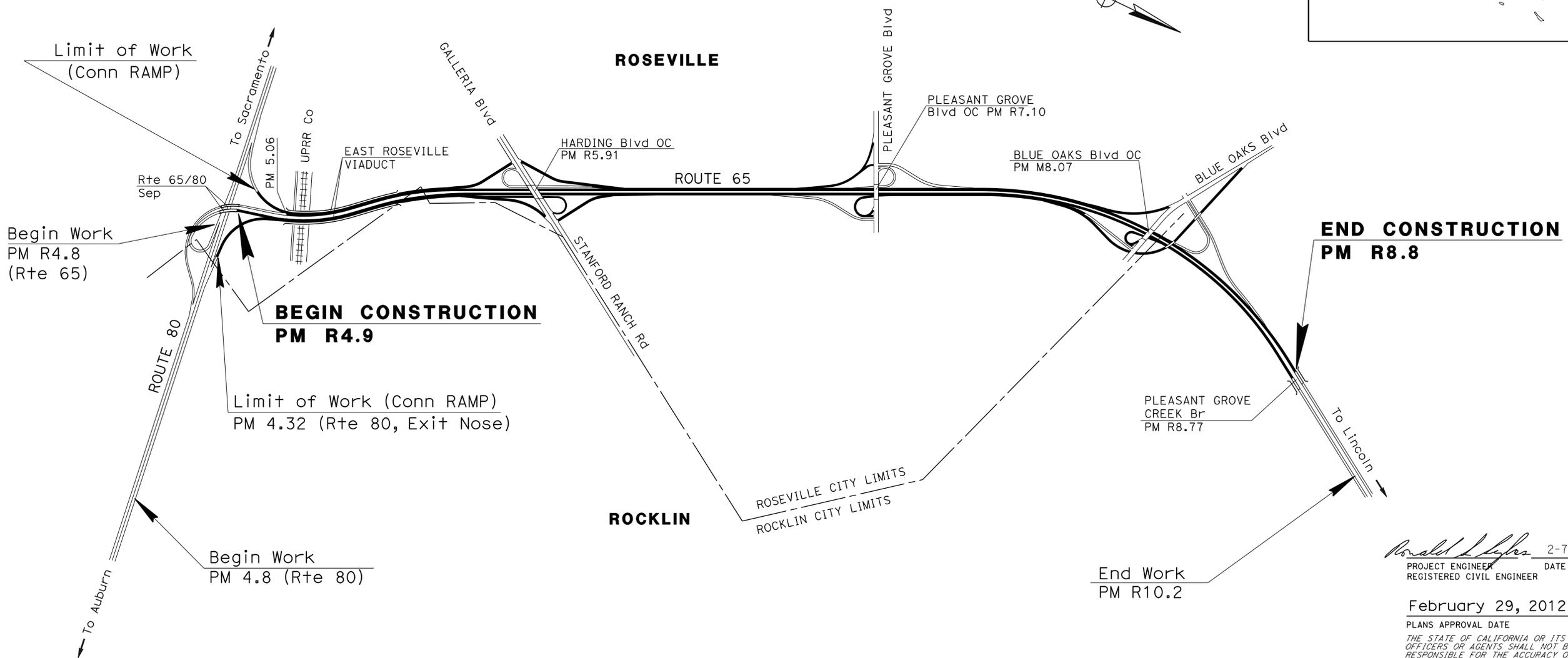


**STATE OF CALIFORNIA**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN PLACER COUNTY**  
**IN AND NEAR ROSEVILLE**  
**FROM ROUTE 65/80 SEPARATION**  
**TO PLEASANT GROVE CREEK BRIDGE**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

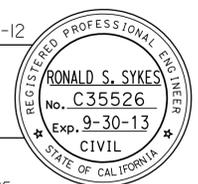
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Plc	65	R4.9/R8.8	1	16



PROJECT MANAGER  
RONALD S. SYKES

DESIGN ENGINEER  
RONALD S. SYKES

*Ronald S. Sykes* 2-7-12  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 February 29, 2012  
 PLANS APPROVAL DATE



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

CONTRACT No.	<b>03-4M3504</b>
PROJECT ID	<b>0300020525</b>

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

NO SCALE

DATE PLOTTED => 29-FEB-2012  
 TIME PLOTTED => 14:49  
 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R4.9/R8.8	2	16

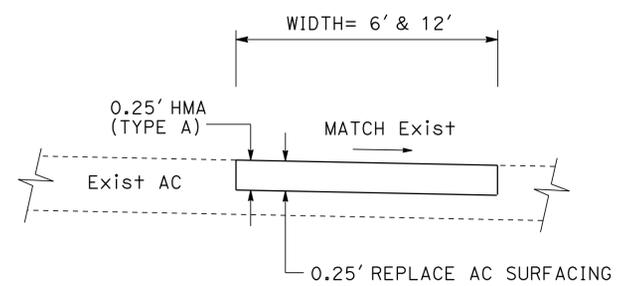
<i>Ronald S. Sykes</i>	2-7-12
REGISTERED CIVIL ENGINEER	DATE
2-29-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER  
**RONALD S. SYKES**  
 No. C35526  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA

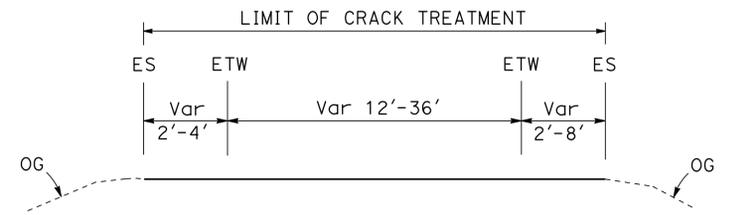
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES :**

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
4. SEE Sht E-1 FOR ELECTRICAL WORK. DO NOT DISTURBE OTHER WIRELESS VEHICLE DETECTION SYSTEMS IN THE NB DIRECTION AT PM R5.50, R7.50 & M8.50. DO NOT DISTURBE EXISTING LOOP LOCATIONS AT PM R5.96, R7.00 & R7.98 IN THE NB & SB DIRECTION AND AT PM M8.24 IN THE SB DIRECTION.
5. SEE Sht Q-1 FOR LOCATIONS OF REPLACE AC SURFACING. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

