Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	1	16

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	CONSTRUCTION AREA SIGNS
4	PAVEMENT DELINEATION AND SIGN PLAN
5-7	PAVEMENT DELINEATION DETAILS
8	PAVEMENT DELINEATION QUANTITIES
9	SIGN QUANTITIES
10-11	ELECTRICAL PLANS
12-14	TRAFFIC CONTROL SYSTEM
15-16	REVISED STANDARD PLANS

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

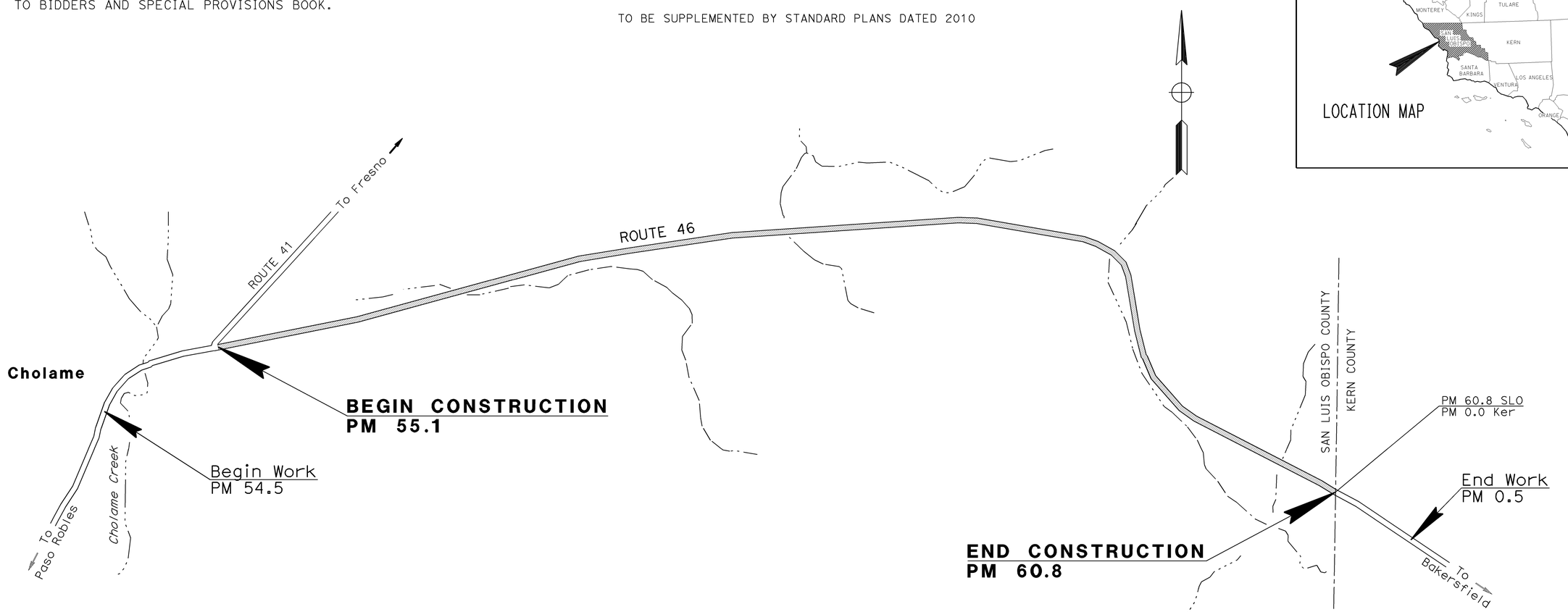
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN SAN LUIS OBISPO COUNTY
NEAR CHOLAME
FROM ROUTE 41
TO KERN COUNTY LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



NO SCALE

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

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

1-07-13
DATE

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. KIRKISH
No. 76829
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

January 7, 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.

PROJECT MANAGER: JOHN LUCHETTA

DESIGN ENGINEER: STEVE WYATT

CONTRACT No.	05-1C3204
PROJECT ID	0512000119

LAST REVISION 01-07-13

DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	2	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SCOTT D. KIRKISH
No. 76829
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

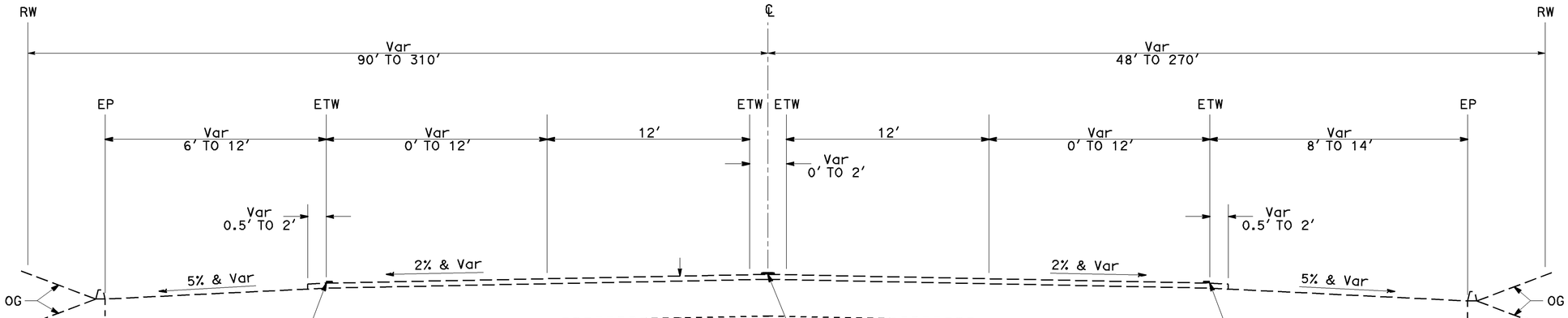
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

DESIGN DESIGNATION
PM 55.11 TO PM 60.85

ADT (2010)	7,000
ADT (2033)	10,818
DHV (2010)	800
DHV (2033)	1,007
D	67.5%
% TRUCKS	13.9%
DESIGN SPEED	65 MPH



ROUTE 46

PM 55.18 TO 60.84

TYPICAL CROSS SECTION
NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: STEVE WYATT
CALCULATED-DESIGNED BY: SCOTT KIRKISH
CHECKED BY: MICHAEL O'NEAL
REVISED BY
DATE REVISED

LAST REVISION 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	3	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

1-7-13
PLANS APPROVAL DATE

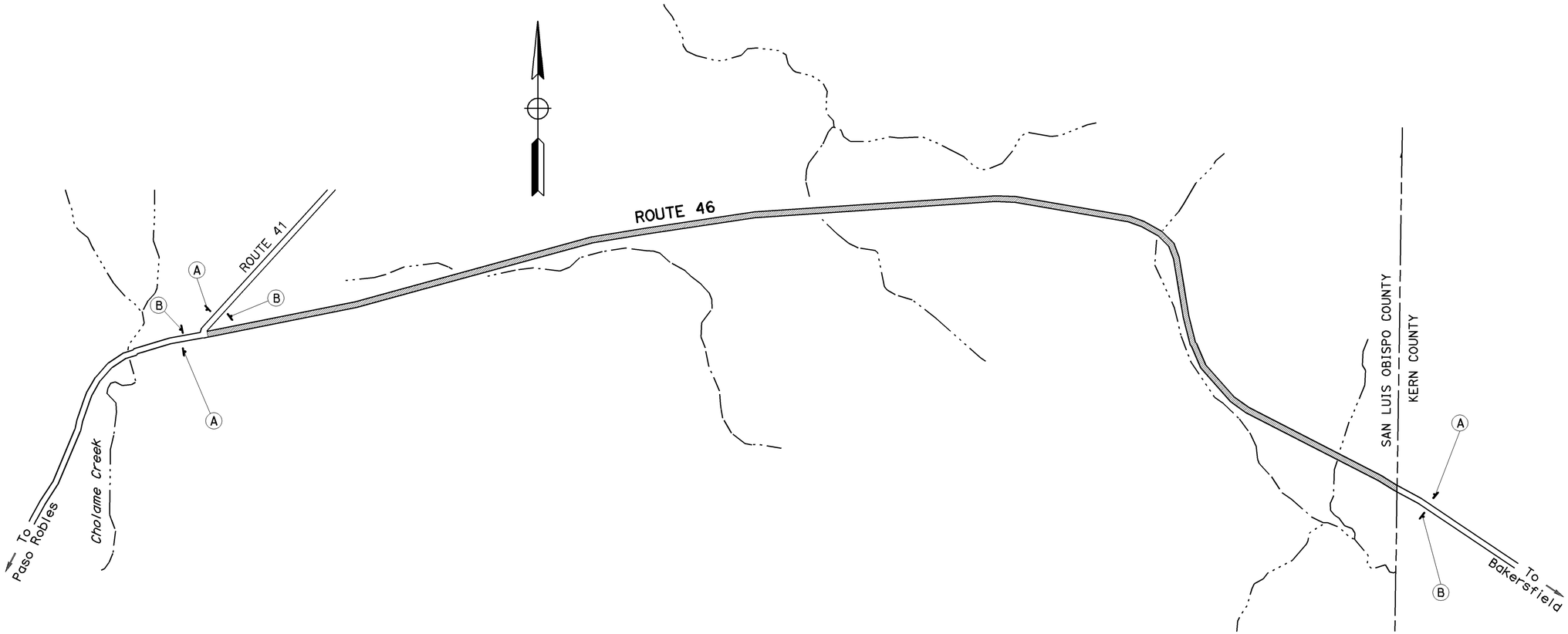
REGISTERED PROFESSIONAL ENGINEER
SCOTT D. KIRKISH
No. 76829
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

