

INDEX OF PLANS

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN KERN COUNTY
 IN BAKERSFIELD
 AT OSWELL STREET UNDERCROSSING**

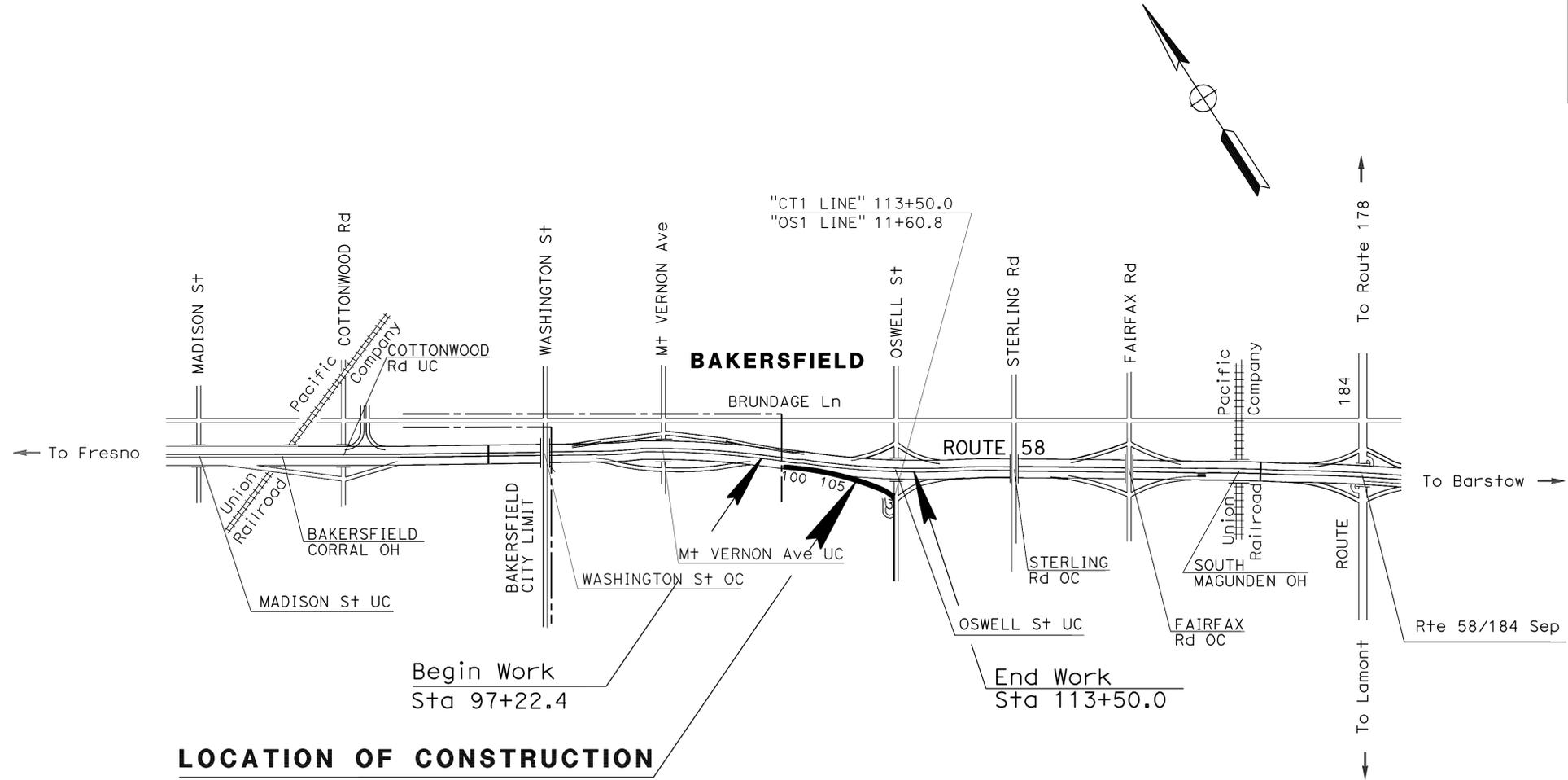
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	1	30





LOCATION MAP



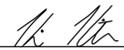
LOCATION OF CONSTRUCTION

**Sta 108+22.5
PM R57.3**

NO SCALE

PROJECT MANAGER
STEVEN MILTON
 DESIGN ENGINEER
RICHARD HELGESON

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


 PROJECT ENGINEER
 REGISTERED CIVIL ENGINEER
 DATE 04-28-09
July 13, 2009
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
KEVIN M. KEISTER
 No. 67907
 Exp. 6/30/09
 CIVIL

CONTRACT No. **06-OH8104**

DATE PLOTTED => 30-JUL-2009
 TIME PLOTTED => 10:55
 LAST REVISION 04-28-09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	2	30
			04-28-09	DATE	
REGISTERED CIVIL ENGINEER			DATE		
7-13-09			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>					
					

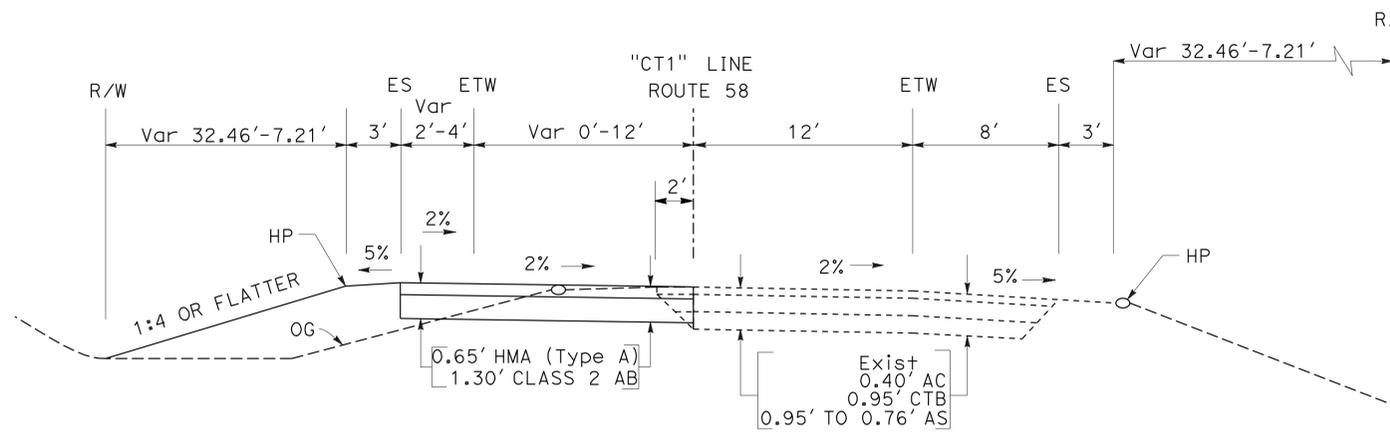
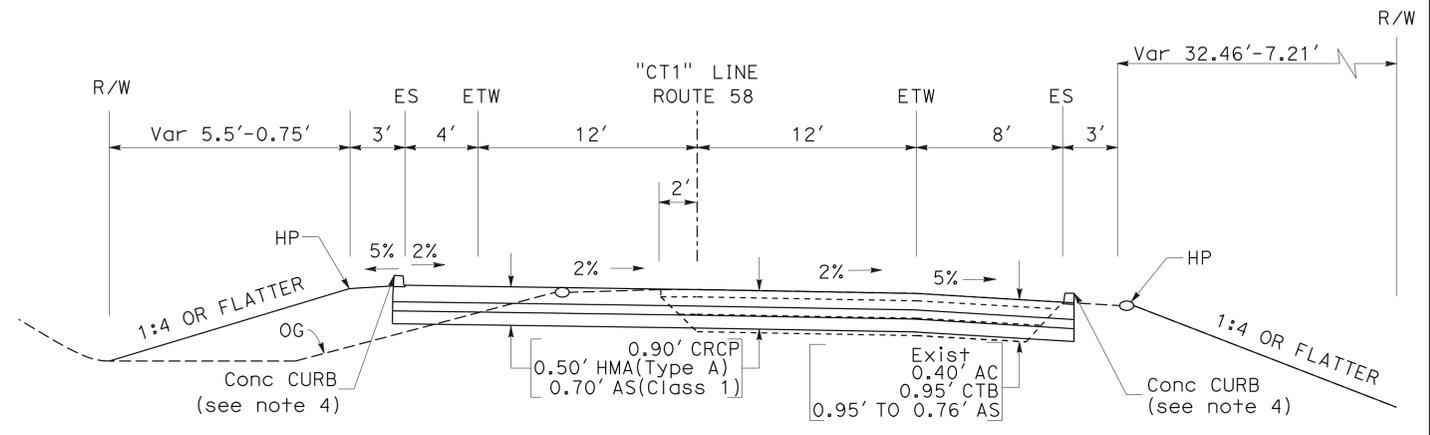
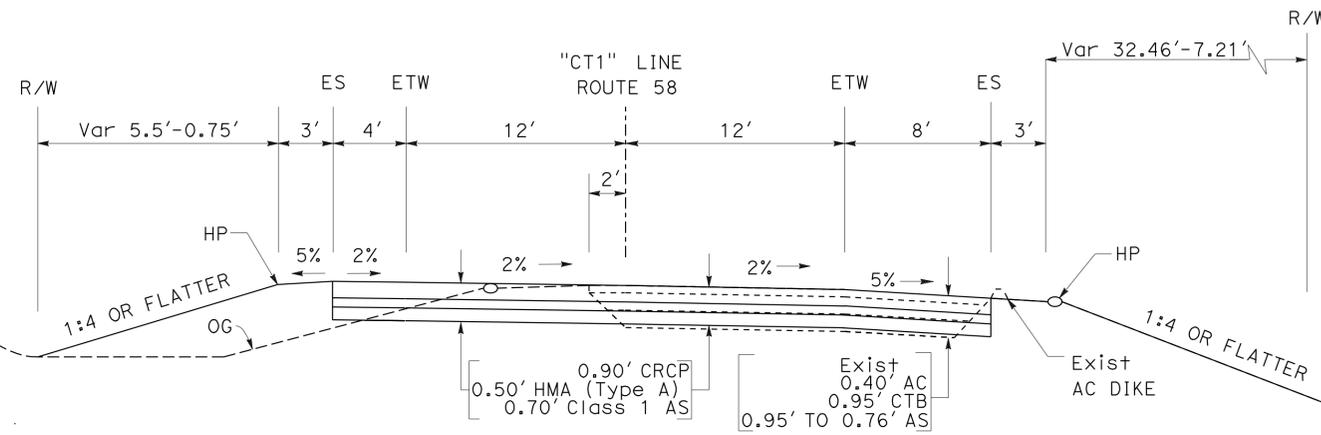
NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- EXACT LOCATIONS AND TYPE OF CURB ARE SHOWN ON THE LAYOUT AND CONSTRUCTION DETAILS SHEETS.

DESIGN DESIGNATION (OFF-RAMP)

2009 ADT 7,100 D=100%
 2029 DHV 1,050 T=13%
 2029 ADT 10,600

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 Farzana Huda, Kevin Keister, Richard Helgeson
 Calculated/Designed by, Checked by, Functional Supervisor
 Revised by, Date Revised



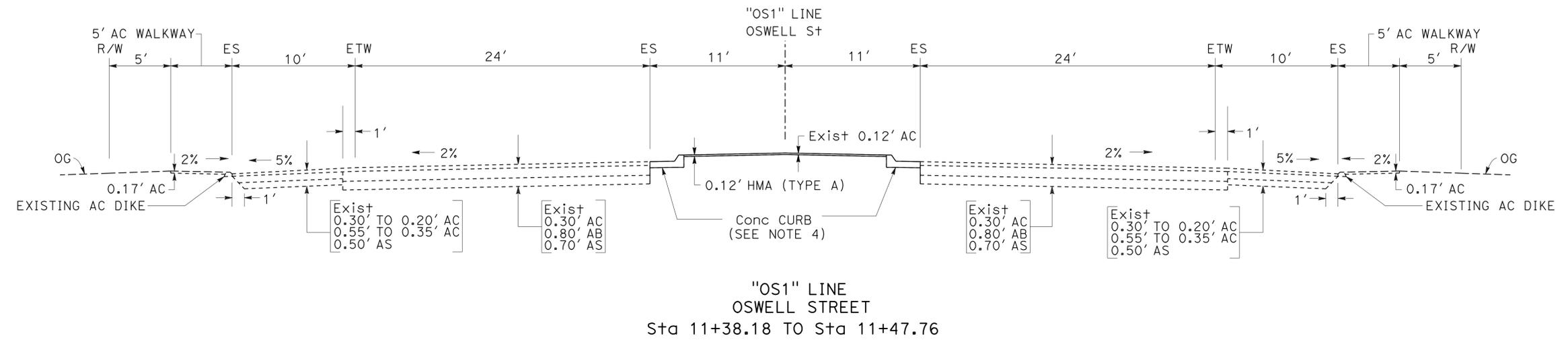
TYPICAL CROSS SECTIONS

NO SCALE

X-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	3	30
 REGISTERED CIVIL ENGINEER DATE			04-28-09		
PLANS APPROVAL DATE			7-13-09		
					
<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>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN
FUNCTIONAL SUPERVISOR RICHARD HELGESON
CALCULATED-DESIGNED BY CHECKED BY
FARZANA HUDA KEVIN KEISTER
REVISED BY DATE REVISED



TYPICAL CROSS SECTION

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN

FUNCTIONAL SUPERVISOR: RICHARD HELGESON
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 REVISIONS: FARZANA HUDA, KEVIN KEISTER, DATE REVISED

NOTE:

FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND

- DIRECTION OF TRAFFIC
- Exist PROFILE
- TERMINAL JOINT TYPE C
- TERMINAL JOINT TYPE A

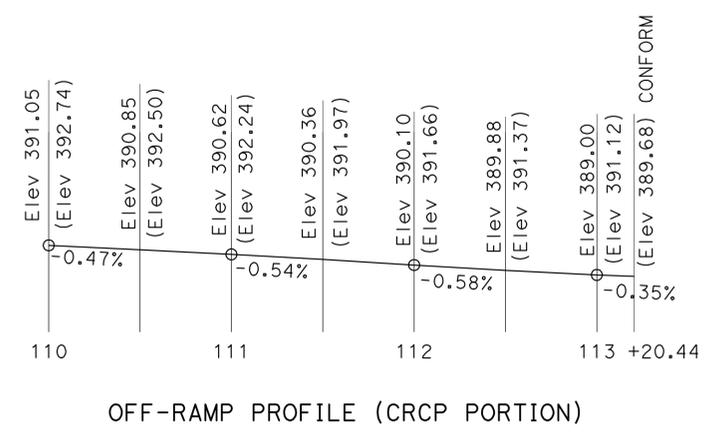
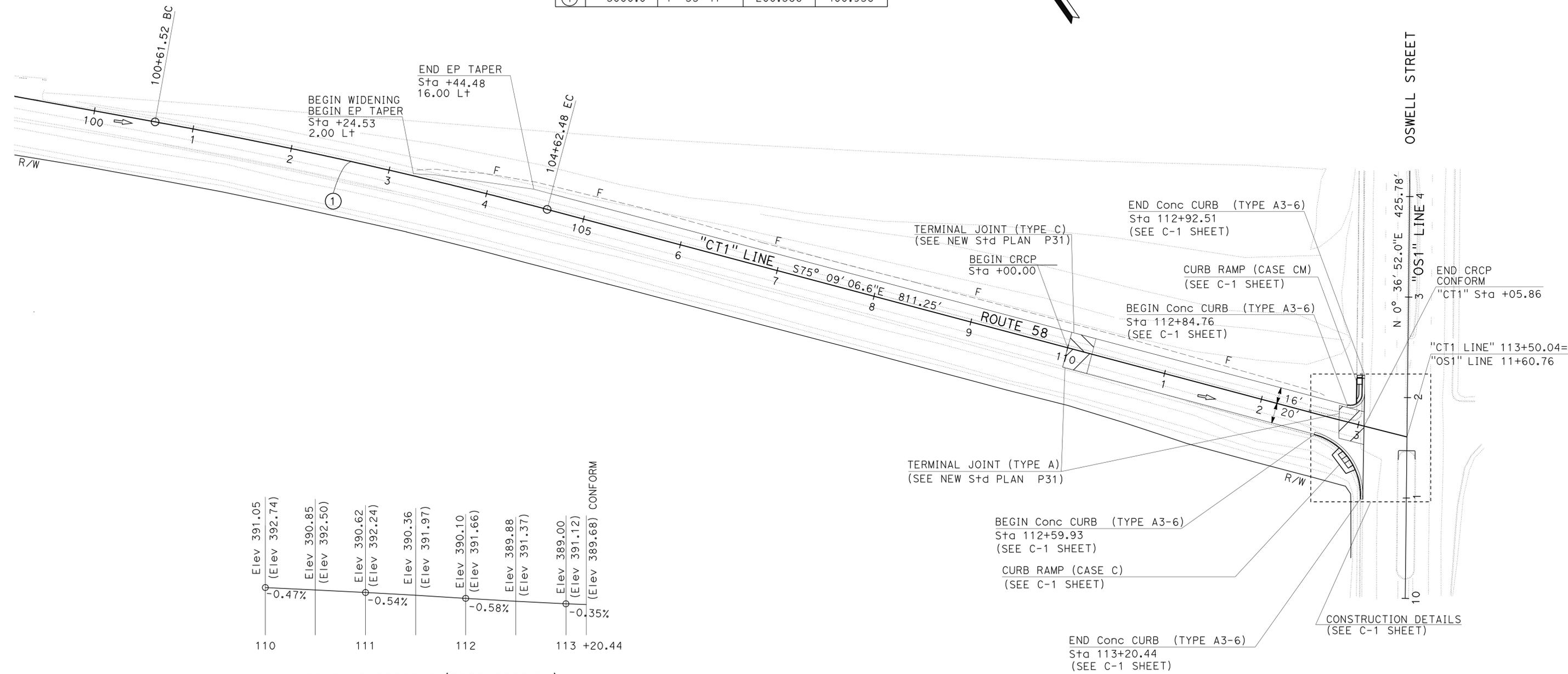
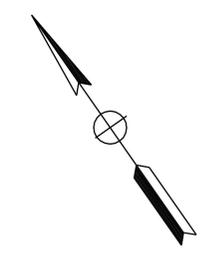
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	4	30

REGISTERED CIVIL ENGINEER DATE: 04-28-09
 KEVIN M. KEISTER No. 67907 Exp. 6/30/09
 PLANS APPROVAL DATE: 7-13-09

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.

CURVE DATA

No.	R	Δ	T	L
①	5000.0	4° 35' 41"	200.586	400.958



LAYOUT
 SCALE: 1" = 50'
L-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	5	30

04-28-09
 REGISTERED CIVIL ENGINEER DATE
 7-13-09
 PLANS APPROVAL DATE

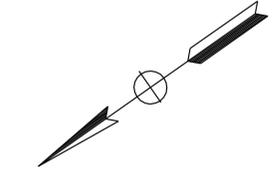
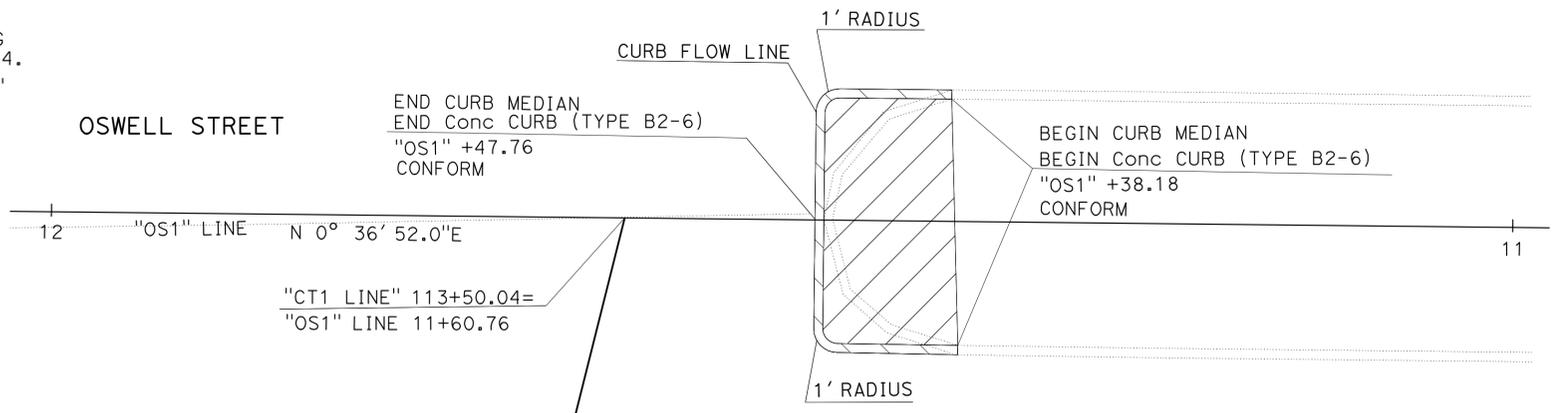
KEVIN M. KEISTER
 No. 67907
 Exp. 6/30/09
 CIVIL

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

- NOTES:**
- FOR BEGIN AND END STATIONS OF CURB RAMP AND SIDEWALK SEE SHEET Q-1.
 - FOR DEPTH OF STEEL COVER & SPACING OF STEEL ON LANES SEE S+D PLAN P4.
 - LONGITUDINAL BARS ARE PLACED @ 6.5" SPACING PARALLEL TO CT1 LINE.
 - TRANSVERSE BARS ARE PLACED @ 18" SPACING PERPENDICULAR TO CT1 LINE.
 - #6 BARS 3" CLEARANCE FROM EDGES.
 - #5 TIE BARS @ 36" SPACING (Typ) 6" Min AND 12" Max FROM EDGE.