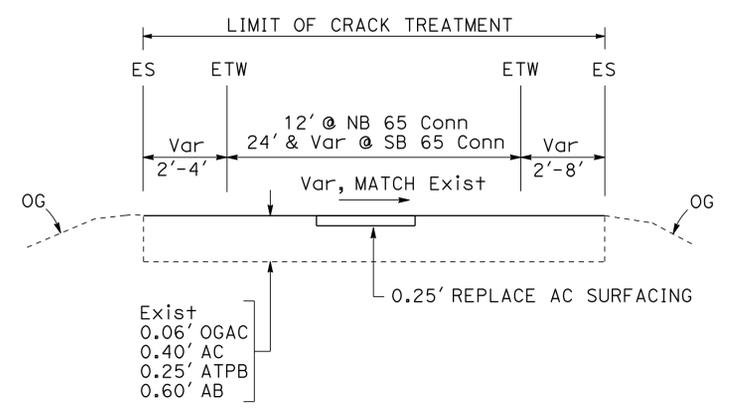


**REPLACE AC SURFACING**

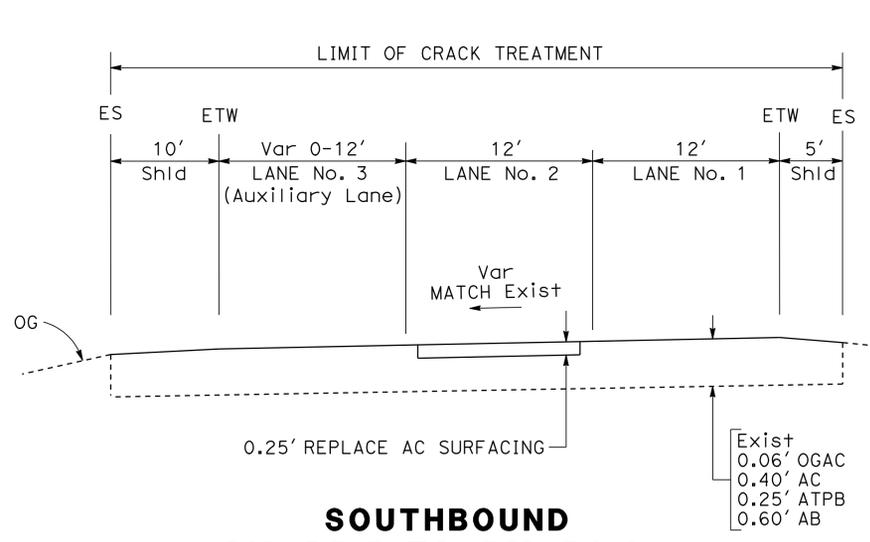


**RAMPS**

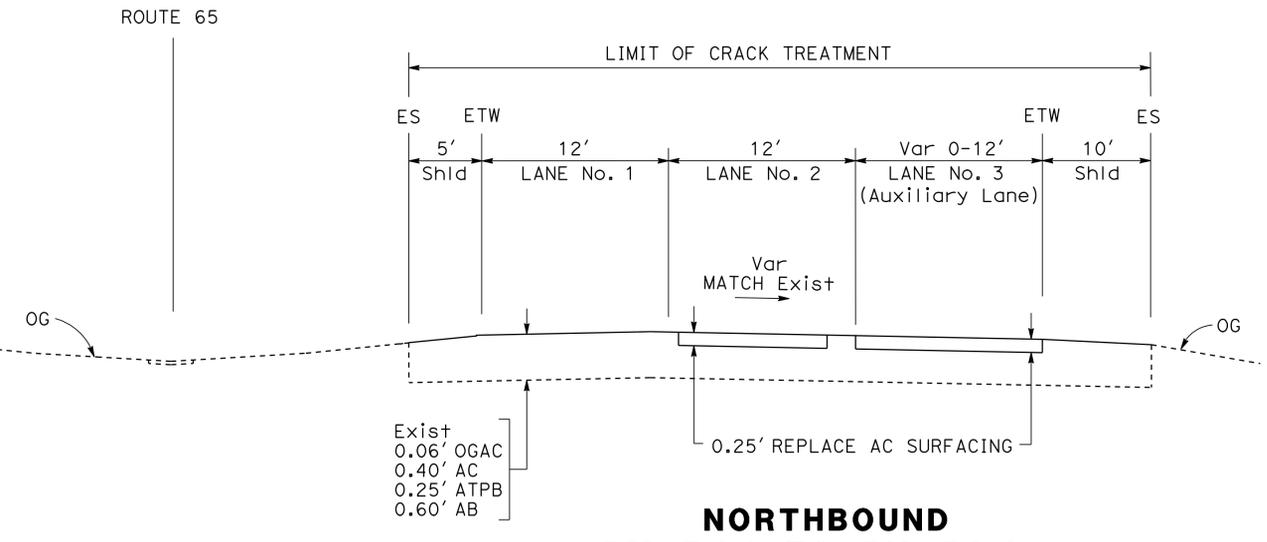
- |   |  |
|---|--|
| <p><b>NORTHBOUND 65</b></p> <ol style="list-style-type: none"> <li>1. OFFRAMP TO STANFORD RANCH Rd</li> <li>2. LOOP OFFRAMP TO GALLERIA Blvd</li> <li>3. ONRAMP FROM STANFORD RANCH Rd</li> <li>4. LOOP ONRAMP FROM EB PLEASANT GROVE Blvd</li> <li>5. OFFRAMP (FLYOVER) TO WB BLUE OAKS Blvd</li> <li>6. LOOP ONRAMP FROM EB BLUE OAKS Blvd</li> </ol> | <p><b>SOUTHBOUND 65</b></p> <ol style="list-style-type: none"> <li>1. ONRAMP FROM EB BLUE OAKS Blvd</li> <li>2. ONRAMP FROM EB PLEASANT GROVE Blvd</li> <li>3. OFFRAMP TO GALLERIA Blvd</li> <li>4. ONRAMP FROM GALLERIA Blvd</li> </ol> |
|---|--|



**WB 80/NB 65 Conn RAMP  
SB 65/WB 80 Conn RAMP**



**SOUTHBOUND  
PM R5.5 TO PM R8.8**



**NORTHBOUND  
PM R4.9 TO PM R8.8**

**TYPICAL CROSS SECTIONS  
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION MAINTENANCE  
 FUNCTIONAL SUPERVISOR: RONALD S. SYKES  
 SHAHRAM RAISI  
 REVISOR: REVISED BY: DATE  
 CALCULATED/DESIGNED BY: CHECKED BY:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R4.9/R8.8	3	16

### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	G20-1 [Spec] (5)		84" x 42"	ROAD WORK NEXT 5 MILES	2 - 4" x 6"	3
B		C40(Mod)	72" x 42"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6" x 6"	3
C	G20-1 [Spec] (5)		60" x 30"	ROAD WORK NEXT 5 MILES	2 - 4" x 4"	1
D	W20-1	C23	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	9
E	G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	7
F	G20-2	C14	48" x 24"	END ROAD WORK	1 - 4" x 6"	3

#### LEGEND

- (X) CONSTRUCTION AREA SIGN LETTER
- 1 SIGN - SINGLE POST
- 2 SIGN - TWO POSTS

Jeffrey S. Jewett  
 REGISTERED CIVIL ENGINEER DATE 2-29-12  
 PLANS APPROVAL DATE  
 No. 49233 Exp. 9-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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

#### NOTES:

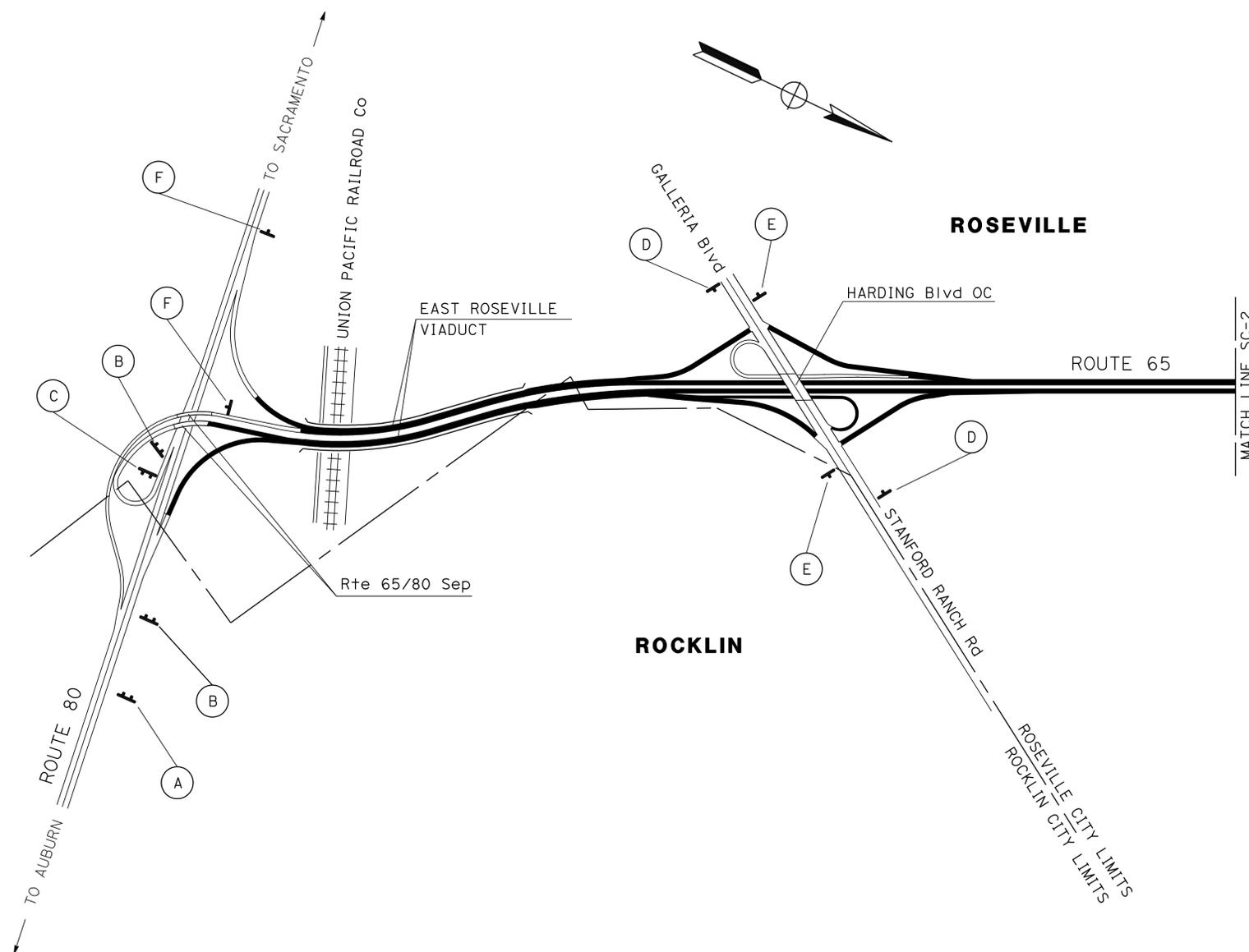
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE MOTORIST INFORMATION PLAN SHEET.

#### SIGN DETAILS

**(A) G20-1 [Spec] (5)**  
 ROAD WORK NEXT 5 MILES  
 8" C SERIES LETTERS  
 84"x42"  
 RETROREFLECTIVE ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.

**(B) C40(Mod) <CA>**  
 TRAFFIC FINES DOUBLED IN WORK ZONES  
 6" D SERIES LETTERS  
 72"x42"  
 RETROREFLECTIVE WHITE BACKGROUND WITH BLACK LEGEND AND BORDER.

**(C) G20-1 [Spec] (5)**  
 ROAD WORK NEXT 5 MILES  
 6" C SERIES LETTERS  
 60"x30"  
 RETROREFLECTIVE ORANGE BACKGROUND WITH BLACK LEGEND AND BORDER.



### CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

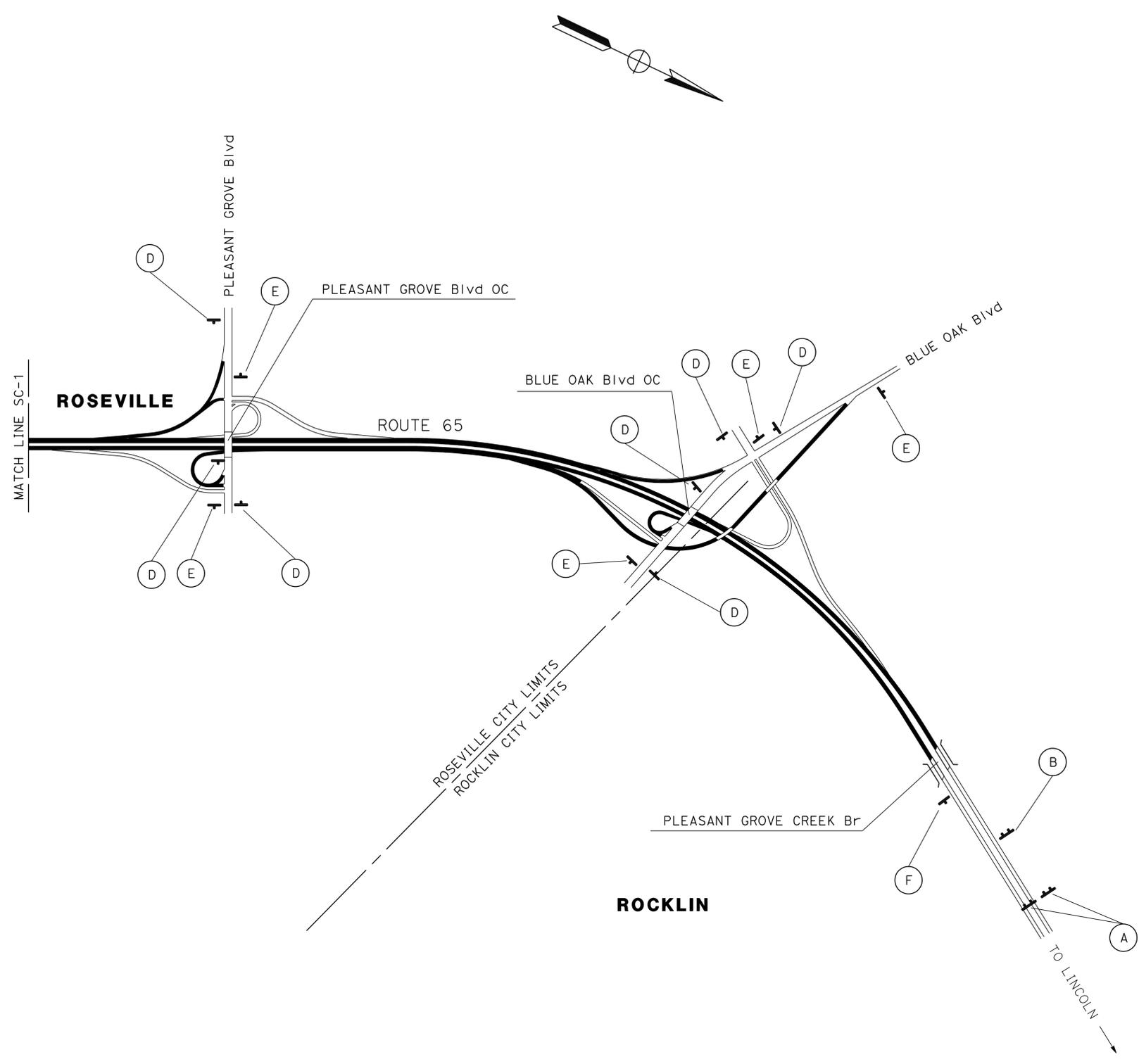
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC  
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES  
 CHECKED BY: JEFF JEWETT  
 DESIGNED BY: CHUCK COOK  
 REVISIONS: REVISED BY: DATE REVISED:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**TRAFFIC**  
 FUNCTIONAL SUPERVISOR  
 SERGIO ACEVES  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 CHUCK COOK  
 JEFF JEWETT  
 REVISED BY  
 DATE  
 REVISIONS: x, x, x, x, x, x, x, x, x, x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Plq	65	R4.9/R8.8	4	16

Jeffrey Jewett  
 REGISTERED CIVIL ENGINEER  
 DATE 2-7-12  
 2-29-12  
 PLANS APPROVAL DATE  
 No. 49233  
 Exp. 9-30-12  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER

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.



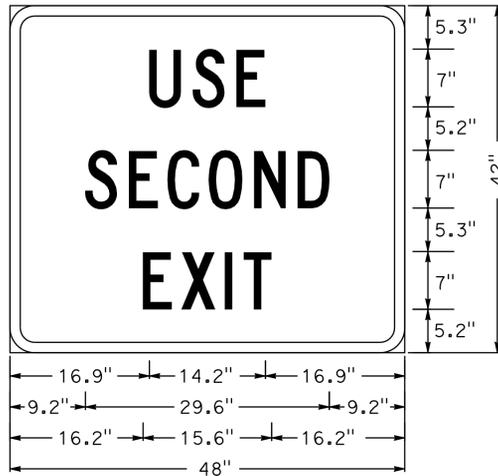
**CONSTRUCTION AREA SIGNS**  
 NO SCALE

**CS-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR  
 RONALD S. SYKES  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 SHAHRAM RAISI  
 REVISED BY  
 DATE REVISED

**DETOUR SIGNS**

SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF SIGNS
FEDERAL	CALIFORNIA			
	G28-2(65)	24" x 25"	STATE ROUTE MARKER	7
	G44	21" x 15"	DIRECTIONAL ARROW	2
	G47	26" x 12"	NORTH	7
	C38(MOD)	48" x 42"	USE SECOND EXIT	2
M4-8	C5A	30" x 15"	DETOUR	6
M4-8a	C7	24" x 18"	END DETOUR	1
M4-10R	C5(R+)	48" x 18"	DETOUR (RIGHT ARROW)	1



**ABBREVIATION**

PCMS - PORTABLE CHANGEABLE MESSAGE SIGN

**LEGEND**

<CA> CALIFORNIA SIGN CODE

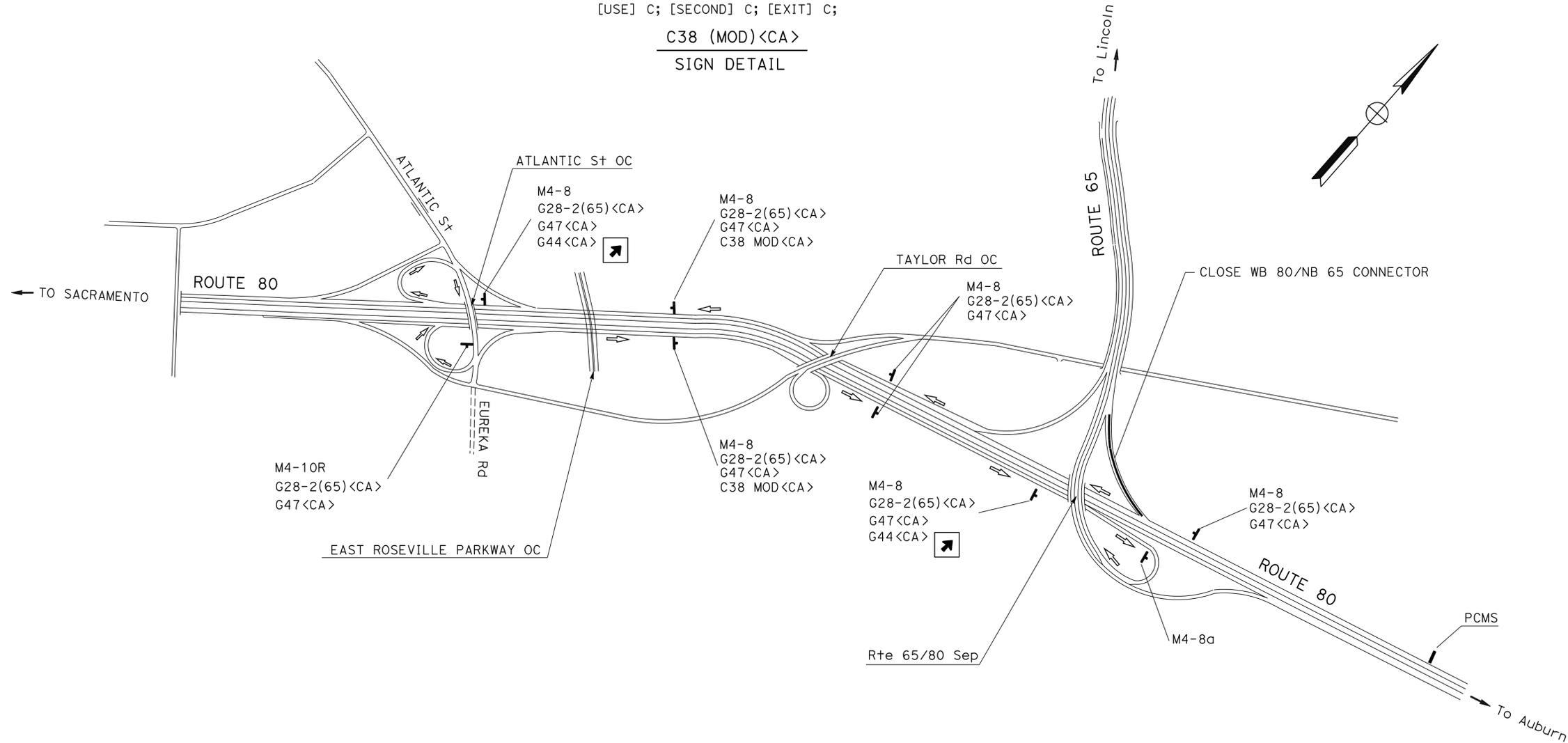
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R4.9/R8.8	5	16

2-7-12 DATE  
 2-29-12 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 RONALD S. SYKES  
 No. C35526  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES**

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. NUMBER OF SIGN PANELS REQUIRED PER DETOUR SHOWN DOES NOT INCLUDE SIGNS SHOWN ON STANDARD PLANS.
3. G SERIES SIGN PANELS TO BE WHITE ON GREEN.
4. ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS CALIFORNIA SIGN CODES.



**MOTORIST INFORMATION PLAN**

NO SCALE

**MI-1**

THIS PLAN ACCURATE FOR MOTORIST INFORMATION WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R4.9/R8.8	6	16

*Jeffrey Jewett*  
 REGISTERED CIVIL ENGINEER DATE 2-7-12  
 2-29-12  
 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.

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE		8" THERMOPLASTIC TRAFFIC STRIPE		8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12 - 3)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36 - 12)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17 - 7)	PAVEMENT MARKER				
	DETAIL NUMBER		DETAIL NUMBER		DETAIL NUMBER	DETAIL NUMBER	DETAIL NUMBER	DETAIL NUMBER	RETROREFLECTIVE			NON-REFLECTIVE
	25A (LF)	27B (LF)	36 (LF)	38B (LF)	37 (LF)	12 (LF)	9 (LF)		TYPE C (EA)	TYPE G (EA)	TYPE H (EA)	TYPE A (EA)
NB MAINLINE Rte 65 PM R6.279 TO PM R7.803		2855	166	127	1151			13,14,36,37,38B	4	155		208
NB MAINLINE Rte 65 PM M8.076 TO PM M8.445		866				1040	155	9,12		28		
SB MAINLINE Rte 65 PM R6.248 TO PM R7.882		2821	315	138	1484			13,14,36,37,38B	4	247		92
SB MAINLINE Rte 65 PM M8.081 TO PM M8.615		1243				1669	183	9,12		41		
SB Rte 65/WB Rte 80 Conn RAMP	671							13,25A		7	29	24
WB Rte 80/NB Rte 65 Conn RAMP	607	517						25A			27	
SUBTOTAL	1278	8302	481	265	2635	2709	338	—————	8	478	56	324
TOTAL	9580		746		2635	2709	338	—————	542			324

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES  
 CALCULATED-DRAWN BY: CHUCK COOK  
 CHECKED BY: JEFF JEWETT  
 REVISIONS: REVISED BY: DATE REVISED:

## PAVEMENT DELINEATION QUANTITIES

**PDQ-1**

LAST REVISION: 02-07-12     
 DATE PLOTTED => 29-FEB-2012     
 TIME PLOTTED => 14:49

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	R4.9/R8.8	7	16

Ronald S. Sykes  
 REGISTERED CIVIL ENGINEER  
 DATE 2-7-12  
 2-29-12  
 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.

