

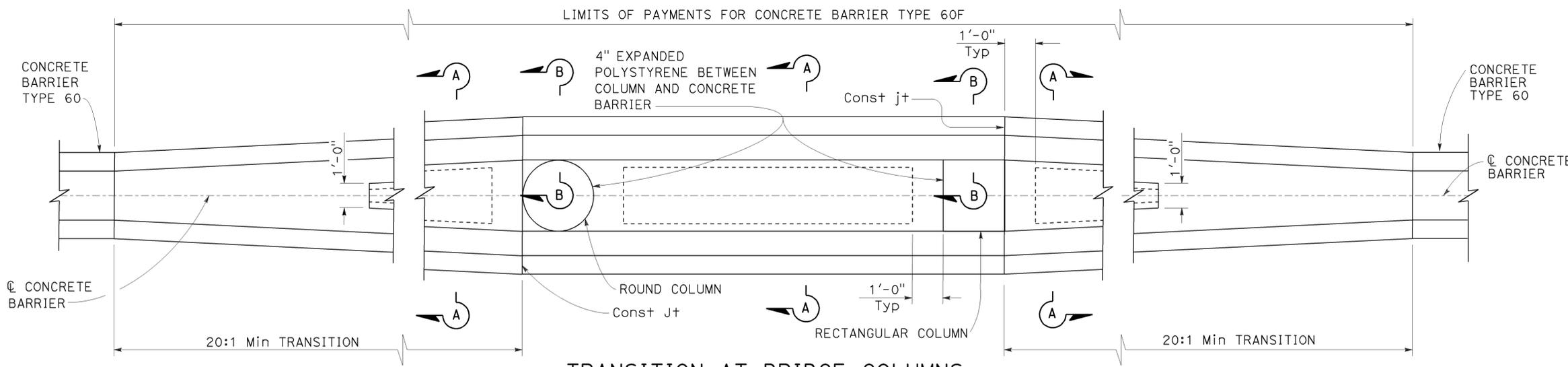
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	201	287

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

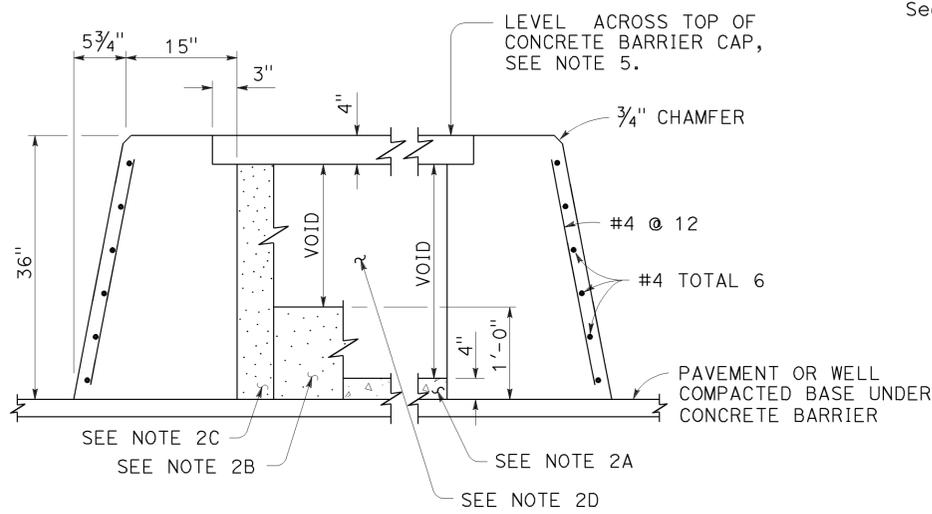
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 05-26-15

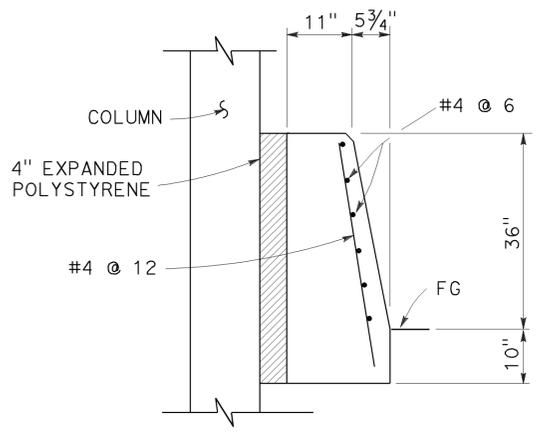


**TRANSITION AT BRIDGE COLUMNS**

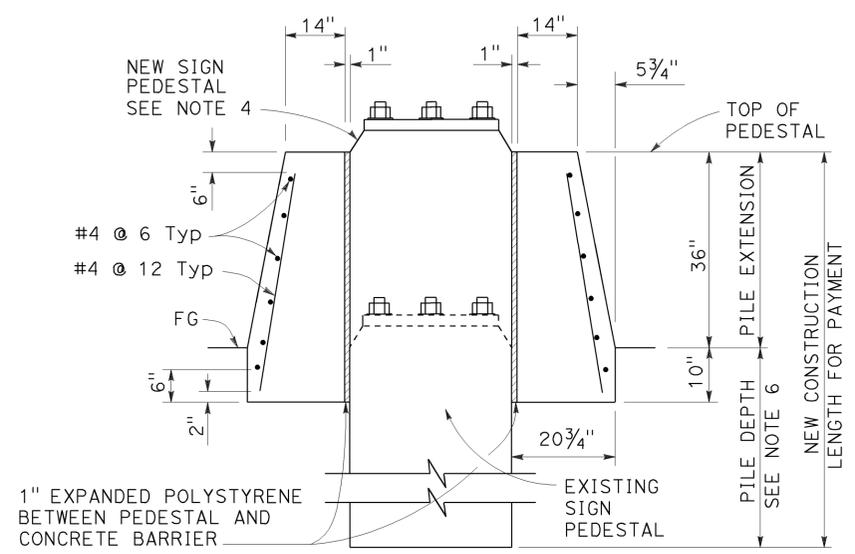
Concrete Barrier Type 60F  
See Note 7



**SECTION A-A**



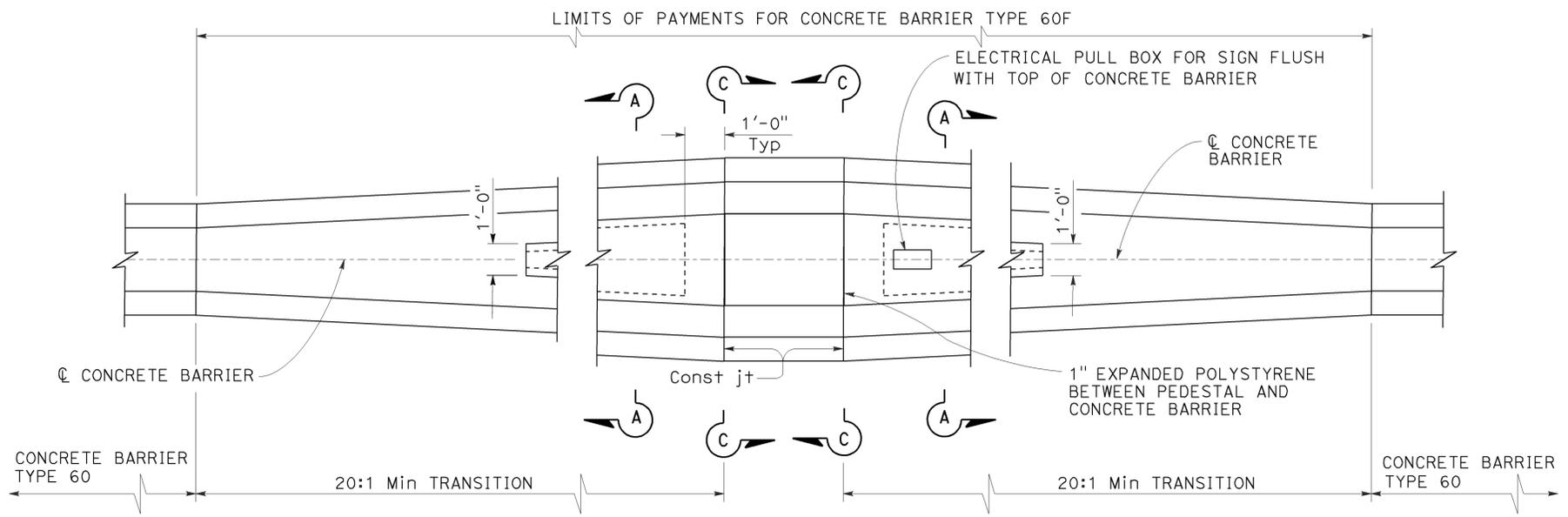
**SECTION B-B**



**SECTION C-C**

**NOTES:**

- See Standard Plan A76A for Concrete Barrier Type 60.
- Contractor options for fill between concrete barrier walls:
  - Place 4" PCC at base between concrete barrier walls.
  - Place 1'-0" of granular material at base between walls.
  - Place granular material from base to bottom of 4" cap.
  - Monolithic concrete with foam blockouts is not permitted.
- Reinforcing steel shall extend continuous through construction joints.
- See "Overhead Sign" plans for sign pedestal elevations on new construction.
- Adjust height of concrete barrier wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.
- See Overhead Signs Standard Plan Pile Foundation Tables.
- All locations with limited shoulder width available for barrier, see Standard Plan A76F for use of Concrete Barrier Type 60GE.



**TRANSITION AT SIGN PEDESTAL**

Concrete Barrier Type 60F  
See Note 7

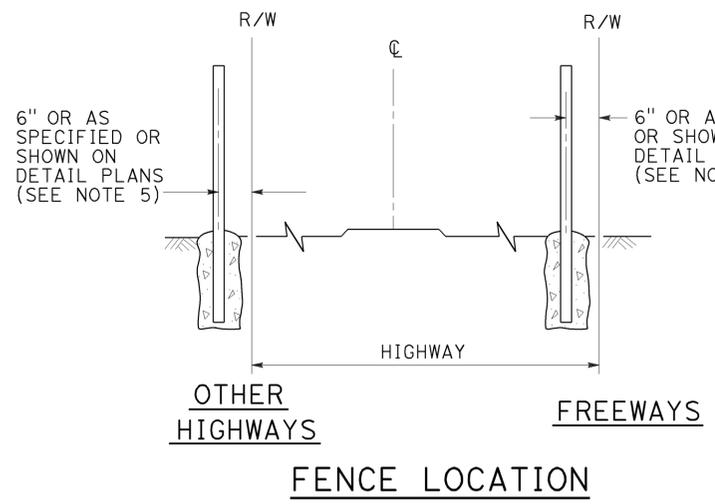
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CONCRETE BARRIER TYPE 60F**  
NO SCALE

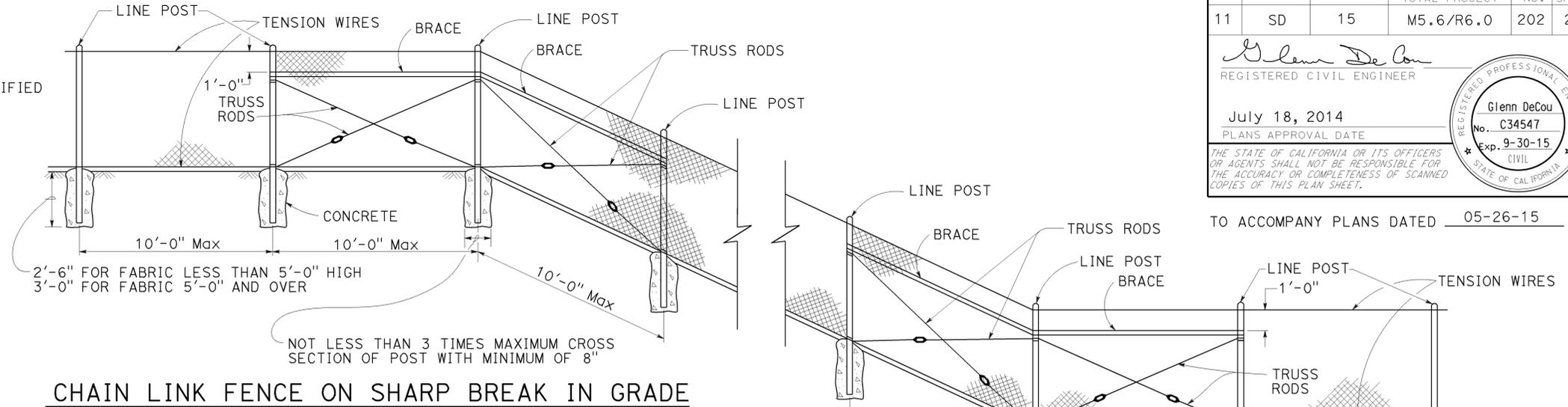
RSP A76C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A76C  
DATED MAY 20, 2011 - PAGE 36 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A76C**

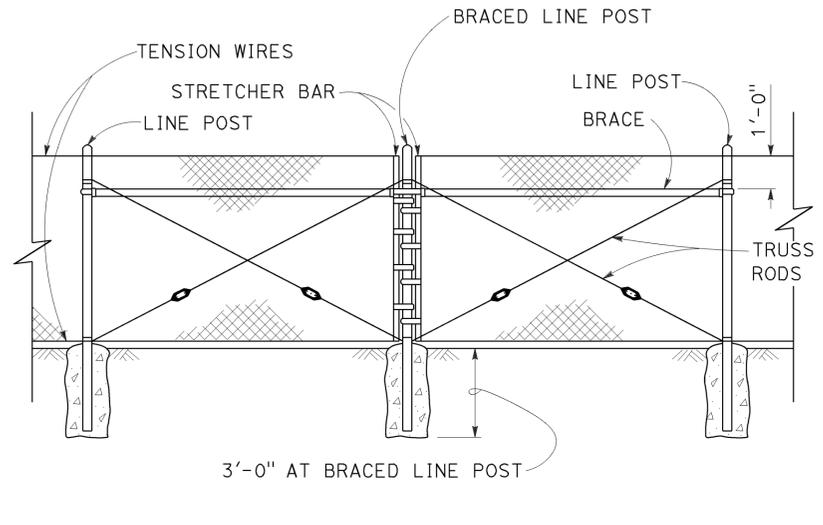
2010 REVISED STANDARD PLAN RSP A76C



**FENCE LOCATION**

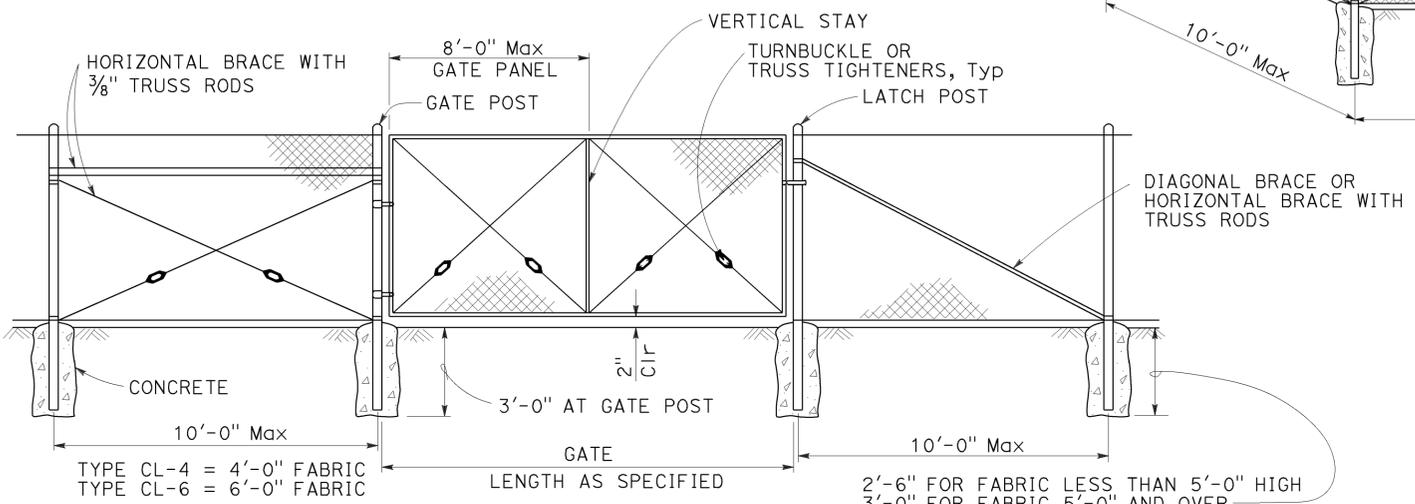


**CHAIN LINK FENCE ON SHARP BREAK IN GRADE**



**BRACED LINE POST INSTALLATION**

Braced line post at intervals not exceeding 1000'



**CHAIN LINK GATE INSTALLATION**

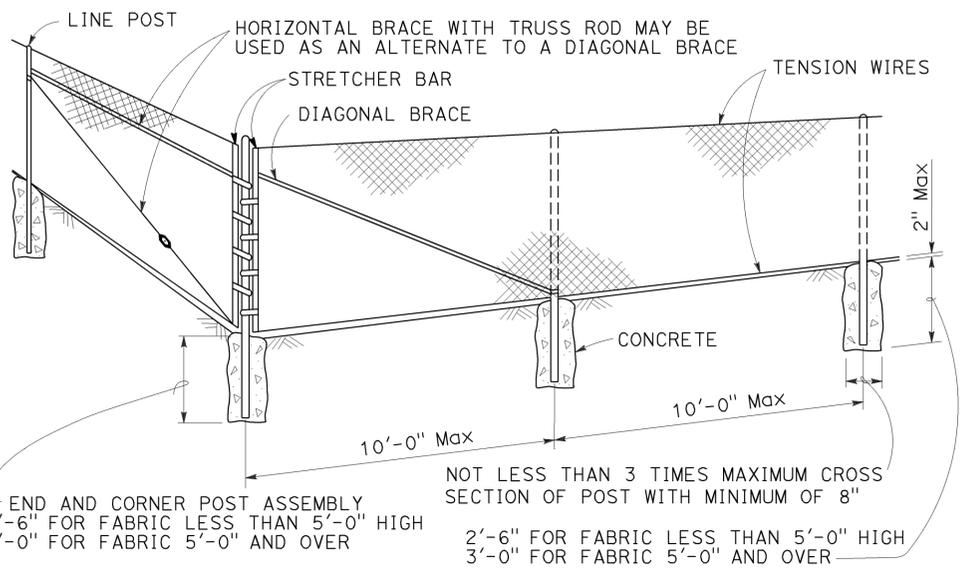
FENCE HEIGHT	GATE WIDTHS	ROUND OD PIPE	WEIGHT (lb/ft)
6'-0" AND LESS	UP THRU 6'-0"	2.875"	5.80
	OVER 6'-0" THRU 12'-0"	4.500"	10.80
	OVER 12'-0" THRU 18'-0"	5.563"	14.63
OVER 6'-0" TO 8'-0" Max	OVER 18'-0" TO 24'-0" Max	6.625"	18.99
	UP THRU 6'-0"	3.500"	7.58
	OVER 6'-0" THRU 12'-0"	5.563"	14.63
	OVER 12'-0" THRU 18'-0"	6.625"	18.99
	OVER 18'-0" TO 24'-0" Max	8.625"	28.58

Above post dimensions and weights are minimums. Larger sizes may be used upon approval.

**NOTES:**

- The table below shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used upon approval.
- Options exercised shall be uniform on any one project.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
- See Revised Standard Plan RSP A85B for Brace, Stretcher Bar, and Truss Tightener Details.

FENCE HEIGHT	LINE POSTS		END, LATCH AND CORNER POSTS		BRACES					
	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED		ROUND OD PIPE	WEIGHT (lb/ft)				
			SECTION	WEIGHT (lb/ft)			SECTION	WEIGHT (lb/ft)		
6'-0" AND LESS	1.900"	2.72	1.875" x 1.625"	1.85	2.375"	3.65	1.66"	2.27	1.625" x 1.25"	1.35
OVER 6'-0" TO 8'-0" Max	2.375"	3.65	2.25" x 1.70"	2.78	2.875"	5.80	1.66"	2.27	1.625" x 1.25"	1.35



**CORNER POST**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CHAIN LINK FENCE**  
NO SCALE

RSP A85 DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN A85  
DATED MAY 20, 2011 - PAGE 112 OF THE STANDARD PLANS BOOK DATED 2010.

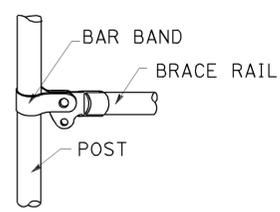
**REVISED STANDARD PLAN RSP A85**

2010 REVISED STANDARD PLAN RSP A85

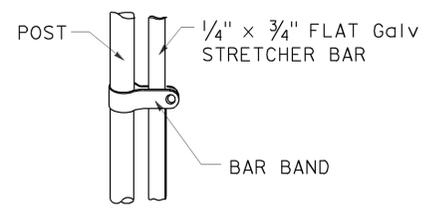
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	203	287

Glenn DeCou  
 REGISTERED CIVIL ENGINEER  
 October 19, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

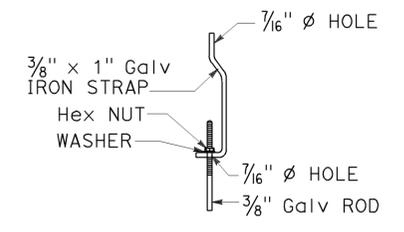
REGISTERED PROFESSIONAL ENGINEER  
 Glenn DeCou  
 No. C34547  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA



**BRACE RAIL**



**STRETCHER BAR**

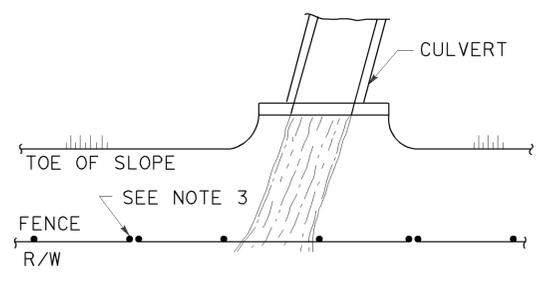


**TRUSS TIGHTENER**

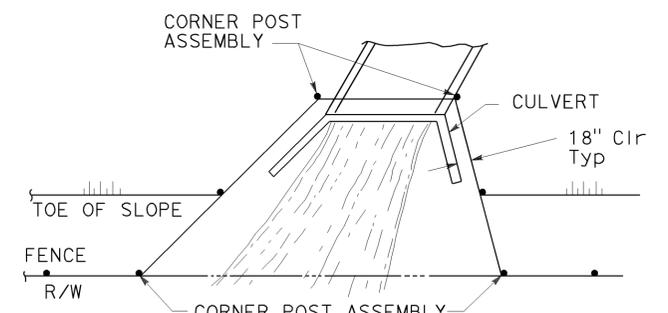
**NOTES:**

1. All material for abutment connection to be galvanized.
2. The chain link fabric shall be replaced by barbed wire strands at 12" maximum centers between the double posts.
3. When the width of the culvert makes it necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the Engineer shall be used.
4. Fencing over stream and around headwall may also use Barbed Wire or Wire Mesh fencing with either wood post or steel post installation.
5. See Standard Plan A85 for Chain Link fence dimensions. See Standard Plan A86 for Barbed Wire and Wire Mesh fence dimensions and for wood post and steel post installation.

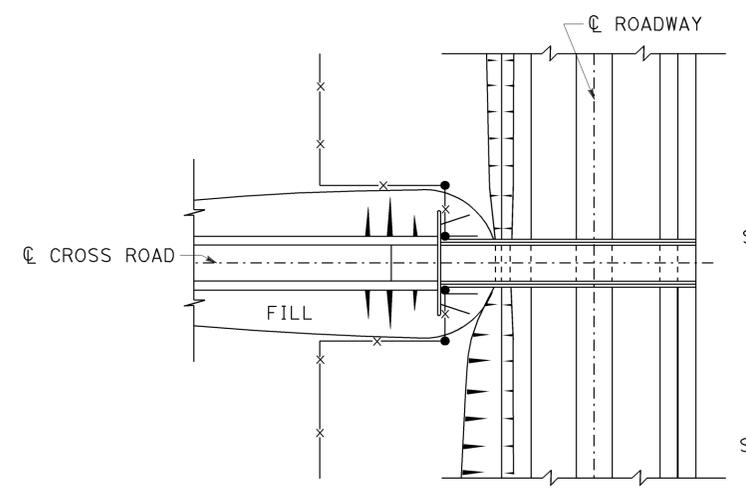
TO ACCOMPANY PLANS DATED 05-26-15



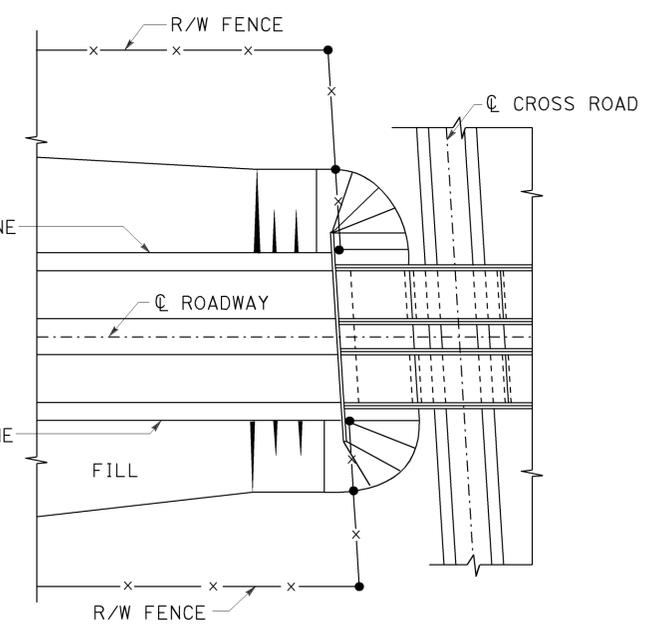
**PLAN**



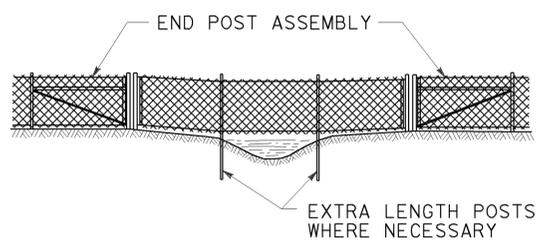
**PLAN**



**PLAN OF ROADWAY - OVERCROSSING**

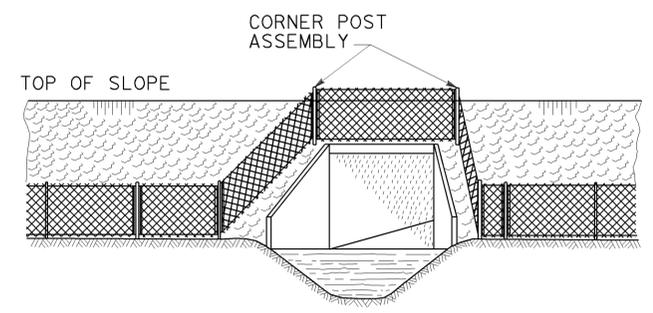


**PLAN OF ROADWAY - UNDERCROSSING**



**ELEVATION**

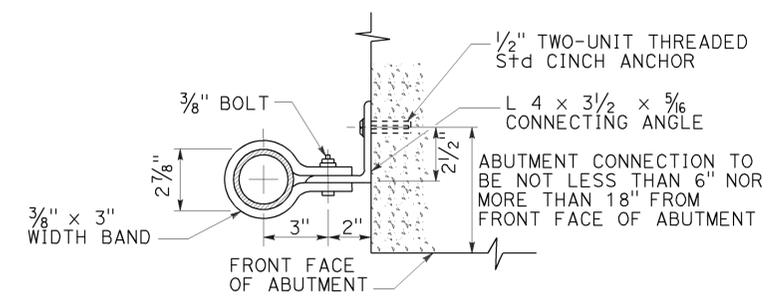
**INSTALLATION OVER STREAM**



**ELEVATION**

**INSTALLATION AROUND HEADWALL**

See Note 4



**ABUTMENT CONNECTION**

**TYPICAL INSTALLATION AT BRIDGES**

ABUTMENT CONNECTION TO BE NOT LESS THAN 6" NOR MORE THAN 18" FROM FRONT FACE OF ABUTMENT

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**CHAIN LINK FENCE DETAILS**

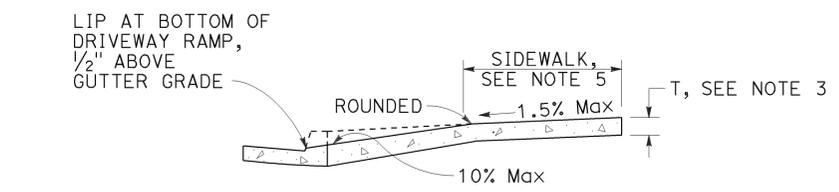
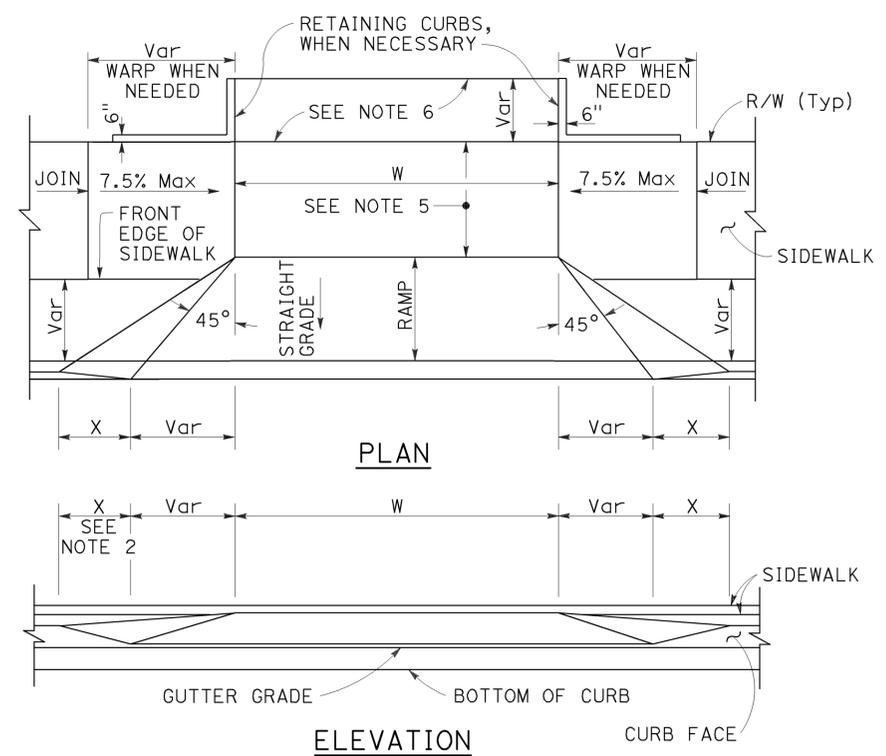
NO SCALE

RSP A85B DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A85B DATED MAY 20, 2011 - PAGE 114 OF THE STANDARD PLANS BOOK DATED 2010.

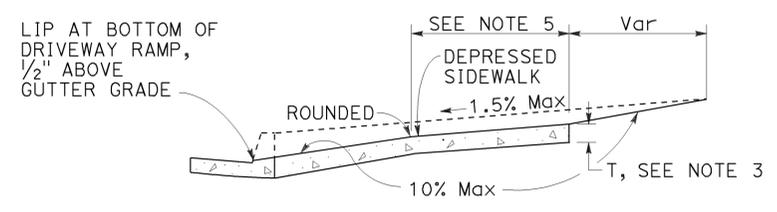
**REVISED STANDARD PLAN RSP A85B**

2010 REVISED STANDARD PLAN RSP A85B

TO ACCOMPANY PLANS DATED 05-26-15



**CASE A**  
Typical driveway, sidewalk not depressed



**CASE B**  
Driveway with depressed sidewalk

**SECTIONS**

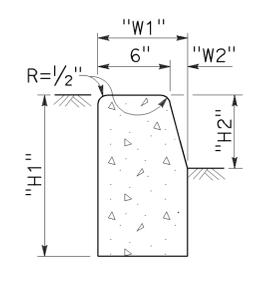
**TABLE A**

CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-9"

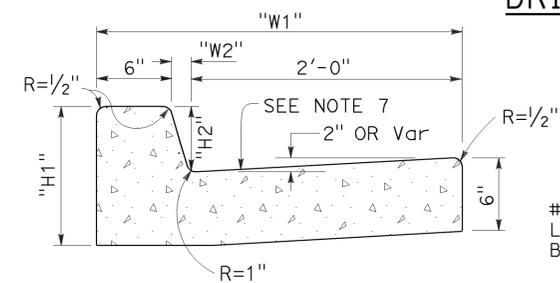
**CURB QUANTITIES**

TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

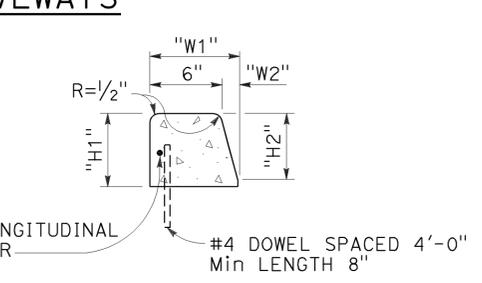
**DRIVEWAYS**



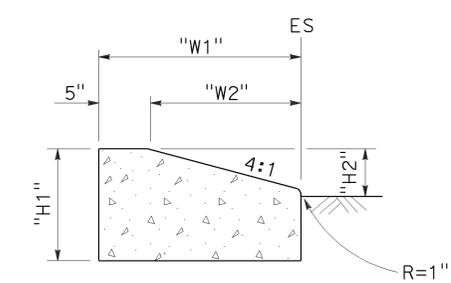
**TYPE A1 CURBS**  
See Table A



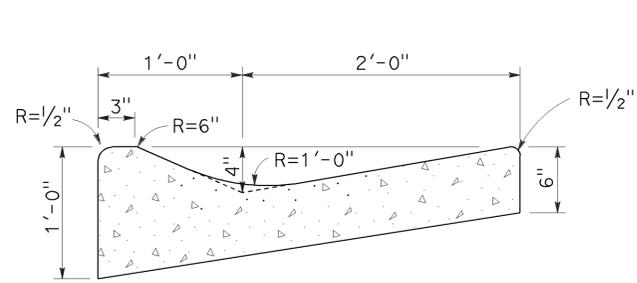
**TYPE A2 CURBS**  
See Table A



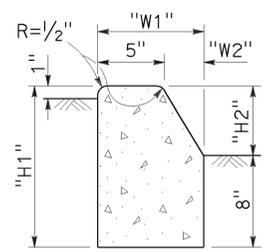
**TYPE A3 CURBS**  
Superimposed on existing pavement  
See Table A



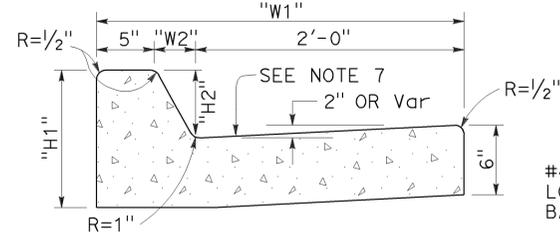
**TYPE D CURBS**  
See Table A



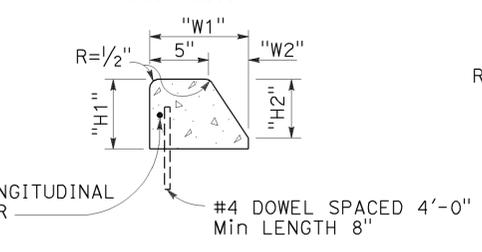
**TYPE E CURB**



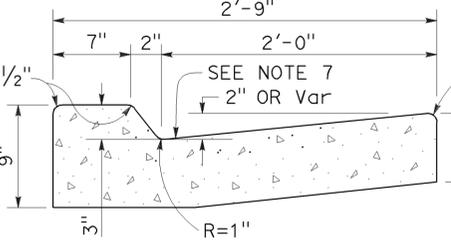
**TYPE B1 CURBS**  
See Table A



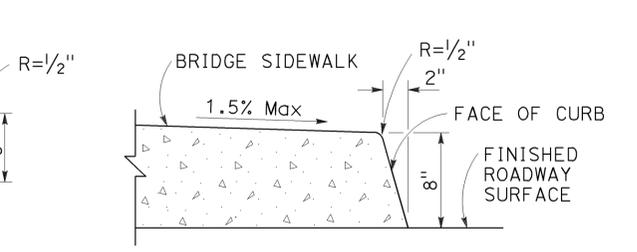
**TYPE B2 CURBS**  
See Table A



**TYPE B3 CURBS**  
Superimposed on existing pavement  
See Table A



**TYPE B4 CURBS**



**TYPE H CURB**  
On Bridges

**CURBS**

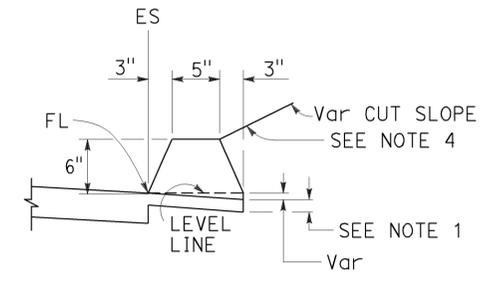
- NOTES:**
- Case A driveway section typically applies.
  - X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
  - Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
  - Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
  - Minimum width of clear passageway for sidewalk shall be 4'-2".
  - Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
  - Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

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DEPARTMENT OF TRANSPORTATION

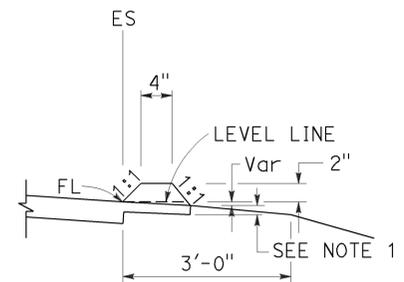
**CURBS AND DRIVEWAYS**

NO SCALE

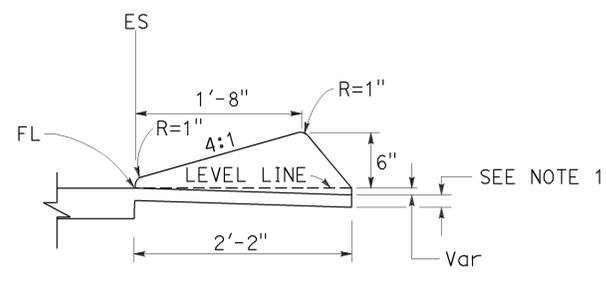
2010 REVISED STANDARD PLAN RSP A87A



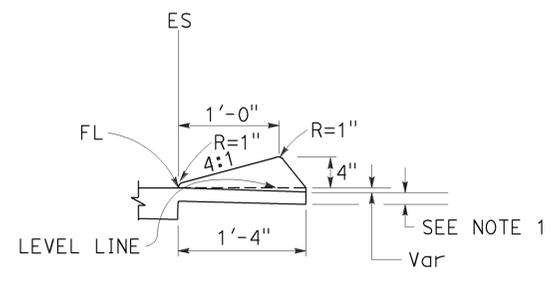
**TYPE A**  
See Note 3



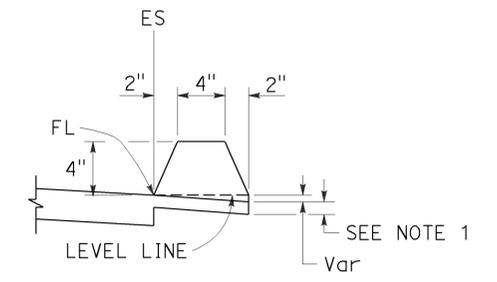
**TYPE C**



**TYPE D**

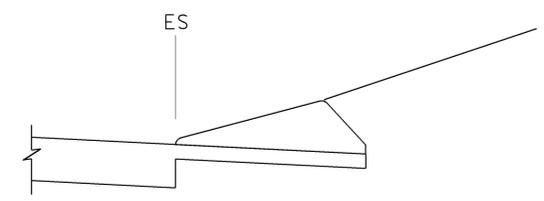


**TYPE E**

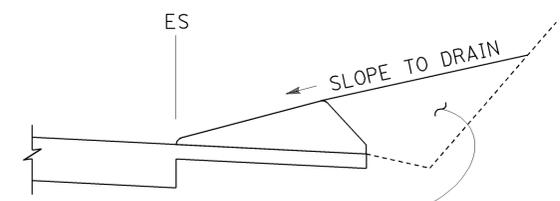


**TYPE F**  
See Note 5

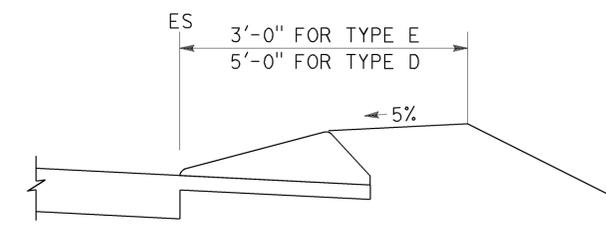
**DIKES**



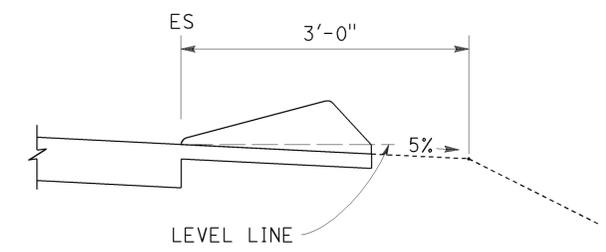
**CASE C-1**  
Cut Slope



**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 F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

**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 JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B  
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A87B**

2010 REVISED STANDARD PLAN RSP A87B

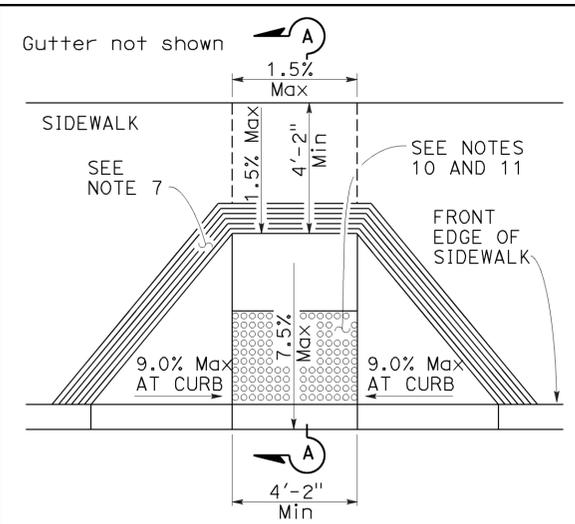
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	206	287

H. David Cordova  
REGISTERED CIVIL ENGINEER

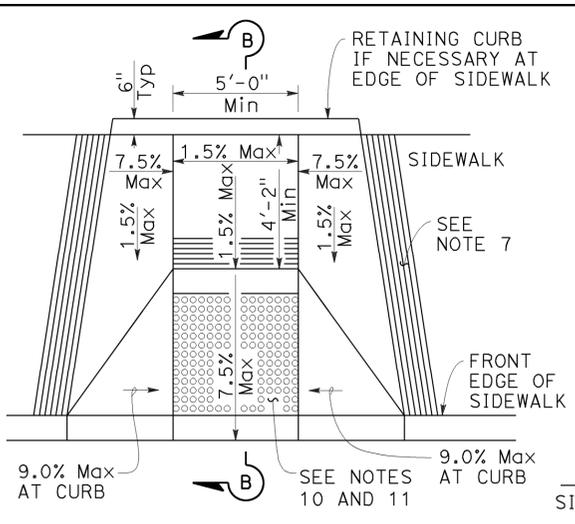
March 21, 2014  
PLANS APPROVAL DATE

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.

