INDEX OF PLANS

SHEET No.	DESCRIPTION
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5-10	CONSTRUCTION DETAILS
11	CONSTRUCTION AREA SIGNS
12	SIGN PLANS, DETAILS AND QUANTITIES
13	SUMMARY OF QUANTITIES
14-22	ELECTRICAL PLANS
23-39	REVISED AND NEW STANDARD PLANS

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

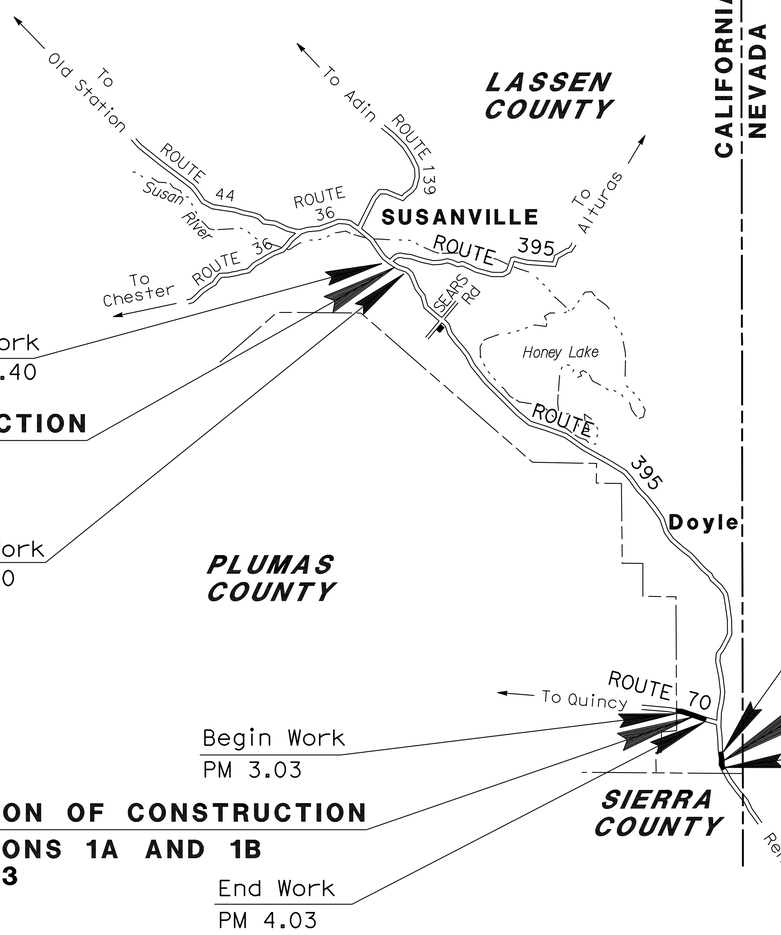
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LASSEN COUNTY AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70, 395	Var	1	39



Edward B Speer 11-15-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

January 31, 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.

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

NO SCALE

CONTRACT No.	02-1E4704
PROJECT ID	0200000106

PROJECT MANAGER: PHIL BAKER
DESIGN ENGINEER: ROB BURNETT

P:\proj2\02\1E470_plans\pse\21e470ab001.dgn

DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:17
LAST REVISION 11-15-10

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => trlenard DGN FILE => 21e470ab001.dgn | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	2	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

1-31-11
PLANS APPROVAL DATE

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. TELEPHONE CONNECTION BEYOND R/W LINE TO BE DONE BY OTHERS.

LEGEND:

TFESA — Temp FENCE (TYPE ESA)

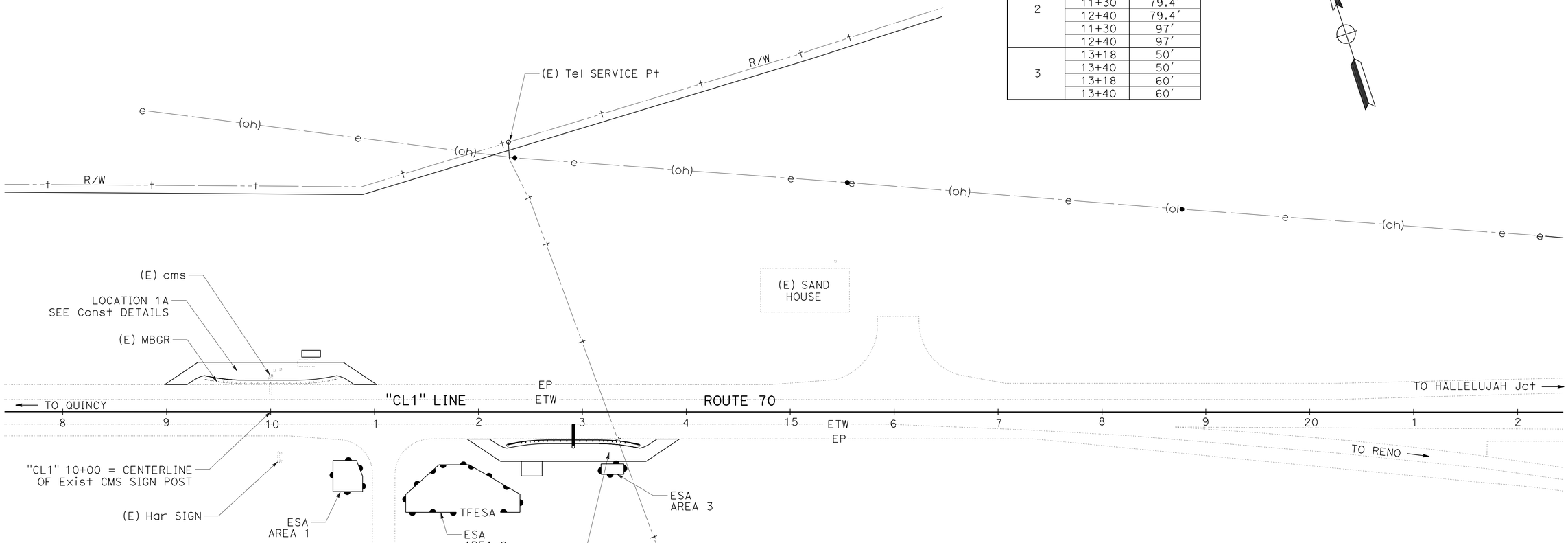
SAW CUT LINE

ABBREVIATION:

TCE TEMPORARY CONSTRUCTION EASEMENT

ESA FENCE ANGLE POINTS

AREA No.	"CL1" Sta	OFFSET Rt
1	10+60	46.7′
	10+82.6	46.7′
	10+88.5	61.7′
	10+60	77′
	10+88.5	77′
2	11+62	51′
	11+91	51′
	11+30	79.4′
	12+40	79.4′
	11+30	97′
	12+40	97′
3	13+18	50′
	13+40	50′
	13+18	60′
	13+40	60′



LOCATIONS 1A AND 1B

Las 70 PM 3.53

LAYOUT

SCALE: 1" = 50′

L-1

REVISED BY | DATE REVISED
ED SPEER | APOLINARIO VIVIT
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB BURNETT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

LAST REVISION 11-15-10 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 13:30

P:\proj2\02\1E470_plans\pse\21e470ea001.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => trlim | DGN FILE => 21e470ea001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	3	39

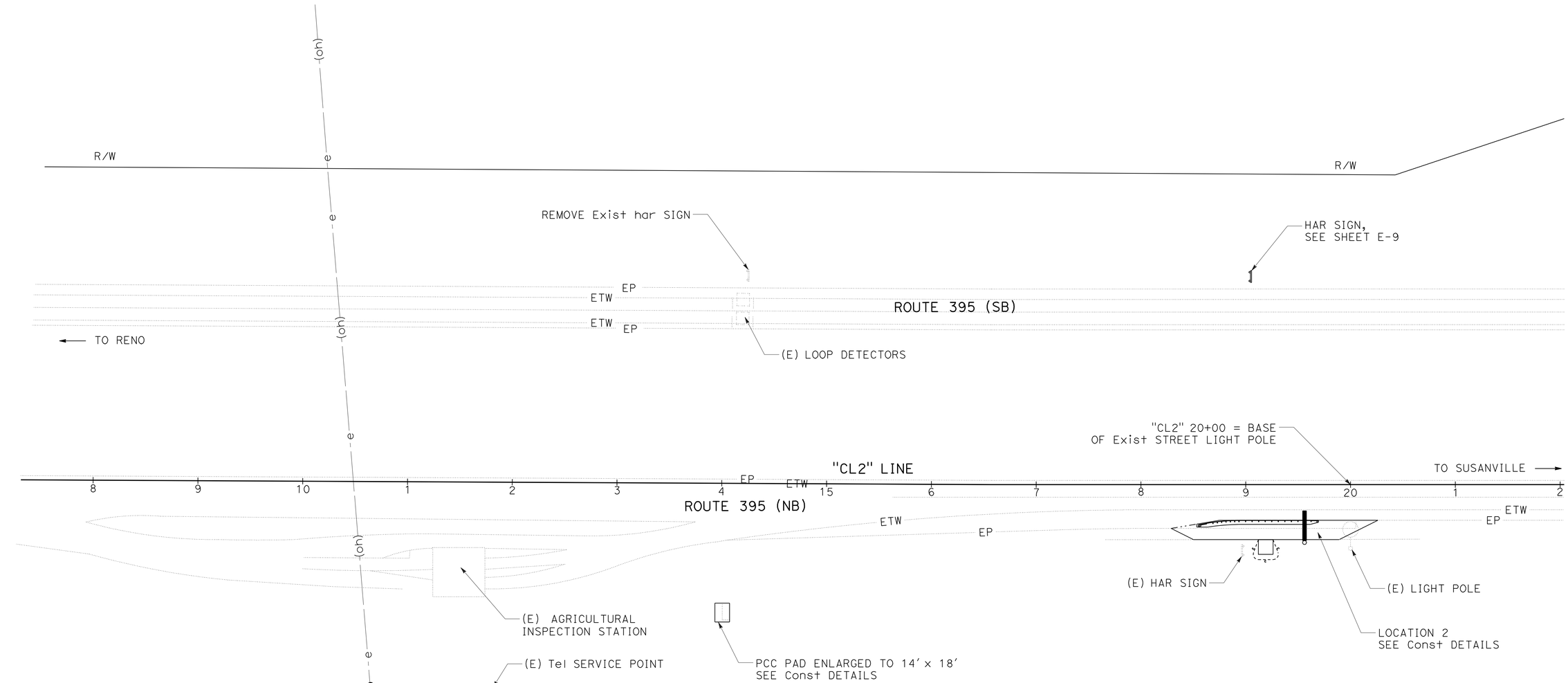
Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

NOTE:

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



LOCATION 2
Las 395 PM 1.70

LAYOUT
SCALE: 1" = 50'

L-2

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LAST REVISION | DATE PLOTTED => 04-FEB-2011
11-15-10 | TIME PLOTTED => 13:30

BORDER LAST REVISED 7/2/2010 | USERNAME => trlim | DGN FILE => 21e470ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	4	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

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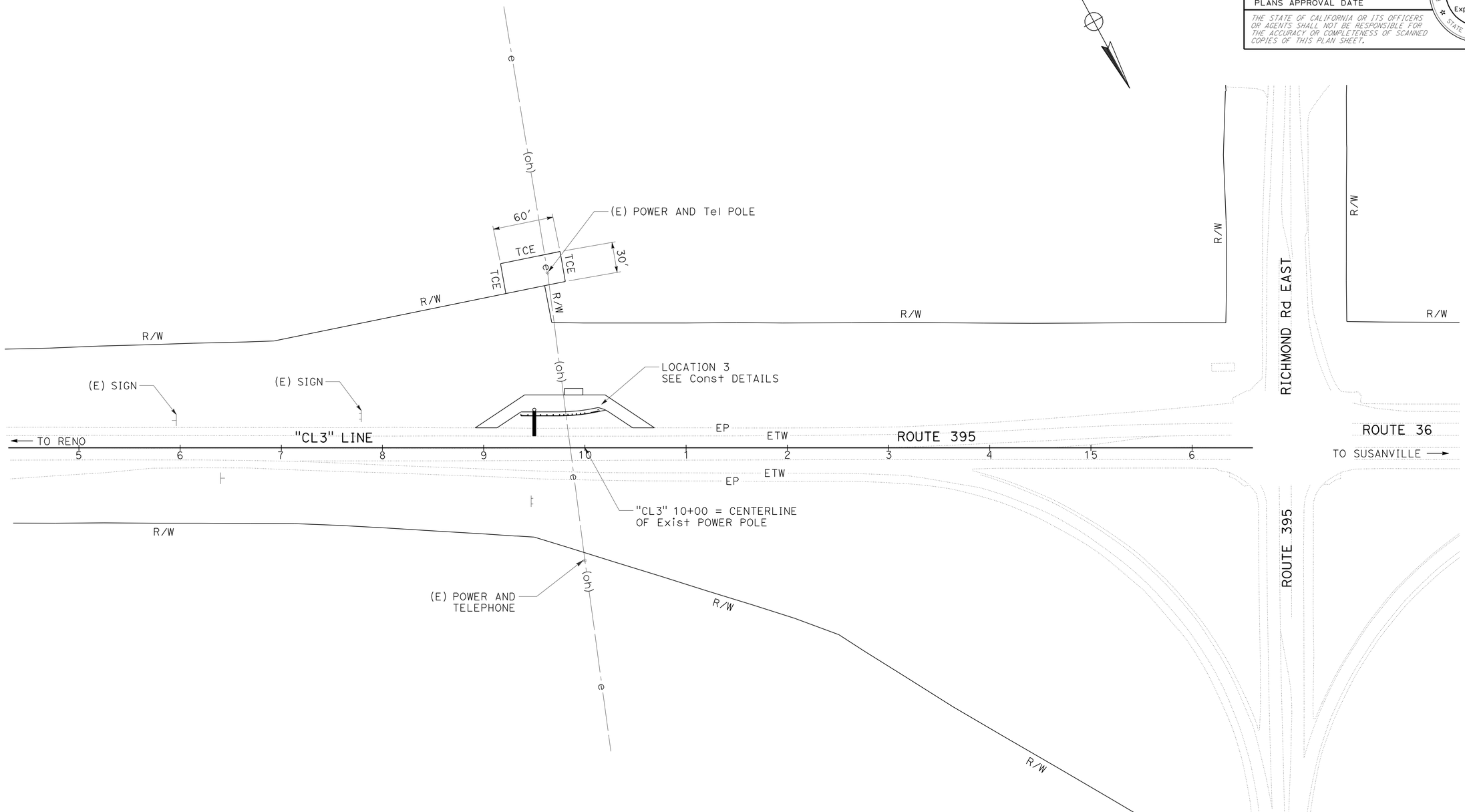
NOTE:

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



LOCATION 3
Las 395 PM 60.90

LAYOUT
SCALE: 1" = 50'

L-3

REVISED BY | DATE REVISED
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LAST REVISION | DATE PLOTTED => 04-FEB-2011
11-15-10 | TIME PLOTTED => 13:30

P:\proj2\02\1E470_plans\pse\21e470ea003.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => trlim | DGN FILE => 21e470ea003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	5	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

1-31-11
PLANS APPROVAL DATE

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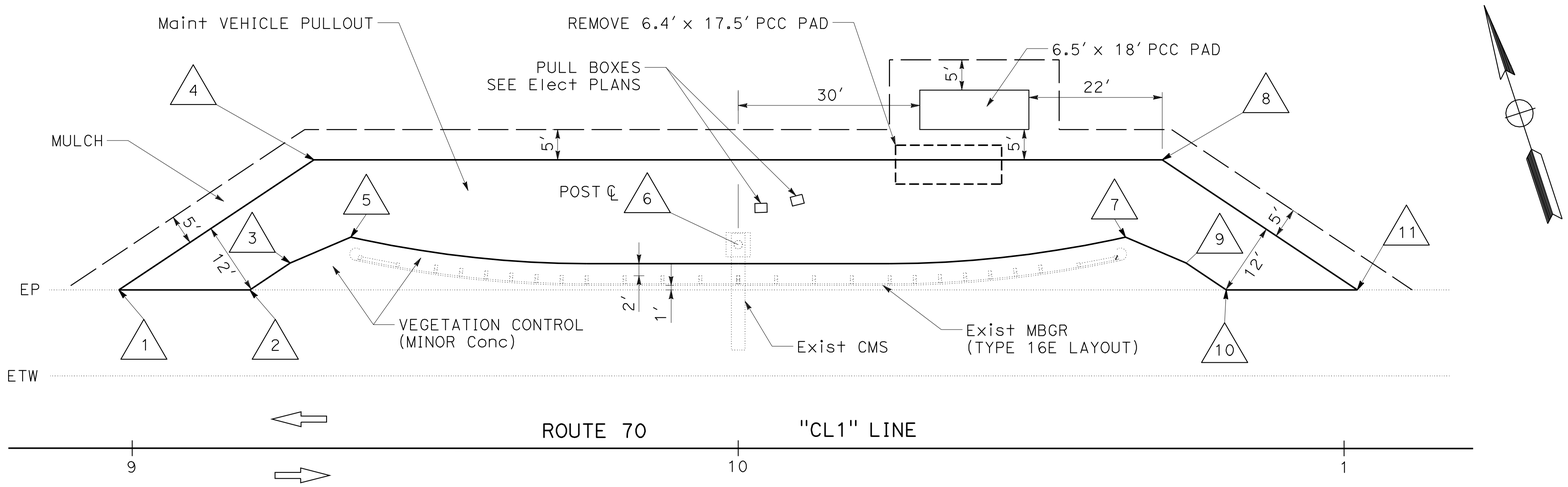
LEGEND:

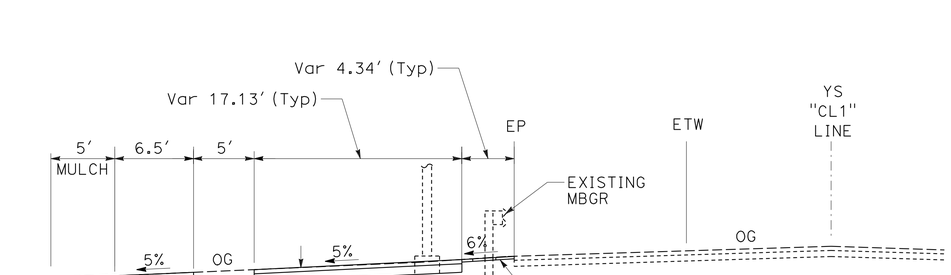
TFESA — Temp FENCE (TYPE ESA)
SAW CUT LINE
DIRECTION OF TRAFFIC
LIMIT OF MULCH
FLOW DIRECTION

ABBREVIATION:

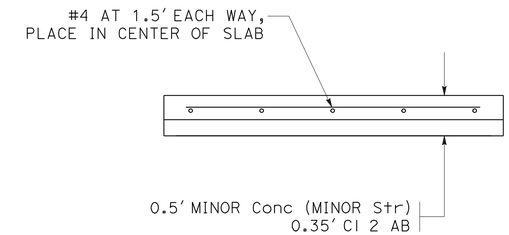
YS YELLOW STRIPE



PLAN



TYPICAL SECTION
LAS-70-PM 3.53
(WESTBOUND)



DETAIL A

ALL PCC PADS

REFERENCE POINTS

No.	"CL1" Sta	OFFSET Lt
1	8+98	26.1'
2	9+19.4	26.1'
3	9+26.1	30.6'
4	9+30	47.6'
5	9+36	34.8'
6	10+00	33.6'
7	10+63.9	34.8'
8	10+70	47.6'
9	10+73.9	30.6'
10	10+80.6	26.1'
11	11+02	26.1'

LOCATION 1A
CONSTRUCTION DETAILS

NO SCALE

C-1

REVISED BY | DATE REVISED
ED SPEER | APOLINARIO VIVIT
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB BURNETT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
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P:\proj2\02\1E470_plans\pse\21e470ga001.dgn

LAST REVISION 11-15-10 | DATE PLOTTED => 07-FEB-2011 | TIME PLOTTED => 10:57

BORDER LAST REVISED 7/2/2010 | USERNAME => trrichf | DGN FILE => 21e470ga001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	6	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL
REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