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

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	3
B	G20-2		48" x 24"	END ROAD WORK	1 - 4" x 4"	3

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



APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS
CS-1

NO SCALE

REVISED BY | DATE REVISED
SCOTT KIRKISH | MICHAEL O'NEAL
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: STEVE WYATT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION | DATE PLOTTED => 23-JAN-2013 | TIME PLOTTED => 09:24
01-07-13

BORDER LAST REVISED 7/2/2010 | USERNAME => s123239 | DGN FILE => 05120001191a001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1450 | PROJECT NUMBER & PHASE 05120001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	4	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — STATE OF CALIFORNIA

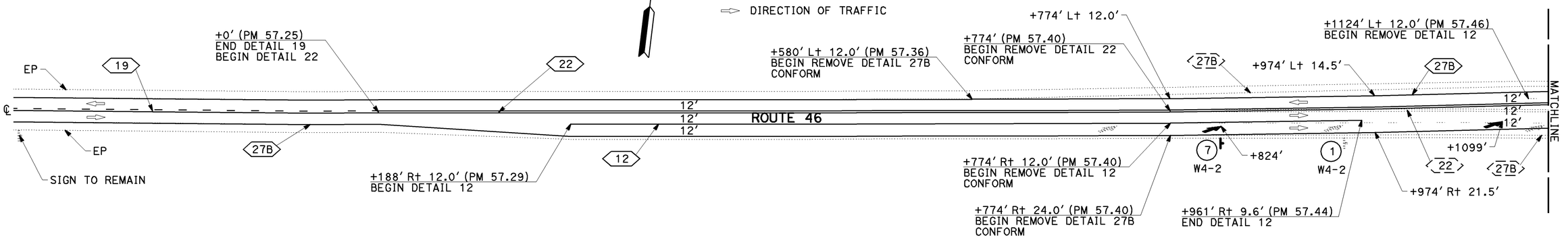
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

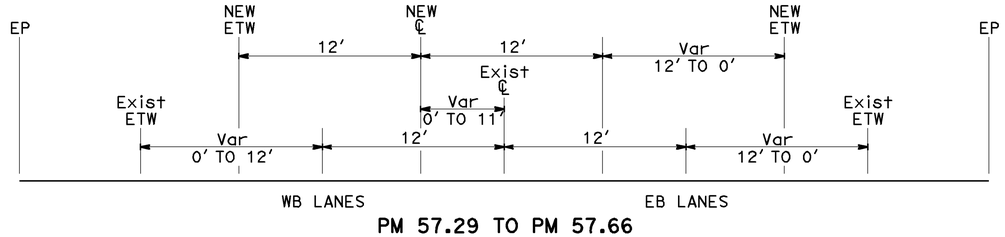
NOTES:

1. MEASUREMENTS ALONG THE EXISTING CENTERLINE STRIPE.
2. EXACT LOCATIONS OF DELINEATORS AND SIGNS TO BE DETERMINED BY ENGINEER.
3. FOR SIGN INFORMATION SEE SHEET SQ-1.
4. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

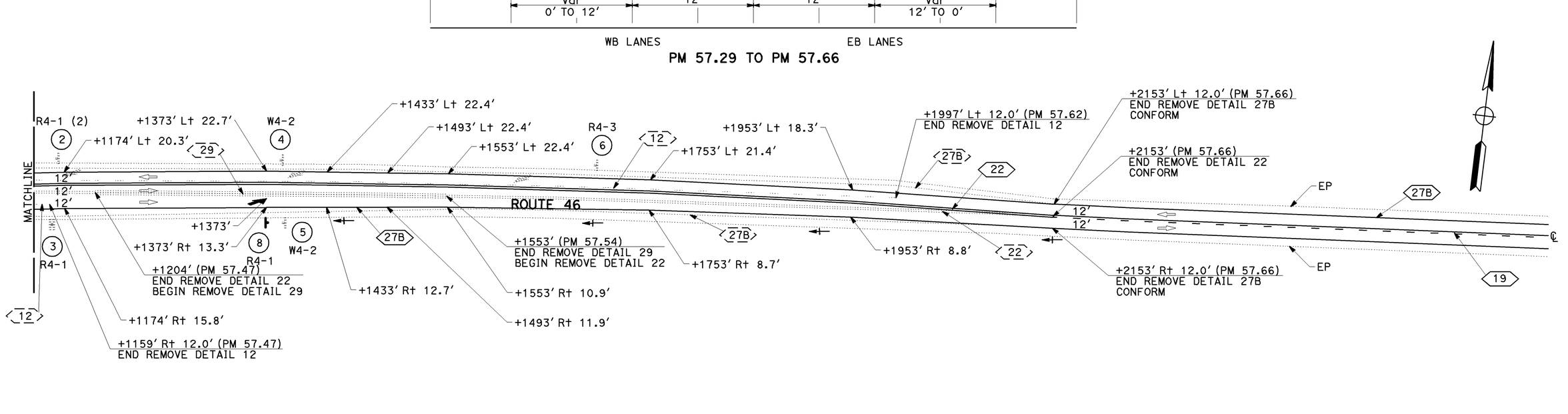
LEGEND

- EXISTING ROADSIDE SIGN
- EXISTING PAVEMENT MARKING
- ROADSIDE SIGN
- (#) ROADSIDE SIGN No.
- PAVEMENT MARKING (TYPE VI ARROW)
- DELINEATOR (CLASS 1), TYPE E - 200' SPACING
- ## TRAFFIC STRIPE DETAIL NUMBER
- ## EXISTING TRAFFIC STRIPE TO BE REMOVED
- DIRECTION OF TRAFFIC





PM 57.29 TO PM 57.66



PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50'

PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: STEVE WYATT
CALCULATED-DESIGNED BY: SCOTT KIRKISH
CHECKED BY: MICHAEL O'NEAL
REVISED BY
DATE REVISED

LAST REVISION: 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	5	16

REGISTERED CIVIL ENGINEER — DATE 1-7-13

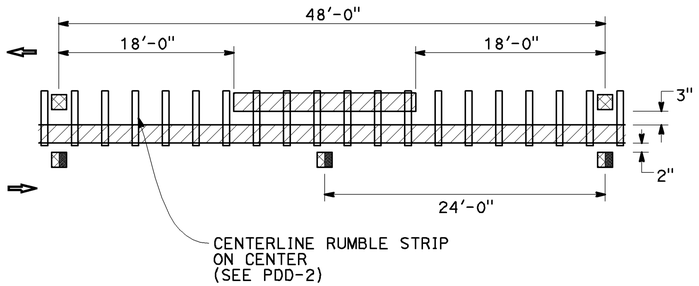
PLANS APPROVAL DATE 1-7-13

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — STATE OF CALIFORNIA

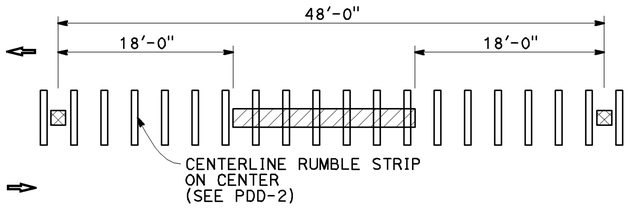
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND

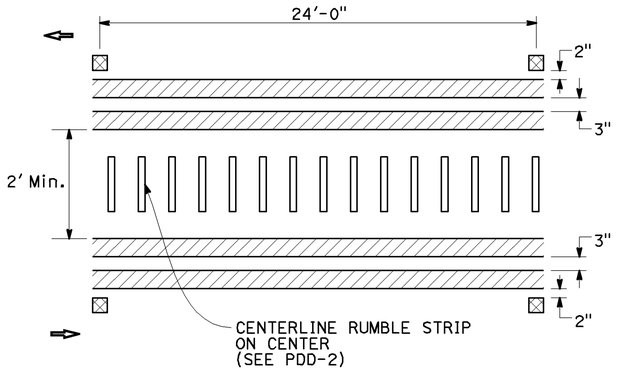
- 4" YELLOW THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE Pvmt Mkr
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE Pvmt Mkr
- DIRECTION OF TRAFFIC



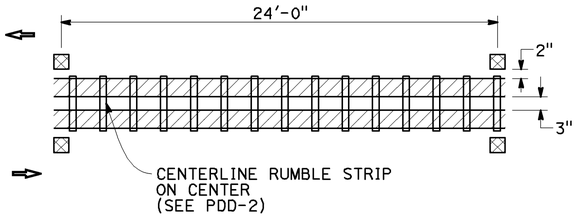
DETAIL 19
WITH CENTERLINE RUMBLE STRIP



DETAIL 6
WITH CENTERLINE RUMBLE STRIP



DETAIL 29
WITH CENTERLINE RUMBLE STRIP



DETAIL 22
WITH CENTERLINE RUMBLE STRIP

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: SCOTT KIRKISH
CHECKED BY: MICHAEL O'NEAL
FUNCTIONAL SUPERVISOR: STEVE WYATT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION DATE PLOTTED => 23-JAN-2013
01-07-13 TIME PLOTTED => 09:45

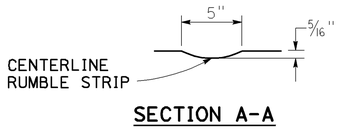
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	6	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

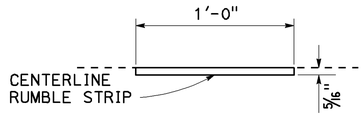
1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — STATE OF CALIFORNIA

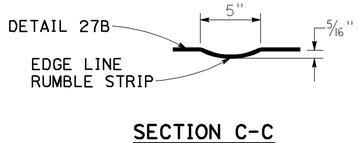
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



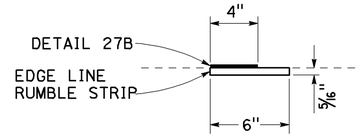
SECTION A-A



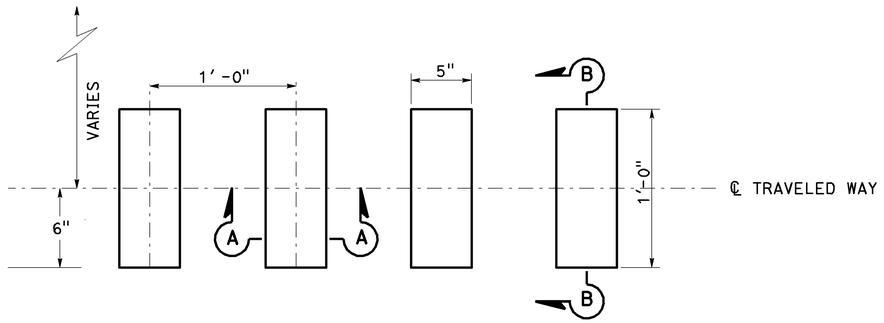
SECTION B-B



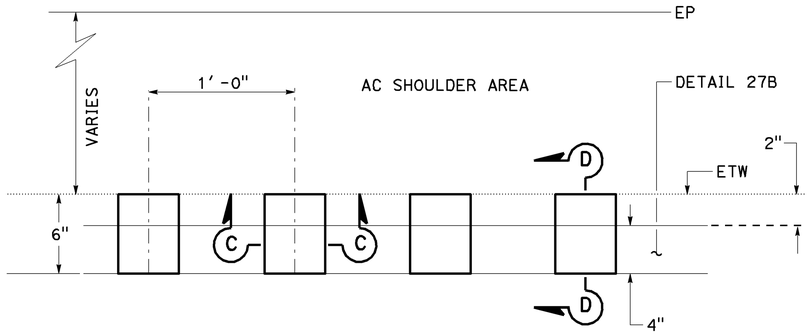
SECTION C-C



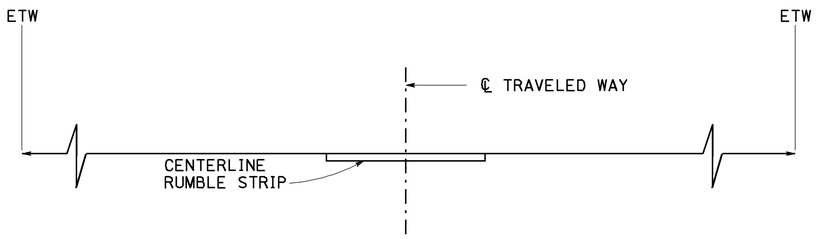
SECTION D-D



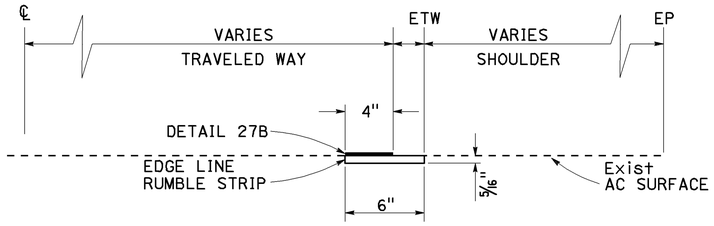
CENTERLINE RUMBLE STRIP
PLAN



EDGE LINE RUMBLE STRIPS
PLAN



CENTERLINE RUMBLE STRIP PLACEMENT



EDGE LINE RUMBLE STRIP PLACEMENT
RIGHT OF DIRECTION OF TRAVEL

PAVEMENT DELINEATION DETAILS
NO SCALE

PDD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: STEVE WYATT
CALCULATED-DESIGNED BY: SCOTT KIRKISH
CHECKED BY: MICHAEL O'NEAL
REVISED BY
DATE REVISED

LAST REVISION 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

BORDER LAST REVISED 7/2/2010
USERNAME => s123239
DGN FILE => 0512000119nb002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1450
PROJECT NUMBER & PHASE 05120001191

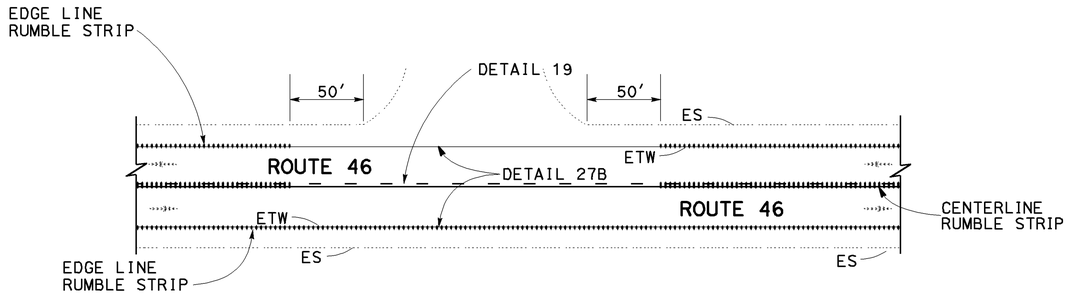
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	7	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