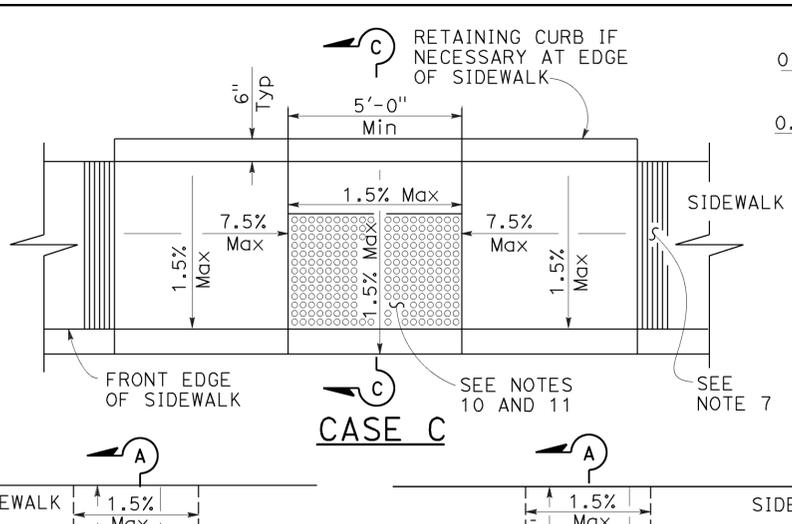
Hector David Cordova  
REGISTERED PROFESSIONAL ENGINEER  
No. C41957  
Exp. 3-31-14  
CIVIL  
STATE OF CALIFORNIA



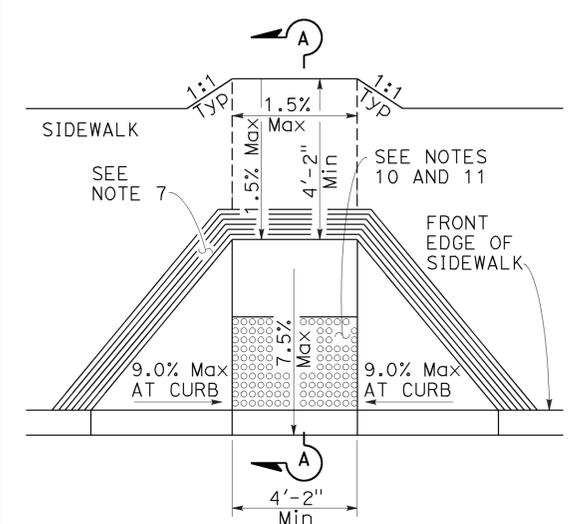
**CASE A**



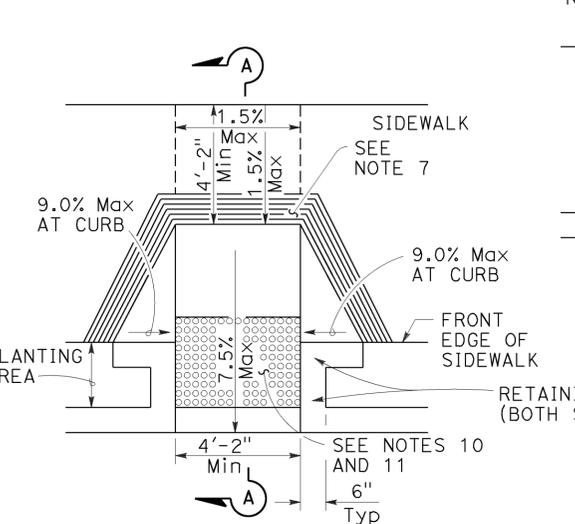
**CASE B**



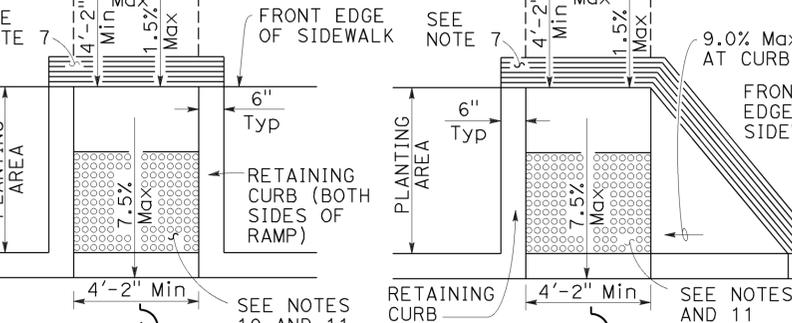
**CASE C**



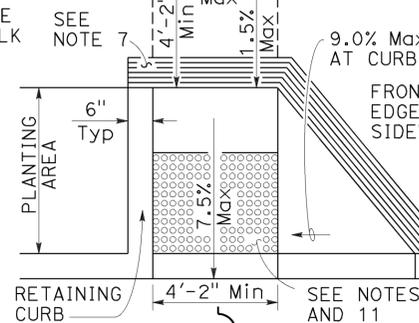
**CASE D**



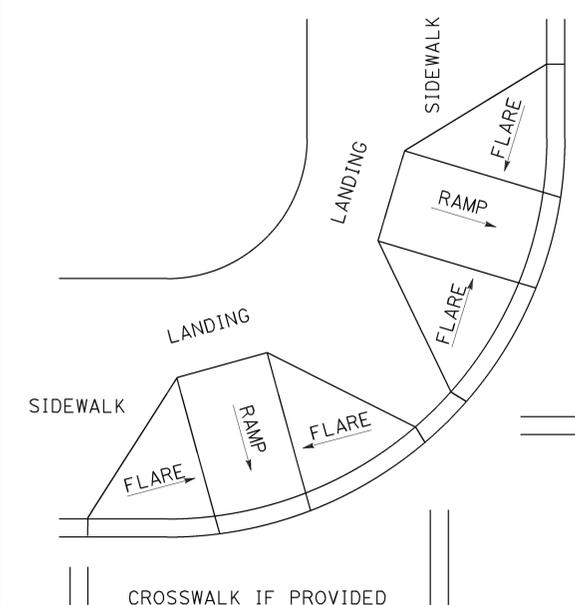
**CASE E**



**CASE F**



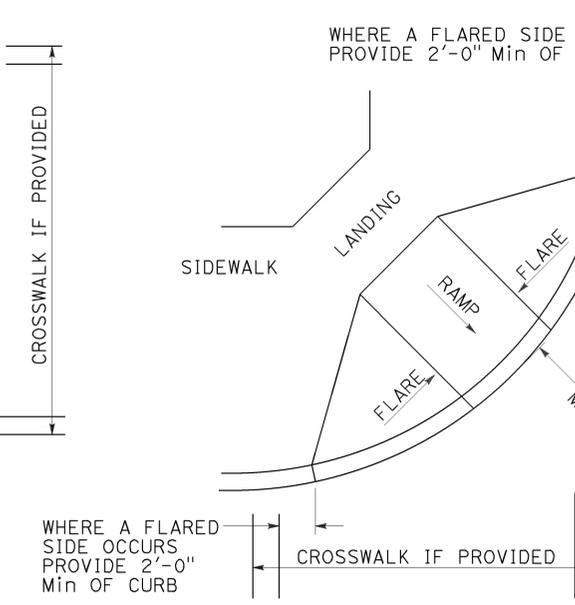
**CASE G**



**DETAIL A**

**TYPICAL TWO-RAMP CORNER INSTALLATION**

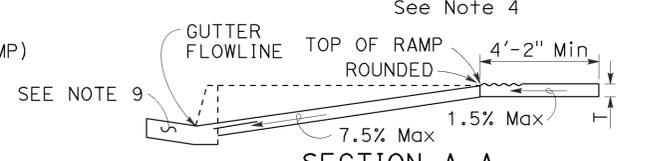
See Note 1



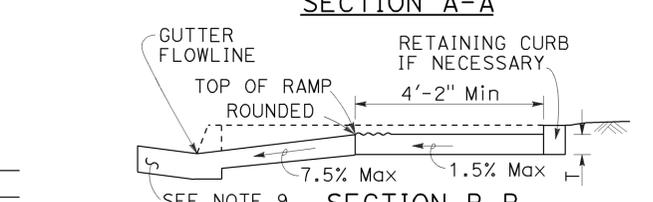
**DETAIL B**

**TYPICAL ONE-RAMP CORNER INSTALLATION**

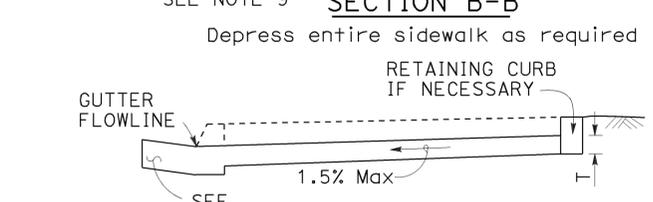
See Notes 1 and 3



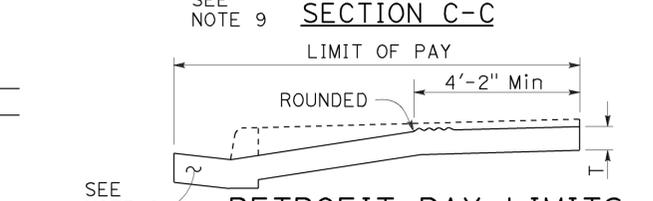
**SECTION A-A**



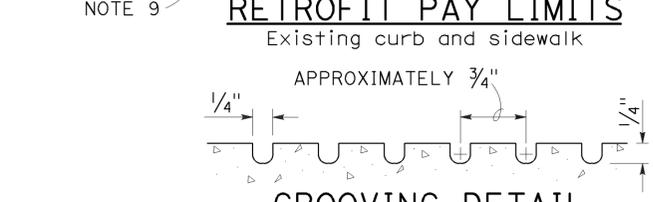
**SECTION B-B**



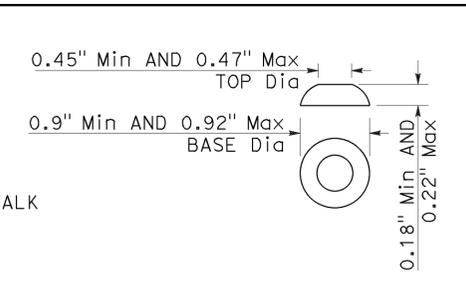
**SECTION C-C**



**RETROFIT PAY LIMITS**



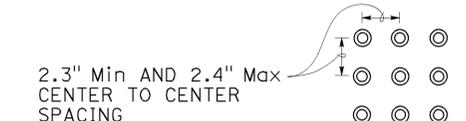
**GROOVING DETAIL**



**RAISED TRUNCATED DOME**

**NOTES:**

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush (no lip) and free of abrupt changes.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1:20 (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide curb ramp. Detectable Warning Surfaces shall conform to the requirements in the Standard Specifications.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3 1/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



**RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE**

See Note 10

**CURB RAMP DETAILS**  
NO SCALE

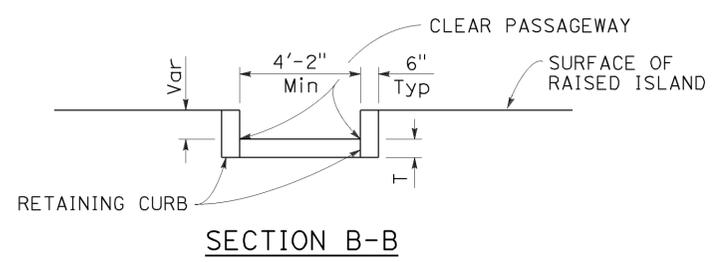
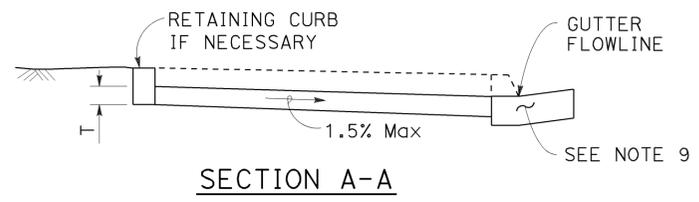
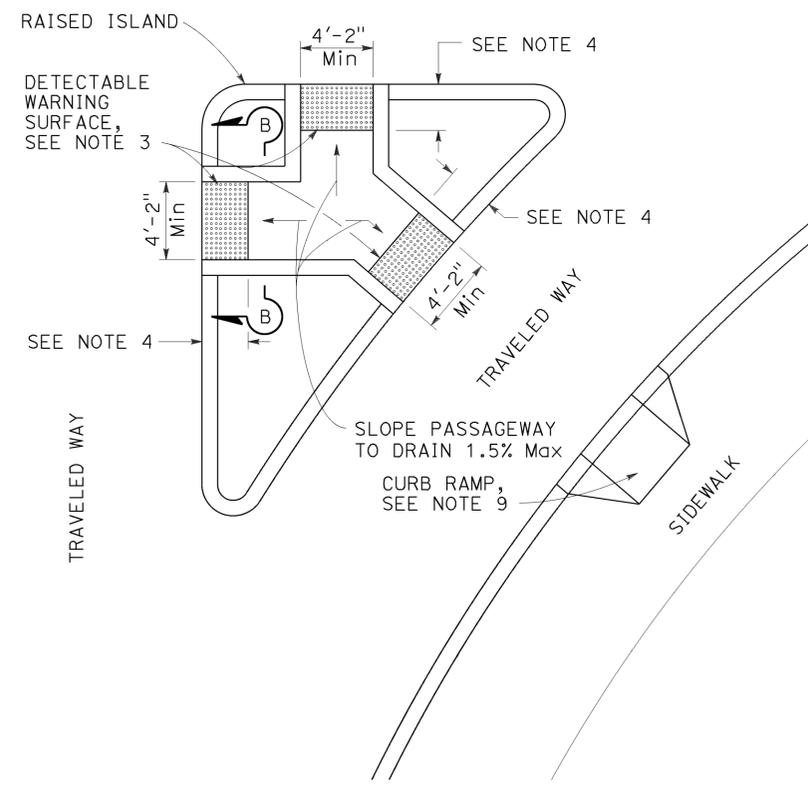
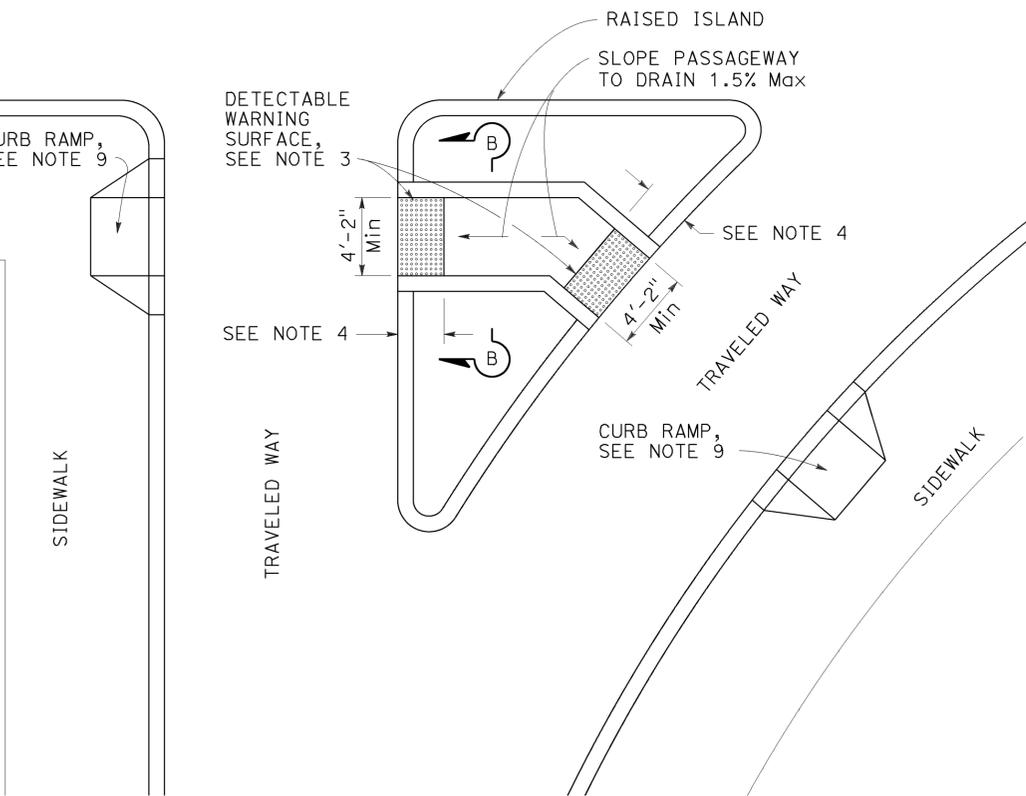
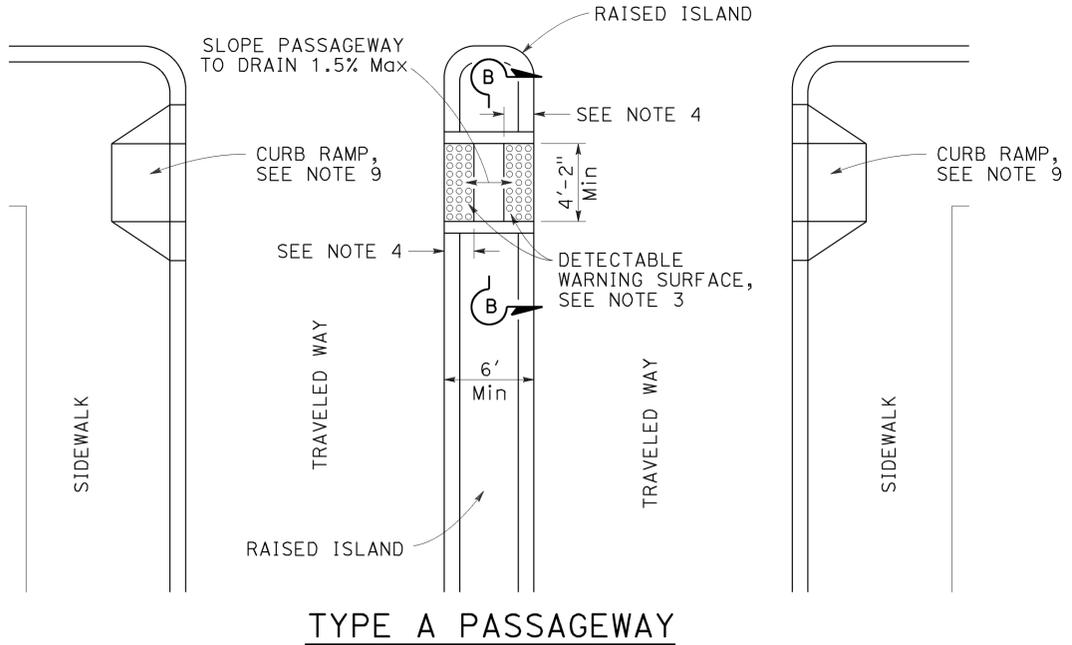
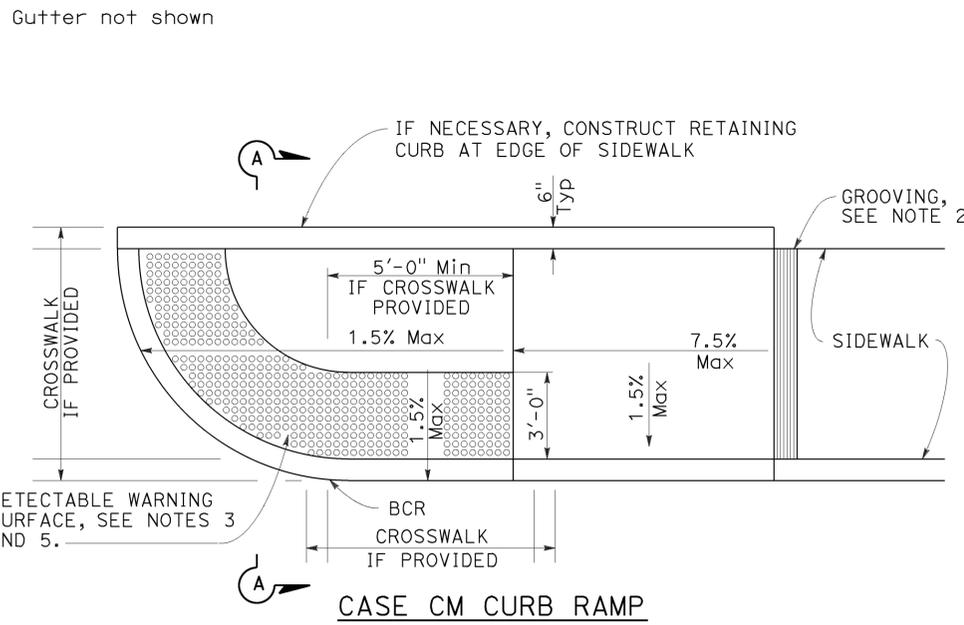
RSP A88A DATED MARCH 21, 2014 SUPERSEDES RSP A88A DATED JULY 19, 2013 AND STANDARD PLAN A88A DATED MAY 20, 2011 - PAGE 121 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A88A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	207	287

*H. David Cordova*  
 REGISTERED CIVIL ENGINEER  
 March 21, 2014  
 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  
 Hector David Cordova  
 No. C41957  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA



- NOTES:
- Sidewalk, ramp and passageway thickness, "T", shall be 3 1/2" minimum.
  - For details of grooving used with Case CM curb ramp, see Revised Standard Plan RSP A88A.
  - For details of detectable warning surfaces, see Revised Standard Plan RSP A88A.
  - Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", each detectable warning surface shall extend the full width and 3'-0" depth of the passageway length. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide island passageway.
  - For Case CM curb ramp, the edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
  - Transitions from ramps to walks, gutters or streets shall be flush (no lip) and free of abrupt changes.
  - Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
  - Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.
  - For additional curb ramp details, see Revised Standard Plan RSP A88A.

TO ACCOMPANY PLANS DATED 05-26-15

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CURB RAMP AND ISLAND PASSAGEWAY DETAILS**  
 NO SCALE

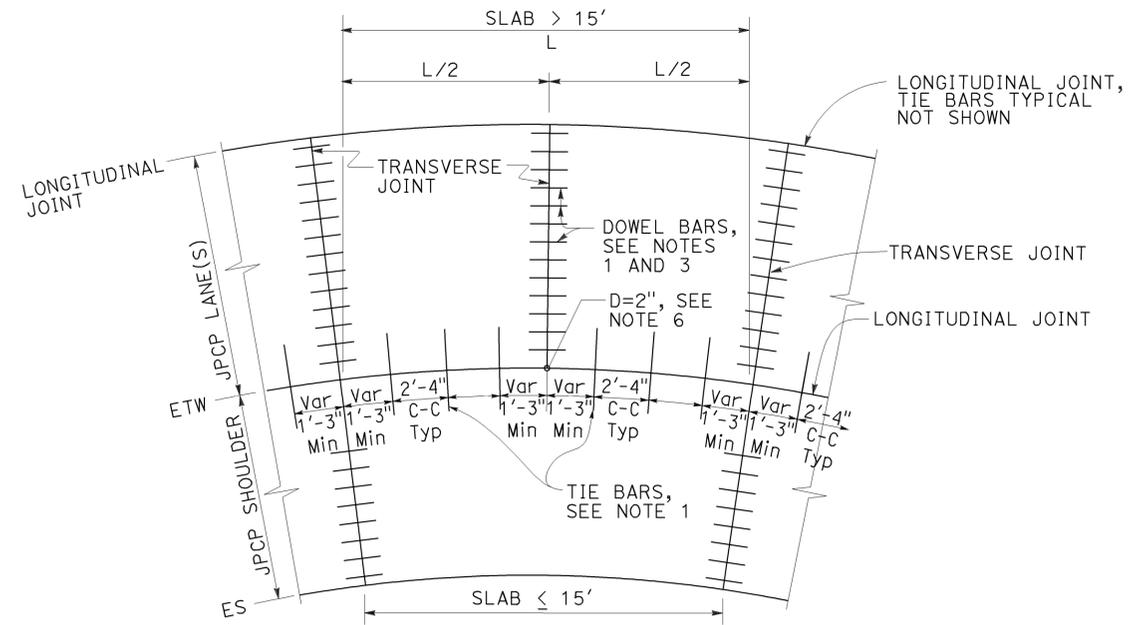
RSP A88B DATED MARCH 21, 2014 SUPERSEDES RSP A88B DATED JULY 19, 2013 AND STANDARD PLAN A88B DATED MAY 20, 2011 - PAGE 122 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A88B

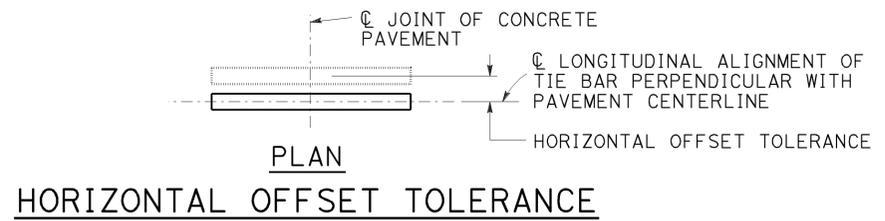
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	208	287

William K. Farnbach  
 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.

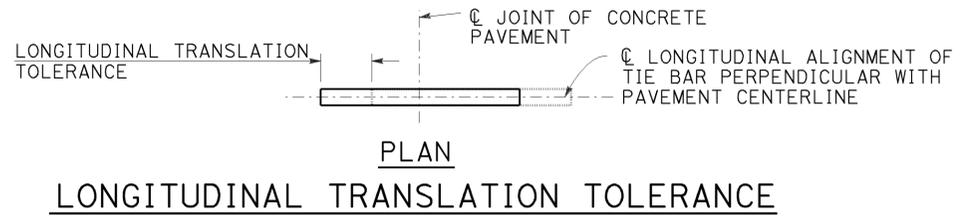
REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA



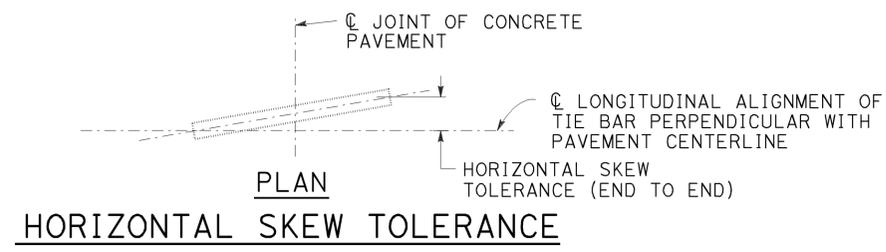
**TIE BAR LAYOUT IN CURVED LANES**



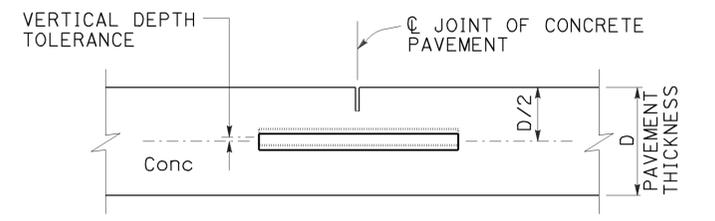
**HORIZONTAL OFFSET TOLERANCE**



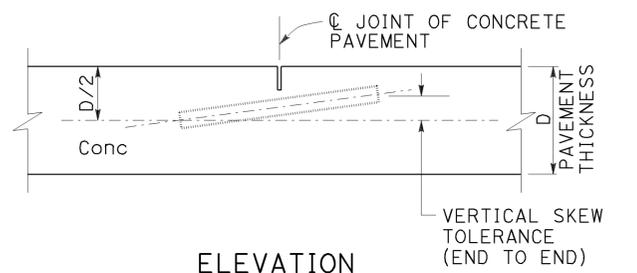
**LONGITUDINAL TRANSLATION TOLERANCE**



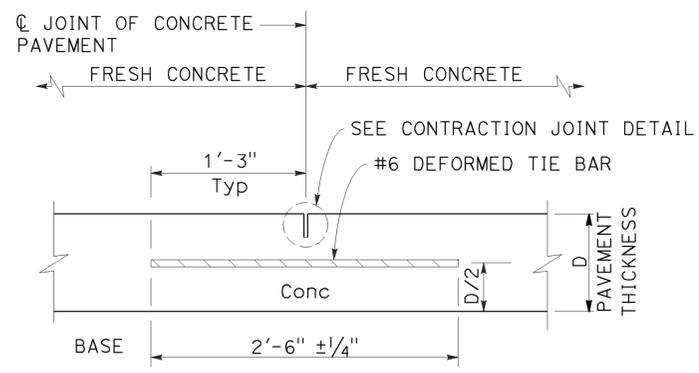
**HORIZONTAL SKEW TOLERANCE**



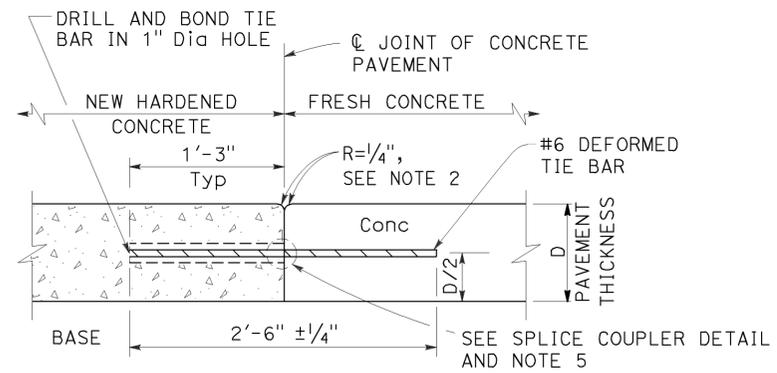
**VERTICAL DEPTH TOLERANCE**



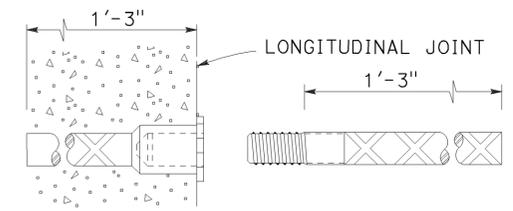
**VERTICAL SKEW TOLERANCE**



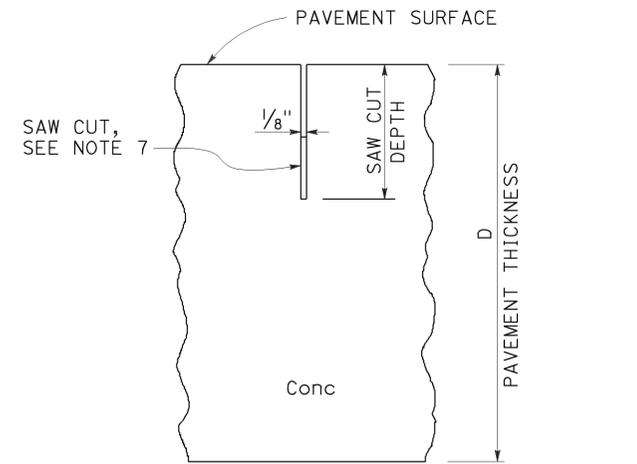
**LONGITUDINAL CONTRACTION JOINT**



**LONGITUDINAL CONSTRUCTION JOINT**



**ALTERNATIVE SPLICE COUPLER**



**CONTRACTION JOINT DETAIL**

- NOTES:**
1. See Revised Standard Plan RSP P1 for typical dowel bar and tie bar placement and locations.
  2. Where new pavement is placed against existing concrete pavement, rounding the corner is not required.
  3. For dowel bar sizes, See Revised Standard Plan RSP P10.
  4. Tie bar details apply to inside widenings.
  5. Use either drill and bond or splice couplers.
  6. Full depth drilled hole. Fill hole with filler material.
  7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-TIE BAR DETAILS**  
 NO SCALE

RSP P15 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P15**

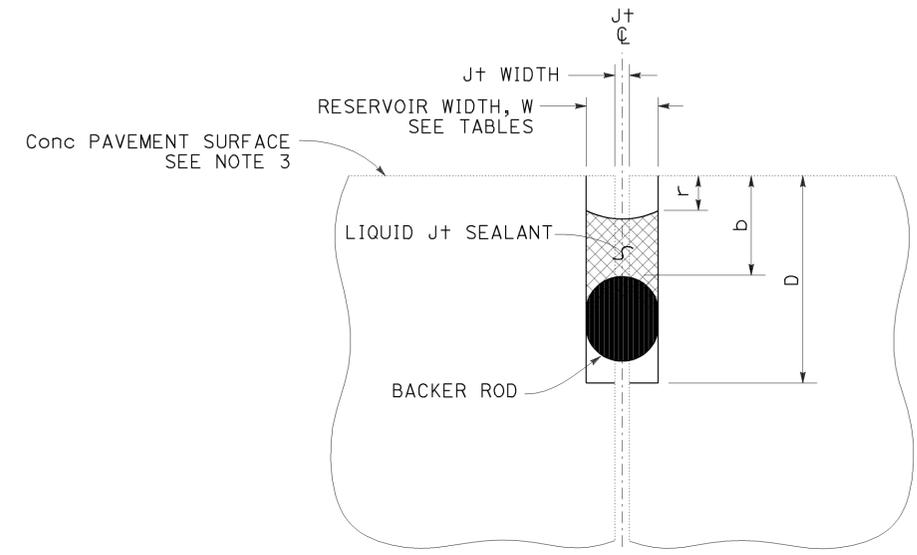
2010 REVISED STANDARD PLAN RSP P15



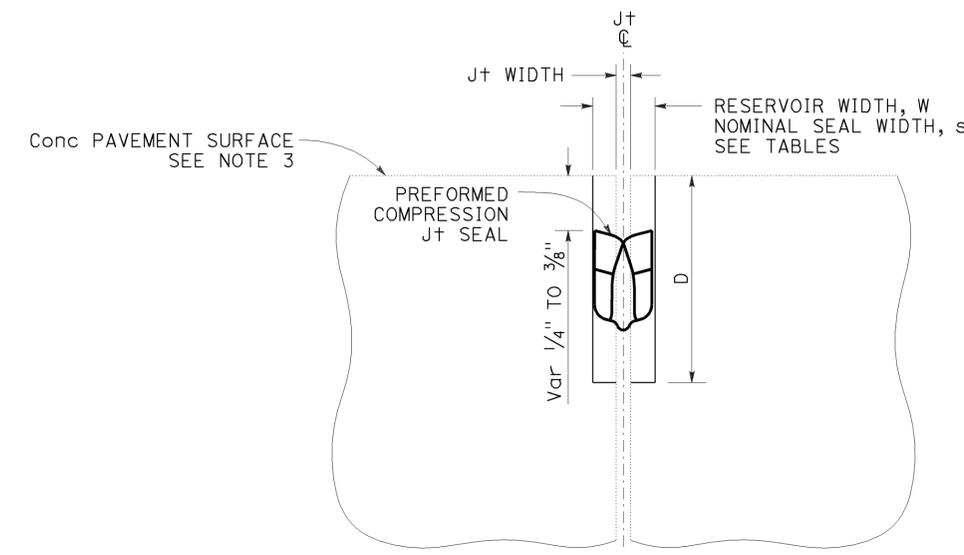
TO ACCOMPANY PLANS DATED 05-26-15

**NOTES:**

1. Details do not apply to isolation joints and longitudinal construction joints.
2. Tie bars, dowel bars, and bar reinforcement are not shown.
3. Depths are measured from the final concrete pavement surface elevation after any grinding.



**LIQUID JOINT SEALANT**



**PREFORMED COMPRESSION JOINT SEAL**

Const SEASON	Min RESERVOIR WIDTH * W ± 1/16"
WINTER	1/4"
SPRING	3/8"
SUMMER	
FALL	

\* Minimum reservoir width for replace joint seal = existing joint width + 1/8"

RESERVOIR WIDTH W ± 1/16"	LIQUID JOINT SEALANT DIMENSIONS					
	BACKER ROD NOMINAL Dia *	DEPTHS (ASPHALT RUBBER) **		DEPTHS (SILICONE)		
		RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RESERVOIR D ± 1/4"	BACKER ROD b ± 1/16"	RECESS r ± 1/16"
1/4"	3/8"	1 3/4"	7/8"	1 3/8"	1/2"	1/4"
3/8"	1/2"	1 7/8"	7/8"	1 1/2"	1/2"	1/4"
1/2"	3/4"	2"	7/8"	1 3/4"	9/16"	5/16"
5/8"	7/8"	2 1/4"	1"	2"	5/8"	5/16"
3/4"	1"	2 3/4"	1 1/8"	2 1/4"	3/4"	3/8"
7/8"	1 1/4"	3"	1 1/4"	2 1/2"	13/16"	3/8"
1"	1 1/2"	3 1/4"	1 3/8"	2 5/8"	7/8"	3/8"
1 1/8"	1 1/2"	3 1/2"	1 1/2"	2 13/16"	1"	1/2"

\* Larger diameter backer rods may be substituted according to manufacturer recommendations if reservoir depth is increased equivalently.  
 \*\* Asphalt rubber sealant recess depth "r" varies from 1/4" to 3/8"

RESERVOIR WIDTH W ± 1/16"	PREFORMED COMPRESSION JOINT SEAL DIMENSIONS	
	NOMINAL SEAL WIDTH s	RESERVOIR DEPTH D ± 1/4"
1/4"	7/16"	1 1/4"
3/8"	11/16"	1 1/16"
1/2"	13/16"	1 1/8"
5/8"	1"	1 7/8"
3/4"	1 1/4"	2 1/8"
7/8"	1 5/8"	2 5/8"
1"	1 7/8"	2 3/8"
1 1/8"	2"	2 7/8"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**JOINT SEALS**  
 NO SCALE

RSP P20 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN P20  
 DATED MAY 20, 2011 - PAGE 136 OF THE STANDARD PLANS BOOK DATED 2010.

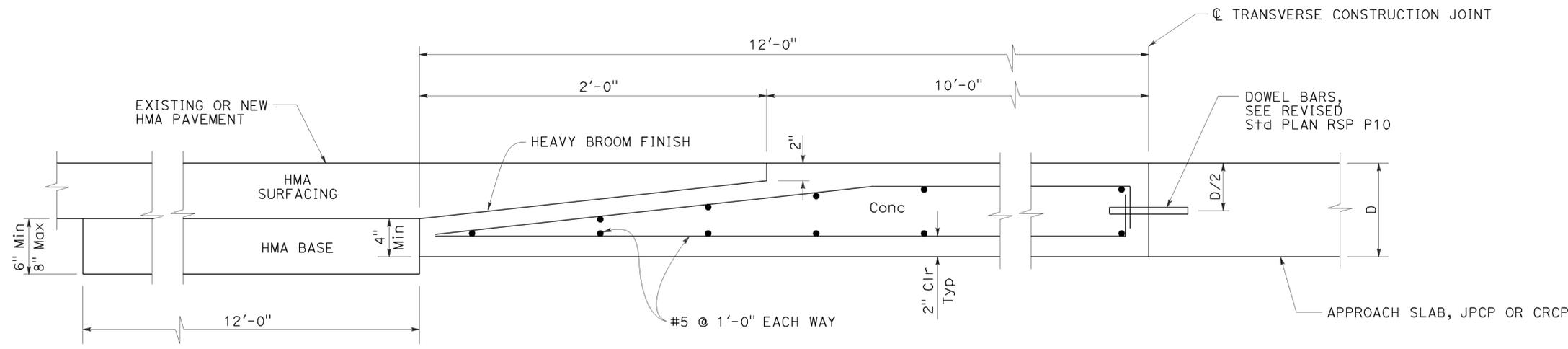
2010 REVISED STANDARD PLAN RSP P20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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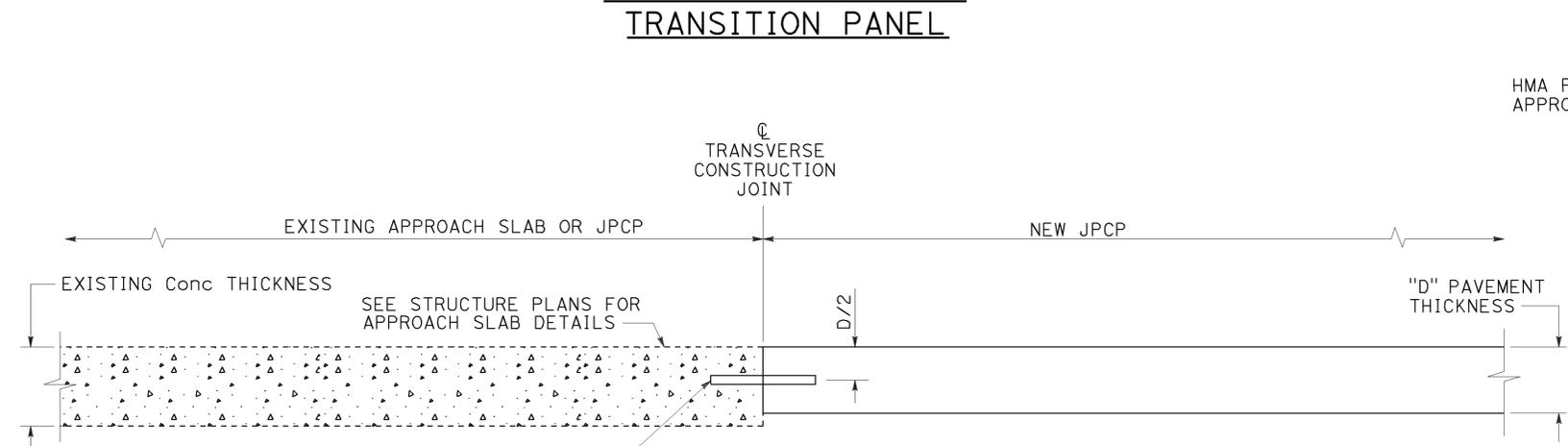
William K. Farnbach  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

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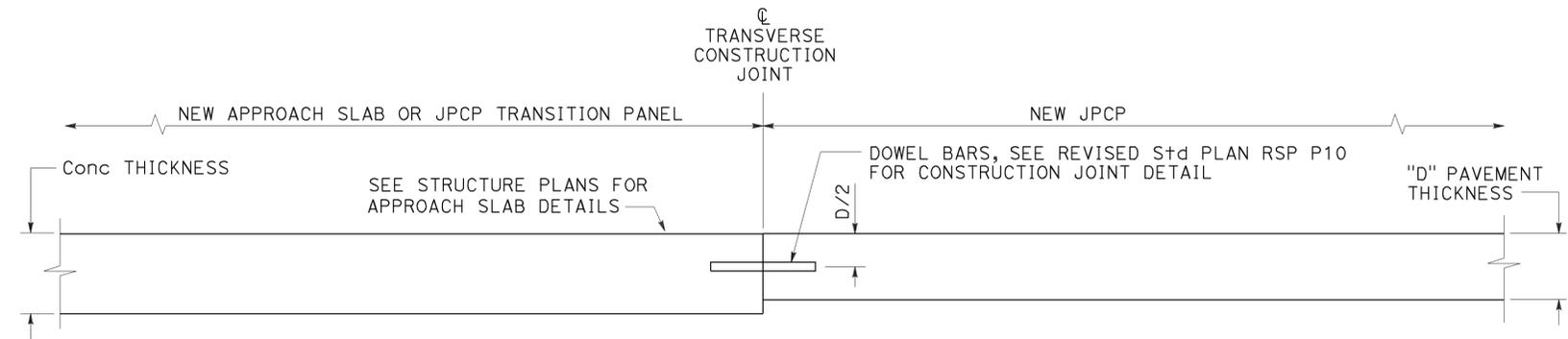
REGISTERED PROFESSIONAL ENGINEER  
 William K. Farnbach  
 No. C49042  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA



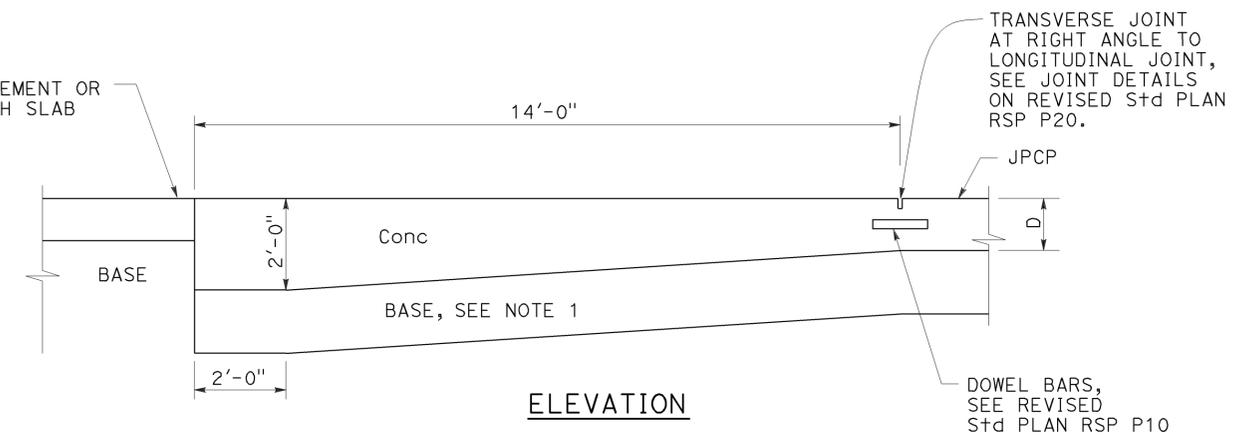
**ELEVATION**  
**CONCRETE PAVEMENT**  
**TRANSITION PANEL**



**ELEVATION**  
**TERMINAL JOINT TYPE 1**  
 For Exist JPCP or Approach Slab



**ELEVATION**  
**TERMINAL JOINT TYPE 2**  
 For JPCP Transition Panel or Approach Slab



**ELEVATION**  
**PAVEMENT END ANCHOR**  
 For HMA Pvmnt or Approach Slab

**NOTE:**  
 1. Maintain same base thickness as JPCP.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CONCRETE PAVEMENT-  
 END PANEL  
 PAVEMENT TRANSITIONS**  
 NO SCALE

RSP P30 DATED JULY 19, 2013 SUPERSEDES RSP P30 DATED APRIL 20, 2012 AND STANDARD PLAN P30 DATED MAY 20, 2011 - PAGE 137 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P30**

2010 REVISED STANDARD PLAN RSP P30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	211	287

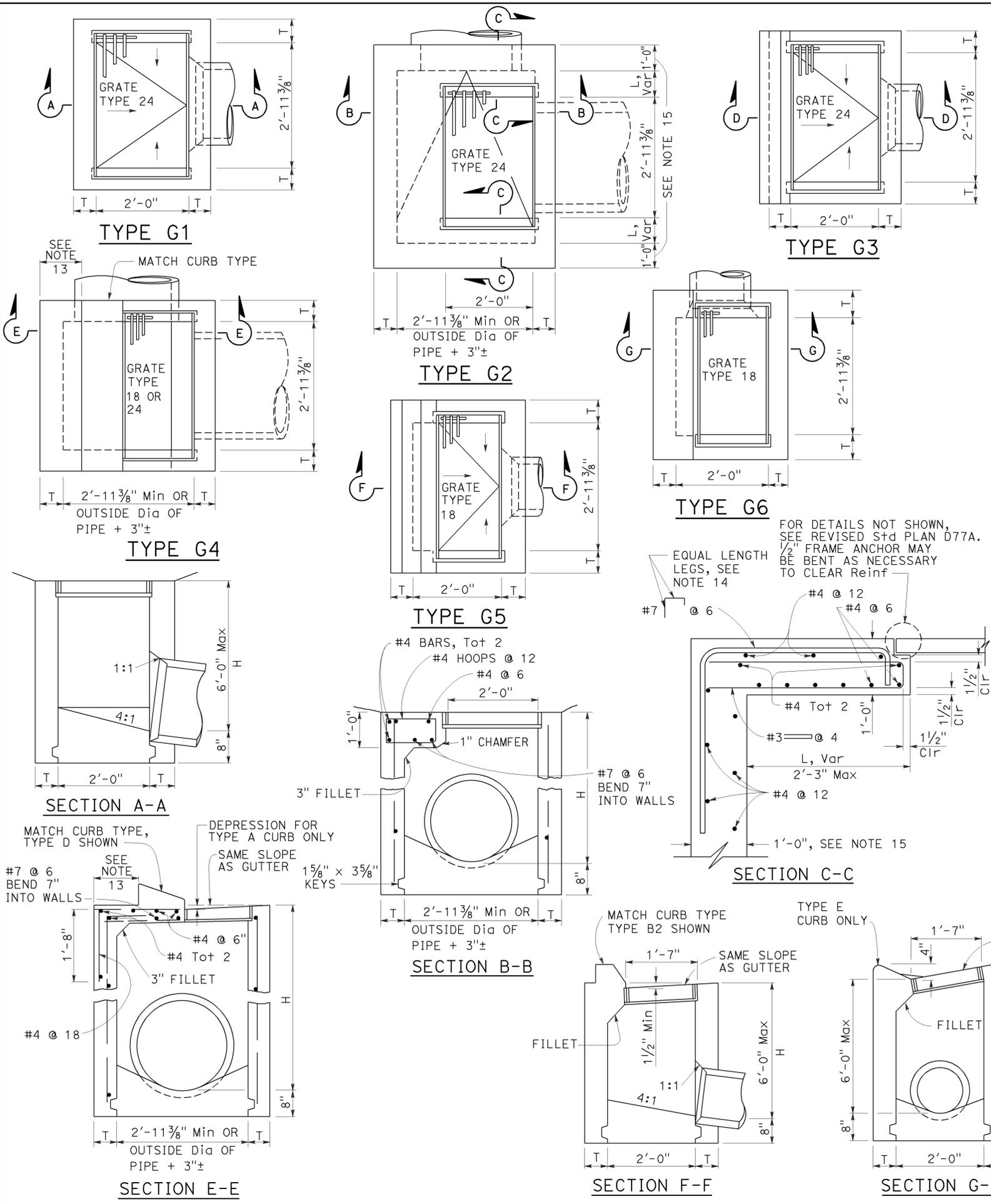
Glenn DeCou  
REGISTERED CIVIL ENGINEER

October 19, 2012  
PLANS APPROVAL DATE

Glenn DeCou  
No. C34547  
Exp. 9-30-13  
CIVIL  
STATE OF CALIFORNIA

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

2010 REVISED STANDARD PLAN RSP D73



**NOTES:**

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round bottom.
- Steps-None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- Details shown apply to both metal and concrete pipe.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- This dimension will vary with different grates, curbs types, box width and wall thickness.
- Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
- Where "L" is 6" or less, wall thickness shall be as shown in Table A.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

**TABLE A**

TYPE	CONCRETE QUANTITIES					
	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	H=3'-0" (CY)	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
G-1	0.95	0.220	See Note A	SEE NOTE A	See Note A	SEE NOTE A
G-2*	1.31	0.255	3.50	0.357	See Note A	SEE NOTE A
G-3	1.03	0.220	See Note A	SEE NOTE A	See Note A	SEE NOTE A
G-4* (TYPE 24)	1.27	0.255	3.48	0.357	See Note A	SEE NOTE A
G-4* (TYPE 18)	1.30	0.255	3.50	0.357	See Note A	SEE NOTE A
G-5	1.02	0.220	See Note A	SEE NOTE A	See Note A	SEE NOTE A
G-6	1.04	0.220	See Note A	SEE NOTE A	See Note A	SEE NOTE A

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. \* QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

**NOTE A:**

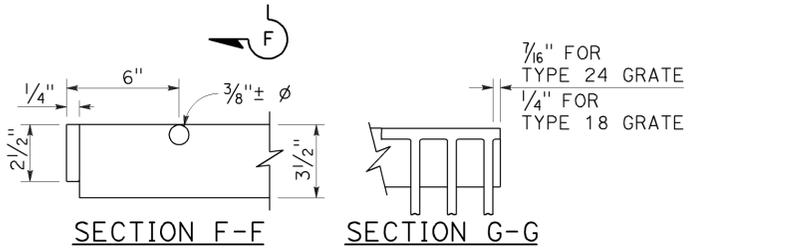
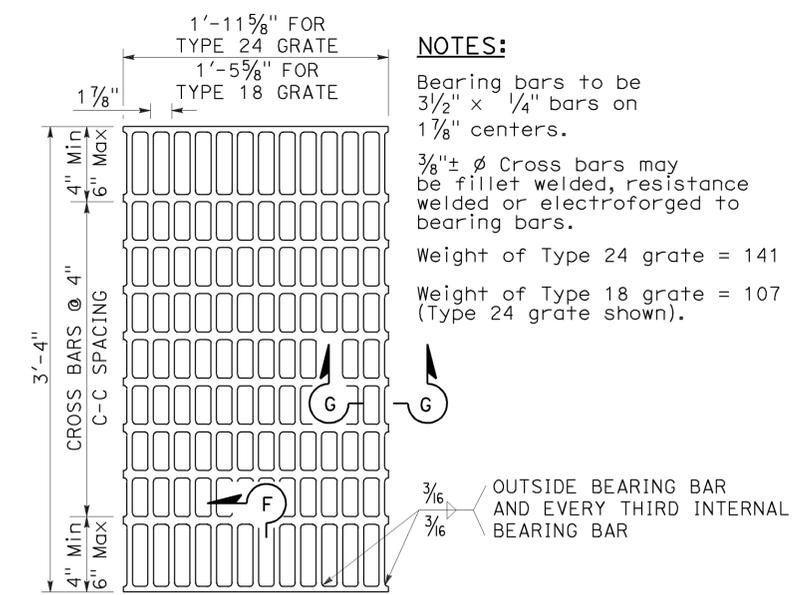
Maximum allowable height 6'-0".

