Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	1	119

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACNHP-X111(074)E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN VENTURA COUNTY
ON ROUTE 23
AT VARIOUS LOCATIONS
AND ON ROUTE 118
FROM PRINCETON AVENUE UNDERCROSSING
TO LOS ANGELES COUNTY LINE

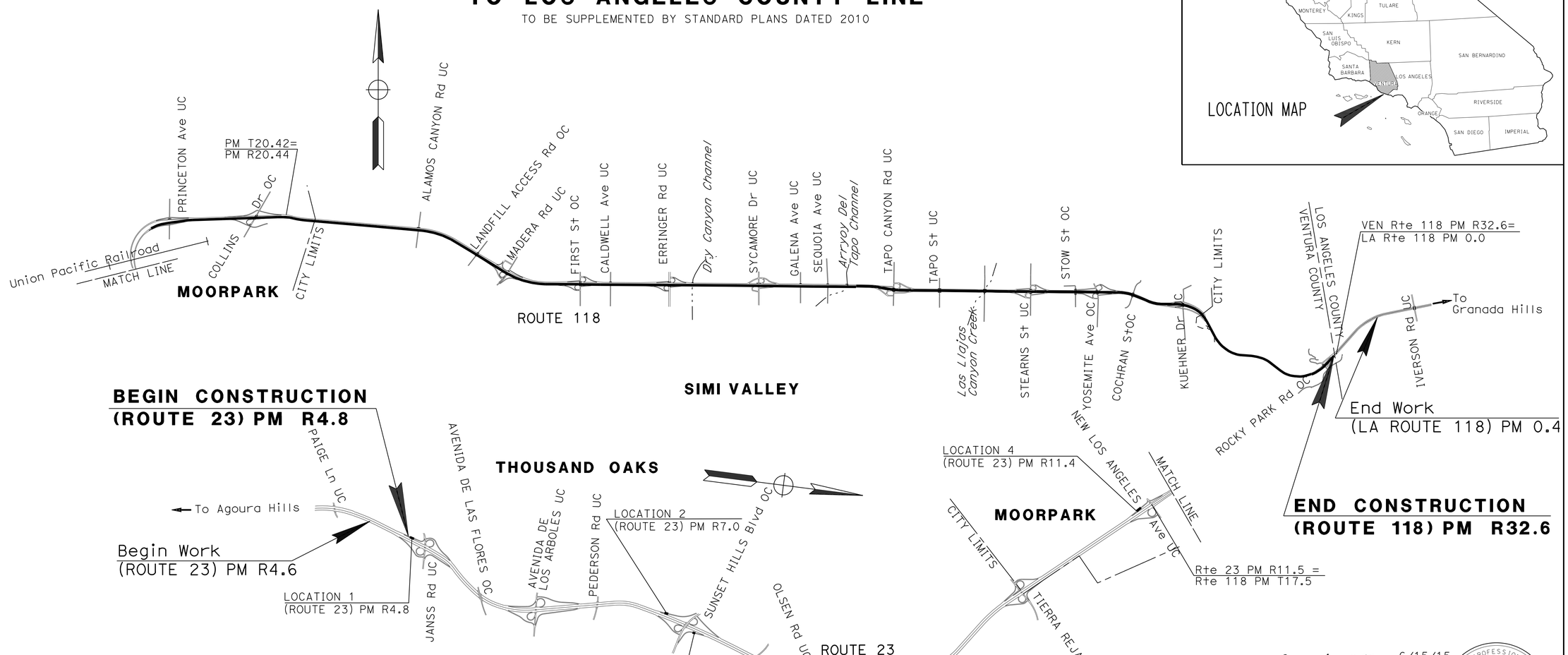
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	CONSTRUCTION AREA SIGN
3-6	TRAFFIC HANDLING PLANS
7-43	PAVEMENT DELINEATION AND SIGN PLANS, DETAILS AND QUANTITIES
44-102	ELECTRICAL PLANS
103-119	REVISED STANDARD PLANS

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

LOCATION MAP



LOCATIONS OF WORK AT HUB BUILDINGS AND LARTMC			
ROUTE	PM	LOCATION	DESCRIPTION
405	23.1	SOUTHBOUND ROUTE 405 WEST OF IMPERIAL Hwy	LAX - LOS ANGELES AIRPORT HUB BUILDING
101	21.3	NORTHBOUND ROUTE 101 EAST OF TUJUNGA Ave	NHD - NORTH HOLLYWOOD HUB BUILDING
2	18.7	ROUTE 134 AND ROUTE 2 INTERCHANGE (2901 WEST BROADWAY, LOS ANGELES, CA 90041)	LARTMC - LOS ANGELES REGIONAL TRANSPORTATION MANAGEMENT CENTER

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

NO SCALE

Jacqueline C Tan 6/15/15
PROJECT ENGINEER DATE
REGISTERED ELECTRICAL ENGINEER

June 22, 2015
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C.TAN No. E015611 Exp. 12/31/15 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.

CONTRACT No.	07-308504
PROJECT ID	0714000245

PROJECT MANAGER RAVI GHATE
DESIGN MANAGER JACQUELINE TAN

LAST REVISION 00-00-00 DATE PLOTTED => 27-AUG-2015 TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	2	119

REGISTERED CIVIL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER HEATHER LIANG No. C69374 Exp. 06/30/16 CIVIL STATE OF CALIFORNIA

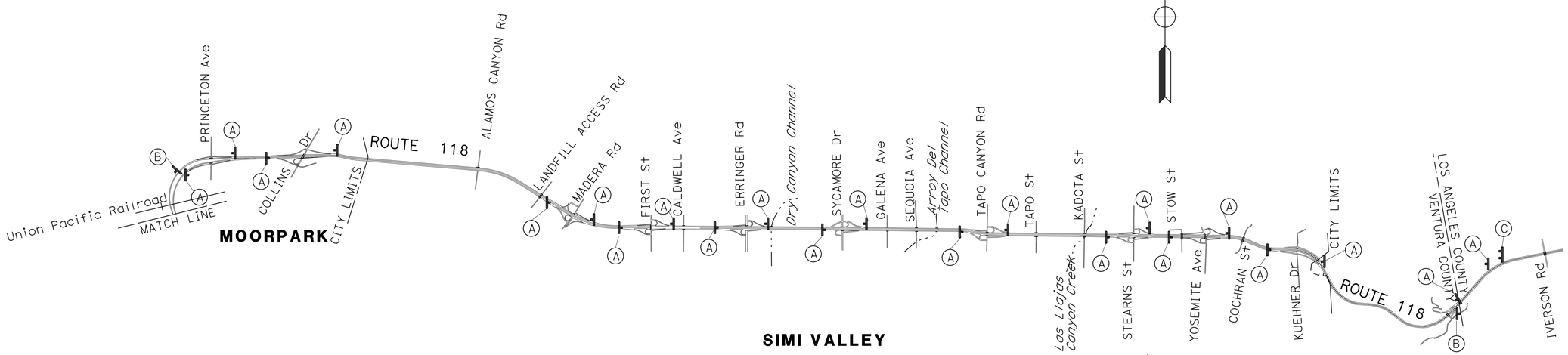
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

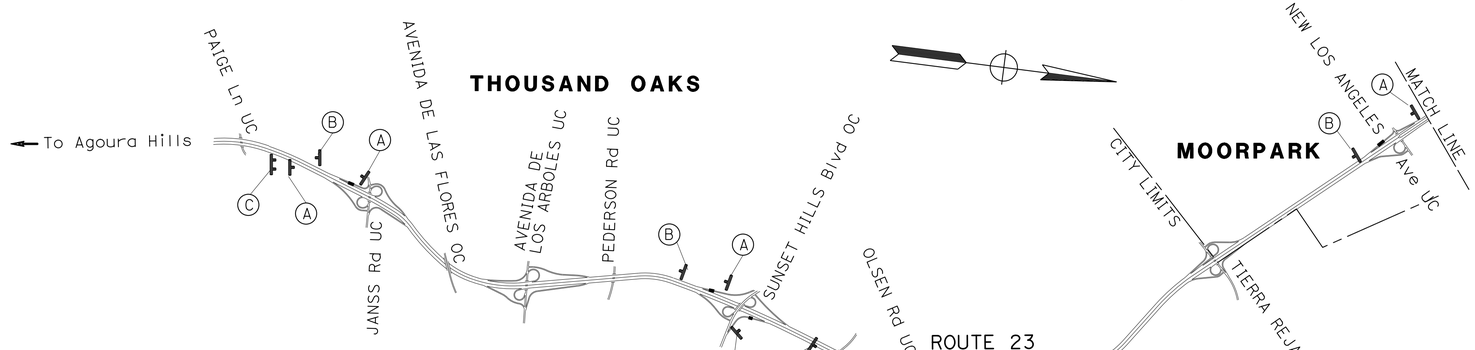
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE FEDERAL (MUTCD)	SIGN CODE CALIFORNIA (CA)	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1		48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	27
B	G20-2		48" x 24"	END ROAD WORK	1 - 4" x 6"	6
C		C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	2

NOTE:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.





CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE TAN
CALCULATED-DESIGNED BY: HEATHER LIANG
CHECKED BY: PETER LIN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

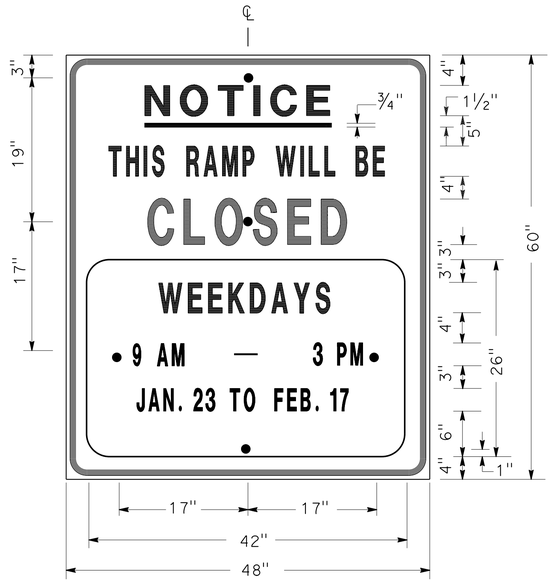
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R 4.8/R 11.4 T 19.0/R 32.6	3	119

REGISTERED CIVIL ENGINEER 4/9/15 DATE

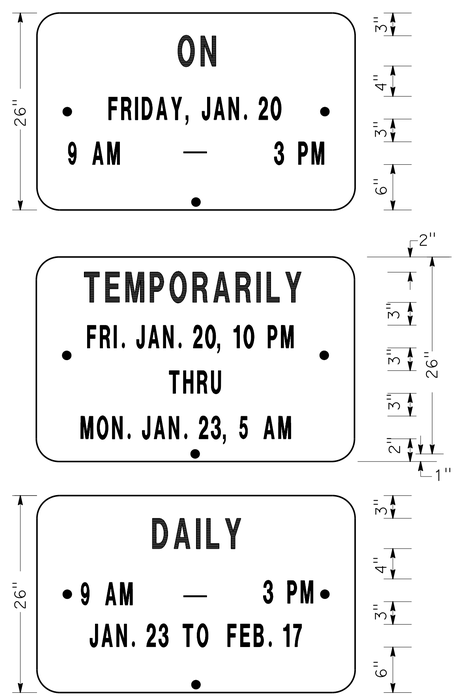
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHANGJIA HORN No. 51846 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA

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



SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: SIGN SP-1

1. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
2. BOLT HOLES MUST BE 3/8" DIAMETER.
3. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
4. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.

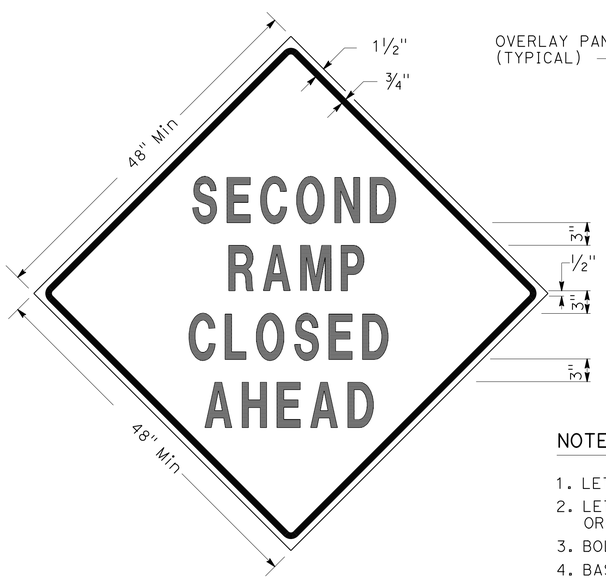
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5, 6, & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

SIGN SP-4

NOTES: SIGN SP-4

1. LETTERS - 6" SERIES C.
2. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
3. BOLT HOLES MUST BE 3/8" DIAMETER.
4. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
5. SIGNS MUST BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH REVISED STANDARD PLAN RSP T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES



SIGN SP-3

SIGN SP-5

NOTES: SIGNS SP-3 & SP-5

1. LETTERS - 6" SERIES D.
2. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
3. BOLT HOLES MUST BE 3/8" DIAMETER.
4. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
5. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.
6. SIGN SP-5 MUST BE USED IF THE OFF-RAMP TO BE CLOSED FOLLOWS A FREEWAY OFF-CONNECTOR.

SPECIAL SIGNS FOR EXIT RAMP CLOSURES

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS
SHEET 1 OF 2

NO SCALE

THD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: ALBERT K YU
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION: 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

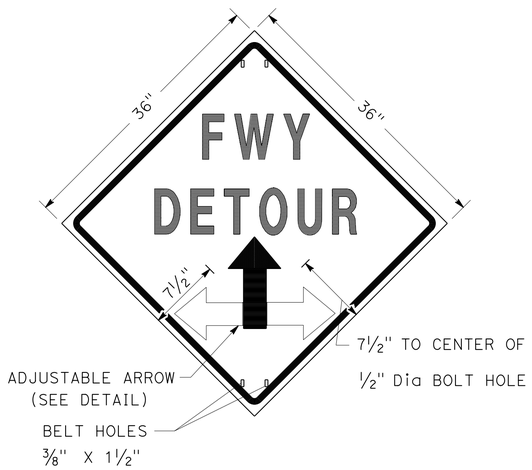
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R 4.8/R 11.4 T 19.0/R 32.6	4	119

4/9/15
REGISTERED CIVIL ENGINEER DATE

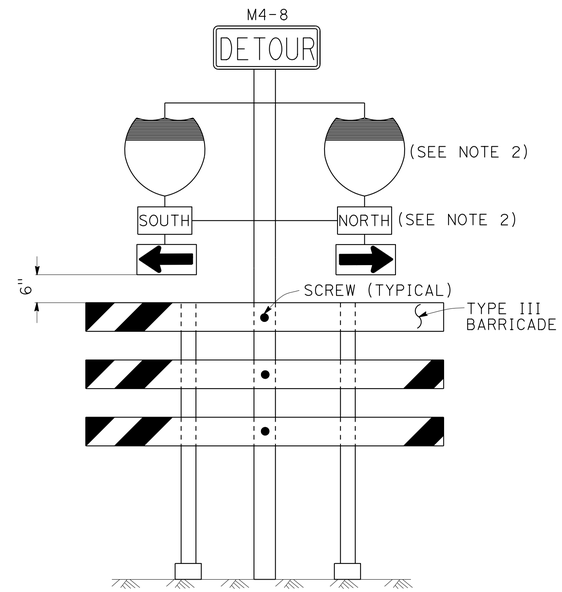
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHANGJIA HORN
No. 51846
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

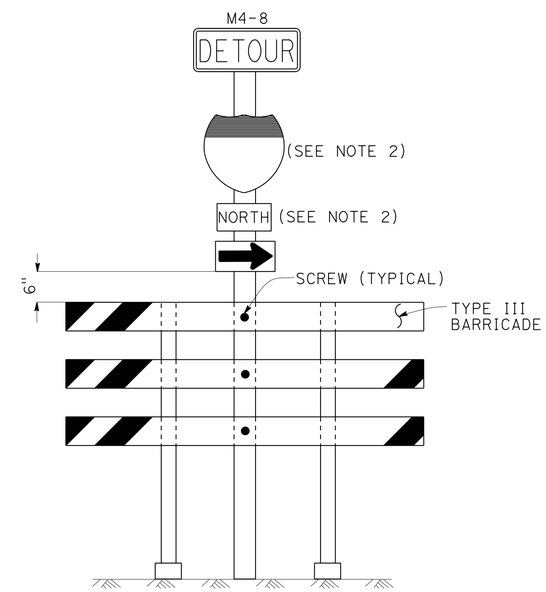
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

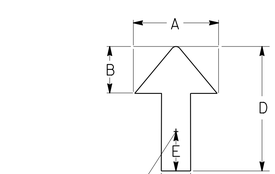
NOTES: SIGN SP-2

1. LETTERS - 6" SERIES E.
2. LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL FOR SIGNS AND ARROWS MUST BE ALUMINUM (MINIMUM 0.06").
4. BELTS (LUGGAGE STRAPS) MUST BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
5. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

NOTES: SIGNS SP-6 & SP-7

1. IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
2. USE APPROPRIATE ROUTE MARKER [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)].

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS				
A	B	C	D	E
6"	3"	2"	8"	1"

ADJUSTABLE ARROW DETAIL

ABBREVIATION

(CA) CALIFORNIA CODE

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS

SHEET 2 OF 2

NO SCALE

THD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

FUNCTIONAL SUPERVISOR: ALBERT K YU
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION: DATE PLOTTED => 27-AUG-2015
00-00-00 TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R 4.8/R 11.4 T 19.0/R 32.6	5	119

REGISTERED CIVIL ENGINEER 4/9/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHANGJIA HORN No. 51846 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA

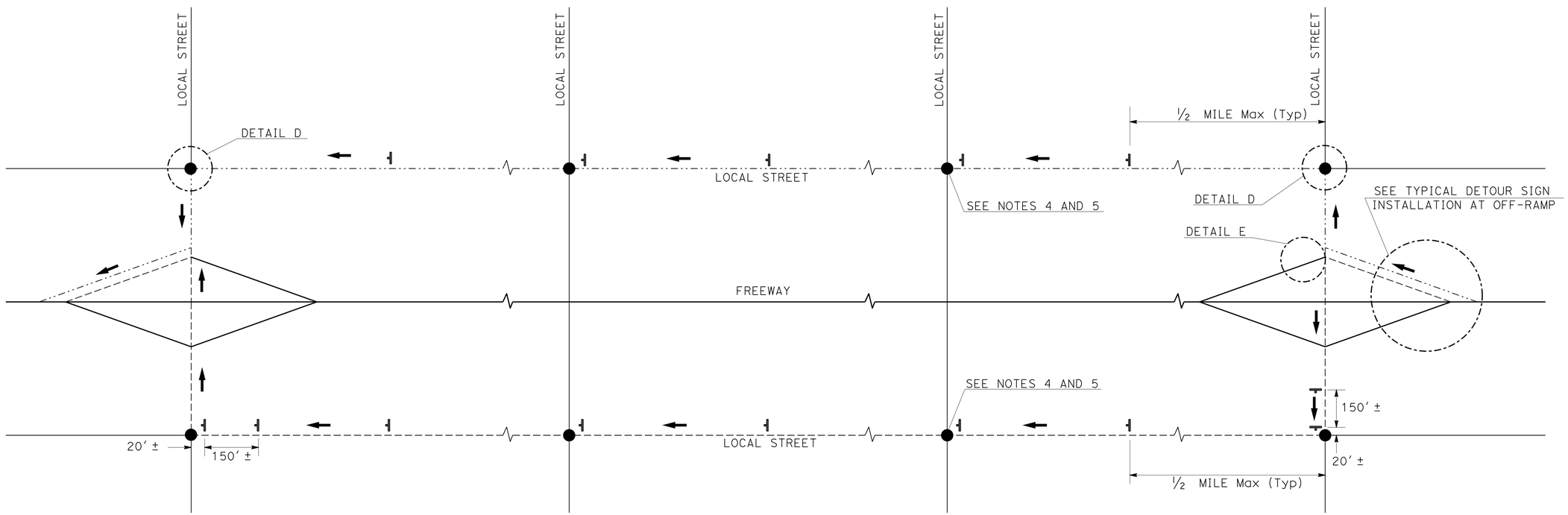
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND

- SIGN SP-2
- AND/OR — DESIGNATED DETOUR ROUTE
- DETOUR DIRECTION
- CONTROLLED INTERSECTION

NOTES:

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. SP-2 SIGNS MUST BE POSTED AT EACH CONTROLLED INTERSECTION (EXCEPT AT COMMERCIAL PROPERTY, RESIDENTIAL COMPLEX OR T-INTERSECTION FROM ONE-WAY STREET) ALONG THE DESIGNATED DETOUR ROUTE.
5. UNLESS OTHERWISE SHOWN ON OTHER THD PLANS, WHEN CONTROLLED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE ARE CLOSELY SPACED, PLACE SP-2 SIGNS AT CONTROLLED INTERSECTIONS AT A DISTANCE NOT TO EXCEED 1/4 MILE FROM THE PRECEDING DETOUR SIGN.
6. EXCEPT AS OTHERWISE SHOWN ON OTHER PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS, SP-2 SIGNS MUST BE PLACED AS SHOWN ON THIS PLAN.



TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

SHEET 1 OF 3

NO SCALE

THD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

FUNCTIONAL SUPERVISOR: ALBERT K YU
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R 4.8/R 11.4 T 19.0/R 32.6	6	119

REGISTERED CIVIL ENGINEER 4/9/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHANGJIA HORN No. 51846 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA

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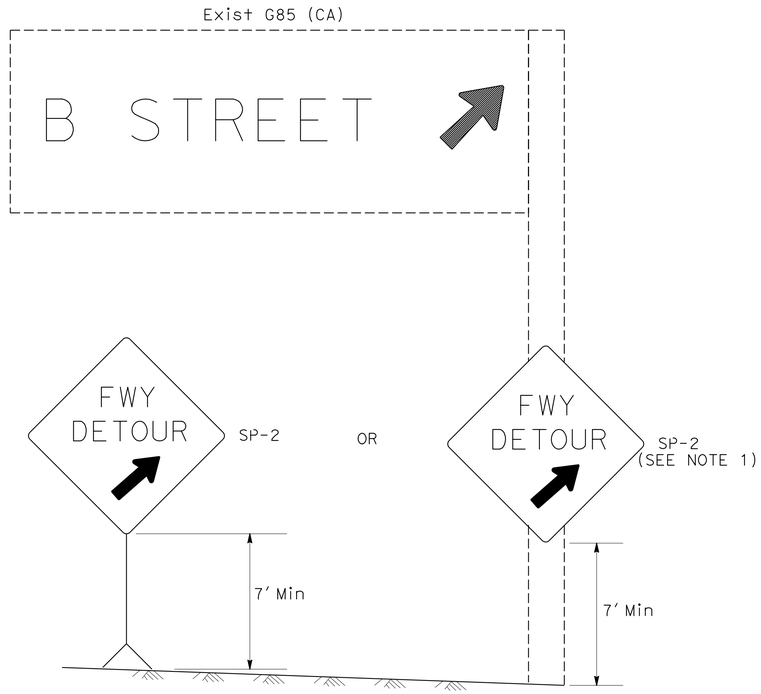
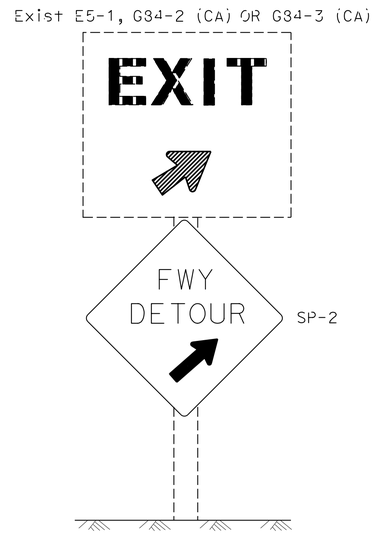
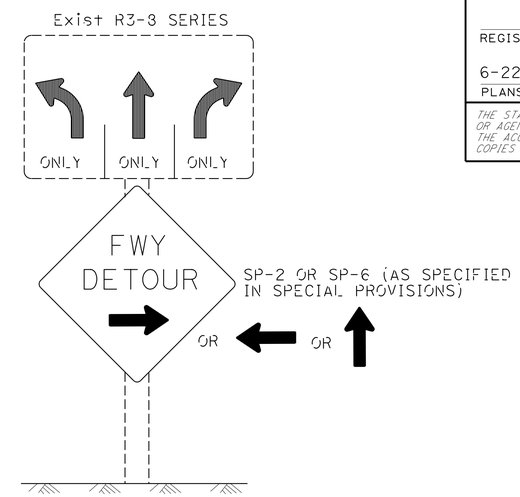


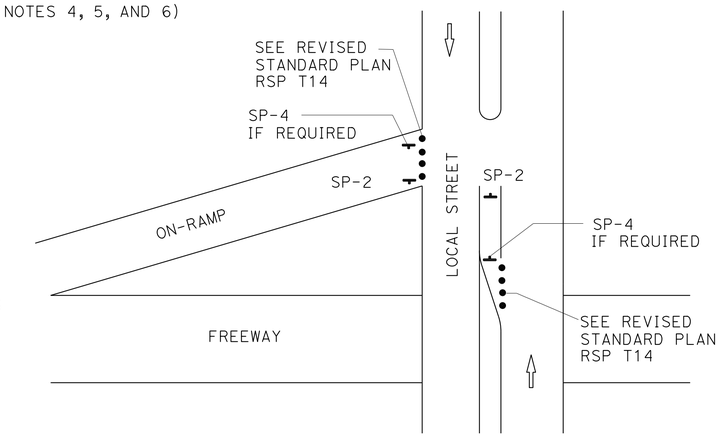
DETAIL A (SEE NOTE 3)



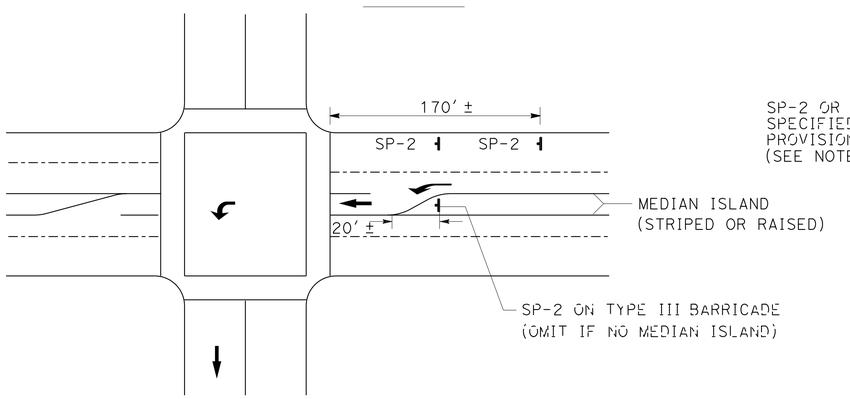
DETAIL B (SEE NOTE 3)



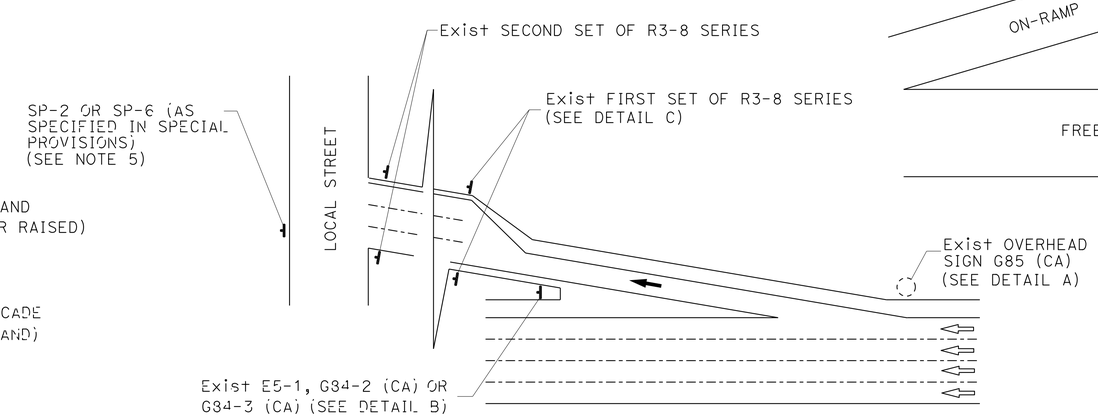
DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL E



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

LEGEND

- • TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- → DETOUR DIRECTION
- ◌ EXISTING OVERHEAD SIGN

NOTES: SIGN SP-2

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. OMIT DETAILS A AND B FOR FULL FREEWAY CLOSURES.
4. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-6 SIGN DETAILS.
5. IF R3-8 SERIES SIGNS ARE NOT PRESENT AT THE OFF-RAMP, SP-2 OR SP-6 SIGNS MUST BE FASTENED ONTO EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
6. EXCEPT FOR DETAILS A & B, OMIT SP-2 SIGNS IF RAMP HAS MANDATORY SINGLE MOVE.

SIGN CODE LEGEND

XXYY-Y: FEDERAL SIGN CODE PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

XXYY-Y (CA): CALIFORNIA SIGN CODE PER CALIFORNIA MUTCD

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE
SHEET 2 OF 3

NO SCALE

THD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

FUNCTIONAL SUPERVISOR: ALBERT K YU
CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
REVISED BY: JC
DATE REVISED: 2/14

LAST REVISION 00-00-00 DATE PLOTTED => 27-AUG-2015 TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	7	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

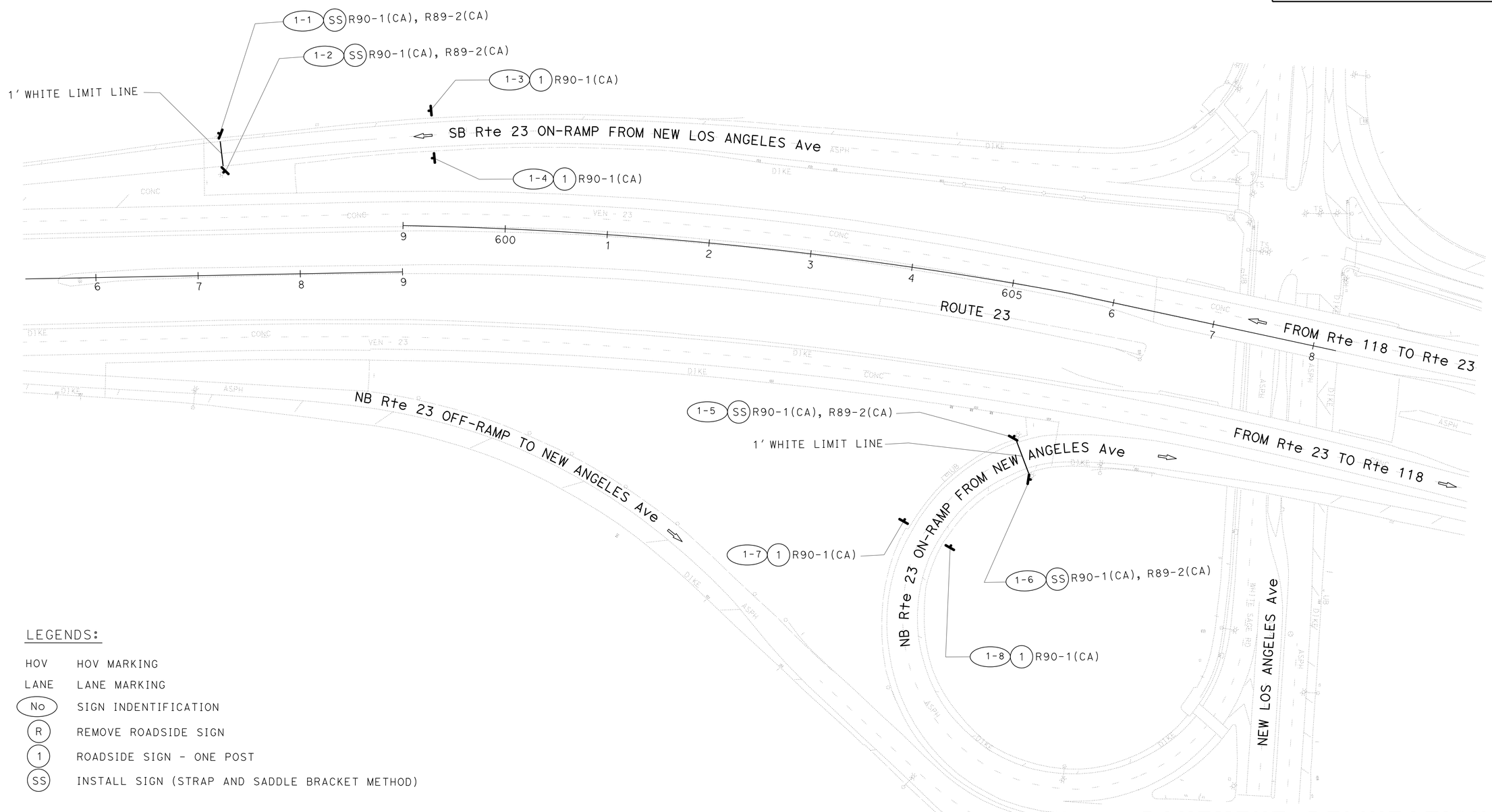
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

NOTES:

1. STRIPES AND PAVEMENT MARKINGS MUST BE THERMOPLASTIC.
2. CONFLICTING STRIPING MUST BE REMOVED.
3. LIMIT LINES MUST BE 1 FOOT SOLID WHITE AND BE PLACED ON TOP OF EXISTING LIMIT LINES.
4. EXACT LOCATIONS FOR ROAD SIGNS TO BE DETERMIND BY THE ENGINEER.



LEGENDS:

HOV	HOV MARKING
LANE	LANE MARKING
(No)	SIGN INDENTIFICATION
(R)	REMOVE ROADSIDE SIGN
(1)	ROADSIDE SIGN - ONE POST
(SS)	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	8	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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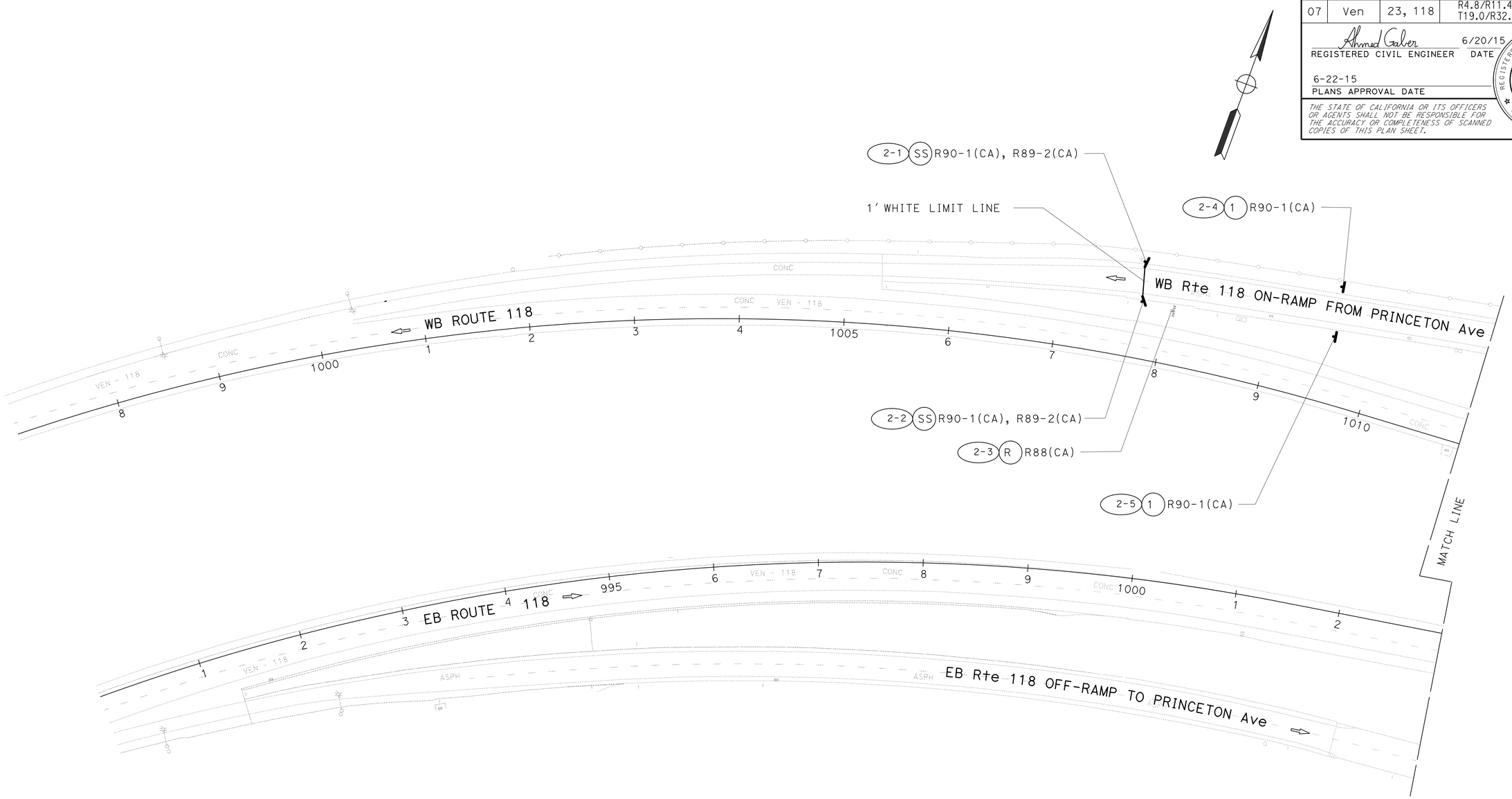

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PD-2

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

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	9	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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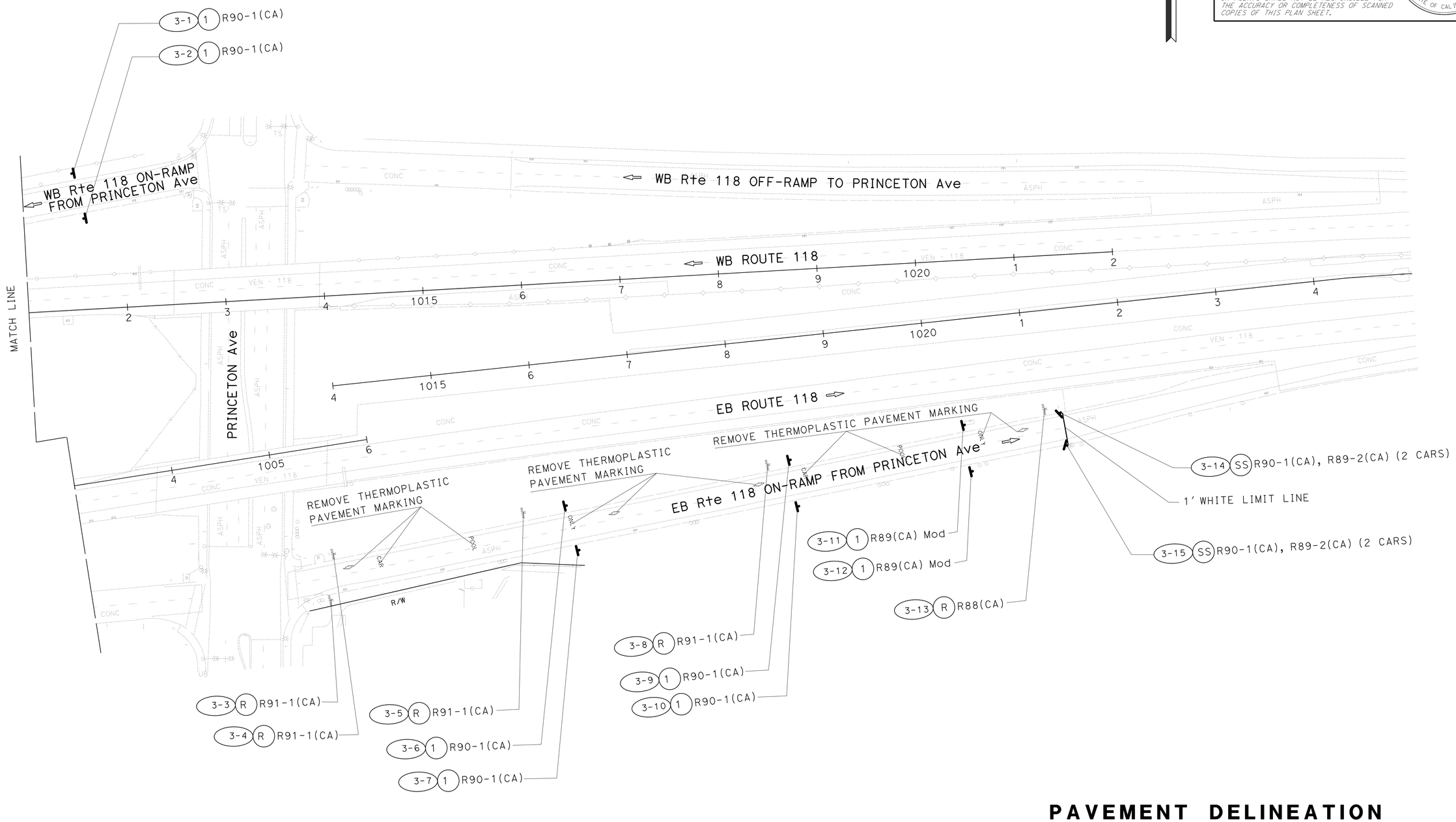

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-3

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

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CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	10	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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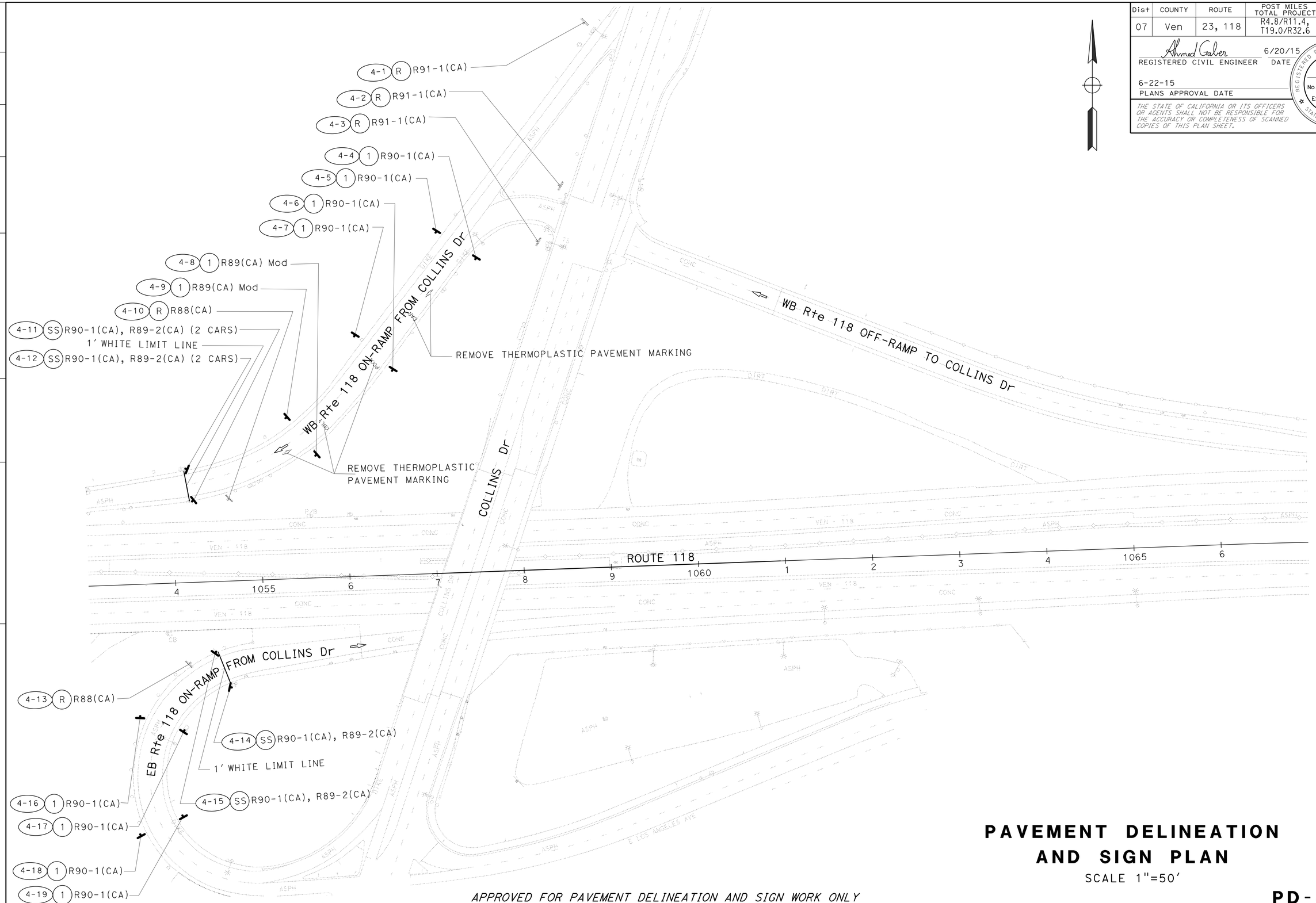

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PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

PD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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BORDER LAST REVISED 7/2/2010 | USERNAME => s115484 | DGN FILE => 730850na004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07140002451

