

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-4	CONSTRUCTION DETAILS
5	CONSTRUCTION AREA SIGNS
6-7	SUMMARY OF QUANTITIES
8-9	ELECTRICAL PLANS
10-17	REVISED STANDARD PLANS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SANTA BARBARA COUNTY
IN AND NEAR BUELLTON
FROM JUNCTION ROUTE 101/246 SEPARATION
TO BUELLFLAT ROCK ROAD

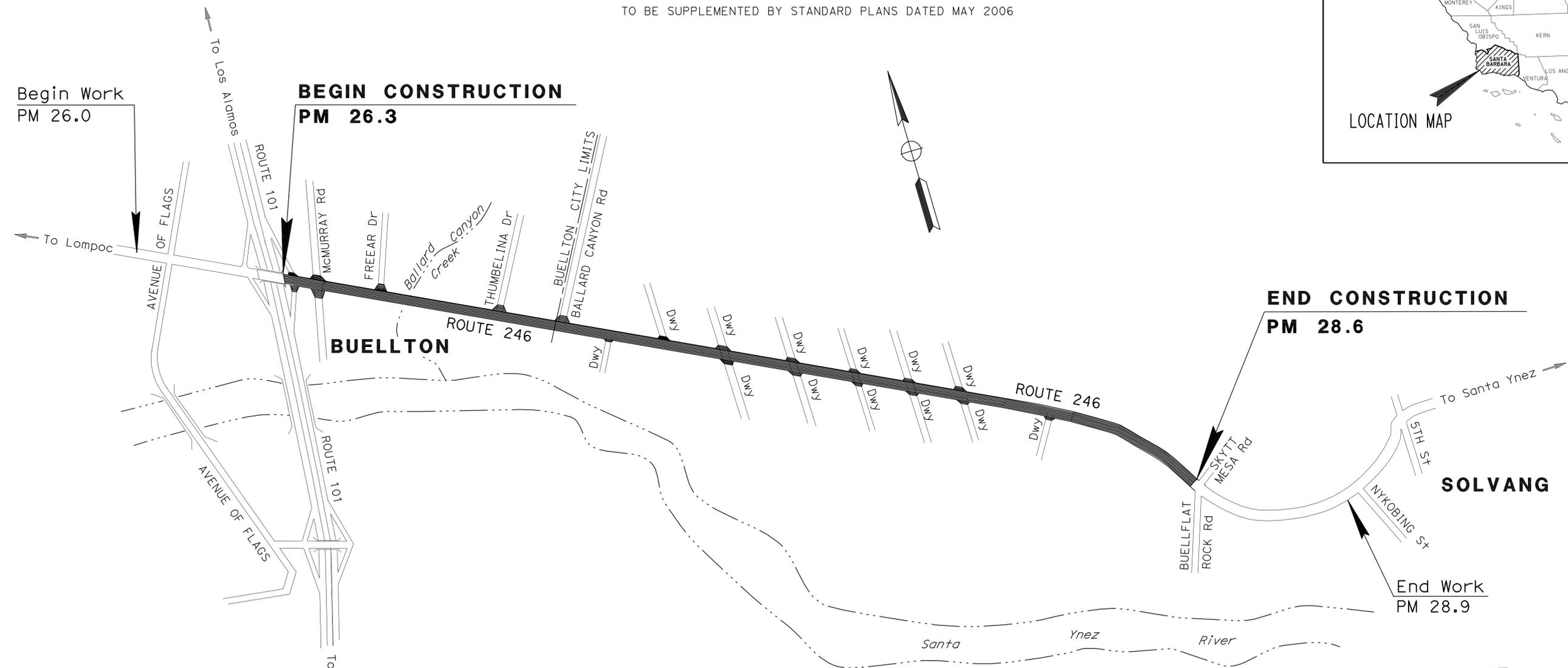
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	1	17





LOCATION MAP



PROJECT MANAGER KELLY J. McCLAIN	DESIGN ENGINEER KELLY J. McCLAIN
--	--

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

NO SCALE

Charles S. Trenbeth 12-27-10
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER

February 7, 2011
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 C.S.
TRENBETH
 No. C68937
 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.

CONTRACT No.	05-0T3504
PROJECT ID	0500000841

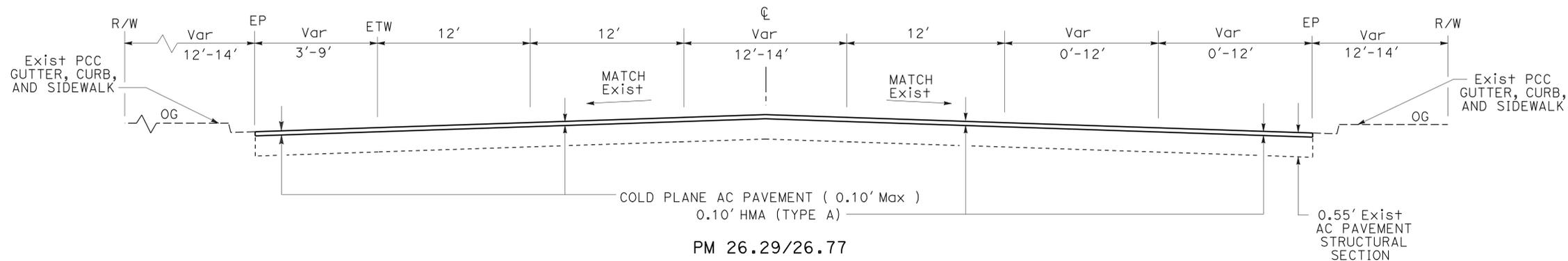
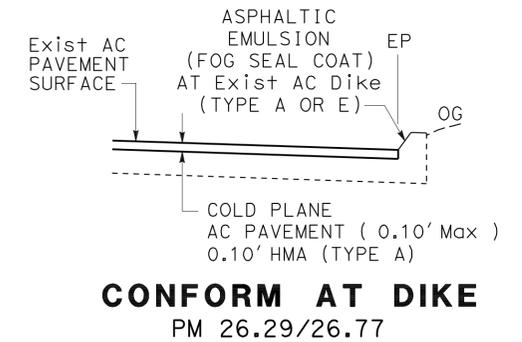
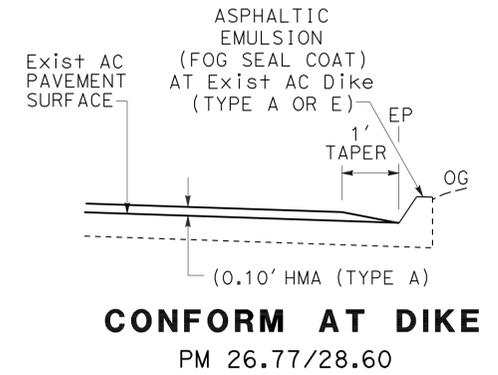
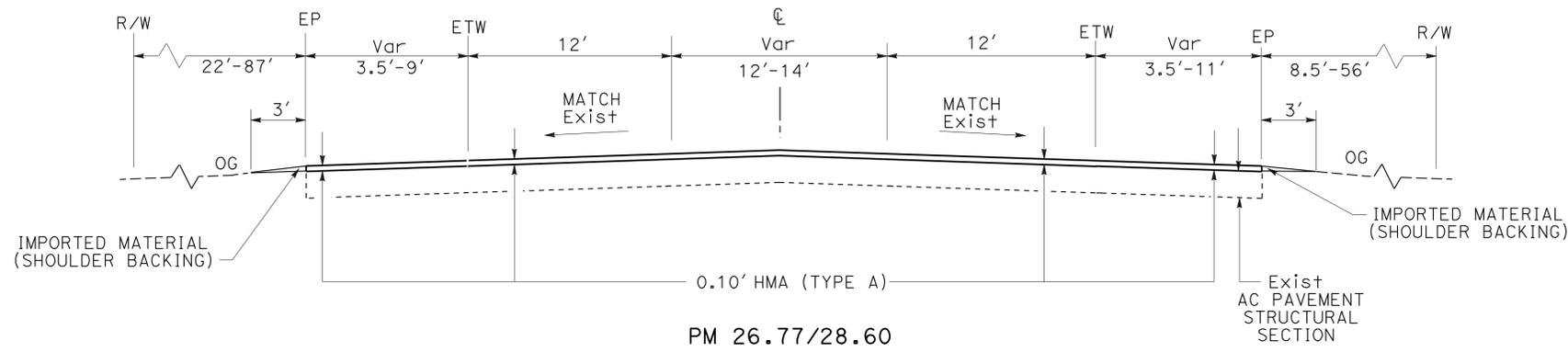
DATE PLOTTED => 06-FEB-2011 TIME PLOTTED => 09:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	2	17
<i>Charles S. Trenbeth</i> 12-27-10 REGISTERED CIVIL ENGINEER DATE			C.S. TRENBETH No. C. 68937 Exp. 12-31-11 CIVIL		
2-7-11			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>					

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.
- HMA (TYPE A) SHALL NOT BE PLACED ON PCC STRUCTURES, GUTTERS, CURBS OR UTILITY COVERS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN
 CALCULATED/DESIGNED BY: CHECKED BY:
 CHARLES S. TRENBETH
 KELLY J. McCLAIN
 REVISED BY: DATE REVISED:



ROUTE 246

TYPICAL CROSS SECTIONS
NO SCALE

X-1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	3	17

REGISTERED CIVIL ENGINEER	DATE	12-27-10
C.S. TRENBETH		
No. C. 68937		
Exp. 12-31-11		
CIVIL		

PLANS APPROVAL DATE 2-7-11

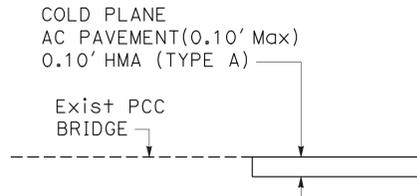
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

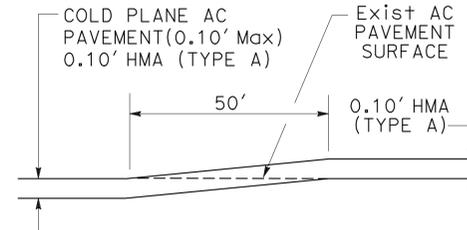
1. HMA-A SHALL NOT BE PLACED ON PCC STRUCTURES, PCC DRAINAGE INLET APRONS OR UTILITY COVERS.