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

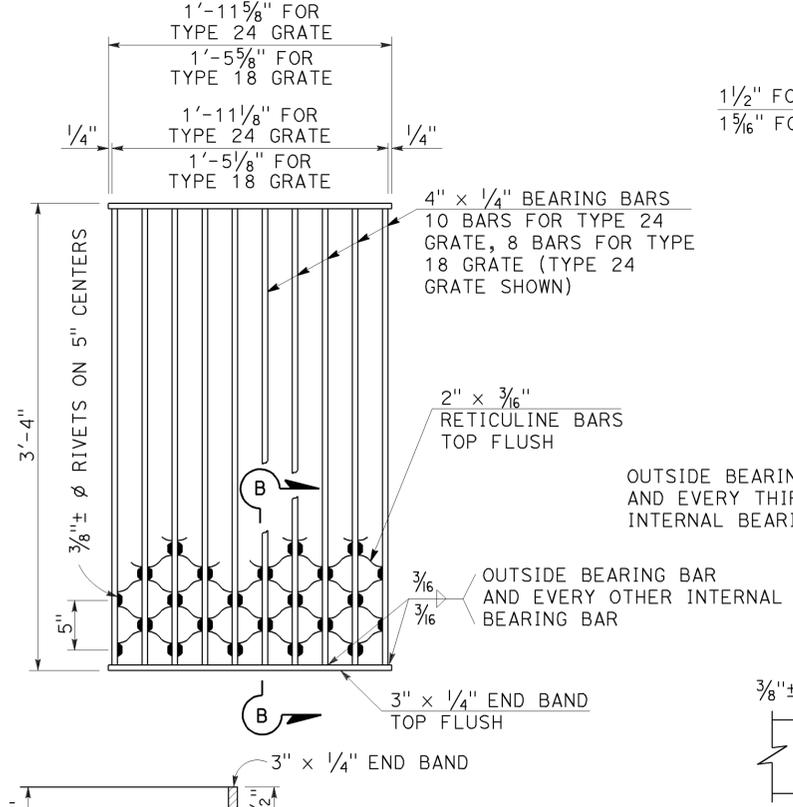
**DRAINAGE INLETS**  
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D73**

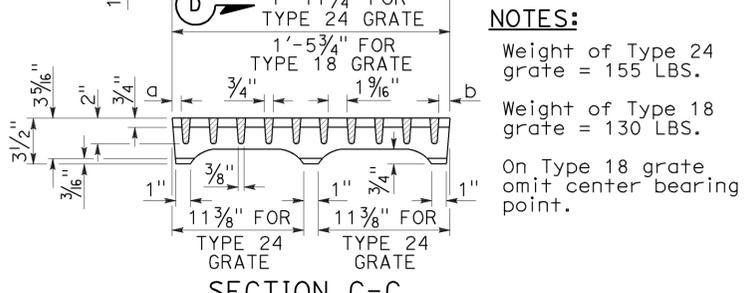
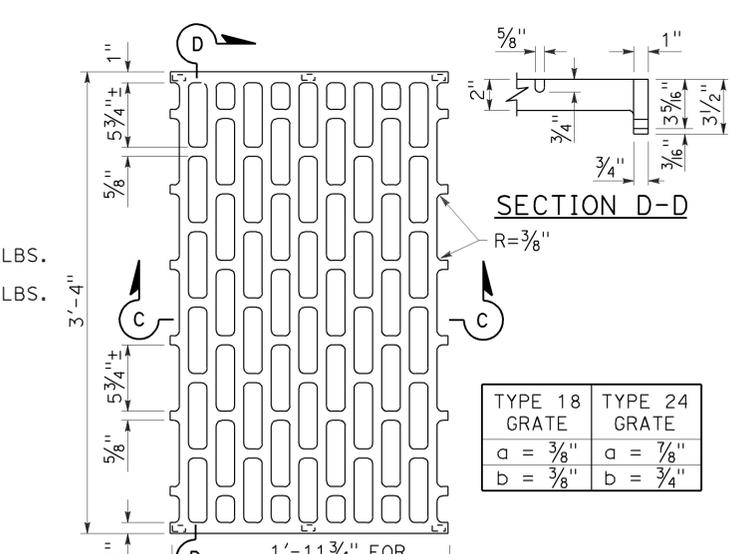


**SECTION B-B**  
TYPE 18-8S AND 24-10S GRATE  
(Welded Steel) Reticuline type

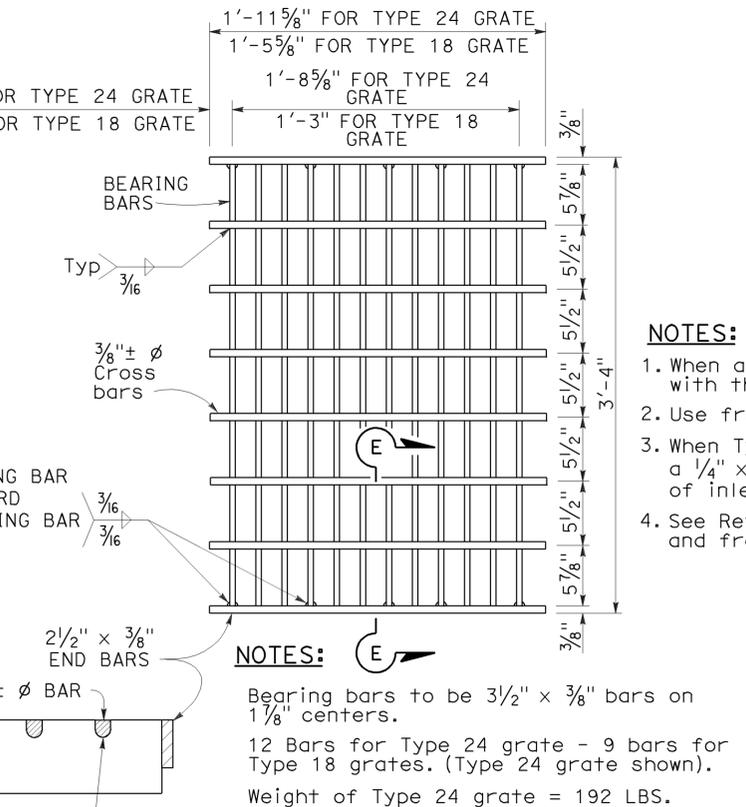


**SECTION E-E**  
TYPE 18-9X AND 24-12X GRATE  
(Welded Steel)

**SECTION D-D**  
TYPE 18-8C AND 24-10C GRATE  
(Cast ductile iron)

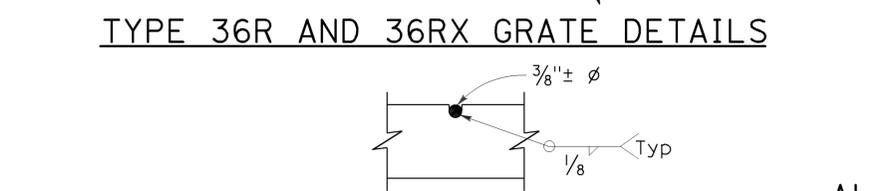
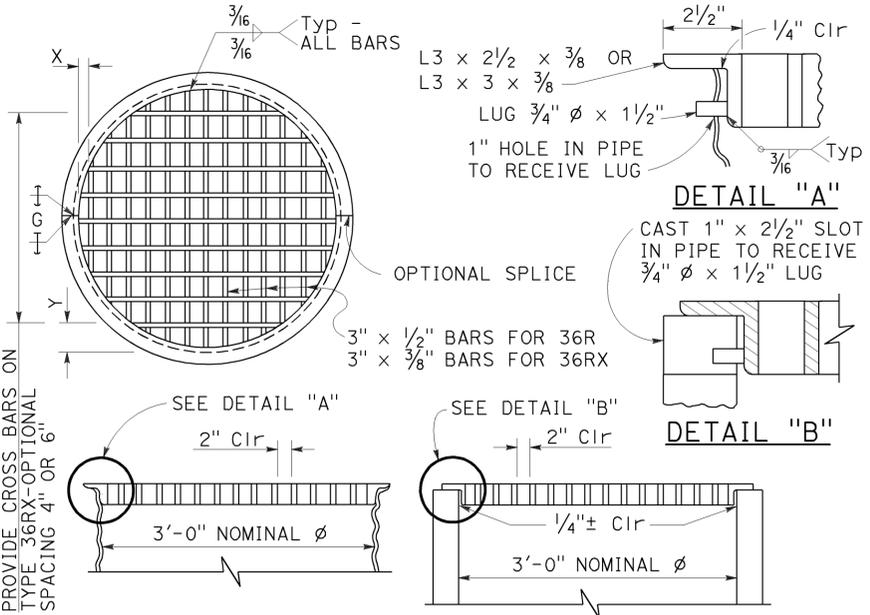


**SECTION E-E**  
TYPE 18-9X AND 24-12X GRATE  
(Welded Steel)

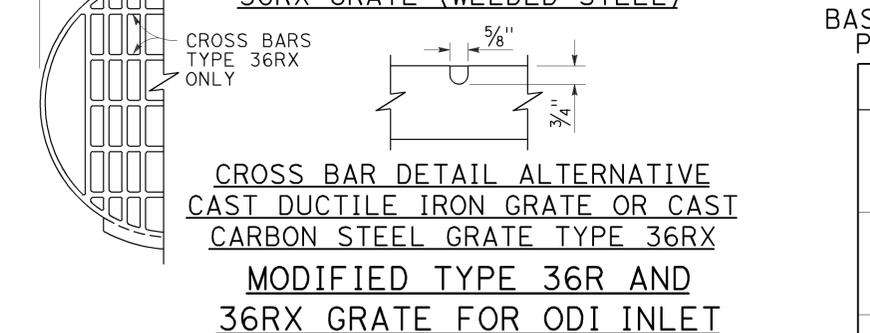


**SECTION E-E**  
TYPE 18-9X AND 24-12X GRATE  
(Welded Steel)

**SECTION D-D**  
TYPE 18-8C AND 24-10C GRATE  
(Cast ductile iron)



**SECTION A-A**  
ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE TYPE 36R AND 36RX

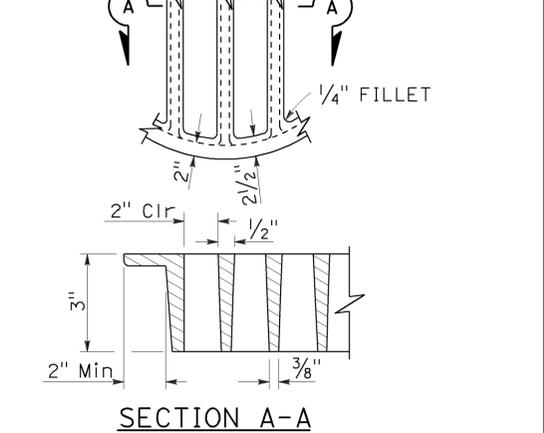


- NOTES:**
- When alternative grates are allowed - Final pay based on alternative with the lesser weight.
  - Use frame shown on Standard Plan D74A, D74B or RSP D77A as appropriate.
  - When Type 24-10S, 24-12X or 24-13 grates are used with GDO Inlets, a 1/4" x 3/2" x 3'-4 7/8" steel bar shall be welded across the center of inlet frame to separate the individual grates.
  - See Revised Standard Plan RSP D77A for connecting chain to welded grate and frame. When chain is required, do not use cast ductile iron grate.

**GRATE BAR SPACING TABLE**

TYPE	NO. OF BARS	CLEAR BAR SPACING	X	Y		Z
				4" SPACING	6" SPACING	
36R	13	2"	2 1/8"	-	-	-
36RX (STEEL)	15	2"	9/16"	3 3/4"	5 3/4"	-
36RX (CAST)	13	2"	2 1/8"	3 3/4"	5 3/4"	-
36R Mod	12	2"	2 1/8"	-	-	5"
36RX Mod (STEEL)	13	2"	9/16"	3 3/4"	5 3/4"	5 1/16"
36RX Mod (CAST)	12	2"	2 1/8"	3 3/4"	5 3/4"	5"

TO ACCOMPANY PLANS DATED 05-26-15



**SECTION A-A**  
ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE TYPE 36R AND 36RX

BASIS FOR Misc IRON AND STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS

INLET TYPE	GRATE TYPE	No. OF GRATES	WEIGHT LB
GDO (SEE NOTE 4)	24-10C	2	391
	24-10S	2	456
	24-12X	2	473
	24-13	2	374
G0, G0L, G1, G2, G3, G4 (TYPE 24)	24-10C	1	202
	24-10S	1	229
	24-12X	1	239
	24-13	1	188
G4 (TYPE 18) G5, G6	18-8S	1	187
	18-9X	1	187
	18-10	1	149
GT1, GT2	18-8S	2	374
	18-9X	2	374
	18-10	2	298
GT3, GT4	24-10C	2	404
	24-10S	2	458
	24-12X	2	478
ODI	24-13	2	376
	36RX (Mod)	1	196
	36R (Mod)	1	220
GMP, GCP, GCPI	36RX	1	215
TRASH RACK	36R	1	236
GRATE CHAIN			22
			3

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**GRATE DETAILS No. 2**  
NO SCALE

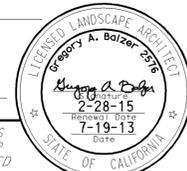
RSP D77B DATED APRIL 19, 2013 SUPERSEDES RSP D77B DATED JULY 20, 2012 AND STANDARD PLAN D77B DATED MAY 20, 2011 - PAGE 165 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	213	287

*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 05-26-15

**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 Ctd 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  
 Pvm+ PAVEMENT

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

**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

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

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
11	SD	15	M5.6/R6.0	214	287

*Gregory A. Balzer*  
LICENSED LANDSCAPE ARCHITECT

November 15, 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 05-26-15

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
		EXTEND IRRIGATION CONDUIT
		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.

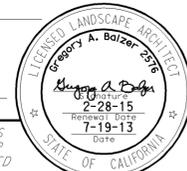
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION  
CONTROL SYMBOLS**  
NO SCALE

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

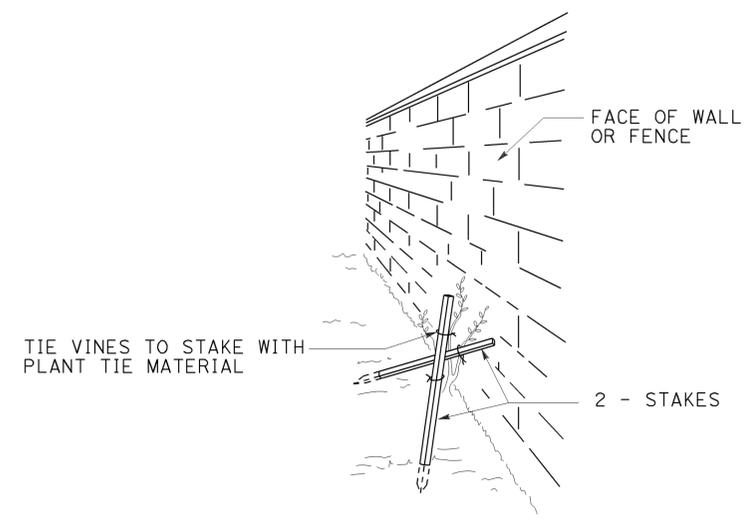
**REVISED STANDARD PLAN RSP H2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	215	287

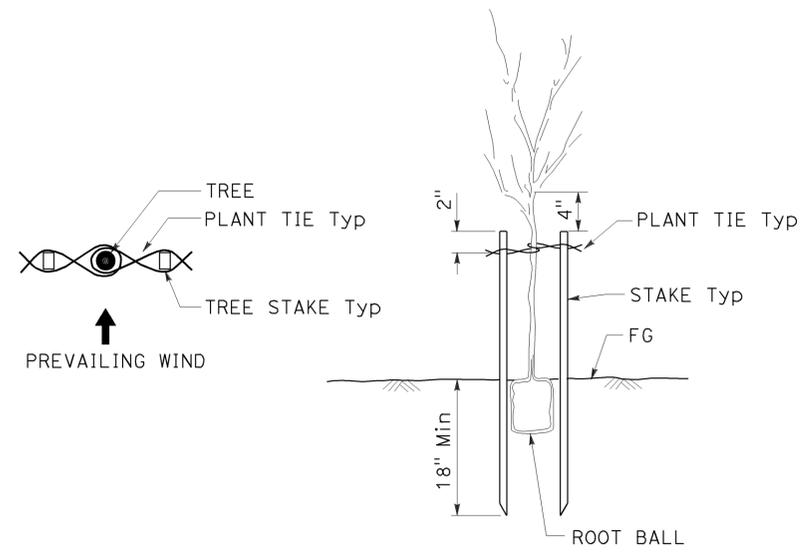
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



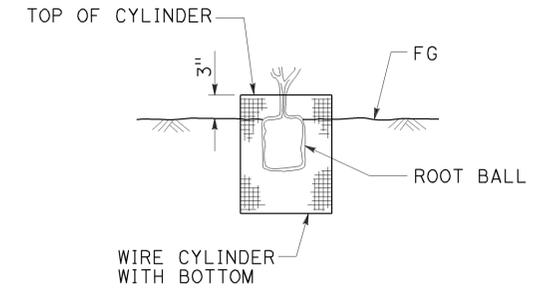
TO ACCOMPANY PLANS DATED 05-26-15



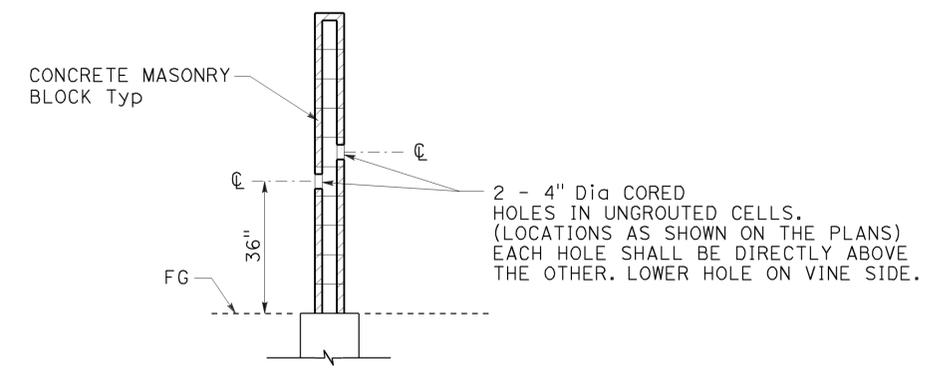
PERSPECTIVE VINE STAKING



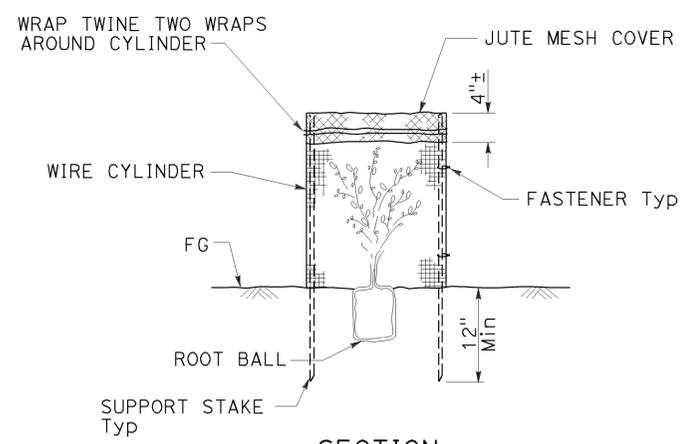
TREE STAKING



SECTION ROOT PROTECTOR



SECTION CORE HOLE (VINE)



SECTION FOLIAGE PROTECTOR

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

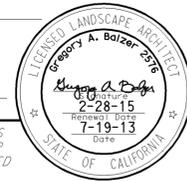
RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H4**

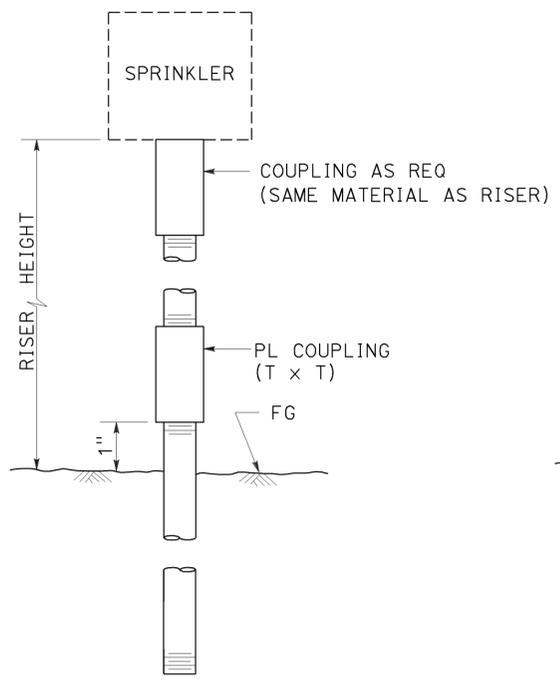
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	216	287

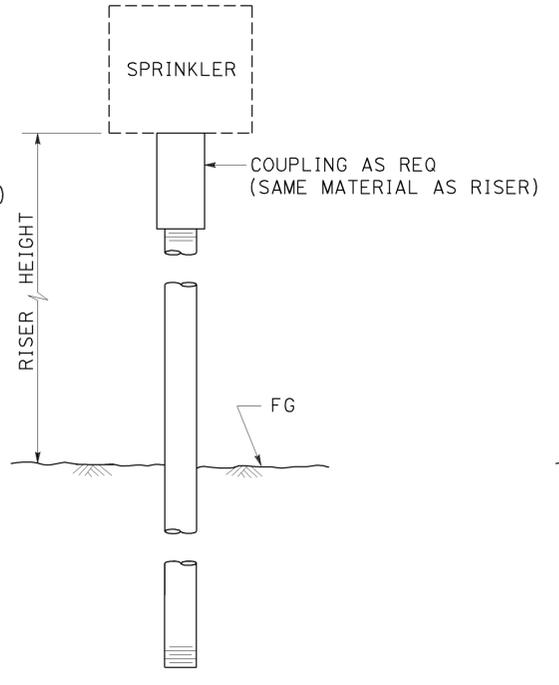
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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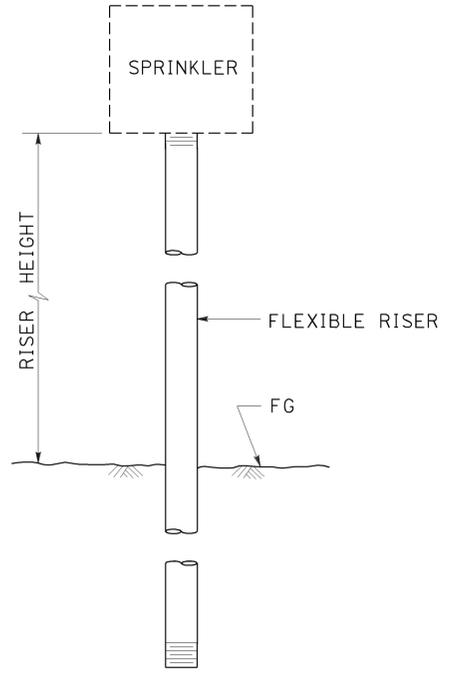
TO ACCOMPANY PLANS DATED 05-26-15



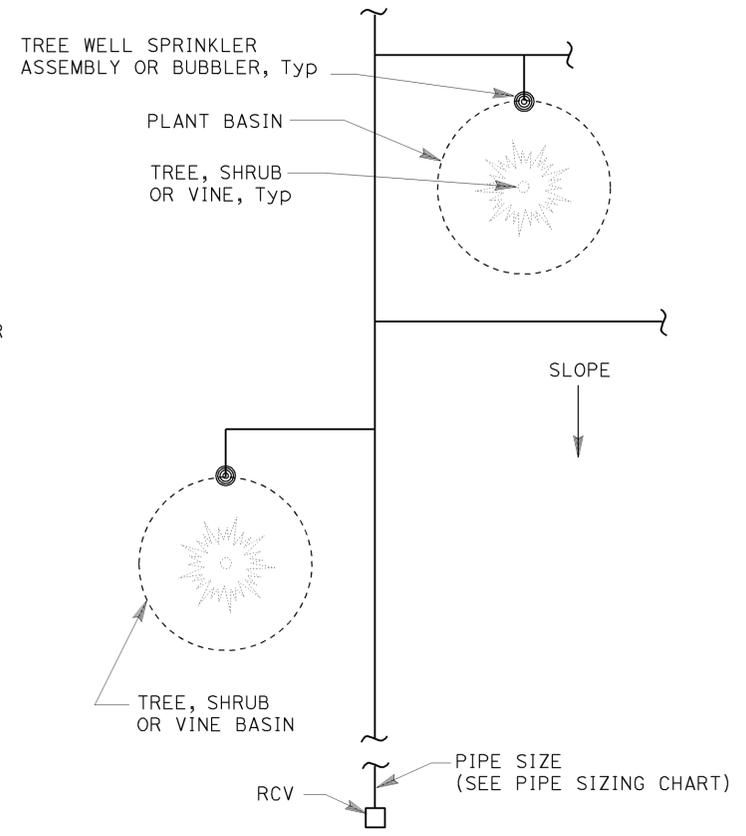
**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE I**



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE II**



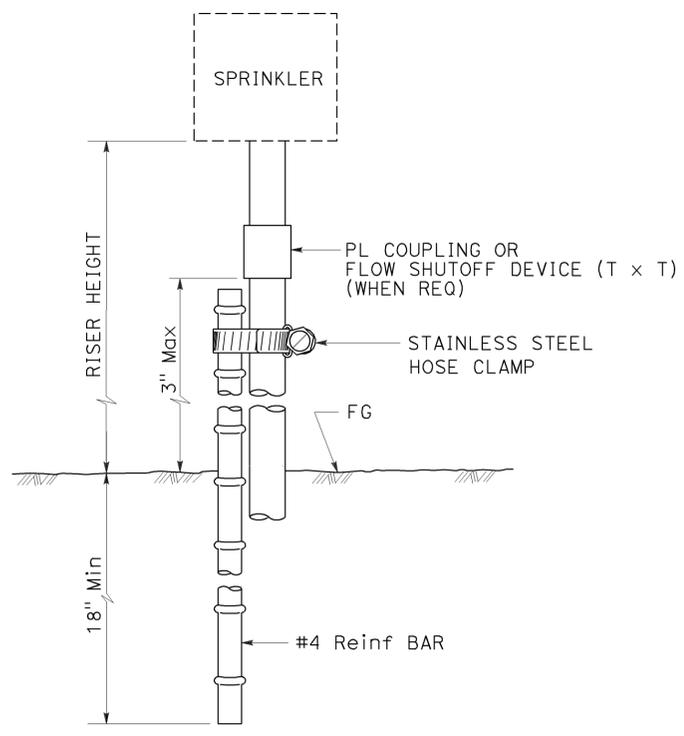
**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE III**



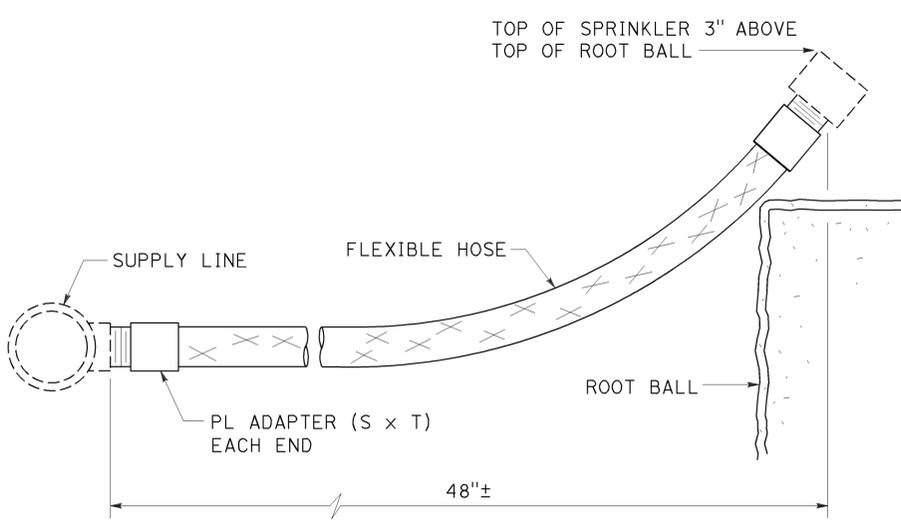
**PLAN**

**NOTES:**

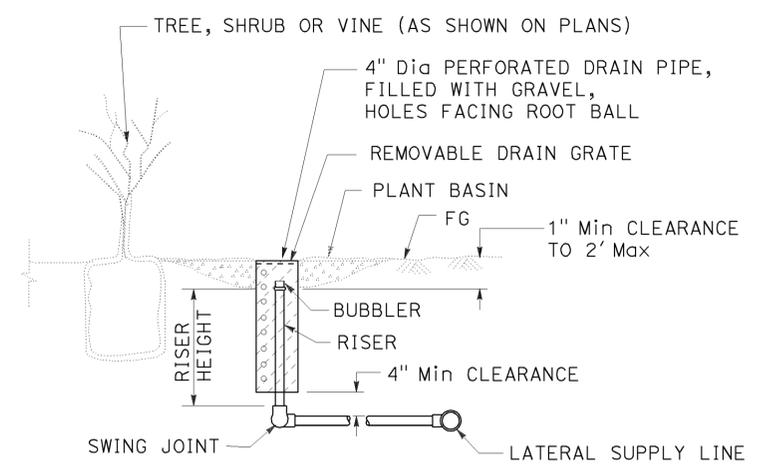
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE IV**



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE V**



**SECTION**  
**TREE WELL SPRINKLER ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
NO SCALE

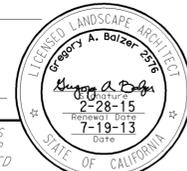
RSP H5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H5**

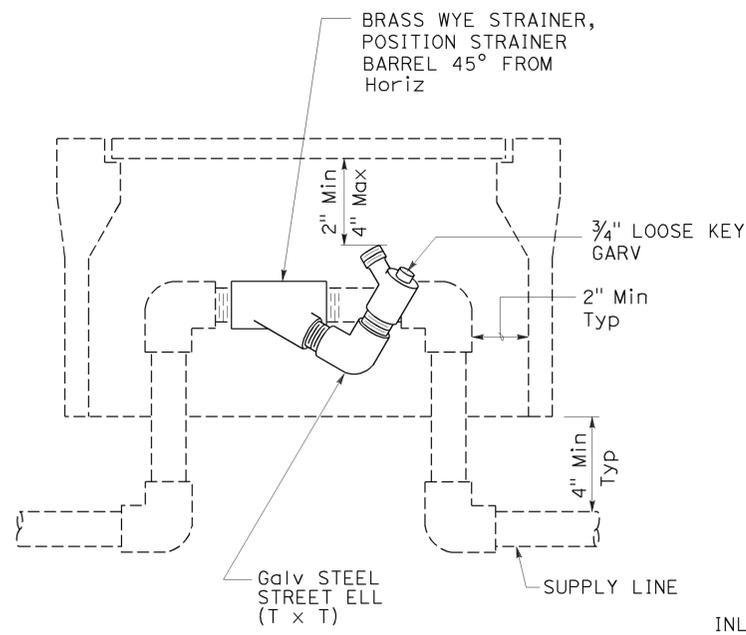
**2010 REVISED STANDARD PLAN RSP H5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	217	287

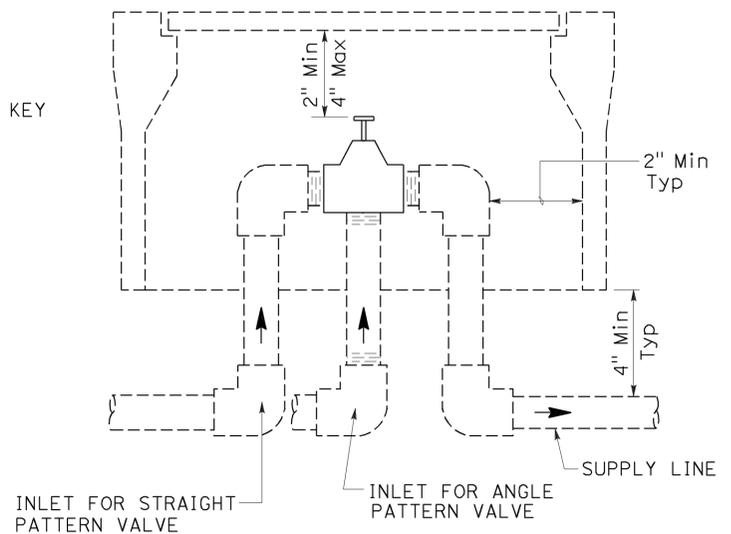
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



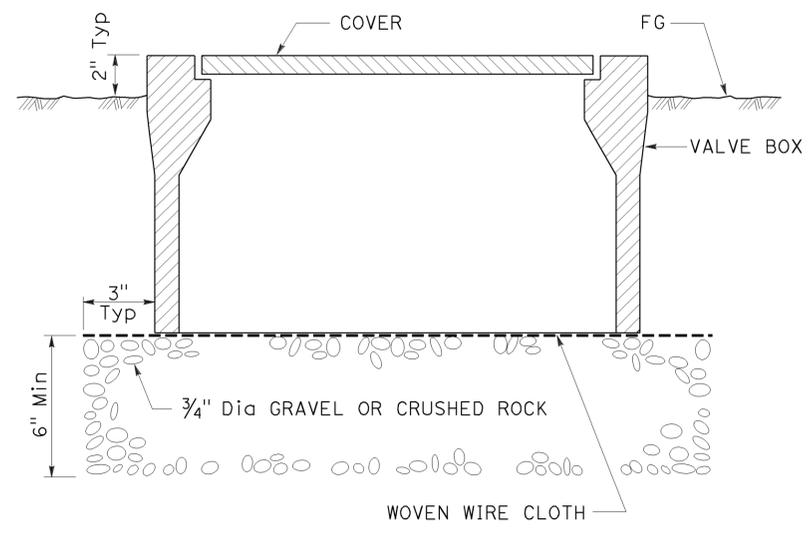
TO ACCOMPANY PLANS DATED 05-26-15



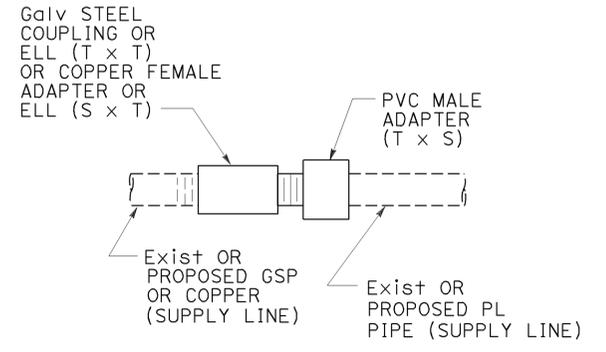
**ELEVATION**  
**WYE STRAINER ASSEMBLY**



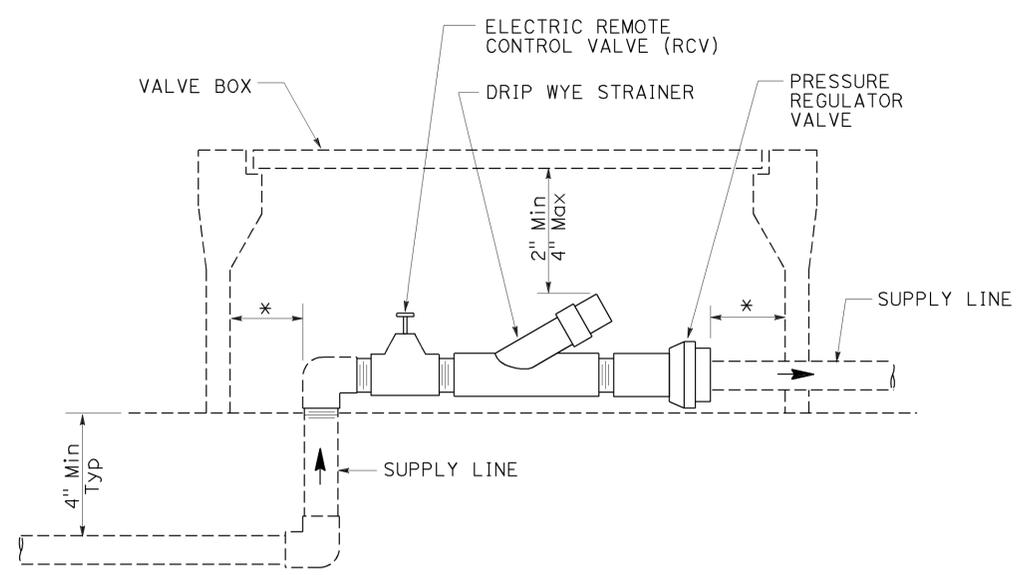
**ELEVATION**  
**VALVE**



**SECTION**  
**VALVE BOX**



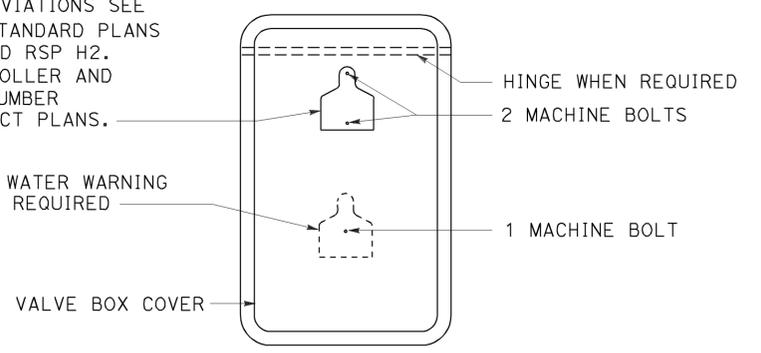
**GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE**



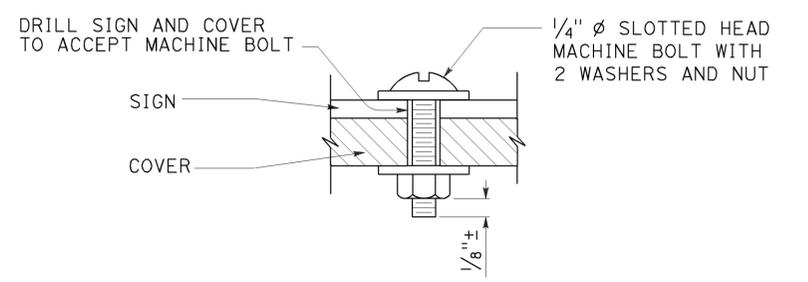
**ELEVATION**  
**DRIP VALVE ASSEMBLY**

IDENTIFICATION LABEL:  
FOR ABBREVIATIONS SEE  
REVISED STANDARD PLANS  
RSP H1 AND RSP H2.  
FOR CONTROLLER AND  
STATION NUMBER  
SEE PROJECT PLANS.

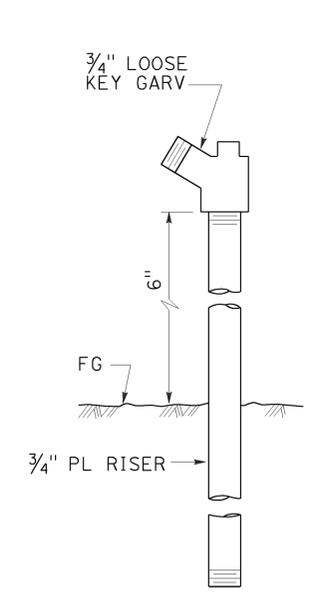
RECYCLED WATER WARNING  
SIGN WHEN REQUIRED



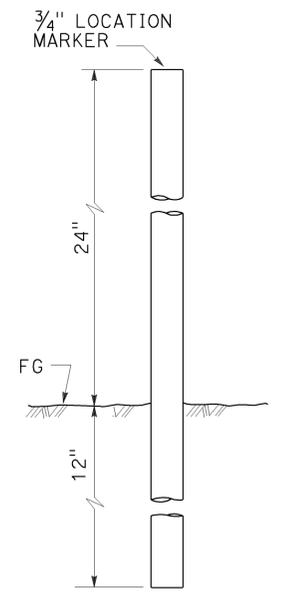
**PLAN**



**SECTION**  
**VALVE BOX IDENTIFICATION**



**ELEVATION**  
**GARDEN VALVE ASSEMBLY**



**ELEVATION**  
**LOCATION MARKER**

**GARDEN VALVE ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**LANDSCAPE DETAILS**

NO SCALE

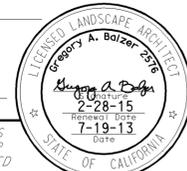
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7  
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H7**

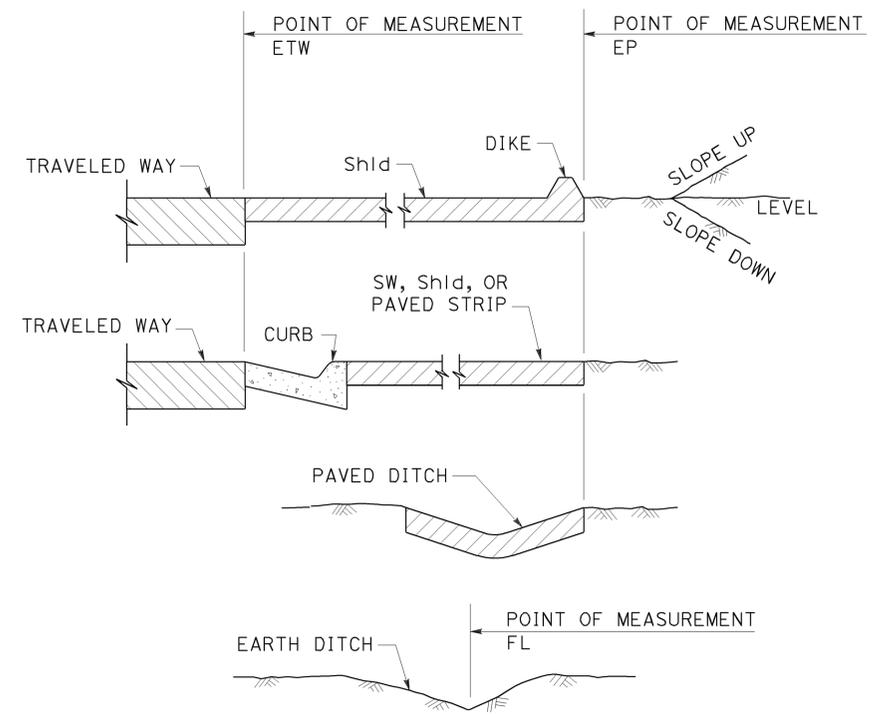
2010 REVISED STANDARD PLAN RSP H7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	218	287

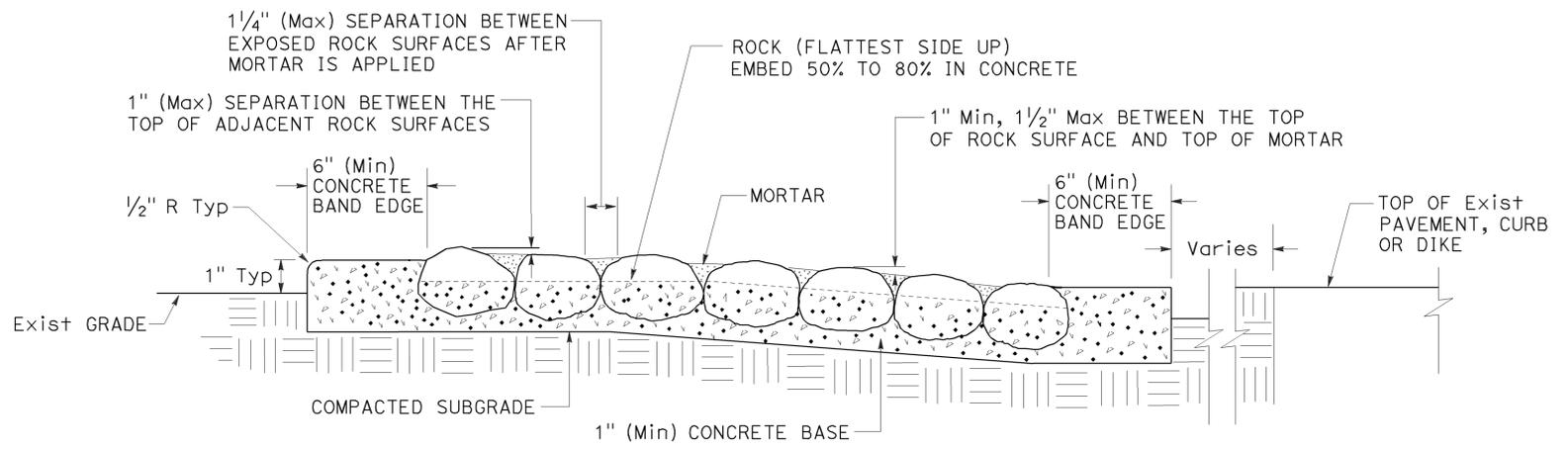
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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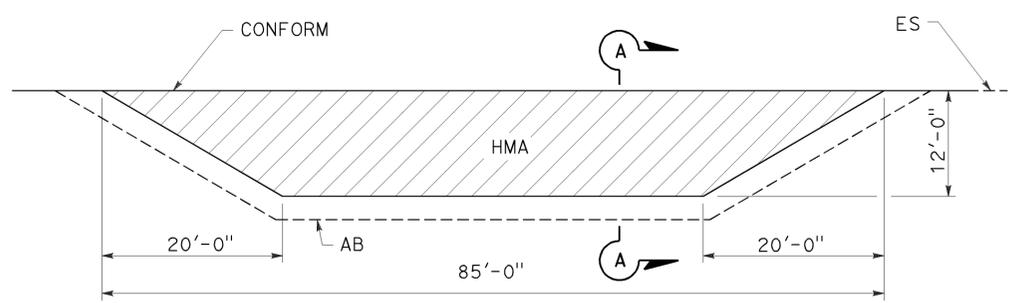
TO ACCOMPANY PLANS DATED 05-26-15



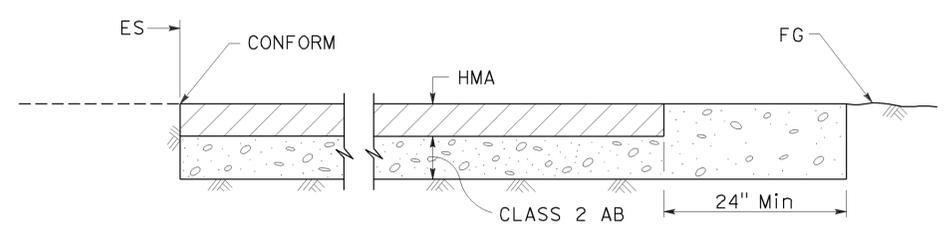
**SECTION  
POINTS OF MEASUREMENT**



**SECTION  
ROCK BLANKET**



**PLAN**



**SECTION A-A  
MAINTENANCE VEHICLE PULLOUT**

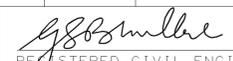
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

RSP H9A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H9A**

2010 REVISED STANDARD PLAN RSP H9A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	219	287

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 05-26-15

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	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
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T9**

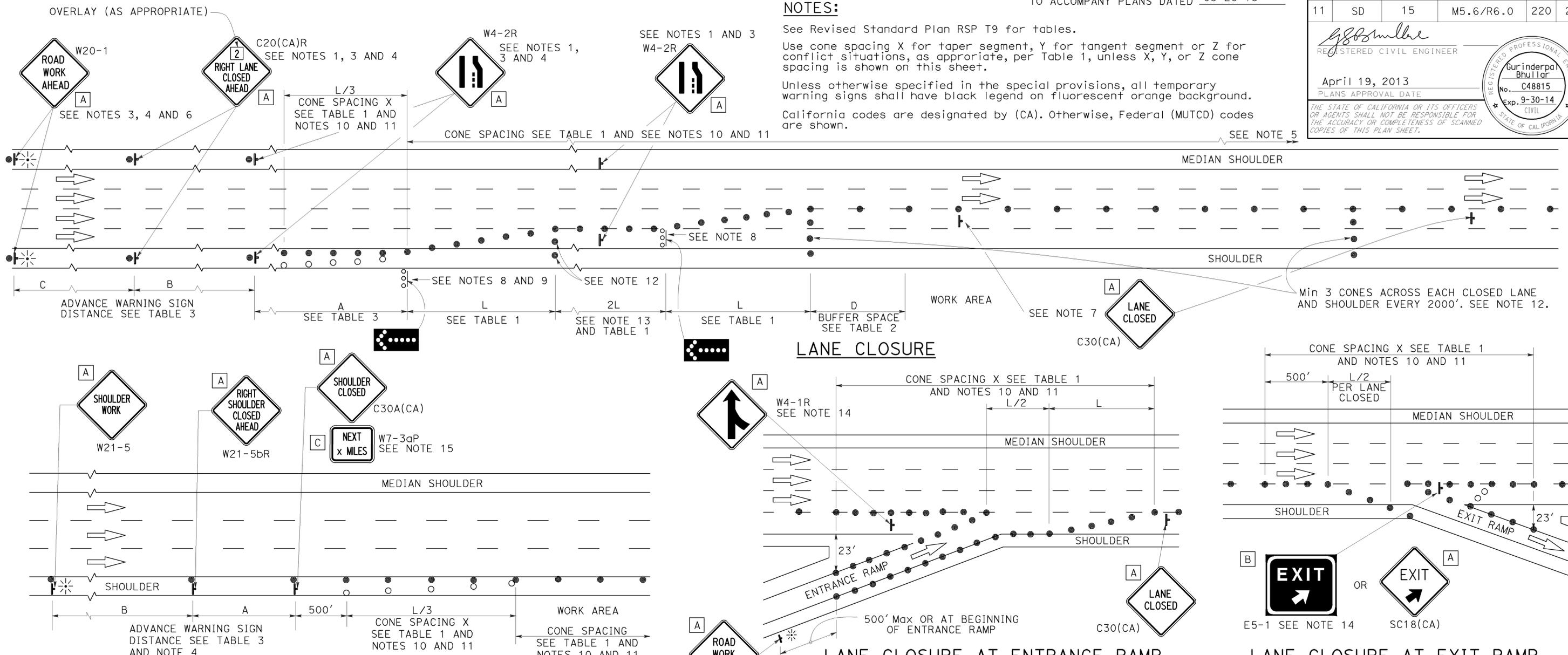
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	220	287

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA

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**NOTES:**

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
  - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
  - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

**SHOULDER CLOSURE**

6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

**NOTES:**

See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.  
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

W20-1 SEE NOTE 4

12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- ⬢ FLASHING ARROW SIGN (FAS)
- ⬢ FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 72" x 60"
- C 36" x 30"

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS**

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	221	287

REGISTERED CIVIL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

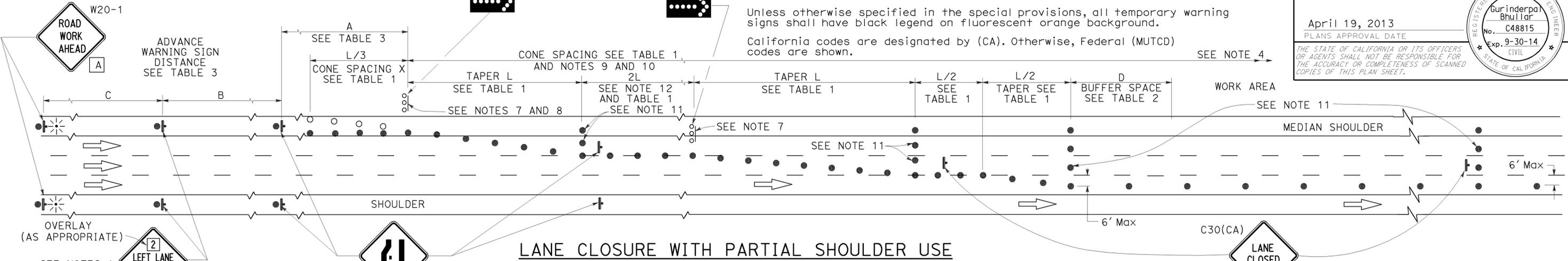
April 19, 2013  
 PLANS APPROVAL DATE

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.