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	11	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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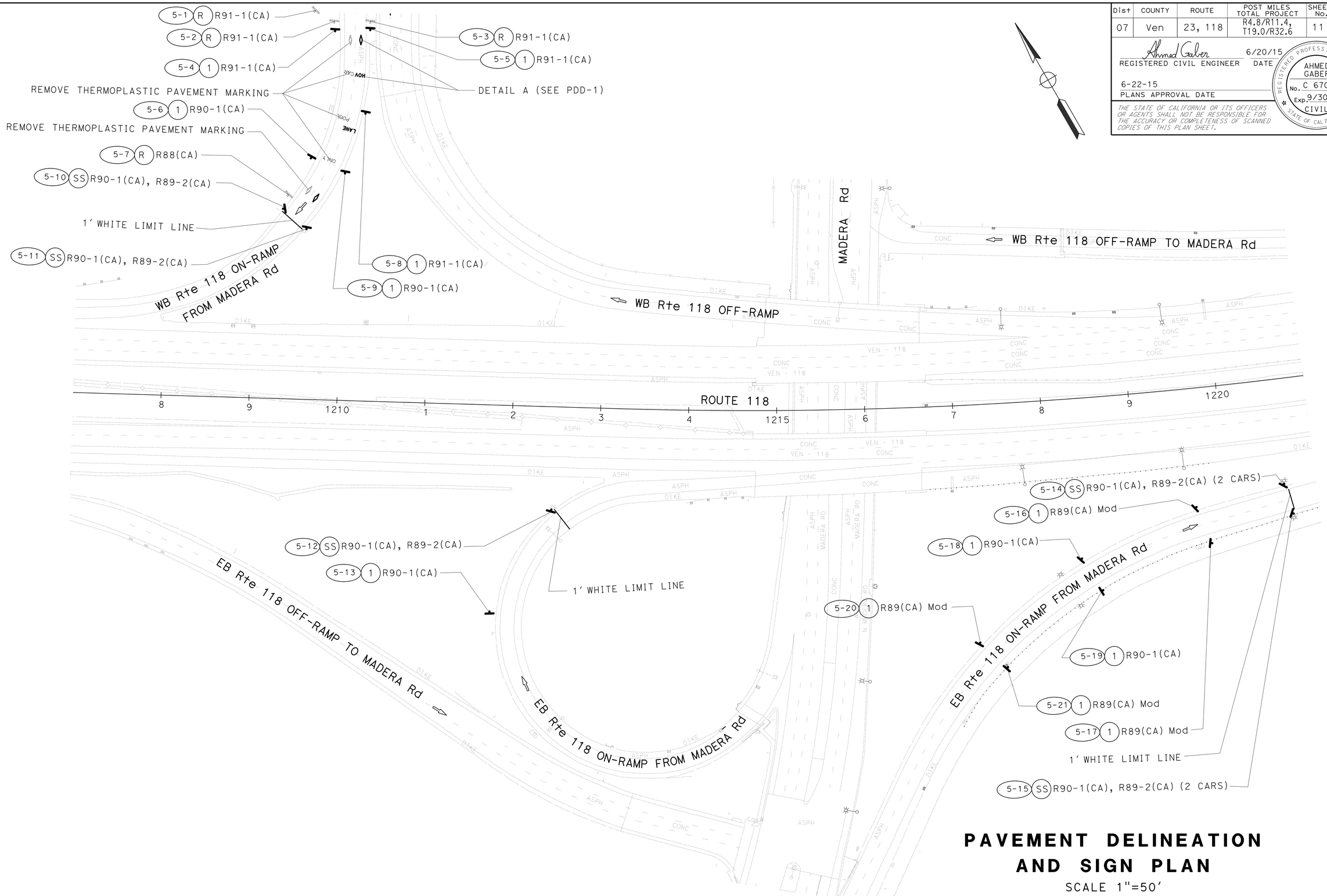

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-5

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

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DATE REVISED

LAST REVISION 00-00-00
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TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	12	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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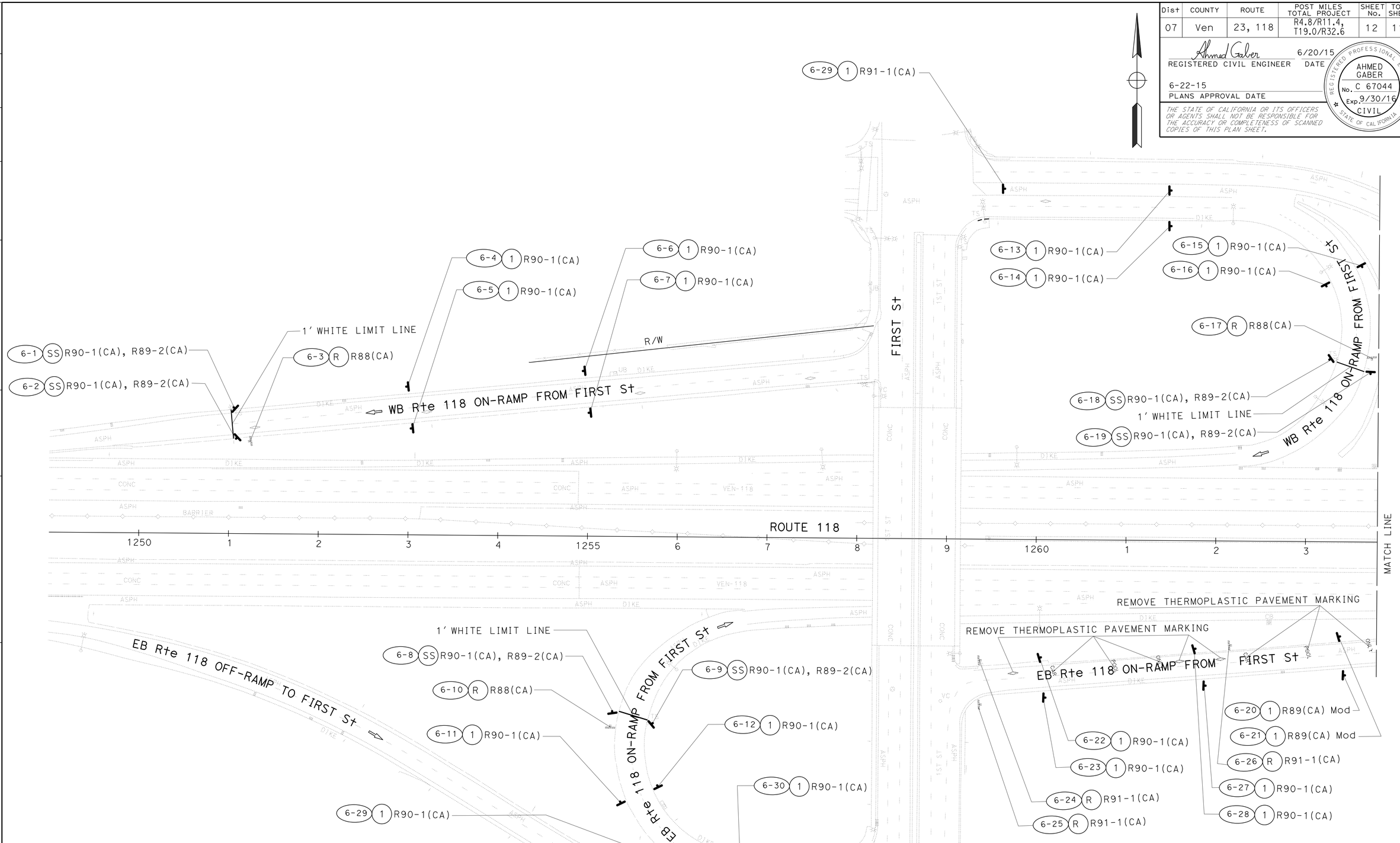

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-6

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MARISA G. MANDOCDOC | AHMED GABER
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
MOHAMMED CHOWDHURY

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	13	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
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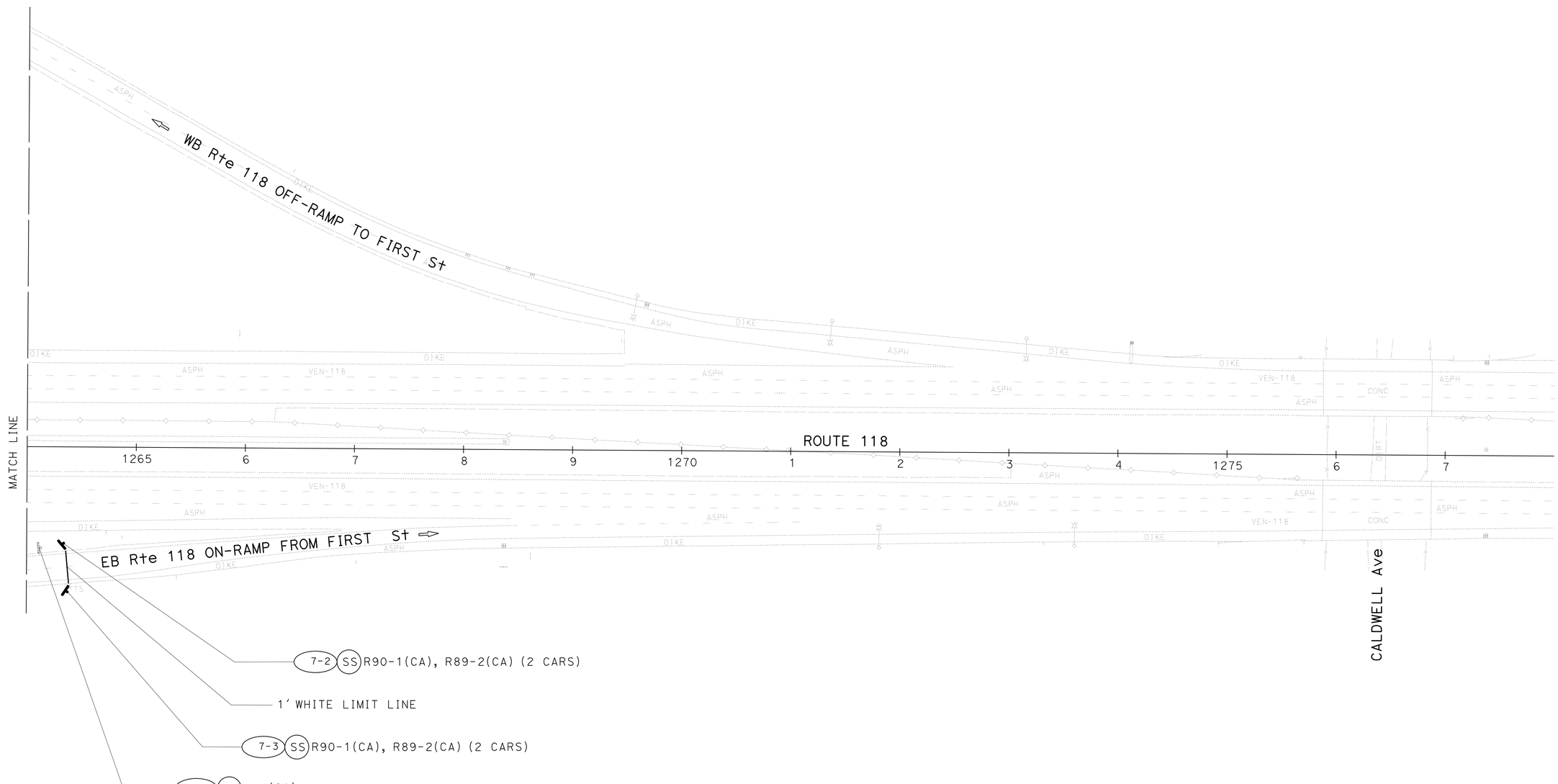

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-7

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LAST REVISION 00-00-00
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TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	14	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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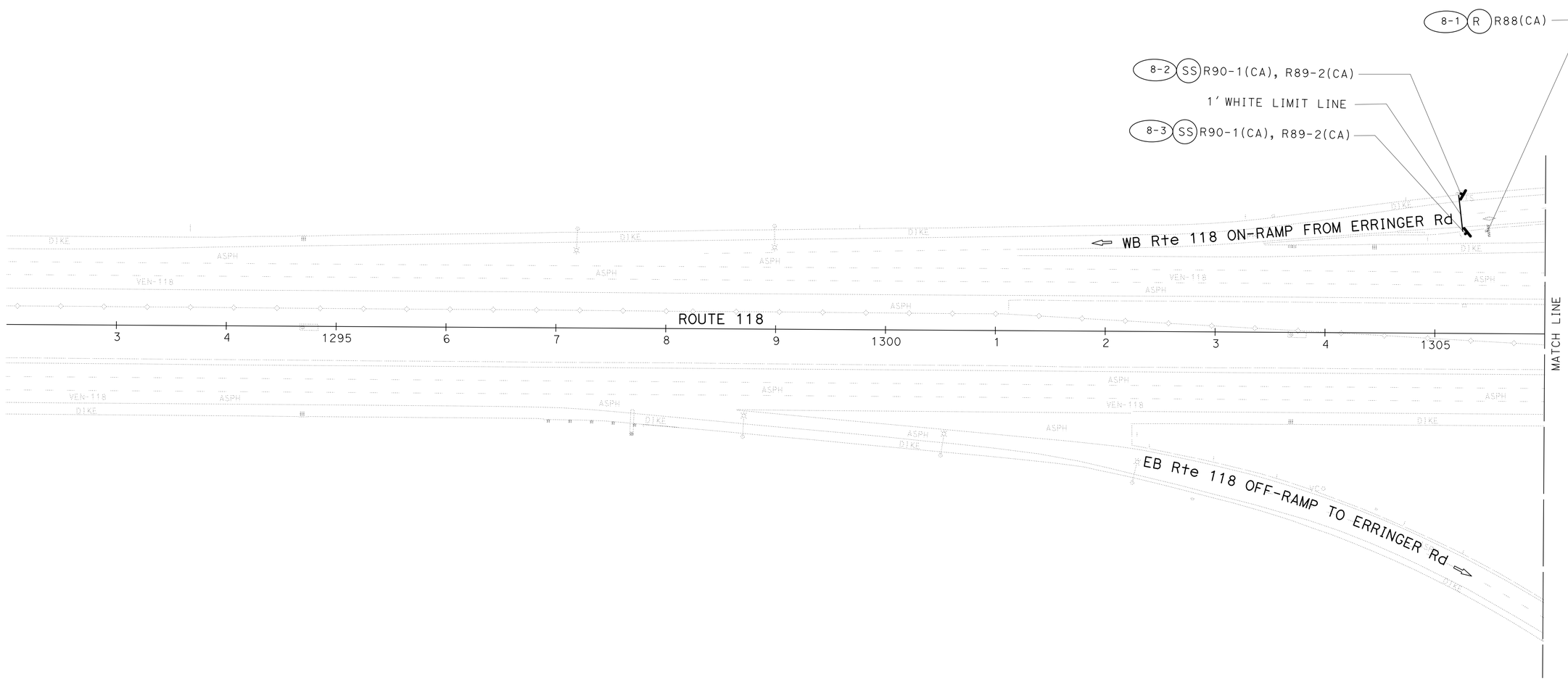

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DATE REVISED

LAST REVISION 00-00-00
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TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	15	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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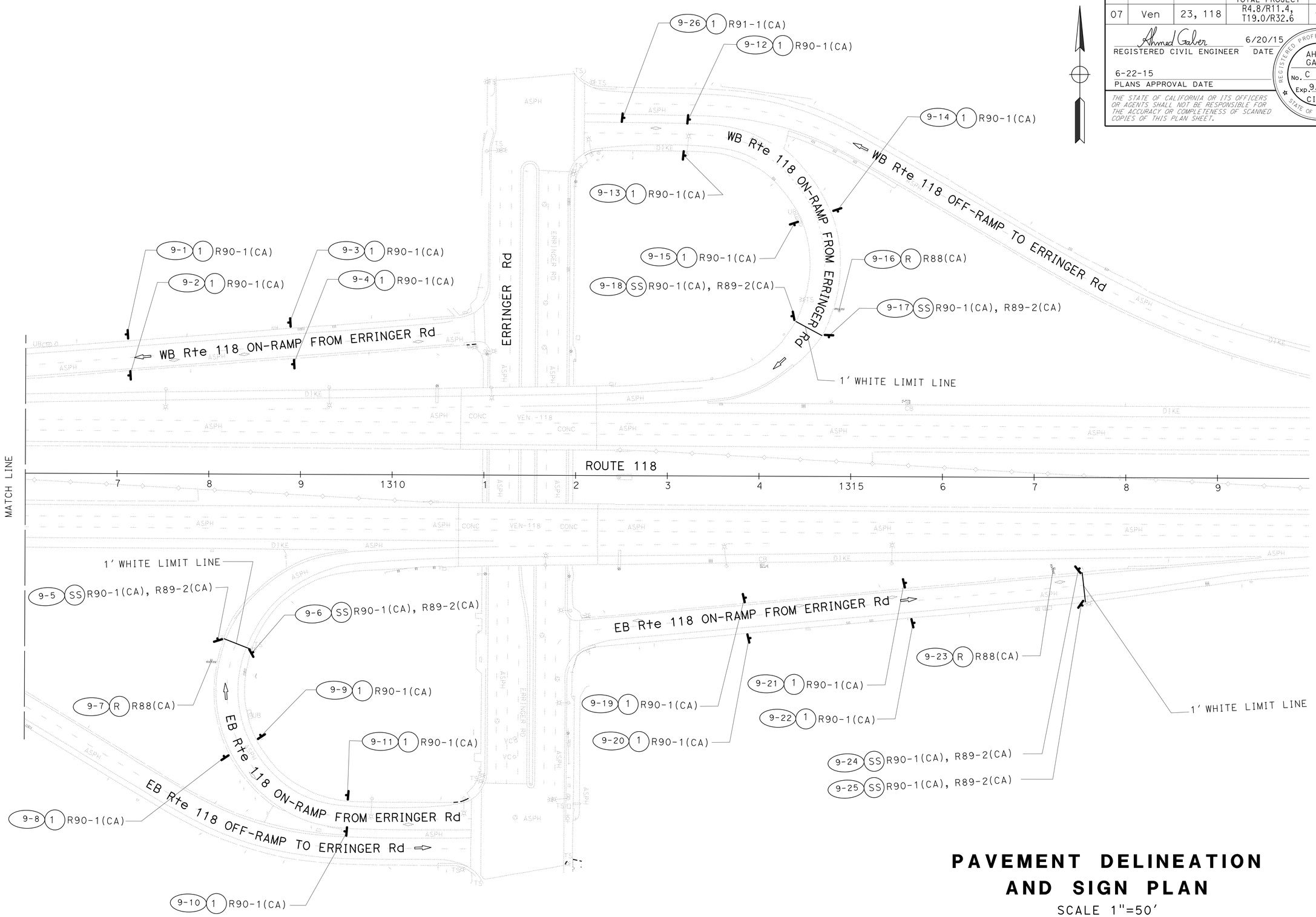

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-9

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
MARISA G. MANDOCDOC	AHMED GABER

FUNCTIONAL SUPERVISOR
MOHAMMED CHOWDHURY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	16	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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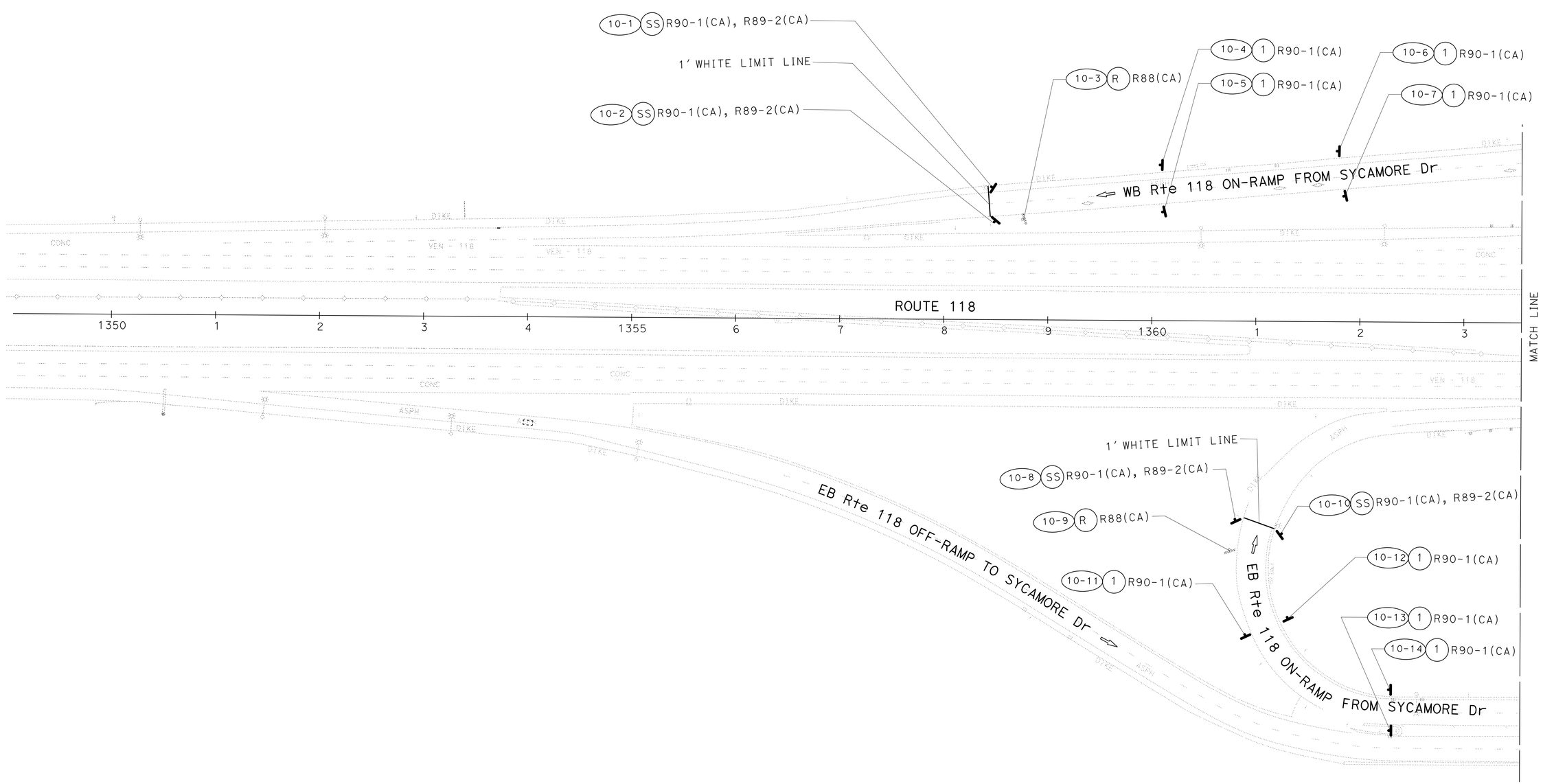

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-10

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FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	17	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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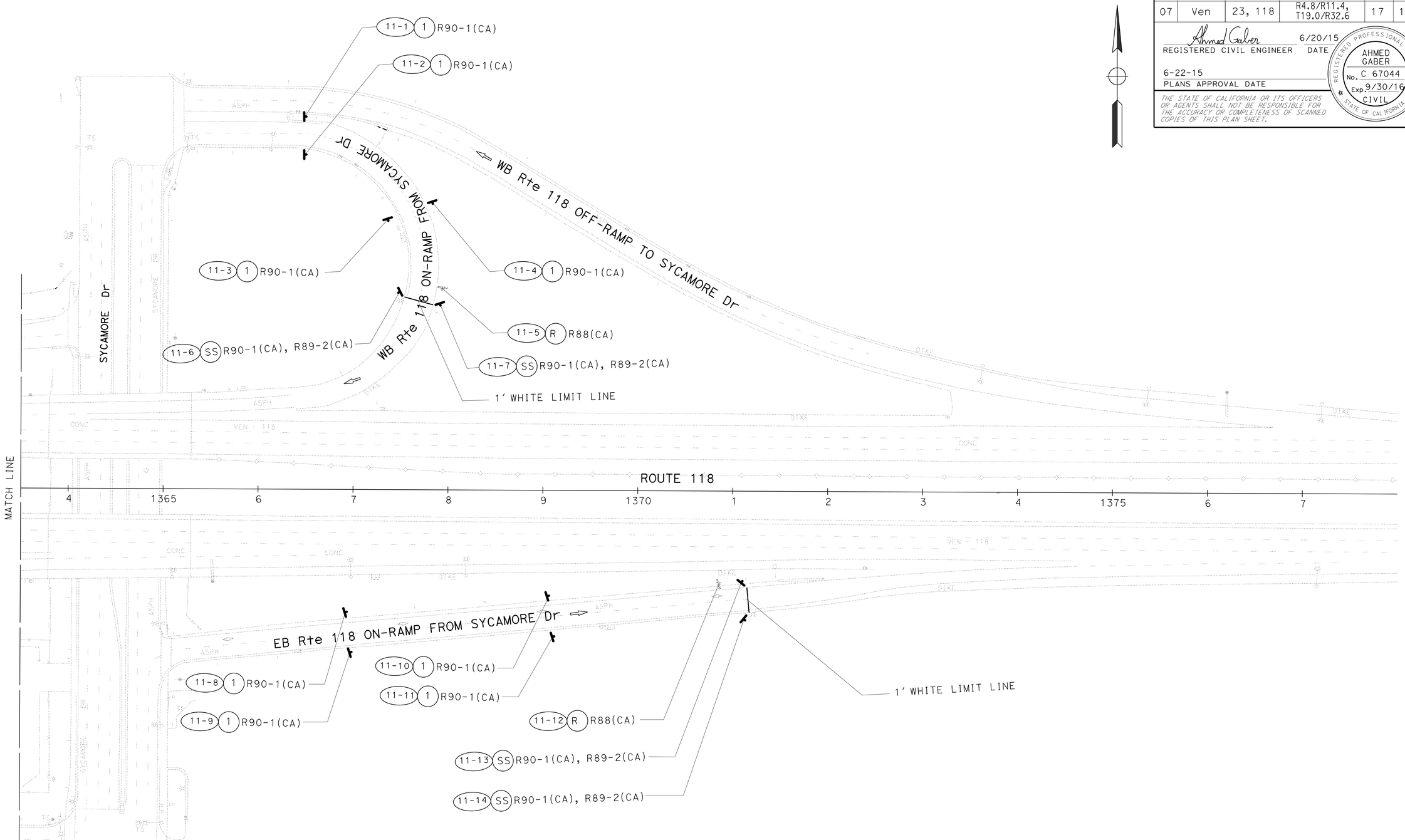

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-11

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	18	119

Ahmed Gaber 6/20/15
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6-22-15
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AHMED GABER
No. C 67044
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STATE OF CALIFORNIA

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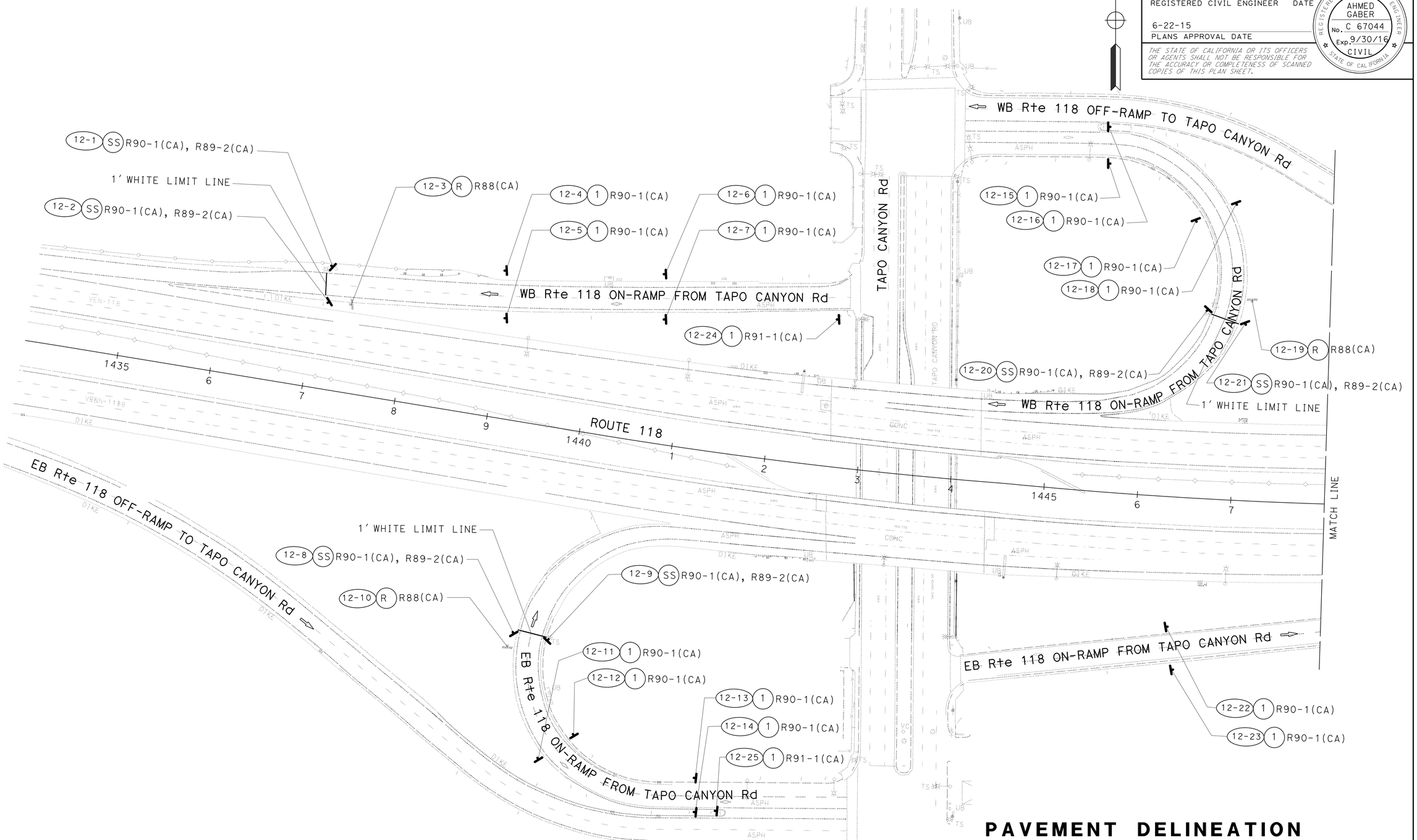

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-12

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LAST REVISION 00-00-00
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TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	19	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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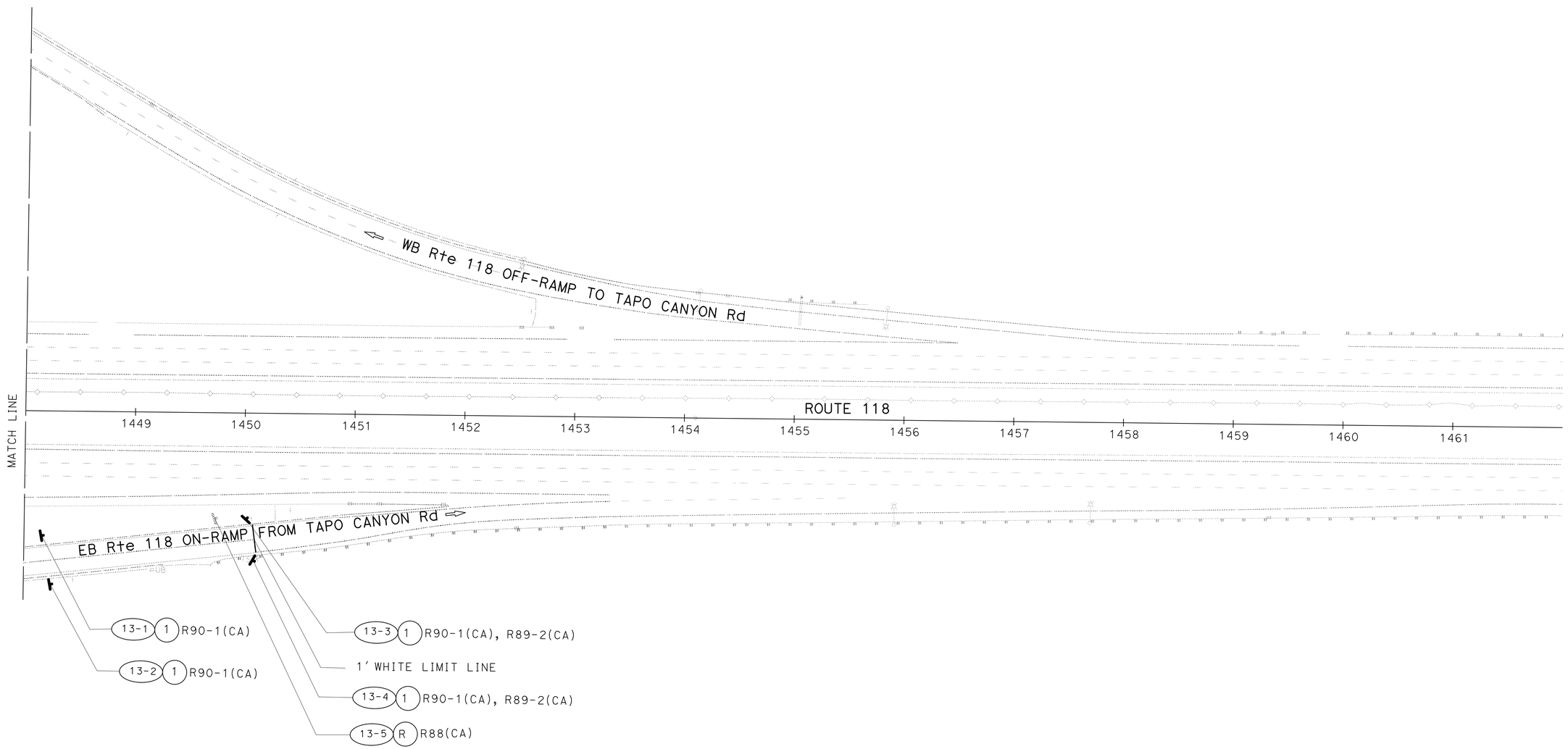

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-13

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LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	20	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

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AHMED GABER
No. C 67044
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CIVIL
STATE OF CALIFORNIA

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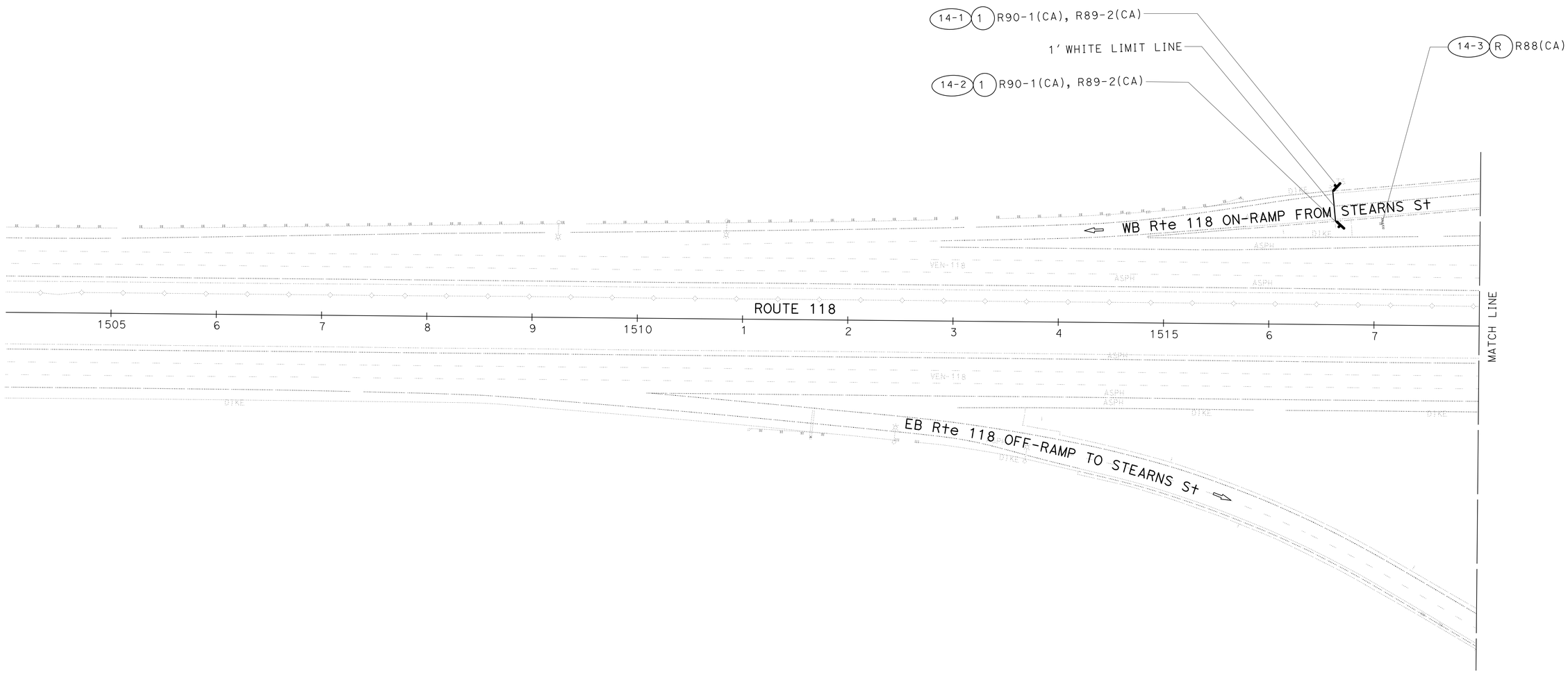

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-14

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TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	21	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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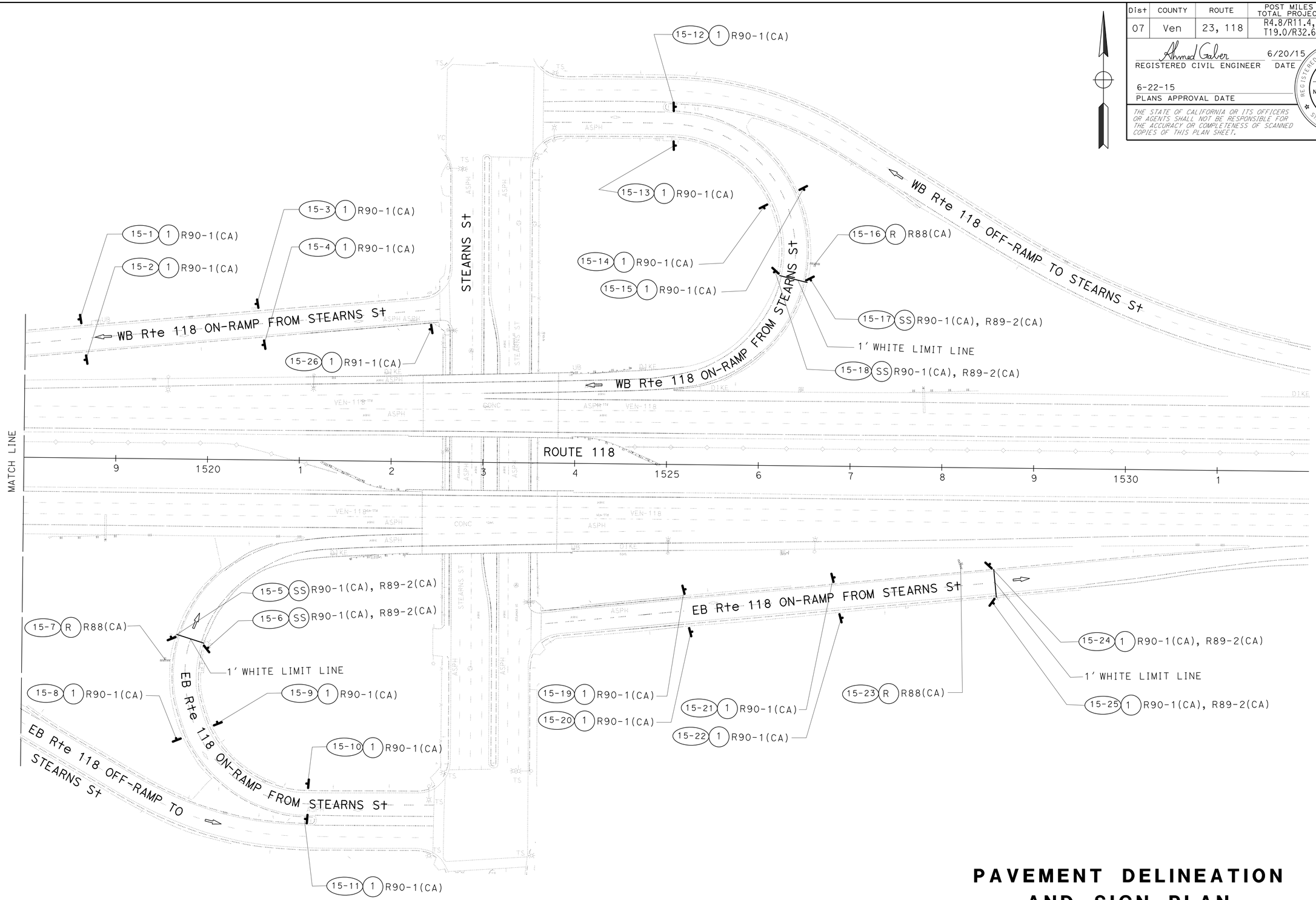

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-15

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LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	22	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
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No. C 67044
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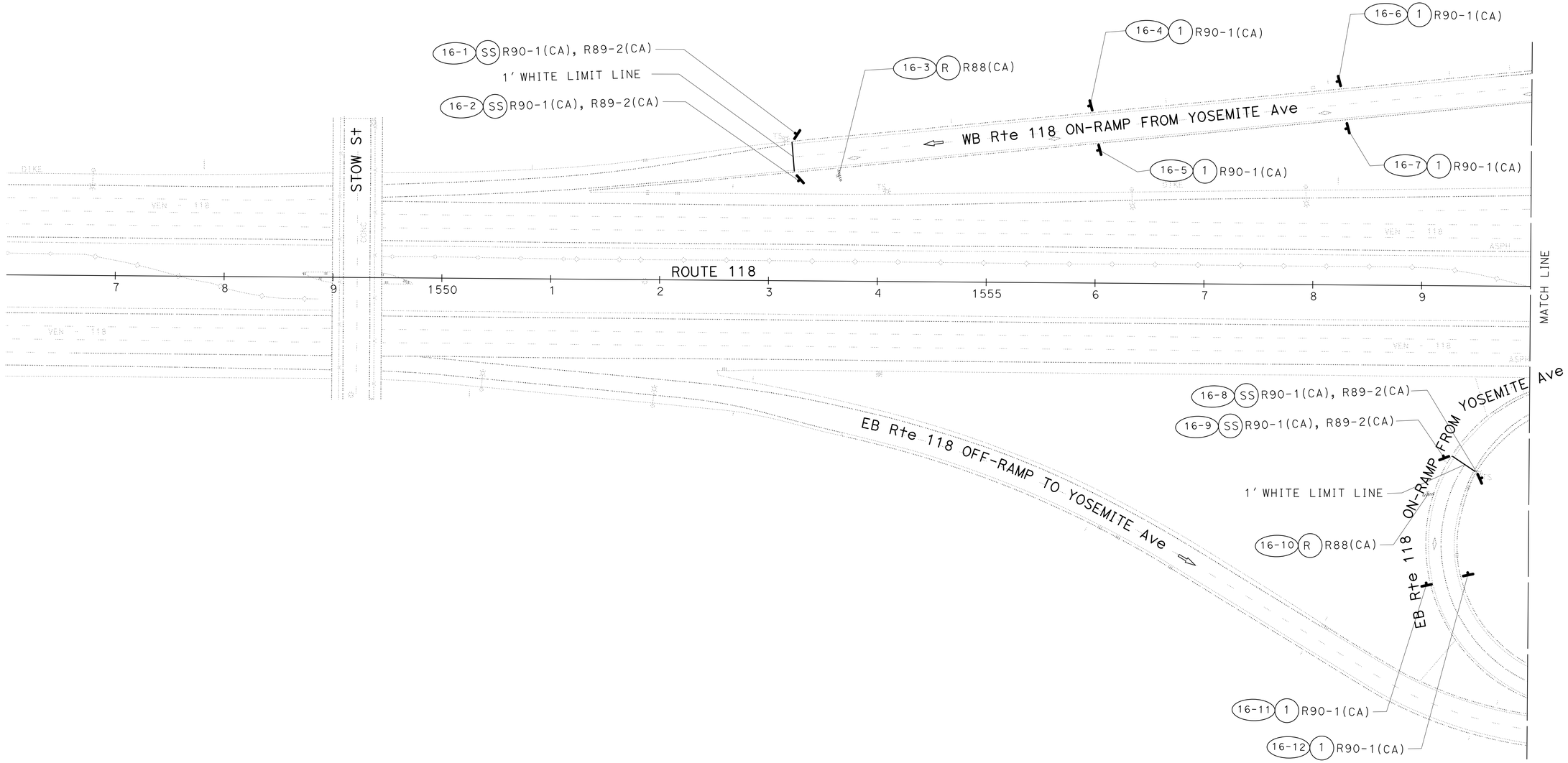