ABBREVIATION:

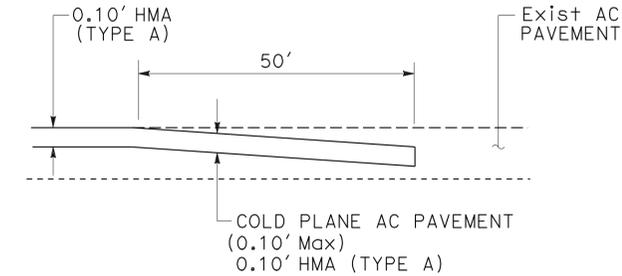
CTR = CENTERLINE



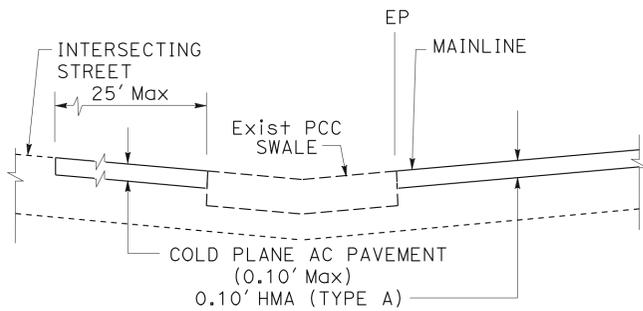
BEGINNING CONFORM
PM 26.29



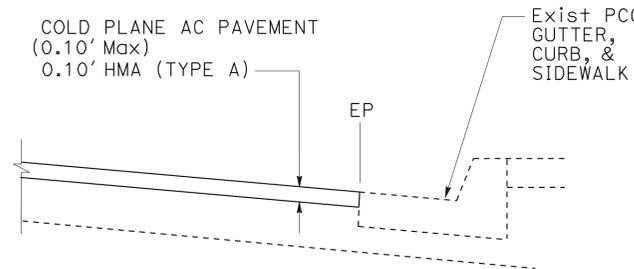
CONFORM AT PM 26.77



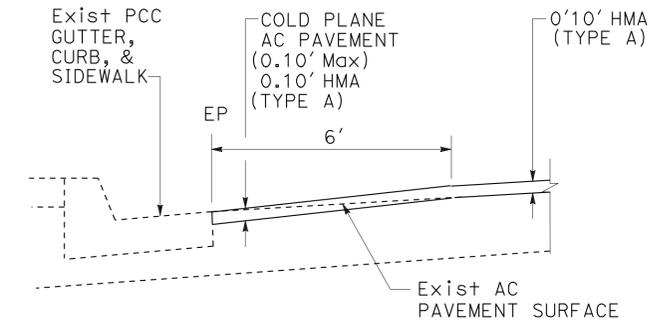
END CONFORM
PM 28.60



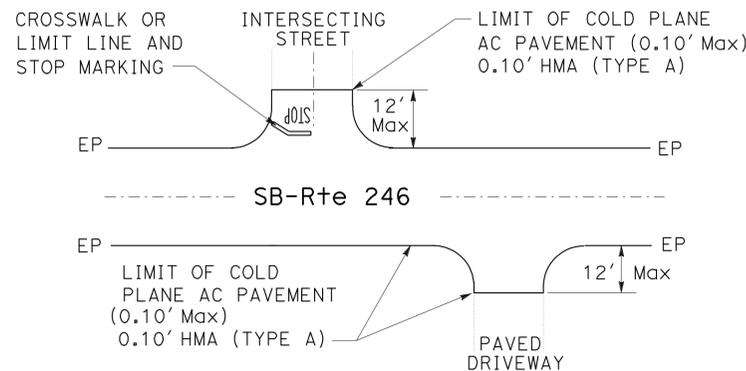
CONFORM AT PCC SWALE
PM 26.52/26.50 WB PM 26.36/26.34 WB



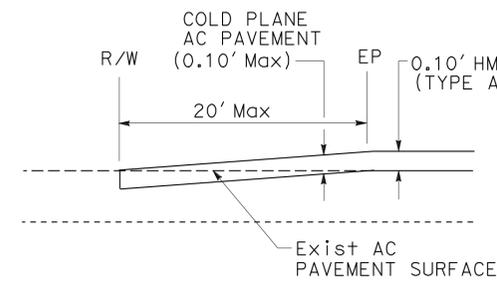
CONFORM AT PCC CURB AND GUTTER
PM 26.29/26.62 EB PM 26.77/26.29 WB



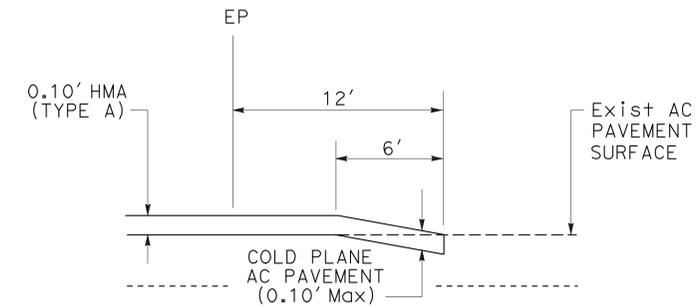
CONFORM AT PCC CURB AND GUTTER
PM 26.84/26.97 WB



TYPICAL INTERSECTION AT LOCAL ROAD AND DRIVEWAY
PM 26.29 TO PM 26.77



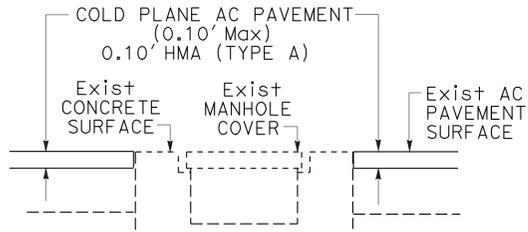
INTERSECTION AT LOCAL STREET
PM 26.86 WB, AND PM 26.97 WB



TYPICAL INTERSECTION AT PAVED DRIVEWAY
PM 26.77 TO PM 28.60

CONSTRUCTION DETAILS
NO SCALE
C-1

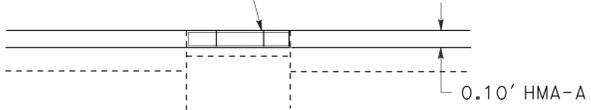
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	4	17
<i>Charles S. Trenbeth</i> 12-27-10 REGISTERED CIVIL ENGINEER DATE			C.S. TRENBETH No. C. 68937 Exp. 12-31-11 CIVIL		
2-7-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



- 12 WATER MANHOLES
- 4 SEWER MANHOLES
- 4 SURVEY MONUMENTS
- 1 SEWER CLEAN-OUT
- 4 SIGNAL DETECTOR HANDHOLES
- 3 PG&E ELECTRIC VAULTS
- 2 GAS MANHOLES

CONFORM AT UTILITIES
PM 26.29 TO 26.77

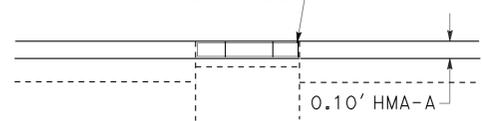
- ADJUST 5 ELECTRIC VAULTS TO GRADE
PM 27.06 EB PM 28.03 EB
PM 27.39 EB PM 28.33 EB
PM 27.67 EB
- ADJUST 3 TELEPHONE MANHOLES/VAULT TO GRADE
PM 26.87 WB
PM 26.93 WB
PM 28.12 EB
- ADJUST 2 SANITARY SEWER MANHOLES TO GRADE
PM 26.84 WB
PM 26.93 WB
- ADJUST 1 WATER MANHOLE TO GRADE
PM 26.84 WB



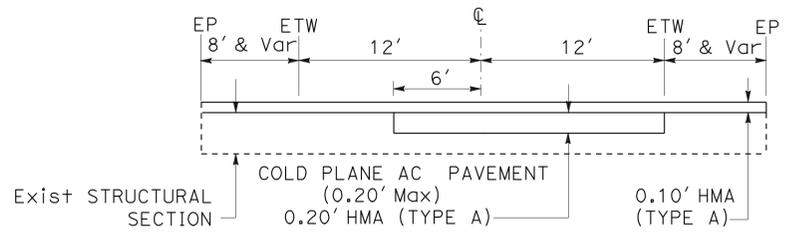
ADJUST FRAME AND COVER TO GRADE
PM 26.77 TO PM 28.60