1-31-11
PLANS APPROVAL DATE

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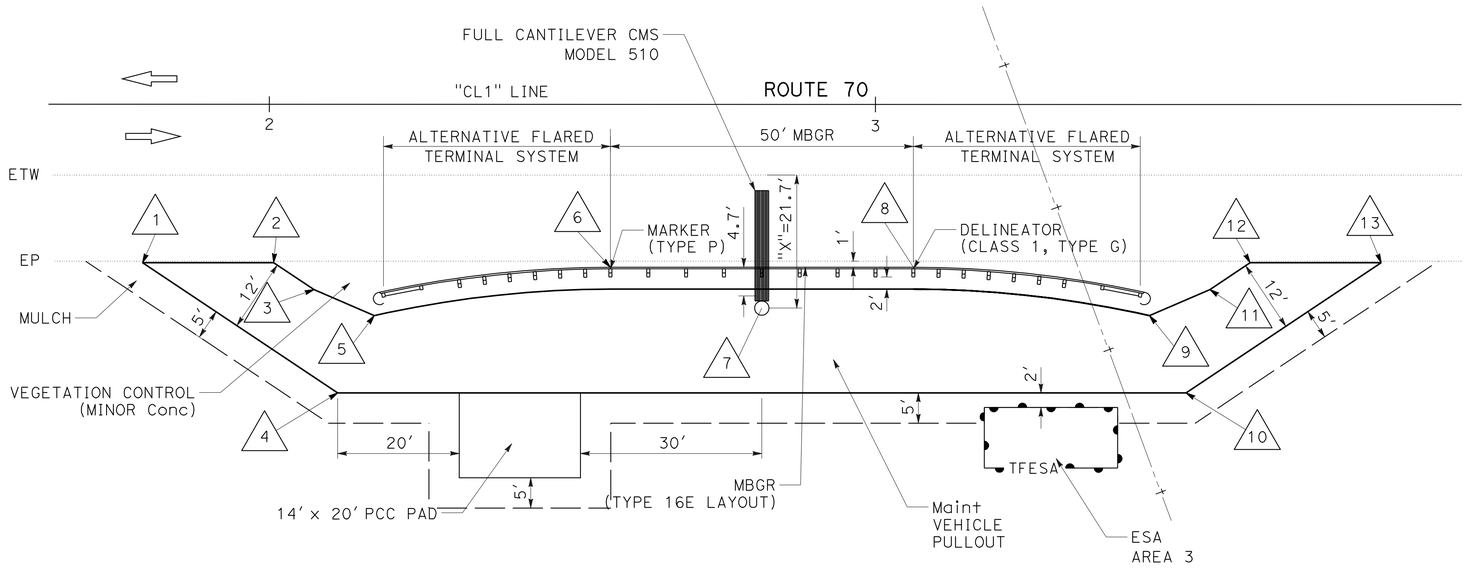
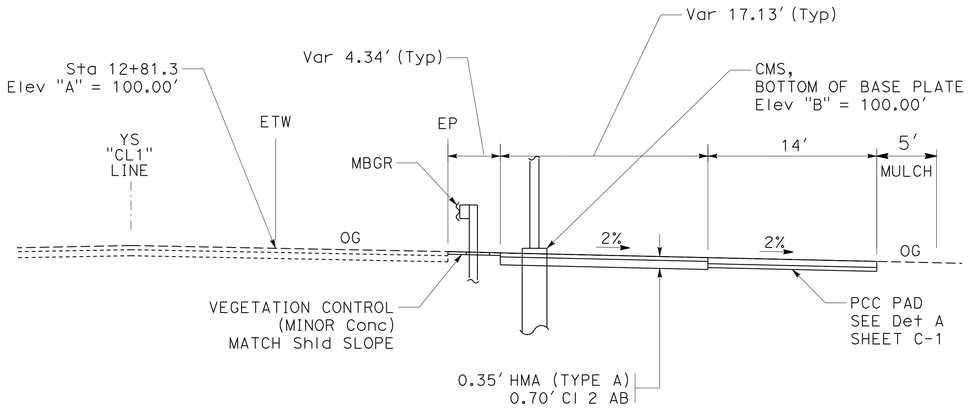


PLAN



TYPICAL SECTION
LAS-70-PM 3.53 (EASTBOUND)

REFERENCE POINTS

No.	"CL1" Sta	OFFSET Rt
1	11+79.1	26.1'
2	12+00.7	26.1'
3	12+07.4	30.6'
4	12+11.3	47.6'
5	12+17.3	34.9'
6	12+56.3	26.9'
7	12+81.3	33.6'
8	13+06.3	26.9'
9	13+45.2	34.9'
10	13+51.3	47.6'
11	13+55.2	30.6'
12	13+61.8	26.1'
13	13+83.5	26.1'

LOCATION 1B
CONSTRUCTION DETAILS
NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ROB BURNETT
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
ED SPEER
APOLINARIO VIVIT

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LAST REVISION | DATE PLOTTED => 04-FEB-2011
11-15-10 | TIME PLOTTED => 13:30

BORDER LAST REVISED 7/2/2010
USERNAME => trlim
DGN FILE => 21e470ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0317
PROJECT NUMBER & PHASE 02000001061

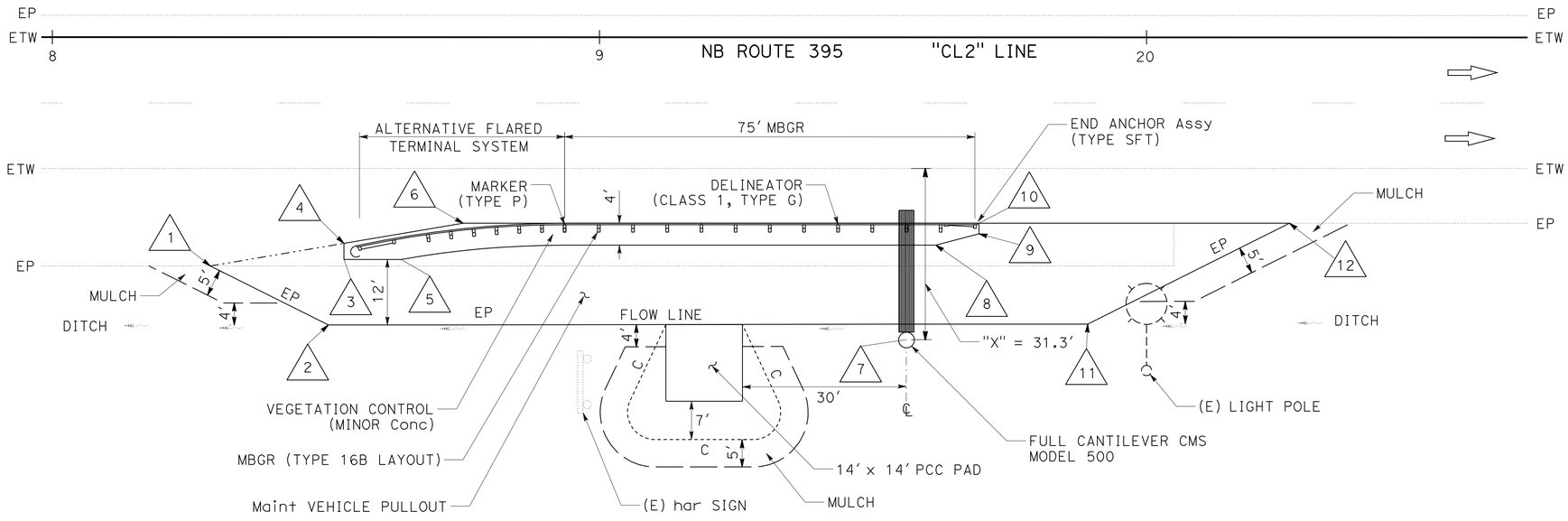
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	7	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

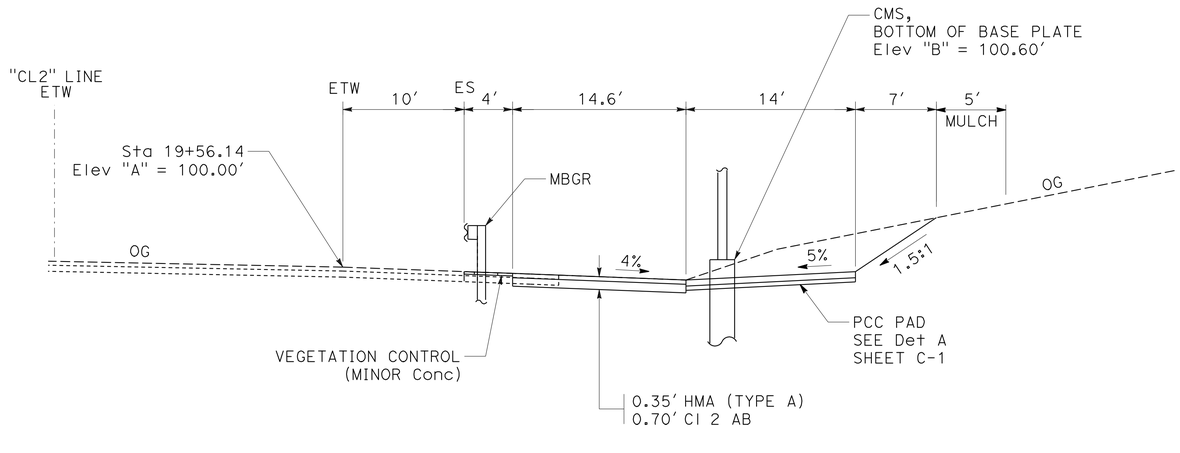
1-31-11
PLANS APPROVAL DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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



PLAN



TYPICAL SECTION
LAS-395-PM 1.70

REFERENCE POINTS

No.	"CL2" Sta	OFFSET Rt
1	18+28.8	41.8'
2	18+50.4	52.6'
3	18+53.3	40.6'
4	18+53.3	37.7'
5	18+63.7	40.6'
6	18+75.1	34.0'
7	19+56.1	55.3'
8	19+61.5	38.0'
9	19+69.4	35.9'
10	19+69.4	34.0'
11	19+89.3	52.4'
12	20+26.1	34.0'

LOCATION 2
CONSTRUCTION DETAILS
NO SCALE

C-3

REVISED BY | DATE REVISED
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LAST REVISION 11-15-10 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 13:31

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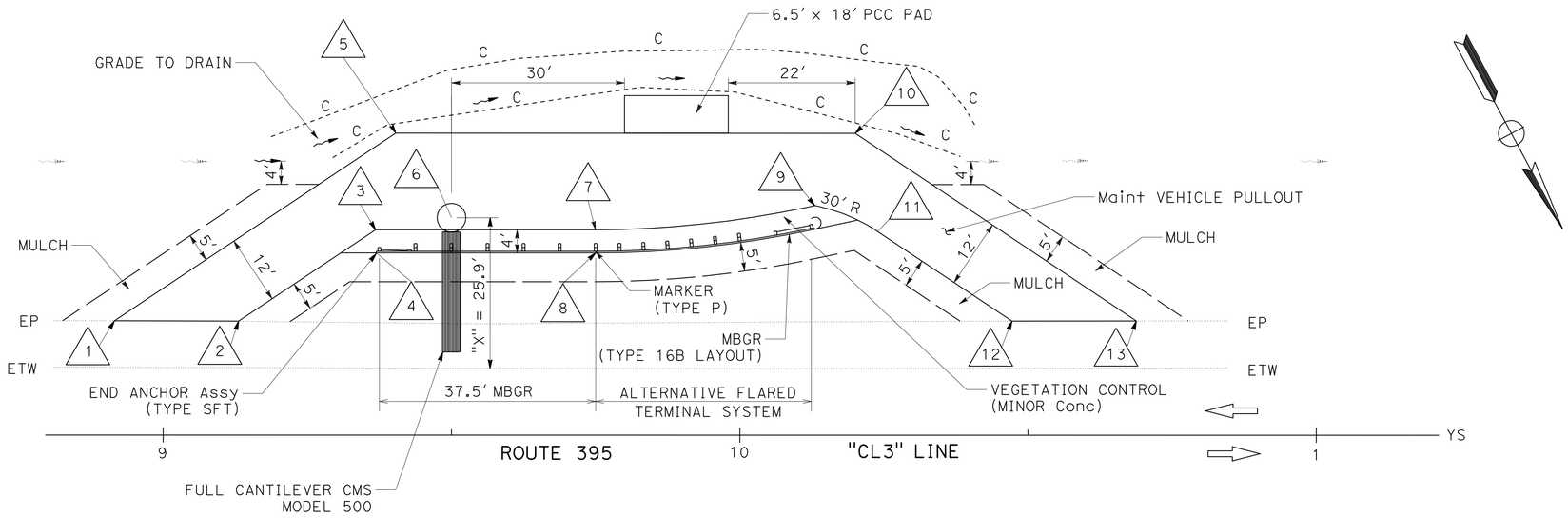
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	8	39

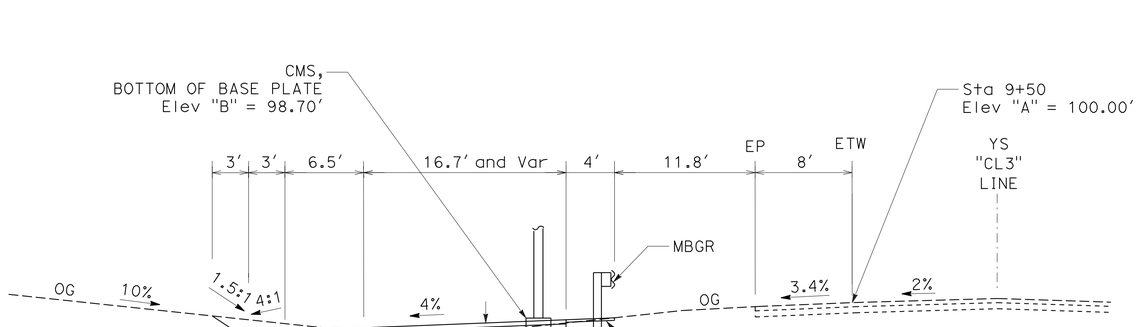
Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA



PLAN



TYPICAL SECTION
LAS-395-PM 60.9

REFERENCE POINTS

No.	"CL3" Sta	OFFSET Lt
1	8+91.6	19.8′
2	9+13.1	19.8′
3	9+36.8	35.6′
4	9+37	31.6′
5	9+40.3	52.3′
6	9+50	37.7′
7	9+75	35.6′
8	9+75	31.6′
9	10+13	39.8′
10	10+20	52.3′
11	10+23.9	35.3′
12	10+47.2	19.8′
13	10+68.8	19.8′

LOCATION 3
CONSTRUCTION DETAILS
NO SCALE

C-4

REVISED BY | DATE REVISED
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CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB BURNETT
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11-15-10 | TIME PLOTTED => 12:48

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	9	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

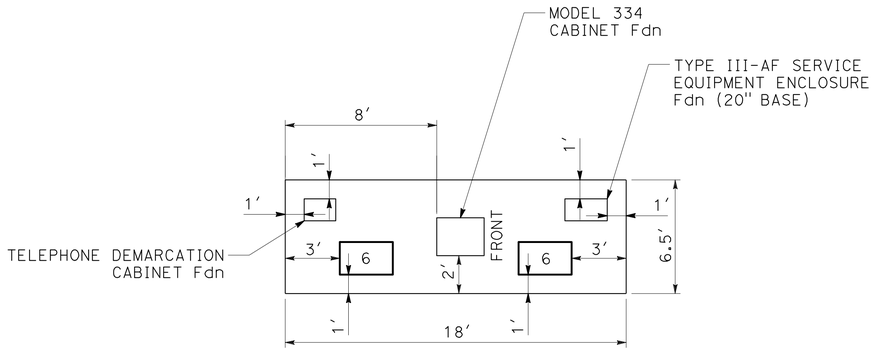
EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

NOTES:

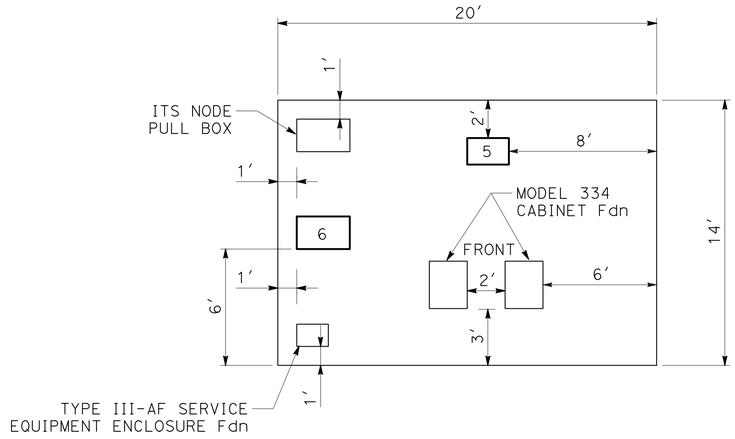
1. har CABINET TO REMAIN.
2. tms CABINET TO REMAIN.
3. pb TO REMAIN.
4. REMOVE pb.

LEGEND:

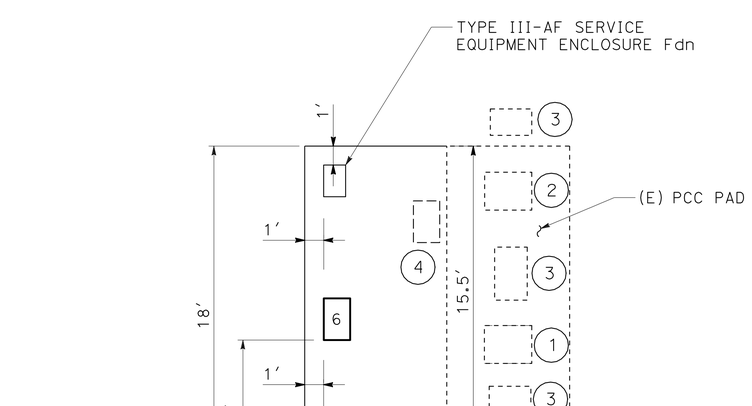
No. PULL BOX TYPE



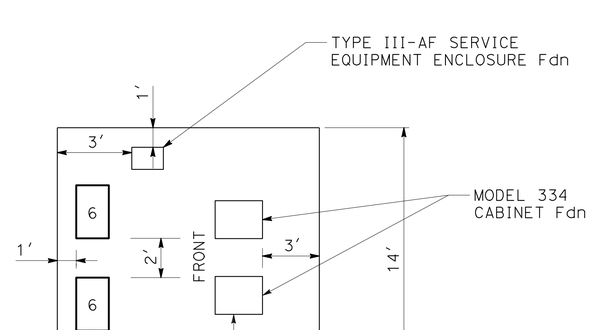
LOCATIONS 1A AND 3



LOCATION 1B



LOCATION 2
Sta 14+00, 123′ Rt



LOCATION 2
Sta 19+19, 60′ Rt

PCC PAD

CONSTRUCTION DETAILS

NO SCALE

C-5

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
ED SPEER
APOLINARIO VIVIT
FUNCTIONAL SUPERVISOR
ROB BURNETT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION 11-15-10
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 12:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	10	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

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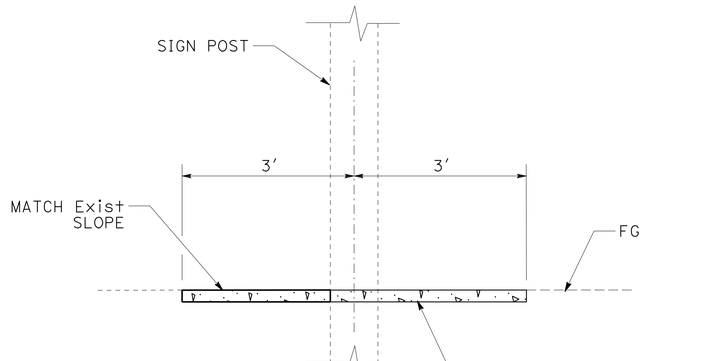
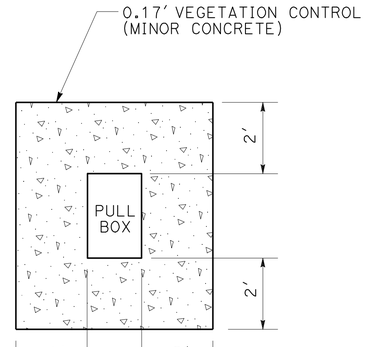


SIGN POST

VEGETATION CONTROL (MINOR CONCRETE)



PULL BOX PAVING

VEGETATION CONTROL (MINOR CONCRETE)

CONSTRUCTION DETAILS

NO SCALE

C-6

CALCULATED-DESIGNED BY: ED SPEER
CHECKED BY: APOLINARIO VIVIT
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: ROB BURNETT
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

P:\proj2\02\1E470_plans\pse\21e470ga006.dgn

LAST REVISION 11-15-10
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 12:46

BORDER LAST REVISED 7/2/2010
USERNAME => s135318
DGN FILE => 21e470ga006.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0317
PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	11	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

EDWARD B. SPEER No. C49740 Exp. 9-30-12 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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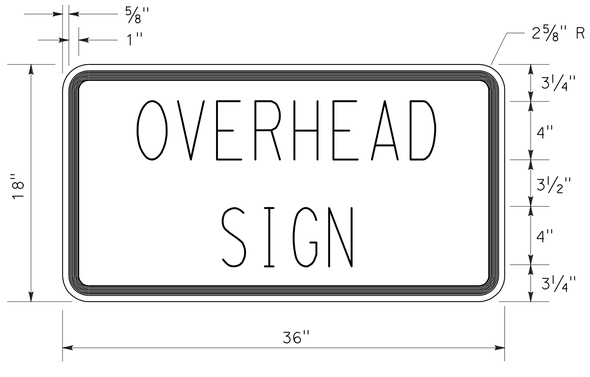
NOTES:

1. EXACT LOCATION OF ALL SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. ALL SIGNS SHALL BE BLACK ON ORANGE.
3. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.

