Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	1	24

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	TYPICAL CROSS SECTIONS
5	PROJECT CONTROL AND MONUMENTATION
6	CONSTRUCTION AREA SIGNS
7-8	TRAFFIC HANDLING PLANS
9	PAVEMENT DELINEATION QUANTITIES
10-11	SUMARRY OF QUANTITIES
12-13	ELECTRICAL PLANS
14-24	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

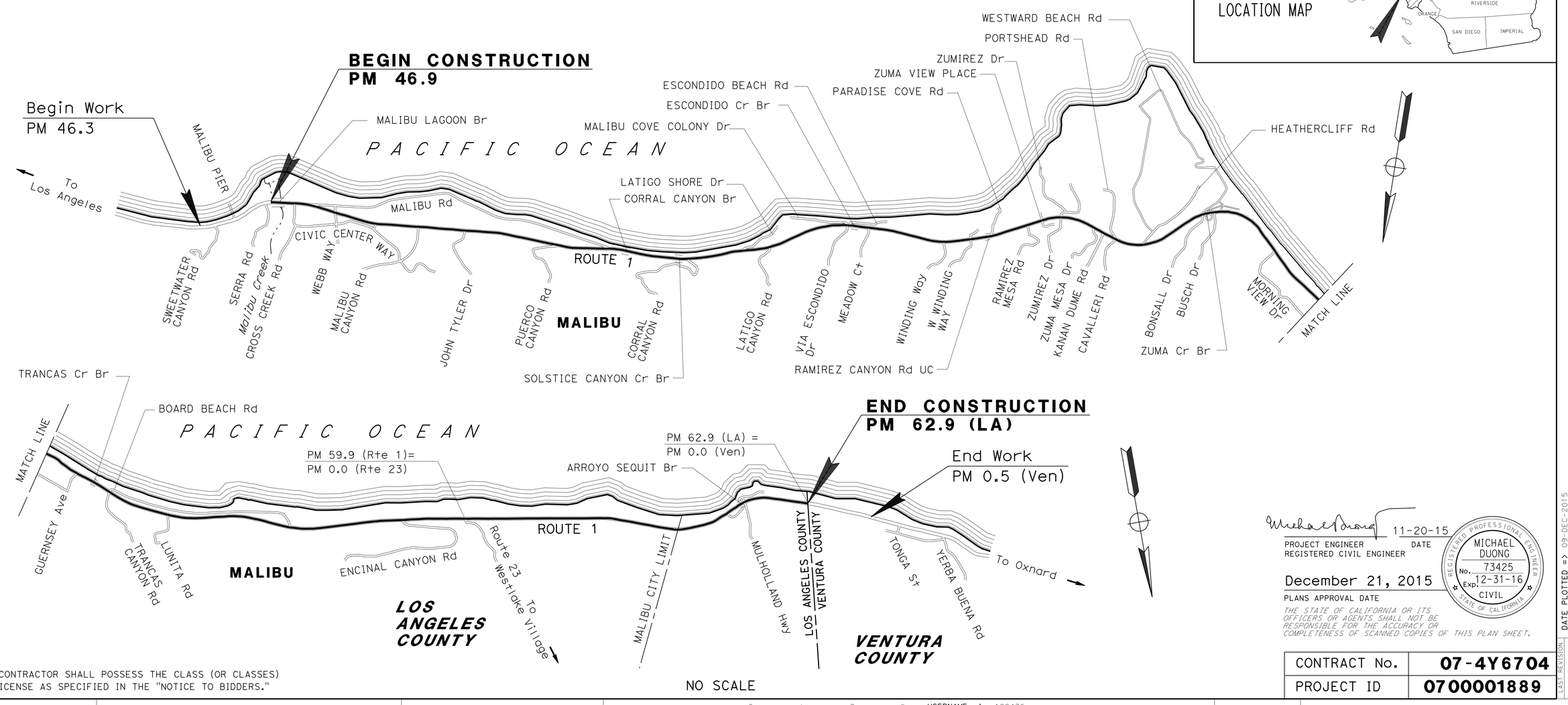
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LOS ANGELES COUNTY
IN AND NEAR MALIBU
FROM MALIBU LAGOON BRIDGE
TO LOS ANGELES COUNTY LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



LOS ANGELES COUNTY

VENTURA COUNTY

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

NO SCALE

PROJECT MANAGER: GARY KEVORKIAN

DESIGN MANAGER: KEVIN KWAN

Michael Duong 11-20-15

PROJECT ENGINEER — DATE

REGISTERED CIVIL ENGINEER

December 21, 2015

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MICHAEL DUONG — No. 73425 — Exp. 12-31-16 — 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.

CONTRACT No.	07-4Y6704
PROJECT ID	0700001889

LAST REVISION 12-21-15

DATE PLOTTED => 09-DEC-2015

TIME PLOTTED => 11:48

BORDER LAST REVISED 10/4/2013 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s122436 | DGN FILE => 74Y670ab001.dgn | UNIT 1964 | PROJECT NUMBER & PHASE 07000018891

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	2	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
4. SEE SUMMARY OF QUANTITIES SHEETS FOR LOCATIONS AND DIMENSIONS OF REPLACE AC SURFACING.
5. UNDERLYING BASE REMOVAL WILL BE DETERMINED BY THE ENGINEER.
6. EXISTING DRAINAGE INLETS HAVE NOT BEEN PLOTTED ON THIS PLANS.
7. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLANS.

PAVEMENT CLIMATE REGION

SOUTH COAST

LEGEND:

HMA (TYPE A) = HOT MIX ASPHALT (TYPE A)

EXISTING PAVEMENT STRUCTURAL SECTION

A — EXISTING
0.15′-0.33′ AC
0.67′ PCC
0.33′ CTB
1′-1.5′ AS

B — EXISTING
0.2′-0.75′ AC
0.5′ AB

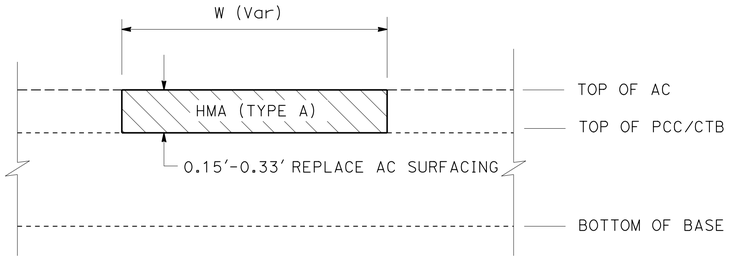
C — EXISTING
0.33′-0.43′ AC
1.22′ AB

D — EXISTING
0.67′ AC

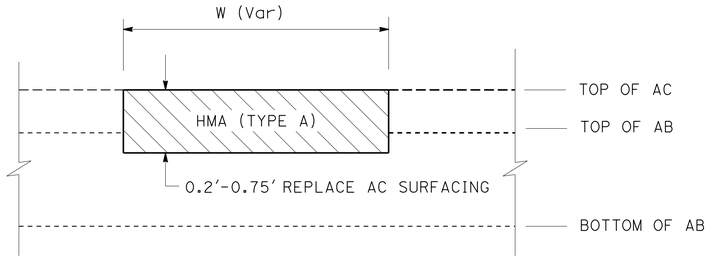
E — EXISTING
0.17′-0.33′ AC
0.55′/0.75′ PCC
1′ & Var AB

F — EXISTING
0.33′ AC
0.67′ CTB
0.33′ AS

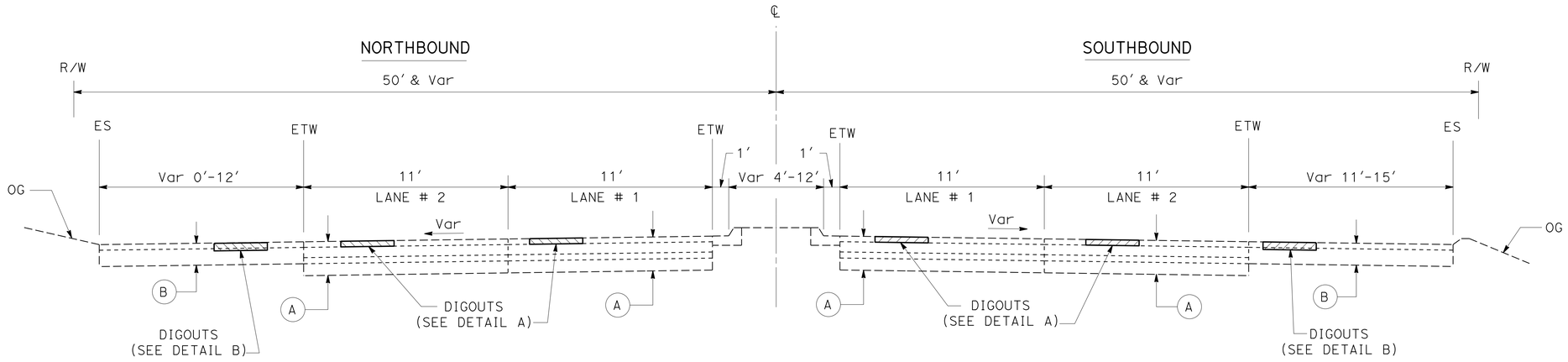
G — EXISTING
0.33′ AC
0.75′ AB



DETAIL A



DETAIL B



PM 47.0/ 51.3

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: KEVIN KWAN

CALCULATED-DESIGNED BY: MICHAEL DUONG
CHECKED BY: KEVIN KWAN

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 30-DEC-2015
12-21-15 | TIME PLOTTED => 10:50

BORDER LAST REVISED 7/2/2010

USERNAME => s122436
DGN FILE => 74Y670ca001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1964

PROJECT NUMBER & PHASE 07000018891

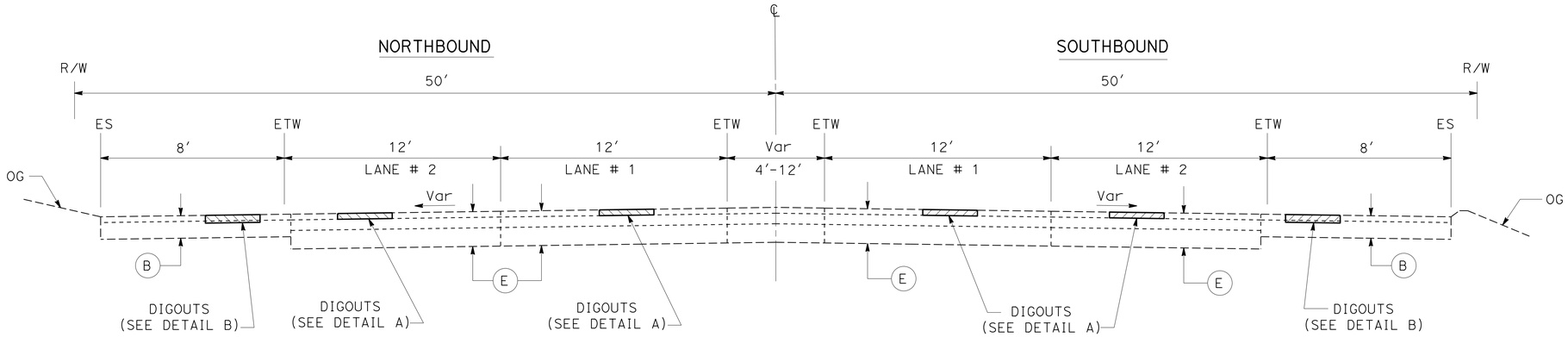
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	3	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