- SURVEY MONUMENTS (TYPE D, WELL)
- PM 26.84 CTR PM 27.79 EB
 - PM 26.86 CTR PM 27.91 CTR
 - PM 26.96 CTR PM 28.09 CTR
 - PM 27.15 CTR PM 28.29 CTR
 - PM 27.31 CTR PM 28.44 CTR
 - PM 27.53 CTR PM 28.51 WB
 - PM 27.72 CTR

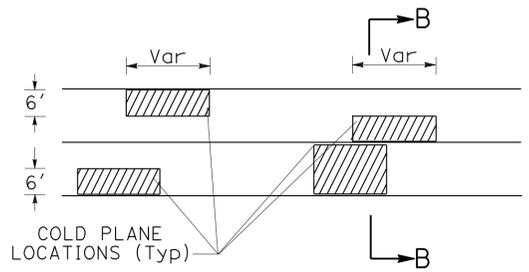
NOTE: SUBSURFACE SURVEY MONUMENTS ARE NOT TO BE DISTURBED IN CONJUNCTION WITH PROVIDING TYPE D WELL MONUMENTS AT NEW GRADE



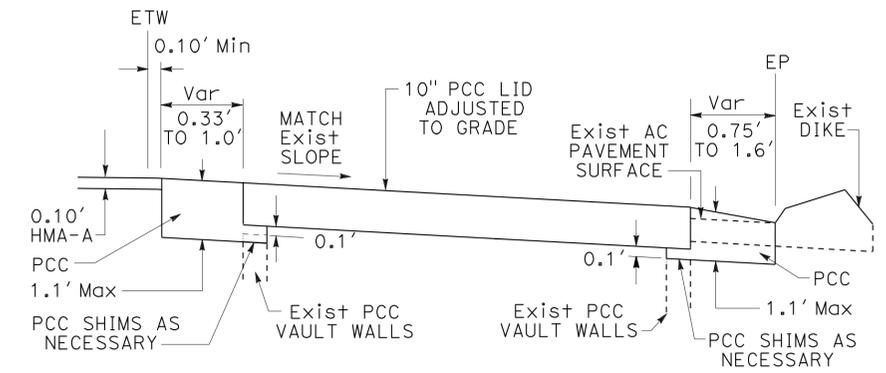
SURVEY MONUMENT
PM 26.77 TO PM 28.60



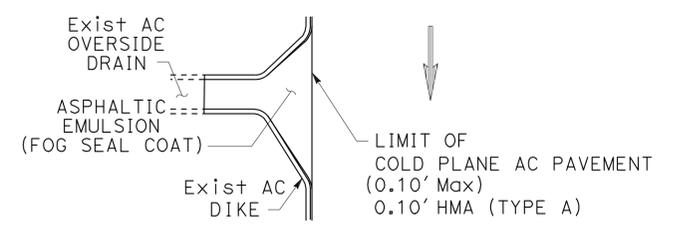
SECTION B-B



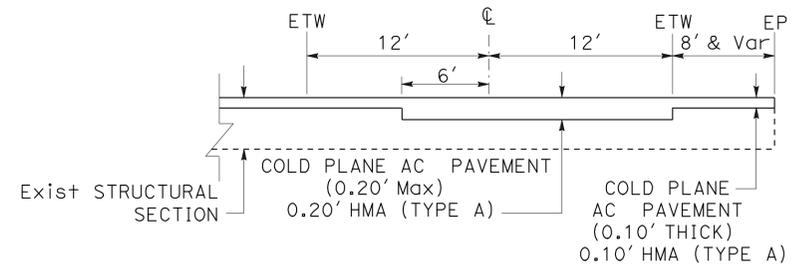
DETAIL AT REPAIR EXISTING ROADBED
PM 26.77/28.60



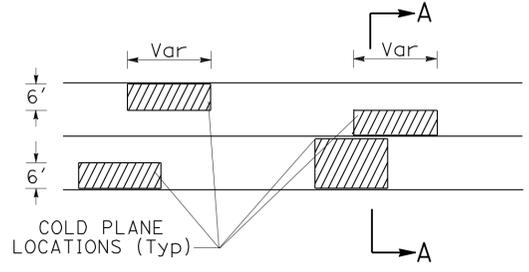
TRANSVERSE SECTION (LONGITUDINAL SECTION SIMILAR)
ADJUST FRAME AND COVER TO GRADE (ELECTRIC VAULT)
PM 27.06 TO PM 28.33



OVERSIDE DRAIN
VARIOUS LOCATIONS



SECTION A-A



DETAIL AT REPAIR EXISTING ROADBED
PM 26.29/26.77

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN
 CALCULATED/DESIGNED BY: KELLY J. McCLAIN
 CHECKED BY:
 REVISOR: CHARLES S. TRENBETH
 DATE: 12-27-10
 REVISOR: KELLY J. McCLAIN
 DATE: 2-7-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	5	17

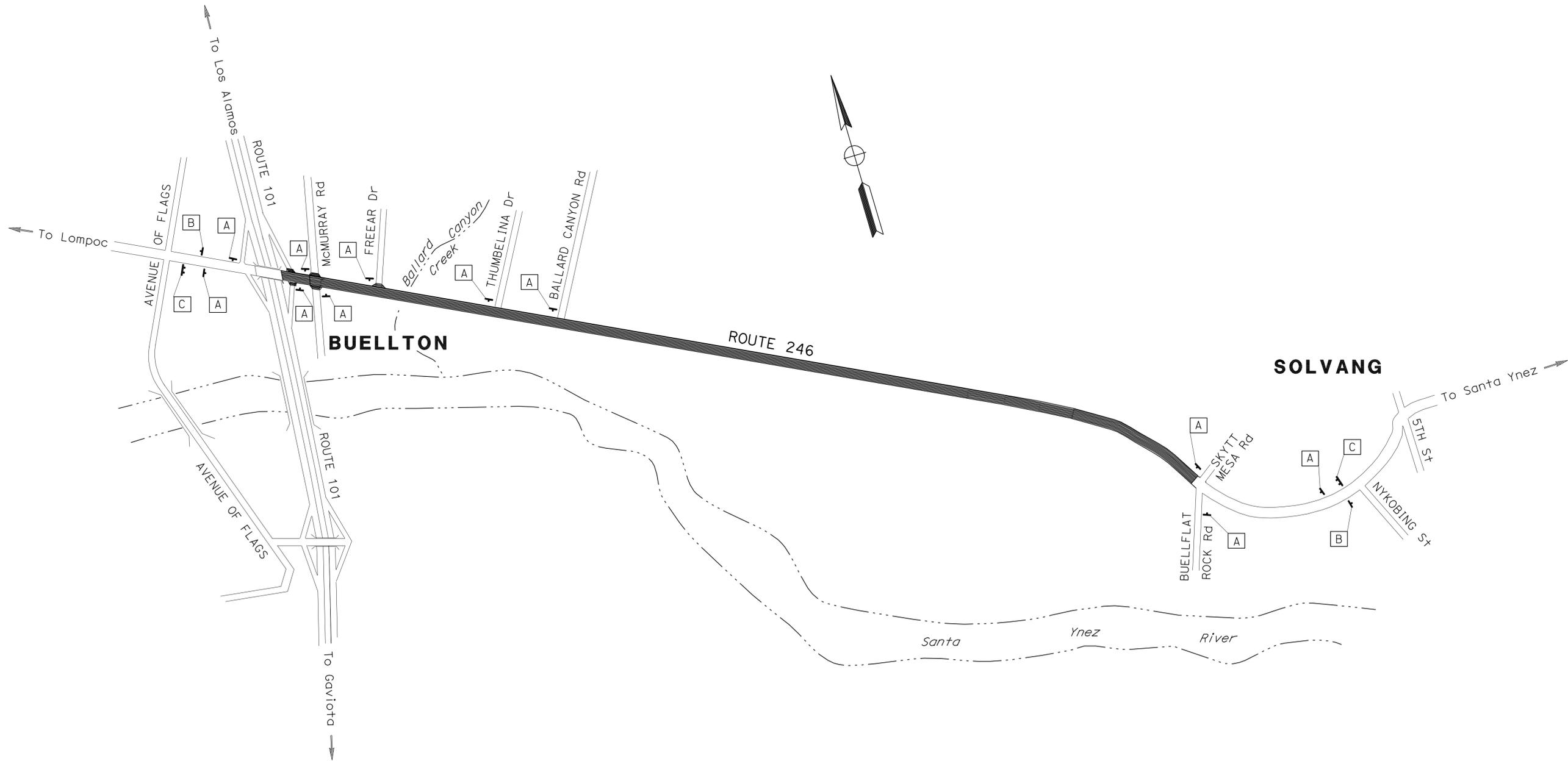
Charles S. Trenbeth 12-27-10
 REGISTERED CIVIL ENGINEER DATE
 2-7-11
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	11
B	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 4"	2
C	(SPECIAL)	84" x 42"	ROAD CONSTRUCTION EXPECT DELAYS (6" CAPITAL LETTERS)	2 - 4" x 6"	2

NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR
 KELLY J. McCLAIN

CALCULATED/DESIGNED BY
 CHECKED BY

CHARLES S. TRENBETH
 KELLY J. McCLAIN

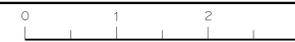
REVISED BY
 DATE REVISED

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS ONLY.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	6	17

Charles S. Trenbeth 12-27-10
 REGISTERED CIVIL ENGINEER DATE

2-7-11
 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.