### REPLACE ASPHALT CONCRETE SURFACING

	LOCATION/DESCRIPTION						REPLACE ASPHALT CONCRETE SURFACING	REMARK
	POST MILE	LANE	WHEEL	LENGTH	WIDTH	CY		
	FROM	TO	No.	PATH	LF			
SB Rte 65	M8.615	M8.597	2	L+/R+	95	12	10.6	USE Exist PM Mkr R8.790 AS REFERENCE.
	M8.573	M8.536	2	L+/R+	195	12	21.7	
	M8.536	M8.497	2	L+	206	6	11.4	
	M8.458	M8.434	2	L+	127	6	7.0	
	M8.434	M8.296	2	L+/R+	729	12	81.0	
	M8.264	M8.255	2	R+	48	6	2.6	
	M8.250	M8.233	2	L+/R+	90	12	10.0	
	M8.240	M8.189	2	L+/R+	269	12	29.9	
	M8.098	M8.081	2	R+	90	6	5.0	
	SB 65/ WB 80 Conn RAMP	R7.882	R7.755	2	L+/R+	671	12	
R7.755		R7.582	2	R+	913	6	50.7	
R7.538		R7.516	2	L+	116	6	6.5	
R7.477		R7.320	2	L+/R+	829	12	92.1	
R7.320		R7.259	2	R+	322	6	17.9	
R6.855		R6.842	2	R+	69	6	3.8	
R6.773		R6.719	2	L+/R+	285	12	31.7	
R6.719		R6.686	2	R+	174	6	9.7	
R6.619		R6.475	2	R+	760	6	42.2	
R6.298		R6.270	2	R+	148	6	8.2	
R6.270	R6.248	2	L+/R+	116	12	12.9		
WB 80/ NB 65 Conn RAMP	R5.031	R5.019	2	L+	63	6	3.5	*
	R5.001	R4.958	1	L+	227	6	12.6	
	R4.969	R4.944	2	L+	132	6	7.3	
	R4.958	R4.944	1	L+/R+	74	12	8.2	
	R4.944	R4.874	1	L+	370	6	20.5	
WB 80/ NB 65 Conn RAMP	4.396	4.404		L+/R+	42	12	4.7	**
	4.417	4.436		L+/R+	100	12	11.1	
	4.460	4.486		L+/R+	137	12	15.3	
	4.518	4.563		L+/R+	238	12	26.4	
	4.570	4.587		L+	90	6	5.0	
COLUMN SUBTOTAL							644.0	

- \* USE EB EAST ROSEVILLE VIADUCT Br No. 19-0152L, PM R5.063, AS REFERENCE.
- \*\* USE WB 80/NB 65 Conn RAMP EXIT NOSE, PM 4.320, AS REFERENCE.
- \*\*\* USE Exist PM Mkr R8.00=M8.00 AS REFERENCE.

	LOCATION/DESCRIPTION						REPLACE ASPHALT CONCRETE SURFACING	REMARK
	POST MILE	LANE	WHEEL	LENGTH	WIDTH	CY		
	FROM	TO	No.	PATH	LF			
NB Rte 65	R6.279	R6.321	2	L+/R+	222	12	24.6	USE Exist PM Mkr R6.000 AS REFERENCE.
	R6.331	R6.342	2	L+/R+	58	12	6.5	
	R6.359	R6.413	2	L+/R+	285	12	31.7	
	R6.426	R6.433	2	R+	37	6	2.1	
	R6.449	R6.470	2	L+/R+	111	12	12.3	
	R6.820	R6.830	2	L+/R+	53	12	5.9	
	R6.851	R6.863	2	L+/R+	63	12	7.0	
	R6.877	R6.894	2	R+	90	6	5.0	
	R6.906	R6.936	2	R+	158	6	8.8	
	R6.936	R6.954	2	L+	95	6	5.3	
	R6.954	R6.990	2	R+	190	6	10.6	
	R7.000	R7.013	2	R+	69	6	3.8	
	R7.026	R7.039	2	R+	69	6	3.8	
	R7.053	R7.083	2	L+/R+	158	12	17.6	
	R7.103	R7.129	2	R+	137	6	7.6	
	R7.129	R7.144	2	L+/R+	79	12	8.8	
	R7.183	R7.206	2	L+/R+	121	12	13.5	
	R7.268	R7.288	2	R+	106	6	5.9	
	R7.288	R7.317	2	L+/R+	153	12	17.0	
	R7.330	R7.379	2	L+/R+	259	12	28.7	
	R7.330	R7.379	3	L+/R+	259	12	28.7	
	R7.433	R7.479	2	R+	243	6	13.5	
	R7.495	R7.540	2	R+	238	6	13.2	
	R7.540	R7.574	2	L+/R+	180	12	19.9	
	R7.605	R7.708	2	L+/R+	544	12	60.4	
	R7.724	R7.767	2	L+/R+	227	12	25.2	
R7.767	R7.803	2	R+	190	6	10.6		
M8.076	M8.132	2	L+/R+	296	12	32.9	***	
	M8.156	M8.186	2	L+/R+	158	12		17.6
	M8.186	M8.201	2	L+	79	6		4.4
	M8.201	M8.222	2	L+/R+	111	12		12.3
	M8.239	M8.296	2	L+/R+	301	12		33.4
M8.427	M8.445	2	L+	95	6	5.3		
COLUMN SUBTOTAL							503.9	
TOTAL							1147.9	

### CRACK TREATMENT

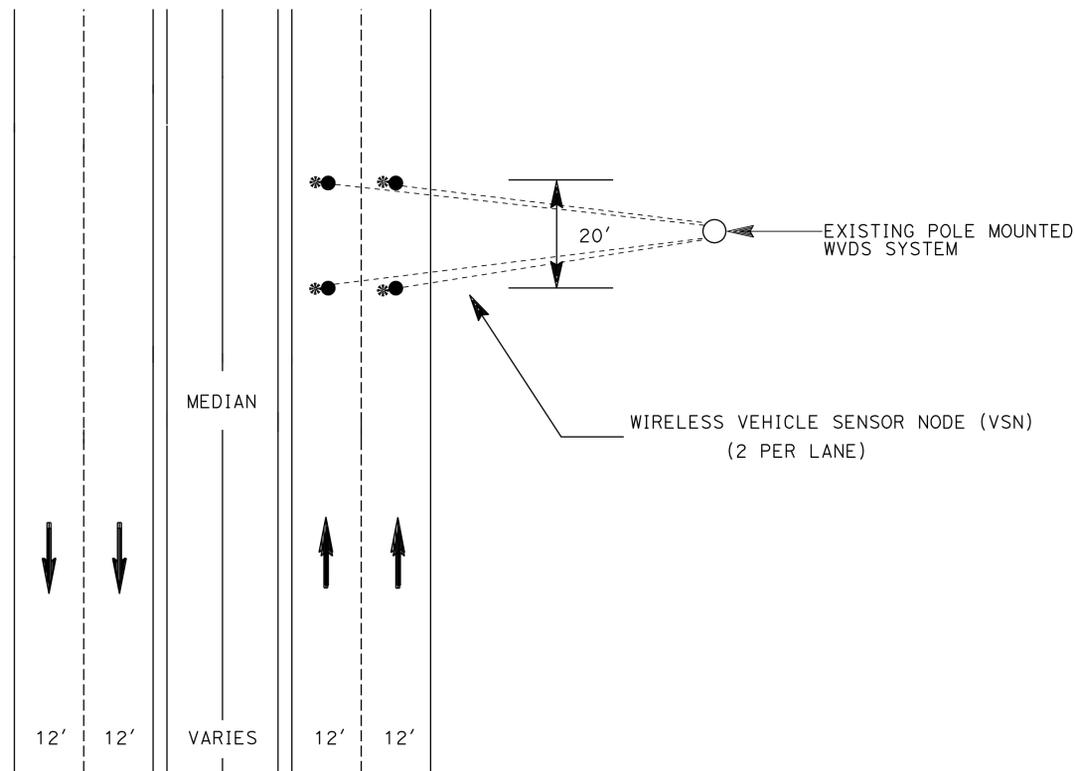
LOCATION/DESCRIPTION	LNMI
RAMPS, NB & SB ROUTE 65 (SEE Sht X-1)	22 *

\* AS DIRECTED BY THE ENGINEER.

## SUMMARY OF QUANTITIES

Q-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Pla	65	4.9/9.0	8	16
<i>H. Golban</i> REGISTERED ELECTRICAL ENGINEER DATE			2-8-12		
PLANS APPROVAL DATE			2-29-12		
<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>					



**DETAIL 'A'**

VEHICLE SENSOR NODE PLACEMENT DETAIL

**NOTE:**

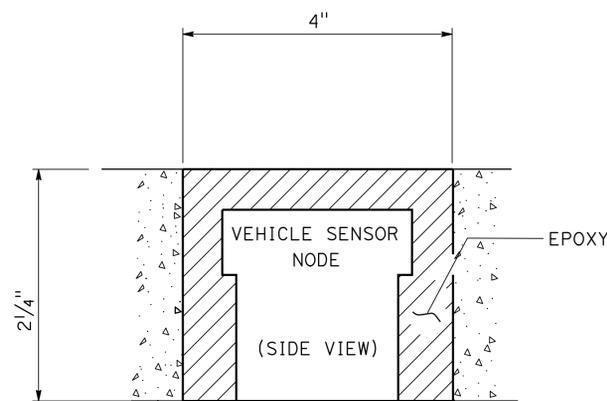
1. FOR ACCURATE RIGHT OF WAY, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**WIRELESS VEHICLE DETECTOR SENSOR NODE INSTALLATION PROCEDURE**

1. PRIOR TO INSTALLATION, IDENTIFY SENSOR'S ID, LANE NUMBER, AND LOCATION IN LANE.
2. INSTALL SENSORS PER MANUFACTURERS WIRELESS SENSOR INSTALLATION GUIDE.
3. DEPENDING ON AMBIENT TEMPERATURE AND HUMIDITY, ADHESIVE DRYING TIME WILL VARY FROM 5 MINUTES TO 15 MINUTES. VERIFY HARDNESS OF EPOXY BEFORE REOPENING THE LANE FOR TRAFFIC.
4. RECORD DISTANCES BETWEEN EACH SENSOR PAIR.
5. SENSORS ARE TO BE PLACED CENTERED IN LANE.