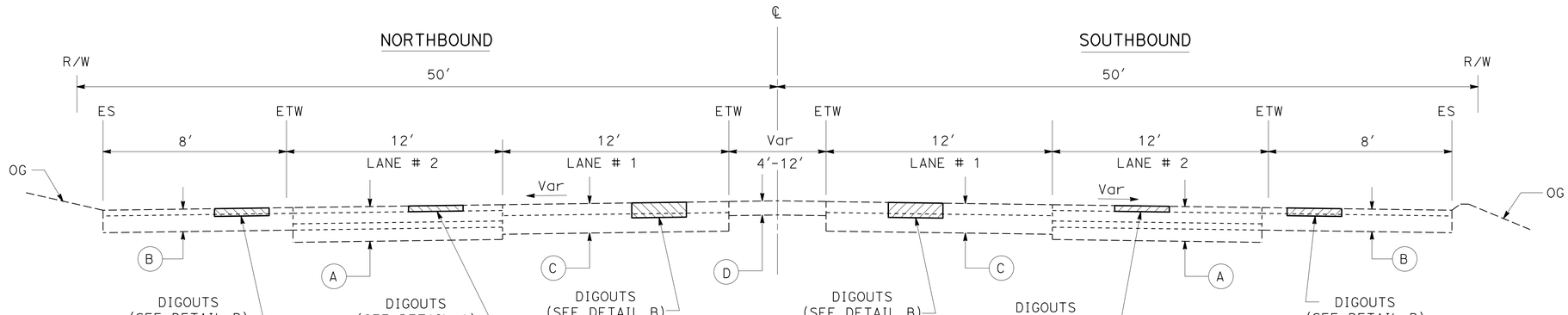
12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

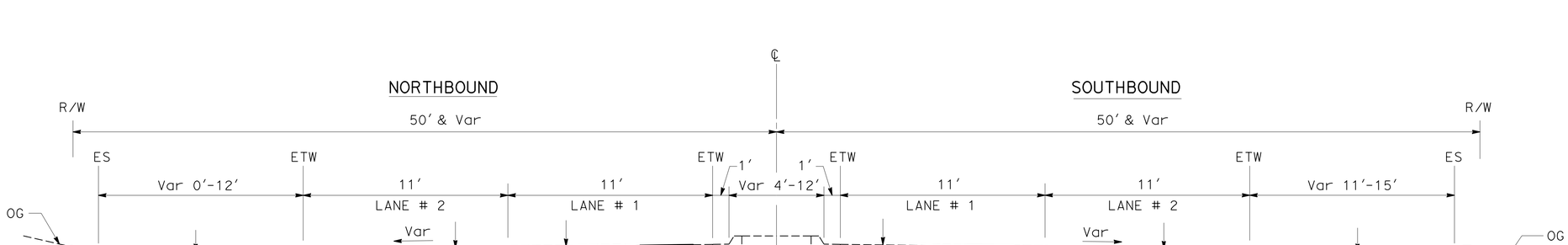
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PM 53.5/53.9
PM 55.5/56.7



PM 53.0/53.5
PM 53.9/55.5



PM 51.3/53.0

TYPICAL CROSS SECTIONS
NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: KEVIN KWAN
CALCULATED-DESIGNED BY: MICHAEL DUONG
CHECKED BY: KEVIN KWAN
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 09-DEC-2015 | 12-21-15 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010 | USERNAME => s122436 | DGN FILE => 74Y670ca002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1964 | PROJECT NUMBER & PHASE 07000018891

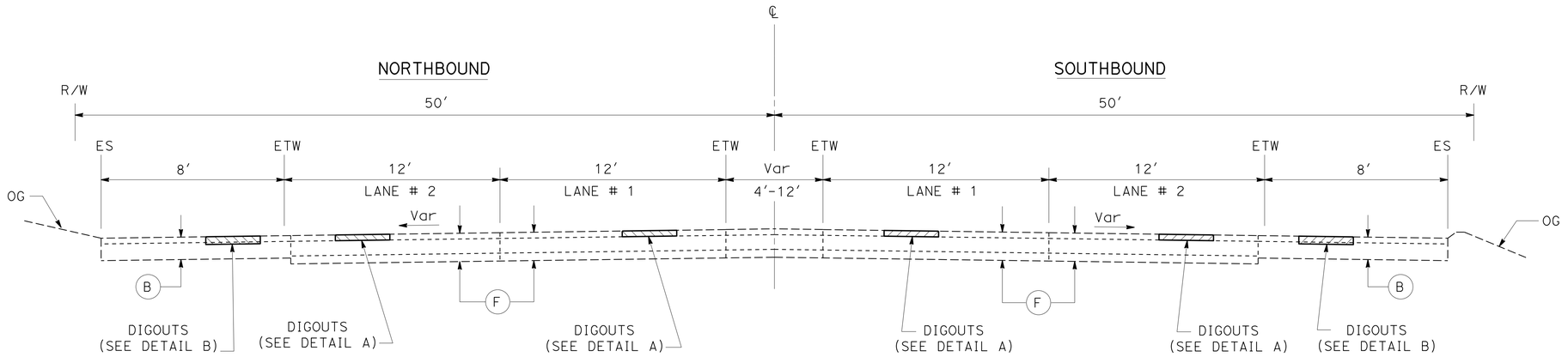
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	4	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

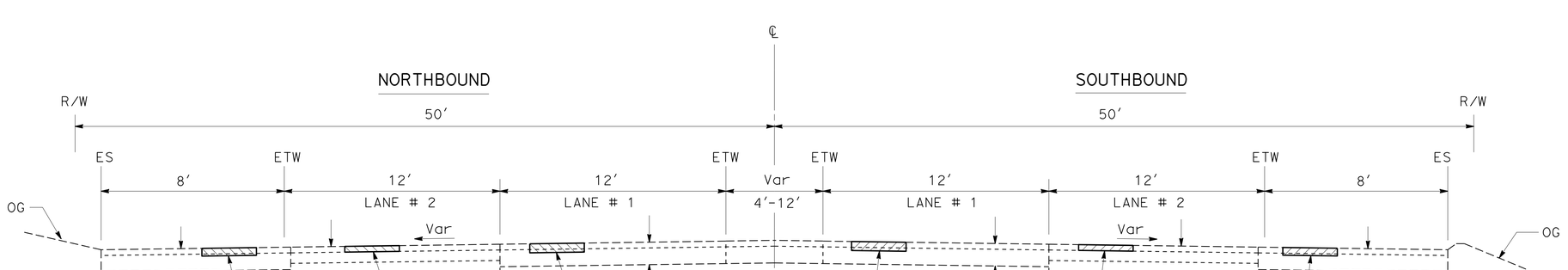
12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.



PM 58.7/62.9



PM 56.7/58.7

TYPICAL CROSS SECTIONS

NO SCALE

X-3

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL DUONG
CHECKED BY: KEVIN KWAN
FUNCTIONAL SUPERVISOR: KEVIN KWAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 12-21-15
DATE PLOTTED => 09-DEC-2015
TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010
USERNAME => s122436
DGN FILE => 74Y670ca003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1964
PROJECT NUMBER & PHASE 07000018891

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	5	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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

NOTE:

FOR COMPLETE PROJECT CONTROL AND MONUMENTATION DATA, SEE THE SURVEY RECORDS ON FILE IN THE SURVEYS DEPARTMENT AT THE DISTRICT OFFICE.

ABBREVIATION:

(N) - FOR INFORMATION ONLY.

SURVEY MONUMENTATION (N)

LATITUDE	LONGITUDE	DESCRIPTION	POST MILE	LOCATION
34° 01′ 33" N	118° 45′ 53" W	PARKER KALAN NAIL/ALUMINUM WASHER LOS ANGELES COUNTY PUBLIC WORKS	51.73	ROUTE 1 NB SHOULDER
34° 01′ 32" N	118° 46′ 02" W	PARKER KALAN NAIL/ALUMINUM WASHER LOS ANGELES COUNTY PUBLIC WORKS	51.86	ROUTE 1 NB SHOULDER
34° 01′ 18" N	118° 48′ 36" W	BRASS DISK	54.42	ROUTE 1 NB SHOULDER
34° 01′ 44" N	118° 50′ 26" W	ALUMINUM DISK	56.59	ROUTE 1 SB SHOULDER

PROJECT CONTROL AND MONUMENTATION

PC-1

REVISED BY | DATE REVISED
MICHAEL DUONG | KEVIN KWAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: KEVIN KWAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION | DATE PLOTTED => 09-DEC-2015
12-21-15 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010

USERNAME => s122436
DGN FILE => 74Y670dc001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1964 | PROJECT NUMBER & PHASE | 07000018891

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	6	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

MICHAEL DUONG No. 73425 Exp. 12-31-16 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

