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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK

STRUCTURE PLANS

SHEET No.	DESCRIPTION
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STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY

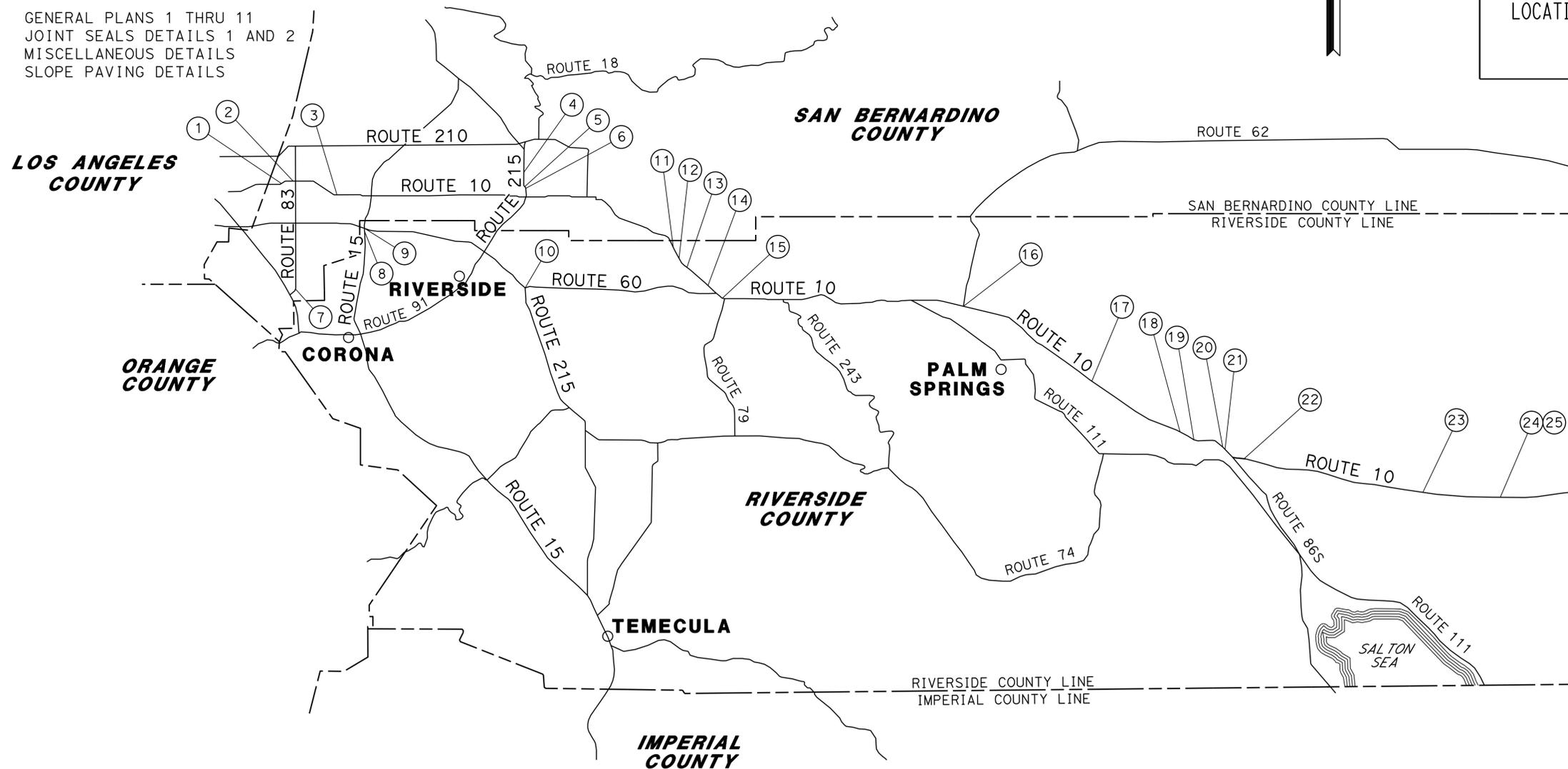
IN RIVERSIDE AND SAN BERNARDINO COUNTIES  
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBD	10,15,60, 83,215	Var	1	51

LOCATION MAP

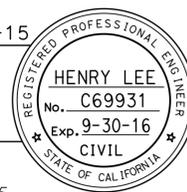
NOTE:  
THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTIONS SHEET (LC-1).



PROJECT MANAGER  
MICHAEL RISTIC

DESIGN MANAGER  
HENRY LEE

Henry Lee 2-23-15  
PROJECT ENGINEER DATE  
REGISTERED CIVIL ENGINEER



February 23, 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.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

CONTRACT No.	08-1E4304
PROJECT ID	0814000021

LAST REVISION 02-23-15  
DATE PLOTTED => 20-FEB-2015  
TIME PLOTTED => 07:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	2	51

Henry Lee 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
HENRY LEE  
No. C69931  
Exp. 9-30-16  
CIVIL  
STATE OF CALIFORNIA

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

**LOCATIONS OF CONSTRUCTION**

Loc No. ①	COUNTY	ROUTE	PM	NAME OF BRIDGE	BRIDGE No.
1	SBd	10	1.23	CENTRAL AVENUE UC	54-1186
2	SBd	10	2.37	MOUNTAIN AVENUE UC	54-1187
3	SBd	10	6.80	HOLT Blvd EXIT RAMP UC	54-0437L
4	SBd	215	6.31	EAST BRANCH LYTLE CREEK	54-0485
5	SBd	215	5.23	WARM CREEK	54-0474
6	SBd	215	5.03	ORANGE SHOW Rd OC	54-0473
7	SBd	83	0.93	CHINO CREEK	54-1248
8	Riv	15	51.40	S15-E60/N15-E60 SEPARATION	56-0748F
9	Riv	15	51.45	N15-W60 CONNECTOR SEPARATION	56-0691G
10	Riv	60	R12.27	E60 TRUCK CONNECTOR	56-0806G
11	Riv	10	R0.90	CALIMESA Blvd OC	56-0483
12	Riv	10	R1.92	SINGLETON ROAD OC	56-0482
13	Riv	10	R3.11	CHERRY VALLEY Blvd OC	56-0481
14	Riv	10	R5.53	SAN TIMOTEO CANYON ROAD OC	56-0496
15	Riv	10	7.32	CALIFORNIA AVENUE UC	56-0434
16	Riv	10	29.69	E10-E62 CONNECTOR OC	56-0474G
17	Riv	10	43.36	RAMON ROAD OC	56-0471
18	Riv	10	R52.34	JEFFERSON STREET OC	56-0427
19	Riv	10	R53.80	THOUSAND PALMS WASH	56-0610R
20	Riv	10	R56.57	44TH AVENUE UC	56-0613R
21	Riv	10	R56.91	GOLF CENTER PARKWAY OC	56-0614
22	Riv	10	R58.89	DILLON ROAD UC	56-0617R
23	Riv	10	R75.67	HAPPY GULCH	56-0209R
24	Riv	10	R82.59	PINTO GULCH	56-0514L
25	Riv	10	R82.59	PINTO GULCH	56-0514R

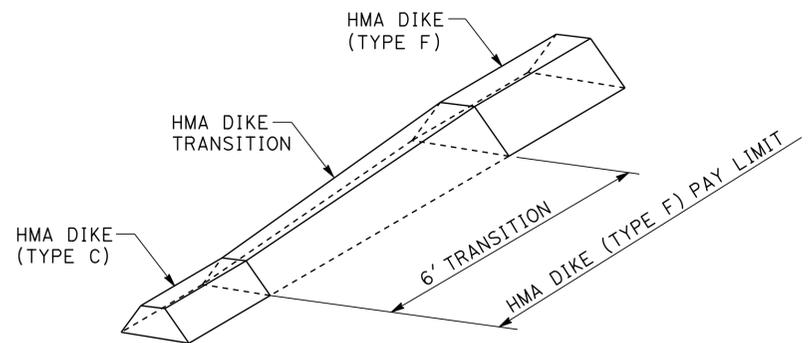
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR: KUAN CHEN  
 CALCULATED/DESIGNED BY: HENRY LEE  
 CHECKED BY: KUAN CHEN  
 REVISED BY: HENRY LEE  
 DATE REVISED:

**LOCATIONS OF CONSTRUCTION  
LC-1**

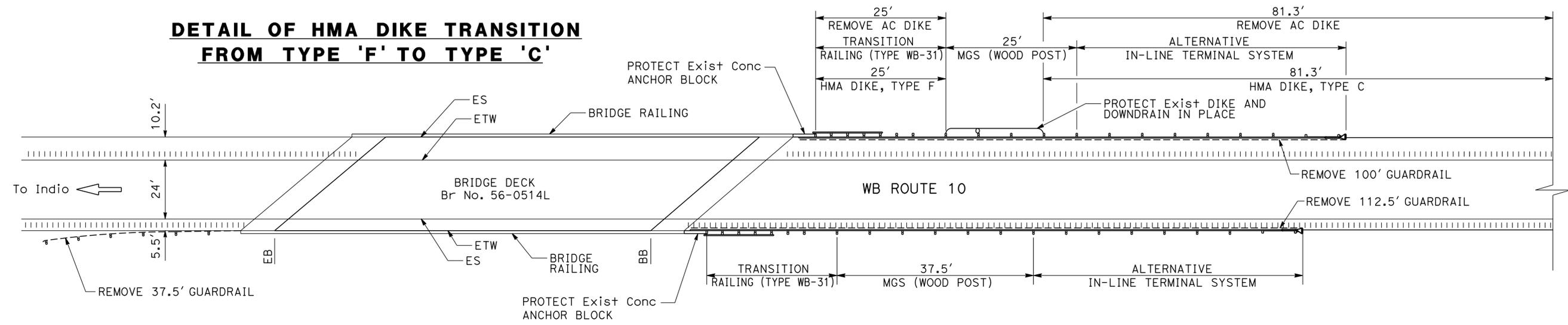
LAST REVISION DATE PLOTTED => 20-FEB-2015  
 02-23-15 TIME PLOTTED => 07:29



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	4	51
Henry Lee			2-23-15	REGISTERED CIVIL ENGINEER DATE	
2-23-15			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER HENRY LEE No. C69931 Exp. 9-30-16 CIVIL STATE OF CALIFORNIA					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

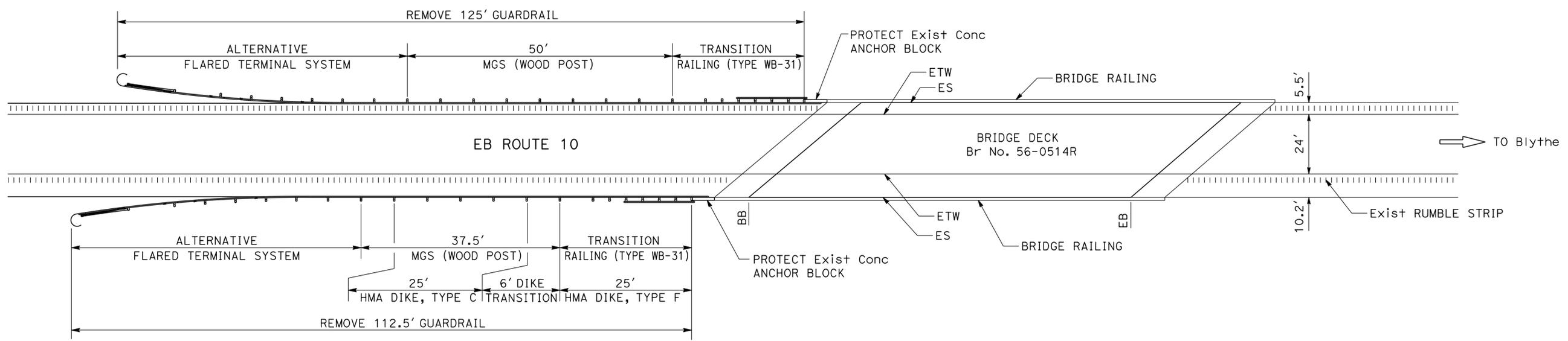


**DETAIL OF HMA DIKE TRANSITION FROM TYPE 'F' TO TYPE 'C'**



**MIDWEST GUARDRAIL SYSTEM CONSTRUCTION DETAILS FOR PINTO GULCH**

Br No. 56-0514L, Riv, Rte 10, PM R82.59



**MIDWEST GUARDRAIL SYSTEM CONSTRUCTION DETAILS FOR PINTO GULCH**

Br No. 56-0514R, Riv, Rte 10, PM R82.59

**CONSTRUCTION DETAILS**  
NO SCALE

**C-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR: KUAN CHEN  
 CHECKED BY: KUAN CHEN  
 DESIGNED BY: HENRY LEE  
 REVISIONS: HENRY LEE, KUAN CHEN  
 REVISOR: HENRY LEE, KUAN CHEN  
 DATE: 7/2/2010

USERNAME => s125726  
DGN FILE => 0814000021ga002.dgn



UNIT 2343

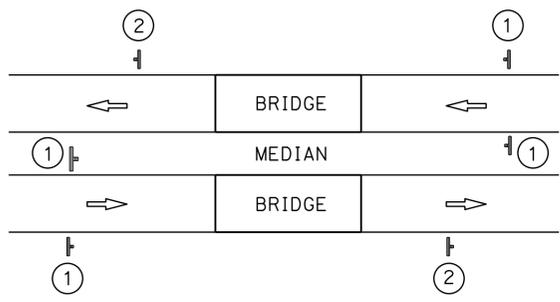
PROJECT NUMBER & PHASE

08140000211

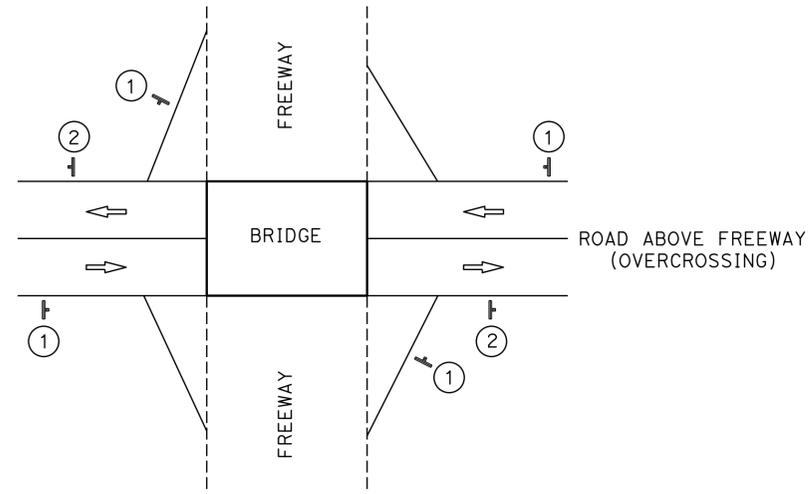
LAST REVISION DATE PLOTTED => 20-FEB-2015  
 TIME PLOTTED => 07:29

**NOTES:**

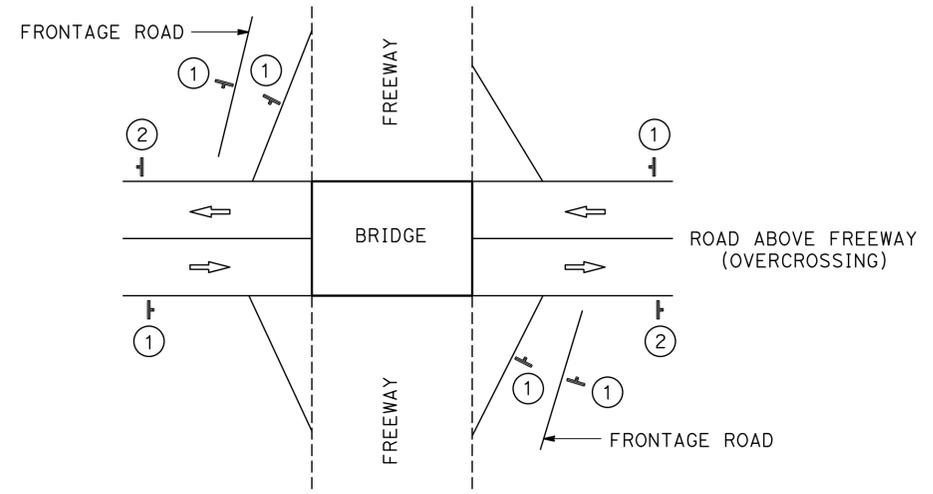
1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE, EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEET THQ-1.
3. LOCATION OF PCMS TO BE DETERMINED BY THE ENGINEER.



**TYPICAL STATIONARY MOUNTED SIGNS**  
FREEWAYS AND EXPRESSWAYS



**TYPICAL STATIONARY MOUNTED SIGNS**  
TWO OR FOUR LANE HIGHWAY



**TYPICAL STATIONARY MOUNTED SIGNS**  
TWO OR FOUR LANE HIGHWAY WITH FRONTAGE ROAD

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
1	W20-1		48" X 48"	ROAD WORK AHEAD	1 - 6" X 6"	70
2	G20-2		42" X 18"	END ROAD WORK	1 - 4" X 4"	41
3		C40(CA)	108" X 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" X 6"	2
4		C40(CA)	144" X 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" X 8"	4

**PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)**

(EA)
4

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

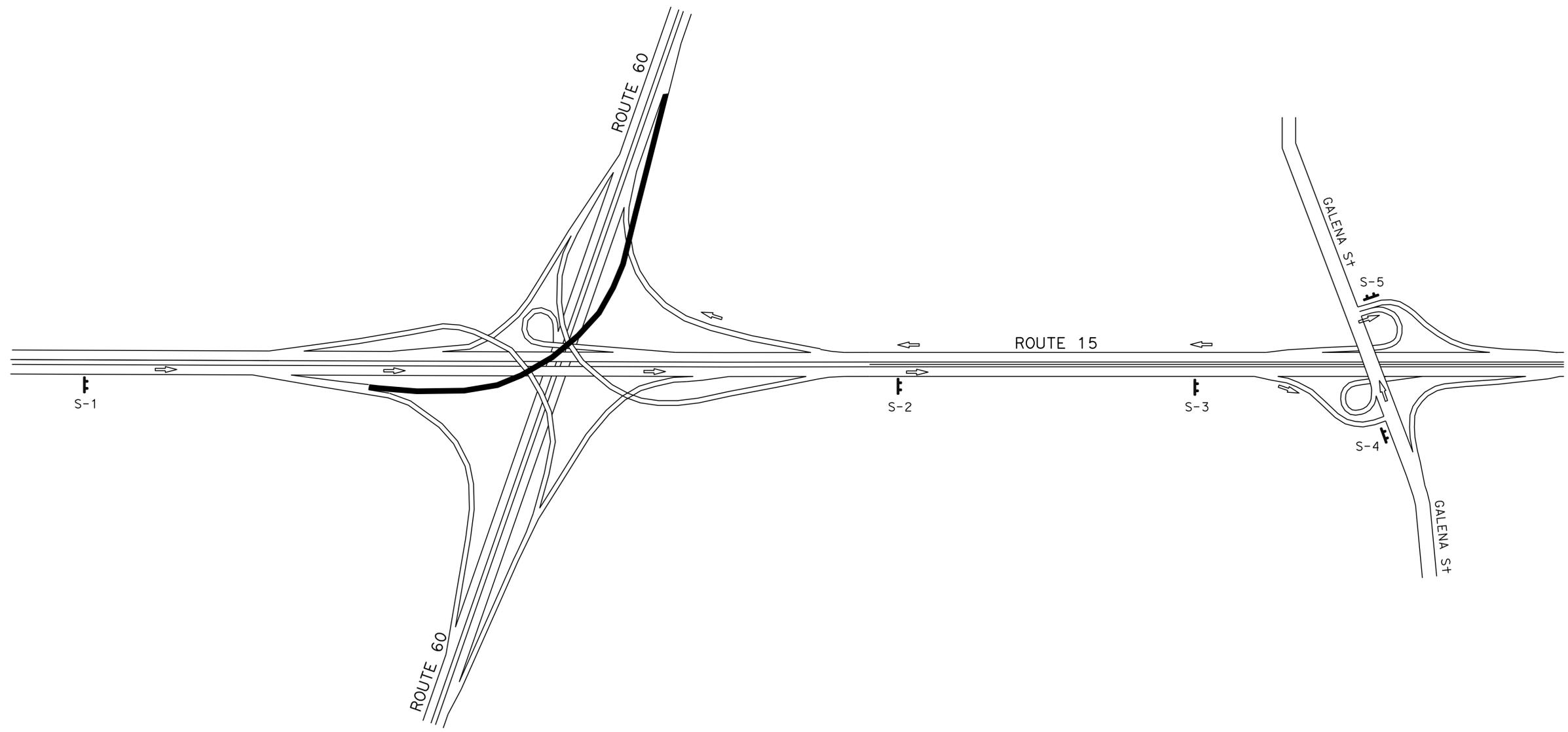
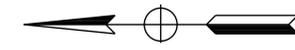
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	6	51
M.M. Kamgar Highway 2-23-15 REGISTERED CIVIL ENGINEER DATE				MEHDI KAMGAR No. C58039 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA	
2-23-15 PLANS APPROVAL DATE				THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.	

**NOTE:**

1. FOR CONSTRUCTION AREA SIGNS INFORMATION SEE SHEETS THD-1 AND THD-2

**LEGEND:**

- █ CLOSURE LOCATION
- ⇨ DIRECTION OF TRAFFIC DETOUR



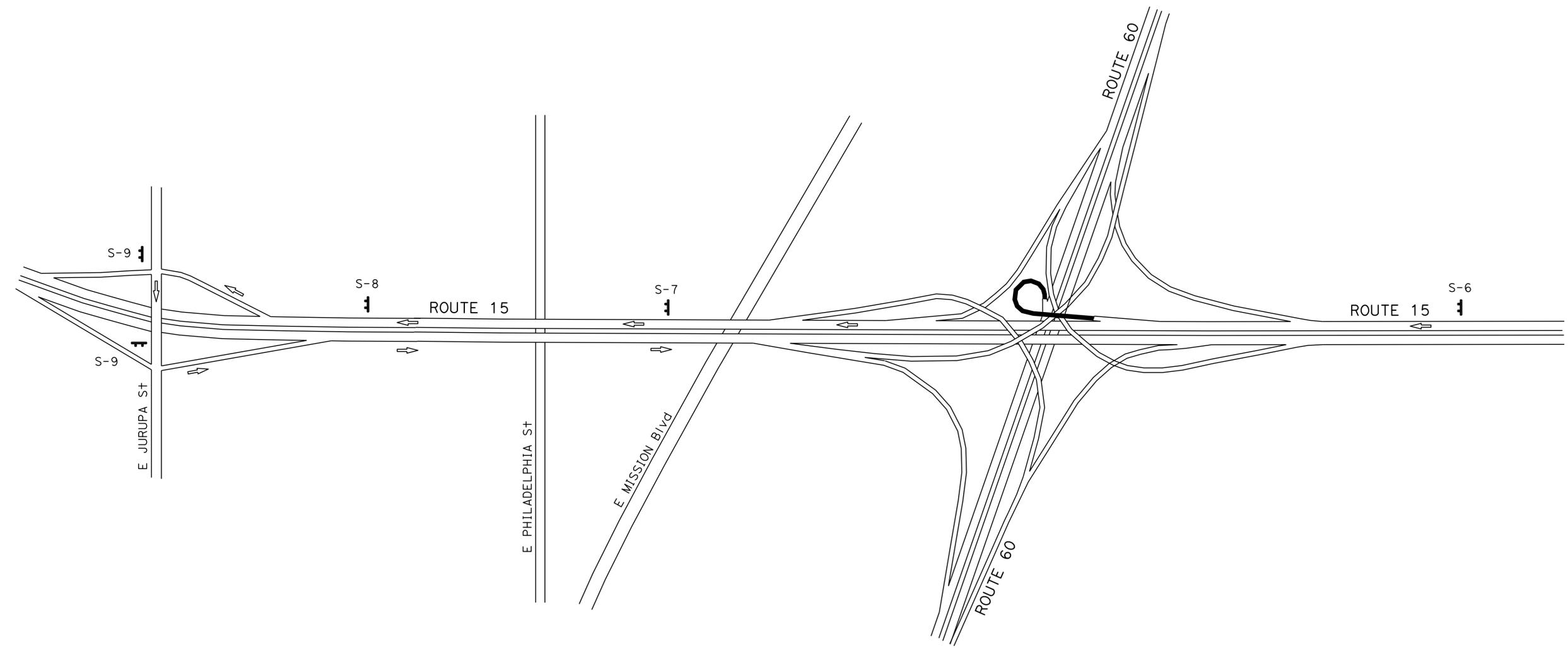
**LOCATION 8**  
**DETOUR DURING SOUTHBOUND ROUTE 15**  
**TO EASTBOUND ROUTE 60 SEPARATION CLOSURE**

**TRAFFIC HANDLING PLAN**  
NO SCALE **TH-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	MOKHTARI	REVISED BY	
<b>Caltrans</b> TRAFFIC DESIGN	PATRICK HALLY	CHECKED BY	MEHDI KAMGAR	DATE	

APPROVED FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	7	51
M.M. Kamgar Highway 2-23-15				REGISTERED CIVIL ENGINEER DATE	
2-23-15				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>					



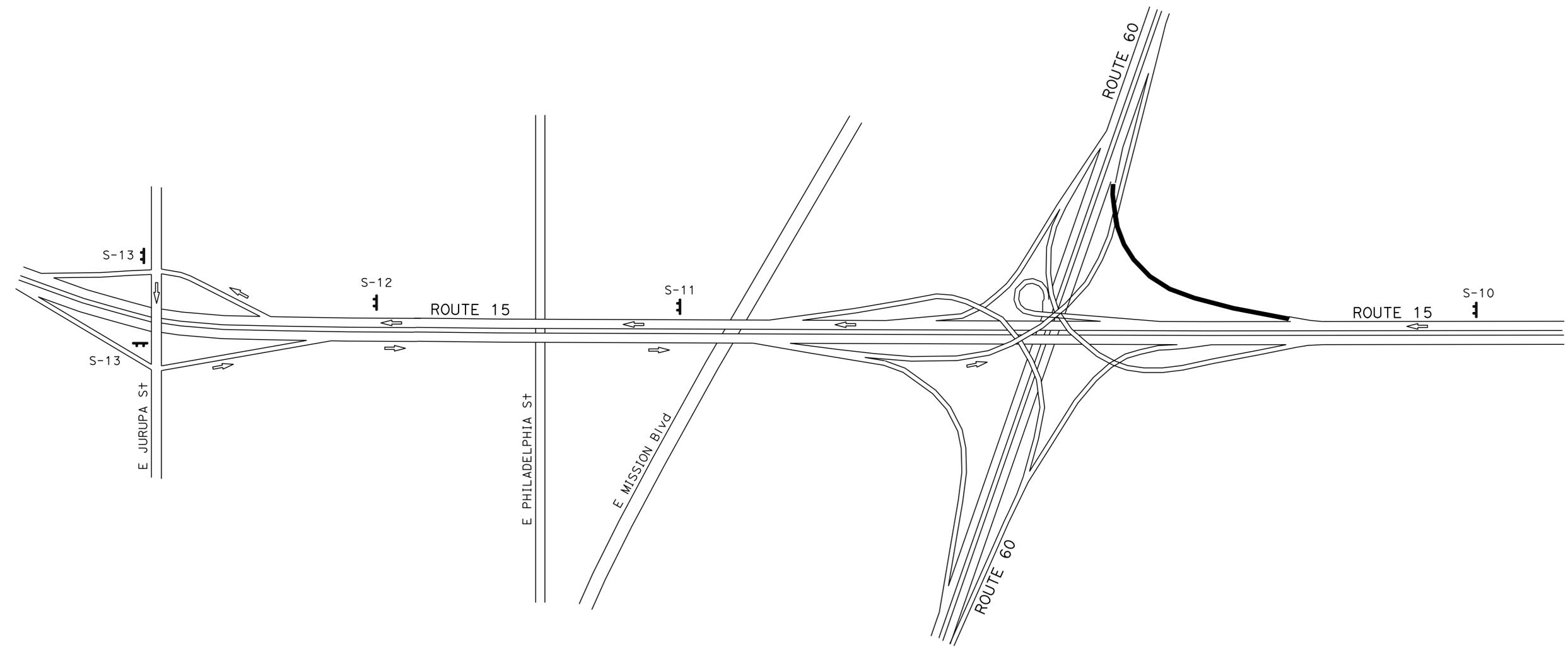
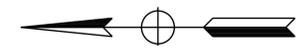
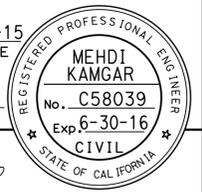
**LOCATION 9**  
**DETOUR DURING NORTHBOUND ROUTE 15**  
**TO WESTBOUND ROUTE 60 CONNECTOR SEPARATION CLOSURE**

**TRAFFIC HANDLING PLAN**  
**NO SCALE**  
**TH-2**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	MOKHTARI	REVISED BY
<b>Caltrans</b> <b>TRAFFIC DESIGN</b>	PATRICK HALLY	CHECKED BY	MEHDI KAMGAR	DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	8	51
<i>M.M. Kamgar</i> Highway 2-23-15 REGISTERED CIVIL ENGINEER DATE					
2-23-15 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.					



**LOCATION 8**  
**DETOUR DURING NORTHBOUND ROUTE 15**  
**TO EASTBOUND ROUTE 60 CONNECTOR CLOSURE**

**TRAFFIC HANDLING PLAN**  
 NO SCALE **TH-3**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

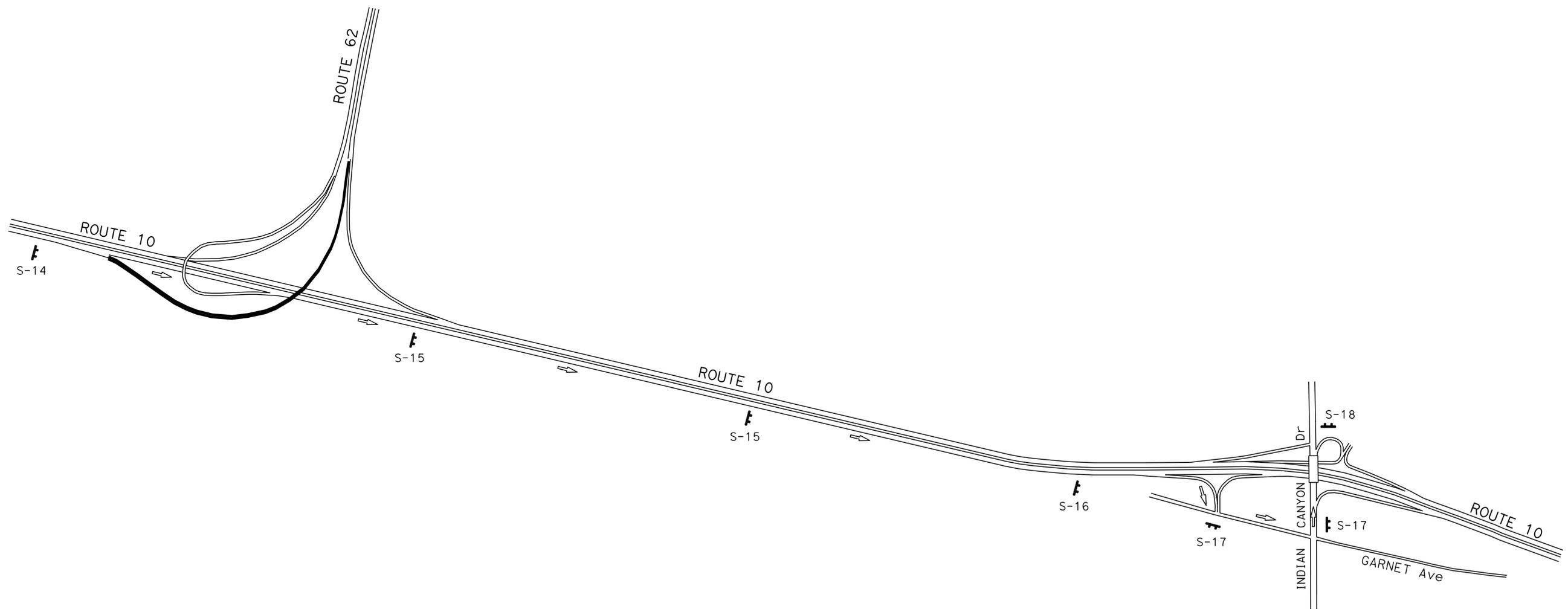
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	MOKHTARI	REVISED BY
<b>Caltrans</b> TRAFFIC DESIGN	PATRICK HALLY	CHECKED BY	MEHDI KAMGAR	DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	9	51

M.M. Kamgar Highway 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
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.



**LOCATION 16**  
**DETOUR DURING EASTBOUND ROUTE 10**  
**TO EASTBOUND ROUTE 62 CONNECTOR OVERCROSSING CLOSURE**

**TRAFFIC HANDLING PLAN**  
NO SCALE **TH-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	MOKHTARI	REVISED BY	
<b>Caltrans</b> <b>TRAFFIC DESIGN</b>	PATRICK HALLY	CHECKED BY	MEHDI KAMGAR	DATE	

APPROVED FOR TRAFFIC HANDLING WORK ONLY





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	12	51

M.M. Kamgar *M.M. Kamgar* 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
PLANS APPROVAL DATE

MEHDI KAMGAR  
No. C58039  
Exp. 6-30-16  
CIVIL  
STATE OF CALIFORNIA

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

**NOTE:**

1. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEET CS-1.

