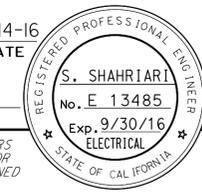
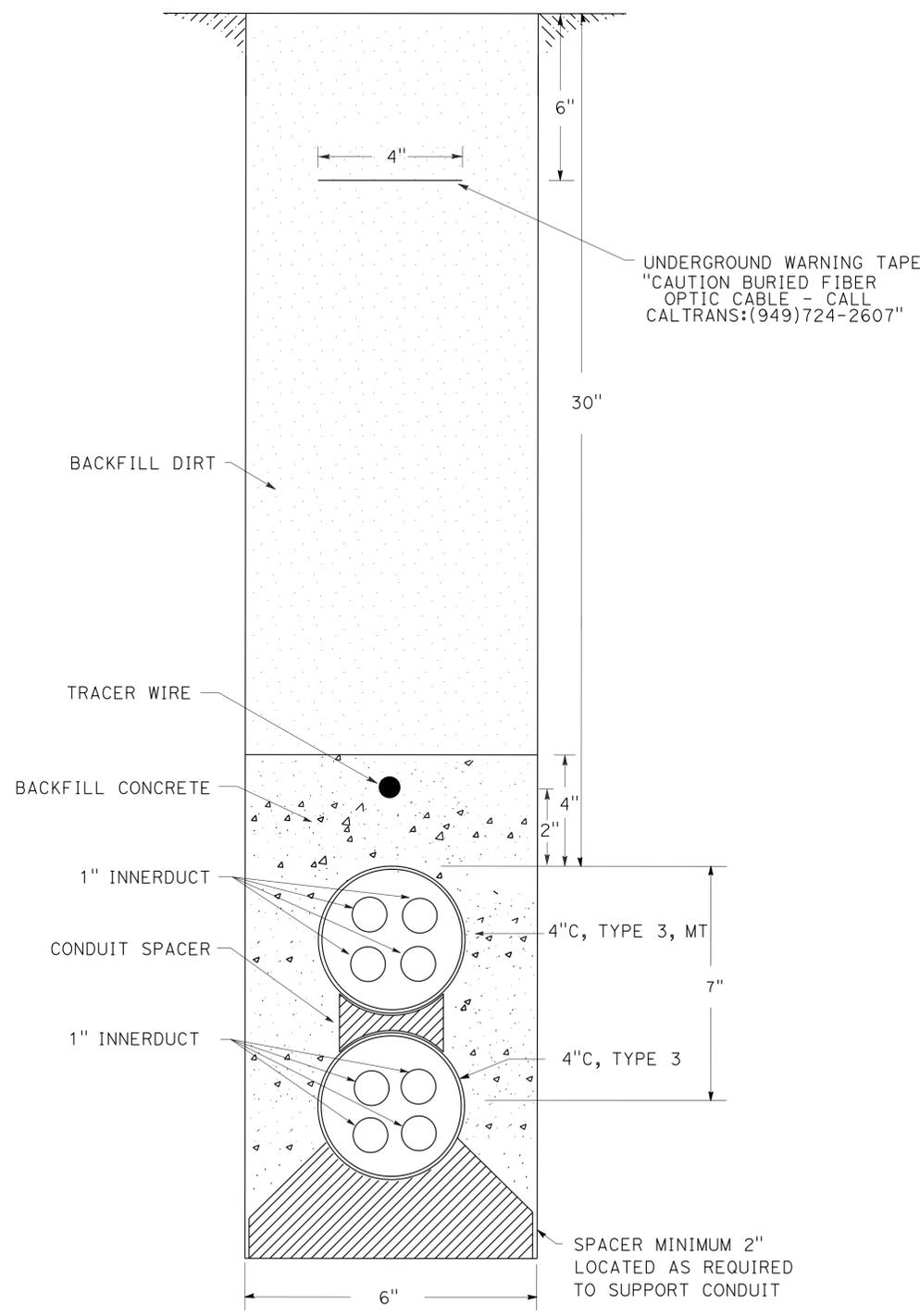
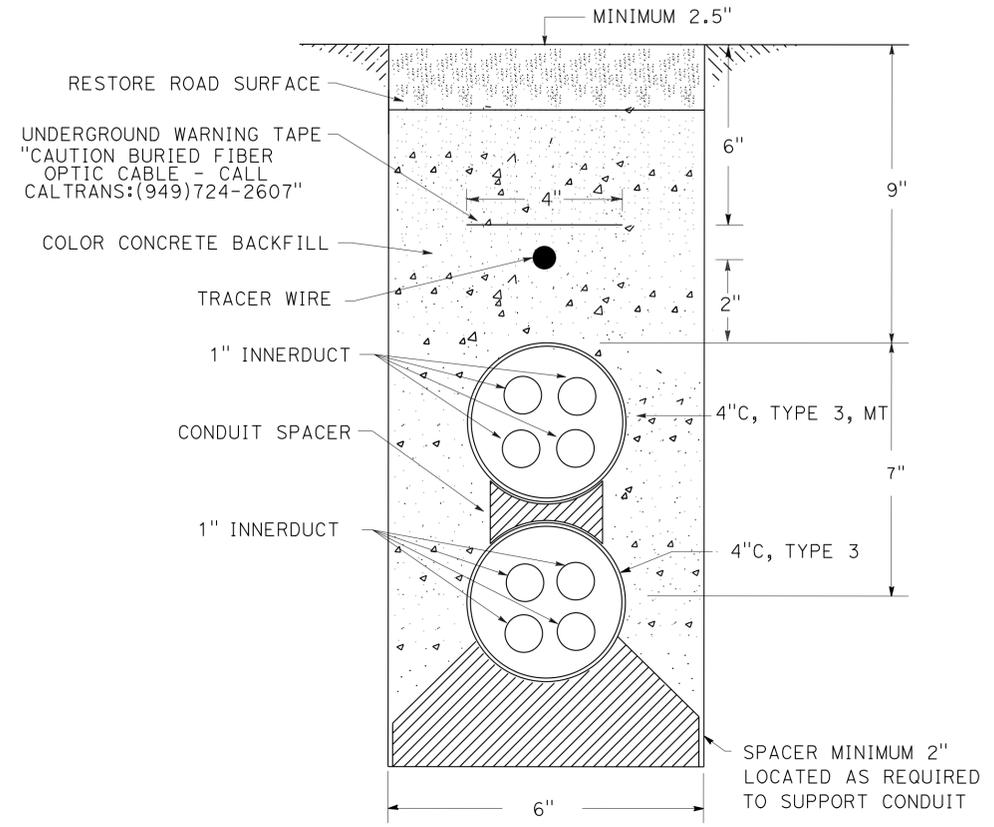


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	5	1.2/2.2	102	244
 REGISTERED ELECTRICAL ENGINEER DATE 03-14-16					
03-28-16 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

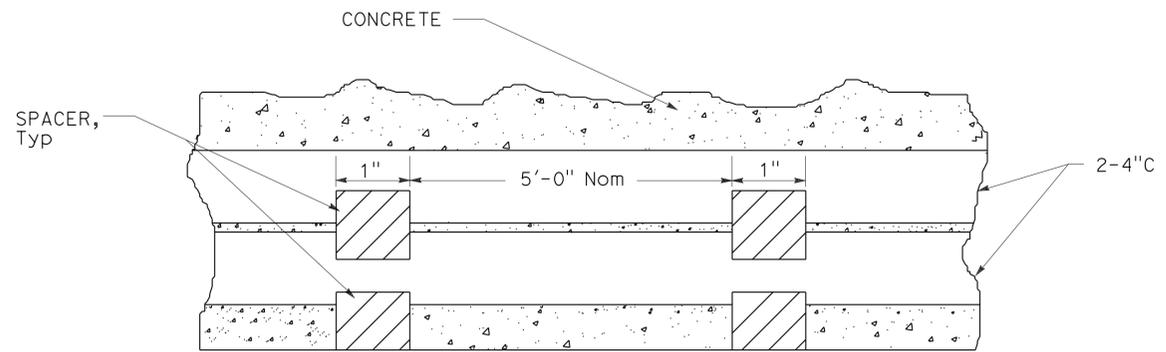
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
Caltrans ELECTRICAL DESIGN	SHAHRIARI	SHAHRIARI	ANTHONY C FERNANDEZ	3/09/16
	SHAHRAM	SHAHRIARI	VANESSA TRUONG	



**TRENCHING IN DIRT
DETAIL**



**TRENCHING IN PAVEMENT
DETAIL**



**CONDUIT SPACER PLACEMENT
SIDE VIEW**

ELECTRICAL DETAILS
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	5	1.2/2.2	103	244

REGISTERED ELECTRICAL ENGINEER **S. SHAHRIARI** DATE 03-14-16
 No. E 13485
 Exp. 9/30/16
 ELECTRICAL
 STATE OF CALIFORNIA

03-28-16
 PLANS APPROVAL DATE

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NOTE:

- ELECTRICAL QUANTITY INFORMATION ON THIS SHEET IS FOR DESIGNER USE ONLY. DO NOT USE FOR BIDDING PURPOSES.

MODIFYING EXISTING ELECTRICAL SYSTEM								
SHEET No.	TYPE 3 CONDUIT 1 1/2"	PULL BOX No.5	FO CABLE TYPE B	SPLICE VAULT	FO CABLE SPLICE ENCLOSURE	TYPE H RISER	WOOD POLE	PULL TAPE
	LF	EA	LF	EA	EA	EA	EA	LF
E-2	900	2	1000		1			
E-3	1250	4	1500			2	3	300
E-4	750	2	800	1	1			800

MODIFYING EXISTING ELECTRICAL SYSTEM												
SHEET No.	TYPE 3 CONDUIT 4"	TYPE 1 CONDUIT 4"	1" INNERDUCT	COMMUNICATION PULL BOX	FO CABLE SPLICE ENCLOSURE	FO CABLE			TRACER WIRE	WARNING TAPE	PULL TAPE	COMMUNICATION PULL BOX
	LF	LF	LF	EA	EA	TYPE A	TYPE B	TYPE D				RC
E-5	1800		7200		1	1000	1000		900	900	5000	
E-6	1900	50	10,200	3		1500	1500	200	950	950	6500	1
E-7			6400		1	900	900				4500	

MODIFYING EXISTING ELECTRICAL SYSTEM				
SHEET No.	1 1/2" CONDUIT TYPE 3	#8 AWG	CIRCUIT BREAKER 30 AMP	PULL BOX No.5
	LF	LF	EA	EA
E-8	200	500	1	1

MODIFYING EXISTING ELECTRICAL SYSTEM				
SHEET No.	2" CONDUIT TYPE 1	3" CONDUIT TYPE 1	#6 AWG	MV LAMP RC
	LF	LF	LF	EA
E-9	50	200	500	2

MODIFYING EXISTING ELECTRICAL SYSTEM			
SHEET No.	2" CONDUIT TYPE 1	PULL BOX No.5	MV LAMP RC
	LF	EA	EA
E-10	20	2	2
E-11	10	1	2
E-12	60	1	2

MODIFYING EXISTING ELECTRICAL SYSTEM								
SHEET No.	2" CONDUIT TYPE 1	1 1/2" CONDUIT TYPE 1	PULL BOX No.5(T)	PULL BOX No.5	LOOP DETECTOR	DETECTOR HAND HOLE	DLC	#14 LOOP WIRES
	LF	LF	EA	EA	EA	EA	LF	LF
E-13	20	400	1	2	4	1	1300	600

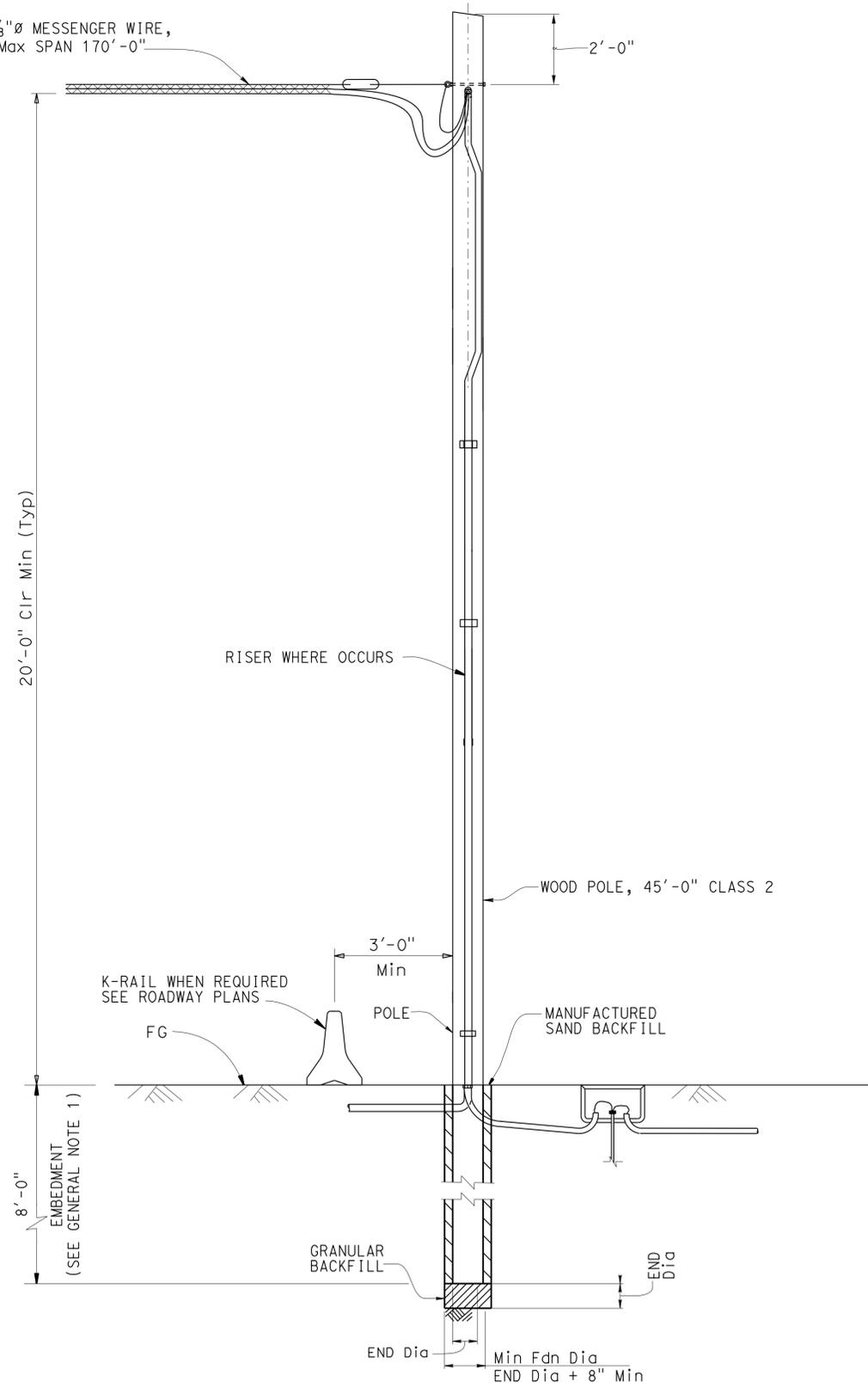
ELECTRICAL QUANTITIES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR SHAHRIARI
 SHAHRAM
 CALCULATED/DESIGNED BY
 CHECKED BY
 ANTHONY C FERNANDEZ
 VANESSA TRUONG
 REVISED BY
 DATE REVISED
 ACF
 5/12/16

LAST REVISION DATE PLOTTED => 18-MAY-2016
 00-00-00 TIME PLOTTED => 14:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	5	1.1/2.2	104	244
<i>Simon Malak</i> REGISTERED CIVIL ENGINEER			DATE	9/1/15	
PLANS APPROVAL DATE 03/28/16			No. C73369 EXP. 12-31-2016 CIVIL STATE OF CALIFORNIA		
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To get to the Caltrans web site, go to: http://www.dot.ca.gov					

OVERHEAD BUNDLE CONSISTING OF A 3/8"Ø MESSENGER WIRE,
72 SINGLE MODE FIBER OPTIC CABLE Max SPAN 170'-0"
AND LASHING WIRE



Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Sixth Edition (LTS-6).

GROUP LOAD COMBINATIONS:

- I Dead Load
- II Dead Load + Wind Load
- IV Fatigue: Not used

LOADING:

Wind Loading: 85 mph (3-second gust)
Wind Recurrence Interval: 10 years
Combined height, exposure, and elevated terrain factor = 1.05
(Exposure C, structure is not located on or over the top half of a ridge, hill, or escarpment)

BASIC DESIGN VALUES:

- Timber Poles: Fb = 1850 psi
- Fv = 110 psi
- Fcp = 230 psi
- Fc = 950 psi
- E = 1500 x 10³ psi

DESIGN WIRE BREAKING STRENGTHS:

ASTM A475, Utilities Grade, 7 strand modified by termination efficiency factor of 0.8

FOUNDATION DESIGN NOTES:

1. Pole embedment depth design is based on Broms' approximate procedure as described in Article 13.6 of AASHTO LTS-5.
2. Embedment depth is calculated based on following soil parameters:
Cohesive Soil:
Shear strength of soil c = 1500 psf.
Cohesionless Soil:
Ø = 30 deg, γ = 120 pcf.
Soil assumed to be unsaturated.
3. An overload factor of 2.0 and an undercapacity factor of 0.7 were used for safety factor of 2.86.
4. Allowable vertical bearing pressure at the end bearing of poles is 3000 psf at 6 feet or more embedment.

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

GENERAL NOTES:

1. Add 2'-0" for slopes above 1V:4H.
2. Do not exceed the attachments shown.

TYPICAL WOOD POLE

NO SCALE

BRANCH CHIEF <u>DAVID A. NEUMANN</u>	DESIGN	BY A MALAK	CHECKED N KANEPATHIPILLAI	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	TEMPORARY WOOD POLES GENERAL NOTES	SES-1
	DETAILS	BY H NGUYEN	CHECKED N KANEPATHIPILLAI			POST MILE	1.1/2.2		
	QUANTITIES	BY	CHECKED						
(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 3619 PROJECT NUMBER & PHASE: 1212000090	CONTRACT NO.: 12-0M4904	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 7-15-15	SHEET 1 OF 3

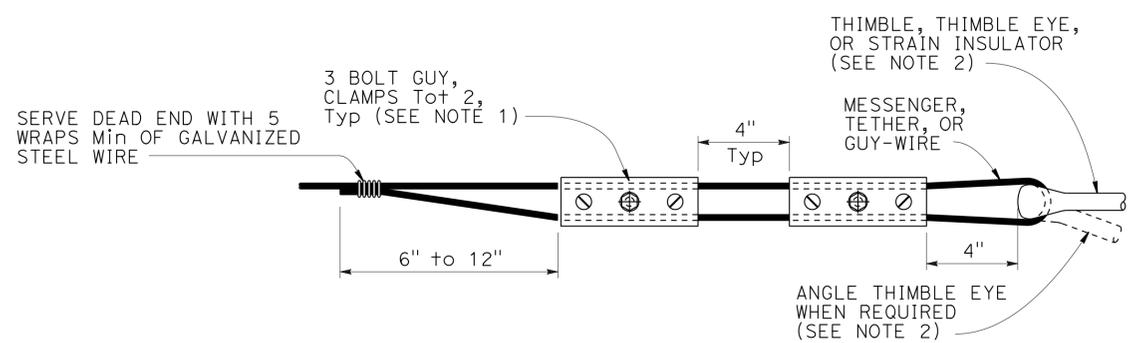
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Oran	5	1.1/2.2	105	244

REGISTERED CIVIL ENGINEER	DATE
<i>Aiman Malak</i>	9/1/15
PLANS APPROVAL DATE	
03/28/16	

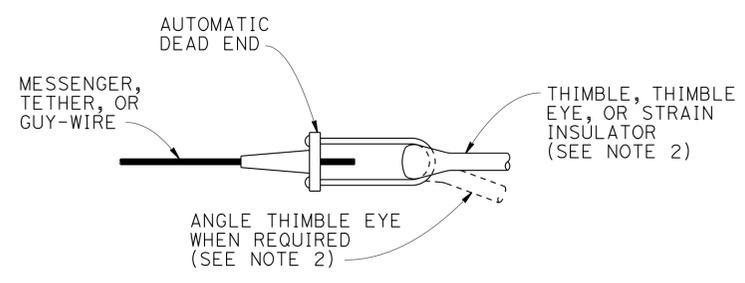
REGISTERED PROFESSIONAL ENGINEER	No.	EXP.
<i>Aiman Malak</i>	C73369	12-31-2016
CIVIL		

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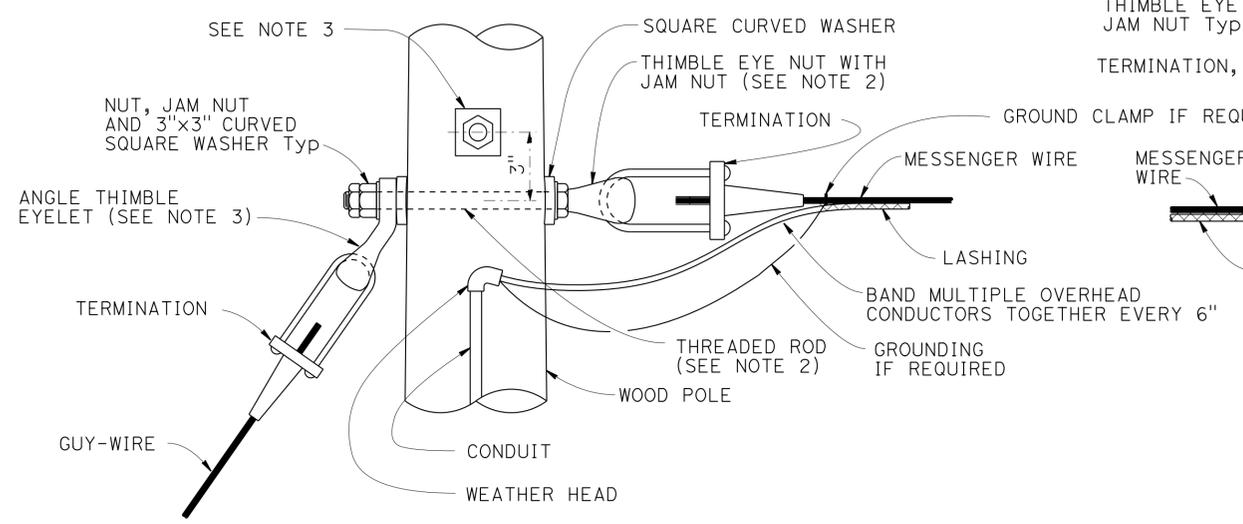
To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



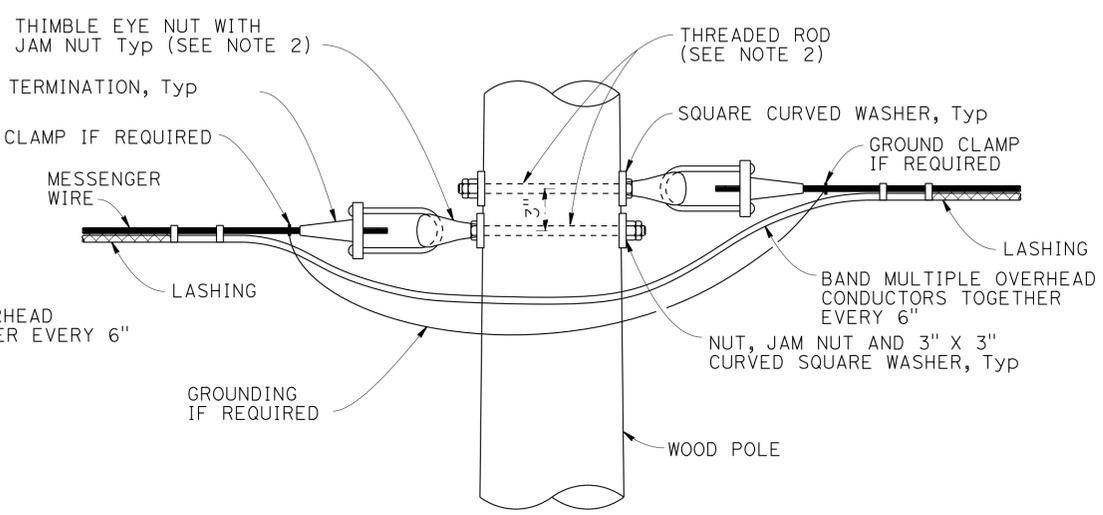
ALTERNATIVE TERMINATION OF MESSENGER WIRES USING GUY CLAMPS



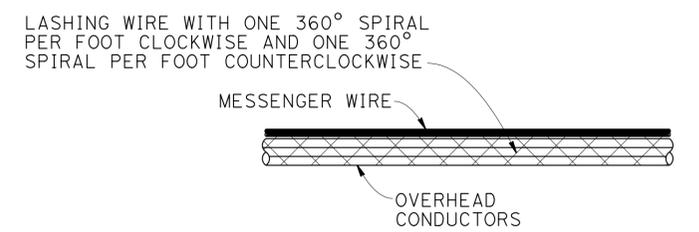
TERMINATION OF WIRES USING AUTOMATIC DEAD END



POLE AT DEAD END WITH GUY-WIRE CONNECTION

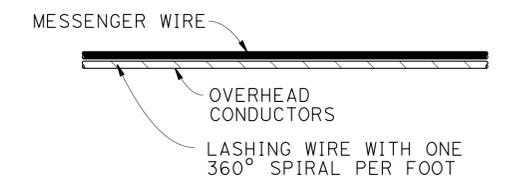


POLE AT TANGENT OR CORNER CONNECTION



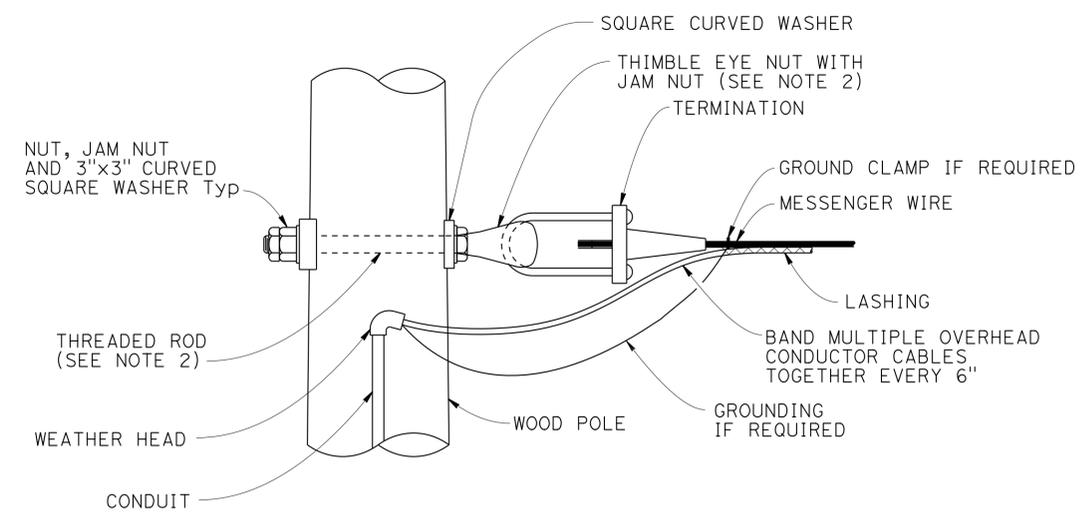
DOUBLE LASHING DETAIL

USE IF d_p IS GREATER THAN $1\frac{1}{2}$ "

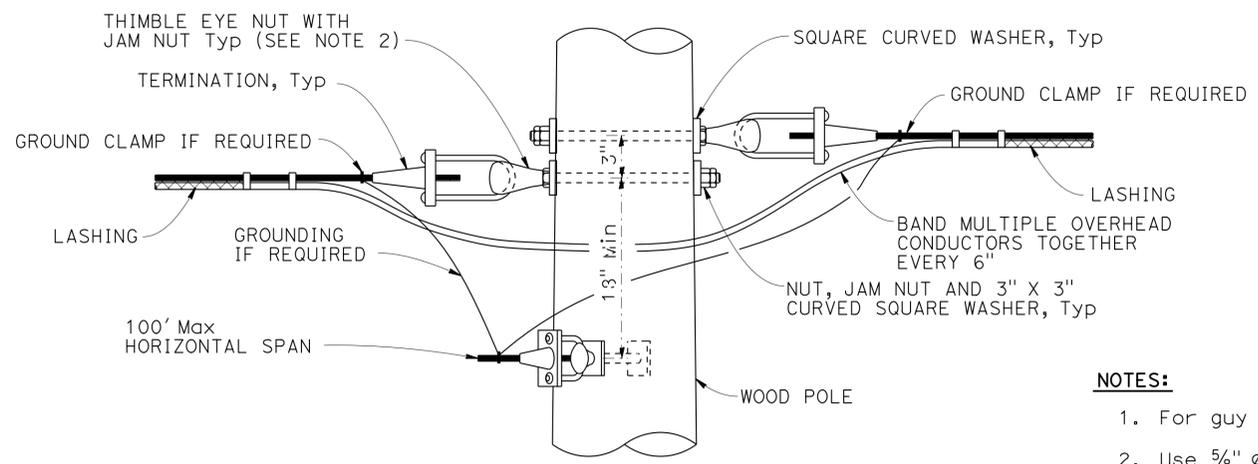


TYPICAL LASHING DETAIL

USE IF d_p IS $1\frac{1}{2}$ " OR LESS



POLE AT DEAD END CONNECTION



POLE AT JUNCTION CONNECTION

NOTES:

1. For guy wires use 3 clamps.
2. Use $\frac{5}{8}$ " ϕ except $\frac{3}{4}$ " ϕ at guyed wires
3. Install additional angle thimble eyelet at poles with two guy wires.

NO SCALE

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

BRANCH CHIEF	DAVID A. NEUMANN
--------------	------------------

DESIGN	BY A MALAK	CHECKED N KANEPATHIPILLAI
DETAILS	BY H NGUYEN	CHECKED N KANEPATHIPILLAI
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

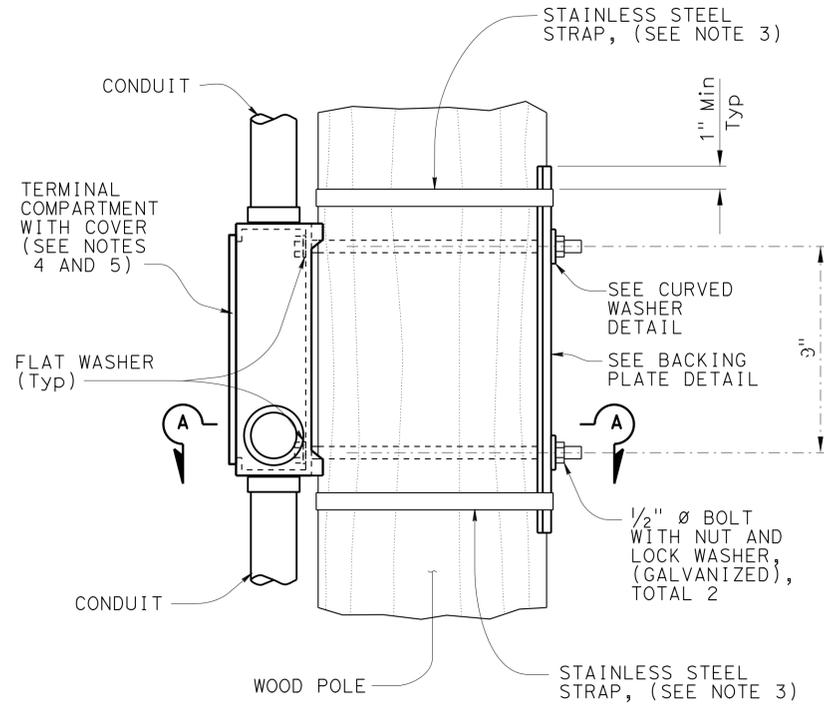
DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	1.1/2.2

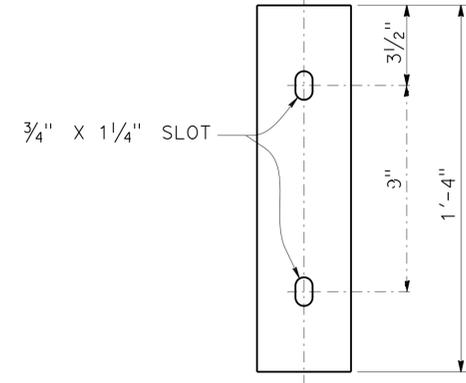
TEMPORARY WOOD POLES
DETAILS No. 1

SES-2
SHEET 2 OF 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	5	1.1/2.2	106	244
			REGISTERED CIVIL ENGINEER	DATE	
			<i>Aiman malak</i>	9/1/15	
			PLANS APPROVAL DATE		
			03/28/16		
			No. C73369		
			EXP. 12-31-2016		
			CIVIL		
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To get to the Caltrans web site, go to: http://www.dot.ca.gov					



ELEVATION

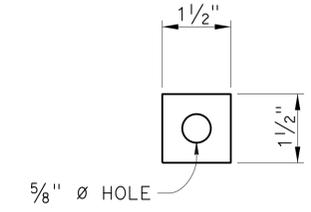


ELEVATION

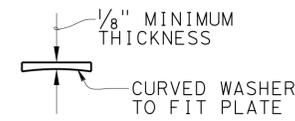


PLAN

BACKING PLATE
DETAIL



ELEVATION

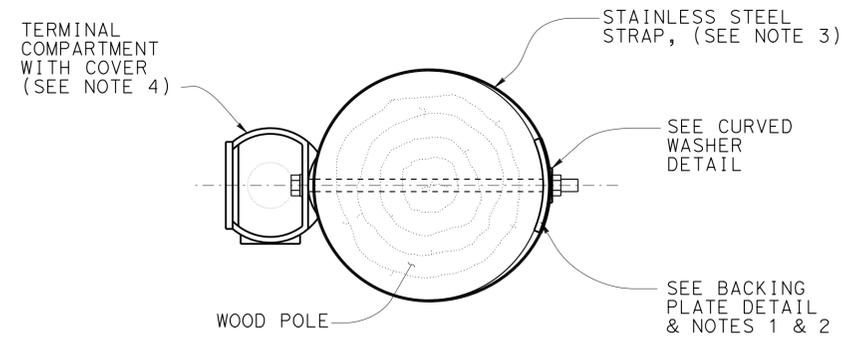


PLAN

CURVED WASHER
DETAIL

NOTES:

1. Verify pole dimensions at terminal compartment for fabrication of backing plate and curved washer.
2. Backing plate to be galvanized after fabrication.
3. 3/4" x 0.044" minimum, rounded edge stainless steel straps, double wrapped with 2" long bend under stainless steel strap buckle.
4. For miscellaneous details for signal mounting not shown see Standard Plan ES-4D.
5. If the terminal compartment has a cable entry guide on the rear face, remove the cable entry guide to a level that will not interfere with the wood post. Close any unused cable entry locations with raintight cap.



SECTION A-A

SIDE MOUNTING
TERMINAL COMPARTMENT

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

NO SCALE

BRANCH CHIEF <u>DAVID A. NEUMANN</u>	DESIGN	BY A MALAK	CHECKED N KANEPATHIPILLAI	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH B	BRIDGE NO.	N/A	TEMPORARY WOOD POLES DETAILS No. 2	SES-3
	DETAILS	BY H NGUYEN	CHECKED N KANEPATHIPILLAI			POST MILE	1.1/2.2		
	QUANTITIES	BY	CHECKED						

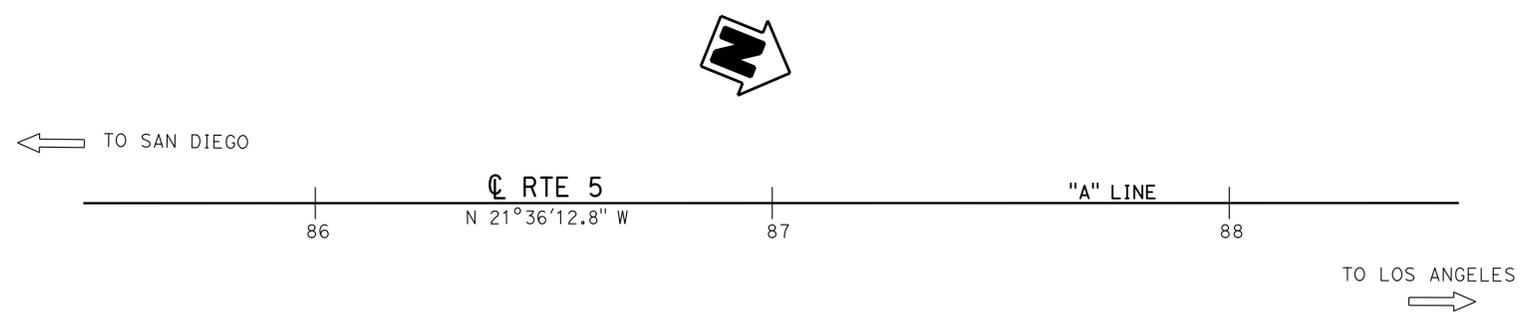
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	107	244

REGISTERED CIVIL ENGINEER: *ngothai*
 DATE: 1-20-16
 PLANS APPROVAL DATE: 03-28-16
 HUY THAI NGO
 No. C71021
 CIVIL ENGINEER
 STATE OF CALIFORNIA

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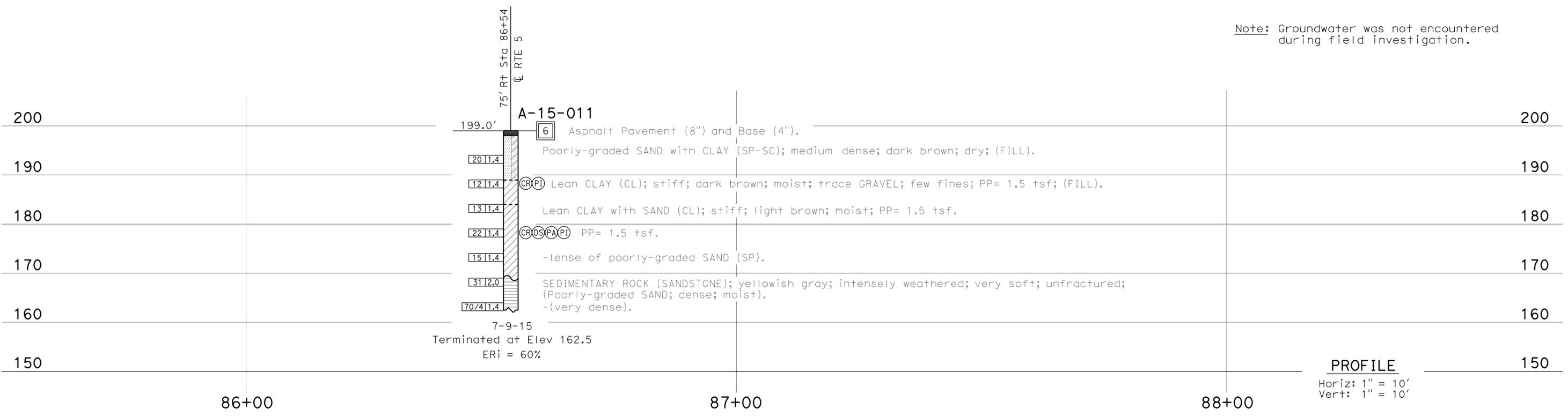
BENCH MARK

BM PRHV 1 Elev 213.904
 Fnd spike and washer on NB I-5 shoulder between Main Lane and El Camino Real off-ramp; approximately 700 ft south of El Camino Real UC ☉
 NGVD88



A-15-011
 6

PLAN
 1" = 20'



Note: Groundwater was not encountered during field investigation.

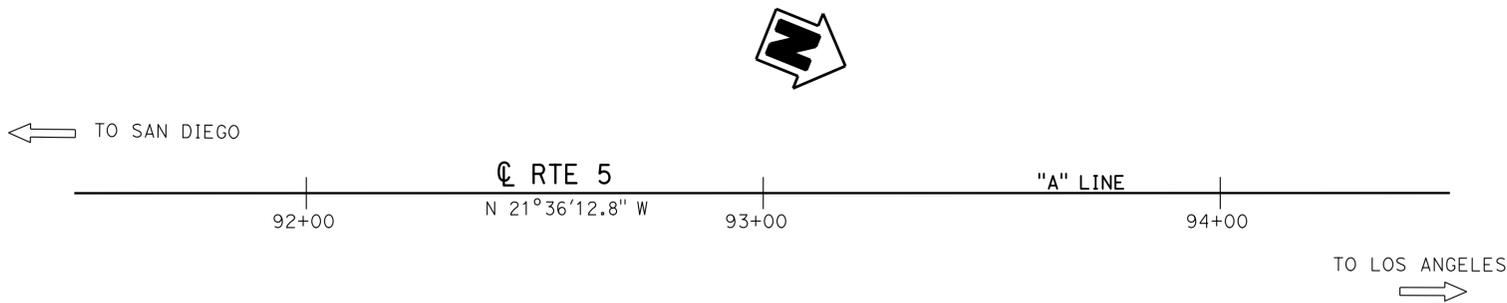
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FUNCTIONAL SUPERVISOR		DRAWN BY: I. G-Remmen		FIELD INVESTIGATION BY:		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		LOG OF TEST BORINGS - LOTB 1	
NAME: T. Liu		CHECKED BY: C. Harris		H. Ngo		DESIGN BRANCH X		POST MILE		1.64	
OGS CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3650		PROJECT NUMBER & PHASE: 12120000901		CONTRACT NO.: 12-0M4904	
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								12-18-15 01-20-16		X X	

FILE => c1212000090u1001.dgn

USERNAME => s127856 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:22

BENCH MARK

BM PRHV 1 Elev 213.904
 Fnd spike and washer on NB I-5 shoulder
 between Main Lane and El Camino Real
 off-ramp; approximately 700 ft south of
 El Camino Real UC ☉
 NGVD88

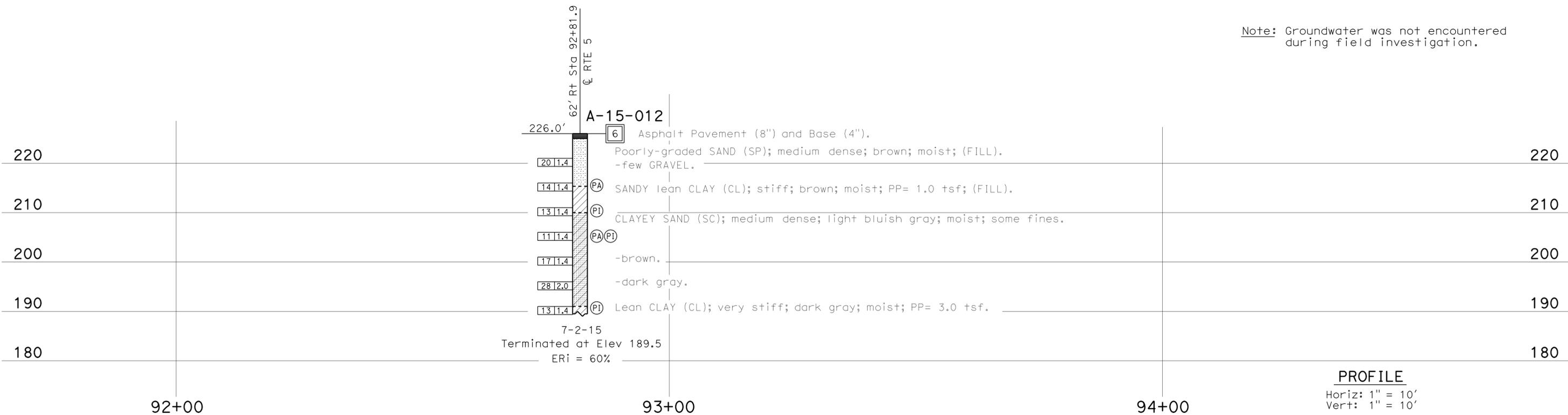


A-15-012

6

PLAN

1" = 20'



Note: Groundwater was not encountered during field investigation.

PROFILE

Horiz: 1" = 10'
 Vert: 1" = 10'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	108	244

REGISTERED CIVIL ENGINEER DATE 1-20-16
 HUY THAI NGO No. C71021
 PLANS APPROVAL DATE 03-28-16
 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA
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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X		BRIDGE NO. POST MILE 1.76		SIGN STRUCTURE 205 LOG OF TEST BORINGS - LOTB2	
FUNCTIONAL SUPERVISOR NAME: T. Liu	DRAWN BY: I. G-Remmen CHECKED BY: C. Harris	FIELD INVESTIGATION BY: H. Ngo		UNIT: 3650 PROJECT NUMBER & PHASE: 12120000901		CONTRACT NO.: 12-0M4904		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 12-18-15 01-20-16 SHEET OF X X	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3
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USERNAME => s127856 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:22

BENCH MARK

BM PRHV 1 Elev 213.904
 Fnd spike and washer on NB I-5 shoulder
 between Main Lane and El Camino Real
 off-ramp; approximately 700 ft south of
 El Camino Real UC ☉
 NGVD88

← TO SAN DIEGO



☉ RTE 5

BC 94+95.907

"A" LINE

TO LOS ANGELES →

94+00

95+00

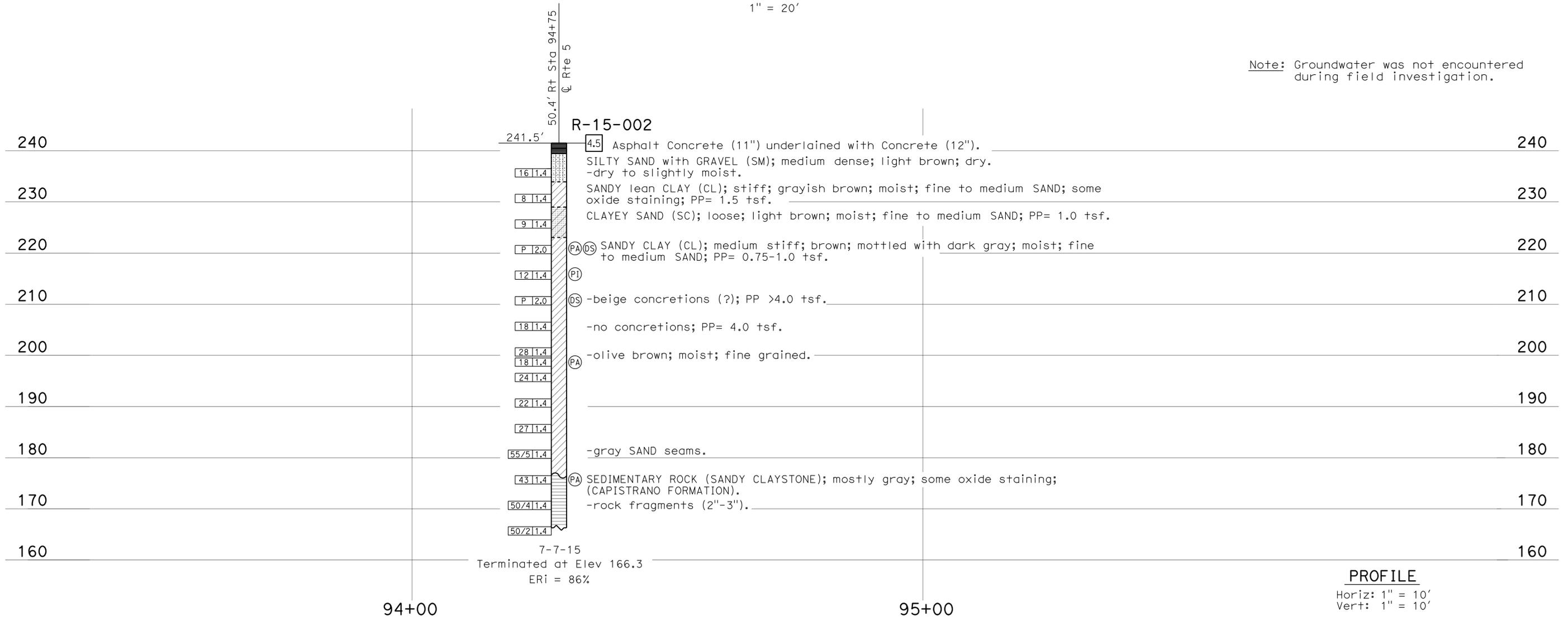
96+00

R-15-002

4.5

PLAN

1" = 20'



Note: Groundwater was not encountered during field investigation.

PROFILE

Horiz: 1" = 10'
 Vert: 1" = 10'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	109	244

REGISTERED CIVIL ENGINEER DATE 1-20-16
 HUY THAI NGO No. C71021
 PLANS APPROVAL DATE 03-28-16

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ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X		SIGN STRUCTURE 207	
FUNCTIONAL SUPERVISOR NAME: T. Liu	DRAWN BY: I. G-Remmen CHECKED BY: C. Harris	FIELD INVESTIGATION BY: H. Ngo		BRIDGE NO. POST MILE 1.81		LOG OF TEST BORINGS - LOTB3		REVISION DATES 12-18-15 01-20-16	
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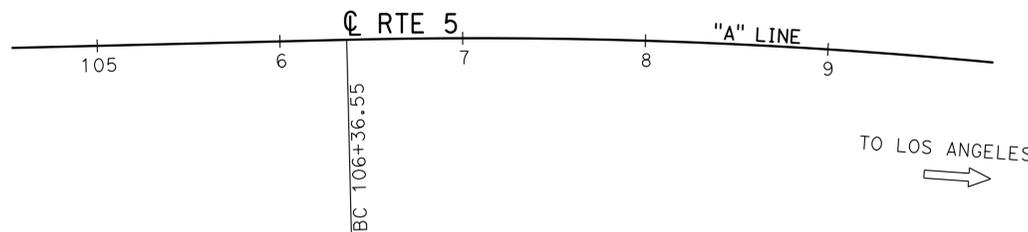
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BENCH MARK

BM PRHV 8 Elev 267.807
 Fnd PK nail and tin on SB I-5 shoulder
 approximately 750 ft north of El Camino
 Real UC ☐
 NGVD88



← TO SAN DIEGO



PLAN

1" = 50'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	110	244

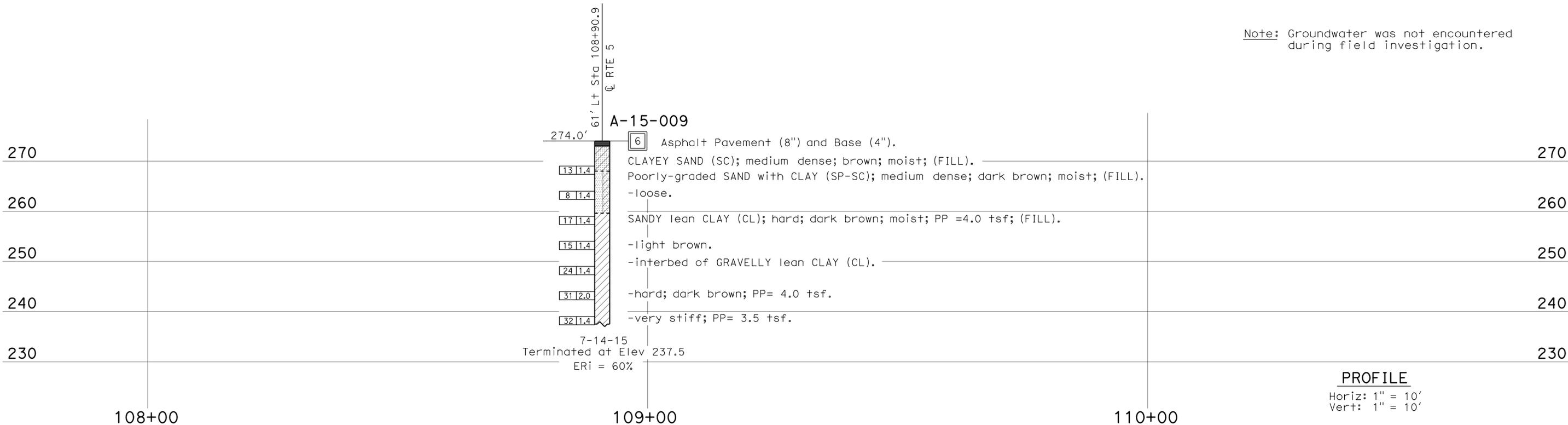
REGISTERED CIVIL ENGINEER DATE 1-20-16
 HUY THAI NGO No. C71021
 PLANS APPROVAL DATE 03-28-16

REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA

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

Note: Groundwater was not encountered during field investigation.



PROFILE

Horiz: 1" = 10'
 Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X		BRIDGE NO.	SIGN STRUCTURE 312	
FUNCTIONAL SUPERVISOR NAME: T. Liu	DRAWN BY: I. G-Remmen	FIELD INVESTIGATION BY: H. Ngo						POST MILE 1.64	LOG OF TEST BORINGS - LOTB4	
CHECKED BY: C. Harris										REVISION DATES 12-18-15 01-20-16
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USERNAME => s127856 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	111	244

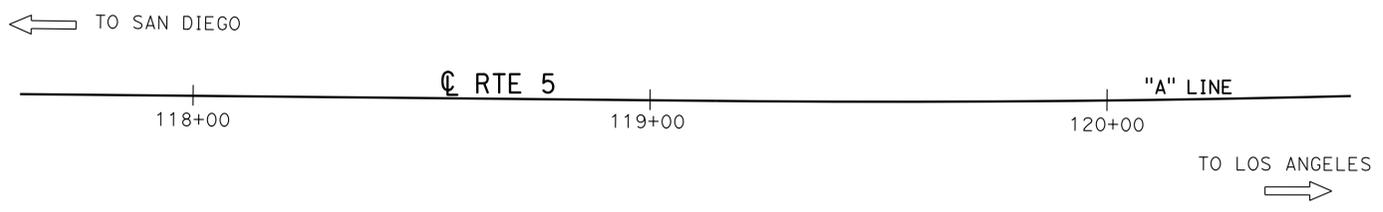
REGISTERED CIVIL ENGINEER *ngothai* DATE 1-20-16
 PLANS APPROVAL DATE 03-28-16
 HUY THAI NGO No. C71021
 CIVIL ENGINEER STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

BENCH MARK

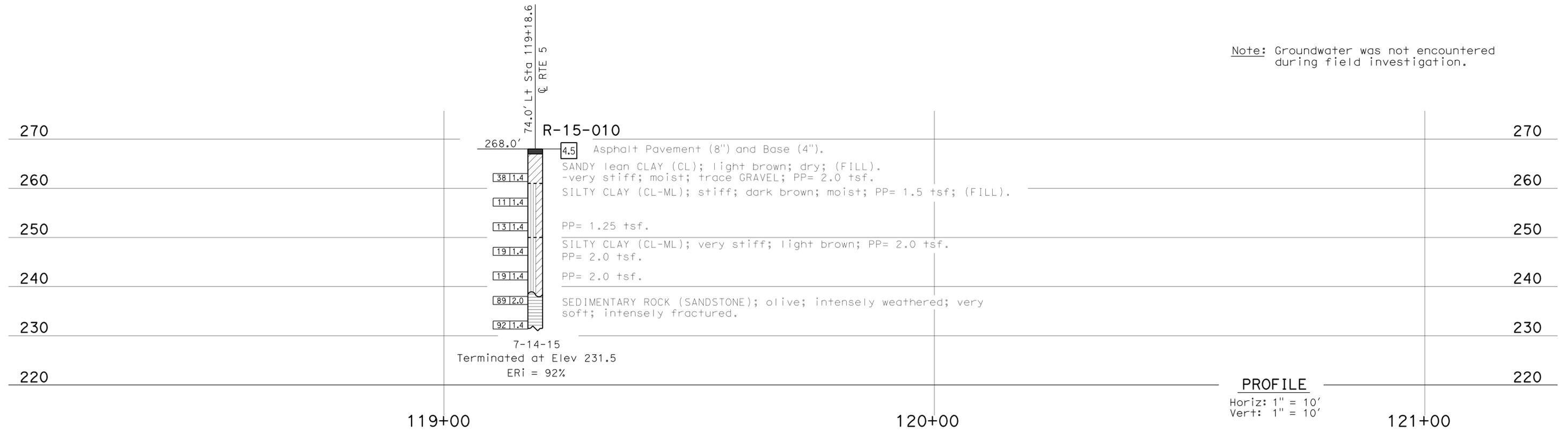
BM PRHV 8 Elev 267.807
 Fnd PK nail and tin on SB I-5 shoulder approximately 750 ft north of El Camino Real UC
 NGVD88



R-15-010
 4.5



PLAN
 1" = 20'



Note: Groundwater was not encountered during field investigation.

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		SIGN STRUCTURE 405	
FUNCTIONAL SUPERVISOR		DRAWN BY: I. G-Remmen		FIELD INVESTIGATION BY:		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		LOG OF TEST BORINGS - LOTB5	
NAME: T. Liu		CHECKED BY: C. Harris		H. Ngo		DESIGN BRANCH X		POST MILE		CONTRACT NO.: 12-0M4904	
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3650		PROJECT NUMBER & PHASE: 12120000901		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
						CONTRACT NO.: 12-0M4904		REVISION DATES		SHEET OF	
								12-18-15 01-20-16		X X	

FILE => c1212000090u1005.dgn

USERNAME => s127956 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:22

	M	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	N	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	O	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	P	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PERFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	S	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	T	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	W
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLLOL	WINGWALL LAYOUT LINE	X
X Sec	CROSS SECTION	
Xing	CROSSING	Y
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	112	244

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE



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

TO ACCOMPANY PLANS DATED 03-28-16

UNIT OF MEASUREMENT SYMBOLS:
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	113	244


 CERTIFIED ENGINEERING GEOLOGIST
 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 GEOLOGIST
 CHRIS A. RISDEN
 CERTIFIED ENGINEERING GEOLOGIST
 No. 2541
 Exp. 9-30-17
 STATE OF CALIFORNIA

CEMENTATION	
DESCRIPTION	CRITERIA
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE.
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE.
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE.

ABBREVIATION:

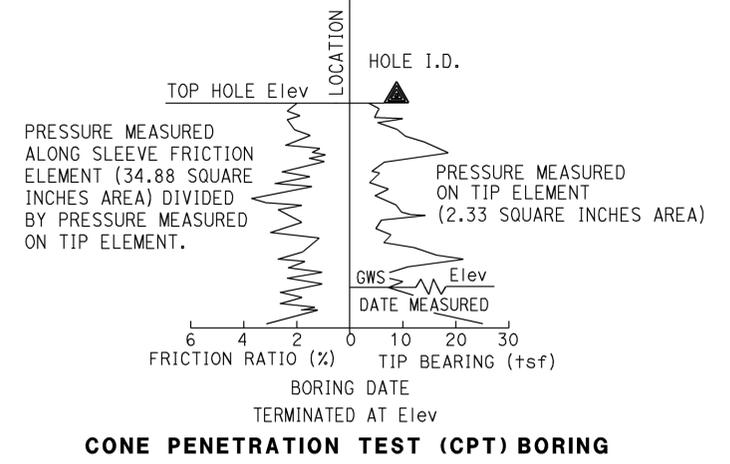
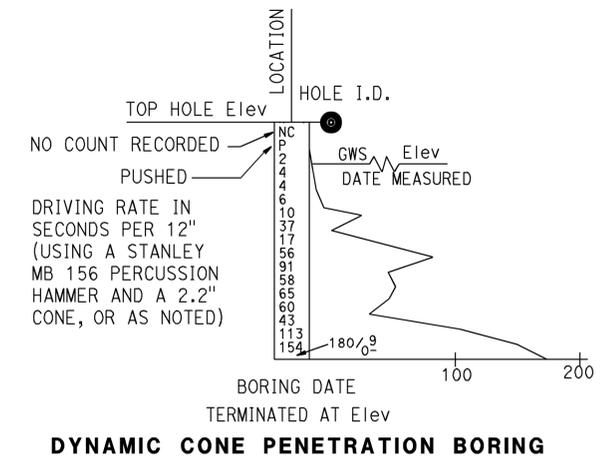
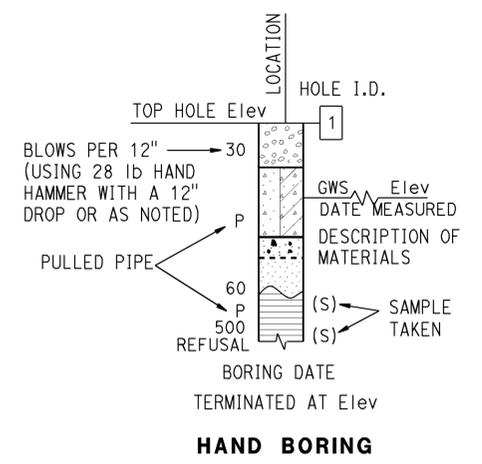
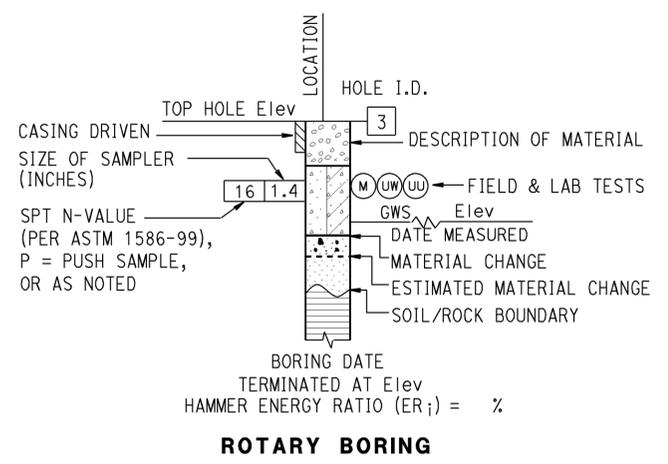
GWS = Ground Water Surface

TO ACCOMPANY PLANS DATED 03-28-16

BOREHOLE IDENTIFICATION		
SYMBOL	HOLE TYPE	DESCRIPTION
	A	AUGER BORING (HOLLOW OR SOLID STEM BUCKET)
	R	ROTARY DRILLED BORING (CONVENTIONAL)
	RW	ROTARY DRILLED WITH SELF-CASING WIRE-LINE
	RC	ROTARY CORE WITH CONTINUOUSLY-SAMPLED, SELF-CASING WIRE-LINE
	P	ROTARY PERCUSSION BORING (AIR)
	R	ROTARY DRILLED DIAMOND CORE
	RC	ROTARY DRILLED DIAMOND CORE, CONTINUOUSLY SAMPLED
	HD	HAND DRIVEN (1-INCH SOIL TUBE)
	HA	HAND AUGER
	D	DYNAMIC CONE PENETRATION BORING
	CPT	CONE PENETRATION TEST (ASTM D 5778)
	O	OTHER (NOTE ON LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
DESCRIPTION	SHEAR STRENGTH (tsf)	POCKET PENETROMETER MEASUREMENT, PP, (tsf)	TORVANE MEASUREMENT, TV, (tsf)	VANE SHEAR MEASUREMENT, VS, (tsf)
VERY SOFT	LESS THAN 0.12	LESS THAN 0.25	LESS THAN 0.12	LESS THAN 0.12
SOFT	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
MEDIUM STIFF	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
STIFF	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
VERY STIFF	1 - 2	2 - 4	1 - 2	1 - 2
HARD	GREATER THAN 2	GREATER THAN 4	GREATER THAN 2	GREATER THAN 2



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LEGEND - SOIL (SHEET 1 OF 2)
 NO SCALE

2010 REVISED STANDARD PLAN RSP A10F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	114	244

Chris A. Risden
 CERTIFIED ENGINEERING GEOLOGIST
 October 30, 2015
 PLANS APPROVAL DATE

REGISTERED GEOLOGIST
 CHRIS A. RISDEN
 CERTIFIED ENGINEERING GEOLOGIST
 No. 2541
 Exp. 9-30-17
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED **03-28-16**

GROUP SYMBOLS AND NAMES					
GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES
	GW WELL-GRADED GRAVEL WELL-GRADED GRAVEL WITH SAND		CL LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL SANDY LEAN CLAY SANDY LEAN CLAY WITH GRAVEL GRAVELLY LEAN CLAY GRAVELLY LEAN CLAY WITH SAND		GW-GM WELL-GRADED GRAVEL WITH SILT WELL-GRADED GRAVEL WITH SILT AND SAND
	GP POORLY-GRADED GRAVEL POORLY-GRADED GRAVEL WITH SAND				
	GW-GM WELL-GRADED GRAVEL WITH SILT WELL-GRADED GRAVEL WITH SILT AND SAND		CL-ML SILTY CLAY SILTY CLAY WITH SAND SILTY CLAY WITH GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY WITH GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY WITH SAND		GW-GC WELL-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) WELL-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)
	GW-GC WELL-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) WELL-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)				
	GP-GM POORLY-GRADED GRAVEL WITH SILT POORLY-GRADED GRAVEL WITH SILT AND SAND		ML SILT SILT WITH SAND SILT WITH GRAVEL SANDY SILT SANDY SILT WITH GRAVEL GRAVELLY SILT GRAVELLY SILT WITH SAND		GP-GC POORLY-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) POORLY-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)
	GP-GC POORLY-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) POORLY-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)				
	GM SILTY GRAVEL SILTY GRAVEL WITH SAND		OL ORGANIC LEAN CLAY ORGANIC LEAN CLAY WITH SAND ORGANIC LEAN CLAY WITH GRAVEL SANDY ORGANIC LEAN CLAY SANDY ORGANIC LEAN CLAY WITH GRAVEL GRAVELLY ORGANIC LEAN CLAY GRAVELLY ORGANIC LEAN CLAY WITH SAND		GC CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	GC CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND				
	GC-GM SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL WITH SAND		OL ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT WITH GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT WITH SAND		SW WELL-GRADED SAND WELL-GRADED SAND WITH GRAVEL
	SW WELL-GRADED SAND WELL-GRADED SAND WITH GRAVEL				
	SP POORLY-GRADED SAND POORLY-GRADED SAND WITH GRAVEL		CH FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL SANDY FAT CLAY SANDY FAT CLAY WITH GRAVEL GRAVELLY FAT CLAY GRAVELLY FAT CLAY WITH SAND		SW-SM WELL-GRADED SAND WITH SILT WELL-GRADED SAND WITH SILT AND GRAVEL
	SW-SM WELL-GRADED SAND WITH SILT WELL-GRADED SAND WITH SILT AND GRAVEL				
	SW-SC WELL-GRADED SAND WITH CLAY (OR SILTY CLAY) WELL-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		MH ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL SANDY ELASTIC SILT SANDY ELASTIC SILT WITH GRAVEL GRAVELLY ELASTIC SILT GRAVELLY ELASTIC SILT WITH SAND		SP-SM POORLY-GRADED SAND WITH SILT POORLY-GRADED SAND WITH SILT AND GRAVEL
	SP-SM POORLY-GRADED SAND WITH SILT POORLY-GRADED SAND WITH SILT AND GRAVEL				
	SP-SC POORLY-GRADED SAND WITH CLAY (OR SILTY CLAY) POORLY-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		OH ORGANIC FAT CLAY ORGANIC FAT CLAY WITH SAND ORGANIC FAT CLAY WITH GRAVEL SANDY ORGANIC FAT CLAY SANDY ORGANIC FAT CLAY WITH GRAVEL GRAVELLY ORGANIC FAT CLAY GRAVELLY ORGANIC FAT CLAY WITH SAND		SM SILTY SAND SILTY SAND WITH GRAVEL
	SM SILTY SAND SILTY SAND WITH GRAVEL				
	SC CLAYEY SAND CLAYEY SAND WITH GRAVEL		OH ORGANIC ELASTIC SILT ORGANIC ELASTIC SILT WITH SAND ORGANIC ELASTIC SILT WITH GRAVEL SANDY ORGANIC ELASTIC SILT SANDY ORGANIC ELASTIC SILT WITH GRAVEL GRAVELLY ORGANIC ELASTIC SILT GRAVELLY ORGANIC ELASTIC SILT WITH SAND		SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND WITH GRAVEL
	SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND WITH GRAVEL				
	PT PEAT		OL/OH ORGANIC SOIL ORGANIC SOIL WITH SAND ORGANIC SOIL WITH GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL WITH GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL WITH SAND		COBBLES COBBLES AND BOULDERS BOULDERS
	COBBLES COBBLES AND BOULDERS BOULDERS				

FIELD AND LABORATORY TESTING	
(C)	CONSOLIDATION (ASTM D2435)
(CL)	COLLAPSE POTENTIAL (ASTM D4546)
(CP)	COMPACTION CURVE (CTM 216)
(CR)	CORROSIVITY TESTING (CTM 643, CTM 422, CTM 417)
(CU)	CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
(DS)	DIRECT SHEAR (ASTM D3080)
(EI)	EXPANSION INDEX (ASTM D4829)
(M)	MOISTURE CONTENT (ASTM D2216)
(OC)	ORGANIC CONTENT-% (ASTM D2974)
(P)	PERMEABILITY (CTM 220)
(PA)	PARTICLE SIZE ANALYSIS (ASTM D422)
(PI)	PLASTICITY INDEX (AASHTO T 90) LIQUID LIMIT (AASHTO T 89)
(PL)	POINT LOAD INDEX (ASTM D5731)
(PM)	PRESSURE METER
(R)	R-VALUE (CTM 301)
(SE)	SAND EQUIVALENT (CTM 217)
(SG)	SPECIFIC GRAVITY (AASHTO T 100)
(SL)	SHRINKAGE LIMIT (ASTM D4943)
(SW)	SWELL POTENTIAL (ASTM D4546)
(UC)	UNCONFINED COMPRESSION-SOIL (ASTM D2166) UNCONFINED COMPRESSION-ROCK (ASTM D7012 - METHOD C)
(UU)	UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
(UW)	UNIT WEIGHT (ASTM D7263 - METHOD B)

APPARENT DENSITY OF COHESIONLESS SOILS	
DESCRIPTION	SPT N ₆₀ (BLOWS / 12 INCHES)
VERY LOOSE	0 - 5
LOOSE	5 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	GREATER THAN 50

MOISTURE	
DESCRIPTION	CRITERIA
DRY	NO DISCERNABLE MOISTURE
MOIST	MOISTURE PRESENT, BUT NO FREE WATER
WET	VISIBLE FREE WATER

PERCENT OR PROPORTION OF SOILS	
DESCRIPTION	CRITERIA
TRACE	PARTICLES ARE PRESENT BUT ESTIMATED TO BE LESS THAN 5%
FEW	5% - 10%
LITTLE	15% - 25%
SOME	30% - 45%
MOSTLY	50% - 100%

PARTICLE SIZE		
DESCRIPTION	SIZE	
BOULDER	GREATER THAN 12"	
COBBLE	3" - 12"	
GRAVEL	COARSE	3/4" - 3"
	FINE	1/5" - 3/4"
SAND	COARSE	1/16" - 1/5"
	MEDIUM	1/64" - 1/16"
	FINE	1/300" - 1/64"
SILT AND CLAY	LESS THAN 1/300"	

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LEGEND - SOIL
(SHEET 2 OF 2)
 NO SCALE

RSP A10G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10G DATED MAY 20, 2011 - PAGE 7 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10G

2010 REVISED STANDARD PLAN RSP A10G

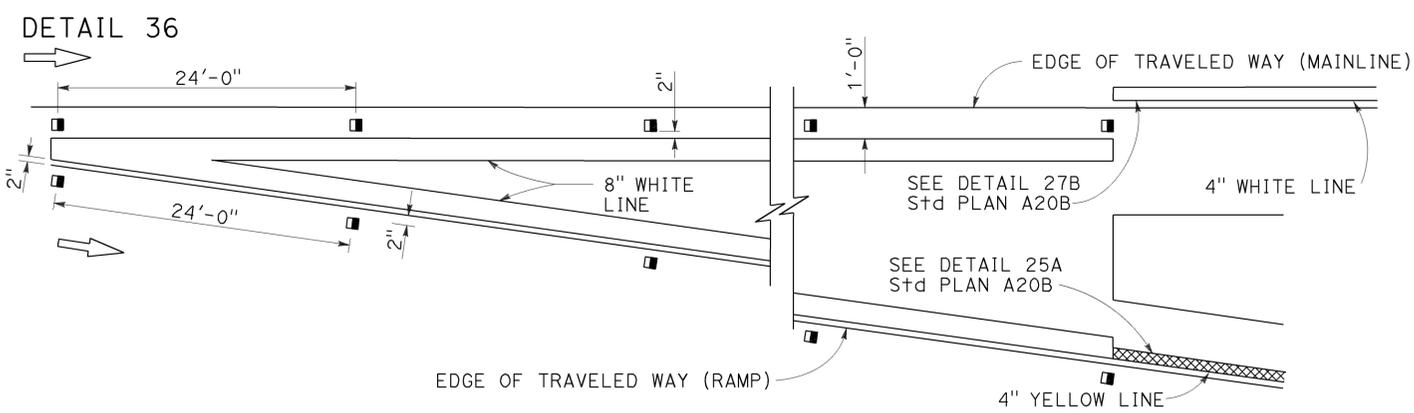
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	115	244

REGISTERED CIVIL ENGINEER
 Roberta L. McLaughlin
 No. C40375
 Exp. 3-31-15
 CIVIL
 STATE OF CALIFORNIA

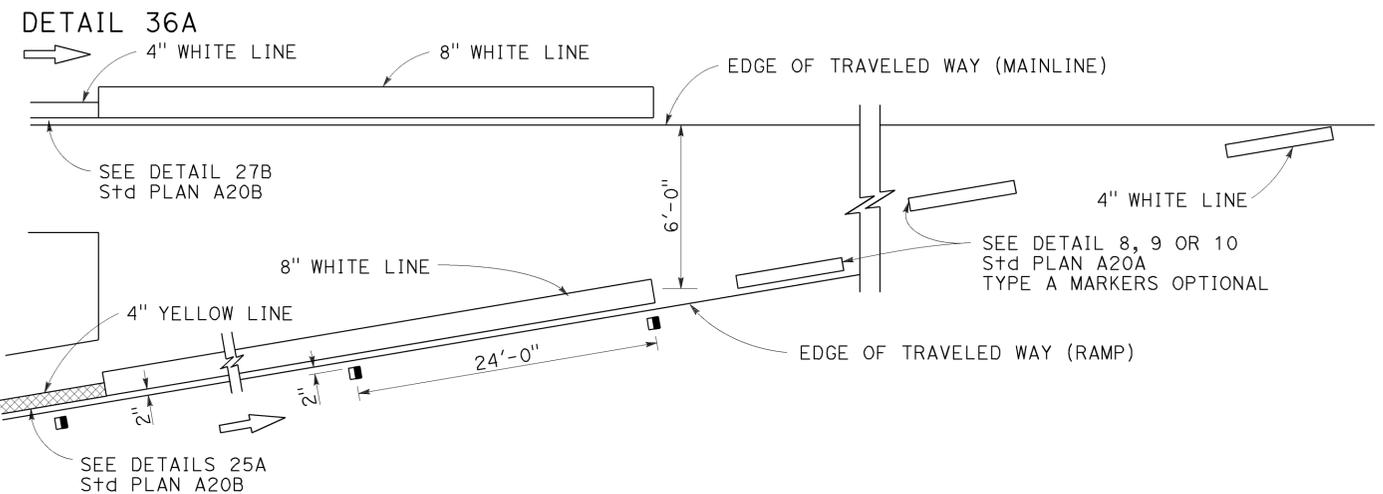
July 19, 2013
 PLANS APPROVAL DATE

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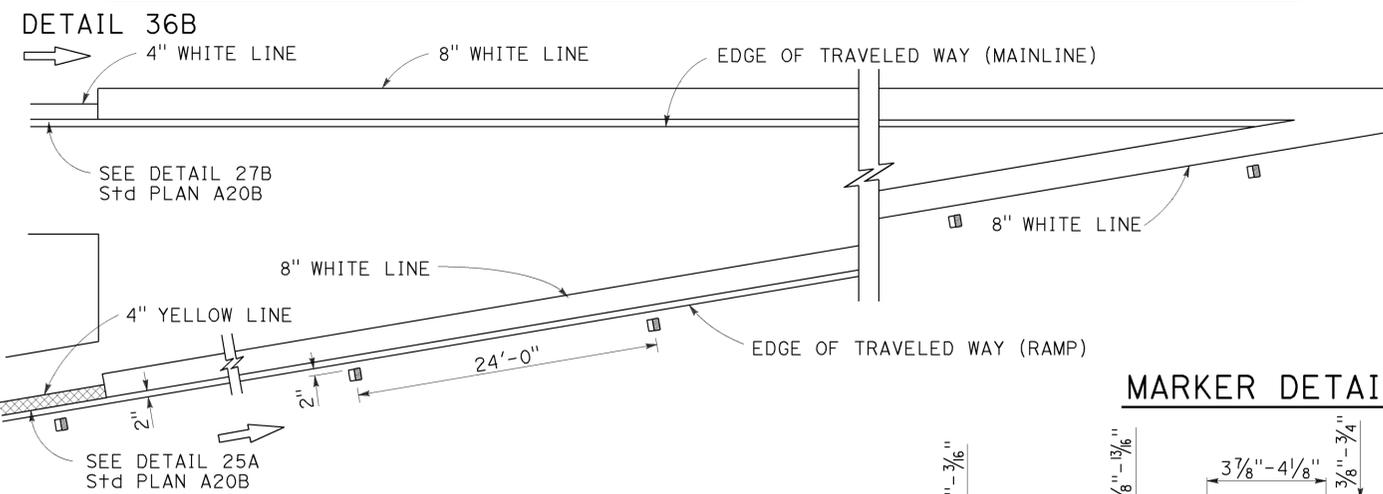
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



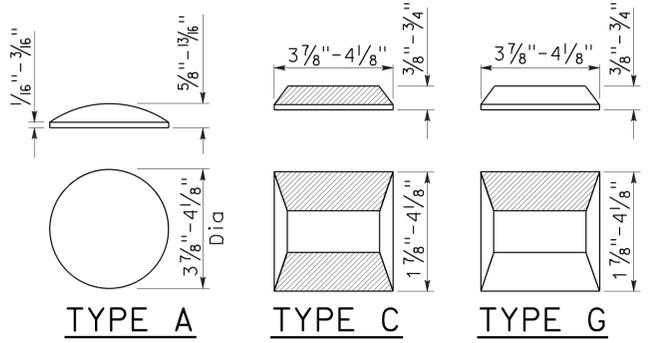
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT



MARKER DETAILS

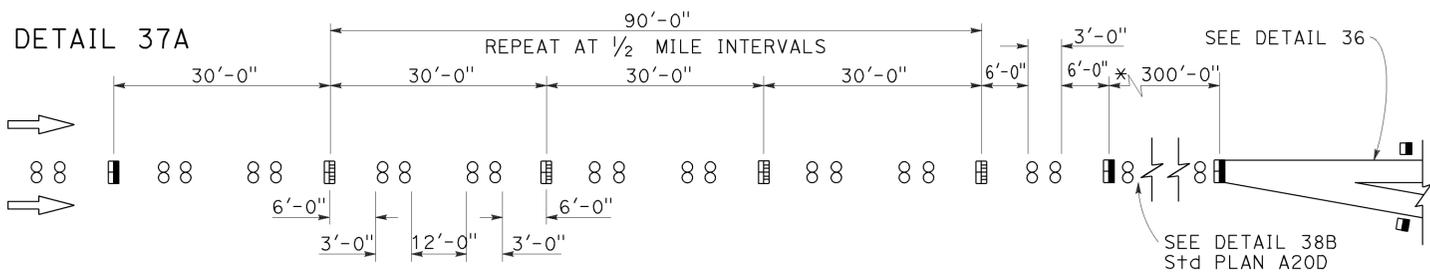
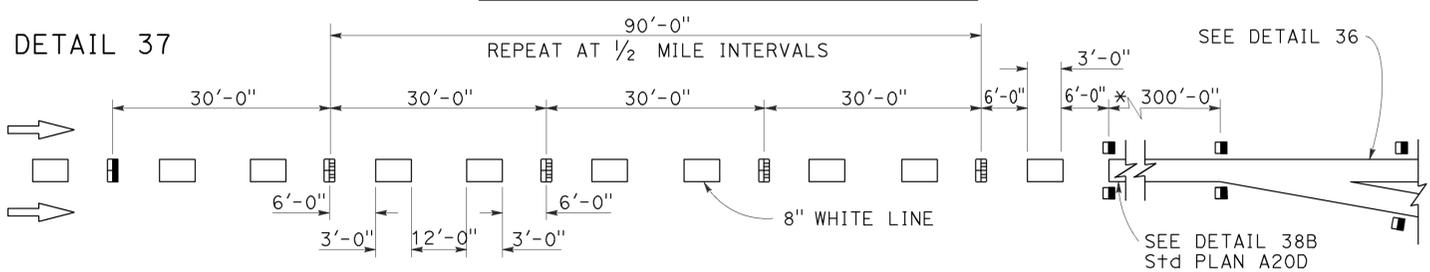
LEGEND:

- MARKERS
- TYPE A WHITE NON-REFLECTIVE
 - ◻ TYPE C RED-CLEAR RETROREFLECTIVE
 - TYPE G ONE-WAY CLEAR RETROREFLECTIVE



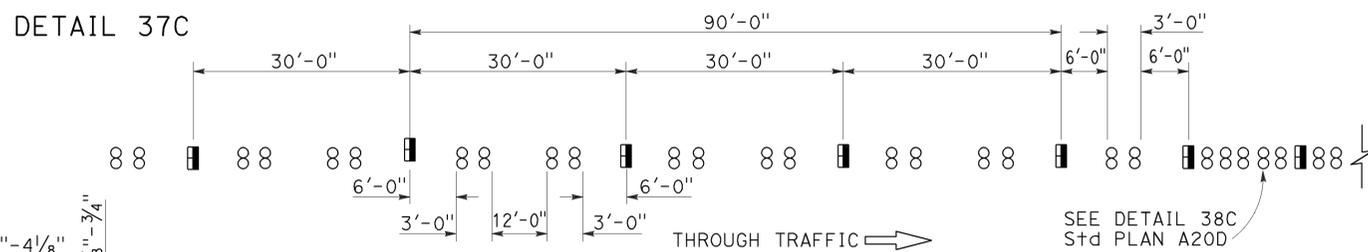
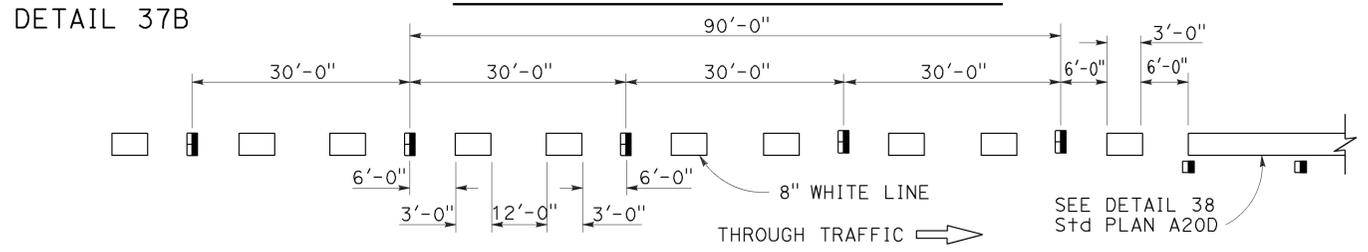
RETROREFLECTIVE FACE

LANE DROP AT EXIT RAMP



* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

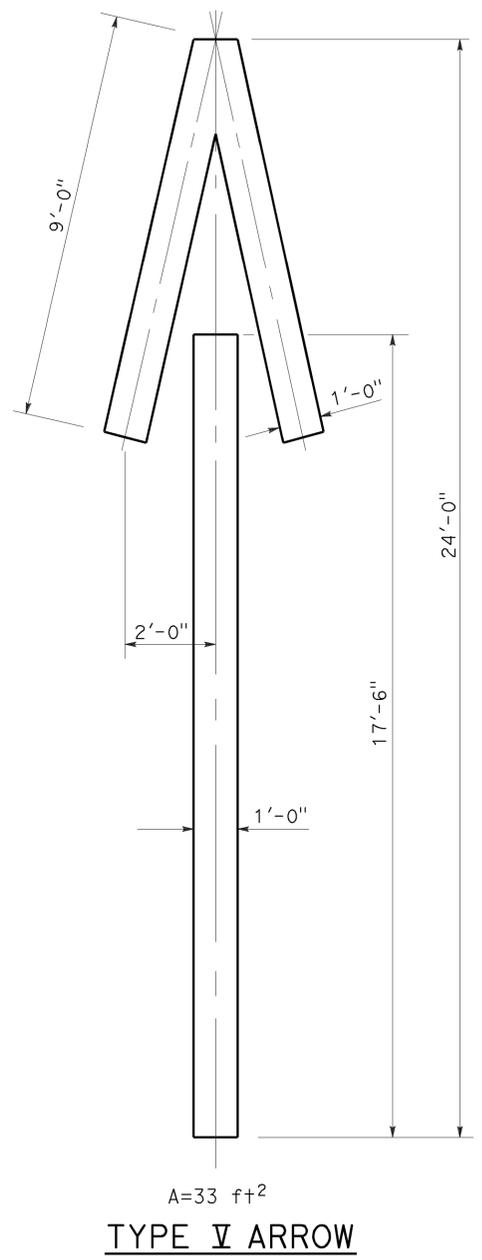
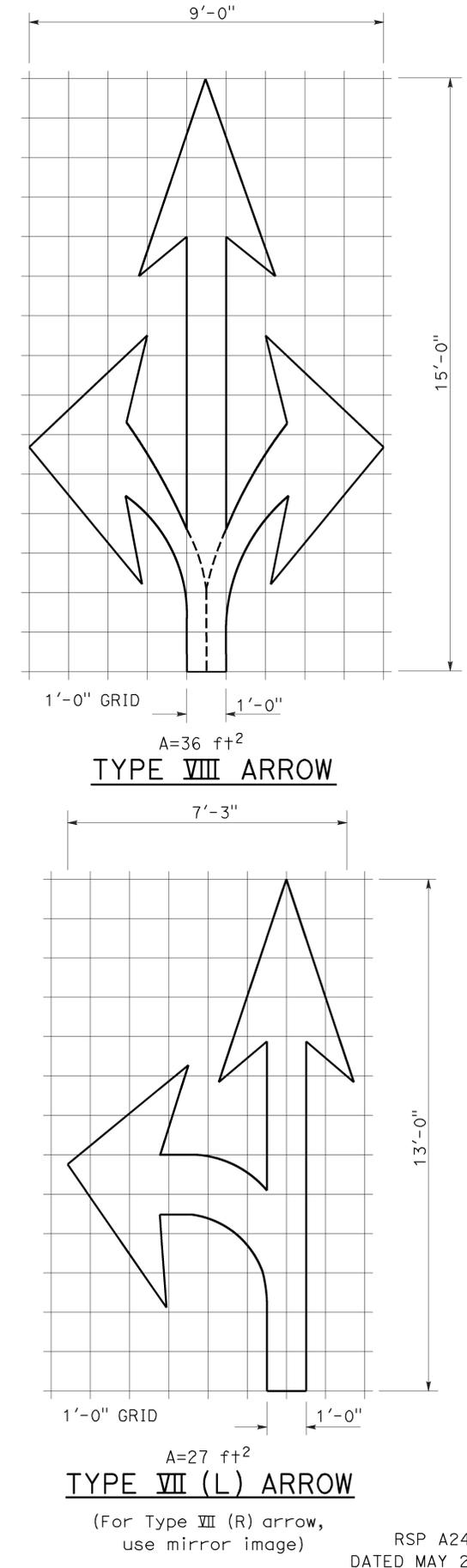
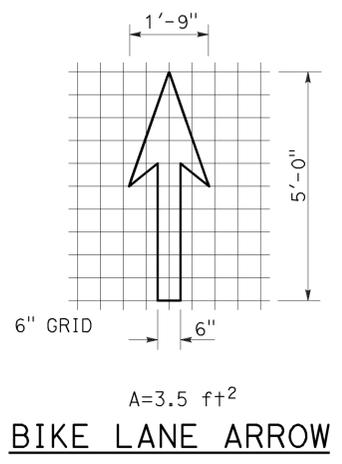
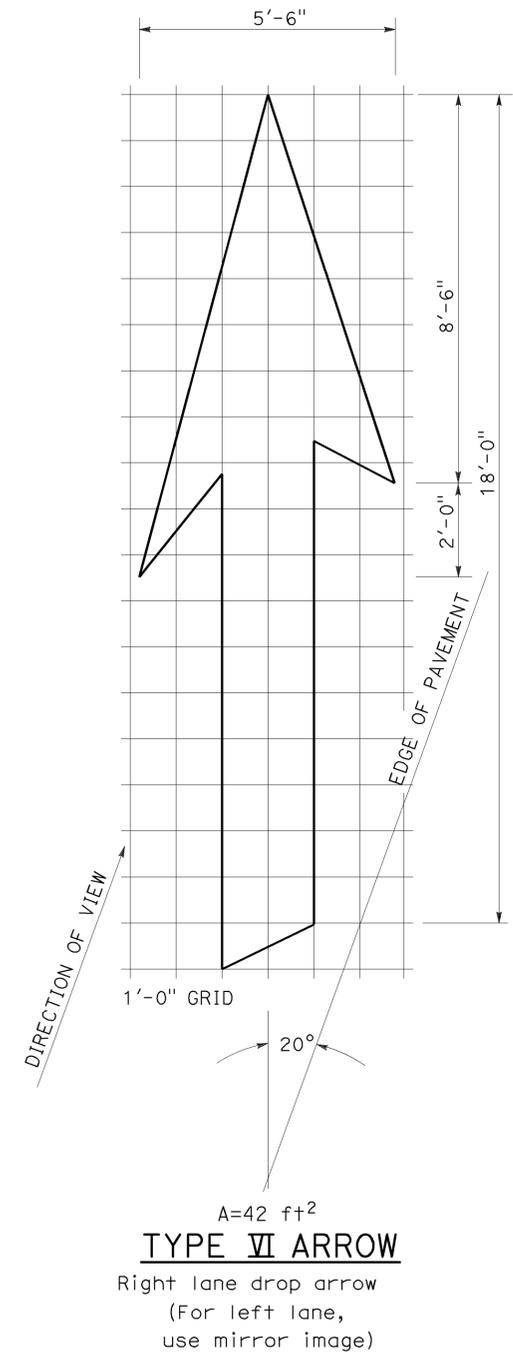
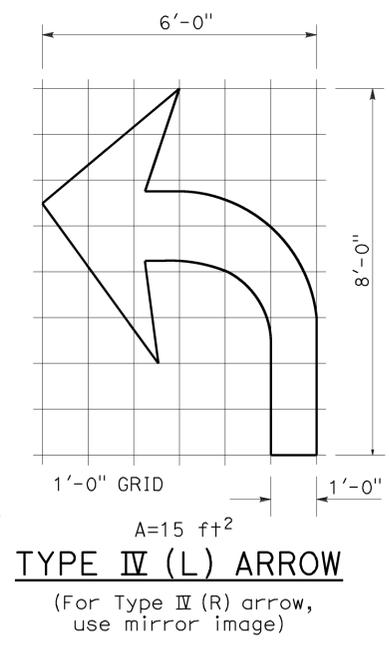
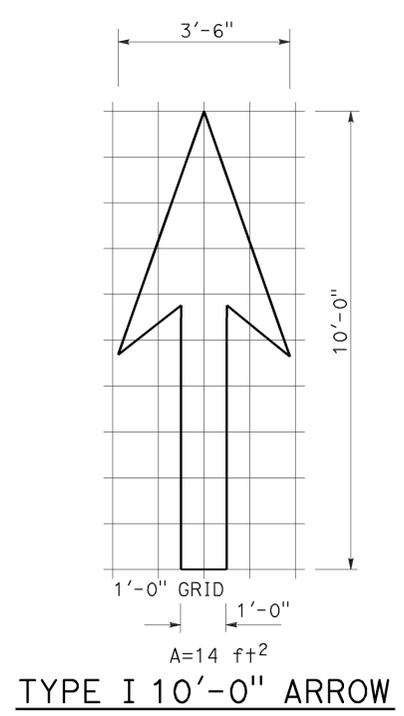
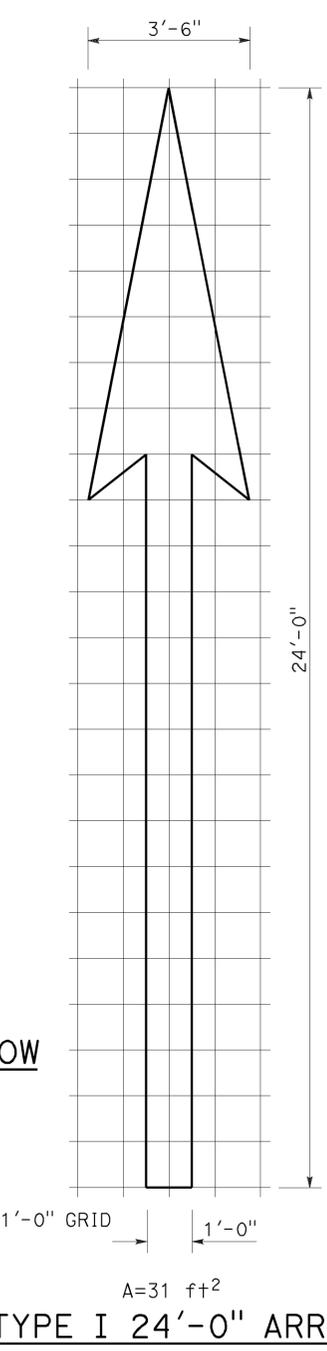
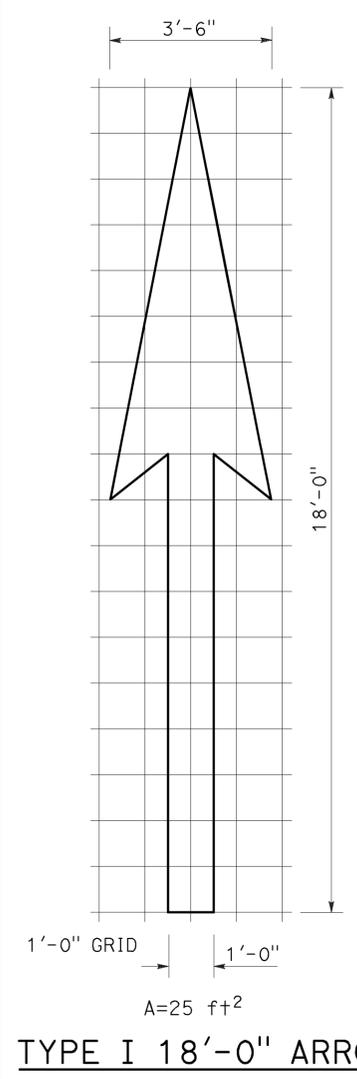
NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

TO ACCOMPANY PLANS DATED **03-28-16**

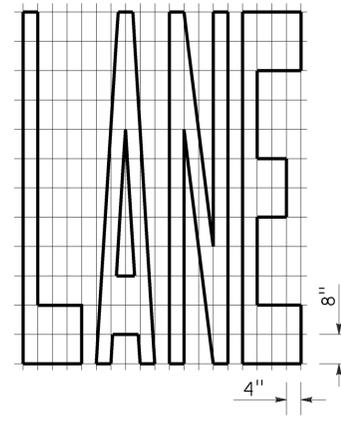


NOTE:
Minor variations in dimensions may be accepted by the Engineer.

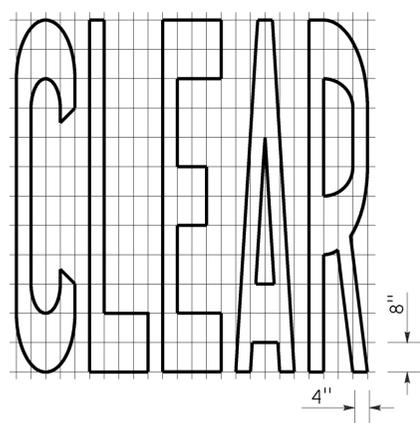
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

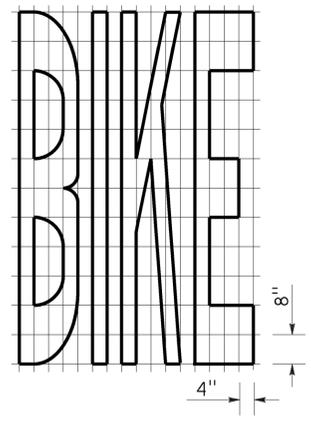
TO ACCOMPANY PLANS DATED 03-28-16



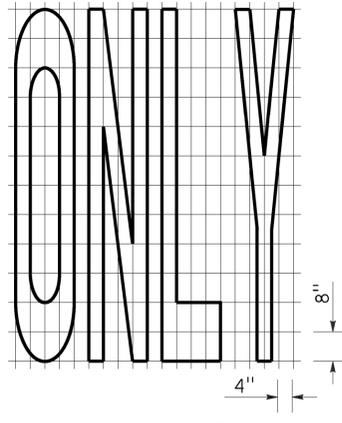
A=24 ft²



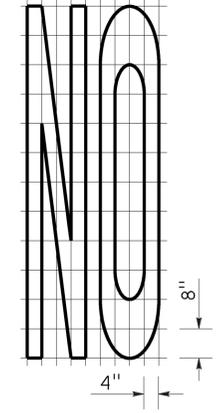
A=27 ft²



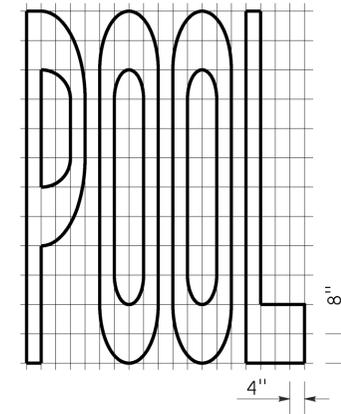
A=21 ft²



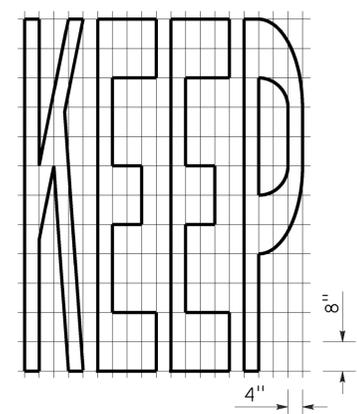
A=22 ft²



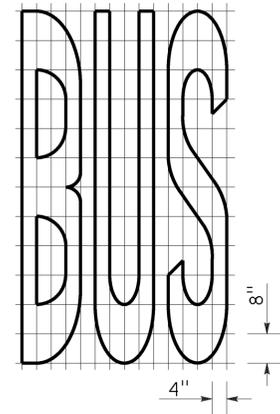
A=14 ft²



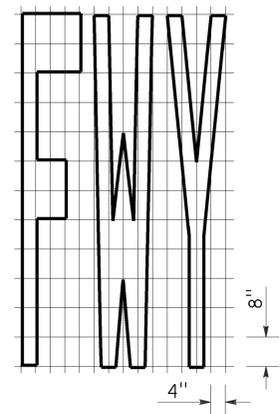
A=23 ft²



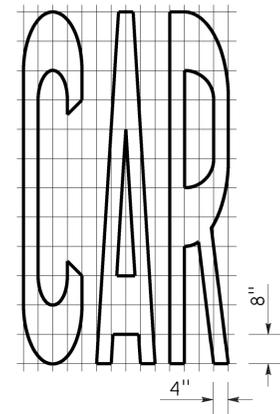
A=24 ft²



A=20 ft²

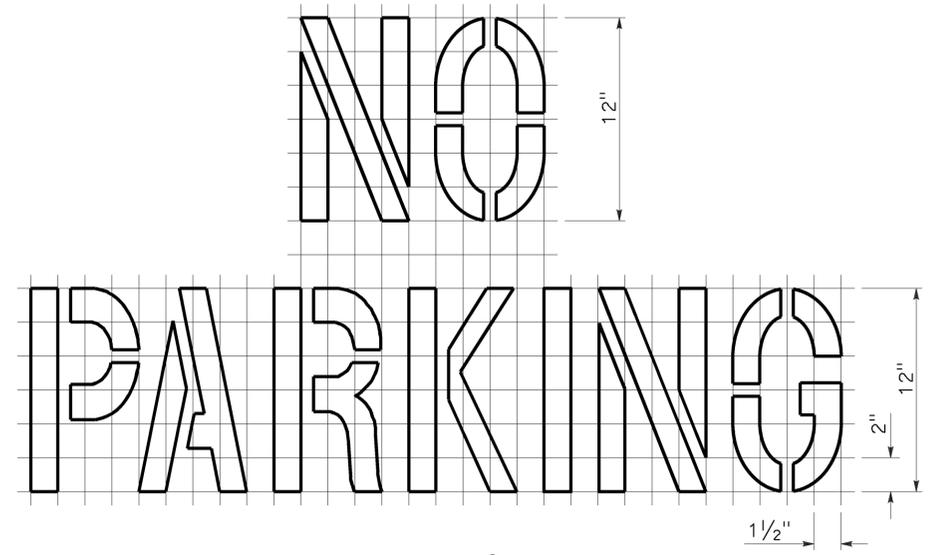


A=16 ft²

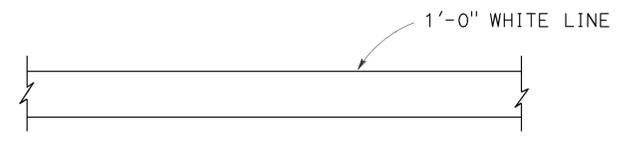


A=17 ft²

WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
WORDS, LIMIT AND YIELD LINES**
NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

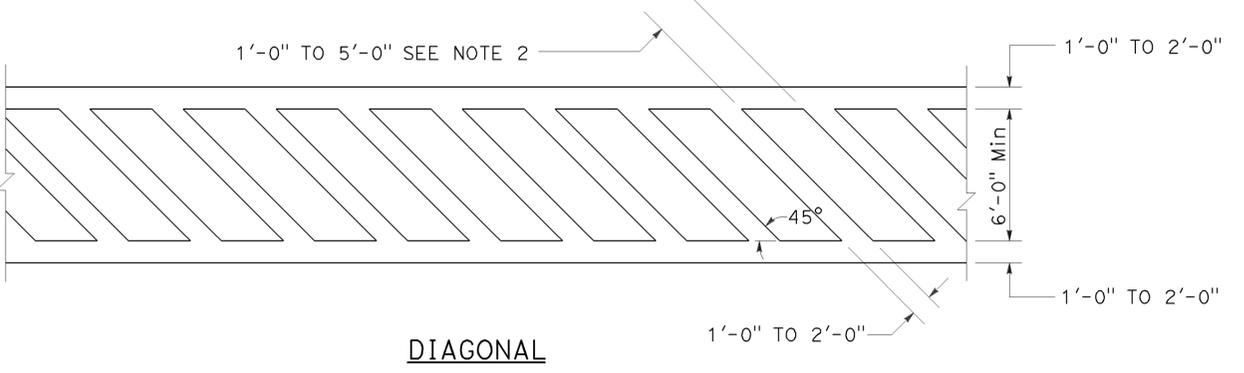
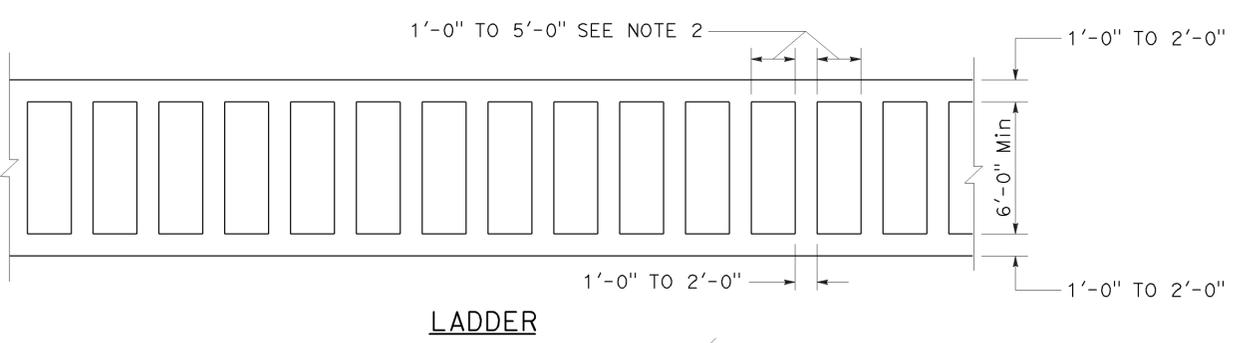
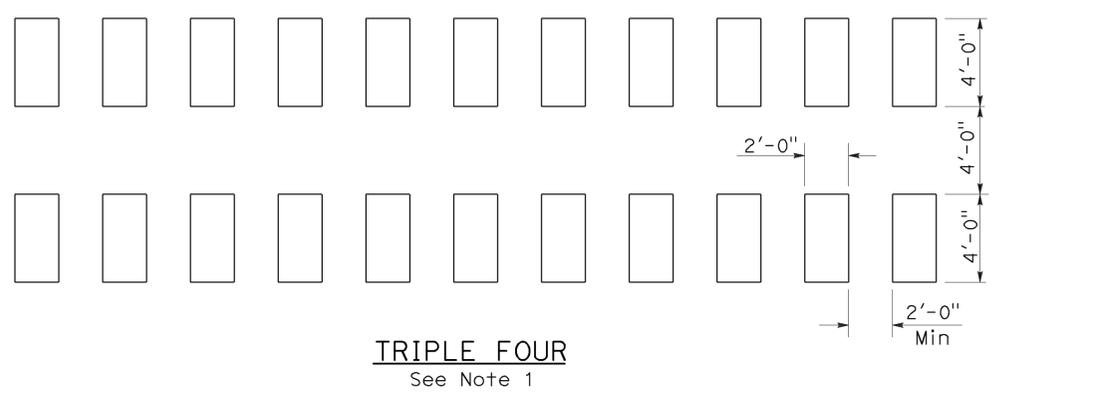
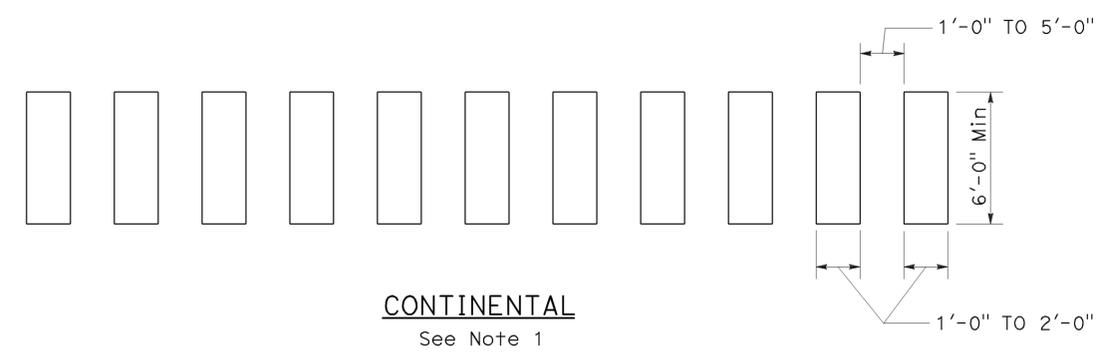
2010 REVISED STANDARD PLAN RSP A24E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	119	244

Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE

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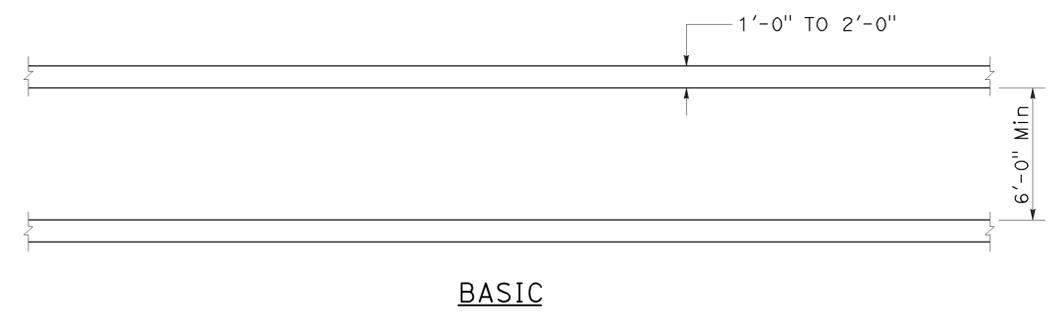
TO ACCOMPANY PLANS DATED 03-28-16



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



BASIC

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
CROSSWALKS**

NO SCALE
RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A24F

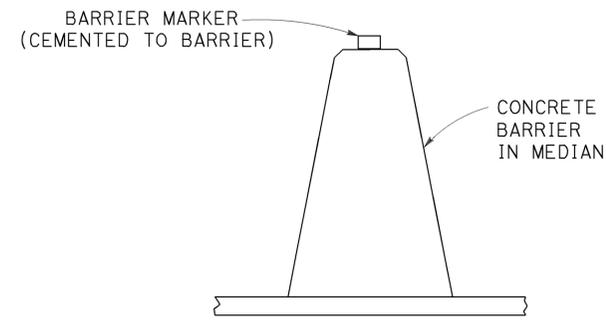
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	120	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

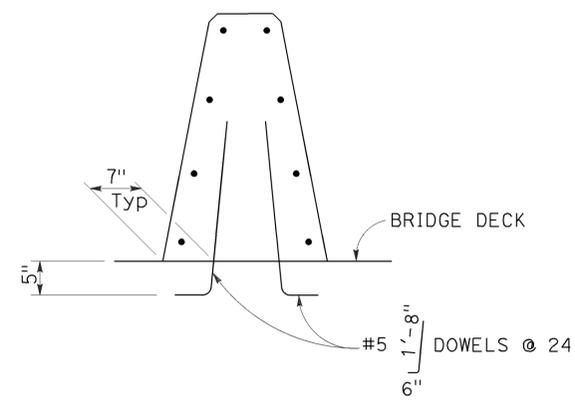
October 30, 2015
PLANS APPROVAL DATE

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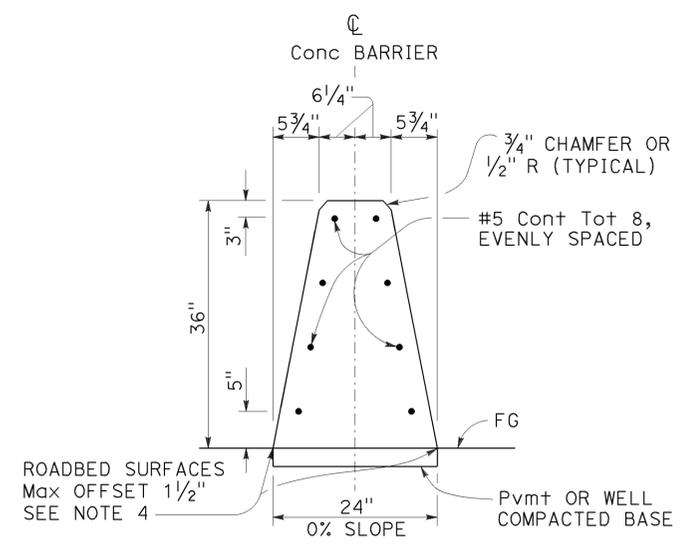
TO ACCOMPANY PLANS DATED **03-28-16**



CONCRETE BARRIER TYPE 60 DELINEATION
See Note 5



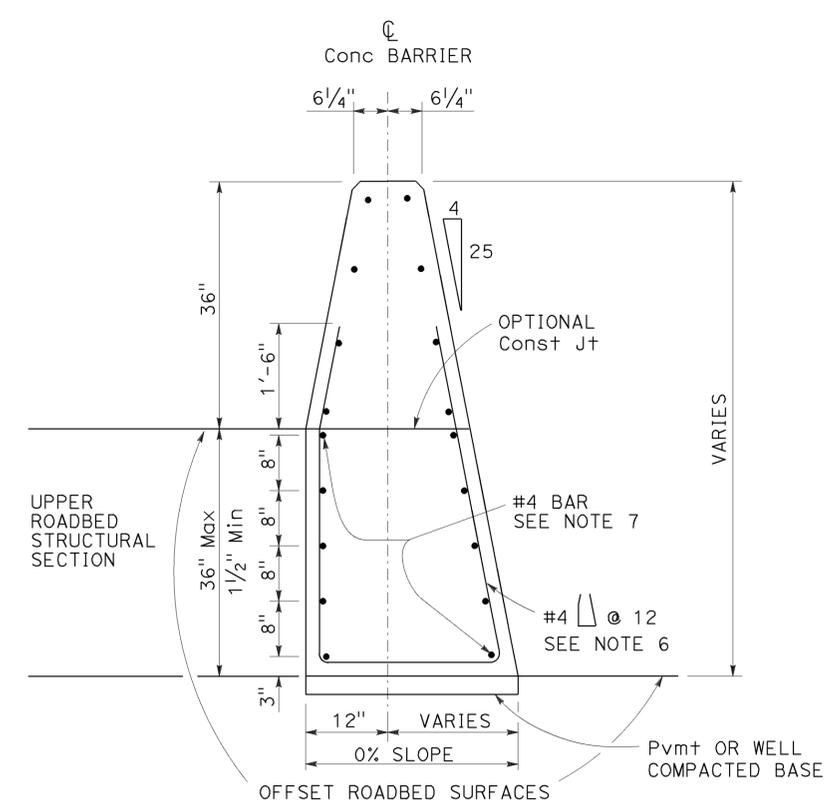
CONCRETE BARRIER TYPE 60A
Details similar to Type 60 except as noted.



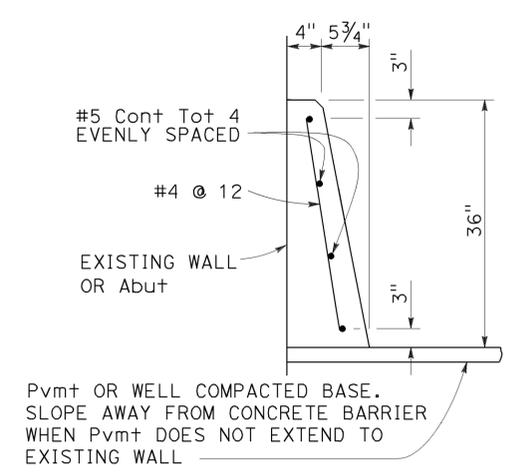
CONCRETE BARRIER TYPE 60

NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Revised Standard Plan RSP A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where roadbed offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- See Project Plans for barrier delineation locations.
- Reinforcing stirrup not required for roadbed offsets less than 1'-0".
- For roadbed surfaces offset greater than 1 1/2" and less than or equal to 3", no reinforcement required. For roadbed surfaces offset greater than 3" and less than or equal to 8", use two #4 Reinf at 3" above the lower roadbed surface. For roadbed surfaces offset greater than 8" and less than or equal to 12", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at 8" above the lower roadbed surface. For roadbed surfaces offset greater than 12" and less than or equal to 36", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at every 8" increment vertical spacing above the first two #4 Reinf.



CONCRETE BARRIER TYPE 60C
Details similar to Type 60 except as noted.
Use concrete barrier end anchor when necessary.
36" roadbed surfaces offset shown.



CONCRETE BARRIER TYPE 60D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60
NO SCALE

RSP A76A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A76A DATED MAY 20, 2011 - PAGE 34 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A76A

2010 REVISED STANDARD PLAN RSP A76A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	121	244

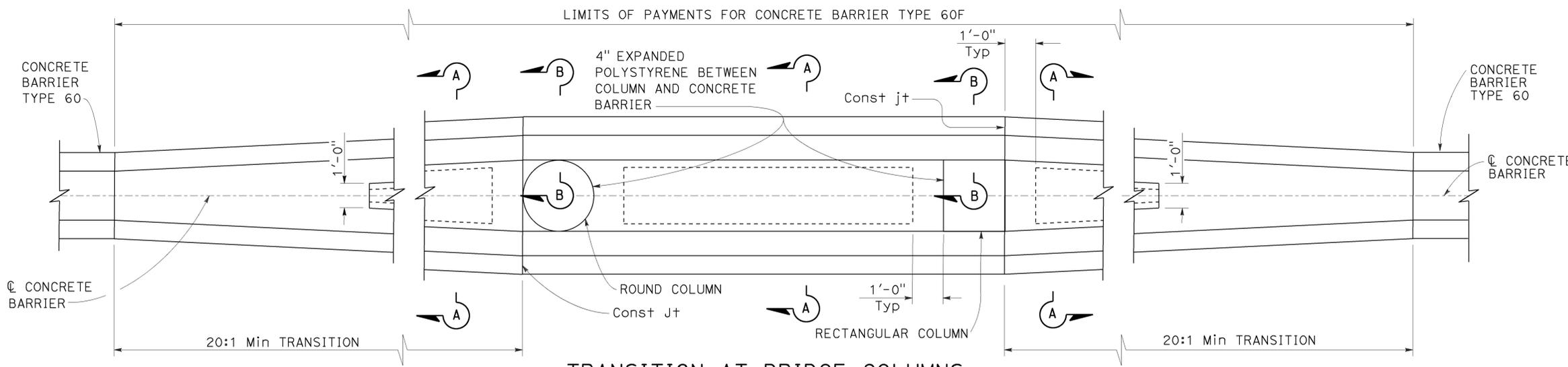
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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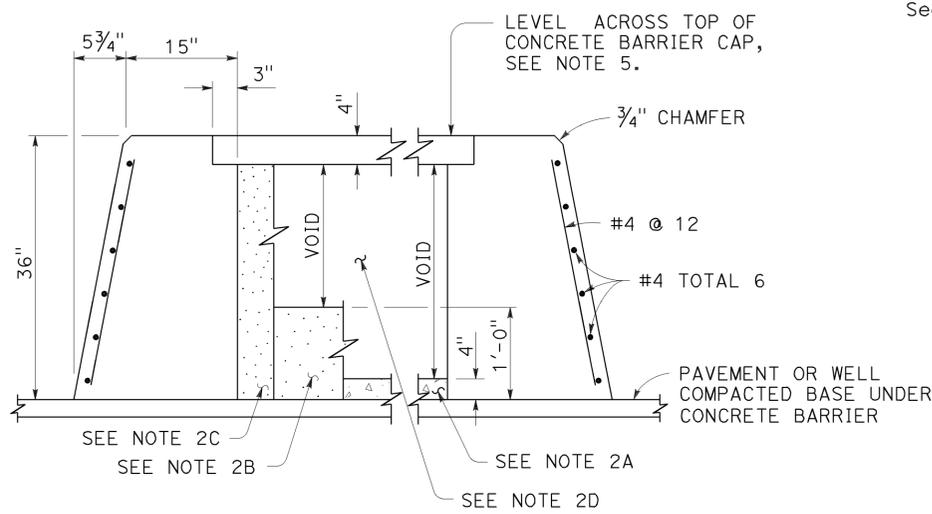
TO ACCOMPANY PLANS DATED 03-28-16

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

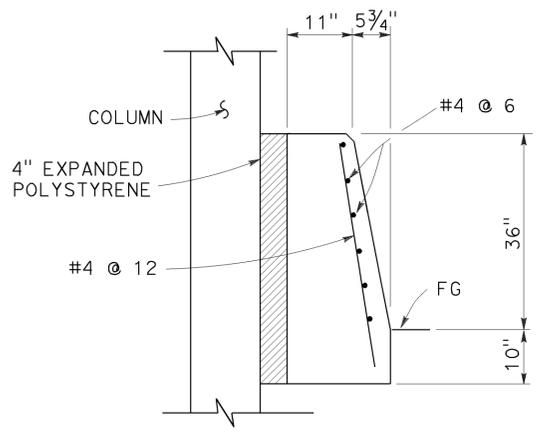


TRANSITION AT BRIDGE COLUMNS

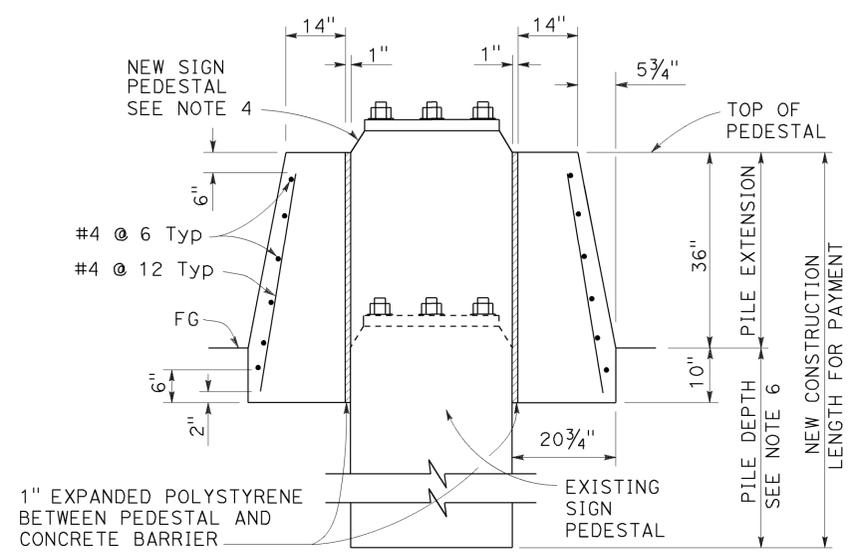
Concrete Barrier Type 60F
See Note 7



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

- See Standard Plan A76A for Concrete Barrier Type 60.
- Contractor options for fill between concrete barrier walls:
 - Place 4" PCC at base between concrete barrier walls.
 - Place 1'-0" of granular material at base between walls.
 - Place granular material from base to bottom of 4" cap.
 - Monolithic concrete with foam blockouts is not permitted.
- Reinforcing steel shall extend continuous through construction joints.
- See "Overhead Sign" plans for sign pedestal elevations on new construction.
- Adjust height of concrete barrier wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.
- See Overhead Signs Standard Plan Pile Foundation Tables.
- All locations with limited shoulder width available for barrier, see Standard Plan A76F for use of Concrete Barrier Type 60GE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 60F

NO SCALE

RSP A76C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A76C
DATED MAY 20, 2011 - PAGE 36 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A76C

2010 REVISED STANDARD PLAN RSP A76C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	122	244

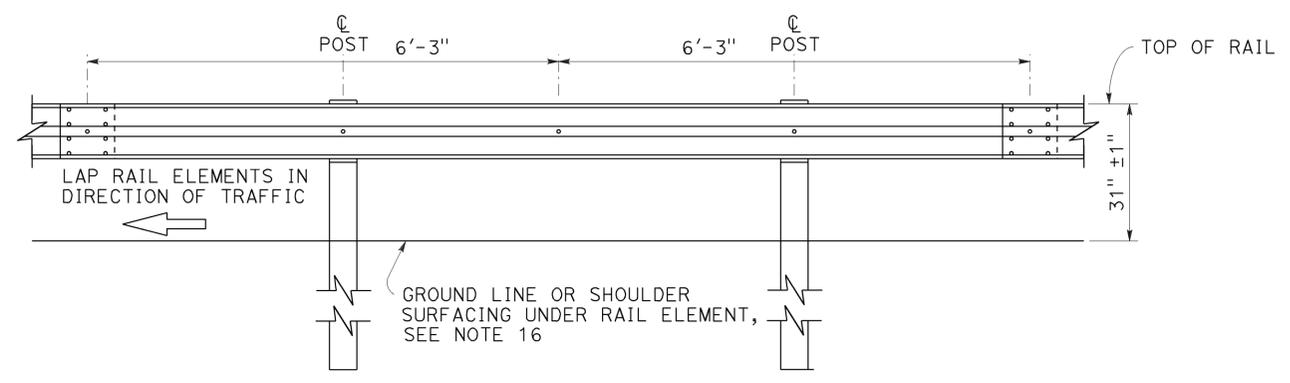
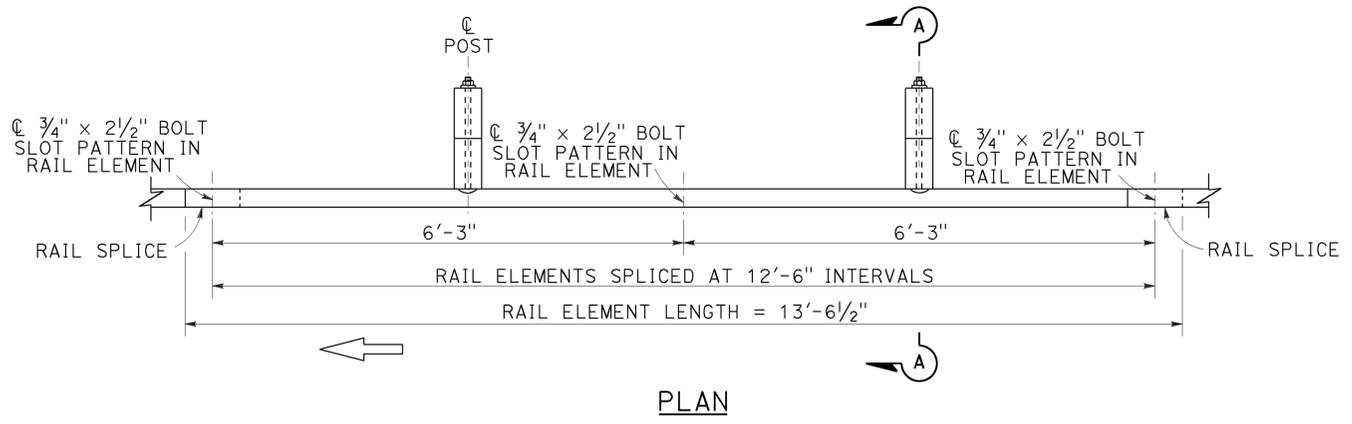
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

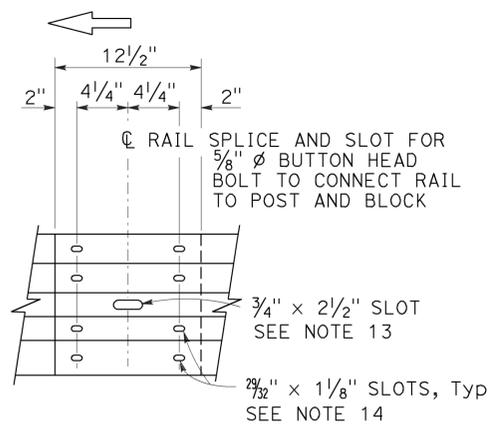
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 03-28-16



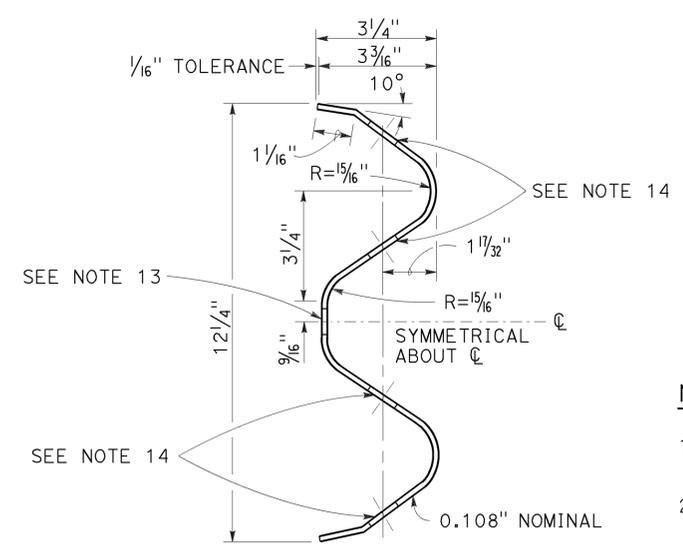
ELEVATION

MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS

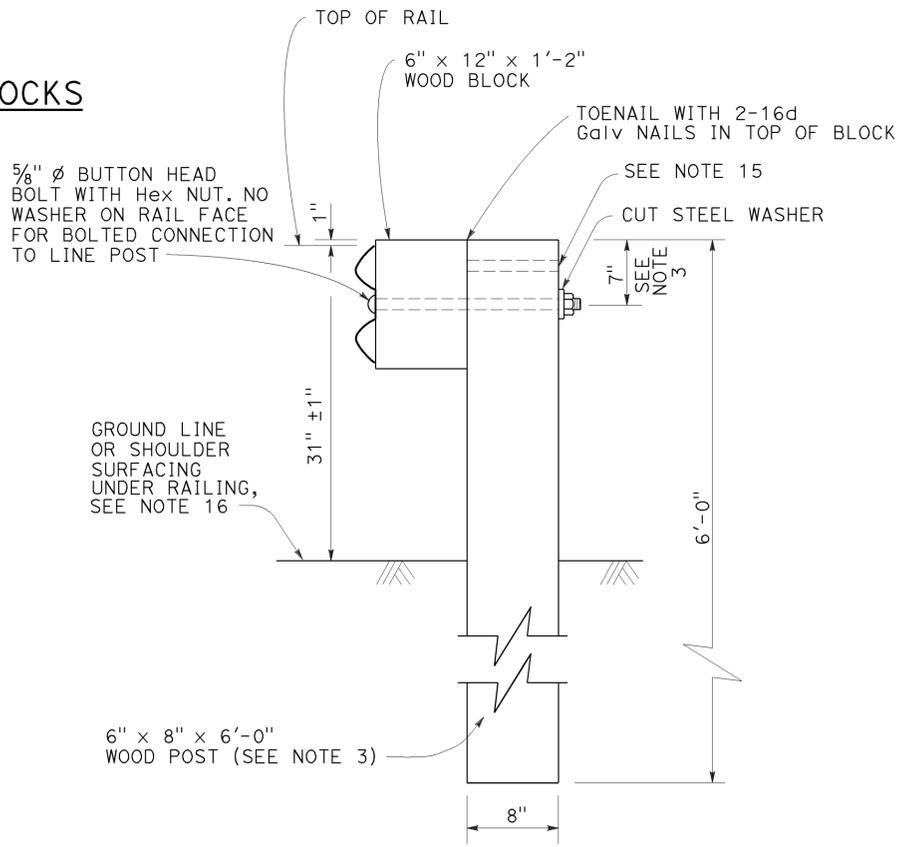


ELEVATION
RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{7}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



SECTION A-A
TYPICAL WOOD LINE POST INSTALLATION

See Note 4

NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MSG connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

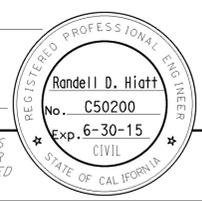
MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH WOOD BLOCK)

NO SCALE

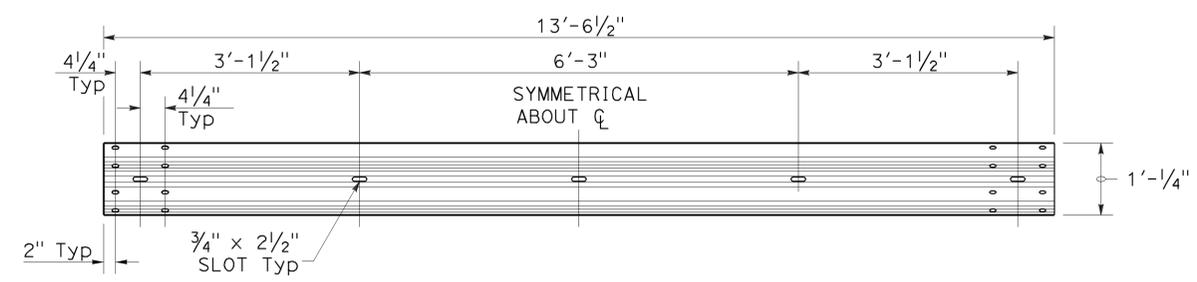
RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1



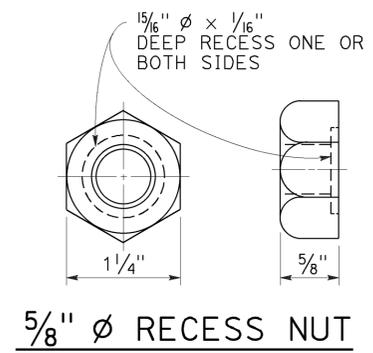
TO ACCOMPANY PLANS DATED 03-28-16



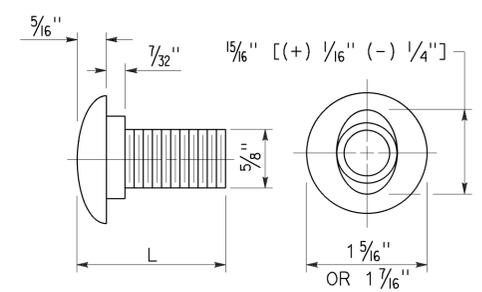
TYPICAL RAIL ELEMENT

NOTE:

1. Slotted holes for splice bolts to overlap ends of rail element.



5/8" Ø RECESS NUT

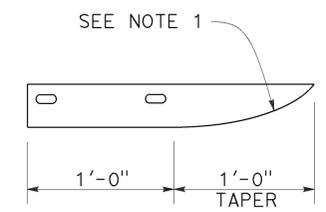


5/8" Ø BUTTON HEAD BOLT

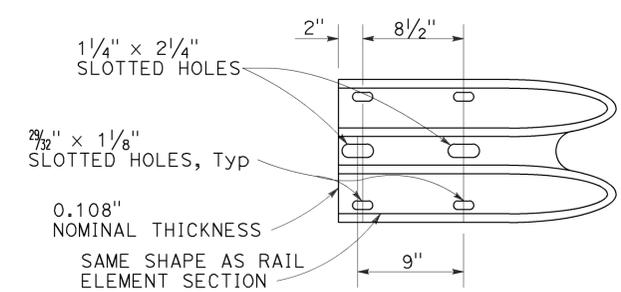
BUTTON HEAD BOLT

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.



PLAN



**ELEVATION
END CAP
(TYPE A)**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

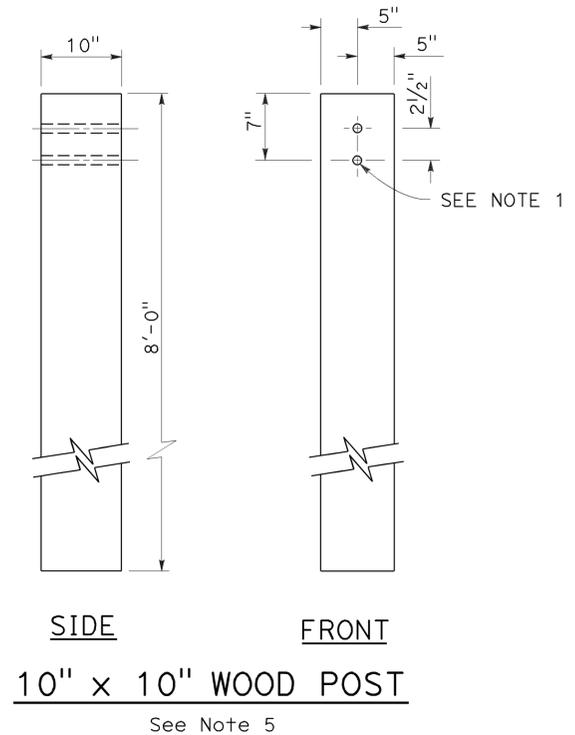
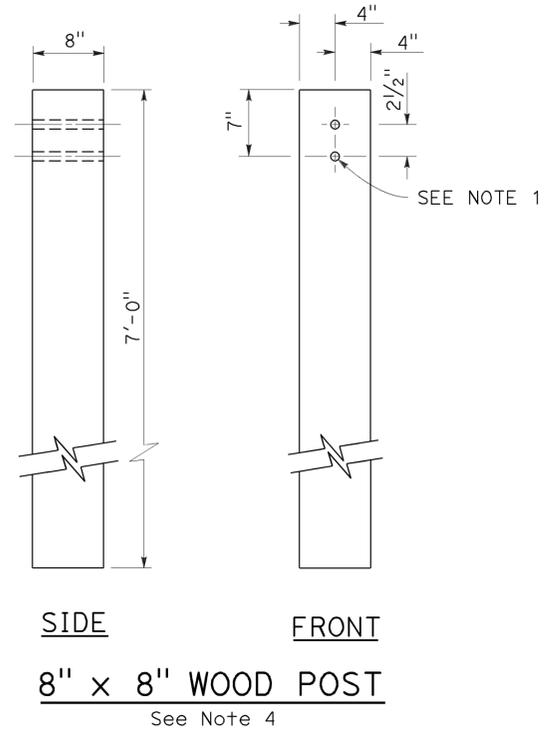
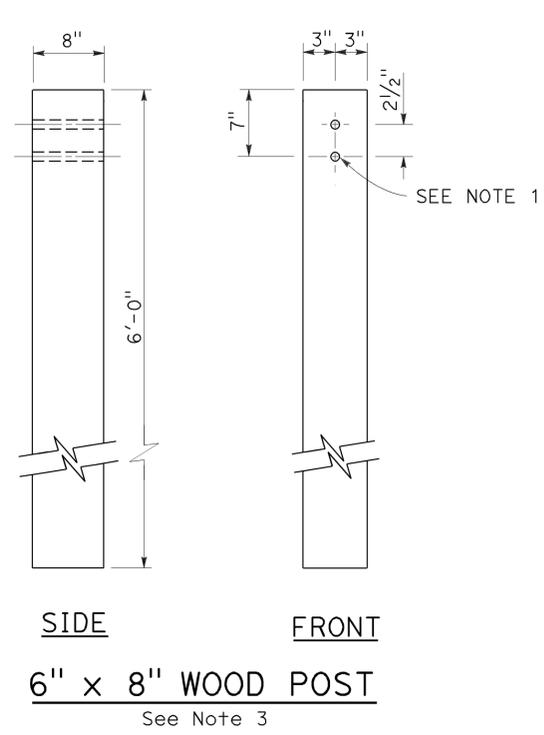
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	124	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

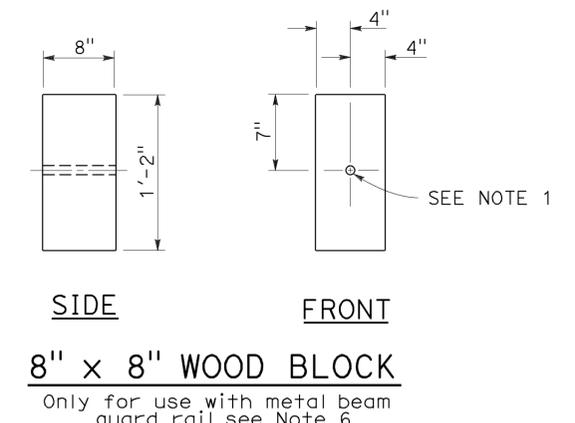
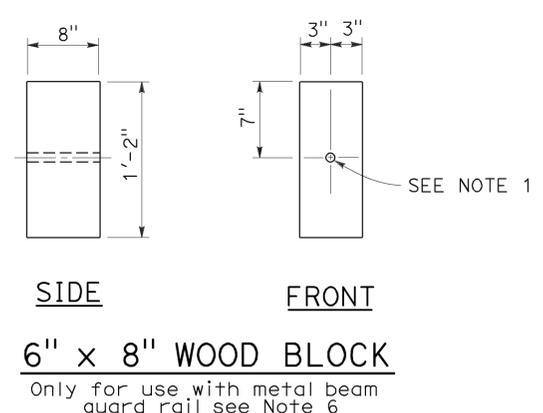
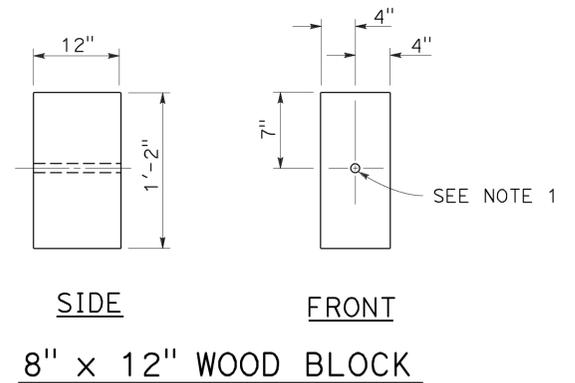
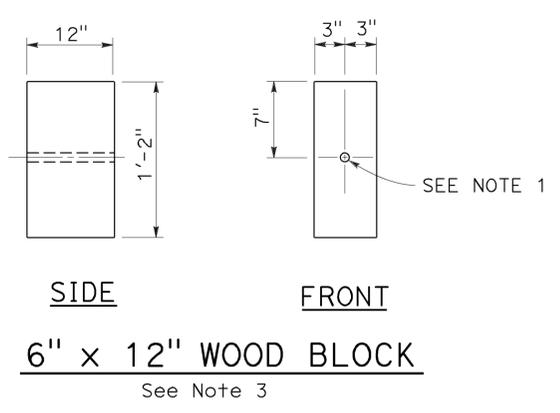
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TO ACCOMPANY PLANS DATED 03-28-16



NOTES:

1. All holes in wood posts and blocks shall be $\frac{3}{4}$ " Dia \pm $\frac{1}{16}$ ".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
WOOD POST AND
WOOD BLOCK DETAILS**

NO SCALE

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N1

2010 REVISED STANDARD PLAN RSP A77N1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	125	244

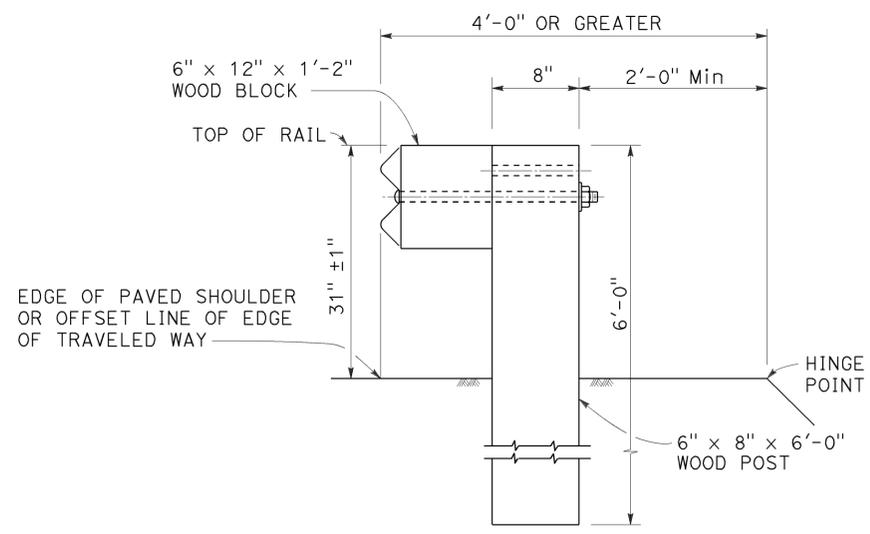
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

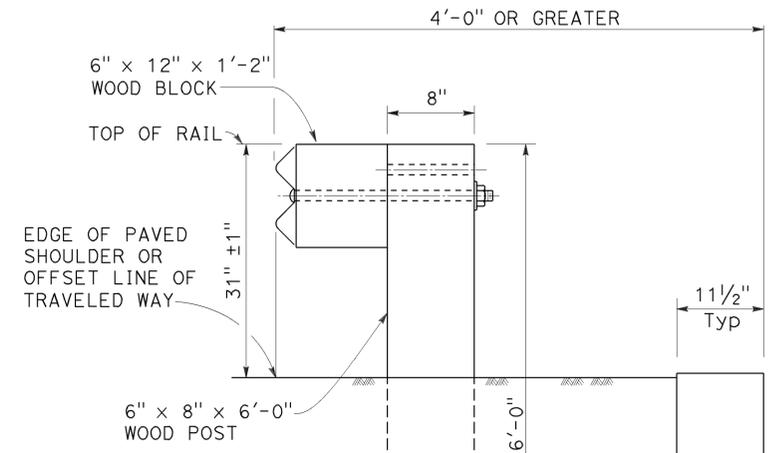
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Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

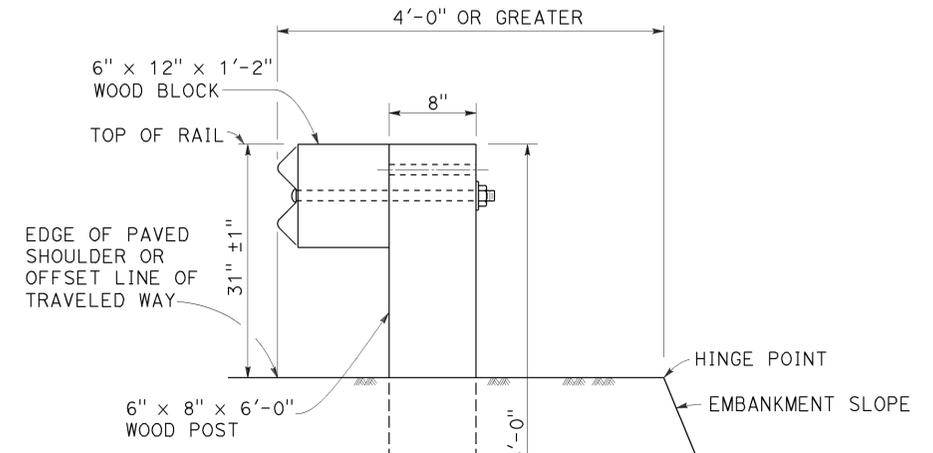
TO ACCOMPANY PLANS DATED 03-28-16



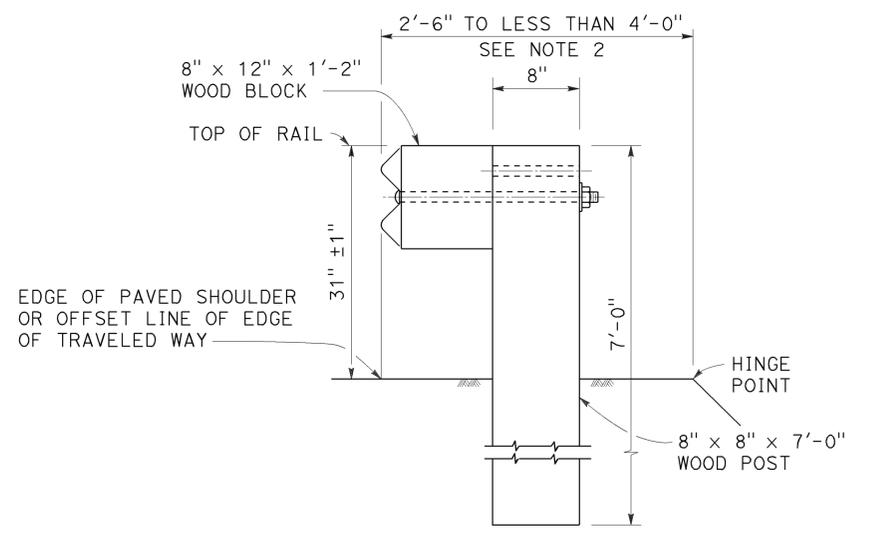
DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL C



DETAIL D



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

INSTALLATION AT EARTH RETAINING WALLS

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N3

2010 REVISED STANDARD PLAN RSP A77N3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	126	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

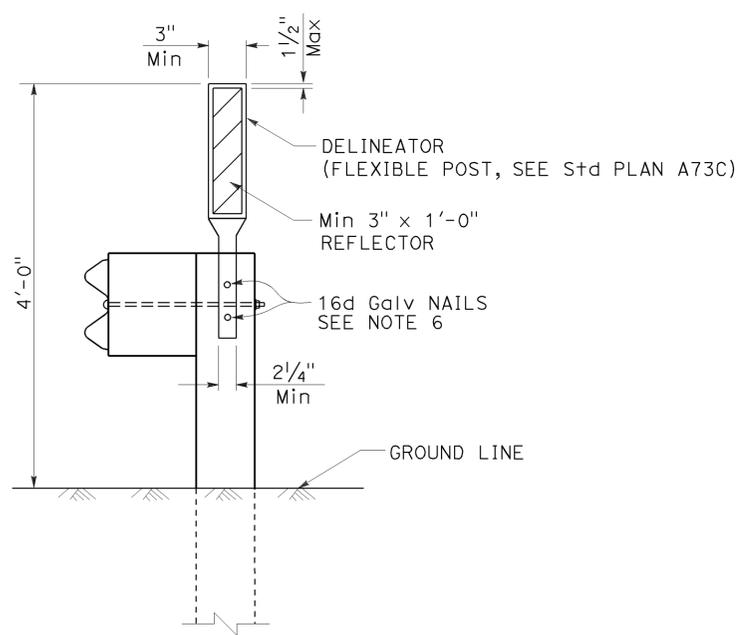
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Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

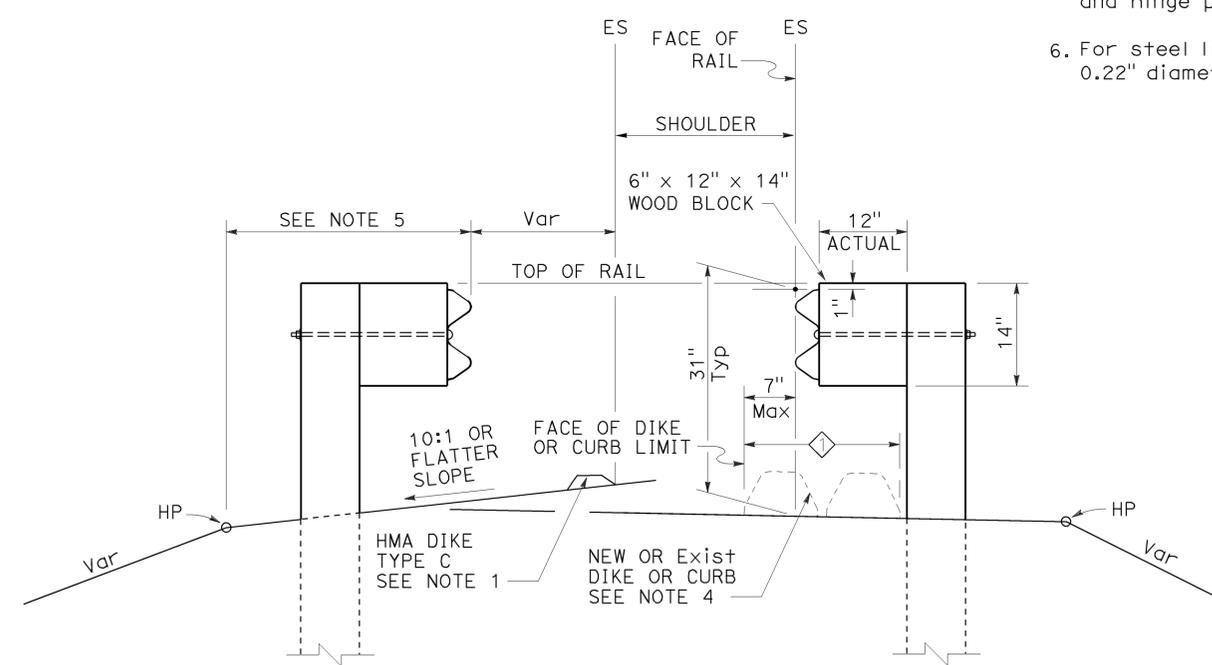
TO ACCOMPANY PLANS DATED **03-28-16**

NOTES:

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

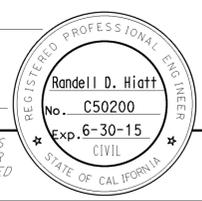
**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

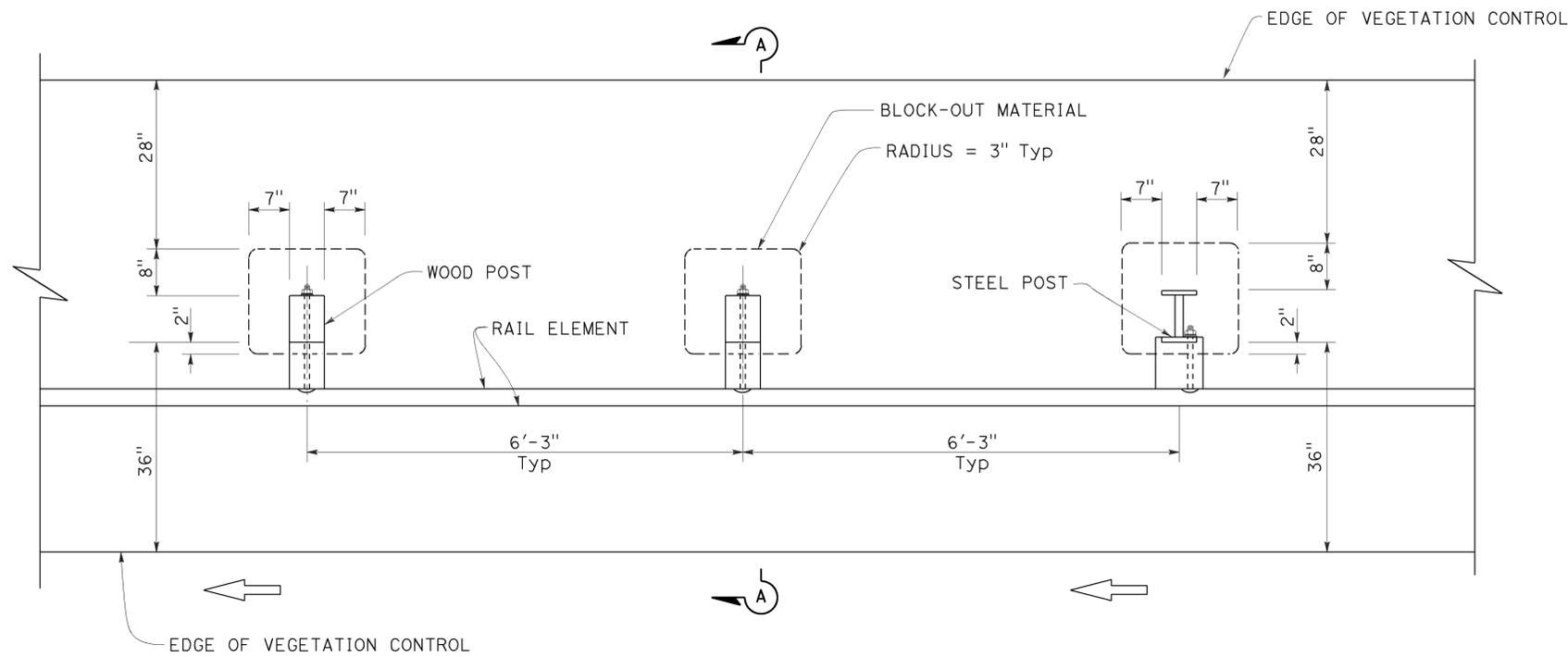
REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	127	244
<i>Randell D. Hiatt</i> REGISTERED CIVIL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



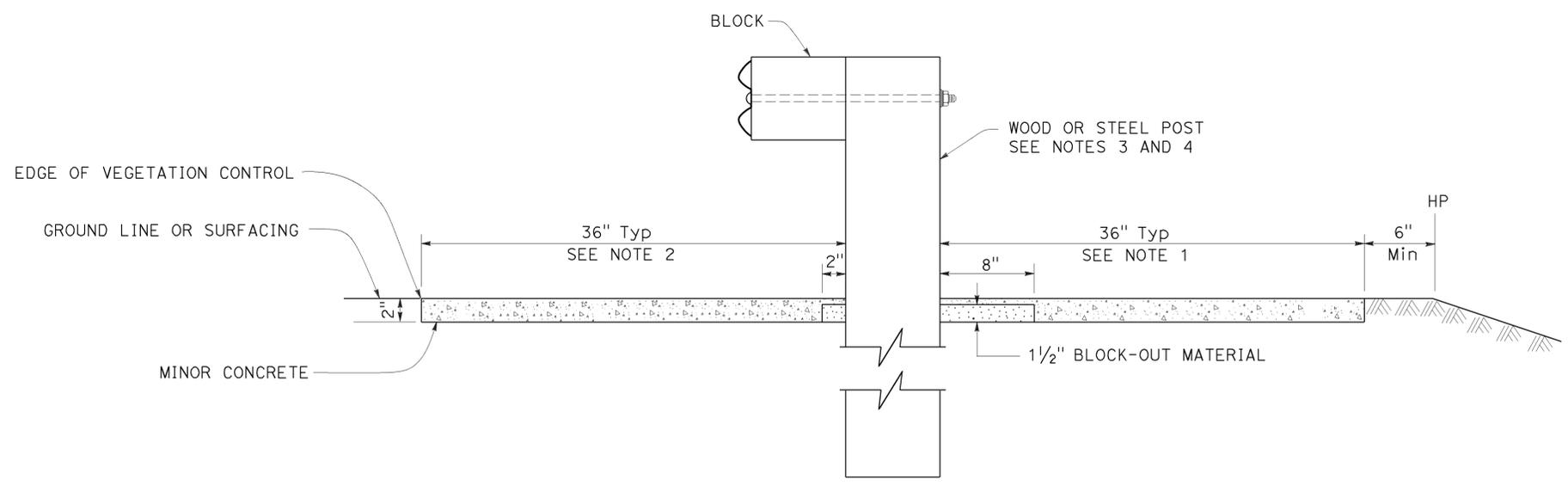
TO ACCOMPANY PLANS DATED **03-28-16**



PLAN

NOTES:

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood post sizes, see Revised Standard Plan RSP A77N1.
4. For steel post sizes, see Revised Standard Plan RSP A77N2.
5. For details not shown, see Revised Standard Plans RSP A77L1 and RSP A77L2.



