

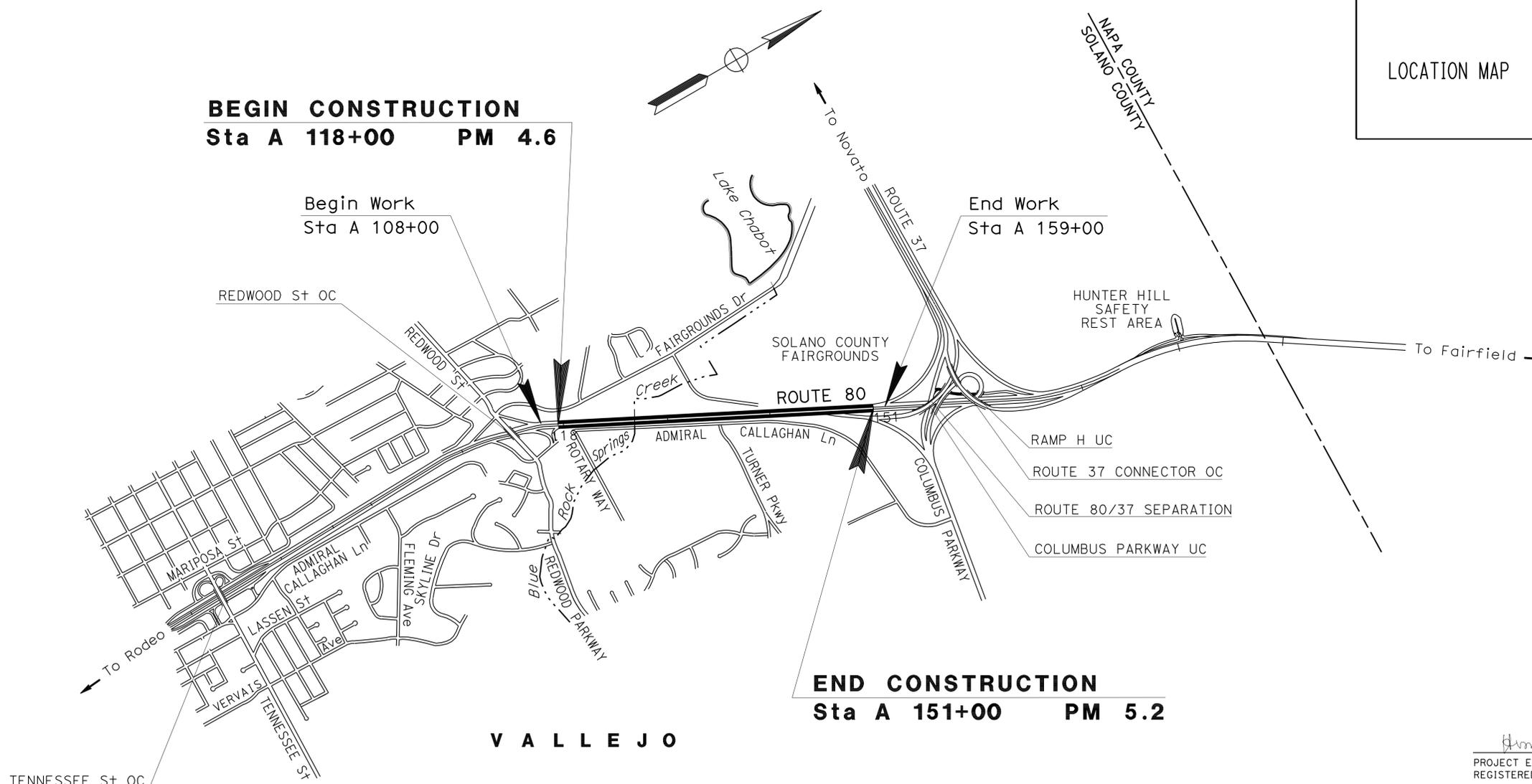
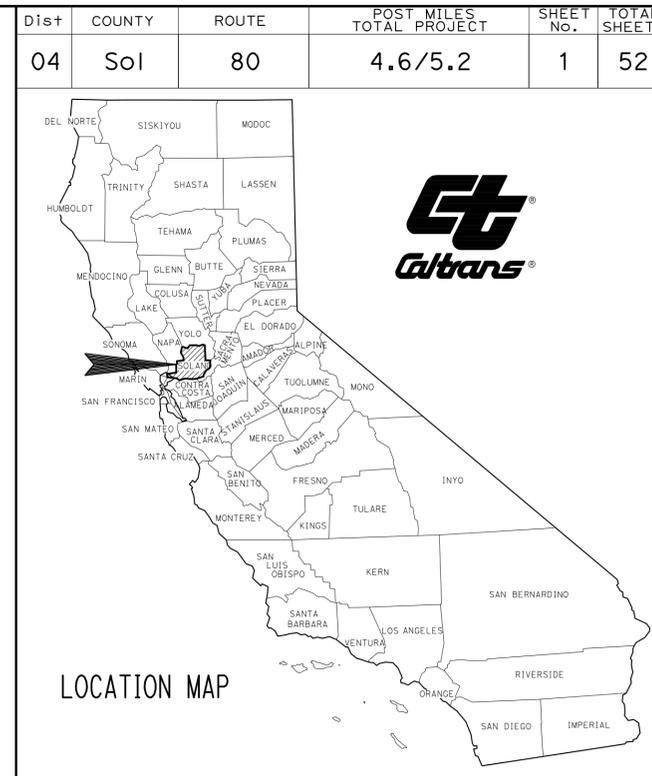
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTION
3-5	LAYOUTS
6	CONSTRUCTION DETAILS
7	EROSION CONTROL DETAILS
8-18	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
19-21	UTILITY PLANS
22-23	CONSTRUCTION AREA SIGNS
24-25	SIGN PLAN AND QUANTITIES
26	SUMMARY OF QUANTITIES
27-31	ELECTRICAL PLANS
32-52	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 **ACHSIMG-080-2(361)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SOLANO COUNTY
IN VALLEJO
FROM REDWOOD STREET ON-RAMP
TO ROUTE 37 CONNECTOR

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER
JAMES HSIAO

DESIGN ENGINEER
STEWART LEE

PROJECT ENGINEER
 REGISTERED CIVIL ENGINEER
 DATE: 10-28-10
 No. 67630
 Exp. 6-30-11
 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.

CONTRACT No.	04-4A4604
PROJECT ID	0400001136

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

NO SCALE

DATE PLOTTED => 23-MAR-2011 TIME PLOTTED => 06:17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: STEWART LEE
 CALCULATED/DESIGNED BY: HUMAYOUN KABIR
 CHECKED BY: JEFFREY NGUYEN
 REVISOR: HK
 DATE: 5/19/10

NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- SEE SUBSURFACE DRAIN SHEET FOR UNDERDRAIN LOCATION Sta. 135+50 TO Sta. 138+41.

LEGEND:

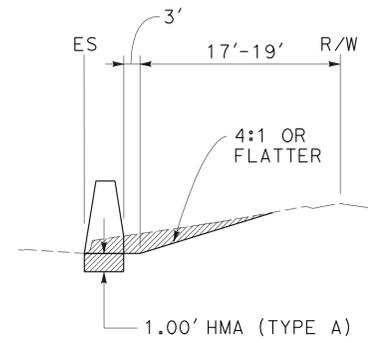
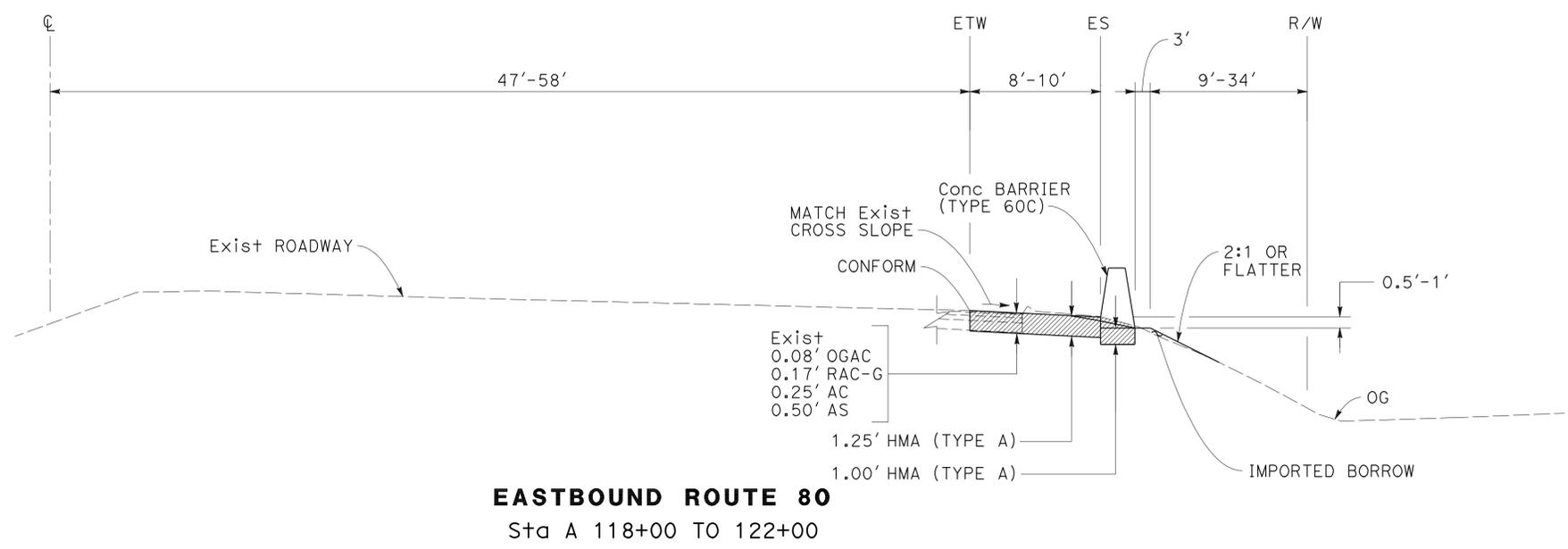
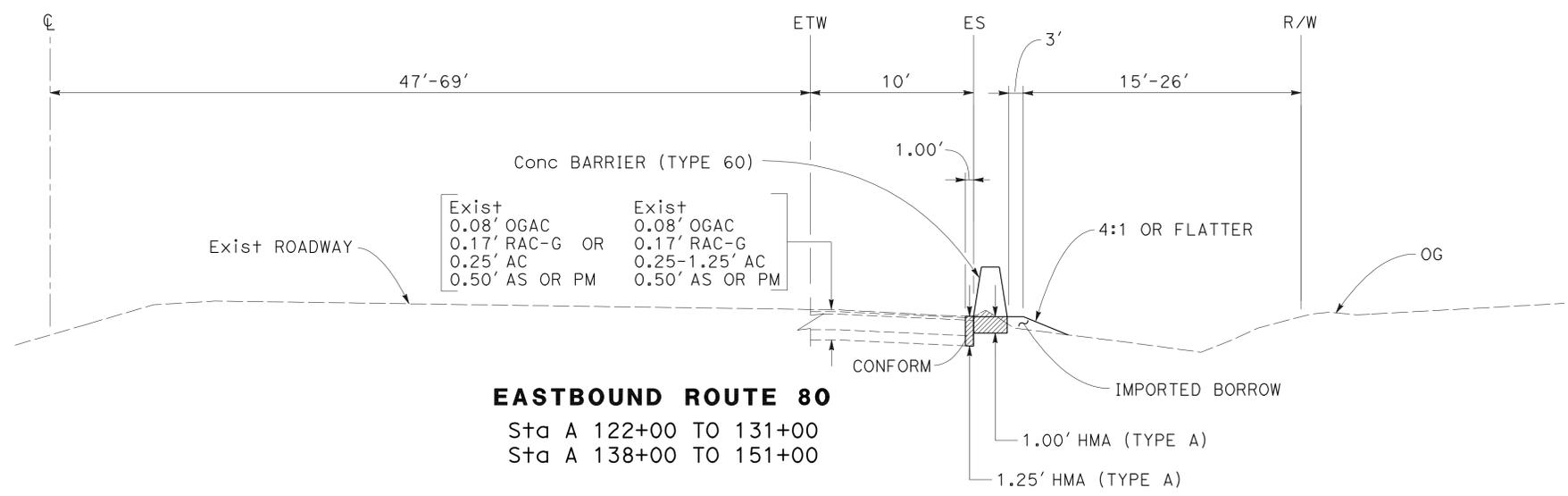
ROADWAY EXCAVATION (TYPE Z-2)

ABBREVIATION:

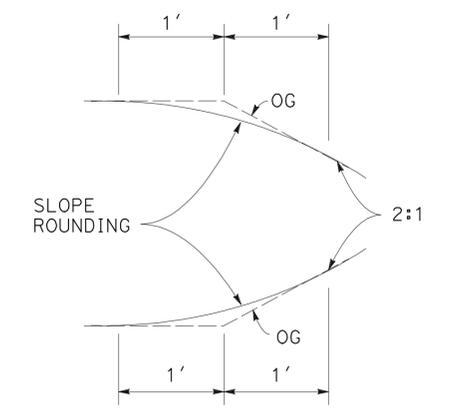
RAC-G RUBBERIZED ASPHALT CONCRETE (TYPE G)

**ROUTE 80
 DESIGN DESIGNATION**

ADT (2009) = 145,000 D = 57%
 DHV = 6250 T = 5%
 ESAL = 1 555 000 V = 75 mph
 TI = 10



CUT SECTION SHOULDER DETAIL



SLOPE ROUNDING DETAIL

TYPICAL CROSS SECTIONS
 NO SCALE

X-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	2	52

REGISTERED CIVIL ENGINEER: Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 CIVIL
 DATE: 10-28-10
 PLANS APPROVAL DATE: 1-31-11

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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE
 CALCULATED/DESIGNED BY: [blank]
 CHECKED BY: [blank]
 HUMANOUN KABIR
 JEFFREY NGUYEN
 REVISED BY: [blank]
 DATE REVISED: [blank]
 HK: [blank]
 5/11/10

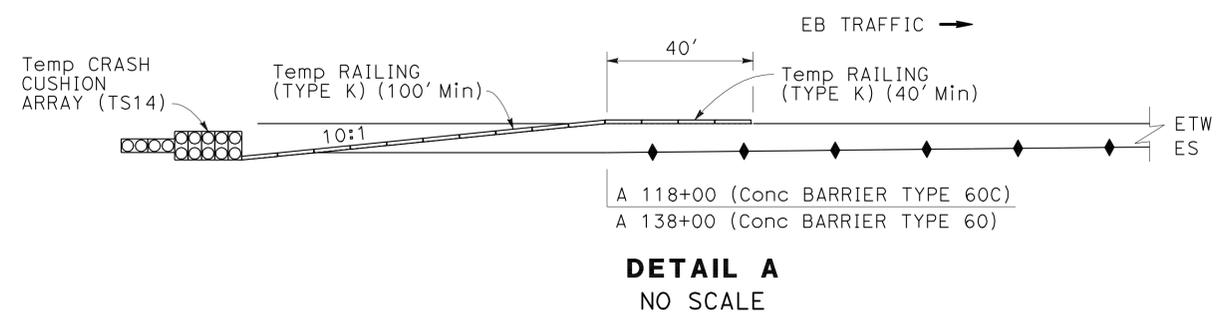
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

NOTE:
 1. INSTALL Temp RAILING (TYPE K) & Temp CRASH CUSHION,
 SAND FILLED ARRAY (TS14) TO PROTECT THE BLUNT END ON
 THE Conc BARRIER UNTIL THE ALTERNATIVE CRASH CUSHION
 IS INSTALLED. SEE DETAIL A.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	3	52

REGISTERED CIVIL ENGINEER: Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 DATE: 10-28-10
 PLANS APPROVAL DATE: 1-31-11

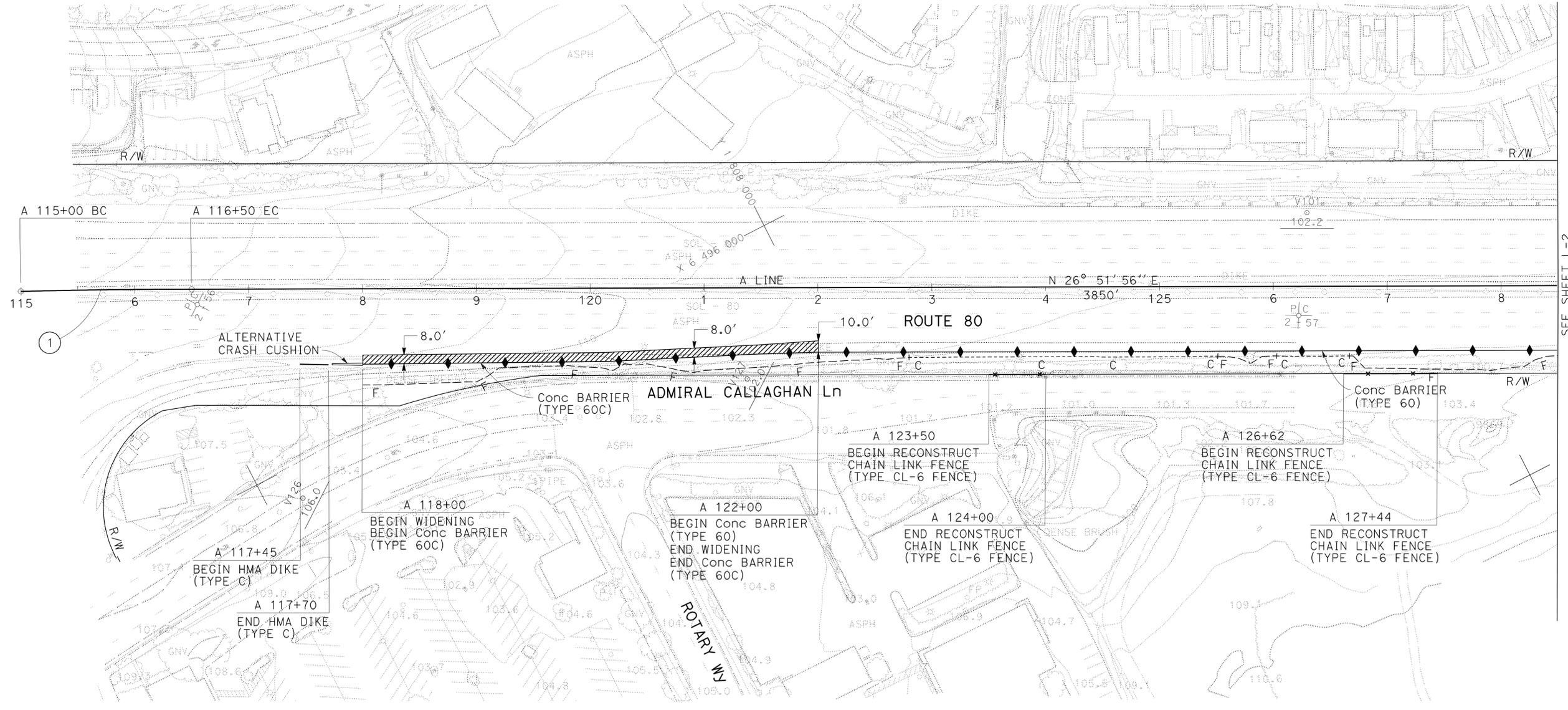
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEGEND:
 CONSTRUCT ROADWAY

CURVE DATA

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
①	4002.62'	02° 08' 50''	75'	150'	1807459.93	6495787.36



V A L L E J O

LAYOUT
 SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE
 CALCULATED/DESIGNED BY: [blank]
 CHECKED BY: [blank]
 HUMANOUR KABIR
 JEFFREY NGUYEN
 REVISED BY: [blank]
 DATE REVISED: [blank]
 HK
 5/11/10

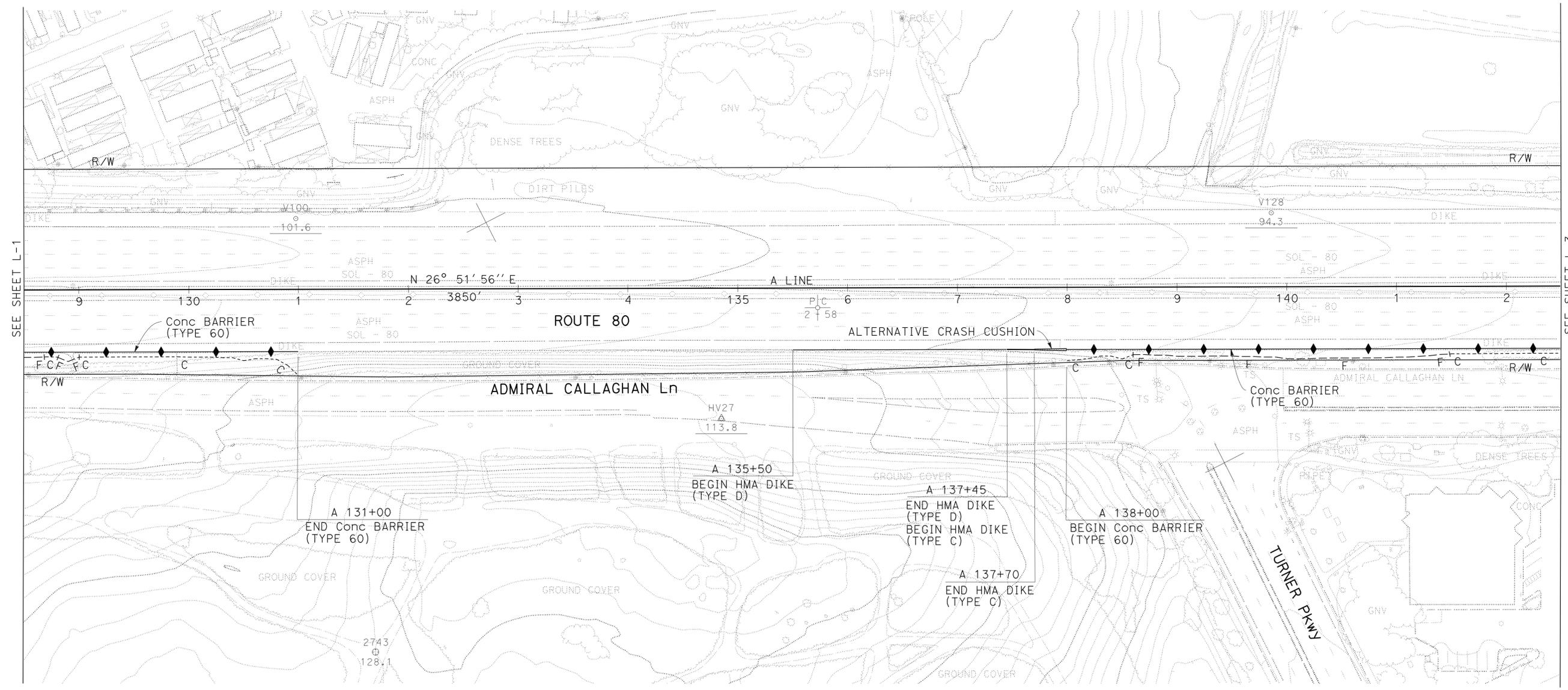
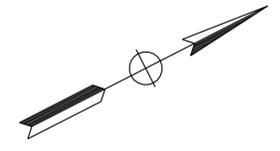
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	4	52

REGISTERED CIVIL ENGINEER: Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 CIVIL

DATE: 10-28-10
 PLANS APPROVAL DATE: 1-31-11

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.



V A L L E J O

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1



LAYOUT
 SCALE: 1" = 50'

LAST REVISION: DATE PLOTTED => 03-FEB-2011
 01-20-11 TIME PLOTTED => 10:53

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: STEWART LEE
 CALCULATED/DESIGNED BY: [blank]
 CHECKED BY: [blank]
 HUMANOUR KABIR
 REVISOR: HK
 DATE: 5/11/10

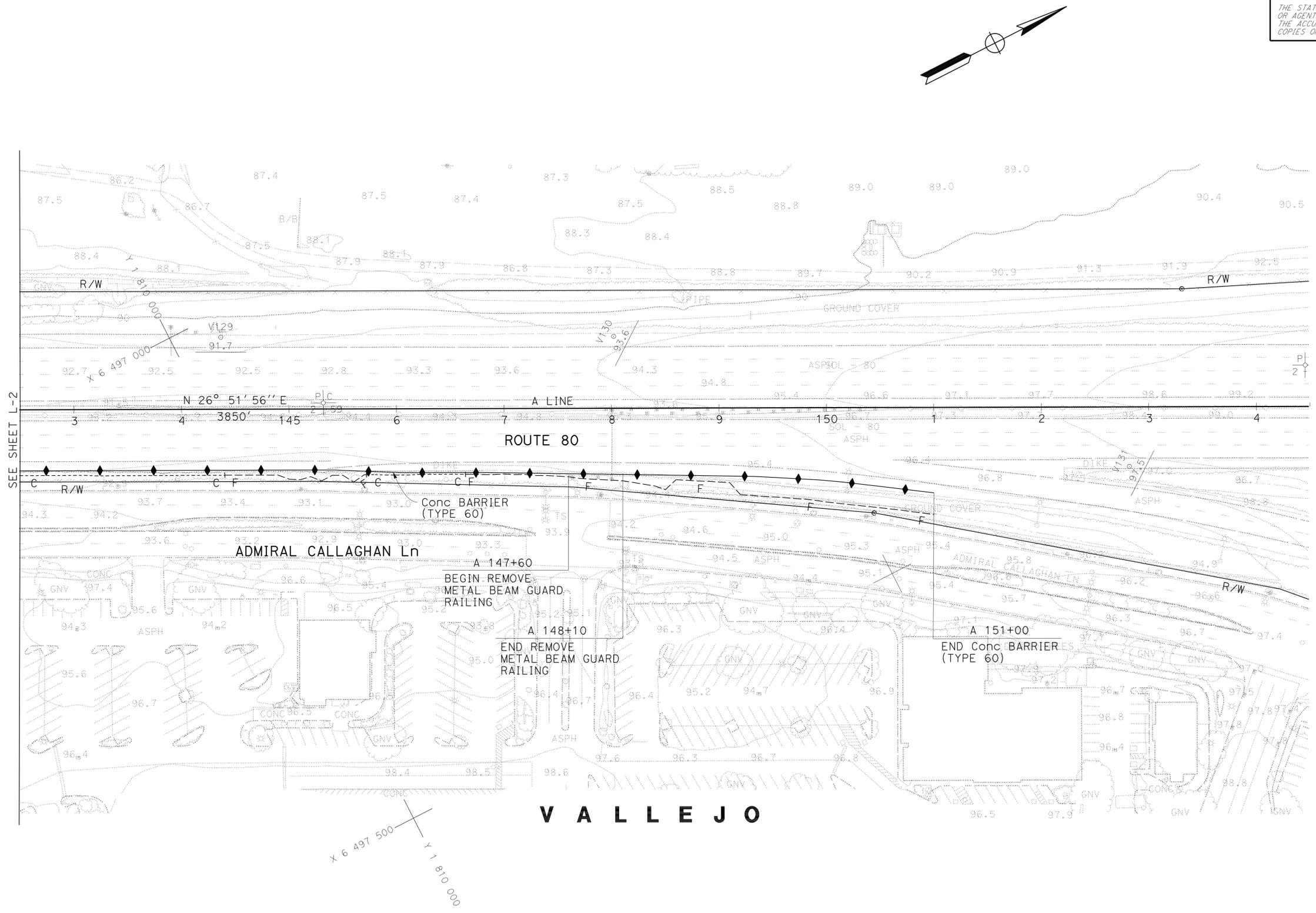
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	5	52

REGISTERED CIVIL ENGINEER: Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 CIVIL

DATE: 10-28-10
 PLANS APPROVAL DATE: 1-31-11

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.



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET L-1

LAYOUT
 SCALE: 1" = 50'

L-3

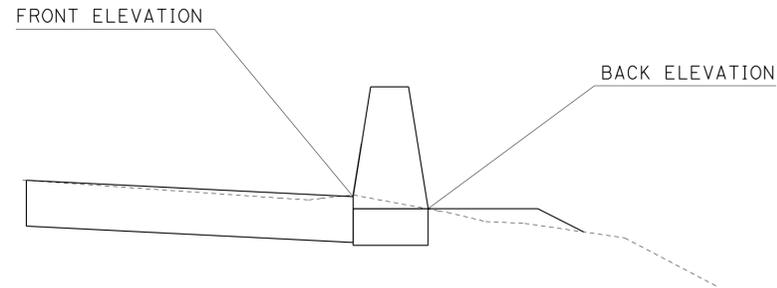
LAST REVISION: DATE PLOTTED => 03-FEB-2011 01-20-11 TIME PLOTTED => 10:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	6	52

<i>Humayoun Kabir</i>	11-5-10
REGISTERED CIVIL ENGINEER	DATE
1-31-11	
PLANS APPROVAL DATE	

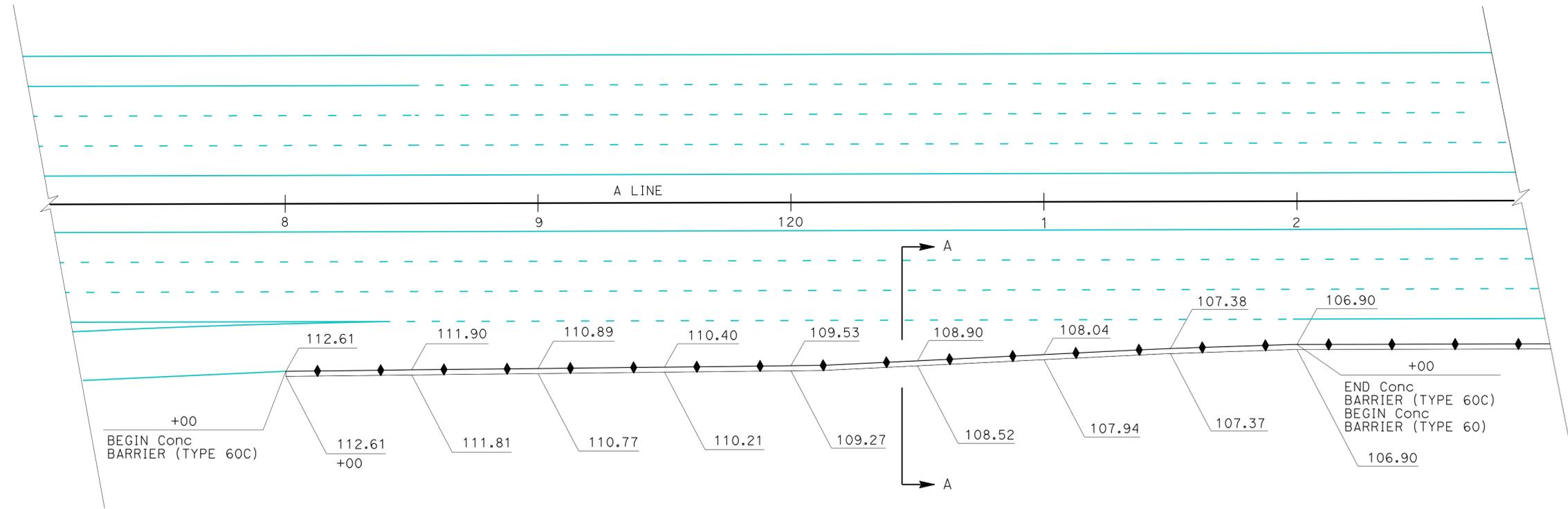
REGISTERED PROFESSIONAL ENGINEER
Humayoun Kabir
No. 67630
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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



SECTION A-A
TYPICAL CROSS SECTION
Conc BARRIER (TYPE 60C)

NOTE:
 UNLESS OTHERWISE SHOWN,
 CONCRETE BARRIER ELEVATIONS
 ARE AT EVERY 50 FEET, STATIONS.



