Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	1	31

INDEX OF PLANS

Sheet No.	Description
1	Title and Location Map
2	Typical Cross Sections
3-5	Layout
6-7	Construction Details
8-10	Drainage Plan, Profile and Details
11	Construction Area Signs
12-14	Traffic Handling Plans and Quantities
15-18	Pavement Delineation and Sign Plans and Quantities
19	Sign Quantities
20	Summary of Quantities
21-22	Electrical Plans
23-31	Revised Standard Plans

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

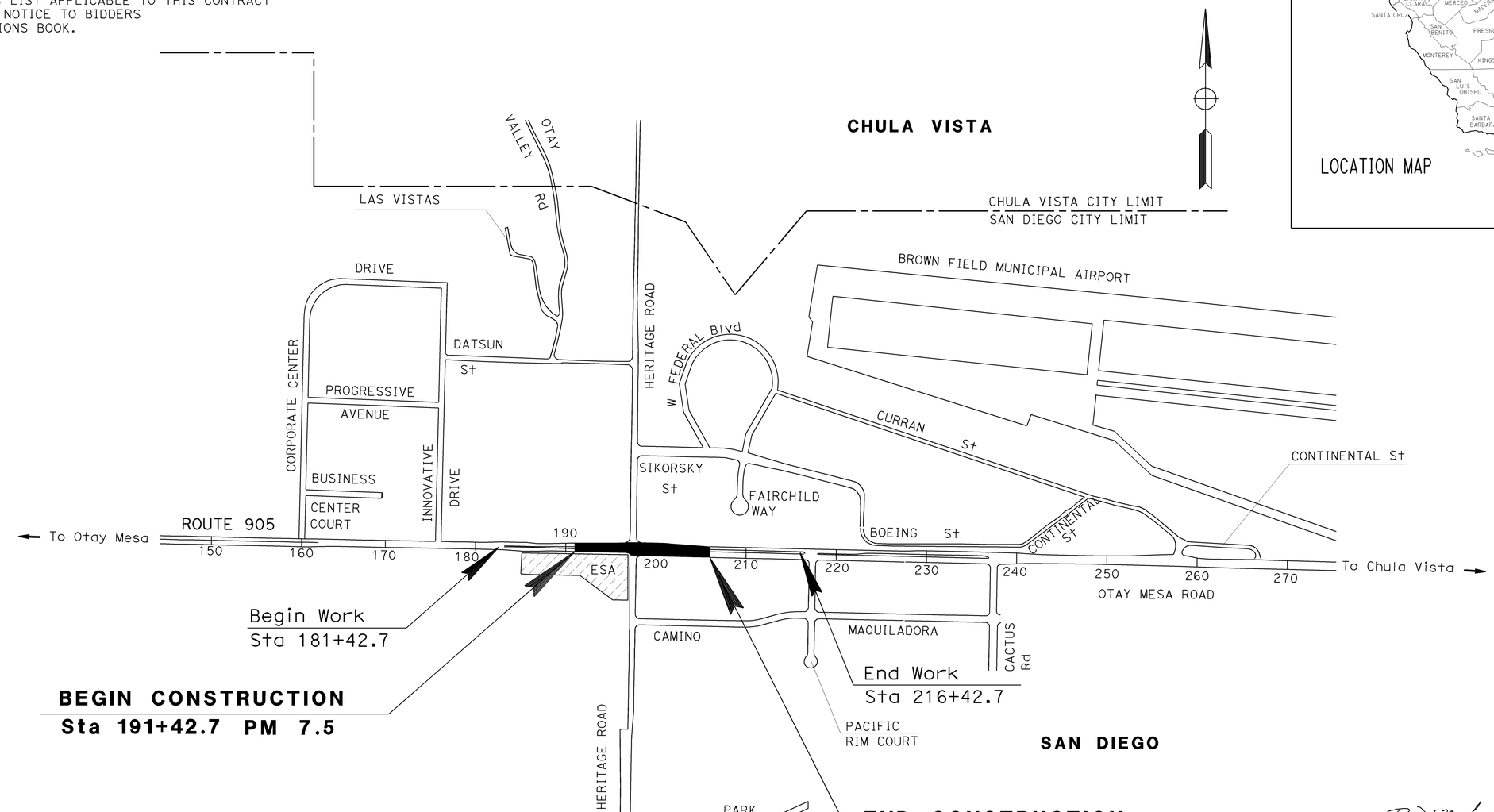
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN SAN DIEGO COUNTY IN SAN DIEGO

FROM 0.2 MILE WEST TO 0.1 MILE EAST OF HERITAGE ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



ESA = ENVIRONMENTALLY SENSITIVE AREA

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

NO SCALE

PROJECT MANAGER DAVID M. POUND

DESIGN ENGINEER DAVE SANDERFER

David McSandy 02-02-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

March 1, 2010
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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

CONTRACT No. **11-402604**

LAST REVISION 02-04-10

DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	2	31

REGISTERED CIVIL ENGINEER 02-10 DATE

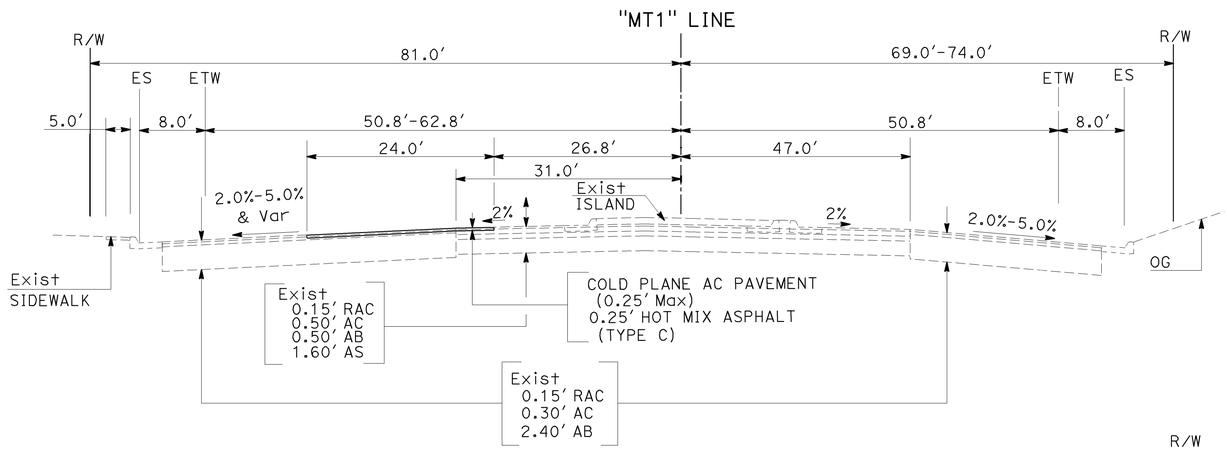
03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. ALL HMA SURFACES SHALL BE FOG SEALED EXCEPT TRAVELED WAYS.

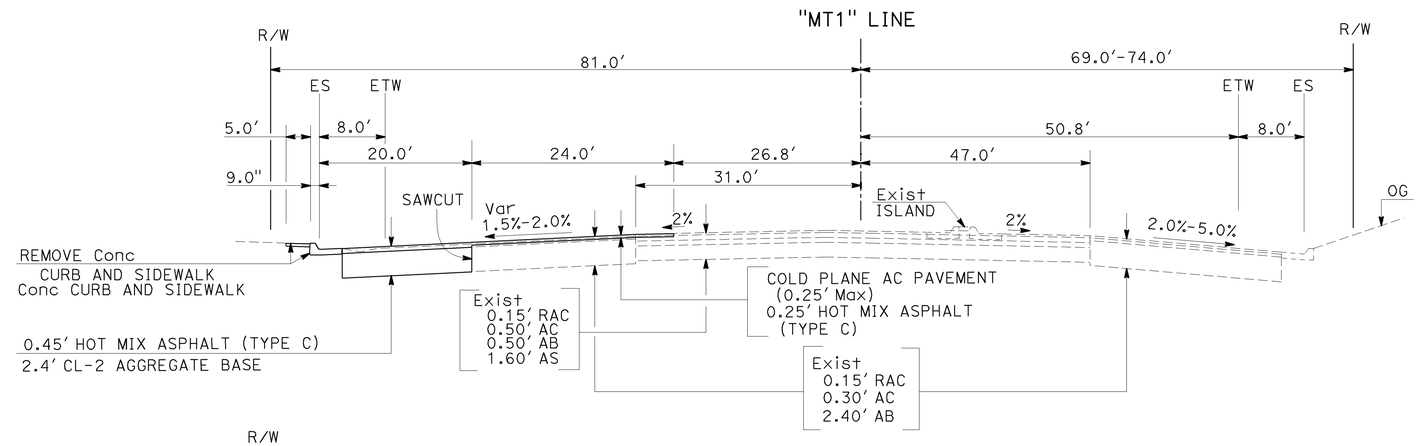


ROUTE 905

"MT1" Sta 199+45.00 TO Sta 202+11.26
"MT1" Sta 203+11.29 TO Sta 206+42.67

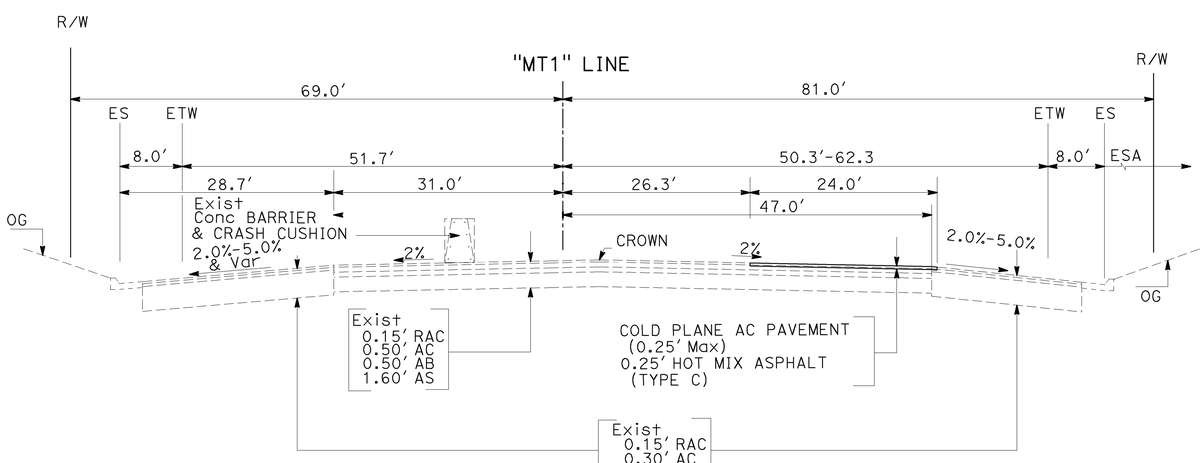
DESIGN DESIGNATION (ROUTE 905)

ROUTE	PM	DIRECTION	ADT			DHV (P.M. PEAK)			D% (WB)			T%			V (MPH)
			YEAR			YEAR			YEAR			YEAR			
			2007	2020	2030	2007	2020	2030	2007	2020	2030	2007	2020	2030	
905	7.5/7.8	WB/EB	35,000	59,850	62,843	-	4540	4770	-	54.37	54.37	-	12.0	12.0	50



ROUTE 905

"MT1" Sta 202+11.26 TO Sta 203+11.29



ROUTE 905

"MT1" Sta 191+42.67 TO Sta 198+22.67

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY | DATE REVISED
THIN BUI | GERRY CRUZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: DAVID M. POUND

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MINOR A PROJECTS

LAST REVISION 02-04-10 | DATE PLOTTED => 02-MAR-2010 | TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	3	31

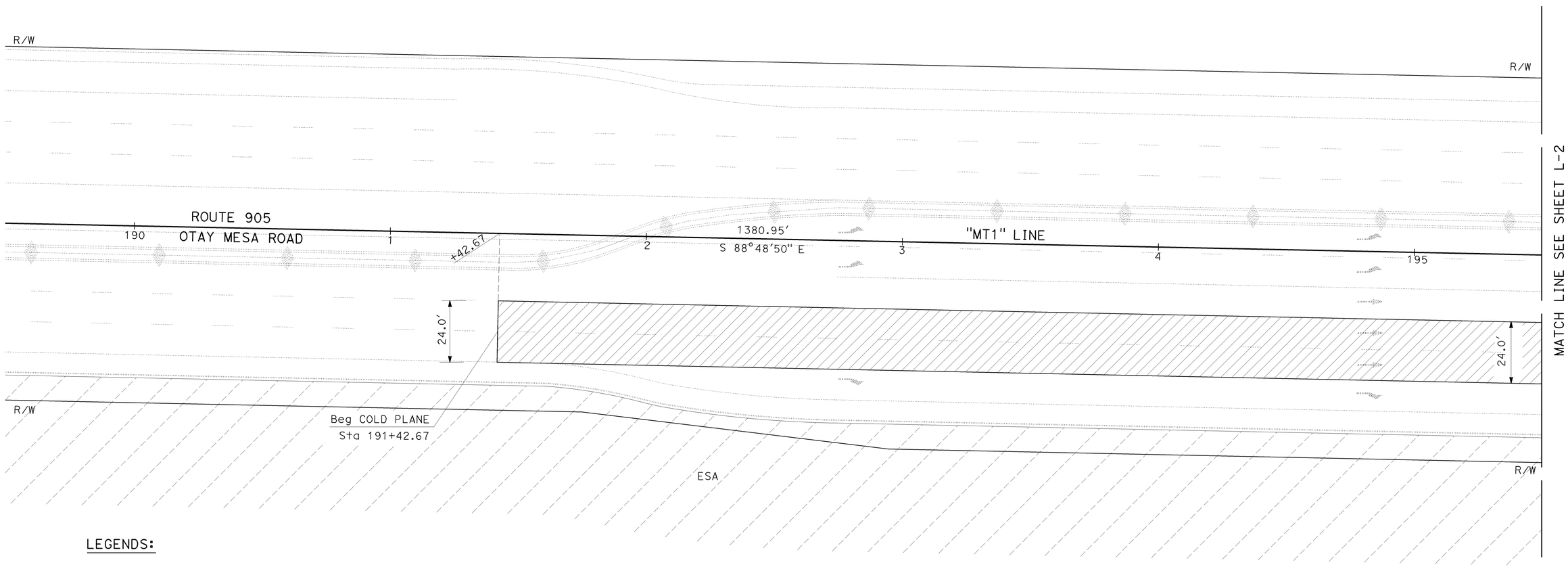
REGISTERED CIVIL ENGINEER 02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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

NOTES: 1) FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2) COORDINATES, BEARINGS AND GRID DISTANCES ARE BASED ON CCS83 (1991.35) ZONE 6.
3) LOCATION OF UTILITY FACILITIES SHOWN ON THESE PLANS WERE OBTAINED FROM OWNER'S RECORDS AND/ OR FROM STATE SURVEYS. ANY UTILITY INFORMATION SHOWN ON THESE PLANS ARE APPROXIMATE.