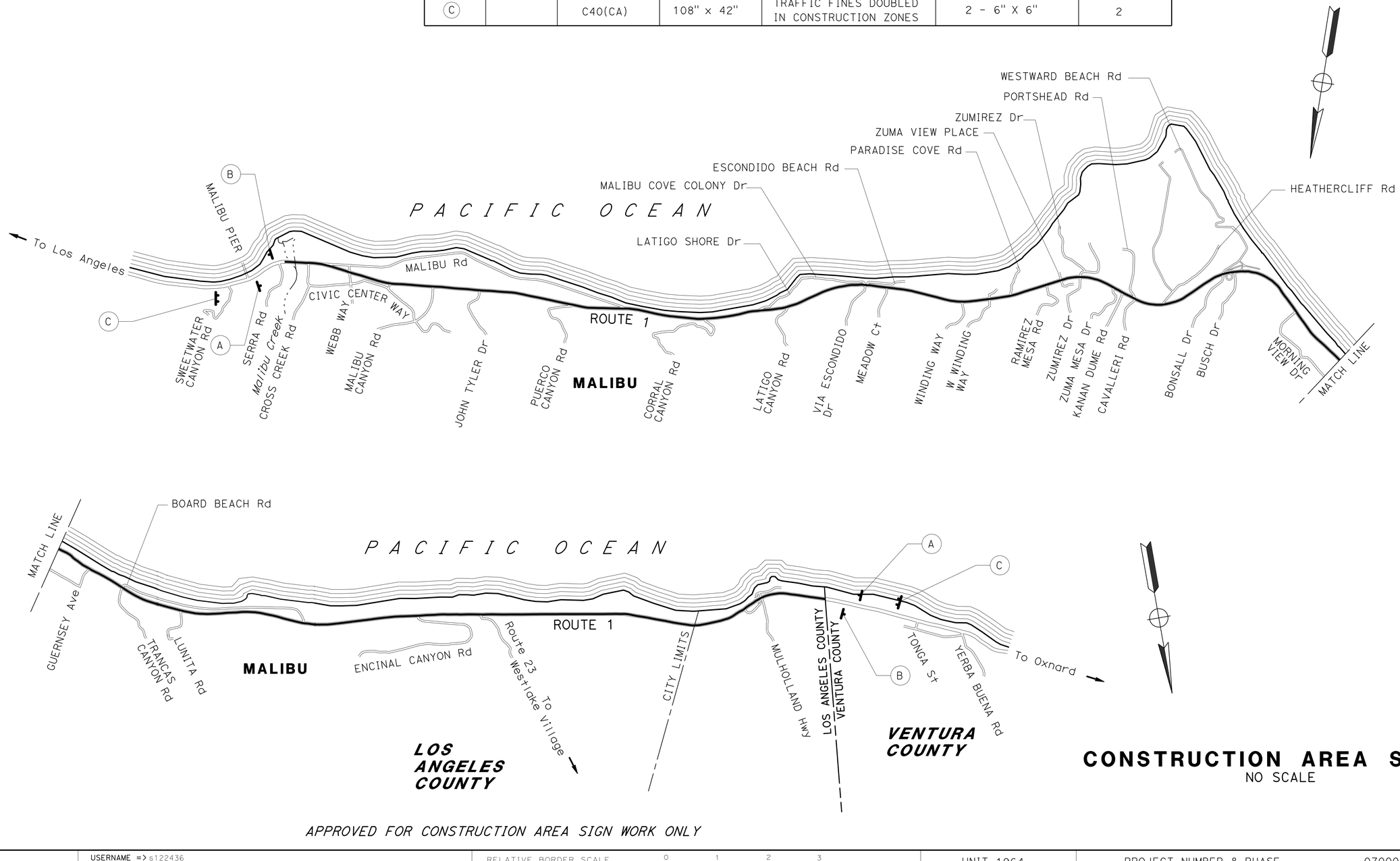
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGNS SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF "ROAD WORK NEXT 16 MILES" SIGNS OR AS DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLAN.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	FEDERAL	CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
(A)	G20-1		60" x 36"	ROAD WORK NEXT 16 MILES	1 - 4" X 6"	2
(B)	G20-2		36" x 18"	END ROAD WORK	1 - 4" X 6"	2
(C)		C40(CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" X 6"	2



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: KEVIN KWAN

CALCULATED-DESIGNED BY: MICHAEL DUONG
CHECKED BY: KEVIN KWAN

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 09-DEC-2015
12-21-15 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010

USERNAME => s122436
DGN FILE => 74Y6701a001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1964

PROJECT NUMBER & PHASE 07000018891

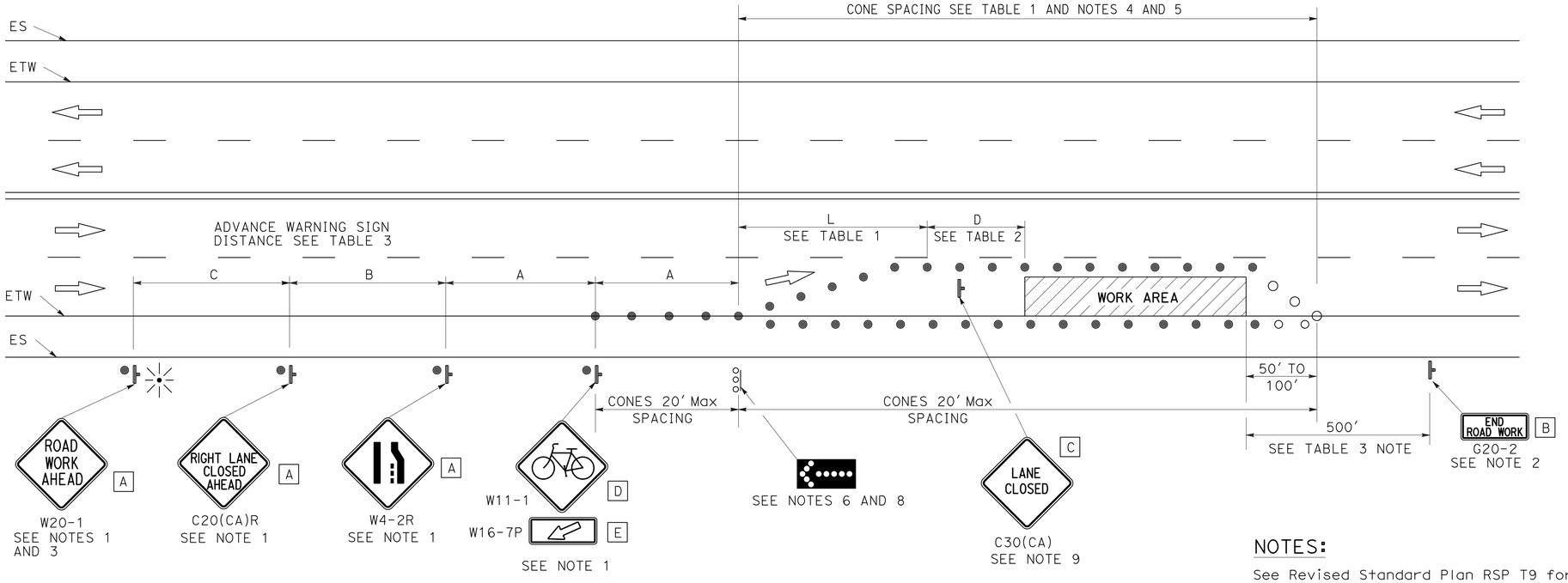
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	7	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.



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 approriate, 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.

LEGEND

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

SIGN PANEL SIZE (Min)

A	48" x 48"
B	36" x 18"
C	30" x 30"
D	36" x 36"
E	24" x 12"

NOTES:

1. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
8. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. 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.

TYPICAL RIGHT LANE CLOSURE

TRAFFIC HANDLING PLAN

NO SCALE

TH-1

REVISED BY | DATE REVISED
MICHAEL DUONG | KEVIN KWAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: KEVIN KWAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION | DATE PLOTTED => 09-DEC-2015
12-21-15 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010 | USERNAME => s122436 | DGN FILE => 74Y670md001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1964 | PROJECT NUMBER & PHASE 07000018891

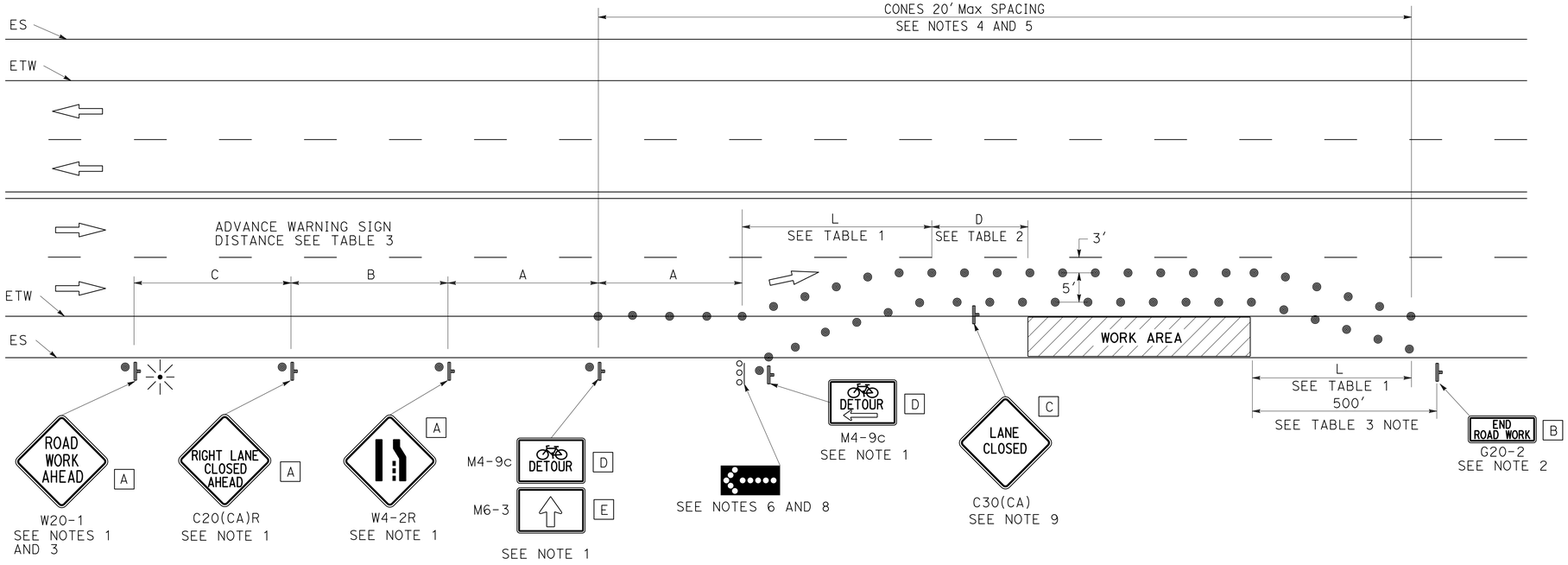
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	8	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.



TYPICAL RIGHT LANE CLOSURE (SHOULDER WORK)

NOTES:

1. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
8. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. 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.

NOTES:

See Revised Standard Plan RSP T9 for tables.

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.

LEGEND

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

SIGN PANEL SIZE (Min)

A	48" x 48"
B	36" x 18"
C	30" x 30"
D	30" x 24"
E	30" x 21"

TRAFFIC HANDLING PLAN

NO SCALE

TH-2

REVISED BY | DATE REVISED
MICHAEL DUONG | KEVIN KWAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: KEVIN KWAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION: DATE PLOTTED => 09-DEC-2015 TIME PLOTTED => 11:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	9	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

MICHAEL DUONG No. 73425 Exp. 12-31-16 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.

PAVEMENT DELINEATION QUANTITIES

DIRECTION	POST MILE		THERMOPLASTIC TRAFFIC STRIPE			THERMOPLASTIC PAVEMENT MARKING			PAVEMENT MARKER		REMARKS
			DETAIL 12	DETAIL 27B	DETAIL 38	LIMIT LINE (WHITE)	CROSSWALK (WHITE)	ARROW AND WORD (WHITE)	NON-REFLECTIVE (TYPE A)	RETROREFLECTIVE (TYPE G)	
			4" BROKEN WHITE (36-12)	4" SOLID WHITE	8" SOLID WHITE						
	FROM	TO	LF	LF	LF	SQFT	SQFT	SQFT	EA	EA	
NB	46.9	51.3	4,440	1,340		18	24		26	102	DETAIL 40A
NB	51.3	53.0		280							
NB	53.0	53.5		280							
NB	53.5	53.9		550							
NB	53.9	55.5	200	150						8	
NB	55.5	56.7									
NB	56.7	58.7	100	220							
NB	58.7	62.9	4,010							102	
SB	46.9	51.3	250		500			104		31	LEFT TURN LANE ONLY, TYPE IV ARROW
SB	51.3	53.0		200							
SB	53.0	53.5		150							
SB	53.5	53.9		350							
SB	53.9	55.5		500							
SB	55.5	56.7									
SB	56.7	58.7	1,690							51	
SB	58.7	62.9	3,140							85	
SUBTOTAL			13,830	4,020	500	18	24	104	26	379	
TOTAL			13,830	4,020	500	146			26	379	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

MICHAEL DUONG — CALCULATED-DESIGNED BY
KEVIN KWAN — CHECKED BY
REVISED BY — DATE REVISED
KEVIN KWAN — FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 12-21-15
DATE PLOTTED => 09-DEC-2015
TIME PLOTTED => 11:29

NOTE:

1. LOCATIONS AND DIMENSIONS OF REPLACE ASPHALT CONCRETE SURFACING ARE APPROXIMATE. EXACT LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER.