**LEGEND:**

\* EXISTING WIRELESS VEHICLE SENSOR NODE (VSN)



**DETAIL 'B'**

VEHICLE SENSOR NODE INSTALLED IN ROADWAY

**PLA 65 LOCATIONS**

APPROXIMATE LOCATION	APPROXIMATE POST MILE	SIDE OF FREEWAY	NUMBER OF LANES/DIRECTION	EXISTING EQUIPMENT TYPE								CONSTRUCTION NOTES		COMMUNICATION NOTES				
				GPRS CARD INSTALLED IN ACCESS POINT	PV PANEL(S)	REPEATER(S)	WIRELESS ETHERNET RADIO	ACCESS POINT	DIRECTIONAL ANTENNA	OMNI-DIRECTIONAL ANTENNA	MIN. SETBACK FROM ETW (FEET)	LATITUDE	LONGITUDE	ETHERNET WIRELESS LINK TO:				
0.3 MI SO. OF PLEASANT GROVE BLVD EXIT	6.50	NB	2N	YES	2	-	YES	1	-	1	30	N38	46	56.8	W121	16	31.4	1, 3

**MODIFY WIRELESS VEHICLE DETECTION SYSTEM**

NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

**E-1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Plac	65	4.9/9.0	9	16

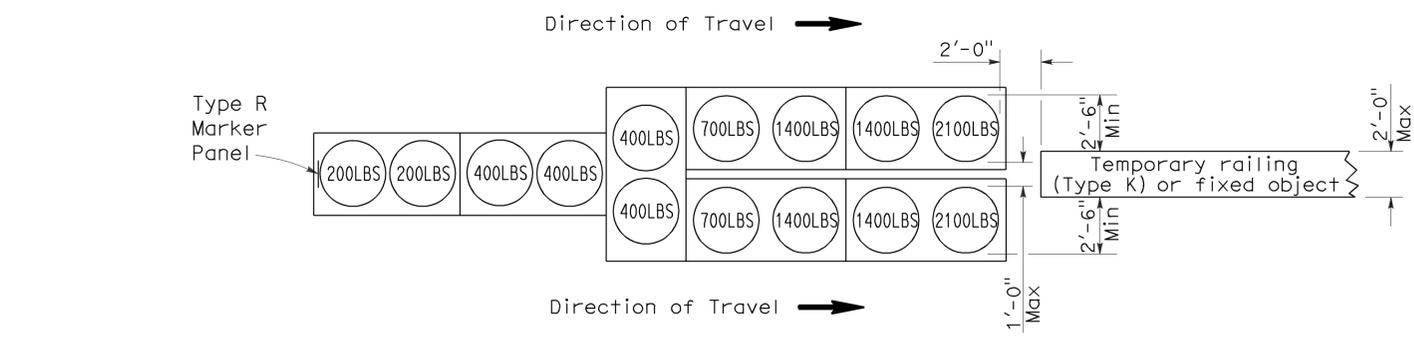
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

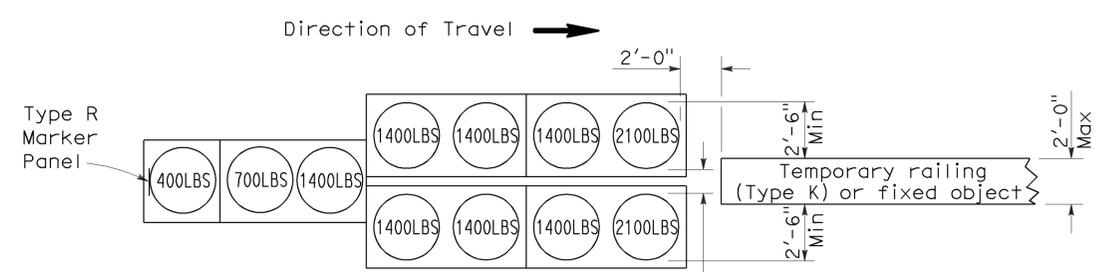
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-29-12



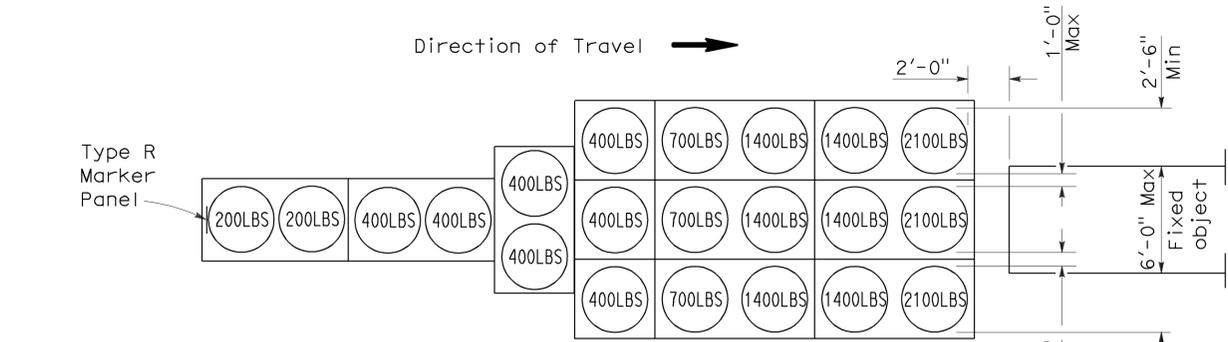
**ARRAY 'TU14'**

Approach speed 45 mph or more



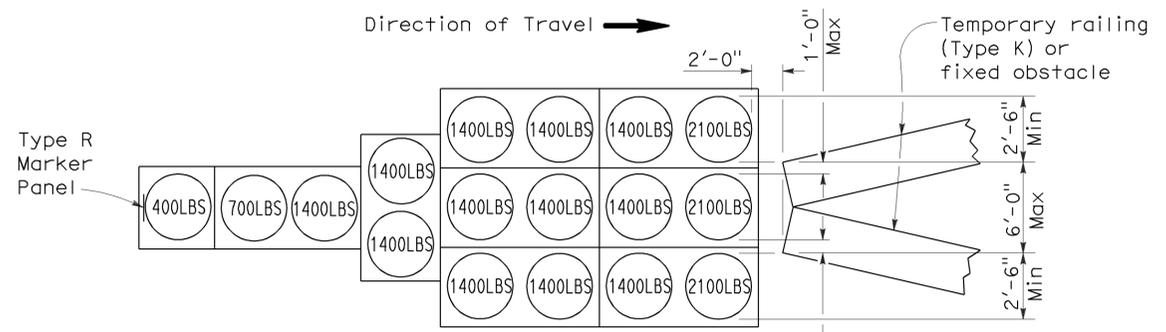
**ARRAY 'TU11'**

Approach speed less than 45 mph



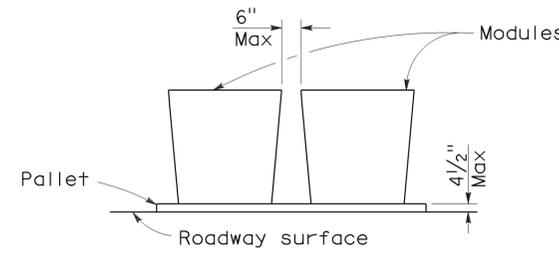
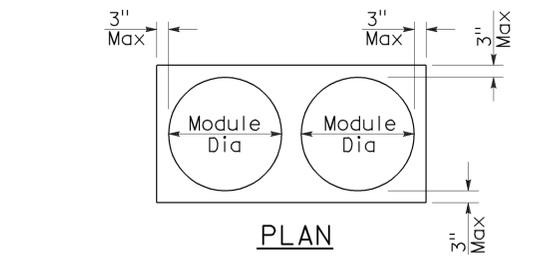
**ARRAY 'TU21'**

Approach speed 45 mph or more



**ARRAY 'TU17'**

Approach speed less than 45 mph



**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

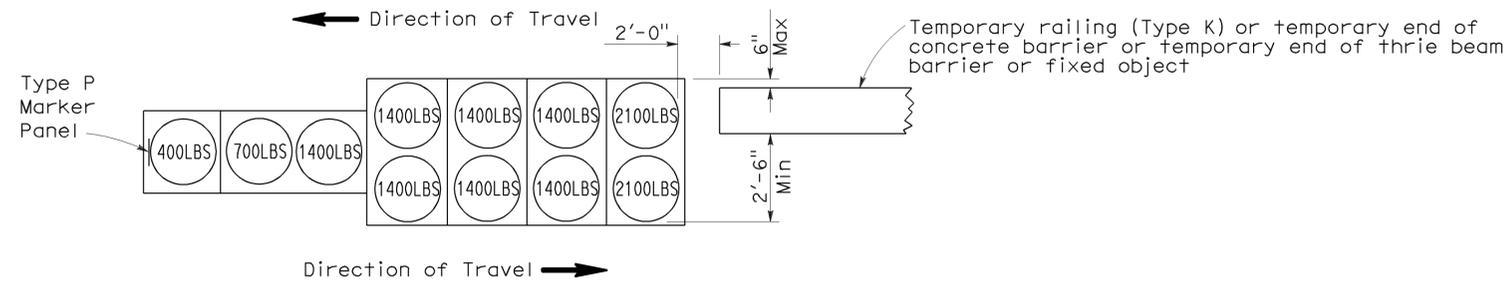
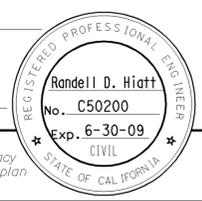
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Pla	65	4.9/9.0	10	16

