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

STATE OF CALIFORNIA ACHSNHPG-P087(029)
DEPARTMENT OF TRANSPORTATION

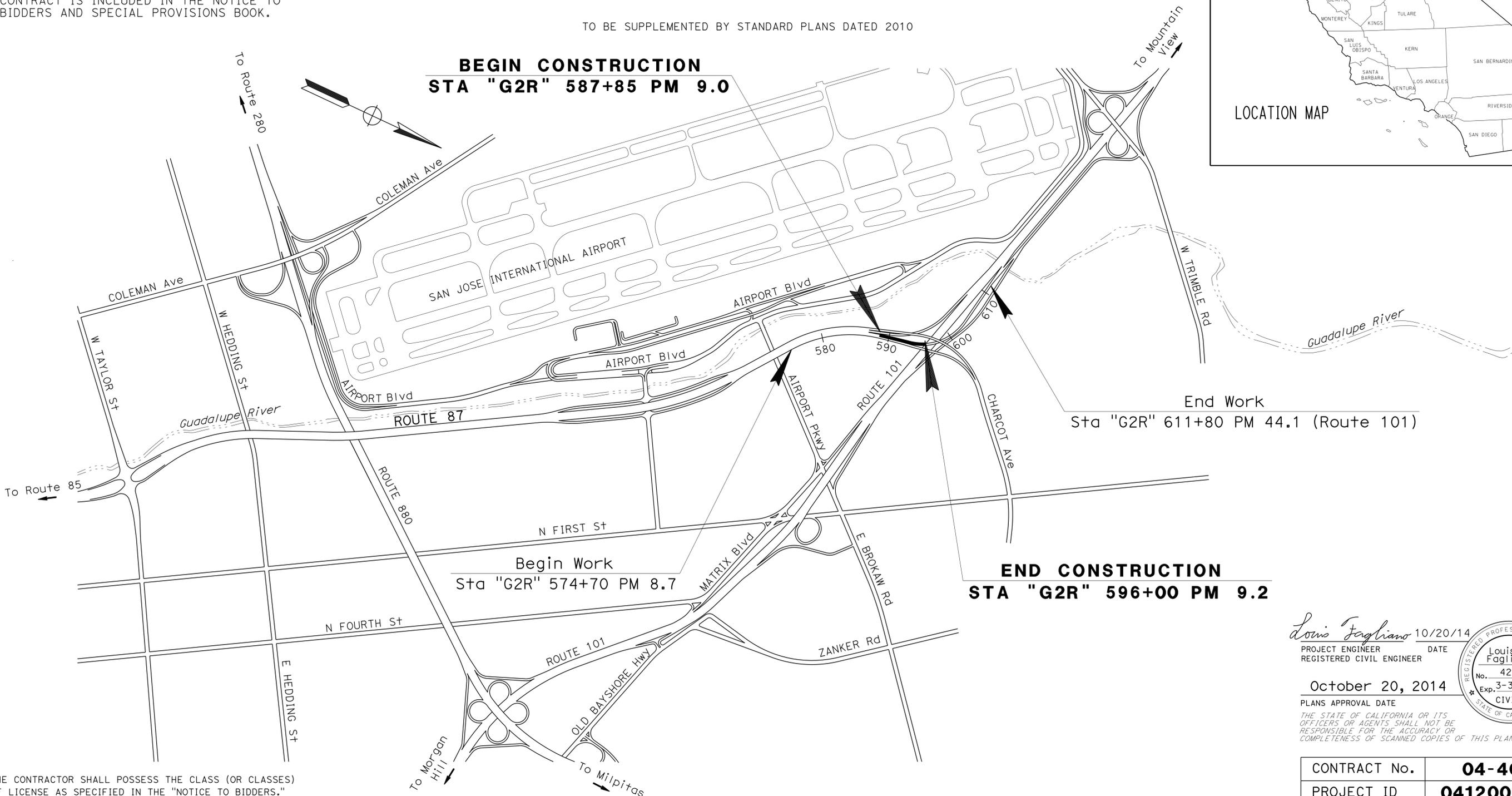
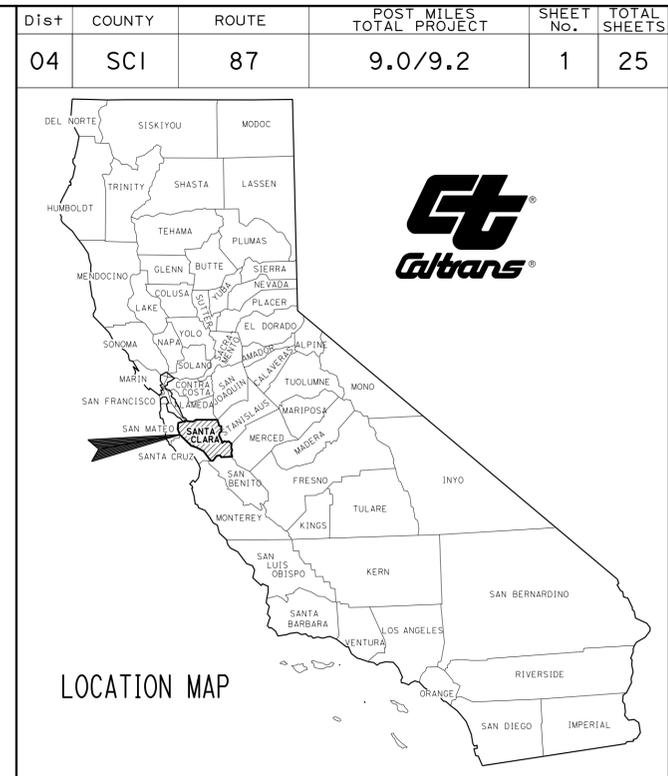
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SANTA CLARA COUNTY
IN SAN JOSE
AT THE NORTHBOUND ROUTE 87
TO NORTHBOUND ROUTE 101 CONNECTOR RAMP

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

BEGIN CONSTRUCTION
STA "G2R" 587+85 PM 9.0

END CONSTRUCTION
STA "G2R" 596+00 PM 9.2

End Work
Sta "G2R" 611+80 PM 44.1 (Route 101)



PROJECT MANAGER
FRANCIS D. MENSAH

DESIGN ENGINEER
TAM LY

Louis S. Fagliano 10/20/14
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

October 20, 2014
PLANS APPROVAL DATE

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



CONTRACT No. 04-4G6104
PROJECT ID 0412000549

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	2	25

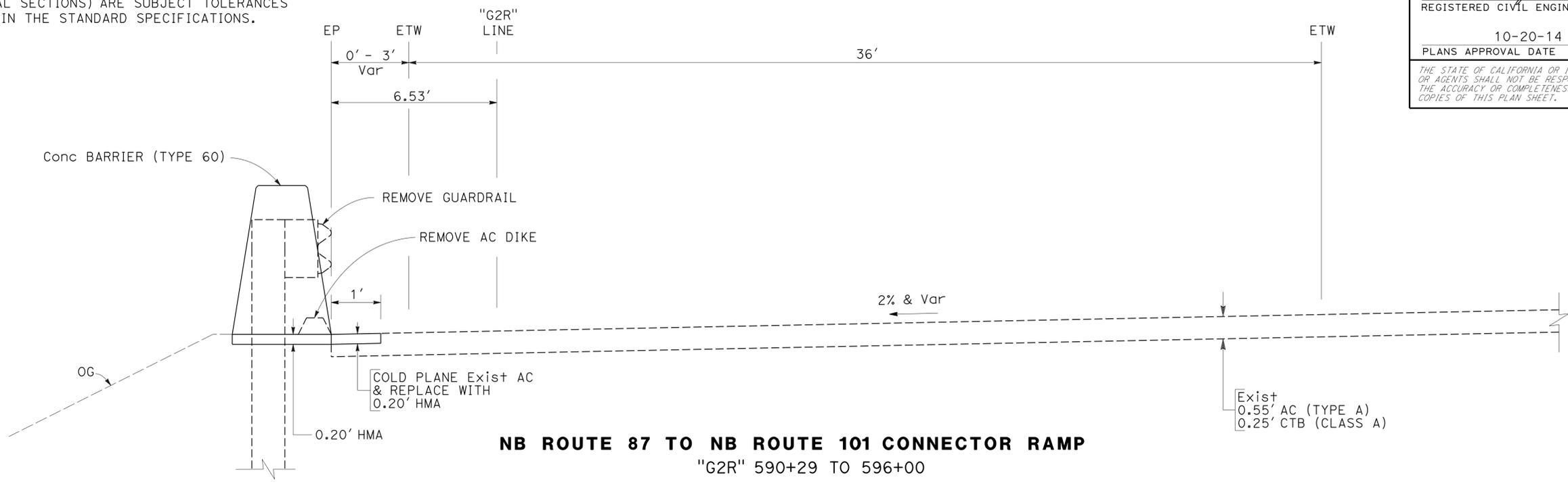
Louis S. Fagliano 10/20/14
 REGISTERED CIVIL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Louis S. Fagliano
 No. 42079
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

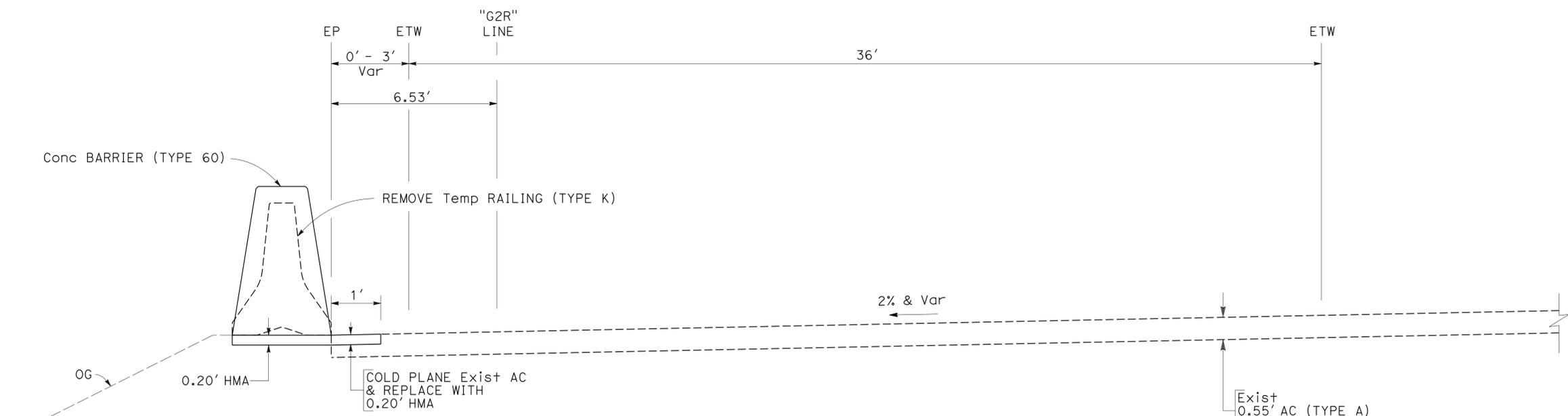
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. THE DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.



NB ROUTE 87 TO NB ROUTE 101 CONNECTOR RAMP
"G2R" 590+29 TO 596+00



NB ROUTE 87 TO NB ROUTE 101 CONNECTOR RAMP
"G2R" 587+85 TO 590+29

TYPICAL CROSS SECTIONS
NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	TAM LY
CALCULATED/DESIGNED BY	CHECKED BY
LOUIS S. FAGLIANO	TAM LY
REVISOR	DATE
LF	9/25/14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

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

NOTE:
 1. REMOVE Conc BARRIER (TYPE K) AFTER
 COMPLETION OF Conc BARRIER (TYPE 60).

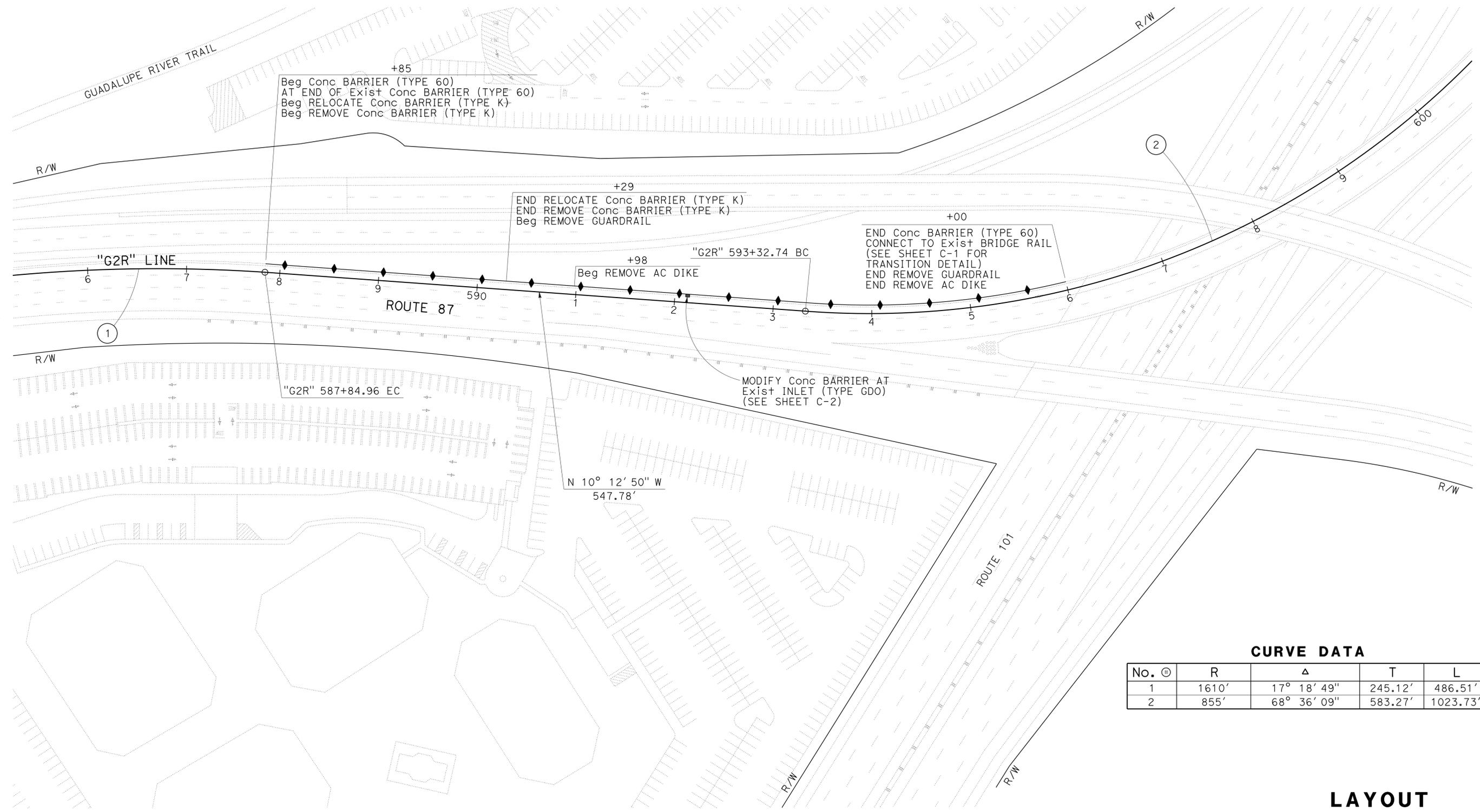
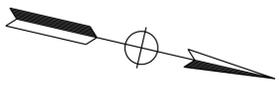
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	3	25

