

INDEX OF PLANS

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

STATE OF CALIFORNIA **ACIM-010-3(104)100E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN RIVERSIDE COUNTY
IN AND NEAR BANNING
FROM HARGRAVE STREET
TO 10/111 CONNECTOR

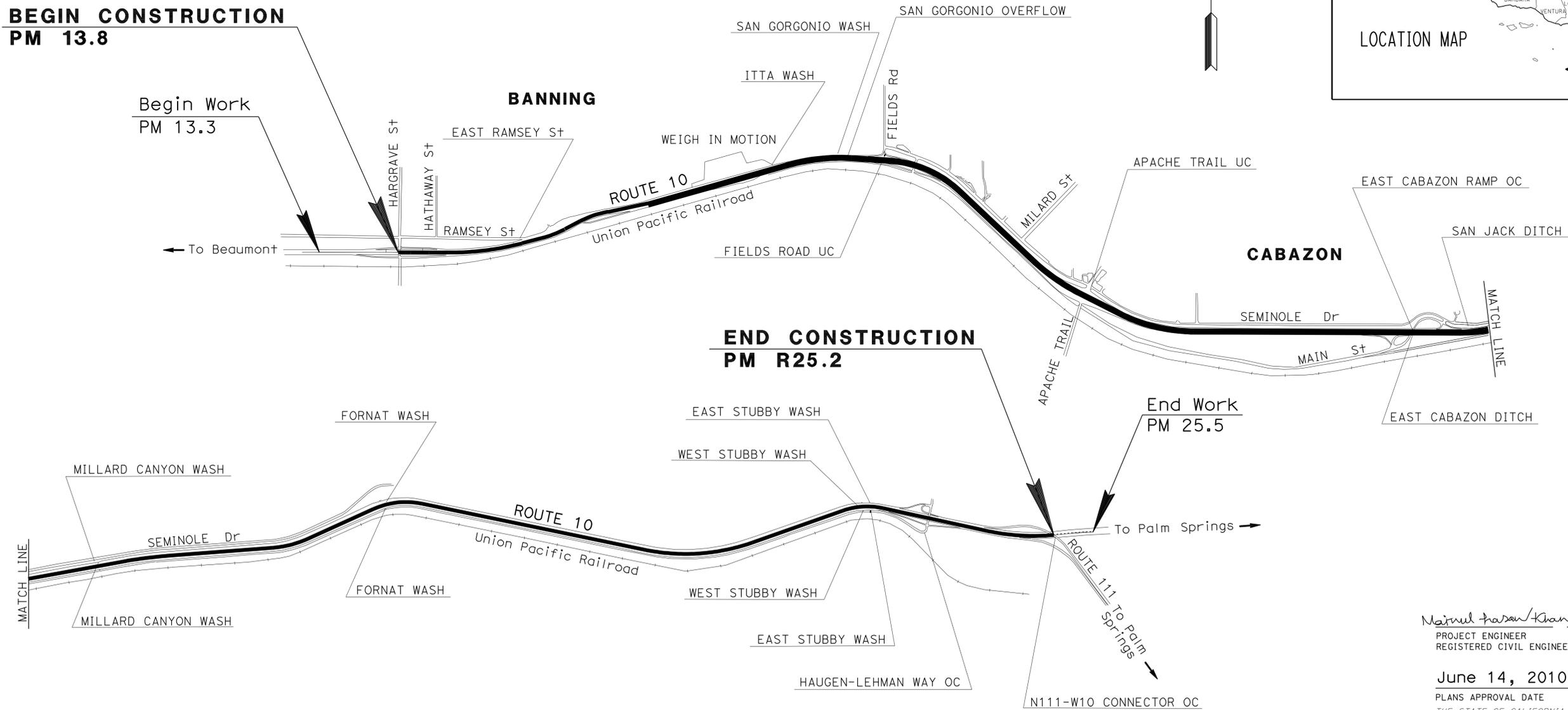
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	1	17

LOCATION MAP

BEGIN CONSTRUCTION
PM 13.8

Begin Work
PM 13.3



END CONSTRUCTION
PM R25.2

End Work
PM 25.5

NO SCALE

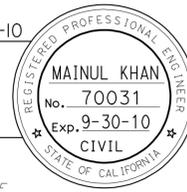
PROJECT MANAGER
XIAO ZHANG

DESIGN ENGINEER
MAINUL KHAN

Mainul Khan 5-10-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

June 14, 2010
PLANS APPROVAL DATE

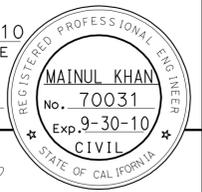
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THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No. **08-OL9504**
PROJECT ID **080000448**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	2	17
Mainul Hasan Khan 5-10-10 REGISTERED CIVIL ENGINEER DATE					
6-14-10 PLANS APPROVAL DATE					
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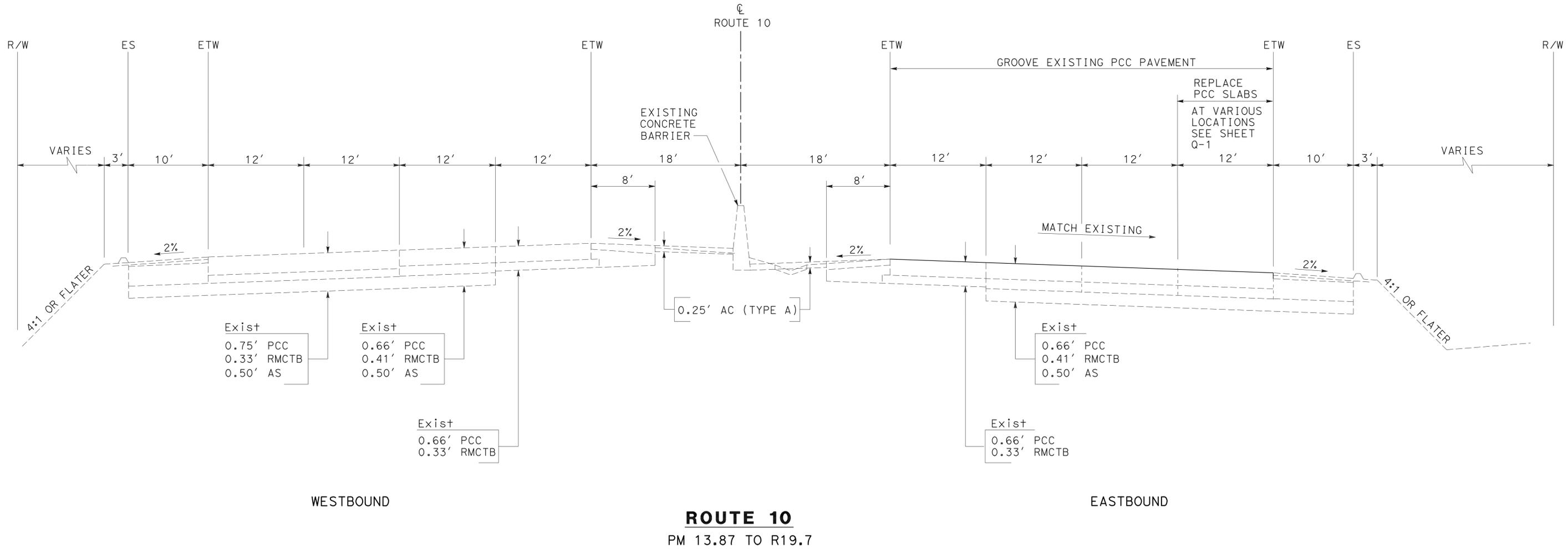


NOTES:

- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

DESIGN DESIGNATION

PM 13.87/R25.2
 ADT (2012) = 112,100 D = 65% WB
 ADT (2032) = 181,100 T = 18%
 DHV = 10,530 V = 65 m/h



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

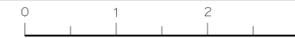
FUNCTIONAL SUPERVISOR
 PATRICK HALLY

CALCULATED/DESIGNED BY
 CHECKED BY

W. K. TSAO
 MAINUL KHAN

REVISED BY
 DATE REVISED

TYPICAL CROSS SECTIONS
 NO SCALE
X-1

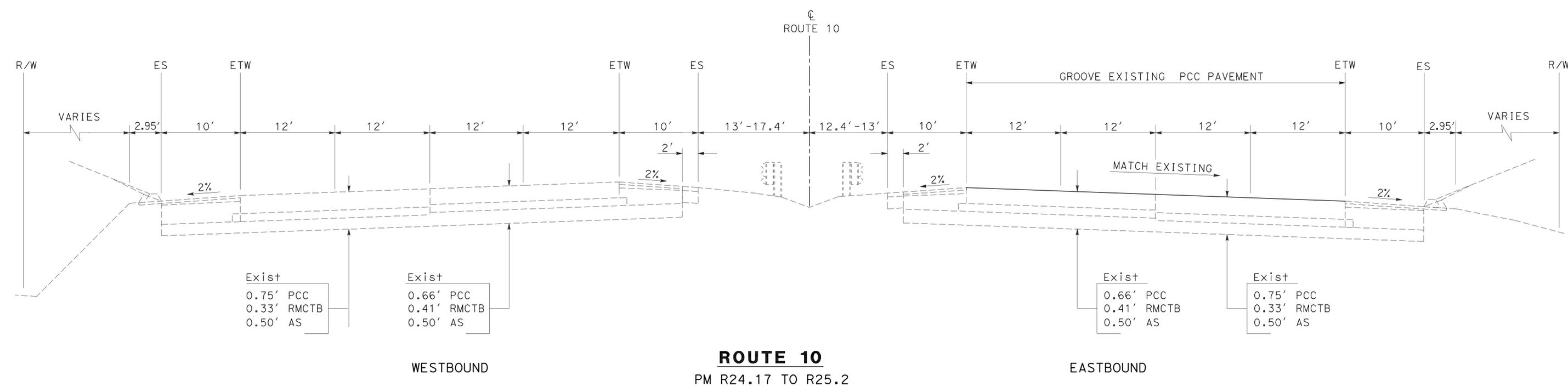
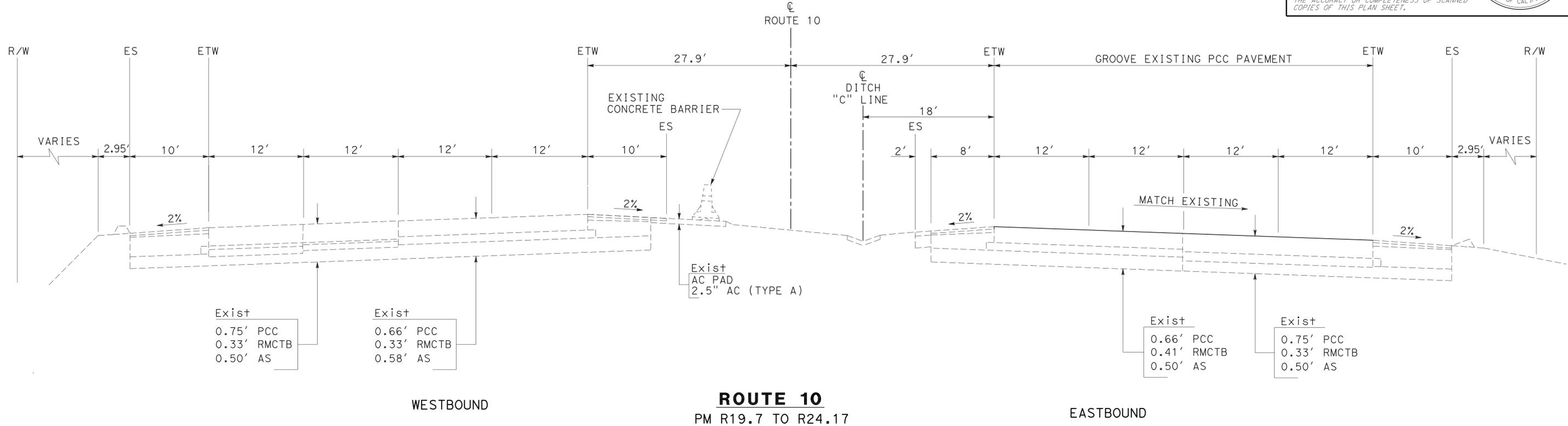