ABBREVIATION:

(N) : NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
Dir : DIRECTION
Int : INTERSECTION
LTL : LEFT TURN LANE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	10	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.

ROADWAY QUANTITIES

No.	Dir	POST MILE	LANE No.	DIMENSION (N) LENGTH FT	DIMENSION (N) WIDTH FT	DIMENSION (N) DEPTH FT	REPLACE AC SURFACING CY
1	NB	47.02	1	250	6	0.33	18.3
2	NB	47.02	2	20	10	0.33	2.4
3	NB	47.08	Int	110	80	0.33	107.6
4	NB	47.10	2, Shld	100	12	0.33	14.7
5	NB	47.11	2	300	6	0.33	22.0
6	NB	47.19	Shld	100	6	0.20	4.4
7	NB	48.19	Shld	500	4	0.20	14.8
8	NB	48.70	2	350	12	0.33	51.3
9	NB	49.00	Shld	200	4	0.20	5.9
10	NB	49.29	Shld	40	4	0.20	1.2
11	NB	49.33	1	200	11	0.33	26.9
12	NB	49.37	2	50	6	0.33	3.7
13	NB	49.43	1	40	11	0.33	5.4
14	NB	49.43	2	40	6	0.33	2.9
15	NB	49.56	2	50	6	0.33	3.7
16	NB	49.57	2	350	12	0.33	51.3
17	NB	49.67	2	150	6	0.33	11.0
18	NB	49.88	Shld	100	10	0.20	7.4
19	NB	49.95	Shld	200	4	0.20	5.9
20	NB	50.03	1	100	10	0.33	12.2
21	NB	50.03	2	2200	12	0.33	322.7
22	NB	50.08	1	50	10	0.33	6.1
23	NB	50.10	1	50	10	0.33	6.1
24	NB	50.35	1	50	10	0.33	6.1
25	NB	50.40	Int, Shld	100	3	0.33	3.7
26	NB	50.42	Shld	100	4	0.20	3.0
27	NB	50.51	1	200	12	0.33	29.3
28	NB	50.63	Shld	890	4	0.20	26.4
29	NB	50.63	2	890	12	0.33	130.5
30	NB	50.76	1	180	6	0.33	13.2
31	NB	51.05	Shld	100	12	0.20	8.9
32	NB	51.12	Shld	50	12	0.20	4.4
33	NB	51.28	Shld	50	12	0.20	4.4
34	NB	51.35	Shld	100	12	0.20	8.9
35	NB	51.47	Shld	80	10	0.20	5.9
36	NB	51.73	Shld	50	10	0.20	3.7
37	NB	51.76	Int, Shld	100	12	0.33	14.7
38	NB	51.79	Shld	50	12	0.20	4.4
39	NB	51.86	Shld	100	3	0.20	2.2
40	NB	51.90	Shld	50	6	0.20	2.2
41	NB	51.98	Shld	70	12	0.20	6.2
42	NB	52.84	2	70	10	0.33	8.6
43	NB	53.38	Shld	80	8	0.20	4.7
44	NB	53.40	2, Shld	200	14	0.33	34.2
45	NB	53.61	2, Shld	550	10	0.33	67.2
46	NB	53.93	Shld	50	6	0.20	2.2
47	NB	54.20	1	50	4	0.43	3.2
48	NB	54.21	Shld	50	4	0.20	1.5
49	NB	54.32	Shld	150	10	0.20	11.1
50	NB	54.36	Shld	900	10	0.20	66.7
						SUBTOTAL	1,185.4

ROADWAY QUANTITIES

No.	Dir	POST MILE	LANE No.	DIMENSION (N) LENGTH FT	DIMENSION (N) WIDTH FT	DIMENSION (N) DEPTH FT	REPLACE AC SURFACING CY
51	NB	54.49	Shld	150	6	0.20	6.7
52	NB	54.59	1,2	150	4	0.43	9.6
53	NB	55.02	Int, 2	50	12	0.43	9.6
54	NB	56.60	2	150	3	0.33	5.5
55	NB	56.76	2	500	10	0.33	61.1
56	NB	56.88	Shld	100	10	0.20	7.4
57	NB	56.90	Shld	20	3	0.20	0.4
58	NB	56.92	Shld	20	3	0.20	0.4
59	NB	57.00	2	50	3	0.33	1.8
60	NB	57.31	2, Shld	70	12	0.33	10.3
61	NB	57.48	2, Shld	150	4	0.33	7.3
62	NB	57.65	2, Shld	200	3	0.33	7.3
63	NB	57.65	Shld	100	4	0.20	3.0
64	NB	57.70	2, Shld	300	3	0.33	11.0
65	NB	57.80	2, Shld	500	3	0.33	18.3
66	NB	57.90	2, Shld	250	3	0.33	9.2
67	NB	58.00	2, Shld	100	3	0.33	3.7
68	NB	58.25	2	100	12	0.33	14.7
69	NB	58.31	Shld	50	3	0.20	1.1
70	NB	58.33	2, Shld	200	3	0.33	7.3
71	NB	58.46	1, Int	15	3	0.33	0.6
72	NB	60.44	2	460	12	0.33	67.5
73	NB	60.61	1	200	12	0.33	29.3
74	NB	60.61	2	200	12	0.33	29.3
75	NB	60.71	2	170	12	0.33	24.9
76	NB	60.91	2	590	12	0.33	86.5
77	NB	61.01	1	200	12	0.33	29.3
78	NB	61.11	2	290	12	0.33	42.5
79	NB	61.12	1	120	12	0.33	17.6
80	NB	61.25	1	320	12	0.33	46.9
81	NB	61.25	2	430	12	0.33	63.1
82	NB	61.49	1	30	6	0.33	2.2
83	NB	61.81	1	170	12	0.33	24.9
84	NB	61.81	2	170	12	0.33	24.9
85	NB	61.92	2	250	12	0.33	36.7
86	NB	62.02	2	50	6	0.33	3.7
87	NB	62.21	2	910	12	0.33	133.5
88	NB	62.33	2	70	8	0.33	6.8
89	NB	62.61	2	220	12	0.33	32.3
90	NB	62.64	1	20	4	0.33	1.0
91	NB	62.67	1	20	4	0.33	1.0
92	NB	62.72	1	50	4	0.33	2.4
93	SB	47.11	2	100	4	0.33	4.9
94	SB	48.17	LTL	250	12	0.33	36.7
95	SB	49.27	Shld	20	4	0.20	0.6
96	SB	49.39	2	50	11	0.33	6.7
97	SB	49.80	Shld	100	4	0.20	3.0
						SUBTOTAL	954.5

SUMMARY OF QUANTITIES
Q-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MICHAEL DUONG
CHECKED BY: KEVIN KWAN
FUNCTIONAL SUPERVISOR: KEVIN KWAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 12-21-15
DATE PLOTTED => 30-DEC-2015
TIME PLOTTED => 10:55

BORDER LAST REVISED 7/2/2010
USERNAME => s122436
DGN FILE => 74Y670pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1964
PROJECT NUMBER & PHASE 07000018891

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	11	24

Michael Duong 11-20-15
REGISTERED CIVIL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL DUONG
No. 73425
Exp. 12-31-16
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.

ROADWAY QUANTITIES

No.	Dir	POST MILE	LANE No.	DIMENSION (N) LENGTH	DIMENSION (N) WIDTH	DIMENSION (N) DEPTH	REPLACE AC SURFACING
				FT	FT	FT	CY
98	SB	49.86	Shld	200	6	0.20	8.9
99	SB	50.20	2	200	6	0.33	14.7
100	SB	50.27	1	100	12	0.33	14.7
101	SB	50.32	1	150	12	0.33	22.0
102	SB	50.36	2	100	4	0.33	4.9
103	SB	50.39	2	250	6	0.33	18.3
104	SB	50.83	Shld	500	6	0.20	22.2
105	SB	51.54	2, Shld	50	18	0.33	11.0
106	SB	51.56	2, Shld	150	18	0.33	33.0
107	SB	51.68	Shld	100	4	0.20	3.0
108	SB	51.90	Shld	150	12	0.20	13.3
109	SB	53.26	Shld	150	10	0.20	11.1
110	SB	53.82	Shld	350	12	0.20	31.1
111	SB	54.09	2, Shld	40	4	0.33	2.0
112	SB	54.22	Shld	500	6	0.20	22.2
113	SB	54.36	2	100	10	0.33	12.2
114	SB	54.38	Shld	100	15	0.20	11.1
115	SB	54.84	Shld	150	10	0.20	11.1
116	SB	55.00	Shld	200	3	0.33	7.3
117	SB	55.59	2	200	6	0.33	14.7
118	SB	55.68	2	100	6	0.33	7.3
119	SB	56.05	1	50	6	0.33	3.7
120	SB	56.65	Shld	250	4	0.20	7.4
121	SB	56.69	1	50	12	0.33	7.3
122	SB	56.69	2	50	12	0.33	7.3
123	SB	56.72	Shld	3000	6	0.20	133.3
124	SB	56.90	2	350	3	0.33	12.8
125	SB	57.16	2	280	3	0.33	10.3
126	SB	57.42	1	200	11	0.33	26.9
127	SB	57.50	2	100	6	0.33	7.3
128	SB	57.53	Shld	100	4	0.20	3.0
129	SB	57.55	1	200	11	0.33	26.9
130	SB	57.55	2	350	6	0.33	25.7
131	SB	57.63	1	50	6	0.33	3.7
132	SB	57.63	2	150	12	0.33	22.0
133	SB	57.63	2	100	12	0.33	14.7
134	SB	57.69	1	50	4	0.33	2.4
135	SB	57.70	1	50	6	0.33	3.7
136	SB	57.75	2	15	3	0.33	0.6
137	SB	57.82	1	100	12	0.33	14.7
138	SB	57.85	2	40	12	0.33	5.9
139	SB	57.87	1	100	12	0.33	14.7
140	SB	57.92	1	50	12	0.33	7.3
141	SB	57.94	1	400	12	0.33	58.7
142	SB	58.01	2	700	12	0.33	102.7
143	SB	58.49	Shld	75	6	0.33	5.5
144	SB	58.62	1	30	6	0.33	2.2
145	SB	59.15	1	150	6	0.33	11.0
146	SB	59.22	Shld	15	3	0.33	0.6
147	SB	59.27	1	50	11	0.33	6.7
						SUBTOTAL	845.1

