plate

DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 3	BRIDGE NO.	STROBRIDGE AVE ON-RAMP WALL RETAINING WALL DETAILS No. 3
DETAILS	BY TONY COTTON	CHECKED TIN WIN			33E0416	
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN			POST MILE 30.3	

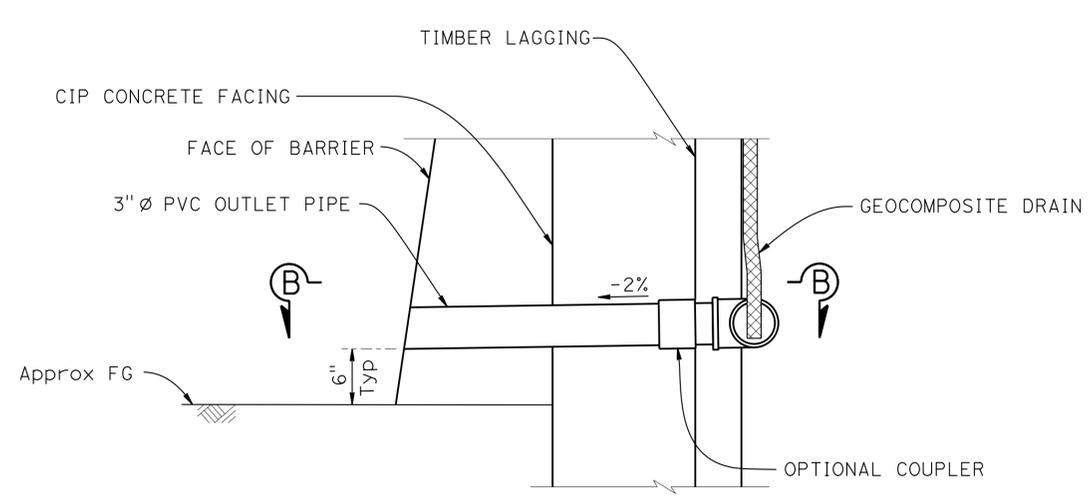
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3578 PROJECT NUMBER & PHASE: 0415000066-1 CONTRACT NO.: 04-3G59U4 DISREGARD PRINTS BEARING EARLIER REVISION DATES 08-07-15 12-08-15 02-24-16 SHEET 7 OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.0710	674	676
04	Alameda	580	0.0/8.0, 26.1/30.3		
10	San Joaquin	580	13.5/215.4		

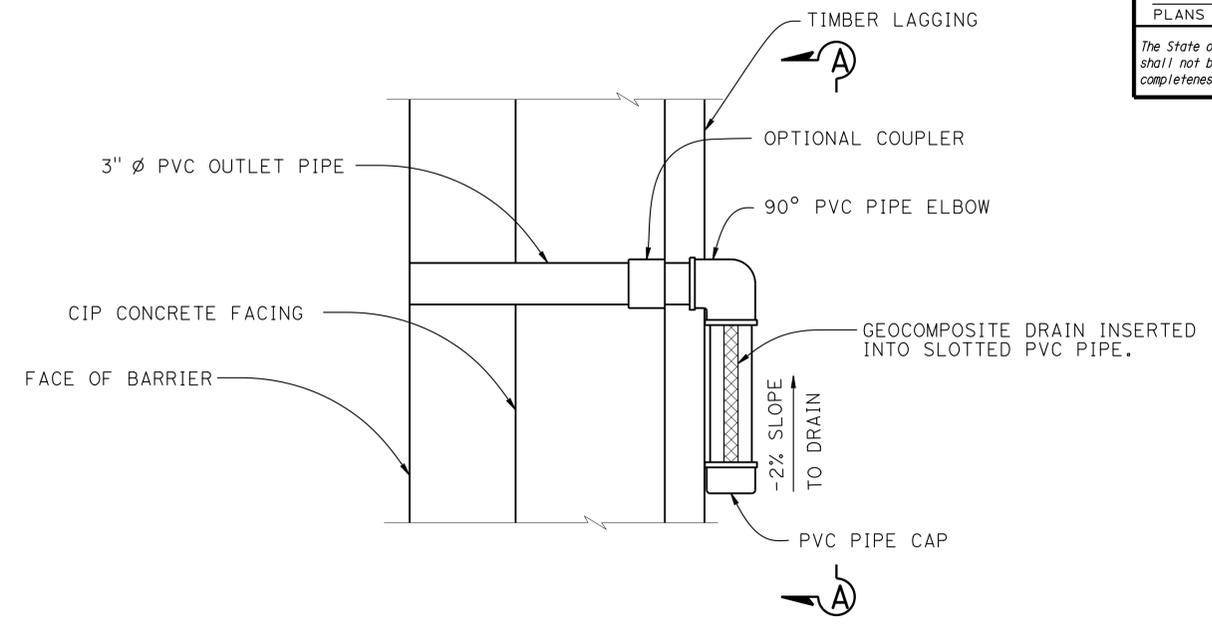
03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLACH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

