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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 **ACNH-ER-19C9(004)E**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN MENDOCINO COUNTY**  
**NEAR LEGGETT**  
**AT 0.1 MILE NORTH OF**  
**JITNEY GULCH BRIDGE**

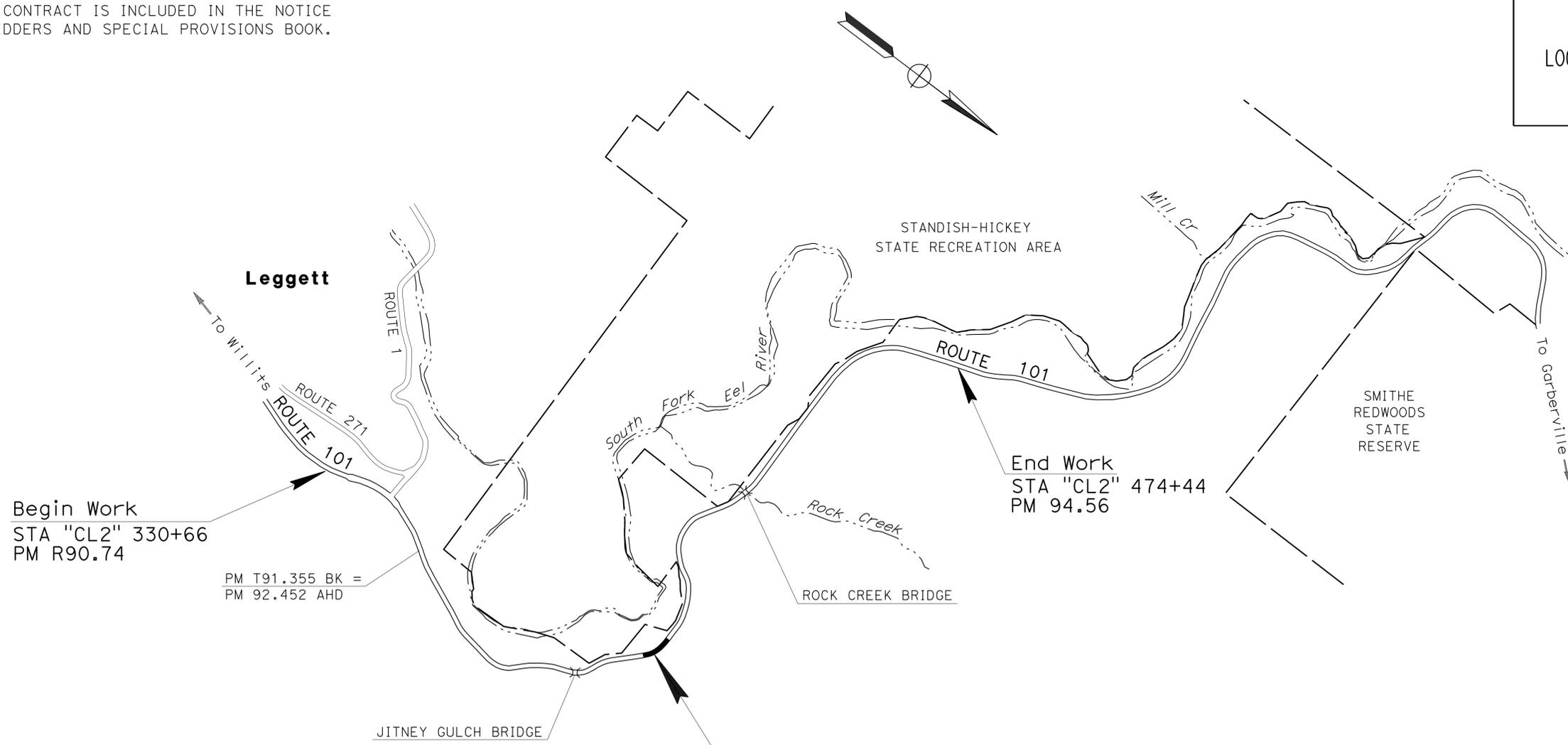
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	1	40





LOCATION MAP

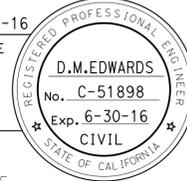


**LOCATION OF CONSTRUCTION**  
**STA "CL2" 402+63 PM 93.2**

NO SCALE

PROJECT MANAGER: STEVEN BLAIR  
 DESIGN MANAGER: KELLY B. TIMMONS

*Dianne M. Edwards* 5-2-16  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**May 2, 2016**  
 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>01-0B5104</b>
PROJECT ID	<b>0112000134</b>

P:\PROJ\01\08510\Drawings\Sheets\0112000134ca001.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR  
 KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 DIANNE EDWARDS  
 ERIC SHADA  
 REVISED BY  
 DATE REVISED

**NOTES:**

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS ARE SHOWN ON THE SUPERELEVATION DIAGRAMS.
- EXACT LOCATIONS AND TYPES OF DIKE, GUARD RAILING AND CABLE RAILING ARE SHOWN ON THE LAYOUT AND SUMMARY OF QUANTITY SHEETS.

**ABBREVIATIONS:**

- GPI GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)  
 SR SUPERELEVATION RATE

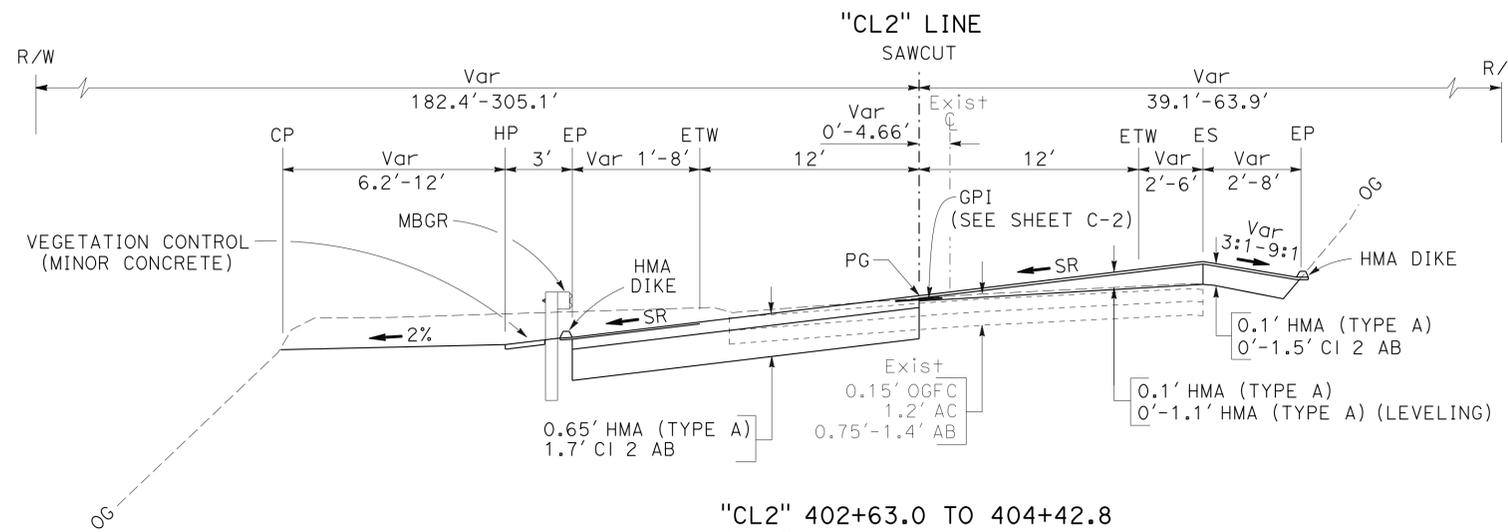
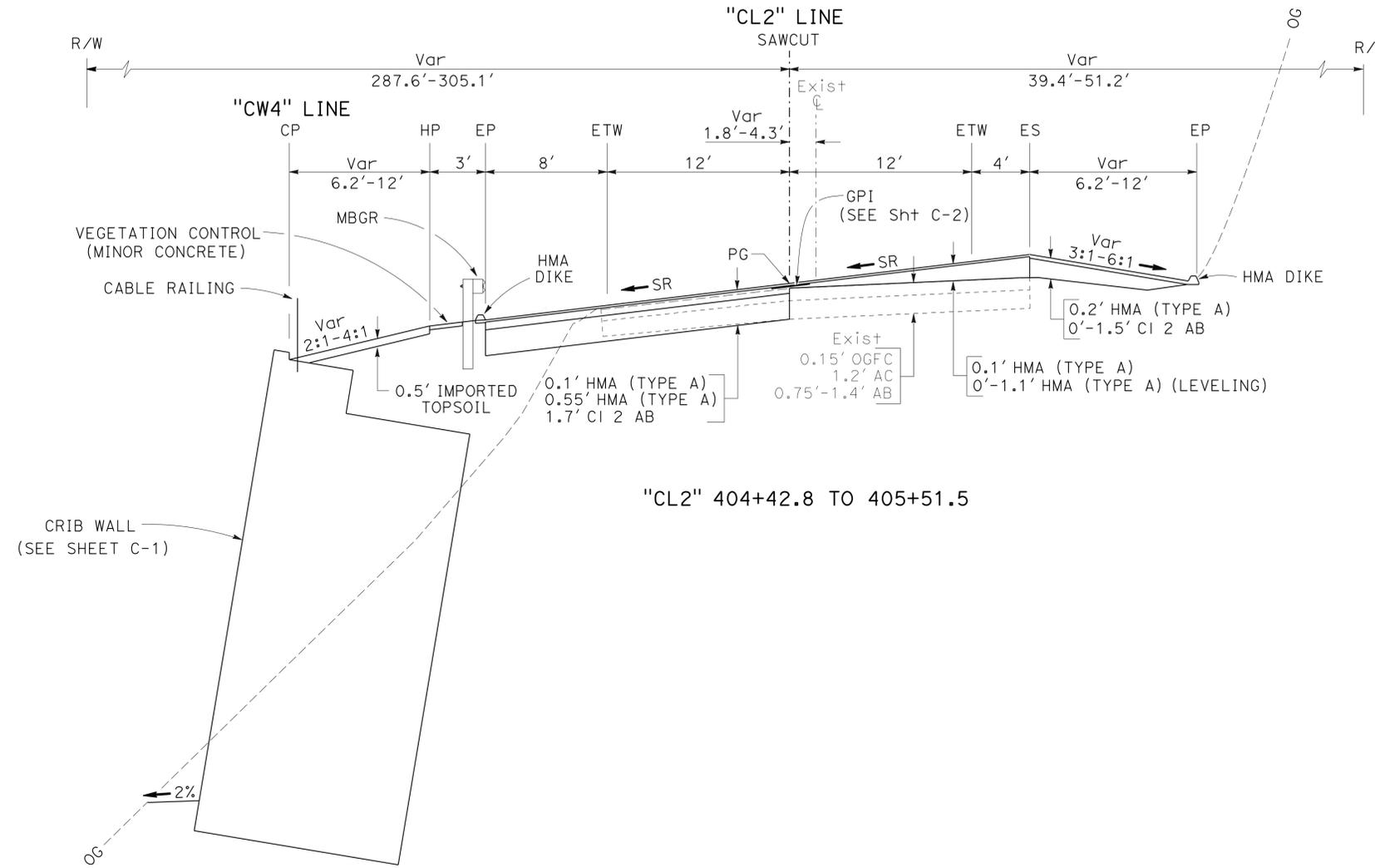
PAVEMENT CLIMATE REGION  
 NORTH COAST

**DESIGN DESIGNATION**

ADT 2014 = 6,370 D = 60%  
 ADT 2024 = 7,290 T = 10%  
 DHV = 830 V = 55 MPH  
 ESAL = 5,399,500

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	2	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER 5-2-16 DATE  
**May 2, 2016**  
 PLANS APPROVAL DATE  
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"CL2" 402+63.0 TO 404+42.8  
 "CL2" 405+51.5 TO 407+35.0

**ROUTE 101**

**TYPICAL CROSS SECTIONS**  
 NO SCALE

**X-1**





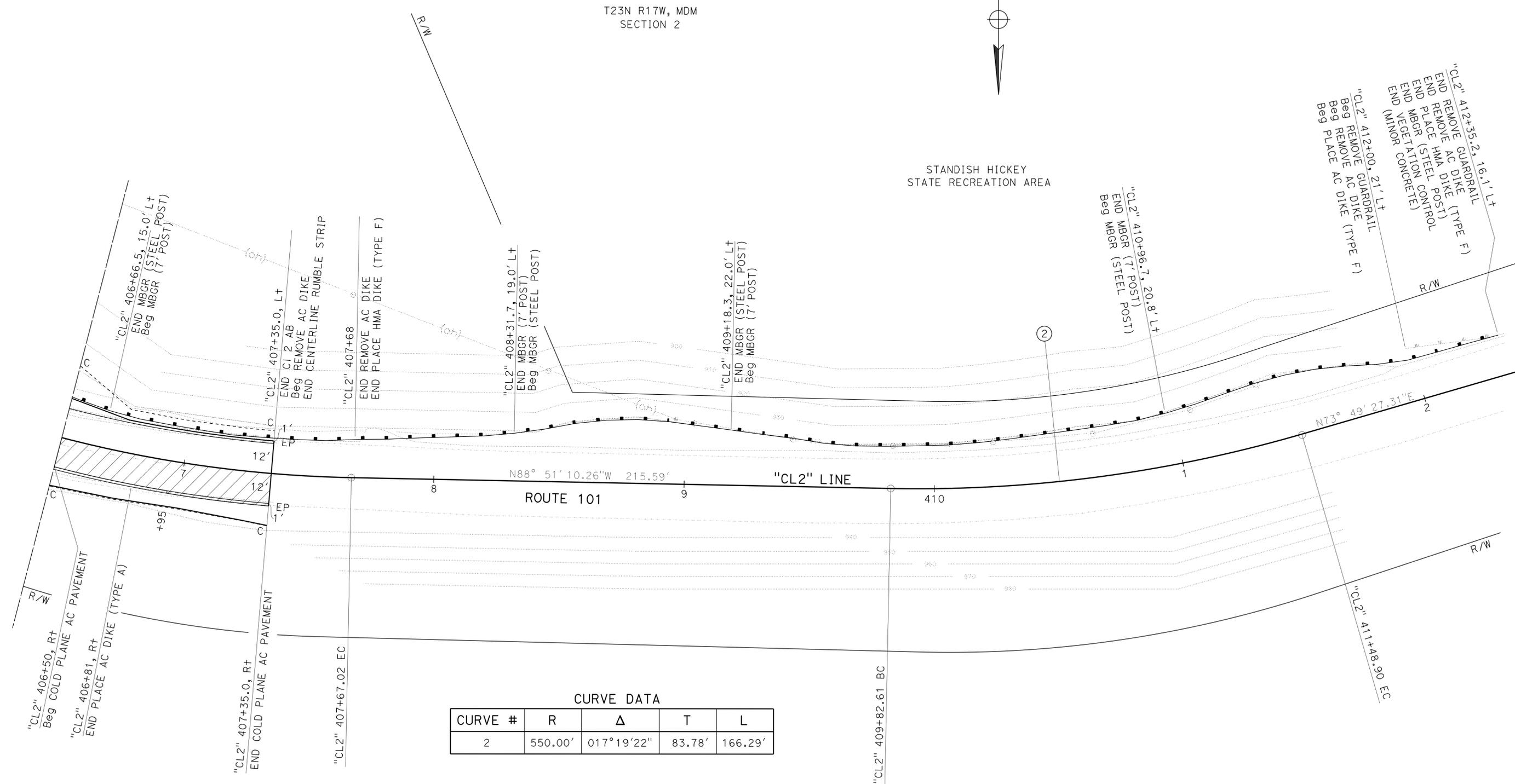
**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	4	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER DATE 5-2-16  
**May 2, 2016**  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**D.M. EDWARDS**  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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**LAYOUT**  
 SCALE: 1" = 20'



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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]  
 DIANNE EDWARDS ERIC SHADA  
 REVISED BY: [blank] DATE: [blank]

- NOTES:**
- SEE SHEET L-1 FOR GUARDRAIL INFORMATION.
  - STRUCTURE BACKFILL (CRIBWALL) SHALL BE PERVIOUS BACKFILL MATERIAL.
  - COORDINATE SYSTEM IS NAD 83 AND VERTICAL DATUM IS NAVD 88.
  - FOR INFORMATION NOT SHOWN SEE S+D PLANS A62B, C7A, C7B AND C7C.

**ABBREVIATIONS**  
 SR SUPERELEVATION RATE

**LEGEND**

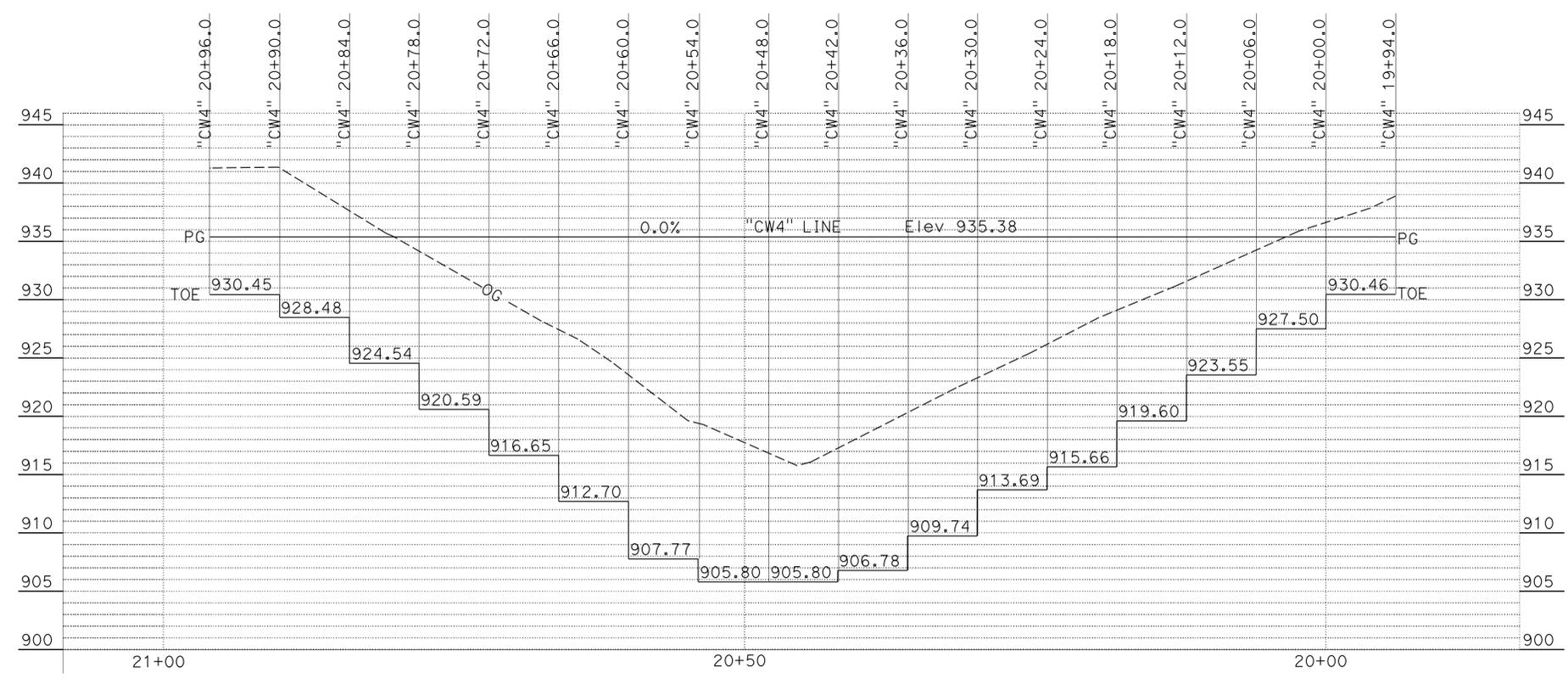
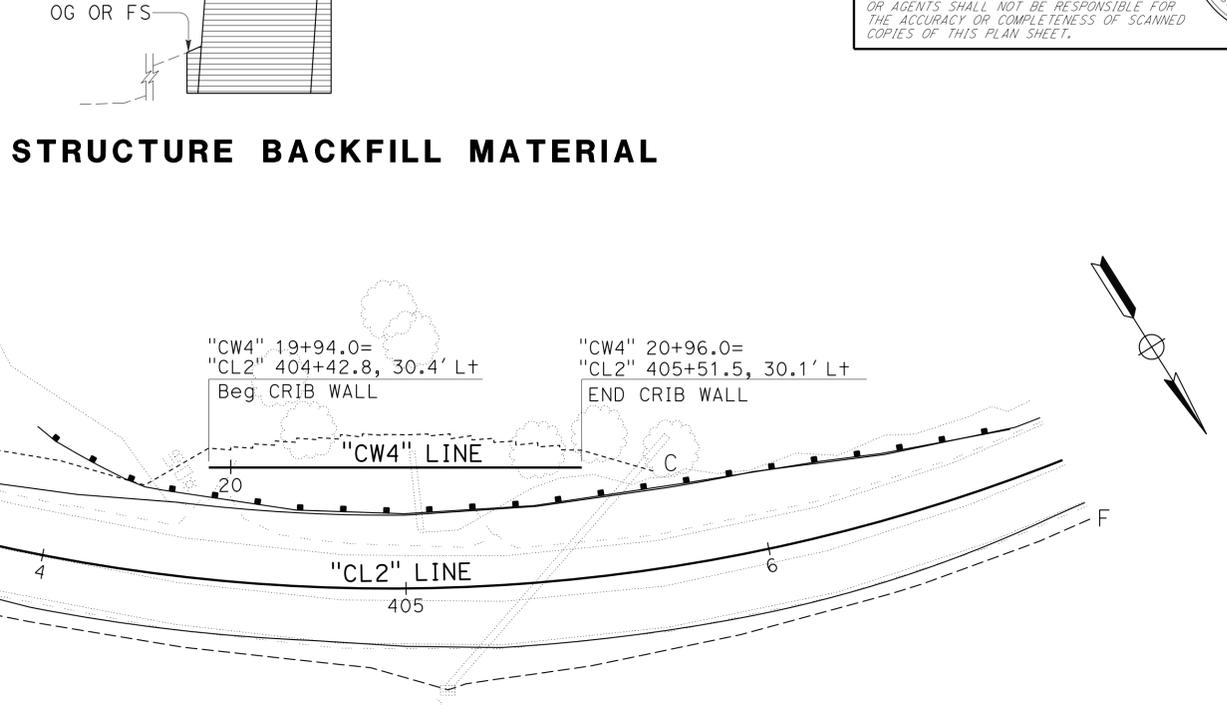
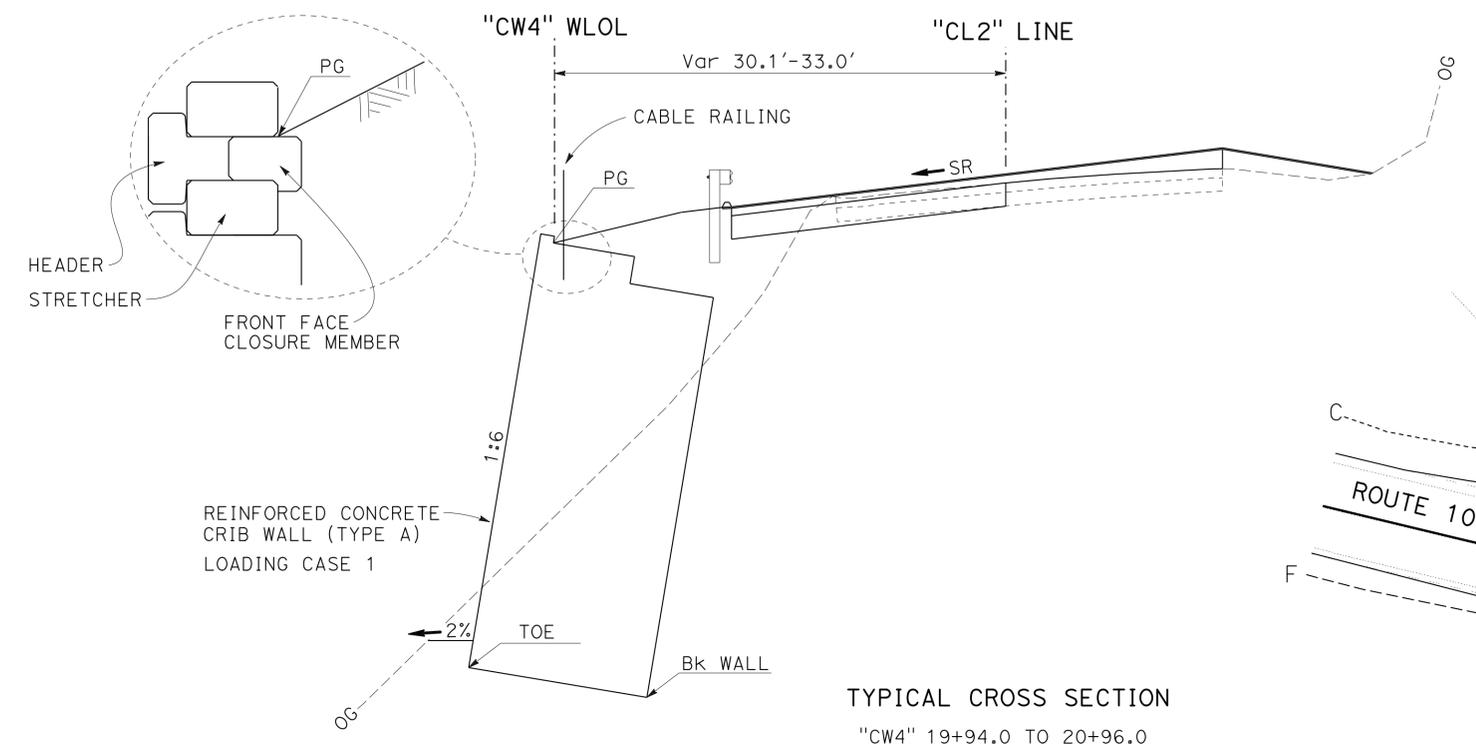
- [Hatched Box] BACKFILL MATERIAL TYPE E
- [Horizontal Lines Box] PERVIOUS BACKFILL MATERIAL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	6	40

REGISTERED CIVIL ENGINEER: *Dianne M. Edwards*  
 No. C-51898  
 Exp. 6-30-16  
 DATE: 5-2-16  
**May 2, 2016**  
 PLANS APPROVAL DATE

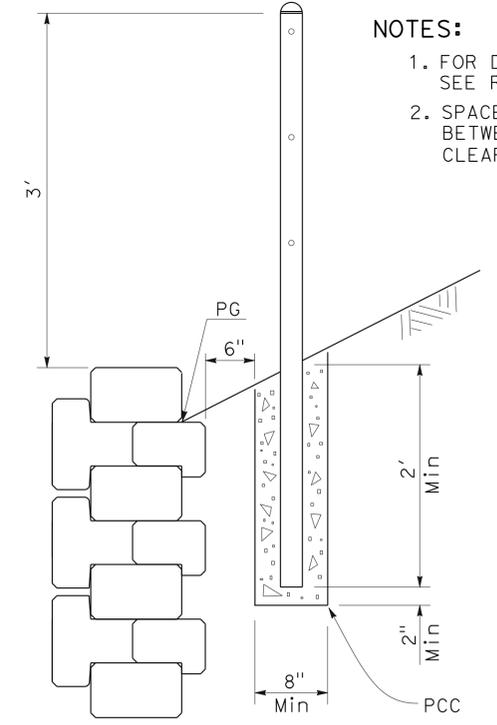
REGISTERED PROFESSIONAL ENGINEER  
 D.M. EDWARDS  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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**REINFORCED CONCRETE CRIB WALL (TYPE A)**

**PLAN VIEW**



**CABLE RAILING DETAIL**

- NOTES:**
- FOR DETAILS NOT SHOWN SEE RSP B11-47.
  - SPACE CABLE RAILING POSTS BETWEEN HEADERS, Min 10' CLEARANCE.