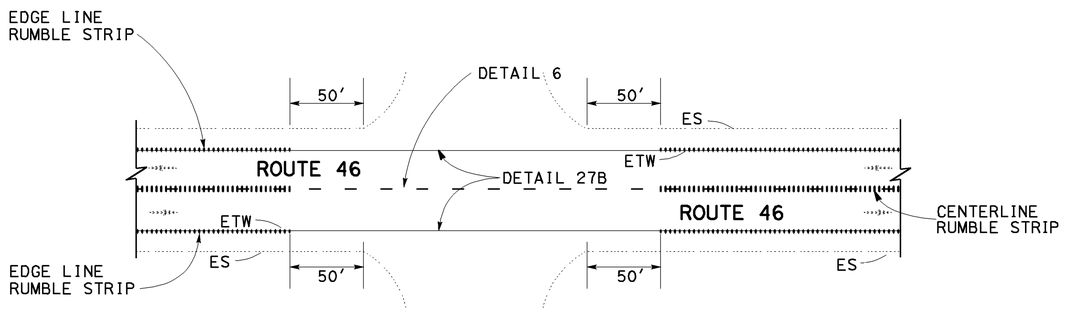
1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — STATE OF CALIFORNIA

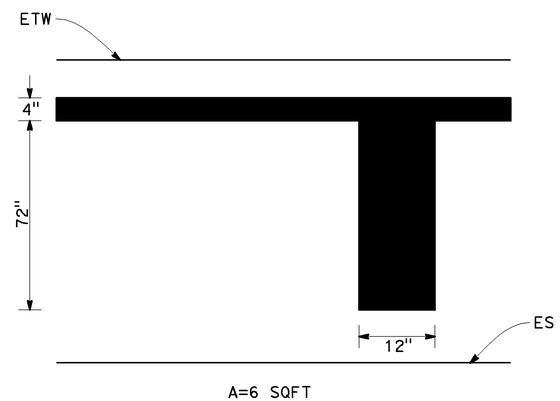
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ACCESS ROAD DETAIL
PM 58.71 ACCESS ROAD NORTH OF ROUTE 46 ONLY

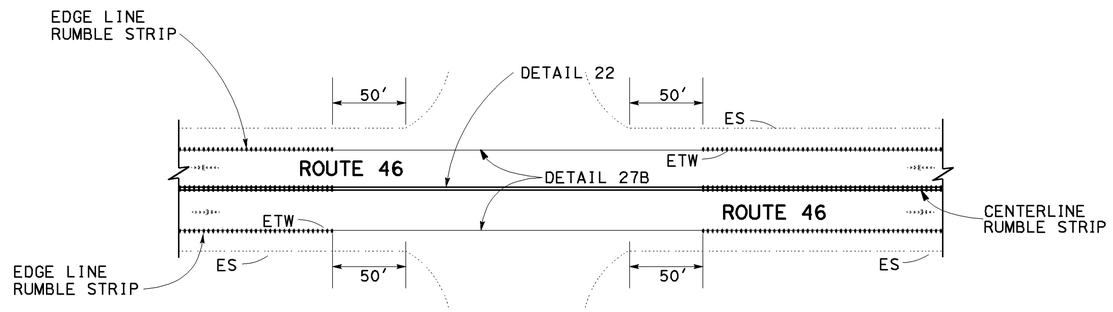


ACCESS ROAD DETAIL
PM 58.29 ACCESS ROAD NORTH AND SOUTH OF ROUTE 46

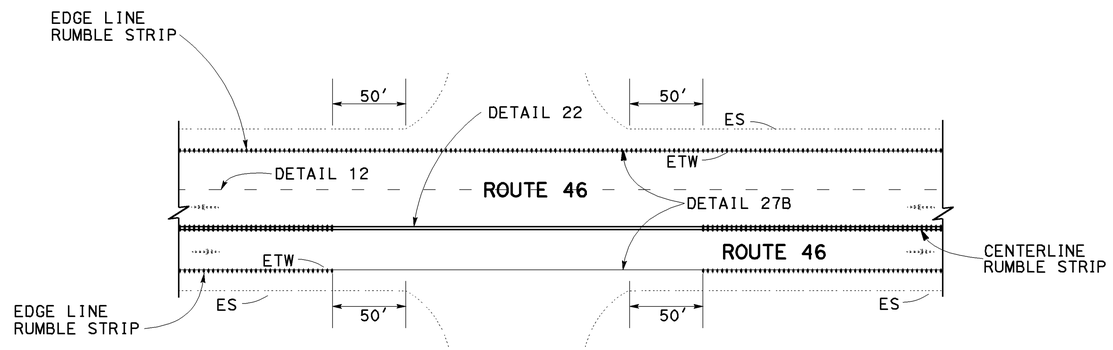


A=6 SQFT

AERIAL PATROL MARKING
PM 56.00 PM 57.00 PM 58.00 PM 59.00 PM 60.00



ACCESS ROAD DETAIL
PM 60.75 ACCESS ROAD NORTH AND SOUTH OF ROUTE 46



ACCESS ROAD DETAIL
PM 60.15 ACCESS ROAD SOUTH OF ROUTE 46 ONLY

PAVEMENT DELINEATION DETAILS
NO SCALE

PDD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: STEVE WYATT
CALCULATED-DESIGNED BY
CHECKED BY: MICHAEL O'NEAL
SCOTT KIRKISH
REVISED BY
DATE REVISED

LAST REVISION 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	8	16

REGISTERED CIVIL ENGINEER — 1-7-13 DATE

SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

1-7-13
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.

PAVEMENT DELINEATION QUANTITIES

LOCATION	REMOVE PAINTED TRAFFIC STRIPE		REMOVE PAINTED PAVEMENT MARKING	REMOVE THERMOPLASTIC TRAFFIC STRIPE				(N) REMOVE PAVEMENT MARKER	CENTERLINE RUMBLE STRIP (GROUND-IN INDENTATIONS)	EDGE LINE RUMBLE STRIP (GROUND-IN INDENTATIONS)		THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)				PAINT TRAFFIC STRIPE (2-COAT)		PAINT PAVEMENT MARKING (2-COAT)	PAVEMENT MARKER (RETRO-REFLECTIVE)			DELINEATOR (CLASS 1)	REMARKS
	WHITE			YELLOW								YELLOW				WHITE							
	DETAIL 12	DETAIL 27B		DETAIL 6	DETAIL 19	DETAIL 22	DETAIL 29			LEFT	RIGHT	DETAIL 6	DETAIL 19	DETAIL 22	DETAIL 29	DETAIL 12	DETAIL 27B		TYPE D	TYPE G	TYPE H		
PM	LF	LF	SQFT	LF	LF	LF	LF	EA	STA	STA	STA	LF	LF	LF	LF	LF	LF	SQFT	EA	EA	EA	EA	
55.18 TO 55.29					726			36	5.81	5.81	5.81		581				1162		12		24		
55.29 TO 57.18				2495				208	99.79	99.79	99.79	9979					19,958	24	208				4 - AERIAL PATROL MARKING
57.18 TO 57.25					462			23	3.70	3.70	3.70		370				739		8		15		
57.25 TO 57.36						1162		48	5.81	5.81	5.81			581		370	1162		48	8			
57.36 TO 57.40		211	42			422		18	2.11	2.11	2.11			211		211	422		18	4			
57.40 TO 57.46	79	634	84			634		33	3.17	3.17	3.17			317		187	634	84	26	4			2 - TYPE VI ARROW
57.46 TO 57.47	26	106	42			106		5	0.53	0.53	0.53			53			106		4				
57.47 TO 57.54	92	739	42				1478	69	3.70	3.70	3.70			370			739	42	31			1	TYPE VI ARROW
57.54 TO 57.62	106	845	42			845		44	4.22	4.22	4.22			422			845		35			2	
57.62 TO 57.66		422				422		18	2.11	2.11	2.11			211			422		18			1	
57.66 TO 57.75					594			30	4.75	4.75	4.75		475				950		10		20		
57.75 TO 58.27				686				57	27.46	27.46	27.46	2746					5491	12	57				2 - AERIAL PATROL MARKING
58.27 TO 58.31				53				4		2.11		211					422		4				
58.31 TO 58.68				488				41	19.54	19.54	19.54	1954					3907		41				
58.68 TO 58.70					132			7	1.06	1.06	1.06		106				211		2		4		
58.70 TO 58.73					198			10			1.58		158				317		3		7		
58.73 TO 58.76					198			10	1.58	1.58	1.58		158				317		3		7		
58.76 TO 58.93						1795		75	8.98	8.98	8.98			898		686	1795		75	14			
58.93 TO 59.06							2746	114	6.86	6.86	6.86				1373	950	1373	12	57	20			2 - AERIAL PATROL MARKING
59.06 TO 60.13						11,299		471	56.50	56.50	56.50			5650		5650	11,299	12	471	118			2 - AERIAL PATROL MARKING
60.13 TO 60.18						528		22		2.64				264		264	528		22	5			
60.18 TO 60.31						1373		57	6.86	6.86	6.86			686		370	1373		57	8			
60.31 TO 60.50					1254			63	10.03	10.03	10.03		1003				2006		21		42		
60.50 TO 60.66					1056			53	8.45	8.45	8.45		845				1690		18		35		
60.66 TO 60.73						739		31	3.70	3.70	3.70			370			739		31				
60.73 TO 60.77						422		18						211			422		18				
60.77 TO 60.84						739		31	3.70	3.70	3.70			370			739		31				
TOTAL	303	2957	252	3722	4620	20,486	4224		290.42	295.17	292.00	14,890	3696	10,614	1373	8688	59,768	186	1329	181	154	4	
	3260			33,052						587.17		30,573				68,456			1664				