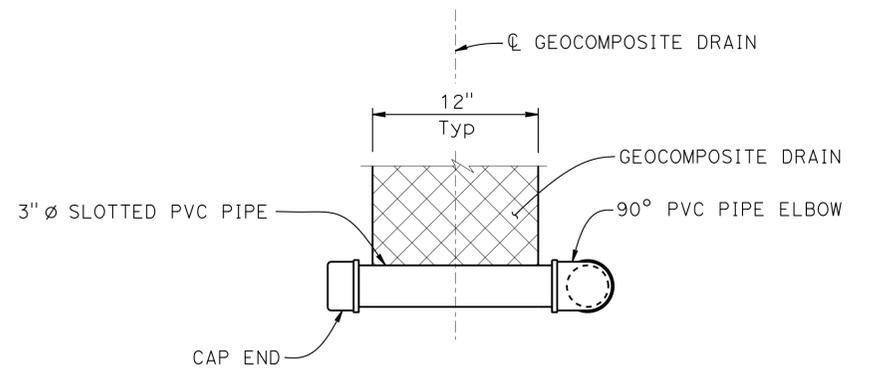
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WALL DRAIN DETAIL AT WEEPHOLE
NO SCALE



SECTION B-B
NO SCALE



VIEW A-A
NO SCALE

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

- NOTES:
- Center Geocomposite drain between soldier piles
 - Geocomposite splice length is 1'-0" minimum

DESIGN	BY ALIREZA YAZDANI M.	CHECKED TIN WIN
DETAILS	BY TONY COTTON	CHECKED TIN WIN
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	33E0416
POST MILE	30.3

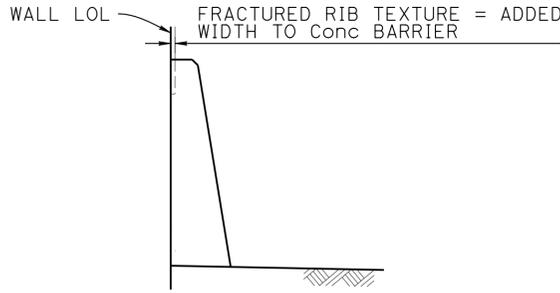
STROBRIDGE AVE ON-RAMP WALL
WALL DRAIN DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Alameda	205	0.07170	675	676
04	Alameda	580	0.07802		
10	San Joaquin	580	13.52154		