LEGENDS:

	EXISTING	FACILITY	OWNER
1)	——— – e ——— —	ELECTRIC	SAN DIEGO GAS & ELECTRIC
2)	——— – g ——— – —	GAS	SAN DIEGO GAS & ELECTRIC
3)	——— – – t ——— —	TELEPHONE	AT&T
4)	——— – – s ——— – – —	SEWER	CITY OF SAN DIEGO
5)	– ——— w ——— ———	WATER	OTAY WATER DISTRICT

6) COLD PLANE AC PAVEMENT (0.25' Max)
0.25' HOT MIX ASPHALT (TYPE C)

7) REMOVE Conc CURB AND SIDEWALK
Conc CURB AND SIDEWALK

8) ENVIRONMENTALLY SENSITIVE AREA

9) 0.45' HOT MIX ASPHALT (TYPE C)
2.4' CL-2 AGGREGATE BASE

LAYOUT L-1

SCALE: 1" = 20'

THIN BUI — REVISED BY
GERRY CRUZ — DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
DAVID M. POUND

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MINOR A PROJECTS

LAST REVISION 02-04-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	4	31

REGISTERED CIVIL ENGINEER 02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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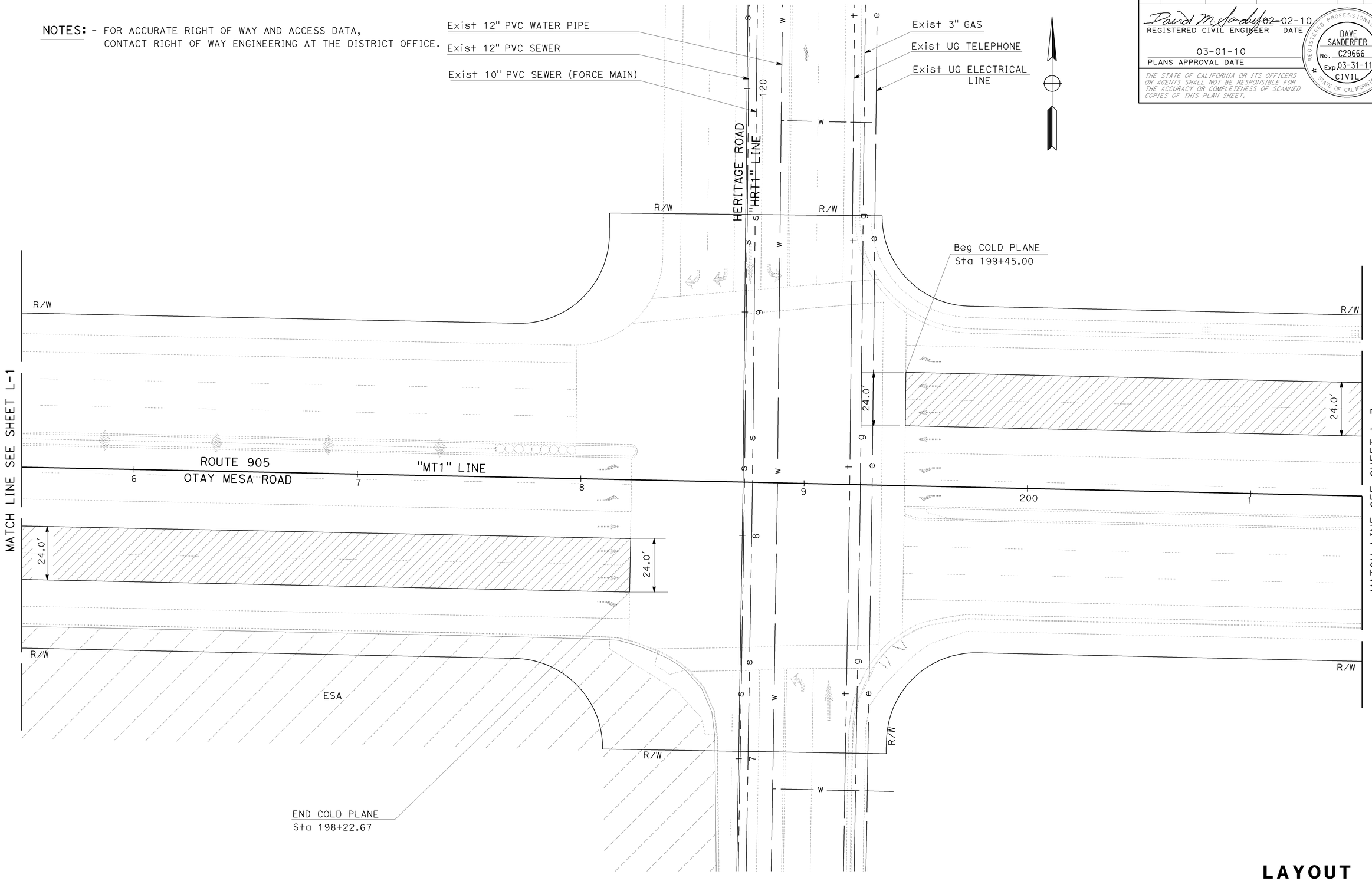


SCALE: 1" = 20'

LAYOUT L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-04-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	5	31

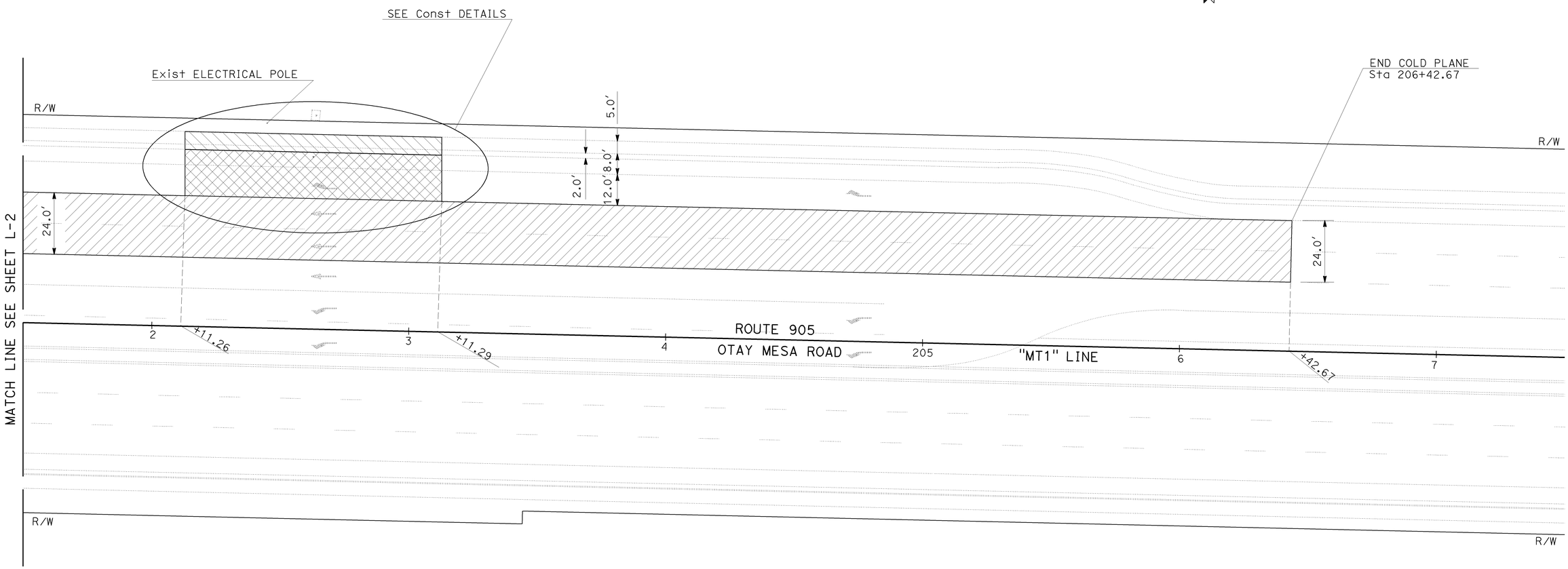
REGISTERED CIVIL ENGINEER 02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAVE SANDERFER
No. C29666
Exp. 03-31-11
CIVIL
STATE OF CALIFORNIA

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

NOTES: - FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT L-3

SCALE: 1" = 20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-04-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	6	31

REGISTERED CIVIL ENGINEER 02-02-10 DATE

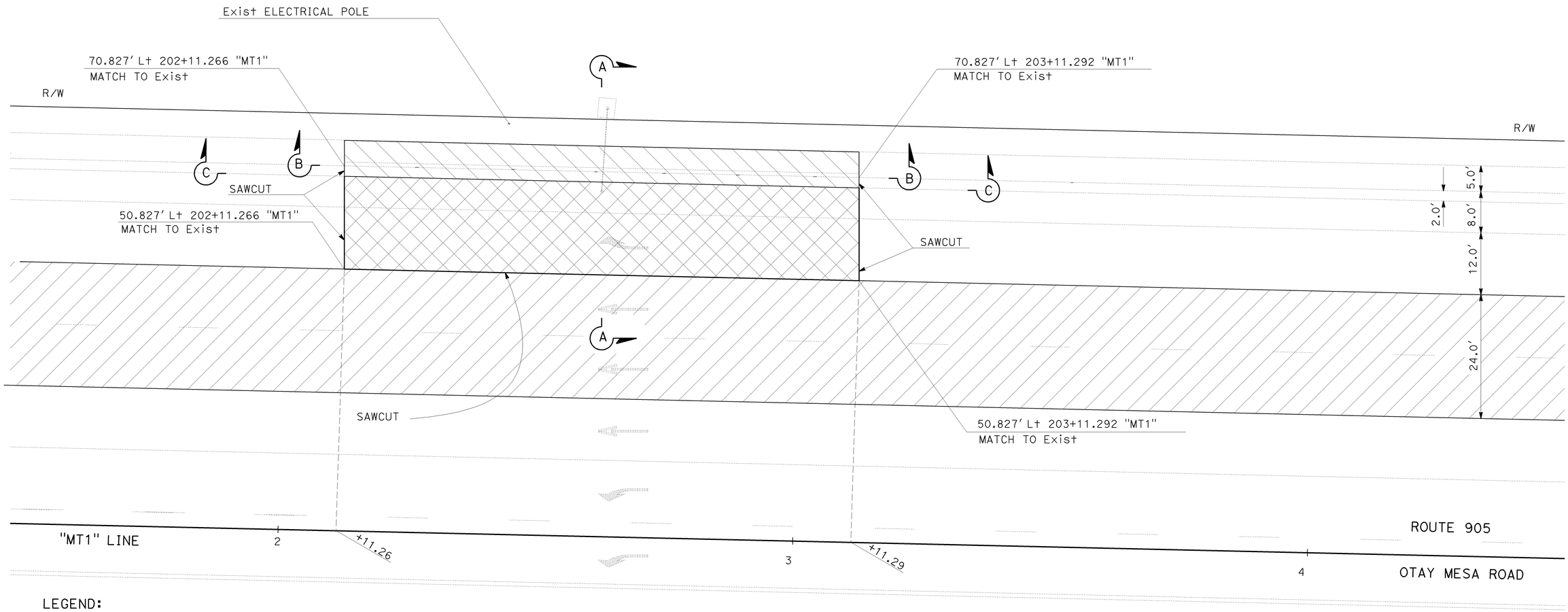
03-01-10
PLANS APPROVAL DATE

DAVE SANDERFER No. C29666 Exp. 03-31-11 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.

NOTE:

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



LEGEND:

1) COLD PLANE AC PAVEMENT (0.25' Max)
0.25' HOT MIX ASPHALT (TYPE C)

2) REMOVE Conc CURB AND SIDEWALK
Conc CURB AND SIDEWALK

3) 0.45' HOT MIX ASPHALT (TYPE C)
2.4' CL-2 AGGREGATE BASE

DETAIL FOR CURB FLOW LINE

"MT1" FROM Sta 202+11.26 TO Sta 203+11.29

CONSTRUCTION DETAILS
C-1

SCALE: 1"=10'

REVISED BY	DATE REVISED
THIN BUI	GERRY CRUZ

CALCULATED-DESIGNED BY / CHECKED BY

FUNCTIONAL SUPERVISOR: DAVID M. POUND

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MINOR A PROJECTS

LAST REVISION 02-04-10 | DATE PLOTTED => 02-MAR-2010 | TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	7	31

REGISTERED CIVIL ENGINEER 02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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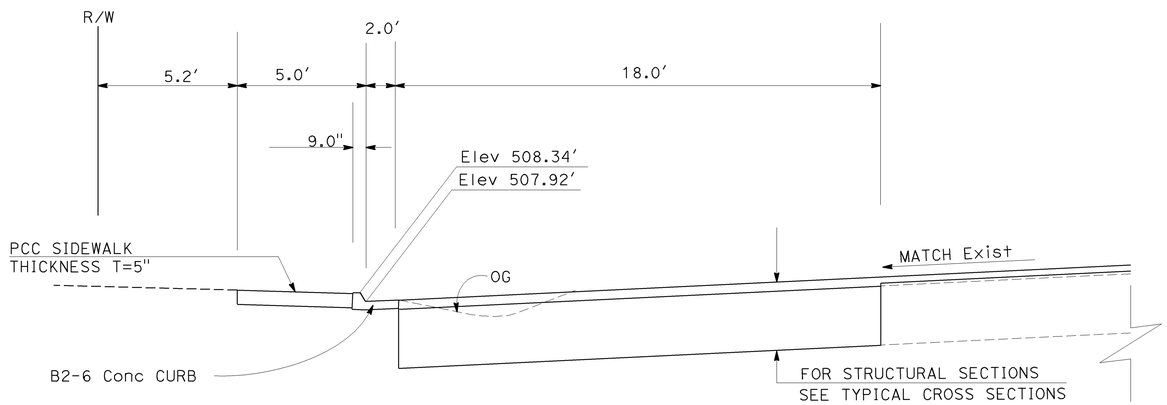
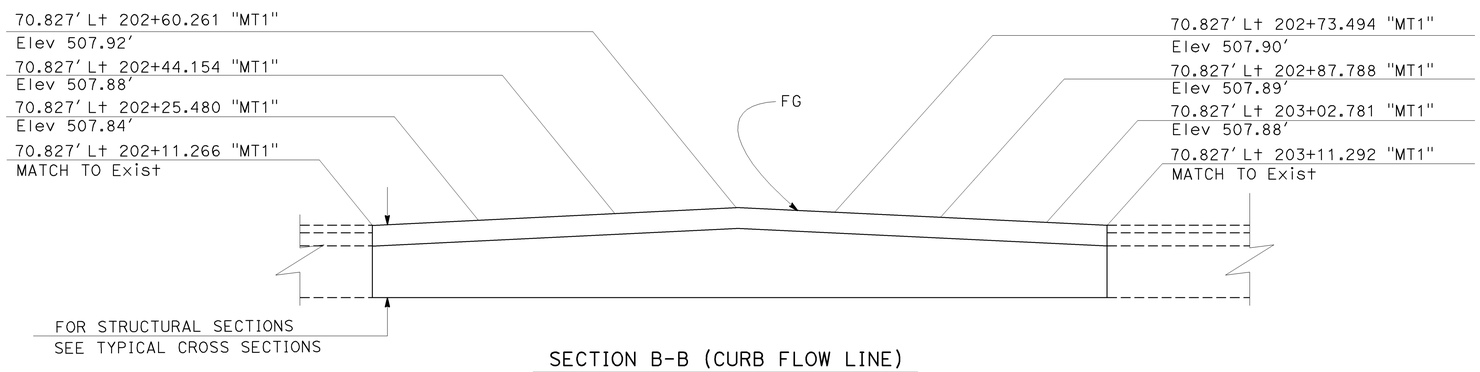