ROADWAY QUANTITIES

No.	Dir	POST MILE	LANE No.	DIMENSION (N) LENGTH	DIMENSION (N) WIDTH	DIMENSION (N) DEPTH	REPLACE AC SURFACING
				FT	FT	FT	CY
148	SB	59.27	1	75	12	0.33	11.0
149	SB	59.30	2	25	4	0.33	1.2
150	SB	59.34	2	225	3	0.33	8.3
151	SB	59.35	2	300	6	0.33	22.0
152	SB	59.40	1	450	11	0.33	60.5
153	SB	59.48	1	350	6	0.33	25.7
154	SB	59.62	1	50	6	0.33	3.7
155	SB	59.76	1	50	6	0.33	3.7
156	SB	59.88	1	250	11	0.33	33.6
157	SB	59.98	1	40	10	0.33	4.9
158	SB	60.01	1	540	12	0.33	79.2
159	SB	60.40	1	290	12	0.33	42.5
160	SB	60.40	2	290	12	0.33	42.5
161	SB	60.50	2	240	12	0.33	35.2
162	SB	60.87	2	90	12	0.33	13.2
163	SB	60.97	1	200	12	0.33	29.3
164	SB	61.07	1	200	12	0.33	29.3
165	SB	61.24	1	70	12	0.33	10.3
166	SB	61.24	2	250	6	0.33	18.3
167	SB	61.26	1	20	4	0.33	1.0
168	SB	61.46	1	50	6	0.33	3.7
169	SB	61.75	Shld	400	10	0.20	29.6
170	SB	61.85	1	390	12	0.33	57.2
171	SB	61.87	Shld	300	10	0.20	22.2
172	SB	61.97	1	220	12	0.33	32.3
173	SB	61.97	2	220	12	0.33	32.3
174	SB	62.10	2	260	12	0.33	38.1
175	SB	62.19	1	90	12	0.33	13.2
176	SB	62.61	2	100	11	0.33	13.4
177	SB	62.72	1	470	12	0.33	68.9
						SUBTOTAL	786.3
						TOTAL	3,771.3

SUMMARY OF QUANTITIES

Q-2

REVISED BY | DATE REVISED
MICHAEL DUONG | KEVIN KWAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: KEVIN KWAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 12-21-15 | DATE PLOTTED => 09-DEC-2015 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010 | USERNAME => s122436 | DGN FILE => 74Y670pa002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1964 | PROJECT NUMBER & PHASE 07000018891

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	12	24

Ohannes Anserlian 10-13-15
REGISTERED ELECTRICAL ENGINEER DATE

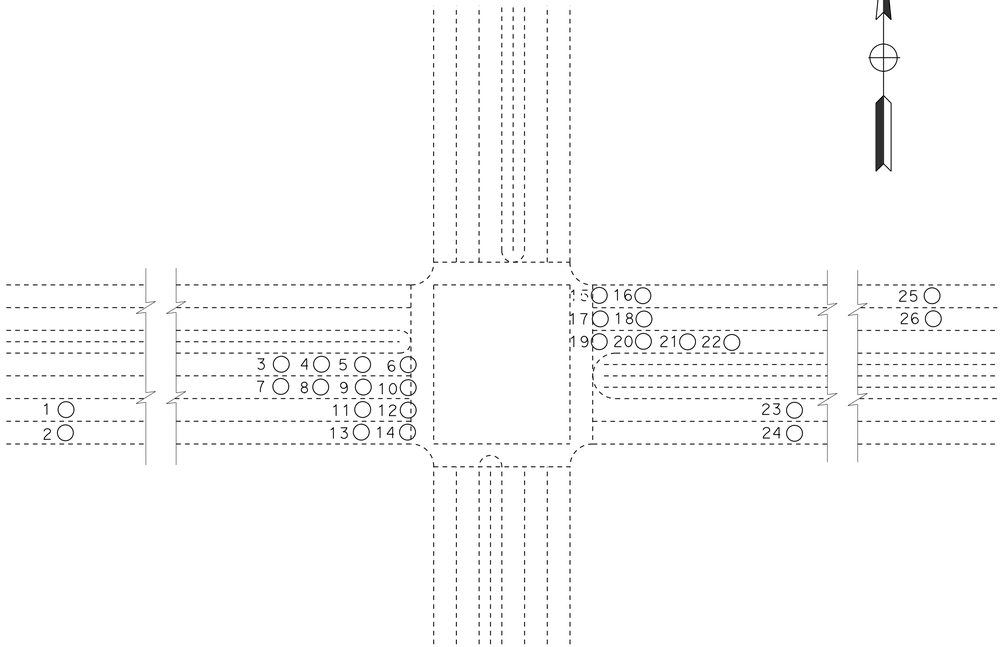
12-21-15
PLANS APPROVAL DATE

OHANNES ANSERLIAN No. E16682 Exp. 6/30/16 ELECT — 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:

1. INSTALL NEW 2" STUBOUT FOR NEW LOOP DETECTORS, AND ABANDON EXISTING ONE.
2. SPLICE NEW LOOP WIRES TO EXISTING DLC IN ADJACENT PULL BOX.
3. PRIOR TO CONSTRUCTION, LOCATE EXISTING INDUCTIVE LOOP DETECTORS.
4. TAG EXISTING DLC IN ADJACENT PULL BOX AND AT CONTROLLER CABINET.
5. ROUND CORNERS OF ACUTE ANGLE SAWCUTS.



DETAIL "A"

INDUCTIVE LOOP DETECTOR SCHEDULE

SIGNAL LOCATION ON ROUTE 1 AT	SEE DETAIL "A" ON THIS SHEET FOR TYPICAL LOCATION OF LOOP DETECTORS																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
CROSS CREEK ROAD	X	X	X	X	X	X													X	X	X	X	X	X	X	X
MALIBU CANYON ROAD			X	X	X	X	X	X	X	X																
CORRAL CANYON ROAD	X	X									X	X	X	X	X	X	X	X							X	X
PARADISE COVE ROAD	X	X																							X	X
KANAN DUME ROAD	X	X																								
HEATHERCLIFF ROAD	X	X																							X	X
ZUMIREZ DRIVE															X	X	X	X	X	X	X	X			X	X
MORNING VIEW DRIVE	X	X	X	X	X	X																				
TRANCAS CANYON ROAD																			X	X	X	X			X	X

X - NEW LOOPS TO BE INSTALLED. ABANDON EXISTING LOOPS AT SAME LOCATION.

MODIFY SIGNAL
NO SCALE

E-1

APPROVED FOR ELECTRICAL WORK ONLY

REVISED BY	DATE REVISED
OA	09/15

CALCULATED-DESIGNED BY
CHECKED BY

PARESH PATEL
OHANNES ANSERLIAN

FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 12-21-15
DATE PLOTTED => 30-DEC-2015
TIME PLOTTED => 10:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	13	24

Ohannes Anserlian 10-13-15
REGISTERED ELECTRICAL ENGINEER DATE

12-21-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
OHANNES ANSERLIAN
No. E16682
Exp. 6/30/16
ELECT
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.

MODIFY SIGNAL		
SHEET No.	(N) TYPE E LOOP (EA)	(N) STUBOUT (EA)
E-1	66	22

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

ELECTRICAL QUANTITIES

E-2

CALCULATED-DESIGNED BY: PARESH PATEL
CHECKED BY: OHANNES ANSERLIAN
REVISED BY: OA
DATE REVISED: 09/15
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION: DATE PLOTTED => 09-DEC-2015
12-21-15 TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010
USERNAME => s122436
DGN FILE => 74Y670ua002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1878
PROJECT NUMBER & PHASE 07000018891

M

Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
Mtl	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

N

N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE

O

Oblr	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm Mtl	PERMEABLE MATERIAL

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
℄,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

Q

Qty	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
℄	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

T continued

TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS

V

V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE

X

X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	14	24

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 12-21-15

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft^3, 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.

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	15	24

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

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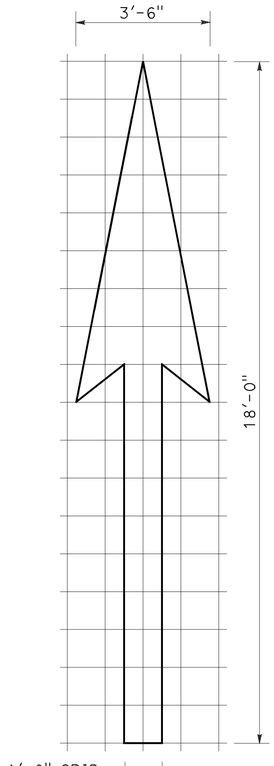
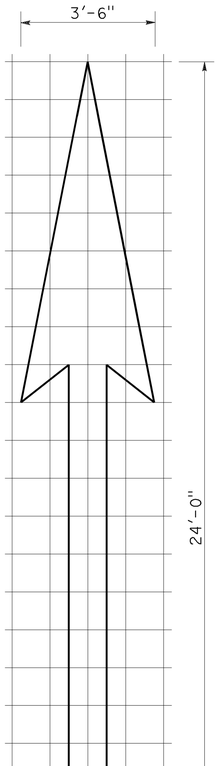
TO ACCOMPANY PLANS DATED 12-21-15

2010 REVISED STANDARD PLAN RSP A24A



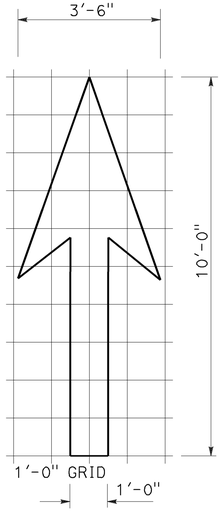
A=25 ft²

TYPE I 18'-0" ARROW



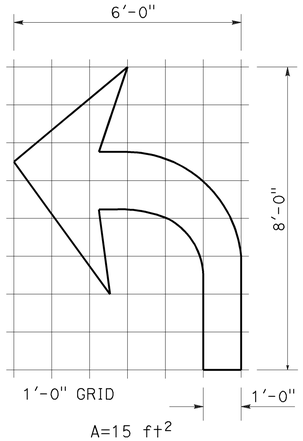
A=31 ft²

TYPE I 24'-0" ARROW



A=14 ft²

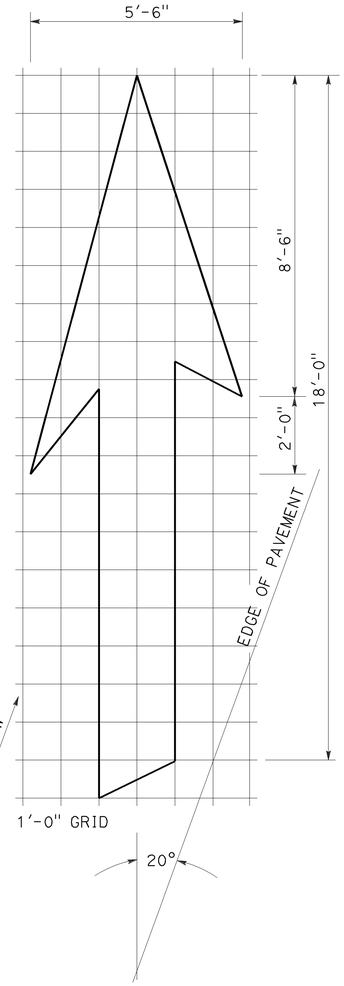
TYPE I 10'-0" ARROW



A=15 ft²

TYPE IV (L) ARROW

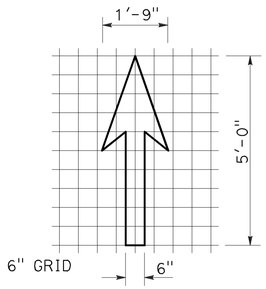
(For Type IV (R) arrow, use mirror image)