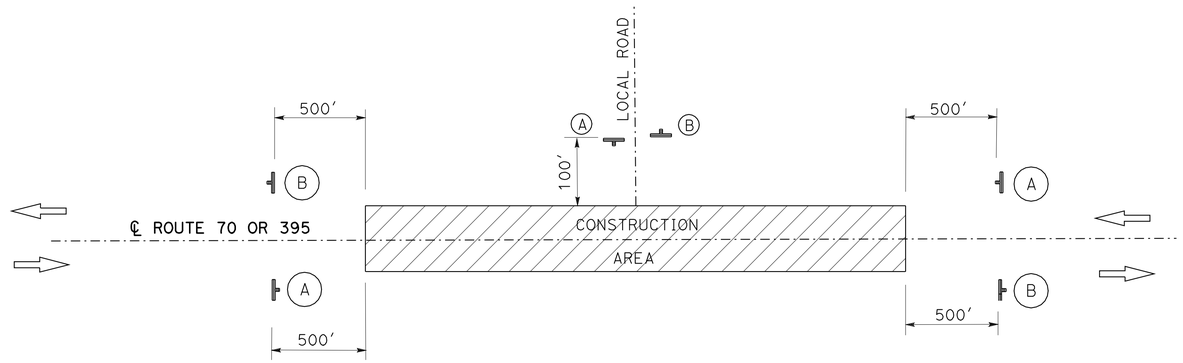
LEGEND:

ONE POST STATIONARY MOUNTED SIGN

DIRECTION OF TRAVEL



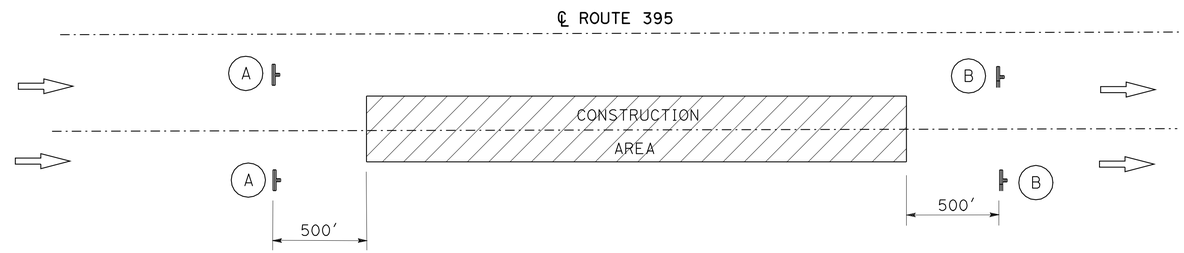
C23B(CA) SIGN PANEL



LOCATIONS 1A, 1B AND 3

CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)

SYMBOL	TYPE	PANEL SIZE INCHES	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1- 4" x 6"	7
	C23B(CA)	36" x 18"	"OVERHEAD SIGN"		
(B)	G20-2	36" x 18"	END ROAD WORK	1- 4" x 4"	7



LOCATION 2

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ROB BURNETT
CALCULATED-DESIGNED BY: ED SPEER
CHECKED BY: APOLINARIO VIVIT
REVISED BY
DATE REVISED

P:\proj\02\1E470_plans\pse\21e4701a001.dgn

LAST REVISION DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 12:46

BORDER LAST REVISED 7/2/2010 | USERNAME => s135318 | DGN FILE => 21e4701a001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

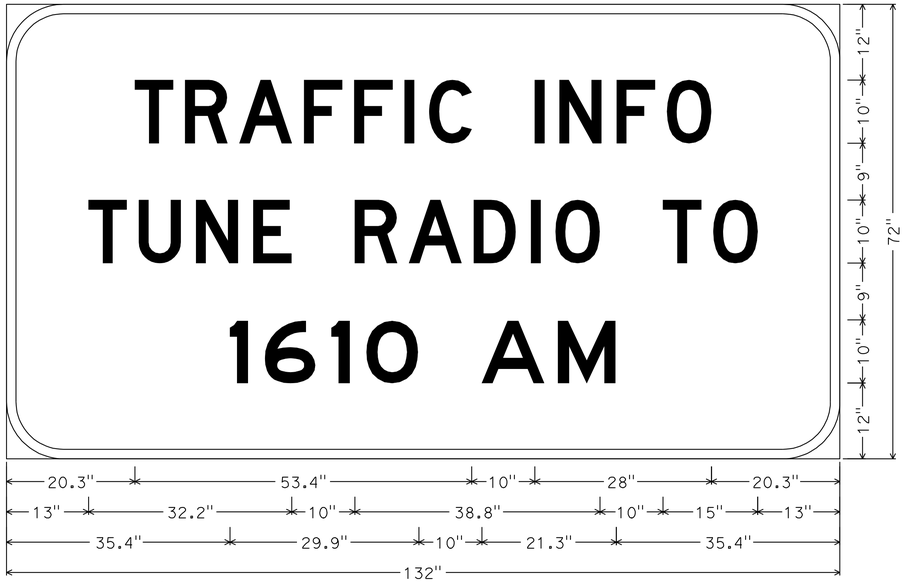
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	12	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
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.



9.0" Radius, 1.5" Border, White on Blue

G81-65(CA) SIGN PANEL

ABBREVIATIONS:

FRP	FIBERGLASS REINFORCED PLASTIC
L	LENGTH OF SIGN
D	DEPTH OF SIGN
RSPF	REMOVABLE SIGN PANEL FRAME
Blk	BLACK
Brn	BROWN
Blu	BLUE
Y	YELLOW
R	RED
G	GREEN
W	WHITE

ROADSIDE SIGN PANELS

SIGN No.	CALIFORNIA SIGN CODE	PANEL SIZE L x D (in x in)	SINGLE FACED	DOUBLE FACED	SIGN FACING MATERIAL						ROADSIDE SIGN PANEL SUBSTRATE MATERIAL (SQFT)										DESCRIPTION (REMARKS)
					BACKGROUND		LEGEND		PROTECTIVE FILM		SINGLE-SHEET						LAMINATED				
											FRP	FRAMED ALUMINUM		UNFRAMED ALUMINUM						ROADSIDE FORMED	
					SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	STANDARD	PREMIUM	.134"	.063"	.079"	.063"	.079"	.126"	1.0" TYPE B	2.5" TYPE B	2.5" TYPE H		
2-1	G81-64A(CA)	132 x 24	X		Y	III	Blk	II				22									WHEN FLASHING
2-2	G81-65(CA)	132 x 72	X		Blu	II	W	II					66								TRAFFIC INFO TUNE RADIO TO 1610 AM
SHEET TOTAL (SQFT)												22	66								

SIGN DETAILS

NO SCALE

SD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans
FUNCTIONAL SUPERVISOR: ROB BURNETT
CALCULATED-DESIGNED BY
CHECKED BY
ED SPEER
APOLINARIO VIVIT
REVISED BY
DATE REVISED

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LAST REVISION DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:14

BORDER LAST REVISED 7/2/2010 | USERNAME => trphils | DGN FILE => 21e470ob001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0317 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	13	39

Edward B Speer 11-15-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
EDWARD B. SPEER
No. C49740
Exp. 9-30-12
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:

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

MARKER

LOCATION	MARKER (TYPE P)	COMMENTS
	EA	
1B	1	ON MBGR
2	1	ON MBGR
3	1	ON MBGR
TOTAL	3	

METAL BEAM GUARD RAILING

LOCATION	MBGR	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE FLARED TERMINAL SYSTEM
	LF	EA	EA
1B	50		2
2	75	1	1
3	37.5	1	1
TOTAL	162.5	2	4

SIGNS

LOCATION	REMOVE ROADSIDE SIGN	ROADSIDE SIGN - TWO POST (LAMINATED WOOD BOX POST)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" - FRAMED)	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080" - FRAMED)
	EA	EA	SQFT	SQFT
2	1	1	22	66
TOTAL	1	1	22	66

VEGETATION CONTROL (MINOR CONCRETE)

LOCATION	VEGETATION CONTROL (MINOR CONCRETE)	COMMENTS
	SQYD	
1B	10.2	2 PULL BOXES BY HAR SIGN
1A	93	UNDER MBGR
1B	93	UNDER MBGR
2	52.2	UNDER MBGR
2	8	AT HAR SIGN POSTS
2	5.1	PULL BOX BY HAR SIGN POSTS
2	8.7	2 PULL BOXES AT "CL2" 16+50 R+
3	37.1	UNDER MBGR
TOTAL	307.3	

CHANGEABLE MESSAGE SIGNS

LOCATION	48" CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	60" CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	(N) "X" DISTANCE	(N) "B" ELEVATION	(N) "h" HEIGHT	FURNISH SIGN STRUCTURE (TRUSS)	INSTALL SIGN STRUCTURE (TRUSS)	COMMENTS
	LF	LF	LF	LF	LF	LB	LB	
1B	18		21.7	100.0	19.5	9200	9200	MODEL 510 FULL CANTILEVER
2		22	31.3	100.5	19.0	13,600	13,600	MODEL 500 FULL CANTILEVER
3		22	25.9	98.7	21.0	13,600	13,600	MODEL 500 FULL CANTILEVER
TOTAL	18	44				36,400	36,400	

TEMPORARY FENCE (TYPE ESA)

LOCATION	TEMPORARY FENCE (TYPE ESA)
	LF
1A	450
TOTAL	450

EROSION CONTROL

LOCATION	MULCH	TEMPORARY FIBER ROLL
	CY	LF
1A	15	10
1B	15	10
2	10	10
3	13	10
TOTAL	53	40

ROADWAY QUANTITIES

LOCATION	HOT MIX ASPHALT (TYPE A)	REMOVE CONCRETE	ROADWAY EXCAVATION	CLASS 2 AGGREGATE BASE	MINOR CONCRETE (MINOR STRUCTURE)
	TON	CY	CY	CY	CY
1A	75.1	2.1	115	75.6	2.2
1B	75.1		120	77.8	5.2
2	66.8		140	68.5	3.6
2, "CL2" 14+00 R+			5	2.0	2.8
3	61.9		90	62.7	2.2
TOTAL	278.9	2.1	470	286.6	16.0

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
ED SPEER | APOLINARIO VIVIT
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
ROB BURNETT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

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LAST REVISION 11-15-10
DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 11:14

BORDER LAST REVISED 7/2/2010
USERNAME => trphils
DGN FILE => 21e470pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0317
PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	14	39

ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

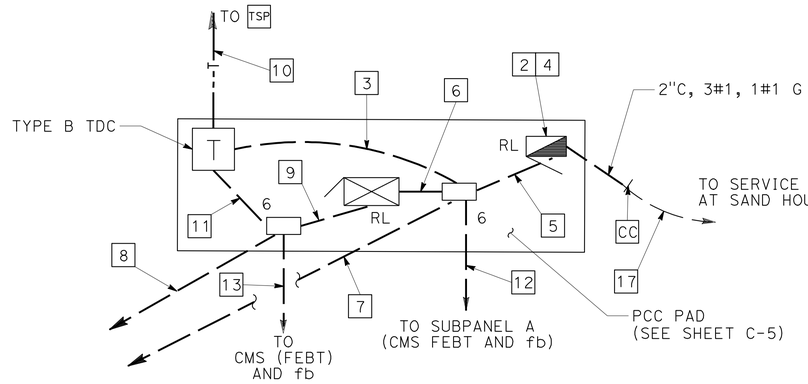
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NOTE:

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

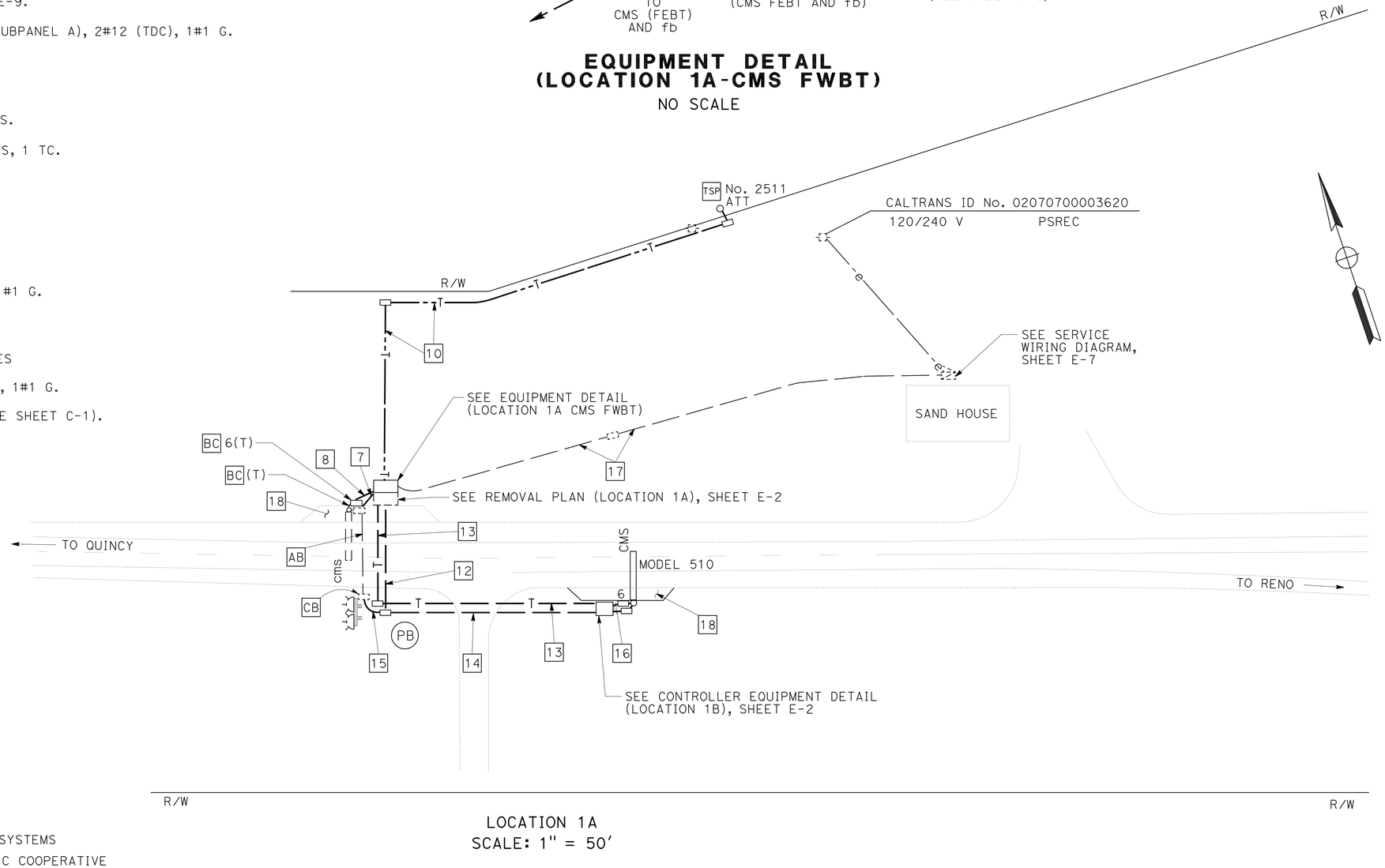
NOTES (THIS SHEET ONLY):

1. SEE REMOVAL PLAN (LOCATION 1A) SHEET E-2. cms CONTROLLER CABINET.
2. SEE MODIFIED SUBPANEL WIRING DIAGRAM, SHEET E-7.
3. 2"C, 2#12, 1#12 G (TDC).
4. SEE 20" WIDE BASE DETAIL, SHEET E-9.
5. 3"C, 2#8 (Cab), 3#6 (cms), 3#1 (SUBPANEL A), 2#12 (TDC), 1#1 G.
6. 3"C, 2#8 (Cab), 1#8 G.
7. 2"C, 3#6 (cms), 1#6 G.
8. 3"C, 2 STATE-FURNISHED CMS CABLES.
9. 3"C, 2 STATE-FURNISHED CMS CABLES, 1 TC.
10. 2"C, MT.
11. 2"C, 3 TC.
12. 2"C, 3#1 (SUBPANEL A), 1#1 G.
13. 2"C, 2 TC.
14. 2"C, 3#1 (SUBPANEL A), 3#8 (fb), 1#1 G.
15. 1½"C, 3#8 (fb), 1#8 G.
16. 2"C, 3#6 (CMS), 1#6 G. 3"C, 2 STATE-FURNISHED CMS CABLES
17. Exist 2"C, 3#6. REPLACE WITH 3#1, 1#1 G.
18. MAINTENANCE VEHICLE PULLOUT (SEE SHEET C-1).



EQUIPMENT DETAIL (LOCATION 1A-CMS FWBT)

NO SCALE



LOCATION 1A
SCALE: 1" = 50'

LEGEND

(PB)	OBJECT MARKER (TYPE PB)
	EXISTING LOOP AND AXLE SENSOR ARRAY
Cab	CABINET
stc	EXISTING SCREENED TRANSMISSION CABLE
ITS	INTELLIGENT TRANSPORTATION SYSTEMS
PSREC	PLUMAS-SIERRA RURAL ELECTRIC COOPERATIVE
	ROADSIDE FB

CHANGEABLE MESSAGE SIGN (LOCATION 1)

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED
ARTURO ROBLES | JIM HANNIGAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

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LAST REVISION | DATE PLOTTED => 07-FEB-2011
11-15-10 | TIME PLOTTED => 10:57

BORDER LAST REVISED 7/2/2010 | USERNAME => trrichf | DGN FILE => 21e470ua001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	15	39

AR† 11-15-10
REGISTERED ELECTRICAL ENGINEER

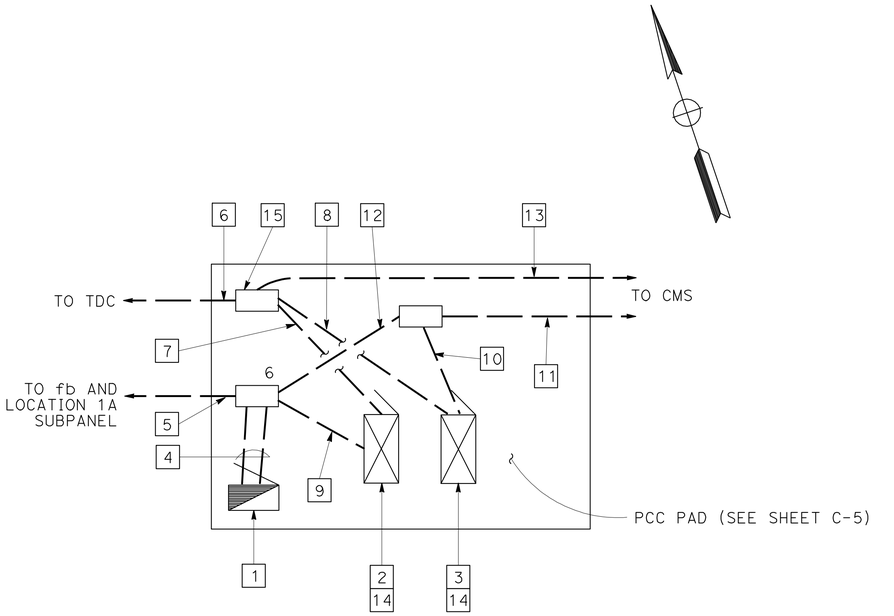
1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

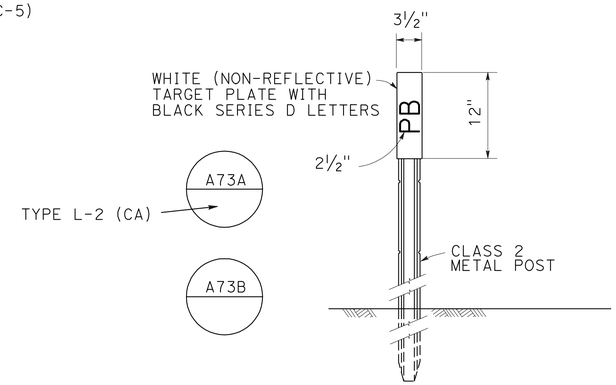
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NOTES (THIS SHEET):

1. TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (SUBPANEL A) WITHOUT METERING SECTION. SEE WIRING DIAGRAM, SHEET E-7.
2. INSTALL HAR FB CONTROLLER ASSEMBLY.
3. INSTALL STATE-FURNISHED CMS CONTROLLER ASSEMBLY.
4. 2"C, 3#1 (SUBPANEL A), 1#1 G. 2"C, 3#6 (CMS), 2#8 (CMS Cab), 2#8 (fb Cab), 1#6 G.
5. 2"C, 3#1 (SUBPANEL A), 3#8 (fb), 1#1 G.
6. 2"C, 2 TC.
7. 3"C, 1 TC.
8. 3"C, 1 TC, 2 STATE-FURNISHED CMS CABLES.
9. 3"C, 2#8 (fb Cab), 3#8 (fb), 1#8 G.
10. 3"C, 2#8 (CMS Cab), 1#8 G.
11. 2"C, 3#6 (CMS), 1#6 G.
12. 2"C, 3#6 (CMS), 2#8 (CMS Cab), 1#6 G.
13. 3"C, 2 STATE-FURNISHED CMS CABLES.
14. COIL CABLES WITH 10' OF SLACK IN BOTTOM OF Cab.
15. ITS NODE PULL BOX.



