

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	1	10



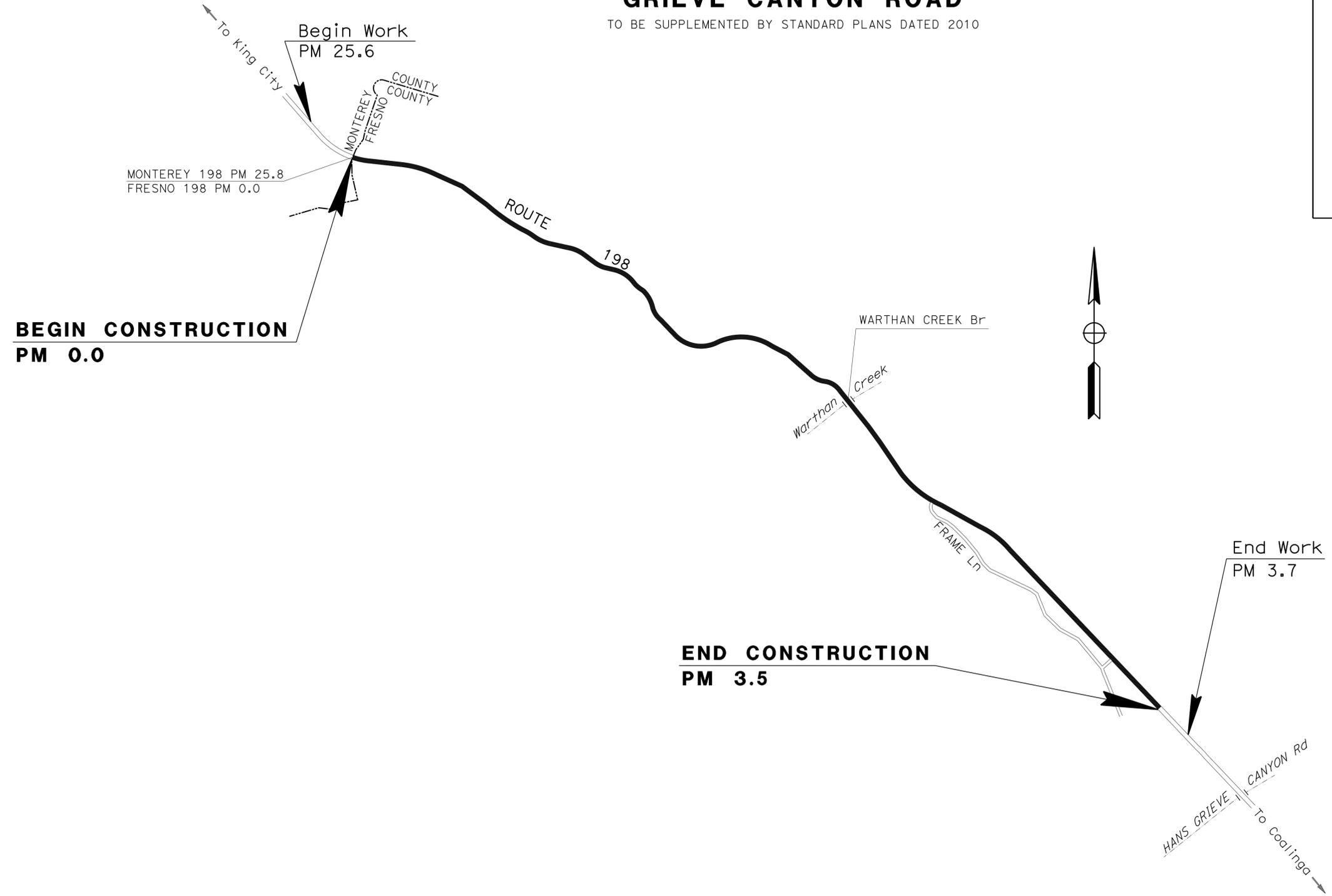
STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN FRESNO COUNTY NEAR**  
**COALINGA FROM MONTEREY COUNTY**  
**LINE TO 0.8 MILE WEST OF HANS**  
**GRIEVE CANYON ROAD**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