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION**

NO SCALE

RSP A77N5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N5

2010 REVISED STANDARD PLAN RSP A77N5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	128	244

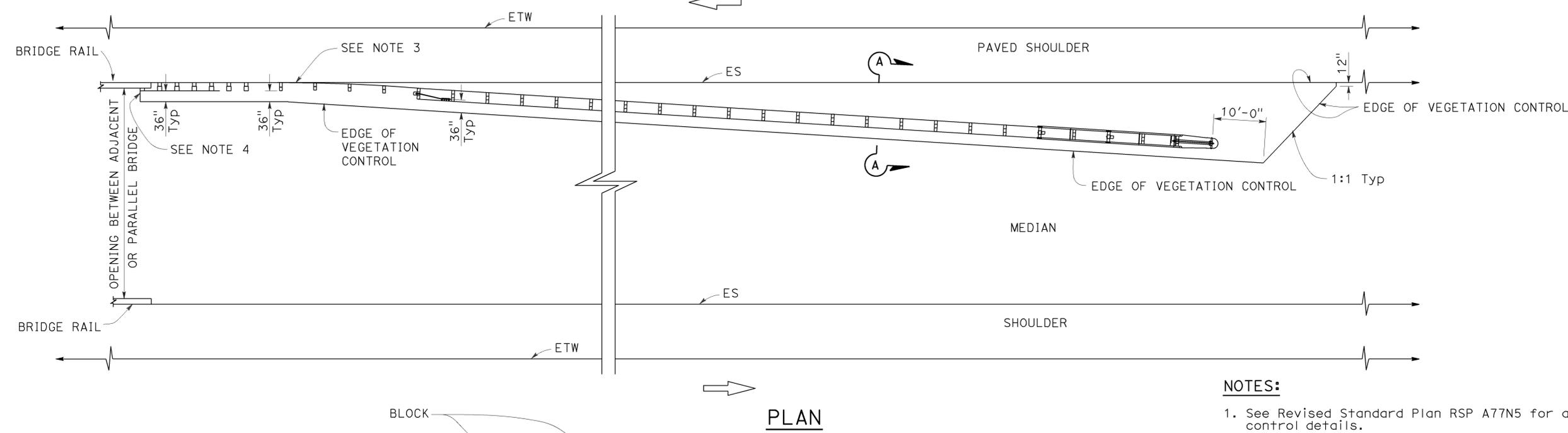
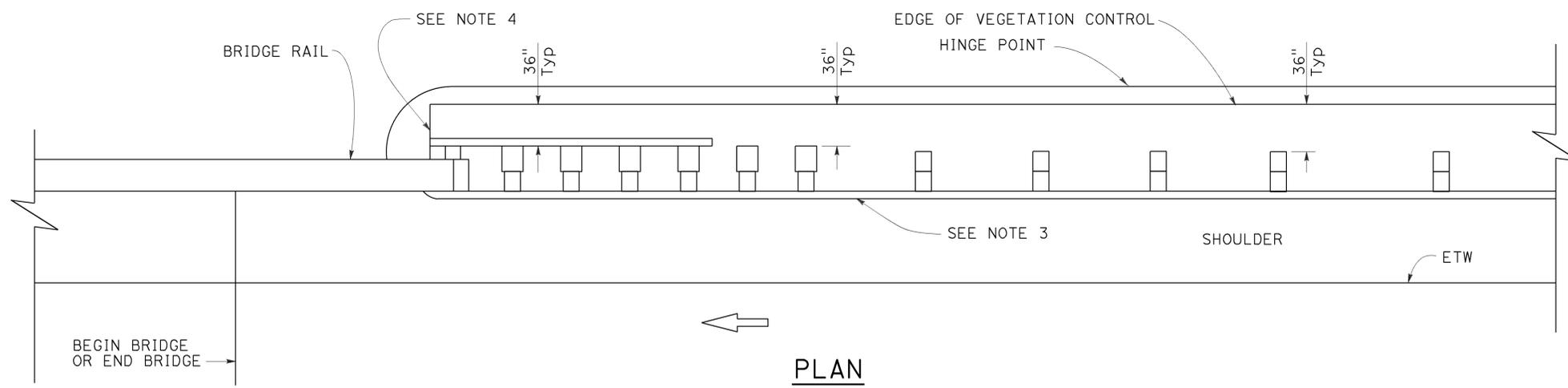
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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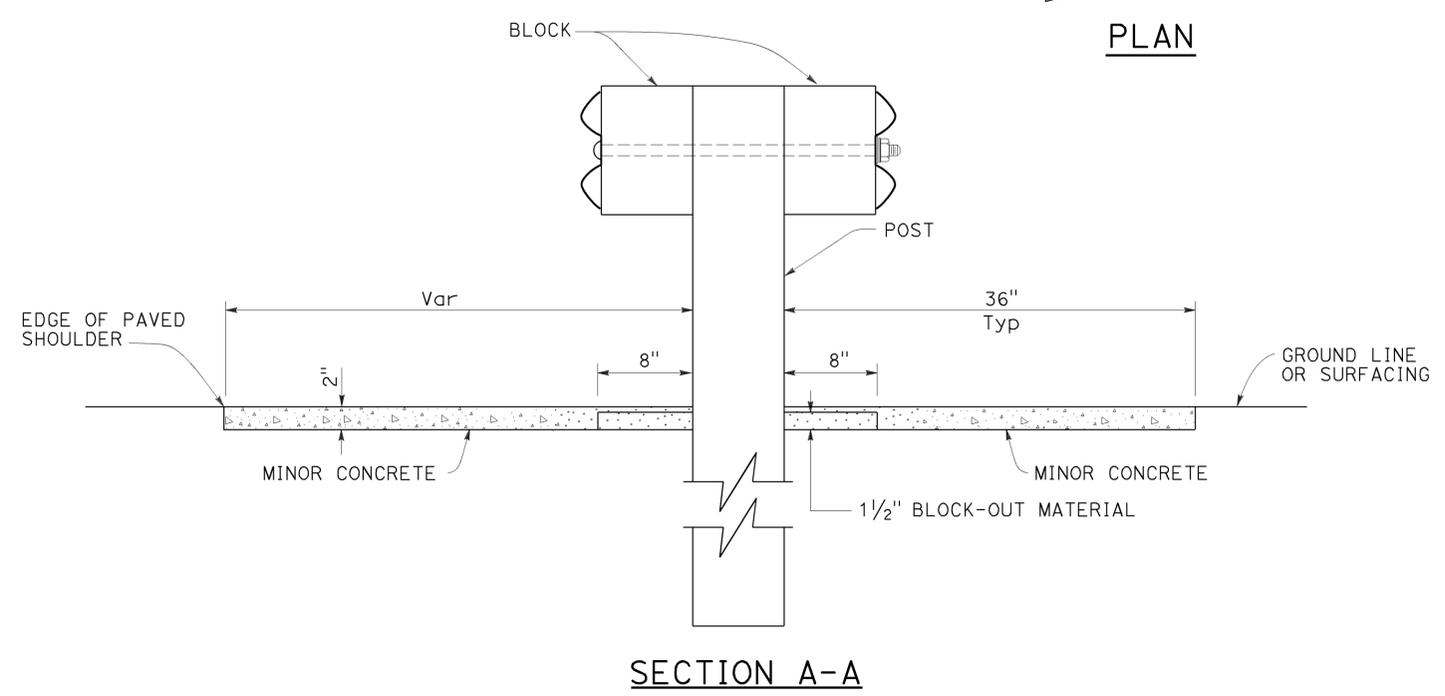
TO ACCOMPANY PLANS DATED 03-28-16

2010 REVISED STANDARD PLAN RSP A77N7



NOTES:

1. See Revised Standard Plan RSP A77N5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
4. End vegetation control at end of backside rail element.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL VEGETATION CONTROL
AT STRUCTURE APPROACH**

NO SCALE

RSP A77N7 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N7

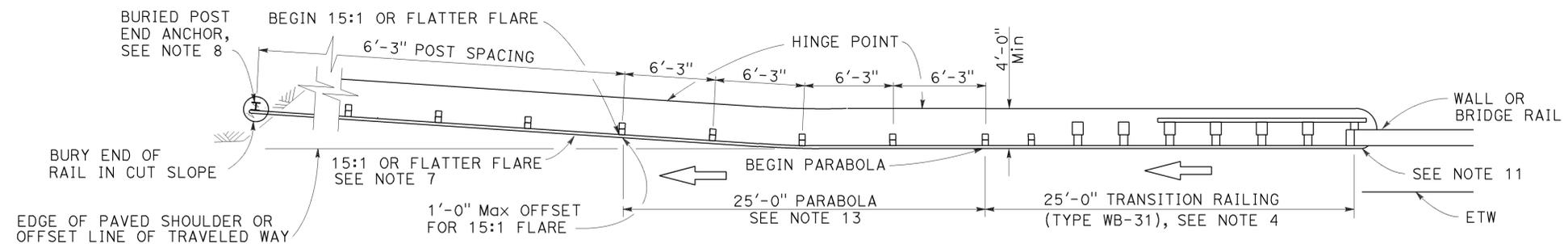
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	129	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

August 14, 2015
PLANS APPROVAL DATE

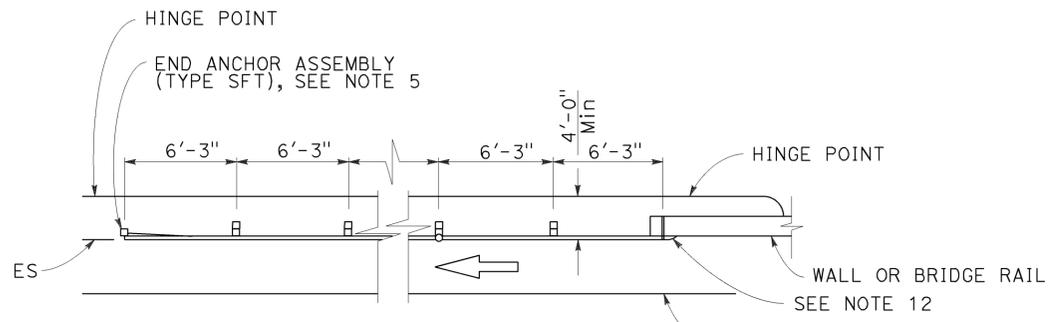
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-17
CIVIL
STATE OF CALIFORNIA



TYPE 12CC LAYOUT

(MGS installation at structure departure with a Buried end anchor treatment at trailing end of railing)
See Notes 9 and 10



TYPE 12DD LAYOUT

(MGS installation at structure departure With end anchor assembly at trailing end of railing)
See Notes 6 and 9

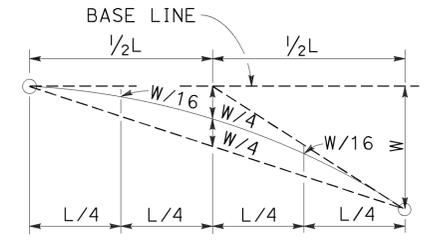


BASE LINE (EDGE OF PAVED SHOULDER OR OFFSET LINE OF EDGE OF TRAVELED WAY)

$Y = \frac{WX^2}{L^2}$

Y = OFFSET FROM BASE LINE
W = MAXIMUM OFFSET
X = DISTANCE ALONG BASE LINE
L = LENGTH OF FLARE

PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MSG post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Type 12CC Layout, see Revised Standard Plan RSP A77U4.
- For details of End Anchor Assembly (Type SFT) used with Type 12DD Layout, see Revised Standard Plan RSP A77S1.
- Type 12DD layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is equal to or greater than 40 feet and MGS is recommended (embankment height, side slopes, other fixed objects). Length of railing to be equal to multiples of 12'-6". For MGS connection details to bridge rail, see Revised Standard Plans RSP A77U1 and RSP A77V1. For MGS connection details to wall, see Revised Standard Plan RSP A77U3.
- The 15:1 or flatter flare for Type 12CC Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 12CC Layout, see Revised Standard Plan RSP A77T2.
- Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12CC Layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of a typical connection to bridge rail for Layout Type 12CC, see Connection Detail CC on Revised Standard Plan RSP A77U2 and Connection Detail HH on Revised Standard Plan RSP A77V2.
- For additional details of a typical connection to bridge rail for Layout Type 12DD, see Connection Detail BB on Revised Standard Plan RSP A77U1 and Connection Detail GG on Revised Standard Plan RSP A77V1.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77P1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
STRUCTURE DEPARTURE**

NO SCALE

RSP A77Q5 DATED AUGUST 14, 2015 SUPERSEDES RSP A77Q5 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77Q5

2010 REVISED STANDARD PLAN RSP A77Q5

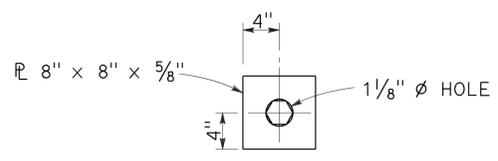
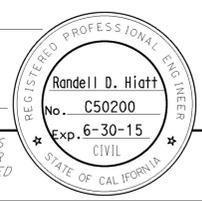
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	130	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

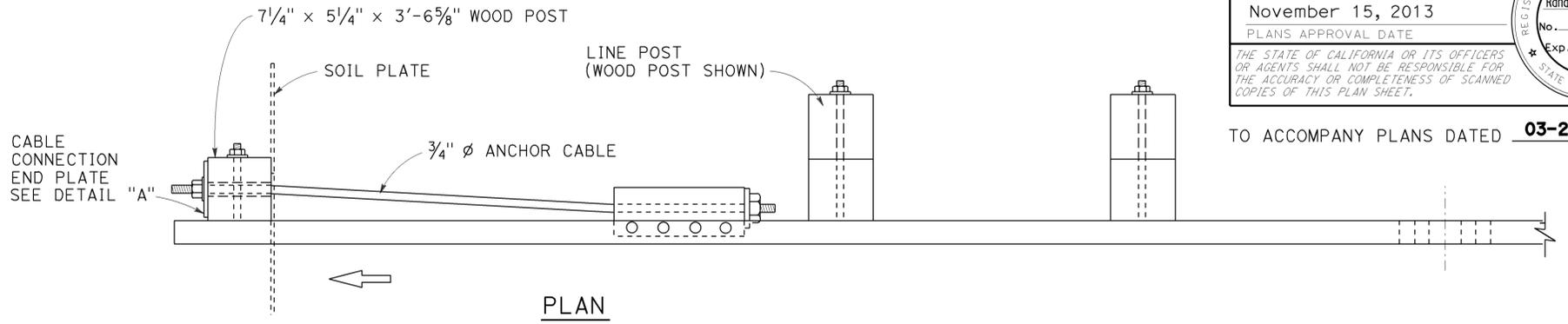
November 15, 2013
PLANS APPROVAL DATE

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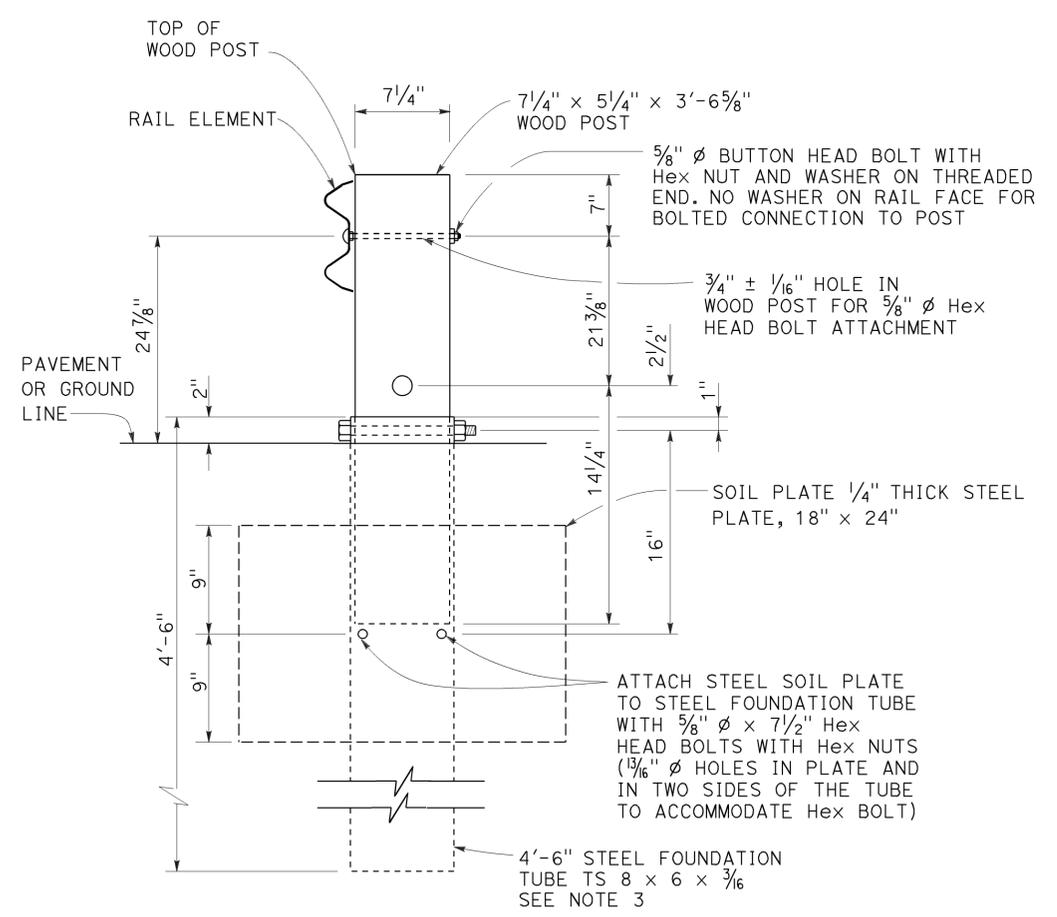
TO ACCOMPANY PLANS DATED **03-28-16**



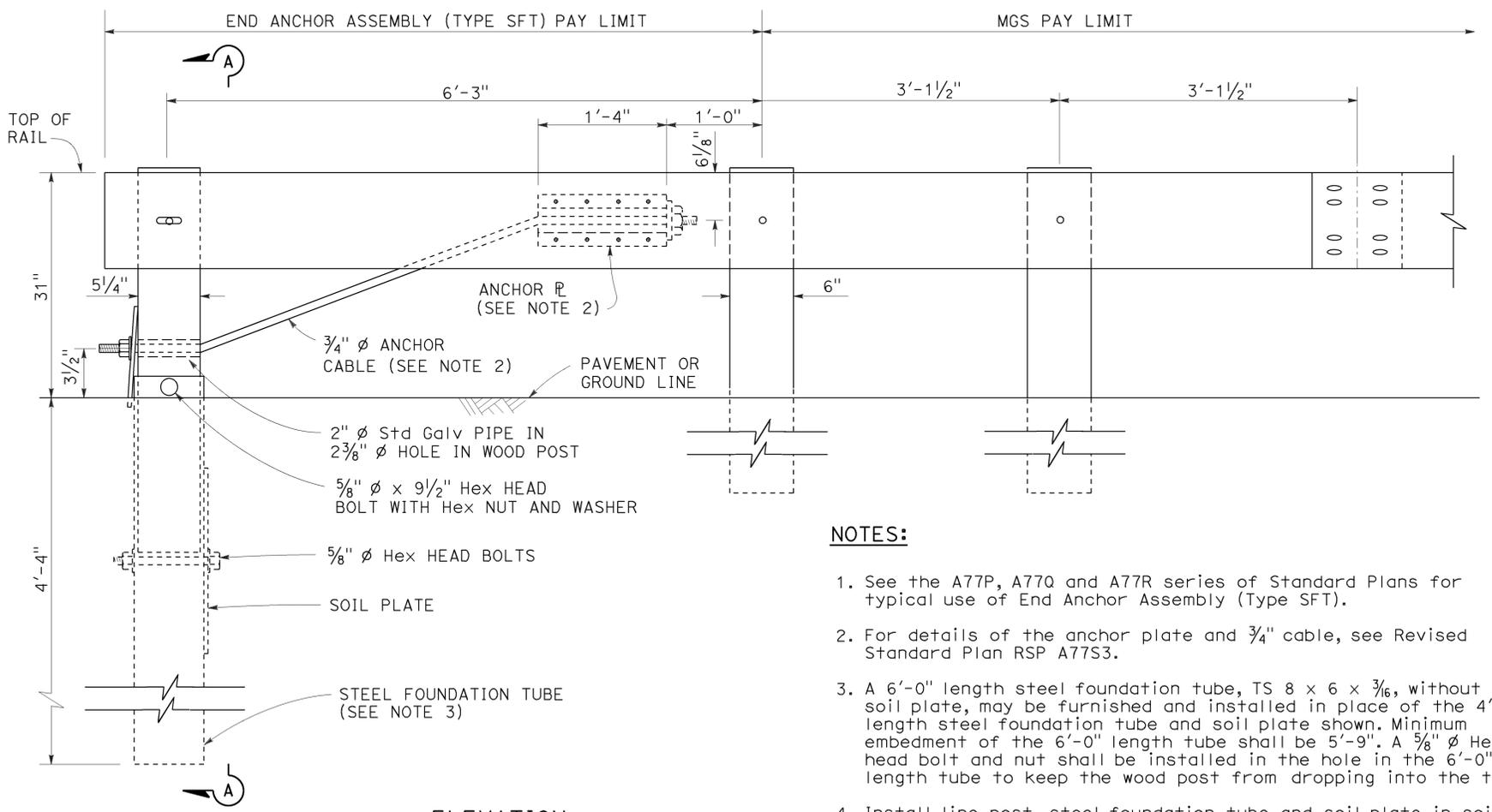
DETAIL "A"
CABLE CONNECTION
END PLATE



PLAN



SECTION A-A



ELEVATION

END ANCHOR
ASSEMBLY (TYPE SFT)
See Note 1

NOTES:

1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4 inch cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8 inch diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
END ANCHOR ASSEMBLY
(TYPE SFT)

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77S1

2010 REVISED STANDARD PLAN RSP A77S1

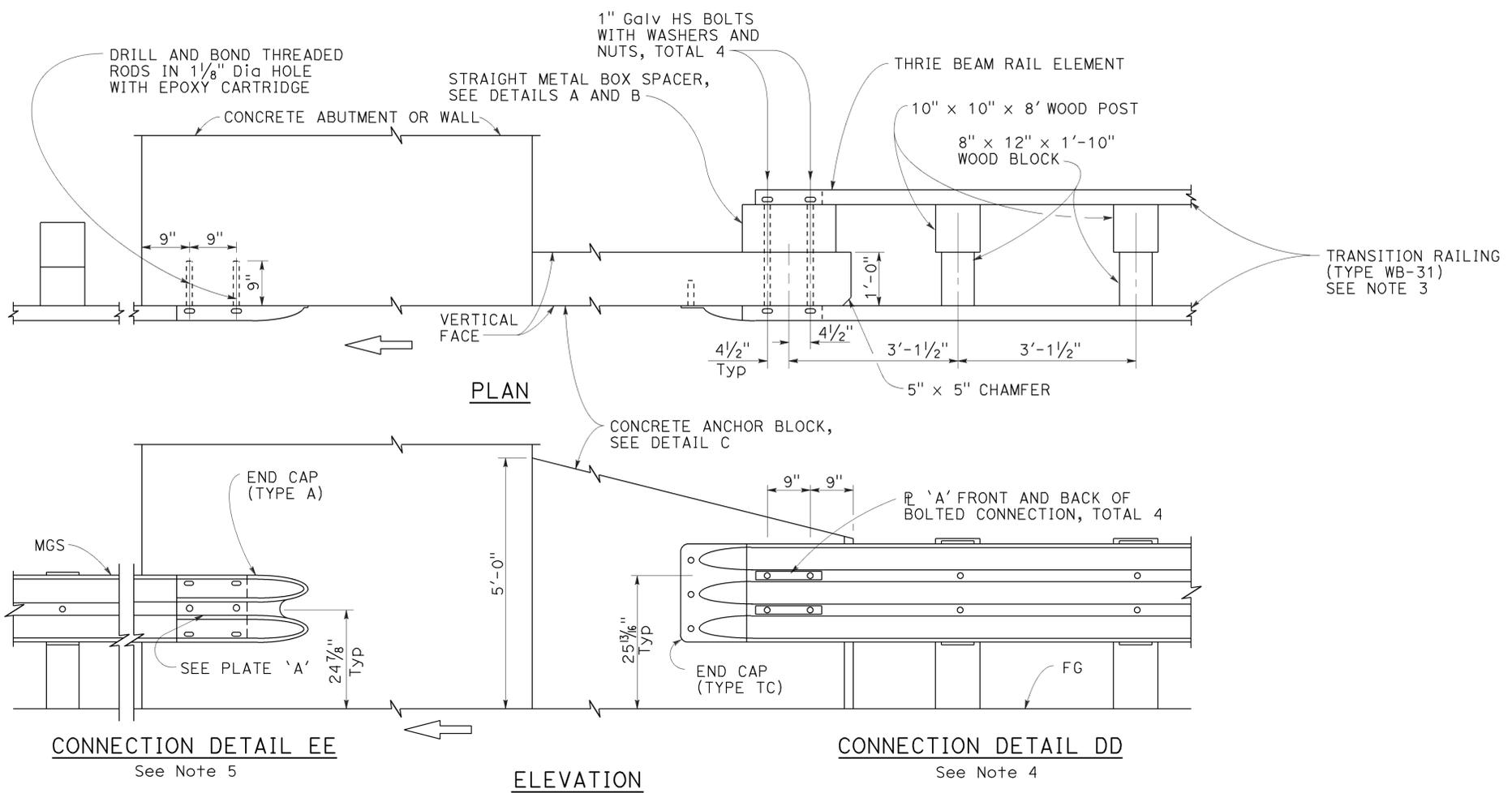
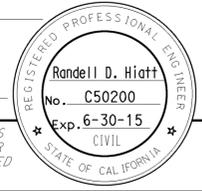
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	131	244

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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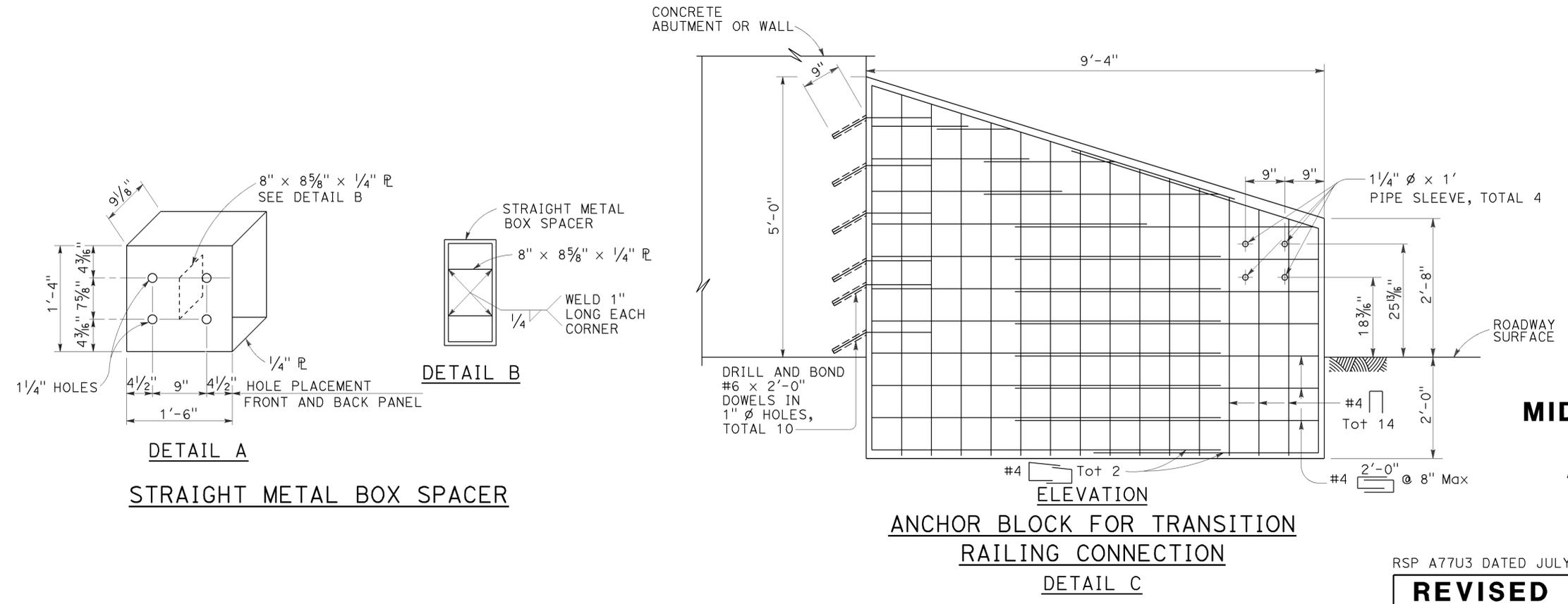
TO ACCOMPANY PLANS DATED 03-28-16



NOTES:

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
4. For typical use of Connection Details DD, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1 and Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2.
5. For typical use of Connection Detail EE, see Layout Type 12D on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.

MIDWEST GUARDRAIL SYSTEM CONNECTION TO ABUTMENT OR WALL



MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO ABUTMENTS AND WALLS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

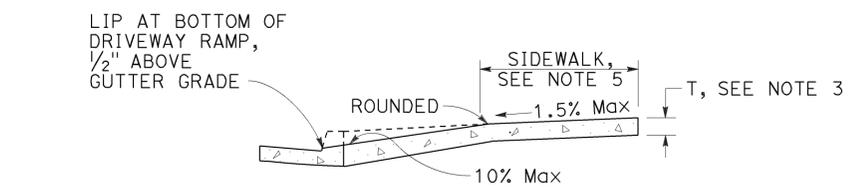
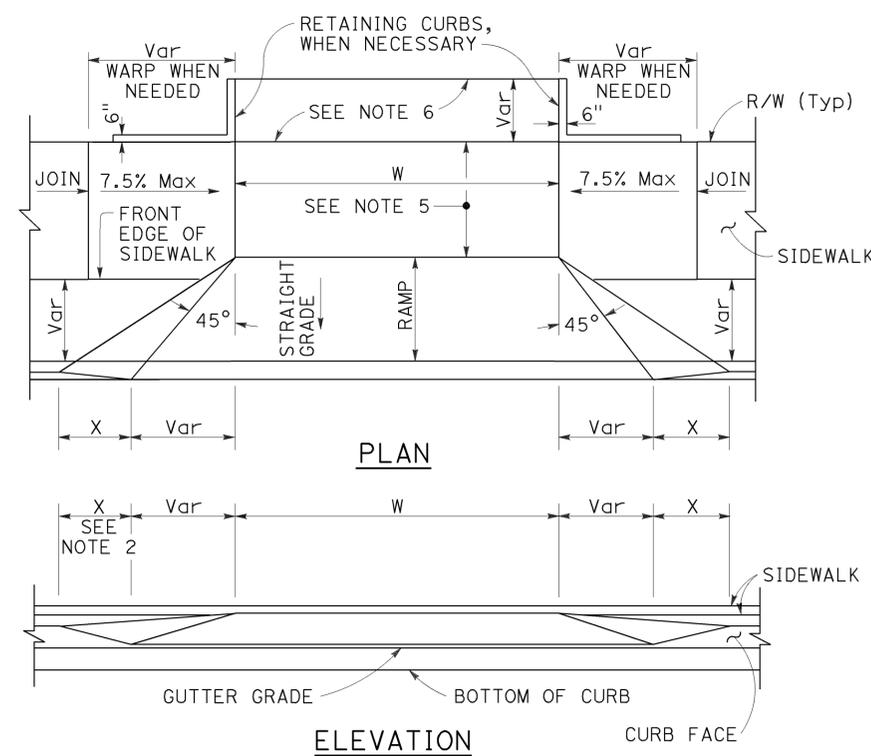
NO SCALE

RSP A77U3 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

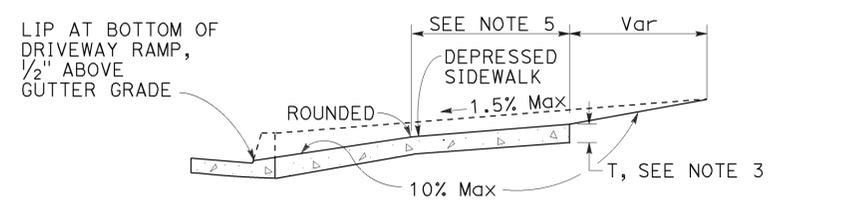
REVISED STANDARD PLAN RSP A77U3

2010 REVISED STANDARD PLAN RSP A77U3

TO ACCOMPANY PLANS DATED 03-28-16



CASE A
Typical driveway, sidewalk not depressed



CASE B
Driveway with depressed sidewalk

SECTIONS

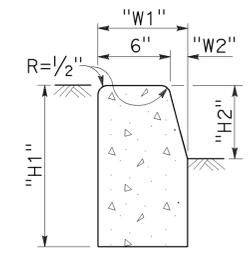
TABLE A

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

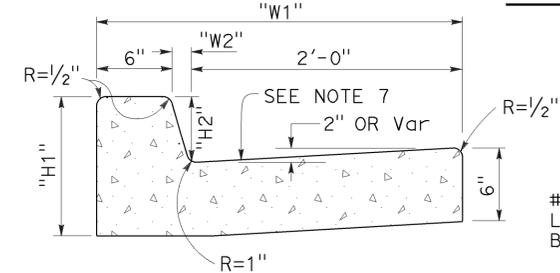
CURB QUANTITIES

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

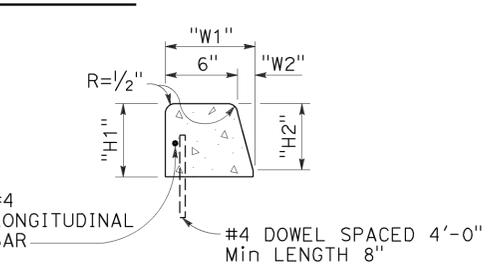
DRIVEWAYS



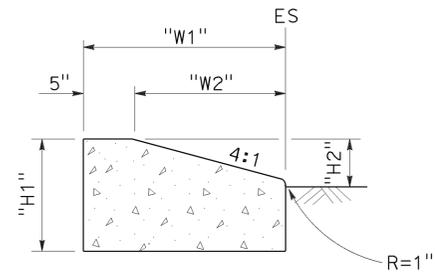
TYPE A1 CURBS
See Table A



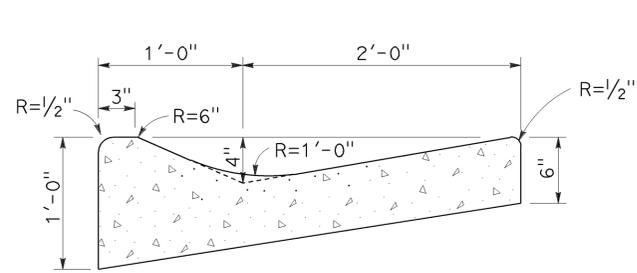
TYPE A2 CURBS
See Table A



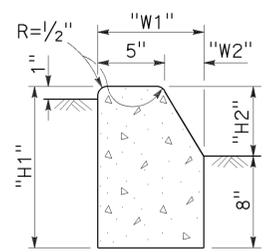
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



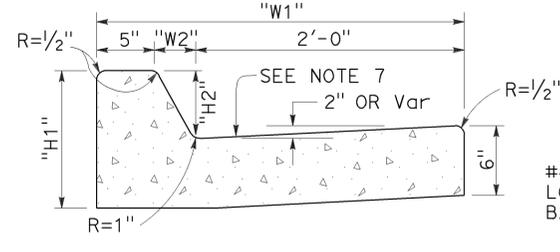
TYPE D CURBS
See Table A



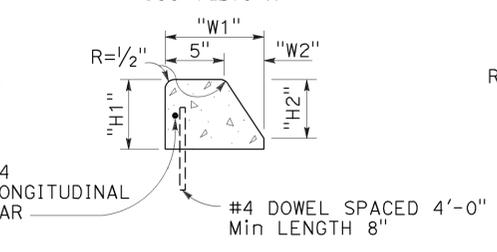
TYPE E CURB



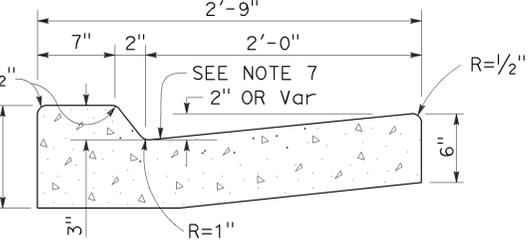
TYPE B1 CURBS
See Table A



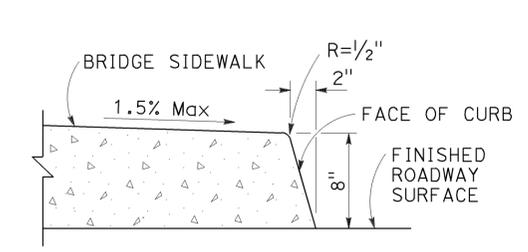
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

CURBS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

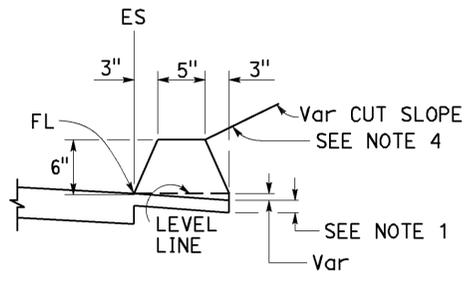
NO SCALE

RSP A87A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87A
DATED MAY 20, 2011 - PAGE 119 OF THE STANDARD PLANS BOOK DATED 2010.

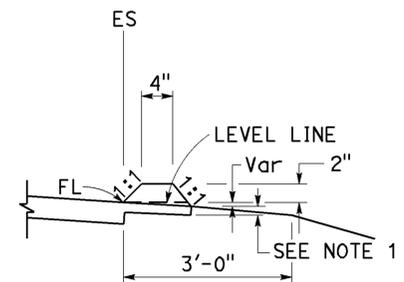
REVISED STANDARD PLAN RSP A87A

2010 REVISED STANDARD PLAN RSP A87A

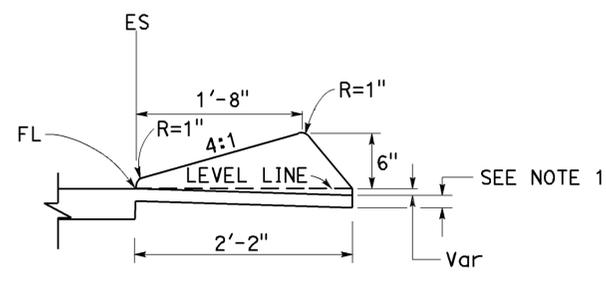
TO ACCOMPANY PLANS DATED 03-28-16



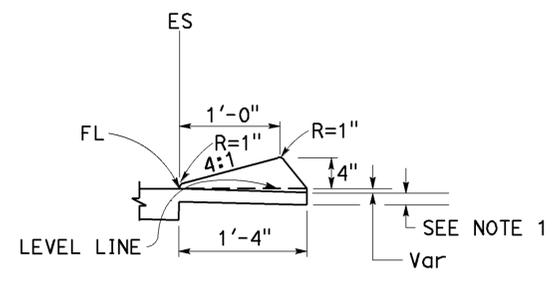
TYPE A
See Notes 3 and 5



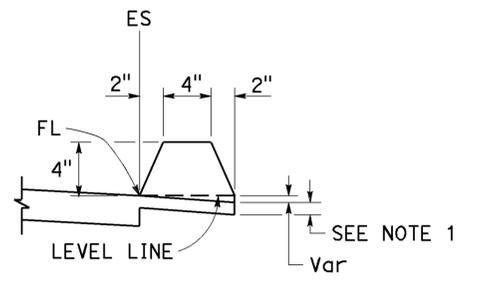
TYPE C



TYPE D

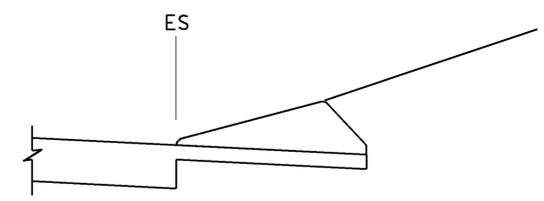


TYPE E

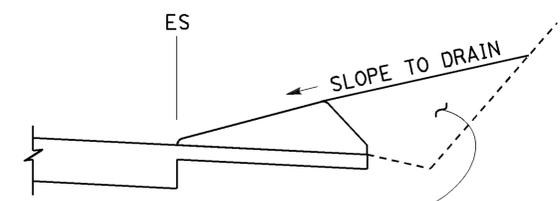


TYPE F
See Note 5

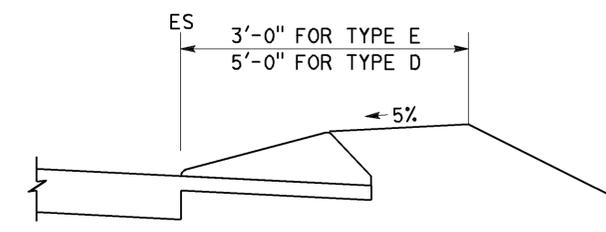
DIKES



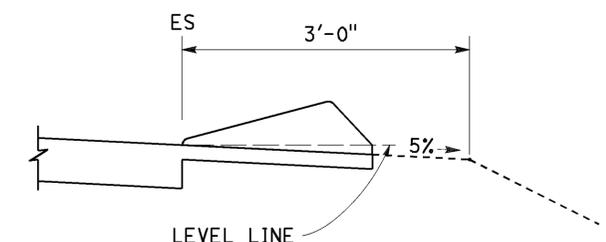
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type A or F dike, where dike is required with guardrail installations. See Revised Standard Plan RSP A77N4 for dike positioning details. See Revised Standard Plan RSP A77N3 for hinge point offsets with guardrail.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

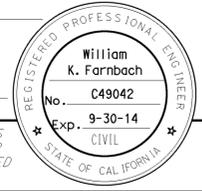
RSP A87B DATED JANUARY 15, 2016 SUPERSEDES RSP A87B DATED JULY 19, 2013 AND STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

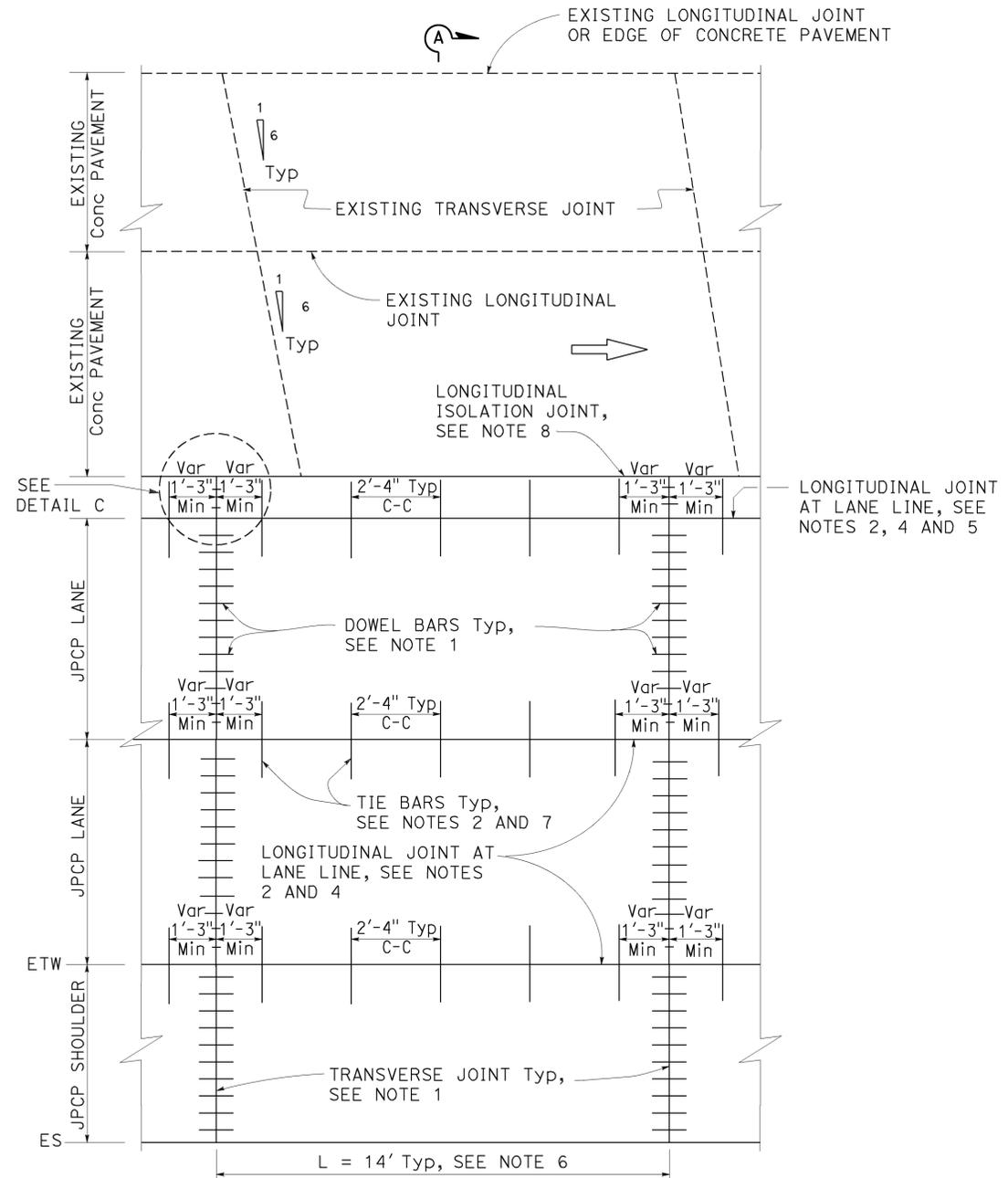
2010 REVISED STANDARD PLAN RSP A87B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	134	244

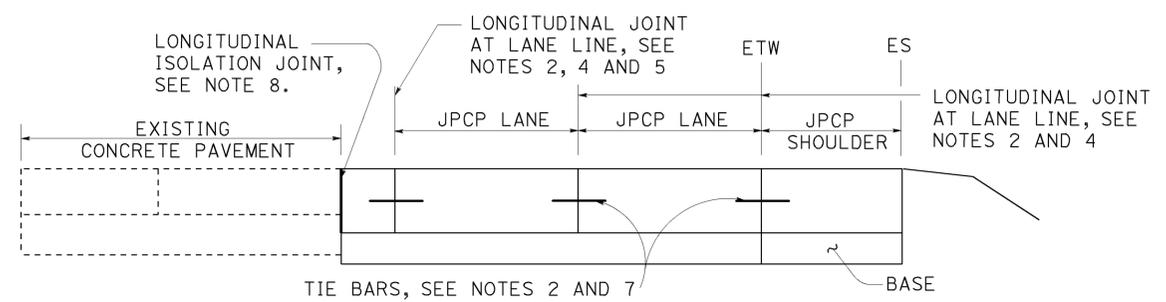
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



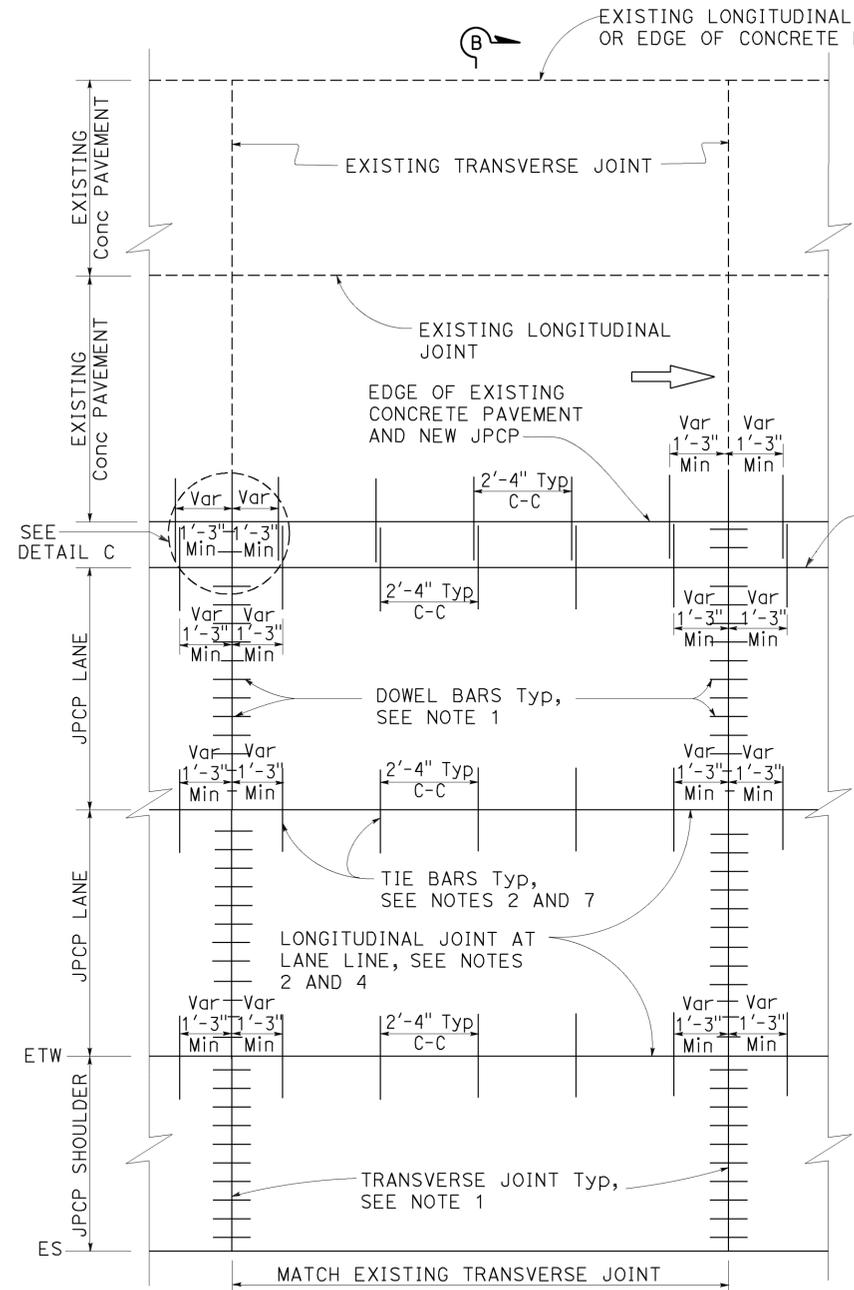
TO ACCOMPANY PLANS DATED 03-28-16



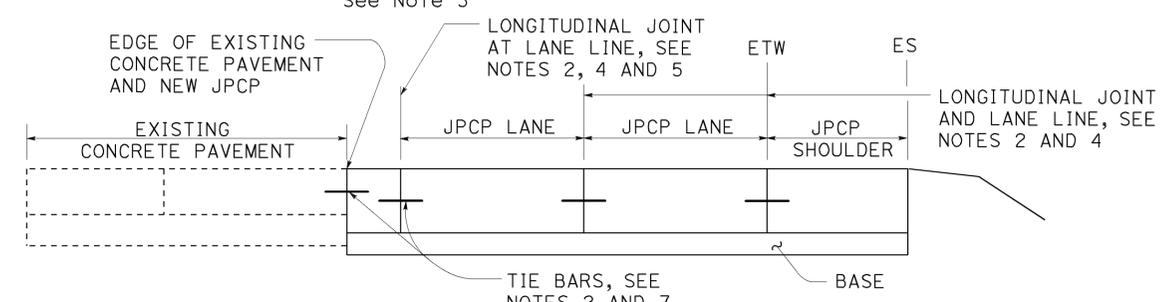
PLAN
ISOLATED
See Note 3



SECTION A-A



PLAN
TIED
See Note 3

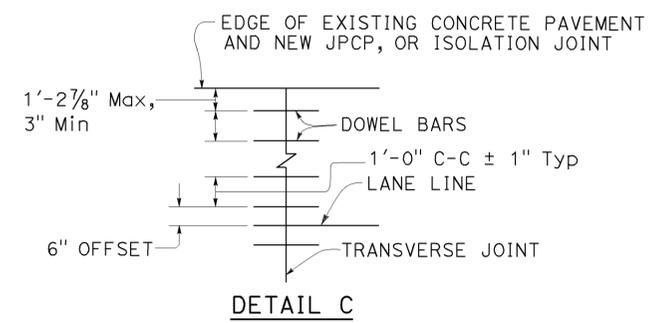


SECTION B-B

LONGITUDINAL JOINT AT LANE LINE, SEE NOTES 2, 4 AND 5

NOTES:

1. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
2. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
3. For joint layout at intersections, see Project Plans.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. Omit longitudinal joint when edge of new concrete pavement is 3'-3" or less from JPCP lane line.
6. Transverse joint spacing may be adjusted to no less than 10' and no more than 15'-6" to conform to bridges, change in pavement type and existing pavement.
7. For dowel bars at longitudinal joint, see Revised Standard Plan RSP P18.
8. For isolation joints, see Detail A on Revised Standard Plan RSP P18.



DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN
CONCRETE PAVEMENT
LANE & SHOULDER
ADDITION OR
REPLACEMENT**

NO SCALE

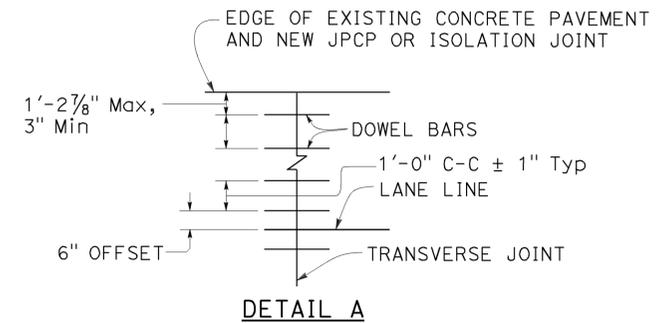
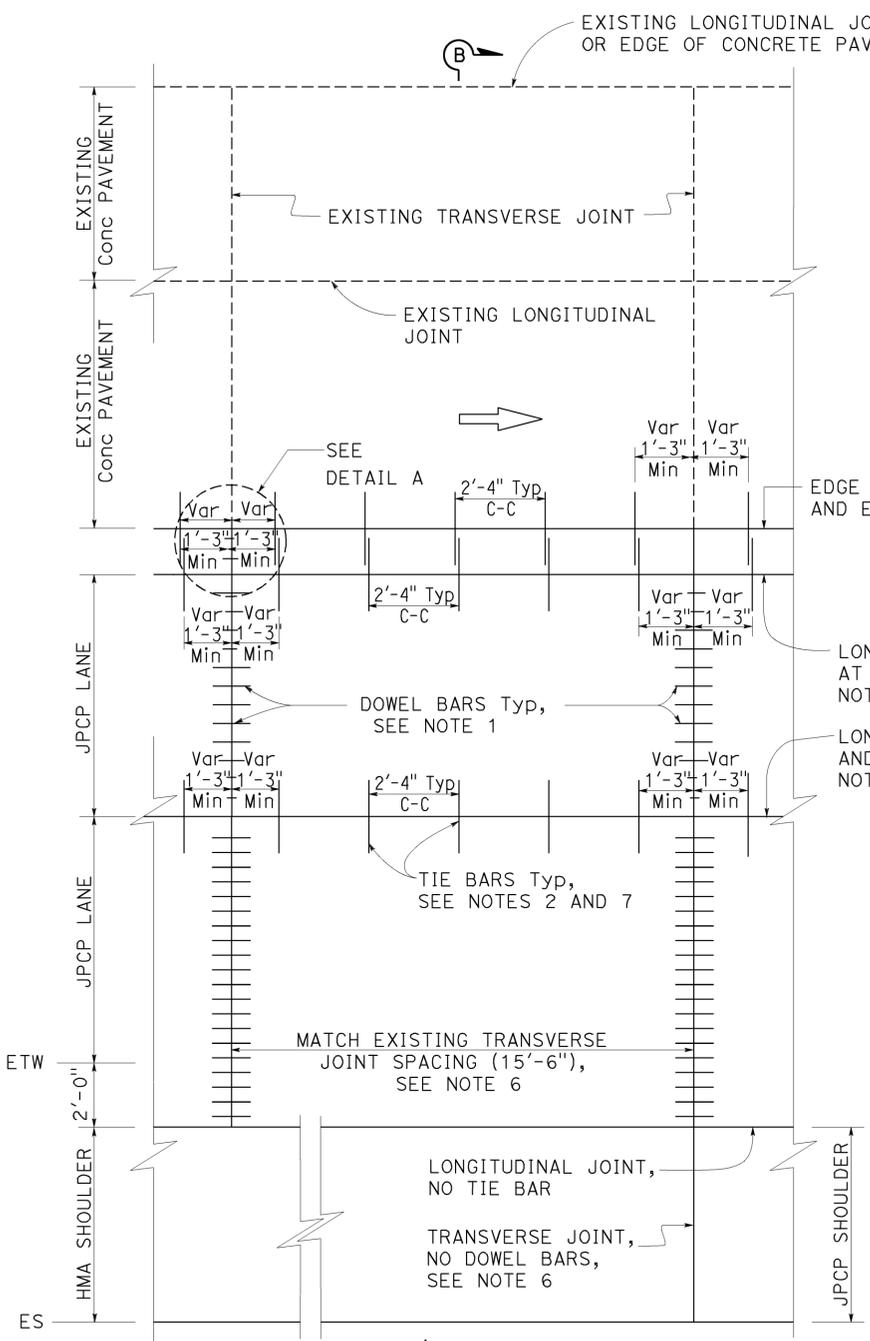
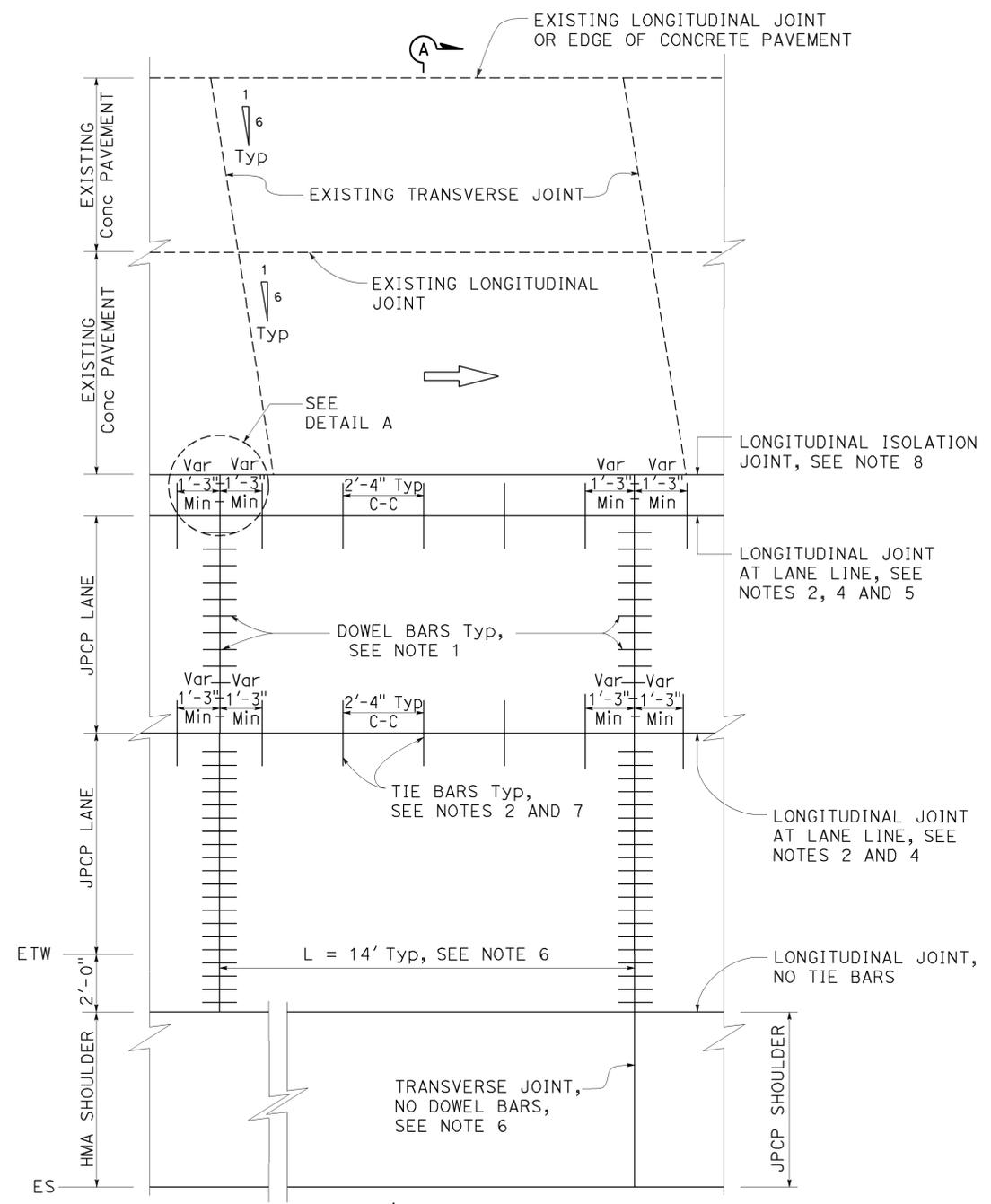
RSP P3A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P3A

2010 REVISED STANDARD PLAN RSP P3A

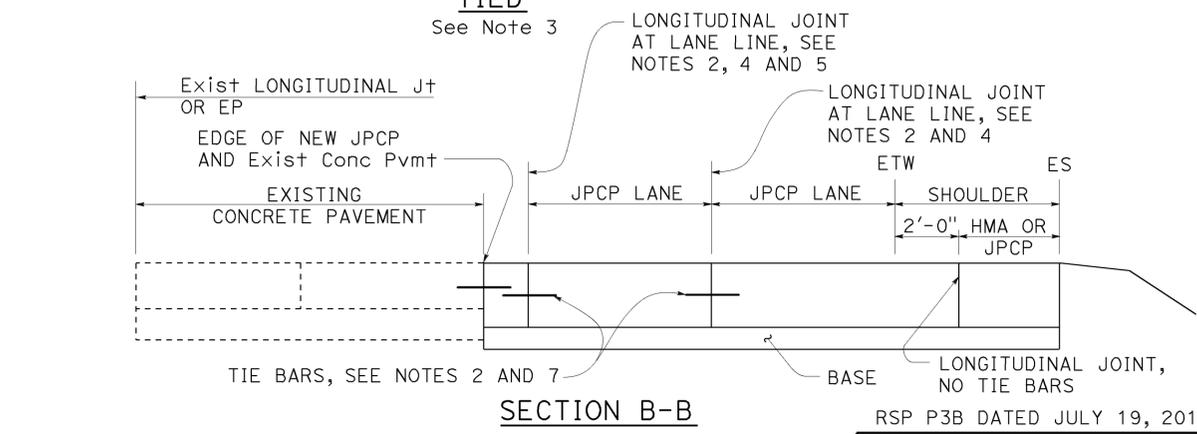
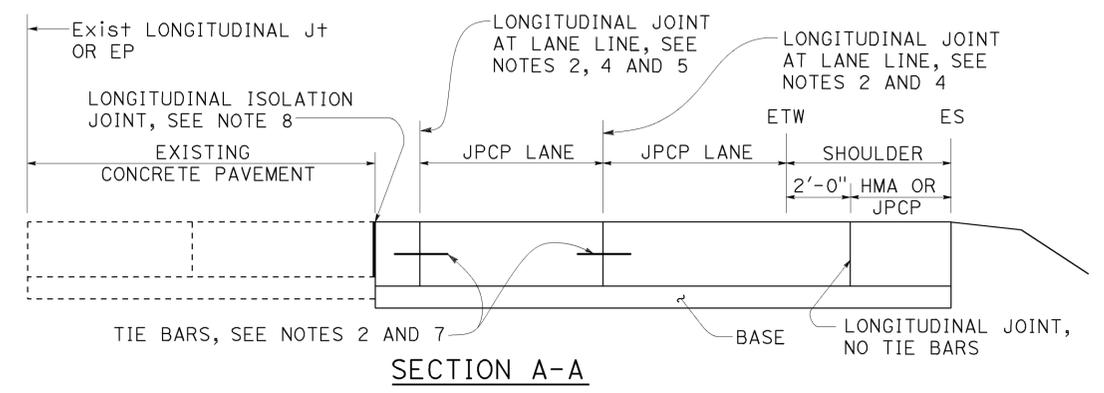
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	135	244
<i>William K. Farnbach</i> REGISTERED CIVIL ENGINEER No. C49042 Exp. 9-30-14 STATE OF CALIFORNIA					
July 19, 2013 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED **03-28-16**



NOTES:

1. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
2. For longitudinal joint and tie bar details not shown, see Revised Standard Plan RSP P15.
3. For joint layout at intersections, see Project Plans.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. Omit longitudinal joint when edge of new concrete pavement is 3'-3" or less from JPCP lane line.
6. Transverse joint spacing may be adjusted to no less than 10' and no more than 15'-6" to conform to bridges, change in pavement type and existing pavement.
7. For dowel bars at longitudinal joint. see Revised Standard Plan RSP P18.
8. For isolation joints, see Detail A on Revised Standard Plan RSP P18.



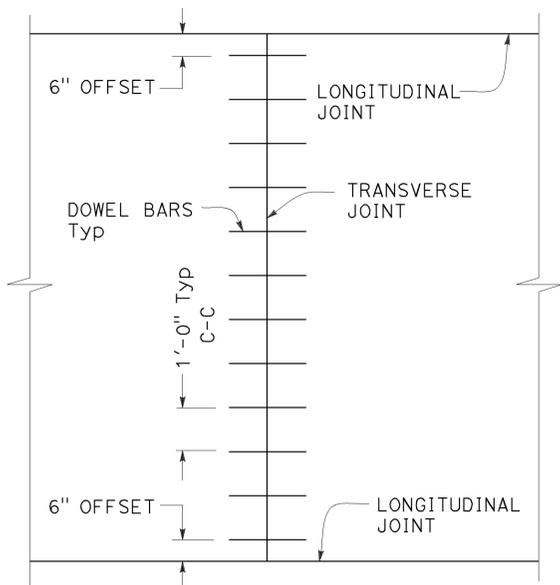
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINTED PLAIN CONCRETE PAVEMENT (WIDENED LANE) LANE AND SHOULDER ADDITION OR REPLACEMENT
 NO SCALE

RSP P3B DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

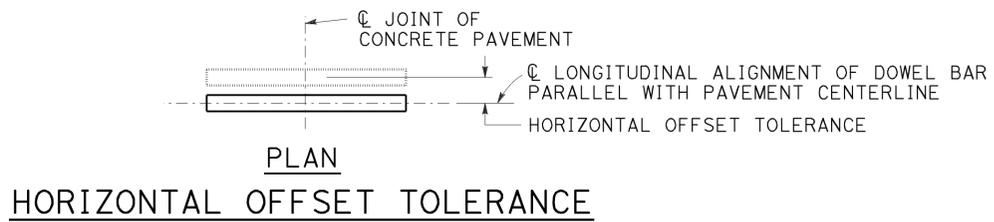
REVISED STANDARD PLAN RSP P3B

2010 REVISED STANDARD PLAN RSP P3B

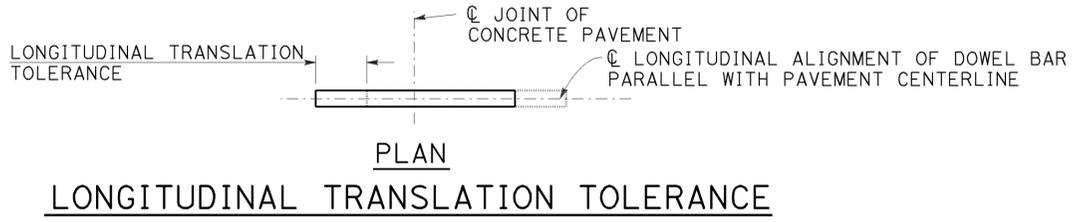
2010 REVISED STANDARD PLAN RSP P10



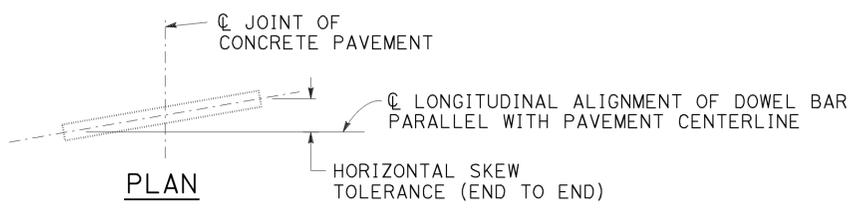
**TRANSVERSE JOINT
DOWEL BAR LAYOUT**



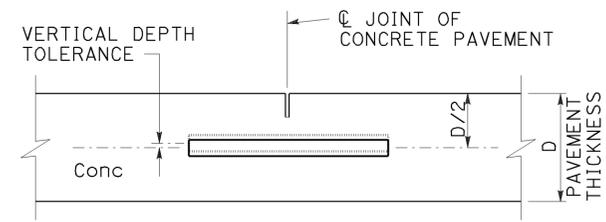
**PLAN
HORIZONTAL OFFSET TOLERANCE**



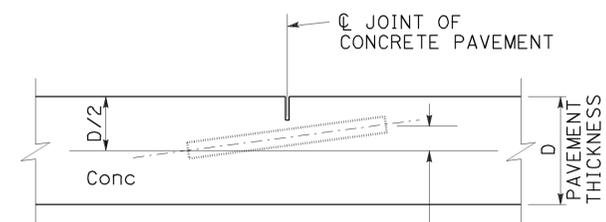
**PLAN
LONGITUDINAL TRANSLATION TOLERANCE**



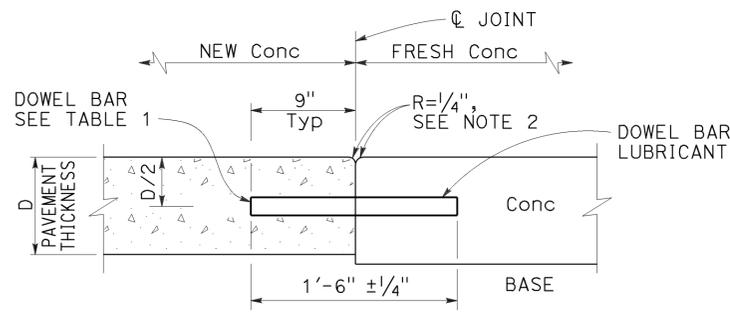
**PLAN
HORIZONTAL SKEW TOLERANCE**



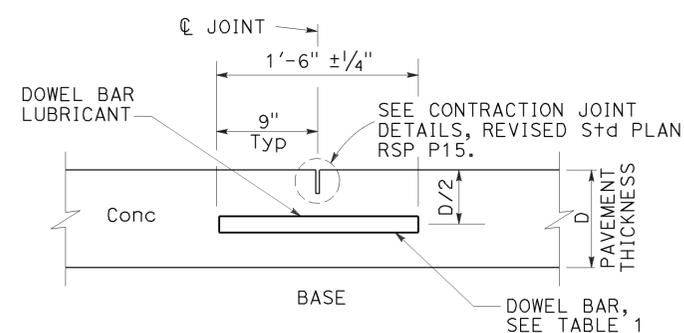
**ELEVATION
VERTICAL DEPTH TOLERANCE**



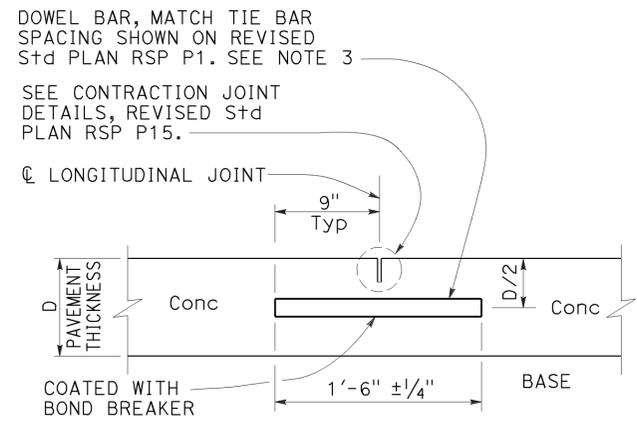
**ELEVATION
VERTICAL SKEW TOLERANCE**



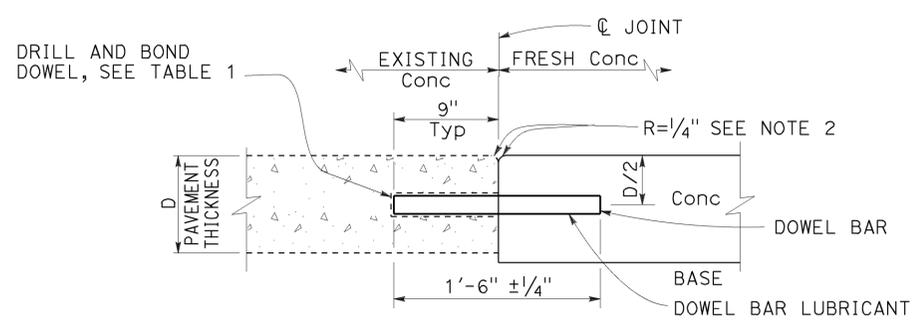
**TRANSVERSE
CONSTRUCTION JOINT DETAIL**



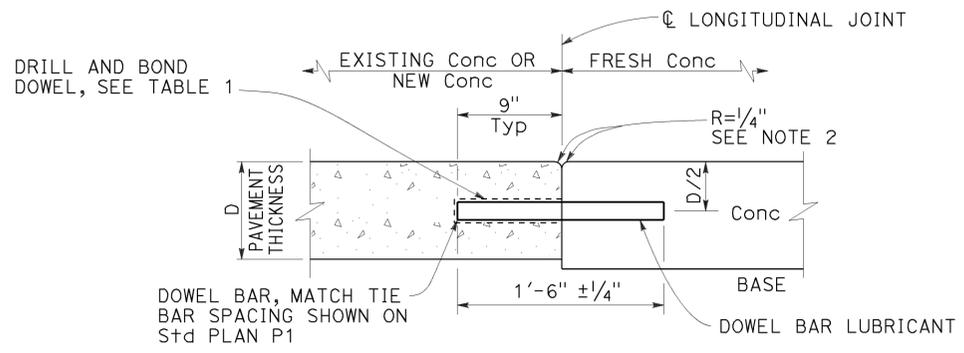
TRANSVERSE CONTRACTION JOINT



**LONGITUDINAL CONTRACTION
JOINT WITH DOWEL BARS**
See Revised Std Plan RSP P18



**TRANSVERSE CONSTRUCTION JOINT
FOR EXISTING CONCRETE PAVEMENT**



**LONGITUDINAL CONSTRUCTION JOINT
WITH DOWEL BARS**
See Revised Std Plan RSP P18

NOTES:

1. See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
2. Where fresh concrete pavement is placed against new concrete or existing concrete pavement, rounding the corner of the existing concrete pavement is not required.
3. May also use 3/4" Dia dowel bars 2'-4" ± 1/4" in length. Center the length of dowel bars at the centerline of longitudinal joint.

TO ACCOMPANY PLANS DATED 03-28-16

TABLE 1

DOWEL BAR DIAMETER TABLE			
PAVEMENT THICKNESS	0.65'	> 0.65' - 0.85'	> 0.85'
MINIMUM DOWEL * BAR DIAMETER	1"	1 1/4"	1 1/2"

* The drilled hole diameter must be 1/8" to 3/16" larger than the bar diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT
DOWEL BAR
DETAILS**

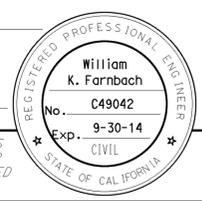
NO SCALE

RSP P10 DATED JULY 19, 2013 SUPERSEDES RSP P10 DATED APRIL 20, 2012 AND STANDARD PLAN P10 DATED MAY 20, 2011 - PAGE 131 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	137	244

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
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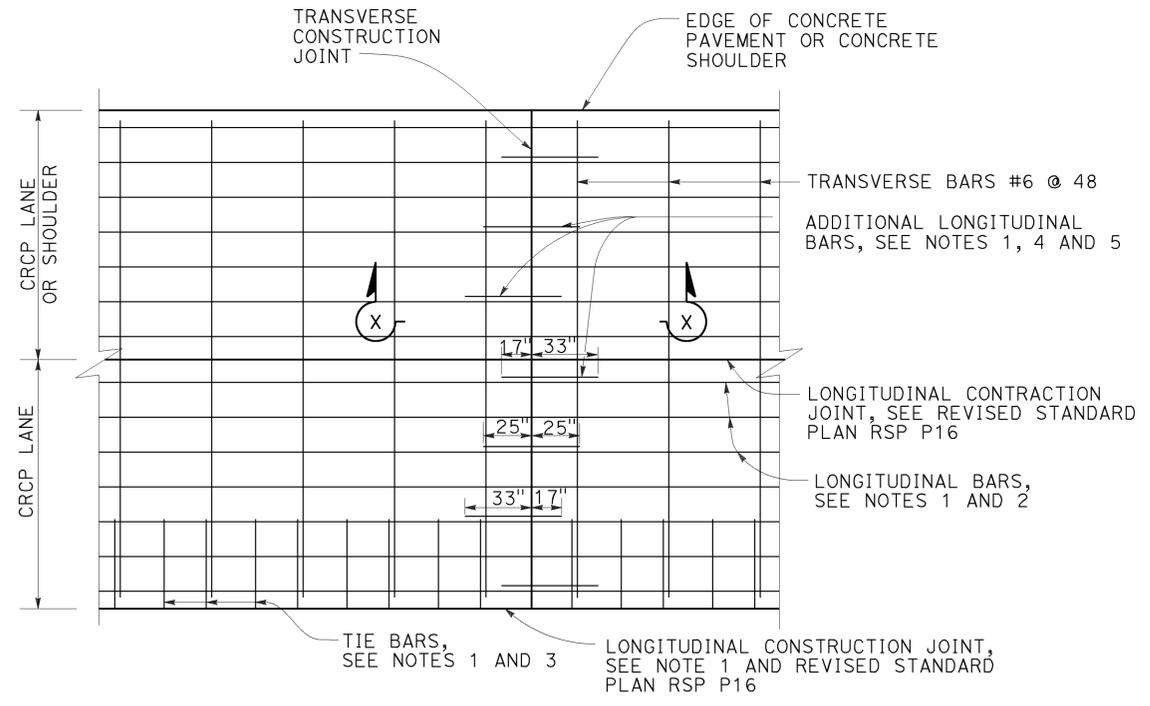
TO ACCOMPANY PLANS DATED 03-28-16

NOTES:

1. For longitudinal bar size, spacing and clearances, see Table 1 on Revised Standard Plan RSP P4.
2. The length of lap splices for bar reinforcement must be at least 25".
3. For tie bars in longitudinal construction joint, see Revised Standard Plan RSP P16.
4. Place additional longitudinal bars parallel to and in the same plane as the longitudinal bars.
5. Place additional longitudinal bars symmetrically about longitudinal construction joint.

