

INDEX OF PLANS

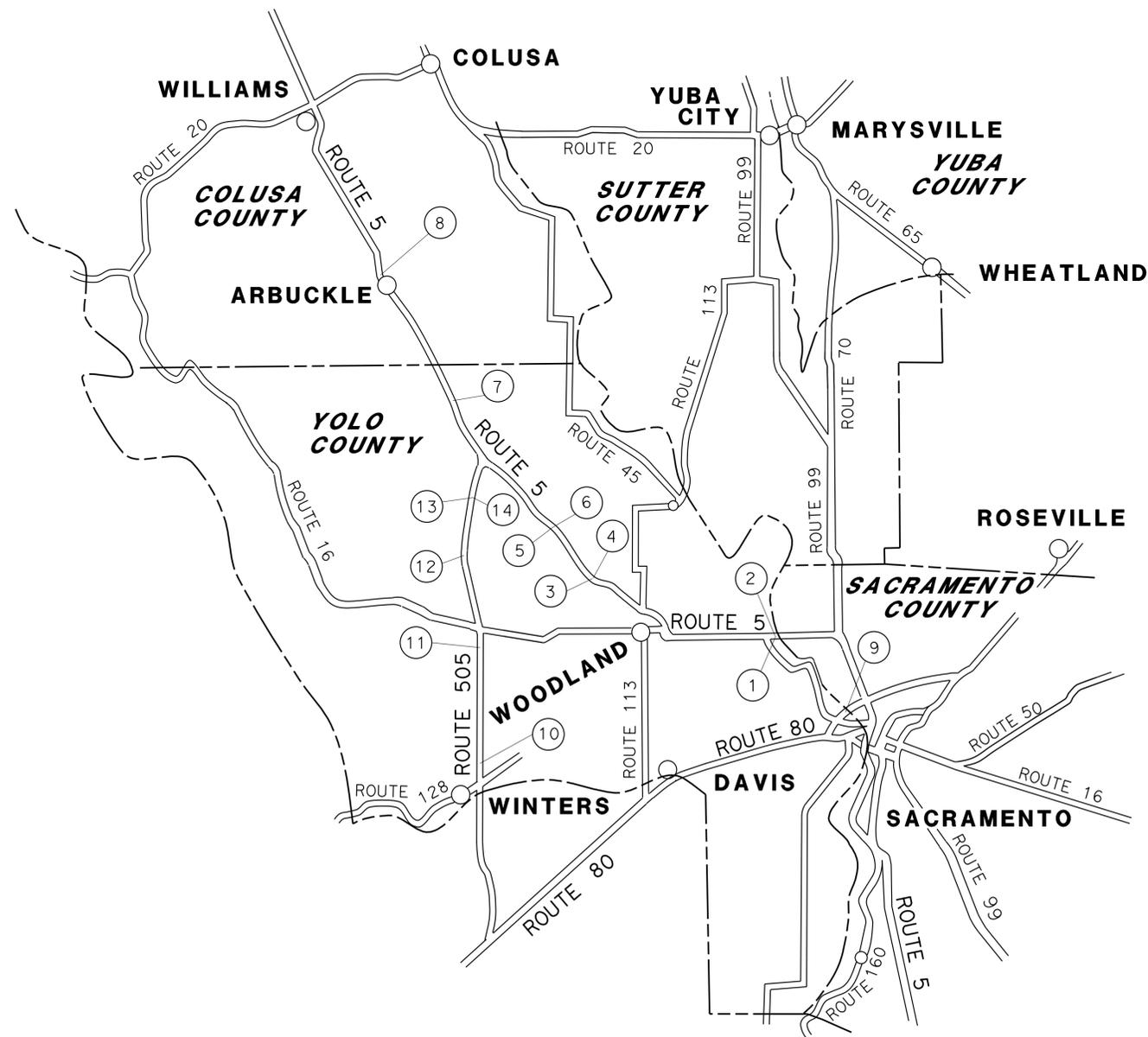
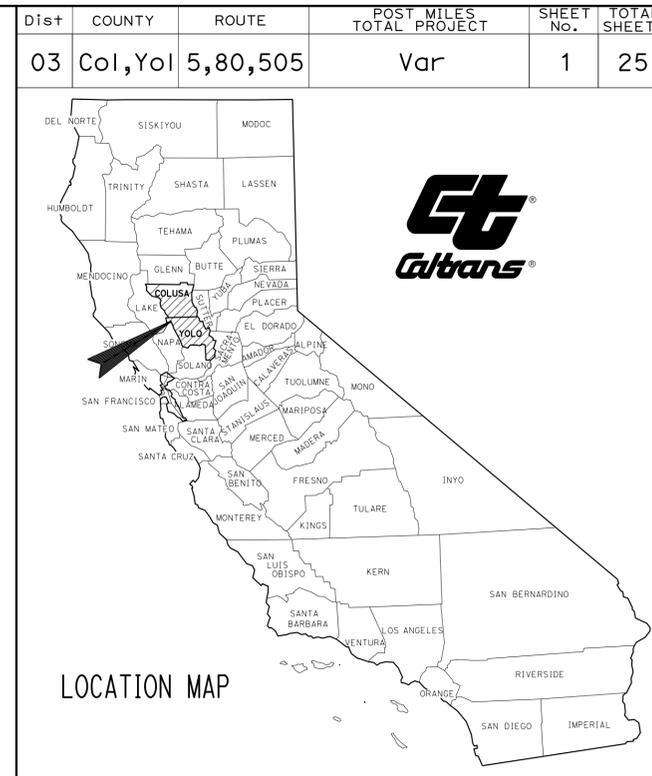
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	CONSTRUCTION DETAILS
3-4	CONSTRUCTION AREA SIGNS
5	PAVEMENT DELINEATION QUANTITIES
6-14	REVISED STANDARD PLANS

STRUCTURE PLANS  
15-25 ROUTE 5, 80 AND 505 BRIDGES

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

STATE OF CALIFORNIA **ACBHNH-000C(376)**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN COLUSA AND YOLO COUNTIES**  
**AT VARIOUS LOCATIONS**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATIONS OF CONSTRUCTION

No. (X)	COUNTY	ROUTE	POST MILE	BRIDGE NUMBER	STRUCTURE NAME
1	Yol	5	0.01	22-0025L	SACRAMENTO RIVER BR (ELKHORN)
2	Yol	5	0.01	22-0025R	SACRAMENTO RIVER BR (ELKHORN)
3	Yol	5	R11.44	22-0007L	CACHE CREEK
4	Yol	5	R11.45	22-0007R	CACHE CREEK
5	Yol	5	R16.74	22-0009L	SMITH CREEK
6	Yol	5	R16.74	22-0009R	SMITH CREEK
7	Yol	5	R26.65	22-0133	COUNTY ROAD 4 OC
8	Col	5	7.15	15-0046	HALL STREET OC
9	Yol	80	R11.31	22-0026R	SACRAMENTO RIVER BOH (BRYTE BEND)
10	Yol	505	2.50	22-0160	COUNTY ROAD 31 OC
11	Yol	505	9.52	22-0164	COUNTY ROAD 24 OC
12	Yol	505	15.62	22-0168	COUNTY ROAD 16 OC
13	Yol	505	20.11	22-0166R	COUNTY ROAD 12 UC
14	Yol	505	20.11	22-0166L	COUNTY ROAD 12 UC

PROJECT MANAGER  
DOUG H. LANGE  
 DESIGN ENGINEER  
RONALD S. SYKES

  
 PROJECT ENGINEER  
 REGISTERED CIVIL ENGINEER  
 DATE 4-4-14



April 7, 2014  
 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

DATE PLOTTED => 05-JUN-2014  
 TIME PLOTTED => 08:48  
 LAST REVISION: 00-00-00

**LEGEND**

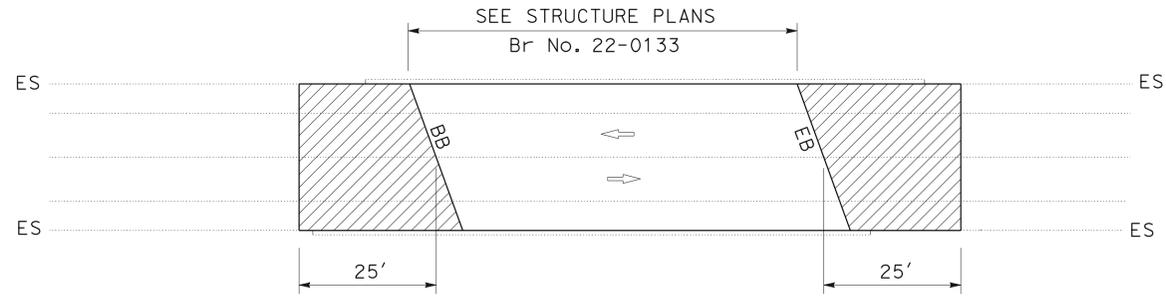
 COLD PLANE AC Pvmt  
 GRIND Exist Conc Pvmt  
 DIRECTION OF TRAFFIC

**NOTES:**

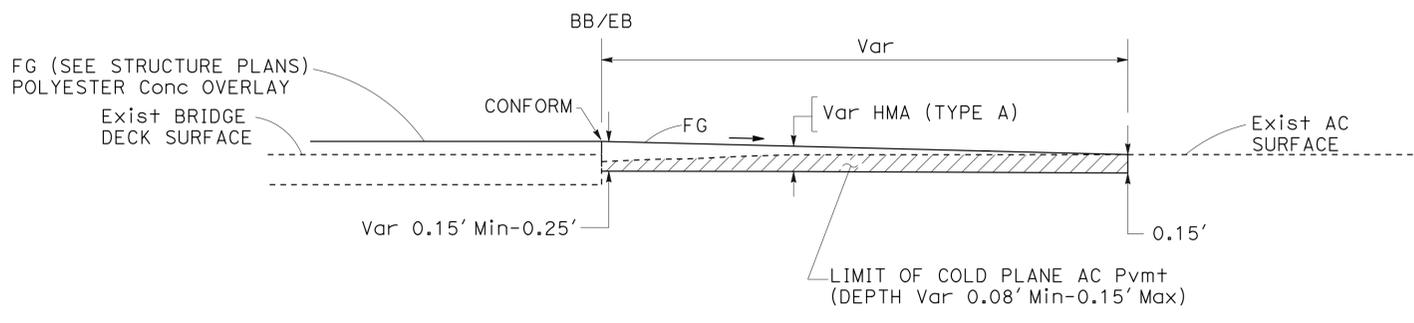
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR DETAILS NOT SHOWN SEE STRUCTURE PLANS.

**ROADWAY QUANTITIES**

LOCATION No.	BRIDGE No.	STRUCTURE NAME	HMA (TYPE A)	COLD PLANE ASPHALT CONCRETE PAVEMENT	GRIND EXISTING CONCRETE PAVEMENT
			TON	SQYD	SQYD
1	22-0025L	SACRAMENTO RIVER BR (ELKHORN)	18	125	
2	22-0025R	SACRAMENTO RIVER BR (ELKHORN)	18	125	
5	22-0009L	SMITH CREEK	92		430
7	22-0133	COUNTY ROAD 4 OC	26	190	
<b>TOTAL</b>			154	440	430

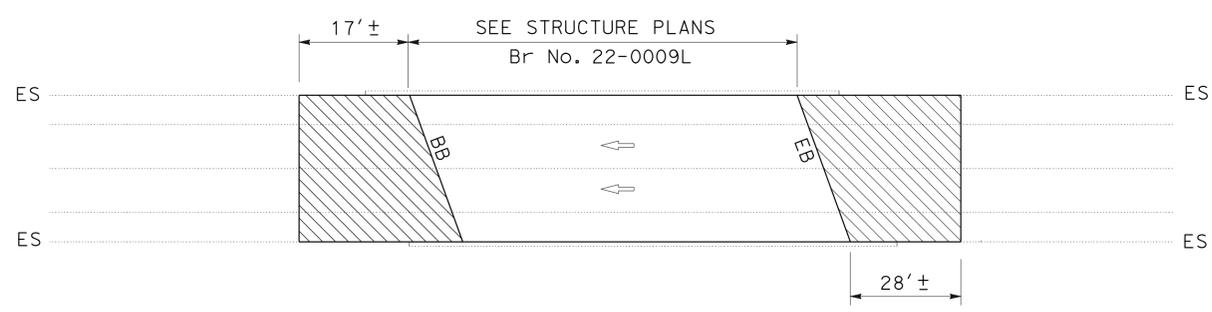


PLAN

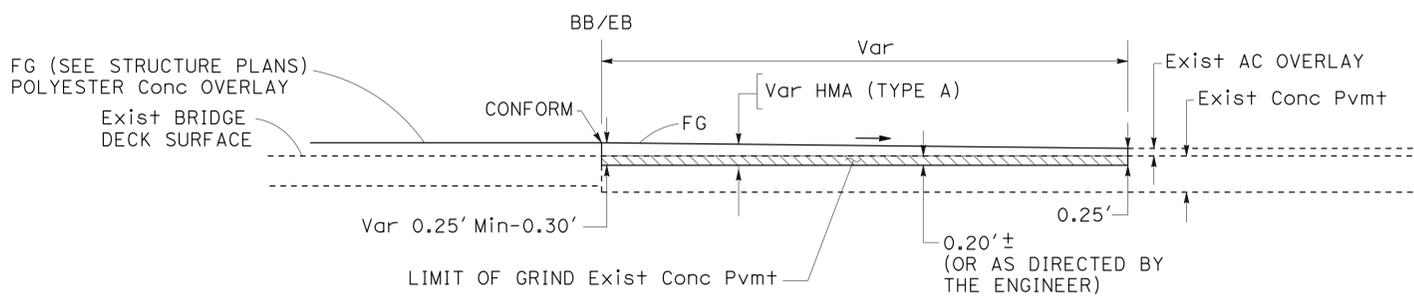


PROFILE

**LOCATION 7**

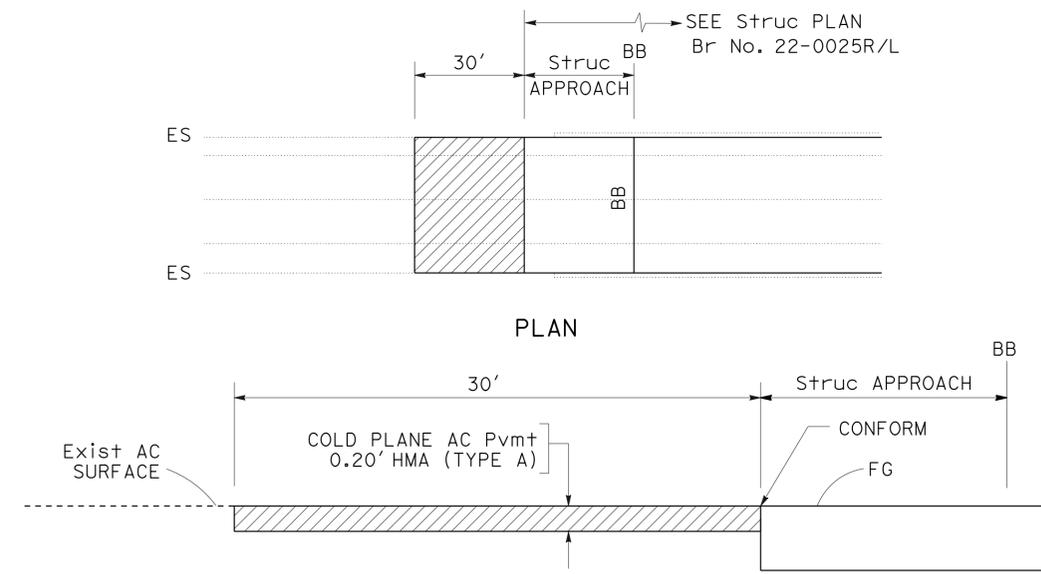


PLAN



PROFILE

**LOCATION 5**



PLAN

PROFILE

**LOCATION 1 AND 2**

NOTE: RIGHT BRIDGE SHOWN, LEFT BRIDGE SYMMETRICAL

**PAVEMENT CONFORM AT BRIDGE APPROACH**

**CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES**

NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION MAINTENANCE  
 FUNCTIONAL SUPERVISOR RONALD S. SYKES  
 CALCULATED/DESIGNED BY CHECKED BY  
 SHAHRAM RAISI DAVID LAMB  
 REVISED BY DATE REVISED  
 USERNAME => s119538  
 DGN FILE => 0313000030ga001.dgn



UNIT 0484

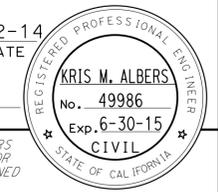
PROJECT NUMBER & PHASE

03130000301

BORDER LAST REVISED 7/2/2010

LAST REVISION DATE PLOTTED => 05-JUN-2014  
 00-00-00 TIME PLOTTED => 08:49

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5,80,505	Var	3	25
<i>Kris M. Albers</i> REGISTERED CIVIL ENGINEER			4-2-14	DATE	
PLANS APPROVAL DATE			4-7-14		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



**NOTES:**

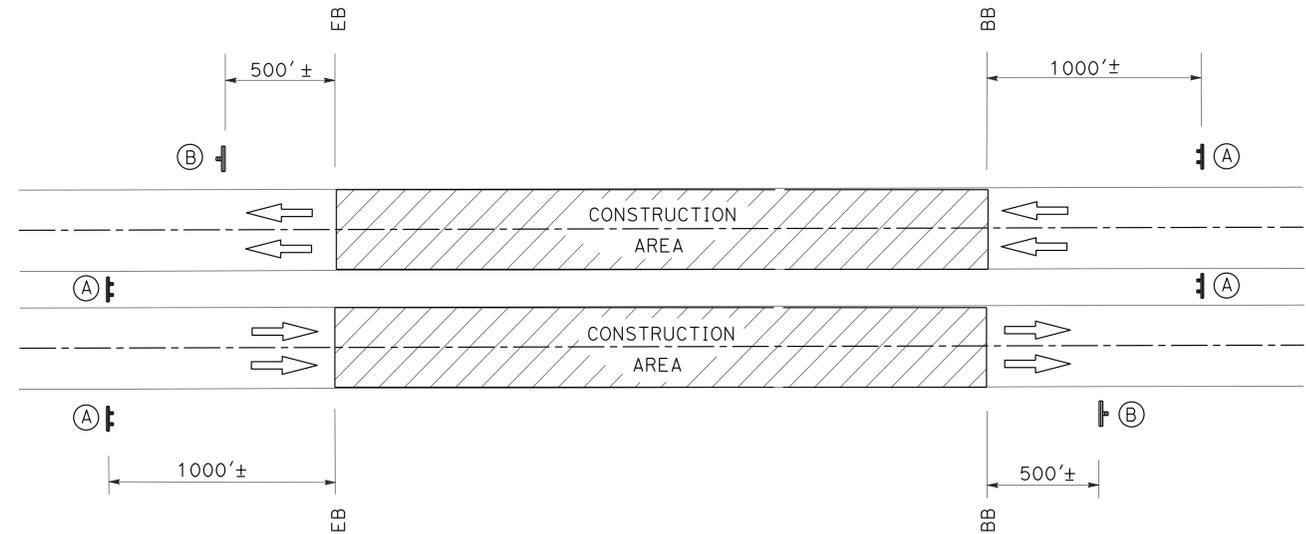
1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

