INDEX OF PLANS

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4-5	CONSTRUCTION DETAILS
6	CONSTRUCTION AREA SIGNS
7	TRAFFIC HANDLING DETAILS
8	PAVEMENT DELINEATION PLAN
9	SUMMARY OF QUANTITIES
10-12	ELECTRICAL PLANS
13-20	REVISED STANDARD PLANS
21	NEW STANDARD PLAN

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LOS ANGELES COUNTY

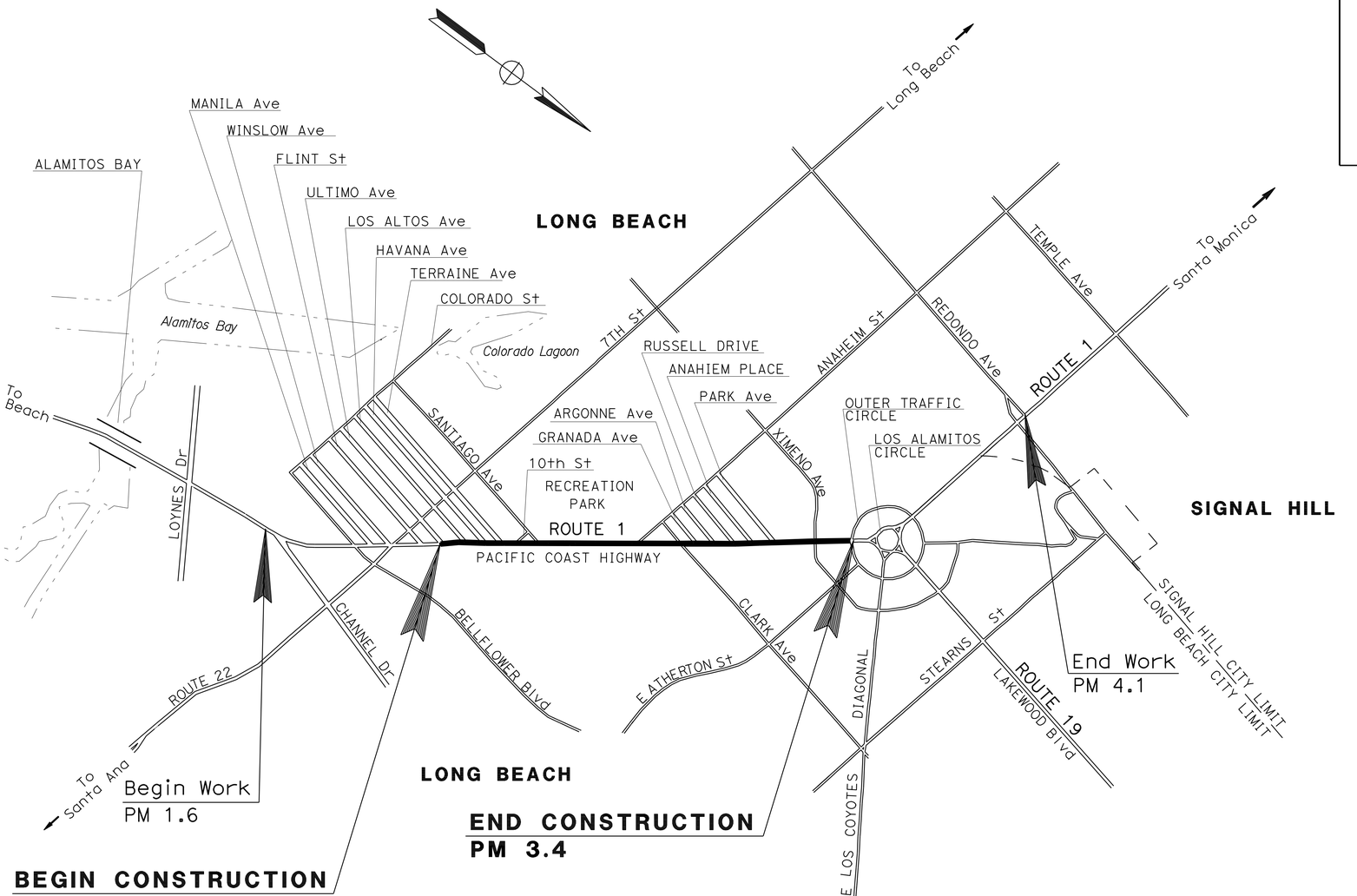
IN LONG BEACH

FROM ULTIMO AVENUE TO OUTER TRAFFIC CIRCLE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	1	21

LOCATION MAP



NO SCALE

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

PROJECT MANAGER: GARY KEVORKIAN

DESIGN ENGINEER: HAMID SAADATNEJADI

Robert Carl Doria 8-26-11
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

August 29, 2011
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.	07-1W0304
PROJECT ID	0700020901

LAST REVISION 8-24-11
DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:47

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	2	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER R.C. DORIA No. 50821 Exp. 9-30-11 CIVIL STATE OF CALIFORNIA

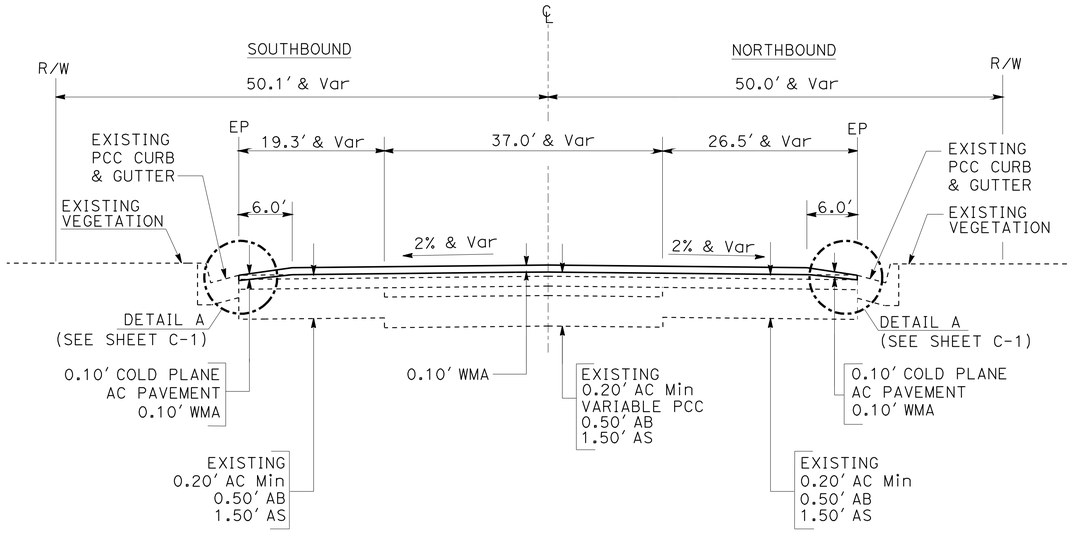
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLAN.
4. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

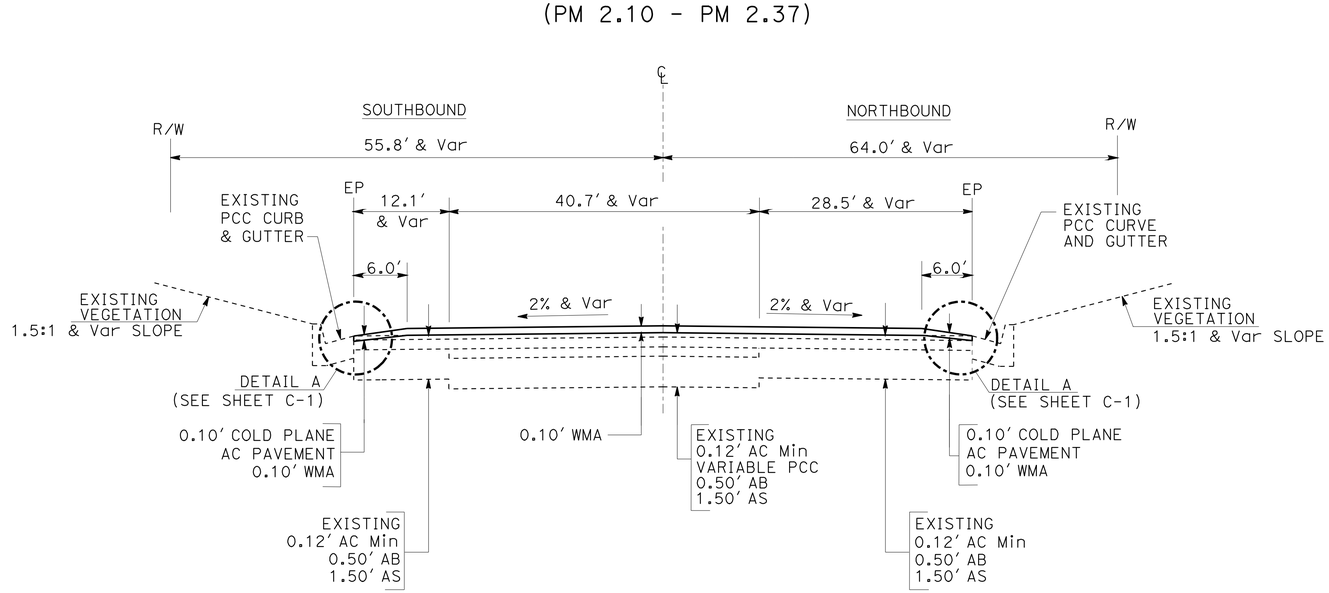
ABBREVIATIONS:

WMA = WARM MIX ASPHALT (TYPE A)



ULTIMO STREET TO 10TH STREET

(PM 2.10 - PM 2.37)



10TH STREET TO ANAHEIM STREET

(PM 2.37 -PM 2.75)

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
CALCULATED-DESIGNED BY: ROBERT CARL DORIA
CHECKED BY: HAMID SAADATNEJADI
REVISED BY
DATE REVISED

LAST REVISION 8-24-11
DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	3	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

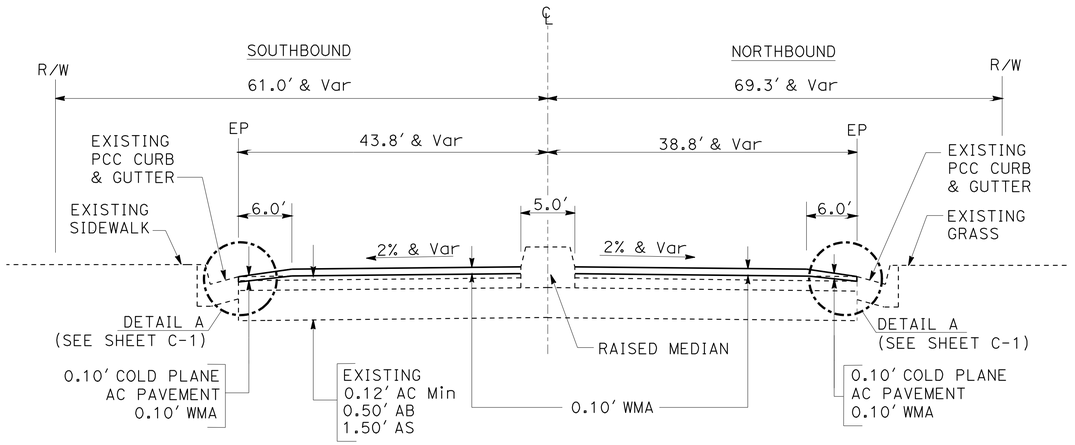
8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
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.