LEGEND

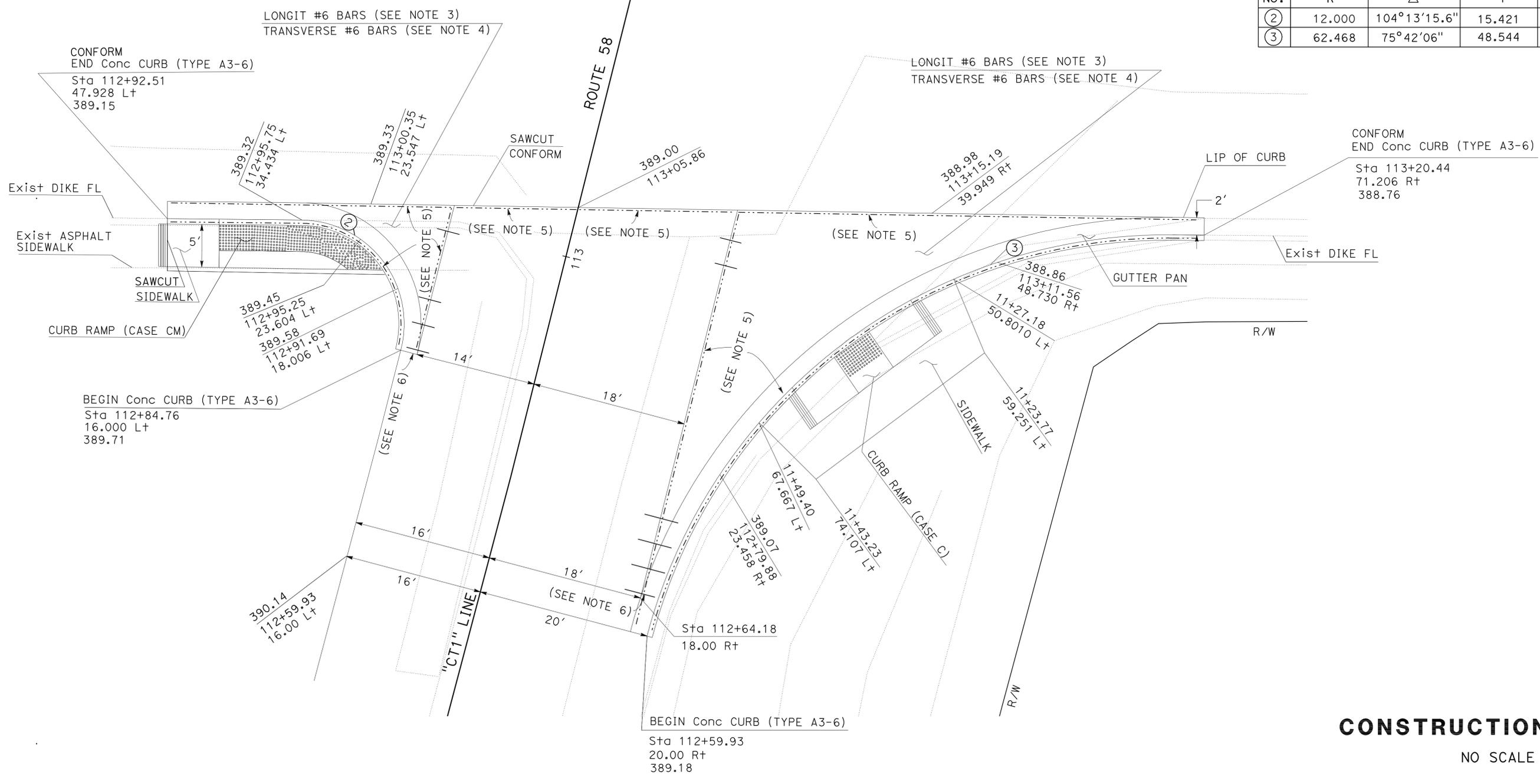
ROADWAY Exc (REMOVE AC) AND 0.12' HMA (TYPE A)
 ROADWAY Exc (REMOVE Conc CURB) AND INSTALL Conc CURB (TYPE B2-6)
 REBARS



CURVE DATA

No.	R	Δ	T	L
②	12.000	104°13'15.6"	15.421	21.828
③	62.468	75°42'06"	48.544	82.536

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Farzana Huda
 Kevin Keister
 Richard Helgeson
 DESIGN



CONSTRUCTION DETAILS
NO SCALE
C-1

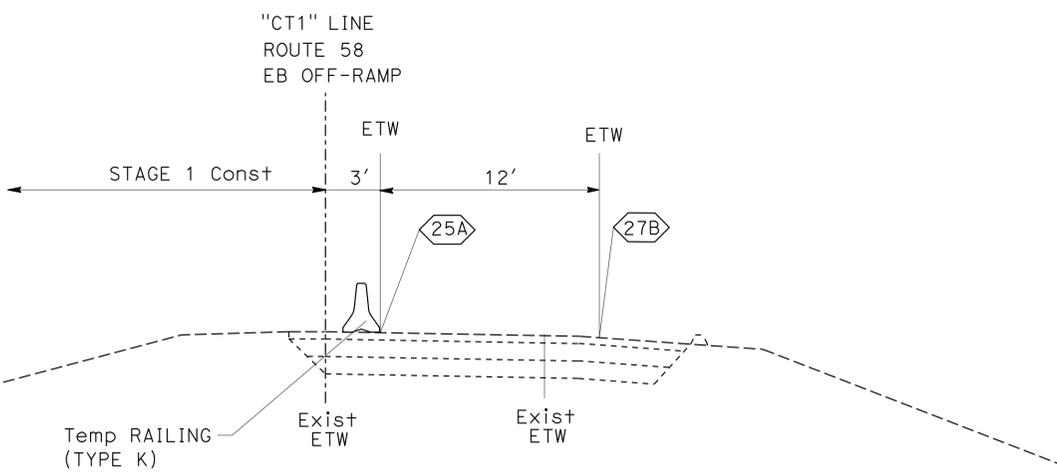
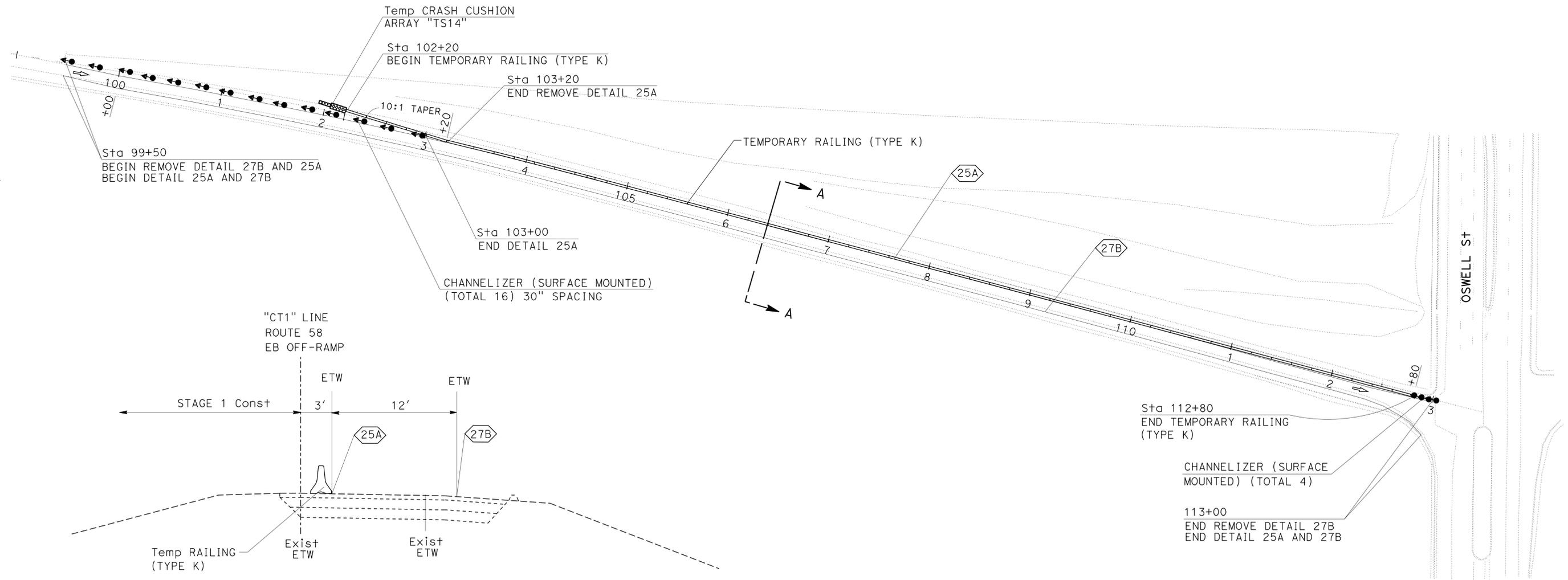
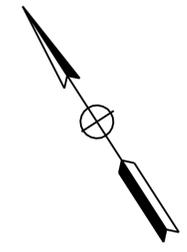
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	6	30

Amarjit S. Dhillon		03/16/09
REGISTERED CIVIL ENGINEER	DATE	
7-13-09		
PLANS APPROVAL DATE		

AMARJIT S. DHILLON	
No. 67458	Exp. 6/30/09
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.

- LEGEND:**
- DIRECTION OF TRAFFIC
 - TRAFFIC STRIPE DETAIL No.
 - Temp RAILING (TYPE K)
 - Temp CRASH CUSHION ARRAY "TS14"
 - CHANNELIZERS (SURFACED MOUNTED)



SECTION A-A
NO SCALE

**TRAFFIC HANDLING PLAN
(STAGE 1)**

SCALE: 1" = 50'

TH-1

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

REVISOR BY
DATE REVISED

AMARJIT DHILLON
HASSAN M TAHA

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
MOHAMMED QATAMI

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES

USERNAME => trstrk
DGN FILE => 60h810md001.dgn

CU 06386 EA 0H8101

LAST REVISION | DATE PLOTTED => 30-JUL-2009
03-16-09 TIME PLOTTED => 10:56

TEMPORARY PAVEMENT DELINEATION QUANTITIES

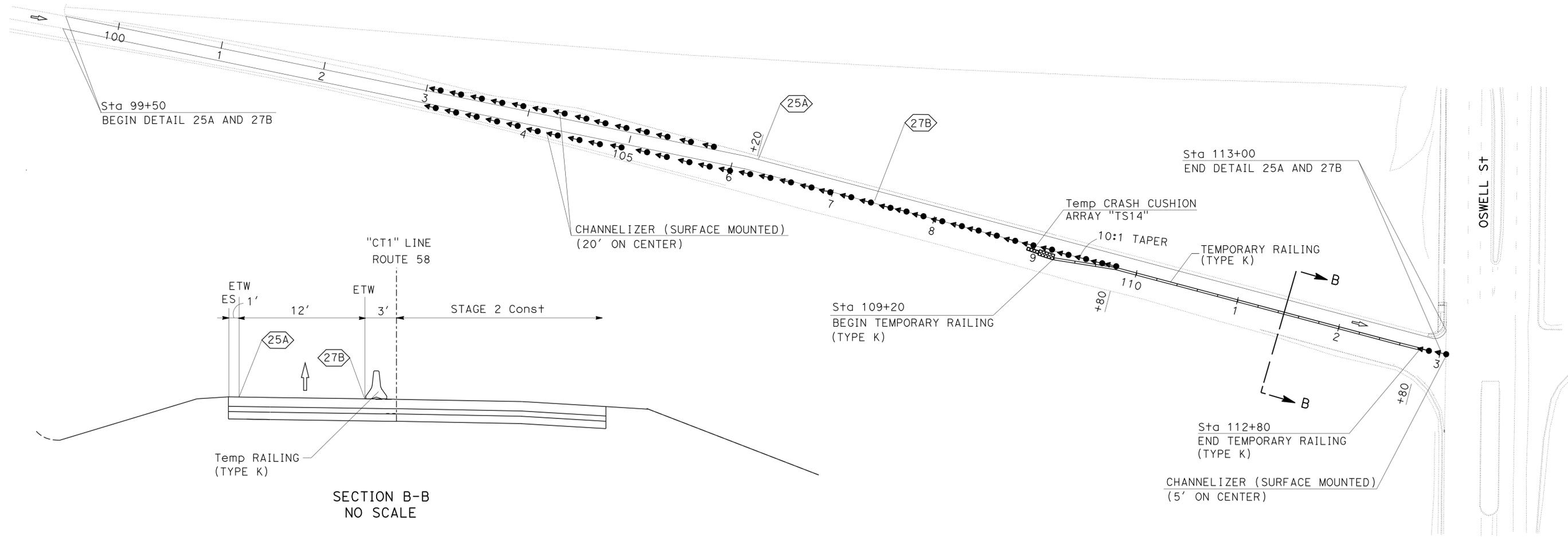
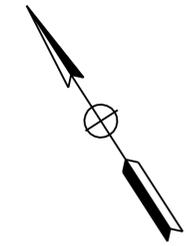
SHEET No.	ROUTE	LOCATION		DIRECTION	DETAIL No.	TEMPORARY PAVEMENT MARKERS	REMOVE PAVEMENT MARKER	TEMPORARY TRAFFIC STRIPE (TAPE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	
		FROM	TO						WHITE 4"	YELLOW 4"
TH-1	ROUTE 58	99+50	103+20	EB	25A	EA	EA	LF	LF	LF
	ROUTE 58	99+50	113+00	EB	27B		16		1350	370
	ROUTE 58	99+50	113+00	EB	25A	57		1350		
	ROUTE 58	99+50	113+00	EB	27B			1350		
TH-2	ROUTE 58	99+50	113+00	EB	25A	57		1350		
	ROUTE 58	99+50	113+00	EB	27B			1350		
TOTAL						114	16	5400	1720	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	7	30

Amarjit S. Dhillon
 REGISTERED CIVIL ENGINEER DATE 03/20/09
 No. 67458
 Exp. 6/30/09
 CIVIL
 STATE OF CALIFORNIA

7-13-09
 PLANS APPROVAL DATE

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TEMPORARY RAILING (TYPE K)

SHEET No.	DIRECTION	Sta TO Sta	LF
TH-1	EB	102+20 to 112+80	1060
TH-2	EB	109+20 to 112+80	360
TOTAL			1420

TEMPORARY CRASH CUSHION MODULE "TS14"

SHEET No.	EA
TH-1	14
TH-2	14
TOTAL	28

CHANNELIZER (SURFACE MOUNTED)

SHEET No.	EA
TH-1	18
TH-2	54
TOTAL	72

TRAFFIC HANDLING PLAN AND QUANTITIES (STAGE 2)

SCALE: 1" = 50' TH-2

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY



USERNAME => trstrk
DGN FILE => 60h810md002.dgn

CU 06386

EA 0H8101

BORDER LAST REVISED 4/11/2008

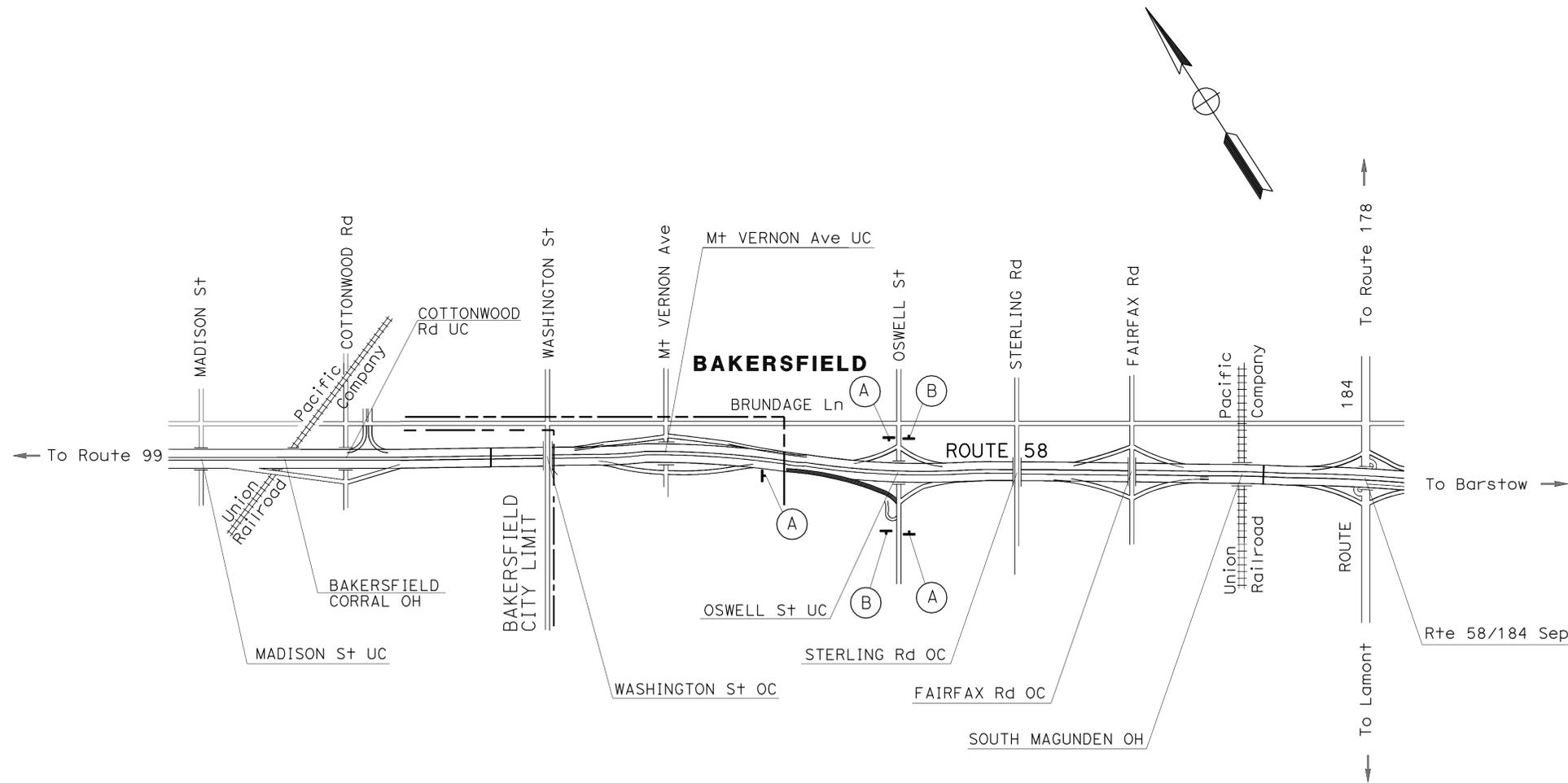
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 AMARJIT DHILLON
 HASSAN M TAHA
 MOHAMMED QATAMI
 TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 30-JUL-2009
 03-20-09 TIME PLOTTED => 10:15

**STATIONARY MOUNTED
CONSTRUCTION AREA SIGNS**

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	NUMBER OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	3
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2

NOTE: SIGN LOCATIONS SHOWN ARE APPROXIMATE ONLY.
EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	8	30

Amrajit S. Dhillon
 REGISTERED CIVIL ENGINEER DATE 03/16/09
 7-13-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 AMARJIT S. DHILLON
 No. 67458
 Exp. 6/30/09
 CIVIL
 STATE OF CALIFORNIA

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR
 MOHAMMED QATAMI

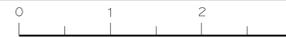
CALCULATED-DESIGNED BY
 CHECKED BY

AMARJIT DHILLON
 HASSAN M TAHA

REVISED BY
 DATE REVISED

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => frstrk
 DGN FILE => 60h8101a001.dgn

CU 06386

EA 0H8101

CONSTRUCTION AREA SIGN

NO SCALE

CS-1

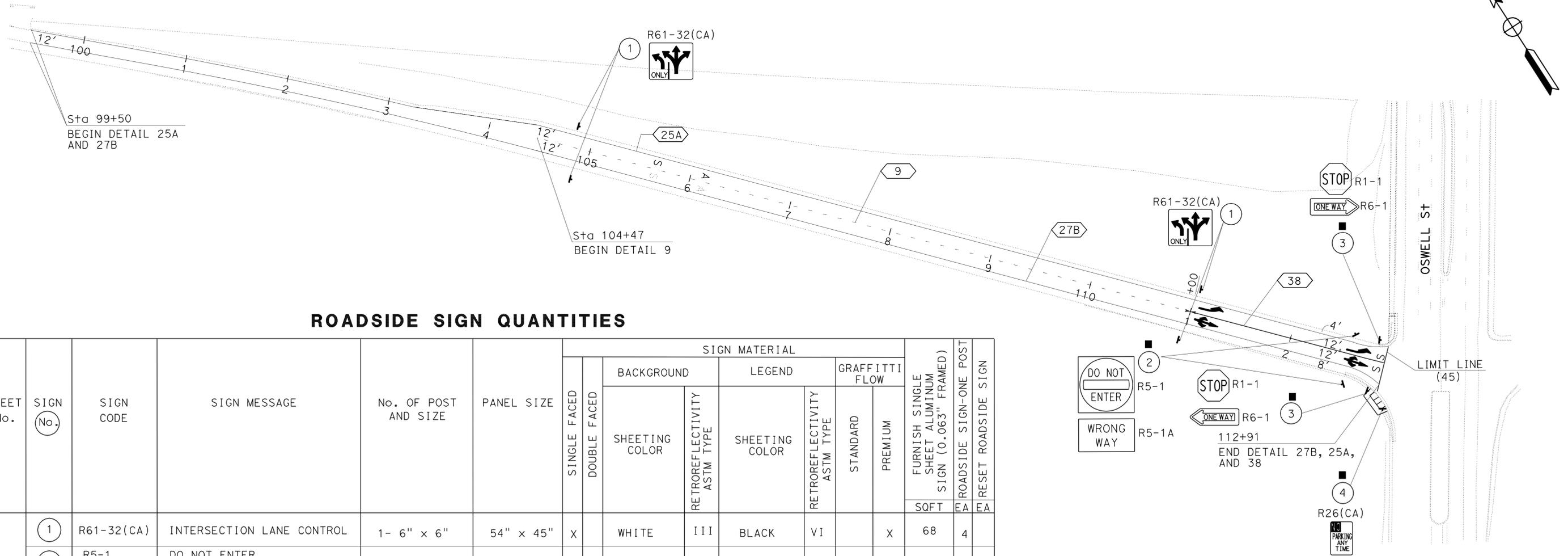
LAST REVISION | DATE PLOTTED => 30-JUL-2009
 03-16-09 | TIME PLOTTED => 10:56