CONCRETE BARRIER (TYPE 60C) ELEVATIONS

CONSTRUCTION DETAILS
 NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	STEWART LEE
CALCULATED/DESIGNED BY	CHECKED BY
HUMAYOUN KABIR	JEFFREY NGUYEN
REVISOR	DATE
HK	11/05/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	7	52

Alex McDonald
 LICENSED LANDSCAPE ARCHITECT

1-31-11
 PLANS APPROVAL DATE

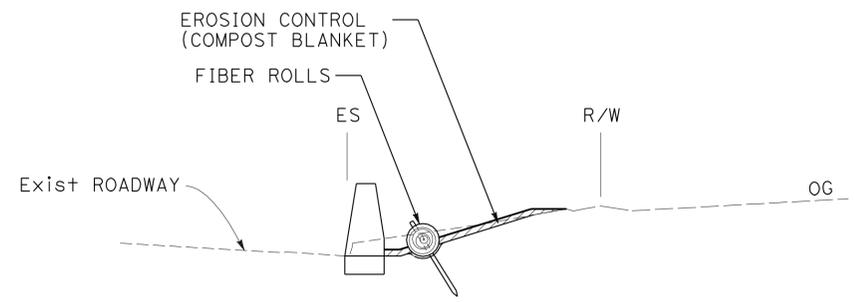
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



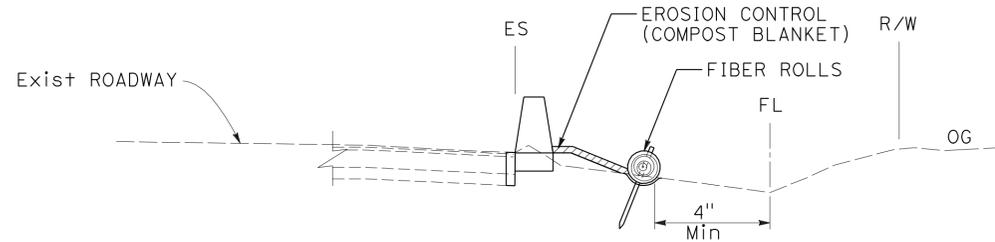
NOTE:

1. EROSION CONTROL LOCATIONS ARE DIAGRAMMATIC ONLY.

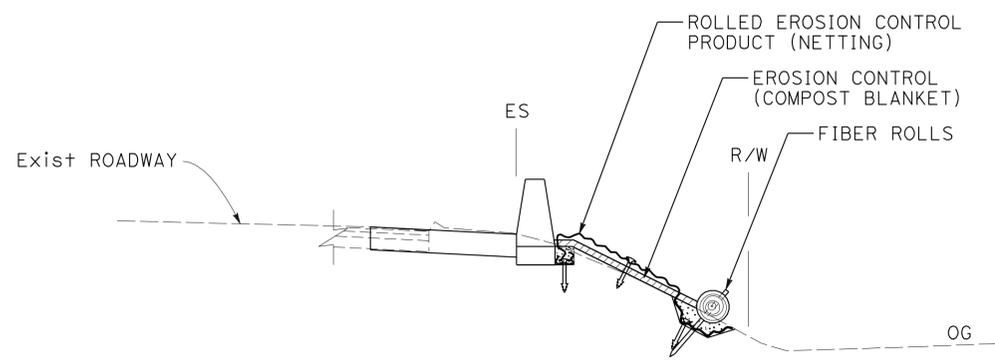
LEGEND:



**SECTION
 CUT SECTION SHOULDER DETAIL**
 EROSION CONTROL (TYPE 1)



**SECTION
 EASTBOUND ROUTE 80**
 Sta A 122+00 TO 131+00
 Sta A 138+00 TO 151+00
 EROSION CONTROL (TYPE 1)



**SECTION
 EASTBOUND ROUTE 80**
 Sta A 118+00 TO 122+00
 EROSION CONTROL (TYPE 2)

EROSION CONTROL QUANTITIES

STATION	LOCATION	TYPE	SQFT	EROSION CONTROL (COMPOST BLANKET)	ROLLED EROSION CONTROL PRODUCT (NETTING)	FIBER ROLLS
				CY	SQFT	LF
Sta A 118+00 TO 122+00	R+	2	4,102	13	4,102	400
Sta A 122+00 TO 131+00	R+	1	6,464	20	-	898
Sta A 138+00 TO 151+00	R+	1	9,578	30	-	1,300
TOTAL			20,144	63	4,102	2,598

EROSION CONTROL DETAILS
 NO SCALE

ECD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - WATER QUALITY

Caltrans

SENIOR LANDSCAPE ARCHITECT: DAVID W. YAM
 CHECKED BY: [Blank]
 CALCULATED/DESIGNED BY: [Blank]
 REVISOR: Jennifer Egawa
 DATE REVISOR: 11/04/10
 AKM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 HYDRAULICS

FUNCTIONAL SUPERVISOR: JOSEPH PETERSON
 CALCULATED/DESIGNED BY: KATHLEEN REILLY
 CHECKED BY: KATHLEEN REILLY
 REVISIONS:
 LC 5/19/10
 REVISED BY: DATE REVISED

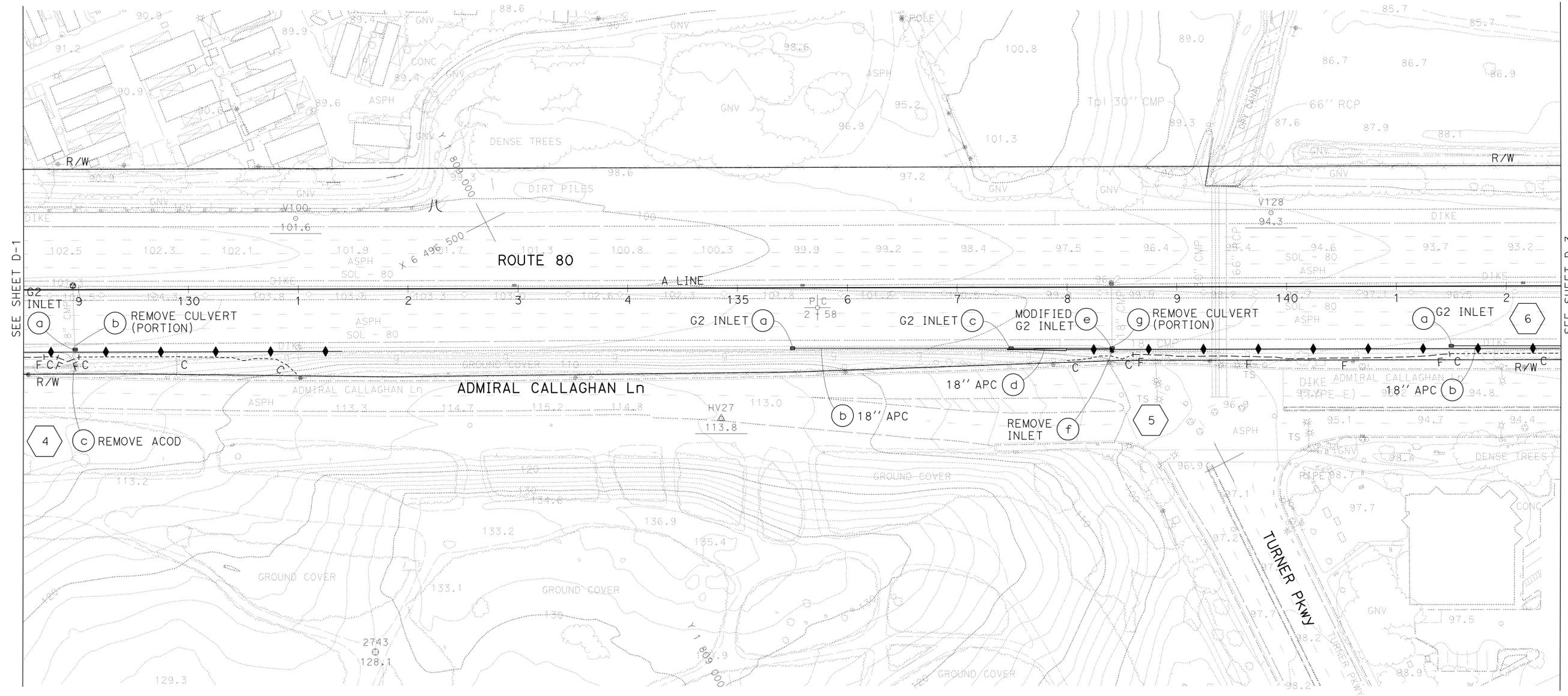
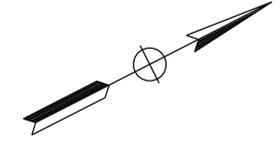
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	9	52

10-28-10
 Kathleen M. Reilly
 REGISTERED CIVIL ENGINEER
 DATE
 1-31-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Kathleen M. Reilly
 No. 53582
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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



SEE SHEET D-1

SEE SHEET D-3

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET D-1

THIS PLAN FOR DRAINAGE WORK ONLY

DRAINAGE PLAN
 SCALE: 1" = 50'

D-2

LAST REVISION DATE PLOTTED => 03-FEB-2011 01-11-11 TIME PLOTTED => 11:05

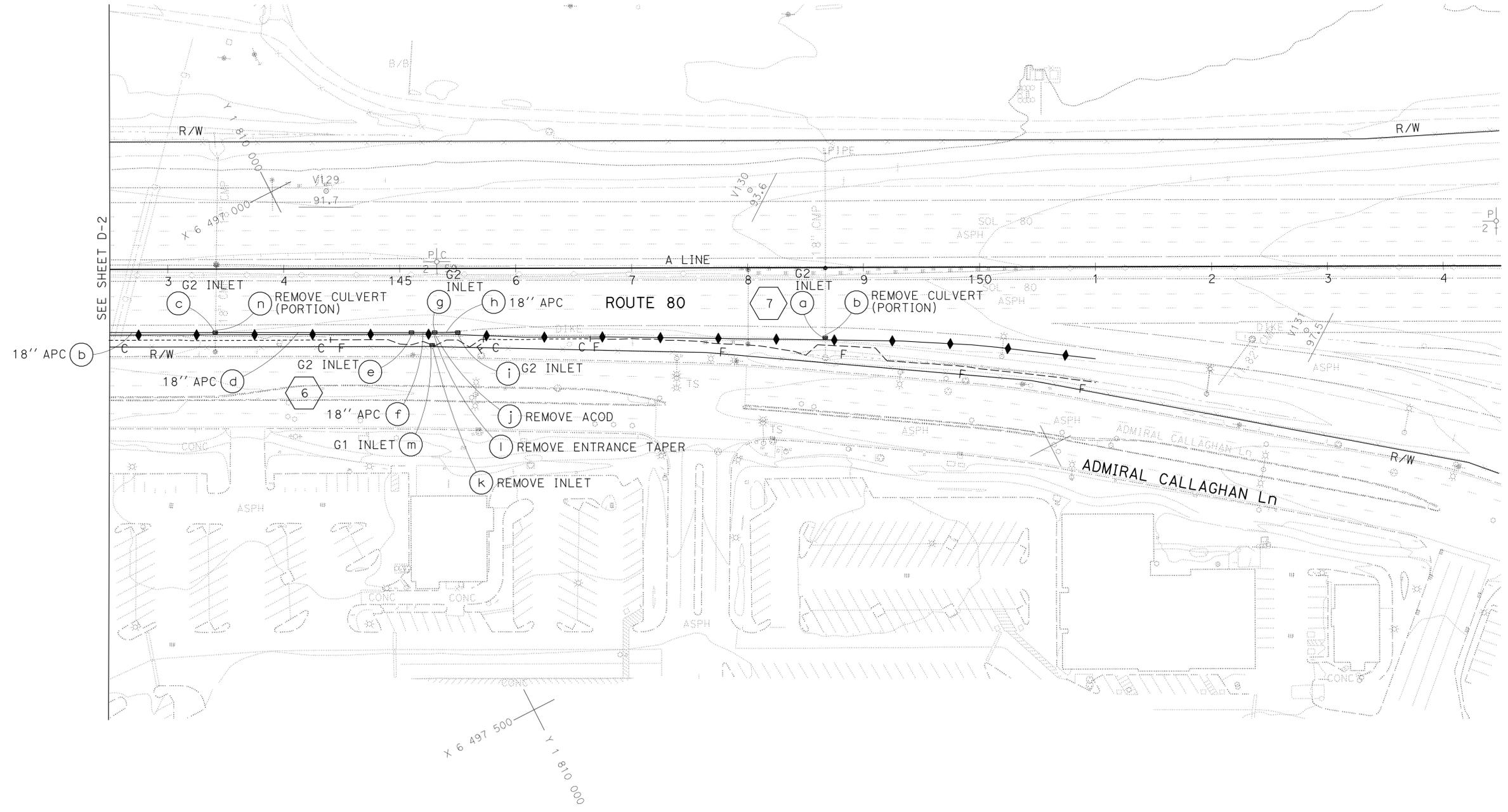
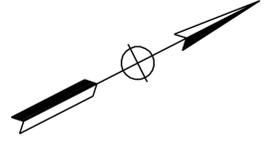
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 HYDRAULICS
 FUNCTIONAL SUPERVISOR: JOSEPH PETERSON
 CALCULATED/DESIGNED BY: CHECKED BY:
 LILY CHAN KATHLEEN REILLY
 REVISED BY: DATE REVISED:
 LC 5/19/10

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	10	52

10-28-10
 Kathleen M. Reilly
 REGISTERED CIVIL ENGINEER DATE
 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 SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Kathleen M. Reilly
 No. 53582
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA



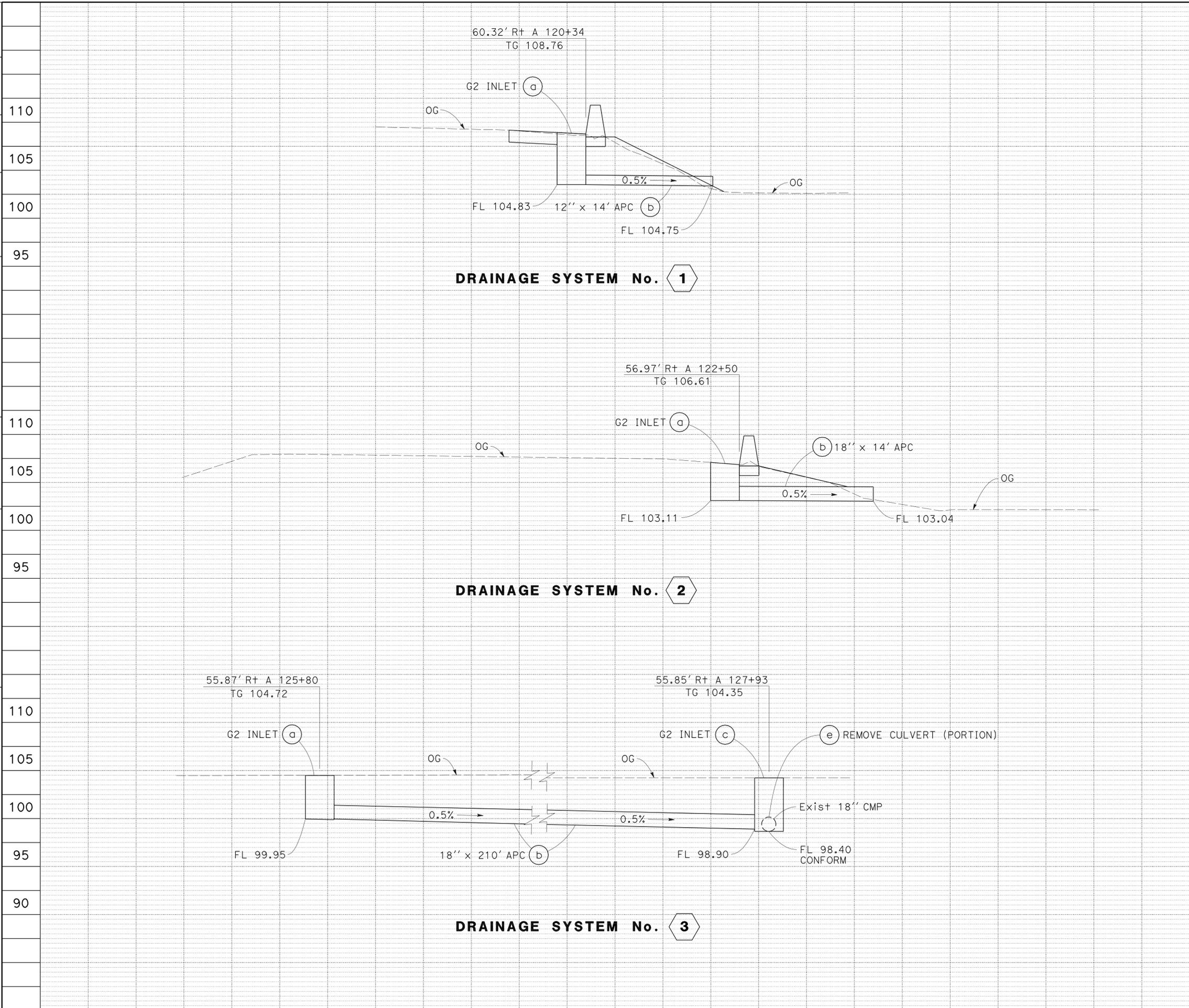
FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET D-1

THIS PLAN FOR DRAINAGE WORK ONLY

DRAINAGE PLAN
 SCALE: 1" = 50'

D-3



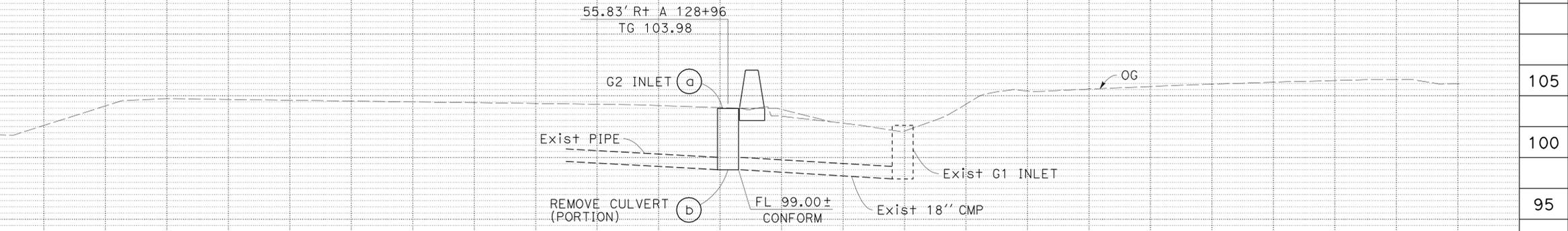


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Soi	80	4.6/5.2	11	52
			10-28-10		
			REGISTERED CIVIL ENGINEER	DATE	
			1-31-11	PLANS APPROVAL DATE	
			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		

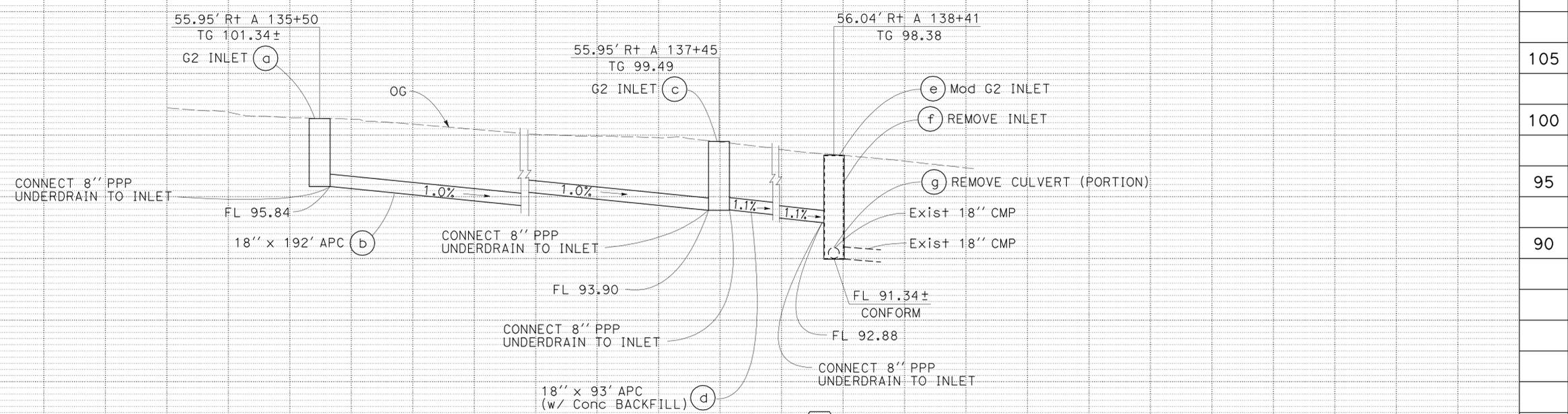


DRAINAGE PROFILES
 SCALE: Horiz 1" = 5'
 Vert 1" = 5'
DP-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	12	52
REGISTERED CIVIL ENGINEER			DATE	10-28-10	
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 SCANNED COPIES OF THIS PLAN SHEET.					



DRAINAGE SYSTEM No. 4

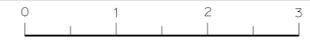


DRAINAGE SYSTEM No. 5

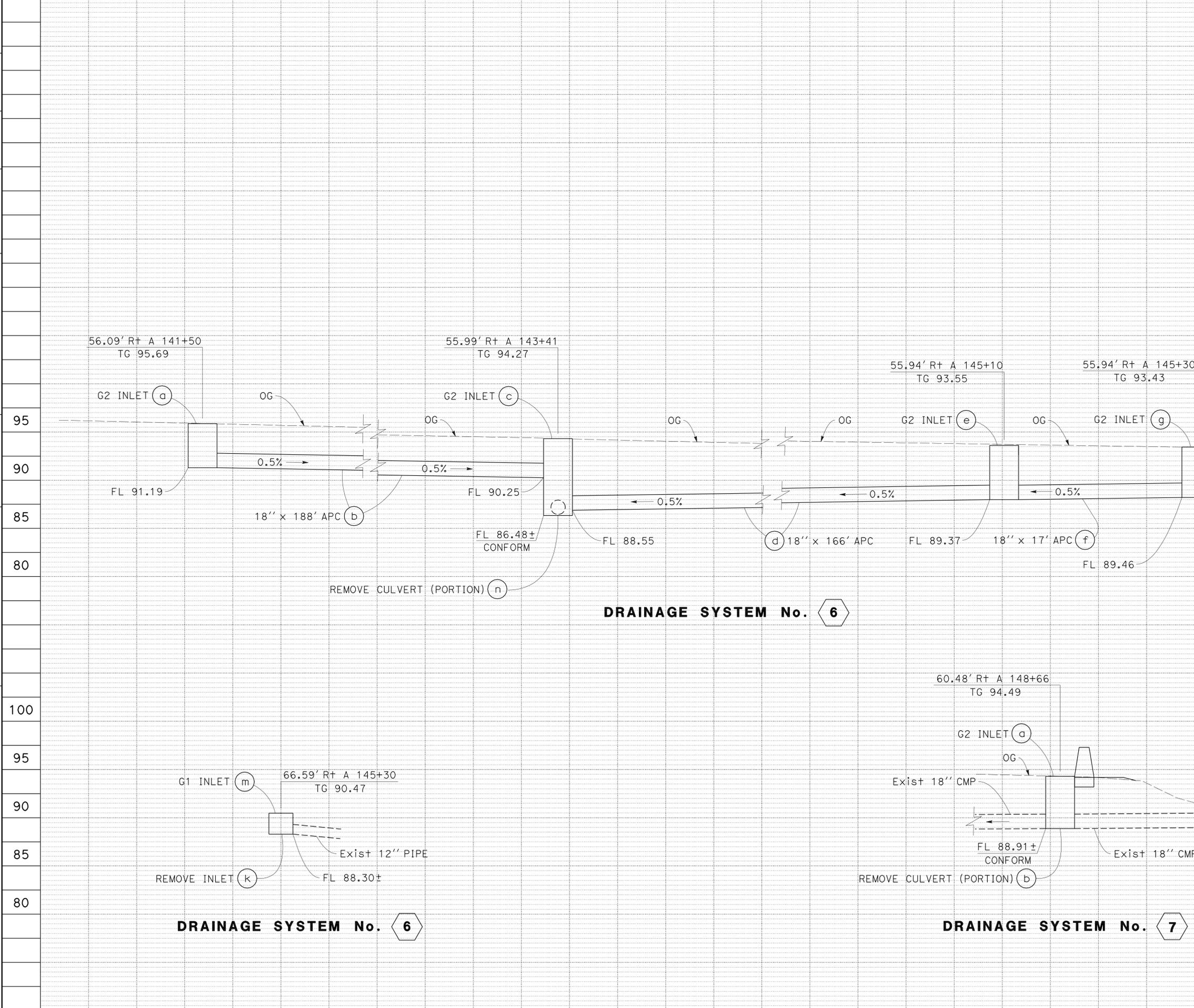
DRAINAGE PROFILES

SCALE: Horiz 1" = 5'
 Vert 1" = 5'

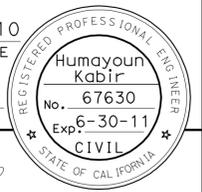
DP-2



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	13	52
			REGISTERED CIVIL ENGINEER	DATE	
			1-31-11	10-28-10	
			PLANS APPROVAL DATE		



DRAINAGE SYSTEM No. 6

DRAINAGE SYSTEM No. 6

DRAINAGE SYSTEM No. 7

DRAINAGE PROFILES

SCALE: Horiz 1" = 5'
 Vert 1" = 5'

DP-3



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	14	52

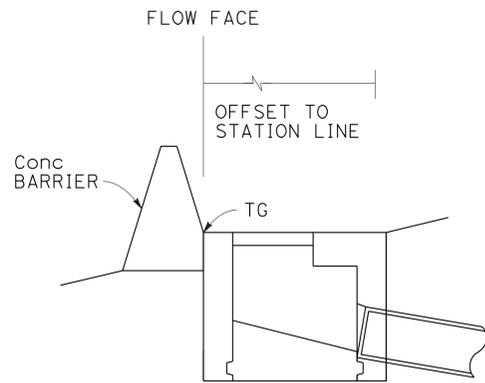
Kathleen M. Reilly		10-28-10
REGISTERED CIVIL ENGINEER	DATE	
1-31-11		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	Kathleen M. Reilly
No.	53582
Exp.	6-30-11
CIVIL	

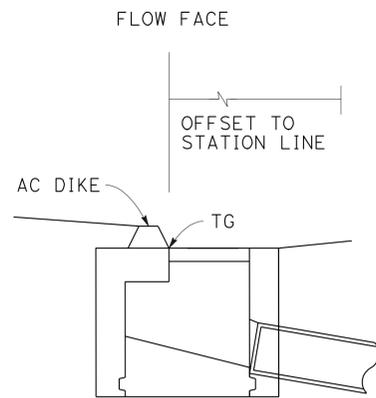
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

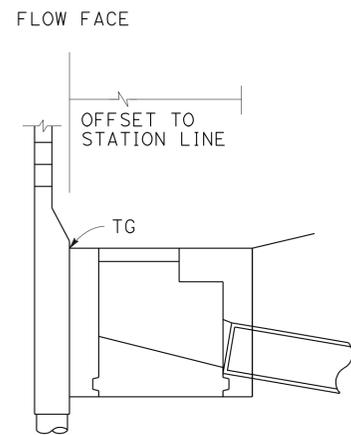
1. FOR INFORMATION NOT SHOWN, SEE STANDARD PLAN D73 THROUGH D74B.



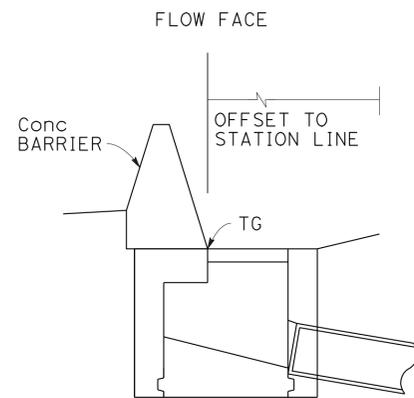
SECTION B-B



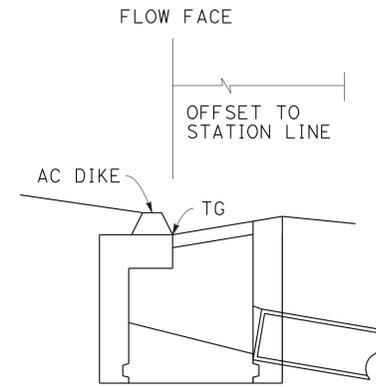
SECTION C-C



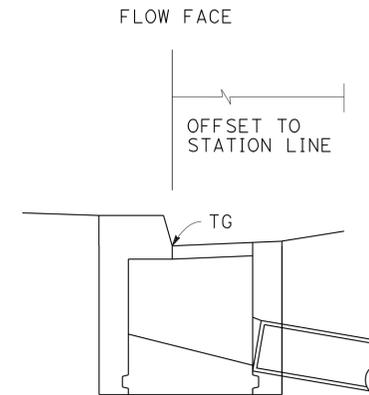
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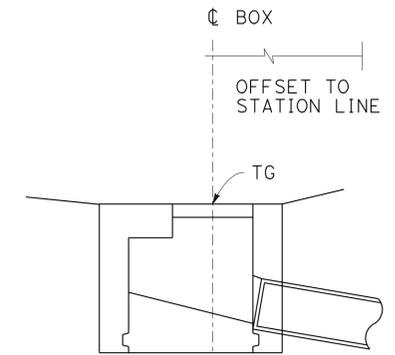
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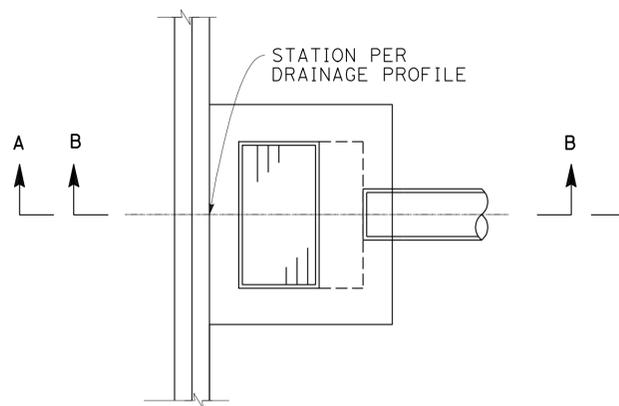
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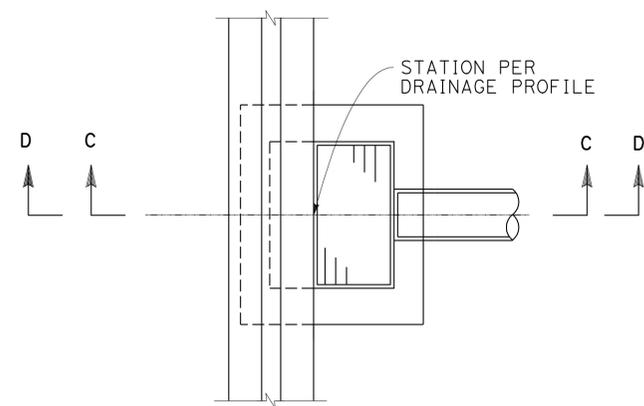
ELEVATION



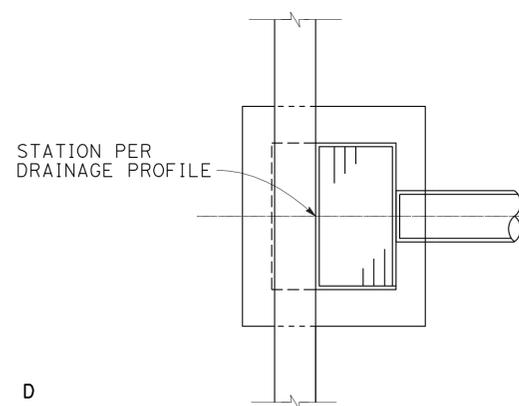
ELEVATION



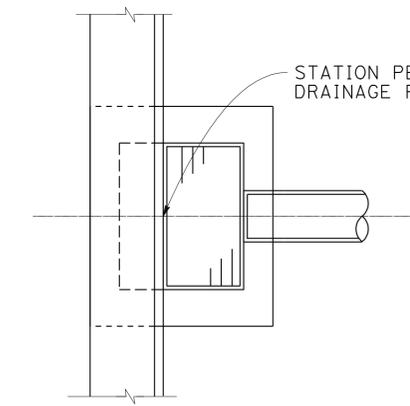
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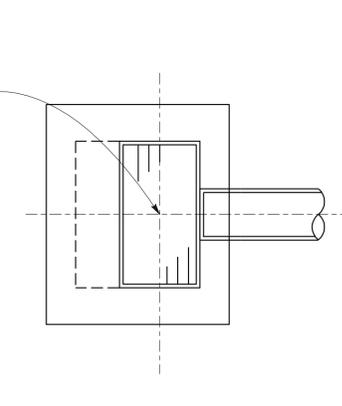
PLAN



PLAN
INLET WITHIN
AC SIDE GUTTER



PLAN
INLET ADJACENT
TO CURB



PLAN
FIELD INLET

INLET ADJACENT TO SOUNDWALL (SECTION A-A) OR CONCRETE BARRIER (SECTION B-B)
(TYPES 60E, 60GE, 60SC, 60SE, OR HIGH SIDE OF TYPES 60C, 60GC)

INLET ADJACENT TO AC DIKE (SECTION C-C) OR CONCRETE BARRIER (SECTION D-D)
(TYPE 60C SHOWN, TYPES 60, 60G, 60GC SIMILAR)

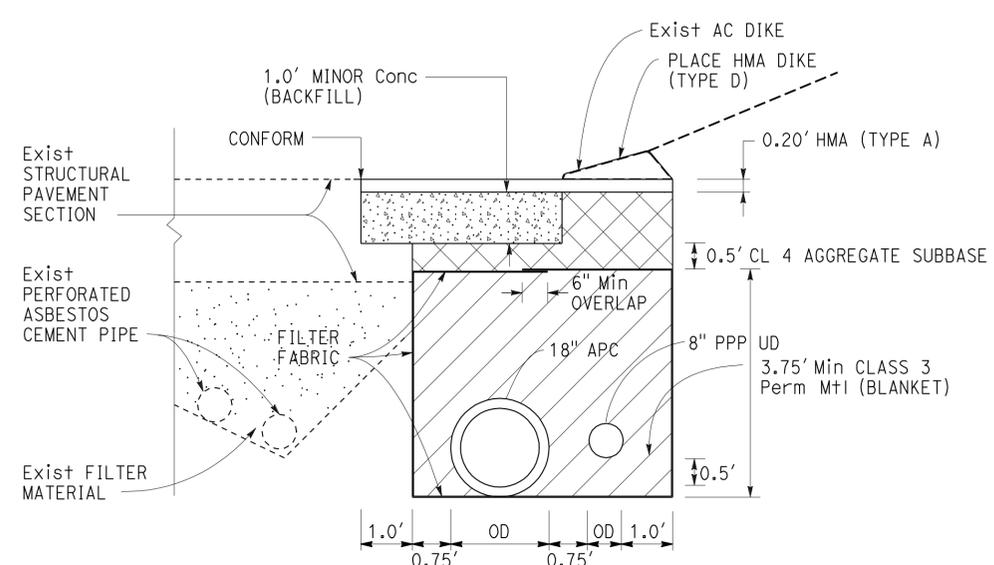
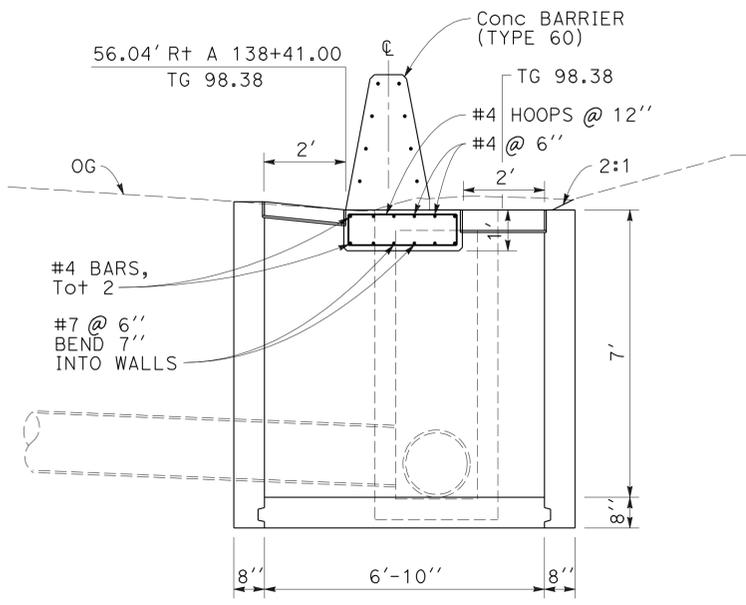
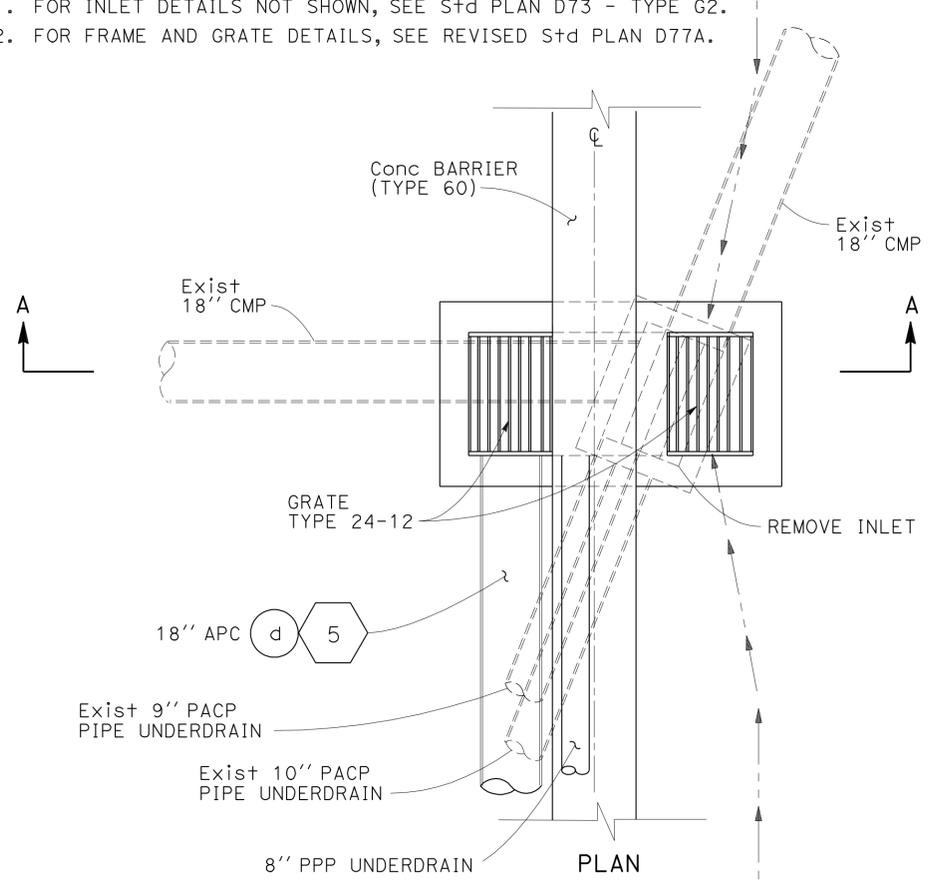
DRAINAGE DETAILS
NO SCALE

DD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
HYDRAULICS
FUNCTIONAL SUPERVISOR: JOSEPH PETERSON
CALCULATED/DESIGNED BY: [blank]
CHECKED BY: [blank]
REVISOR: LILY CHAN, KATHLEEN REILLY
DATE: 10/20/10
LC: 10/20/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	15	52
			10-28-10		
Kathleen M. Reilly			DATE	REGISTERED PROFESSIONAL ENGINEER	
REGISTERED CIVIL ENGINEER				Kathleen M. Reilly	
1-31-11				No. 53582	
PLANS APPROVAL DATE				Exp. 6-30-11	
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.					