**INDEX OF PLANS**

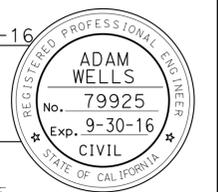
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTION
3	CONSTRUCTION DETAILS
4	CONSTRUCTION AREA SIGNS
5-6	SUMMARY OF QUANTITIES
7-10	REVISED STANDARD PLANS

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



PROJECT MANAGER	BILL MOSES
DESIGN ENGINEER	RENE SANCHEZ

*Adam Wells* 01-15-16  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**January 25, 2016**  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.	<b>06-0T5504</b>
PROJECT ID	<b>0615000151</b>

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

NO SCALE

DATE PLOTTED => 03-FEB-2016 TIME PLOTTED => 06:28  
 LAST REVISION 01-15-16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	2	10

<i>Adam Wells</i>	01-15-16
REGISTERED CIVIL ENGINEER	DATE
1-25-16	
PLANS APPROVAL DATE	

ADAM WELLS
No. 79925
Exp. 9-30-16
CIVIL

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:**

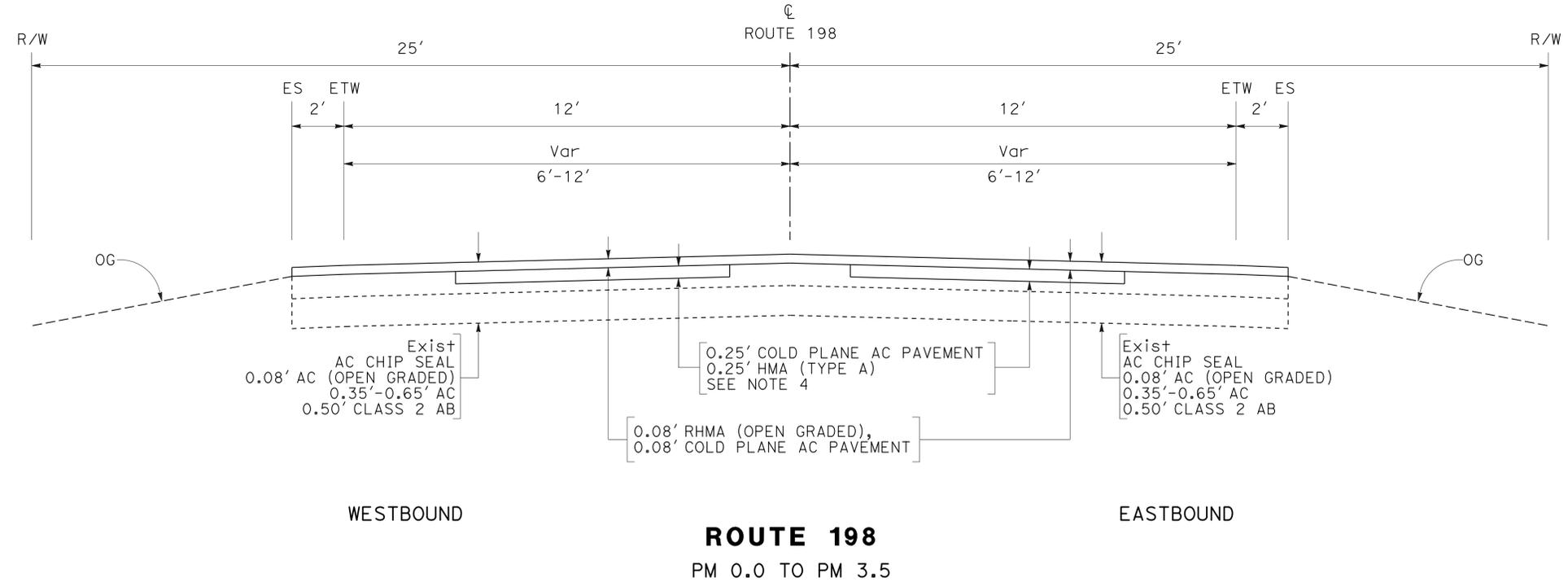
1. DIMENSIONS OF PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
4. SEE REPAIR FAILED AREA TABLES ON Q-1 AND Q-2 SHEETS FOR DIMENSIONS AND LOCATIONS OF COLD PLANE AC PAVEMENT AND HMA (TYPE A).