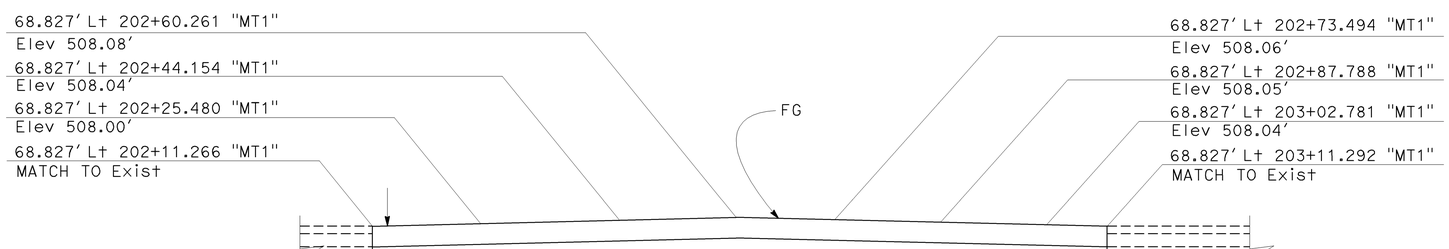
SECTION A-A

"MT1" Sta 202+61.365



SECTION B-B (CURB FLOW LINE)

"MT1" Sta 202+11.26 TO Sta 203+11.29



SECTION C-C (CURB LIP)

"MT1" Sta 202+11.26 TO Sta 203+11.29

CONSTRUCTION DETAILS
C-2

SCALE: 1" = 10′

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-09-10
DATE PLOTTED => 03-MAR-2010
TIME PLOTTED => 16:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	8	31

REGISTERED CIVIL ENGINEER DATE 02-10

PLANS APPROVAL DATE 03-01-10

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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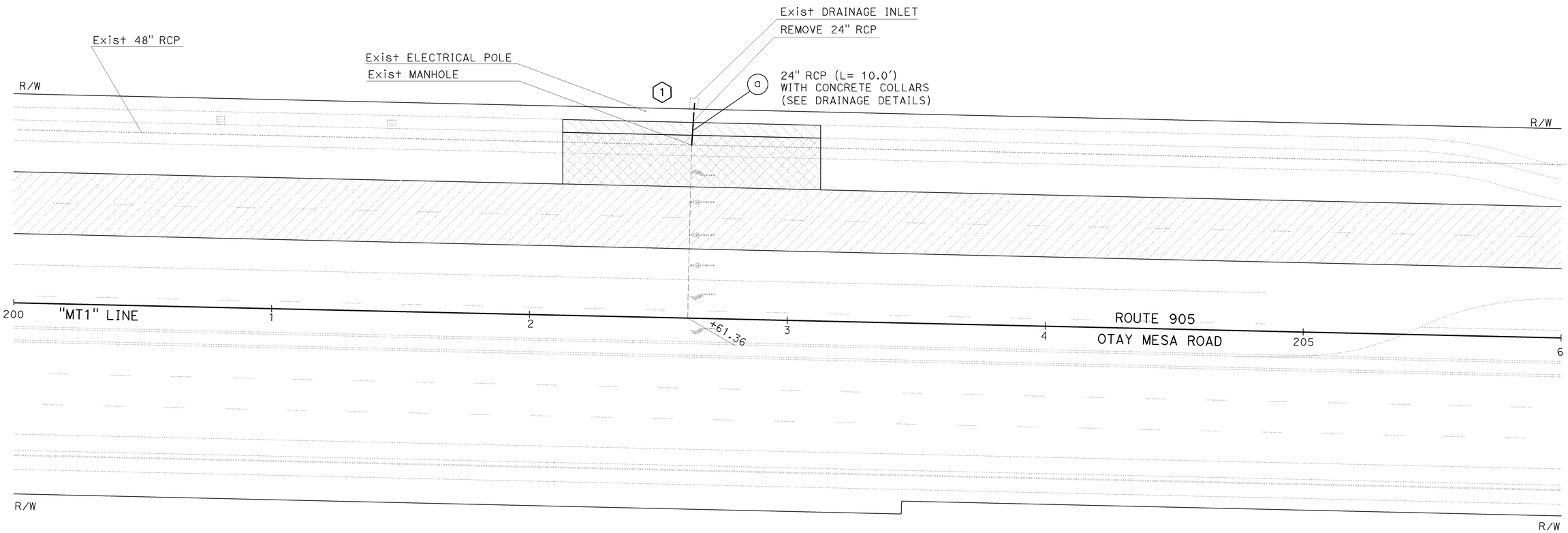
NOTES: 1) FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2) EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



LEGEND:

⊗ = DRAINAGE SYSTEM

⊗ = DRAINAGE UNIT

THIS PLAN SHEET ACCURATE FOR DRAINAGE WORK ONLY.

DRAINAGE PLAN

SCALE: 1" = 20'

D-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND

CALCULATED-DESIGNED BY: THIN BUI

CHECKED BY: GERRY CRUZ

REVISED BY

DATE REVISED

LAST REVISION 02-09-10

DATE PLOTTED => 02-MAR-2010

TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	9	31

REGISTERED CIVIL ENGINEER DATE 02-10

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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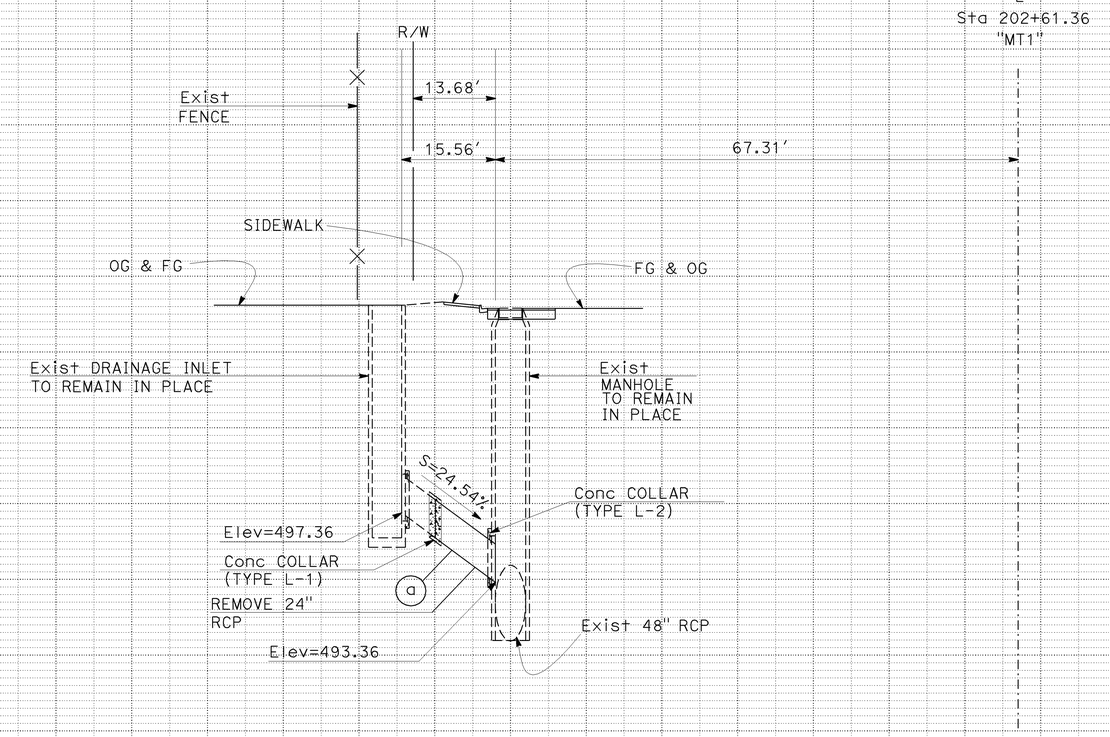

DRAINAGE SYSTEM 1

a 24" RCP (L=10.00') WITH CONCRETE COLLARS (TYPE L-1, L-2)
(SEE DRAINAGE DETAILS)

DRAINAGE PROFILE
DP-1

Horiz 1" = 10'
Vert 1" = 4'

REVISED BY | DATE REVISED
THIN BUI | GERRY CRUZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
DAVID M. POUND

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MINOR A PROJECTS

LAST REVISION 02-09-10 | DATE PLOTTED => 02-MAR-2010 TIME PLOTTED => 09:44

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11	SD	905	7.5/7.8	10	31

REGISTERED CIVIL ENGINEER DATE 02-10

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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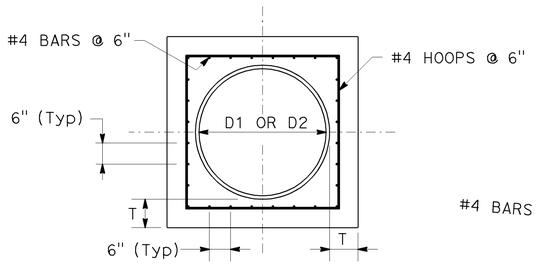
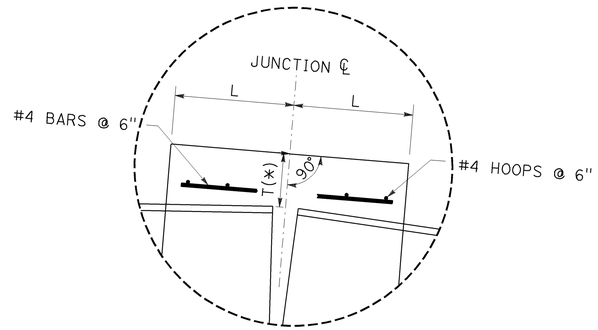
NOTES:

1. WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, L & T SHALL CORRESPOND WITH THE LARGER OF THE TWO PIPE DIAMETERS.
2. JOIN PIPES AT INVERTS
3. BEND EXPOSED REBAR INTO CONCRETE COLLAR.



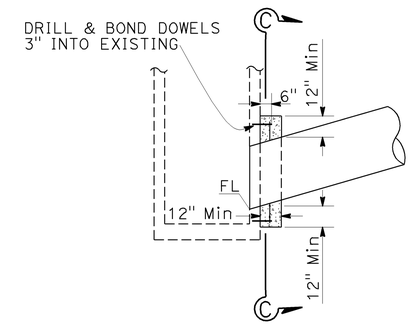
SECTION B-B

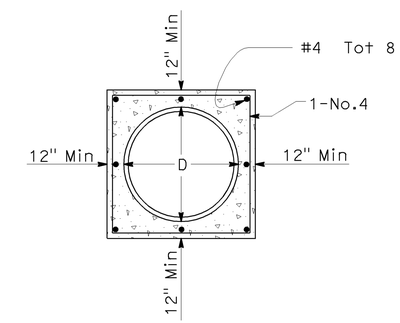


DETAIL A

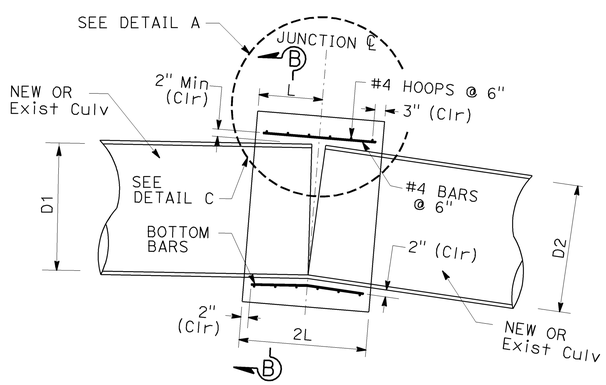
(*)=MEASURED ALONG JUNCTION ℄

TABLE D		
D (INCH)	L (Min) (INCH)	T (Min) (INCH)
18	12	6
24	12	6
36	18	8
42	18	8
48	18	8
54	18	9
60	24	12
66	24	12
72	24	12



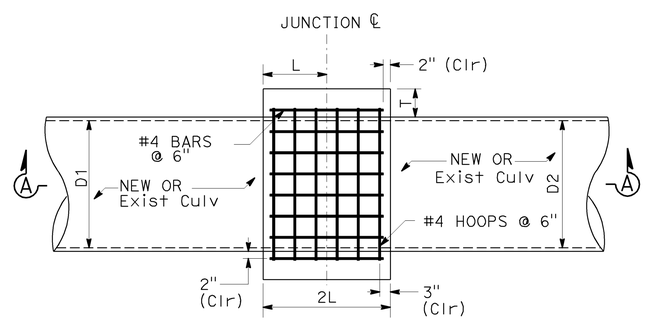


SECTION C-C



SECTION A-A

NOTE: BEND BOTTOM BARS AS NECESSARY TO MAINTAIN 2" CLEARANCE



CONCRETE COLLAR (TYPE L-1)

CONCRETE COLLAR (TYPE L-2)

DRAINAGE DETAILS
DD-1

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-09-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	11	31

02-02-10
REGISTERED CIVIL ENGINEER DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN ADIBI
No. 54839
Exp. 06-30-10
CIVIL
STATE OF CALIFORNIA

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

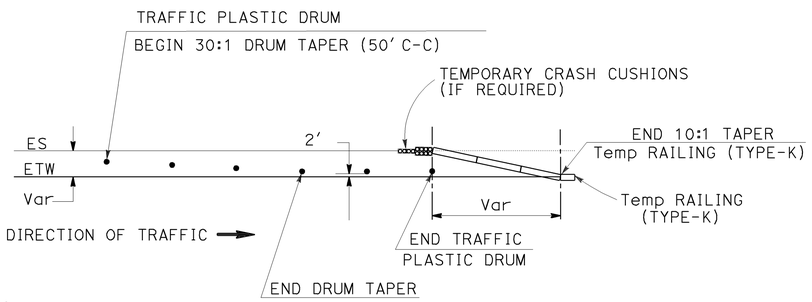
NOTES:

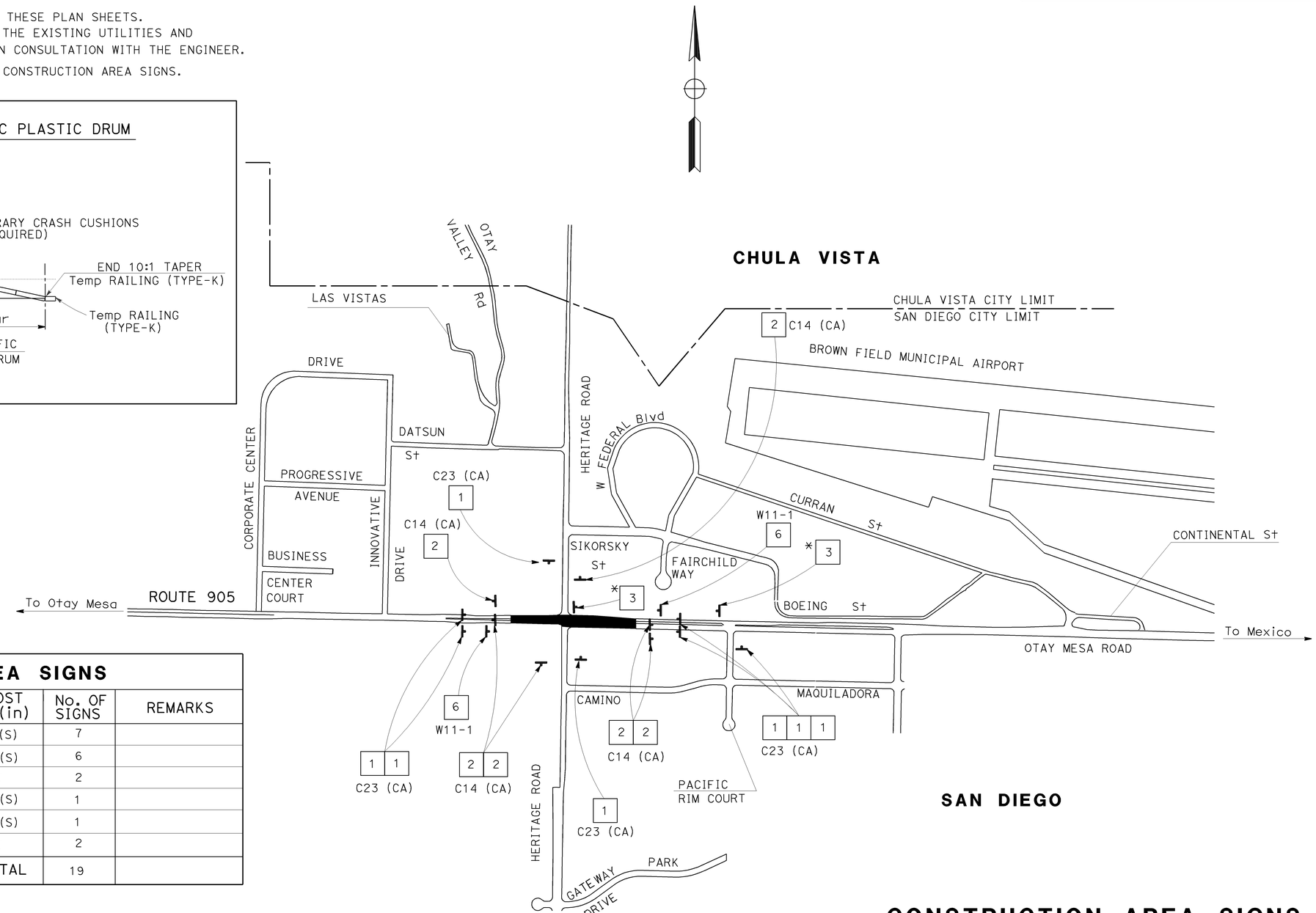
1. EXACT LOCATION OF CONSTRUCTION AREA SIGNS SHALL BE DETERMINED BY THE ENGINEER.
2. FEDERAL MUTCD SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS ARE USED.
3. EXISTING UTILITIES HAVE NOT BEEN SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF THE EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF SIGN POSTS IN CONSULTATION WITH THE ENGINEER.
4. SEE TRAFFIC HANDLING PLAN FOR ADDITIONAL CONSTRUCTION AREA SIGNS.

LEGEND:

XX = CONSTRUCTION AREA SIGN

TYPICAL- PLACEMENT OF TRAFFIC PLASTIC DRUM





CONSTRUCTION AREA SIGNS

SIGN No.	CODE	PANEL SIZE (in)	No. OF POST AND SIZE (in)	No. OF SIGNS	REMARKS
1	C23 (CA)	48 X 48	1 - 4 X 6 (S)	7	
2	C14 (CA)	48 X 24	1 - 4 X 4 (S)	6	
*3	R9-11a	24 x 12	PORTABLE	2	
4	C30A (CA)	30 X 30	1 - 4 X 4 (S)	1	
5	C30 (CA)	30 X 30	1 - 4 X 4 (S)	1	
6	W11-1	24 x 24	PORTABLE	2	
			TOTAL	19	

(S) DENOTES STATIONARY MOUNTED SIGN.
* PLACE R9-11a ONLY WHEN SIDEWALK WILL BE CLOSED.

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

REVISED BY | DATE REVISED
SASAN VAZIRI | SHAHIN ADIBI
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
CAMILLE ABOU-FADEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 02-09-10 | DATE PLOTTED => 02-MAR-2010 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	12	31

REGISTERED CIVIL ENGINEER 02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

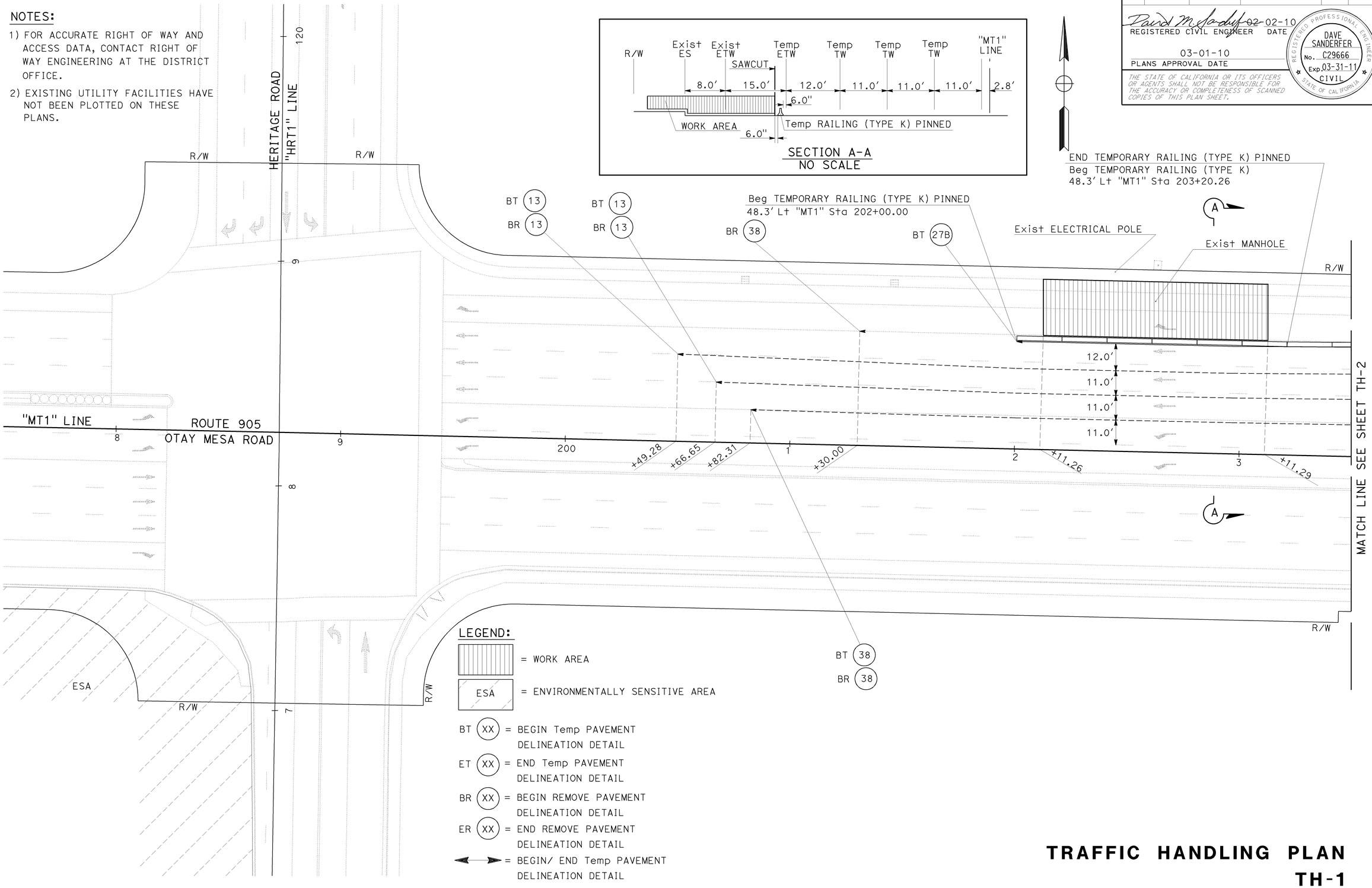
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

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

2) EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

SECTION A-A
NO SCALE



LEGEND:

= WORK AREA

ESA = ENVIRONMENTALLY SENSITIVE AREA

BT (XX) = BEGIN Temp PAVEMENT DELINEATION DETAIL

ET (XX) = END Temp PAVEMENT DELINEATION DETAIL

BR (XX) = BEGIN REMOVE PAVEMENT DELINEATION DETAIL

ER (XX) = END REMOVE PAVEMENT DELINEATION DETAIL

= BEGIN/ END Temp PAVEMENT DELINEATION DETAIL

TRAFFIC HANDLING PLAN
TH-1

SCALE: 1" = 20′

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-09-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	13	31

REGISTERED CIVIL ENGINEER DATE 02-10

03-01-10
PLANS APPROVAL DATE

DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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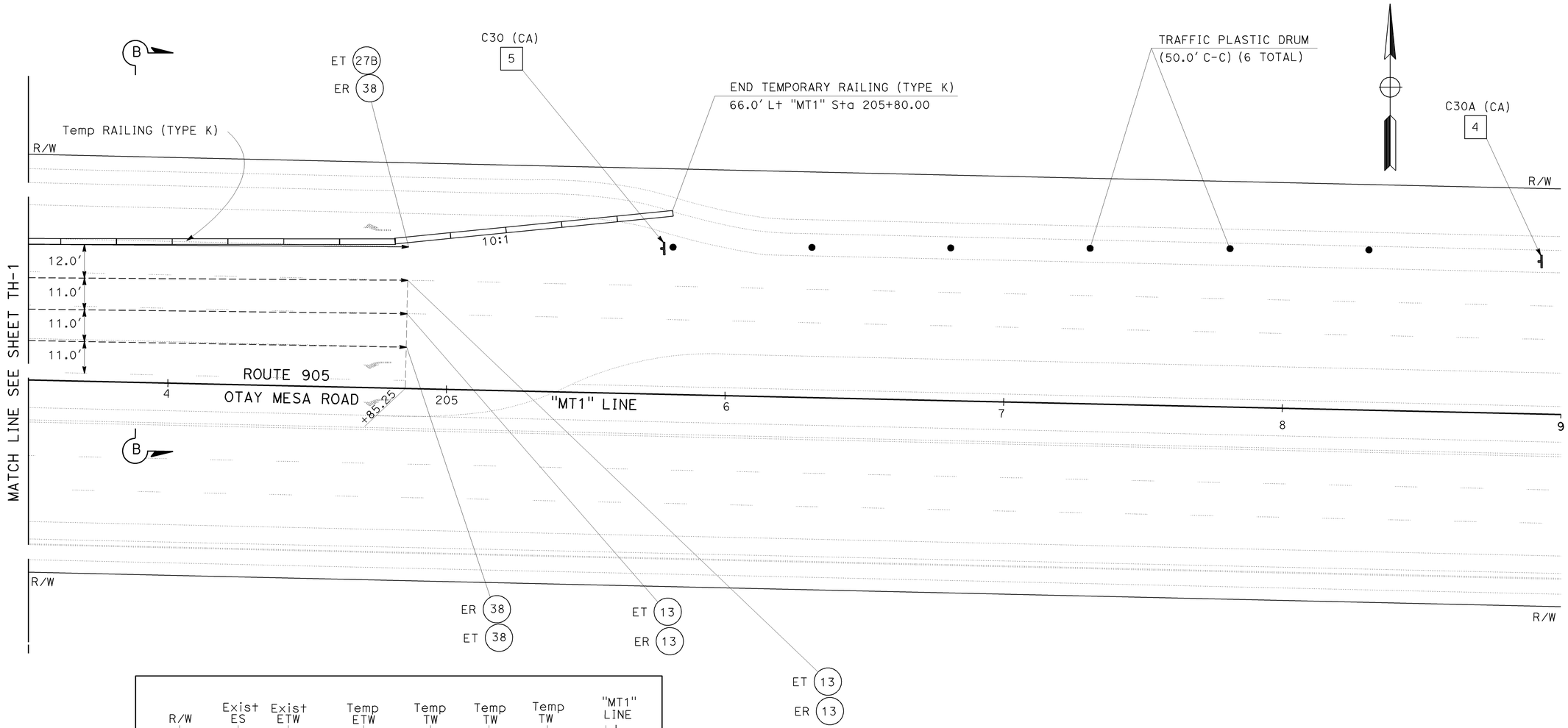
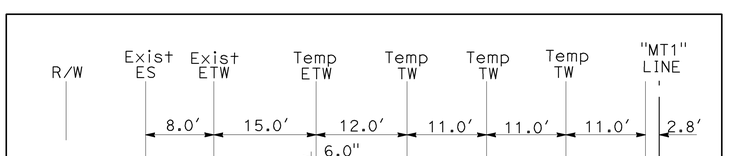
NOTES: 1) FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2) EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.