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-16

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LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	23	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
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REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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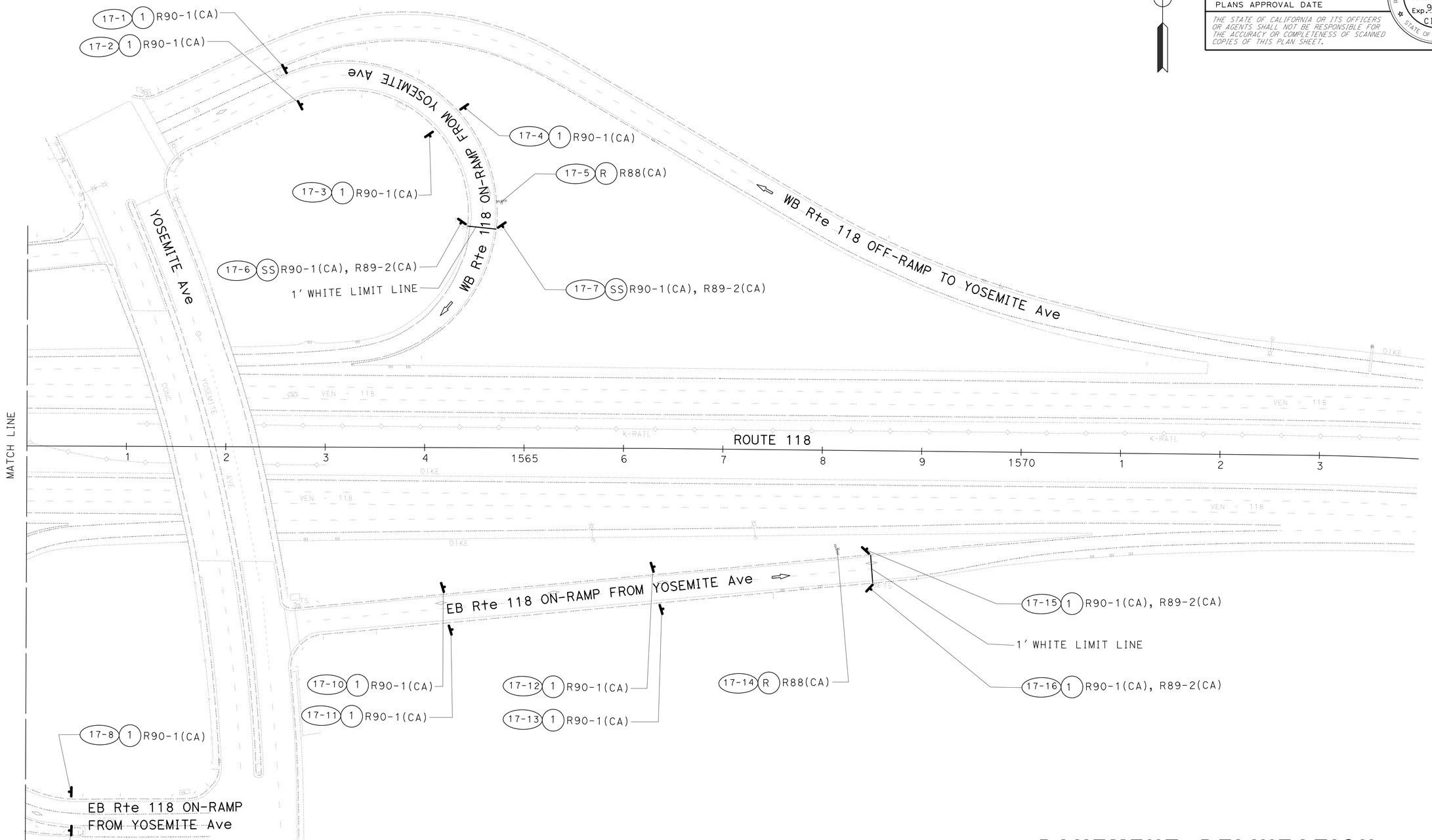

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-17

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CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	24	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
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AHMED GABER
No. C 67044
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CIVIL
STATE OF CALIFORNIA

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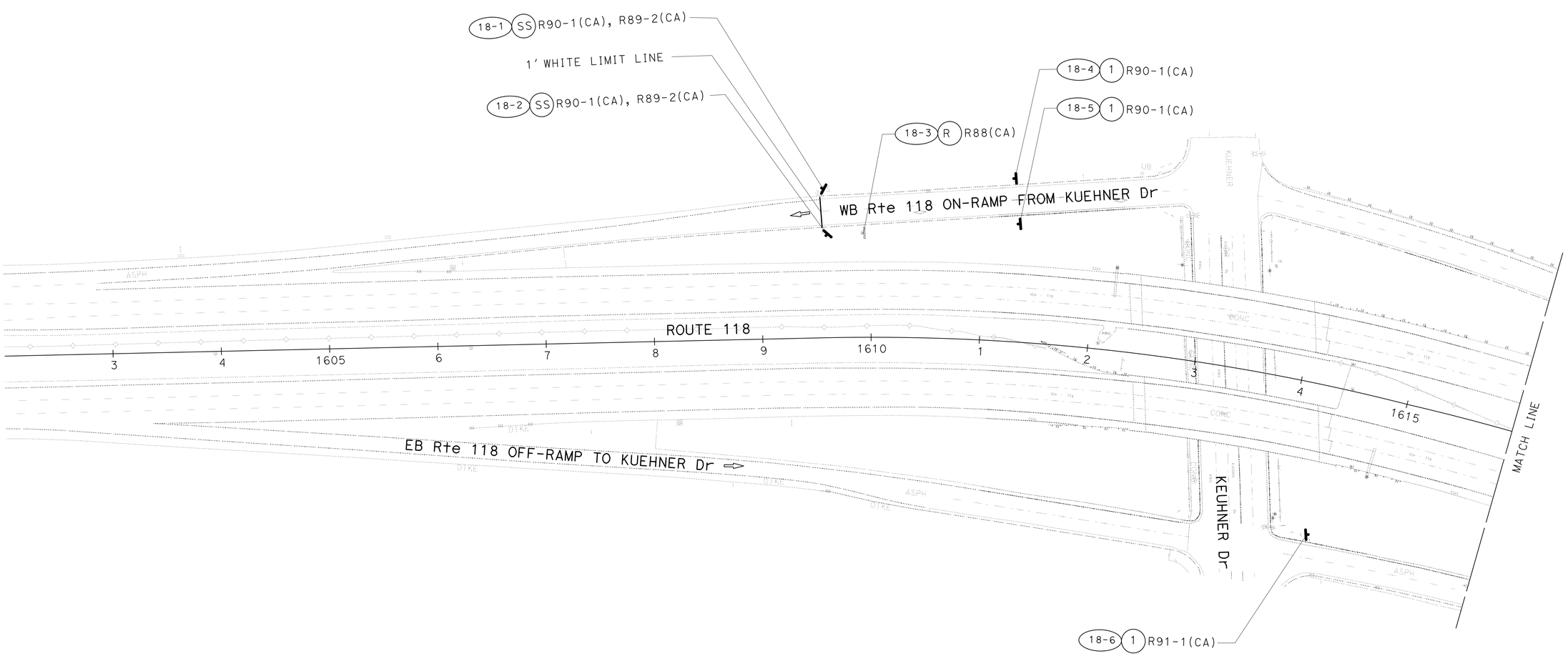

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
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LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	25	119

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6-22-15
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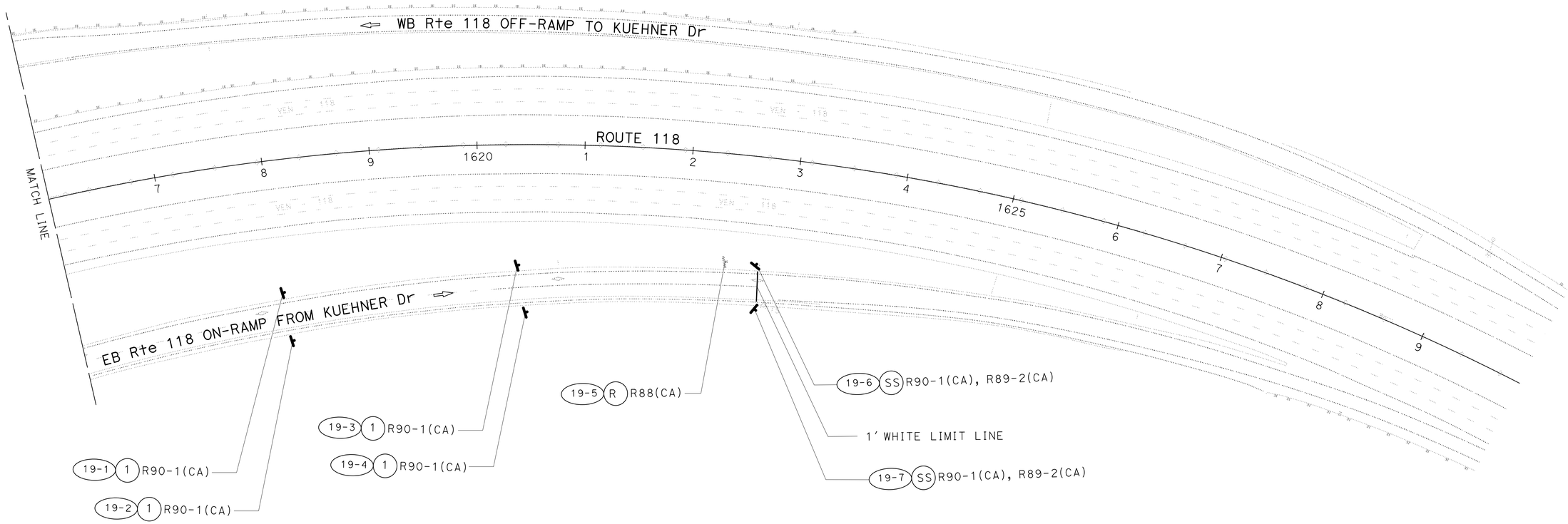

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

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PD-19

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Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

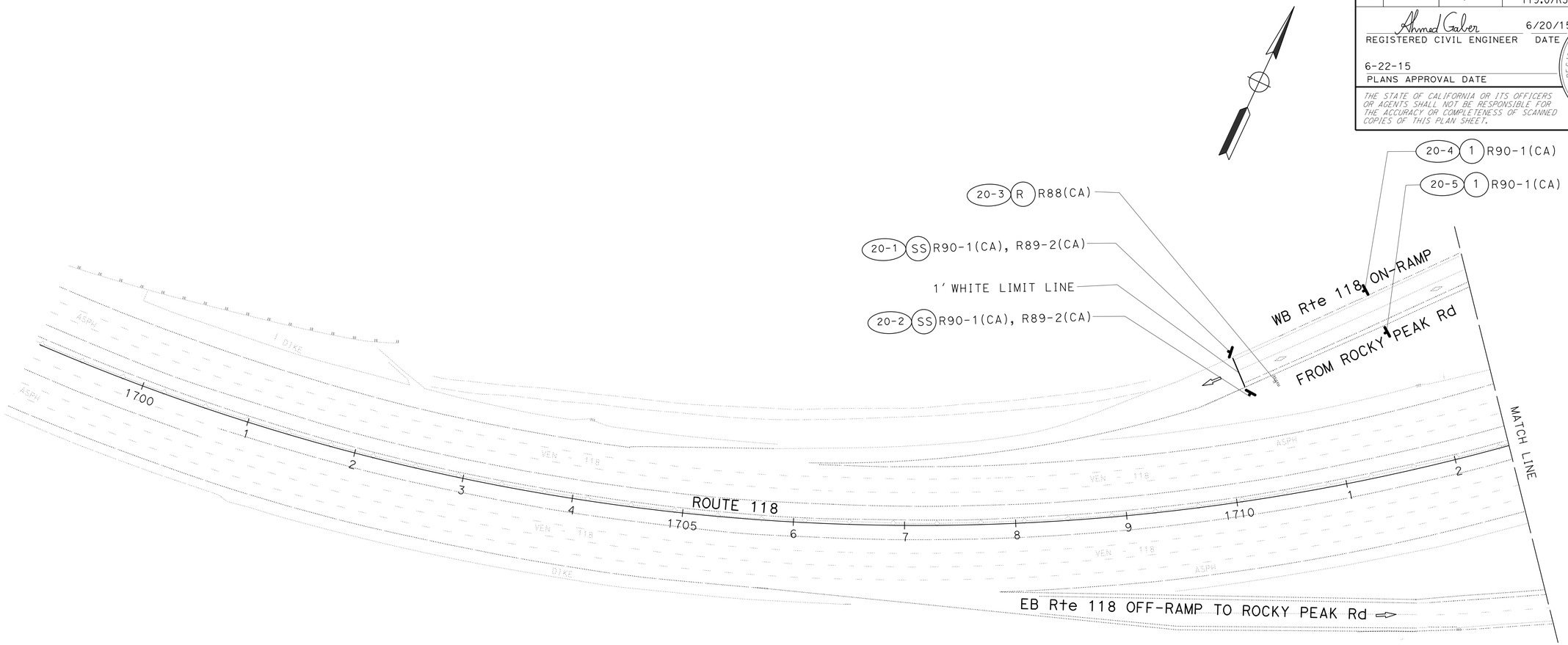
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	26	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
AHMED GABER
No. C 67044
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

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



PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PD-20

REVISED BY | DATE REVISED

MARISA G. MANDOCDOC | AHMED GABER

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® TRAFFIC DESIGN

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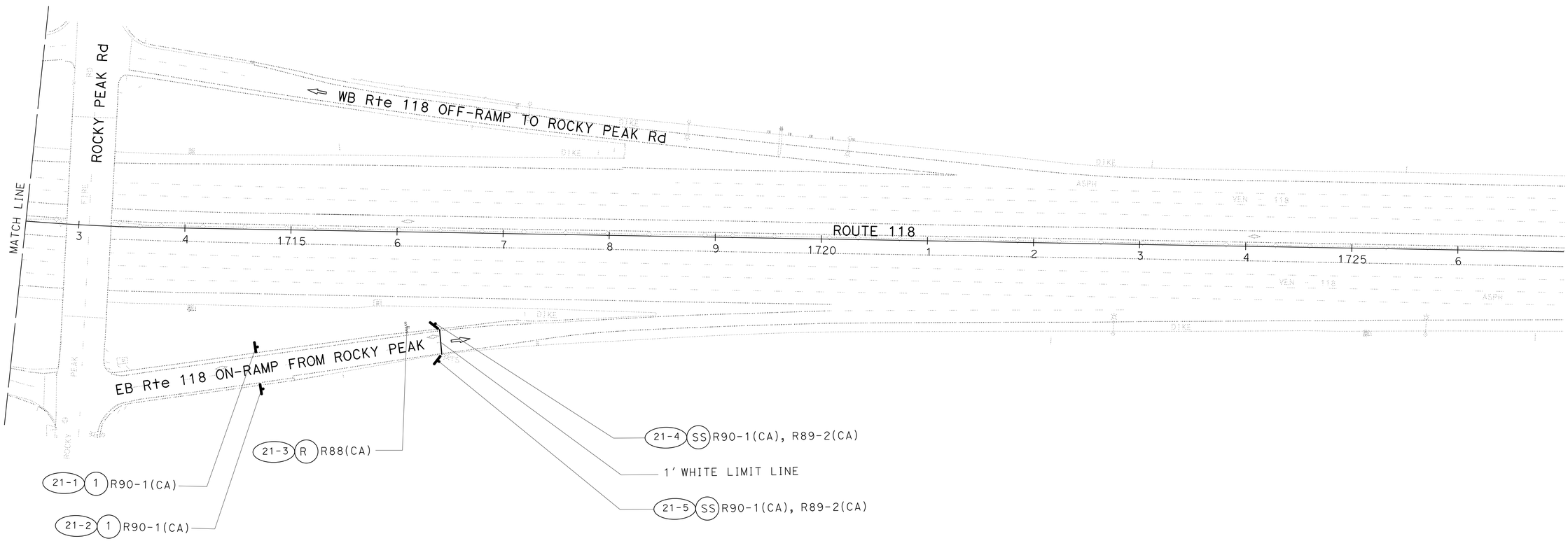

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PD-21

REVISED BY | DATE REVISED
MARISA G. MANDOCDOC | AHMED GABER
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
MOHAMMED CHOWDHURY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

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Ahmed Gaber 6/20/15
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6-22-15
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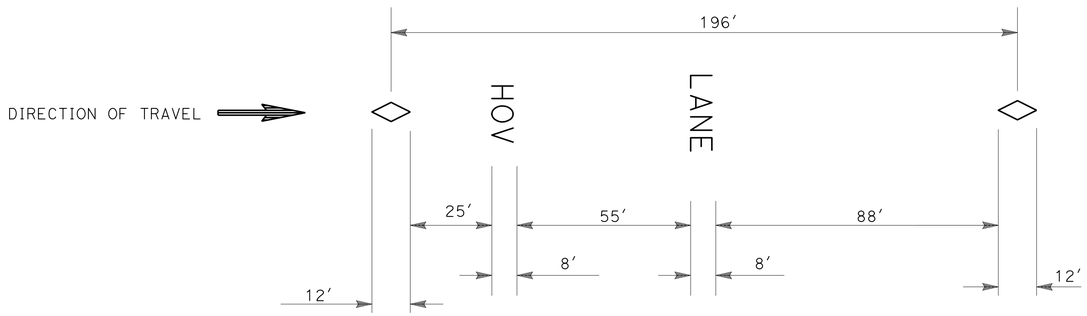
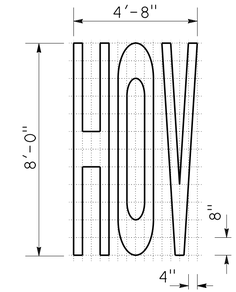
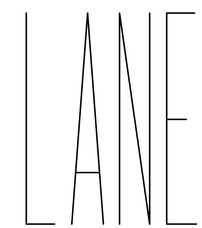


DETAIL A
HOV ON RAMP LANE MARKING



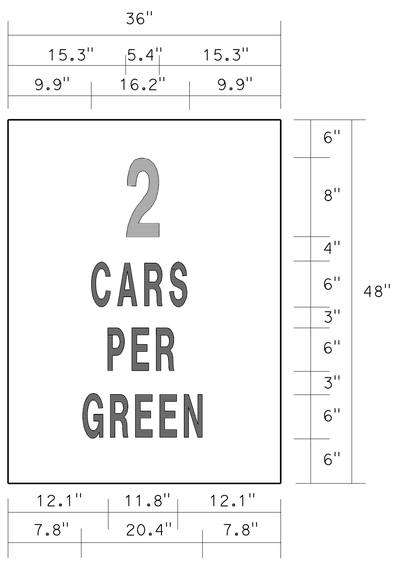
A=18 ft^2

"HOV" PAVEMENT MARKING



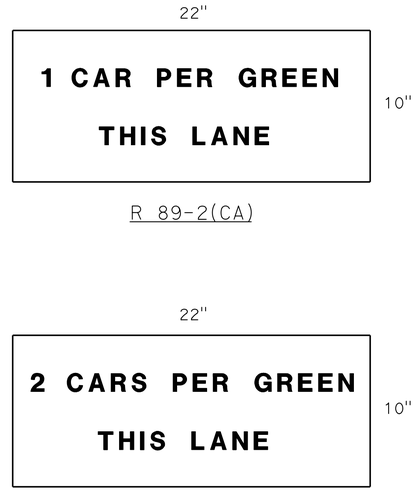
A=24 ft^2

"LANE" PAVEMENT MARKING



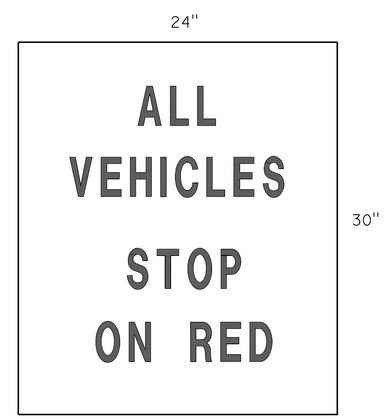
BLACK ON WHITE;
"2" D; "CARS" C; "PER" C; "GREEN" C;

R 89(CA) Mod

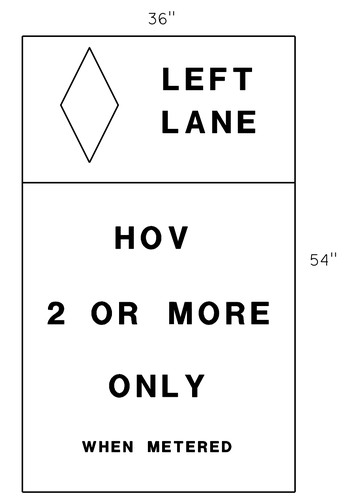


R 89-2(CA)

R 89-2(CA) (2 CARS)



R 90-1(CA)



R 91-1(CA)

PAVEMENT DELINEATION AND SIGN DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
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CHECKED BY: MARISA G. MANDOCDOC
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	29	119

Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

SHEET No.	STATIONS	THERMOPLASTIC PAVEMENT MARKING			REMOVE THERMOPLASTIC PAVEMENT MARKING
		DIAMOND	1' WHITE LIMIT LINE	WORDS	
		SQFT	SQFT	SQFT	SQFT
PD-1	597+20, 605+20		48		
PD-2	999+80		24		
PD-3	1021+20		24		128
PD-4	1054+20, 1054+50		48		64
PD-5	1209+40, 1212+50, 1220+50	22	72	42	64
PD-6	1251+00, 1255+50, 1263+40		72		64
PD-7	1264+40		24		
PD-8	1305+20		24		
PD-9	1308+40, 1314+60, 1317+50		72		
PD-10	1358+40, 1361+00		48		
PD-11	1367+50, 1371+10		48		
PD-12	1437+00, 1440+00, 1446+90		72		
PD-13	1450+10		24		
PD-14	1516+70		24		
PD-15	1520+10, 1526+40, 1528+60		72		
PD-16	1553+20, 1559+40		48		
PD-17	1564+40, 1568+40		48		
PD-18	1609+60		24		
PD-19	1622+70		24		
PD-20	1710+30		24		
PD-21	1716+30		24		
	SUB TOTAL	22	888	42	320
	TOTAL		952		320

TEMPORARY DRAINAGE INLET PROTECTION QUANTITIES

DESCRIPTION	TEMPORARY DRAINAGE INLET PROTECTION (EA)
ERRINGER Rd ON RAMP TO WB 118	1
ERRINGER Rd ON RAMP TO EB 118	1
SYCAMORE Dr ON RAMP TO WB 118	1
SYCAMORE Dr ON RAMP TO EB 118	1
TAPO CANYON Rd ON RAMP TO WB 118	1
TAPO CANYON Rd ON RAMP TO EB 118	1
STEARNS St ON RAMP TO WB 118	1
STEARNS St ON RAMP TO EB 118	1
ROCKY PEAK Rd ON RAMP TO WB 118	1
ROCKY PEAK Rd ON RAMP TO EB 118	1
TOTAL	10

PAVEMENT DELINEATION QUANTITIES

PDQ-1

REVISED BY | DATE REVISED
MARISA G. MANDOCDOC | AHMED GABER
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	30	119

REGISTERED CIVIL ENGINEER — DATE: 6/20/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — AHMED GABER — No. C 67044 — Exp. 9/30/16 — CIVIL — STATE OF CALIFORNIA

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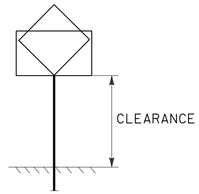
TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-1	FWBT	1-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	1-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	1-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	1-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	1-5	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	1-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	1-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	1-8	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-2	FWBT	2-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	2-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	2-3	R88 (CA)														1	60	
	FWBT	2-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	2-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-3	FWBT	3-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	3-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	3-3	R91-1 (CA)														1	60	
	FEBT	3-4	R91-1 (CA)														1	60	
	FEBT	3-5	R91-1 (CA)														1	60	
SHEET TOTAL					12	8										79.6	4	240	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES
SQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

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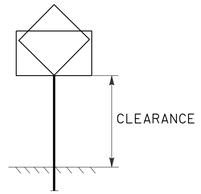
TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-3	FEBT	3-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	3-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	3-8	R91-1 (CA)	24" X 30"													1	60	
	FEBT	3-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	3-10	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	3-11	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FEBT	3-12	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FEBT	3-13	R88 (CA)														1	60	
	FEBT	3-14	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	3-15	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
PD-4	FWBT	4-1	R91-1 (CA)														1	60	
	FWBT	4-2	R91-1 (CA)														1	60	
	FWBT	4-3	R91-1 (CA)														1	60	
	FWBT	4-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	4-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	4-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	4-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	4-8	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FWBT	4-9	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FWBT	4-10	R88 (CA)														1	60	
	FWBT	4-11	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
SHEET TOTAL					6	12										107.8	6	360	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
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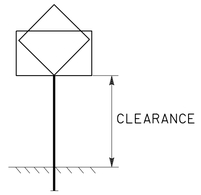
TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (Ft)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-4	FWBT	4-12	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	4-13	R88 (CA)														1	60	
	FEBT	4-14	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	4-15	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	4-16	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	4-17	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	4-18	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	4-19	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-5	FWBT	5-1	R91-1 (CA)														1	60	
	FWBT	5-2	R91-1 (CA)														1	60	
	FWBT	5-3	R91-1 (CA)														1	60	
	FWBT	5-4	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
	FWBT	5-5	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
	FWBT	5-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	5-7	R88 (CA)														1	60	
	FWBT	5-8	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
	FWBT	5-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	5-10	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	5-11	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
SHEET TOTAL					10	9										103.5	5	300	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	33	119

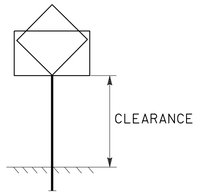
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-5	FEBT	5-12	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	5-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	5-14	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	5-15	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	5-16	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FWBT	5-17	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FWBT	5-18	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	5-19	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	5-20	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FWBT	5-21	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
PD-6	FWBT	6-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	6-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	6-3	R88 (CA)														1	60	
	FWBT	6-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-8	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
SHEET TOTAL					12	11										122.6	1	60	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	34	119

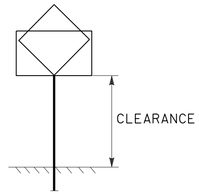
REGISTERED CIVIL ENGINEER 6/20/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-6	FEBT	6-9	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	6-10	R88 (CA)														1	60	
	FEBT	6-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-14	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-15	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-16	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	6-17	R88 (CA)														1	60	
	FWBT	6-18	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	6-19	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	6-20	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FEBT	6-21	R89 (CA) Mod	36" X 48"		1	8	●	W	VIII	B		B		●	12			
	FEBT	6-22	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-23	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-24	R91-1 (CA)														1	60	
	FEBT	6-25	R91-1 (CA)														1	60	
	FEBT	6-26	R91-1 (CA)														1	60	
	FEBT	6-27	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-28	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-29	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	6-30	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					6	14										103.8	5	300	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	35	119

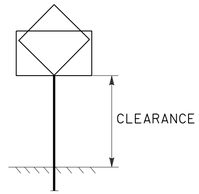
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-7	FEBT	7-1	R88 (CA)														1	60	
	FEBT	7-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	7-3	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
PD-8	FWBT	8-1	R88 (CA)														1	60	
	FWBT	8-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	8-3	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
PD-9	FWBT	9-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-5	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	9-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	9-7	R88 (CA)														1	60	
	FEBT	9-8	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-10	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					12	10										89.6	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	36	119

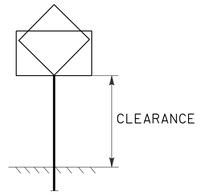
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-9	FWBT	9-14	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-15	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	9-16	R88 (CA)														1	60	
	FWBT	9-17	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	9-18	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	9-19	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-20	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-21	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-22	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	9-23	R88 (CA)														1	60	
	FEBT	9-24	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	9-25	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	9-26	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
PD-10	FWBT	10-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	10-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	10-3	R88 (CA)														1	60	
	FWBT	10-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	10-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					12	9										93.1	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	37	119

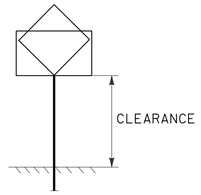
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-10	FWBT	10-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	10-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	10-8	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	10-9	R88 (CA)														1	60	
	FEBT	10-10	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	10-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	10-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	10-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	10-14	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-11	FWBT	11-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	11-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	11-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	11-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	11-5	R88 (CA)														1	60	
	FWBT	11-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	11-7	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	11-8	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	11-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	11-10	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	11-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					8	14										96.4	2	120	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	38	119

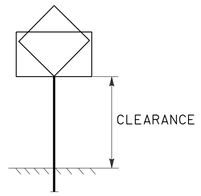
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-11	FEBT	11-12	R88 (CA)														1	60	
	FEBT	11-13	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	11-14	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
PD-12	FWBT	12-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	12-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	12-3	R88 (CA)														1	60	
	FWBT	12-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	12-8	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	12-9	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	12-10	R88 (CA)														1	60	
	FEBT	12-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	12-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	12-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	12-14	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-15	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-16	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					12	10										89.6	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	39	119

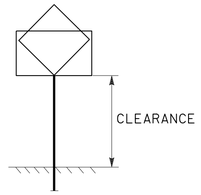
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-12	FWBT	12-17	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-18	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-19	R88 (CA)														1	60	
	FWBT	12-20	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	12-21	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	12-22	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	12-23	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	12-24	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
	FEBT	12-25	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
PD-13	FEBT	13-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	13-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	13-3	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FEBT	13-4	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FEBT	13-5	R88 (CA)														1	60	
PD-14	FWBT	14-1	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FWBT	14-2	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FWBT	14-3	R88 (CA)														1	60	
PD-15	FWBT	15-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					4	14										106.6	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	40	119

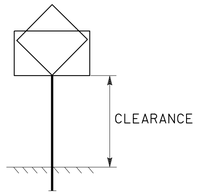
REGISTERED CIVIL ENGINEER 6/20/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-15	FWBT	15-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-5	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	15-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	15-7	R88 (CA)														1	60	
	FEBT	15-8	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-10	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-14	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-15	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	15-16	R88 (CA)														1	60	
	FWBT	15-17	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	15-18	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	15-19	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-20	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-21	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-22	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	15-23	R88 (CA)														1	60	
SHEET TOTAL					8	14										96.4	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: AHMED GABER
CHECKED BY: MARISA G. MANDOCDOC
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	41	119

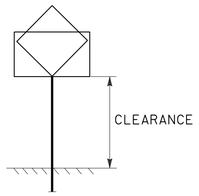
REGISTERED CIVIL ENGINEER — Ahmed Gaber — DATE 6/20/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — AHMED GABER — No. C 67044 — Exp. 9/30/16 — CIVIL — STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD) EA	ROADSIDE SIGN-ONE POST EA	(N) POST DATA SIZE & CLEARANCE (FT) 4" x 6"	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED) SQFT	REMOVE ROADSIDE SIGN EA	TREATED WOOD WASTE LB	REMARKS
PD-15	FEBT	15-24	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FEBT	15-25	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FWBT	15-26	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
PD-16	FWBT	16-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	16-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	16-3	R88 (CA)														1	60	
	FWBT	16-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	16-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	16-6	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	16-7	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	16-8	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	16-9	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	16-10	R88 (CA)														1	60	
	FEBT	16-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	16-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-17	FWBT	17-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	17-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	17-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	17-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
SHEET TOTAL					8	13										103.1	2	120	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	42	119

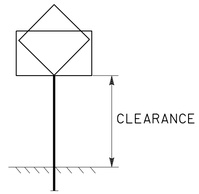
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-17	FWBT	17-5	R88 (CA)														1	60	
	FWBT	17-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	17-7	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	17-8	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	17-9	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	17-10	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	17-11	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	17-12	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	17-13	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	17-14	R88 (CA)														1	60	
	FWBT	17-15	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
	FWBT	17-16	R89-2 (CA)	22" X 10"		1	8	●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"				●	W	VIII	B		B		●	5			
PD-18	FWBT	18-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	18-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	18-3	R88 (CA)														1	60	
	FEBT	18-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	18-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	18-6	R91-1 (CA)	36" X 54"		1	8	●	W	VIII	B		B		●	13.5			
SHEET TOTAL					8	11										93.1	3	180	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4, T19.0/R32.6	43	119

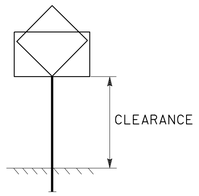
Ahmed Gaber 6/20/15
REGISTERED CIVIL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER AHMED GABER No. C 67044 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

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

TYPICAL POST HEIGHT DETAIL
No Scale



ROADSIDE SIGN QUANTITIES

SHEET NUMBER	DIRECTION	SIGN No.	SIGN CODE	PANEL SIZE L x D	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)	ROADSIDE SIGN-ONE POST	(N) POST DATA SIZE & CLEARANCE (FT)	MATERIAL SUMMARY: SINGLE FACED	BACKGROUND: SHEETING COLOR	BACKGROUND: RETROREFLECTIVE ASTM TYPE	LEGEND: SHEETING COLOR	LEGEND: RETROREFLECTIVE ASTM TYPE	SYMBOL: SHEETING COLOR	SYMBOL: RETROREFLECTIVE ASTM TYPE	PREMIUM GRAFFITI FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	REMOVE ROADSIDE SIGN	TREATED WOOD WASTE	REMARKS
					EA	EA	4" x 6"									SQFT	EA	LB	
PD-19	FEBT	19-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	19-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	19-3	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	19-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	19-5	R88 (CA)														1	60	
	FEBT	19-6	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	19-7	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
PD-20	FWBT	20-1	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	20-2	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FWBT	20-3	R88 (CA)														1	60	
	FWBT	20-4	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FWBT	20-5	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
PD-21	FEBT	21-1	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	21-2	R90-1 (CA)	24" X 30"		1	8	●	W	VIII	B		B		●	5			
	FEBT	21-3	R88 (CA)														1	60	
	FEBT	21-4	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
	FEBT	21-5	R89-2 (CA)	22" X 10"	1			●	W	VIII	B		B		●	1.6			
			R90-1 (CA)	24" X 30"	1			●	W	VIII	B		B		●	5			
SHEET TOTAL					12	8										79.6	3	180	
GRAND TOTAL (SQ-1 THROUGH SQ-14)					130	157										1364.8	46	2760	

LEGEND:

B: BLACK
W: WHITE

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

SIGN QUANTITIES

SQ-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
CALCULATED-DESIGNED BY: MARISA G. MANDOCDOC
CHECKED BY: AHMED GABER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	44	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

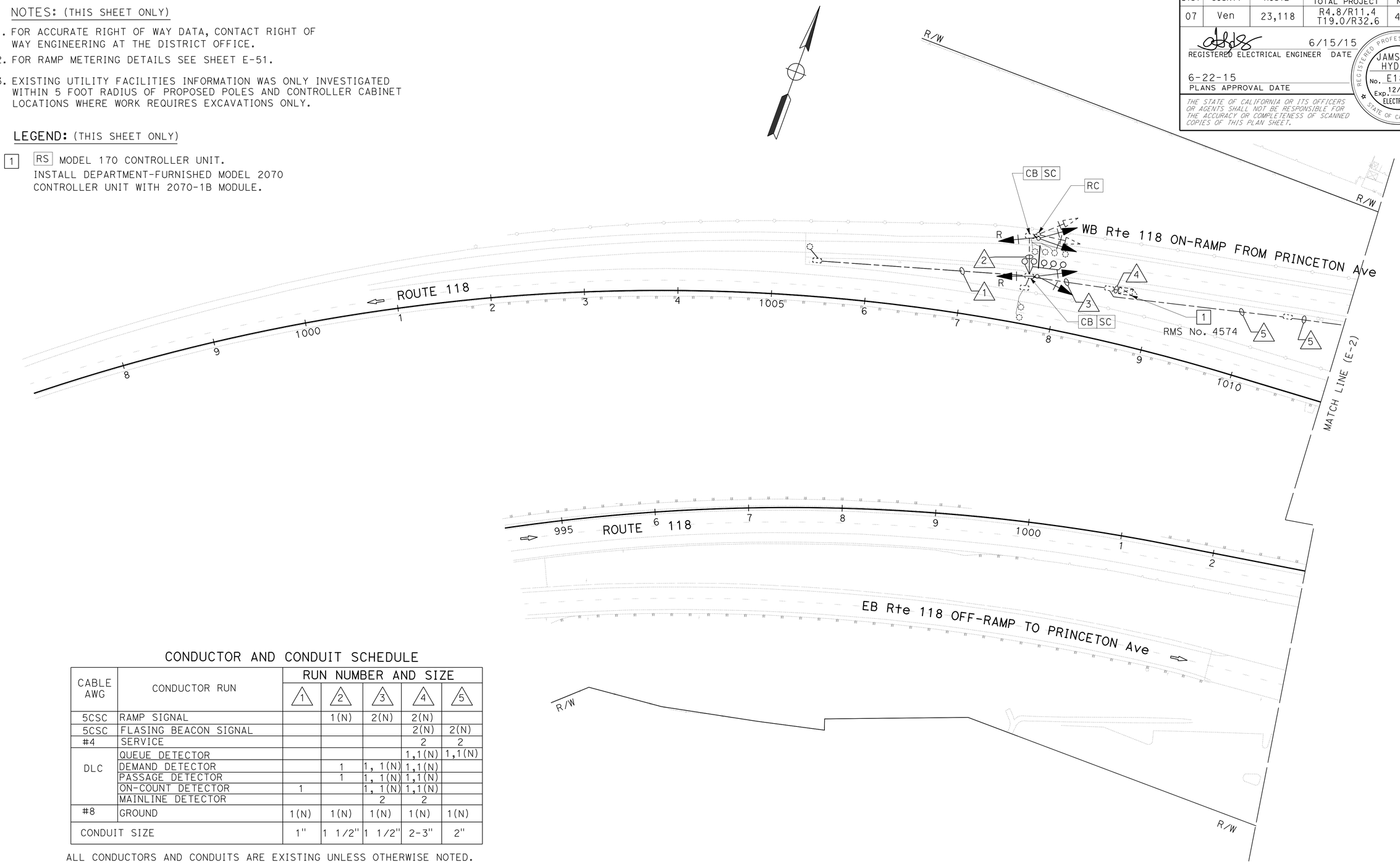
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT.
INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE				
		1	2	3	4	5
5CSC	RAMP SIGNAL		1(N)	2(N)	2(N)	
5CSC	FLASING BEACON SIGNAL				2(N)	2(N)
#4	SERVICE				2	2
DLC	QUEUE DETECTOR				1,1(N)	1,1(N)
	DEMAND DETECTOR		1	1, 1(N)	1,1(N)	
	PASSAGE DETECTOR		1	1, 1(N)	1,1(N)	
	ON-COUNT DETECTOR	1		1, 1(N)	1,1(N)	
	MAINLINE DETECTOR			2	2	
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1"	1 1/2"	1 1/2"	2-3"	2"

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-1

REVISED BY | DATE REVISED
JAMSHED HYDER | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | OSWALD ELIZONDO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	45	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

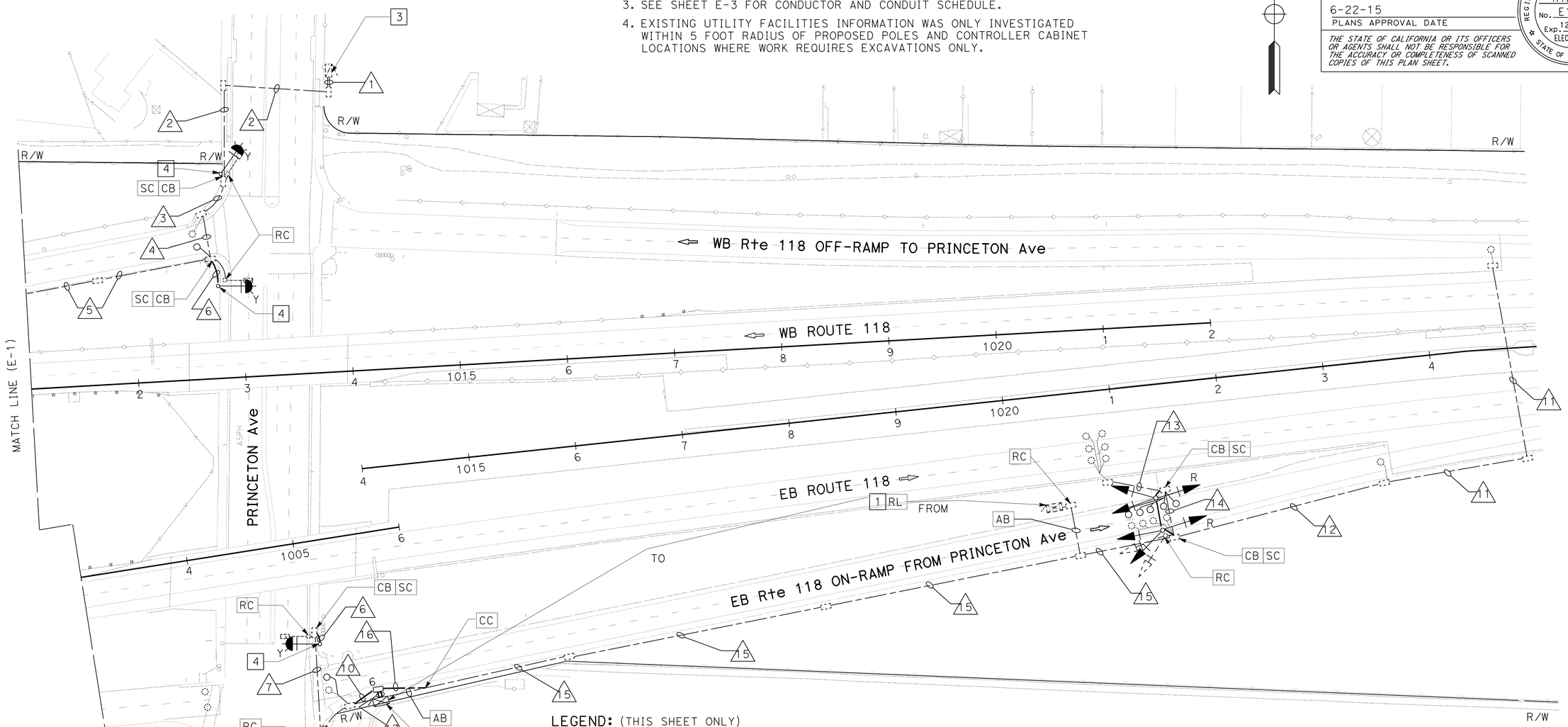
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. SEE SHEET E-3 FOR CONDUCTOR AND CONDUIT SCHEDULE.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE. RELOCATE THE CABINET TO RIGHT SHOULDER OF THE RAMP ENTRANCE.