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	3	17

Mainul Khan 5-10-10
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MAINUL KHAN
 No. 70031
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

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TYPICAL CROSS SECTIONS
NO SCALE
X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: PATRICK HALLY
 CALCULATED/DESIGNED BY: W. K. TSAO
 CHECKED BY: MAINUL KHAN
 REVISED BY: W. K. TSAO
 DATE REVISED:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	4	17

Mainul Hasan Khan 5-10-10
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 MAINUL KHAN
 No. 70031
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

NOTES:

1. ALL WORK WITHIN STATE RIGHT OF WAY.
2. THE LOCATIONS AND DIMENSIONS OF PORTLAND CEMENT CONCRETE SLABS WILL BE DETERMINED BY THE ENGINEER.
3. REFER TO STANDARD PLAN P8 (JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT) SLAB LAYOUT, TYPE II FOR MORE DETAILS

LEGEND:

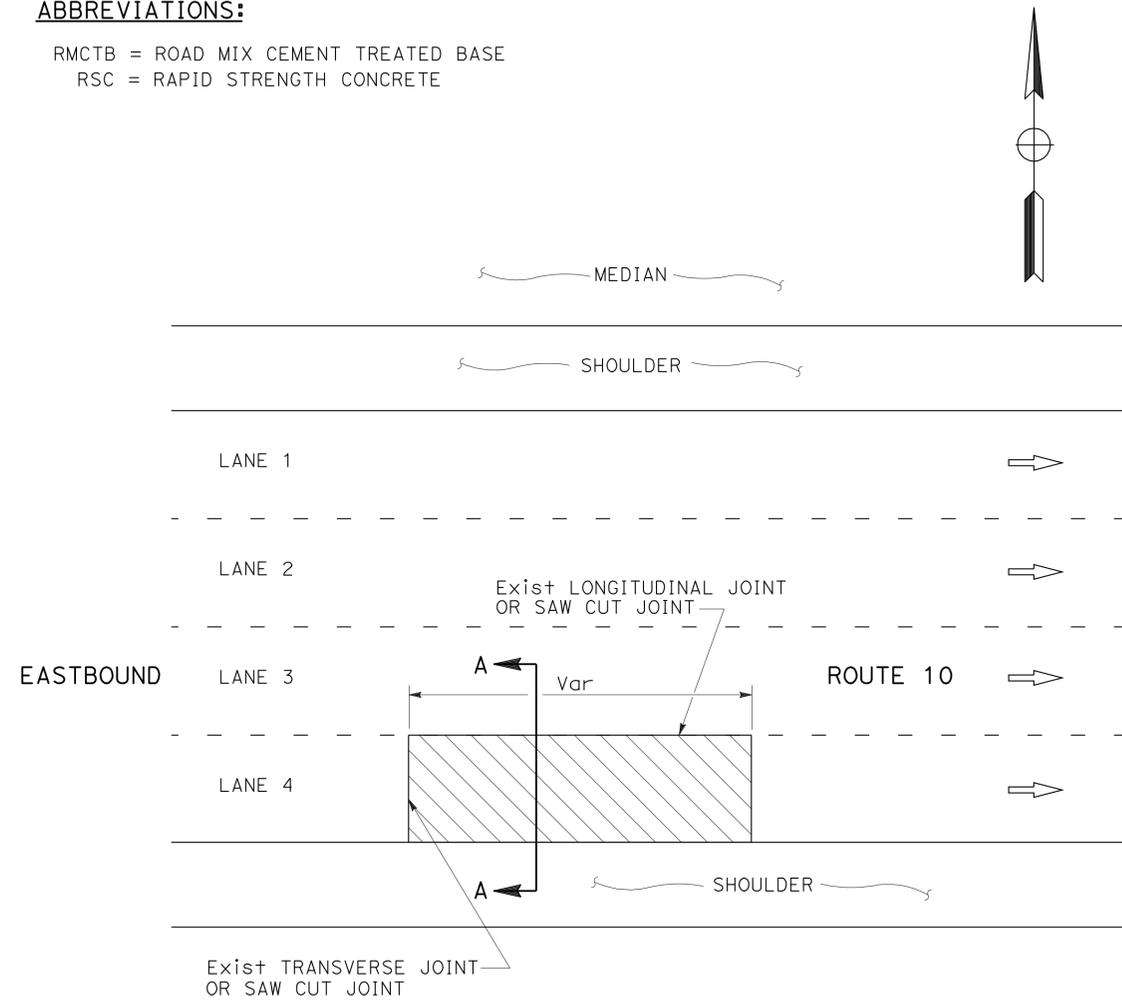
 REPLACE PCC SLAB

 DIRECTION OF TRAVEL

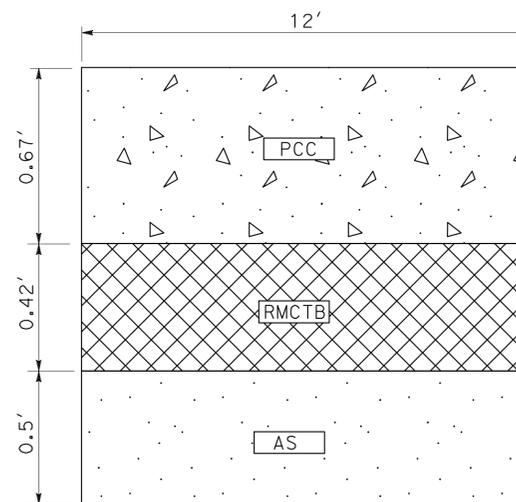
ABBREVIATIONS:

RMCTB = ROAD MIX CEMENT TREATED BASE
 RSC = RAPID STRENGTH CONCRETE

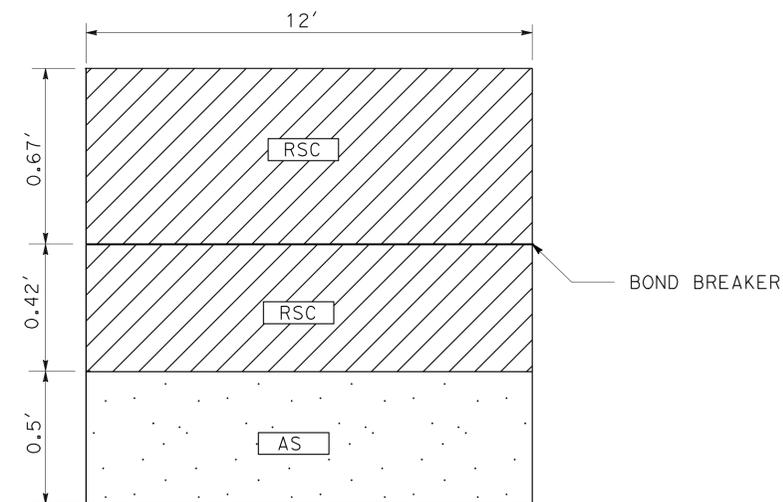
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR
 PATRICK HALLY
 CALCULATED/DESIGNED BY
 CHECKED BY
 W. K. TSAO
 MAINUL KHAN
 REVISED BY
 DATE REVISED



PLAN
REPLACE CONCRETE PAVEMENT
(TYPICAL)