SECTION B-B
NO SCALE

TRAFFIC HANDLING PLAN
TH-2

SCALE: 1" = 20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MINOR A PROJECTS

FUNCTIONAL SUPERVISOR: DAVID M. POUND
CALCULATED-DESIGNED BY: THIN BUI
CHECKED BY: GERRY CRUZ
REVISED BY
DATE REVISED

LAST REVISION 02-09-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	14	31

REGISTERED CIVIL ENGINEER DATE 02-10

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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

TRAFFIC HANDLING QUANTITIES

SHEET	ROUTE	LINE	DIRECTION	STATION BEGIN	STATION END	TEMPORARY RAILING (TYPE K) (LF)	TRAFFIC PLASTIC DRUM (EA)
TH-1	905	"MT1"	WB	202+00.00	203+50.00	150	
TH-2	905	"MT1"	WB	203+50.00	205+80.00	230	
			WB	205+80.00	208+29.81		6
					TOTAL	380	6

TEMPORARY PAVEMENT DELINEATION

SHEET	ROUTE	LINE	DIRECTION	STATION BEGIN	STATION END	TEMPORARY PAVEMENT MARKER DETAIL No.	(EA) NON-REFLECTIVE TYPE A WHITE	(EA) RETROREFLECTIVE TYPE G CLEAR	TEMPORARY TRAFFIC STRIPE (PAINT) (LF) SOLID STRIPE	REMOVE THERMOPLASTIC TRAFFIC STRIPE (LF)	REMOVE PAVEMENT MARKER (N) (EA)
TH-1	905	"MT1"	WB	200+49.28	203+50.00	13	28	7			
				200+49.28	203+50.00	13					35
				200+66.65	203+50.00	13	24	7			
				200+66.65	203+50.00	13					31
				200+82.31	203+50.00	38		12	269.00		
				200+82.31	203+50.00	38				535.38	12
				202+00.00	203+50.00	27B			150.00		
				201+30.00	203+50.00	38				440.00	10
TH-2	905	"MT1"	WB	203+50.00	204+85.25	13	12	4			
				203+50.00	204+85.25	13					16
				203+50.00	204+85.25	13	12	4			
				203+50.00	204+85.25	13					16
				203+50.00	204+85.25	38		7	135.25		
				203+50.00	204+85.25	38				270.50	7
				203+50.00	204+85.25	27B			135.25		
				203+50.00	204+85.25	38				270.50	7
					SUB TOTAL		76	41	689.50	1516.38	134
					TOTAL		117		689.50	1516.38 *	134

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

* SEE PAVEMENT DELINEATION QUANTITY SHEET FOR ADDITIONAL QUANTITIES.

TRAFFIC HANDLING QUANTITIES
THQ-1

REVISED BY | DATE REVISED
THIN BUI | GERRY CRUZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
DAVID M. POUND
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MINOR A PROJECTS

LAST REVISION 02-09-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	15	31

02-02-10
REGISTERED CIVIL ENGINEER DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN T. ADIBI
No. 54839
Exp. 06-30-10
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:

REPLACE PAVEMENT DELINEATION IN KIND, UNLESS INDICATED OTHERWISE.

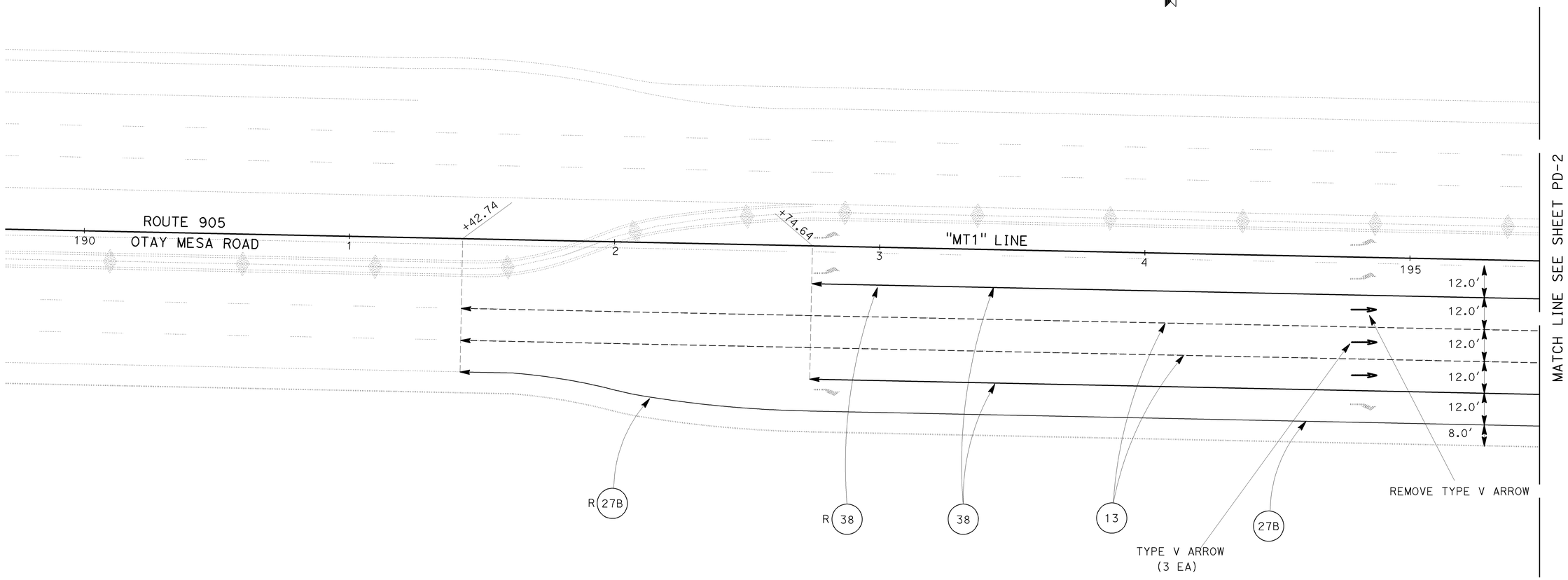
LEGEND

(XX) = PAVEMENT DELINEATION DETAIL

⟷ = BEGIN / END PAVEMENT DELINEATION DETAIL

R (XX) = REMOVE PAVEMENT DELINEATION DETAIL

S/S (XX) = STRAP AND SADDLE BRACKET METHOD ROADSIDE SIGN



PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1" = 20′

PD-1

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

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

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL
CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: SHAHIN ADIBI
REVISED BY / DATE REVISED

LAST REVISION 02-10-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	16	31

02-02-10
REGISTERED CIVIL ENGINEER DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN T. ADIBI
No. 54839
Exp. 06-30-10
CIVIL
STATE OF CALIFORNIA

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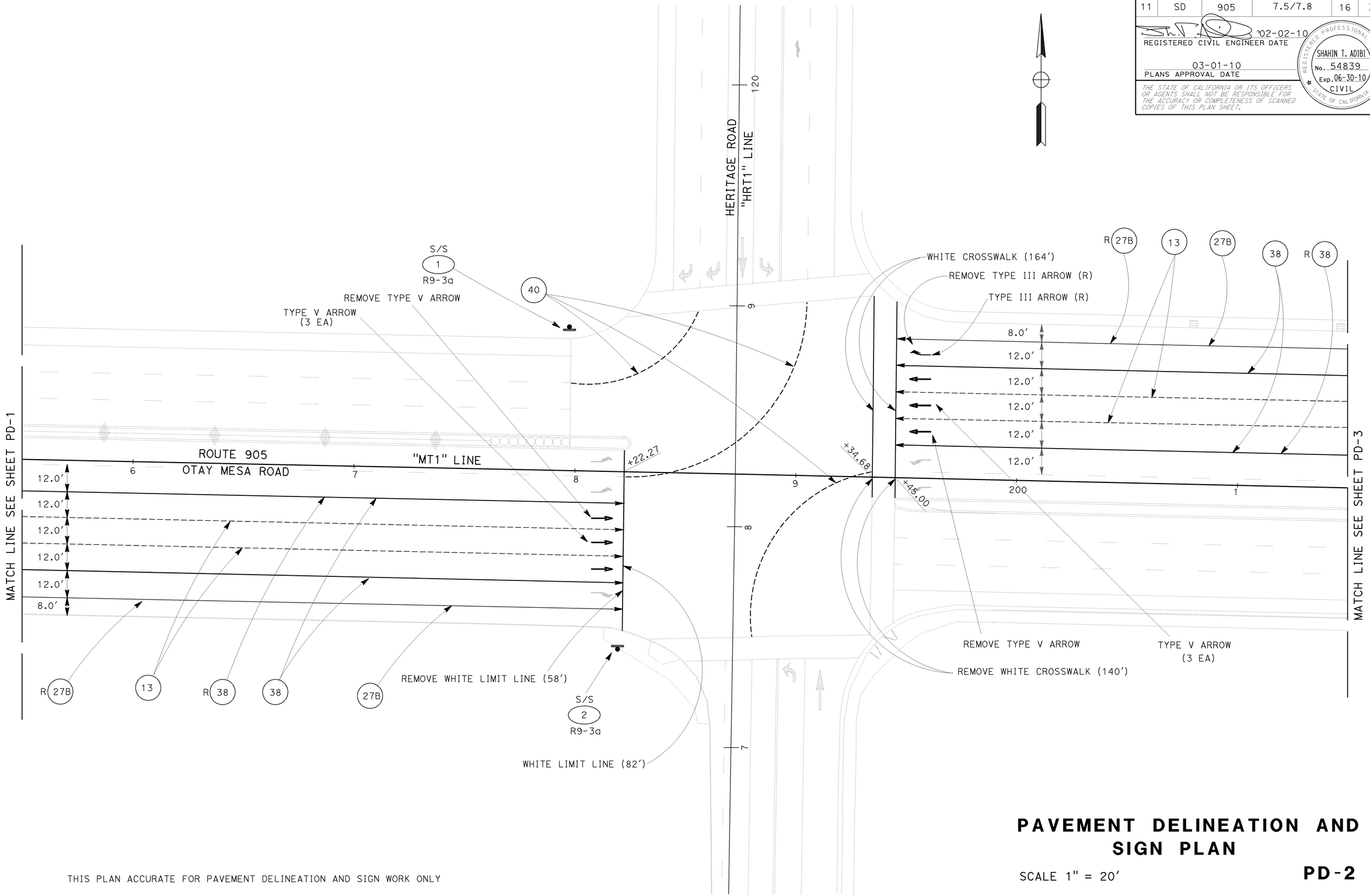

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1" = 20'

PD-2

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL

CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: SHAHIN ADIBI

REVISED BY
DATE REVISED

LAST REVISION 02-10-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	17	31

02-02-10
REGISTERED CIVIL ENGINEER DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHIN T. ADIBI
No. 54839
Exp. 06-30-10
CIVIL
STATE OF CALIFORNIA

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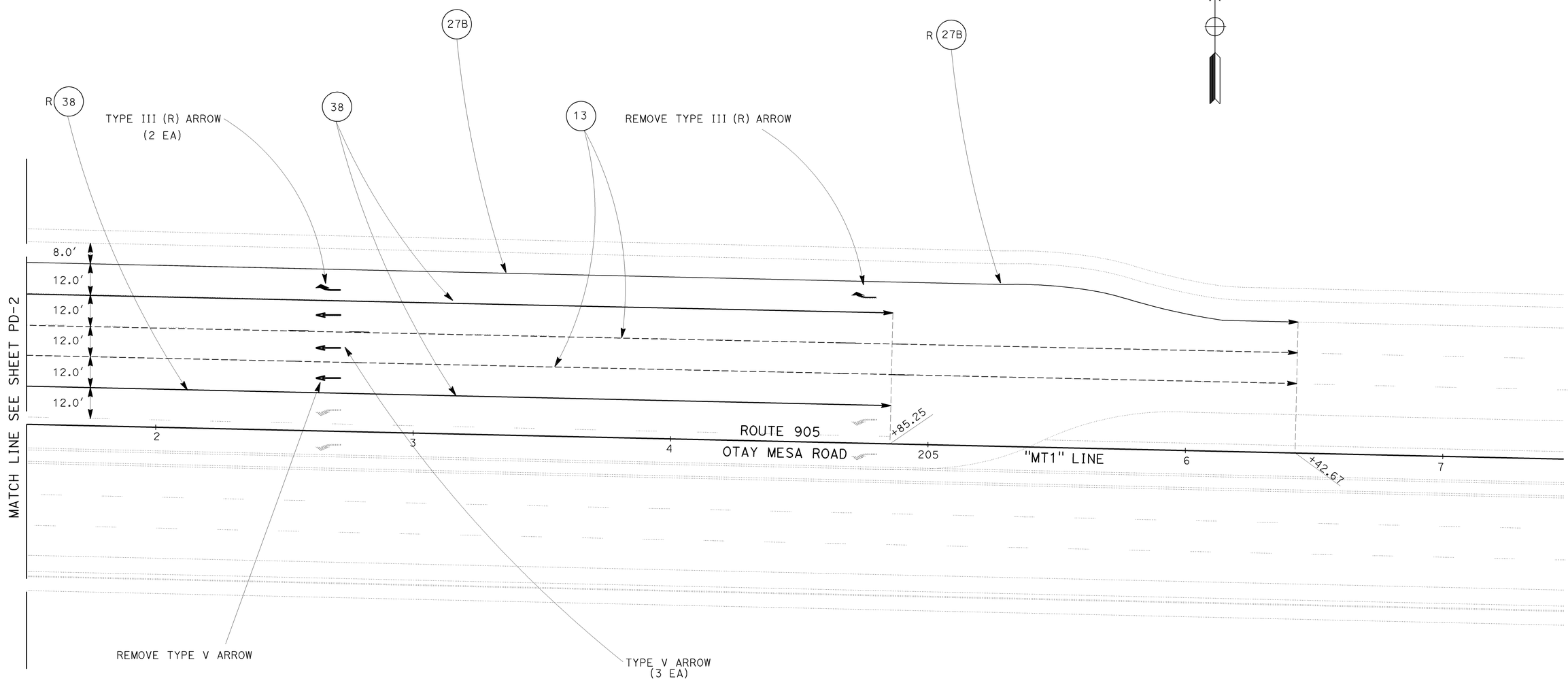

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1" = 20'

PD-3

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

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL
CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: SHAHIN ADIBI
REVISED BY
DATE REVISED

LAST REVISION 02-10-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	18	31

REGISTERED CIVIL ENGINEER 02-02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN T. ADIBI No. 54839 Exp.09/30/10 CIVIL STATE OF CALIFORNIA

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

PAVEMENT MARKER SUMMARY / TRAFFIC STRIPE SUMMARY

ROUTE	SHEET	DETAIL No.	NON-REFLECTIVE (EA) TYPE A WHITE	RETROREFLECTIVE (EA) TYPE G CLEAR	PAINT 4 INCH (LF) 2-COAT	THERMOPLASTIC (LF) 4 INCH BROKEN 6-1	THERMOPLASTIC (LF) 8 INCH	REMARKS
905	PD-1	13	72	20				410' X 2=820'
		27B			410			
		38		24			550	
	PD-2	13	80	21				544'+408'=952'
		27B			476			
		38		41			952	
		40				295		
	PD-3	13	84	24				493' X 2=986'
		27B			493			
		38		29			660	
		TOTAL	236	159	1379	295	2162	

REPLACE PAVEMENT DELINEATION IN KIND, UNLESS INDICATED OTHERWISE.

THERMOPLASTIC PAVEMENT MARKING

ROUTE	SHEET	X-WALK AND LIMIT LINE 12 in SQFT	ARROW TYPE III (R) SQFT	ARROW TYPE V SQFT
905	PD-1			99
	PD-2	246	42	198
	PD-3		84	99
	SUBTOTAL	246	126	396
	TOTAL	768		

REPLACE PAVEMENT DELINEATION IN KIND, UNLESS INDICATED OTHERWISE.