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

PAVEMENT DELINEATION QUANTITIES
PDQ-1

SCOTT KIRKISH — CALCULATED-DESIGNED BY
MICHAEL O'NEAL — CHECKED BY
STEVE WYATT — FUNCTIONAL SUPERVISOR
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	9	16

1-7-13
REGISTERED CIVIL ENGINEER DATE

SCOTT D. KIRKISH No. 76829 Exp. 12-31-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

1-7-13
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.

ROADSIDE SIGN QUANTITIES

SIGN No. (##)	SIGN CODE		SIGN MESSAGE	PANEL SIZE	SINGLED FACED	DIRECTION	BACKGROUND		LEGEND		GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	POST SIZE		ROADSIDE SIGN - ONE POST	REMOVE ROADSIDE SIGN	REMARKS
	FEDERAL	CALIFORNIA					SHEETING COLOR	RETROREFLECTIVITY ASTM COLOR	SHEETING COLOR	RETROREFLECTIVITY ASTM COLOR	PREMIUM						
												SQFT	4" X 6"	6" X 6"	EA	EA	
1	W4-2		LANE ENDS SYMBOL													1	PM 57.42 Rt Shld
2	R4-1		DO NOT PASS													1	PM 57.46 Lt Shld
3	R4-1		DO NOT PASS													1	PM 57.46 Rt Shld (2 SIGNS ON POST)
4	W4-2		LANE ENDS SYMBOL													1	PM 57.51 Lt Shld
5	W4-2		LANE END SYMBOL													1	PM 57.51 Rt Shld
6	R4-3		SLOWER TRAFFIC KEEP RIGHT													1	PM 57.56 Lt Shld
7	W4-2		LANE END SYMBOL	48" X 48"	X	FEBT	YELLOW	IV	BLACK	IV	X	16.00		16.0′	1		PM 57.41 Rt Shld
8	R4-1		DO NOT PASS	36" X 48"	X	FEBT	WHITE	IV	BLACK	IV	X	12.00	15.5′		1		PM 57.51 Rt Shld
									TOTAL			28.00			2	6	

SIGN QUANTITIES
SQ-1

CALCULATED-DESIGNED BY: SCOTT KIRKISH
CHECKED BY: MICHAEL O'NEAL
FUNCTIONAL SUPERVISOR: STEVE WYATT
REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 01-07-13
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	10	16

Xavier Alfaro 1-07-13
REGISTERED ELECTRICAL ENGINEER

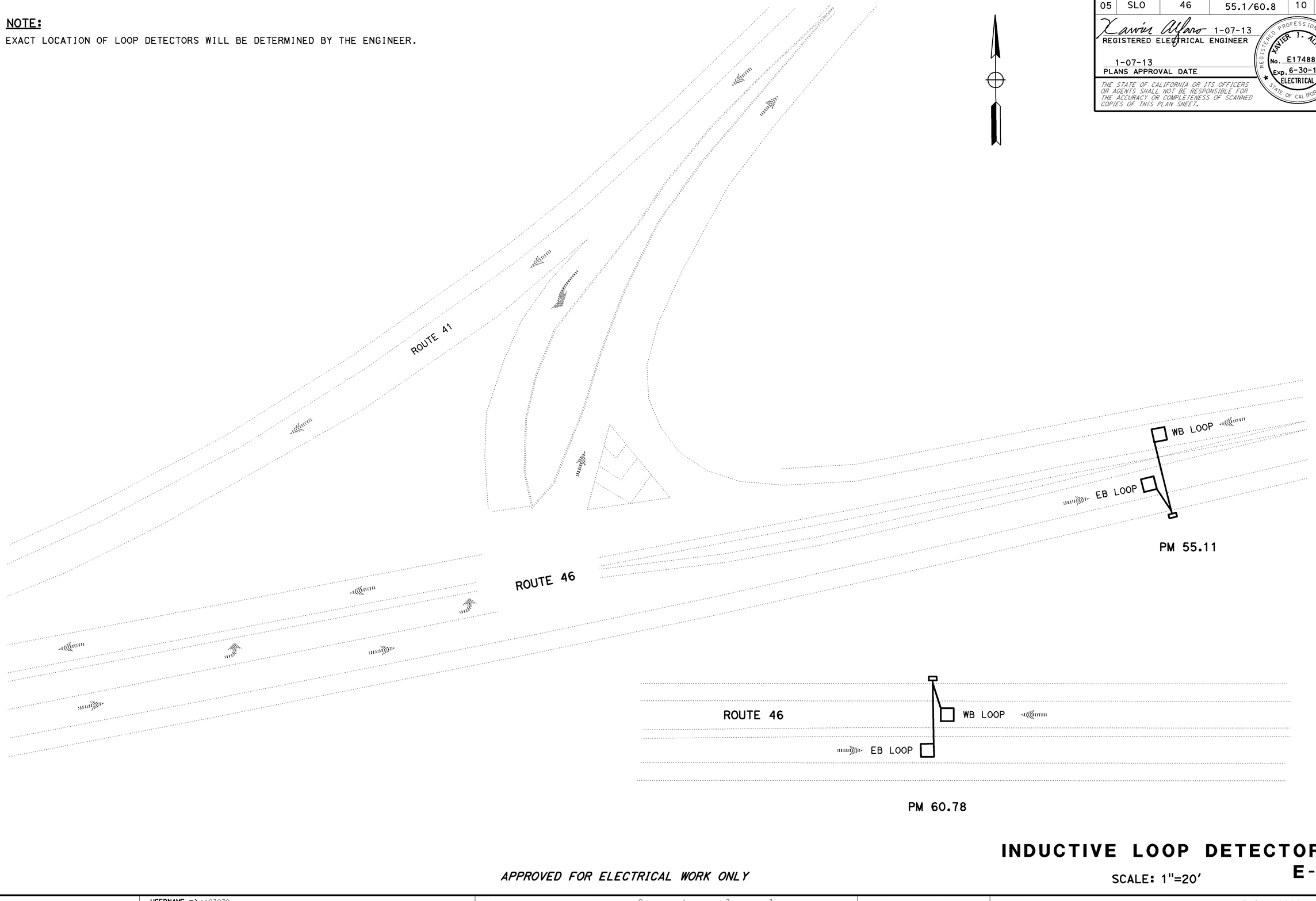
1-07-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
XAVIER I. ALFARO
No. E17488
Exp. 6-30-13
ELECTRICAL
STATE OF CALIFORNIA

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

NOTE:

EXACT LOCATION OF LOOP DETECTORS WILL BE DETERMINED BY THE ENGINEER.



APPROVED FOR ELECTRICAL WORK ONLY

INDUCTIVE LOOP DETECTOR

SCALE: 1"=20'

E-1

CALCULATED-DESIGNED BY	XAVIER ALFARO	REVISED BY	
CHECKED BY	RAJPREET SINGH	DATE REVISED	
FUNCTIONAL SUPERVISOR	ALI BAKHDOUD		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN

LAST REVISION
DATE PLOTTED => 23-JAN-2013
TIME PLOTTED => 09:24
01-07-13

BORDER LAST REVISED 7/2/2010

USERNAME => s123239
DGN FILE => 0512000119ua001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1515

PROJECT NUMBER & PHASE 05120001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	11	16

Xavier Alfaro 1-07-13
REGISTERED ELECTRICAL ENGINEER

1-07-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
XAVIER I. ALFARO
No. E17488
Exp. 6-30-13
ELECTRICAL
STATE OF CALIFORNIA

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

NOTE:

THE QUANTITIES ON THIS SHEET ARE FOR INFORMATION ONLY AND ARE NOT SEPARATE PAY ITEMS.