SECTION A-A
 EXISTING SLAB



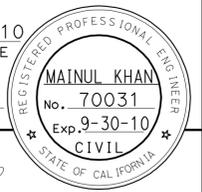
SECTION A-A
 REPLACED SLAB

CONSTRUCTION DETAILS
 NO SCALE

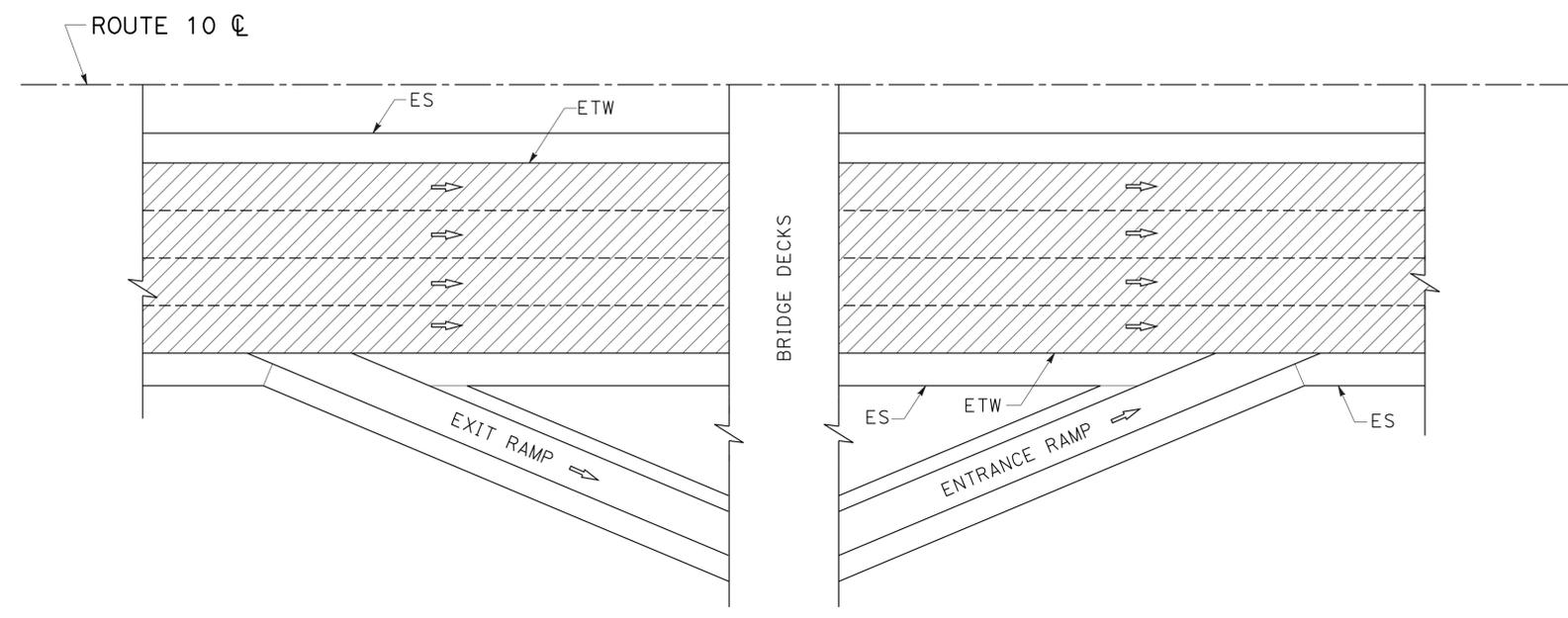
C-1

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08	Riv	10	13.8/R25.2	5	17

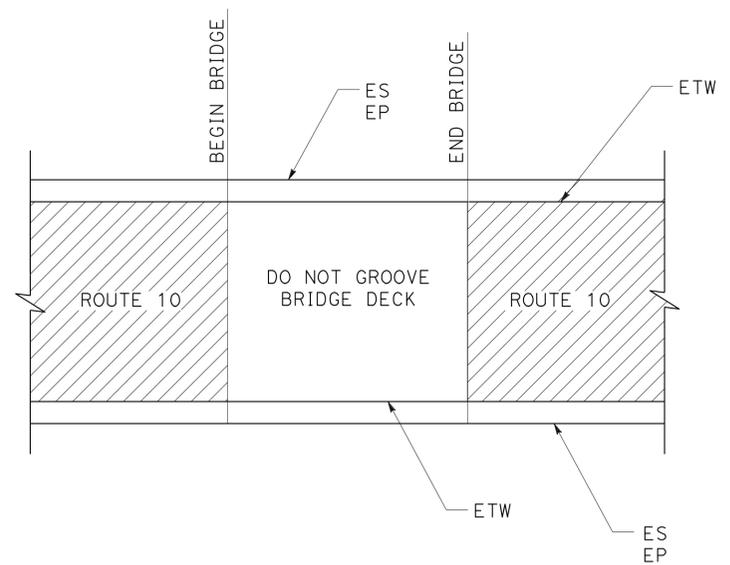
Mainul Hasan Khan 5-10-10
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEGEND:
 GROOVED PC



LIMIT OF WORK AT GORE AREA



LIMIT OF WORK AT BRIDGE DECK AREA

STRUCTURE DECK

BRIDGE NUMBER	STRUCTURE NAME	PM
56-0324	HARGRAVE STREET UC	13.86
56-0328	EAST RAMSEY STREET-E10UC	R14.76
56-0255	ITTA WASH	R15.79
56-003	SAN GORGONIO WASH	R16.14
56-0351	SAN GORGONIO OVERFLOW	R16.23
56-0454	FIELDS ROAD UC	R16.54
56-0455	APACHE TRAIL UC	R17.66
56-0456	EAST CABAZON RAMP OC	R19.40
56-0562	EAST CABAZON DITCH	R19.41
56-0568	SAN JACK DITCH	R19.79
56-0529R	MILLARD CANYON WASH	R20.15
56-0166R	FORNAT WASH	R21.67
56-0167R	WEST CHANNEL STUBBY WASH	R24.2
56-0168R	EAST CHANNEL STUBBY WASH	R24.2
56-0530	VERBENIA AVENUE OC	R24.55
56-0532G	N111-W10 CONNECTOR OC	R25.2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: PATRICK HALLY
 W. K. TSAO
 MAINUL KHAN
 REVISIONS: [Blank]
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 REVISIONS: [Blank]
 REVISIONS: [Blank]

LAST REVISION | DATE PLOTTED => 14-JUN-2010
 05-10-10 TIME PLOTTED => 13:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	6	17

Mainul Hasan Khan 5-10-10
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MAINUL KHAN
 No. 70031
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

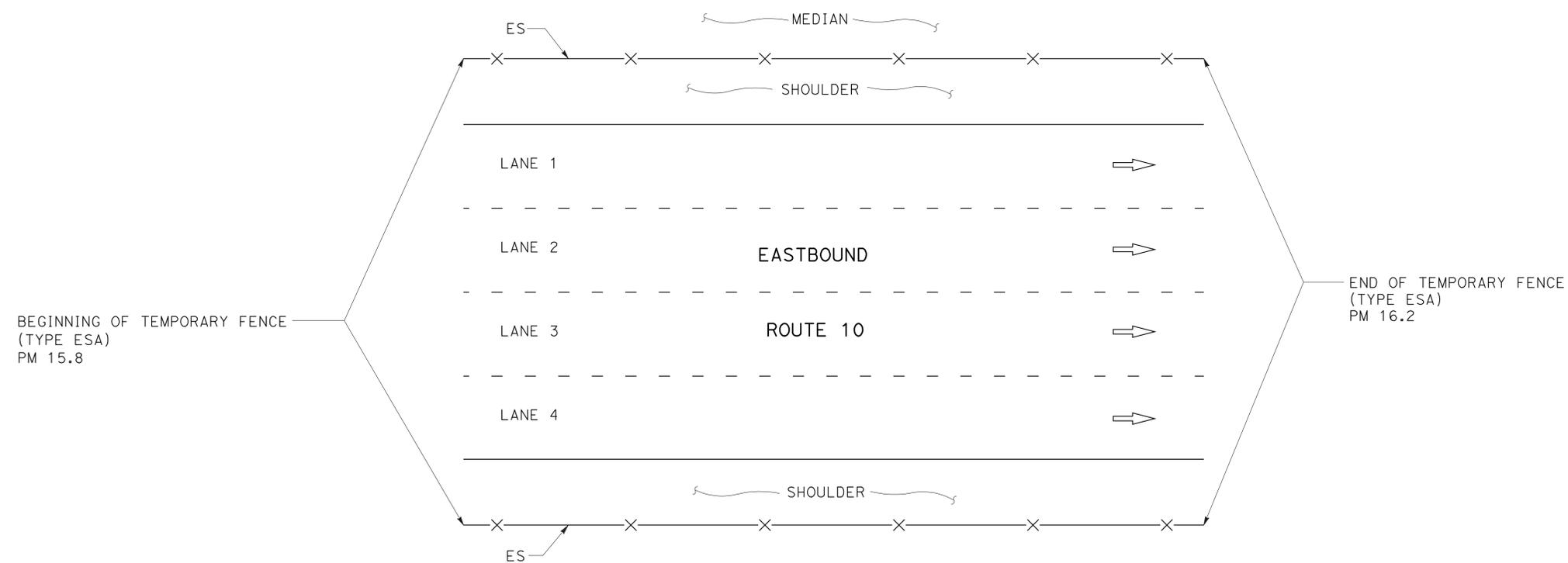
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. ALL WORK WITHIN STATE RIGHT OF WAY.
2. THE LOCATIONS AND DIMENSIONS OF TEMPORARY FENCE (TYPE ESA) TO BE DETERMINED BY THE ENGINEER.

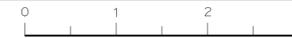
LEGEND:

➔ DIRECTION OF TRAVEL



**PLAN
TEMPORARY FENCE (TYPE ESA)
(TYPICAL)**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	PATRICK HALLY
CALCULATED/DESIGNED BY	CHECKED BY
W. K. TSAO	MAINUL KHAN
REVISOR BY	DATE REVISED

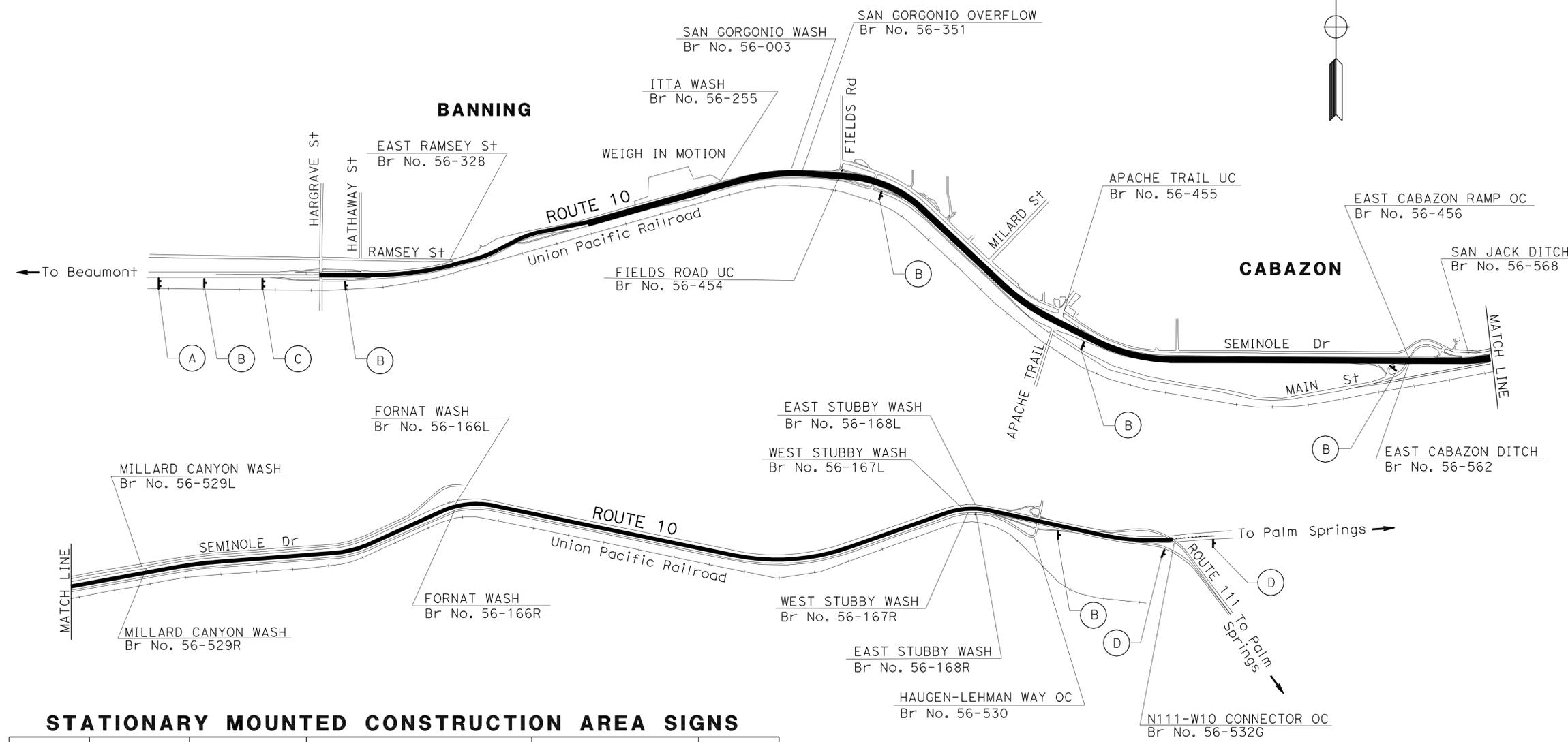


LEGEND:

- ↑ ONE POST SIGN
- ↑↑ TWO POST SIGN
- ROAD WORK AREA
- (X) CONSTRUCTION AREA SIGN CODE

NOTES:

1. CONSTRUCTION AREA SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. REFER TO STANDARD PLAN T-10 FOR TRAFFIC CONTROL REQUIREMENT.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	(X) SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
A	G20-1	90" x 36"	ROAD WORK NEXT 12 MILES	2 - 4" x 6"	1
B	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	6
C	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLE IN CONSTRUCTION ZONES	2 - 6" x 6"	1
D	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2

CONSTRUCTION AREA SIGNS
NO SCALE **CS-1**

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY



USERNAME => s135318
DGN FILE => 80L9501a001.dgn

CU 08381

EA 0L9501

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B
 LARRY SARTORI
 VU TRAN
 TRAN HOANG
 REVISOR BY
 DATE REVISOR
 CHECKED BY
 DESIGNED BY
 CALCULATED BY

QUANTITIES

POST MILES		LANE #4 (EB)	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	DOWEL BAR (DRILL AND BOND)
FROM	TO	No. OF BROKEN SLABS	CY	EA
13.8	13.85	2	10.72	36
13.85	14.05	1	5.36	18
14.05	14.1	1	5.36	18
14.1	14.2	2	10.72	36
14.2	14.27	6	32.16	108
14.27	14.35	5	26.80	90
14.4	14.41	2	10.72	36
14.5	14.5	2	10.72	36
14.75	14.77	3	16.08	54
14.95	14.97	2	10.72	36
15	15.1	7	37.52	126
15.15	15.2	3	16.08	54
16.2	16.2	1	5.36	18
17.8	17.85	2	10.72	36
17.9	18	6	32.16	108
18.1	18.1	1	5.36	18
18.3	18.3	2	10.72	36
19	19	2	10.72	36
TOTAL BROKEN SLABS IN EB		50	268	900

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	8	17

Mainul Hasan Khan 5-10-10
 REGISTERED CIVIL ENGINEER DATE
 6-14-10
 PLANS APPROVAL DATE

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TEMPORARY CONSTRUCTION BMPs

TEMPORARY CONSTRUCTION SITE BMPs	UNITS	QUANTITIES
TEMPORARY COVER	SQYD	800
TEMPORARY FIBER ROLL	LF	560
TEMPORARY CONCRETE WASHOUT (PORTABLE)	EA	3

GROOVE EXISTING CONCRETE PAVEMENT

PM		LENGTH	LENGTH	WIDTH	AREA	AREA
BEGIN	END	MILES	(F+)	(F+)	(SQFT)	(SQYD)
13.8	25.2	11.4	60192	48	2889216	321024

PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION	DETAIL No. OR PAVEMENT MARKING	REMOVE PAVEMENT MARKERS	PAVEMENT MARKER						THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)								
				RETROREFLECTIVE TYPE			RECESSED TYPE			4" YELLOW			4" WHITE			8" WHITE		
				C	G	H	C	G	H	EA	EA	EA	EA	EA	EA	EA	EA	
-	PM 13.87 to R25.2	27B	-	-	-	-	-	-	-	-	-	-	58250	-	-			
-	PM 13.87 to 16.25	12	785	-	-	-	60	725	-	-	-	-	37710	-	-			
-	PM 16.25 to R25.2	12	2955	108	2847	-	-	-	-	-	-	-	141768	-	-			
-	PM 13.87 to 16.25	25	263	-	-	-	-	-	263	12570	-	-	-	-	-			
-	PM 16.25 to R25.2	25	986	-	-	986	-	-	-	47256	-	-	-	-	-			
-	PM 13.87 to 16.25	36	13	-	-	-	-	13	-	-	-	-	-	-	275			
-	PM 16.25 to R25.2	36	60	-	60	-	-	-	-	-	-	-	-	-	1300			
-	PM 15.35 to 15.5 (TRUCK AUX LANE)	37	62	-	-	-	-	548	54	-	-	-	-	-	792			
SUBTOTAL			-	108	2907	986	68	792	263	59826	237728	2367						
TOTAL			5124	4001			1123			299921								

SUMMARY OF QUANTITIES

Q-1

- NOTES:**
- VOLUME OF EACH SLAB= 18' L x 12' W x 0.67' = 5.36 CY.
 - EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 W. K. TSAO
 MAINUL KHAN
 PATRICK HALLY
 REVISOR BY DATE
 CHECKED BY
 DESIGNED BY
 SUPERVISOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	9	17

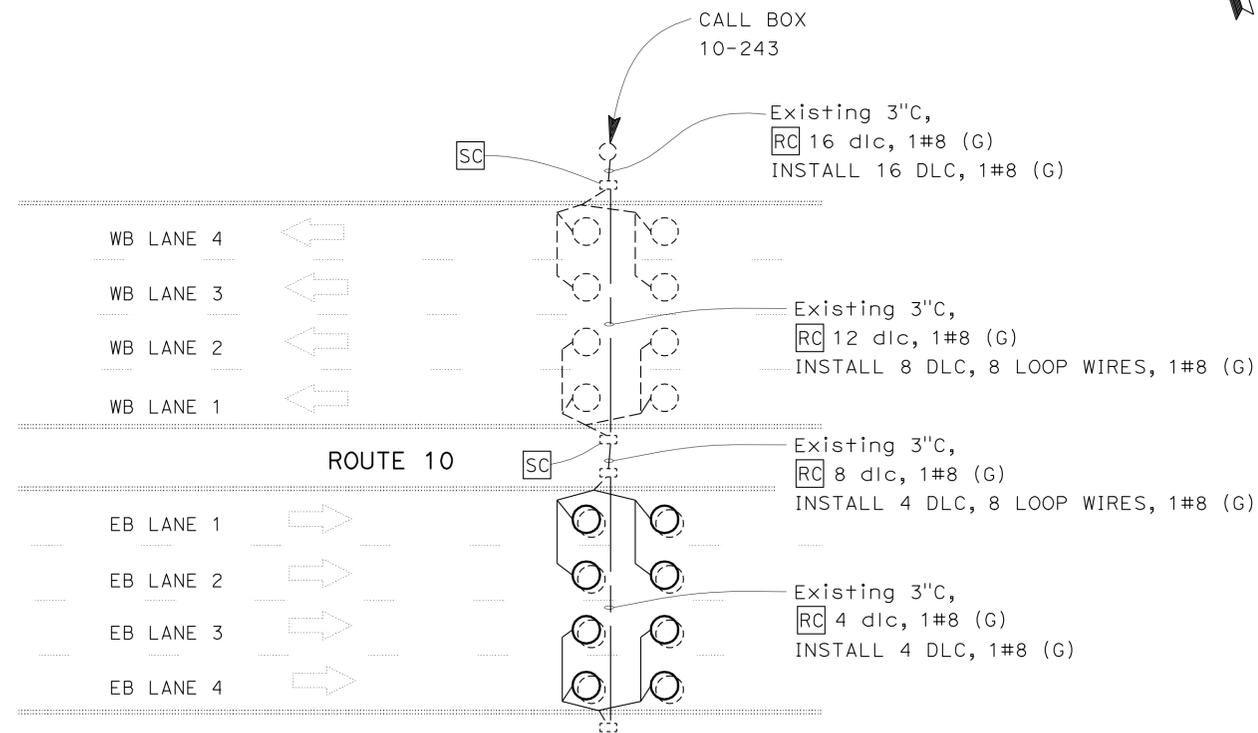
<i>Michael Apante</i>	5-10-10
REGISTERED ELECTRICAL ENGINEER	DATE
6-14-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MICHAEL APANTE
No. E17164
Exp. 9-30-11
ELECTRICAL
STATE OF CALIFORNIA

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GENERAL NOTE:

1. ALL EXISTING LOOP DETECTORS, SHOWN TO BE REPLACED, ON THE EASTBOUND LANES SHALL BE ABANDONED.



INDUCTIVE LOOP DETECTOR

WEST OF EB HAUGEN-LEHMANN EXIT,
APPROXIMATE PM 24.5

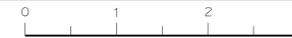
INDUCTIVE LOOP DETECTOR

NO SCALE

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

RELATIVE BORDER SCALE
IS IN INCHES



USERNAME => frrmguye
DGN FILE => 80L950ua001.dgn

CU 08395

EA 0L9501

BORDER LAST REVISED 4/11/2008

LAST REVISION | DATE PLOTTED => 14-JUN-2010
05-10-10 | TIME PLOTTED => 11:26

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN A

FUNCTIONAL SUPERVISOR
DAVID A. GONZALEZ

CALCULATED-DESIGNED BY
CHECKED BY

MICHAEL APANTE
DAVID A. GONZALEZ

REVISOR BY
DATE REVISED

M.A.
4-10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	10	17

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

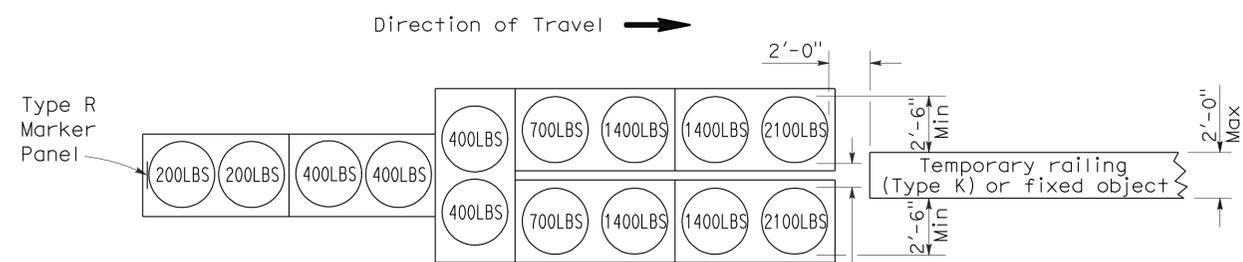
June 6, 2008
PLANS APPROVAL DATE

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

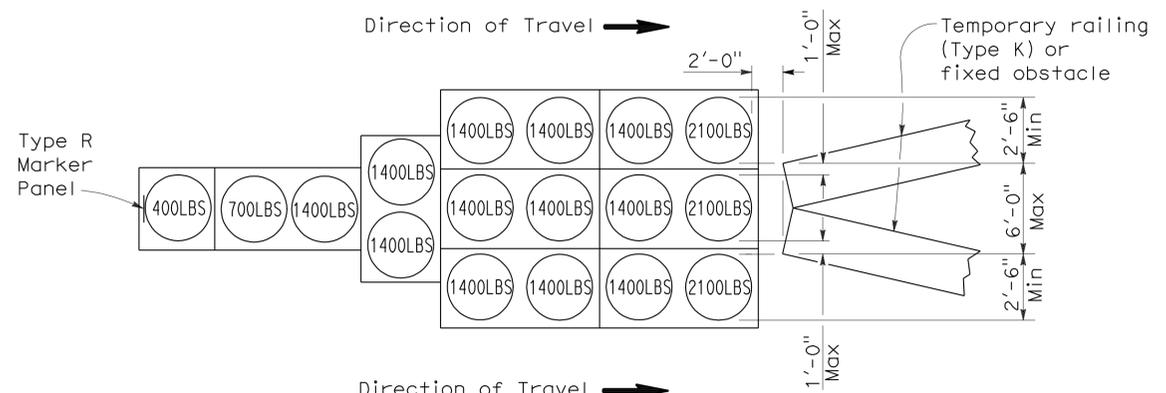
To accompany plans dated 6-14-10

2006 REVISED STANDARD PLAN RSP T1A



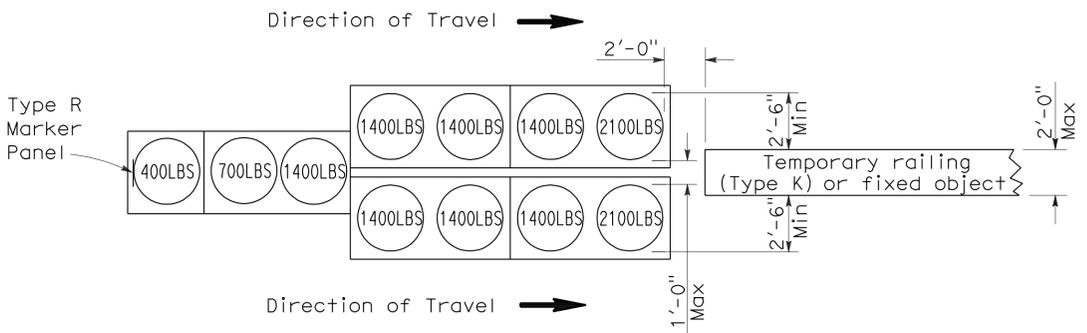
ARRAY 'TU14'

Approach speed 45 mph or more



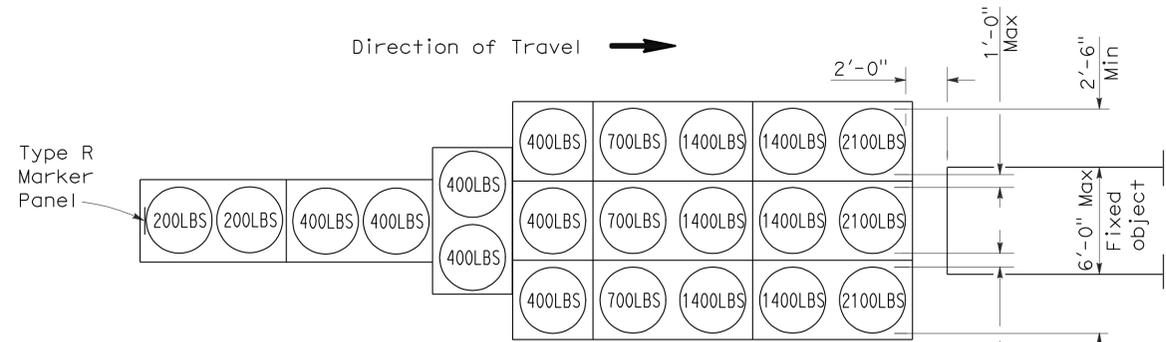
ARRAY 'TU17'

Approach speed less than 45 mph



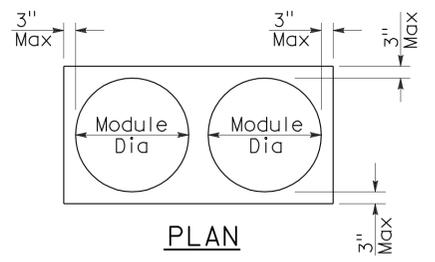
ARRAY 'TU11'

Approach speed less than 45 mph

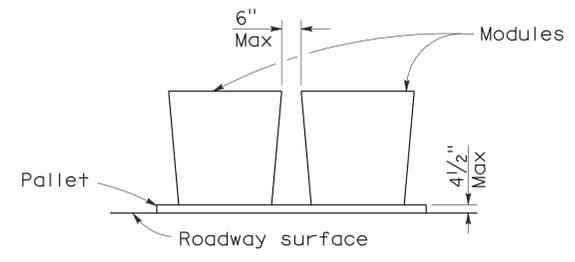


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

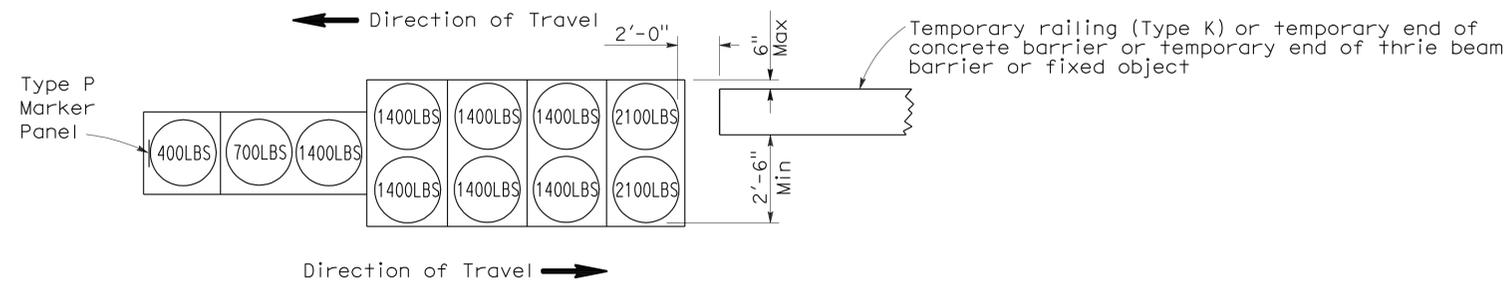
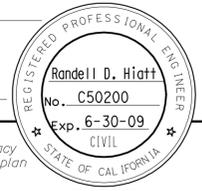
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	11	17

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

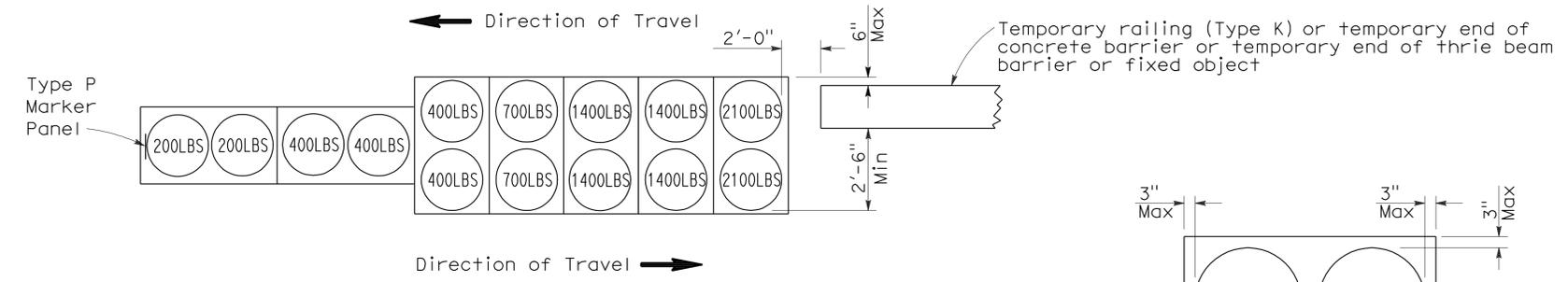
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To accompany plans dated 6-14-10



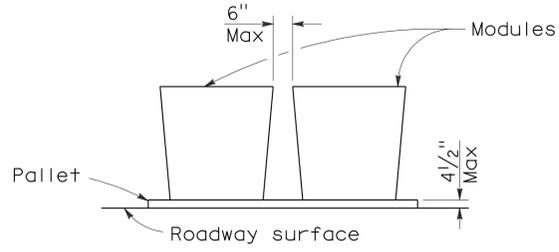
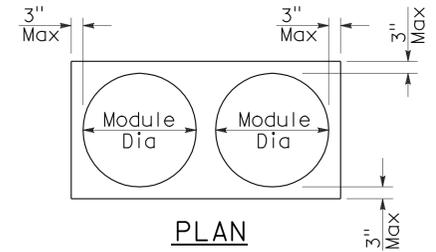
ARRAY 'TB11'

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

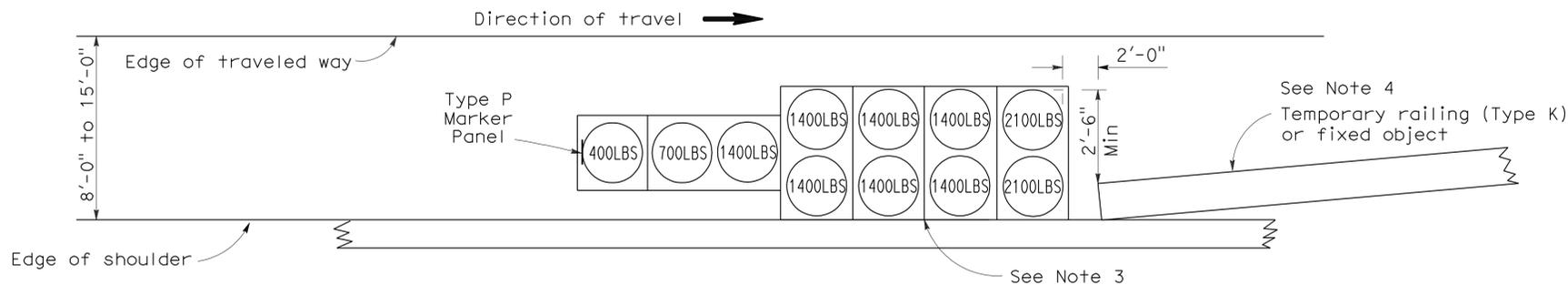
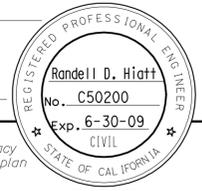
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	12	17