Louis S. Fagliano 10/20/14
 REGISTERED CIVIL ENGINEER DATE

10-20-14
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
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REGISTERED PROFESSIONAL ENGINEER
 Louis S. Fagliano
 No. 42079
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA



N 10° 12' 50" W
 547.78'

CURVE DATA

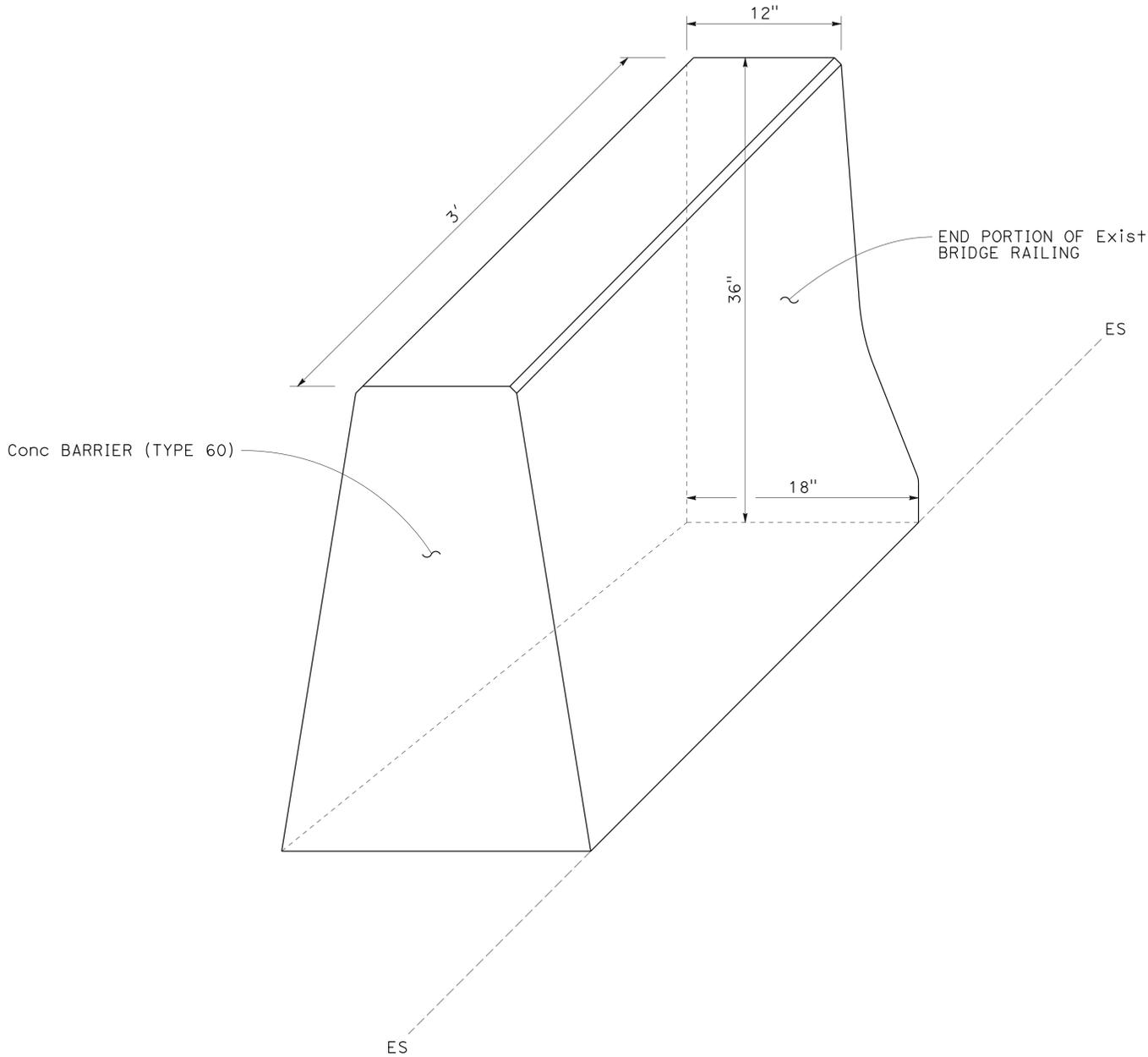
No. Ⓢ	R	Δ	T	L
1	1610'	17° 18' 49"	245.12'	486.51'
2	855'	68° 36' 09"	583.27'	1023.73'

LAYOUT
 SCALE: 1" = 50'

L-1

LAST REVISION DATE PLOTTED => 04-DEC-2014 10-20-14 TIME PLOTTED => 14:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	4	25
<i>Louis Fagliano</i> 10/20/14 REGISTERED CIVIL ENGINEER DATE			10-20-14 PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER Louis S. Fagliano No. 42079 Exp. 3-31-16 CIVIL STATE OF CALIFORNIA			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		



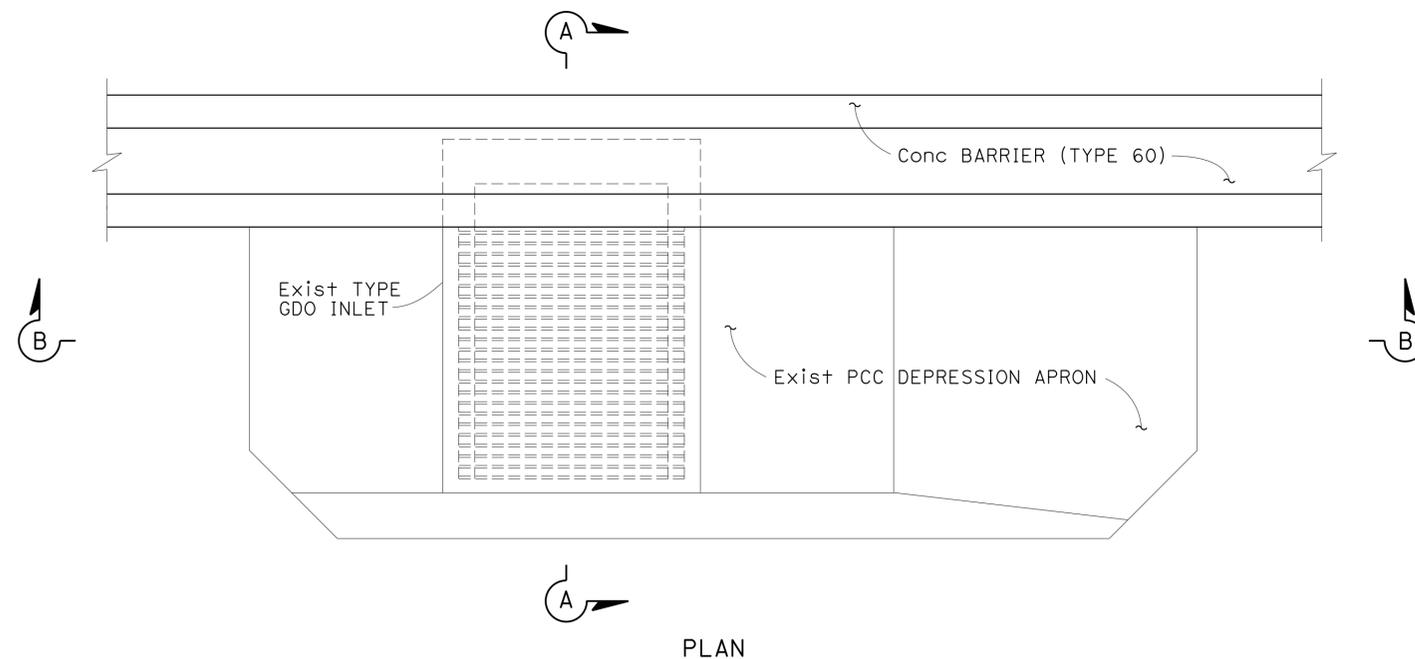
CONCRETE BARRIER TRANSITION DETAIL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	TAM LY
CALCULATED/DESIGNED BY	CHECKED BY
LOUIS S. FAGLIANO	TAM LY
REVISED BY	DATE REVISED
LF	9/25/14

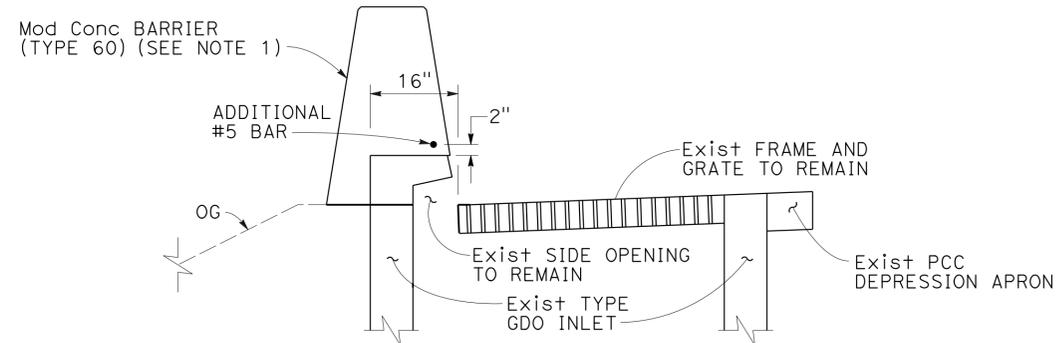
CONSTRUCTION DETAILS
NO SCALE

C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	5	25
<i>Louis Fagliano</i> 10/20/14 REGISTERED CIVIL ENGINEER DATE			10-20-14 PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER Louis S. Fagliano No. 42079 Exp. 3-31-16 CIVIL STATE OF CALIFORNIA			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		

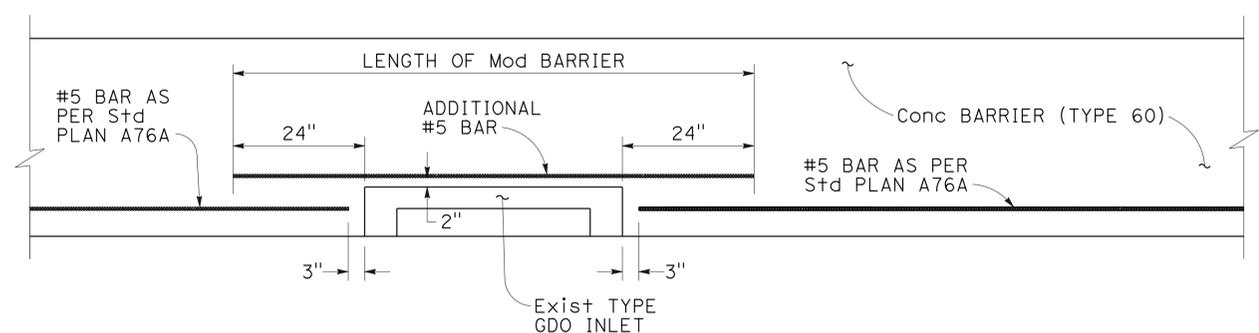


PLAN



SECTION A-A

NOTE:
 1. THE MODIFIED BARRIER IS TO CONTAIN THE SAME REINFORCING BARS AS PER Std PLAN A76A EXCEPT FOR THE SPECIFIC #5 BARS SHOWN IN SECTION B-B.



SECTION B-B
 ELEVATION VIEW

**MODIFIED CONCRETE BARRIER DETAIL
 AT EXISTING TYPE GDO INLET**

CONSTRUCTION DETAILS
 NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	TAM LY
CALCULATED/DESIGNED BY	CHECKED BY
LOUIS S. FAGLIANO	TAM LY
REVISOR	DATE
LF	9/25/14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY
 FUNCTIONAL SUPERVISOR: KAMRAN NAKHJURI
 CALCULATED/DESIGNED BY: KAMRAN NAKHJURI
 CHECKED BY: KAMRAN NAKHJURI
 REVISOR: JIANGFAN CHEN
 DATE REVISED: 9/22/14
 JC

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

NOTE:
 1. TEMPORARY BMP LOCATIONS ARE DESIGNED BASED ON
 DISTURBED AREAS AND WATER FLOW PATTERNS INFORMATION
 AVAILABLE AT DESIGN PHASE.

LEGEND:

- ////// TFR ////
 - □
 -
- TEMPORARY FIBER ROLL
 TEMPORARY DRAINAGE INLET PROTECTION
 TEMPORARY COVER

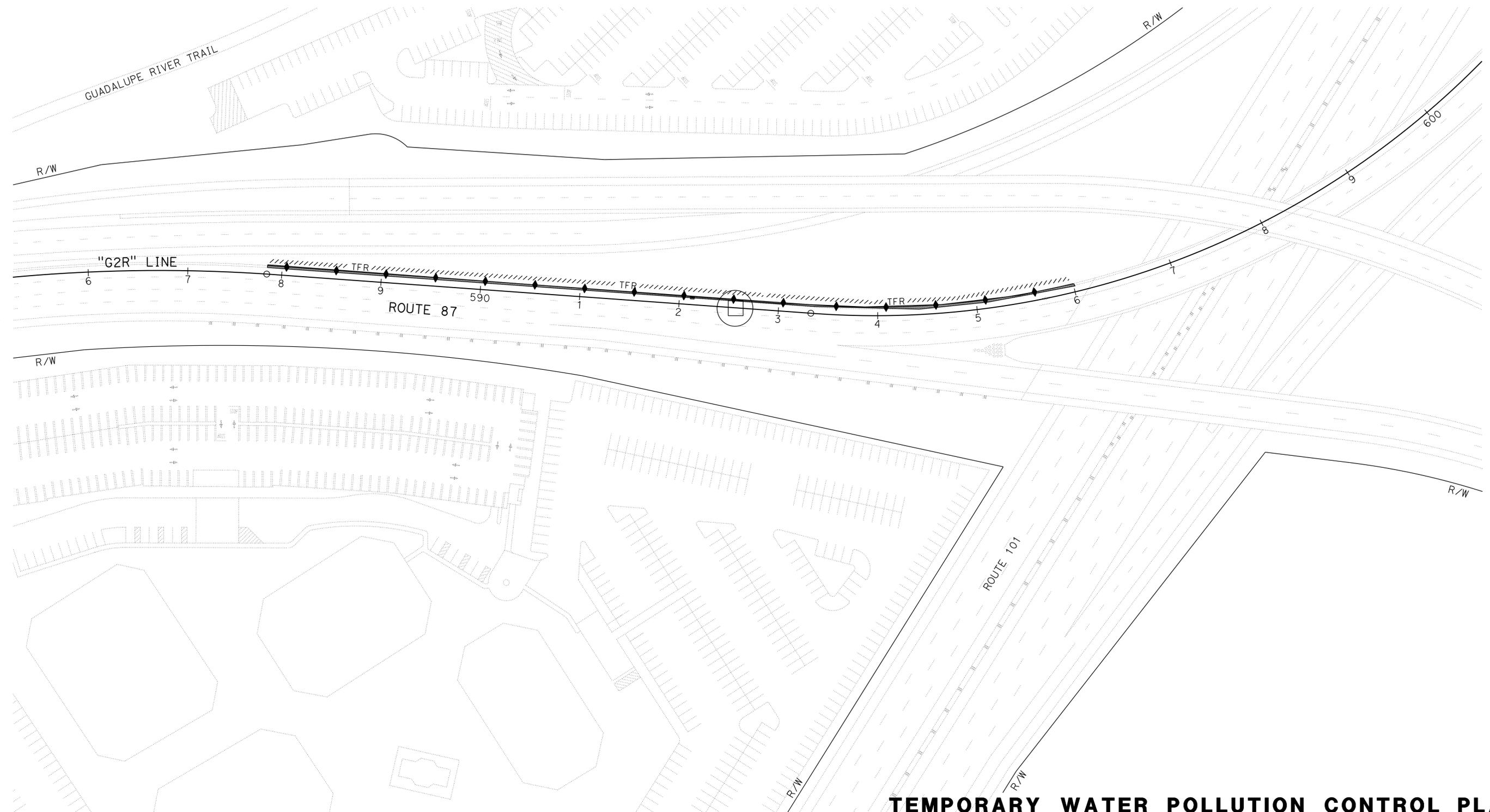


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	6	25

10/20/14
 REGISTERED CIVIL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

Jiangfan Chen
 No. 77248
 Exp. 6-30-15
 CIVIL

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



TEMPORARY WATER POLLUTION CONTROL PLAN
 SCALE: 1" = 50'