2 120/240 V TYPE II-CF SERVICE EQUIPMENT ENCLOSURE.
Ctid No. 07-52-118-R019.765
ADDRESS: 14381 1/2 PRINCETON AVENUE,

3 120/240 V TYPE II-CF SERVICE EQUIPMENT ENCLOSURE.
Ctid No. 07-52-118-R019.753
ADDRESS: 6441 3/4 PRINCETON AVENUE

4 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	46	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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: (THIS SHEET ONLY)

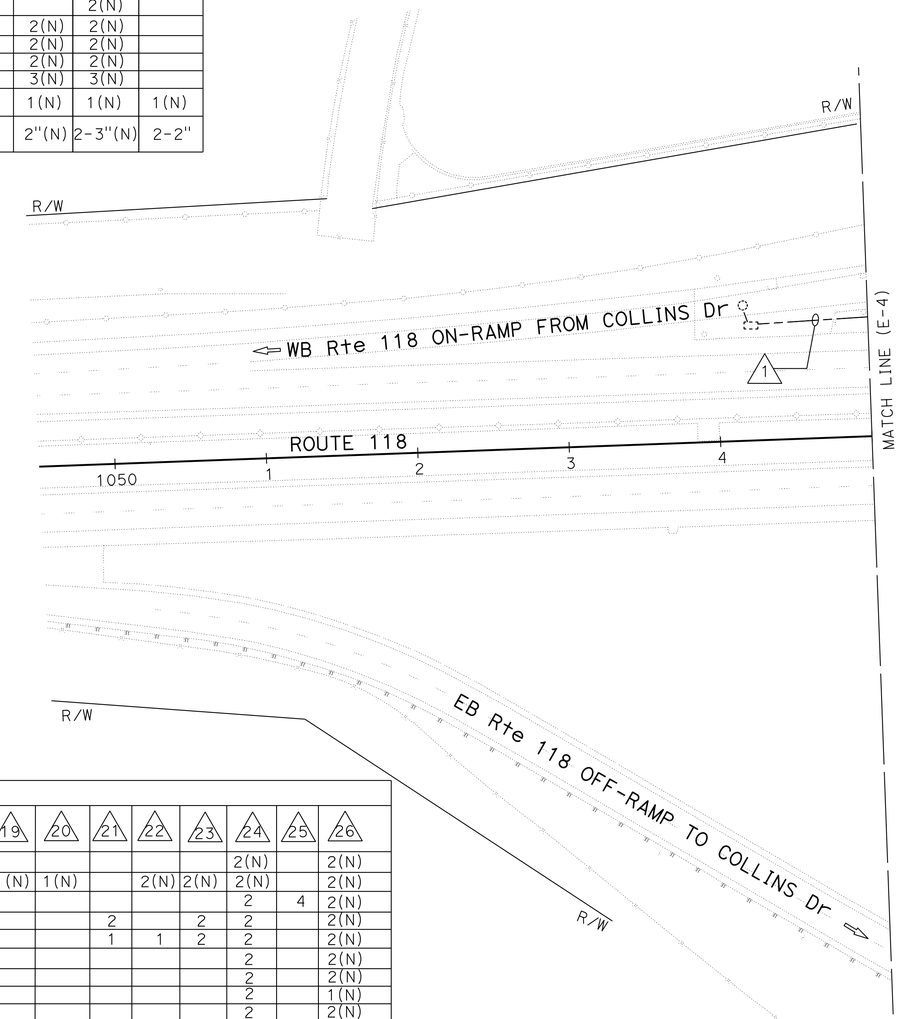
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CONDUCTOR AND CONDUIT SCHEDULE (E-2)

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5CSC	RAMP SIGNAL														1(N)	2(N)	2(N)	2(N)	
5CSC	FLASING BEACON SIGNAL			1(N)	1(N)	2(N)	1(N)	1(N)		2(N)	2(N)							2(N)	
#4	SERVICE	2	2	2	2	2			2(N)	2(N)	2(N)							2(N)	2
DLC	OFF-COUNT DETECTOR											1(N)	1(N)		1(N)	1(N)	1(N)	1(N)	
	QUEUE DETECTOR				1	1,1(N)					2(N)							2(N)	
	DEMAND DETECTOR														1(N)	2(N)	2(N)	2(N)	
	PASSAGE DETECTOR														1(N)	2(N)	2(N)	2(N)	
	ON-COUNT DETECTOR												1(N)		1(N)	2(N)	2(N)	2(N)	
	MAINLINE DETECTOR													3(N)	3(N)	3(N)	3(N)	3(N)	
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		2-2"	2"	2"	2"	2"	1"(N)	2"	2"	2"	2"(N)	2"	2"	2"	2"	2"	2"(N)	2-3"(N)	2-2"

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW



CONDUCTOR AND CONDUIT SCHEDULE (E-3 AND E-4)

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																									
		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
5CSC	RAMP SIGNAL			1(N)	2(N)							2(N)					1(N)	2(N)							2(N)		2(N)
5CSC	FLASING BEACON SIGNAL					1(N)		1(N)		2(N)	2(N)	2(N)							1(N)	1(N)	1(N)		2(N)	2(N)	2(N)		2(N)
#4	SERVICE						4	4		4	4	2(N)	2		2			2							2	4	2(N)
DLC	OFF-COUNT DETECTOR								2(N)	2(N)	2(N)	2(N)										2		2	2		2(N)
	QUEUE DETECTOR										2(N)	2(N)							1			1	1	2	2		2(N)
	DEMAND DETECTOR			1(N)	2(N)							2(N)					1	2							2		2(N)
	PASSAGE DETECTOR			1(N)	2(N)							2(N)					1	2							2		2(N)
	ON-COUNT DETECTOR	1(N)	1(N)		1(N)							1(N)		1	1		1	2							2		1(N)
	MAINLINE DETECTOR		2(N)		2(N)							2(N)				2	2	2							2		2(N)
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1"	2"	2"	2"	1"	2"	2"	2"	2"	2"	2"(N)	2"	2"	2"	2"	2"	2"	2"	1"(N)	2"(N)	2"	2"	2"	2-3"	2-2"	2-3"(N)

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	47	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

6-22-15
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER — JAMSHED HYDER — No. E18656 — Exp. 12/31/16 — ELECTRICAL — STATE OF CALIFORNIA

NOTES: (THIS SHEET ONLY)

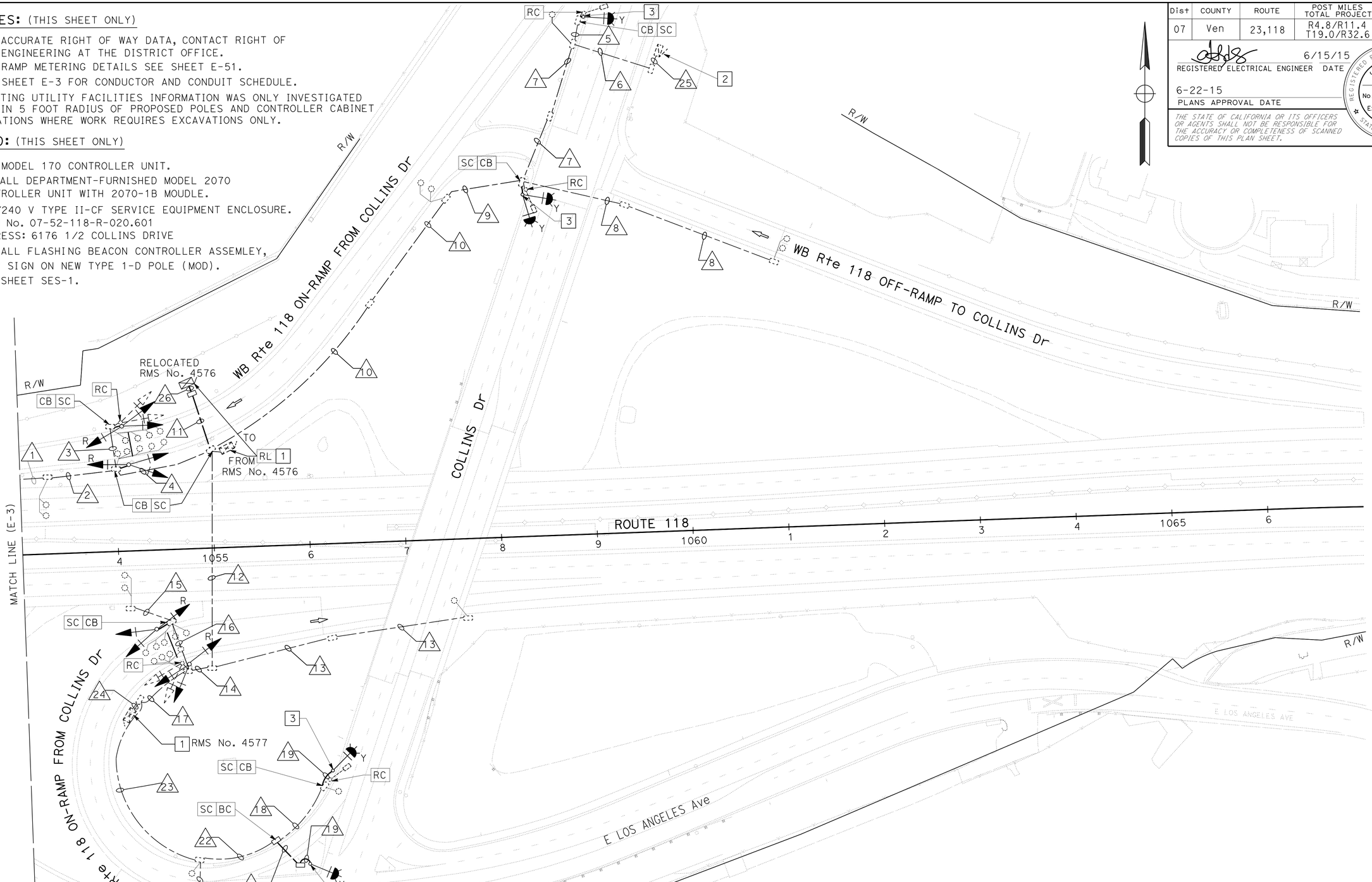
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. SEE SHEET E-3 FOR CONDUCTOR AND CONDUIT SCHEDULE.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT.
INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MOUDLE.

2 120/240 V TYPE II-CF SERVICE EQUIPMENT ENCLOSURE.
Ctid No. 07-52-118-R-020.601
ADDRESS: 6176 1/2 COLLINS DRIVE

3 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD).
SEE SHEET SES-1.



MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	48	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

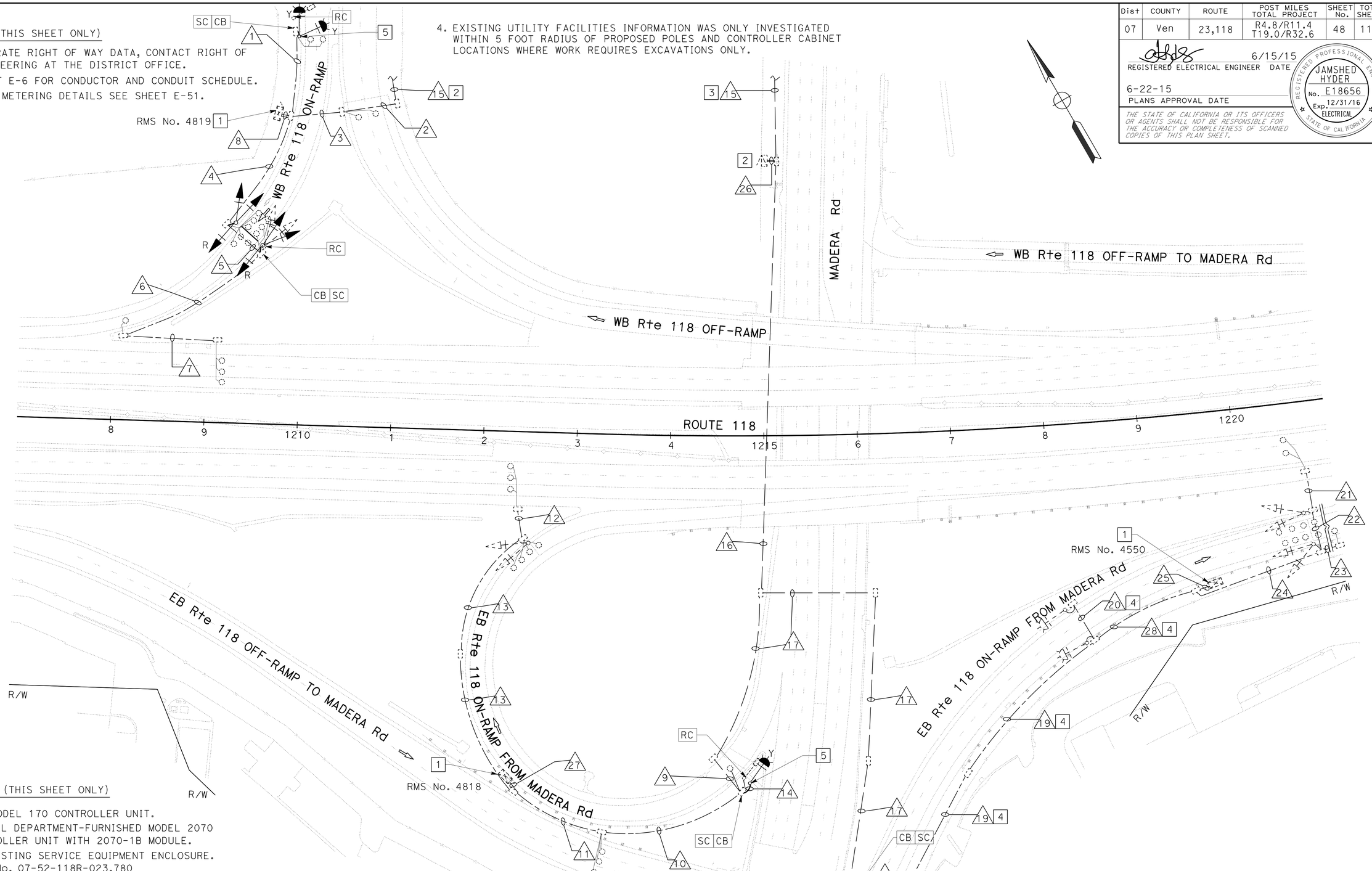
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE SHEET E-6 FOR CONDUCTOR AND CONDUIT SCHEDULE.
3. FOR RAMP METERING DETAILS SEE SHEET E-51.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



LEGEND: (THIS SHEET ONLY)

1. RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.
2. TO EXISTING SERVICE EQUIPMENT ENCLOSURE. Ctid No. 07-52-118R-023.780 ADDRESS: 2671 1/2 MADERA ROAD
3. TO EXISTING RMS No. 4819.
4. RC NUMBER 14 CONDUCTORS.
5. INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	49	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																												
		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	27	28
5CSC	RAMP SIGNAL				2(N)	1(N)			2(N)					1									1(N)		2(N)	2(N)		1	
5CSC	FLASING BEACON SIGNAL	1(N)							1(N)		1(N)	1(N)			1(N)				1(N)	2(N)	1(N)					3(N)		1(N)	3(N)
#6	SERVICE		2	2					2							2											2		
#4	SERVICE									2	2	2					4	2	2	2						2	4	2	2
DLC	OFF-COUNT DETECTOR			2					2			3																3	
DLC	QUEUE DETECTOR	2							2		1	1								2						2		1	2
DLC	DEMAND DETECTOR				2	1			2	1				1											2	2		1	
DLC	PASSAGE DETECTOR				2	1			2					1											2	2		1	
DLC	ON-COUNT DETECTOR				2	1	1		2					1										1	2	2		1	
DLC	MAINLINE DETECTOR				3	3	3	3	3				3	3								2	2		2	2		3	
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2-3"	2"	2"	2"	2"	2"	1"(N)	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2-3"	2-3"	2-3"	1 1/2"

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

E-6

REVISED BY | DATE REVISED
JAMSHED HYDER | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	50	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JAMSHED HYDER — No. E18656 — Exp. 12/31/16 — 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-9.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

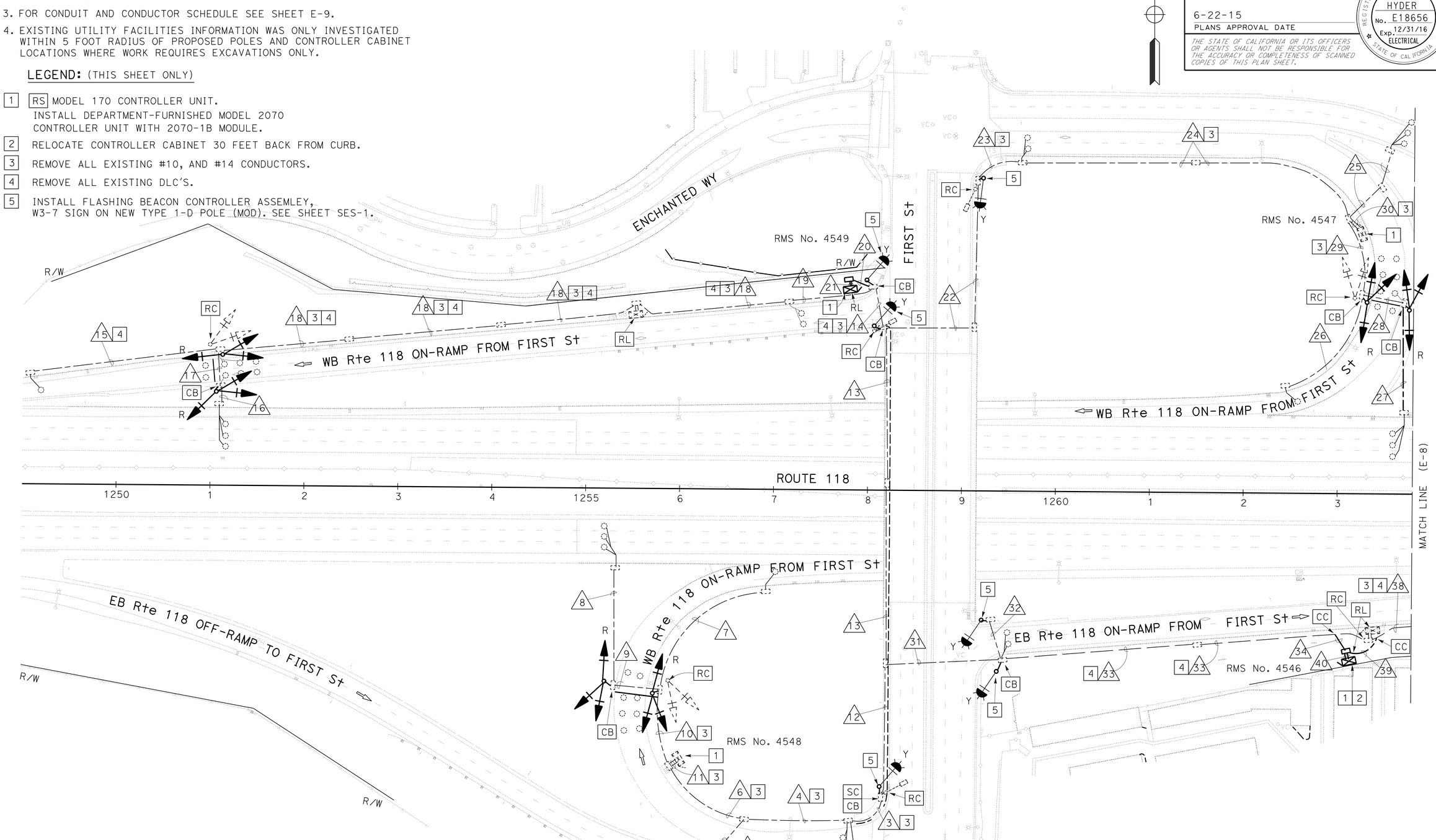
1 RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

2 RELOCATE CONTROLLER CABINET 30 FEET BACK FROM CURB.

3 REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

4 REMOVE ALL EXISTING DLC'S.

5 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.



APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	51	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

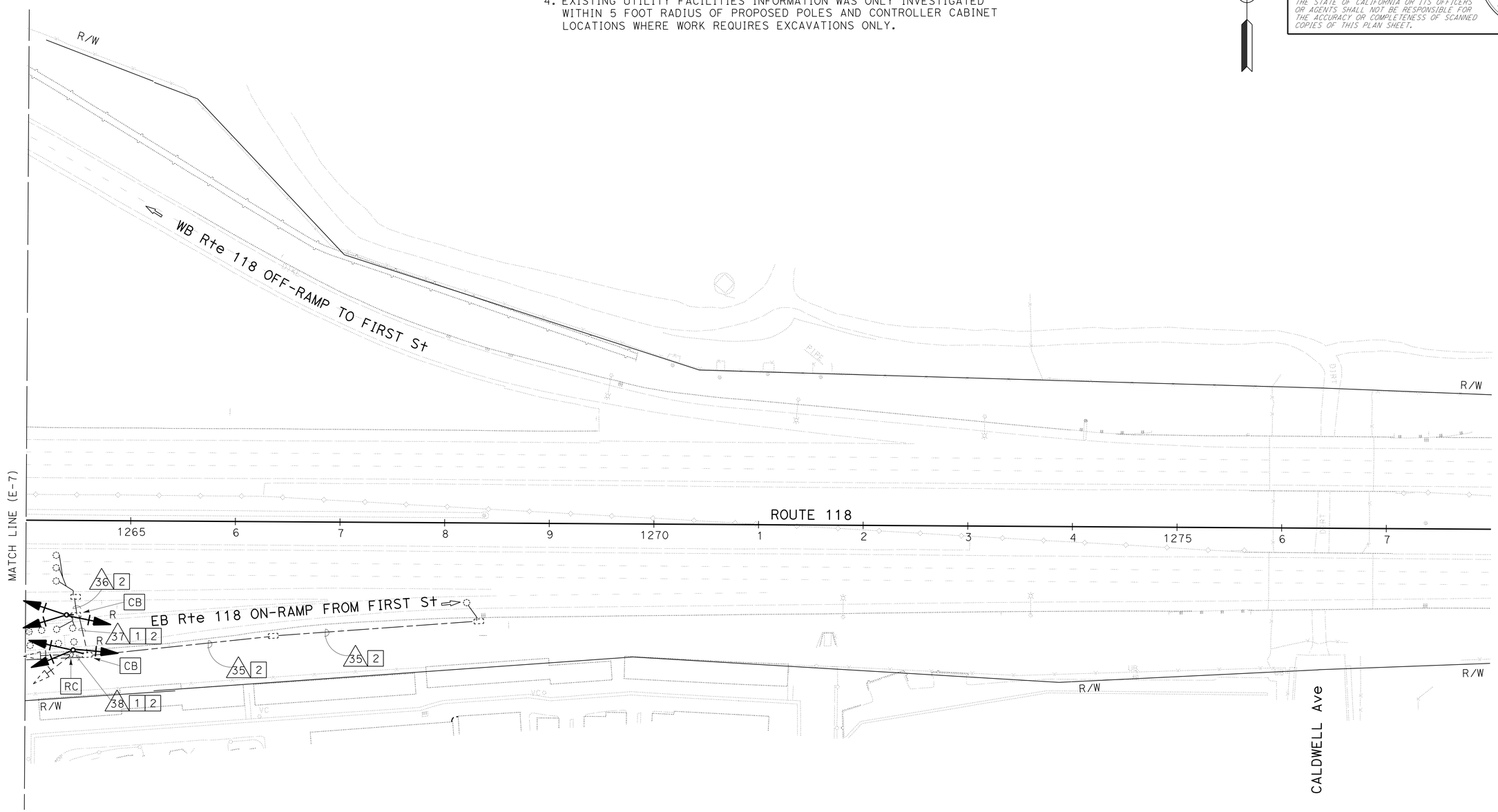
LEGEND: (THIS SHEET ONLY)

1 REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

2 REMOVE ALL EXISTING DLC'S.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-9.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-8

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

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	52	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-7 & E-8)

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
5CSC	RAMP SIGNAL									1(N)	2(N)	2(N)						1(N)	2(N)	2(N)	2(N)	2(N)
5CSC	FLASING BEACON SIGNAL			1(N)	1(N)		1(N)					1(N)			1(N)						2(N)	2(N)
#4	SERVICE	4	4	4									4	4							2	2
#6	SERVICE	4	4	2	2		2					2	2									
#8	TELEPHONE DEMARCATION	2																				
DLC	OFF RAMP DETECTOR					2	2					2										
DLC	QUEUE DETECTOR				1, 1(N)		1, 1(N)					1, 1(N)								2(N)	2(N)	2(N)
DLC	DEMAND DETECTOR									1(N)	1, 1(N)	1, 1(N)						1(N)	2(N)	2(N)	2(N)	2(N)
DLC	PASSAGE DETECTOR									1	2	2						1(N)	2(N)	2(N)	2(N)	2(N)
DLC	MAIN LINE DETECTOR								3	3	3	3					3(N)	3(N)	3(N)	3(N)	3(N)	3(N)
DLC	ON RAMP DETECTOR							1			1	1				1(N)			1(N)	1(N)	1(N)	1(N)
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		2"C	2"C	2"C	2"C	1½"C	2"C	1½"C	2"C	2"C	2½"C	2-3"C	2"C	2"C	2"C	1½"C	2"C	2"C	2½"C	2"C	3"C(N)	2-3"C(N)

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																		
		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
5CSC	RAMP SIGNAL							1	1								1(N)	2(N)	2(N)	2(N)
5CSC	FLASING BEACON SIGNAL		1(N)	1(N)						1(N)		1(N)	2(N)	2(N)						2(N)
#4	SERVICE	2	2	2						2										
#6	SERVICE										2		2	2						2
#8	TELEPHONE DEMARCATION																			
DLC	OFF RAMP DETECTOR																			
DLC	QUEUE DETECTOR			2					2	2			2(N)	2(N)						2(N)
DLC	DEMAND DETECTOR							1(N)	1, 1(N)	1, 1(N)							1(N)	2(N)	2(N)	2(N)
DLC	PASSAGE DETECTOR							1	2	2							1(N)	2(N)	2(N)	2(N)
DLC	MAIN LINE DETECTOR						3	3	3	3						3(N)	3(N)	3(N)	3(N)	3(N)
DLC	ON RAMP DETECTOR					1			1	1					1(N)			1(N)	1(N)	1(N)
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1½"C	1½"C	2"C	1½"C	1½"C	2"C	2"C	2½"C	2-3"C	1½"C	1½"C	2"C	2"C(N)	1½"C	2"C	2"C	2"C	2½"C(N)	2-3"C(N)

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW

MODIFY RAMP METERING SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

E-9

REVISED BY | DATE REVISED
FARID REKABI | JAMSHED HYDER
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/T11.4 T19.6/R32.6	53	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

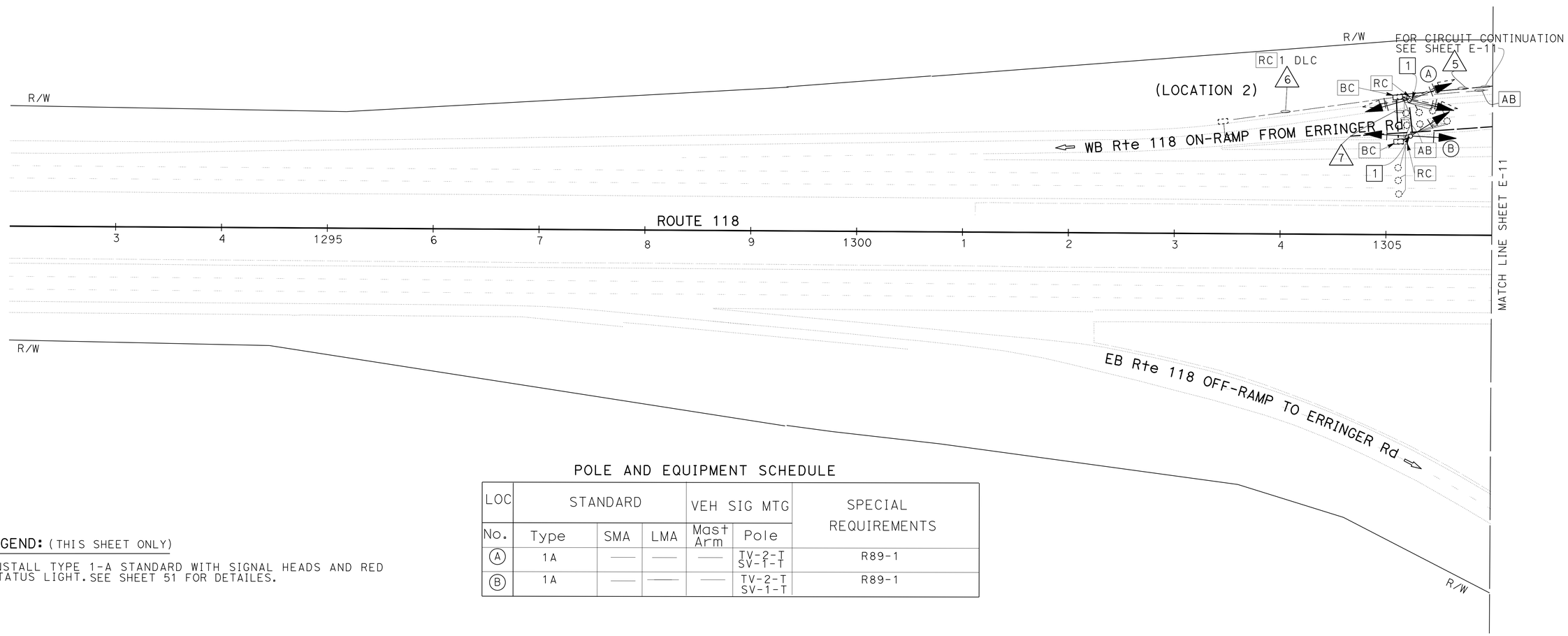
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09-30-15 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-12.
3. FOR RAMP METERING DETAILS SEE SHEET E-51.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
A	1A	—	—	—	TV-2-T SV-1-T	R89-1
B	1A	—	—	—	TV-2-T SV-1-T	R89-1

LEGEND: (THIS SHEET ONLY)

1 INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET 51 FOR DETAILES.

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-10

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 11-14-14
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	54	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09-30-15 ELECTRICAL STATE OF CALIFORNIA

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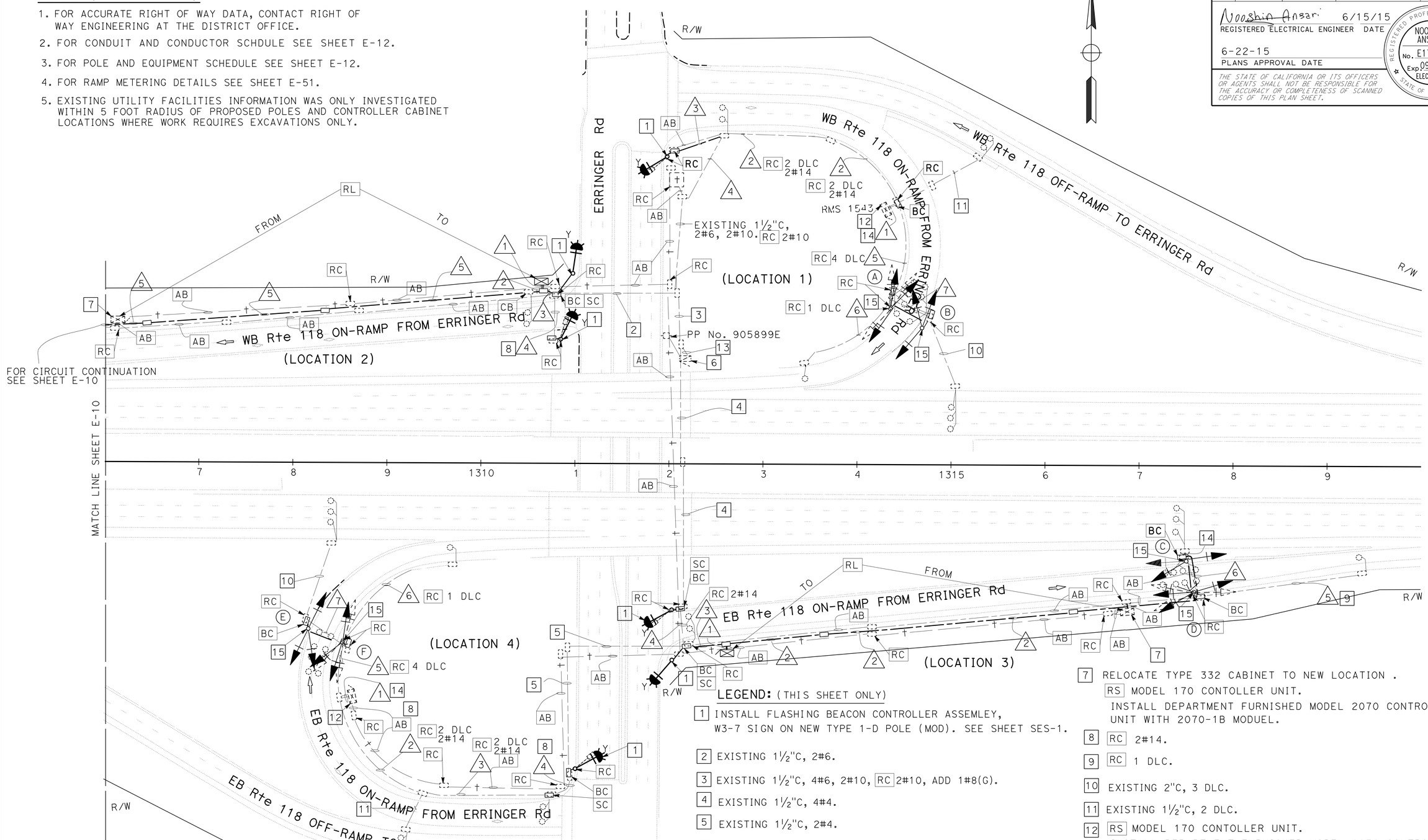
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-12.
3. FOR POLE AND EQUIPMENT SCHEDULE SEE SHEET E-12.
4. FOR RAMP METERING DETAILS SEE SHEET E-51.
5. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



14 EXISTING 11/2" C, RC 6 DLC, 2#14.

15 INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET E-51 FOR DETAILES.

LEGEND: (THIS SHEET ONLY)

1 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.

2 EXISTING 1½"C, 2#6.

3 EXISTING 1½"C, 4#6, 2#10, RC 2#10, ADD 1#8(G).

4 EXISTING 1½"C, 4#4.

5 EXISTING 1½"C, 2#4.

6 EXISTING 120/240 V METERED TYPE III-CF SERVICE EQUIPMENT ENCLOSUER WITH :

100 A, 240 V, 2P, CB, MAIN BREACKER
4-40 A, 120 V, 1P, CB, RAMP METERING SYSTEM
1-15 A, 120 V, 1P, CB, TELEPHONE DEMARCATION CABINET
Ctid No. 07-52-118-0024.0811

7 RELOCATE TYPE 332 CABINET TO NEW LOCATION . RS MODEL 170 CONTOLLER UNIT. INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODUEL.

8 RC 2#14.

9 RC 1 DLC.

10 EXISTING 2"C, 3 DLC.

11 EXISTING 1½"C, 2 DLC.

12 RS MODEL 170 CONTOLLER UNIT. INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

13 EXISTING 2" C, 4#4,4#6,2#10, RC 2#10.

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 11-14-14
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	55	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09-30-15 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.

CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-10 & E-11)

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2				2		1
3CSC	FLASING BEACON SIGNAL	1	1	1				
#6	SERVICE	2	2		2			
DLC	WB OFF-COUNT	2(E)						
	QUEUE DETECTOR	2	2			2		
	DEMAND DETECTOR	2				2		1
	PASSAGE DETECTOR	2				2		1
	ON-COUNT DETECTOR	1				1	1	
	SURVEILLANCE DETECTOR	3(E)				3(E)		3(E)
#8	GROUND	1		1	1	1	1	1
CONDUIT SIZE		2-3"(E)	3"(E)	1½"	1½"(E)	3"(E)	1½"(E)	1½"(E)

(E): EXISTING

WB RTE 118 ON-RAMP FROM NB ERRINGER ROAD (LOCATION 1) ON E-11

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2	2			2		1
3CSC	FLASING BEACON SIGNAL	2		2	1			
#6	SERVICE	2		2				
DLC	QUEUE DETECTOR	2	2					
	DEMAND DETECTOR	2	2			2		1
	PASSAGE DETECTOR	2	2			2		1
	ON-COUNT DETECTOR	1	1			1	1	
	SURVEILLANCE DETECTOR	3	3			3		3
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3"	3"	2"	1½"(E)	3"	1½"(E)	3"

(E): EXISTING

WB RTE 118 ON-RAMP FROM SB ERRINGER RD (LOCATION 2) ON E-10 AND E-11

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2				2		1
	FLASING BEACON SIGNAL	2		2	1			
#4	SERVICE	2		2	4			
	QUEUE DETECTOR	2		2				
DLC	DEMAND DETECTOR	2	2					
	PASSAGE DETECTOR	2	2				1	
	ON-COUNT DETECTOR	1	1			1	1	
	SURVEILLANCE DETECTOR	3	3				3	
#8	GROUND	1	1	1	1	1	1	
CONDUIT SIZE		2-3"	3"	2"	1½"(E)	1½"(E)	2"	

(E): EXISTING

EB RTE 118 ON-RAMP FROM NORTH OF ERRINGER RD (LOCATION 3) ON E-11

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2				2		1
3CSC	FLASING BEACON SIGNAL	1	1	1	1			
#4	SERVICE	2	2	2	2			
DLC	E/B OFF-COUNT	2(E)	2(E)					
	QUEUE DETECTOR	2	2	2				
	DEMAND DETECTOR	2				2		1
	PASSAGE DETECTOR	2				2		1
	ON-COUNT DETECTOR	1				1	1	
	SURVEILLANCE DETECTOR	3(E)				3(E)		3(E)
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3"(E)	3"(E)	2"(E)	1½"(E)	3"(E)	1½"(E)	1½"(E)

(E): EXISTING

EB RTE 118 ON-RAMP FROM WEST ERRINGER RD (LOCATION 4) ON E-11

POLE AND EQUIPMENT SCHEDULE (SHEETS E-11)

POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
A	1A	—	—	—	TV-2-T SV-1-T	R89-1
B	1A	—	—	—	TV-2-T SV-1-T	R89-1
C	1A	—	—	—	TV-2-T SV-1-T	R89-1
D	1A	—	—	—	TV-2-T SV-1-T	R89-1
E	1A	—	—	—	TV-2-T SV-1-T	R89-1
F	1A	—	—	—	TV-2-T SV-1-T	R89-1

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

E-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY: OSWALD ELIZONDO
REVISED BY / DATE REVISED

LAST REVISION 11-14-14 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	56	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 9/30/15 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.

NOTES: (THIS SHEET ONLY)

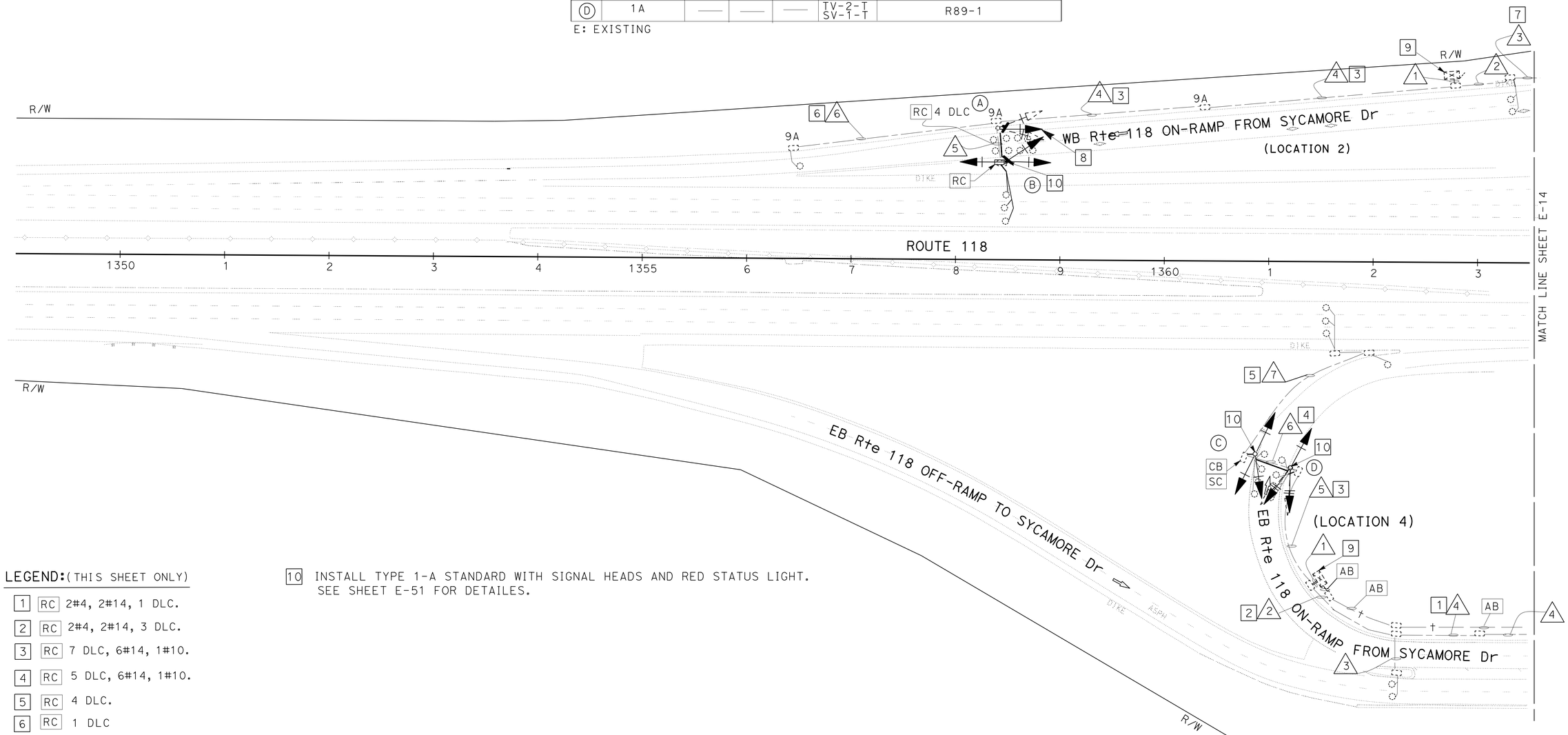
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-15.
3. FOR RAMP METERING DETAILS SEE SHEET E-51.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

POLE AND EQUIPMENT SCHEDULE (SHEETS E-13)

POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
A	1A (E)	—	—	—	TV-1-T SV-1-T	R89-1
B	1A	—	—	—	TV-2-T SV-1-T	R89-1
C	1A	—	—	—	TV-2-T SV-1-T	R89-1
D	1A	—	—	—	TV-2-T SV-1-T	R89-1

E: EXISTING



LEGEND: (THIS SHEET ONLY)

1 RC 2#4, 2#14, 1 DLC.
2 RC 2#4, 2#14, 3 DLC.
3 RC 7 DLC, 6#14, 1#10.
4 RC 5 DLC, 6#14, 1#10.
5 RC 4 DLC.
6 RC 1 DLC
7 RC 2#14, 1 DLC
8 RC 2 - SECTION SIGNAL HEAD. INSTALL 3 - SECTION 12" LED SIGNAL HEAD.
9 RS MODEL 170 CONTOLLER UNIT. INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.
10 INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET E-51 FOR DETAILES.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	57	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09/30/15 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.

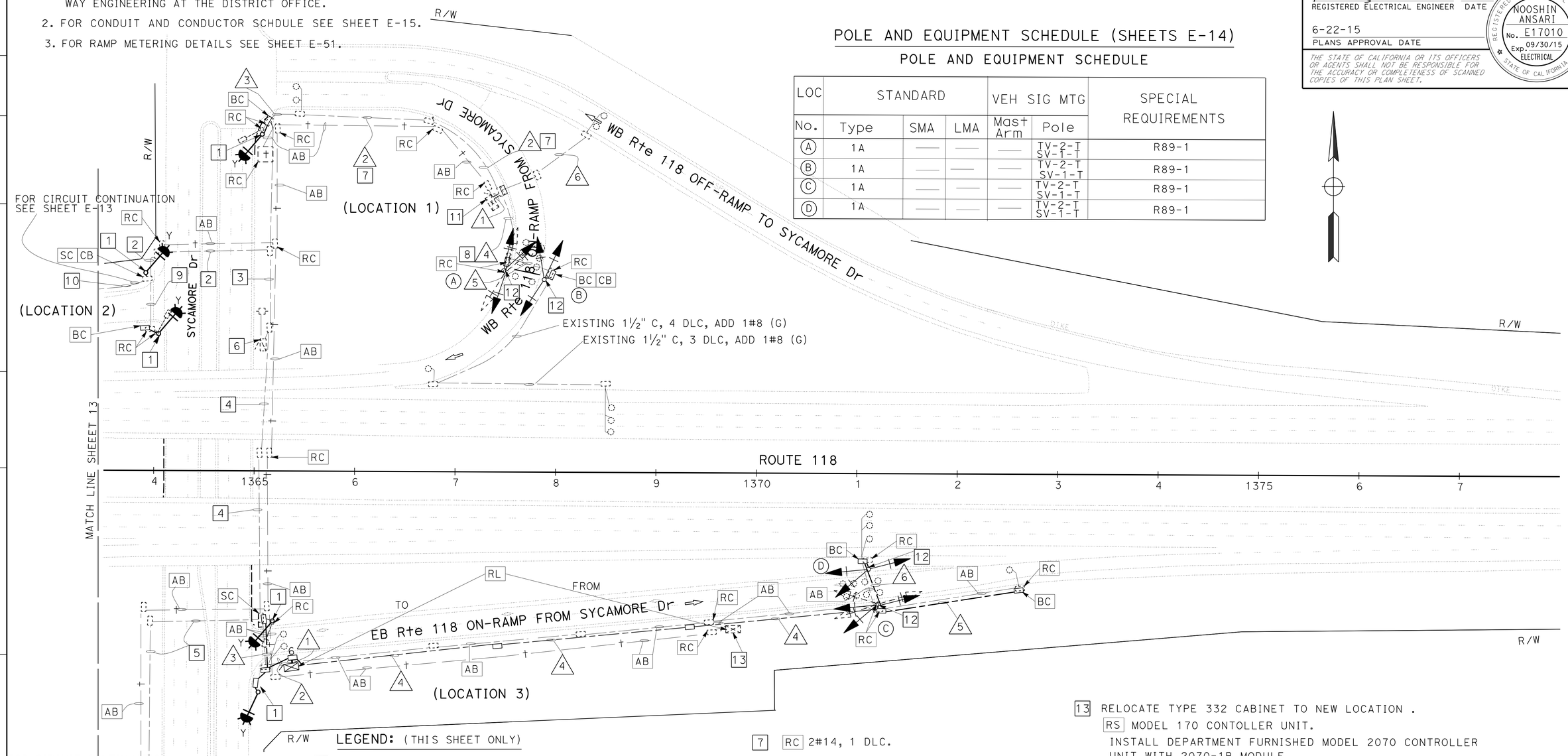
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-15.
3. FOR RAMP METERING DETAILS SEE SHEET E-51.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

POLE AND EQUIPMENT SCHEDULE (SHEETS E-14)

POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
A	1A	—	—	—	TV-2-T SV-1-T	R89-1
B	1A	—	—	—	TV-2-T SV-1-T	R89-1
C	1A	—	—	—	TV-2-T SV-1-T	R89-1
D	1A	—	—	—	TV-2-T SV-1-T	R89-1



LEGEND: (THIS SHEET ONLY)

1. INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D (MOD). SEE SHEET SES-1.
2. EXISTING 1½"C, 2#6
3. EXISTING 1½"C, 4#6, 2#10, RC 2#10.
4. EXISTING 1½"C, 4#4
5. EXISTING 1½"C, 2#4
6. EXISTING 120/240 V METERED TYPE III-BF SERVICE EQUIPMENT ENCLOSUER WITH :
   100 A, 240 V, 2P, CB, MAIN BREACKER
   4-40 A, 120 V, 1P, CB, RAMP METERING SYSTEM
   1-15 A, 120 V, 1P, CB, TELEPHONE DEMARCATION BOX
   Ctid No. 07-52-118-0025.8310
7. RC 2#14, 1 DLC.
8. RC 7 DLC, 6#14, 1#10.
9. EXISTING 1½" C, RC 2#14, ADD 1-3CSC, 1#8 (G).
10. EXISTING 1½" C, RC 2#6,2#14, ADD 2-3CSC, 2#6, 1#8(G)
11. RS MODEL 170 CONTOLLER UNIT.
    INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070 -1B MODULE.
12. INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET E-51 FOR DETAILES.
13. RELOCATE TYPE 332 CABINET TO NEW LOCATION .
    RS MODEL 170 CONTOLLER UNIT.
    INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY
REVISED BY
DATE REVISED
LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	58	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09/30/15 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.

CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-13 & E-14)

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE					
		1	2	3	4	5	6
5CSC	RAMP SIGNAL	2			2	1	
3CSC	FLASING BEACON SIGNAL	1	1	1			
#6	SERVICE	2	2	2			
DLC	WB OFF-COUNT	2					2
	QUEUE DETECTOR	2	2				
	DEMAND DETECTOR	2			2	1	
	PASSAGE DETECTOR	2			2	1	
	ON-COUNT DETECTOR	1			1	1	
	SURVEILLANCE DETECTOR	3			3	3	
#8	GROUND	1	1	1	1	1	
CONDUIT SIZE		2-3"(E)	1½"(E)	2"(E)	2½"(E)	2"(E)	1½"(E)

(E): EXISTING

WB RTE 118 ON-RAMP FROM NORTH SYCOMORE DR
(LOCATION 1) ON E-14

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE					
		1	2	3	4	5	6
9CSC	RAMP SIGNAL	2			2	1	
3CSC	FLASING BEACON SIGNAL	2	2	2			
#6	SERVICE	2	2	2			
DLC	QUEUE DETECTOR	2	2				
	DEMAND DETECTOR	2			2		
	PASSAGE DETECTOR	2			2	1	
	ON-COUNT DETECTOR	1			1		1
	SURVEILLANCE DETECTOR	3			3	3	
#8	GROUND	1	1	1	1	1	1
CONDUIT SIZE		2-3"(E)	3"(E)	2"(E)	1½"(E)	2"(E)	1½"(E)

(E): EXISTING

WB RTE 118 ON-RAMP FROM SOUTH OF SYCAMAR DR
(LOCATION 2) ON E-13 AND E-14

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2				2	1	
3CSC	FLASING BEACON SIGNAL	1	1		1			
#4	SERVICE	2	2		2			
DLC	EB OFF-COUNT	2	2	2				
	QUEUE DETECTOR	2	2		2			
	DEMAND DETECTOR	2				2	1	
	PASSAGE DETECTOR	2				2	1	
	ON-COUNT DETECTOR	1				1	1	1
	SURVEILLANCE DETECTOR	3				3	3	3
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3" C	1½"(E)	1½"(E)	1½"(E)	3"	1½"(E)	1½"(E)

(E): EXISTING

EB RTE 118 ON-RAMP FROM NORTH OF SYCOMORE DR
(LOCATION 3) ON E-14

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
9CSC	RAMP SIGNAL	2				2	1	
3CSC	FLASING BEACON SIGNAL	1	1		1			
#4	SERVICE	2	2		2			
DLC	EB OFF-COUNT	2	2	2				
	QUEUE DETECTOR	2	2		2			
	DEMAND DETECTOR	2				2	1	
	PASSAGE DETECTOR	2				2	1	
	ON-COUNT DETECTOR	1				1	1	1
	SURVEILLANCE DETECTOR	3				3	3	3
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3" C	1½"(E)	1½"(E)	1½"(E)	3"	1½"(E)	1½"(E)

(E): EXISTING

EB RTE 118 ON-RAMP FROM SOUTH OF SYCOMAR DR
(LOCATION 4) ON E-13 ND E-14

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

E-15

REVISED BY | DATE REVISED
NOOSHIN ANSARI | NOOSHIN ANSARI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	59	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09/30/15 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.