**LEGEND:**

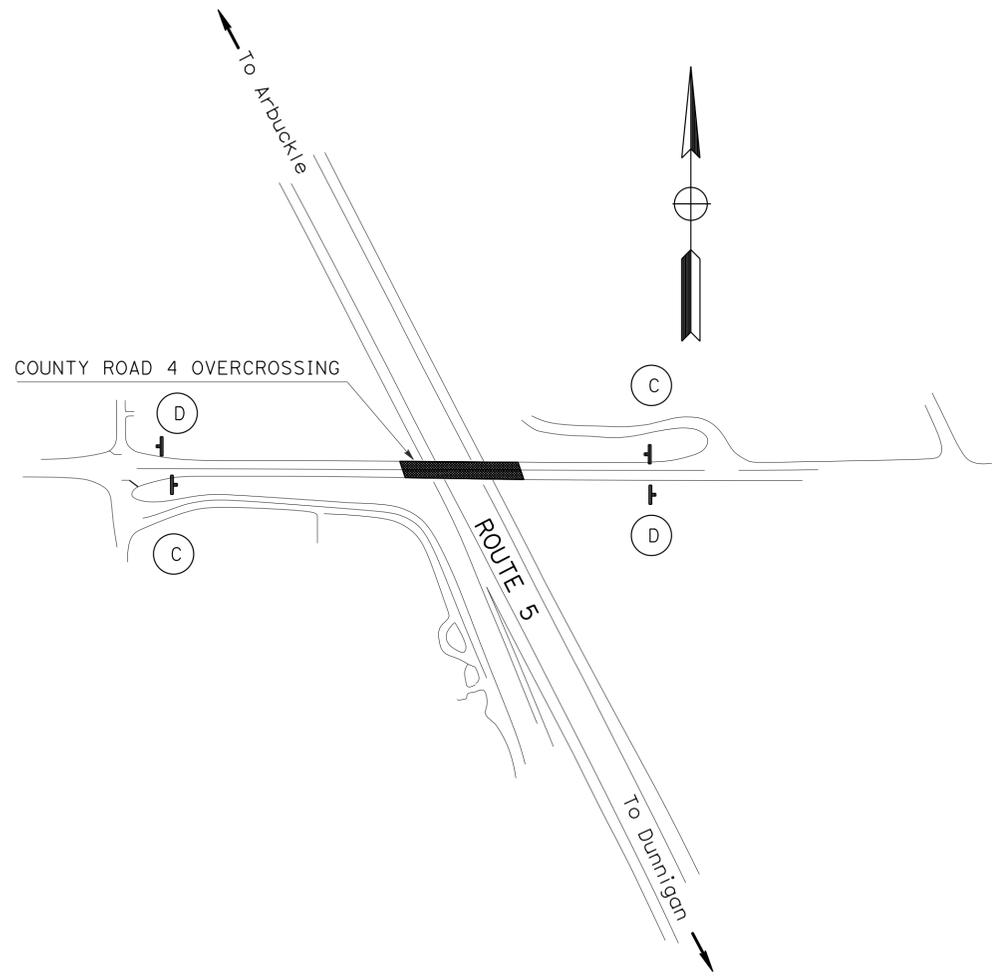


**CONSTRUCTION AREA SIGNS  
(STATIONARY MOUNTED)**

SIGN No.	TYPE	PANEL SIZE INCHES	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
(A)	W20-1	60" x 60"	ROAD WORK AHEAD	2 - 4" x 6"	16
(B)	C14(CA)	48" x 24"	END ROAD WORK	1 - 4" x 6"	8
(C)	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	12
(D)	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	12



LOCATIONS 1, 2, 3, 5, 6, 9, 13 AND 14



**LOCATION 7**

Yol Rte 5 PM 26.65

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 TRAFFIC  
 Et Caltrans  
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES  
 CALCULATED/DESIGNED BY: JACK KEMMERLY  
 CHECKED BY: KRIS ALBERS  
 REVISED BY: DATE REVISIONS  
 USERNAME => s119538  
 DGN FILE => 03130000301a001.dgn  
 BORDER LAST REVISED 7/2/2010  
 RELATIVE BORDER SCALE 1/8" = 1'-0" IN INCHES  
 UNIT 0390  
 PROJECT NUMBER & PHASE 03130000301

LAST REVISION DATE PLOTTED => 05-JUN-2014  
 04-04-14 TIME PLOTTED => 08:49



**PAVEMENT DELINEATION QUANTITIES**

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE			4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	
	DETAIL 25	DETAIL 27B	DETAIL 22	DETAIL 12	DETAIL 14A
	LF	LF	LF	LF	LF
1-Yol-5,Br No.22-0025L	3720	3720		3576	144
2-Yol-5,Br No.22-0025R	3720	3720		3432	288
3-Yol-5,Br No.22-0007L	231	231		231	
5-Yol-5,Br No.22-0009L	128	128		128	
6-Yol-5,Br No.22-0009R	83	83		83	
7-Yol-5,Br No.22-0133		600	600		
10-Yol-505,Br No.22-0160		394	394		
11-Yol-505,Br No.22-0164		394	394		
12-Yol-505,Br No.22-0168		444	444		
13-Yol-505,Br No.22-0166R	97	97		97	
14-Yol-505,Br No.22-0166L	97	97		97	
<b>SUBTOTAL</b>	8076	9908	1,832	8016	432
<b>TOTAL</b>		19,816		8076	

**PAVEMENT MARKER**

DETAIL NUMBER	RETROREFLECTIVE			
	TYPE D	TYPE G	TYPE H	TYPE C
	EA	EA	EA	
12		157		
25			169	
22	78			
14A				12
<b>SUBTOTAL</b>	78	157	169	12
<b>TOTAL</b>	416			

**REMOVE THERMOPLASTIC TRAFFIC STRIPE**

LOCATION	DESCRIPTION	
	EDGE LINE	LANE LINE
	LF	LF
5	83	24
10	394	
11	394	
12	444	
13	97	24
14	97	24
<b>SUBTOTAL</b>	1509	72
<b>TOTAL</b>	1581	

**REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)**

LOCATION	DESCRIPTION	
	CENTERLINE	LEFT EDGE LINE
	LF	LF
5		83
10	394	
11	394	
12	444	
13		97
14		97
<b>SUBTOTAL</b>	1232	277
<b>TOTAL</b>	1509	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col,Yol	5,80,505	Var	5	25

*Kris M. Albers* 4-2-14  
 REGISTERED CIVIL ENGINEER DATE

4-7-14  
 PLANS APPROVAL DATE

*Kris M. Albers*  
 No. 49986  
 Exp. 6-30-15  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES  
 CALCULATED/DESIGNED BY: JACK KEMMERLY  
 CHECKED BY: KRIS ALBERS  
 REVISOR: KRIS ALBERS  
 DATE REVISED: 7/2/2010

**PAVEMENT DELINEATION QUANTITIES**

**PDQ-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5,80,505	Var	6	25

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 4-7-14

**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
∅	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.

**REVISED STANDARD PLAN RSP A10B**

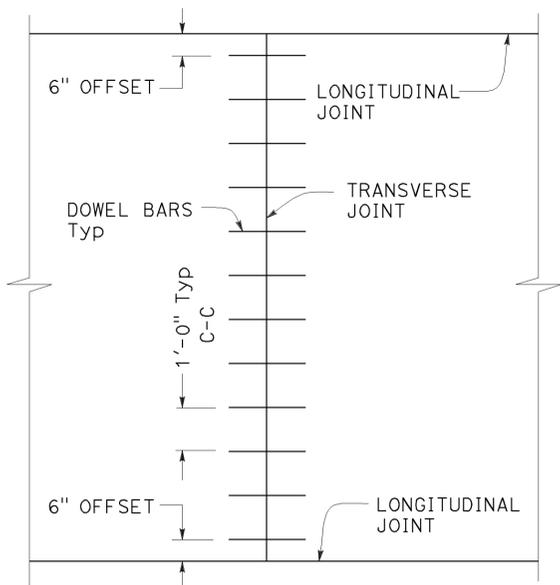
	<b>M</b>
Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE 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

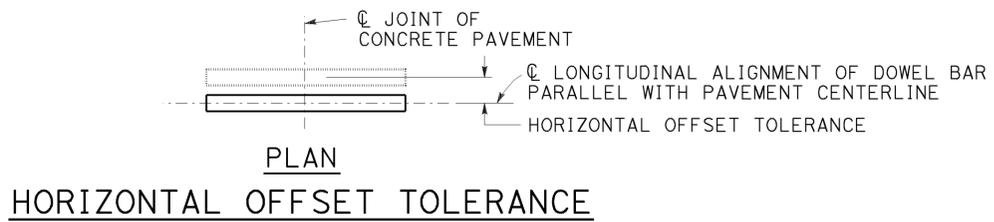
	<b>S</b>
S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
ℒ	STATION LINE
SM	SELECTED 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

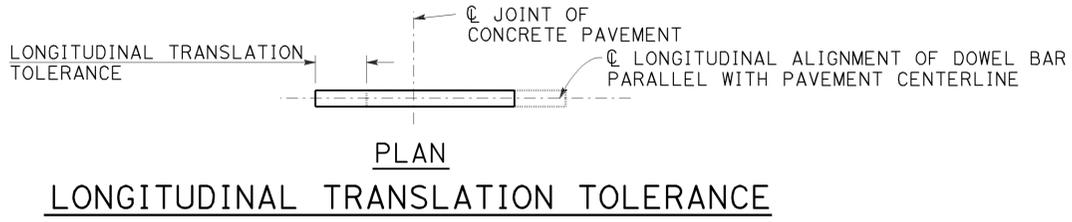
2010 REVISED STANDARD PLAN RSP P10



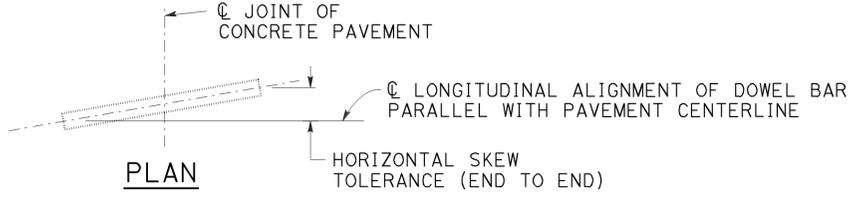
**TRANSVERSE JOINT  
DOWEL BAR LAYOUT**



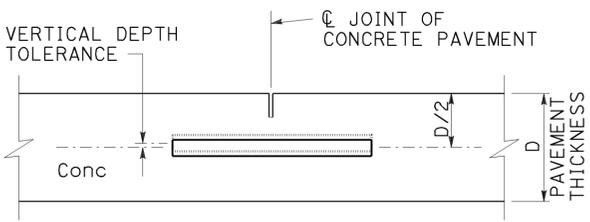
**PLAN  
HORIZONTAL OFFSET TOLERANCE**



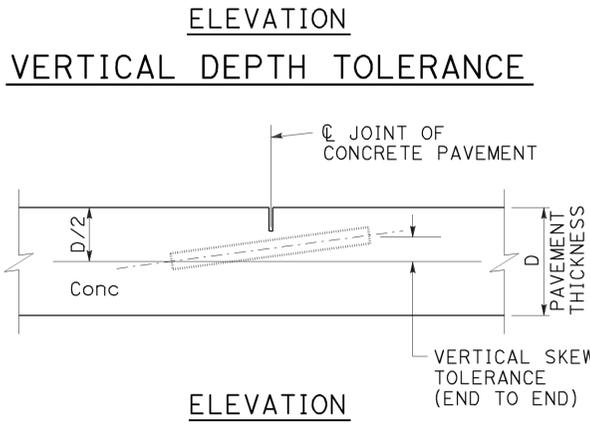
**PLAN  
LONGITUDINAL TRANSLATION TOLERANCE**



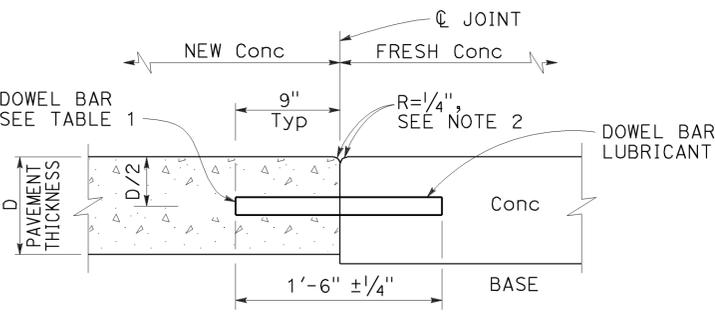
**PLAN  
HORIZONTAL SKEW TOLERANCE**



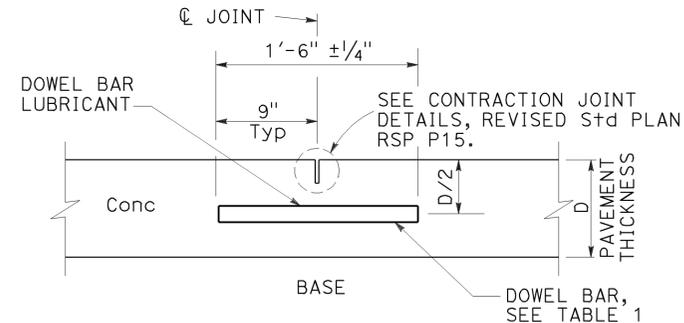
**ELEVATION  
VERTICAL DEPTH TOLERANCE**



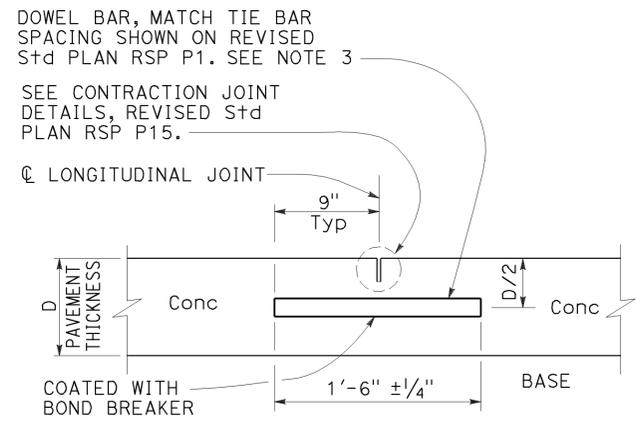
**ELEVATION  
VERTICAL SKEW TOLERANCE**



**TRANSVERSE  
CONSTRUCTION JOINT DETAIL**



**TRANSVERSE CONTRACTION JOINT**

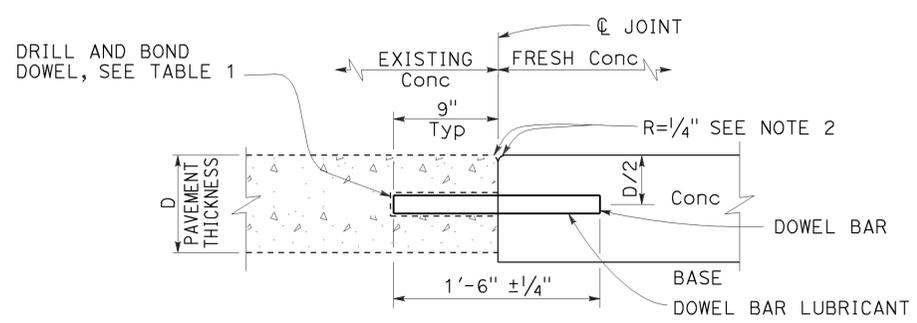


**LONGITUDINAL CONTRACTION  
JOINT WITH DOWEL BARS**  
See Revised Std Plan RSP P18

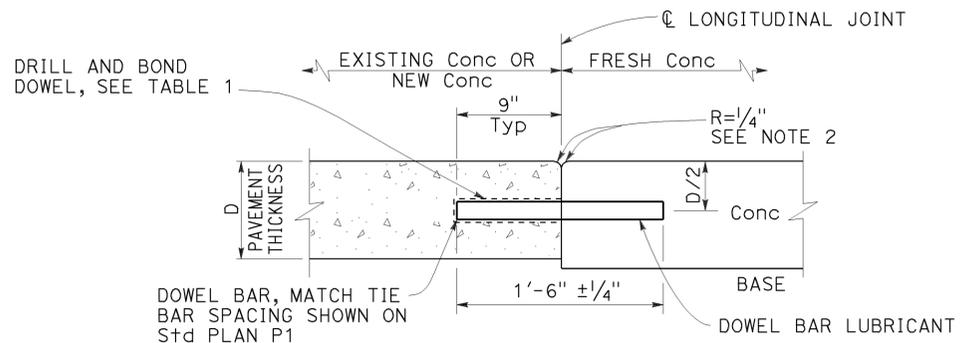
**TABLE 1  
DOWEL BAR DIAMETER TABLE**

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

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



**TRANSVERSE CONSTRUCTION JOINT  
FOR EXISTING CONCRETE PAVEMENT**



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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT  
DOWEL BAR  
DETAILS**  
NO SCALE

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5, 80, 505	Var	8	25

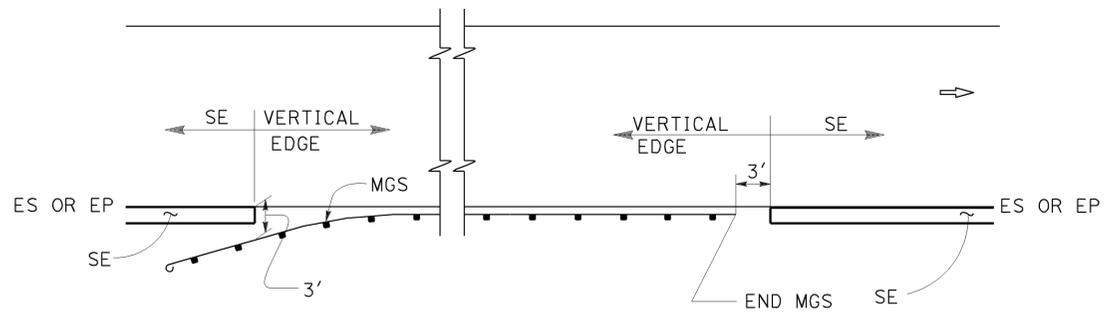
REGISTERED CIVIL ENGINEER  
 November 15, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Cornelis M. Hakim  
 No. C55610  
 Exp. 12-31-14  
 CIVIL  
 STATE OF CALIFORNIA