LEGEND

- XXX TRAFFIC STRIPE DETAIL No.
- XX ROADSIDE SIGN No.
- + ROADSIDE SIGN-ONE POST
- ↗ TYPE III ARROW
- ↖ TYPE II ARROW
- Reset Roadside Sign
- S "STOP" PAVEMENT MARKING
- A "AHEAD" PAVEMENT MARKING
- I LIMITS OF DESIGNATED TRAFFIC STRIPING DETAIL

PAVEMENT DELINEATION QUANTITIES

SHEET No.	ROUTE	LOCATION		DIRECTION	DETAIL No.	PAVEMENT MARKERS (RETROREFLECTIVE)		THERMOPLASTIC TRAFFIC STRIPE			THERMOPLASTIC PAVEMENT MARKING	
		FROM	TO			TYPE G YELLOW (ONE-WAY)	TYPE H YELLOW (ONE-WAY)	SOLID		"BROKEN 17'-7"	DESCRIPTION	SQFT
						EA	EA	4"	8"	4"		
PD-1	ROUTE 58	99+50	112+91	EB	25A		57	1341			2-TYPE III (L) ARROW	84
		99+50	112+91	EB	27B			1341			2-TYPE II (B) ARROW	118
		104+47	111+00	EB	9	15				653	LIMIT LINE	45
		111+00	112+91	EB	38	9			191		3-"STOP"	66
SUBTOTAL						24	57	2682	191	653	1-"AHEAD"	31
TOTAL								81	2682	191	653	344



ROADSIDE SIGN QUANTITIES

SHEET No.	SIGN No.	SIGN CODE	SIGN MESSAGE	No. OF POST AND SIZE	PANEL SIZE	SIGN MATERIAL						SQFT	ROADSIDE SIGN-ONE POST			
						SINGLE FACED	DOUBLE FACED	BACKGROUND		LEGEND			GRAFFITI FLOW		EA	EA
								SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE		STANDARD	PREMIUM		
PD-1	1	R61-32(CA)	INTERSECTION LANE CONTROL	1- 6" x 6"	54" x 45"	X		WHITE	III	BLACK	VI	X	68	4		
	2	R5-1	DO NOT ENTER												2	
		R5-1A	WRONG WAY													
	3	R1-1	STOP												2	
R6-1		ONE WAY														
4	R26(CA)	NO PARKING ANY TIME												1		
TOTAL												68	4	5		

PAVEMENT DELINEATION AND SIGN PLAN AND QUANTITIES

SCALE: 1" = 50'

PD-1

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

EARTHWORK

SHEET No.	LOCATION	ROADWAY EXCAVATION	EMBANKMENT (N)
		CY	CY
	RAMP		
X-1, L-1	103+24.53 TO 110+00.00, L+ "CT1"	541	148
X-1, L-1	110+00.00 TO 113+20.44, L+ & Rt "CT1"	866	44
	OSWELL S+ MEDIAN		
X-2, L-1	11+38.18 TO 11+47.76, L+ & Rt "OS1"	4	
	TOTAL	1411	

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

ROADWAY QUANTITIES

SHEET No.	LOCATION	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	CLASS 1 AGGREGATE SUBBASE	HOT MIX ASPHALT (TYPE A)	CLASS 2 AGGREGATE BASE	TACK COAT (N)	CRCP (TERMINAL JOINT)		
		CY	CY	TON	CY	TON	LF	TYPE A	TYPE C
	RAMP								
X-1	103+24.53 TO 110+00.00, L+			481	484	1		20	16
L-1	110+00.00								
X-1	110+00.00 TO 113+20.44	391	310	430		1			
L-1	113+20.44							32	
	OSWELL S+ MEDIAN								
X-2	11+38.18 TO 11+47.76			2					
	SUBTOTAL							52	16
	TOTAL	391	310	913	484			68	

MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)

SHEET No.	LOCATION	Conc CURB	CURB RAMP	SIDEWALK	REMARKS
		CY	CY	CY	
C-1	112+84.76 TO 112+92.51, L+ "CT1"	1			TYPE A3-6
C-1	112+59.93 TO 113+20.44, Rt "CT1"	3			TYPE A3-6
C-1, X-2	11+38.18 TO 11+47.76, L+ & Rt "OS1"	3			TYPE B2-6
C-1, L-1	11+93.72 TO 12+12.72, L+ "OS1"		2		CASE CM
X-2, L-1	11+31.20 TO 11+46.38, Rt "OS1"		1		CASE C
C-1, L-1	12+12.72 TO 12+21.72, L+ "OS1"			3	
X-2, L-1	11+27.18 TO 11+49.40, Rt "OS1"			5	
	SUBTOTAL	7	3	8	
	TOTAL		18		

ABBREVIATION:

CRCP - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	58	R57.3	10	30

04-28-09
 REGISTERED CIVIL ENGINEER DATE
 KEVIN M. KEISTER
 No. 67907
 Exp. 6/30/09
 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.

EROSION CONTROL (COMPOST BLANKET)

LOCATION	AREA (N)	EROSION CONTROL (COMPOST BLANKET)	PURE LIVE SEED (EROSION CONTROL) (N)
	SQYD	CY	LBS
103+24.00 TO 112+98.00, L+ "CT1"	896	25.1	3.26
TOTAL		25.1	

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

TEMPORARY WATER POLLUTION CONTROL ITEMS

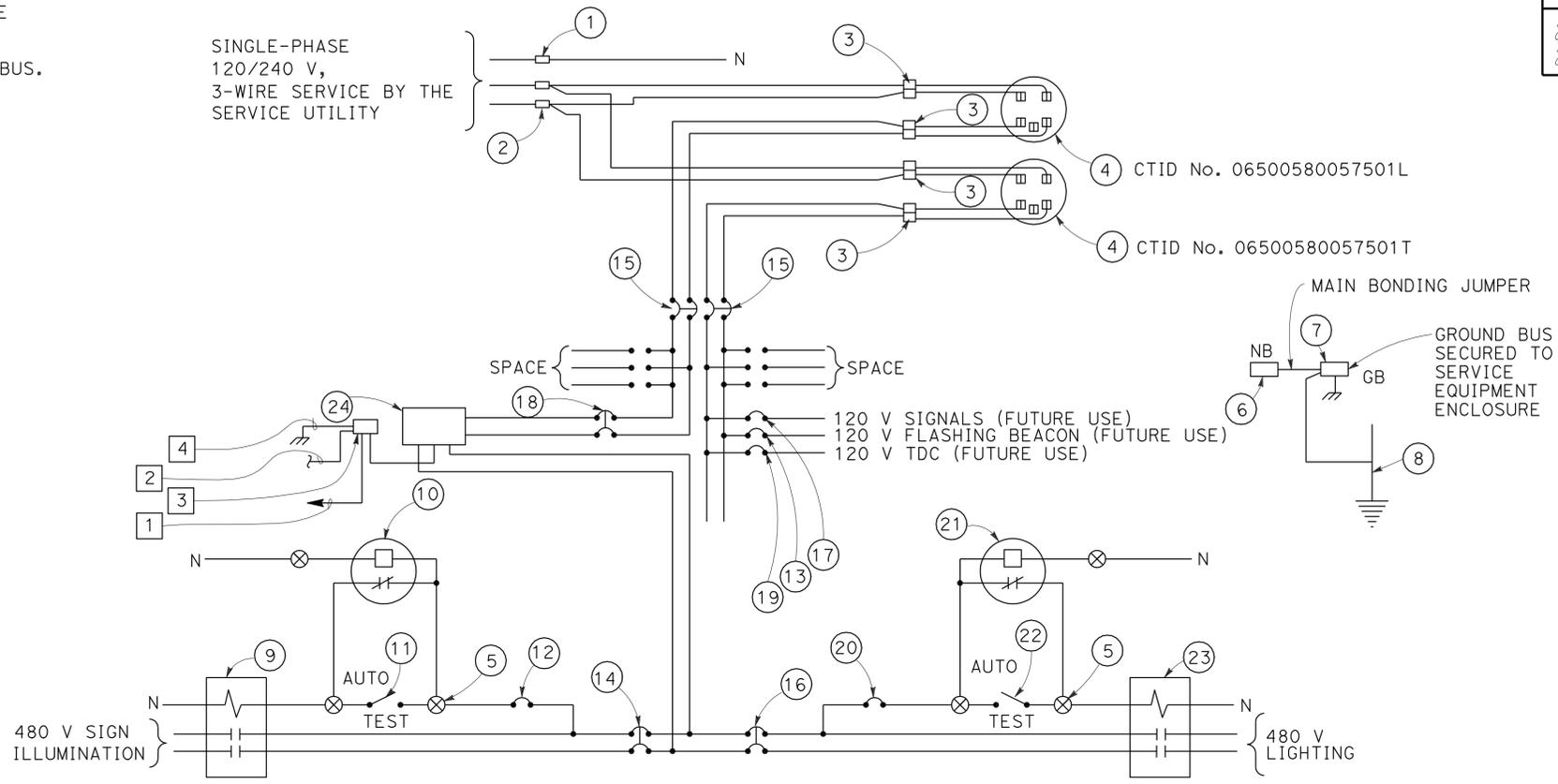
LOCATION	TEMPORARY SILT FENCE	TEMPORARY DRAINAGE INLET PROTECTION
	LF	EA
103+00.00 TO 113+00.00, L+ "CT1"	1000	
103+00.00 TO 113+00.00, L+ "CT1"		
12+56.33, 61.76' L+ "OS1"		1
12+56.19, 45.00' L+ "OS1"		1
110+40.34, 40.78' L+ "CT1"		1
110+40.23, 49.17' Rt "CT1"		1
TOTAL	1000	4

SUMMARY OF QUANTITIES

Q-1

NOTES: (FOR THIS SHEET ONLY)

- 1 240/480 V TRANSFORMER GROUNDED CIRCUIT CONDUCTOR (NEUTRAL CONDUCTOR).
- 2 240/480 V TRANSFORMER GROUNDING ELECTRODE CONDUCTOR.
- 3 240/480 V SYSTEM NEUTRAL BUS AND GROUND BUS.
- 4 240/480 V ENCLOSURE BONDING JUMPER.



120/240 V SERVICE WIRING DIAGRAM

TYPE III-CF SERVICE EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	NEUTRAL LUG		13	15 A, 120 V, 1P, CB	FLASHING BEACON (120 V)
2	LANDING LUG		14	20 A, 480 V, 2P, CB	SIGN ILLUMINATION (480 V)
3	TEST BYPASS FACILITY		15	100 A, 240 V, 2P, CB	MAIN BREAKER (240 V)
4	METER SOCKET AND SUPPORT		16	20 A, 480 V, 2P, CB	LIGHTING (480 V)
5	TERMINAL BLOCKS		17	50 A, 120 V, 1P, CB	SIGNALS (120 V)
6	NEUTRAL BUS		18	30 A, 240 V, 2P, CB	XFMR PRIMARY (240 V)
7	GROUND BUS		19	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET (120 V)
8	GROUNDING ELECTRODE		20	15 A, 240 V, 1P, CB	LIGHTING CONTROL (240 V)
9	30 A, 2PNO, CONTACTOR	SIGN ILLUMINATION (480 V)	21	PHOTOELECTRIC UNIT (TYPE V)	
10	PHOTOELECTRIC UNIT (TYPE V)		22	15 A, 1P, TEST SWITCH	LIGHTING CONTROL (240 V)
11	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH (240 V)	23	30 A, 2PNO CONTACTOR	LIGHTING (480 V)
12	15 A, 240 V, 1P, CB	SIGN ILLUMINATION CONTROL (240 V)	24	STEP UP TRANSFORMER	5 kVA, 240-240/480V, 1Ø

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Electrical DESIGN

FUNCTIONAL SUPERVISOR
 ALT BAKHDOUD

CALCULATED-DESIGNED BY
 CHECKED BY

PAUL MATOS
 RAJPREET SINGH

REVISED BY
 DATE REVISED

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



USERNAME => frsrk
 DGN FILE => 60h810u002.dgn

CU 06391 EA 0H8101

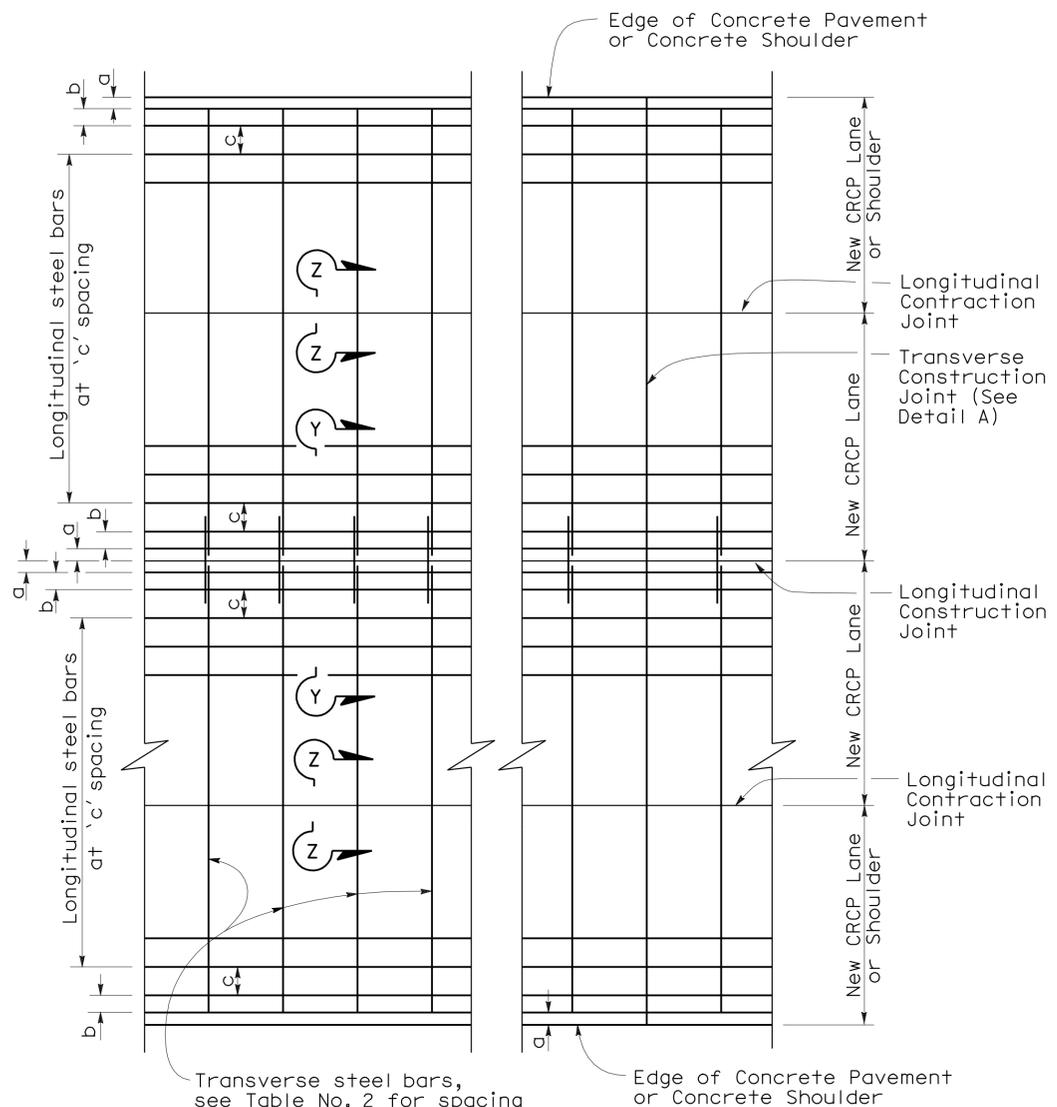
MODIFY LIGHTING
NO SCALE
E-2

TABLE No. 1 LONGITUDINAL STEEL

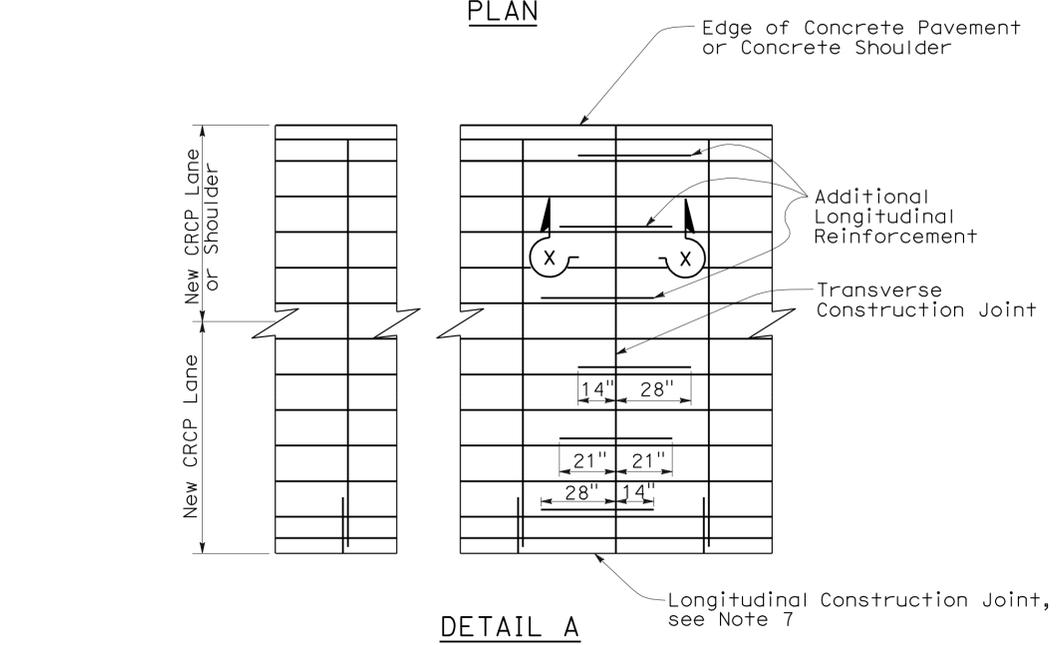
Slab Thickness and Bar Size	First Spacing at Edge or Joint	Second Spacing from Edge or Joint	Regular Steel Bars	Additional Reinforcement at Transverse Construction Joint	Cir		
D	Bar Size	Spacing a	Spacing b	Spacing c	Spacing $2 \times c$	Length L	X
.80'	#6	3" TO 4"	3" TO 8"	8"	16"	42"	4"
.85'	#6	3" TO 4"	3" TO 7"	7"	14"	42"	4"
.90'	#6	3" TO 4"	3" TO 6.5"	6.5"	13"	42"	4"
.95'	#6	3" TO 4"	3" TO 6"	6.5"	13"	42"	4"
1.00'	#6	3" TO 4"	3" TO 6"	6"	12"	42"	4.25"
1.05'	#6	3" TO 4"	3" TO 5.5"	6"	12"	42"	4.5"
1.10'	#6	3" TO 4"	3" TO 5.5"	5.5"	11"	42"	4.75"

TABLE No. 2 TRANSVERSE STEEL

Slab Thickness and Bar Size	Pvmt Width (From Edge of Conc Pvmt or Conc Shld to Nearest Edge of Conc Pvmt or Conc Shld)							
	$\leq 48'$	$\leq 60'$	$\leq 72'$	$\leq 84'$	$\leq 96'$	$\leq 108'$	$\leq 120'$	
D	Bar Size	Spacing	Spacing	Spacing	Spacing	Spacing	Spacing	
.80'	#6	3'	3'	3'	2.5'	2'	2'	1.5'
.85'	#6	3'	3'	2.5'	2.5'	2'	1.5'	1.5'
.90'	#6	3'	2.5'	2.5'	2'	2'	1.5'	1.5'
.95'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.00'	#6	3'	2.5'	2'	2'	1.5'	1.5'	1'
1.05'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'
1.10'	#6	2.5'	2.5'	2'	1.5'	1.5'	1.5'	1'