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

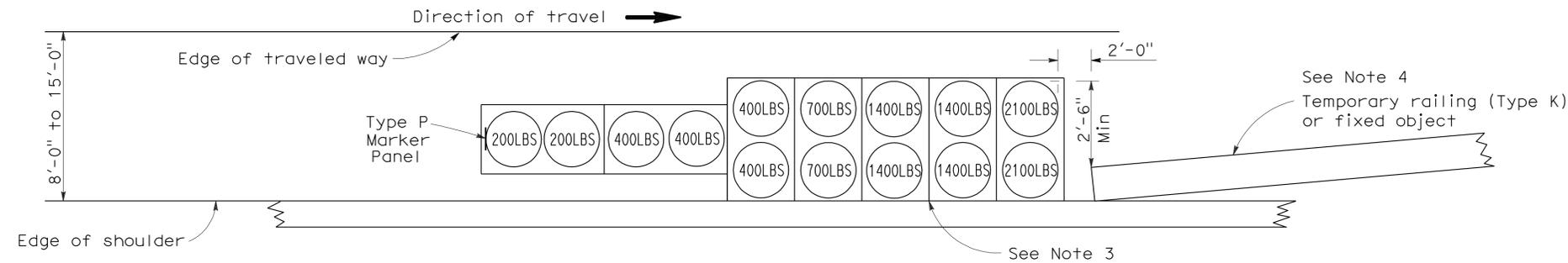
June 6, 2008
PLANS APPROVAL DATE

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

To accompany plans dated 6-14-10



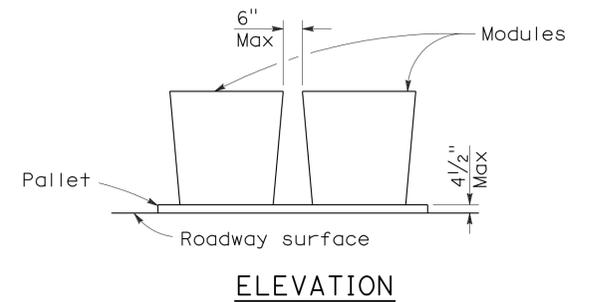
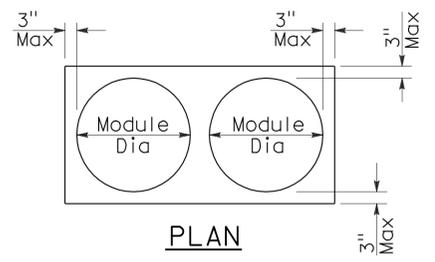
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



CRASH CUSHION PALLET DETAIL
See Note 11

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.

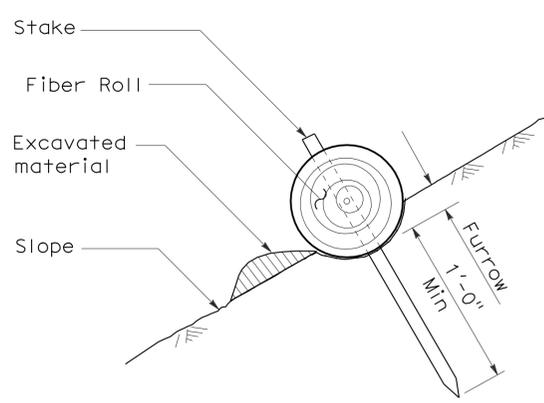
REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

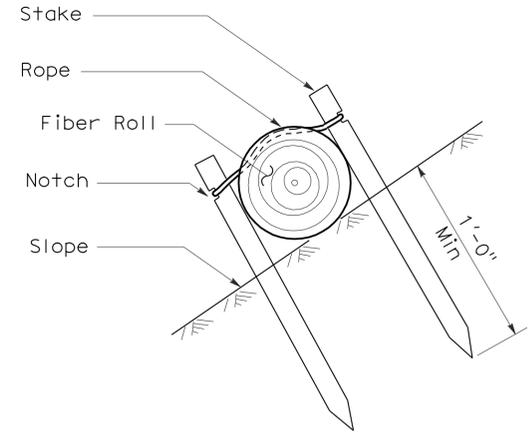
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	13	17

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

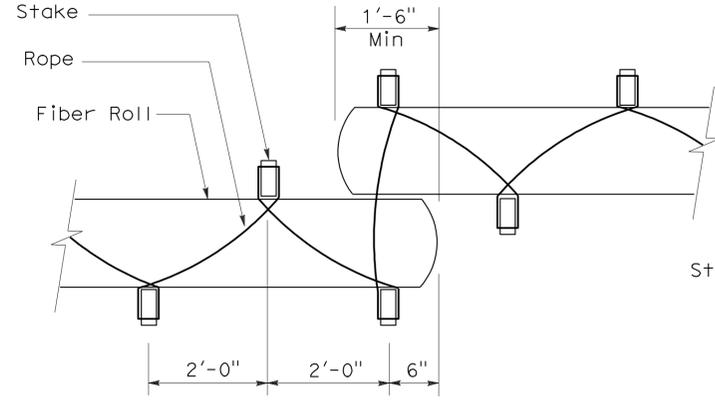
To accompany plans dated 6-14-10



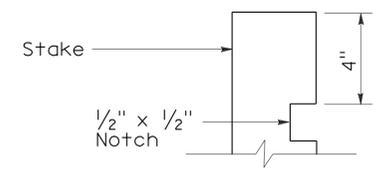
SECTION
TEMPORARY FIBER ROLL
(TYPE 1)



SECTION
TEMPORARY FIBER ROLL
(TYPE 2)

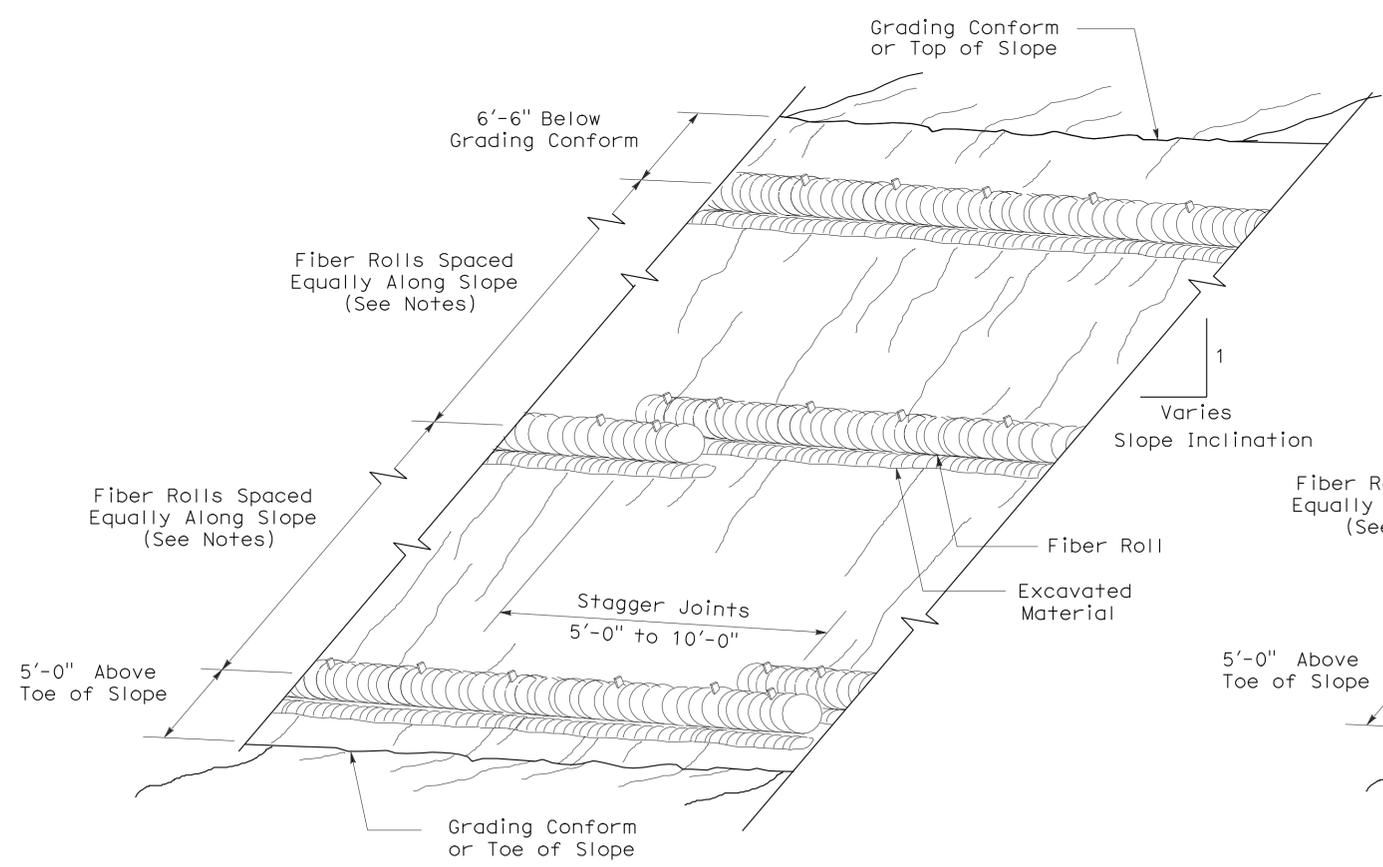


PLAN
TEMPORARY FIBER ROLL
(TYPE 2)