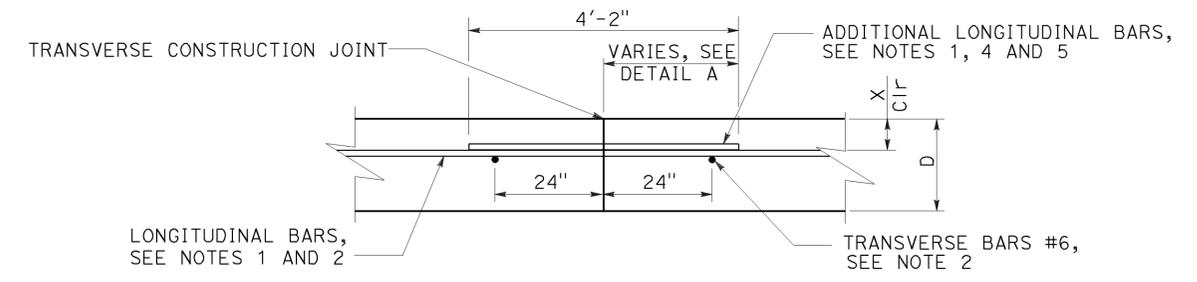
ABBREVIATION

D = Thickness of CRCP



DETAIL A

Additional longitudinal bars at transverse construction joint



SECTION X-X

TRANSVERSE CONSTRUCTION JOINT

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT
 TRANSVERSE CONSTRUCTION JOINT**

NO SCALE

RSP P14 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P14

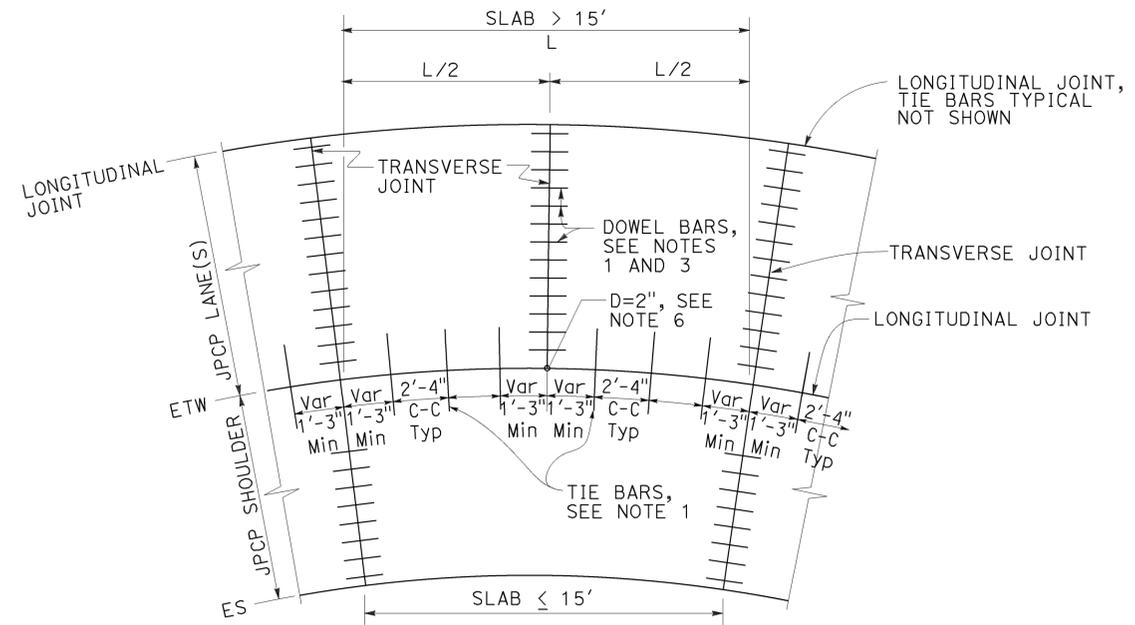
2010 REVISED STANDARD PLAN RSP P14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	138	244

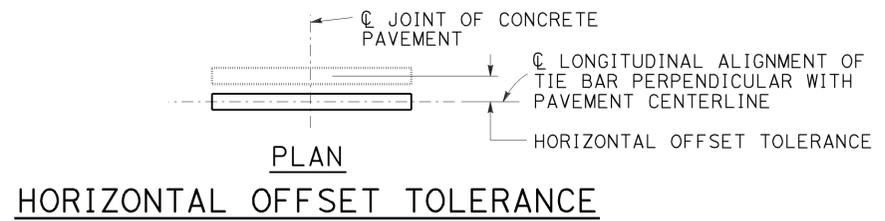
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

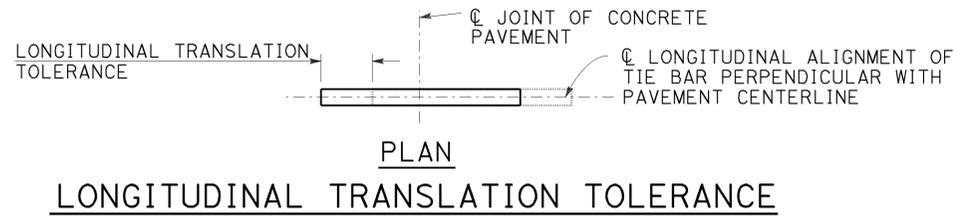
TO ACCOMPANY PLANS DATED **03-28-16**



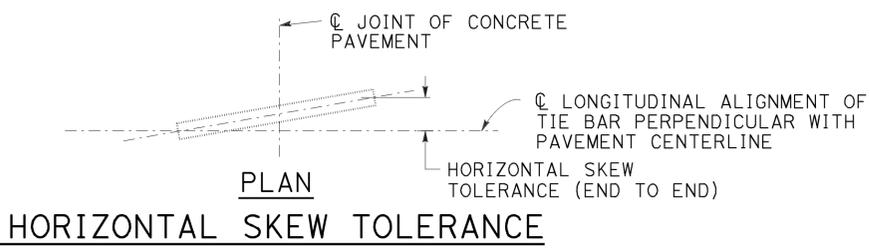
TIE BAR LAYOUT IN CURVED LANES



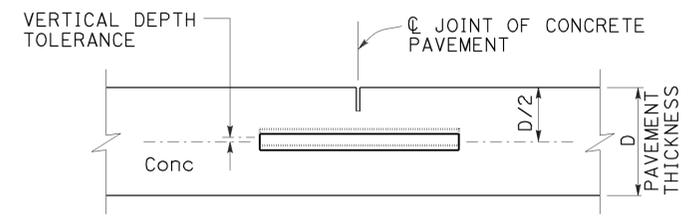
HORIZONTAL OFFSET TOLERANCE



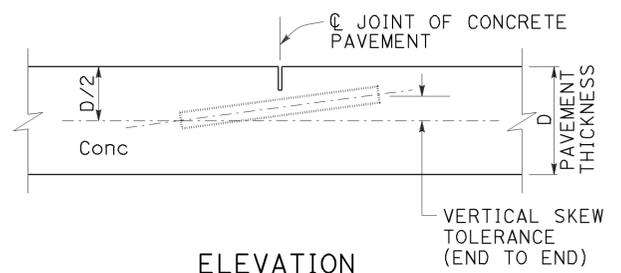
LONGITUDINAL TRANSLATION TOLERANCE



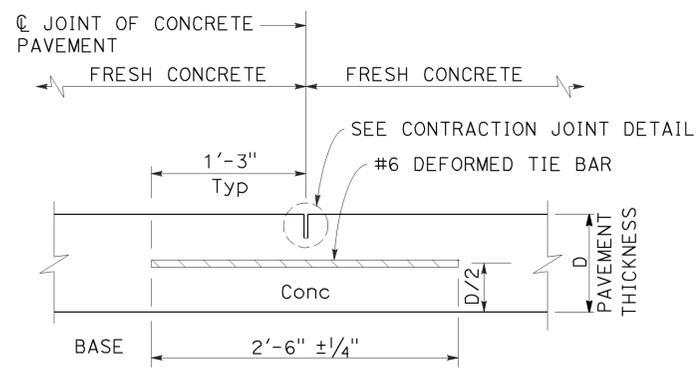
HORIZONTAL SKEW TOLERANCE



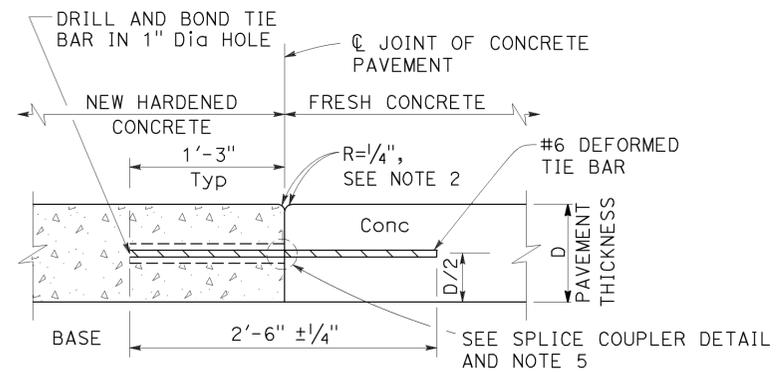
ELEVATION VERTICAL DEPTH TOLERANCE



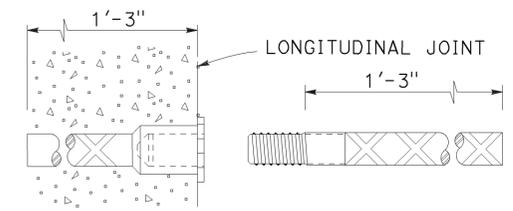
ELEVATION VERTICAL SKEW TOLERANCE



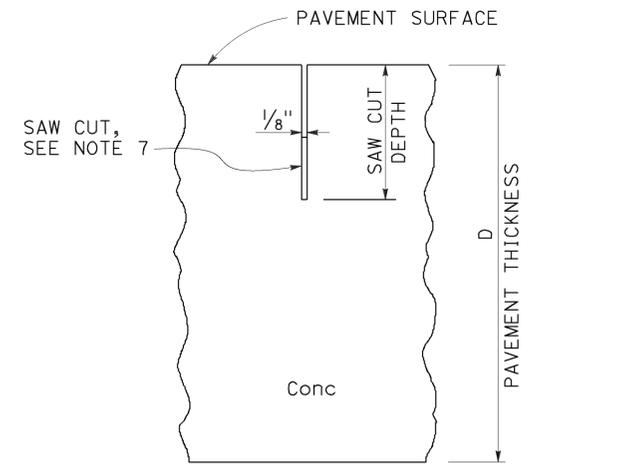
LONGITUDINAL CONTRACTION JOINT



LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE SPLICE COUPLER



CONTRACTION JOINT DETAIL

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar and tie bar placement and locations.
 2. Where new pavement is placed against existing concrete pavement, rounding the corner is not required.
 3. For dowel bar sizes, See Revised Standard Plan RSP P10.
 4. Tie bar details apply to inside widenings.
 5. Use either drill and bond or splice couplers.
 6. Full depth drilled hole. Fill hole with filler material.
 7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT - TIE BAR DETAILS
 NO SCALE

RSP P15 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

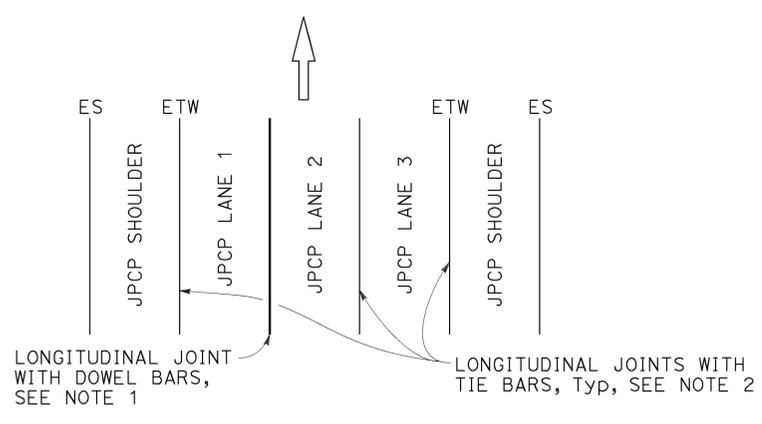
2010 REVISED STANDARD PLAN RSP P15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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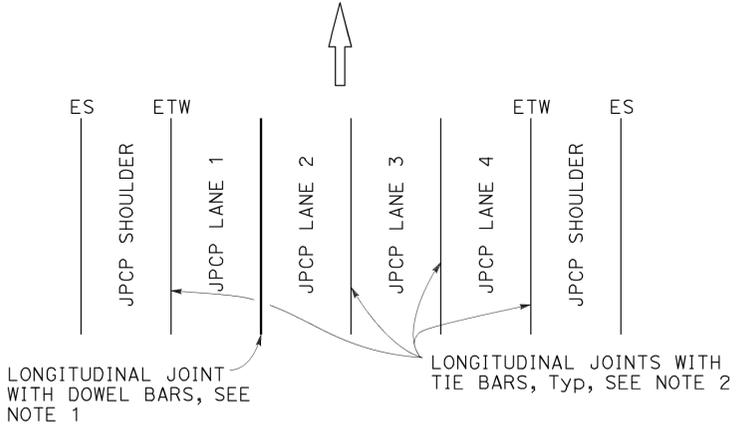
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



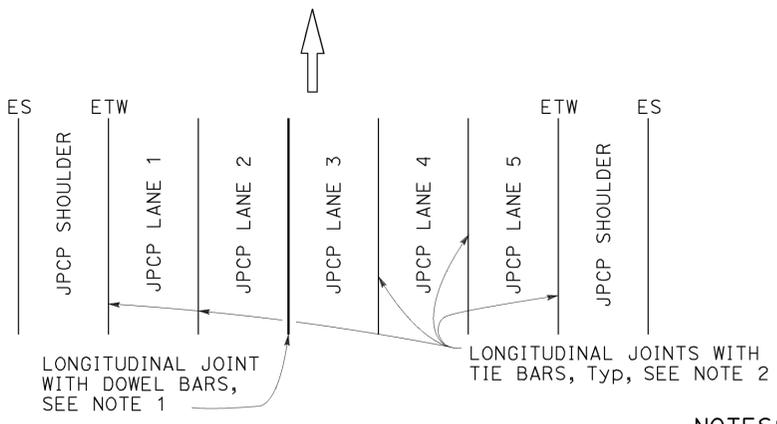
TO ACCOMPANY PLANS DATED 03-28-16



3 LANES WITH CONCRETE SHOULDERS
PLAN



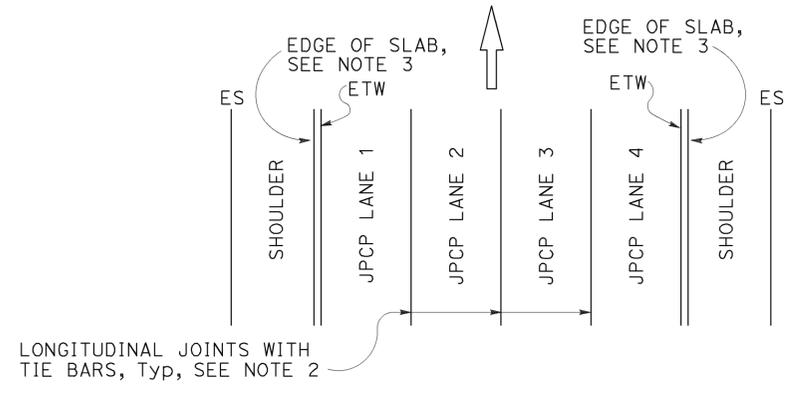
4 LANES WITH CONCRETE SHOULDERS
PLAN



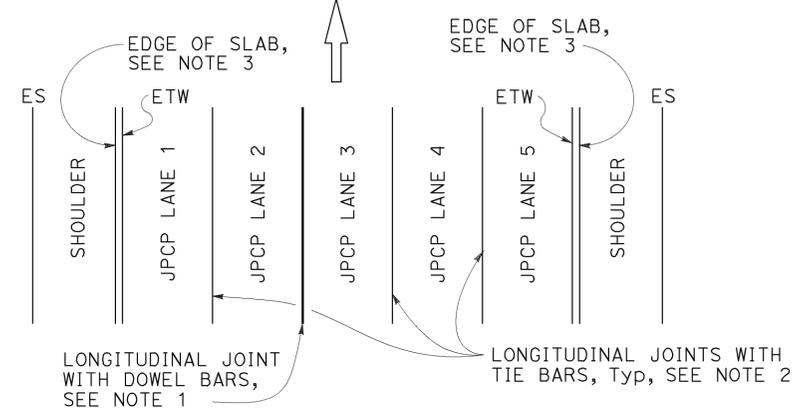
5 LANES WITH CONCRETE SHOULDERS
PLAN

NOTES:

- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P15 for longitudinal joint with tie bars.
- S = Reservoir depth.
 $S = \frac{7}{8}'' \pm \frac{1}{16}''$ for asphalt rubber seals
 $S = \frac{9}{16}'' \pm \frac{1}{16}''$ for silicone seals
 Preformed compression seals must be $\frac{13}{16}''$ wide and $S = 1\frac{1}{16}'' \pm \frac{1}{16}''$

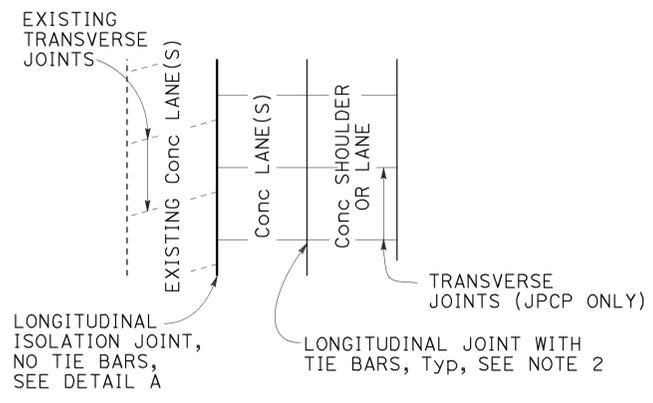


4 LANES OR LESS WITH AC SHOULDERS
PLAN



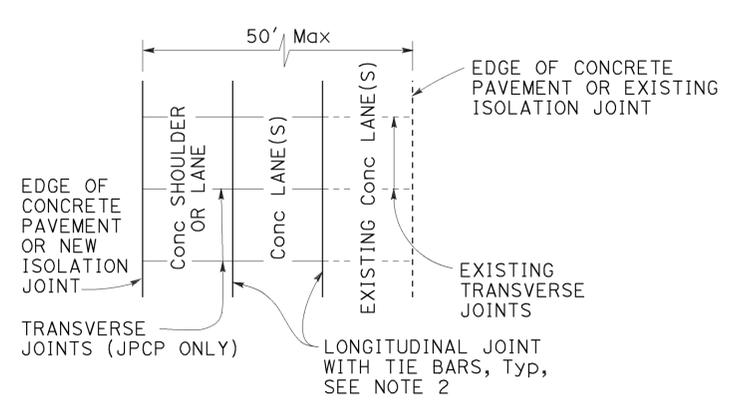
5 LANES WITH AC SHOULDERS
PLAN

NEW CONSTRUCTION
Location of Longitudinal Joints For JPCP



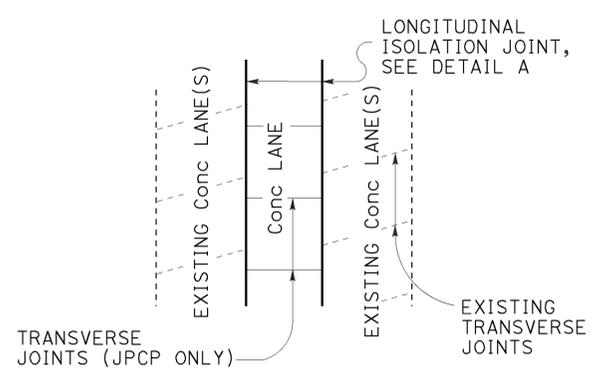
CASE 1
PLAN

Transverse Joints do not align between new and existing.



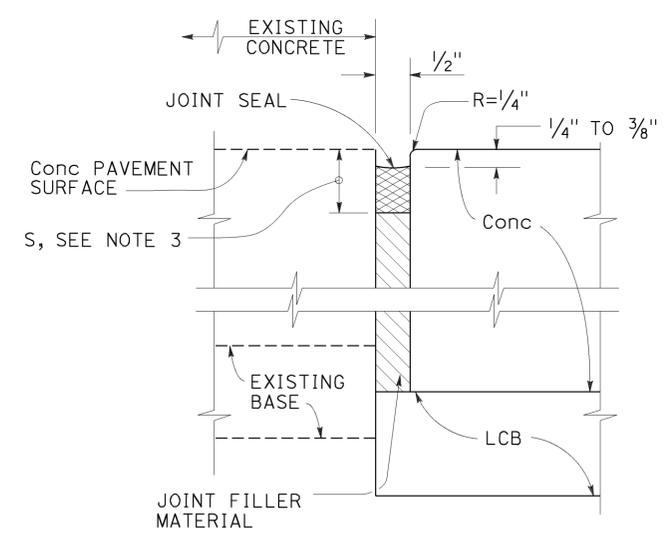
CASE 2
PLAN

Transverse Joints align between new and existing. (For JPCP only)



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN

Transverse Joints do not align between new and existing.



DETAIL "A"
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT
LANE SCHEMATICS
AND ISOLATION JOINT DETAIL**

NO SCALE

LANE/SHOULDER ADDITION OR RECONSTRUCTION
For JPCP and CRCP

RSP P18 DATED JULY 19, 2013 SUPERSEDES RSP P18 DATED APRIL 20, 2012 AND STANDARD PLAN P18 DATED MAY 20, 2011 - PAGE 135 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P18

2010 REVISED STANDARD PLAN RSP P18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	140	244

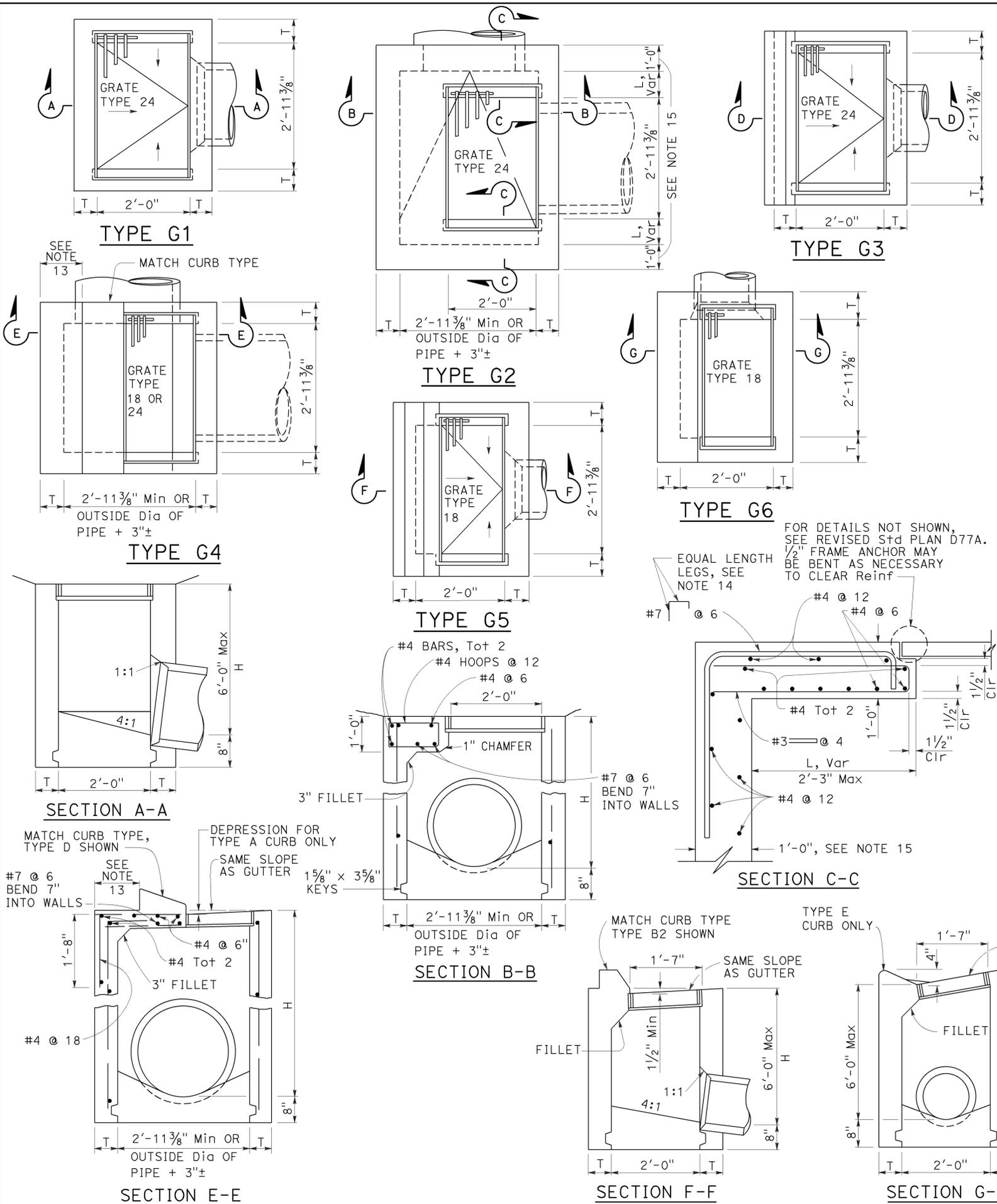
Glenn DeCou
REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

Glenn DeCou
No. C34547
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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2010 REVISED STANDARD PLAN RSP D73



- 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 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
 - Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round 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. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
 - Details shown apply to both metal and concrete pipe.
 - Pipe(s) can be placed in any wall.
 - Curb section shall match adjacent curb.
 - Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
 - Set inlet so that grate bars are parallel to direction of principal surface flow.
 - See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
 - See Standard Plan D78A for gutter depression details.
 - This dimension will vary with different grates, curbs types, box width and wall thickness.
 - Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
 - Where "L" is 6" or less, wall thickness shall be as shown in Table A.
 - 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 connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

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)
G-1	0.95	0.220	See Note A	SEE NOTE A
G-2*	1.31	0.255	3.50	0.357
G-3	1.03	0.220	See Note A	SEE NOTE A
G-4* (TYPE 24)	1.27	0.255	3.48	0.357
G-4* (TYPE 18)	1.30	0.255	3.50	0.357
G-5	1.02	0.220	SEE NOTE A	SEE NOTE A
G-6	1.04	0.220	SEE NOTE A	SEE NOTE A

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. * QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

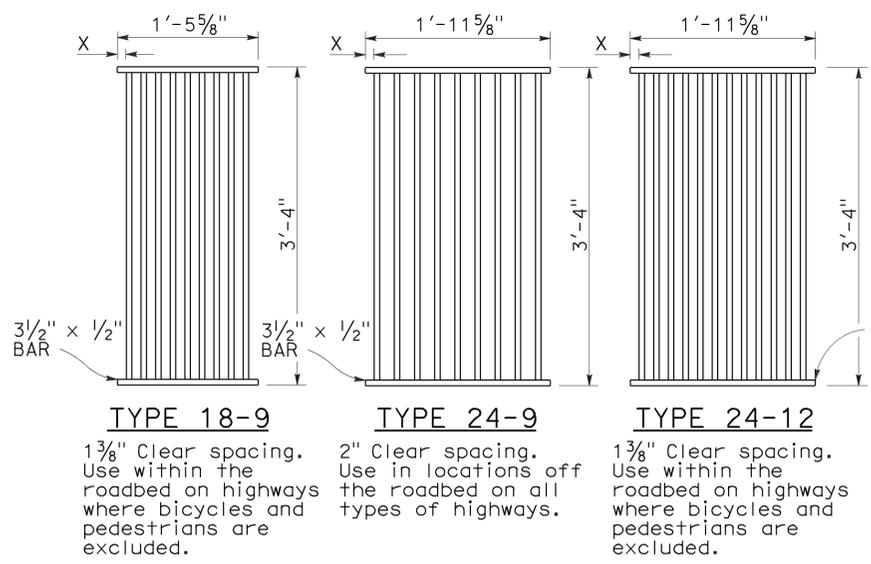
NOTE A:
Maximum allowable height 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

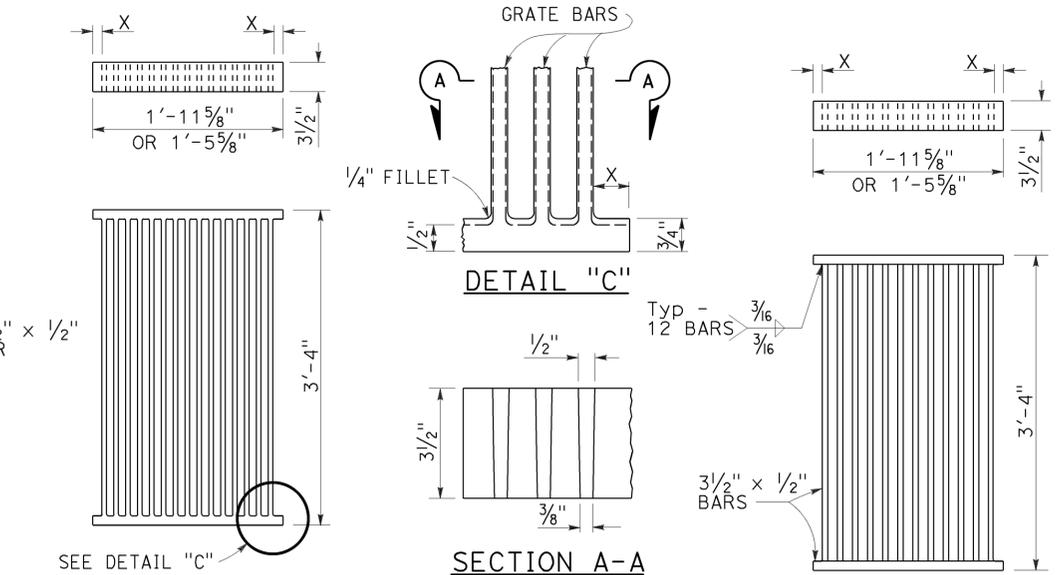
DRAINAGE INLETS
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

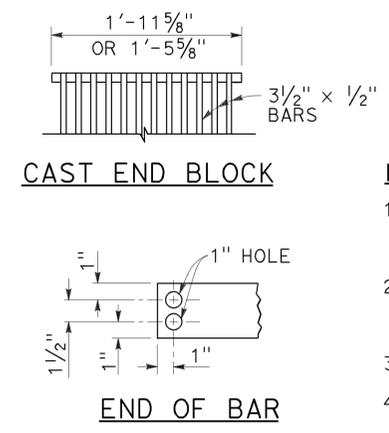
REVISED STANDARD PLAN RSP D73



RECTANGULAR GRATE DETAILS
(See table below)

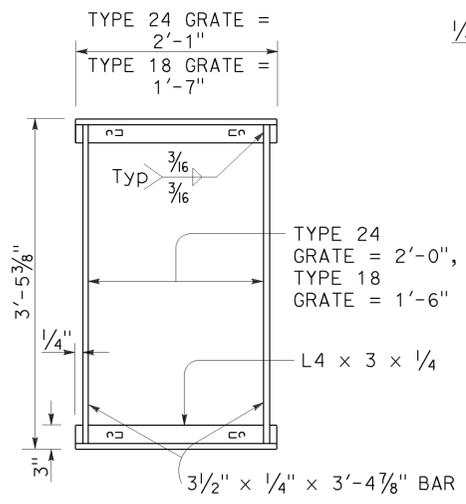


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE
ALTERNATIVE WELDED GRATE

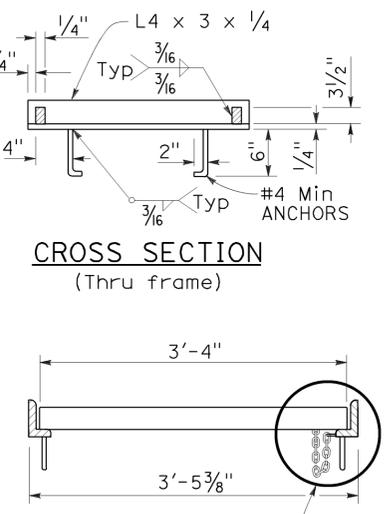


CAST END BLOCK
END OF BAR

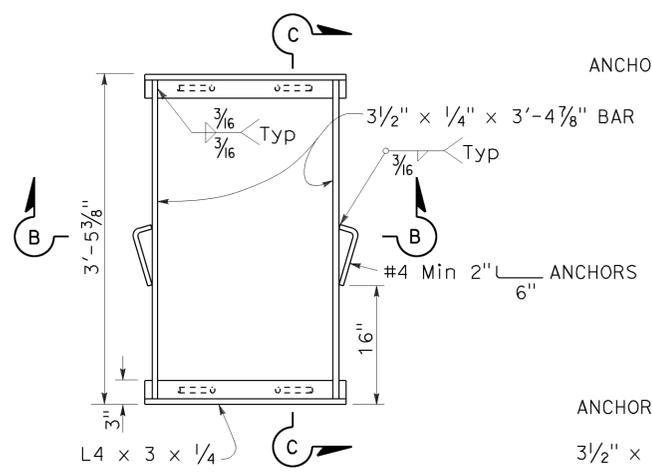
- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
 - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
 - Rounded top of bars optional on all grates.
 - Pipe inlets with a grate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



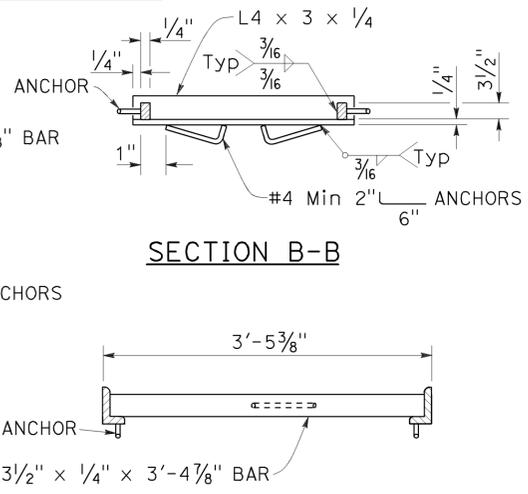
TYPICAL FRAME



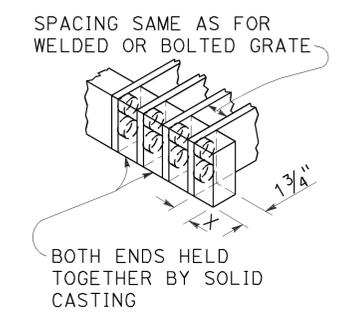
CROSS SECTION (Thru frame)
LONGITUDINAL SECTION (Thru frame and grate)



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

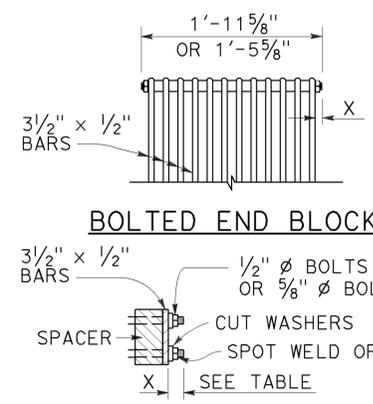
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

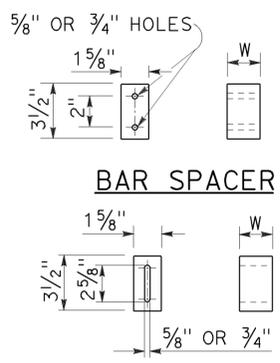
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

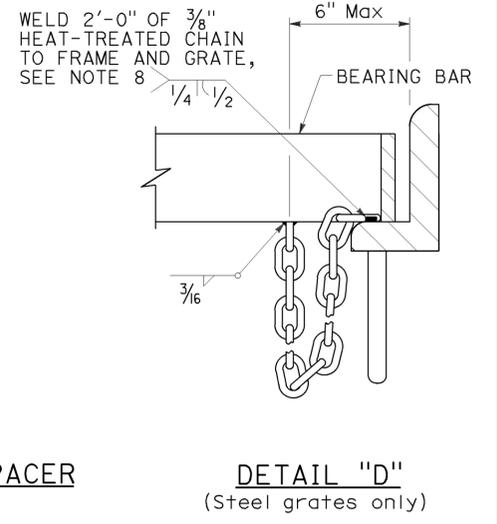
INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



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)

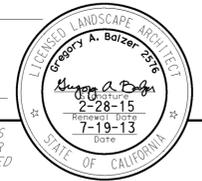
RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	142	244


 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED **03-28-16**

A

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

B

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

C

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

D

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

E

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

F

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

G

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

H

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

I

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

L

L LENGTH

M

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

N

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

O

O/C ON CENTER
 OD OUTSIDE DIAMETER
 OL OVERLAP

P

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

Q

Q QUARTER CIRCLE
 QCV QUICK COUPLING VALVE

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

R

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

S

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

T

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

U

UG UNDERGROUND

W

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

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

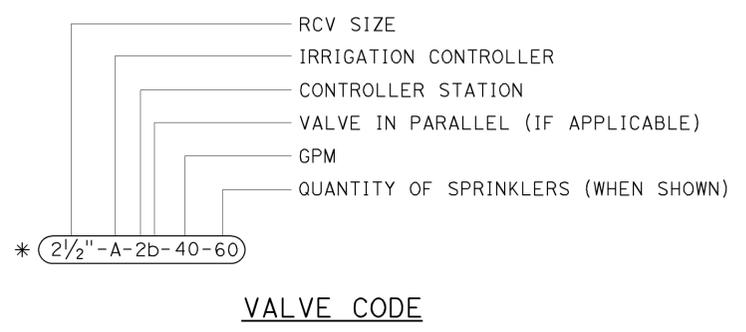
RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H1

2010 REVISED STANDARD PLAN RSP H1

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

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



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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	143	244

Gregory A. Balzer
LICENSED LANDSCAPE ARCHITECT

November 15, 2013
PLANS APPROVAL DATE

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LICENSED LANDSCAPE ARCHITECT
Gregory A. Balzer
2-28-15
11-15-13
DATE

TO ACCOMPANY PLANS DATED **03-28-16**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE AND EROSION CONTROL SYMBOLS
NO SCALE

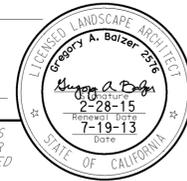
RSP H2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H2

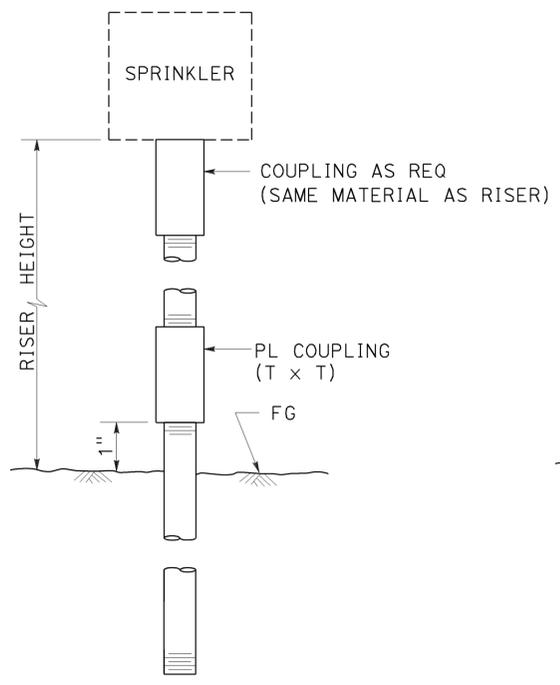
2010 REVISED STANDARD PLAN RSP H2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	144	244

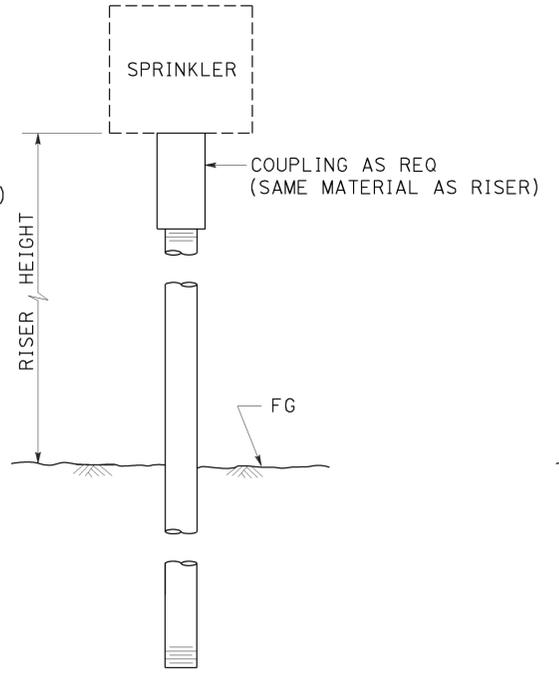
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



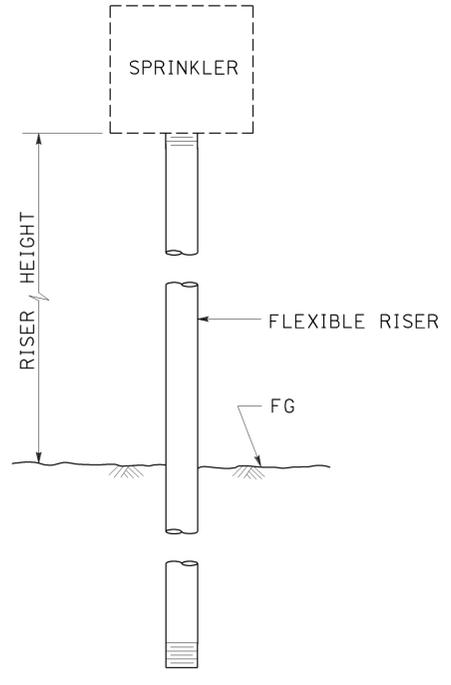
TO ACCOMPANY PLANS DATED 03-28-16



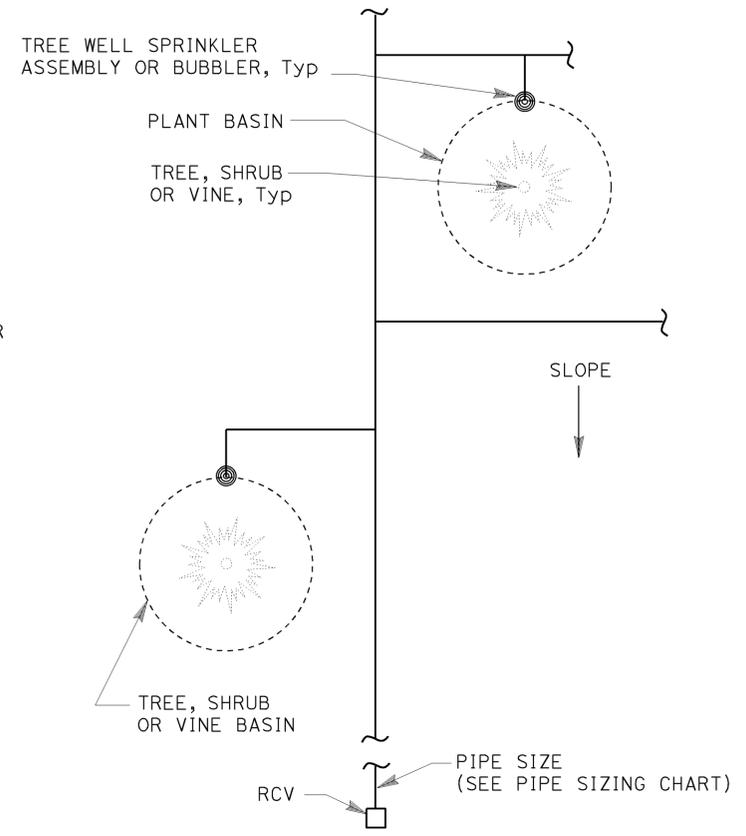
ELEVATION
RISER SPRINKLER
ASSEMBLY TYPE I



ELEVATION
RISER SPRINKLER
ASSEMBLY TYPE II



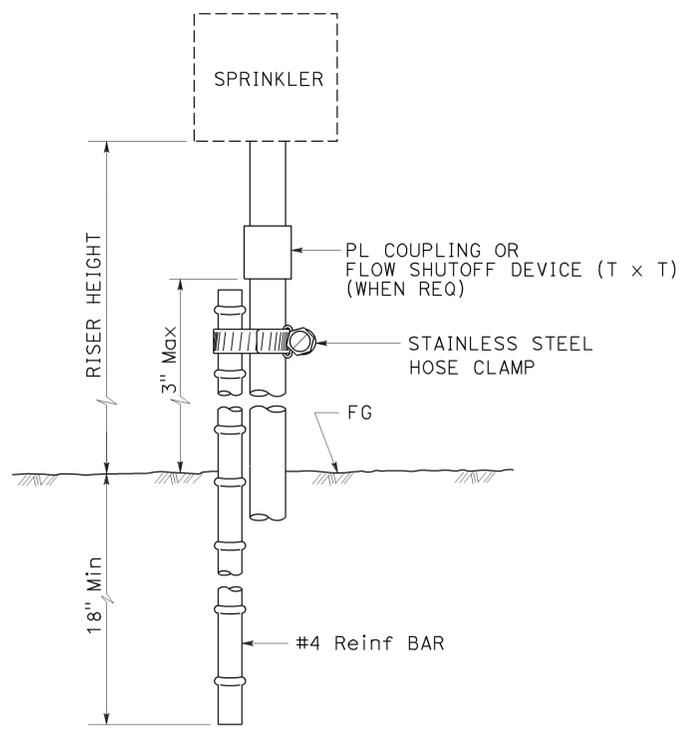
ELEVATION
RISER SPRINKLER
ASSEMBLY TYPE III



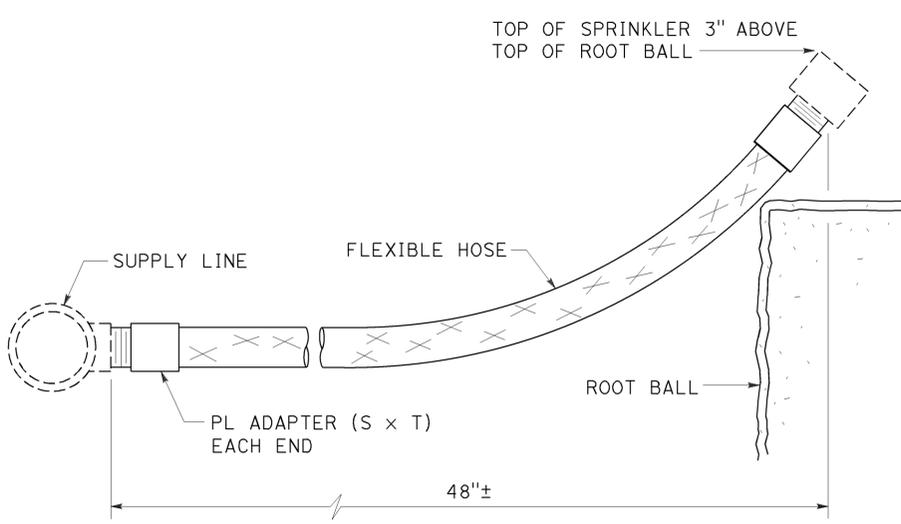
PLAN

NOTES:

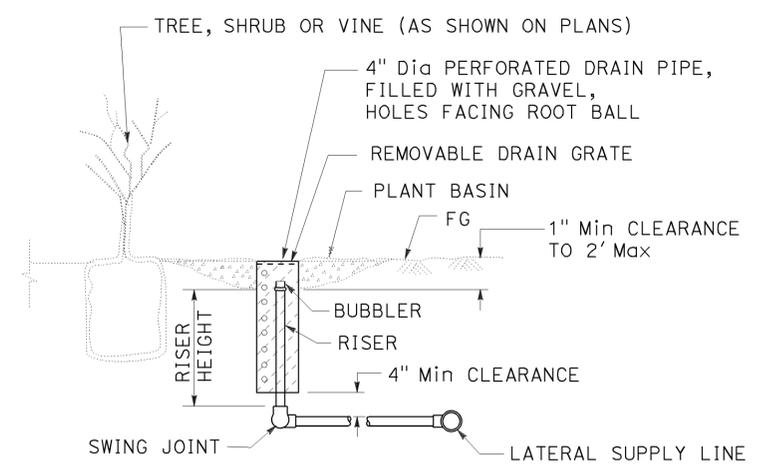
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



ELEVATION
RISER SPRINKLER
ASSEMBLY TYPE IV



ELEVATION
RISER SPRINKLER
ASSEMBLY TYPE V



SECTION
TREE WELL SPRINKLER ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS

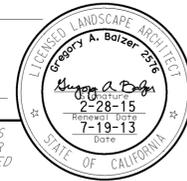
NO SCALE

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

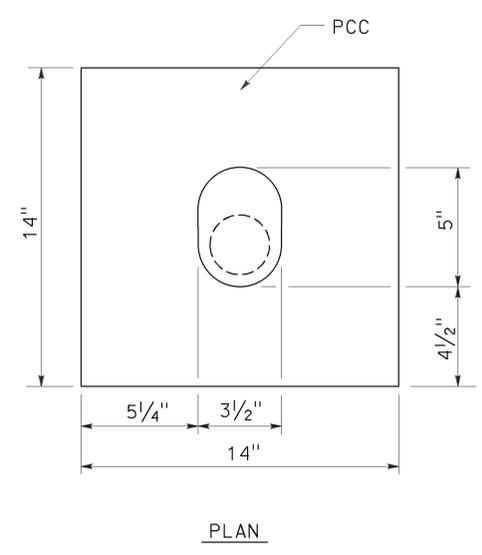
REVISED STANDARD PLAN RSP H5

2010 REVISED STANDARD PLAN RSP H5

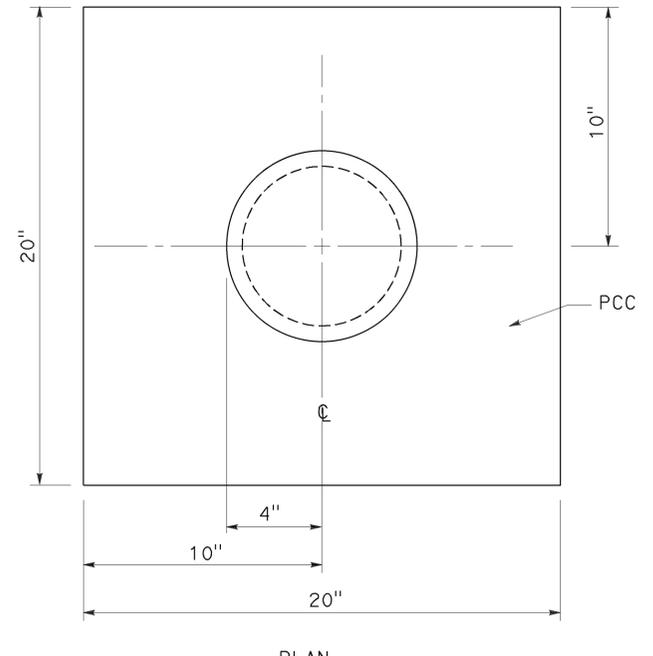
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	145	244
<i>Gregory A. Balzer</i> LICENSED LANDSCAPE ARCHITECT					
July 19, 2013 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



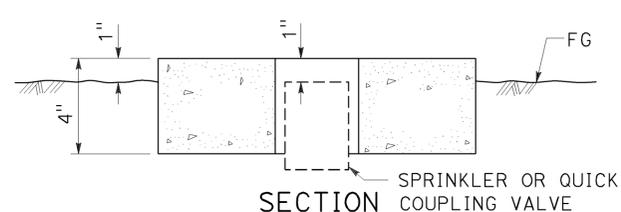
TO ACCOMPANY PLANS DATED **03-28-16**



PLAN

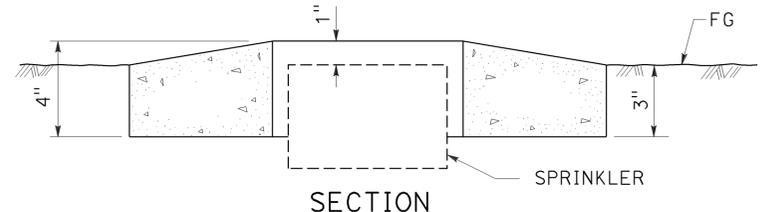


PLAN



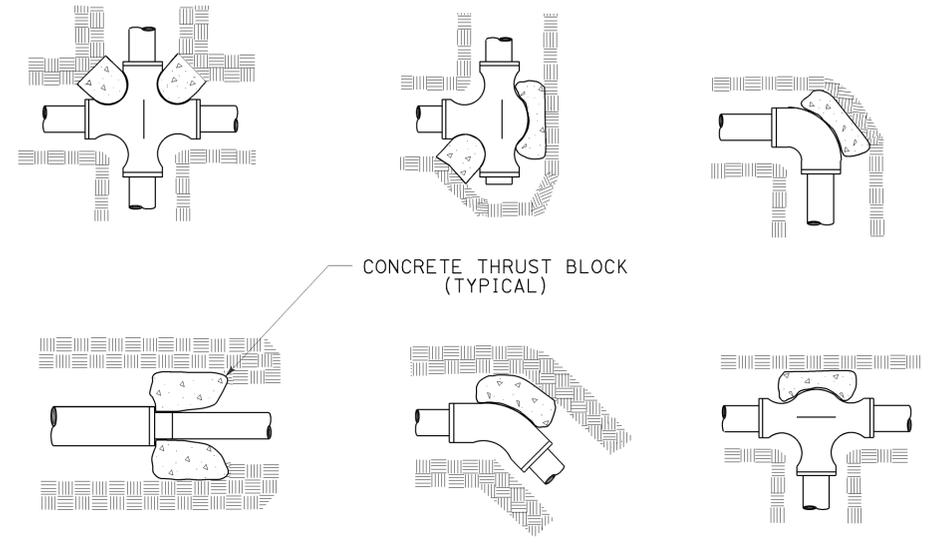
SECTION

SPRINKLER PROTECTOR TYPE I

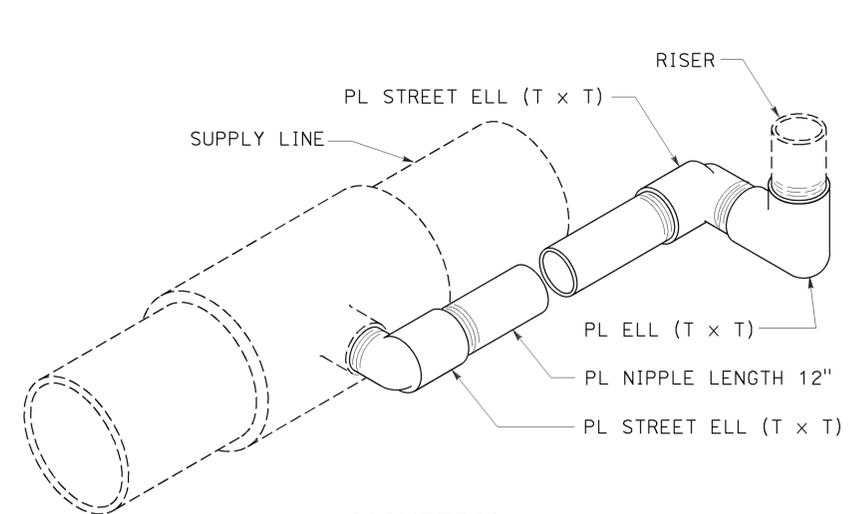


SECTION

SPRINKLER PROTECTOR TYPE II

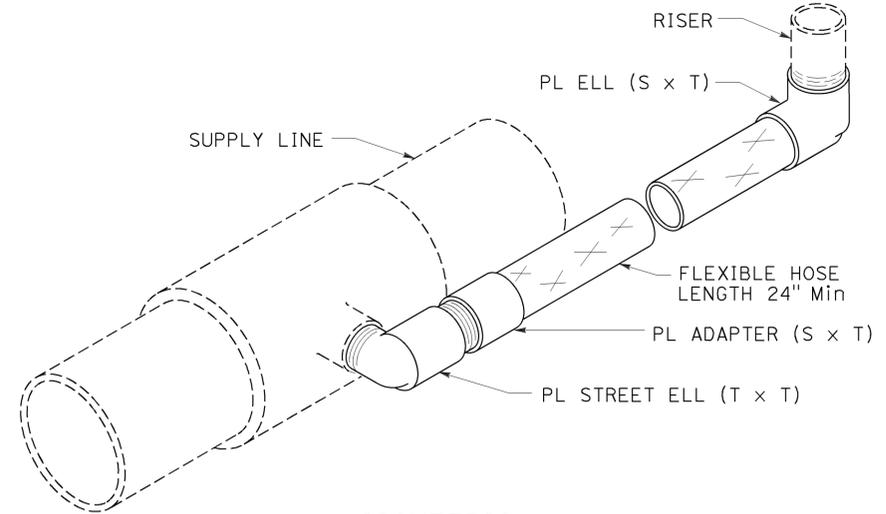


TYPICAL THRUST BLOCKS



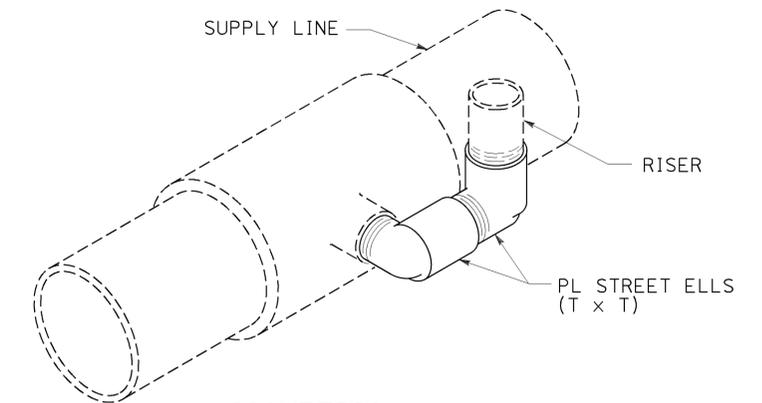
ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE I



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE II



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE III

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS

NO SCALE

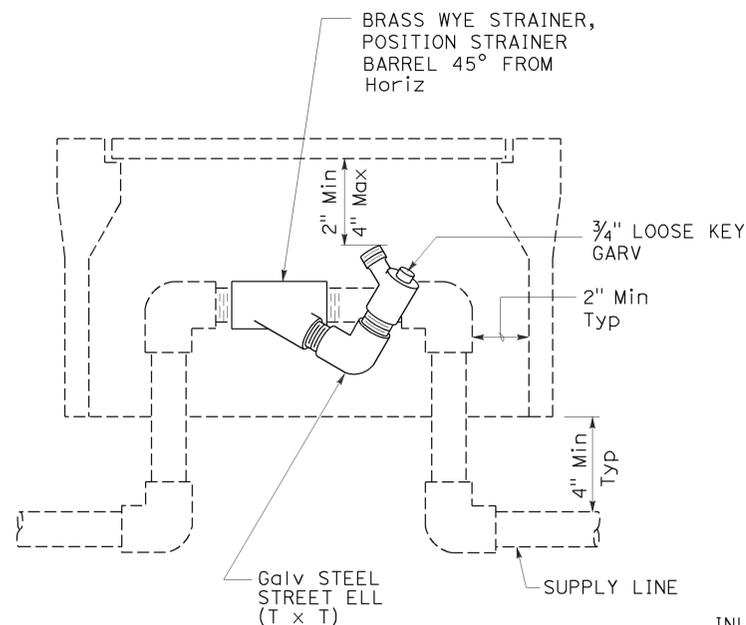
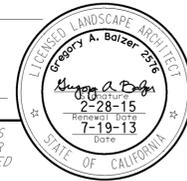
RSP H6 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H6

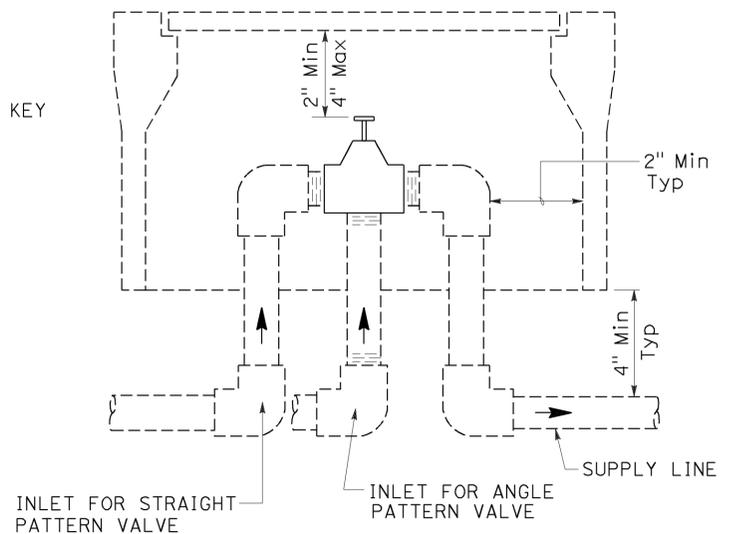
2010 REVISED STANDARD PLAN RSP H6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	146	244

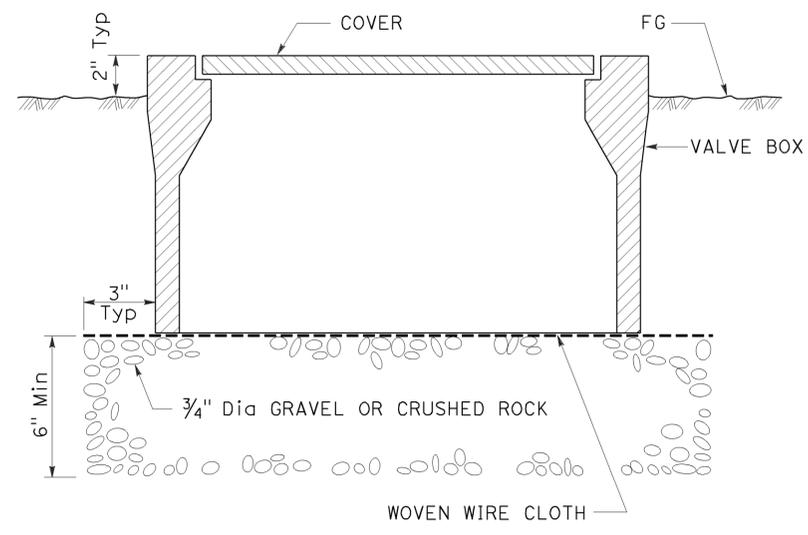
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



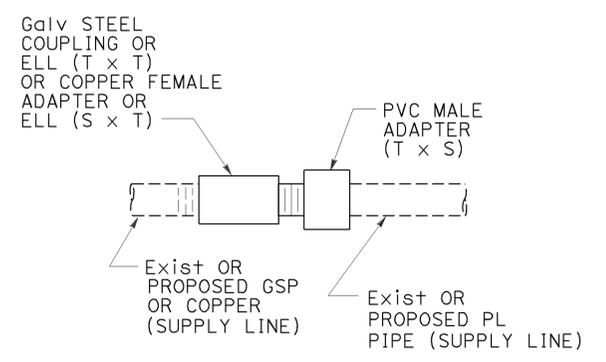
ELEVATION
WYE STRAINER ASSEMBLY



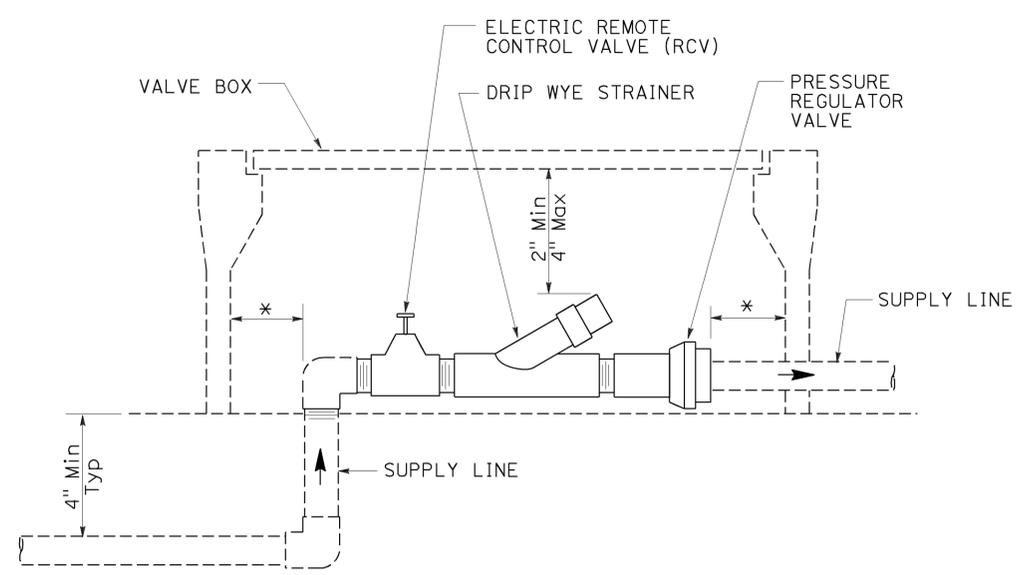
ELEVATION
VALVE



SECTION
VALVE BOX



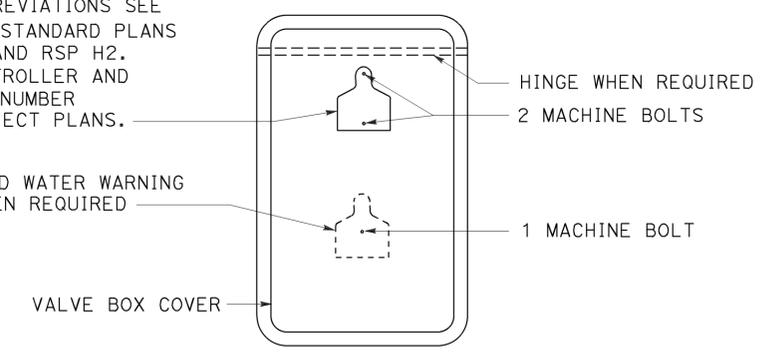
GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE



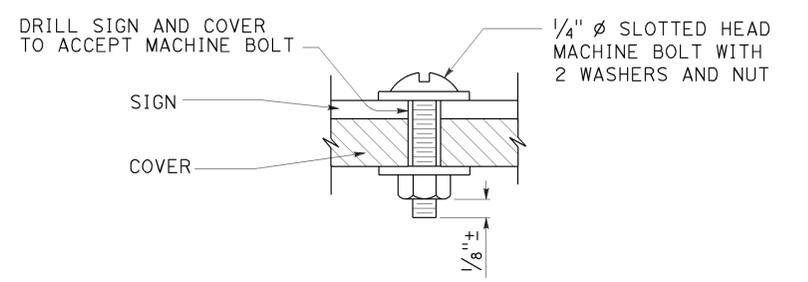
ELEVATION
DRIP VALVE ASSEMBLY

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

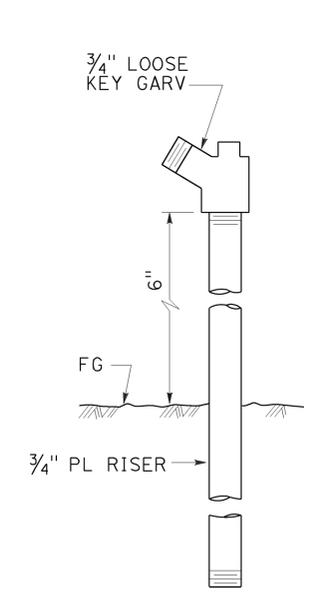
RECYCLED WATER WARNING
SIGN WHEN REQUIRED



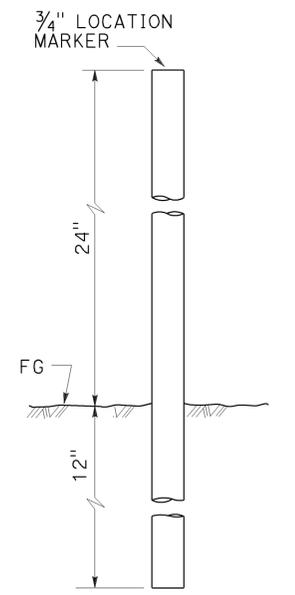
PLAN



SECTION
VALVE BOX IDENTIFICATION



ELEVATION
GARDEN VALVE ASSEMBLY



ELEVATION
LOCATION MARKER

GARDEN VALVE ASSEMBLY

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE DETAILS

NO SCALE

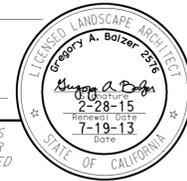
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H7

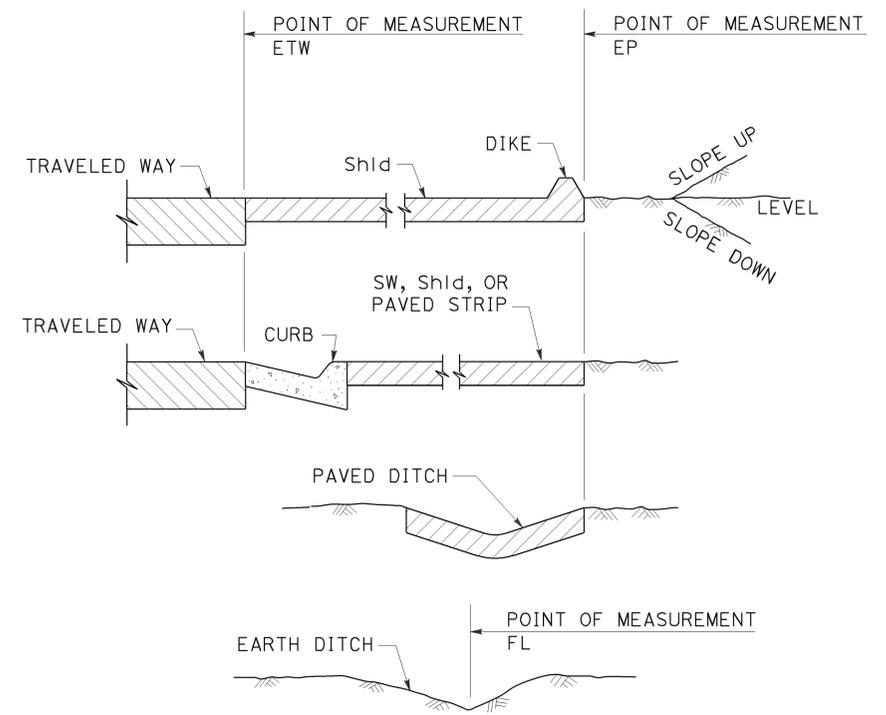
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	147	244

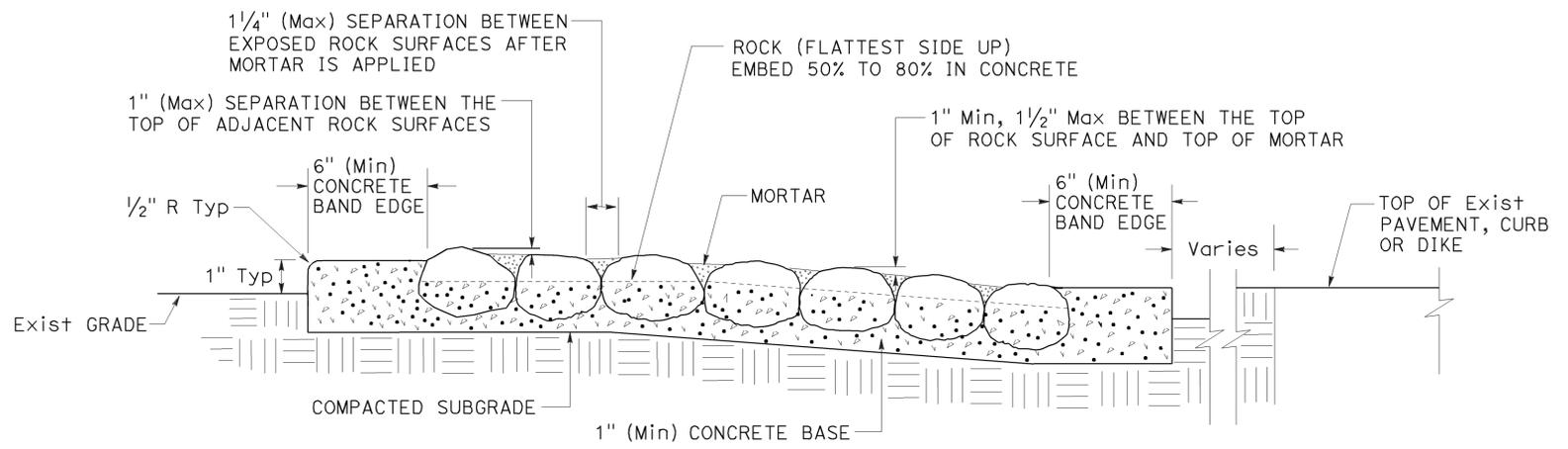
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



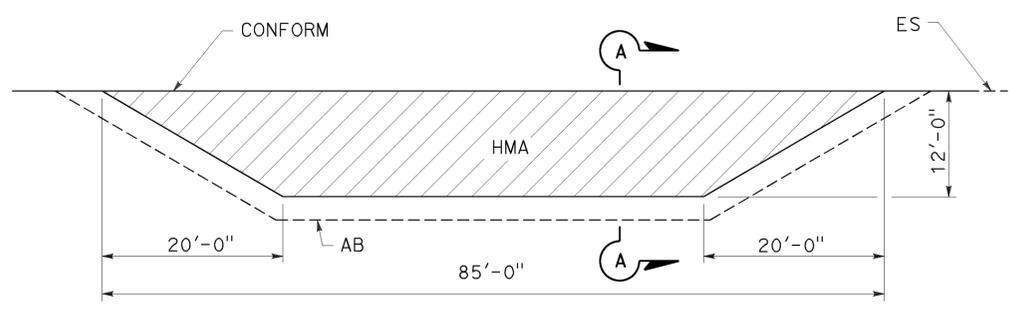
TO ACCOMPANY PLANS DATED 03-28-16



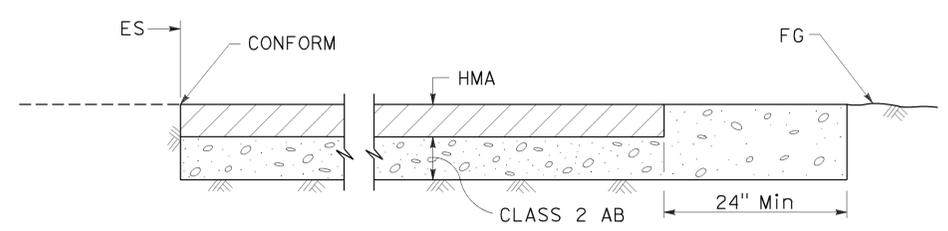
**SECTION
POINTS OF MEASUREMENT**



**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

TO ACCOMPANY PLANS DATED **03-28-16**

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.

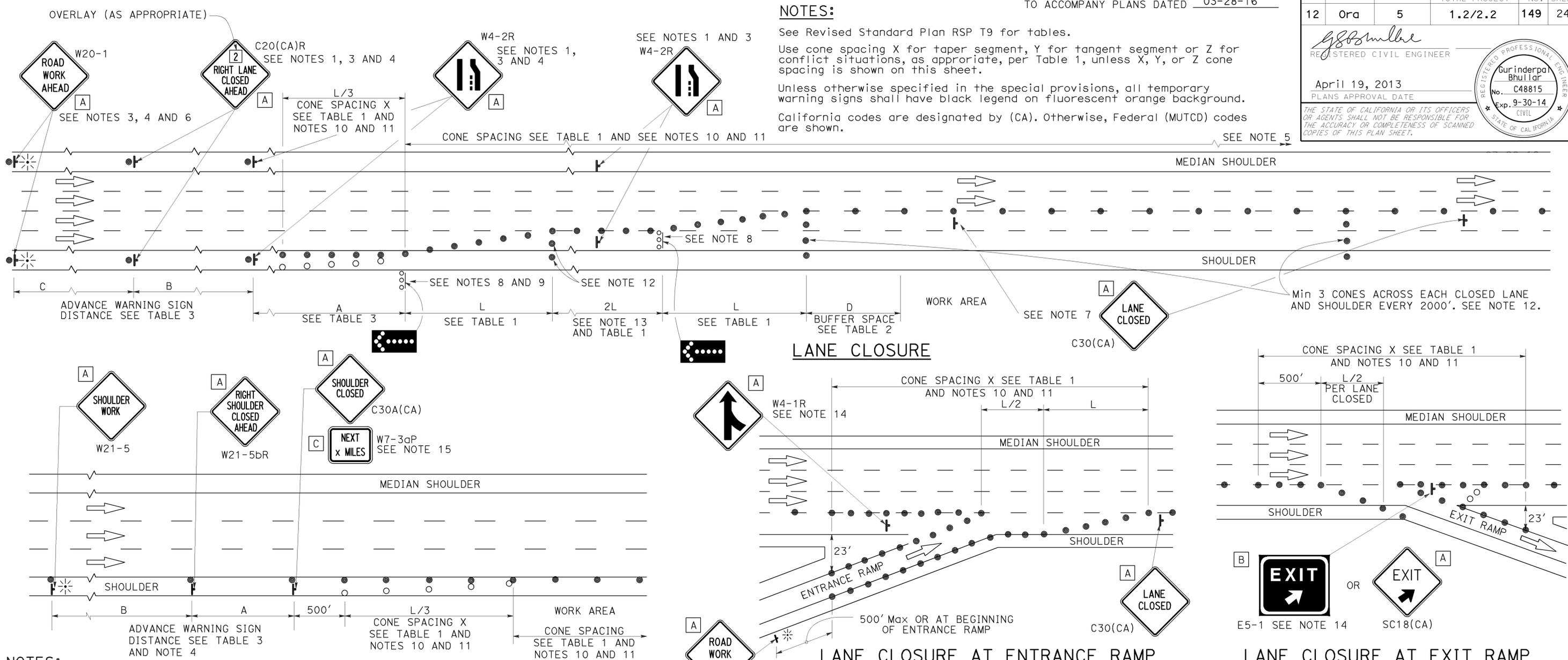
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	149	244

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.

- NOTES:**
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
12	Ora	5	1.2/2.2	150	244

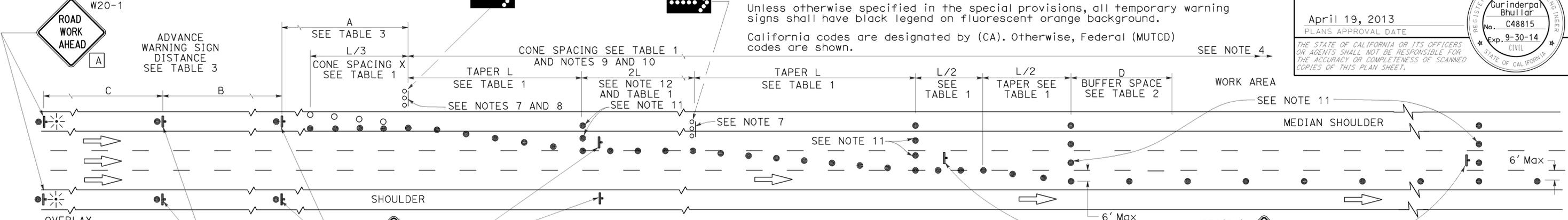
REGISTERED CIVIL ENGINEER
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 STATE OF CALIFORNIA

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.

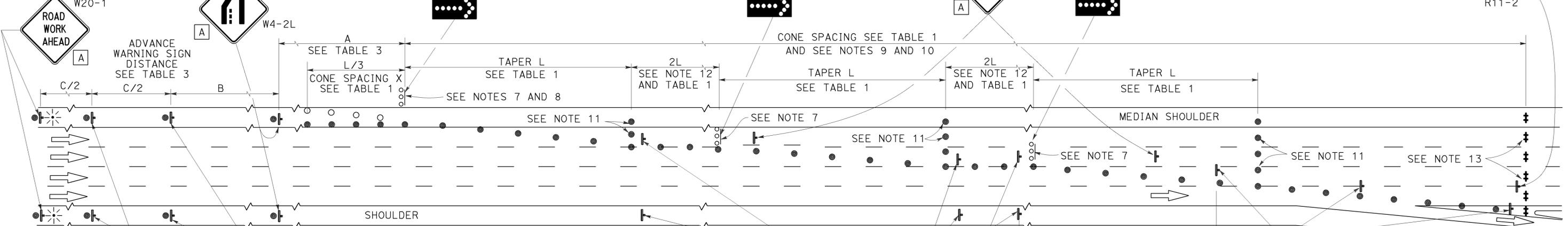
NOTES: See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
 Unless otherwise specified in the special provisions, all temporary warning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

SEE NOTES 3 AND 5



LANE CLOSURE WITH PARTIAL SHOULDER USE

SEE NOTES 3 AND 5



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

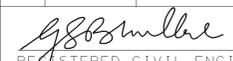
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURES ON
 FREEWAYS AND EXPRESSWAYS**
 NO SCALE

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

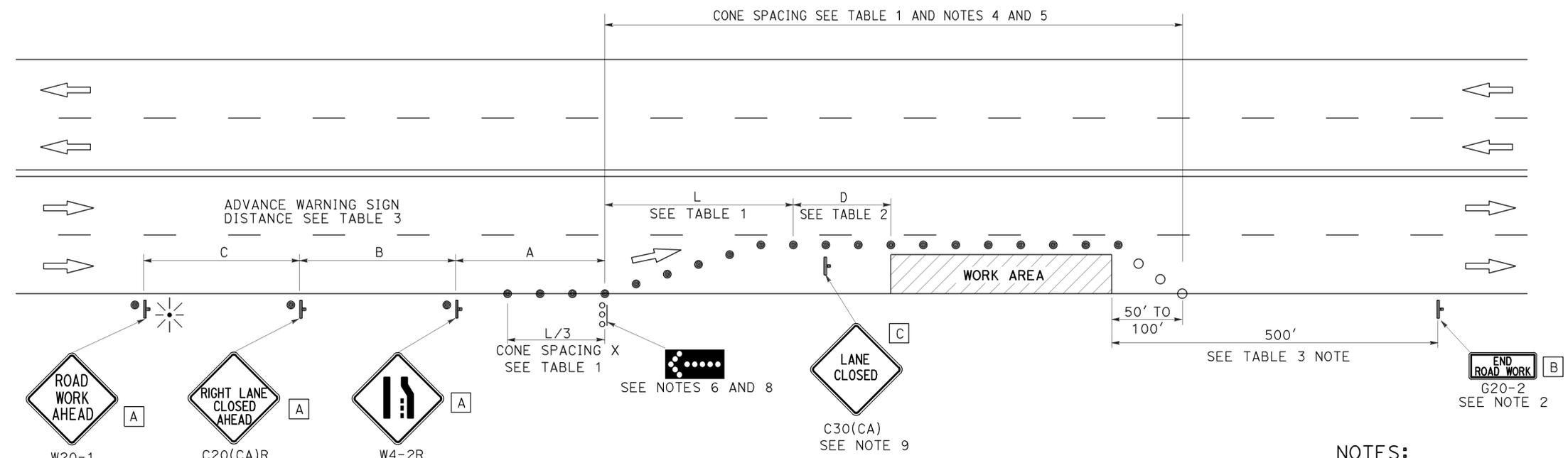
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	151	244


 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.

TO ACCOMPANY PLANS DATED 03-28-16



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.