**ABBREVIATION:**

RAC RUBBERIZED ASPHALT CONCRETE

**PAVEMENT CLIMATE REGION**

INLAND VALLEY



**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** PAVEMENT PRESERVATION  
 ADAM WELLS  
 RENE SANCHEZ  
 RENE SANCHEZ  
 RENE SANCHEZ

FUNCTIONAL SUPERVISOR  
 RENE SANCHEZ

CALCULATED/DESIGNED BY  
 CHECKED BY

ADAM WELLS  
 RENE SANCHEZ

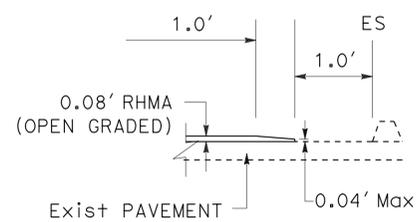
REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	3	10

*Adam Wells* 01-15-16  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

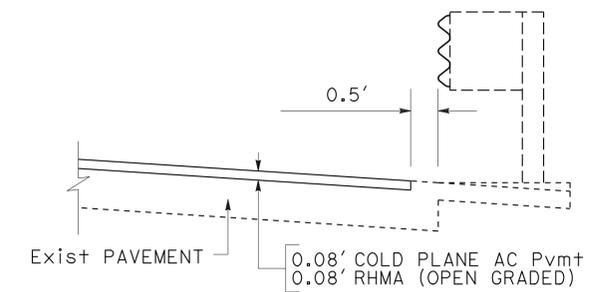
REGISTERED PROFESSIONAL ENGINEER  
**ADAM WELLS**  
 No. 79925  
 Exp. 09-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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