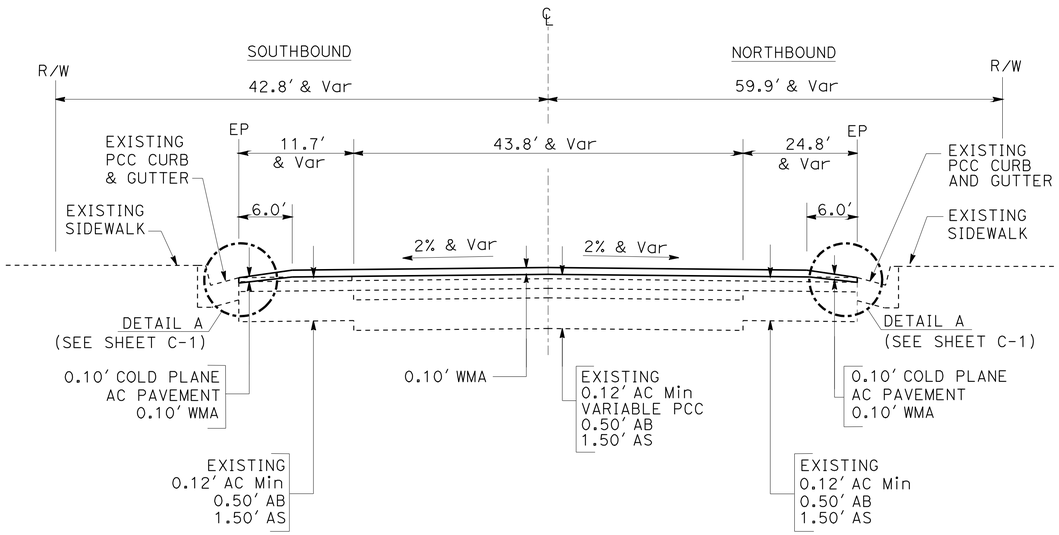
NOTE:

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



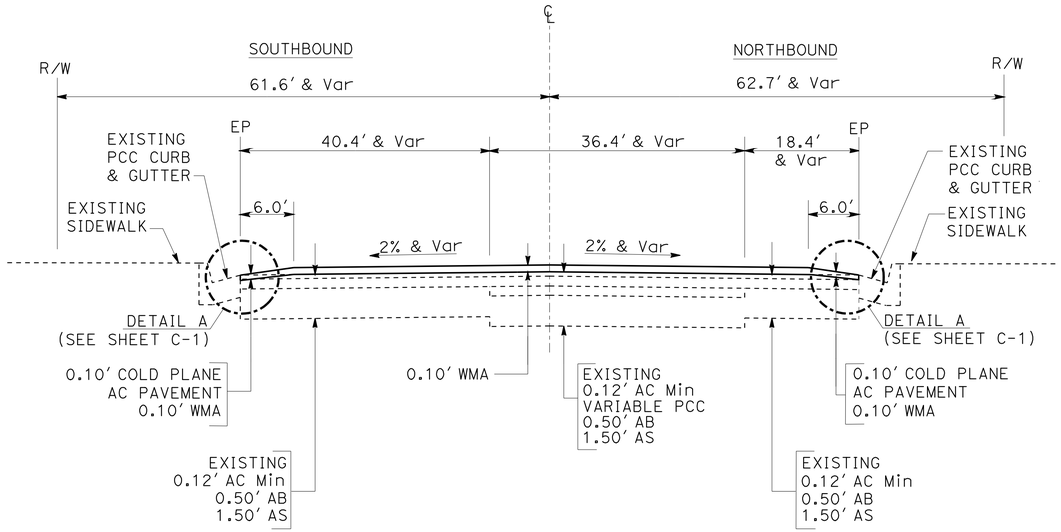
ANAHEIM STREET TO CLARK STREET

(PM 2.75 - PM 2.87)



CLARK STREET TO XIMENO AVENUE

(PM 2.87 - PM 3.29)



XIMENO AVENUE TO OUTER TRAFFIC CIRCLE

(PM 3.29 - PM 3.40)

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
CALCULATED-DESIGNED BY: ROBERT CARL DORIA
CHECKED BY: HAMID SAADATNEJADI
REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 24-AUG-2011
8-24-11 | TIME PLOTTED => 10:48

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030ca002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1959
PROJECT NUMBER & PHASE 07000209011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	4	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
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.

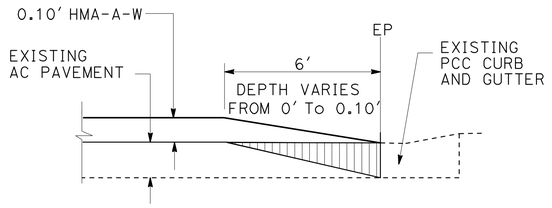
NOTES:

1. DETAIL D SHALL MATCH EXISTING LANELINE AT INTERSECTION APPROACHES.
2. WMA = WARM MIX ASPHALT (TYPE A)

LEGEND:

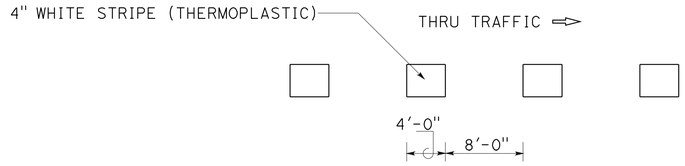
LIMITS OF COLD PLANE ASPHALT CONCRETE PAVEMENT

LIMITS OF WARM MIX ASPHALT (TYPE A)

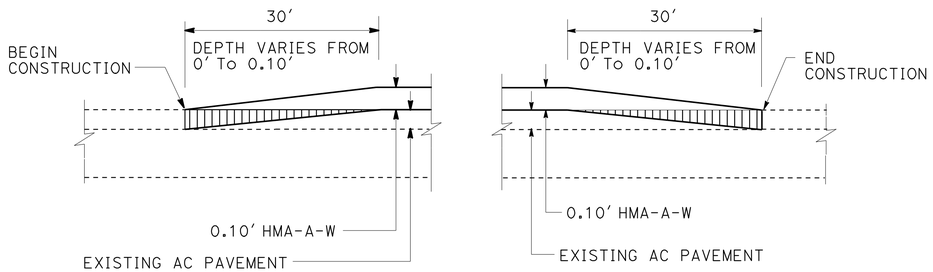


DETAIL A

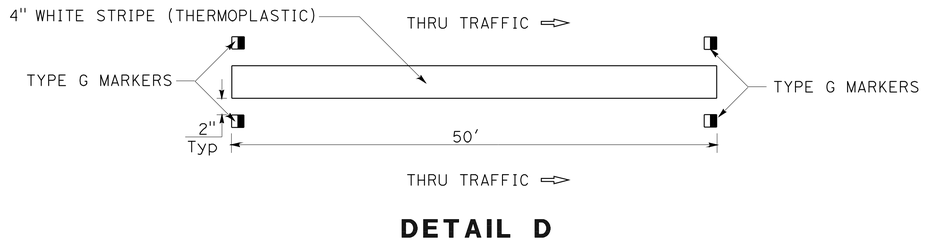
TYPICAL AC TRANSITION
TO CONFORM AT PCC CURB AND GUTTER



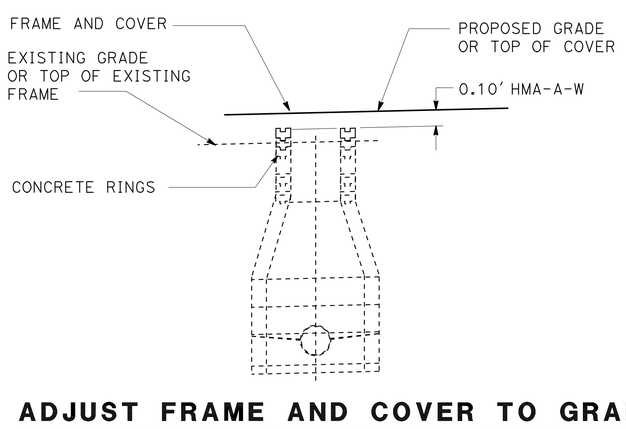
DETAIL B



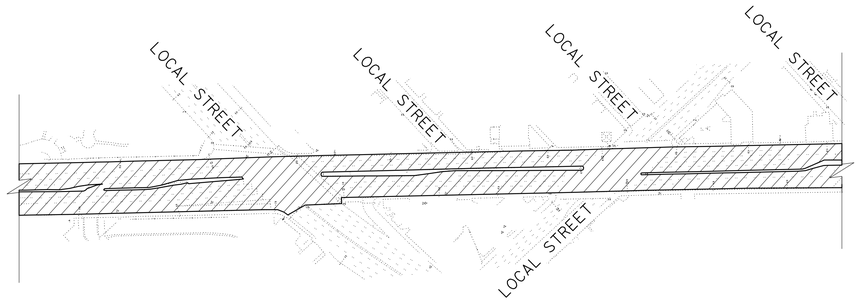
COLD PLANE TO CONFORM
DETAILS FOR BEGIN AND END CONSTRUCTION



DETAIL D



ADJUST FRAME AND COVER TO GRADE



TYPICAL PAVING LIMITS

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI

CALCULATED-DESIGNED BY: ROBERT CARL DORIA
CHECKED BY: HAMID SAADATNEJADI

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 24-AUG-2011
8-24-11 | TIME PLOTTED => 10:48

BORDER LAST REVISED 7/2/2010

USERNAME => s112049
DGN FILE => 71w030ga001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1959

PROJECT NUMBER & PHASE 07000209011

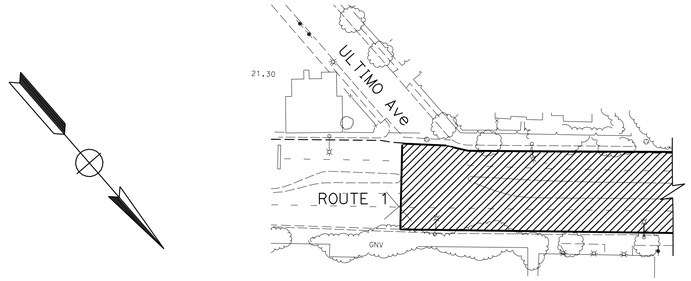
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	5	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

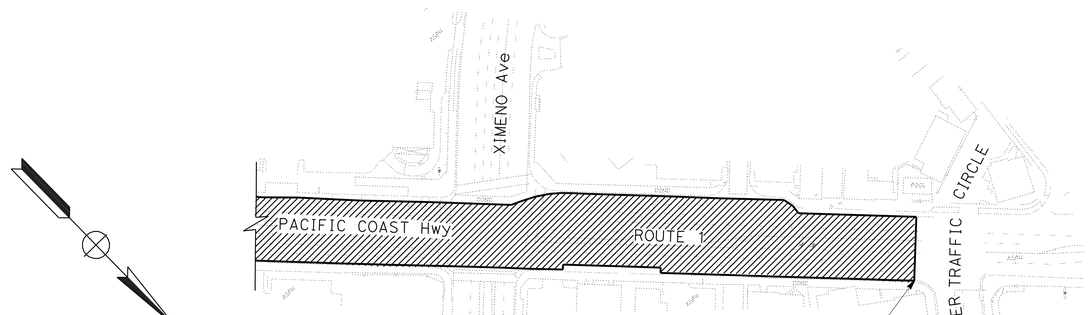
8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
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.



BEGIN CONSTRUCTION AT ULTIMO AVENUE



END CONSTRUCTION AT OUTER TRAFFIC CIRCLE

CONSTRUCTION DETAILS

NO SCALE

C-2

REVISED BY | DATE REVISED
ROBERT CARL DORIA | HAMID SAADATNEJADI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 8-24-11
DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:48

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1959
PROJECT NUMBER & PHASE 07000209011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	6	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
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.