REPAIR EXISTING ROADBED SUMMARY TABLE

EASTBOUND POST MILE LOCATIONS	COLD PLANE AC PAVEMENT					HMA (TYPE A)	WESTBOUND POST MILE LOCATIONS	COLD PLANE AC PAVEMENT					HMA (TYPE A)
	MAINLINE				INTERSECTION			MAINLINE				INTERSECTION	
	LANE No. 2		LANE No. 1					LANE No. 2		LANE No. 1			
	6' WIDE	12' WIDE	6' WIDE	12' WIDE				6' WIDE	12' WIDE	6' WIDE	12' WIDE		
SQYD					TONS	SQYD					TONS		
26.36/26.38					528	70.8	28.60/28.54					448.8	60
26.38/26.40				97		13.2	28.53/28.52				48		6.6
26.38/26.43		424.8				57.6	28.52/28.51				48		6.6
26.44/26.46		96				13.2	28.49/28.48				48		6.6
26.48/26.49				64.8		9.6	28.41/28.40				48		6.6
26.51/26.53		80.4				10.8	28.35/28.34				48		6.6
26.53/26.54					72	9.6	27.17/27.16					96	13.2
26.54/26.56		114	32.4			20.4	27.14/27.13				48		6.6
26.56/26.57			60		115.2	24	26.77/26.76				24		3.3
26.62/26.63	31.2		48			11.4	26.72/26.70					161	21.6
26.72/26.73				48		6.6	26.66/26.63	112.8					15.2
26.75/26.76				48		6.6	26.63/26.62					32.4	4.5
26.91/26.92			48			6.6	26.59/26.57					161	21.6
26.97/26.99				240		32.4	26.54/26.53					192	26.4
27.03/27.05			80.4			10.8	26.46/26.44		80.4	80.4			21.6
27.15/27.17				104.4		14.4	26.44/26.41					240	32.4
27.18/27.19			48			6.6	26.40/26.39	24		24			6.5
27.22/27.24			80.4			10.8	26.39/26.38			24			3.3
27.28/27.29				96		13.2	26.38/26.36					300	40.8
27.32/27.33			32.4			4.8							
27.44/27.45			32.4			4.8							
27.53/27.54			32.4			4.8							
27.68/27.69			32.4			4.8							
28.23/28.24			32.4			4.8							
28.37/28.38			40.8			6							
28.43/28.44			40.8			6							
28.48/28.49			40.8			6							
28.53/28.54			40.8			6							
28.58/28.60				128.4		18							
SUB-TOTAL	3010.6					414.6	SUB-TOTAL	2288.8					310
SUB-TOTAL COLD PLANE (SQYD)						5299.4 *							
SUB-TOTAL HMA (TYPE A) (TONS)						724.6 *							

* QUANTITIES INCLUDED IN ROADWAY QUANTITY TABLE.
 EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN
 CALCULATED/DESIGNED BY: CHARLES S. TRENBETH
 CHECKED BY: KELLY J. McCLAIN
 REVISED BY: CHARLES S. TRENBETH
 DATE REVISED:



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	7	17

Charles S. Trenbeth 12-27-10
 REGISTERED CIVIL ENGINEER DATE

2-7-11
 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.

THERMOPLASTIC PAVEMENT MARKING

LOCATION	PAVEMENT MARKING	REMOVE THERMOPLASTIC PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKING
		SQFT	SQFT
PM 26.3 TO 28.6	CROSSWALK		1173
	LIMIT LINE		307
	STOP		88
	SIGNAL		128
	AHEAD		124
	ARROW TYPE III(L)	84	84
	ARROW TYPE IV(R)		60
	ARROW TYPE IV(L)	1080	1440
	ARROW TYPE VI		84
	ARROW TYPE VII(R)		54
	ARROW TYPE VII(L)		27
	TOTAL		1164

IMPORTED MATERIAL (SHOULDER BACKING)

EASTBOUND LOCATION	IMPORTED MATERIAL (SHOULDER BACKING)	WESTBOUND LOCATION	IMPORTED MATERIAL (SHOULDER BACKING)
	TON		TON
EB-PM 26.81 TO 26.84	3	WB-PM 28.59 TO 27.99	60
		WB-PM 27.30 TO 27.16	14
		WB-PM 27.09 TO 26.96	13
SUB-TOTAL	3		87
TOTAL		90	

NOTE:
EXACT LOCATION TO BE DETERMINED BY ENGINEER.

PAVEMENT STRUCTURE

LOCATION	COLD PLANE AC PAVEMENT	TACK COAT	HOT MIX ASPHALT (TYPE A)	ASPHALTIC EMULSION (FOG SEAL COAT)	ADJUST FRAME AND COVER TO GRADE	SURVEY MONUMENT
	SQYD	TON	TON	TON	EA	EA
PM 26.3 TO 28.6	25,711.4	20.9	6548.6	1.4	11	13

PAVEMENT DELINEATION

LOCATION	DETAIL No.	PAVEMENT MARKER (NON-REFLECTIVE)	PAVEMENT MARKER (RETROREFLECTIVE)		REMOVE PAINTED TRAFFIC STRIPE	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC TRAFFIC STRIPE	4"	4"	8"
		TYPE A	TYPE D	TYPE G				4"	4"	8"
								EA	EA	EA
PM 26.3 TO 28.6	DETAIL 12								2536	
	DETAIL 13	216		56						
	DETAIL 22		114				2640			
	DETAIL 27B				19,420		24,288			
	DETAIL 29		26				1056			
	DETAIL 32		1100			24,275	21,016	21,016		
	DETAIL 38				56		480			1268
PAINTED BLACK CENTERLINE					19,420					
SUB-TOTAL			1240	112						
TOTAL		216	1352		38,840	24,275	480	49,000	23,552	1268

SUMMARY OF QUANTITIES

Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR: KELLY J. McCLAIN
 CALCULATED/DESIGNED BY: CHARLES S. TRENBETH
 CHECKED BY: KELLY J. McCLAIN
 REVISED BY: CHARLES S. TRENBETH
 DATE REVISED: 7/2/2010



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC OPERATIONS

FUNCTIONAL SUPERVISOR
 JULIE M. GONZALEZ

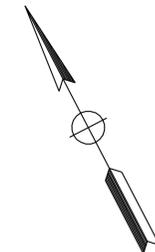
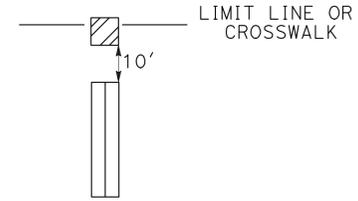
CALCULATED/DESIGNED BY
 CHECKED BY

KEN VOMASKE
 JULIE M. GONZALEZ

REVISED BY
 DATE REVISED

NOTES:

- FRONT END LOOPS SHALL EXTEND 2' PAST LIMIT LINE OR CROSSWALK.
- EXISTING SIGNAL AND LIGHTING SYSTEM NOT SHOWN.
- AB Exist LOOP DETECTORS TO BE REPLACED.
- USE EXISTING TERMINATION CONDUITS FOR NEW LOOP CONDUCTORS.
- TYPE D LOOPS SHALL HAVE 5 TURNS EACH.



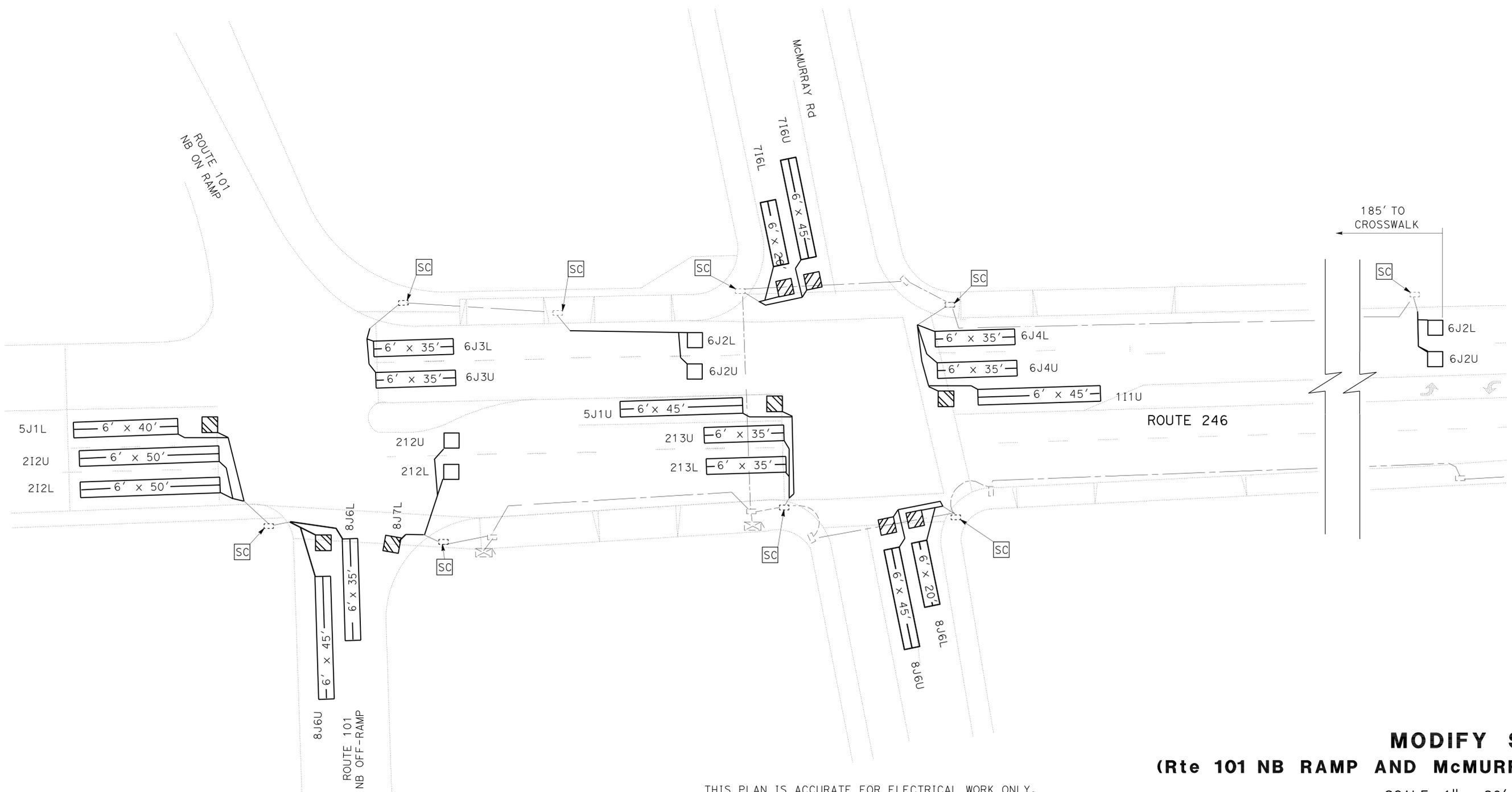
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	8	17