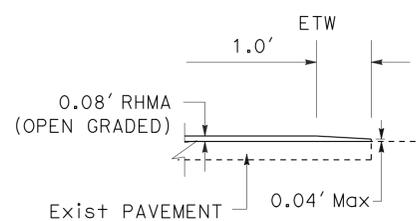
**SHOULDER TAPER DETAIL**

- PM 0.3      PM 2.1      PM 2.9
- PM 0.6      PM 2.5      PM 3.1
- PM 1.3      PM 2.7
- PM 1.5      PM 2.8

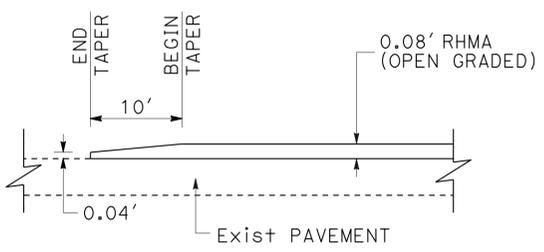


**DETAIL A**

- PM 0.7
- PM 0.9
- PM 1.9



ROUTE 198  
**SHOULDER DETAIL**



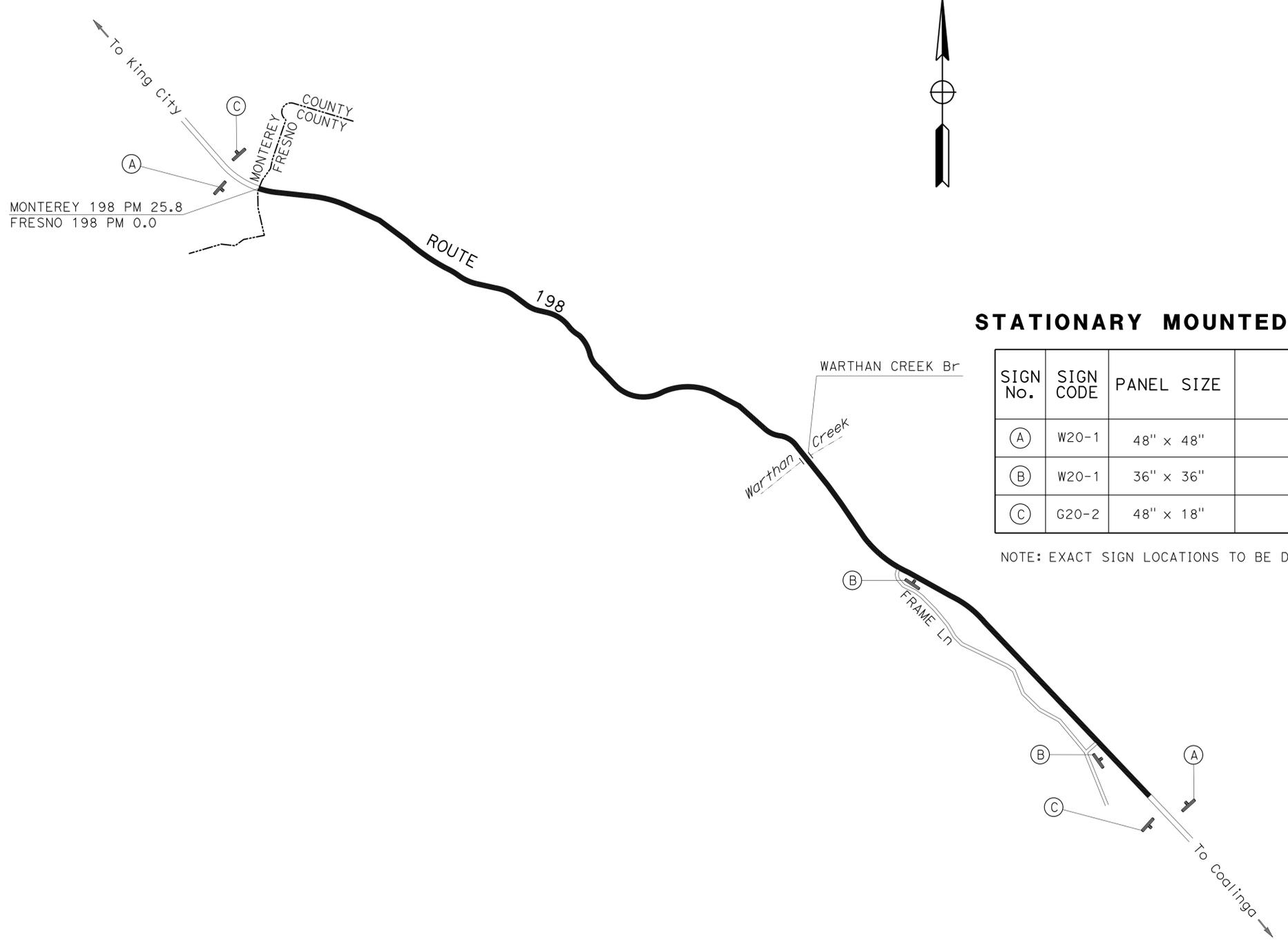
**TYPICAL LONGITUDINAL PAVEMENT TRANSITION**

- PM 0.0
- PM 3.5

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	4	10
			01-15-16	DATE	
REGISTERED CIVIL ENGINEER			ADAM WELLS No. 79925 Exp. 9-30-16 CIVIL		
1-25-16 PLANS APPROVAL DATE			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		

**NOTE:**  
EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	2
(B)	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 4"	2
(C)	G20-2	48" x 18"	END ROAD WORK	1 - 4" x 4"	2

NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** PAVEMENT PRESERVATION  
 FUNCTIONAL SUPERVISOR: RENE SANCHEZ  
 CALCULATED/DESIGNED BY: ADAM WELLS  
 CHECKED BY: RENE SANCHEZ  
 REVISED BY: ADAM WELLS  
 DATE REVISED:

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

LAST REVISION | DATE PLOTTED => 27-JAN-2016  
 01-15-16 | TIME PLOTTED => 13:31

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® PAVEMENT PRESERVATION  
 FUNCTIONAL SUPERVISOR: RENE SANCHEZ  
 CALCULATED/DESIGNED BY: ADAM WELLS  
 CHECKED BY: RENE SANCHEZ  
 REVISED BY: ADAM WELLS  
 DATE REVISED: 01-15-16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	5	10