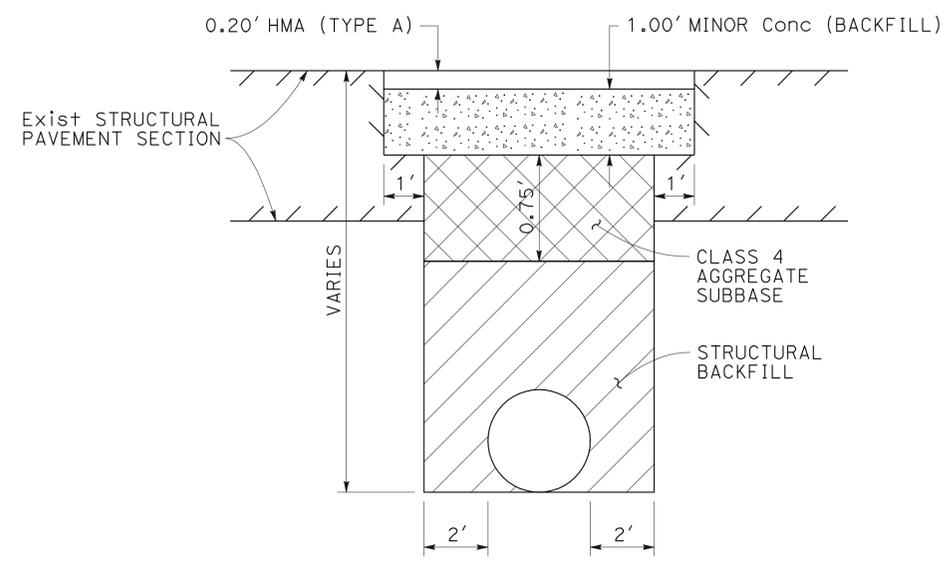
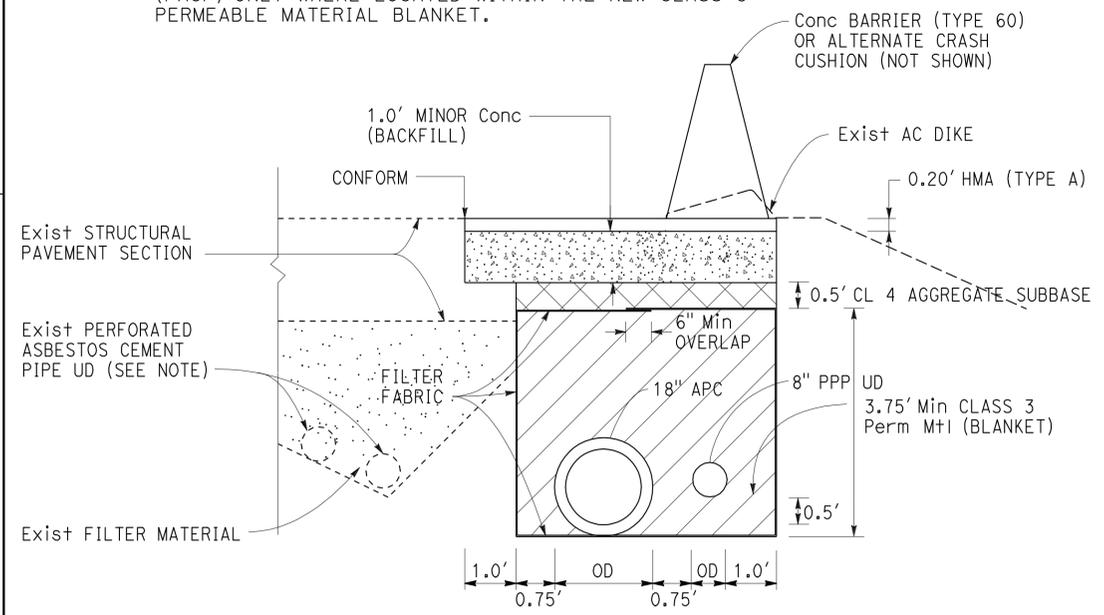
NOTES:
 1. FOR INLET DETAILS NOT SHOWN, SEE S+D PLAN D73 - TYPE G2.
 2. FOR FRAME AND GRATE DETAILS, SEE REVISED S+D PLAN D77A.



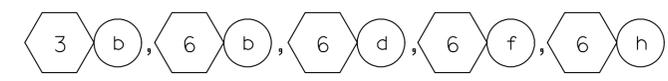
DRAINAGE INLET TYPE G2 MODIFIED



NOTES: REMOVE Exist PERFORATED ASBESTOS CEMENT PIPES (PACP) ONLY WHERE LOCATED WITHIN THE NEW CLASS 3 PERMEABLE MATERIAL BLANKET.



DRAINAGE DETAILS
NO SCALE



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CALTRANS

FUNCTIONAL SUPERVISOR
 JOSEPH PETERSON

HYDRAULICS

REVISIONS

LC	10/20/10
REVISOR	LILY CHAN
DESIGNER	KATHLEEN REILLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

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

ABBREVIATION:
 PACP PERFORATED ASBESTOS CEMENT PIPE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	16	52

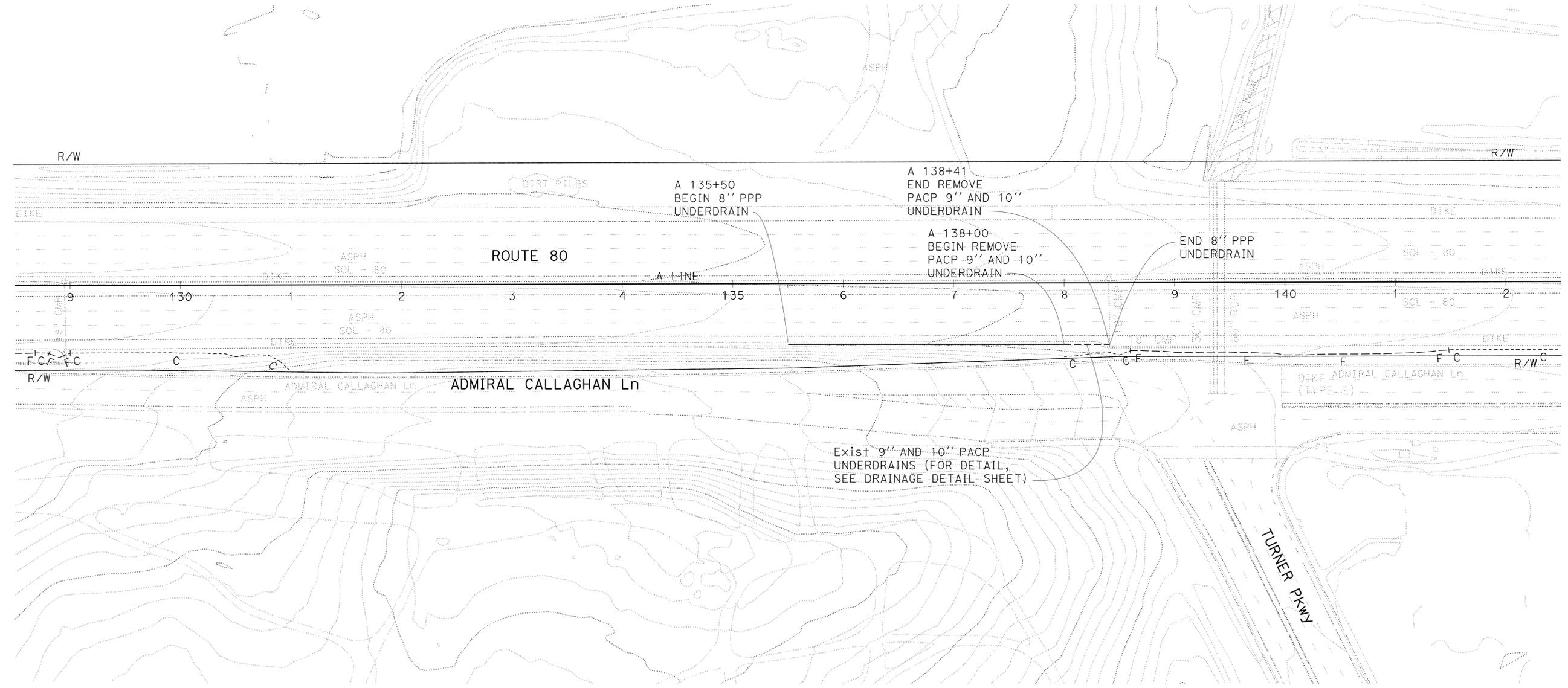
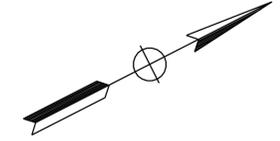
REGISTERED CIVIL ENGINEER DATE 10-28-10
 1-31-11
 PLANS APPROVAL DATE

Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 CIVIL

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

UNDERDRAIN QUANTITIES

LOCATION	8" PPP UNDERDRAIN	REMOVE PACP	
		9"	10"
A 135+50 TO 138+41	285	41	41
TOTAL	285	82	



SUBSURFACE DRAINAGE PLAN UNDERDRAINS

SCALE: 1" = 50'

THIS PLAN ACCURATE FOR UNDERDRAIN WORK ONLY

SB-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 MIMY MA

CALCULATED/DESIGNED BY
 CHECKED BY

SAMI HASSOUNEH
 RAJANIKANT PATEL

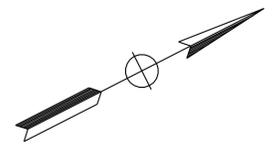
REVISOR
 DATE REVISED

SH
 6/10/10

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

- NOTES:**
- FOR Exist HIGHWAY ELECTRICAL FACILITIES, SEE ELECTRICAL PLANS.
 - ALL UTILITY LOCATIONS ARE APPROXIMATE UNLESS OTHERWISE SHOWN.

ABBREVIATIONS:
 MTC METROPOLITAN TRANSPORTATION COMMISSION
 PG&E PACIFIC GAS AND ELECTRIC
 VSFCV VALLEJO SANITATION AND FLOOD CONTROL DISTRICT

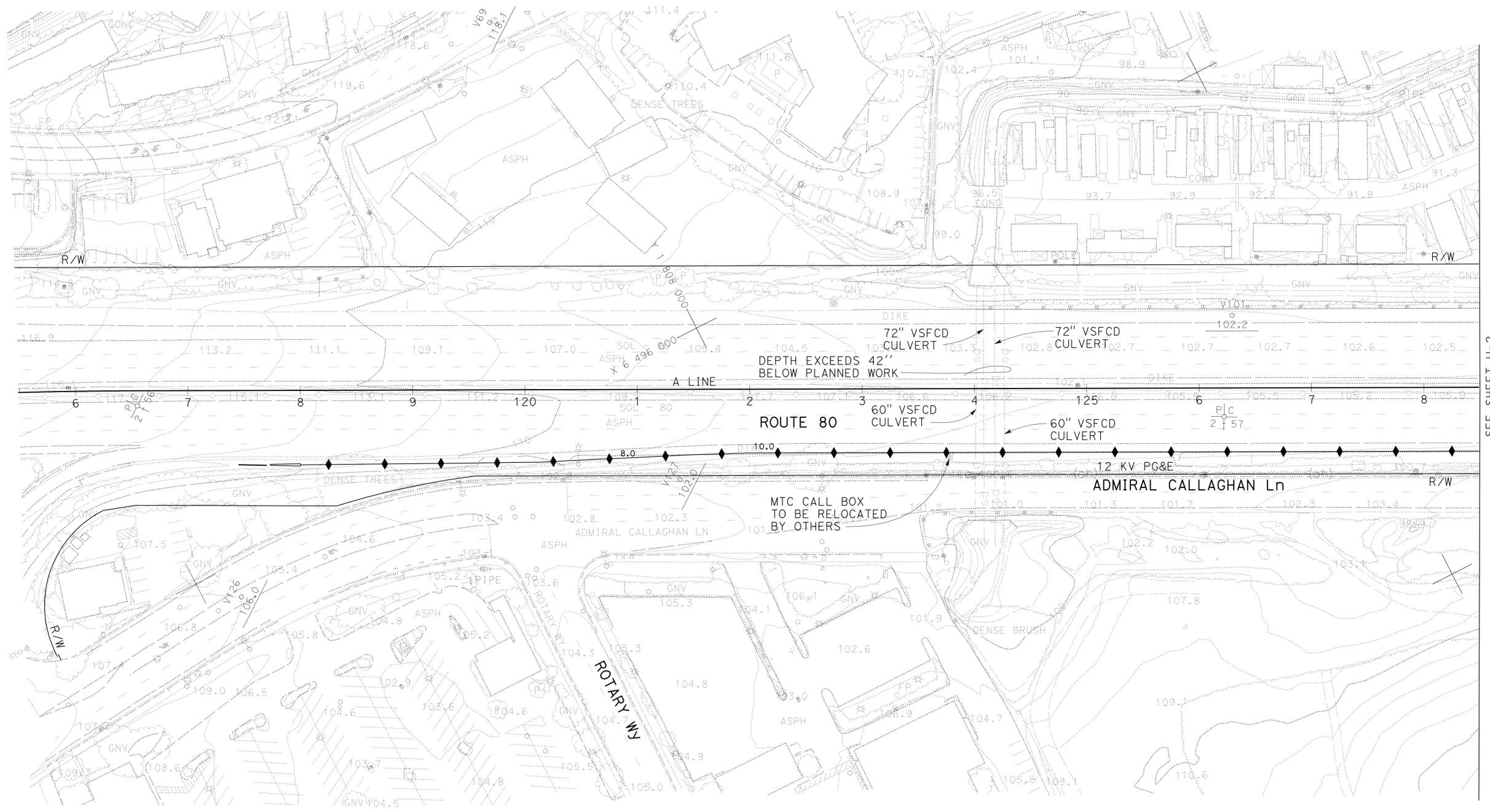


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	19	52

10-28-10
 REGISTERED CIVIL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

Rajanikant N. Patel
 No. 25490
 Exp. 2-31-11
 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.



SEE SHEET U-2

UTILITY PLAN
 SCALE: 1" = 50'

THIS PLAN FOR UTILITY WORK ONLY

U-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: MIMY MA
 CALCULATED/DESIGNED BY: SAMI HASSOUNEH
 CHECKED BY: RAJANIKANT PATEL
 REVISED BY: SH
 DATE REVISED: 6/10/10

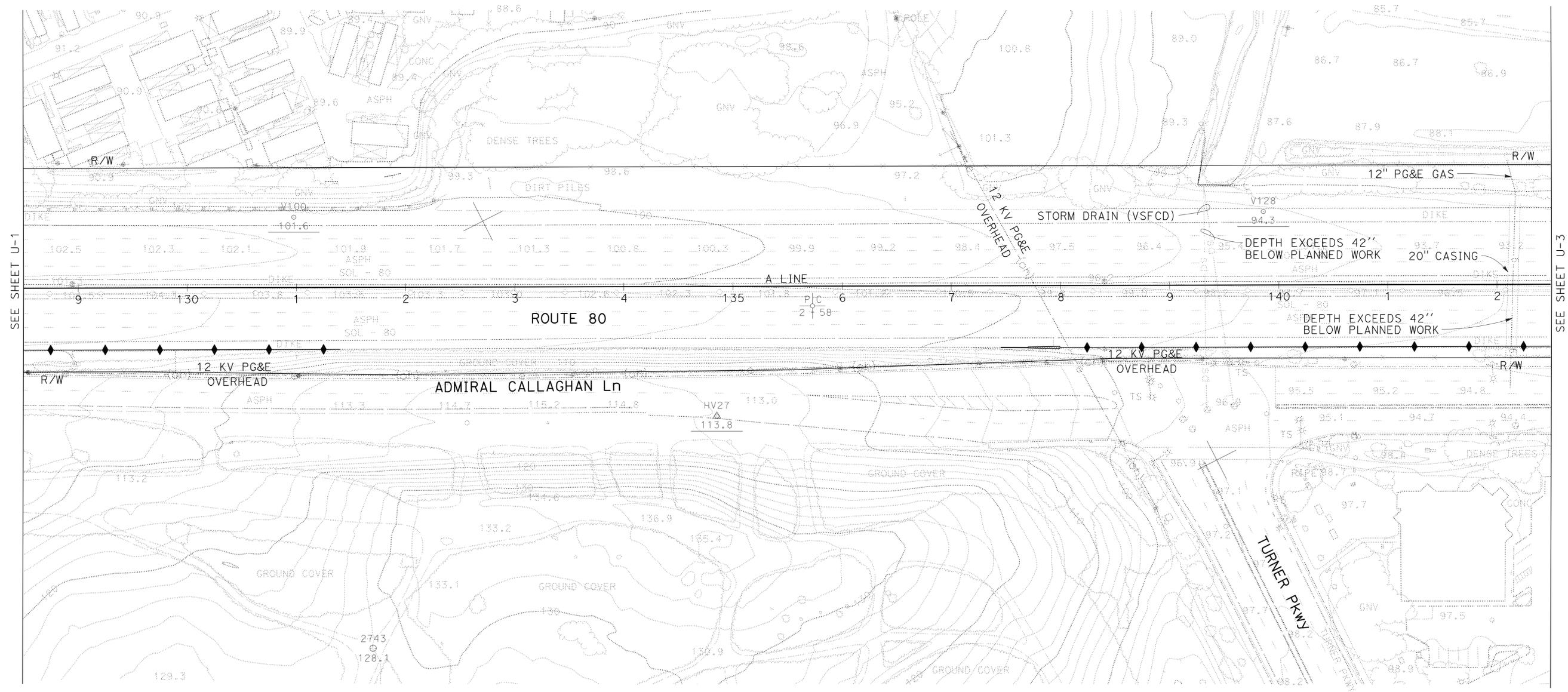
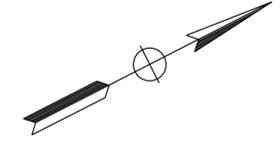
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	20	52

10-28-10
 REGISTERED CIVIL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

Rajanikant N. Patel
 No. 25490
 Exp. 12-31-11
 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.



FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET U-1

THIS PLAN FOR UTILITY WORK ONLY

UTILITY PLAN
 SCALE: 1" = 50'

U-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	22	52
			10-28-10		
			DATE		
			1-31-11		
			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

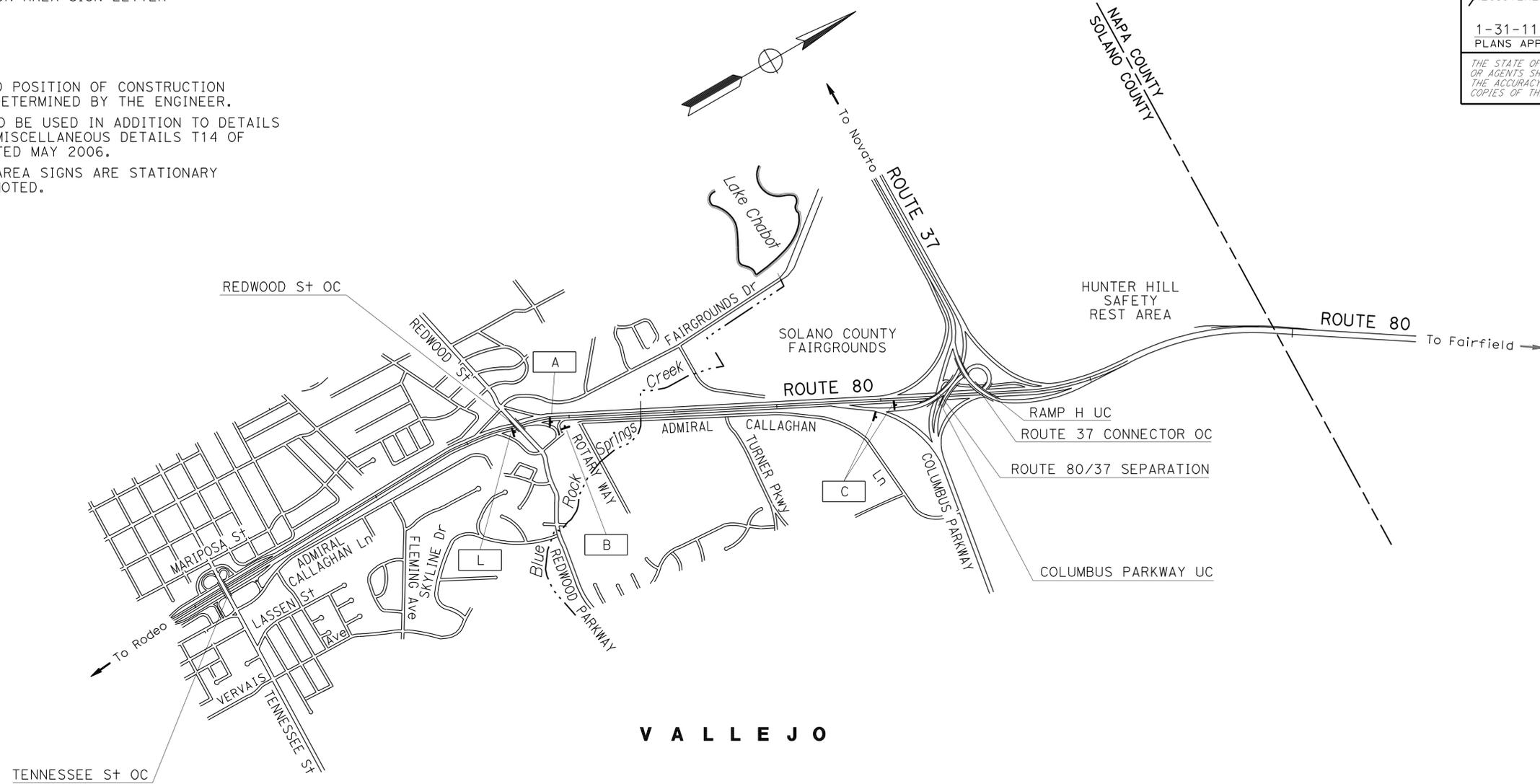


LEGEND:

A CONSTRUCTION AREA SIGN LETTER

NOTES:

1. EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
2. THESE PLANS ARE TO BE USED IN ADDITION TO DETAILS FOR RAMP CLOSURE MISCELLANEOUS DETAILS T14 OF STANDARD PLANS DATED MAY 2006.
3. ALL CONSTRUCTION AREA SIGNS ARE STATIONARY UNLESS OTHERWISE NOTED.



CONSTRUCTION AREA SIGNS

SIGN	SIGN CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	No. OF SIGNS
A	W20-1	ROAD WORK AHEAD	48" x 48"	(ONE) 4" x 6"	1
B	W20-1	ROAD WORK AHEAD	36" x 36"	(ONE) 4" x 6"	1
C	G20-2	END ROAD WORK	36" x 18"	(ONE) 4" x 4"	2
D	SC6-4 (CA)	RAMP CLOSED	48" x 60"	(ONE) 6" x 6"	2
E	W20-2	DETOUR AHEAD	36" x 36"	(ONE) 4" x 6"	2
F	M4-8	DETOUR	30" x 15"	(ONE) 6" x 6"	2
	G27-2 (80) (CA)	ROUTE SHIELD	24" x 24"		
	M3-2	EAST	30" x 15"		
G	M6-3 (↑)	STRAIGHT AHEAD ARROW	21" x 15"	(ONE) 6" x 6"	1
	M4-8	DETOUR	30" x 15"		
	G27-2 (80) (CA)	ROUTE SHIELD	24" x 24"		
	M3-2	EAST	30" x 15"		
	M6-1 (←)	LEFT ARROW	21" x 15"		

CONSTRUCTION AREA SIGNS

SIGN	SIGN CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	No. OF SIGNS
H	M4-8A	END DETOUR	24" x 18"	(ONE) 4" x 4"	3
I	SC3 (CA)	DETOUR WITH STRAIGHT ARROW	54" x 18"	(ONE) 6" x 6"	1
	SPECIAL	ROUTE 37 COLUMBUS Pkwy	54" x 48"		
J	SC3 (CA)	DETOUR WITH UP RIGHT ARROW	54" x 18"	(ONE) 6" x 6"	1
	SPECIAL	ROUTE 37 COLUMBUS Pkwy	54" x 48"		
K	M4-10L	DETOUR (INSIDE LEFT ARROW)	54" x 18"	(ONE) 6" x 6"	2
	SPECIAL	ROUTE 37 COLUMBUS Pkwy	54" x 48"		
L	C40 (CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	108" x 42"	(TWO) 4" x 6"	1

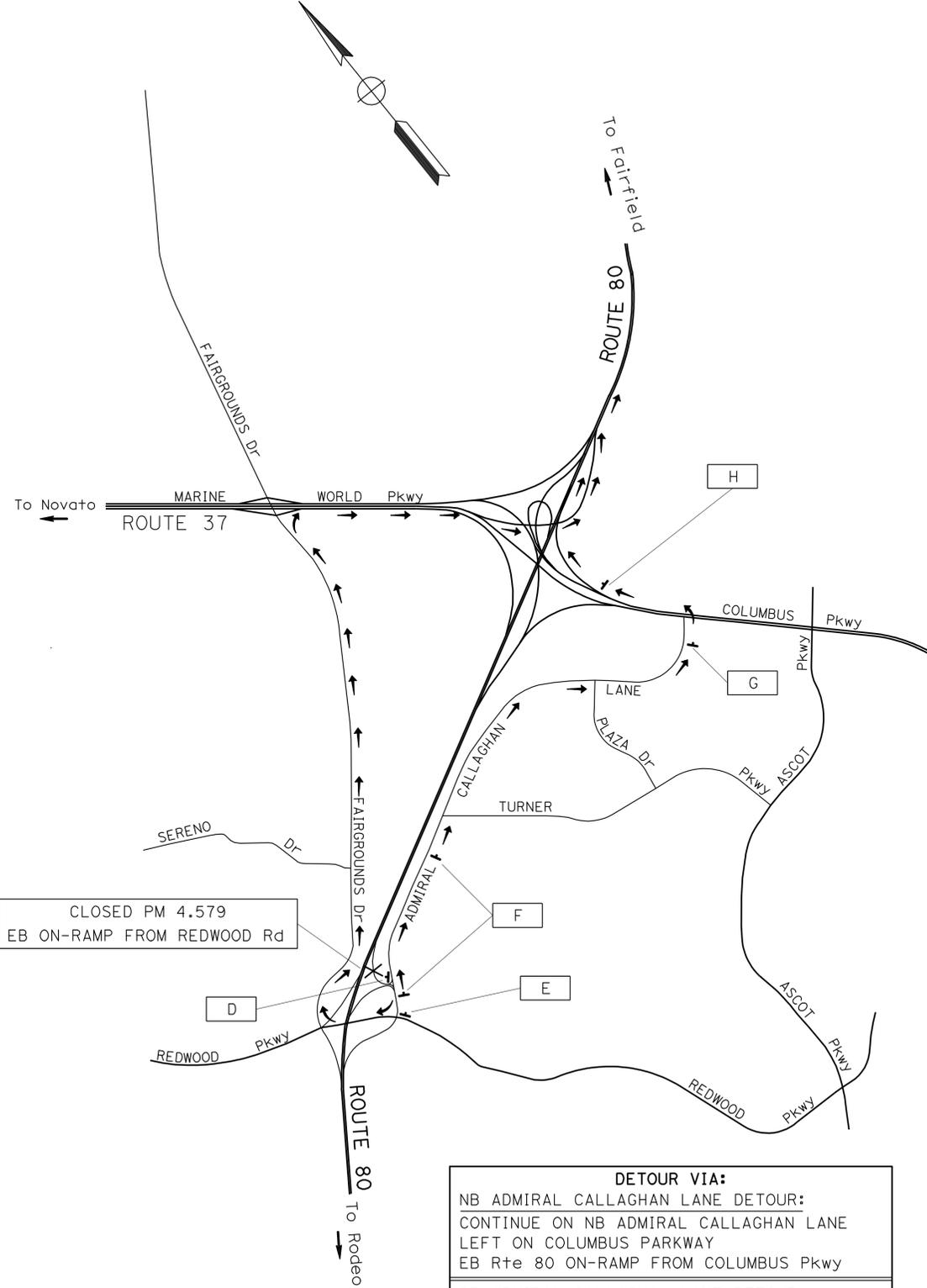
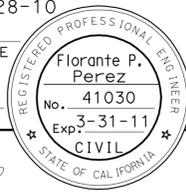
CONSTRUCTION AREA SIGNS
NO SCALE

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CALCULATED/DESIGNED BY: CLAUDIA FANG
 CHECKED BY: FLORANTE PEREZ
 REVISIONS: 6/16/10
 CF

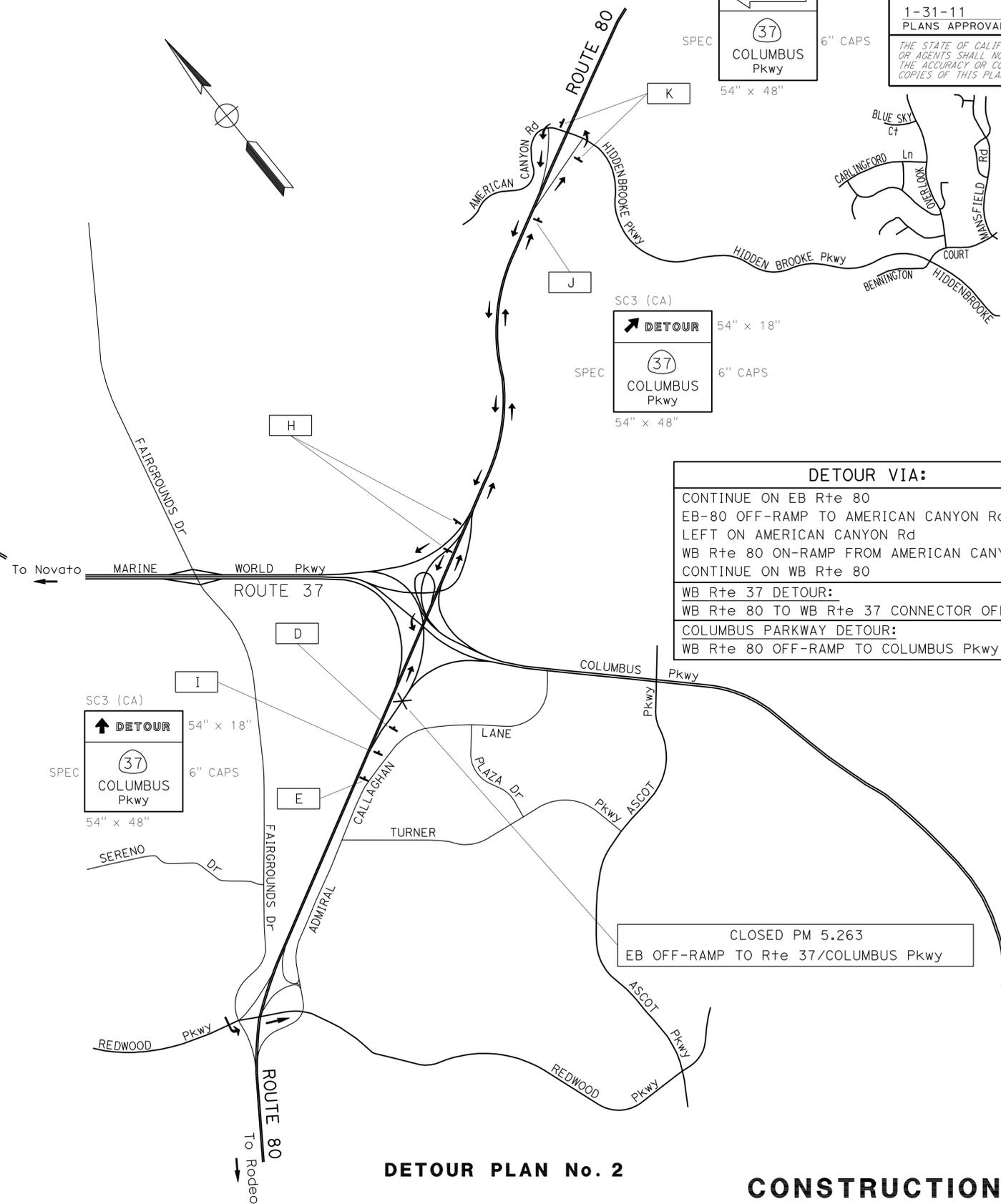
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	23	52
			10-28-10		
			DATE		
			1-31-11		
			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