**CONSTRUCTION DETAILS**  
 NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	7	40
<i>Dianne M. Edwards</i> REGISTERED CIVIL ENGINEER				5-2-16 DATE	
May 2, 2016 PLANS APPROVAL DATE					
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**NOTES:**

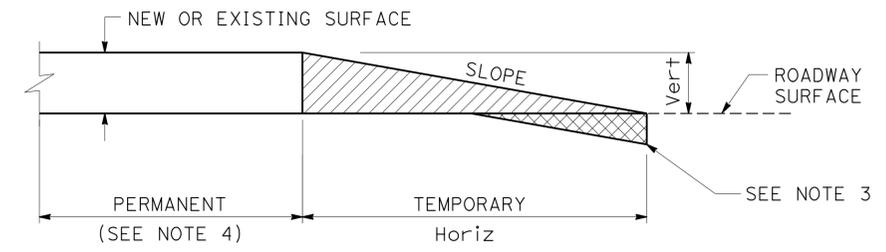
1. ROADWAY SURFACE IS THE TOP OF EXISTING SURFACE OR THE TOP OF THE PLANED SURFACE.
2. IF AUTHORIZED, YOU MAY USE ALTERNATIVE MATERIALS OR METHODS TO PRODUCE THE REQUIRED TAPER.
3. GRIND EXISTING SURFACES TO ACCOMMODATE A MINIMUM TAPER THICKNESS OF 0.10' WHEN TEMPORARY TAPER WILL BE IN PLACE FOR MORE THAN 14 DAYS.
4. PERMANENT SURFACE MAY BE EXISTING OR NEW SURFACE.

**LEGEND:**

- COLD PLANE AC PAVEMENT
- HMA MATERIAL (TEMPORARY TAPER)

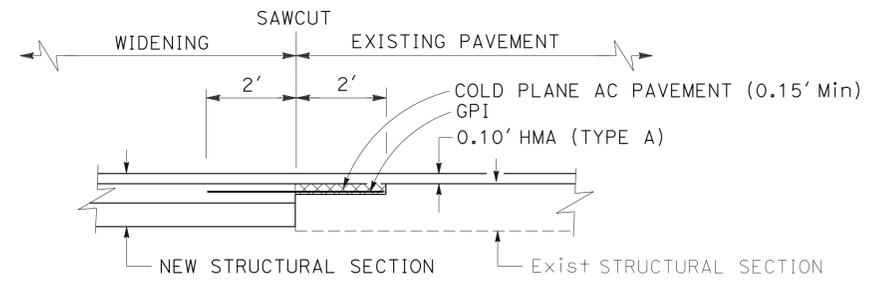
**ABBREVIATIONS:**

GPI GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)

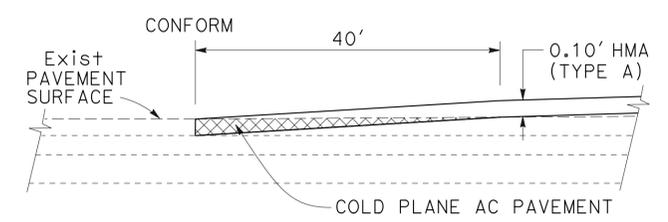


VERTICAL	SLOPE H:V
0 - 0.10'	70:1
GREATER THAN 0.10'	160:1

**TEMPORARY PAVING CONFORM DETAIL**

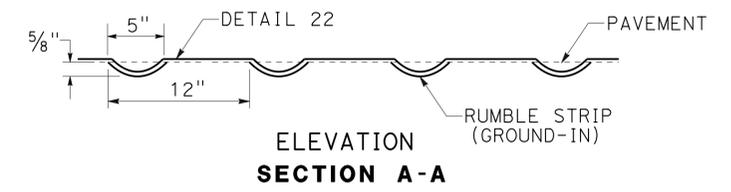


**GPI DETAIL**  
"CL2" 402+63 TO 407+35

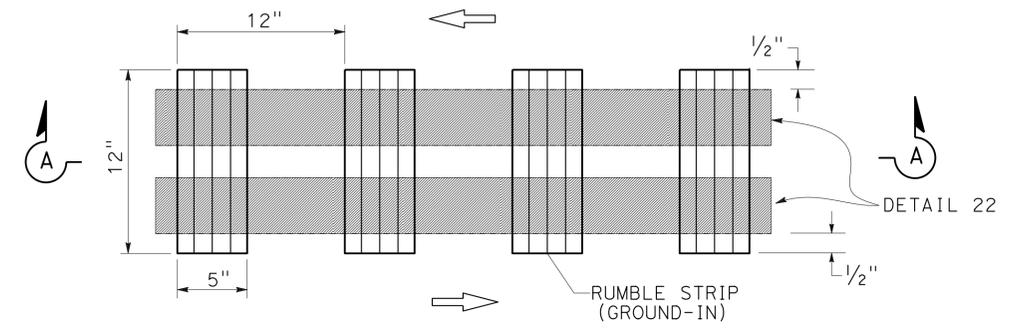


**PAVING CONFORM DETAIL**

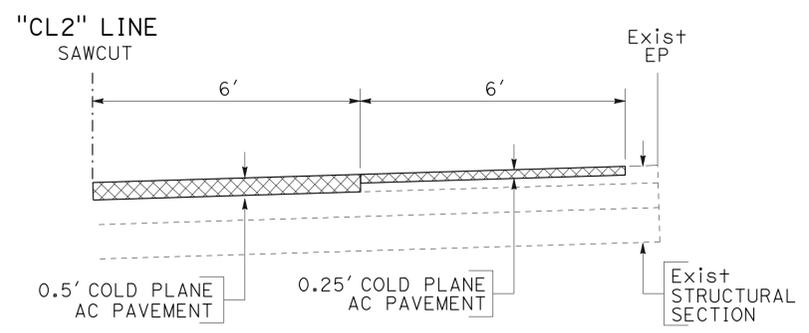
"CL2" 402+63 TO 403+03 Rt  
 "CL2" 406+95 TO 407+35 Rt



**ELEVATION SECTION A-A**



**PLAN CENTERLINE RUMBLE STRIP**



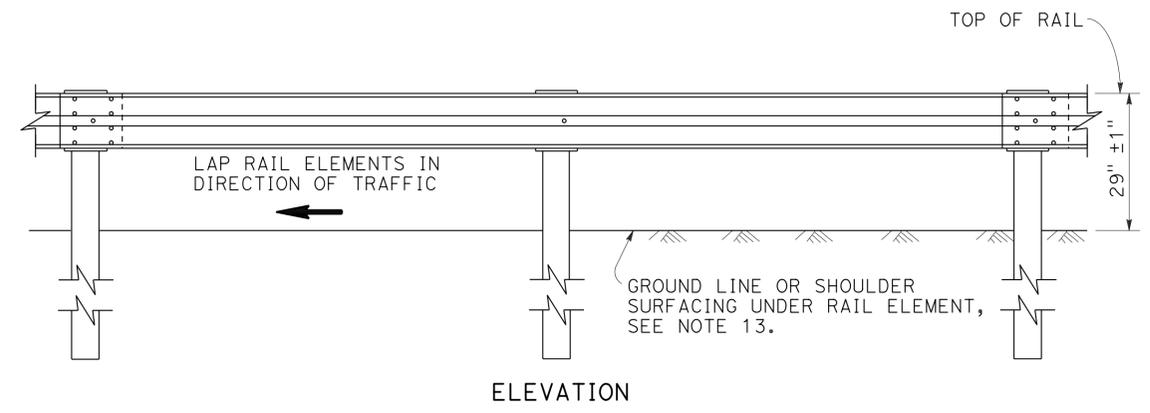
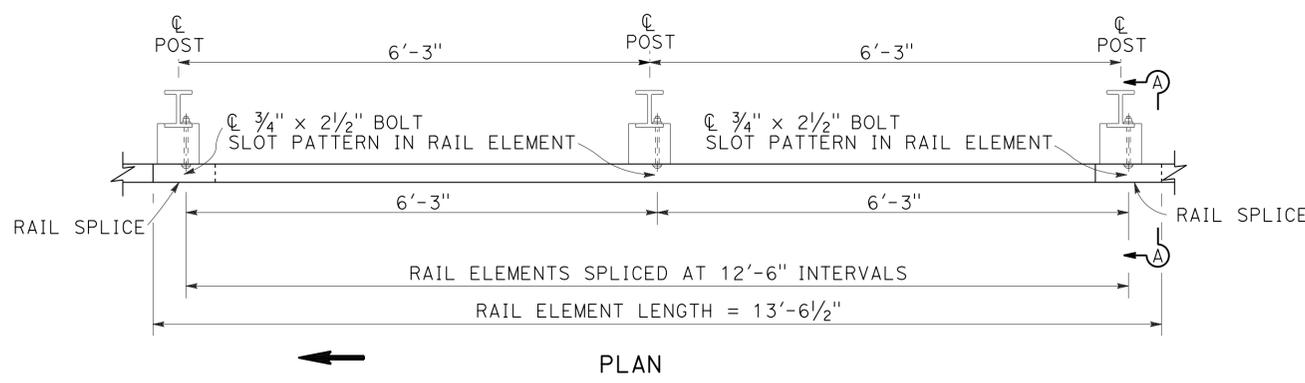
**CROSS SECTION COLD PLANE AC DETAIL**

"CL2" 403+03 TO 404+25 Rt  
 "CL2" 406+50 TO 406+95 Rt

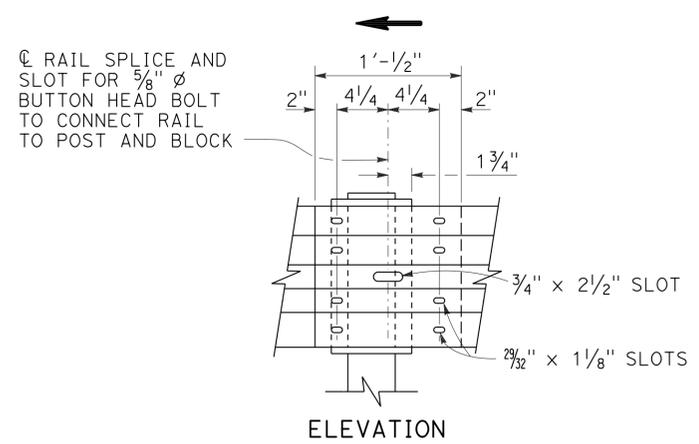
**CONSTRUCTION DETAILS**  
NO SCALE

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 DIANNE EDWARDS  
 ERIC SHADA  
 REVISOR: [blank]  
 DATE: [blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	8	40
<i>Dianne M. Edwards</i> REGISTERED CIVIL ENGINEER			5-2-16 DATE	REGISTERED PROFESSIONAL ENGINEER No. C-51898 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA	
May 2, 2016 PLANS APPROVAL DATE					
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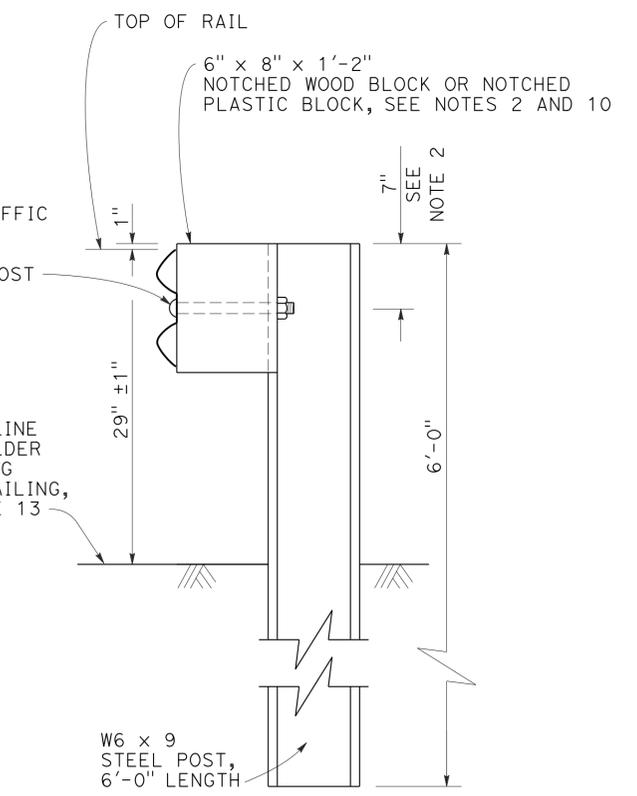
**METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS**



**RAIL ELEMENT SPLICE DETAIL**

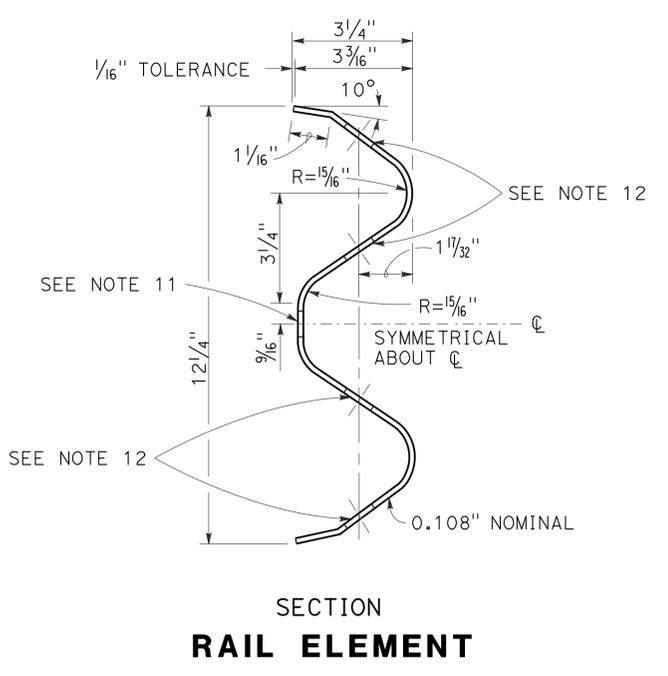
- A) CONNECT THE OVER LAPPED END OF THE RAIL ELEMENTS WITH 5/8" Ø x 1 3/8" BUTTON HEAD OVAL SHOULDER SPLICE BOLTS INSERTED INTO THE 2 9/32" x 1/8" SLOTS AND BOLTED TOGETHER WITH 5/8" RECESSED HEX NUTS. RECESS OF HEX NUT POINTS TOWARD RAIL ELEMENT. A TOTAL OF 8 BOLTS AND NUTS ARE TO BE USED AT EACH RAIL SPLICE CONNECTION.
- B) THE ENDS OF THE RAIL ELEMENTS ARE TO BE OVERLAPPED IN THE DIRECTION OF TRAFFIC (SEE DETAILS).
- C) WHERE END CAP IS TO BE ATTACHED TO THE END OF A RAIL ELEMENT, A TOTAL OF 4 OF THE ABOVE DESCRIBED SPLICE BOLTS AND NUTS ARE TO BE USED.

5/8" Ø BUTTON HEAD BOLT WITH Hex NUT. ATTACH RAIL ELEMENT TO WOOD BLOCK AND STEEL POST WITH BOLT ON TRAFFIC APPROACH SIDE OF POST WEB. NO WASHER ON RAIL FACE FOR BOLTED CONNECTION TO LINE POST



**SECTION A-A TYPICAL STEEL LINE POST INSTALLATION**

SEE NOTE 3



**SECTION RAIL ELEMENT**

**NOTES:**

1. FOR DETAILS OF STANDARD HARDWARE USED TO CONSTRUCT GUARD RAILING, SEE SHEET C-4.
2. FOR DETAILS OF STEEL POSTS AND NOTCHED WOOD BLOCKS USED TO CONSTRUCT GUARD RAILING, SEE SHEET C-4.
3. FOR ADDITIONAL INSTALLATION DETAILS, SEE SHEET C-5.
4. GUARD RAILING POST SPACING TO BE 6'-3" CENTER TO CENTER, EXCEPT AS OTHERWISE NOTED.
5. FOR GUARD RAILING TYPICAL LAYOUTS, SEE SHEET C-6.
6. TO CONNECT RAILING TO TERMINAL SYSTEM END TREATMENT, TRANSITION THE TOP OF RAILING HEIGHT AT A RATIO OF 120:1 TO TERMINAL SYSTEM END TREATMENT HEIGHT PLUS ONE 12'-6" STANDARD RAILING SECTION AT THE TRANSITIONED HEIGHT FOR A HORIZONTAL CONNECTION TO THE END TREATMENT.
7. FOR GUARD RAILING END ANCHOR DETAILS, SEE SHEET C-7.
8. FOR DIKE POSITIONING AND GUARD RAILING DELINEATION DETAILS, SEE SHEET C-4.
9. DIRECTION OF ADJACENT TRAFFIC INDICATED BY → .
10. NOTCHED FACE OF BLOCK FACES STEEL POST.
11. SLOTTED HOLE FOR BOLTED CONNECTION OF RAIL ELEMENT TO BLOCK AND POST. SEE "SECTION THRU RAIL ELEMENT".
12. SLOTTED HOLES FOR SPLICE BOLTS TO OVERLAP ENDS OF RAIL ELEMENT. SEE "SECTION THRU RAIL ELEMENT".
13. INSTALL POSTS IN SOIL.

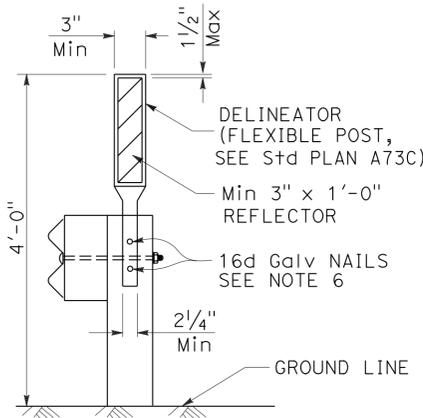
**CONSTRUCTION DETAILS**  
NO SCALE

P:\PROJECTS\01\08510\08510.dwg - 0112000134ga003.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: DIANNE EDWARDS  
 CHECKED BY: ERIC SHADA  
 REVISED BY: DATE  
 REVISIONS:

P:\PROJ\01\08510\varof+ing\Sheets\0112000134ga004.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Kelly B. Timmons  
 Functional Supervisor  
 Checked by  
 Eric Shada  
 Dianne Edwards  
 Revised by  
 Date Revised

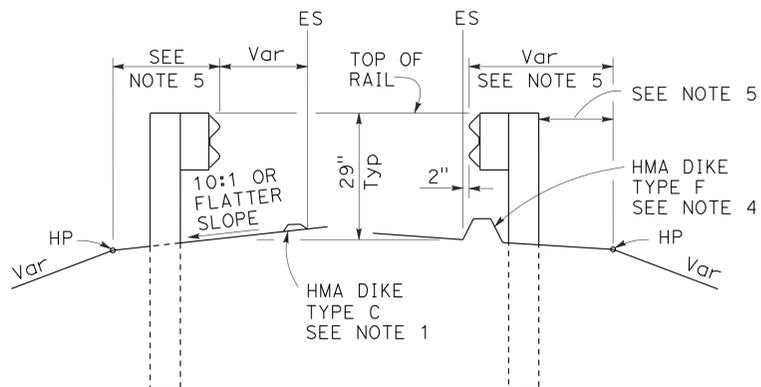
**NOTES:**

1. WHEN NECESSARY TO PLACE DIKE IN FRONT OF FACE OF GUARD RAILING, ONLY TYPE C DIKE MAY BE USED. FOR DIKE DETAILS, SEE STANDARD PLAN A87B.
2. FOR STANDARD RAILING POST EMBEDMENT, SEE SHEET C-5.
3. GUARD RAILING DELINEATION TO BE USED WHERE SHOWN ON THE PROJECT PLANS.
4. WHEN DIKE OR CURB IS PLACED UNDER GUARD RAILING, THE MAXIMUM HEIGHT OF THE DIKE OR CURB SHALL BE 4". MOUNTABLE DIKE SHOULD NOT BE USED. FOR DIKE AND CURB DETAILS, SEE STANDARD PLANS A87A AND A87B.
5. FOR DETAILS OF TYPICAL DISTANCE BETWEEN THE FACE OF RAIL AND HINGE POINT, SEE SHEET C-5.
6. FOR STEEL LINE POSTS, USE 1/4" - 20 SELF-TAPPING SCREWS IN 0.22" DIAMETER HOLES OR 1/4" BOLTS IN 3/32" DIAMETER HOLES.



**GUARD RAILING DELINEATION**

SEE NOTE 3



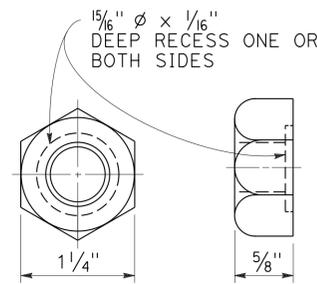
**DIKE POSITIONING**

**NOTE:**

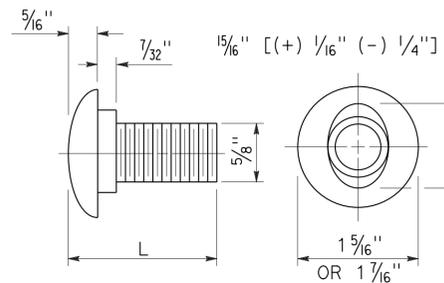
1. SLOTTED HOLES FOR SPLICE BOLTS TO OVERLAP ENDS OF RAIL ELEMENT.

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

\*\* FOR NESTED RAIL APPLICATIONS.



**5/8" Ø RECESS NUT**

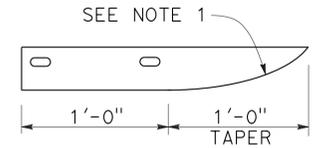


**5/8" Ø BUTTON HEAD BOLT**

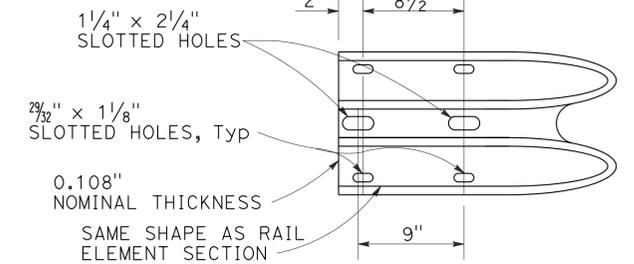
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	9	40

Dianne M. Edwards  
 REGISTERED CIVIL ENGINEER 5-2-16 DATE  
 May 2, 2016  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 D.M. EDWARDS  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA



**PLAN**

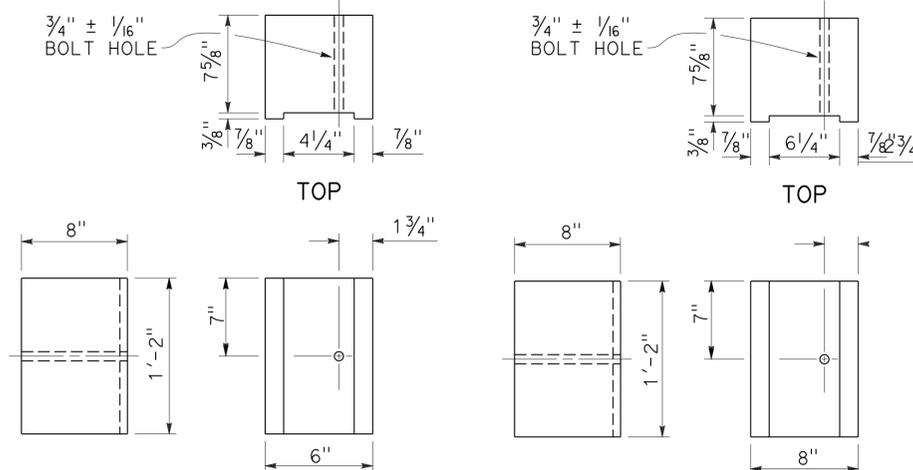


**ELEVATION**

**END CAP (TYPE A)**

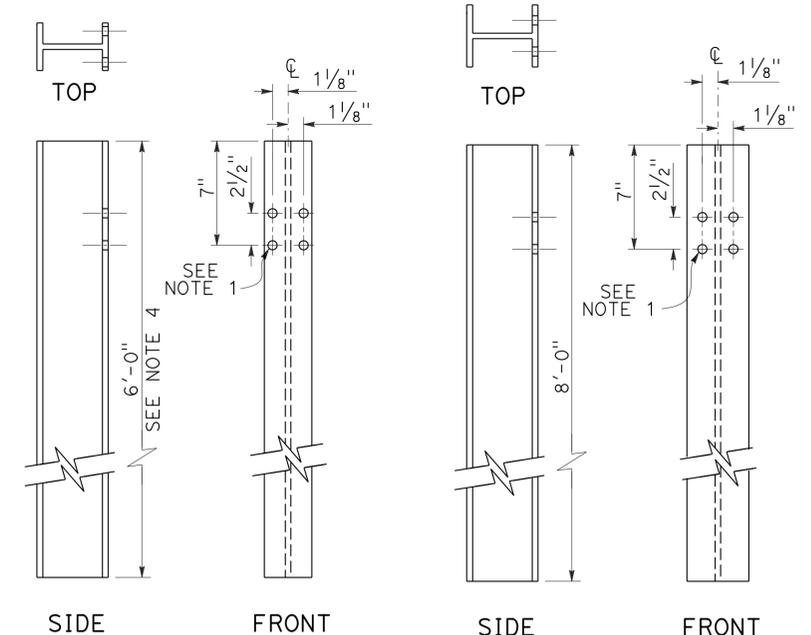
**NOTES:**

1. ALL HOLES IN STEEL POST SHALL BE 1/8" Dia MAXIMUM.
2. DIMENSIONS SHOWN FOR WOOD BLOCK ARE NOMINAL.
3. NOTCHED FACE OF BLOCK FACES STEEL POST.
4. 6'-0" LENGTH POSTS TO BE USED FOR TYPICAL ROADWAY INSTALLATION. 7'-0" LENGTH POSTS TO BE USED FOR NARROW ROADWAY INSTALLATION. SEE SHEET C-5.