01-15-16  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**ADAM WELLS**  
 No. 79925  
 Exp. 9-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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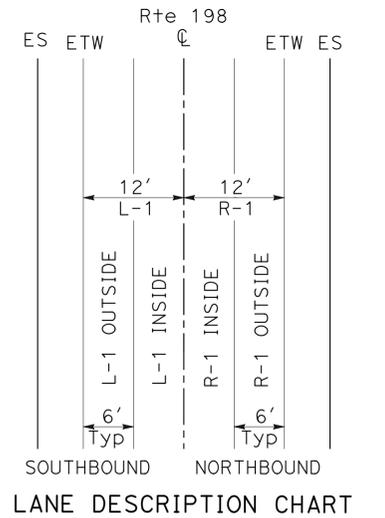
### REPAIR FAILED AREA

BEGIN POST MILE	END POST MILE	LOCATION	LENGTH	WIDTH	COLD PLANE AC PAVEMENT	HMA (TYPE A)
			FT	FT	SQYD	TON
0.065	0.196	R-1 FULL WIDTH	692	12	922	150
0.202	0.209	R-1 INSIDE	37	6	25	4
0.211	0.216	R-1 OUTSIDE	26	6	18	3
0.225	0.260	R-1 OUTSIDE	185	6	123	20
0.260	0.326	R-1 FULL WIDTH	348	12	465	76
0.531	0.541	R-1 INSIDE	53	6	35	6
0.566	0.579	R-1 OUTSIDE	69	6	46	7
0.614	0.732	R-1 FULL WIDTH	623	12	831	136
0.830	0.945	R-1 FULL WIDTH	607	12	810	132
0.952	0.958	R-1 FULL WIDTH	32	12	42	7
1.053	1.107	R-1 FULL WIDTH	285	12	380	62
1.111	1.123	R-1 INSIDE	63	6	42	7
1.128	1.136	R-1 OUTSIDE	42	6	28	5
1.136	1.159	R-1 FULL WIDTH	121	12	162	26
1.176	1.197	R-1 INSIDE	111	6	74	12
1.236	1.316	R-1 FULL WIDTH	422	12	563	92
1.350	1.426	R-1 FULL WIDTH	401	12	535	87
1.476	1.483	R-1 OUTSIDE	37	6	25	4
1.498	1.543	R-1 FULL WIDTH	238	12	317	52
1.564	1.573	R-1 FULL WIDTH	48	12	63	10
1.573	1.597	R-1 OUTSIDE	127	6	84	14
1.623	1.631	R-1 OUTSIDE	42	6	28	5
1.659	1.666	R-1 FULL WIDTH	37	12	49	8
1.669	1.739	R-1 FULL WIDTH	370	12	493	80
1.862	1.879	R-1 INSIDE	90	6	60	10
1.944	1.964	R-1 OUTSIDE	106	6	70	11
EB SUBTOTAL (TABLE 1 OF 2)					6290	1026

### REPAIR FAILED AREA

BEGIN POST MILE	END POST MILE	LOCATION	LENGTH	WIDTH	COLD PLANE AC PAVEMENT	HMA (TYPE A)
			FT	FT	SQYD	TON
1.964	2.054	R-1 FULL WIDTH	475	12	634	103
2.064	2.080	R-1 OUTSIDE	84	6	56	9
2.120	2.135	R-1 INSIDE	79	6	53	9
2.275	2.280	R-1 INSIDE	26	6	18	3
2.294	2.298	R-1 INSIDE	21	6	14	2
2.305	2.309	R-1 FULL WIDTH	21	12	28	5
2.309	2.329	R-1 INSIDE	106	6	70	11
2.389	2.399	R-1 FULL WIDTH	53	12	70	11
2.722	2.725	R-1 INSIDE	16	6	11	2
2.738	2.741	R-1 INSIDE	16	6	11	2
2.742	2.756	R-1 OUTSIDE	74	6	49	8
2.788	2.795	R-1 OUTSIDE	37	6	25	4
2.812	2.828	R-1 FULL WIDTH	84	12	113	18
2.926	2.954	R-1 INSIDE	148	6	99	16
2.954	2.961	R-1 OUTSIDE	37	6	25	4
2.979	2.988	R-1 OUTSIDE	48	6	32	5
3.008	3.022	R-1 INSIDE	74	6	49	8
3.022	3.035	R-1 FULL WIDTH	69	12	92	15
3.094	3.109	R-1 INSIDE	79	6	53	9
3.116	3.119	R-1 FULL WIDTH	16	12	21	3
3.124	3.130	R-1 INSIDE	32	6	21	3
3.187	3.193	R-1 INSIDE	32	6	21	3
3.268	3.280	R-1 INSIDE	63	6	42	7
3.280	3.286	R-1 FULL WIDTH	32	12	42	7
EB SUBTOTAL (TABLE 2 OF 2)					1649	267
EB SUBTOTAL (TABLE 1 OF 2)					6290	1026
EB SUBTOTAL					7939**	1293**