CONTROLLER EQUIPMENT DETAIL (LOCATION 1B)

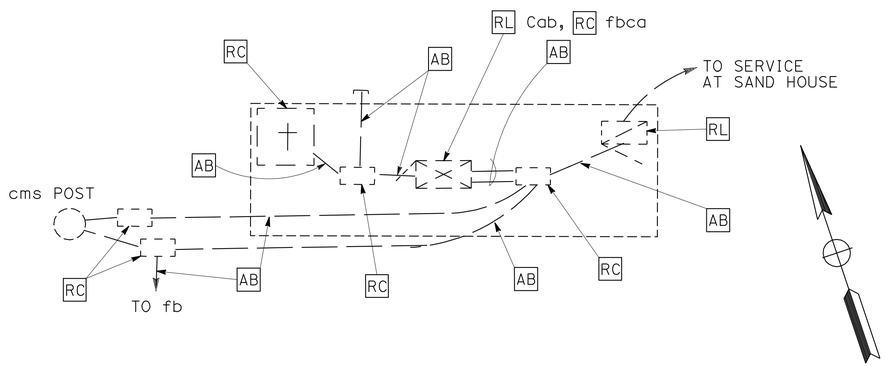


NOTE: MARKERS SHALL COMPLY WITH TYPE L-2 MODIFIED WITH A SNOW POLE BRACKET. PLACE MARKER 2" OUTSIDE PULL BOX PAVING ON SIDE AWAY FROM TRAFFIC. SEE PULL BOX PAVING DETAIL.

OBJECT MARKER (TYPE PB)

EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS TO BE MAINTAINED

TYPE	LOCATION	DESCRIPTION
CMS	Las 70, PM 3.53	HALLELUJAH JUNCTION SAND HOUSE, FWBT
CCTV	Las 36, PM 29.39	JUNCTION ROUTE 36/395



REMOVAL PLAN (LOCATION 1A)

EXISTING TRAFFIC MONITORING STATIONS TO BE PROTECTED IN PLACE

TMS No.	LOCATION	DESCRIPTION	EQUIPMENT
125	Las 70, PM 3.55	1,716' W OF JUNCTION ROUTE 395	2 LOOPS
215	Las 395, PM R1.5	200' N OF AGRICULTURAL INSPECTION STATION	5 LOOPS, 10 AXLE SENSORS
175	Las 395, PM R60.75	926' S OF JUNCTION ROUTE 36	2 LOOPS

CHANGEABLE MESSAGE SIGN (LOCATION 1)

NO SCALE

E-2

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

REVISED BY | DATE REVISED
ARTURO ROBLES | JIM HANNIGAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB STINGER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 04-FEB-2011
11-15-10 | TIME PLOTTED => 12:53

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BORDER LAST REVISED 7/2/2010 | USERNAME => trcarol | DGN FILE => 21e470ua002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	16	39

ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

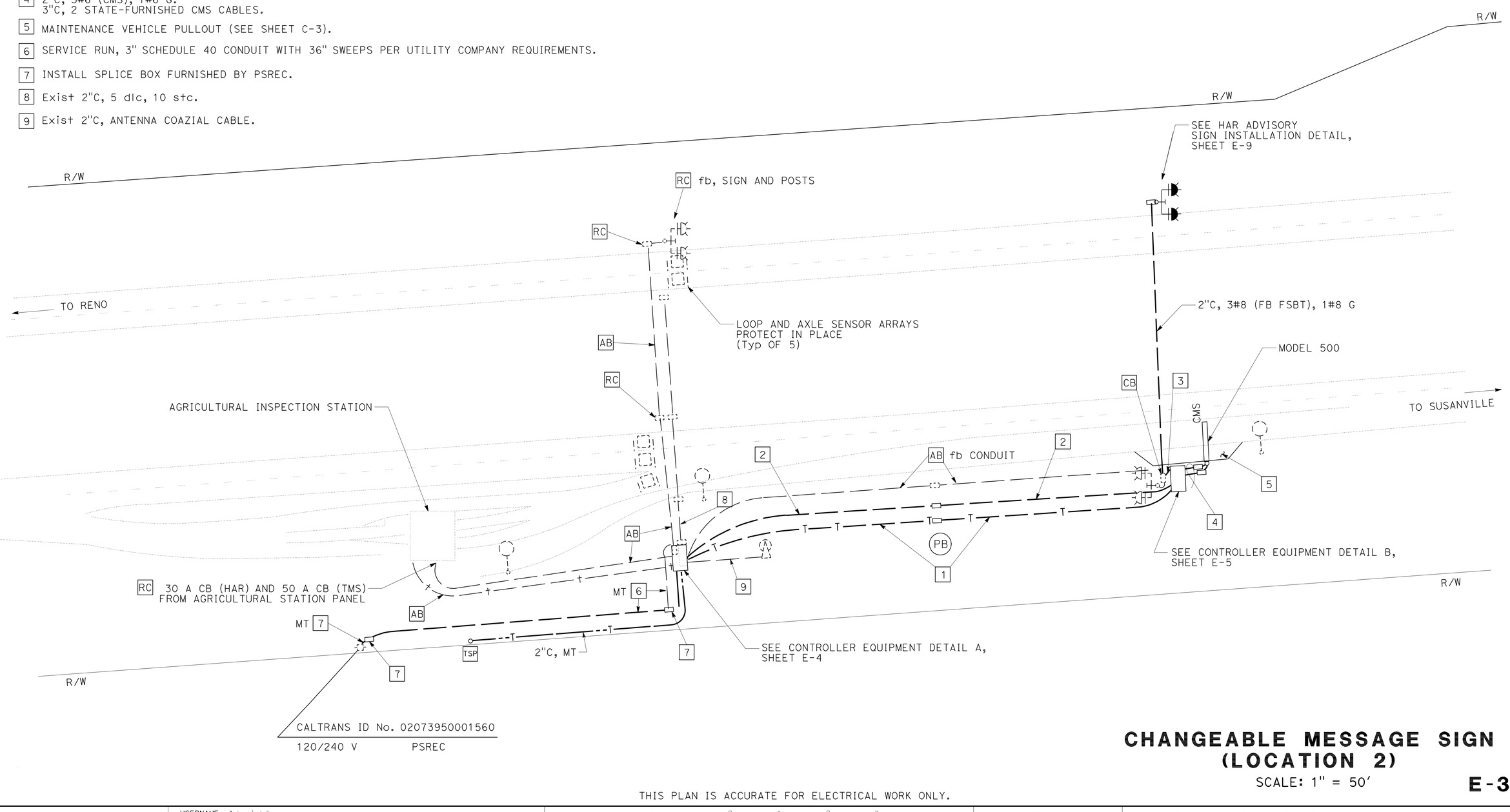
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NOTE:

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

NOTES (THIS SHEET):

1. 2"C, 2 TC.
2. 2"C, 3#1 (SUBPANEL), 1#1 G.
3. 2"C, 2#8 (fb FNBT), 2#8 (FB FSBT), 1#8 G.
4. 2"C, 3#6 (CMS), 1#6 G.
   3"C, 2 STATE-FURNISHED CMS CABLES.
5. MAINTENANCE VEHICLE PULLOUT (SEE SHEET C-3).
6. SERVICE RUN, 3" SCHEDULE 40 CONDUIT WITH 36" SWEEPS PER UTILITY COMPANY REQUIREMENTS.
7. INSTALL SPLICE BOX FURNISHED BY PSREC.
8. Exist 2"C, 5 dlc, 10 stc.
9. Exist 2"C, ANTENNA COAZIAL CABLE.



CHANGEABLE MESSAGE SIGN (LOCATION 2)

SCALE: 1" = 50'

E-3

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: ROB STINGER
CALCULATED-DESIGNED BY: JIM HANNIGAN
CHECKED BY: ARTURO ROBLES
REVISED BY | DATE REVISED

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LAST REVISION | DATE PLOTTED => 07-FEB-2011
11-15-10 | TIME PLOTTED => 10:57

BORDER LAST REVISED 7/2/2010 | USERNAME => trrichf | DGN FILE => 21e470ua003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	17	39

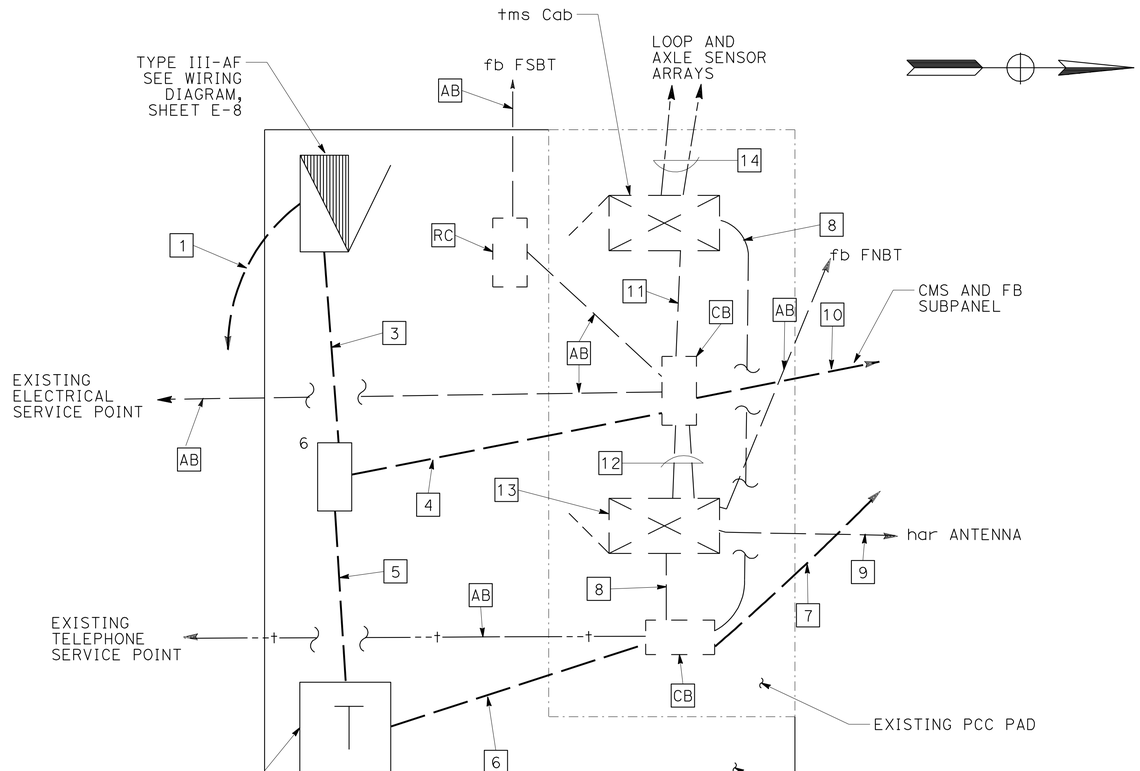
ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

1-31-11
PLANS APPROVAL DATE

NOTES (THIS SHEET):

1. 3" SCHEDULE 40 CONDUIT WITH 36" SWEEPS PER UTILITY COMPANY REQUIREMENTS. SEE SHEET E-3 SERVICE RUN.
2. 2"C, MT.
3. 2"C, 3#1 (SUBPANEL), 2#8 (har), 2#8 (tms), 2#12 (TDC), 1#1 G.
4. 2"C, 3#1 (SUBPANEL), 2#8 (har), 2#8 (tms), 1#1 G.
5. 2"C, 2#12, 1#12 G.
6. 2"C, 4 TC.
7. 2"C, 2 TC.
8. REPLACE 1 TC.
9. Exist 2"C, ANTENNA COAXIAL CABLE.
10. 2"C, 3#1 (SUBPANEL), 1#1 G.
11. Exist 2"C. REPLACE BRANCH CIRCUIT CONDUCTORS WITH 2#8, 1#8 G.
12. Exist 3"C. REPLACE BRANCH CIRCUIT CONDUCTORS WITH 2#8, 1#8 G. [AB] 2"C (FB FSBT).
13. har Cab, [RC] fbca, CB PANEL, AND POWER STRIPS.
14. 2 EXISTING 3"C, 5 dlc, 10 stc.



CONTROLLER EQUIPMENT DETAIL A
Sta 14+00, 123' Rt

SEE SHEET L-2

CHANGEABLE MESSAGE SIGN (LOCATION 2)

NO SCALE

E-4

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY
ARTURO ROBLES

CHECKED BY
JIM HANNIGAN

FUNCTIONAL SUPERVISOR
ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN

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LAST REVISION 11-15-10 | DATE PLOTTED => 04-FEB-2011 | TIME PLOTTED => 12:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	18	39

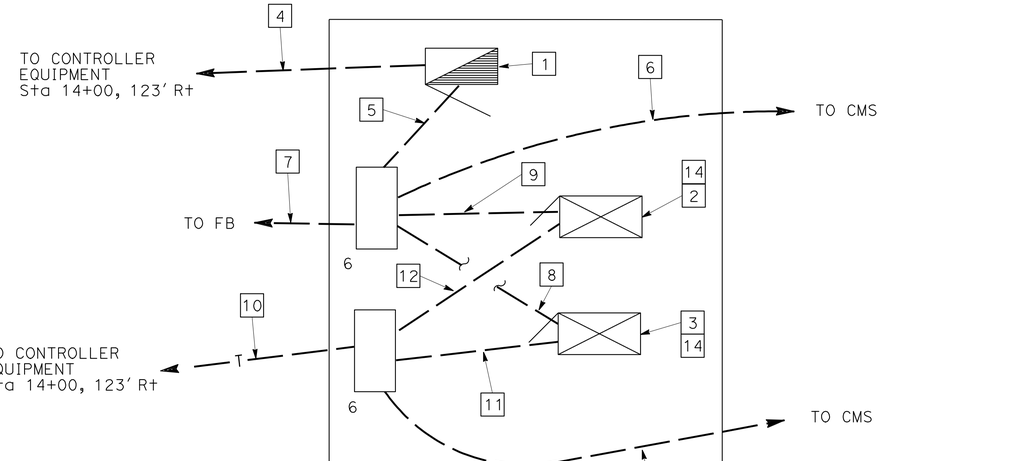
ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

NOTES (THIS SHEET):

1. TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (SUBPANEL) WITHOUT METERING SECTION. SEE WIRING DIAGRAM, SHEET E-8.
2. INSTALL STATE-FURNISHED CMS CONTROLLER ASSEMBLY.
3. INSTALL HAR FB CONTROLLER ASSEMBLY.
4. 2"C, 3#1 (SUBPANEL), 1#1 G.
5. 2"C, 3#6 (CMS), 2#8 (CMS Cab), 2#8 (FB Cab), 1#6 G.
6. 2"C, 3#6 (CMS), 1#6 G.
7. 2"C, 2#8, (fb FNBT), 2#8 (FB FSBT), 1#8 G.
8. 3"C, 2#8 (FB Cab), 2#8 (fb FNBT), 2#8 (FB FSBT), 1#8 G.
9. 2"C, 2#8 (CMS Cab), 1#8 G.
10. 2"C, 2 TC.
11. 2"C, 1 TC.
12. 3"C, 2 STATE-FURNISHED CMS CABLES, 1 TC.
13. 3"C, 2 STATE-FURNISHED CMS CABLES.
14. COIL 10' OF CABLES IN BOTTOM OF CABINET.



CONTROLLER EQUIPMENT DETAIL B
Sta 19+19, 60' Rt

SEE SHEET L-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

CHANGEABLE MESSAGE SIGN (LOCATION 2)

NO SCALE

E-5

REVISED BY	DATE REVISED
ARTURO ROBLES	
JIM HANNIGAN	

CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

P:\proj2\02\1E470_plans\pse\21e470ua005.dgn

LAST REVISION DATE PLOTTED => 04-FEB-2011
11-15-10 TIME PLOTTED => 12:53

BORDER LAST REVISED 7/2/2010 | USERNAME => trcarol | DGN FILE => 21e470ua005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	19	39

ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

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

NOTES (THIS SHEET):

1 INSTALL STATE-FURNISHED CMS CONTROLLER ASSEMBLY.

2 TYPE III-AF SERVICE EQUIPMENT ENCLOSURE. SEE WIRING DIAGRAM, SHEET E-8.

3 TYPE B TDC.

4 2"C, MT.

5 2"C, 1 TC.

6 3"C, 2 STATE-FURNISHED CMS CABLES.

7 3"C, 2 STATE-FURNISHED CMS CABLES, 1 TC.

8 3"C, 3#1 (SUBPANEL), 3#6 (CMS), 2#8 (Cab), 2#12 (TDC), 1#1 G.

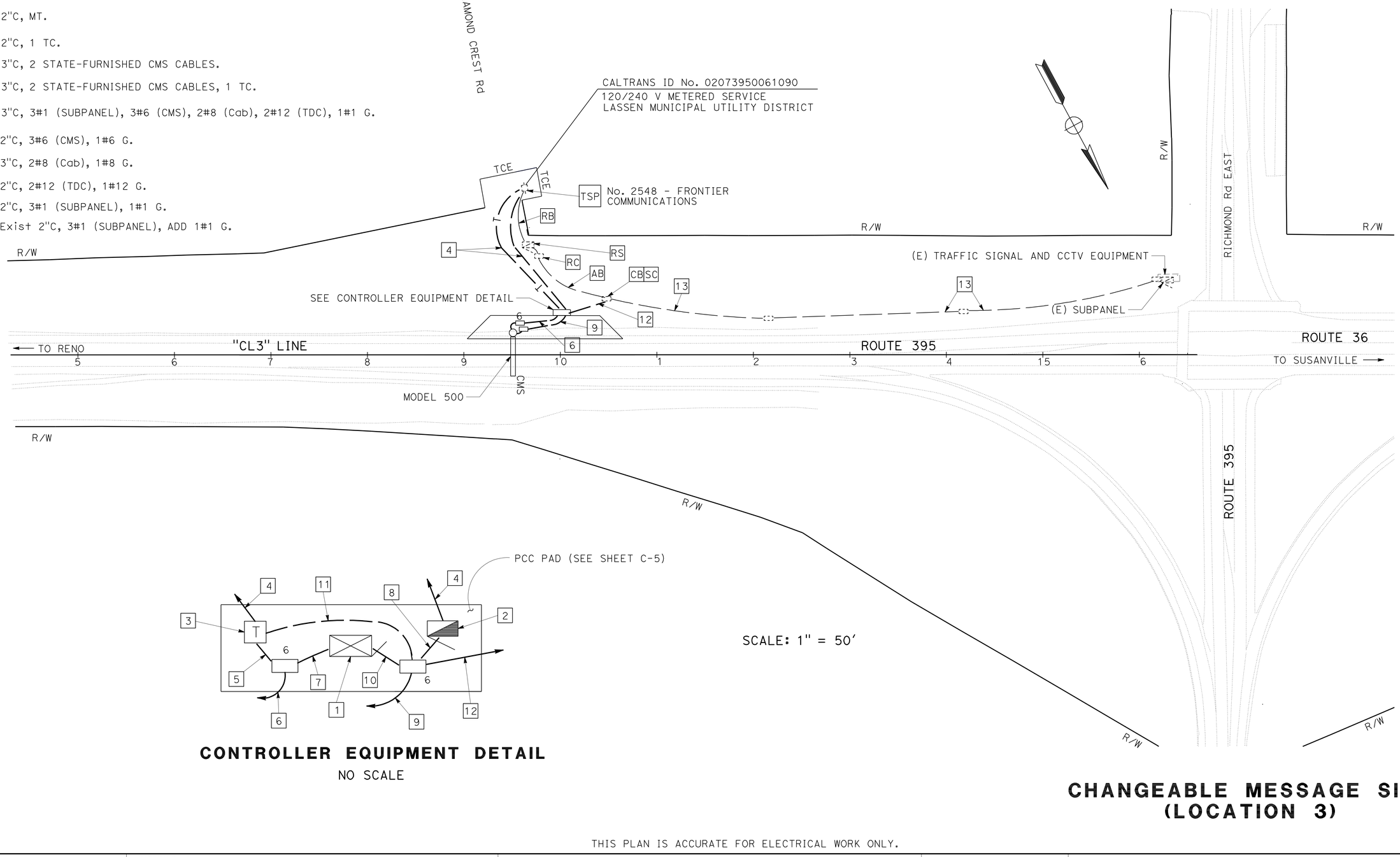
9 2"C, 3#6 (CMS), 1#6 G.