INDUCTIVE LOOP DETECTOR

SHEET No.	1½" CONDUIT	TYPE A LOOP	No. 5 PULL BOX
	LF	EA	EA
E-1	20	4	2

ELECTRICAL QUANTITIES
E-2

REVISED BY | XAVIER ALFARO
DATE REVISED | RAJPREET SINGH
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR | ALI BAKHDOUD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => $DATE
01-07-13 | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1515 | PROJECT NUMBER & PHASE 05120001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	12	16

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Gurinderpal Bhullar — No. C48815 — 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.

LEGEND

- TRAFFIC CONE
- TEMPORARY SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 and below	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
OVER 50	SEE NOTE 11	

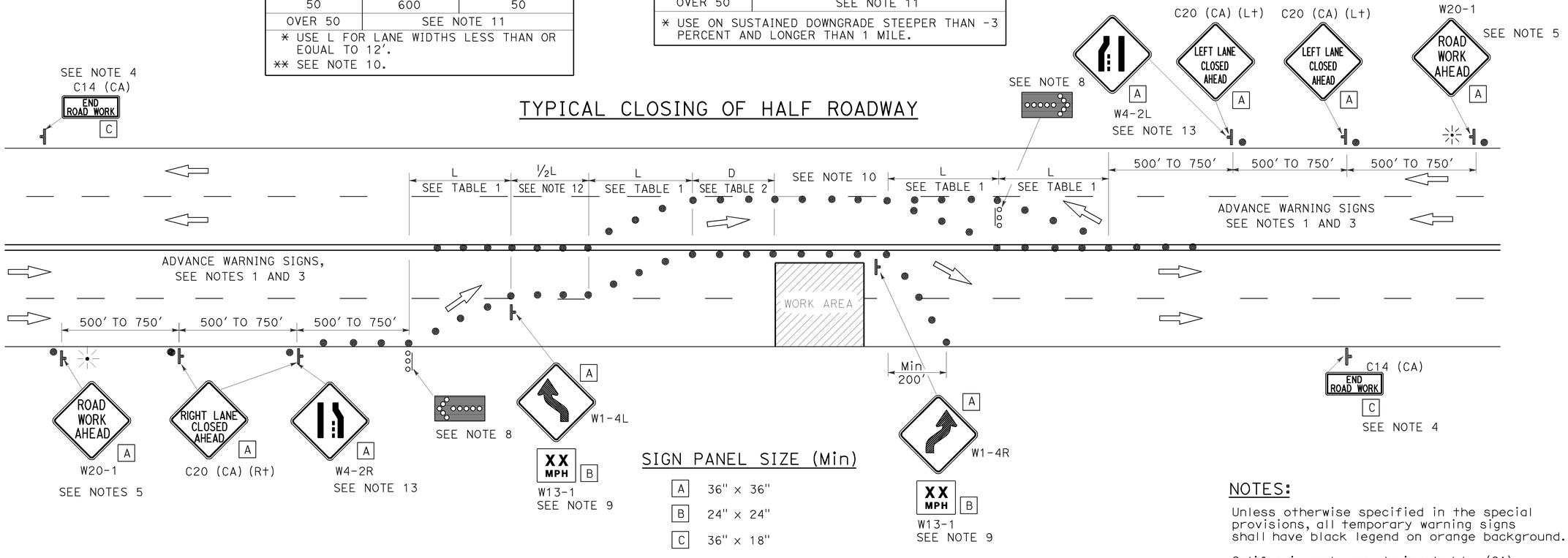
* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.
** SEE NOTE 10.

TABLE 2

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	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
OVER 50	SEE NOTE 11			

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

TYPICAL CLOSING OF HALF ROADWAY



SIGN PANEL SIZE (Min)

- A — 36" x 36"
- B — 24" x 24"
- C — 36" x 18"

NOTES:

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

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

NOTES:

1. Where Approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
3. 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.
4. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
5. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
6. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
7. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
8. Flashing arrow signs shall be either Type I or Type II.
9. Advisory speed will be determined by the Engineer. The W13-1 Sign will not be required when advisory speed is more than the posted or maximum speed limit.
10. The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
11. For approach speeds over 50 mph, use the "Traffic Control System For Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
12. Unless otherwise specified in the special provisions, the (½ L) shown between the two (L) lane closure tapers shall be used.
13. When specified in the special provisions, a W4-2 "Lane Ends" symbol sign is to be used in place of the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-1

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012
01-07-13 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => 0512000024uj001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1450 | PROJECT NUMBER & PHASE 0512000111

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	13	16

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-7-13
PLANS APPROVAL DATE

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

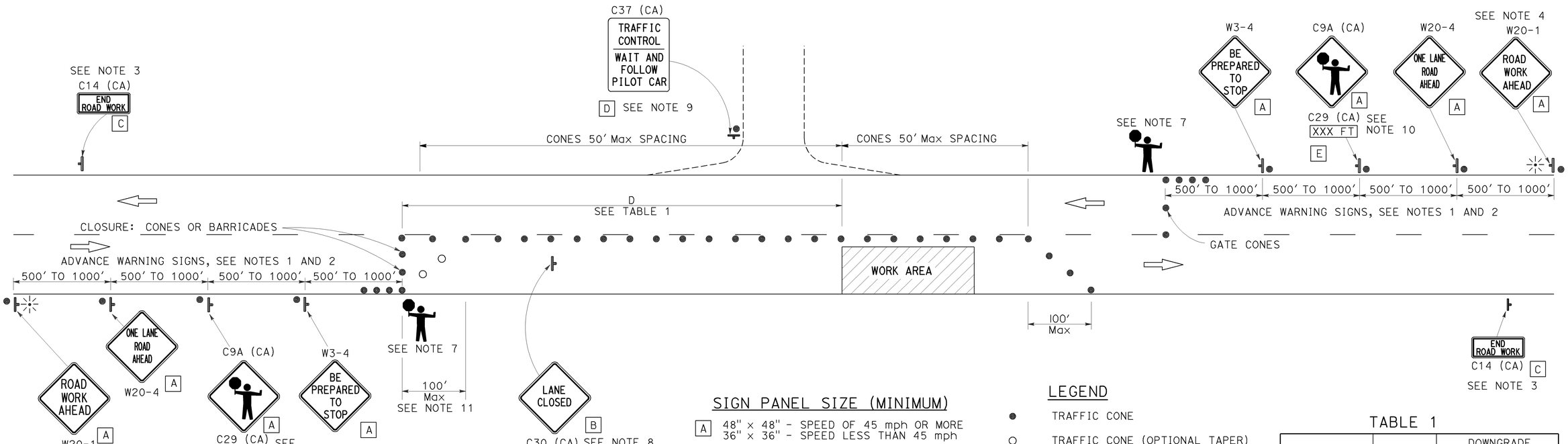
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

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

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

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (MINIMUM)

- A — 48" x 48" - SPEED OF 45 mph OR MORE; 36" x 36" - SPEED LESS THAN 45 mph
- B — 30" x 30"
- C — 36" x 18"
- D — 36" x 42"
- E — 36" x 9"

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

TABLE 1

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	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

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
2. 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.
3. A C14 (CA) "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.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____MILES", use a W20-4 sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. 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.
8. 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.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-2

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012
01-07-13 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => 0512000024uj002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1450 | PROJECT NUMBER & PHASE 0512000111