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN CODE	SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
S-1	SEE THD-1 & THD-2 SHEETS FOR DETAILS	84" X 78"	2 - 6" X 8"	1
S-2		78" X 48"	2 - 4" X 6"	1
S-3		78" X 48"	2 - 4" X 6"	1
S-4		78" X 48"	2 - 4" X 6"	1
S-5		78" X 48"	2 - 4" X 6"	1
S-6		78" X 78"	2 - 6" X 8"	1
S-7		78" X 48"	2 - 4" X 6"	1
S-8		78" X 48"	2 - 4" X 6"	1
S-9		78" X 48"	2 - 4" X 6"	2
S-10		84" X 78"	2 - 6" X 8"	1
S-11		78" X 48"	2 - 4" X 6"	1
S-12		78" X 48"	2 - 4" X 6"	1
S-13		78" X 48"	2 - 4" X 6"	2
S-14		90" X 78"	2 - 6" X 8"	1
S-15		78" X 48"	2 - 4" X 6"	2
S-16		78" X 48"	2 - 4" X 6"	1
S-17		78" X 48"	2 - 4" X 6"	2
S-18		78" X 48"	2 - 4" X 6"	1
S-19		96" X 78"	2 - 6" X 8"	1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: PATRICK HALLY

CALCULATED-DESIGNED BY: CHECKED BY:

MOKHTARI: MEHDI KAMGAR

REVISED BY: DATE REVISED:

**TRAFFIC HANDLING QUANTITIES THQ-1**



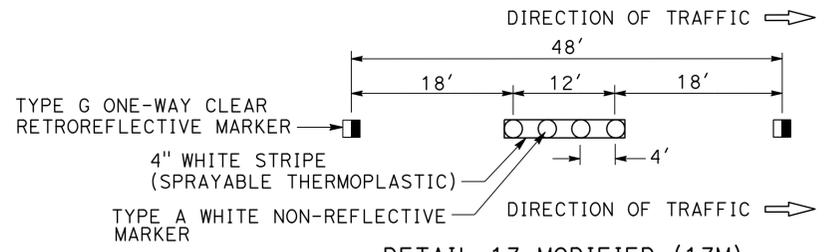
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	13	51

M.M. Kamgar Highway 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
PLANS APPROVAL DATE

MEHDI KAMGAR  
No. C58039  
Exp. 6-30-16  
CIVIL  
STATE OF CALIFORNIA

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DETAIL 13 MODIFIED (13M)

INSTALL TYPE A NON-REFLECTIVE MARKER WITH STRIPING DETAIL 13M  
INSTALL TYPE A MARKER BEFORE STRIPING TO GET THE PROPER BONDING

**PAVEMENT DELINEATION QUANTITIES**

BRIDGE/ LOCATIONS	DETAIL No.	4" TERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)		PAVEMENT MARKER (RETROREFLECTIVE)			PAVEMENT MARKER (NON-REFLECTIVE)	REMOVE TERMOPLASTIC PAVEMENT MARKING	REMOVE TERMOPLASTIC TRAFFIC STRIPE	REMOVE PAVEMENT MARKER	TERMOPLASTIC PAVEMENT MARKING	REMARKS
		YELLOW	WHITE	TYPE G	TYPE H	TYPE D	TYPE A	SQFT	LF	EA	SQFT	
		LF	LF	EA	EA	EA	EA					
1	25	400										
	22	400										
	27B		800		50				2800	50		
	13M		1200									
2	25	350										
	22	350										
	27B		700		40				2400	40		
	13M		1000									
4	25	200										
	22	200										
	27B		400						1400			
	13M		600									
5	25	300										
	22	300										
	27B		600						2000			
	13M		800									
6	22	600										
	12		1000					45	2800		45	TYPE IV(L) ARROW
	27B		1200									
7	22	150				14						
	27B		300							14		
9					12							
										12		
10	25A	700										
	12		700	16						16		
	27B		700						2100			
20	25A	180										
	12		360	10	10		50		720	70		
22	27B		180									
	25A	215										
23	12		215	10	10		50		645	70		
	27B		215									
	25A	60										
24	12		60	4	4				180	8		
	27B		60									
	25A	500										
25	12		500	16	16				1500	32		
	27B		500									
	25A	500										
SUB-TOTAL		5405	13090	72	158	14		45	18045	344	45	
TOTAL		18495		244			100	45	18045	344	45	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN

**PAVEMENT DELINEATION QUANTITIES PDQ-1**

LAST REVISION DATE PLOTTED => 20-FEB-2015 02-23-15 TIME PLOTTED => 07:29

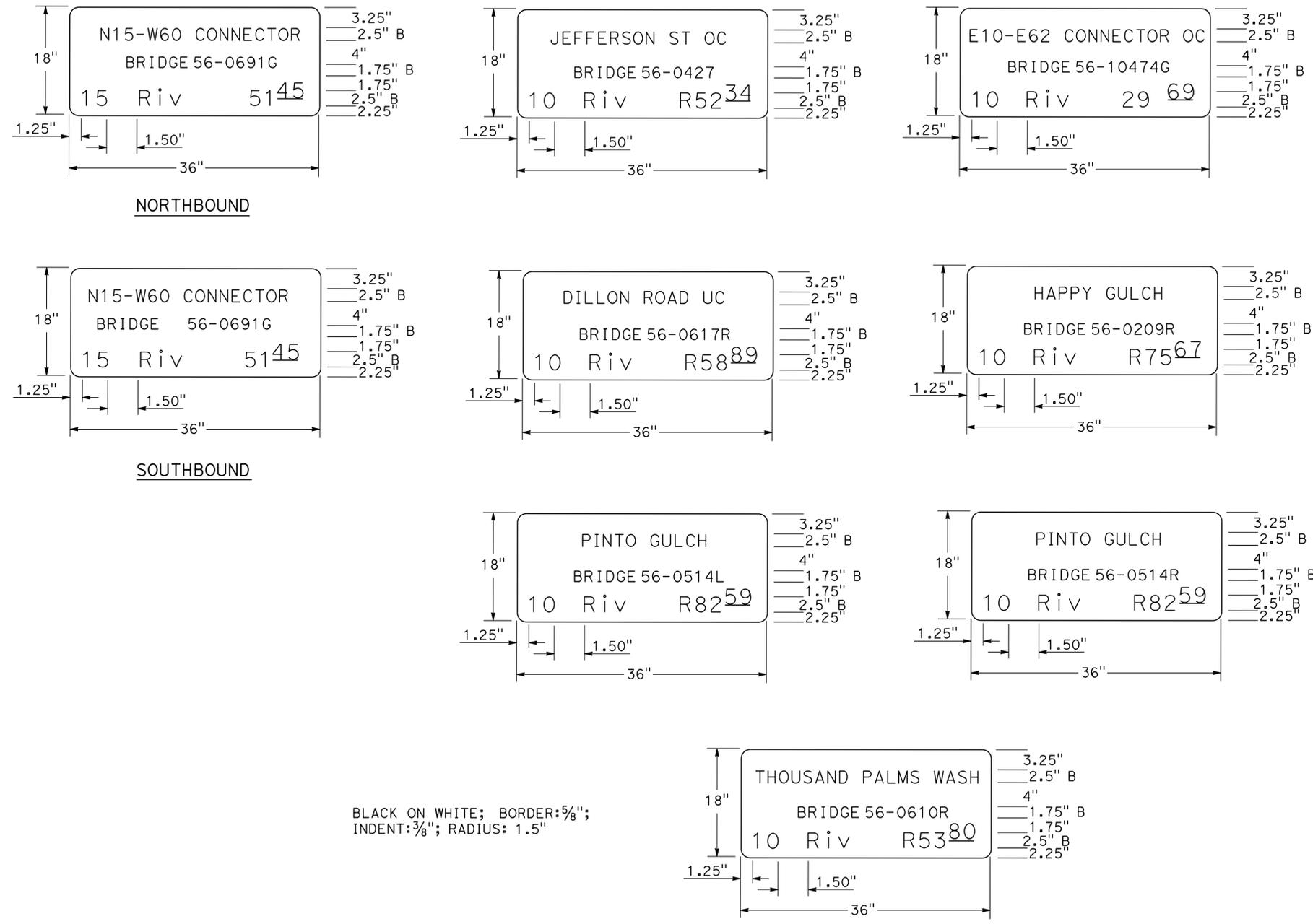
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	14	51

M.M. Kamgar Highway 2-23-15  
REGISTERED CIVIL ENGINEER DATE  
2-23-15  
PLANS APPROVAL DATE

MEHDI KAMGAR  
No. C58039  
Exp. 6-30-16  
CIVIL  
STATE OF CALIFORNIA

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> TRAFFIC DESIGN	PATRICK HALLY	CHECKED BY	DATE REVISED
		MEHDI KAMGAR	



BLACK ON WHITE; BORDER: 5/8";  
INDENT: 3/8"; RADIUS: 1.5"

**G11-4.1(CA) DETAILS**

**SIGN DETAILS**  
NO SCALE **SD-1**

LAST REVISION DATE PLOTTED => 20-FEB-2015 02-23-15 TIME PLOTTED => 07:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	15	51

M.M. Kamgar Highway 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
PLANS APPROVAL DATE

MEHDI KAMGAR  
No. C58039  
Exp. 6-30-16  
CIVIL  
STATE OF CALIFORNIA

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**ROADSIDE SIGN PANEL QUANTITIES**

SHEET NUMBER	SIGN CODE	SIGN SIZE L x D	FURNISH SINGLE SHEET ALUMINUM SIGN	SINGLE FACED	BACKGROUND	LEGEND	PROTECTIVE OVERLAY
			0.063"-UNFRAMED		SHEETING COLOR	SHEETING COLOR	PREMIUM
CALIFORNIA		INCHES	SQFT				
SD-1	G11-4.1(CA)	36 x 18	45.00	X	WHITE	BLACK	X
TOTAL			45.00				

**ROADSIDE SIGN QUANTITIES**

SHEET NUMBER	SIGN CODE	SIGN PANEL SIZE	POST SIZE AND LENGTH	ROADSIDE SIGN ONE POST
CALIFORNIA		INCHES	4"x4"	EACH
SD-1	G11-4.1(CA)	36 x 18	12'	9
TOTAL				9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: PATRICK HALLY

DESIGNED BY: MOKHTARI MEHDI KAMGAR

CHECKED BY:

REVISOR BY: DATE

REVISOR BY: DATE

**SIGN QUANTITIES**  
**SQ-1**

LAST REVISION DATE PLOTTED => 20-FEB-2015 02-23-15 TIME PLOTTED => 07:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	16	51

Henry Lee 2-23-15  
REGISTERED CIVIL ENGINEER DATE

2-23-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
HENRY LEE  
No. C69931  
Exp. 9-30-16  
CIVIL  
STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR KUAN CHEN  
 CALCULATED-DESIGNED BY CHECKED BY  
 HENRY LEE KUAN CHEN  
 REVISED BY DATE REVISED

### ROADWAY QUANTITIES

LOCATION				COLD PLANE AC PAVEMENT	TACK COAT	HMA-*	SHOULDER RUMBLE STRIP (HMA, GROUND-IN INDENTATION)
BRIDGE	COUNTY	ROUTE	POSTMILE	SQYD	TON	TON	S+a
PINTO GULCH (56-0514L)	Riv	10	R82.59	2210.0	0.55	620.30	10.5
PINTO GULCH (56-0514R)	Riv	10	R82.59	2210.0	0.55	620.30	10.5
TOTAL				4420.0	1.1	1240.6	21.0

### GUARDRAIL SYSTEM QUANTITIES

POSTMILE	BRIDGE No.	REMOVE GUARDRAIL	MGS (WOOD POST)	TRANSITION RAILING (TYPE WB-31)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM
		LF	LF	EA	EA	EA
R82.59	56-0514L/R	487.5	150	4	2	2

### PLACE HOT MIX ASPHALT DIKE

POSTMILE	BRIDGE No.	TYPE C	TYPE F	HMA TYPE A *	REMOVE AC DIKE
		LF	LF	TON	LF
R82.59	56-0514L	106.3	56	1.3	106.3

\* ADDED TOTAL QUANTITIES SHOWN ON THE ROADWAY QUANTITIES TABLE.

## SUMMARY OF QUANTITIES Q-1

	<b>M</b>	
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	
	<b>N</b>	
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	
	<b>O</b>	
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	
	<b>P</b>	
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	

	<b>P continued</b>	
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	PREFORMED 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	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
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	

	<b>S</b>	
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	
	<b>T</b>	
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	

	<b>T continued</b>	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	
	<b>U</b>	
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	
	<b>V</b>	
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
	<b>W</b>	
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	
WWLOL	WINGWALL LAYOUT LINE	
	<b>X</b>	
X Sec	CROSS SECTION	
Xing	CROSSING	
	<b>Y</b>	
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	17	51

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Grace M. Tsushima  
 No. C49814  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 2-23-15

**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 <sup>3</sup> , 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

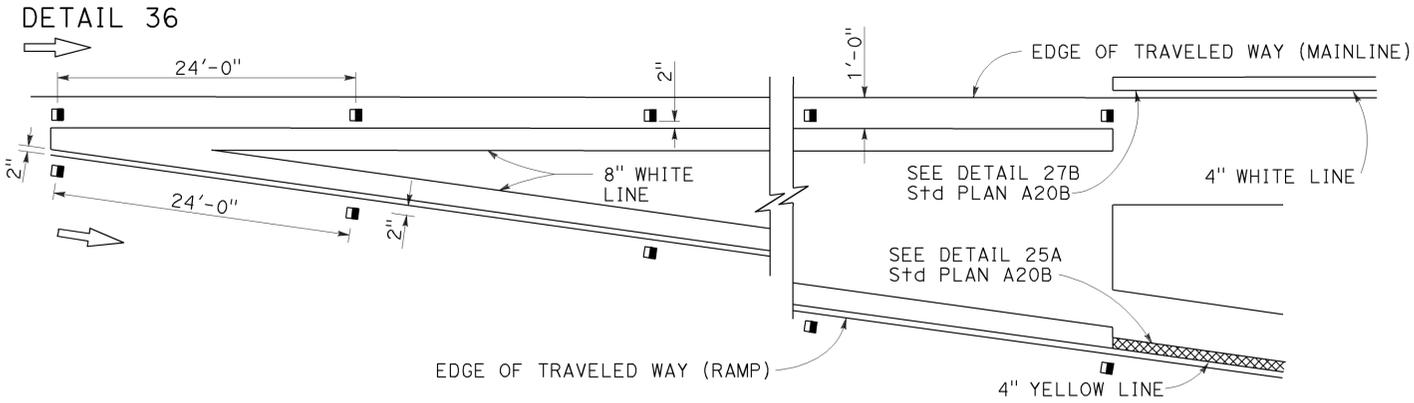
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	18	51

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

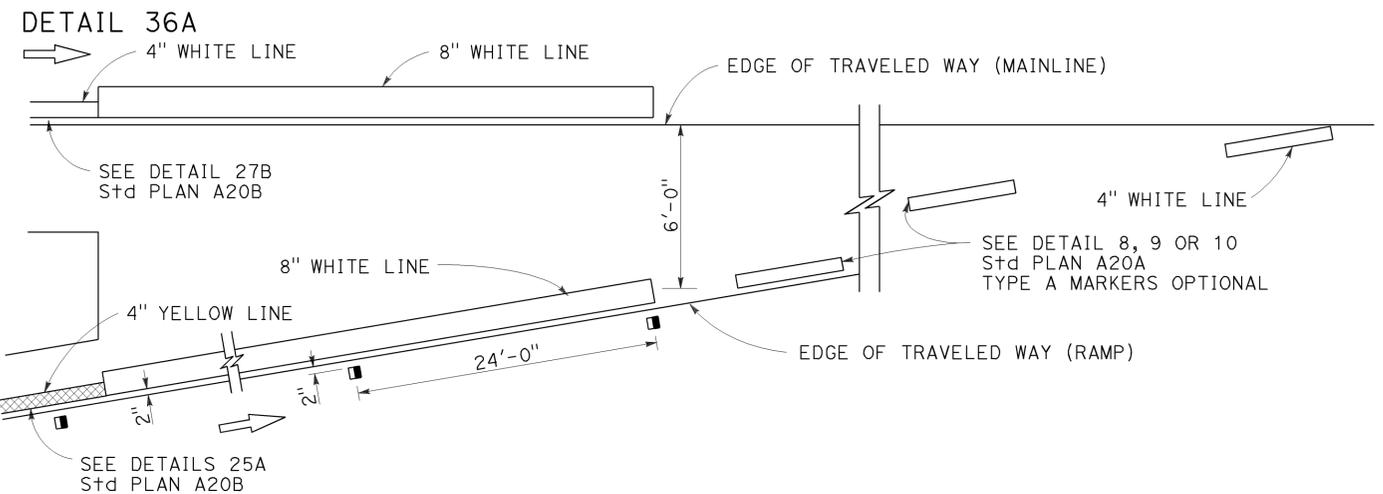
July 19, 2013  
 PLANS APPROVAL DATE

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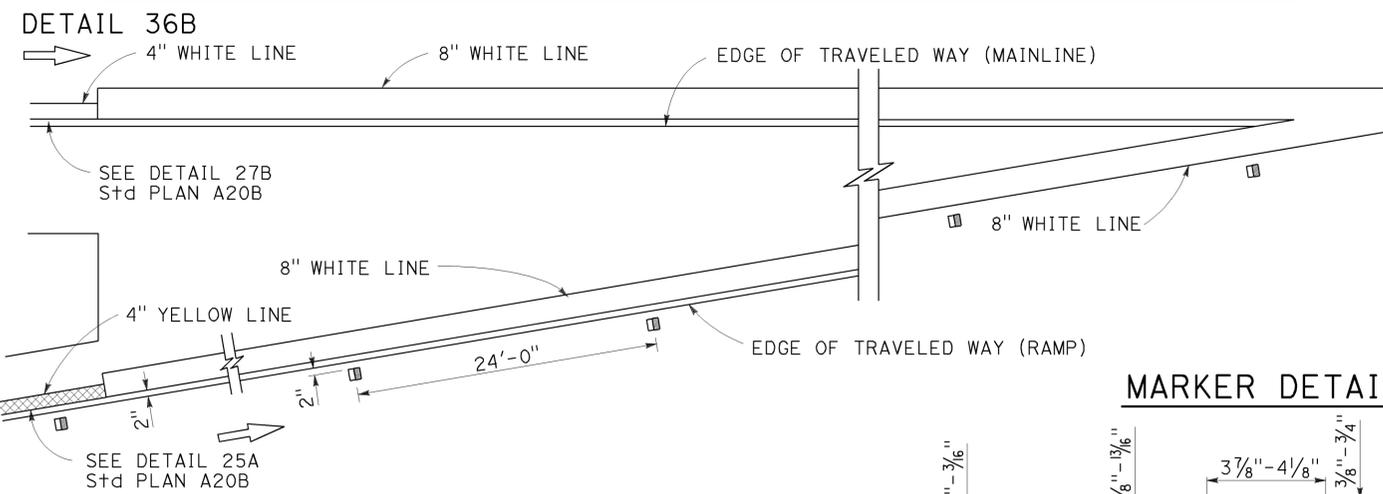
### EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT

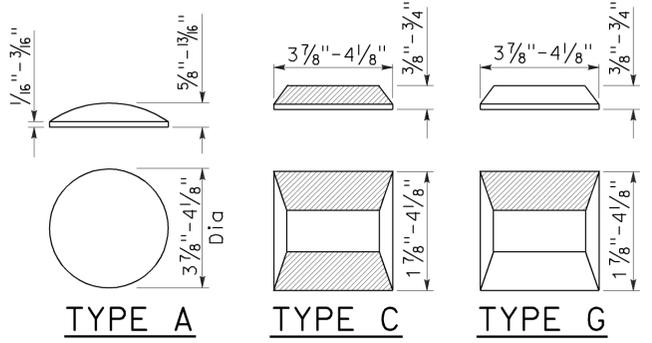


### ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

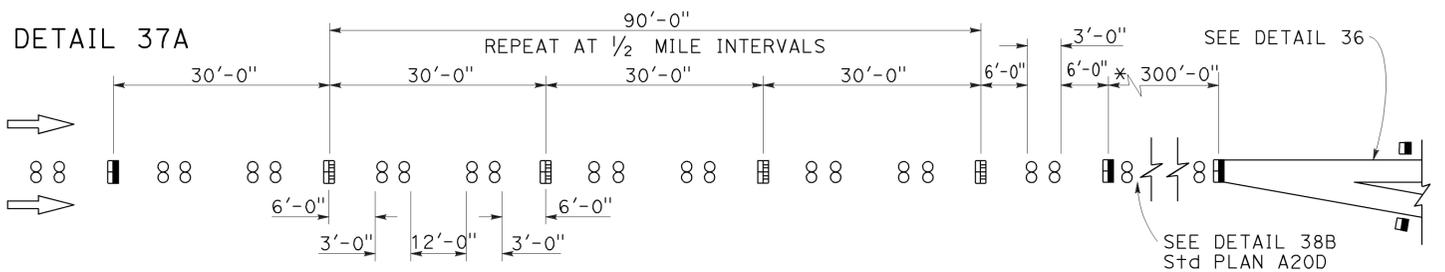
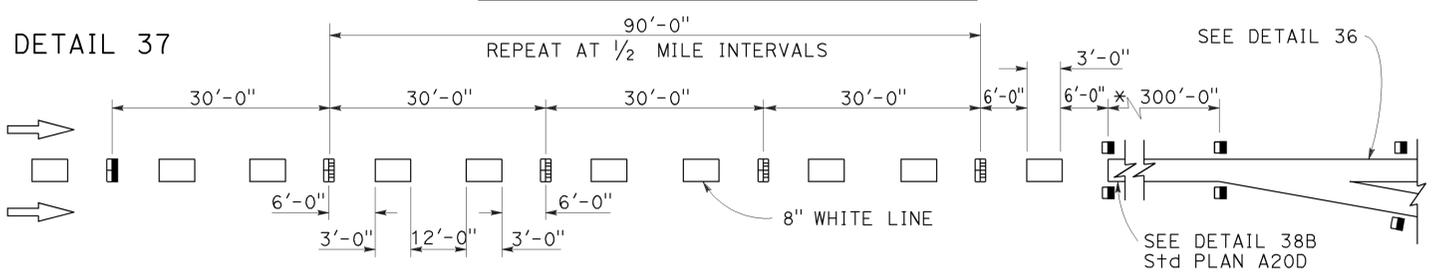


### MARKER DETAILS

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

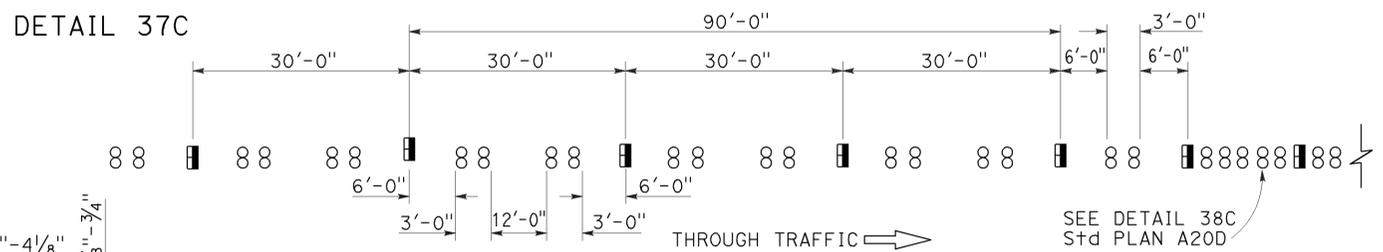
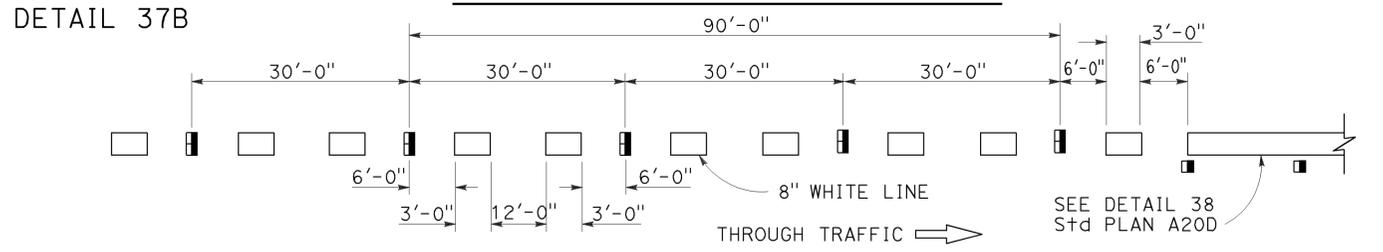


### LANE DROP AT EXIT RAMP



\* 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

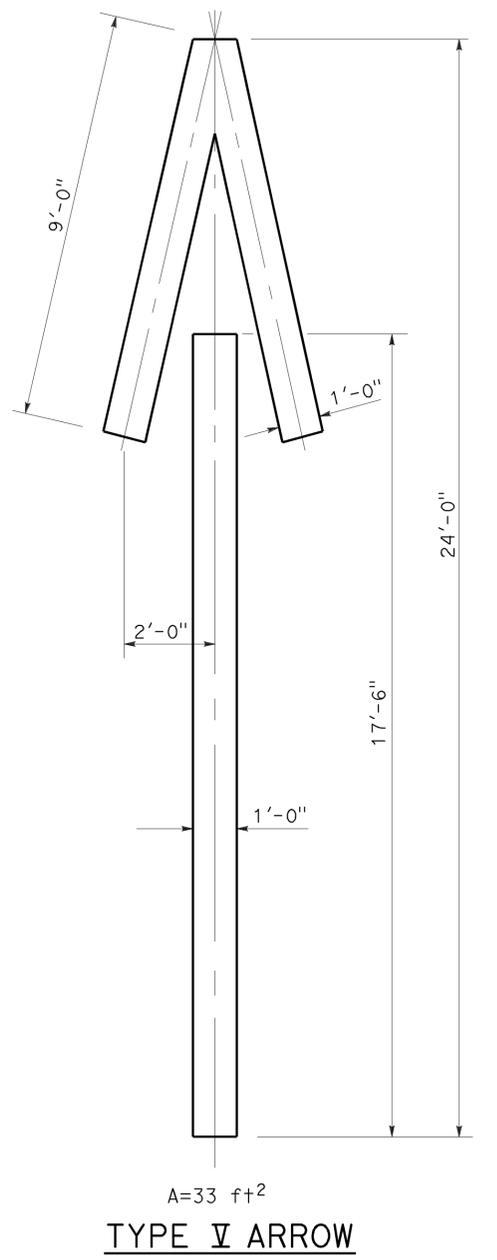
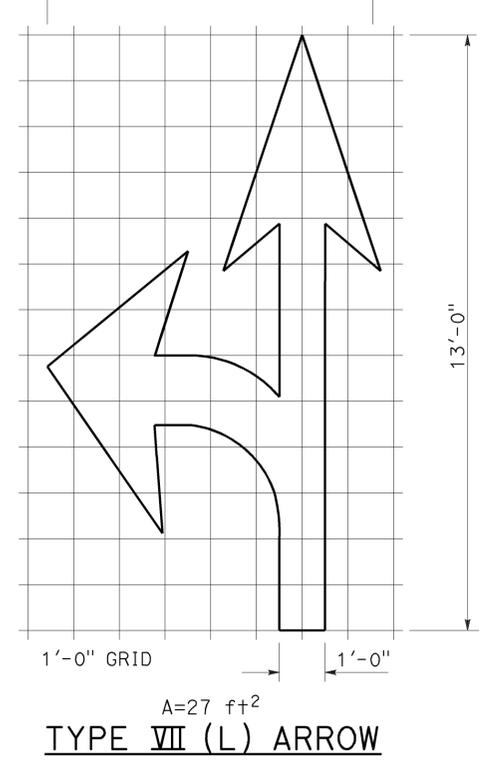
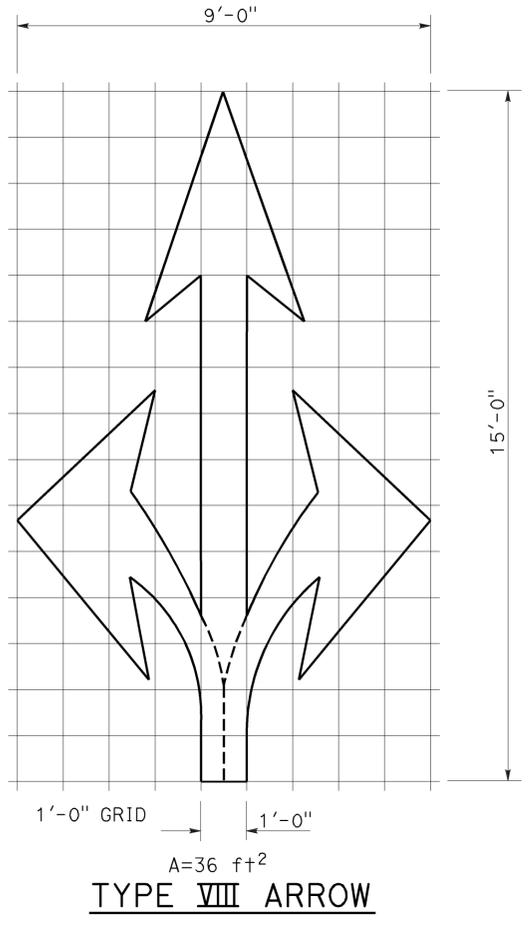
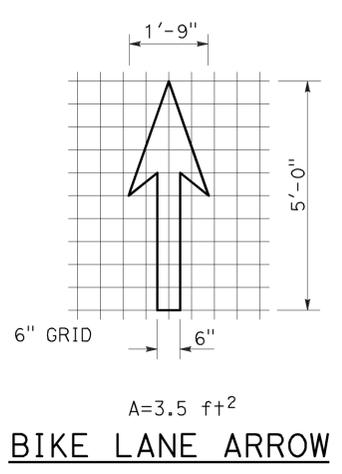
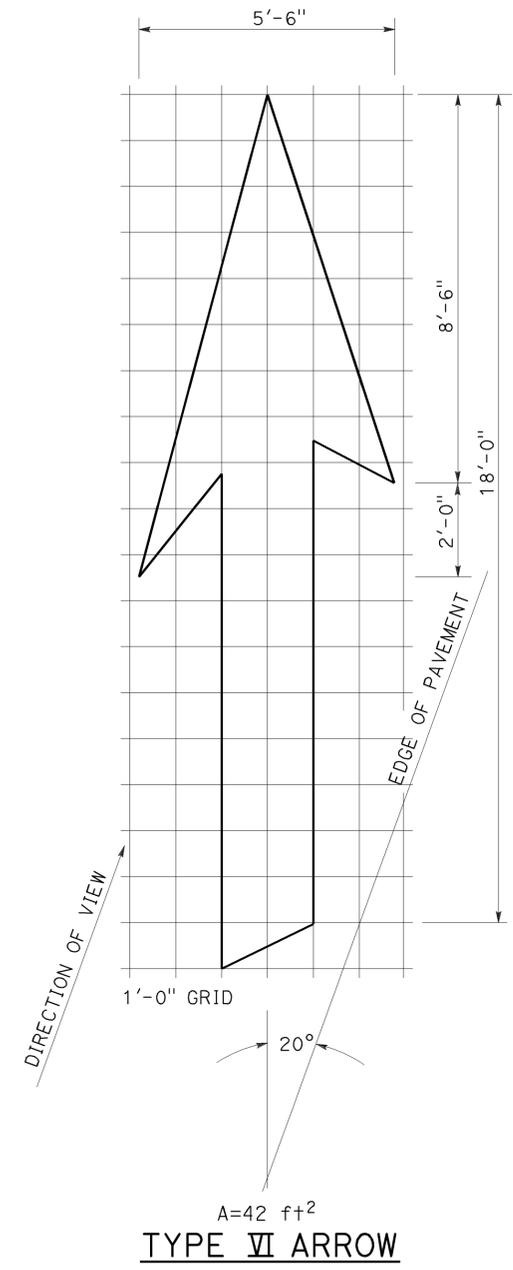
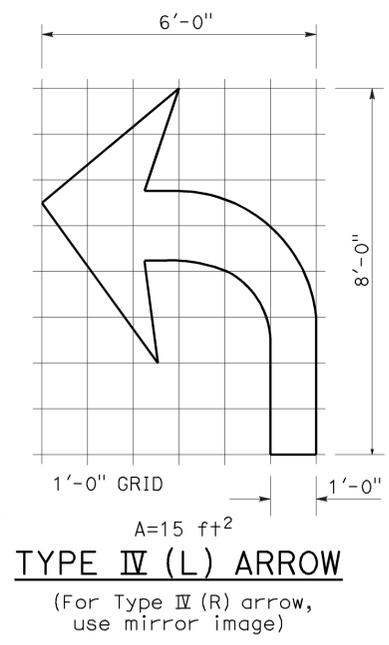
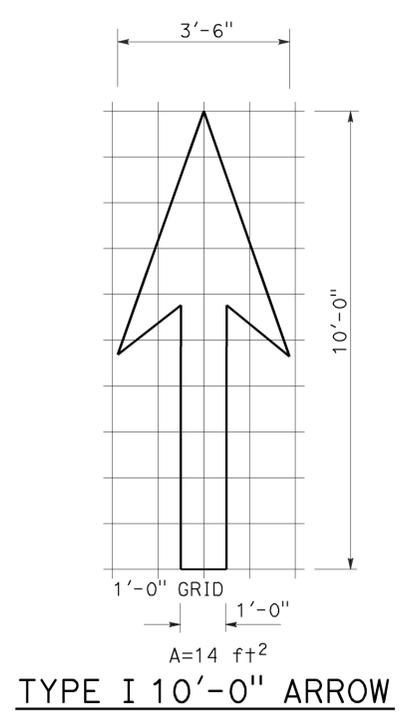
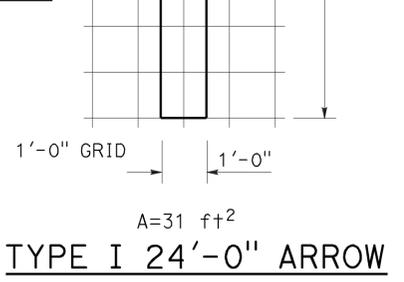
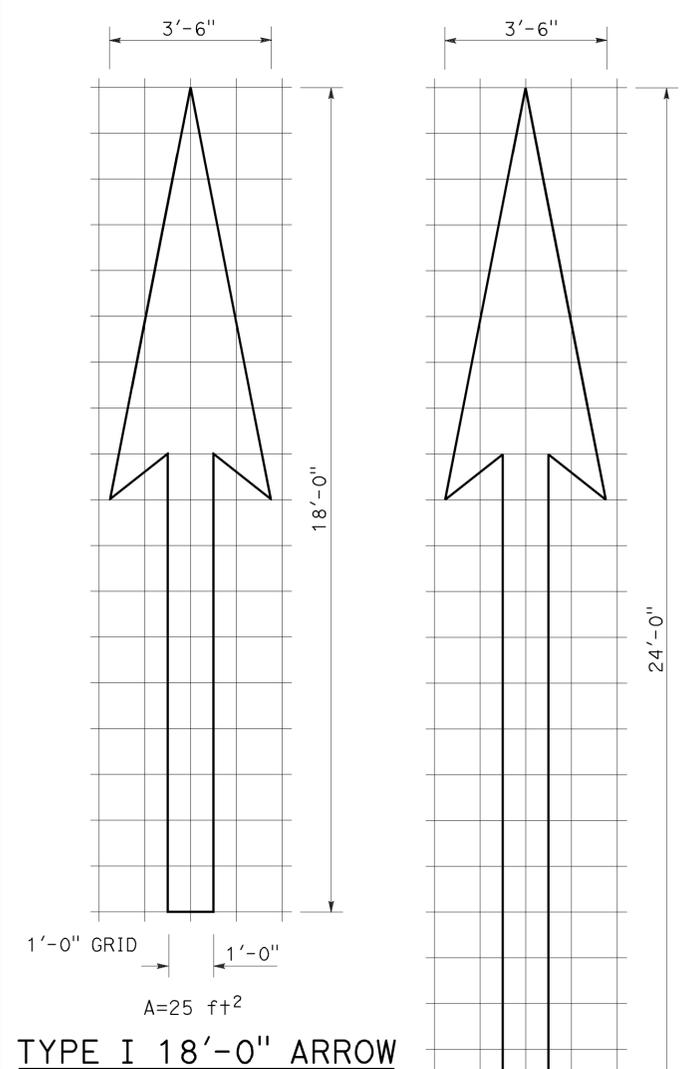
RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	19	51
REGISTERED CIVIL ENGINEER April 20, 2012 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 2-23-15