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

WPC-1

LAST REVISION DATE PLOTTED => 04-DEC-2014 10-20-14 TIME PLOTTED => 14:12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans WATER QUALITY

FUNCTIONAL SUPERVISOR
 KAMRAN NAKHJURI

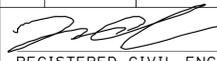
CALCULATED/DESIGNED BY
 CHECKED BY

JENNIFER CHEN
 KAMRAN NAKHJURI

REVISED BY
 DATE REVISED

JC
 9/22/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	7	25

 10/20/14
 REGISTERED CIVIL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Jiangfan
 Chen
 No. 77248
 Exp. 6-30-15
 CIVIL
 STATE OF CALIFORNIA

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TEMPORARY WATER POLLUTION CONTROL QUANTITIES

STATION LIMITS	TEMPORARY COVER	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY FIBER ROLL
	SQYD	EA	LF
"G2R" 587+85 TO 596+00	200	1	900
TOTAL	200	1	900

TEMPORARY WATER POLLUTION CONTROL QUANTITIES WPCQ-1

LAST REVISION | DATE PLOTTED => 04-DEC-2014
 10-20-14 | TIME PLOTTED => 14:12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION Caltrans	FUNCTIONAL SUPERVISOR ROLAND AU-YEUNG	CALCULATED/DESIGNED BY CHECKED BY	HERMINIO S. RUIDERA	REVISOR BY	HR
			JERILYN L. STRUVEN	DATE REVISED	9/22/14

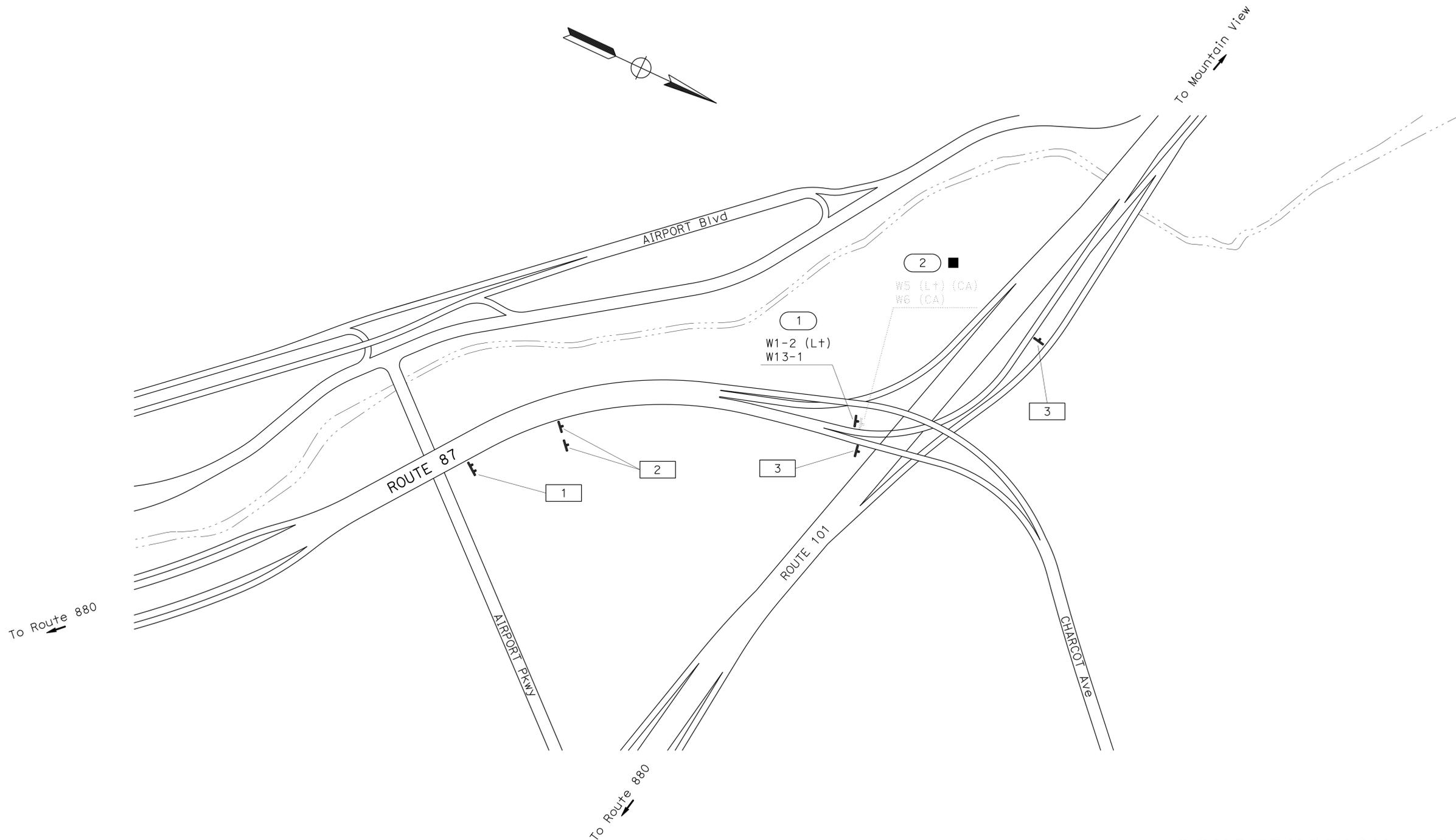
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	8	25
			10/20/14		
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			10-20-14		
			No. 49964		
			Exp. 2-31-14		
			CIVIL		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
2. CONSTRUCTION AREA SIGNS TO BE STATIONARY MOUNTED.

LEGEND:

- No. CONSTRUCTION AREA SIGN NUMBER
- No. ROADSIDE SIGN NUMBER
- REMOVE ROADSIDE SIGN



CONSTRUCTION AREA SIGNS AND SIGN PLAN
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGNS AND SIGN WORK ONLY

CS-1

LAST REVISION | DATE PLOTTED => 04-DEC-2014
10-20-14 | TIME PLOTTED => 14:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	9	25

REGISTERED CIVIL ENGINEER DATE: 10/20/14
 PLANS APPROVAL DATE: 10-20-14

Jerilyn L. Struven
 No. 49964
 Exp. 2-31-14
 CIVIL

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

CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	No. OF SIGNS	REMARKS
1	C40 (CA)	72" x 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 4" x 6"	1	
2	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	2	
3	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2	

ROADSIDE SIGN QUANTITIES

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	POST SIZE & LENGTH	ROADSIDE SIGN ONE POST	REMOVE ROADSIDE SIGN	REMARKS
					EA		
1	W1-2 (L+)	30" x 30"	40 MPH	4" x 6", 17"-0"	1		
	W13-1	24" x 24"					
2	W5 (L+) (CA)					1	
	W6 (CA)						
TOTAL					1	1	

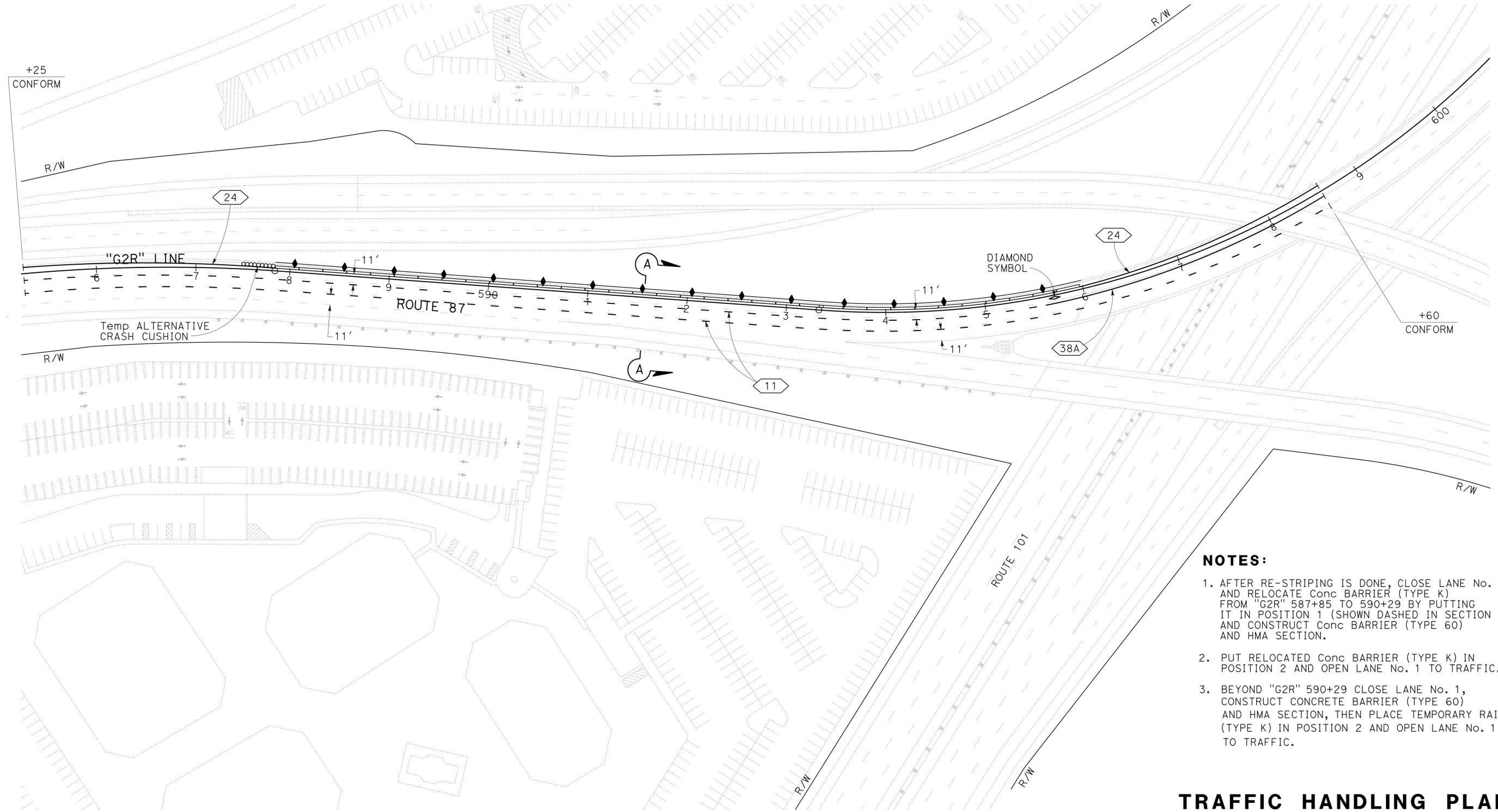
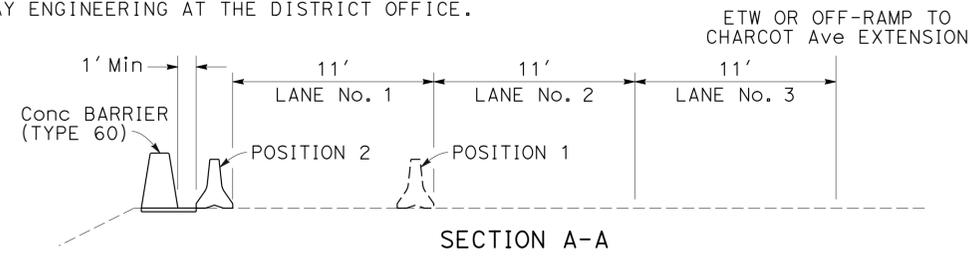
SIGN PANEL SUMMARY

SIGN No.	SIGN CODE	SIGN SIZE	SIGN AREA (SQFT)	BACKGROUND		LEGEND		GRAPHIC FILM		UNFRAMED ALUMINUM		REMARKS
				SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	STANDARD	PREMIUM	0.063"	0.080"	
1	W1-2 (L+)	30" x 30"	6.25	YELLOW	III	BLACK	PLAIN		X	6.25		
	W13-1	24" x 24"	4.00	YELLOW	III	BLACK	PLAIN		X	4.00		
TOTAL										10.25		

CONSTRUCTION AREA SIGNS AND SIGN QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	10	25
<i>Louis S. Fagliano</i> 10/20/14 REGISTERED CIVIL ENGINEER DATE			Louis S. Fagliano No. 42079 Exp. 3-31-16 CIVIL		
10-20-14 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

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



- NOTES:**
1. AFTER RE-STRIPING IS DONE, CLOSE LANE No. 1 AND RELOCATE Conc BARRIER (TYPE K) FROM "G2R" 587+85 TO 590+29 BY PUTTING IT IN POSITION 1 (SHOWN DASHED IN SECTION A-A) AND CONSTRUCT Conc BARRIER (TYPE 60) AND HMA SECTION.
 2. PUT RELOCATED Conc BARRIER (TYPE K) IN POSITION 2 AND OPEN LANE No. 1 TO TRAFFIC.
 3. BEYOND "G2R" 590+29 CLOSE LANE No. 1, CONSTRUCT CONCRETE BARRIER (TYPE 60) AND HMA SECTION, THEN PLACE TEMPORARY RAILING (TYPE K) IN POSITION 2 AND OPEN LANE No. 1 TO TRAFFIC.

TRAFFIC HANDLING PLAN
 SCALE: 1" = 50'

TH-1

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	TAM LY
CALCULATED/DESIGNED BY	CHECKED BY
LOUIS S. FAGLIANO	TAM LY
REVISOR	DATE
LF	9/25/14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR
 TAM LY
 CALCULATED/DESIGNED BY
 CHECKED BY
 LOUIS S. FAGLIANO
 TAM LY
 REVISED BY
 DATE REVISED
 LF
 9/25/14

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

- NOTES:**
1. ALL LANES ARE 12' WIDE UNLESS OTHERWISE NOTED.
 2. FOR DETAIL 13M, SEE SHEET PDD-1.