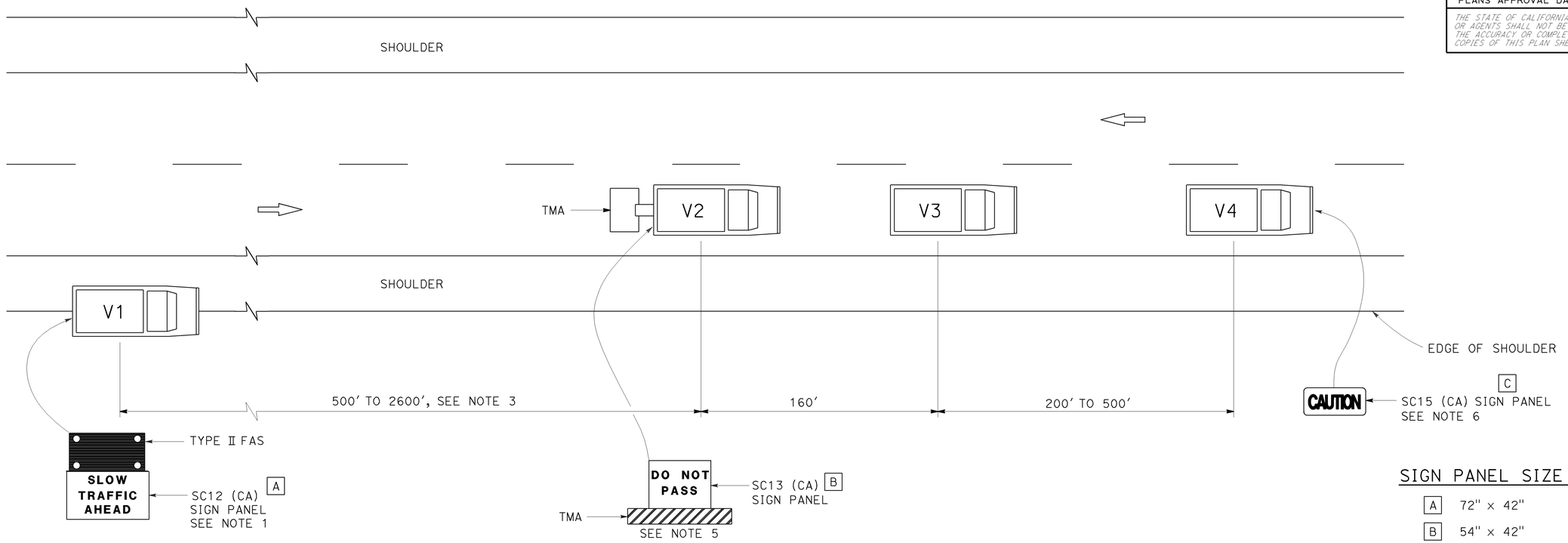
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	14	16

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-7-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Gurinderpal Bhullar
No. C48815
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.



SIGN PANEL SIZE (Min)

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

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

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. 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 be Type III, IV VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Gross Vehicle Weight of shadow vehicle shall be a minimum of 20,000 pounds and 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. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

TCS-3

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012
01-07-13 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => 0512000024uj003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1450 | PROJECT NUMBER & PHASE 0512000111

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SLO	46	55.1/60.8	15	16

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

January 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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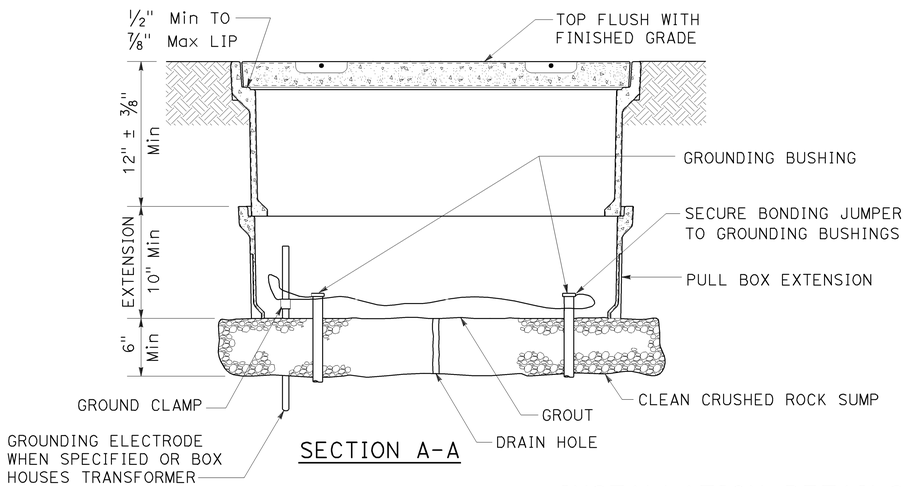
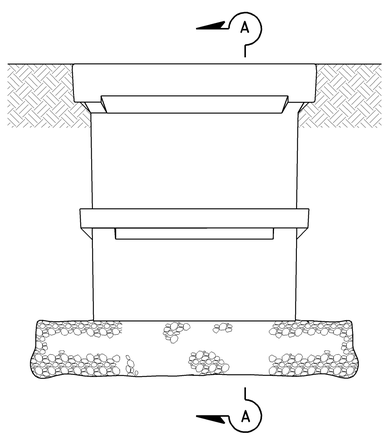
TO ACCOMPANY PLANS DATED 1-7-13



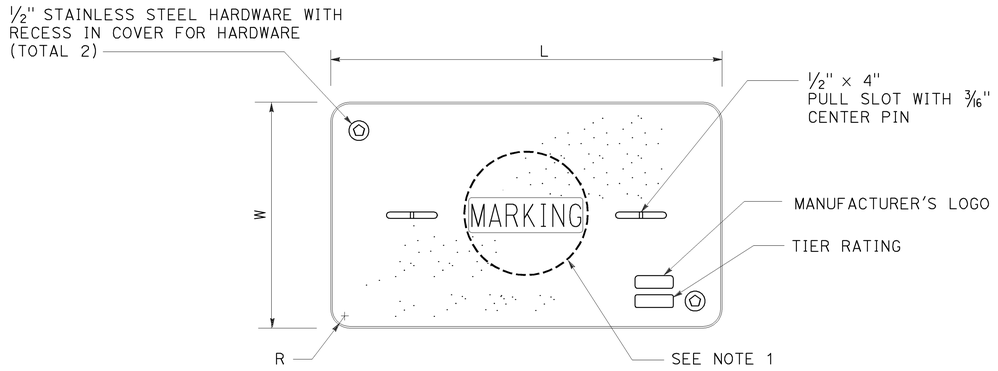
SECTION A-A



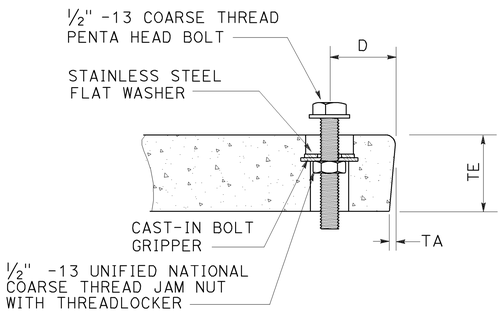
SIDE VIEW

INSTALLATION DETAILS

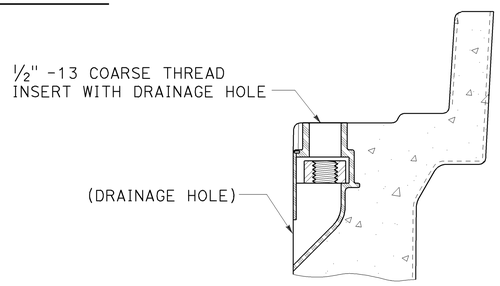
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3½	12"	N/A	40 lb	1' - 3⅜"	10⅛"	1⅜"	2"	⅛"	1¾"	30 lb
No. 5	12"	10"	55 lb	1' - 11¼"	1' - 1¾"	1⅜"	2"	⅛"	1¾"	60 lb
No. 6	12"	10"	70 lb	2' - 6½"	1' - 5½"	1⅜"	2"	⅛"	2"	85 lb

NOTES ON PULL BOXES:

1. Pull box covers must be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;

   A) No. 3½ pull box.
   1) "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
   2) "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.

   B) No. 5, 6, 9 or 9A pull box.
   1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
   2) "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
   3) "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
   4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
   5) "RAMP METER" - Ramp meter circuits.
   6) "COUNT STATION" - Count or speed monitor circuits.
   7) "COMMUNICATIONS" - Communication circuits.
   8) "TOS COMMUNICATIONS" - TOS communication line.
   9) "TOS POWER" - TOS power.
   10) "TDC POWER" - Telephone demarcation cabinet power.
   11) "CCTV" - Closed circuit television circuits.
   12) "TMS" - Traffic monitoring station circuits.
   13) "CMS" - Changeable message sign circuits.
   14) "HAR" - Highway advisory radio circuits.