**NOTES:** See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

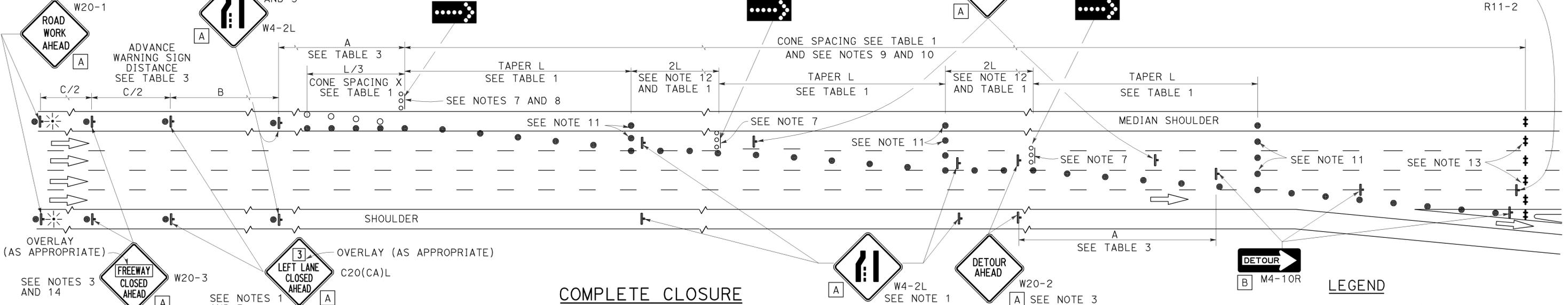
Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.  
 California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

SEE NOTES 3 AND 5



**LANE CLOSURE WITH PARTIAL SHOULDER USE**

SEE NOTES 3 AND 5



**COMPLETE CLOSURE**

**NOTES:**

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" X 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure With Partial Shoulder Use" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 48" x 18"
- C 48" x 30"

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

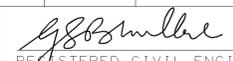
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURES ON  
 FREEWAYS AND EXPRESSWAYS**  
 NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10A**

2010 REVISED STANDARD PLAN RSP T10A

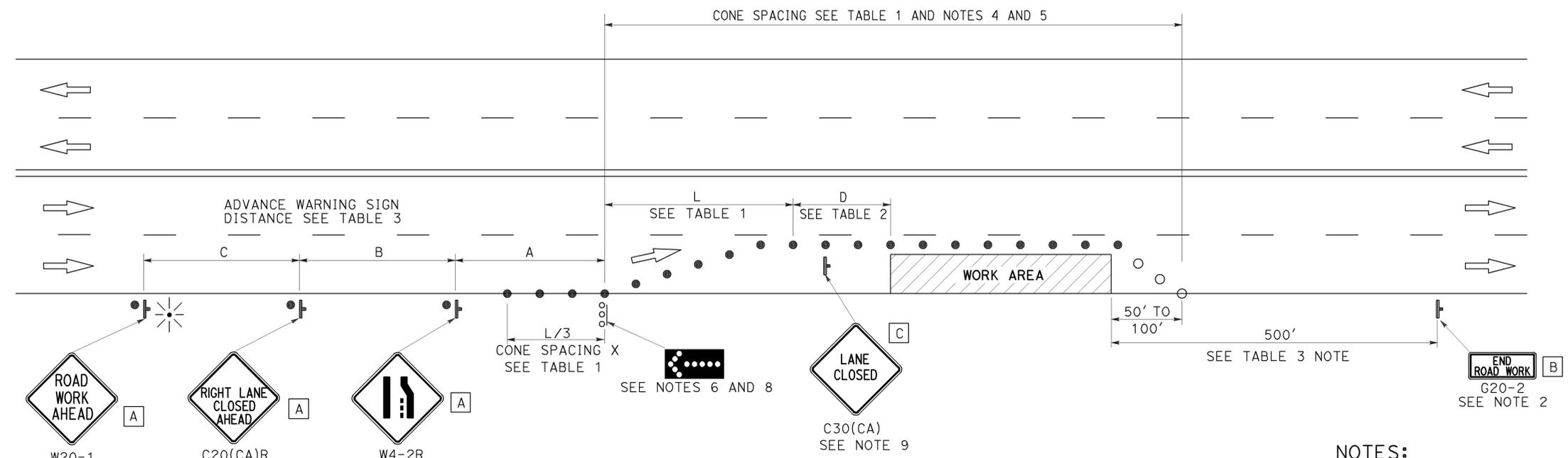
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	222	287

  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 05-26-15



TYPICAL LANE CLOSURE

NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

NOTES:

- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- ⌋ TEMPORARY TRAFFIC CONTROL SIGN
-  FLASHING ARROW SIGN (FAS)
-  FAS SUPPORT OR TRAILER
-  PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURE ON  
 MULTILANE CONVENTIONAL  
 HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T11**

2010 REVISED STANDARD PLAN RSP T11

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

## LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

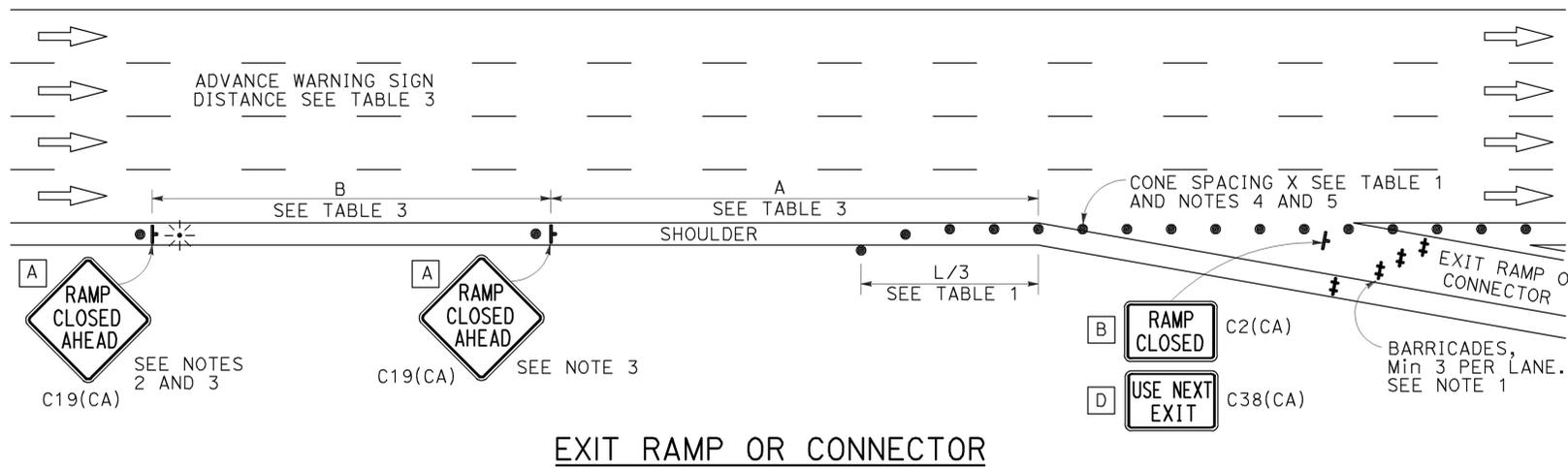
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	223	287

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

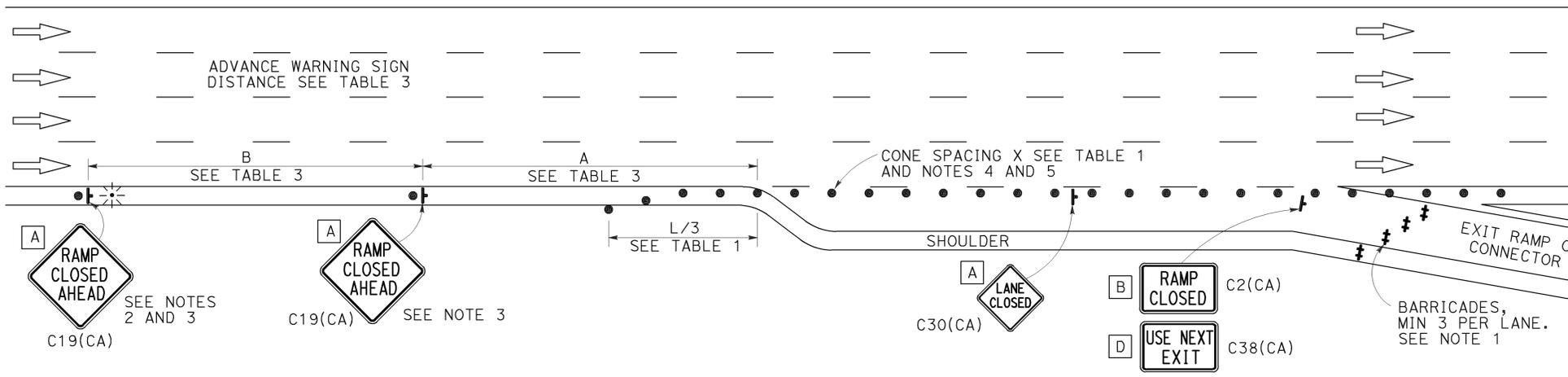
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TO ACCOMPANY PLANS DATED 05-26-15

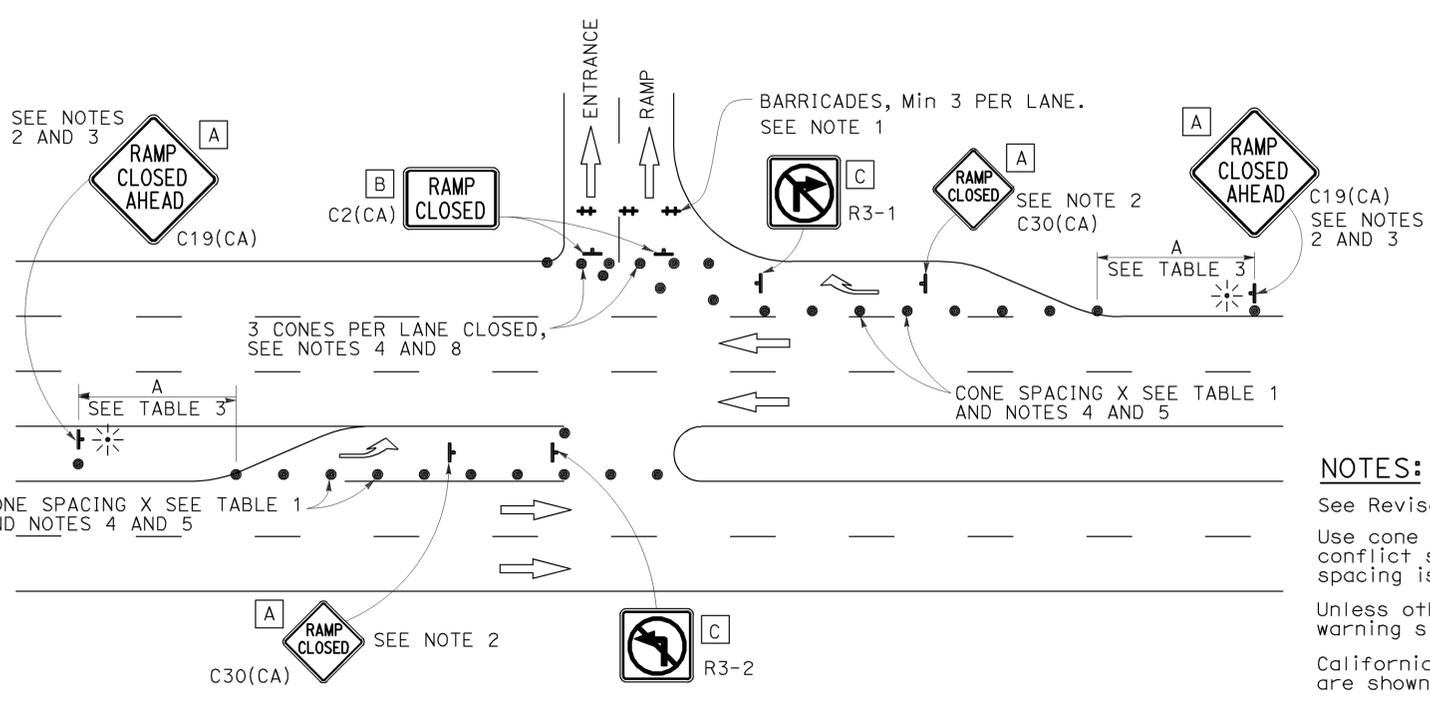
2010 REVISED STANDARD PLAN RSP T14



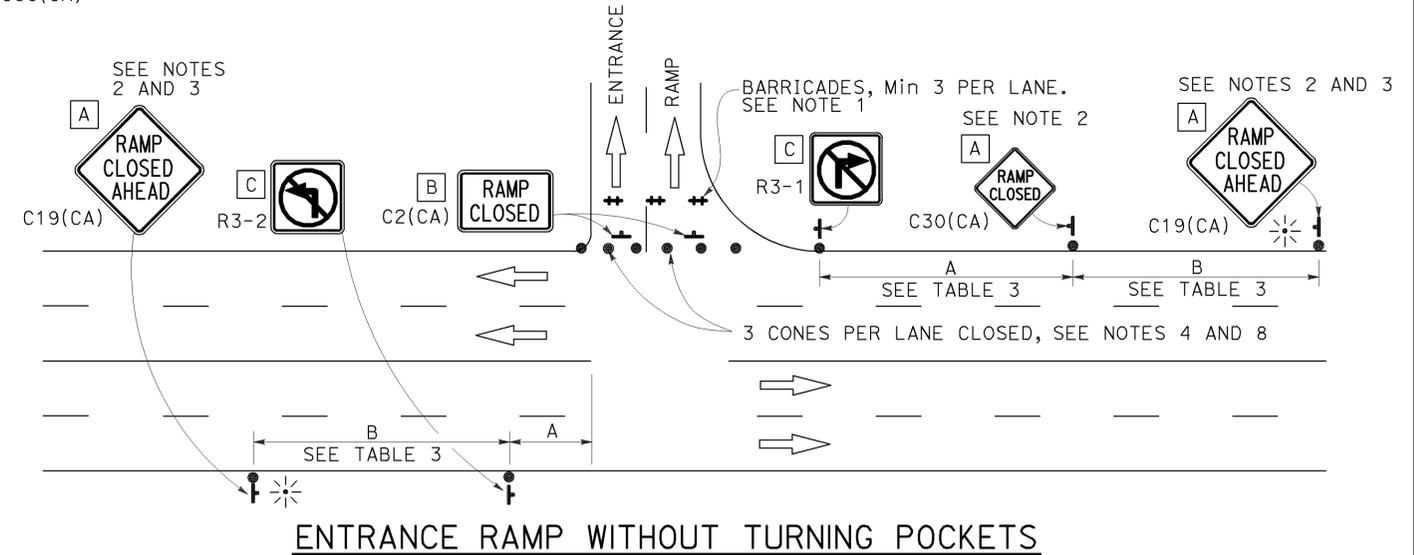
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

1. See Revised Standard Plan RSP T9 for tables.
2. Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
3. Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
4. California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

## NOTES:

1. Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
2. In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
3. Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
4. All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
6. At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
7. The existing "EXIT" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.

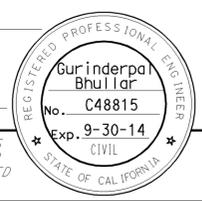
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

### TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

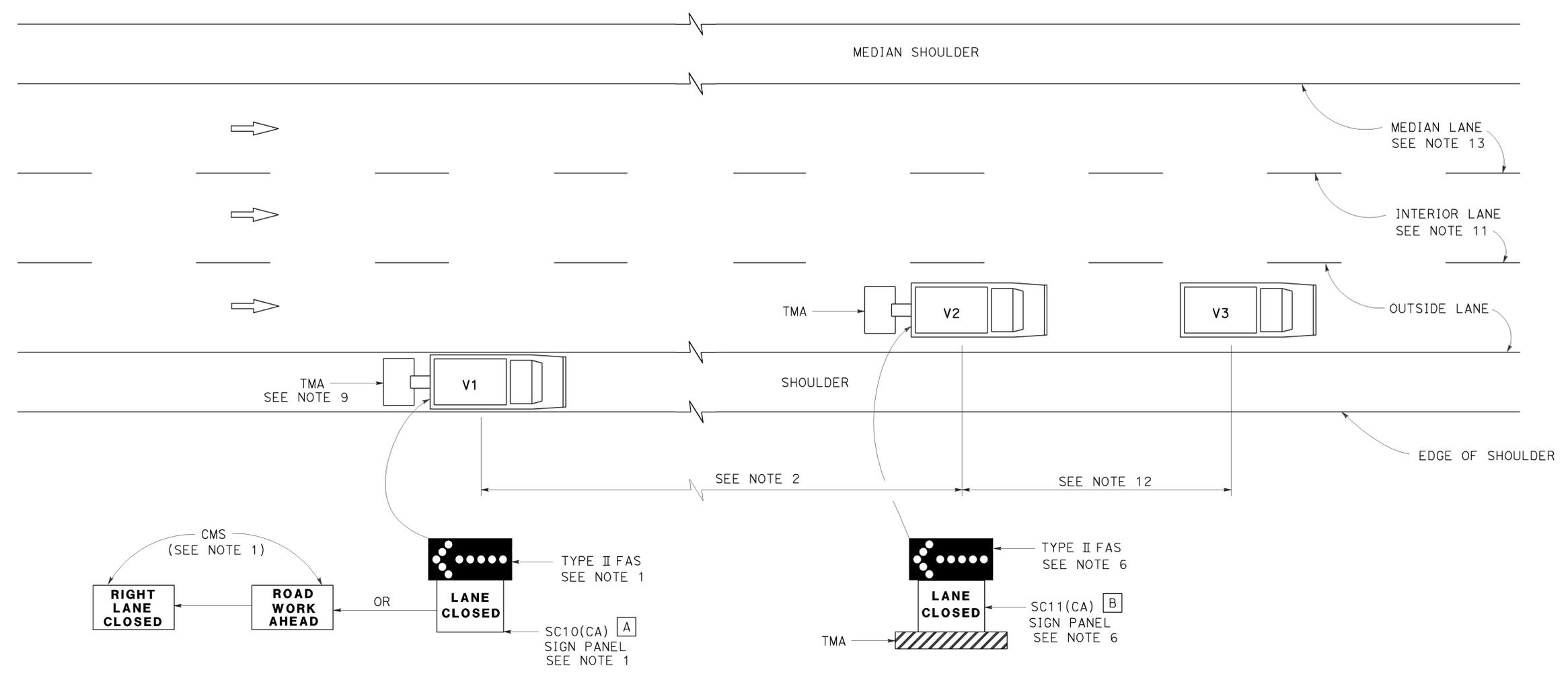
NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP T14



TO ACCOMPANY PLANS DATED 05-26-15



**SIGN PANEL SIZE (Min)**

- A 66" x 36"
- B 54" x 42"

**LEGEND**

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
-  FLASHING ARROW SIGN (FAS)
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

**MOVING LANE CLOSURE ON MEDIAN LANE OR  
OUTSIDE LANE OF MULTILANE HIGHWAYS**

**NOTES:**

- Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
- If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
- A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
- Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
- 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.
- Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
- 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.
- All vehicles shall be equipped with flashing or rotating amber lights.
- 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.
- Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
- For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
- The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
- When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
FOR MOVING LANE CLOSURE  
ON MULTILANE HIGHWAYS**  
NO SCALE

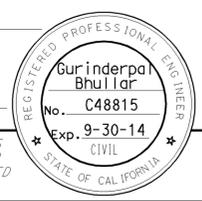
RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15  
DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T15**

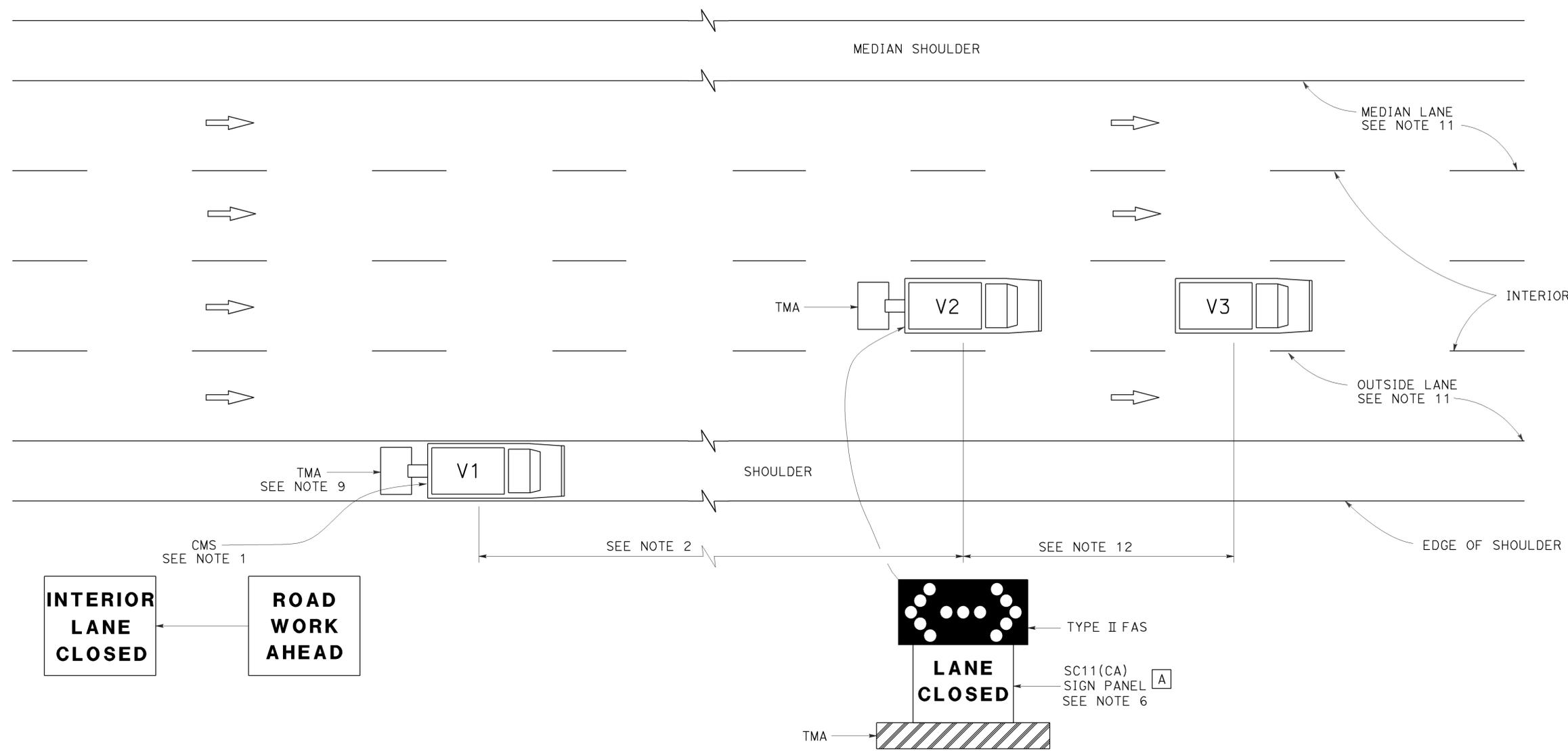
2010 REVISED STANDARD PLAN RSP T15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	225	287

*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
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TO ACCOMPANY PLANS DATED 05-26-15



SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

- V1 SIGN VEHICLE
- V2 SHADOW VEHICLE
- V3 WORK/APPLICATION VEHICLE
- FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
- CMS CHANGEABLE MESSAGE SIGN
- TMA TRUCK-MOUNTED ATTENUATOR

**MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS**

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
5. 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.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. 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.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. 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.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on median lane or outside lane of multilane highways, use Revised Standard Plan T15.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.

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

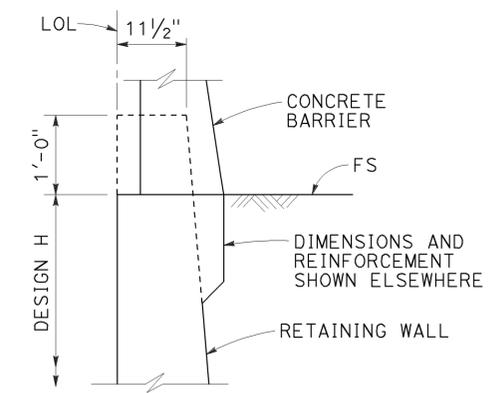
RSP T16 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T16 DATED MAY 20, 2011 - PAGE 244 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T16**

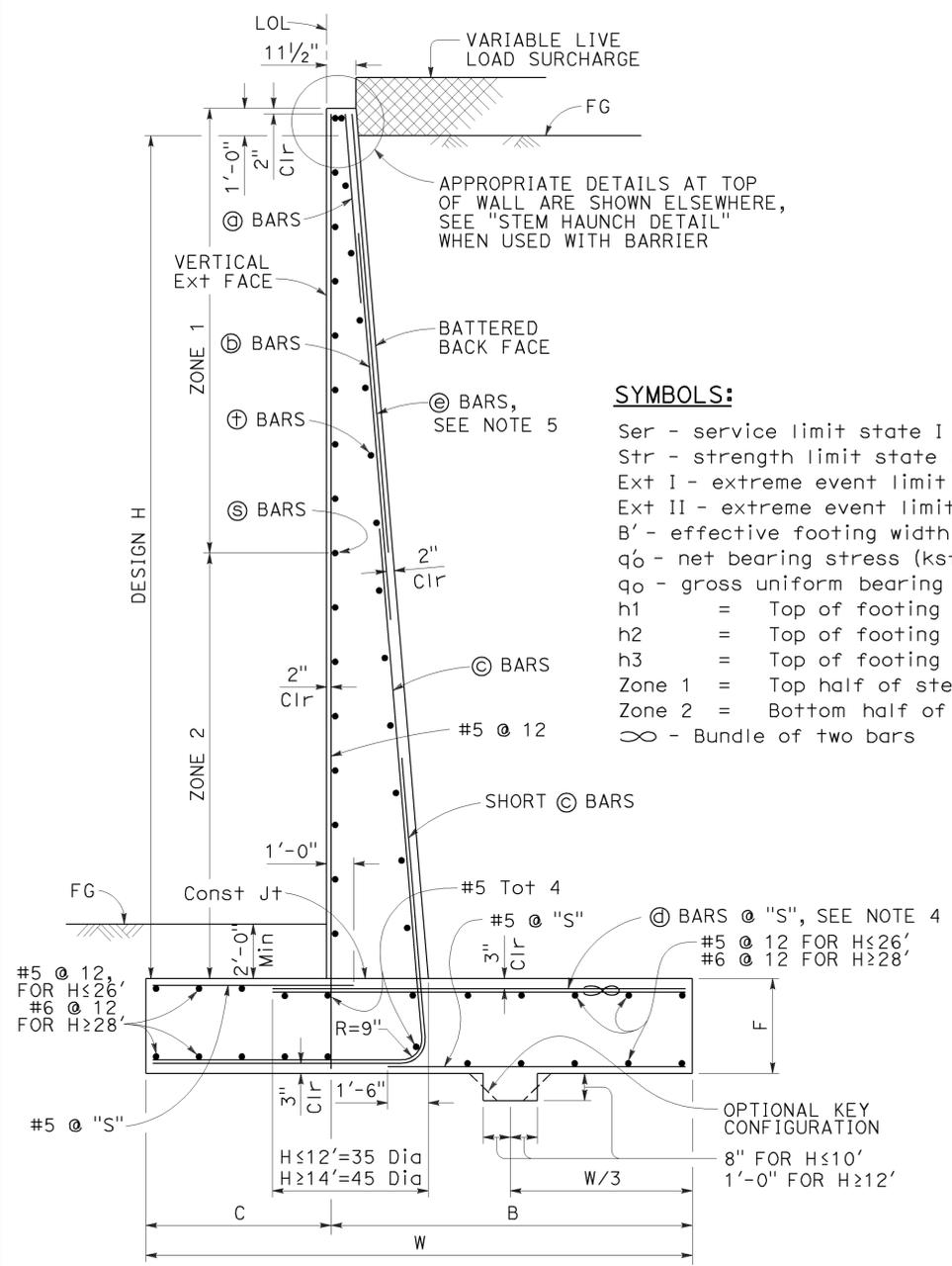
2010 REVISED STANDARD PLAN RSP T16

**DESIGN CONDITIONS:**

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.



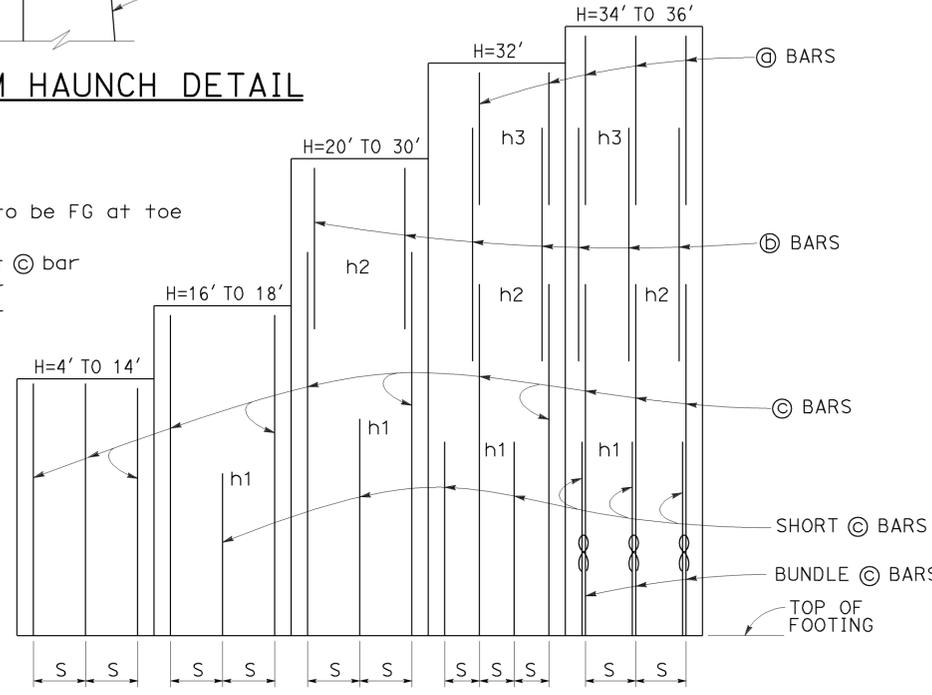
**STEM HAUNCH DETAIL**



**TYPICAL SECTION**

**SYMBOLS:**

- Ser - service limit state I
- Str - strength limit state I
- Ext I - extreme event limit state I
- Ext II - extreme event limit state II
- B' - effective footing width (ft)
- q<sub>0</sub> - net bearing stress (ksf), OG assumed to be FG at toe
- q<sub>o</sub> - gross uniform bearing stress (ksf)
- h<sub>1</sub> = Top of footing to top of short © bar
- h<sub>2</sub> = Top of footing to top of © bar
- h<sub>3</sub> = Top of footing to top of Ⓣ bar
- Zone 1 = Top half of stem height
- Zone 2 = Bottom half of stem height
- ∞ - Bundle of two bars



**ELEVATION**

**DESIGN NOTES:**

- TO ACCOMPANY PLANS DATED 05-26-15
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
  - LS: Varied surcharge on level ground surface
  - DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
  - CT: 54 kip transverse force applied at H<sub>e</sub> = 32', distributed over 10 feet at the top of wall and 1 : 1 distribution down and outward. Distribution below footing taken no less than 40'.
  - SEISMIC: k<sub>h</sub> = 0.2, k<sub>v</sub> = 0.0
  - SOIL: φ = 34°, γ = 120 pcf
  - REINFORCED CONCRETE: f'c = 3,600 psi, fy = 60,000 psi
  - LOAD COMBINATIONS AND LIMIT STATES:
    - Service I Q = 1.00DC+1.00EV+1.00EH+1.00LS
    - Strength I Q = αDC+βEV+ηEH+1.75LS
    - Extreme I Q = 1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE
    - Extreme II Q = 1.00DC+1.00EV+1.00EH+1.00CT
  - Where:
    - Q: Force Effects
    - α: 1.25 or 0.90, Whichever Controls Design
    - β: 1.35 or 1.00, Whichever Controls Design
    - η: 1.50 or 0.90, Whichever Controls Design
    - DC: Dead Load of Structure Components
    - EH: Horizontal Earth Fill Pressure
    - EV: Vertical Earth Pressure from Earth Fill Weight
    - LS: Live Load Surcharge
    - EQE: Seismic Earth Pressure
    - EQD: Soil and Structural and Nonstructural Components Inertia
    - CT: Vehicular Collision Force

**NOTES:**

1. For details not shown and drainage notes see RSP B3-5
2. For wall stem joint details see B0-3 3-3 and B0-3 3-4
3. At © bars:
  - H ≤ 6', no splices are allowed within 1'-8" above the top of footing.
  - H > 6', no splices are allowed within H/4 above the top of footing.
4. Bundle Ⓣ bars for H = 34' & 36'.
5. Provide #6 @ 10" x 15'-0" © bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations. For H ≤ 14', hook © bar into footing and reduce bar length as needed to maintain Min Clr cover.

DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	13'-3"	14'-6"	15'-9"	17'-1"	18'-5"	19'-10"	21'-2"	22'-7"	24'-0"
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-2"	7'-8"	8'-2"	9'-0"
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-9"	9'-6"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-8"	1'-9"	1'-9"	1'-11"	2'-2"	2'-5"	2'-10"	3'-3"	3'-6"	4'-0"	4'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	7/8: 12	1 : 12	1 : 12	1 : 12
SPACING "S"	9"	9"	9"	9"	9"	7"	6"	5"	6"	6"	6"	6"	6"	6"	6"	10"	8"
© BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#7	#7	#6
Ⓣ BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#9	#9	#8
© BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#11	#11	#11
Ⓣ BARS	#5	#5	#6	#6	#6	#6	#9	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h1	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-1"	11'-0"	12'-1"	13'-0"	13'-0"	12'-7"	11'-6"
h2	-	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	19'-0"	18'-0"	20'-2"
h3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-0"	21'-10"	24'-0"
ZONE 1 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12
ZONE 1 Ⓣ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
ZONE 2 Ⓣ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Ser: B', q <sub>0</sub>	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	11.0, 2.4	12.1, 2.5	13.2, 2.8	14.4, 2.9	15.5, 3.1	16.8, 3.3	18.0, 3.5	19.2, 3.7	20.6, 3.7
Str: B', q <sub>0</sub>	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	7.4, 3.8	8.2, 4.1	9.0, 4.4	9.9, 4.6	10.7, 4.9	11.7, 5.2	12.6, 5.4	13.6, 5.8	14.6, 5.9
Ext I: B', q <sub>0</sub>	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.6, 6.4	5.0, 6.9	5.3, 7.6	5.8, 8.1	6.1, 8.9	6.7, 9.4	7.1, 10.0	7.5, 10.7	8.2, 10.9
Ext II: B', q <sub>0</sub>	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	9.8, 3.0	11.2, 3.1	12.5, 3.2	13.9, 3.4	15.2, 3.6	16.7, 3.8	18.0, 4.0	19.3, 4.2	20.8, 4.3

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**RETAINING WALL TYPE 1 (CASE 1)**  
NO SCALE

RSP B3-1A DATED APRIL 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP B3-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	227	287

Gary Wang  
 REGISTERED CIVIL ENGINEER  
 April 20, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**DESIGN CONDITIONS:**

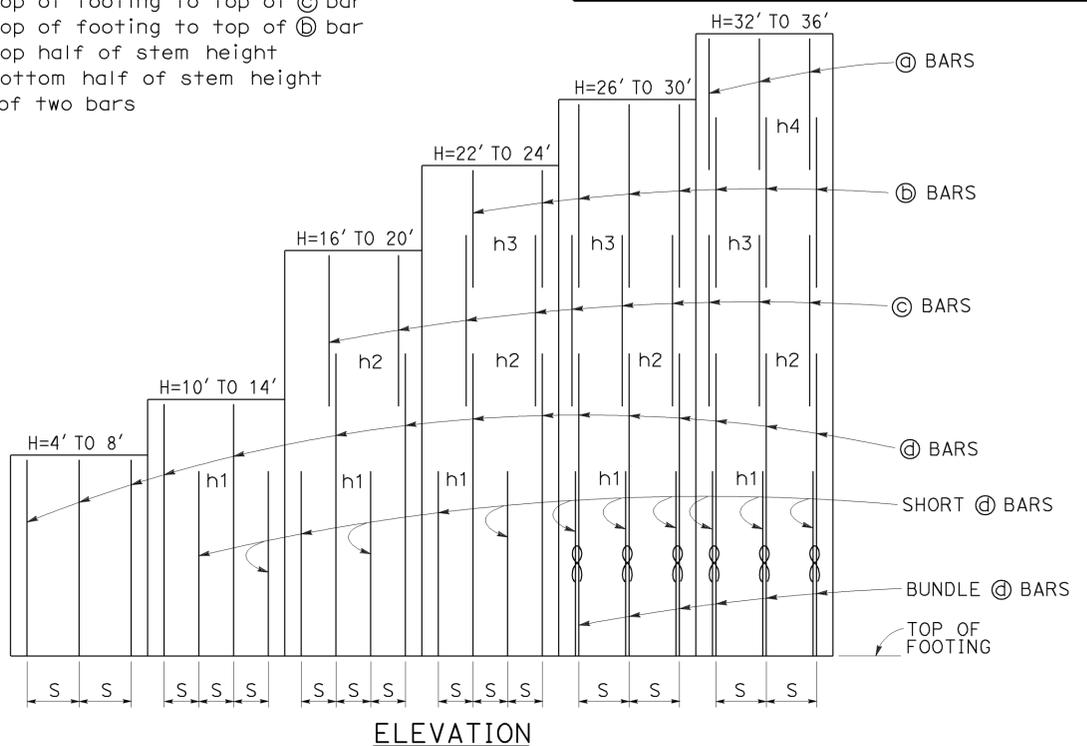
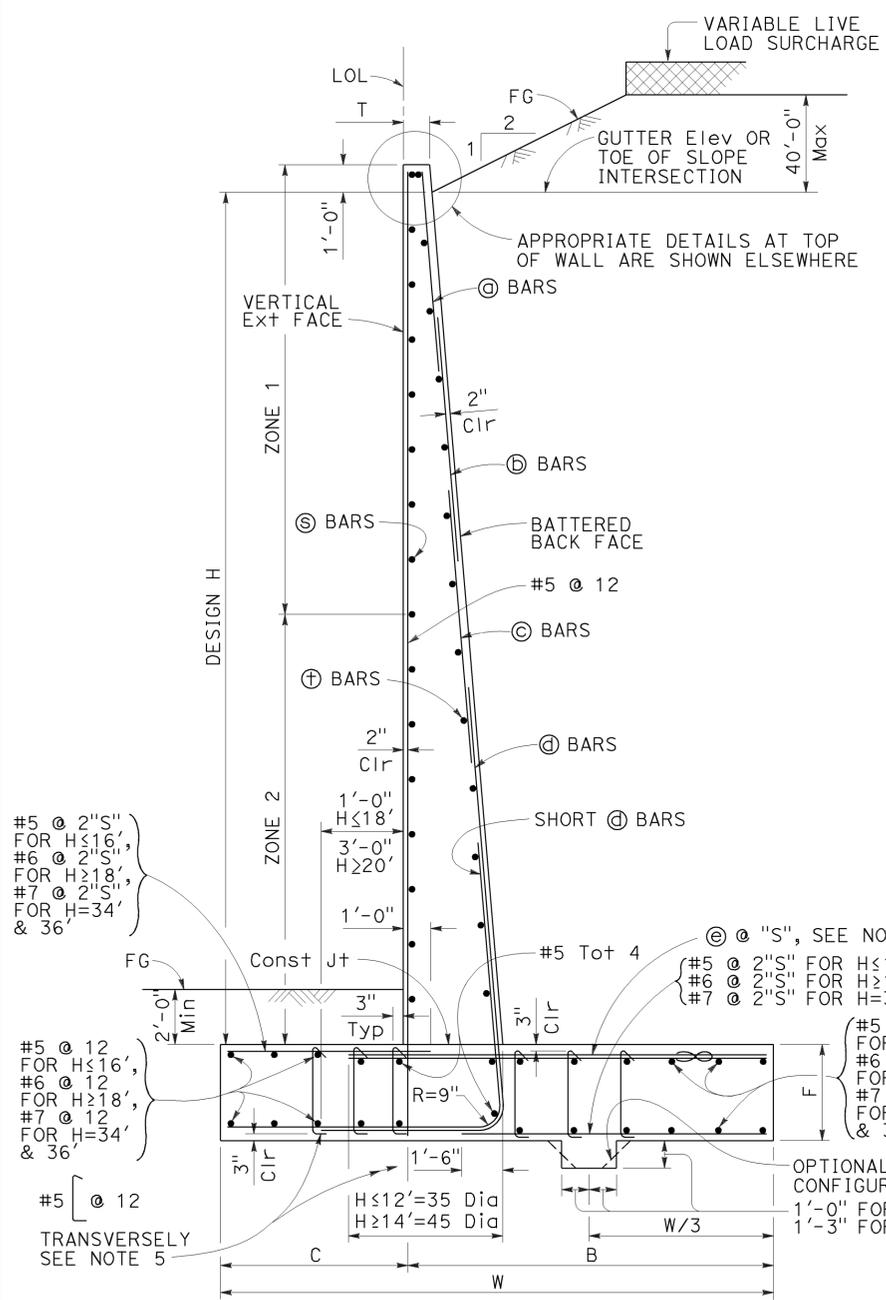
Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

**DESIGN NOTES:**

- DESIGN:** AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
- LS:** Varied surcharge on level ground surface
- DC:** Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
- SEISMIC:**  $k_h = 0.2$   
 $k_v = 0.0$
- SOIL:**  $\phi = 34^\circ$   
 $\gamma = 120$  pcf
- REINFORCED CONCRETE:**  $f'_c = 3,600$  psi  
 $f_y = 60,000$  psi
- LOAD COMBINATIONS AND LIMIT STATES:**  
 Service I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00LS$   
 Strength I  $Q = \alpha DC + \beta EV + \eta EH + 1.75LS$   
 Extreme I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE$
- Where:**  
 Q: Force Effects  
 $\alpha$ : 1.25 or 0.90, Whichever Controls Design  
 $\beta$ : 1.35 or 1.00, Whichever Controls Design  
 $\eta$ : 1.50 or 0.90, Whichever Controls Design  
 DC: Dead Load of Structure Components  
 EH: Horizontal Earth Fill Pressure  
 EV: Vertical Earth Pressure from Earth Fill Weight  
 LS: Live Load Surcharge  
 EQE: Seismic Earth Pressure  
 EQD: Soil and Structural and Nonstructural Components Inertia

**SYMBOLS:**

- TO ACCOMPANY PLANS DATED 05-26-15
- Ser - service limit state I  
 Str - strength limit state I  
 Ext - extreme event limit state I  
 B' - effective footing width (ft)  
 $q_0$  - net bearing stress (ksf), OG assumed to be FG at toe  
 $q_0$  - gross uniform bearing stress (ksf)  
 h1 = Top of footing to top of short @ bar  
 h2 = Top of footing to top of @ bar  
 h3 = Top of footing to top of @ bar  
 h4 = Top of footing to top of @ bar  
 Zone 1 = Top half of stem height  
 Zone 2 = Bottom half of stem height  
 ∞ - Bundle of two bars



**TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA**

DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-0"	7'-6"	9'-6"	11'-0"	12'-6"	15'-6"	17'-3"	19'-6"	21'-9"	23'-6"	26'-0"	28'-1"	30'-3"	31'-6"	33'-0"	34'-8"	35'-11"
C	2'-0"	2'-6"	3'-3"	3'-6"	4'-3"	5'-0"	5'-3"	5'-9"	6'-9"	7'-3"	8'-3"	8'-9"	9'-0"	9'-6"	10'-0"	10'-10"	11'-3"
B	4'-0"	5'-0"	6'-3"	7'-6"	8'-3"	10'-6"	12'-0"	13'-9"	15'-0"	16'-3"	17'-9"	19'-4"	21'-3"	22'-0"	23'-0"	23'-10"	24'-8"
F	1'-6"	1'-6"	2'-0"	2'-3"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-6"	3'-6"	3'-7"	3'-7"	3'-9"	3'-9"	4'-0"	4'-4"
T	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1'-2"	1'-5"	1'-10"	2'-3"	2'-9"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	7/8: 12	1: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12	1 1/8: 12
SPACING "S"	16"	12"	10"	7"	7"	7"	7"	7"	7"	6"	6"	10"	8"	7"	7"	7"	7"
@ BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#5	#5	#5
@ BARS	-	-	-	-	-	-	-	-	-	#5	#5	#5	#5	#5	#7	#7	#7
@ BARS	-	-	-	-	-	#6	#6	#6	#6	#7	#8	#8	#8	#8	#8	#9	#9
@ BARS	#5	#5	#6	#6	#7	#8	#9	#10	#10	#10	#11	#11	#11	#11	#11	#11	#11
@ BARS	#5	#5	#6	#6	#7	#8	#9	#10	#10	#10	#11	#11	#11	#11	#11	#11	#11
h1	-	-	-	5'-3"	6'-4"	7'-6"	8'-9"	9'-9"	11'-0"	11'-3"	11'-6"	10'-3"	11'-9"	12'-3"	12'-6"	13'-3"	13'-8"
h2	-	-	-	-	-	-	12'-8"	15'-6"	17'-0"	16'-6"	17'-3"	18'-0"	17'-6"	17'-4"	14'-10"	15'-9"	16'-4"
h3	-	-	-	-	-	-	-	-	-	18'-9"	21'-3"	21'-3"	22'-4"	22'-8"	18'-0"	18'-6"	19'-6"
h4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26'-3"	27'-4"	28'-6"
No. of Toe Stirrups	0	0	0	0	0	0	0	0	0	0	0	5	5	6	7	8	9
No. of Heel Stirrups	0	0	0	0	0	0	0	0	4	6	7	8	10	10	11	11	11
ZONE 1 @ BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 10	#6 @ 10
ZONE 2 @ BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12	#7 @ 12	#7 @ 12	#7 @ 10	#7 @ 10
ZONE 1 @ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 @ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12
Ser: B', q <sub>0</sub>	4.0, 0.9	5.5, 1.0	9.3, 1.0	10.9, 1.3	12.3, 1.5	14.8, 1.9	16.6, 2.1	18.7, 2.4	20.6, 2.7	22.3, 3.0	24.2, 3.3	26.1, 3.5	28.2, 3.9	29.6, 4.0	31.1, 4.2	32.7, 4.4	34.1, 4.6
Str: B', q <sub>0</sub>	2.2, 2.2	3.5, 2.2	5.1, 2.3	6.3, 2.6	7.6, 2.7	12.9, 3.1	14.3, 3.6	16.5, 3.9	19.4, 4.5	20.7, 4.8	22.5, 5.2	24.3, 5.6	26.2, 6.0	27.5, 6.3	28.8, 6.6	30.3, 6.9	31.8, 7.2
Ext: B', q <sub>0</sub>	2.3, 3.4	2.7, 4.4	3.6, 5.0	3.8, 6.5	4.5, 7.0	7.0, 6.1	7.6, 6.9	9.3, 7.0	11.0, 7.1	11.8, 7.6	14.1, 7.4	15.6, 7.7	17.1, 8.0	17.2, 8.7	18.1, 9.0	19.0, 9.4	19.4, 10.0

- NOTES:**
- For details not shown and drainage notes see RSP B3-5
  - For wall stem joint details see B0-3/3-3 and B0-3/3-4
  - At @ and short @ bars:  
 $H < 6'$ , no splices are allowed within 1'-8" above the top of footing.  
 $H > 6'$ , no splices are allowed within  $H/4$  above the top of footing.
  - Bundle @ bars for  $H \geq 26'$ .
  - Hook stirrups around & space with alternating transverse reinforcement at  $2 \times "S"$ .