10 3"C, 2#8 (Cab), 1#8 G.

11 2"C, 2#12 (TDC), 1#12 G.

12 2"C, 3#1 (SUBPANEL), 1#1 G.

13 Exist 2"C, 3#1 (SUBPANEL), ADD 1#1 G.



CONTROLLER EQUIPMENT DETAIL
NO SCALE

SCALE: 1" = 50'

CHANGEABLE MESSAGE SIGN (LOCATION 3)

E-6

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

ARTURO ROBLES — CALCULATED-DESIGNED BY
JIM HANNIGAN — CHECKED BY
ROB STINGER — FUNCTIONAL SUPERVISOR
REVISED BY — DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 07-FEB-2011
11-15-10 | TIME PLOTTED => 10:57

P:\proj2\02\1E470_plans\pse\21e470ua006.dgn

BORDER LAST REVISED 7/2/2010 | USERNAME => trrichf | DGN FILE => 21e470ua006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	20	39

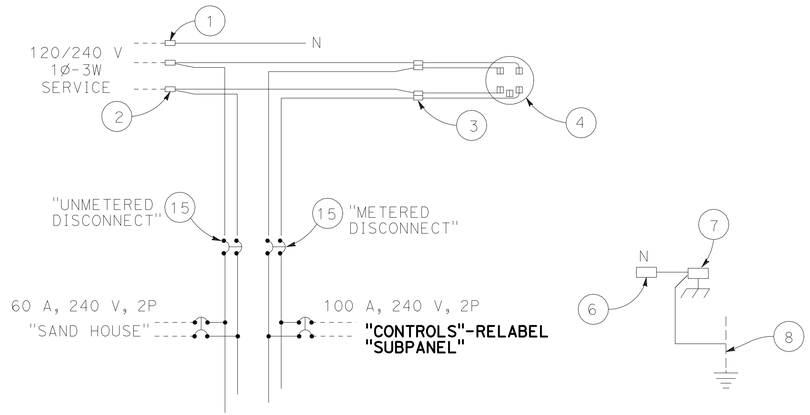
ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

1-31-11
PLANS APPROVAL DATE

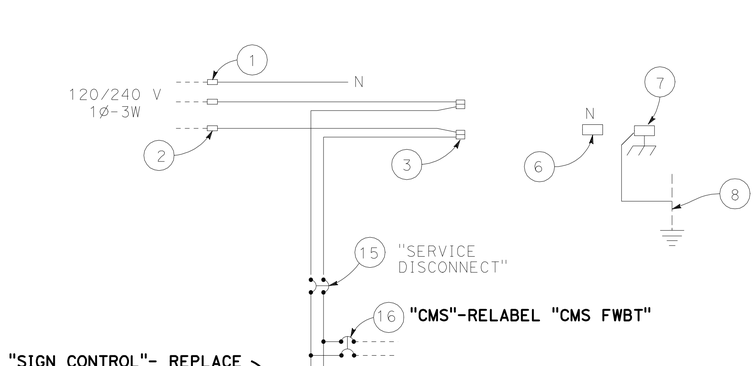
REGISTERED PROFESSIONAL ENGINEER
A.P. ROBLES
No. E15293
Exp. 3-31-11
ELECTRICAL
STATE OF CALIFORNIA

NOTE:

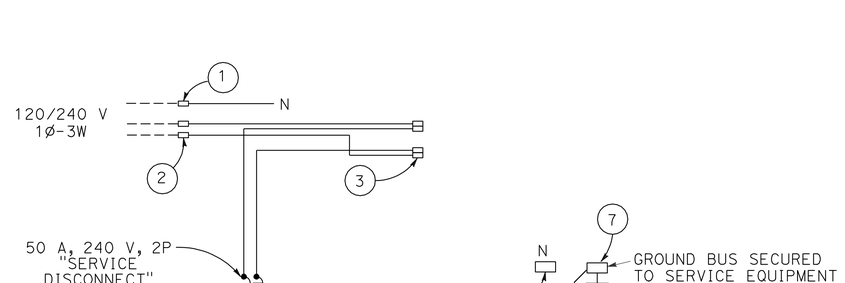
SEE RSP ES-2D FOR DETAILS NOT SHOWN.



EXISTING 120/240 V SERVICE (SAND HOUSE)



MODIFIED 120/240 V SUBPANEL (LOCATION 1A)



SUBPANEL A (LOCATION 1B)

CHANGEABLE MESSAGE SIGN (WIRING DIAGRAMS)

NO SCALE

E-7

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY
CHECKED BY
ARTURO ROBLES
JIM HANNIGAN
FUNCTIONAL SUPERVISOR
ROB STINGER

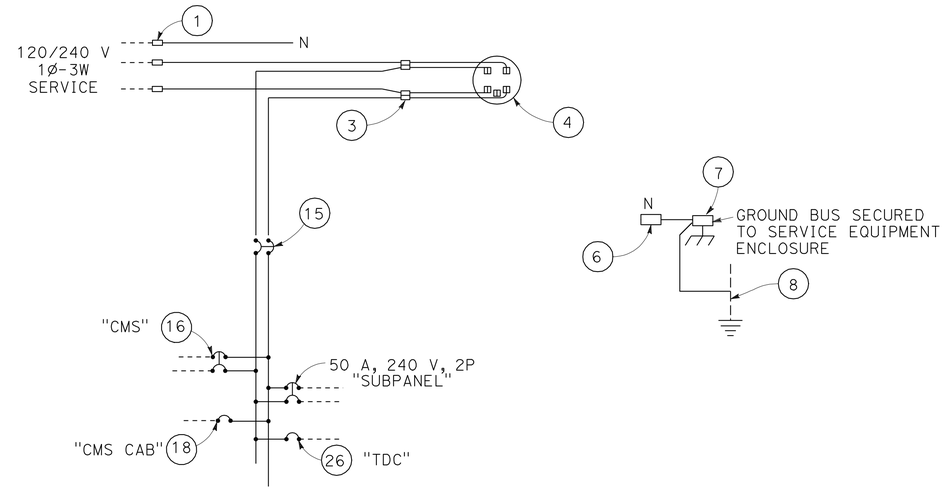
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN

P:\proj2\02\1E470_plans\pse\21e470ua007.dgn

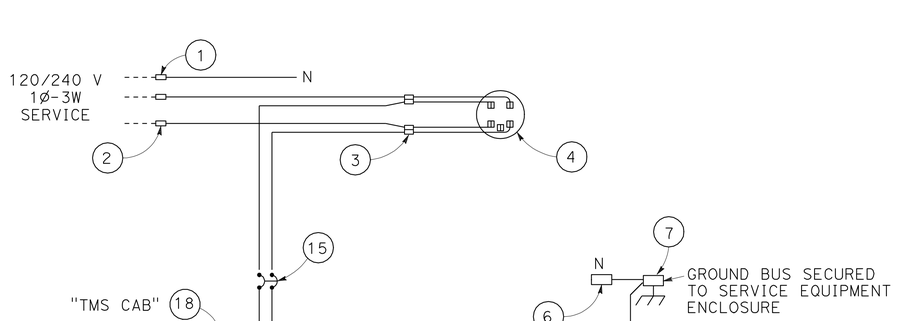
LAST REVISION 11-15-10
DATE PLOTTED => 07-FEB-2011
TIME PLOTTED => 10:57

BORDER LAST REVISED 7/2/2010
USERNAME => trrichf
DGN FILE => 21e470ua007.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0147
PROJECT NUMBER & PHASE 02000001061

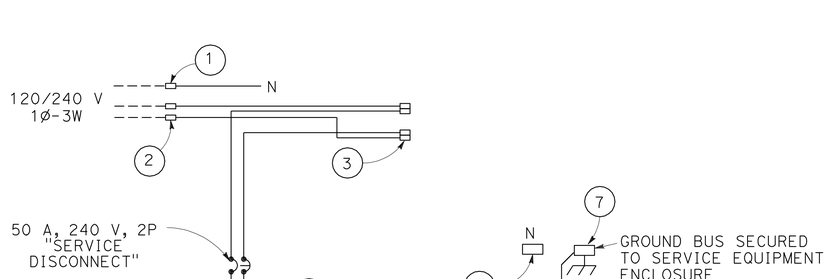
NOTE:
SEE RSP ES-2D FOR ADDITIONAL INFORMATION.



120/240 V SERVICE (LOCATION 3)



120/240 V SERVICE



SUBPANEL

CHANGEABLE MESSAGE SIGN (WIRING DIAGRAMS)

NO SCALE

E-8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	21	39

ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

A.P. ROBLES No. E15293 Exp. 3-31-11 ELECTRICAL REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

1-31-11
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.

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: ARTURO ROBLES
CHECKED BY: JIM HANNIGAN
FUNCTIONAL SUPERVISOR: ROB STINGER

Caltrans ELECTRICAL DESIGN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

LAST REVISION: DATE PLOTTED => 04-FEB-2011
11-15-10 TIME PLOTTED => 13:16

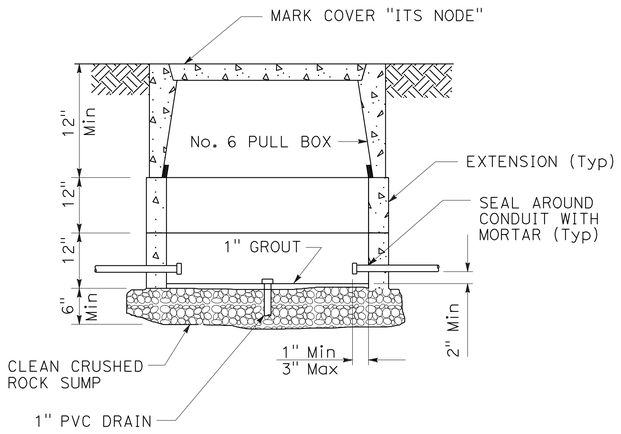
BORDER LAST REVISED 7/2/2010 | USERNAME => trpierce | DGN FILE => 21e470ua008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0147 | PROJECT NUMBER & PHASE 02000001061

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Las	70,395	Var	22	39

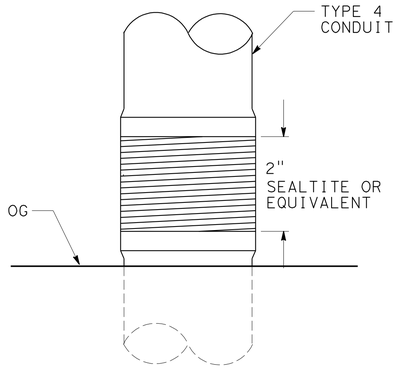
ART 11-15-10
REGISTERED ELECTRICAL ENGINEER

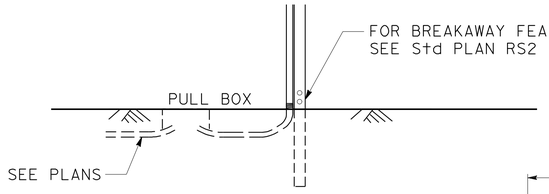
1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — A.P. ROBLES — No. E15293 — Exp. 3-31-11 — ELECTRICAL — STATE OF CALIFORNIA

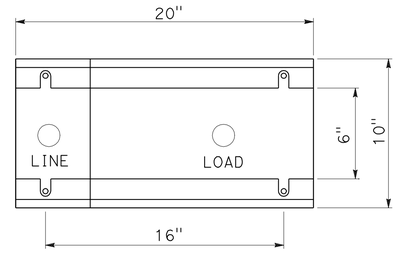


ITS NODE PULL BOX

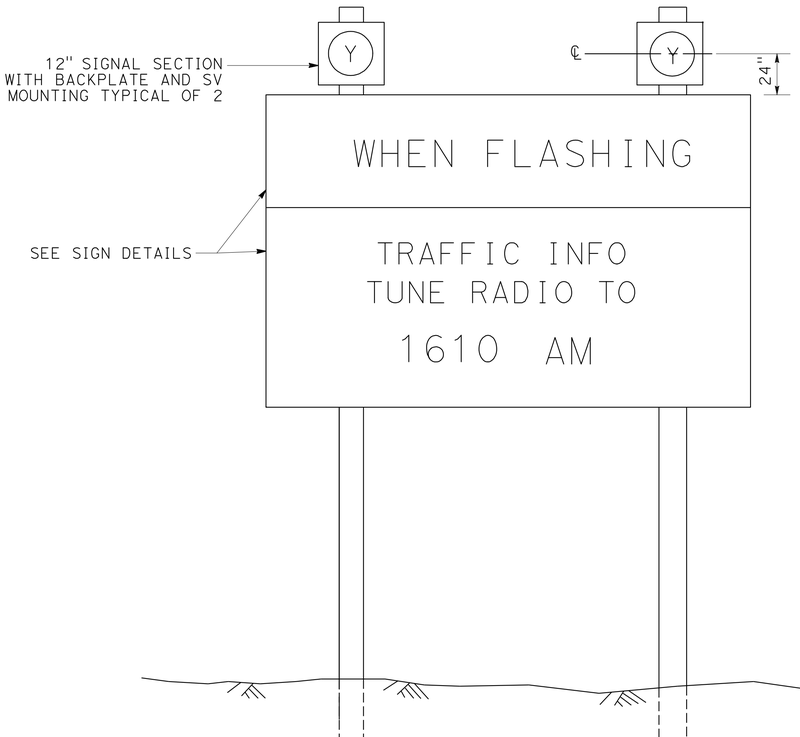


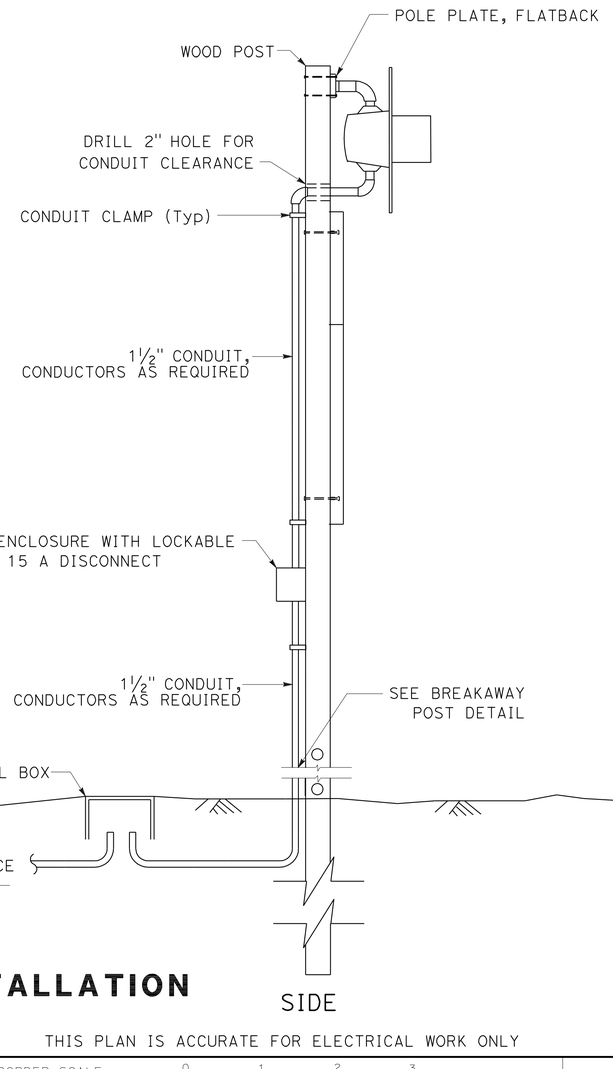


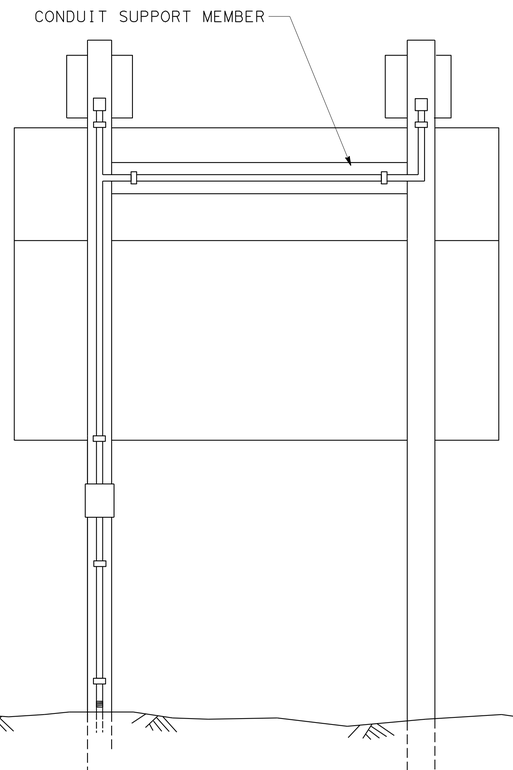
BREAKAWAY POST
(CONDUIT CONNECTION)



BASE DETAIL FOR TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (20" WIDE)







HAR ADVISORY SIGN INSTALLATION

ELECTRICAL DETAILS

NO SCALE

E-9

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
ARTURO ROBLES	JIM HANNIGAN		

FUNCTIONAL SUPERVISOR: ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

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LAST REVISION DATE PLOTTED => 04-FEB-2011
TIME PLOTTED => 13:16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	23	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

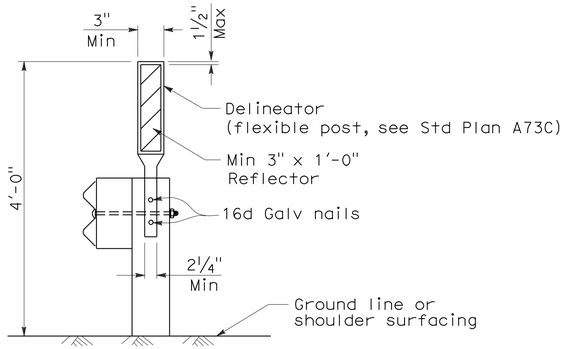
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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.