DETOUR VIA:
NB ADMIRAL CALLAGHAN LANE DETOUR:
 CONTINUE ON NB ADMIRAL CALLAGHAN LANE
 LEFT ON COLUMBUS PARKWAY
 EB Rte 80 ON-RAMP FROM COLUMBUS Pkwy

SB ADMIRAL CALLAGHAN LANE DETOUR:
 CONTINUE ON SB ADMIRAL CALLAGHAN LANE
 RIGHT ON REDWOOD ST
 RIGHT ON FAIRGROUNDS Dr
 EB Rte 37 ON-RAMP FROM FAIRGROUNDS Dr
 EB Rte 37 CONNECTOR ON-RAMP TO EB Rte 80

DETOUR PLAN No. 1



DETOUR VIA:
 CONTINUE ON EB Rte 80
 EB-80 OFF-RAMP TO AMERICAN CANYON Rd
 LEFT ON AMERICAN CANYON Rd
 WB Rte 80 ON-RAMP FROM AMERICAN CANYON Rd
 CONTINUE ON WB Rte 80

WB Rte 37 DETOUR:
 WB Rte 80 TO WB Rte 37 CONNECTOR OFF-RAMP
COLUMBUS PARKWAY DETOUR:
 WB Rte 80 OFF-RAMP TO COLUMBUS Pkwy

DETOUR PLAN No. 2

CONSTRUCTION AREA SIGNS
 NO SCALE

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	24	52
			10-28-10		
			DATE		
			1-31-11		
			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



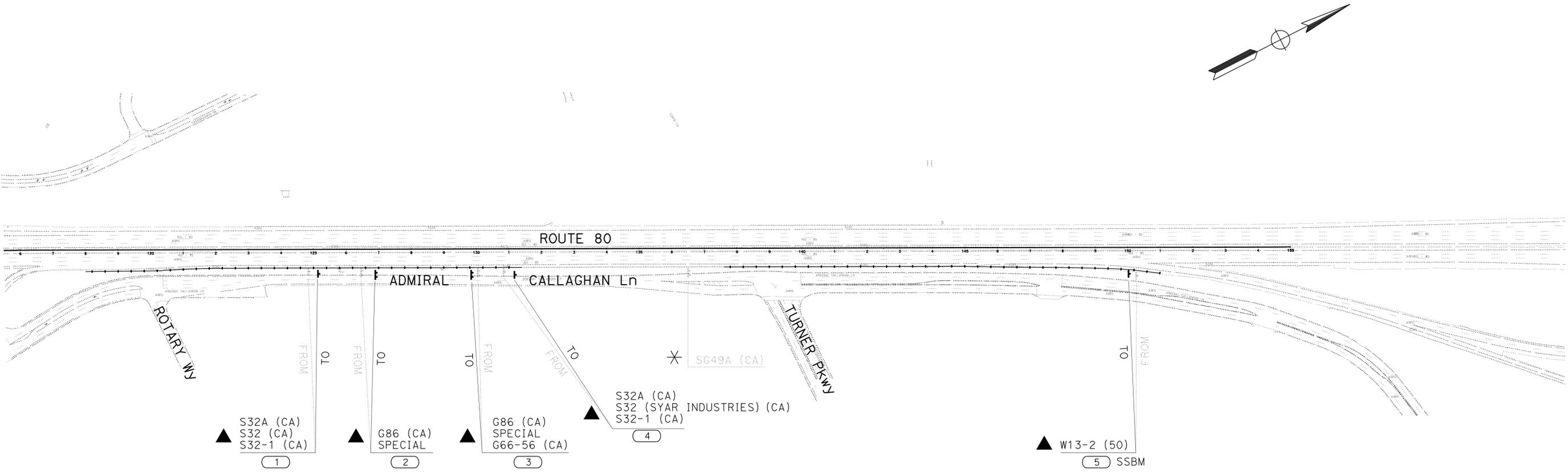
LEGEND:

- (No.) ROADSIDE SIGN NUMBER
- ▲ RELOCATE ROADSIDE SIGN
- ✕ EXISTING SIGN TO REMAIN

NOTES:

1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
2. EXISTING SIGNS ARE SHOWN AS DROPOUT.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CALCULATED/DESIGNED BY: CLAUDIA FANG
 CHECKED BY: FLORANTE PEREZ
 REVISED BY: CF
 DATE REVISED: 8/23/10



SIGN PLAN
NO SCALE

S-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LORDES DAVID
 CALCULATED/DESIGNED BY: CLAUDIA FANG
 CHECKED BY: FLORANTE PEREZ
 CF
 8/23/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	25	52

10-28-10
Florante P. Perez
 REGISTERED CIVIL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Florante P. Perez
 No. 41030
 Exp. 3-31-11
 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.

ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No.	SIGN CODE	RELOCATE ROADSIDE SIGN			REMARKS
			WOOD POST		SSBM	
			ONE POST	TWO POST		
			EACH			
S-1	1	S32A (CA)	1			
		S32 (CA)				
		S32-1 (CA)				
	2	G86 (CA)		1		
		SPECIAL				
	3	G86 (CA)		1		
		SPECIAL				
	4	G66-56 (CA)	1			
		S32A (CA)				
		S32 (CA) (SYAR INDUSTRIES)				
5	S32-1 (CA)					
	W13-2 (50)			1	MOUNT ON ELECTROLIER	
TOTAL			2	2	1	

SIGN QUANTITIES

SQ-1

LAST REVISION | DATE PLOTTED => 03-FEB-2011
 10-29-10 TIME PLOTTED => 11:12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	26	52

Humayoun Kabir 10-28-10
 REGISTERED CIVIL ENGINEER DATE

1-31-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Humayoun Kabir
 No. 67630
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

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

ROADWAY EXCAVATION (TYPE Z-2)

STATION	LOCATION	CY
A 118+00 TO 131+00	R+	347
A 138+00 TO 151+00	R+	216
A 135+50 TO 137+45	R+	6
TOTAL		569

HOT MIX ASPHALT (TYPE A)

STATION	LOCATION	TON
A 118+00 TO 131+00	R+	569.13
A 138+00 TO 151+00	R+	306.31
SUBTOTAL		875.44
HMA DIKE (TYPE C)		0.38
HMA DIKE (TYPE D)		11.18
DQ-2 SHEET		88.46
TOTAL		975.46

CONCRETE BARRIER AND CRASH CUSHION

STATION	TYPE			
	60	60C	ALTERNATIVE CRASH CUSHION	
	LF		EA	
A 118+00 TO 122+00		400	1	
A 122+00 TO 131+00	900			
A 138+00 TO 151+00	1300		1	
TOTAL		2200	400	2

TEMPORARY RAILING (TYPE K)

STATION	LOCATION	LF
A 117+00 TO 118+40	R+	140
A 137+00 TO 138+40	R+	140
TOTAL		280

REMOVE METAL BEAM GUARD RAILING (MBGR)

STATION	LOCATION	LF
A 147+60 TO 148+10	R+	50
TOTAL		50

TEMPORARY CRASH CUSHION MODULE

STATION	LOCATION	EA
A 117+00	R+	14
A 137+00	R+	14
TOTAL		28

RECONSTRUCT CHAIN LINK FENCE

STATION	LOCATION	LF
A 123+50 TO 124+00	R+	50
A 126+62 TO 127+44	R+	82
TOTAL		132

IMPORTED BORROW

STATION	LOCATION	CY
A 118+00 TO 131+00	R+	85
A 138+00 TO 151+00	R+	63
TOTAL		148

PLACE HOT MIX ASPHALT DIKE (TYPE C)

STATION	LOCATION	LF	TON *
A 117+45 TO 117+70	R+	25	0.19
A 137+45 TO 137+70	R+	25	0.19
TOTAL		50	0.38

PLACE HOT MIX ASPHALT DIKE (TYPE D)

STATION	LOCATION	LF	TON *
A 135+50 TO 137+45	R+	195	11.18
TOTAL		195	11.18

* SEE HOT MIX ASPHALT (TYPE A) FOR TOTAL

* SEE HOT MIX ASPHALT (TYPE A) FOR TOTAL

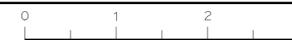
TACK COAT

STATION	LOCATION	TON
A 118+00 TO 131+00	R+	0.16
A 138+00 TO 151+00	R+	0.02
TOTAL		0.18

SUMMARY OF QUANTITIES

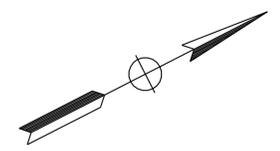
Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 HUMAYOUN KABIR
 JEFFREY NGUYEN
 STEWART LEE
 REVISIONS: 01-18-11

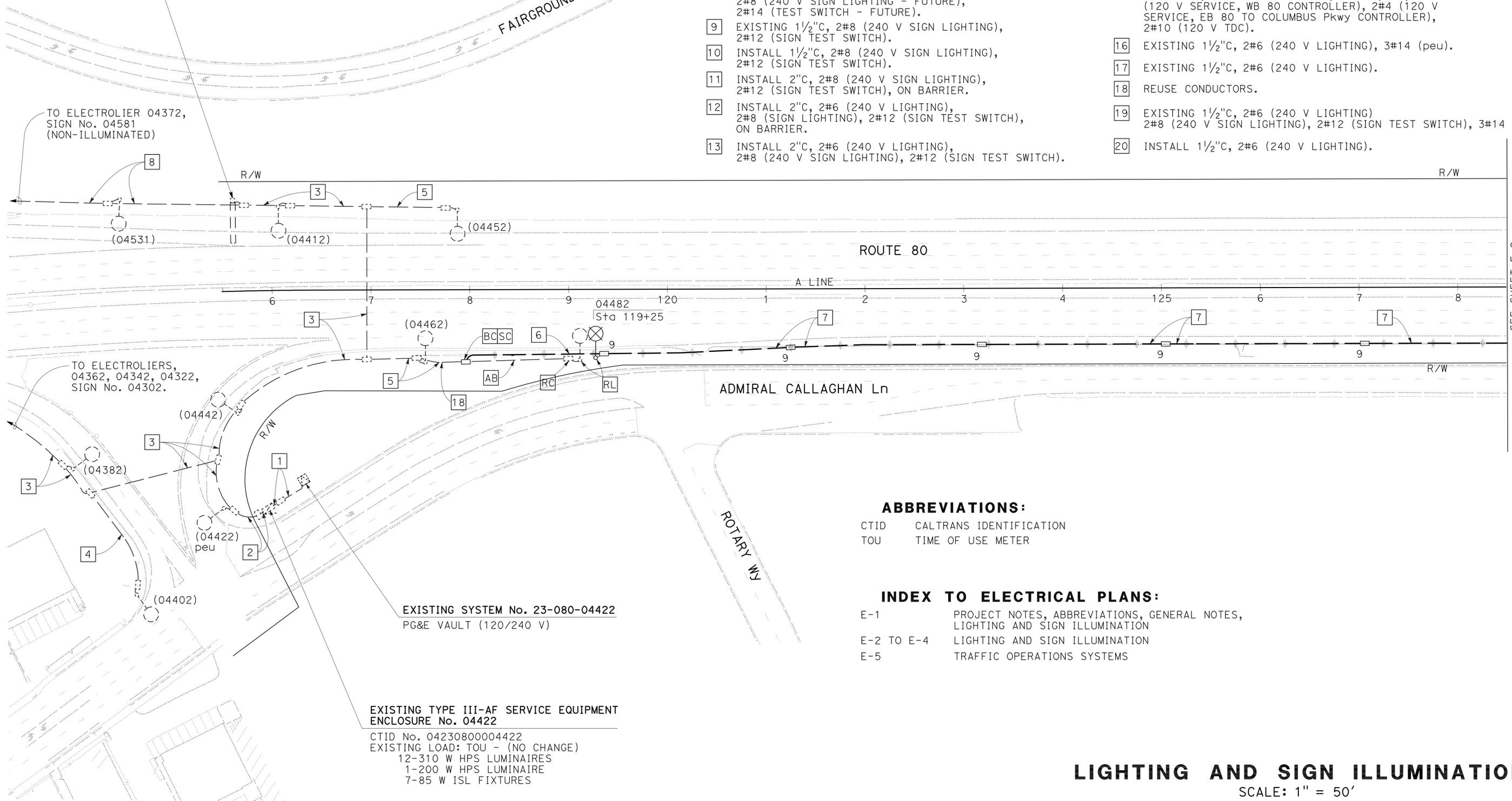


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL
 FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 CHECKED BY: JESSIE CABUGAO
 REVISIONS: JC 9/29/10
 DESIGNED BY: ELAINE T. WONG

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



EXISTING SIGN No. 04432
 3-85 W ISL - SC1



- PROJECT NOTES**
- 1 EXISTING 2"C, 3#2 (120/240 V SERVICE).
 - 2 EXISTING 2"C, 2#6 (240 V LIGHTING), 2#8 (240 V SIGN LIGHTING), 2#14 (TEST SWITCH), 3#14 (PEU).
 - 3 EXISTING 2"C, 2#6 (240 V LIGHTING), 2#8 (240 V SIGN LIGHTING), 2#14 (TEST SWITCH).
 - 4 EXISTING 1 1/2"C, 2#10 (240 V LIGHTING)
 - 5 EXISTING 2"C, 2#6 (240 V LIGHTING).
 - 6 INSTALL 2"C, 2#6 (240 V LIGHTING), ON BARRIER.
 - 7 INSTALL 2"C, MT, ON BARRIER.
 - 8 EXISTING 2"C, 2#6 (240 V SIGN LIGHTING), 2#8 (240 V SIGN LIGHTING - FUTURE), 2#14 (TEST SWITCH - FUTURE).
 - 9 EXISTING 1 1/2"C, 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH).
 - 10 INSTALL 1 1/2"C, 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH).
 - 11 INSTALL 2"C, 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH), ON BARRIER.
 - 12 INSTALL 2"C, 2#6 (240 V LIGHTING), 2#8 (SIGN LIGHTING), 2#12 (SIGN TEST SWITCH), ON BARRIER.
 - 13 INSTALL 2"C, 2#6 (240 V LIGHTING), 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH).

- 14 EXISTING 1 1/2"C, 2#6 (240 V LIGHTING), 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH).
- 15 EXISTING 2"C, 2#6 (240 V LIGHTING), 2#8 (240 V SIGN LIGHTING), 2#12 (TEST SWITCH), 3#14 (peu), 2#2 (120 V SERVICE, WB 80 CONTROLLER), 2#4 (120 V SERVICE, EB 80 TO COLUMBUS Pkwy CONTROLLER), 2#10 (120 V TDC).
- 16 EXISTING 1 1/2"C, 2#6 (240 V LIGHTING), 3#14 (peu).
- 17 EXISTING 1 1/2"C, 2#6 (240 V LIGHTING).
- 18 REUSE CONDUCTORS.
- 19 EXISTING 1 1/2"C, 2#6 (240 V LIGHTING) 2#8 (240 V SIGN LIGHTING), 2#12 (SIGN TEST SWITCH), 3#14 (peu).
- 20 INSTALL 1 1/2"C, 2#6 (240 V LIGHTING).

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	27	52

10-28-10
 REGISTERED ELECTRICAL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

Elaine T. Wong
 No. 13753
 Exp. 6-30-11
 ELECT

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

ABBREVIATIONS:
 CTID CALTRANS IDENTIFICATION
 TOU TIME OF USE METER

INDEX TO ELECTRICAL PLANS:
 E-1 PROJECT NOTES, ABBREVIATIONS, GENERAL NOTES, LIGHTING AND SIGN ILLUMINATION
 E-2 TO E-4 LIGHTING AND SIGN ILLUMINATION
 E-5 TRAFFIC OPERATIONS SYSTEMS

LIGHTING AND SIGN ILLUMINATION
 SCALE: 1" = 50'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION DATE PLOTTED => 03-FEB-2011 10-29-10 TIME PLOTTED => 11:12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

CALCULATED/DESIGNED BY
 CHECKED BY

JESSIE CABUGAO
 ELAINE T. WONG

REVISED BY
 DATE REVISED

JC
 9/29/10

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

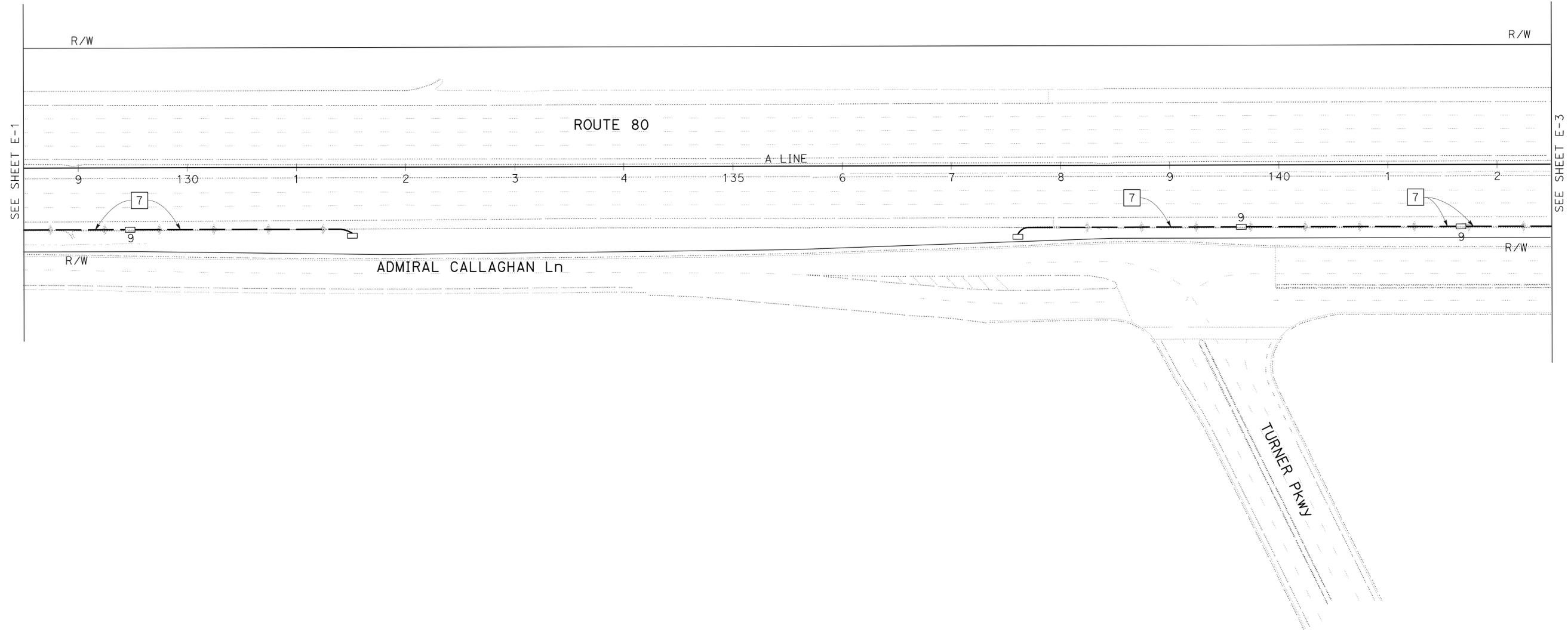
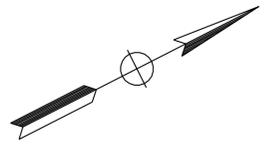
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	28	52

10-28-10
 REGISTERED ELECTRICAL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

Elaine T. Wong
 No. 13753
 Exp. 6-30-11
 ELECT

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

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LIGHTING AND SIGN ILLUMINATION
 SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR: LAI HONG CHIU
 CALCULATED/DESIGNED BY: JESSIE CABUGAO
 CHECKED BY: ELAINE T. WONG
 REVISED BY: JC
 DATE REVISED: 9/29/10

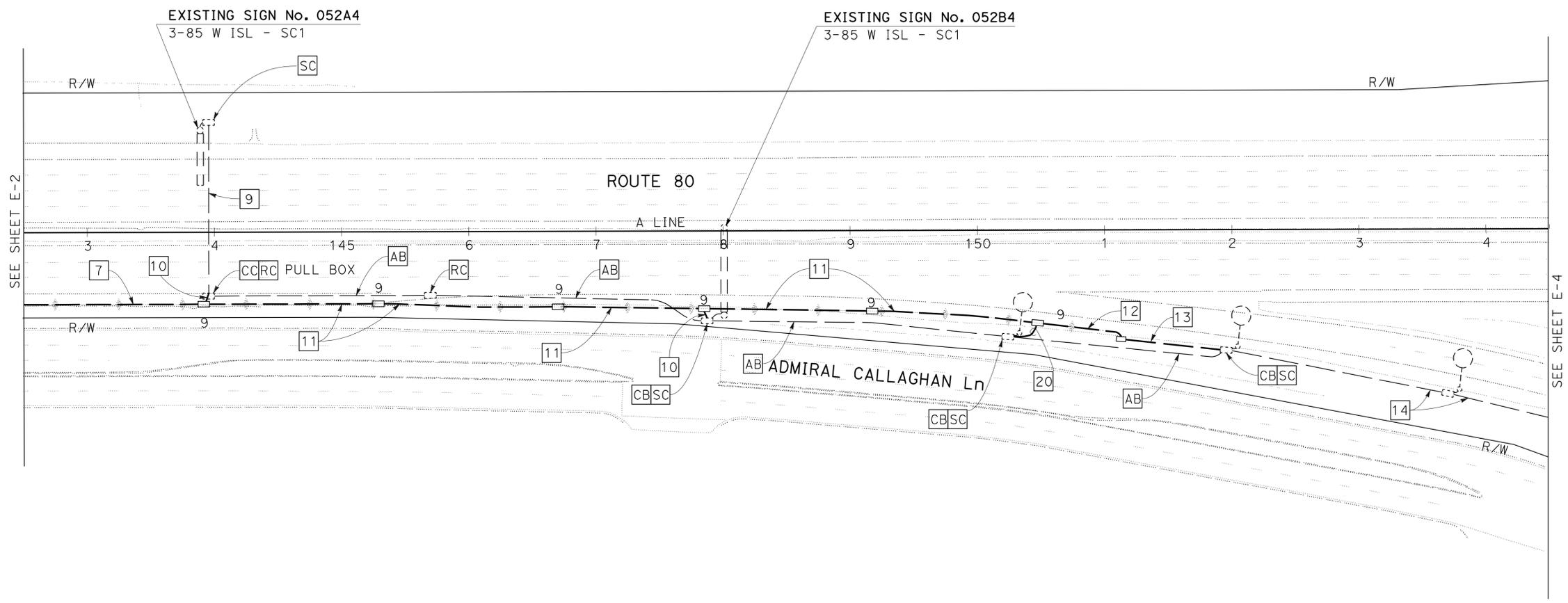
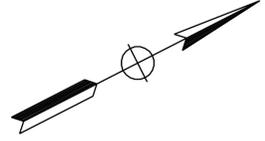
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	29	52
			10-28-10		
			REGISTERED ELECTRICAL ENGINEER	DATE	
			1-31-11	PLANS APPROVAL DATE	

Elaine Wong
 REGISTERED ELECTRICAL ENGINEER
 No. 13753
 Exp. 6-30-11
 ELECT

STATE OF CALIFORNIA

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SEE SHEET E-2

SEE SHEET E-4

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

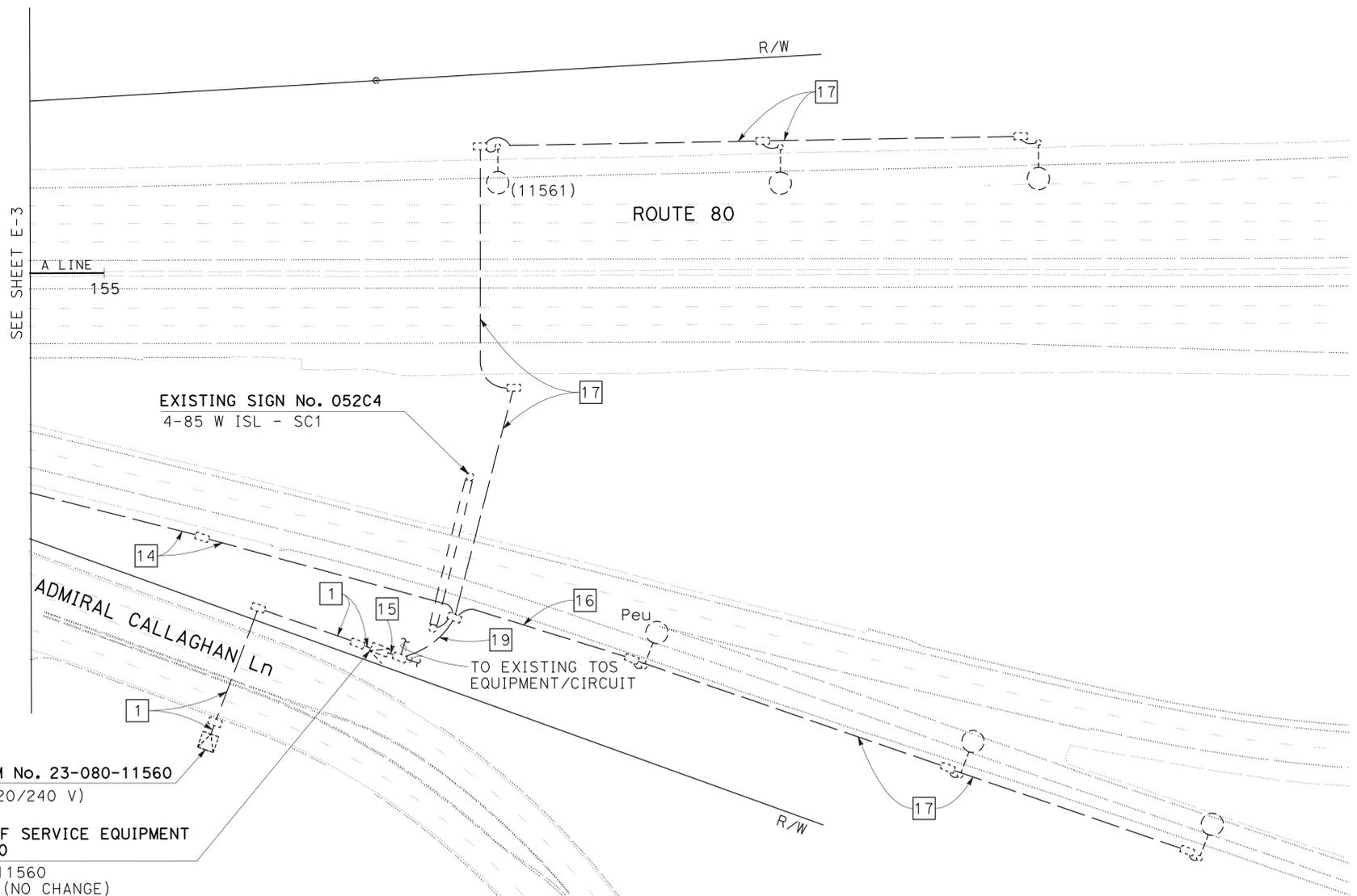
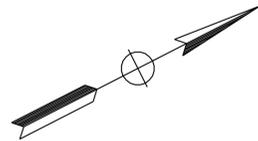
LIGHTING AND SIGN ILLUMINATION
 SCALE: 1" = 50'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	30	52
			10-28-10	DATE	
			1-31-11	PLANS APPROVAL DATE	

REGISTERED ELECTRICAL ENGINEER	DATE
Elaine Wong	10-28-10
No. 13753	Exp. 6-30-11
ELECT	

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

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



EXISTING SYSTEM No. 23-080-11560
PG&E UG BOX (120/240 V)

EXISTING TYPE III-AF SERVICE EQUIPMENT ENCLOSURE No. 11560
CTID No. 0423080R011560
EXISTING LOAD: TOU (NO CHANGE)
9-310 W hps LUMINAIRE
10-85 W isl FIXTURE
100 W tdc
800 W tmc

FOR INFORMATION ONLY

LIGHTING AND SIGN ILLUMINATION
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR	DATE
ELECTRICAL	LAI HONG CHIU	JESSIE CABUGAO	JC	9/29/10
Caltrans		ELAINE T. WONG		

LAST REVISION | DATE PLOTTED => 03-FEB-2011
10-29-10 | TIME PLOTTED => 10:48

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

CALCULATED/DESIGNED BY
 CHECKED BY

JESSIE CABUGAO
 ELAINE T. WONG

REVISED BY
 DATE REVISED

JC
 9/29/10

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

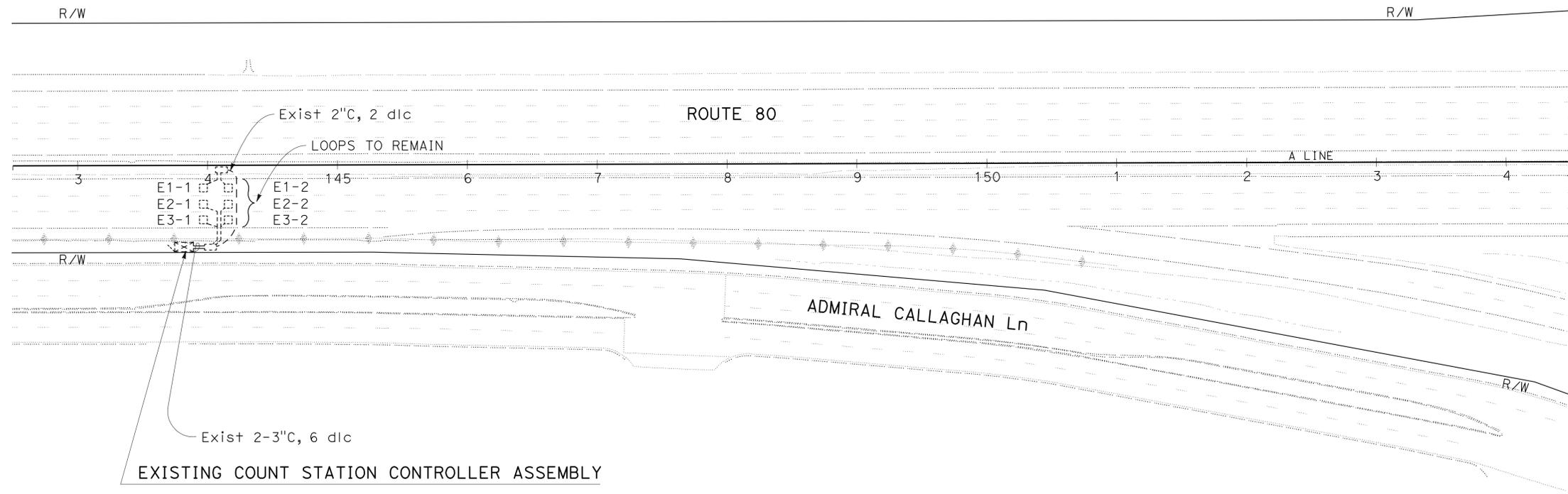
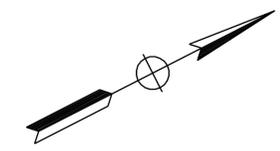
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	80	4.6/5.2	31	52

10-28-10
 REGISTERED ELECTRICAL ENGINEER DATE
 1-31-11
 PLANS APPROVAL DATE

Elaine T. Wong
 No. 13753
 Exp. 6-30-11
 ELECT

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

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 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF SCANNED
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FOR INFORMATION ONLY

TRAFFIC OPERATIONS SYSTEM
 SCALE: 1" = 50'

E-5

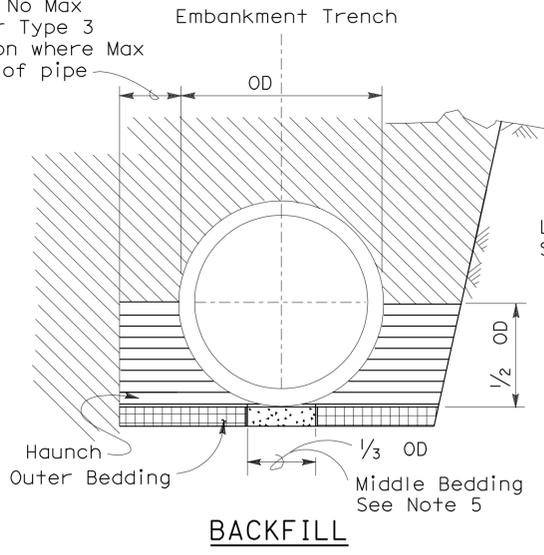
FOR NOTES, ABBREVIATIONS
 AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



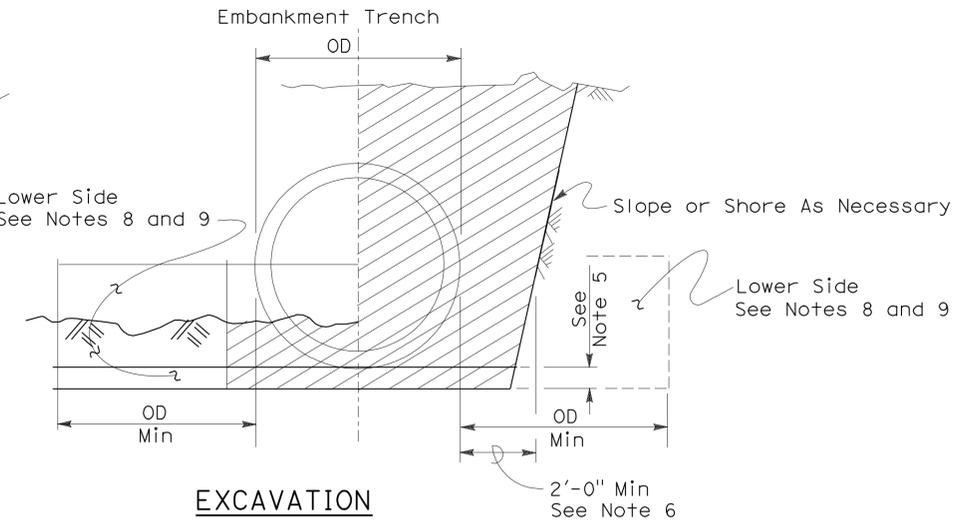
To accompany plans dated 1-31-11

2'-0" Min; No Max except for Type 3 Installation where Max Equals OD of pipe



BACKFILL

- Roadway Embankment
- Structure Backfill (Culvert) See Note 6
- Structure Backfill (Culvert) See Note 6
- Loose Backfill



EXCAVATION

- 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:

- 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.
- The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
- 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.
- Oval and arch shaped RCP shall not be used.
- 1/25 OD Min, not less than 3".
- 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.
- Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimums.
- 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.
- 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.
- 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.