A=42 ft²

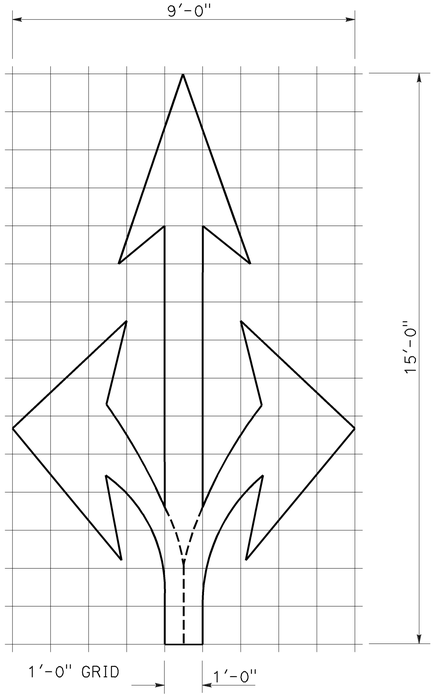
TYPE VI ARROW

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



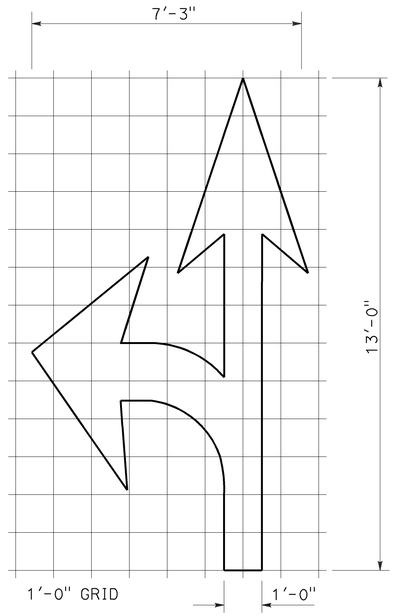
A=3.5 ft²

BIKE LANE ARROW



A=36 ft²

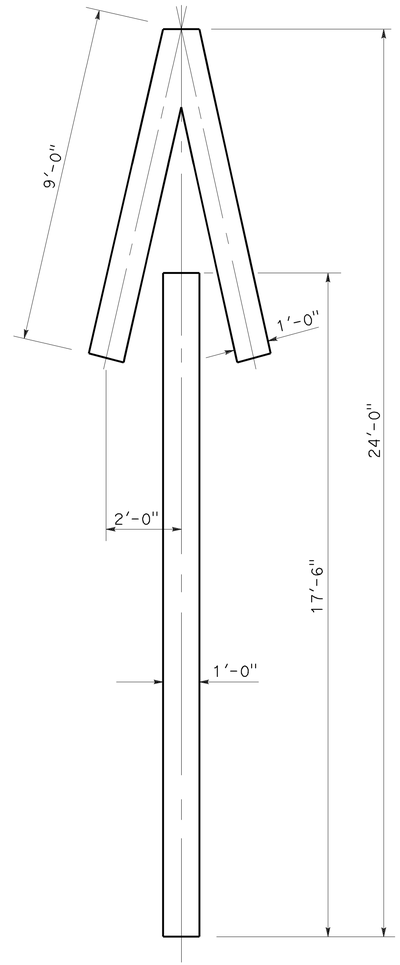
TYPE VIII ARROW



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

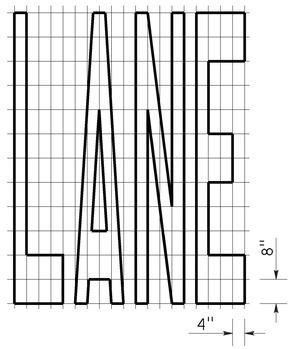
PAVEMENT MARKINGS ARROWS

NO SCALE

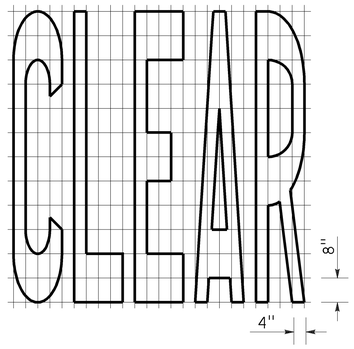
RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

3-14-12



A=24 ft²



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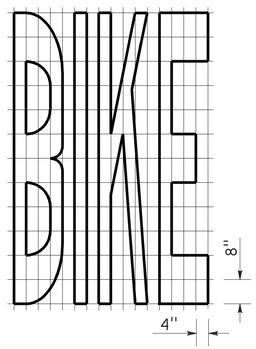
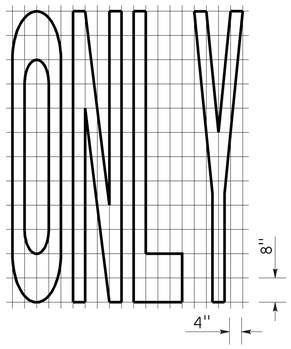
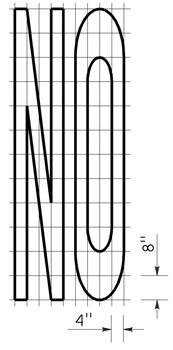


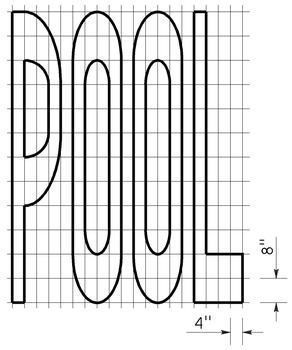
A=21 ft²



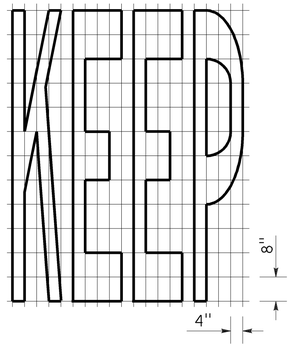
A=22 ft²



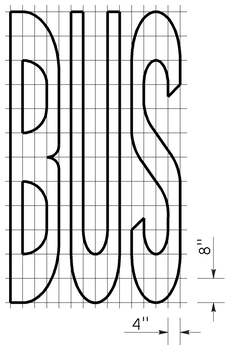
A=14 ft²



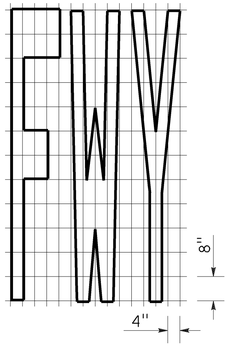
A=23 ft²



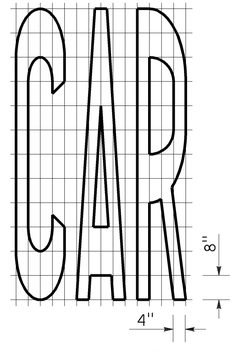
A=24 ft²



A=20 ft²



A=16 ft²



A=17 ft²

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	16	24

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

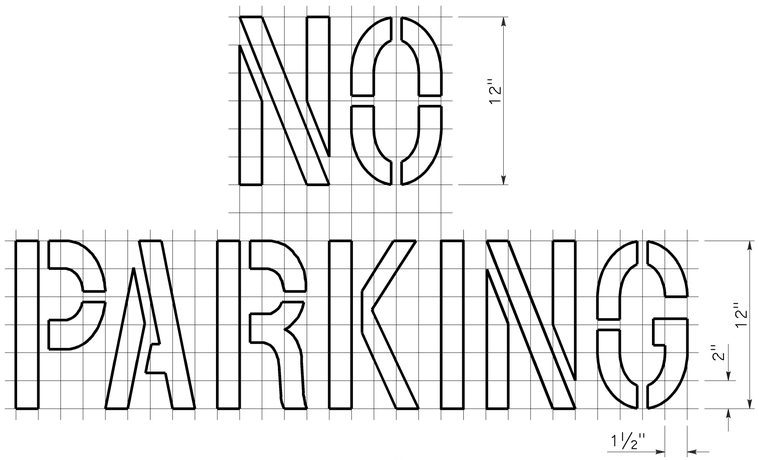
July 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

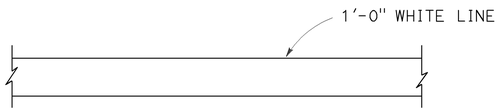
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 12-21-15

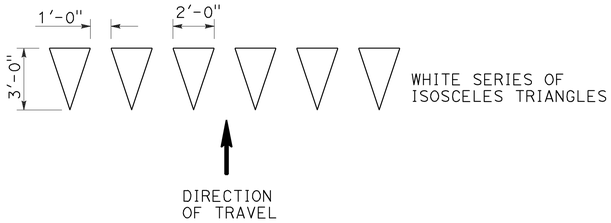
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES

NO SCALE

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

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	17	24

REGISTERED CIVIL ENGINEER

July 19, 2013
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.

TO ACCOMPANY PLANS DATED 12-21-15

2010 REVISED STANDARD PLAN RSP T9

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		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	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%
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 recommmended 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

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	18	24

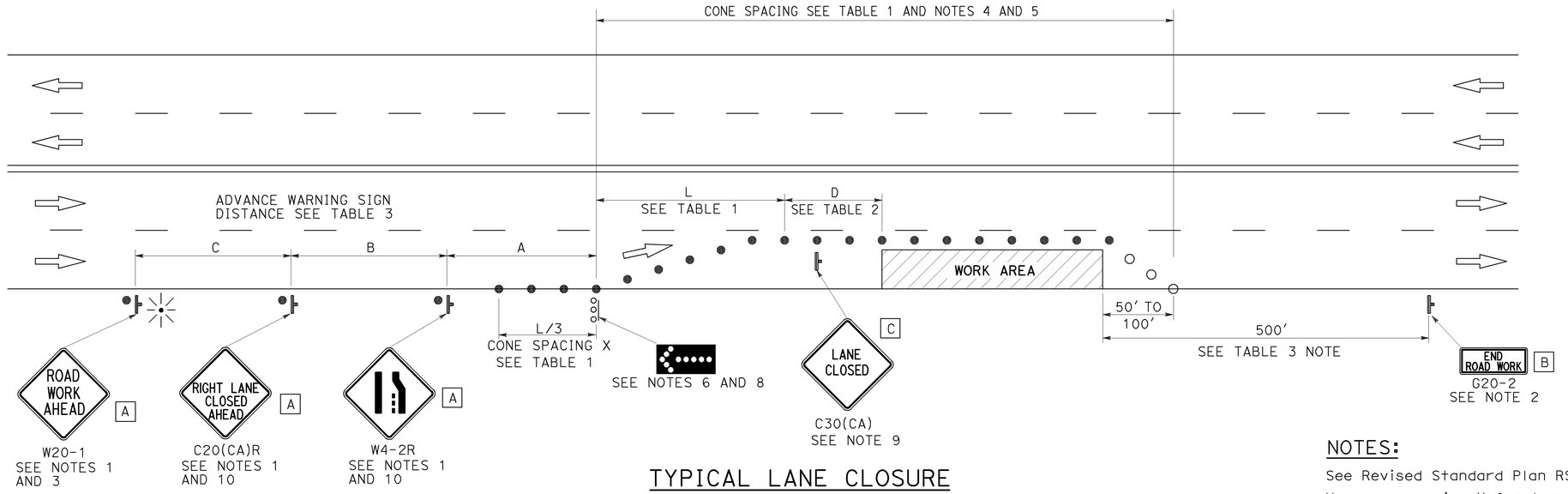
REGISTERED CIVIL ENGINEER

April 19, 2013
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.