**6" x 8" 8" x 8" NOTCHED WOOD BLOCK**

SEE NOTES 2 AND 3



**W6 x 9**  
SEE NOTE 4

**W6 x 15**

**STEEL POST**

**CONSTRUCTION DETAILS**

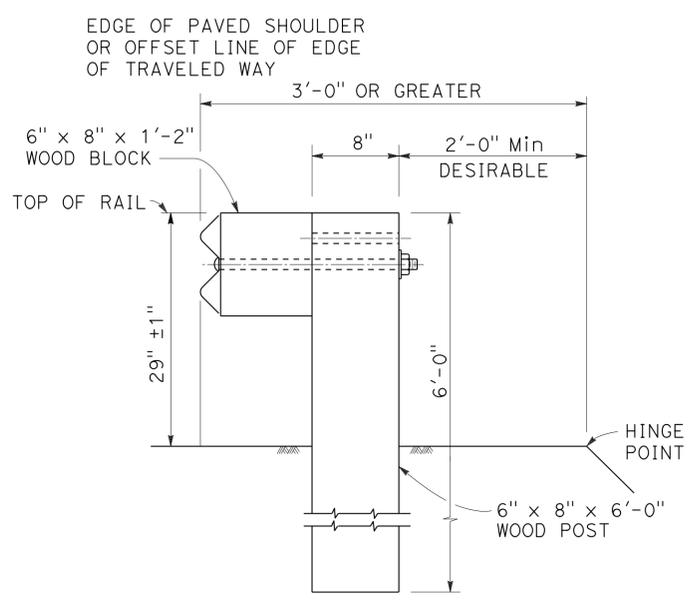
NO SCALE

**C-4**

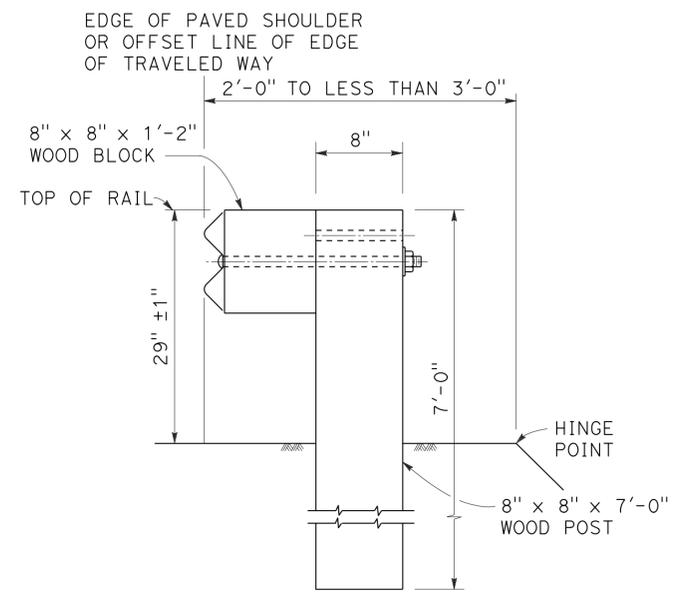
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	10	40
<i>Dianne M. Edwards</i> REGISTERED CIVIL ENGINEER DATE 5-2-16				No. C-51898 Exp. 6-30-16 CIVIL	
May 2, 2016 PLANS APPROVAL DATE					
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**NOTES:**

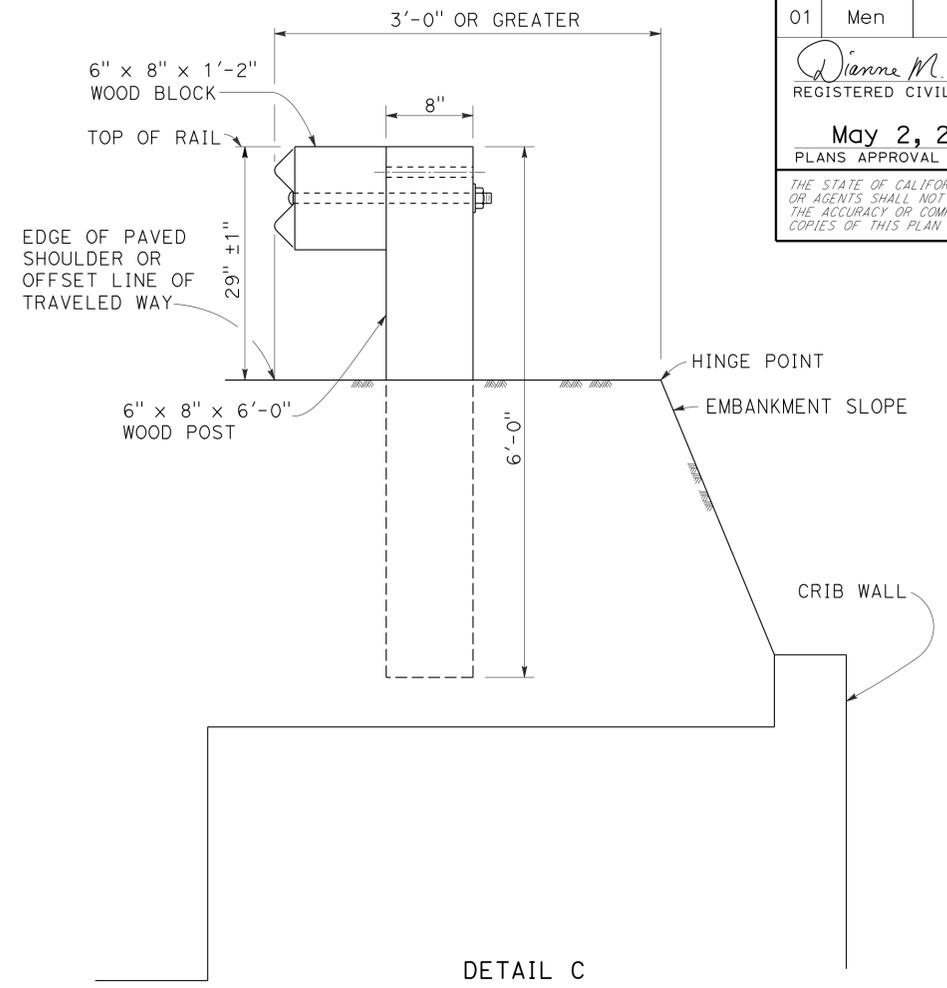
1. THESE INSTALLATION DETAILS ALSO APPLICABLE TO STEEL LINE POST INSTALLATIONS. FOR DETAIL A, AND C, WHERE STEEL LINE POST INSTALLATIONS ARE CONSTRUCTED, W6 X 9 STEEL POST, 6'-0" IN LENGTH, WITH 6" X 8" X 1'-2" NOTCHED WOOD BLOCKS OR NOTCHED RECYCLED PLASTIC BLOCKS ARE TO BE USED IN PLACE OF THE SIZE OF WOOD POST AND WOOD BLOCK SHOWN. FOR DETAIL B, WHERE STEEL LINE POST INSTALLATIONS ARE CONSTRUCTED, W6 X 9 STEEL POST, 7'-0" IN LENGTH, WITH 6" X 8" X 1'-2" NOTCHED WOOD BLOCKS OR NOTCHED RECYCLED PLASTIC BLOCKS ARE TO BE USED IN PLACE OF THE SIZE OF WOOD POST AND WOOD BLOCK SHOWN. FOR ADDITIONAL INSTALLATION DETAILS, SEE SHEET C-3.
2. FOR DIKE POSITIONING WITH GUARD RAILING INSTALLATIONS, SEE SHEET C-4.



**DETAIL A**  
**TYPICAL ROADWAY INSTALLATION**  
 SEE NOTE 1



**DETAIL B**  
**NARROW ROADWAY INSTALLATION**  
 SEE NOTE 1

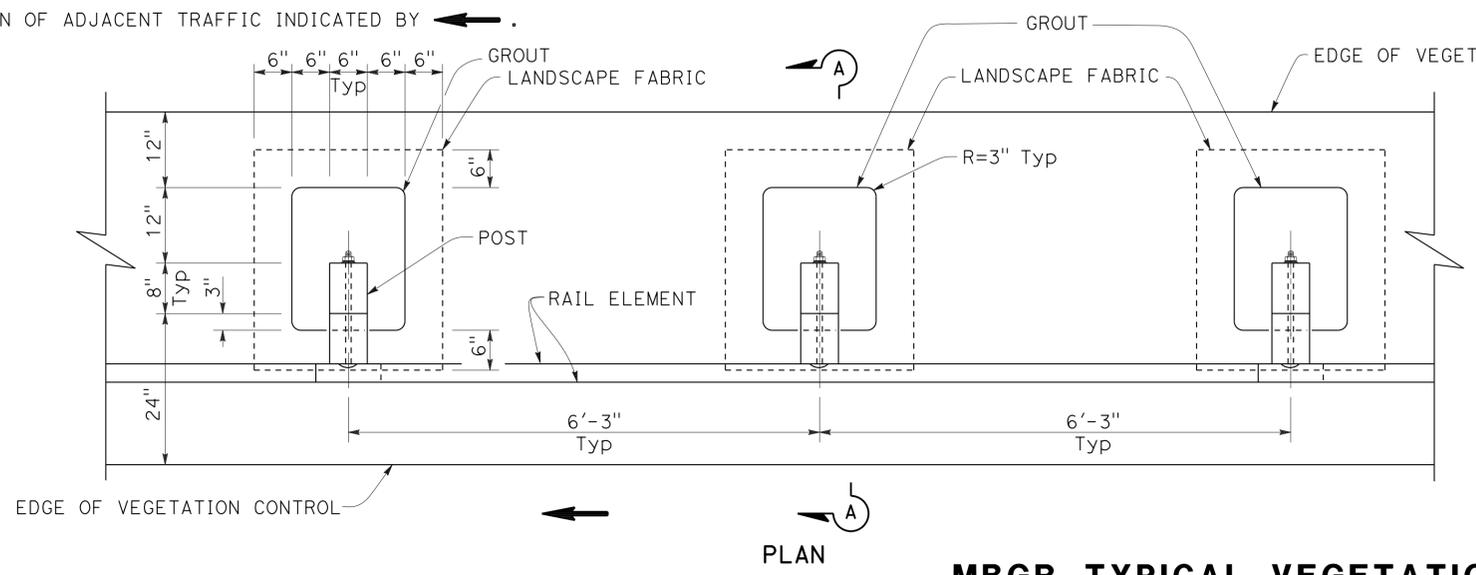


**DETAIL C**  
**INSTALLATION AT EARTH RETAINING WALLS**

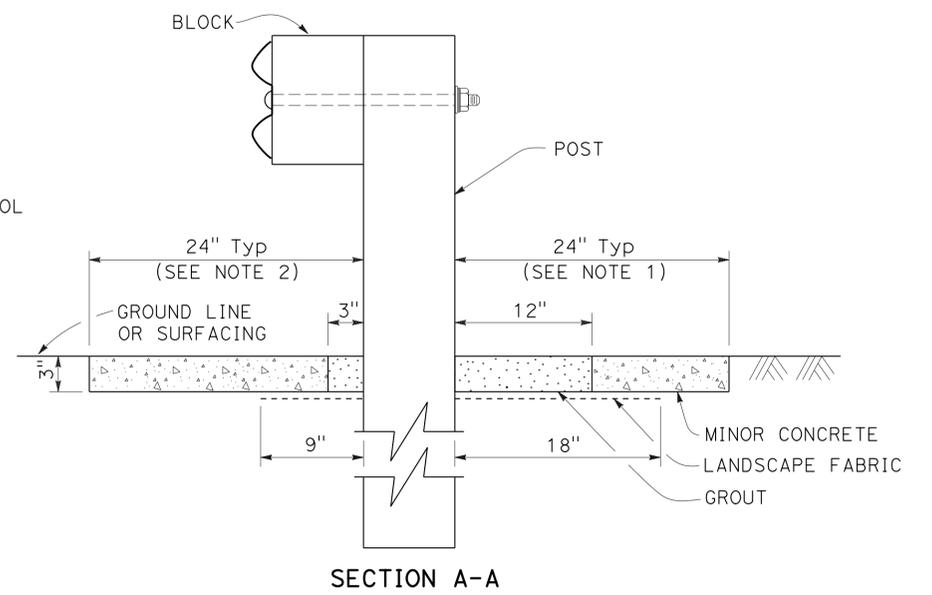
**MBGR TYPICAL LINE POST EMBEDMENT AND HINGE OFFSET DETAILS**

**NOTES:**

1. WHERE THE DISTANCE BETWEEN BACK OF POST AND HINGE POINT IS LESS THAN 24", VEGETATION CONTROL TO BE CONSTRUCTED FLUSH WITH THE BACK EDGE OF THE POST.
2. WHERE DIKE IS CONSTRUCTED UNDER RAILING, CONSTRUCT VEGETATION CONTROL TO BACK EDGE OF DIKE. WHERE PAVED SHOULDER IS CONSTRUCTED WITHIN 24" IN FRONT OF THE POST, CONSTRUCT VEGETATION CONTROL TO THE EDGE OF PAVED SHOULDER.
3. DIRECTION OF ADJACENT TRAFFIC INDICATED BY ←.



**PLAN**  
**MBGR TYPICAL VEGETATION CONTROL**



**SECTION A-A**  
**CONSTRUCTION DETAILS**  
 NO SCALE

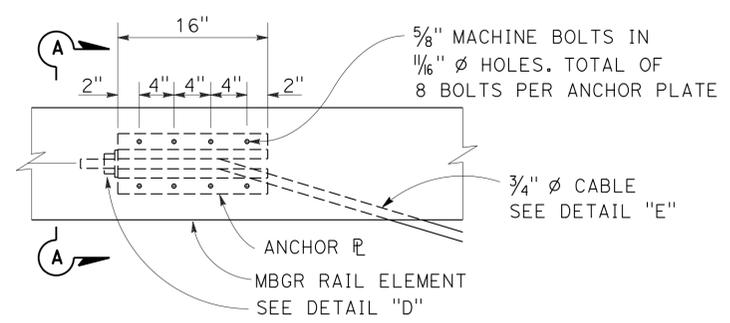
P:\PROJ\01\08510\graff\ing\Sheets\0112000134ga005.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Kelly B. Timmons  
 Functional Supervisor  
 Eric Shada  
 Checked By  
 Dianne Edwards  
 Revised By  
 DATE REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	11	40

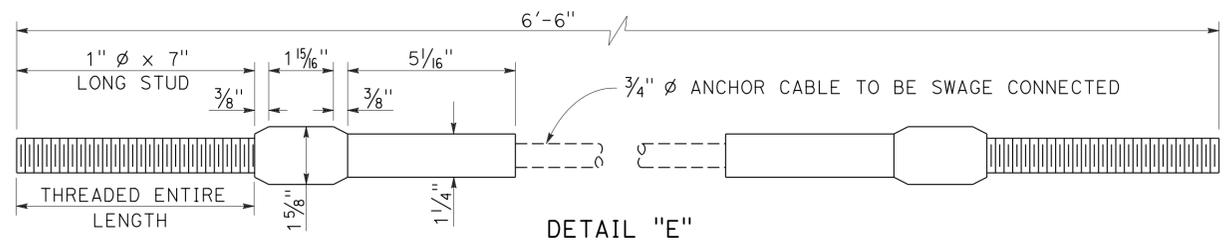
*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER 5-2-16 DATE  
**May 2, 2016**  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
D.M. EDWARDS
No. C-51898
Exp. 6-30-16
CIVIL

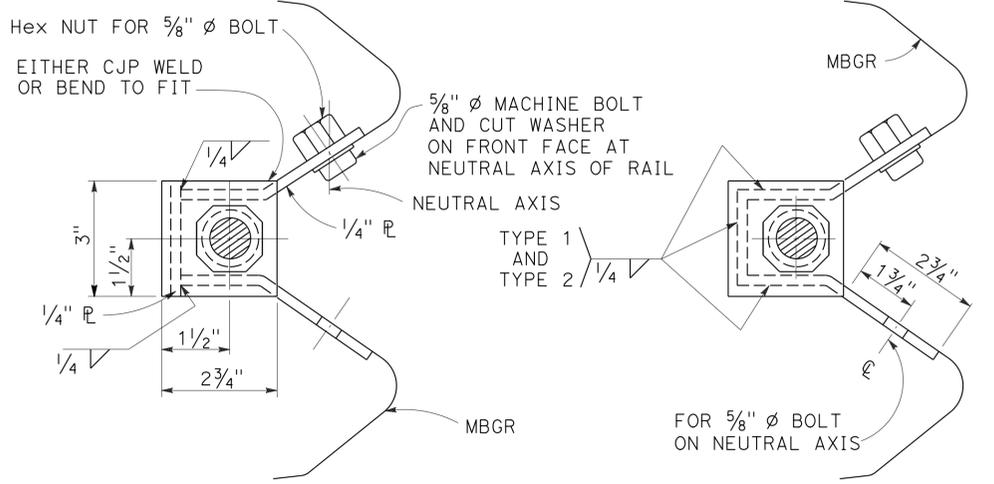
**NOTE:**  
 1. SEE SHEET C-7 FOR USE OF ANCHOR CABLE AND ANCHOR PLATE.



**ANCHOR PLATE DETAIL**



**DETAIL "E"**

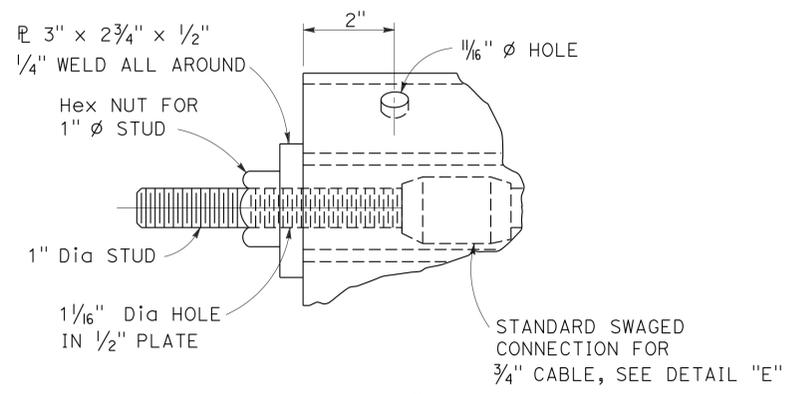


**SECTION A-A (ALTERNATIVE TYPE 1)**

**SECTION A-A (ALTERNATIVE TYPE 2)**

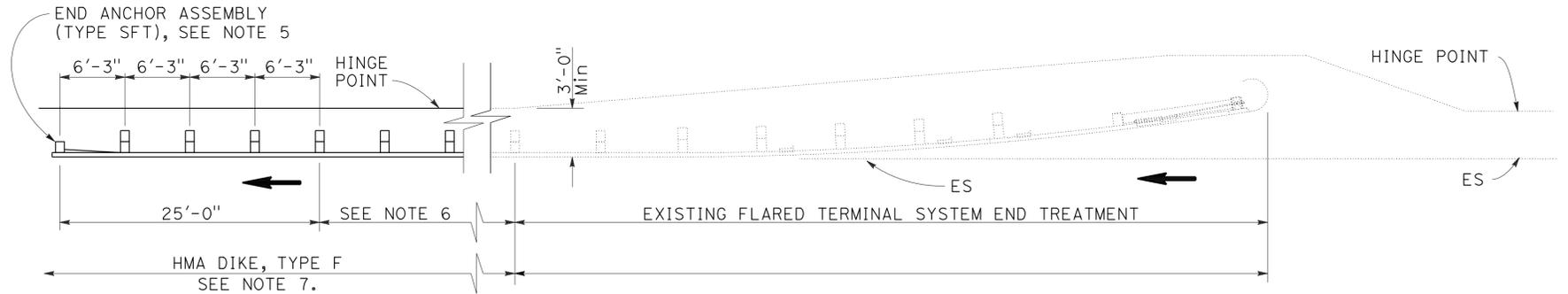
**NOTE:**  
 DIMENSIONING APPLIES TO BOTH TYPES.

**ANCHOR CABLE WITH SWAGED FITTING AND STUD**

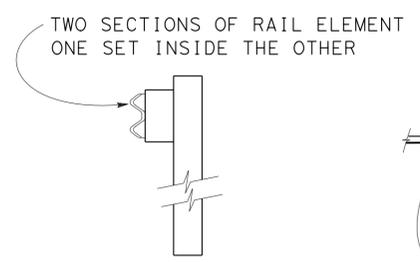


**DETAIL "D"**

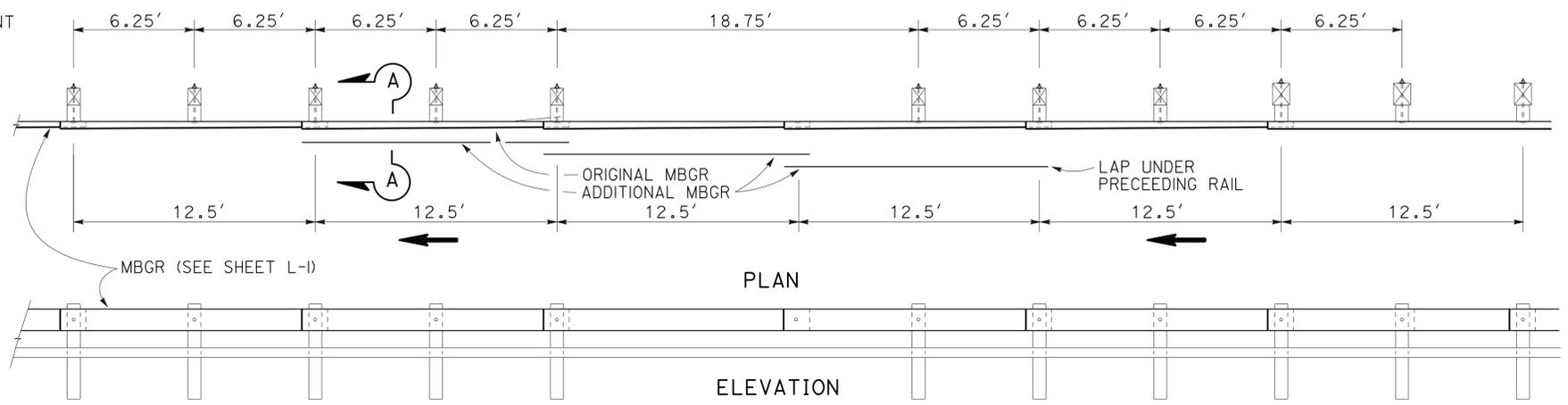
- NOTES:**
1. LINE POST, BLOCKS AND HARDWARE TO BE USED ARE SHOWN ON SHEETS C-3, C-4 AND C-5.
  2. GUARD RAIL POST SPACING TO BE 6'-3" CENTER TO CENTER, EXCEPT AS OTHERWISE NOTED.
  3. LINE POSTS ARE W6 x 9 STEEL POSTS, 6'-0" IN LENGTH, WITH 6" x 8" x 1'-2" NOTCHED WOOD BLOCKS OR RECYCLED PLASTIC BLOCKS.
  4. DIRECTION OF ADJACENT TRAFFIC INDICATED BY → .
  5. FOR END ANCHOR ASSEMBLY (TYPE SFT) DETAILS, SEE ABOVE AND SHEET C-7.
  6. DEPENDENT ON SITE CONDITIONS (EMBANKMENT HEIGHT AND SIDE SLOPE), CONSTRUCTION OF ADDITIONAL GUARD RAILING (LENGTH EQUAL TO MULTIPLES OF 12'-6" WITH 6'-3" POST SPACING) MAY BE ADVISABLE.
  7. SEE SHEET C-4 FOR DIKE POSITIONING DETAILS.