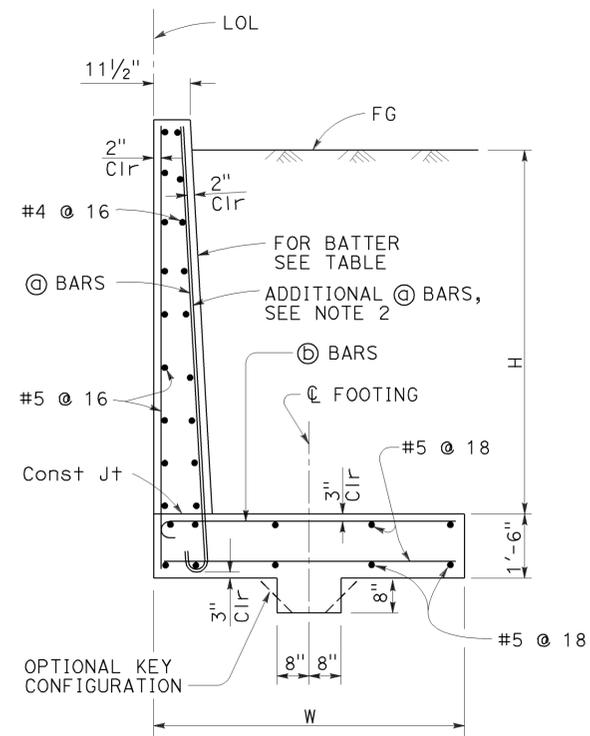
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**RETAINING WALL TYPE 1 (CASE 2)**  
 NO SCALE

RSP B3-1B DATED APRIL 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

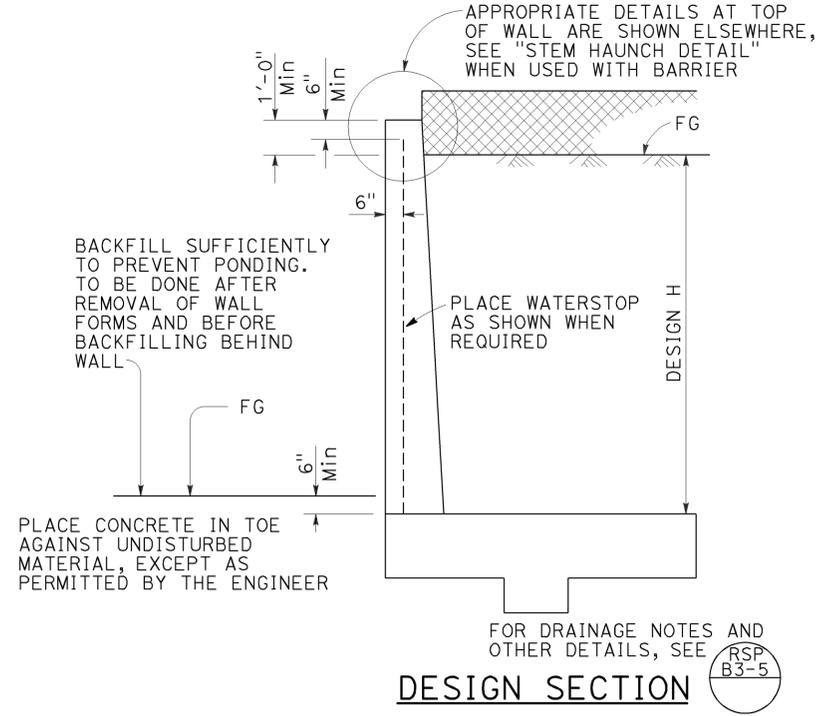
**REVISED STANDARD PLAN RSP B3-1B**

2010 REVISED STANDARD PLAN RSP B3-1B

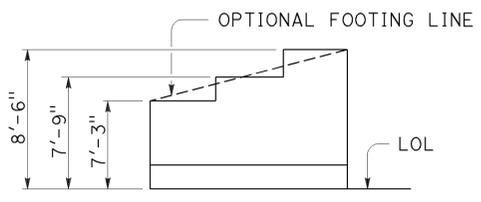
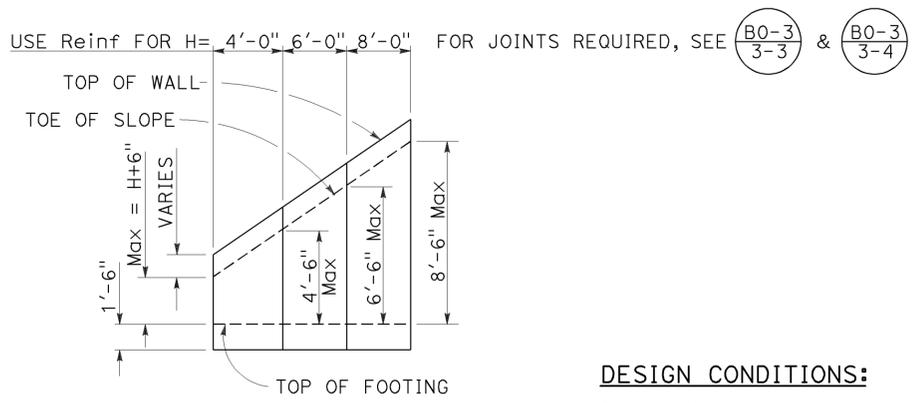
2010 REVISED STANDARD PLAN RSP B3-4A



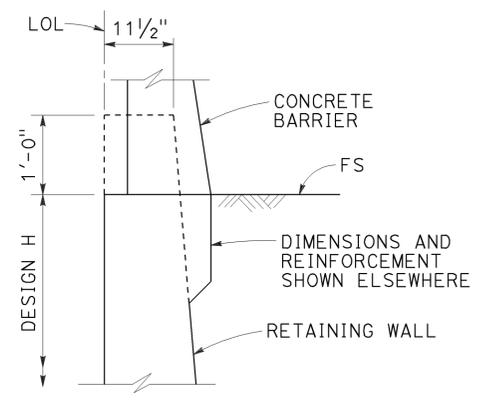
**SPREAD FOOTING SECTION**



**DESIGN SECTION**



**TYPICAL LAYOUT EXAMPLE**



**STEM HAUNCH DETAIL**

**DESIGN CONDITIONS:**

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

**DESIGN NOTES:**

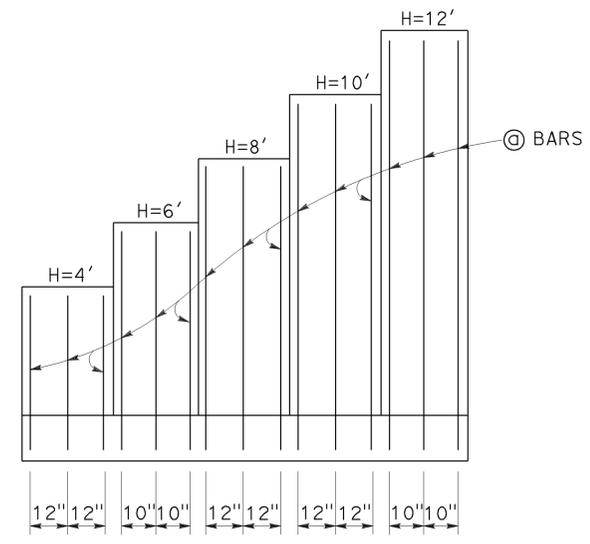
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
- LS: Varied surcharge on level ground surface
- DC: Stem Architectural Treatment of thickness up to 6" of concrete (75 psf) considered
- CT: 54 kip transverse force applied at  $H_e = 32"$ , distributed over 10 feet at the top of wall and 1 : 1 distribution down and outward. Distribution below footing taken no less than 40'.
- SEISMIC:  $K_h = 0.2$   
 $K_v = 0.0$
- SOIL:  $\phi = 34^\circ$   
 $\gamma = 120$  pcf
- REINFORCED CONCRETE:  $f'_c = 3,600$  psi  
 $f_y = 60,000$  psi
- LOAD COMBINATIONS AND LIMIT STATES:
  - Service I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00LS$
  - Strength I  $Q = aDC + \phi EV + \eta EH + 1.75LS$
  - Extreme I  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE$
  - Extreme II  $Q = 1.00DC + 1.00EV + 1.00EH + 1.00CT$

**Where:**

- Q: Force Effects
- a: 1.25 or 0.90, Whichever Controls Design
- $\phi$ : 1.35 or 1.00, Whichever Controls Design
- $\eta$ : 1.50 or 0.90, Whichever Controls Design
- DC: Dead Load of Structure Components
- EH: Horizontal Earth Fill Pressure
- EV: Vertical Earth Pressure from Earth Fill Weight
- LS: Live Load Surcharge
- EQE: Seismic Earth Pressure
- EQD: Soil and Structural and Nonstructural Components Inertia
- CT: Vehicular Collision Force

**NOTES:**

1. At @ bars:
  - $H \leq 6'$ , no splices are allowed within 1'-8" above the top of footing.
  - $H > 6'$ , no splices are allowed within H/4 above the top of footing.
2. Provide #6 @ 8" @ bars in addition to tabulated @ bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations.



**ELEVATION**

**SYMBOLS:**

- Ser - service limit state I
- Str - strength limit state I
- Ext I - extreme event limit state I
- Ext II - extreme event limit state II
- B' - effective footing width (ft)
- $q_0$  - net bearing stress (ksf), OG assumed to be FG at toe
- $q_o$  - gross uniform bearing stress (ksf)

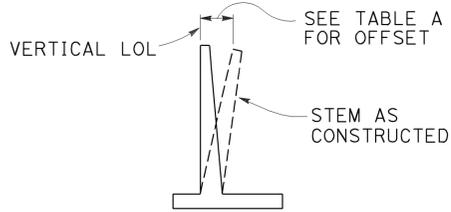
TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA					
DESIGN H	4'	6'	8'	10'	12'
W	7'-3"	7'-9"	8'-6"	9'-6"	10'-6"
BATTER	NONE	NONE	100 : 2	100 : 3	100 : 4
@ BARS	#7 @ 12	#7 @ 10	#7 @ 12	#7 @ 12	#7 @ 10
Ⓞ BARS	#7 @ 12	#7 @ 10	#8 @ 12	#9 @ 12	#10 @ 10
Ser: B', $q_0$	6.2, 1.4	6.1, 1.8	6.4, 2.1	7.0, 2.5	7.7, 2.8
Str: B', $q_o$	6.2, 2.4	6.1, 2.9	5.3, 3.0	6.0, 3.5	6.6, 4.0
Ext I: B', $q_o$	4.4, 1.5	4.1, 2.2	4.0, 3.1	4.1, 3.9	4.2, 4.8
Ext II: B', $q_o$	2.5, 2.7	3.1, 3.0	3.8, 3.2	4.9, 3.3	5.8, 3.5

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**RETAINING WALL TYPE 5 (CASE 1)**  
NO SCALE

RSP B3-4A DATED APRIL 20, 2012 SUPPLEMENTS THE  
STANDARD PLANS BOOK DATED 2010.

TO ACCOMPANY PLANS DATED 05-26-15

2010 REVISED STANDARD PLAN RSP B3-5

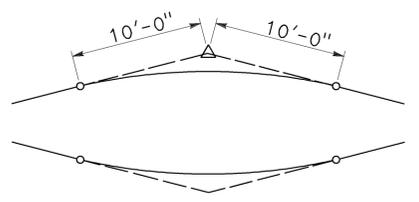


**TABLE A**

H	OFFSET
4'-12'	H/200
14'-16'	H/160
18'-20'	H/140
22'-24'	H/130
26'-36'	2 1/2"

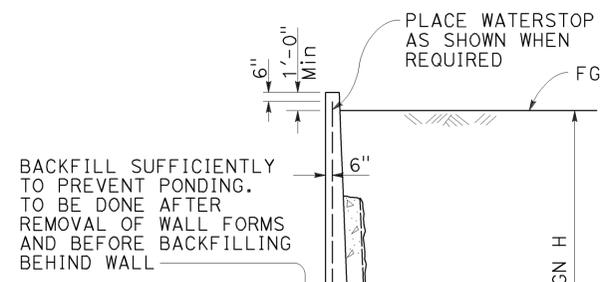
**APPROXIMATE WALL OFFSET VALUES**

Values for offsetting forms to be determined by the Engineer.



**20'-0" VC AT TOP OF WALL SLOPE CHANGE**

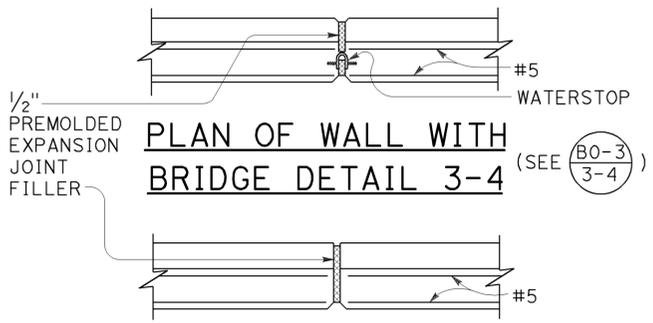
Where shown on the plans



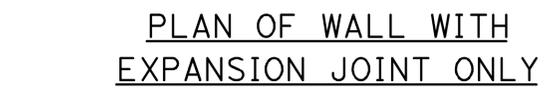
BACKFILL SUFFICIENTLY TO PREVENT PONDING. TO BE DONE AFTER REMOVAL OF WALL FORMS AND BEFORE BACKFILLING BEHIND WALL.

PLACE CONCRETE IN TOE AGAINST UNDISTURBED MATERIAL EXCEPT AS PERMITTED BY THE ENGINEER.

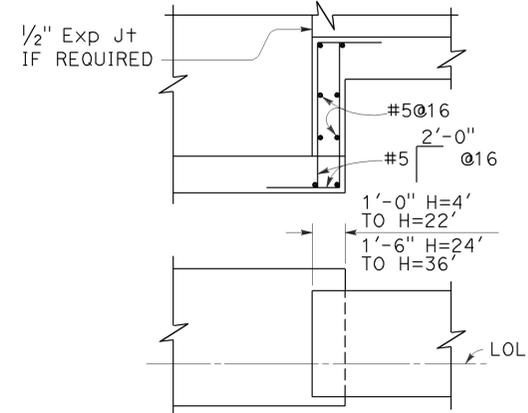
**DESIGN AND DRAINAGE**



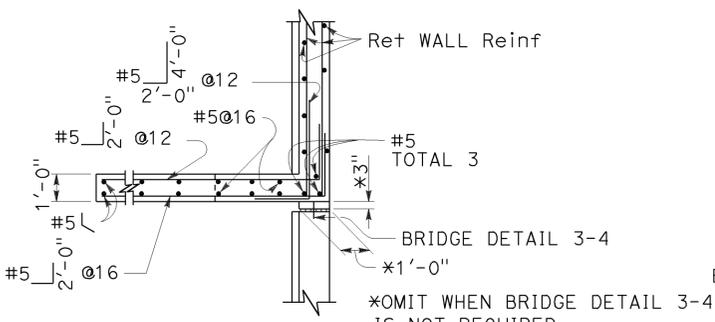
**PLAN OF WALL WITH BRIDGE DETAIL 3-4**



**PLAN OF WALL WITH EXPANSION JOINT ONLY**

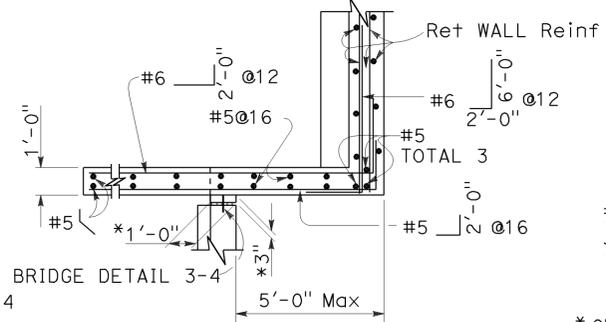


**FOOTING STEP**



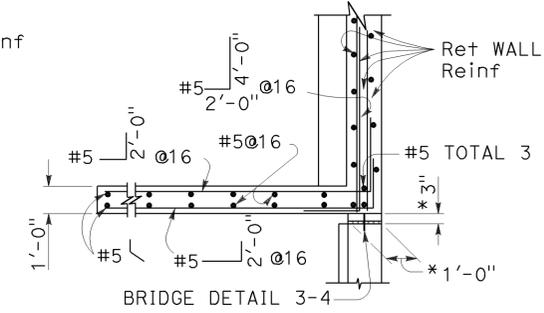
**PLAN**

(For return wall Type "A")



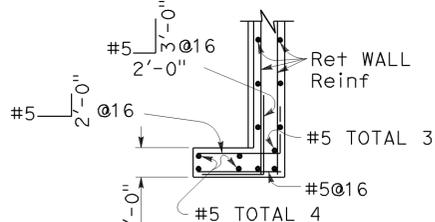
**PLAN**

(For return wall Type "B")



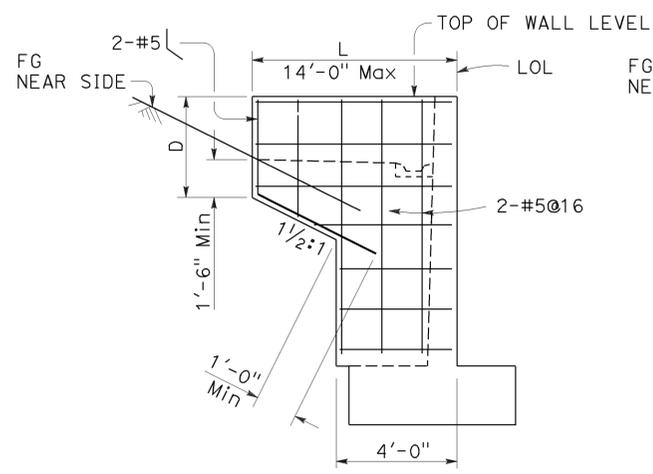
**PLAN**

(For return wall Type "C")



**PLAN**

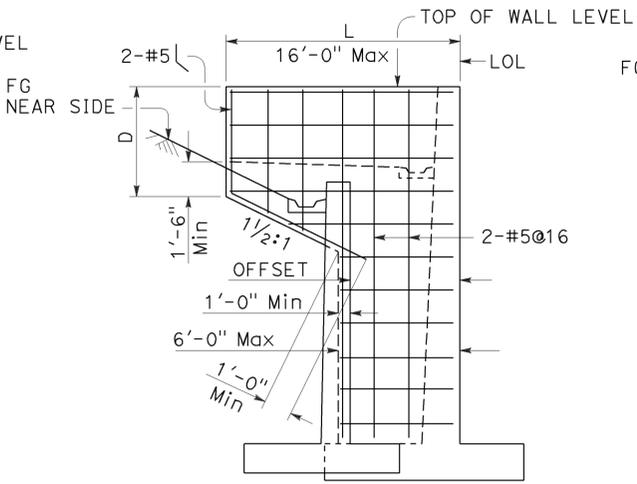
(For return wall Type "D")



**ELEVATION**

**RETURN WALL TYPE "A"**

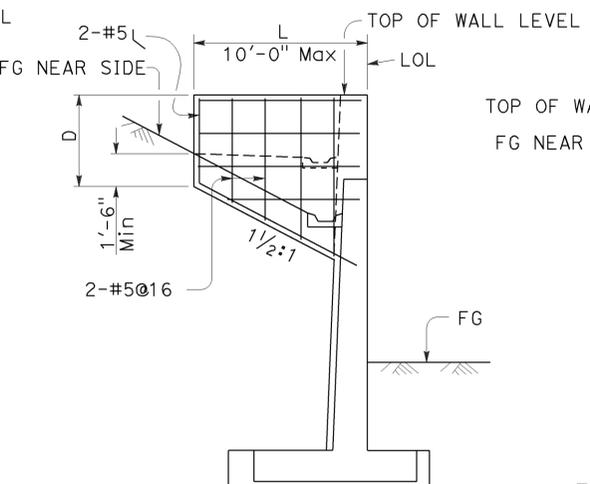
Use where H=8' or less



**ELEVATION**

**RETURN WALL TYPE "B"**

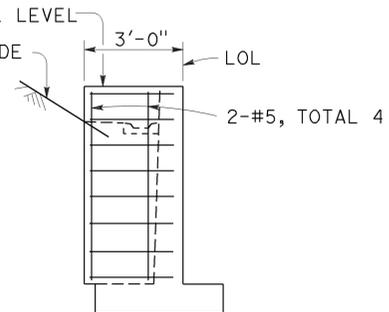
Use where H=10' or more on offset walls



**ELEVATION**

**RETURN WALL TYPE "C"**

Use where H=10' or more on straight walls



**ELEVATION**

**RETURN WALL TYPE "D"**

Use where H=6' or less

**DESIGN CONDITIONS:**

Design "H" may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in table

Return wall not required unless shown elsewhere

**DESIGN NOTES:**

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments

LIVE LOAD: Surcharge on level ground surface

SOIL:  $\phi = 34^\circ$   
 $\gamma = 120$  pcf

REINFORCED CONCRETE:  $f_y = 60,000$  psi  
 $f_c' = 3,600$  psi

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**RETAINING WALL DETAILS No. 1**

NO SCALE

RSP B3-5 DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN B3-5 DATED MAY 20, 2011 - PAGE 277 OF THE STANDARD PLANS BOOK DATED 2010.

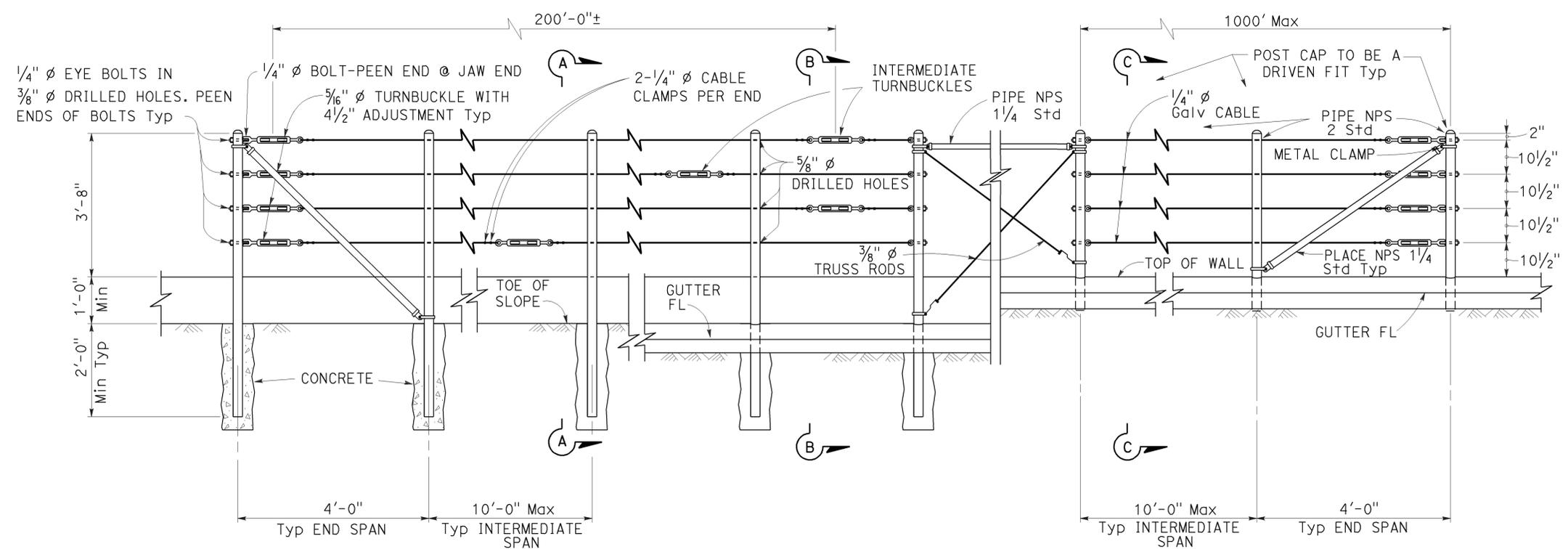
**REVISED STANDARD PLAN RSP B3-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	230	287

REGISTERED CIVIL ENGINEER  
 Tillet Satter  
 No. C42892  
 Exp. 3-31-12  
 CIVIL  
 STATE OF CALIFORNIA

October 21, 2011  
 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.

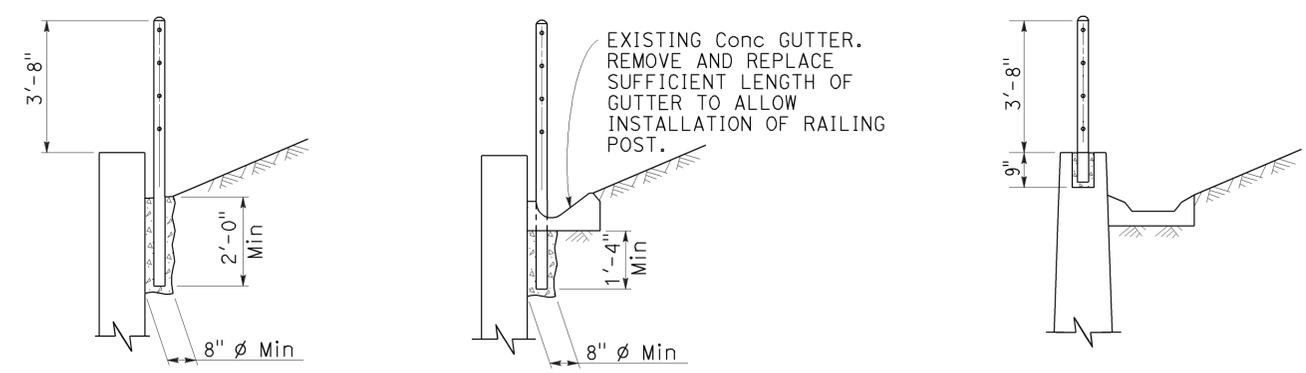


**EXISTING WALL (WITHOUT GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** Existing  
**RETAINING WALL (WITH GUTTER)** New construction

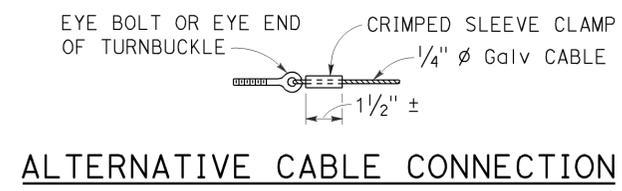
**ELEVATION**

**NOTES:**

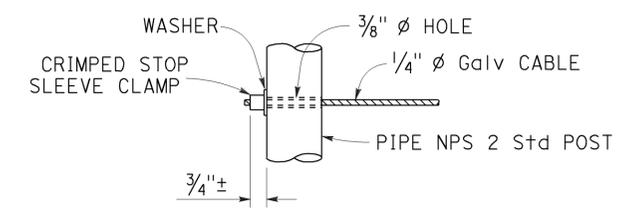
1. Maximum distance between turnbuckles shall be 200'-0"±.
2. Intermediate turnbuckles to be placed in adjacent spans.
3. Cable shall not be spliced between intermediate turnbuckles and end posts.
4. Posts to be vertical.
5. Alignment of holes in posts may vary to conform to slope of top of retaining 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.



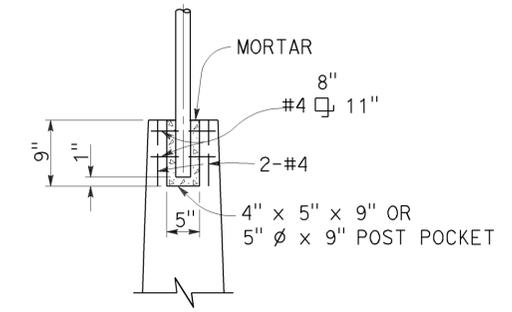
**SECTION A-A** Existing  
**SECTION B-B** Existing  
**SECTION C-C** New construction



**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**

2010 REVISED STANDARD PLAN RSP B11-47

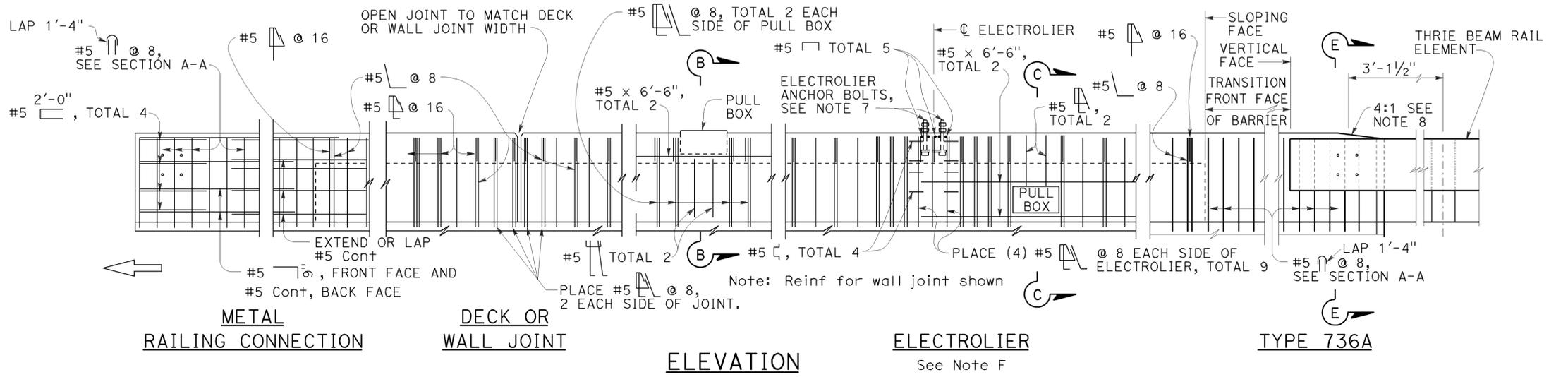
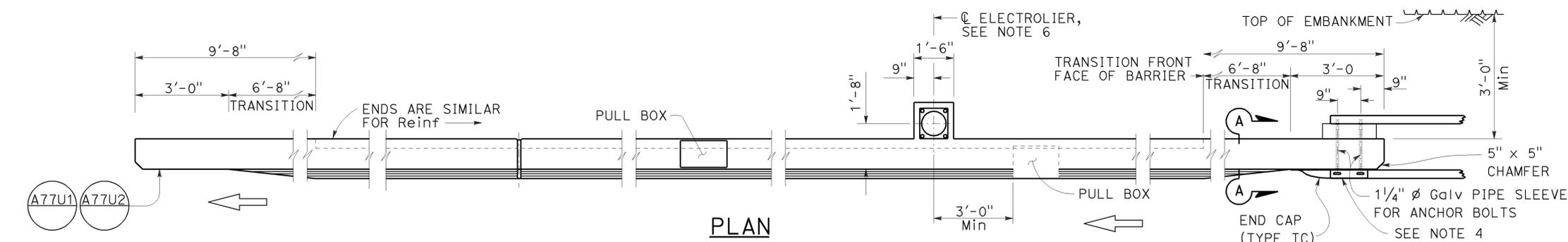
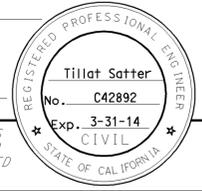
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	231	287

REGISTERED CIVIL ENGINEER

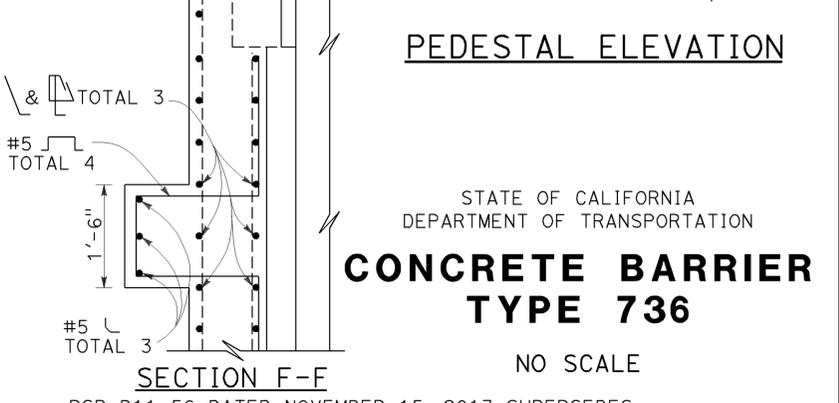
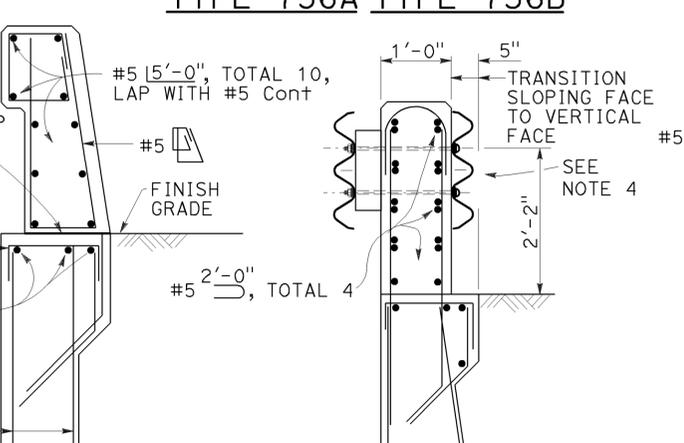
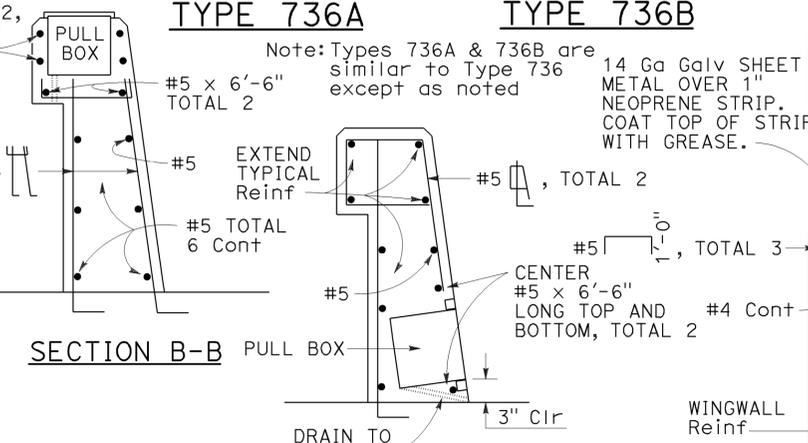
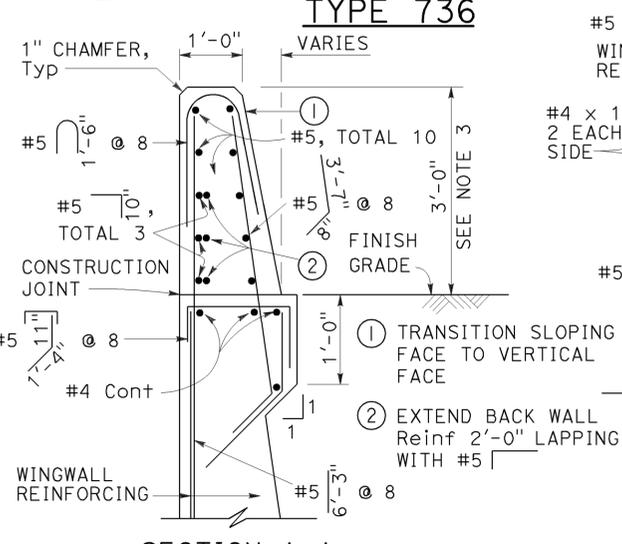
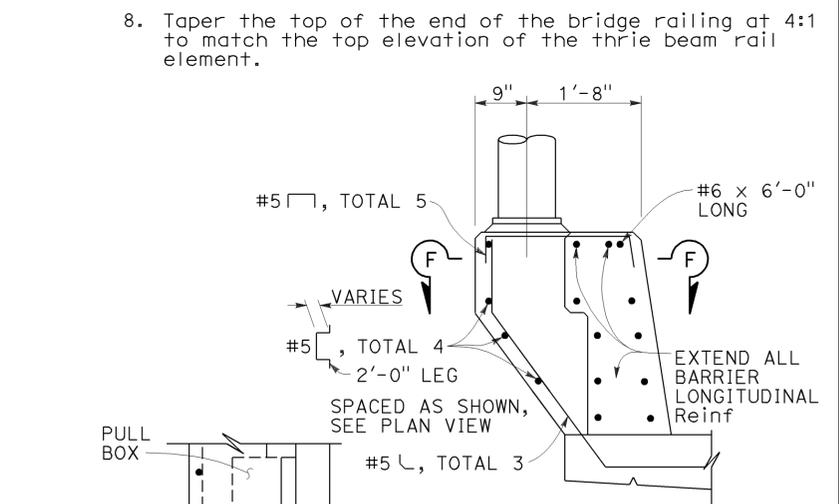
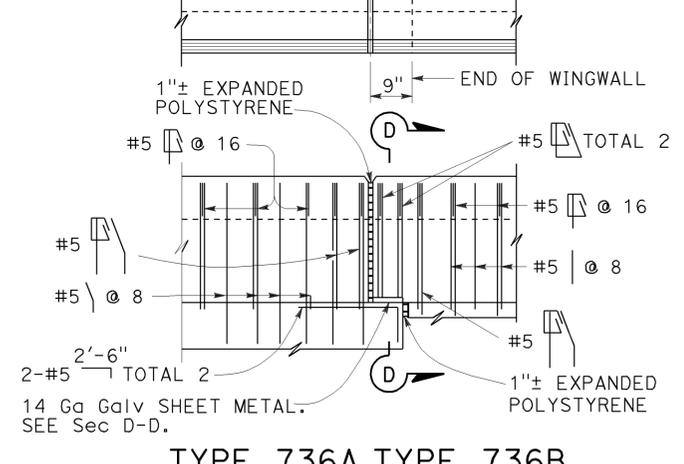
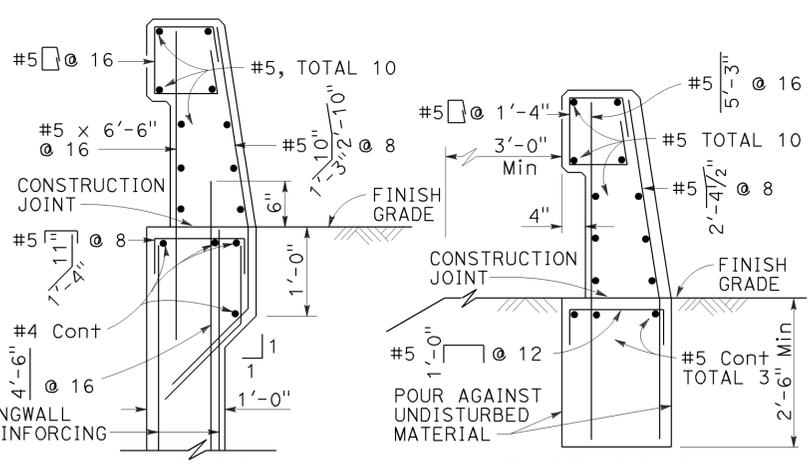
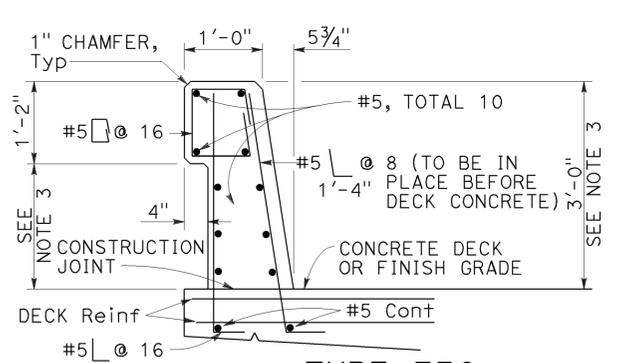
November 15, 2013  
PLANS APPROVAL DATE

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 05-26-15



- NOTES:**
- Walls are to be backfilled before barrier is placed.
  - Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
  - Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
  - For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
  - See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
  - For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
  - Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.
  - Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail element.



Details shown for barrier anchorage to Type 736A. Anchorage for barrier Types 736 and 736B are similar to their respective details.

Note: Types 736A & 736B are similar to Type 736 except as noted.

14 Ga Galv SHEET METAL OVER 1" NEOPRENE STRIP. COAT TOP OF STRIP WITH GREASE.

RSP B11-56 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-56 DATED JULY 19, 2013 AND STANDARD PLAN B11-56 DATED MAY 20, 2011 - PAGE 298 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP B11-56**

2010 REVISED STANDARD PLAN RSP B11-56

**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**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	232	287

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

Theresa  
Aziz Gabriel  
No. E15129  
Exp. 6-30-14  
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 05-26-15

**SOFFIT AND WALL MOUNTED LUMINAIRES**

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

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

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	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

**MISCELLANEOUS ELECTROLIERS**

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

- NOTES:**
- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
  - 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
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(LEGEND AND ABBREVIATIONS)**

NO SCALE

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

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

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	233	287

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 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 05-26-15

**CONDUIT**

**SIGNAL EQUIPMENT**

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN 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)

**SIGNAL EQUIPMENT Cont**

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

**SERVICE EQUIPMENT**

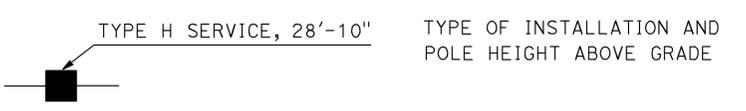
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		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

**NOTES:**

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

**POLE-MOUNTED SERVICE DESIGNATION**



**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

**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 JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

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

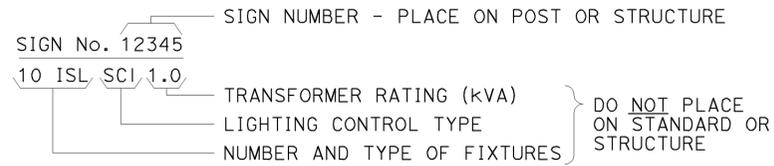
2010 REVISED STANDARD PLAN RSP ES-1B



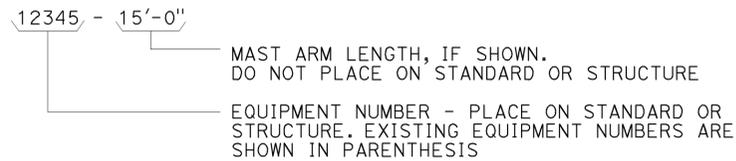
TO ACCOMPANY PLANS DATED 05-26-15

### EQUIPMENT IDENTIFICATION

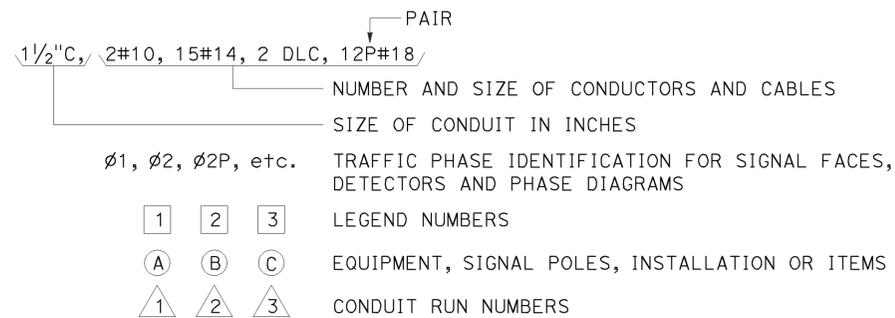
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



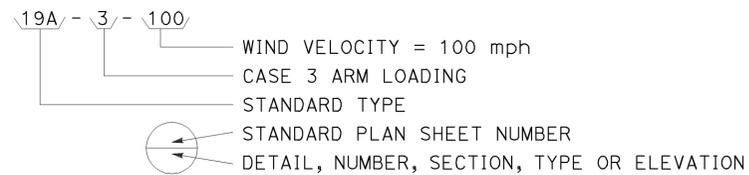
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



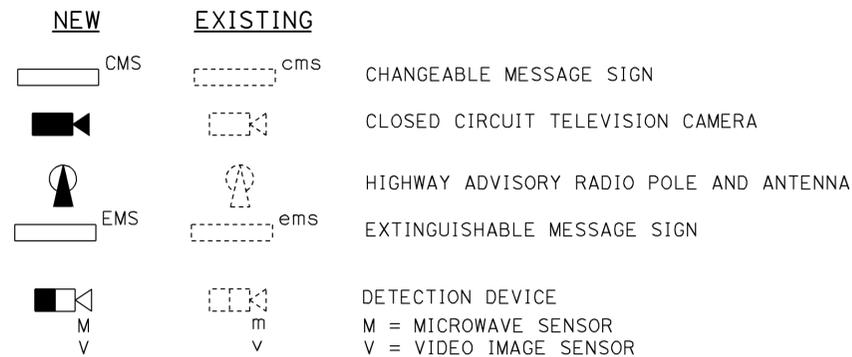
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



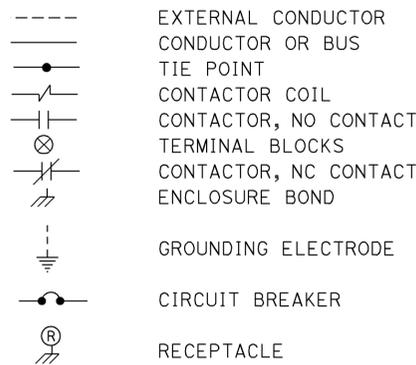
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



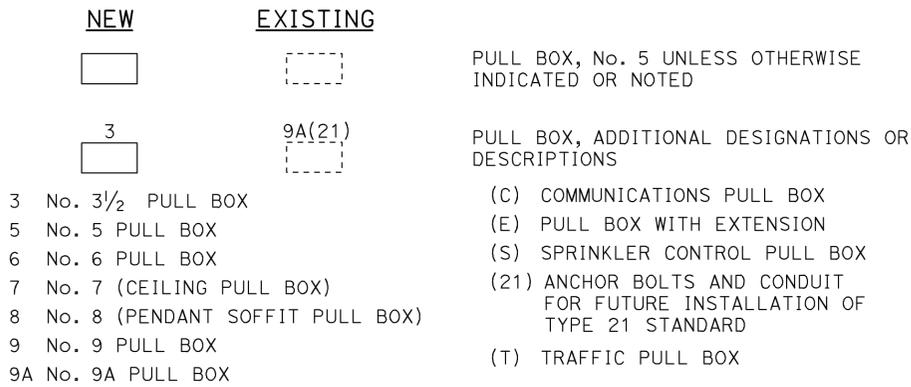
### MISCELLANEOUS EQUIPMENT



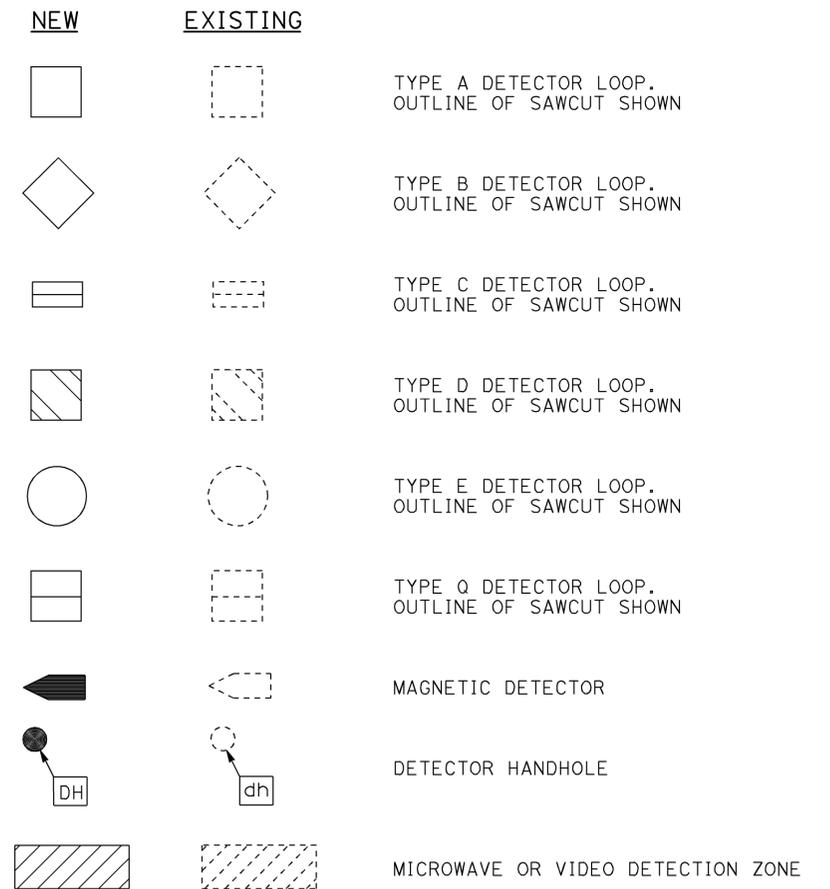
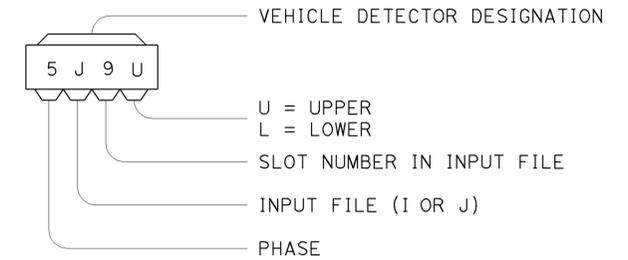
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