LEGEND:
 CHANGE OF PAVEMENT DELINEATION DETAILS

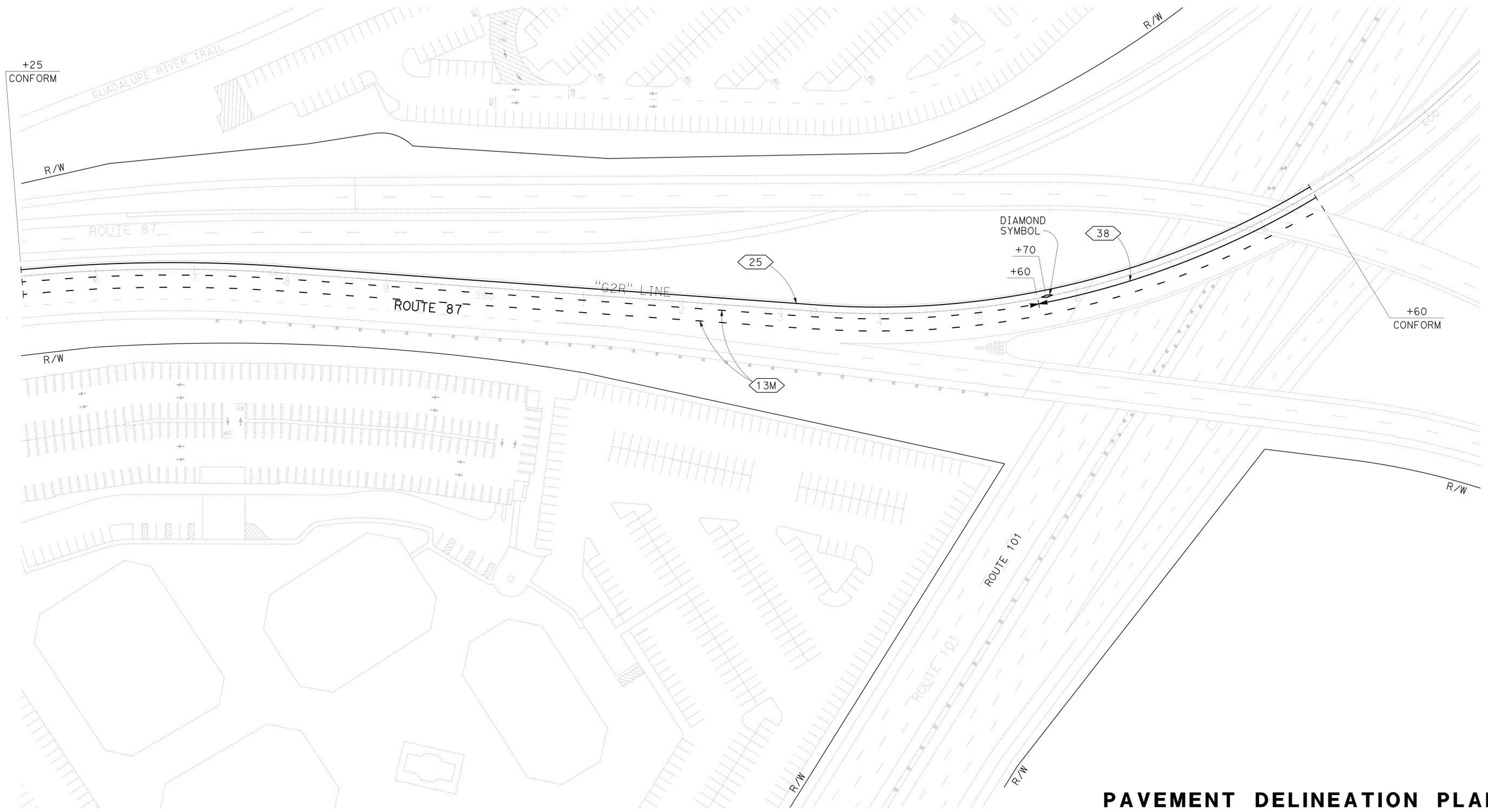


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	11	25

Louis S. Fagliano 10/20/14
 REGISTERED CIVIL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Louis S. Fagliano
 No. 42079
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

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PAVEMENT DELINEATION PLAN
 SCALE: 1" = 50'

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

PD-1

LAST REVISION DATE PLOTTED => 04-DEC-2014 10-20-14 TIME PLOTTED => 14:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	12	25

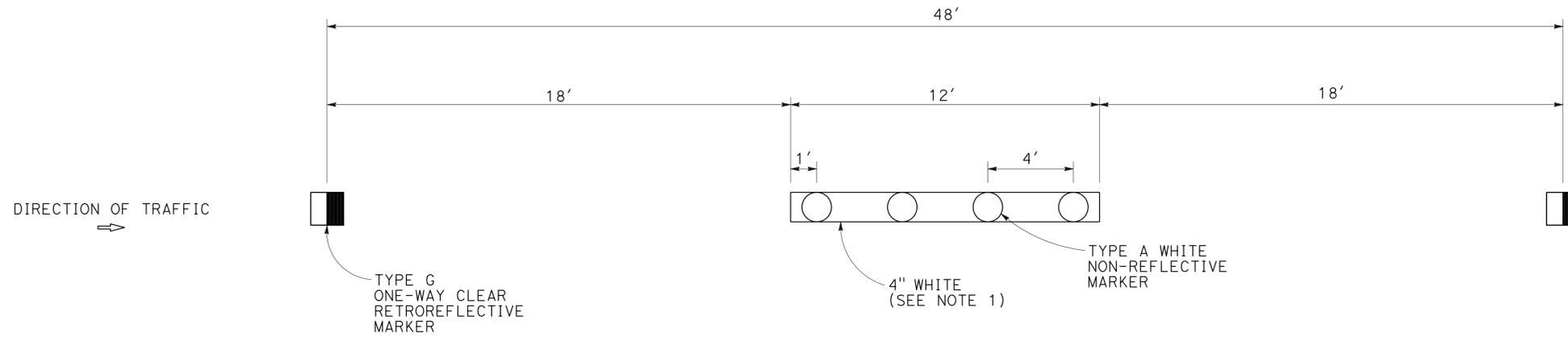
Louis S. Fagliano 10/20/14
 REGISTERED CIVIL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Louis S. Fagliano
 No. 42079
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

1. INSTALL 4" WHITE AFTER INSTALLING PAVEMENT MARKERS.
2. DETAIL 13M IS A PAVEMENT DELINEATION MODIFIED FROM DETAIL 13.

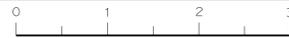


DETAIL 13M

PAVEMENT DELINEATION DETAILS
NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	TAM LY
CALCULATED/DESIGNED BY	CHECKED BY
LOUIS S. FAGLIANO	TAM LY
REVISOR BY	DATE REVISED
LF	9/25/14



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	13	25

Louis Fagliano 10/20/14
REGISTERED CIVIL ENGINEER DATE

10-20-14
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.

REMOVE THERMOPLASTIC TRAFFIC STRIPES, PAVEMENT MARKERS AND PAVEMENT MARKINGS

STATION LIMITS	REMOVE THERMOPLASTIC TRAFFIC STRIPE		REMOVE PAVEMENT MARKER		REMOVE PAVEMENT MARKINGS
	EXISTING DETAIL 13M	EXISTING DETAIL 38	EXISTING DETAIL 13M	EXISTING DETAIL 38	EXISTING DIAMOND SYMBOL
	LF		EA		SQFT
"G2R" 585+25 TO 598+60	2370		252		
"G2R" 595+60 TO 598+60		300		14	
"G2R" 595+71					11
TOTAL	2670		266		11

TEMPORARY TRAFFIC STRIPE (PAINT) AND TEMPORARY PAVEMENT MARKING (PAINT)

STATION LIMITS	TRAFFIC STRIPE (PAINT)			PAVEMENT MARKING (PAINT)
	DETAIL 11	DETAIL 24	DETAIL 38A	DIAMOND SYMBOL
	LF			SQFT
"G2R" 585+25 TO 598+60		1335		
"G2R" 585+25 TO 598+60	2370			
"G2R" 595+60 TO 598+60			300	
"G2R" 595+70				11
TOTAL	4005			11

THERMOPLASTIC TRAFFIC STRIPE AND PAVEMENT MARKINGS

STATION LIMITS	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	4" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	PAVEMENT MARKINGS DIAMOND SYMBOL
	DETAIL 13M	DETAIL 25	DETAIL 38	
	LF			
"G2R" 585+25 TO 598+60	2370	1335		
"G2R" 595+60 TO 598+60			300	
"G2R" 595+70				11
TOTAL	2370	1335	300	11

PAVEMENT MARKERS

STATION LIMITS	PAVEMENT MARKER (NON-REFLECTIVE)		PAVEMENT MARKER (RETROREFLECTIVE)	
	TYPE A WHITE		TYPE G WHITE	TYPE H YELLOW
	DETAIL 13M		DETAIL 13M	DETAIL 38
"G2R" 585+25 TO 598+60				
"G2R" 595+60 TO 598+60			14	
	202		50	28
SUBTOTAL			64	28
TOTAL	202		92	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR
TAM LY
CALCULATED/DESIGNED BY
CHECKED BY
LOUIS S. FAGLIANO
TAM LY
REVISED BY
DATE REVISED
9/25/14
LF

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	14	25

Louis Fagliano 10/20/14
REGISTERED CIVIL ENGINEER DATE

10-20-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Louis S. Fagliano
No. 42079
Exp. 3-31-16
CIVIL
STATE OF CALIFORNIA

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ASPHALT QUANTITIES

STATION LIMITS	DESCRIPTION		
	COLD PLANE ASPHALT CONCRETE PAVEMENT	HOT MIX ASPHALT	TACK COAT
	SQYD	TON	
"G2R" 587+85 TO 596+00	91	37	0.1
TOTAL	91	37	0.1

REMOVE GUARDRAIL

STATION LIMITS	LF
"G2R" 590+29 TO 596+00	571
TOTAL	571

CONCRETE RAILING (TYPE K)

STATION LIMITS	DESCRIPTION	PLACEMENT		TOTAL
		POSITION 1	POSITION 2	
		LF		
"G2R" 587+85 TO 590+29	RELOCATE Conc BARRIER (TYPE K)	244	244	488
"G2R" 590+29 TO 596+00	TEMPORARY RAILING (TYPE K)		571	571
"G2R" 587+85 TO 590+29	REMOVE Conc BARRIER (TYPE K)		244	244

TREATED WOOD WASTE

STATION LIMITS	LB
"G2R" 590+29 TO 596+00	8,120
TOTAL	8,120

REMOVE ASPHALT CONCRETE DIKE

STATION LIMITS	LF
"G2R" 590+98 TO 596+00	502
TOTAL	502

ROADWAY EXCAVATION

STATION LIMITS	CY
"G2R" 587+85 TO 596+00	12
TOTAL	12

CONCRETE BARRIER (TYPE 60)

STATION LIMITS	LF
"G2R" 587+85 TO 596+00	815
TOTAL	815

TEMPORARY ALTERNATIVE CRASH CUSHION

STATION LIMITS	EA
"G2R" 587+85	1
TOTAL	1

SUMMARY OF QUANTITIES

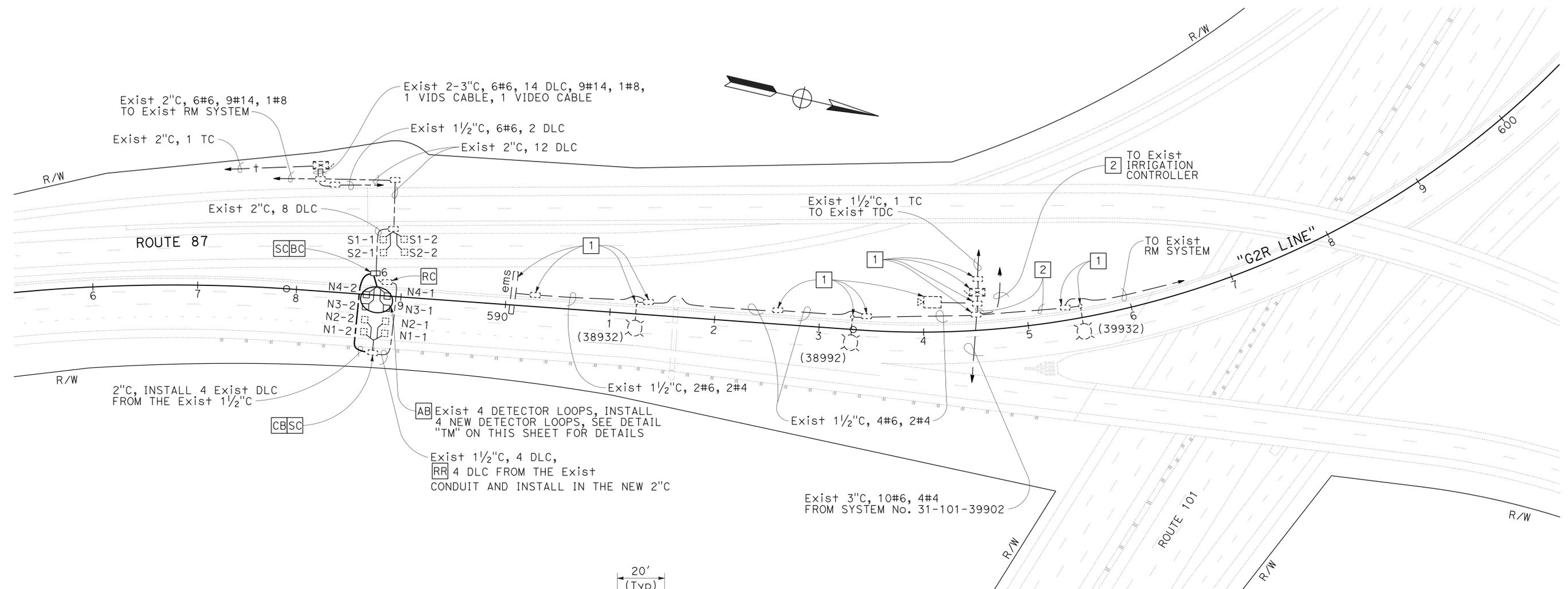
Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR
LOUIS S. FAGLIANO
TAM LY
CALCULATED/DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
LF
9/25/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	15	25
<i>Kenneth Y. Xu</i> 10/20/14 REGISTERED ELECTRICAL ENGINEER DATE			Kenneth Y. Xu No. 15219 Exp. 6-30-16 ELECT		
10-20-14			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL
 Caltrans®
 FUNCTIONAL SUPERVISOR: KENNETH XU
 CHECKED BY: KENNETH XU
 CALCULATED/DESIGNED BY: MICHELLE CHAN
 REVISIONS: LF 9/22/14
 REVISED BY: DATE REVISION

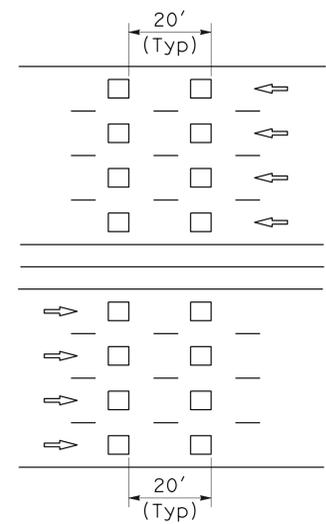


GENERAL NOTE:

- YOU MUST PROVIDE TWO REPORTS PER LOCATION ON THE STATUS OF EACH DETECTOR LOOP REPLACEMENT SHOWING CONTINUITY AND INSULATION RESISTANCE READINGS. THE REPORTS MUST BE SUBMITTED TO THE ENGINEER, ONE BEFORE STARTING WORK AND THE OTHER AFTER WORK HAS BEEN COMPLETED AT EACH LOCATION.