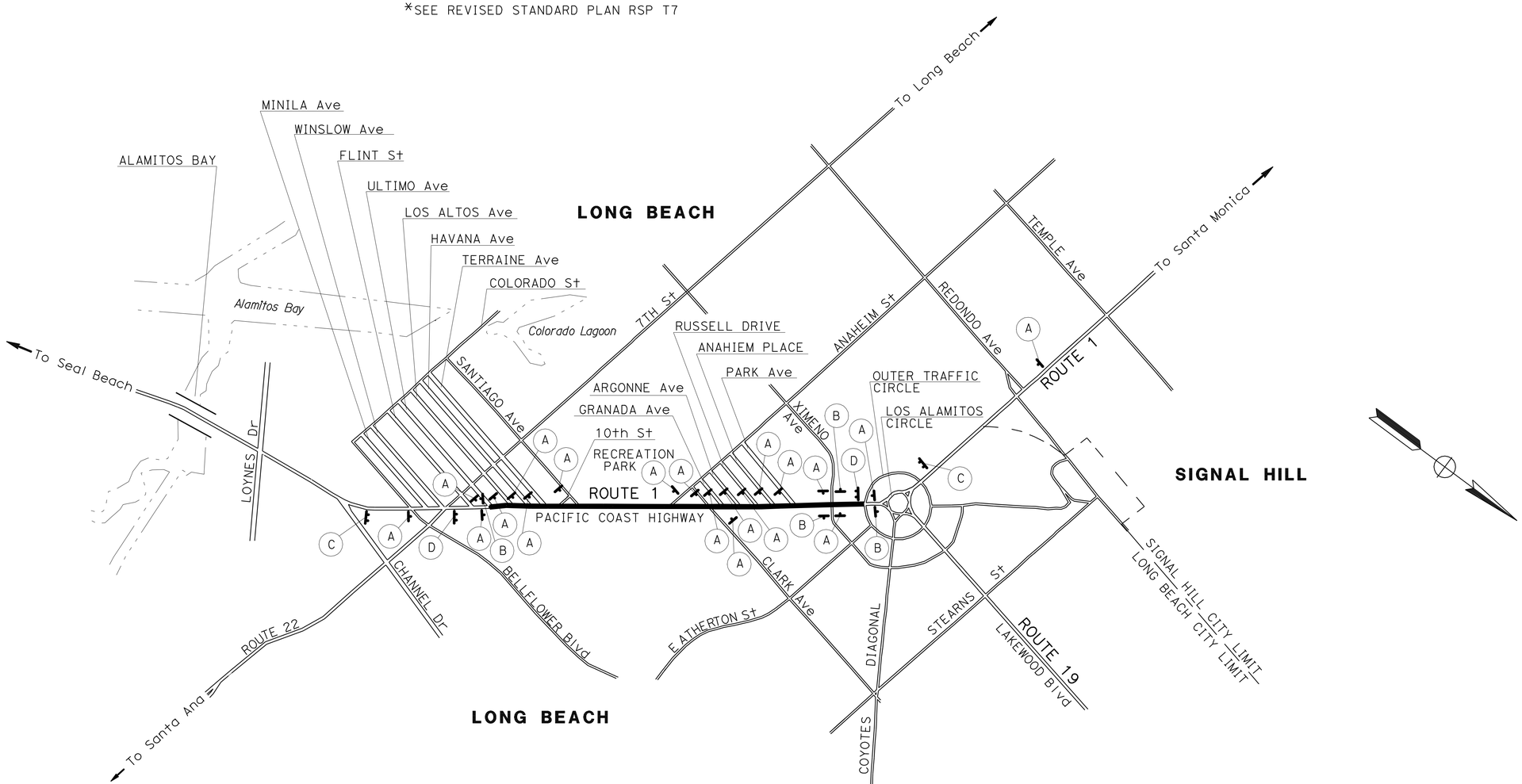
NOTES:

1. "TRAFFIC FINE DOUBLED IN CONSTRUCTION ZONES" SIGNS SHALL BE PLACED 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" SIGNS OR AS DETERMINED BY THE ENGINEER.
2. LOCATIONS OF CONSTRUCTION AREA SIGNS AS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
4. SEE SHEET THD-1 FOR ADDITIONAL CONSTRUCTION AREA SIGNS.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	19
(B)	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 6"	4
(C)	C40 (CA)	72" x 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 6"	2
(D)	*	90" x 60"	CONSTRUCTION PROJECT FUNDING IDENTIFICATION	2 - 6" x 6"	2

*SEE REVISED STANDARD PLAN RSP T7



NO SCALE

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

ROBERT CARL DORIA — REVISED BY
HAMID SAADATNEJADI — DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 8-24-11 | DATE PLOTTED => 24-AUG-2011 | TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010 | USERNAME => s112049 | DGN FILE => 71w0301a001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1959 | PROJECT NUMBER & PHASE 07000209011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	7	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

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NOTE:

1. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

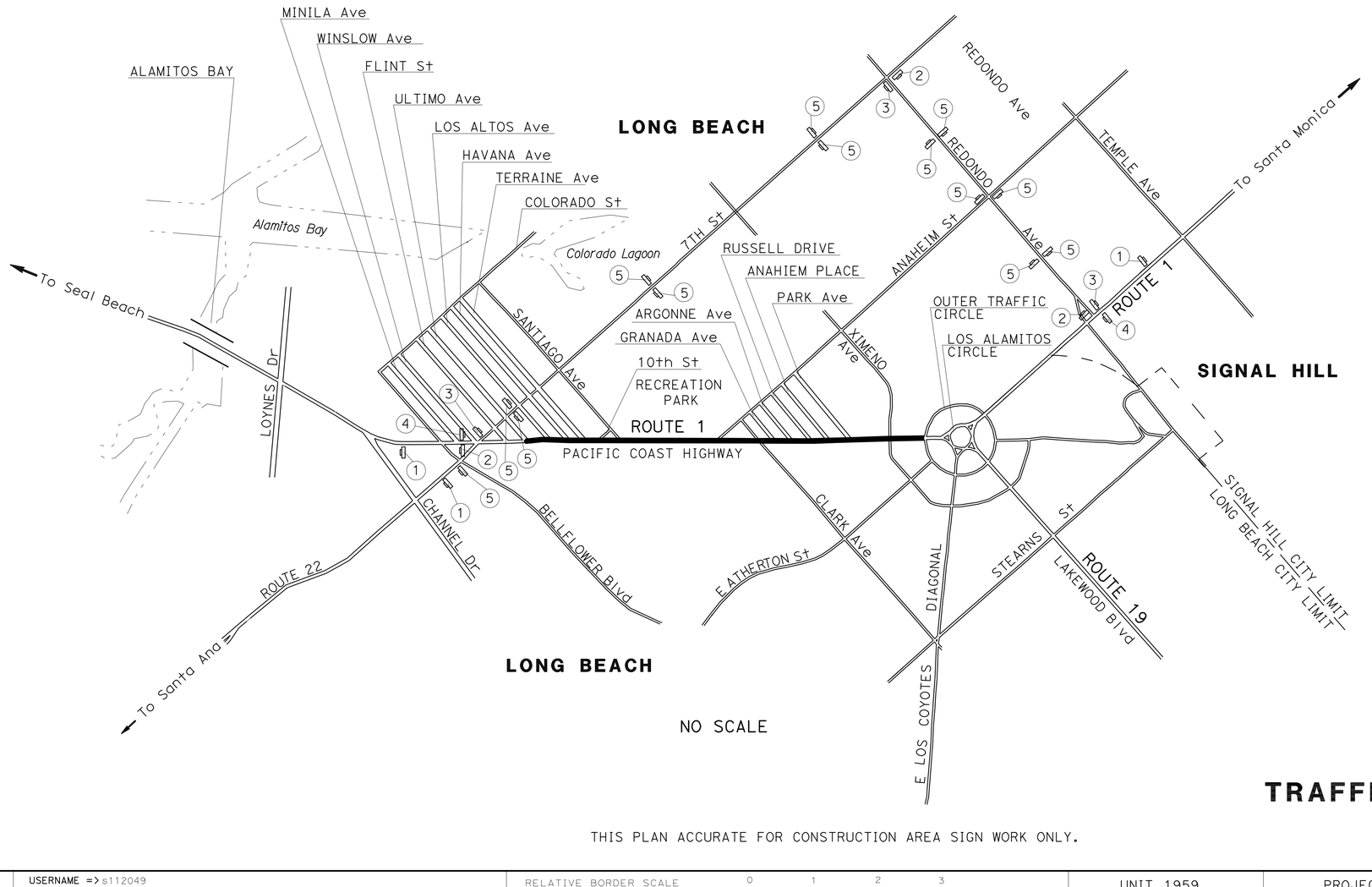
LEGEND:

TEMPORARY SIGN MOUNTED ON TYPE II BARRICADE.

WORK AREA

TRAFFIC HANDLING QUANTITIES

SIGN No.	SIGN CODE	PANEL SIZE (INCHES)	SIGN MESSAGE	NUMBER OF SIGNS	NUMBER OF TYPE II BARRICADES
①	W20-2	36 x 36	DETOUR AHEAD	3	3
②	M4-10L	48 x 18	DETOUR (INSIDE ARROW)	2	2
③	M4-10R	48 x 18	DETOUR (INSIDE ARROW)	2	2
④	M4-8a	24 x 18	END DETOUR	2	2
⑤	SC3	36 x 12	DETOUR	13	13
			TOTALS	22	22



NO SCALE

TRAFFIC HANDLING DETAILS

NO SCALE

THD-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
CALCULATED-DESIGNED BY: ROBERT CARL DORIA
CHECKED BY: HAMID SAADATNEJADI
REVISED BY
DATE REVISED

LAST REVISION 8-24-11
DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030me001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1959
PROJECT NUMBER & PHASE 07000209011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	8	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
CIVIL
STATE OF CALIFORNIA

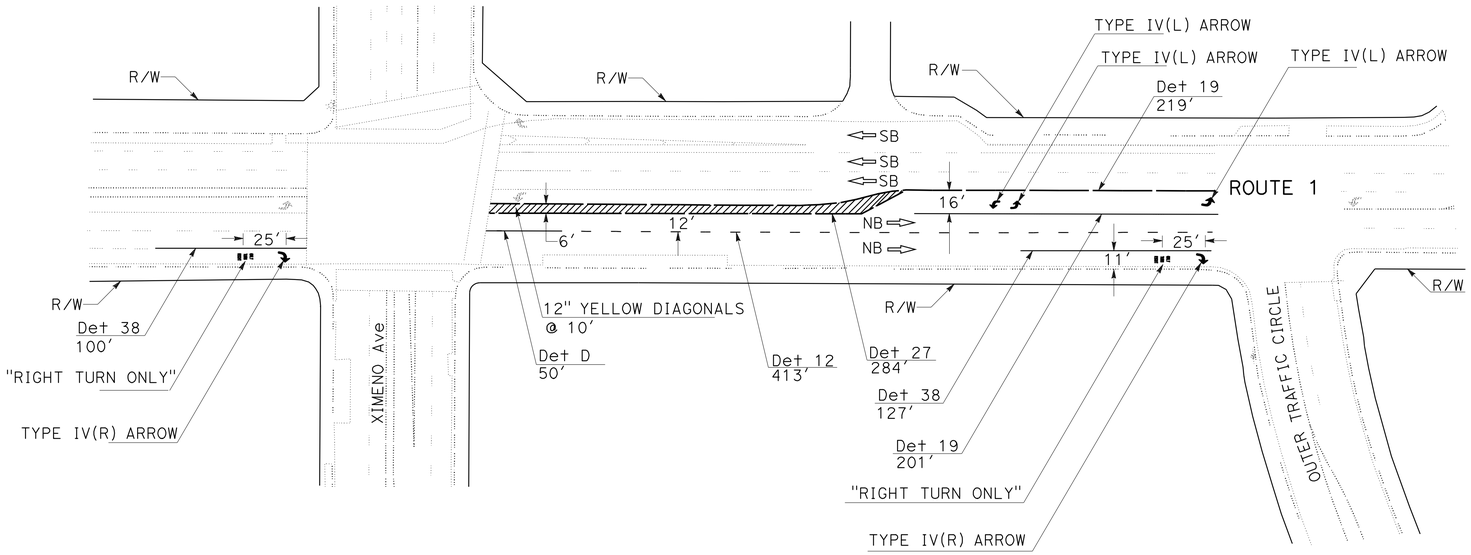
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

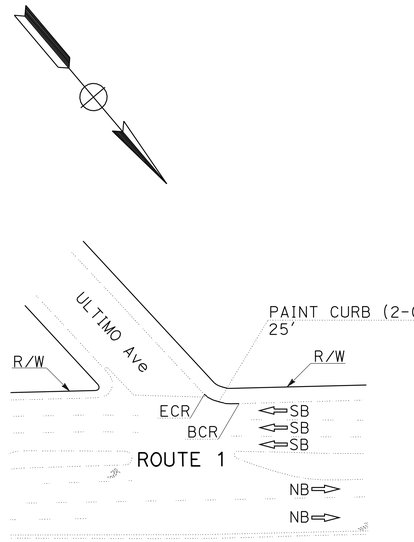
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NEW PAVEMENT DELINEATION SHALL MATCH EXISTING EXCEPT AS SHOWN ON THIS SHEET.
3. INSTALL HIGHWAY POST MARKERS AT BEGIN CONSTRUCTION AND END CONSTRUCTION LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. Det 39A "BIKE LANE INTERSECTION LINE" SHALL BE A MINIMUM OF 100' LONG.