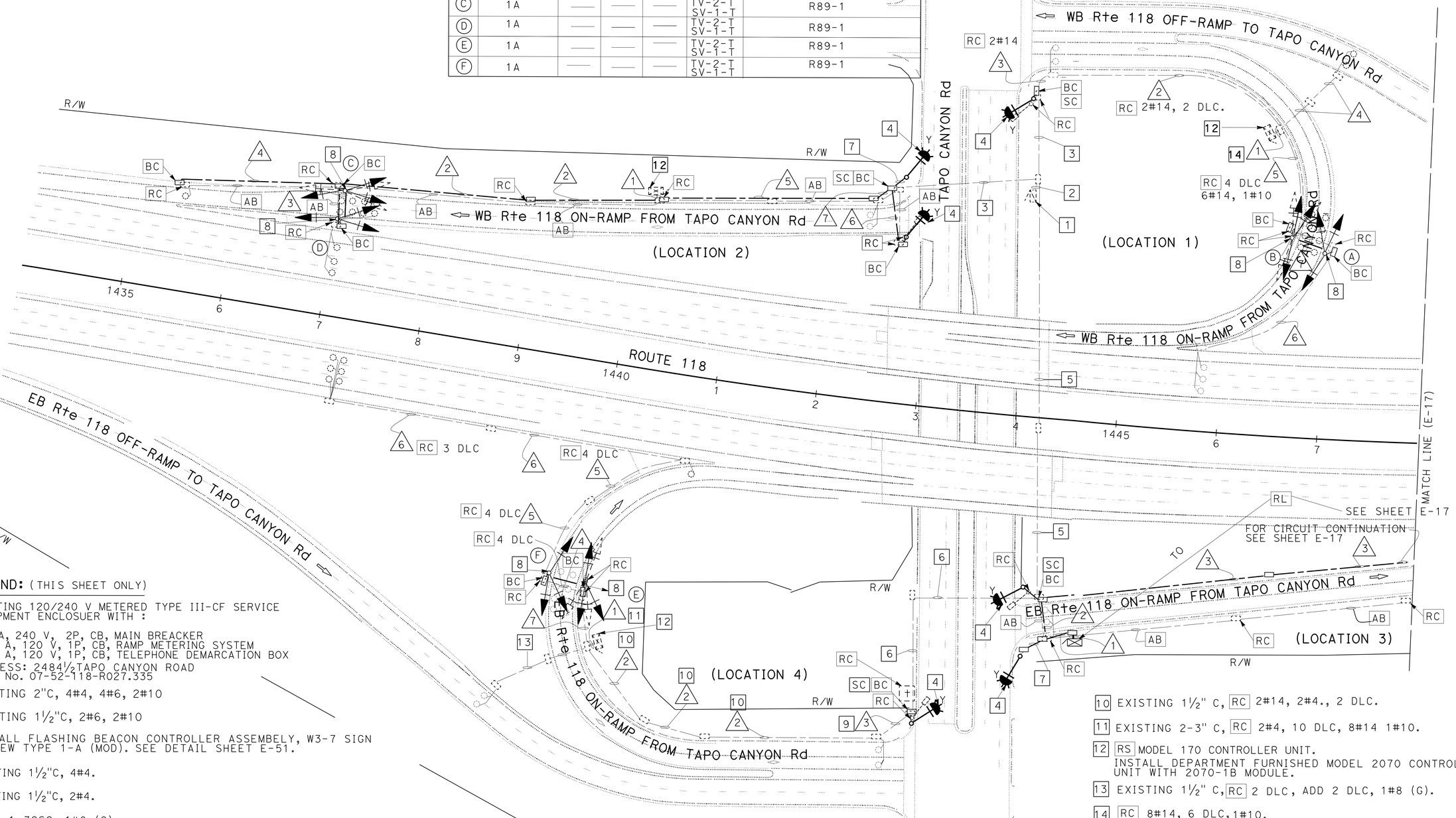
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-18.
3. FOR RAMP METERING DETAILS SEE SHEET E-51.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

POLE AND EQUIPMENT SCHEDULE (SHEET E-16)

POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
A	1A	—	—	—	TV-2-T SV-1-T	R89-1
B	1A	—	—	—	TV-2-T SV-1-T	R89-1
C	1A	—	—	—	TV-2-T SV-1-T	R89-1
D	1A	—	—	—	TV-2-T SV-1-T	R89-1
E	1A	—	—	—	TV-2-T SV-1-T	R89-1
F	1A	—	—	—	TV-2-T SV-1-T	R89-1



LEGEND: (THIS SHEET ONLY)

1. EXISTING 120/240 V METERED TYPE III-CF SERVICE EQUIPMENT ENCLOSUER WITH :
   100 A, 240 V, 2P, CB, MAIN BREACKER
   4-40 A, 120 V, 1P, CB, RAMP METERING SYSTEM
   1-15 A, 120 V, 1P, CB, TELEPHONE DEMARCATION BOX
   ADDRESS: 2484½TAPO CANYON ROAD
   CTID No. 07-52-118-R027.335
2. EXISTING 2"C, 4#4, 4#6, 2#10
3. EXISTING 1½"C, 2#6, 2#10
4. INSTALL FLASHING BEACON CONTROLLER ASSEMBELY, W3-7 SIGN ON NEW TYPE 1-A (MOD). SEE DETAIL SHEET E-51.
5. EXISTING 1½"C, 4#4.
6. EXISTING 1½"C, 2#4.
7. 2" C, 1-3CSC, 1#8 (G).
8. INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET E-51 FOR DETAILES.
9. EXISTING 1½" C, RC 2#14, 2#4.
10. EXISTING 1½" C, RC 2#14, 2#4., 2 DLC.
11. EXISTING 2-3" C, RC 2#4, 10 DLC, 8#14 1#10.
12. RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.
13. EXISTING 1½" C, RC 2 DLC, ADD 2 DLC, 1#8 (G).
14. RC 8#14, 6 DLC, 1#10.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: NOOSHIN ANSARI
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	60	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09/30/15 ELECTRICAL STATE OF CALIFORNIA

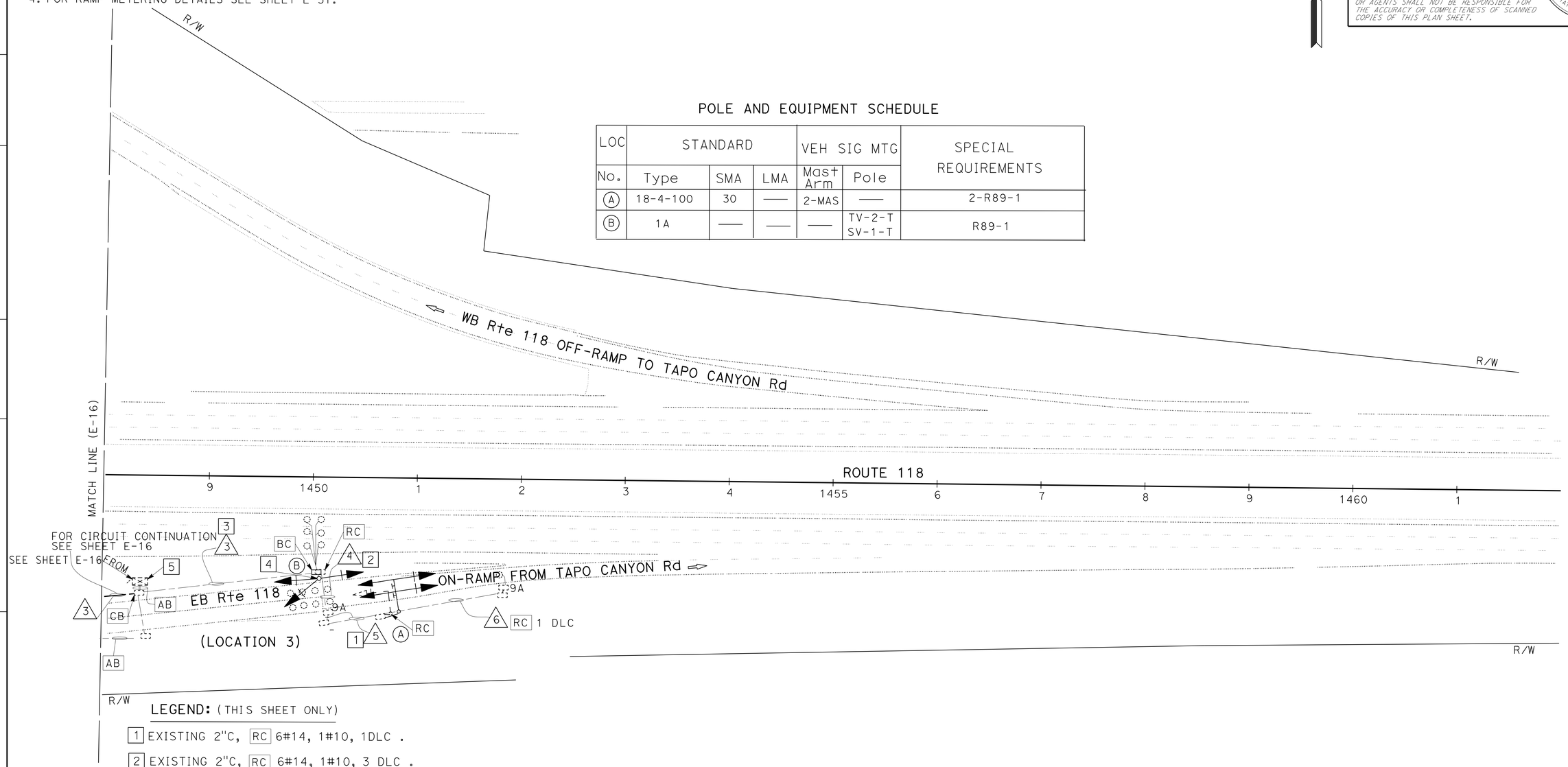
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONDUIT AND CONDUCTOR SCHDULE SEE SHEET E-18.
3. THE LOCATION OF POLE (A) SHALL BE 70 FEET DOWNSTREM OF THE LIMIT LINE.
4. FOR RAMP METERING DETAILS SEE SHEET E-51.
5. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

POLE AND EQUIPMENT SCHEDULE

LOC	STANDARD			VEH SIG MTG		SPECIAL REQUIREMENTS
No.	Type	SMA	LMA	Mast Arm	Pole	
(A)	18-4-100	30	—	2-MAS	—	2-R89-1
(B)	1A	—	—	—	TV-2-T SV-1-T	R89-1



LEGEND: (THIS SHEET ONLY)

1 EXISTING 2"C, RC 6#14, 1#10, 1DLC .

2 EXISTING 2"C, RC 6#14, 1#10, 3 DLC .

3 EXISTING 2"C, RC 6#14, 1#10, 7 DLC.

4 INSTALL TYPE 1-A STANDARD WITH SIGNAL HEADS AND RED STATUS LIGHT. SEE SHEET E-51 FOR DETAILES.

5 RELOCATE TYPE 332 CABINET TO NEW LOCATION . RS MODEL 170 CONTOLLER UNIT. INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT WITHL 2070-1B MODULE.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-17

REVISED BY | DATE REVISED
NOOSHIN ANSARI | NOOSHIN ANSARI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	61	119

Nooshin Ansari 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER NOOSHIN ANSARI No. E17010 Exp. 09/30/15 ELECTRICAL STATE OF CALIFORNIA

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CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-16 & E-17)

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
5CSC	RAMP SIGNAL	2				2		1
3CSC	FLASING BEACON SIGNAL	1	1	1				
#6	SERVICE	2(E)	2(E)	2(E)				
DLC	WB OFF-COUNT	2(E)			2(E)			
	QUEUE DETECTOR	2	2					
	DEMAND DETECTOR	2				2		
	PASSAGE DETECTOR	2				2		
	ON-COUNT DETECTOR	1(E)				1(E)	1(E)	1(E)
	SURVEILLANCE DETECTOR	3(E)				3(E)	3(E)	3(E)
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3"(E)	1½"(E)	2"(E)	1½"(E)	2½"(E)	1½"(E)	2"(E)

(E): EXISTING WB RTE 118 ON-RAMP FROM NORTH OF TOPA CANYON (LOCATION 1) ON E-16

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
5CSC	RAMP SIGNAL	2	2	1				
3CSC	FLASING BEACON SIGNAL	2				2	1	2
#6	SERVICE	2				2		2
	QUEUE DETECTOR	2				2		
DLC	DEMAND DETECTOR	2	2	1				
	PASSAGE DETECTOR	2	2	1				
	ON-COUNT DETECTOR	1	1		1			
	SURVEILLANCE DETECTOR	3	3	3				
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3"(E)	3"	3"	2"	3"	2"	2"

(E): EXISTING WB RTE 118 ON-RAMP FROM SOUTH OF TOPA CANYON ROAD (LOCATION 2) ON E-16

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE					
		1	2	3	4	5	6
5CSC	RAMP SIGNAL	2	2	2	2	2	
3CSC	FLASING BEACON SIGNAL	2	1				
#4	SERVICE	2	2				
DLC	QUEUE DETECTOR	2					
	DEMAND DETECTOR	2	2	2	1		
	PASSAGE DETECTOR	2	2	2	1		
	ON-COUNT DETECTOR	1	1	1	1	1	1
	SURVEILLANCE DETECTOR	3	3	3			
#8	GROUND	1	1	1	1	1	1
CONDUIT SIZE		2-3"	3"	3"	2"(E)	2"(E)	2"(E)

(E): EXISTING EB RTE 118 ON-RAMP FROM NORTH OF TAPO CANYON (LOCATION 3) ON E-16 AND E-17

CONDUIT AND CONDUCTOR SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE						
		1	2	3	4	5	6	7
5CSC	RAMP SIGNAL	2			1			2
3CSC	FLASING BEACON SIGNAL	1	1	1				
#4	SERVICE	2	2	2				
DLC	EB OFF-COUNT	2	2					
	QUEUE DETECTOR	2			1			
	DEMAND DETECTOR	2			1			2
	PASSAGE DETECTOR	2						2
	ON-COUNT DETECTOR	1			1	1		1
	SURVEILLANCE DETECTOR	3			3	3	3	3
#8	GROUND	1	1	1	1	1	1	1
CONDUIT SIZE		2-3"(E)	3"(E)	2"(E)	1½"(E)	2"(E)	2"(E)	2"(E)

(E): EXISTING EB RTE 118 ON-RAMP FROM SOUTH OF TAPO CANYON ROAD (LOCATION 4) ON E-16

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

E-18

REVISED BY | DATE REVISED
NOOSHIN ANSARI | NOOSHIN ANSARI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	62	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

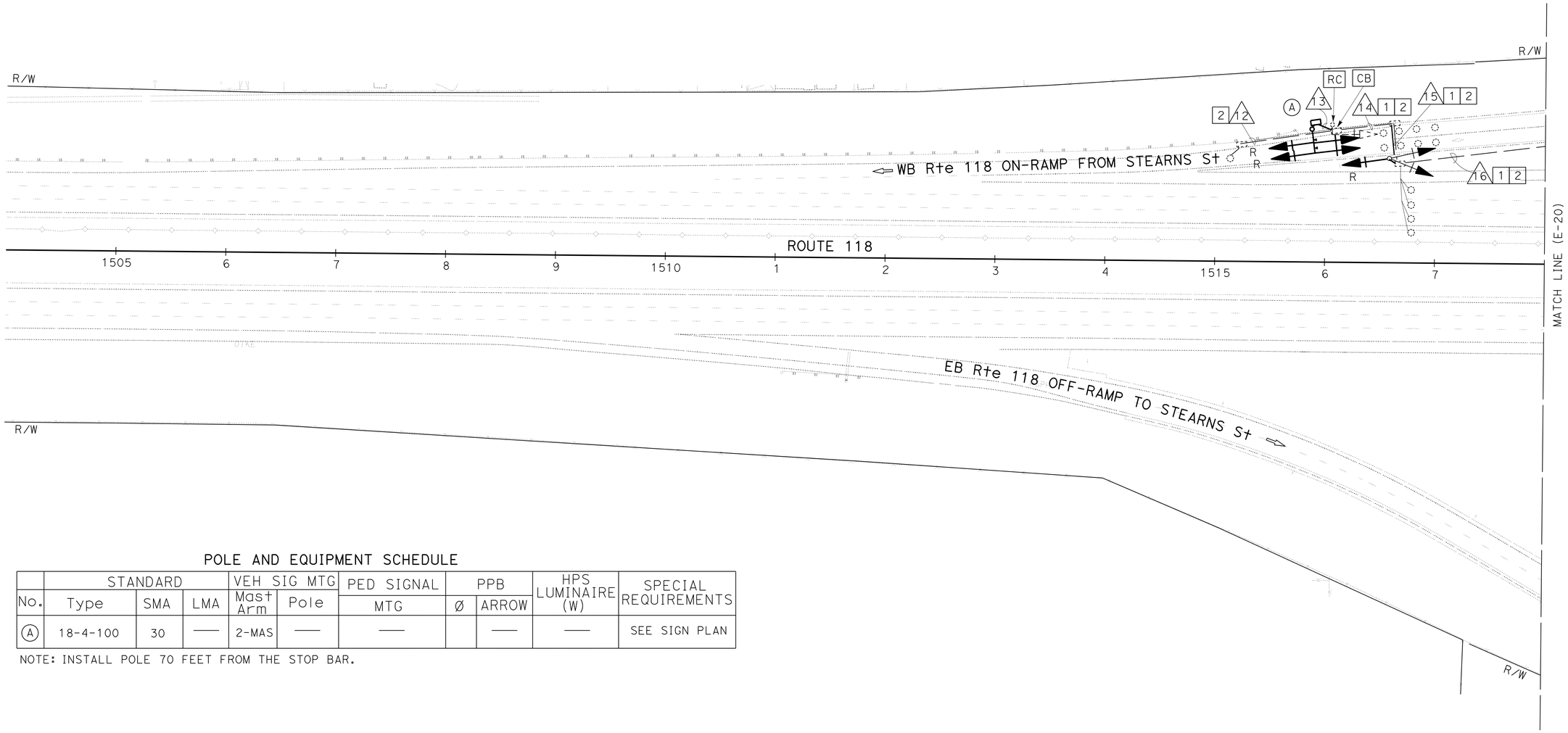
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-21.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

[1] REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

[2] REMOVE ALL EXISTING DLC'S.



POLE AND EQUIPMENT SCHEDULE

No.	STANDARD Type	SMA	LMA	VEH SIG MTG Mast Arm	Pole	PED SIGNAL MTG	PPB Ø	ARROW	HPS LUMINAIRE (W)	SPECIAL REQUIREMENTS
(A)	18-4-100	30	—	2-MAS	—	—		—	—	SEE SIGN PLAN

NOTE: INSTALL POLE 70 FEET FROM THE STOP BAR.

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-19

REVISED BY	DATE REVISED
FARID REKABI	JAMSHED HYDER
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	63	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-21.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

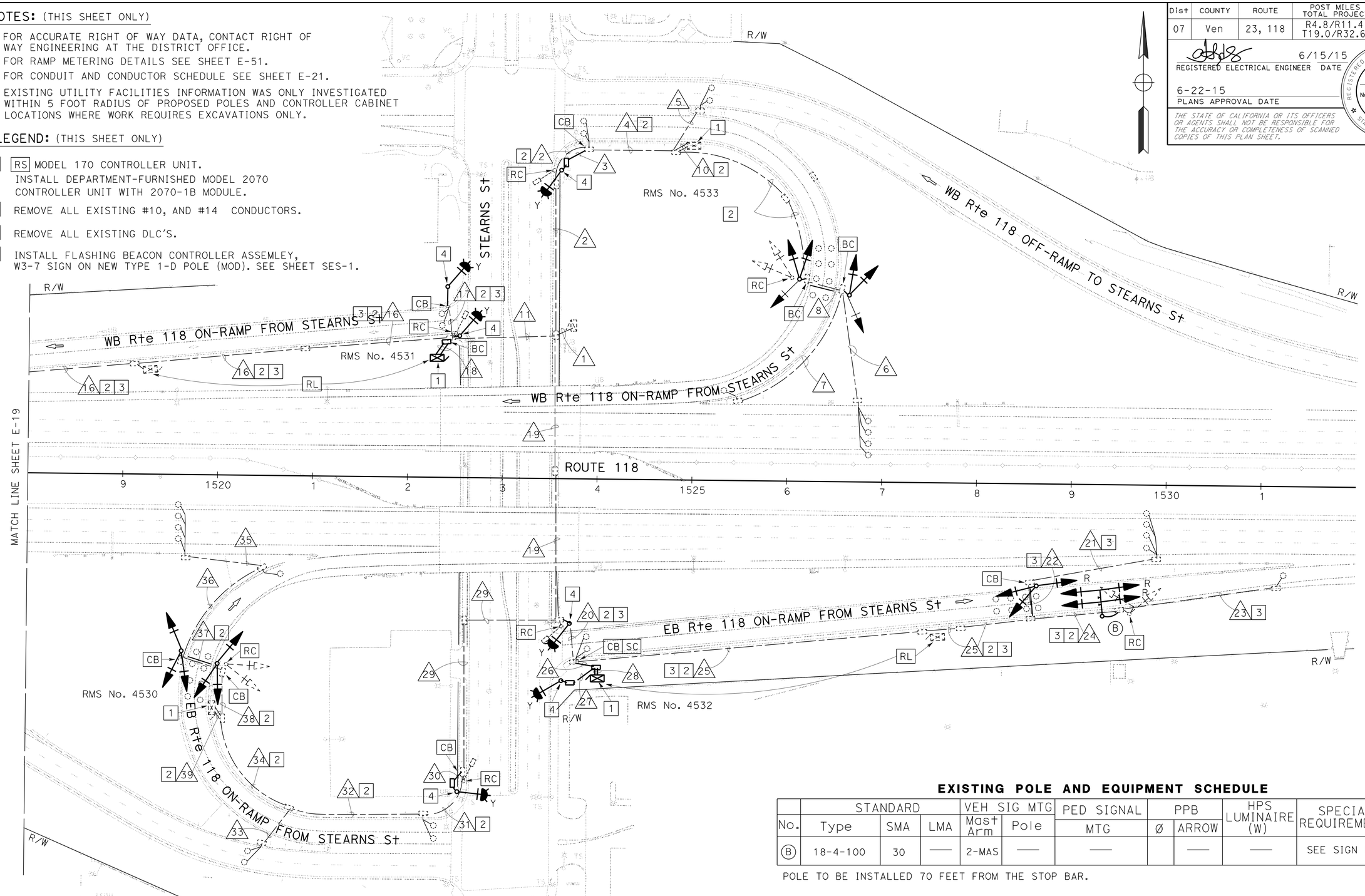
LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

2 REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

3 REMOVE ALL EXISTING DLC'S.

4 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.



EXISTING POLE AND EQUIPMENT SCHEDULE

No.	STANDARD Type	SMA	LMA	VEH SIG MTG Mast Arm	Pole	PED SIGNAL MTG	PPB Ø	PPB ARROW	HPS LUMINAIRE (W)	SPECIAL REQUIREMENTS
(B)	18-4-100	30	—	2-MAS	—	—		—	—	SEE SIGN PLAN

POLE TO BE INSTALLED 70 FEET FROM THE STOP BAR.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	64	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-19 & E-20)

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5CSC	RAMP SIGNAL								1(N)	2(N)	2(N)			1(N)	1(N)	1(N)	2(N)		2(N)
5CSC	FLASING BEACON SIGNAL			1(N)	1(N)						1(N)							1(N)	2(N)
#4	SERVICE	4																	
#6	SERVICE	4	2		2						2	2							2
#8	TELEPHONE DEMARCATION	2	2																
DLC	OFF RAMP DETECTOR					2					2								
DLC	QUEUE DETECTOR				1, 1(N)						1, 1(N)							2(N)	2(N)
DLC	DEMAND DETECTOR								1(N)	1, 1(N)	1, 1(N)					1(N)	2(N)		2(N)
DLC	PASSAGE DETECTOR								1	2	2					1(N)	2(N)		2(N)
DLC	MAIN LINE DETECTOR						4		4	4	4						4(N)		4(N)
DLC	ON RAMP DETECTOR							1	1	1	1		1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		2"C	1½"C	1½"C(N)	1½"C	1½"C	2"C	2"C	2"C	2½"C	2-3"C	1½"C	1½"C	2"C(N)	2"C	2"C	2½"C	1½"C	2-3"C(N)

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																				
		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
5CSC	RAMP SIGNAL				1(N)		1(N)		2(N)		2(N)									1(N)	2(N)	2(N)
5CSC	FLASING BEACON SIGNAL		1(N)						1(N)	1(N)	2(N)		1(N)	1(N)	1(N)		1(N)					1(N)
#4	SERVICE	4	2						2		2	2		2	2		2					2
#6	SERVICE																					
#8	TELEPHONE DEMARCATION																					
DLC	OFF RAMP DETECTOR															2	2					2
DLC	QUEUE DETECTOR								2(N)		2(N)				1, 1(N)		1, 1(N)					1, 1(N)
DLC	DEMAND DETECTOR				1(N)			2(N)	2(N)		2(N)									1(N)	1, 1(N)	1, 1(N)
DLC	PASSAGE DETECTOR				1(N)			2(N)	2(N)		2(N)									1	2	2
DLC	MAIN LINE DETECTOR			4(N)	4(N)			4(N)	4(N)		4(N)							4	4	4	4	4
DLC	ON RAMP DETECTOR					1(N)	1(N)	1(N)	1(N)										1	1	1	1
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1½"C	1½"C	2"C	2"C	1½"C	2"C	1½"C	2"C(N)	2"C(N)	2-3"C(N)	1½"C	1½"C(N)	1½"C	1½"C	1½"C	2"C	2"C	2"C	2"C	2½"C	2-3"C

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.

(N): NEW

MODIFY RAMP METERING SYSTEM

E-21

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	65	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-24.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

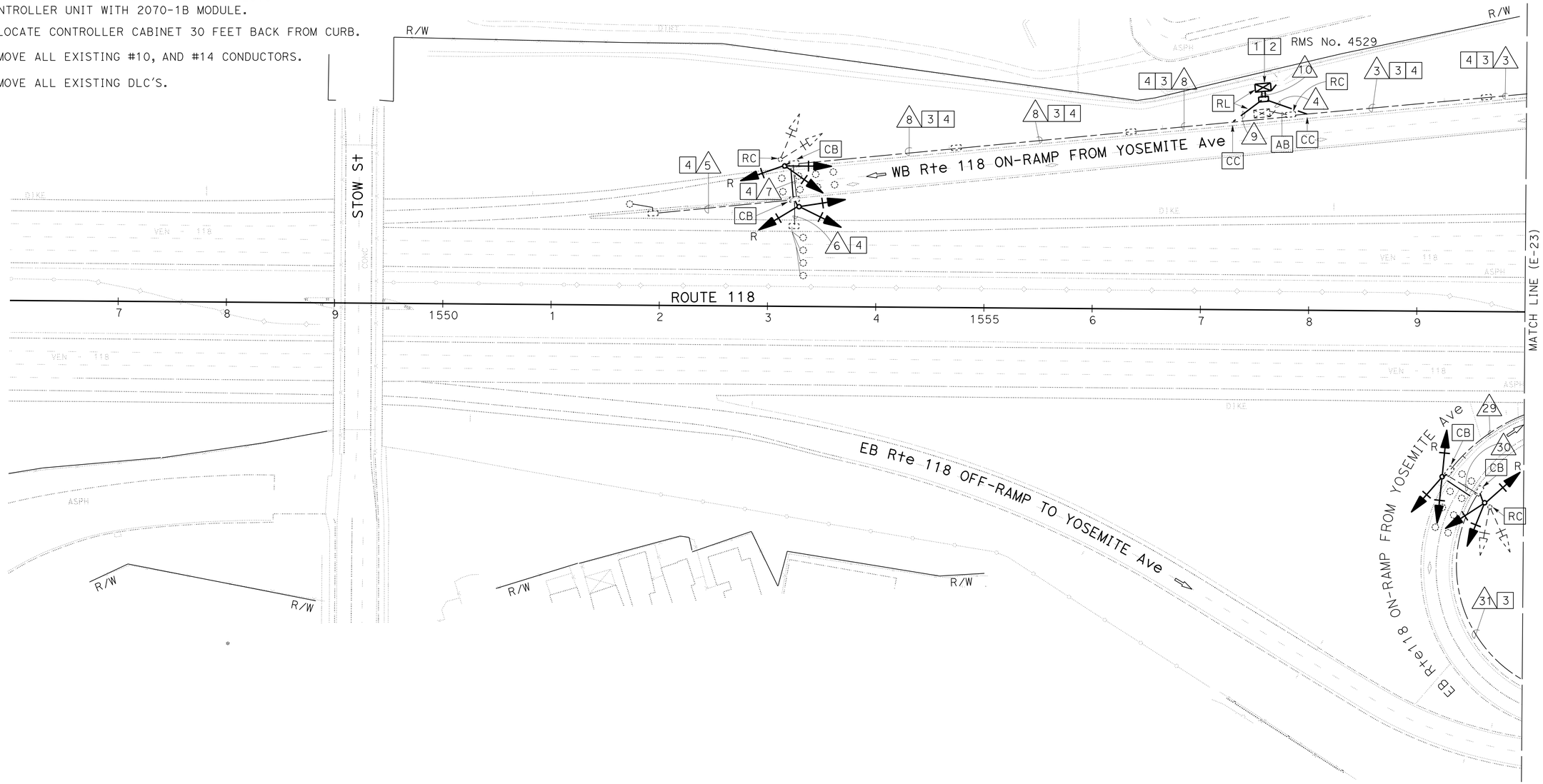
LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

2 RELOCATE CONTROLLER CABINET 30 FEET BACK FROM CURB.

3 REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

4 REMOVE ALL EXISTING DLC'S.



MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	66	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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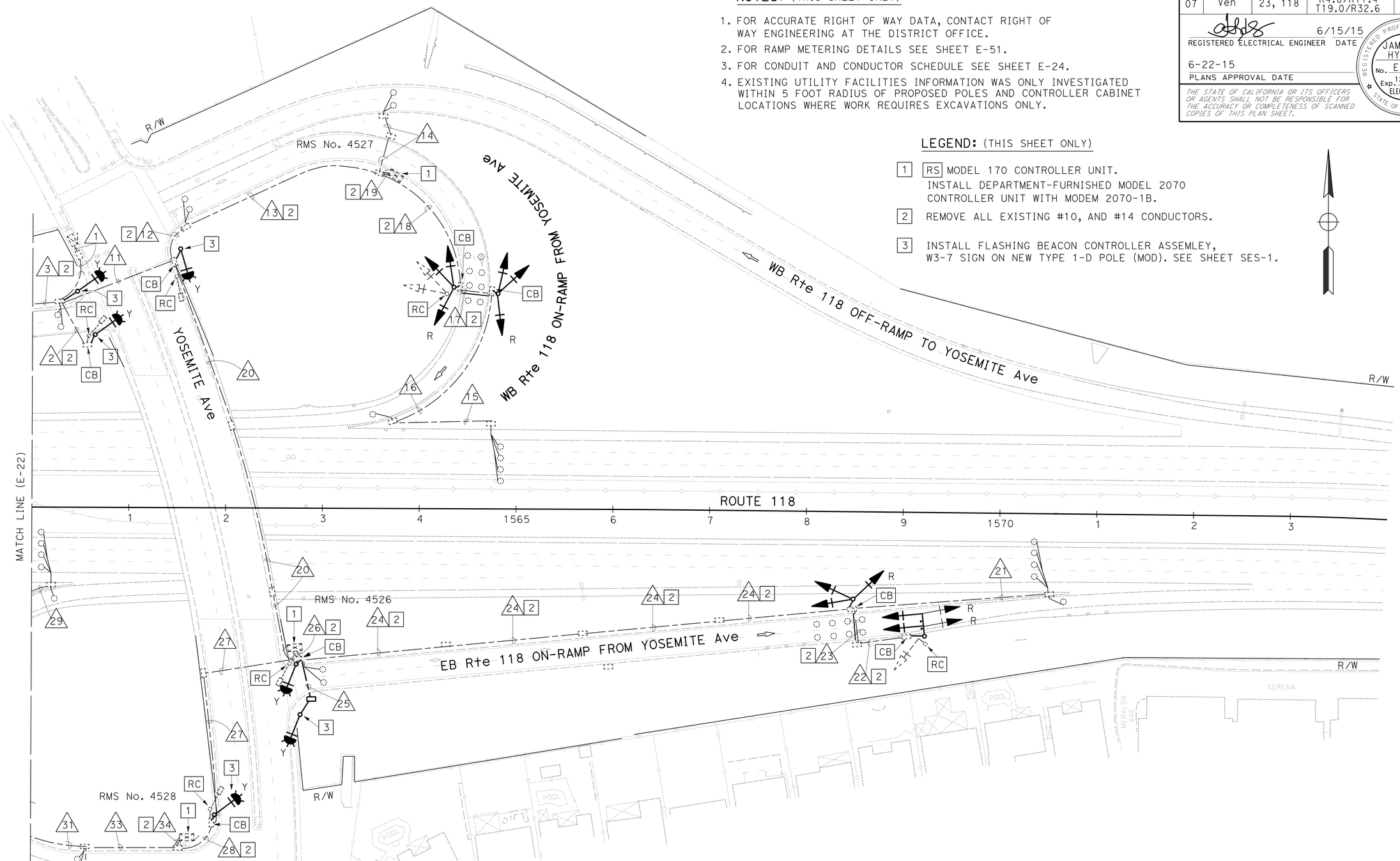
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. FOR CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-24.
4. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT. INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH MODEM 2070-1B.

2 REMOVE ALL EXISTING #10, AND #14 CONDUCTORS.

3 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.



MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-23

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	67	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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CONDUCTOR AND CONDUIT SCHEDULE (SHEETS E-22 & E-23)

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
5CSC	RAMP SIGNAL							1(N)	2(N)	2(N)	2(N)							1(N)	2(N)	2(N)
5CSC	FLASING BEACON SIGNAL		1(N)	2(N)	2(N)						2(N)		1(N)	1(N)						1(N)
#4	SERVICE	4										4								
#6	SERVICE	4		2	2						2	2	2	2						2
#8	TELEPHONE DEMARCATION																			
DLC	OFF RAMP DETECTOR														2					2
DLC	QUEUE DETECTOR			2(N)	2(N)						2(N)			1, 1(N)						1, 1(N)
DLC	DEMAND DETECTOR							1(N)	2(N)	2(N)	2(N)							1(N)	1, 1(N)	1, 1(N)
DLC	PASSAGE DETECTOR							1(N)	2(N)	2(N)	2(N)							1	2	2
DLC	MAIN LINE DETECTOR						4(N)	4(N)	4(N)	4(N)	4(N)					4	4	4	4	4
DLC	ON RAMP DETECTOR					1(N)			1(N)	1(N)	1(N)						1	1	1	1
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		2"C	1½"C	2"C	2"C(N)	1½"C	2"C	2"C	2½"C	2½"C(N)	2-3"C(N)	2"C	2"C	2"C	1½"C	2"C	2"C	2"C	2½"C	2-3"C

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE														
		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
5CSC	RAMP SIGNAL			1(N)	1(N)	2(N)		2(N)				1(N)	2(N)		2(N)	2(N)
5CSC	FLASING BEACON SIGNAL						1(N)	2(N)		1(N)						1(N)
#4	SERVICE	4						2	2	2						2
#6	SERVICE															
#8	TELEPHONE DEMARCATION															
DLC	OFF RAMP DETECTOR															
DLC	QUEUE DETECTOR							2						2	2	2
DLC	DEMAND DETECTOR				1(N)	1, 1(N)		1, 1(N)				1(N)	1, 1(N)		1, 1(N)	1, 1(N)
DLC	PASSAGE DETECTOR				1	2		2				1	2		2	2
DLC	MAIN LINE DETECTOR		4			4		4			4	4	4		4	4
DLC	ON RAMP DETECTOR		1			1		1			1	1	1		1	1
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1½"C	2"C	1½"C	1½"C	2"C	2"C	2½"C	1½"C	1½"C	1"C	2"C	2"C	1"C	2"C	2-3"C

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

MODIFY RAMP METERING SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

E-24

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: FARID REKABI
CHECKED BY: JAMSHED HYDER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	68	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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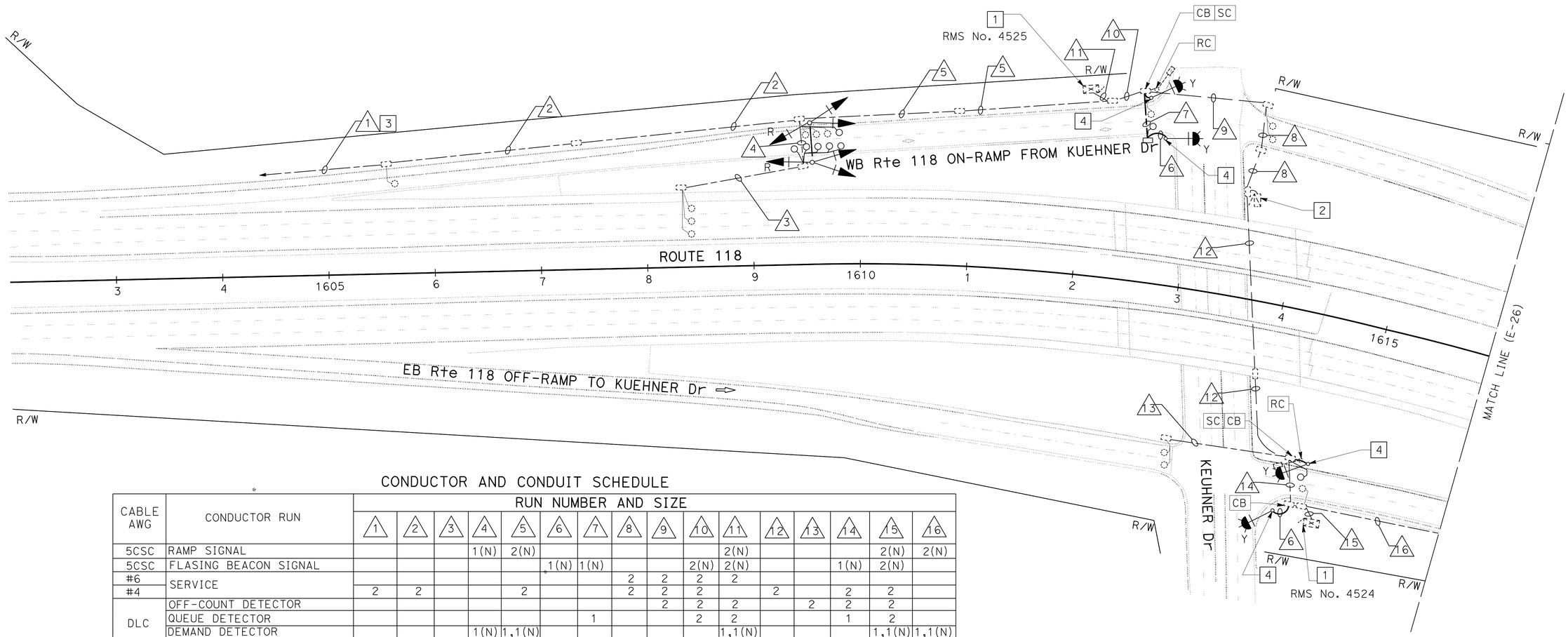
NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.

LEGEND: (THIS SHEET ONLY)

1. RS MODEL 170 CONTROLLER UNIT.
   INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.
2. 120/240 V TYPE II-CF SERVICE EQUIPMENT ENCLOSURE.
   Ctid No. 07-52-118-R030.529
   ADDRESS: 26058 1/2 KUEHNER DRIVE
3. TO TRAFFIC MONITORING STATION APPROX 1,400 FEET.
4. INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5CSC	RAMP SIGNAL				1(N)	2(N)						2(N)				2(N)	2(N)
5CSC	FLASING BEACON SIGNAL						1(N)	1(N)			2(N)	2(N)			1(N)	2(N)	
#6	SERVICE								2	2	2	2					
#4	SERVICE	2	2			2			2	2	2		2		2	2	
DLC	OFF-COUNT DETECTOR									2	2	2		2	2	2	
DLC	QUEUE DETECTOR							1			2	2			1	2	
DLC	DEMAND DETECTOR				1(N)	1,1(N)						1,1(N)				1,1(N)	1,1(N)
DLC	PASSAGE DETECTOR				1(N)	1,1(N)						1,1(N)				1,1(N)	1,1(N)
DLC	ON-COUNT DETECTOR		1		1(N)	1,1(N)						1,1(N)				1,1(N)	1,1(N)
DLC	MAINLINE DETECTOR			3	3	3						3				3	3
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1 1/2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2-3"	2"	2"	2"	2-3"	2"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	69	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

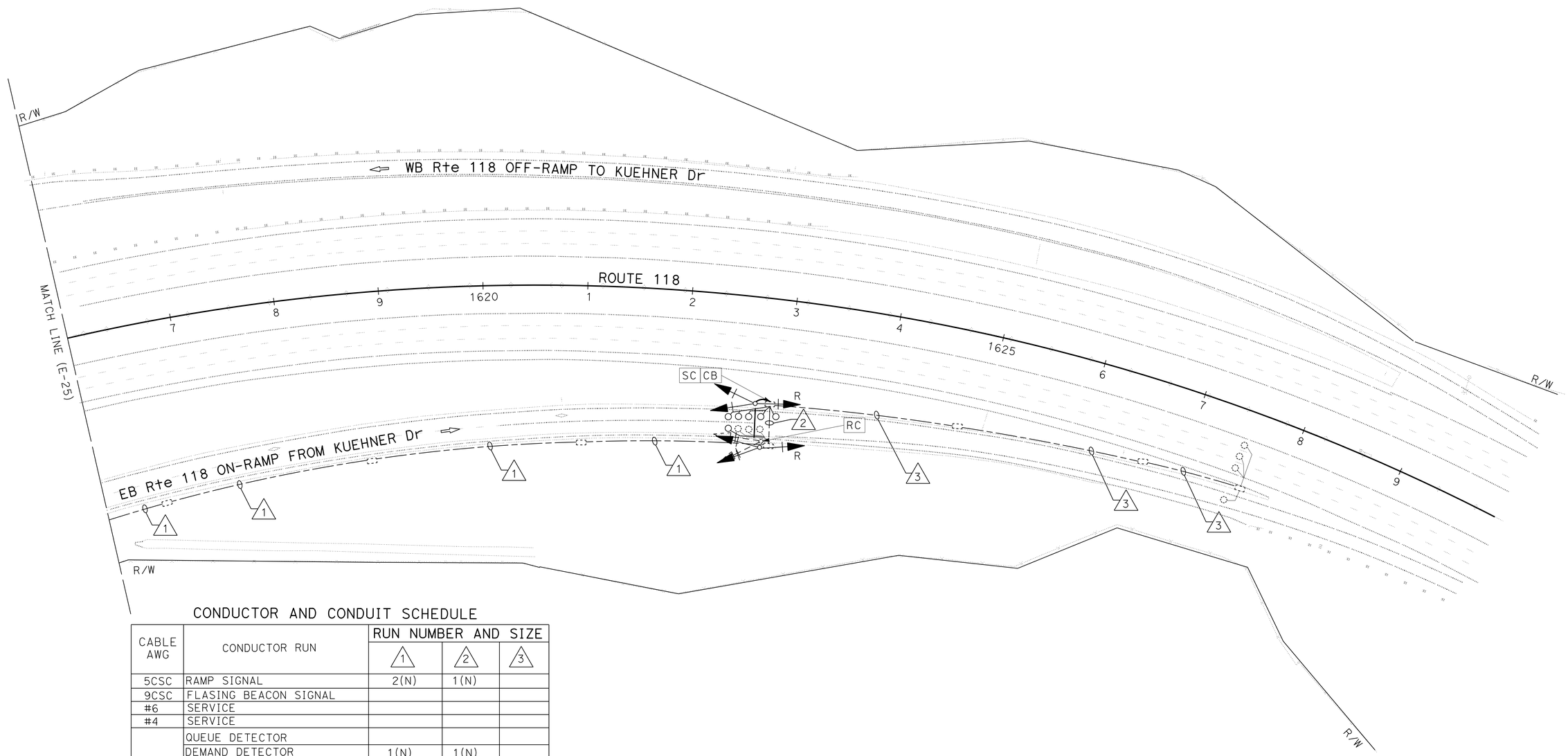
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE		
		1	2	3
5CSC	RAMP SIGNAL	2(N)	1(N)	
9CSC	FLASING BEACON SIGNAL			
#6	SERVICE			
#4	SERVICE			
DLC	QUEUE DETECTOR			
	DEMAND DETECTOR	1(N)	1(N)	
	PASSAGE DETECTOR	1(N)	1(N)	
	ON-COUNT DETECTOR	1,1(N)	1,1(N)	1
	MAINLINE DETECTOR	3	3	3
#8	GROUND	1(N)	1(N)	1(N)
CONDUIT SIZE		2"	2"	2"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	70	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JAMSHED HYDER — No. E18656 — Exp. 12/31/16 — 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.