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

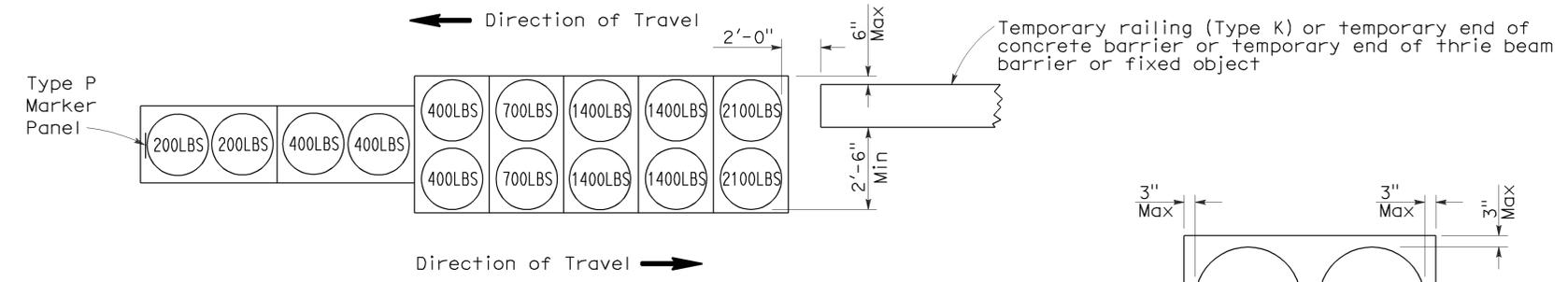
June 6, 2008  
PLANS APPROVAL DATE

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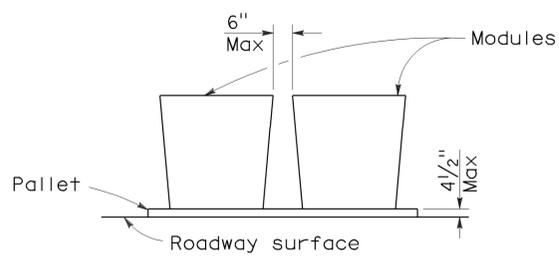
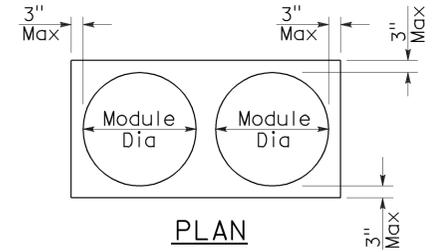
To accompany plans dated 2-29-12



**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
03	Pla	65	4.9/9.0	11	16

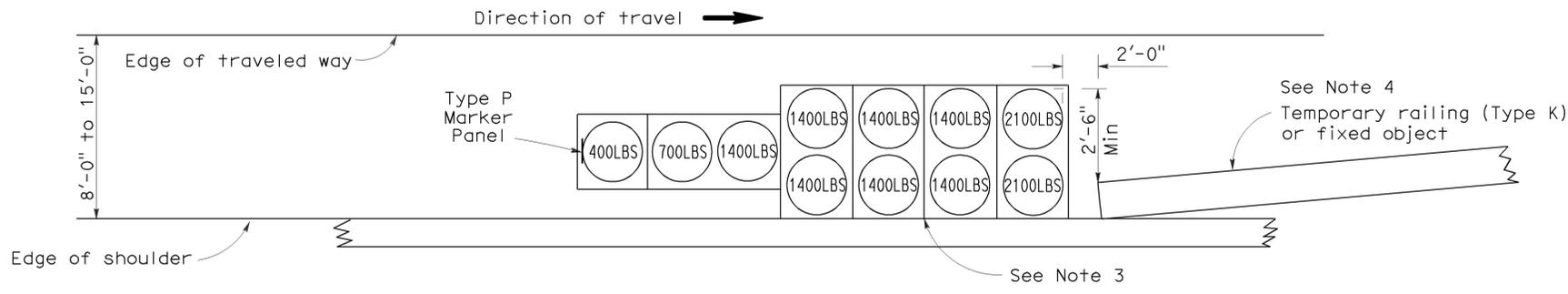
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

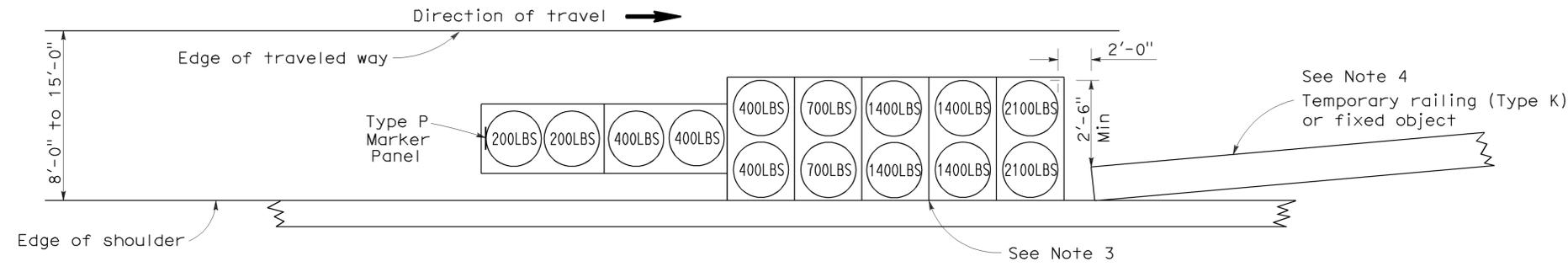
*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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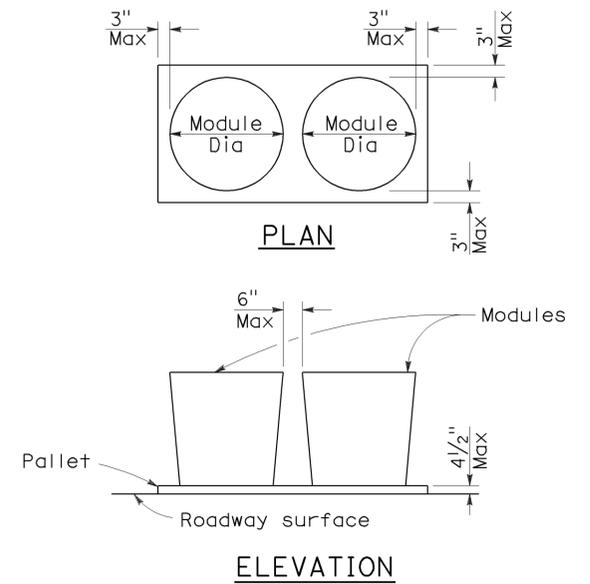
To accompany plans dated 2-29-12



**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:**

- ⊗ 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
03	Pla	65	4.9/9.0	12	16

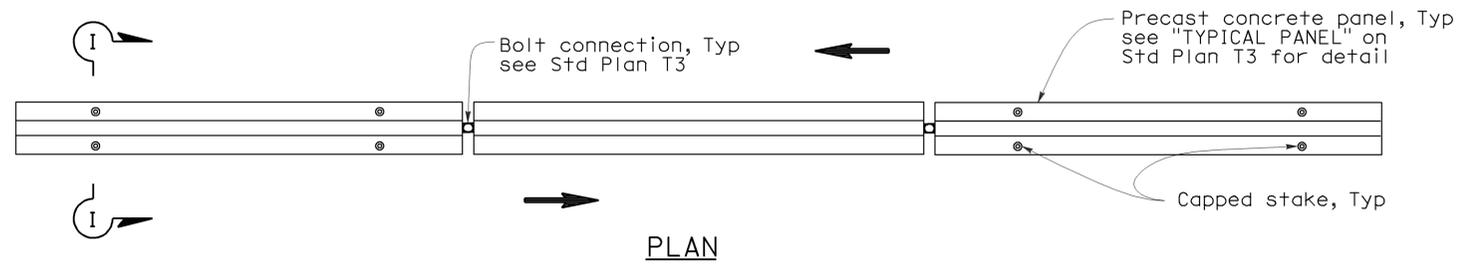
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

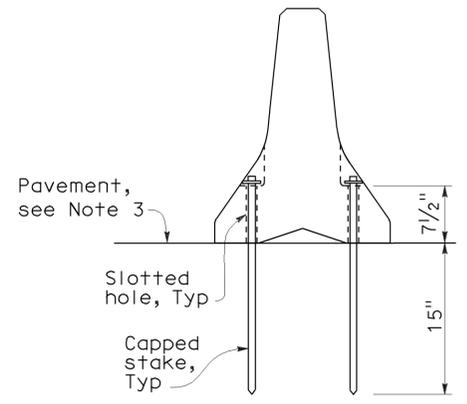
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 2-29-12



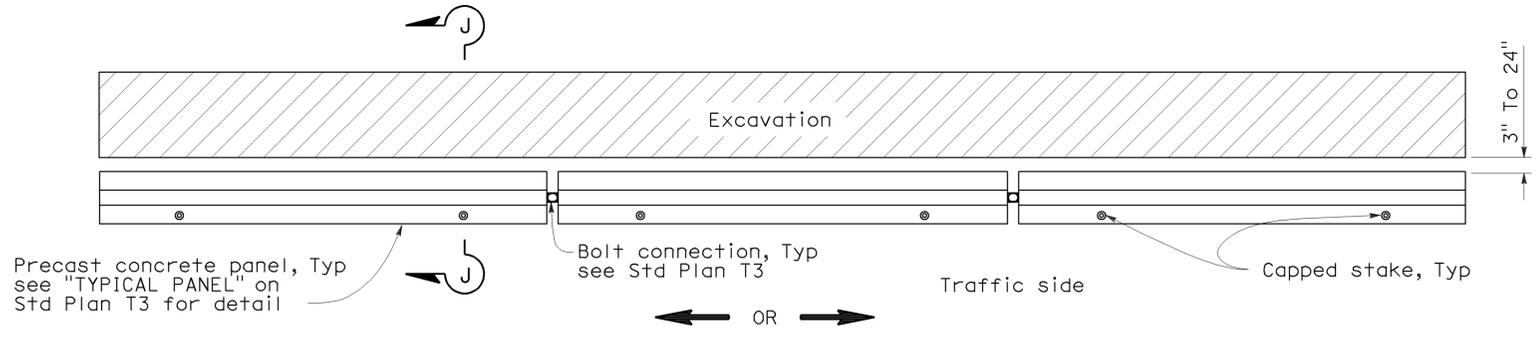
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