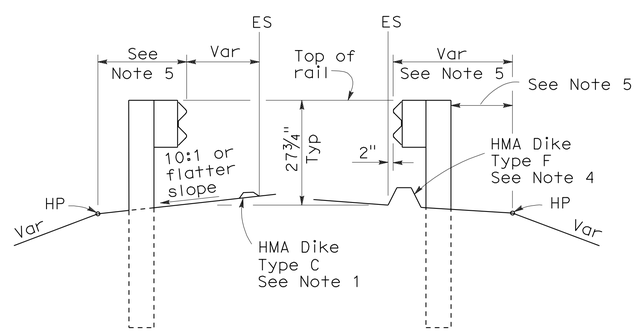
To accompany plans dated 1-31-11

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL RAILING DELINEATION AND DIKE POSITIONING DETAILS

NO SCALE

RSP A77C4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77C4
DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	24	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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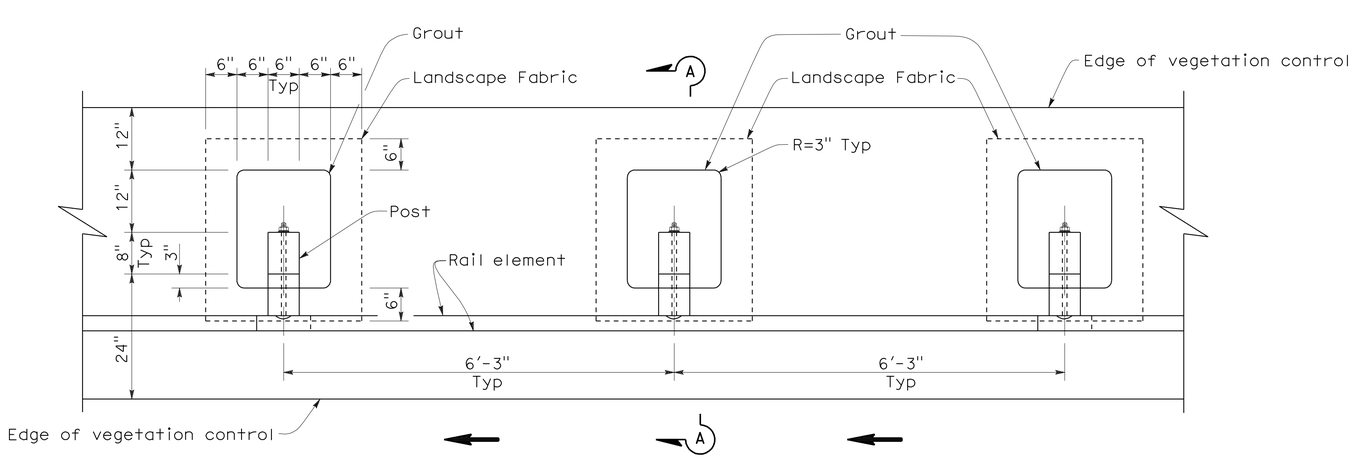
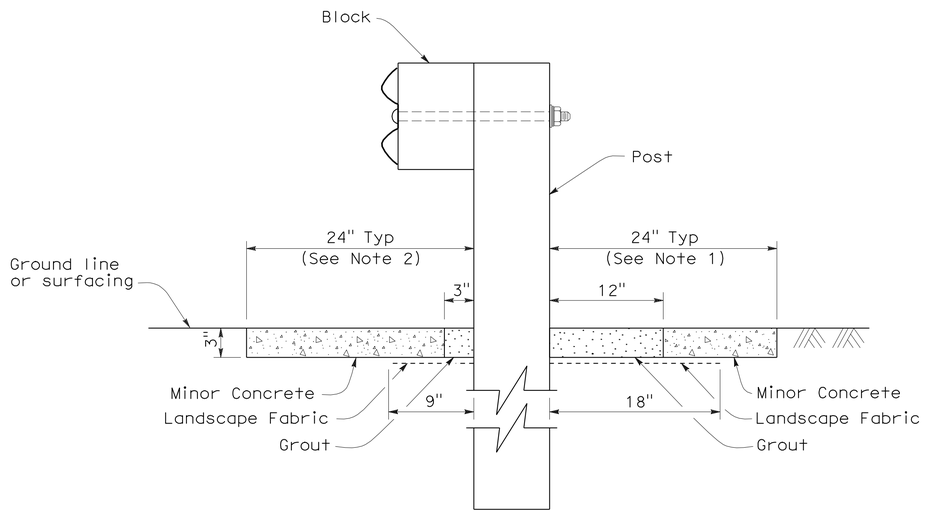
To accompany plans dated 1-31-11



PLAN

NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ← .



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION

NO SCALE

NSP A77C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C5

2006 NEW STANDARD PLAN NSP A77C5

7-17-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	25	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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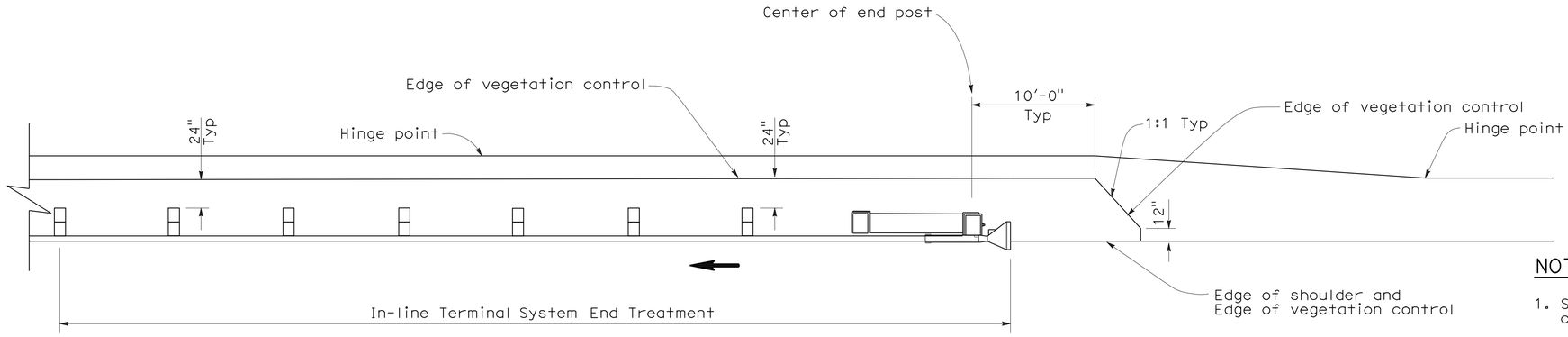
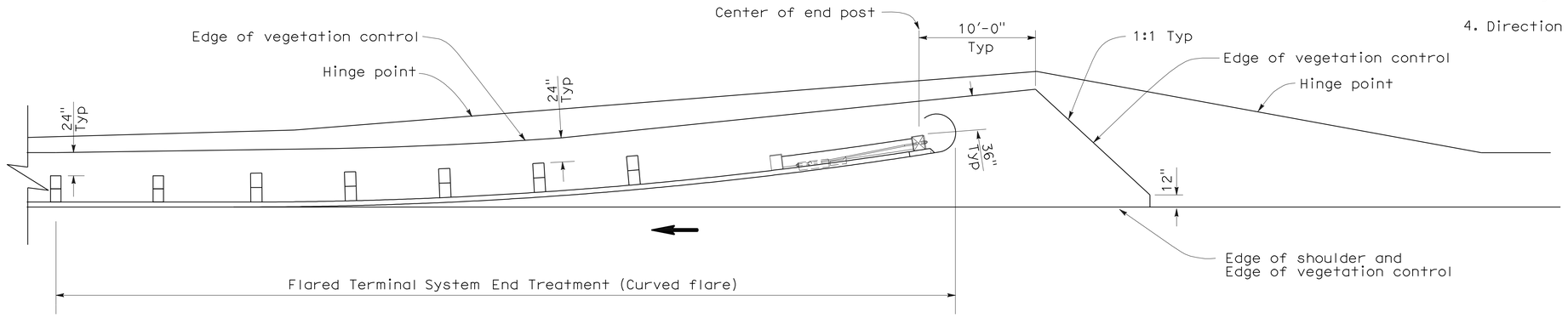
To accompany plans dated 1-31-11



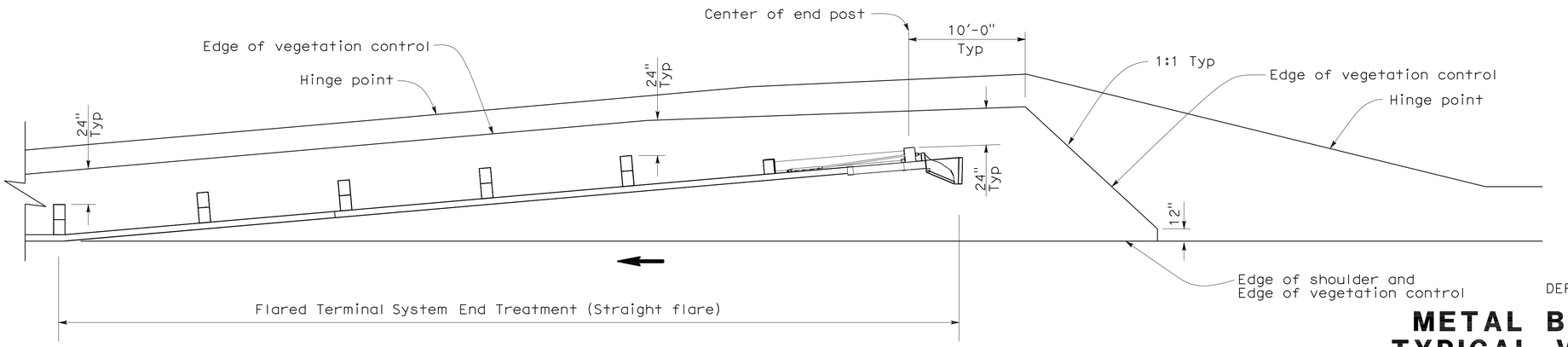
PLAN

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



PLAN



PLAN

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL
FOR TERMINAL SYSTEM END TREATMENTS

NO SCALE

NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C6

2006 NEW STANDARD PLAN NSP A77C6

7-17-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	26	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 20, 2006
PLANS APPROVAL DATE

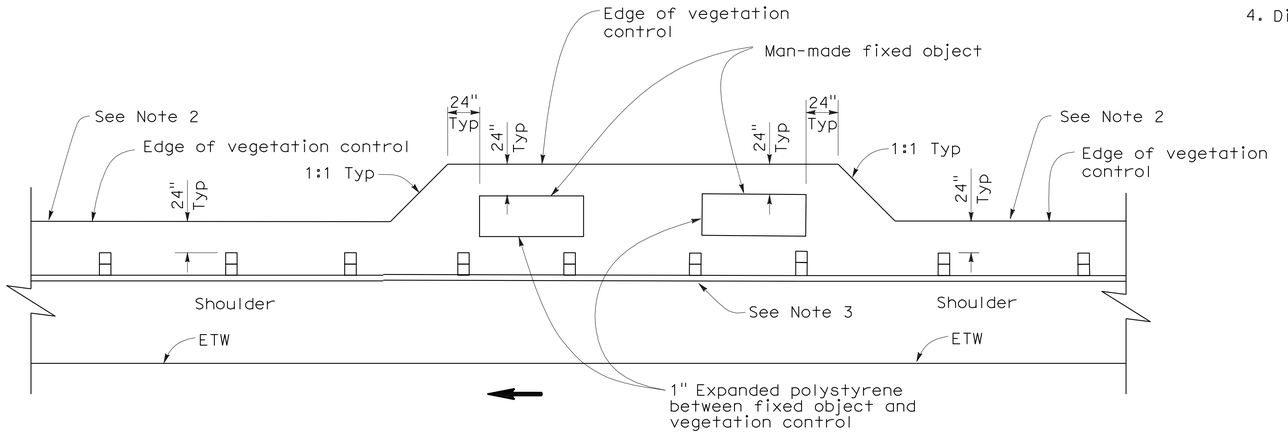
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-07
CIVIL
STATE OF CALIFORNIA

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 1-31-11

NOTES:

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



PLAN

FIXED OBJECT(S) ON SHOULDER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL VEGETATION CONTROL AT FIXED OBJECT

NO SCALE

NSP A77C8 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP A77C8

2006 NEW STANDARD PLAN NSP A77C8

7-17-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	27	39

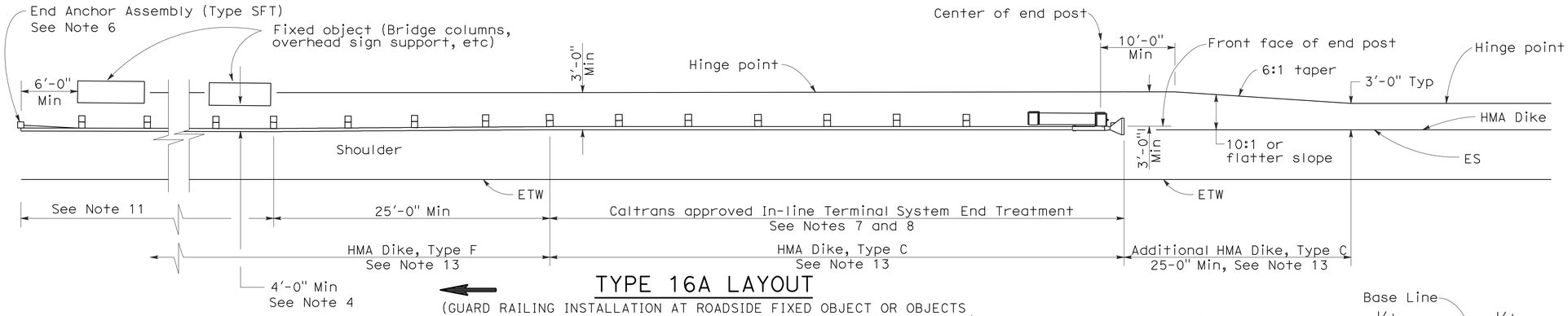
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

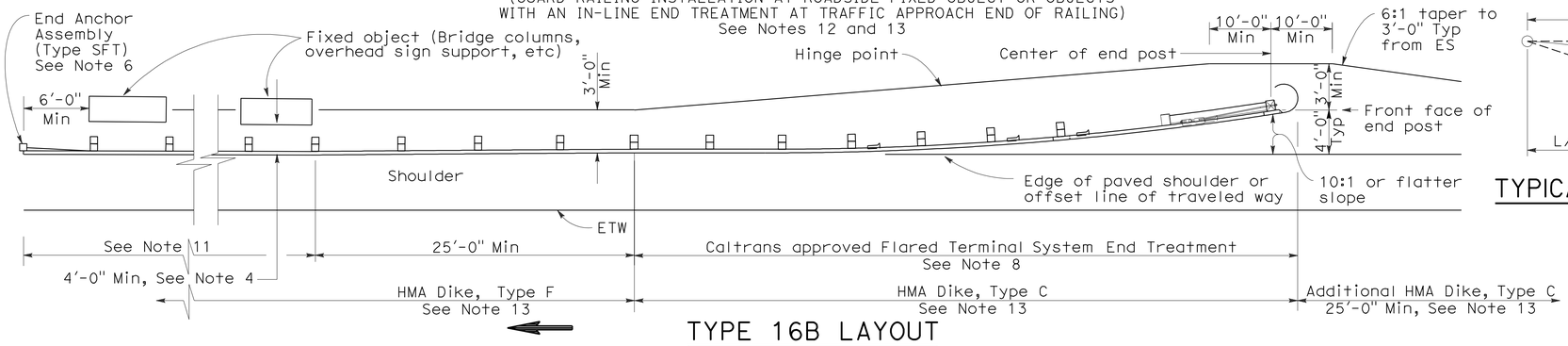
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 1-31-11



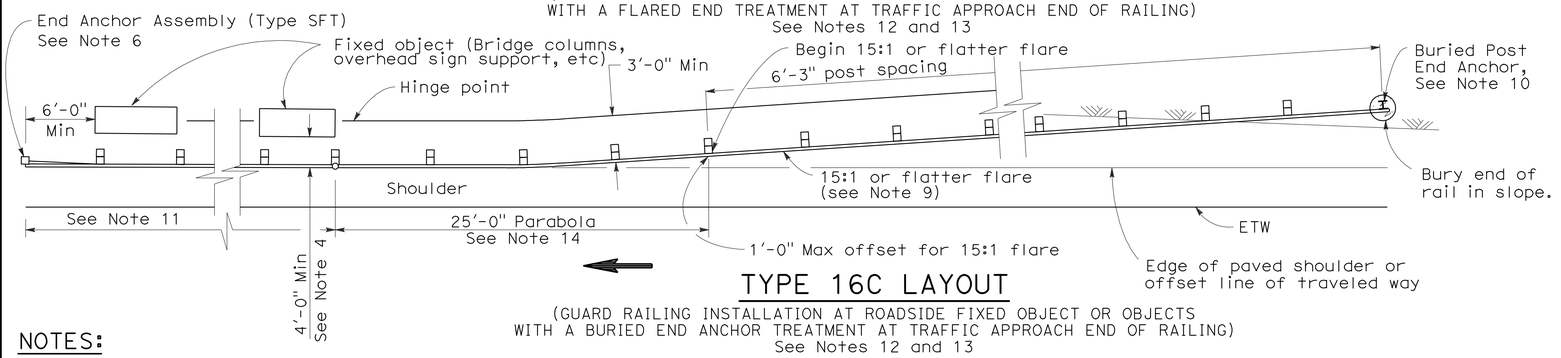
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



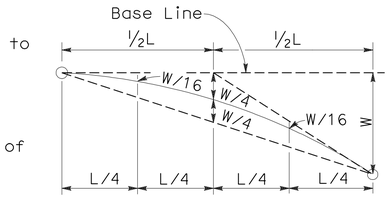
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

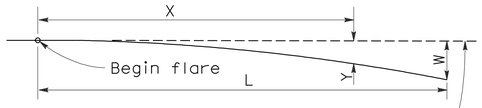


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



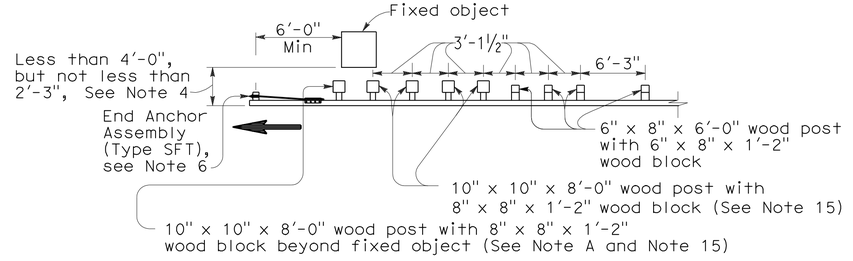
TYPICAL PARABOLIC LAYOUT



$$Y = \frac{WX^2}{L^2}$$

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1½" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

NOTES:

1. Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
5. Direction of adjacent traffic indicated by ⟶.
6. For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
7. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
8. The type of terminal system to be used will be shown on the Project Plans.
9. The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
10. For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
11. As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
12. Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
13. Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
14. For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
15. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	28	39

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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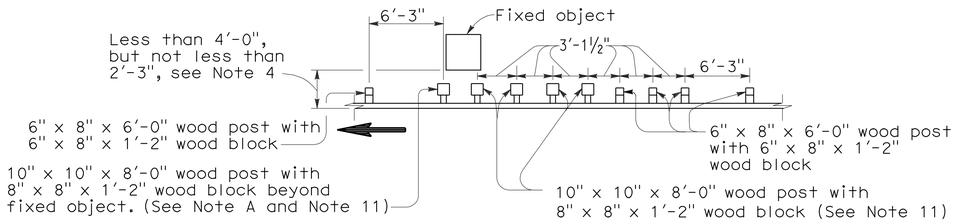
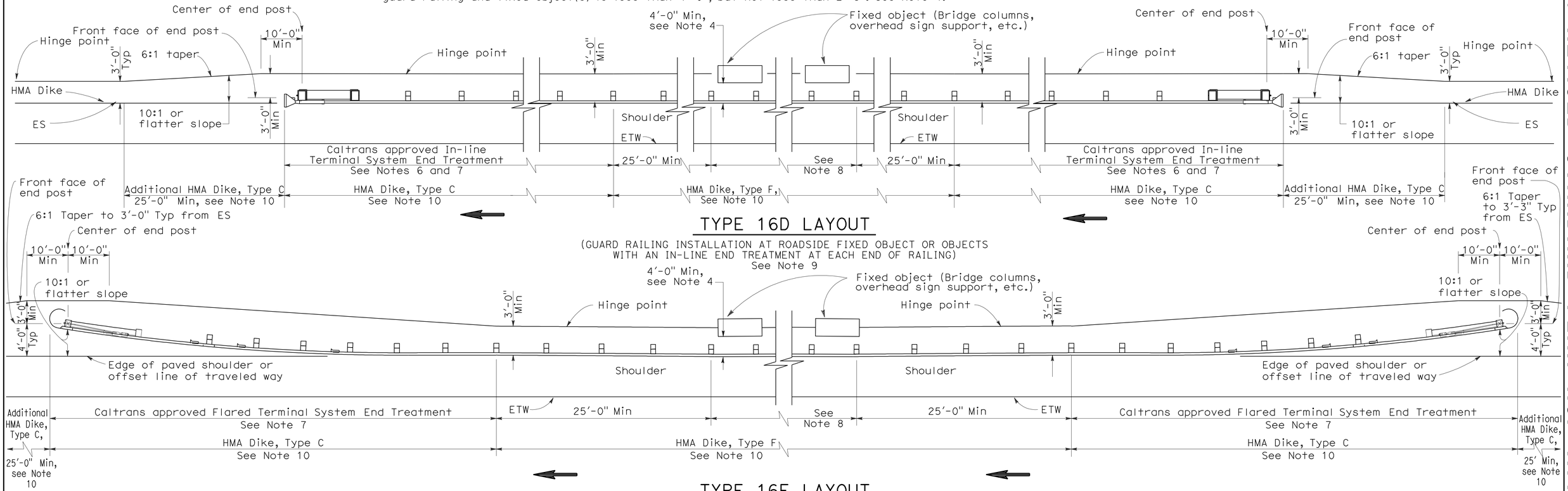
To accompany plans dated 1-31-11



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1½" center to center spacing are to be used between fixed object(s).