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

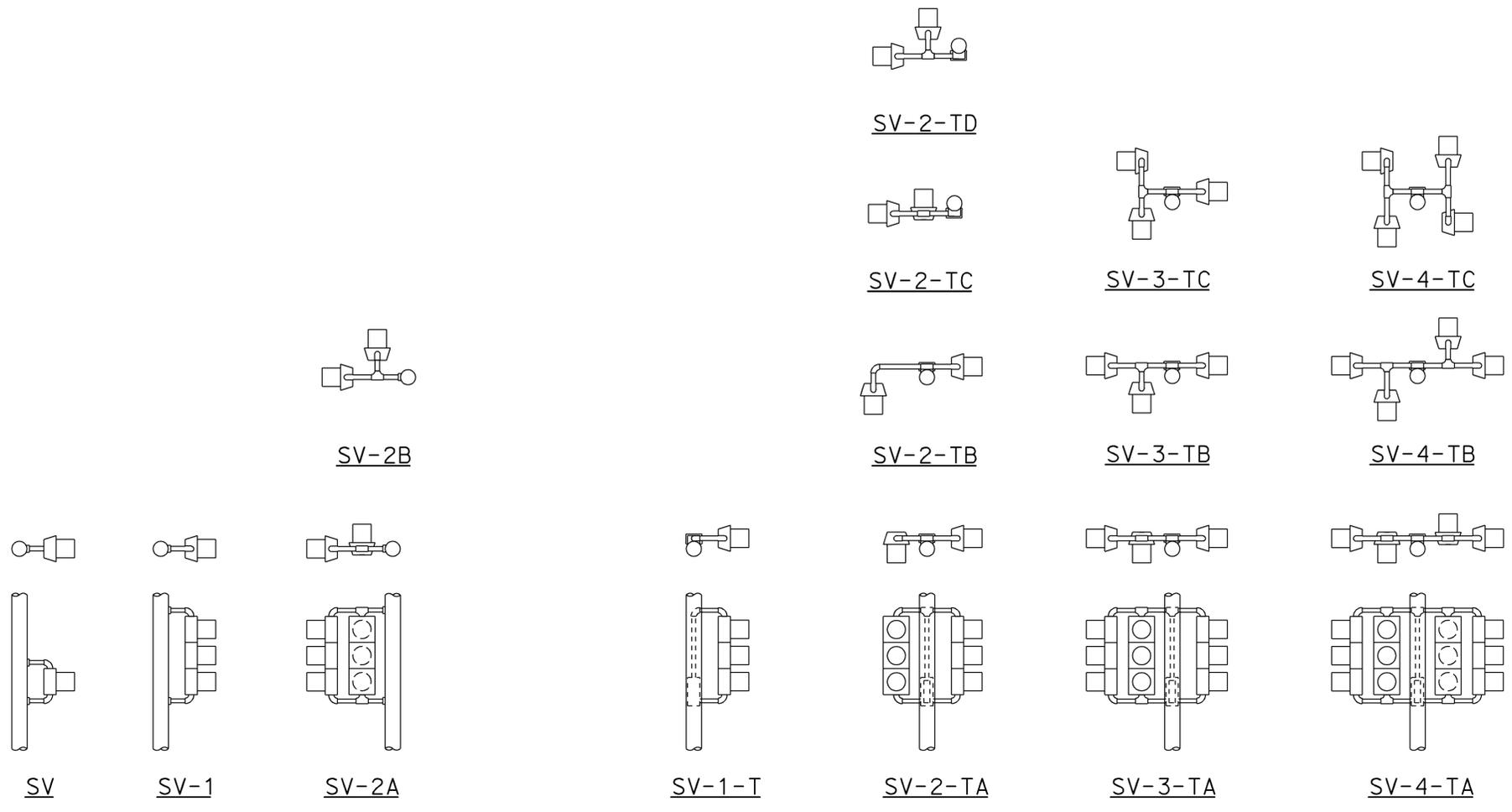
2010 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	235	287

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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TO ACCOMPANY PLANS DATED 05-26-15

PLAN VIEW OF OTHER SIDE MOUNTINGS



**ABBREVIATIONS:**

- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES  
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

**NOTES:**

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

PLAN VIEW OF TOP MOUNTINGS

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (VEHICULAR SIGNAL HEADS  
 AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4A**

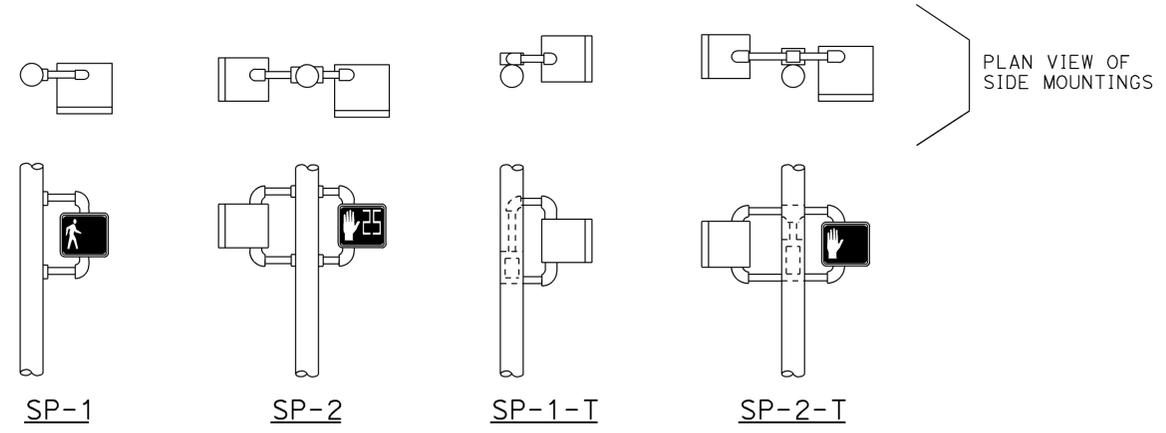
2010 REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	236	287

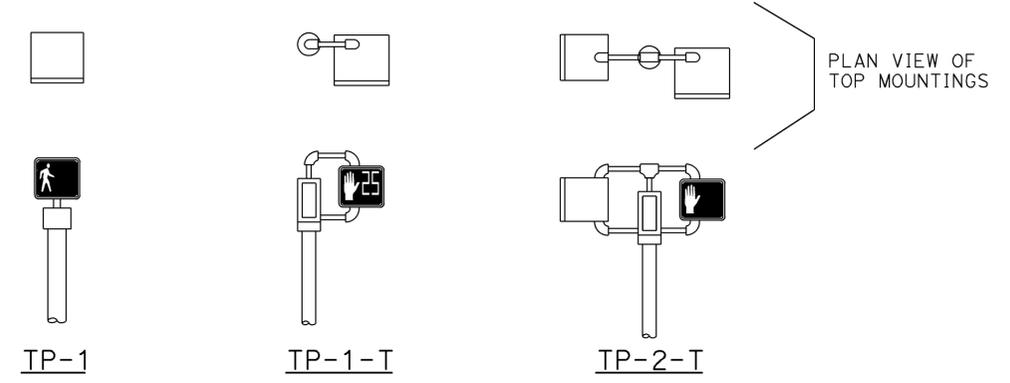
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 October 17, 2014  
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 05-26-15



SIDE MOUNTINGS



TOP MOUNTINGS

PEDESTRIAN SIGNALS AND MOUNTINGS

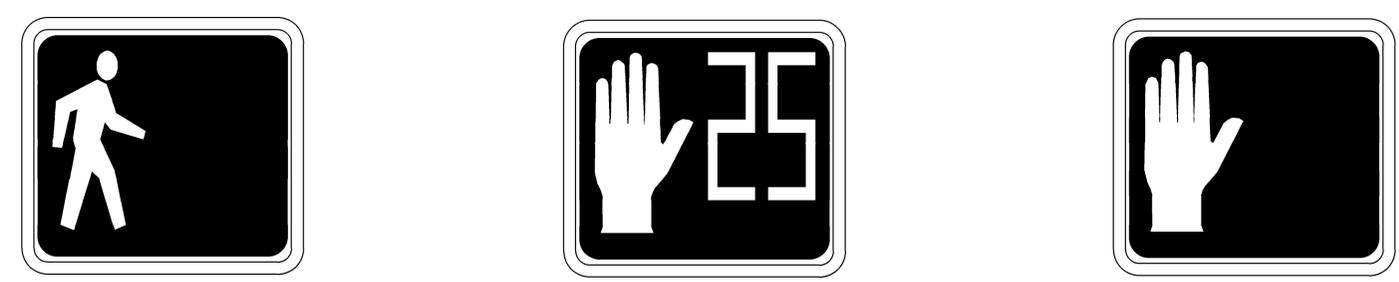
DETAIL A

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Standard Plan ES-4D for attachment fittings details.

ABBREVIATIONS:

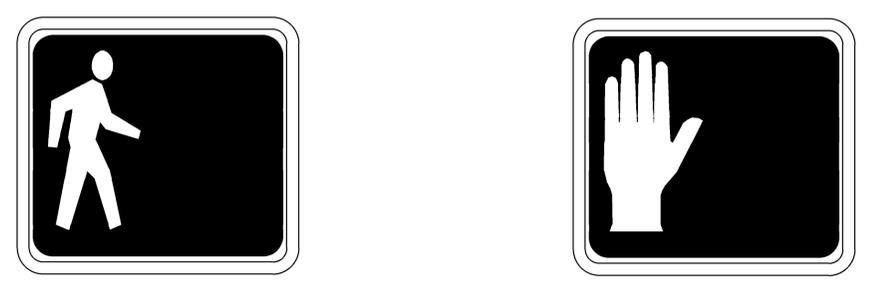
- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



PERSON WALKING INTERVAL      FLASHING UPRAISED HAND INTERVAL      STEADY UPRAISED HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN

DETAIL B



PERSON WALKING INTERVAL      STEADY UPRAISED HAND INTERVAL

PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN

DETAIL C

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(PEDESTRIAN SIGNAL)**

NO SCALE

RSP ES-4B DATED OCTOBER 17, 2014 SUPERSEDES RSP ES-4B DATED JULY 19, 2013 AND STANDARD PLAN ES-4B DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

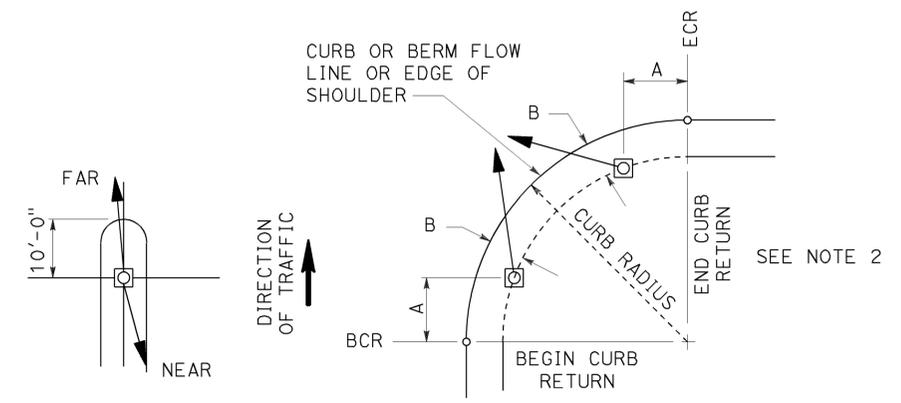
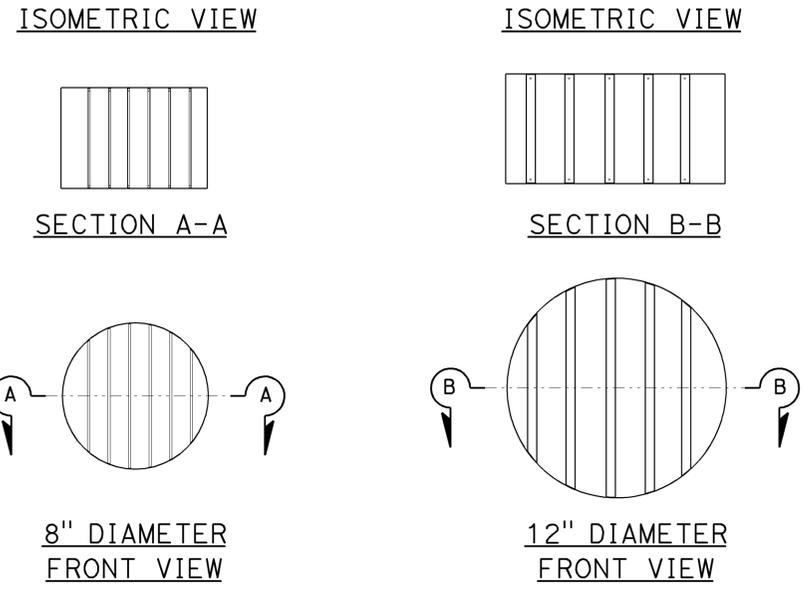
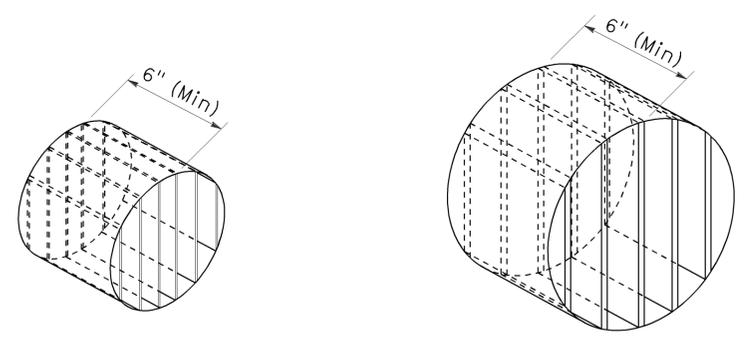
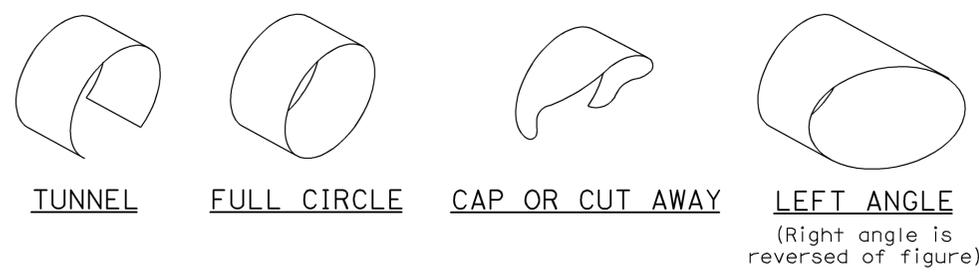
**REVISED STANDARD PLAN RSP ES-4B**

2010 REVISED STANDARD PLAN RSP ES-4B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	237	287

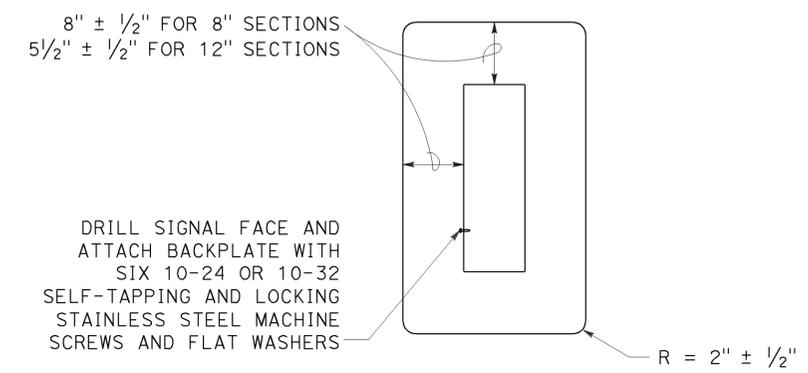
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA  
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TO ACCOMPANY PLANS DATED 05-26-15



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
  2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.

**VISORS**



**8" AND 12" SECTIONS**

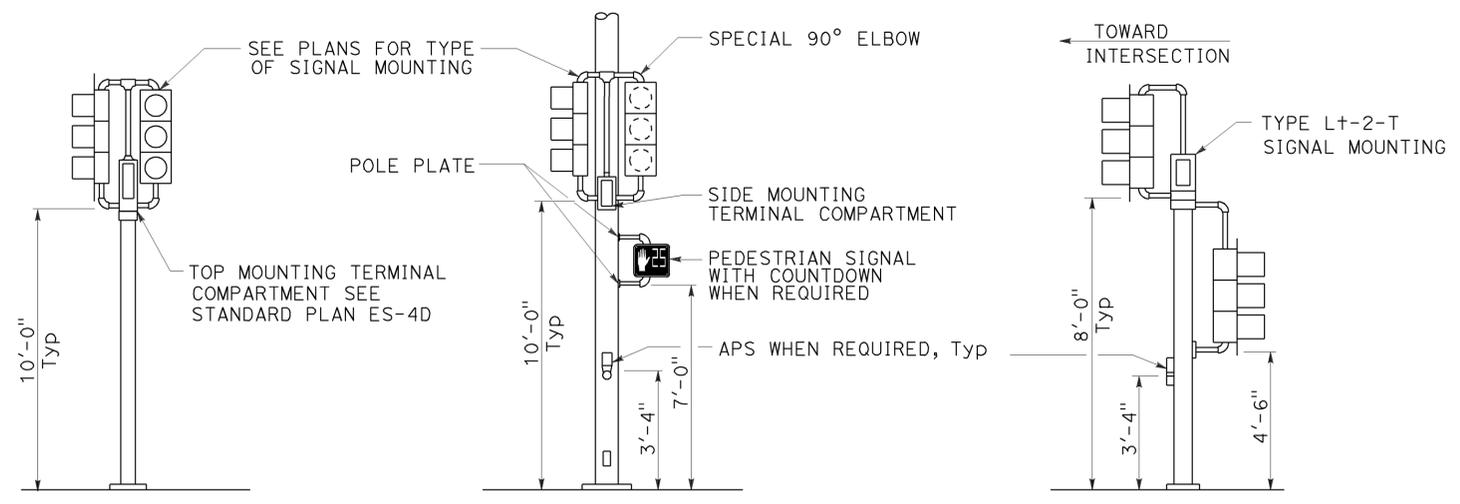
**BACKPLATE**

1/16" minimum thickness  
 3001-14 aluminum or plastic when specified

**DIRECTIONAL LOUVER**

Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

**SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS**



**TOP MOUNTED SIGNALS (TV)**

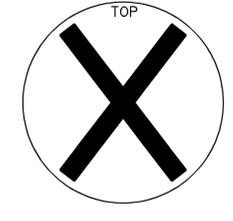
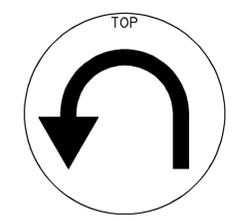
Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

**SIDE MOUNTED SIGNALS (SV AND SP)**

Normally used on standards with luminaire or signal mast arm

**LEFT TURN LANE SIGNAL**

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans



**SIGNAL FACES**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-4C

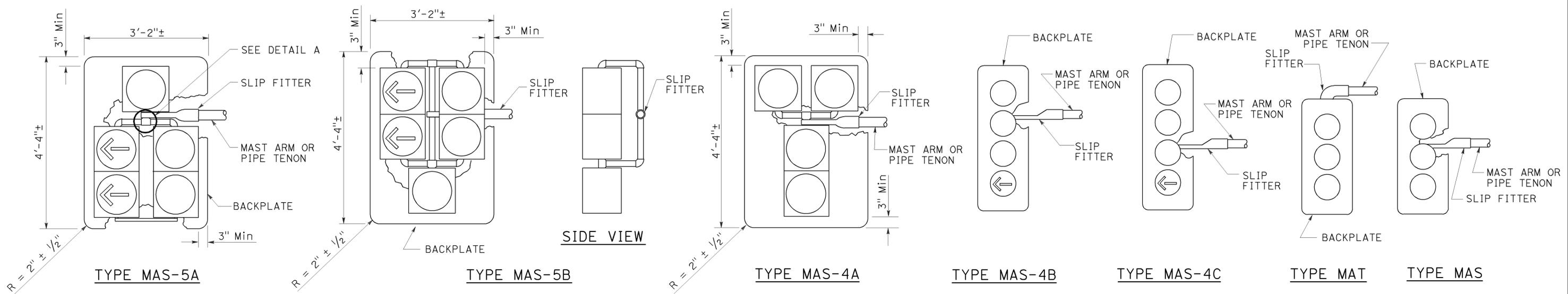
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	238	287

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

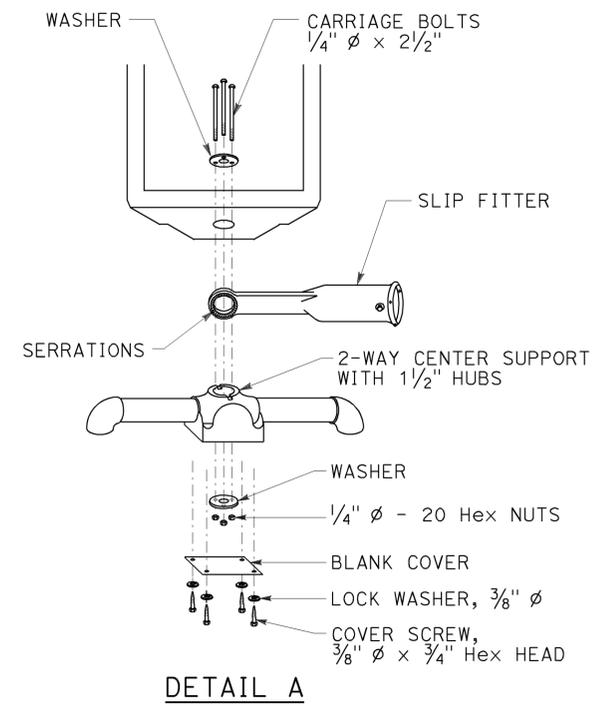
REGISTERED PROFESSIONAL ENGINEER  
 Theresa  
 Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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 OR AGENTS SHALL NOT BE RESPONSIBLE FOR  
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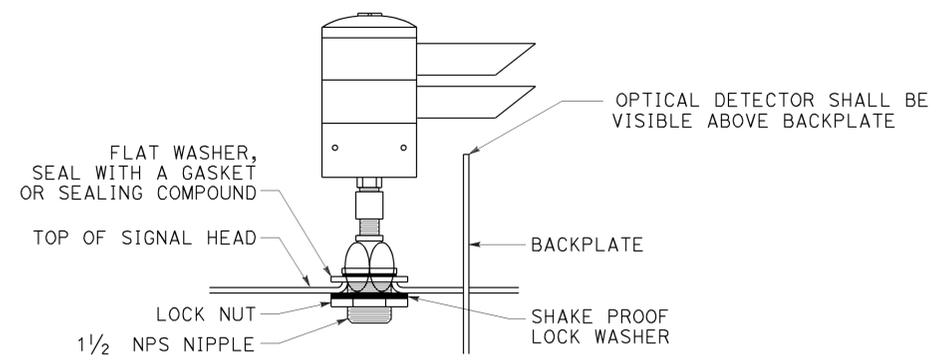
TO ACCOMPANY PLANS DATED 05-26-15



**MAST ARM MOUNTINGS**



**DETAIL A**



**DETAIL B**

**OPTICAL DETECTOR MOUNTING FOR  
EMERGENCY VEHICLE DETECTION SYSTEM**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (VEHICULAR SIGNAL HEADS AND  
 OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E  
 DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4E**

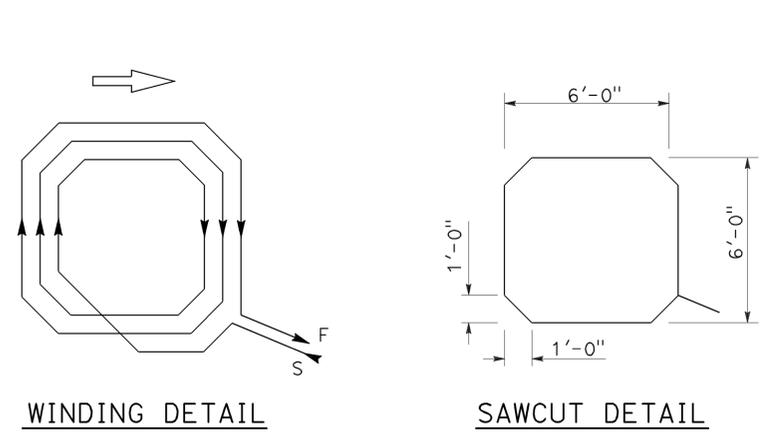
2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	239	287

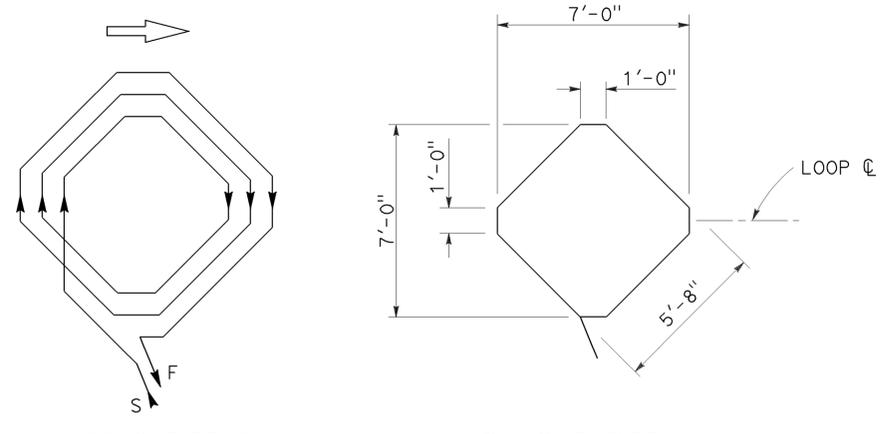
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

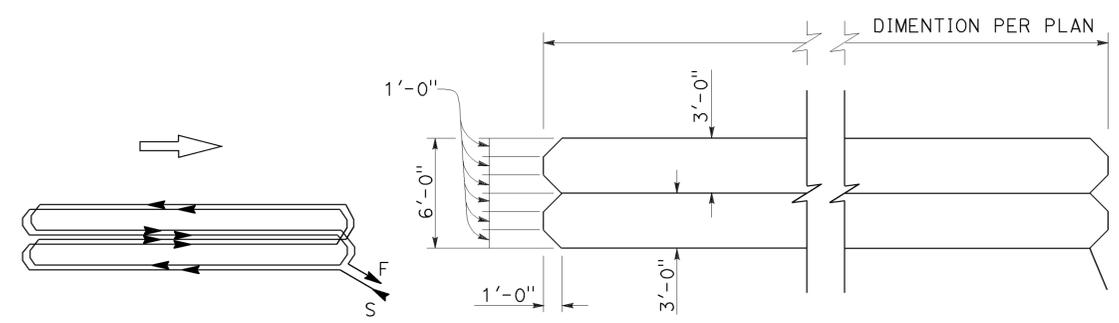
TO ACCOMPANY PLANS DATED 05-26-15



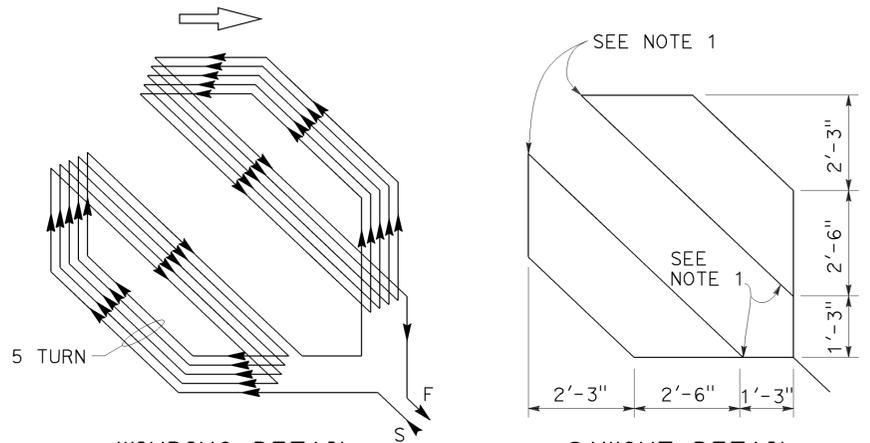
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE A LOOP DETECTOR CONFIGURATION**



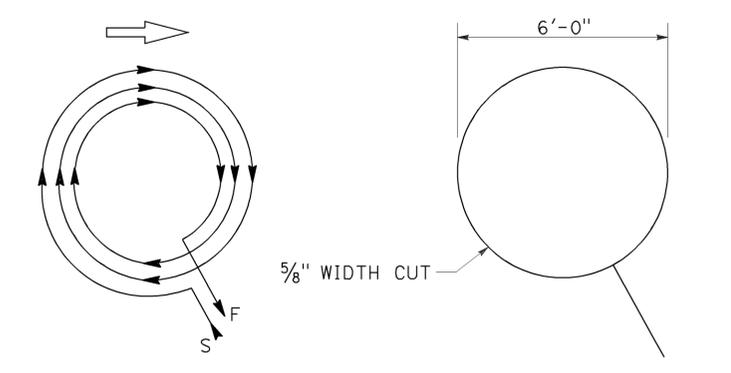
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



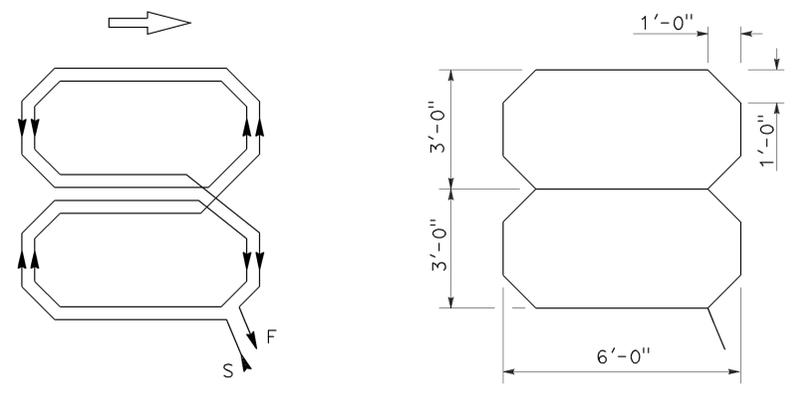
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



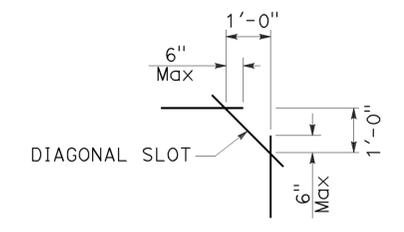
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE D LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAWCUT DETAIL  
**TYPE E LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAWCUT DETAIL  
**TYPE Q LOOP DETECTOR CONFIGURATION**



**PLAN VIEW OF DIAGONAL SLOT AT CORNERS**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
  2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (DETECTORS)**

NO SCALE

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

**2010 REVISED STANDARD PLAN RSP ES-5B**

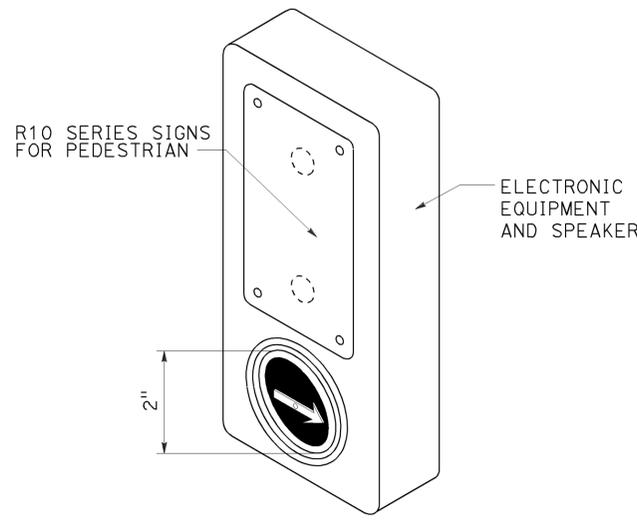
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	240	287

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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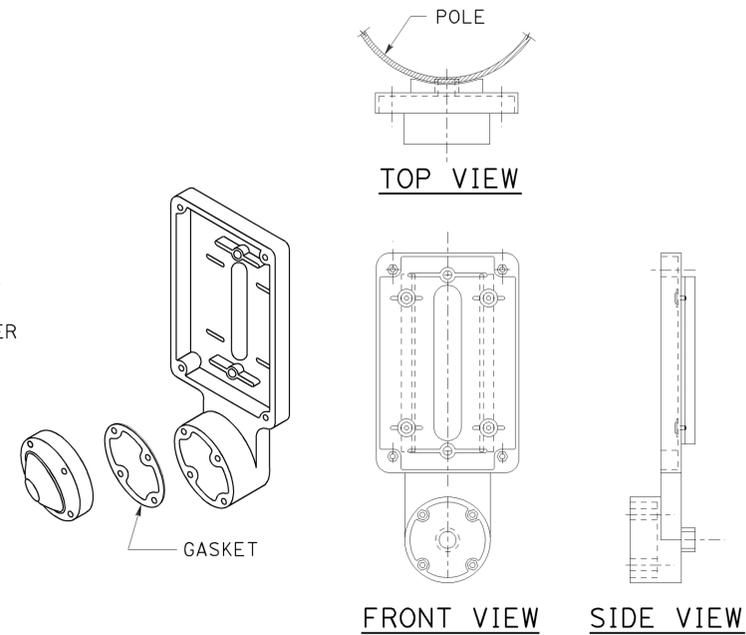
TO ACCOMPANY PLANS DATED 05-26-15

**NOTES:**

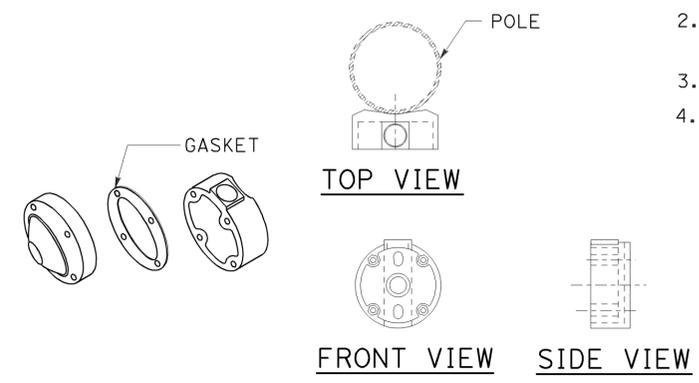
1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



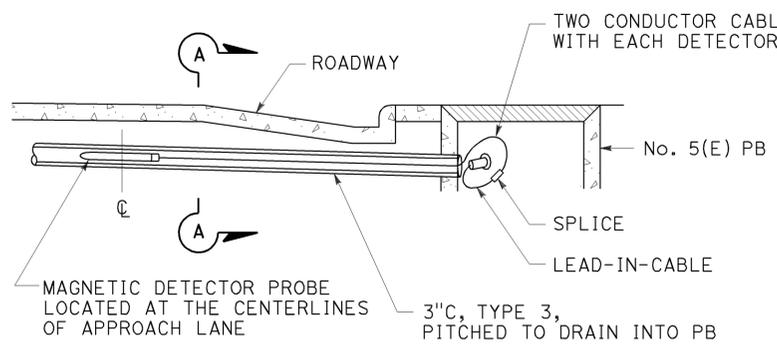
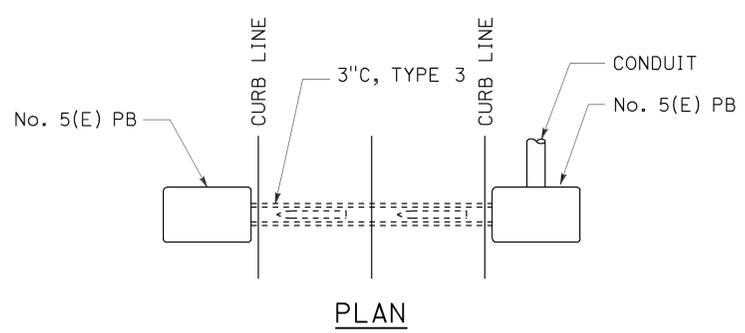
**ACCESSIBLE PEDESTRIAN SIGNAL**  
**DETAIL A**  
 (See note 1 to 4)



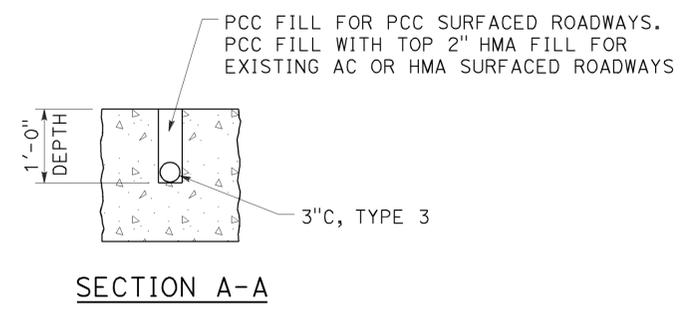
**TYPE B PUSH BUTTON ASSEMBLY**  
**DETAIL B**  
 (See note 1 to 4)



**TYPE C PUSH BUTTON ASSEMBLY**  
**DETAIL C**  
 (See note 1 to 4)



**MAGNETIC VEHICLE DETECTOR**  
**INSTALLATION DETAILS**  
**DETAIL D**



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(ACCESSIBLE PEDESTRIAN SIGNAL,**  
**PUSH BUTTON ASSEMBLIES AND**  
**MAGNETIC VEHICLE DETECTOR)**  
 NO SCALE

RSP ES-5C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5C  
 DATED MAY 20, 2011 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-5C**

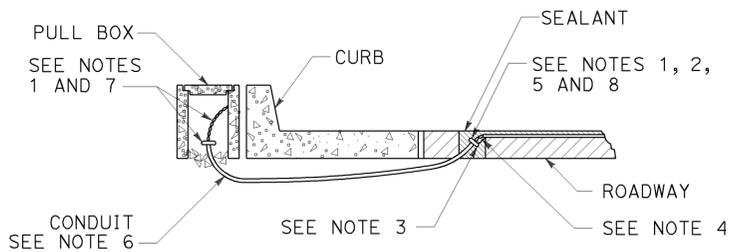
2010 REVISED STANDARD PLAN RSP ES-5C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	241	287

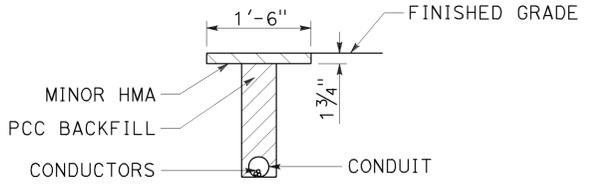
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
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TO ACCOMPANY PLANS DATED 05-26-15

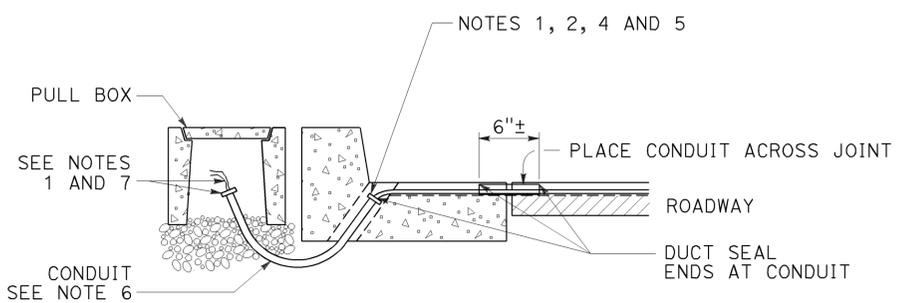
2010 REVISED STANDARD PLAN RSP ES-5D



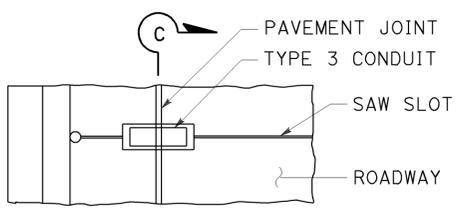
**TYPE A**  
**CURB TERMINATION DETAIL**



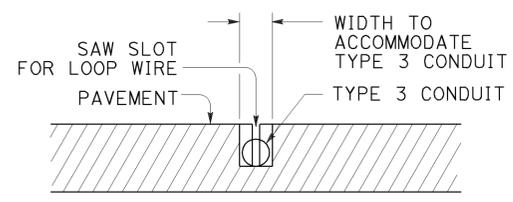
**"T" TRENCH**  
**DETAIL T**



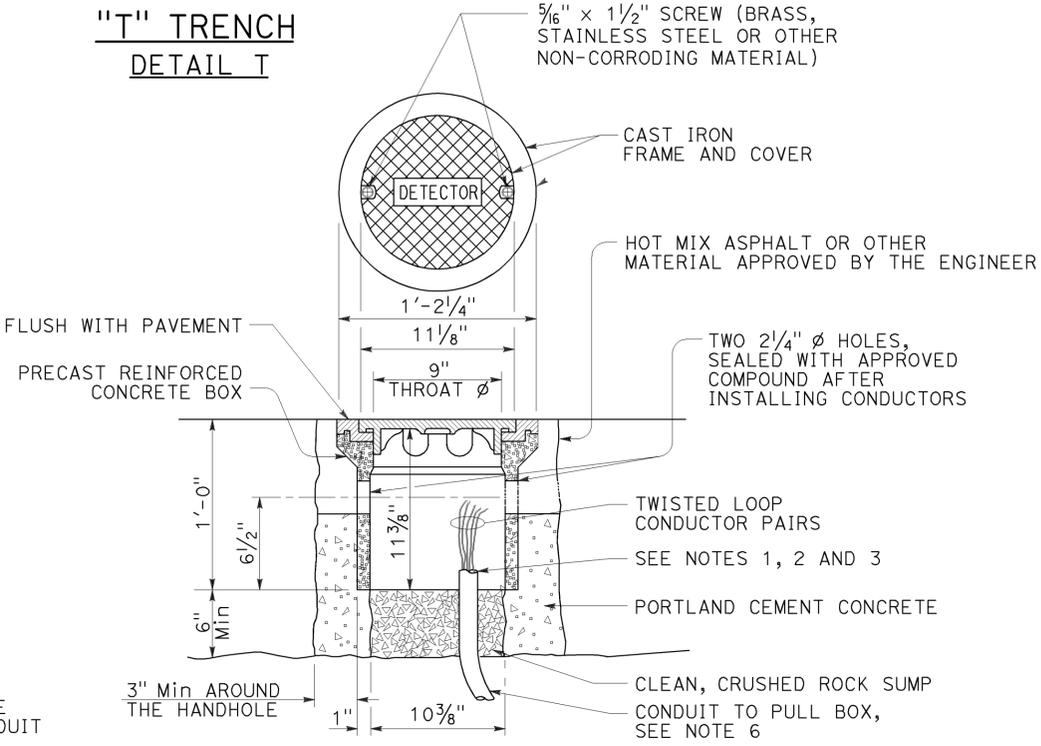
**CROSS SECTION**



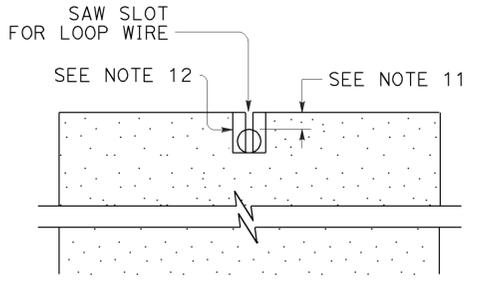
**PLAN VIEW**



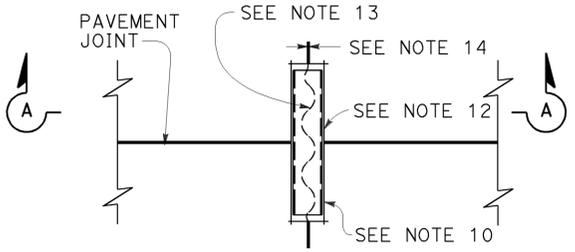
**SECTION C-C**



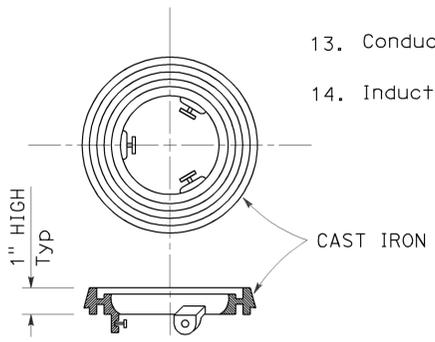
**DETECTOR HANDHOLE DETAIL**



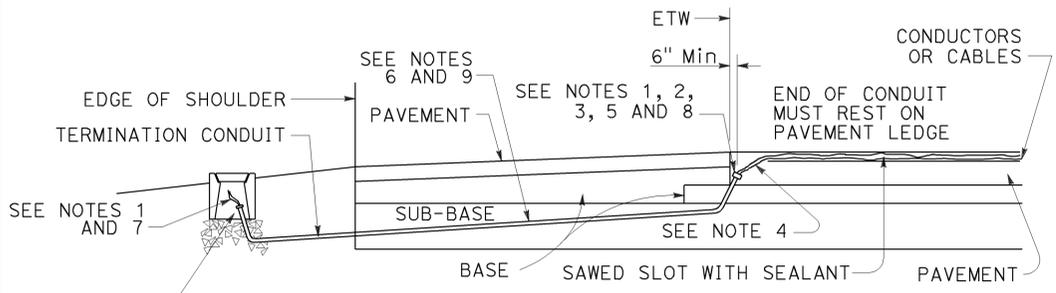
**SECTION A-A**



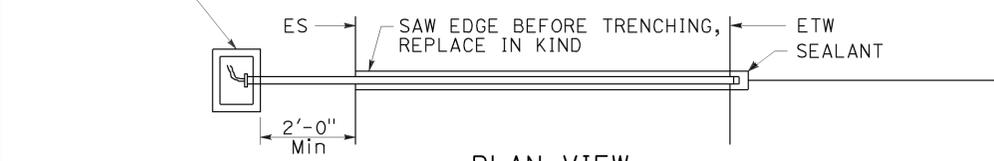
**PLAN VIEW**  
**TYPICAL LOOP LEAD-IN DETAIL**  
**AT PAVEMENT JOINT**



**LOCKING GRADE RING**



**CROSS SECTION**



**PLAN VIEW**  
**SHOULDER TERMINATION DETAILS**

**NOTES:**

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size      Loop conductors  
 1"C minimum      1 to 2 pairs  
 1 1/2"C minimum      3 to 4 pairs  
 2"C minimum      5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

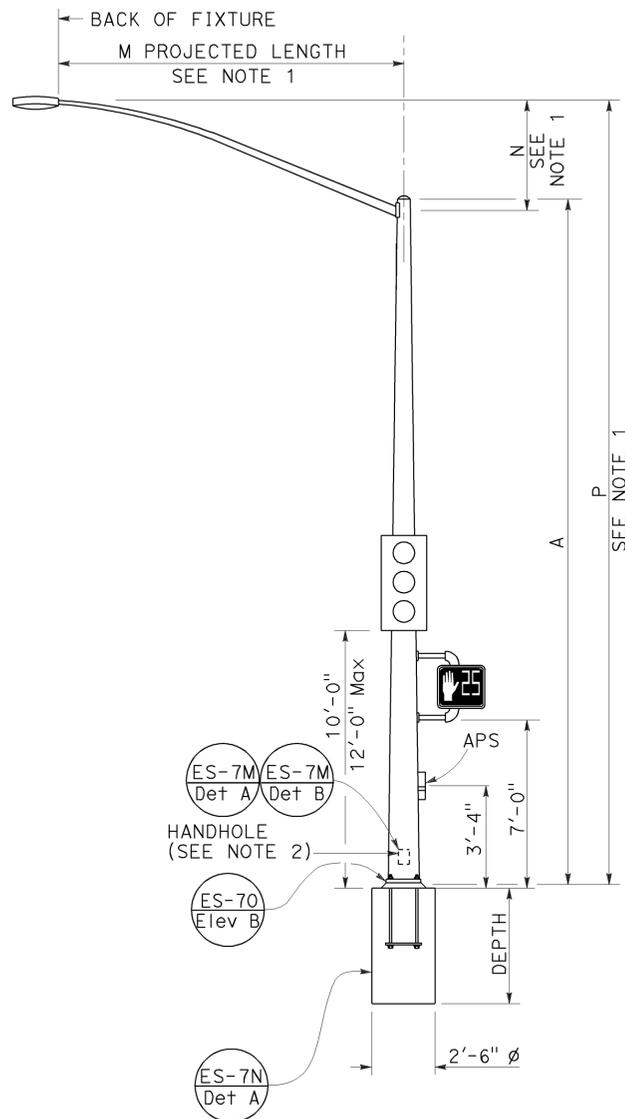
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(CURB TERMINATION**  
**AND HANDHOLE)**  
NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.  
**REVISED STANDARD PLAN RSP ES-5D**

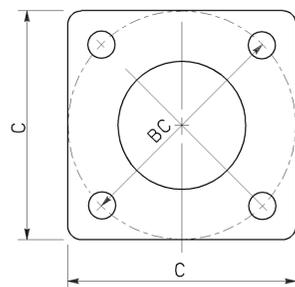
**NOTES:**

- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
- Handhole shall be located on the downstream side of traffic.