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

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

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

NOTES:

- Each advance warning 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. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, 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.
- 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.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- 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.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

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 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR LANE CLOSURE ON
MULTILANE CONVENTIONAL
HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11
DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

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
12	Ora	5	1.2/2.2	152	244

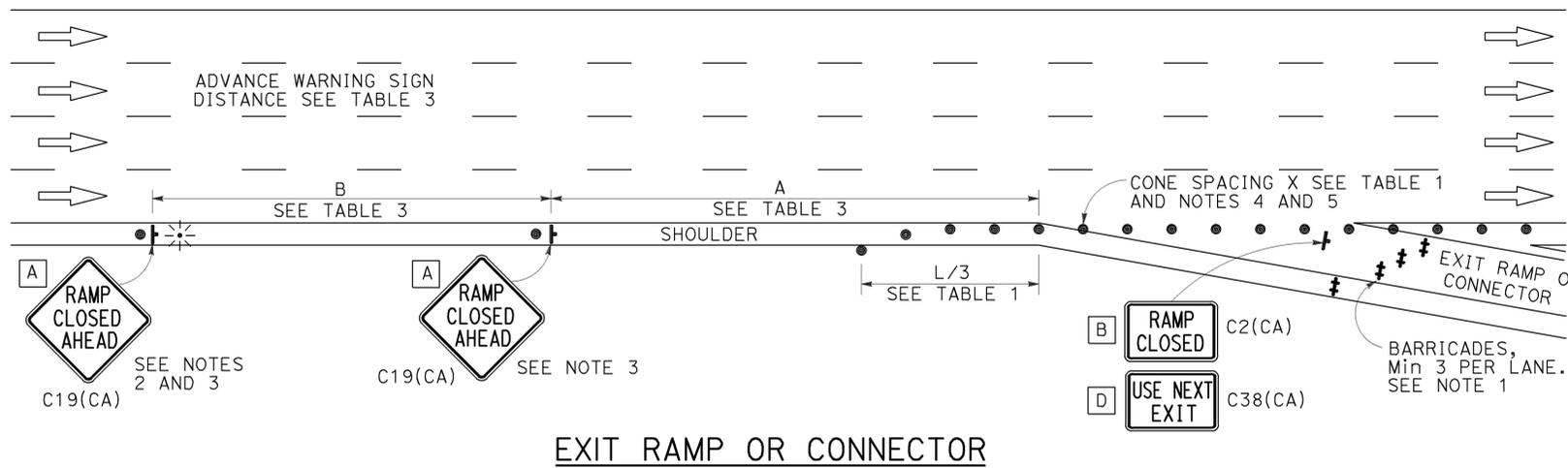
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

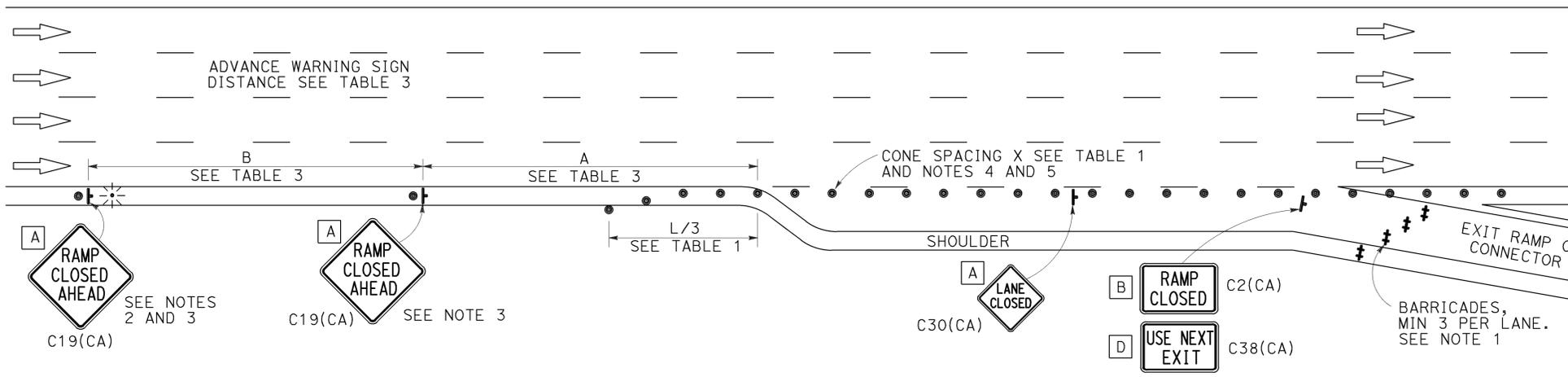
TO ACCOMPANY PLANS DATED **03-28-16**

NOTES:

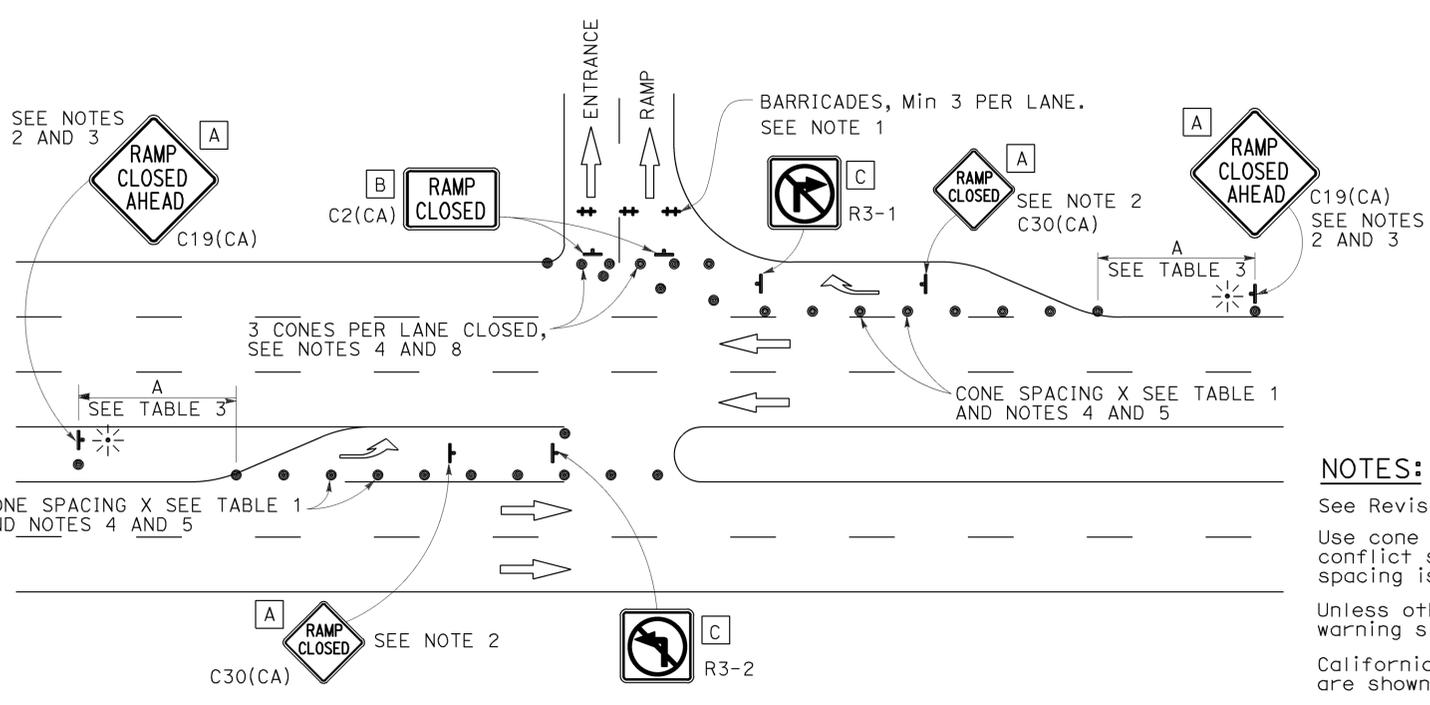
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



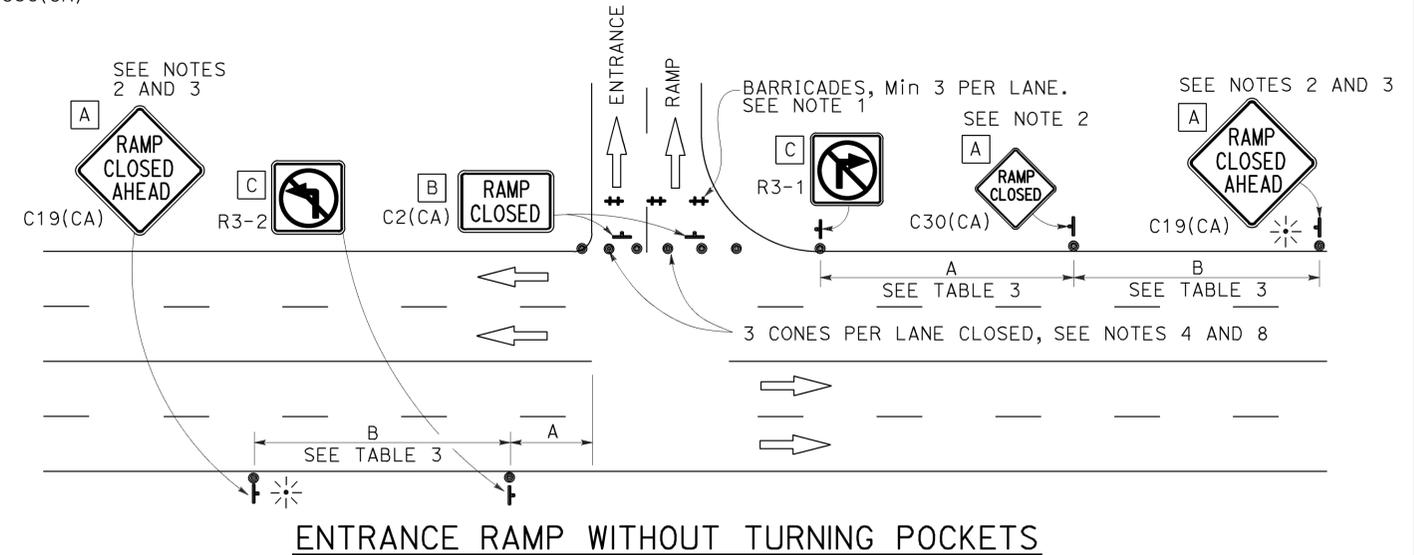
EXIT RAMP OR CONNECTOR



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

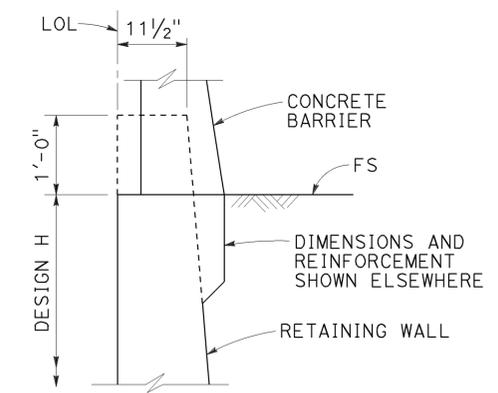
2010 REVISED STANDARD PLAN RSP T14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	153	244

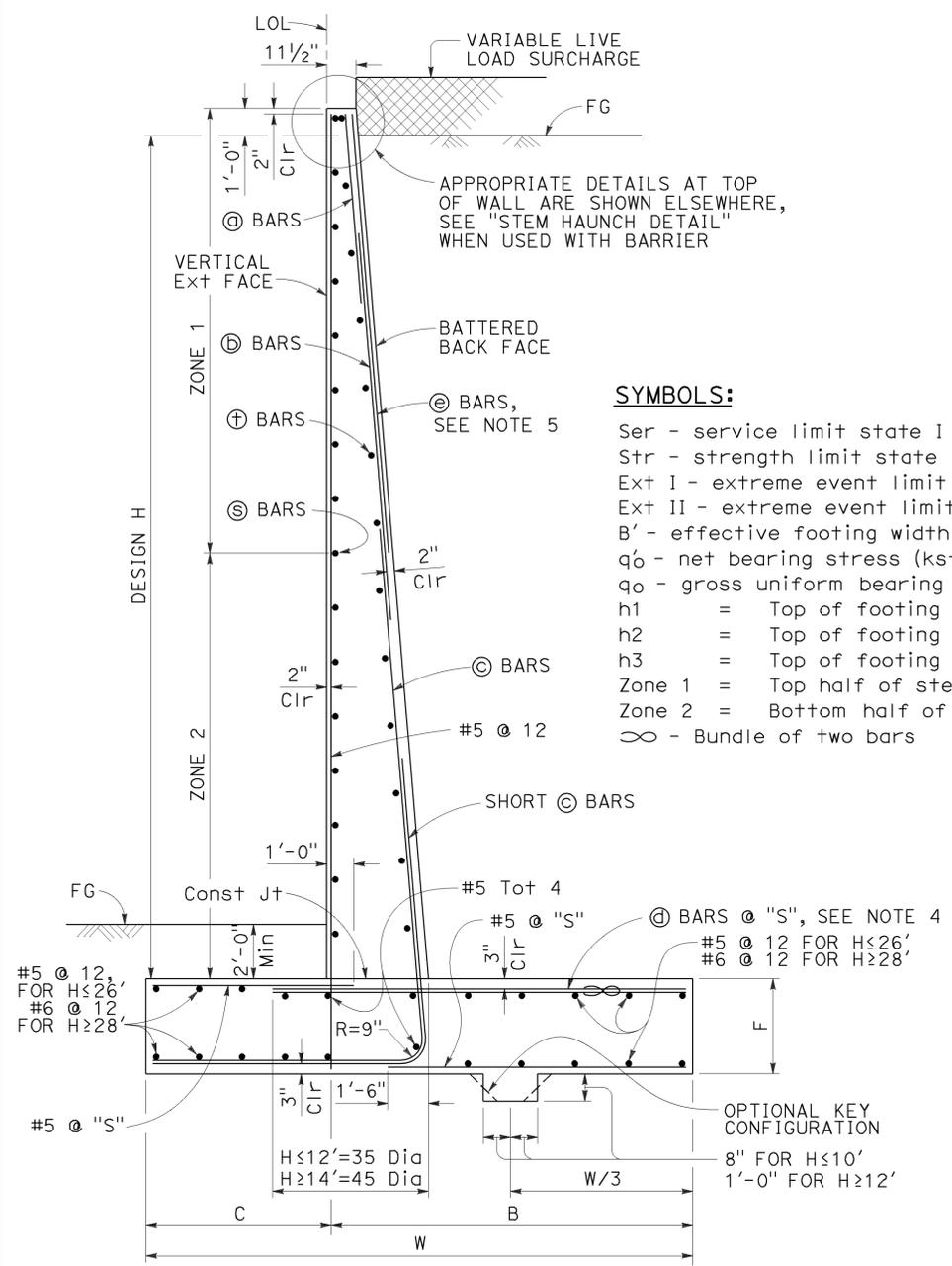
Gary Wang
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

DESIGN CONDITIONS:

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.



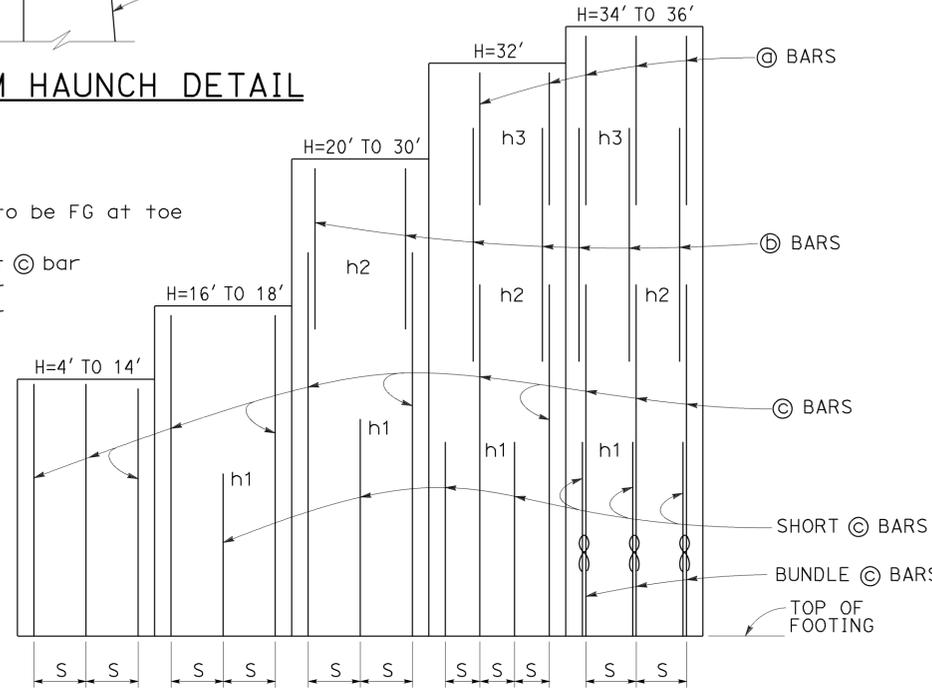
STEM HAUNCH DETAIL



TYPICAL SECTION

SYMBOLS:

- Ser - service limit state I
- Str - strength limit state I
- Ext I - extreme event limit state I
- Ext II - extreme event limit state II
- B' - effective footing width (ft)
- q₀ - net bearing stress (ksf), OG assumed to be FG at toe
- q_o - gross uniform bearing stress (ksf)
- h₁ = Top of footing to top of short ⊙ bar
- h₂ = Top of footing to top of ⊕ bar
- h₃ = Top of footing to top of ⊖ bar
- Zone 1 = Top half of stem height
- Zone 2 = Bottom half of stem height
- ∞ - Bundle of two bars



ELEVATION

DESIGN NOTES:

- TO ACCOMPANY PLANS DATED 03-28-16
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
 - LS: Varied surcharge on level ground surface
 - DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
 - CT: 54 kip transverse force applied at H_e = 32', distributed over 10 feet at the top of wall and 1:1 distribution down and outward. Distribution below footing taken no less than 40'.
 - SEISMIC: k_H = 0.2, k_V = 0.0
 - SOIL: φ = 34°, γ = 120 pcf
 - REINFORCED CONCRETE: f'_c = 3,600 psi, f_y = 60,000 psi
 - LOAD COMBINATIONS AND LIMIT STATES:
 - Service I Q = 1.00DC+1.00EV+1.00EH+1.00LS
 - Strength I Q = αDC+βEV+ηEH+1.75LS
 - Extreme I Q = 1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE
 - Extreme II Q = 1.00DC+1.00EV+1.00EH+1.00CT
 - Where:
 - Q: Force Effects
 - α: 1.25 or 0.90, Whichever Controls Design
 - β: 1.35 or 1.00, Whichever Controls Design
 - η: 1.50 or 0.90, Whichever Controls Design
 - DC: Dead Load of Structure Components
 - EH: Horizontal Earth Fill Pressure
 - EV: Vertical Earth Pressure from Earth Fill Weight
 - LS: Live Load Surcharge
 - EQE: Seismic Earth Pressure
 - EQD: Soil and Structural and Nonstructural Components Inertia
 - CT: Vehicular Collision Force

NOTES:

1. For details not shown and drainage notes see RSP B3-5
2. For wall stem joint details see B0-3 3-3 and B0-3 3-4
3. At ⊙ bars:
 - H ≤ 6', no splices are allowed within 1'-8" above the top of footing.
 - H > 6', no splices are allowed within H/4 above the top of footing.
4. Bundle ⊗ bars for H = 34' & 36'.
5. Provide #6 @ 10" x 15'-0" ⊙ bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations. For H ≤ 14', hook ⊙ bar into footing and reduce bar length as needed to maintain Min CLR cover.

DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	13'-3"	14'-6"	15'-9"	17'-1"	18'-5"	19'-10"	21'-2"	22'-7"	24'-0"
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-2"	7'-8"	8'-2"	9'-0"
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-9"	9'-6"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-8"	1'-9"	1'-9"	1'-11"	2'-2"	2'-5"	2'-10"	3'-3"	3'-6"	4'-0"	4'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	7/8: 12	1: 12	1: 12	1: 12
SPACING "S"	9"	9"	9"	9"	9"	7"	6"	5"	6"	6"	6"	6"	6"	6"	6"	10"	8"
⊙ BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
⊕ BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#7	#7	#7
⊖ BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#11	#11	#11
⊗ BARS	#5	#5	#6	#6	#6	#6	#9	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h ₁	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-1"	11'-0"	12'-1"	13'-0"	13'-0"	12'-7"	11'-6"
h ₂	-	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	19'-0"	18'-0"	20'-2"
h ₃	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-2"	21'-10"	24'-0"
ZONE 1 ⊖ BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 ⊖ BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12
ZONE 1 ⊕ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
ZONE 2 ⊕ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ser: B', q ₀	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	11.0, 2.4	12.1, 2.5	13.2, 2.8	14.4, 2.9	15.5, 3.1	16.8, 3.3	18.0, 3.5	19.2, 3.7	20.6, 3.7
Str: B', q _o	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	7.4, 3.8	8.2, 4.1	9.0, 4.4	9.9, 4.6	10.7, 4.9	11.7, 5.2	12.6, 5.4	13.6, 5.8	14.6, 5.9
Ext I: B', q _o	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.6, 6.4	5.0, 6.9	5.3, 7.6	5.8, 8.1	6.1, 8.9	6.7, 9.4	7.1, 10.0	7.5, 10.7	8.2, 10.9
Ext II: B', q _o	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	9.8, 3.0	11.2, 3.1	12.5, 3.2	13.9, 3.4	15.2, 3.6	16.7, 3.8	18.0, 4.0	19.3, 4.2	20.8, 4.3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RETAINING WALL TYPE 1 (CASE 1)
NO SCALE

RSP B3-1A DATED APRIL 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP B3-1A

TO ACCOMPANY PLANS DATED **03-28-16**

2010 REVISED STANDARD PLAN RSP B3-5

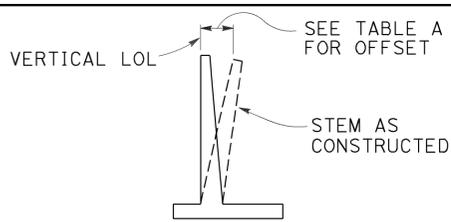
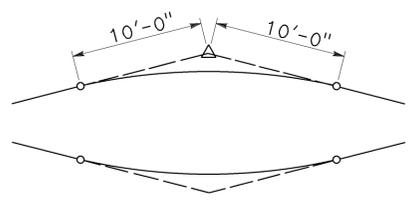


TABLE A

H	OFFSET
4'-12'	H/200
14'-16'	H/160
18'-20'	H/140
22'-24'	H/130
26'-36'	2 1/2"

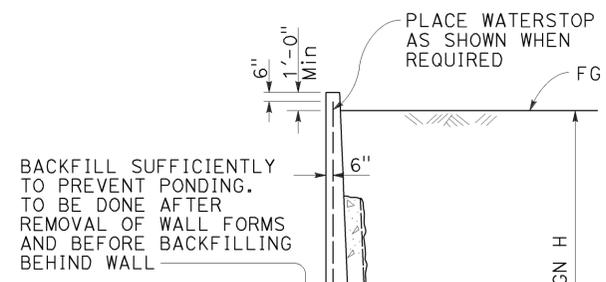
APPROXIMATE WALL OFFSET VALUES

Values for offsetting forms to be determined by the Engineer.



20'-0" VC AT TOP OF WALL SLOPE CHANGE

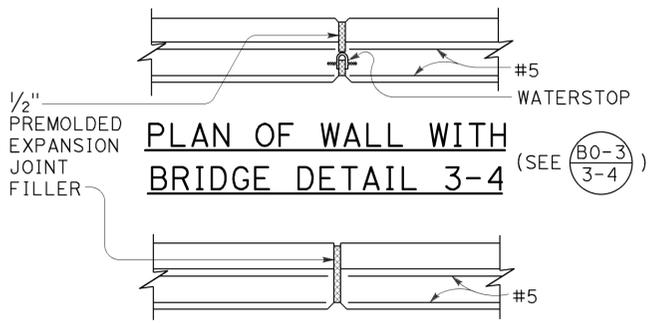
Where shown on the plans



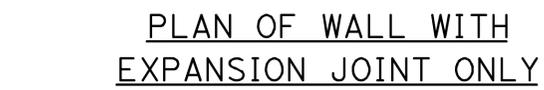
BACKFILL SUFFICIENTLY TO PREVENT PONDING. TO BE DONE AFTER REMOVAL OF WALL FORMS AND BEFORE BACKFILLING BEHIND WALL.

PLACE CONCRETE IN TOE AGAINST UNDISTURBED MATERIAL EXCEPT AS PERMITTED BY THE ENGINEER.

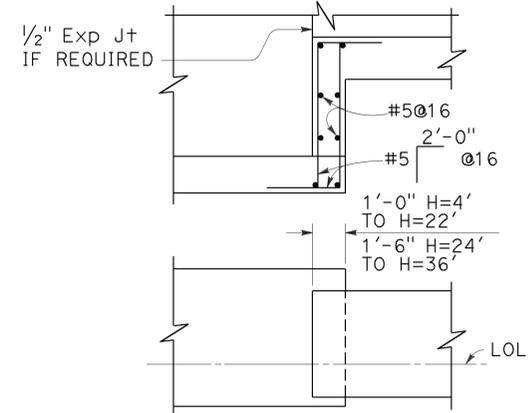
DESIGN AND DRAINAGE



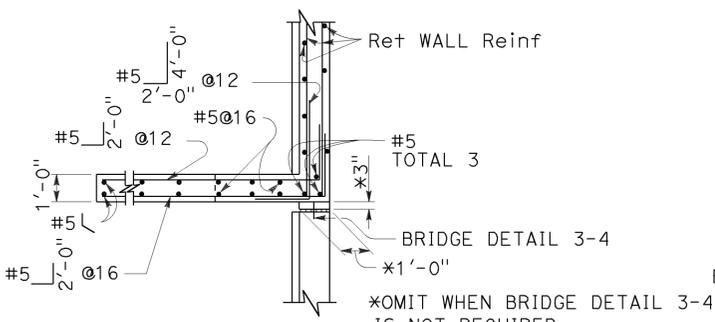
PLAN OF WALL WITH BRIDGE DETAIL 3-4



PLAN OF WALL WITH EXPANSION JOINT ONLY

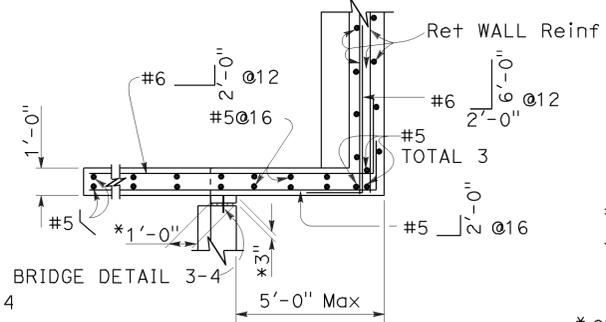


FOOTING STEP



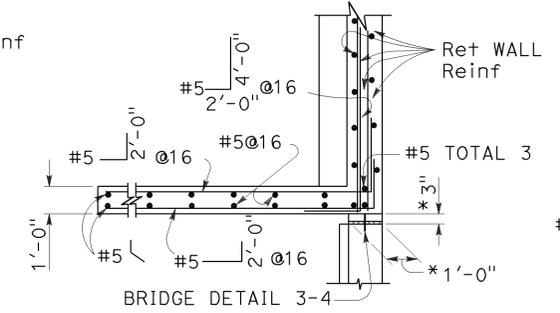
PLAN

(For return wall Type "A")



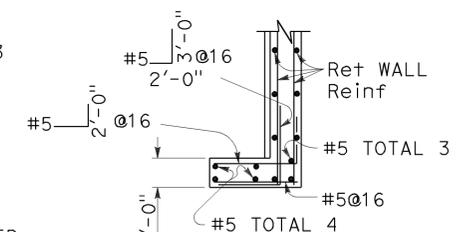
PLAN

(For return wall Type "B")



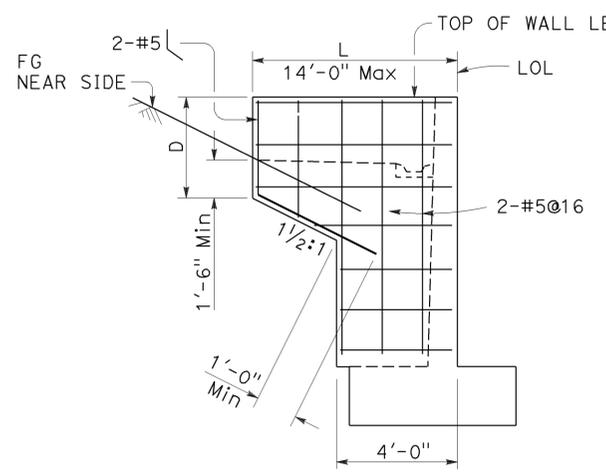
PLAN

(For return wall Type "C")



PLAN

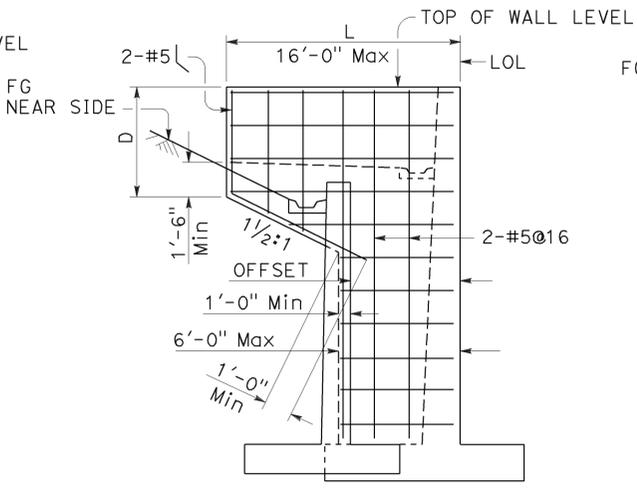
(For return wall Type "D")



ELEVATION

RETURN WALL TYPE "A"

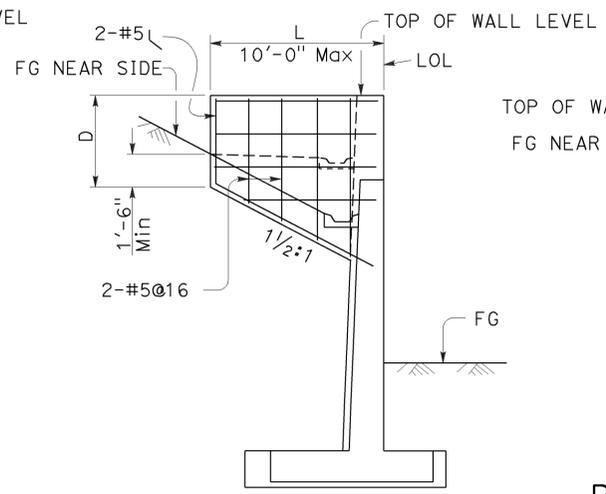
Use where H=8' or less



ELEVATION

RETURN WALL TYPE "B"

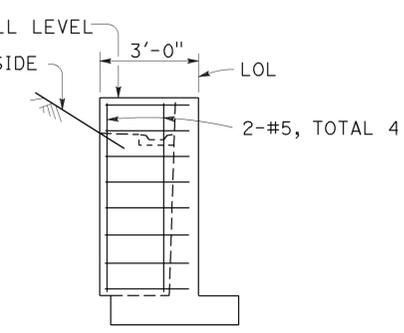
Use where H=10' or more on offset walls



ELEVATION

RETURN WALL TYPE "C"

Use where H=10' or more on straight walls



ELEVATION

RETURN WALL TYPE "D"

Use where H=6' or less

DESIGN CONDITIONS:

Design "H" may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in table

Return wall not required unless shown elsewhere

DESIGN NOTES:

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

LIVE LOAD: Surcharge on level ground surface

SOIL: $\phi = 34^\circ$
 $\gamma = 120$ pcf

REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f_c' = 3,600$ psi

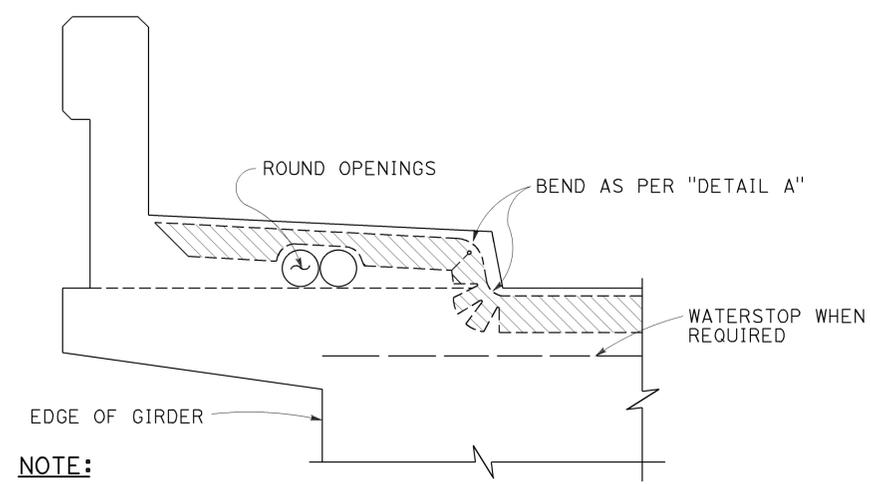
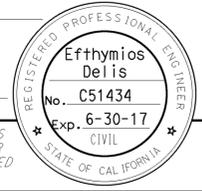
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL DETAILS No. 1

NO SCALE

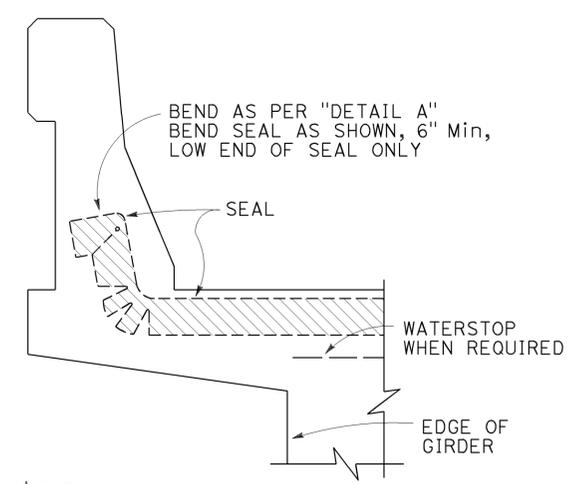
RSP B3-5 DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN B3-5 DATED MAY 20, 2011 - PAGE 277 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B3-5

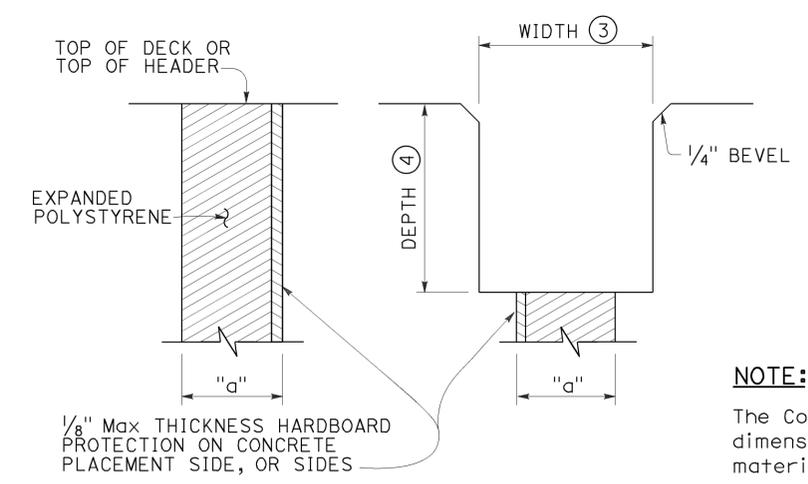


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



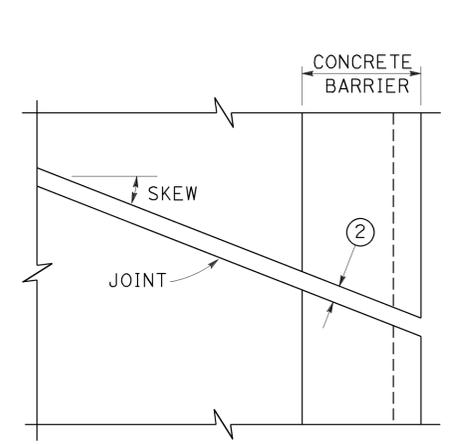
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

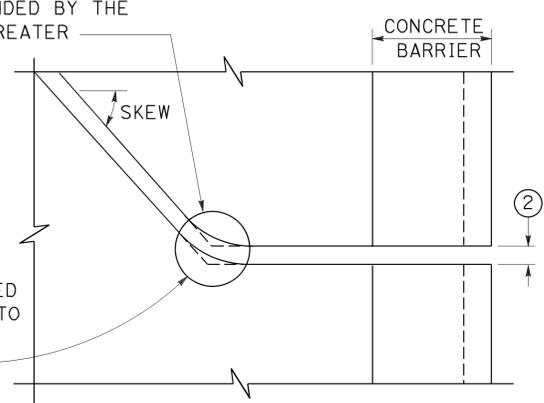
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



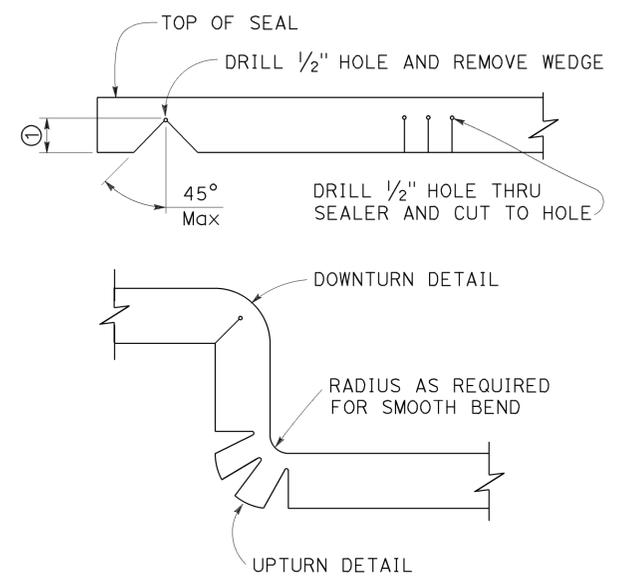
PLAN OF JOINT (SKEW ≤ 20°)

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.

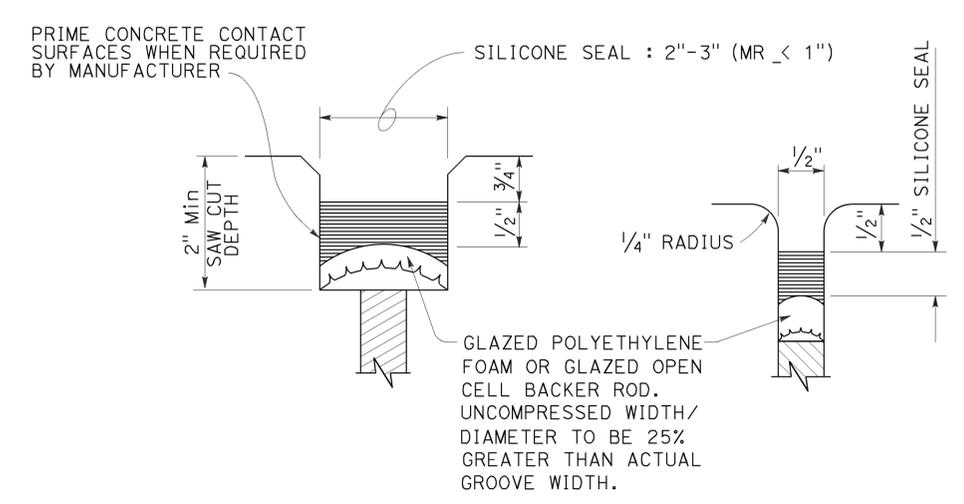


DETAIL A

- 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 (W_2) 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"

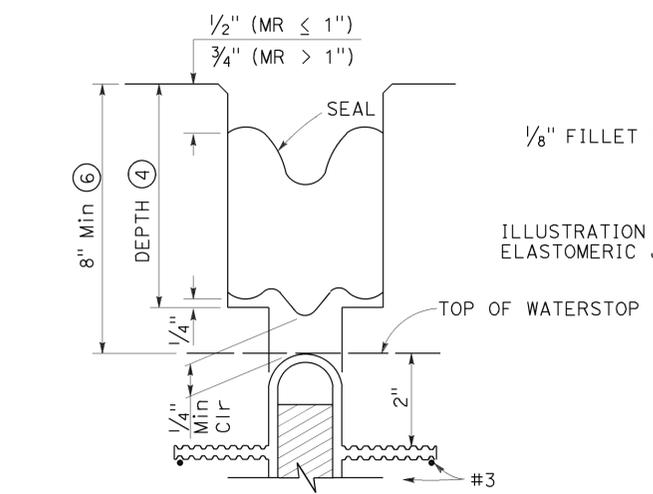


TYPE A SEAL

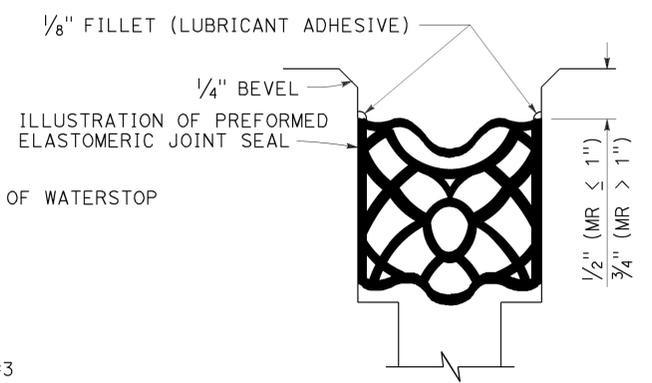
Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W_2)



TYPE B SEAL

Movement Rating ≤ 2"

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	156	244

REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

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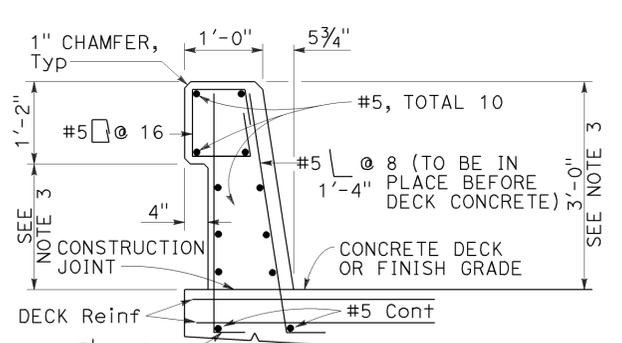
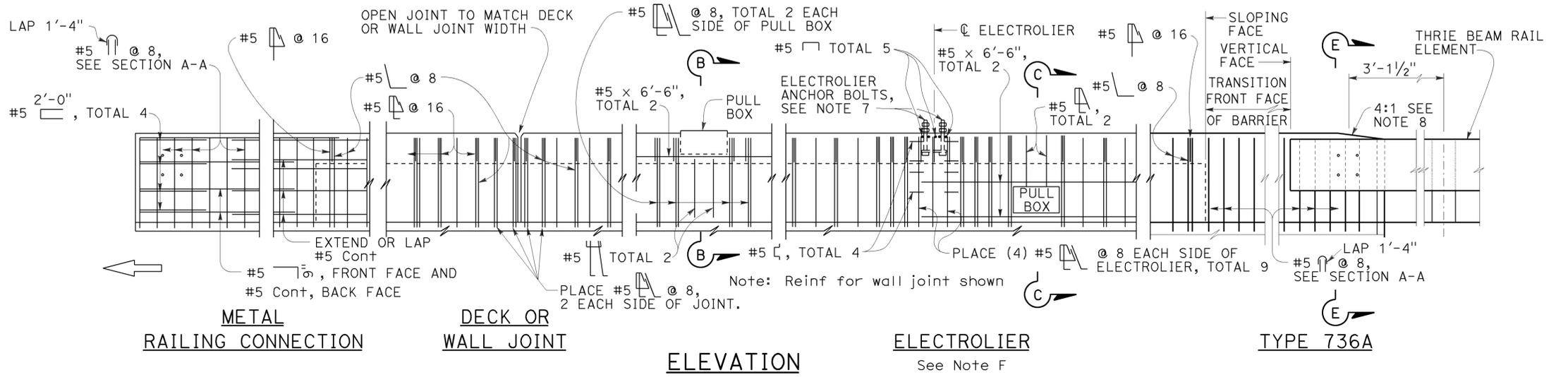
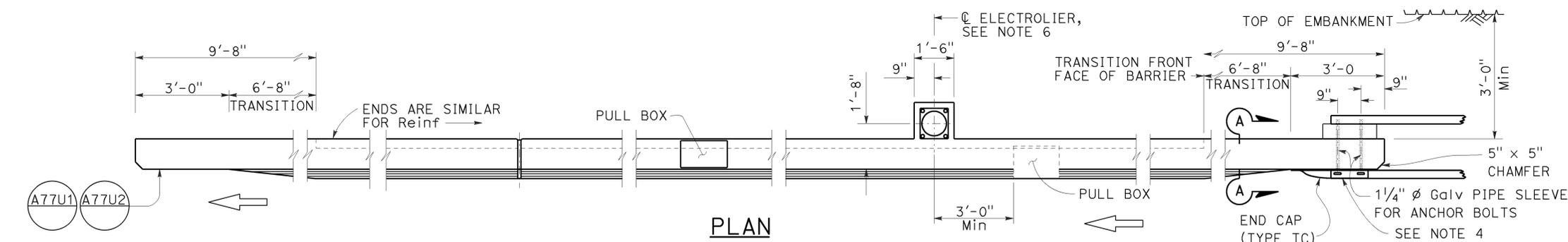
REGISTERED PROFESSIONAL ENGINEER
Tillat Satter
No. C42892
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED **03-28-16**

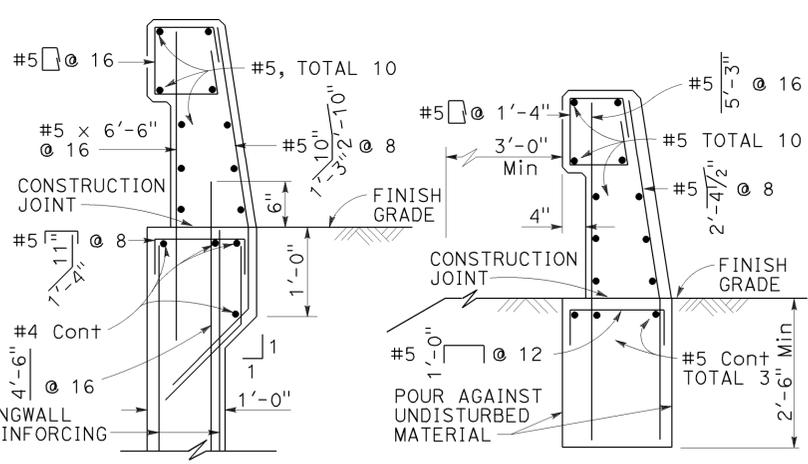
NOTES:

1. Walls are to be backfilled before barrier is placed.
2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
3. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
4. For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
5. See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
6. For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
7. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.
8. Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail element.

2010 REVISED STANDARD PLAN RSP B11-56



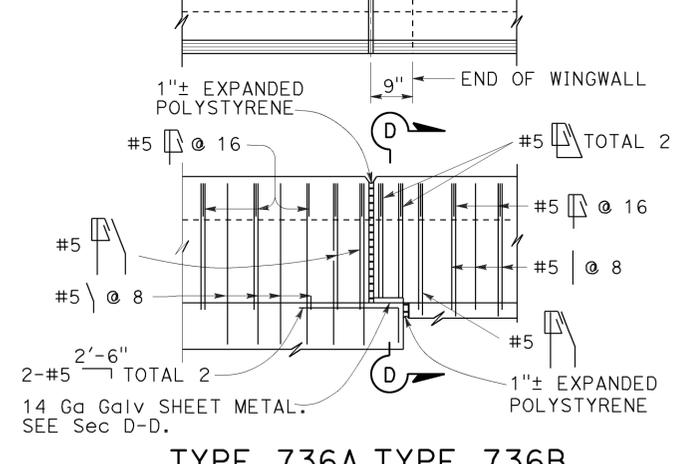
TYPE 736



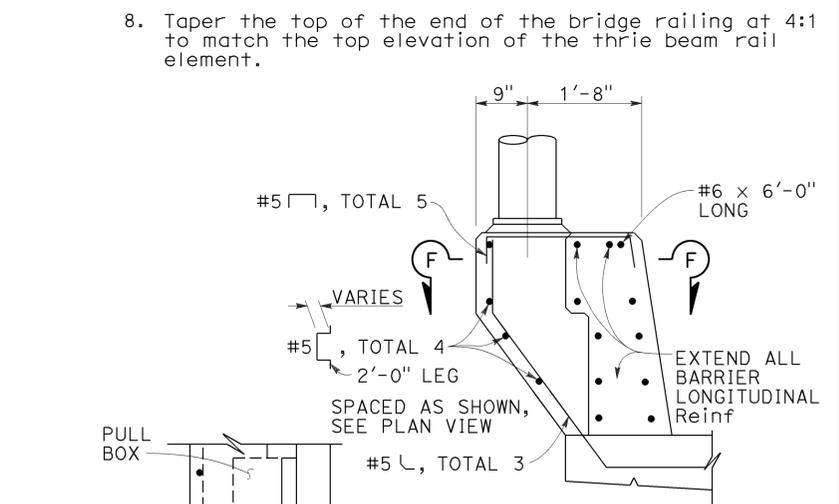
TYPE 736A

TYPE 736B

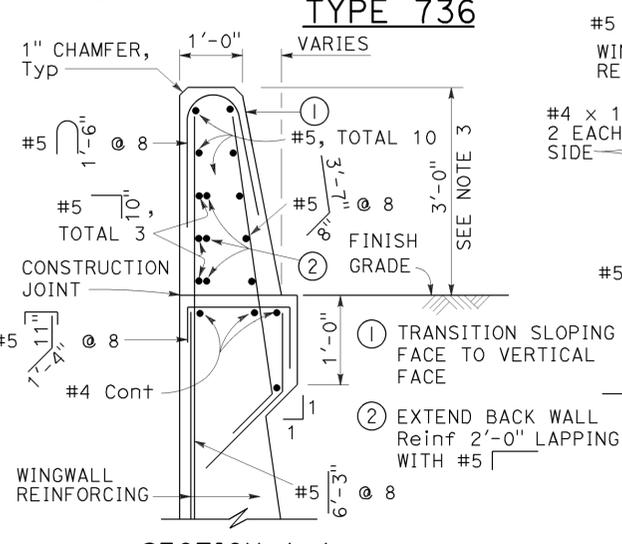
Note: Types 736A & 736B are similar to Type 736 except as noted



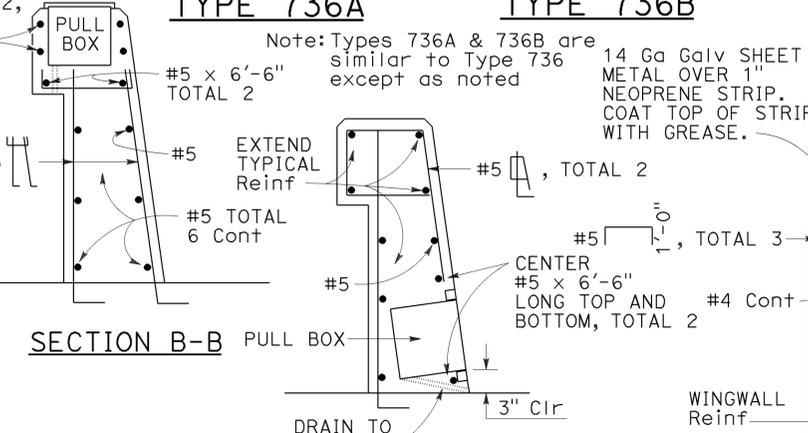
TYPE 736A TYPE 736B



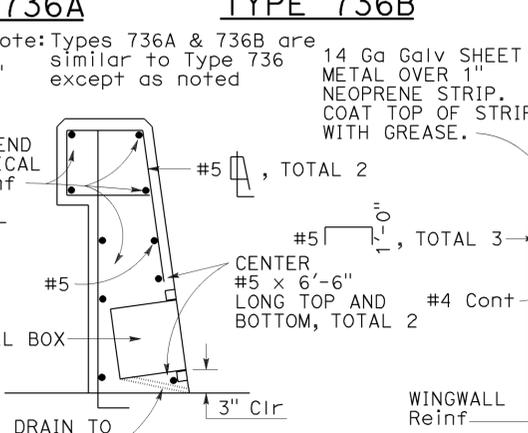
PEDESTAL ELEVATION



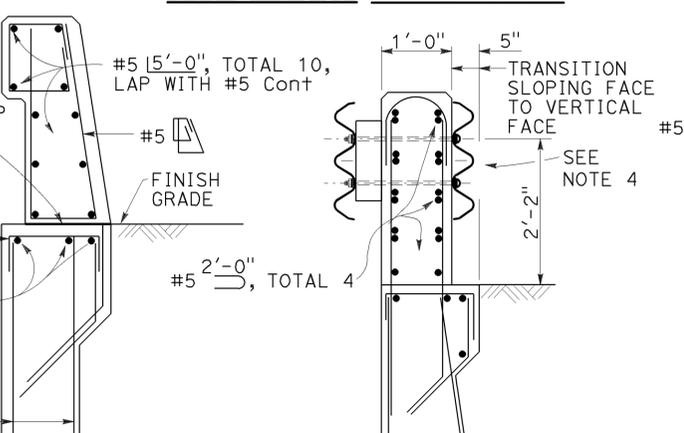
SECTION A-A



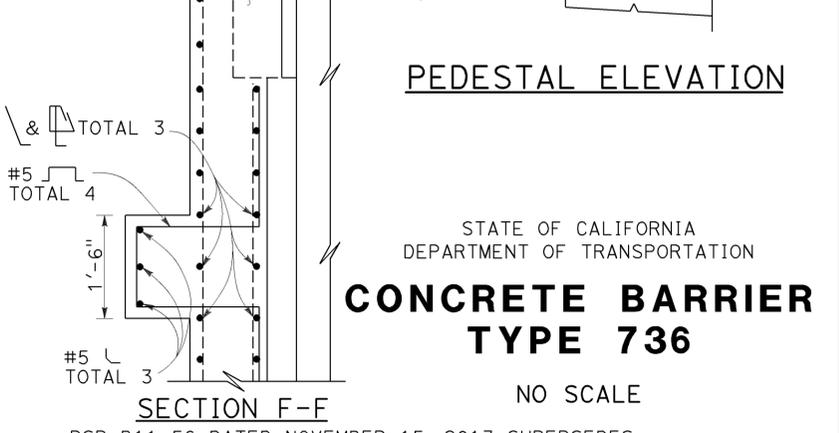
SECTION B-B



SECTION C-C



SECTION D-D



SECTION F-F

Details shown for barrier anchorage to Type 736A. Anchorage for barrier Types 736 and 736B are similar to their respective details.

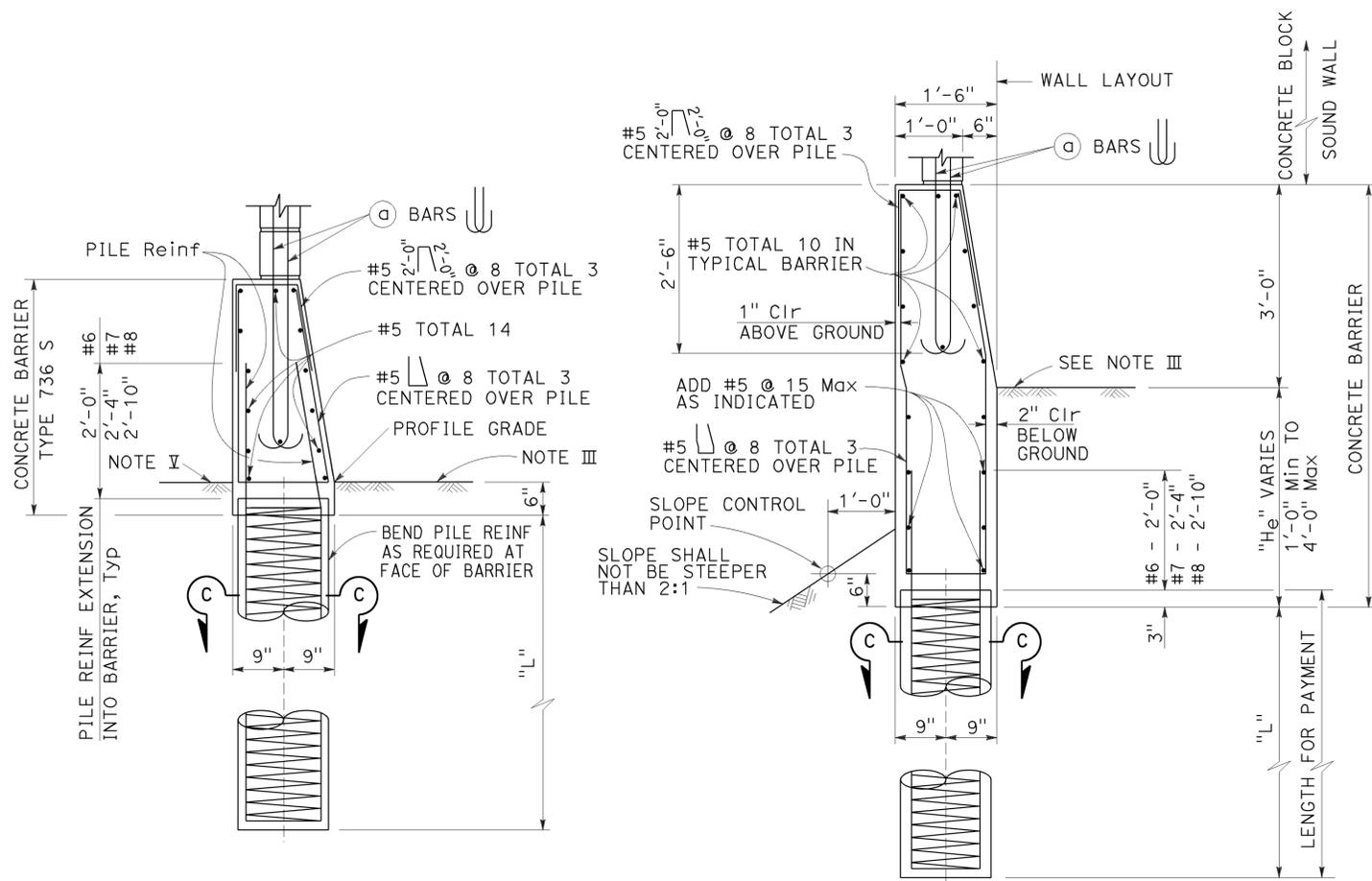
RSP B11-56 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-56 DATED JULY 19, 2013 AND STANDARD PLAN B11-56 DATED MAY 20, 2011 - PAGE 298 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-56

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE BARRIER
TYPE 736**

NO SCALE



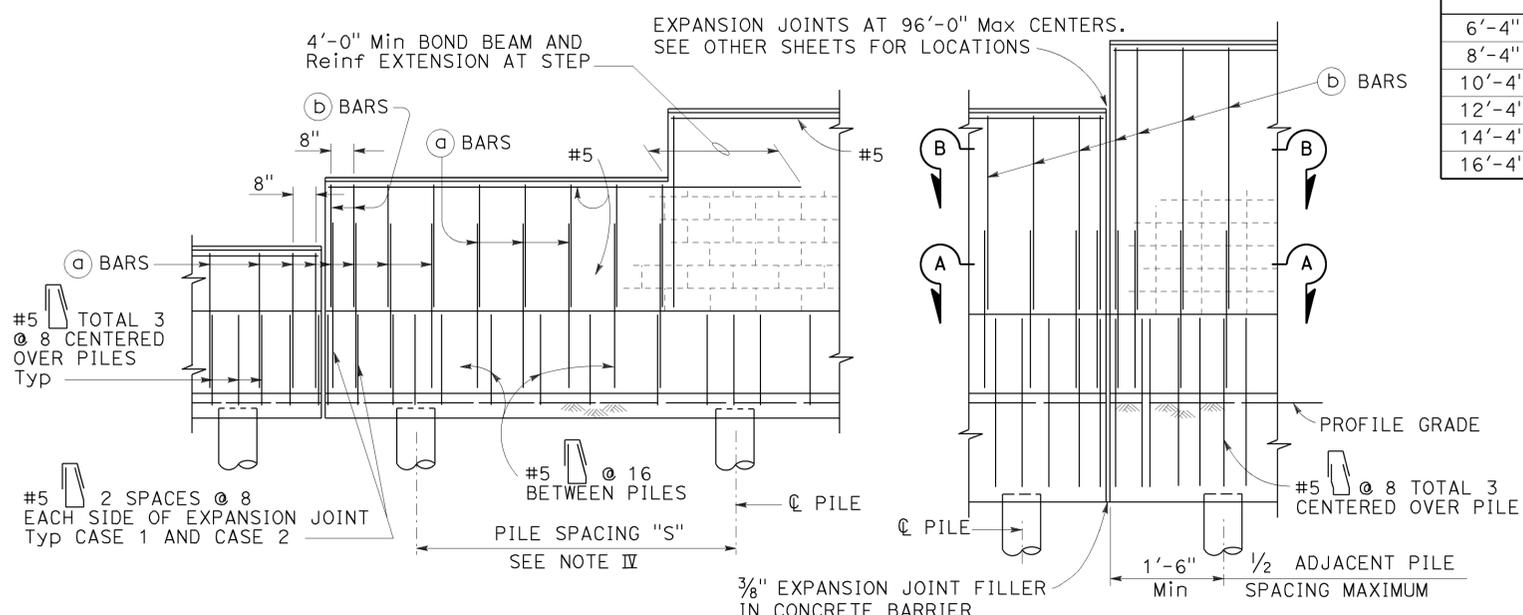
CASE 1

For details not shown, See Case 2.
 Level ground ±10% on both sides of barrier.

CASE 2

For details not shown, See Case 1.
 Level ground ±10% at the traffic side of barrier and sloping ground on the opposite side.

BARRIER SECTIONS



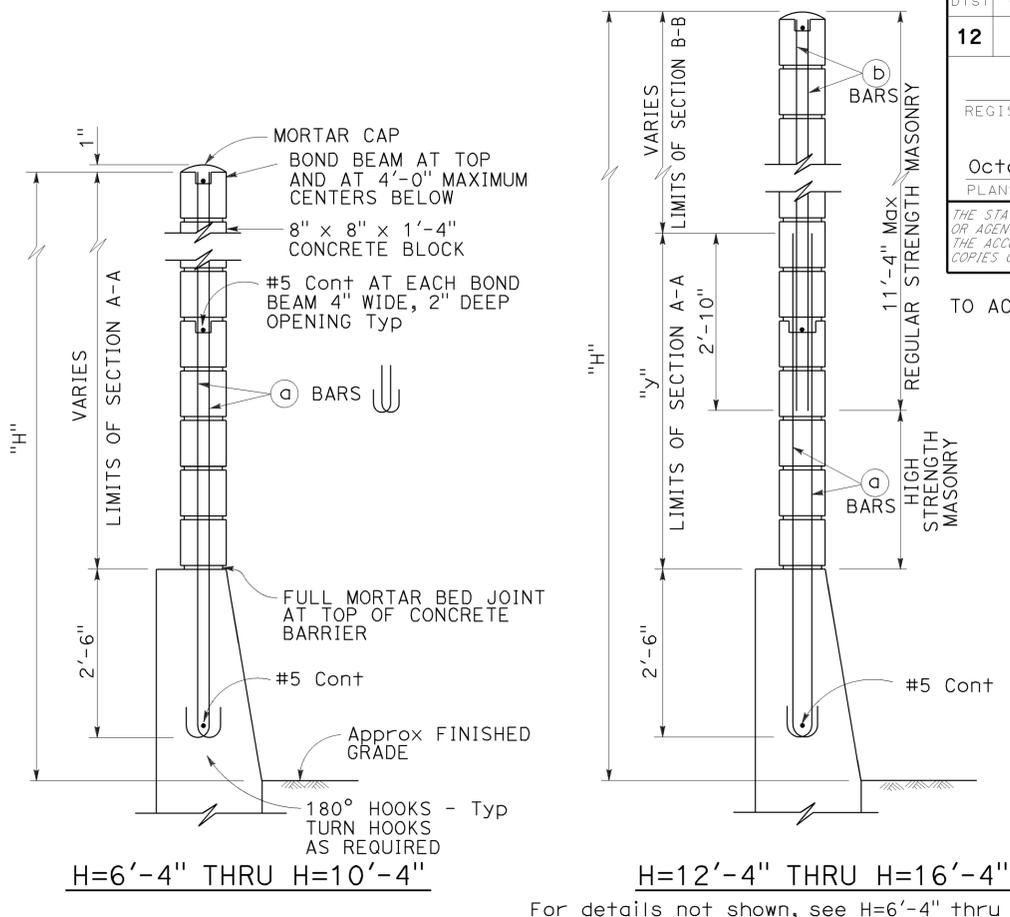
CASE 1

For details not shown, See Case 2.

CASE 2

For details not shown, See Case 1.

PARTIAL ELEVATIONS



TYPICAL SECTIONS

See Standard Plan B15-8 for pile details.

SOUND WALL REINFORCEMENT TABLE

MAXIMUM H	(a) BARS @ 1'-4" Max	(b) BARS @ 1'-4" Max	"y"	f'm (psi)	COMPRESSIVE STRENGTH OF CMU (psi)	H
6'-4"	#4	---	---	1500	1900	6'-4"
8'-4"	#4	---	---	1500	1900	8'-4"
10'-4"	#4	---	---	1500	1900	10'-4"
12'-4"	#5	#4	5'-0"	1500	1900	12'-4"
14'-4"	#6	#4	7'-0"	1500	1900	14'-4"
16'-4"	#6	#4	9'-0"	2500	3750	16'-4"

NOTES I THROUGH VI:

- I. Details shown are primarily to conform design of sound walls to Type 736S and Type 736 SV Concrete Barriers. For sound wall details conforming with barriers see Standard Plans B15-7 and B15-8.
- II. For details and sections not shown, see Standard Plans B15-7 and B15-8.
- III. Slope ground at traffic side of barrier to drain. Maximum slope ±10%. See Std Plan B11-56, Note 3.
- IV. Pile spacing may be varied, but shall not exceed the tabular values. See Standard Plan B15-8.
- V. For Case 1 - ground line to be at the same elevation on both sides of the barrier. Barrier shall not be used to retain earth.
- VI. See Standard Plan B15-9 for other details.

NOTES A THROUGH F:

- A. For type of block, type of block bond, and joint finish, see other sheets.
- B. When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- C. Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- D. For intermediate wall heights (H), or barrier depths (H_e), that are between the values given, use the tabular information for the next higher (H) or (H_e).
- E. Concrete to be used for the barrier shall contain not less than 590 pounds of cementitious material per cubic yard.
- F. Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE".

SOUND WALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (1)

NO SCALE

RSP B15-6 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN B15-6 DATED MAY 20, 2011 - PAGE 320 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B15-6

2010 REVISED STANDARD PLAN RSP B15-6

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:

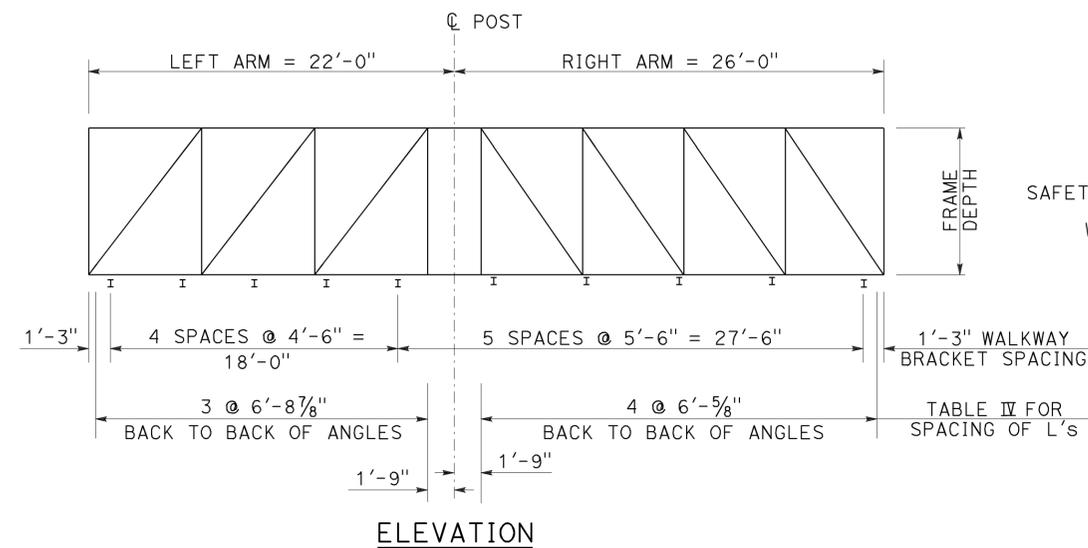
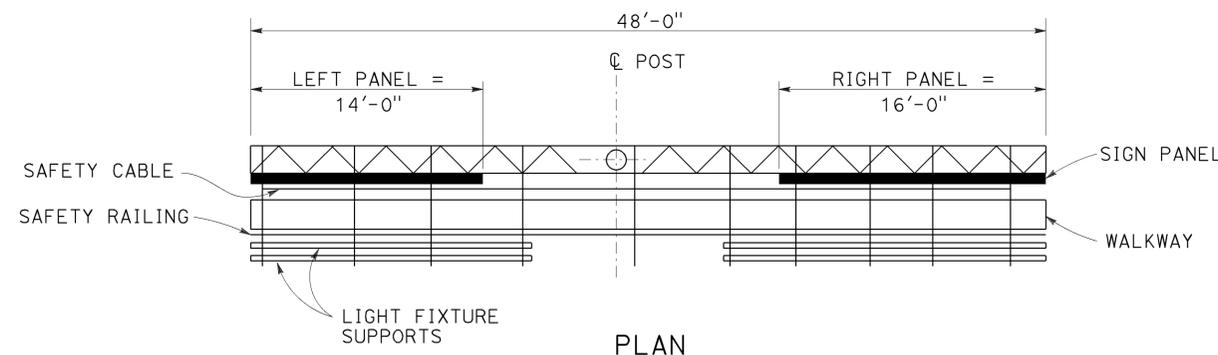
STRUCTURAL STEEL: $f_y = 36,000$ psi
 REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3600$ psi
 FOOTING SOIL PRESSURE: 2.5 ksf (spread footing)

MINIMUM CLEARANCE

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

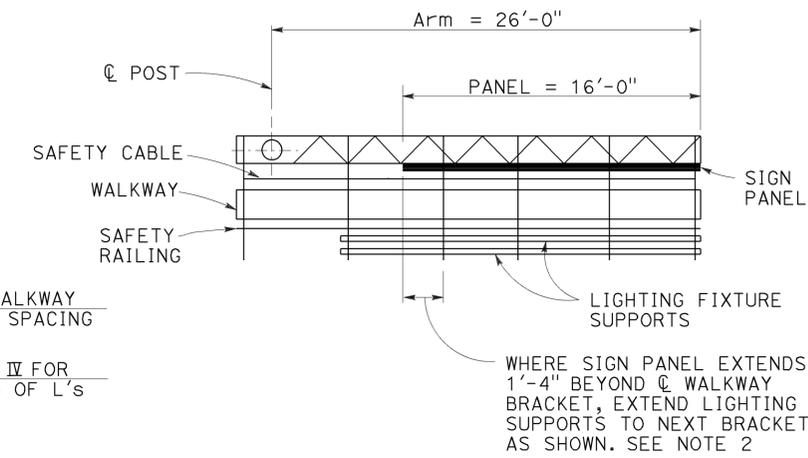
WELDING:

All welding continuous unless otherwise noted on the plans.



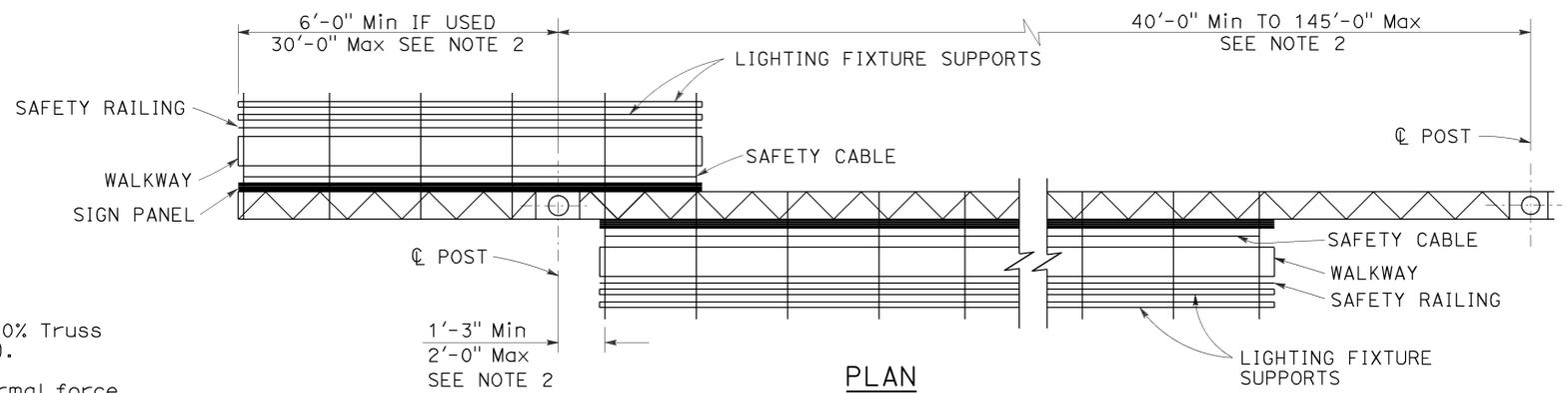
UNBALANCED SINGLE POST TYPE

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
12	Ora	5	1.2/2.2	159	244

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

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TO ACCOMPANY PLANS DATED 03-28-16

2010 REVISED STANDARD PLAN RSP S1

TABLE XV

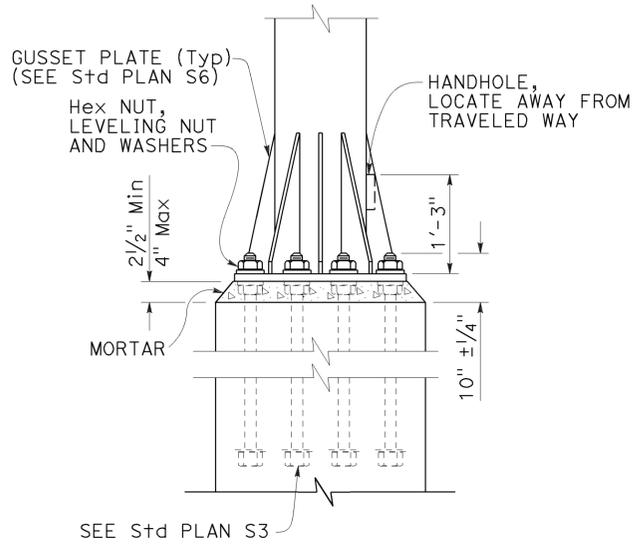
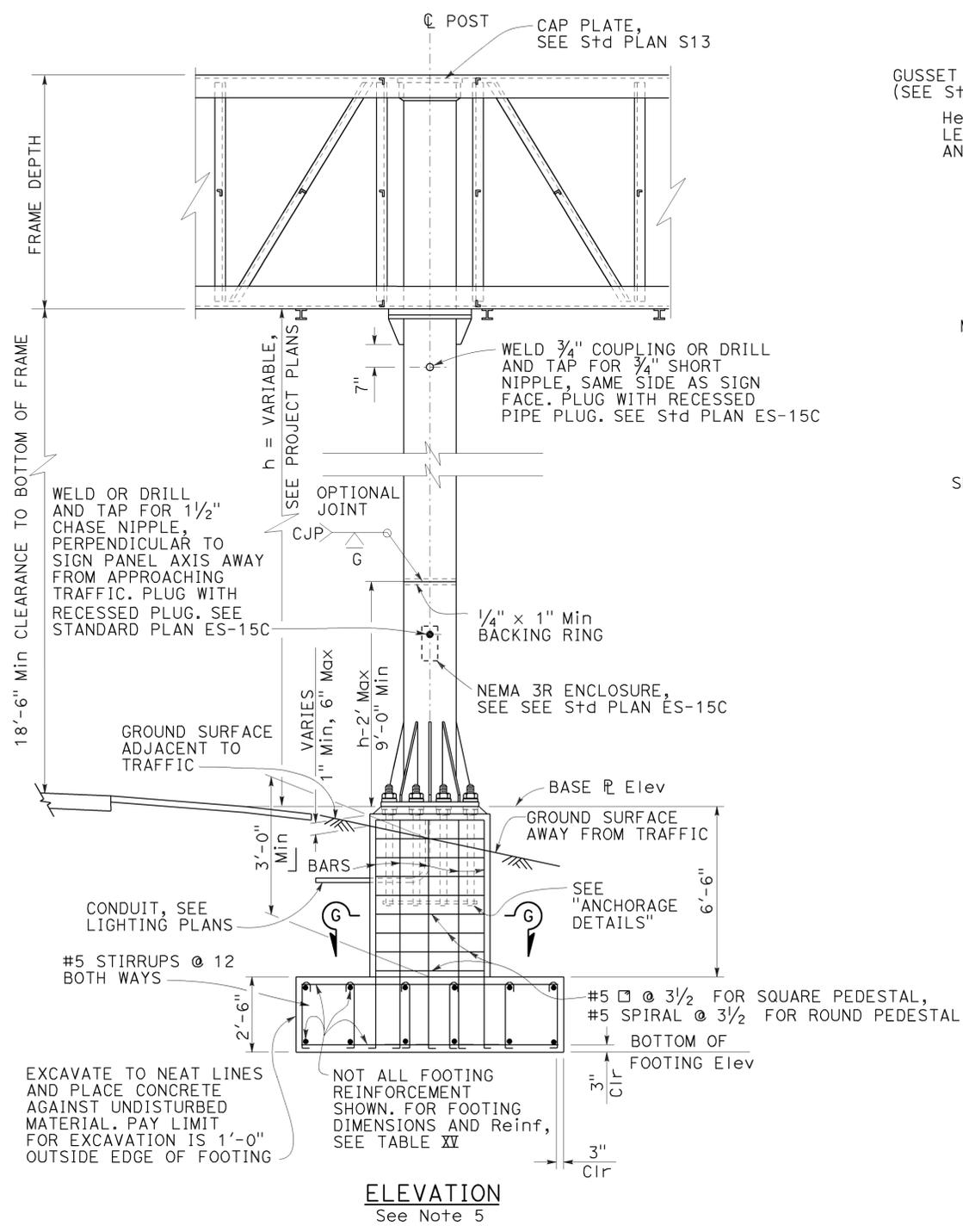
POST TYPE	PIPE		CAP PLATE SIZE FOR CHORD L's 5 x 5	CAP PLATE SIZE FOR CHORD L's 6 x 6	ROUND PEDESTAL					SQUARE PEDESTAL					SPREAD FOOTING						
	NPS	THICKNESS			PEDESTAL SIZE Dia	VERTICAL EQUALLY SPACED TOTAL	J-BARS BAR SIZE	SPIRAL BAR SIZE	PITCH	PEDESTAL SIZE SQUARE	VERTICAL EQUALLY SPACED TOTAL	J-BARS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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	160	244


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

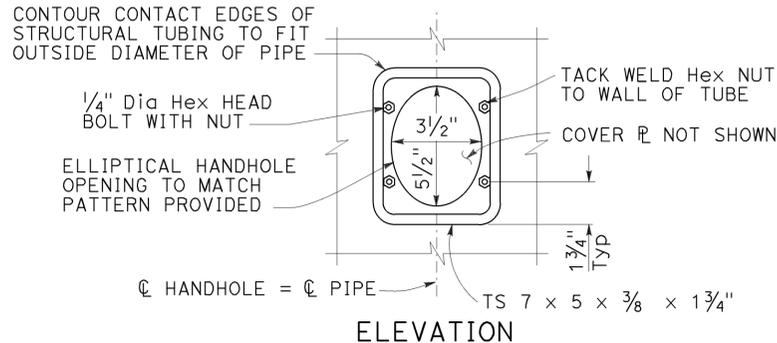
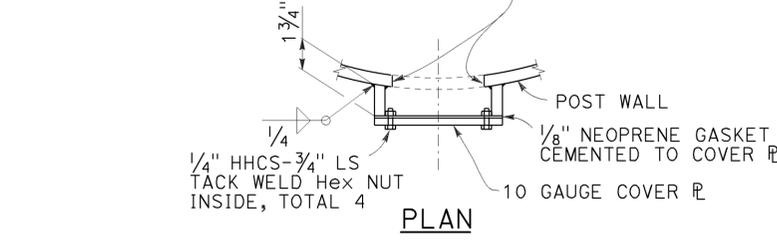
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED **03-28-16**



ELEVATION
ANCHORAGE DETAILS

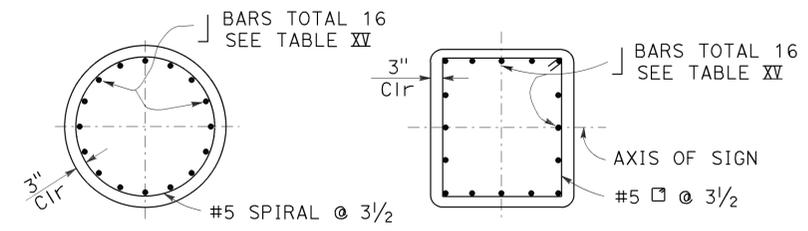
GRIND EDGES SMOOTH, ROUGHNESS OF EDGES NO GREATER THAN 1000 MICROINCHES



TYPICAL DETAILS OF
HANDHOLE AND COVER

NOTES:

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



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

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

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

REVISED STANDARD PLAN RSP S2

2010 REVISED STANDARD PLAN RSP S2

LEGEND:

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

ABBREVIATIONS

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	161	244

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 03-28-16

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

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
		150
		15 STRUCTURE
		150 STRUCTURE
		21
		210
		21 STRUCTURE
		210 STRUCTURE
		30
		31
		32

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
12	Ora	5	1.2/2.2	162	244

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 03-28-16

CONDUIT

SIGNAL EQUIPMENT

NEW	EXISTING	
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
		COMMUNICATION CONDUIT
		TELEPHONE CONDUIT
		FIRE ALARM CONDUIT
		FIBER OPTIC CONDUIT
		CONDUIT TERMINATION
		CONDUIT RISER 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

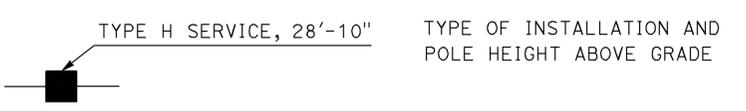
NEW	EXISTING	
		OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

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

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

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

ILLUMINATED OVERHEAD SIGN

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

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

NO SCALE

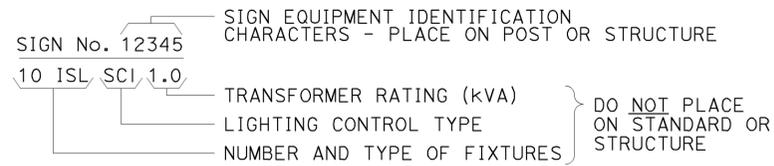
RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

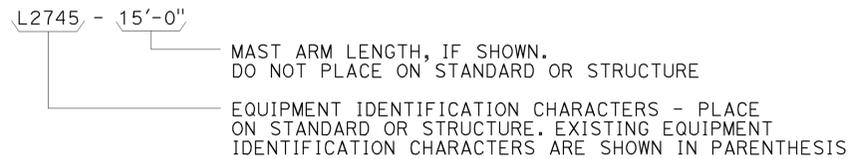
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

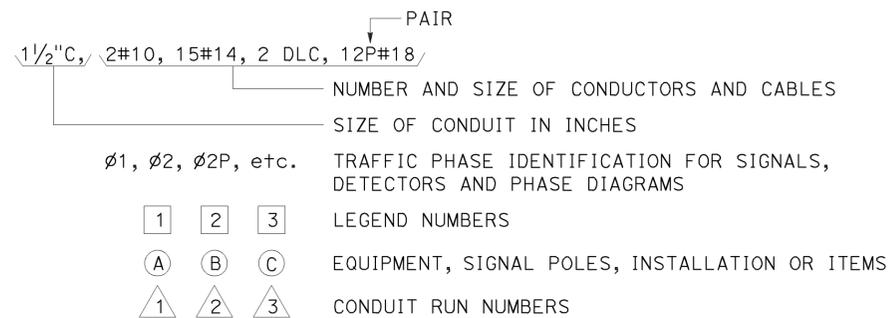
ILLUMINATED SIGN IDENTIFICATION:



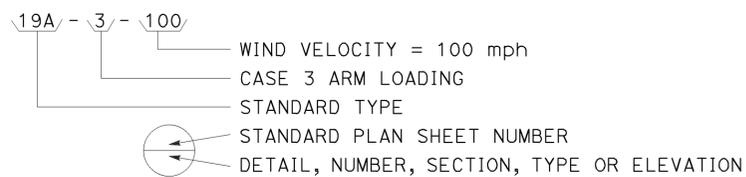
ELECTROLIER OR EQUIPMENT IDENTIFICATION:



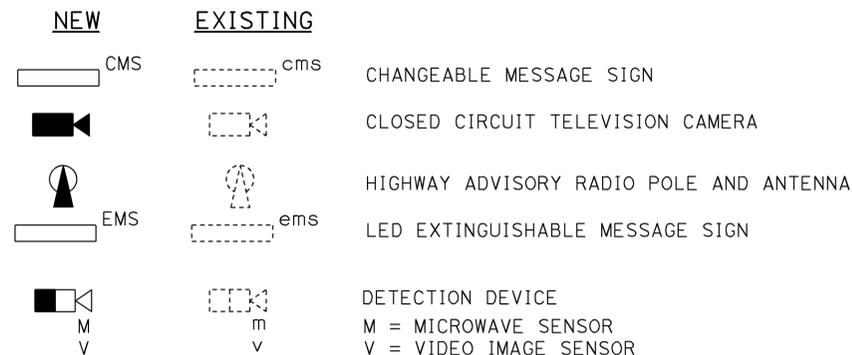
CONDUIT AND CONDUCTOR IDENTIFICATION:



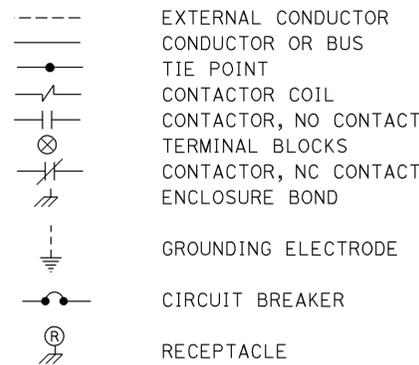
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



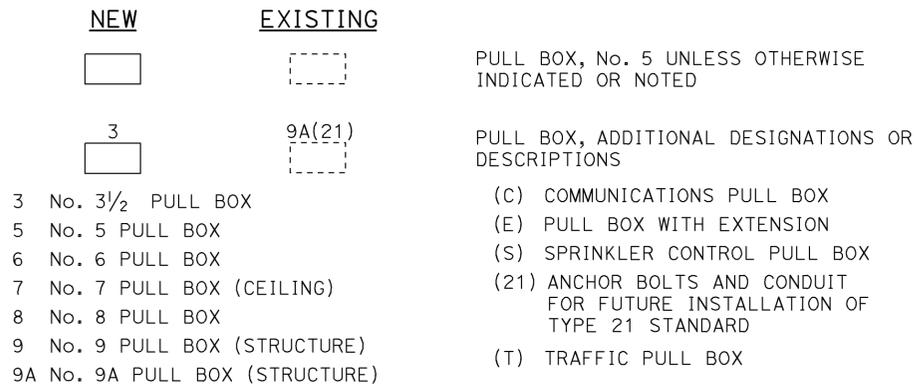
MISCELLANEOUS EQUIPMENT



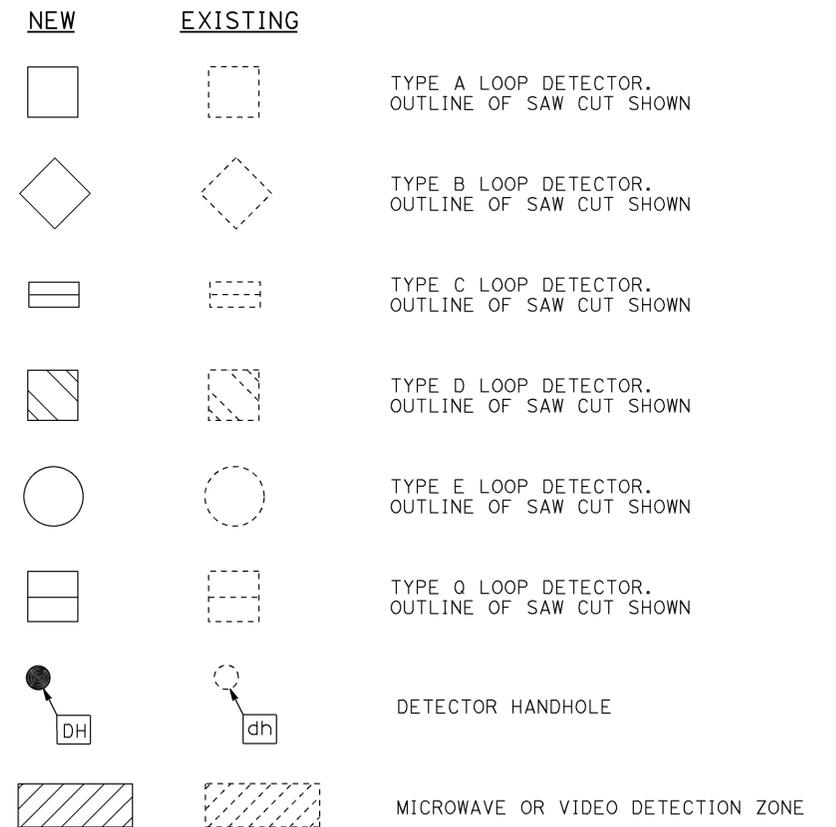
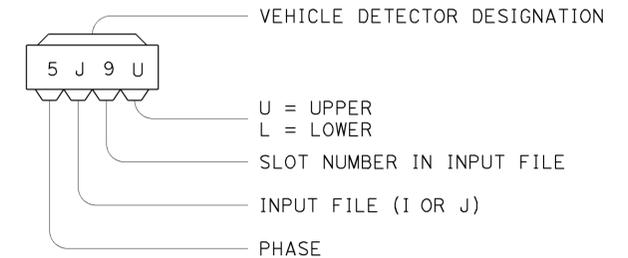
WIRING DIAGRAM LEGEND



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.