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Layout Types 16D or 16E where minimum clearance between the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16D LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 9

TYPE 16E LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT EACH END OF RAILING)
See Note 9

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
5. Direction of adjacent traffic indicated by ⟶.
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system to be used will be shown on the Project Plans.
8. As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
9. Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
10. Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
11. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77G4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G4
DATED MAY 1, 2006 - PAGE 62 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G4

2006 REVISED STANDARD PLAN RSP A77G4

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	29	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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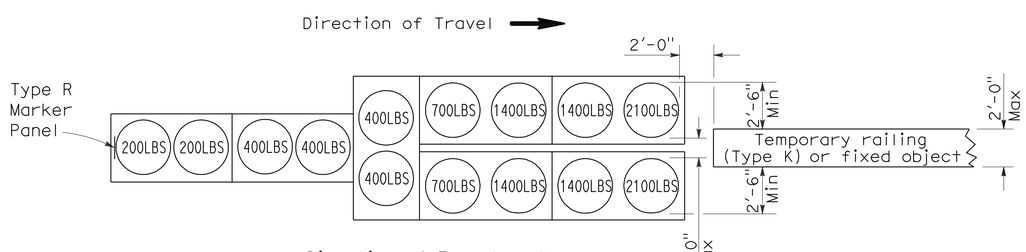
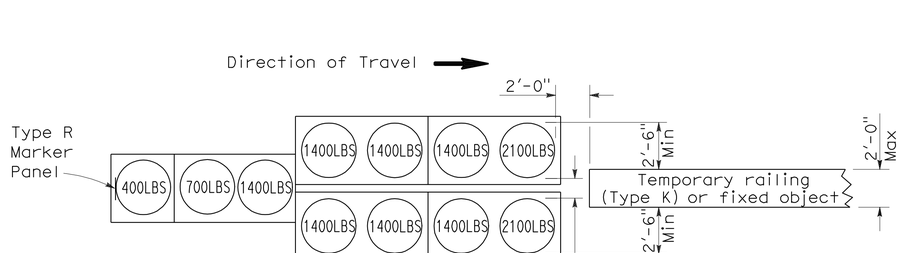
To accompany plans dated 1-31-11



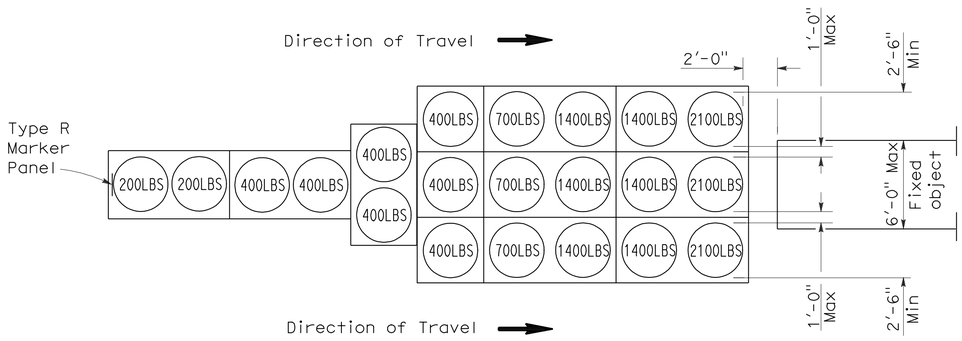
ARRAY 'TU14'

Approach speed 45 mph or more



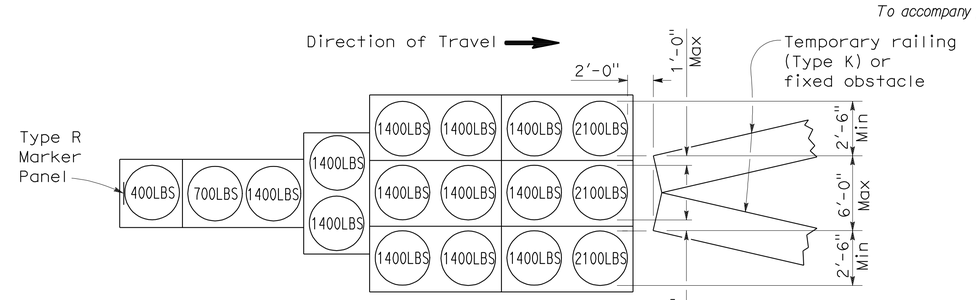
ARRAY 'TU11'

Approach speed less than 45 mph



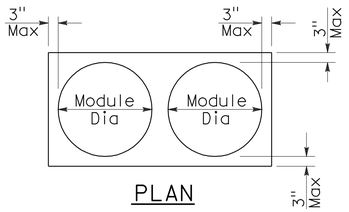
ARRAY 'TU21'

Approach speed 45 mph or more

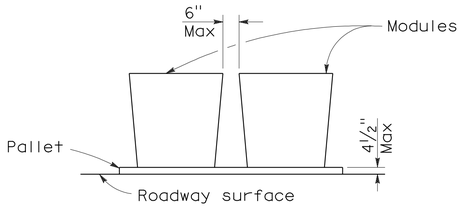


ARRAY 'TU17'

Approach speed less than 45 mph



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
02	Las	70,395	Var	30	39

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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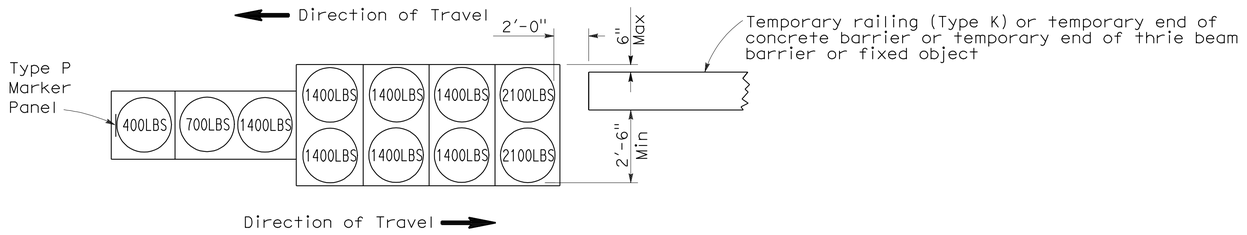
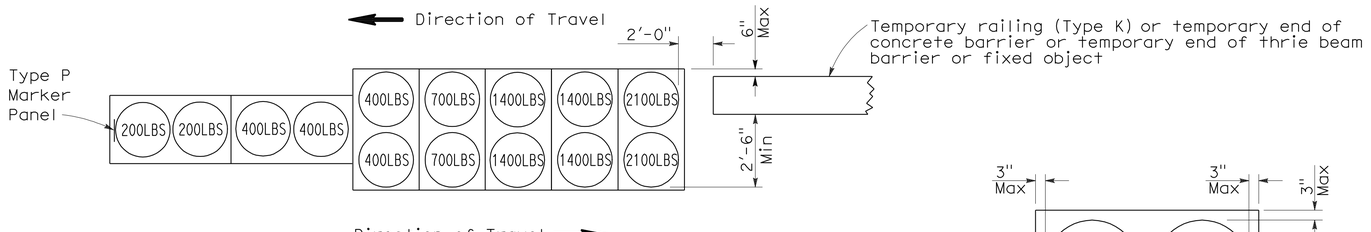
To accompany plans dated 1-31-11



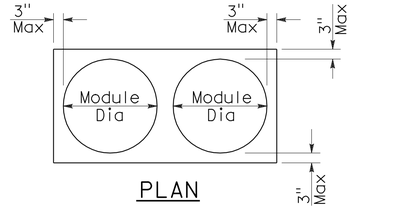
ARRAY 'TB11'

Approach speed less than 45 mph

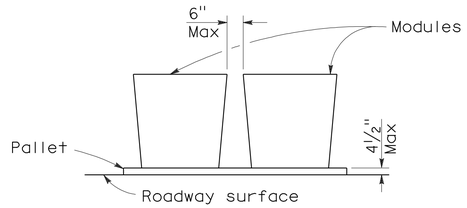


ARRAY 'TB14'

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
02	Las	70,395	Var	31	39

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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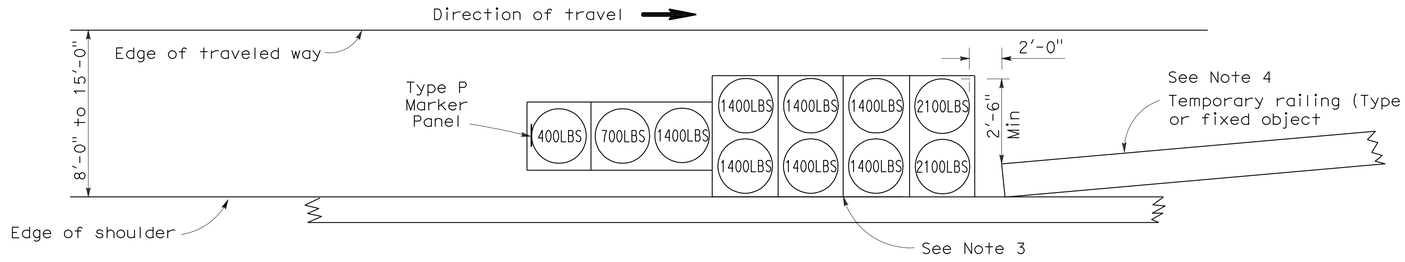
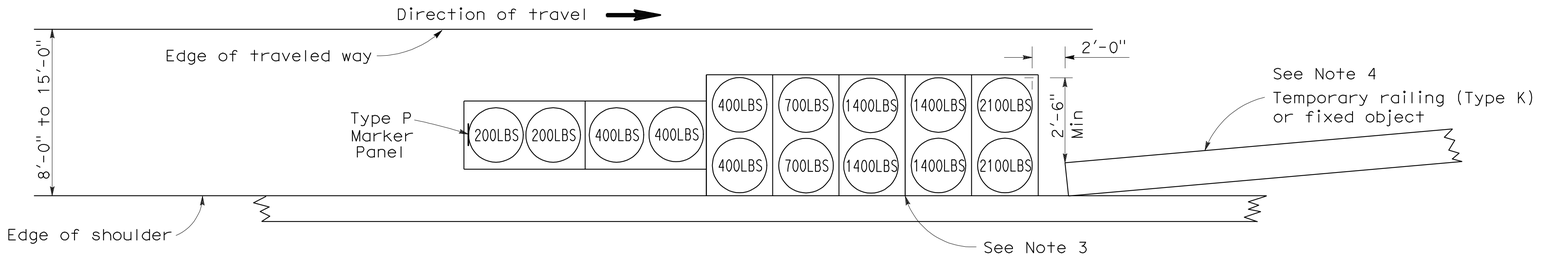
To accompany plans dated 1-31-11



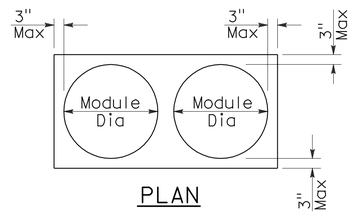
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

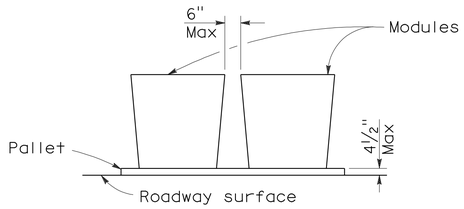


ARRAY 'TS14'

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
02	Las	70,395	Var	32	39

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 1-31-11

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.

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
02	Las	70,395	Var	33	39

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 1-31-11

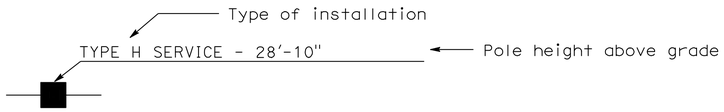
CONDUIT

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
02	Las	70,395	Var	34	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

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

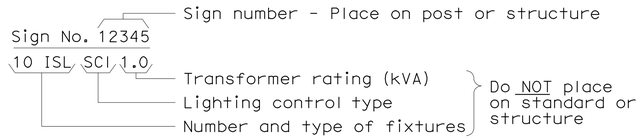
October 5, 2007
PLANS APPROVAL DATE

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.

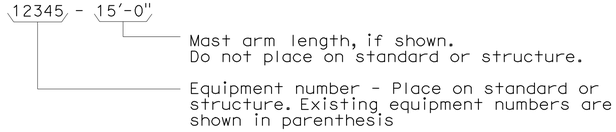
To accompany plans dated 1-31-11

EQUIPMENT IDENTIFICATION

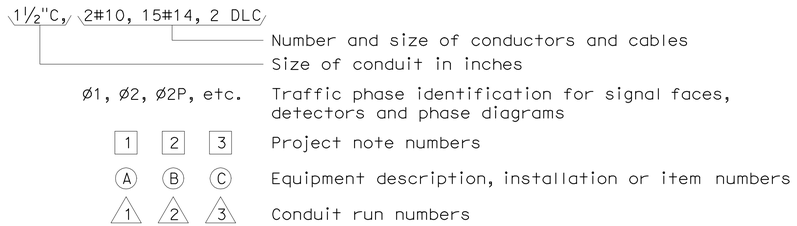
ILLUMINATED SIGN IDENTIFICATION NUMBER:



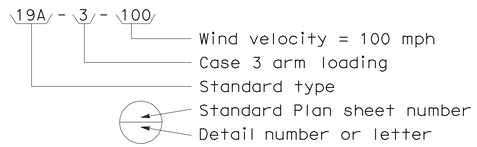
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



CONDUIT AND CONDUCTOR IDENTIFICATION:

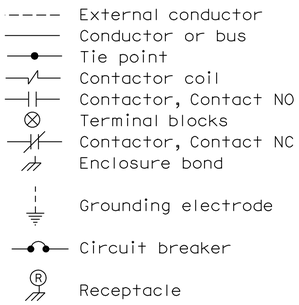


SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



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)



PULL BOXES

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

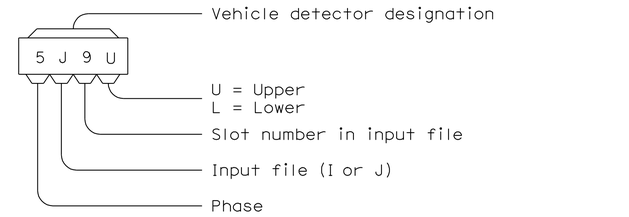
3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(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

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

VEHICLE DETECTORS



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
02	Las	70,395	Var	35	39

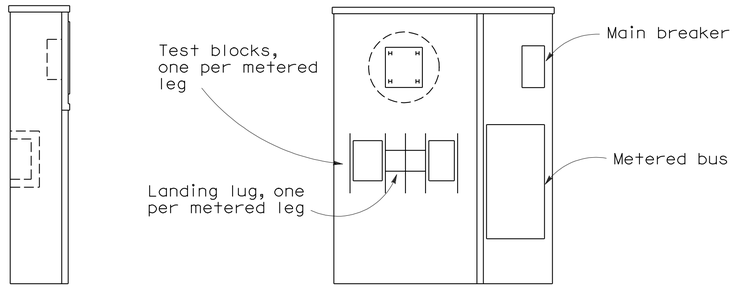
Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

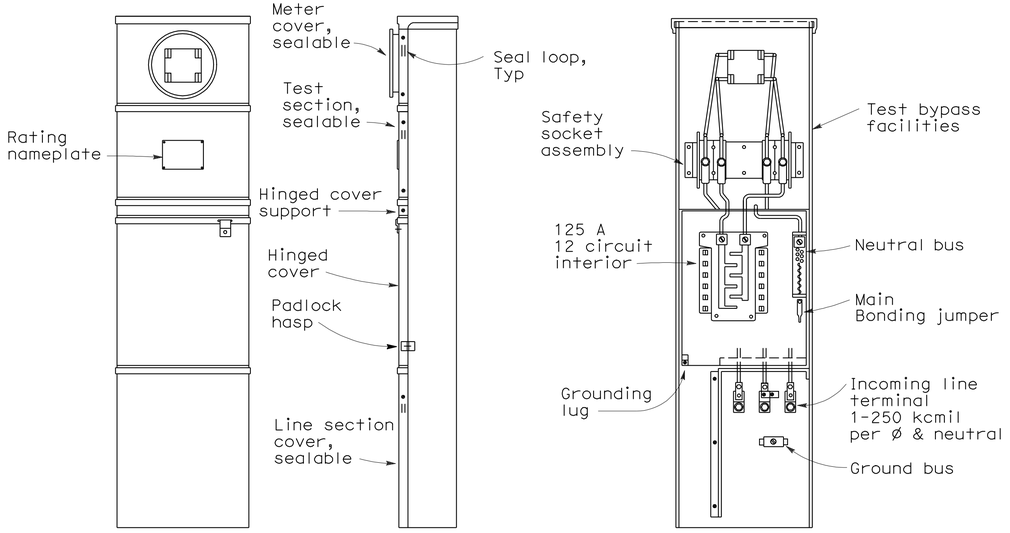
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 1-31-11



SIDE VIEW ELEVATION

TYPE II-A SERVICE EQUIPMENT ENCLOSURE



FRONT VIEW SIDE VIEW FRONT VIEW

(Less covers and dead front panel)
For metered circuits only

TYPE II-B SERVICE EQUIPMENT ENCLOSURE

NOTES-TYPE II SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosures and metering equipment shall meet the requirements of the service utility.
2. Service equipment enclosures shall be factory wired NEMA 3R construction and shall be provided with dead front panel and provisions for padlocking.
3. Control wiring shall be 600 V, No. 14 AWG stranded (THHN) machine tool wire. Where subject to flexing, 19 strand wire shall be used.
4. Main bus shall be rated for 125 A and shall be tin-plated copper.
5. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
   a) Adjacent to the breaker or device with character size a minimum of ⅛".
   b) At the top of the exterior door panel indicating system number, voltage level and number of phases with character size a minimum of 3⁄16".
6. A plastic laminated wiring diagram shall be provided and attached to the inside of the front door.
7. In unpaved areas, a raised portland cement concrete pad of 2'-0" x 4" x width of service equipment enclosure foundation or controller cabinet foundation shall be constructed in front of Type II service equipment enclosure.
8. Internal bus, where shown, is typical only. Alternative designs of proposed service equipment enclosure shall be submitted to the Engineer for approval.
9. Circuit breakers may be mounted in the vertical or horizontal position.
10. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
11. Minimum clearance shall be required for front and back of service equipment enclosures per National Electrical Code, Article 110.26, "Spaces About Electrical Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT TYPE II SERIES)

NO SCALE

RSP ES-2B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2B
DATED MAY 1, 2006 - PAGE 404 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2B

2006 REVISED STANDARD PLAN RSP ES-2B

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	36	39

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 1-31-11

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.

2. Service equipment enclosures shall be factory wired and conform to NEMA standards.

3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.

4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.

5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of 7/16".

6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.

7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.

8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:

   a) Incoming terminals (landing lugs)
   b) Neutral lugs
   c) Solid neutral terminal strip

9. At least 6 standard single pole circuit breaker spaces, 3/4" nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.

10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.

11. Main bus shall be rated for 125 A and shall be tin-plated copper.

12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:

    a) Adjacent to the breaker or device with character size a minimum of 1/8".

    b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of 3/16".

14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.

15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.

16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.

17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.

18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.

19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.

20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.