2006 REVISED STANDARD PLAN RSP A62DA

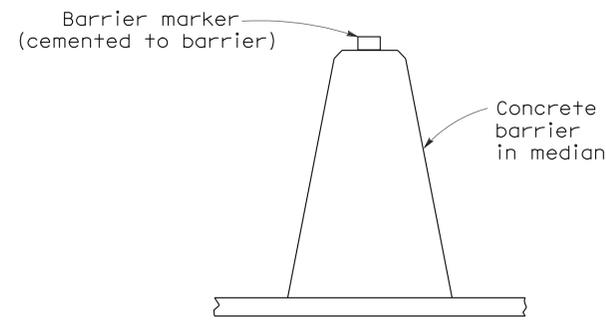
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Sol	80	4.6/5.2	33	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

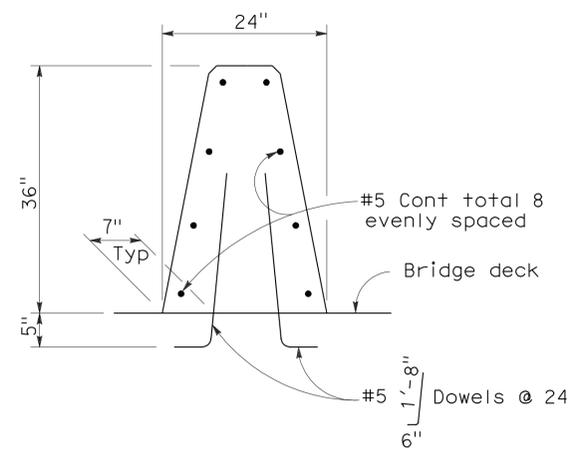
June 6, 2008
PLANS APPROVAL DATE

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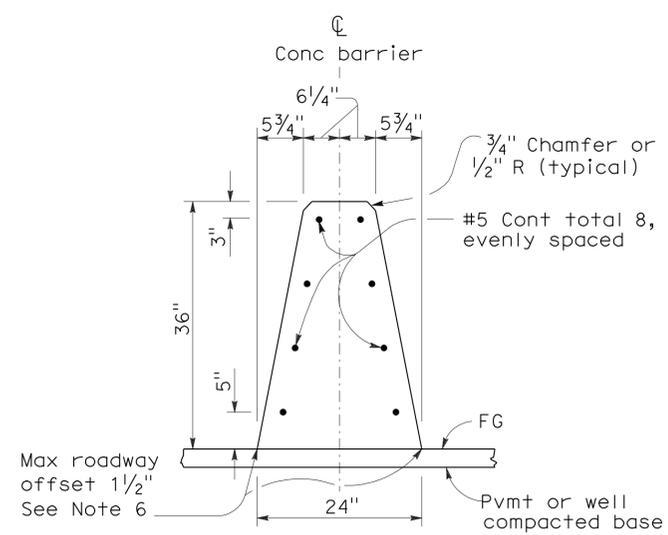
To accompany plans dated 1-31-11



CONCRETE BARRIER TYPE 60 DELINEATION
See Notes 7 and 8



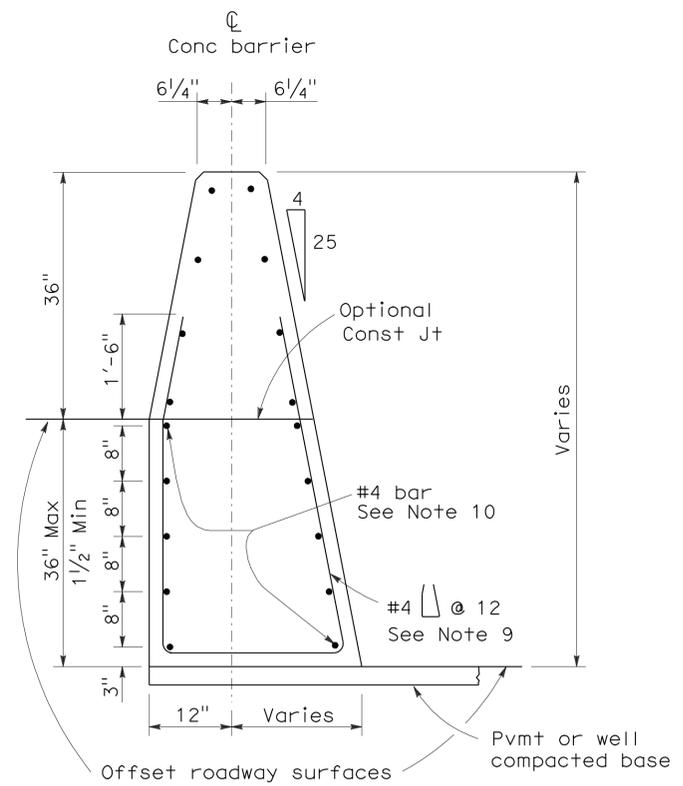
CONCRETE BARRIER TYPE 60A
Details similar to Type 60 except as noted.



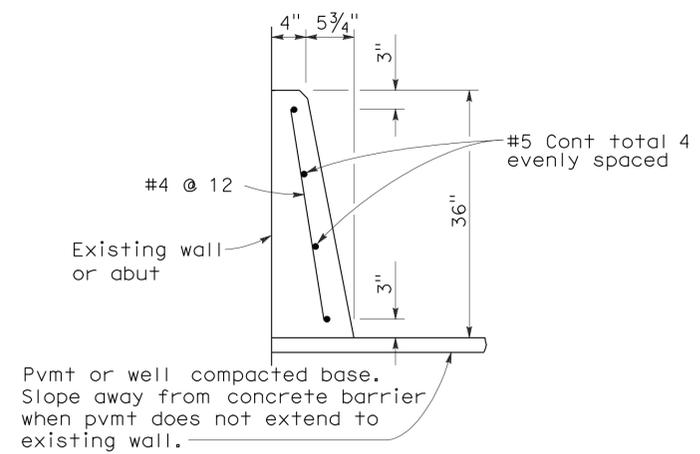
CONCRETE BARRIER TYPE 60

NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C
Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



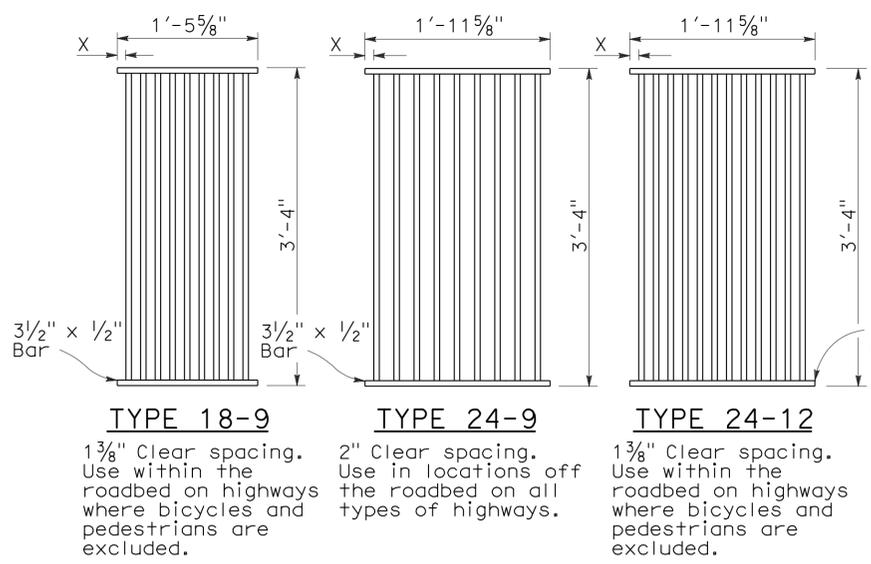
CONCRETE BARRIER TYPE 60D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60
NO SCALE

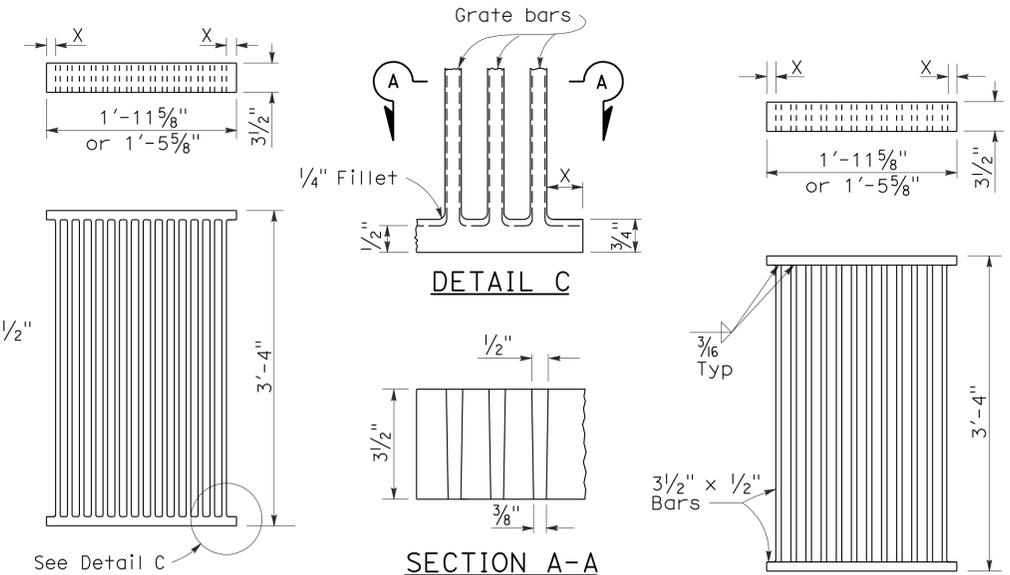
RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A
DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

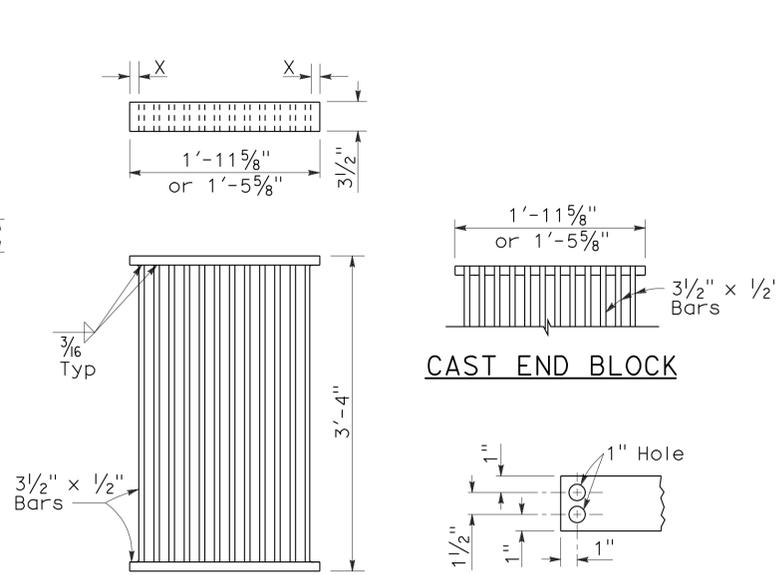
2006 REVISED STANDARD PLAN RSP A76A



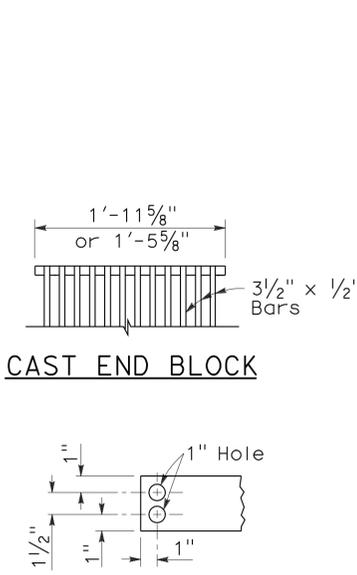
RECTANGULAR GRATE DETAILS
(See table below)



ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE



ALTERNATIVE WELDED GRATE

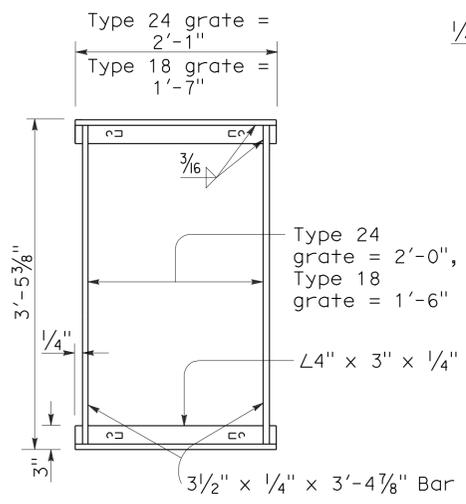


CAST END BLOCK

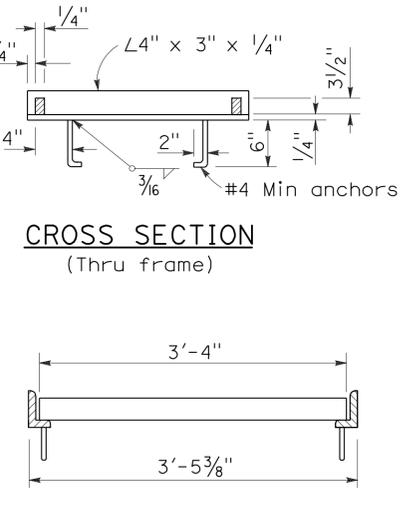
END OF BAR

NOTES:

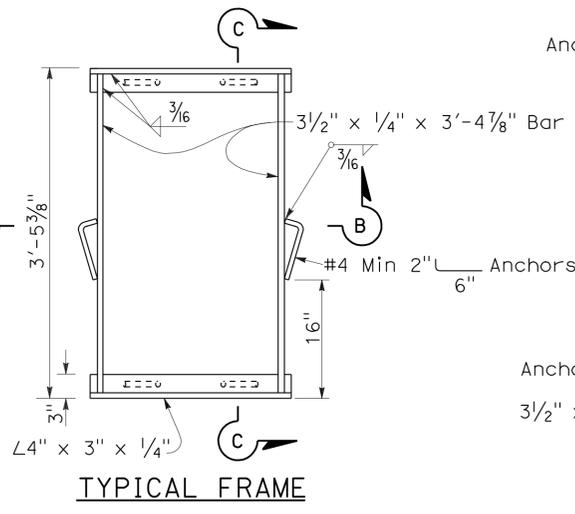
1. Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
2. Contractor has the option of using cast nodular iron, cast steel, welded, bolted, or cast end block grate.
3. See Special Provisions for requirements pertaining to galvanizing or asphalt dipping of grates and frames.
4. Rounded top of bars optional on all grates.
5. Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
6. Full penetration butt welds may be substituted for the fillet welds on all anchors.
7. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
8. Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).



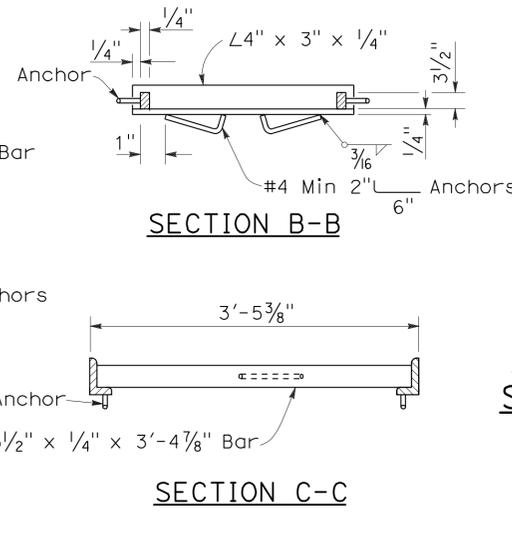
TYPICAL FRAME



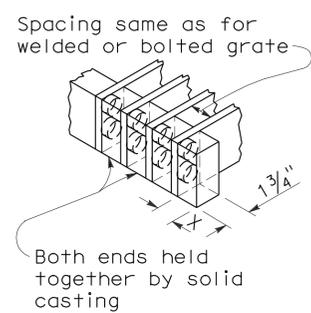
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME



ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)



ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE

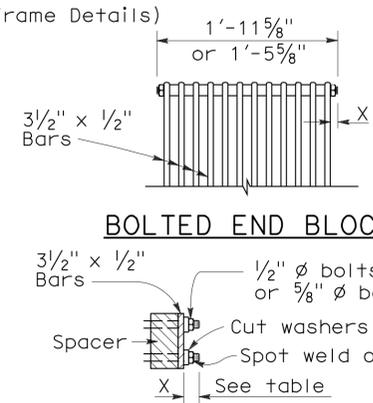
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

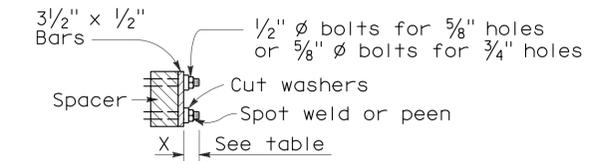
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22

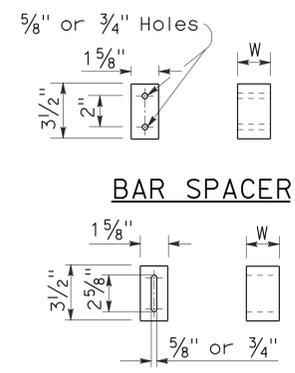


BOLTED END BLOCK



BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER

ALTERNATIVE SPACER
W = 1 3/8" or 2"

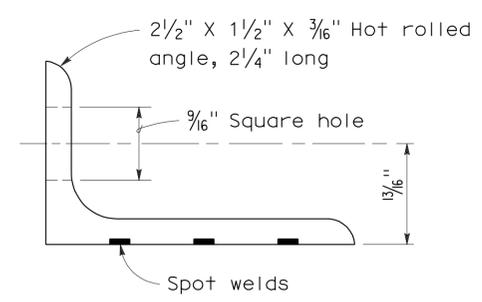
BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS

(See General Notes, No 8)

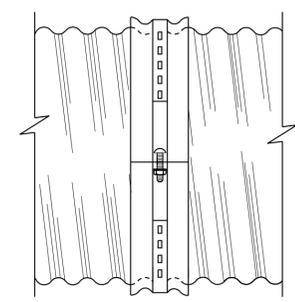
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	35	52

Raymond Don Tsztoo
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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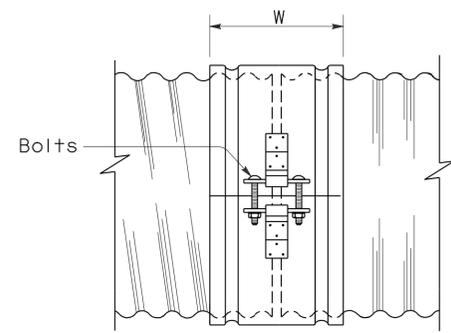
To accompany plans dated 1-31-11



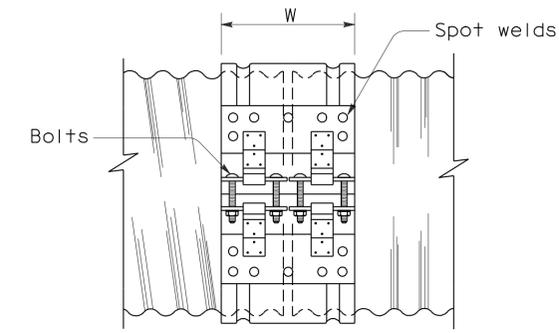
ANGLE



SIDE VIEW ANGLE



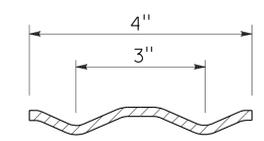
SIDE VIEW SINGLE BAR AND STRAP



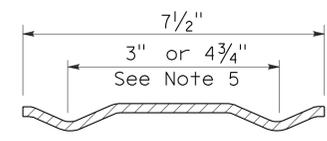
SIDE VIEW DOUBLE BAR AND STRAP

NOTES:

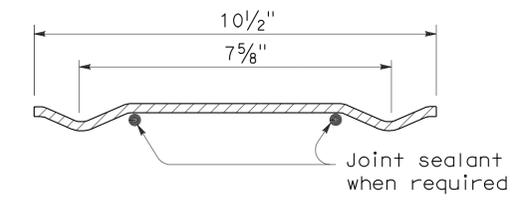
1. All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
2. Dimensions and thicknesses shown are minimum.
3. Spot welds shall develop minimum required strength of strap.
4. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
5. Dimension depends upon whether end condition is lips up or lips down.



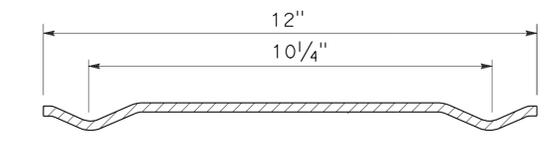
SECTION H-4 HUGGER BAND



SECTION H-7 HUGGER BAND



SECTION H-10 HUGGER BAND



SECTION H-12 HUGGER BAND

HUGGER COUPLING BANDS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CORRUGATED METAL PIPE
 COUPLING DETAILS No. 4
 HUGGER COUPLING BANDS**

NO SCALE

RSP D97D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97D
 DATED MAY 1, 2006 - PAGE 186 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97D

2006 REVISED STANDARD PLAN RSP D97D

ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE								
				CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND		
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP		
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"-10"	7"	0.052"-0.079"	0.048"-0.060"	0.052"	0.060"							2-3/8"	2-3/8"					
				12"-18"	7"	0.052"-0.079"		0.064"								2-1/2"				
UNIVERSAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"	
		42"-60"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		THROUGH 72"	12"	0.052"-0.168"	0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
ANNULAR	2 2/3" x 1/2"	THROUGH 36"	7"	0.064"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"	2" x 2" x 3/16"	2-1/2"	2-1/2"	3-3/8"	3-3/8"	3-1/2"	
		42"-72"	12"	0.064"-0.168"	0.075"-0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi		2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi		2" x 2" x 3/16"		3-1/2"		4-3/8"			
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"				
HELICAL	2 2/3" x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"	
		42"-72"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi		2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi		2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi		2" x 2" x 3/16"		3-1/2"		4-3/8"			
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"				
HUGGER	2 2/3" x 1/2"	REROLLED END	12"-54"	4"	0.052"-0.109"		0.052"						2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"	
			60"-66"	4"	0.109"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"			3-1/2"	
			36"-48"	4"	0.138"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"			3-1/2"	
			THROUGH 72"	10 1/2"	0.052"-0.168"		0.052"		0.079"	1/2"	7/8"	32 ksi								
	3" x 1"	REROLLED END	48"-90"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi								
			96"-120"	10 1/2"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi								
	5" x 1"	REROLLED END	48"-66"	7 1/2"	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"					3-1/2"
			72"-90"	7 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"					3-1/2"
			48"-90"	7 1/2"	0.064"-0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi								
			48"-120"	12" SEE	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		48"-84"	12" NOTE	0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi									
		90"-120"	12" 11	0.138"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi									

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE						
				SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		42"-60"	12"	0.064"-0.109"	0.075"-0.105"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		66"-72"	12"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		78"-114"	12"	0.079"-0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
HUGGER	2 2/3" x 1/2" * REROLLED END	24"-72"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi							
		78"-84"	10 1/2"	0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi							

* See Note 14.

14. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3" x 1/2" annual corrugations with a minimum of two full corrugations at each end.

NOTES: To accompany plans dated 1-31-11

- All ferrous metal coupling band connection hardware shall be galvanized or electro-plated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
- Two piece bands are required for pipes greater than 42" diameter.
- The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 5
STANDARD JOINT**

NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97E

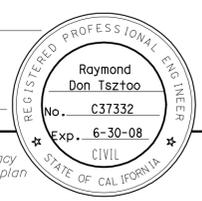
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	36	52

Raymond Don Tsztou
REGISTERED CIVIL ENGINEER

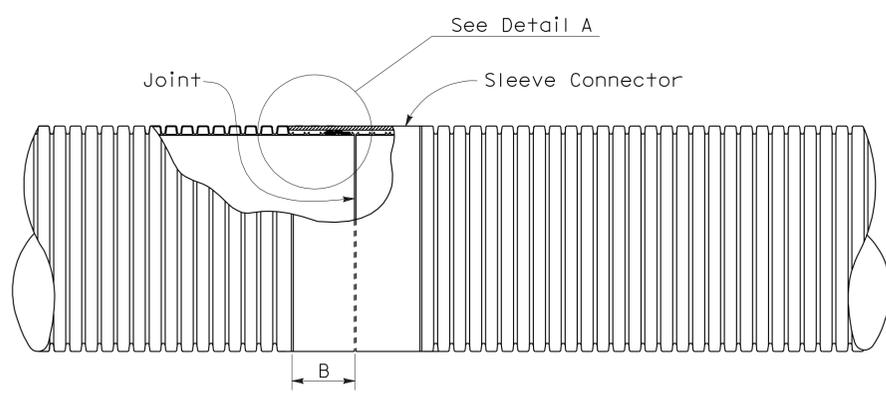
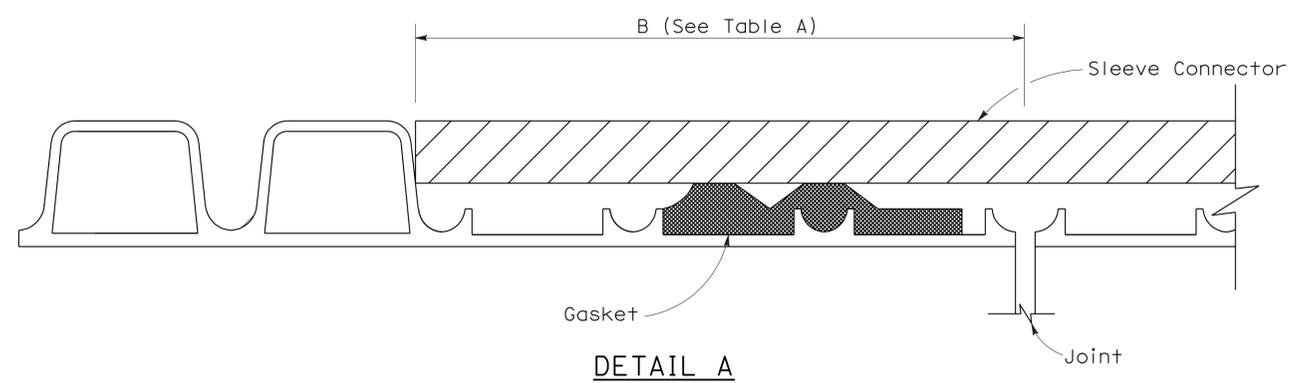
June 6, 2008
PLANS APPROVAL DATE

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2006 REVISED STANDARD PLAN RSP D97E

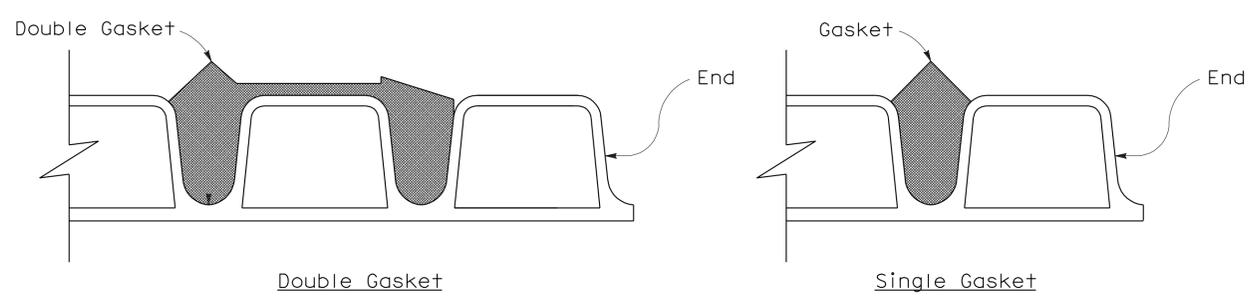


To accompany plans dated 1-31-11

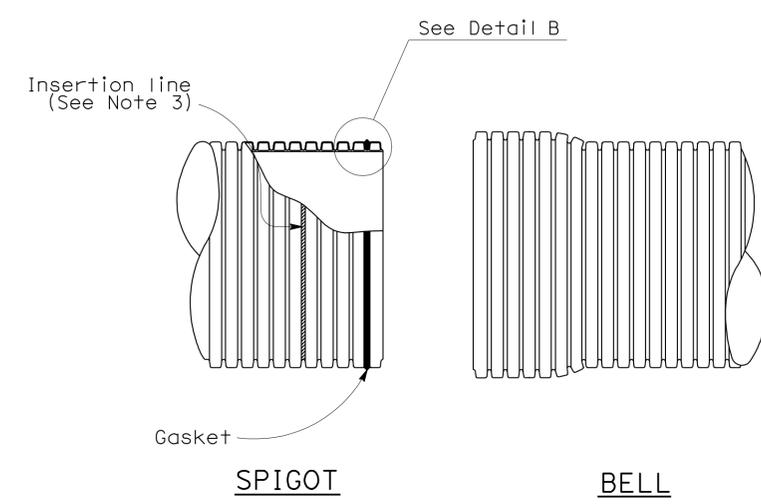


PLAN VIEW
Liner Insert
See Note 4

- NOTES:**
- For pipe sections installed on straight alignment, the pipe sections shall be joined to achieve maximum joint overlap at all points on the periphery as indicated in Table A where the plans call for positive or watertight joints. Maximum joint overlap is recommended where the plans call for standard joints, but in no case shall the joint overlap be less than 3/2".
 - For pipe sections installed on curved alignment, the maximum angle of deflection from straight alignment at any joint shall not exceed two degrees. Where the plans call for watertightness, field testing for compliance is required. Where plans call for positive joints, the pipe sections shall be joined to achieve Table A Dimensions on one side of the joint. Joints classified as standard shall have no less than 3/2" joint overlap at any point on the periphery.
 - Factory applied insertion line limit shall be placed on spigot.
 - Liner insert to be used inside of existing pipe.