**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.

**2010 REVISED STANDARD PLAN RSP A24A**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	20	51

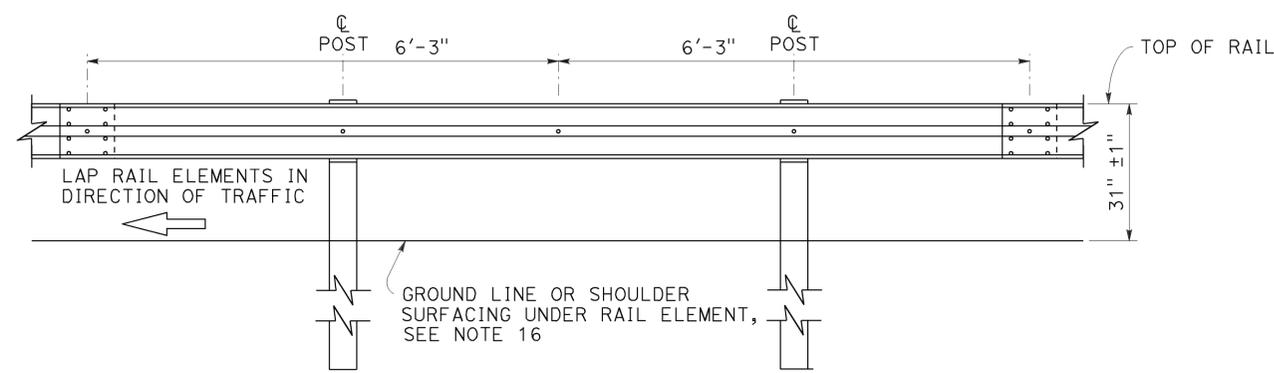
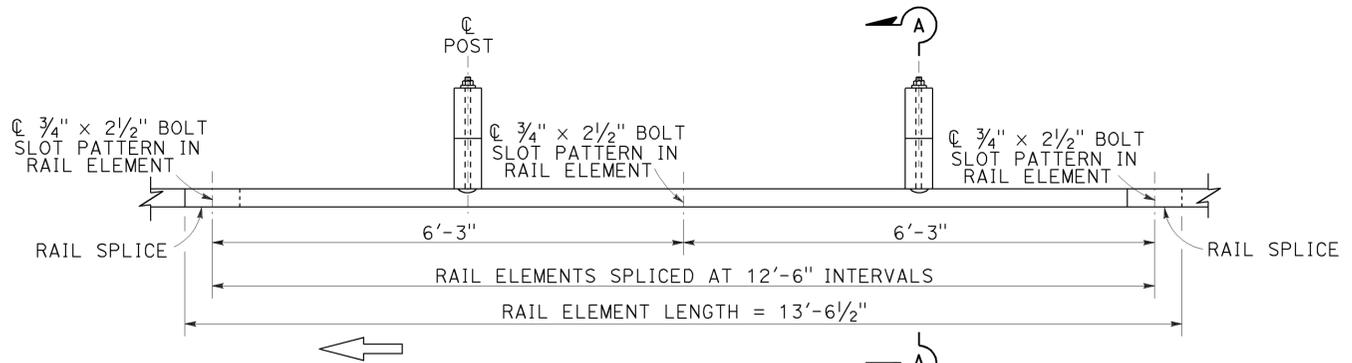
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

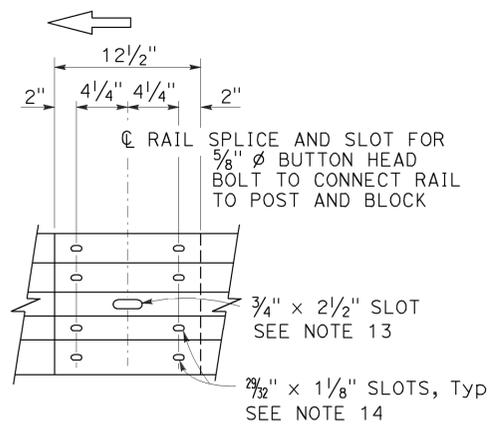
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

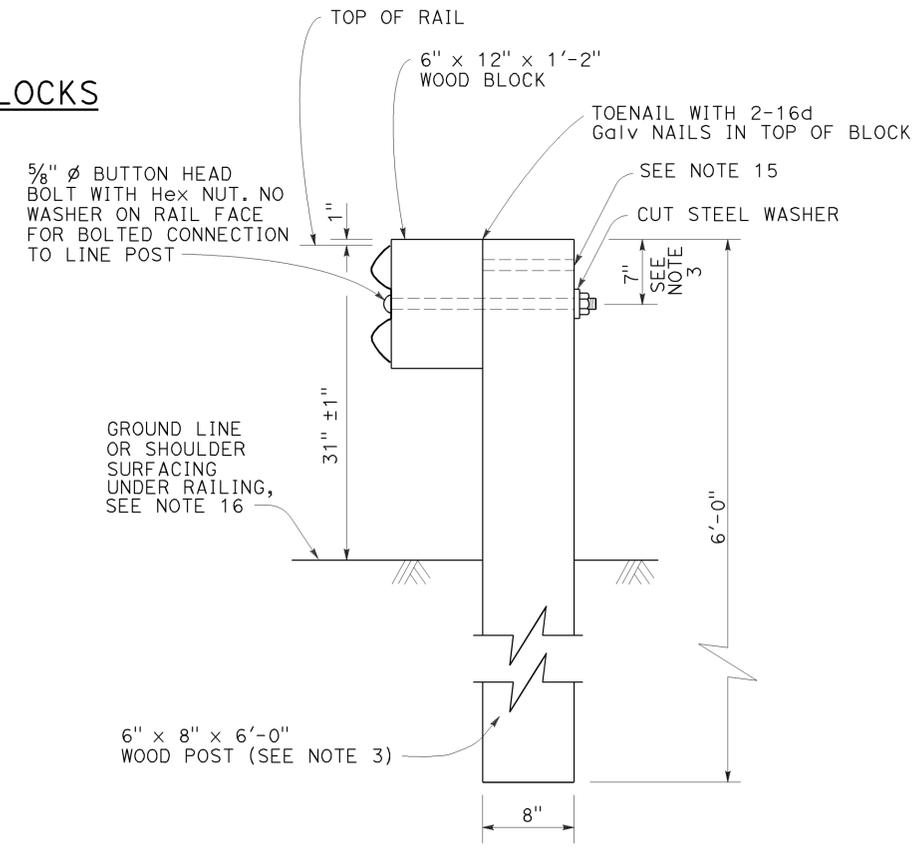
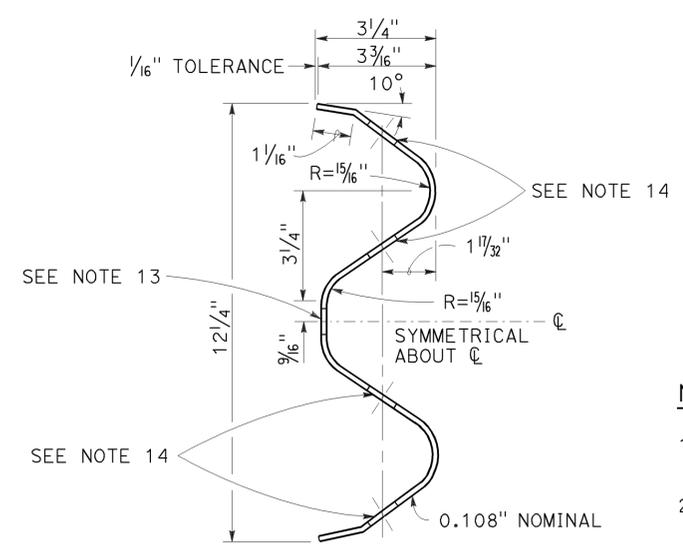
TO ACCOMPANY PLANS DATED 2-23-15



**MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS**



- Connect the over lapped end of the rail elements with  $\frac{5}{8}$ "  $\phi$   $\times$   $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the  $\frac{7}{32}$ "  $\times$   $1\frac{1}{8}$ " slots and bolted together with  $\frac{5}{8}$ "  $\phi$  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.



**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 MGS 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.

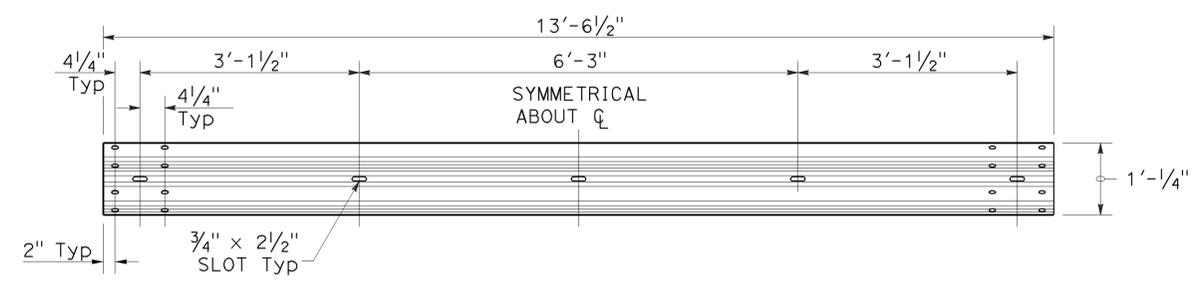
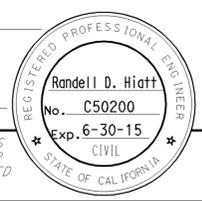
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM  
STANDARD RAILING SECTION  
(WOOD POST WITH  
WOOD BLOCK)**

NO SCALE

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

**REVISED STANDARD PLAN RSP A77L1**

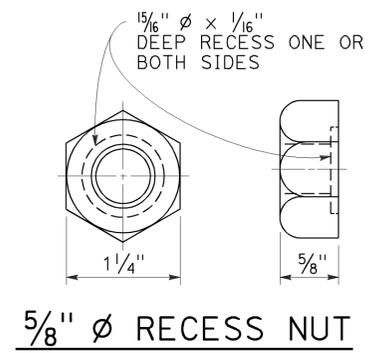
2010 REVISED STANDARD PLAN RSP A77L1



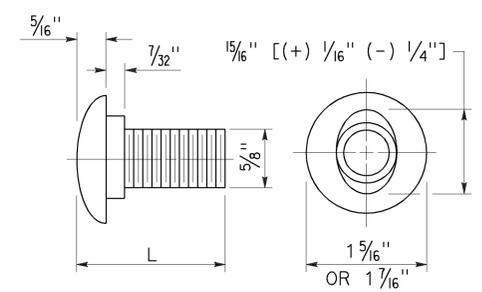
**TYPICAL RAIL ELEMENT**

**NOTE:**

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



**5/8" Ø RECESS NUT**

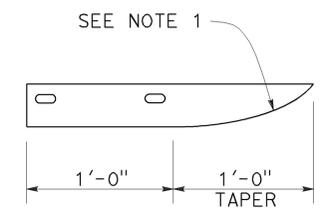


**5/8" Ø BUTTON HEAD BOLT**

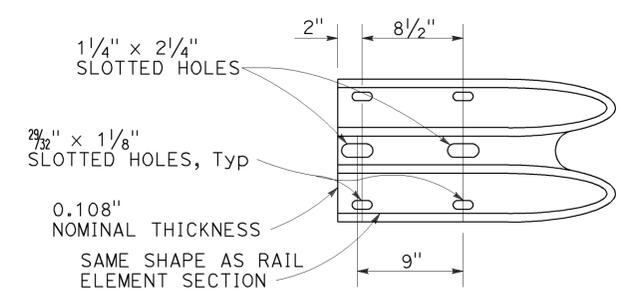
**BUTTON HEAD BOLT**

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
08	Riv, Sbd	10,15,60, 83,215	Var	22	51

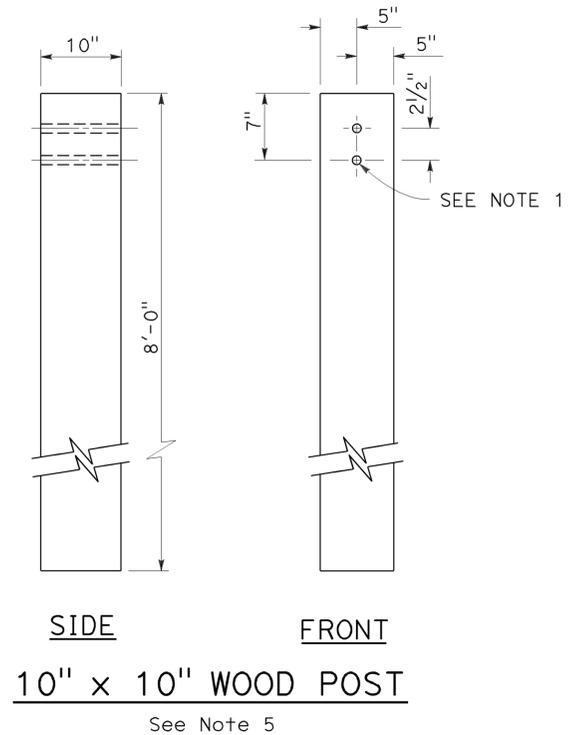
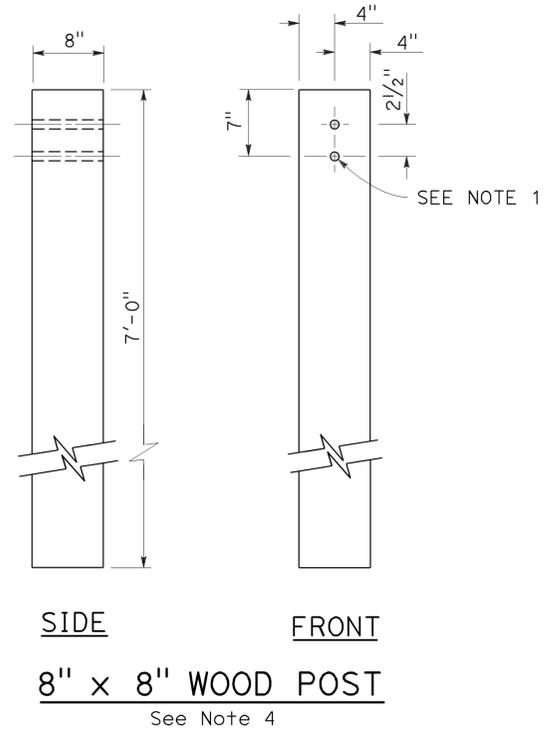
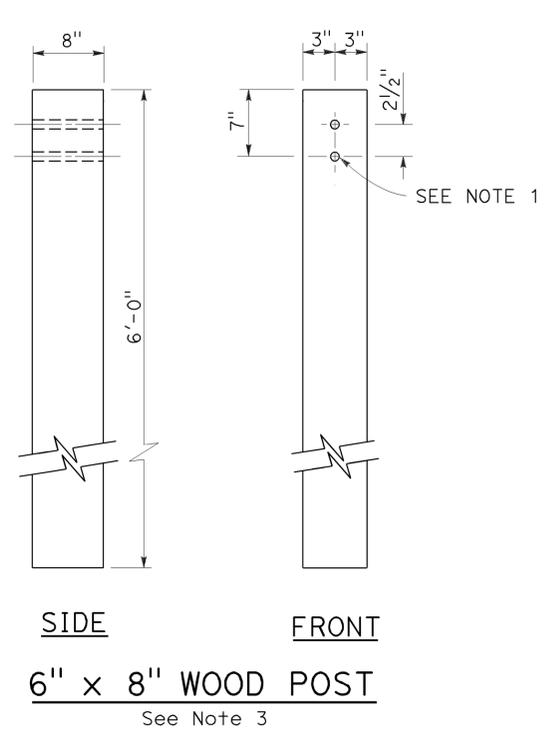
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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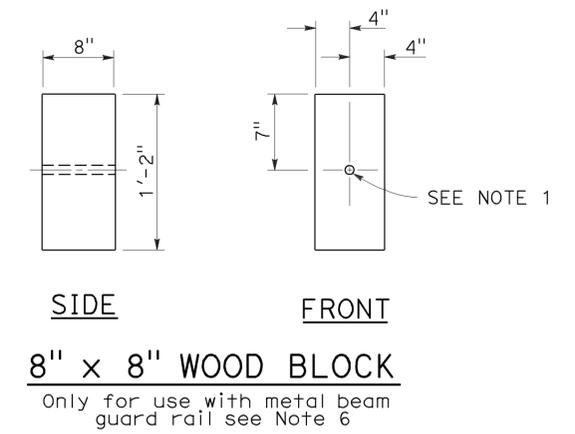
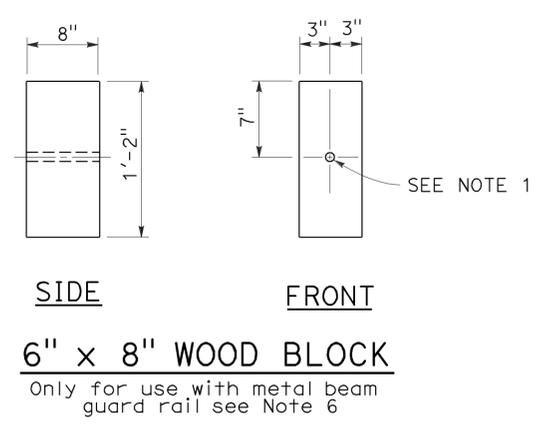
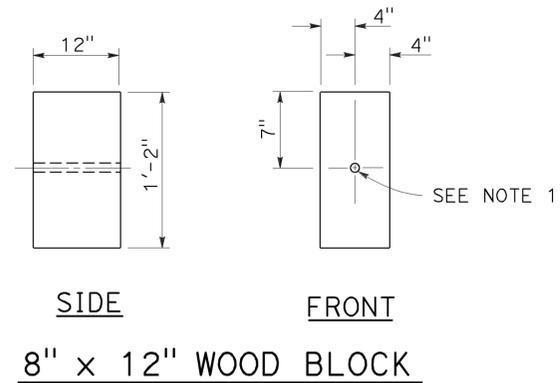
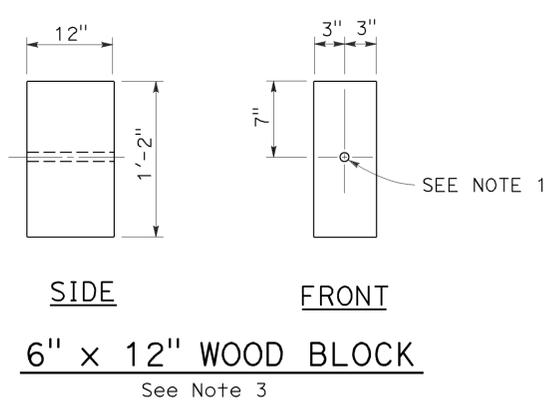
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-23-15



**NOTES:**

1. All holes in wood posts and blocks shall be 3/4" Dia ± 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
08	Riv, SBd	10,15,60, 83,215	Var	23	51

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

November 15, 2013  
PLANS APPROVAL DATE

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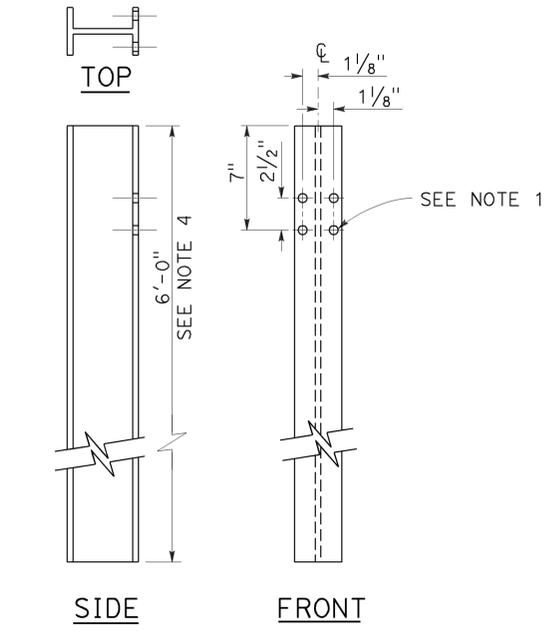
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-23-15

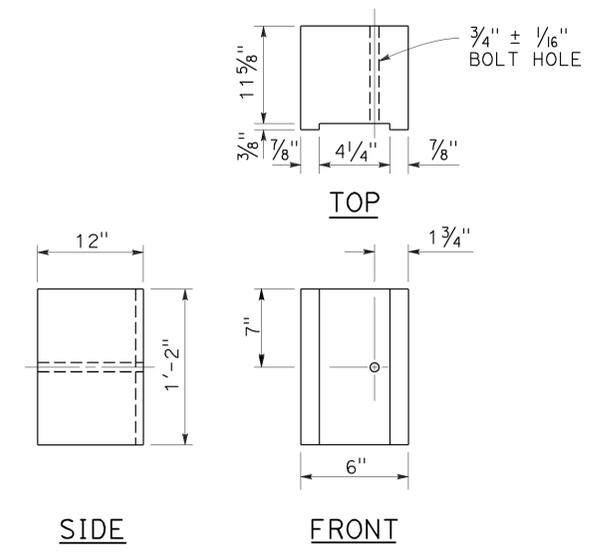
**NOTES:**

1. All holes in steel post shall be  $\frac{13}{16}$ " Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

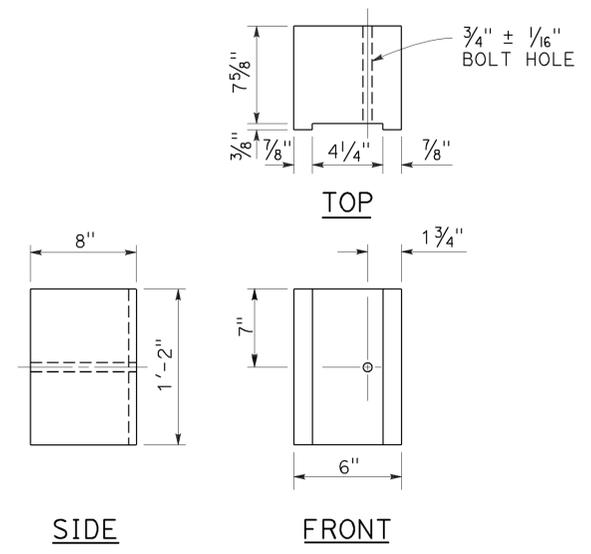
2010 REVISED STANDARD PLAN RSP A77N2



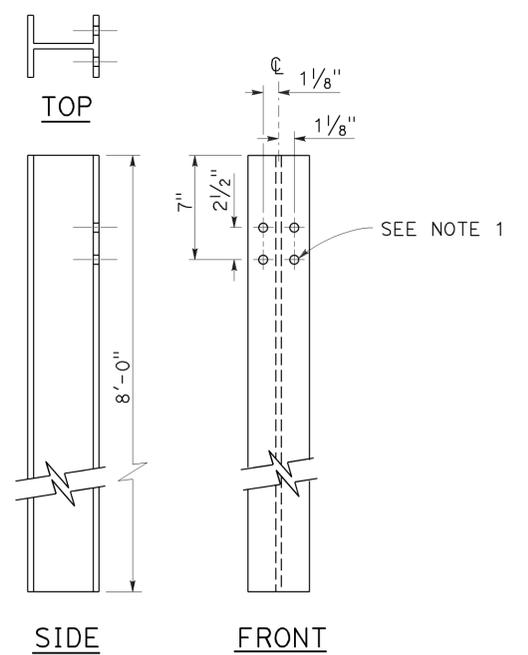
**W6 x 9 OR W6 x 8.5  
STEEL POST**  
See Note 4



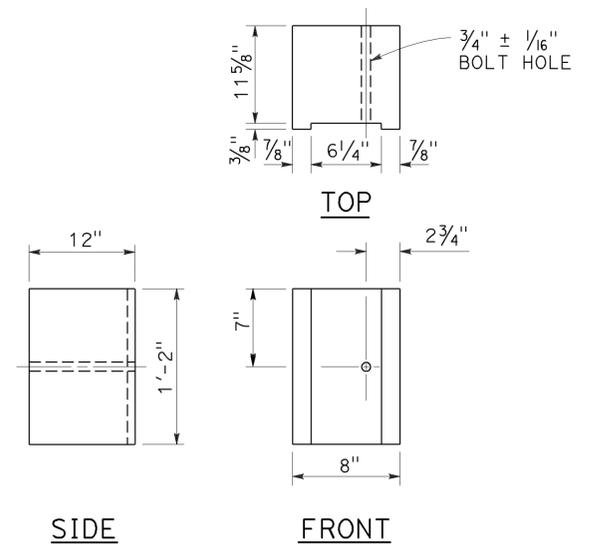
**6" x 12"  
NOTCHED WOOD BLOCK**  
See Notes 2 and 3



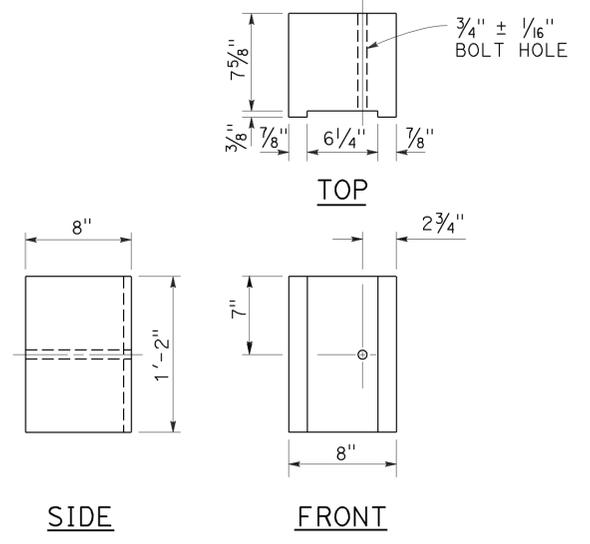
**6" x 8"  
NOTCHED WOOD BLOCK**  
Only for use with metal beam guard railing. See Note 5



**W6 x 15  
STEEL POST**  
See Note 6



**8" x 12"  
NOTCHED WOOD BLOCK**  
See Notes 2 and 3



**8" x 8"  
NOTCHED WOOD BLOCK**  
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2  
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77N2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	24	51

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

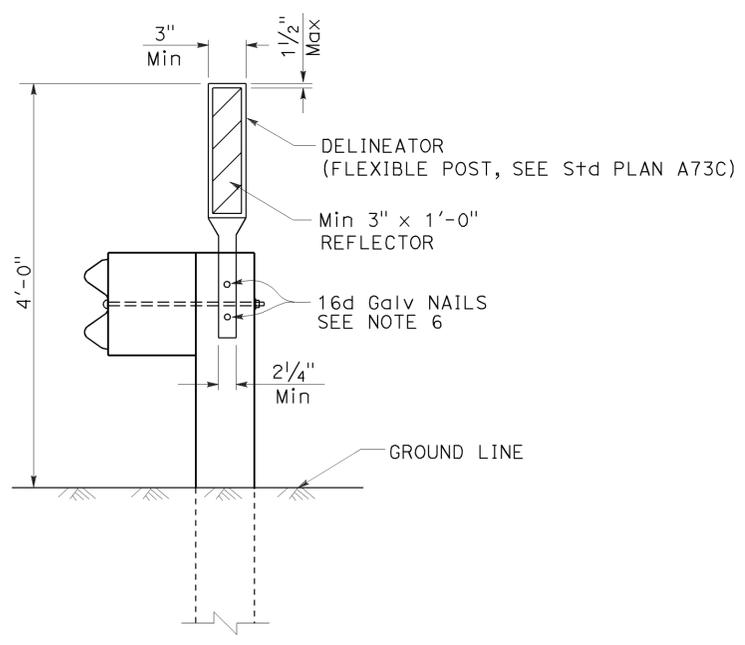
July 19, 2013  
PLANS APPROVAL DATE

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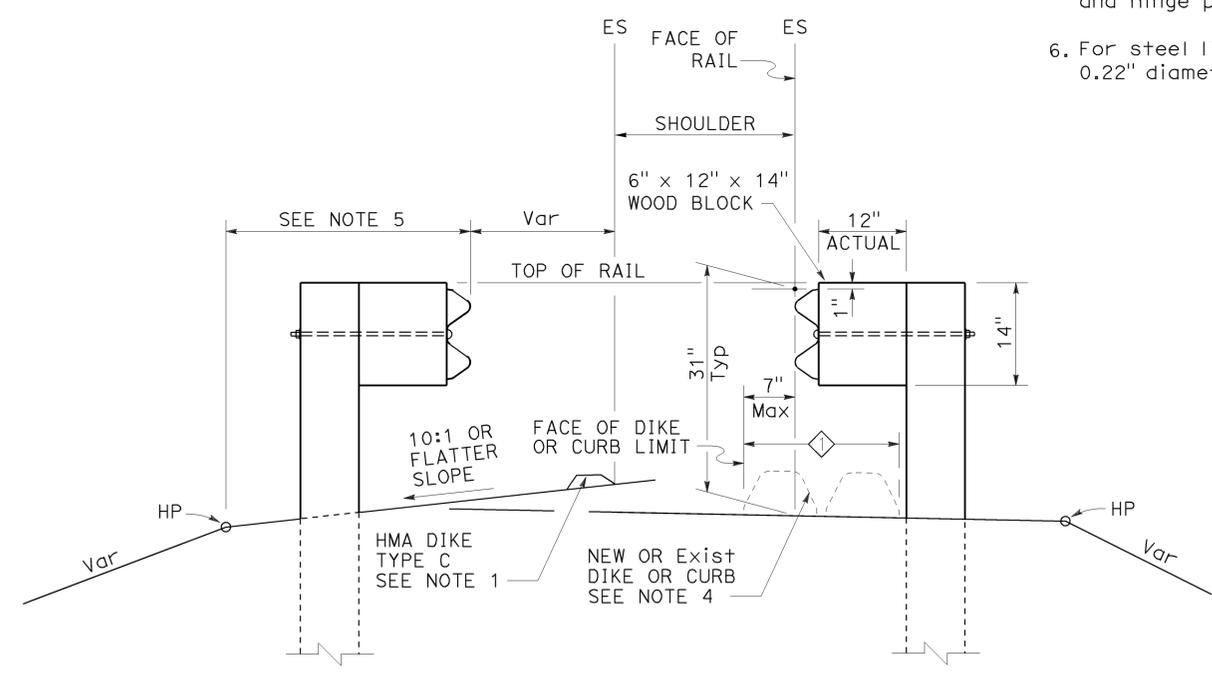
TO ACCOMPANY PLANS DATED 2-23-15

**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 5/32" 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
08	Riv, Sbd	10,15,60, 83,215	Var	25	51

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

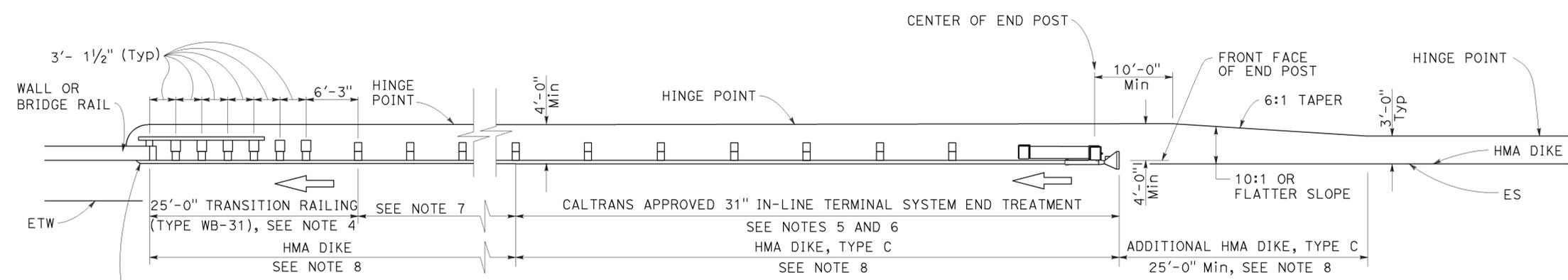
July 19, 2013  
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 2-23-15

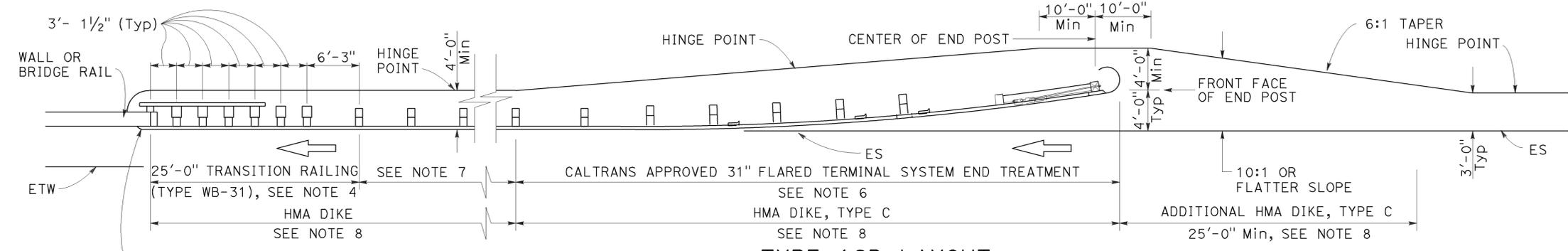
2010 REVISED STANDARD PLAN RSP A77Q1



**TYPE 12A LAYOUT**

(MGS installation at structure approach with 31" in-line end treatment at traffic approach end of railing)  
See Notes 9

SEE NOTES 12 AND 13.