PROJECT NOTES:

- EXISTING ELECTRICAL EQUIPMENT TO REMAIN IN PLACE
- EXISTING 1 1/2" C, 2#6



TRAFFIC MONITORING STATION NOTES

FREEWAY MAINLINE DETECTOR DESIGNATION:

N=NORTHBOUND LANES (NB)
 S=SOUTHBOUND LANES (SB)
 E=EASTBOUND LANES (EB)
 W=WESTBOUND LANES (WB)

NUMBER OF LANES FROM LEFT WITH RESPECT TO DIRECTION OF TRAFFIC:

1=FIRST LANE FROM LEFT
 2=SECOND LANE FROM LEFT
 3=THIRD LANE FROM LEFT
 4=FOURTH LANE FROM LEFT

NUMBER OF DETECTOR IN THE SAME LANE:

1=ENTERING DETECTOR
 2=LEAVING DETECTOR

DETAIL "TM"
TRAFFIC MONITORING STATION

MODIFY TRAFFIC MONITORING STATION

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR
 KENNETH XU

CALCULATED/DESIGNED BY
 CHECKED BY

MICHELLE CHAN
 KENNETH XU

REVISOR
 DATE

LF
 9/22/14

DATE
 9/22/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	16	25

Kenneth Y. Xu 10/20/14
 REGISTERED ELECTRICAL ENGINEER DATE
 10-20-14
 PLANS APPROVAL DATE

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MODIFY TRAFFIC OPERATIONS SYSTEM

SHEET No.	(N) BORING	(N) 2" CONDUIT	(N) CB	(N) BC	(N) SC	(N) #6 PB	(N) LOOP TYPE A
	E-1	100	100	1	1	8	1

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

ELECTRICAL QUANTITIES

E-2

	M	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	N	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	O	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	P	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	S	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
ℒ	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	T	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	W
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLOL	WINGWALL LAYOUT LINE	X
X Sec	CROSS SECTION	
Xing	CROSSING	Y
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	17	25

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 10-20-14

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

TABLE A

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

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

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

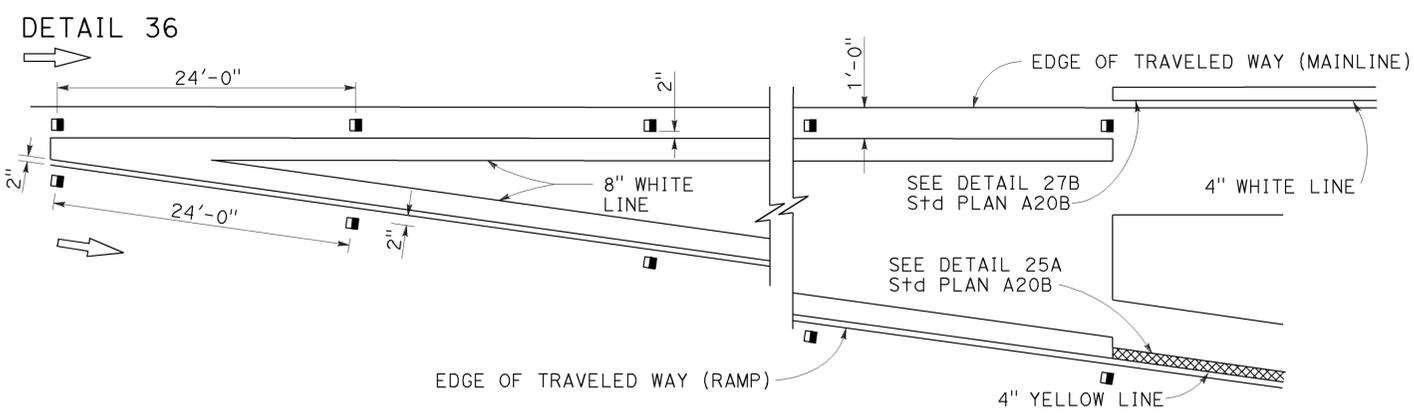
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	18	25

REGISTERED CIVIL ENGINEER
 Roberta L. McLaughlin
 No. C40375
 Exp. 3-31-15
 CIVIL
 STATE OF CALIFORNIA

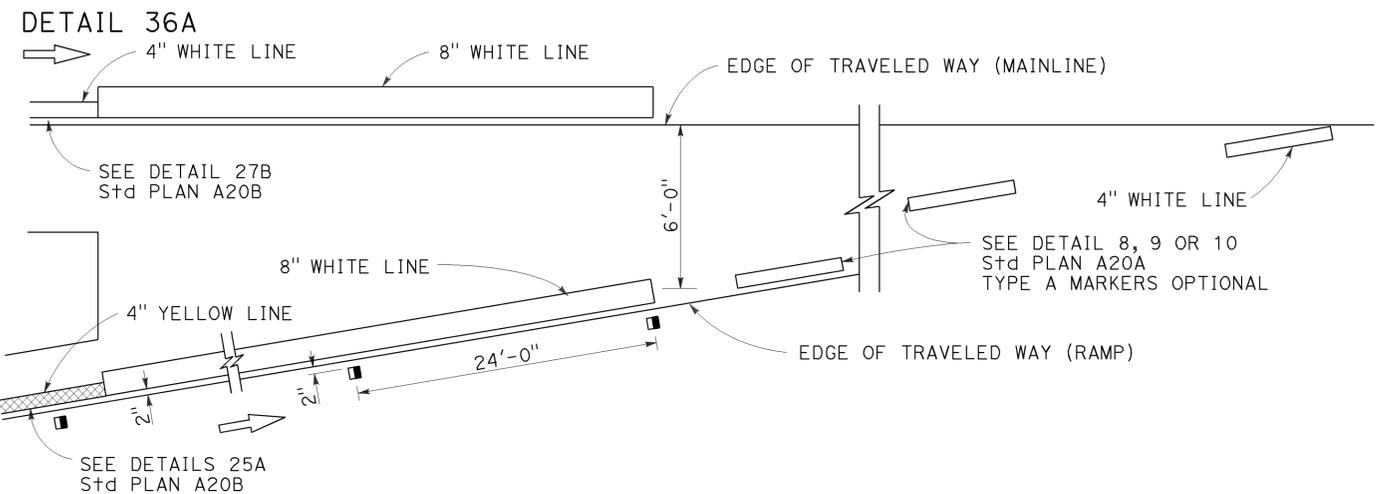
July 19, 2013
 PLANS APPROVAL DATE

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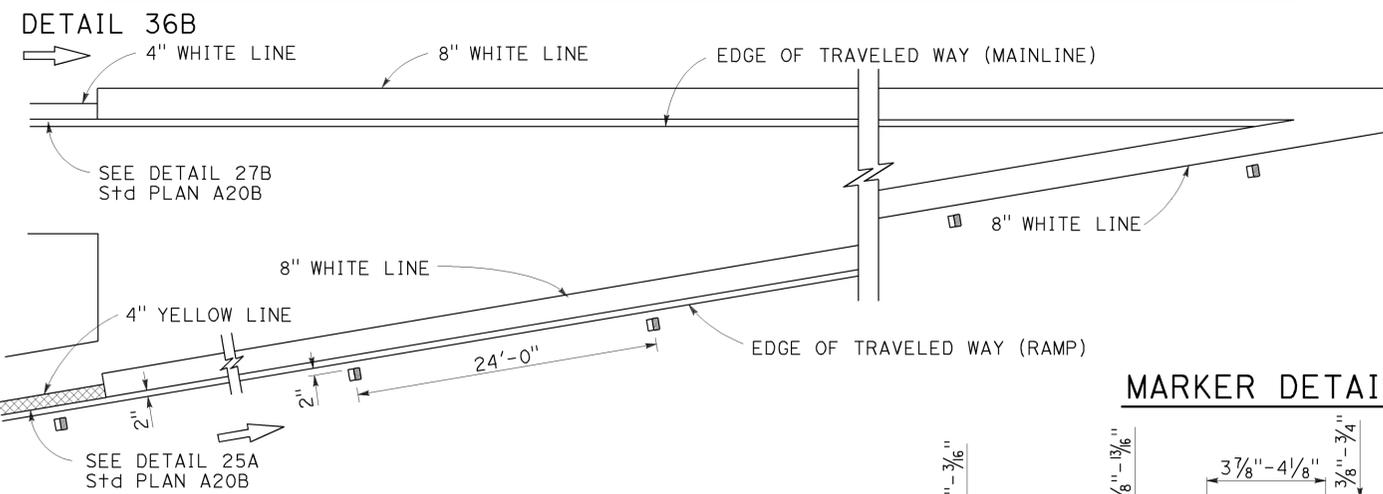
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



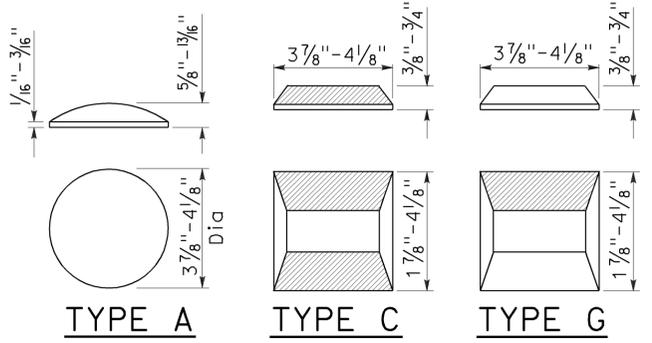
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT



MARKER DETAILS

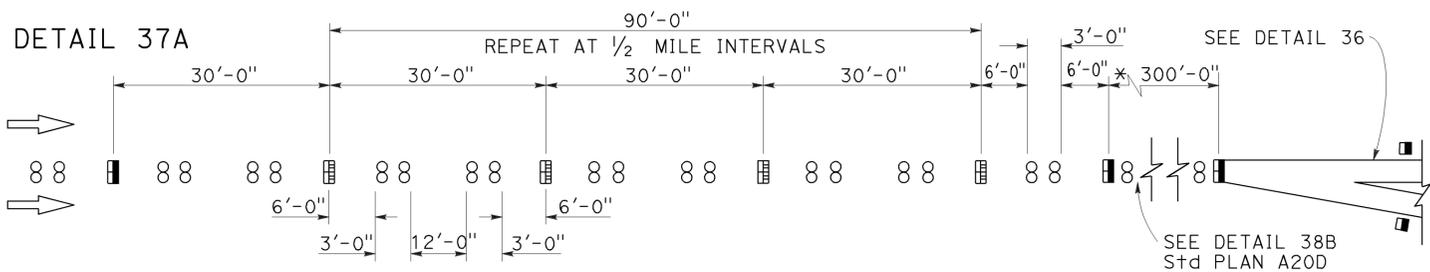
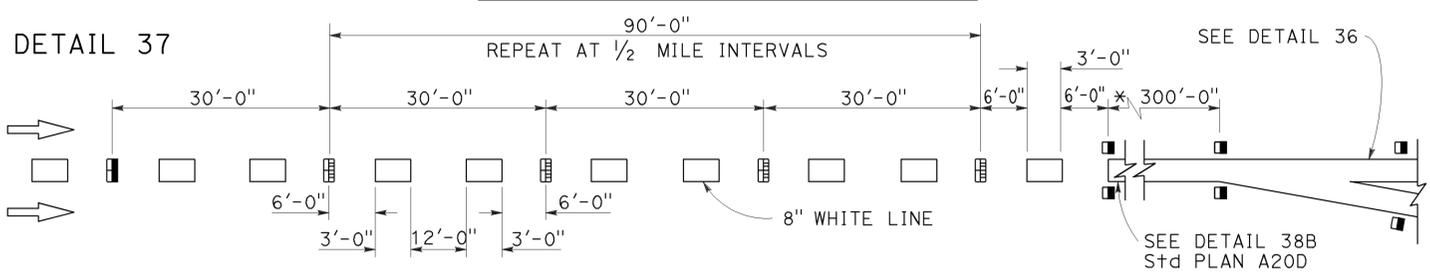
LEGEND:

- MARKERS
- TYPE A WHITE NON-REFLECTIVE
 - ◻ TYPE C RED-CLEAR RETROREFLECTIVE
 - TYPE G ONE-WAY CLEAR RETROREFLECTIVE



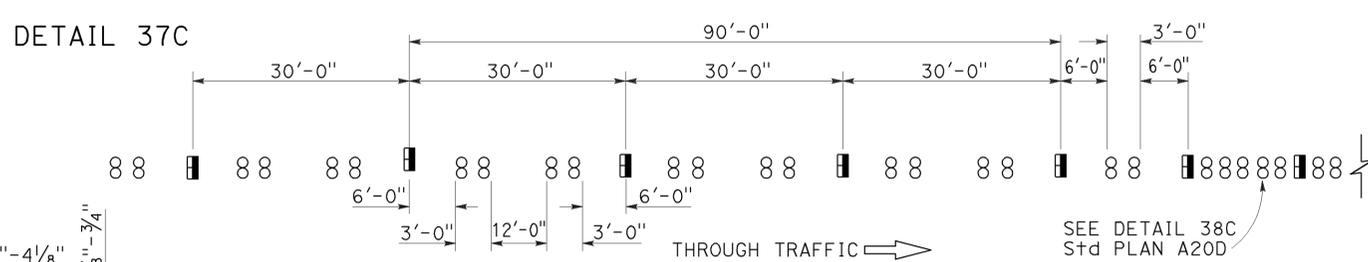
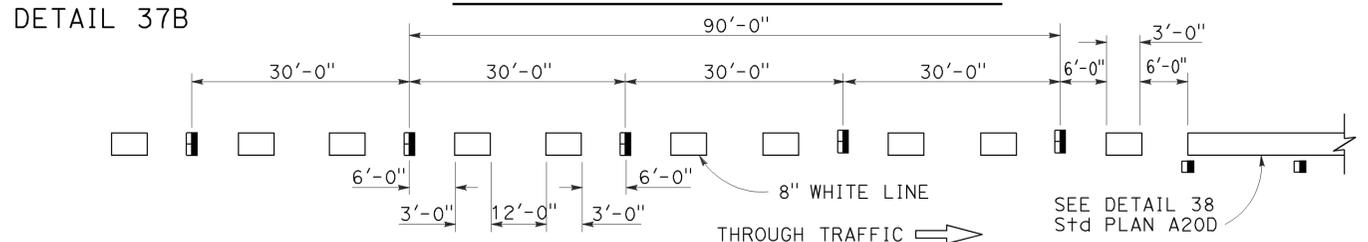
RETROREFLECTIVE FACE