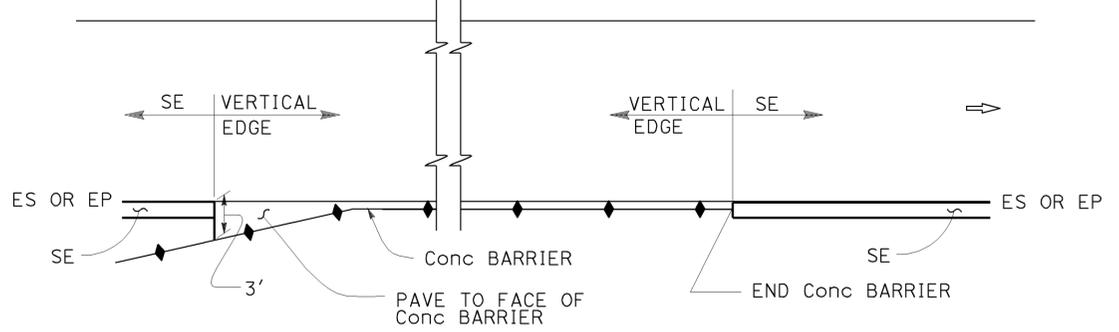
TO ACCOMPANY PLANS DATED 4-7-14

**ABBREVIATIONS:**

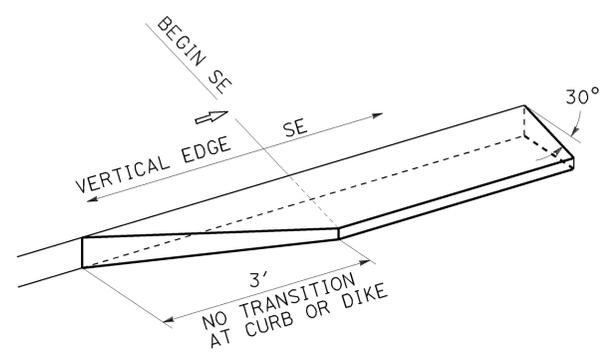
SE SAFETY EDGE



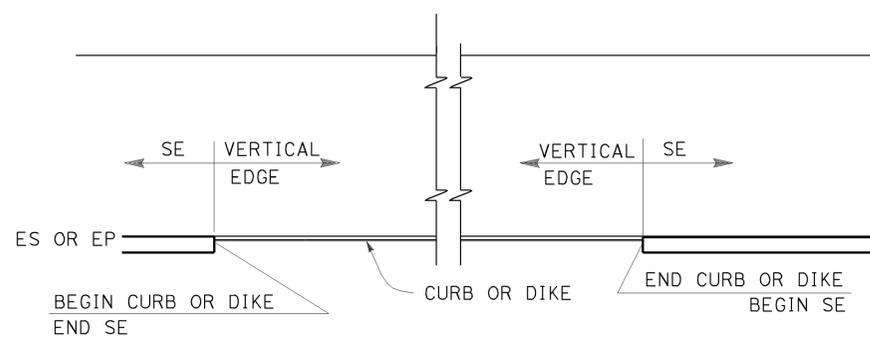
**MGS**



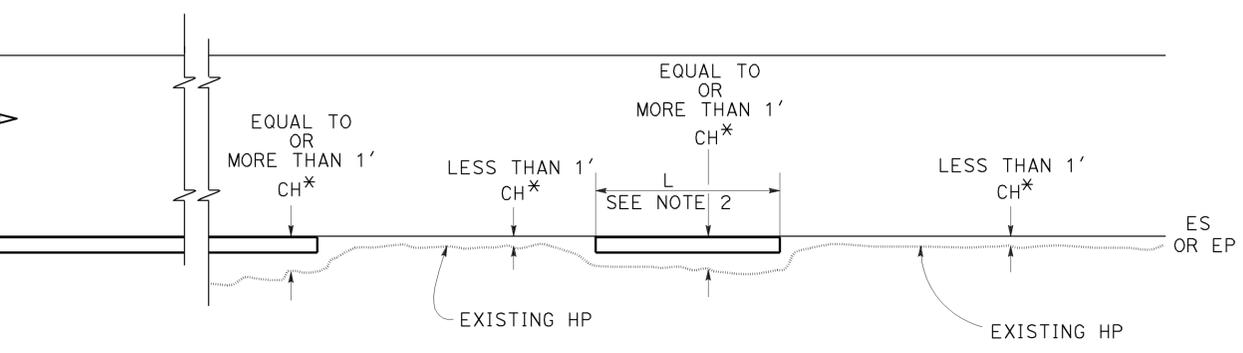
**CONCRETE BARRIER**



**TRANSITION DETAIL FOR CONCRETE ONLY**

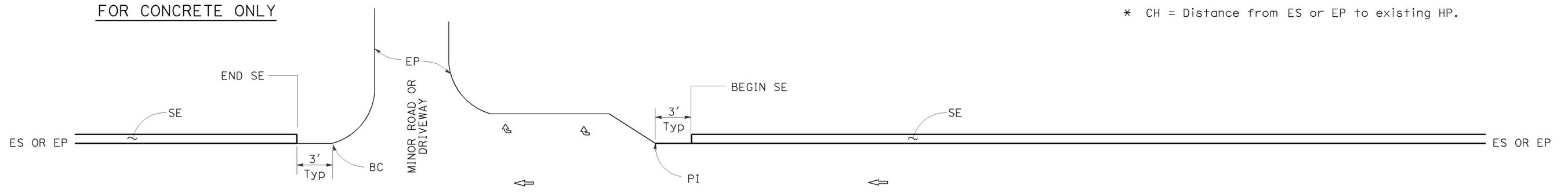


**CURB OR DIKE**



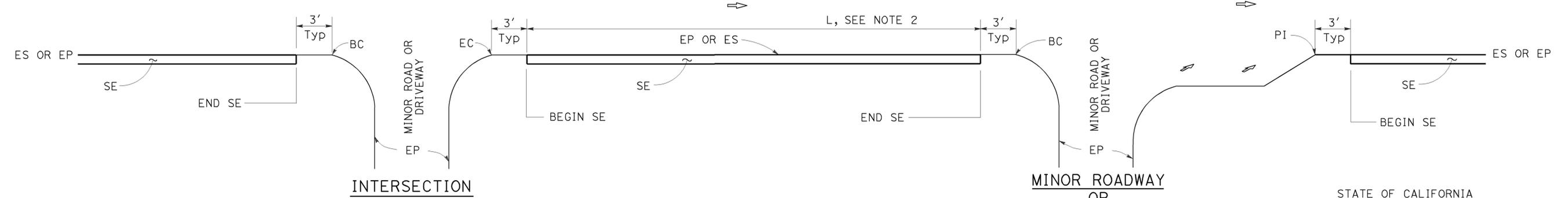
**NARROW SIDE SLOPE**

\* CH = Distance from ES or EP to existing HP.



**STATE ROUTE**

**STATE ROUTE**



**INTERSECTION**

**DRIVEWAY AND INTERSECTION**

**MINOR ROADWAY OR DRIVEWAY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT EDGE TREATMENTS**

NO SCALE

**NOTES:**

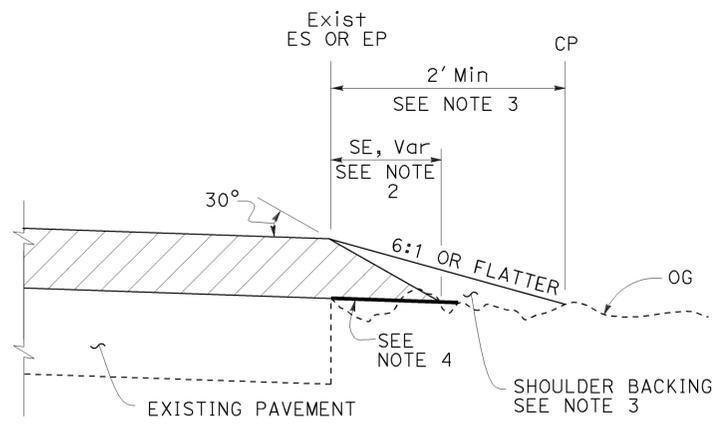
1. For details not shown, see Revised Standard Plans RSP P75 and RSP P76.
2. Safety edge is optional when L is less than 30'.

RSP P74 DATED NOVEMBER 15, 2013 SUPERSEDES RSP P74 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

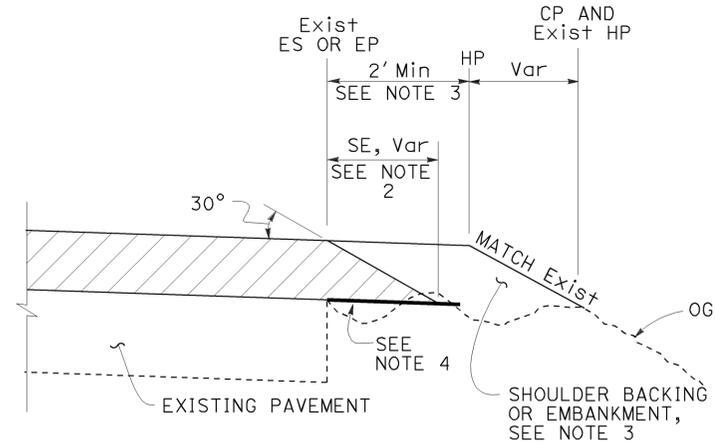
**REVISED STANDARD PLAN RSP P74**

2010 REVISED STANDARD PLAN RSP P74

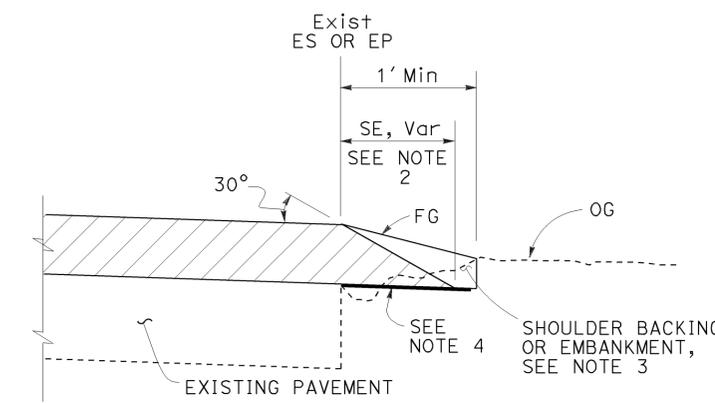
2010 REVISED STANDARD PLAN RSP P75



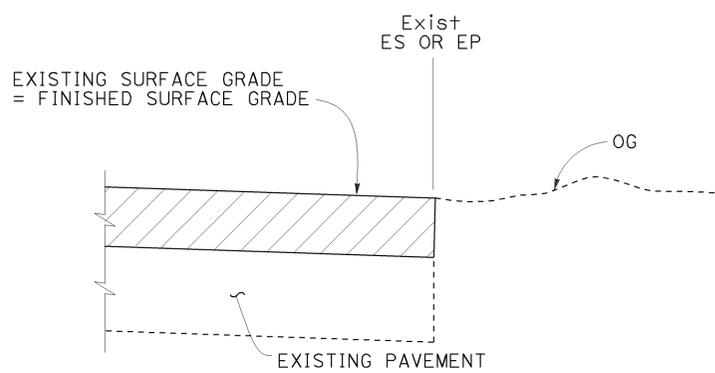
**CASE A**  
Safety Edge



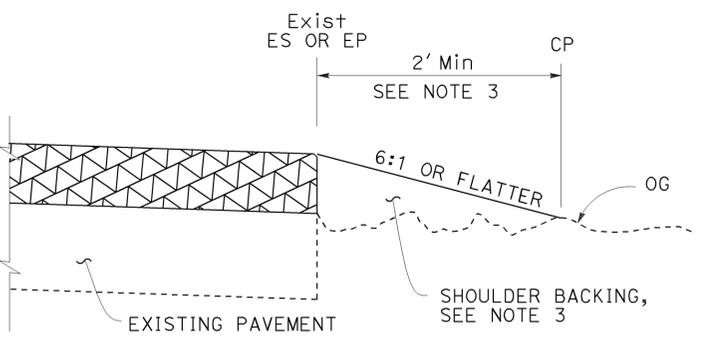
**CASE B**  
Safety Edge



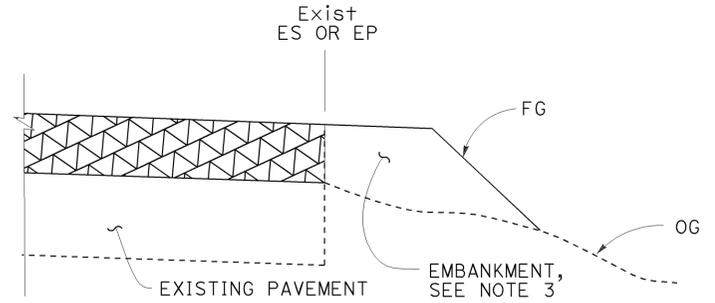
**CASE C**  
Safety Edge



**CASE D**  
Vertical Edge



**CASE E**  
Vertical Edge



**CASE F**  
Vertical Edge  
\* See Table A and Revised Std Plan RSP P74

- NOTES:**
- For limits of safety edge and vertical edge treatments, see Revised Standard Plan RSP P74.
  - Details shown for HMA overlay thickness less than 0.43'. See Detail "A" for HMA overlay thickness more than 0.43' or concrete overlay.
  - For locations and limits of shoulder backing or embankment see project plans.
  - Grade existing ground to place safety edge. 1' minimum width
  - Safety edge transverse joint must match overlay transverse joint. End of #6 longitudinal bar must be 2" ± 1/2" clear from transverse joint.
  - Safety edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Revised Standard Plan RSP P74.

**LEGEND:**

- HMA OVERLAY
- HMA OR CONCRETE OVERLAY
- CONCRETE OVERLAY

**ABBREVIATIONS:**

- SE SAFETY EDGE
- TT TOTAL THICKNESS OF SE

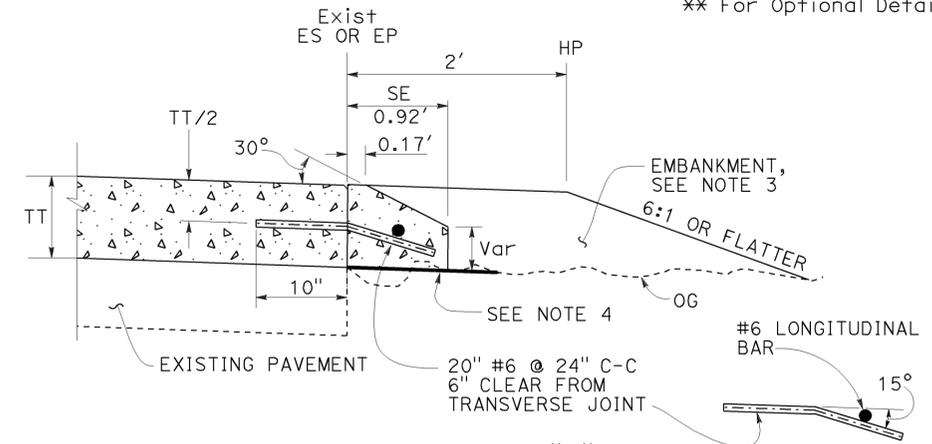
**TABLE A**  
EDGE TREATMENT FOR VARIOUS OVERLAY THICKNESS AND CONDITIONS

FIELD CONDITION	OVERLAY THICKNESS	
	LESS THAN 0.15'	0.15' OR MORE
Exist SLOPE 6:1 OR FLATTER	CASE E	CASE A
Exist SLOPE 3:1 TO 6:1	CASE E	CASE B
Exist SLOPE STEEPER THAN 3:1	CASE F	CASE F
CUT SECTION (REPLACE, COLD PLANE, MILL PAVEMENT)	CASE D	CASE C

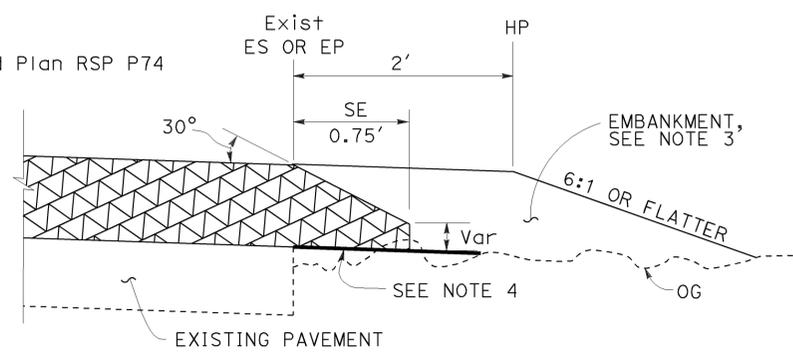
TO ACCOMPANY PLANS DATED 4-7-14  
**ADDITIONAL HMA OR CONCRETE QUANTITIES FOR SE/SIDE/MILE**

TYPICAL CROSS SECTION	TT	TOTAL ADDITIONAL MATERIAL FOR SE/SIDE/MILE		
		HMA (TON)	CONCRETE (CY)*	CONCRETE (CY)**
	0.15'	NA	NA	NA
	0.20'	13.7	NA	NA
	0.30'	30.9	NA	NA
	0.40'	54.9	NA	NA
	0.45'	69.4	NA	NA
	0.50'	84.2	NA	NA
	0.60'	113.9	NA	NA
	0.70'	143.6	70.9	94.2
	0.80'	173.3	85.6	112.2
	0.90'	203.0	100.3	130.2
	1.00'	232.7	114.9	148.2
	1.10'	262.4	129.6	166.2
1.20'	292.1	144.3	184.2	

\* For Detail "A"  
 \*\* For Optional Detail "A"



**OPTIONAL DETAIL "A"**  
 For concrete overlay  
 See Note 5

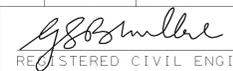


**DETAIL "A"**

For HMA overlay thickness more than 0.43' or concrete overlay

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PAVEMENT EDGE TREATMENTS- OVERLAYS**  
 NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5, 80, 505	Var	10	25

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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

TO ACCOMPANY PLANS DATED 4-7-14

TABLE 1

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

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

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

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

TABLE 2

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

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

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

**REVISED STANDARD PLAN RSP T9**

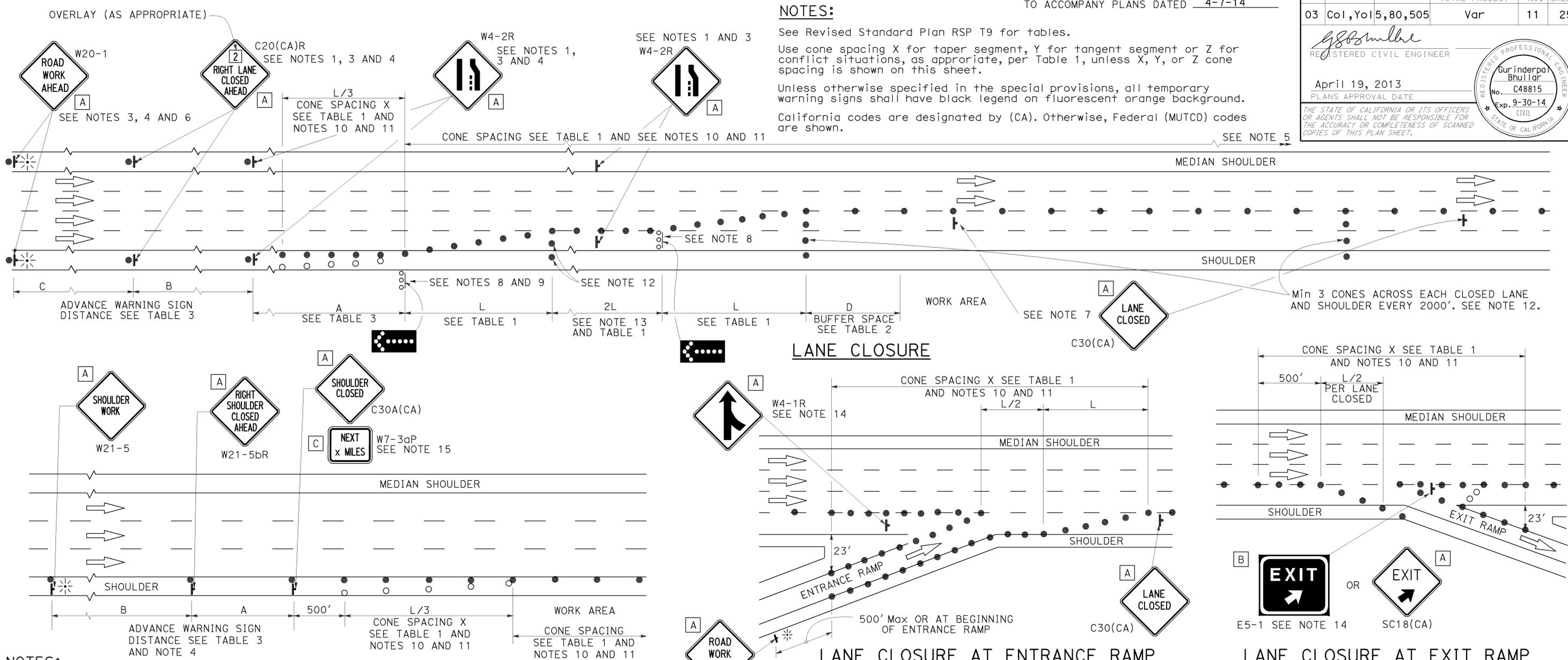
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo!	5,80,505	Var	11	25

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



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

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

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

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

**NOTES:**

See Revised Standard Plan RSP T9 for tables.