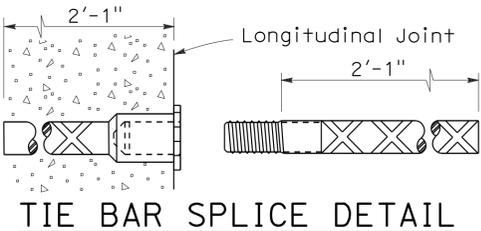


PLAN



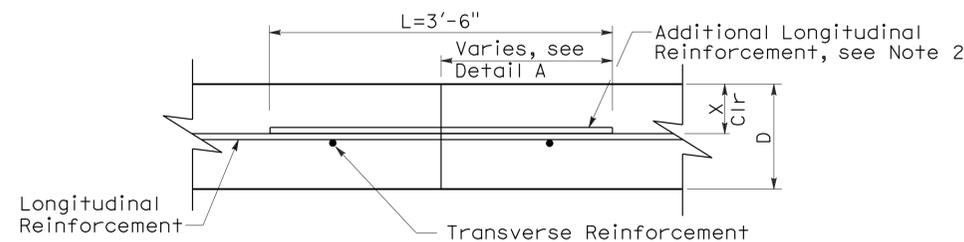
DETAIL A

ADDITIONAL LONGITUDINAL REINFORCEMENT AT TRANSVERSE CONSTRUCTION JOINT



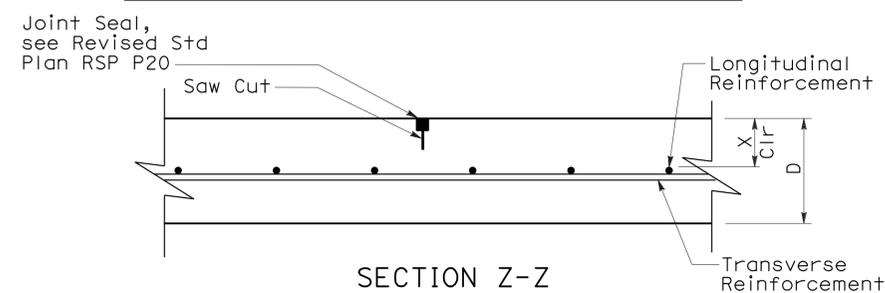
TIE BAR SPLICE DETAIL

(Splice Coupler)



SECTION X-X

TRANSVERSE CONSTRUCTION JOINT

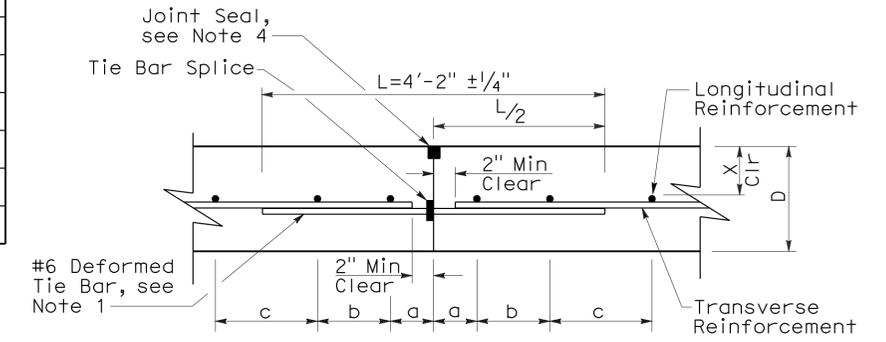


SECTION Z-Z

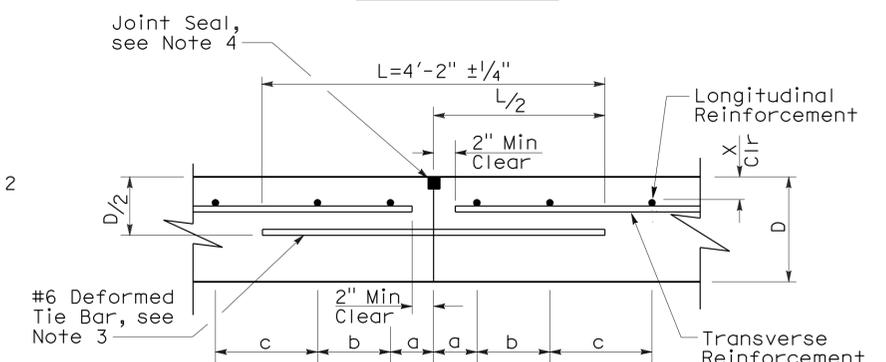
LONGITUDINAL CONTRACTION JOINT

- NOTES:**
- Place tie bar in the same plane as transverse reinforcements.
 - Place additional longitudinal reinforcement in the same horizontal plane as the longitudinal reinforcement without horizontal space.
 - Place tie bar parallel to and within 2" of transverse reinforcement.
 - Joint seals at longitudinal construction joints shall conform to the details shown on Revised Standard Plan RSP P20 for Type C joint.
 - Tie bar spacing shall be equal to transverse bar spacing.
 - Reinforcing bar splices shall be a minimum of 25".
 - Additional longitudinal reinforcement symmetrical about longitudinal construction joint.

To accompany plans dated 7-13-09



SECTION Y-Y



ALTERNATE

LONGITUDINAL CONSTRUCTION JOINT

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT**

NO SCALE

RNSP P4 DATED JUNE 5, 2009 SUPERSEDES NSP P4 DATED MAY 15, 2009 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NOTE:

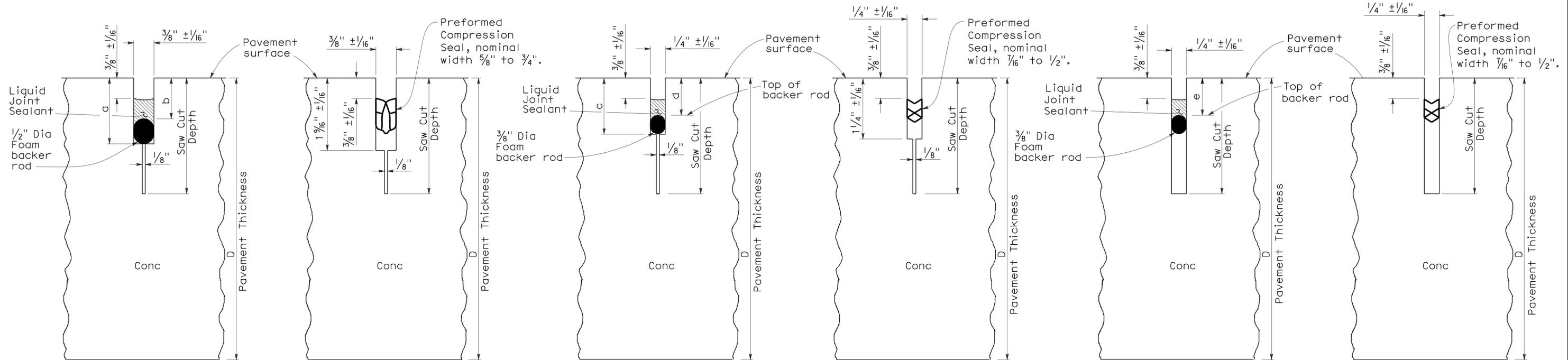
1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	15	30

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 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 7-13-09



LIQUID SEALANT

COMPRESSION SEAL

LIQUID SEALANT

COMPRESSION SEAL

LIQUID SEALANT

COMPRESSION SEAL

TYPE A1

TYPE A2

TYPE B

Transverse Contraction Joints

Longitudinal Contraction Joints

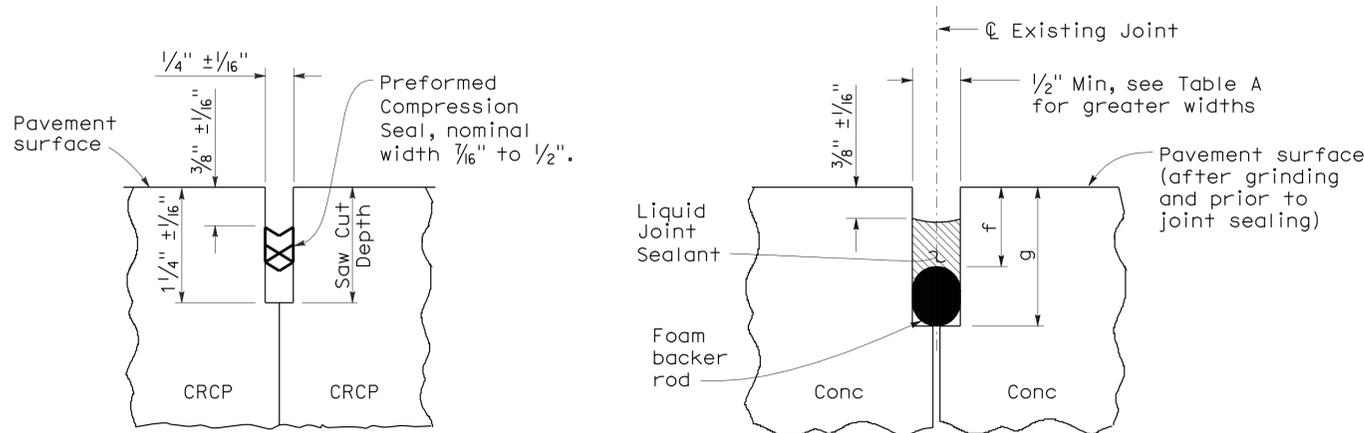
Longitudinal or Transverse Contraction Joint

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"



COMPRESSION SEAL

LIQUID SEALANT

TYPE C

TYPE R

Transverse and Longitudinal Construction Joints (For CRCP)

Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20 DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

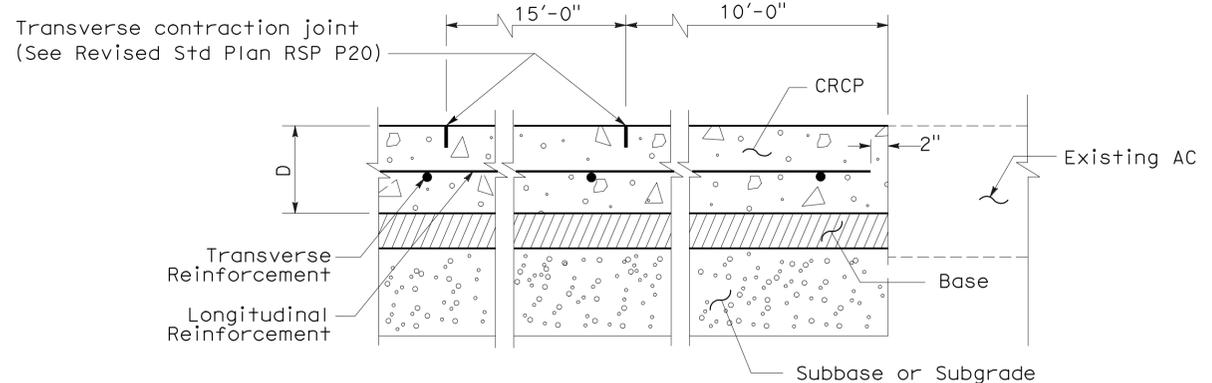
REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

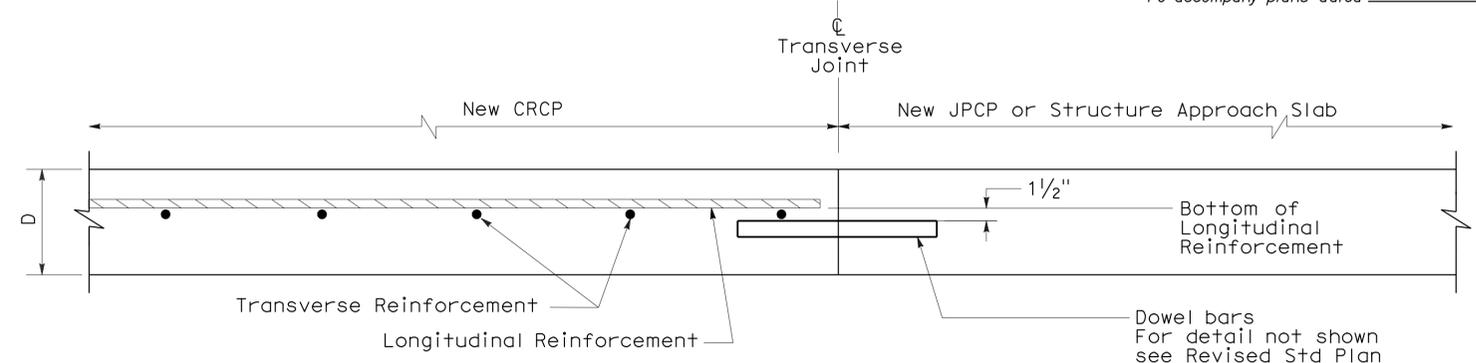
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	16	30

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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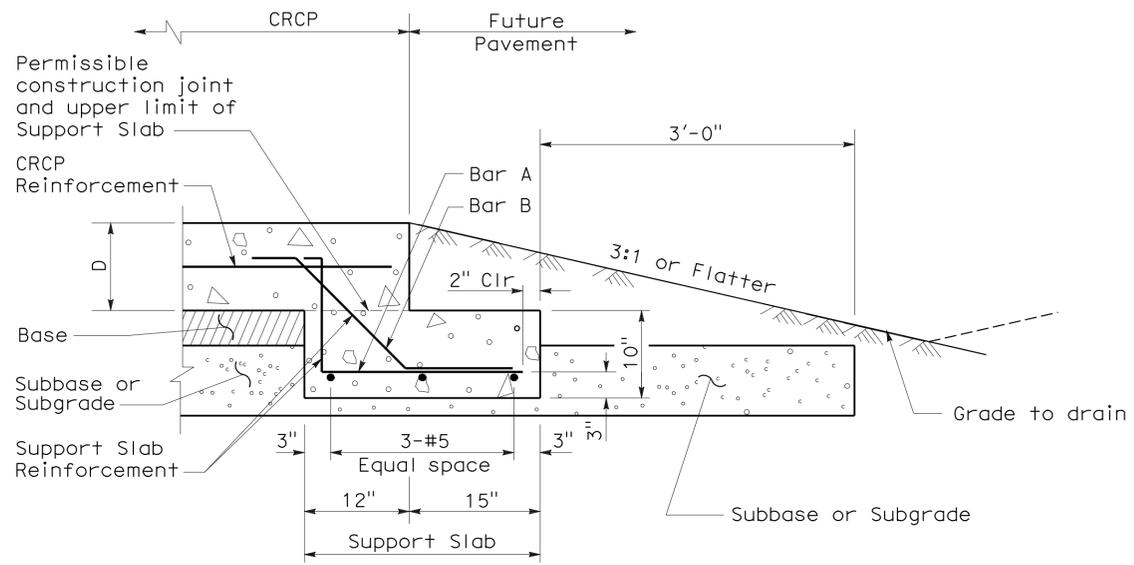
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. 49042
 Exp. 09-30-10
 STATE OF CALIFORNIA



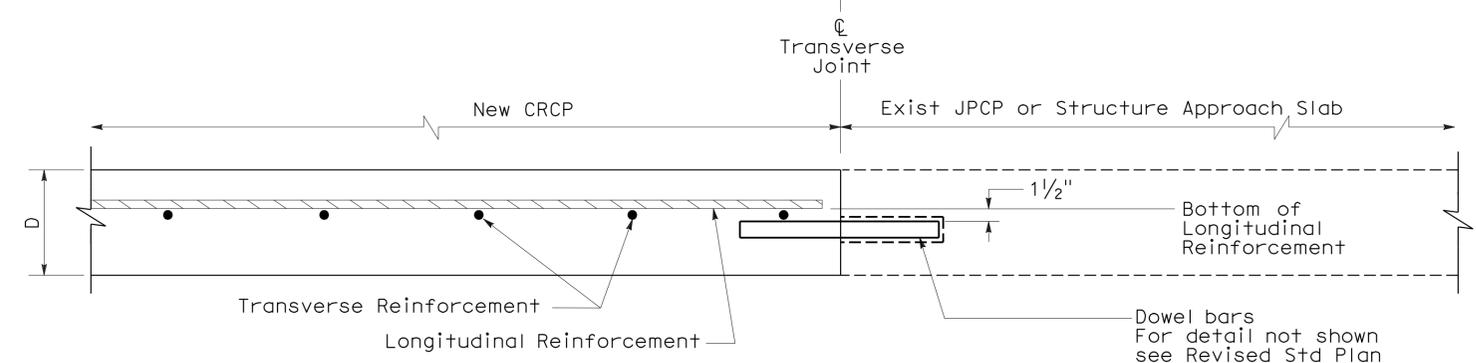
TERMINAL JOINT TYPE A
(For Existing AC)



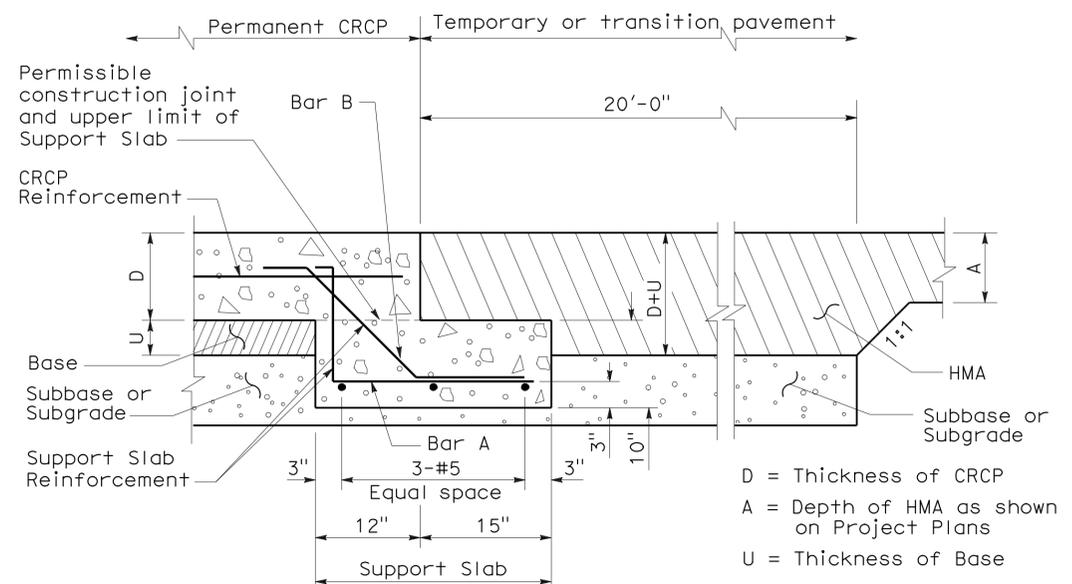
TERMINAL JOINT TYPE E
(For New JPCP or Structure Approach Slabs)



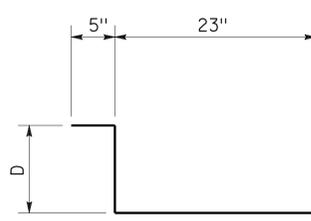
TERMINAL JOINT TYPE B
(For Future Pavement)



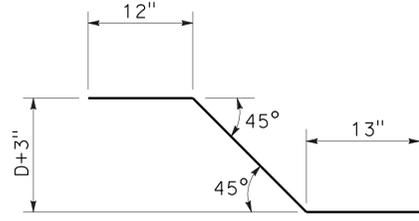
TERMINAL JOINT TYPE D
(For Existing JPCP or Structure Approach Slabs)



TERMINAL JOINT TYPE C
(For Temporary HMA Pavement)



BAR "A" (#5)
AT 12" C-C



BAR "B" (#5)
AT 12" C-C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

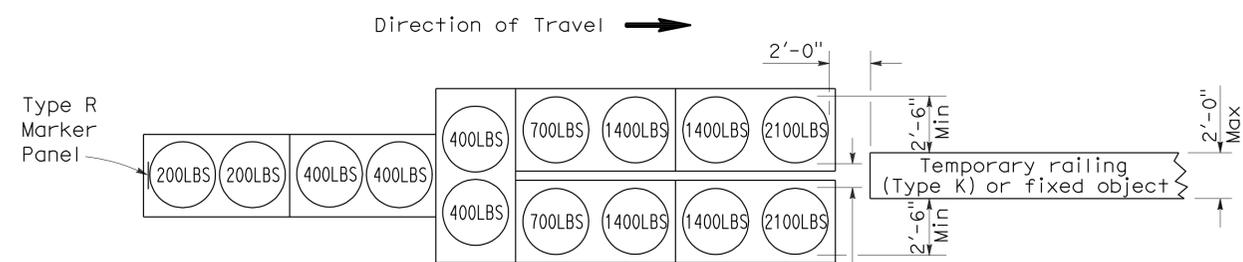
**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT -
TERMINAL JOINT DETAILS**

NO SCALE
NSP P31A DATED JUNE 5, 2009 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP P31A

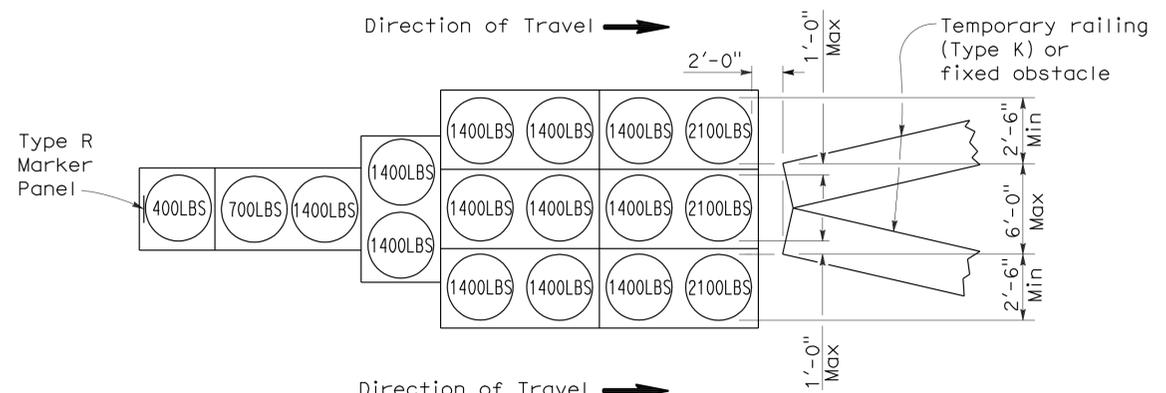
To accompany plans dated 7-13-09

To accompany plans dated 7-13-09



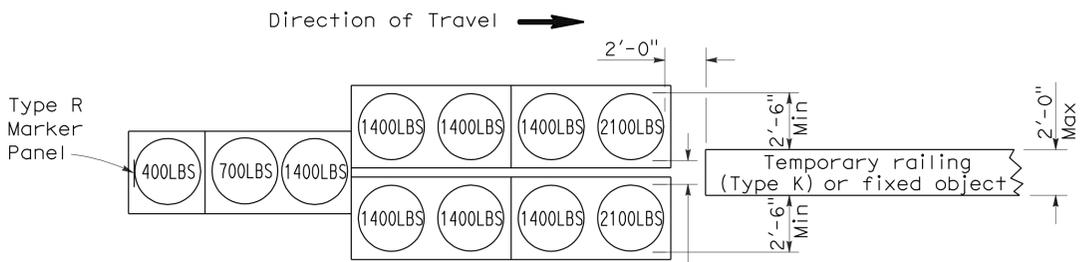
ARRAY 'TU14'