TO ACCOMPANY PLANS DATED 12-21-15



TYPICAL LANE CLOSURE

NOTES:

1. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
8. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

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 approriate, 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.

LEGEND

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

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

4-2-13

LEGEND:

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

ABBREVIATIONS

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	19	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

Theresa Aziz Gabriel No. E15129 Exp. 6-30-14 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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 12-21-15

SOFFIT AND WALL MOUNTED LUMINAIRES

- PENDANT, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL SURFACE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL LUMINAIRE TO REMAIN UNMODIFIED
- (M) EXISTING SOFFIT OR WALL LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

1. HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
2. LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
3. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

7-15-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	20	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

Theresa Aziz Gabriel No. E15129 Exp. 6-30-14 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

July 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 12-21-15

CONDUIT

NEW	EXISTING	
— — — —	— — — —	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
— — — - — — - —	— — — - — — - —	TRAFFIC SIGNAL CONDUIT
— — C — —	— — c — —	COMMUNICATION CONDUIT
— — T — —	— — t — —	TELEPHONE CONDUIT
— — F — —	— — f — —	FIRE ALARM CONDUIT
— — FO — —	— — fo — —	FIBER OPTIC CONDUIT
— — — ⊣	— — — ⊣	CONDUIT TERMINATION
R	r	CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION

TYPE H SERVICE, 28'-10" — TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE

FLASHING BEACON

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

SIGNAL EQUIPMENT

NEW	EXISTING	
C	C	PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
PV	PV	MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

NOTES:

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

ILLUMINATED OVERHEAD SIGN

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1B

2010 REVISED STANDARD PLAN RSP ES-1B

7-15-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	21	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel No. E15129 Exp. 6-30-14 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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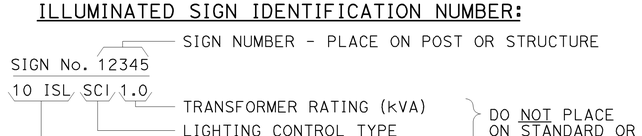
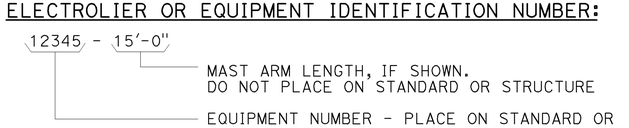
TO ACCOMPANY PLANS DATED 12-21-15

EQUIPMENT IDENTIFICATION

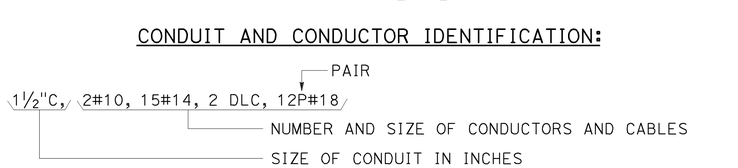
ILLUMINATED SIGN IDENTIFICATION NUMBER:



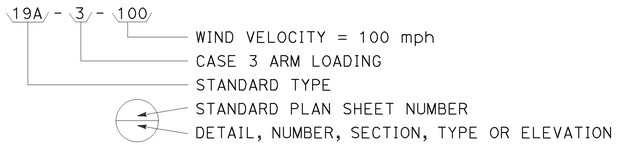
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



CONDUIT AND CONDUCTOR IDENTIFICATION:



SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



MISCELLANEOUS EQUIPMENT

NEW	EXISTING	
CMS	cms	CHANGEABLE MESSAGE SIGN
		CLOSED CIRCUIT TELEVISION CAMERA
		HIGHWAY ADVISORY RADIO POLE AND ANTENNA
EMS	ems	EXTINGUISHABLE MESSAGE SIGN
M V	m v	DETECTION DEVICE M = MICROWAVE SENSOR V = VIDEO IMAGE SENSOR

WIRING DIAGRAM LEGEND

	EXTERNAL CONDUCTOR
	CONDUCTOR OR BUS
	TIE POINT
	CONTACTOR COIL
	CONTACTOR, NO CONTACT
	TERMINAL BLOCKS
	CONTACTOR, NC CONTACT
	ENCLOSURE BOND
	GROUNDING ELECTRODE
	CIRCUIT BREAKER
	RECEPTACLE

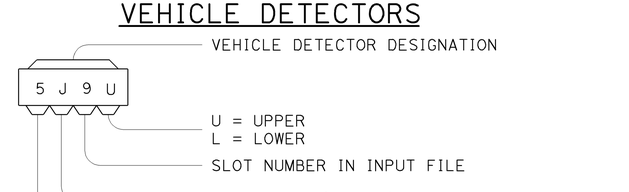
PULL BOXES

NEW	EXISTING	
		PULL BOX, No. 5 UNLESS OTHERWISE INDICATED OR NOTED
3	9A(21)	PULL BOX, ADDITIONAL DESIGNATIONS OR DESCRIPTIONS

3 No. 3½ PULL BOX
5 No. 5 PULL BOX
6 No. 6 PULL BOX
7 No. 7 (CEILING PULL BOX)
8 No. 8 (PENDANT SOFFIT PULL BOX)
9 No. 9 PULL BOX
9A No. 9A PULL BOX

(C) COMMUNICATIONS PULL BOX
(E) PULL BOX WITH EXTENSION
(S) SPRINKLER CONTROL PULL BOX
(21) ANCHOR BOLTS AND CONDUIT FOR FUTURE INSTALLATION OF TYPE 21 STANDARD
(T) TRAFFIC PULL BOX

VEHICLE DETECTORS



NEW	EXISTING	
		TYPE A DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		TYPE B DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		TYPE C DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		TYPE D DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		TYPE E DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		TYPE Q DETECTOR LOOP. OUTLINE OF SAWCUT SHOWN
		MAGNETIC DETECTOR
DH	dh	DETECTOR HANDHOLE
		MICROWAVE OR VIDEO DETECTION ZONE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

7-11-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	22	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

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

October 30, 2015
PLANS APPROVAL DATE

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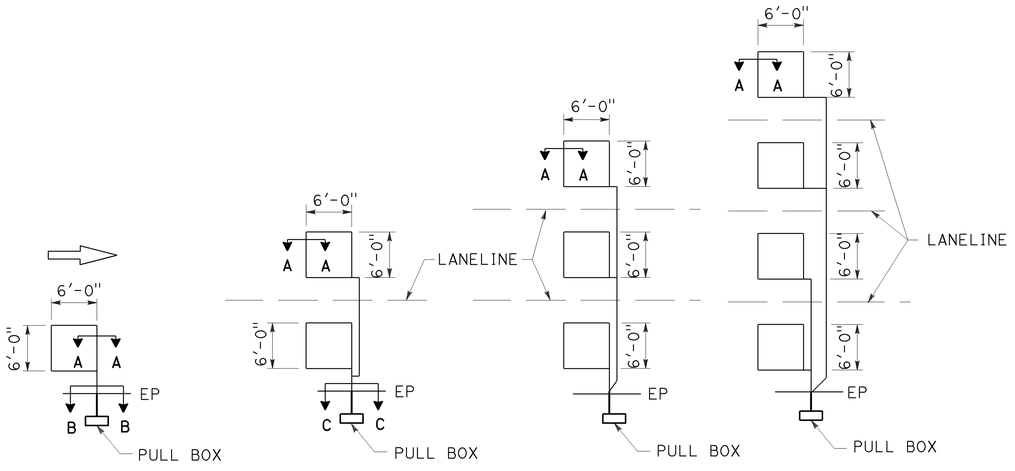
TO ACCOMPANY PLANS DATED 12-21-15

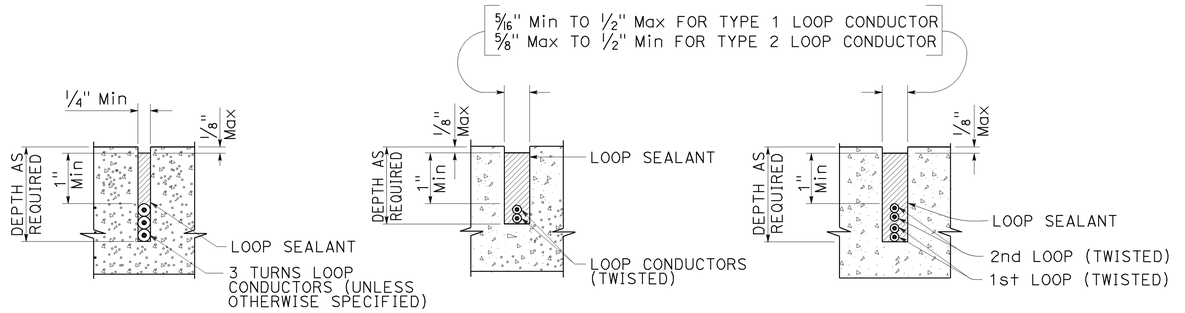


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

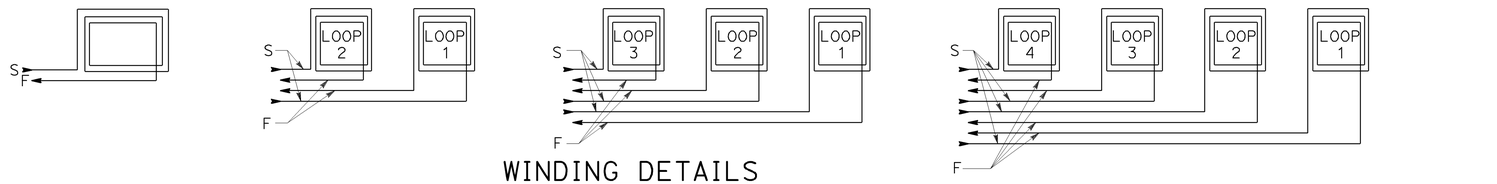
Type A loop detector configurations illustrated

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
   Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans.