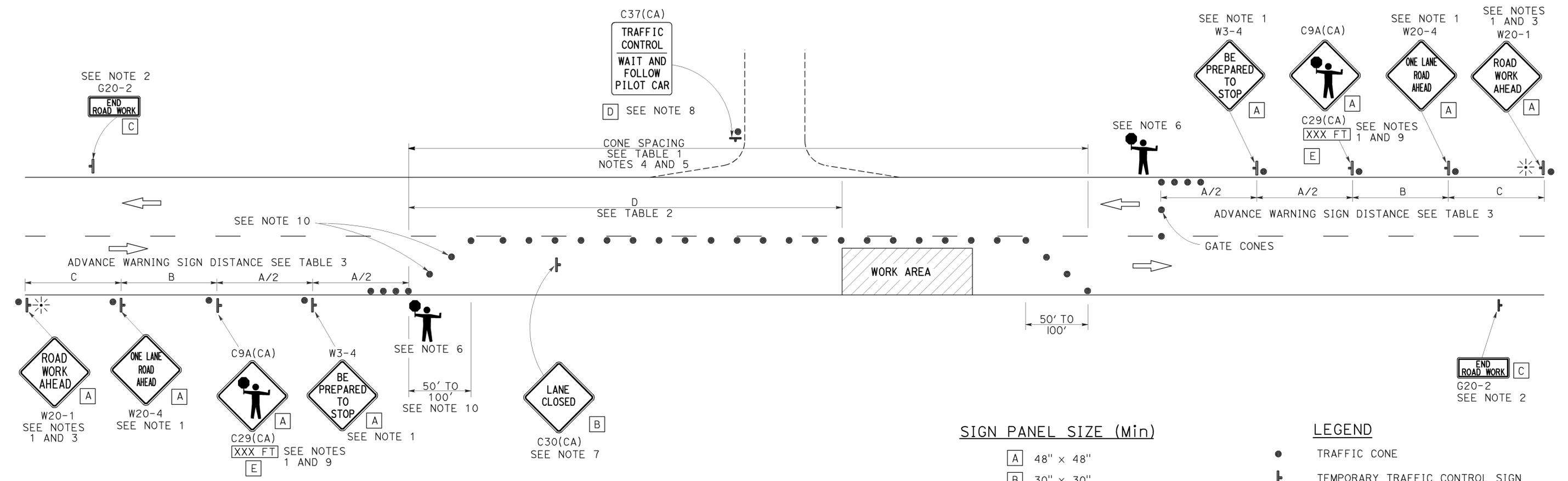
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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 4-7-14



**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.

**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**

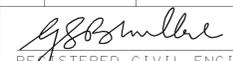
NO SCALE

RSP T13 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T13  
DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T13**

2010 REVISED STANDARD PLAN RSP T13

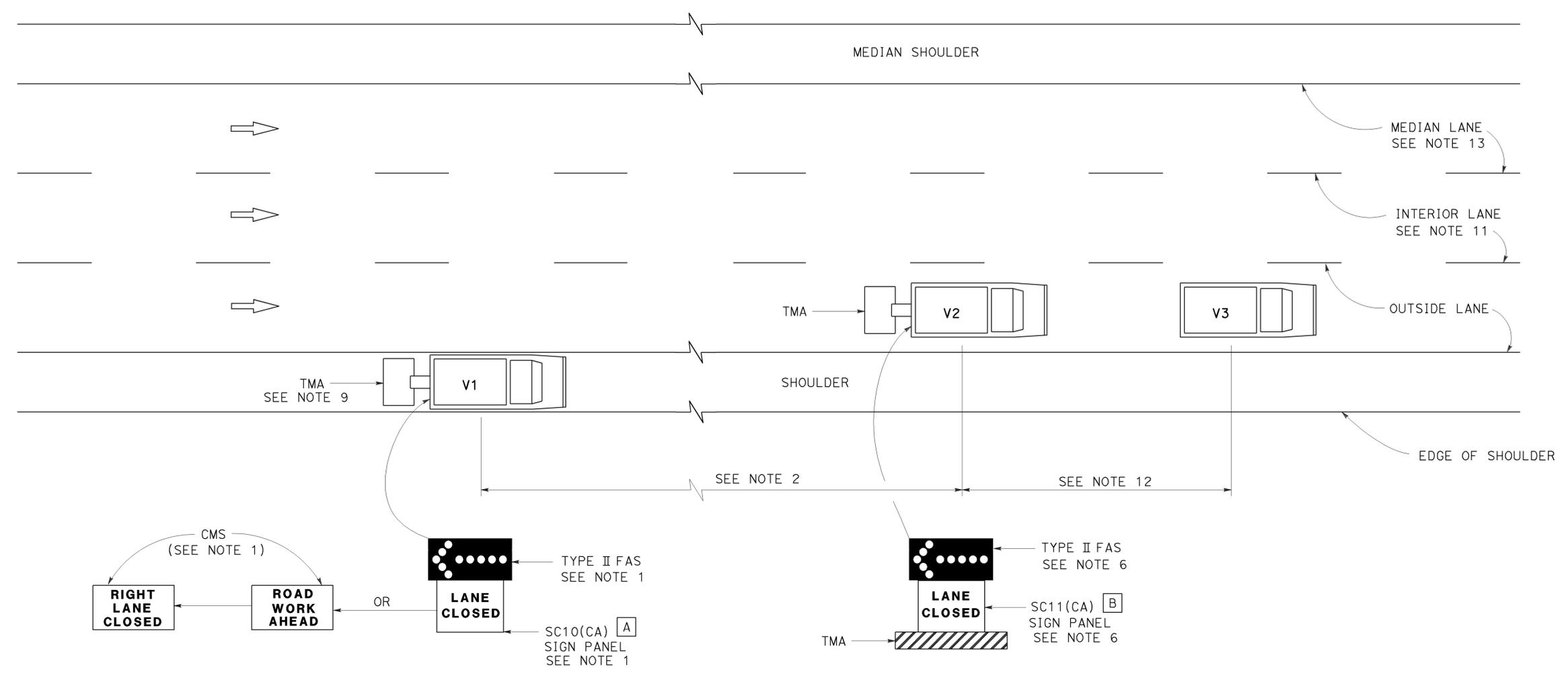
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	13	25

  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 4-7-14



**SIGN PANEL SIZE (Min)**

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

**LEGEND**

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

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

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

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

**REVISED STANDARD PLAN RSP T15**

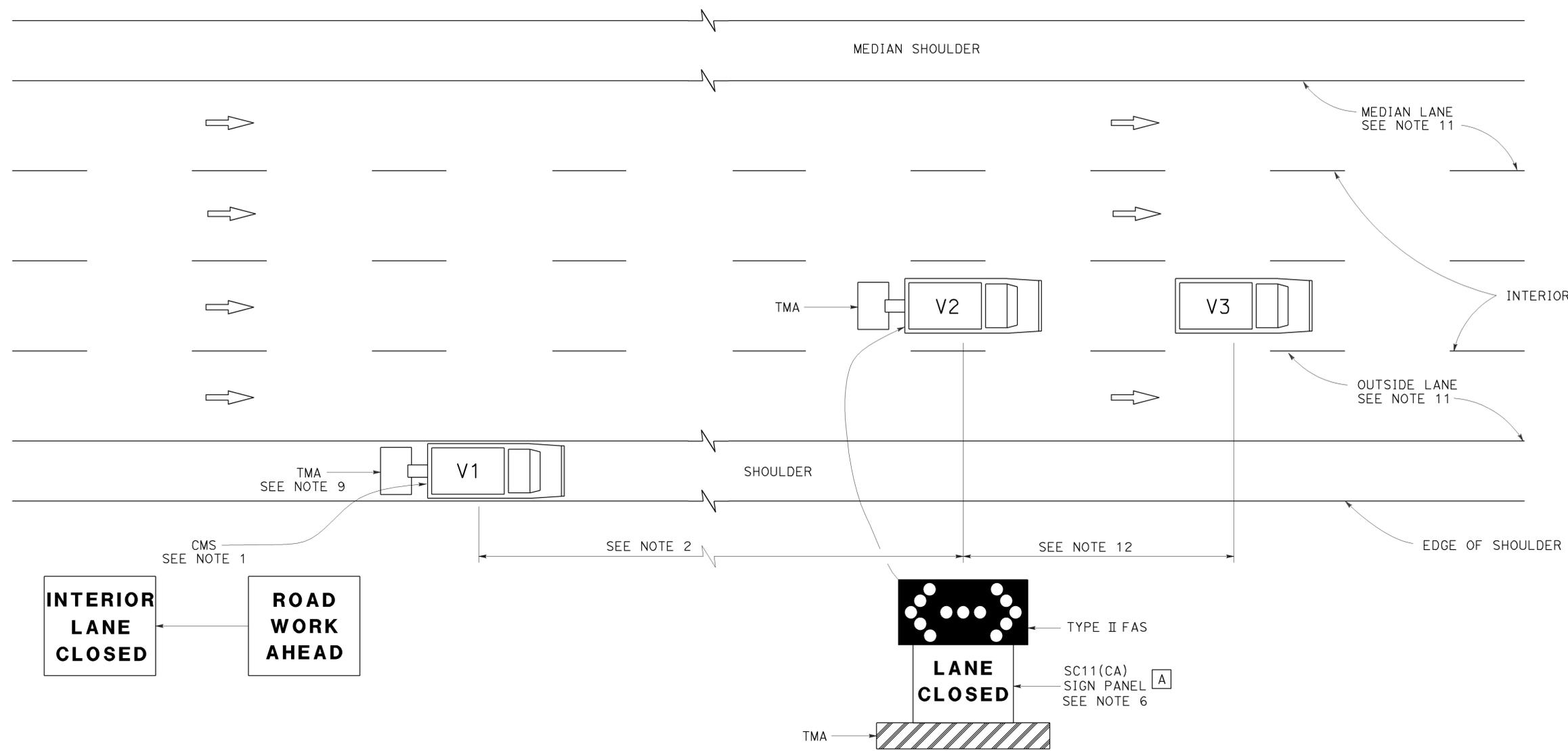
2010 REVISED STANDARD PLAN RSP T15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	14	25

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 4-7-14



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

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

**MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS**

NOTES:

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

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

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

**REVISED STANDARD PLAN RSP T16**

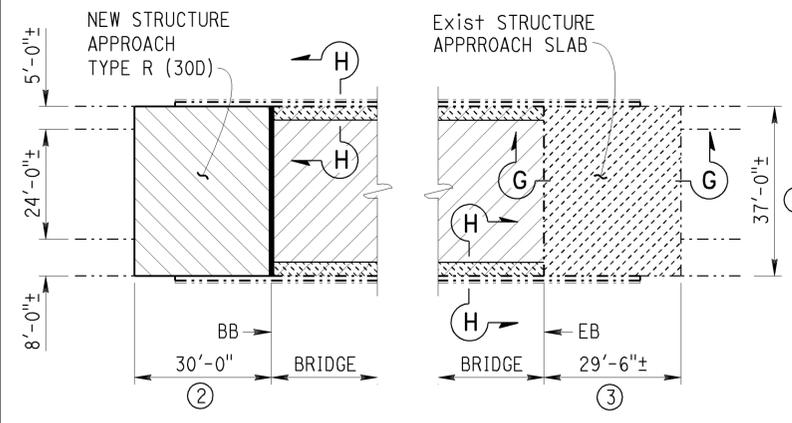
2010 REVISED STANDARD PLAN RSP T16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	15	25

REGISTERED CIVIL ENGINEER  
 PETER B. KANG  
 No. C 70336  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

2-14-14  
 DATE  
 4-7-14  
 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.



**DETAIL A**

RIGHT BRIDGE SHOWN,  
LEFT BRIDGE SYMMETRICAL  
NO SCALE

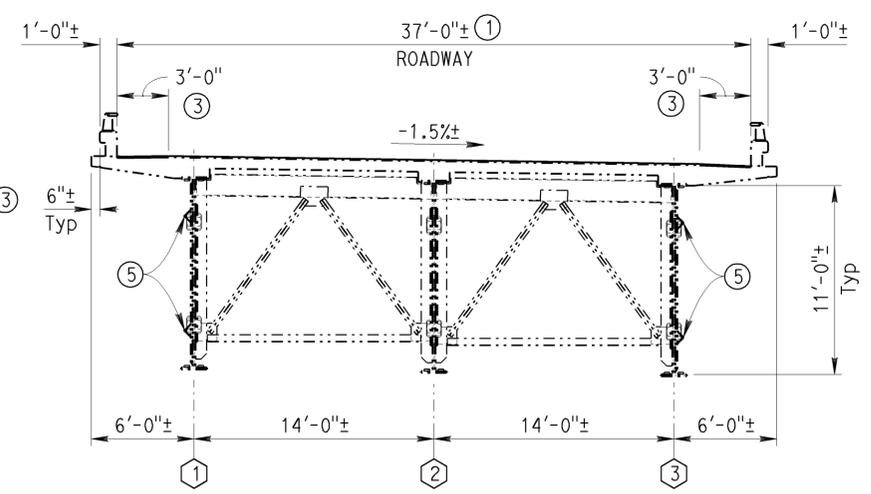
**DETAIL B**

RIGHT BRIDGE SHOWN,  
LEFT BRIDGE SYMMETRICAL  
NO SCALE

SACRAMENTO RIVER #22-0025L/R

**QUANTITIES**

WORK AREA MONITORING (BRIDGE)	LUMP SUM
PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	6,938 CF
REMOVE ASPHALT CONCRETE SURFACING	268,620 SQFT
REMOVE UNSOUND CONCRETE	6,938 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	277,500 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	27,750 CF
PLACE POLYESTER CONCRETE OVERLAY	277,500 SQFT
BRIDGE REMOVAL (PORTION), LOCATION A	LUMP SUM
GRIND EXISTING BRIDGE DECK	4,840 SQYD
AGGREGATE BASE (APPROACH SLAB)	8 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	82 CY
PAVING NOTCH EXTENSION	56 CF
CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP SUM
JOINT SEAL (MR 1/2")	106 LF
PAINT STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP SUM
SPOT BLAST CLEAN AND PAINT UNDERCOAT	224 SQFT



**TYPICAL SECTION AT HINGES**

RIGHT BRIDGE SHOWN, LEFT BRIDGE SYMMETRICAL  
3/16" = 1'

**NOTES:** (APPLY TO ALL SHEETS)

----- Indicates existing.

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

① STANDARD PLAN SHEET NUMBER  
② DETAIL NUMBER

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

① Indicates limits of remove existing 1"± depth AC overlay, prepare concrete deck surface, furnish and place 1" depth polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. See "JOINT SEAL DETAILS" sheet.

② Indicates limits of remove existing concrete approach pavement and place new Structure Approach Type R (30D), prepare concrete deck surface and place 1" depth polyester concrete overlay. See "JOINT SEAL DETAILS" and "STRUCTURE APPROACH TYPE R (30D)" sheets.

③ Indicates limits of grind existing concrete approach to conform to existing pavement. For details see "SECTION G-G" on "JOINT SEAL DETAILS" sheet.

④ Indicates limits of grind existing concrete bridge deck to 1" maximum depth. For details see "SECTION H-H" on "JOINT SEAL DETAILS" sheet.

⑤ Indicates location of remove existing sheet metal cover plate at hinge pins at exterior girder hinges, total 2 angles per girder per hinge, total 64 angles per bridge. See "COVER PLATE REMOVAL DETAILS" sheet.

⑥ Conform roadway to new deck elevation, see "ROAD PLANS".

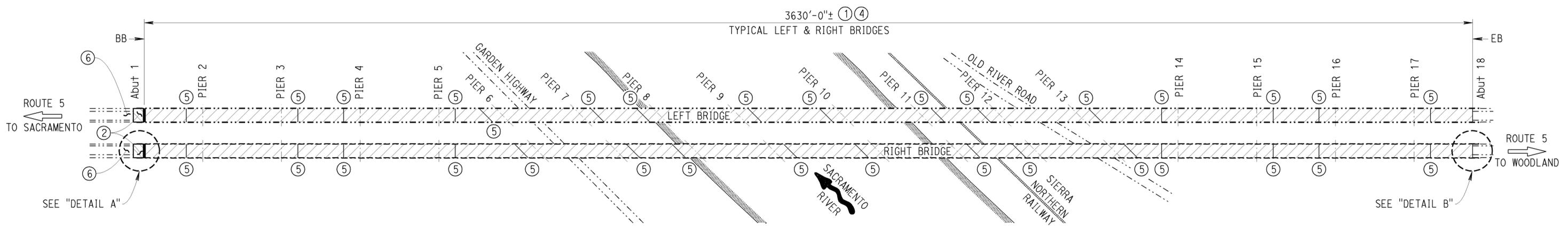
— Indicates limits of remove existing joint seal and place new joint seal. See "JOINT SEAL DETAILS" sheet.

**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	BEARING PAD REPLACEMENT DETAILS
8	COVER PLATE REMOVAL DETAILS
9	EXPANSION JOINT RECONSTRUCTION DETAILS
10	JOINT SEAL DETAILS
11	STRUCTURE APPROACH TYPE R (30D)

**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")



**SACRAMENTO RIVER (ELKHORN)**

Br No. 22-0025R/L, Yo1, ROUTE 5, PM 0.01  
NO SCALE

DESIGN ENGINEER  
 2-14-14

DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI
DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI
QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT	BY GF BIDWELL
SPECIFICATIONS	BY DAVE KLEIN

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE No.	VARIOUS
POST MILE	VARIES

**ROUTES 5, 80 & 505 BRIDGES**  
**GENERAL PLAN No. 1**

USERNAME => s121511 DATE PLOTTED => 25-MAR-2014 TIME PLOTTED => 08:49

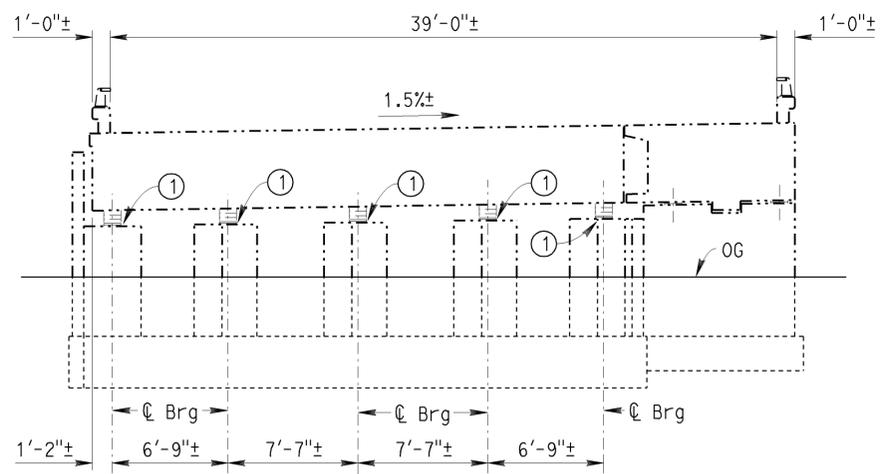
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	16	25

*Peter B. Kang* 2-14-14  
 REGISTERED CIVIL ENGINEER DATE

4-7-14  
 PLANS APPROVAL DATE

PETER B. KANG  
 No. C 70336  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

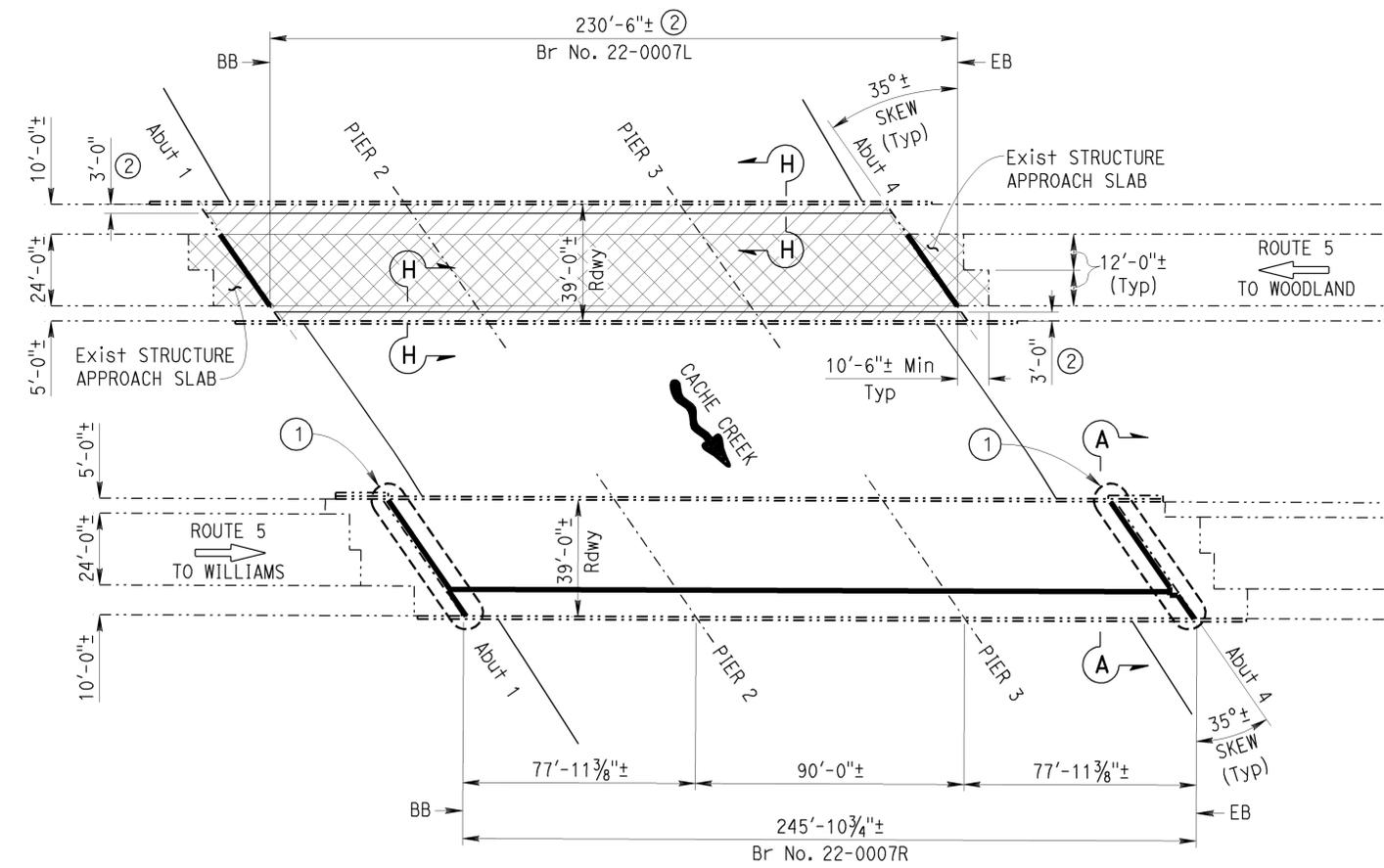
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*



**SECTION A-A**  
 Abut 4 SHOWN; Abut 1 SIMILAR  
 3/16" = 1'

TEMPORARY SUPPORT TABLE			
LOCATION	DEAD LOAD (kips)	MINIMUM DESIGN LOAD DL+LL+I (kips)	MINIMUM LATERAL DESIGN LOAD (kips)
SPAN 1 Abut 1	342	593	69
SPAN 3 Abut 4	341	592	69

- JACKING NOTES:**
- Jacking operation shall not exceed the maximum upward deflection of 1/4".
  - The jacking force shall be applied to all jacks simultaneously across the entire width of the superstructure. The total vertical lift shall be enough to release the existing bearing pads and install new bearing pads, but no greater than 1/4" above final grade. The differential lift between jacks shall not exceed 1/8".
  - Vertical deflection shall be maintained during repair operations.