Approach speed 45 mph or more



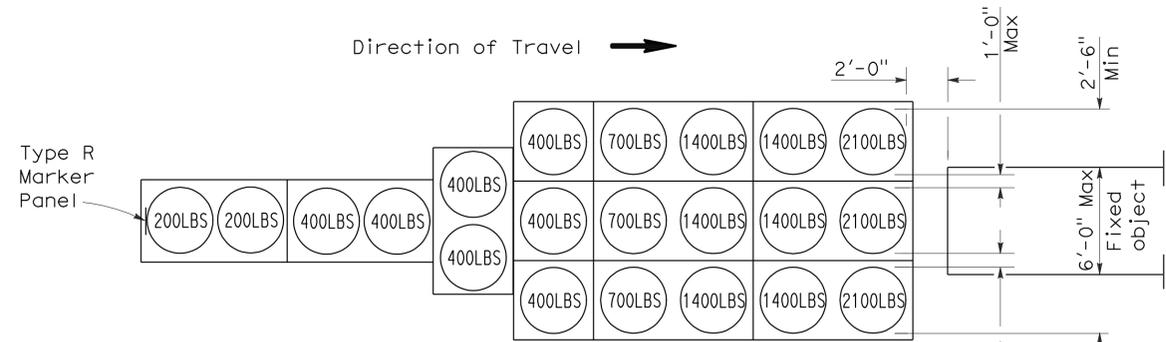
ARRAY 'TU17'

Approach speed less than 45 mph



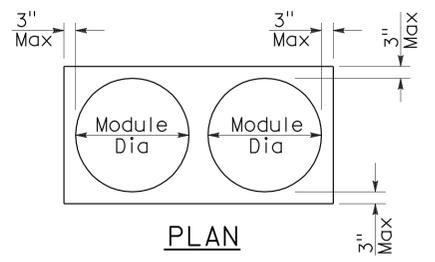
ARRAY 'TU11'

Approach speed less than 45 mph

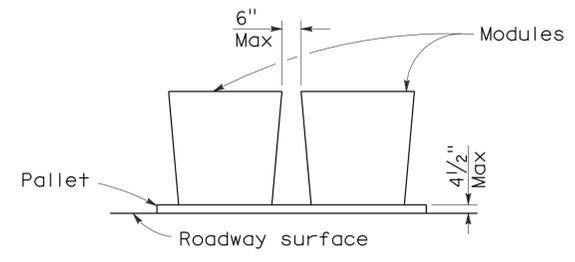


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

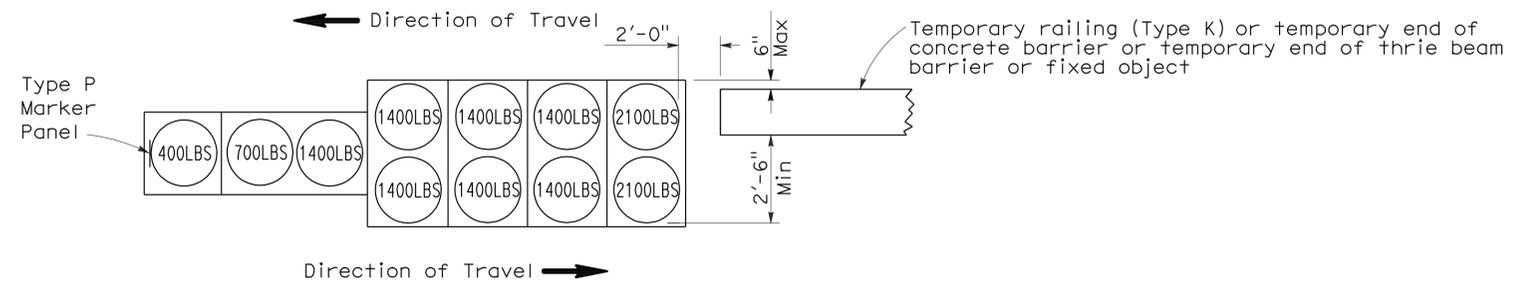
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	18	30

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

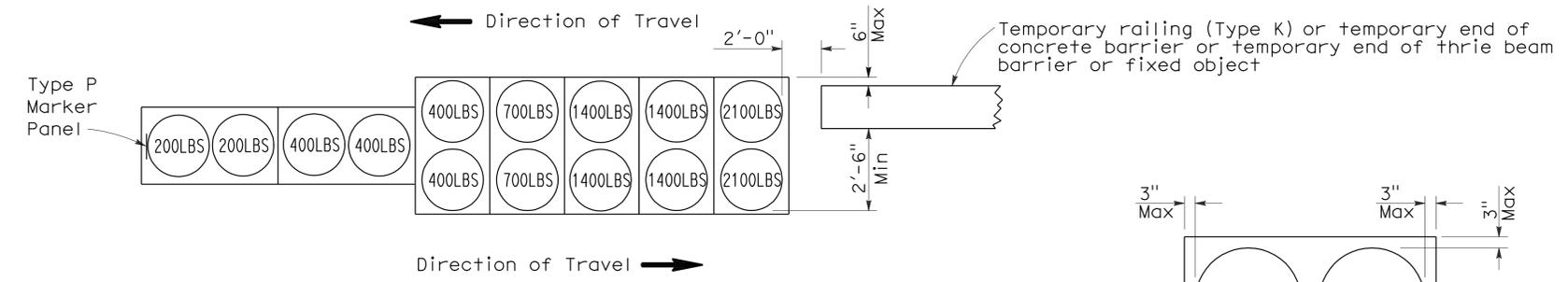
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 7-13-09



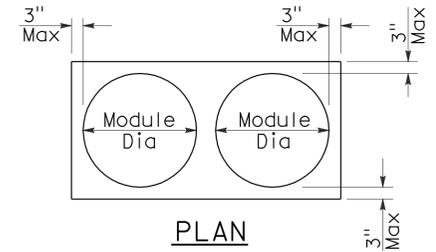
ARRAY 'TB11'

Approach speed less than 45 mph

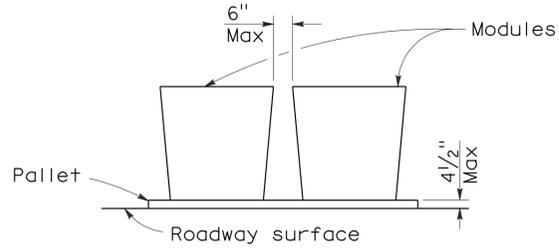


ARRAY 'TB14'

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

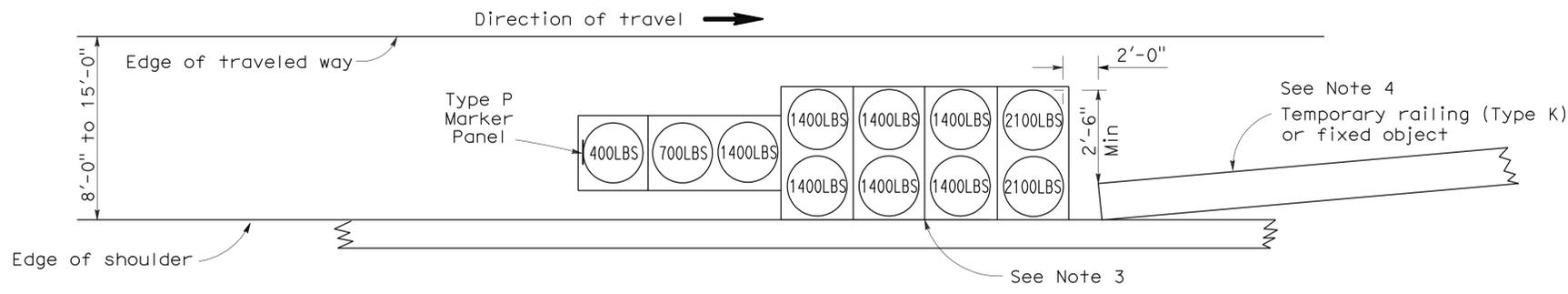
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	19	30

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

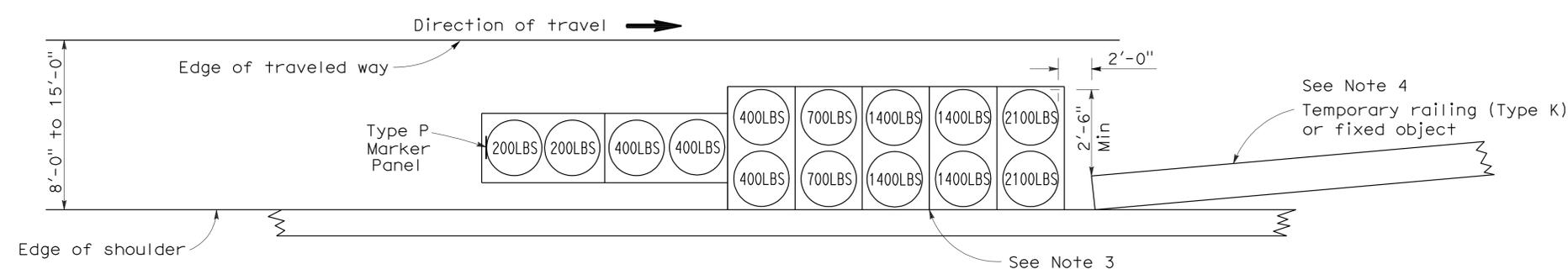
June 6, 2008
PLANS APPROVAL DATE

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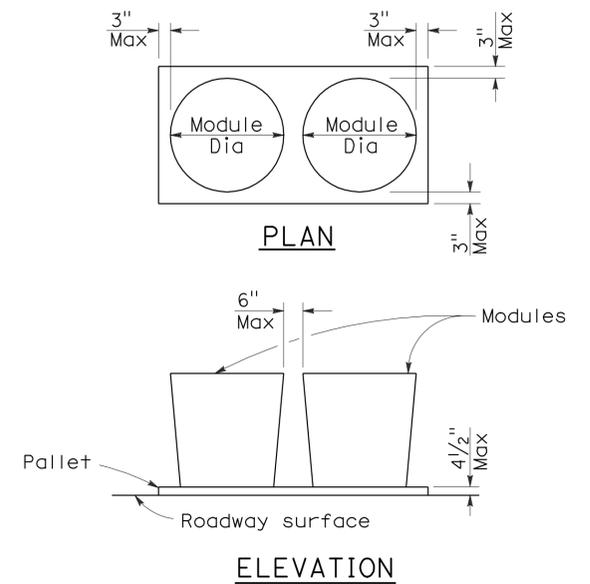
To accompany plans dated 7-13-09



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

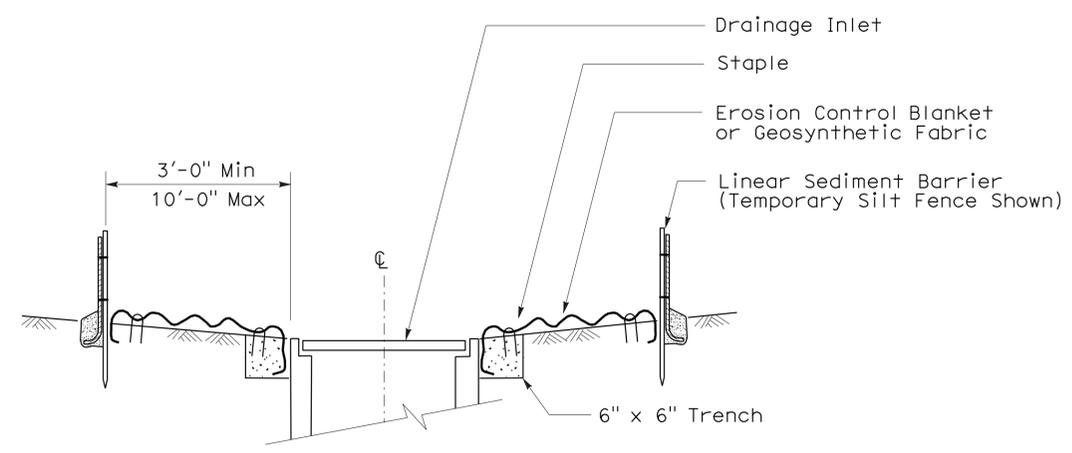
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	20	30

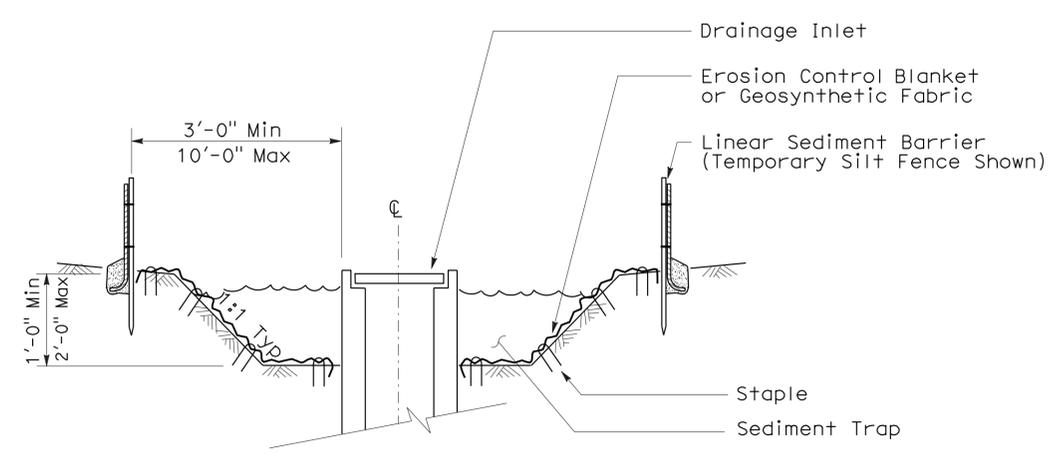
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE
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To accompany plans dated 7-13-09

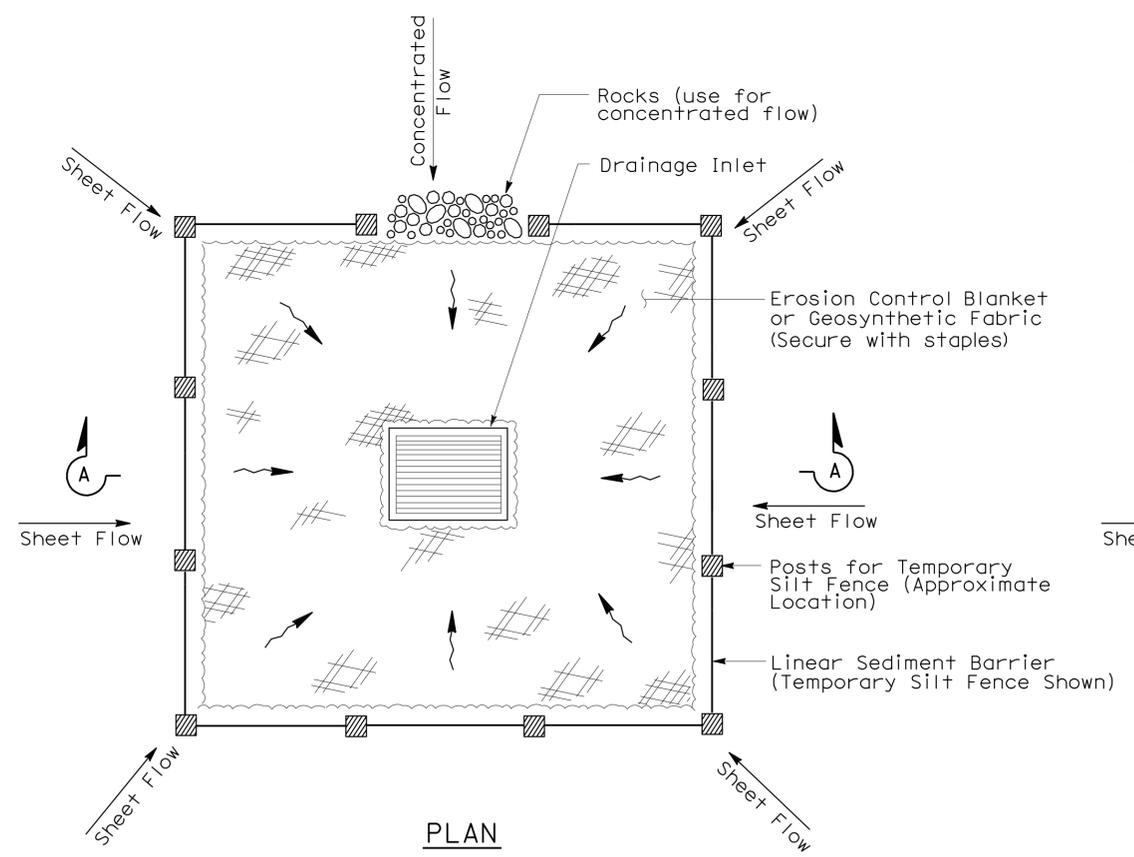
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



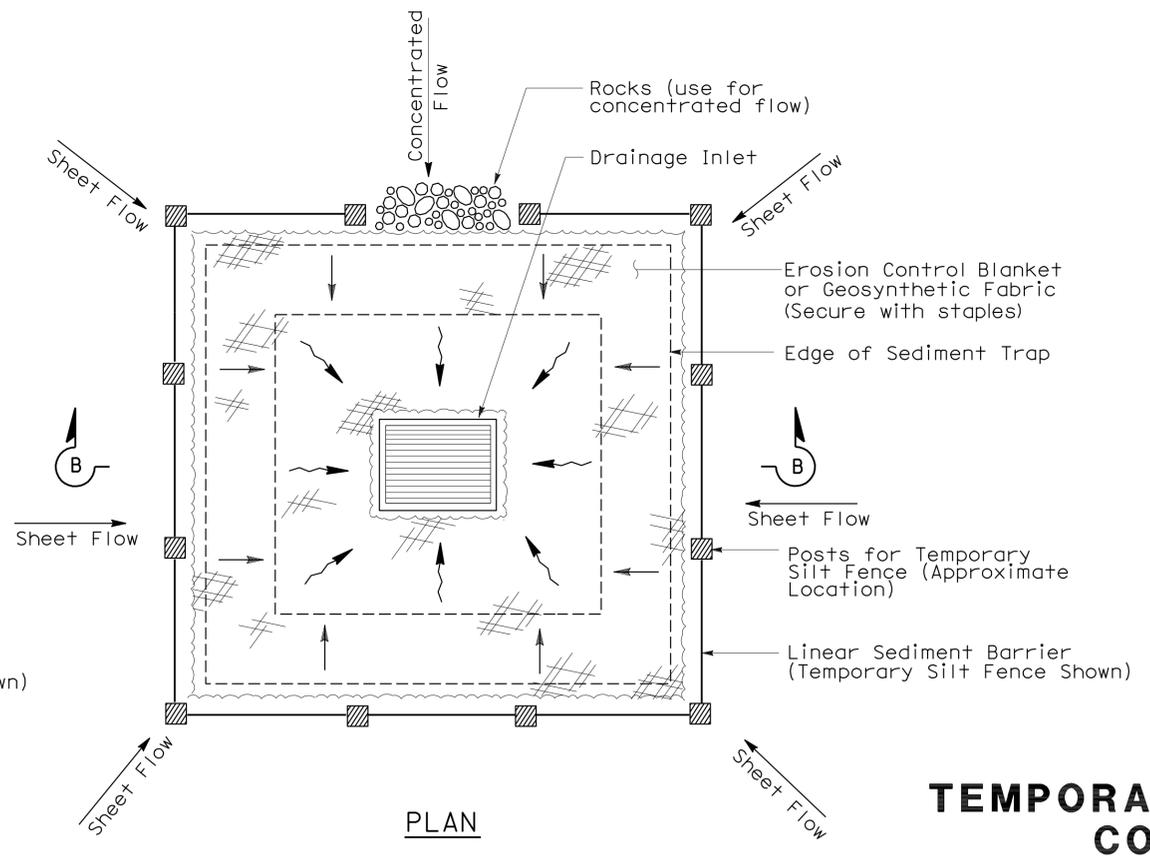
SECTION A-A



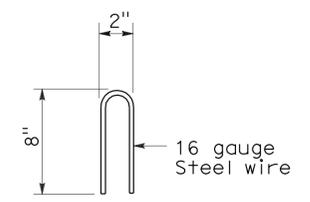
SECTION B-B



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

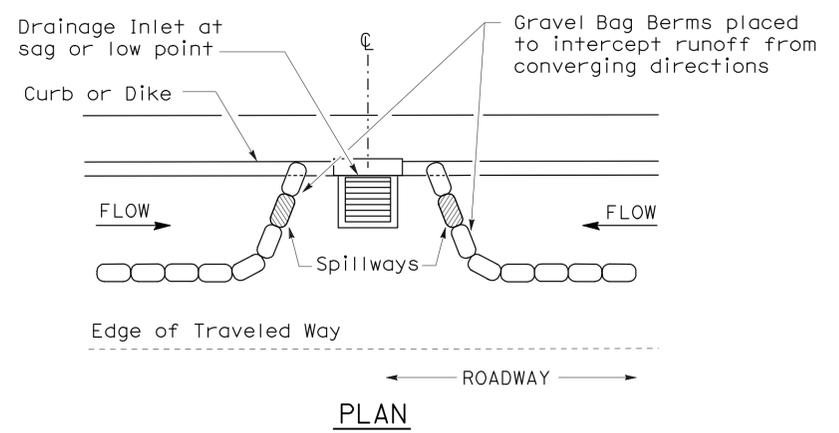


To accompany plans dated 7-13-09

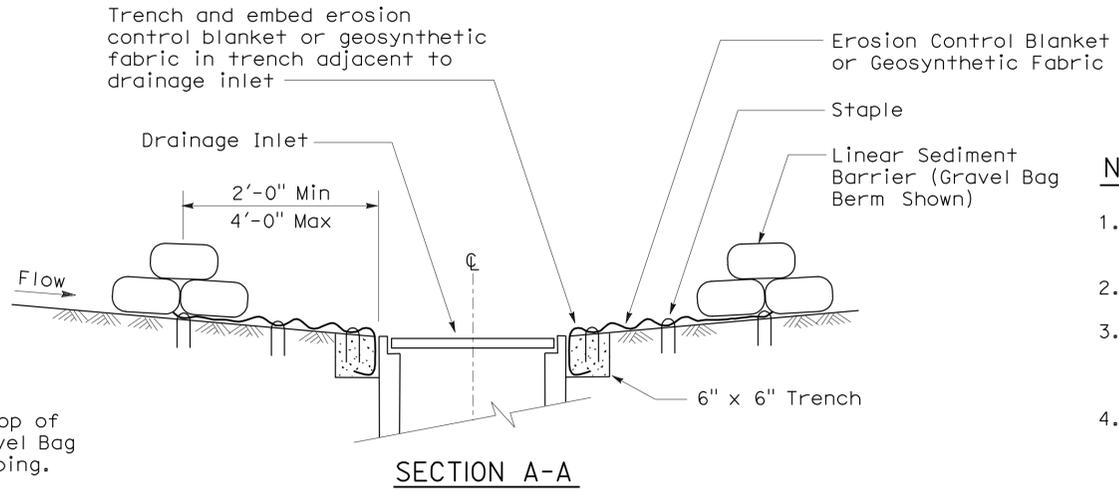
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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