REMOVE THERMOPLASTIC PAVEMENT MARKING

ROUTE	SHEET	TRAFFIC STRIPE 8 INCH DETAIL 38 (LF)	X-WALK AND LIMIT LINE 12 in SQFT	ARROW TYPE III (R) SQFT	ARROW TYPE V SQFT
905	PD-1	550			33
	PD-2	950	198	42	66
	PD-3	650		84	33
	SUBTOTAL	2150	198	126	132
	TOTAL	2150 *	456		

* SEE TRAFFIC HANDLING QUANTITY SHEET FOR ADDITIONAL QUANTITIES.

REMOVE PAVEMENT MARKER (N)

ROUTE	LOCATION	TYPE (EA) A	TYPE (EA) G
905	PD-1,PD-2, PD-3	232	118
	TOTAL	350	

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

REMOVE PAINTED TRAFFIC STRIPE

ROUTE	LOCATION	DETAIL No.	PAINT (LF)
905	PD-1,PD-2, PD-3	27B	1375
		TOTAL	1375

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: SHAHIN ADIBI
REVISED BY
DATE REVISED

LAST REVISION 02-10-10
DATE PLOTTED => 02-MAR-2010
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	19	31

REGISTERED CIVIL ENGINEER 02-02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHIN T. ADIBI No. 54839 Exp. 09/30/10 CIVIL STATE OF CALIFORNIA

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

NOTES:

1. CALIFORNIA SIGN QUANTIITES ARE DESIGNATED BY (CA) OTHERWISE FEDERAL (MUTCD) SIGN CODES ARE SHOWN.
2. EXACT LOCATION OF SIGNS TO BE DETERMINED BY THE ENGINEER.
3. REFER TO "FURNISH ROADSIDE SIGN PANEL" CHART FOR FURTHER INFORMATION.

ROADSIDE SIGN QUANTITIES

SIGN No.	CODE	SHEET No.	PANEL SIZE Horiz	PANEL SIZE Vert	INSTALL SIGN (STRAP & SADDLE BRACKET METHOD)
			INCHES X INCHES		EA
1	R9-3a	PD-2	24 X 24		1
2	R9-3a	PD-2	24 X 24		1
			TOTAL		2

NOTES:

1. REFER TO "ROADSIDE SIGN QUANTITIES" CHART FOR FURTHER INFORMATION.
2. GREEN-Grn, WHITE-Wht, BLACK-Blk, BLUE-Blu, YELLOW-Ylw, BROWN-Brn, RED-Red, ORANGE-Org, CREAM-Crm.

FURNISH ROADSIDE SIGN PANEL

SIGN No.	CODE	PANEL SIZE Horiz	PANEL SIZE Vert	BACKGROUND SHEETING COLOR	BACKGROUND RETRO-REFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND REFLECTIVE ASTM TYPE	LEGEND BLACK(NON-REFLECTIVE)	SIGN PANEL SINGLE SHEET ALUMINUM (SQFT) UNFRAMED 0.063 INCHES	SIGN PANEL PROTECTIVE OVERLAY PREMIUM FILM
		INCHES X INCHES								
1	R9-3a	24 X 24		Wht	IV	Red/Blk	IV	X	4.0	X
2	R9-3a	24 X 24		Wht	IV	Red/Blk	IV	X	4.0	X
								TOTAL	8.0	

SIGN QUANTITIES
SQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: SHAHIN ADIBI
REVISED BY
DATE REVISED

LAST REVISION 02-10-10
DATE PLOTTED => 02-MAR-2010
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	20	31

REGISTERED CIVIL ENGINEER 02-02-10 DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVE SANDERFER No. C29666 Exp. 03-31-11 CIVIL STATE OF CALIFORNIA

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

DRAINAGE QUANTITIES

SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	CONCRETE COLLAR (N) TYPE L-1 (EA)	CONCRETE COLLAR (N) TYPE L-2 (EA)	24" RCP (LF)	Max COVER (N) (LF)	PIPE JOINT CLASSIFICATION (N)	DESCRIPTION	STATION OFFSET (LF)	STATION SIDE R+	STATION SIDE L+	STATION FROM	STATION TO	ALIGNMENT	DRAINAGE SYSTEM No.	DRAINAGE UNIT
D-1	1	a	1	1	10.0	12.95	D	24" RCP WITH Conc COLLARS	67.31		L+	202+61.36	202+61.36	MT1	1	a
			TOTAL		10.0											

(N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
D = DOWNDRAIN JOINT TYPE

ROADWAY QUANTITIES

SHEET	ROUTE	LINE	DIRECTION	STATION BEGIN	STATION END	TRAVELED WAY SHOULDER (SQFT)	TRAVELED WAY TRAVELED WAY (SQFT)	COLD PLANE ASPHALT CONCRETE PAVEMENT (SQYD)	ROADWAY EXCAVATION (CY)	CLASS 2 AGGREGATE BASE (CY)	TACK COAT (TON)	ASPHALTIC EMULSION (FOG SEAL COAT) (N) (TON)	HOT MIX ASPHALT (TYPE C) (TON)	REMOVE Conc CURB AND SIDEWALK (CY)	MINOR Conc (CURB AND SIDEWALK) (CY)
L-1	905	"MT1"	EB	191+42.67	195+50.00		9,775.92	1086.21			0.26		176.51		
L-2	905	"MT1"	EB	195+50.00	198+22.67		6,544.08	727.12			0.17		118.16		
			WB	199+45.00	201+50.00		4,920.00	546.67			0.13		88.83		
L-3	905	"MT1"	WB	201+50.00	206+42.67	800.24	13,024.44	1313.79	211.17	177.83	0.34	0.03	278.51	13.89	13.89
							TOTAL	3673.79	211.17	177.83	0.90	0.03	662.01	13.89	13.89

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

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
THIN BUI | GERRY CRUZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: DAVID M. POUND
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MINOR A PROJECTS

LAST REVISION 02-10-10 | DATE PLOTTED => 03-MAR-2010 | TIME PLOTTED => 10:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	21	31

Joseph Rand 03-01-10
REGISTERED ELECTRICAL ENGINEER DATE

03-01-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH RAND No. 11131 Exp. 06-30-11 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: 1) FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.
2) EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

NOTES:

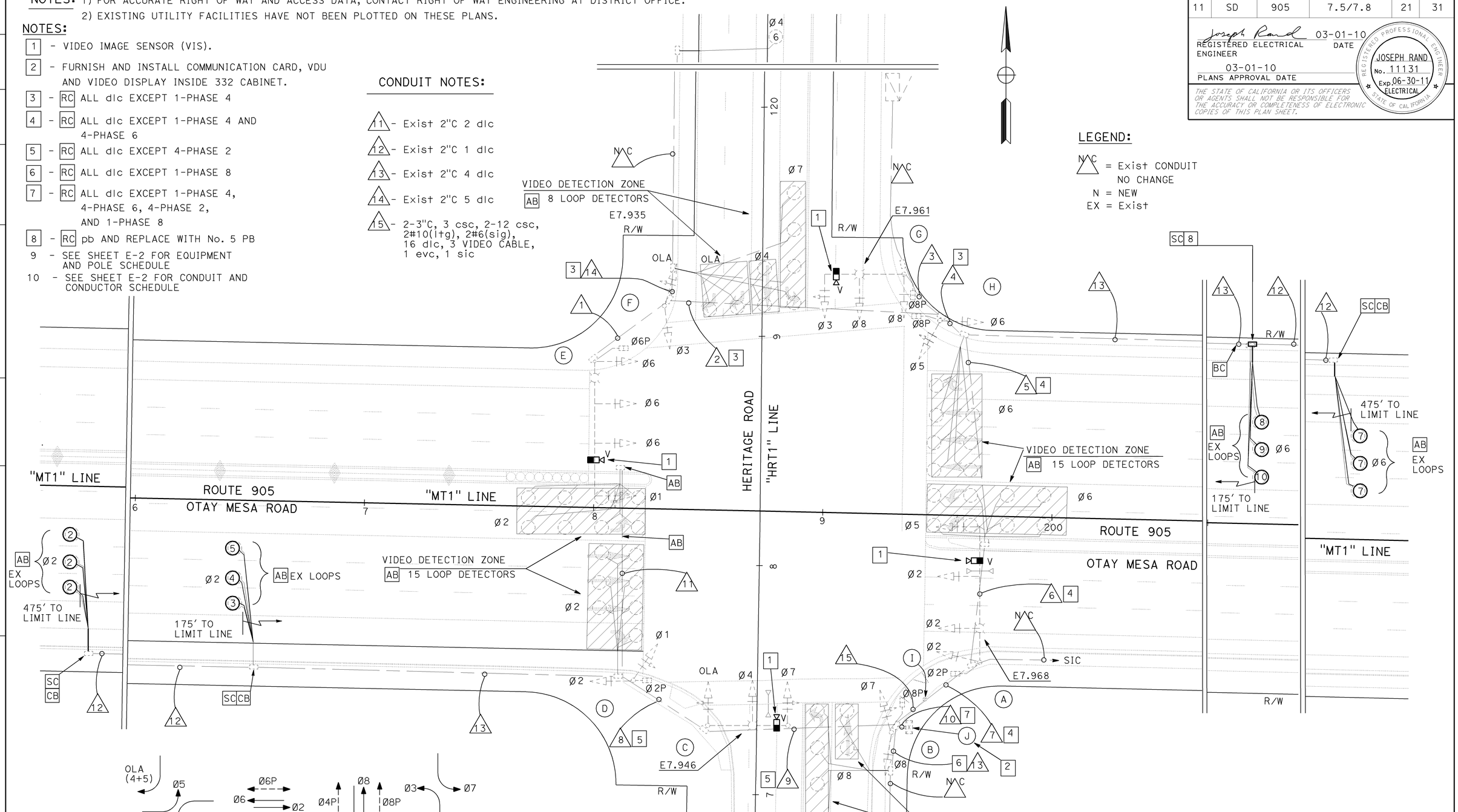
1 - VIDEO IMAGE SENSOR (VIS).
2 - FURNISH AND INSTALL COMMUNICATION CARD, VDU AND VIDEO DISPLAY INSIDE 332 CABINET.
3 - RC ALL dlc EXCEPT 1-PHASE 4
4 - RC ALL dlc EXCEPT 1-PHASE 4 AND 4-PHASE 6
5 - RC ALL dlc EXCEPT 4-PHASE 2
6 - RC ALL dlc EXCEPT 1-PHASE 8
7 - RC ALL dlc EXCEPT 1-PHASE 4, 4-PHASE 6, 4-PHASE 2, AND 1-PHASE 8
8 - RC pb AND REPLACE WITH No. 5 PB
9 - SEE SHEET E-2 FOR EQUIPMENT AND POLE SCHEDULE
10 - SEE SHEET E-2 FOR CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT NOTES:

11 - Exist 2"C 2 dlc
12 - Exist 2"C 1 dlc
13 - Exist 2"C 4 dlc
14 - Exist 2"C 5 dlc
15 - 2-3"C, 3 csc, 2-12 csc, 2#10(itg), 2#6(sig), 16 dlc, 3 VIDEO CABLE, 1 evc, 1 sic

LEGEND:

N C = Exist CONDUIT NO CHANGE
N = NEW
EX = Exist



Exist TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

TRAFFIC SIGNAL No. P7.950
ROUTE 905 AT HERITAGE Rd

SIGNAL AND LIGHTING

SCALE 1" = 20'

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE WILSON
CALCULATED-DESIGNED BY: JOSEPH RAND
CHECKED BY: ENRIQUE BERNAL
REVISED BY / DATE REVISED

LAST REVISION 03-01-10 | DATE PLOTTED => 02-MAR-2010 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	7.5/7.8	22	31

REGISTERED ELECTRICAL ENGINEER — 03-01-10 DATE

03-01-10 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER JOSEPH RAND No. 11131 Exp. 06-30-11 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:

SEE SHEET E-1

CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	CONDUIT SIZE AND RUN * 3" 1	3" 2	3" 3	2-3" 4	2-3" 5	2-3" 6	2-3" 7	3" 8	3" 9	3-3" 10
No. 14 CONDUCTORS 3CSC		POLE - A							1			1
		B										1
		C									1 1	1 1
		D								1	1	1
		E	1	1		1	1	1	1			1
		F	1	1		1 1	1 1	1 1	1 1			1 1
		G			1 1	1 1	1 1	1 1	1 1			1 1
12CSC		H				1 1	1 1	1 1	1 1			1 1
		I										2
TOTAL 3CSC / 12CSC			1	1 2	2 2	3 4	3 4	3 4	3 5	1	1 2	7 8
14		PEU										
10		LIGHTING	2	2	2	2	2	2	2		2	
6		SIG CONTROLLER			2	2	2	2	2			2
TYPE B DLC	Ø1							4	4			
	Ø2									7	7	
	Ø3											
	Ø4			2		2	2	2	2			
	Ø5									4	4	
	Ø6					7	7	7	7			
	Ø7			2		2	2	2	2			
	Ø8											
	OLA					1	1	1	1			1
VIDEO CABLE HARNESS (N)	2	POLE - A							1			1
	4/7	C									1	1
	6	E	1	1		1	1	1	1			1
	3/8	G			1	1	1	1	1			1
EVC									1		1	2
SIC		INTERCONNECT							1			1
TOTAL CONDUCTORS / CABLES (Exist)			3	9	8	23	23	27	30	12	17	21
TOTAL CABLES (Exist & N)			4	10	9	25	25	29	33	12	18	25
NOTES				3		3	4	4	4	5	5	7

* ALL CONDUIT AND CONDUCTORS ARE EXISTING UNLESS LABELED (N).