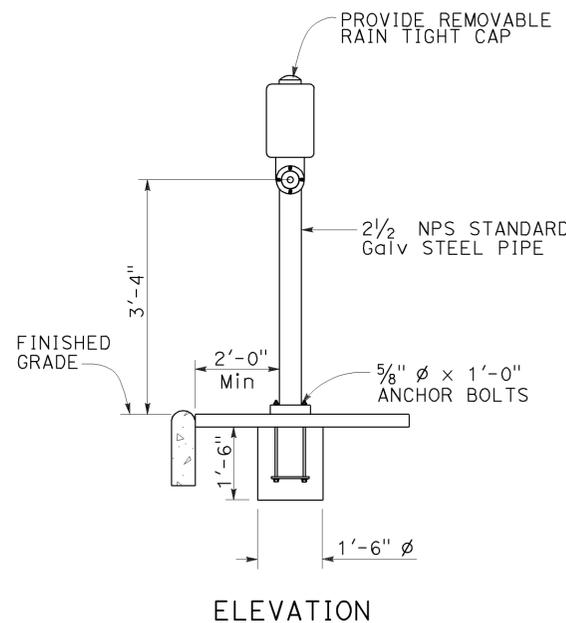
TO ACCOMPANY PLANS DATED 05-26-15



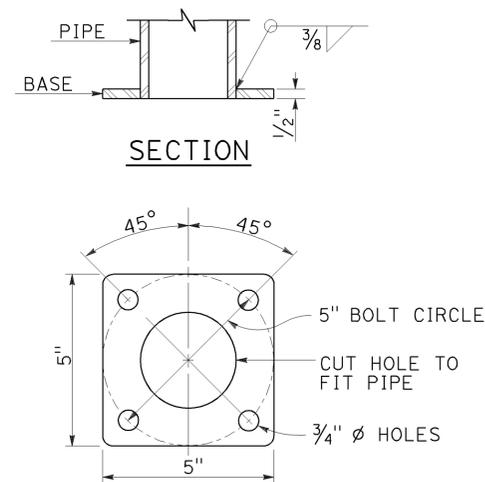
**TYPE 15TS AND 21TS STANDARD**  
**ELEVATION A**  
 (See Note 1)



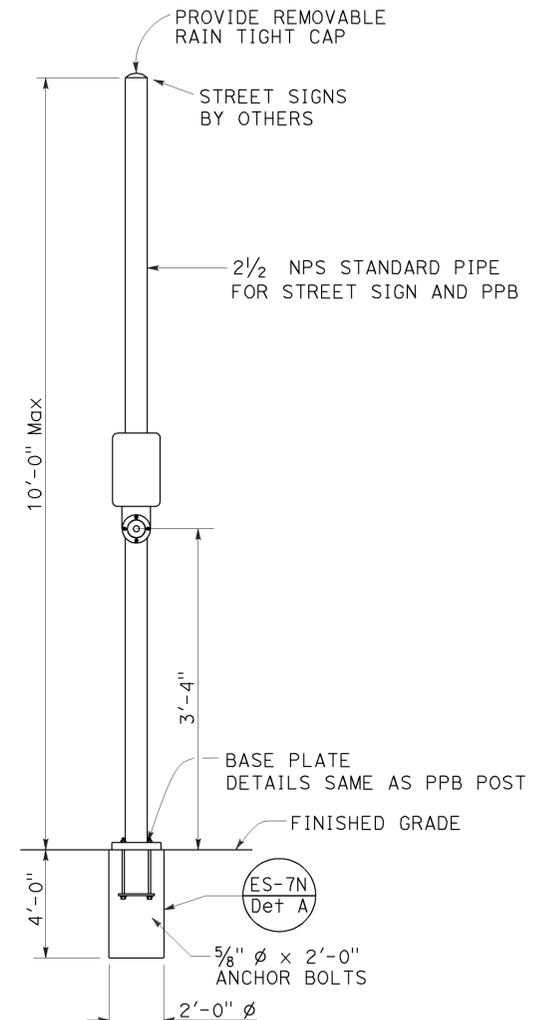
**BASE PLATE**  
**TYPE 15TS AND 21TS**  
**DETAIL A**



**PUSH BUTTON ASSEMBLY POST**  
**DETAIL B**



**BASE PLATE**  
**PBA POST**



**COMBINED STREET SIGN**  
**PUSH BUTTON ASSEMBLY POST**  
**DETAIL C**

POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH DEPTH
	A HEIGHT	Min OD			C	BC = BOLT CIRCLE	ANCHOR BOLT SIZE	
		BASE	TOP					
15TS	30'-0"	8"	3 1/16"	0.1793"	1'-1 1/2"	1'-0"	1 1/2" diameter x 42"	7'-6"
21TS	35'-0"	9 3/8"	3 3/16"		1'-3"	1'-2"		8'-6"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

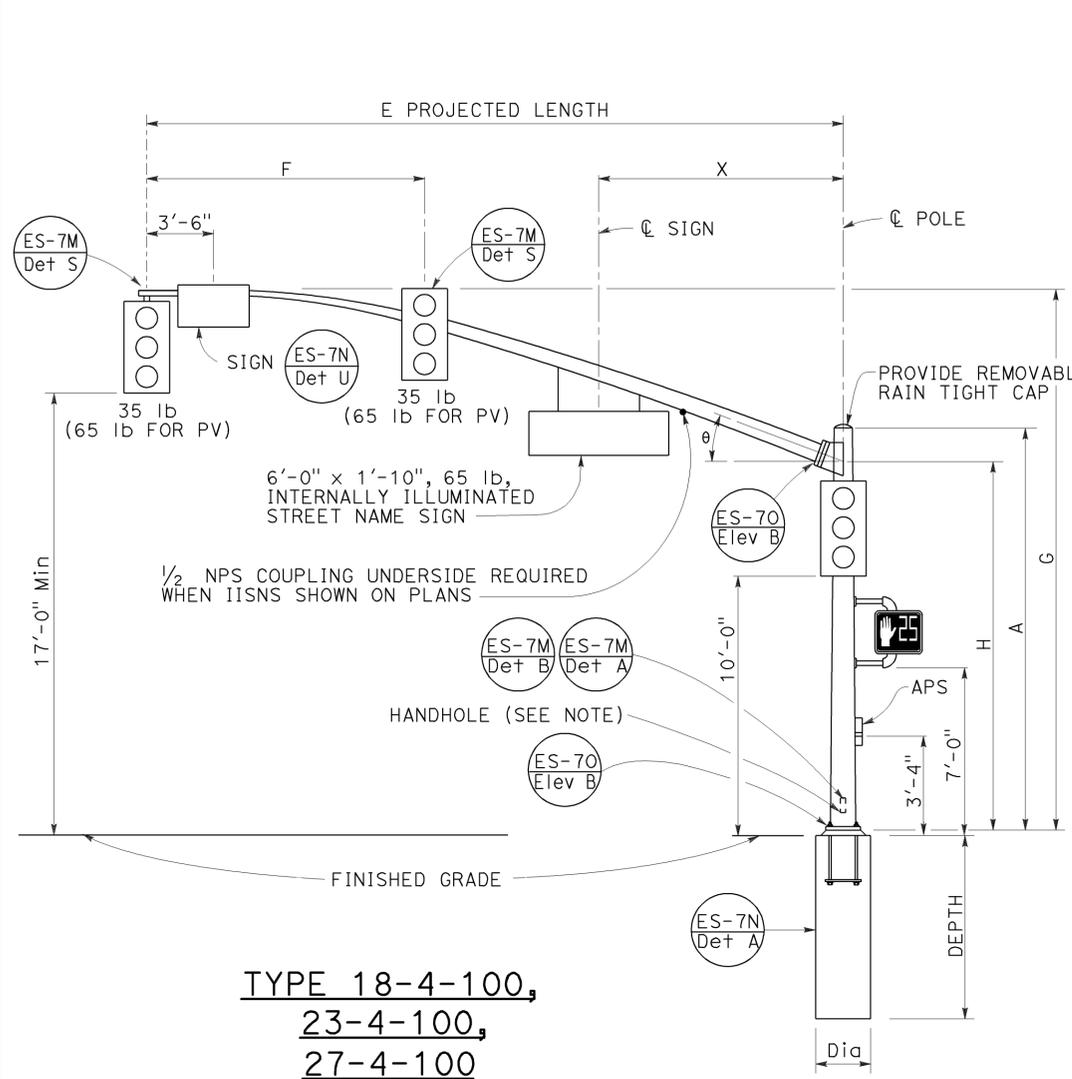
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD, TYPE TS,**  
**AND PUSH BUTTON ASSEMBLY POST)**

NO SCALE

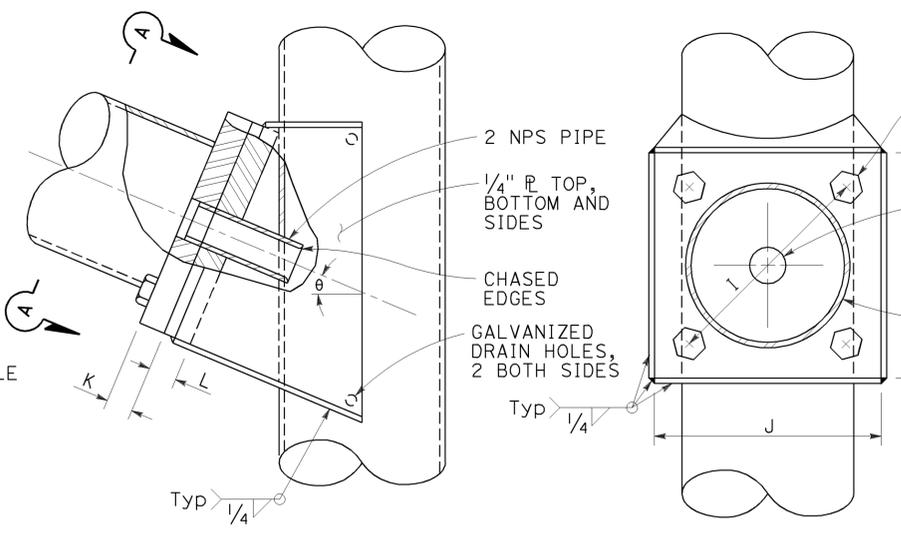
RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A  
 DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7A**

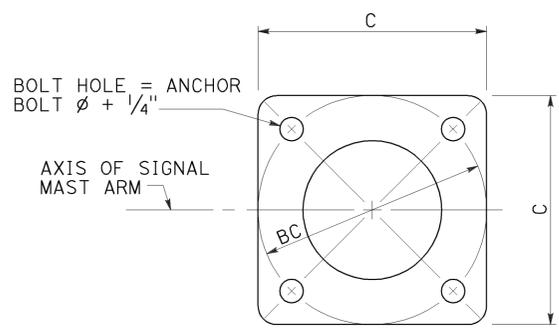
2010 REVISED STANDARD PLAN RSP ES-7A



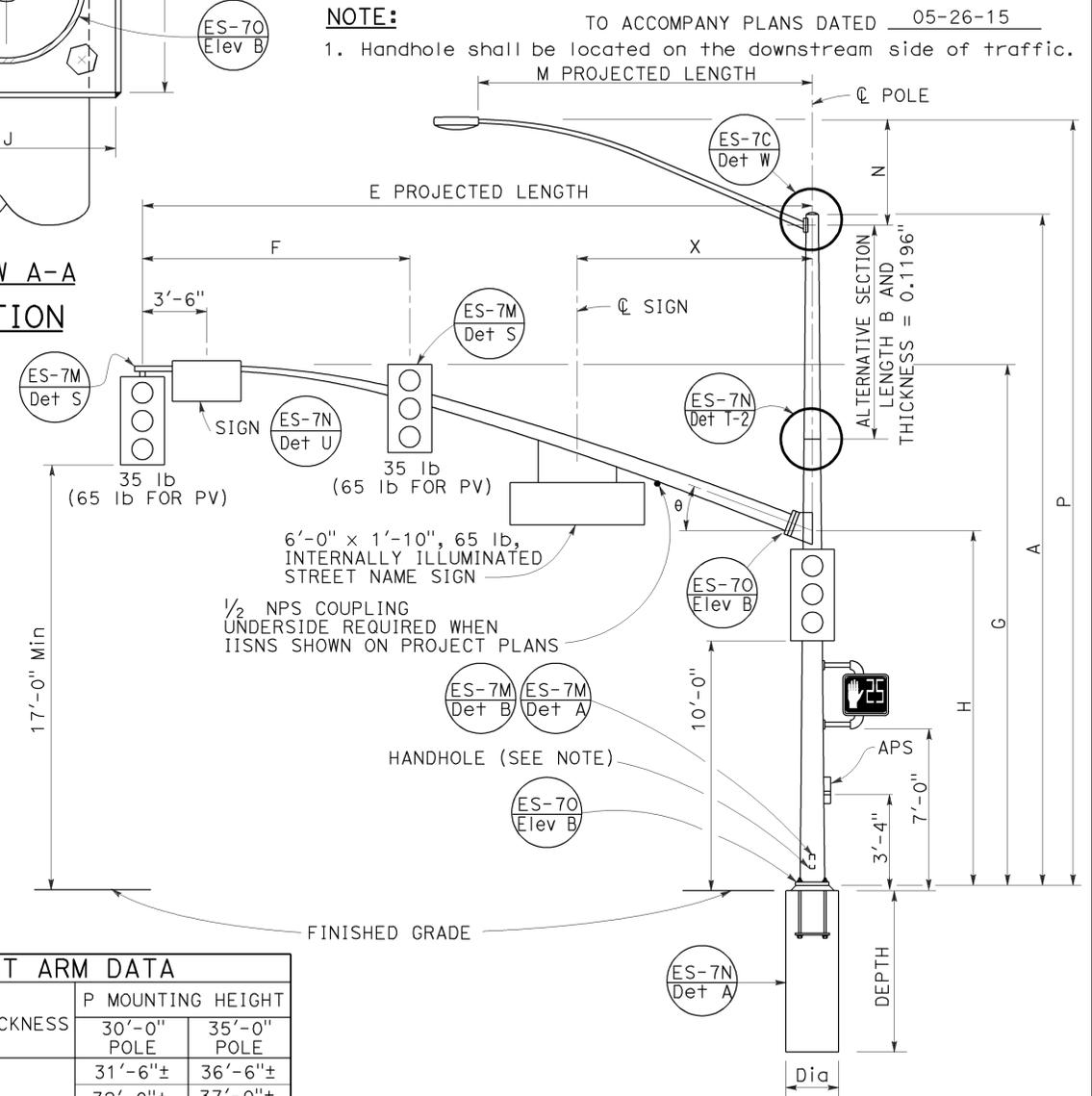
**TYPE 18-4-100,  
 23-4-100,  
 27-4-100  
 ELEVATION A**



**ELEVATION C  
 SIGNAL MAST ARM CONNECTION  
 DETAIL A**



**BASE PLATE  
 DETAIL B**



**TYPE 19-4-100, 19A-4-100,  
 24-4-100, 24A-4-100,  
 26-4-100, 26A-4-100  
 ELEVATION B**

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L POLE R THICKNESS	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 3/8"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	8"										
35'-0"	14'-0"	8 1/8"										
40'-0"	15'-0"	9 3/8"										
45'-0"	17'-0"	10 1/4"										

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	4"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA			CIDH PILE FOUNDATION						
			A HEIGHT	Min OD		THICKNESS	ALTERNATIVE SECTION			LUMINAIRE MAST ARM	SIGNAL MAST ARM	Dia	DEPTH	REINFORCED	
				BASE	TOP		B LENGTH	BOTTOM	TOP						C
18-4-100	4	100	17'-0"	12 1/8"	9 1/16"	NONE	1'-7"	1'-5 1/2"	3"	2" φ × 42"	3'-0"	11'-0"	YES		
19-4-100			30'-0"		7 11/16"	10'-0"								9 1/8"	7 11/16"
19A-4-100			35'-0"		6 15/16"	15'-0"								6 15/16"	
23-4-100			17'-0"		9 9/16"	NONE								NONE	
24-4-100			30'-0"	7 11/16"	0.3125"	1'-7"	1'-5 1/2"	3"	2" φ × 42"	3'-0"	11'-0"	YES			
24A-4-100			35'-0"	6 15/16"									10'-0"	9 1/8"	7 11/16"
26-4-100			30'-0"	8 3/16"									15'-0"	6 15/16"	
26A-4-100			35'-0"	7 7/16"									10'-0"	9 5/8"	8 3/16"
27-4-100	17'-0"	10 1/16"	NONE	NONE	23"	21"	2 1/2" φ × 42"	40'-0", 45'-0"	3'-6"	12'-0"					

[ ] INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SIGNAL AND LIGHTING STANDARD,  
 CASE 4 SIGNAL MAST ARM LOADING,  
 WIND VELOCITY=100 MPH AND SIGNAL  
 MAST ARM LENGTHS 25' TO 45')**  
 NO SCALE  
 RSP ES-7F DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7F  
 DATED MAY 20, 2011 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.  
**REVISED STANDARD PLAN RSP ES-7F**

2010 REVISED STANDARD PLAN RSP ES-7F

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	244	287

Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 No. C57793  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA

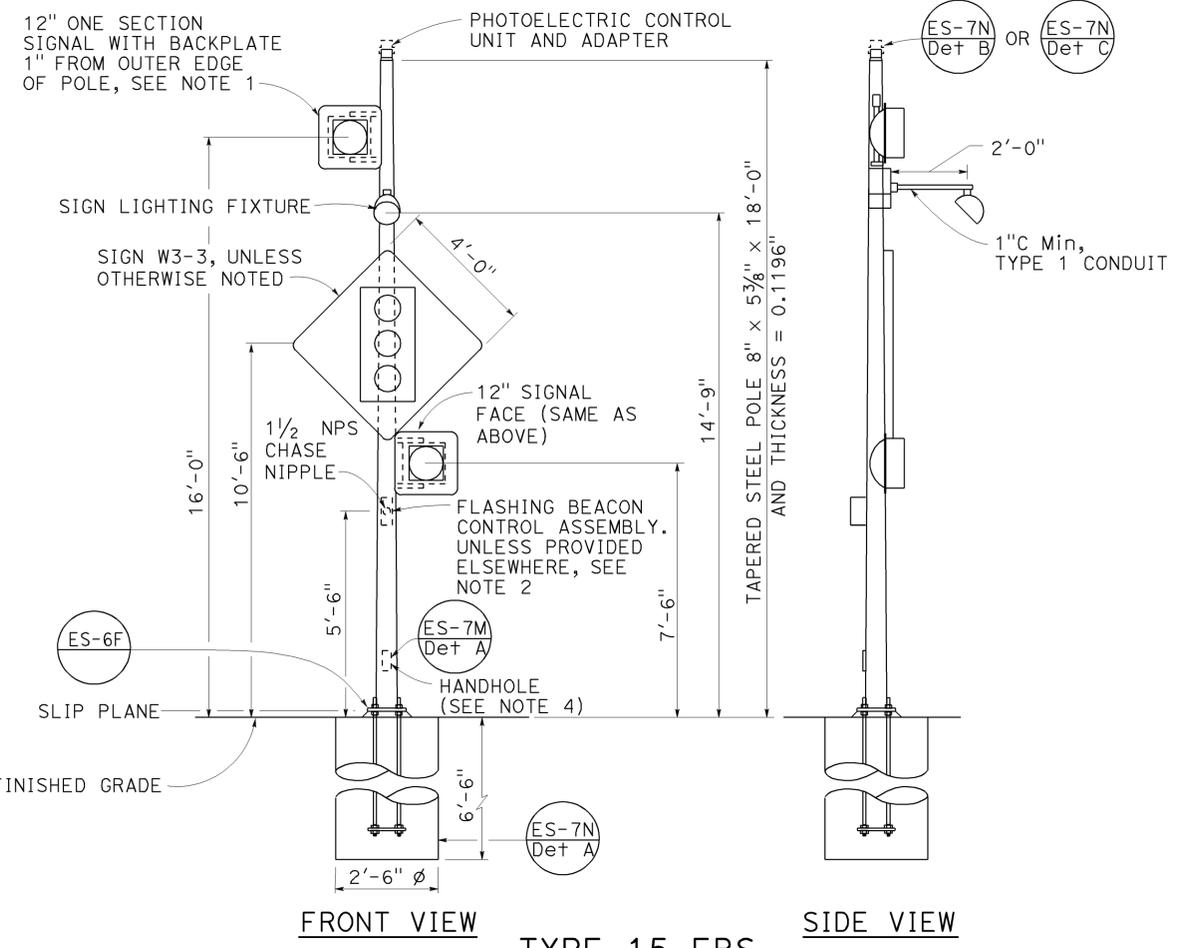
July 19, 2013  
 PLANS APPROVAL DATE

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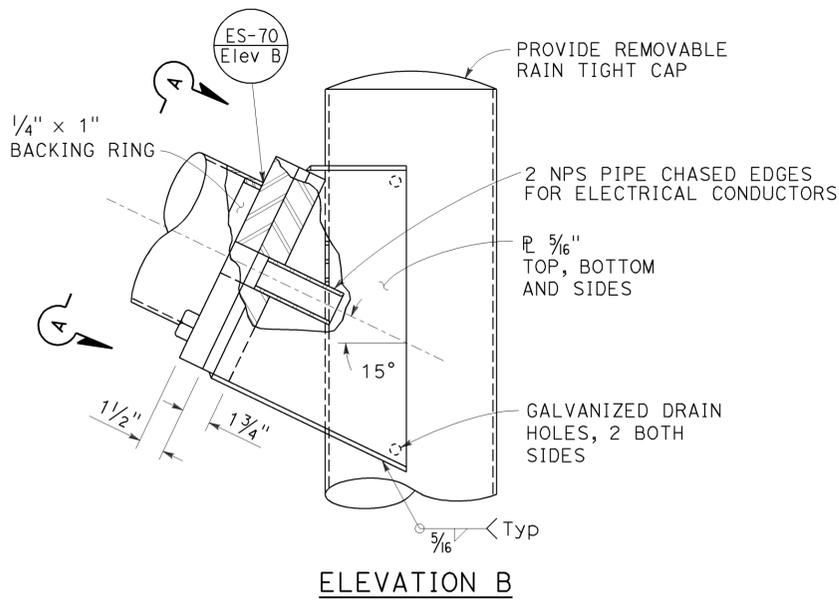
TO ACCOMPANY PLANS DATED 05-26-15

**NOTES:**

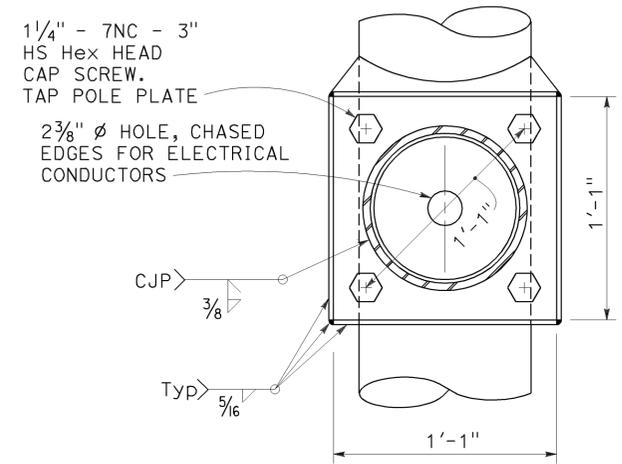
1. See Revised Standard Plan RSP ES-4A and Standard Plan ES-4D for attachment fitting details.
2. For wiring diagram, see Standard Plan ES-14B.
3. For additional notes and details, see Standard Plans ES-7M and ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.



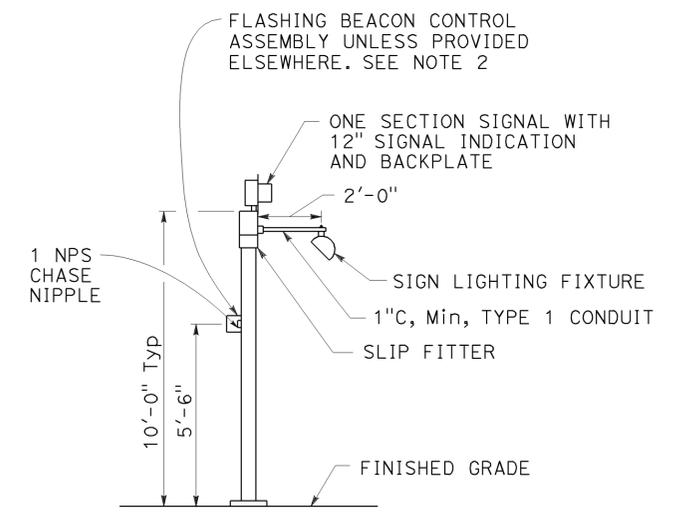
**TYPE 15-FBS**  
**ADVANCE FLASHING BEACON WITH SLIP BASE INSTALLATION**  
**DETAIL A**



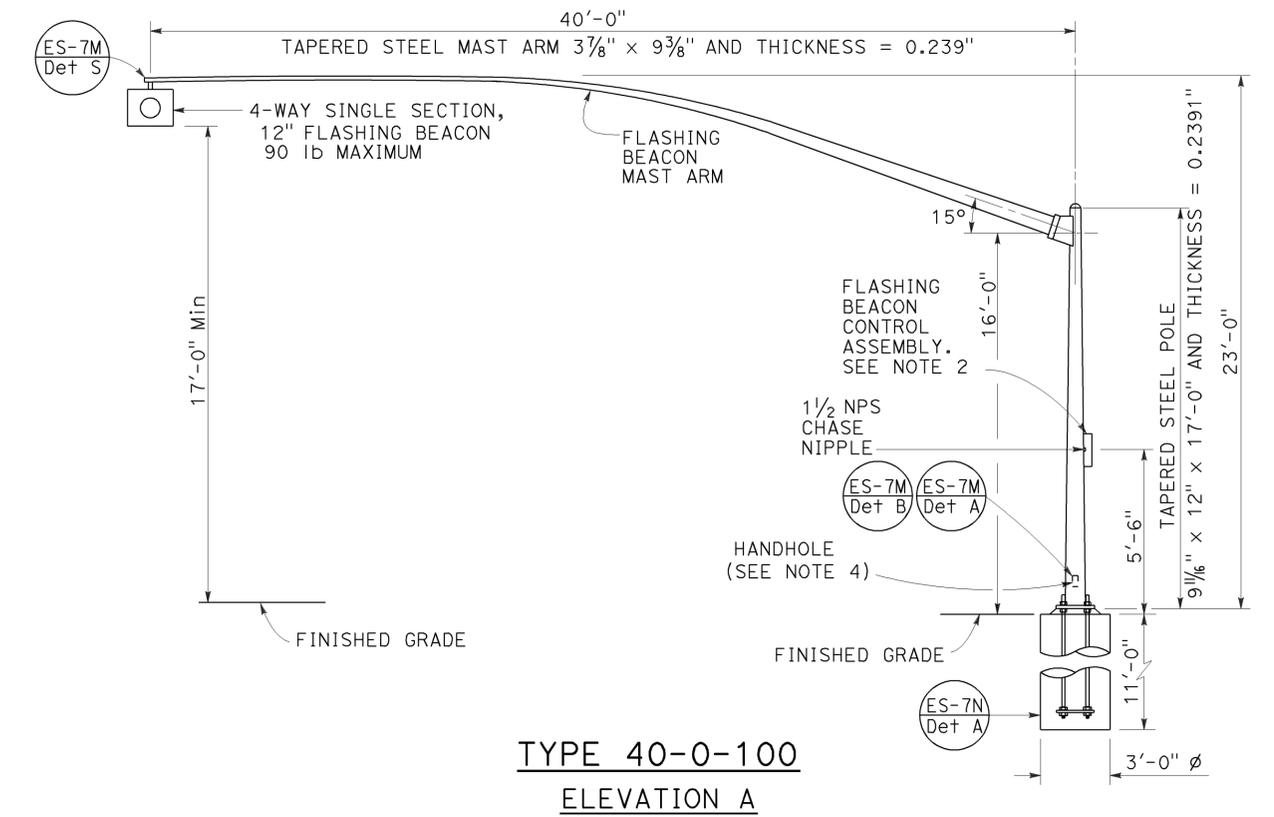
**ELEVATION B**



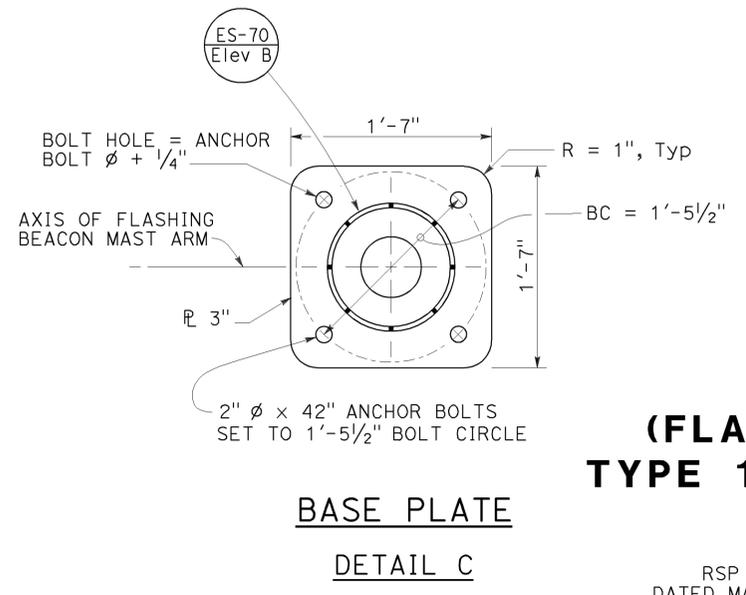
**VIEW A-A**  
**FLASHING BEACON MAST ARM CONNECTION DETAIL**  
**DETAIL B**



**TYPE 1-A, 1-B, 1-C AND 1-D**  
**ADVANCE FLASHING BEACON INSTALLATION**  
**DETAIL D**  
 See Note 5



**TYPE 40-0-100**  
**ELEVATION A**



**BASE PLATE**  
**DETAIL C**

**ELECTRICAL SYSTEMS**  
**(FLASHING BEACON ON A TYPE 1, TYPE 15-FBS AND TYPE 40 STANDARD)**  
 NO SCALE

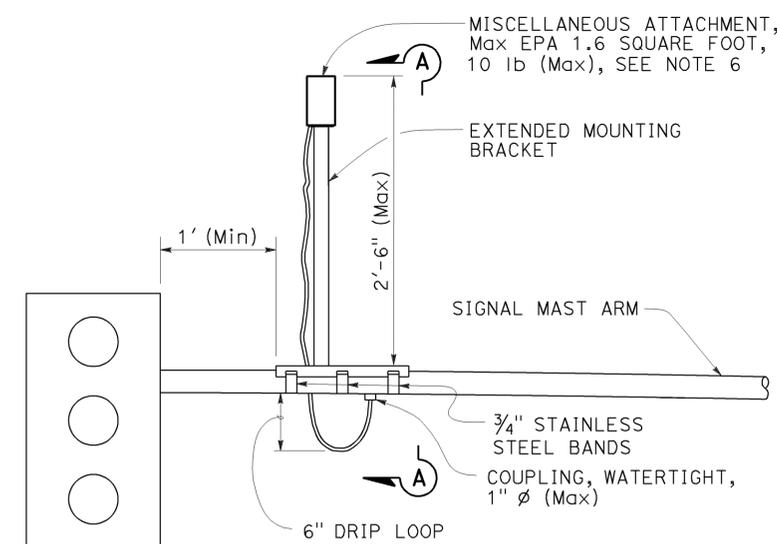
RSP ES-7J DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7J DATED MAY 20, 2011 - PAGE 471 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-7J

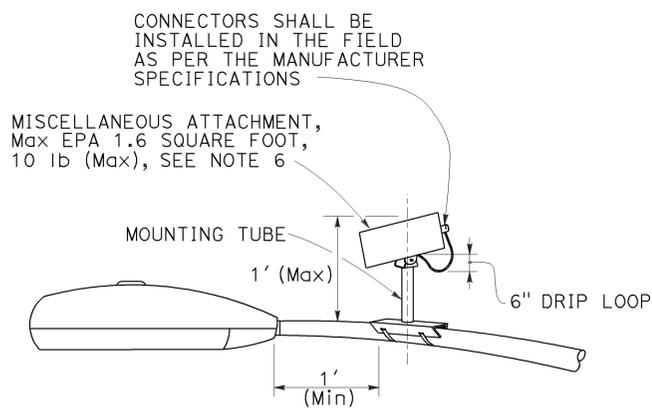
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	245	287

Stanley P. Johnson  
 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.

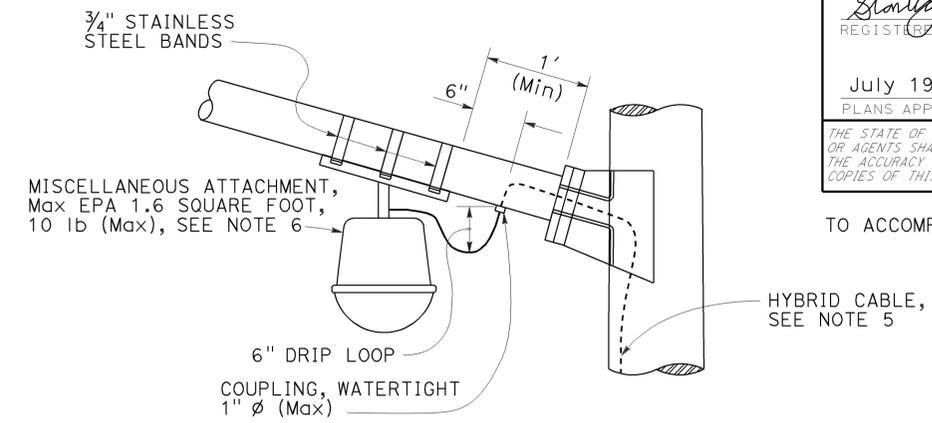
2010 REVISED STANDARD PLAN RSP ES-7R



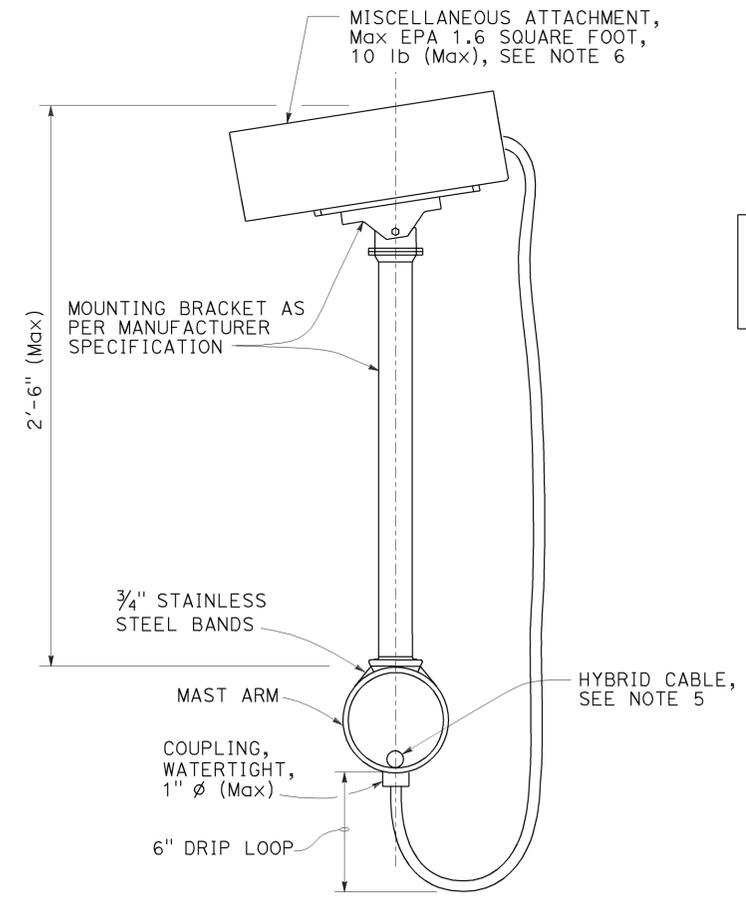
**SIGNAL MAST ARM MOUNT  
DETAIL A**



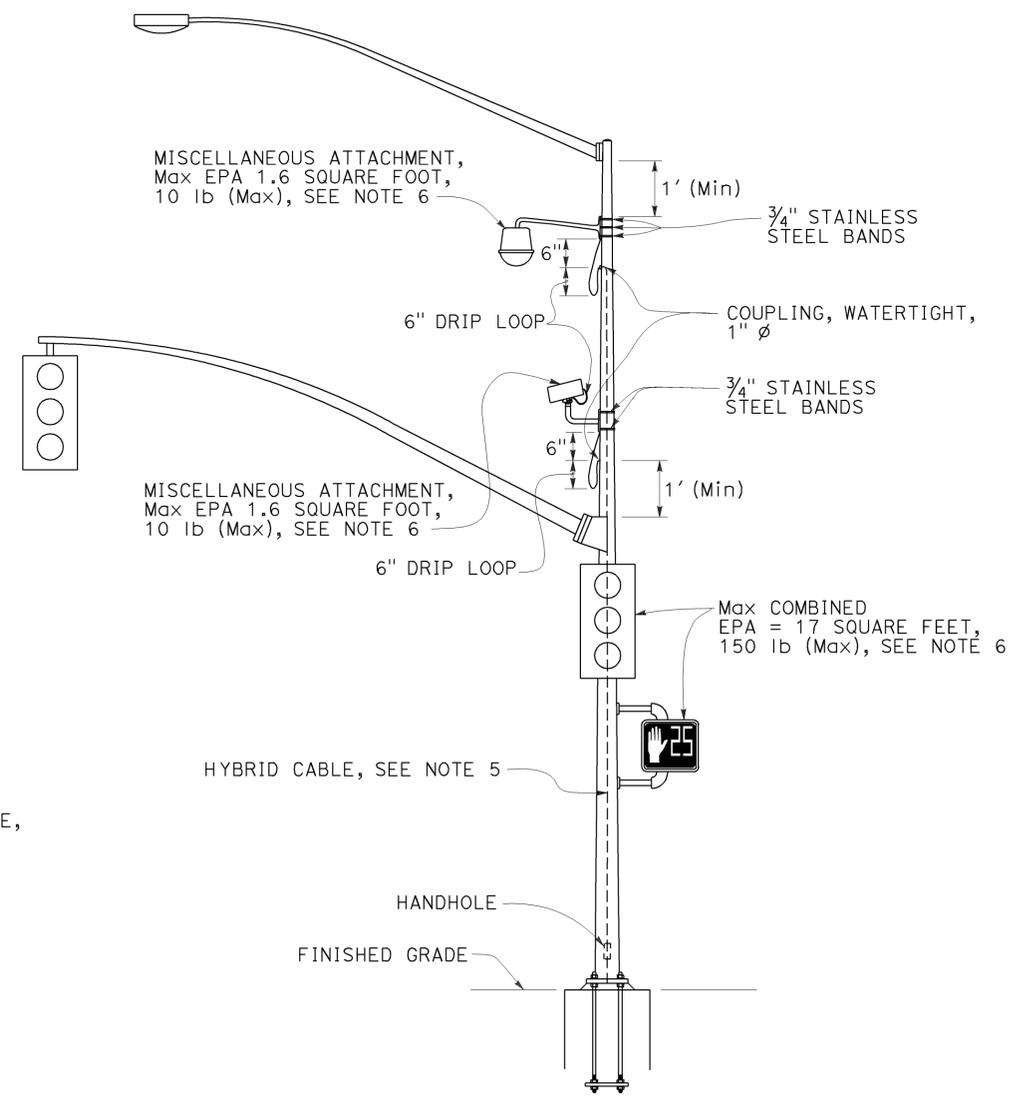
**LUMINAIRE MAST ARM MOUNT  
DETAIL B**



**LUMINAIRE MAST ARM MOUNT  
DETAIL C**



**SECTION A-A**



**SIGNAL POLE MOUNT  
DETAIL D**

**NOTES:**

1. Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
2. Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
3. Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
4. Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
5. A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
6. Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet.
7. Maximum of two miscellaneous attachments per traffic signal structure.
8. Maximum of one miscellaneous attachment per mast arm.
9. Miscellaneous attachment shall be mounted using clamping devices.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(SIGNAL AND LIGHTING,  
MISCELLANEOUS ATTACHMENT)**

NO SCALE

RSP ES-7R DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7R DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-7R**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	246	287

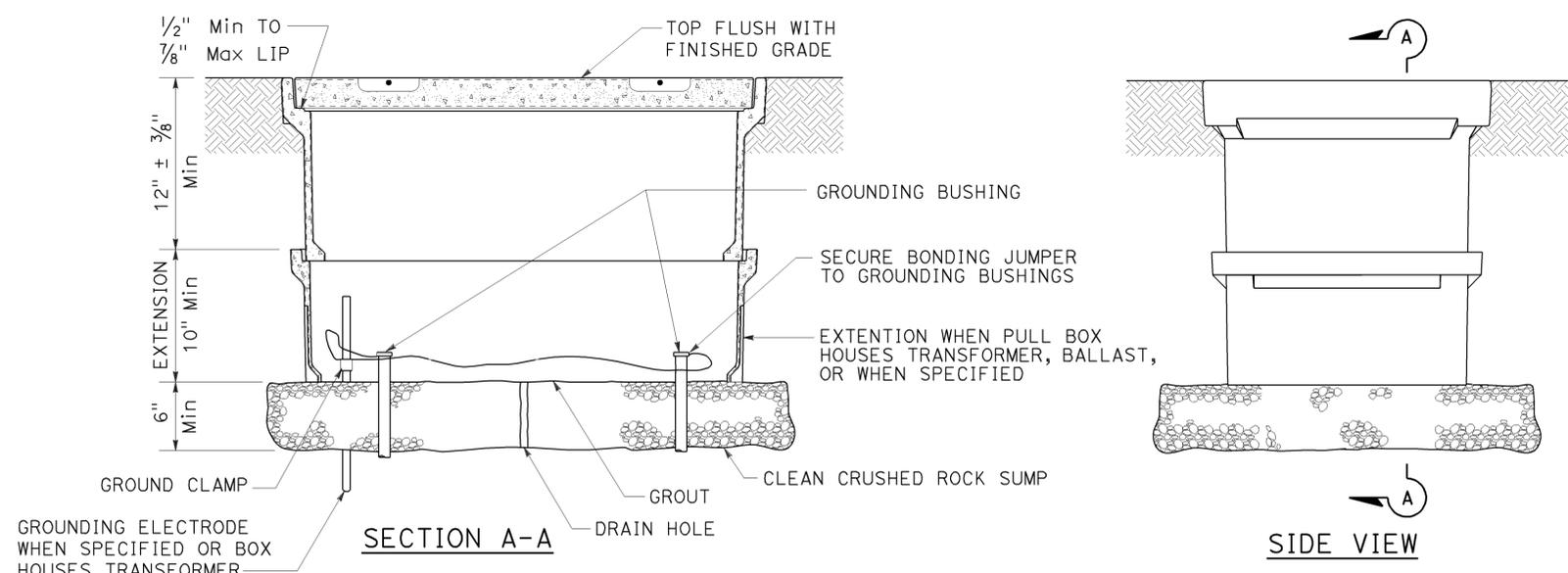
Theresa Gabriel  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

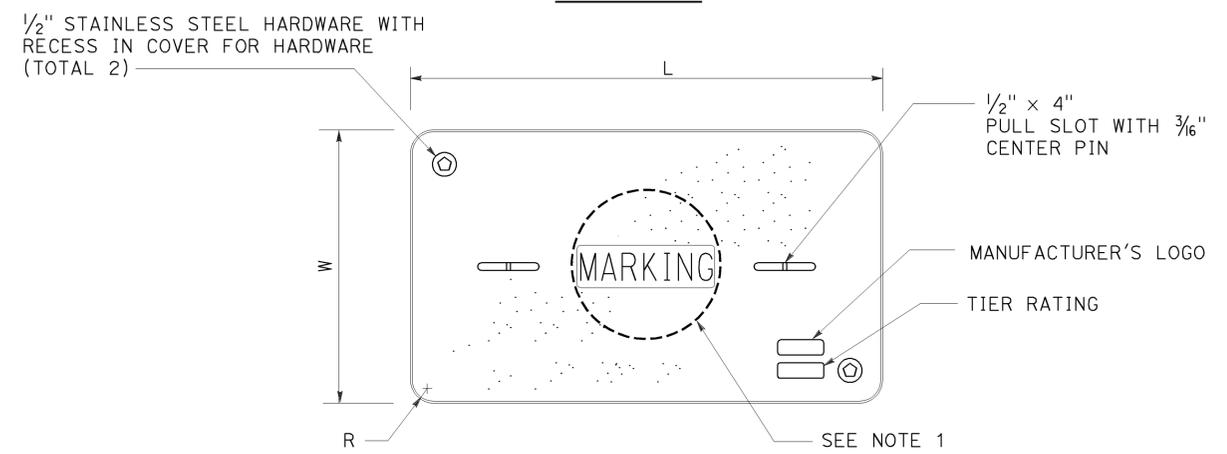
Theresa Aziz Gabriel  
No. E15129  
Exp. 6-30-14  
ELECTRICAL  
STATE OF CALIFORNIA

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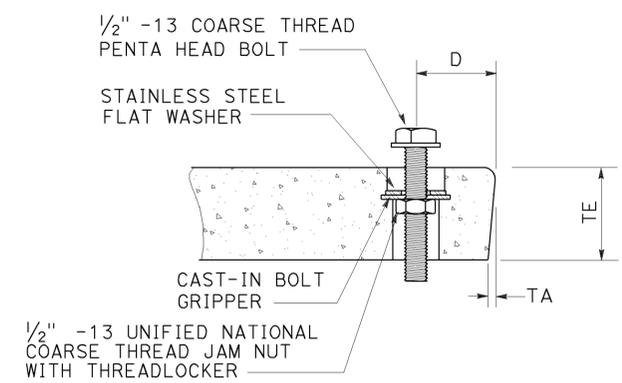
TO ACCOMPANY PLANS DATED 05-26-15



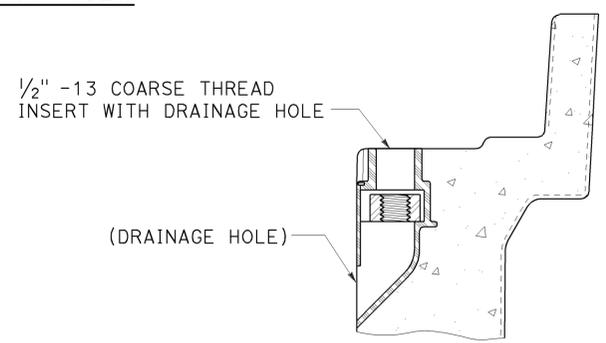
**INSTALLATION DETAILS**  
**DETAIL A**



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
**OR SIMILAR**



**TYPICAL THREADED INSERT**  
**OR SIMILAR**

**NOTES:**

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
  - No. 3 1/2 pull box.
    - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
  - No. 5, 6, 9 or 9A pull box.
    - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
    - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
    - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
    - "RAMP METER" - Ramp meter circuits.
    - "COUNT STATION" - Count or speed monitor circuits.
    - "COMMUNICATIONS" - Communication circuits.
    - "TOS COMMUNICATIONS" - TOS communication line.
    - "TOS POWER" - TOS power.
    - "TDC POWER" - Telephone demarcation cabinet power.
    - "CCTV" - Closed circuit television circuits.
    - "TMS" - Traffic monitoring station circuits.
    - "CMS" - Changeable message sign circuits.
    - "HAR" - Highway advisory radio circuits.
    - "BOOSTER PUMP" - Booster pump circuit.
- 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.
- 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.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

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

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

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

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

2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	247	287

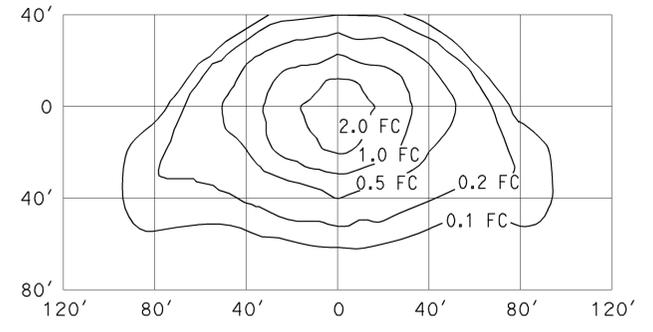
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

July 19, 2013  
 PLANS APPROVAL DATE

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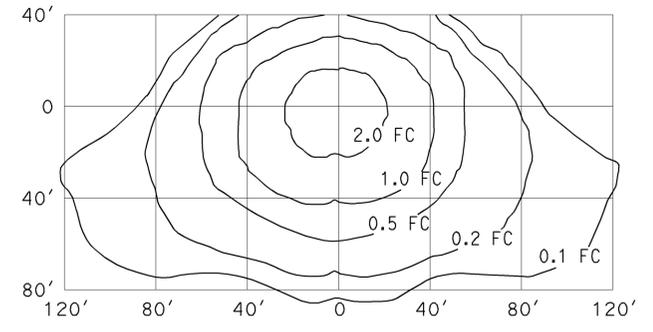
TO ACCOMPANY PLANS DATED 05-26-15