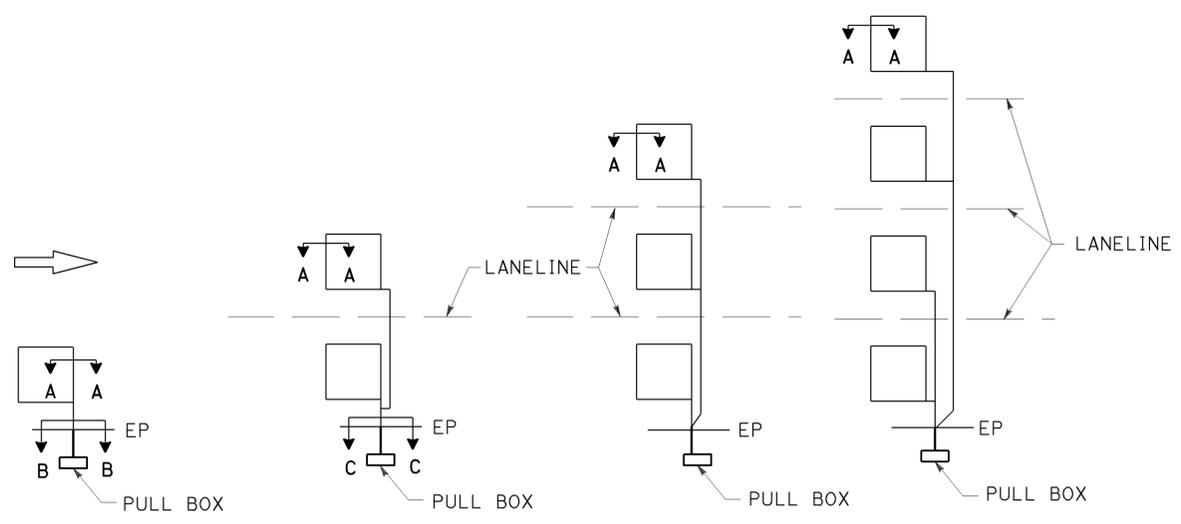
REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

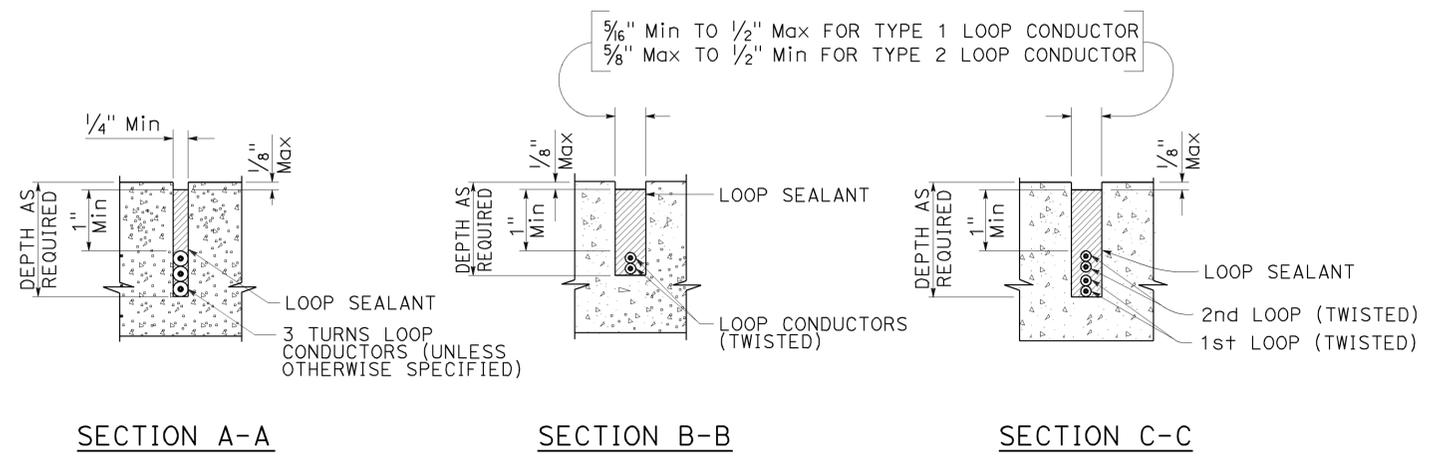
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	164	244
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER April 15, 2016 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



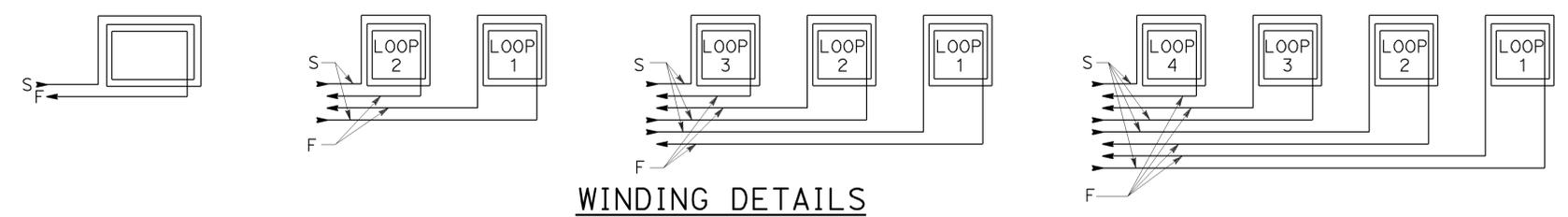
TO ACCOMPANY PLANS DATED 03-28-16



SAW CUT DETAILS
Type A loop detector configurations illustrated

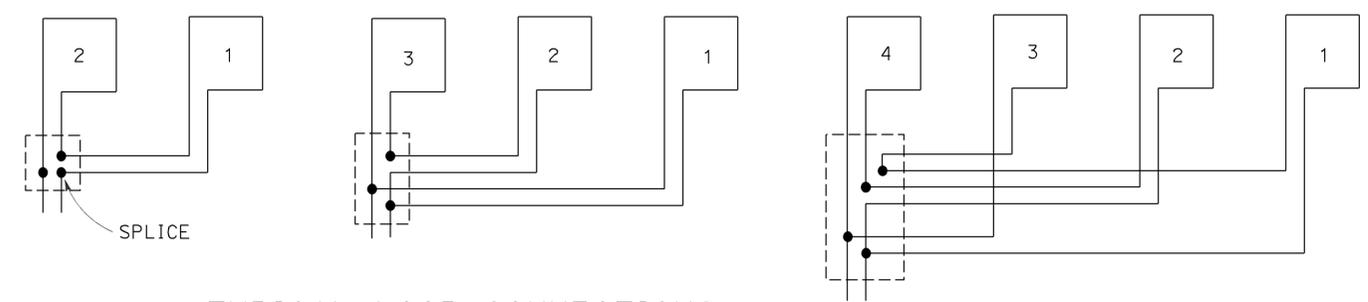


SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



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.

2010 REVISED STANDARD PLAN RSP ES-5A

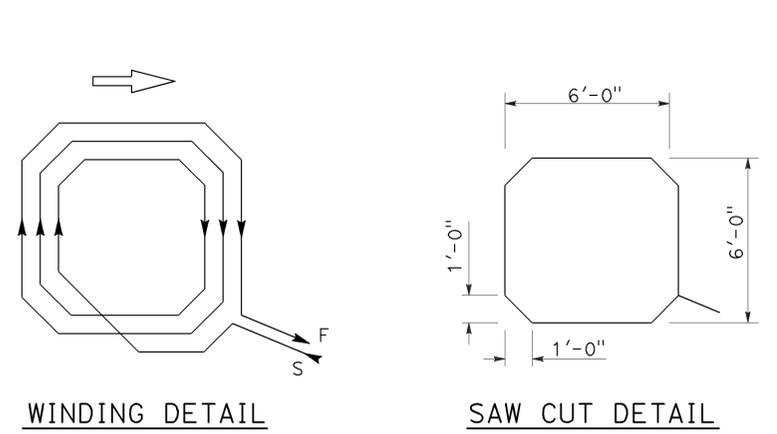
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	165	244

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

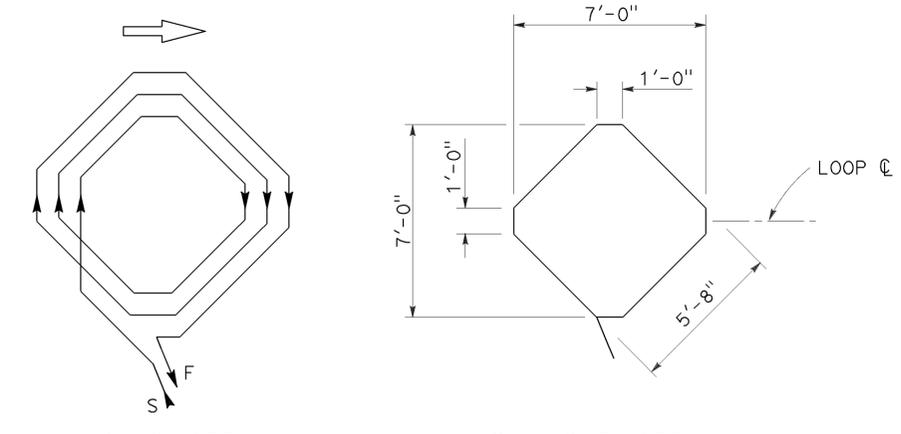
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

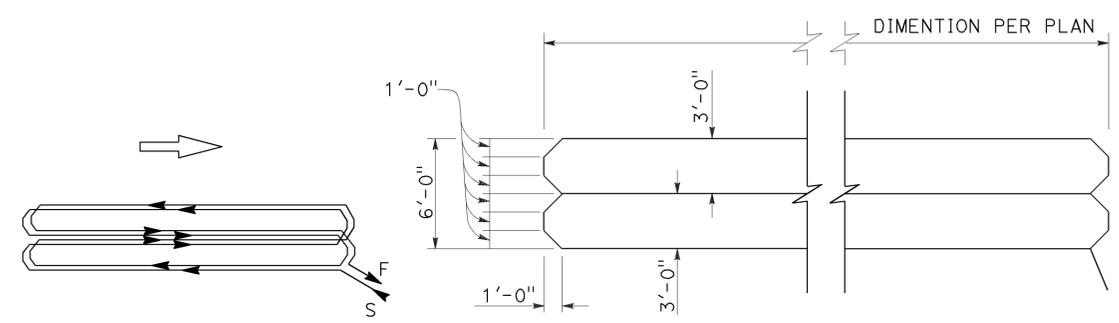
TO ACCOMPANY PLANS DATED 03-28-16



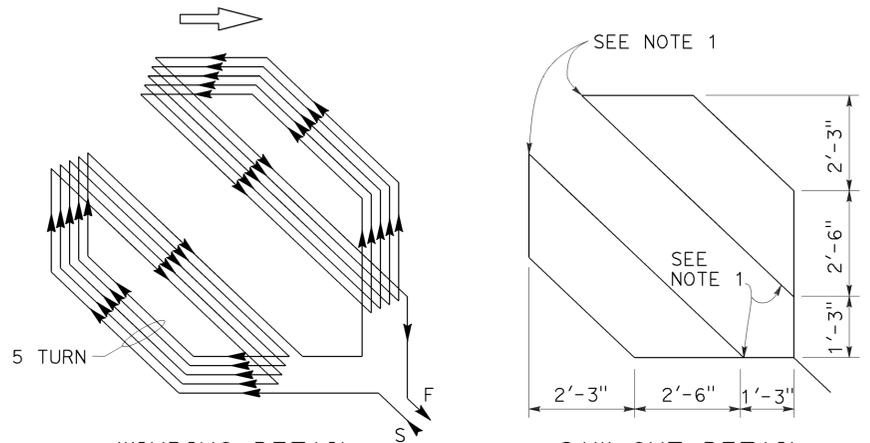
WINDING DETAIL
SAW CUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



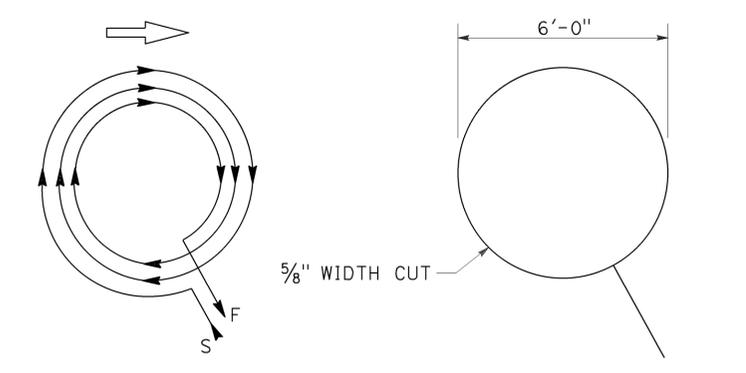
WINDING DETAIL
SAW CUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



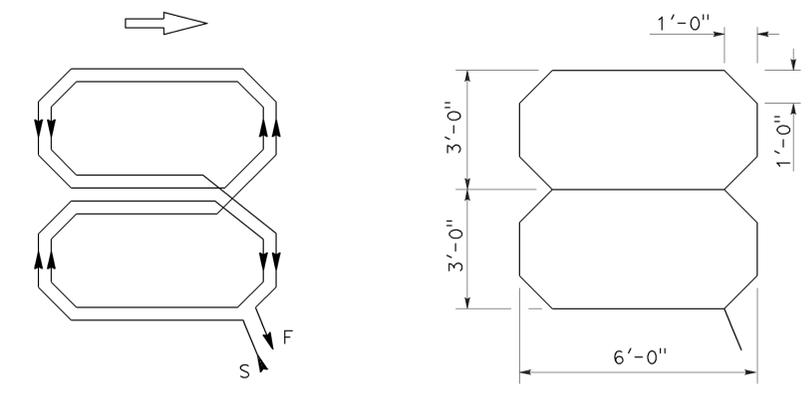
WINDING DETAIL
SAW CUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



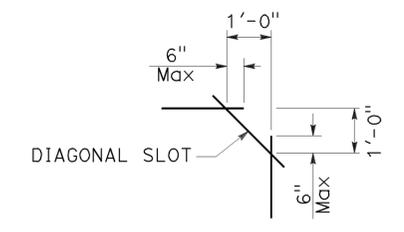
WINDING DETAIL
SAW CUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



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.

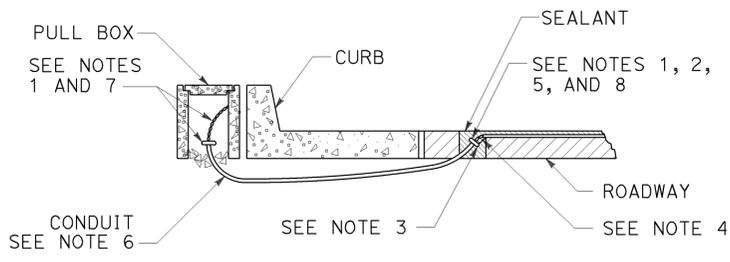
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	166	244

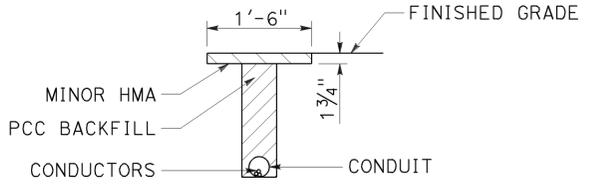
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 03-28-16

2010 REVISED STANDARD PLAN RSP ES-5D

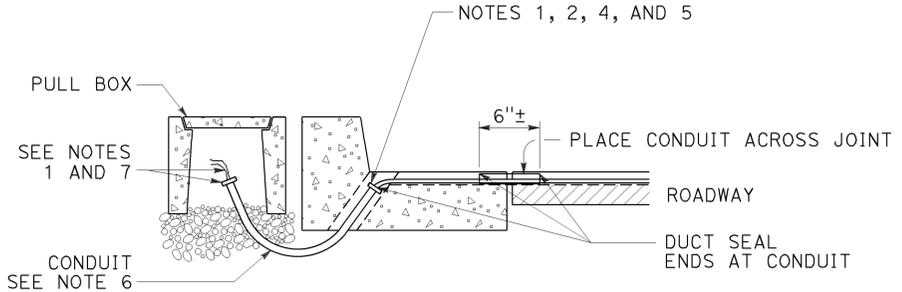


**TYPE A
CURB TERMINATION DETAIL**

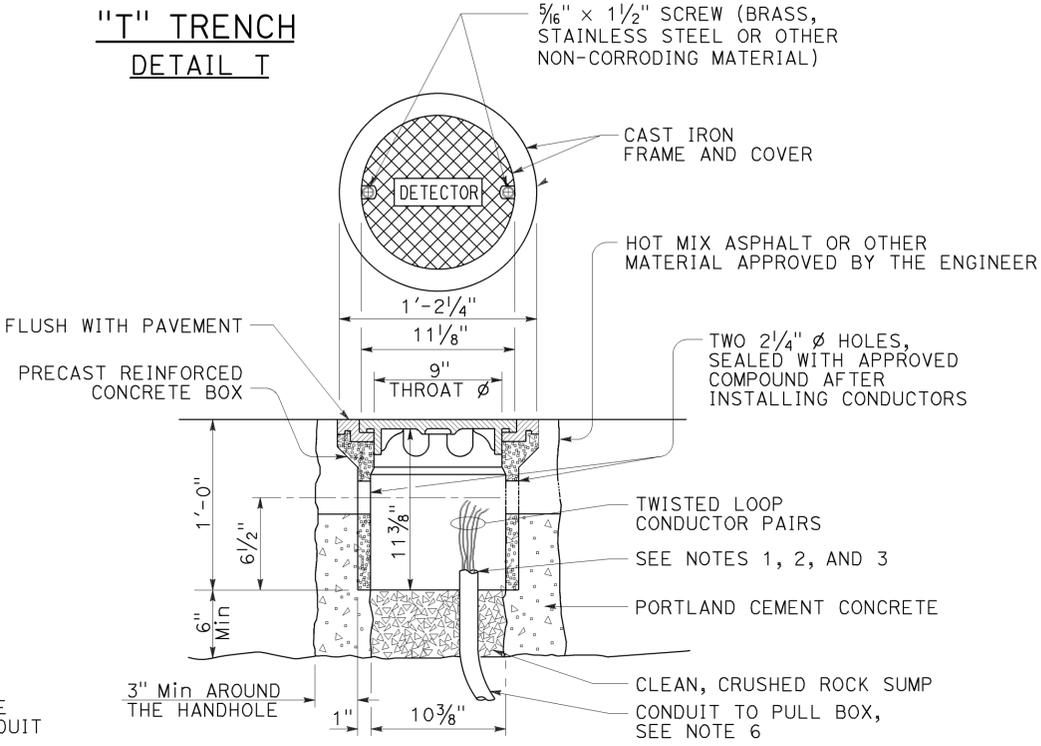


**"T" TRENCH
DETAIL T**

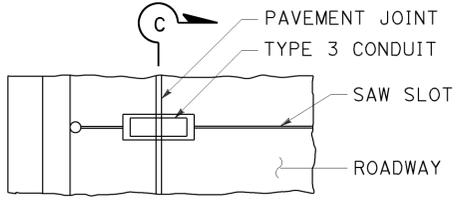
5/16" x 1 1/2" SCREW (BRASS, STAINLESS STEEL OR OTHER NON-CORRODING MATERIAL)



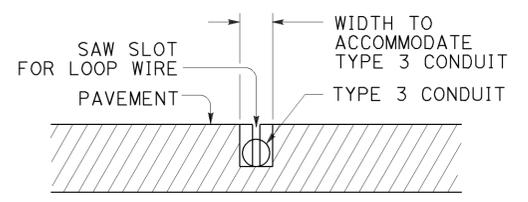
CROSS SECTION



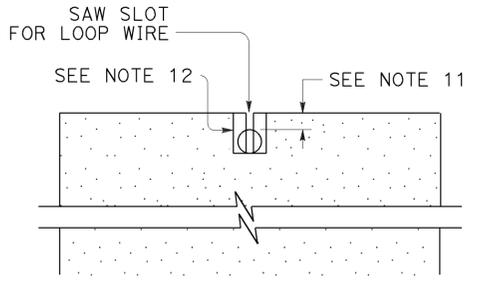
DETECTOR HANDHOLE DETAIL



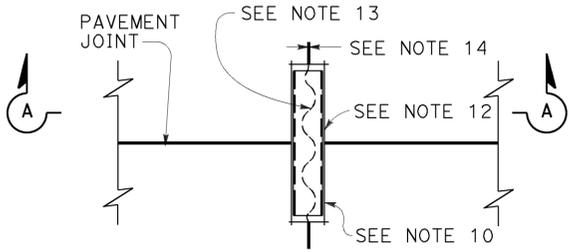
PLAN VIEW



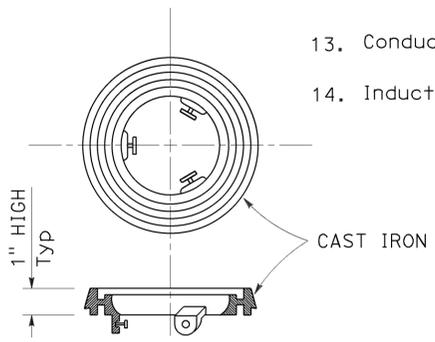
SECTION C-C



SECTION A-A



**PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT**



LOCKING GRADE RING

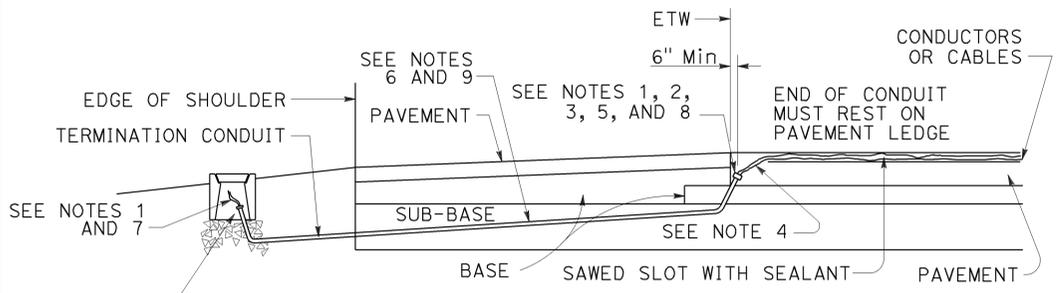
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

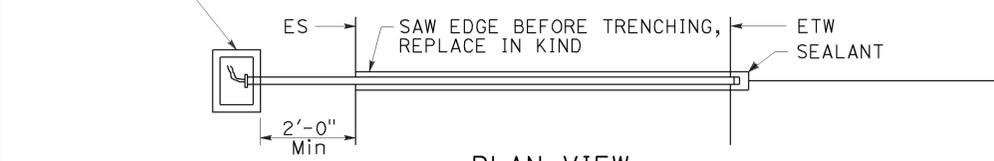
NO SCALE

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**

NOTES:

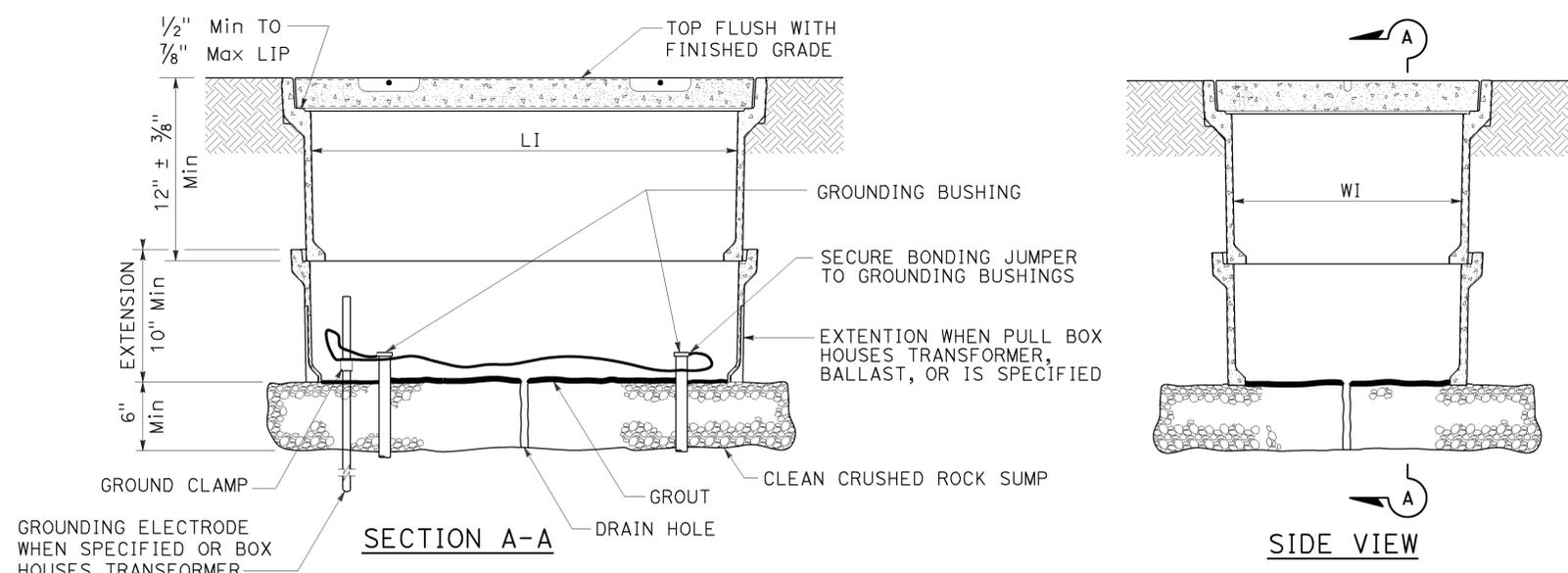
- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
 1"C minimum 1 to 2 pairs
 1 1/2"C minimum 3 to 4 pairs
 2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	1.2/2.2	167	244

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

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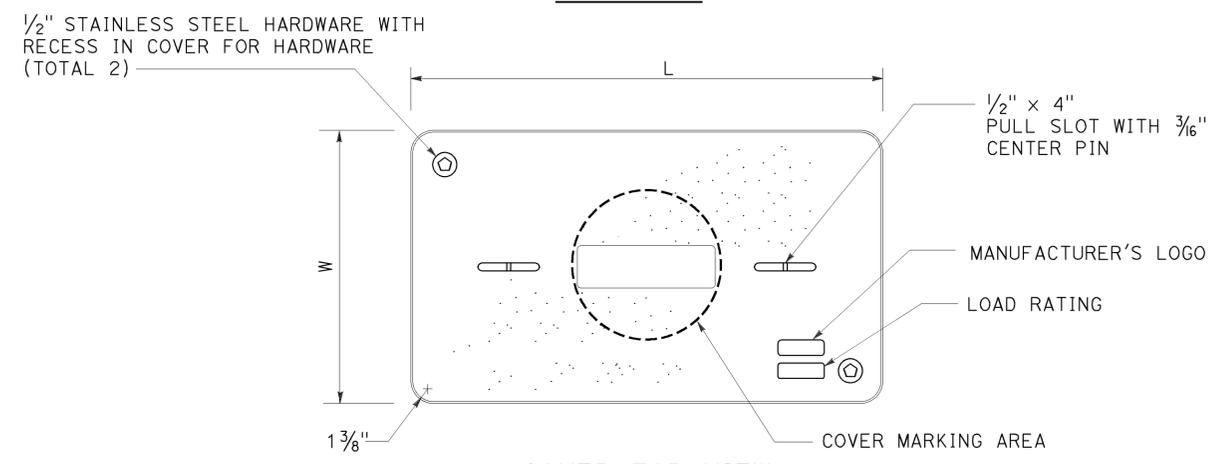
TO ACCOMPANY PLANS DATED 03-28-16



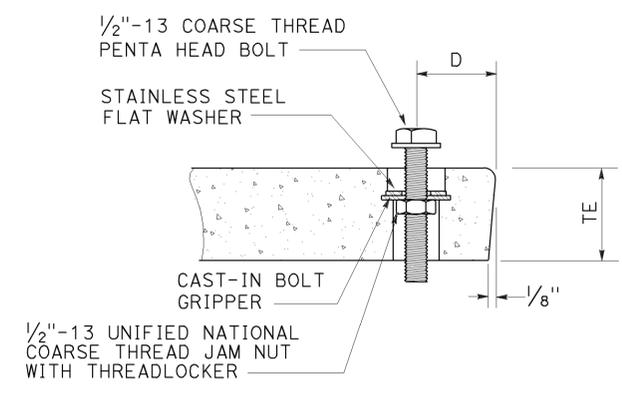
INSTALLATION DETAILS
DETAIL A

NOTES:

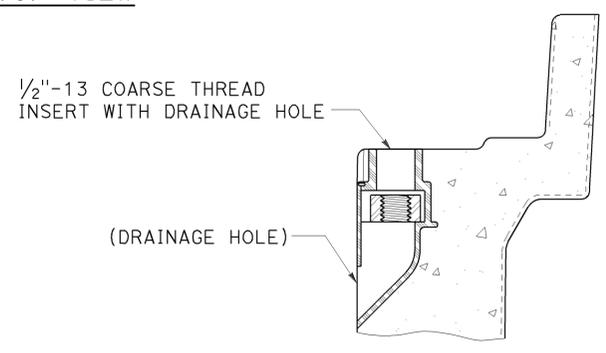
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male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

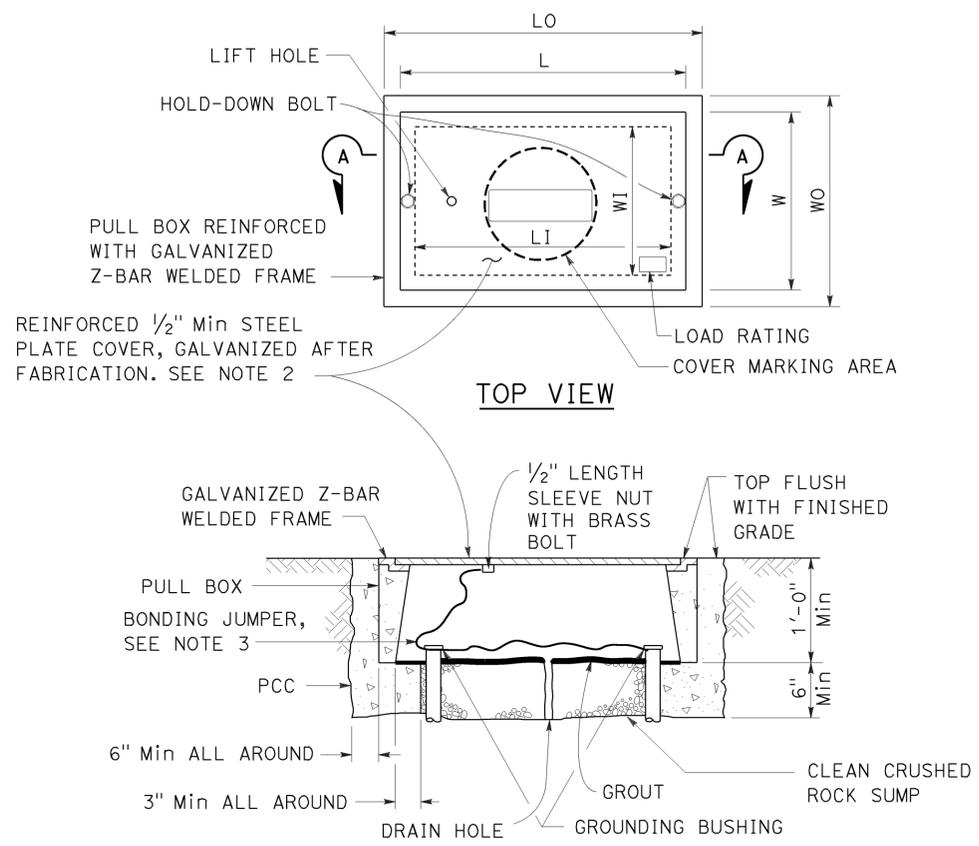
2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	1.2/2.2	168	244

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

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TO ACCOMPANY PLANS DATED 03-28-16



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

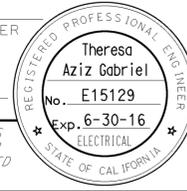
RSP ES-8B DATED APRIL 15, 2016 SUPERSEDES RSP ES-8B
 DATED OCTOBER 30, 2015 AND RSP ES-8B DATED JULY 19, 2013 AND RSP ES-8B
 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

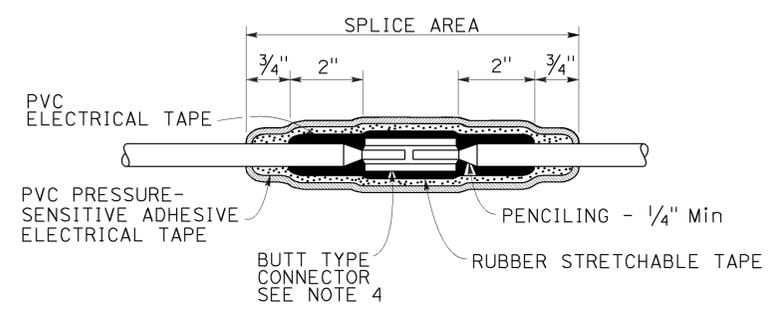
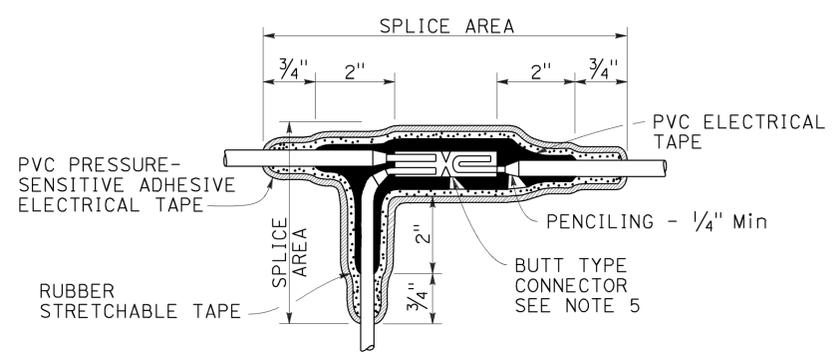
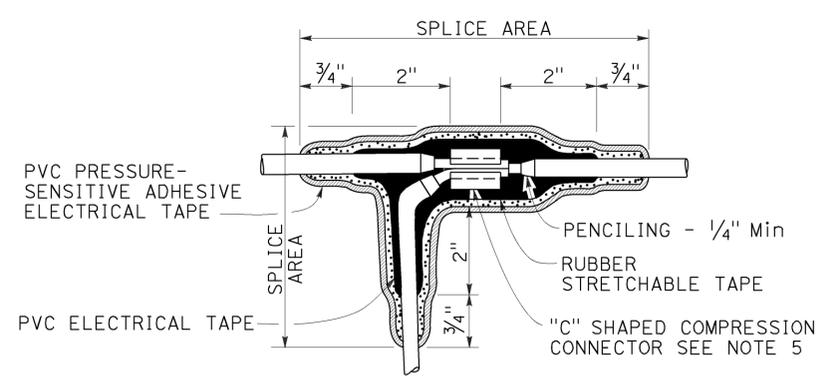
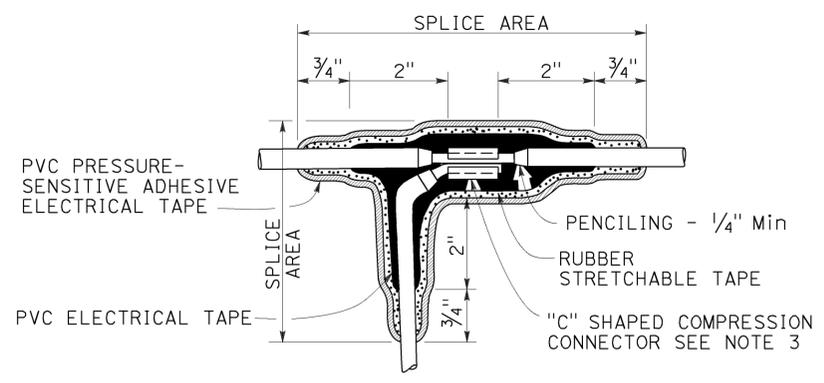
2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	169	244

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.



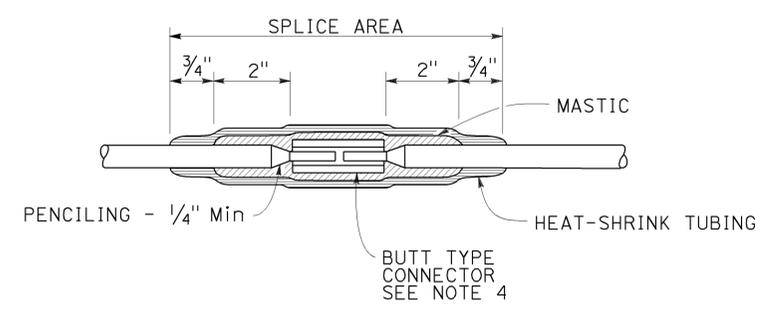
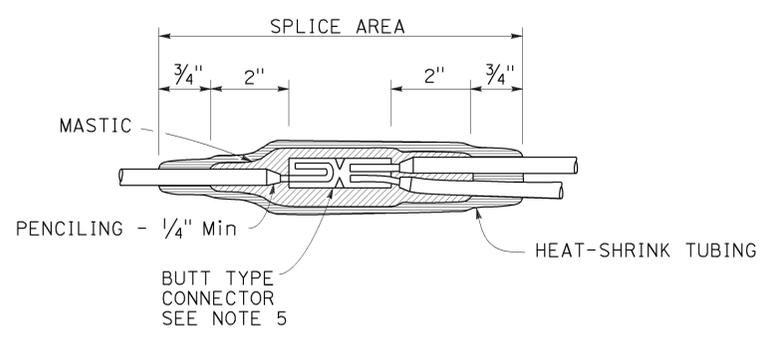
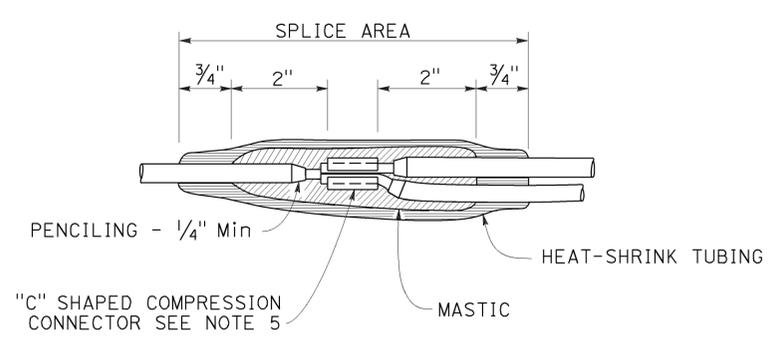
TO ACCOMPANY PLANS DATED 03-28-16



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
12	Ora	5	1.2/2.2	170	244

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

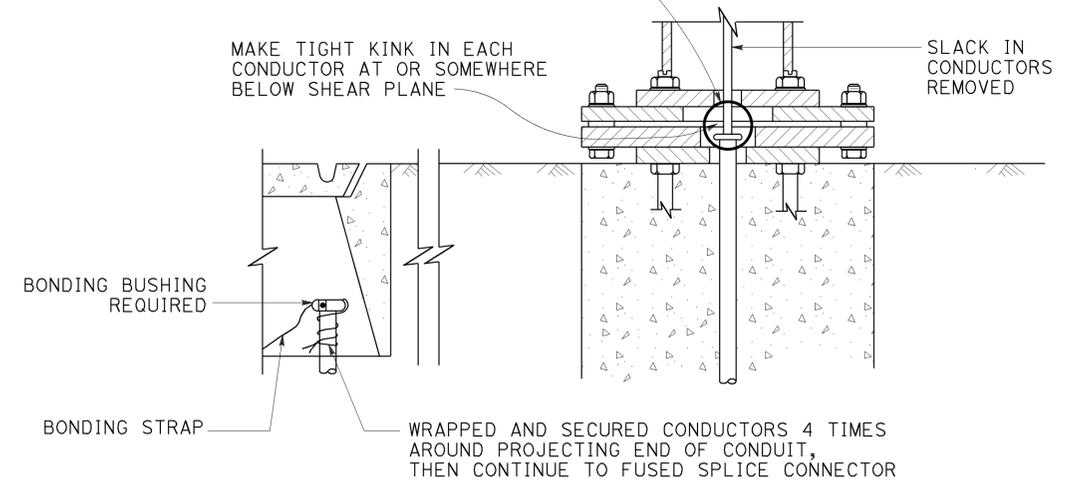
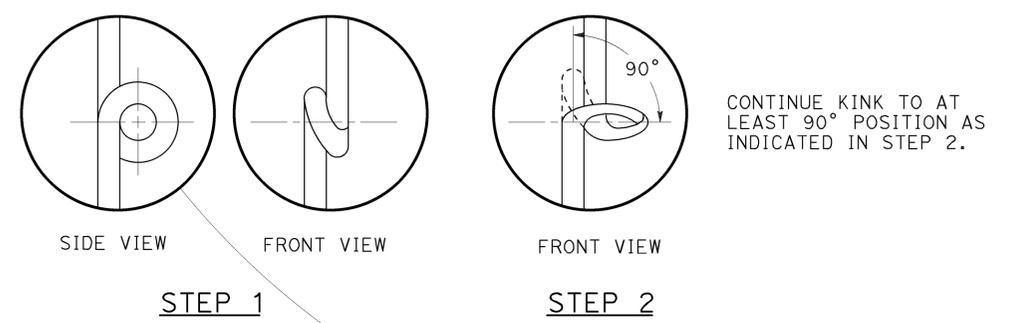
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 03-28-16

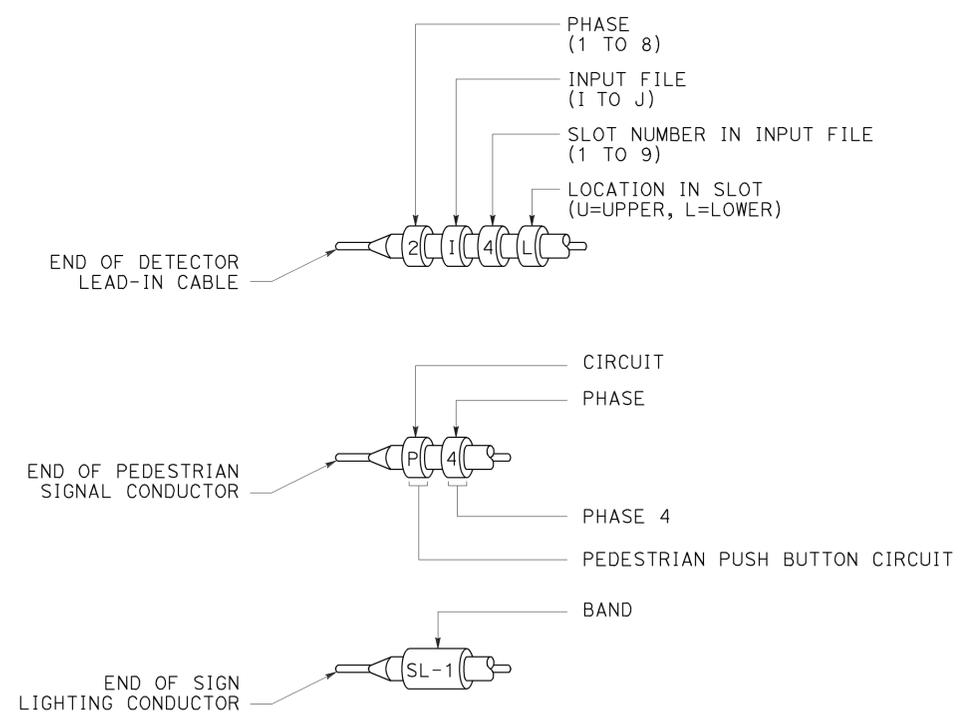
CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING						
		HPS LAMP BALLAST		LOW PRESSURE SODIUM BALLAST	INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	180 W	85 W	1 KVA	2 KVA	3 KVA
120 V	250 V	5 A	5 A	5 A	5 A	10 A	20 A	30 A
240 V	250 V	5 A	5 A	5 A	5 A	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:**
1. Primary lines of multiple ballasts shall be provided with fused connectors. Fuse ratings shall be as noted above.
 2. See Revised Standard Plan RSP ES-15D, Type SC3 control.

FUSE RATINGS FOR FUSED CONNECTORS



KINKING DETAIL FOR SLIP BASE STANDARDS
DETAIL A



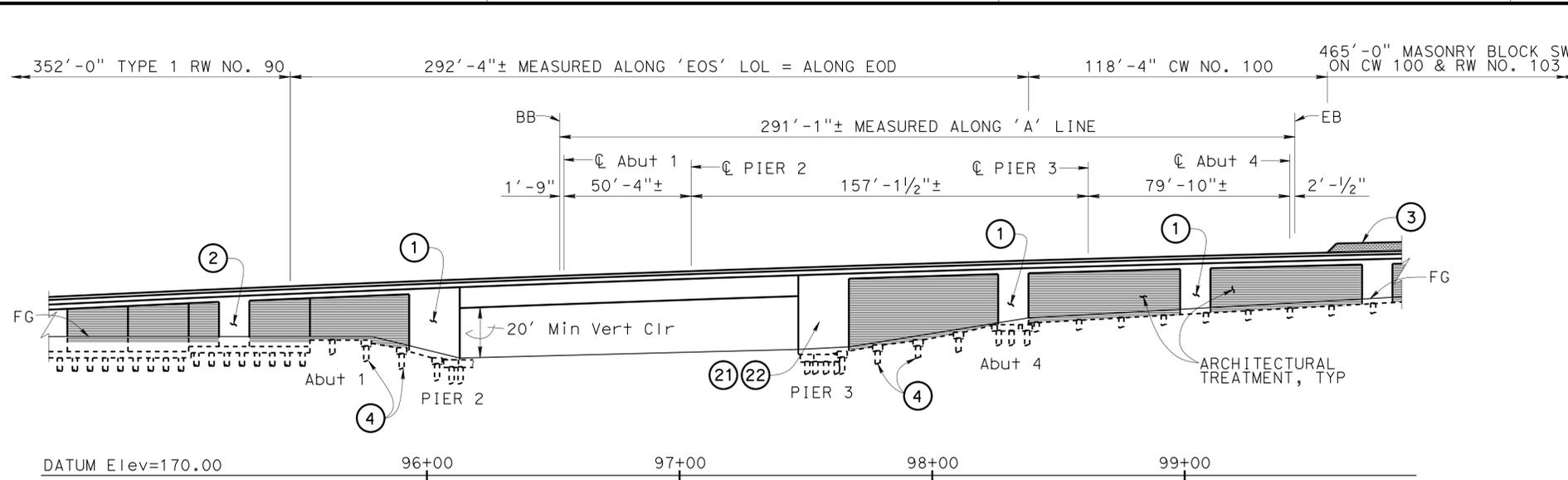
TYPICAL BANDING DETAILS
DETAIL B

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

NO SCALE

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

2010 REVISED STANDARD PLAN RSP ES-13B



ELEVATION
1"=30'-0"

NOTES:

- ① Curtain wall
- ② Retaining wall
- ③ Masonry sound wall
- ④ 24"Ø CIDH piles
- ⑤ Structure Approach Type R(30D)
- ⑥ Structure Approach Type N(30D)
- ⑦ Closure pour
- ⑧ Median concrete barrier type 60A (Modified) from BB to EB
- ⑨ Median concrete barrier type 60A (Modified) from BB and EB to end of approach slabs
- ⑩ For median concrete barrier type 60A (Modified) after approach slab, see "Road Way Plans"
- ⑪ Remove existing median concrete barrier type 50A
- ⑫ Remove existing concrete barrier
- ⑬ Remove existing concrete
- ⑭ Concrete barrier type 736
- ⑮ Concrete barrier type 736A
- ⑯ Match the existing grade and cross slope
- ⑰ Temporary railing type K (See Road Way Plans)
- ⑱ Remove existing masonry sound wall
- ⑳ Replace existing joint seal
- ㉑ New joint seal

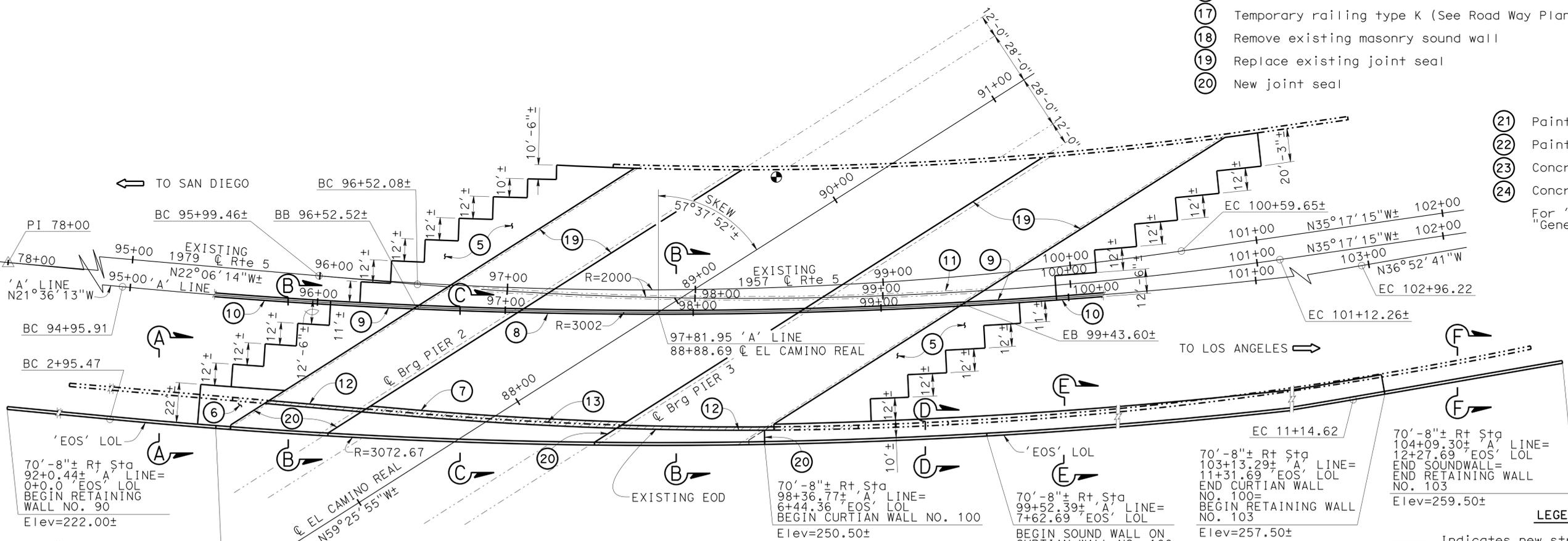
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	171	244

Jinrong Wang 02-01-16
REGISTERED CIVIL ENGINEER DATE

3-28-16
PLANS APPROVAL DATE

JINRONG WANG
No. C49844
Exp. 09-30-16
CIVIL
STATE OF CALIFORNIA

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CURVE DATA:

Exist 1957 Rte 5	Exist 1979 Rte 5	'A' LINE	'EOS' LINE
R = 2000'±	R = 2000'±	R = 3002.00'	R = 3072.67'
Δ = 13°11'01"±	Δ = 13°11'01"±	Δ = 15°16'29"	Δ = 15°16'29"
T = 231.12'±	T = 231.12'±	T = 402.54'	T = 412.02'
L = 460.19'±	L = 460.19'±	L = 800.31'	L = 819.15'

PLAN
1"=30'-0"

NOTES (CONT):

- ㉑ Paint 'BR NO. 55-0203
 - ㉒ Paint 'EL CAMINO REAL UC'
 - ㉓ Concrete barrier type 736 (Modified)
 - ㉔ Concrete barrier type 736A (Modified)
- For 'Quantities' see "General Notes" sheet

LEGEND:

- Indicates new structure
- Indicates existing structure
- ▨ Indicates limits of bridge removal (Portion)
- CW Indicates Curtain Wall
- ⊙ Indicates point of minimum vertical clearance

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

DESIGN	BY JINRONG WANG	CHECKED LEON VALLA
DETAILS	BY TON DOAN	CHECKED LEON VALLA
QUANTITIES	BY PAUL M. / LEON V.	CHECKED FAYEK T. / WILLIAM A.

LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
LAYOUT	BY TON DOAN
SPECIFICATIONS	BY XIAODONG CHEN

CHECKED LEON VALLA	CHECKED LEON VALLA	CHECKED LEON VALLA
PLANS AND SPECS COMPARED XIAODONG CHEN	PLANS AND SPECS COMPARED XIAODONG CHEN	PLANS AND SPECS COMPARED XIAODONG CHEN

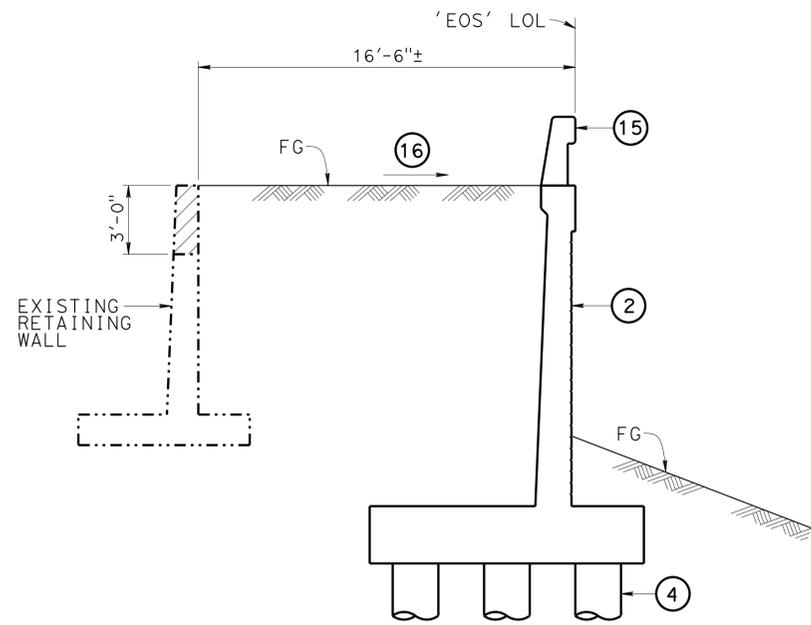
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
BRIDGE NO. 55-0203
POST MILE 1.6
DESIGN BRANCH 12

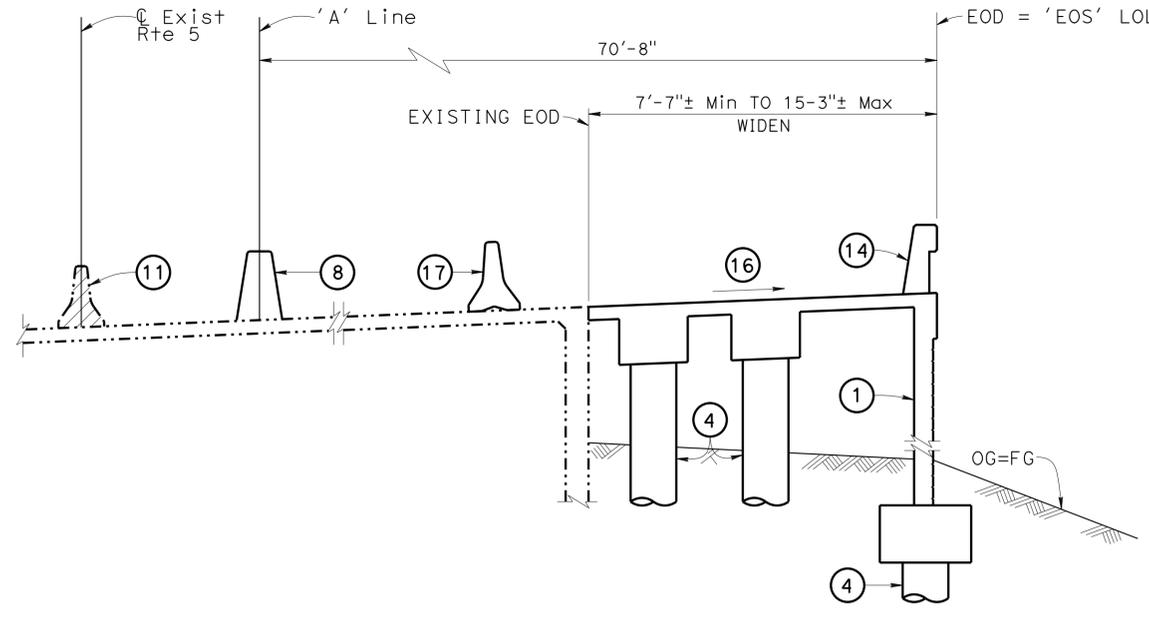
EL CAMINO REAL UC WIDENING
GENERAL PLAN NO. 1

USERNAME => s127856 DATE PLOTTED => 16-MAY-2016 TIME PLOTTED => 14:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	172	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER JINRONG WANG No. C49844 Exp. 09-30-16 CIVIL STATE OF CALIFORNIA					
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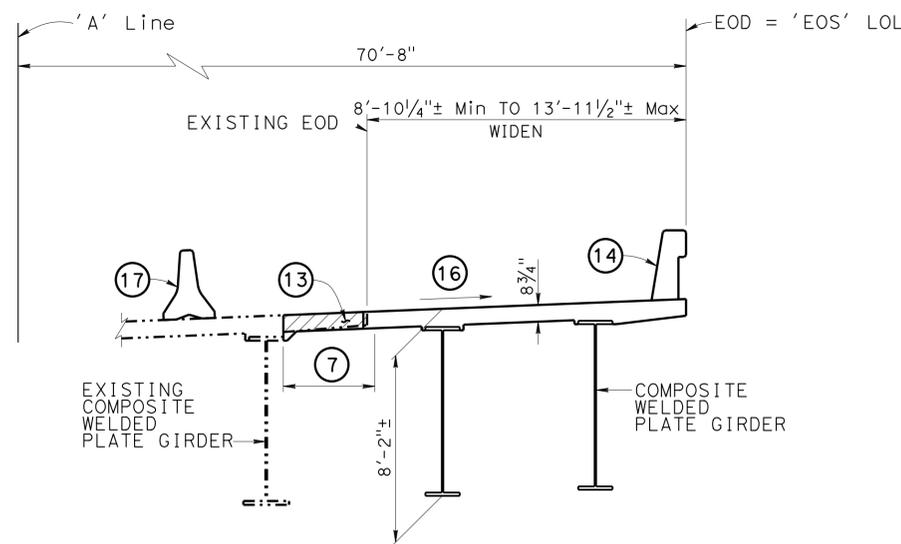


TYPICAL SECTION A-A
1/4"=1'-0"

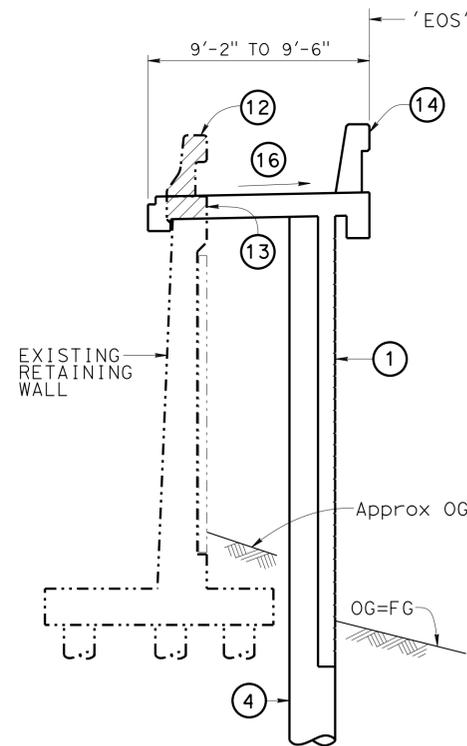


TYPICAL SECTION B-B
1/4"=1'-0"

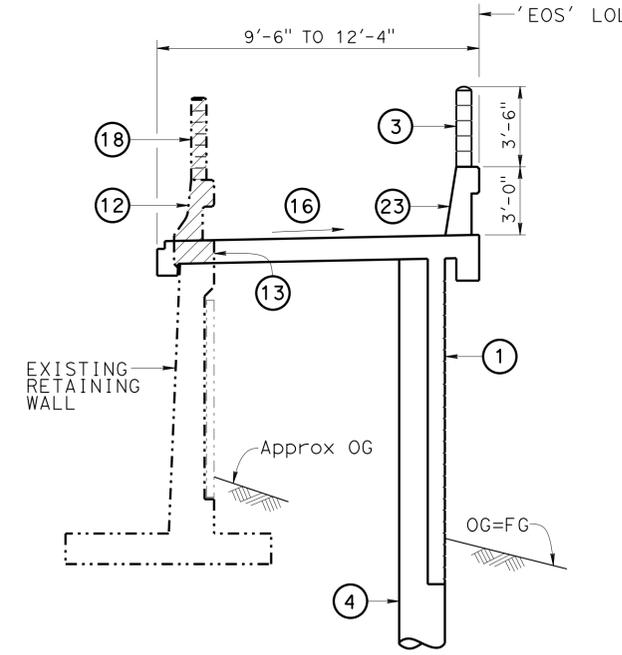
- NOTES:**
- For 'Section A-A', 'Section B-B', 'Section C-C', 'Section D-D', and 'Section E-E' locations, see "General Plan No. 1" sheet
 - For 'Legend' and 'Notes', see "General Plan No. 1" sheet



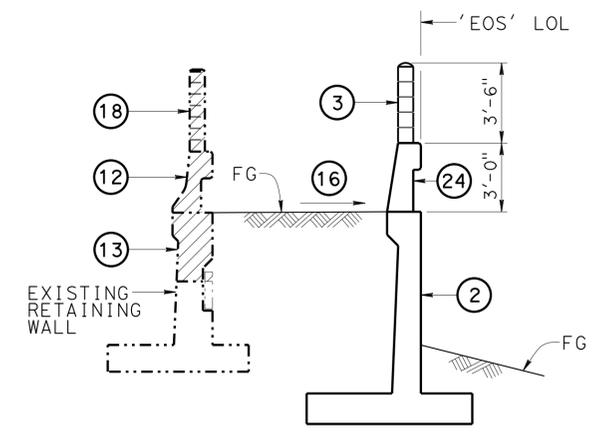
TYPICAL SECTION C-C
1/4"=1'-0"



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



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



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

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

MATT HOLM DESIGN ENGINEER	DESIGN	BY JINRONG WANG	CHECKED LEON VALLA	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 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING GENERAL PLAN NO. 2					
	DETAILS	BY TON DOAN	CHECKED LEON VALLA	LAYOUT	BY TON DOAN			POST MILE	1.6						
	QUANTITIES	BY PAUL MAK	CHECKED FAYEK TANNOUS	SPECIFICATIONS	BY XIAODONG CHEN										
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS										REVISION DATES	SHEET	OF			
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)										12-16-14	03-09-16	12-08-15	12-29-15	2	74
UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M4901										DISREGARD PRINTS BEARING EARLIER REVISION DATES					

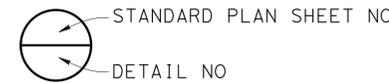
USERNAME => s127856 DATE PLOTTED => 16-MAY-2016 TIME PLOTTED => 14:24

INDEX TO PLANS

SHEET NO.:	TITLE:
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2.	GENERAL PLAN NO. 2
3.	INDEX TO PLANS
4.	GENERAL NOTES
5.	PILE DATA TABLE NO. 1
6.	PILE DATA TABLE NO. 2
7.	FOUNDATION PLAN NO. 1
8.	FOUNDATION PLAN NO. 2
9.	FOUNDATION PLAN NO. 3
10.	ABUTMENT 1-PIER 2 LAYOUT
11.	ABUTMENT 1-PIER 2 DETAILS NO. 1
12.	ABUTMENT 1-PIER 2 DETAILS NO. 2
13.	ABUTMENT 1-PIER 2 DETAILS NO. 3
14.	ABUTMENT 1-PIER 2 DETAILS NO. 4
15.	ABUTMENT 1-PIER 2 DETAILS NO. 5
16.	ABUTMENT 1-PIER 2 DETAILS NO. 6
17.	ABUTMENT 1-PIER 2 DETAILS NO. 7
18.	ABUTMENT 4-PIER 3 LAYOUT
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20.	ABUTMENT 4-PIER 3 DETAILS NO. 2
21.	ABUTMENT 4-PIER 3 DETAILS NO. 3
22.	ABUTMENT 4-PIER 3 DETAILS NO. 4
23.	ABUTMENT 4-PIER 3 DETAILS NO. 5
24.	ABUTMENT 4-PIER 3 DETAILS NO. 6
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27.	PIER 2 AND PIER 3 PEDESTAL DETAILS
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34.	BRACING DETAILS NO. 1
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36.	BRACING DETAILS NO. 3
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38.	BEARING DETAILS NO. 2
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52.	CURTAIN WALL 100/RETAINING WALL 103/WALL DETAILS NO. 3
53.	CURTAIN WALL 100/RETAINING WALL 103/WALL DETAILS NO. 4
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55.	CURTAIN WALL 100/RETAINING WALL 103/WALL DETAILS NO. 6
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57.	CURTAIN WALL 100/RETAINING WALL 103/SOUND WALL DETAILS NO. 2
58.	CURTAIN WALL 100/RETAINING WALL 103/MISCELLANEOUS DETAILS NO. 1
59.	RETAINING WALL 90/ARCHITECTURAL TREATMENT DETAILS NO. 1
60.	CURTAIN WALL 100/RETAINING WALL 103/ARCHITECTURAL TREATMENT DETAILS NO. 2
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STANDARD PLANS DATED 2010

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 3)
A10D	SYMBOLS (SHEET 2 OF 3)
A10E	SYMBOLS (SHEET 3 OF 3)
RSP A10F	LEGEND-SOIL (SHEET 1 OF 2)
RSP A10G	LEGEND-SOIL (SHEET 2 OF 2)
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL-BRIDGE
RSP A76A	CONCRETE BARRIER TYPE 60
RSP A77U3	MIDWEST GUARDRAIL SYSTEM-CONNECTIONS TO ABUTMENTS AND WALLS
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BO-13	BRIDGE DETAILS
B2-3	16" AND 24" CAST-IN-DRILLED- HOLE CONCRETE PILE
RSP B3-1A	RETAINING WALL TYPE 1 - H = 4' THROUGH 30'
RSP B3-5	RETAINING WALL DETAILS NO. 1
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11-56	CONCRETE BARRIER TYPE 736
RSP B15-6	SOUNDWALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (1)
RSP P10	CONCRETE PAVEMENT - DOWEL BAR DETAILS
RSP P14	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT-TRANSVERSE CONSTRUCTION JOINT



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	173	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY JINRONG WANG	CHECKED LEON VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING							
	DETAILS	BY TON DOAN	CHECKED LEON VALLA			55-0203	INDEX TO PLANS							
	QUANTITIES	BY PAUL MAK	CHECKED FAYEK TANNOUS			POST MILE	1.6							
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3606	PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M4901		REVISION DATES	SHEET 3 OF 74					
					DISREGARD PRINTS BEARING EARLIER REVISION DATES		<table border="1"> <tr> <td>08-18-15</td> <td>11-02-15</td> <td>12-24-15</td> <td>01-20-16</td> </tr> </table>		08-18-15	11-02-15	12-24-15	01-20-16		
08-18-15	11-02-15	12-24-15	01-20-16											

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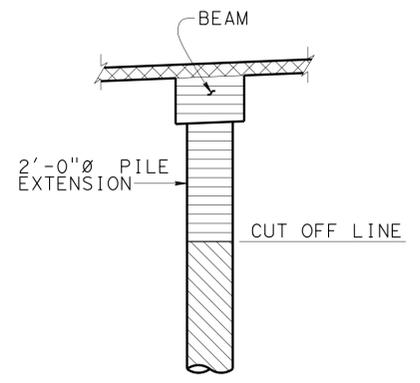
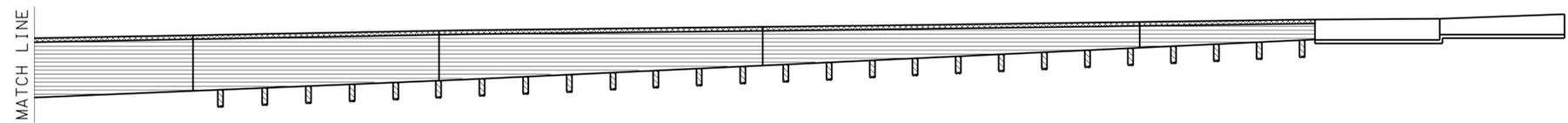
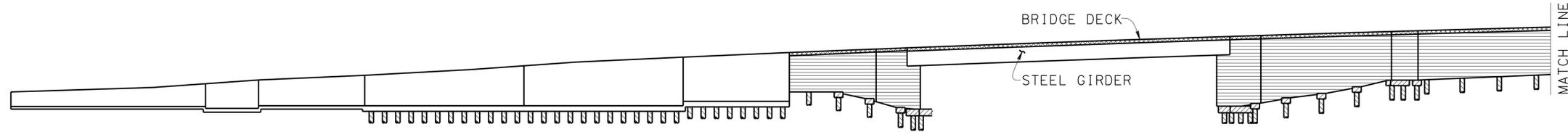
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	174	244

Jinrong Wang 02-01-16
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3-28-16
PLANS APPROVAL DATE

JINRONG WANG
No. C49844
Exp. 09-30-16
CIVIL
STATE OF CALIFORNIA

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- Structural Concrete, Bridge (Polymer Fiber) (4250 psi @ 28 days)
- Structural Concrete, Bridge
- Structural Concrete, Bridge Footings (4000 psi @ 28 days)
- Structural Concrete, CIDH pile (4000 psi @ 28 days)
- Structural Concrete, Retaining Wall

CONCRETE STRENGTH AND TYPE LIMITS
NO SCALE

TYPICAL PILE EXTENSION
1/4"=1'-0"

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition with California Amendments. Preface dated January 2014

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.7 dated April 2013

DEAD LOAD: Includes 35 psf for future wearing surface
10% additional dead load for steel deck form

LIVE LOADING: HL93 with "Low Boy" and Permit Design Vehicle

SEISMIC LOADING:
PGA = 0.4g
Mmax = 6.9 Vs30 = 400 m/s
See: 'Site Specific ARS Curve'

REINFORCED CONCRETE:
fy = 60 ksi
f'c = 3.6 ksi
n = 8

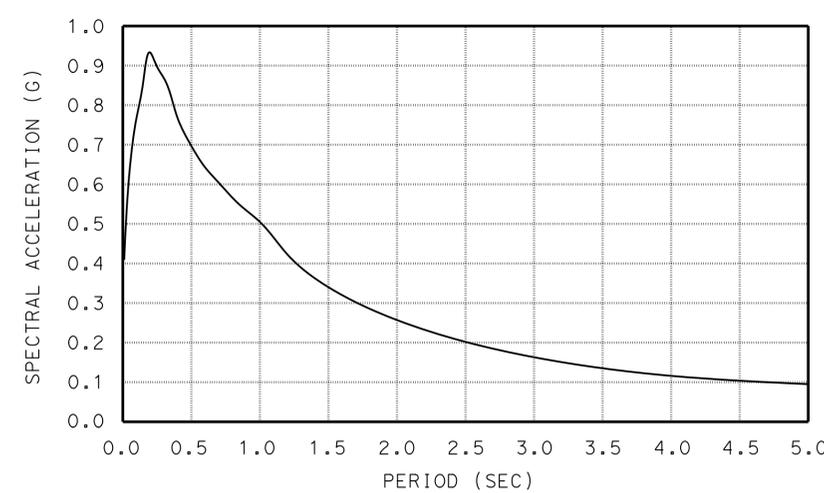
STRUCTURAL STEEL:
fy = 50 ksi (Grade 50)

ANCHOR RODS:
All anchors rods shall be Galv fy = 55 ksi

HS BOLTS:
All shall be fy = 92 ksi
(+threads excluded from shear plane)

QUANTITIES

LEAD COMPLIANCE PLAN	LUMP SUM	
WORK AREA MONITORING (BRIDGE)	LUMP SUM	
REFINISH BRIDGE DECK	873	SOFT
BRIDGE REMOVAL (PORTION)	LUMP SUM	
STRUCTURE EXCAVATION (BRIDGE)	680	CY
STRUCTURE EXCAVATION (RETAINING WALL)	1,062	CY
STRUCTURE BACKFILL (BRIDGE)	621	CY
STRUCTURE BACKFILL (RETAINING WALL)	1,592	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	89	CY
24" CAST-IN-DRILLED-HOLE CONCRETE PILING	5,831	LF
STRUCTURAL CONCRETE, BRIDGE FOOTING	49	CY
STRUCTURAL CONCRETE, BRIDGE	646	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	321	CY
STRUCTURAL CONCRETE, RETAINING WALL	515	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	33	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	479	CY
PAVING NOTCH EXTENSION	402	CF
SPLIT FACE BLOCK TEXTURE	5,300	SOFT
DRILL AND BOND DOWEL	105	LF
DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	70	EA
JOINT SEAL (MR 1/2")	573	LF
JOINT SEAL (MR 1")	558	LF
BAR REINFORCING STEEL (BRIDGE)	389,100	LB
BAR REINFORCING STEEL (RETAINING WALL)	122,000	LB
HEADED BAR REINFORCEMENT	60	EA
FURNISH STRUCTURAL STEEL (BRIDGE)	115,030	LB
ERECT STRUCTURAL STEEL (BRIDGE)	115,030	LB
SOUND WALL (MASONRY BLOCK)	1,625	SOFT
CLEAN AND PAINT STRUCTURAL STEEL	LUMP SUM	
SPOT BLAST CLEAN AND PAINT UNDERCOAT	48	SOFT
PREPARE AND STAIN CONCRETE	5,300	SOFT
MISCELLANEOUS METAL (BRIDGE)	1,847	LB
CONCRETE BARRIER (TYPE 60A) (MODIFIED)	292	LF
CONCRETE BARRIER (TYPE 736)	781	LF
CONCRETE BARRIER (TYPE 736A)	448	LF



ACCELERATION RESPONSE SPECTRA (WITH 5% DAMPING)
SITE SPECIFIC ARS CURVE
NO SCALE

DESIGN	BY	JINRONG WANG	CHECKED	LEON VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING GENERAL NOTES						
	DETAILS	BY	TON DOAN	CHECKED			LEON VALLA	POST MILE		1.6					
QUANTITIES	BY	PAUL MAK	CHECKED	FAYEK TANNOUS	UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M4901		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET	OF				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)										08-16-15	07-28-16	03-09-16	07-28-16	4	74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	175	244

JINRONG WANG 02-01-16
 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.