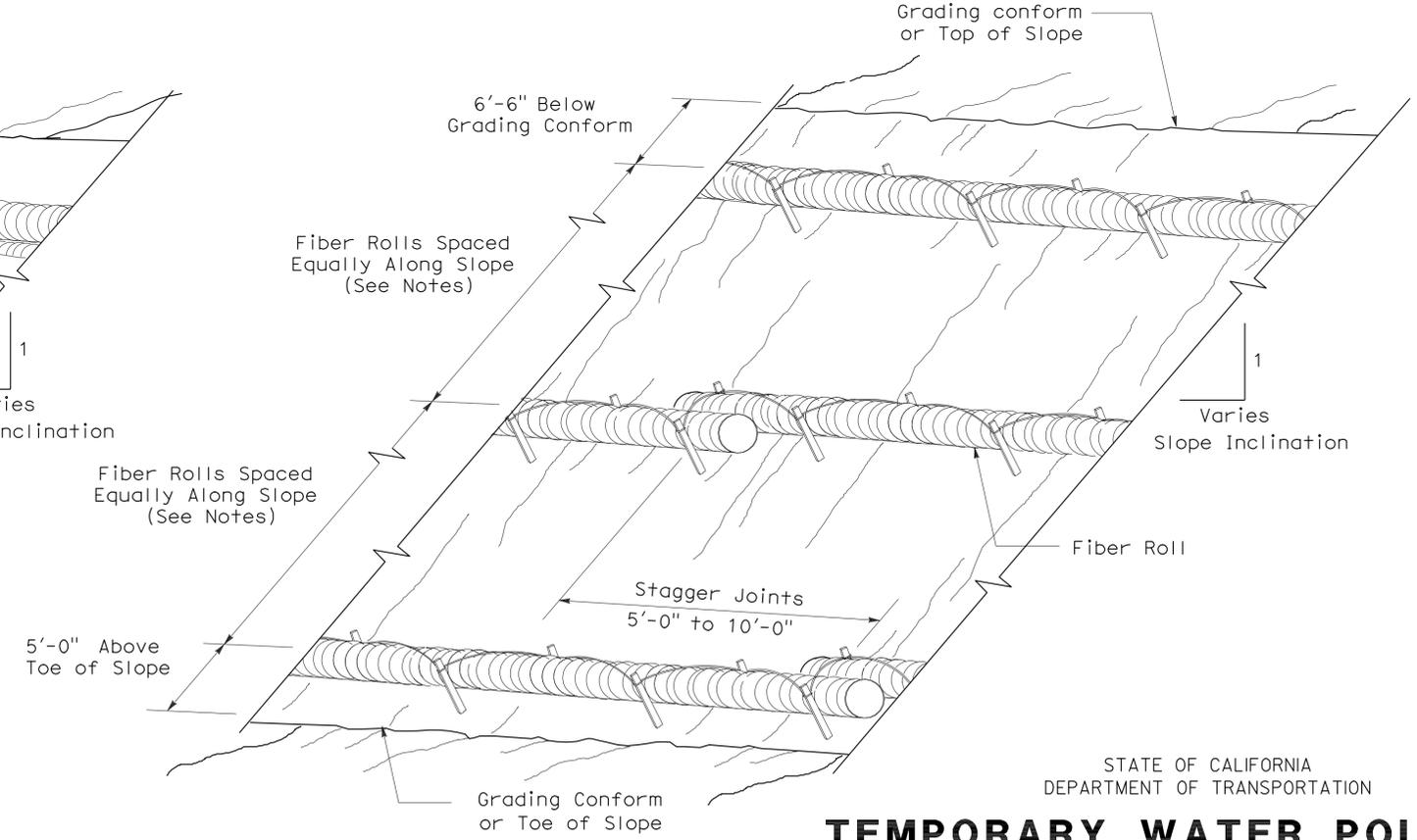


ELEVATION
STAKE NOTCH DETAIL

- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
 2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)

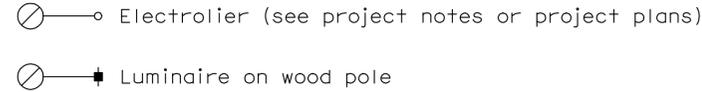
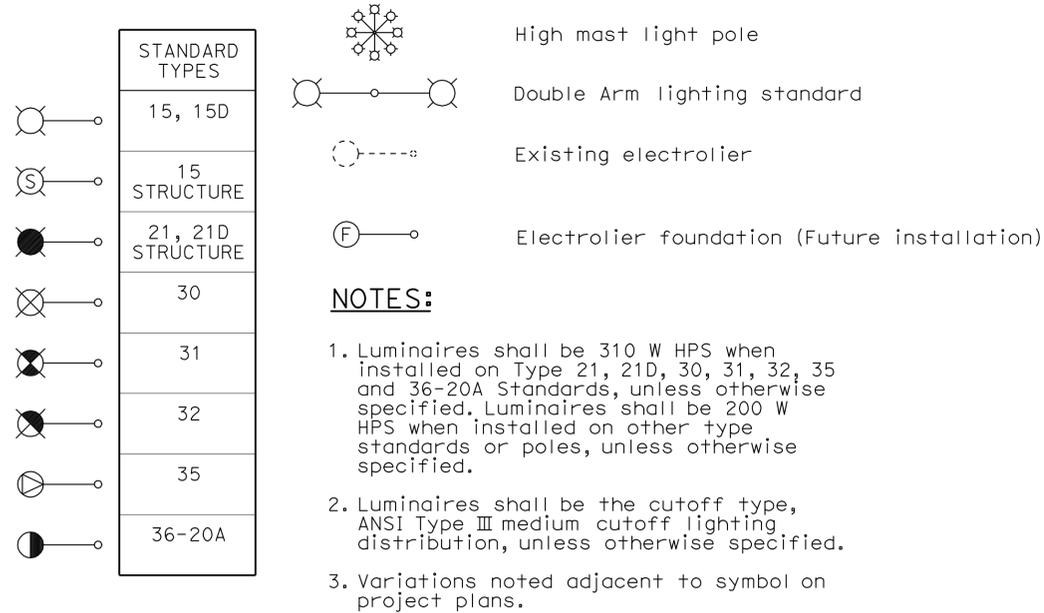


PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY FIBER ROLL)
 NO SCALE

2006 REVISED STANDARD PLAN RSP T56

ELECTROLIERS



STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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
08	Riv	10	13.8/R25.2	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 6-14-10

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
08	Riv	10	13.8/R25.2	15	17

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

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

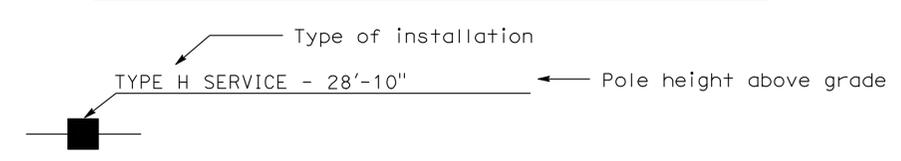
SIGNAL EQUIPMENT

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

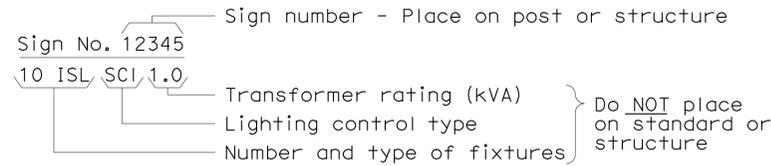
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

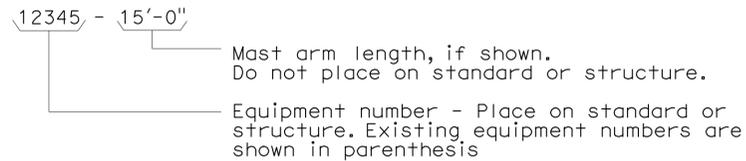
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

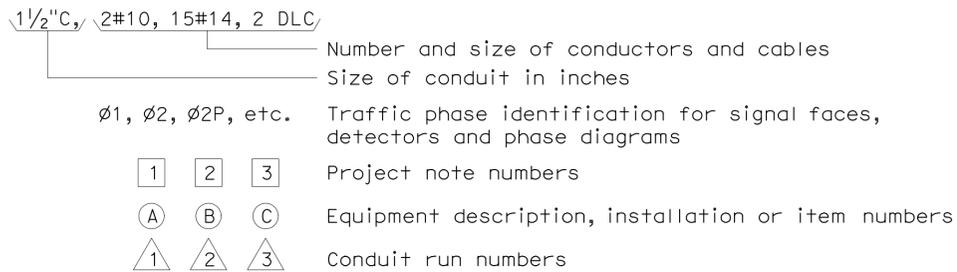
ILLUMINATED SIGN IDENTIFICATION NUMBER:



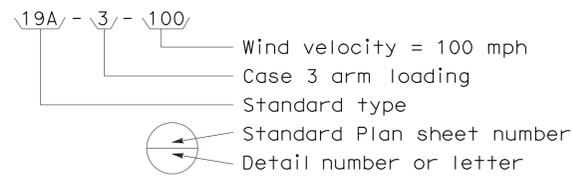
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



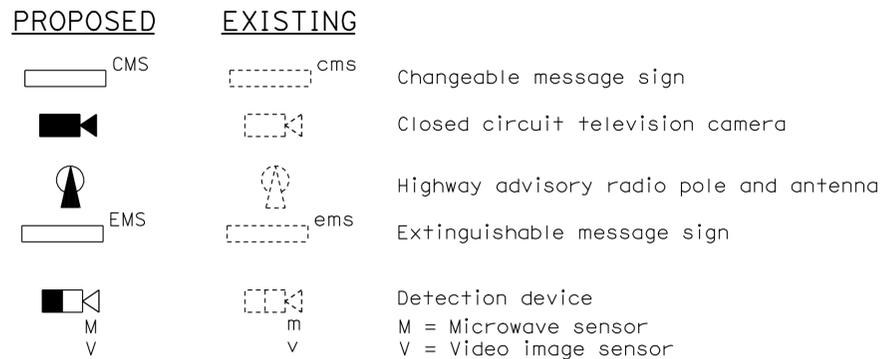
CONDUIT AND CONDUCTOR IDENTIFICATION:



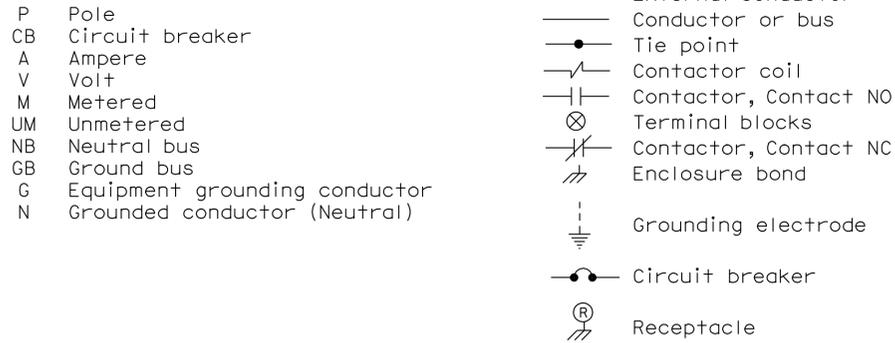
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