NOTES: (THIS SHEET ONLY)

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2. FOR RAMP METERING DETAILS SEE SHEET E-51.
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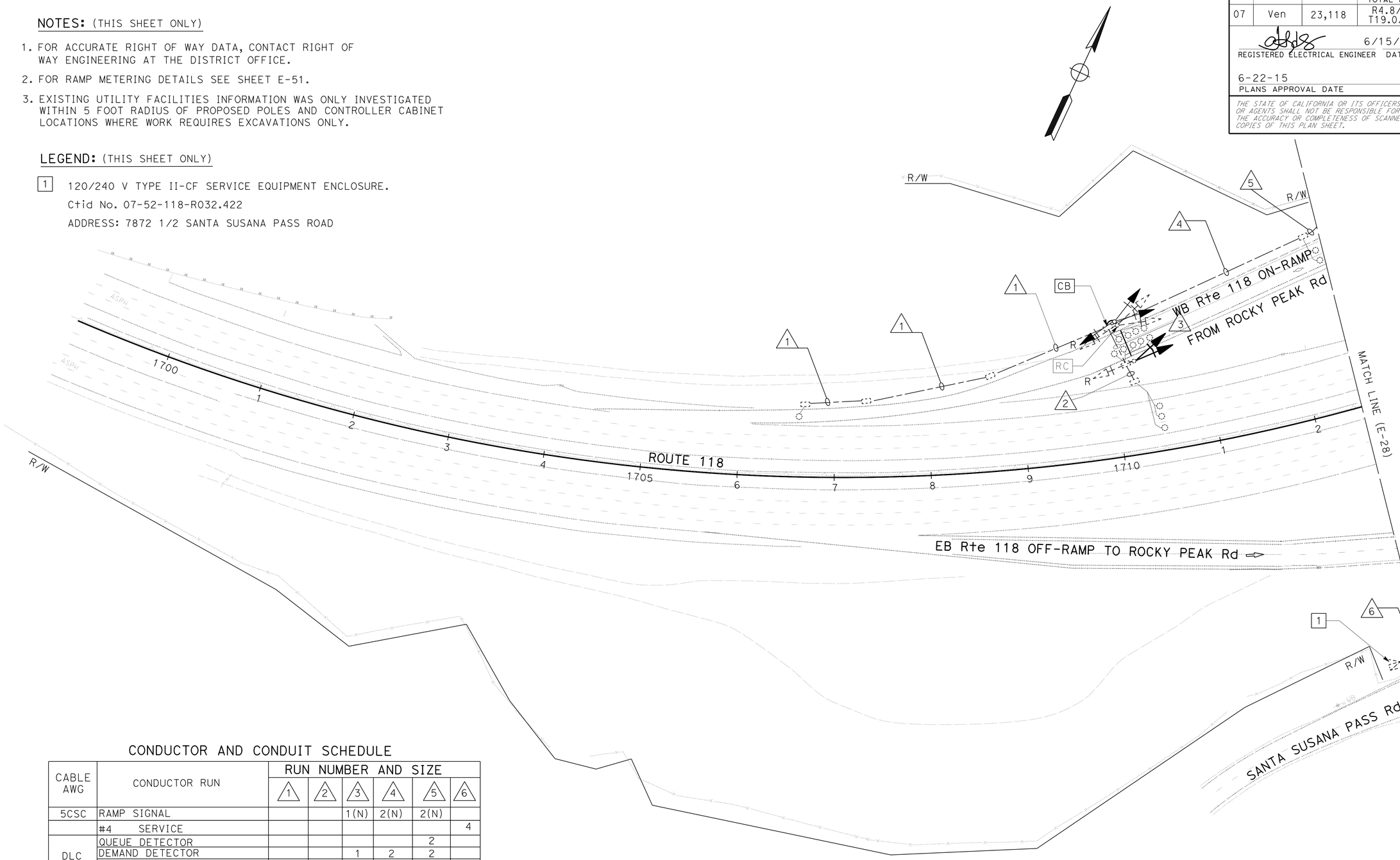
LEGEND: (THIS SHEET ONLY)

[1] 120/240 V TYPE II-CF SERVICE EQUIPMENT ENCLOSURE.
Ctid No. 07-52-118-R032.422
ADDRESS: 7872 1/2 SANTA SUSANA PASS ROAD



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE					
		1	2	3	4	5	6
5CSC	RAMP SIGNAL			1(N)	2(N)	2(N)	
	#4 SERVICE						4
DLC	QUEUE DETECTOR					2	
	DEMAND DETECTOR			1	2	2	
	PASSAGE DETECTOR			1	2	2	
	ON-COUNT DETECTOR	1		1	2	2	
	MAINLINE DETECTOR		3	3	3	3	
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		1 1/2"	2"	2"	2"	2"	2"

ALL CONDUCTORS AND CONDUITS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: JAMSHED HYDER
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	71	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

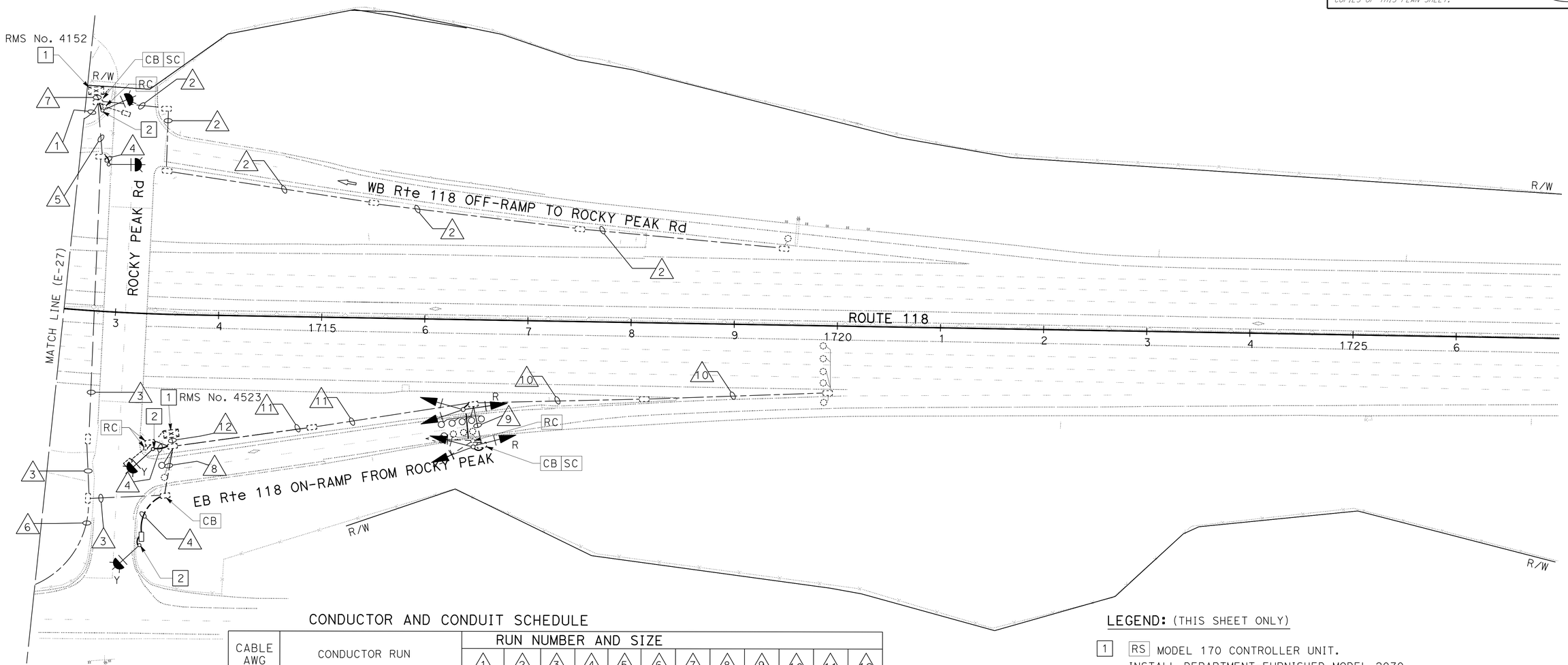
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 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.

NOTES: (THIS SHEET ONLY)

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR RAMP METERING DETAILS SEE SHEET E-51.
3. EXISTING UTILITY FACILITIES INFORMATION WAS ONLY INVESTIGATED WITHIN 5 FOOT RADIUS OF PROPOSED POLES AND CONTROLLER CABINET LOCATIONS WHERE WORK REQUIRES EXCAVATIONS ONLY.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NUMBER AND SIZE											
		1	2	3	4	5	6	7	8	9	10	11	12
5CSC	RAMP SIGNAL	2(N)						2(N)		1(N)		2(N)	2(N)
5CSC	FLASING BEACON SIGNAL				1(N)	1(N)		2(N)	1(N)				2(N)
#4	SERVICE			2		2	4	2	2				2
DLC	OFF-COUNT DETECTOR		1					1					
	QUEUE DETECTOR	2						2					2
	DEMAND DETECTOR	2						2		1		2	2
	PASSAGE DETECTOR	2						2		1		2	2
	ON-COUNT DETECTOR	2						2			1	1	2
	MAINLINE DETECTOR	4						4			4	4	4
#8	GROUND	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)	1(N)
CONDUIT SIZE		2"	11/2"	2"	1"(N)	2"	2"	2-3"	2"	2"	2"	2"	2-3"

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N): NEW

LEGEND: (THIS SHEET ONLY)

1 RS MODEL 170 CONTROLLER UNIT.
INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER UNIT WITH 2070-1B MODULE.

2 INSTALL FLASHING BEACON CONTROLLER ASSEMLEY, W3-7 SIGN ON NEW TYPE 1-D POLE (MOD). SEE SHEET SES-1.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY RAMP METERING SYSTEM

SCALE: 1"=50'

E-28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO
CALCULATED-DESIGNED BY: JAMSHED HYDER
CHECKED BY: OSWALD ELIZONDO
REVISED BY / DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	72	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.

ABBREVIATIONS: (SHEETS E-30 TO E-57)

#	NUMBER
72SMFO	72 SINGLEMODE FIBER OPTIC CABLE
12SMFO	12 SINGLEMODE FIBER OPTIC CABLE
48SMFO	48 SINGLEMODE FIBER OPTIC CABLE
50P22	50 PAIR 22 AWG TWISTED PAIR CABLE
AVC	AUTOMATIC VEHICLE CLASSIFICATION
AC	ALTERNATING CURRENT
CN	CABLE NODE
CAT-5E	ETHERNET CABLE PER ANSI/TIA-568 STANDARD
COAX	COAXIAL CABLE
DN	DATA NODE
ES1	ETHERNET SWITCH TYPE 1
ES2	ETHERNET SWITCH TYPE 2
FDU	FIBER DISTRIBUTION UNIT
FOTM	FIBER OPTIC TRAFFIC MODEM
FOSE	FIBER OPTIC SPLICE ENCLOSURE
GBIC	GIGABIT INTERFACE CONVERTER
HT	HIGH TEMPERATURE
ID	IDENTIFICATION NUMBER
IP	INTERNET PROTOCOL
LARTMC	LOS ANGLELES REGIONAL TRANSPORTATION MANAGEMENT CENTER
NHD	NORTH HOLLYWOOD
LAX	LOS ANGELES AIRPORT
P22	PAIR 22 AWG
PDA	POWER DISTRIBUTION ASSEMBLY
PR	PAIR
RG-6A/U	COAXIAL CABLE
RMS	RAMP METERING SYSTEM
SFP	SMALL FORM FACTOR PLUGGABLE TRANSCEIVER (LX OR ZX TYPE)
SMFO	SINGLEMODE FIBER OPTIC CABLE
T1	1.544 MEGABIT PER SECOND
TPC	TWISTED PAIR CABLE
TOS	TRAFFIC OPERATION SYSTEM
TS	TEMPERATURE SENSOR
TSC	TERMINAL SERVICE CARD
TX	TRANSMIT OR TRANSMITTER
VD	VIDEO DECODER
VE	VIDEO ENCODER
W/GFI	WITH GROUND FAULT INTERRUPTER

LEGEND: (SHEETS E-30 TO E-57)

NEW

V	SPLICE VAULT
CCTV	CCTV CABINET
V S	SPLICE VAULT WITH SPLICE CLOSURE
	FIBER OPTIC CABLE
	SURGE PROTECTOR
HT	HIGH TEMPERATURE RELAY COIL
12	WIRE SIZE, IF NOT INDICATED SHALL BE #12 AWG
F	FAN
L	INDICATOR LAMP
	THERMOSTATIC CONTROL
THERMO	ADJUSTABLE CALIBRATED THERMOSTAT
R	DUPLEX RECEPTACLE
	GROUNDING ELECTRODE

NOTES: (E-30 THROUGH E-57)

1. MAIN LINE CONDUITS MUST ENTER PULL BOXES ON THE SHORT SIDE OF THE PULL BOX.
2. EXISTING IRRIGATION SYSTEMS ARE NOT SHOWN FOR CLARITY.
3. NEW FIBER OPTIC COMMUNICATION CONDUIT RUNS MUST HAVE A TRACER WIRE.
4. NUMBER OF CONDUITS IN SOME COMMUNICATION RUNS MAY NOT BE SHOWN FOR CLARITY. THE CONTRACTOR MUST REROUTE IMPACTED CONDUITS AND REPLACE ITS CONTENTS AS NOTED ON THE PLANS.
5. CONDUITS INSTALLED ACROSS NEW WALLS MUST BE EITHER CORED THROUGH THE WALL OR INSTALLED DURING SOUNDWALL CONSTRUCTION.
6. PULL BOXES INSTALLED IN THE SHOULDER MUST BE TRAFFIC RATED.
7. INSTALL CONTROLLER CABINETS OR CCTV POLES A MINIMUM OF 30 FEET FROM ETW, OR 6 FEET BEHIND METAL BEAM GUARD RAILING.

(ABBREVIATIONS, LEGEND AND NOTES)

MODIFY COMMUNICATION SYSTEM

E-29

REVISED BY | DATE REVISED
HOSAKERE K. ANANTH | JACQUELINE C. TAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	73	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

PLANS APPROVAL DATE 6-22-15

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.

NOTES : (THIS SHEET ONLY)

1. DE-ENERGIZE POWER SERVICE TO EACH LOCATION PRIOR TO INSTALLING THE COMPONENTS AS A SAFETY PRECAUTION.
2. ALL ITEMS A THROUGH J REFER TO WORK INSIDE THE EXISTING RMS CONTROLLER CABINET.

LEGEND: (THIS SHEET ONLY)

A - INSTALL TERMINAL SERVER CARD
B - INSTALL CAT 5E
C - INSTALL TYPE 1 SWITCH WITH TWO LX-SFP
D - RS FIBER OPTIC TRAFFIC MODEM.
E - INSTALL VIDEO ENCODER
F - INSTALL TYPE 2 SWITCH WITH 2-LX AND 2-ZX SFP
G - INSTALL FDU
H - INSTALL FOSE
I - INSTALL TEMPERATURE SENSOR
J - RS EXISTING 170 AND INSTALL 2070 CONTROLLER WITH 2070-1B MODULE.

ROUTE 23
LOCATIONS OF CONSTRUCTION

LOC. No.	LOCATION ID	DIR	POST MILE	DESCRIPTION OF LOCATION [1]	SERVICE EQUIPMENT ENCLOSURE LOCATION [1]	A	B	C	D	E	F	G	H	I	J	REMARKS
1	RMS 4744	SB	4.89	JANSS Rd 1	Ctid 07-52-23-R05.170, 1275½ JANSS ROAD			1	1					1	1	
2	RMS 4752	SB	7.01	SUNSET HILLS Blvd 1	Ctid 07-52-23-R07.140, 2002½ SUNSET HILLS Blvd			1	1					1	1	
3	RMS 4755	NB	7.37	SUNSET HILLS Blvd 2	Ctid 07-52-23-R07.150, 1991½ SUNSET HILLS Blvd			1	1					1	1	
4	RR114	EB	11.40	NEW LOS ANGELES Ave	Ctid 07-52-23-R060.986, 1403½ NEW LOS ANGELES Ave				1		1			1		
					SUBTOTAL QUANTITIES (THIS SHEET):	X	X	3	4	X	1	X	X	4	3	

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-29

E-30

REVISED BY | DATE REVISED
HOSAKERE K. ANANTH | JACQUELINE C. TAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	74	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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NOTES : (THIS SHEET ONLY)
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2. ALL ITEMS A THROUGH J REFER TO WORK INSIDE THE EXISTING CONTROLLER CABINET.

LEGEND: (THIS SHEET ONLY)

A - INSTALL TERMINAL SERVER CARD
B - INSTALL CAT 5E
C - INSTALL TYPE 1 SWITCH WITH TWO LX-SFP
D - RS FIBER OPTIC TRAFFIC MODEM.
E - INSTALL VIDEO ENCODER
F - INSTALL TYPE 2 SWITCH WITH 2-LX AND 2-ZX SFP
G - INSTALL FDU
H - INSTALL FOSE
I - INSTALL TEMPERATURE SENSOR
J - RS EXISTING 170 AND INSTALL 2070 CONTROLLER WITH 2070-1B MODULE.

ROUTE 118
LOCATIONS OF CONSTRUCTION

LOC. No.	LOCATION ID	DIR	POST MILE	DESCRIPTION OF LOCATION	SERVICE EQUIPMENT ENCLOSURE LOCATION	A	B	C	D	E	F	G	H	I	J	REMARKS
1	CN RR 114	EB	19.0	NEW LOS ANGELES AVENUE	1401½ New Los Angeles Ave						1	1		1		
2	RMS 4574	WB	19.0	WB ON RAMP FROM PRINCETON	6404½ Princeton Ave ; Ctid 07-52-118-0-019.753			1	1					1	1	
3	RMS 4575	EB	19.7	EB ON RAMP FROM PRINCETON	6404¾ Princeton Ave ; Ctid 07-52-118-0-19.623			1	1					1	1	
4	RMS 4576	WB	19.87	WB ON RAMO FROM COLLINS	6408½ Collins Dr. ; Ctid 07-52-118-0-020.601			1	1					1	1	
5	RMS 4577	EB	19.9	EB ON RAMP FROM COLLINS	6408½ Collins Dr. ; Ctid 07-52-118-0-020.601			1	1					1	1	
6	CMS 119	WB	21.40	COLLINS Dr	6408¾ N.Melray St. : Ctid 07-52-118-T-0-020.224	1	1	1	1					1	1	
7	IP NODE	WB	21.40	COLLINS Dr	6408¾ N.Melray St. : Ctid 07-52-118-T-0-020.224			1		1	1	1		1		
8	CCTV RR214	WB	21.40	COLLINS Dr	6408½ N.Melray St. : Ctid 07-52-118-T-0-020.222		1	1	1					1		
9	TMS 2520	EB	20.5	DUMPSITE ACCESS Road	6408½ N.Melray St. : Ctid 07-52-118-T-0-020.222			1	1					1	1	
10	TMS 2528	EB	21.5	ALMOS CANYON ACCESS Road	6408½ N.Melray St. : Ctid 07-52-118-T-0-020.222			1	1					1	1	
11	TMS 2550	EB	22.43	DUMPSITE ACCESS Road	2787½ Madera Rd. : Ctid 07-52-118-R-023.780			1	1					1	1	
12	RMS 4818	EB	22.9	MADERA 1	2787½ Madera Rd. : Ctid 07-52-118-R-023.780			1	1					1	1	
13	RMS 4819	WB	23.1	MADERA	2787½ Madera Rd. : Ctid 07-52-118-R-023.780			1	1					1	1	
14	RMS 4550	EB	23.2	MADERA 2	2787½ Madera Rd. : Ctid 07-52-118-R-023.780			1	1					1	1	
15	TMS 2628	EB	23.4	MADERA	2787½ Madera Rd. : Ctid 07-52-118-R-023.780			1	1					1	1	
16	RMS 4549	WB	23.62	FIRST 1	2481½ First street : Ctid 07-52-118-R-023.635			1	1					1	1	
17	RMS 4548	EB	23.78	FIRST 1	2481½ First street : Ctid 07-52-118-R-023.635			1	1					1	1	
18	RMS 4547	WB	23.85	FIRST 2	2481½ First street : Ctid 07-52-118-R-023.635			1	1					1	1	
19	RMS 4546	EB	23.97	FIRST 2	2481½ First street : Ctid 07-52-118-R-023.635			1	1					1	1	
20	TMS 2629	EB	24.2	CALDWELL	2572½ Chandler Ave: Ctid 07-52-118-R-024.149			1	1					1	1	
21	RMS 4545	WB	24.67	ERRINGER 1	Erringer Road: Ctid 07-52-118-0-024.0811			1	1					1	1	
22	RMS 4544	EB	24.78	ERRINGER 2	Erringer Road: Ctid 07-52-118-0-024.0811			1	1					1	1	
23	RMS 4543	WB	24.85	ERRINGER 2	Erringer Road: Ctid 07-52-118-0-025.8310			1	1					1	1	
24	RMS 4542	EB	24.97	ERRINGER 2	Erringer Road: Ctid 07-52-118-0-025.8310			1	1					1	1	
25	TMS 2621	WB	25.1	ATHERWOOD	2300½ Chesterton St ; Ctid 07-52-118-R-025.100			1	1					1	1	
26	RMS 4541	WB	25.67	SYCAMORE 1	2682½ Sycamore Dr : Ctid 07-52-118-R-025.831			1	1					1	1	
27	RMS 4540	EB	25.78	SYCAMORE 1	2682½ Sycamore Dr : Ctid 07-52-118-R-025.831			1	1					1	1	
28	RMS 4539	WB	25.86	SYCAMORE 2	2682½ Sycamore Dr : Ctid 07-52-118-R-025.831			1	1					1	1	
29	RMS 4538	EB	25.98	SYCAMORE 2	2682½ Sycamore Dr : Ctid 07-52-118-R-025.831			1	1					1	1	
30	TMS 2622	WB	26.35	GALENA	2131½Darwin Ave; Ctid 07-53-005-0-019.300			1	1					1	1	
31	TMS 2623	EB	26.8	COPPERFIELD	315½Ave 21; Ctid 07-53-005-0-019.580			1	1					1	1	
32	RMS 4537	WB	27.16	TAPO CANYON 1	2608½Tapo Canyon Road; Ctid 07-52-118-R-027.335			1	1					1	1	
33	RMS 4536	EB	27.2	TAPO CANYON 1	2608½Tapo Canyon Road; Ctid 07-52-118-R-027.335			1	1					1	1	
34	RMS 4535	WB	27.35	TAPO CANYON 2	2608½Tapo Canyon Road; Ctid 07-52-118-R-027.335			1	1					1	1	
35	RMS 4534	EB	27.4	TAPO CANYON 2	2608½Tapo Canyon Road; Ctid 07-52-118-R-027.335			1	1					1	1	
36	TMS 2624	EB	27.81	TAPO Street	2659½Tapo St; Ctid 07-52-118-R-028.321			1	1					1	1	
37	AVC 782	EB	27.9	TAPO Street	2659½Tapo St; Ctid 07-52-118-R-028.321			1	1			1		1	1	
38	TMS 2625	WB	28.3	KADOTA	2581¾Kadota St; Ctid 07-052-118-R-027.842			1	1					1	1	
					SUBTOTAL QUANTITIES (THIS SHEET):	1	2	37	36	1	2	3	-	38	35	

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-29

MODIFY COMMUNICATION SYSTEM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	75	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.

NOTES : (THIS SHEET ONLY)

1. DE-ENERGIZE POWER SERVICE TO EACH LOCATION PRIOR TO INSTALLING THE COMPONENTS AS A SAFETY PRECAUTION.
2. ALL ITEMS A THROUGH J REFER TO WORK INSIDE THE EXISTING CONTROLLER CABINET.

LEGEND: (THIS SHEET ONLY)

A - INSTALL 170 TERMINAL SERVER CARD
B - INSTALL CAT 5E
C - INSTALL TYPE 1 SWITCH WITH TWO LX-SFP
D - RS FIBER OPTIC TRAFFIC MODEM.
E - INSTALL VIDEO ENCODER
F - INSTALL TYPE 2 SWITCH WITH 2-LX AND 2-ZX SFP
G - INSTALL FDU
H - INSTALL FOSE
I - INSTALL TEMPERATURE SENSOR
J - RS EXISTING 170 AND INSTALL 2070 CONTROLLER WITH 2070-1B MODULE.

ROUTE 118
LOCATIONS OF CONSTRUCTION

LOC. No.	LOCATION ID	DIR	POST MILE	DESCRIPTION OF LOCATION	SERVICE EQUIPMENT ENCLOSURE LOCATION[1]	A	B	C	D	E	F	G	H	I	J	REMARKS
39	RMS 4533	WB	28.67	STEARNS St 1	2581½ Stearns Street; Ctid 07-052-118-R-028.841			1	1					1	1	
40	RMS 4532	EB	28.7	STEARNS St 1	2581½ Stearns Street; Ctid 07-052-118-R-028.841			1	1					1	1	
41	RMS 4531	WB	28.86	STEARNS St 2	2581½ Stearns Street; Ctid 07-052-118-R-028.841			1	1					1	1	
42	RMS 4530	EB	28.9	STEARNS St 2	2581½ Stearns Street; Ctid 07-052-118-R-028.841			1	1					1	1	
43	CCTV RR300	WB	30.00	STEARNS St	2498½ Stearns street		1	1	1	1				1		
44	DN RR300	WB	28.90	STEARNS St	2498½ Stearns street		1				1	1	1	1		
45	TMS 2626	WB	29.3	STOW St	2400½ Stow street; Ctid 07-52-118-R-029.323			1	1					1	1	
46	RMS 4529	WB	29.36	YOSEMITE Ave 1	2605½ Yosemite Ave: SCE Vault No.5190615			1	1					1	1	
47	RMS 4528	EB	29.53	YOSEMITE Ave 1	2605½ Yosemite Ave: SCE Vault No.5190615			1	1					1	1	
48	RMS 4527	WB	29.59	YOSEMITE Ave 2	2605½ Yosemite Ave: SCE Vault No.5190615			1	1					1	1	
49	RMS 4526	EB	29.73	YOSEMITE Ave 2	2605½ Yosemite Ave: SCE Vault No.5190615			1	1					1	1	
50	TMS 2627	WB	29.96	COCHRAN St	2605½ Yosemite Ave: SCE Vault No.5190615			1	1					1	1	
51	CCTV RR313	EB	31.30	KUEHNER Dr	2262¾ Kuehner Dr: PP No.1754315E		1	1	1	1	1			1		
52	CMS 132	EB	30.20	KUEHNER Dr	2262¾ Kuehner Dr: PP No.1754315E	1	1	1	1					1	1	
53	RMS 4525	WB	30.38	KUEHNER Dr	2262¾ Kuehner Dr: PP No.1754315E		1	1	1					1	1	
54	RMS 4524	EB	30.82	KUEHNER Dr	2262¾ Kuehner Dr: PP No.1754315E			1	1					1	1	
55	TMS 2556	EB	31.32	KUEHNER Dr	26058½ Kuehner Dr; Ctid 07-52-118-R-030.529			1	1					1	1	
56	RMS 4152	WB	32.48	ROCKY PEAK Rd 1	26058½ Kuehner Dr; Ctid 07-52-118-R-030.529			1	1					1	1	
57	TMS 2671	EB	32.5	ROCKY PEAK Rd	26058½ Kuehner Dr; Ctid 07-52-118-R-030.529			1	1					1	1	
58	RMS 4523	EB	32.53	ROCKY PEAK Rd 2	26058½ Kuehner Dr; Ctid 07-52-118-R-030.529			1	1		1	1		1	1	
59	DN SV011	EB	32.6	IVERSON Rd	Iverson Road			1	1					1		
60	TMS 2626	EB	32.6	IVERSON Rd	Iverson Road			1	1					1	1	
					SUBTOTAL QUANTITIES (THIS SHEET):	1	5	21	21	2	3	2	1	22	18	

MODIFY COMMUNICATION SYSTEM

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGENDS, ABBREVIATIONS AND GENERAL NOTES SEE SHEET E-29

E-32

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	76	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

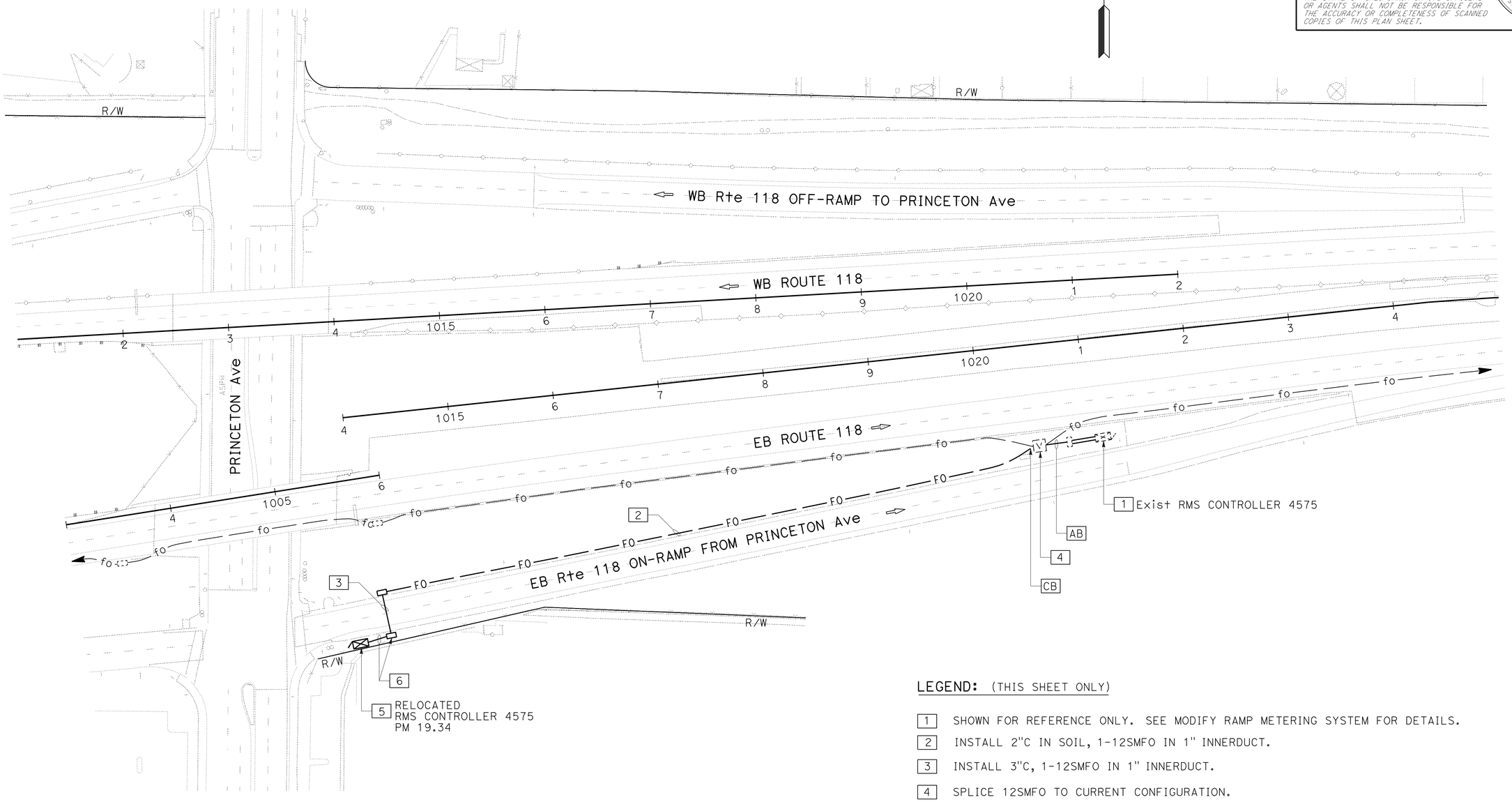
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN — No. E15611 — Exp. 12/31/15 — 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:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. INSTALL 2"C IN SOIL, 1-12SMFO IN 1" INNERDUCT.
3. INSTALL 3"C, 1-12SMFO IN 1" INNERDUCT.
4. SPLICE 12SMFO TO CURRENT CONFIGURATION.
5. SEE MODIFY RAMP METERING SYSTEM FOR EXACT RELOCATION OF EXISTING RMS CABINET 4575.
6. INSTALL 2"C, 1-12SMFO IN 1" INNERDUCT.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

E-33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	77	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

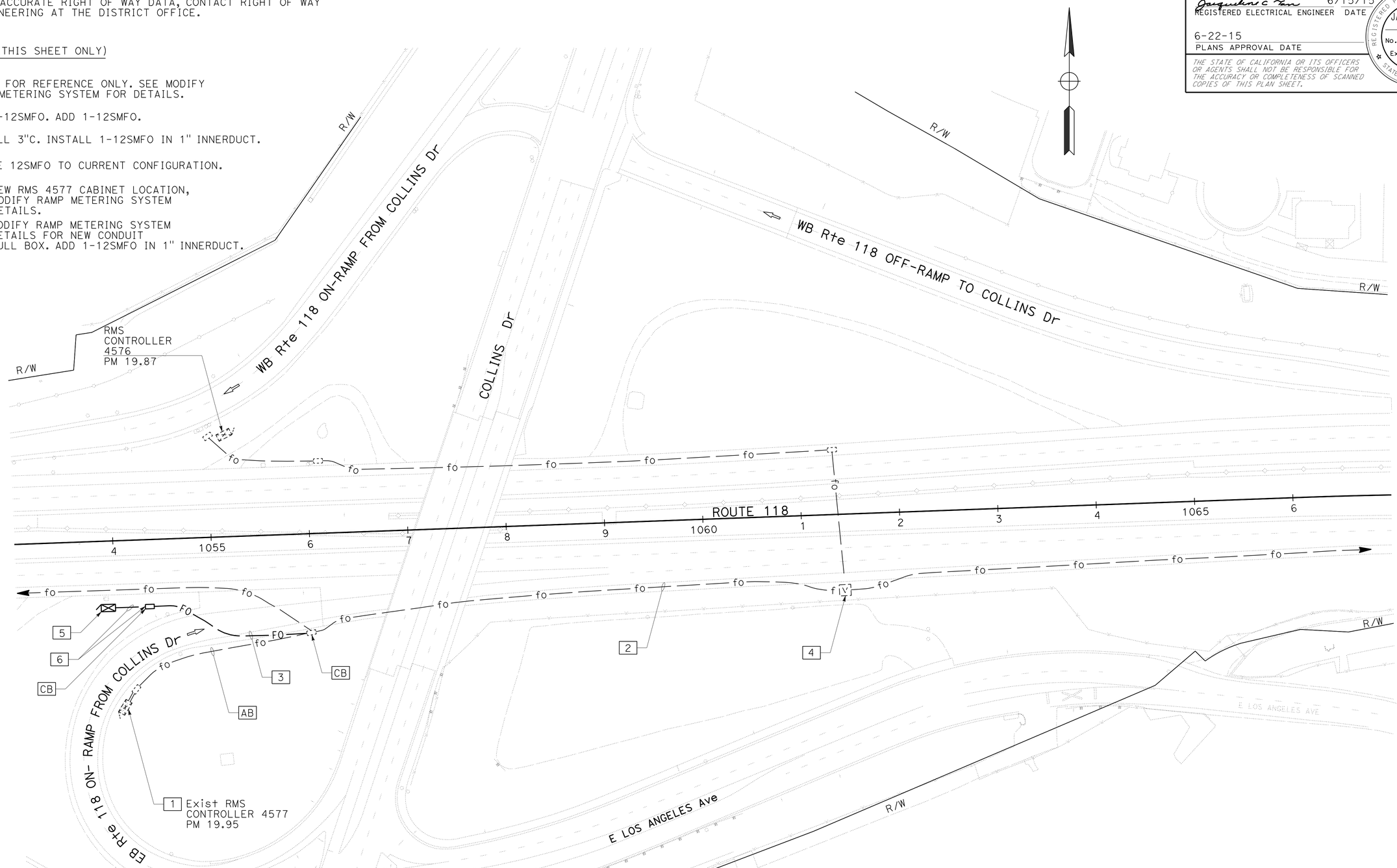
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. RC 1-12SMFO. ADD 1-12SMFO.
3. INSTALL 3"C. INSTALL 1-12SMFO IN 1" INNERDUCT.
4. SPLICE 12SMFO TO CURRENT CONFIGURATION.
5. FOR NEW RMS 4577 CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO IN 1" INNERDUCT.



APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

E-34

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN

CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN

REVISED BY
DATE REVISED

LAST REVISION 03-24-15 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	78	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

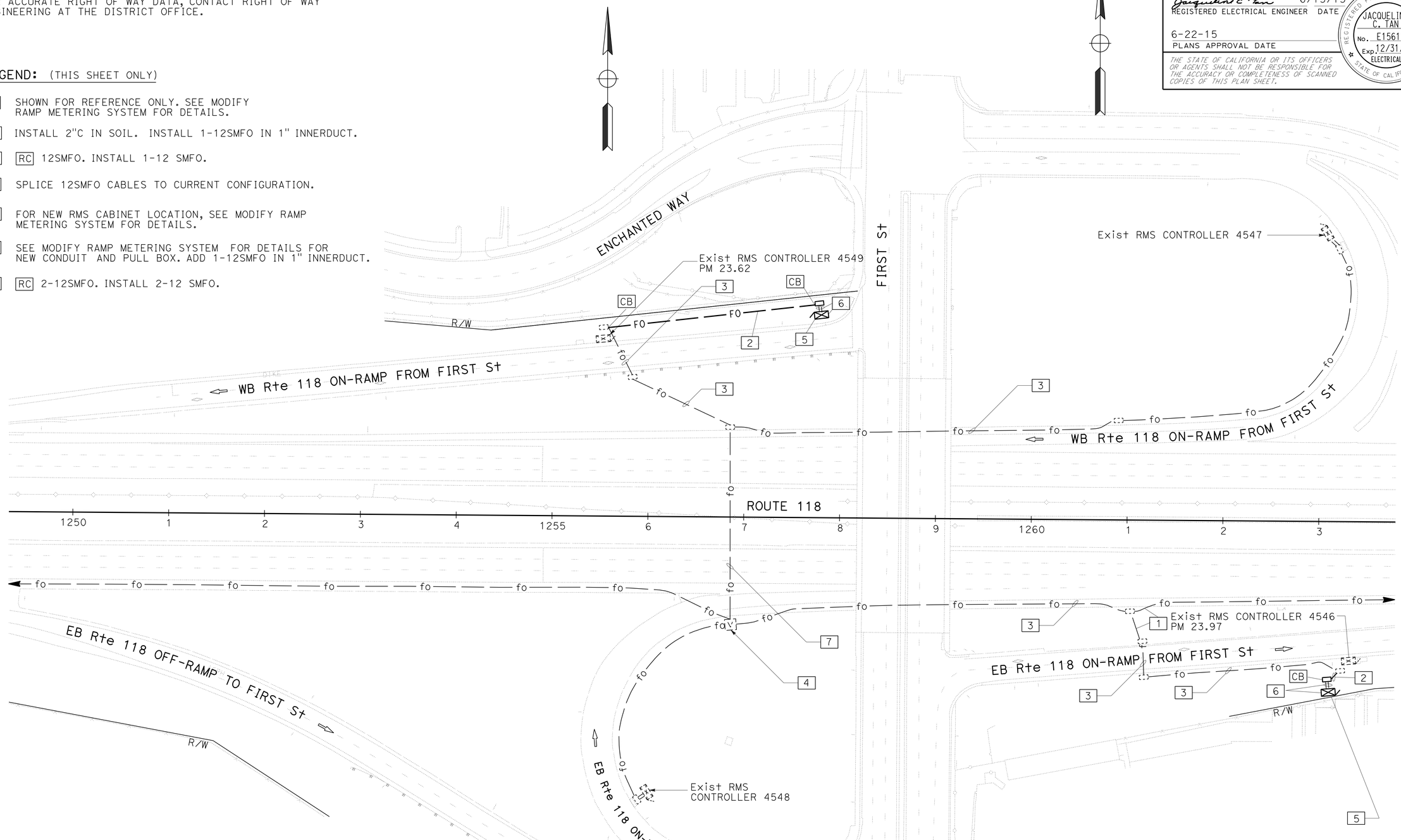
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. INSTALL 2"C IN SOIL. INSTALL 1-12SMFO IN 1" INNERDUCT.
3. RC 12SMFO. INSTALL 1-12 SMFO.
4. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION.
5. FOR NEW RMS CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO IN 1" INNERDUCT.
7. RC 2-12SMFO. INSTALL 2-12 SMFO.



MODIFY COMMUNICATION SYSTEM

SCALE: 1"=50'

E-35

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY / DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	79	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

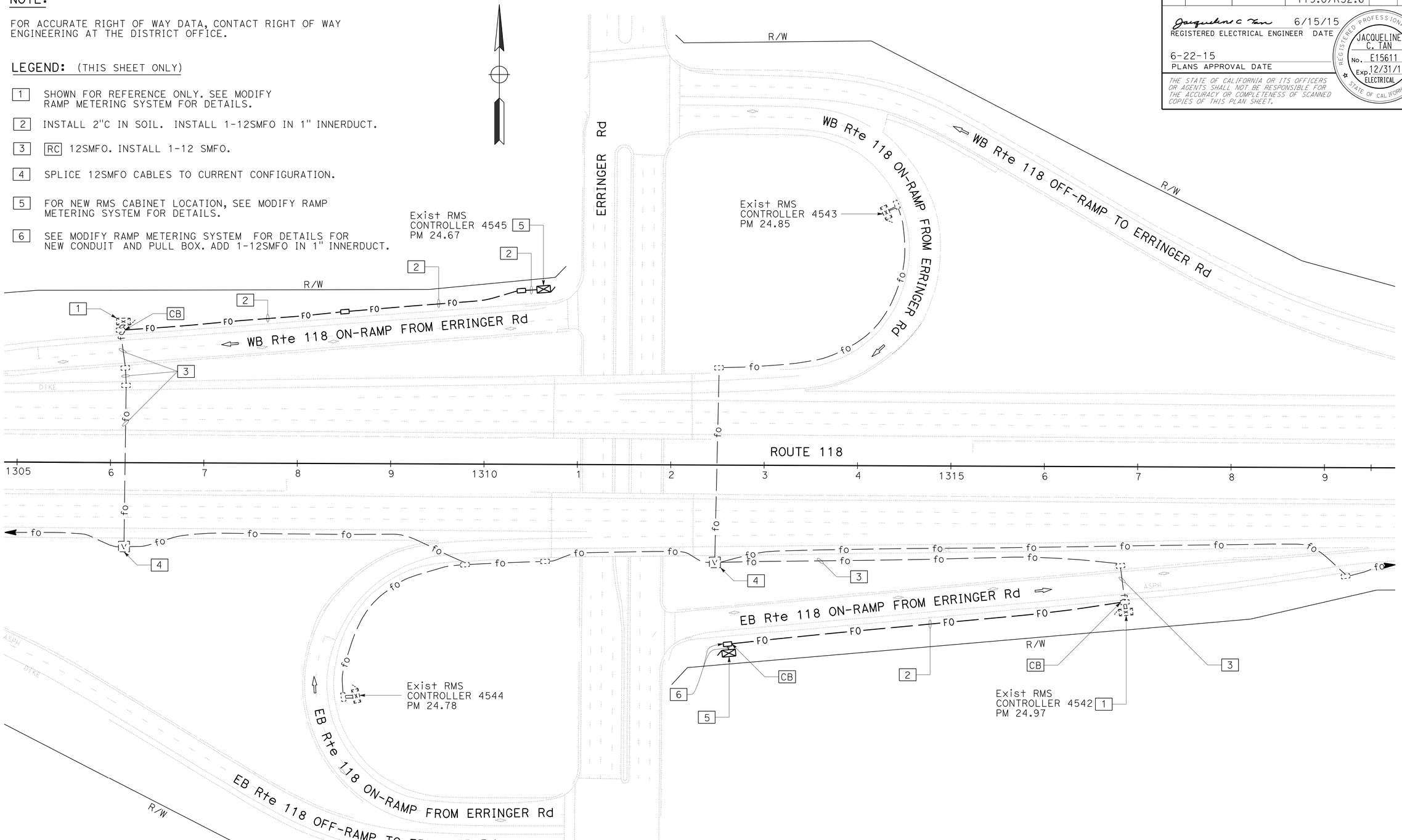
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. INSTALL 2"C IN SOIL. INSTALL 1-12SMFO IN 1" INNERDUCT.
3. RC 12SMFO. INSTALL 1-12 SMFO.
4. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION.
5. FOR NEW RMS CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO IN 1" INNERDUCT.



APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

E-36

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	80	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

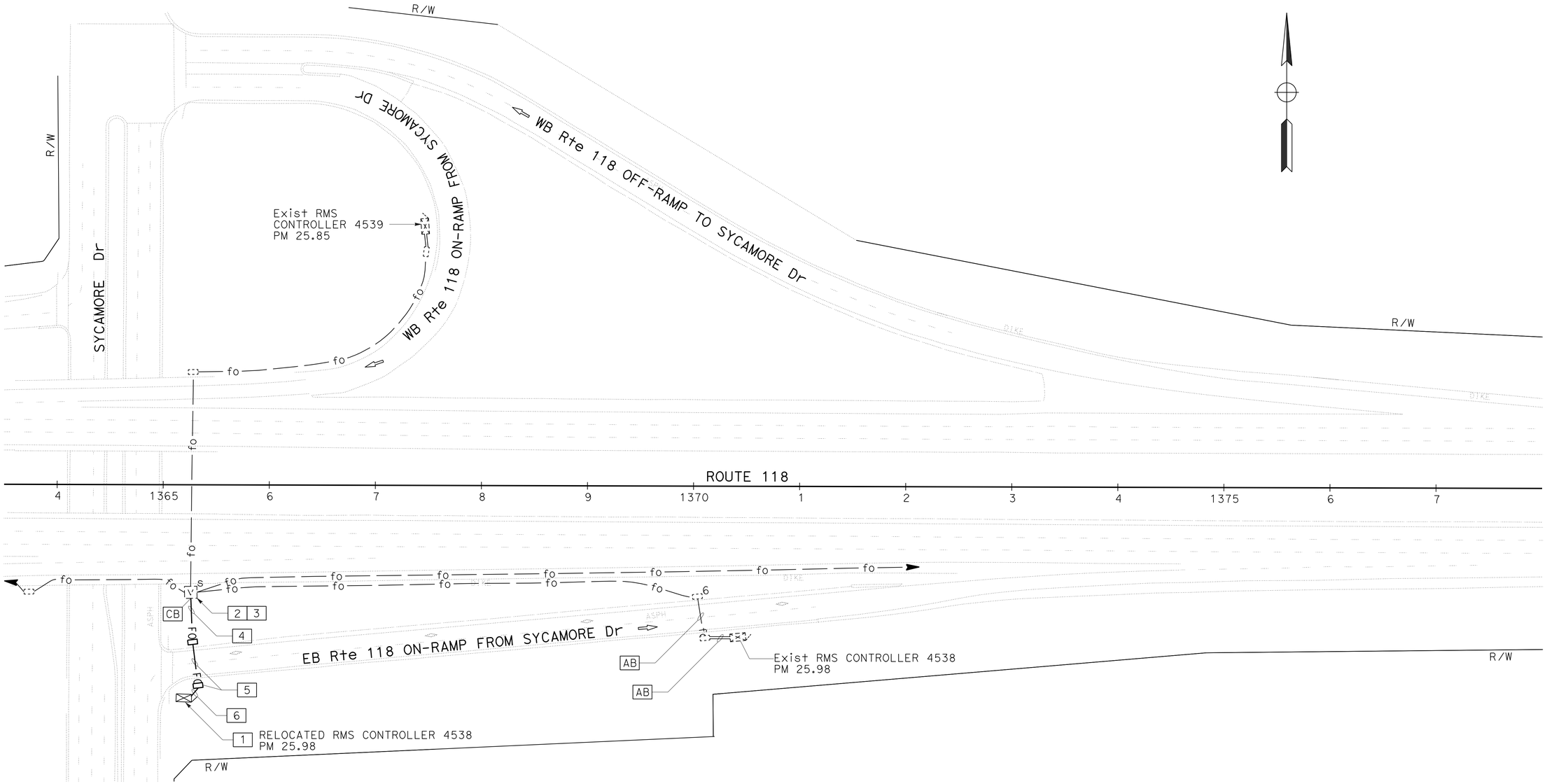
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR NEW LOCATION OF EXISTING RMS CABINET 4538.
2. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION.
3. INSTALL FOSE
4. INSTALL 1-12SMFO IN 1" INEERDUCT IN NEW 2"C.
5. JACK 1-3"C. 1-12SMFO IN 1" INNERDUCT.
6. INSTALL 1-2"C IN SOIL. 1-12SMFO IN 1" INNERDUCT.



MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

E-37

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	81	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

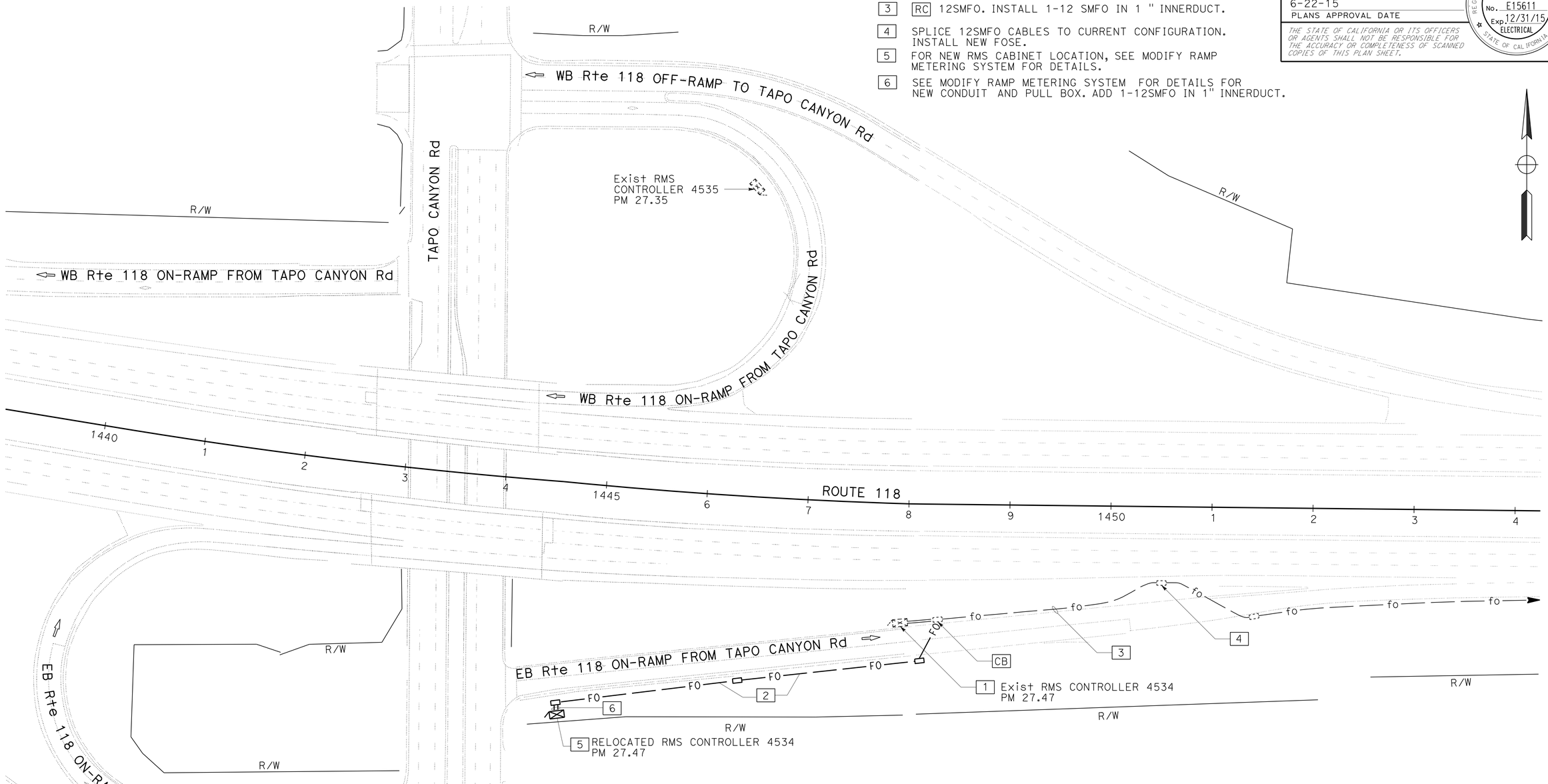
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. INSTALL 2"C IN SOIL. INSTALL 1-12SMFO IN 1" INNERDUCT.
3. RC 12SMFO. INSTALL 1-12 SMFO IN 1 " INNERDUCT.
4. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION. INSTALL NEW FOSE.
5. FOR NEW RMS CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO IN 1" INNERDUCT.



MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

E-38

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	82	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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NOTE:

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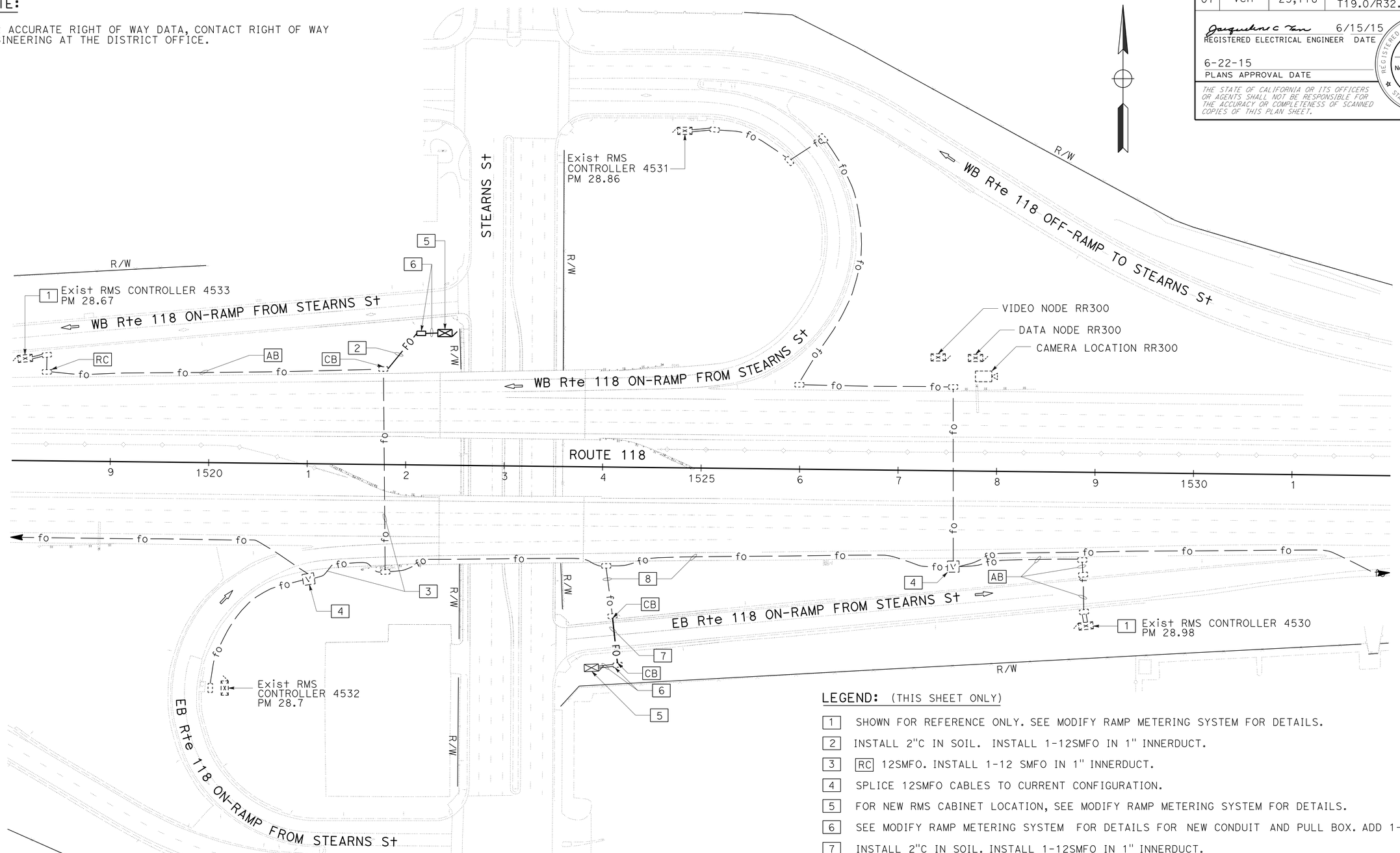


LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. INSTALL 2"C IN SOIL. INSTALL 1-12SMFO IN 1" INNERDUCT.
3. RC 12SMFO. INSTALL 1-12 SMFO IN 1" INNERDUCT.
4. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION.
5. FOR NEW RMS CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO.
7. INSTALL 2"C IN SOIL. INSTALL 1-12SMFO IN 1" INNERDUCT.
8. ADD 1-12SMFO TO EXISTING CONDUIT.

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

E-39

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	83	119

REGISTERED ELECTRICAL ENGINEER — DATE: 6/15/15

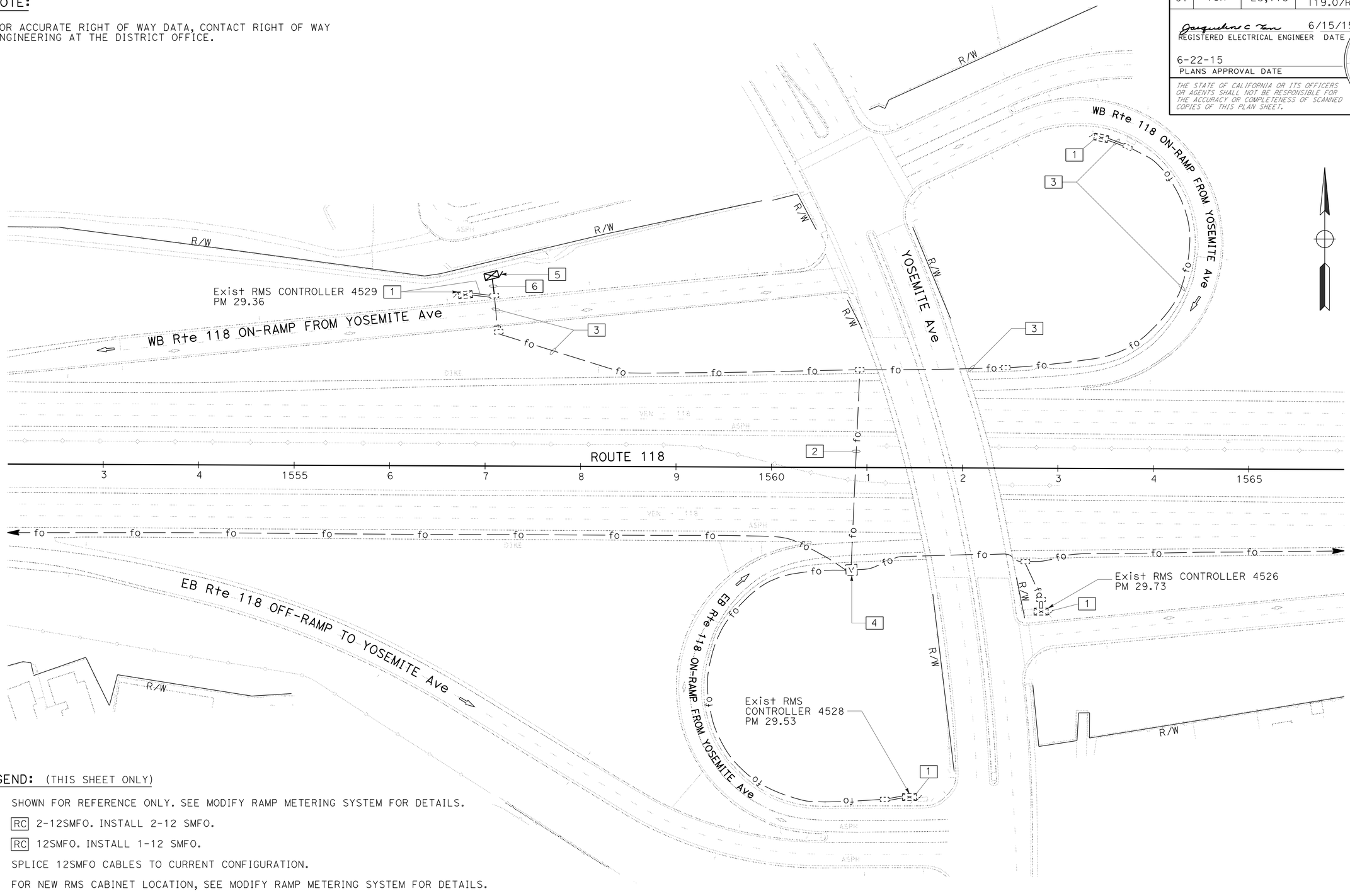
6-22-15
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN — No. E15611 — Exp. 12/31/15 — ELECTRICAL — STATE OF CALIFORNIA

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LEGEND: (THIS SHEET ONLY)

1. SHOWN FOR REFERENCE ONLY. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
2. RC 2-12SMFO. INSTALL 2-12 SMFO.
3. RC 12SMFO. INSTALL 1-12 SMFO.
4. SPLICE 12SMFO CABLES TO CURRENT CONFIGURATION.
5. FOR NEW RMS CABINET LOCATION, SEE MODIFY RAMP METERING SYSTEM FOR DETAILS.
6. SEE MODIFY RAMP METERING SYSTEM FOR DETAILS FOR NEW CONDUIT AND PULL BOX. ADD 1-12SMFO IN 1" INNERDUCT.

APPROVED FOR ELECTRICAL WORK ONLY

FOR LEGEND, ABBREVIATIONS & NOTES, SEE E-29.

MODIFY COMMUNICATION SYSTEM

SCALE: 1" =50'

E-40

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 03-24-15
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23, 118	R4.8/R11.4 T19.0/R32.6	84	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/15 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.

LEGEND: (THIS SHEET ONLY)

X - TERMINATED ACTIVE ON FDU

O - TERMINATED SPARE WITH F/O PIGTAIL IN CABINET

-- - SPLICE WITH EXISTING DATA DISTRIBUTION 48SMFO CABLE

* - SPLICE WITH EXISTING 24SMFO CABLE IN KIND

TS - TRAFFIC SIGNAL

NOTES: (THIS SHEET ONLY)

1. FIBER NUMBERS MAY BE RE-ASSIGNED BY THE ENGINEER DURING CONSTRUCTION.
2. SPLICE WITH ADJACENT TRUNK AND SPARE FIBER OPTIC CABLES WITH ON GOING PROJECT(S).

ROUTE 118
VIDEO AND DATA DISTRIBUTION FIBER OPTIC CABLE (48SMFO) ASSIGNMENT TABLE (PM 19.0 TO 32.6)

FIBER	USE	RMS 4574 Pm 19.0 Princeton Ave /WB	RMS 4575 Pm 19.7 Princeton Ave/EB	RMS 4576 Pm 19.87 Collins Drive/WB	RMS 4579 Pm 19.9 Collins Drive/EB	CMS 119 Pm 21.40 Collins Drive/WB	CCTV RR214 Pm 21.40 Collins Drive/WB	TMS 2520 Pm 20.5 Dumpsite Access/EB	TMS 2528 Pm 21.5 Almos Cyn Access/EB	TMS 2550 Pm 22.43 Dumpsite Access/EB	RMS 4818 Pm 22.9 Madera Ave/EB	RMS 4819 Pm 23.1 Madera Ave/WB	RMS 4550 Pm 23.2 Madera Ave/EB	TMS 2628 Pm 23.4 Madera Ave/EB	RMS 4549 Pm 23.62 First St./WB	RMS 4548 Pm 23.78 First St./EB	RMS 4547 Pm 23.85 First St./WB	RMS 4546 Pm 23.97 First St./EB	TMS 2629 Pm 24.2 Caldwell Ave/WB	RMS 4545 Pm 26.47 Erringer Ave/WB	RMS 4544 Pm 24.78 Erringer Ave/EB	RMS 4543 Pm 24.85 Erringer Ave/WB	RMS 4542 Pm 24.97 Erringer Ave/EB	TMS 2621 Pm 25.1 Atherwood Blvd/WB	RMS 4541 Pm 25.67 Sycamore Ave/WB	RMS 4540 Pm 25.78 Sycamore Ave/EB	RMS 4539 Pm 25.86 Sycamore Ave/WB	RMS 4538 Pm 25.98 Sycamore Ave/EB	TMS 2622 Pm 26.35 Galena Blvd/WB	TMS 2623 Pm 26.8 Copperfield Ave/EB	RMS 4537 Pm 27.16 Tapo Canyon Blvd/WB	RMS 4536 Pm 27.2 Tapo Canyon Blvd/EB	RMS 4535 Pm 27.35 Tapo Canyon Blvd/WB	NOTES
FIBER 1	DATA IN 1	X		X				X		X		X		X		X		X																
FIBER 2	DATA OUT 1	X		X				X		X		X		X		X		X																
FIBER 3	DATA IN 2		X		X				X		X		X		X		X		X															
FIBER 4	DATA OUT 2		X		X				X		X		X		X		X		X															
FIBER 5	DATA IN 3																			X		X		X		X		X		X		X		
FIBER 6	DATA OUT 3																			X		X		X		X		X		X		X		
FIBER 7	DATA IN 4																				X		X		X		X		X		X		X	
FIBER 8	DATA OUT 4																				X		X		X		X		X		X		X	
FIBER 9	CMS IN 1					X																												
FIBER 10	CMS OUT 1					X																												
FIBER 11																																		
FIBER 12																																		
FIBER 13	CCTV IN 1						X																											
FIBER 14	CCTV OUT 1						X																											
FIBER 15	CCTV IN 2																																	
FIBER 16	CCTV OUT 2																																	
FIBER 17																																		
FIBER 18																																		
FIBER 19	TS IN 1																																	
FIBER 20	TS OUT 1																																	
FIBER 21																																		
FIBER 22																																		
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FIBER 46																																		
FIBER 47																																		
FIBER 48																																		

(FIBER ASSIGNMENT TABLES)

MODIFY COMMUNICATION SYSTEM

E-41

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	85	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/15 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.

LEGEND: (THIS SHEET ONLY)

X - TERMINATED ACTIVE ON FDU

O - TERMINATED SPARE WITH F/O PIGTAIL IN CABINET

-- - SPLICE WITH EXISTING DATA DISTRIBUTION 48SMFO CABLE

* - SPLICE WITH EXISTING 24SMFO CABLE IN KIND

TS - TRAFFIC SIGNAL

NOTES: (THIS SHEET ONLY)

1. FIBER NUMBERS MAY BE RE-ASSIGNED BY THE ENGINEER DURING CONSTRUCTION.
2. SPLICE WITH ADJACENT TRUNK AND SPARE FIBER OPTIC CABLES WITH ON GOING PROJECT(S).

ROUTE 118
VIDEO AND DATA DISTRIBUTION FIBER OPTIC CABLE (48SMFO) ASSIGNMENT TABLE (PM 19.0 TO 32.6)

FIBER	USE	RMS 4534 Pm 27.4 Tapo Canyon Blvd/EB	TMS 2624 Pm 27.81 Tapo Canyon Blvd/EB	TMS 2625 Pm 28.3 Kadota Ave/WB	RMS 4533 Pm 28.67 Stearns St./WB	RMS 4532 Pm 28.7 Stearns St./EB	RMS 4531 Pm 28.86 Stearns St./WB	TMS 4530 Pm 28.9 Stearns St./EB	CCTV RR300 Pm 30.0 Stearns St./WB	DN RR300 Pm 28.90 Stearns St./WB	TMS 2626 Pm 29.3 Stow St./WB	RMS 4529 Pm 29.36 Yosemite Ave/WB	RMS 4528 Pm 29.53 Yosemite Ave/EB	RMS 4527 Pm 29.59 Yosemite Ave/WB	RMS 4526 Pm 29.73 Yosemite Ave/EB	TMS 2627 Pm 29.96 Cochran St./WB	CCTV RR313 Pm 31.30 Kuehner Drive/EB	CMS 132 Pm 30.20 Kuehner Drive/EB	RMS 4525 Pm 30.38 Kuehner Drive/WB	RMS 4524 Pm 30.82 Kuehner Drive/EB	TMS 2556 Pm 31.32 Kuehner Drive/EB	RMS 4152 Pm 32.48 Rocky Peak Rd./WB	RMS 4523 Pm 32.53 Rocky Peak Rd./EB	DN SV011 Pm 32.6 Iverson Rd./EB	NOTES
FIBER 1	DATA IN 1																								
FIBER 2	DATA OUT 1																								
FIBER 3	DATA IN 2																								
FIBER 4	DATA OUT 2																								
FIBER 5	DATA IN 3	X																							
FIBER 6	DATA OUT 3	X																							
FIBER 7	DATA IN 4		X																						
FIBER 8	DATA OUT 4		X																						
FIBER 9	CMS IN 1																	X							
FIBER 10	CMS OUT 1																	X							
FIBER 11	DATA IN 5			X		X		X			X		X		X				X		X				
FIBER 12	DATA OUT 5			X		X		X			X		X		X				X		X				
FIBER 13	CCTV IN 1								X								X								
FIBER 14	CCTV OUT 1								X								X								
FIBER 15	CCTV IN 2																								
FIBER 16	CCTV OUT 2																								
FIBER 17	DATA IN 6				X		X					X		X		X				X		X	X		
FIBER 18	DATA OUT 6				X		X					X		X		X				X		X	X		
FIBER 19	TS IN 1																								
FIBER 20	TS OUT 1																								
FIBER 21																									
FIBER 22																									
FIBER 23																									
FIBER 24																									
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.																									
.																									
FIBER 46																									
FIBER 47																									
FIBER 48																									

(FIBER ASSIGNMENT TABLES)

MODIFY COMMUNICATION SYSTEM

E-42

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

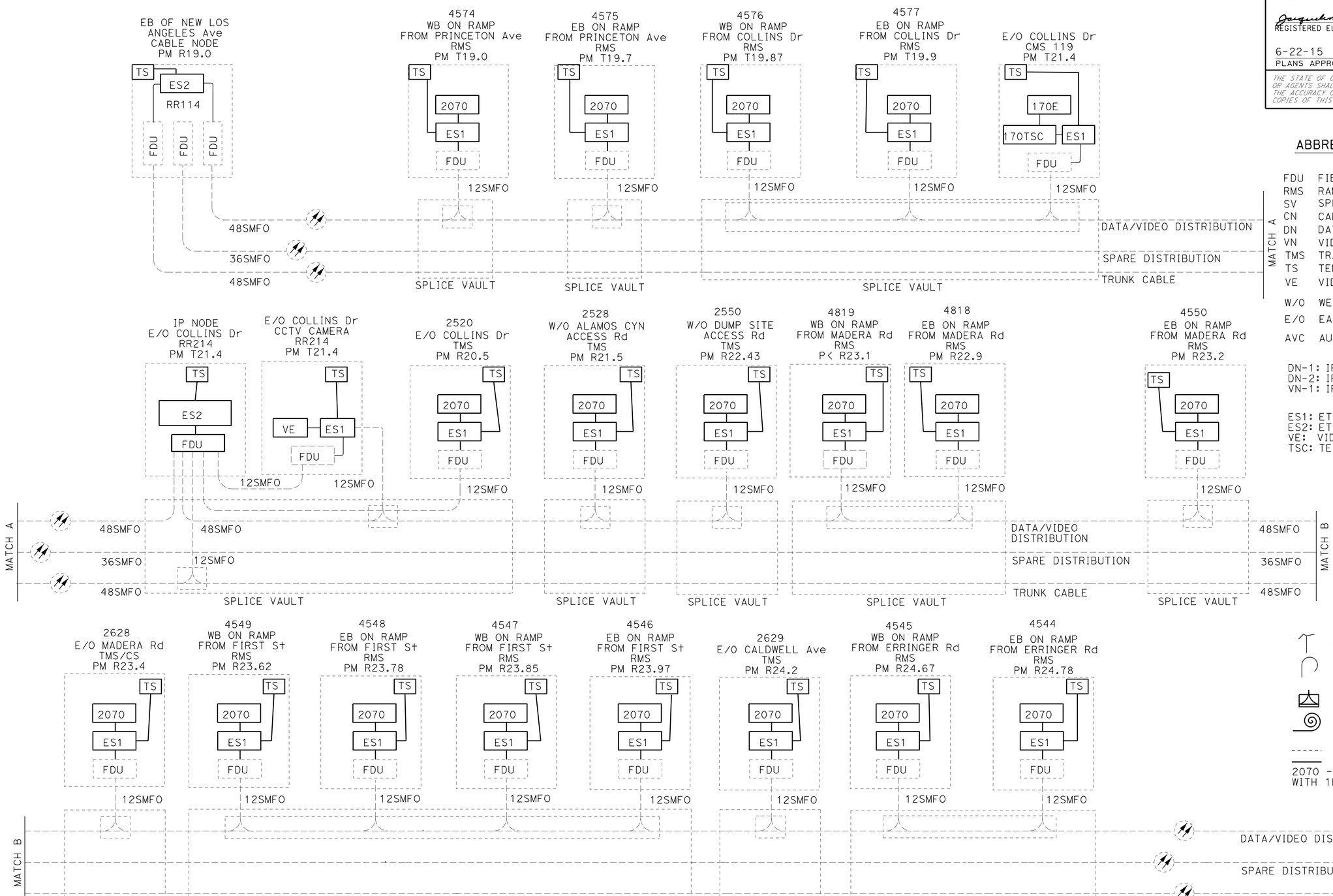
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	86	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.



ABBREVIATIONS: (E-43 TO E-46)

FDU	FIBER DISTRIBUTION UNIT
RMS	RAMP METERING SYSTEM
SV	SPLICE VAULT
CN	CABLE NODE
DN	DATA NODE
VN	VIDEO NODE
TMS	TRAFFIC MONITORING STATION
TS	TEMPERATURE SENSOR
VE	VIDEO ENCODER
W/O	WEST OF
E/O	EAST OF
AVC	AUTOMATIC VEHICLE CLASSIFICATION

DN-1: IP NODE (RR214)
DN-2: IP NODE (RR300)
VN-1: IP NODE (RR300)

ES1: ETHERNET SWITCH - TYPE 1
ES2: ETHERNET SWITCH - TYPE 2
VE: VIDEO ENCODER
TSC: TERMINAL SERVER CARD

LEGEND: (E-43 TO E-46)

- COIL CONDUCTORS IN PULL BOX
- COIL CONDUCTORS IN CABINET
- FIBER OPTIC CABLES SPLICE IN FIBER OPTIC SPLICE CLOSURE
- COIL 12 SMFO IN EXISTING SPLICE VAULT
- EXISTING TOS ELEMENT
- PROPOSED TOS ELEMENT

2070 - CONTROLLER MODEL 2070 WITH 1B MODULE

MODIFY COMMUNICATION SYSTEM

NO SCALE

(SCHEMATIC No. 1)

APPROVED FOR ELECTRICAL WORK ONLY

E-43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
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LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	87	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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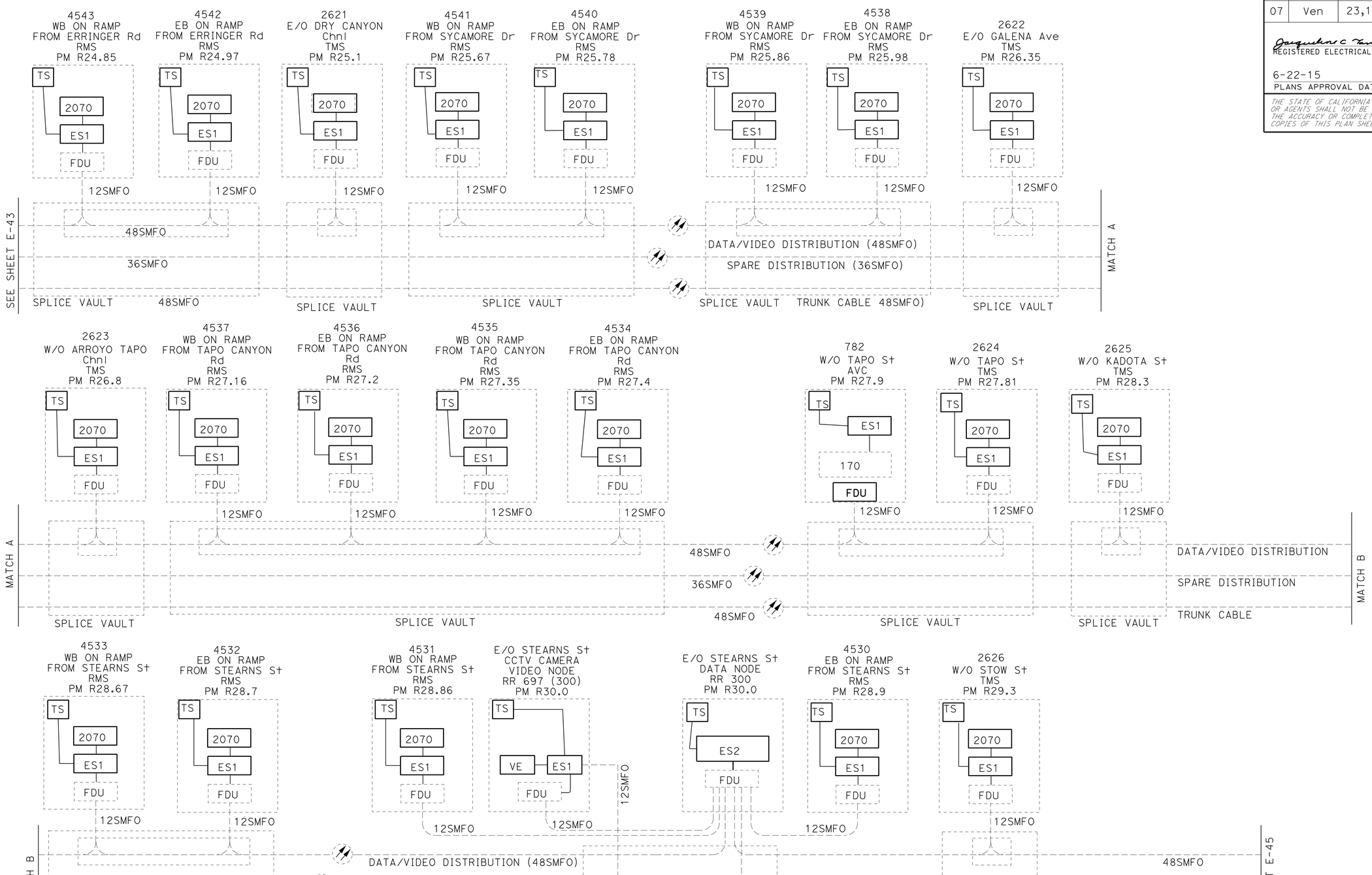

MODIFY COMMUNICATION SYSTEM

NO SCALE

(SCHEMATIC No. 2)

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E-44

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **OFFICE OF ITS**

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

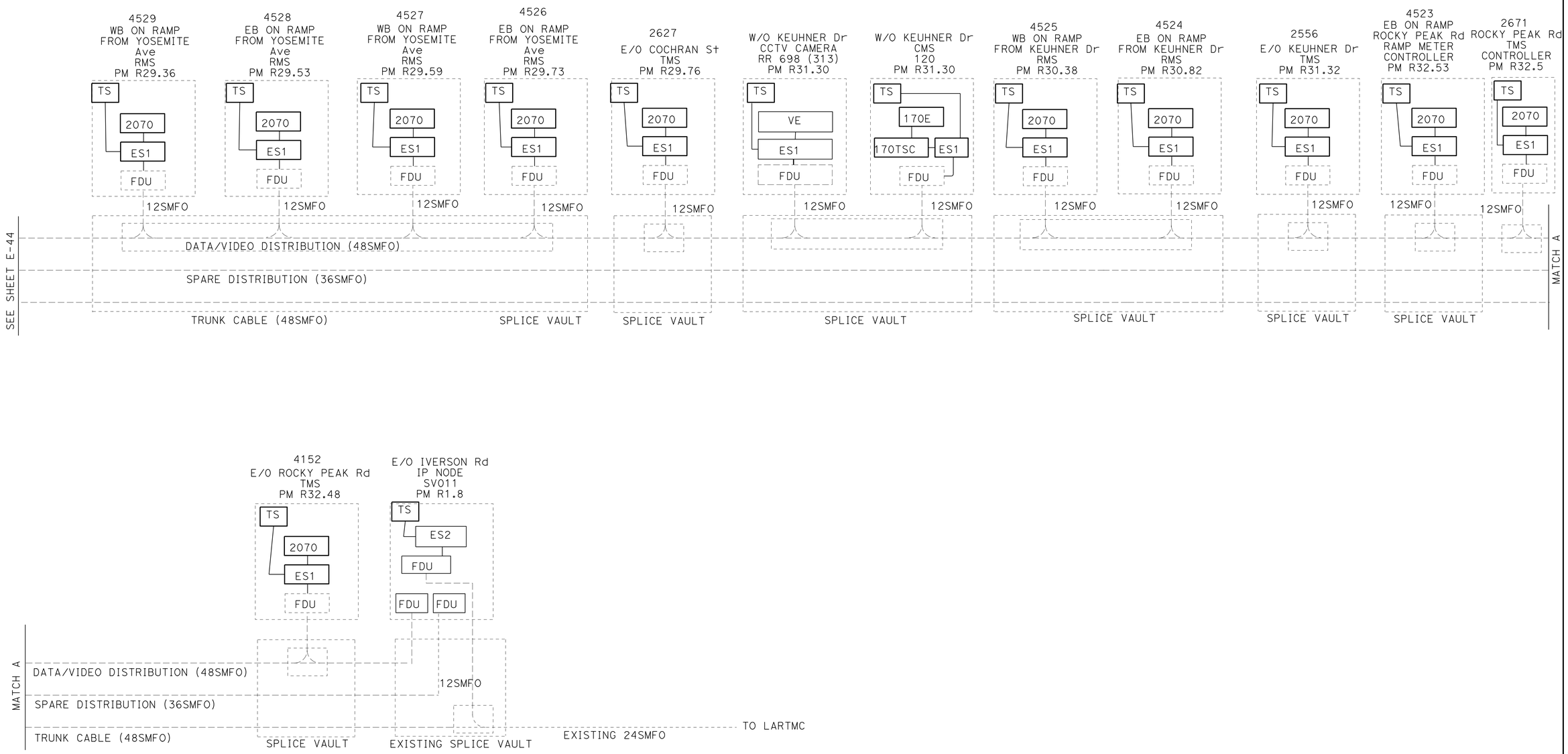
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	88	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.



(SCHEMATIC No. 3)

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MODIFY COMMUNICATION SYSTEM

NO SCALE

E-45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
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LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

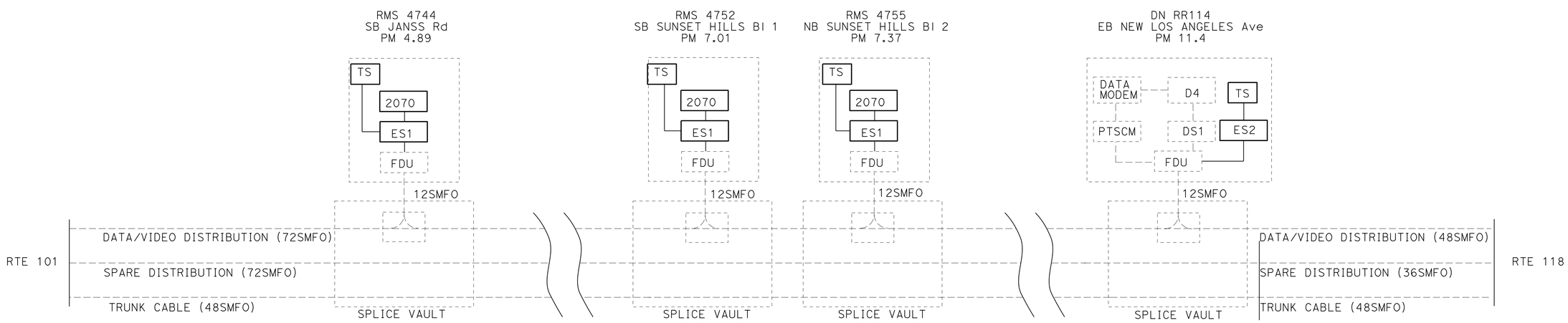
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	89	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 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.



(ROUTE 23 - SCHEMATIC)

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY COMMUNICATION SYSTEM

NO SCALE

E-46

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® **OFFICE OF ITS**

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN

CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.6/R32.6	90	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

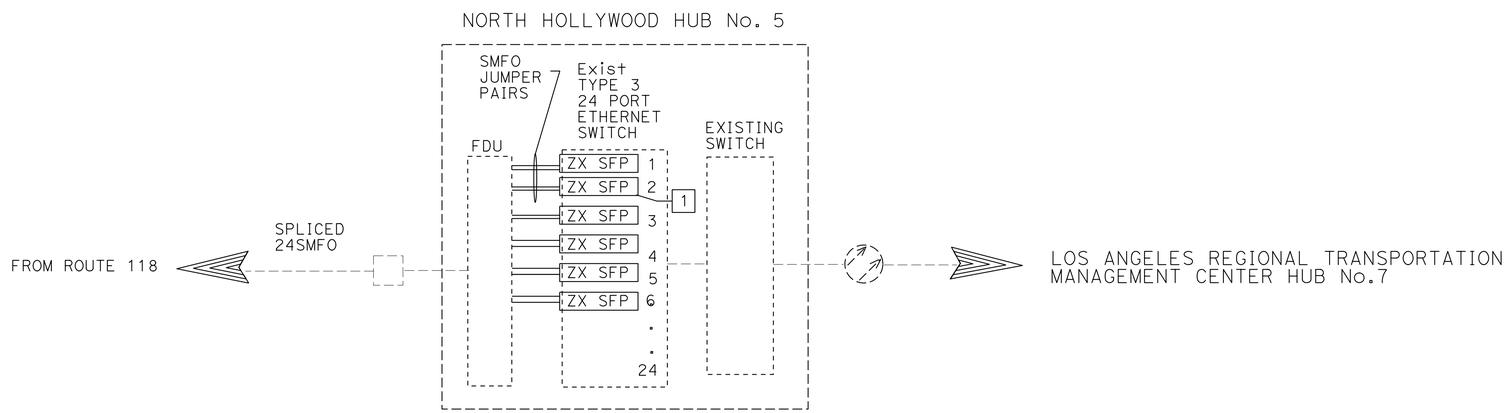
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE: (THIS SHEET ONLY)

1. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.

LEGEND: (THIS SHEET ONLY)

[1] INSTALL 6 ZX SFP MODULES IN EXISTING TYPE 3 ETHERNET SWITCH WITH 43.4 MILE CONNECTION DISTANCE AND COMPATIBLE WITH FIELD SFP MODULES.



(SCHEMATIC)

APPROVED FOR ELECTRICAL WORK ONLY

WORK AT NORTH HOLLYWOOD HUB

NO SCALE

E-47

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY / CHECKED BY
HOSAKERE K. ANANTH / JACQUELINE C. TAN
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.6/R32.6	91	119

REGISTERED ELECTRICAL ENGINEER — DATE 6/15/15

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — JACQUELINE C. TAN — No. E15611 — Exp. 12/31/15 — ELECTRICAL — STATE OF CALIFORNIA

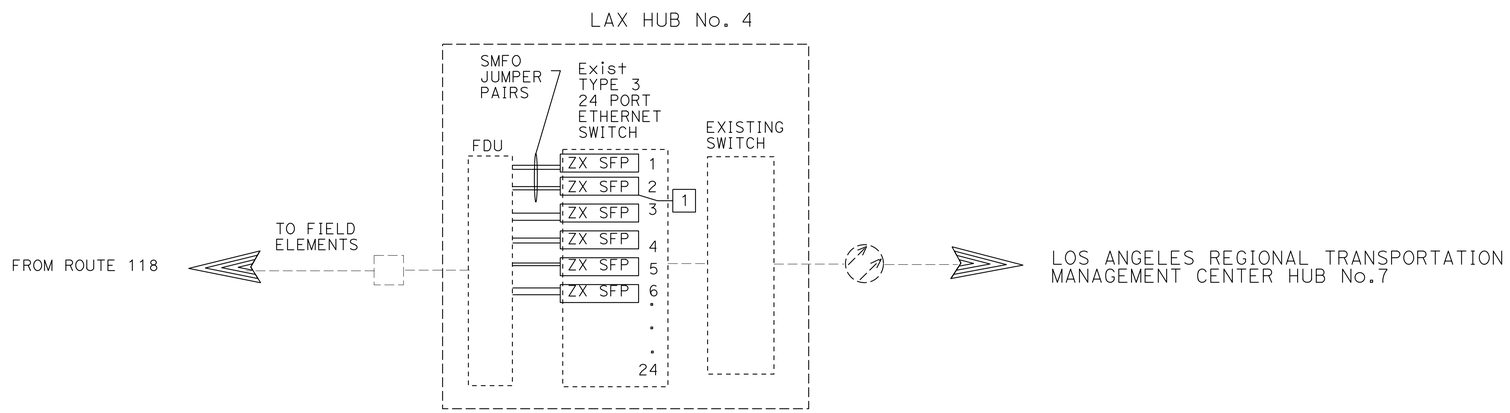
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE: (THIS SHEET ONLY)

1. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.

LEGEND: (THIS SHEET ONLY)

[1] INSTALL 6 ZX SFP MODULES IN EXISTING TYPE 2 ETHERNET SWITCH WITH 43.4 MILE CONNECTION DISTANCE AND COMPATIBLE WITH FIELD SFP MODULES.



(SCHEMATIC)

APPROVED FOR ELECTRICAL WORK ONLY

WORK AT LAX HUB

NO SCALE

E-48

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
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DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.6/R32.6	92	119

Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

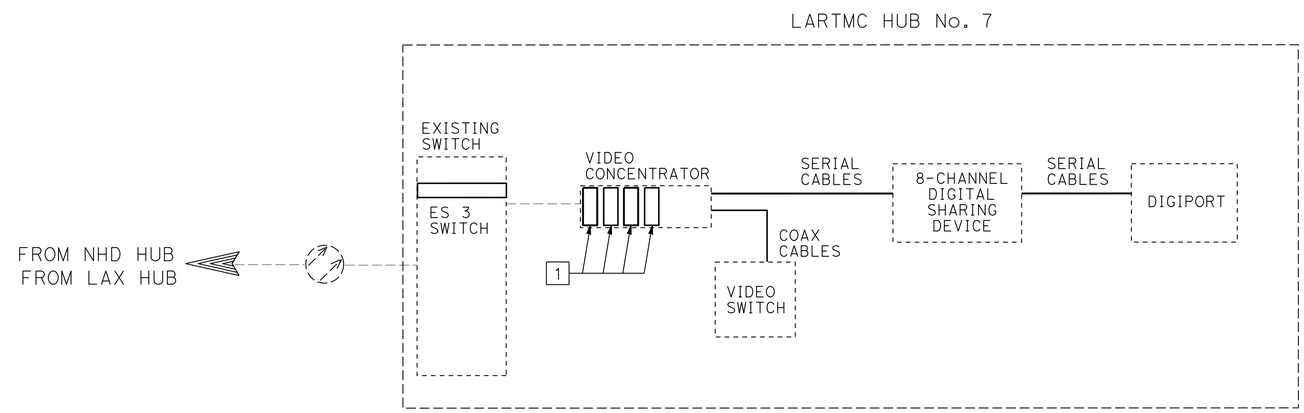
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE: (THIS SHEET ONLY)

1. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.