NOTES:

- Design tip elevations are controlled by: (a) Compression, (b) Tension, (c) Settlement, and (d) Lateral load
- The specified tip elevation shall not be raised above the design tip elevations for Tension, Settlement, and Lateral load

LOCATION	PILE	PILE TYPE	NOMINAL RESISTANCE (Kips)		CUT-OFF ELEVATION (ft)	DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)	REQUIRED NOMINAL DRIVING RESISTANCE (Kips)
			COMPRESSION	TENSION				
ABUT 1		24" CIDH	400	200	222.25	170.00 (a) 180.00 (c) 185.00 (d)	170.00	N/A
SPAN 1 CAP BEAM A	P1	24" CIDH PILE EXTENSION	342	N/A	225.50	175.50 (a)	175.50	N/A
	P2	24" CIDH PILE EXTENSION	342	N/A	220.50	170.50 (a)	170.50	N/A
SPAN 1 CAP BEAM B	P1	24" CIDH PILE EXTENSION	342	N/A	225.50	175.50 (a)	175.50	N/A
	P2	24" CIDH PILE EXTENSION	342	N/A	220.50	170.50 (a)	170.50	N/A
SPAN 1 CURTAIN WALL	P1	24" CIDH	400	N/A	219.75	159.75 (a)	159.75	N/A
	P2	24" CIDH	400	N/A	216.75	156.75 (a)	156.75	N/A
	P3	24" CIDH	400	N/A	212.75	152.75 (a)	152.75	N/A
PIER 2		24" CIDH	400	200	211.50	151.50 (a) 171.50 (b) 180.50 (c) 181.50 (d)	151.50	N/A
PIER 3		24" CIDH	400	200	211.50	161.50 (a) 181.50 (b) 181.50 (c) 181.50 (d)	161.50	N/A
SPAN 3 CAP BEAM A	P1	24" CIDH PILE EXTENSION	342	N/A	216.50	176.50 (a)	176.50	N/A
	P2	24" CIDH PILE EXTENSION	342	N/A	220.50	180.50 (a)	180.50	N/A
	P3	24" CIDH PILE EXTENSION	342	N/A	223.50	183.00 (a)	183.00	N/A
	P4	24" CIDH PILE EXTENSION	342	N/A	226.50	186.50 (a)	186.50	N/A
SPAN 3 CURTAIN WALL	P1	24" CIDH	342	N/A	213.25	163.25 (a)	163.25	N/A
	P2	24" CIDH	342	N/A	215.75	165.75 (a)	165.75	N/A
	P3	24" CIDH	342	N/A	217.75	167.75 (a)	167.75	N/A
	P4	24" CIDH	342	N/A	220.75	170.75 (a)	170.75	N/A
ABUT 4		24" CIDH	400	200	223.75	183.75 (a) 185.75 (c) 191.75 (d)	183.75	N/A

PILE DATA TABLE (CONTINUOUS)								
LOCATION	PILE	PILE TYPE	NOMINAL RESISTANCE (Kips)		CUT-OFF ELEVATION (ft)	DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)	REQUIRED NOMINAL DRIVING RESISTANCE (Kips)
			COMPRESSION	TENSION				
RW 90 SEGMENT A		24" CIDH	190	95	215.25	175.25 (a) 185.25 (b) 185.25 (c) 177.25 (d)	175.25	N/A
RW 90 SEGMENT B		24" CIDH	190	95	217.25	175.25 (a) 185.25 (b) 185.25 (c) 177.25 (d)	175.25	N/A
CURTAIN WALL 100	1	24" CIDH PILE EXTENSION	380	N/A	230.00	170.00 (a) 190.00 (c) 190.00 (d)	170.00	N/A
	2	24" CIDH PILE EXTENSION	380	N/A	232.00	172.00 (a) 192.00 (c) 192.00 (d)	172.00	N/A
	3	24" CIDH PILE EXTENSION	380	N/A	233.50	173.50 (a) 193.50 (c) 193.50 (d)	173.50	N/A
	4	24" CIDH PILE EXTENSION	380	N/A	234.50	174.50 (a) 194.50 (c) 194.50 (d)	174.50	N/A
	5	24" CIDH PILE EXTENSION	380	N/A	235.50	175.50 (a) 195.50 (c) 195.50 (d)	175.50	N/A
	6	24" CIDH PILE EXTENSION	380	N/A	236.00	176.00 (a) 196.00 (c) 196.00 (d)	176.00	N/A
	7	24" CIDH PILE EXTENSION	380	N/A	236.00	176.00 (a) 196.00 (c) 196.00 (d)	176.00	N/A
	8	24" CIDH PILE EXTENSION	380	N/A	236.50	176.50 (a) 196.50 (c) 196.50 (d)	176.50	N/A
	9	24" CIDH PILE EXTENSION	380	N/A	236.50	176.50 (c) 196.50 (c) 196.50 (d)	176.50	N/A
	10	24" CIDH PILE EXTENSION	380	N/A	237.00	177.00 (a) 197.00 (c) 197.00 (d)	177.00	N/A
	11	24" CIDH PILE EXTENSION	380	N/A	237.50	177.50 (a) 197.50 (c) 197.50 (d)	177.50	N/A
	12	24" CIDH PILE EXTENSION	380	N/A	238.00	178.00 (a) 198.00 (c) 198.00 (d)	178.00	N/A
	13	24" CIDH PILE EXTENSION	380	N/A	238.50	178.50 (a) 198.50 (c) 198.50 (d)	178.50	N/A
	14	24" CIDH PILE EXTENSION	380	N/A	239.00	179.00 (a) 199.00 (c) 199.00 (d)	179.00	N/A

DESIGN	BY JINRONG WANG	CHECKED LEON VALLA
DETAILS	BY TON DOAN	CHECKED LEON VALLA
QUANTITIES	BY PAUL MAK	CHECKED FAYEK TANNOUS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO. 55-0203
POST MILE 1.6

**EL CAMINO REAL UC WIDENING
PILE DATA TABLE NO. 1**

USERNAME => s127956 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	176	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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PILE DATA TABLE (CONTINUOUS)

LOCATION	PILE	PILE TYPE	NOMINAL RESISTANCE (Kips)		CUT-OFF ELEVATION (ft)	DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)	REQUIRED NOMINAL DRIVING RESISTANCE (Kips)
			COMPRESSION	TENSION				
CURTAIN WALL 100	15	24" CIDH PILE EXTENSION	380	N/A	239.00	179.00 (a) 199.00 (c) 199.00 (d)	179.00	N/A
	16	24" CIDH PILE EXTENSION	380	N/A	240.00	180.00 (a) 200.00 (c) 200.00 (d)	180.00	N/A
	17	24" CIDH PILE EXTENSION	380	N/A	240.50	180.50 (a) 200.50 (c) 200.50 (d)	180.50	N/A
	18	24" CIDH PILE EXTENSION	380	N/A	241.00	181.00 (a) 201.00 (c) 201.00 (d)	181.00	N/A
	19	24" CIDH PILE EXTENSION	380	N/A	242.00	182.00 (a) 202.00 (c) 202.00 (d)	182.00	N/A
	20	24" CIDH PILE EXTENSION	380	N/A	242.50	182.50 (a) 202.50 (c) 202.50 (d)	182.50	N/A
	21	24" CIDH PILE EXTENSION	380	N/A	243.00	183.00 (a) 203.00 (c) 203.00 (d)	183.00	N/A
	22	24" CIDH PILE EXTENSION	380	N/A	244.00	184.00 (a) 204.00 (c) 204.00 (d)	184.00	N/A
	23	24" CIDH PILE EXTENSION	380	N/A	244.50	184.50 (a) 204.50 (c) 204.50 (d)	184.50	N/A
	24	24" CIDH PILE EXTENSION	380	N/A	245.50	185.50 (a) 205.50 (c) 205.50 (d)	185.50	N/A
	25	24" CIDH PILE EXTENSION	380	N/A	246.00	186.00 (a) 206.00 (c) 206.00 (d)	186.00	N/A
	26	24" CIDH PILE EXTENSION	380	N/A	247.50	187.50 (a) 207.50 (c) 207.50 (d)	187.50	N/A
	27	24" CIDH PILE EXTENSION	380	N/A	248.50	188.50 (a) 208.50 (c) 208.50 (d)	188.50	N/A
	28	24" CIDH PILE EXTENSION	380	N/A	249.00	189.00 (a) 209.00 (c) 209.00 (d)	189.00	N/A
29	24" CIDH PILE EXTENSION	380	N/A	250.00	190.00 (a) 209.00 (c) 209.00 (d)	190.00	N/A	
30	24" CIDH PILE EXTENSION	380	N/A	250.50	190.50 (a) 209.50 (c) 209.50 (d)	190.50	N/A	

NOTES:

- Design tip elevations are controlled by: (a) Compression, (b) Tension, (c) Settlement, and (d) Lateral load
- The specified tip elevation shall not be raised

DESIGN	BY JINRONG WANG	CHECKED LEON VALLA
DETAILS	BY TON DOAN	CHECKED LEON VALLA
QUANTITIES	BY PAUL MAK	CHECKED FAYEK TANNOUS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO.	55-0203
POST MILE	1.6

EL CAMINO REAL UC WIDENING
PILE DATA TABLE NO. 2

USERNAME => s127956 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:24

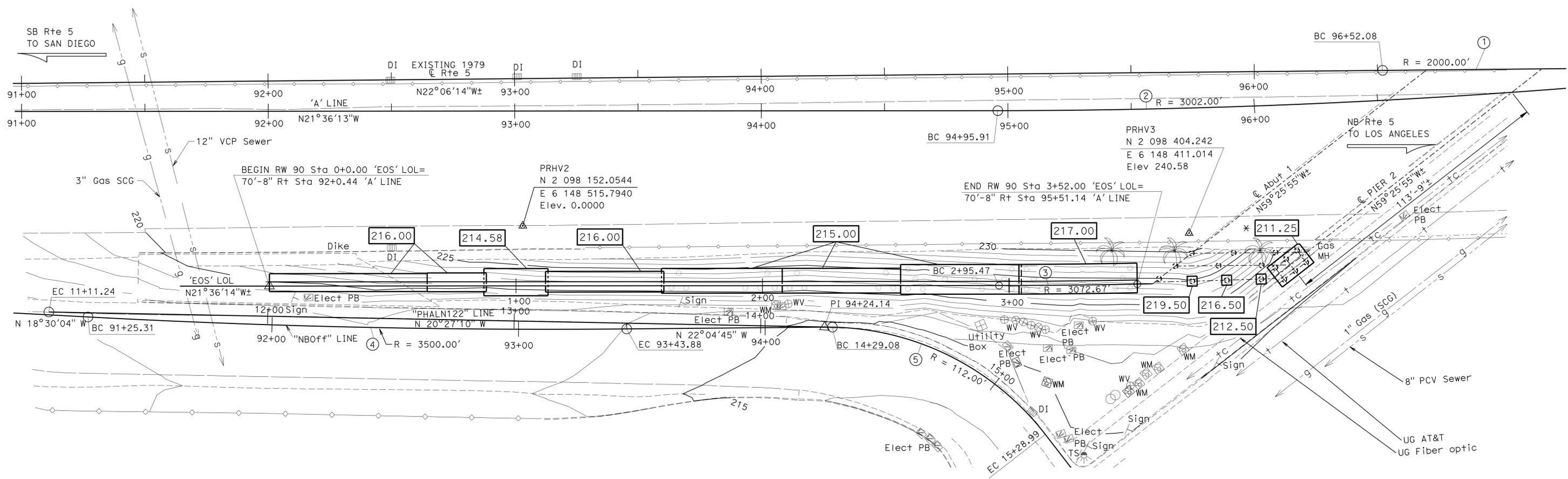
No.	R	Δ	T	L
①	2000.00'	13°11'01"	231.12'	460.19'
②	3002.00'	15°16'29"	402.54'	800.31'
③	3072.67'	15°16'29"	412.02'	819.15'
④	3500.00'	03°34'41"	109.32'	218.57'
⑤	112.00'	51°06'35"	53.55'	99.91'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	177	244

JINRONG WANG 02-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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SURVEY CONTROL

PRHV3
 PD: PK & TIN
 66.08 Ft Rt "I5CL1" Line
 Sta 95+73.16
 N 2 098 404.242
 E 6 148 411.014
 Elev 240.58

PRHV2
 PD: PK & TIN
 68.26 Ft Rt "I5CL1" Line
 Sta 93+00.08
 N 2 098 152.054
 E 6 148 515.794
 Elev 226.65

LEGEND:

- Indicates CIDH pile
- Indicates bottom of footing elevation
- Indicates top of new footing elevation = top of existing footing elevation

NOTES:

Underground utilities as shown are approximate. See District Utility Plans for details.

Not all piles shown for clarity

PRELIMINARY INVESTIGATION SECTION				DESIGN BY JINRONG WANG	CHECKED LEON VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 55-0203	EL CAMINO REAL UC WIDENING FOUNDATION PLAN NO. 1
SCALE: VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY TON DOAN	CHECKED LEON VALLA	POST MILE 1.6					
1"=20'	HORIZ. DATUM NAD83	QUANTITIES BY PAUL MAK	CHECKED FAYEK TANNOUS						

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3647 PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M4901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
03/25/15 12/28/15 03/09/16 11/20/15	7	74

USERNAME => s127956 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	178	244

02-01-16
DATE

3-28-16
PLANS APPROVAL DATE

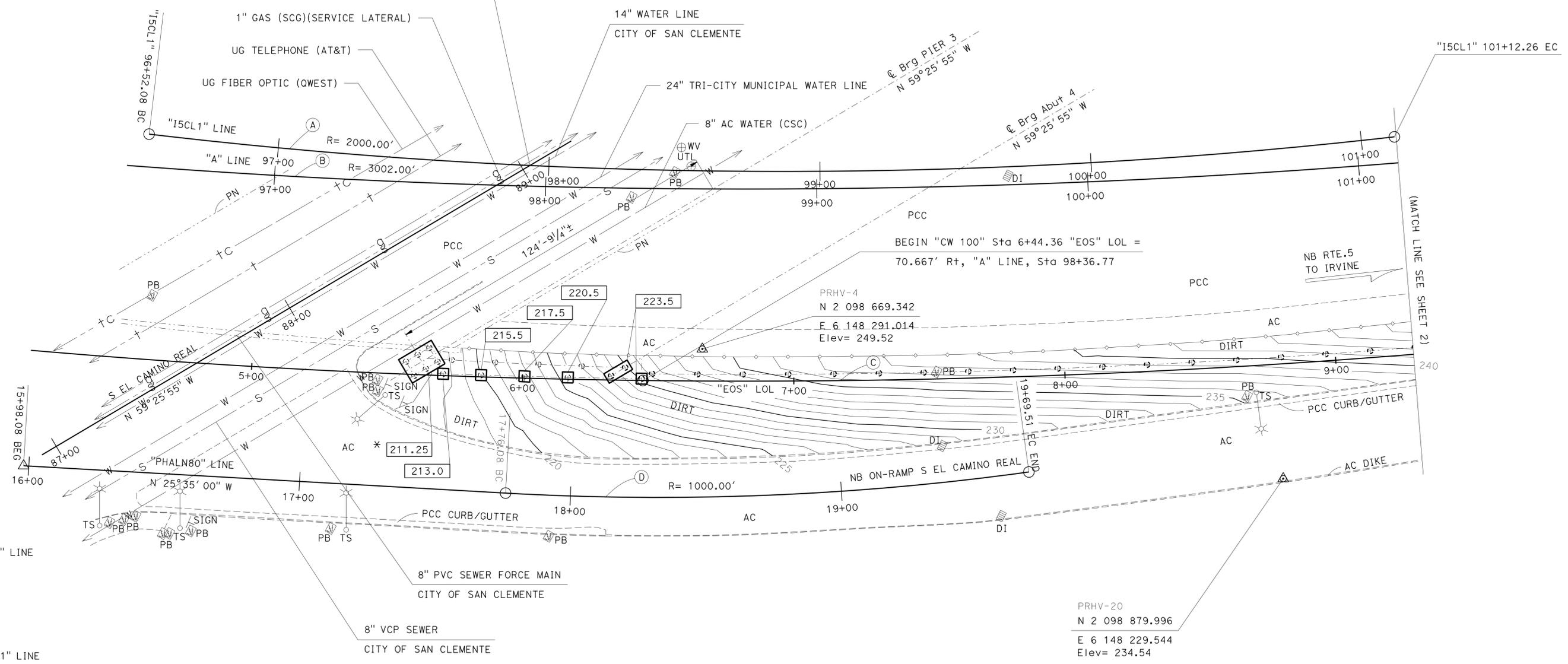
JINRONG WANG
REGISTERED CIVIL ENGINEER
No. C49844
Exp. 09-30-16
CIVIL

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CURVE DATA				
No.	R	Δ	T	L
(A)	2000.00'	13°11'00"	231.11'	460.18'
(B)	3002.00'	15°16'29"	402.54'	800.31'
(C)	3072.67'	15°16'28.60"	412.02'	819.15'
(D)	1000.00'	11°04'58"	97.02'	193.43'



Sta 97+93.00, "I5CL1" LINE, C ROUTE 5 =
Sta 97+93.00, "PHALN98" LINE, EL CAMINO REAL



SURVEY CONTROL

PRHV-4
FND PK+Tin
65.54' Rt, C "I5CL1" LINE
Sta 98+57.57
N 2 098 669.342
E 6 148 291.014
Elev= 249.52

PRHV-20
FND PK+Tin
121.04' Rt, C "I5CL1" LINE
Sta 100+60.52
N 2 098 879.996
E 6 148 229.544
Elev= 234.54

LEGEND:
[Symbol] INDICATES BOTTOM OF FOOTING ELEVATION

NOTES:
UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE,
SEE UTILITY PLANS FOR MORE INFORMATION

* TOP Elev OF NEW FOOTING =
TOP Elev OF Exist FOOTING

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

EL CAMINO REAL UC WIDENING
CURTAIN WALL 100 / RETAINING WALL 103
FOUNDATION PLAN NO. 2

PRELIMINARY INVESTIGATION SECTION				DESIGN BY J. WANG	CHECKED P. MAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 55-0203
SCALE 1"=20'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY KC	CHECKED P. MAK	POST MILE 1.6			
ALIGNMENT TIES Dist. Traverse Sheet	SURVEYED BY District 12	CHECKED BY X	QUANTITIES BY P. MAK	CHECKED F. TANNOUS				

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	179	244

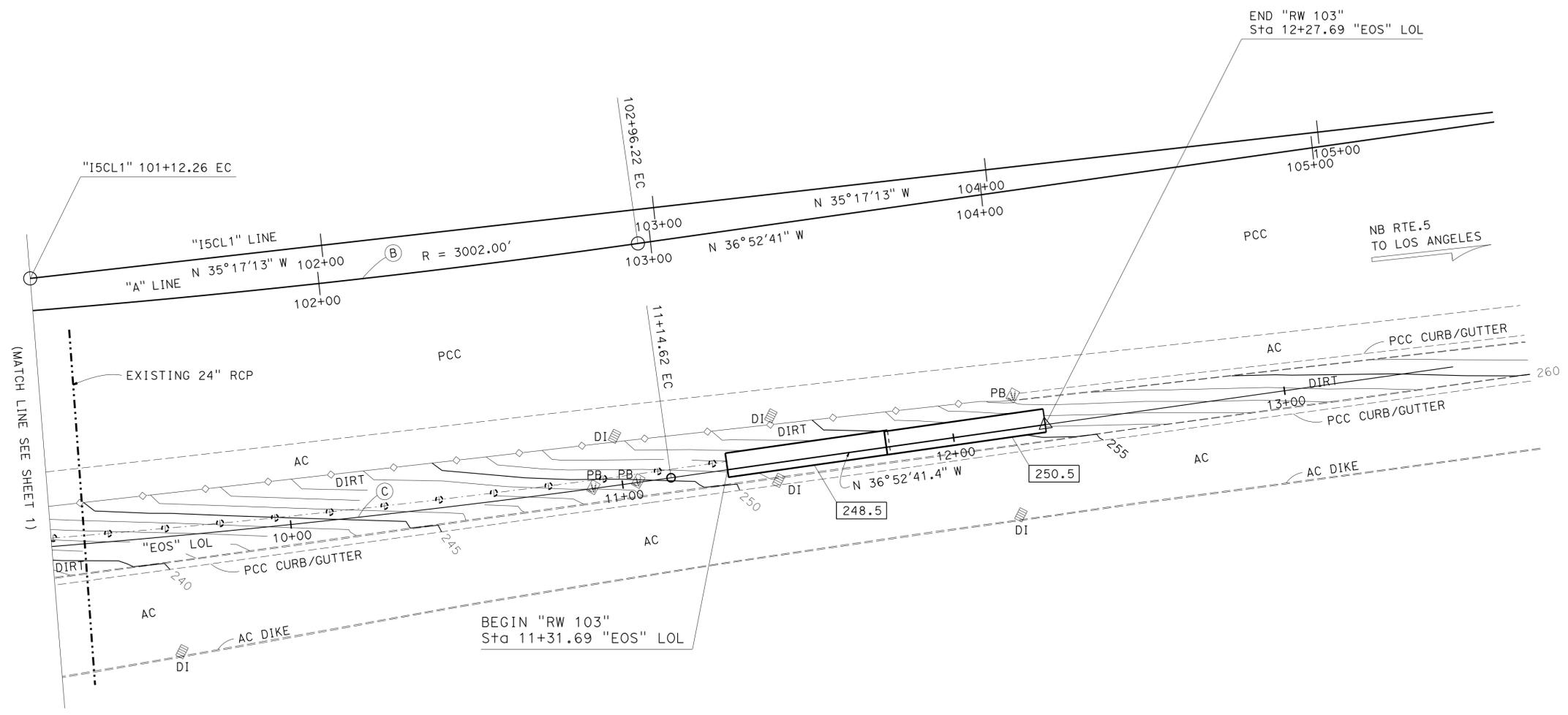
Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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

CURVE DATA				
No.	R	Δ	T	L
(B)	3002.00'	15°16'29"	402.54'	800.31'
(C)	3072.67'	15°16'28.60"	412.02'	819.15'



SURVEY CONTROL
 (SEE SHEET 1)

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

LEGEND:
 [Symbol] INDICATES BOTTOM OF FOOTING ELEVATION

EL CAMINO REAL UC WIDENING

CURTAIN WALL 100 / RETAINING WALL 103

FOUNDATION PLAN NO. 3

PRELIMINARY INVESTIGATION SECTION				DESIGN BY J. WANG	CHECKED P. MAK	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 55-0203
SCALE 1"=20'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY KC	CHECKED P. MAK	POST MILE 1.6			
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY V. PHAM 02/2015	CHECKED BY X	QUANTITIES BY P. MAK	CHECKED F. TANNOUS				

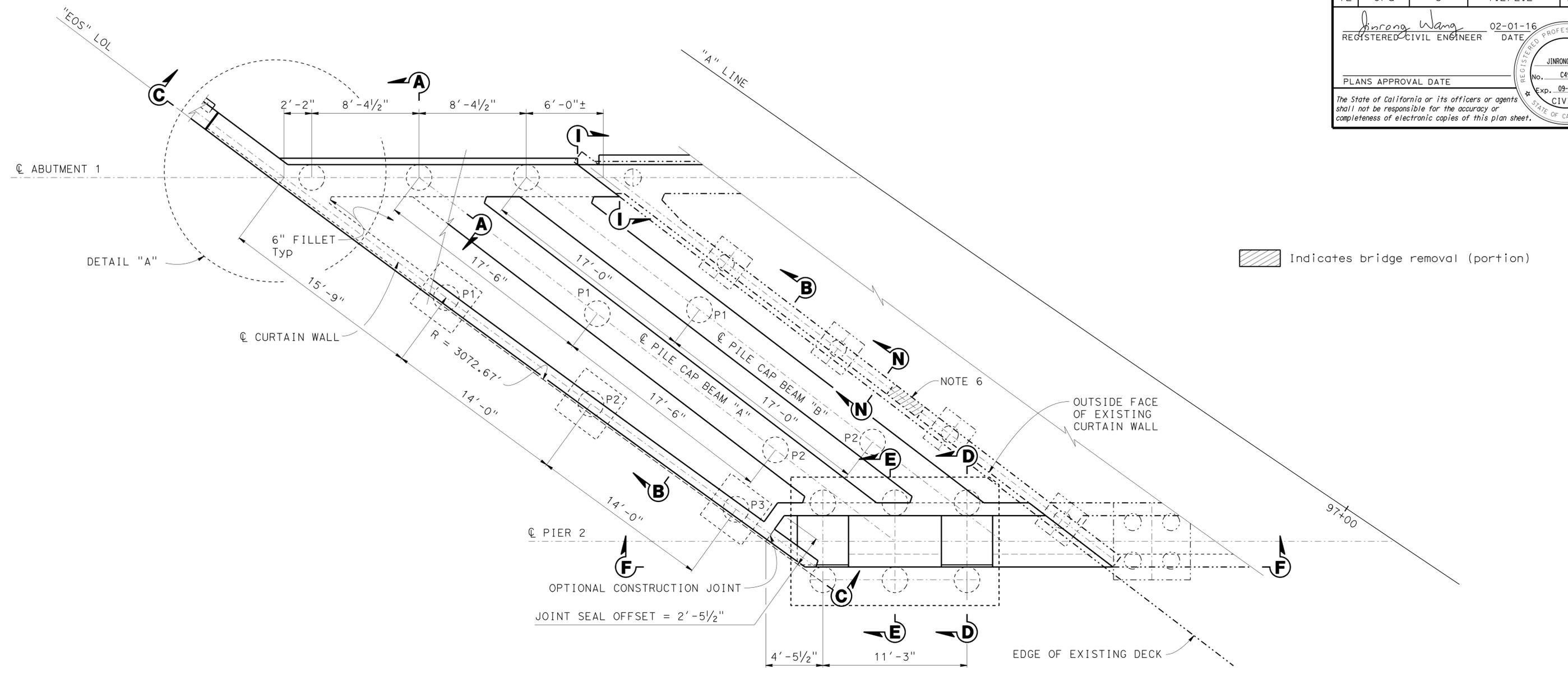
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	180	244

Jinrong Wang 02-01-16
REGISTERED CIVIL ENGINEER DATE

JINRONG WANG
No. C49844
Exp. 09-30-16
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE _____

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PLAN
1/4" = 1'-0"

- NOTES:
- For "SECTION A-A" and "DETAIL A" see "ABUTMENT 1 - PIER 2 DETAILS NO. 1" sheet.
 - For "SECTION B-B" see "ABUTMENT 1 - PIER 2 DETAILS NO. 2" sheet.
 - For "VIEW C-C" see "ABUTMENT 1 - PIER 2 DETAILS NO. 3" sheet.
 - For "SECTION D-D" and "SECTION E-E" see "PIER 2 AND PIER 3 COLUMN DETAILS" sheet.
 - For "VIEW F-F" see "ABUTMENT 1 - PIER 2 DETAILS NO. 4" sheet.
 - Construct 3' x 4' access opening in existing curtain wall. Exact location to be determined by the Engineer. Edge of opening shall be 4" minimum from ϕ of any pile.
 - For "SECTION I-I" and "SECTION N-N" see "ABUTMENT 1 PIER 2 DETAILS NO. 6" sheet.

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

DESIGN	BY	J. WANG	CHECKED	L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING ABUTMENT 1 - PIER 2 LAYOUT
	DETAILS	BY	KC	CHECKED			L. VALLA	POST MILE	
QUANTITIES	BY	L. VALLA	CHECKED	P. MAK	UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901	REVISION DATES	SHEET 10 OF 74	

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

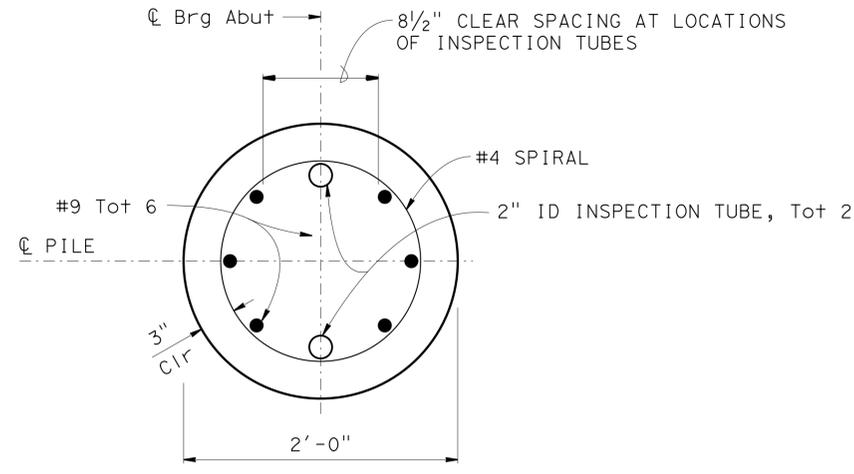
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 7-8-15, 11-2-15, 3-10-16

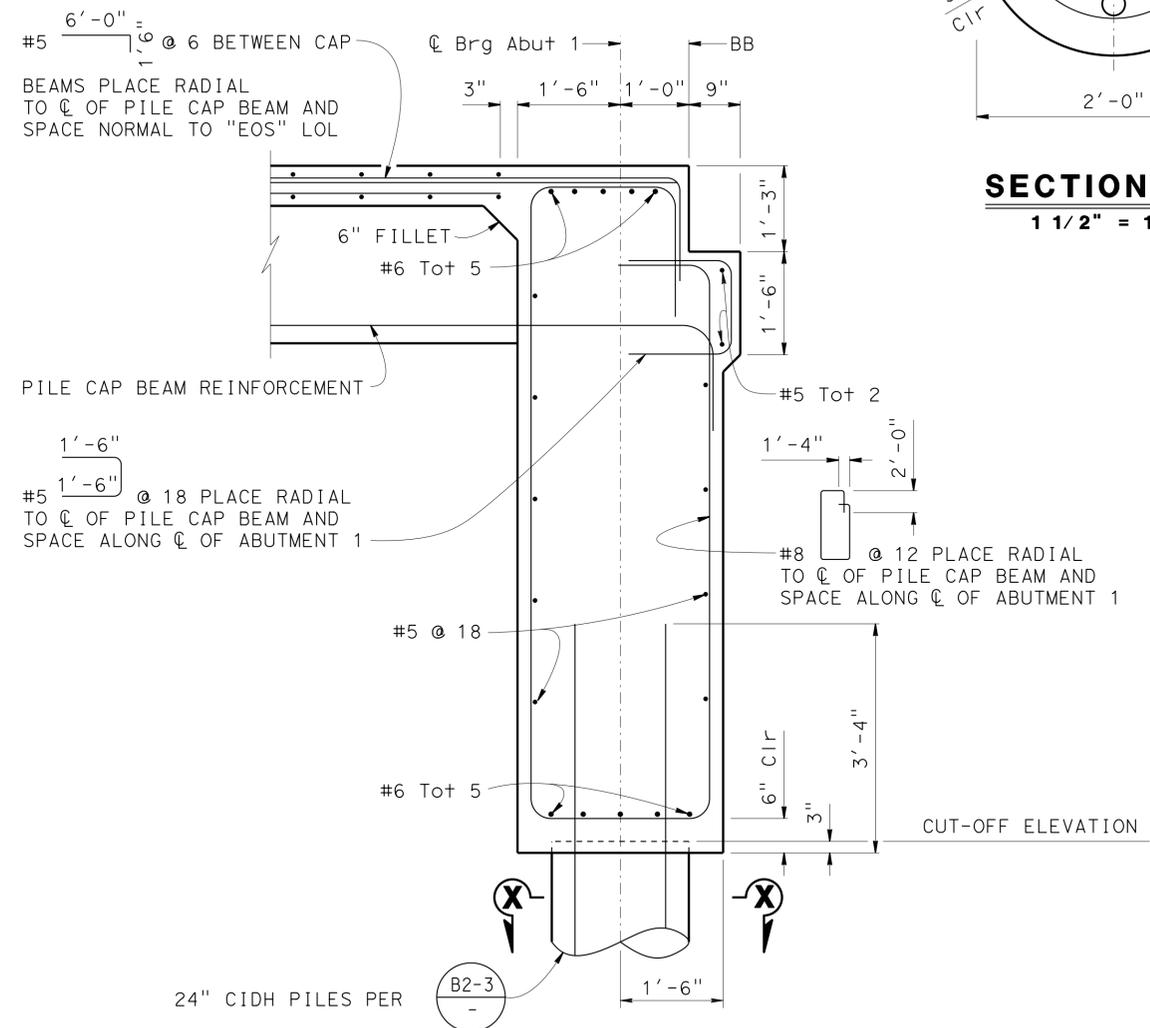
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	181	244

JINRONG WANG 02-01-16
 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.

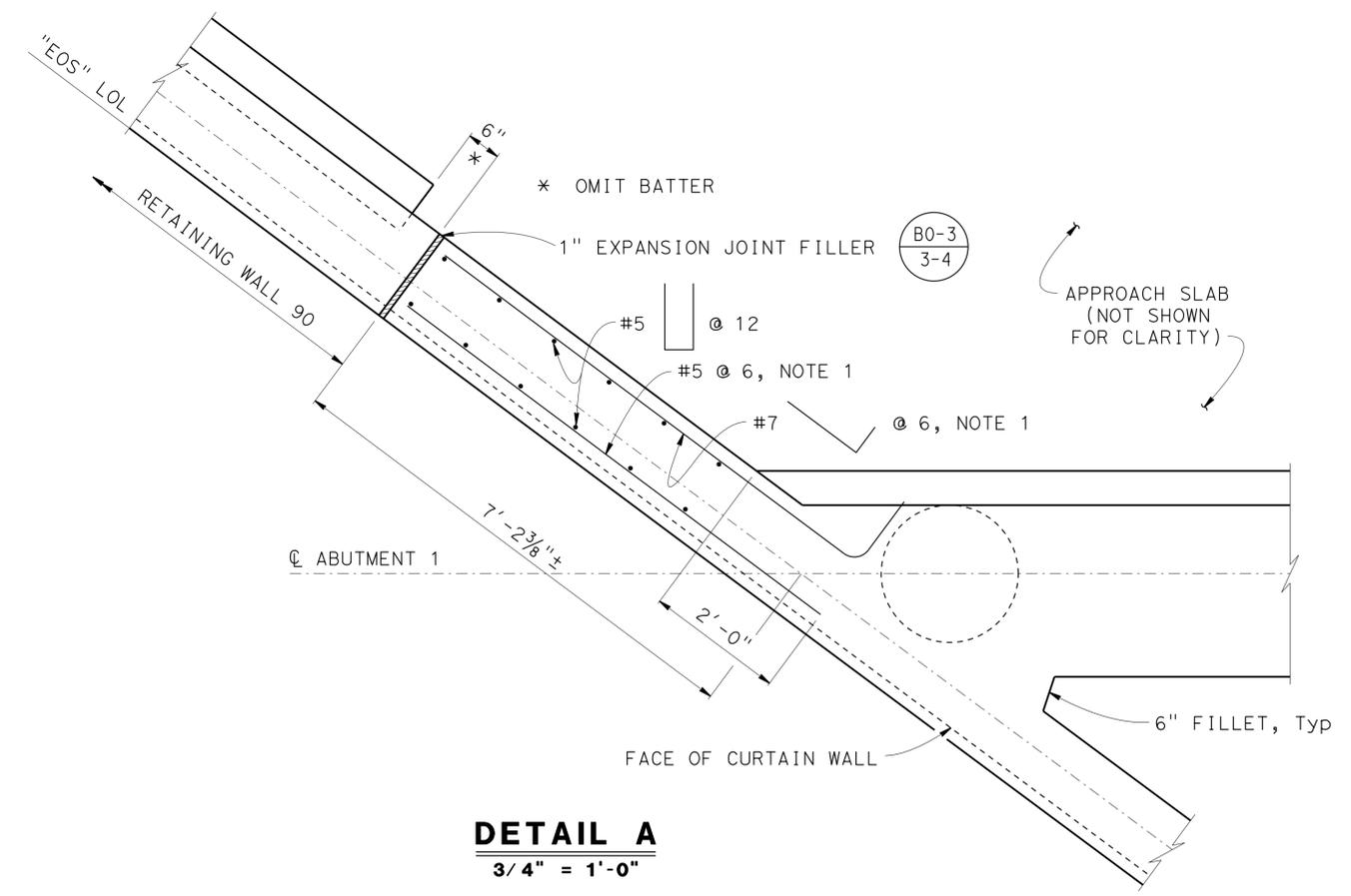


SECTION X-X
1 1/2" = 1'-0"



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

NOTE: Not all pile cap beam steel shown for clarity.
 NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



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

NOTES:
 1. This reinforcement is in addition to the curtain wall reinforcement.

DESIGN	BY J. WANG	CHECKED L. VALLA
DETAILS	BY KC	CHECKED L. VALLA
QUANTITIES	BY L. VALLA	CHECKED P. MAK

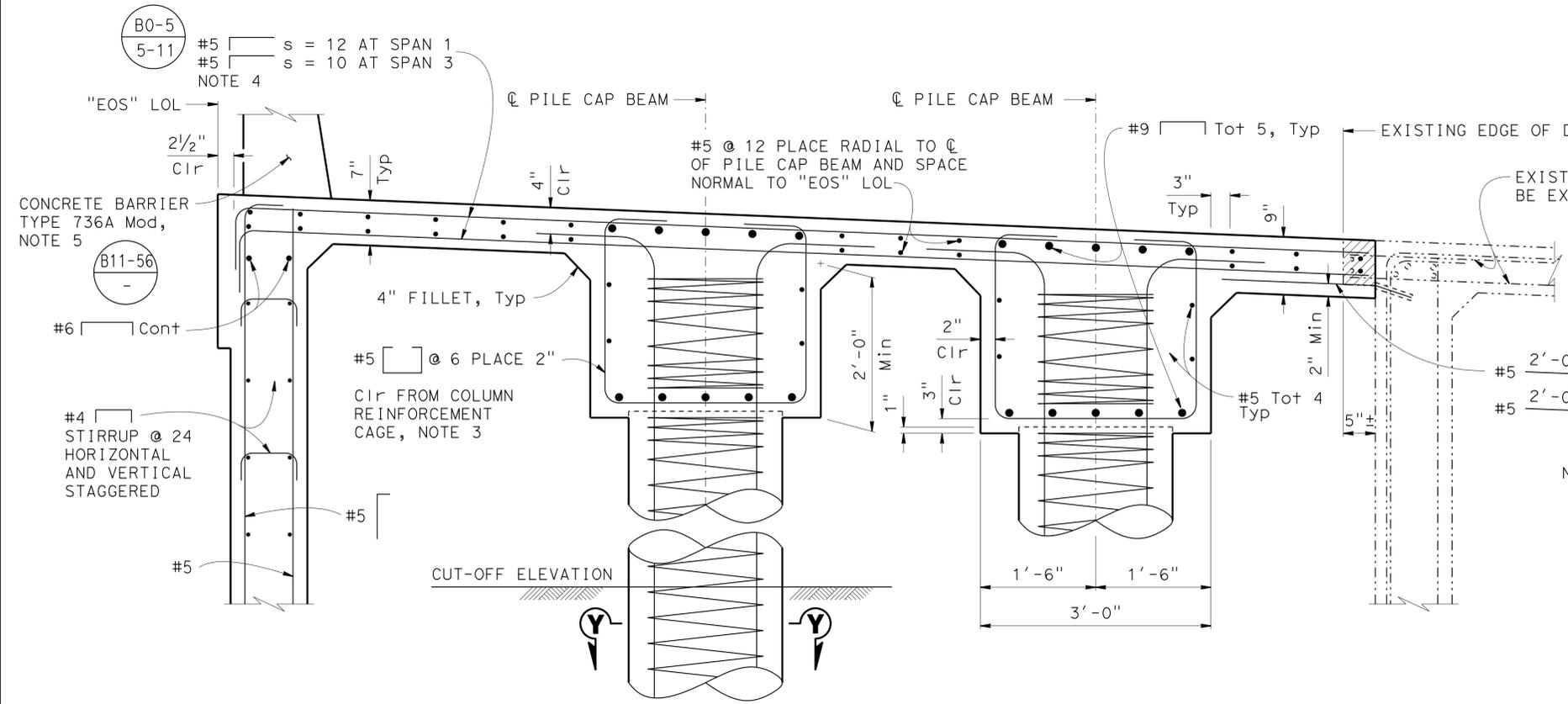
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO.	55-0203
POST MILE	1.6

EL CAMINO REAL UC WIDENING
ABUTMENT 1 - PIER 2 DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	182	244
Jinrong Wang			02-01-16	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.					



- #5 2'-0" 6" DRILL AND BOND @ 12 AT SPAN 1
- #5 2'-0" 6" DRILL AND BOND @ 10 AT SPAN 3

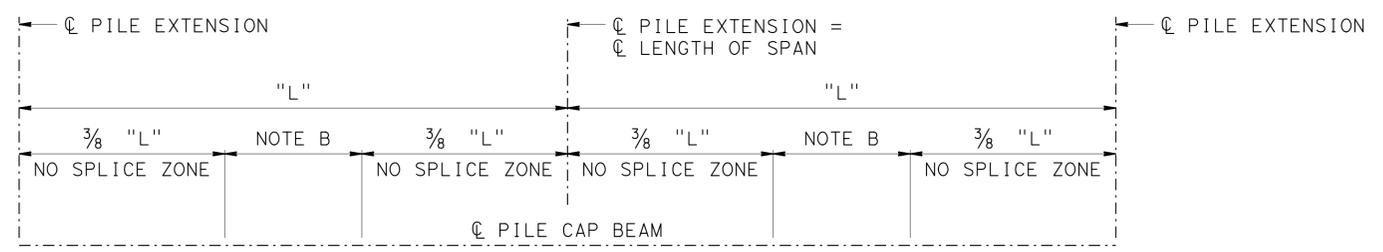
NOTES:

- Span 1 shown, span 3 similar.
- Transverse reinforcement placed normal to "EOS" LOL.
- Place normal to ϕ pile cap beam.
- Use same 90° hooks in backwall for transverse bars in obtuse and acute corners.
- Barrier steel and attachment not shown for clarity. For "BARRIER ATTACHMENT DETAIL TO SPAN 1 AND 3", see "ABUTMENT 1 - PIER 2 DETAILS NO. 4" SHEET.

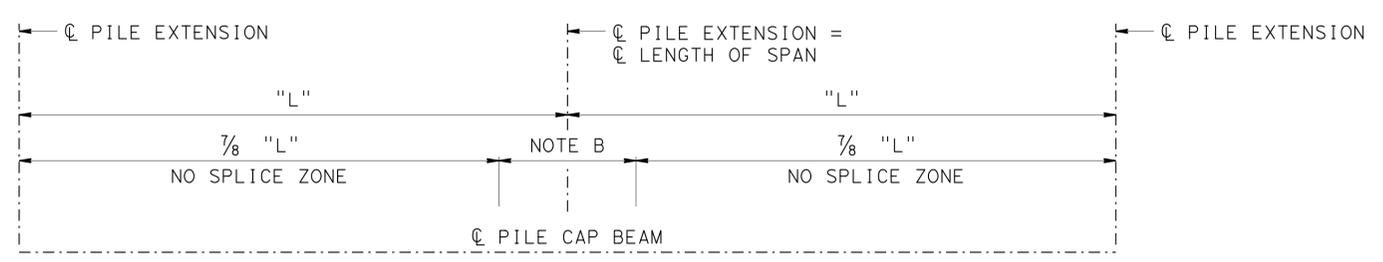
LEGEND:

Indicates bridge removal (portion)

SECTION B-B
1" = 1'-0"



TOP #9 Cont SPICE LOCATIONS



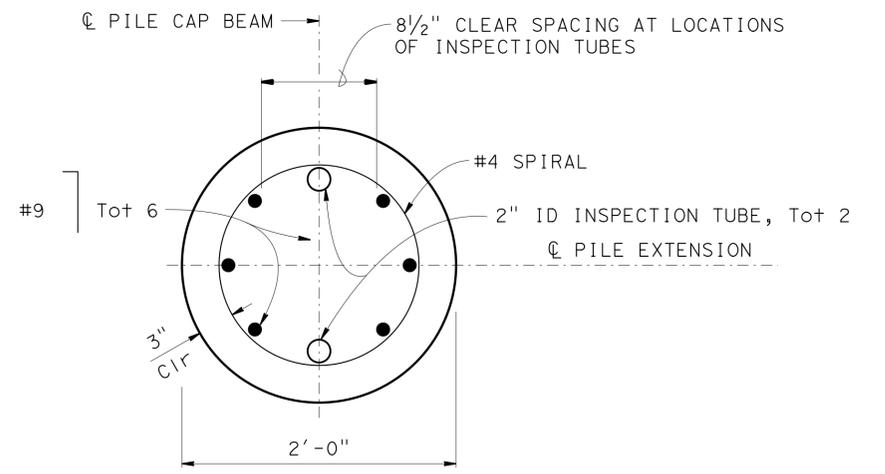
BOTTOM #9 Cont SPICE LOCATIONS

PILE CAP BEAM SPICING REQUIREMENTS
NO SCALE

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

NOTES:

- All splicing must be service splices.
- All splicing must be done at this location staggered 2'-0" on center.



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

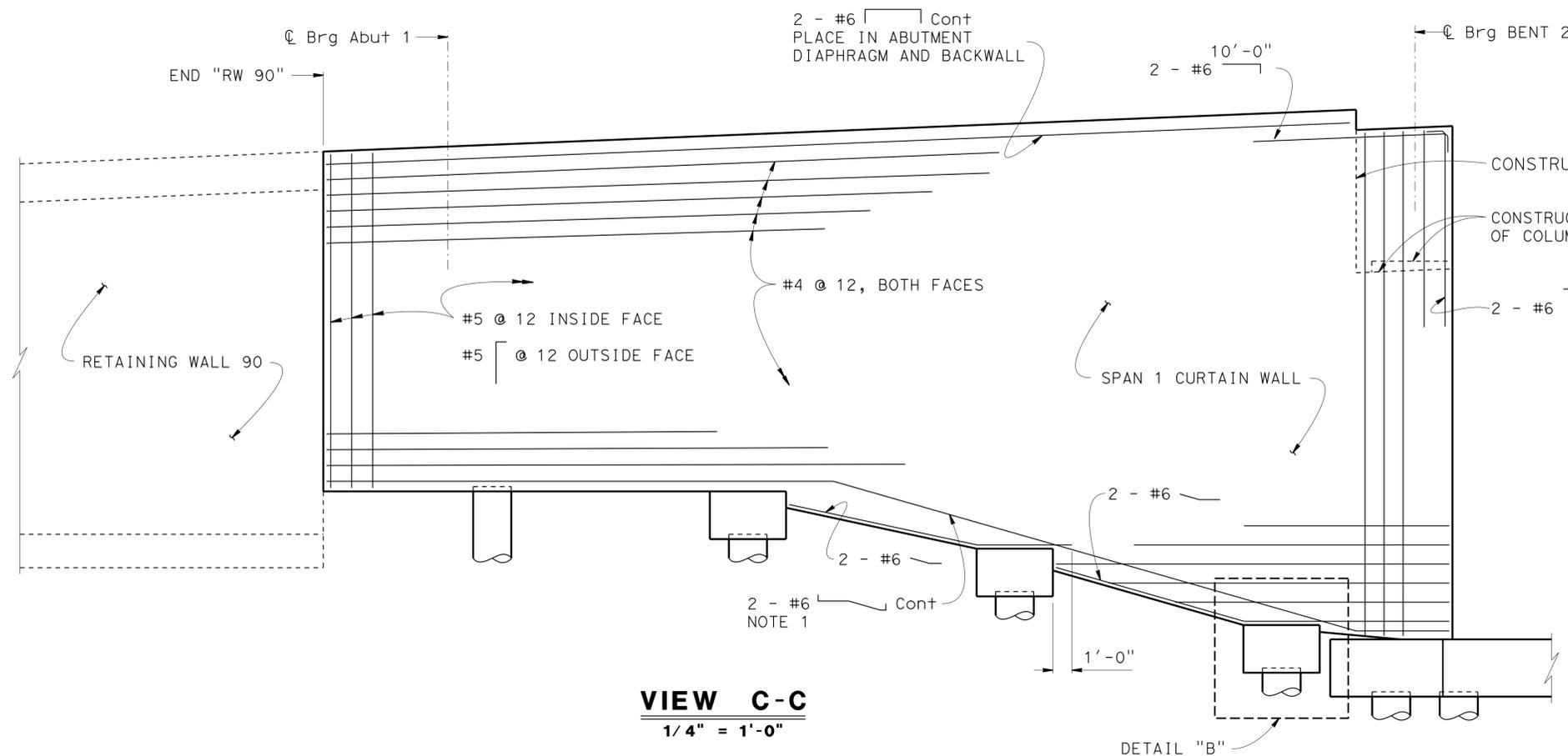
DESIGN	BY L. VALLA	CHECKED J. WANG
DETAILS	BY KC	CHECKED J. WANG
QUANTITIES	BY L. VALLA	CHECKED P. MAK

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

DIVISION OF ENGINEERING SERVICES	BRIDGE NO.
STRUCTURE DESIGN	55-0203
DESIGN BRANCH 12	POST MILE
	1.6

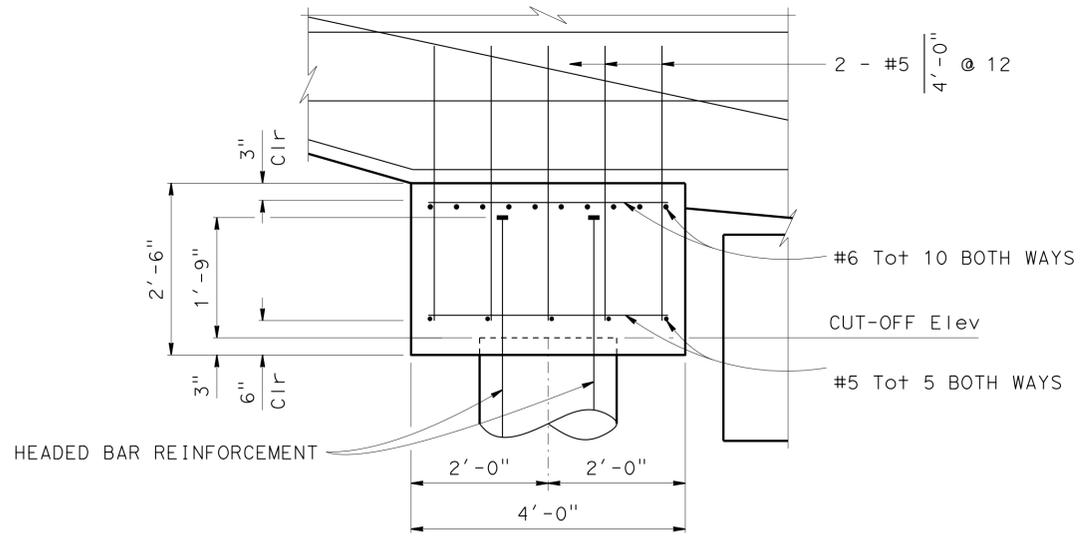
EL CAMINO REAL UC WIDENING	
ABUTMENT 1 - PIER 2 DETAILS NO. 2	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	183	244
Jinrong Wang 02-01-16				REGISTERED CIVIL ENGINEER	DATE
3-28-16				PLANS APPROVAL DATE	
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NOTES:
1. Hook into Abutment 1 and Pier 2 front wall.

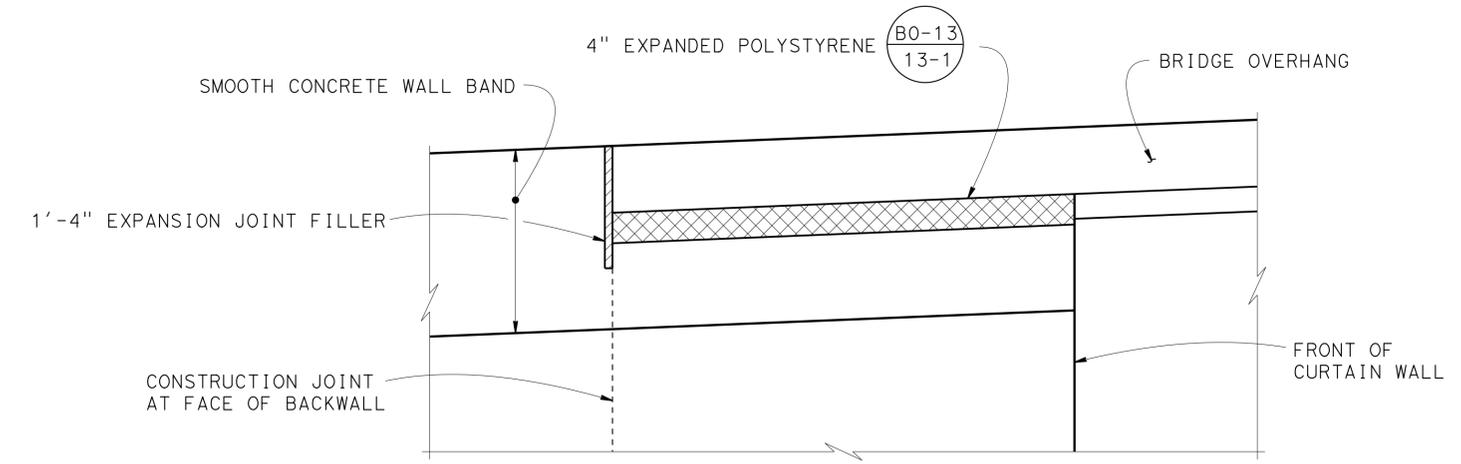
VIEW C-C
1/4" = 1'-0"



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

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

NOTE: "DETAIL A" typical for all curtain wall footings.



CURTAIN WALL AT BRIDGE OVERHANG DETAIL
1" = 1'-0"

LEGEND:
 Limits of expansion joint filler.
 Limits of expanded polystyrene.

DESIGN	BY L. VALLA	CHECKED J. WANG
DETAILS	BY KC	CHECKED J. WANG
QUANTITIES	BY L. VALLA	CHECKED P. MAK

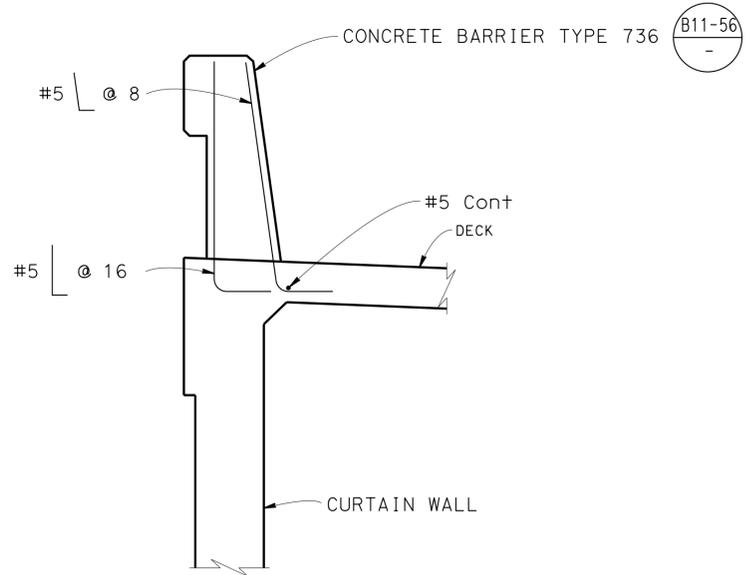
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 12

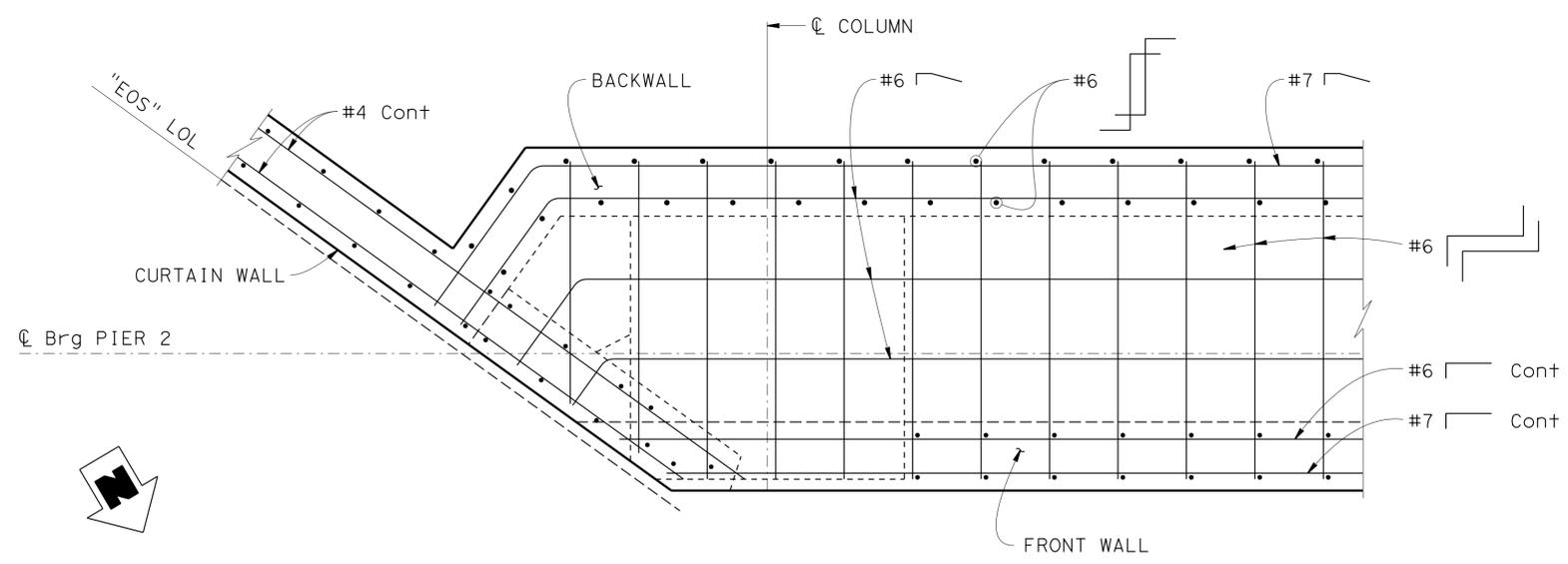
BRIDGE NO.	55-0203
POST MILE	1.6

EL CAMINO REAL UC WIDENING
ABUTMENT 1 - PIER 2 DETAILS NO. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	184	244
Jinrong Wang			02-01-16	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.					



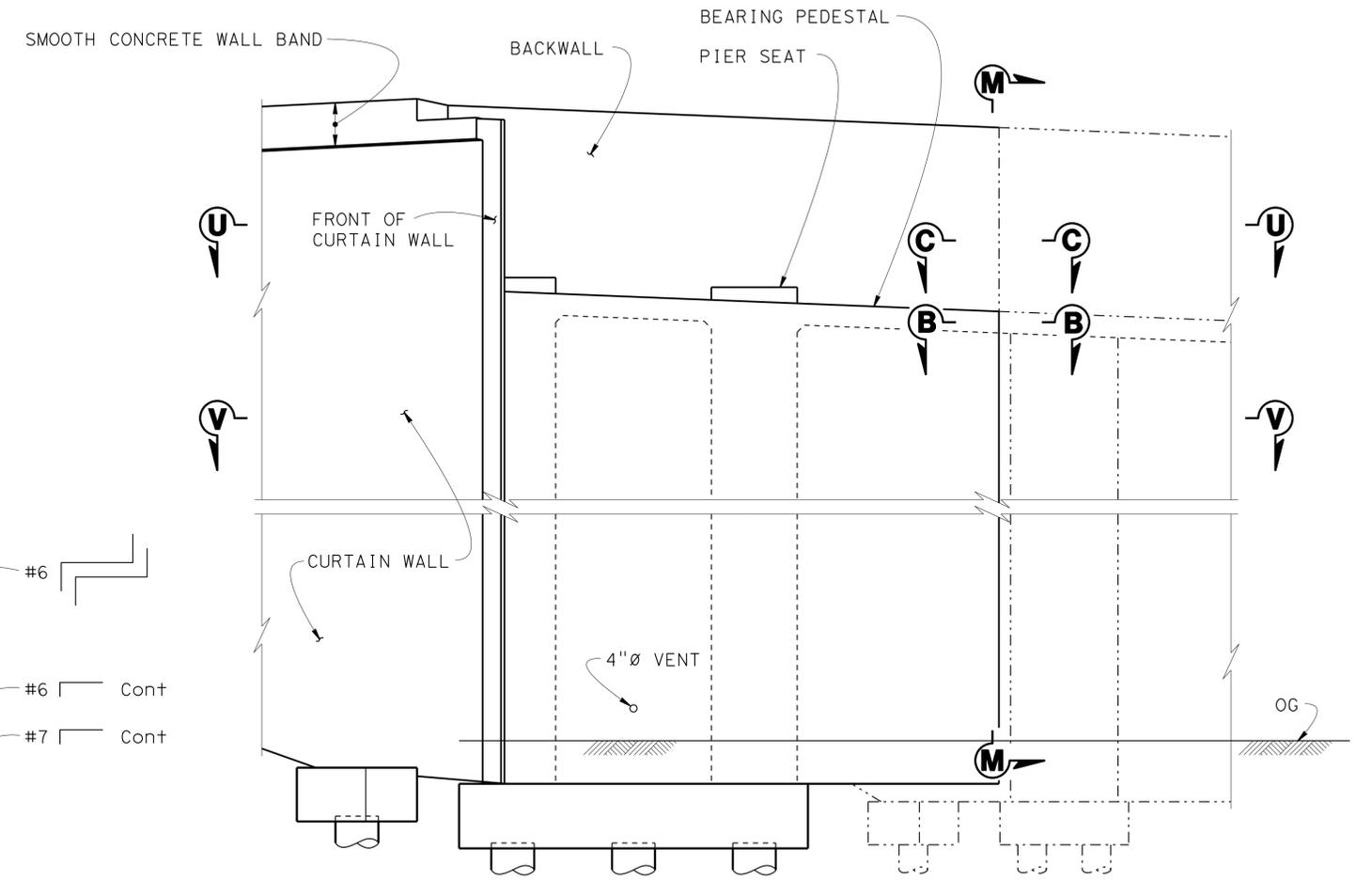
BARRIER ATTACHMENT TO SPANS 1 AND 3 DETAIL
NO SCALE



PIER SEAT CORNER DETAIL - PIER 2
3/4" = 1'-0"

NOTE: Not all steel shown for clarity.

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



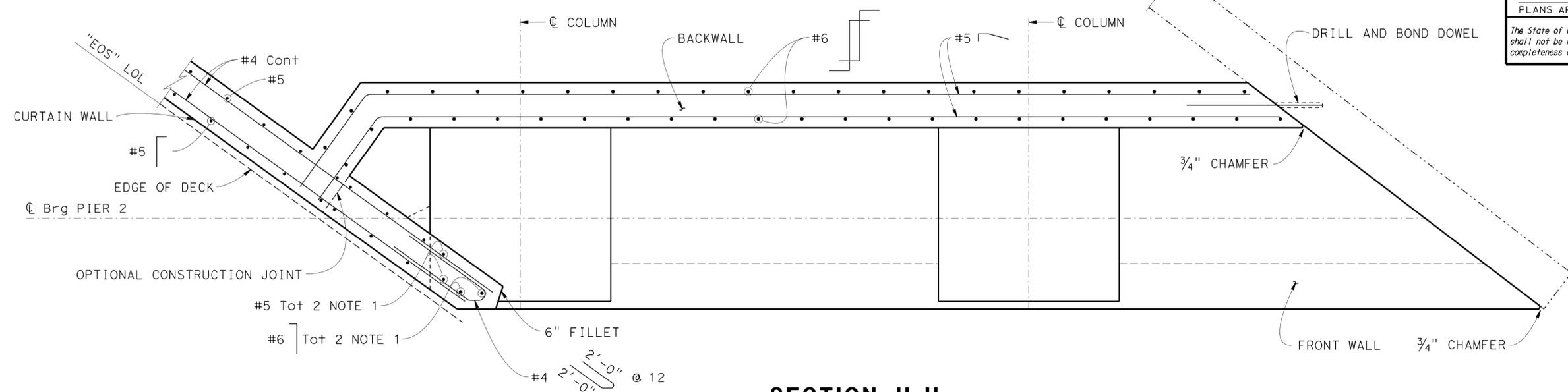
VIEW F-F
1/4" = 1'-0"

NOTES:

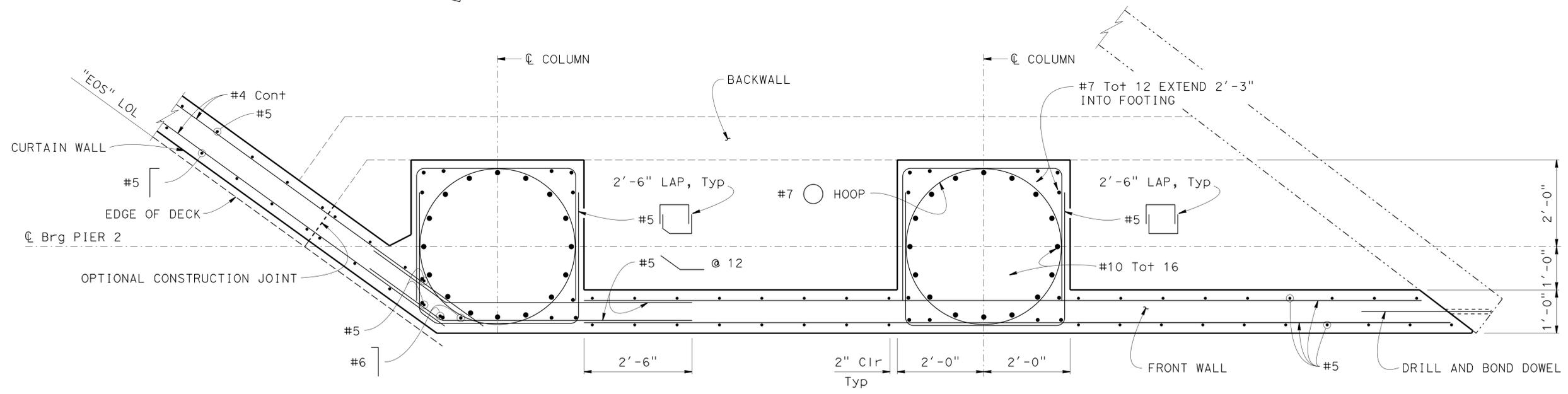
1. For "SECTION U-U" and "SECTION V-V" see "ABUTMENT 1 - PIER 2 DETAILS NO. 5" sheet.
2. For "SECTION M-M" see "ABUTMENT 1 - PIER 2 DETAILS NO. 6" sheet.
3. For "SECTION B-B" and "SECTION C-C" see "ABUTMENT 1 - PIER 2 DETAILS NO. 7" sheet.

DESIGN	BY	L. VALLA	CHECKED	J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING				
	DETAILS	BY	KC	CHECKED			J. WANG	POST MILE		1.6	ABUTMENT 1 - PIER 2 DETAILS NO. 4		
	QUANTITIES	BY	L. VALLA	CHECKED			P. MAK						
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3606	PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 14	OF 74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	185	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER JINRONG WANG No. C49844 Exp. 09-30-16 CIVIL STATE OF CALIFORNIA					
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SECTION U-U
3/4" = 1'-0"



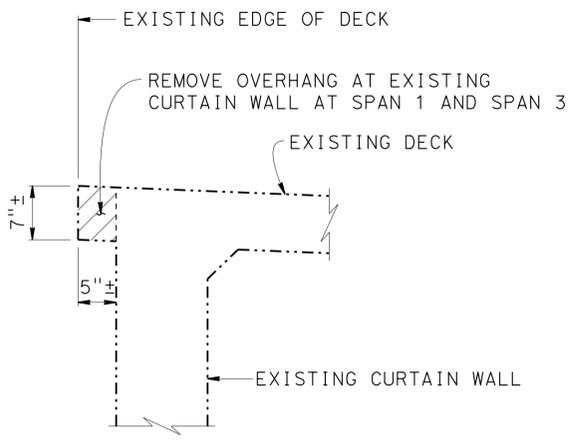
SECTION V-V
3/4" = 1'-0"

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

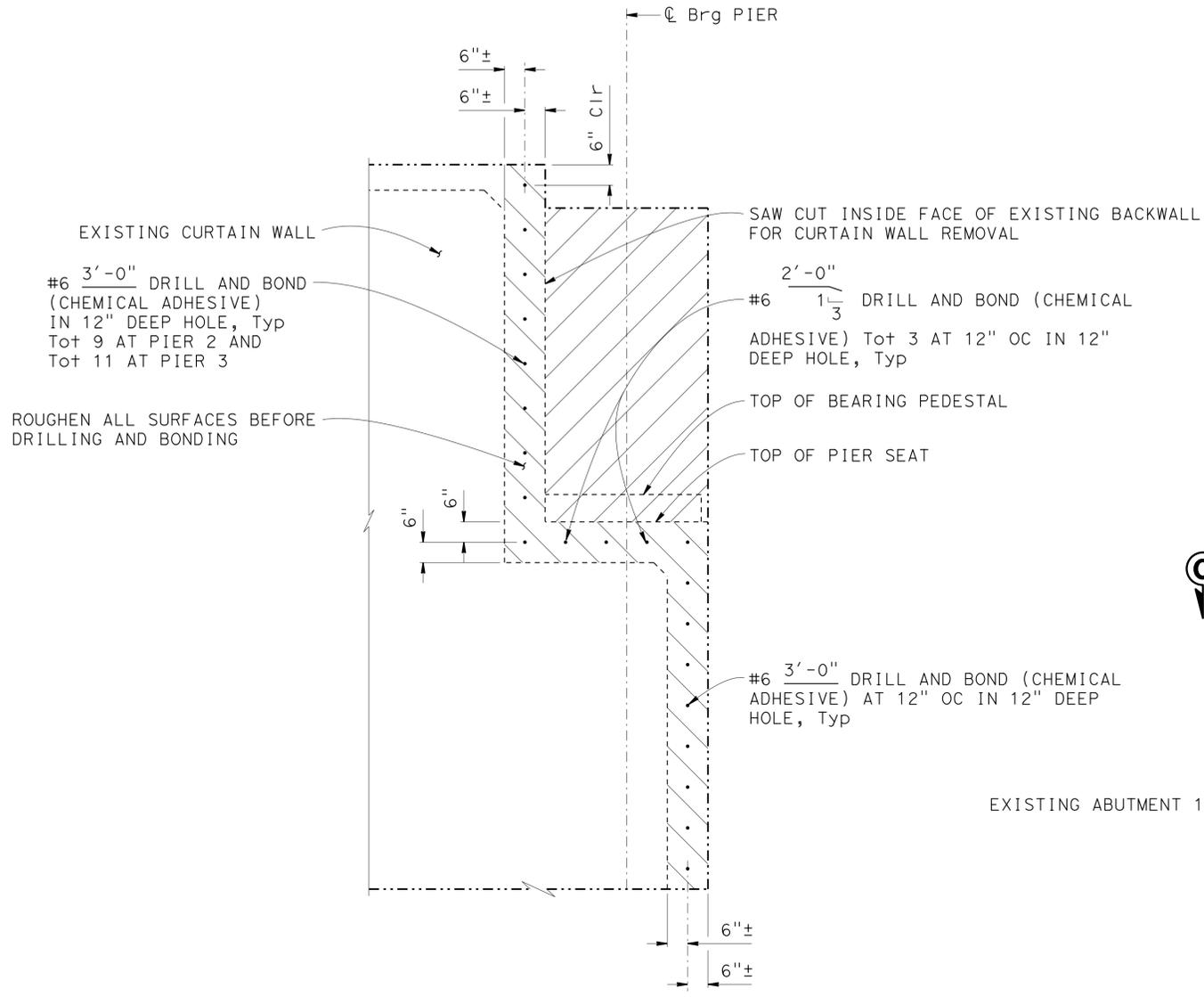
- NOTES:
- Place with column pour and extend 3'-0" into column.
 - All lap splices are 2'-0" on #4 bars.

DESIGN	BY L. VALLA	CHECKED J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING ABUTMENT 1 - PIER 2 DETAILS NO. 5		
DETAILS	BY KC	CHECKED J. WANG			55-0203			
QUANTITIES	BY L. VALLA	CHECKED P. MAK			POST MILE 1.6			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3606	PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901	REVISION DATES	SHEET 15 OF 74

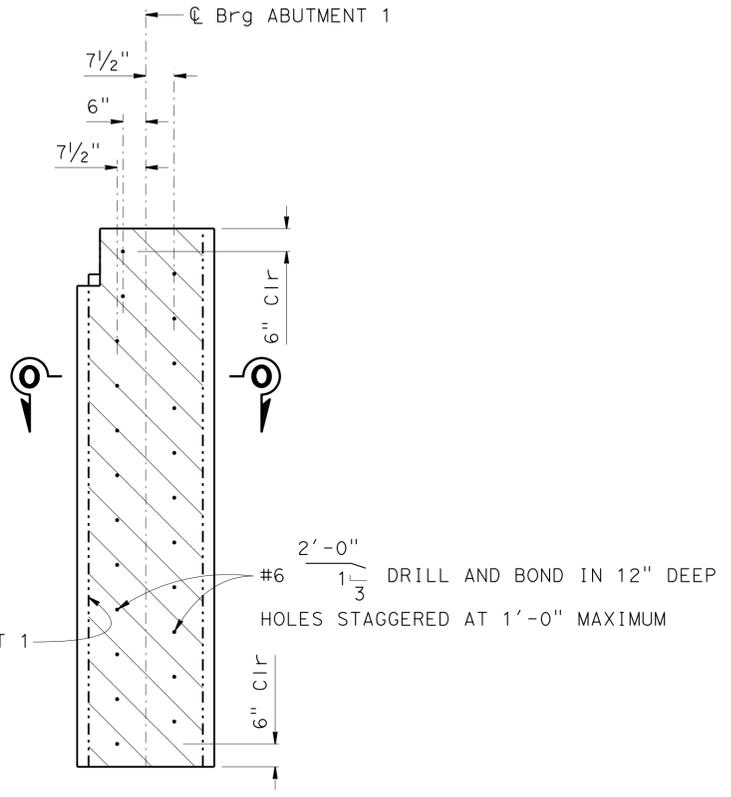
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	186	244
Jinrong Wang			02-01-16		
REGISTERED CIVIL ENGINEER			DATE		
3-28-16			PLANS APPROVAL DATE		
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SECTION N-N
NO SCALE



SECTION M-M
NO SCALE



SECTION I-I
NO SCALE

LEGEND:

- Indicates limits of bridge removal (portion)
- Indicates limits of roughened surfaces

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

NOTE:
For "SECTION 0-0" see "ABUTMENT 1 - PIER 2 DETAILS NO. 7" sheet.