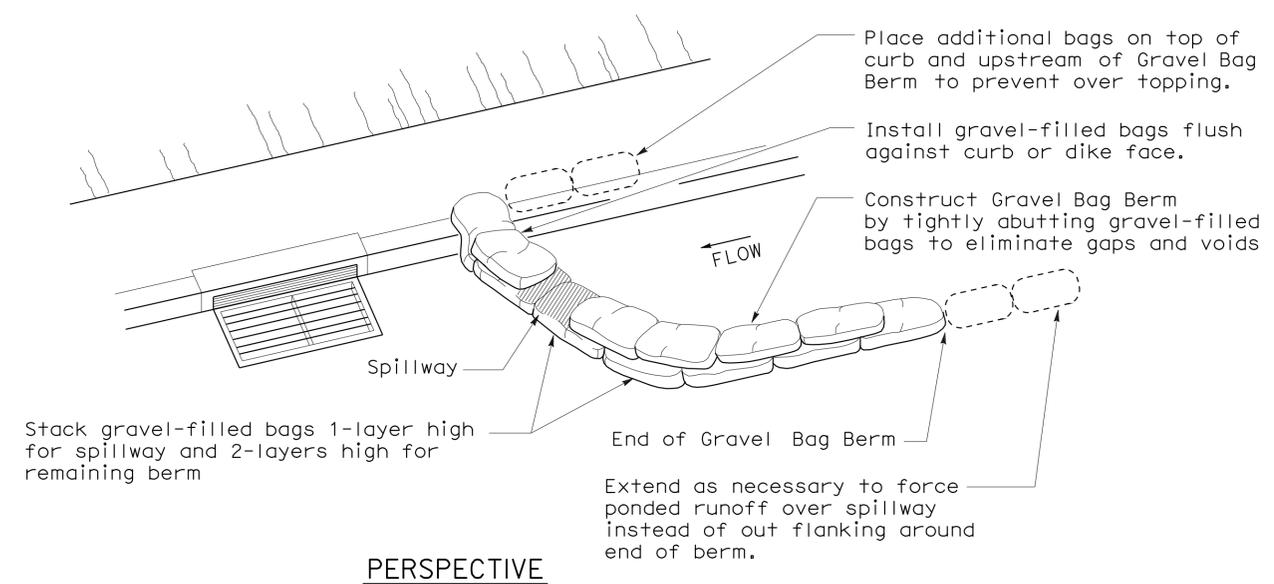
PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



SECTION A-A

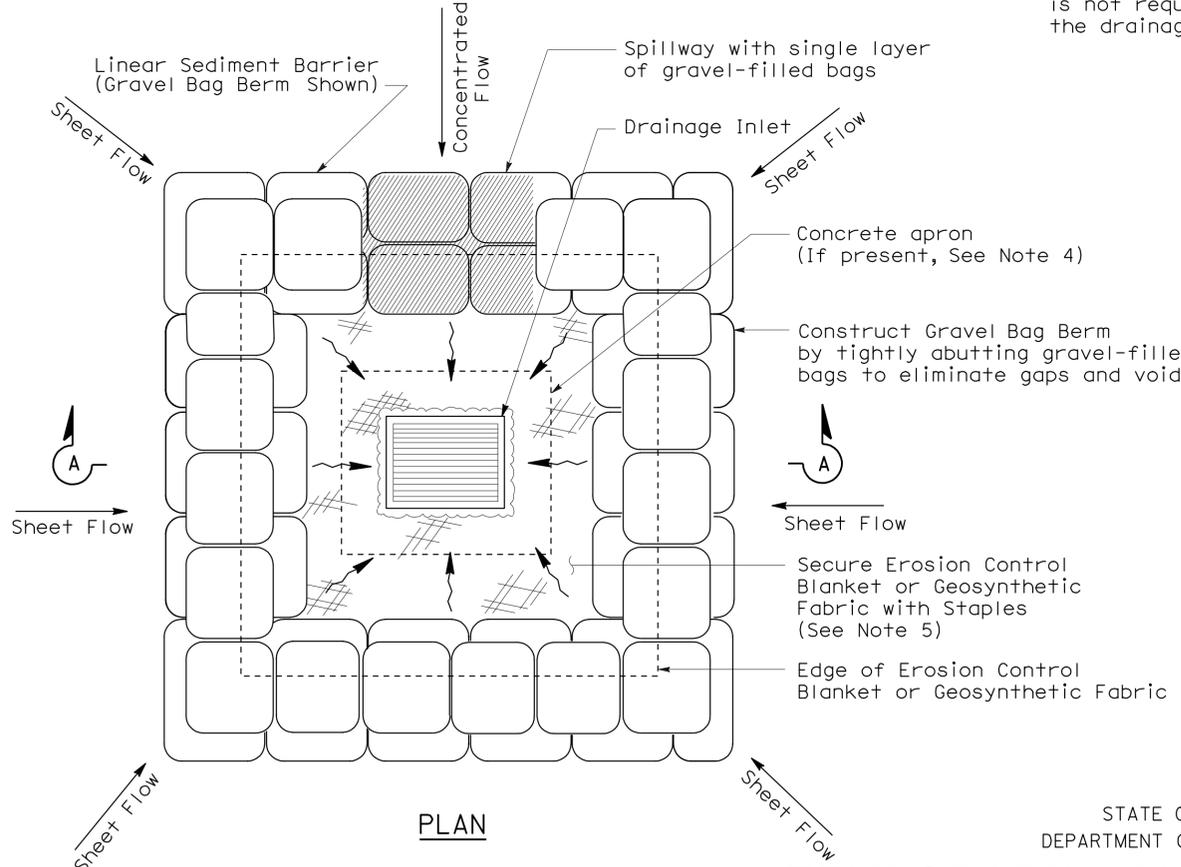
NOTES:

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.

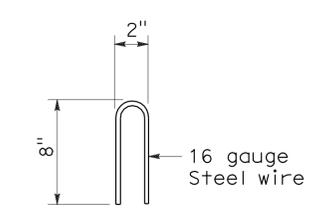


PERSPECTIVE

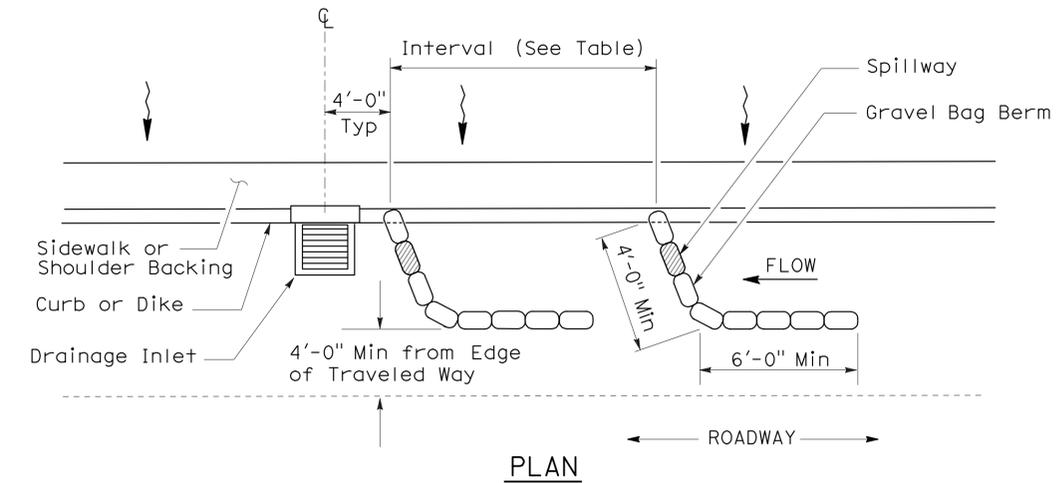
Stack gravel-filled bags 1-layer high for spillway and 2-layers high for remaining berm



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)

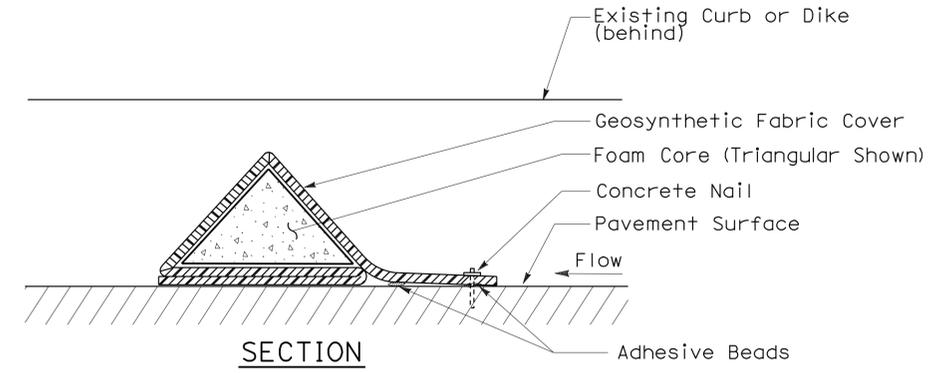
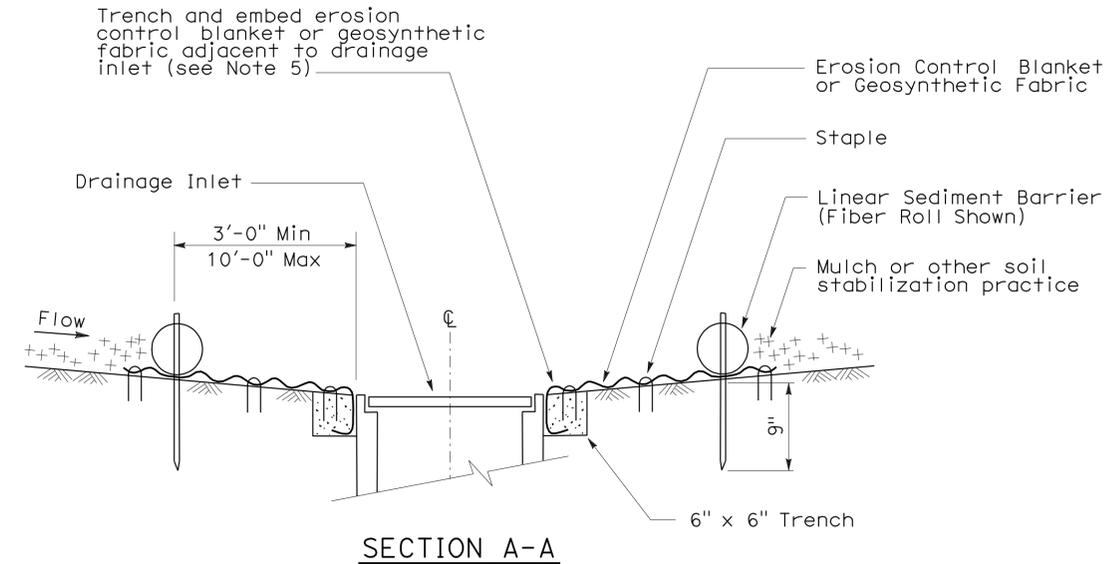
NO SCALE
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	22	30

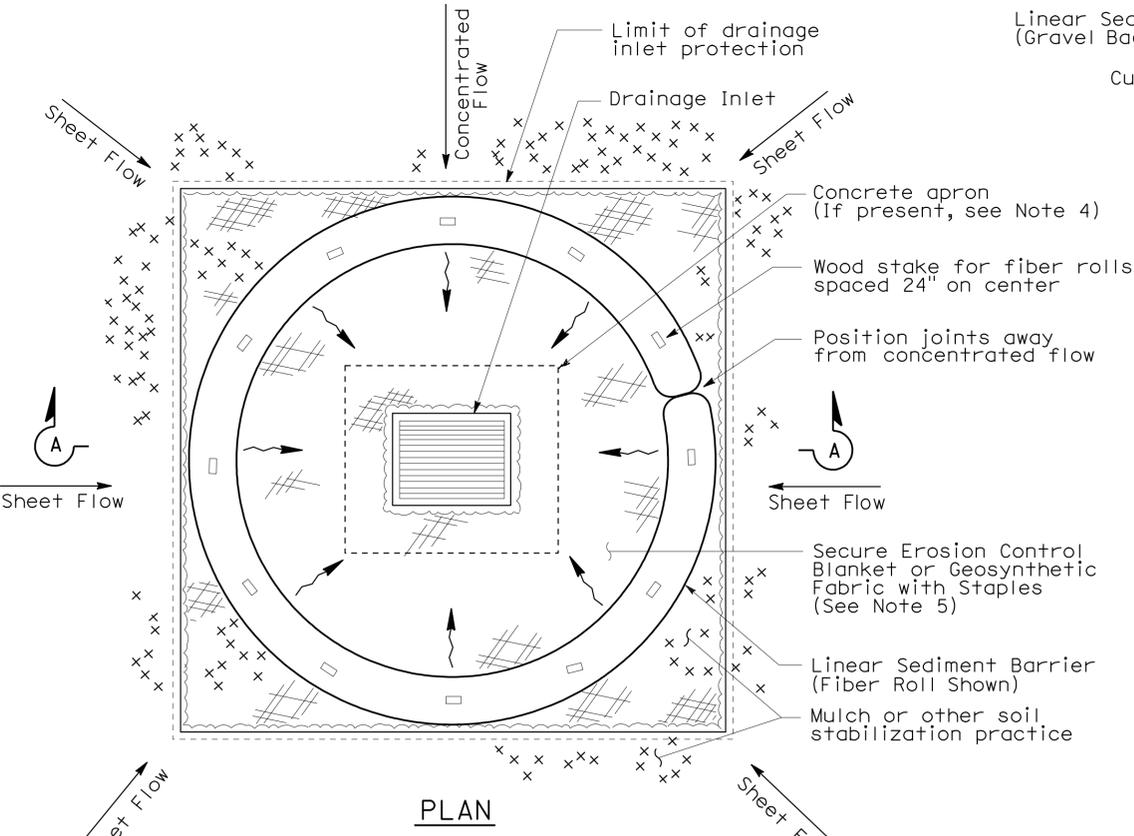
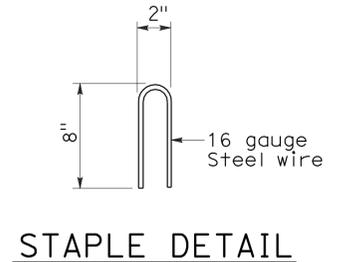
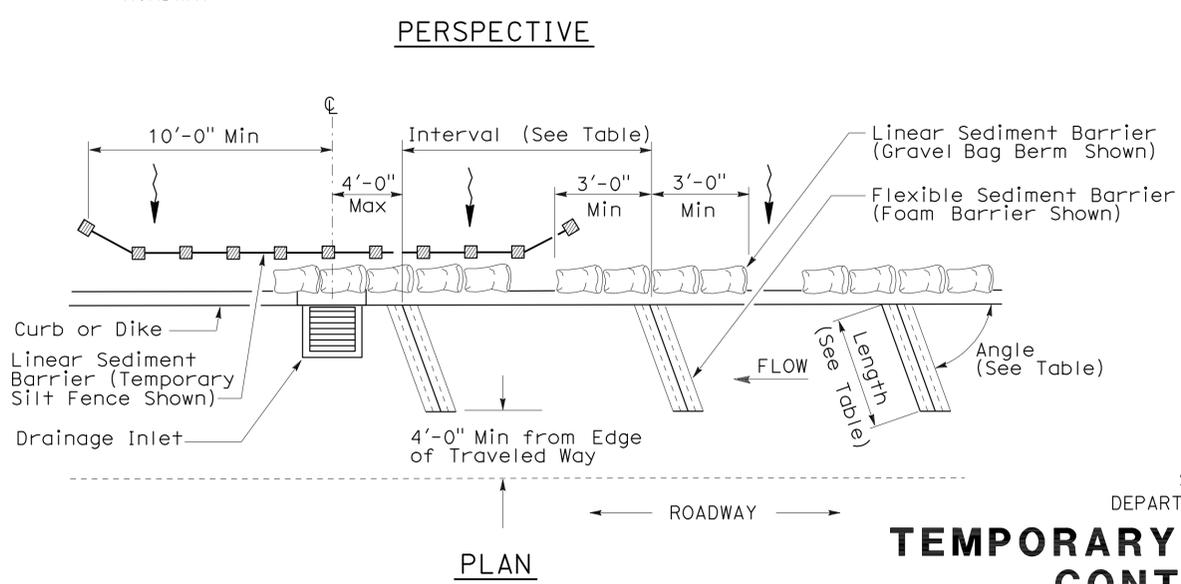
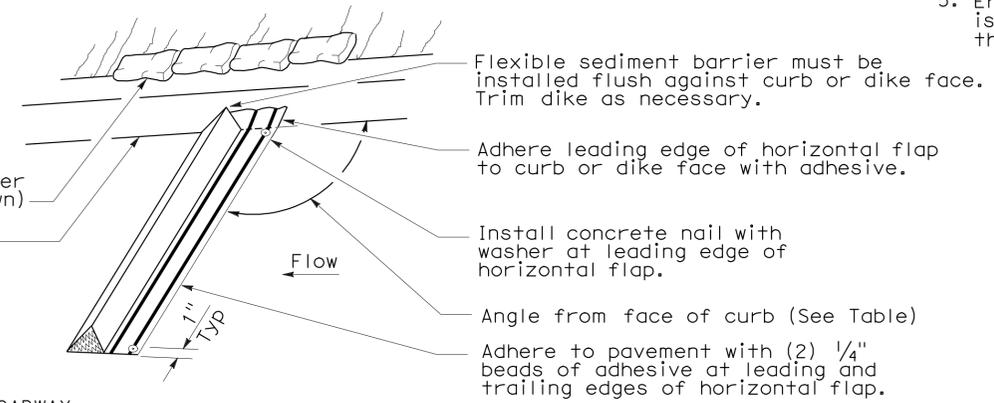
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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'



FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)

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

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

To accompany plans dated 7-13-09

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers 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.