\*\* INCLUDED IN ROADWAY QUANTITIES TABLE.  
 EXACT LOCATION AS DIRECTED BY THE ENGINEER.



## SUMMARY OF QUANTITIES Q-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	6	10

01-15-16  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**ADAM WELLS**  
 No. 79925  
 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.

### REPAIR FAILED AREA

BEGIN POST MILE	END POST MILE	LOCATION	LENGTH	WIDTH	COLD PLANE AC PAVEMENT	HMA (TYPE A)
			FT	FT	SQYD	TON
3.303	3.293	L-1 INSIDE	53	6	35	6
3.255	3.228	L-1 INSIDE	143	6	95	16
3.202	3.195	L-1 OUTSIDE	37	6	25	4
3.185	3.181	L-1 FULL WIDTH	21	12	28	5
3.172	3.162	L-1 FULL WIDTH	53	12	70	11
3.121	3.109	L-1 INSIDE	63	6	42	7
2.396	2.389	L-1 INSIDE	37	6	25	4
2.052	1.967	L-1 FULL WIDTH	449	12	598	98
1.767	1.761	L-1 INSIDE	32	6	21	3
1.580	1.575	L-1 INSIDE	26	6	18	3
1.466	1.459	L-1 FULL WIDTH	37	12	49	8
1.426	1.340	L-1 FULL WIDTH	454	12	605	99
1.325	1.315	L-1 FULL WIDTH	53	12	70	11
1.309	1.222	L-1 FULL WIDTH	459	12	612	100
1.203	1.195	L-1 FULL WIDTH	42	12	56	9
1.195	1.184	L-1 INSIDE	58	6	39	6
0.946	0.836	L-1 FULL WIDTH	581	12	774	126
0.759	0.751	L-1 FULL WIDTH	42	12	56	9
0.730	0.629	L-1 FULL WIDTH	533	12	711	116
0.577	0.571	L-1 FULL WIDTH	32	12	42	7
0.534	0.501	L-1 FULL WIDTH	174	12	232	38
0.212	0.208	L-1 INSIDE	21	6	14	2
0.190	0.181	L-1 INSIDE	48	6	32	5
0.118	0.111	L-1 OUTSIDE	37	6	25	4
<b>WB SUBTOTAL</b>					4274**	697**

\*\* INCLUDED IN ROADWAY QUANTITIES TABLE.  
 EXACT LOCATION AS DIRECTED BY THE ENGINEER.

### ROADWAY QUANTITIES

LOCATION	COLD PLANE AC PAVEMENT	HMA (TYPE A)	RHMA (OPEN GRADED FRICTION COURSE)	TACK COAT
	SQYD	TON	TON	TON
ROUTE 198 PM 0.0 TO PM 3.5	53,387		3000	10
ROUTE 198 WB REPAIR FAILED AREA	4,274	697		1
ROUTE 198 EB REPAIR FAILED AREA	7,939	1293		2
<b>TOTAL</b>	65,600	1926	3000	13