REGISTERED ELECTRICAL ENGINEER
 K.J. VOMASKE
 No. 15720
 Exp. 6-30-12
 STATE OF CALIFORNIA

12-27-10 DATE
 2-7-11 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.

Typ DETECTOR LOOP ARRAY DETAIL



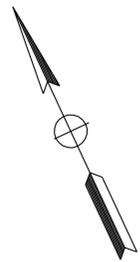
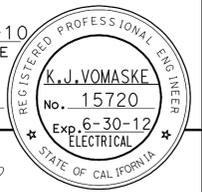
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

MODIFY SIGNAL
(Rte 101 NB RAMP AND McMURRAY Rd)
 SCALE: 1" = 20' **E-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB	246	26.3/28.6	9	17

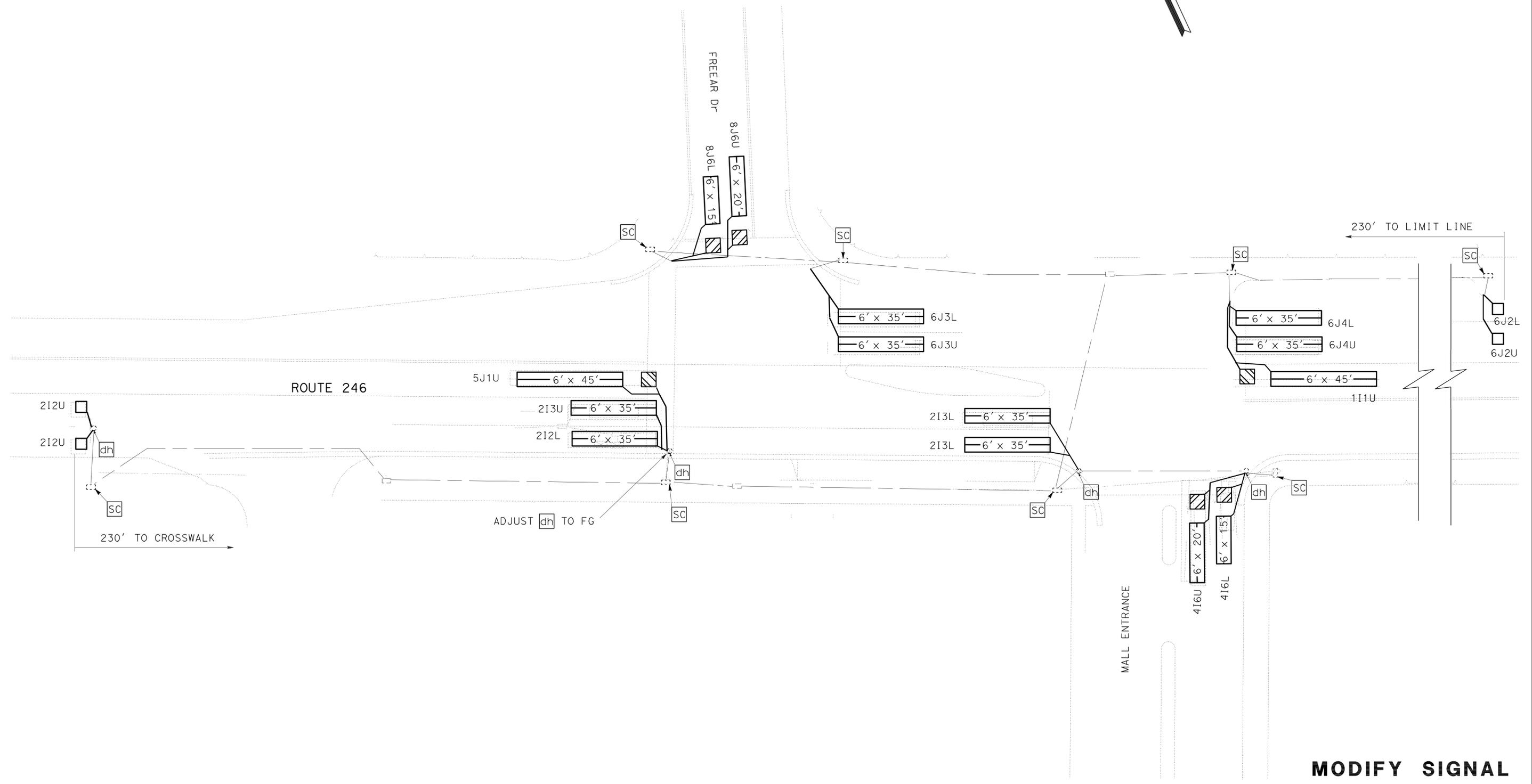
<i>Ken Vomaske</i>	12-27-10
REGISTERED ELECTRICAL ENGINEER	DATE
2-7-11	
PLANS APPROVAL DATE	

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.



- NOTES:**
- FOR PROJECT NOTES, REFER TO SHEET E-1.
 - REUSE EXISTING DETECTOR HANDHOLES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans TRAFFIC OPERATIONS	JULIE M. GONZALEZ	CHECKED BY	KEN VOMASKE
			JULIE M. GONZALEZ
			DATE REVISOR



THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**MODIFY SIGNAL
(FREEAR Dr)
SCALE: 1" = 20' E-2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	246	26.3/28.6	11	17

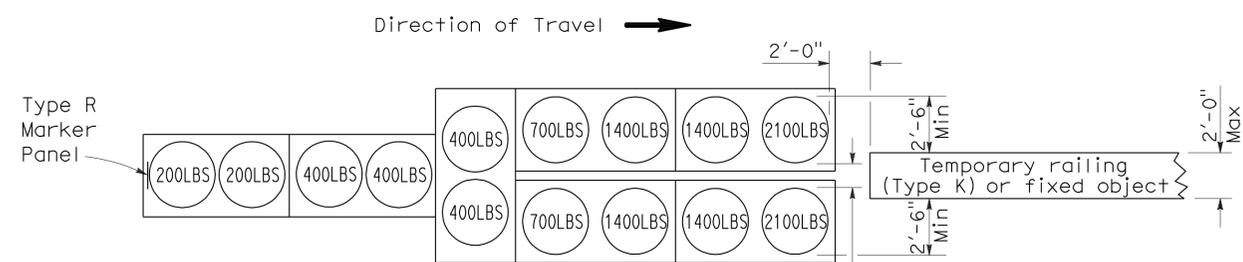
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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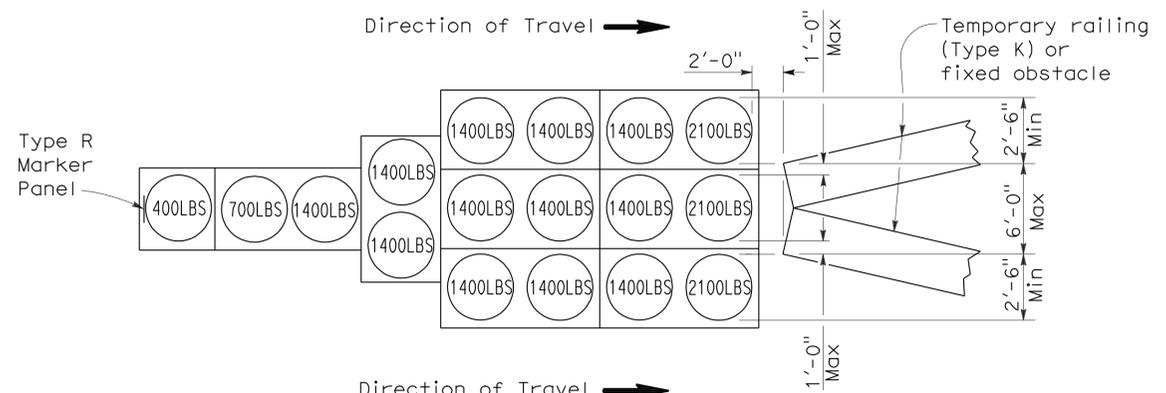
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 2-7-11