**CACHE CREEK**  
 Br No. 22-0007R/L, YoI, ROUTE 5, PM R11.45/R11.44  
 1" = 30'

- NOTES: (APPLY TO THIS SHEET ONLY)**
- Indicates limits of remove existing 1" depth AC overlay.
  - Indicates limits of prepare concrete deck surface, furnish and place 1" depth polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. See "JOINT SEAL DETAILS" sheet.
  - Indicates location of remove existing elastomeric bearing pad and place new elastomeric bearing pads at Abutments 1 and 4, total 5 bearing pads at each abutment. See "BEARING PAD REPLACEMENT DETAILS" sheet.
  - Indicates limits of grind existing concrete bridge deck to 1" maximum depth. For details see "SECTION H-H" on "JOINT SEAL DETAILS" sheet.
  - Indicates limits of clean expansion joint and install new joint seal. See "JOINT SEAL DETAILS" sheet.

**VEHICLE ACCESS NOTE:**

During the bearing pad replacement scope of work, the contractor will not have vehicle access under the Cache Creek bridges. The only access to the bearing pads will be by foot access, entering from the roadway median and shoulder areas.

CACHE CREEK #22-0007L/R

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	225	CF
REMOVE ASPHALT CONCRETE SURFACING	6,312	SQFT
REMOVE UNSOUND CONCRETE	225	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	9,770	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	733	CF
PLACE POLYESTER CONCRETE OVERLAY	9,770	SQFT
GRIND EXISTING BRIDGE DECK	1,383	SQFT
TEMPORARY SUPPORT	LUMP	SUM
CLEAN EXPANSION JOINT	403	LF
REPLACE BEARING PAD	10	EA
JOINT SEAL (MR 1")	156	LF
JOINT SEAL (TYPE AL)	246	LF

 DESIGN ENGINEER 2-14-14	DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE No.	<b>ROUTES 5, 80 &amp; 505 BRIDGES</b> GENERAL PLAN No. 2
	DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI	LAYOUT	BY GF BIDWELL		VARIOUS	
	QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI	SPECIFICATIONS	BY DAVE KLEIN		VARIES	

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

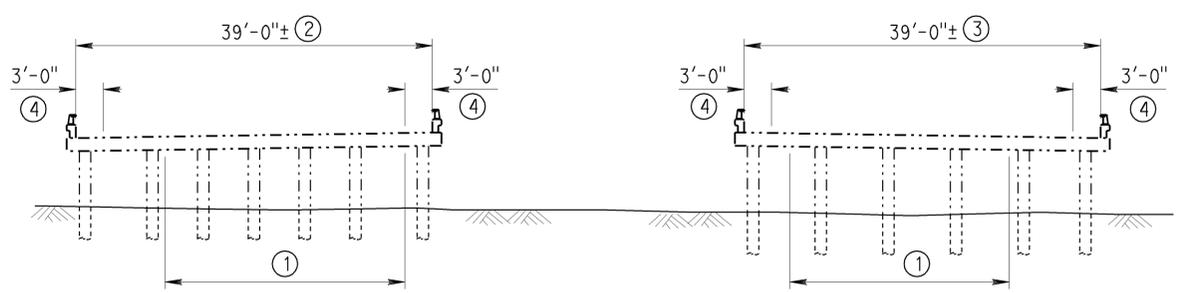
UNIT: 3488 PROJECT NUMBER & PHASE: 0313000030 1 CONTRACT No.: 03-4M7401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-28-13 10-28-13 12-11-13 1-7-14 1-29-14	2	11

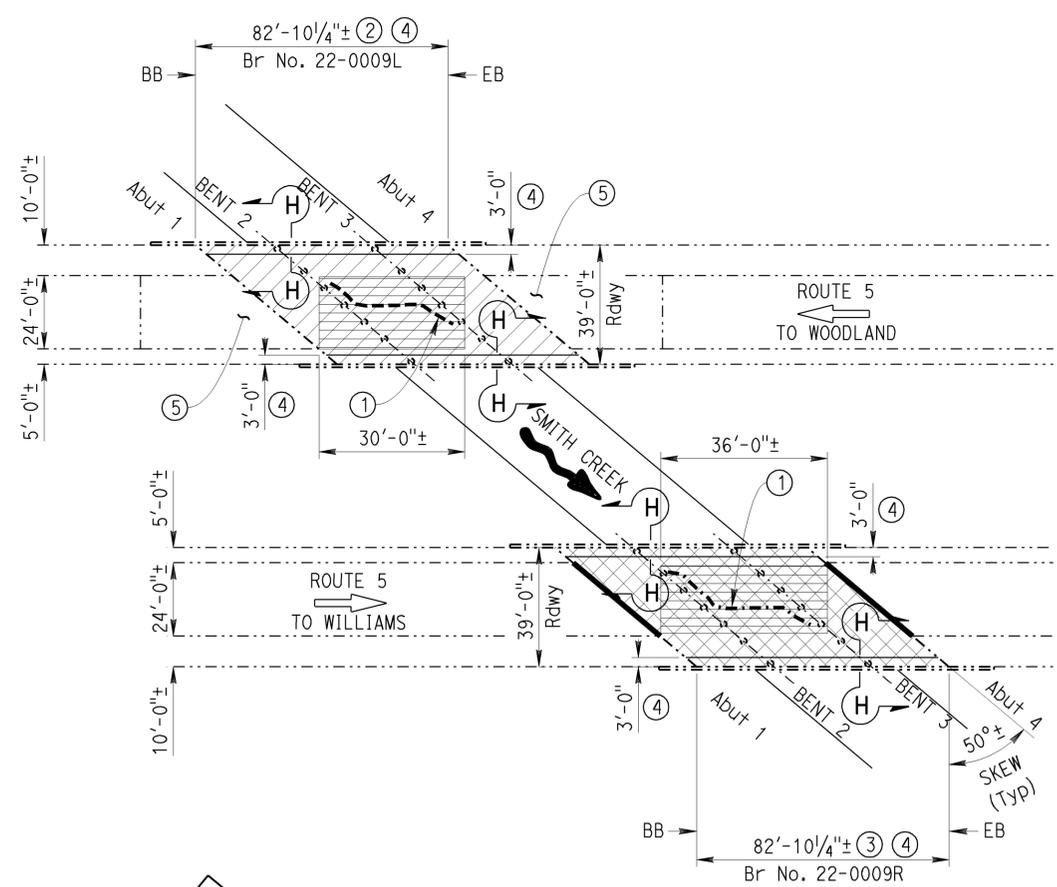
USERNAME => s121511 DATE PLOTTED => 16-MAR-2014 TIME PLOTTED => 1:31:17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	17	25
<i>Peter B. Kang</i> 2-14-14 REGISTERED CIVIL ENGINEER DATE			4-7-14 PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.			REGISTERED PROFESSIONAL ENGINEER PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA		



**TYPICAL SECTION**  
 Br No. 22-0009R/L  
 1" = 10'

- NOTES:** (APPLY TO THIS SHEET ONLY)
- ① Indicates location of repair spalled surface area. Prior to placing filler material, epoxy inject longitudinal cracks in soffit. Length of cracks is 66"± each bridge.
  - ② Indicates limits of prepare existing concrete deck surface, furnish and place 1" depth polyester concrete overlay. See "JOINT SEAL DETAILS" sheet.
  - ③ Indicates limits of remove existing 1"± depth AC overlay, prepare concrete deck surface, furnish and place 1" depth polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. See "JOINT SEAL DETAILS" sheet.
  - ④ Indicates limits of grind existing concrete bridge deck to 1" maximum depth. For details see "SECTION H-H" on "JOINT SEAL DETAILS" sheet.
  - ⑤ Conform roadway to new deck elevation, see "ROAD PLANS".
  - Indicates limits of clean expansion joint and place new joint seal. See "JOINT SEAL DETAILS" sheet.



**SMITH CREEK**  
 Br No. 22-0009R/L, YoI, ROUTE 5, PM R16.74  
 1" = 30'

SMITH CREEK #22-0009L/R

**QUANTITIES**

INJECT CRACK (EPOXY)	132	LF
RAPID SETTING CONCRETE (PATCH)	162	CF
REPAIR SPALLED SURFACE AREA	1,584	SQFT
REMOVE ASPHALT CONCRETE SURFACING	3,231	SQFT
REMOVE UNSOUND CONCRETE	162	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	6,463	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	646	CF
PLACE POLYESTER CONCRETE OVERLAY	6,463	SQFT
GRIND EXISTING BRIDGE DECK	111	SQYD
CLEAN EXPANSION JOINT	124	LF
JOINT SEAL (MR 1/2")	124	LF

 DESIGN ENGINEER 2-14-14	DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI	LAYOUT	BY GF BIDWELL
	QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI	SPECIFICATIONS	BY DAVE KLEIN

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

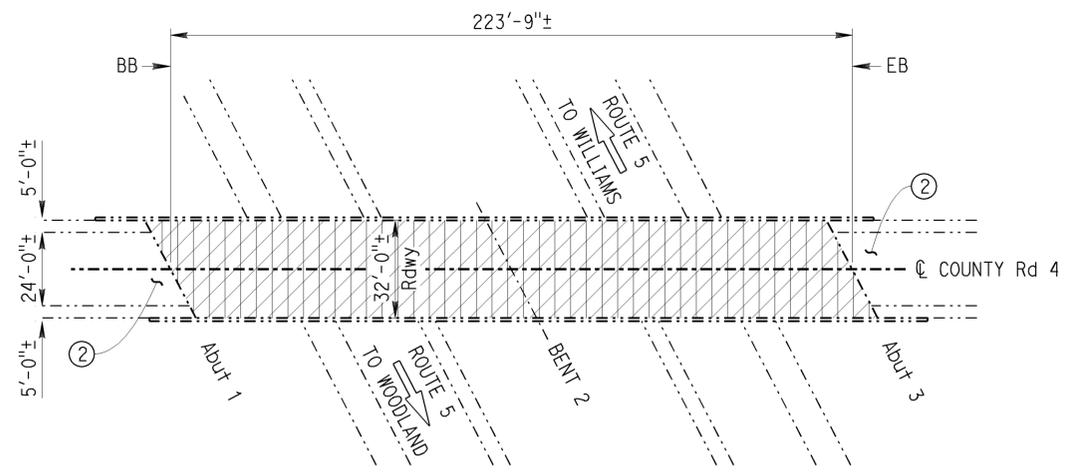
BRIDGE No.  
 VARIOUS  
 POST MILE  
 VARIES

**ROUTES 5, 80 & 505 BRIDGES**  
 GENERAL PLAN No. 3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5, 80, 505	Var	18	25

REGISTERED CIVIL ENGINEER DATE 2-14-14  
 PETER B. KANG  
 No. C 70336  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

PLANS APPROVAL DATE 4-7-14  
 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.



COUNTY RD 4 OVERCROSSING #22-0133

QUANTITIES

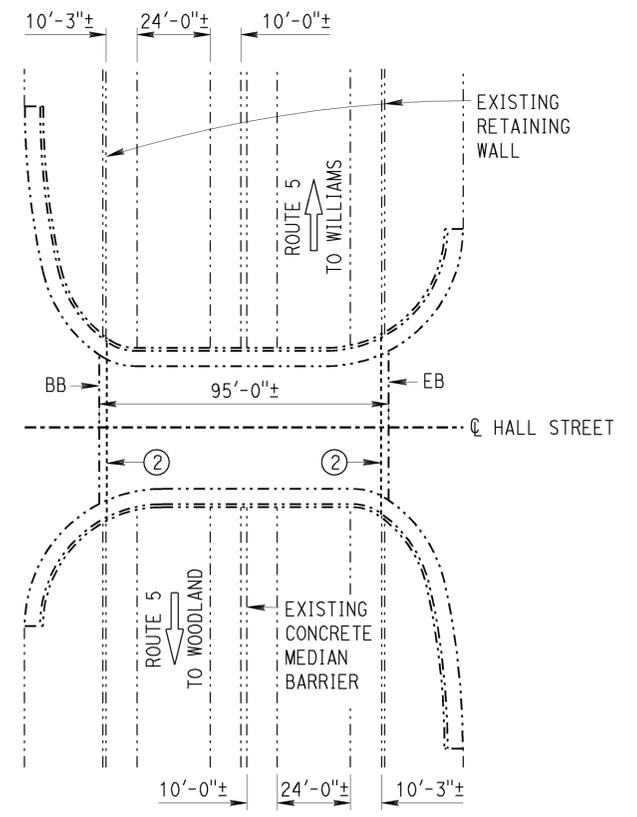
RAPID SETTING CONCRETE (PATCH)	179	CF
REMOVE UNSOUND CONCRETE	179	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	7,160	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	716	CF
PLACE POLYESTER CONCRETE OVERLAY	7,160	SQFT
REMOVE CHIP SEAL	7,160	SQFT



COUNTY ROAD 4 OVERCROSSING

Br No. 22-0133, Yol, ROUTE 5, PM R26.65  
1" = 30'

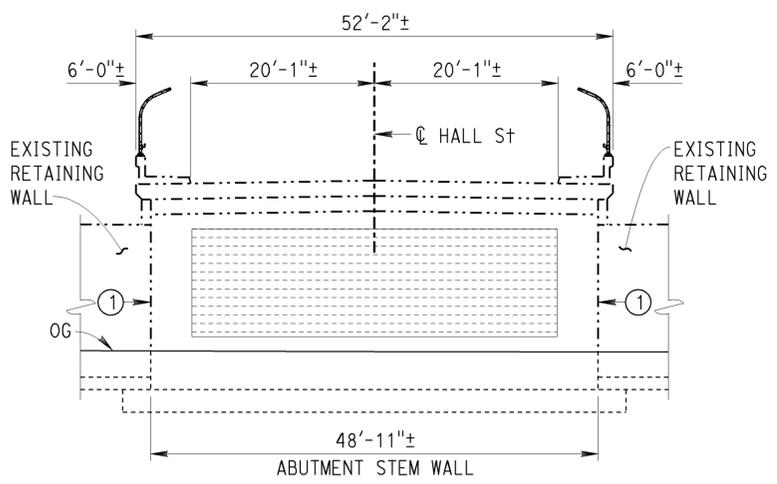
- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates location of repair spalled surface area. Prior to placing filler material, epoxy inject longitudinal cracks in abutment stem wall. Length of cracks is 196'±.
  - Indicates limits of remove existing 3/8"± depth chip seal overlay.
  - Indicates limits of prepare existing concrete deck surface, furnish and place 1" depth polyester concrete overlay. See "JOINT SEAL DETAILS" sheet.
  - Conform roadway to new deck elevation, see "ROAD PLANS".



HALL ST. OVERCROSSING #22-0133

QUANTITIES

INJECT CRACK (EPOXY)	196	LF
REPAIR SPALLED SURFACE AREA	1,000	SQFT



ABUTMENT ELEVATION

Br No. 15-0046  
1" = 10'



HALL STREET OVERCROSSING

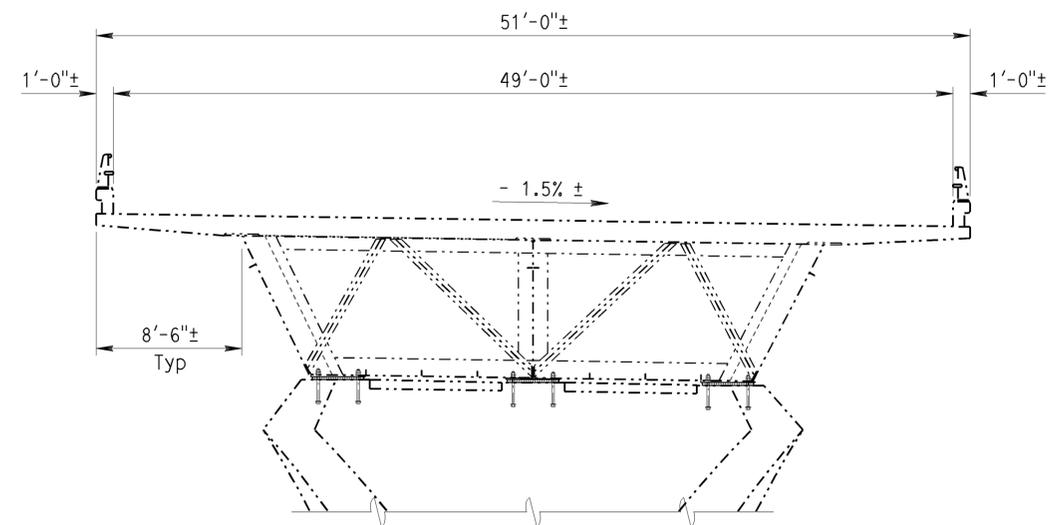
Br No. 15-0046, Col, ROUTE 5, PM 7.15  
1" = 30'

 DESIGN ENGINEER 2-14-14	DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE No.	<b>ROUTES 5, 80 &amp; 505 BRIDGES</b> GENERAL PLAN No. 4	
	DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI	LAYOUT	BY GF BIDWELL		VARIOUS		
	QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI	SPECIFICATIONS	BY DAVE KLEIN	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	POST MILE		
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						PROJECT NUMBER & PHASE: 0313000030 1 CONTRACT No.: 03-4M7401	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 9-28-13 10-28-13 12-11-13 1-7-14 1-29-14	SHEET 4 OF 11

FILE => 03-4m7401\_04gp4.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yoi	5, 80, 505	Var	19	25

*Peter B. Kang* 2-14-14  
 REGISTERED CIVIL ENGINEER DATE  
 4-7-14  
 PLANS APPROVAL DATE  
 PETER B. KANG  
 No. C 70336  
 Exp. 9-30-14  
 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.