21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT NOTES TYPE III SERIES)

NO SCALE

RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

2006 REVISED STANDARD PLAN RSP ES-2C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	37	39

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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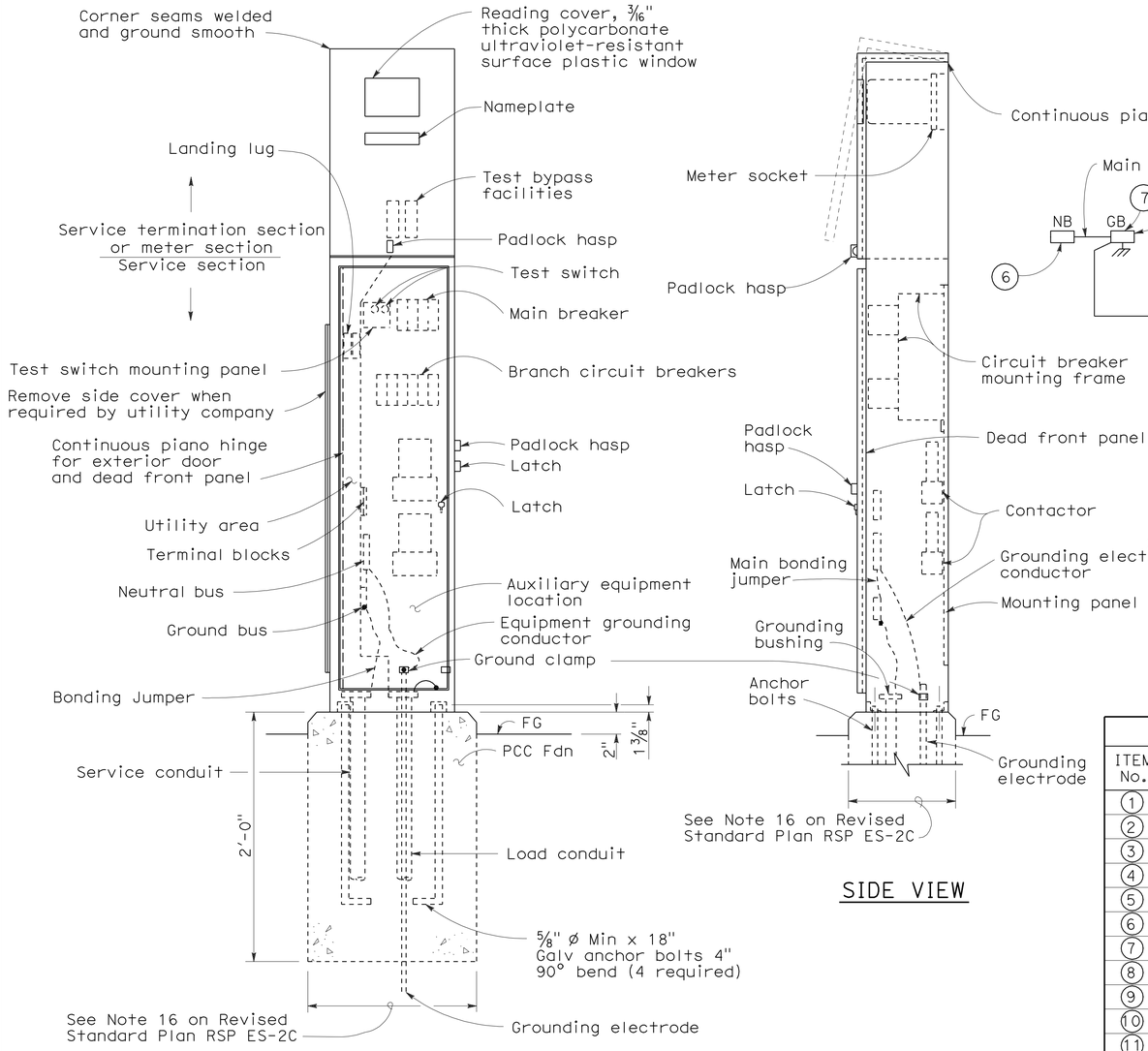
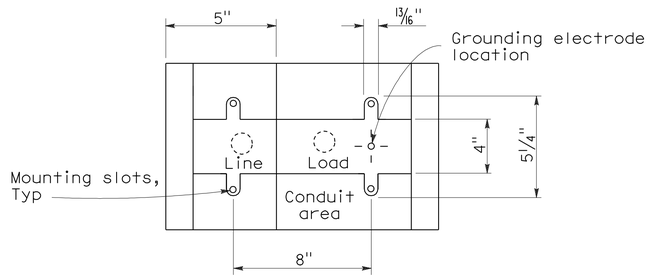
To accompany plans dated 1-31-11



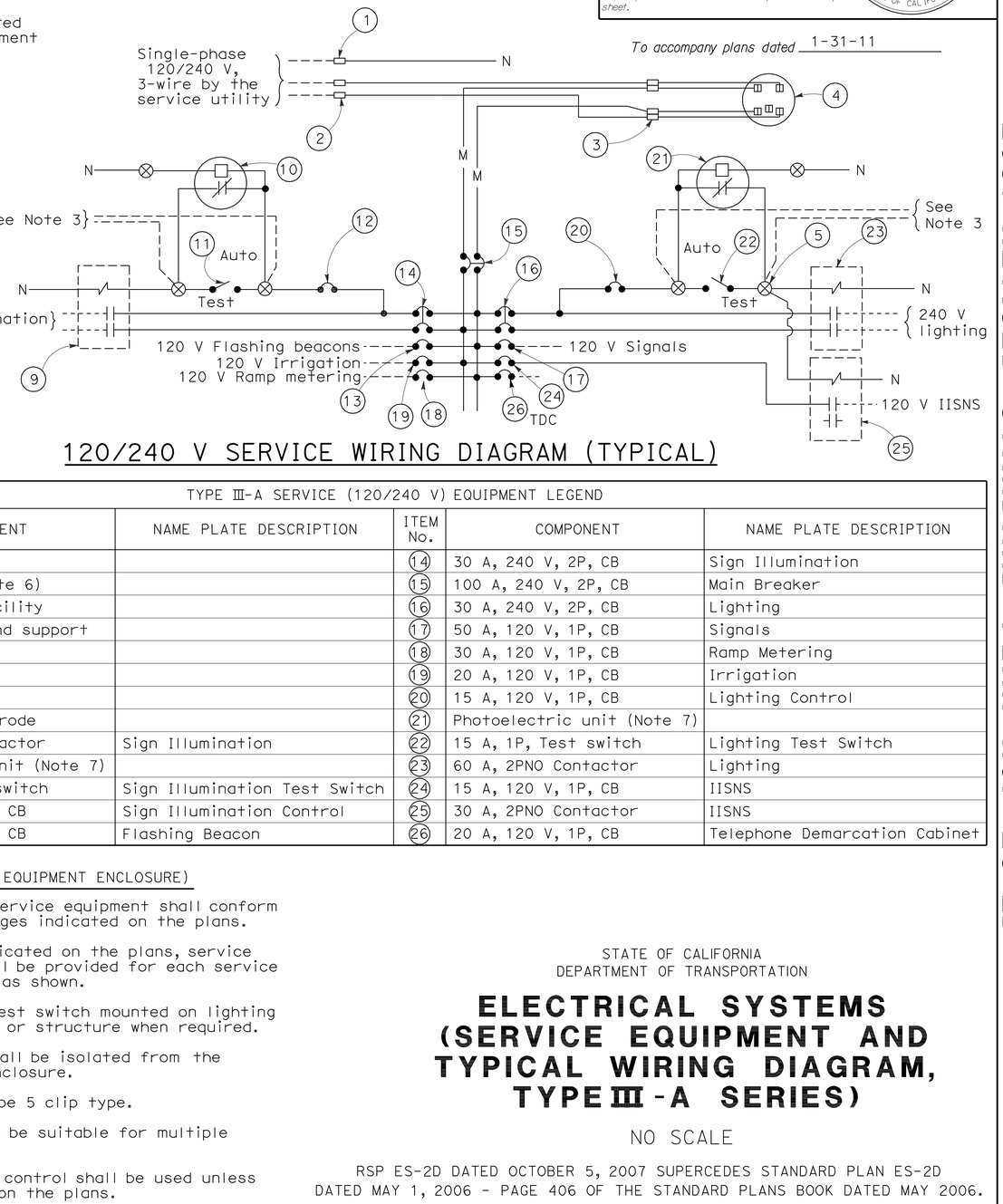
FRONT VIEW

SIDE VIEW

TYPE Ⅲ-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)



BASE FOR TYPE Ⅲ-A SERVICE EQUIPMENT ENCLOSURE



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE Ⅲ-A SERVICE (120/240 V) EQUIPMENT LEGEND

ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
(1)	Neutral lug		(14)	30 A, 240 V, 2P, CB	Sign Illumination
(2)	Landing lug (Note 6)		(15)	100 A, 240 V, 2P, CB	Main Breaker
(3)	Test bypass facility		(16)	30 A, 240 V, 2P, CB	Lighting
(4)	Meter socket and support		(17)	50 A, 120 V, 1P, CB	Signals
(5)	Terminal blocks		(18)	30 A, 120 V, 1P, CB	Ramp Metering
(6)	Neutral bus		(19)	20 A, 120 V, 1P, CB	Irrigation
(7)	Ground bus		(20)	15 A, 120 V, 1P, CB	Lighting Control
(8)	Grounding electrode		(21)	Photoelectric unit (Note 7)	
(9)	30 A, 2PNO Contactor	Sign Illumination	(22)	15 A, 1P, Test switch	Lighting Test Switch
(10)	Photoelectric unit (Note 7)		(23)	60 A, 2PNO Contactor	Lighting
(11)	15 A, 1P, Test switch	Sign Illumination Test Switch	(24)	15 A, 120 V, 1P, CB	IISNS
(12)	15 A, 120 V, 1P, CB	Sign Illumination Control	(25)	30 A, 2PNO Contactor	IISNS
(13)	15 A, 120 V, 1P, CB	Flashing Beacon	(26)	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. (1) and (6) shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type Ⅴ photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE Ⅲ-A SERIES)

NO SCALE

RSP ES-2D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2D DATED MAY 1, 2006 - PAGE 406 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2D

2006 REVISED STANDARD PLAN RSP ES-2D

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	38	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

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

October 5, 2007
PLANS APPROVAL DATE

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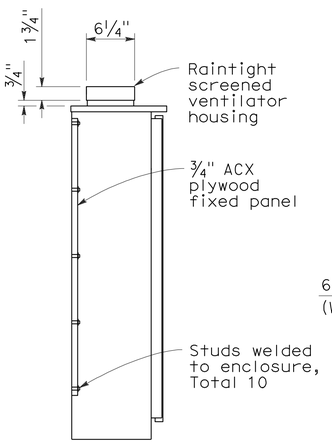
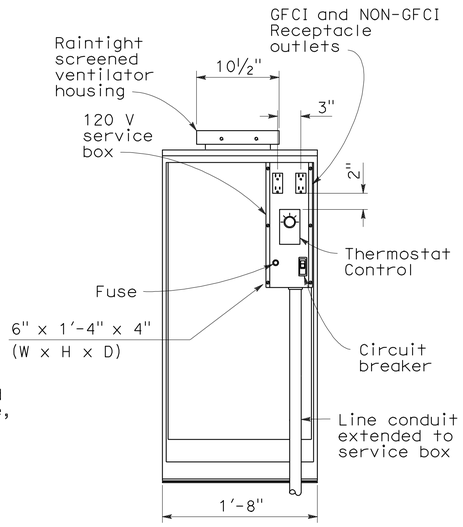
To accompany plans dated 1-31-11

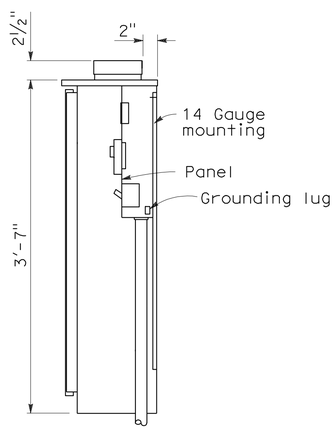


SECTION A-A

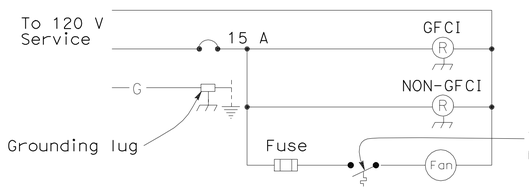


FRONT VIEW

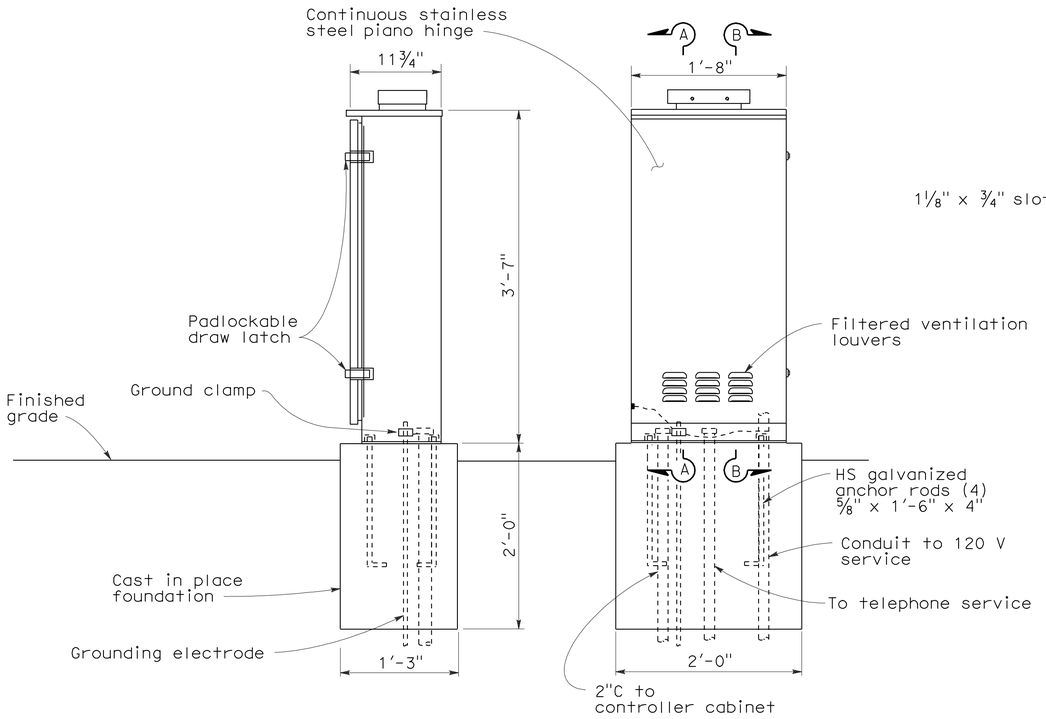
(Exterior door removed for clarity)



SECTION B-B

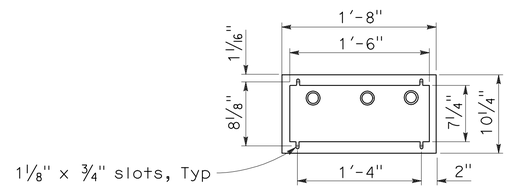


WIRING DIAGRAM



SIDE VIEW

FRONT VIEW



BASE PLAN

NOTES:

1. Telephone demarcation cabinet shall be furnished with a mounting panel, outlets, circuit breaker and deadfront plates in place. Dimensions are nominal.
2. An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between the bottom of the cabinet and the foundation.
3. In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 2'-0" x 1'-10" x 4" thick, with 2" above the finished grade.
4. All conduits shall be bonded to the enclosure.
5. Telephone demarcation cabinet:
   a) Material shall be anodized aluminum (⅛" thick).
   b) Fabrication shall conform to the requirements of the Standard Specifications.
   c) The exterior door shall be side hung and secured with a padlockable draw latch, the padlock hole shall be a minimum diameter of 7/16" to receive a padlock.
   d) Ventilation louvers shall be located on the door.
   e) Fan shall be mounted in a ventilator housing.
   f) Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
   g) Fan circuit shall be fused at 175 percent of the fan motor capacity.
   h) Fan capacity shall be at least 25 cubic feet per minute.
   i) Fasten fixed mounting panels with nuts, lock and flat washers to 3/16" Ø x 1" studs welded to enclosure.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (TELEPHONE DEMARCATION CABINET, TYPE B)

NO SCALE

RSP ES-3E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-3E
DATED MAY 1, 2006 - PAGE 414 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-3E

2006 REVISED STANDARD PLAN RSP ES-3E

8-17-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Las	70,395	Var	39	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-10 — ELECTRICAL — STATE OF CALIFORNIA

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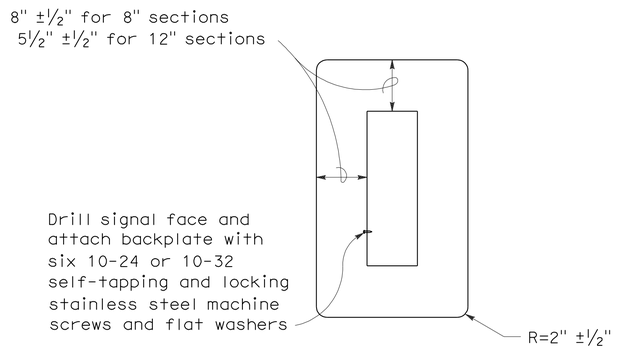
To accompany plans dated 1-31-11

VISORS

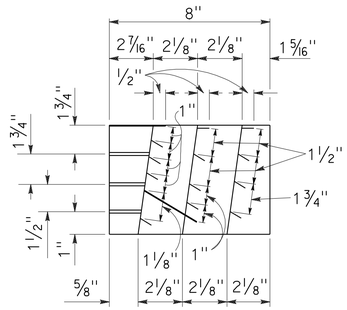
(Right angle is reversed of figure)



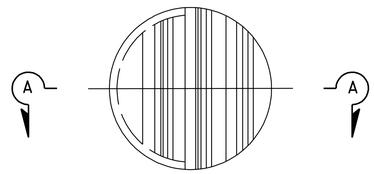
8" AND 12" SECTIONS

BACKPLATE

1/16" minimum thickness
3001-14 aluminum, or plastic when specified



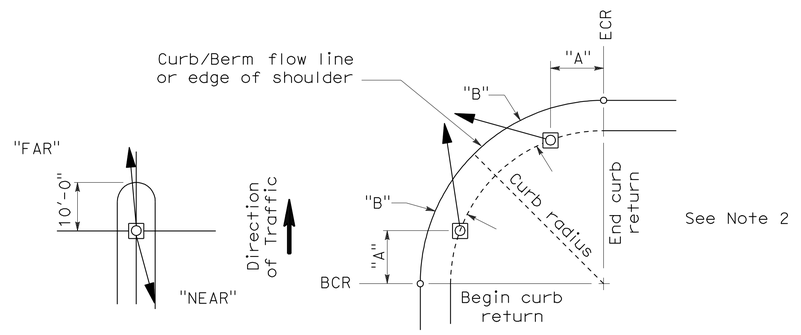
SECTION A-A



FRONT VIEW

DIRECTIONAL LOUVER

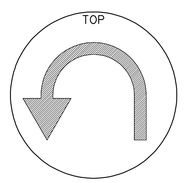
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



NOTES:

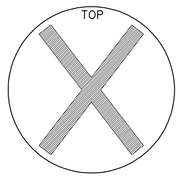
1. Typical signal pole placement unless dimensioned on plans.
2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS

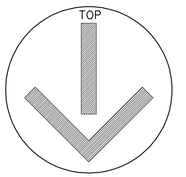


U-TURN SIGNAL FACE

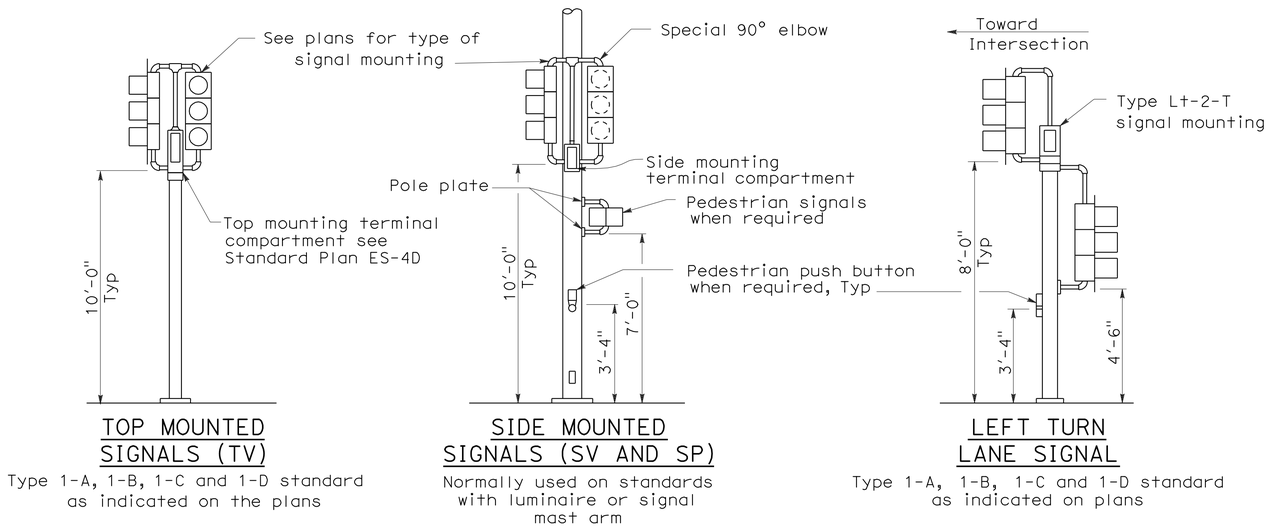
BICYCLE SIGNAL FACE



LANE CONTROL SIGNAL FACE



LANE CONTROL SIGNAL FACE



TOP MOUNTED SIGNALS (TV)

Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

TYPICAL SIGNAL INSTALLATIONS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C
DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4C

2006 REVISED STANDARD PLAN RSP ES-4C

5-19-08