**TYPE 12B LAYOUT**

(MGS installation at structure approach with 31" Flared end treatment at traffic approach end of railing)  
See Notes 9

SEE NOTES 11 AND 12

**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.
- MGS 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 plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Types 12A and 12B Layouts, see Revised Standard Plan RSP A77U4.
- 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
- The type 31" of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment. A 12.5 degree angle of departure can be drawn on the Project Plans from the edge of traveled way through the outer most point of the fixed object to determine the additional length of railing needed.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
  - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
  - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77Q3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77U1 and RSP A77U2 and Connection Detail FF on Revised Standard Plans RSP A77V1 and RSP A77V2.
- For additional details of a typical connection to walls or abutments, see Revised Standard Plan RSP A77U3.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP A77Q1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77Q1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10,15,60, 83,215	Var	26	51

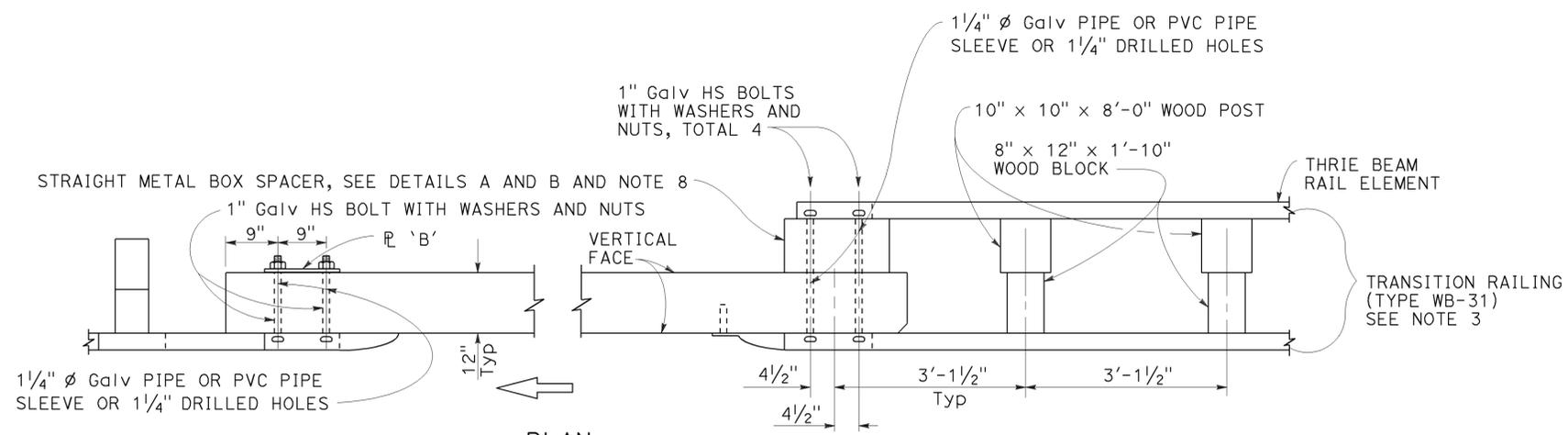
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

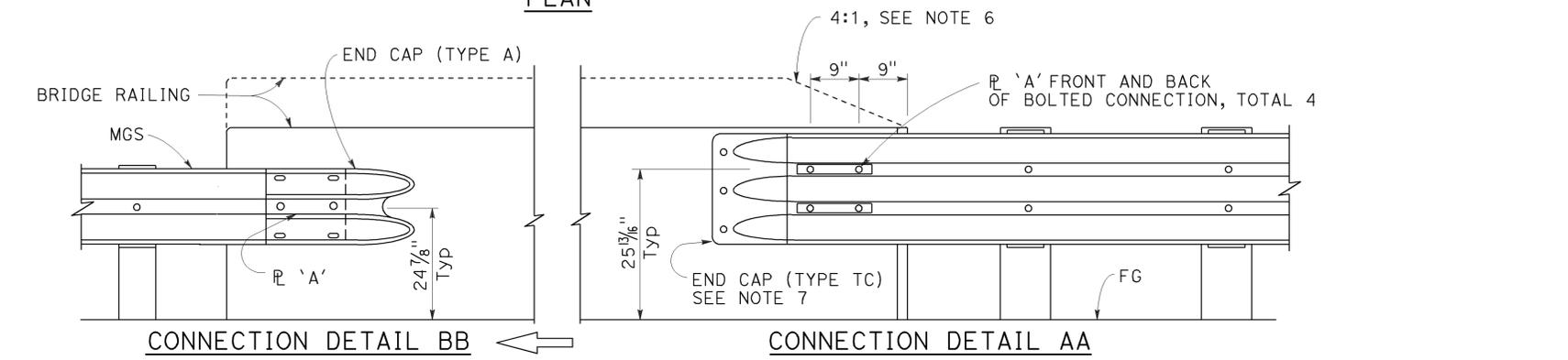
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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-23-15



PLAN

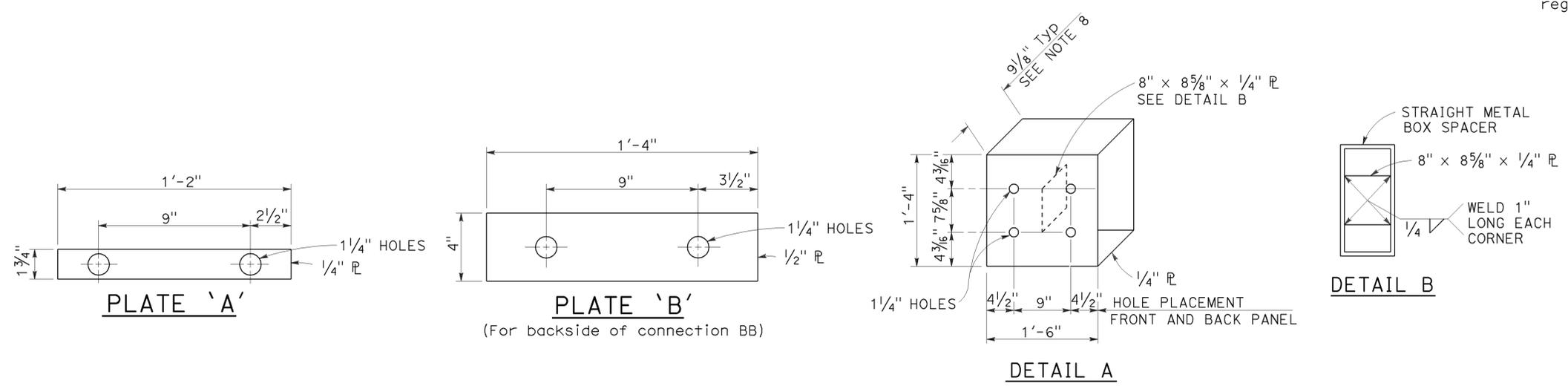


ELEVATION

**MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**

**NOTES:**

- See Revised Standard Plan RSP A77U2 for additional connection details to bridges without sidewalks.
- Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
- 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 bridge railing.
- For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
- For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
- Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
- For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
- See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



**STRAIGHT METAL BOX SPACER**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS**  
**DETAILS No. 1**

NO SCALE

RSP A77U1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A77U1**

2010 REVISED STANDARD PLAN RSP A77U1

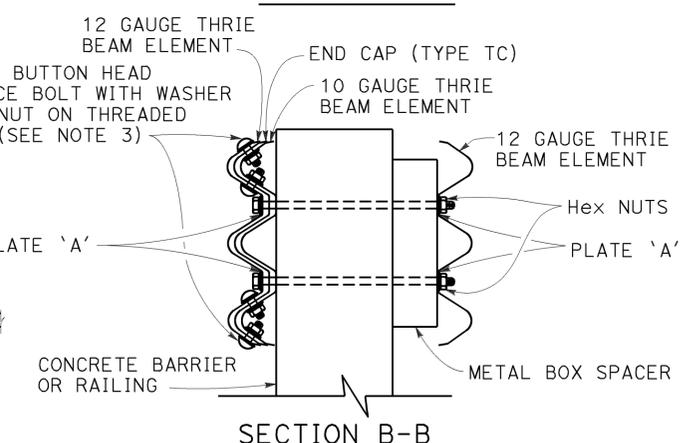
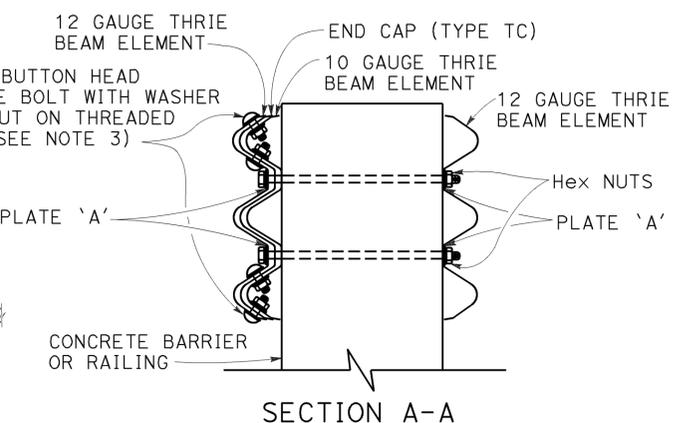
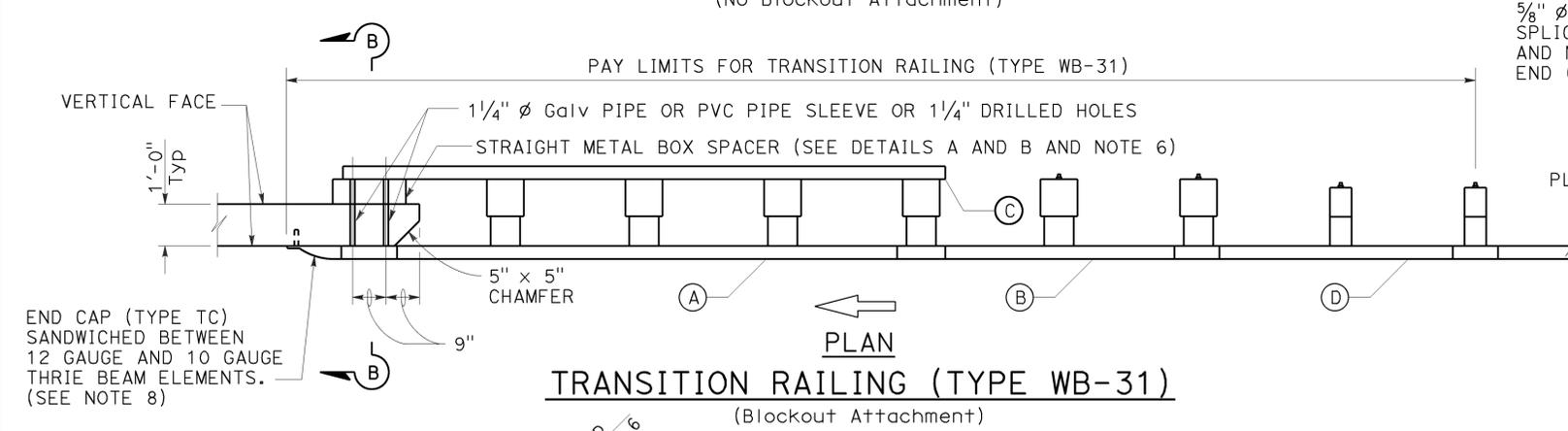
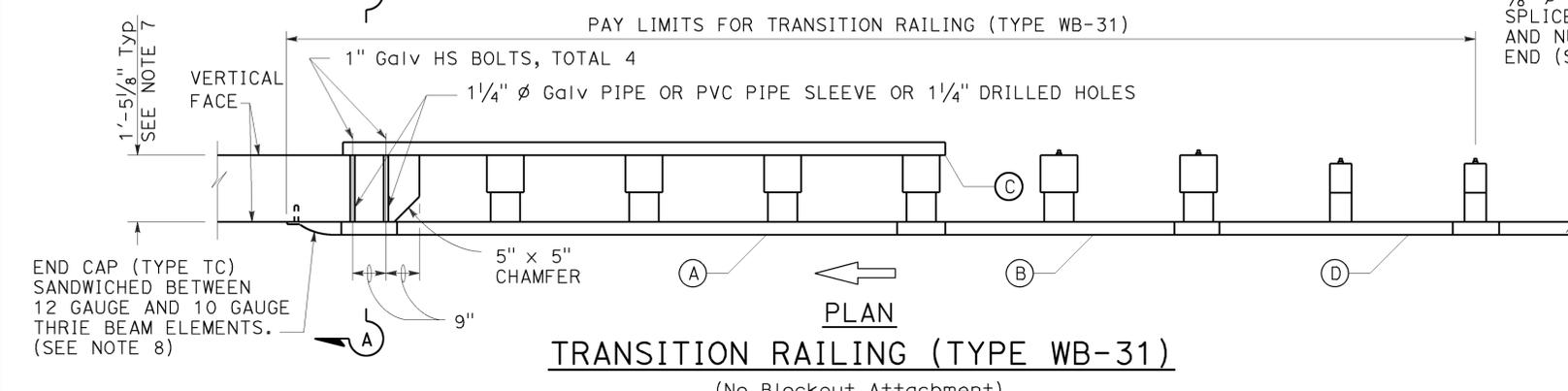
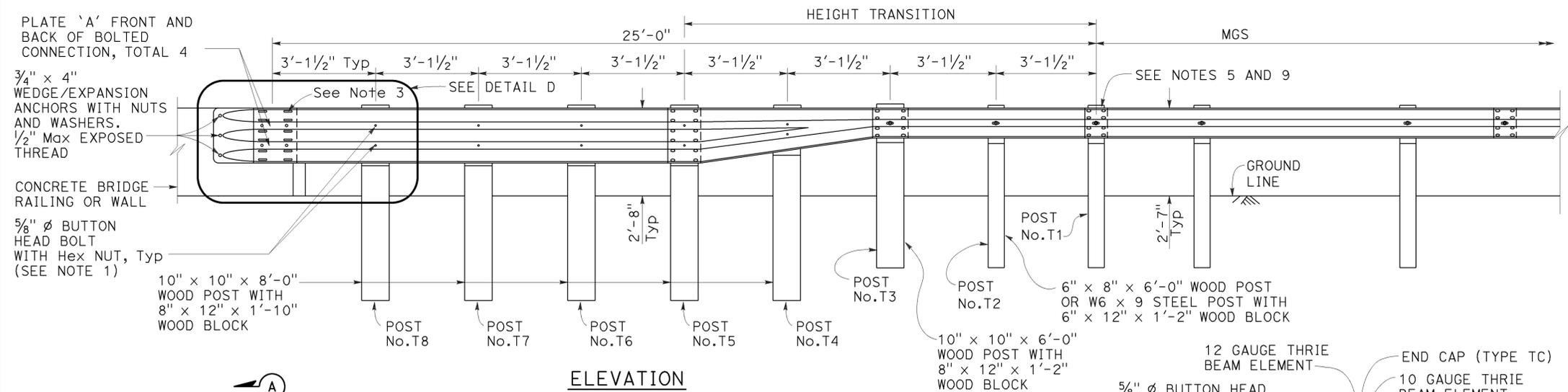
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBD	10,15,60, 83,215	Var	27	51

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

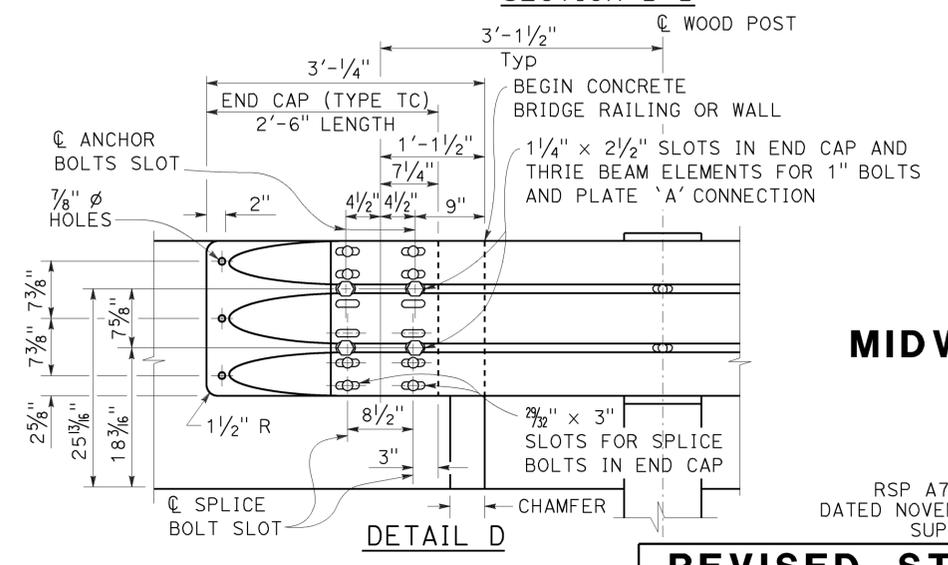
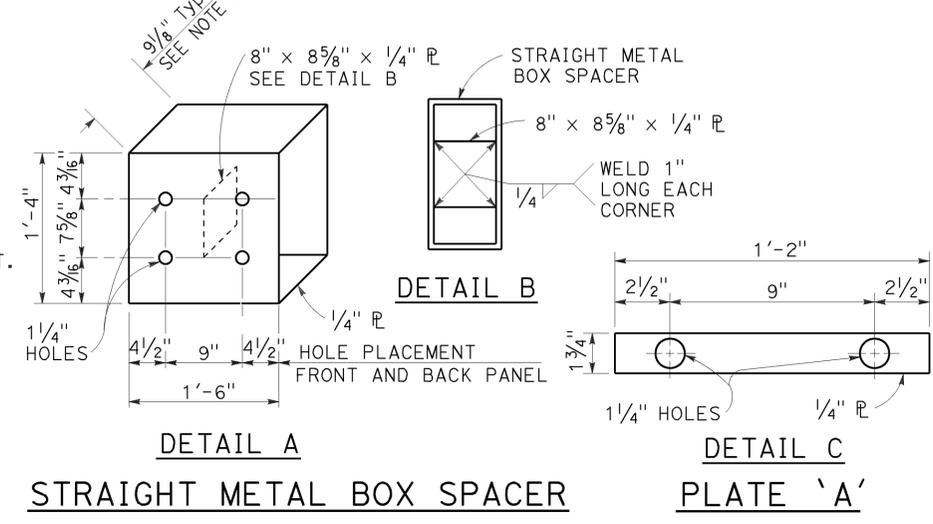
January 23, 2015  
PLANS APPROVAL DATE

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



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
  - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
  - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
  - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3/2" LENGTH)
- 10 GAUGE = 0.138" THICK  
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED 2-23-15
1. Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4"  $\phi$ . Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
  4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
  5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
  6. The depth of the metal box spacer varies from the 9/8" to 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
  9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM  
TRANSITION RAILING  
(TYPE WB-31)**

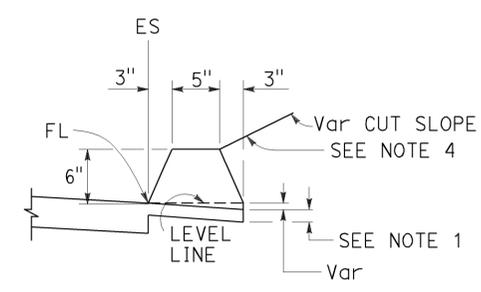
NO SCALE

RSP A77U4 DATED JANUARY 23, 2015 SUPERSEDES RSP A77U4 DATED NOVEMBER 15, 2013 AND RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

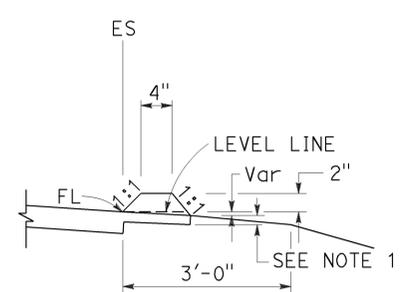
**REVISED STANDARD PLAN RSP A77U4**

2010 REVISED STANDARD PLAN RSP A77U4

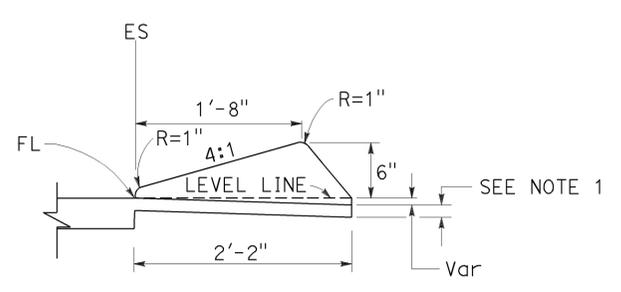
TO ACCOMPANY PLANS DATED 2-23-15



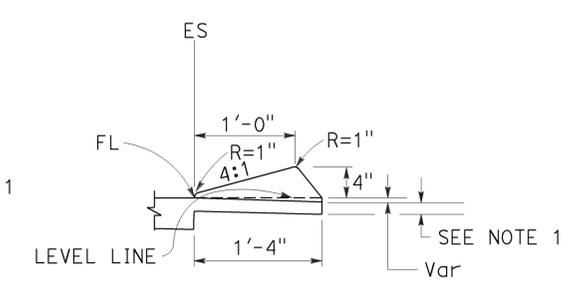
**TYPE A**  
See Note 3



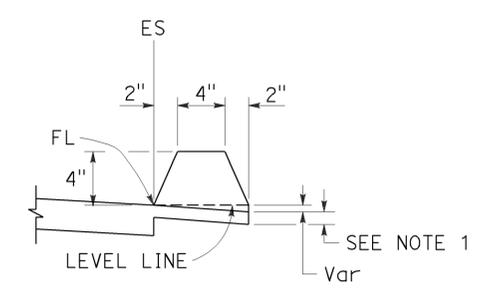
**TYPE C**



**TYPE D**

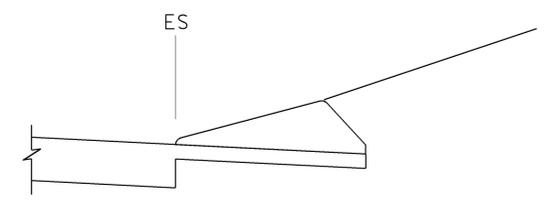


**TYPE E**

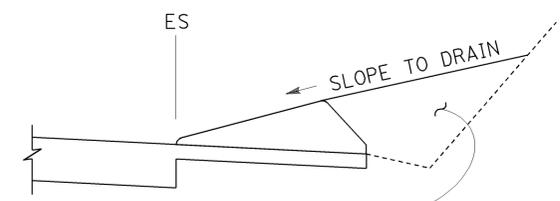


**TYPE F**  
See Note 5

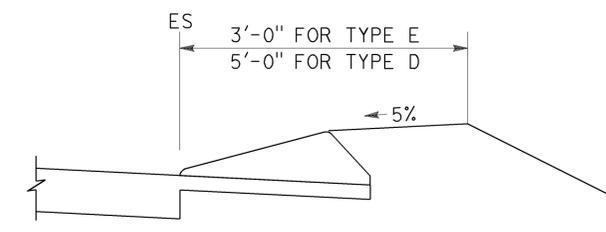
**DIKES**



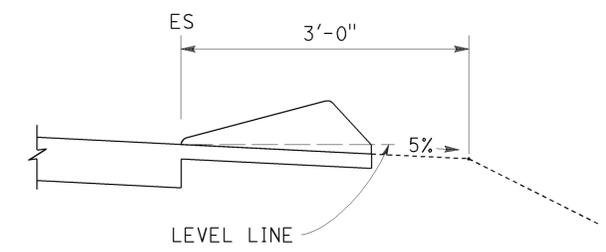
**CASE C-1**  
Cut Slope



**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 F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

**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 JULY 19, 2013 SUPERSEDES 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
08	Riv, SBd	10,15,60, 83,215	Var	29	51

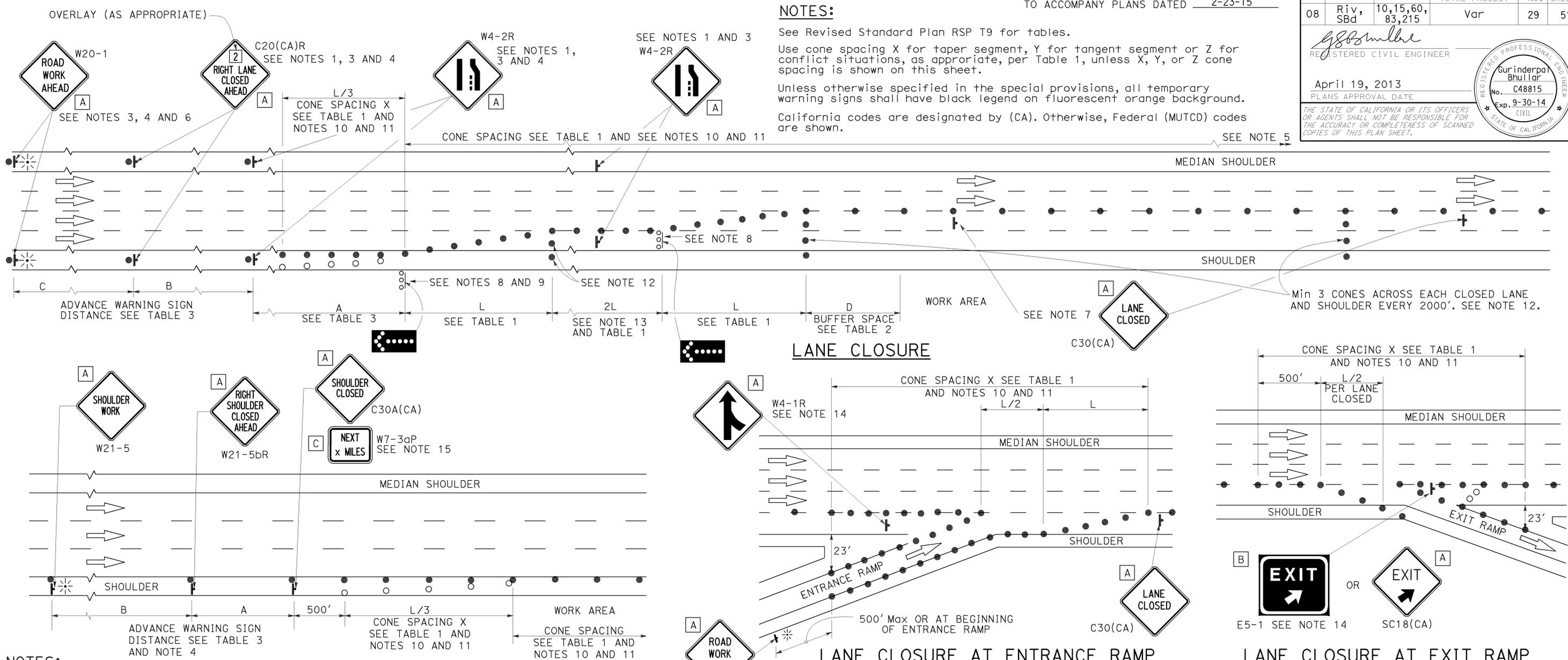
REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

TO ACCOMPANY PLANS DATED 2-23-15

**NOTES:**

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



**NOTES:**

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

**SHOULDER CLOSURE**

- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) "NEXT x MILES" 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 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.

**LANE CLOSURE AT ENTRANCE RAMP**

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

**LANE CLOSURE AT EXIT RAMP**

- 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**

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	30	51

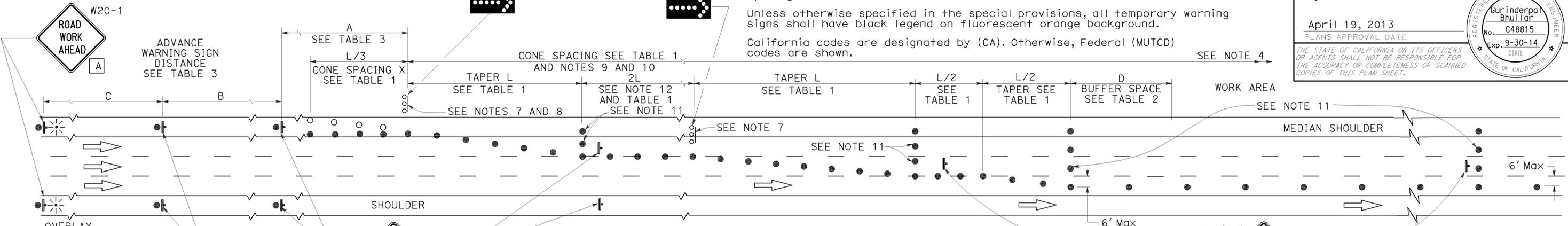
REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

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

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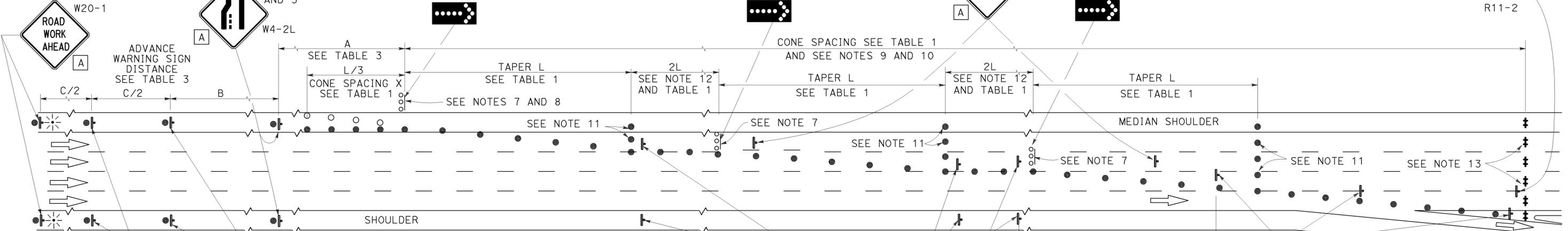
**NOTES:** See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary 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

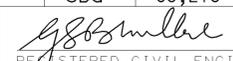
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURES ON  
 FREEWAYS AND EXPRESSWAYS**  
 NO SCALE

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
08	Riv, SBd	10,15,60, 83,215	Var	31	51

  
 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

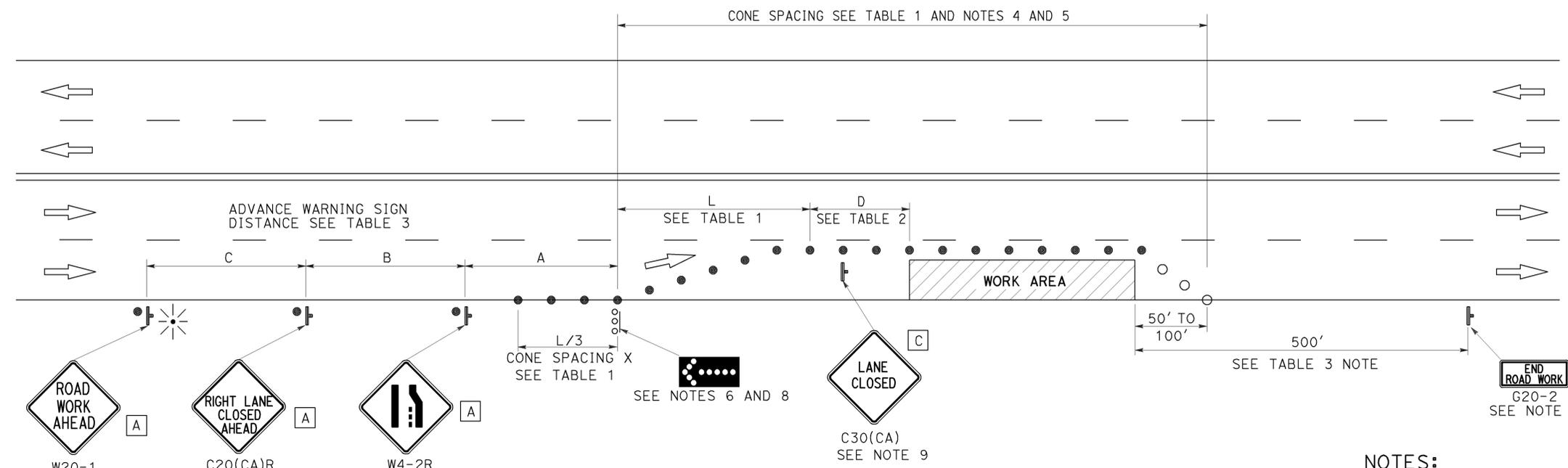
No. C48815

Exp. 9-30-14

CIVIL

STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-23-15



**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:**

1. 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.
2. 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.
3. 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.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. 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.
8. 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.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. 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

**NOTES:**

See Revised Standard Plan RSP T9 for tables.