LEGEND: (THIS SHEET ONLY)

1 INSTALL 4 VIDEO DECODER MODULES IN EXISTING VIDEO CONCENTRATOR RACK TO BE USED TO DECODE INCOMING VIDEO.



(SCHEMATIC)

WORK AT LOS ANGELES REGIONAL TRANSPORTATION MANAGEMENT CENTER

NO SCALE

E-49

REVISED BY | DATE REVISED
HOSAKERE K. ANANTH | JACQUELINE C. TAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	93	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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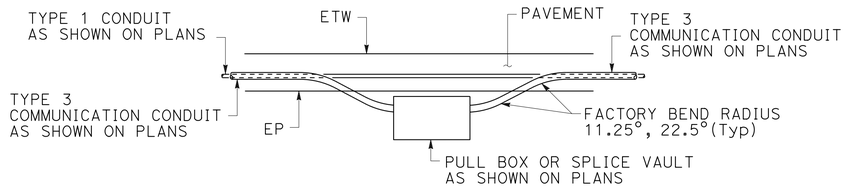
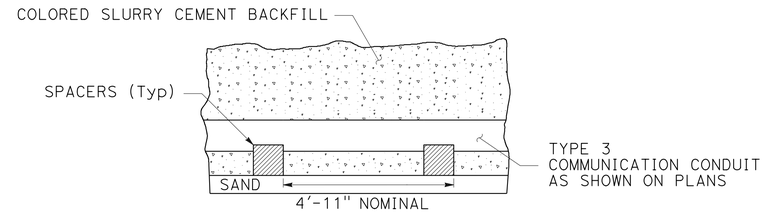
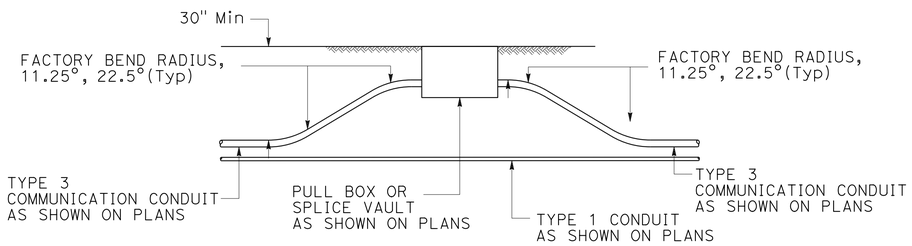


TYPICAL OUTSIDE SHOULDER PULL BOX INSTALLATION (TOP VIEW)



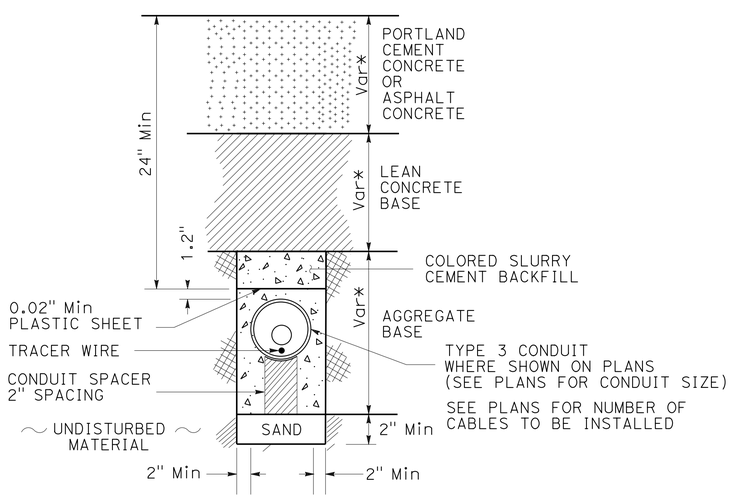
TYPICAL CONDUIT SPACER PLACEMENT (SIDE VIEW)



TYPICAL PULL BOX FOR SOIL AREA TRENCHING (ELEVATION)

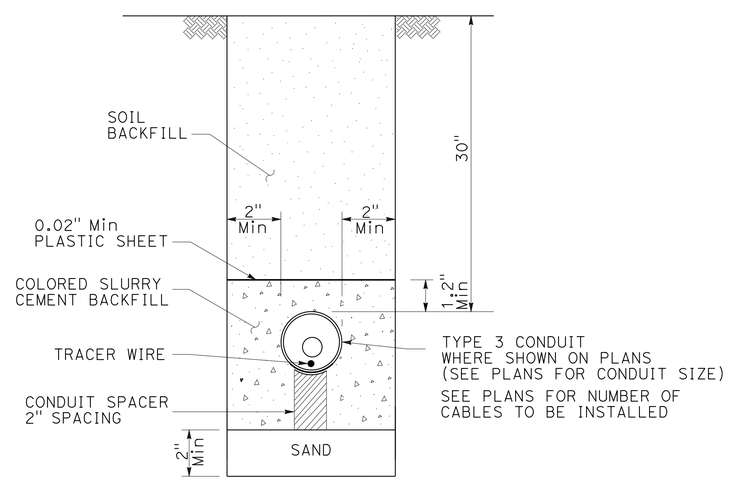
NOTES: (THIS SHEET ONLY)

1. REPLACE AC DIKE IN KIND, AS NECESSARY.
2. TRENCH TO BE CENTERED IN SHOULDER OR AS DIRECTED BY ENGINEER.
3. MAINTAIN 24" MINIMUM COVER AND BACKFILL TRENCH WITH SLURRY CEMENT BETWEEN PULL BOX AND PAVED SHOULDER.
4. WHERE TRENCH TRANSITIONS FROM ASPHALT TO UNPAVED AREA, EXCEPT AT PULL BOXES, CONDUIT TO GRADUALLY TRANSITION FROM 24" MINIMUM DEPTH TO 30" MINIMUM DEPTH WITHIN THE UNPAVED AREA.
5. 24" MINIMUM COVER MAY BE REDUCED TO 9" MINIMUM COVER IF NEEDED TO CLEAR A STORM DRAIN OR OTHER FIXED OBJECT AS DIRECTED BY THE ENGINEER.
6. PROVIDE MINIMUM 4'-11" CLEARANCE BETWEEN ANY CONDUIT AND EXISTING STRUCTURE FOUNDATIONS.
7. ANCHOR/RESTRAIN TOP CONDUIT FROM FLOATING DURING SLURRY CEMENT BACKFILL.
8. CONDUITS MUST BE INSTALLED IN NEW ASPHALT PAVEMENT AFTER AGGREGATE BASE IS PLACED AND COMPACTED. CONDUIT INSTALLATION MUST PRECEDE ROADWAY PAVING.
9. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.



TRENCH IN PAVEMENT (PCC OR ASPHALT)

(* PAVEMENT THICKNESS, SEE TYPICAL CROSS SECTION PLANS)



TRENCH IN SOIL WITH TYPE 3 COMMUNICATION CONDUIT(S) AND TYPE 1 CONDUIT(S)

(TYPICAL COMMUNICATION CONDUIT INSTALLATION DETAILS)

ELECTRICAL DETAILS

NO SCALE

E-50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
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REVISED BY / DATE REVISED

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	94	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JAMSHED HYDER No. E18656 Exp. 12/31/16 ELECTRICAL STATE OF CALIFORNIA

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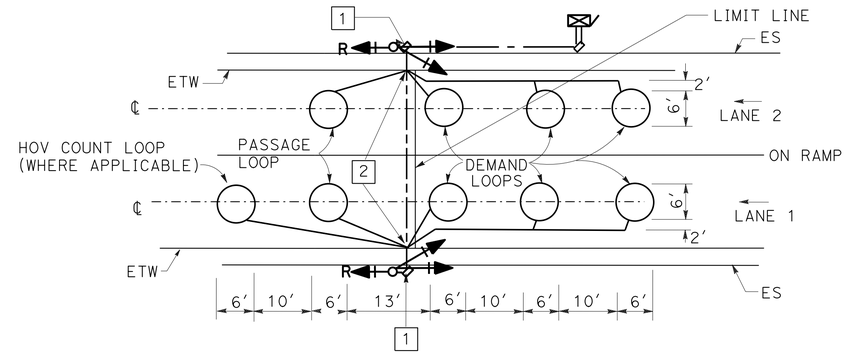
LEGEND: (THIS SHEET)

1 SEE PLANS FOR CONDUIT SIZES & TYPES OF PULL BOXES. SEE TYPICAL LOOP LEAD-IN DETAIL AT PAVEMENT JOINT ON THIS SHEET.

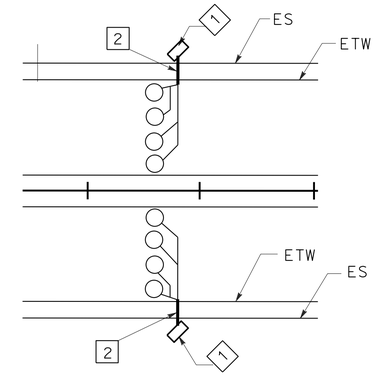
2 SEE ES-5D.

NOTE: (THIS SHEET)

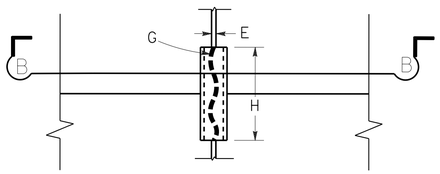
1. THE CONTRACTOR MUST VERIFY ALL CONTROLLER FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING MATERIAL.



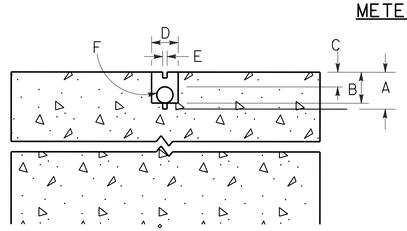
TYPICAL 2-LANE RAMP METERING SYSTEM INSTALLATION



TYPICAL TRAFFIC MONITORING LOOP CONFIGURATION



PLAN VIEW



SECTION B-B

A. SAW-CUT DEPTH TO ACCOMMODATE SPECIFIED NUMBER OF CONDUCTORS WITH A MINIMUM OF ½" FROM TOP OF WIRE TO PAVEMENT SURFACE (3 ¼" Max).

B. SLOT SAW-CUT DEPTH TO ACCOMMODATE 1" TYPE 3 CONDUIT WITH ½" MINIMUM FROM TOP OF CONDUIT TO PAVEMENT SURFACE.

C. ½" MINIMUM BETWEEN TOP OF CONDUIT AND PAVEMENT SURFACE.

D. SAW-CUT WIDTH TO ACCOMMODATE 1" TYPE 3 CONDUIT WITH ½" CLEARANCE.

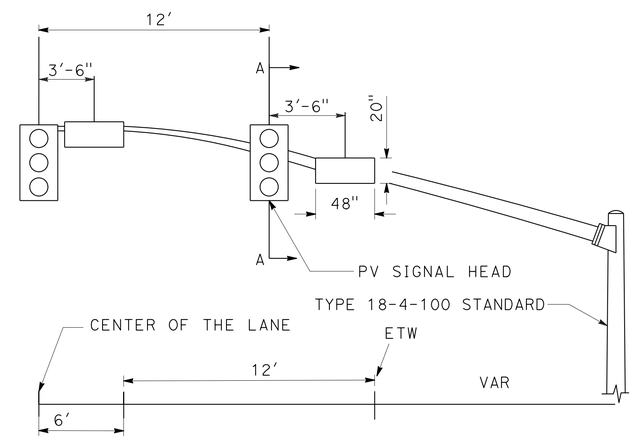
E. SAW-CUT 2/5" WIDE (Max).

F. 1" TYPE 3 CONDUIT, 6" LONG, PLUG BOTH ENDS WITH CAULKING COMPOUND TO KEEP OUT EPOXY.

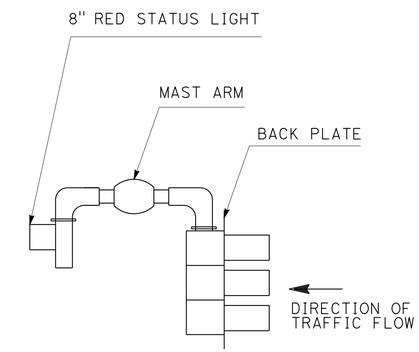
G. CONDUCTORS WITH ½" MINIMUM SLACK INSIDE CONDUIT.

H. SAW-CUT LENGTH OF SLOT ⅛" LONGER THAN CONDUIT.

TYPICAL LOOP LEAD-IN DETAIL AT PAVEMENT JOINT

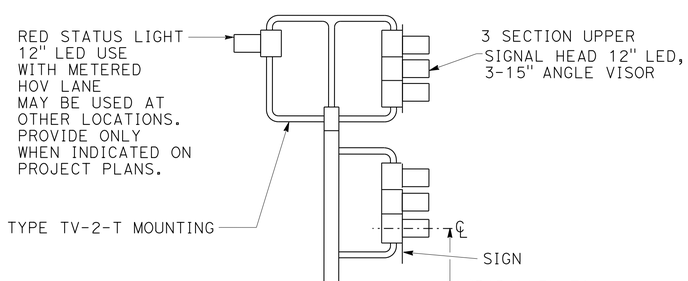


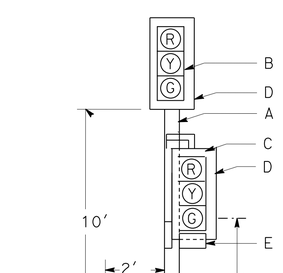
2-LANE ON-RAMP



SECTION A-A

TYPICAL SIGNAL STRUCTURAL INSTALLATION





RAMP METER SIGNAL

A. TYPE 1-A SIGNAL STANDARD.

B. 3-SECTION 12" LED SIGNAL HEAD (RED, YELLOW, GREEN). 18" x 7⅞" ANGLED VISORS ARE REQUIRED WHERE SHOWN ON PLANS.

C. 3-SECTION 12" LED SIGNAL HEAD (RED, YELLOW, GREEN). 12" FULL CIRCLE VISORS TYPE SV-1-T BRACKET MOUNTING ON SIDE OF STANDARD, AWAY FROM TRAFFIC.

D. BACKPLATE.

E. R89(CA) OR R89-1(CA) MOUNT ON BACK PLATE AND CENTER BETWEEN GREEN SECTION AND BOTTOM OF BACK PLATES AND SIDES. ATTACH WITH ¼" x ¾" BOLTS, HEX NUTS, PLAIN AND LOCK WASHERS.

ELECTRICAL DETAILS

NO SCALE

E-51

REVISED BY | DATE REVISED
JAMSHED HYDER | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | OSWALD ELIZONDO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 27-AUG-2015 | TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	95	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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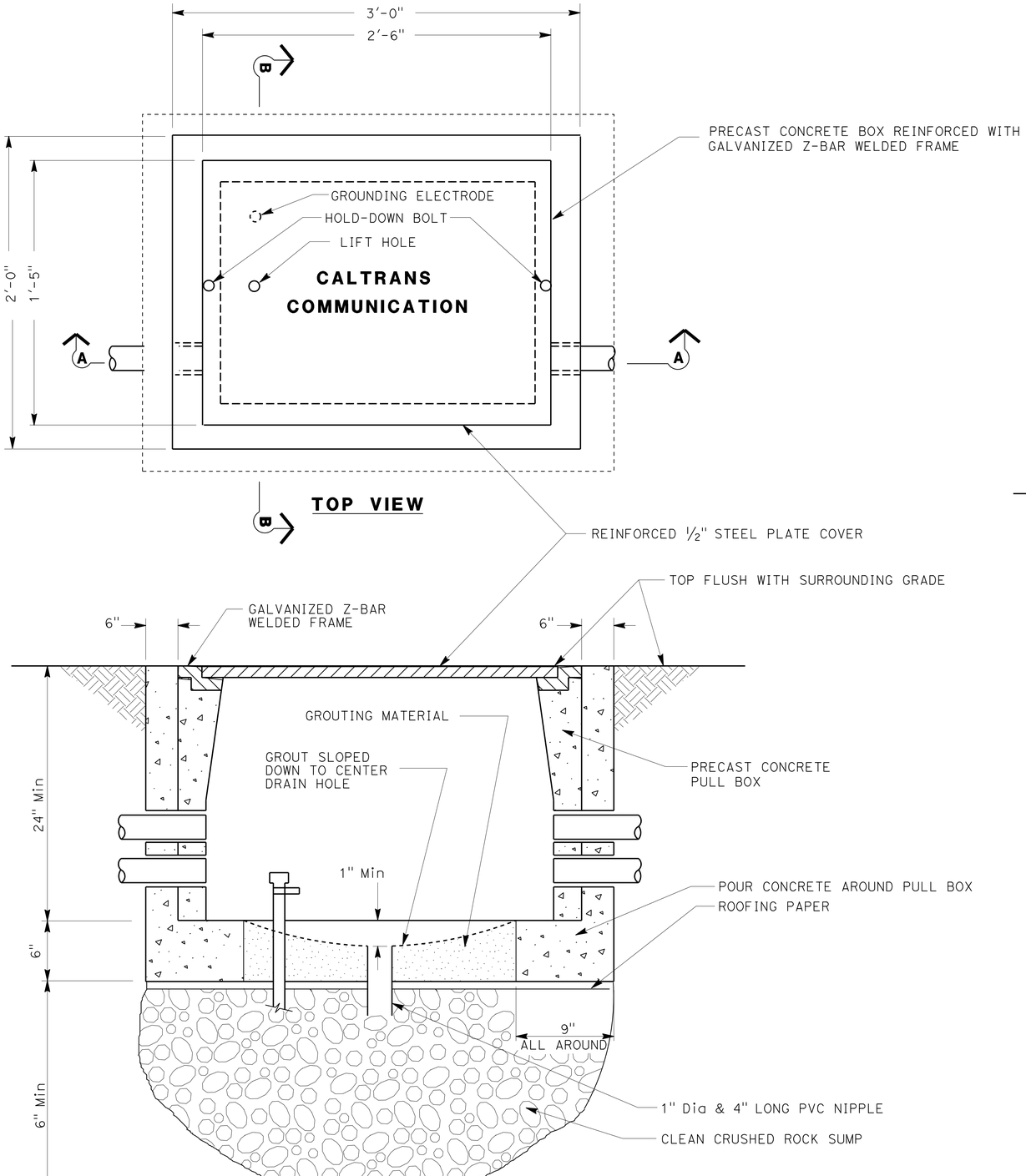
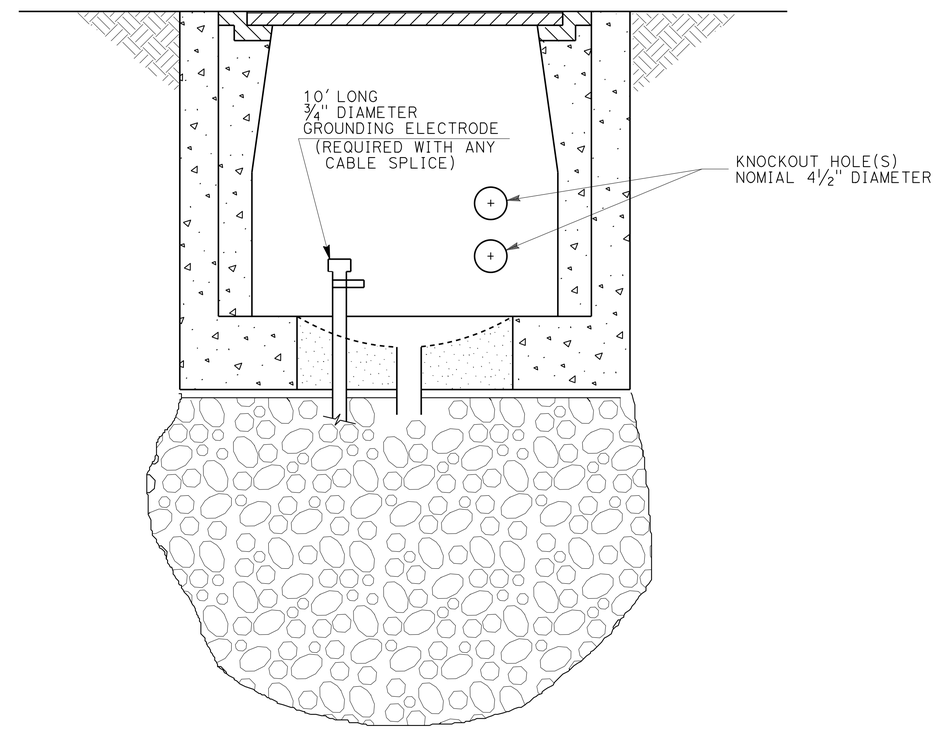


TOP VIEW

SECTION A-A

NOTES: (THIS SHEET ONLY)

1. FOR DETAILS NOT SHOWN SEE STD PLAN RSP ES-8B.
2. CONDUITS SHOWN ARE FOR EXAMPLE ONLY. ADDITIONAL CONDUITS MAY BE REQUIRED AS SHOWN ON THE PLAN SHEETS.
3. SEE SPECIAL PROVISIONS REGARDING HOLDDOWN BOLTS FOR TRAFFIC RATE COVERS.



SECTION B-B

(COMMUNICATION PULL BOX DETAILS)

ELECTRICAL DETAILS

NO SCALE

E-52

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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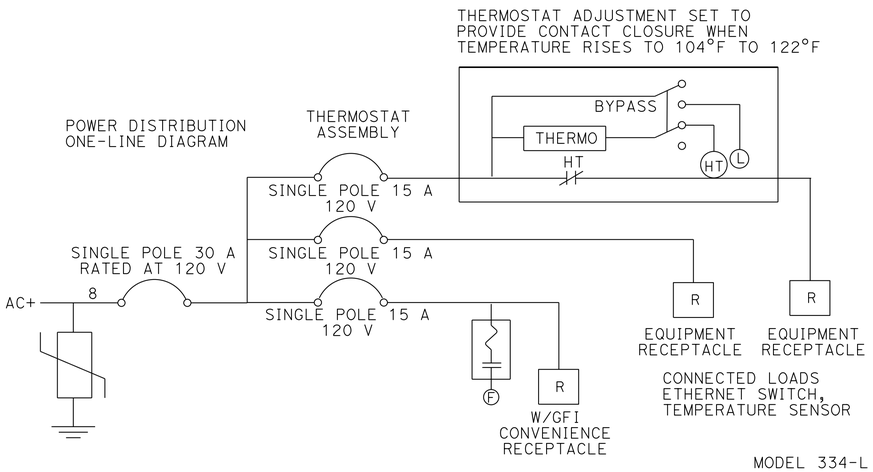


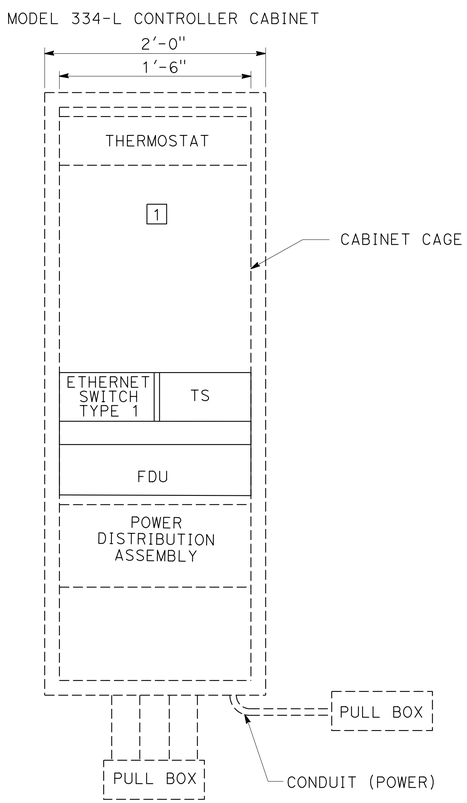
POWER DISTRIBUTION ASSEMBLY

NOTE: (THIS SHEET ONLY)

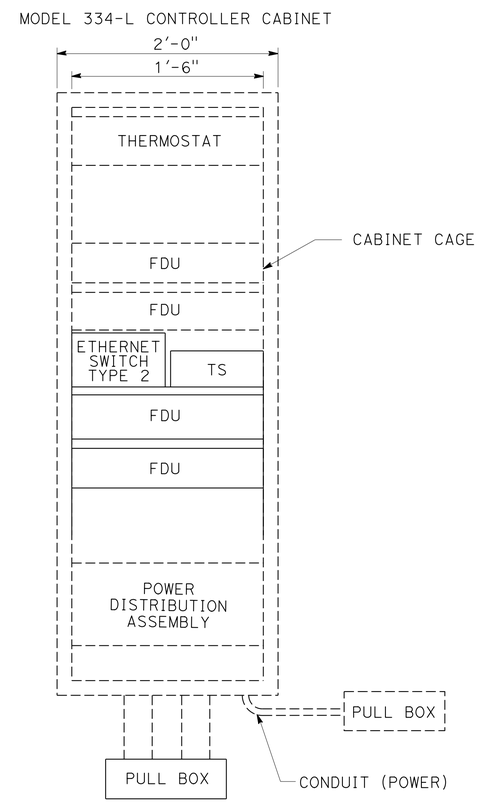
1. VIDEO ENCODER TO BE COMPATIBLE WITH EXISTING DECODER MODULE IN EXISTING DECODER RACK AT THE LARTMC.

LEGEND: (THIS SHEET ONLY)

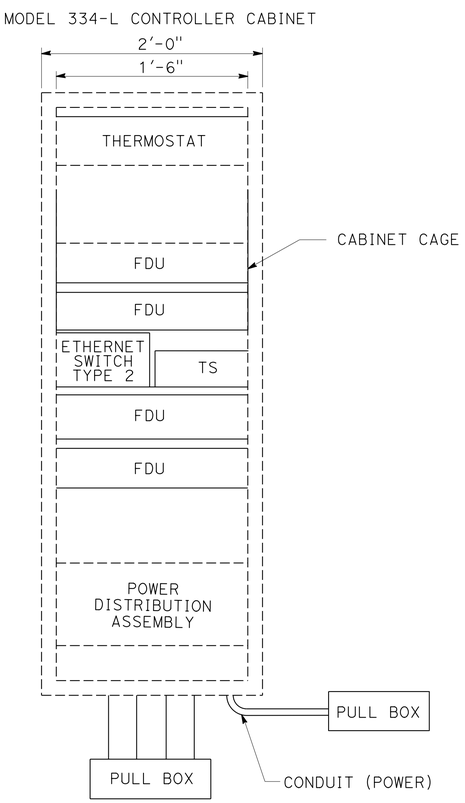
1 FOR CMS LOCATIONS ONLY, INSERT 170 TERMINAL SERVER CARD IN EXISTING 170 CONTOLLER ASSEMBLY.



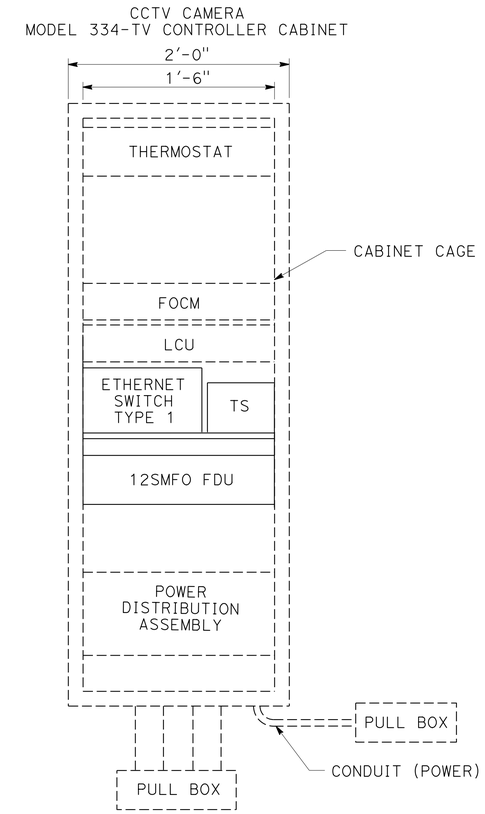
MODEL 334L - CONTROLLER (CMS, RMS, TMS, AVC) CABINET EQUIPMENT LAYOUT



MODEL 334L - CONTROLLER (DATA/IP NODE RTE 118 AND 23) CABINET EQUIPMENT LAYOUT



MODEL 334L - CONTROLLER (IP NODE RTE 118 AND 23) CABINET EQUIPMENT LAYOUT



Exist MODEL 334-TV CONTROLLER CABINET EQUIPMENT LAYOUT

(MODEL 334-L AND 334-TV CONTROLLER CABINET DETAILS)

FOR ABBREVIATIONS AND NOTES SEE SHEET E-29

ELECTRICAL DETAILS

NO SCALE

E-53

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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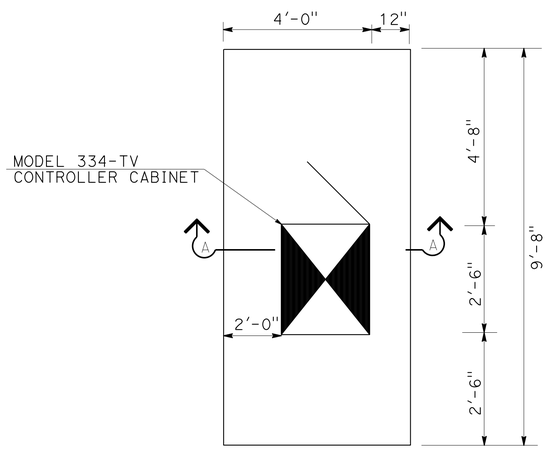
Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

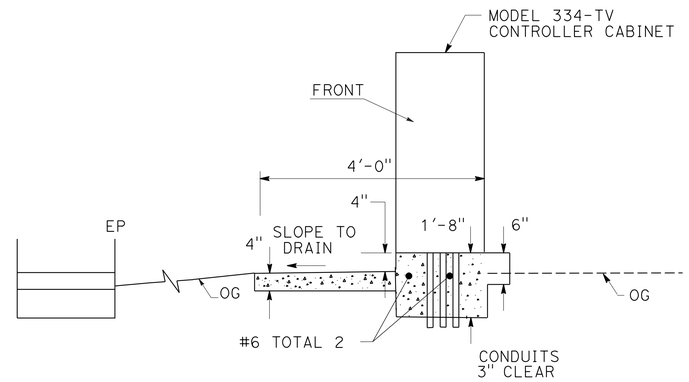
6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
JACQUELINE C. TAN
No. E15611
Exp. 12/31/15
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.



DETAIL A
PLAN VIEW



SECTION A-A
ELEVATION VIEW FOR DETAIL A

NOTES: (THIS SHEET ONLY)

1. CABINETS TO BE INSTALLED 30 FEET FROM ETW OR 6 FEET FROM MBGR FOR TYPICAL FIXED OBJECT INSTALLATION .
2. CONSTRUCT PAD AND GRADE TO DRAIN AROUND AND AWAY FROM CABINET IN KEEPING WITH EXISTING DRAINAGE PATTERN.
3. CABINET DOOR MUST BE LOCATED PER PLAN AND HINGED TO SWING AWAY FROM TRAVELED WAY.
4. FOR INFORMATION NOT SHOWN, SEE STANDARD PLAN SHEET ES-3C.

(CONTROLLER CABINET FOUNDATION DETAILS)

ELECTRICAL DETAILS
NO SCALE

E-54

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
HOSAKERE K. ANANTH	JACQUELINE C. TAN

FUNCTIONAL SUPERVISOR
JACQUELINE C. TAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
OFFICE OF ITS

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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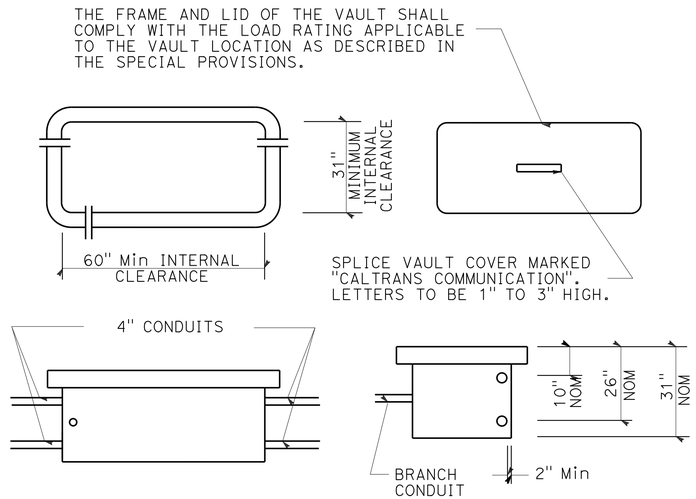
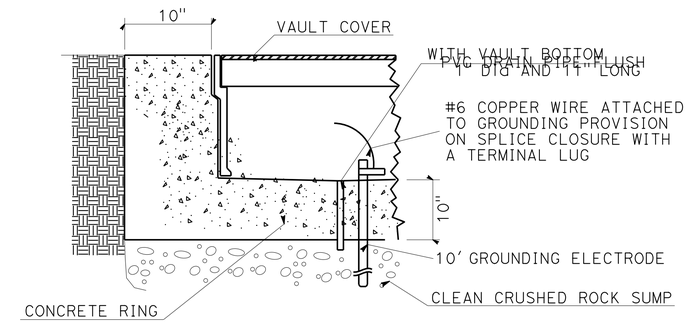


SPLICE VAULT DIMENSIONS

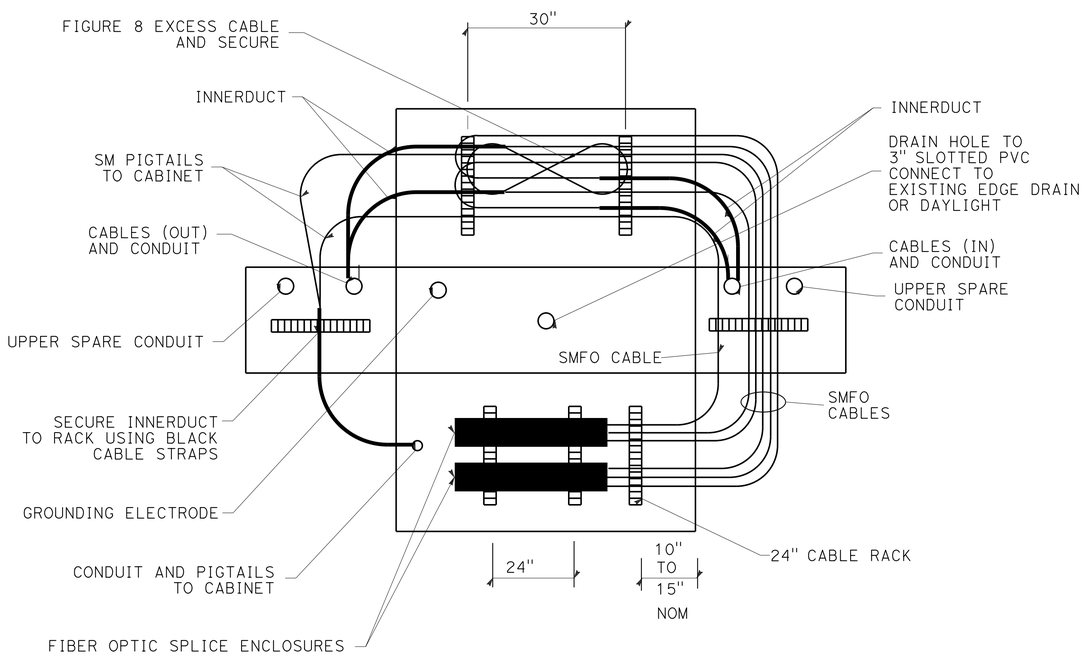
NOTES: (THIS SHEET ONLY)

1. UPON ACCEPTANCE OF THE WORK ALL CONDUITS MUST BE SEALED WITH COMPATIBLE SEALANT MATERIAL
2. ALL GROUND CONNECTIONS MUST BE COATED WITH OXIDATION PROHIBITING COMPOUND.
3. ALL CABLE STRAPS MUST BE DESIGNED TO WITHSTAND ULTRA-VIOLET EXPOSURE.
4. THE VAULT MUST BE CAULKED AFTER ALL KNOWN ENTRANCES HAVE BEEN MADE.
5. INSTALL ALL CABLES IN LOWER 4" CONDUIT.
6. UPPER 4" CONDUIT IS SPARE ONLY.
7. VAULT MUST HAVE INTEGRAL BASE OR MUST BE GROUTED PER STANDARD SPECIFICATION OF PULL BOXES.
8. NUMBER OF SPLICE ENCLOSURES MAY VARY.
9. SPLICE VAULT COVERS MUST BE STEEL PLATED.
10. ADDITIONAL KNOCKOUTS ARE NEEDED ON THE LONGER SIDE OF THE SPLICE VAULT.
11. COIL 32' OF FIBER OPTIC CABLES IN SPLICE VAULT.
12. CONCRETE ENCASEMENT AROUND SPLICE VAULT MUST BE MINOR CONCRETE.
13. PAVEMENT AND SUBGRADE TO BE AS DIRECTED BY THE ENGINEER.
14. LONGER SIDE OF THE SPLICE VAULT MUST BE PARALLEL TO THE DIRECTION OF TRAVEL.
15. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.



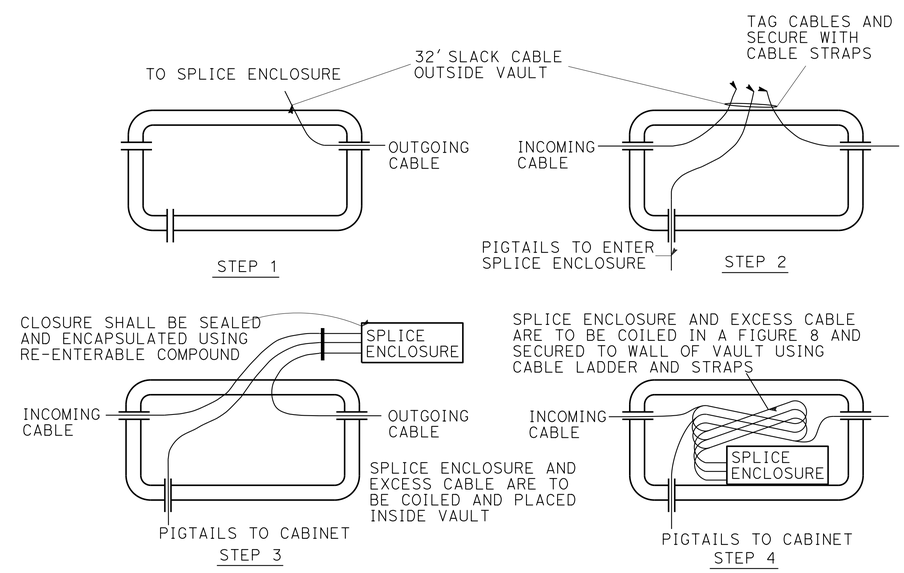
SPLICE VAULT INSTALLATION

INSTALLATION IN ASPHALT PAVEMENT OR COMPACTED EARTH



CABLE INSTALLATION

TOP VIEW - WALLS FOLDED DOWN FOR CLARITY



SPLICE PROCEDURE

(TYPICAL SPLICE VAULT DETAILS)

ELECTRICAL DETAILS

NO SCALE

E-55

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	23,118	R4.8/R11.4 T19.0/R32.6	99	119

REGISTERED ELECTRICAL ENGINEER 6/15/15 DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E15611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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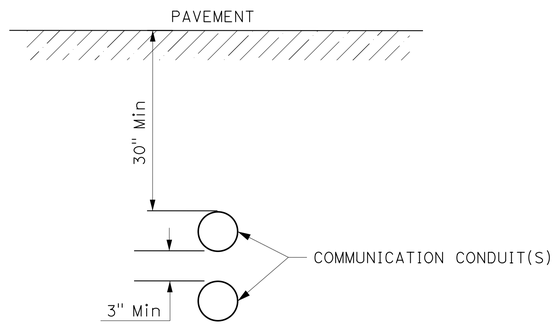
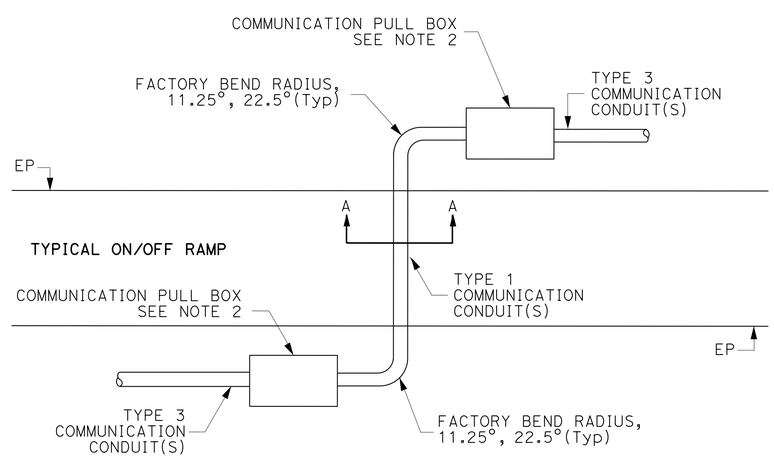
NOTES: (THIS SHEET ONLY)

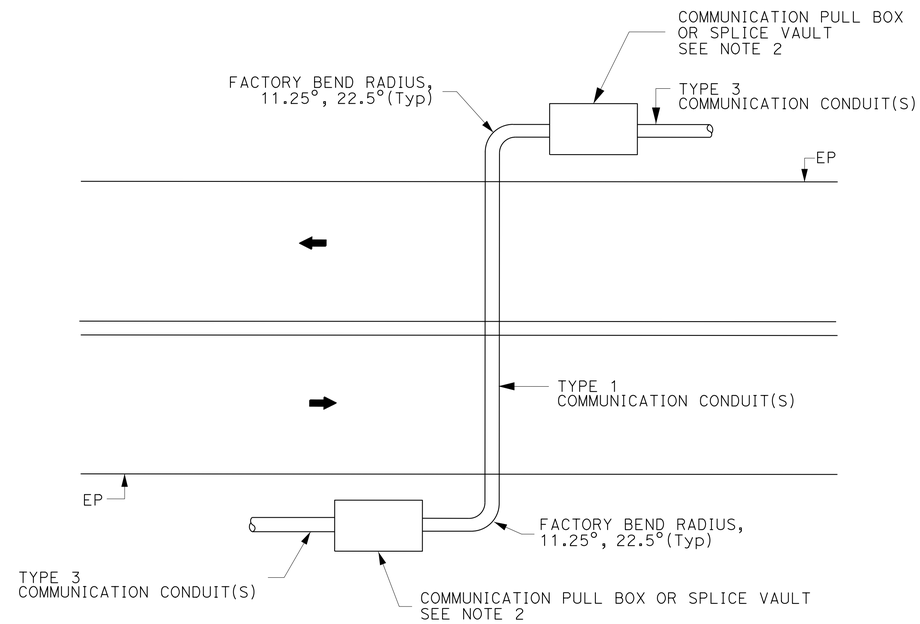
1. JACKED COMMUNICATION CONDUITS SHALL BE 30" MINIMUM BELOW FINISHED GRADE.
2. PLACE PULL BOXES OR SPLICE VAULTS AS SHOWN PER PLANS.
3. BENDS MUST BE FACTORY BENDS.
4. FOR ABBREVIATIONS AND NOTES SEE SHEET E-29.



SECTION A-A



TYPICAL ON/OFF RAMP CROSSING



TYPICAL MAINLINE CROSSING (4 OR MORE LANES)

(JACKED CONDUIT DETAILS)

ELECTRICAL DETAILS

NO SCALE

E-56

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF ITS

FUNCTIONAL SUPERVISOR: JACQUELINE C. TAN
CALCULATED-DESIGNED BY: HOSAKERE K. ANANTH
CHECKED BY: JACQUELINE C. TAN
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 27-AUG-2015
TIME PLOTTED => 11:14

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Jacqueline C Tan 6/15/15
REGISTERED ELECTRICAL ENGINEER DATE

6-22-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JACQUELINE C. TAN No. E015611 Exp. 12/31/15 ELECTRICAL STATE OF CALIFORNIA

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NOTE: ITEMS SHOWN IN TABLE ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

MODIFY COMMUNICATION SYSTEM

SHEET No.	1" INNER-DUCT	12SMFO	2070 WITH 1B MODULE	1-2" C IN SOIL	1-3"C JACKED	TS	ES1	SFP (LX)	ES2	SFP (ZX)	VE	FDU	FOSE	170 TSC CARD	PULL BOX	CAT 5E	TRACER WIRE #12 AWG
	LF	LF	EA	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
E-30						4	3	6	1	2							
E-31						37	37	74	1	2	1			1		2	
E-32						20	16	40	3	8	3			2		4	
E-33	470	500		450	20								1		3		470
E-34	100	400		40	20								1		1		100
E-35	400	350		250									1		1		400
E-36	600	900		850									2		2		600
E-37	500	500		75	20								1		1		200
E-38	500	525		400	20										4		500
E-39	750	500		25									2		1		300
E-40	40	500		30									1		1		
E-43			18						2								
E-44			20									2		1		2	
E-45			11											1		4	
E-46			3			4	3	6	1	2							

WORK AT NORTH HOLLYWOOD HUB

SHEET No.	SFP (ZX)	FIBER JUMPER PAIRS
	EA	EA
E-47	6	6

WORK AT LAX HUB

SHEET No.	SFP (ZX)	FIBER JUMPER PAIRS
	EA	EA
E-48	6	6

WORK AT LOS ANGELES REGIONAL TRANSPORTATION MANAGEMENT CENTER

SHEET No.	COAX	SERIAL CABLE	VD
	EA	EA	EA
E-49	4	4	4

ELECTRICAL QUANTITIES

E-57

REVISED BY | DATE REVISED
HOSAKERE ANANTH | JACQUELINE C. TAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | JACQUELINE C. TAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF ITS

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