**METAL BEAM GUARD RAILING TYPICAL LAYOUT**



**SECTION A-A**



**METAL BEAM GUARD RAILING TWO POST OMITTED DETAIL**

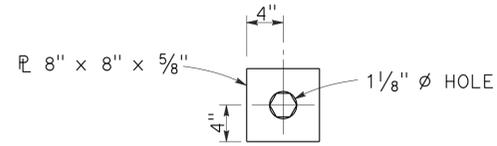
**CONSTRUCTION DETAILS**  
 NO SCALE

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 REVISIONS: [blank]  
 REVISED BY: DIANNE EDWARDS  
 DATE: [blank]  
 REVISED BY: ERIC SHADA  
 DATE: [blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	12	40
<i>Dianne M. Edwards</i> REGISTERED CIVIL ENGINEER			5-2-16 DATE	REGISTERED PROFESSIONAL ENGINEER No. C-51898 Exp. 6-30-16 CIVIL	
May 2, 2016 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>					

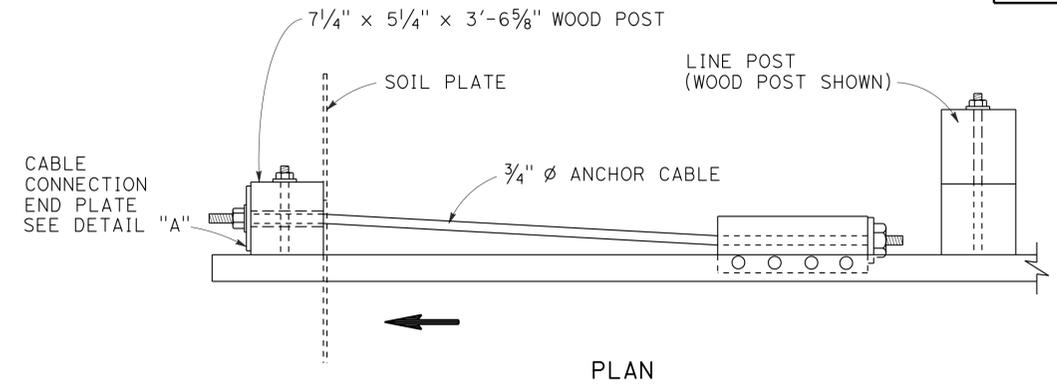
**NOTES:**

- FOR DETAILS OF THE ANCHOR PLATE AND 3/4" CABLE, SEE SHEET C-6.
- A 6'-0" LENGTH STEEL FOUNDATION TUBE, TS 8 X 6 X 3/16", WITHOUT A SOIL PLATE, MAY BE FURNISHED AND INSTALLED IN PLACE OF THE 4'-6" LENGTH STEEL FOUNDATION TUBE AND SOIL PLATE SHOWN. MINIMUM EMBEDMENT OF THE 6'-0" LENGTH TUBE SHALL BE 5'-9". A 5/8" Ø Hex HEAD BOLT AND NUT SHALL BE INSTALLED IN THE HOLE IN THE 6'-0" LENGTH TUBE TO KEEP THE WOOD POST FROM DROPPING INTO THE TUBE.
- DIRECTION OF TRAFFIC INDICATED BY .
- INSTALL LINE POST, STEEL FOUNDATION TUBE AND SOIL PLATE IN SOIL.

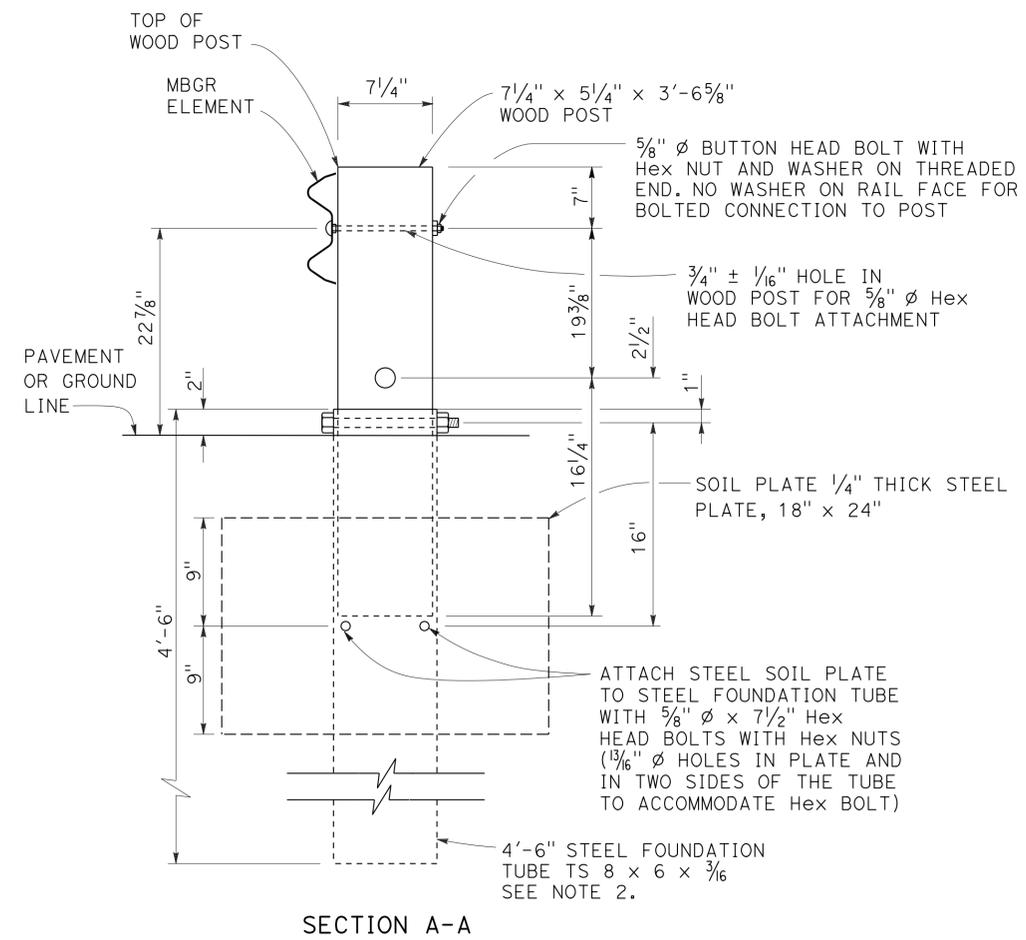


DETAIL "A"

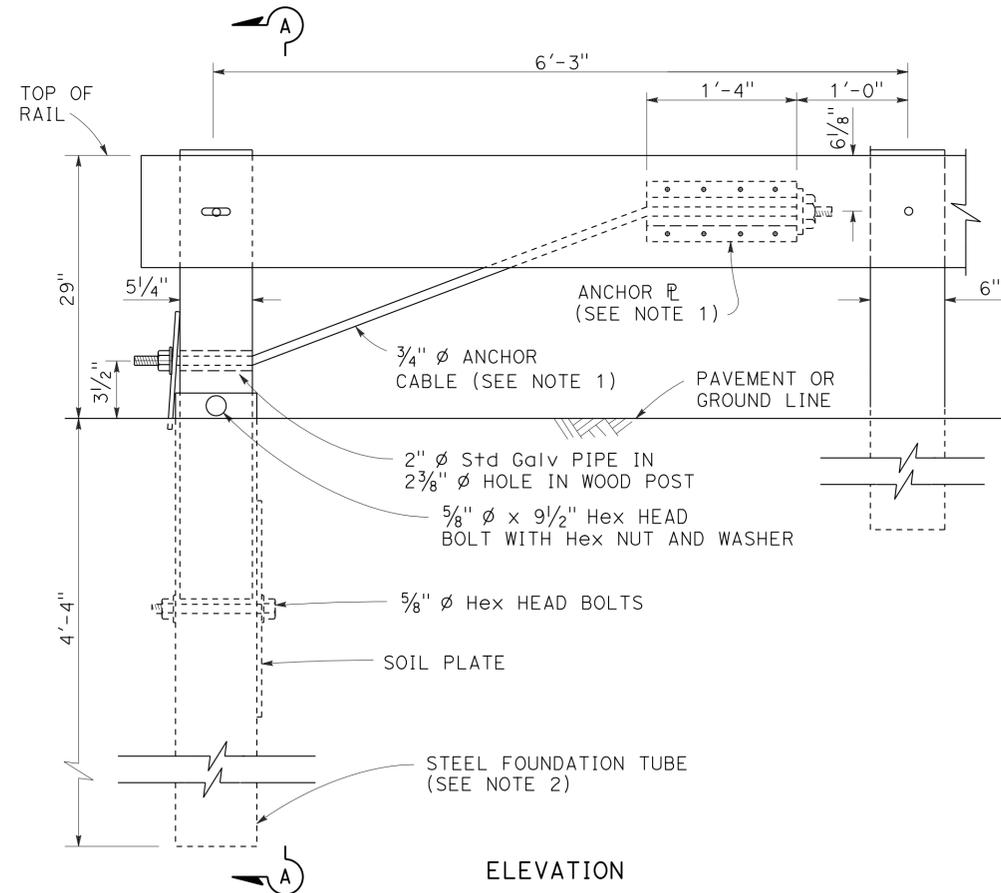
**CABLE CONNECTION END PLATE**



PLAN



SECTION A-A



ELEVATION

**END ANCHOR ASSEMBLY (TYPE SFT)**

SEE NOTE 1

P:\PROJ\01\08510\graf\ing\Sheets\0112000134ga007.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Kelly B. Timmons  
 Functional Supervisor  
 Eric Shada  
 Checked By  
 Dianne Edwards  
 Revised By  
 DATE  
 DATE

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

T23N R17W, MDM  
SECTION 2

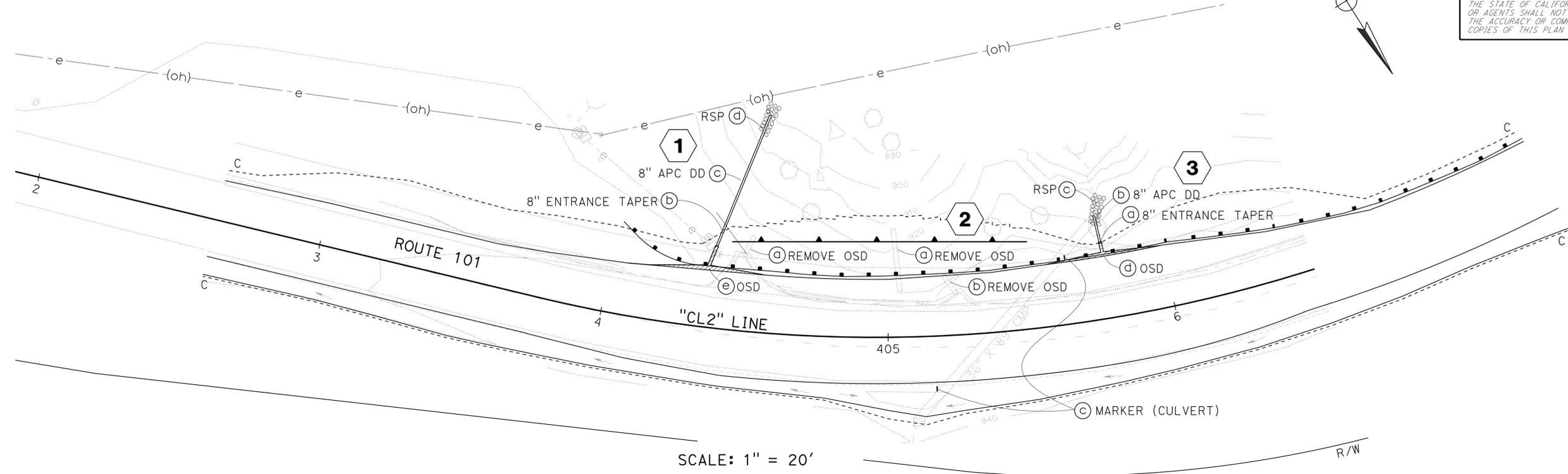
**LEGEND**  
PLACE HMA (Misc AREA)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	13	40

Wianne M. Edwards  
 REGISTERED CIVIL ENGINEER 5-2-16 DATE  
 May 2, 2016  
 PLANS APPROVAL DATE

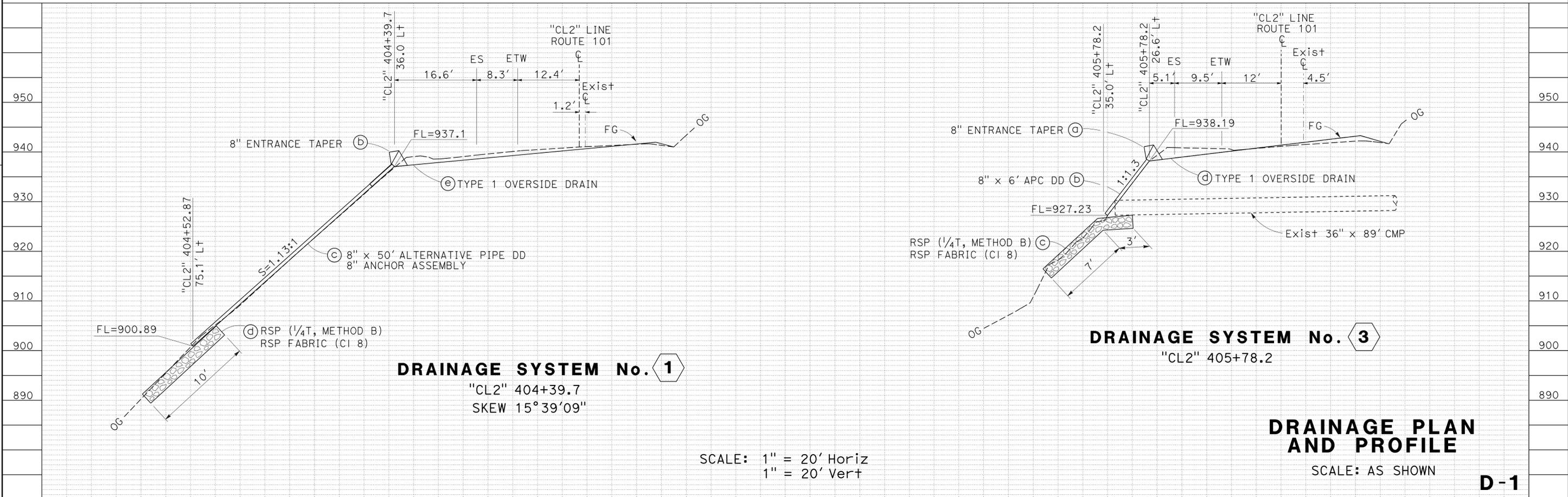
REGISTERED PROFESSIONAL ENGINEER  
 D.M. EDWARDS  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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.



SCALE: 1" = 20'

APPROVED FOR DRAINAGE WORK ONLY



**DRAINAGE SYSTEM No. 1**

"CL2" 404+39.7  
SKEW 15° 39' 09"

**DRAINAGE SYSTEM No. 3**

"CL2" 405+78.2

SCALE: 1" = 20' Horiz  
1" = 20' Vert

**DRAINAGE PLAN AND PROFILE**

SCALE: AS SHOWN

**D-1**

P:\PROJ\01\08510\graf\ing\Sheets\01120001341a001.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 DIANNE EDWARDS  
 ERIC SHADA  
 REVISED BY  
 DATE REVISED  
 DISTRICT OFFICE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	14	40

<i>Dianne M. Edwards</i>		5-2-16
REGISTERED CIVIL ENGINEER	DATE	
<b>May 2, 2016</b>		
PLANS APPROVAL DATE		

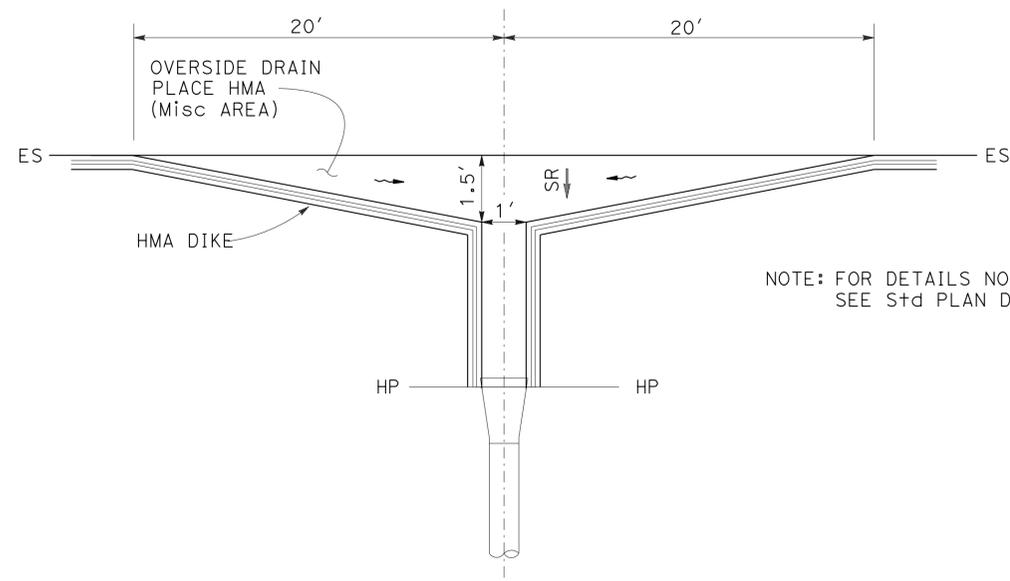
  

REGISTERED PROFESSIONAL ENGINEER	D.M. EDWARDS
No. C-51898	
Exp. 6-30-16	
CIVIL	

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

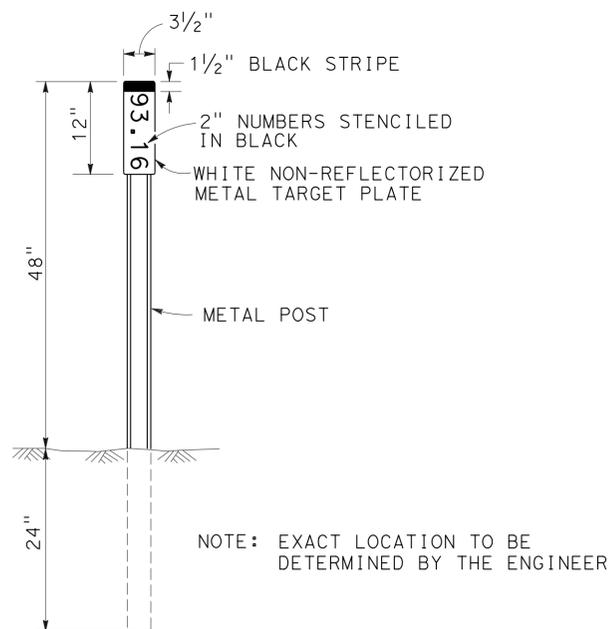
**ABBREVIATIONS**

SR SUPERELEVATION RATE



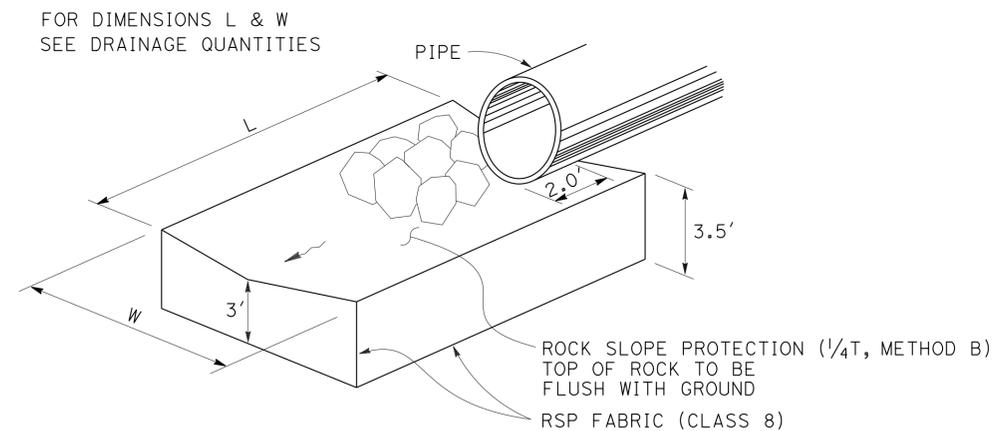
**TYPE 1 OVERSIDE DRAIN**

DRAINAGE SYSTEM No. **1** (e) **3** (d)



**MARKER (CULVERT)**

PM 93.16



**ROCK ENERGY DISSIPATOR AT OSD OUTLET**

DRAINAGE SYSTEM No. **1** (d) **3** (c)

**DRAINAGE DETAILS**  
NO SCALE

**DD-1**

P:\PROJ\01\08510\graf+ing\Sheets\01120001341c001.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Kelly B. Timmons  
 Functional Supervisor  
 Kelly B. Timmons  
 Calculated/Designed By  
 Checked By  
 Dianne Edwards  
 Eric Shada  
 Revised By  
 Date Revised  
 USERNAME => s132662  
 DGN FILE => 01120001341c001.dgn  
 BORDER LAST REVISED 7/2/2010  
 RELATIVE BORDER SCALE 15" IN INCHES  
 UNIT 0312  
 PROJECT NUMBER & PHASE 01120001341  
 LAST REVISION DATE PLOTTED => 16-AUG-2016  
 00-00-00 TIME PLOTTED => 08:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	15	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER DATE 5-2-16  
**May 2, 2016**  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**D.M. EDWARDS**  
 No. C-51898  
 Exp. 6-30-16  
 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. THE JOINT CLASSIFICATION SHALL BE DOWNDDRAIN.
2. LENGTHS OF PIPES AND ANGLE OF ELBOWS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

**APC ALLOWABLE ALTERNATIVES**

DRAINAGE SYSTEM No.	GALVANIZED CSP 0.109"	GALVANIZED POLYMERIC SHEET COATED CSP 0.79"
1	X	X
3	X	X

**DRAINAGE QUANTITIES**

DRAINAGE SYSTEM No.	DRAINAGE UNIT	REMOVE OVERSIDE DRAIN	8" ENTRANCE DRAIN	8" ENTRANCE TAPER	8" ALTERNATIVE PIPE DOWNDRAIN	8" ANCHOR ASSEMBLY	ROCK SLOPE PROTECTION (1/4", METHOD B) (CY)	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	MARKER (CULVERT)	PLACE HMA (MISCELLANEOUS AREA)	HMA (TYPE A) *	REMARKS
1	a	1										
	b		1									
	c			50	3							
	d					5	15					L=10', W=4'
	e								4.8	0.7		TYPE 1 OVERSIDE DRAIN
2	a	1										
	b	1										
	c							2				PM 93.16
3	a		1									
	b			6	1							
	c					22	43					L=10', W=9'
	d								4.2	0.6		TYPE 1 OVERSIDE DRAIN
TOTAL	3	2	56	4	27	58	2	9.0	1.3			

\* TOTALS INCLUDED IN ROADWAY TABLE

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: DIANNE EDWARDS  
 CHECKED BY: ERIC SHADA  
 REVISED BY: DIANNE EDWARDS  
 DATE REVISED:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	16	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER DATE 5-2-16  
**May 2, 2016**  
 PLANS APPROVAL DATE

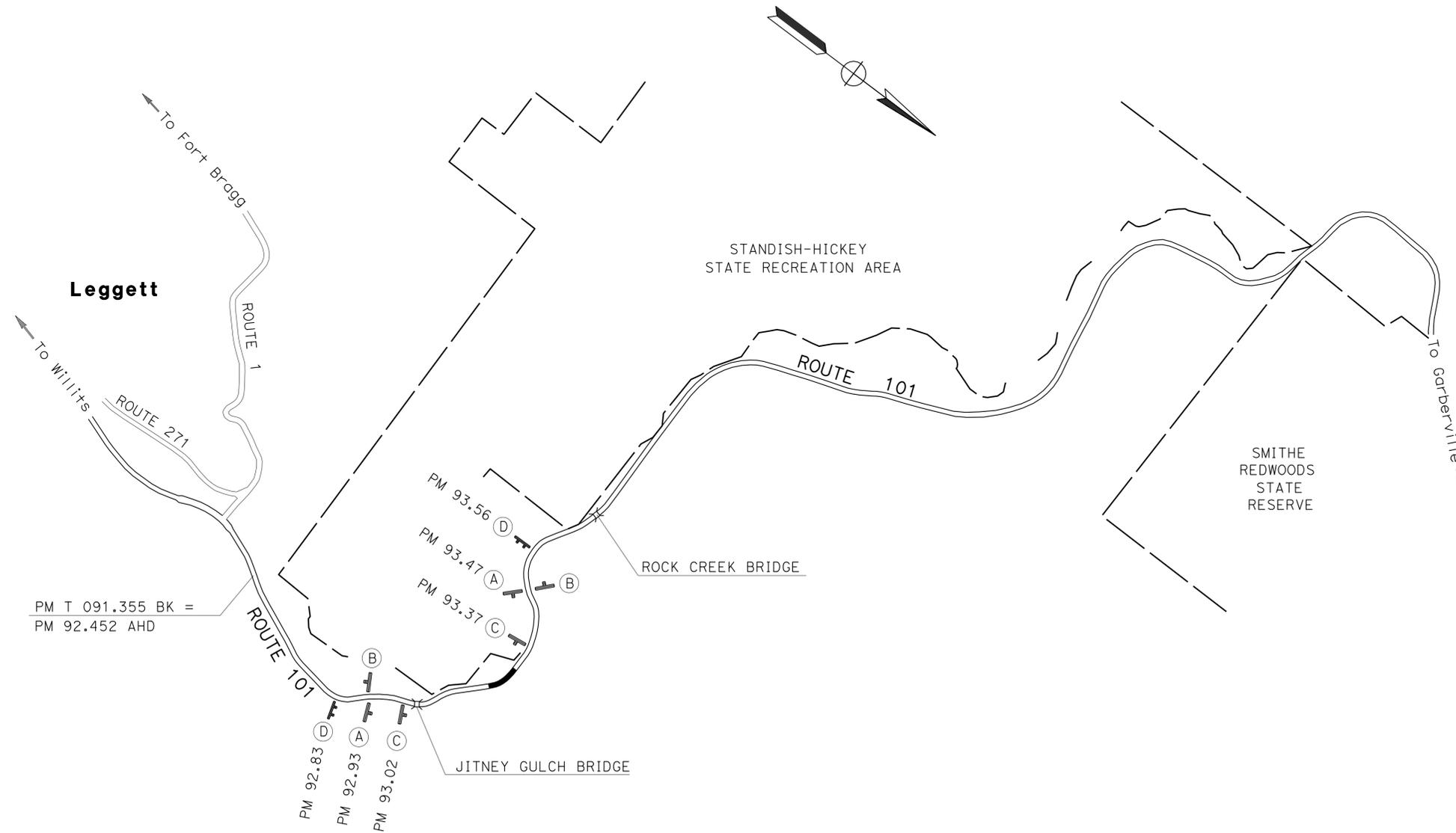
REGISTERED PROFESSIONAL ENGINEER  
**D.M. EDWARDS**  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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.
  - CALIFORNIA CODES ARE DESIGNATED BY (CA). OTHERWISE, FEDERAL (MUTCD) CODES ARE SHOWN.
  - (N) NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN	TYPE	SIGN MESSAGE	PANEL SIZE	No. OF POSTS AND SIZE	No. OF SIGNS (N)
A	W20-1	ROAD WORK AHEAD	36" x 36"	1 - 4" x 6"	2
B	G20-2	END ROAD WORK	36" x 18"	1 - 4" x 4"	2
C	W11-1	BICYCLE SYMBOL	36" x 36"	1 - 4" x 6"	2
	W16-1	SHARE THE ROAD	24" x 30"		
D	C40 (CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	108" x 42"	2 - 6" x 6"	2



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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: DIANNE EDWARDS  
 CHECKED BY: ERIC SHADA  
 REVISED BY: DATE  
 REVISIONS:

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY



P:\PROJECTS\0112000134\Drawings\Traffic\Traffic Handling\Traffic Handling.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 TRAFFIC OPERATIONS  
 SHERI M. RODRIGUEZ  
 TROY A. ARSENEAU  
 RICHARD MULLEN

**NOTES:**

- CALIFORNIA CODES ARE DESIGNATED BY (CA). OTHERWISE, FEDERAL (MUTCD) CODES ARE SHOWN.
- ALL SIGNS SHALL HAVE A BLACK LEGEND ON FLUORESCENT ORANGE BACKGROUND AND SHALL BE EQUIPPED WITH AT LEAST TWO 16" x 16" ORANGE FLAGS FOR DAYTIME CLOSURE OR FLASHING BEACONS FOR LANE CLOSURE DURING HOURS OF DARKNESS.
- ALL CONES USED FOR LANE CLOSURES DURING THE HOURS OF DARKNESS SHALL BE FITTED WITH RETROREFLECTIVE BANDS OR SLEEVES.
- WHEN A PILOT CAR IS USED, PLACE A C37 (CA) SIGN AT ALL INTERSECTIONS WITHIN TRAFFIC CONTROL AREA. WHERE VEHICULAR TRAFFIC CAN NOT EFFECTIVELY SELF-REGULATE, AT LEAST ONE FLAGGER SHALL BE USED AT EACH INTERSECTION WITHIN THE TRAFFIC CONTROL AREA.
- FLAGGER SHOULD STAND IN A CONSPICUOUS PLACE, FACING TRAFFIC AT ALL TIMES, BE VISIBLE TO APPROACHING TRAFFIC AS WELL AS APPROACHING VEHICLES AFTER THE FIRST VEHICLE HAS STOPPED.
- ADDITIONAL ADVANCE FLAGGERS ARE REQUIRED DURING HOURS OF DAYLIGHT. A FULL MATRIX PCMS IN PLACE OF EACH ADVANCE FLAGGER REQUIRED DURING HOURS OF DARKNESS.
- WHEN FLAGGER IS NOT VISIBLE FROM THIS LOCATION PLACE A C29 (CA) SIGN BELOW THE C9A (CA) SIGN.