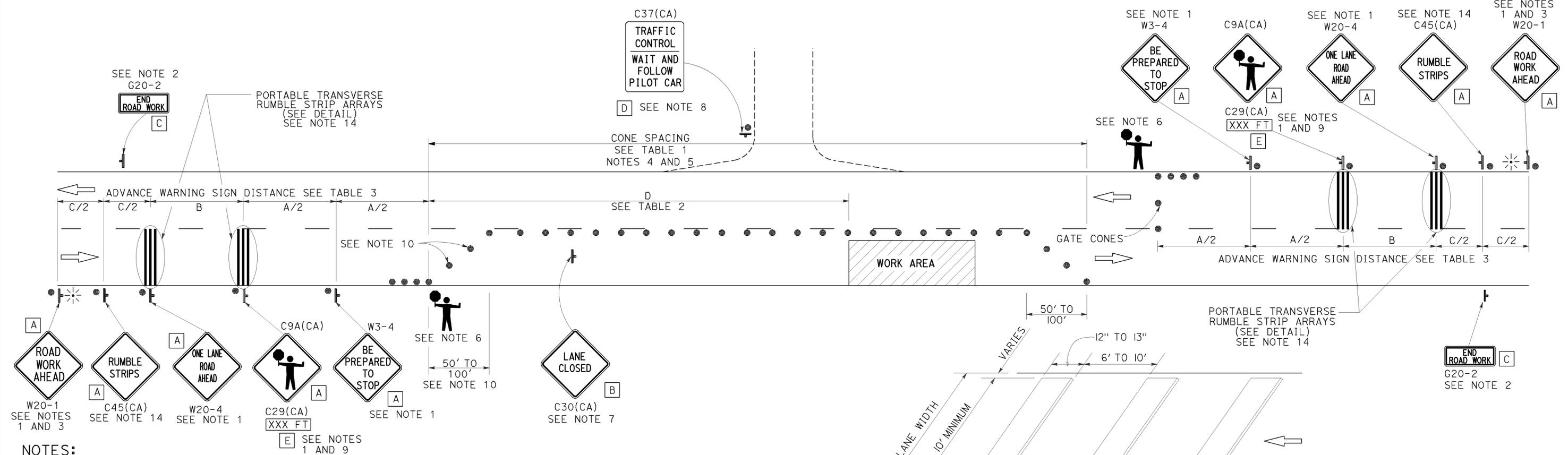
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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.

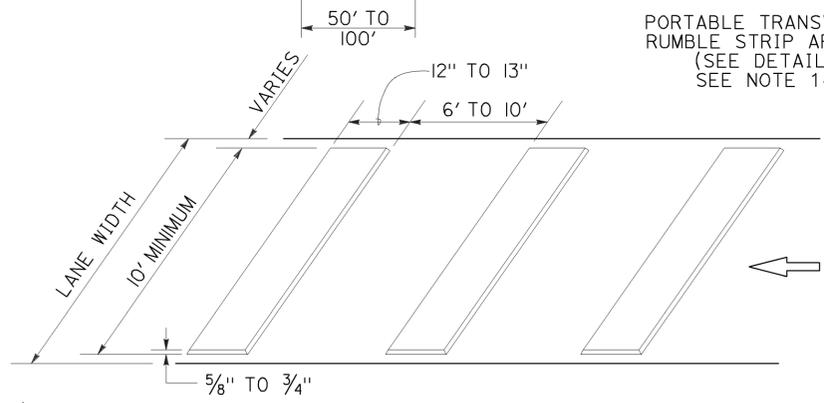
**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**

TO ACCOMPANY PLANS DATED 2-23-15



- NOTES:**
- Each advance warning sign in each direction of travel 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 control 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 W20-4 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.
  - Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.

- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
  - Work duration occupies a location for four hours or less
  - Posted speed limit is below 45 MPH
  - Work is of emergency nature
  - Work zone is in snow or icy weather conditions



**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

**LEGEND**

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ PORTABLE FLASHING BEACON
- 🚧 FLAGGER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP T13 DATED OCTOBER 17, 2014 SUPERSEDES RSP T13 DATED JULY 18, 2014  
AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED  
MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP T13

# 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
08	Riv, SBD	10,15,60, 83,215	Var	33	51

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

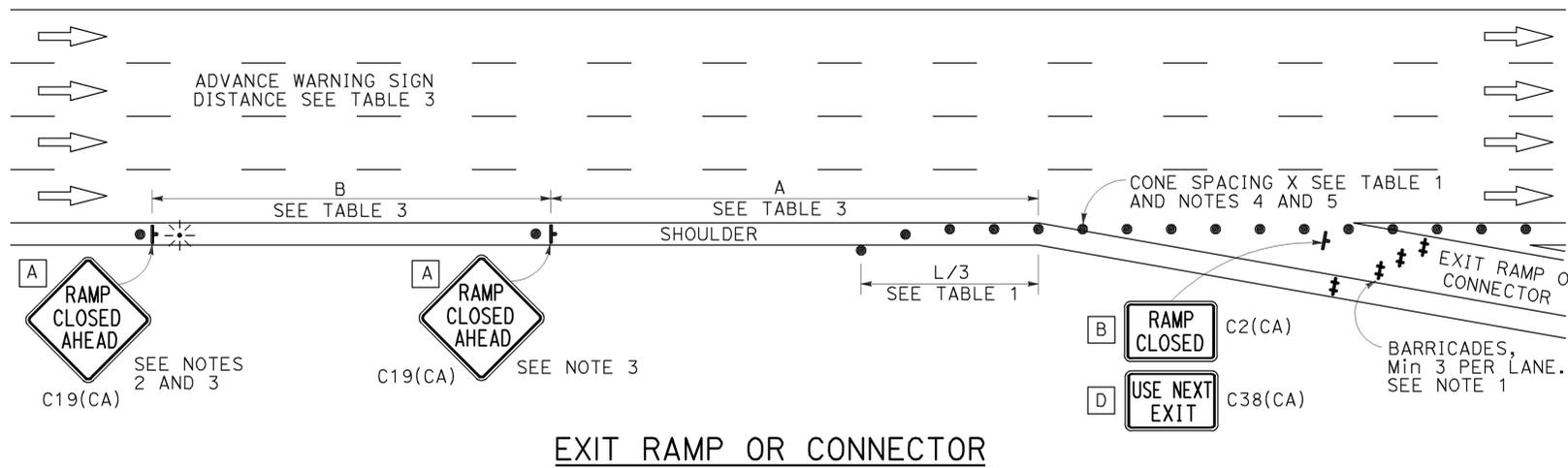
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

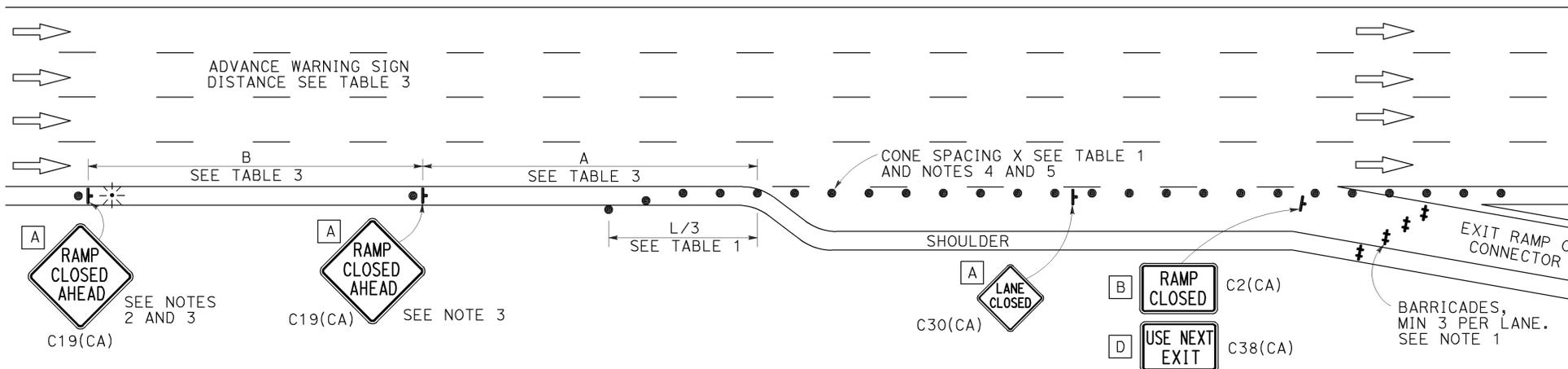
TO ACCOMPANY PLANS DATED 2-23-15

## NOTES:

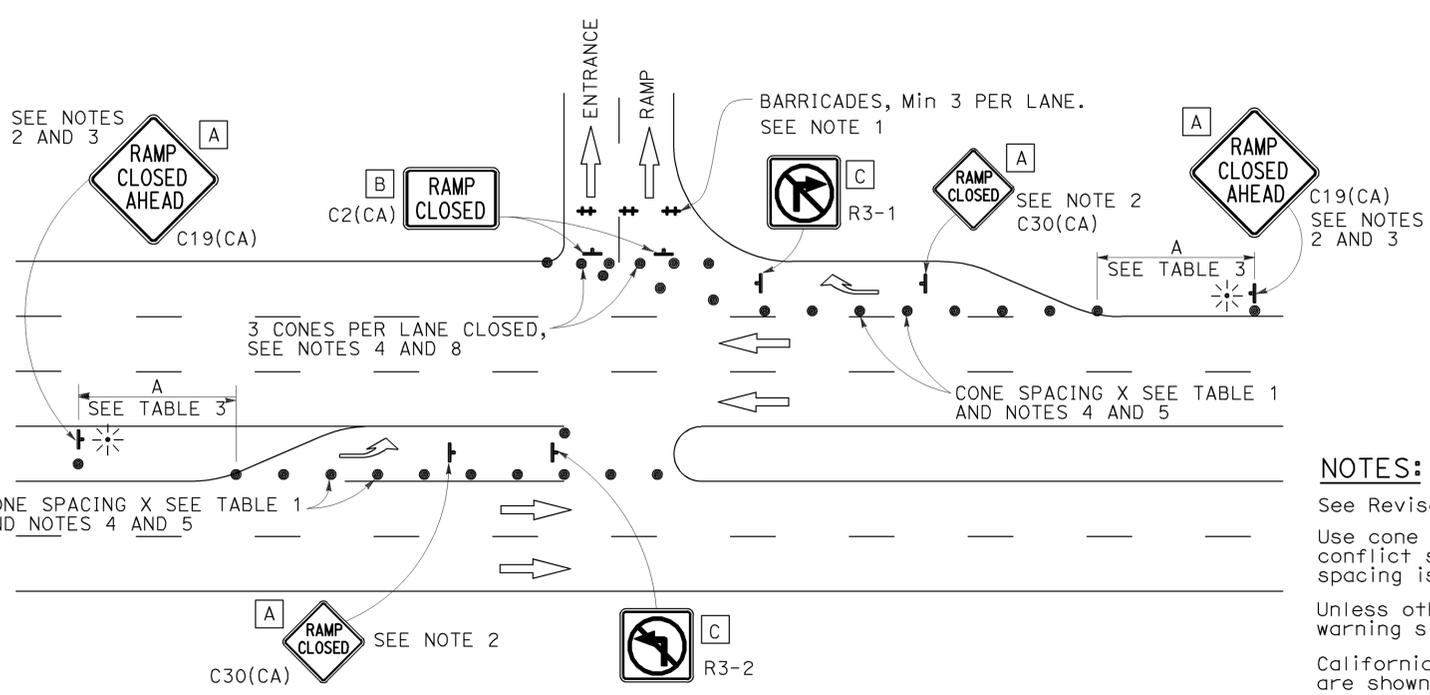
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



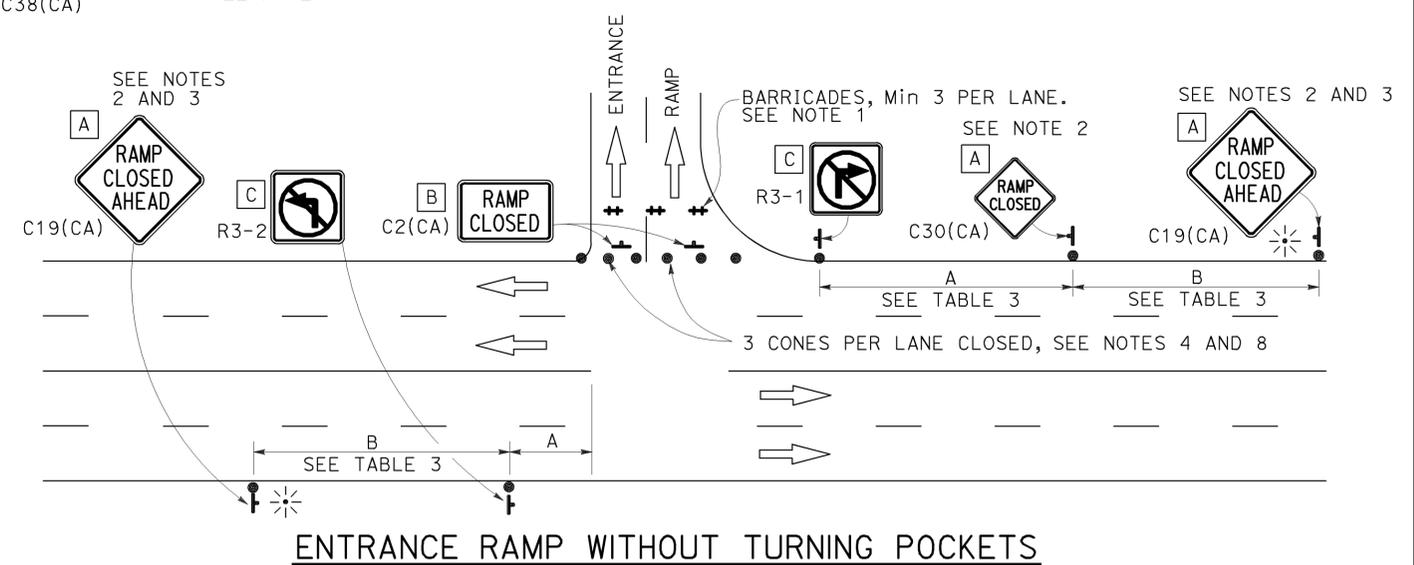
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

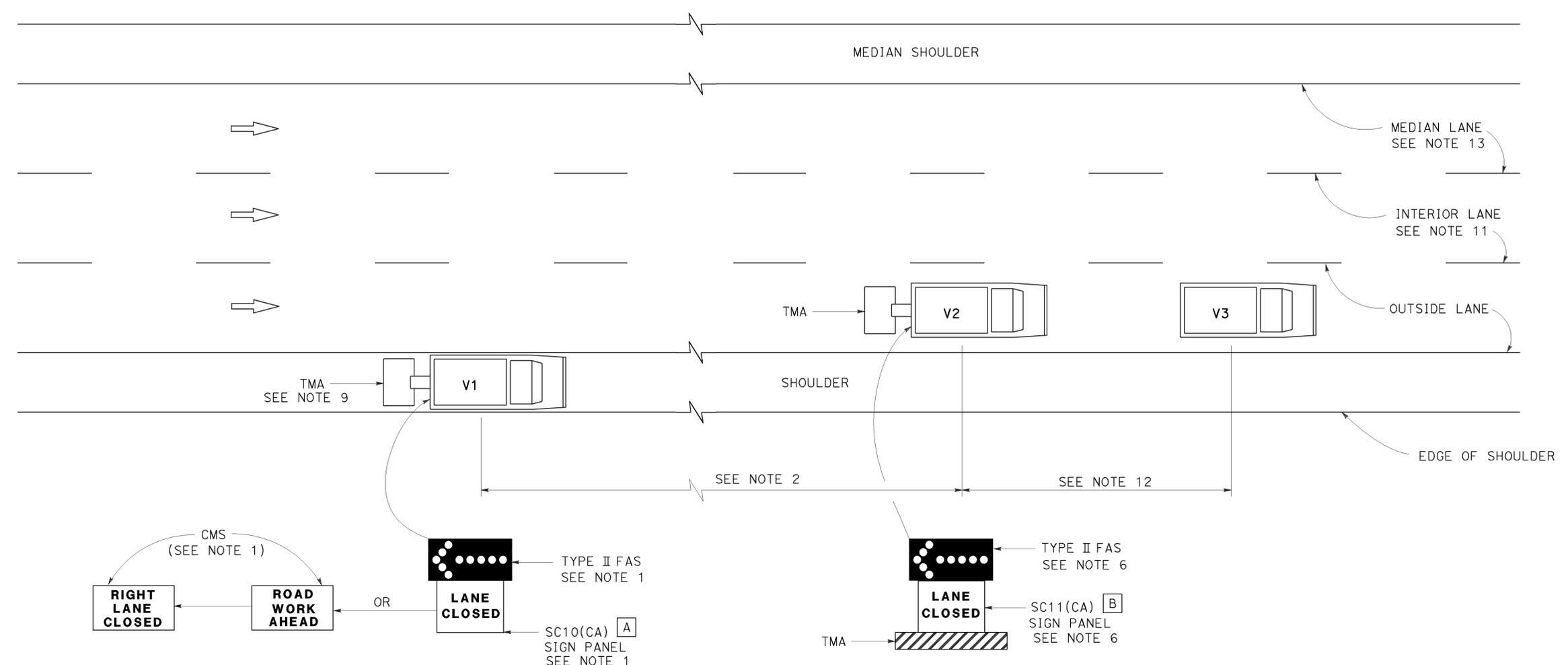
- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning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

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

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

2010 REVISED STANDARD PLAN RSP T14

TO ACCOMPANY PLANS DATED 2-23-15



**SIGN PANEL SIZE (Min)**

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

**LEGEND**

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

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

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS**  
NO SCALE

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

**REVISED STANDARD PLAN RSP T15**

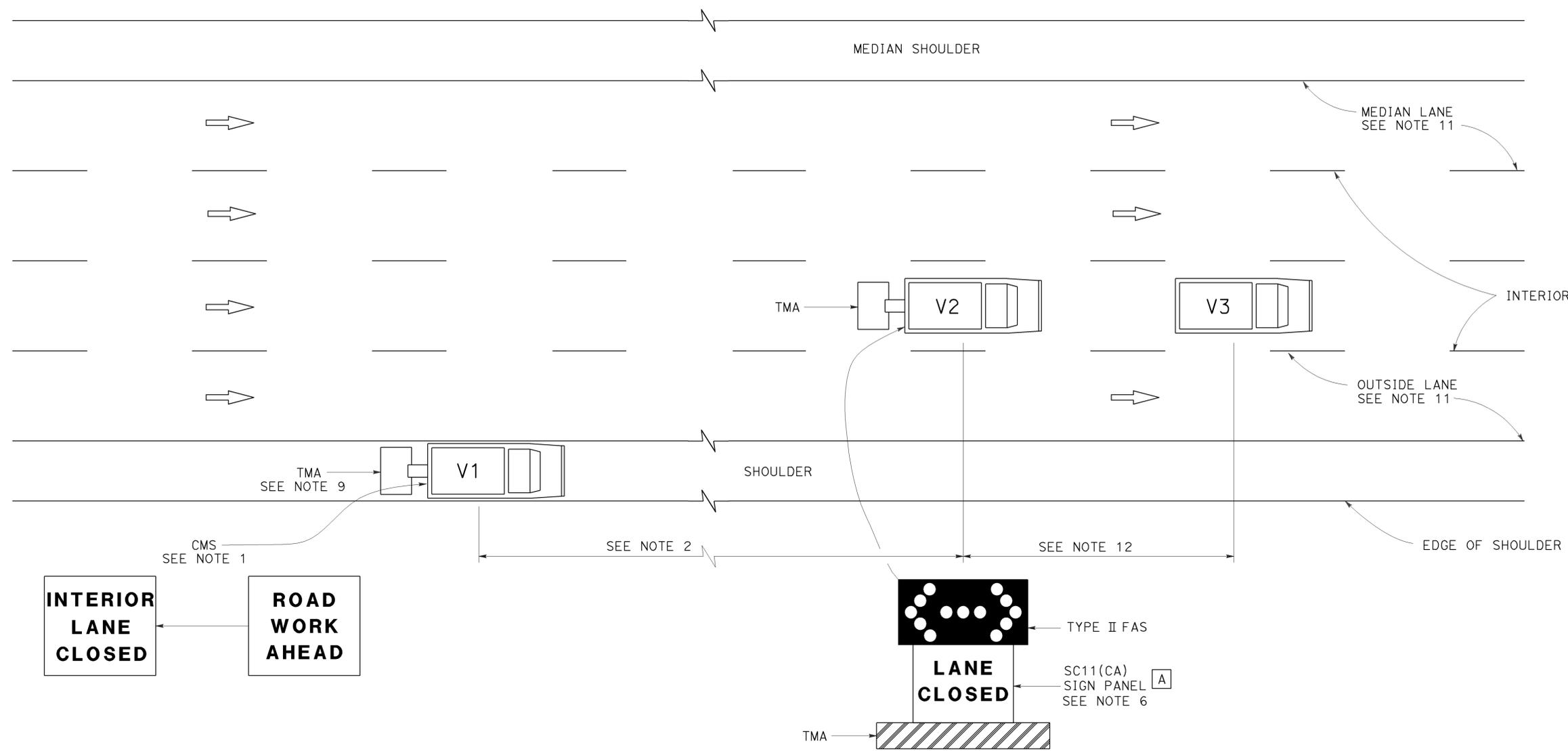
2010 REVISED STANDARD PLAN RSP T15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15,60, 83,215	Var	35	51

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 2-23-15



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

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

MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

NOTES:

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

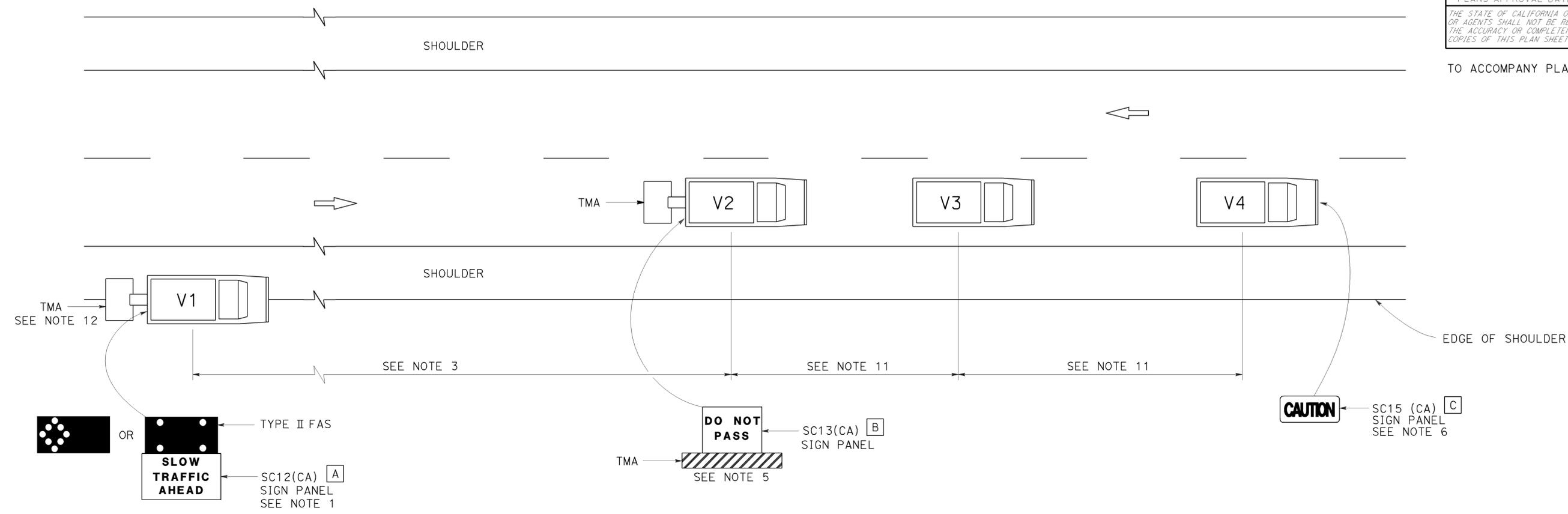
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR MOVING LANE CLOSURE  
 ON MULTILANE HIGHWAYS**  
 NO SCALE

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

**REVISED STANDARD PLAN RSP T16**

2010 REVISED STANDARD PLAN RSP T16

TO ACCOMPANY PLANS DATED 2-23-15



**NOTES:**

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

**LEGEND**

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
- FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
- FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

**SIGN PANEL SIZE (Min)**

- A 72" x 42"
- B 54" x 42"
- C 54" x 24"

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

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17  
 DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T17**

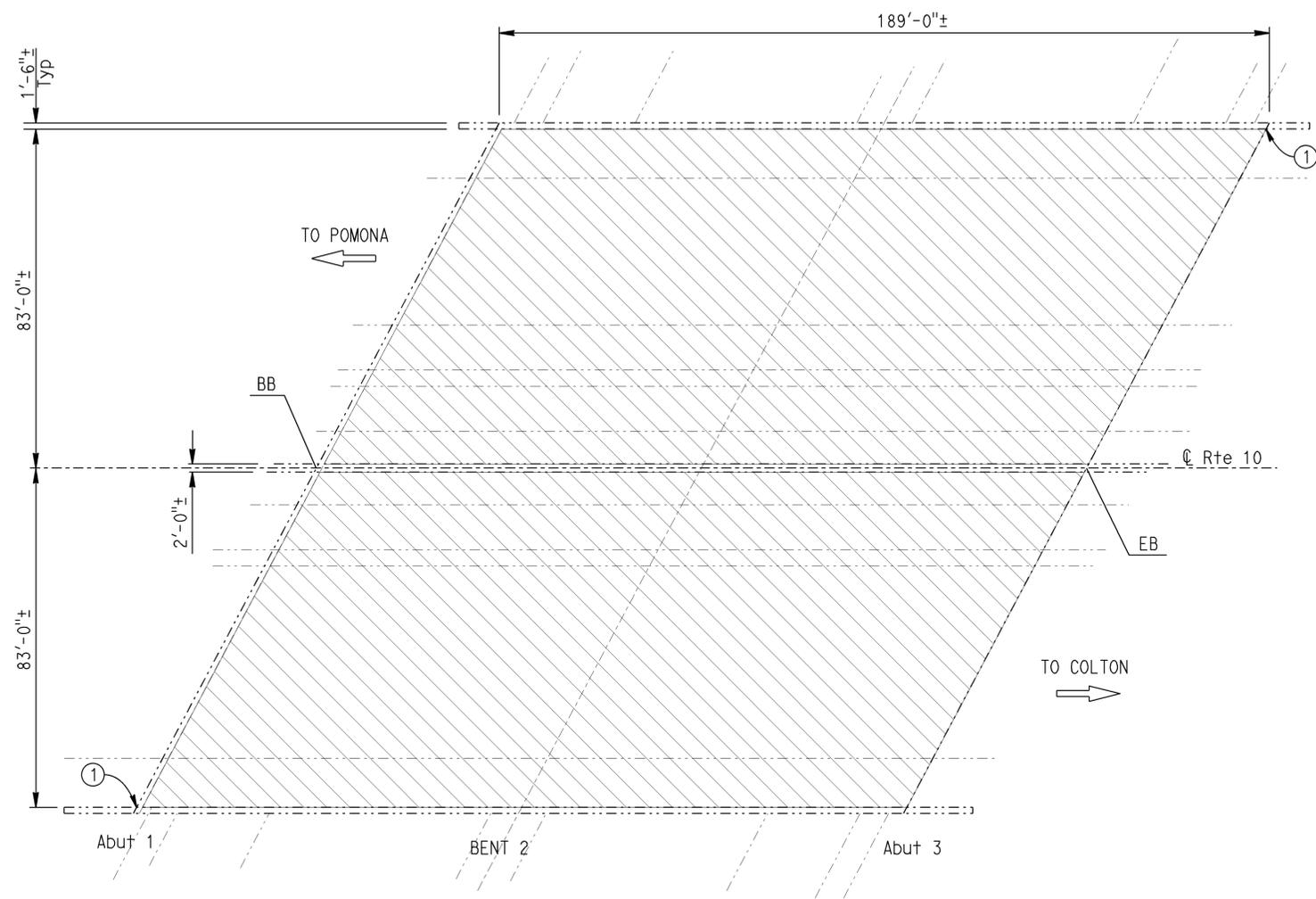
2010 REVISED STANDARD PLAN RSP T17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	37	51

1-12-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-23-15  
 PLANS APPROVAL DATE

QUANG VO  
 No. C55211  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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**NOTES:** (APPLY TO ALL SHEETS)  
 ----- Indicates Existing  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**NOTES:** (APPLY TO THIS SHEET ONLY)  
 ① Paint bridge name "CENTRAL AVENUE UC" and Paint "Br. No. 54-1186"  
 Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate

**INDEX TO PLANS**

SHEET No.	TITLE
1	GENERAL PLAN No. 1
2	GENERAL PLAN No. 2
3	GENERAL PLAN No. 3
4	GENERAL PLAN No. 4
5	GENERAL PLAN No. 5
6	GENERAL PLAN No. 6
7	GENERAL PLAN No. 7
8	GENERAL PLAN No. 8
9	GENERAL PLAN No. 9
10	GENERAL PLAN No. 10
11	GENERAL PLAN No. 11
12	JOINT SEAL DETAILS NO. 1
13	JOINT SEAL DETAILS NO. 2
14	MISCELLANEOUS DETAILS
15	SLOPE PAVING DETAILS



**CENTRAL AVENUE UNDERCROSSING**

Br No. 54-1186, ROUTE 10, PM 1.23

**QUANTITIES**

DESCRIPTION	QUANTITY	UNIT
CENTRAL AVENUE UNDERCROSSING	BR. NO. 54-1186	
PREPARE CONCRETE BRIDGE DECK SURFACE	30,996	SQFT
TREAT BRIDGE DECK	30,996	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	344	GAL
PAINT BRIDGE NAME AND NUMBER	2	EA

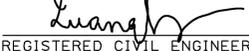
**STANDARD PLANS DATED 2010**

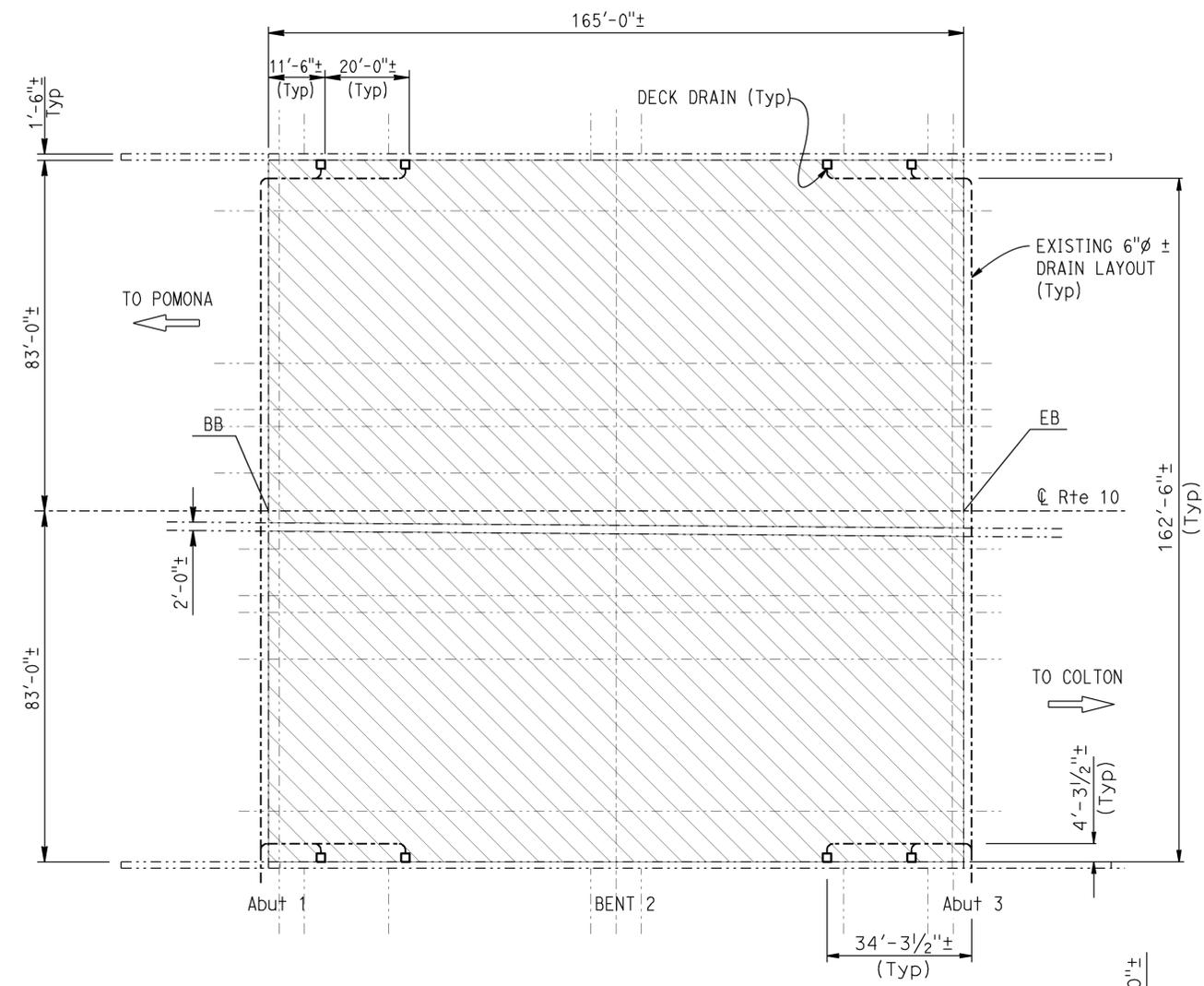
SHEET No.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



 DESIGN ENGINEER 1-12-15	DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE No.	<b>ROUTE 10, 15, 60, 83, 215, BRIDGES</b> GENERAL PLAN No. 1	
	DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO			CHECKED M. HASHIMOTO		VARIOUS
	QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI			PLANS AND SPECS COMPARED XIAHONG LI		VARIES

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3488 PROJECT NUMBER & PHASE: 0814000021 CONTRACT No.: 08-1E4301 DISREGARD PRINTS BEARING EARLIER REVISION DATES 8-19-14 12-02-14 1-22-15 SHEET 1 OF 15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	38	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
QUANG VO No. C55211 Exp. 6-30-16 CIVIL					
<small>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.</small>					



### MOUNTAIN AVENUE UNDERCROSSING

Br No. 54-1187, ROUTE 10, PM 2.37  
1" = 20'