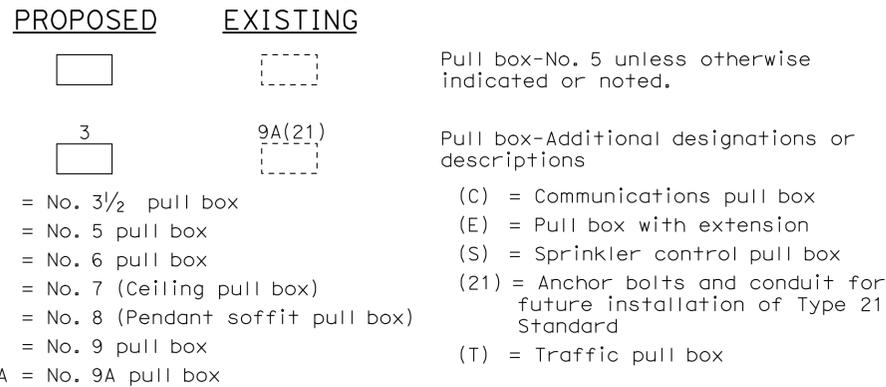
MISCELLANEOUS EQUIPMENT



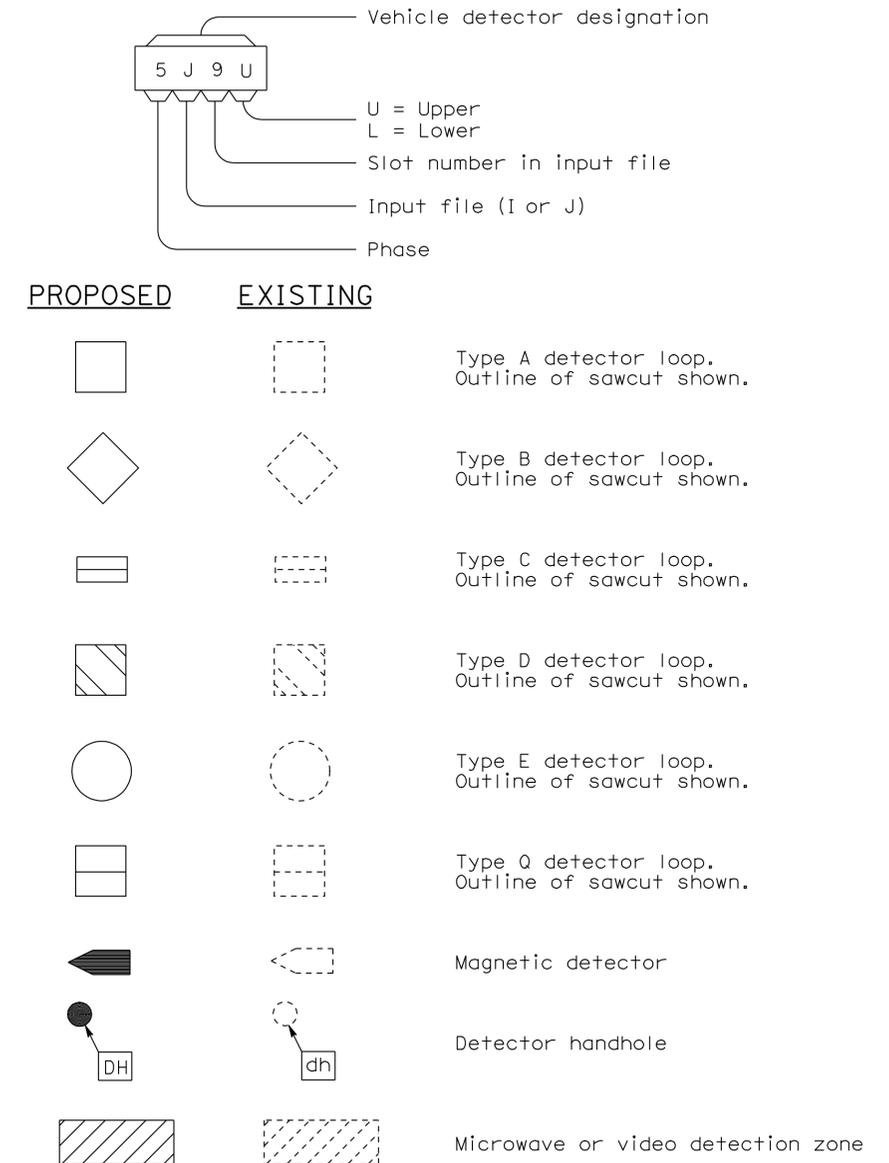
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

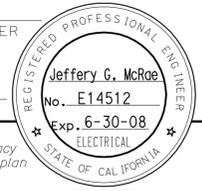
RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	13.8/R25.2	17	17

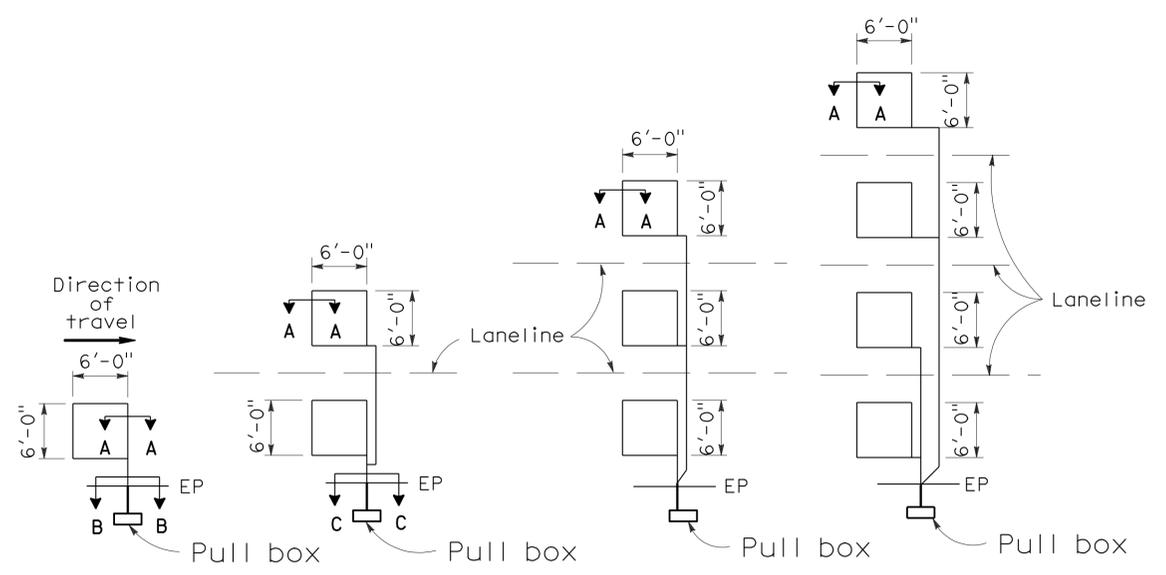
REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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To accompany plans dated 6-14-10

LOOP INSTALLATION PROCEDURE

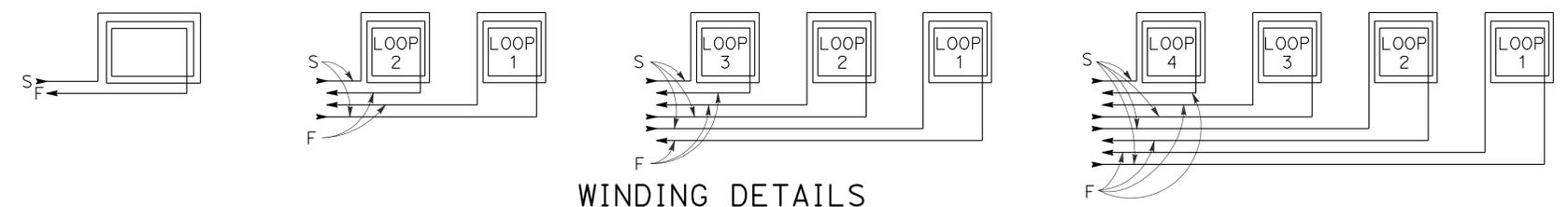
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no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

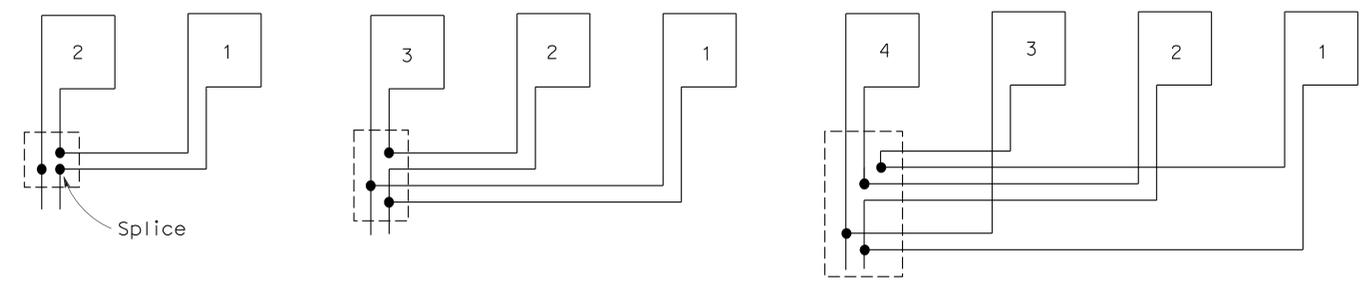
SAWCUT DETAILS

- (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)



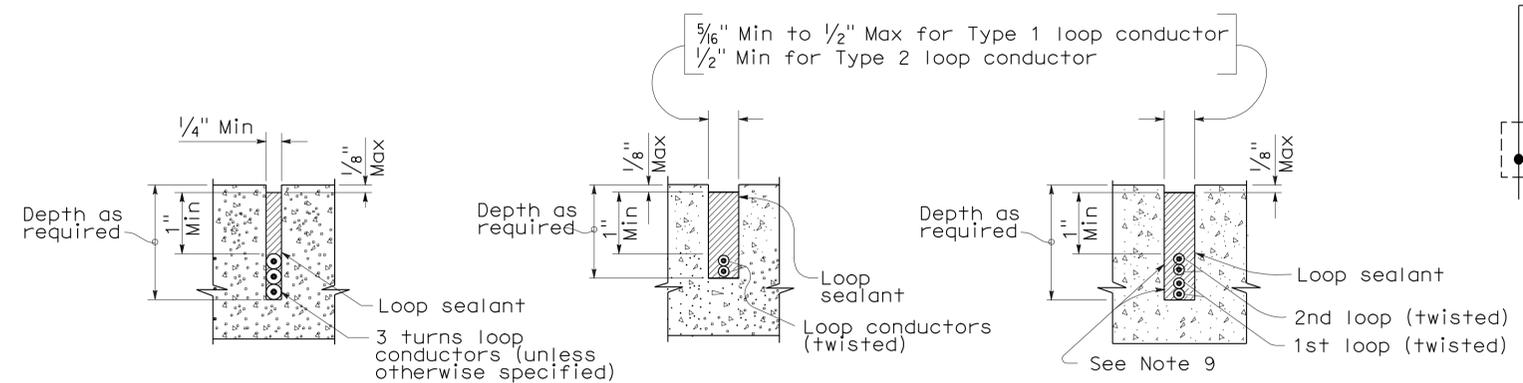
WINDING DETAILS

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.

2006 REVISED STANDARD PLAN RSP ES-5A