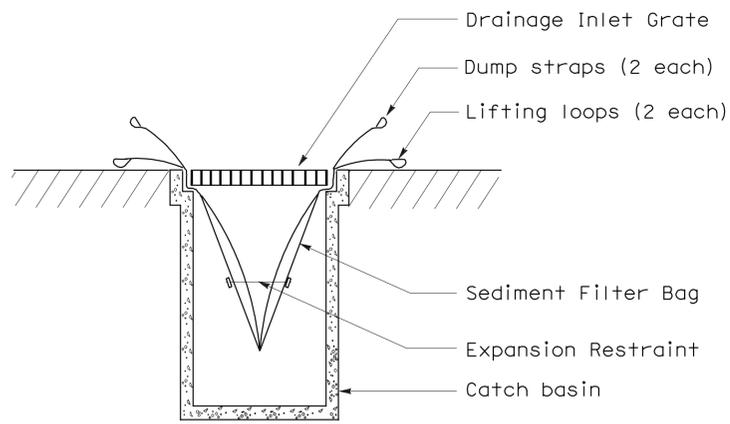
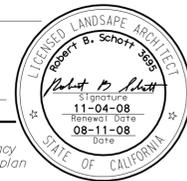
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	23	30

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

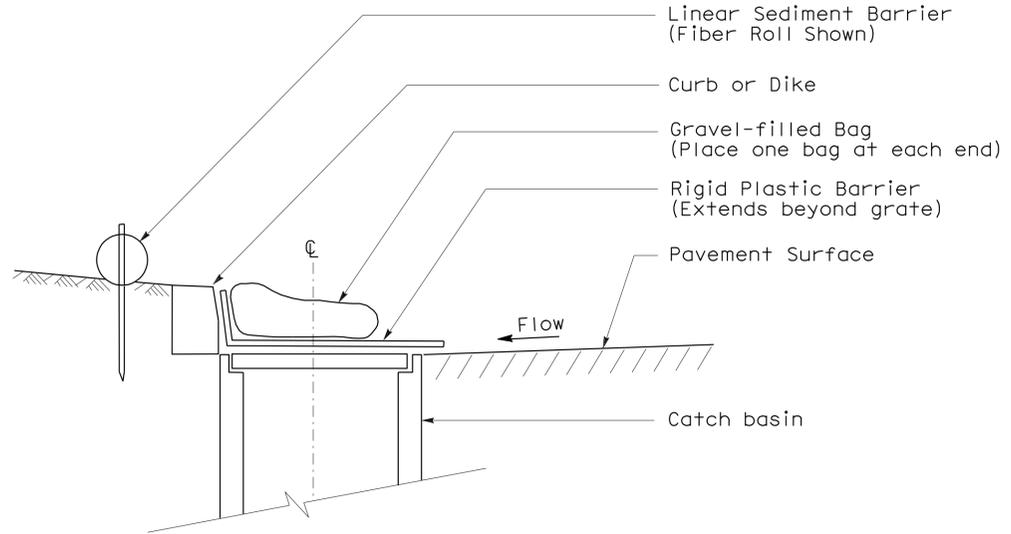
August 15, 2008
 PLANS APPROVAL DATE

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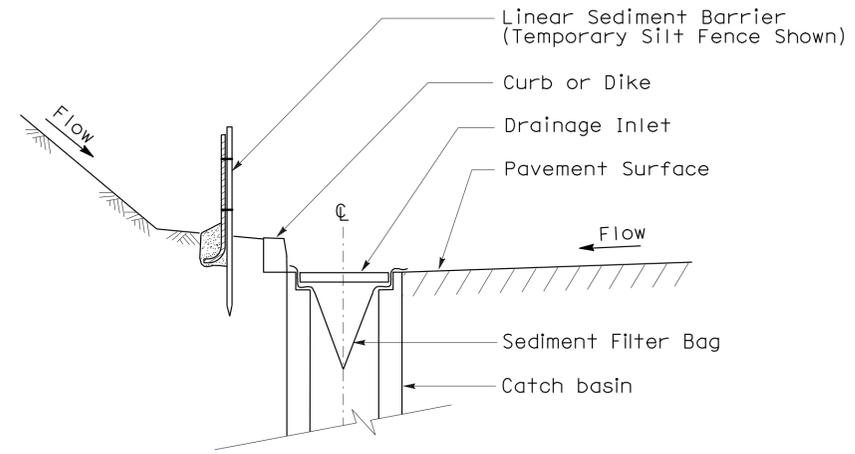
To accompany plans dated 7-13-09



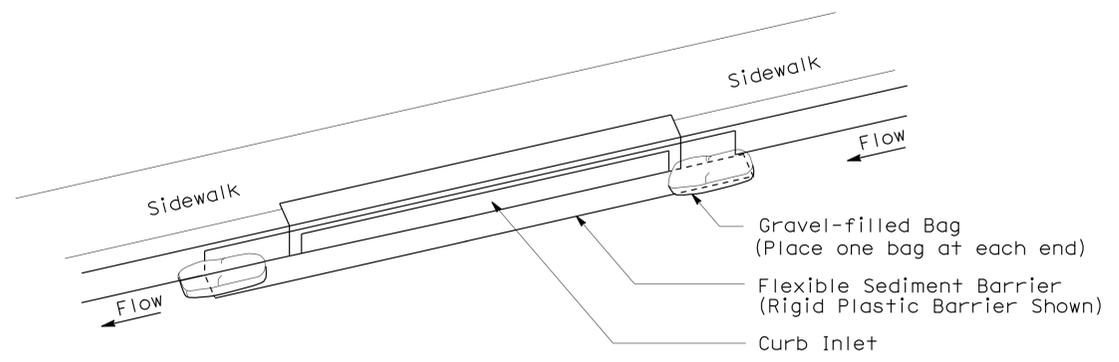
SECTION B-B
SEDIMENT FILTER BAG DETAIL



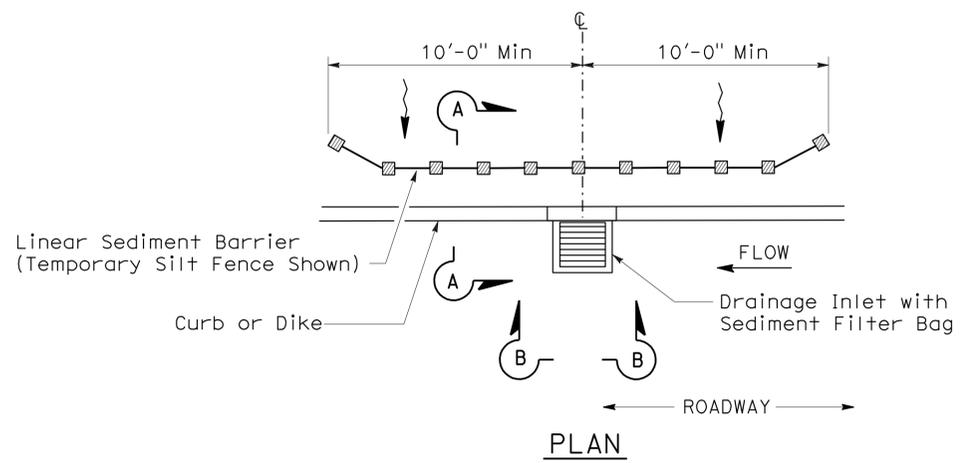
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



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

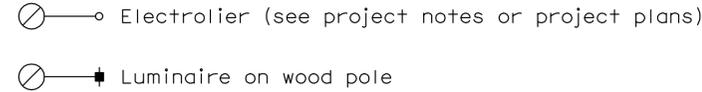
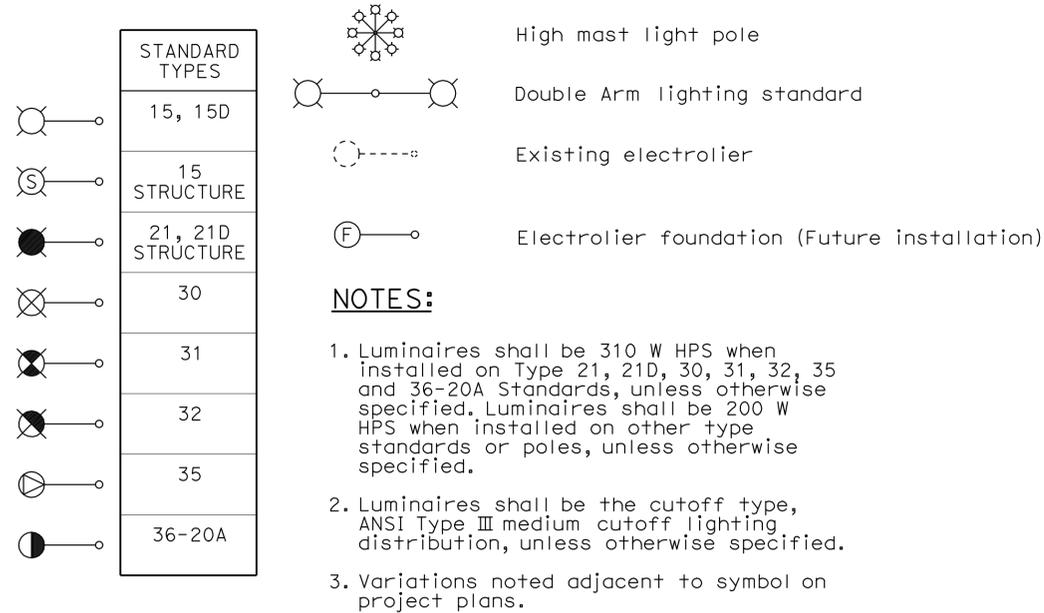
**TEMPORARY WATER POLLUTION
CONTROL DETAILS
(TEMPORARY DRAINAGE
INLET PROTECTION)**

NO SCALE

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

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS



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

PROPOSED	EXISTING	Description
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	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	24	30

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

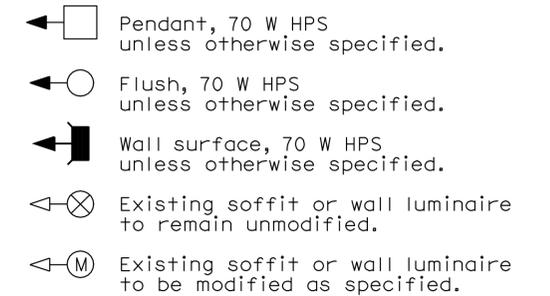
October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 7-13-09

SOFFIT AND WALL MOUNTED LUMINAIRES



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
06	Ker	58	R57.3	25	30

Jeffery 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

CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination RSP ES-9A C
		Conduit riser in/on structure or service pole

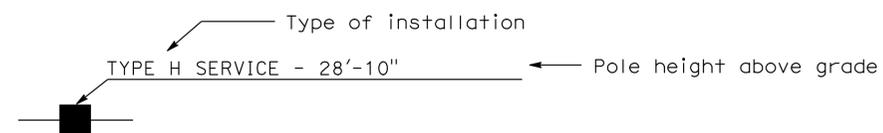
SIGNAL EQUIPMENT

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	
---OH	---oh	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

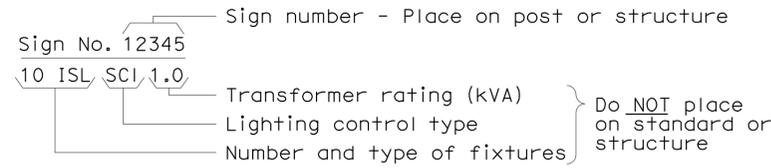
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

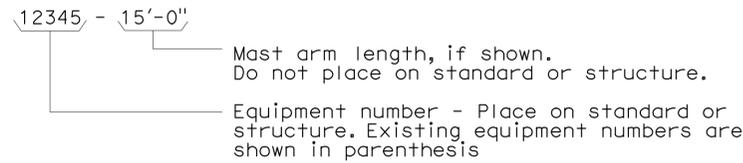
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

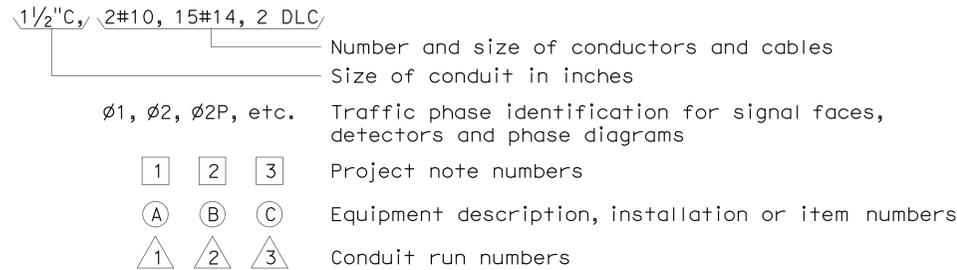
ILLUMINATED SIGN IDENTIFICATION NUMBER:



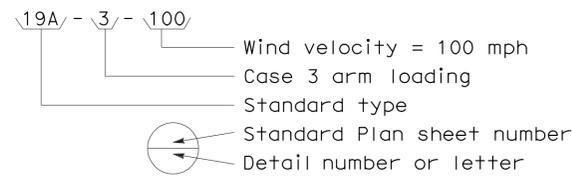
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



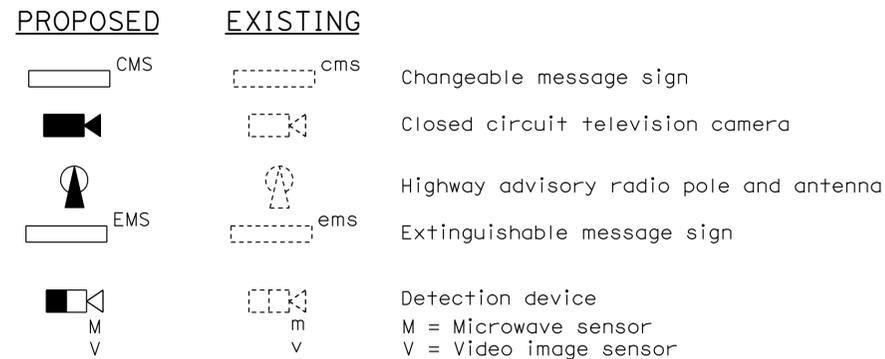
CONDUIT AND CONDUCTOR IDENTIFICATION:



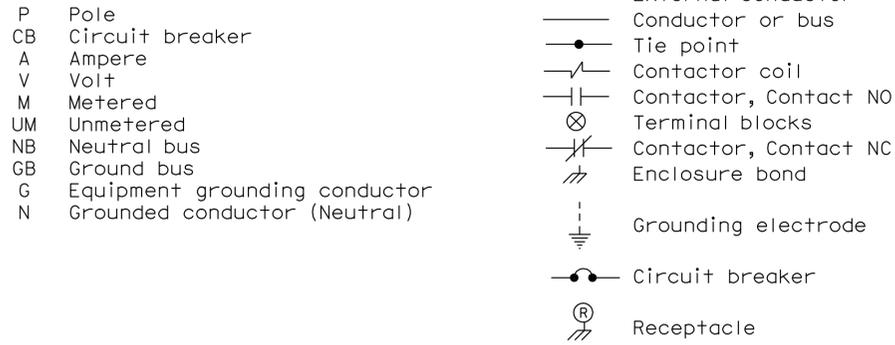
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



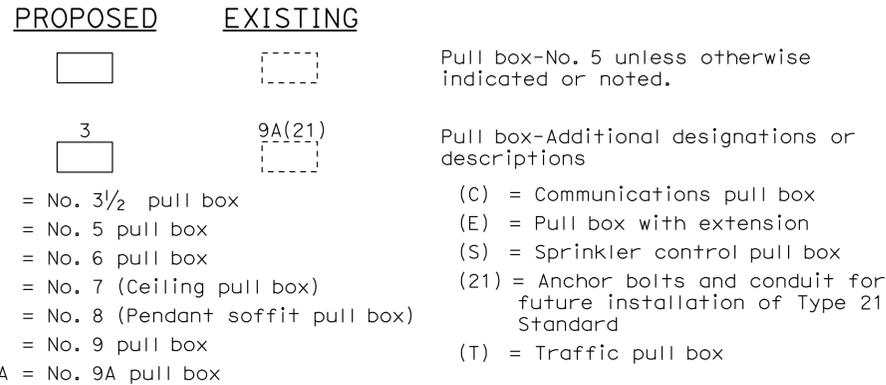
MISCELLANEOUS EQUIPMENT



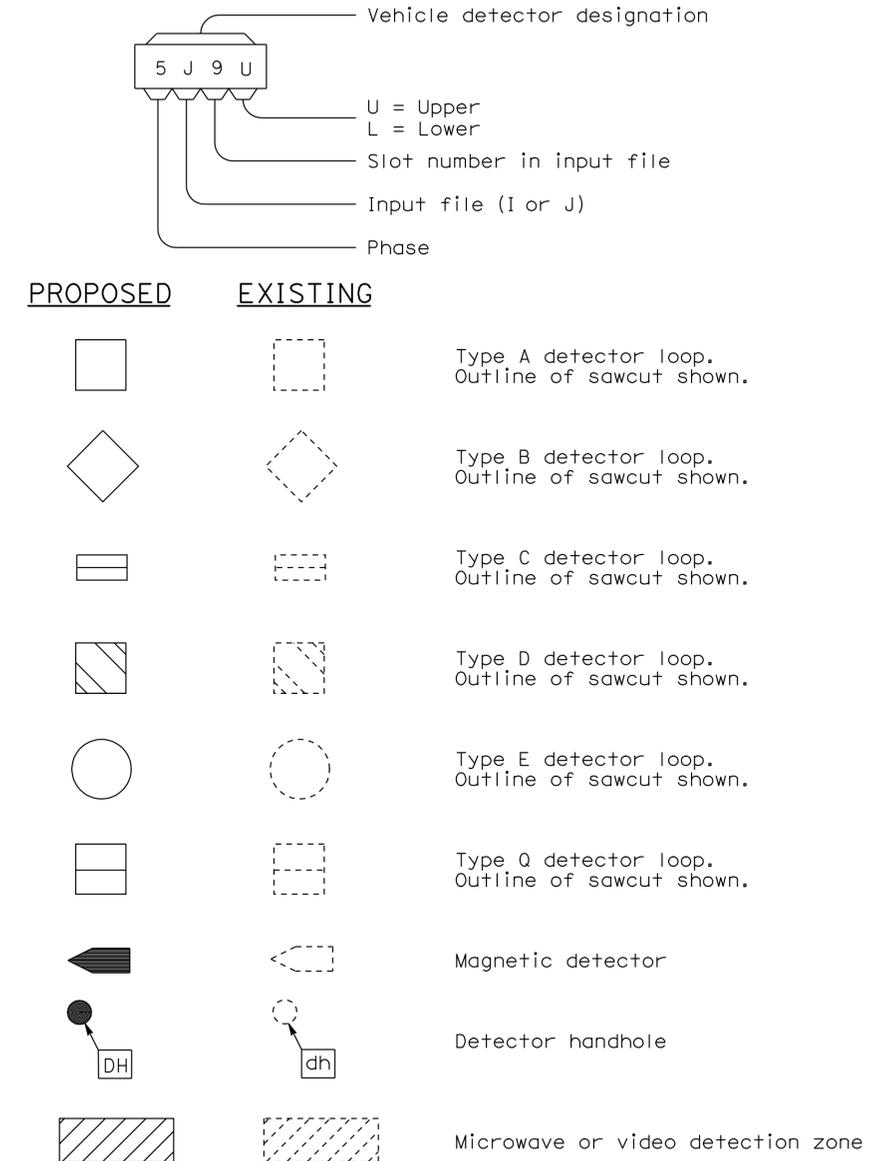
WIRING DIAGRAM LEGEND



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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	27	30

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER

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 7-13-09

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of $\frac{1}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of $\frac{1}{8}$ ".
 - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

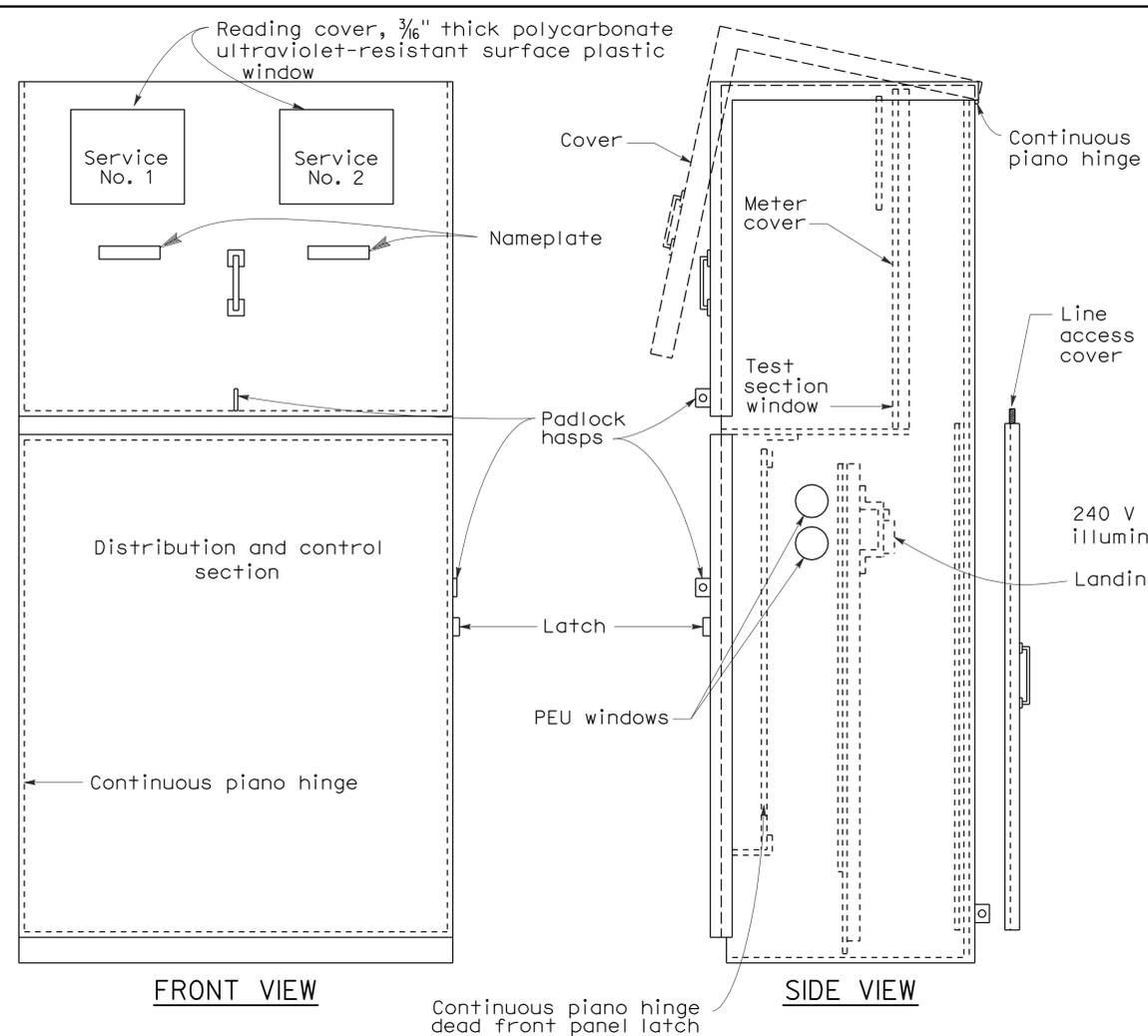
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT NOTES
 TYPE III SERIES)**