QUANTITIES

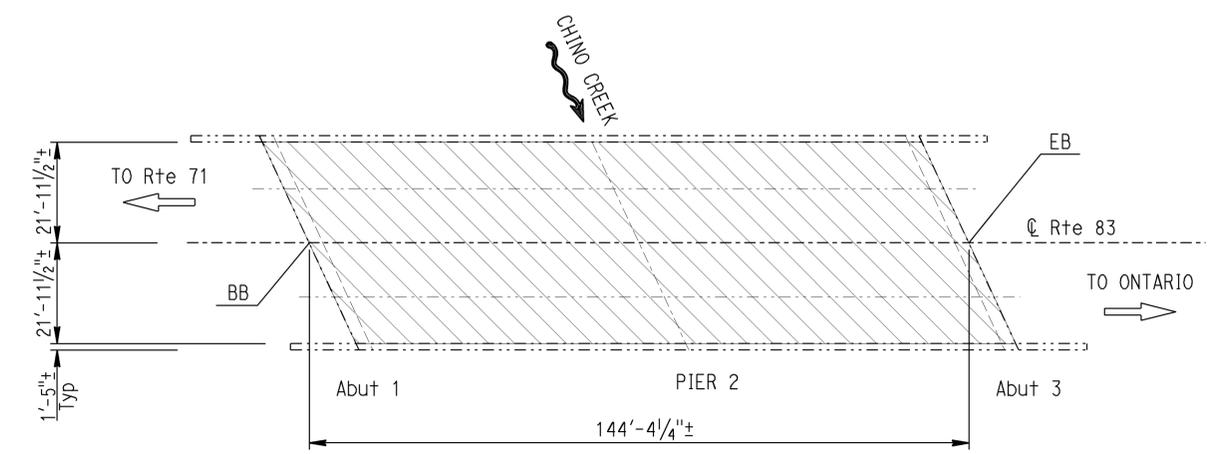
MOUNTAIN AVENUE UNDERCROSSING	BR. NO. 54-1187
PREPARE CONCRETE BRIDGE DECK SURFACE	27,060 SQFT
TREAT BRIDGE DECK	27,060 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	301 GAL
CLEAN BRIDGE DECK DRAINAGE SYSTEM	545 LF

QUANTITIES

HOLT BOULEVARD OFF-RAMP UNDERCROSSING	BR. NO. 54-0437L
ACCESS OPENING, SOFFIT	2 EA

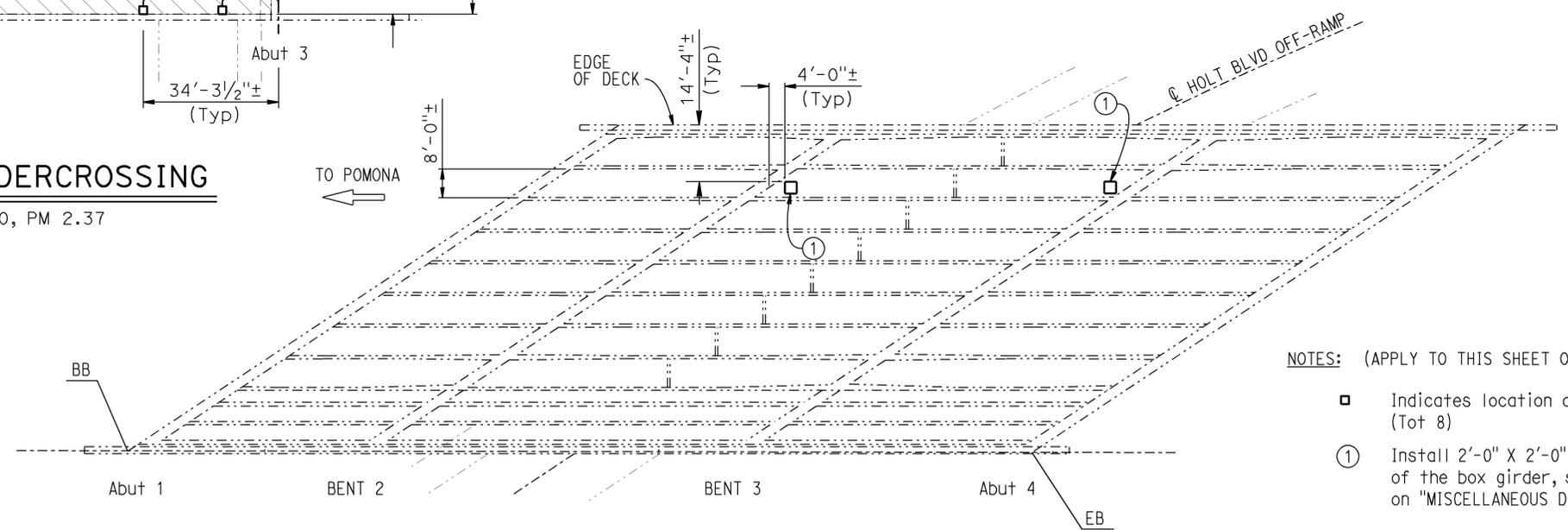
QUANTITIES

CHINO CREEK	BR. NO. 54-1248
PREPARE CONCRETE BRIDGE DECK SURFACE	6,420 SQFT
TREAT BRIDGE DECK	6,420 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	72 GAL



### CHINO CREEK

Br No. 54-1248, ROUTE 83, PM 0.93  
1" = 20'



### HOLT BOULEVARD OFF-RAMP UNDERCROSSING

Br No. 54-0437L, ROUTE 10, PM 6.80  
1" = 20'

- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates location of clean bridge deck drains (Tot 8)
  - ① Install 2'-0" X 2'-0" access opening in the bottom of the box girder, see "SOFFIT ACCESS DOOR ASSEMBLY" on "MISCELLANEOUS DETAILS" sheet
  -  Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate
- For other drain pipe details at abutment retaining wall, see "RETAINING WALL ELVATION" on "MISCELLANEOUS DETAILS" sheet.

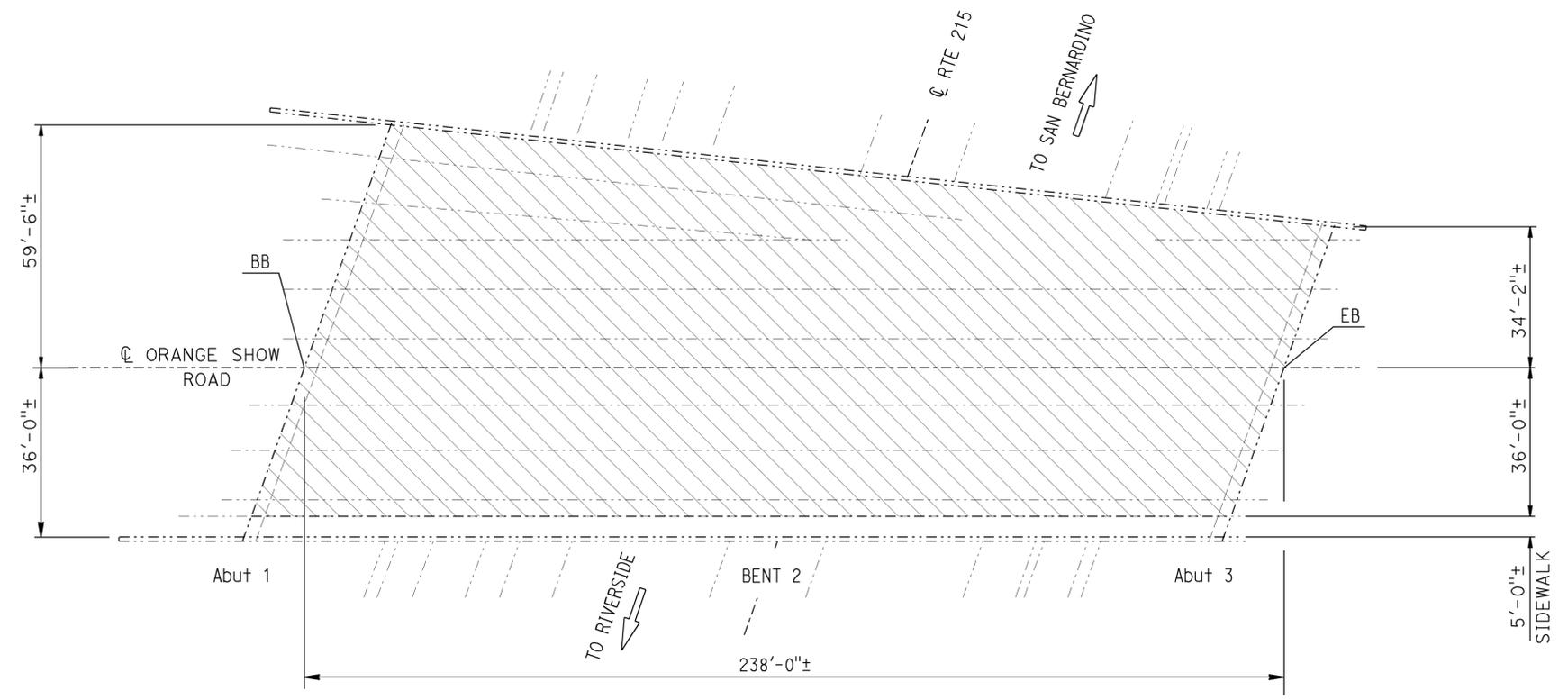
 DESIGN ENGINEER	DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	<b>ROUTE 10, 15, 60, 83, 215, BRIDGES</b> GENERAL PLAN No. 2								
	DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO		CHECKED M. HASHIMOTO		VARIOUS							
	QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI		CHECKED XIAHONG LI		VARIES							
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3488 PROJECT NUMBER & PHASE: 0814000021	CONTRACT No.: 08-1E4301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1" style="font-size: small;"> <tr> <th>REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>8-19-14   12-02-14   1-22-15</td> <td>2</td> <td>15</td> </tr> </table>	REVISION DATES	SHEET	OF	8-19-14   12-02-14   1-22-15	2	15
REVISION DATES	SHEET	OF														
8-19-14   12-02-14   1-22-15	2	15														

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	39	51

1-12-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-23-15  
 PLANS APPROVAL DATE

QUANG VO  
 No. C55211  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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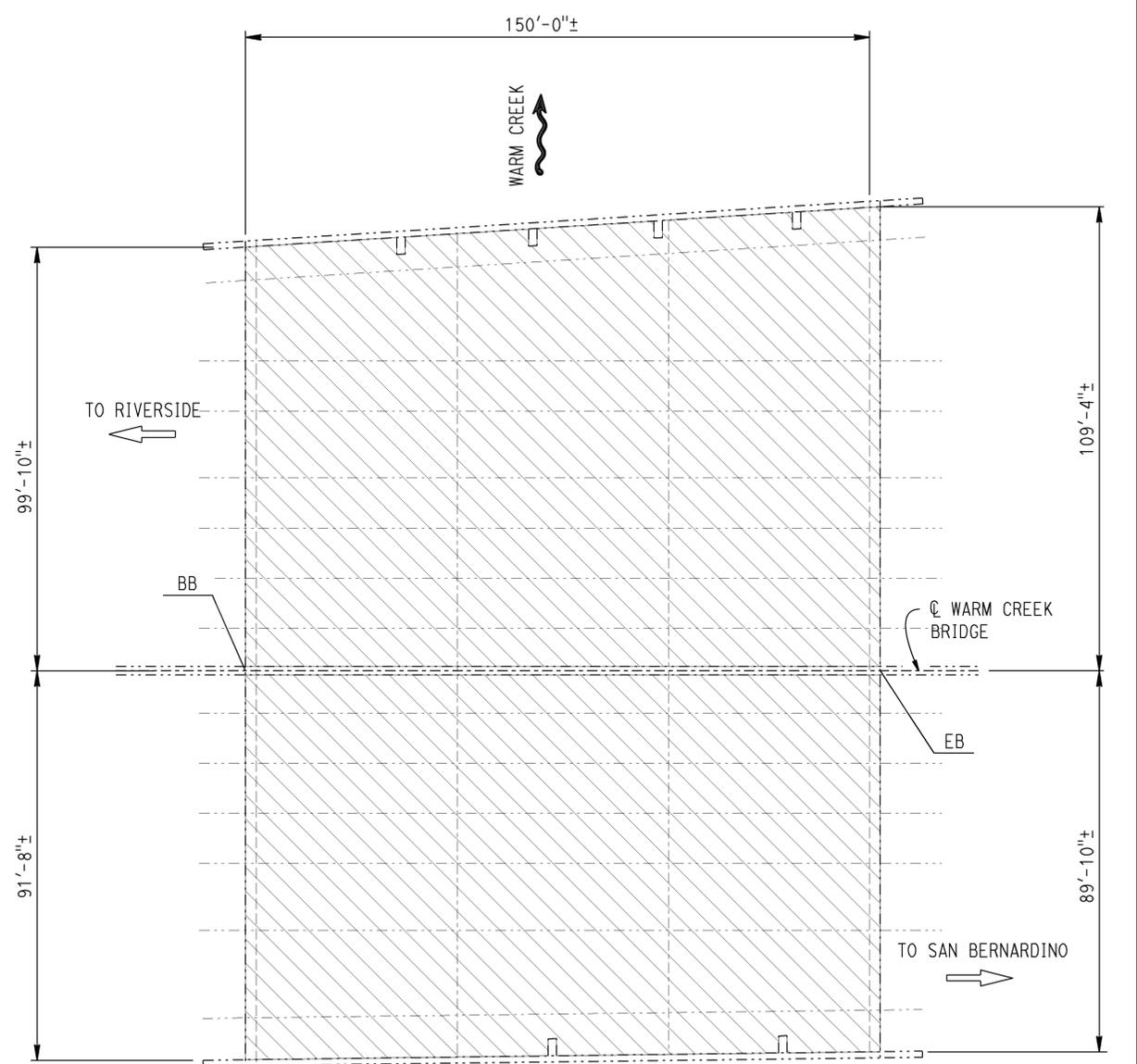
**ORANGE SHOW ROAD OVERCROSSING**  
 Br No. 54-0473, ROUTE 215, PM 5.03  
 1" = 20'

QUANTITIES

ORANGE SHOW ROAD OVERCROSSING	BR. NO. 54-0473
PREPARE CONCRETE BRIDGE DECK SURFACE	19,800 SQFT
TREAT BRIDGE DECK	19,800 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	220 GAL

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate



**WARM CREEK**

Br No. 54-0474, ROUTE 215, PM 5.23  
 1" = 20'

QUANTITIES

WARM CREEK	BR. NO. 54-0474
PREPARE CONCRETE BRIDGE DECK SURFACE	29,300 SQFT
TREAT BRIDGE DECK	29,300 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	326 GAL

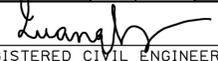
1-12-15  
 DESIGN ENGINEER

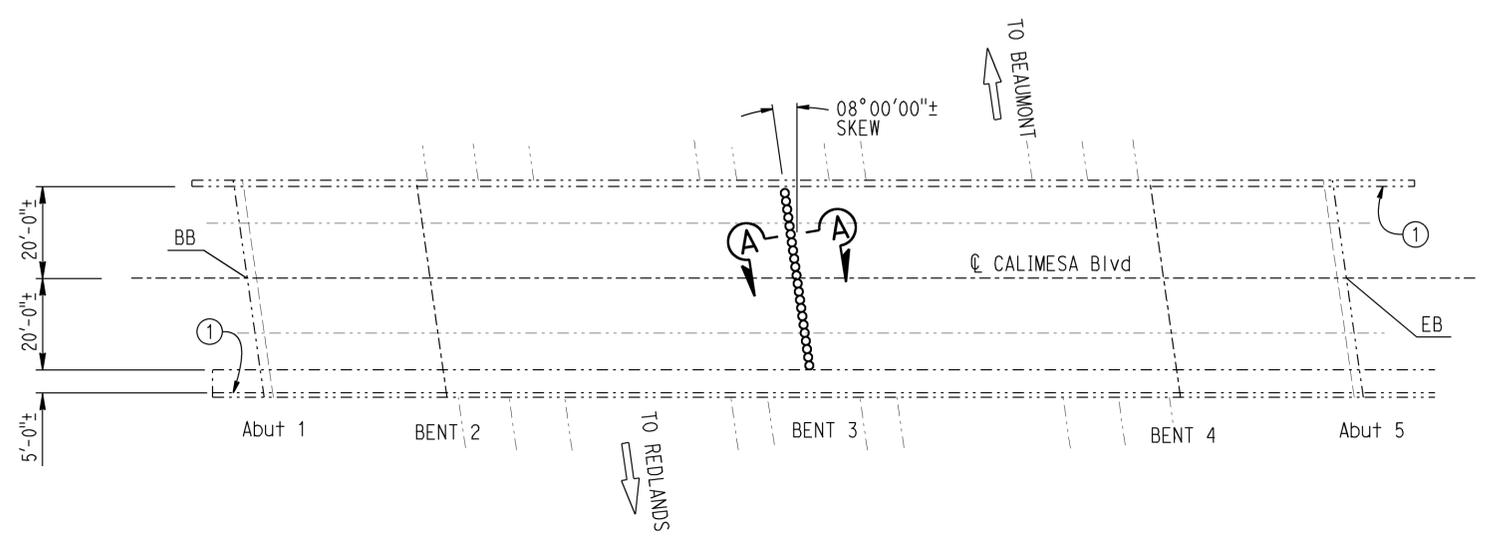
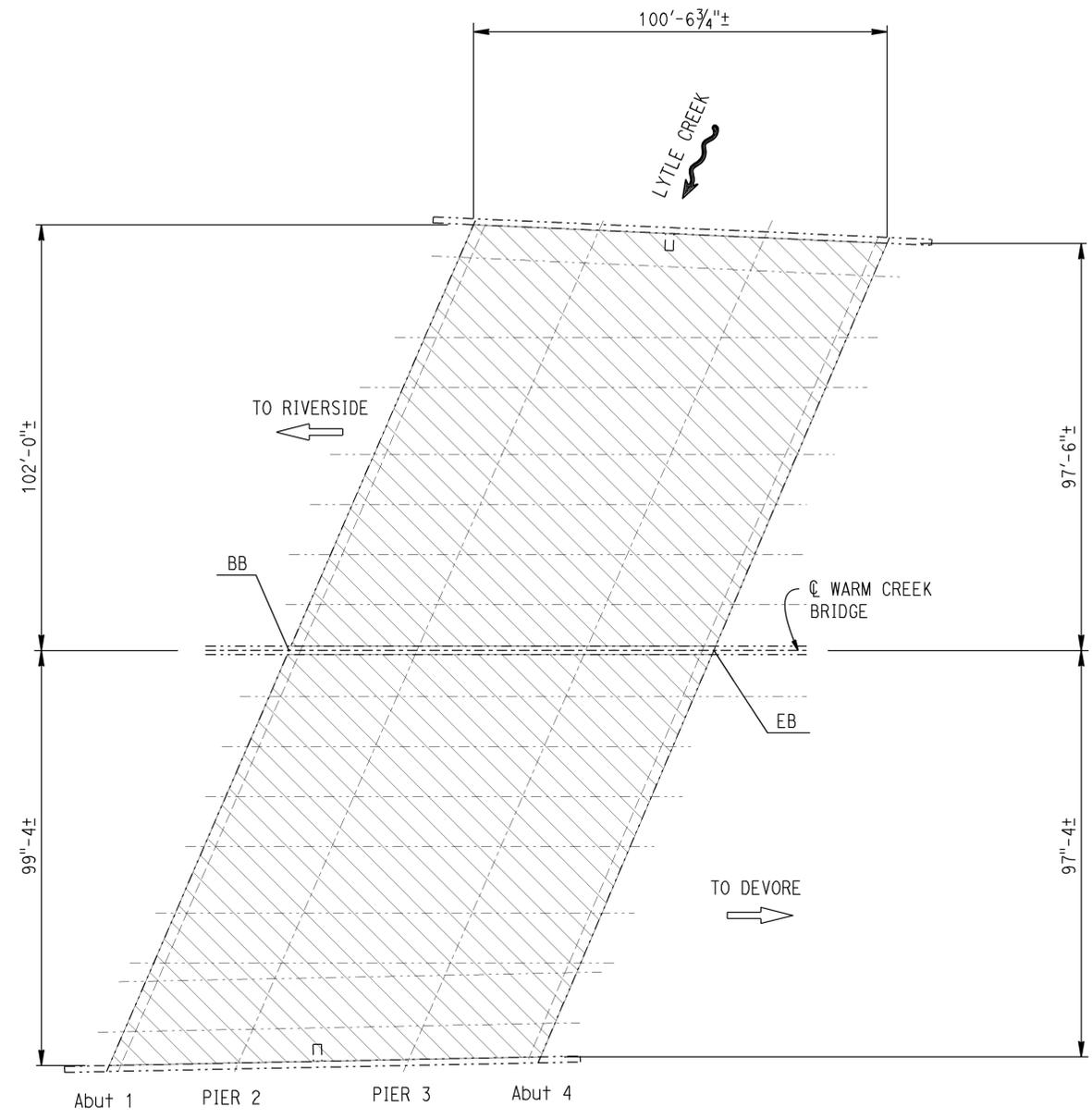
DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED XIAHONG LI

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
**STRUCTURE MAINTENANCE DESIGN**

**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
**GENERAL PLAN No. 3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10, 15, 60, 83, 215	Var	40	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
REGISTERED PROFESSIONAL ENGINEER <b>QUANG VO</b> No. C55211 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA					
<small>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.</small>					



### CALIMESA BOULEVARD OVERCROSSING

Br No. 56-0483, ROUTE 10, PM R0.86  
1" = 20'

#### QUANTITIES

CALIMESA BOULEVARD OVERCROSSING	BR. NO. 56-0483
CLEAN EXPANSION JOINT	41 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (ASPHALTIC PLUG)	41 LF

#### NOTES: (APPLY TO THIS SHEET ONLY)

-  Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate
-  Indicates location of clean and place new asphaltic plug joint seal. For SECTION A-A, see "JOINT SEAL DETAILS NO. 1" sheet.
- ① Paint bridge name "CALIMESA BOULEVARD OC" and Paint "Br. No. 56-0483"



### EAST BRANCH LYTLE CREEK

Br No. 54-0485, ROUTE 215, PM 6.31  
1" = 20'

#### QUANTITIES

EAST BRANCH LYTLE CREEK	BR. NO. 54-0485
PREPARE CONCRETE BRIDGE DECK SURFACE	19,920 SQFT
TREAT BRIDGE DECK	19,920 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	221 GAL

 DESIGN ENGINEER	DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
	QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

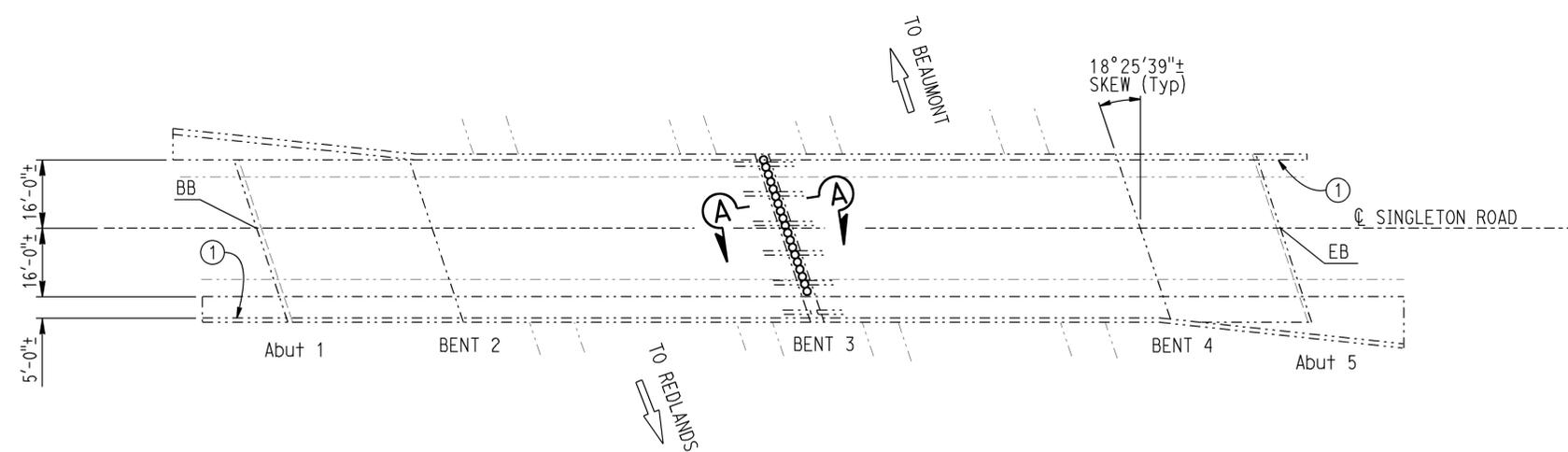
BRIDGE No. VARIOUS  
POST MILE VARIES  
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
GENERAL PLAN No. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10, 15, 60, 83, 215	Var	41	51
				1-12-15	
REGISTERED CIVIL ENGINEER				DATE	
				2-23-15	
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.					



NOTES: (APPLY TO THIS SHEET ONLY)

- ⊘ Indicates location of clean and place new asphaltic plug joint seal. For SECTION A-A, see "JOINT SEAL DETAILS NO. 1" sheet
- ① Paint bridge name "SINGLETON ROAD OC" and Paint "Br. No. 56-0482"
- ② Paint bridge name "CHERRY VALLEY BOULEVARD OC" and paint "Br. No. 56-0481"
- ③ Paint bridge name "SAN TIMOTEO CANYON ROAD OC" and paint "Br. No. 56-0496"

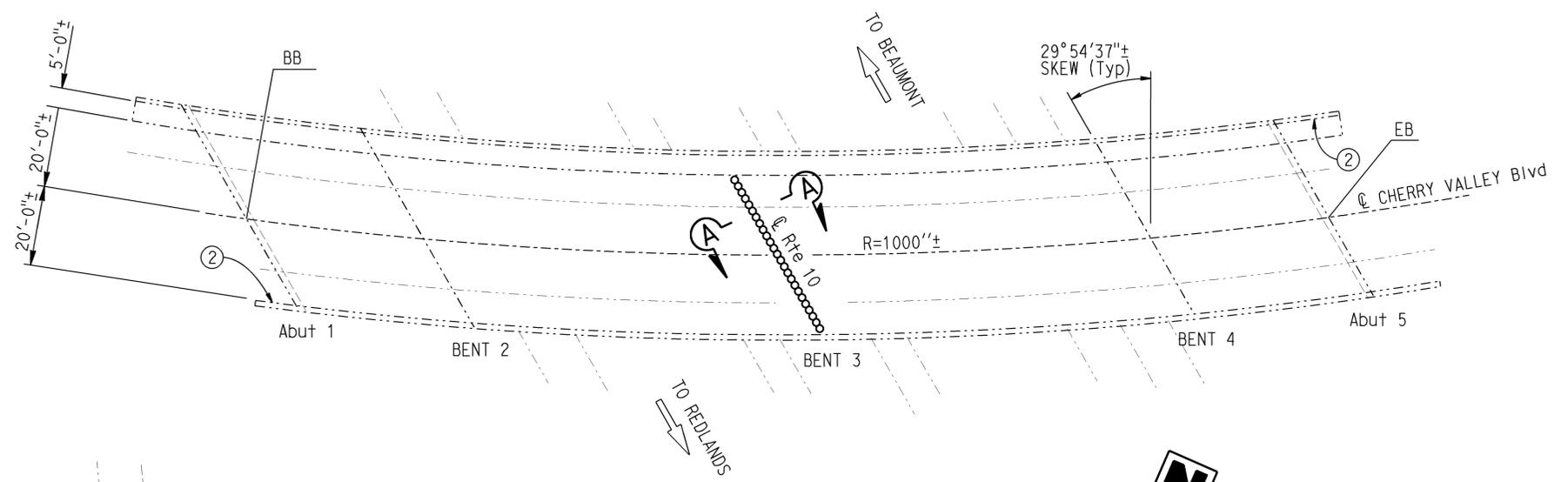


### SINGLETON ROAD OVERCROSSING

Br No. 56-0482, ROUTE 10, PM R1.92  
1" = 20'

#### QUANTITIES

SINGLETON ROAD OVERCROSSING	BR. NO. 56-0482
CLEAN EXPANSION JOINT	34 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (ASPHALTIC PLUG)	34 LF

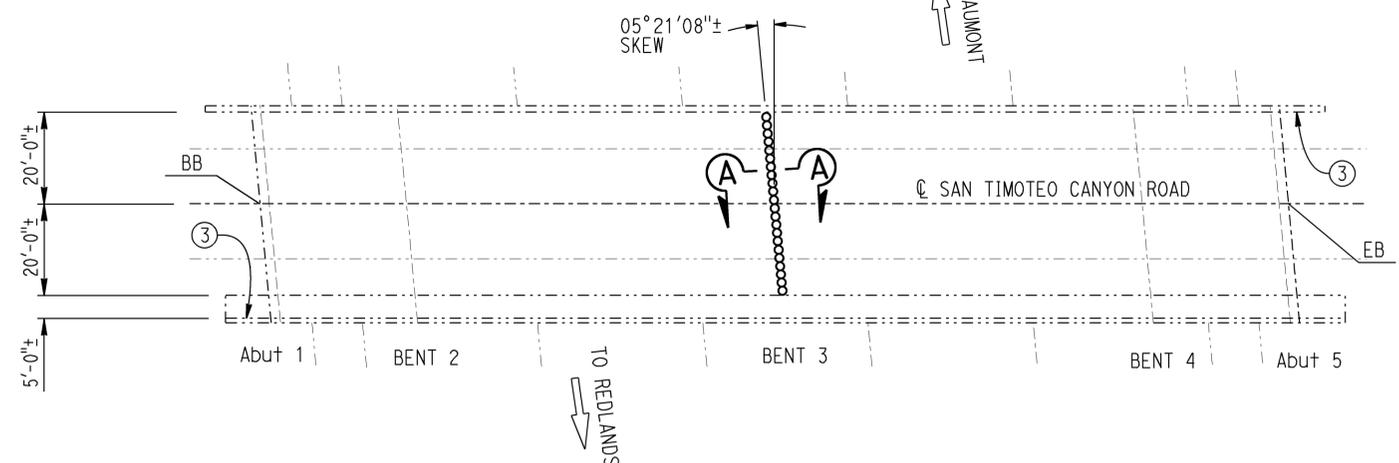


### CHERRY VALLEY BOULEVARD OVERCROSSING

Br No. 56-0481, ROUTE 10, PM 3.05  
1" = 20'

#### QUANTITIES

CHERRY VALLEY BOULEVARD OVERCROSSING	BR. NO. 56-0481
CLEAN EXPANSION JOINT	48 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (ASPHALTIC PLUG)	48 LF



### SAN TIMOTEO CANYON ROAD OVERCROSSING

Br No. 56-0496, ROUTE 10, PM R5.53  
1" = 20'

#### QUANTITIES

SAN TIMOTEO CANYON ROAD OVERCROSSING	BR. NO. 56-0496
CLEAN EXPANSION JOINT	41 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (ASPHALTIC PLUG)	41 LF

*Matthew Cole*  
DESIGN ENGINEER 1-12-15

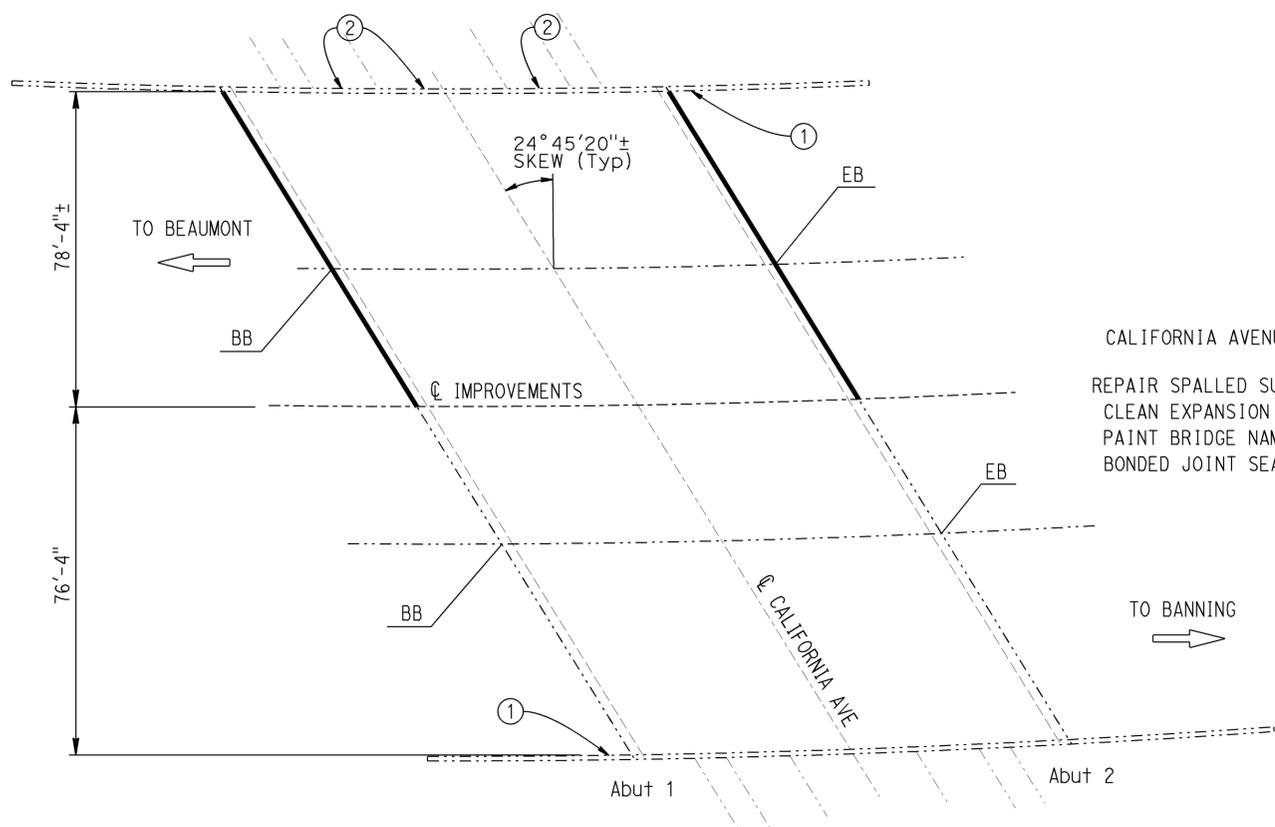
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DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED XIAHONG LI