LEGEND:

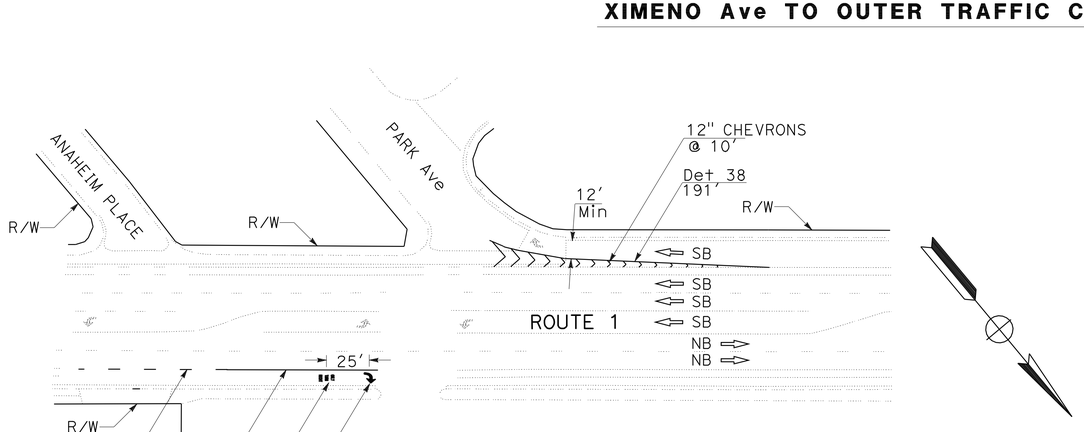
⇦ DIRECTION OF TRAVEL



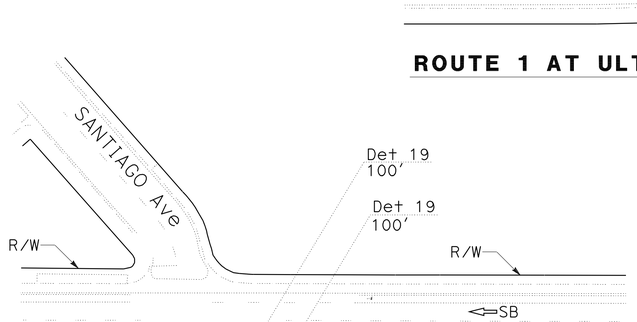
XIMENO Ave TO OUTER TRAFFIC CIRCLE



ROUTE 1 AT ULTIMO Ave



ROUTE 1 AT PARK Ave



ROUTE 1 AT SANTIAGO Ave

PAVEMENT DELINEATION PLAN

SCALE 1" = 50'

PD-1

REVISED BY | DATE REVISED
ROBERT CARL DORIA | HAMID SAADATNEJADI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION 8-24-11 | DATE PLOTTED => 24-AUG-2011 | TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010 | USERNAME => s112049 | DGN FILE => 71w030na001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1959 | PROJECT NUMBER & PHASE 07000209011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	9	21

Robert Carl Doria 8-26-11
REGISTERED CIVIL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
R.C. DORIA
No. 50821
Exp. 9-30-11
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. FOR ADDITIONAL QUANTITIES, SEE SHEET THD-1.

ROADWAY QUANTITIES

POST MILE	LOCATION	(N) CONSTRUCTION AREA	HOT MIX ASPHALT (TYPE A) USING WARM MIX TECHNOLOGIES	COLD PLANE ASPHALT CONCRETE PAVEMENT	TACK COAT	ADJUST FRAME AND COVER TO GRADE		MILEPOST MARKER
						VALVE	MANHOLE	
		SQFT	TON	SQYD	TON	EA	EA	EA
2.1 / 2.8	ULTIMO Ave TO ANAHEIM St	290,461.0	2,251.1	5,049.3	8.1	43	4	2
2.8 / 3.4	ANAHEIM St TO OUTER TRAFFIC CIRCLE	274,714.9	2,129.0	5,277.1	7.6	44	11	2
	SUBTOTAL	565,175.9	4,380.1	10,326.4	15.7	87	15	4
	TOTAL	565,175.9	4,380.1	10,326.4	15.7	102		4

REMOVE PAVEMENT DELINEATION QUANTITIES

POST MILE	LOCATION	REMOVE TRAFFIC STRIPE		REMOVE PAVEMENT MARKING		REMOVE PAVEMENT MARKER
		YELLOW	WHITE	YELLOW	WHITE	
		LF	LF	SQFT	SQFT	EA
2.1 / 2.8	ULTIMO Ave TO ANAHEIM St	16,314	9,888		591	515
2.8 / 3.4	ANAHEIM St TO OUTER TRAFFIC CIRCLE	13,359	11,319	196	1,507	510
	SUBTOTAL	29,673	21,207	196	2,098	1,025
	TOTAL	29,673	21,207	196	2,098	1,025

PAVEMENT DELINEATION QUANTITIES

POST MILE	LOCATION	THERMOPLASTIC TRAFFIC STRIPE												THERMOPLASTIC PAVEMENT MARKINGS						RETROREFLECTIVE PAVEMENT MARKERS			PAINT CURB (2-COAT)
		4"									6"		8"										
		DETAIL B	DETAIL 12	DETAIL 19		DETAIL D	DETAIL 22	DETAIL 25	DETAIL 27	DETAIL 27B	DETAIL 39	DETAIL 39A	DETAIL 38	SYMBOLS	ARROWS	WORDS	12" CROSSWALK	12" CHEVRONS	12" DIAGONALS YELLOW	TYPE D	TYPE G	TYPE H	RED
		WHITE BROKEN (8-4)	WHITE BROKEN (36-12)	YELLOW BROKEN (36-12)	YELLOW	WHITE	YELLOW	YELLOW	YELLOW	WHITE	YELLOW	WHITE BROKEN (8-4)	WHITE										
		LF	LF	LF	LF						LF	LF	LF	SQFT						EA			LF
2.1 / 2.8	ULTIMO AVENUE TO ANAHEIM STREET	355	6,133	1,728	1,728	450	1,302		2,087	4,917	4,917	1,055	1,171	84	303	33	171			147	197	117	
2.8 / 3.4	ANAHEIM STREET TO OUTER TRAFFIC CIRCLE	1,280	4,330	620	620	1,015	1,070	957	3,087	3,045	2,895	2,551	2,397	98	366	279	984	118	741	105	227	111	25
	SUBTOTAL	1,635	10,463	2,348	2,348	1,465	4,744*	957	10,348*	7,962	7,812	3,606	3,568	182	669	312	1,155	118	741	252	428	228	25
	TOTAL	1,635	12,811		27,824						7,812	3,606	3,568	3,177						908			25

*ADJUSTED TO EQUIVALENT 4" TRAFFIC STRIPING.

ROBERT CARL DORIA — REVISED BY
HAMID SAADATNEJADI — DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

SUMMARY OF QUANTITIES

Q-1

LAST REVISION 8-24-11
DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1959
PROJECT NUMBER & PHASE 07000209011

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

EXISTING POLE AND EQUIPMENT SCHEDULE

STANDARD				LUMINAIRE INTEGRALBLST	SIGNAL MOUNTING VEHICLE		PED	PPB	REFLECTORIZED STREET NAME SIGN
No.	DESCRIPTION	SMA	LMA	LPS (W)	POLE	MAST ARM		ø	
(A)	19-2-113	25′	12′	180	SV-1-T	mas	SP-1-T	6	-
(B)	15	-	12′	180	SV-2-TA	-	SP-1-T	8	-
(C)	26-5-113	45′	12′	180	SV-1-T	ma† 2-mas	-	-	ANAHEIM STREET
(D)	1-A	-	-	-	TV-1-T	-	SP-1-T	8	-
(E)	1-A	-	-	-	TV-2-T	-	-	-	-
(F)	19-2-113	30′	12′	180	SV-2-T	ma	SP-1-T	4	-
(G)	26-5-133	45′	12′	180	SV-1-T	ma† 2-mas	SP-1-T	4	ANAHEIM STREET
(H)	1-A	-	-	-	TV-2-T	-	SP-1-T	6	-

EXISTING CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	CONDUIT RUN 1	2	3	4	5
DLC	ø1	-	-	-	2(N)	2(N)
	ø2	-		6(N)		6(N)
	ø4	-				2(N)
	ø5	-		2(N)		2(N)
	ø6	-			6(N)	6(N)
	ø8	-	3(N)	3(N)		3(N)
#8	GROUND	1	1	1	1	1
#10	LUMINAIRE	2	2	2	2	-
#6	SIGNAL COMMON	-	-	-	-	2
28 CONDUCTOR SIGNAL CABLE		2	2	2	2	2
CONDUIT SIZE		3"	3"	3"	3"	2-3"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	10	21

Kenny Nguyen 8-26-11
REGISTERED ELECTRICAL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — KENNY NGUYEN No. E17759 Exp 6/30/12 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.

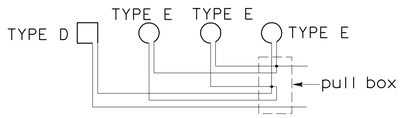
NOTES:(THIS SHEET)

1 AB EXISTING INDUCTIVE LOOP DETECTORS AND INSTALL NEW INDUCTIVE LOOP DETECTORS AS SHOWN.

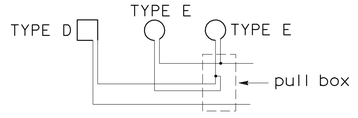
2 INSTALL AT THE BEGINING OF THE LEFT-TURN LANE.

GENERAL NOTE:(THIS SHEET)

1. FOR LOOP CONNECTION SEE DETAILS A AND B.

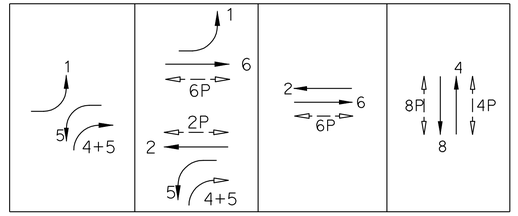


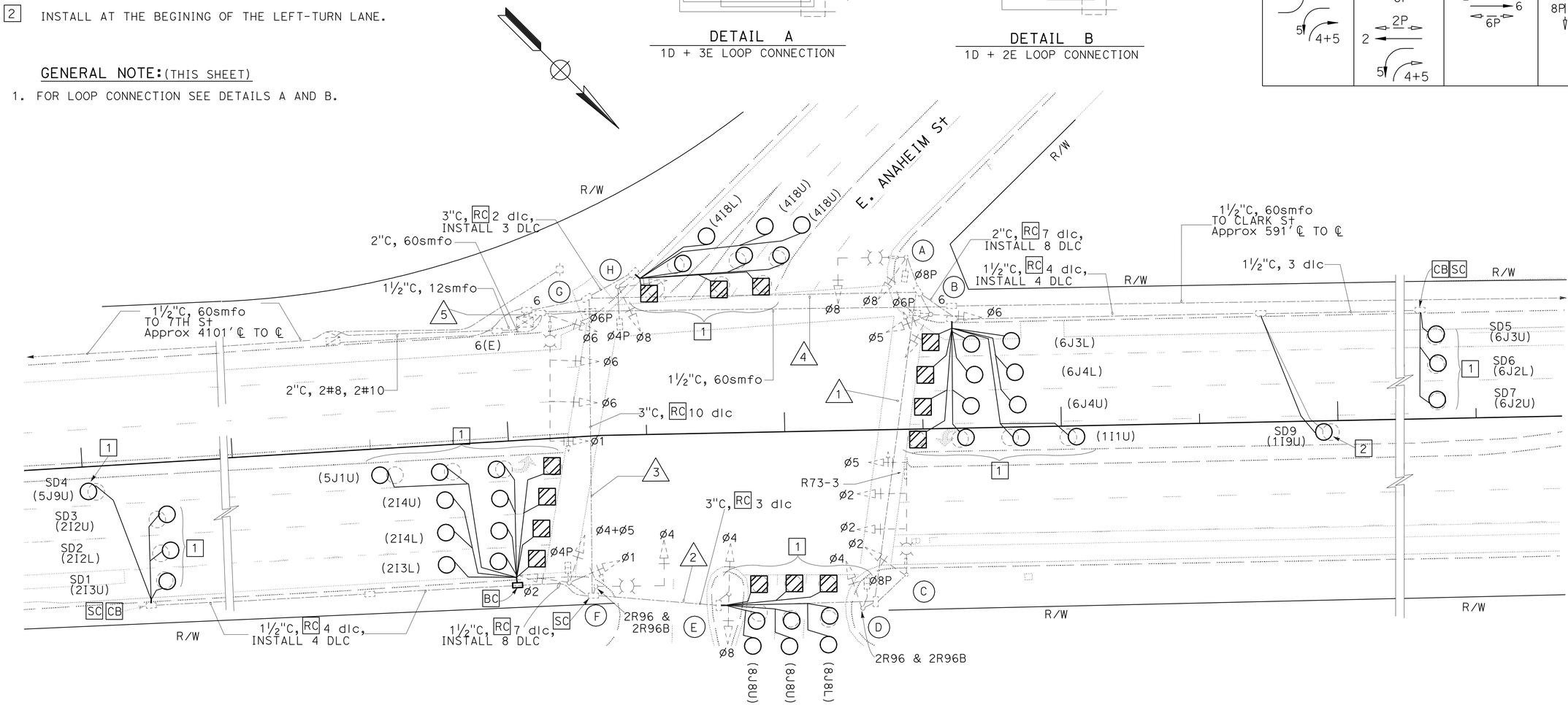
DETAIL A
1D + 3E LOOP CONNECTION



DETAIL B
1D + 2E LOOP CONNECTION

EXISTING PHASE DIAGRAM





THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

MODIFY SIGNAL AND LIGHTING
(ROUTE 1/ANAHEIM St)
SCALE: 1" = 20′

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: HASSAN MANNA
CALCULATED-DESIGNED BY: XOCHILT NARANJO
CHECKED BY: KENNY NGUYEN
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010 | USERNAME => s112049 | DGN FILE => 71w030ua001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1879 | PROJECT NUMBER & PHASE 07000209011