2. The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus ⅛" or greater.
3. Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within ⅛". Top outside radius of covers and pull boxes must have a ⅛" radius.
4. Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (PULL BOX)

NO SCALE

RSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

01-09-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SLO	46	55.1/60.8	16	16

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

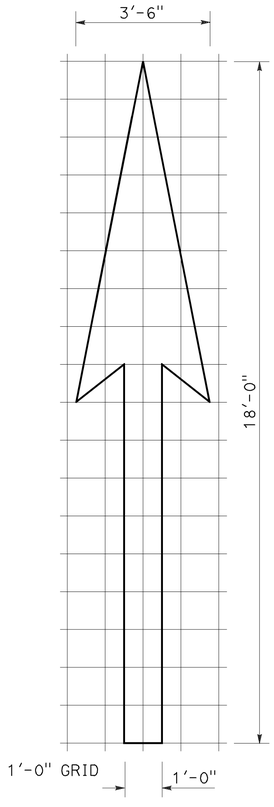
April 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
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.

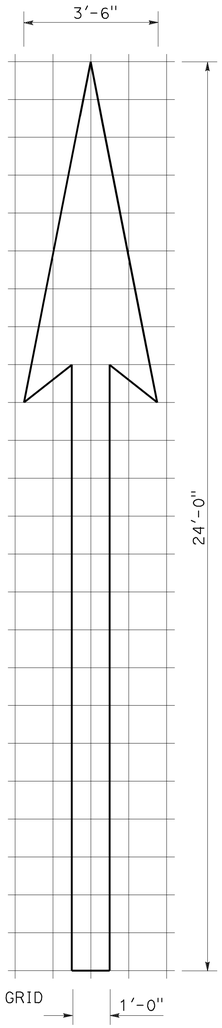
TO ACCOMPANY PLANS DATED 1-7-13

2010 REVISED STANDARD PLAN RSP A24A



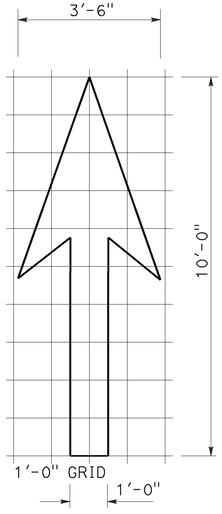
A=25 ft²

TYPE I 18'-0" ARROW



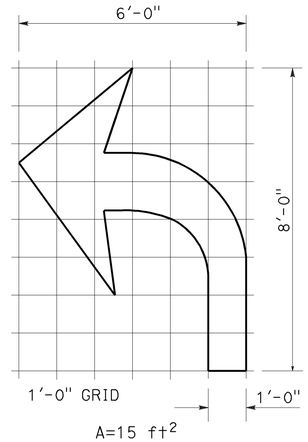
A=31 ft²

TYPE I 24'-0" ARROW



A=14 ft²

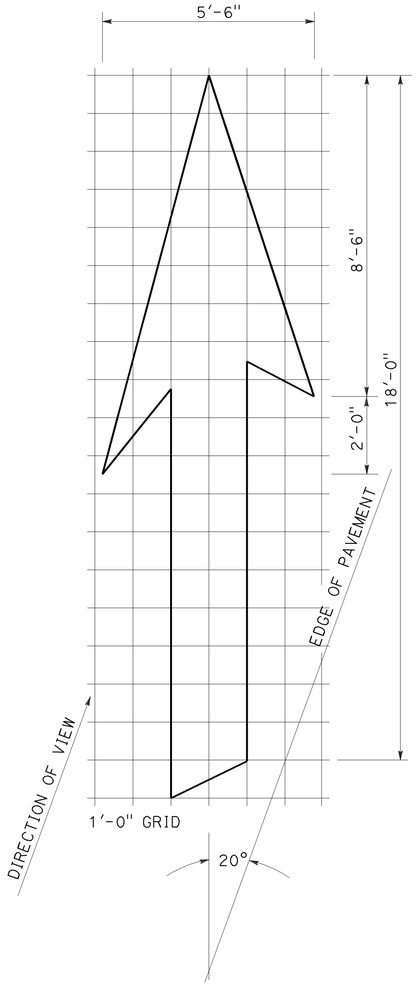
TYPE I 10'-0" ARROW



A=15 ft²

TYPE IV (L) ARROW

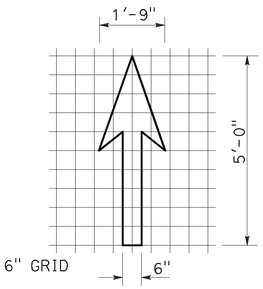
(For Type IV (R) arrow, use mirror image)



A=42 ft²

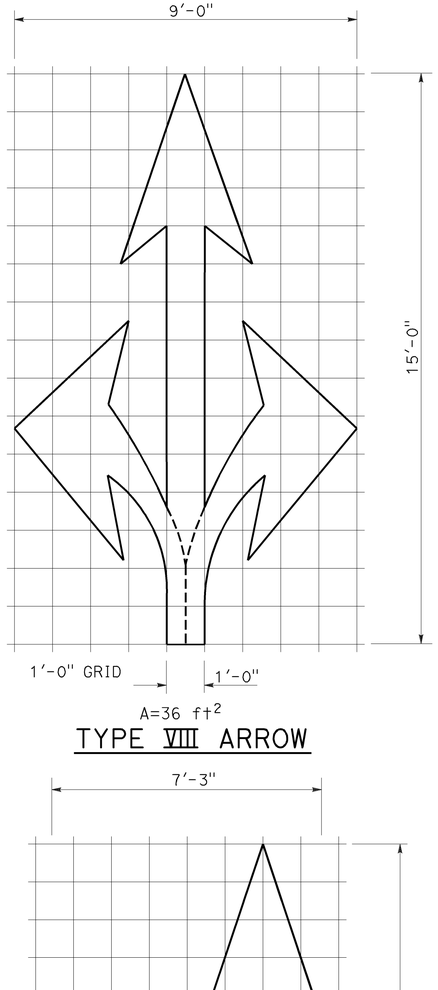
TYPE VI ARROW

Right lane drop arrow (For left lane, use mirror image)



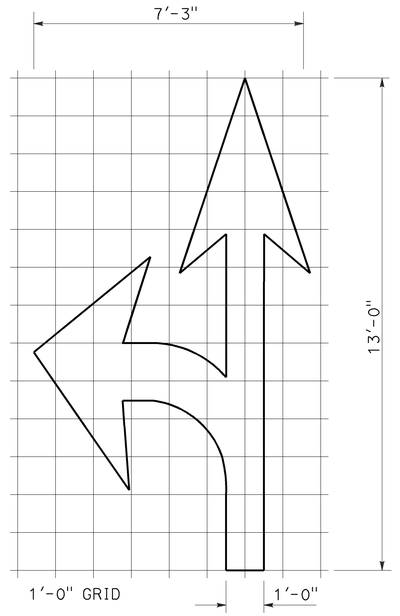
A=3.5 ft²

BIKE LANE ARROW



A=36 ft²

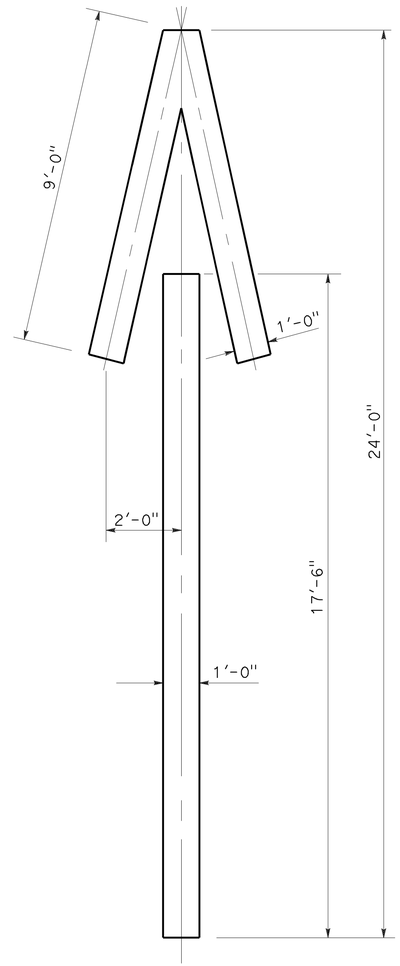
TYPE VIII ARROW



A=27 ft²

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft²

TYPE V ARROW

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS

NO SCALE

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

REVISED STANDARD PLAN RSP A24A

3-14-12