EQUIPMENT AND POLE SCHEDULE **

Loc	STANDARD TYPE	SMA (FT)	LMA (FT)	PLACEMENT DIMENSIONS A (FT)	B (FT)	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN PPB	REMARKS
A	29A-5-80	60	15	Exist		SV-1-T	MAT 2 MAS	SP-1-T		310W HPS SPECIAL HEAVY DUTY POLE
B	1A (10′)			Exist		TV-2-T		SP-1-T		
C	24-4-80	35	15	Exist		SV-1-T	MAT MAS		Ø2P ←	310W HPS
D	1A (10′)			Exist		TV-2-T		SP-1-T		
E	29A-5-80	60	15	Exist		SV-1-T	MAT 2 MAS	SP-1-T		310W HPS SPECIAL HEAVY DUTY POLE
F	1A (10′)			Exist		TV-2-T			Ø6P →	
G	24-4-80	35	15	Exist		SV-1-T	MAT MAS	SP-1-T	Ø6P ←	310W HPS
H	1A (10′)			Exist		TV-2-T		SP-1-T	Ø8P ←	
I	PPB (4)			Exist					Ø2P → Ø8P ←	
J	Exist MODEL 170 CONTROLLER ASSEMBLY, TO REMAIN. 2									

** ALL EQUIPMENT Exist, TO REMAIN.

SIGNAL AND LIGHTING

NO SCALE

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE WILSON
CALCULATED-DESIGNED BY: JOSEPH RAND
CHECKED BY: ENRIQUE BERNAL
REVISED BY / DATE REVISED

LAST REVISION 03-01-10 | DATE PLOTTED => 02-MAR-2010 | TIME PLOTTED => 09:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	23	31

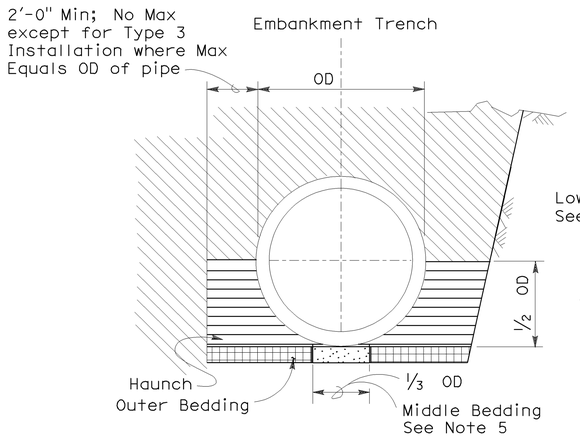
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

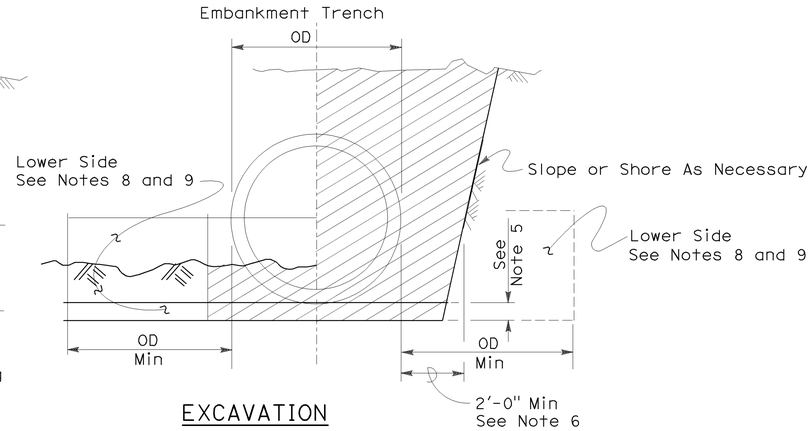
REGISTERED PROFESSIONAL ENGINEER Dallas Forester No. C37765 Exp. 12-31-06 CIVIL STATE OF CALIFORNIA

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 03-01-10



BACKFILL



EXCAVATION

Roadway Embankment

Structure Backfill (Culvert) See Note 6

Structure Backfill (Culvert) See Note 6

Loose Backfill

Excavation Structure (Culvert)

TYPE 1 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 30 and the maximum percentage passing the 75 μm sieve size shall be 12.

TYPE 2 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 25.

TYPE 3 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 85 percent relative compaction.

90 percent relative compaction will be required where the fill over the pipe is less than 4'-0" or 1/2 OD.

NOTES:

1. Unless otherwise shown on the plans or specified in the special provision, the Contractor shall have the option of selecting the class of RCP and the type of installation to be used, provided the height of cover does not exceed the value shown for the RCP selected.
   Example: 24" RCP culvert with maximum cover of 19'-0"' the options are:
   a) Class III or stronger with Installation Type 1.
   b) Class III Special or stronger with Installation Type 2.
   c) Class IV Special or stronger with Installation Type 3.
   Cover is defined as the maximum vertical distance from top of the pipe to finished grade within the length of any given culvert.
2. The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
3. The "length of any culvert" is defined as the culvert between:
   a) Successive drainage structure (inlets, junction boxes, headwalls, etc.).
   b) A drainage structure and the inlet or outlet end of the culvert.
   c) The inlet and outlet end of the culvert when there are no intervening drainage structures.
4. Oval and arch shaped RCP shall not be used.
5. 1/25 OD Min, not less than 3".
6. Slurry cement backfill may be substituted for backfill in the outer bedding and haunch areas. If slurry is used the outer and middle beddings shall be omitted. Prior to installation the soil under the middle 1/3 of the outside diameter of the pipe shall be softened by scarifying or other means to a minimum depth of 1/25 OD, but not less than 3". Where slurry cement backfill is used clear distance to trench wall may be reduced as set forth in Section 19-3.062 of the Standard Specifications.
7. Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimums.
8. Lower side shall be suitable material as determined by the Engineer. Otherwise it shall be considered unsuitable as set forth in Section 19-2.02 of the Standard Specifications. See Note 9.
9. Where the pipe is placed in a trench, if the trench walls are sloped at 5 vertical to 1 horizontal or steeper for at least 90 percent of the trench height or up to not less than 12" from the grading plane, the firmness of the soil in the lower side need not be considered.
10. Non-reinforced precast concrete pipe sizes 3'-0" or smaller may be placed under installation Types 1, 2 or 3.

INSTALLATION TYPE 1

MINIMUM CLASS AND D-LOAD	COVER	
	108" Dia AND SMALLER	OVER 108" Dia
Class II 1000D	14.9'	12.9'
Class III 1350D	15.0' - 20.9'	13.0' - 18.9'
Class III Special 1700D	21.0' - 26.9'	19.0' - 24.9'
Class IV 2000D	27.0' - 31.9'	25.0' - 29.9'
Class IV Special 2500D	32.0' - 40.9'	30.0' - 38.9'
Class V 3000D	41.0' - 49.9'	39.0' - 46.9'
Class V Special 3600D	50.0' - 59.0'	47.0' - 58.0'

INSTALLATION TYPE 2

MINIMUM CLASS AND D-LOAD	COVER
Class II 1000D	9.9'
Class III 1350D	10.0'- 14.9'
Class III Special 1700D	15.0' - 19.9'
Class IV 2000D	20.0' - 24.9'
Class IV Special 2500D	25.0' - 31.9'
Class V 3000D	32.0' - 38.9'
Class V Special 3600D	39.0' - 47.0'

INSTALLATION TYPE 3

MINIMUM CLASS AND D-LOAD	COVER	
	48" Dia AND SMALLER	OVER 48" Dia
Class II 1000D	7.9'	5.9'
Class III 1350D	8.0' - 10.9'	6.0' - 8.9'
Class III Special 1700D	11.0' - 14.9'	9.0' - 12.9'
Class IV 2000D	15.0' - 17.9'	13.0' - 15.9'
Class IV Special 2500D	18.0' - 21.9'	16.0' - 19.9'
Class V 3000D	22.0' - 26.9'	20.0' - 24.9'
Class V Special 3600D	30.0' - 33.0'	25.0' - 31.0'

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

EXCAVATION AND BACKFILL CONCRETE PIPE CULVERTS

NO SCALE

RSP A62DA DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A62DA DATED MAY 1, 2006 - PAGE 20 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A62DA

2006 REVISED STANDARD PLAN RSP A62DA

10-26-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	24	31

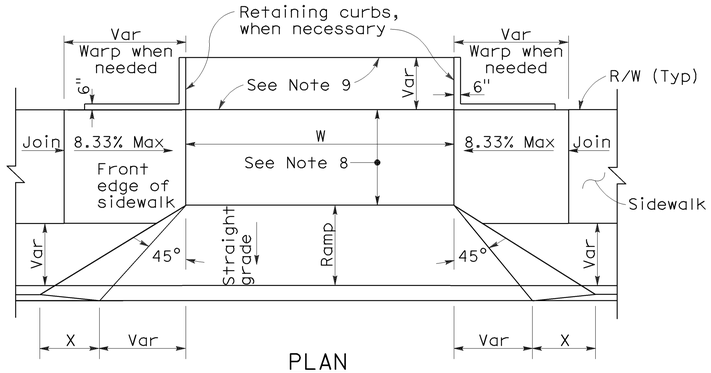
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

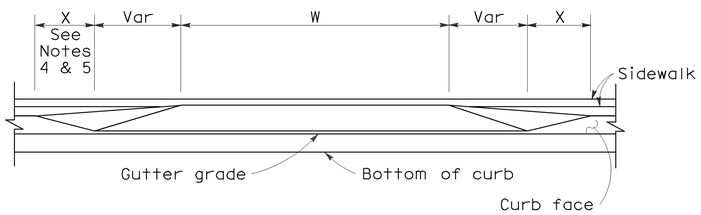
REGISTERED PROFESSIONAL ENGINEER Michael Janzen No. 44788 Exp. 03-31-08 CIVIL STATE OF CALIFORNIA

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.

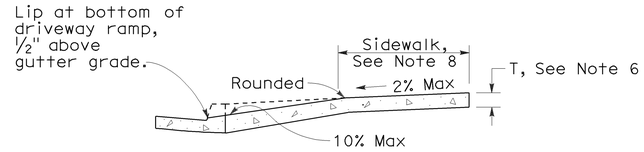
To accompany plans dated 03-01-10



PLAN

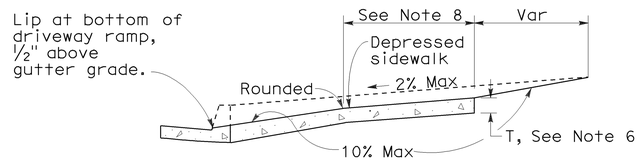


ELEVATION



CASE A

Typical driveway, sidewalk not depressed

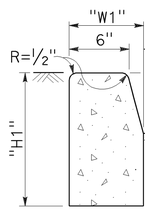


CASE B

Driveway with depressed sidewalk

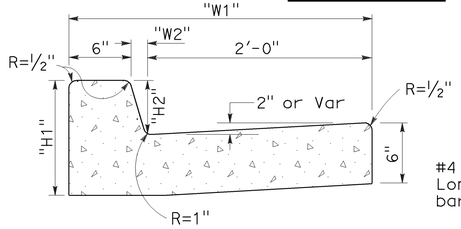
SECTIONS

DRIVEWAYS



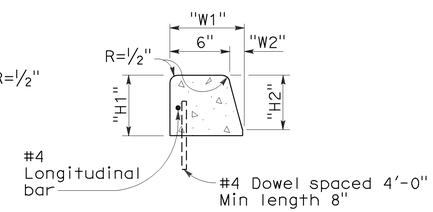
TYPE A1 CURBS

See Table A



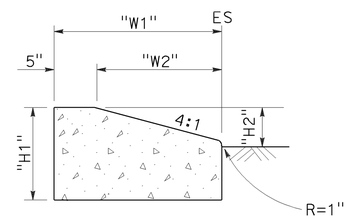
TYPE A2 CURBS

See Table A



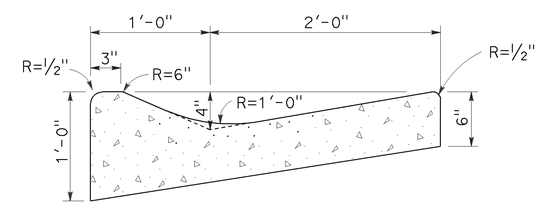
TYPE A3 CURBS

Superimposed on existing pavement
See Table A

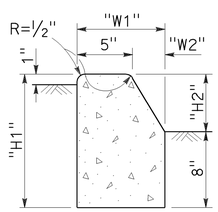


TYPE D CURBS

See Table A

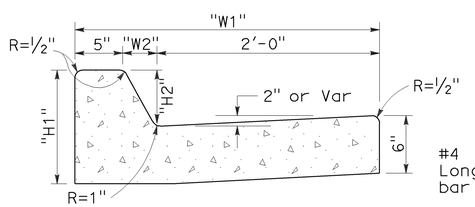


TYPE E CURB



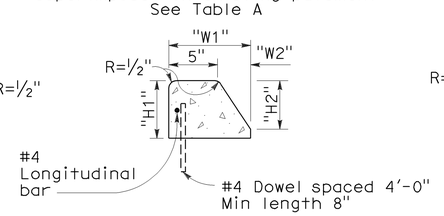
TYPE B1 CURBS

See Table A



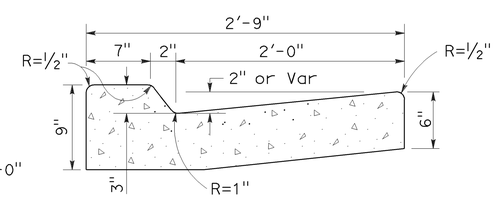
TYPE B2 CURBS

See Table A

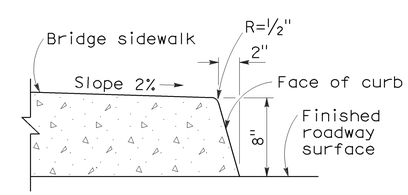


TYPE B3 CURBS

Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB

On Bridges

CURB QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

CURB TYPE	DIMENSIONS "H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7½"	1½"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7½"	1½"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7¼"	1¼"
A3-8	8"	7"	7¾"	1¾"
B1-4	1'-0"	4"	7½"	2½"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7½"	2½"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8½"	3½"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-8"

CURBS

NOTES:

1. Case A driveway section typically applies.
2. Use Case B driveway section when ramp slopes would exceed 10% in Case A.
3. Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
4. X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
5. X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
6. Sidewalk and ramp thickness "T" at driveway shall be 4" for residental and 6" for commercial.
7. Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
8. Minimum width of clear passageway for sidewalk shall be 4'-0".
9. Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
10. Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

NO SCALE

RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A87A

2006 REVISED STANDARD PLAN RSP A87A

10-25-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	25	31

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 03-01-10

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, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	26	31

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 03-01-10

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

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

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
11	SD	905	7.5/7.8	27	31

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 03-01-10

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345

10 ISL SCI 1.0

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

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

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

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

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

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

1 2 3 — Project note numbers

A B C — Equipment description, installation or item numbers

1 2 3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

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

MISCELLANEOUS EQUIPMENT

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

WIRING DIAGRAM LEGEND

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

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

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 — 9A(21)

Pull box-Additional designations or descriptions

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

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

VEHICLE DETECTORS

5 J 9 U

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	28	31

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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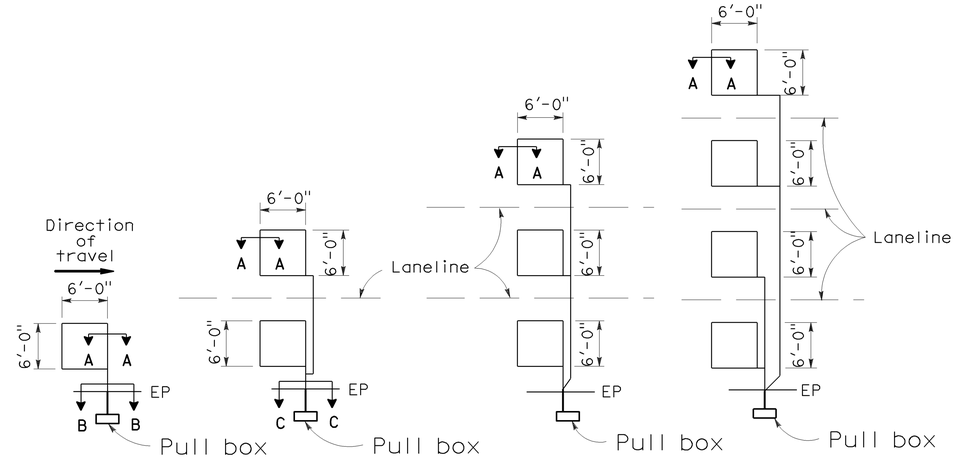
To accompany plans dated 03-01-10