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	11	21

Kenny Nguyen 8-26-11
REGISTERED ELECTRICAL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

KENNY NGUYEN No. E17759 Exp 6/30/12 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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

EXISTING POLE AND EQUIPMENT SCHEDULE

STANDARD				LUMINAIRE	SIGNAL MOUNTING		PPB		REFLECTORIZED STREET NAME SIGN
				INTEGRALBLST	VEHICLE		PED		
No.	DESCRIPTION	SMA	LMA	LPS (W)	POLE	MAST ARM		ø	
(A)	19-1-113	30′	12′	180	SV-1-T	mas	SP-1-T	6	-
(B)	15	-	12′	180	SV-2-TA	-	SP-1-T	8	-
(C)	28-5-113	55′	12′	180	SV-1-TA	mat 2-mas	SP-1-T	8	CLARK STREET
(D)	1-A	-	-	-	TV-2-T	-	SP-1-T	2	-
(E)	17-113	20′	12′	180	SV-1-T	mas	SP-1-T	2	-
(F)	15	-	12′	180	SV-2-TA	-	SP-1-T	4	-
(G)	28-5-113	55′	12′	180	SV-1-TA	mat 2-mas	SP-1-T	4	CLARK STREET
(H)	1-A	-	-	-	TV-2-T	-	SP-1-T	6	-

EXISTING CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	CONDUIT RUN				
		1	2	3	4	5
DLC	ø1	-	-	2(N)	2(N)	2(N)
	ø2	-	6(N)	-	-	6(N)
	ø4	-	-	-	-	3(N)
	ø5	-	2(N)	-	-	2(N)
	ø6	-	-	-	6(N)	6(N)
	ø8	-	-	3(N)	3(N)	3(N)
#6	SIGNAL SERVICE	-	-	-	-	2
#10	LUMINAIRE	2	2	2	2	-
#8	GROUND	1	1	1	1	1
28 CONDUCTOR SIGNAL CABLE		2	2	2	2	2
CONDUIT SIZE		3"	3"	3"	3"	2-3"

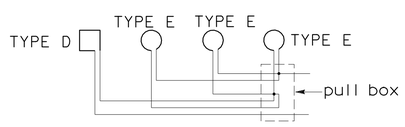
NOTES: (THIS SHEET)

1 AB EXISTING INDUCTIVE LOOP DETECTORS AND INSTALL NEW INDUCTIVE LOOP DETECTORS.

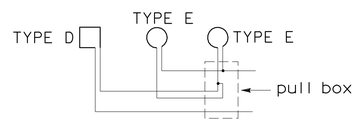
2 INSTALL AT THE BEGINING OF THE LEFT-TURN LANE.

GENERAL NOTE: (THIS SHEET)

1. FOR LOOP CONNECTION SEE DETAILS A AND B.

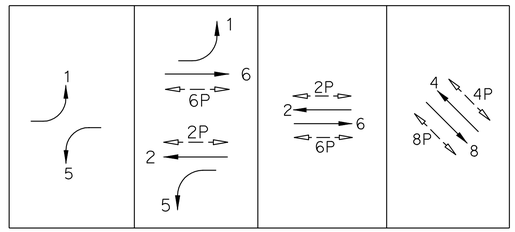


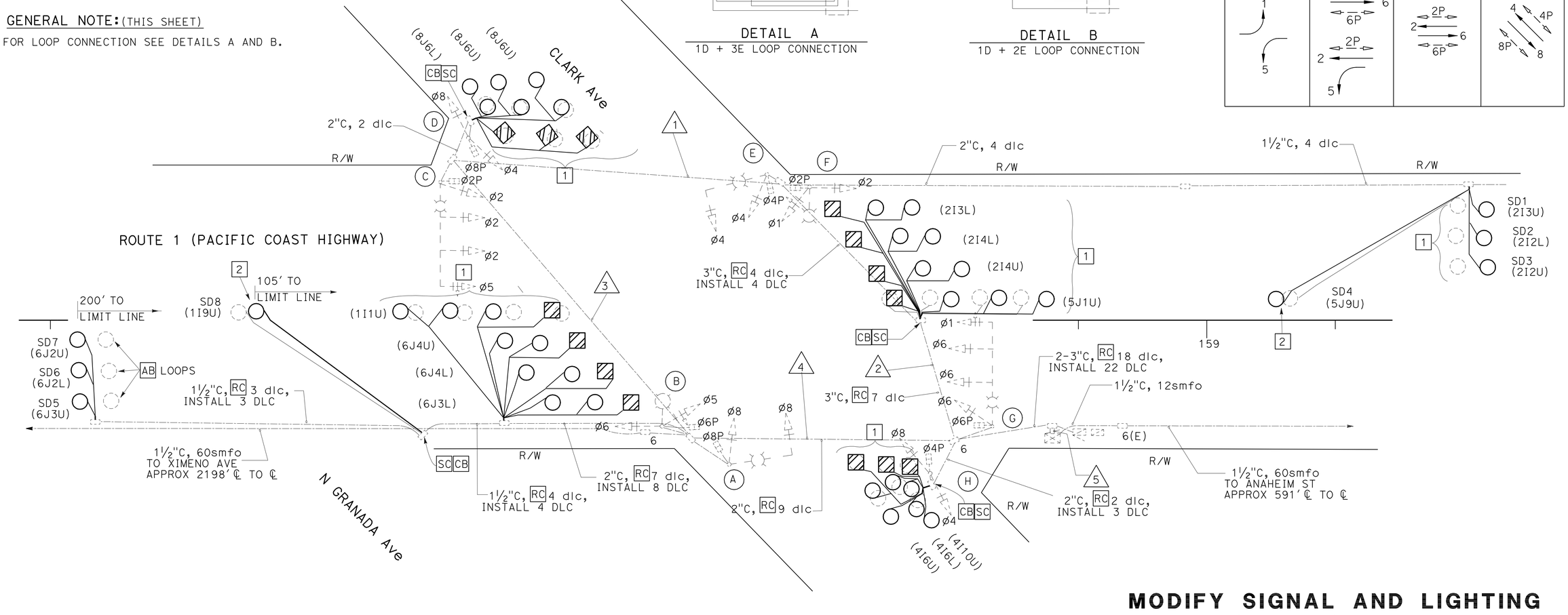
DETAIL A
1D + 3E LOOP CONNECTION



DETAIL B
1D + 2E LOOP CONNECTION

EXISITNG PHASE DIAGRAM





MODIFY SIGNAL AND LIGHTING
(ROUTE 1/ CLARK Ave)
SCALE: 1" = 20′

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: HASSAN MANNA
CALCULATED-DESIGNED BY: XOCHILT NARANJO
CHECKED BY: KENNY NGUYEN
REVISED BY | DATE REVISED

LAST REVISION DATE PLOTTED => 24-AUG-2011
8-24-11 TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030ua002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1879
PROJECT NUMBER & PHASE 07000209011

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

CONDUIT AND CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	CONDUIT RUN 1	2	3	4	5	6	7
DLC	ø1	-	-	-	2(N)	-	2(N)	2(N)
	ø2	-	-	6(N)	-	6(N)	-	6(N)
	ø3	2(N)	2(N)	2(N)	-	2(N)	-	2(N)
	ø4	-	-	-	-	-	5(N)	5(N)
	ø5	-	-	2(N)	-	2(N)	-	2(N)
	ø6	-	-	-	7(N)	-	7(N)	7(N)
	ø7	-	-	-	-	-	4(N)	4(N)
	ø8	4(N)	4(N)	4(N)	-	4(N)	-	4(N)
#6	SERVICE						2	2
#10	LUMINAIRES	2	2	2	2	-	-	-
#8	GROUND	1	1	1	1	1	1	1
28 CONDUCTOR SIGNAL CABLE		2	2	2	2	2	2	2
CONDUIT SIZE		3"	3"	3"	3"	3"	3"	2-3"

EXISTING PHASE DIAGRAM

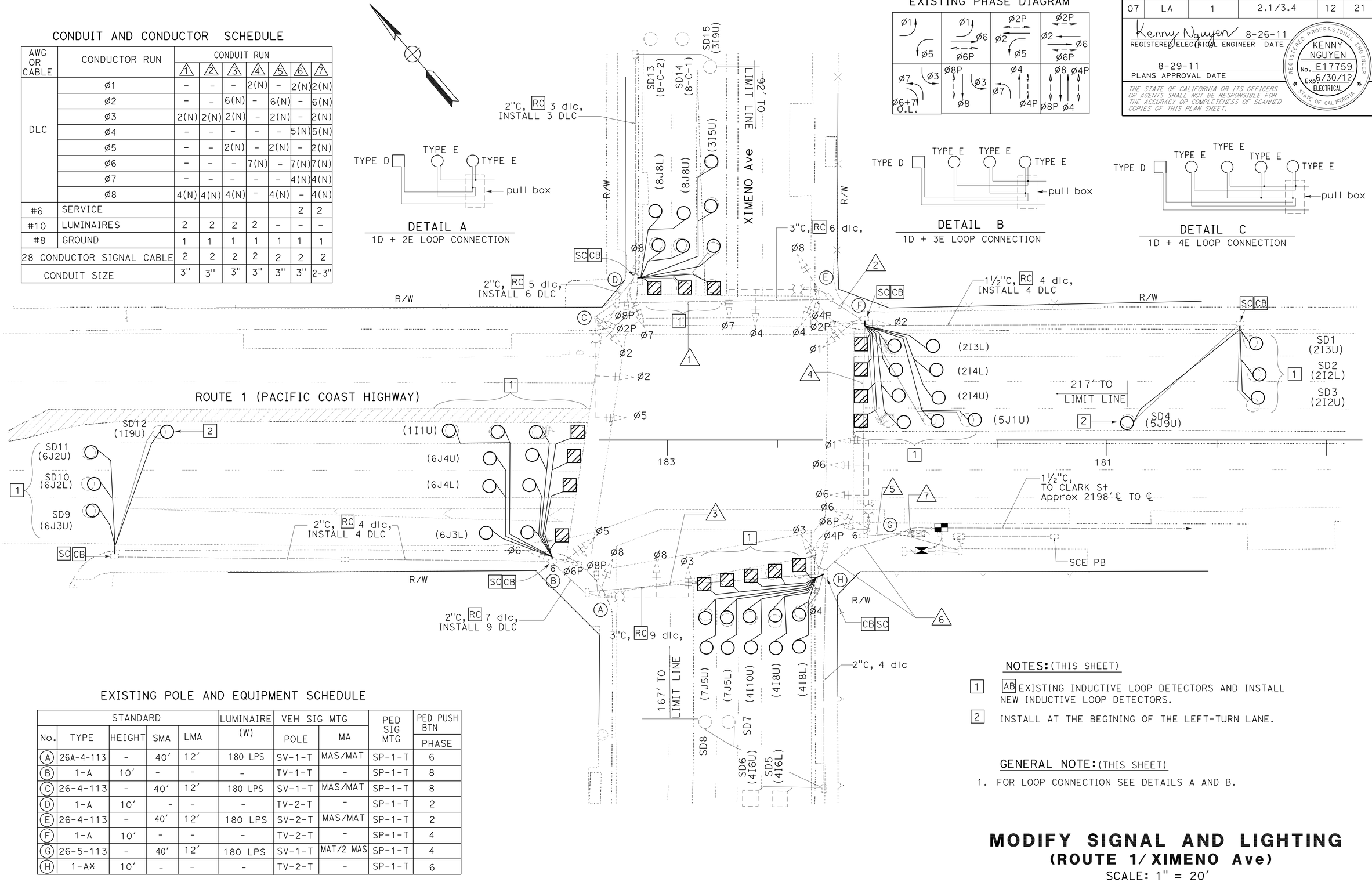
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	12	21

Kenny Nguyen 8-26-11
REGISTERED ELECTRICAL ENGINEER DATE

8-29-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — KENNY NGUYEN No. E17759 Exp 6/30/12 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.