LANE DROP AT EXIT RAMP



* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKERS
 AND TRAFFIC LINE
 TYPICAL DETAILS**
 NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

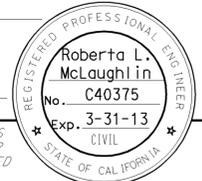
REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

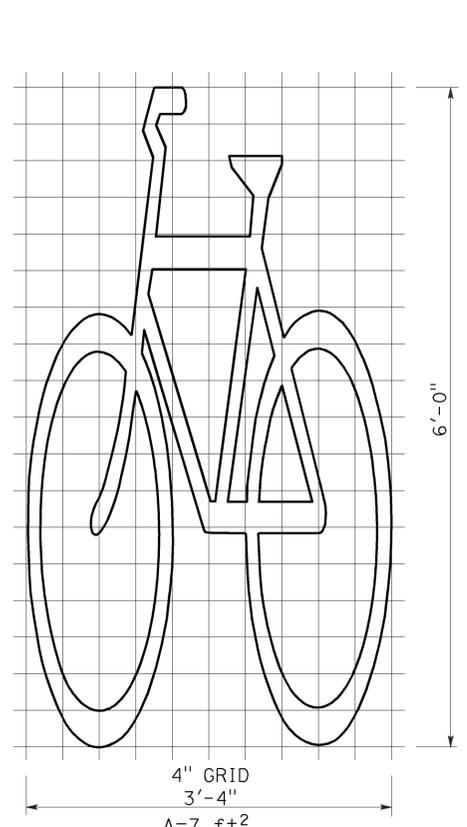
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	19	25

October 19, 2012
 PLANS APPROVAL DATE

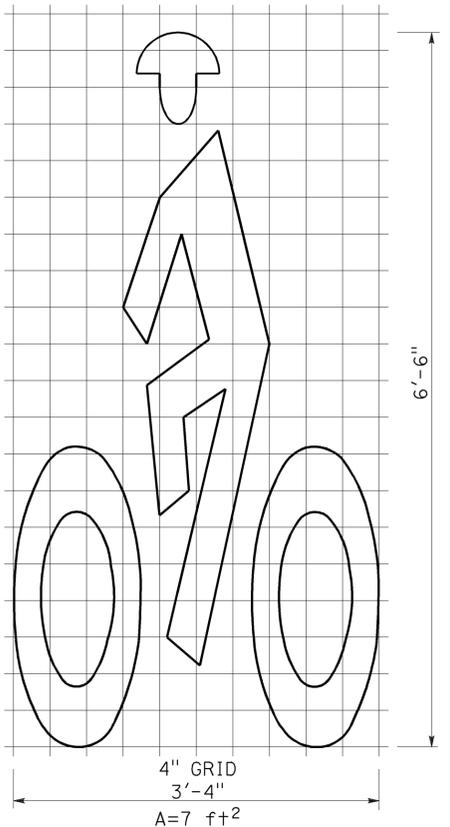
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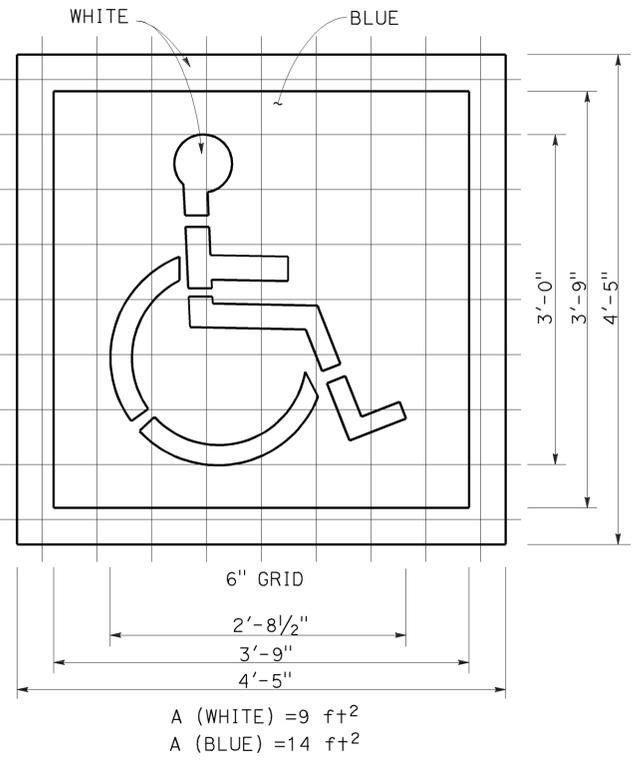
NOTE: TO ACCOMPANY PLANS DATED 10-20-14
 Minor variations in dimensions may be accepted by the Engineer.



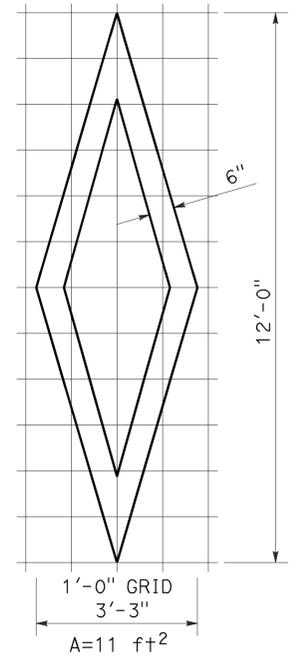
**BIKE LANE SYMBOL
WITHOUT PERSON**



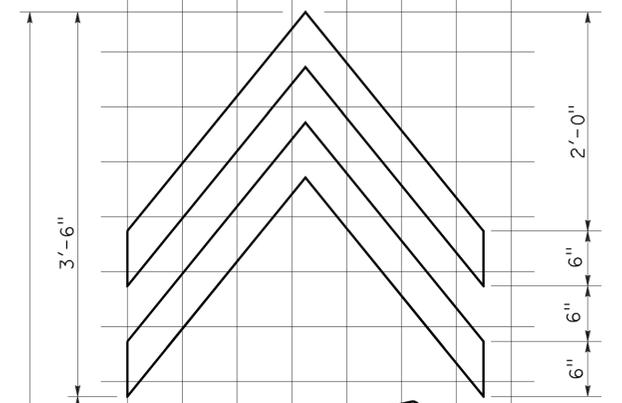
**BIKE LANE SYMBOL
WITH PERSON**



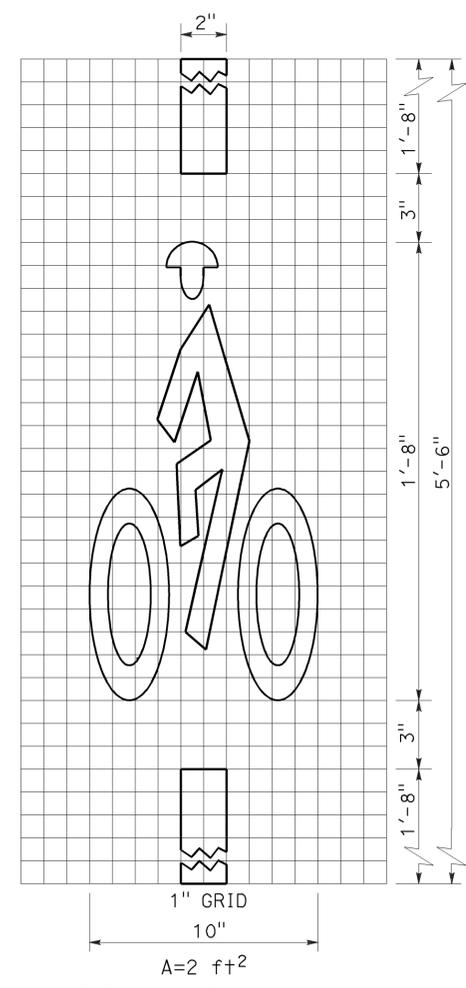
**INTERNATIONAL SYMBOL
OF ACCESSIBILITY (ISA) MARKING**



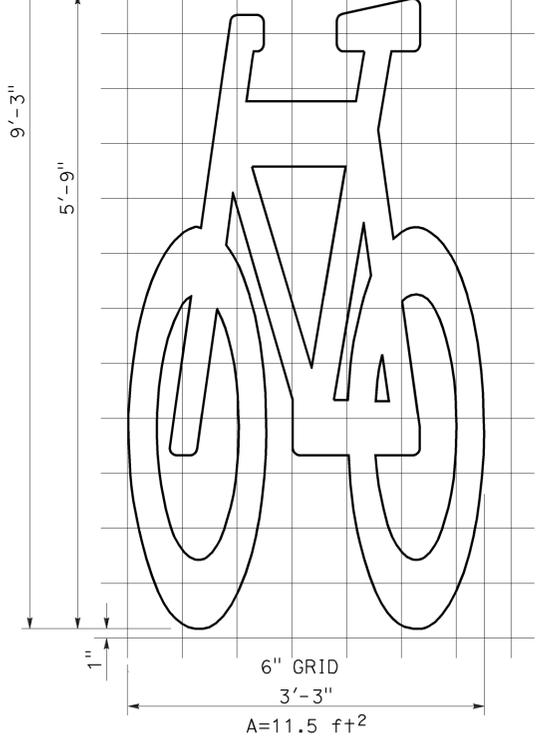
DIAMOND SYMBOL



SHARED ROADWAY BICYCLE MARKING

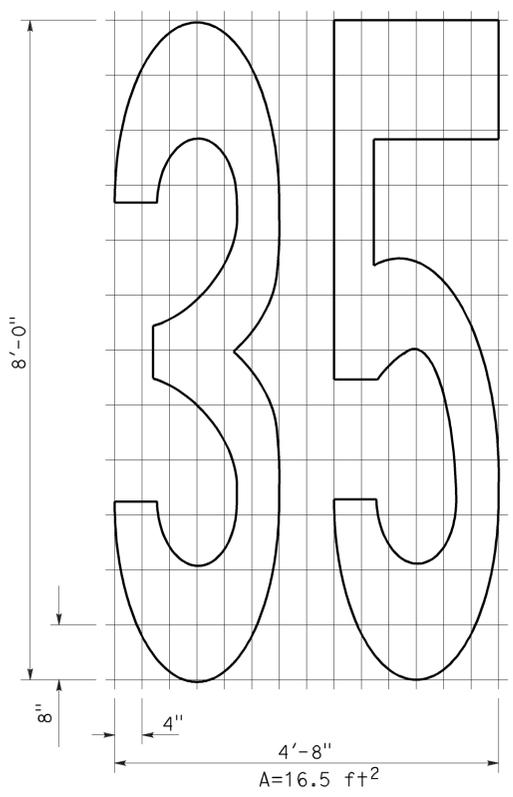
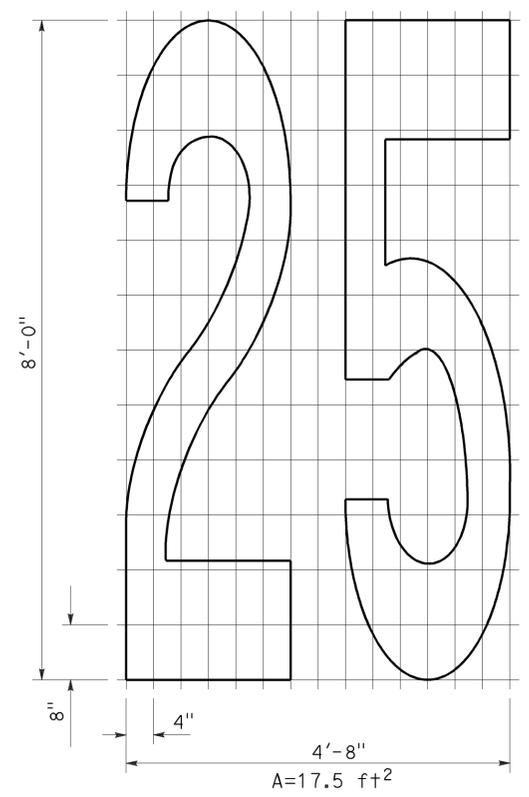


**BICYCLE LOOP
DETECTOR SYMBOL**

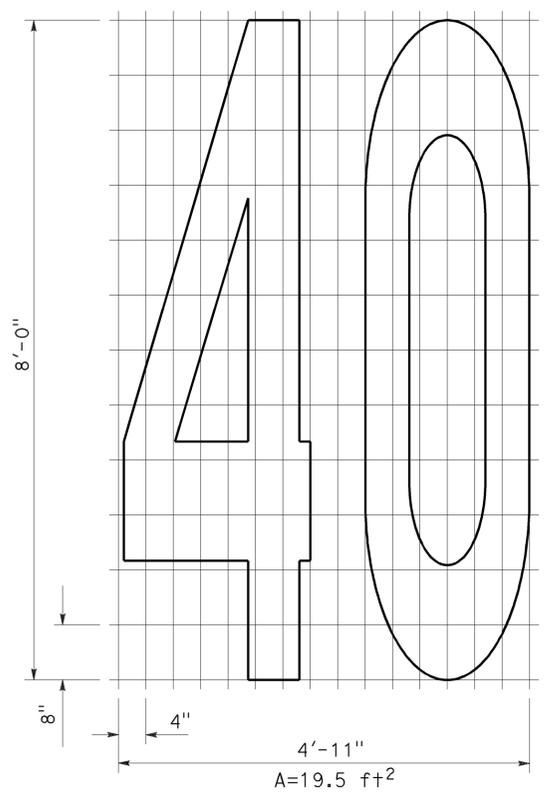


STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 SYMBOLS AND NUMERALS**
 NO SCALE

RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C
 DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.