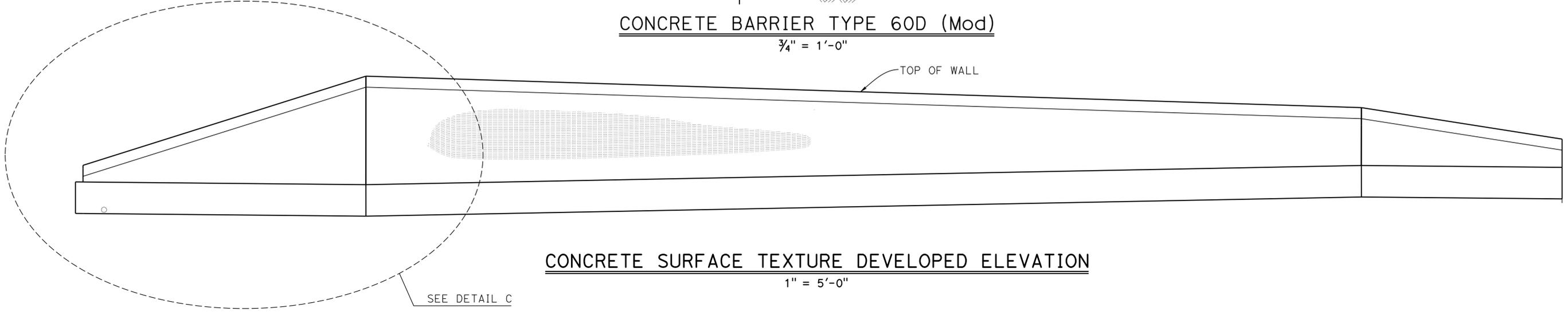
03-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

ALIREZA YAZDANI MOTLAGH
 No. 69601
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

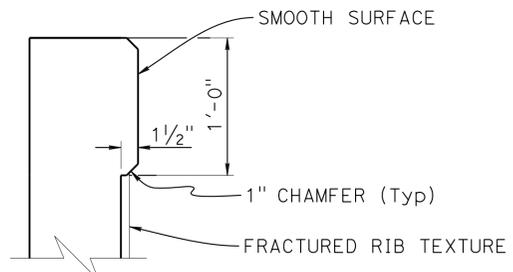
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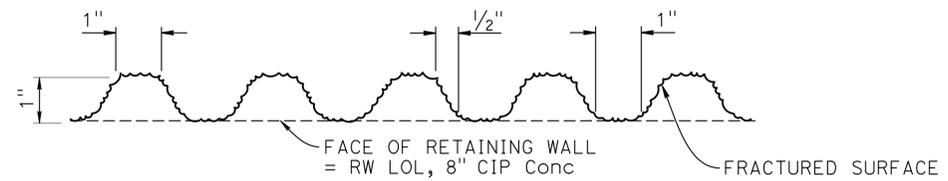
CONCRETE BARRIER TYPE 60D (Mod)
 $\frac{3}{4}'' = 1'-0''$