NO SCALE

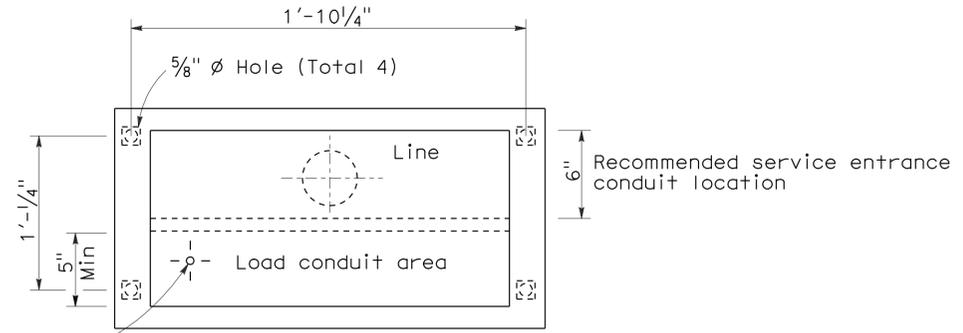
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
 DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

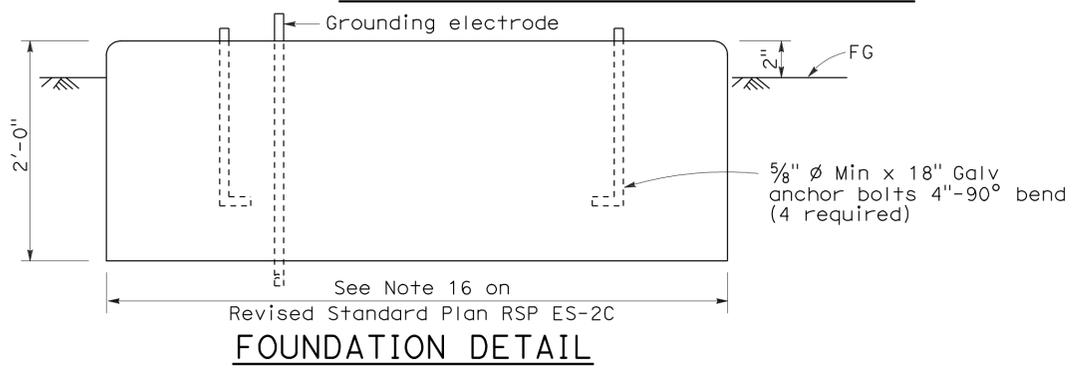
2006 REVISED STANDARD PLAN RSP ES-2C



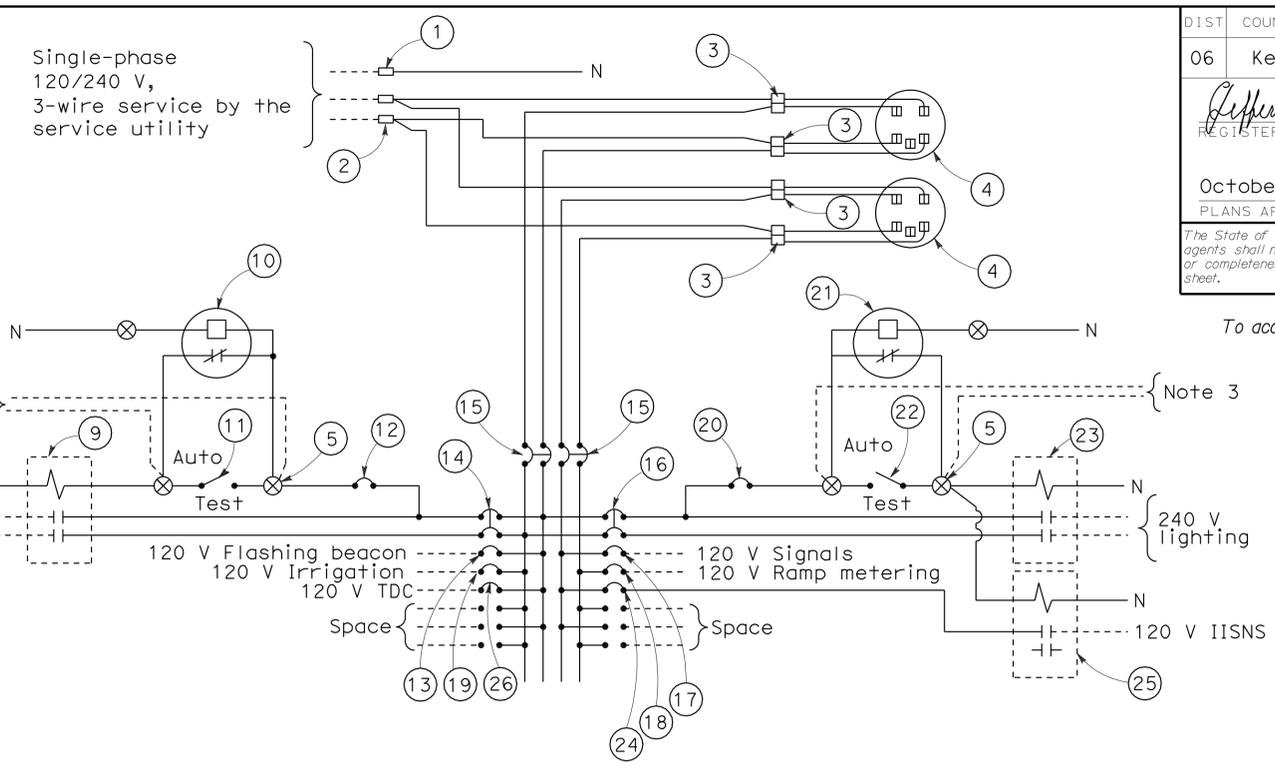
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

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

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM
 TYPE III-C SERIES)**

NO SCALE

RSP ES-2F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2F DATED MAY 1, 2006 - PAGE 408 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-2F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Ker	58	R57.3	29	30

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

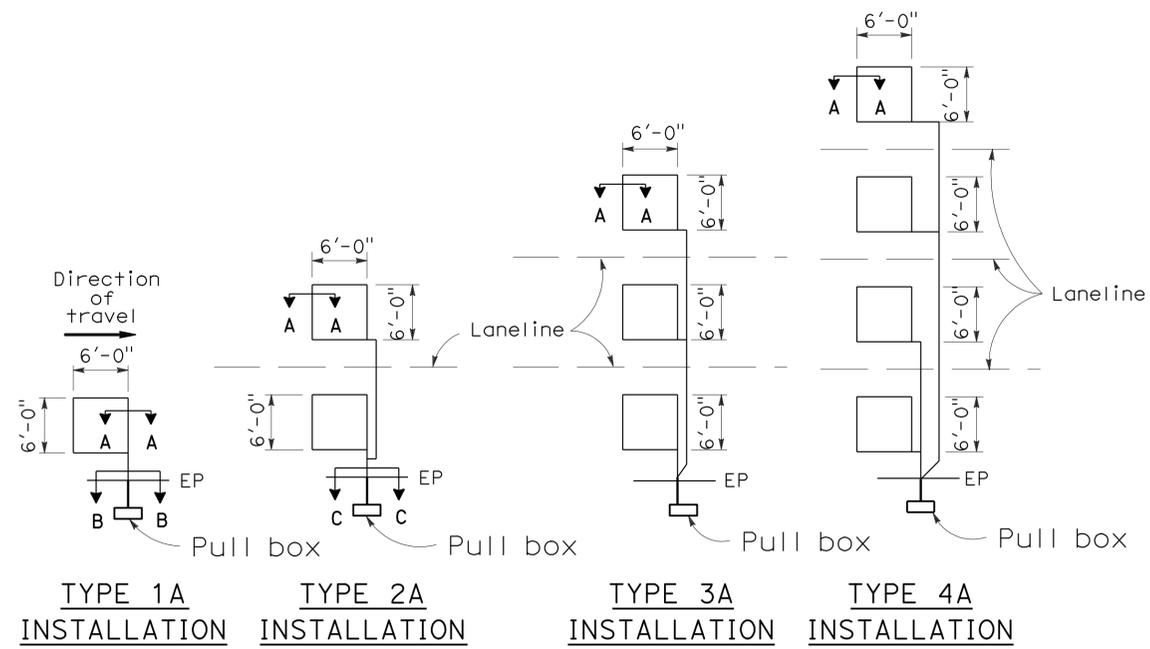
October 5, 2007
 PLANS APPROVAL DATE

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 7-13-09

LOOP INSTALLATION PROCEDURE

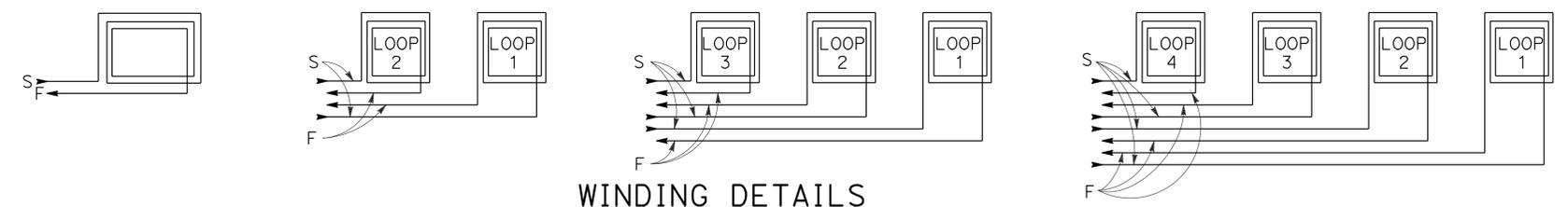
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no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



SAWCUT DETAILS

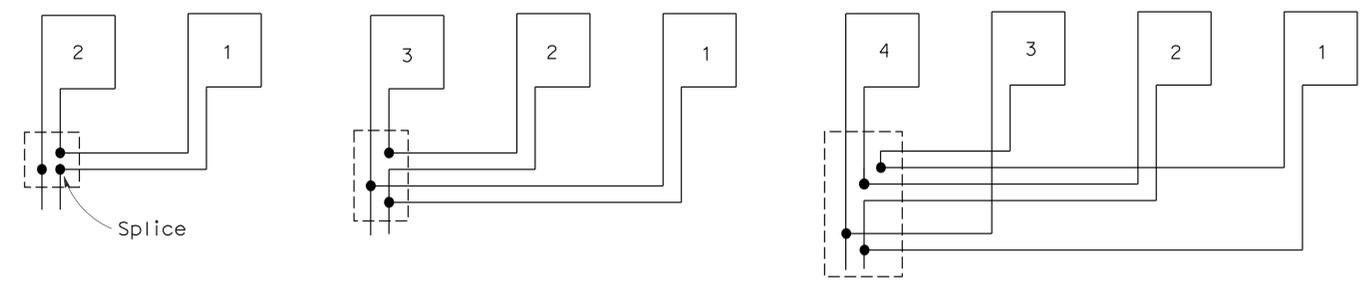
(Type A loop detector configurations illustrated)

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



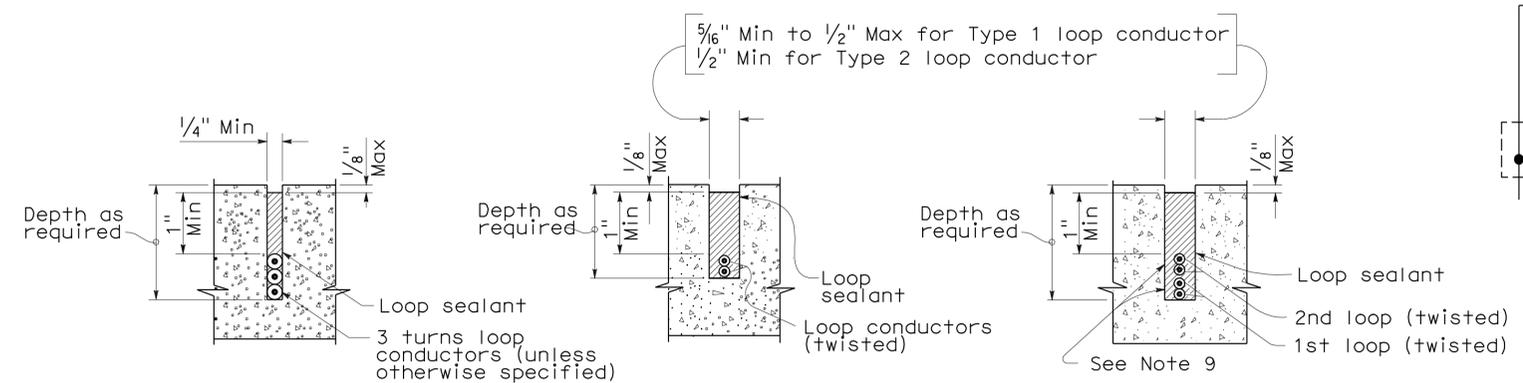
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A
 SECTION B-B
 SECTION C-C
 SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

ELECTRICAL SYSTEMS (DETECTORS)

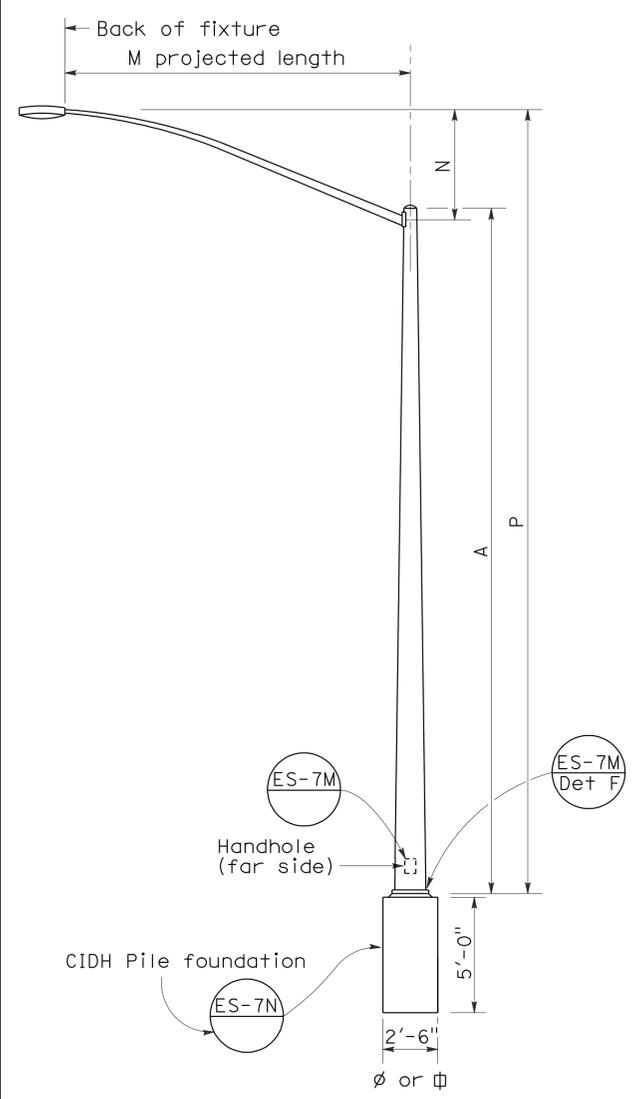
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

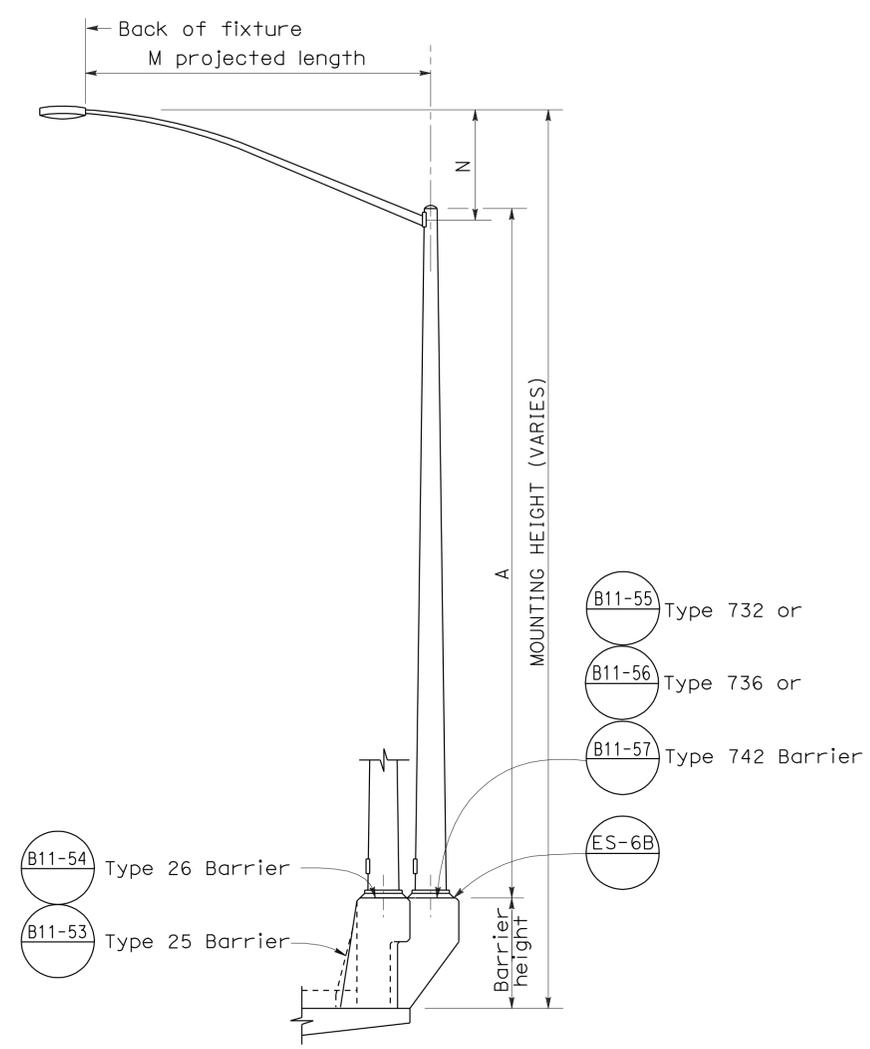
RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-5A

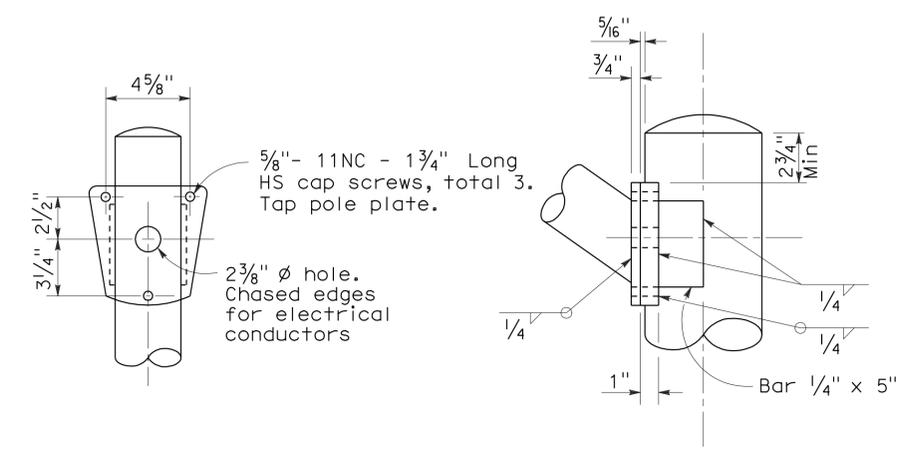
To accompany plans dated 7-13-09



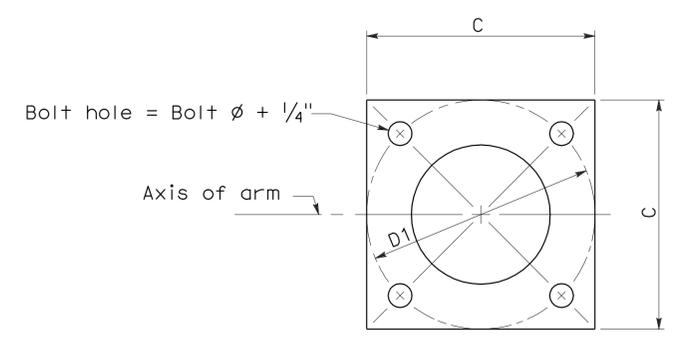
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD		Wall Thickness	C	D1 Bolt Circle	Thick-ness	Anchor Bolts Size	
15	30'	8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1" ϕ x 3'-0" x 4"*	6' - 15' 12'
21	35'	8 5/8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1 1/4" ϕ x 3'-0" x 4"*	6' - 15' 12'

* For barrier rail bolts, see Standard Plan ES-6B.

M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	LUMINAIRE ARM DATA	
				Type 15	Type 21
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

NOTES:

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
- For additional notes, see Standard Plan ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)

NO SCALE

RSP ES-6A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-6A DATED MAY 1, 2006 - PAGE 427 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-6A

2006 REVISED STANDARD PLAN RSP ES-6A