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

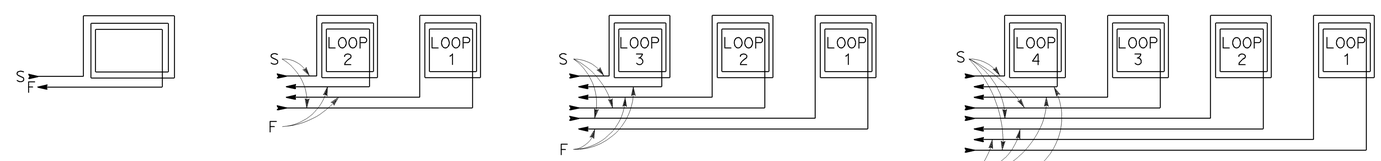


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

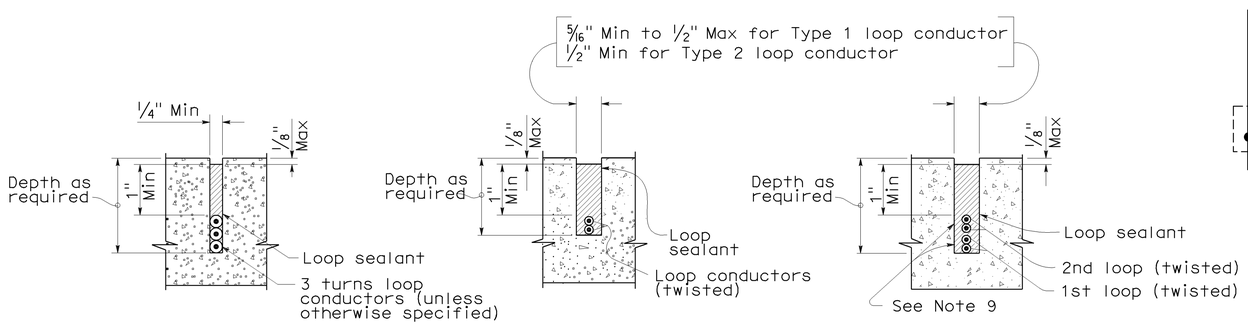
(Type A loop detector configurations illustrated)

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



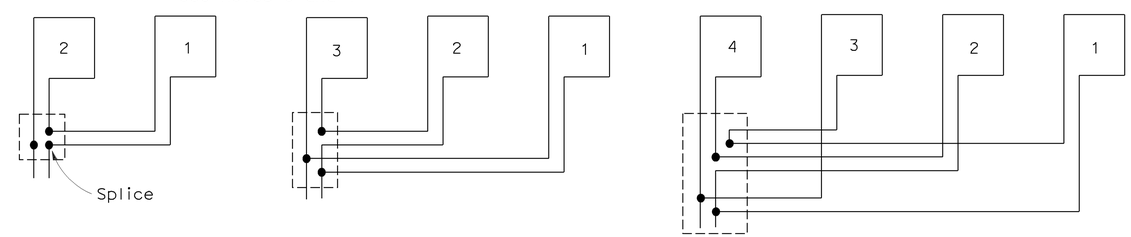
WINDING DETAILS

See Notes 6 and 7



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

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

8-17-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	29	31

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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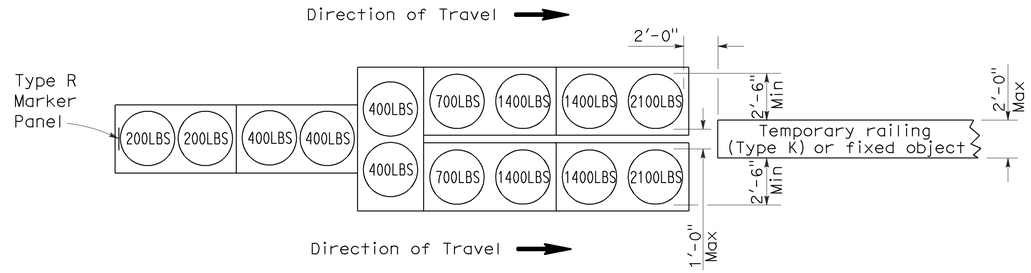
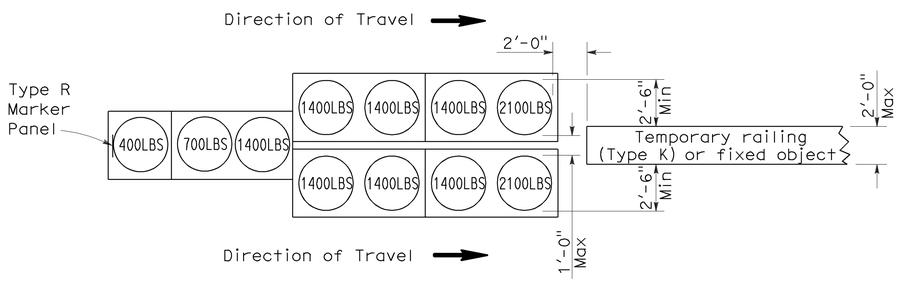
To accompany plans dated 03-01-10



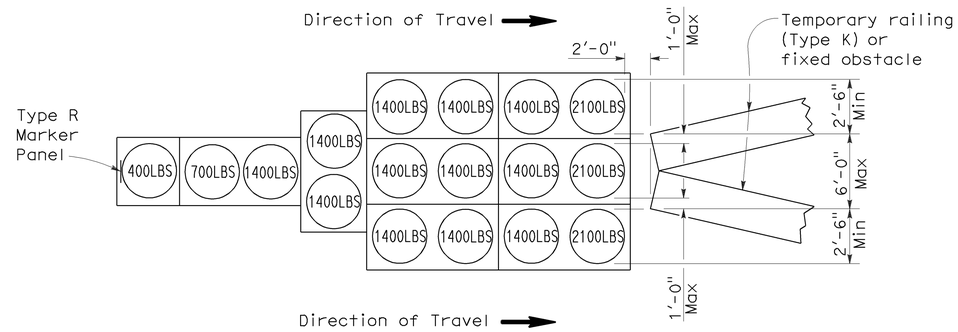
ARRAY 'TU14'

Approach speed 45 mph or more



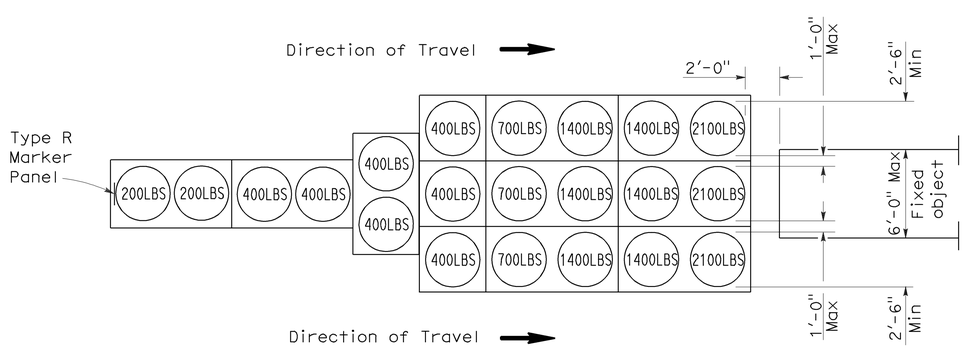
ARRAY 'TU11'

Approach speed less than 45 mph



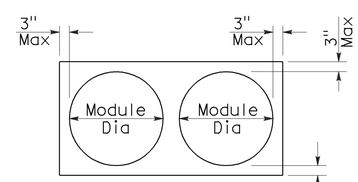
ARRAY 'TU17'

Approach speed less than 45 mph

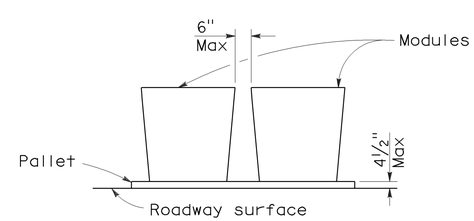


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	905	7.5/7.8	30	31

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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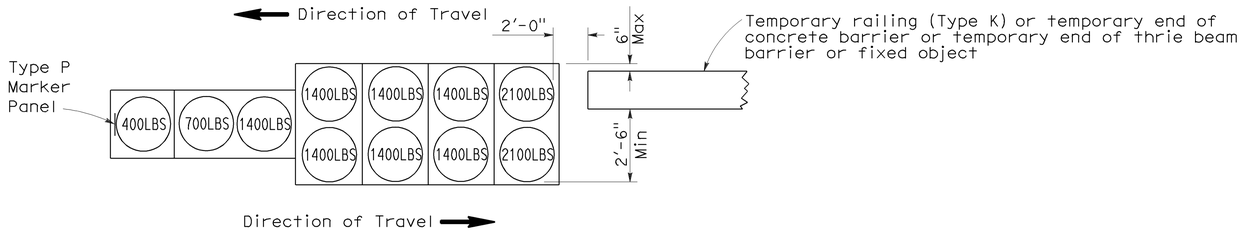
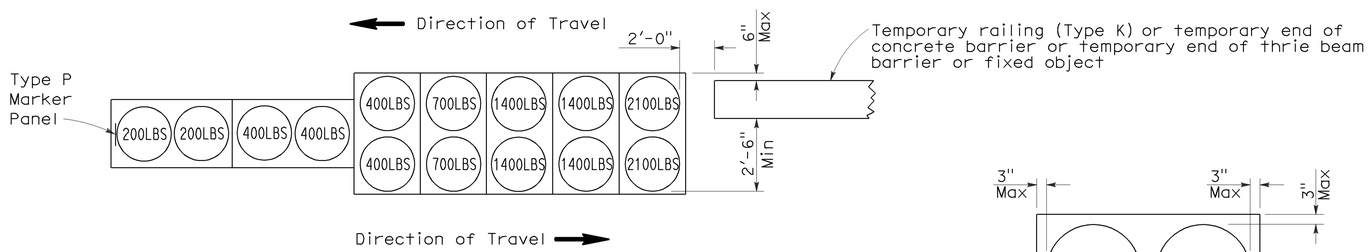
To accompany plans dated 03-01-10



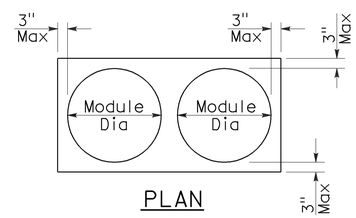
ARRAY 'TB11'

Approach speed less than 45 mph

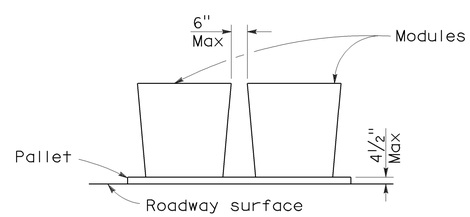


ARRAY 'TB14'

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
11	SD	905	7.5/7.8	31	31

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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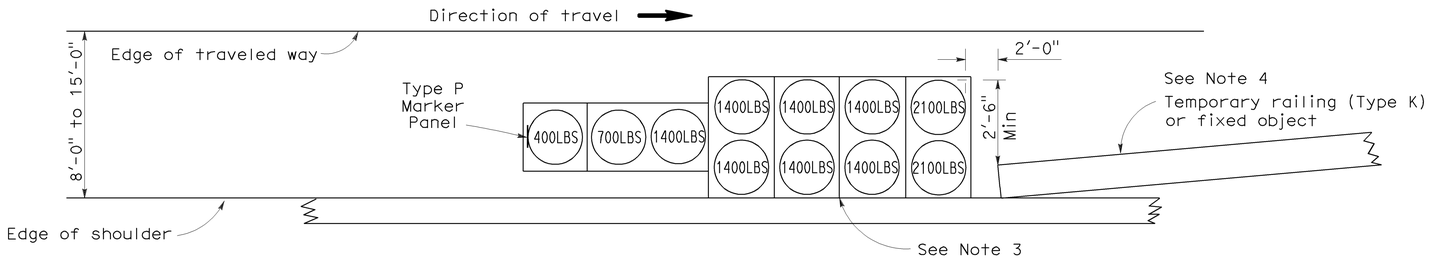
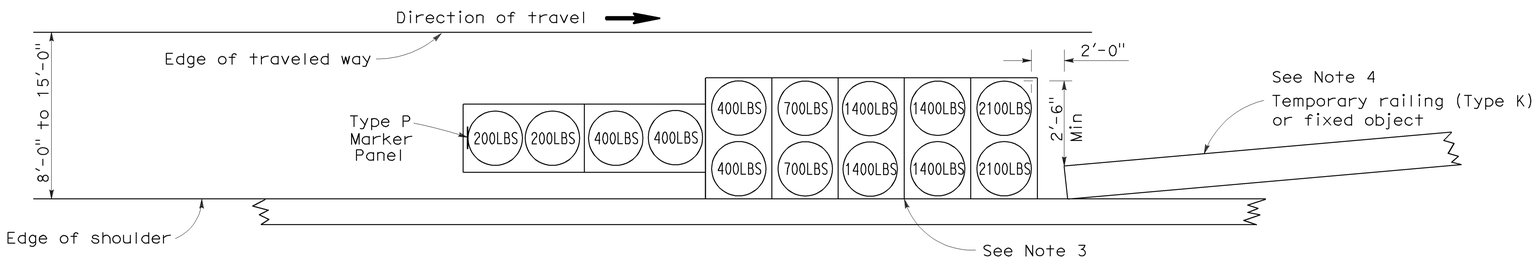
To accompany plans dated 03-01-10



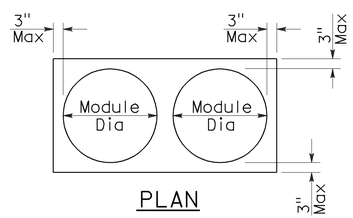
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

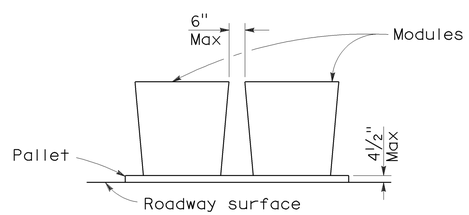


ARRAY 'TS14'

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