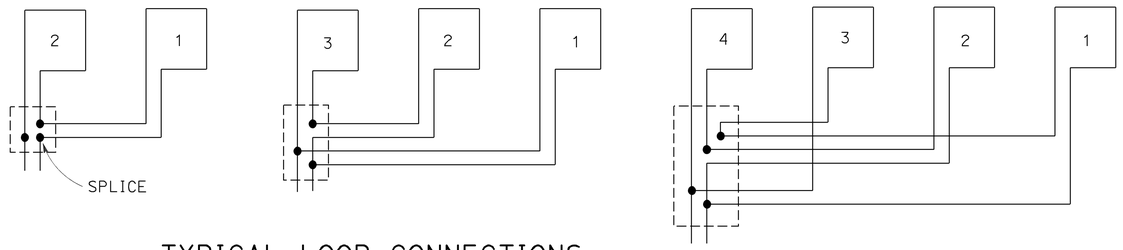


SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS



TYPICAL LOOP CONNECTIONS

Dashed lines represent the pull box

ABBREVIATIONS:

S - START
F - FINISH

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LOOP DETECTORS)

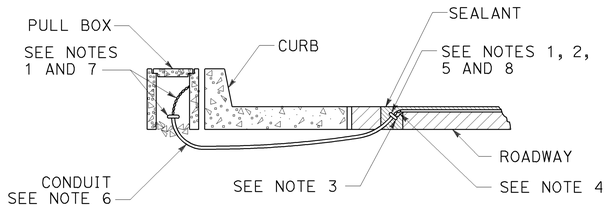
NO SCALE

RSP ES-5A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-5A DATED MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5A

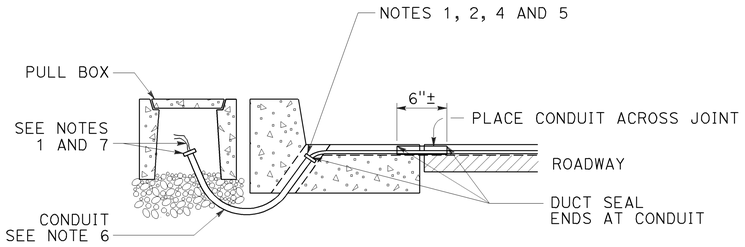
2010 REVISED STANDARD PLAN RSP ES-5A

8-24-15



TYPE A

CURB TERMINATION DETAIL



CROSS SECTION

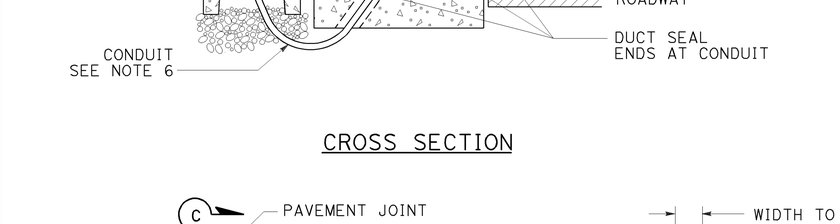
PLAN VIEW

SECTION C-C

TYPE B

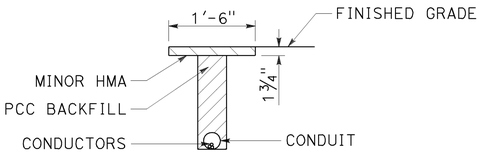
CURB TERMINATION DETAIL

CROSS SECTION

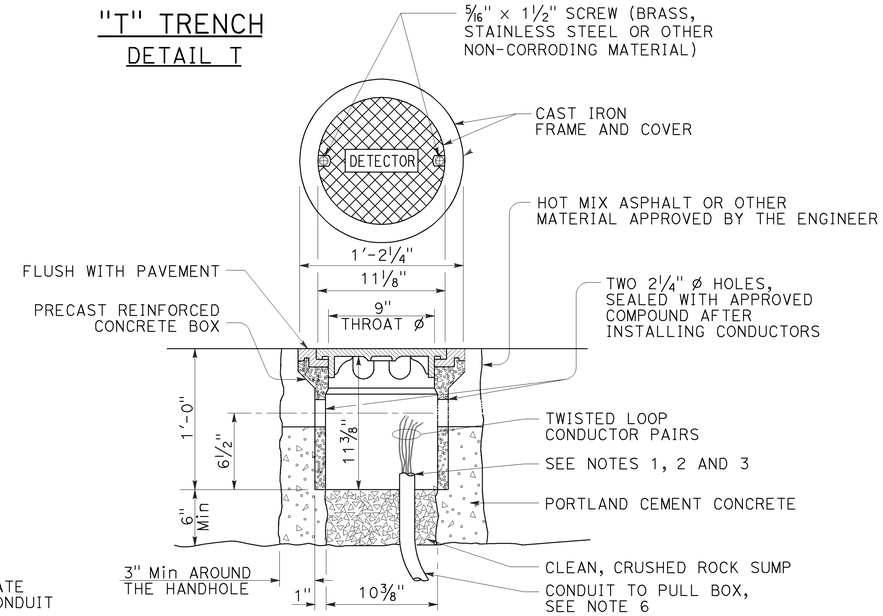


PLAN VIEW

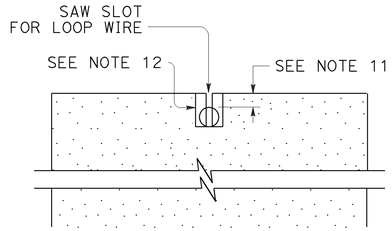
SHOULDER TERMINATION DETAILS



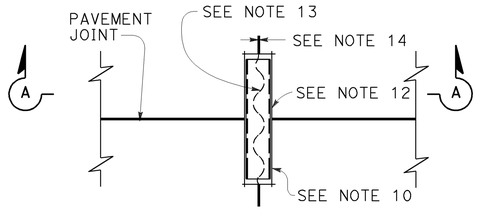
"T" TRENCH DETAIL T



DETECTOR HANDHOLE DETAIL

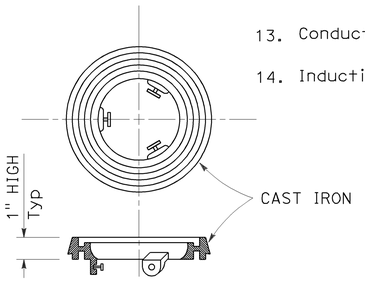


SECTION A-A



PLAN VIEW

TYPICAL LOOP LEAD-IN DETAIL AT PAVEMENT JOINT



LOCKING GRADE RING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	23	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Theresa Aziz Gabriel — No. E15129 — Exp. 6-30-14 — ELECTRICAL — STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 12-21-15

NOTES:

1. Bushing shall be used at end of conduit.
2. Tape detector conductors or cables 3" each side of bushings.
3. Install duct seal compound to each end of termination conduit before installing sealant.
4. Round all sharp edges where detector conductors or cables have to pass.
5. End of conduit shall be 3⅛" below roadway surface.
6.

Conduit size	Loop conductors
1"C minimum	1 to 2 pairs
1½"C minimum	3 to 4 pairs
2"C minimum	5 or more pairs

7. Splice detector conductors or cables to detector lead-in-cable.
8. Location of detector handhole when shown on plans.
9. When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
10. ¾"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
11. ½" Minimum between top of conduit and pavement surface.
12. Sawcut shall not exceed 1" in width and ⅛" longer than conduit to be installed.
13. Conductors with ½" minimum slack inside conduit.
14. Inductive loop detector saw slot.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CURB TERMINATION AND HANDHOLE)

NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D
DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

7-9-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	46.9/62.9	24	24

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

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

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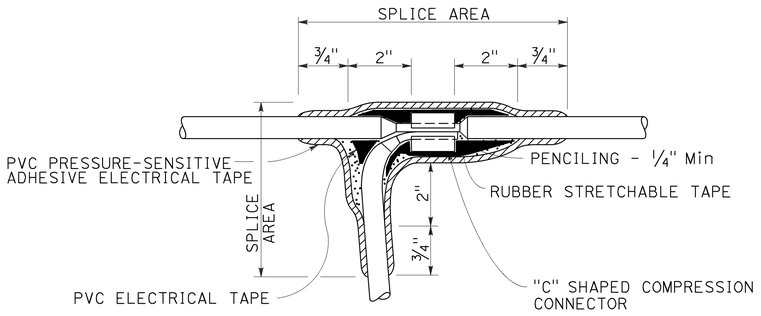
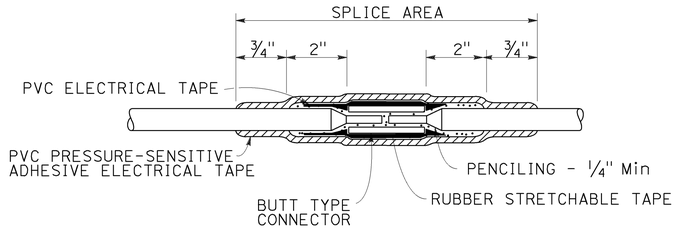
TO ACCOMPANY PLANS DATED 12-21-15



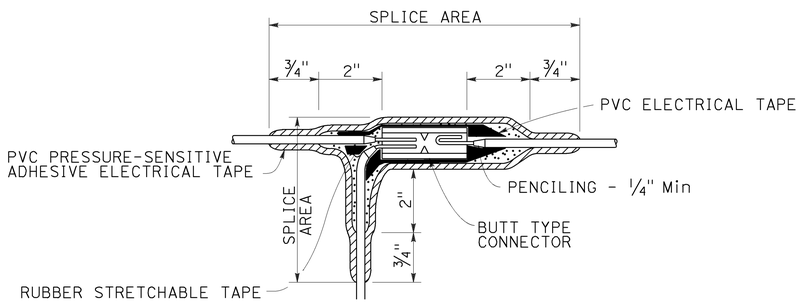
TYPE C SPLICE

See Note 3



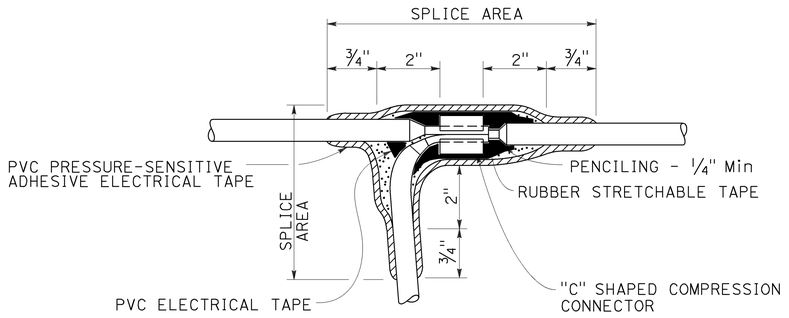
TYPE S SPLICE

See Note 4



TYPE ST SPLICE

See Note 5



TYPE T SPLICE

See Note 5

NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SPLICING DETAILS)

NO SCALE

RSP ES-13A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-13A

2010 REVISED STANDARD PLAN RSP ES-13A

9-28-15