### PAVEMENT DELINEATION QUANTITIES

LOCATION	DETAIL No.	PAVEMENT MARKER (RETROREFLECTIVE)		THERMOPLASTIC TRAFFIC STRIPE			REMOVE PAVEMENT MARKER (N)
		TYPE D TWO-WAY YELLOW	TYPE H ONE-WAY YELLOW	4"	4" (BROKEN 12-3)	4" (BROKEN 36-12)	
		EA	EA	LF	LF	LF	
ROUTE 198 PM 0.0 TO PM 3.5	6	34				1584	2025
	19	102	201	4,752		4752	
	22	1014		24,288			
	27B			36,960			
	27C				200		
<b>SUBTOTAL</b>		1150	201				
<b>TOTAL</b>			1351	66,000	200	6336	

(N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

## SUMMARY OF QUANTITIES

### Q-2

	<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
WWL	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
06	Fre	198	0.0/3.5	7	10
<i>Grace M. Tsushima</i> REGISTERED CIVIL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED 1-25-16

**UNIT OF MEASUREMENT SYMBOLS:**

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

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:

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
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

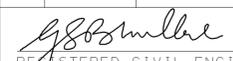
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	8	10

  
 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 1-25-16

TABLE 1

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

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

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

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

TABLE 2

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

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Longitudinal buffer space or flagger station spacing

\*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T9**

2010 REVISED STANDARD PLAN RSP T9

**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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Fre	198	0.0/3.5	9	10

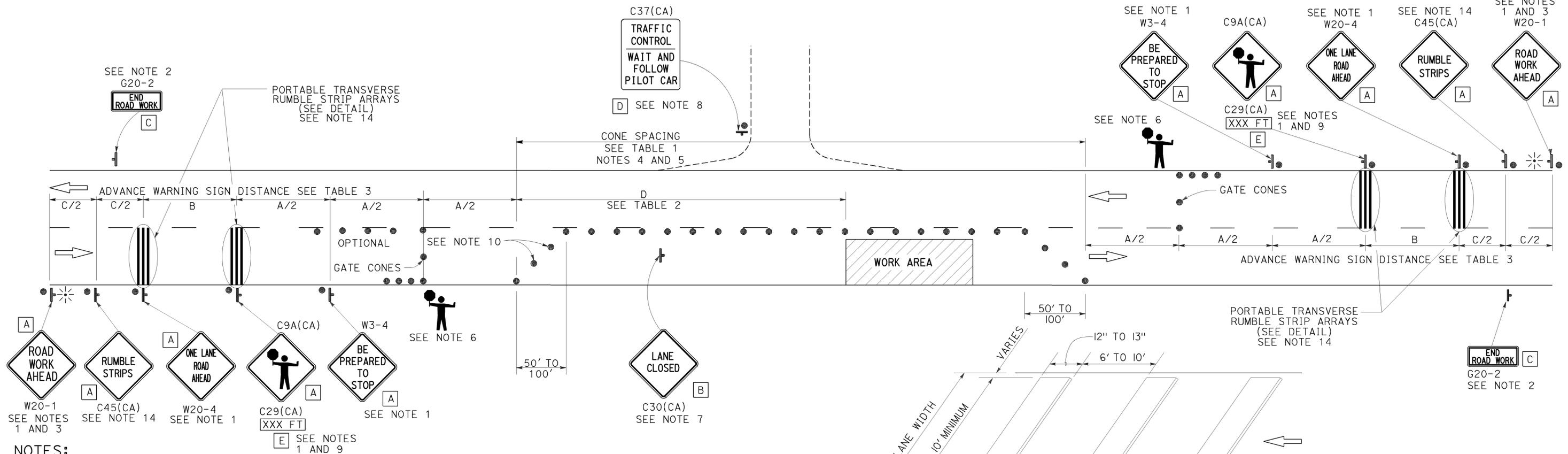
*Devinder Singh*  
 REGISTERED CIVIL ENGINEER  
 No. C50470  
 Exp. 6-30-17  
 CIVIL  
 STATE OF CALIFORNIA