**RIGHT BRIDGE TYPICAL SECTION AT PIER**

3/16" = 1'

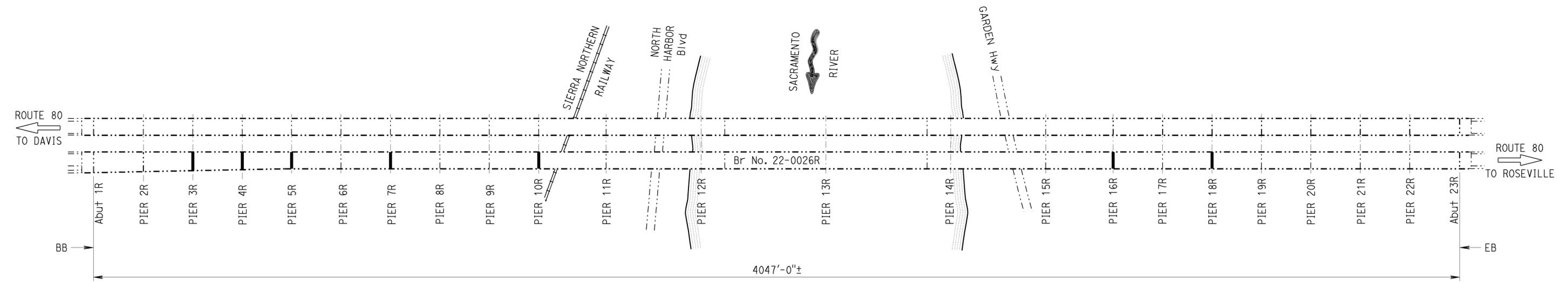
SACRAMENTO RIVER BOH #22-0026R

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION B	LUMP SUM
TEMPORARY DECKING	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	17 CY
JOINT SEAL (MR 1/2")	350 LF

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates location of reconstruct PCC expansion joint and place new joint seal. See "EXPANSION JOINT RECONSTRUCTION DETAILS" sheet.



**SACRAMENTO RIVER BOH (BRYTE BEND)**

Br. No. 22-0026R, Yoi, ROUTE 80, PM R11.31  
NO SCALE

 DESIGN ENGINEER 2-14-14	DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE No.	<b>ROUTES 5, 80 &amp; 505 BRIDGES</b> GENERAL PLAN No. 5	
	DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI	LAYOUT	BY GF BIDWELL		CHECKED ALI NOJOUMI		VARIOUS
	QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI	SPECIFICATIONS	BY DAVE KLEIN		CHECKED DAVE KLEIN		PLANS AND SPECS COMPARED

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: 0313000030 1 CONTRACT No.: 03-4M7401  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 9-28-13, 10-28-13, 12-11-13, 1-7-14, 1-29-14  
 SHEET 5 OF 11  
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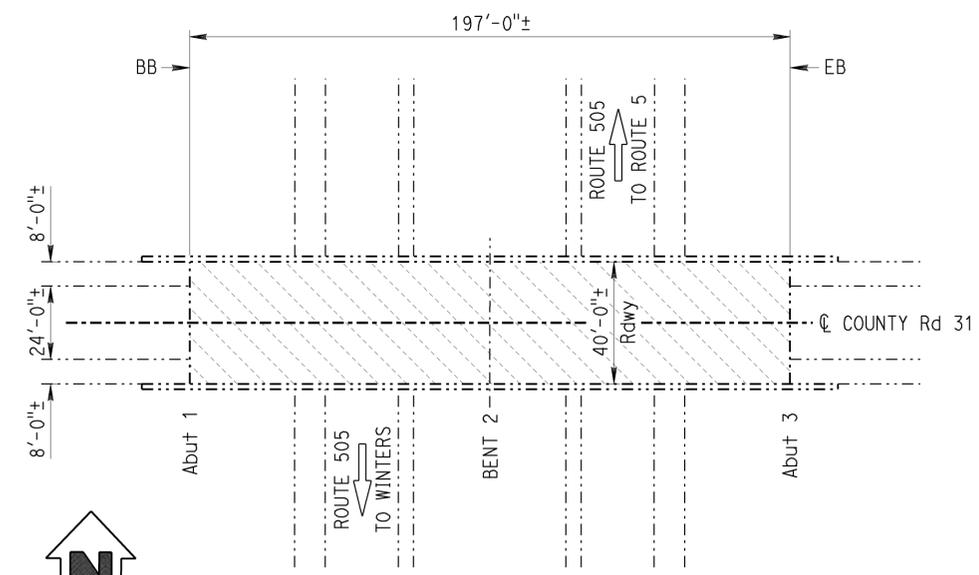
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yol	5, 80, 505	Var	20	25

*Peter B. Kang* 2-14-14  
 REGISTERED CIVIL ENGINEER DATE  
 4-7-14  
 PLANS APPROVAL DATE  
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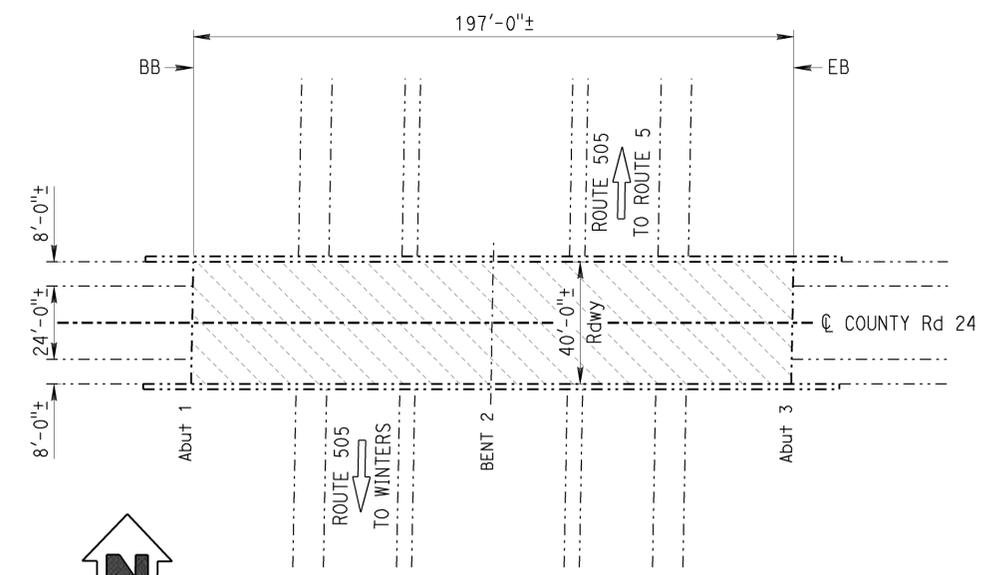
NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate. See "JOINT SEAL DETAILS" sheet.



**COUNTY ROAD 31 OVERCROSSING**

Br No. 22-0160, Yol, ROUTE 505, PM 2.50  
1" = 30'



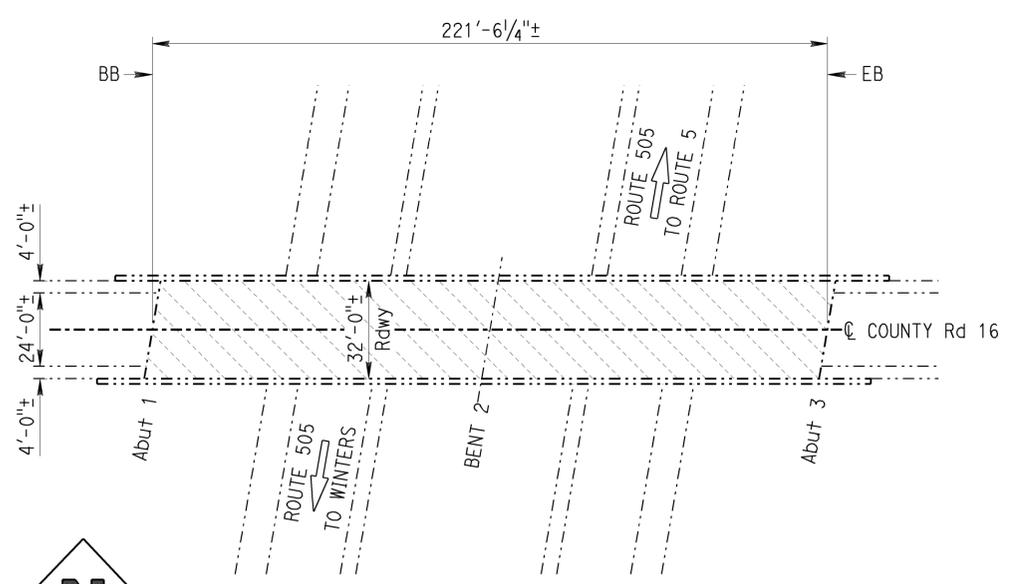
**COUNTY ROAD 24 OVERCROSSING**

Br No. 22-0164, Yol, ROUTE 505, PM 9.52  
1" = 30'

COUNTY RD 31 OVERCROSSING #22-0160

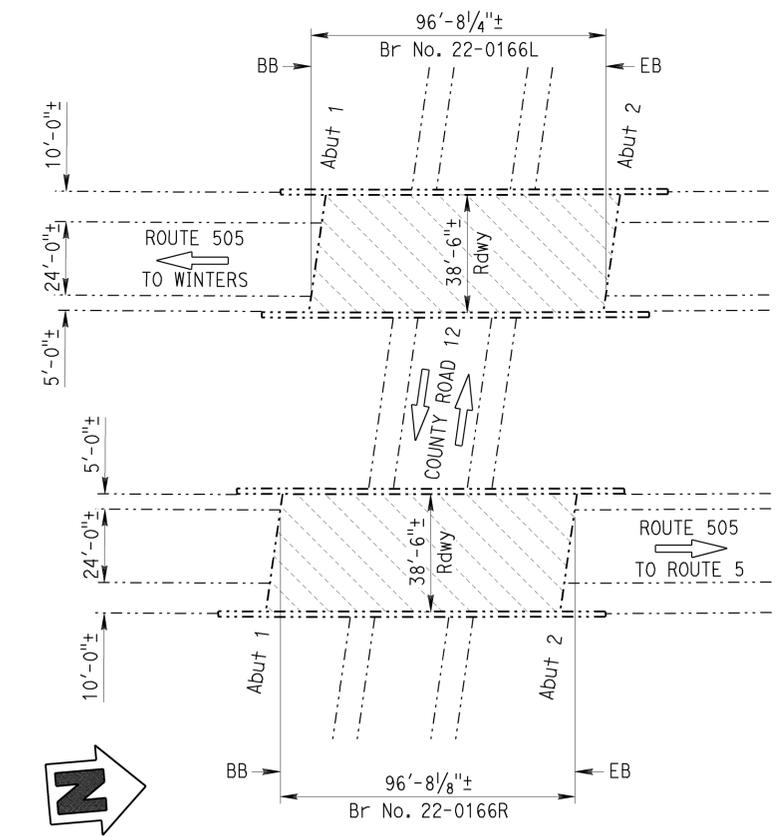
QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	7,880 SQFT
TREAT BRIDGE DECK	7,880 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	88 GAL



**COUNTY ROAD 16 OVERCROSSING**

Br No. 22-0168, Yol, ROUTE 505, PM 15.62  
1" = 30'



**COUNTY ROAD 12 UNDERCROSSING**

Br No. 22-0166R/L, Yol, ROUTE 505, PM 20.11  
1" = 30'

COUNTY RD 24 OVERCROSSING #22-0164

QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	7,880 SQFT
TREAT BRIDGE DECK	7,880 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	88 GAL

COUNTY RD 16 OVERCROSSING #22-0168

QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	7,089 SQFT
TREAT BRIDGE DECK	7,089 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	79 GAL

COUNTY RD 12 OVERCROSSING #22-0166R/L

QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	7,541 SQFT
TREAT BRIDGE DECK	7,541 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	84 GAL

DESIGN ENGINEER 2-14-14

DESIGN	BY PETER KANG	CHECKED ALI NOJOUMI
DETAILS	BY GF BIDWELL	CHECKED ALI NOJOUMI
QUANTITIES	BY PETER KANG	CHECKED ALI NOJOUMI

LOAD FACTOR DESIGN	BY PETER KANG	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT	BY GF BIDWELL	CHECKED ALI NOJOUMI
SPECIFICATIONS	BY DAVE KLEIN	PLANS AND SPECS COMPARED DAVE KLEIN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

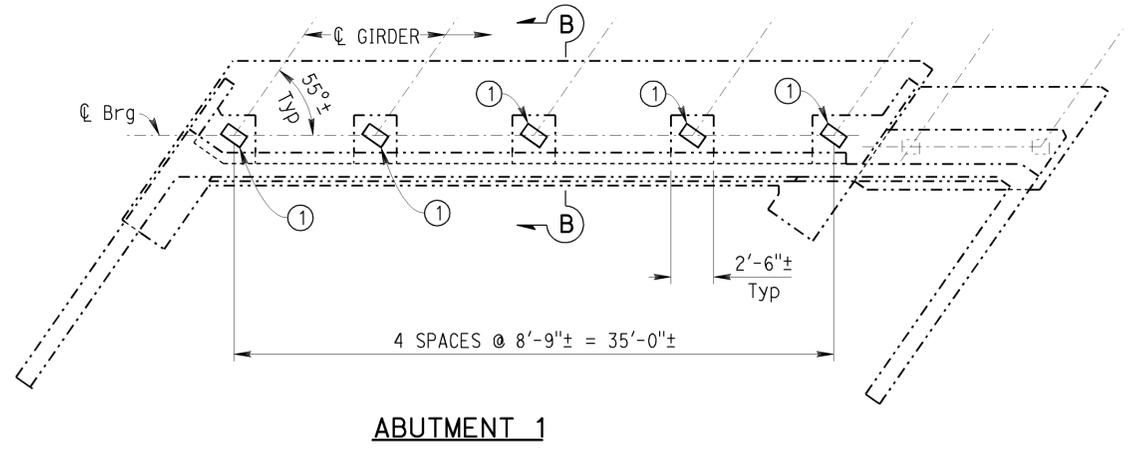
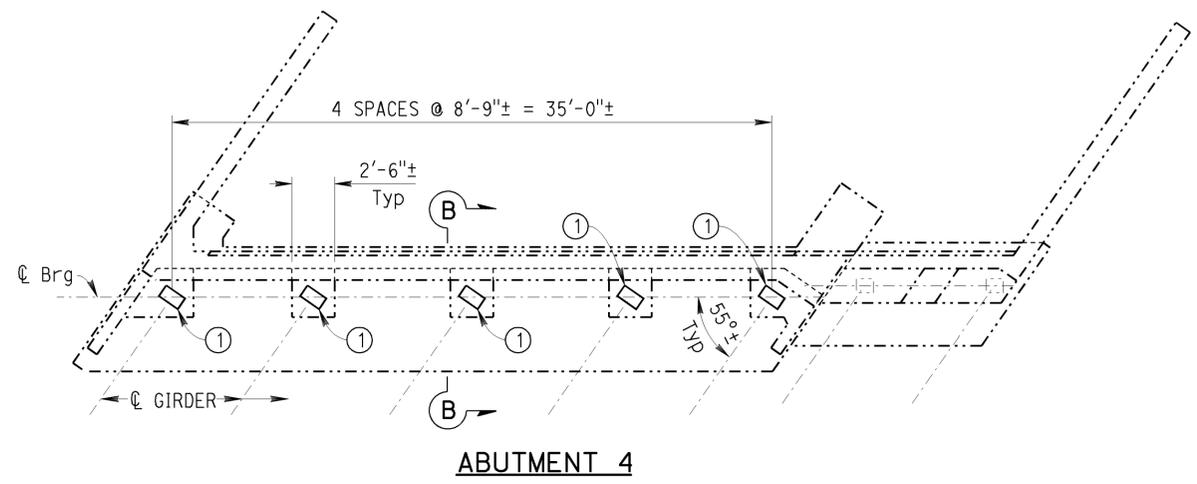
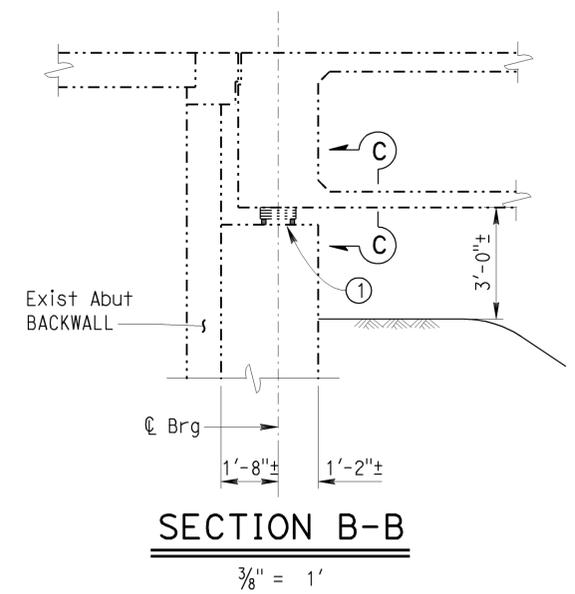
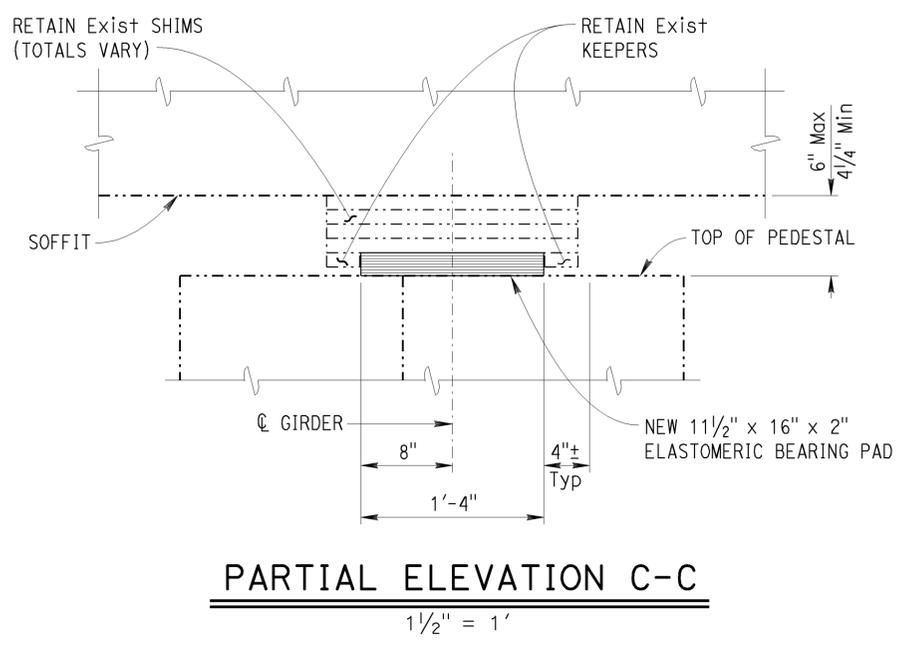
BRIDGE No.	VARIOUS
POST MILE	VARIES

**ROUTES 5, 80 & 505 BRIDGES**  
GENERAL PLAN No. 6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	21	25
<i>Peter B. Kang</i> 2-14-14 REGISTERED CIVIL ENGINEER DATE			4-7-14 PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					
REGISTERED PROFESSIONAL ENGINEER <b>PETER B. KANG</b> No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA					

NOTES: (APPLY TO THIS SHEET ONLY)

① Indicates location of remove existing 11 1/2" x 16" x 2" elastomeric bearing pads and place new 11 1/2" x 16" x 2" steel reinforced elastomeric bearing pads.