EXISTING POLE AND EQUIPMENT SCHEDULE

No.	STANDARD TYPE	HEIGHT	SMA	LMA	LUMINAIRE (W)	VEH SIG MTG POLE	VEH SIG MTG MA	PED SIG MTG	PED PUSH BTN PHASE
(A)	26A-4-113	-	40'	12'	180 LPS	SV-1-T	MAS/MAT	SP-1-T	6
(B)	1-A	10'	-	-	-	TV-1-T	-	SP-1-T	8
(C)	26-4-113	-	40'	12'	180 LPS	SV-1-T	MAS/MAT	SP-1-T	8
(D)	1-A	10'	-	-	-	TV-2-T	-	SP-1-T	2
(E)	26-4-113	-	40'	12'	180 LPS	SV-2-T	MAS/MAT	SP-1-T	2
(F)	1-A	10'	-	-	-	TV-2-T	-	SP-1-T	4
(G)	26-5-113	-	40'	12'	180 LPS	SV-1-T	MAT/2 MAS	SP-1-T	4
(H)	1-A*	10'	-	-	-	TV-2-T	-	SP-1-T	6

NOTES: (THIS SHEET)

1 AB EXISTING INDUCTIVE LOOP DETECTORS AND INSTALL NEW INDUCTIVE LOOP DETECTORS.

2 INSTALL AT THE BEGINING OF THE LEFT-TURN LANE.

GENERAL NOTE: (THIS SHEET)

1. FOR LOOP CONNECTION SEE DETAILS A AND B.

MODIFY SIGNAL AND LIGHTING
(ROUTE 1/ XIMENO Ave)

SCALE: 1" = 20'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: HASSAN MANNA
CALCULATED-DESIGNED BY: XOCHILT NARANJO
CHECKED BY: KENNY NGUYEN
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 24-AUG-2011
TIME PLOTTED => 10:50
8-24-11

BORDER LAST REVISED 7/2/2010
USERNAME => s112049
DGN FILE => 71w030ua003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1879
PROJECT NUMBER & PHASE 07000209011

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	13	21

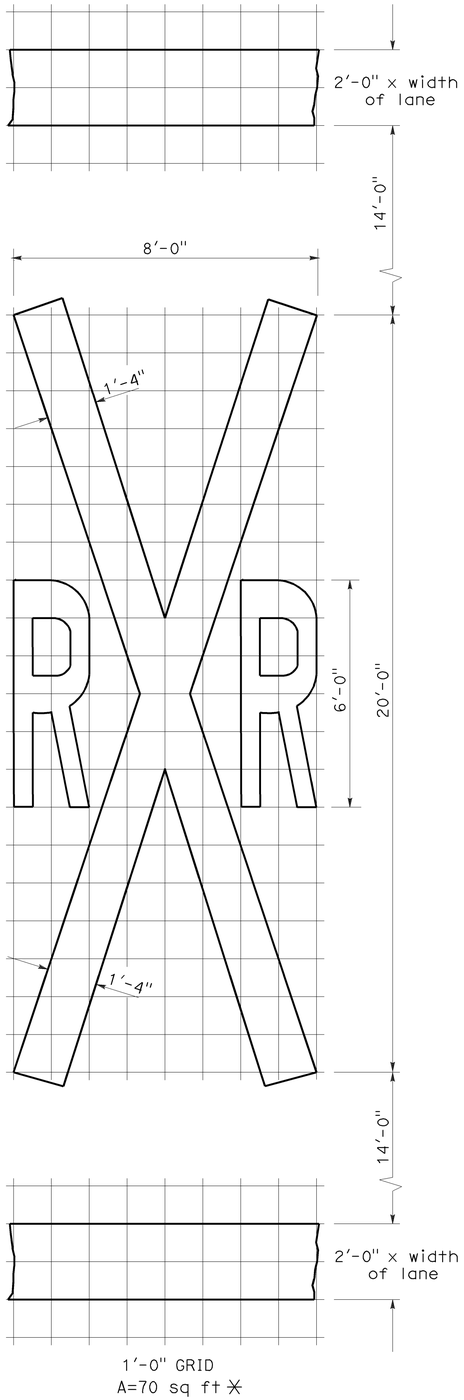
Donald E. Howe
REGISTERED CIVIL ENGINEER

Donald E. Howe
No. C46402
Exp. 3-31-09
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

June 6, 2008
PLANS APPROVAL DATE

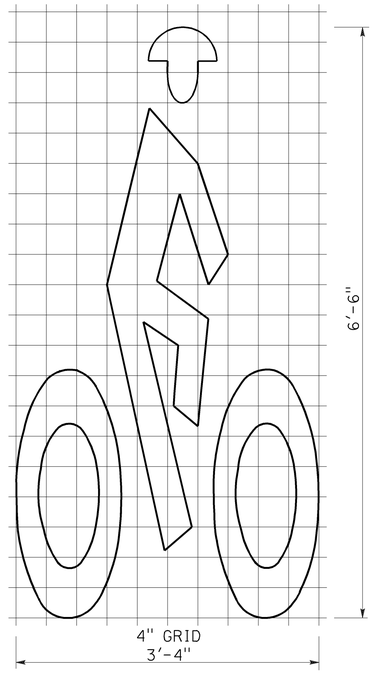
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 8-29-11



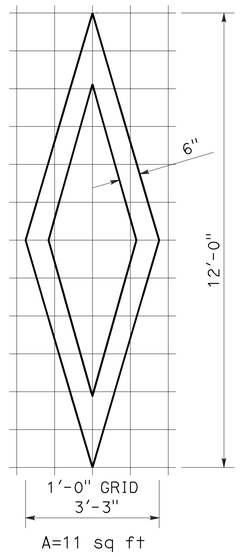
RAILROAD CROSSING SYMBOL

✳70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



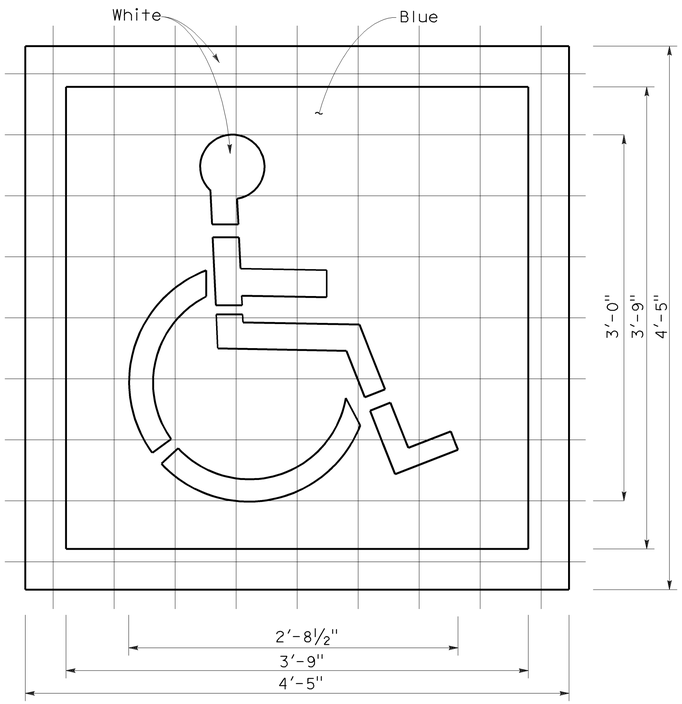
A=7 sq ft

BIKE LANE SYMBOL



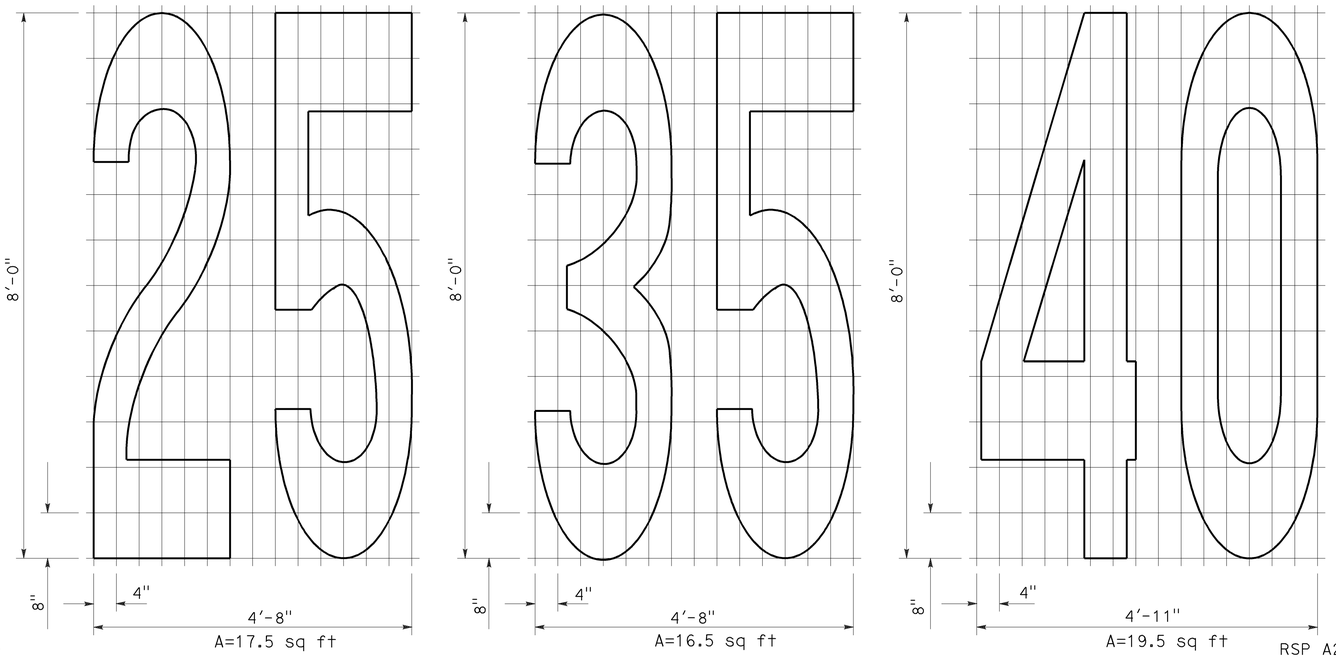
A=11 sq ft

DIAMOND SYMBOL

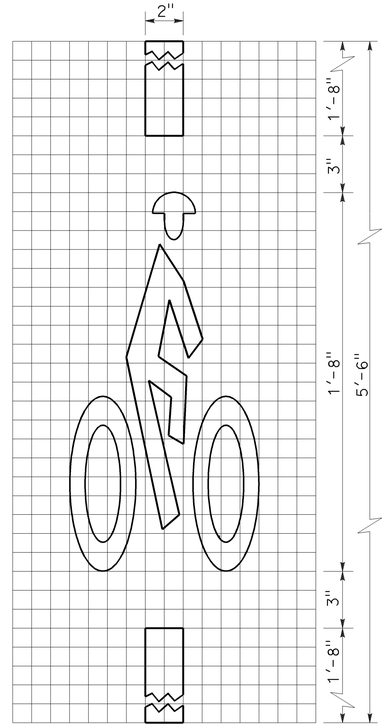


6" GRID
A (White) =9 sq ft
A (Blue) =14 sq ft

INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



NUMERALS



A=2 sq ft

BICYCLE LOOP DETECTOR SYMBOL

NOTE:

1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

RSP A24C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A24C DATED MAY 1, 2006 - PAGE 11 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A24C

2006 REVISED STANDARD PLAN RSP A24C

5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	14	21

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 8-29-11

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

- 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 wire or rope.
- 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.
- SF Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces,
MAS-4B	mas-4B	side attachment - 4 signal section
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces,
MAS-5B	mas-5B	side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- (M) Existing soffit or wall luminaire to be modified as specified.