**LEGEND**

- TRAFFIC CONE
- ⊥ TEMPORARY SIGN
- ← DIRECTION OF TRAVEL
- ☼ PORTABLE FLASHING BEACON
- 🚧 FLAGGER

**SIGN PANEL SIZE (MINIMUM)**

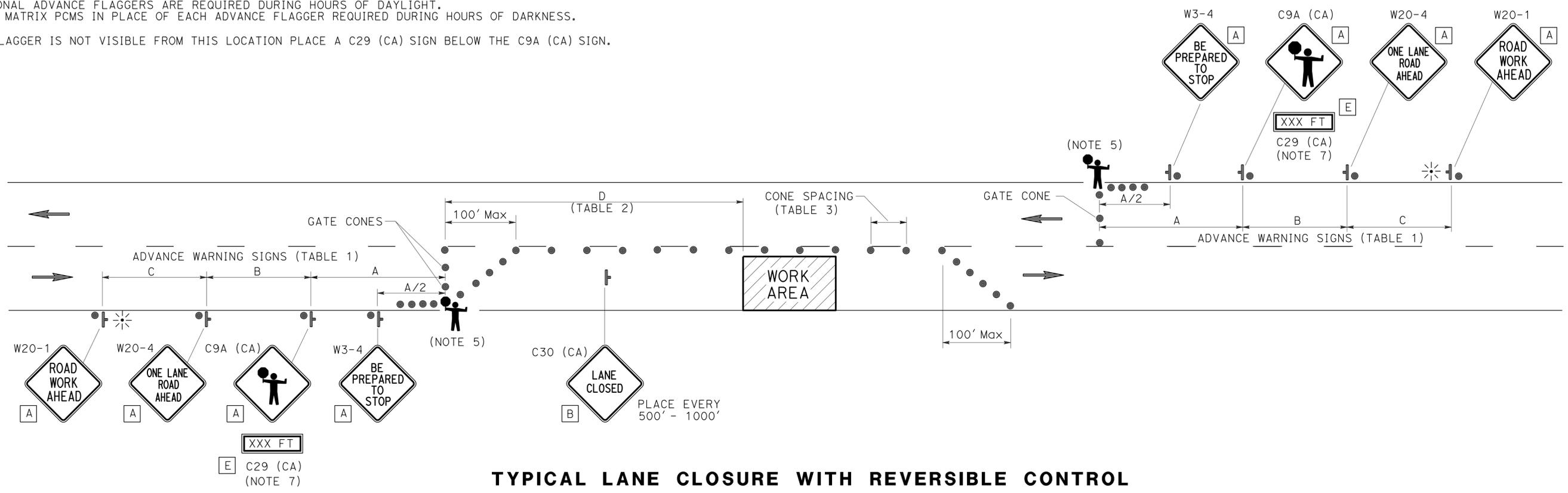
- A 48" x 48" - SPEED OF 45 mph OR MORE  
36" x 36" - SPEED LESS THAN 45 mph
- B 30" x 30"
- C UNUSED
- D UNUSED
- E 20" x 7"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	18	41

Sheri M. Rodriguez  
 REGISTERED CIVIL ENGINEER  
 DATE 11-13-15  
 No. C66861  
 Exp. 9-30-16  
 CIVIL  
 STATE OF CALIFORNIA

**May 2, 2016**  
 PLANS APPROVAL DATE

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**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**

**TABLE 1**  
ADVANCE WARNING SIGN SPACING

ROAD TYPE	Min A	Min B	Min C
	ft		
URBAN (25 mph OR LESS)	100	100	100
URBAN (30 mph TO 40 mph)	250	250	250
URBAN (MORE THAN 40 mph)	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

**TABLE 2**  
BUFFER SPACE

APPROACH SPEED	Min D	DOWNGRADE		
		Min D		
		-3%*	-6%*	-9%*
mph		ft		
25 & BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785

\* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

**TABLE 3**  
Max CONE SPACING

POSTED SPEED	TAPER	TANGENT	CONFLICT*
	ft		
mph			
20	20	40	10
25	25	50	12
30	30	60	15
35	35	70	17
40	40	80	20
45	45	90	22
50	50	100	25
55	55	110	27
60	60	120	30
65	65	130	32

\* USE WHERE THERE IS A CONFLICT BETWEEN EXISTING PAVEMENT MARKINGS AND CHANNELIZERS.

**TRAFFIC HANDLING PLAN**  
NO SCALE

APPROVED FOR TRAFFIC HANDLING WORK ONLY

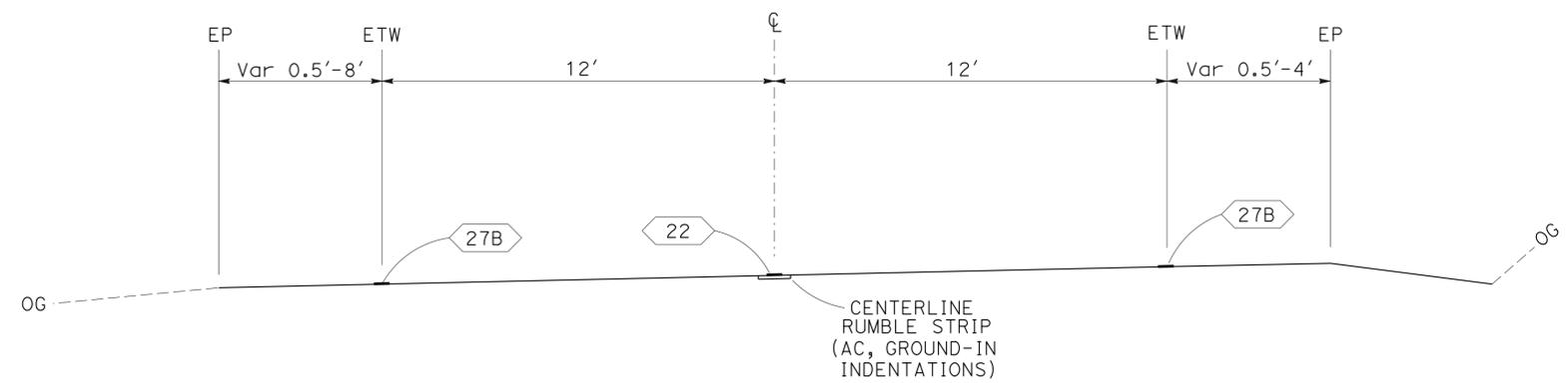
**TH-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	19	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER DATE 5-2-16  
 May 2, 2016  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 D.M. EDWARDS  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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"CL2" 402+63 TO 407+35  
**ROUTE 101**  
 NO SCALE

**TRAFFIC STRIPE AND PAVEMENT MARKER QUANTITIES**

LOCATION		CL Lt/Rt	DETAIL NUMBER	DETAIL LENGTH (N)	REMOVE PAVEMENT MARKER EA	4" THERMOPLASTIC TRAFFIC STRIPE		PAVEMENT MARKER (RETROREFLECTIVE-RECESSED) TYPE D YELLOW EA	CENTERLINE RUMBLE STRIP STA
FROM	TO					SOLID			
				LF		WHITE LF	YELLOW LF		
"CL2" 402+63	"CL2" 407+35	CL	22	473			946	42	4.7
"CL2" 404+25	"CL2" 406+50	CL			20				
"CL2" 402+63	"CL2" 407+35	L+	27B	473		473			
"CL2" 402+63	"CL2" 407+35	R+	27B	473		473			
SUBTOTAL					20	946	946	42	4.7
TOTAL					20		1892	42	4.7

(N) NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.

**PAVEMENT DELINEATION DETAILS  
 AND QUANTITIES**

**PDD-1**

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Kelly B. Timmons  
 Functional Supervisor  
 Dianne Edwards  
 Eric Shada  
 Revised By  
 Date Revised  
 Calculated/Designed By  
 Checked By  
 USERNAME => s132662  
 DGN FILE => 0112000134nb001.dgn  
 BORDER LAST REVISED 7/2/2010  
 UNIT 0312  
 PROJECT NUMBER & PHASE 01120001341

LAST REVISION DATE PLOTTED => 16-AUG-2016  
 00-00-00 TIME PLOTTED => 08:03

**ABBREVIATIONS**

GPI = GEOSYNTHETIC PAVEMENT INTERLAYER  
 N = NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.

**TEMPORARY TRAFFIC CONTROL**

STATION		TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION SYSTEM	TYPE III BARRICADE
FROM	TO	LF	EA	EA
"CL2" 402+55	"CL2" 402+91		1	2
"CL2" 402+91	"CL2" 406+10	320		
"CL2" 406+10	"CL2" 406+46		1	2
TOTAL		320	2	4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	20	40

*Dianne M. Edwards*  
 REGISTERED CIVIL ENGINEER 5-2-16 DATE

**May 2, 2016**  
 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.

**D.M. EDWARDS**  
 No. C-51898  
 Exp. 6-30-16  
 CIVIL

**CRIB WALL**

STATION		REINFORCED CONCRETE CRIB WALL (TYPE A)	STRUCTURE EXCAVATION (CRIB WALL)	STRUCTURE BACKFILL (CRIB WALL)	CABLE RAILING
FROM	TO	SQFT	CY	CY	LF
"CW4" 19+94	"CW4" 20+96	1823	1005	1253	102
TOTAL		1823	1005	1253	102

**HMA DIKE**

STATION		REMOVE AC DIKE	PLACE HMA DIKE (TYPE A)	PLACE HMA DIKE (TYPE F)	* HMA (TYPE A)
FROM	TO	LF	LF	LF	TONS
"CL2" 402+63	"CL2" 406+81		420		11.5
"CL2" 404+31.1	"CL2" 407+68			399	5.4
"CL2" 407+35	"CL2" 407+68	33			
"CL2" 412+00	"CL2" 412+35	35		35	0.5
TOTAL		68	420	434	17.4

\* TOTALS INCLUDED IN ROADWAY TABLE

**GUARD RAILING**

STATION		END ANCHOR ASSEMBLY (TYPE SFT)	METAL BEAM GUARD RAILING (STEEL POST)	METAL BEAM GUARD RAILING (7' POST)	REMOVE GUARDRAIL	GUARD RAILING DELINEATOR (TYPE F)	VEGETATION CONTROL (MINOR CONCRETE)	REMARKS
FROM	TO	EA	LF	LF	LF	EA	SQYD	
"CL2" 404+02.1	"CL2" 404+07.5	1					2.3	
"CL2" 404+07.5	"CL2" 406+66.5		250.0			5	108.8	25' @ 35' RADIUS
"CL2" 406+66.5	"CL2" 408+31.7			162.5		3	72.2	
"CL2" 408+31.7	"CL2" 409+18.3		87.5			1	38.9	
"CL2" 409+18.3	"CL2" 410+96.7			175.0		3	77.8	
"CL2" 410+96.7	"CL2" 412+35.2		137.5			2	61.1	CONNECT TO EXIST MBGR
"CL2" 412+00.0	"CL2" 412+35.2				37.5			REMOVE TERMINAL SYSTEM
TOTALS		1	475.0	337.5	37.5	14	361.1	

**ROADWAY**

STATION		HMA (TYPE A)	HMA (LEVELING)	CLASS 2 AGGREGATE BASE (CY)	ROADWAY EXCAVATION	EMBANKMENT (N)	TACK COAT	ASPHALT BINDER (GPI)	GPI (PAVING FABRIC)	COLD PLANE AC PAVEMENT	IMPORTED TOPSOIL (CY)
FROM	TO	TONS	TONS	CY	CY	CY	TON	TON	SQYD	SQYD	CY
"CL2" 402+63	"CL2" 403+03									58	
"CL2" 402+63	"CL2" 407+35	473	110	536	945	120	0.24	0.25	236		15
"CL2" 403+03	"CL2" 404+25									163	
"CL2" 406+50	"CL2" 406+95									61	
"CL2" 406+95	"CL2" 407+35									59	
FROM HMA DIKE QUANTITIES		17.4									
FROM DRAINAGE QUANTITIES		1.3									
TOTAL		491.7	110	536	945	120	0.24	0.25	236	341	15

**TEMPORARY WATER POLLUTION CONTROL**

STATION		TEMPORARY DI PROTECTION	TEMPORARY SILT FENCE	TEMPORARY FIBER ROLL	TEMPORARY MULCH	TEMPORARY COVER	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY REINFORCED SILT FENCE	TEMPORARY CHECK DAM
FROM	TO	EA	LF	LF	SQYD	SQYD	EA	LF	LF
"CL2" 405+13, R+		1							
"CL2" 402+63	"CL2" 407+35		205	145	645	365	1	120	120
TOTAL		1	205	145	645	365	1	120	120

**SUMMARY OF QUANTITIES**

**Q-1**

P:\PROJ\01\08510\08510.dgn - DEPARTMENT OF TRANSPORTATION DESIGN  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN  
 FUNCTIONAL SUPERVISOR: KELLY B. TIMMONS  
 CALCULATED/DESIGNED BY: DIANNE EDWARDS  
 CHECKED BY: ERIC SHADA  
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.





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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans® LANDSCAPE ARCHITECTURE  
 FUNCTIONAL SUPERVISOR  
 STEVE THORNE  
 CALCULATED/DESIGNED BY  
 LOGAN MOORE  
 CHECKED BY  
 LAURA LAZZAROTTO  
 REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	22	40

*Laura Lazzarotto*  
 LICENSED LANDSCAPE ARCHITECT  
 May 2, 2016  
 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.

### EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	HYDROSEED	SEED	MIX 1	106 LB/ACRE
		FIBER	WOOD	1000 LB/ACRE
STEP 2	STRAW	STRAW	BARLEY	3 TONS/ACRE
STEP 3	HYDROMULCH	FIBER	WOOD	1000 LB/ACRE
		TACKIFIER	PSYLLIUM	150 LB/ACRE

### EROSION CONTROL QUANTITIES

SHEET	STATION		LOCATION	DESCRIPTION	HYDROSEED	STRAW	HYDROMULCH	PURE LIVE SEED (N)
	FROM	TO			SQFT	SQFT	SQFT	LBS
EC-1	"CL2" 404+26	"CL2" 405+82	L+	EROSION CONTROL TYPE 1	2040	2040	2040	5.3
TOTAL					2040	2040	2040	5.3

(N) NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.

### SEED MIX 1

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
ACHILLEA MILLEFOLIUM <sup>1</sup> (WHITE YARROW)	45	2
ELYMUS GLAUCUS 'BERKELEY' <sup>1</sup> (BERKELEY BLUE WILD RYE)	55	20
FESTUCA CALIFORNICA <sup>1</sup> (CALIFORNIA FESCUE)	45	9
HORDEUM VULGARE (COMMON BARLEY)	75	75

<sup>1</sup> SEED PRODUCED IN CALIFORNIA ONLY

## EROSION CONTROL QUANTITIES

**ECQ-1**

P:\PROJ\01\08510\08510.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ELECTRICAL  
 CALTRANS  
 FUNCTIONAL SUPERVISOR JOHN CARSON  
 DESIGNED BY  
 CHECKED BY  
 BRIAN FINCK  
 WILLIAM BARTLEY  
 REVISIONS  
 REVISION BY DATE  
 REVISION BY DATE

**NOTES:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**MODIFY LIGHTING**

SHEET No.	2" C TYPE 3	No. 5 PULL BOX	CONDUCTOR #10	CONDUCTOR #12	CONDUCTOR (G) #8
	E-1	LF 800	EA 5	LF 1600	LF 200

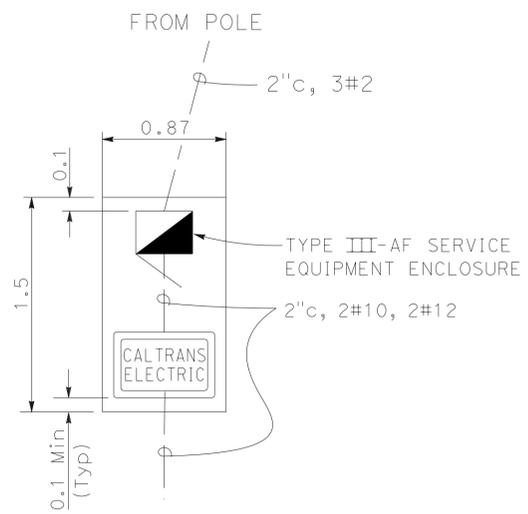
ITEMS SHOWN IN THIS TABLE ARE NOT SEPARATE PAY ITEMS. THEY ARE FOR INFORMATION ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	23	40

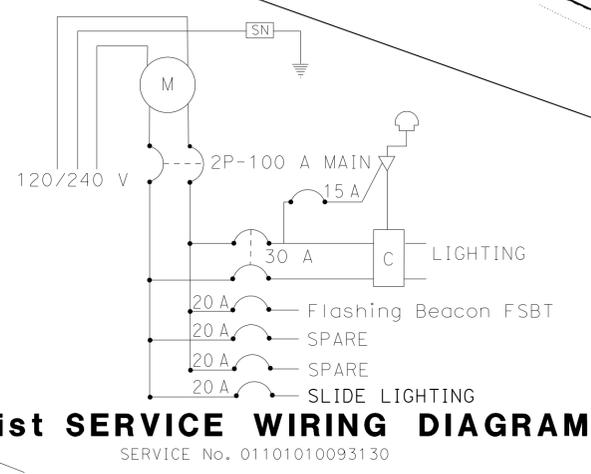
Brian T. Finck  
 REGISTERED ELECTRICIAN  
 No. 17756  
 Exp. 6-30-16  
 ELECT

May 2, 2016  
 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.



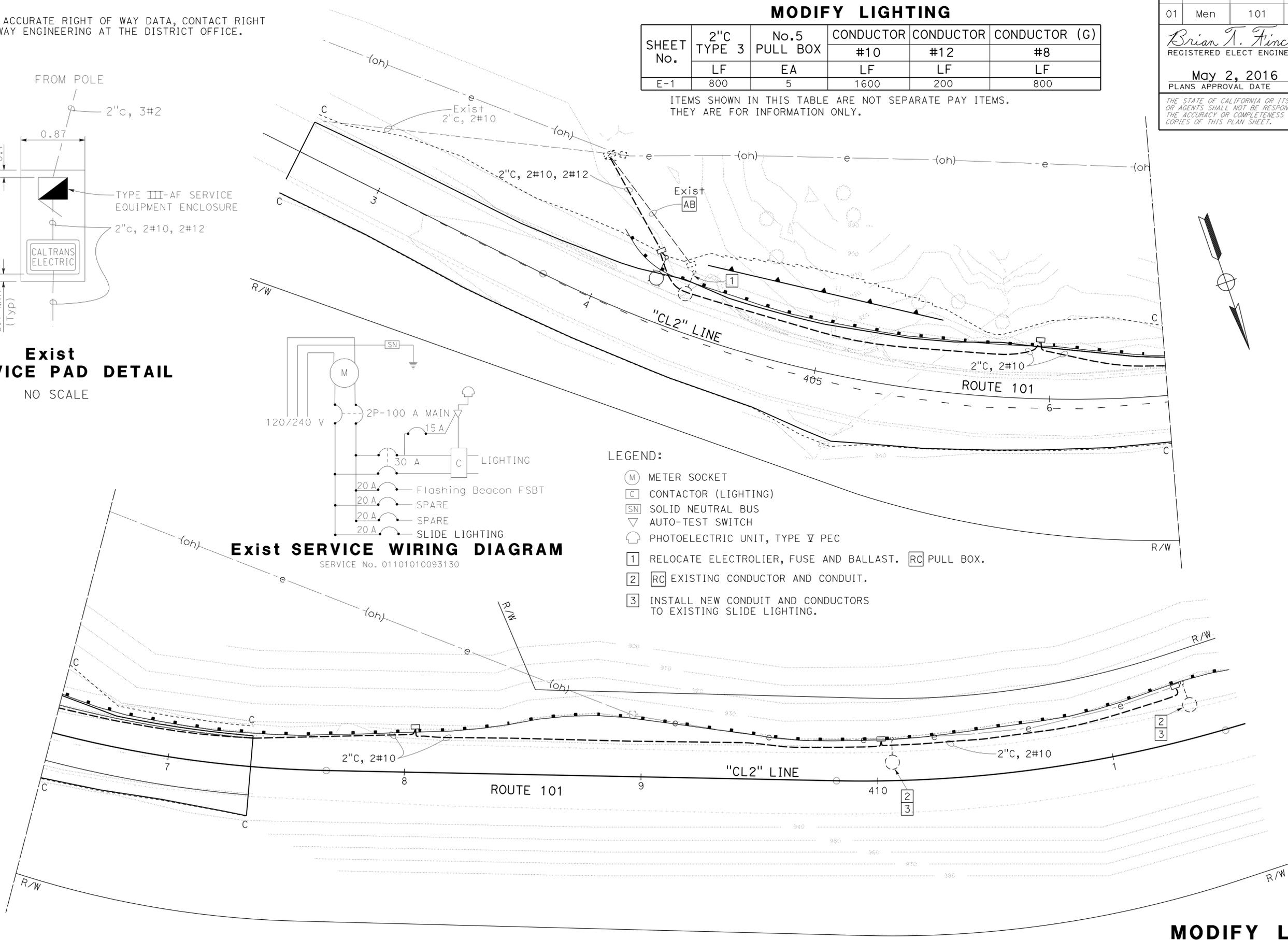
**Exist SERVICE PAD DETAIL**  
 NO SCALE



**Exist SERVICE WIRING DIAGRAM**  
 SERVICE No. 01101010093130

**LEGEND:**

- (M) METER SOCKET
- (C) CONTACTOR (LIGHTING)
- (SN) SOLID NEUTRAL BUS
- ▽ AUTO-TEST SWITCH
- ☐ PHOTOELECTRIC UNIT, TYPE V PEC
- 1 RELOCATE ELECTROLIER, FUSE AND BALLAST. RC PULL BOX.
- 2 RC EXISTING CONDUCTOR AND CONDUIT.
- 3 INSTALL NEW CONDUIT AND CONDUCTORS TO EXISTING SLIDE LIGHTING.