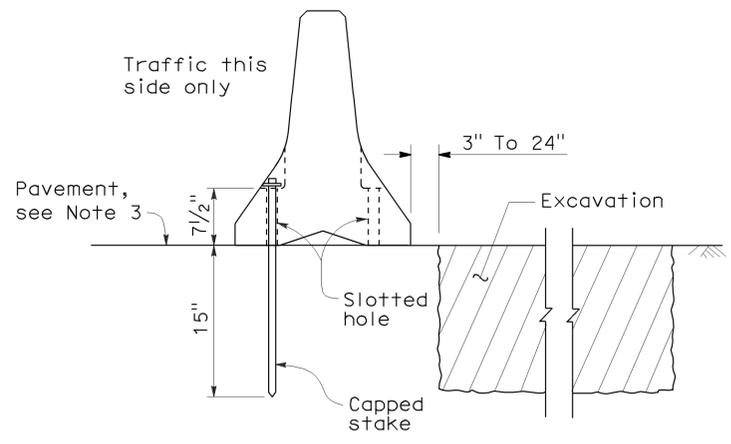
**SECTION I-I**

**NOTES:**

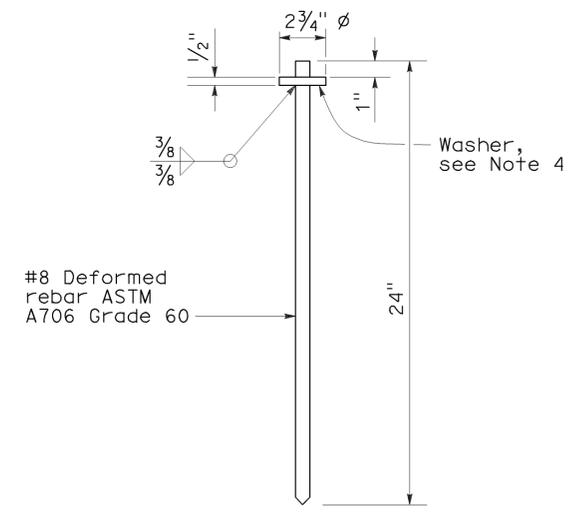
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



**SECTION J-J**



**CAPPED STAKE DETAIL**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY RAILING  
(TYPE K)**  
NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

# 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
03	Pla	65	4.9/9.0	13	16

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

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

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To accompany plans dated 2-29-12

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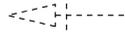
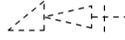
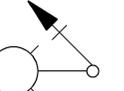
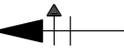
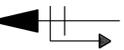
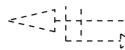
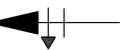
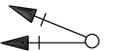
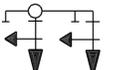
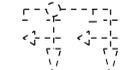
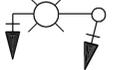
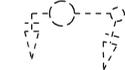
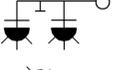
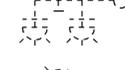
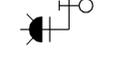
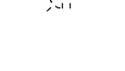
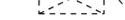
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 Jeffrey G. McRae  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

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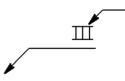
### CONDUIT

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 
		Conduit riser in/on structure or service pole

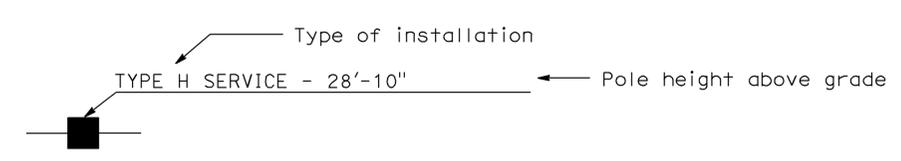
### SIGNAL EQUIPMENT

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 lowered "LG" Indicates lowered 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

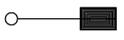
### POLE-MOUNTED SERVICE DESIGNATION



### 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

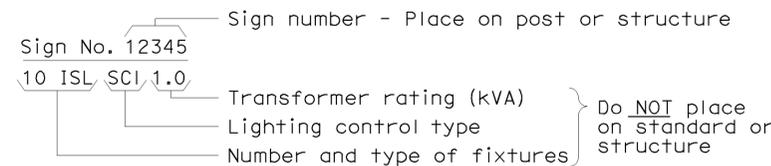
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1B**

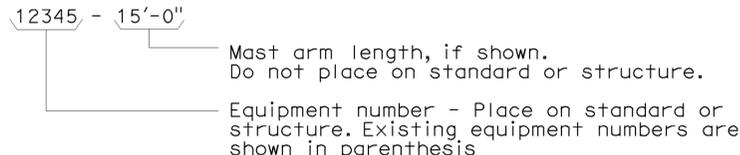
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

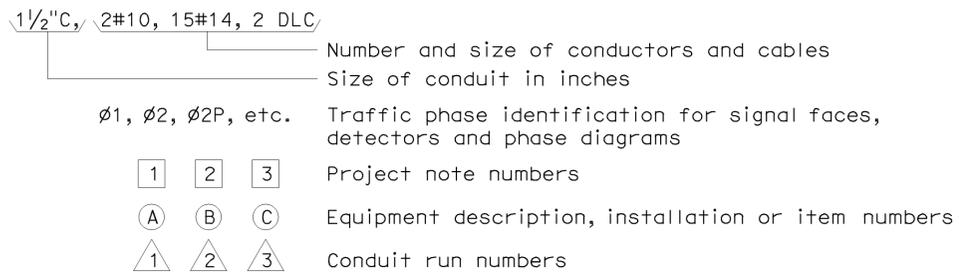
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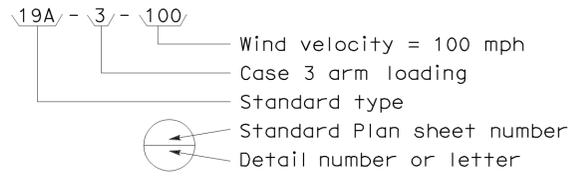
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



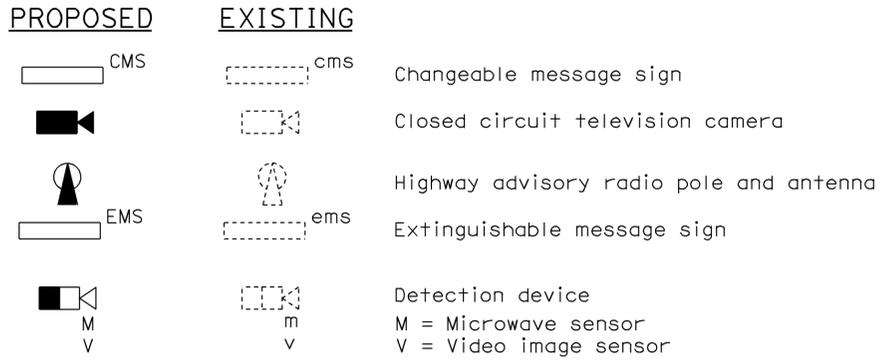
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



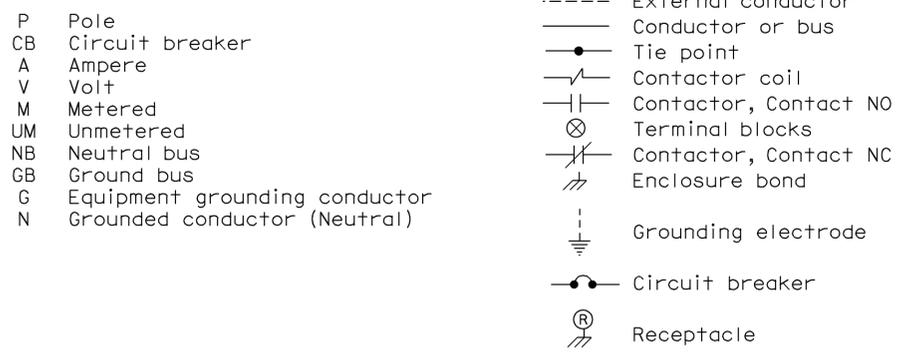
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