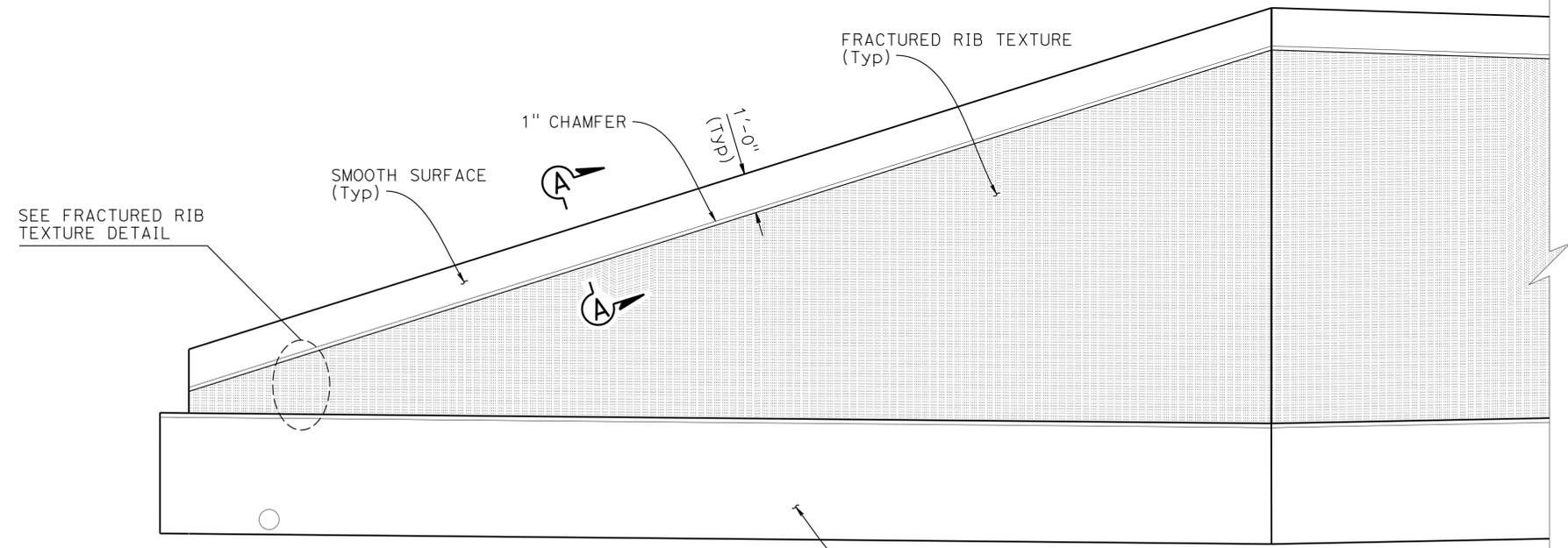
CONCRETE SURFACE TEXTURE DEVELOPED ELEVATION
 $1'' = 5'-0''$



SECTION A-A
 $\frac{1}{2}'' = 1'-0''$



FRACTURED RIB TEXTURE DETAIL
 NO SCALE



DETAIL C
 $\frac{1}{2}'' = 1'-0''$

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

DESIGN	BY CONNIE YIP	CHECKED TIN WIN
DETAILS	BY TONY COTTON	CHECKED TIN WIN
QUANTITIES	BY ALIREZA YAZDANI M.	CHECKED TIN WIN

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 3

BRIDGE NO.	33E0416
POST MILE	30.3

**STROBRIDGE AVE ON-RAMP WALL
 CONCRETE SURFACE TEXTURE**



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Ala	238,580, 880	R23.2/26.8, 48.5/R49.6, 29.8/32.8	555	1157

Shahin Vahdani 04/01/05
REGISTERED PROFESSIONAL

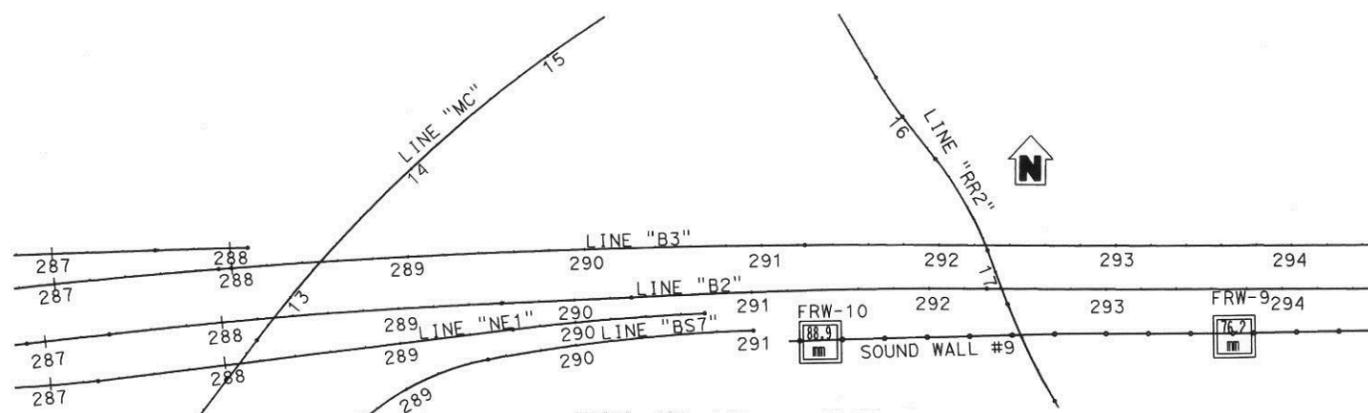
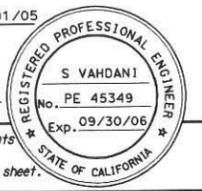
12-19-05
PLANS APPROVAL DATE