October 30, 2015  
 PLANS APPROVAL DATE

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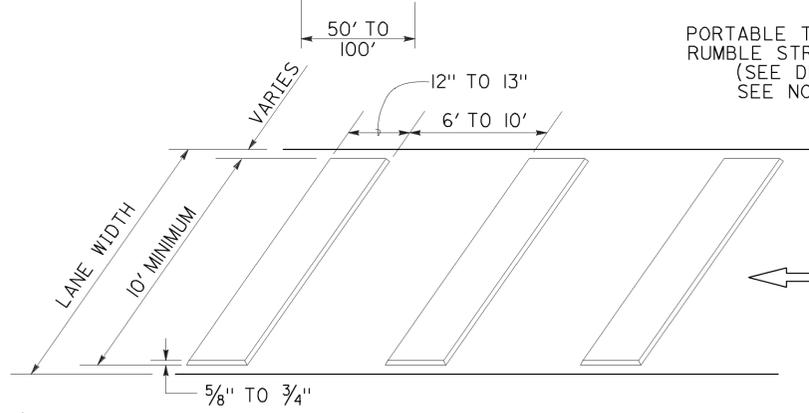
**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**

TO ACCOMPANY PLANS DATED 1-25-16



**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



**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

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

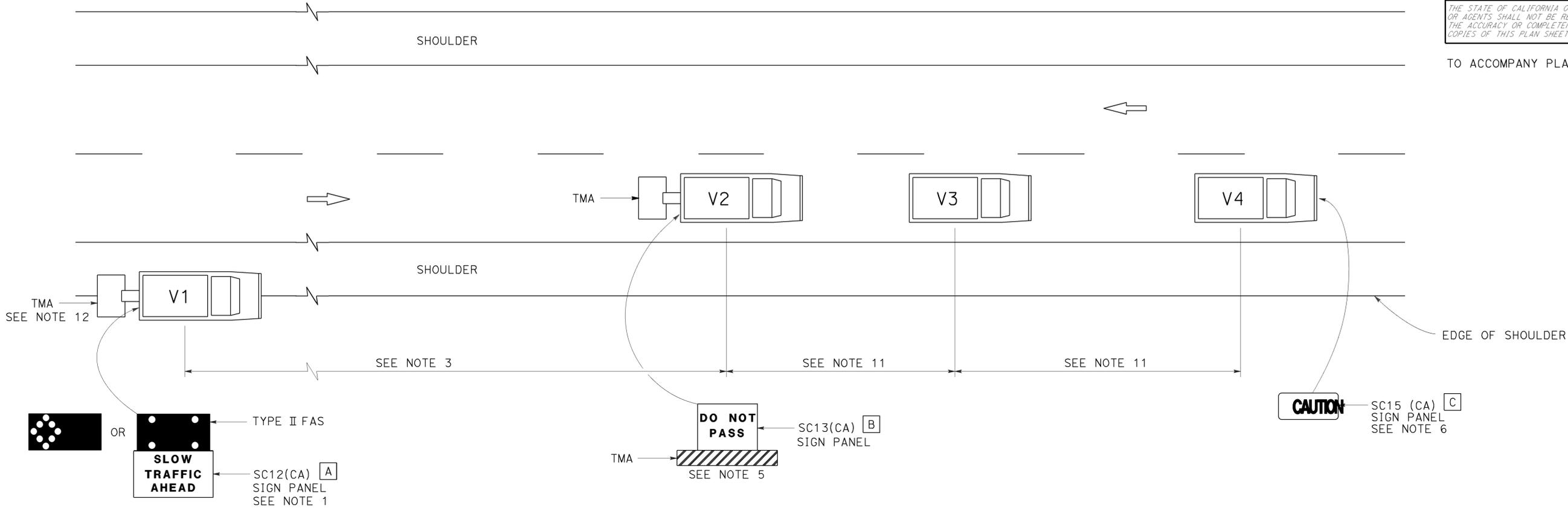
NO SCALE

RSP T13 DATED OCTOBER 30, 2015 SUPERSEDES RSP T13 DATED OCTOBER 17, 2014, 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.

**REVISED STANDARD PLAN RSP T13**

2010 REVISED STANDARD PLAN RSP T13

TO ACCOMPANY PLANS DATED 1-25-16



**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