NOTE:
Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A
DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	15	21

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 8-29-11

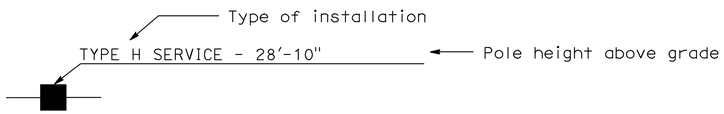
CONDUIT

PROPOSED	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 (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
—OH—	—oh—	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	16	21

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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To accompany plans dated 8-29-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345
10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- Mast arm length, if shown. Do not place on standard or structure.
- Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- Number and size of conductors and cables
- Size of conduit in inches

ø1, ø2, ø2P, etc. — Traffic phase identification for signal faces, detectors and phase diagrams

[1] [2] [3] — Project note numbers

(A) (B) (C) — Equipment description, installation or item numbers

△1 △2 △3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- Wind velocity = 100 mph
- Case 3 arm loading
- Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
EMS	ems	Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
3	9A(21)	Pull box-Additional designations or descriptions

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U

- Vehicle detector designation
- U = Upper, L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	17	21

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Randell D. Hiatt — No. C50200 — Exp. 6-30-09 — CIVIL — STATE OF CALIFORNIA

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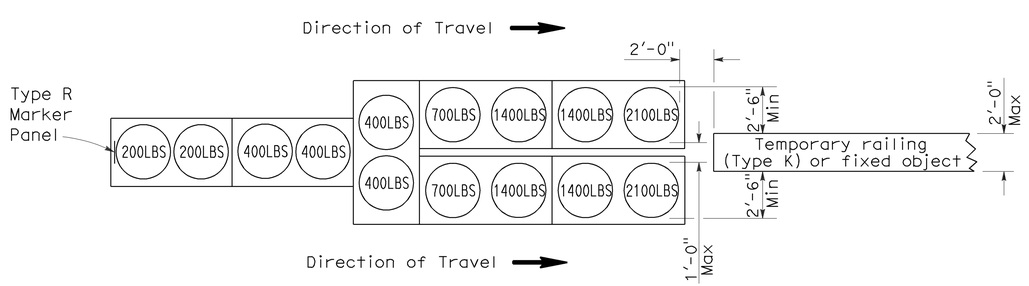
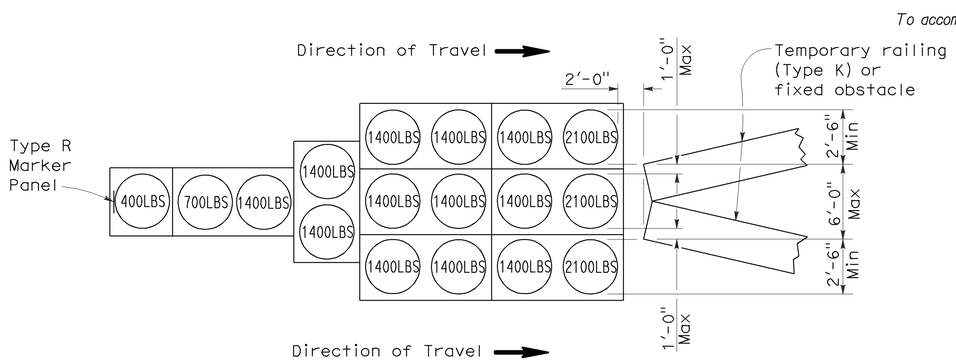
To accompany plans dated 8-29-11



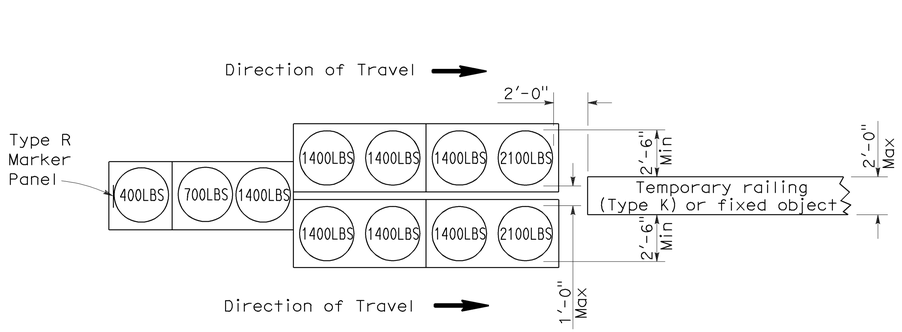
ARRAY 'TU14'

Approach speed 45 mph or more



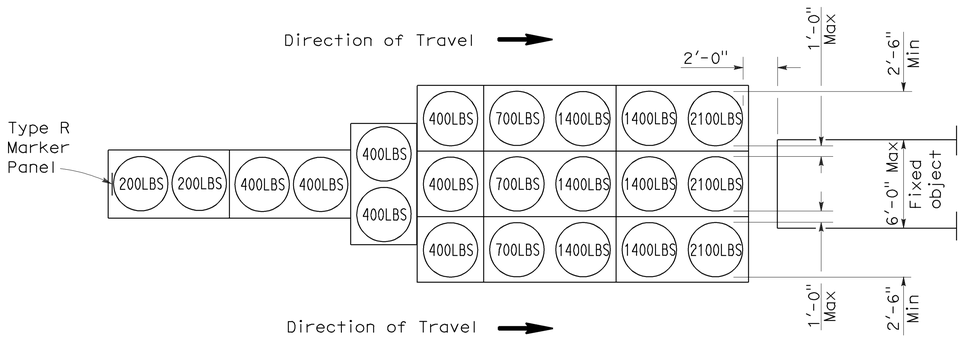
ARRAY 'TU17'

Approach speed less than 45 mph



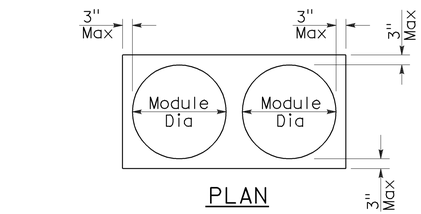
ARRAY 'TU11'

Approach speed less than 45 mph

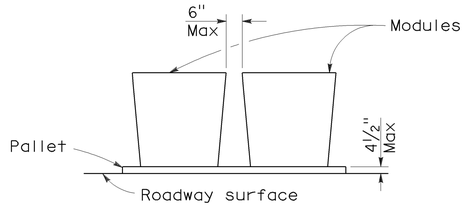


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	18	21

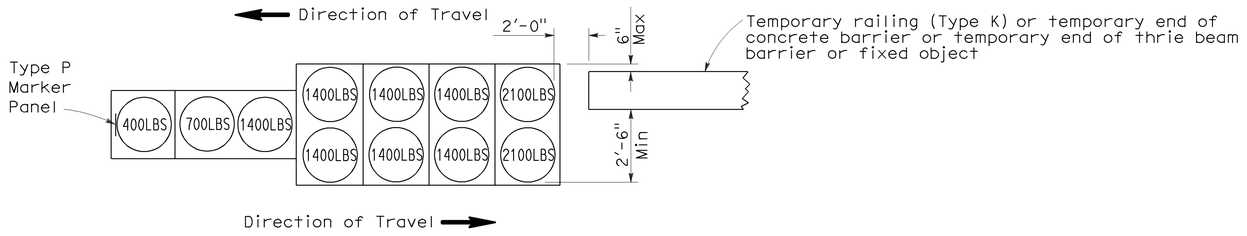
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

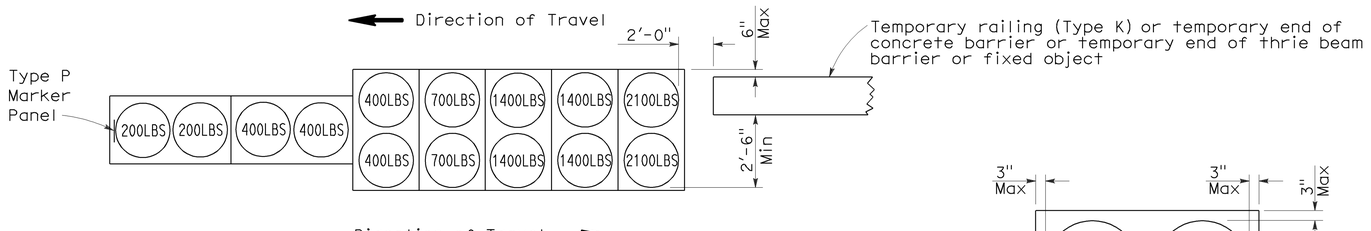
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 8-29-11



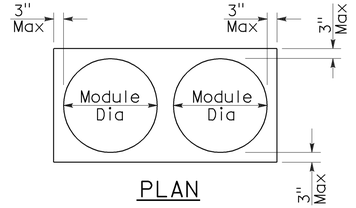
ARRAY 'TB11'

Approach speed less than 45 mph

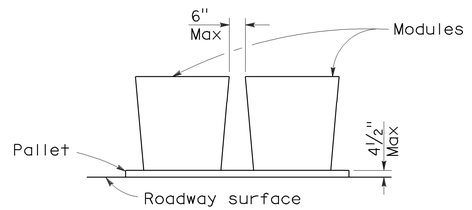


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	19	21

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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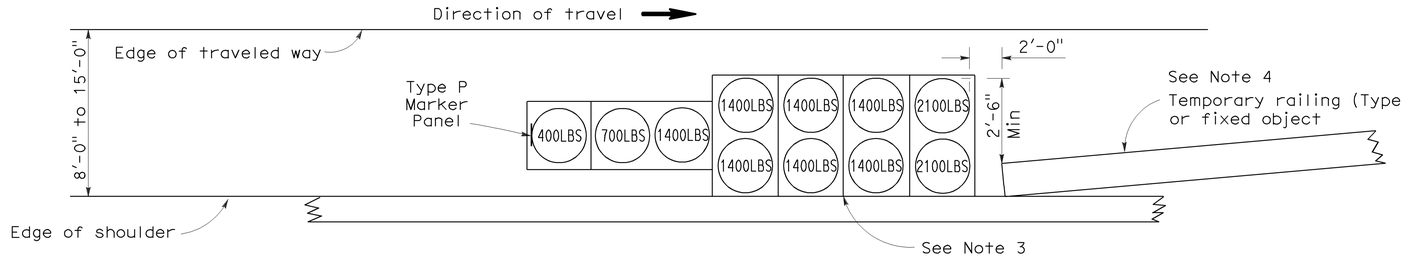
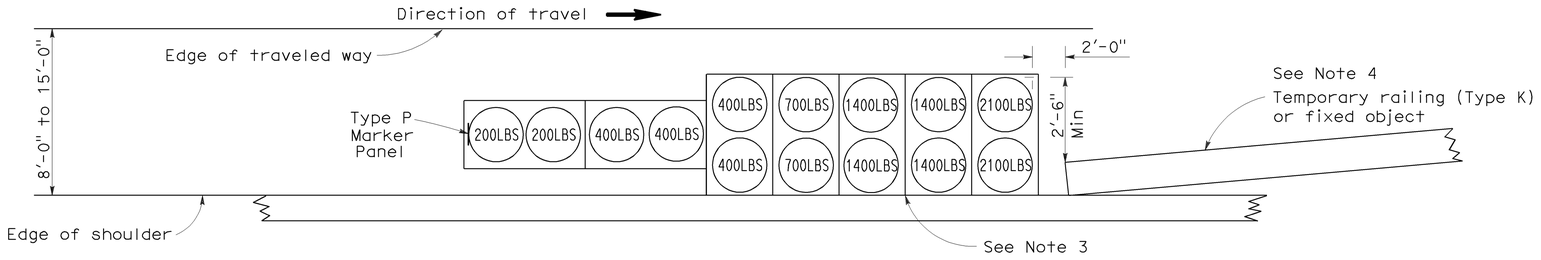
To accompany plans dated 8-29-11



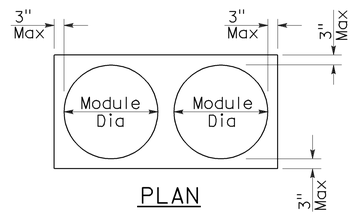
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

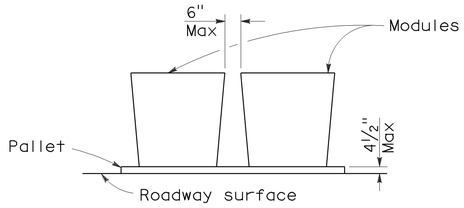


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	2.1/3.4	20	21

Greg W. Edwards
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Greg W. Edwards — No. C36386 — Exp. 6-30-08 — CIVIL — STATE OF CALIFORNIA