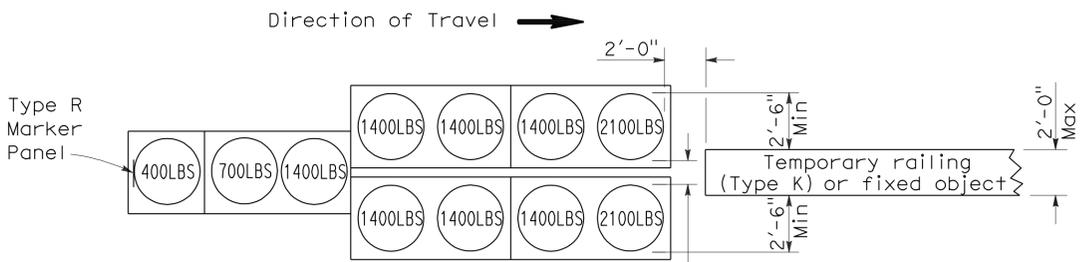
ARRAY 'TU14'

Approach speed 45 mph or more



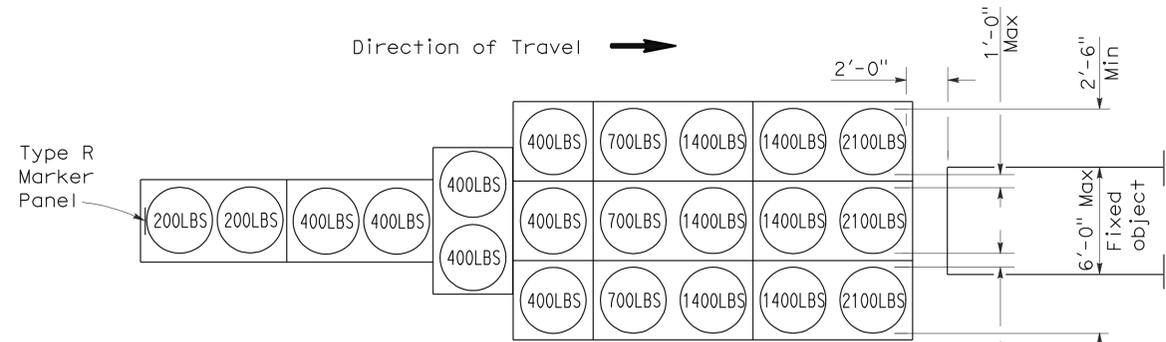
ARRAY 'TU17'

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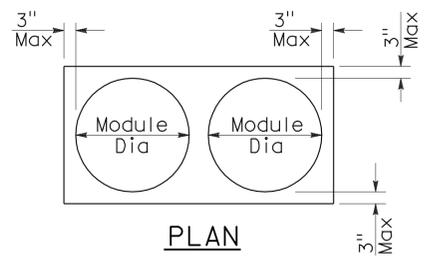
ARRAY 'TU11'

Approach speed less than 45 mph

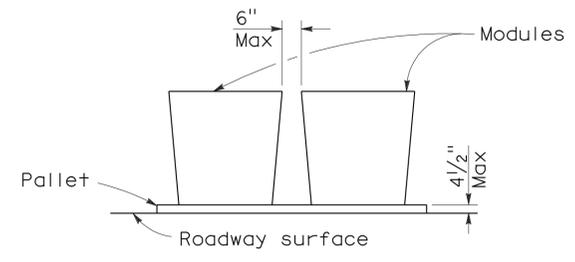


ARRAY 'TU21'

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

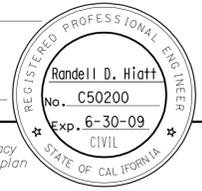
2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	246	26.3/28.6	12	17

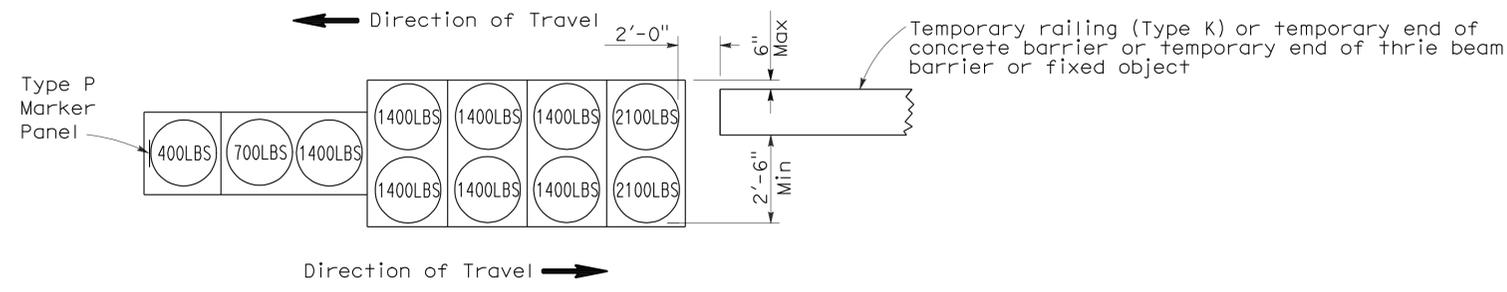
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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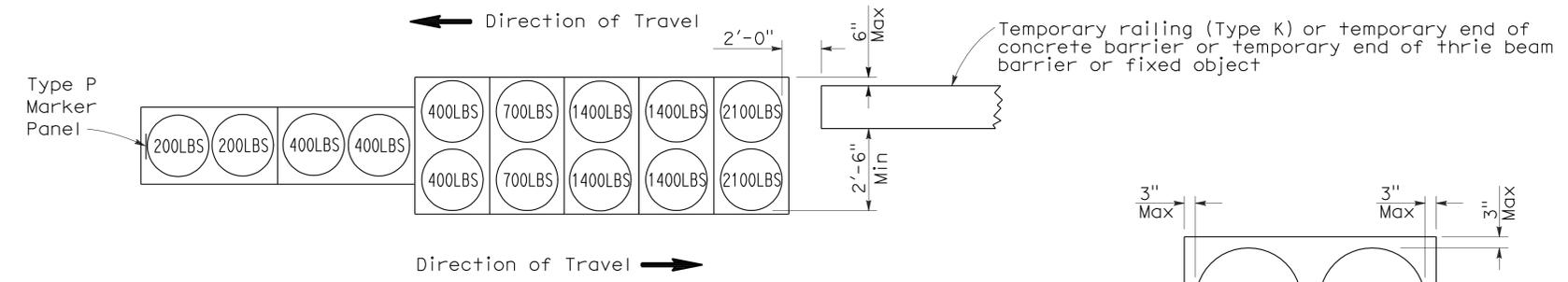


To accompany plans dated 2-7-11



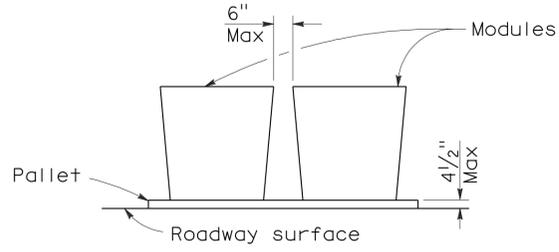
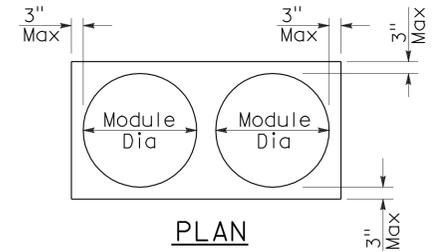
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



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
05	SB	246	26.3/28.6	13	17

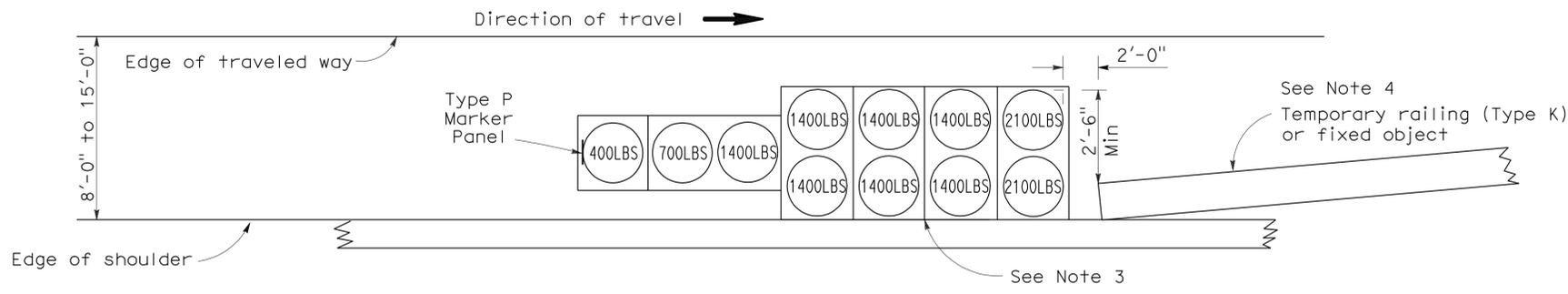
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