NUMERALS



NUMERALS

LEGEND:

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

ABBREVIATIONS

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	20	25

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 10-20-14

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

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

MISCELLANEOUS ELECTROLIERS

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

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

STANDARD ELECTROLIER

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

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

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	21	25

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel
REGISTERED PROFESSIONAL ENGINEER
No. E15129
Exp. 6-30-14
ELECTRICAL

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TO ACCOMPANY PLANS DATED 10-20-14

CONDUIT

SIGNAL EQUIPMENT

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

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

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

SERVICE EQUIPMENT

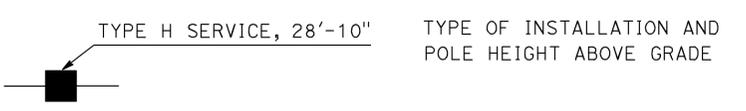
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

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

ILLUMINATED OVERHEAD SIGN

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1B

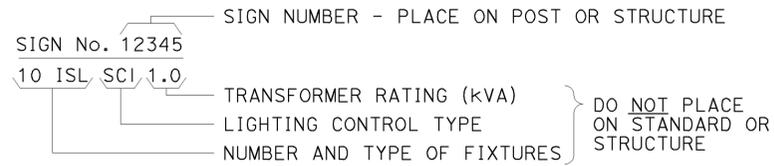
2010 REVISED STANDARD PLAN RSP ES-1B



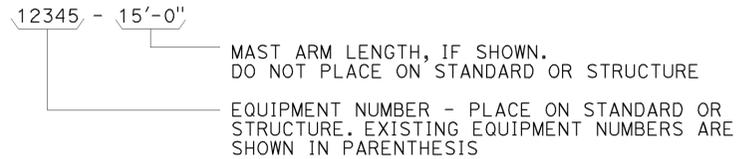
TO ACCOMPANY PLANS DATED 10-20-14

EQUIPMENT IDENTIFICATION

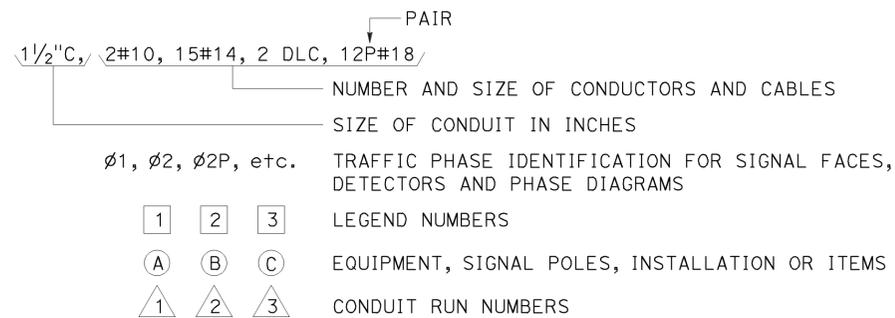
ILLUMINATED SIGN IDENTIFICATION NUMBER:



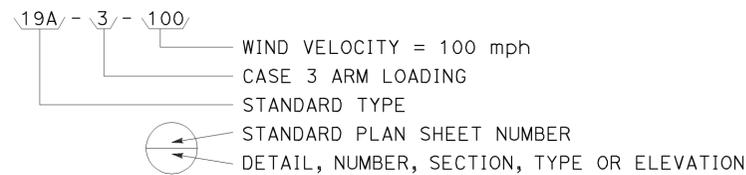
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



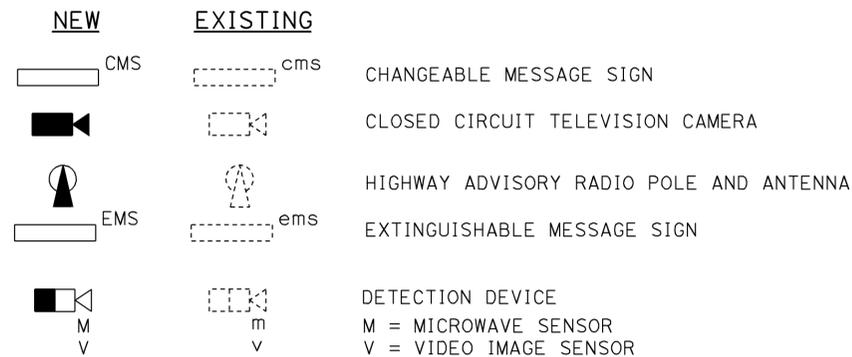
CONDUIT AND CONDUCTOR IDENTIFICATION:



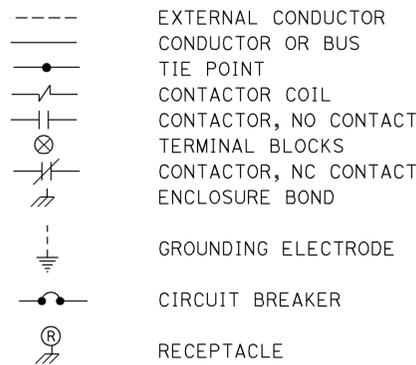
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



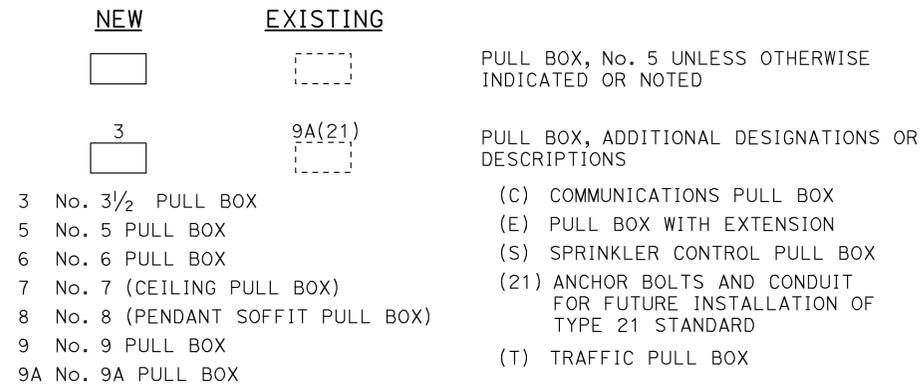
MISCELLANEOUS EQUIPMENT



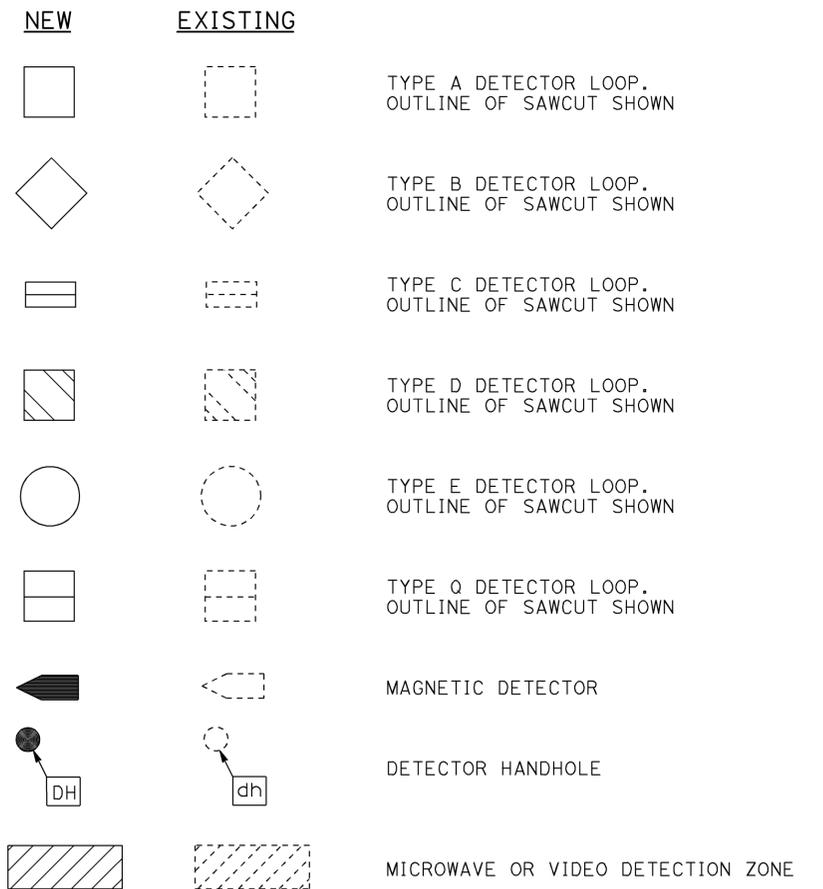
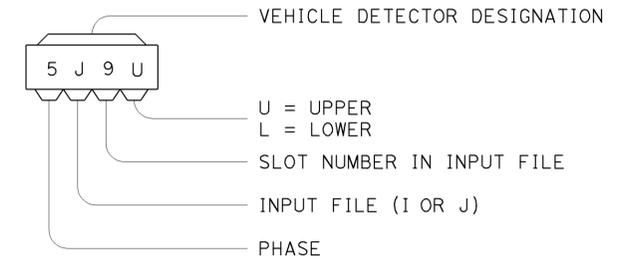
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

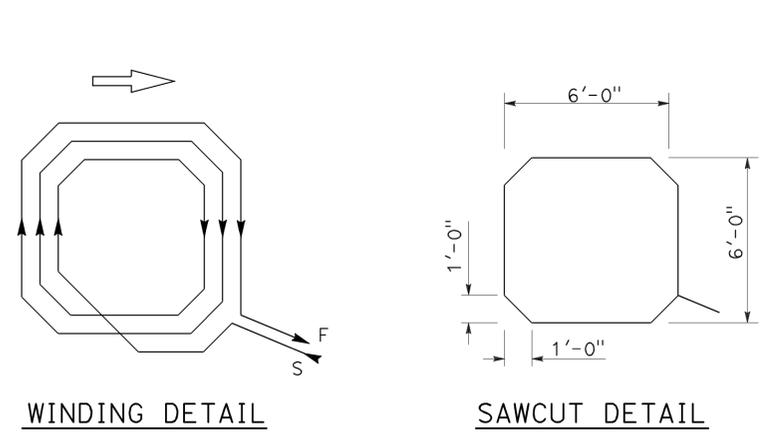
NO SCALE

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

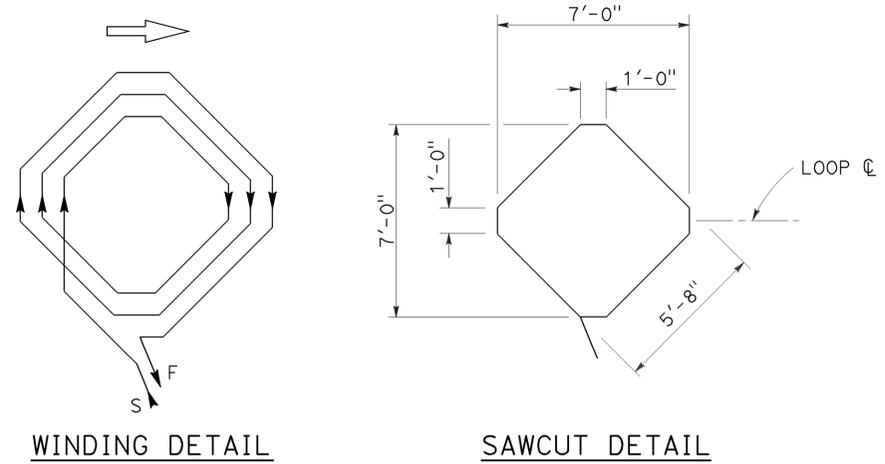
REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

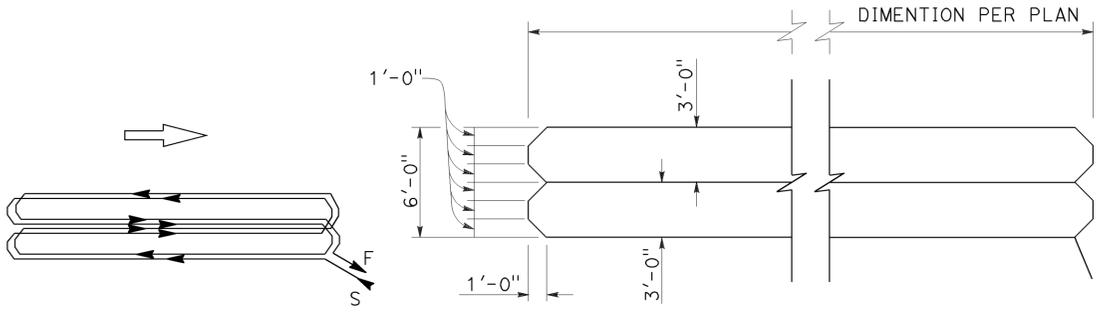
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	23	25
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER July 19, 2013 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
TO ACCOMPANY PLANS DATED <u>10-20-14</u>					



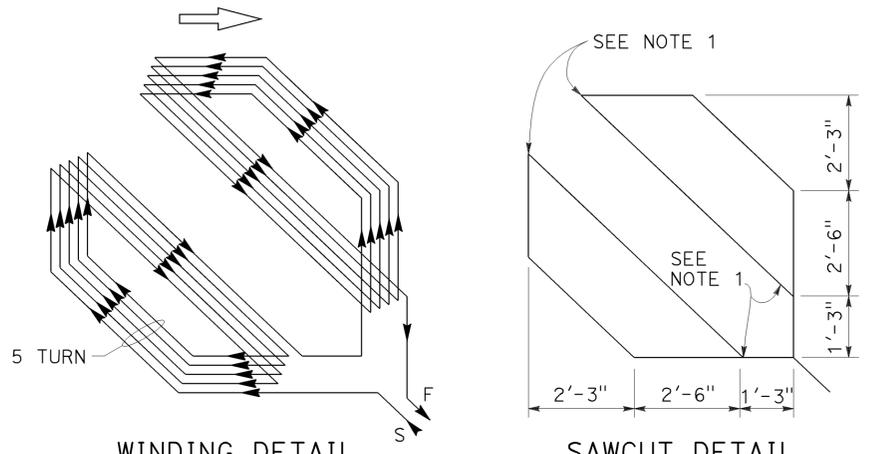
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



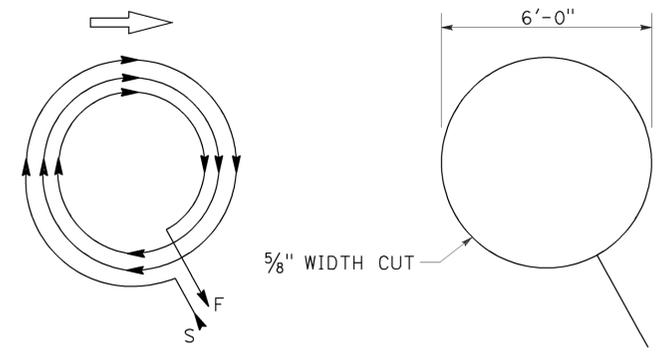
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



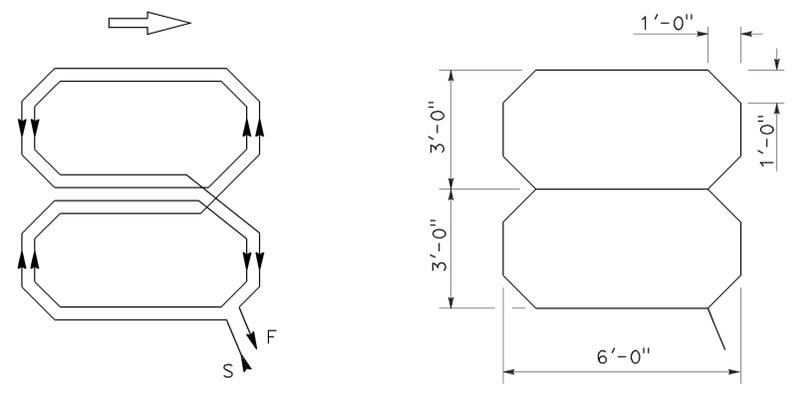
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



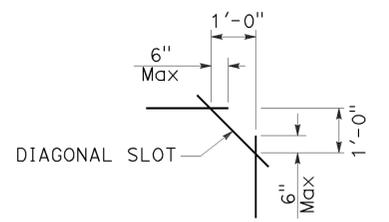
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B
DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