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE No. VARIOUS  
POST MILE VARIES  
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
GENERAL PLAN No. 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	42	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
REGISTERED PROFESSIONAL ENGINEER <b>QUANG VO</b> No. C55211 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA					
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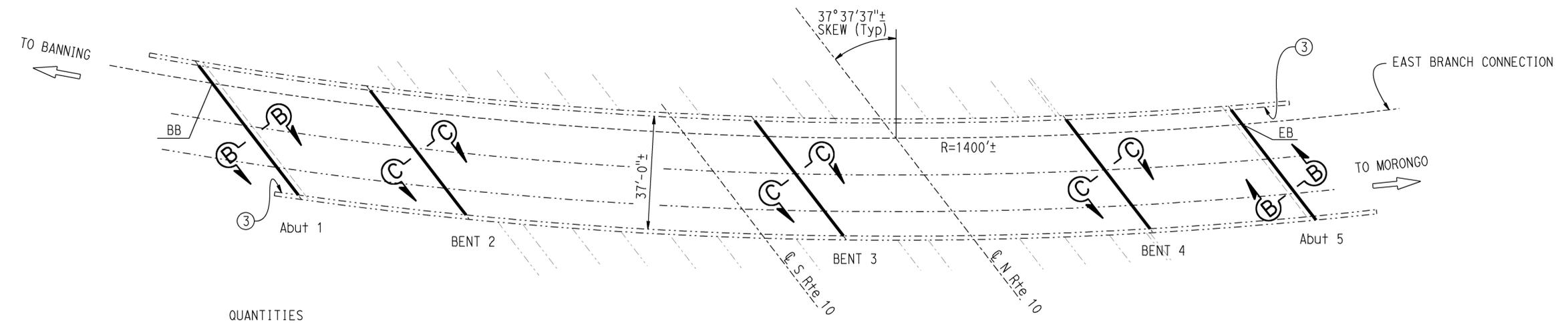


QUANTITIES

CALIFORNIA AVENUE UNDERCROSSING	BR. NO. 56-0434
REPAIR SPALLED SURFACE AREA	12 SQFT
CLEAN EXPANSION JOINT	174 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
BONDED JOINT SEAL (MR 1")	174 LF

- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates location of clean expansion joint and install new joint seal. For SECTION B-B and SECTION C-C, see "JOINT SEAL DETAILS NO. 2" sheet.
  - ① Paint bridge name "CALIFORNIA AVENUE UC" and paint "Br. No. 56-0434"
  - ② Repair spalled surface area (all existing reinforcement to remain) approximately 0'-4" x 1'-0" x 0'-4"
  - ③ Paint bridge name "E10-E62 CONNECTOR" and paint "Br. No. 56-04746"

**CALIFORNIA AVENUE UNDERCROSSING**  
 Br No. 56-0434, ROUTE 10, PM 7.32  
 1" = 20'



QUANTITIES

E10-E62 CONNECTOR	BR. NO. 56-04746
POLYESTER CONCRETE EXPANSION DAM	29 CF
CLEAN EXPANSION JOINT	240 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (MR 1/2")	144 LF
JOINT SEAL (MR 1")	96 LF

**E10-E62 CONNECTOR**  
 Br No. 56-04746, ROUTE 10, PM 29.69  
 1" = 20'

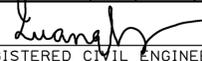
  
 DESIGN ENGINEER 1-12-15

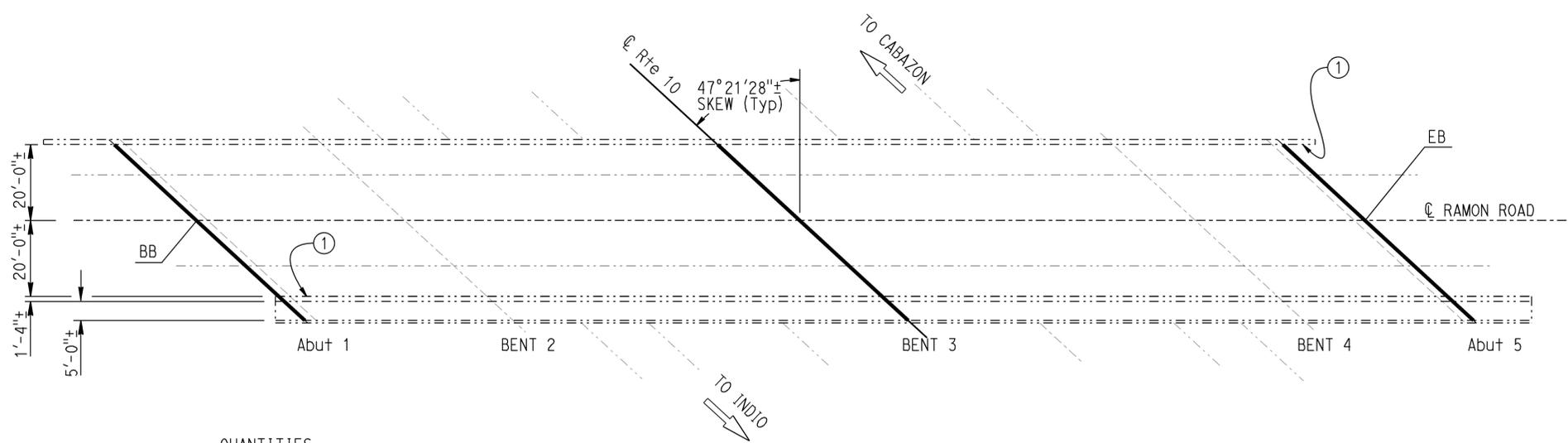
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DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED
				XIAHONG LI

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE No. VARIOUS  
 POST MILE Varies  
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
 GENERAL PLAN No. 6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	43	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
REGISTERED PROFESSIONAL ENGINEER <b>QUANG VO</b> No. C55211 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA					
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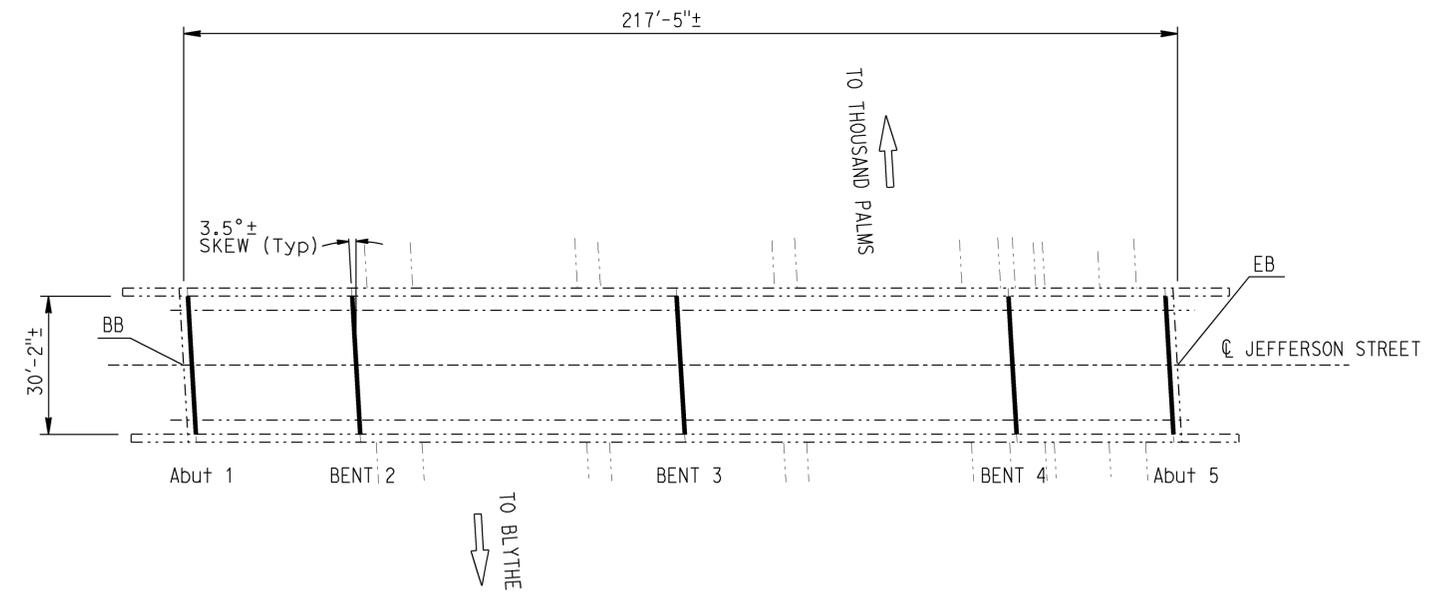


**QUANTITIES**

RAMON ROAD OVERCROSSING	BR. NO. 56-0471
CLEAN EXPANSION JOINT	210 LF
PAINT BRIDGE NAME AND NUMBER	2 EA
JOINT SEAL (MR 1")	210 LF



**RAMON ROAD OVERCROSSING**  
 Br No. 56-0471, ROUTE 10, PM 43.36  
 1" = 20'



**JEFFERSON STREET OVERCROSSING**  
 Br No. 56-0427, ROUTE 10, PM R52.34  
 1" = 20'

**QUANTITIES**

JEFFERSON STREET OVERCROSSING	BR. NO. 56-0427
CLEAN EXPANSION JOINT	155 LF
JOINT SEAL (MR 1/2")	124 LF
JOINT SEAL (MR 1")	31 LF

**NOTES:** (APPLY TO THIS SHEET ONLY)

- Indicates location of clean expansion joint and install new joint seal
- ① Paint bridge name "RAMON ROAD OC" and paint "Br. No. 54-0471"

  
 DESIGN ENGINEER 1-12-15

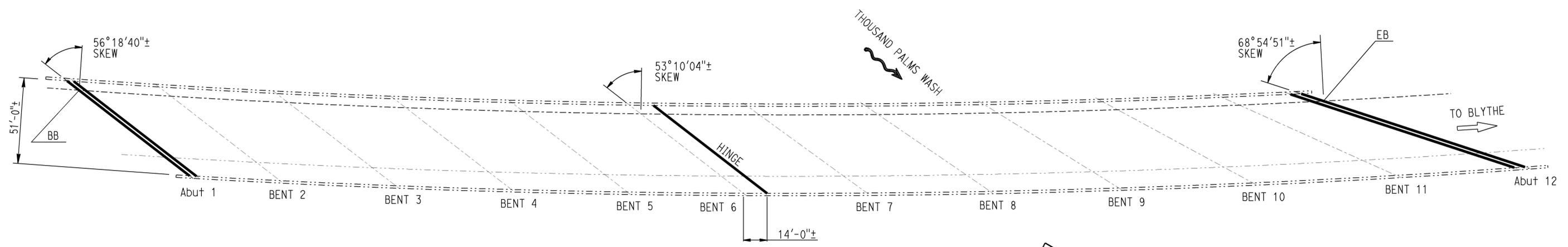
DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED XIAHONG LI

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

**BRIDGE No. VARIOUS**  
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
 POST MILE VARIES  
**GENERAL PLAN No. 7**

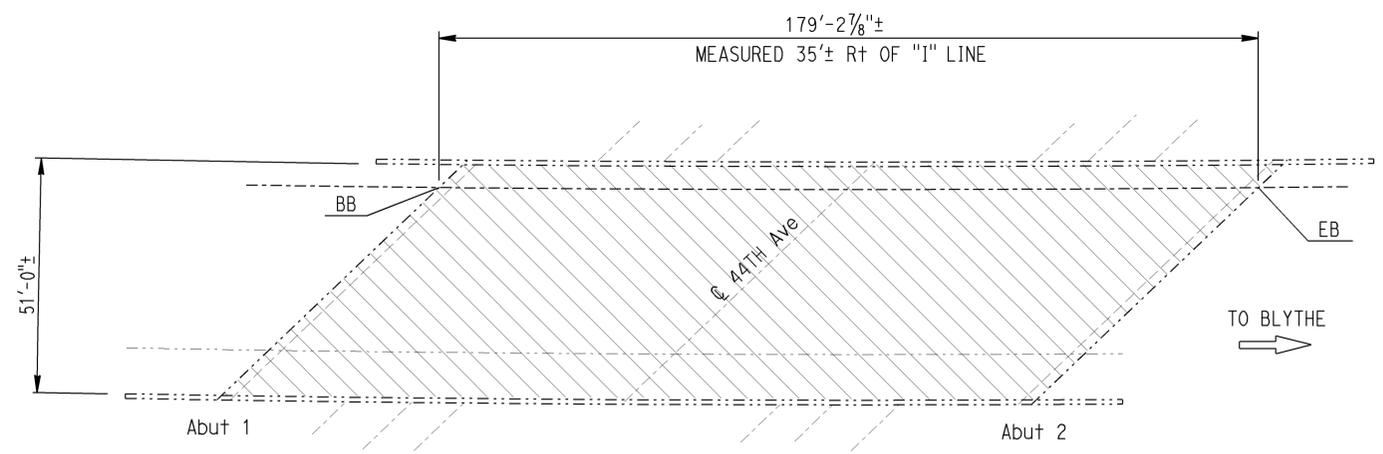
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	44	51
REGISTERED CIVIL ENGINEER			DATE		
1-12-15					
PLANS APPROVAL DATE			2-23-15		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



**THOUSAND PALMS WASH**

Br No. 56-0610R, ROUTE 10, PM R53.80  
1" = 30'

THOUSAND PALMS WASH	BR. NO. 56-0610R
CLEAN EXPANSION JOINT	560 LF
BONDED JOINT SEAL (MR 2")	478 LF
BONDED JOINT SEAL (MR 2 1/2")	88 LF



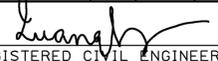
**44TH AVENUE UNDERCROSSING**

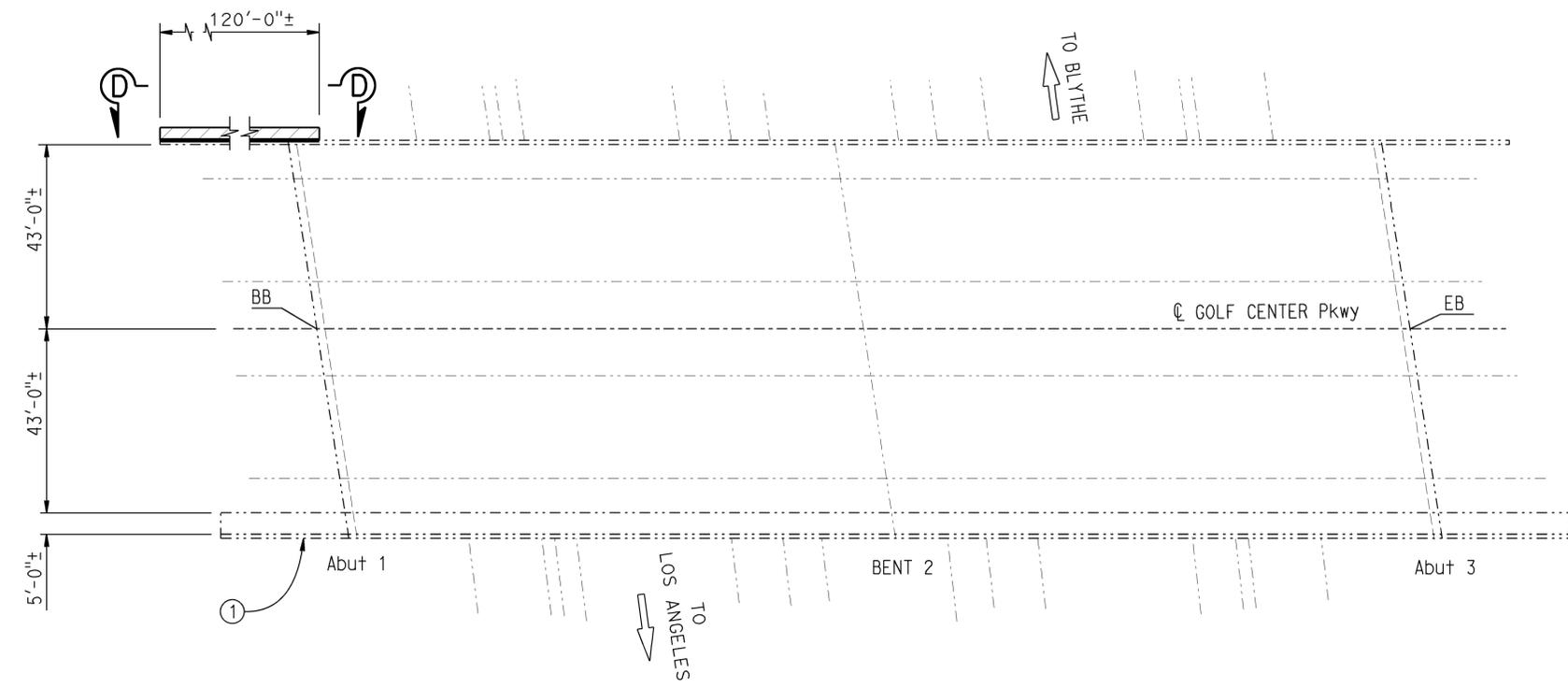
Br No. 56-0613R, ROUTE 10, PM R56.57  
1" = 20'

44TH AVENUE UNDERCROSSING	BR. NO. 56-0613R
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	9,144 SQFT
TREAT BRIDGE DECK	9,144 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	102 GAL

- NOTES:** (APPLY TO THIS SHEET ONLY)
- Indicates location of clean expansion joint and install new joint seal
  - Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate

 DESIGN ENGINEER 1-12-15	DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE No.	<b>ROUTE 10, 15, 60, 83, 215, BRIDGES</b> GENERAL PLAN No. 8		
	DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO		CHECKED M. HASHIMOTO		VARIOUS	
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI	PLANS AND SPECS COMPARED	XIAHONG LI	POST MILE	UNIT: 3488 PROJECT NUMBER & PHASE: 0814000021 CONTRACT No.: 08-1E4301		
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)									ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 8-19-14   12-02-14

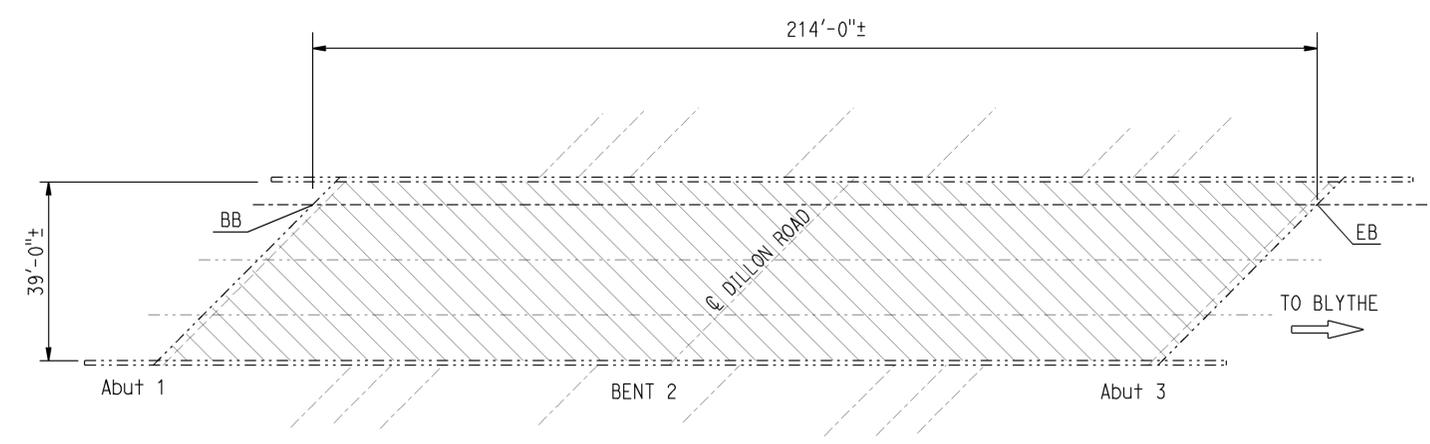
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	45	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
					
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QUANTITIES

GOLF CENTER PARKWAY OVERCROSSING	BR. NO. 56-0614
BRIDGE REMOVAL (PORTION)	LUMP SUM
STRUCTURE BACKFILL (SLURRY CEMENT)	1 CY
CLEAN EXPANSION JOINT	120 LF
JOINT SEAL (TYPE AL)	120 LF
SLOPE PAVING (CONCRETE)	8 CY

**GOLF CENTER PARKWAY OVERCROSSING**  
 Br No. 56-0614, ROUTE 10, PM 56.95  
 1" = 20'



- NOTES:** (APPLY TO THIS SHEET ONLY)
-  Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate
  -  Indicates location of clean expansion joint and install new joint seal
  -  Indicates limits of bridge removal (portion) For "VIEW D-D", see "SLOPE PAVING DETAILS" sheet
  - ① Indicates structure backfill (slurry cement) (5' x 3' x 2')

**DILLON ROAD UNDERCROSSING**  
 Br No. 56-0617R, ROUTE 10, PM R58.89  
 1" = 20'

QUANTITIES

DILLON ROAD UNDERCROSSING	BR. NO. 56-0617R
PREPARE CONCRETE BRIDGE DECK SURFACE	8,346 SQFT
TREAT BRIDGE DECK	8,346 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	93 GAL

  
 DESIGN ENGINEER 1-12-15

DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED XIAHONG LI

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
 GENERAL PLAN No. 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, Sbd	10, 15, 60, 83, 215	Var	46	51

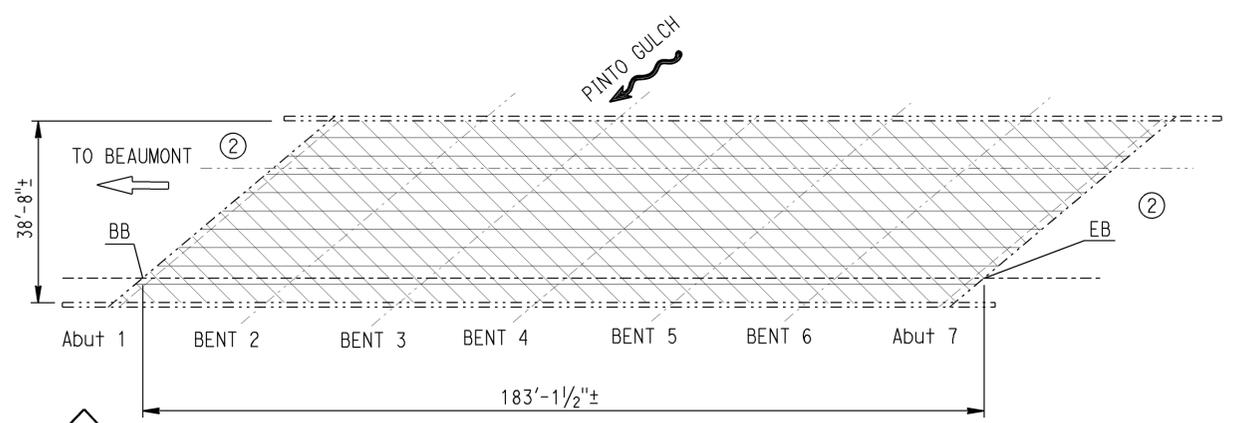
1-12-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-23-15  
 PLANS APPROVAL DATE

QUANG VO  
 No. C55211  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

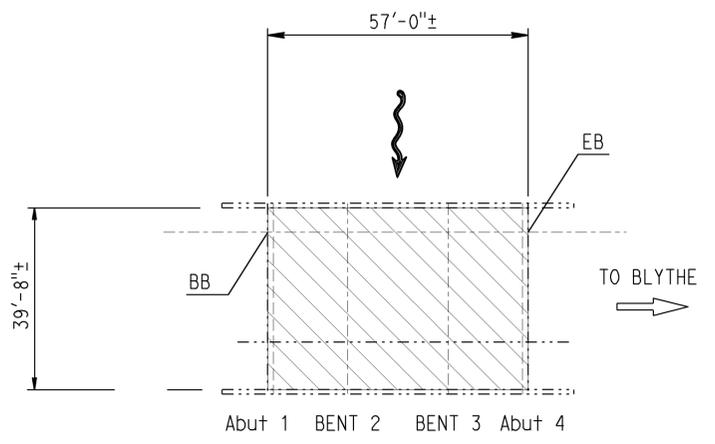
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

QUANTITIES

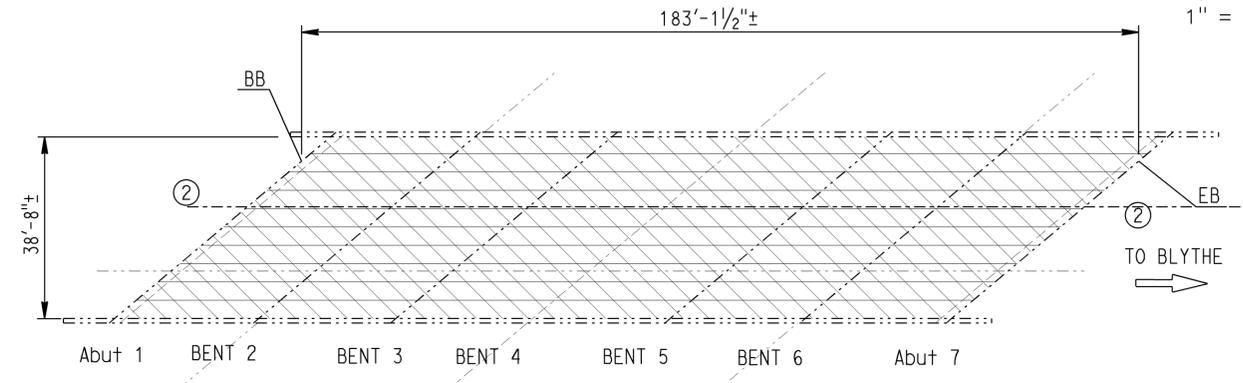
PINTO GULCH	BR. NO. 56-0514L	
REMOVE ASPHALT CONCRETE SURFACING	7,081	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	7,081	SQFT
TREAT BRIDGE DECK	7,081	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	79	GAL



**PINTO GULCH**  
 Br No. 56-0514L, ROUTE 10, PM R82.59  
 1" = 20'



**HAPPY GULCH**  
 Br No. 56-0209R, ROUTE 10, PM R75.67  
 1" = 20'



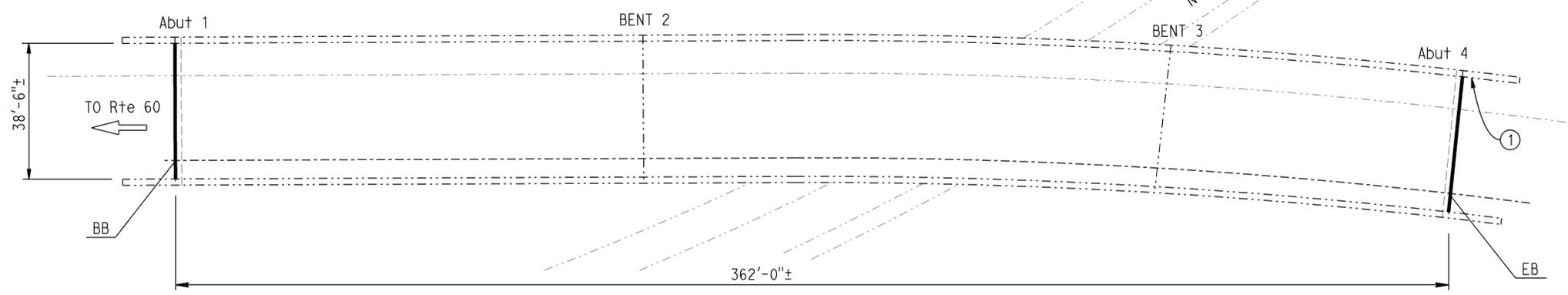
**PINTO GULCH**  
 Br No. 56-0514R, ROUTE 10, PM R82.59  
 1" = 20'

QUANTITIES

PINTO GULCH	BR. NO. 56-0514R	
REMOVE ASPHALT CONCRETE SURFACING	7,081	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	7,081	SQFT
TREAT BRIDGE DECK	7,081	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	79	GAL

QUANTITIES

HAPPY GULCH	BR. NO. 56-0209R	
PREPARE CONCRETE BRIDGE DECK SURFACE	2,261	SQFT
TREAT BRIDGE DECK	2,261	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	25	GAL



**S15-E60/N15-E60 SEPARATION**  
 Br No. 56-0748F, ROUTE 15, PM 51.40  
 1" = 20'

QUANTITIES

S15-E60/N15-E60 SEPARATION	BR. NO. 56-0748F	
CLEAN EXPANSION JOINT	78	LF
PAINT BRIDGE NAME AND NUMBER	1	EA
JOINT SEAL (MR 1")	39	LF
JOINT SEAL (MR 1 1/2")	39	LF

- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates location of clean expansion joint and install new joint seal
  - Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate
  - Indicates limits of remove existing 4" ac surfacing
  - ① Paint bridge name "S15-E60/N15-E60 SEPARATION" and paint "Br. No.56-0748F"
  - ② For approach roadway taper, see "ROADWAY PLANS"

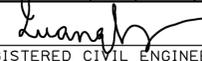
DESIGN ENGINEER 1-12-15

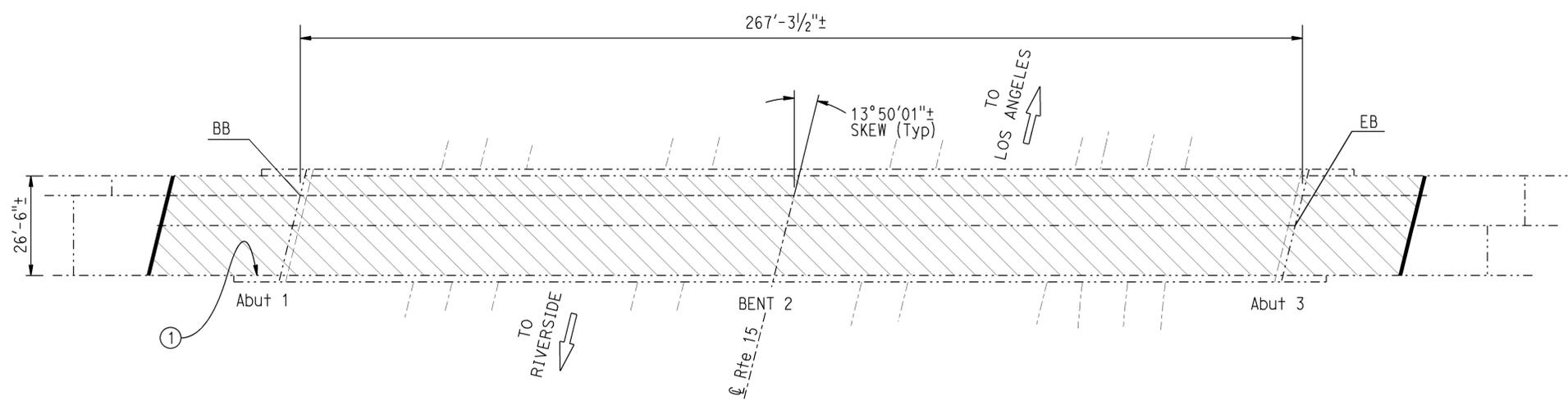
DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE No. VARIOUS  
 POST MILE VARIES  
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
**GENERAL PLAN No. 10**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	47	51
 REGISTERED CIVIL ENGINEER			DATE	1-12-15	
PLANS APPROVAL DATE			2-23-15		
REGISTERED PROFESSIONAL ENGINEER <b>QUANG VO</b> No. C55211 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA					
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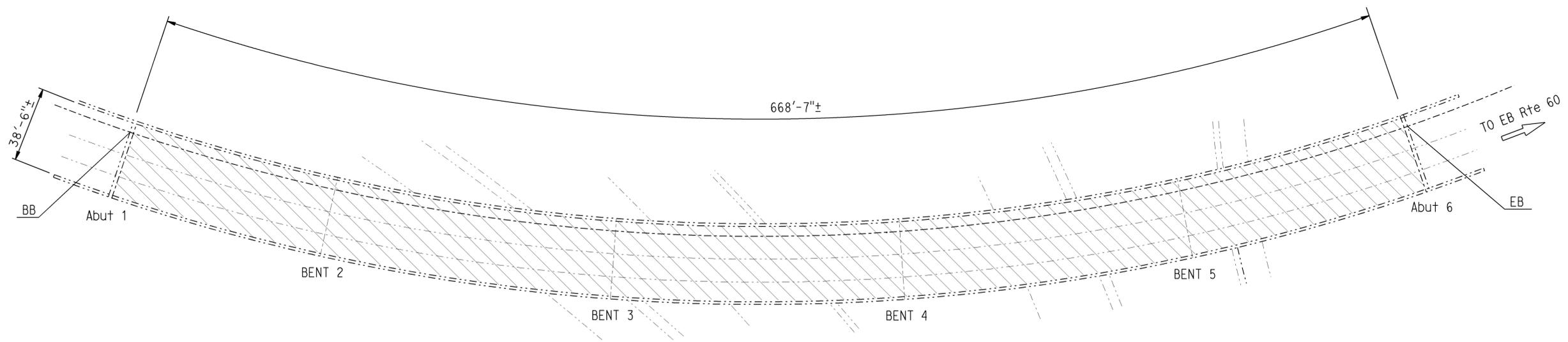
- NOTES: (APPLY TO THIS SHEET ONLY)**
-  Indicates location of clean existing joint seal and install new joint seal
  -  Indicates limits of prepare concrete bridge deck and treat bridge deck with high molecular weight methacrylate
  - ① Paint bridge name "N15 - W60 CONNECTOR SEPARATION" and paint "Br. No. 56-0691G"