**MODIFY LIGHTING**

SCALE: 1" = 20'

**E-1**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

**BENCH MARK**

01-Men-101-PM 93.17-5/8" rebar  
with 1" aluminum cap.  
N=2,450,419.162  
E=6,080,516.897 (CCS-83 Horizontal Datum)  
Elev=938.36 ft  
NAVD88 Vertical Datum

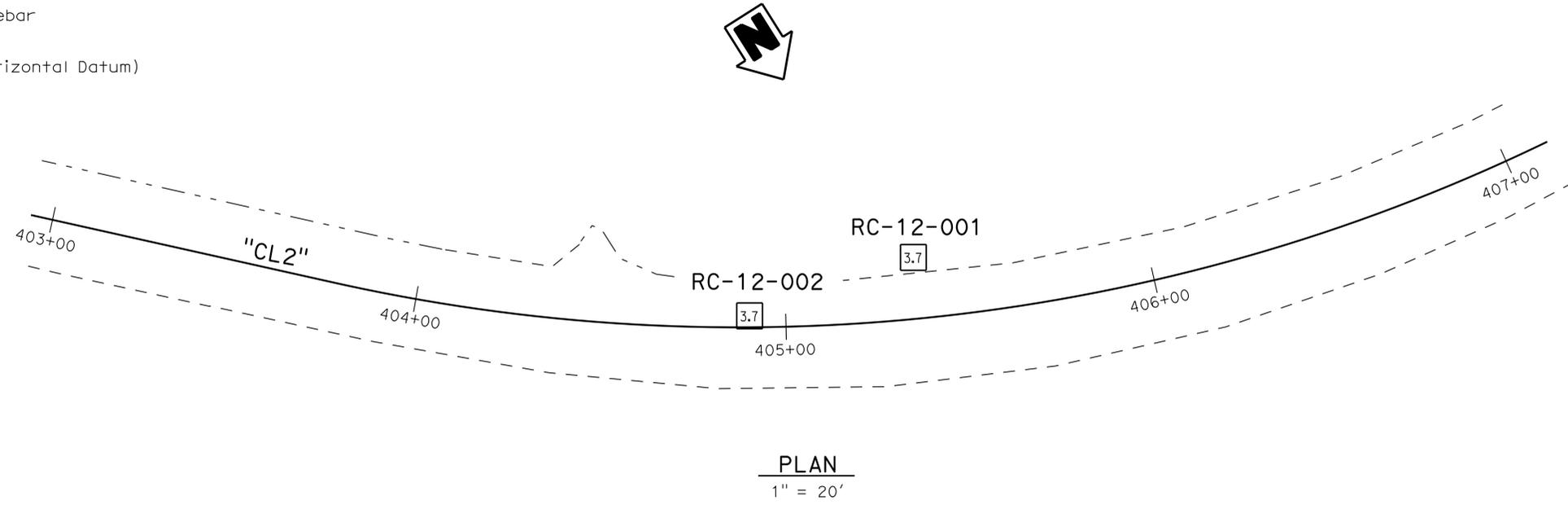
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	24	40

REGISTERED CIVIL ENGINEER DATE 1-22-14

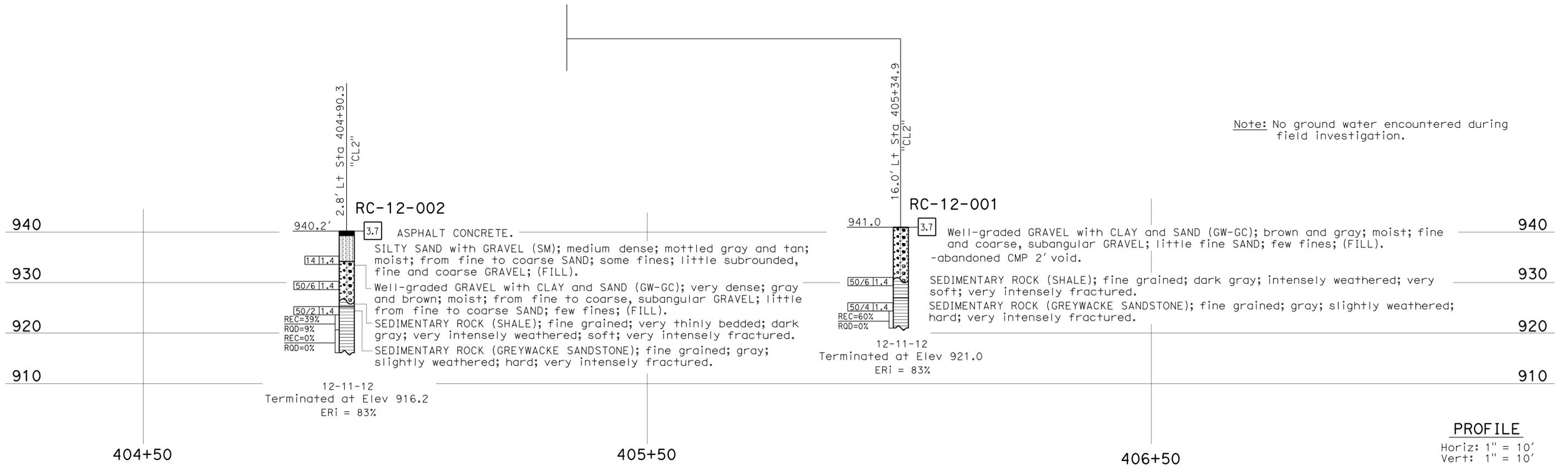
**May 2, 2016**  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Ryan Turner  
No. C73956  
Exp. 6-30-15  
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.



This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).  
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



<b>ENGINEERING SERVICES</b>		<b>MATERIALS AND GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH X</b>		BRIDGE NO. POST MILE 93.16		<b>CRIB WALL PM 93.16</b> <b>LOG OF TEST BORINGS</b>			
FUNCTIONAL SUPERVISOR NAME: C. Narwold	DRAWN BY: W. Tang 12/13 CHECKED BY: J. SCARDINE	FIELD INVESTIGATION BY: R. Turner		UNIT: 3643 PROJECT NUMBER & PHASE: 0112000134		CONTRACT NO.: 01-0B5101		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 01-13-14 01-14-14		SHEET X	OF X

065 CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

FILE => 0112000134zz001.dgn

USERNAME => s132662 DATE PLOTTED => 16-AUG-2016 TIME PLOTTED => 08:04

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	<b>M</b>
Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
MtI	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT
	<b>N</b>
N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE
	<b>O</b>
Obir	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN
	<b>P</b>
p	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm MtI	PERMEABLE MATERIAL

	<b>P continued</b>
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
PL, PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT
	<b>Q</b>
	<b>R</b>
Qty	QUANTITY
	<b>R</b>
R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

	<b>S</b>
S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
SL	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES
	<b>T</b>
T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

	<b>T continued</b>
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL
	<b>U</b>
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
	<b>V</b>
V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME
	<b>W</b>
W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
	<b>X</b>
X Sec	CROSS SECTION
Xing	CROSSING
	<b>Y</b>
Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	25	40

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
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  
Grace M. Tsushima  
No. C49814  
Exp. 9-30-14  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-2-16

**UNIT OF MEASUREMENT SYMBOLS:**

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	26	40

  
 CERTIFIED ENGINEERING GEOLOGIST  
 October 30, 2015  
 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 GEOLOGIST  
 CHRIS A. RISDIEN  
 CERTIFIED ENGINEERING GEOLOGIST  
 No. 2541  
 Exp. 9-30-17  
 STATE OF CALIFORNIA

CEMENTATION	
DESCRIPTION	CRITERIA
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE.
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE.
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE.

**ABBREVIATION:**

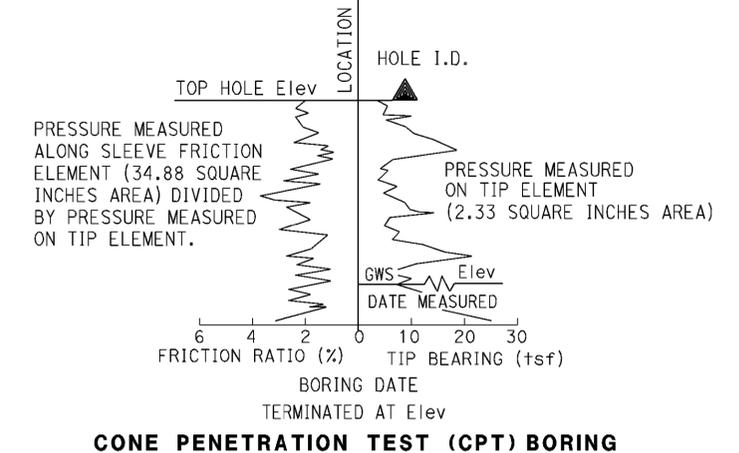
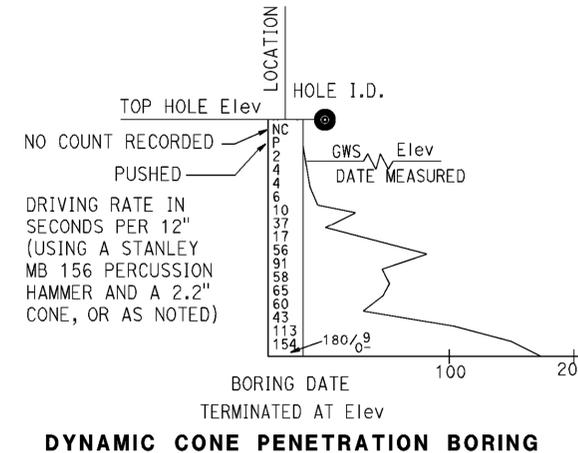
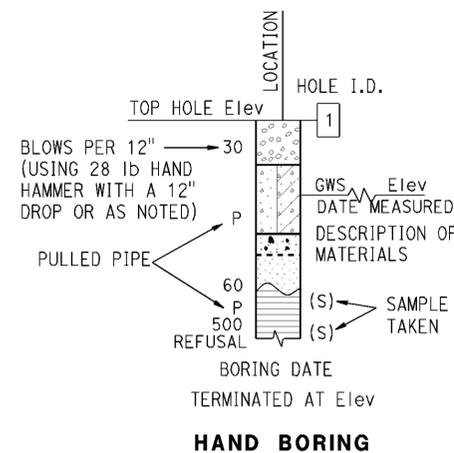
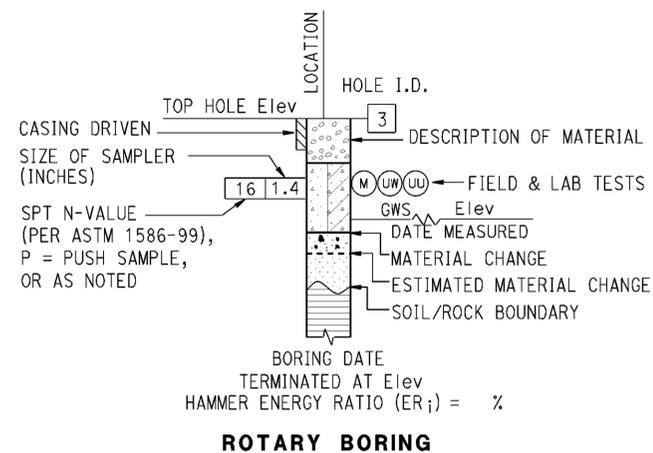
GWS = Ground Water Surface

TO ACCOMPANY PLANS DATED 5-2-16

BOREHOLE IDENTIFICATION		
SYMBOL	HOLE TYPE	DESCRIPTION
 A	A	AUGER BORING (HOLLOW OR SOLID STEM BUCKET)
 R	R	ROTARY DRILLED BORING (CONVENTIONAL)
 RW	RW	ROTARY DRILLED WITH SELF-CASING WIRE-LINE
 RC	RC	ROTARY CORE WITH CONTINUOUSLY-SAMPLED, SELF-CASING WIRE-LINE
 P	P	ROTARY PERCUSSION BORING (AIR)
 R	R	ROTARY DRILLED DIAMOND CORE
 RC	RC	ROTARY DRILLED DIAMOND CORE, CONTINUOUSLY SAMPLED
 HD	HD	HAND DRIVEN (1-INCH SOIL TUBE)
 HA	HA	HAND AUGER
 D	D	DYNAMIC CONE PENETRATION BORING
 CPT	CPT	CONE PENETRATION TEST (ASTM D 5778)
 O	O	OTHER (NOTE ON LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
DESCRIPTION	SHEAR STRENGTH (tsf)	POCKET PENETROMETER MEASUREMENT, PP, (tsf)	TORVANE MEASUREMENT, TV, (tsf)	VANE SHEAR MEASUREMENT, VS, (tsf)
VERY SOFT	LESS THAN 0.12	LESS THAN 0.25	LESS THAN 0.12	LESS THAN 0.12
SOFT	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
MEDIUM STIFF	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
STIFF	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
VERY STIFF	1 - 2	2 - 4	1 - 2	1 - 2
HARD	GREATER THAN 2	GREATER THAN 4	GREATER THAN 2	GREATER THAN 2



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LEGEND - SOIL**  
**(SHEET 1 OF 2)**  
 NO SCALE

RSP A10F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10F DATED MAY 20, 2011 - PAGE 6 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A10F**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	27	40

*Chris A. Risden*  
 CERTIFIED ENGINEERING GEOLOGIST

October 30, 2015  
 PLANS APPROVAL DATE

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REGISTERED GEOLOGIST  
 CHRIS A. RISDEN  
 No. 2541  
 Exp. 9-30-17  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-2-16

GROUP SYMBOLS AND NAMES					
GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES
	GW WELL-GRADED GRAVEL WELL-GRADED GRAVEL WITH SAND		CL LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL SANDY LEAN CLAY SANDY LEAN CLAY WITH GRAVEL GRAVELLY LEAN CLAY GRAVELLY LEAN CLAY WITH SAND		CL-ML SILTY CLAY SILTY CLAY WITH SAND SILTY CLAY WITH GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY WITH GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY WITH SAND
	GP POORLY-GRADED GRAVEL POORLY-GRADED GRAVEL WITH SAND				
	GW-GM WELL-GRADED GRAVEL WITH SILT WELL-GRADED GRAVEL WITH SILT AND SAND		ML SILT SILT WITH SAND SILT WITH GRAVEL SANDY SILT SANDY SILT WITH GRAVEL GRAVELLY SILT GRAVELLY SILT WITH SAND		OL ORGANIC LEAN CLAY ORGANIC LEAN CLAY WITH SAND ORGANIC LEAN CLAY WITH GRAVEL SANDY ORGANIC LEAN CLAY SANDY ORGANIC LEAN CLAY WITH GRAVEL GRAVELLY ORGANIC LEAN CLAY GRAVELLY ORGANIC LEAN CLAY WITH SAND
	GW-GC WELL-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) WELL-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)				
	GP-GM POORLY-GRADED GRAVEL WITH SILT POORLY-GRADED GRAVEL WITH SILT AND SAND		OL ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT WITH GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT WITH SAND		CH FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL SANDY FAT CLAY SANDY FAT CLAY WITH GRAVEL GRAVELLY FAT CLAY GRAVELLY FAT CLAY WITH SAND
	GP-GC POORLY-GRADED GRAVEL WITH CLAY (OR SILTY CLAY) POORLY-GRADED GRAVEL WITH CLAY AND SAND (OR SILTY CLAY AND SAND)				
	GM SILTY GRAVEL SILTY GRAVEL WITH SAND		MH ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL SANDY ELASTIC SILT SANDY ELASTIC SILT WITH GRAVEL GRAVELLY ELASTIC SILT GRAVELLY ELASTIC SILT WITH SAND		OH ORGANIC FAT CLAY ORGANIC FAT CLAY WITH SAND ORGANIC FAT CLAY WITH GRAVEL SANDY ORGANIC FAT CLAY SANDY ORGANIC FAT CLAY WITH GRAVEL GRAVELLY ORGANIC FAT CLAY GRAVELLY ORGANIC FAT CLAY WITH SAND
	GC CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND				
	GC-GM SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL WITH SAND		OH ORGANIC ELASTIC SILT ORGANIC ELASTIC SILT WITH SAND ORGANIC ELASTIC SILT WITH GRAVEL SANDY ORGANIC ELASTIC SILT SANDY ORGANIC ELASTIC SILT WITH GRAVEL GRAVELLY ORGANIC ELASTIC SILT GRAVELLY ORGANIC ELASTIC SILT WITH SAND		OL/OH ORGANIC SOIL ORGANIC SOIL WITH SAND ORGANIC SOIL WITH GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL WITH GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL WITH SAND
	SW WELL-GRADED SAND WELL-GRADED SAND WITH GRAVEL				
	SP POORLY-GRADED SAND POORLY-GRADED SAND WITH GRAVEL		SM SILTY SAND SILTY SAND WITH GRAVEL		SC CLAYEY SAND CLAYEY SAND WITH GRAVEL
	SW-SM WELL-GRADED SAND WITH SILT WELL-GRADED SAND WITH SILT AND GRAVEL				
	SW-SC WELL-GRADED SAND WITH CLAY (OR SILTY CLAY) WELL-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND WITH GRAVEL		PT PEAT
	SP-SM POORLY-GRADED SAND WITH SILT POORLY-GRADED SAND WITH SILT AND GRAVEL				
	SP-SC POORLY-GRADED SAND WITH CLAY (OR SILTY CLAY) POORLY-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)		COBBLES COBBLES AND BOULDERS BOULDERS		
	SM SILTY SAND SILTY SAND WITH GRAVEL				

FIELD AND LABORATORY TESTING	
(C)	CONSOLIDATION (ASTM D2435)
(CL)	COLLAPSE POTENTIAL (ASTM D4546)
(CP)	COMPACTION CURVE (CTM 216)
(CR)	CORROSIIVITY TESTING (CTM 643, CTM 422, CTM 417)
(CU)	CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
(DS)	DIRECT SHEAR (ASTM D3080)
(EI)	EXPANSION INDEX (ASTM D4829)
(M)	MOISTURE CONTENT (ASTM D2216)
(OC)	ORGANIC CONTENT-% (ASTM D2974)
(P)	PERMEABILITY (CTM 220)
(PA)	PARTICLE SIZE ANALYSIS (ASTM D422)
(PI)	PLASTICITY INDEX (AASHTO T 90) LIQUID LIMIT (AASHTO T 89)
(PL)	POINT LOAD INDEX (ASTM D5731)
(PM)	PRESSURE METER
(R)	R-VALUE (CTM 301)
(SE)	SAND EQUIVALENT (CTM 217)
(SG)	SPECIFIC GRAVITY (AASHTO T 100)
(SL)	SHRINKAGE LIMIT (ASTM D4943)
(SW)	SWELL POTENTIAL (ASTM D4546)
(UC)	UNCONFINED COMPRESSION-SOIL (ASTM D2166) UNCONFINED COMPRESSION-ROCK (ASTM D7012 - METHOD C)
(UU)	UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
(UW)	UNIT WEIGHT (ASTM D7263 - METHOD B)

APPARENT DENSITY OF COHESIONLESS SOILS	
DESCRIPTION	SPT N <sub>60</sub> (BLOWS / 12 INCHES)
VERY LOOSE	0 - 5
LOOSE	5 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	GREATER THAN 50

MOISTURE	
DESCRIPTION	CRITERIA
DRY	NO DISCERNABLE MOISTURE
MOIST	MOISTURE PRESENT, BUT NO FREE WATER
WET	VISIBLE FREE WATER

PERCENT OR PROPORTION OF SOILS	
DESCRIPTION	CRITERIA
TRACE	PARTICLES ARE PRESENT BUT ESTIMATED TO BE LESS THAN 5%
FEW	5% - 10%
LITTLE	15% - 25%
SOME	30% - 45%
MOSTLY	50% - 100%

PARTICLE SIZE		
DESCRIPTION	SIZE	
BOULDER	GREATER THAN 12"	
COBBLE	3" - 12"	
GRAVEL	COARSE	3/4" - 3"
	FINE	1/5" - 3/4"
SAND	COARSE	1/16" - 1/5"
	MEDIUM	1/64" - 1/16"
	FINE	1/300" - 1/64"
SILT AND CLAY	LESS THAN 1/300"	

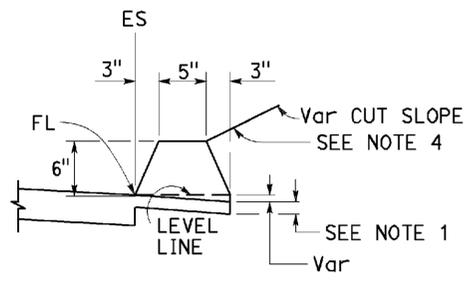
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LEGEND - SOIL**  
**(SHEET 2 OF 2)**  
 NO SCALE

RSP A10G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10G DATED MAY 20, 2011 - PAGE 7 OF THE STANDARD PLANS BOOK DATED 2010.

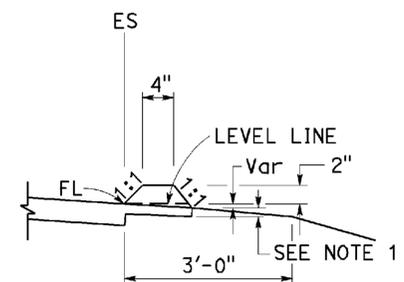
**REVISED STANDARD PLAN RSP A10G**

2010 REVISED STANDARD PLAN RSP A10G

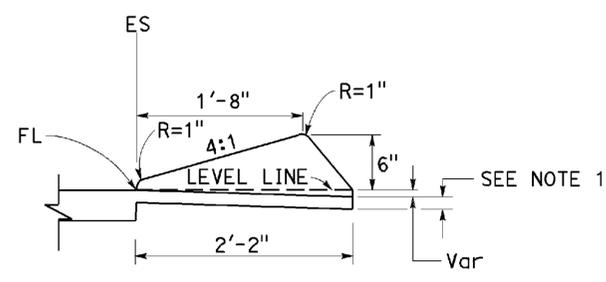
TO ACCOMPANY PLANS DATED 5-2-16



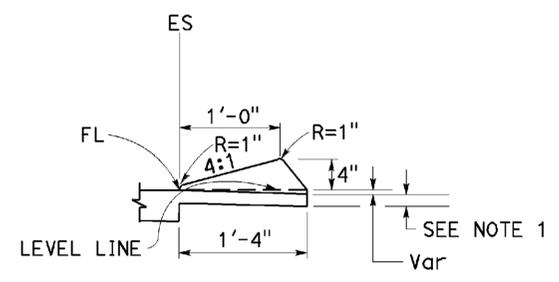
**TYPE A**  
See Notes 3 and 5



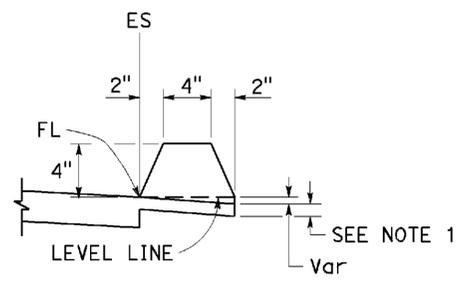
**TYPE C**



**TYPE D**

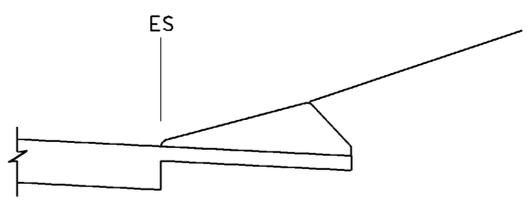


**TYPE E**

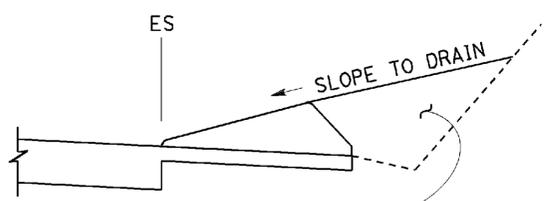


**TYPE F**  
See Note 5

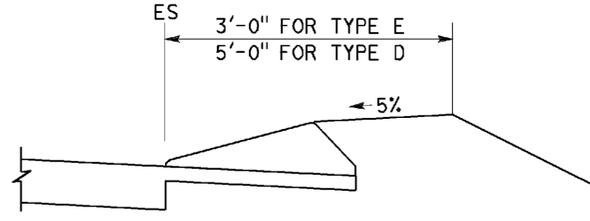
**DIKES**



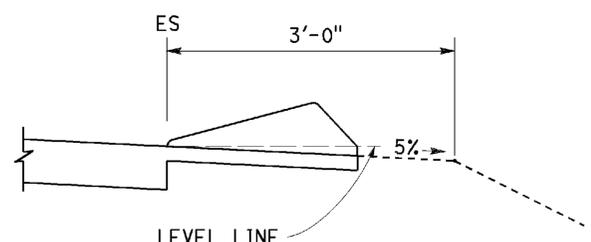
**CASE C-1**  
Cut Slope



**CASE C-2**  
Cut Slope



**CASE F**



**CASE R**  
See Note 2

**TYPE D AND E BACKFILL DETAILS**

**NOTES:**

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type A or F dike, where dike is required with guardrail installations. See Revised Standard Plan RSP A77N4 for dike positioning details. See Revised Standard Plan RSP A77N3 for hinge point offsets with guardrail.

**DIKE QUANTITIES**

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**HOT MIX ASPHALT DIKES**

NO SCALE

RSP A87B DATED JANUARY 15, 2016 SUPERSEDES RSP A87B DATED JULY 19, 2013 AND STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A87B**

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2010 REVISED STANDARD PLAN RSP A87B

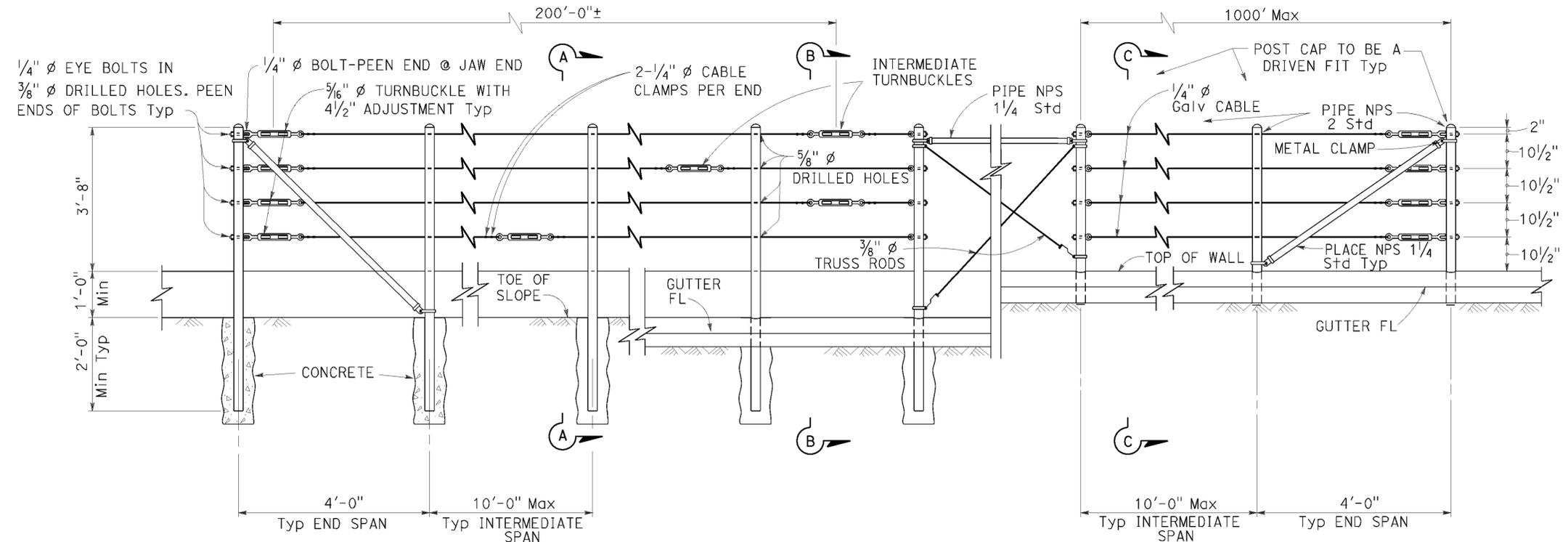
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	29	40

REGISTERED CIVIL ENGINEER		
October 21, 2011		
PLANS APPROVAL DATE		

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TO ACCOMPANY PLANS DATED 5-2-16

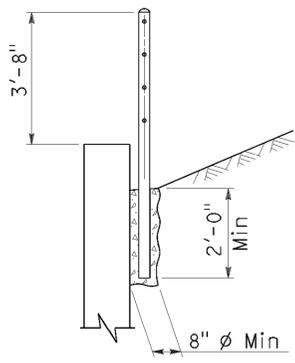


**EXISTING WALL (WITHOUT GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** New construction

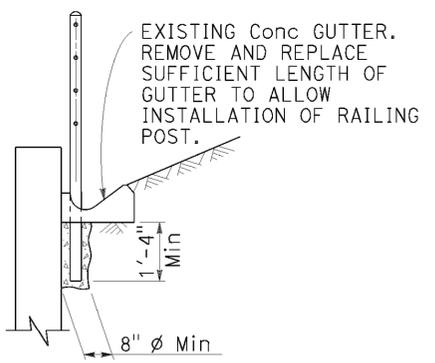
**ELEVATION**

**NOTES:**

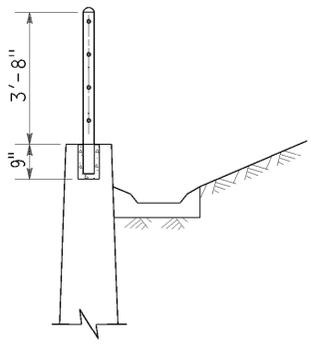
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining wall.
6. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.
7. Line posts shall be braced horizontally and trussed diagonally in both directions at intervals not to exceed 1000'.
8. Post pockets to be centered in top of wall.
9. Typical end spans, braced in both directions, shall be constructed at changes in line where the angle of deflection is 15° or more.
10. Provide thimbles at all cable loops.