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Alameda County Transportation Improvement Authority
426 17th Street, Suite 100
Oakland, CA 94612

Fugro West, Inc.
1000 Broadway, Suite 200
Oakland, CA 94607

To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



NOTES:

- 64 MM DIAMETER SAMPLES WERE RETRIEVED USING A MODIFIED CALIFORNIA SAMPLER WITH AN INSIDE DIAMETER (ID) OF 64 MM AND AN OUTSIDE DIAMETER (OD) OF 76 MM.
- 36 MM DIAMETER SAMPLES WERE RETRIEVED USING A STANDARD PENETRATION TEST SAMPLER WITH ID OF 36 MM AND OD OF 51 MM.
- BLOW COUNTS SHOWN IN BORING LOGS ARE ACTUAL FIELD BLOW COUNTS; NO ADJUSTMENT TO SAMPLER TYPE WAS MADE.
- SOLID FLIGHT AUGER BORING AND ROTARY WASH BORING SAMPLES WERE DRIVEN USING A ROPE AND CATHEAD SAFETY HAMMER SYSTEM. HOLLOW STEM AUGER BORING SAMPLES WERE DRIVEN USING AN AUTOMATED TRIP SAFETY HAMMER SYSTEM. A 63.6 KG HAMMER FALLING 762MM WAS USED UNLESS OTHERWISE NOTED.
- THE SOIL WAS LOGGED IN GENERAL ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM.
- POCKET PENETROMETER VALUES OF >431 INDICATE AN UNCONFINED COMPRESSION STRENGTH GREATER THAN THE INSTRUMENTS LIMIT.
- VISUAL CLASSIFICATION OF EARTH MATERIALS IS BASED ON FIELD INSPECTION AND IS CONFIRMED OR REVISED WITH LABORATORY TESTING.

DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

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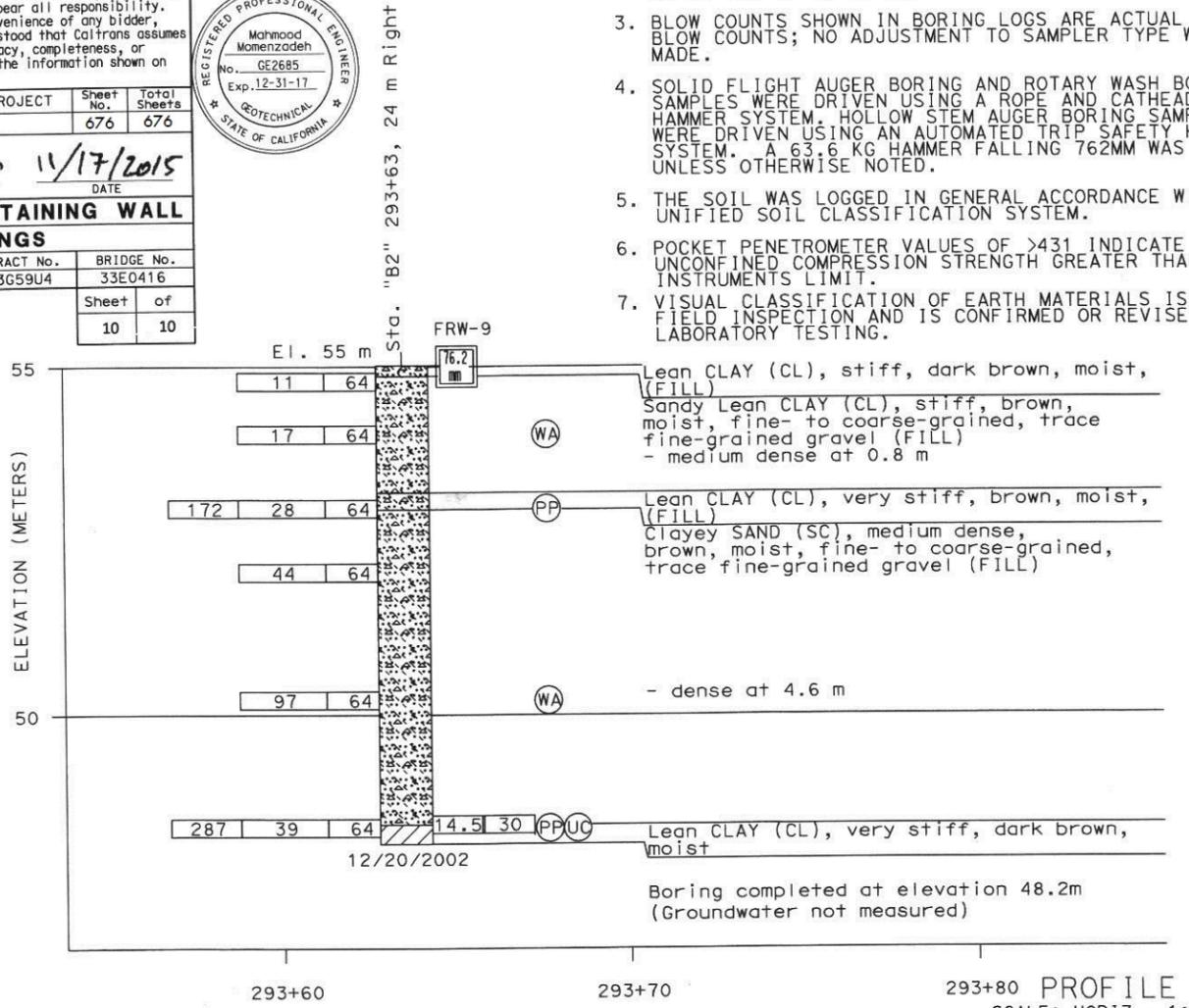
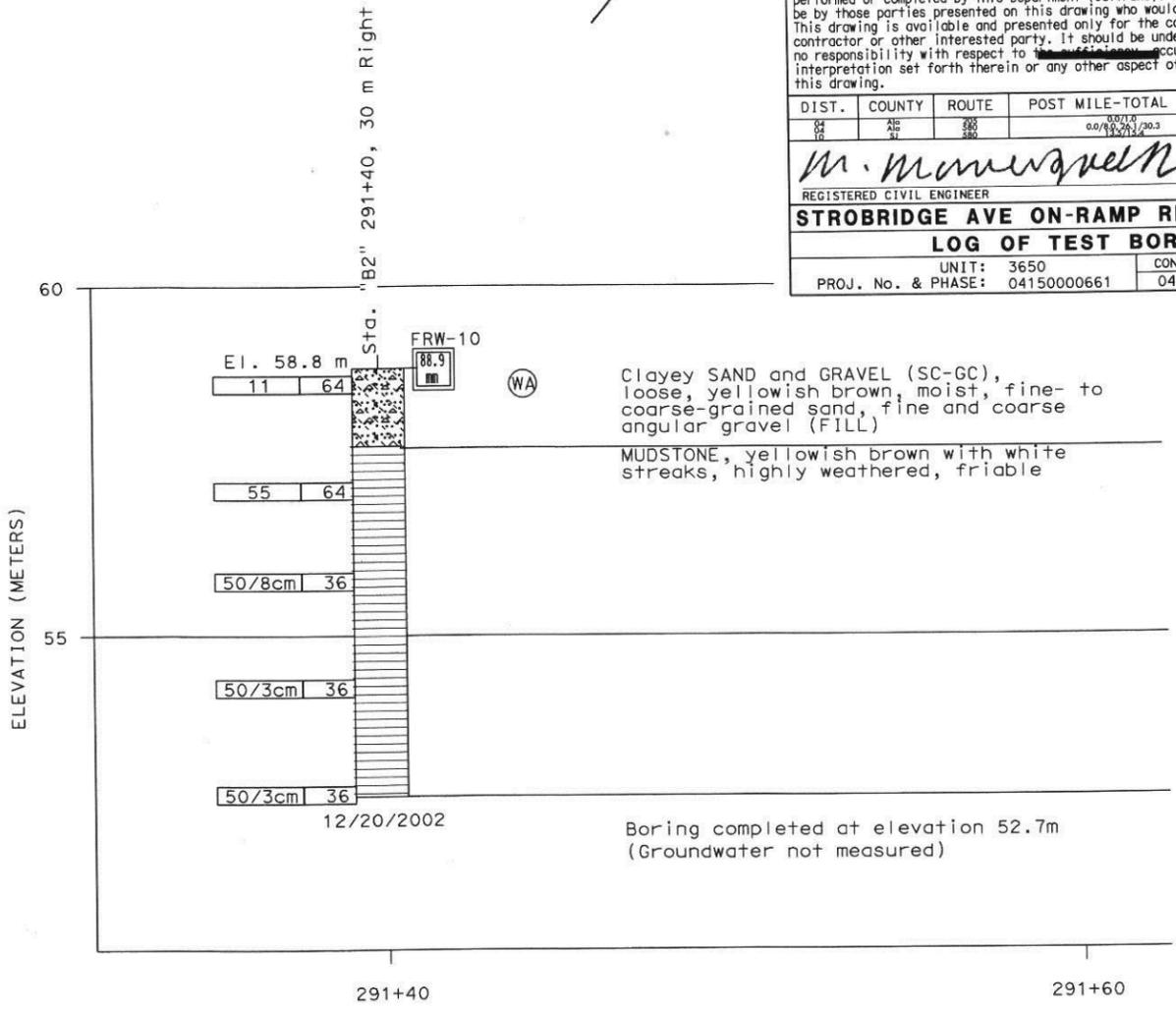
DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
04	Ala	880	0.0/0.0-29.8/32.8	676	676