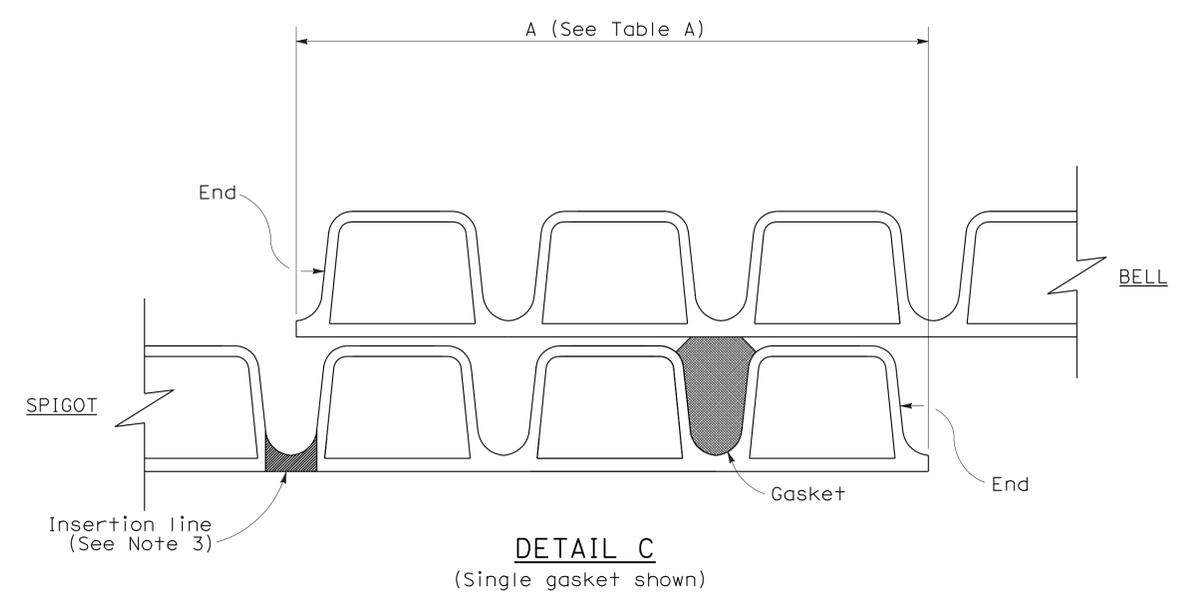
DETAIL B



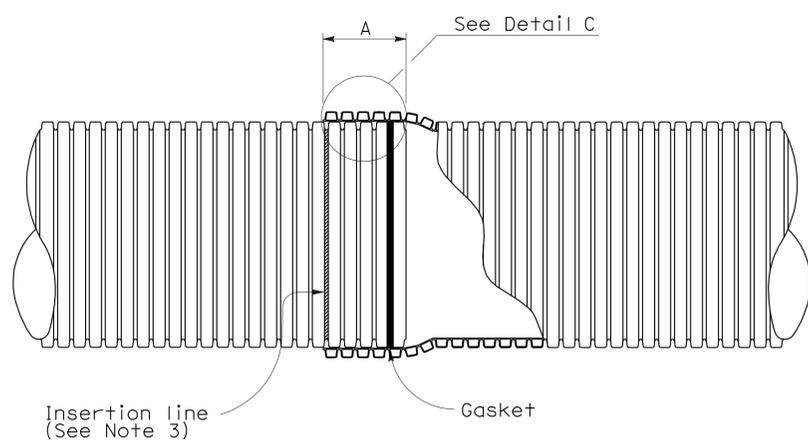
SPIGOT BELL

TABLE A

JOINT OVERLAP DIMENSIONS		
PIPE Dia (NOMINAL)	A	B
12"	5 3/4"	4 1/4"
15"	6 3/4"	5 5/8"
18"	6 3/4"	5 5/8"
21"	8 1/2"	5 5/8"
24"	8 1/2"	6 1/8"
30"	8 1/2"	7 1/8"
36"	8 1/2"	8 1/8"



DETAIL C
(Single gasket shown)



BELL AND SPIGOT JOINT

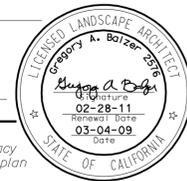
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CORRUGATED POLYVINYL CHLORIDE PIPE
WITH SMOOTH INTERIOR
STANDARD AND POSITIVE JOINTS**

NO SCALE
NSP D97I DATED MARCH 7, 2008 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP D97I

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Sol	80	4.6/5.2	38	52

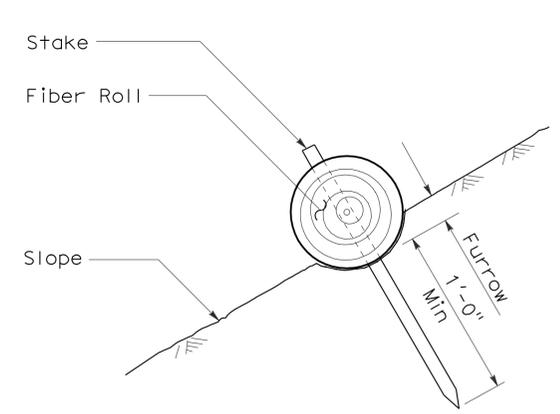
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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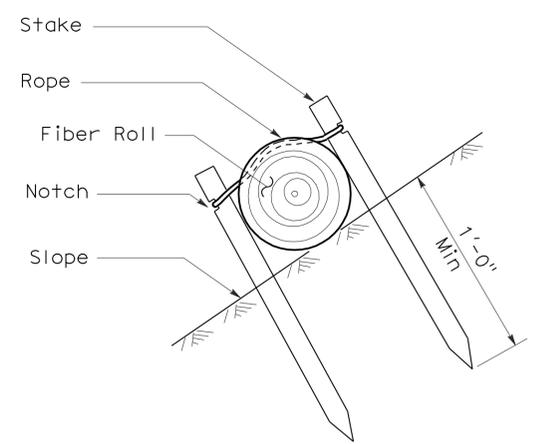
To accompany plans dated 1-31-11

NOTES:

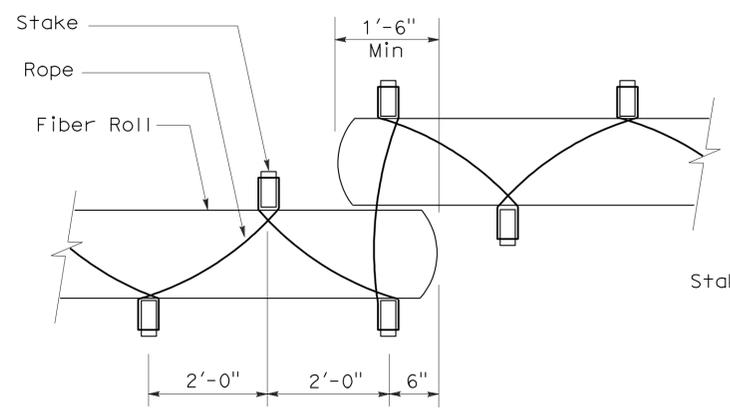
1. Fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



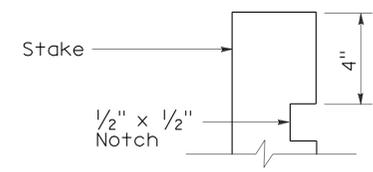
SECTION
FIBER ROLL
(TYPE 1)



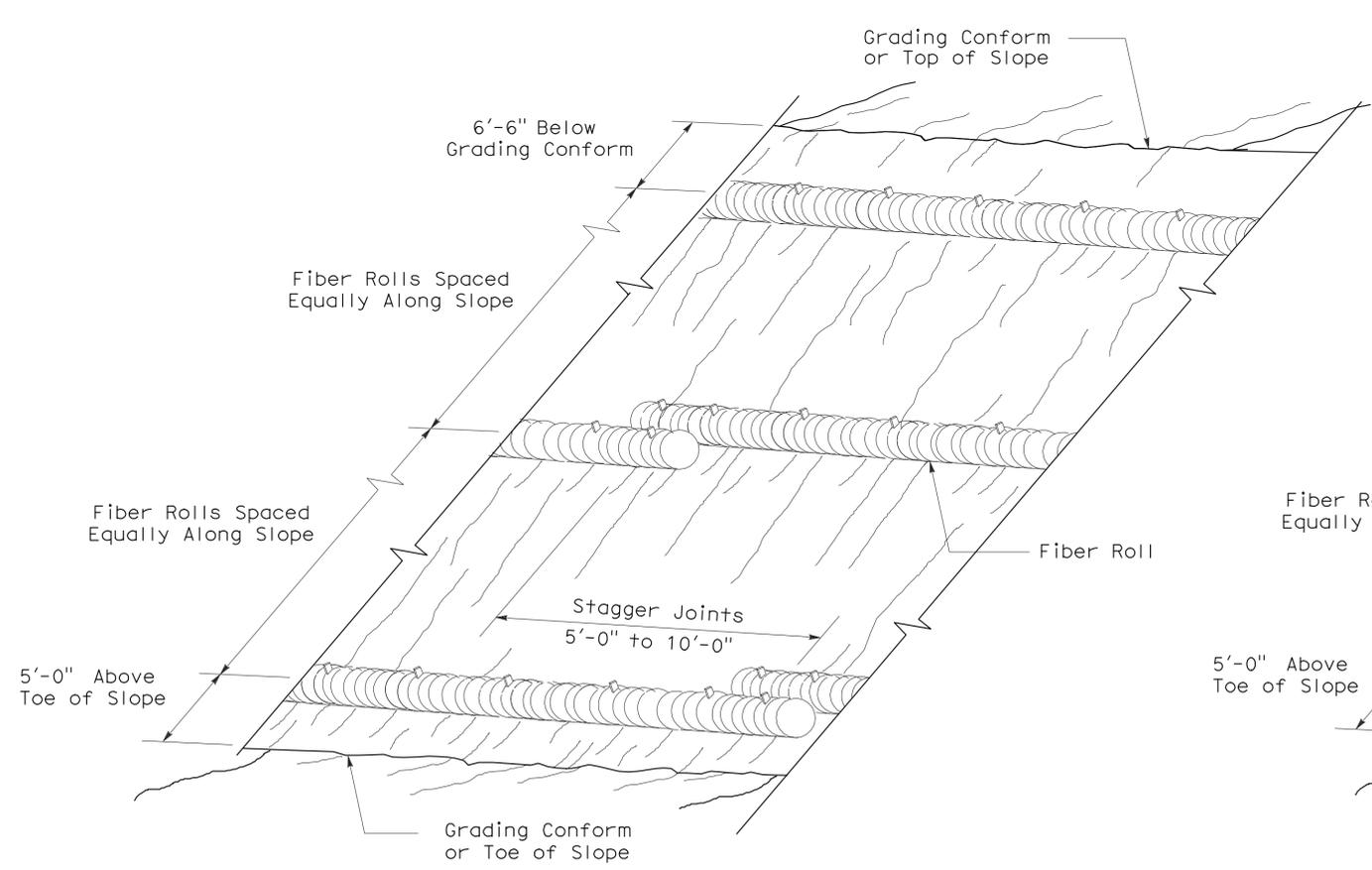
SECTION



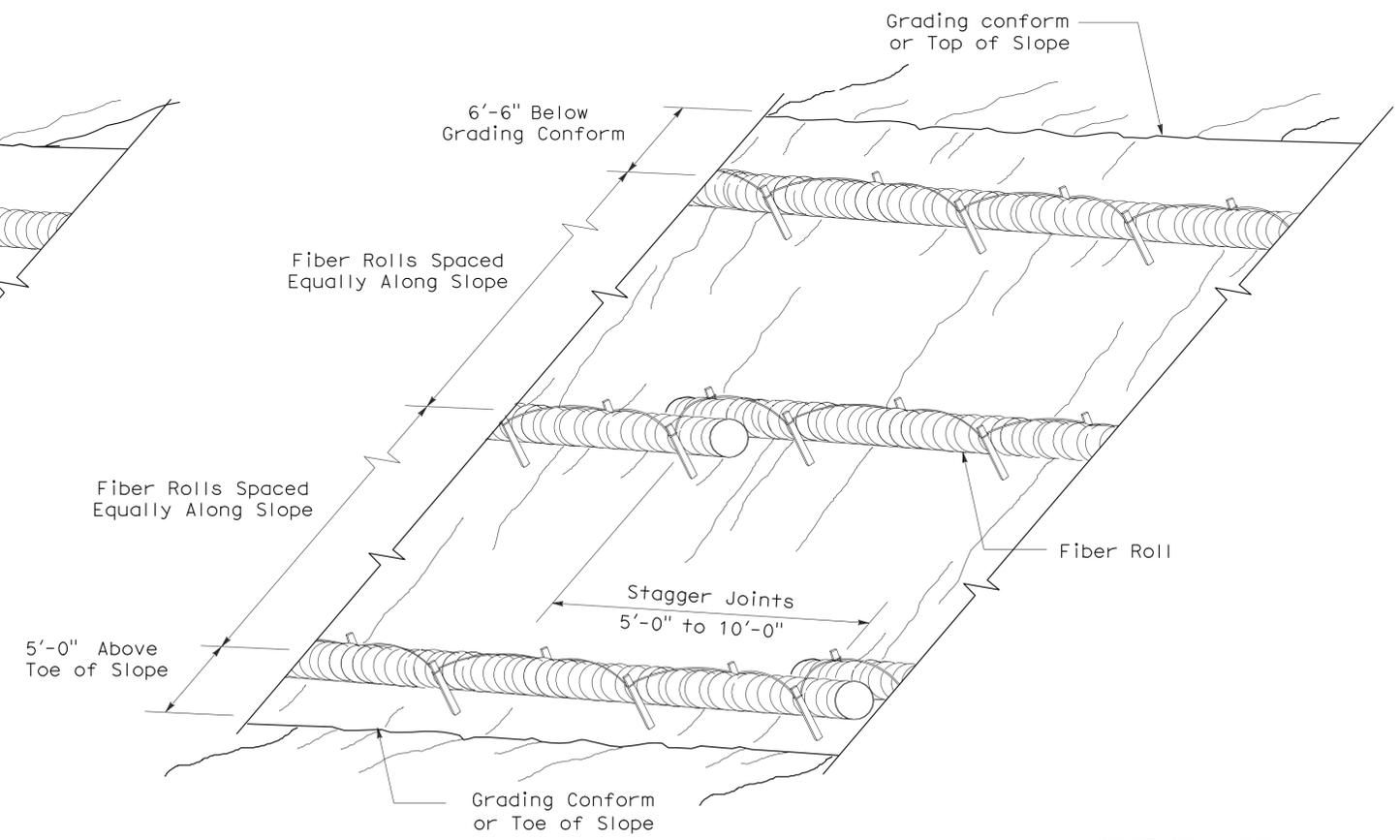
PLAN



ELEVATION
STAKE NOTCH DETAIL



PERSPECTIVE
FIBER ROLL (TYPE 1)



PERSPECTIVE
FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EROSION CONTROL DETAILS
(FIBER ROLL)

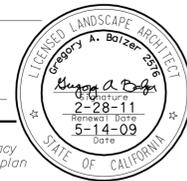
NO SCALE

RNSP H51 DATED APRIL 3, 2009 SUPERSEDES NSP H51 DATED DECEMBER 1, 2006 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED NEW STANDARD PLAN RNSP H51

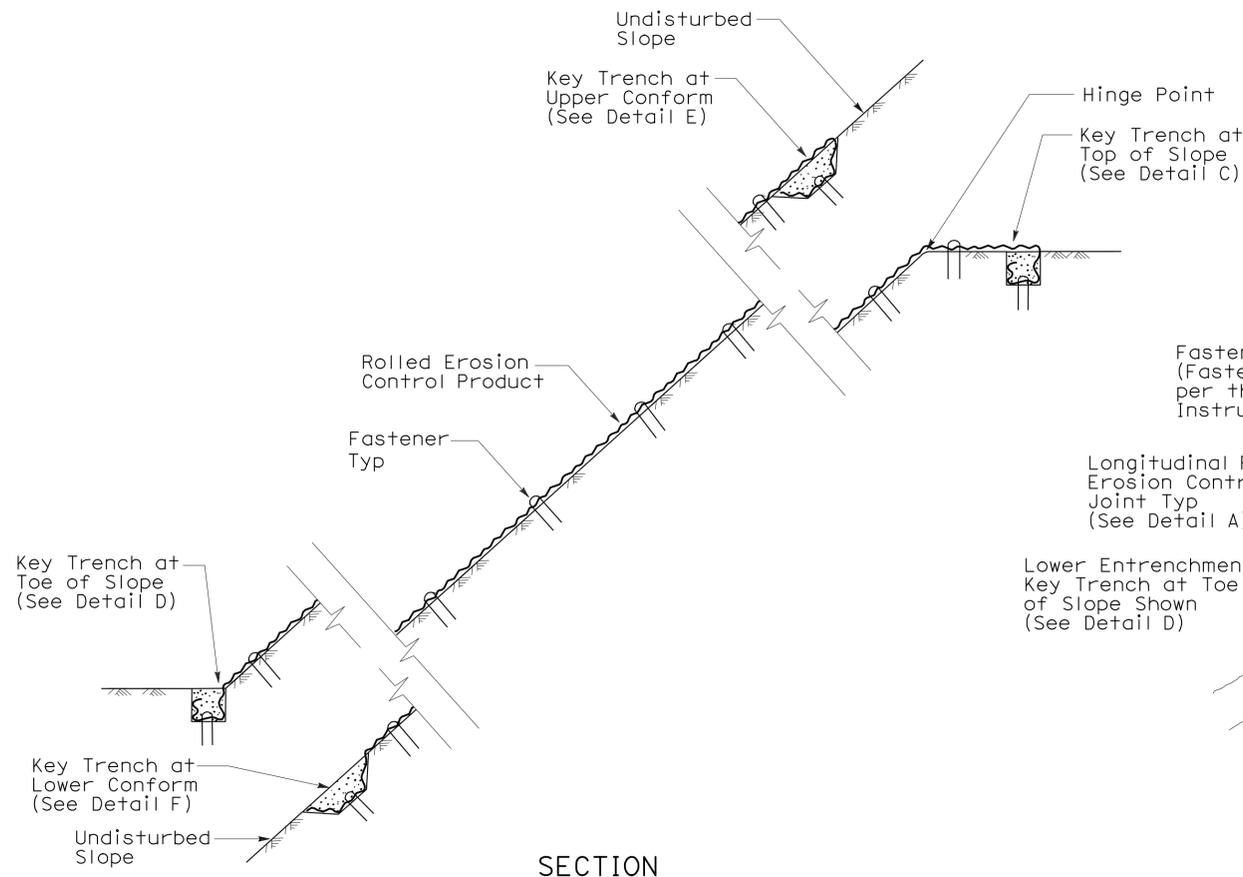
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	39	52

Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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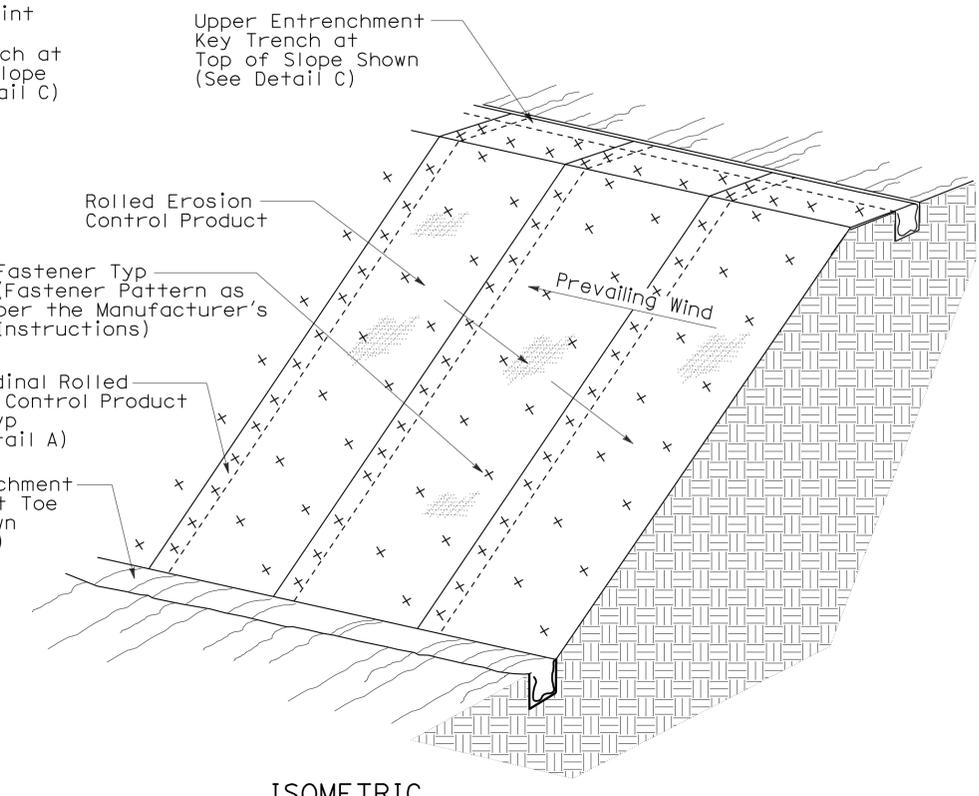


To accompany plans dated 1-31-11

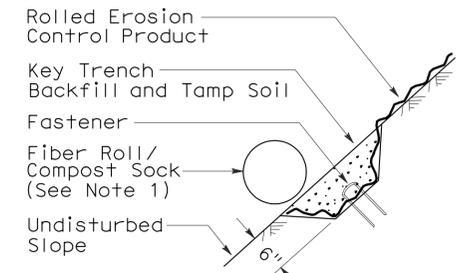
- NOTE:**
1. Fiber Roll/Compost Sock shown for reference purposes only.
 2. If transverse rolled erosion control product joints are required on slopes, see Detail B.



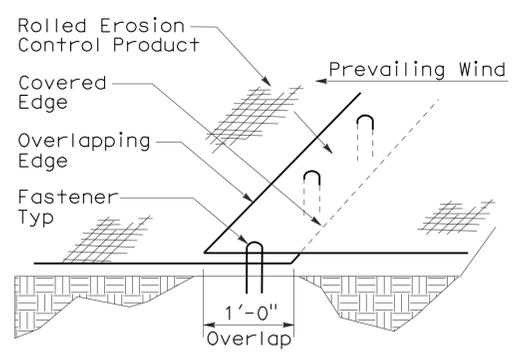
SECTION
ROLLED EROSION CONTROL PRODUCT
ON SLOPE WITH VARIOUS KEY ENTRENCHMENTS



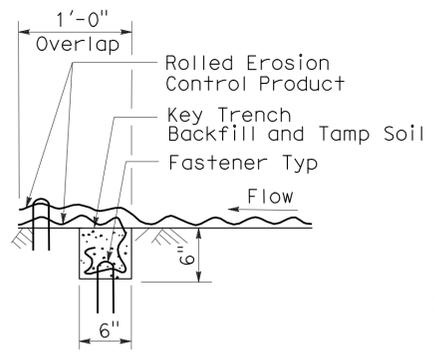
ISOMETRIC
ROLLED EROSION CONTROL PRODUCT
ON SLOPE



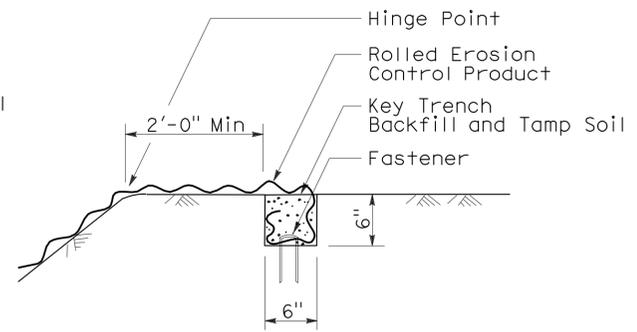
SECTION
DETAIL F
KEY TRENCH AT
LOWER CONFORM



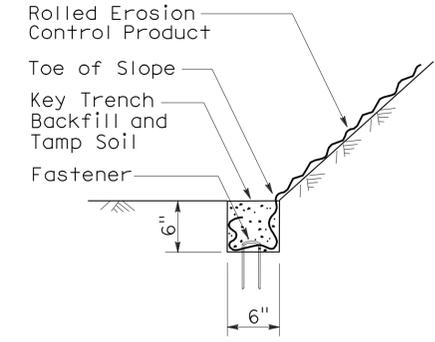
PERSPECTIVE
DETAIL A
LONGITUDINAL ROLLED EROSION
CONTROL PRODUCT JOINT



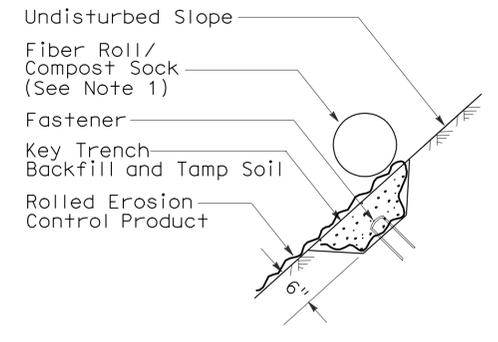
SECTION
DETAIL B
TRANSVERSE ROLLED EROSION
CONTROL PRODUCT JOINT



SECTION
DETAIL C
KEY TRENCH AT
TOP OF SLOPE



SECTION
DETAIL D
KEY TRENCH AT
TOE OF SLOPE



SECTION
DETAIL E
KEY TRENCH AT
UPPER CONFORM

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ROLLED EROSION CONTROL PRODUCT

NO SCALE

NSP H53 DATED JUNE 5, 2009 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP H53

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SoI	80	4.6/5.2	40	52

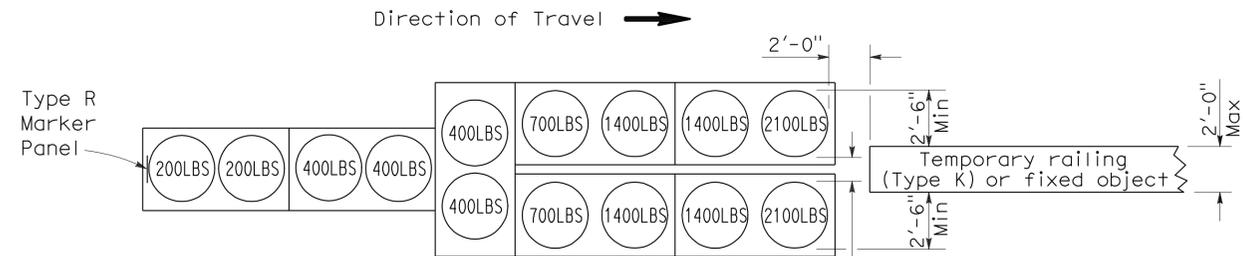
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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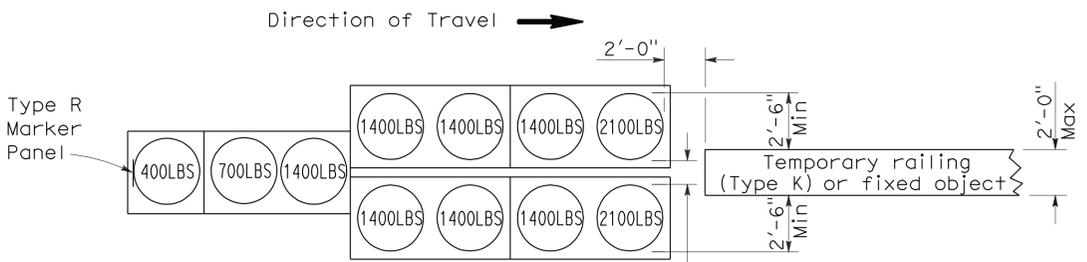
To accompany plans dated 1-31-11

2006 REVISED STANDARD PLAN RSP T1A



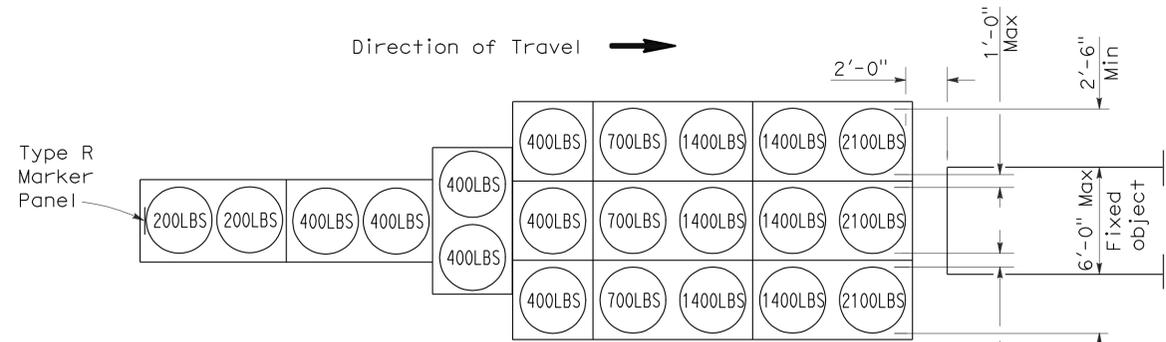
ARRAY 'TU14'

Approach speed 45 mph or more



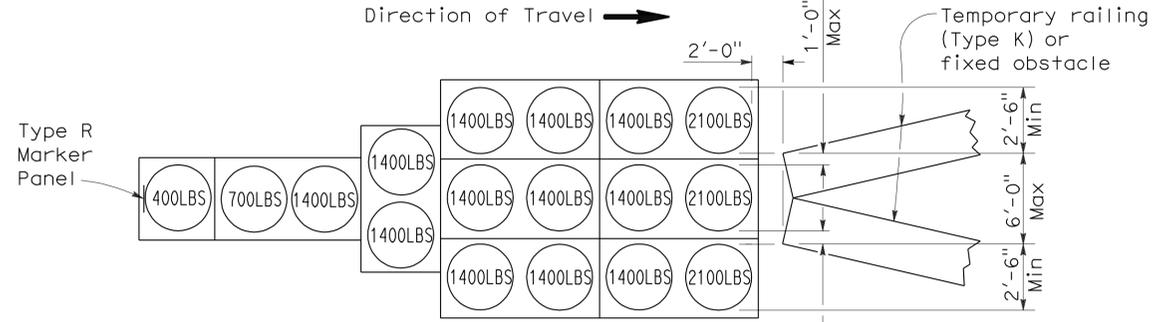
ARRAY 'TU11'

Approach speed less than 45 mph



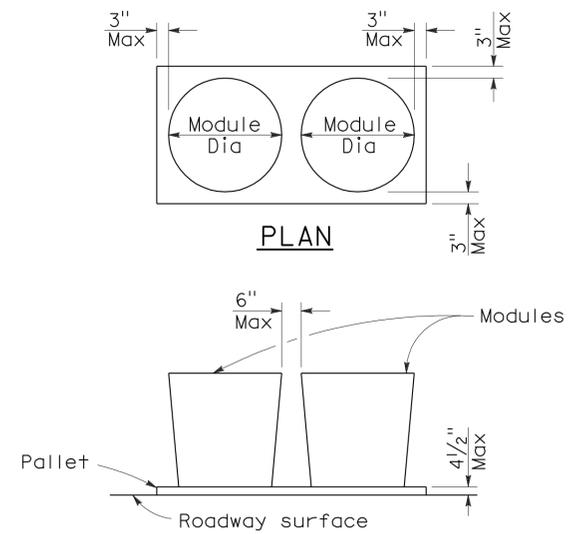
ARRAY 'TU21'

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

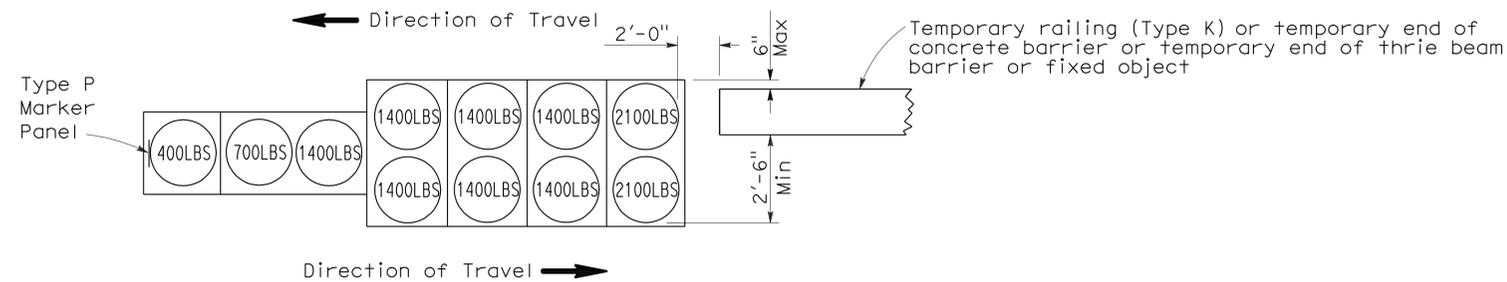
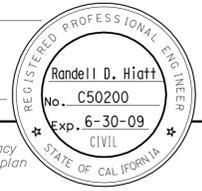
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	41	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

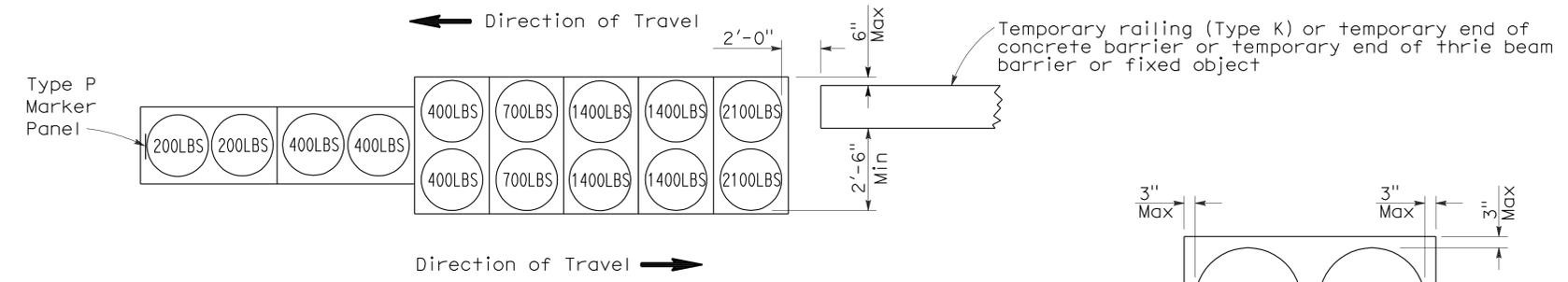
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 1-31-11



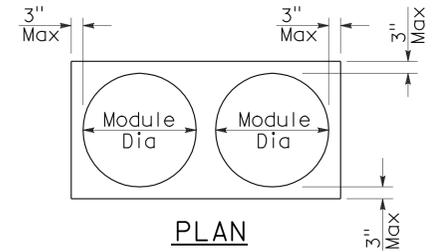
ARRAY 'TB11'

Approach speed less than 45 mph

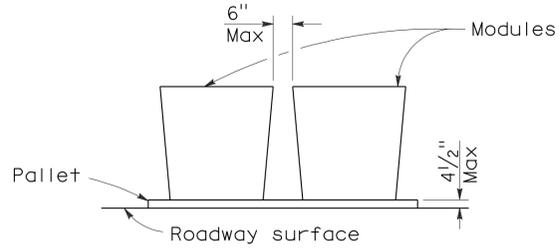


ARRAY 'TB14'

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

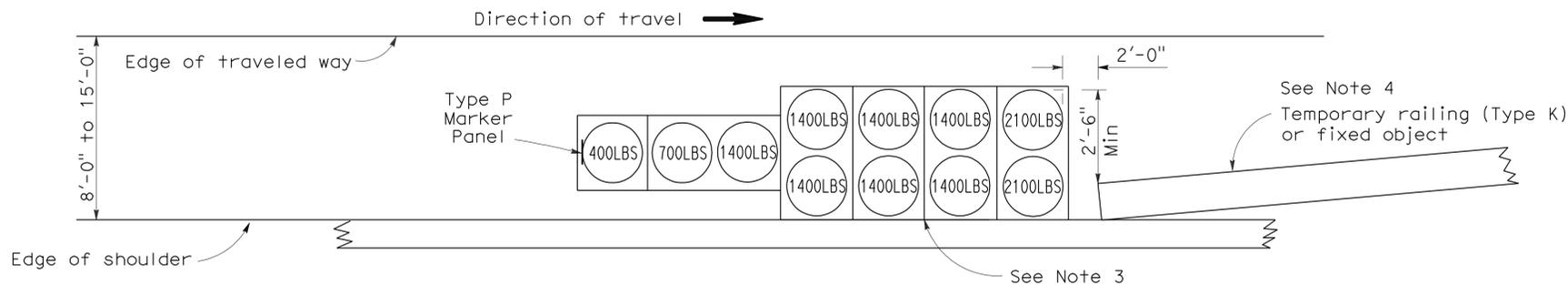
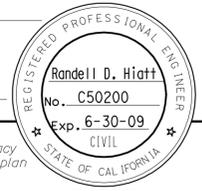
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Sol	80	4.6/5.2	42	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