DESIGN	BY L. VALLA	CHECKED J. WANG
DETAILS	BY KC	CHECKED J. WANG
QUANTITIES	BY L. VALLA	CHECKED P. MAK

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO.	55-0203
POST MILE	1.6

EL CAMINO REAL UC WIDENING
ABUTMENT 1 - PIER 2 DETAILS NO. 6

TIME PLOTTED => 14:24 18-MAY-2016 USERNAME => s127956 DATE PLOTTED =>

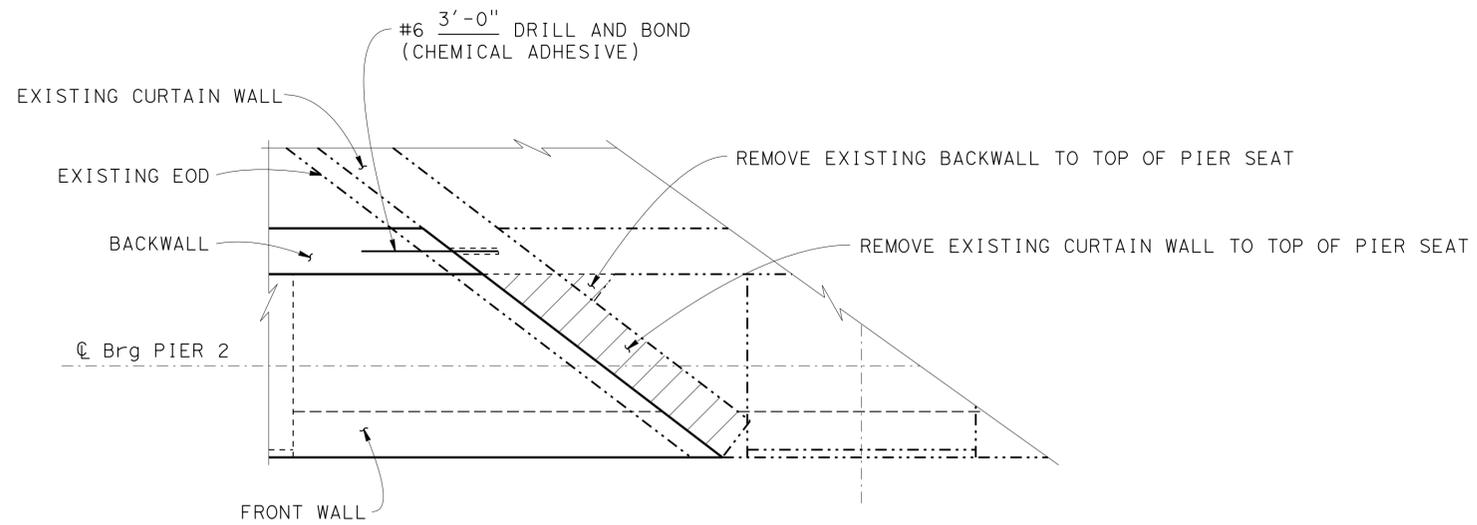
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	187	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

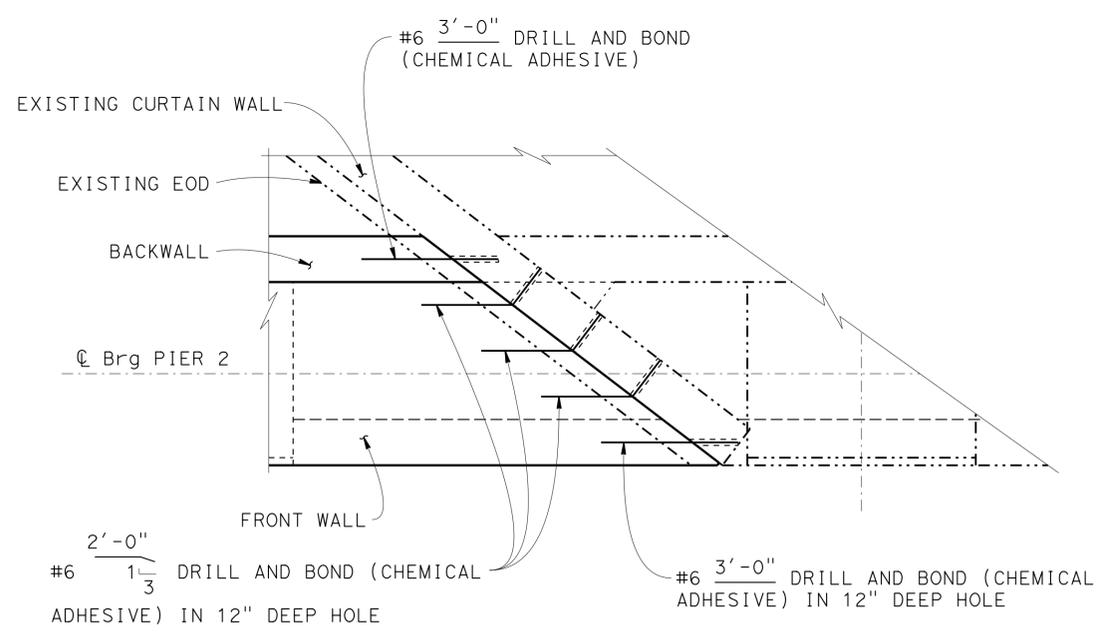
3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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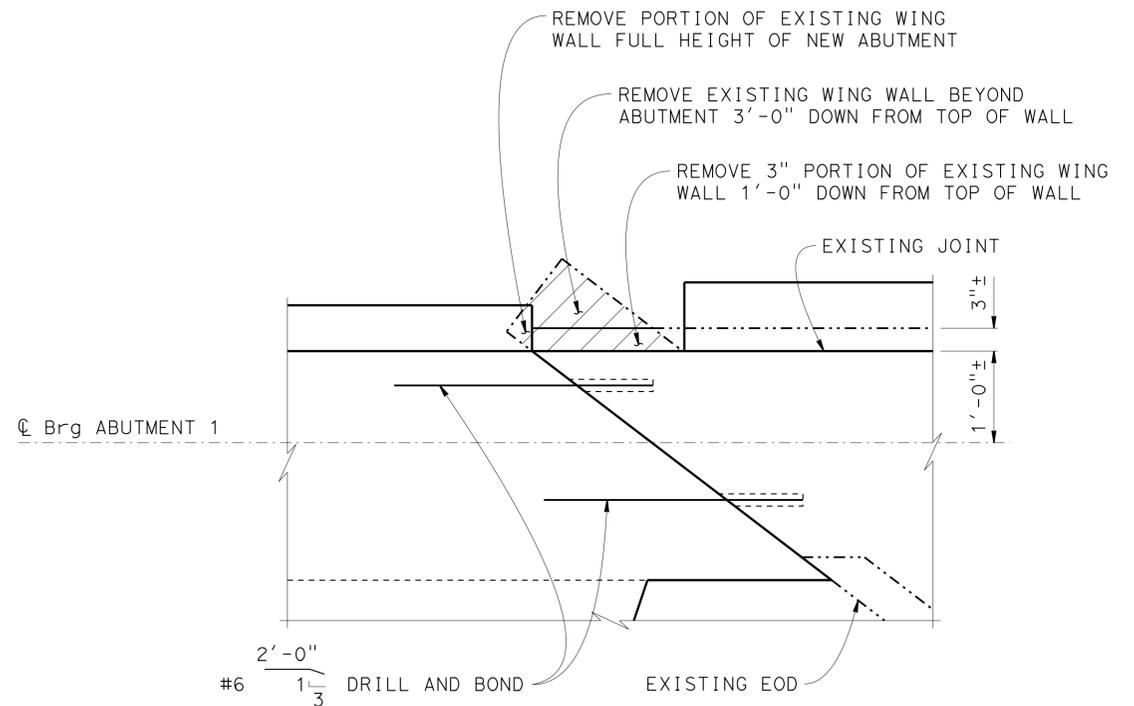
SECTION C-C
 NO SCALE



SECTION B-B
 NO SCALE



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



SECTION O-O
 NO SCALE

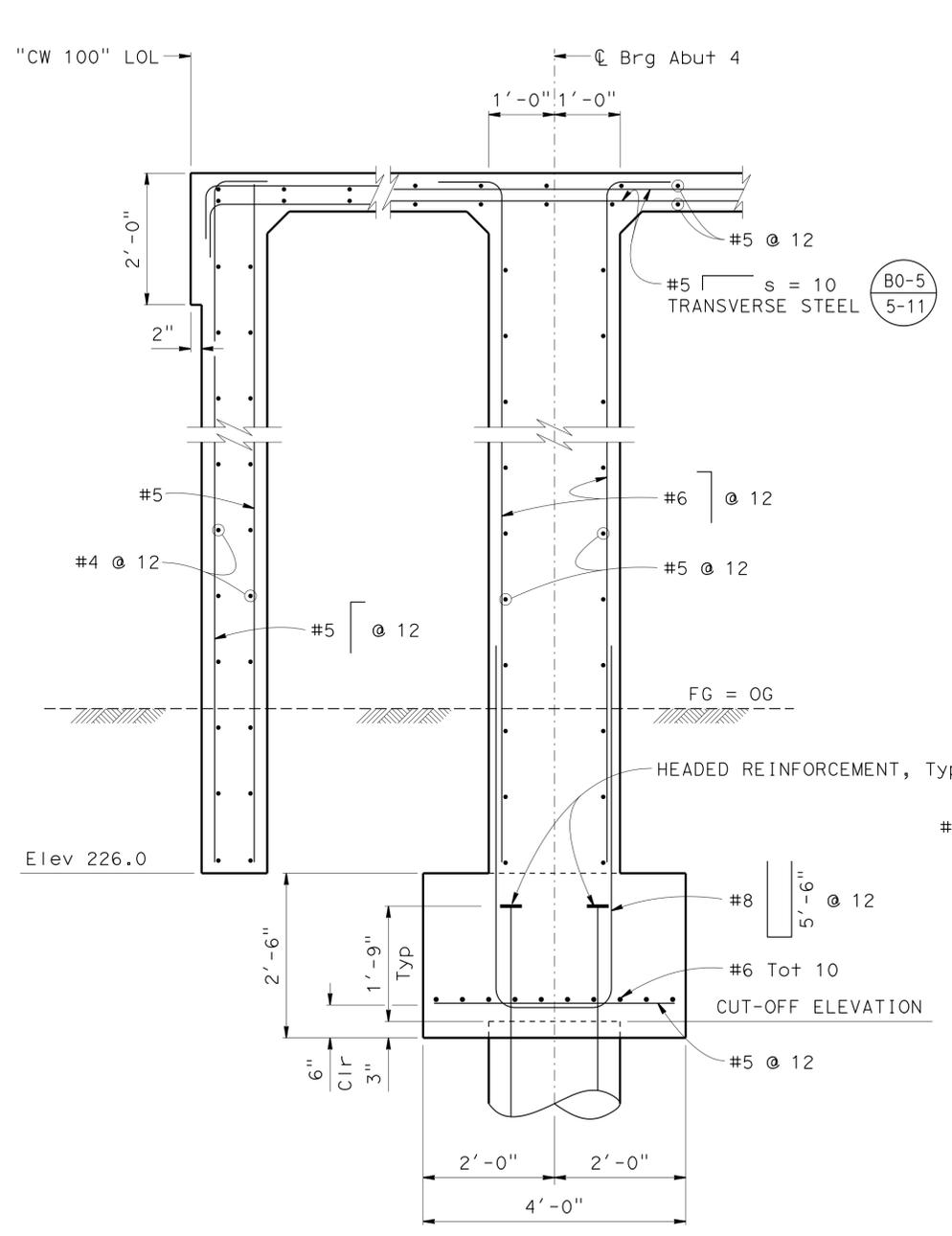


- LEGEND:
- Indicates limits of bridge removal (portion)
 - Indicates limits of roughened surfaces

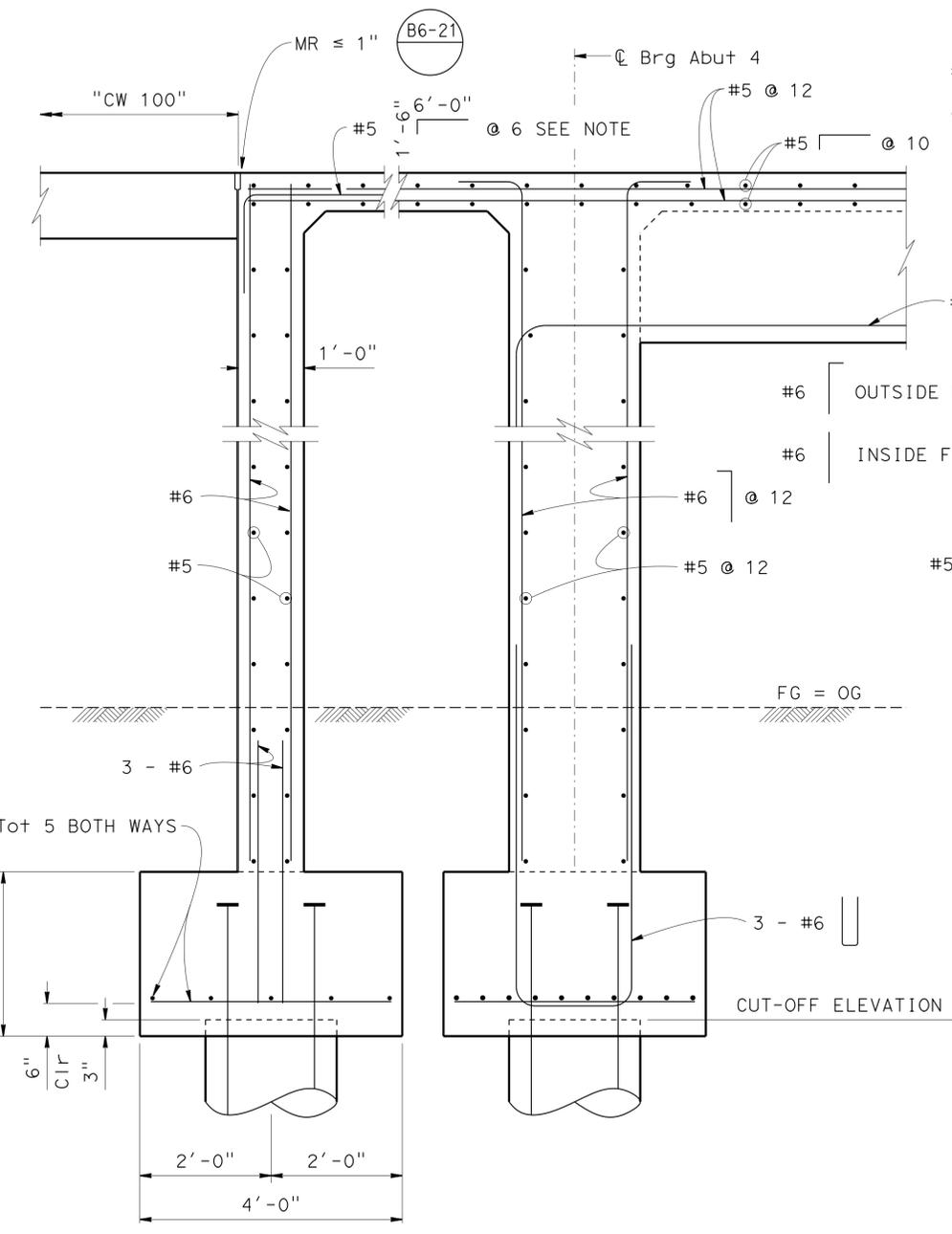
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. VALLA	CHECKED J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING	
	DETAILS	BY KC	CHECKED L. VALLA			55-0203	ABUTMENT 1 - PIER 2 DETAILS NO. 7	
	QUANTITIES	BY L. VALLA	CHECKED P. MAK			POST MILE 1.6		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3606	PROJECT NUMBER & PHASE: 1212000090 1		CONTRACT NO.: 12-0M4901
					DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 17 OF 74

TIME PLOTTED => 14.24
 DATE PLOTTED => 18-MAY-2016
 USERNAME => s127956

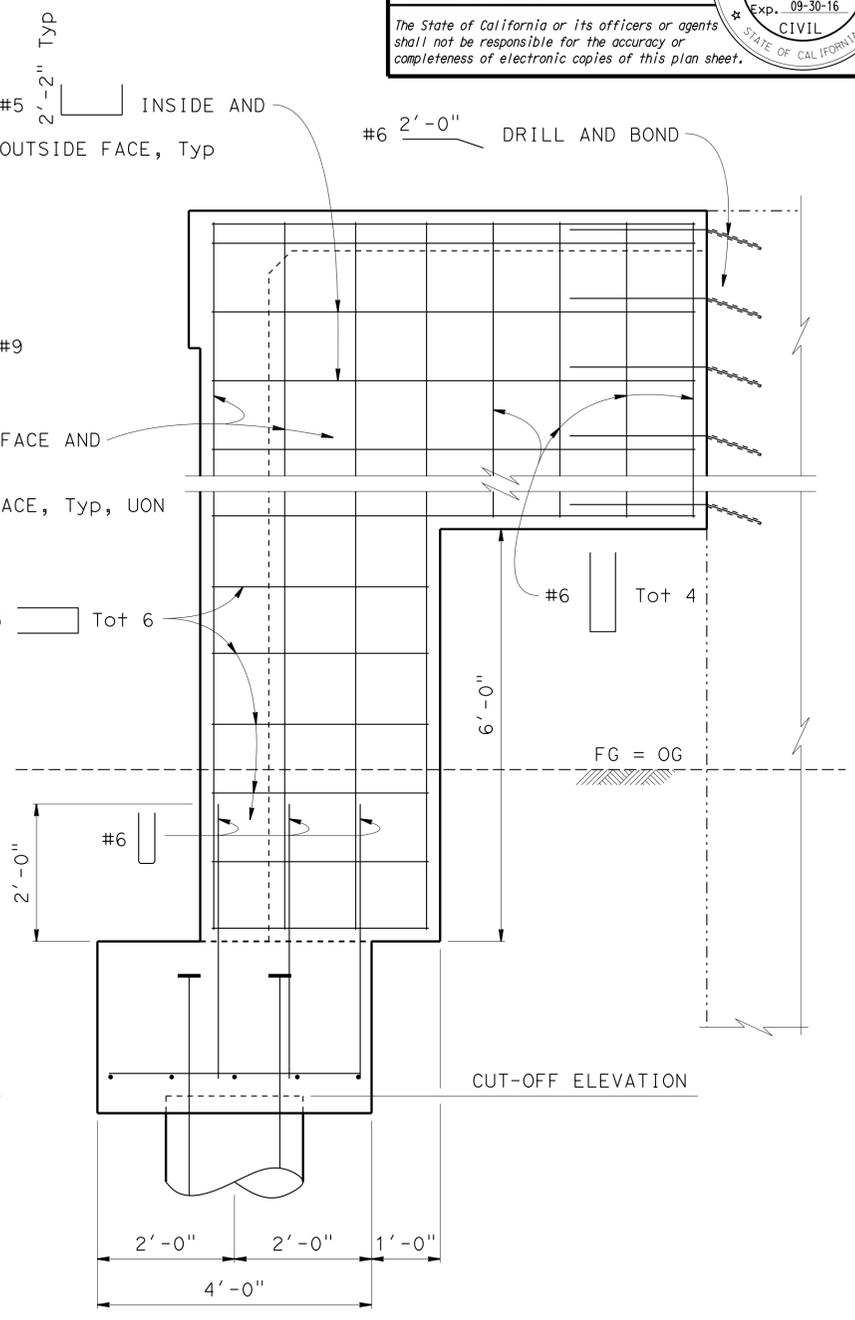
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	189	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
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SECTION A-A
3/4" = 1'-0"



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



VIEW F-F
3/4" = 1'-0"

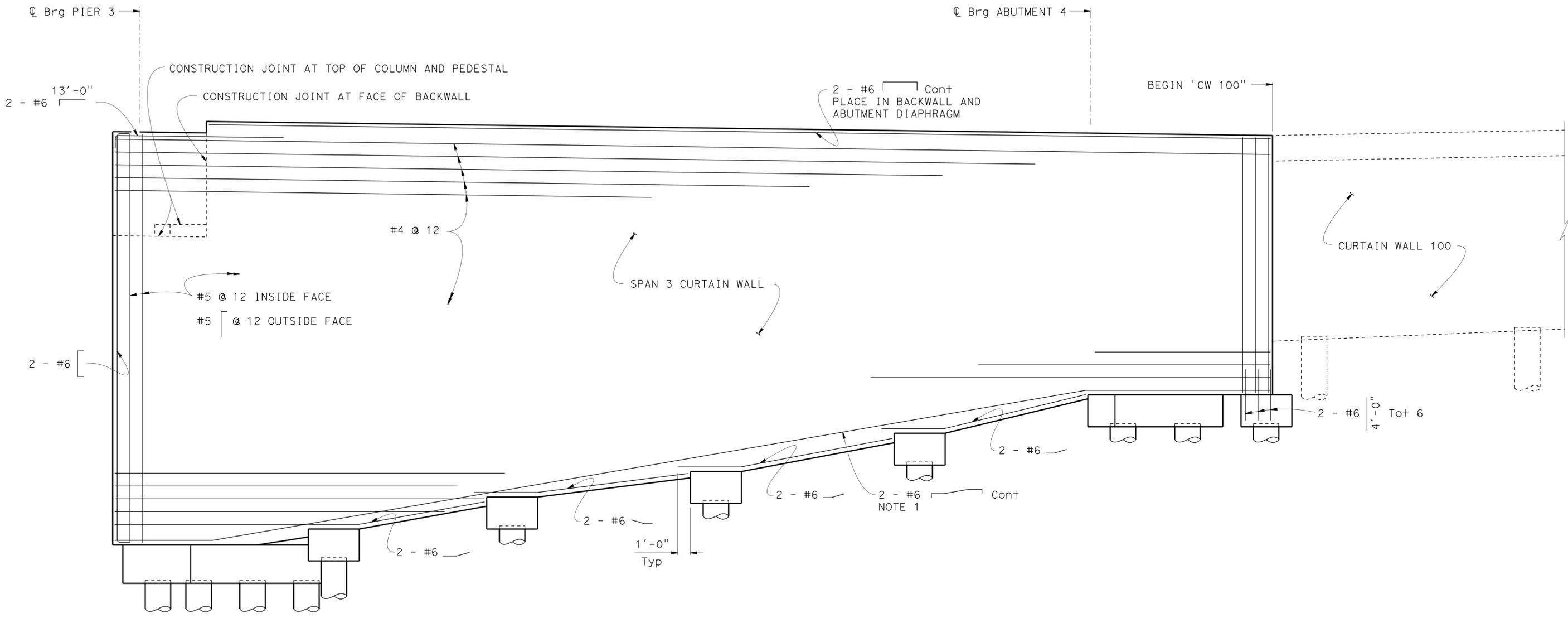
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTE: Barrier not shown for clarity.

NOTE:
1. PLACE RADIAL TO PILE CAP BEAM AND SPACE NORMAL TO "EOS" LOL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY J. WANG	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING ABUTMENT 4 - PIER 3 DETAILS NO. 1						
	DETAILS	BY KC	CHECKED L. VALLA			POST MILE	1.6							
	QUANTITIES	BY L. VALLA	CHECKED P. MAK			PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901							
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES		<table border="1"> <tr> <td>REVISION DATES</td> <td>SHEET</td> <td>OF</td> </tr> <tr> <td>7-8-15</td> <td>19</td> <td>74</td> </tr> </table>	REVISION DATES	SHEET	OF	7-8-15	19	74
REVISION DATES	SHEET	OF												
7-8-15	19	74												

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	190	244
Jinrong Wang			02-01-16		
REGISTERED CIVIL ENGINEER			DATE		
3-28-16			PLANS APPROVAL DATE		
JINRONG WANG			REGISTERED PROFESSIONAL ENGINEER		
No. C49844			Exp. 09-30-16		
CIVIL			STATE OF CALIFORNIA		
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VIEW G-G
1/4" = 1'-0"

- NOTES:
- Hook into Abutment 4 and Pier 3 front wall.

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

DESIGN	BY	L. VALLA	CHECKED	J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING			
	DETAILS	BY	KC	CHECKED			L. VALLA	55-0203	ABUTMENT 4 - PIER 3 DETAILS NO. 2		
QUANTITIES	BY	L. VALLA	CHECKED	P. MAK	PROJECT NUMBER & PHASE: 1212000090 1		POST MILE	CONTRACT NO.: 12-0M4901			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	1.6	REVISION DATES	SHEET	OF	
							7-8-15	9-18-15	11-3-15	20	74

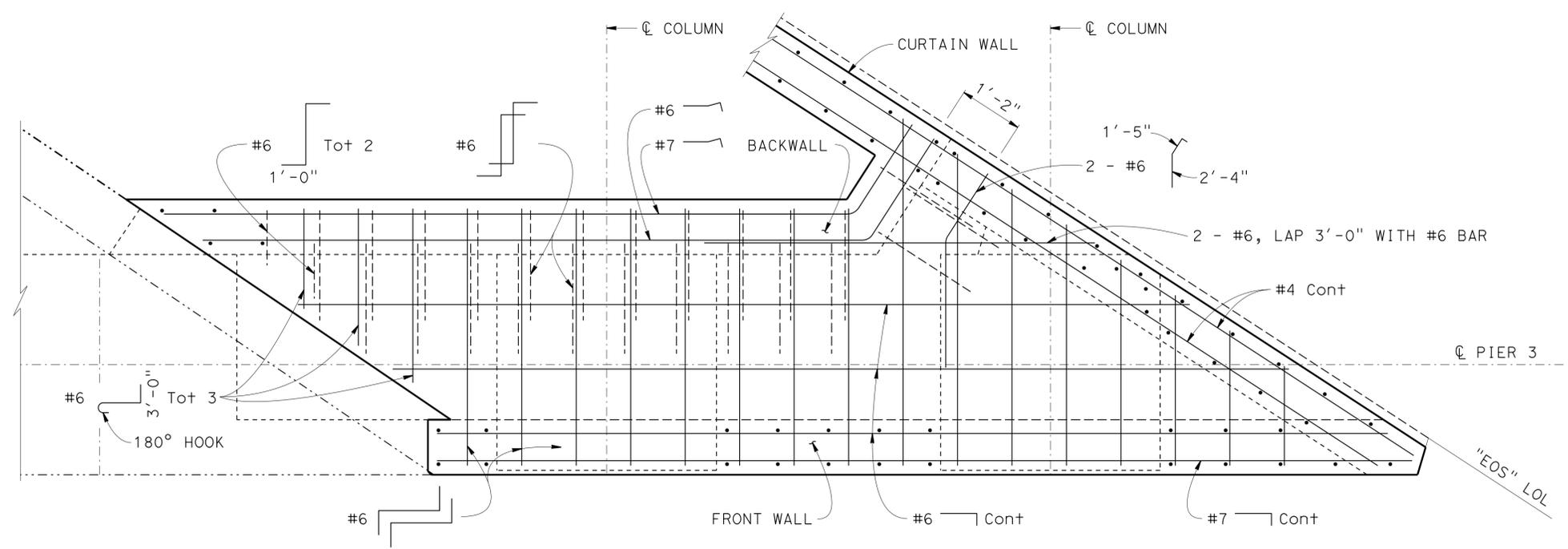
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	191	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

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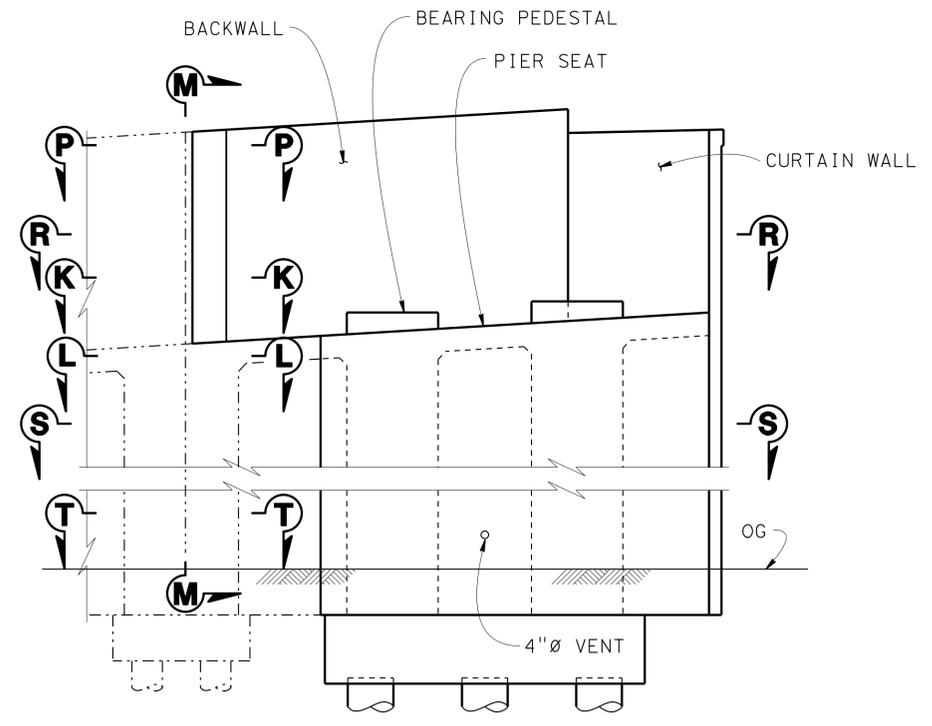


PIER SEAT CORNER DETAIL - PIER 3
 3/4" = 1'-0"

NOTE: Not all steel shown for clarity including #6 drill and bond dowels (chemical adhesive).

- NOTES:
1. For "SECTION R-R" and "SECTION S-S" see "ABUTMENT 4 - PIER 3 DETAILS NO. 4" sheet.
 2. For "SECTION M-M" see "ABUTMENT 1 - PIER 2 DETAILS NO. 6" sheet.
 3. For "SECTION P-P" and "SECTION T-T" see "ABUTMENT 4 - PIER 3 DETAILS NO. 5" sheet.
 4. For "SECTION L-L" and "SECTION K-K" see "ABUTMENT 4 - PIER 3 DETAILS NO. 6" sheet.

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



VIEW H-H
 NO SCALE

DESIGN	BY	L. VALLA	CHECKED	J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	55-0203	EL CAMINO REAL UC WIDENING ABUTMENT 4 - PIER 3 DETAILS NO. 3		
	DETAILS	BY	KC	CHECKED			L. VALLA	POST MILE		1.6	
	QUANTITIES	BY	L. VALLA	CHECKED			P. MAK				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 21 OF 74

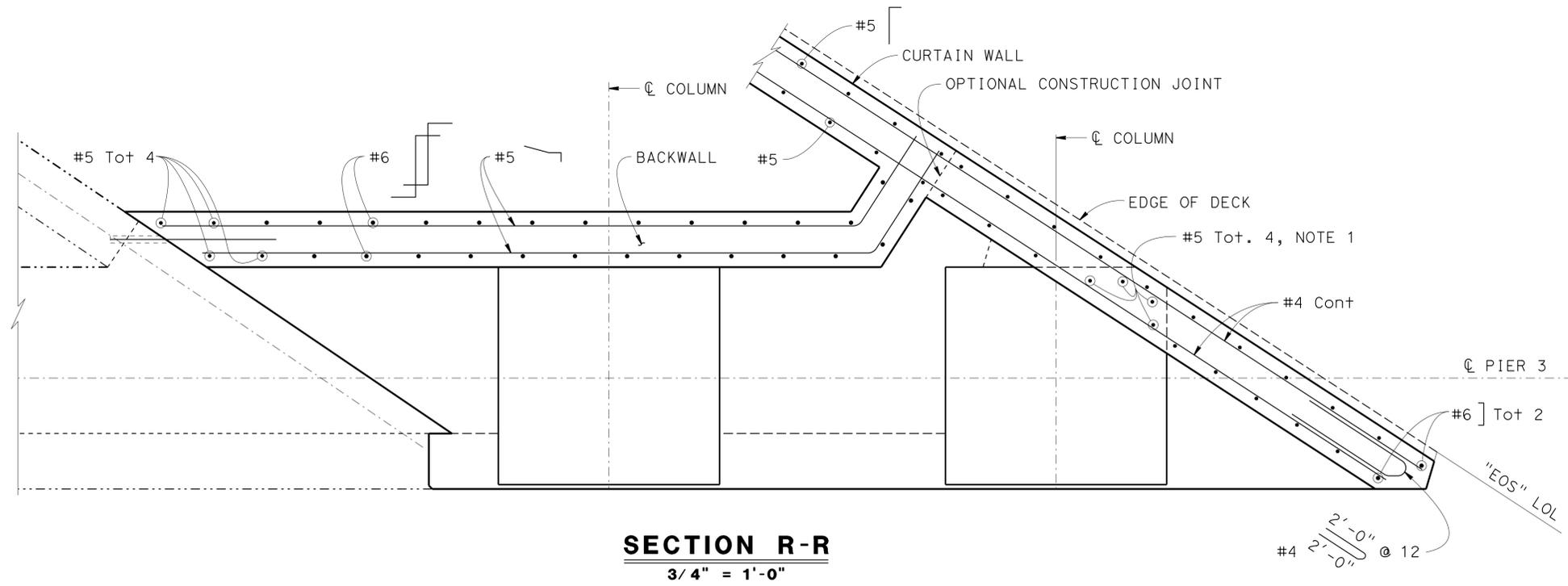
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	192	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

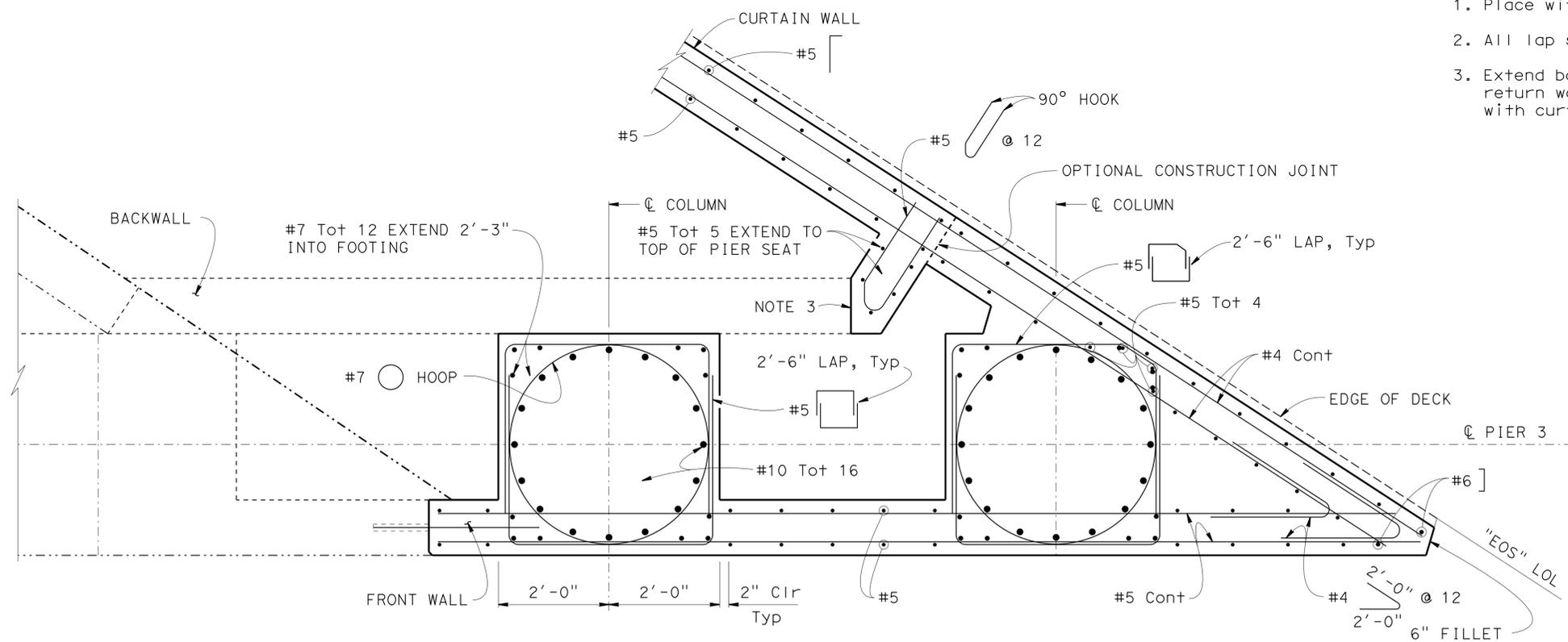
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



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

Notes:

1. Place with column pour and extend 3'-0" into column.
2. All lap splices are 2'-0".
3. Extend backwall down to column footing to form short return wall. Return wall to be poured monolithically with curtain wall.



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

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

DESIGN	BY	L. VALLA	CHECKED	J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING				
	DETAILS	BY	KC	CHECKED			L. VALLA	55-0203	ABUTMENT 4 - PIER 3 DETAILS NO. 4			
	QUANTITIES	BY	L. VALLA	CHECKED			P. MAK	POST MILE	1.6			

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: 3606
 PROJECT NUMBER & PHASE: 1212000090 1
 CONTRACT NO.: 12-0M4901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
7-8-15	22	74

FILE => 55-0203-F-abut4-de104.dgn

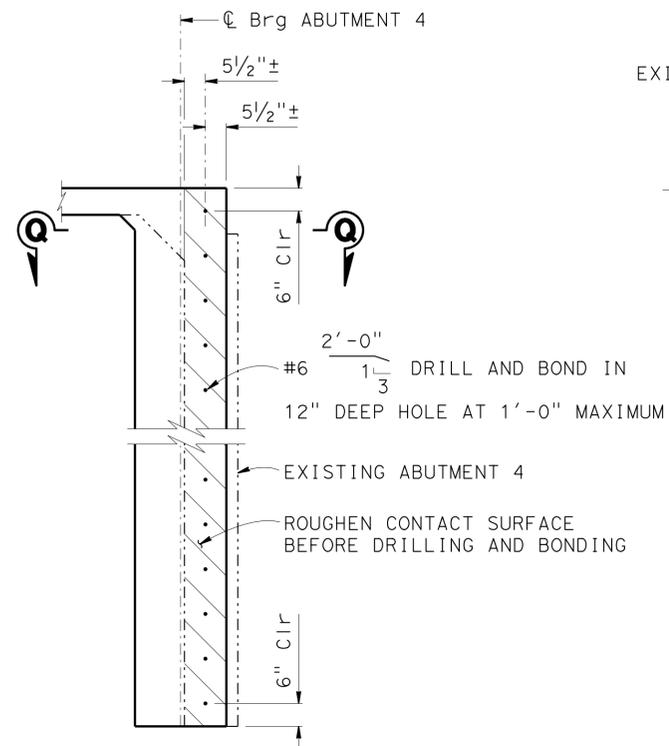
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	193	244

Jinrong Wang 02-01-16
 REGISTERED CIVIL ENGINEER DATE

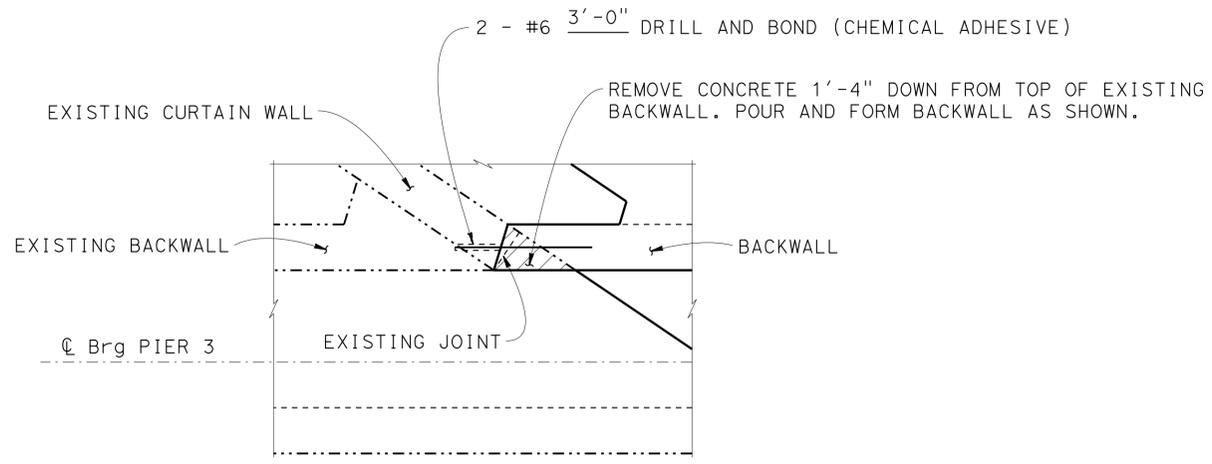
3-28-16
 PLANS APPROVAL DATE

JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA

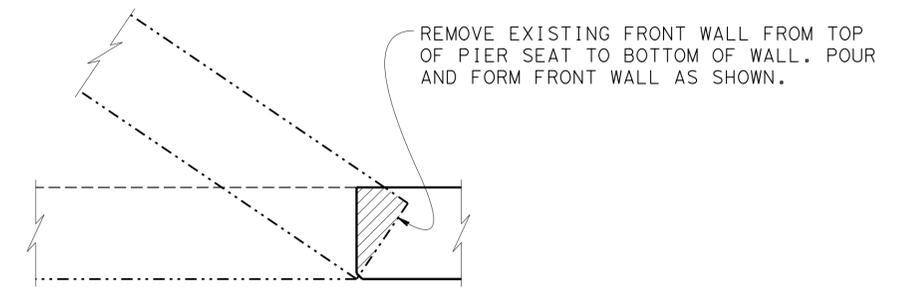
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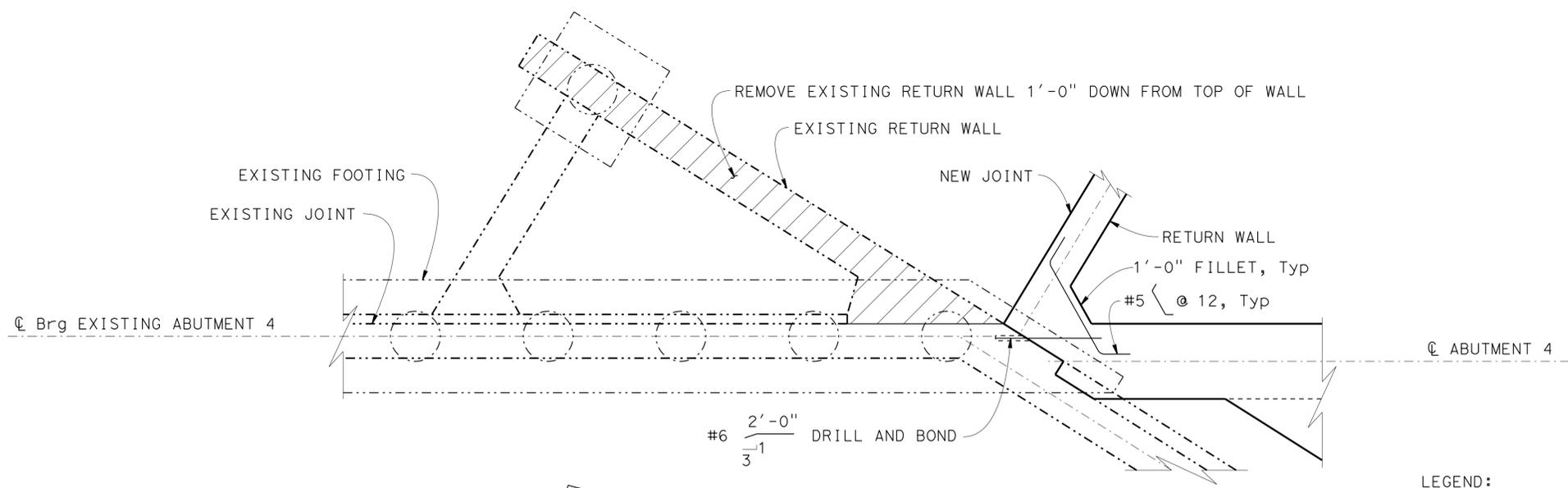
SECTION K-K
NO SCALE



SECTION P-P
NO SCALE



SECTION T-T
NO SCALE



SECTION Q-Q
NO SCALE

- LEGEND:
- Indicates limits of bridge removal (portion)
 - Indicates limits of roughened surface

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

DESIGN	BY L. VALLA	CHECKED J. WANG
DETAILS	BY KC	CHECKED L. VALLA
QUANTITIES	BY L. VALLA	CHECKED P. MAK

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO.	55-0203
POST MILE	1.6

EL CAMINO REAL UC WIDENING
ABUTMENT 4 - PIER 3 DETAILS NO. 5

TIME PLOTTED => 14:24
 DATE PLOTTED => 18-MAY-2016
 USERNAME => s127956

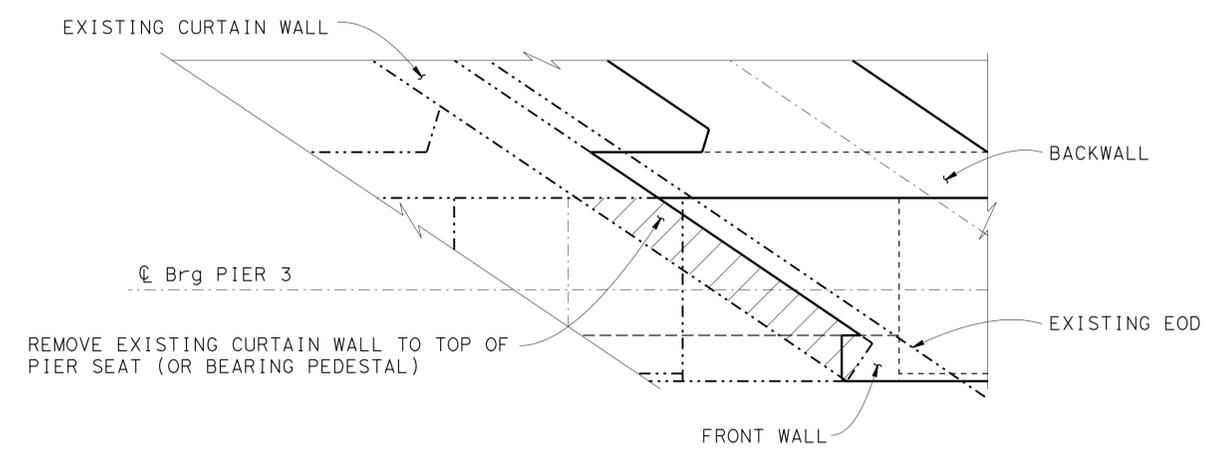
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	194	244

Jinrong Wang 02-01-16
REGISTERED CIVIL ENGINEER DATE

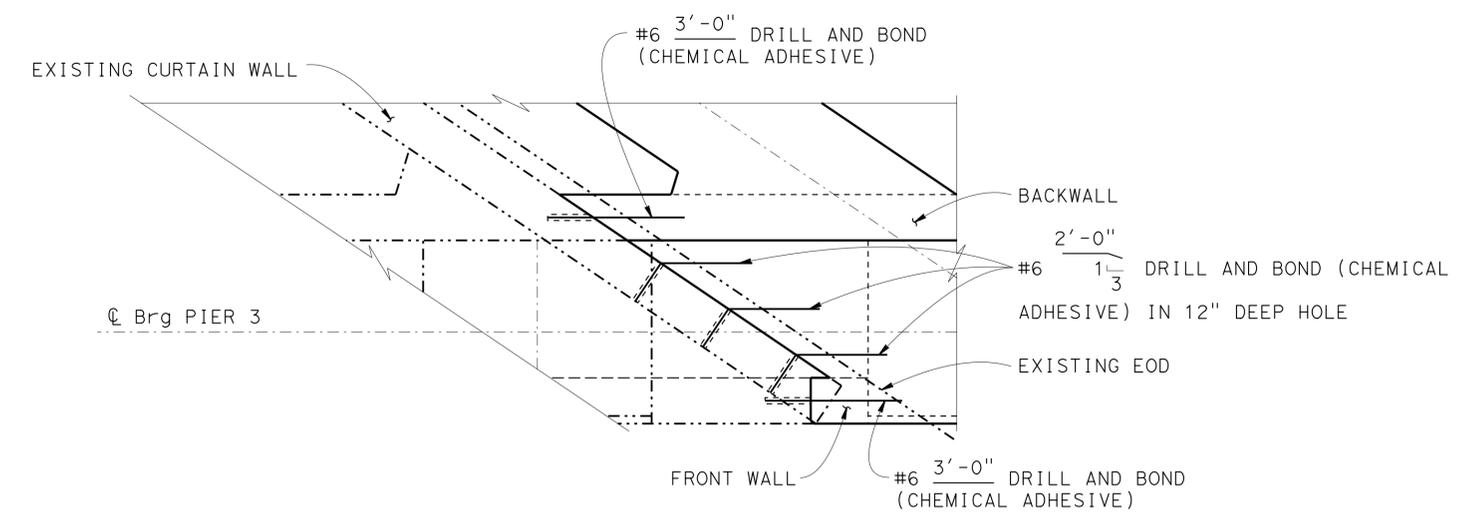
3-28-16
PLANS APPROVAL DATE

JINRONG WANG
No. C49844
Exp. 09-30-16
CIVIL
STATE OF CALIFORNIA

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SECTION K-K
NO SCALE



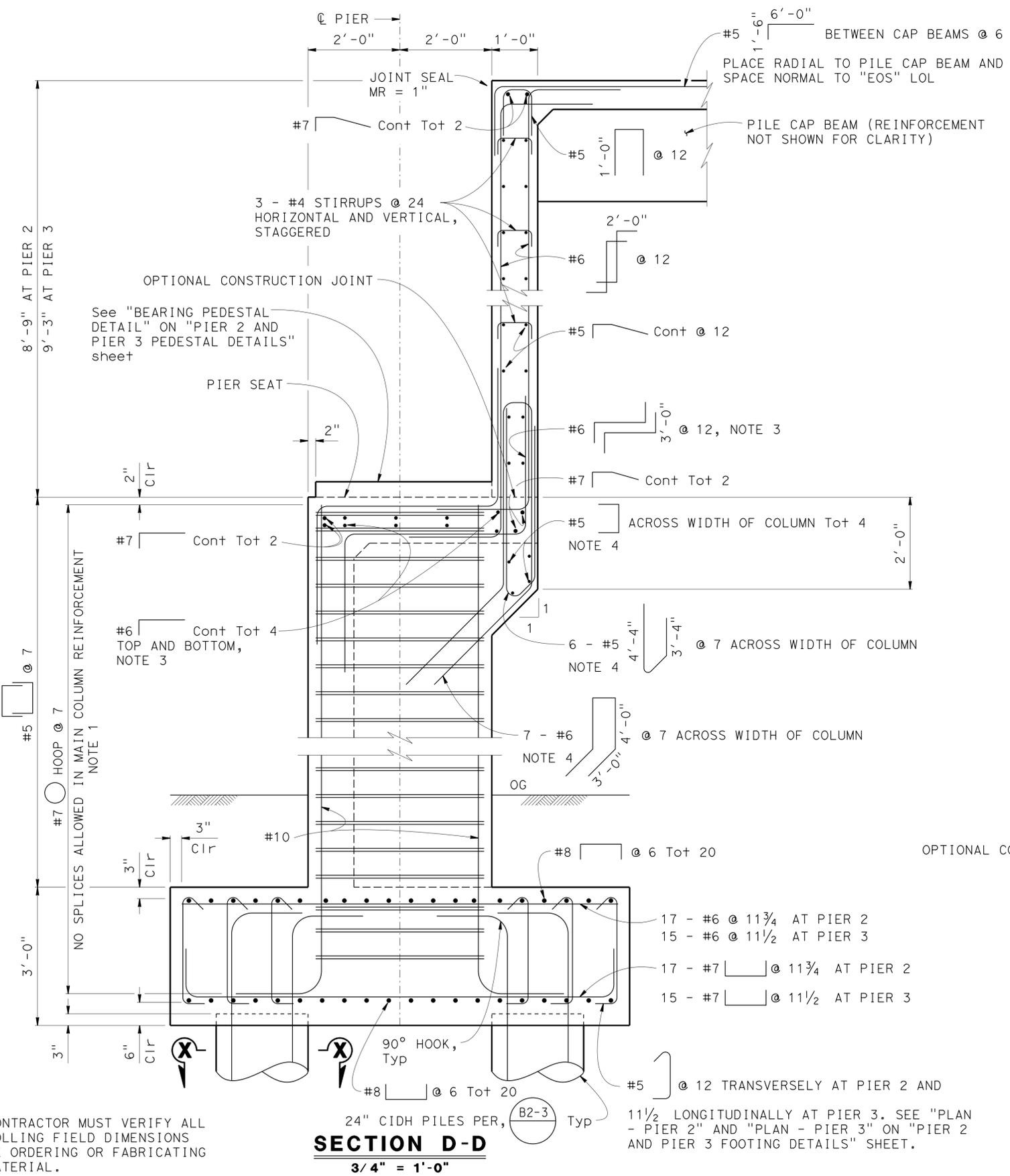
SECTION L-L
NO SCALE

LEGEND:
 Indicates limits of bridge removal portion

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

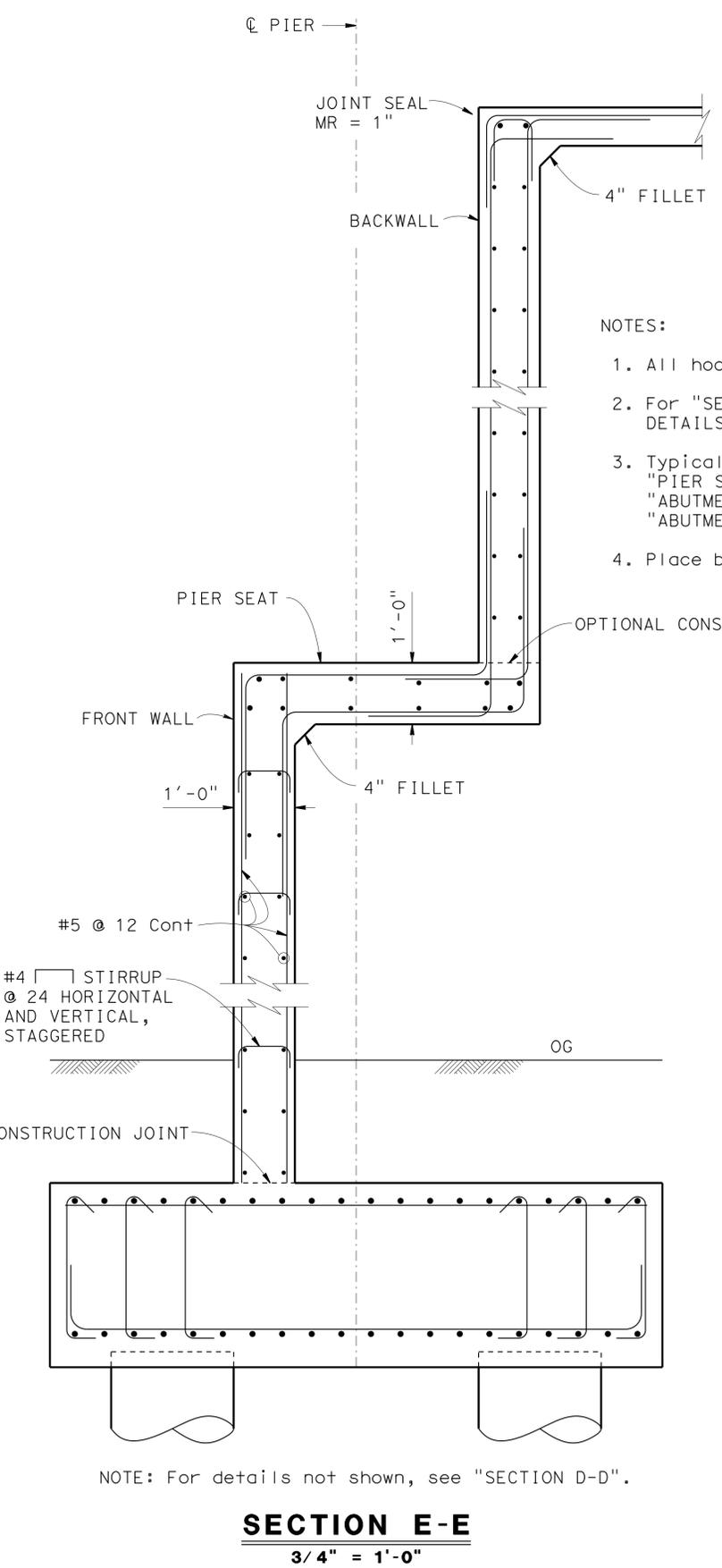
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. VALLA	CHECKED J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING		
	DETAILS	BY KC	CHECKED L. VALLA			55-0203	ABUTMENT 4 - PIER 3 DETAILS NO. 6		
	QUANTITIES	BY L. VALLA	CHECKED P. MAK			POST MILE 1.6			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0 1 2 3	UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 1	CONTRACT NO.: 12-0M4901	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 24 OF 74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	195	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
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NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

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

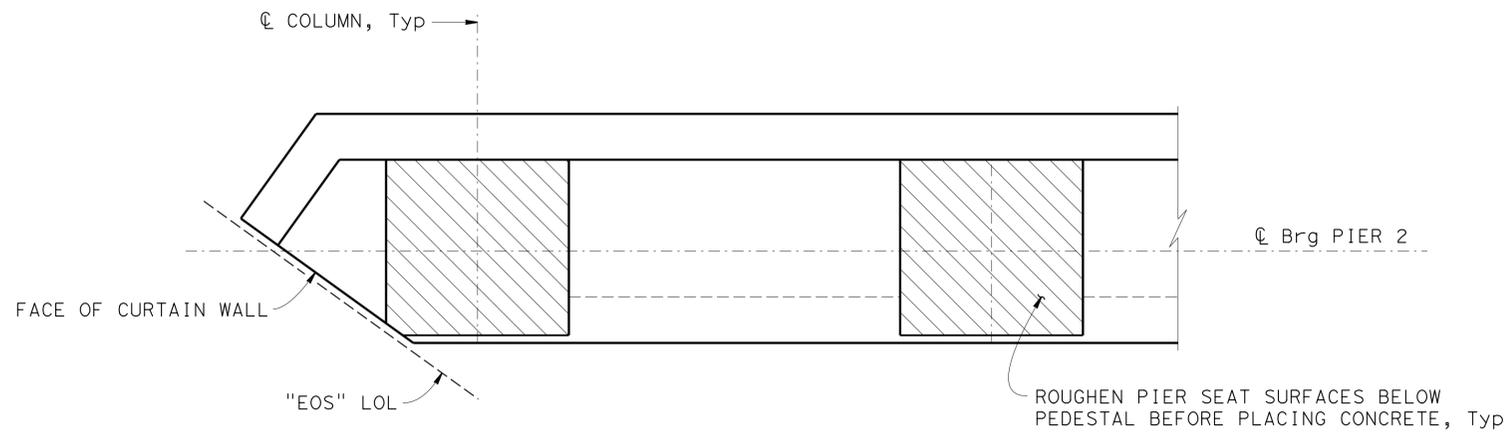


- NOTES:
- All hoops are ultimate butt spliced continuous.
 - For "SECTION X-X" see "ABUTMENT 1 - PIER 2 DETAILS NO. 1" sheet.
 - Typical reinforcement unless shown otherwise on "PIER SEAT CORNER DETAILS AT PIERS 2 AND 3" on "ABUTMENT 1 - PIER 2 DETAILS NO. 4" sheet and "ABUTMENT 4 - PIER 3 DETAILS NO. 3" sheet.
 - Place bars in column pour before placing backwall.

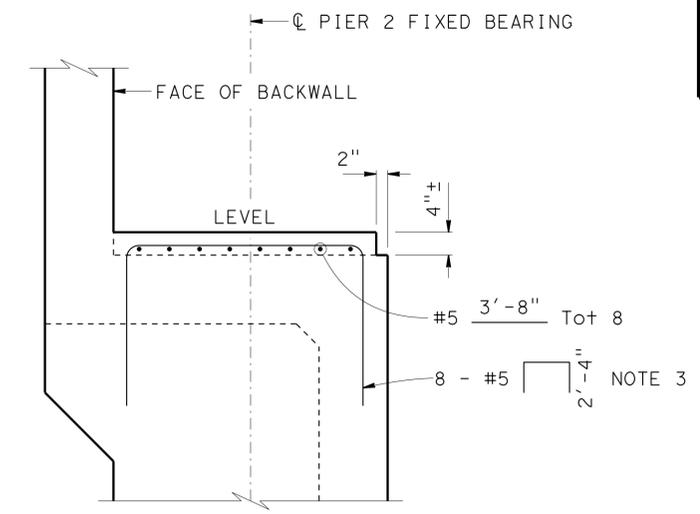
SECTION E-E
3/4" = 1'-0"

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY L. VALLA	CHECKED J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING		
	DETAILS	BY KC	CHECKED L. VALLA			55-0203	PIER 2 AND PIER 3 COLUMN DETAILS		
	QUANTITIES	BY L. VALLA	CHECKED P. MAK			POST MILE 1.6			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3606	CONTRACT NO.: 12-0M4901		REVISION DATES	SHEET 25 OF 74
					PROJECT NUMBER & PHASE: 1212000090 1	DISREGARD PRINTS BEARING EARLIER REVISION DATES		6-28-15 11-2-15 1-20-16	

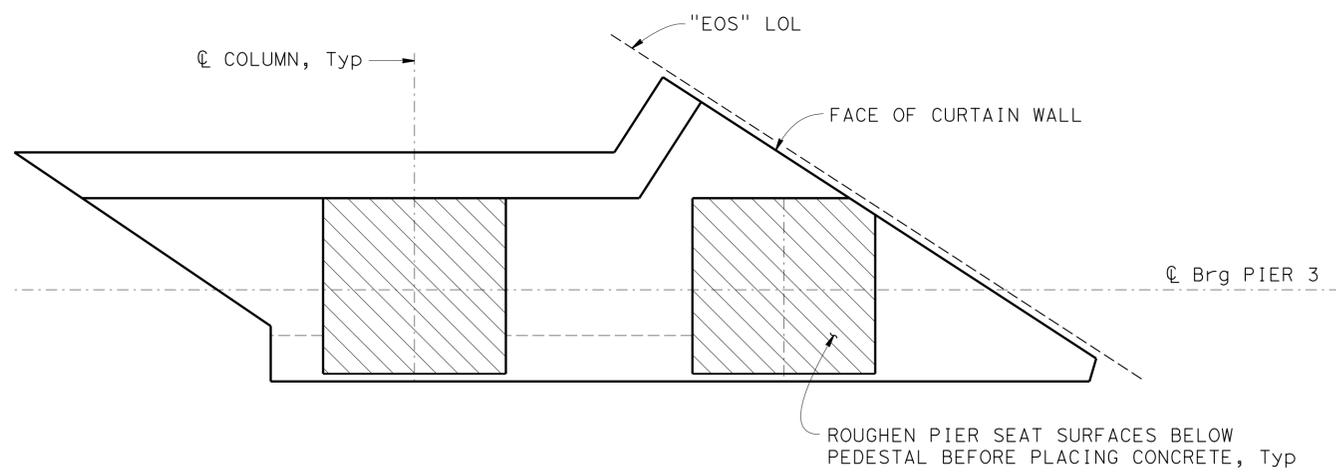
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	197	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER JINRONG WANG No. C49844 Exp. 09-30-16 CIVIL STATE OF CALIFORNIA					
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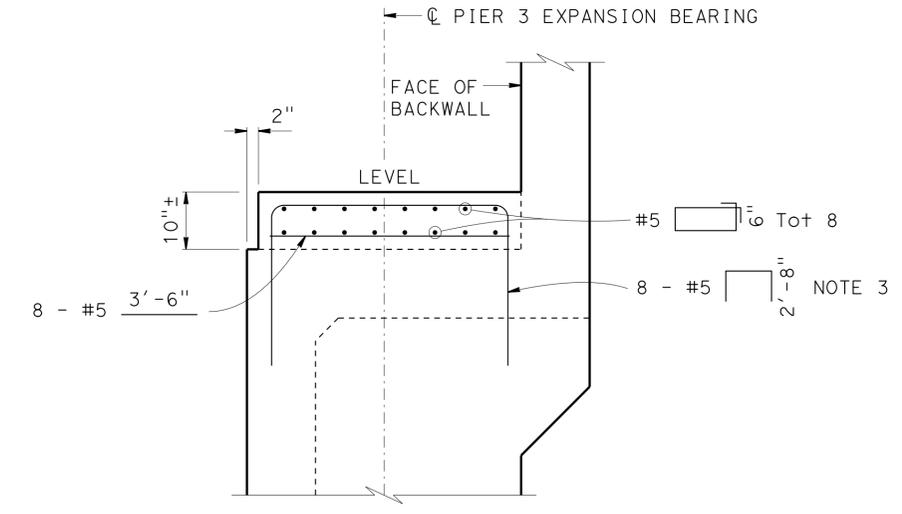
ROUGHENED SURFACES FOR BEARING PEDESTALS AT PIER 2
NO SCALE



AT PIER 2



ROUGHENED SURFACES FOR BEARING PEDESTALS AT PIER 3
NO SCALE



AT PIER 3

BEARING PEDESTAL DETAIL
3/4" = 1'-0"

Indicates limits of roughened surfaces

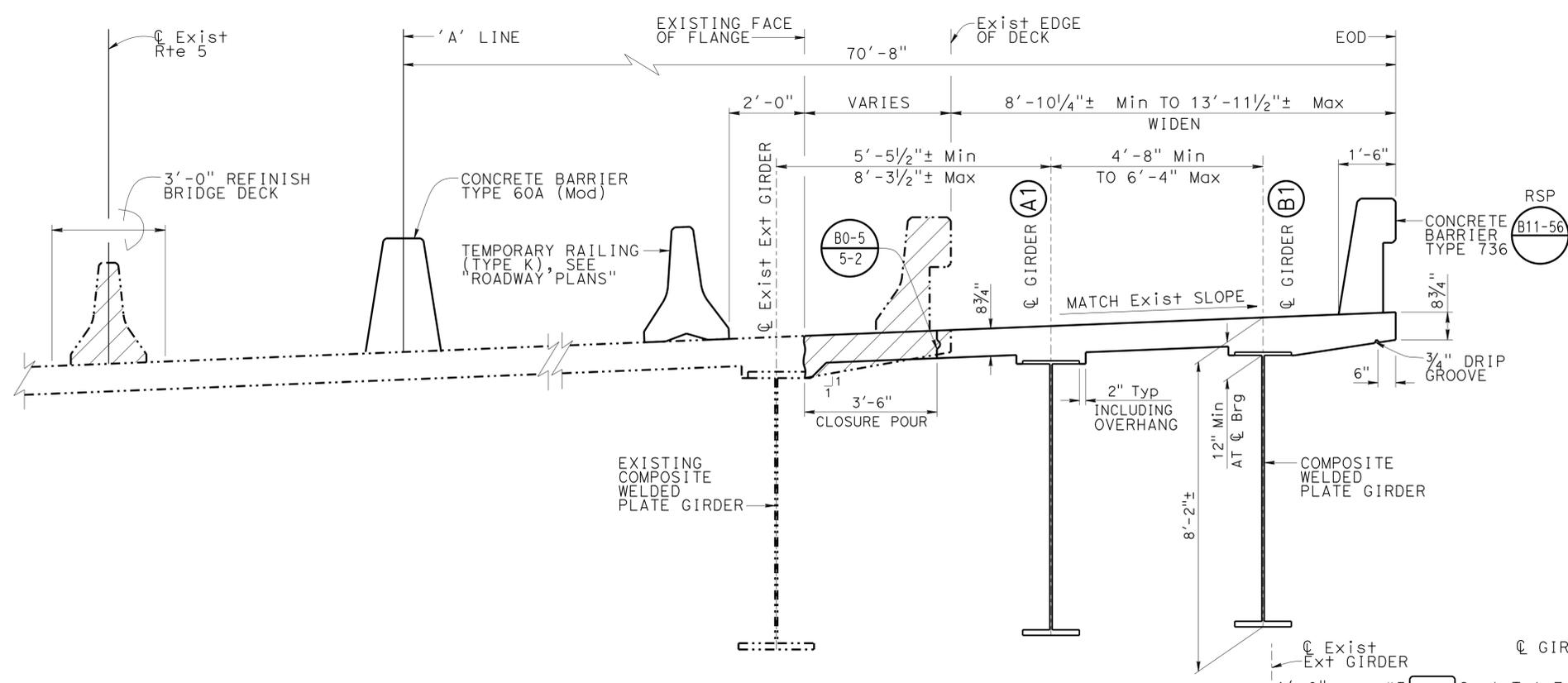
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

- NOTES:
1. Pier reinforcement not shown for clarity.
 2. Exterior bearing pedestals to be poured monolithically with curtain walls.
 3. Place in column pour before placing pedestal.

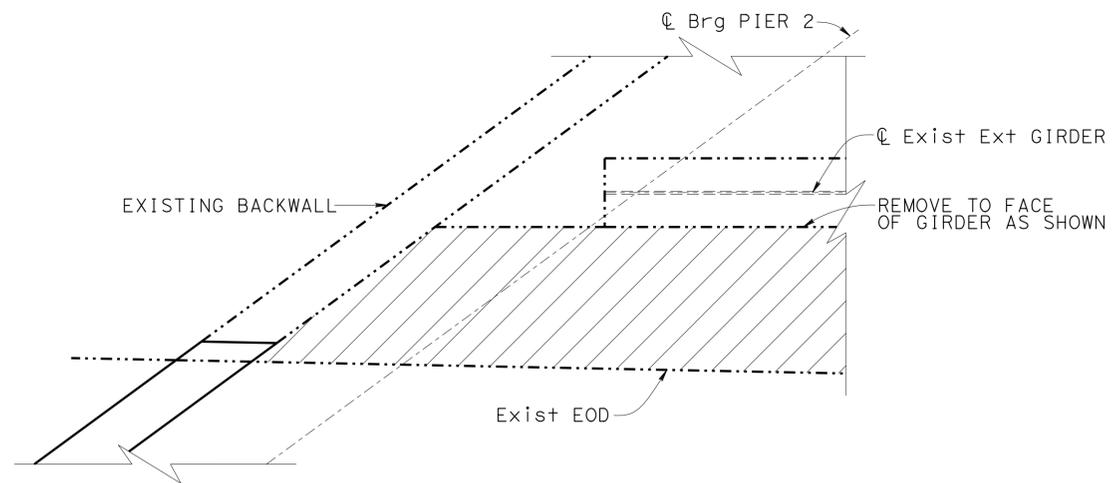
DESIGN	BY	L. VALLA	CHECKED	J. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING			
	DETAILS	BY	KC	CHECKED			L. VALLA	55-0203	PIER 2 AND PIER 3 PEDESTAL DETAILS		
QUANTITIES	BY	L. VALLA	CHECKED	P. MAK	PROJECT NUMBER & PHASE: 1212000090 1	POST MILE	1.6	CONTRACT NO.: 12-0M4901	REVISION DATES		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3606	DISREGARD PRINTS BEARING EARLIER REVISION DATES	6-28-15	11-2-15	1-20-16	SHEET 27 OF 74

USERNAME => s127956 DATE PLOTTED => 18-MAY-2016 TIME PLOTTED => 14:24

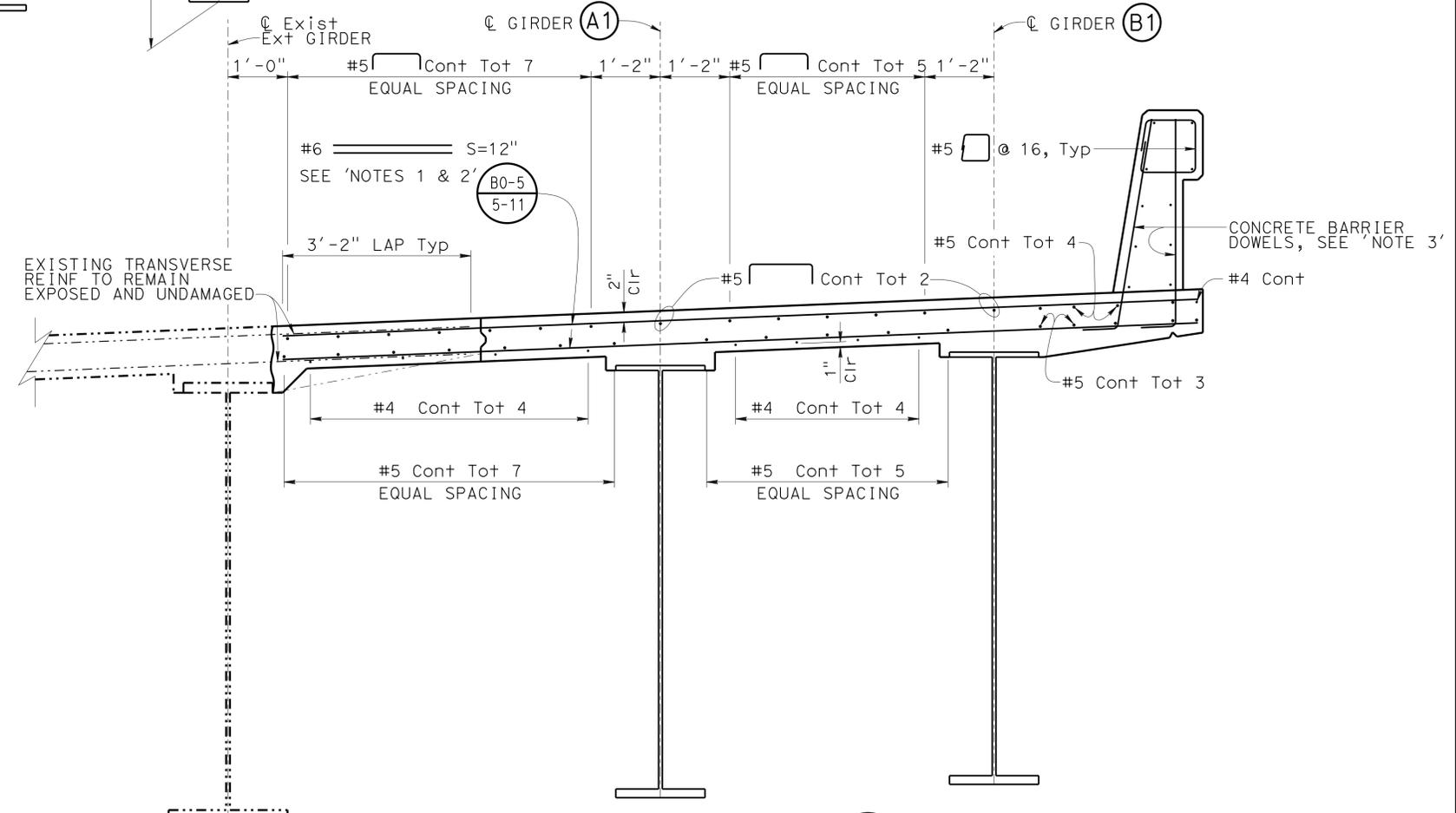
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	198	244
Jinrong Wang			02-01-16	REGISTERED CIVIL ENGINEER DATE	
3-28-16			PLANS APPROVAL DATE		
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TYPICAL SECTION
1/2" = 1'-0" (B0-5)



PIER 2 SHOWN, PIER 3 SIMILAR
PLAN VIEW OF BRIDGE REMOVAL IN CORNER OF EXISTING GIRDER
1/2" = 1'-0"



PART TYPICAL SECTION
3/4" = 1'-0" (B0-5)

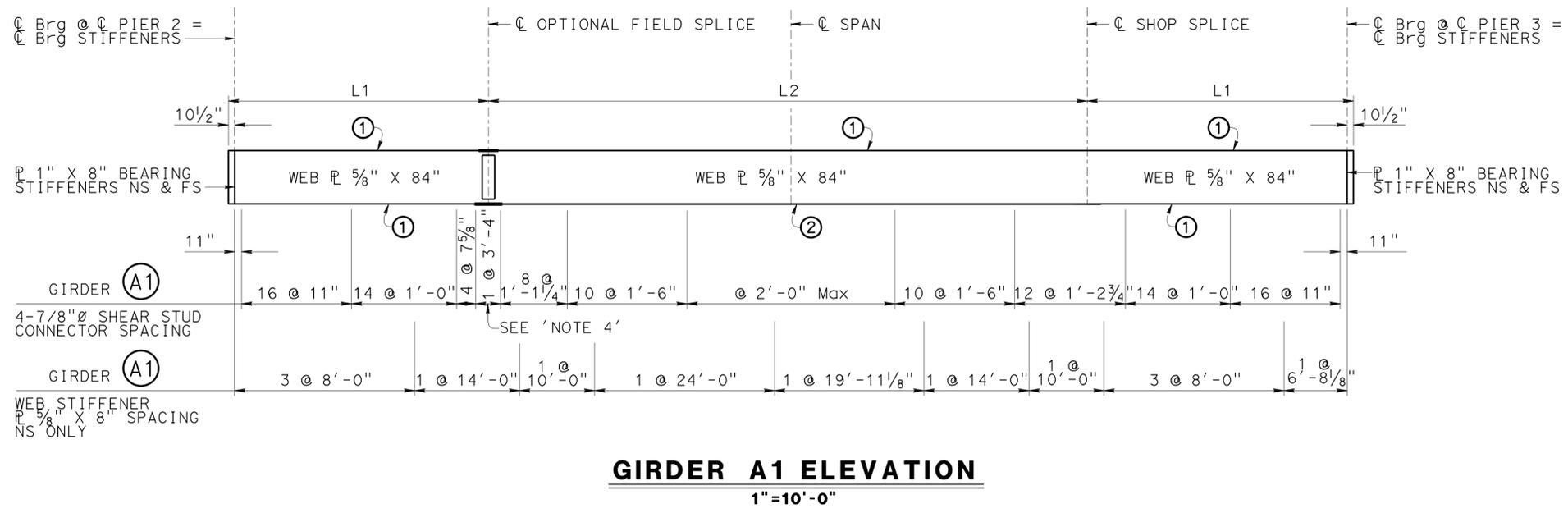
- NOTES:**
1. Match existing reinforcement and place normal to center of new interior girder A1 station line. Lap splice existing bars as shown.
 2. For details of transverse deck reinforcement not shown, see "Girder Details No. 3" sheet.
 3. For details not shown, see RSP B11-56.
- Indicates bridge removal (portion)

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

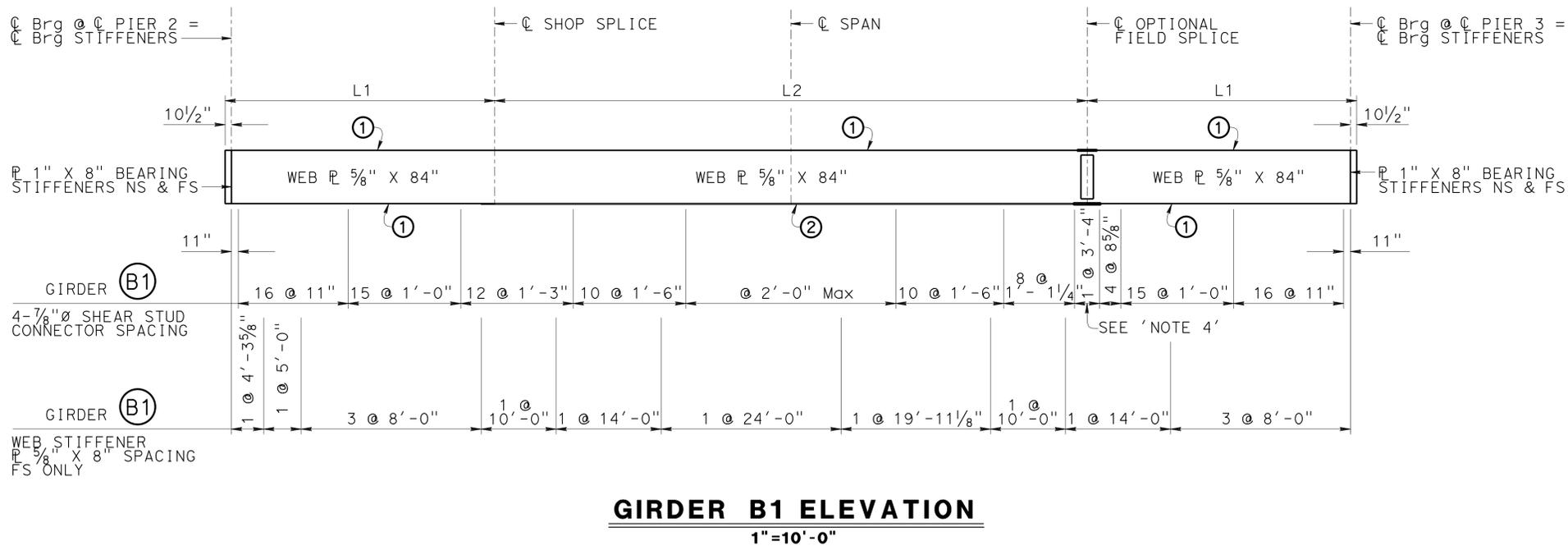
DESIGN	BY LEON VALLA	CHECKED WILLIAM ADDLESPURGER	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING TYPICAL SECTION	
DETAILS	BY TON DOAN	CHECKED LEON VALLA			55-0203		
QUANTITIES	BY LEON VALLA	CHECKED WILLIAM ADDLESPURGER			POST MILE 1.6		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M491	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 28 OF 74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	1.2/2.2	200	244

JINRONG WANG 02-01-16
 REGISTERED CIVIL ENGINEER DATE
 3-28-16
 PLANS APPROVAL DATE
 JINRONG WANG
 No. C49844
 Exp. 09-30-16
 CIVIL
 STATE OF CALIFORNIA
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- NOTES:**
1. For 7/8" Ø shear stud connection details, see "Steel Girder Shop Splice And Stud Connector Details" sheet
 2. For optional field splice plate details see "Girder Details No. 2" sheet
 3. For bearing and web stiffener connection details, see "Steel Girder Transverse Stiffener Details" and "Steel Girder Connection Stiffener Details" sheets
 4. 7/8" Ø Shear stud connectors must not be welded to top of optional field splice plates



GIRDER	DIMENSION (FT)		FLANGE PLATE SCHEDULE (IN)	
	L1	L2	①	②
(A1)	34'-8 1/8"	79'-0"	1 X 18	1 3/4 X 18
(B1)	35'-11 7/8"	79'-0"	1 X 18	1 3/4 X 18

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

DESIGN	BY LEON VALLA	CHECKED WILLIAM ADDLESPURGER	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	EL CAMINO REAL UC WIDENING GIRDER DETAILS NO. 1
DETAILS	BY TON DOAN	CHECKED LEON VALLA			55-0203	
QUANTITIES	BY LEON VALLA	CHECKED WILLIAM ADDLESPURGER			POST MILE 1.6	

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
 UNIT: 3606 PROJECT NUMBER & PHASE: 1212000090 & 1 CONTRACT NO.: 12-0M491
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 06-25-15, 11-08-15, 12-29-15, 08-06-15
 SHEET 30 OF 74