**EXISTING ABUTMENT PLAN**

Br No. 22-0007R

3/16" = 1'

DESIGN	BY PETER KANG	CHECKED ALI NOJOURI
DETAILS	BY GF BIDWELL	CHECKED ALI NOJOURI
QUANTITIES	BY PETER KANG	CHECKED ALI NOJOURI

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

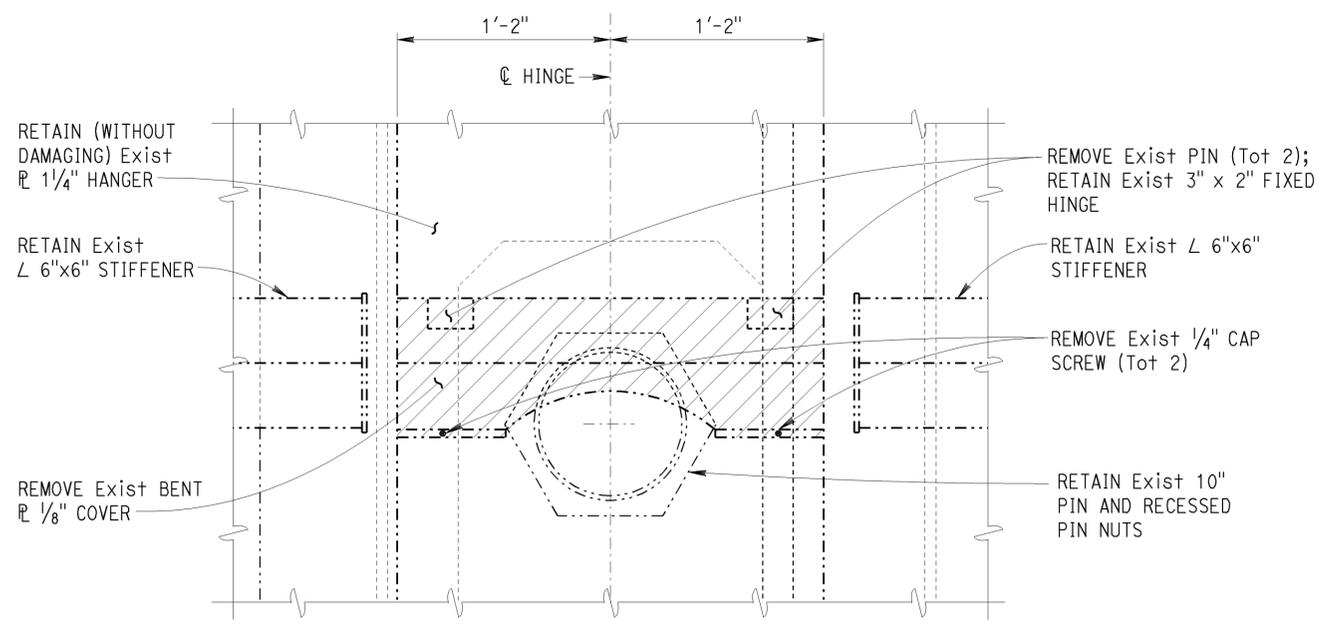
DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE No. VARIOUS  
POST MILE VARIES

**ROUTES 5, 80 & 505 BRIDGES**

**BEARING PAD REPLACEMENT DETAILS**

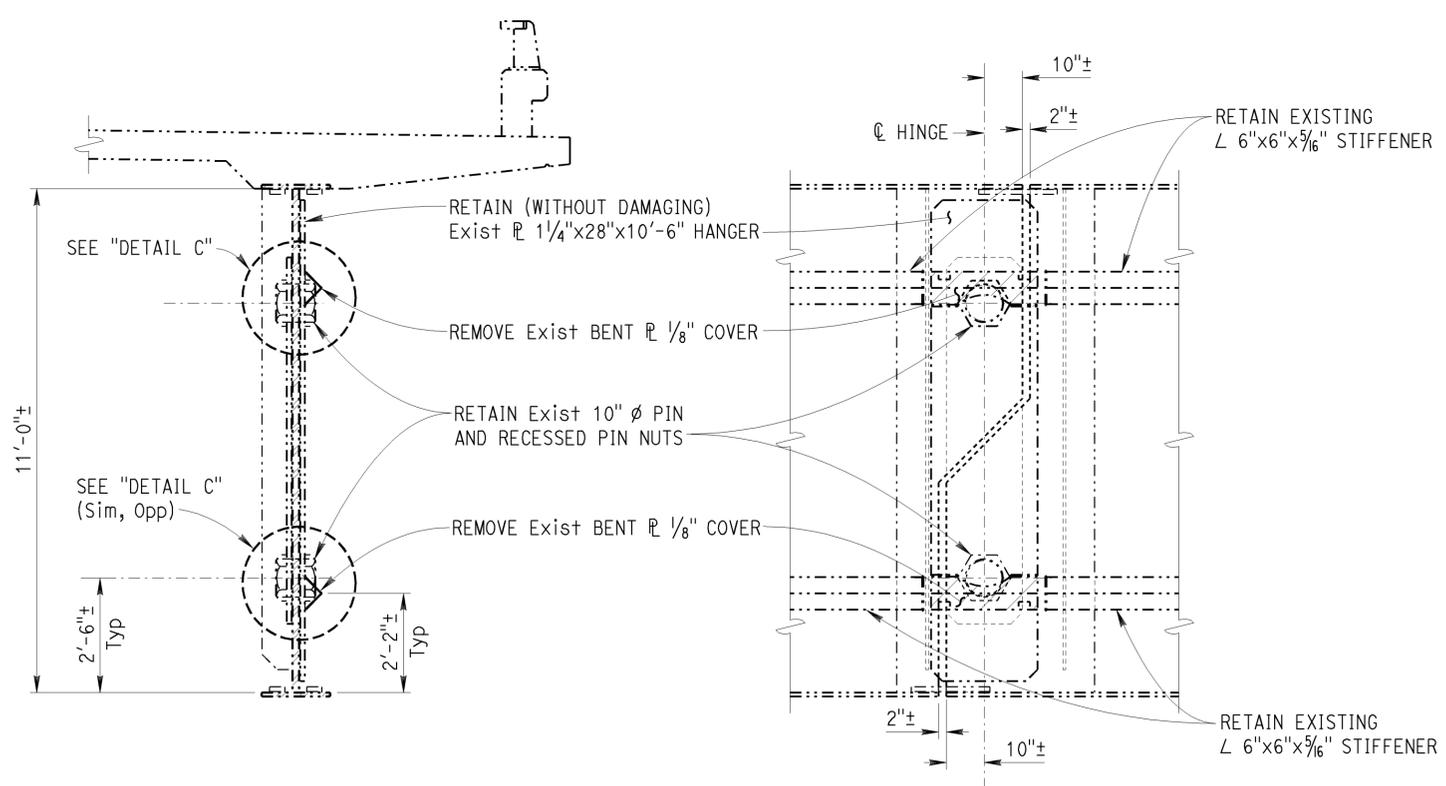
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	22	25
<i>Peter B. Kang</i> 2-14-14 REGISTERED CIVIL ENGINEER DATE			4-7-14 PLANS APPROVAL DATE		
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**PARTIAL ELEVATION D-D**  
2" = 1'

NOTES: (APPLY TO THIS SHEET ONLY)

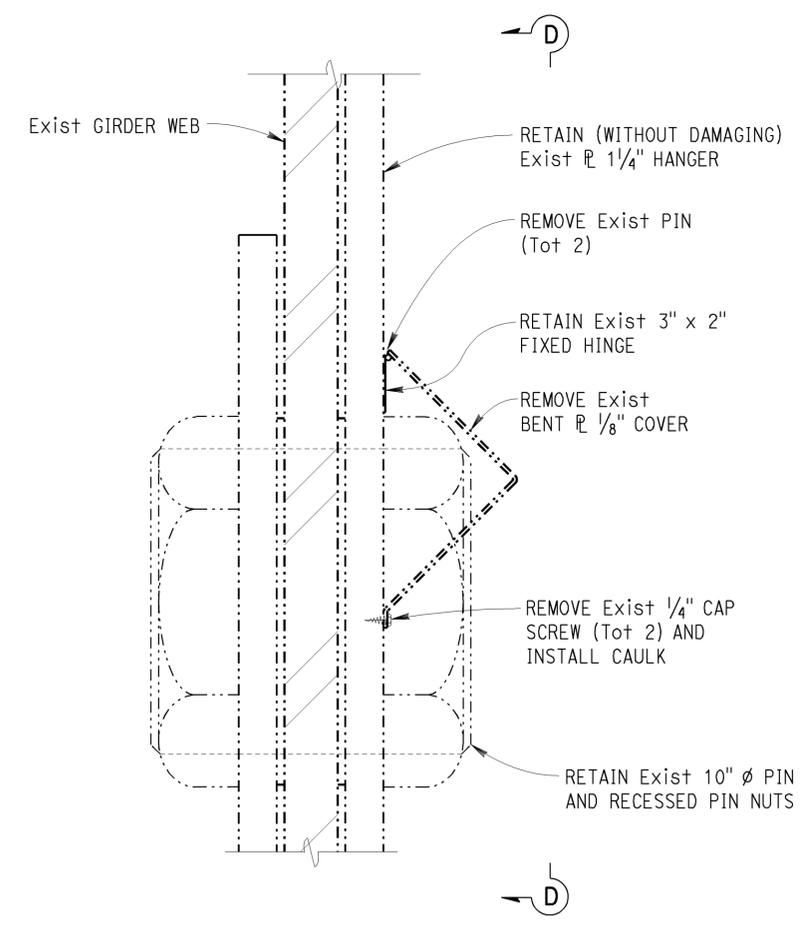
Indicates limits of clean structural steel (existing bridge), spot blast clean and paint undercoat and paint structural steel (existing bridge).



**SECTION EXTERIOR ELEVATION**

**TYPICAL EXTERIOR GIRDER AT HINGE**

Br No. 22-0025R/L  
1/2" = 1'



**DETAIL C**

4" = 1'

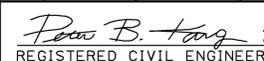
DESIGN	BY PETER KANG	CHECKED ALI NOJOURI
DETAILS	BY GF BIDWELL	CHECKED ALI NOJOURI
QUANTITIES	BY PETER KANG	CHECKED ALI NOJOURI

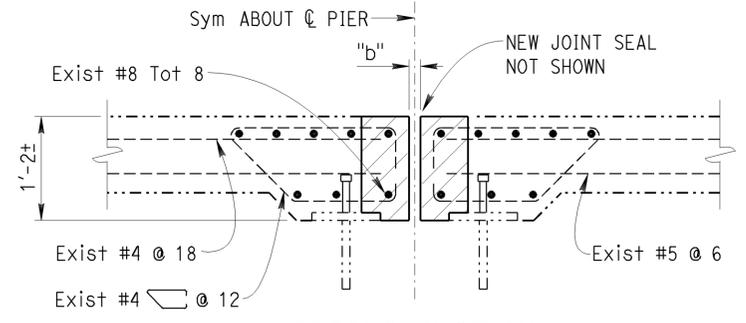
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

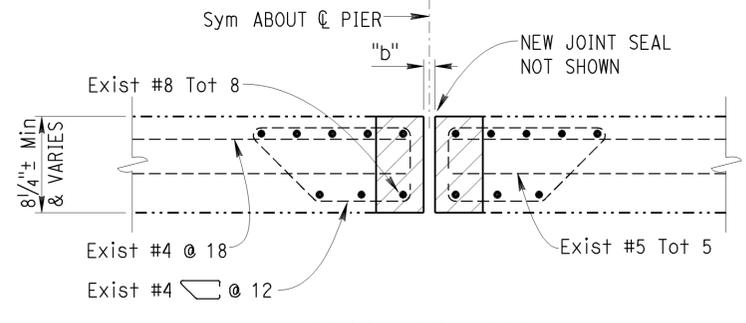
BRIDGE No.	VARIOUS
POST MILE	VARIES

**ROUTES 5, 80 & 505 BRIDGES**  
**COVER PLATE REMOVAL DETAILS**

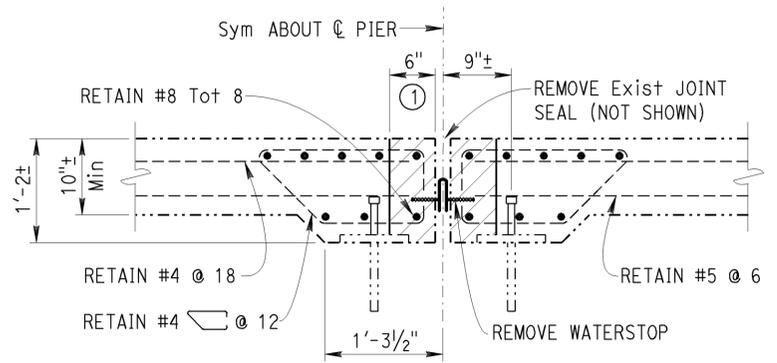
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, Yo	5, 80, 505	Var	23	25
			2-14-14	DATE	
REGISTERED CIVIL ENGINEER			PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL		
PLANS APPROVAL DATE			4-7-14		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



**RECONSTRUCTION**



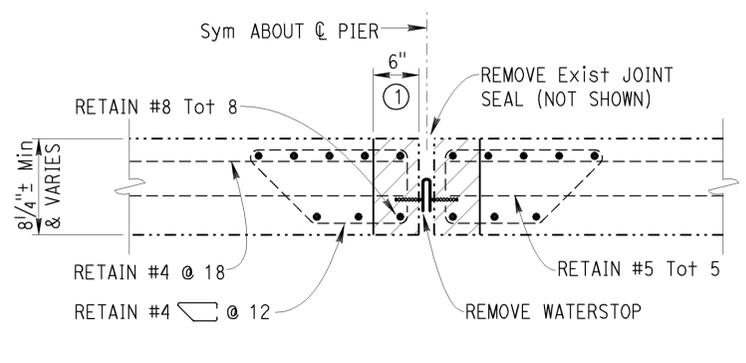
**RECONSTRUCTION**



**EXISTING**

**SECTION E-E**

1" = 1'



**EXISTING**

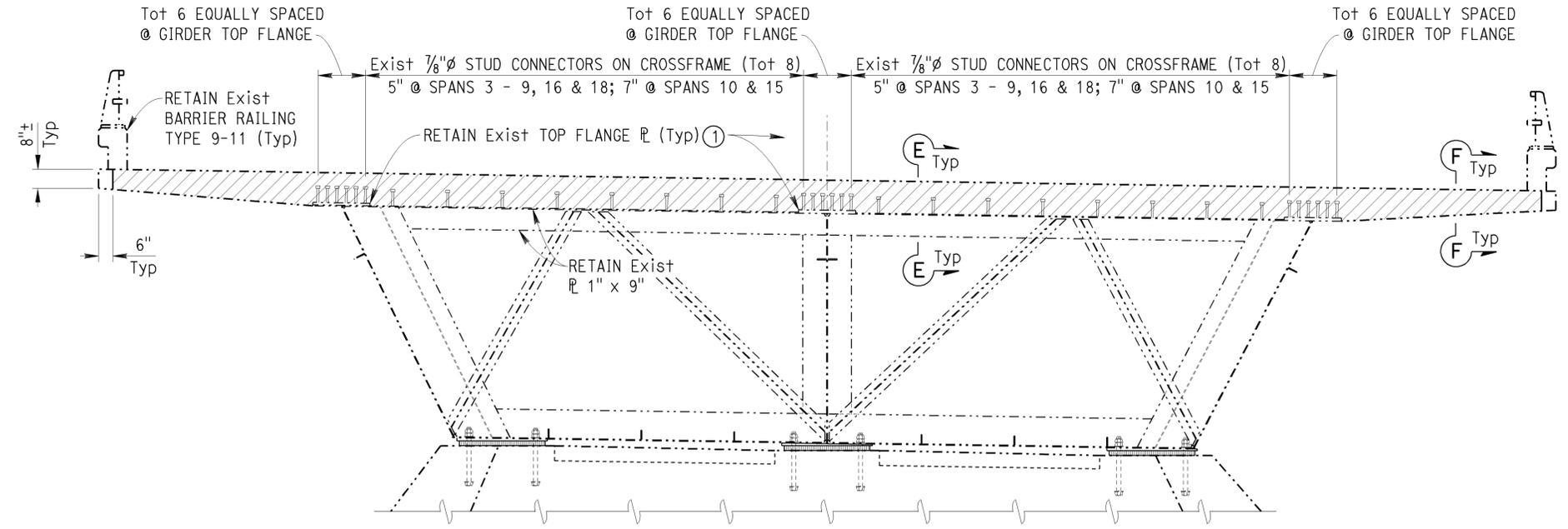
**SECTION F-F**

1" = 1'

- NOTES:** (APPLY TO THIS SHEET ONLY)
-  Indicates limits of remove bridge portion and place structure concrete. Retain (without darning) all existing bar reinforcing steel.
  - "b" New joint width "b" varies with temperature, to be determined by the Engineer.
  - ① Existing top flange  $\phi$  sizes:  
 27" x 1 1/4" @ span 2  
 24" x 1" @ spans 3 - 5, 7, 16 & 18  
 24" x 1 3/4" @ spans 10 & 15
- For joint seal details see "JOINT SEAL DETAILS" sheet.

**GENERAL NOTES**  
**LOAD FACTOR DESIGN**

- DESIGN: BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
- DEAD LOAD: Includes 35 psf for future wearing surface.
- LIVE LOADING: HS20-44 and permit design load.
- REINFORCED CONCRETE:  $f_y = 60,000$  psi  
 $f'_c = 3,600$  psi  
 $n = 9$



**TYPICAL SECTION AT PIERS 3, 4, 5, 7, 10, 16 & 18**

Br No. 22-0026R  
3/8" = 1'

**TEMPORARY DECK PLATE LOAD CRITERIA**

MOMENT DEMAND/FOOT (kips-ft/ft)	ANCHOR BOLT SHEAR/FOOT (kips/ft)	ANCHOR BOLT TENSION (kips/bolt)
18.41	16	8

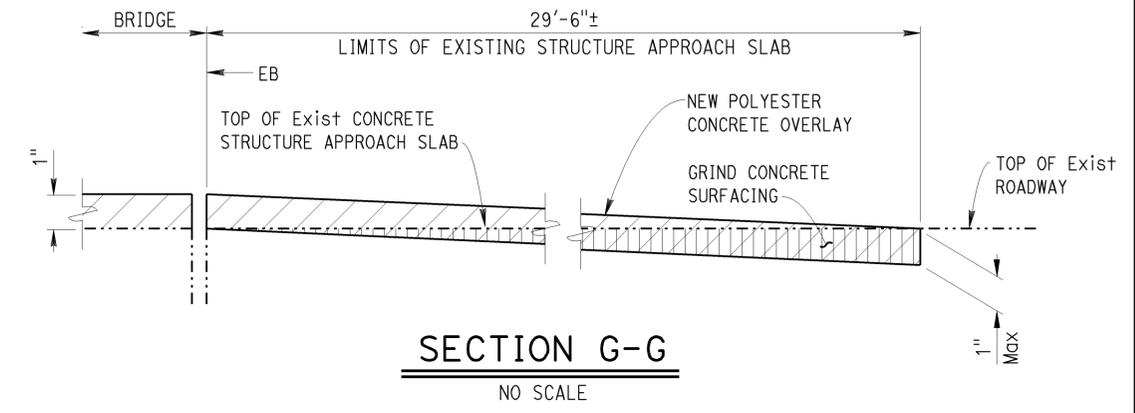
Plate deflection shall not exceed  $s/12$  inches ( $s$  = span of plate).  
Maximum anchor bolt spacing = 1'-0".