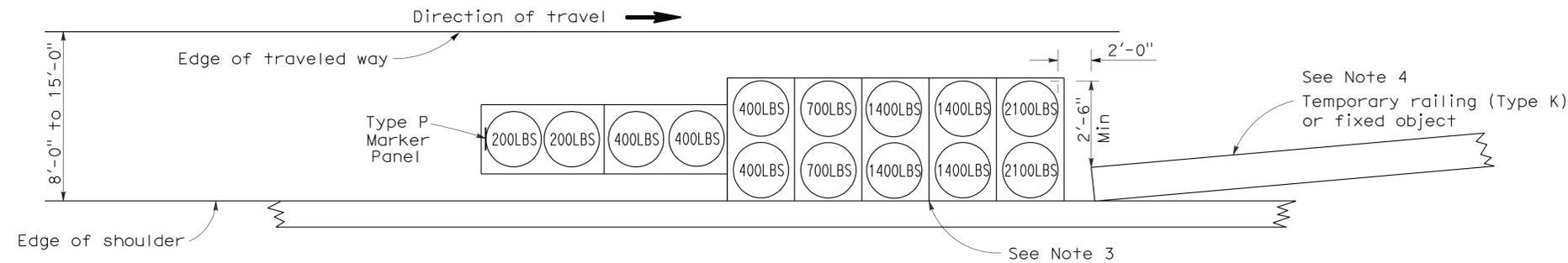
June 6, 2008
PLANS APPROVAL DATE

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

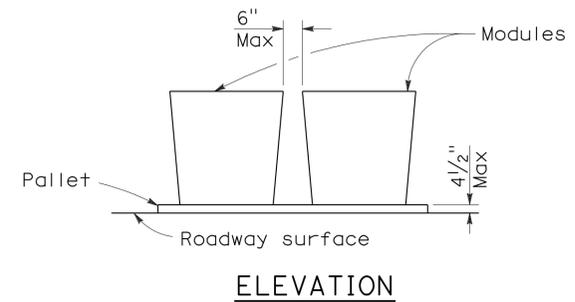
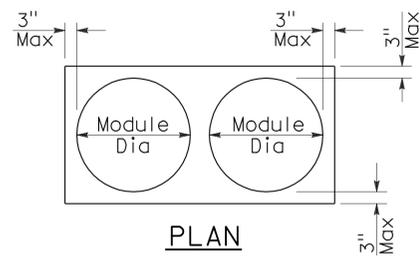
To accompany plans dated 1-31-11



ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- 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

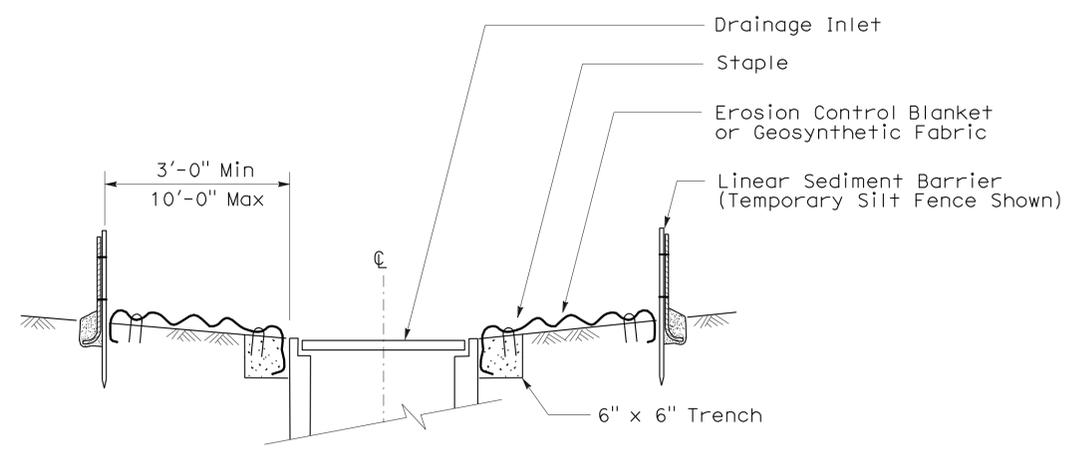
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	44	52

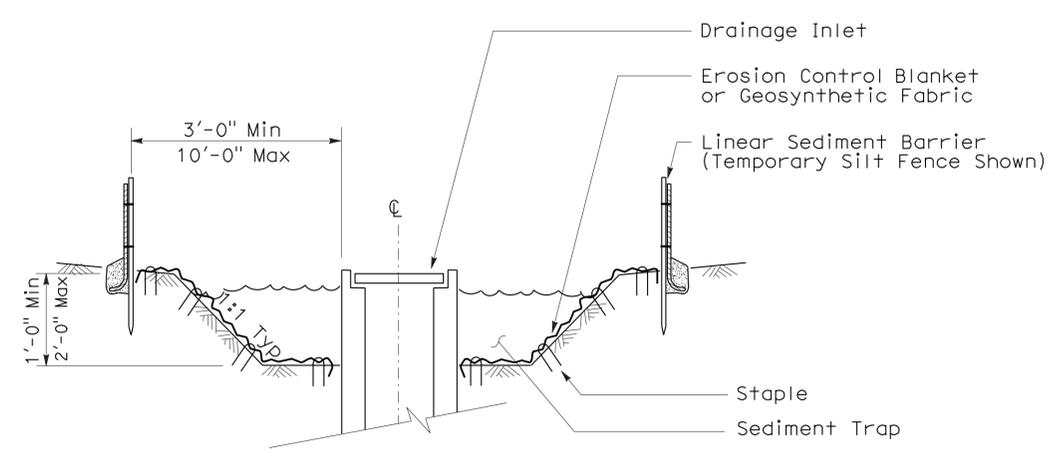
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE
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To accompany plans dated 1-31-11

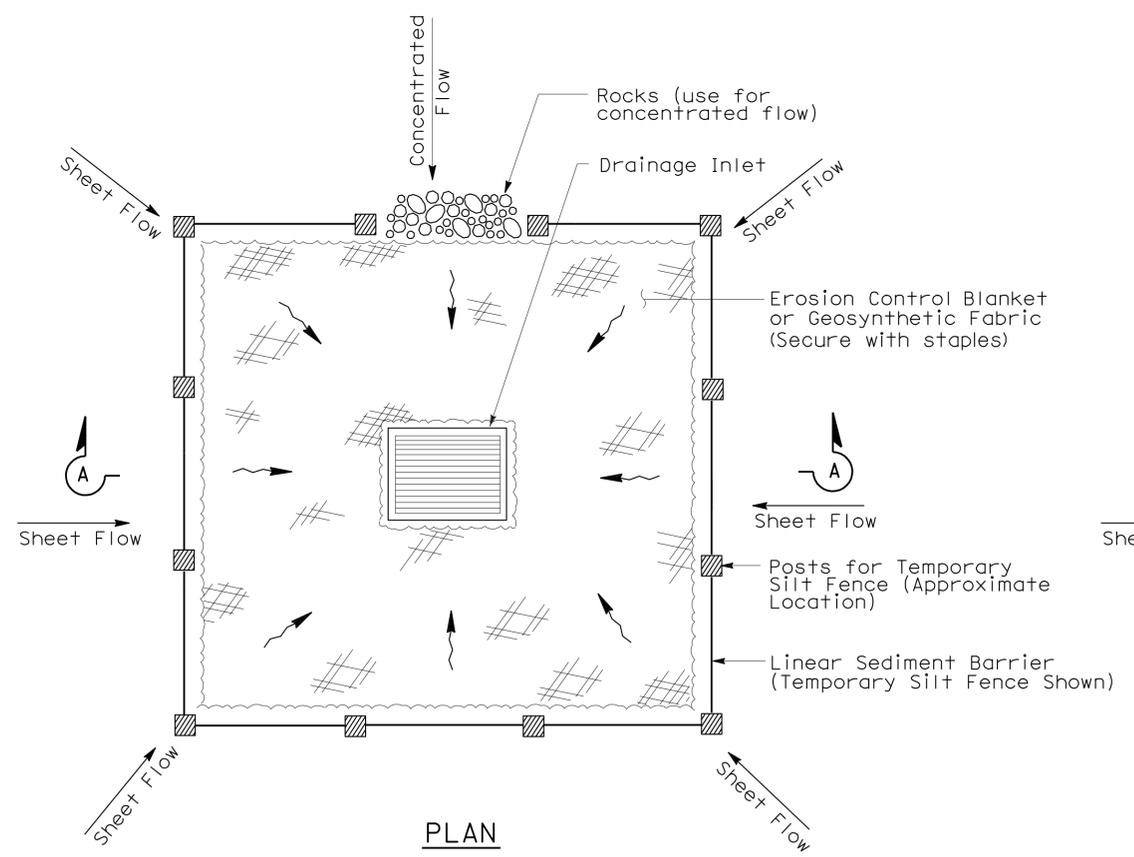
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
 2. Dimensions may vary to fit field conditions.



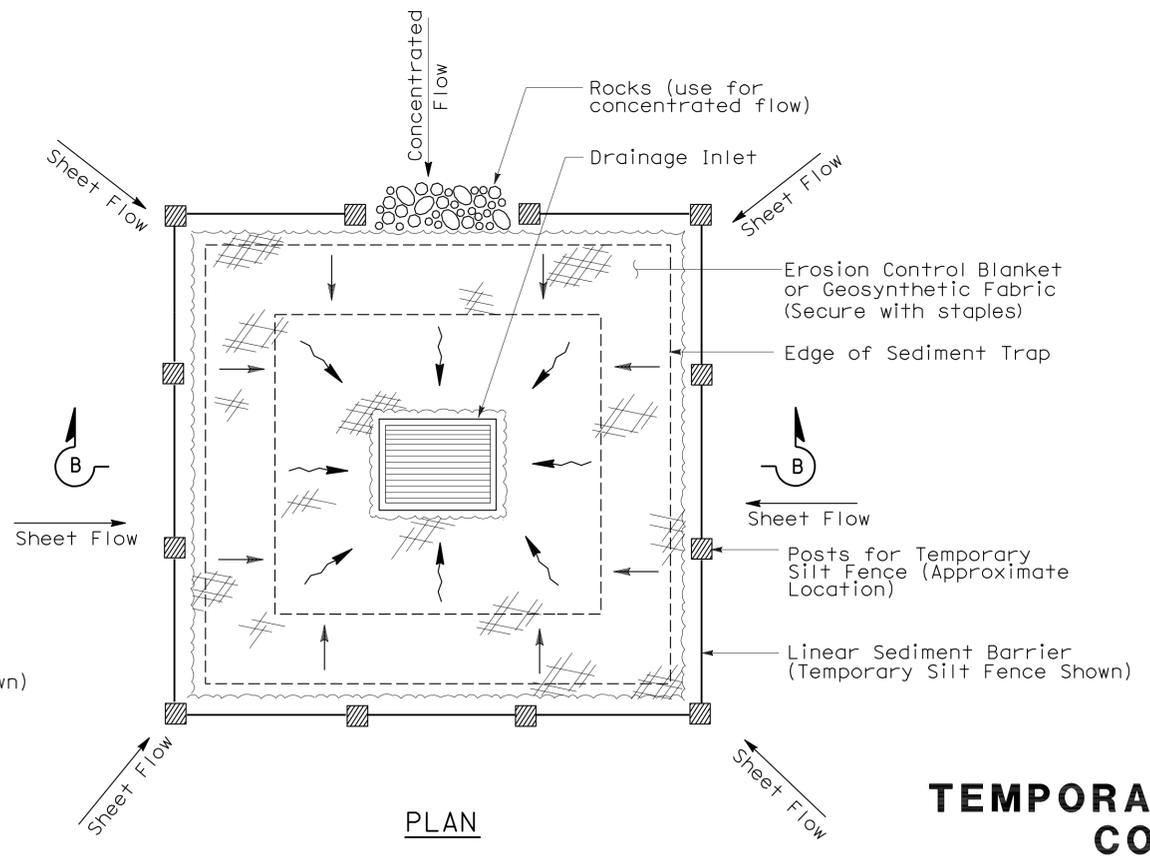
SECTION A-A



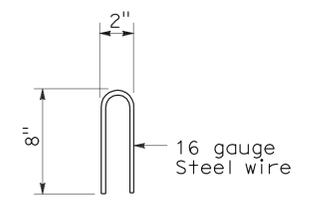
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	45	52

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

August 15, 2008
 PLANS APPROVAL DATE

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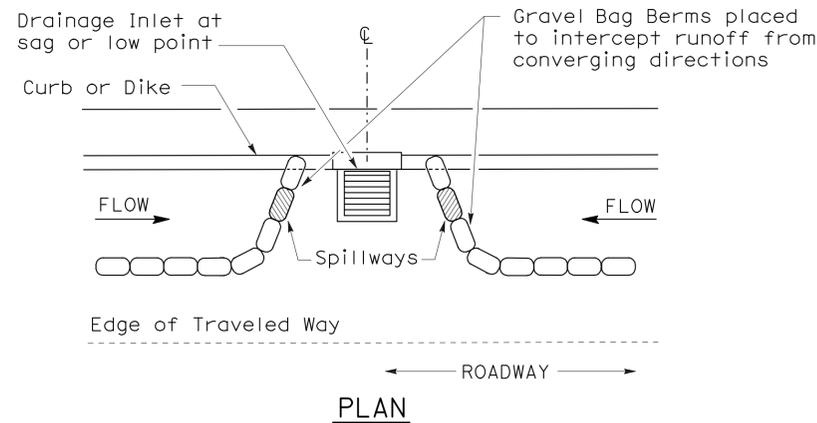
To accompany plans dated 1-31-11

2006 NEW STANDARD PLAN NSP T62

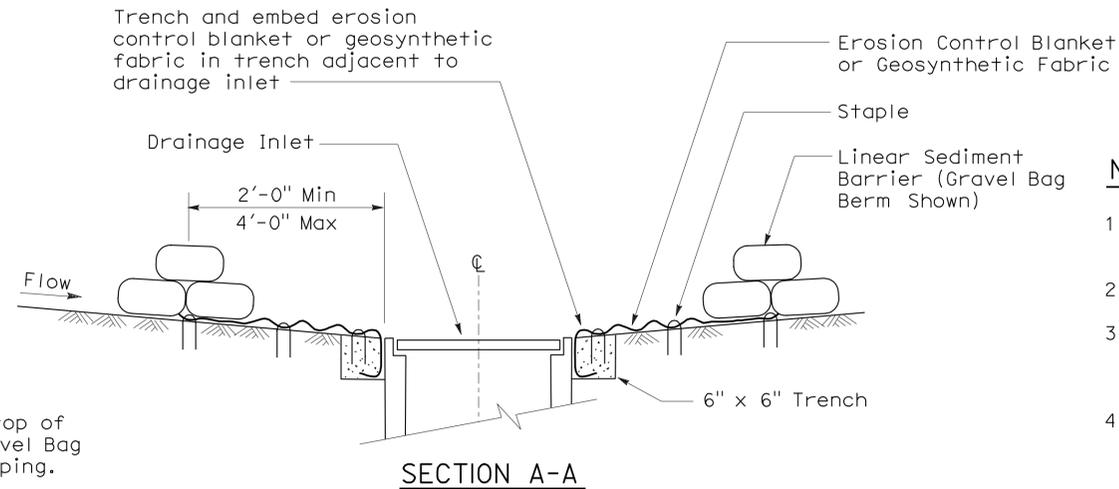
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



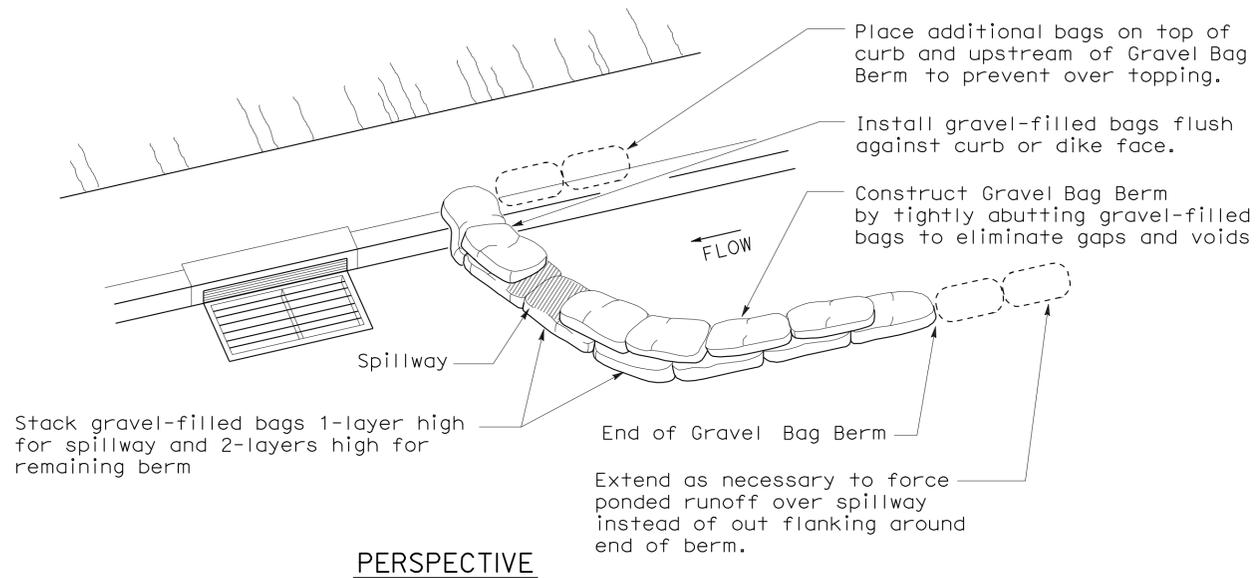
PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



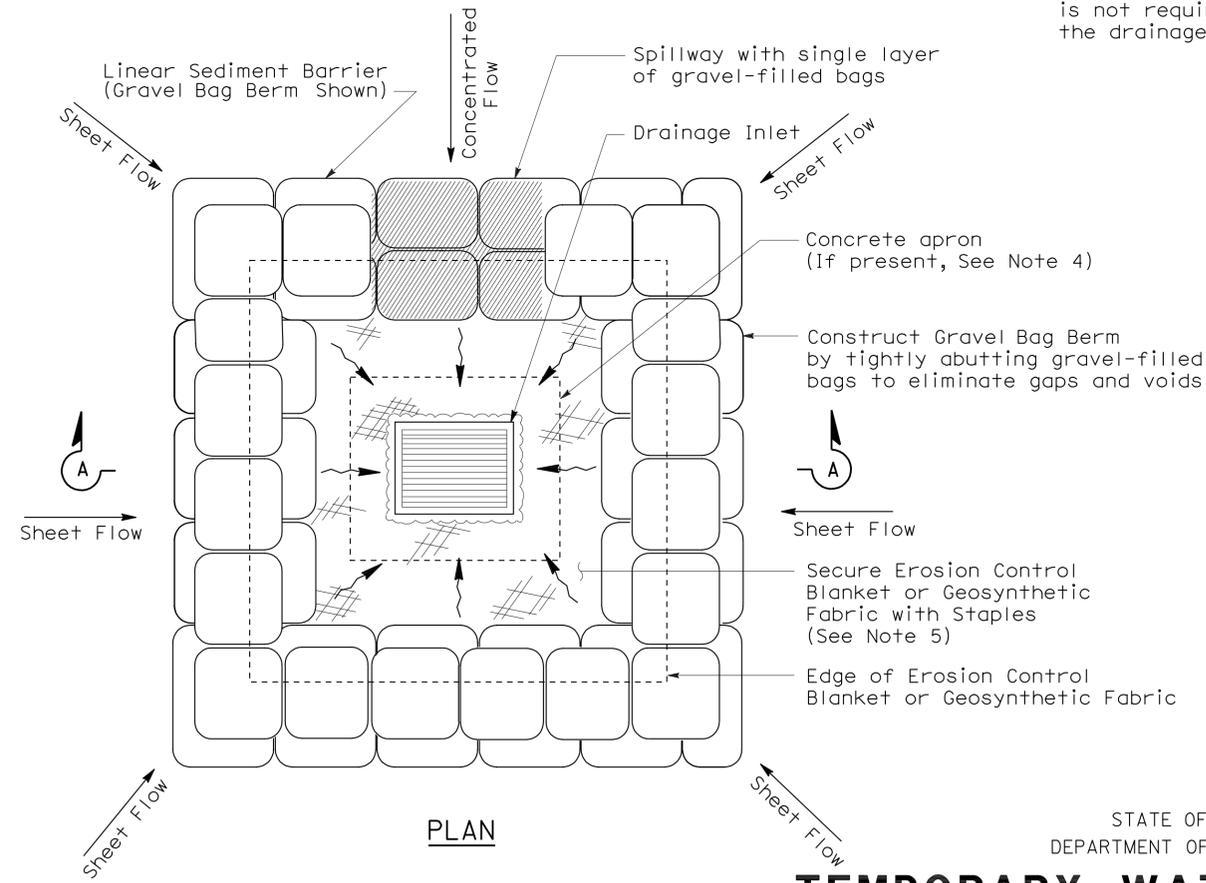
SECTION A-A

NOTES:

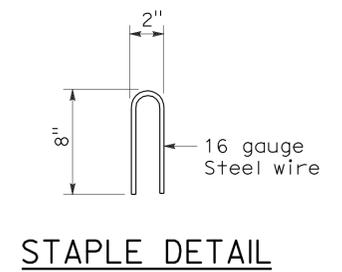
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



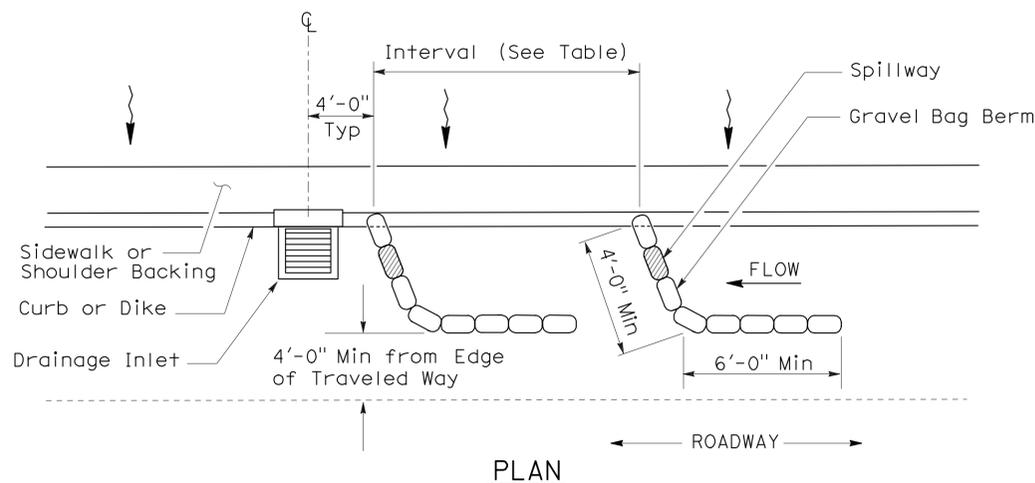
PERSPECTIVE



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

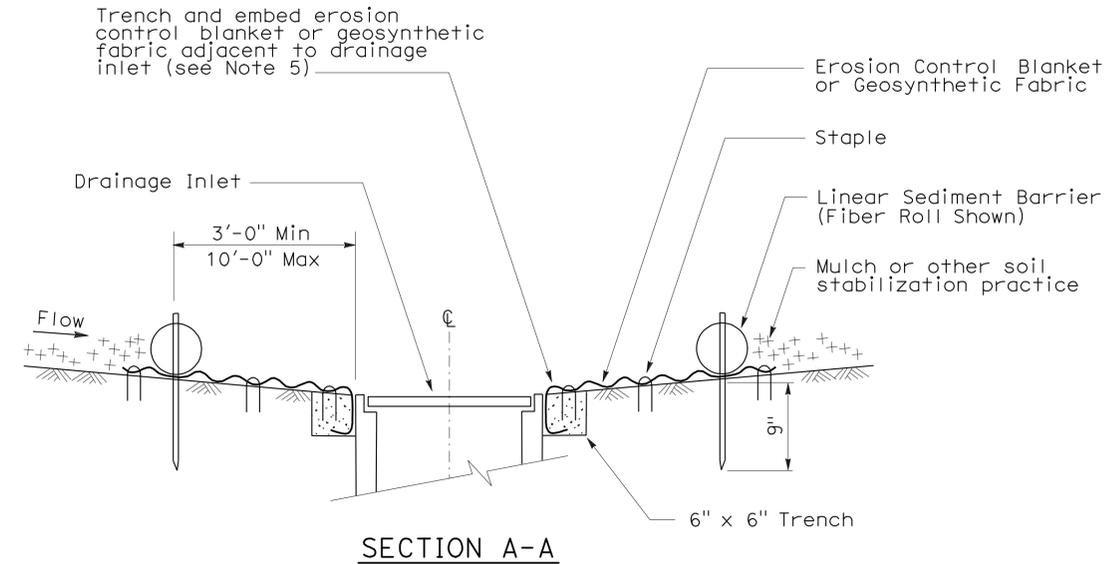
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	46	52

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

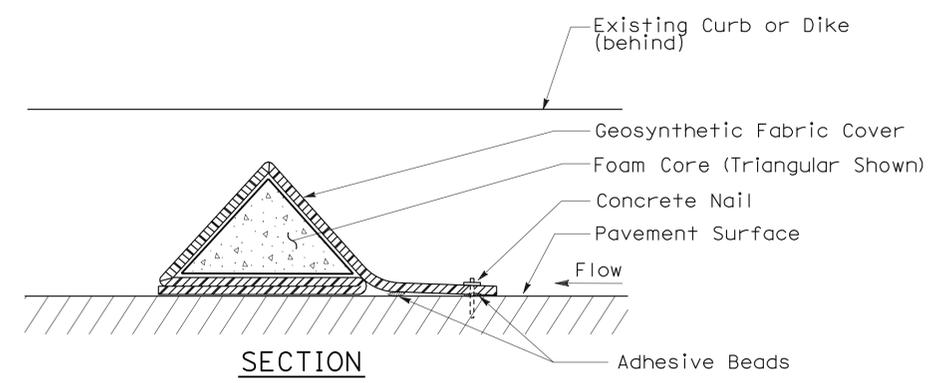
August 15, 2008
PLANS APPROVAL DATE

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To accompany plans dated 1-31-11



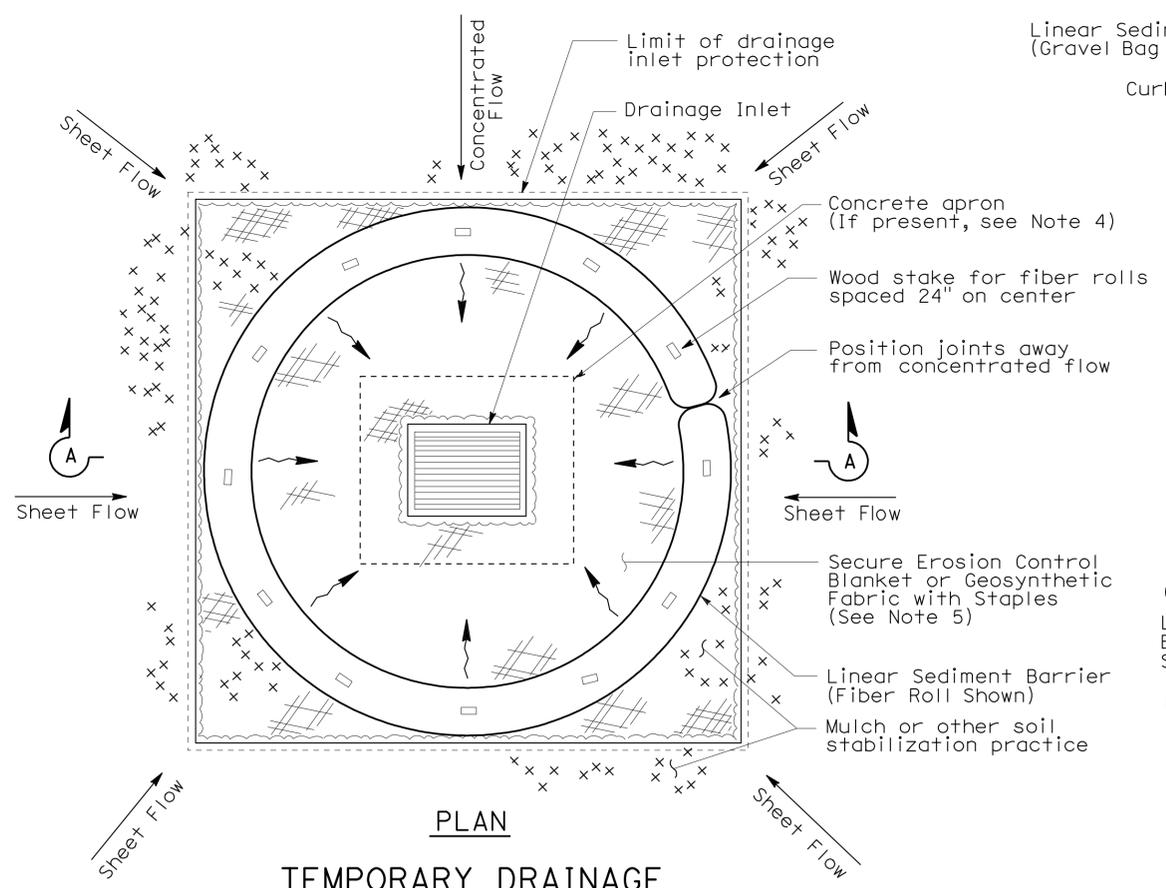
SECTION A-A



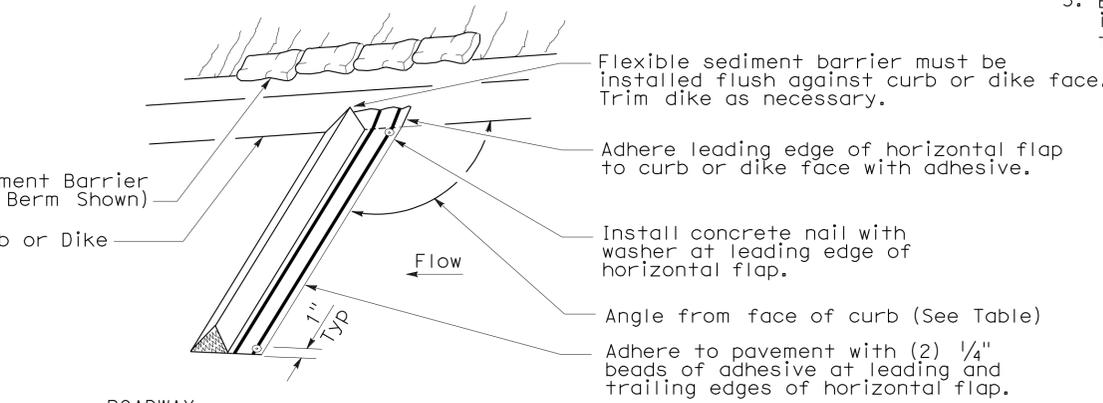
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

NOTES:

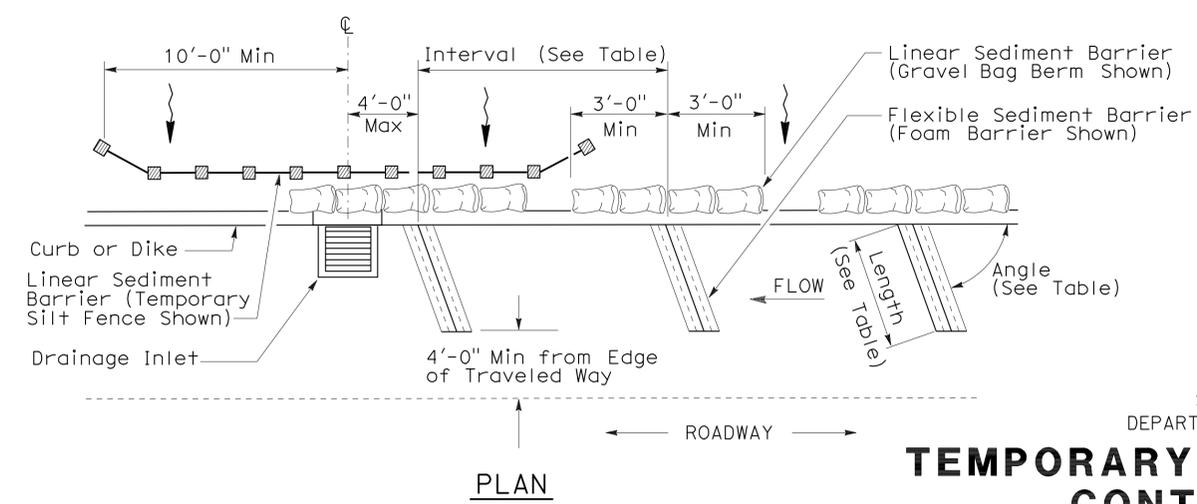
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
- Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



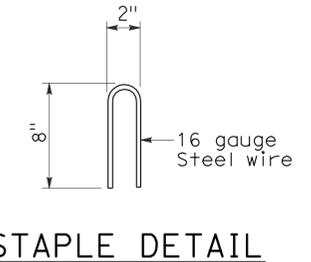
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



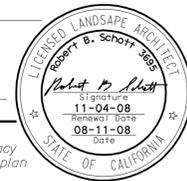
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE
NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

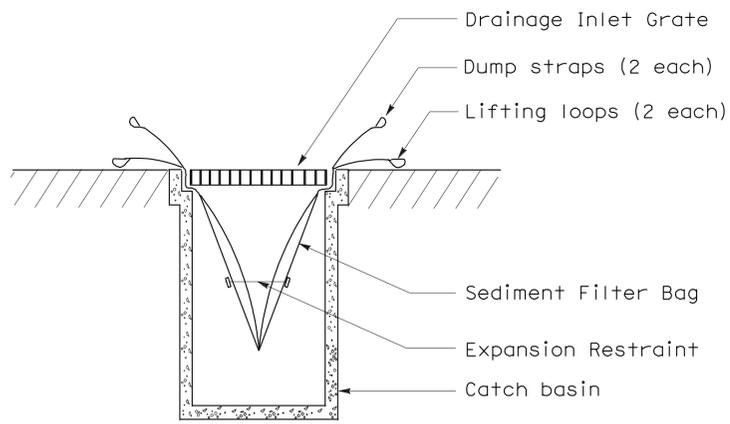
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	47	52