**N15-W60 CONNECTOR SEPARATION**  
 Br No. 56-0691G, ROUTE 15, PM 51.45  
 1" = 20'

**QUANTITIES**

N15-W60 CONNECTOR SEPARATION	BR. NO. 56-0691G
PREPARE CONCRETE BRIDGE DECK SURFACE	8,674 SQFT
TREAT BRIDGE DECK	8,674 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	96 GAL
CLEAN EXPANSION JOINT	58 LF
PAINT BRIDGE NAME AND NUMBER	1 EA
JOINT SEAL (MR 1")	58 LF



**EB 60 TRUCK CONNECTOR**  
 Br No. 56-0806G, ROUTE 60, PM R12.27  
 1" = 30'

**QUANTITIES**

EB 60 TRUCK CONNECTOR	BR. NO. 56-0806G
PREPARE CONCRETE BRIDGE DECK SURFACE	25,741 SQFT
TREAT BRIDGE DECK	25,741 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	286 GAL

  
 DESIGN ENGINEER 1-12-15

DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO	LAYOUT	BY QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO	SPECIFICATIONS	BY XIAHONG LI
				CHECKED M. HASHIMOTO
				PLANS AND SPECS COMPARED XIAHONG LI

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

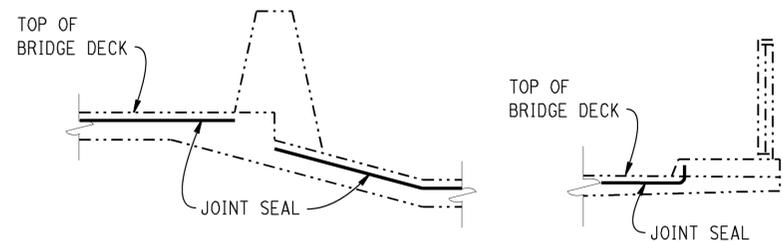
BRIDGE No.	VARIOUS
POST MILE	VARIES

**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
 GENERAL PLAN No. 11

JOINT SEAL TABLE							
BRIDGE NAME	BRIDGE NUMBER	LOCATION		MINIMUM "MR" (in)	APPROXIMATE LENGTH (ft)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (in)
CALIMESA BLVD OC	56-0483	BENT 3 **	EJ	1	41	NO	12
SINGLETON ROAD OC	56-0482	BENT 3 **	EJ	1/2	34	NO	12
CHERRY VALLEY BLVD OC	56-0481	BENT 3 **	EJ	1/2	48	NO	12
SAN TIMOTEO CANYON ROAD OC	56-0496	BENT 3 **	EJ	1	41	NO	12
CALIFORNIA AVENUE UC	56-0434	ABUT 1***	BB	1	87	NO	12
		ABUT 2***	EB	1	87	NO	12
EIO - E62 CONNECTOR	56-0474G	ABUT 1	BB	1/2	48	YES	6
		BENT 2	EJ	1/2	48	NO	7
		BENT 3	EJ	1	48	NO	7
		BENT 4	EJ	1	48	NO	7
		ABUT 5	EB	1/2	48	YES	6
RAMON ROAD OC	56-0471	ABUT 1	BB	1	70	NO	12
		BENT 3	EJ	1	70	YES	6
		ABUT 5	EB	1	70	NO	12
JEFFERSON STREET OC	56-0427	ABUT 1	BB	1/2	31	NO	12
		BENT 2	EJ	1/2	31	NO	6
		BENT 3	EJ	1	31	NO	6
		BENT 4	EJ	1/2	31	NO	6
		ABUT 5	EB	1/2	31	NO	12
THOUSAND PALMS WASH	56-0610R	ABUT 1***	BB	2	94	YES	6
		ABUT 1***	BW	2	94	YES	6
		HINGE***	H	2 1/2	88	NO	8
		ABUT 12***	BW	2	145	NO	6
GOLF CENTER PKWY OC	56-0614	SE WINGWALL	AJ	1/2	120	NO	5
		S15 - E60/N15 - E60 SEPARATION	56-0748F	ABUT 1	BB	1 1/2*	39
N15 - W60 CONNECTOR SEPARATION	56-0691G	ABUT 4	EB	1	39	YES	6
		ABUT 1	BB	1*	29	NO	12
ABUT 3	EB	1*	29	NO	12		

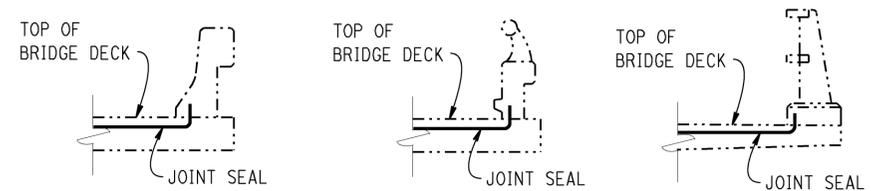
THE FOLLOWING NOTES APPLY TO JOINT SEAL TYPE B:

- SEAL MUST SATISFY BOTH MINIMUM MOVEMENT RATING (MR) AND MINIMUM W1 REQUIREMENTS.
- MINIMUM W1 IS THE CALCULATED MAXIMUM WIDTH OF THE JOINT BASED ON FIELD MEASUREMENTS. AFTER THE JOINTS HAVE BEEN CLEANED, MINIMUM W1 IS TO BE CALCULATED BY THE ENGINEER.
- W1 SHALL BE THE SMALLER OF THE VALUES DETERMINED AS FOLLOWS:
  - 0.85 TIMES THE MANUFACTURER'S DESIGNED MINIMUM UNCOMPRESSED WIDTH OF THE SEAL.
  - THE WIDTH OF THE SEAL ON THE THIRD SUCCESSIVE TEST CYCLE OF THE PRESSURE DEFLECTION TEST, WHEN COMPRESSED TO AN AVERAGE PRESSURE OF 3 PSI.
- BENT TYPE B JOINT SEAL 6" UP INTO CURB OR RAIL ON THE LOW SIDE OF THE DECK WHERE DECK JOINT MATCHES CURB OR RAIL JOINT.
- FOR DETAILS NOT SHOWN, SEE 



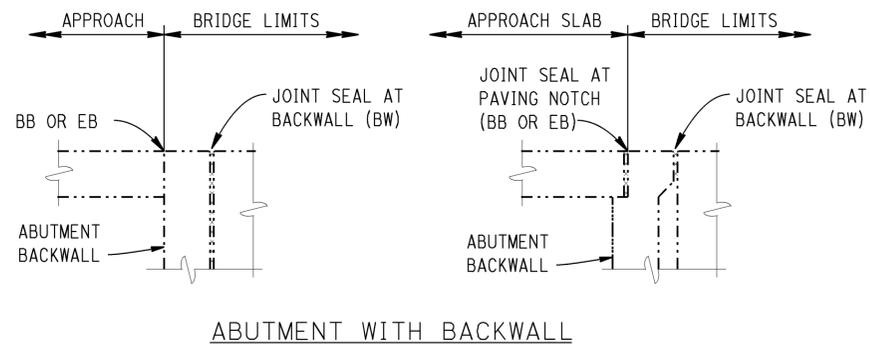
THE FOLLOWING NOTES APPLY TO JOINT SEAL TYPE A:

- BENT TYPE A JOINT SEAL 3" UP INTO CURB OR RAIL ON THE LOW SIDE OF THE DECK WHERE DECK JOINT MATCHES CURB OR RAIL JOINT.
- FOR DETAILS NOT SHOWN, SEE 



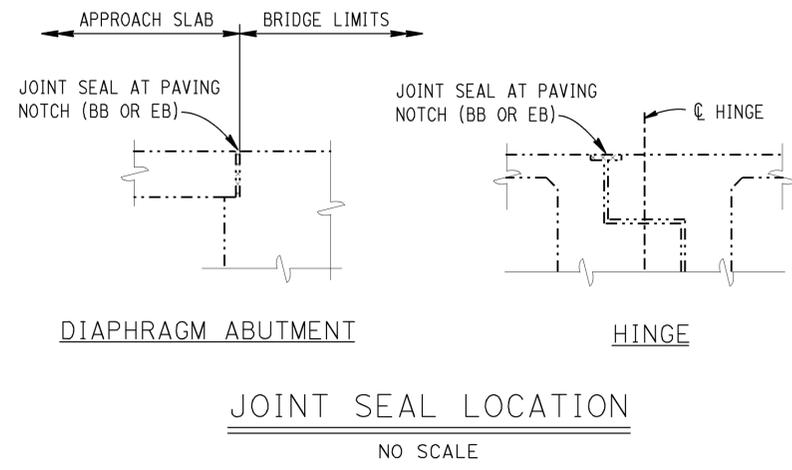
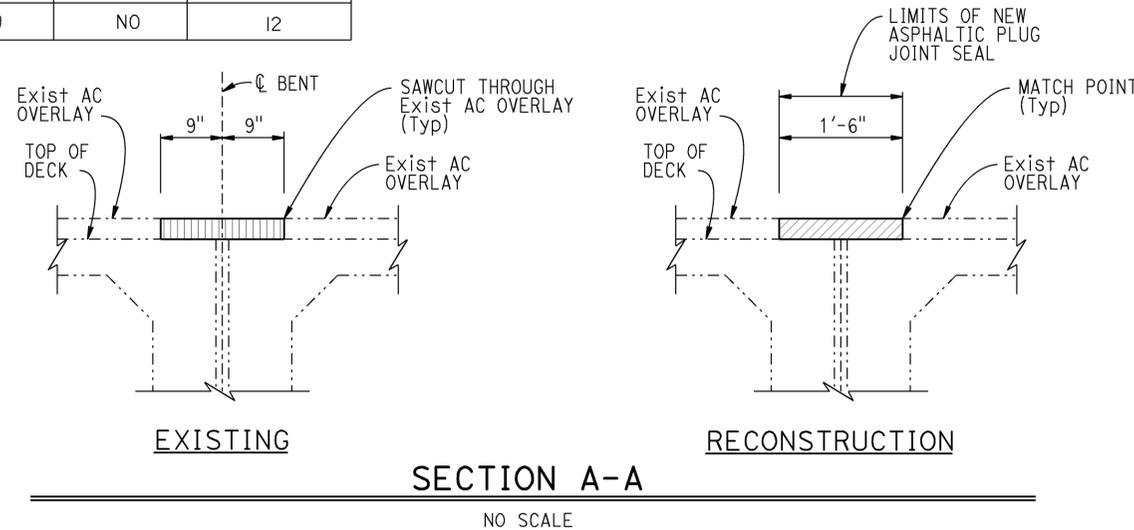
NOTES: (APPLY TO THIS SHEET ONLY)

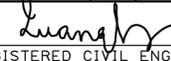
-  Indicates limits of remove existing ac surfacing.
-  Indicates limits of place new asphaltic plug joint seal

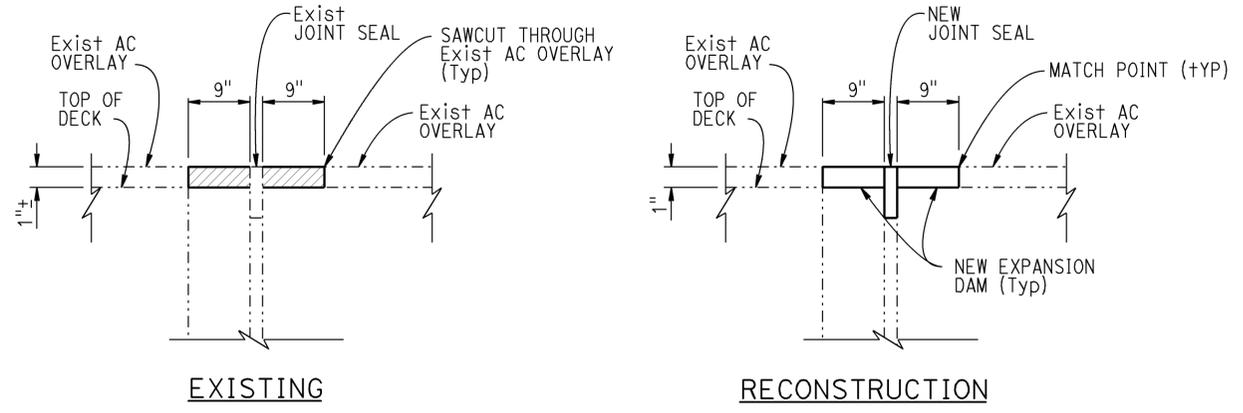


LEGEND:

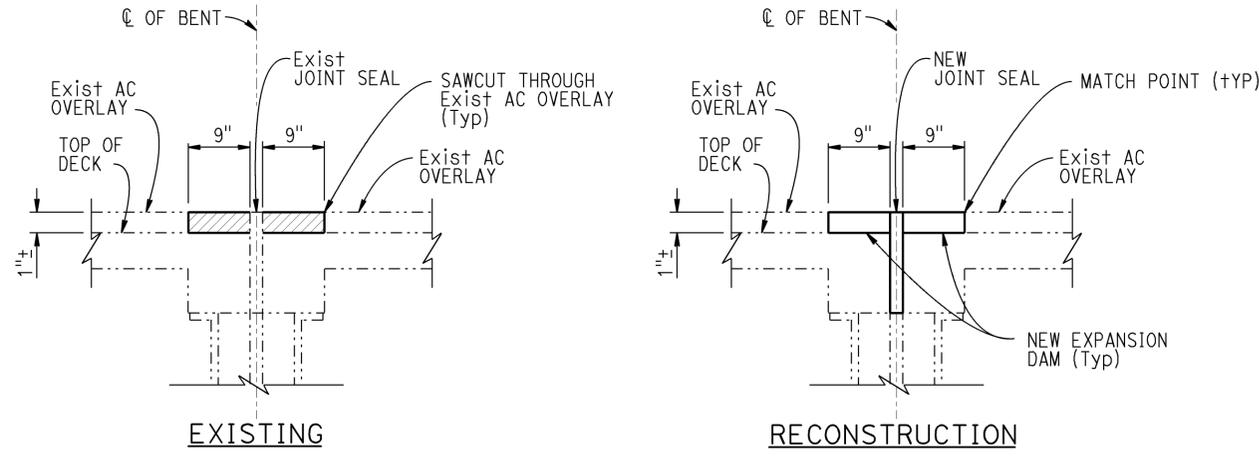
- AJ - APRON/WINGWALL JOINT SEAL
- BB - PAVING NOTCH AT BEGINNING OF BRIDGE
- BW - BACK WALL
- EB - PAVING NOTCH AT END OF BRIDGE
- EJ - EXPANSION JOINT AT PIER, BENT
- H - HINGE JOINT
- \* - USE TYPE B JOINT SEAL ONLY
- \*\* - ASPHALTIC PLUG JOINT SEAL
- \*\*\*- USE BONDED JOINT SEAL



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	49	51
			1-12-15		
REGISTERED CIVIL ENGINEER			DATE		
2-23-15			PLANS APPROVAL DATE		
					
<small>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.</small>					



**SECTION B-B**  
NO SCALE



**SECTION C-C**  
NO SCALE

NOTES: (APPLY TO THIS SHEET ONLY)

 Indicates limits of remove existing ac, overlay

DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO

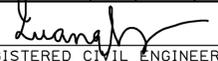
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

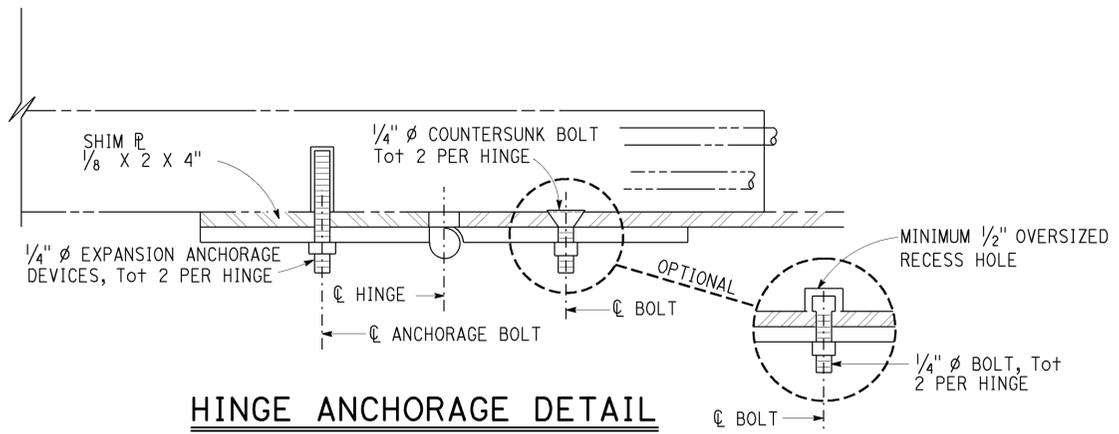
**DIVISION OF MAINTENANCE**  
**STRUCTURE MAINTENANCE DESIGN**

BRIDGE No.	VARIOUS
POST MILE	VARIES

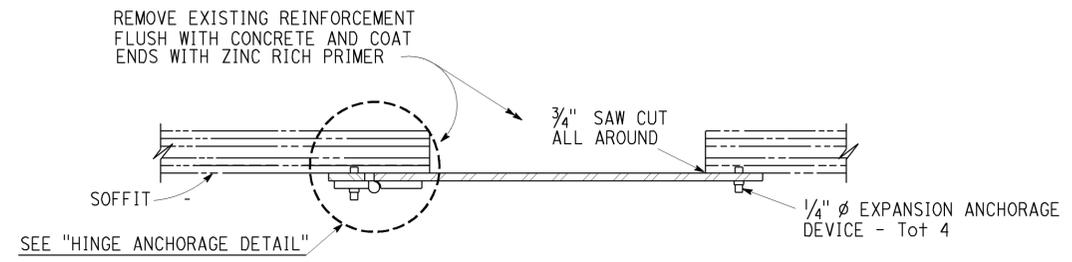
**ROUTE 10, 15, 60, 83, 215, BRIDGES**  
**JOINT SEAL DETAILS NO. 2**

USERNAME => s109618 DATE PLOTTED => 29-JAN-2015 TIME PLOTTED => 08:14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	50	51
 REGISTERED CIVIL ENGINEER DATE 1-12-15					
PLANS APPROVAL DATE 2-23-15					
<small>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.</small>					

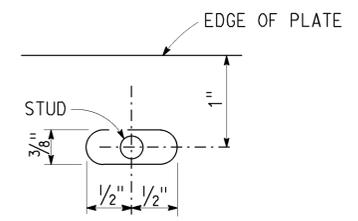


**HINGE ANCHORAGE DETAIL**

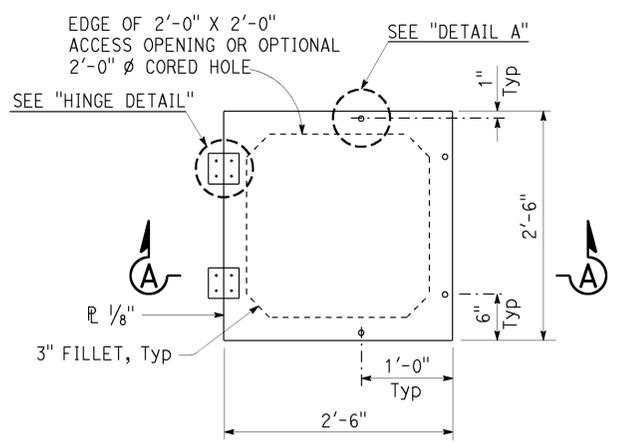


**SECTION A-A**

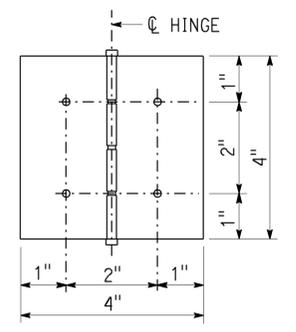
- NOTES:
1. Non-removable pin in hinge
  2. Hinge assembly to be galvanized, brass or stainless steel
  3. Use thread locking system for all hinge nuts
  4. Hinge assembly to be minimum 1/8" thick



**DETAIL A**



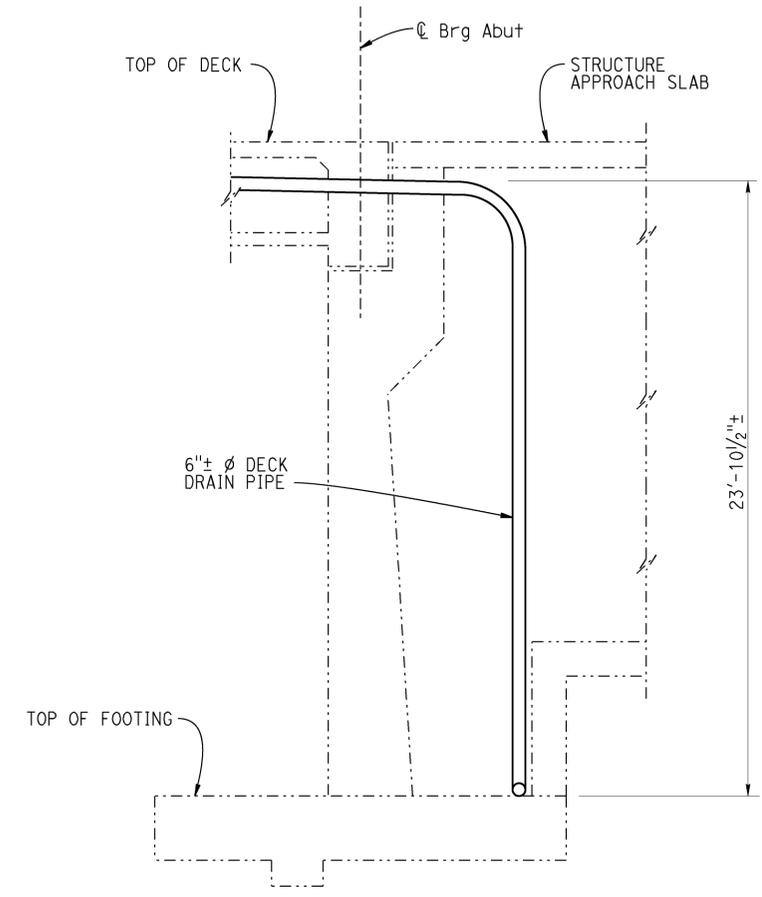
**PLAN**



**HINGE DETAIL**

**SOFFIT ACCESS DOOR ASSEMBLY**

NOTE: SOFFIT ACCESS DOOR OPENING DIRECTION TO BE DETERMINED BY THE ENGINEER



**RETAINING WALL ELEVATION**

NO SCALE

DESIGN	BY M. HASHIMOTO	CHECKED QUANG VO
DETAILS	BY ROB KIRKLAND	CHECKED QUANG VO
QUANTITIES	BY M. HASHIMOTO	CHECKED QUANG VO

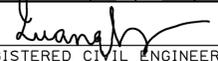
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

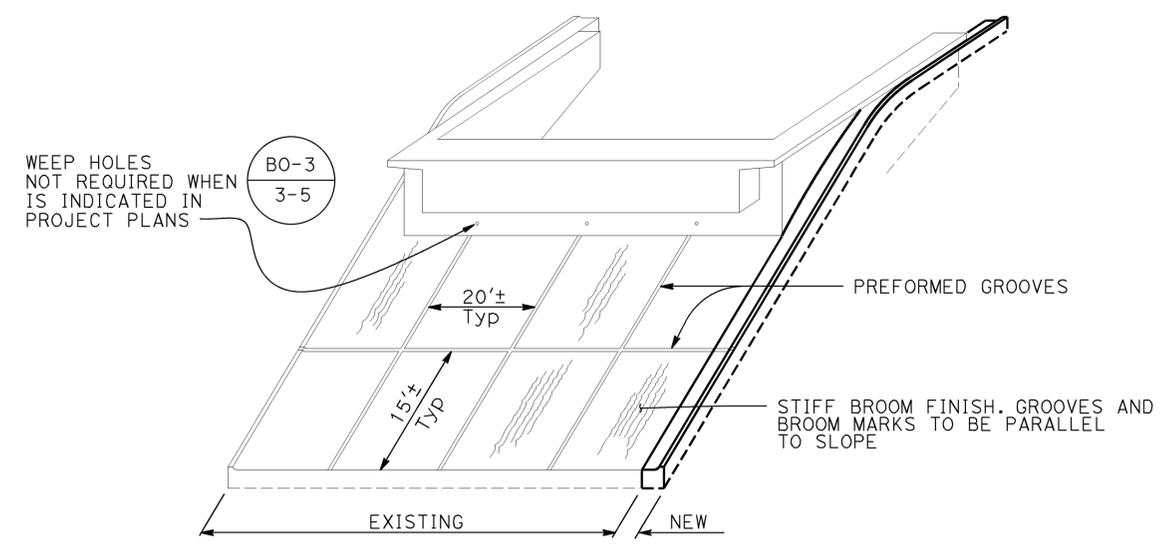
DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE No.	VARIOUS
POST MILE	VARIES

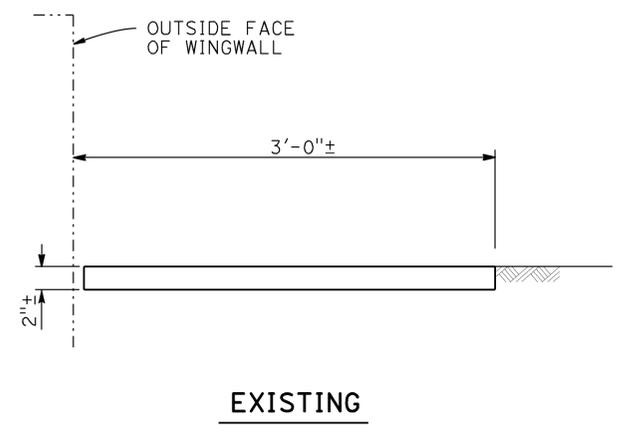
ROUTE 10, 15, 60, 83, 215, BRIDGES  
MISCELLANEOUS DETAILS

USERNAME => s109618 DATE PLOTTED => 29-JAN-2015 TIME PLOTTED => 08:15

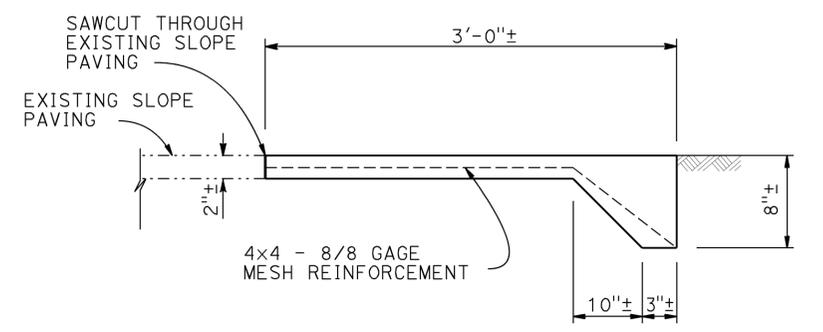
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 83, 215	Var	51	51
 REGISTERED CIVIL ENGINEER				1-12-15 DATE	
2-23-15 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



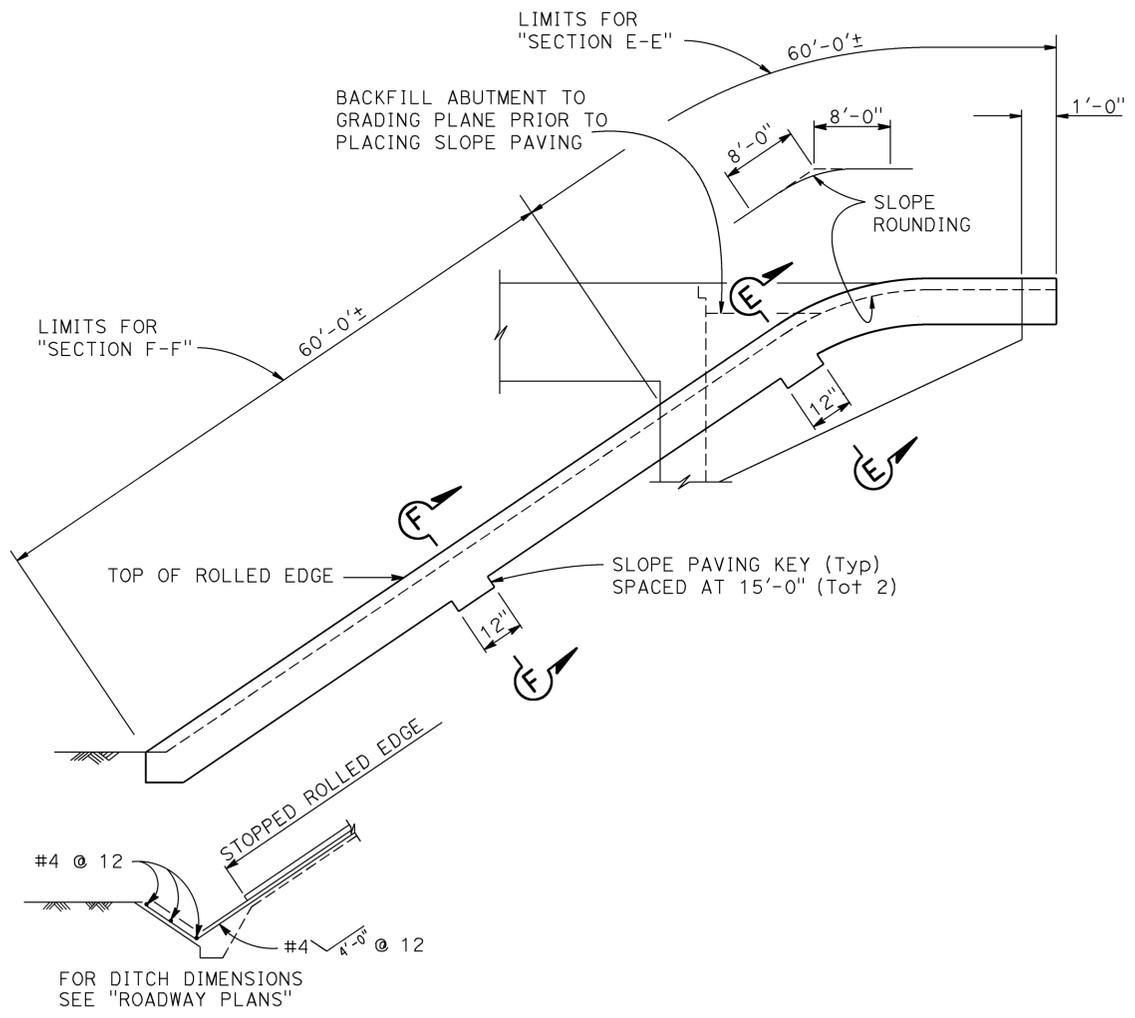
**PICTORIAL VIEW OF TYPICAL INSTALLATION**



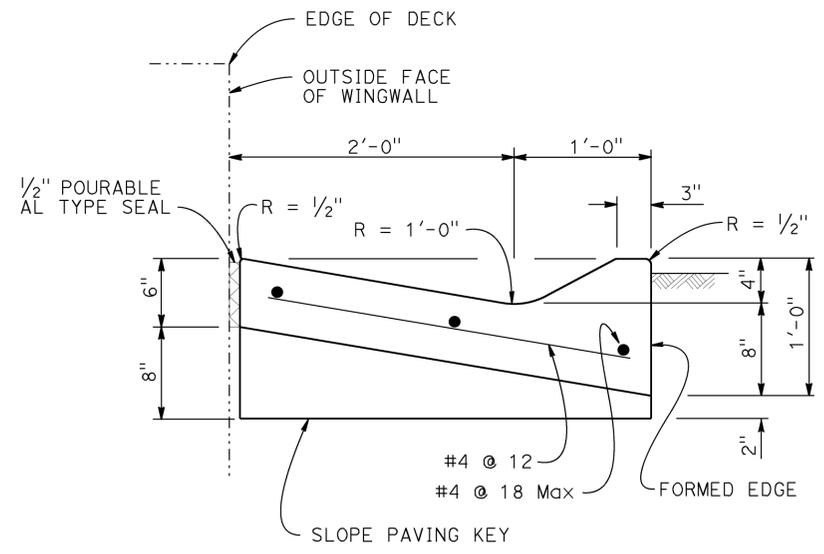
**EXISTING**



**EXISTING**

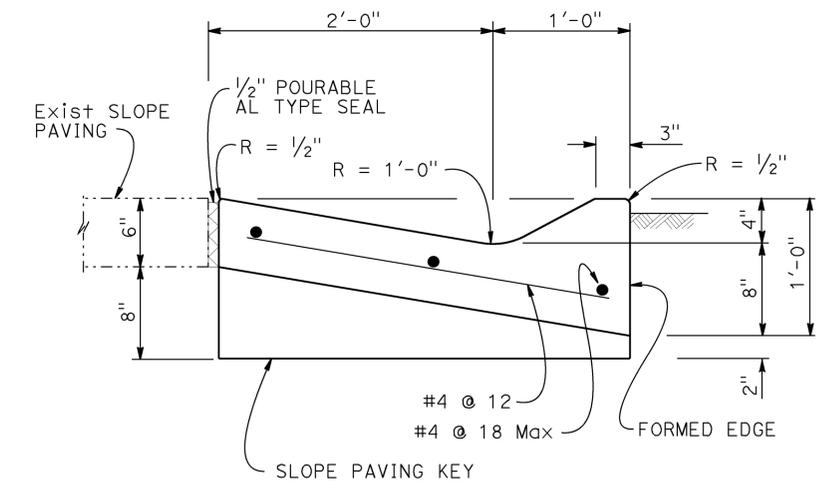


**WITH DITCH** **VIEW D-D**  
NO SCALE



**RECONSTRUCTION**

**SECTION E-E**  
NO SCALE



**RECONSTRUCTION**

**SECTION F-F**  
NO SCALE

DESIGN BY M. HASHIMOTO		CHECKED QUANG VO	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE No. VARIOUS	<b>ROUTE 10, 15, 60, 83, 215, BRIDGES</b> SLOPE PAVING DETAILS
DETAILS BY ROB KIRKLAND		CHECKED QUANG VO			POST MILE VARIES	
QUANTITIES BY M. HASHIMOTO		CHECKED QUANG VO			UNIT: 3488 PROJECT NUMBER & PHASE: 0814000021	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			CONTRACT NO.: 08-1E4301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES: 10-23-14, 12-04-14, 1-22-15	SHEET 15 OF 15

USERNAME => s109618 DATE PLOTTED => 29-JAN-2015 TIME PLOTTED => 08:15