DESIGN BY PETER KANG CHECKED ALI NOJOURI DETAILS BY GF BIDWELL CHECKED ALI NOJOURI QUANTITIES BY PETER KANG CHECKED ALI NOJOURI	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE <b>STRUCTURE MAINTENANCE DESIGN</b>	BRIDGE No.	<b>ROUTES 5, 80 &amp; 505 BRIDGES</b>				
			VARIOUS		<b>EXPANSION JOINT RECONSTRUCTION DETAILS</b>			
			VARIES					
STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3488 PROJECT NUMBER & PHASE: 0313000030 1	CONTRACT No.: 03-4M7401	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 9-28-13 10-28-13 12-11-13 1-7-14 1-29-14	SHEET 9 OF 11

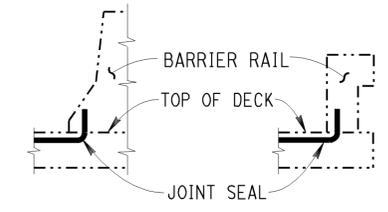
### JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	LOCATION	MINIMUM "MR" (INCHES)	APPROXIMATE LENGTH (FEET)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXPANSION JOINT (INCHES)
SACRAMENTO RIVER (ELKHORN)	22-0025R	Abut 1 BB	1/2	53	---	---
	22-0025L	Abut 1 BB	1/2	53	---	---
CACHE CREEK	22-0007R	Abut 1 BB	1	48	NO	12.0
		Abut 4 EB	1	48	NO	12.0
	RIGHT ETW	TYPE AL	246	NO	12.0	
	22-0007L	Abut 1 BB	1	30	NO	12.0
Abut 4 EB		1	30	NO	12.0	
SMITH CREEK	22-0009R	Abut 1 BB	1/2	62	NO	12.0
		Abut 4 EB	1/2	62	NO	12.0
SACRAMENTO RIVER BOH (BRYTE BEND)	22-0026R	PIER 3 CL	1/2	50	---	---
		PIER 4 CL	1/2	50	---	---
		PIER 5 CL	1/2	50	---	---
		PIER 7 CL	1/2	50	---	---
		PIER 10 CL	1/2	50	---	---
		PIER 18 CL	1/2	50	---	---

- 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.
  - Bend 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 (B6-21)



LEGEND:  
 BB = BEGINNING OF BRIDGE  
 EB = END OF BRIDGE  
 ETW = EDGE OF TRAVEL WAY  
 CL = CENTERLINE OF PIER JOINT



### JOINT SEAL AT LOW SIDE OF DECK

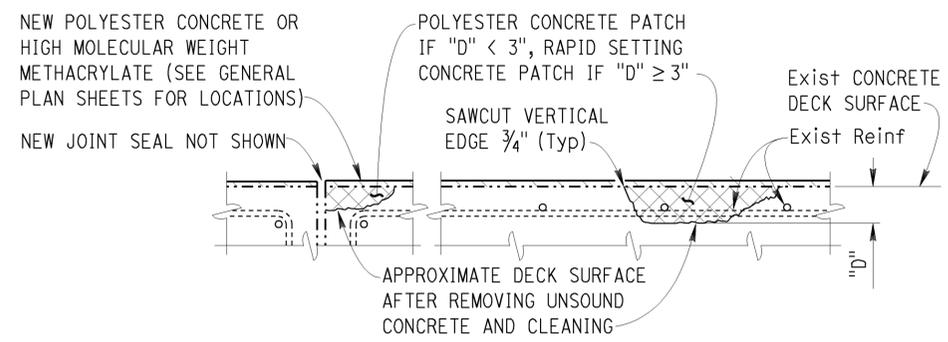
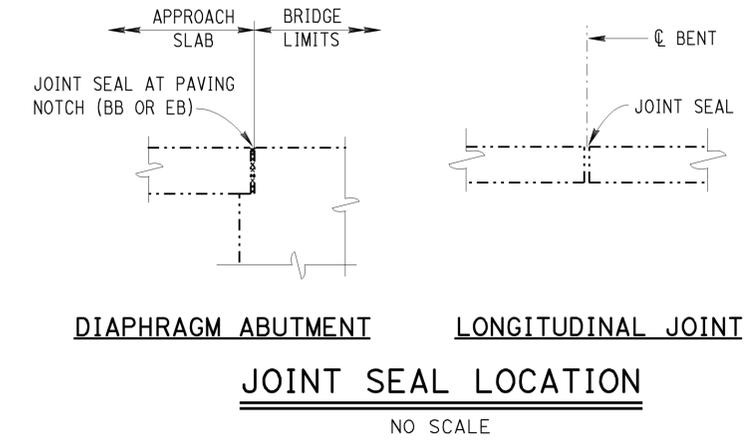
DETAILS SHOWN FOR ILLUSTRATION PURPOSES ONLY.  
 FOR USE ONLY WHERE DECK JOINT MATCHES THE BARRIER RAIL JOINT.  
 NO SCALE

### DECK REPAIR TABLE

REMOVE UNSOUND CONCRETE AND PLACE RAPID SETTING CONCRETE (PATCH)

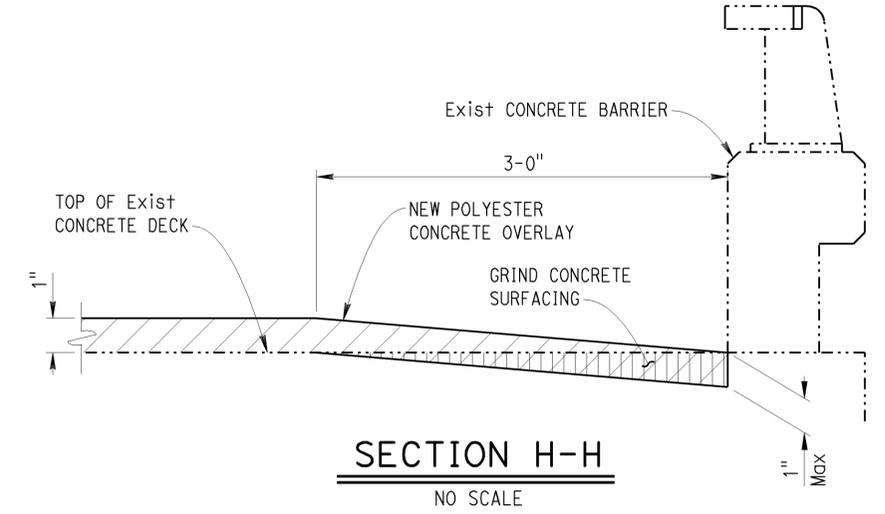
BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (PERCENT)	APPROXIMATE DEPTH (INCHES)
SACRAMENTO RIVER (ELKHORN)	22-0025L	10	3
	22-0025R	10	3
CACHE CREEK	22-0007L	10	3
SMITH CREEK	22-0009L	10	3
	22-0009R	10	3
COUNTY ROAD 4 OC	22-0133	10	3

LOCATIONS TO BE DETERMINED BY THE ENGINEER.



### JOINT AND DECK REPAIR DETAIL

LOCATIONS TO BE DETERMINED BY THE ENGINEER.  
 REINFORCEMENT MAY BE ENCOUNTERED DURING DECK CONCRETE REMOVAL.  
 NO SCALE

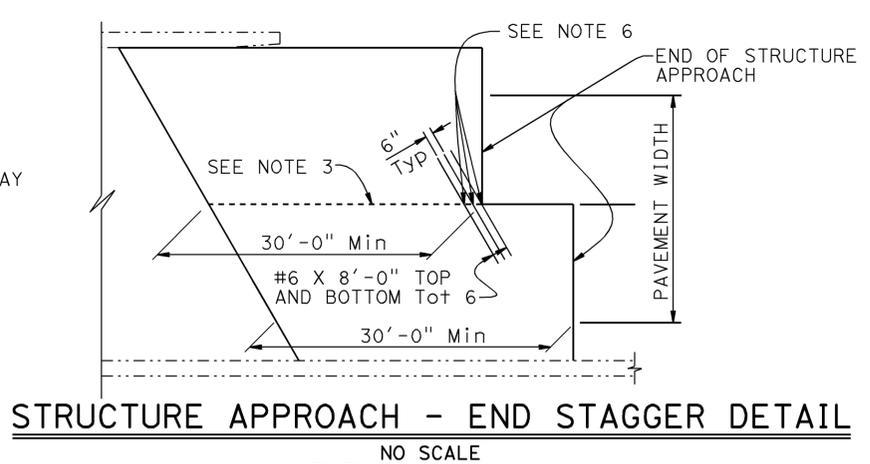
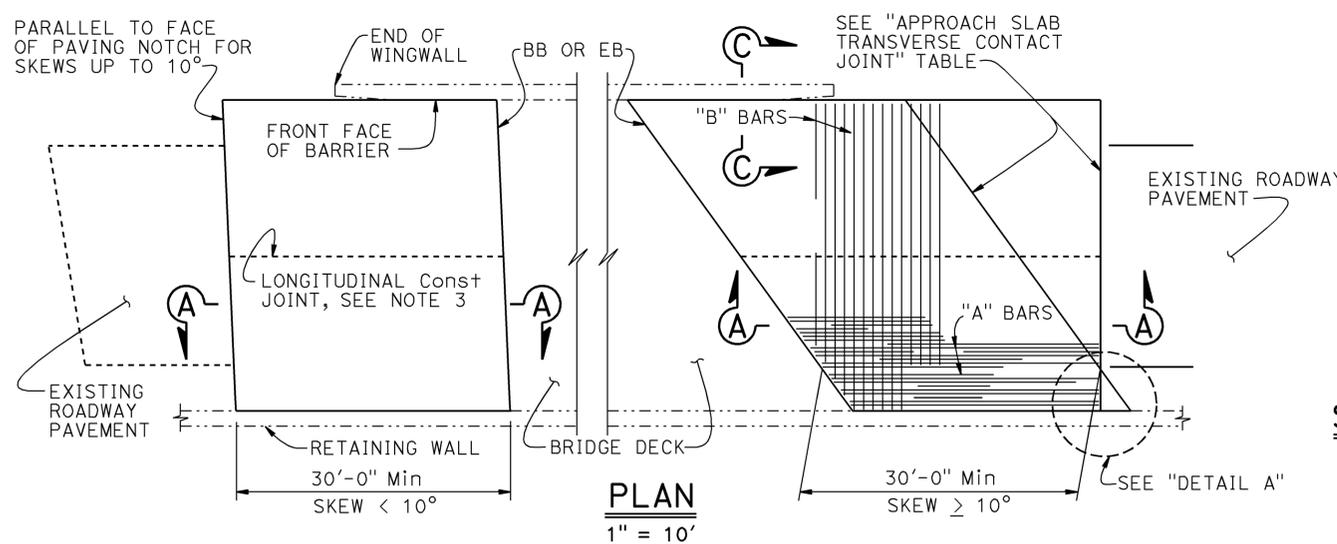


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col, YoI	5, 80, 505	Var	25	25

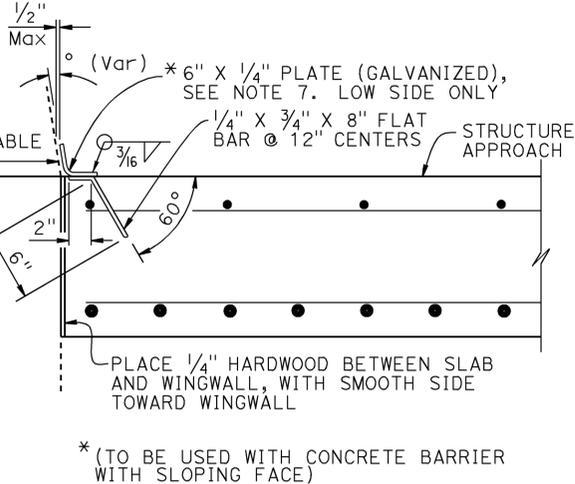
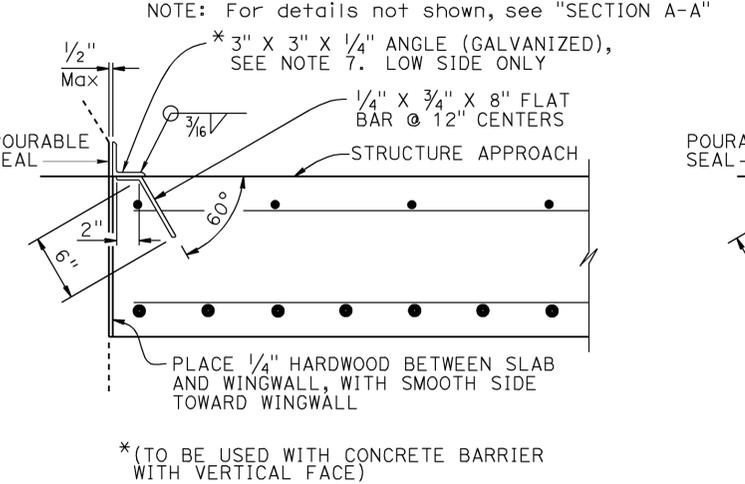
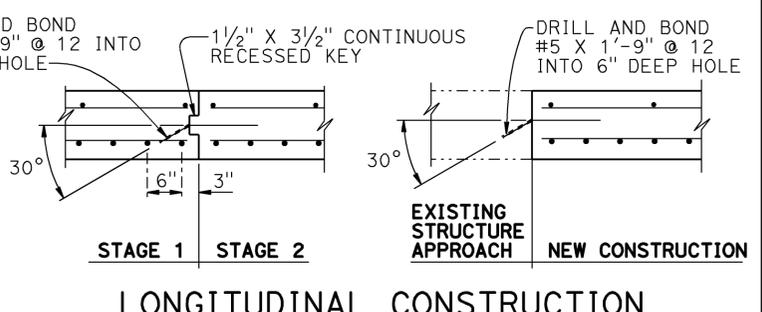
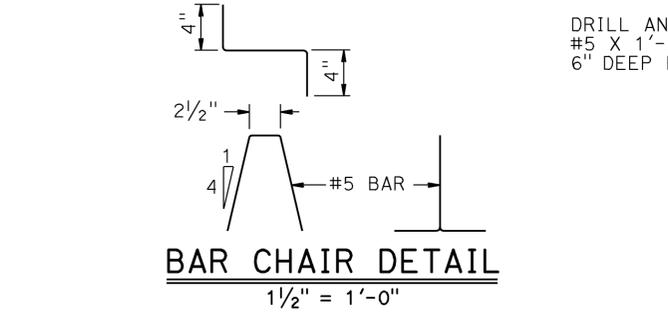
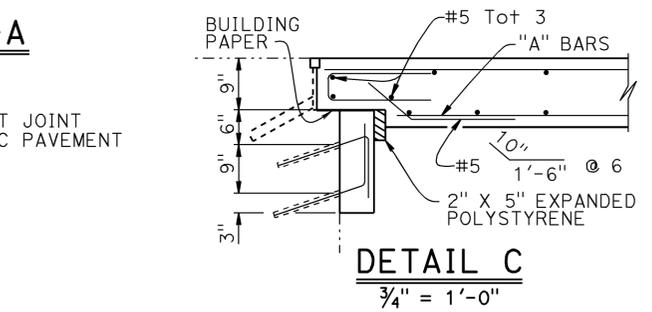
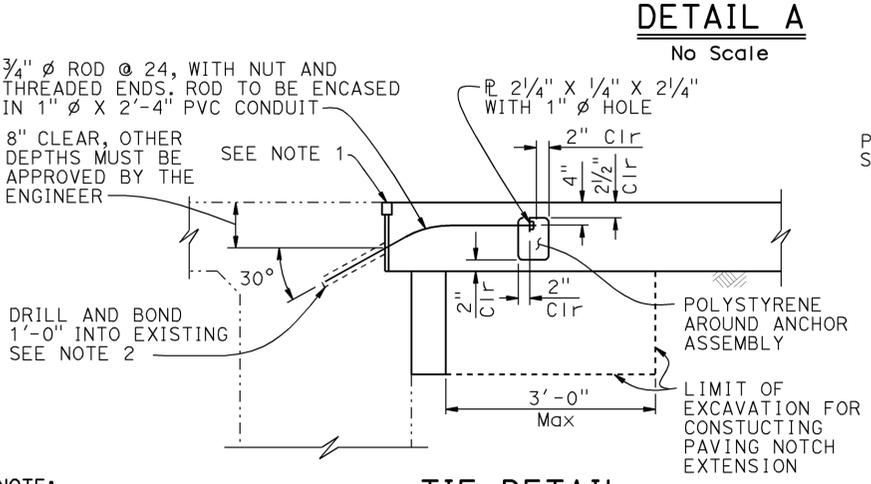
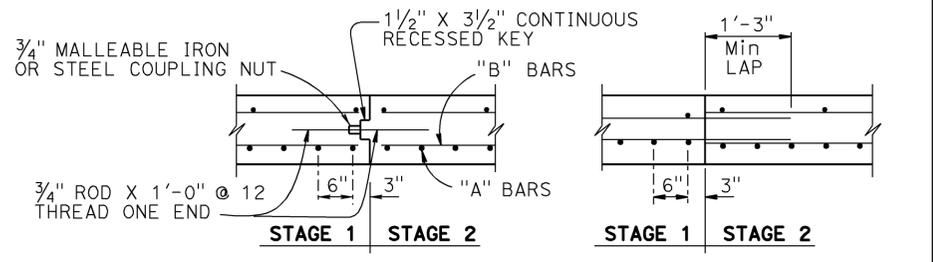
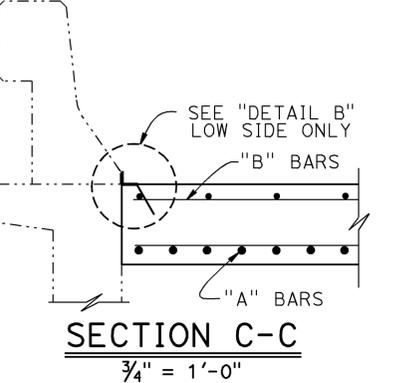
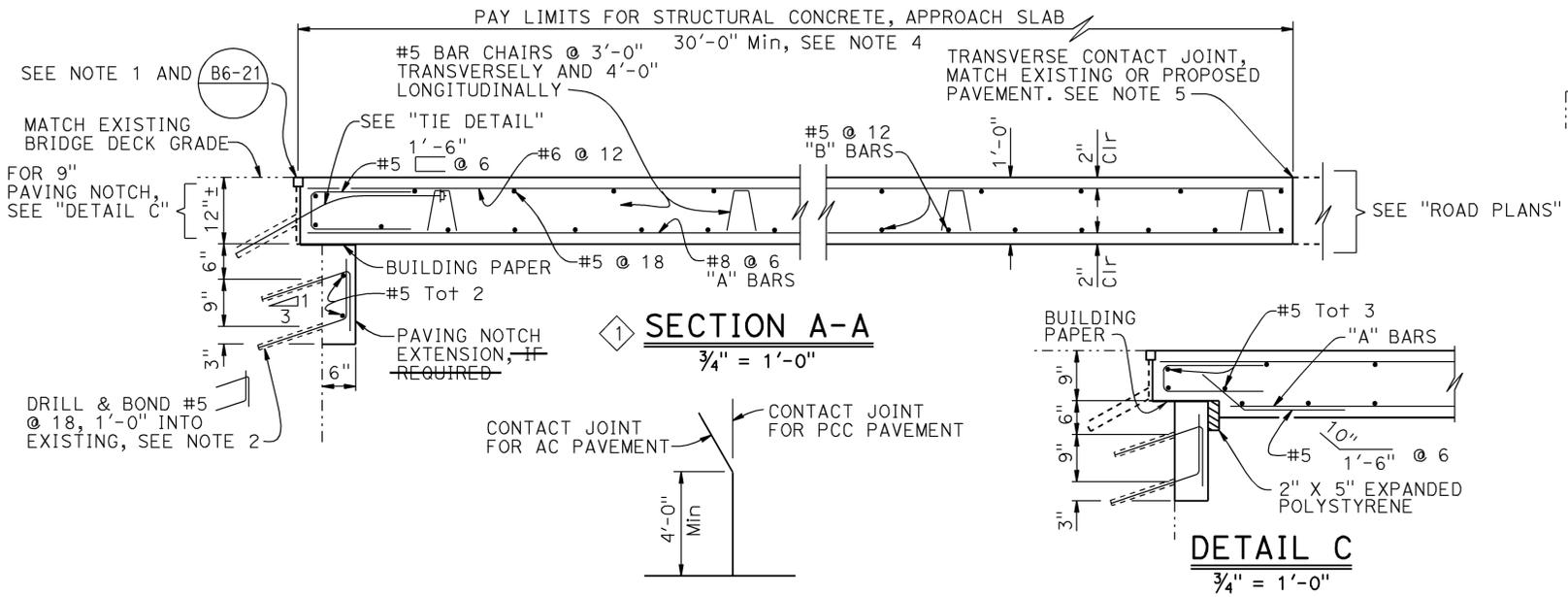
REGISTERED CIVIL ENGINEER  
 PETER B. KANG  
 No. C 70336  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

2-14-14  
 DATE  
 4-7-14  
 PLANS APPROVAL DATE

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APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



- NOTES:
- For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required
  - Space to avoid existing prestress anchorages and main reinforcement
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines
  - Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint
  - For transverse contact joint with new PCC paving, refer to Standard Plan RSP P10
  - Couplers are required for stage construction
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable

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

STANDARD DRAWING  
 FILE NO. **xs3-150**  
 APPROVAL DATE \_\_\_\_\_ REVISED  
 1 DETAIL REVISED  
 2 NOTE REVISED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 BRIDGE No. VARIOUS  
 POST MILE VARIES

ROUTES 5, 80 & 505 BRIDGES  
 STRUCTURE APPROACH TYPE R(30D)