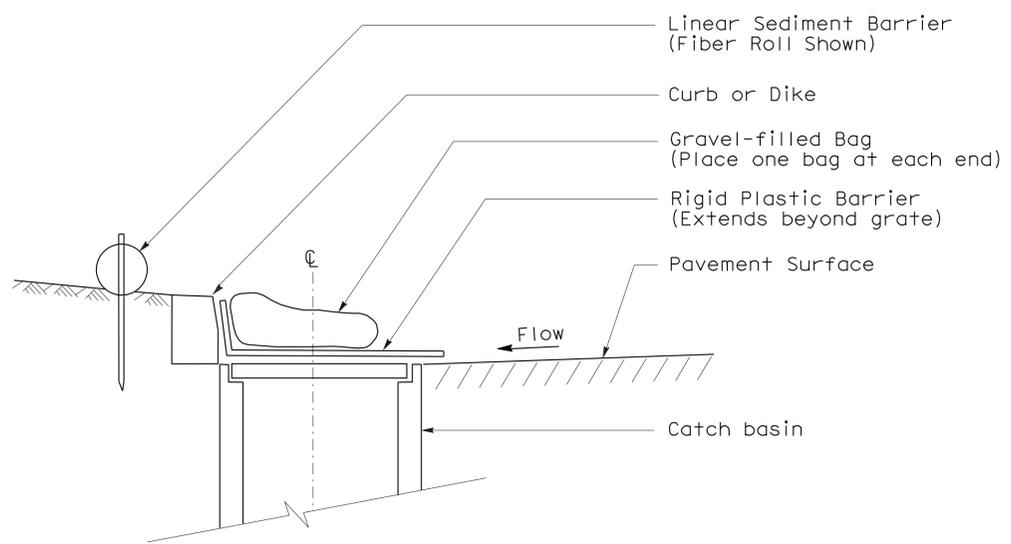
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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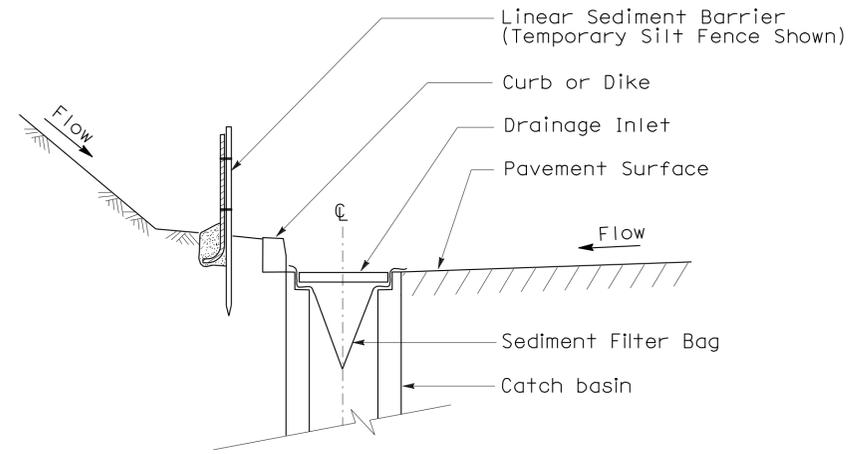
To accompany plans dated 1-31-11



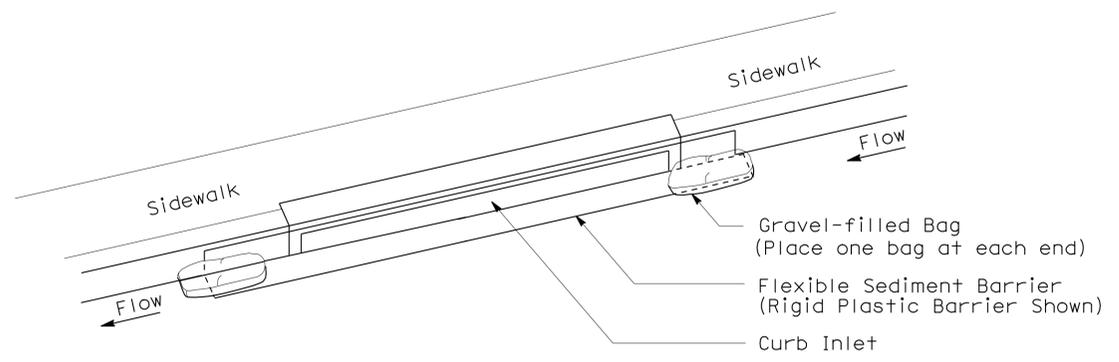
SECTION B-B
SEDIMENT FILTER BAG DETAIL



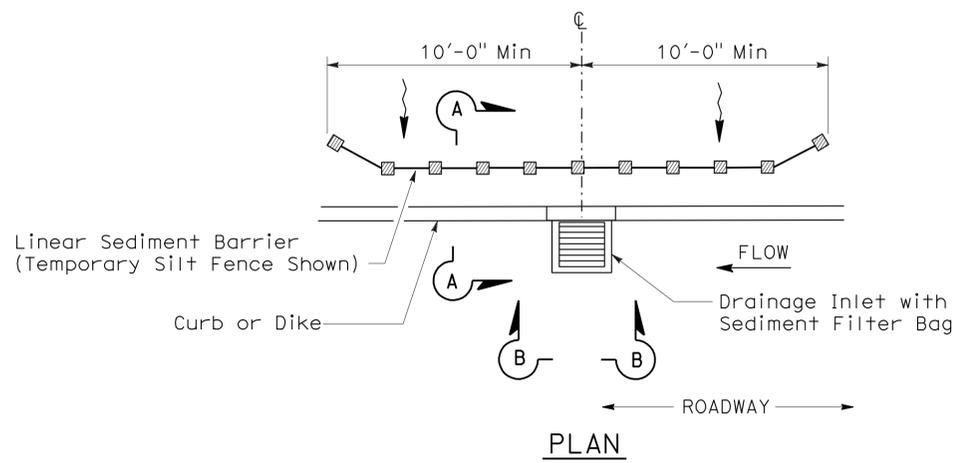
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

NOTES:

- 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.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- 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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	48	52

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 1-31-11

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
04	SoI	80	4.6/5.2	49	52

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 1-31-11

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

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
		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
		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

SERVICE EQUIPMENT

PROPOSED	EXISTING	
		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		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 Cont

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

NOTES:

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

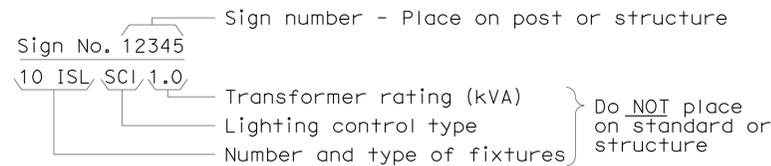
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

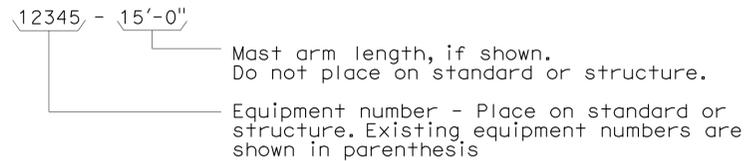
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

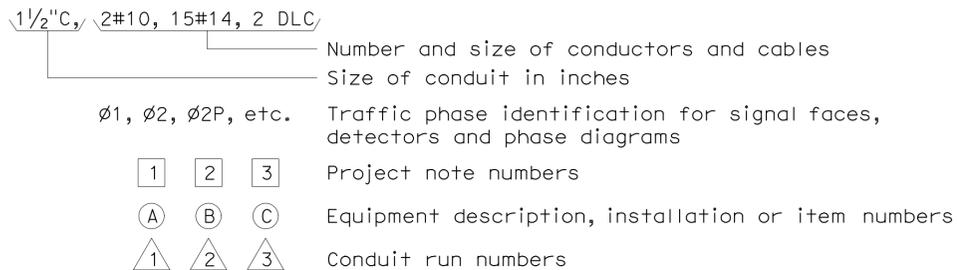
ILLUMINATED SIGN IDENTIFICATION NUMBER:



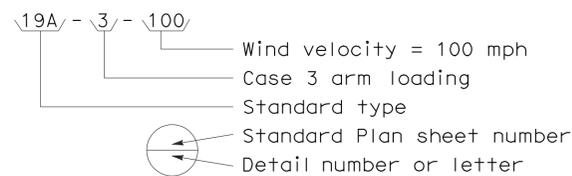
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



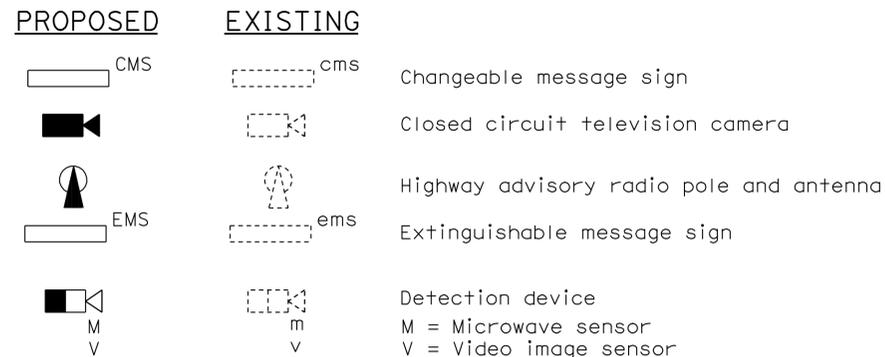
CONDUIT AND CONDUCTOR IDENTIFICATION:



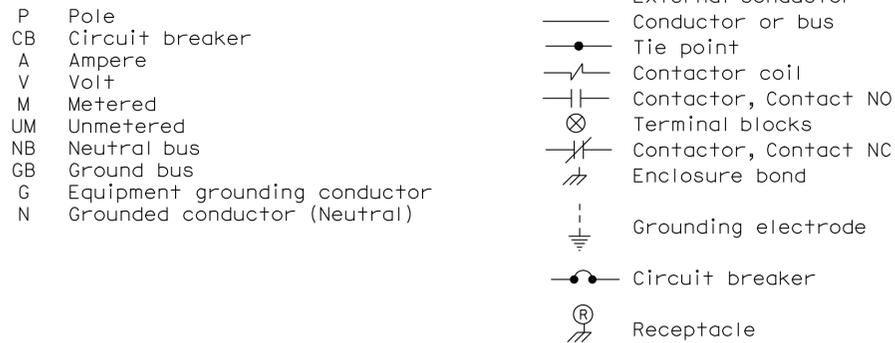
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



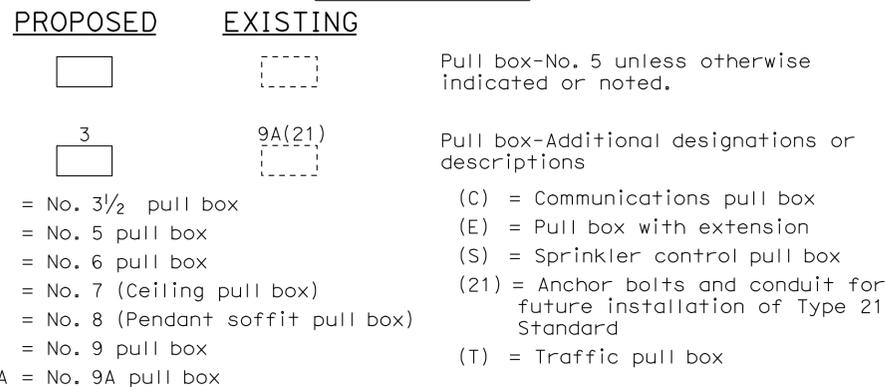
MISCELLANEOUS EQUIPMENT



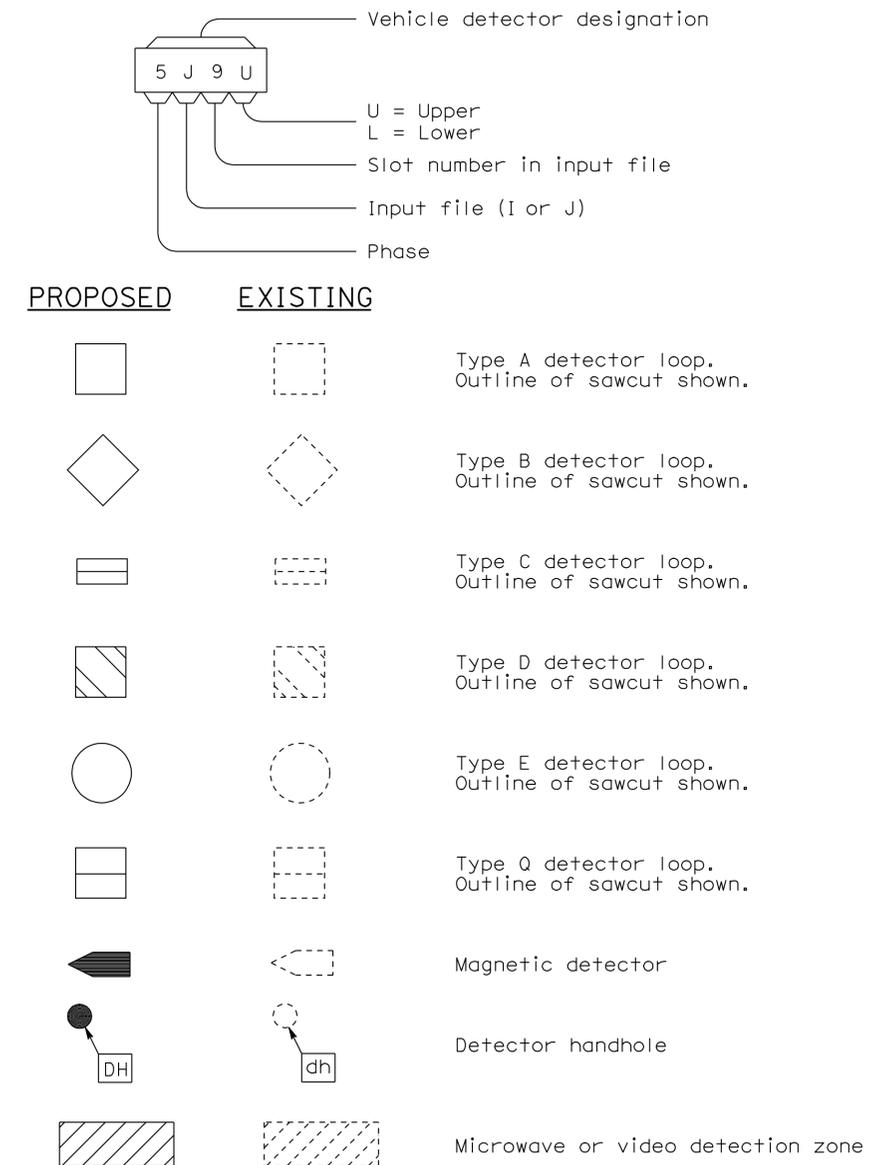
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (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.

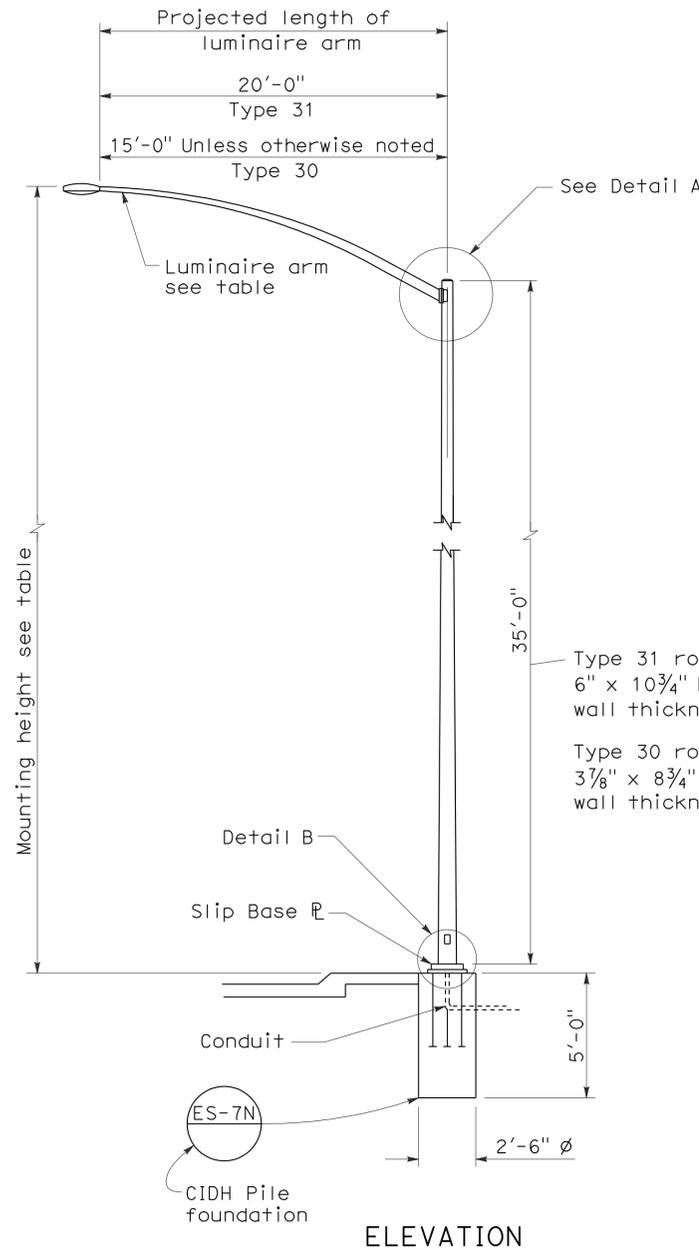
REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

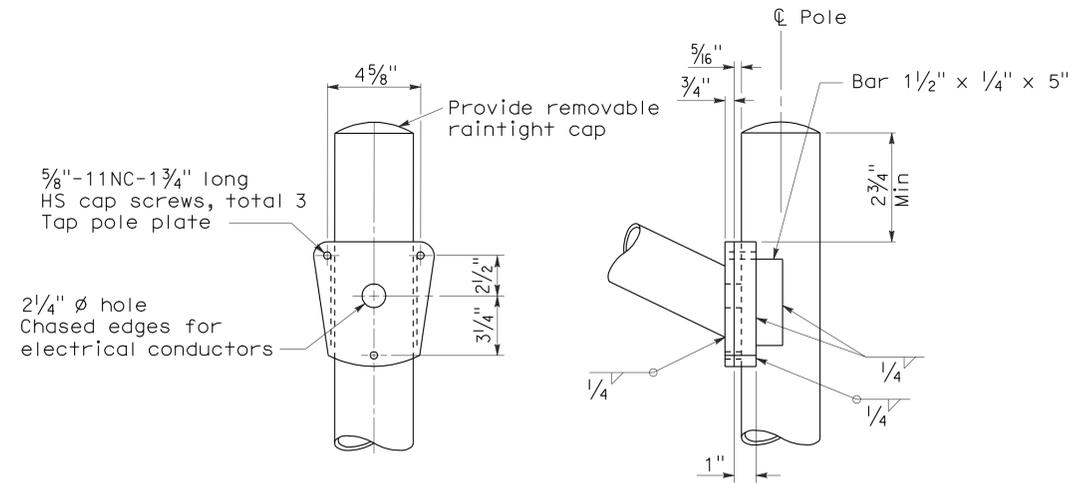
LUMINAIRE ARM DATA

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3 1/4"	36'-9"±
8'-0"		3 1/2"	37'-3"±
10'-0"		3 3/4"	38'-0"±
12'-0"		3 3/4"	39'-0"±
15'-0"		4 1/4"	39'-6"±
** 20'-0"	0.1793"	5"	37'-0"±

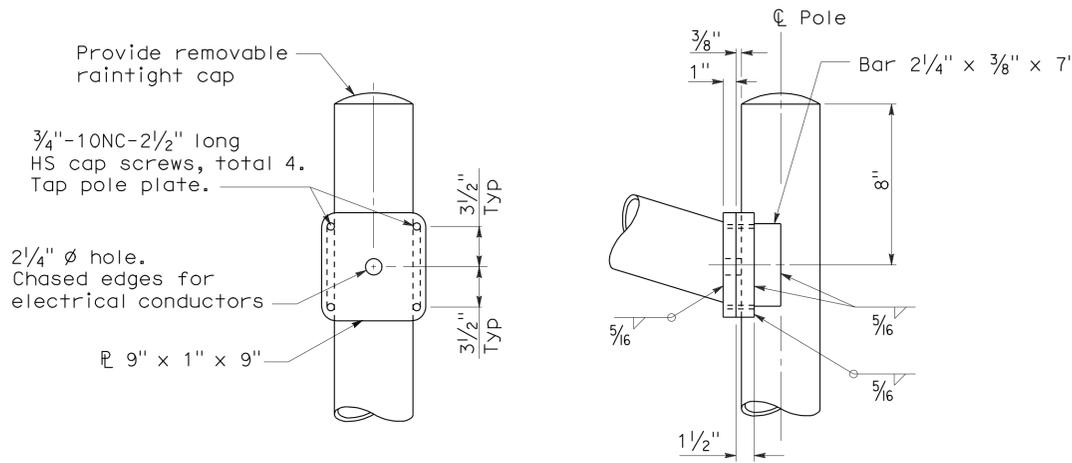
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



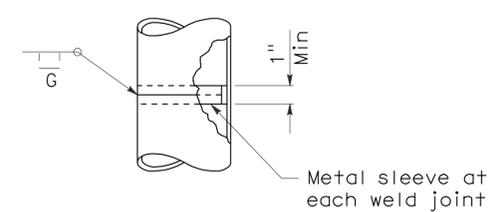
ELEVATION



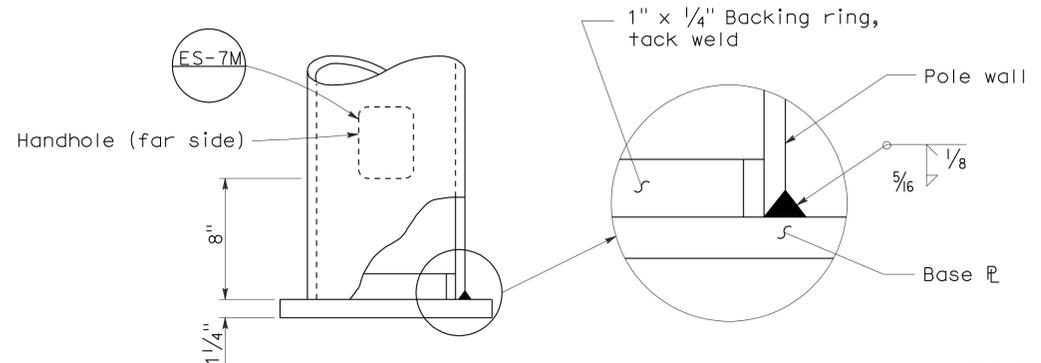
DETAIL A - TYPE 30



DETAIL A - TYPE 31



POLE SPLICE



DETAIL B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Sol	80	4.6/5.2	51	52

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 03-31-08
 CIVIL
 STATE OF CALIFORNIA

January 18, 2008
 PLANS APPROVAL DATE

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

To accompany plans dated 1-31-11

NOTES:

- Sheet steel shall have a minimum yield of 48,000 psi.
- For slip base details see Standard Plan ES-6F.
- For Type 30 fixed base use Type 15 base plate, and foundation shown on Revised Standard Plan RSP ES-6A. Use 1 1/4" Dia x 3'-6" x 4" anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
- Handhole shall be located on downstream side of traffic unless noted otherwise on plans.
- For additional general notes refer to Standard Plan ES-7M.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD
 TYPES 30 AND 31)**
 NO SCALE

RSP ES-6E DATED JANUARY 18, 2008 SUPERCEDES STANDARD PLAN ES-6E DATED MAY 1, 2006 - PAGE 430 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-6E

2006 REVISED STANDARD PLAN RSP ES-6E

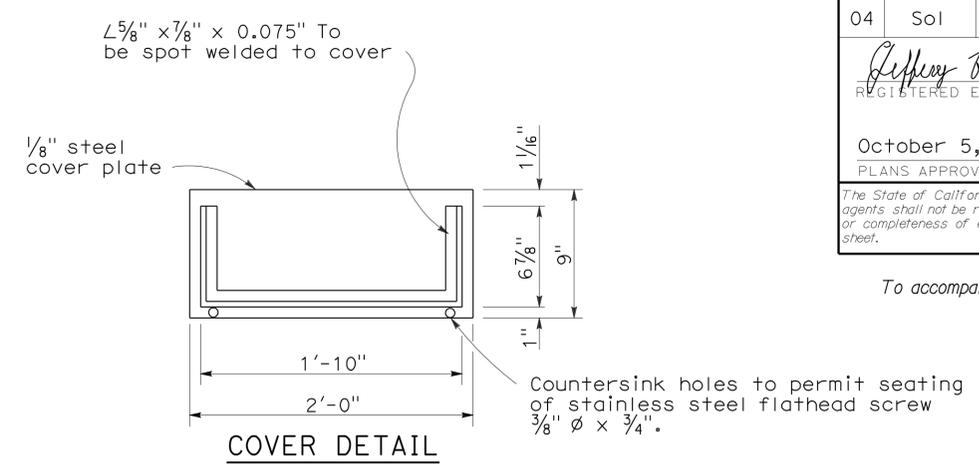
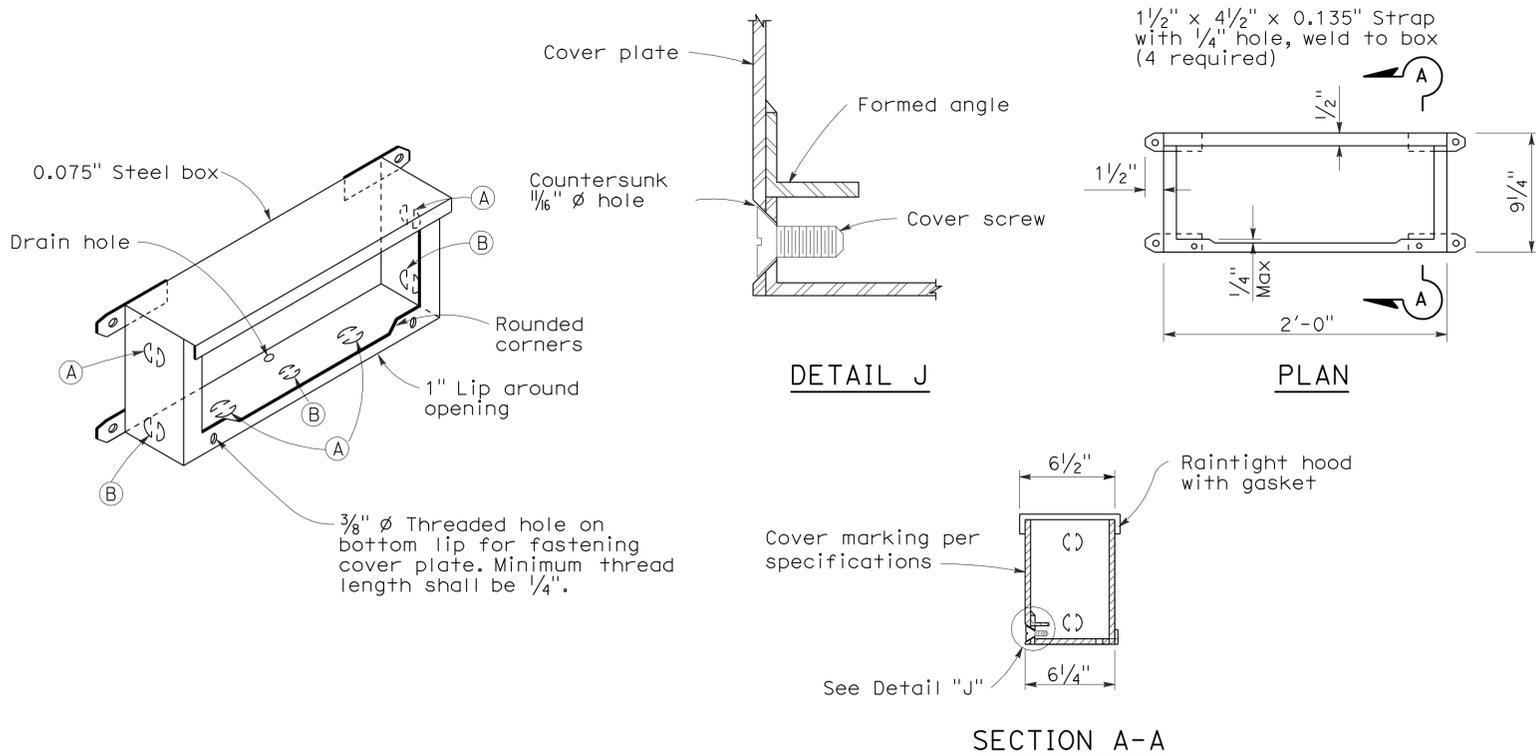
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Soi	80	4.6/5.2	52	52

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

October 5, 2007
 PLANS APPROVAL DATE

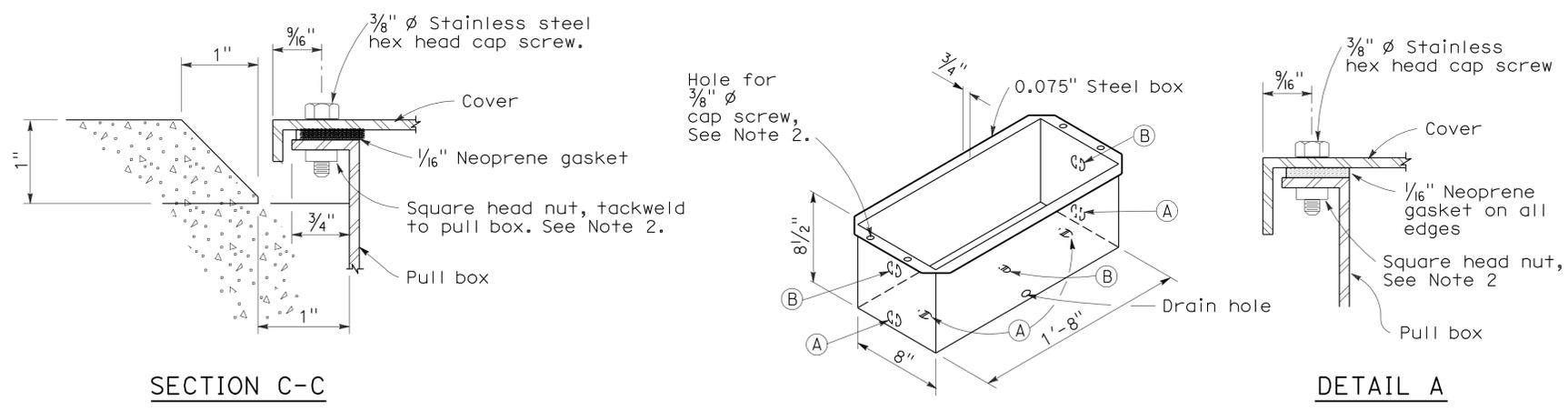
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 1-31-11



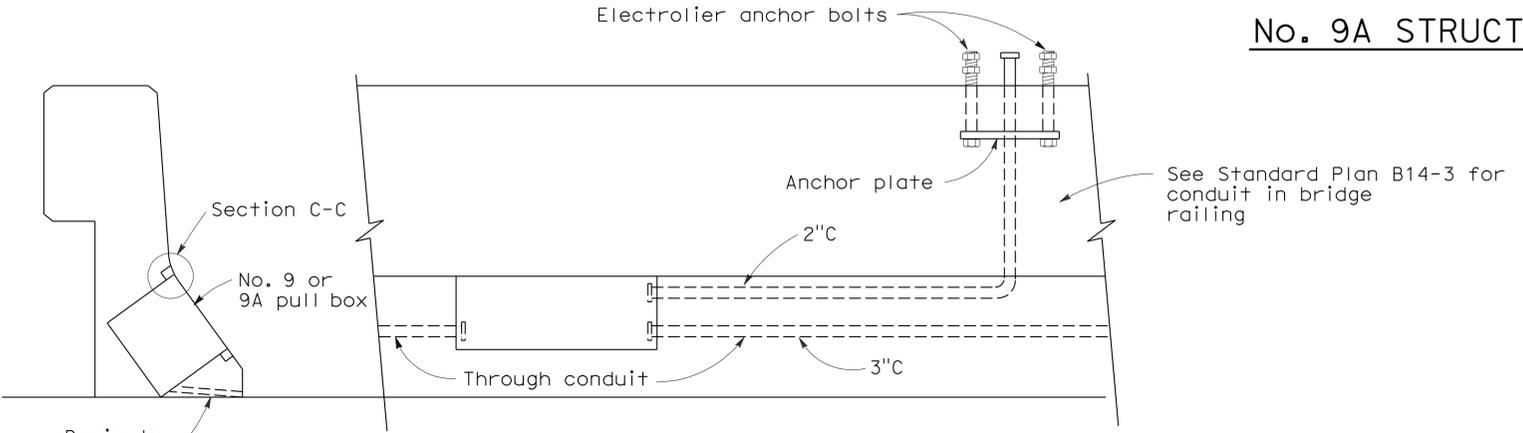
INSTALLATION NOTE:
 Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

No. 9 STRUCTURE PULL BOX



- NOTES:** No. 9 and 9A Pull Box
- Corner joints shall be lapped and secured by spot welding or riveting.
 - Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
 - Pound knockouts flat after punching.
 - Multiple size knockouts shall not be permitted.
 - Pull box covers shall be marked as shown on Standard Plan ES-8.

No. 9A STRUCTURE PULL BOX



INSTALLATION IN SLOPING PARAPETS

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.

- KNOCKOUT SCHEDULE**
No. 9 AND 9A PULL BOX
- (A) 2"C, 1 each end, 2 on bottom.
 - (B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(ELECTRICAL DETAILS
STRUCTURE INSTALLATIONS)

NO SCALE
 RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-9C