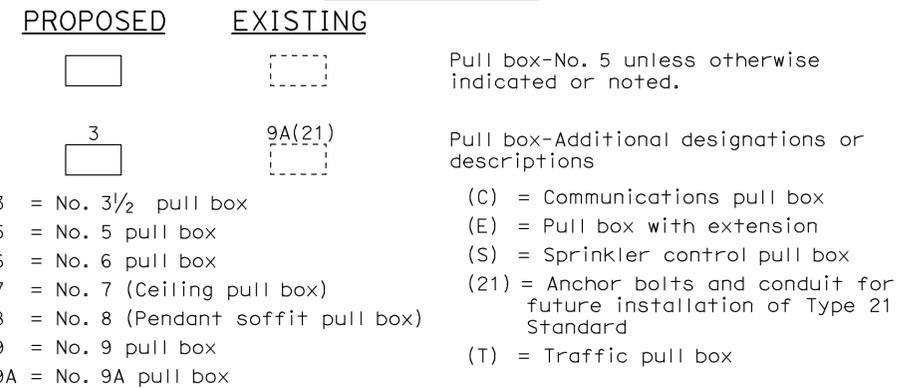
### MISCELLANEOUS EQUIPMENT



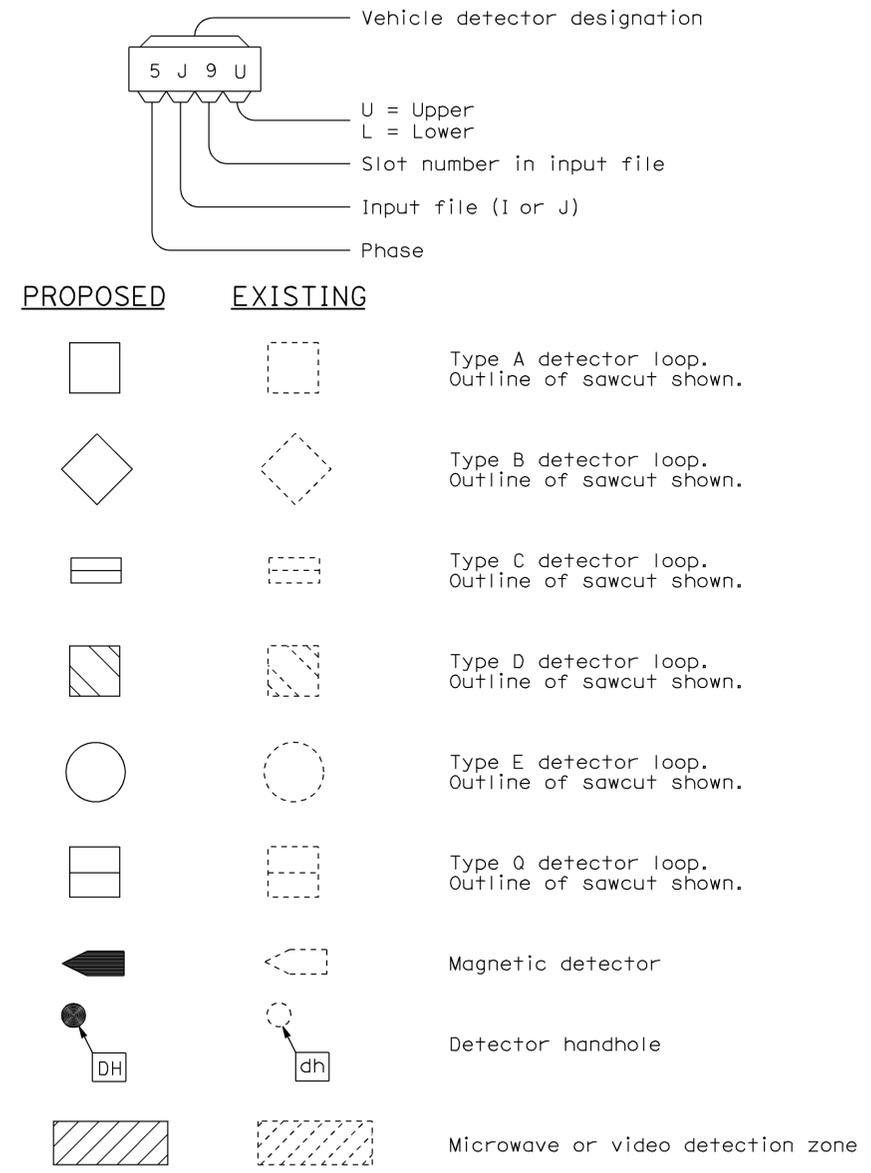
### WIRING DIAGRAM LEGEND



### 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.

2006 REVISED STANDARD PLAN RSP ES-1C

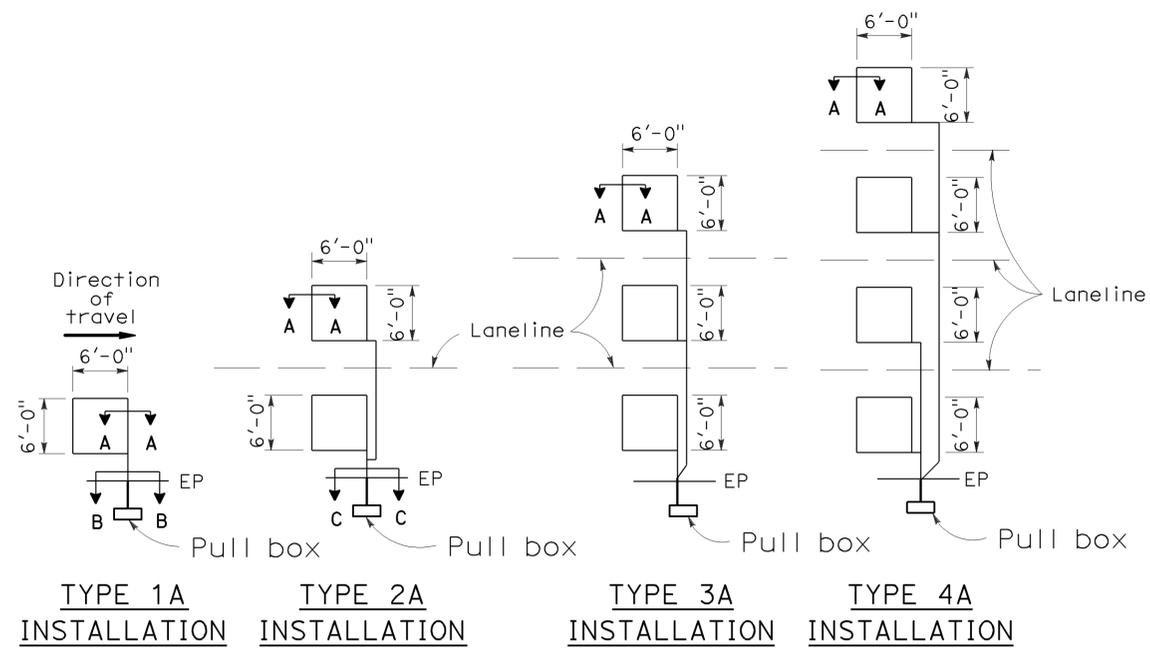
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Pla	65	4.9/9.0	16	16

*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 2-29-12

## LOOP INSTALLATION PROCEDURE

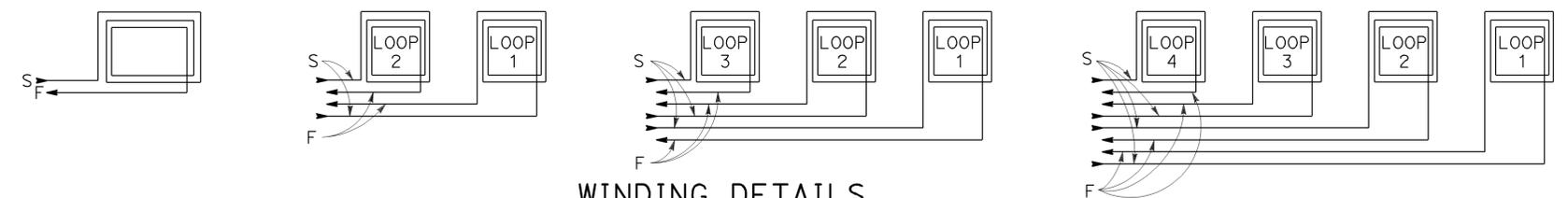
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no 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.



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

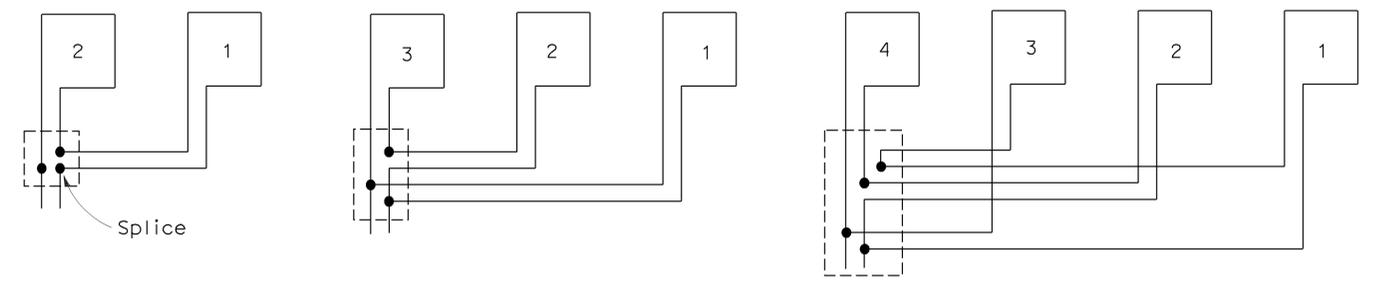
### SAWCUT DETAILS

- (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)



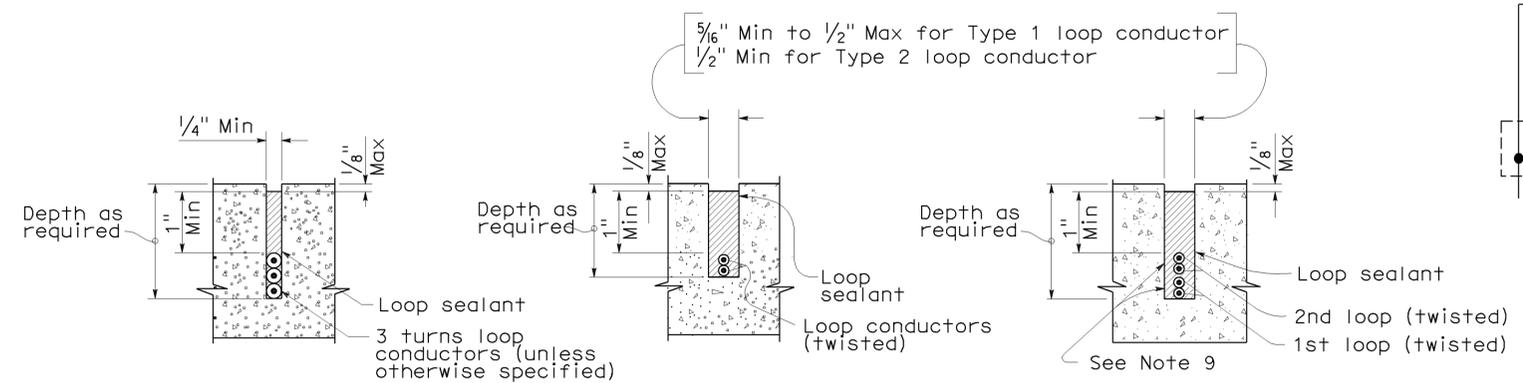
### WINDING DETAILS

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.

## REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A