M. Momenzadeh 11/17/2015
REGISTERED CIVIL ENGINEER DATE

STROBRIDGE AVE ON-RAMP RETAINING WALL

LOG OF TEST BORINGS

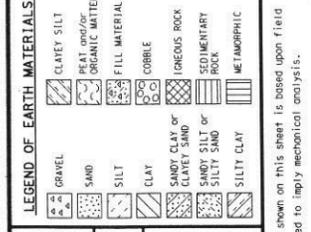
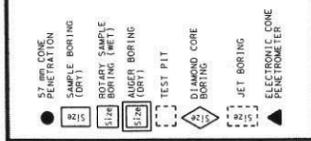
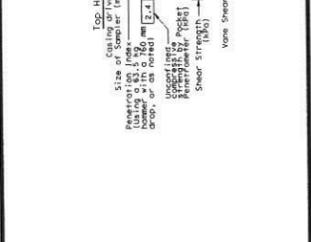
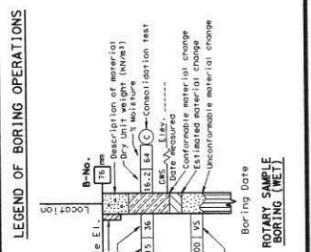
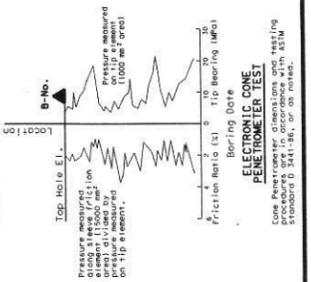
UNIT: 3650	CONTRACT No. 04-3G59U4	BRIDGE No. 33E0416
PROJ. No. & PHASE: 04150000661		
	Sheet 10	of 10



PROFILE
SCALE: HORIZ = 1:100
VERT = 1:50

** FOR KILOMETER POST AND BRIDGE NUMBER, SEE "GENERAL PLAN NO. 1" SHEET.

SW-42



NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

EMIL VERGARA DESIGN OVERSIGHT	DRAWN BY M FILLINGIM	R STORESUND FIELD INVESTIGATION BY:
SIGN OFF DATE	CHECKED BY M BAJUNIEMI	DATE: 12/20/02

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R STORESUND
PROJECT ENGINEER

BRIDGE NO. **	KILOMETER POST **
------------------	----------------------

SOUND WALL NO. 9	
LOG OF TEST BORINGS	
REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
3/12/03 5/27/04 6/18/04 8/1/05	11