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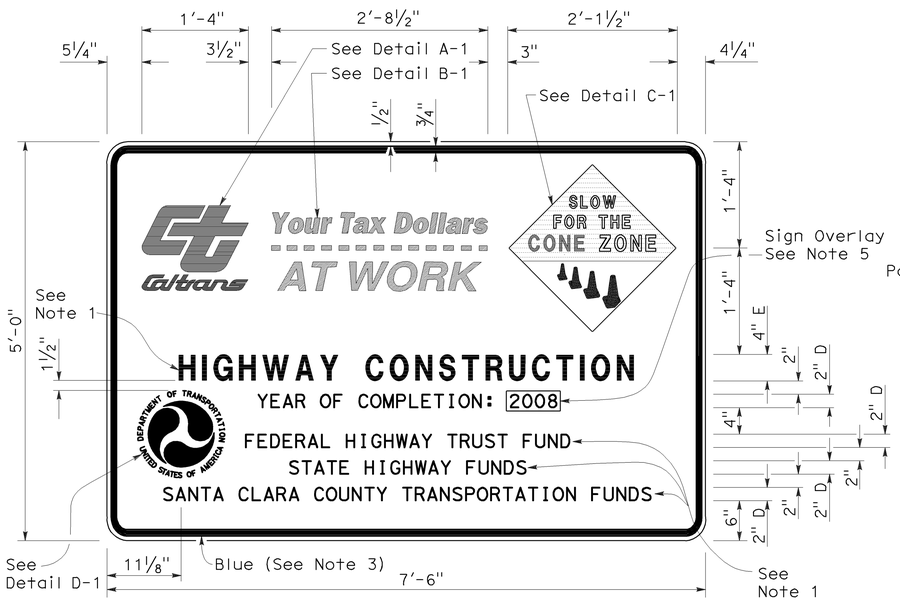
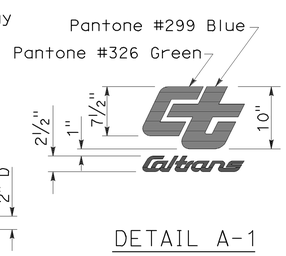
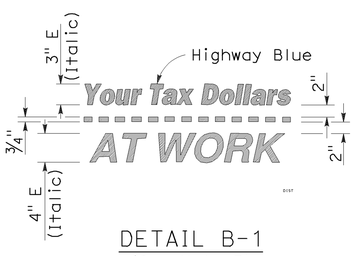
To accompany plans dated 8-29-11



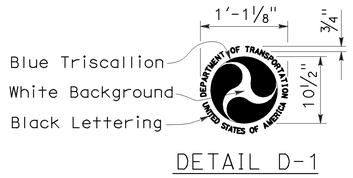
TYPE 1



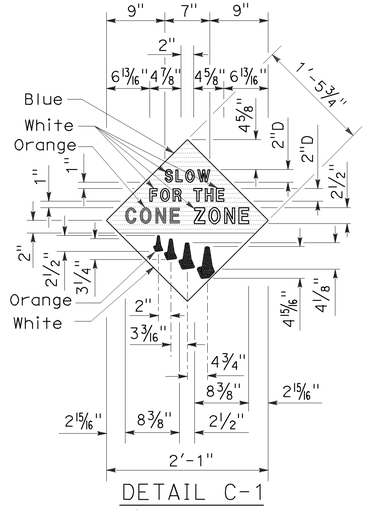
DETAIL A-1



DETAIL B-1
(See Note 3)



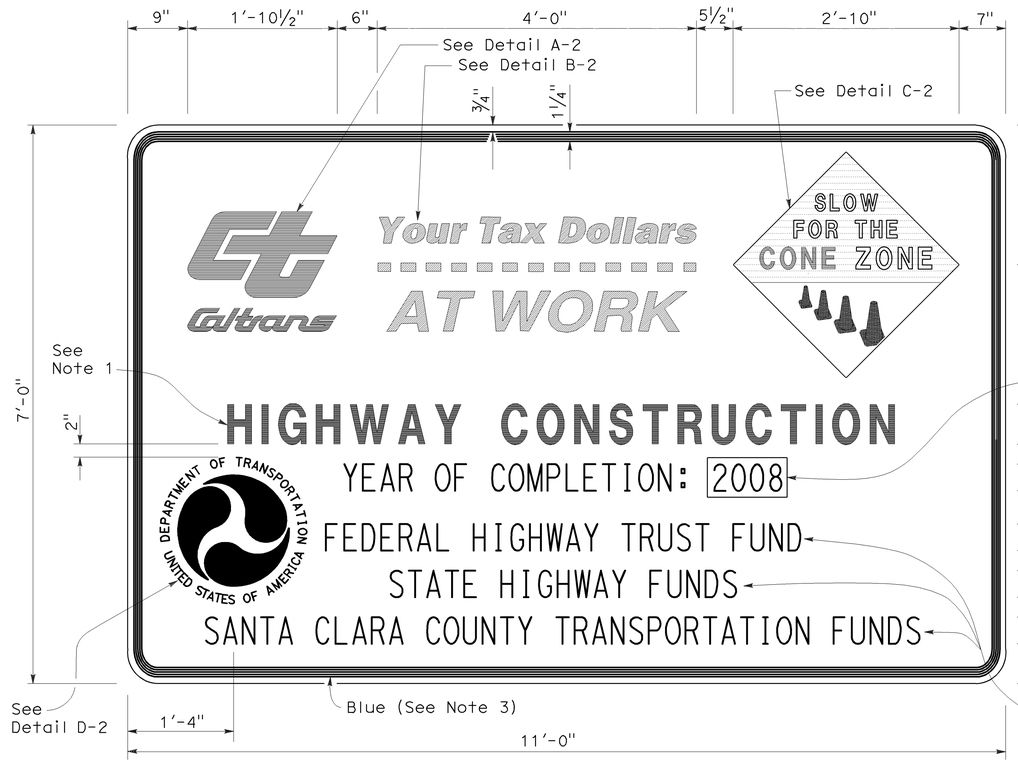
DETAIL D-1
(See Note 6)



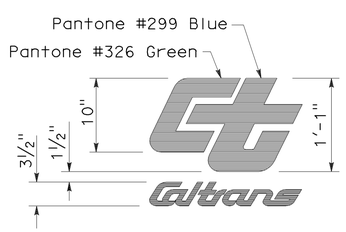
DETAIL C-1
(See Note 4)

NOTES:

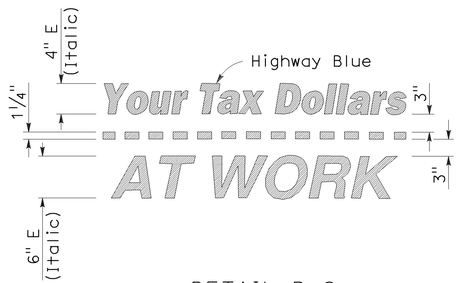
1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, " SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.



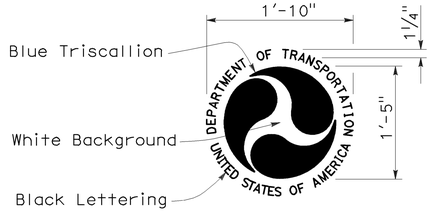
TYPE 2



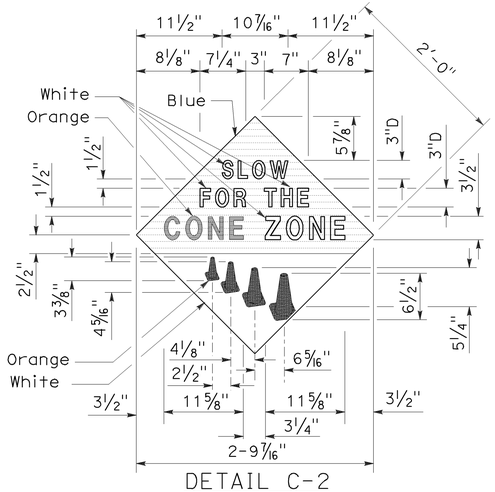
DETAIL A-2



DETAIL B-2
(See Note 3)



DETAIL D-2
(See Note 6)



DETAIL C-2
(See Note 4)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS

NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7
DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T7

2006 REVISED STANDARD PLAN RSP T7

9-7-06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	1	2.1/3.4	21	21

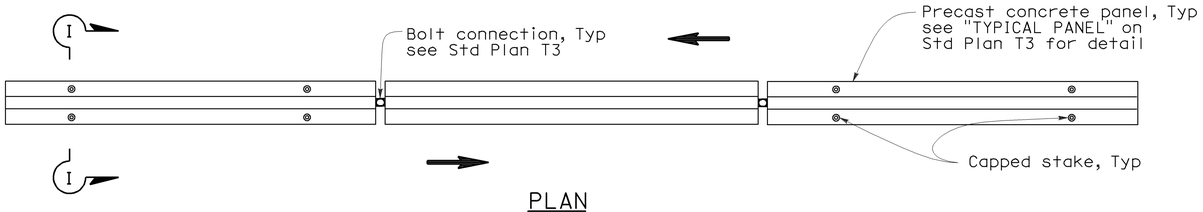
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

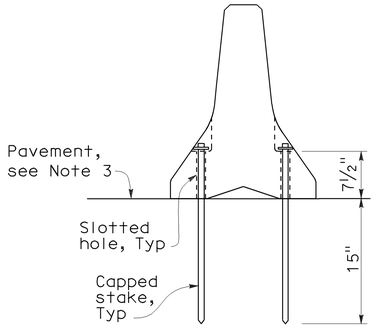
To accompany plans dated 8-29-11



PLAN

RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC

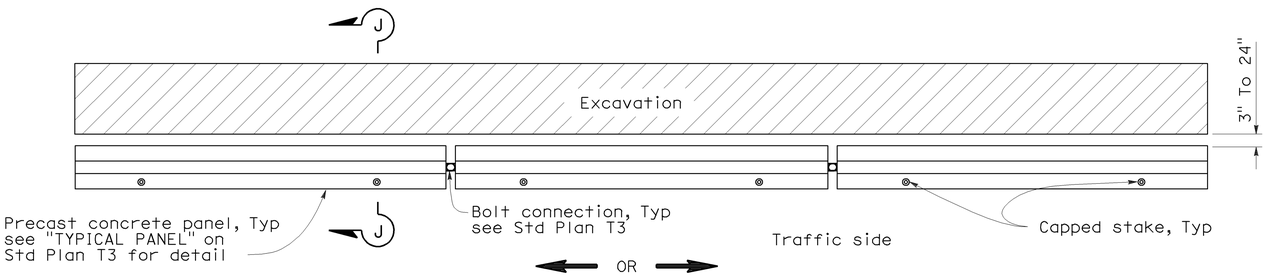
See Note 1



SECTION I-I

NOTES:

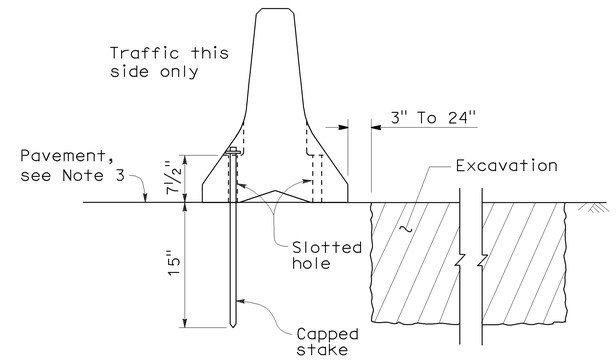
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by ⟹.



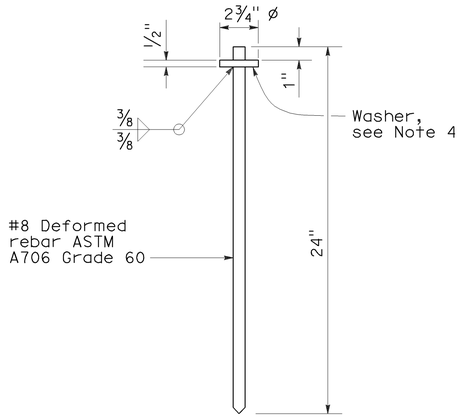
PLAN

RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION

See Note 2



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY RAILING (TYPE K)

NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T3A

2006 NEW STANDARD PLAN NSP T3A

8-31-10