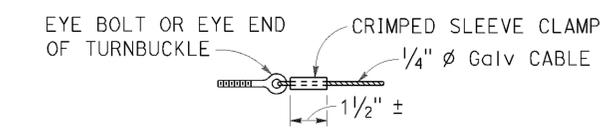
**SECTION A-A**  
Existing



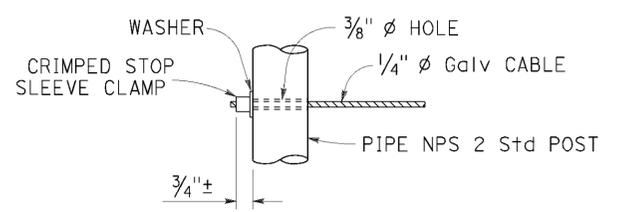
**SECTION B-B**  
Existing



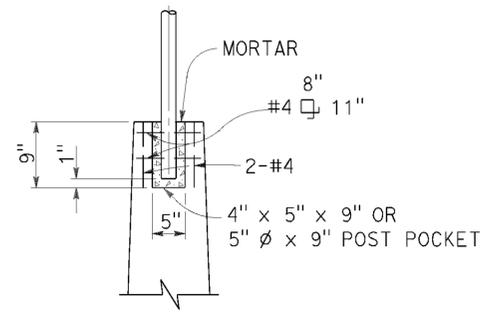
**SECTION C-C**  
New construction



**ALTERNATIVE CABLE CONNECTION**



**ALTERNATIVE DEAD END ANCHORAGE**



**POST POCKET**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CABLE RAILING**

NO SCALE

RSP B11-47 DATED OCTOBER 21, 2011 SUPERSEDES STANDARD PLAN B11-47 DATED MAY 20, 2011 - PAGE 293 OF THE STANDARD PLANS BOOK DATED 2010.

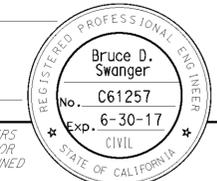
**REVISED STANDARD PLAN RSP B11-47**

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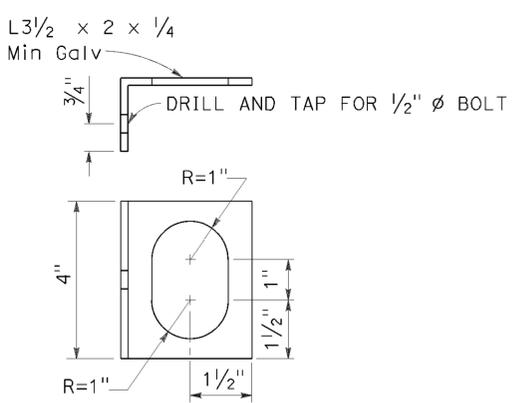
2010 REVISED STANDARD PLAN RSP B11-47

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	101	93.2	30	40

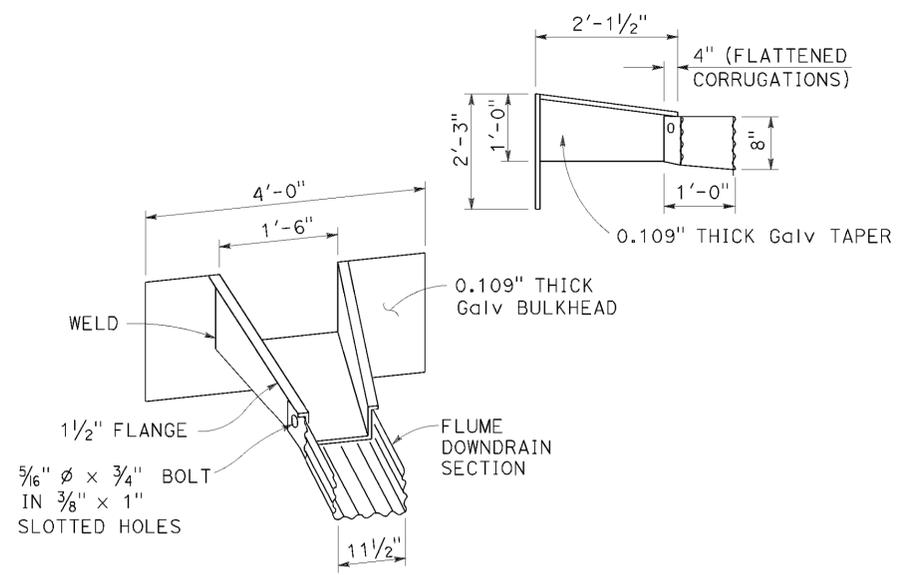
  

 REGISTERED CIVIL ENGINEER		
October 30, 2015 PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

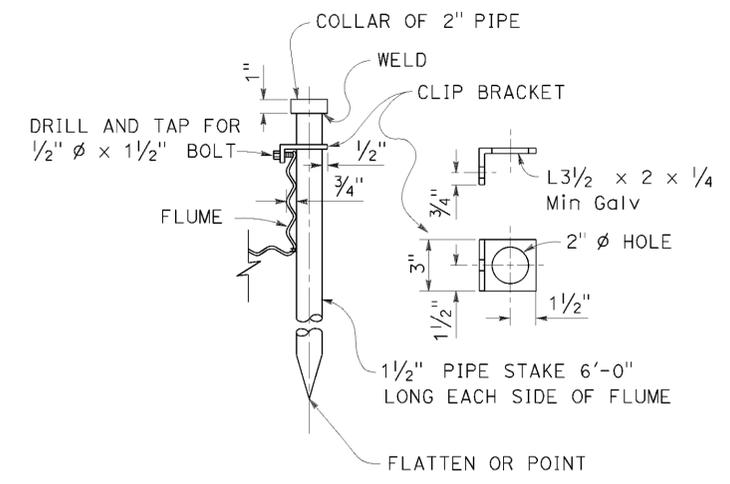
TO ACCOMPANY PLANS DATED 5-2-16



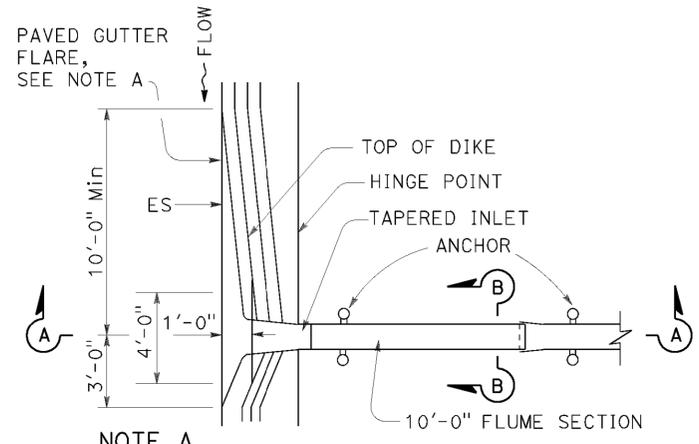
**ALTERNATIVE CLIP BRACKET DETAIL**



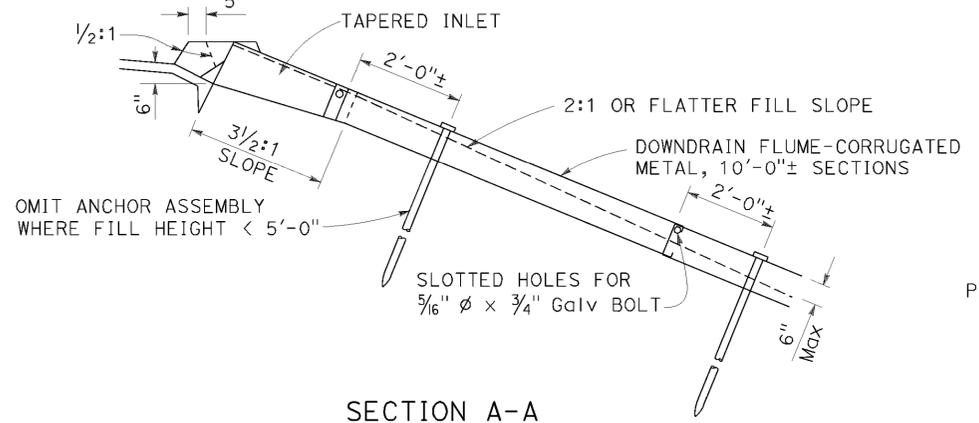
**TAPERED INLET**



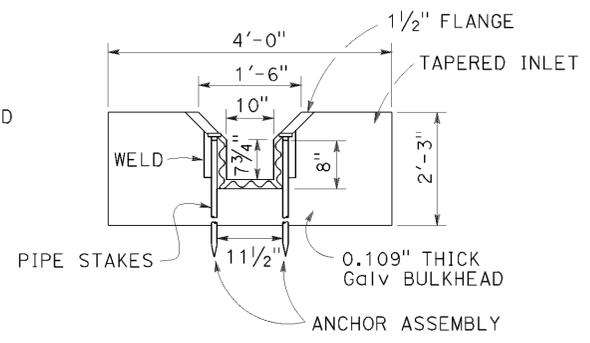
**PIPE STAKE ANCHOR DETAIL**



**NOTE A**  
In sag location, use 10'-0" length of paved gutter flare on both sides of inlet.  
**PLAN**

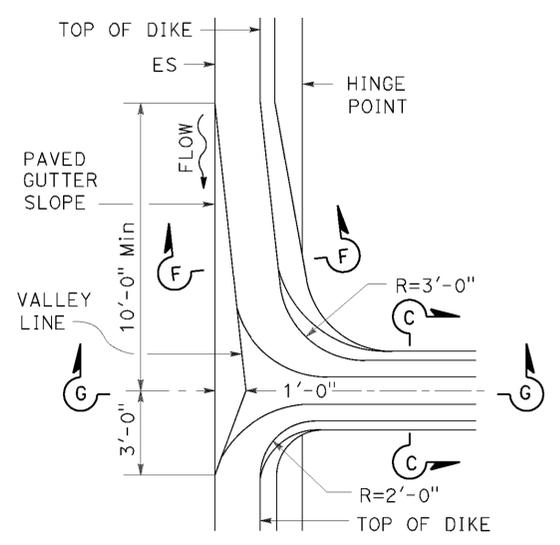


**SECTION A-A**



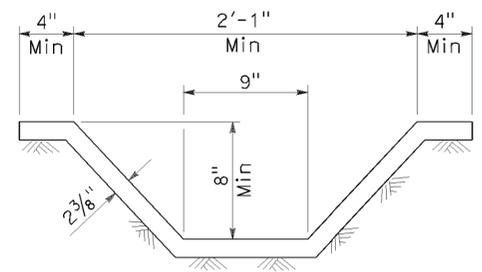
**SECTION B-B**

**TAPERED INLET AND FLUME DOWNDRAIN**



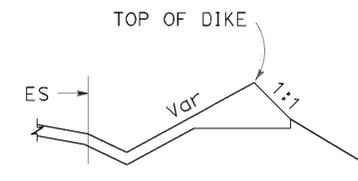
**PLAN**  
**MOUNTABLE DIKE**

**HOT MIX ASPHALT OVERSIDE DRAINS**

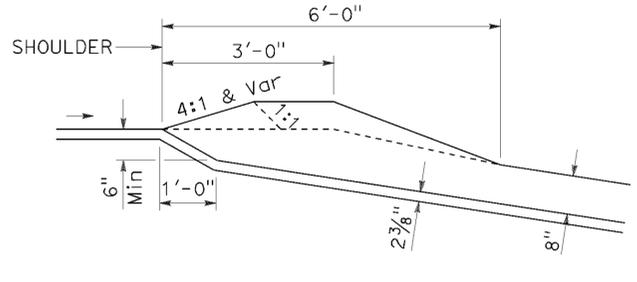


**SECTION C-C**

**NOTE:**  
1. Cross section of slope ditch may be semicircular, vee or trapezoidal.



**SECTION F-F**



**SECTION G-G**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**OVERSIDE DRAINS**  
NO SCALE

RSP D87D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D87D DATED MAY 20, 2011 - PAGE 185 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D87D**

2010 REVISED STANDARD PLAN RSP D87D

P:\PROJ\01\08510\drain\ing\Sheets\vo006.dgn

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	31	40

Raymond Don Tsztoo  
 REGISTERED CIVIL ENGINEER  
 October 30, 2015  
 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.

TO ACCOMPANY PLANS DATED 5-2-16

ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAND THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE													
				CSP		CAP		CSP		CAP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND							
				CSP	CAP	CSP	CAP	CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP									
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"	7"	0.064"-0.168"				0.052"								3-3/8"													
	1 1/2' x 1/4"	8"-10"	7"	0.064"-0.168"		0.060"-0.164"		0.064"		0.060"						3-3/8"		3-3/8"											
ANNULAR	2 2/3" x 1/2"	THROUGH 24"	12"	0.064"-0.168"		0.060"-0.164"		0.064"		0.060"						2" x 2" x 3/16"		2" x 2" x 3/16"		3-1/2"		3-1/2"		3-3/8"		3-3/8"		3-1/2"	
HUGGER	2 2/3" x 1/2" REROLLED END	THROUGH 24"	10 1/2"	0.064"-0.168"				0.064"				0.079"	1/2"	7/8"	32 ksi														

NOTES:

- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
  - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
  - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 2 2/3" x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3" x 1/2" corrugations.
- For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 7" measured along the length of the pipe.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAND THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE													
				SSRP		ASRP		SSRP		ASRP		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND							
SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP							
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"	12"	0.064"-0.168"		0.060"-0.164"		0.064"		0.060"						2" x 2" x 3/16"		2" x 2" x 3/16"		3-1/2"		3-1/2"		3-3/8"		3-3/8"		3-1/2"	
HUGGER	2 2/3" x 1/2" * REROLLED END	24"	10 1/2"	0.064"-0.168"				0.064"				0.079"	1/2"	7/8"	32 ksi														

\* See Note 11.

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE  
COUPLING DETAILS No. 7  
DOWNDRAIN**

NO SCALE

RSP D97G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D97G DATED MAY 20, 2011 - PAGE 202 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D97G**

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2010 REVISED STANDARD PLAN RSP D97G

**LEGEND:**

<b>AB</b>	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
<b>BC</b>	INSTALL PULL BOX IN EXISTING CONDUIT RUN
<b>BP</b>	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
<b>CB</b>	INSTALL CONDUIT INTO EXISTING PULL BOX
<b>CC</b>	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
<b>CF</b>	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
<b>DH</b>	DETECTOR HANDHOLE
<b>FA</b>	FOUNDATION TO BE ABANDONED
<b>IS</b>	INSTALL SIGN ON SIGNAL MAST ARM
<b>NS</b>	NO SLIP BASE ON STANDARD
<b>PEC</b>	PHOTOELECTRIC CONTROL
<b>PEU</b>	PHOTOELECTRIC UNIT
<b>RC</b>	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
<b>RE</b>	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
<b>RL</b>	RELOCATE EQUIPMENT
<b>RR</b>	REMOVE AND REUSE EQUIPMENT
<b>RS</b>	REMOVE AND SALVAGE EQUIPMENT
<b>SC</b>	SPLICE NEW TO EXISTING CONDUCTORS
<b>SD</b>	SERVICE DISCONNECT
<b>TSP</b>	TELEPHONE SERVICE POINT

**ABBREVIATIONS**

AC+	UNDERGROUNDED CONDUCTOR	MAT	MAST ARM MOUNTING TOP ATTACHMENT
APS	ACCESSIBLE PEDESTRIAN SIGNAL	MAS	MAST ARM MOUNTING SIDE ATTACHMENT
Batt	BATTERY	MBPS	MANUAL BYPASS SWITCH
BBS	BATTERY BACKUP SYSTEM	M/M	MULTIPLE TO MULTIPLE TRANSFORMER MOUNTING
BC	BOLT CIRCLE	Mtg	MERCURY VAPOR LIGHTING FIXTURE
BIK	BLACK	MV	MICROWAVE VEHICLE DETECTION SYSTEM
BP	BYPASS	MVDS	NEUTRAL (GROUNDED CONDUCTOR)
BPB	BICYCLE PUSH BUTTON	N	NEUTRAL BUS
C	CONDUIT	NB	NORMALLY CLOSE
CB	CIRCUIT BREAKER	NC	NORMALLY OPEN
CCTV	CLOSED CIRCUIT TELEVISION	NO	CIRCUIT BREAKER'S POLE
Ckt	CIRCUIT	P	PULL BOX
CMS	CHANGEABLE MESSAGE SIGN	PB	PUSH BUTTON ASSEMBLY
Ctid	CALTRANS IDENTIFICATION	PBA	PHOTOELECTRIC CONTROL
Comm	COMMUNICATION	PEC	PEDESTRIAN
Cntl	CONTROL	Ped	PHOTOELECTRIC UNIT
DF	DEPARTMENT-FURNISHED	PEU	CONDUIT WITH PULL TAPE
DLC	LOOP DETECTOR LEAD-IN CABLE	PT	POWER TRANSFER RELAY
EMS	EXTINGUISHABLE MESSAGE SIGN	PTR	RELOCATED EQUIPMENT
EVUC	EMERGENCY VEHICLE UNIT CABLE	RE	RAMP METERING
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	RM	ROADSIDE WEATHER INFORMATION SYSTEM
FB	FLASHING BEACON	RWIS	SLIP BASE
FBCA	FLASHING BEACON CONTROL ASSEMBLY	SB	SIGNAL INTERCONNECT CABLE
FBS	FLASHING BEACON WITH SLIP BASE	SIC	SIGNAL
FO	FIBER OPTIC	Sig	SIGNAL MAST ARM
G	EQUIPMENT GROUNDING CONDUCTOR	SMA	STREET NAME SIGN
GB	GROUND BUS	SNS	SERVICE POINT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SP	TERMINAL BOARD
Grn	GREEN	TB	TELEPHONE DEMARCATION CABINET
HAR	HIGHWAY ADVISORY RADIO	TDC	TEMPERATURE
Hex	HEXAGONAL	Temp	TRAFFIC MONITORING STATION
HPS	HIGH PRESSURE SODIUM	TMS	TRAFFIC OPERATIONS SYSTEM
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TOS	UNINTERRUPTABLE POWER SUPPLY
ISL	INDUCTION SIGN LIGHTING	UPS	UNINTERRUPTABLE POWER SUPPLY CONTROLLER
LED	LIGHT EMITTING DIODE	UPSC	VEHICLE
LMA	LUMINAIRE MAST ARM	Veh	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	VIVDS	WHITE
Ltg	LIGHTING	Wht	WEIGH-IN-MOTION
Lum	LUMINAIRE	WIM	TRANSFORMER
M	METERED	Xfmr	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	32	40

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

October 30, 2015  
PLANS APPROVAL DATE

Theresa Aziz Gabriel  
No. E15129  
Exp. 6-30-16  
ELECTRICAL

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.

TO ACCOMPANY PLANS DATED 5-2-16

**SOFFIT AND WALL-MOUNTED LUMINAIRES**

- PENDANT SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH-MOUNTED SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL-MOUNTED LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

**NOTE:**  
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL	DEFINITIONS
$\Omega$	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
$\mu$	MICRO
P	PICO
Hz	HERTZ

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

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

**MISCELLANEOUS ELECTROLIERS**

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

- NOTES:**
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W 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.

**STANDARD ELECTROLIER**

NEW	EXISTING	STANDARD TYPE
		15
		150
		15 STRUCTURE
		150 STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	33	40

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER  
October 30, 2015  
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 5-2-16

**CONDUIT**

NEW	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 ATTACHED TO THE STRUCTURE OR SERVICE POLE

**SIGNAL EQUIPMENT**

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

**SERVICE EQUIPMENT**

NEW	EXISTING	
		OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

**POLE-MOUNTED SERVICE DESIGNATION**

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

**FLASHING BEACON**

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

**SIGNAL EQUIPMENT Cont**

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

**NOTES:**

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

**ILLUMINATED OVERHEAD SIGN**

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

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

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2010 REVISED STANDARD PLAN RSP ES-1B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	34	40

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER  
October 30, 2015  
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.

TO ACCOMPANY PLANS DATED 5-2-16

**CONDUIT**

NEW	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 ATTACHED TO THE STRUCTURE OR SERVICE POLE

**SIGNAL EQUIPMENT**

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

**SERVICE EQUIPMENT**

NEW	EXISTING	
		OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

**POLE-MOUNTED SERVICE DESIGNATION**

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

**FLASHING BEACON**

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

**SIGNAL EQUIPMENT Cont**

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

**NOTES:**

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

**ILLUMINATED OVERHEAD SIGN**

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

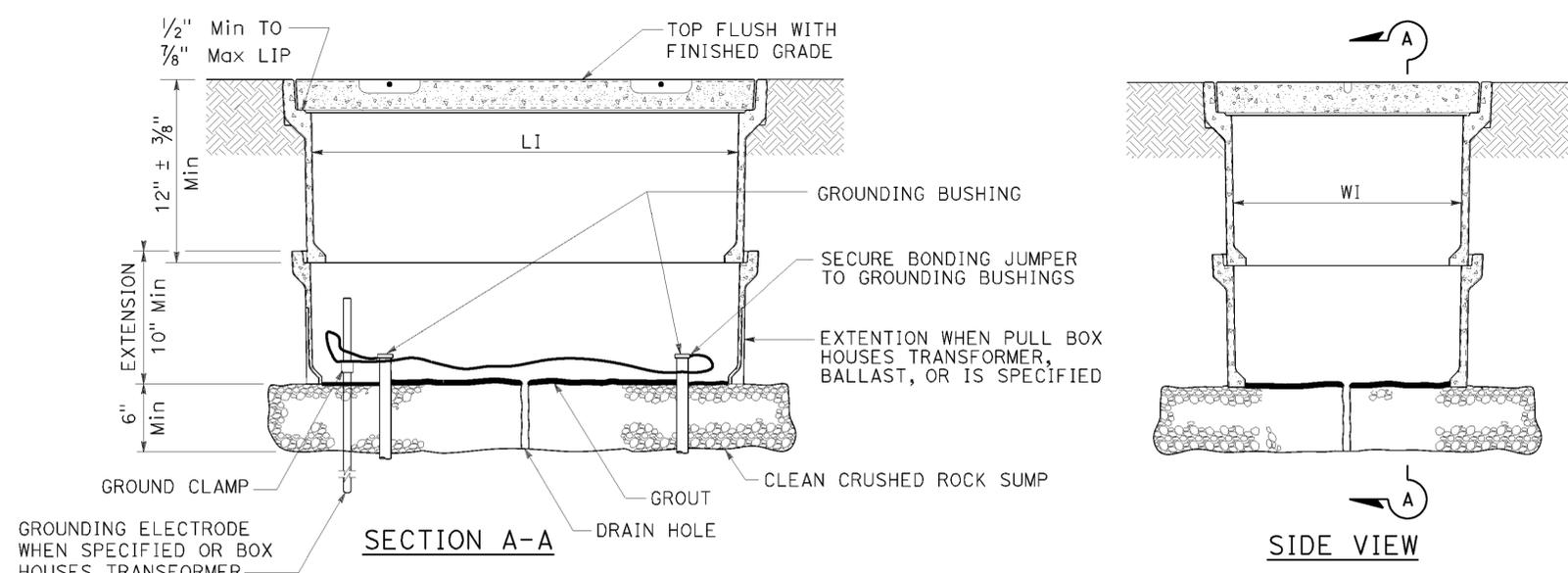
**REVISED STANDARD PLAN RSP ES-1B**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	101	93.2	35	40

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 April 15, 2016  
 PLANS APPROVAL DATE  
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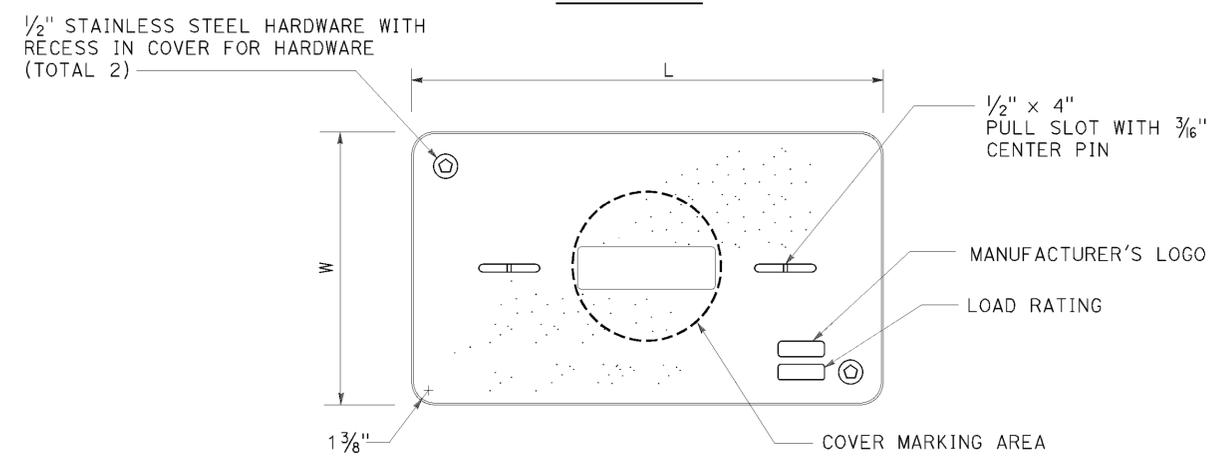
TO ACCOMPANY PLANS DATED 5-2-16



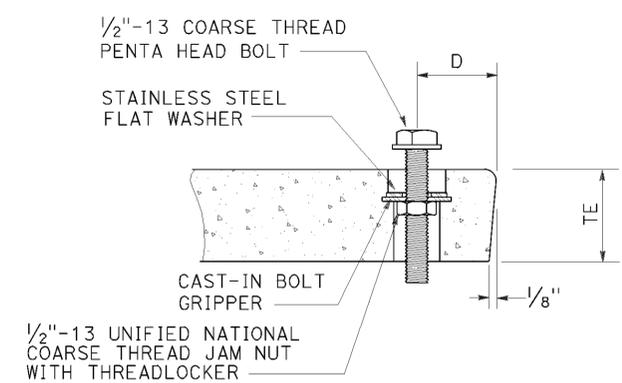
**INSTALLATION DETAILS**  
DETAIL A

**NOTES:**

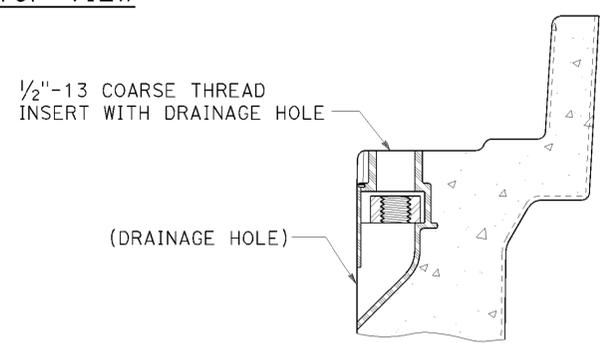
1. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
2. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
3. Dimensions for the cover for non-traffic pull box are nominal values.