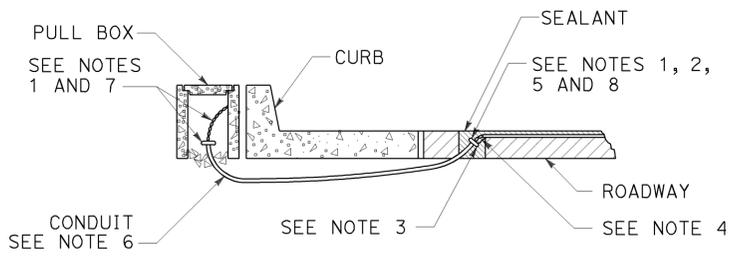
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SCI	87	9.0/9.2	24	25

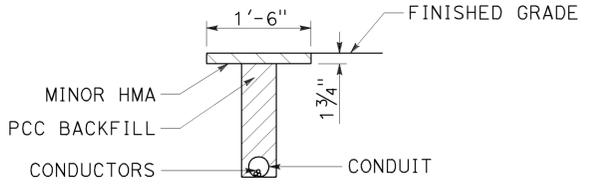
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



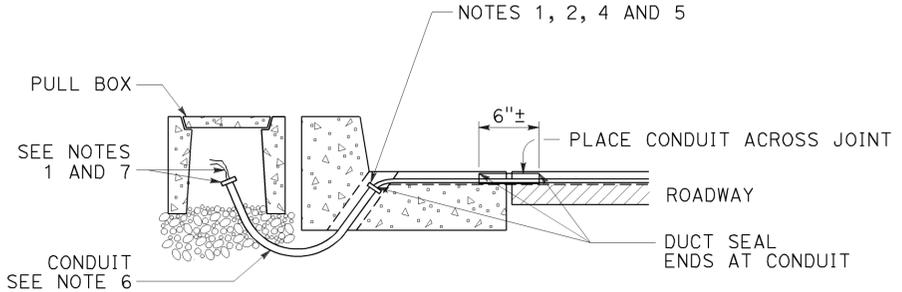
TO ACCOMPANY PLANS DATED 10-20-14



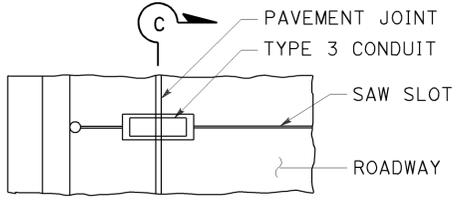
TYPE A
CURB TERMINATION DETAIL



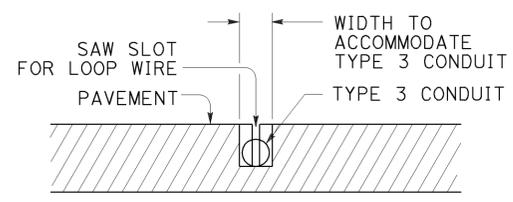
"T" TRENCH
DETAIL T



CROSS SECTION

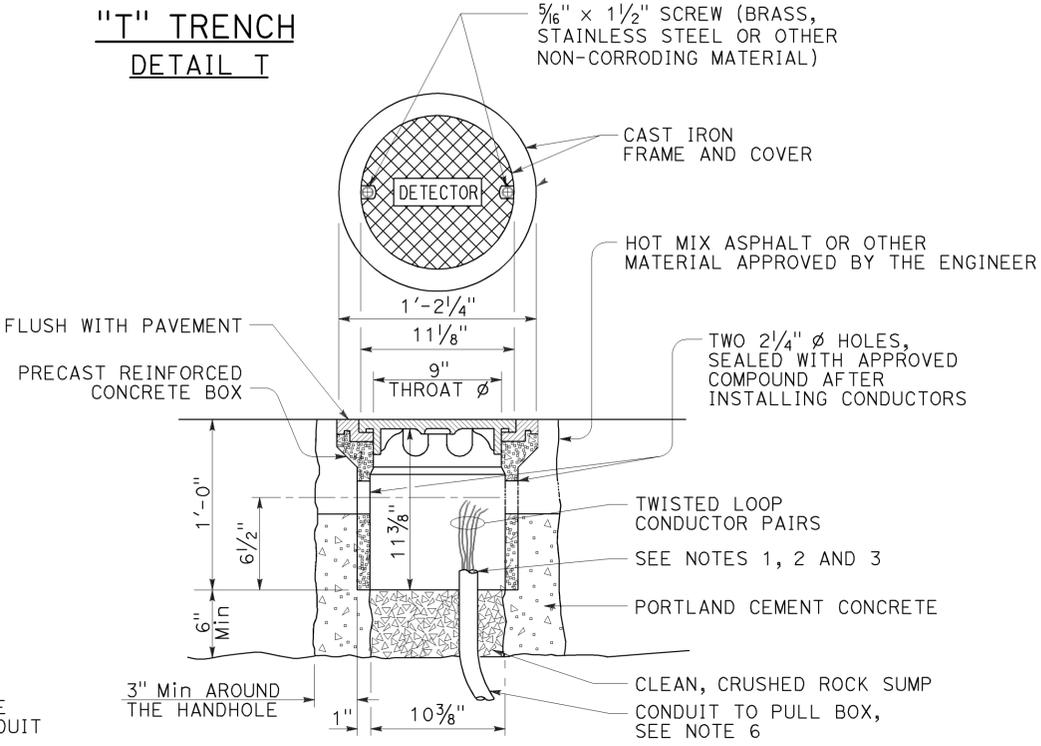


PLAN VIEW

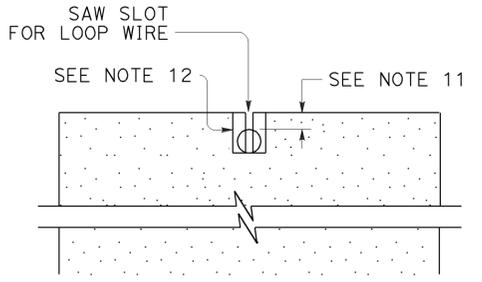


SECTION C-C

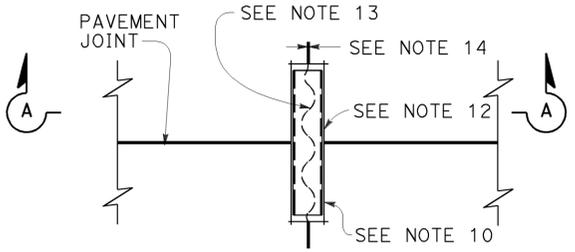
TYPE B
CURB TERMINATION DETAIL



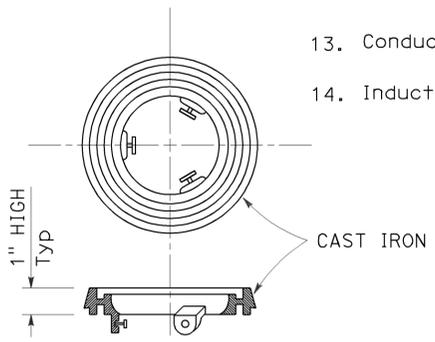
DETECTOR HANDHOLE DETAIL



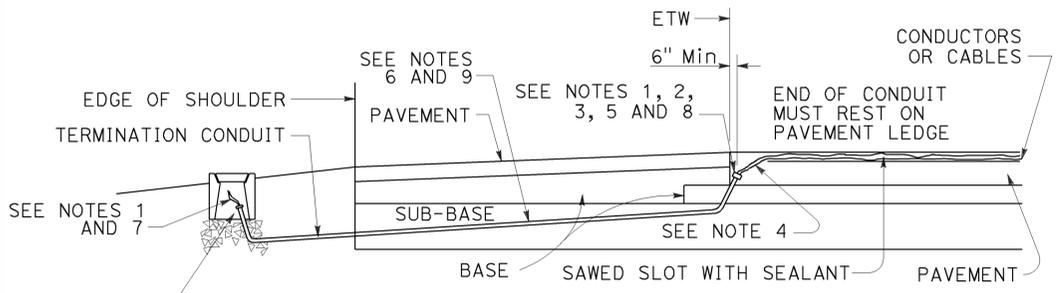
SECTION A-A



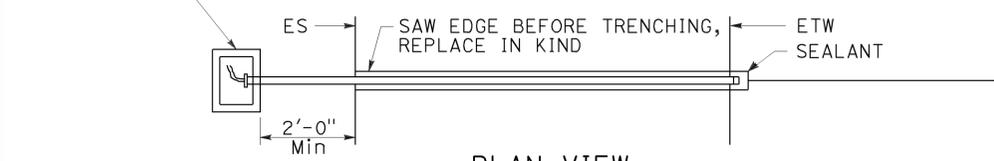
PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING



CROSS SECTION



PLAN VIEW
SHOULDER TERMINATION DETAILS

NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
 1"C minimum 1 to 2 pairs
 1 1/2"C minimum 3 to 4 pairs
 2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CURB TERMINATION
AND HANDHOLE)
NO SCALE

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

REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SCI	87	9.0/9.2	25	25

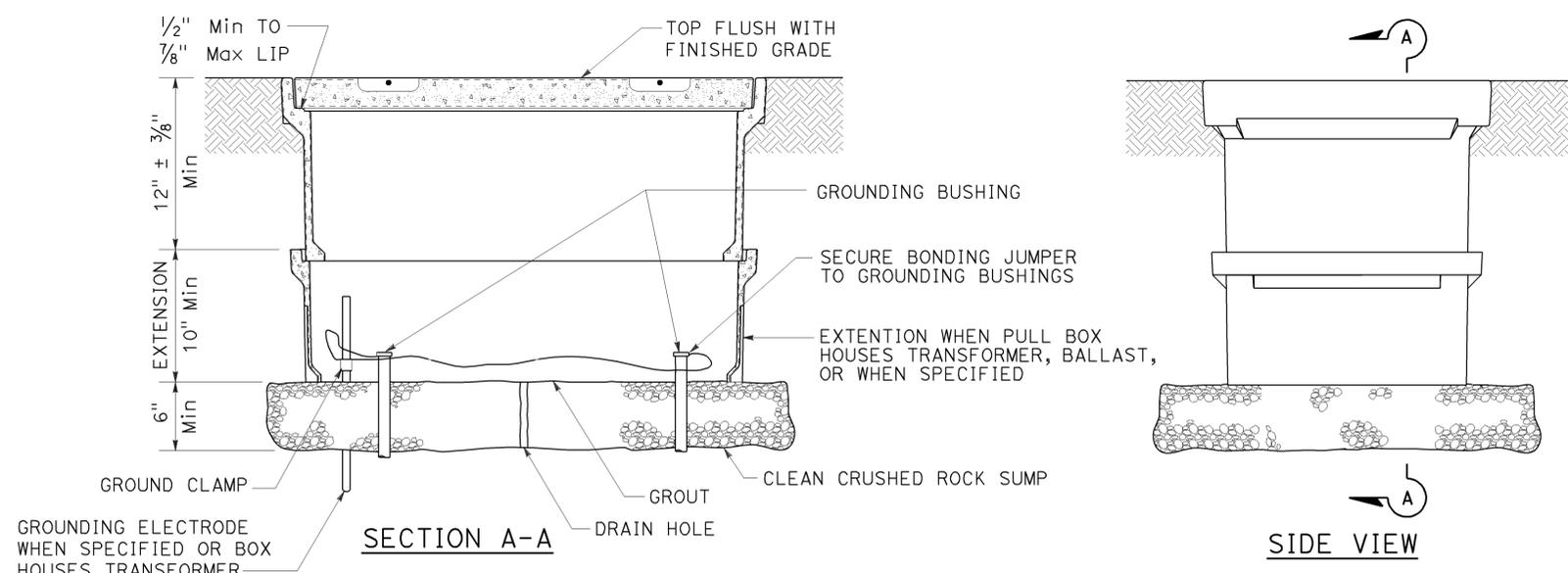
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

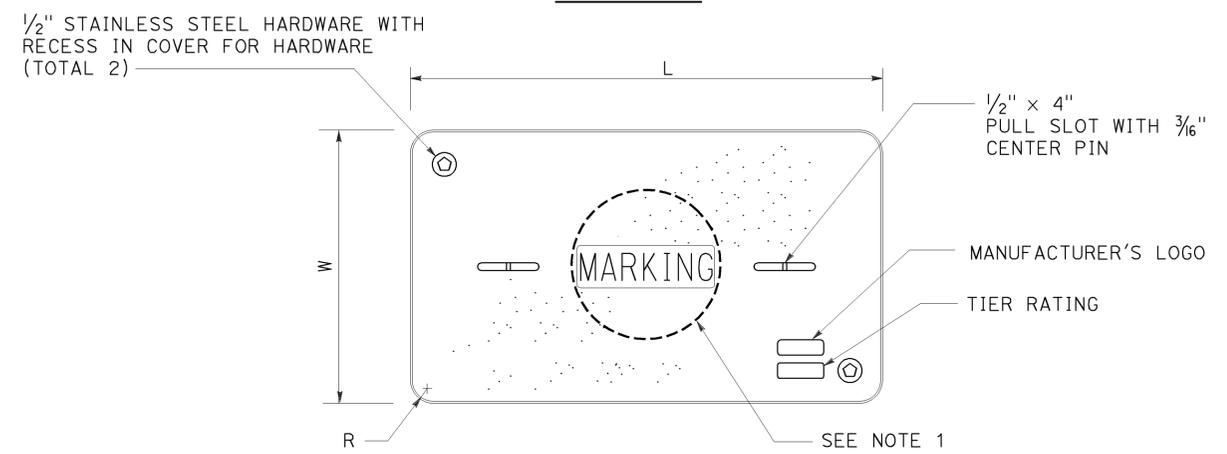
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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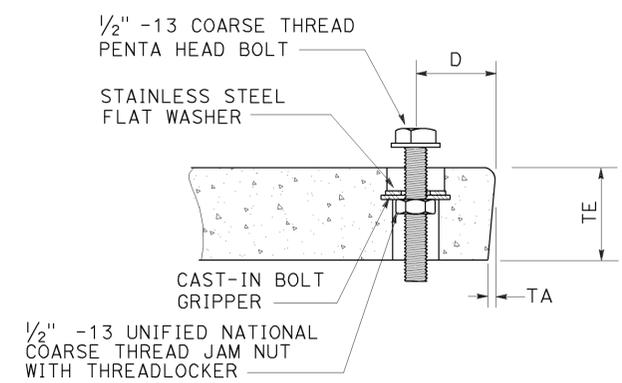
TO ACCOMPANY PLANS DATED 10-20-14



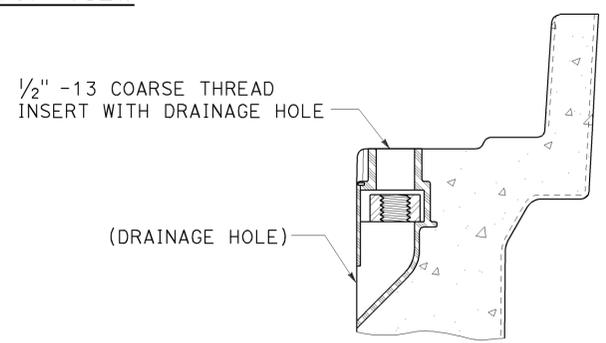
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOTES:

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3 1/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A