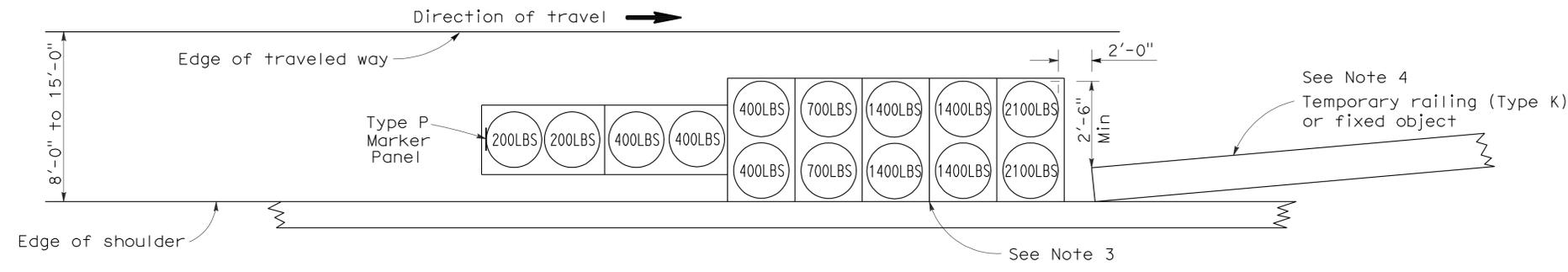
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 2-7-11



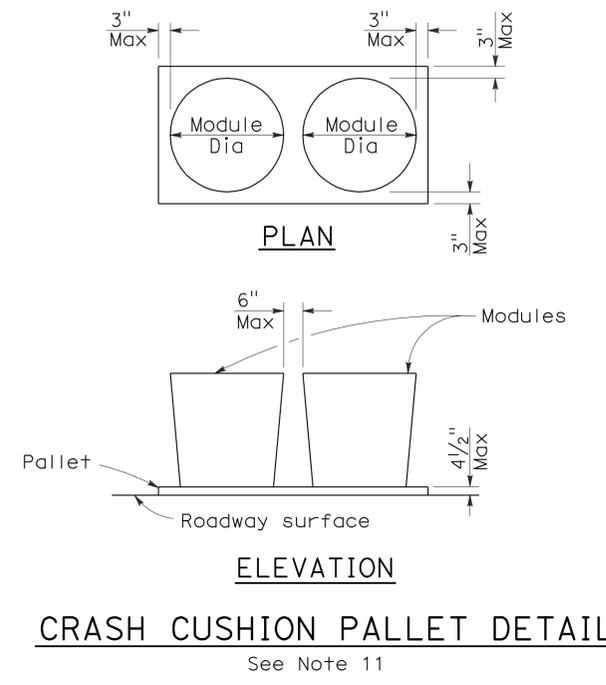
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

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
05	SB	246	26.3/28.6	14	17

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 2-7-11

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
05	SB	246	26.3/28.6	15	17

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

October 5, 2007
 PLANS APPROVAL DATE

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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

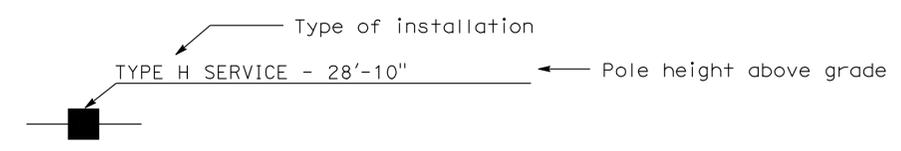
SIGNAL EQUIPMENT

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

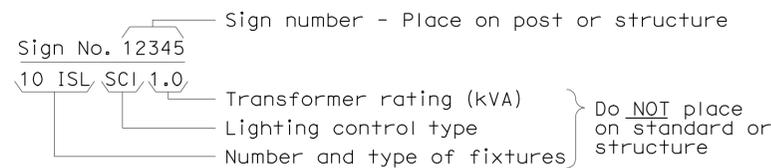
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

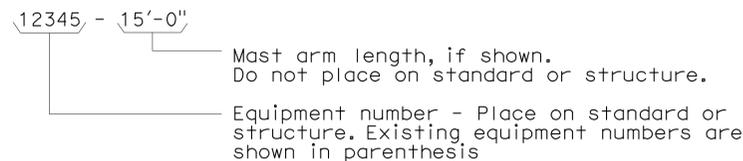
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

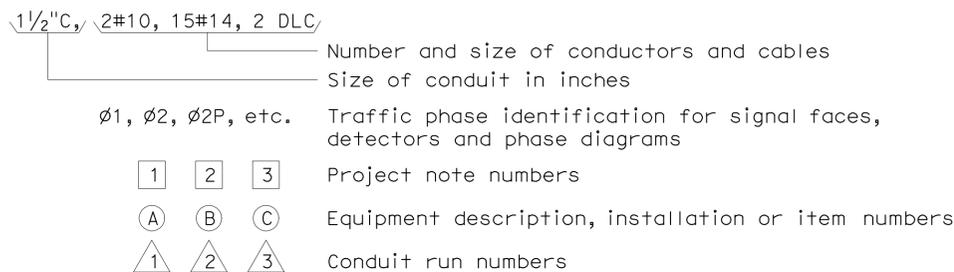
ILLUMINATED SIGN IDENTIFICATION NUMBER:



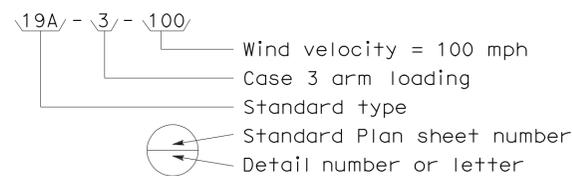
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



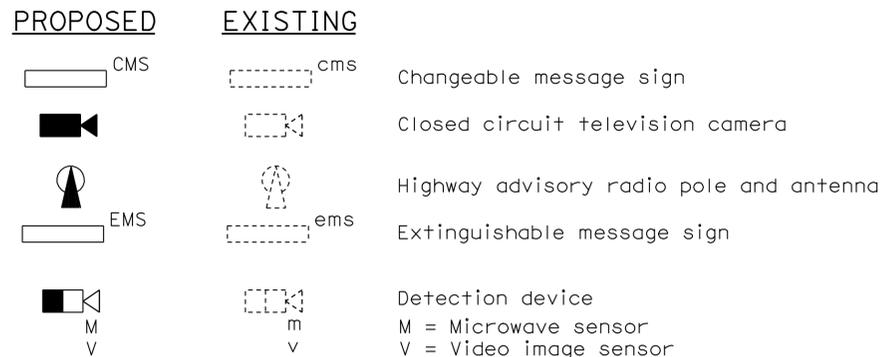
CONDUIT AND CONDUCTOR IDENTIFICATION:



SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



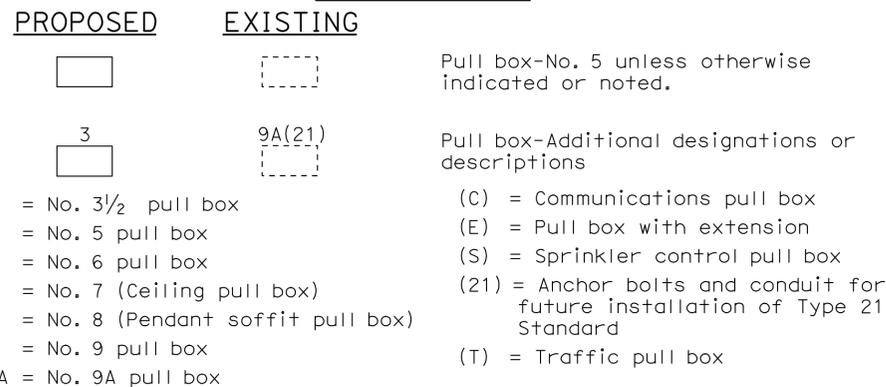
MISCELLANEOUS EQUIPMENT



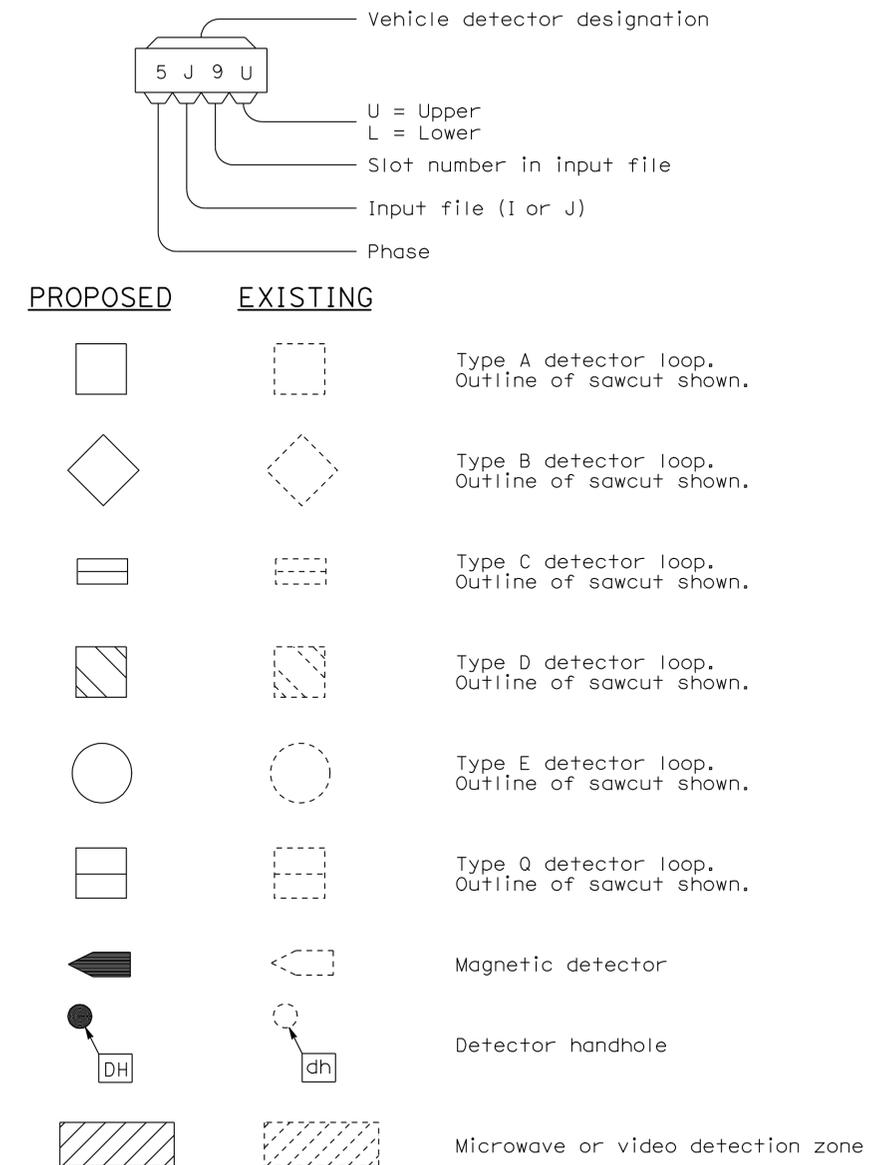
WIRING DIAGRAM LEGEND

- | | |
|---------------------------------|----------------------------|
| P Pole | ---- External conductor |
| CB Circuit breaker | — Conductor or bus |
| A Ampere | • Tie point |
| V Volt | ~ Contactor coil |
| M Metered | — — Contactor, Contact NO |
| UM Unmetered | ⊗ Terminal blocks |
| NB Neutral bus | — /— Contactor, Contact NC |
| GB Ground bus | ≡ Enclosure bond |
| G Equipment grounding conductor | ⋮ Grounding electrode |
| N Grounded conductor (Neutral) | ⊕ Circuit breaker |
| | Ⓜ Receptacle |

PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)

NO SCALE

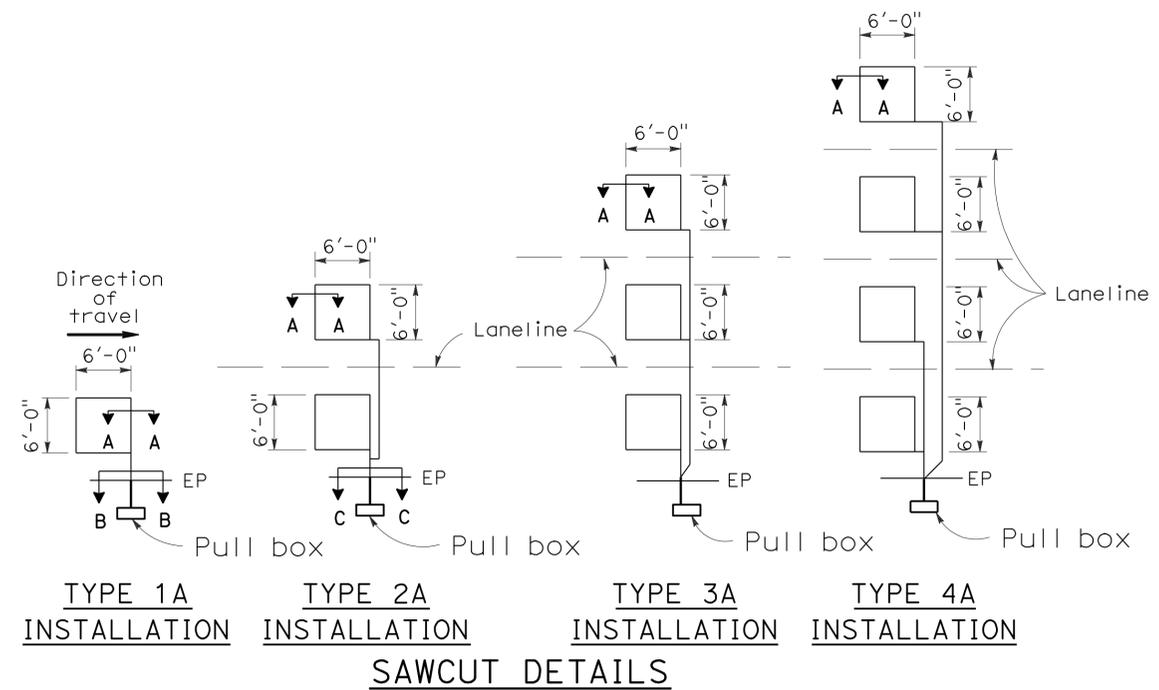
RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

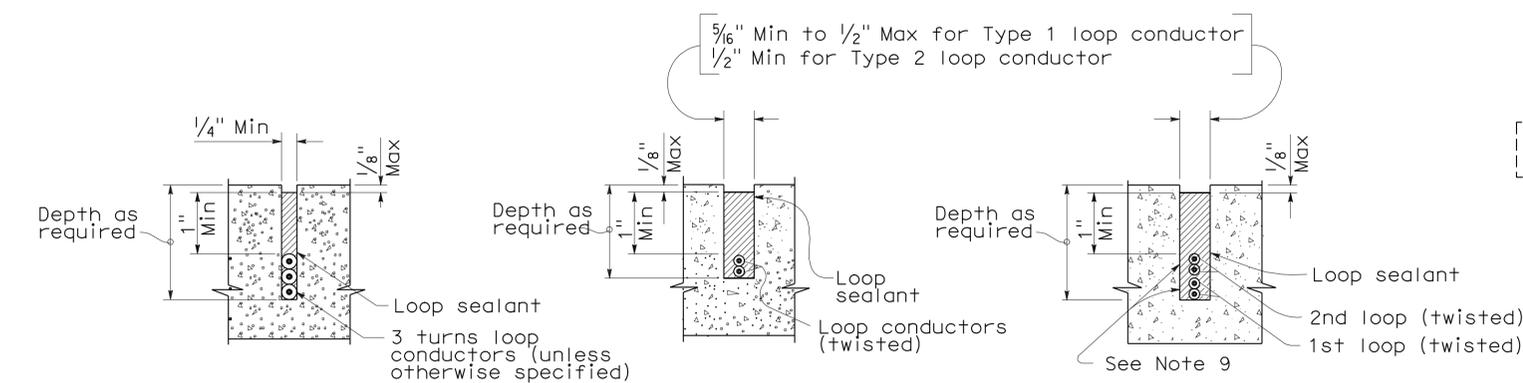
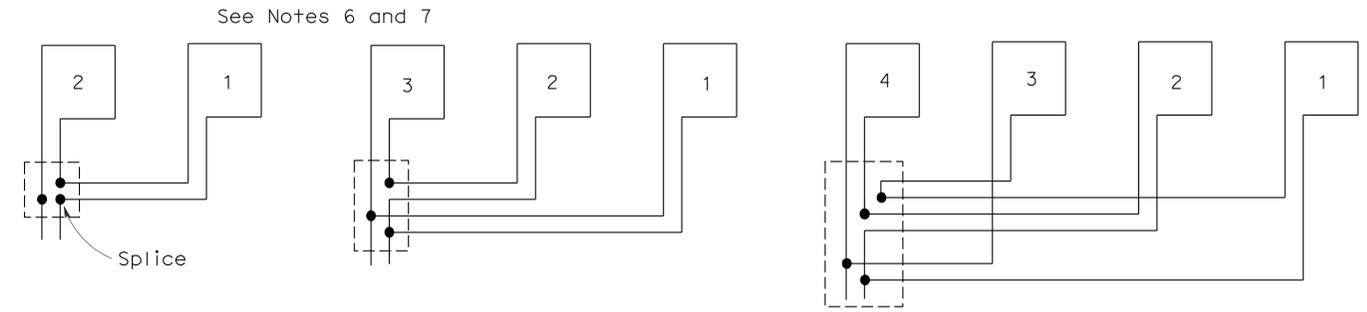
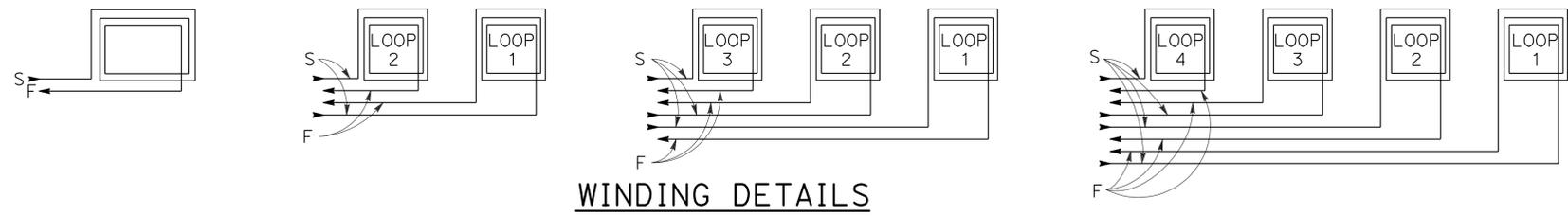
2006 REVISED STANDARD PLAN RSP ES-1C

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)



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

TYPICAL LOOP CONNECTIONS
(Dashed lines represent the pull box)

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.

REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	SB	246	26.3/28.6	17	17

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

October 5, 2007
PLANS APPROVAL DATE

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To accompany plans dated 2-7-11

2006 REVISED STANDARD PLAN RSP ES-5A