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
OR SIMILAR



**TYPICAL THREADED INSERT**  
OR SIMILAR

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MINIMUM WEIGHT	LI Min	WI Min	TE	D	L	W	MINIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3"	9"	1 3/4"	1 3/4"	1' - 3 1/4" - 1' - 3 3/8"	10" - 10 1/8"	30 lb
No. 5	12"	10"	55 lb	1' - 8"	11"	2"	1 3/4"	1' - 11 1/4"	1' - 1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2' - 6 1/2"	1' - 5 1/2"	85 lb

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(NON-TRAFFIC PULL BOX)**  
NO SCALE

RSP ES-8A DATED APRIL 15, 2016 SUPERSEDES RSP ES-8A DATED OCTOBER 30, 2015 AND RSP ES-8A DATED JULY 19, 2013 AND RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-8A**

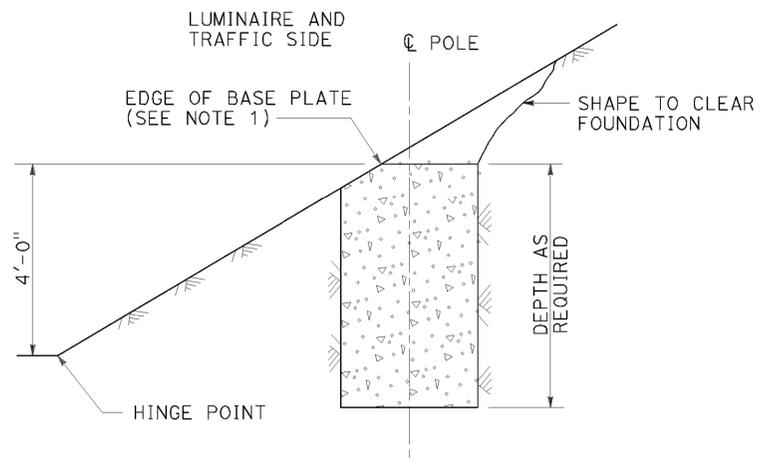
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	36	40

Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 July 15, 2016  
 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.

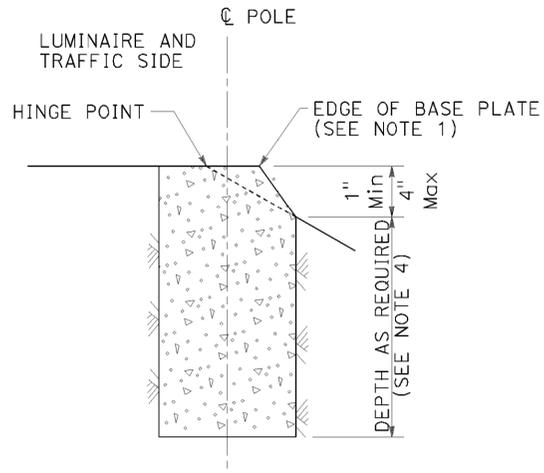


TO ACCOMPANY PLANS DATED 5-2-16

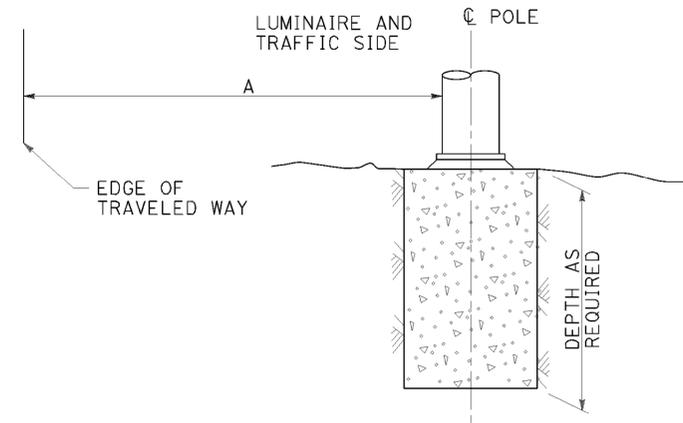
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



CUT SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-1  
 See Note 2 and 3



FILL SLOPES  
STEEPER THAN 4:1,  
LESS THAN 2:1  
DETAIL A-2  
 See Note 2 and 3

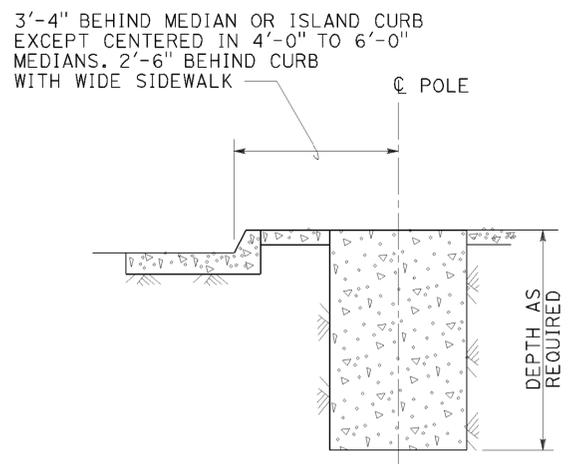


FLAT SECTIONS, CUT OR FILL SLOPES  
4:1 OR FLATTER  
DETAIL A-3  
 See Note 2

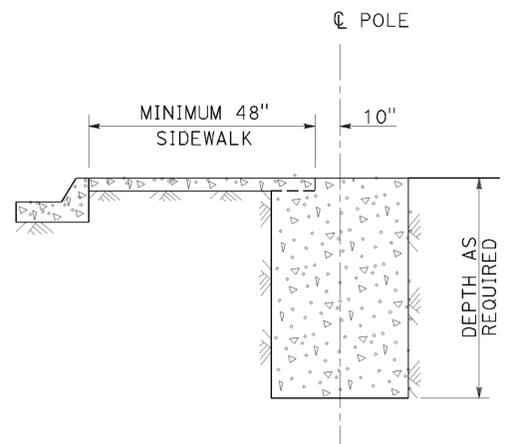
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT  
IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL A

NOTES:

1. Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
2. Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
3. Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
4. CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND  
OR WIDE SIDEWALK  
DETAIL B-1  
 7' Wide and wider



NARROW SIDEWALK  
DETAIL B-2  
 Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL B

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(FOUNDATION INSTALLATIONS)**  
 NO SCALE

RSP ES-11 DATED JULY 15, 2016 SUPERSEDES RSP  
 ES-11 DATED JULY 19, 2013 AND STANDARD PLAN ES-11  
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-11**

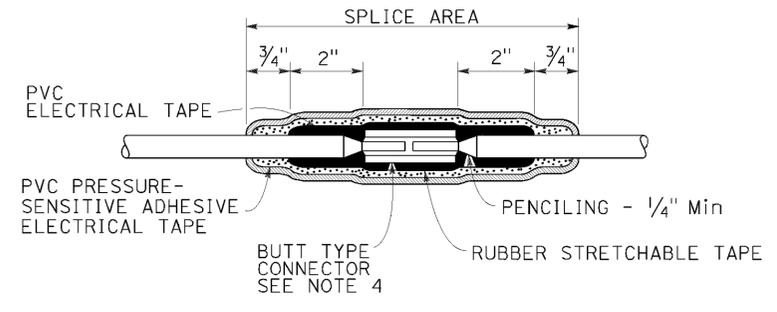
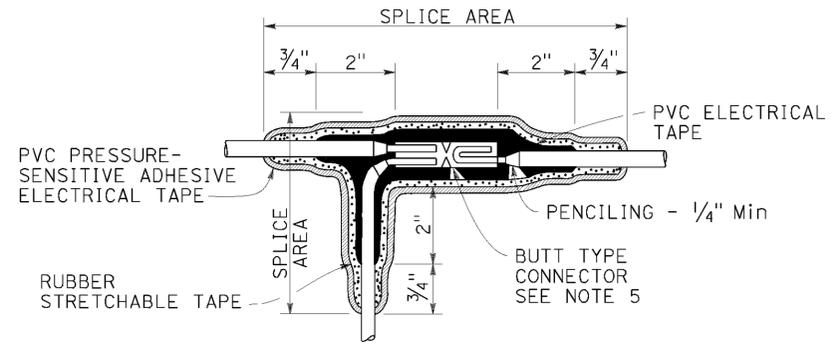
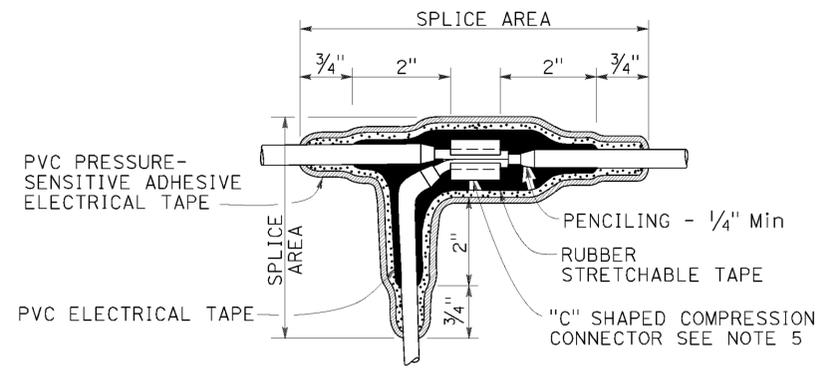
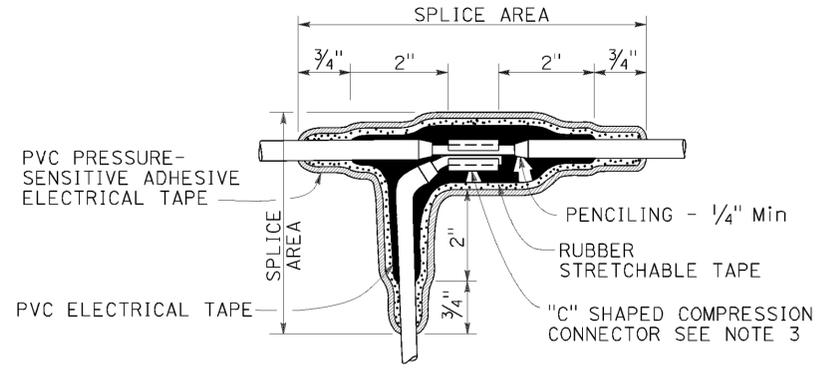
2010 REVISED STANDARD PLAN RSP ES-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	37	40

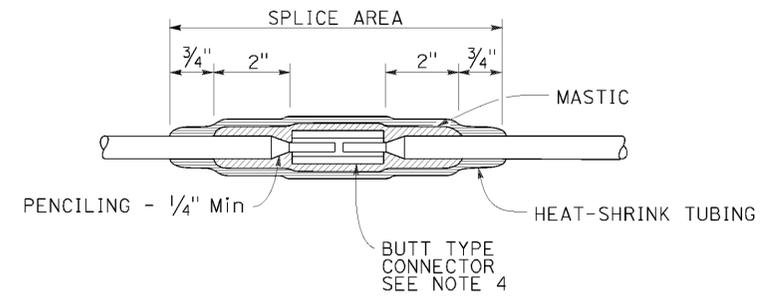
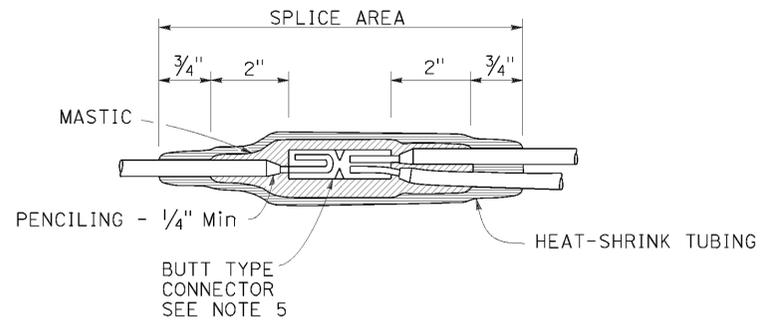
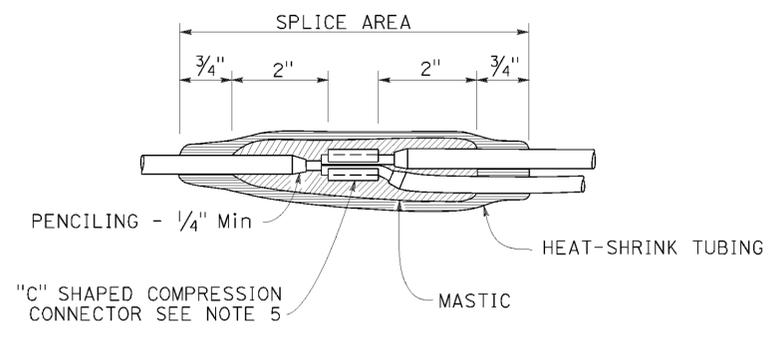
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 April 15, 2016  
 PLANS APPROVAL DATE  
 No. E15129  
 Exp. 6-30-16  
 ELECTRICAL  
 STATE OF CALIFORNIA

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.

TO ACCOMPANY PLANS DATED 5-2-16



TYPICAL SPLICE INSULATION METHOD B



TYPICAL SPLICE INSULATION HEAT-SHRINK TUBING

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(SPLICE INSULATION METHODS DETAILS)**

NO SCALE

RSP ES-13A DATED APRIL 15, 2016 SUPERSEDES RSP ES-13A DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-13A**

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2010 REVISED STANDARD PLAN RSP ES-13A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	38	40

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 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.

TO ACCOMPANY PLANS DATED 5-2-16

**A**

AB AGGREGATE BASE  
 ABS ACRYLONITRILE-BUTADIENE-STYRENE  
 AC ASPHALT CONCRETE  
 ACC ARMOR-CLAD CONDUCTORS  
 Adj ADJACENT/ADJUSTABLE  
 AIC AUXILIARY IRRIGATION CONTROLLER  
 Alt ALTERNATIVE  
 AMEND AMENDMENT  
 ARV AIR RELEASE VALVE  
 AUTO AUTOMATIC  
 AUX AUXILIARY  
 AVB ATMOSPHERIC VACUUM BREAKER

**B**

B&B BALLED AND BURLAPPED  
 B/B BRASS/BRONZE  
 B/B/PL BRASS/BRONZE/PLASTIC  
 B/PL BRASS/PLASTIC  
 BFM BONDED FIBER MATRIX  
 Bit C+D BITUMINOUS COATED  
 BP BOOSTER PUMP  
 BPA BACKFLOW PREVENTER ASSEMBLY  
 BPE BACKFLOW PREVENTER ENCLOSURE  
 BV BALL VALVE

**C**

C CONDUIT  
 CAP CORRUGATED ALUMINUM PIPE  
 CARV COMBINATION AIR RELEASE VALVE  
 CB COUPLING BAND  
 CCA CAM COUPLER ASSEMBLY  
 CEC CONTROLLER ENCLOSURE CABINET  
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE  
 CL CHAIN LINK  
 CNC CONTROL AND NEUTRAL CONDUCTORS  
 Conc CONCRETE  
 CP COPPER PIPE  
 CS COMPOST SOCK  
 CSP CORRUGATED STEEL PIPE  
 CST CENTER STRIP  
 CV CHECK VALVE

**D**

Dia DIAMETER  
 DIP DUCTILE IRON PIPE  
 DIT DRIP IRRIGATION TUBING  
 DG DECOMPOSED GRANITE  
 DN DIAMETER NOMINAL  
 DVA DRIP VALVE ASSEMBLY

**E**

EC EROSION CONTROL  
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL  
 Elect ELECTRIC/ELECTRICAL  
 Elev ELEVATION  
 ELL ELBOW  
 ENCL ENCLOSURE  
 EP EDGE OF PAVEMENT  
 ES EDGE OF SHOULDER  
 EST END STRIP  
 ESTB ESTABLISHMENT  
 ETW EDGE OF TRAVELED WAY

**F**

F FULL CIRCLE  
 F/P FULL/PART CIRCLE  
 FCV FLOW CONTROL VALVE  
 FERT FERTILIZER  
 FG FINISHED GRADE  
 FH FLEXIBLE HOSE  
 FIPT FEMALE IRON PIPE THREAD  
 FIS FERTILIZER INJECTOR SYSTEM  
 FL FLOW LINE  
 FR FIBER ROLL  
 FS FLOW SENSOR  
 FSC FLOW SENSOR CABLE  
 FV FLUSH VALVE

**G**

Galv GALVANIZED  
 GARV GARDEN VALVE  
 GARVA GARDEN VALVE ASSEMBLY  
 GM GRAVEL MULCH  
 GPH GALLONS PER HOUR  
 GPM GALLONS PER MINUTE  
 GSP GALVANIZED STEEL PIPE  
 GV GATE VALVE

**H**

H HALF CIRCLE  
 HDPE HIGH DENSITY POLYETHYLENE  
 HP HORSEPOWER/HINGE POINT  
 HPL HIGH PRESSURE LINE  
 Hwy HIGHWAY

**I**

IC IRRIGATION CONTROLLER  
 ICC IRRIGATION CONTROLLER(S)  
 IN CONTROLLER ENCLOSURE CABINET  
 ID INSIDE DIAMETER  
 IFS IRRIGATION FILTRATION SYSTEM  
 IPS IRON PIPE SIZE  
 IPT IRON PIPE THREAD  
 Irr IRRIGATION

**L**

L LENGTH

**M**

Max MAXIMUM  
 MBGR METAL BEAM GUARD RAILING  
 MCV MANUAL CONTROL VALVE  
 MIC MASTER IRRIGATION CONTROLLER  
 Min MINIMUM  
 MIPT MALE IRON PIPE THREAD  
 Misc MISCELLANEOUS  
 MtI MATERIAL  
 MVP MAINTENANCE VEHICLE PULLOUT

**N**

NCN NO COMMON NAME  
 NL NOZZLE LINE  
 No. NUMBER  
 NPT NATIONAL PIPE THREAD

**O**

O/C ON CENTER  
 OD OUTSIDE DIAMETER  
 OL OVERLAP

**P**

P PART CIRCLE  
 PB PULL BOX  
 PCC PORTLAND CEMENT CONCRETE  
 PE POLYETHYLENE  
 PKt PACKET  
 PL PLASTIC  
 PLS PURE LIVE SEED  
 PLT PLANT/PLANTING  
 PLT ESTB PLANT ESTABLISHMENT  
 PM POST MILE  
 PR PRESSURE RATED  
 PRLV PRESSURE RELIEF VALVE  
 PRV PRESSURE REGULATING VALVE  
 PVC POLYVINYL CHLORIDE  
 PvmT PAVEMENT

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

**NOTE:**  
 For additional abbreviations,  
 see Standard Plans A10A and A10B.

**R**

R RADIUS  
 RCP REINFORCED CONCRETE PIPE  
 RCV REMOTE CONTROL VALVE  
 RCVM REMOTE CONTROL VALVE (MASTER)  
 RCVMF REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR  
 RCVP REMOTE CONTROL VALVE W/PRESSURE REGULATOR  
 RCW RECYCLED WATER  
 RECP ROLLED EROSION CONTROL PRODUCT  
 REQ REQUIRED  
 RICS REMOTE IRRIGATION CONTROL SYSTEM  
 R/W RIGHT OF WAY

**S**

S SLIP  
 SCH SCHEDULE  
 SF STATE-FURNISHED  
 Shld SHOULDER  
 Sq SQUARE  
 SST SIDE STRIP  
 Sta STATION  
 Std STANDARD  
 SW SIDEWALK/SOUND WALL

**T**

T THIRD CIRCLE/THREAD  
 TLS TRUCK LOADING STANDPIPE  
 TQ THREE QUARTER CIRCLE  
 TRM TURF REINFORCEMENT MAT  
 TT TWO-THIRDS CIRCLE  
 TWSA TREE WELL SPRINKLER ASSEMBLY  
 Typ TYPICAL

**U**

UG UNDERGROUND

**W**

W WIDTH  
 W/ WITH  
 WM WATER METER  
 WS WYE STRAINER  
 WSA WYE STRAINER ASSEMBLY  
 WSP WELDED STEEL PIPE  
 WWM WELDED WIRE MESH

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND  
 EROSION CONTROL ABBREVIATIONS**  
 NO SCALE

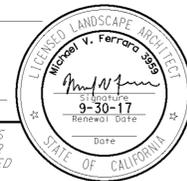
RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

2010 REVISED STANDARD PLAN RSP H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	93.2	39	40

  
 LICENSED LANDSCAPE ARCHITECT  
 July 15, 2016  
 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.

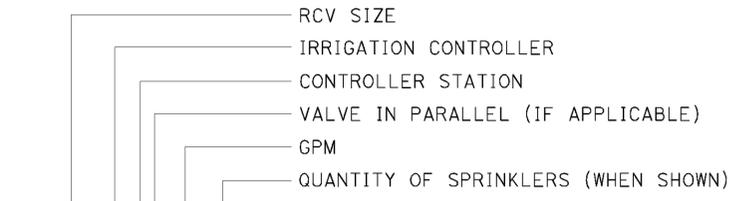


TO ACCOMPANY PLANS DATED 5-2-16

2010 REVISED STANDARD PLAN RSP H2

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



\* (2 1/2" - A - 2b - 40 - 60)

**VALVE CODE**

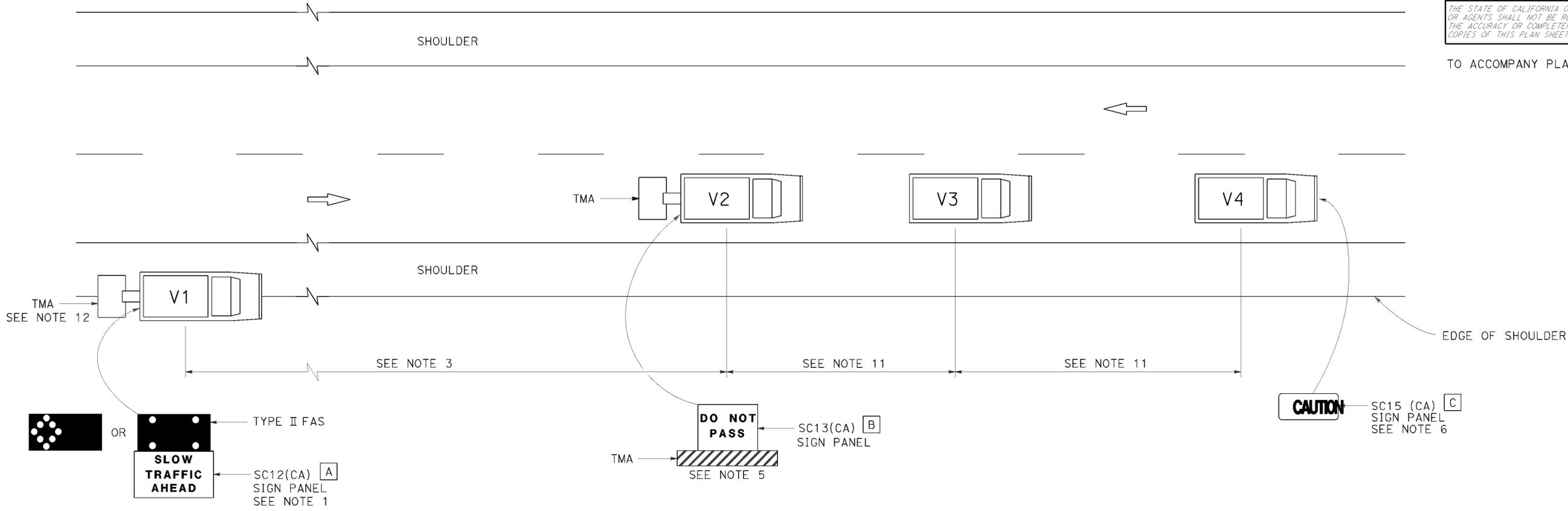
\* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION  
CONTROL SYMBOLS**  
NO SCALE

RSP H2 DATED JULY 15, 2016 SUPERSEDES RSP H2 DATED NOVEMBER 15, 2013 AND RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H2**

TO ACCOMPANY PLANS DATED \_\_\_\_\_



**NOTES:**

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.

7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

**LEGEND**

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- V4 SIGN VEHICLE
- TMA TRUCK-MOUNTED ATTENUATOR
-  FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
-  FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

**SIGN PANEL SIZE (Min)**

- A** 72" x 42"
- B** 54" x 42"
- C** 54" x 24"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
FOR MOVING LANE CLOSURE  
ON TWO LANE HIGHWAYS**  
NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17  
DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T17**