**ISOFOOTCANDLE CURVE - MINIMUM**



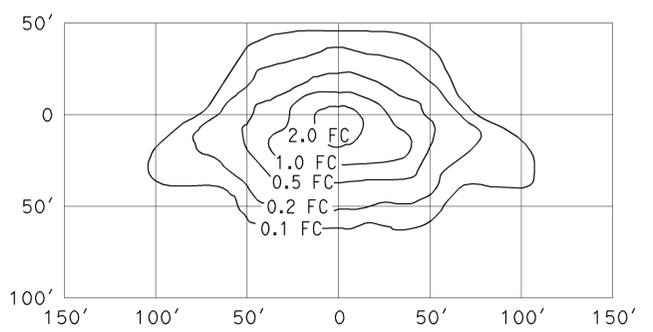
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 34' Mounting Height  
 Lamp operated at 22,000 lm  
 200-W high pressure sodium lamp  
 ANSI Designation S66

**ISOFOOTCANDLE CURVE - MINIMUM**



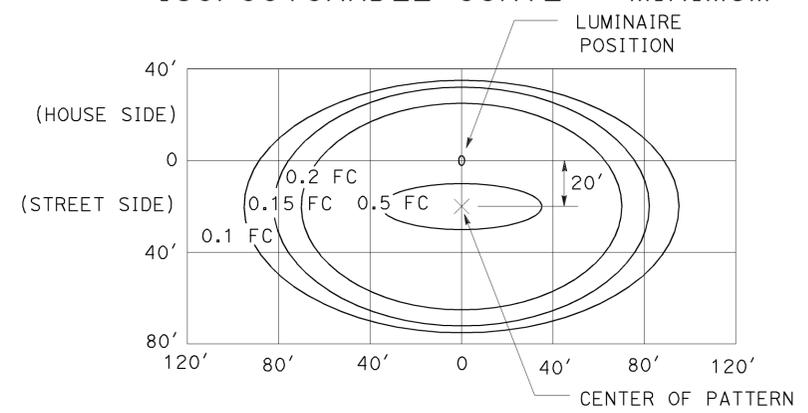
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 40' Mounting Height  
 Lamp operated at 37,000 lm  
 310-W high pressure sodium lamp  
 ANSI Designation S67

**ISOFOOTCANDLE CURVE - MINIMUM**



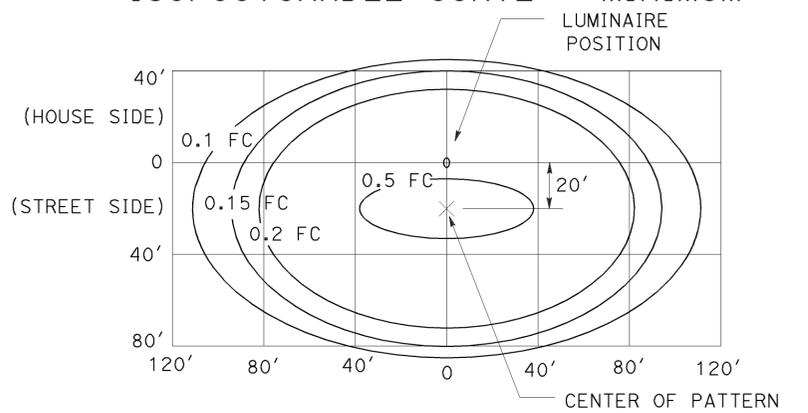
**TYPE III MEDIUM CUTOFF**  
 Cutoff Luminaire  
 30' Mounting Height  
 Lamp operated at 16,000 lm  
 150-W high pressure sodium lamp  
 ANSI Designation S55

**ISOFOOTCANDLE CURVE - MINIMUM**



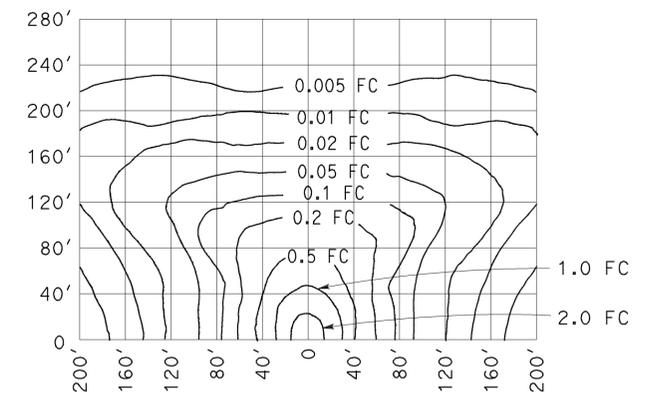
**LED LUMINAIRE ROADWAY 1**  
 165-W at 34' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



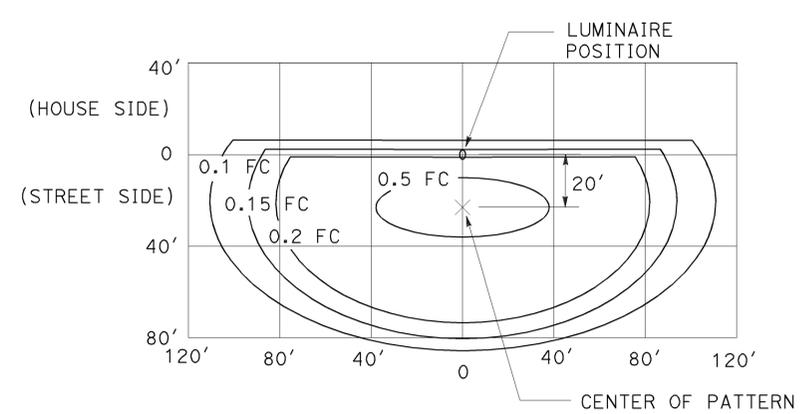
**LED LUMINAIRE ROADWAY 2**  
 235-W at 40' Mounting Height

**ISOFOOTCANDLE CURVE - MINIMUM**



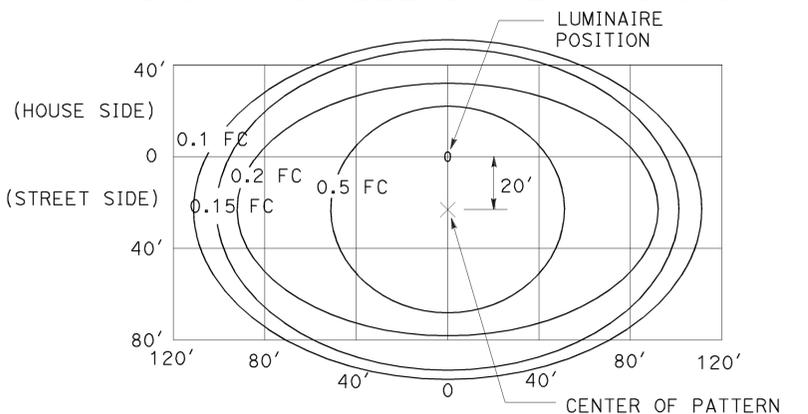
**LOW PRESSURE SODIUM LUMINAIRE**  
 40' Mounting Height  
 Lamp operated at 33,000 lm  
 180-W low pressure sodium lamp

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 3**  
 235-W at 40' Mounting Height  
 with back side control

**ISOFOOTCANDLE CURVE - MINIMUM**



**LED LUMINAIRE ROADWAY 4**  
 300-W at 40' Mounting Height

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

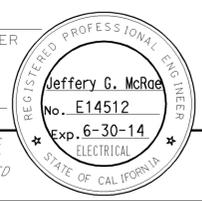
RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-10A**

2010 REVISED STANDARD PLAN RSP ES-10A

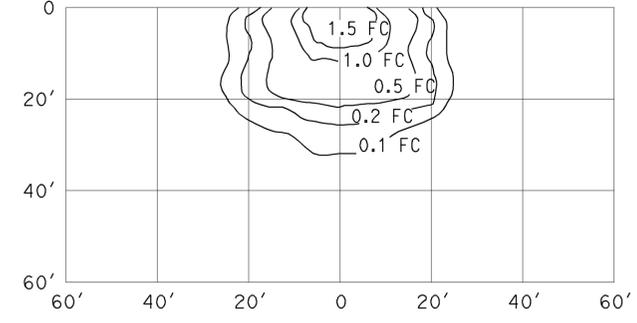
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	248	287

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 July 20, 2012  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



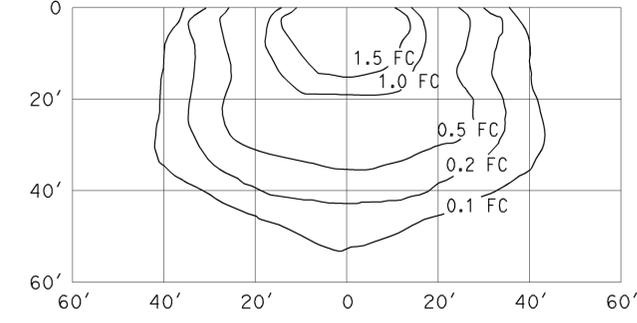
TO ACCOMPANY PLANS DATED 05-26-15

ISOFOOTCANDLE CURVE - MINIMUM



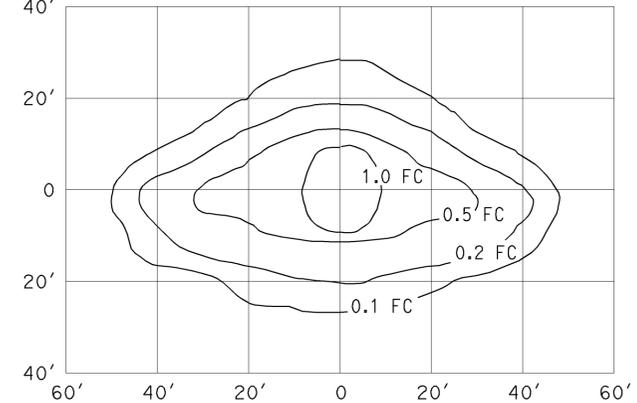
**WALL LUMINAIRE**  
 15' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

ISOFOOTCANDLE CURVE - MINIMUM



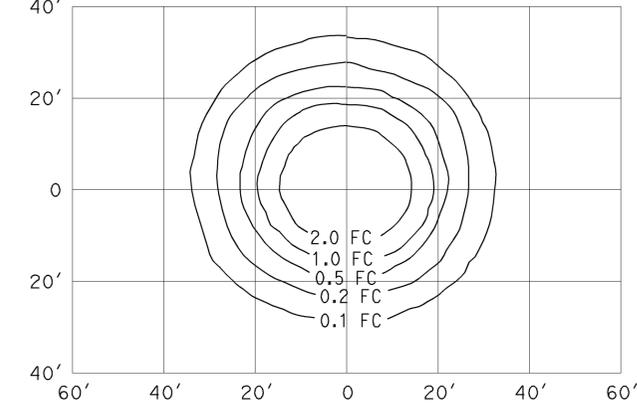
**WALL LUMINAIRE**  
 15' Mounting Height  
 Lamp operated at 9,500 lm  
 100-W high pressure sodium lamp  
 ANSI Designation S54

ISOFOOTCANDLE CURVE - MINIMUM



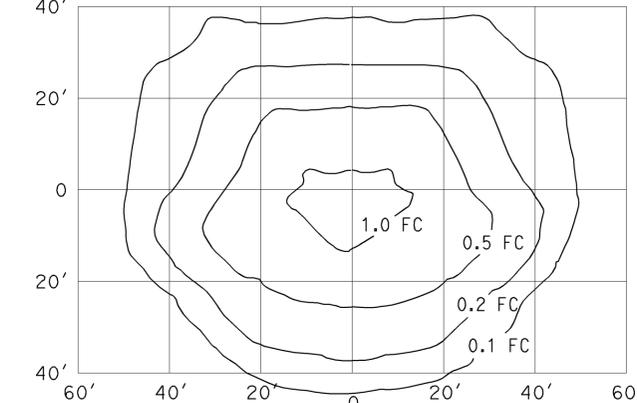
**PENDANT SOFFIT LUMINAIRE  
 TYPE III SHORT**  
 17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

ISOFOOTCANDLE CURVE - MINIMUM

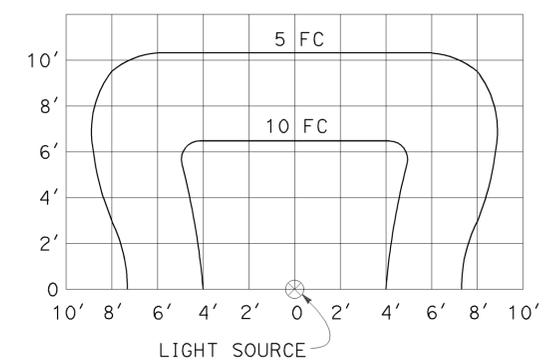


**PENDANT SOFFIT LUMINAIRE**  
 17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62

ISOFOOTCANDLE CURVE - MINIMUM



**FLUSH SOFFIT LUMINAIRE**  
 17' Mounting Height  
 Lamp operated at 5,800 lm  
 70-W high pressure sodium lamp  
 ANSI Designation S62



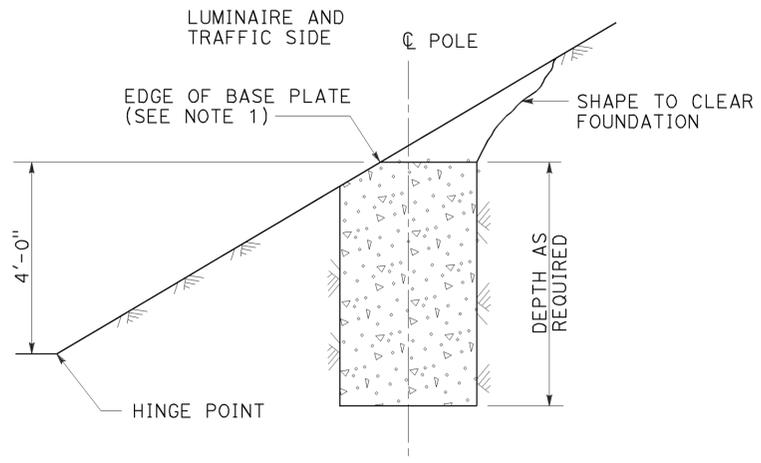
**SIGN LIGHTING FIXTURE  
 ISOFOOTCANDLE DIAGRAM**

- NOTES:**
- Curves represent the minimum footcandle (FC) of initial illumination on a 10'-0" x 20'-0" panel.
  - The FC shown are with the fixture attached to the light fixture mounting channel which places the center of the source 4'-8" in front of panel and 1'-0" below the bottom edge.
  - Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

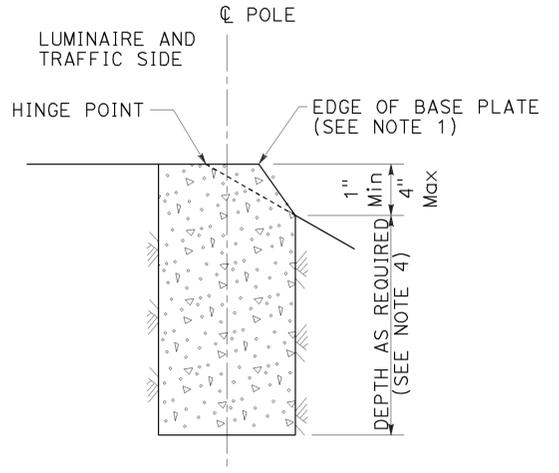
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**  
 NO SCALE

RSP ES-10B DATED JULY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

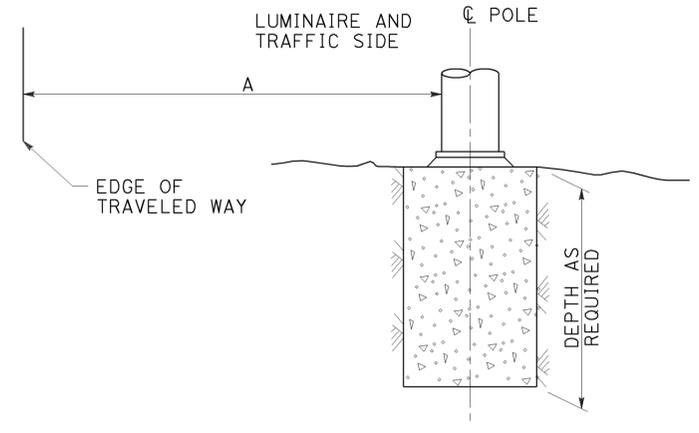
2010 REVISED STANDARD PLAN RSP ES-10B



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

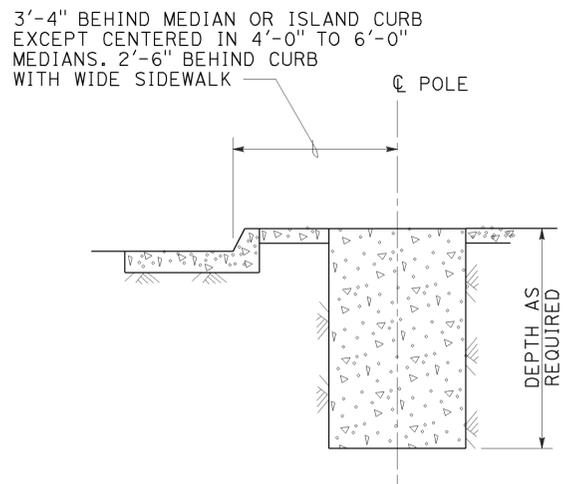
TO ACCOMPANY PLANS DATED 05-26-15

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

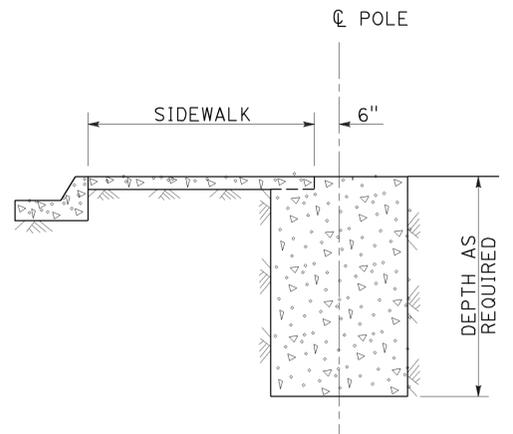
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT  
IN SIDEWALK, MEDIAN AND ISLAND AREAS  
DETAIL A

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- 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 19, 2013 SUPERSEDES STANDARD PLAN ES-11  
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

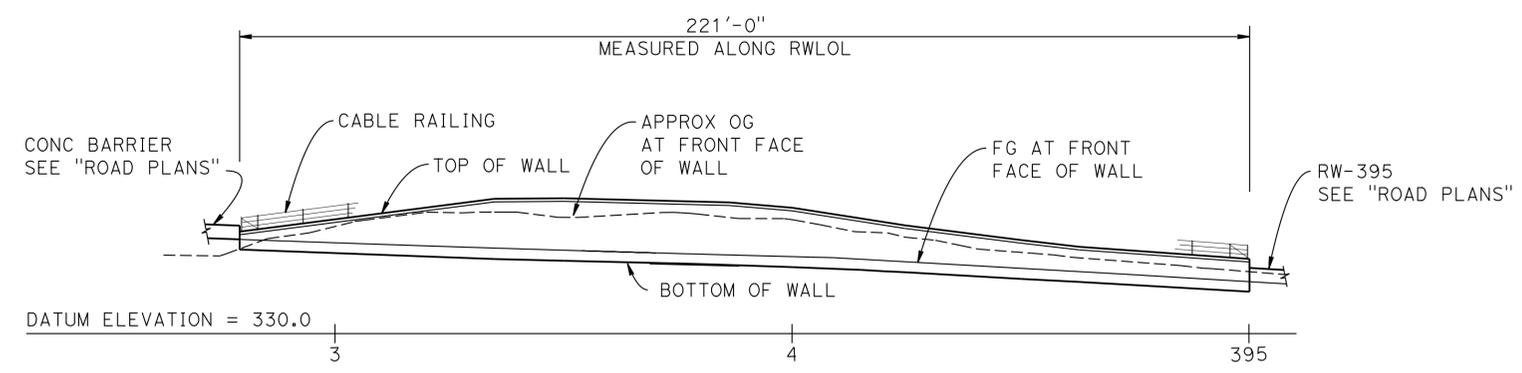
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	250	287

*Renee M. Anderson* 11-14-14  
 REGISTERED CIVIL ENGINEER DATE

05-26-15  
 PLANS APPROVAL DATE

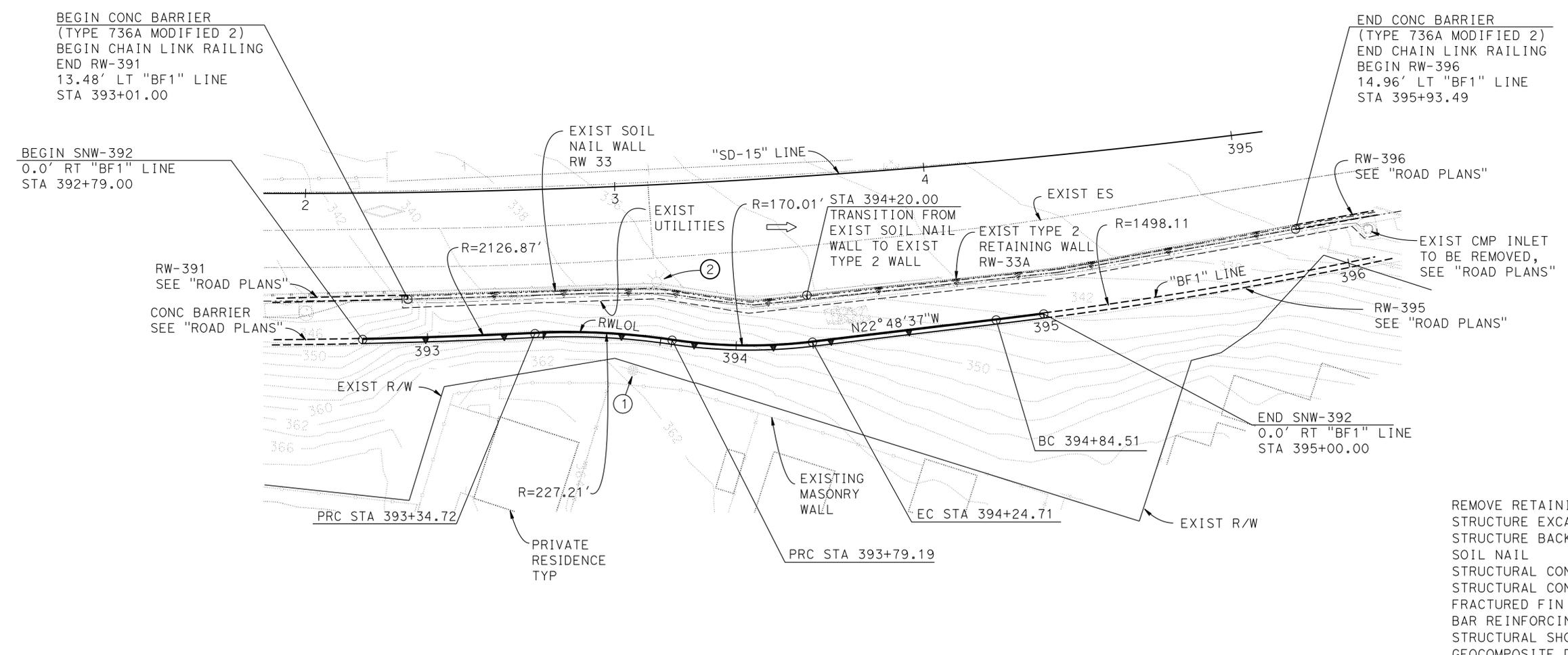
RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL  
 STATE OF CALIFORNIA

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**MIRRORED DEVELOPED ELEVATION**  
 1" = 20'

- NOTES:
- ① Existing Electric Pole. Soil Nails must clear existing light pole
  - ② Existing electrolier
- LEGEND:
- Indicates existing structure
  - Indicates new construction



QUANTITIES

REMOVE RETAINING WALL (PORTION)	27	CY
STRUCTURE EXCAVATION (SOIL NAIL WALL)	144	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	32	CY
SOIL NAIL	996	LF
STRUCTURAL CONCRETE, RETAINING WALL	95	CY
STRUCTURAL CONCRETE, CAP	30	CY
FRACTURED FIN TEXTURE	2,437	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	25,298	LB
STRUCTURAL SHOTCRETE	20	CY
GEOCOMPOSITE DRAIN	246	SQFT
CHAIN LINK RAILING (TYPE 7 MODIFIED)	292	LF
CABLE RAILING	221	LF
CONCRETE BARRIER (TYPE 736A MODIFIED 2)	292	LF

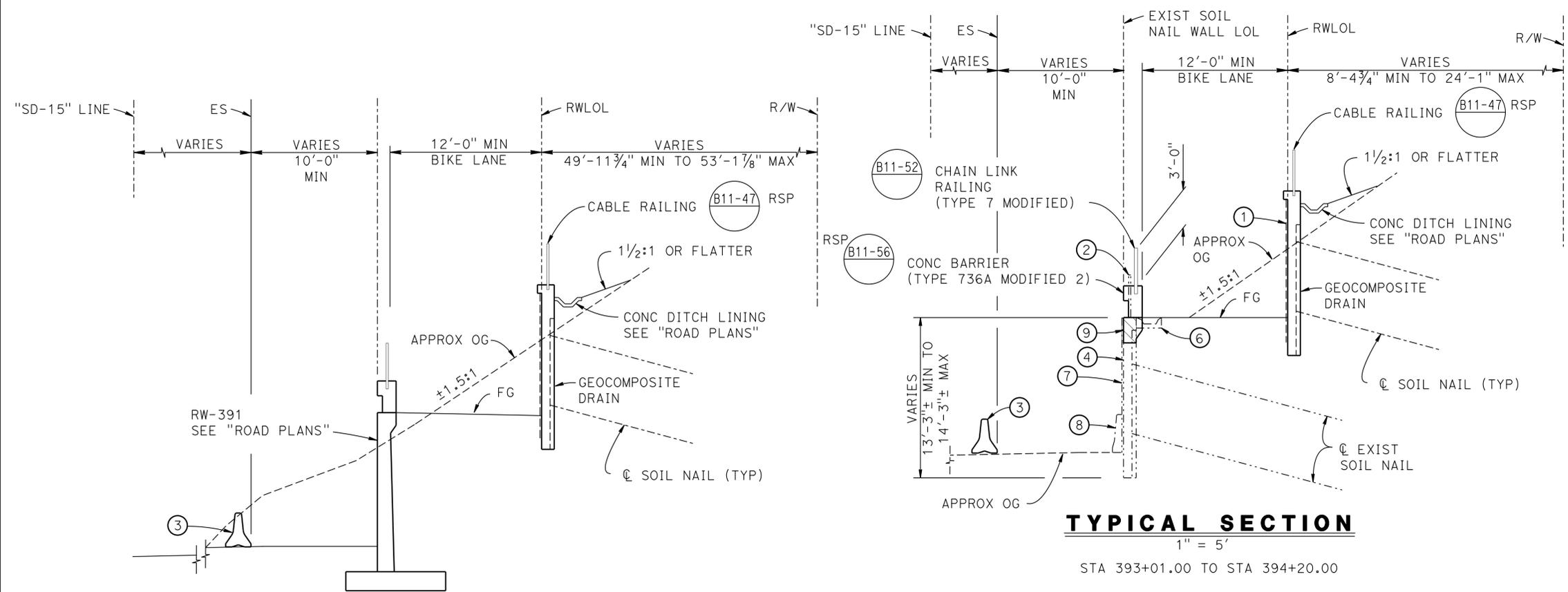
NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**PLAN**  
 1" = 20'

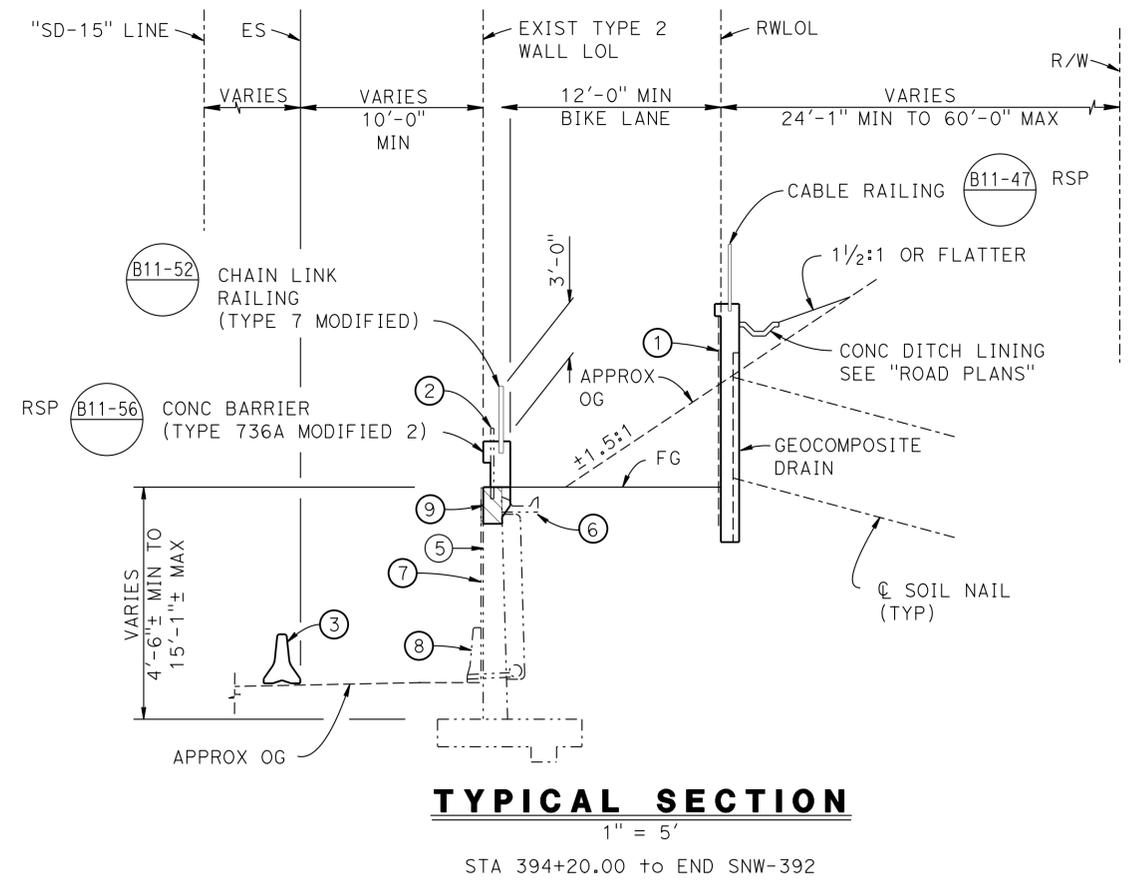
DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY R. ANDERSON	CHECKED M. VO	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY SNW-392 GENERAL PLAN		
	DETAILS	BY R. KIRKLAND	CHECKED M. VO	LAYOUT	BY R. ANDERSON			CHECKED M. VO		POST MILE	
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO	SPECIFICATIONS	BY V. Renganathan			PLANS AND SPECS COMPARED V. Renganathan		M5.668	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						UNIT: 3589	PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 10

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 57e0121agp01.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	251	287
<i>Renée M. Anderson</i> REGISTERED CIVIL ENGINEER			11-14-14 DATE		
05-26-15 PLANS APPROVAL DATE					
<small>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.</small>					



**TYPICAL SECTION**  
 1" = 5'  
 BEGIN SNW-392 TO STA 393+01.00



**TYPICAL SECTION**  
 1" = 5'  
 STA 394+20.00 to END SNW-392

- NOTES:
- Architectural Treatment "Fractured Fin Texture" to match existing
  - Existing Cable Railing to be removed
  - Temporary Railing Type K, see "ROAD PLANS"
  - Existing Soil Nail Wall RW33
  - Existing Type 2 Wall RW-33A
  - Existing concrete gutter to be removed
  - Existing Architectural Treatment
  - Existing Concrete Barrier Type 50D
  - Concrete Wall Cap

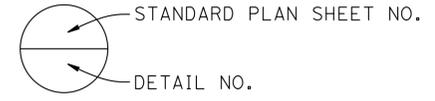
LEGEND:  
 INDICATES REMOVE RETAINING WALL (PORTION)

**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	INDEX TO PLANS
3	STRUCTURE PLAN
4	TYPICAL SECTION
5	SOIL NAIL DETAILS
6	TEST NAIL DETAILS
7	WALL DRAIN DETAILS
8	DETAILS NO. 1
9	LOG OF TEST BORINGS 1 OF 2
10	LOG OF TEST BORINGS 2 OF 2

**STANDARD PLANS DATED 2010**

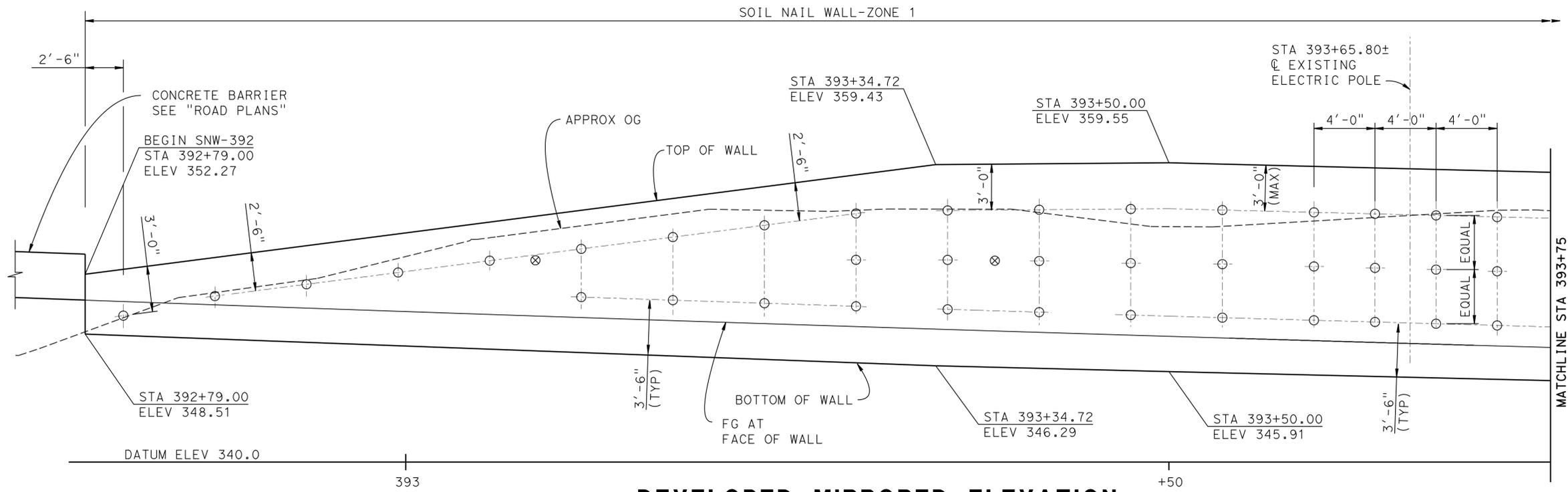
- A10A ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
- (RSP) A10B ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
- A10C SYMBOLS (SHEET 1 OF 2)
- A10D SYMBOLS (SHEET 2 OF 2)
- B11-52 CHAIN LINK RAILING TYPE 7
- (RSP) B11-47 CABLE RAILING
- (RSP) B11-56 CONCRETE BARRIER TYPE 736



NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">DESIGN</td> <td style="width: 20%;">BY R. ANDERSON</td> <td style="width: 20%;">CHECKED M. VO</td> </tr> <tr> <td>DETAILS</td> <td>BY R. KIRKLAND</td> <td>CHECKED M. VO</td> </tr> <tr> <td>QUANTITIES</td> <td>BY R. ANDERSON</td> <td>CHECKED M. VO</td> </tr> </table>	DESIGN	BY R. ANDERSON	CHECKED M. VO	DETAILS	BY R. KIRKLAND	CHECKED M. VO	QUANTITIES	BY R. ANDERSON	CHECKED M. VO	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO. 57E0121 POST MILE M5.668	<b>MID CITY BIKE FACILITY SNW-392</b> <b>INDEX TO PLANS</b>
DESIGN	BY R. ANDERSON	CHECKED M. VO											
DETAILS	BY R. KIRKLAND	CHECKED M. VO											
QUANTITIES	BY R. ANDERSON	CHECKED M. VO											
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES <table border="1" style="font-size: small;"> <tr> <th>REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>6-28-12</td> <td>2</td> <td>10</td> </tr> </table>	REVISION DATES	SHEET	OF	6-28-12	2	10		
REVISION DATES	SHEET	OF											
6-28-12	2	10											

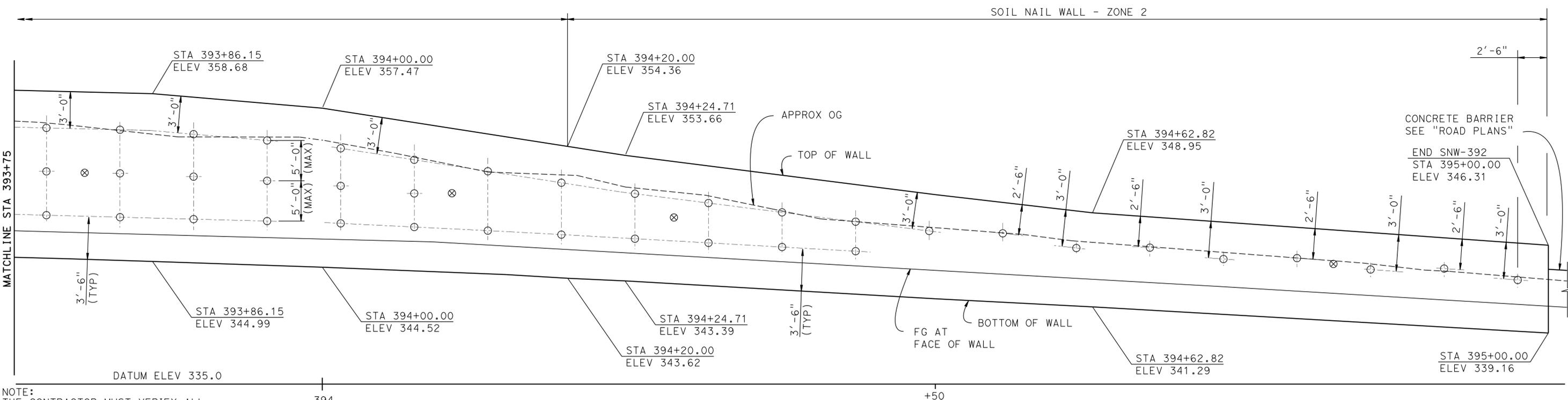
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	252	287
Renee M. Anderson REGISTERED CIVIL ENGINEER		11-14-14 DATE			
05-26-15 PLANS APPROVAL DATE			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



**DEVELOPED MIRRORED ELEVATION**  
1/4" = 1'-0"

NOTE:  
CABLE RAILING NOT SHOWN FOR CLARITY

- NOTES:
- Horizontal spacing of Soil Nails is 6'-0" max. Place Soil Nails normal to RWLLO and at -15° inclination.
  - Soil Nail Length = 12'-0"
  - OG and FG are shown at RWLLO
  - See "TYPICAL SECTION" sheet for Soil Nail Wall Zone design parameters
- LEGEND:
- Indicates Soil Nail Bearing Plate location
  - ⊗ Indicates Test Nail location. Location may be adjusted by the Engineer.
  - Indicates Soil Nail Profile Line.



**DEVELOPED MIRRORED ELEVATION**  
1/4" = 1'-0"

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

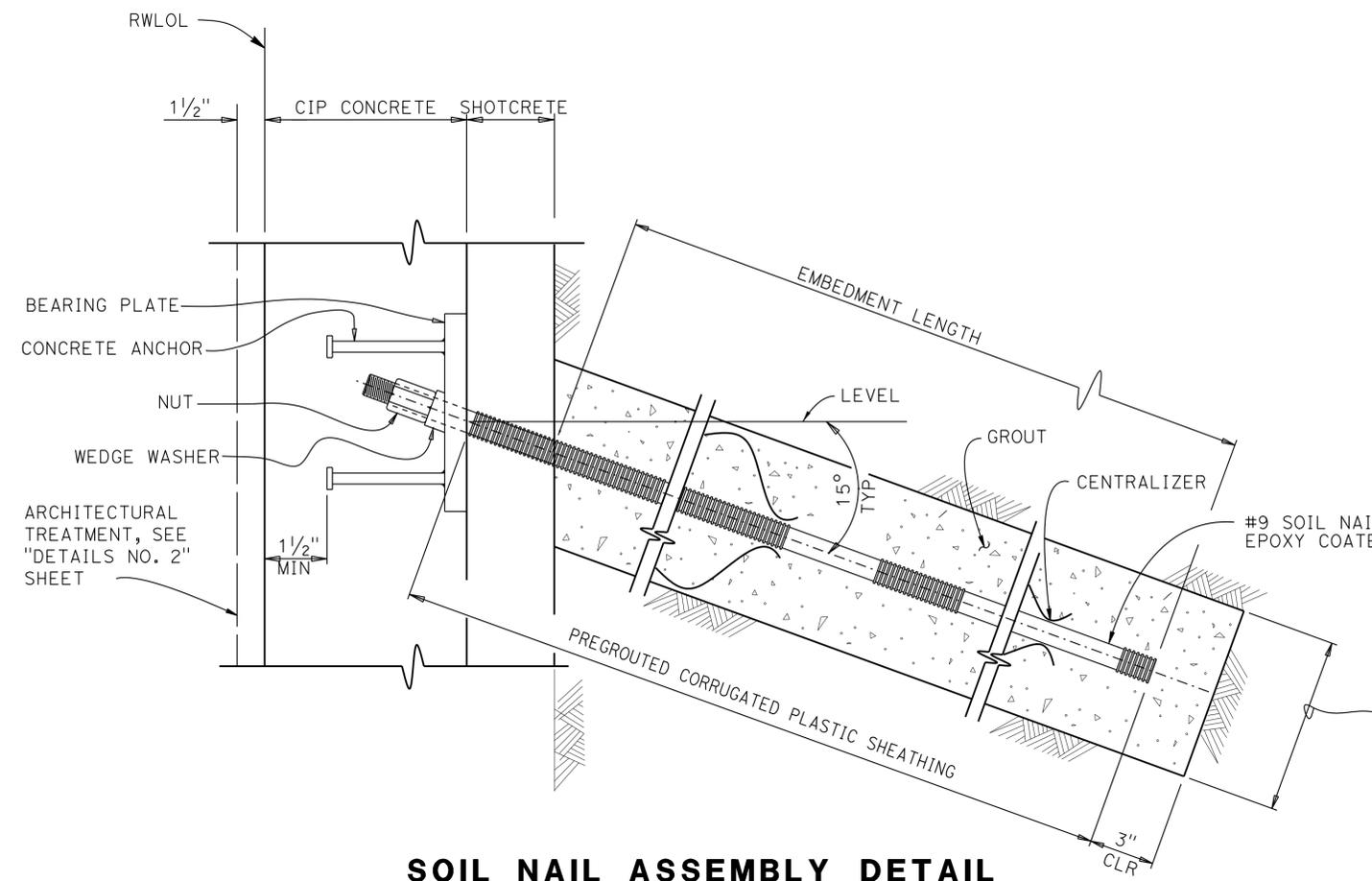
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 10**

**MID CITY BIKE FACILITY SNW-392**  
**STRUCTURE PLAN**

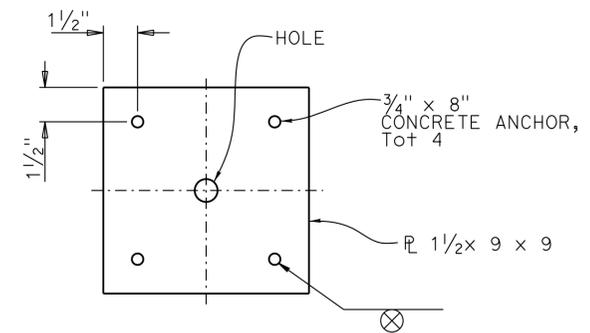
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	254	287
Renee M. Anderson		11-14-14		DATE	
REGISTERED CIVIL ENGINEER		DATE		RENEE ANDERSON	
05-26-15		PLANS APPROVAL DATE		No. 61040	
				Exp. 12-31-2016	
				CIVIL	
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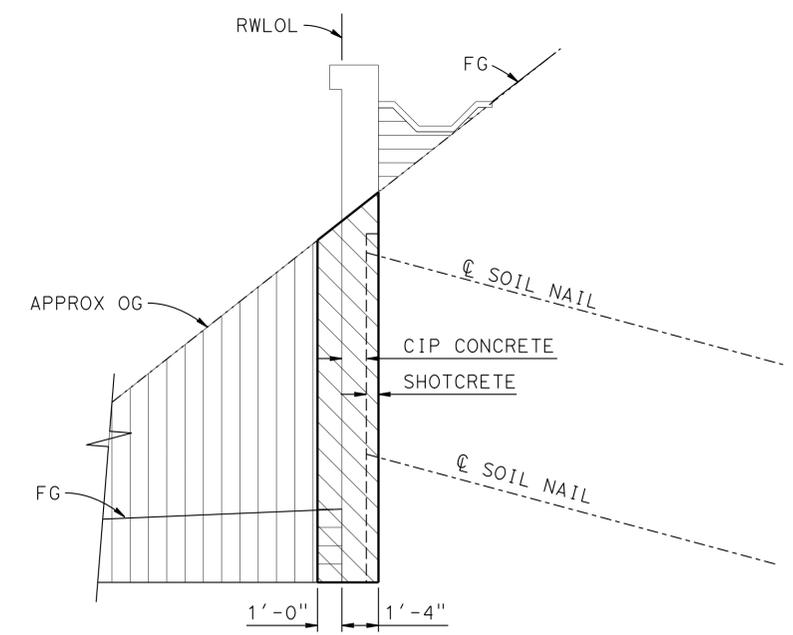
**SOIL NAIL ASSEMBLY DETAIL**  
NO SCALE



**BEARING PLATE DETAIL**  
NO SCALE

**NOTES:**

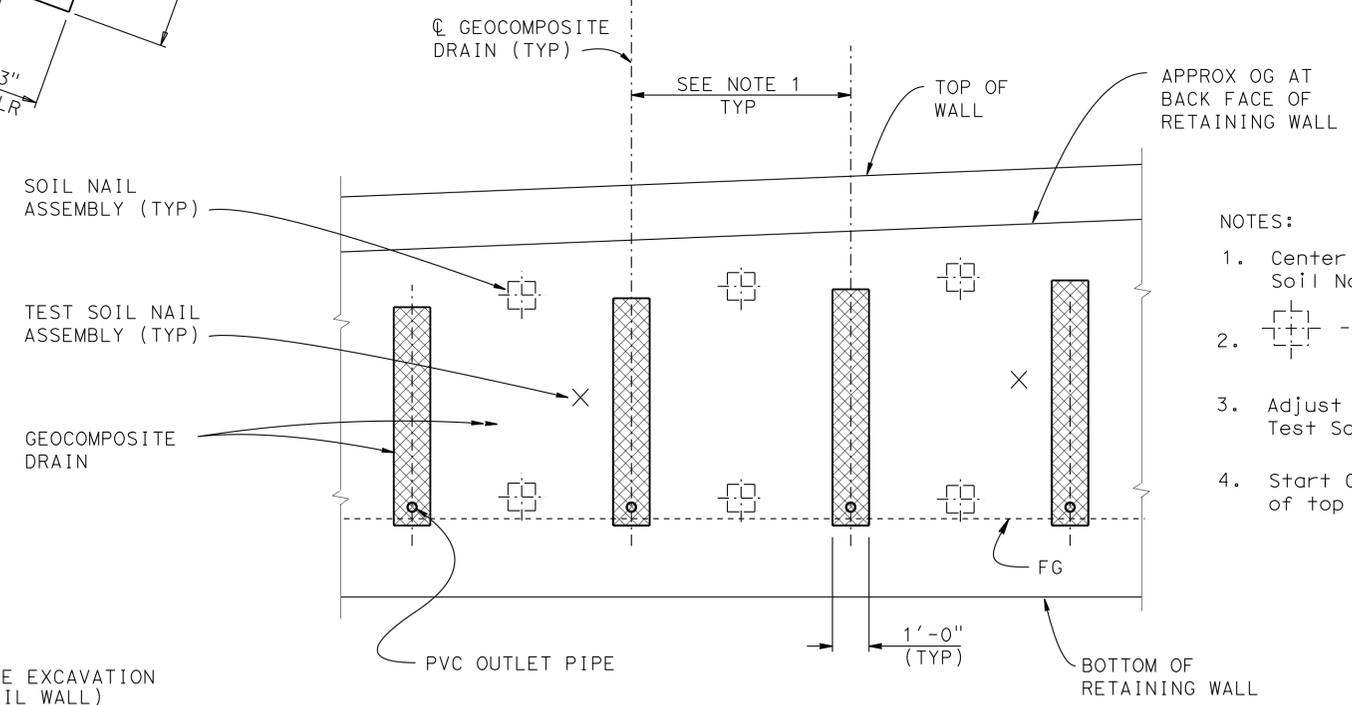
1. Required size and strength of reinforcing bar for Test Soil Nail to be determined by the contractor
2. Minimum hole diameter is bar diameter plus 4" or 2" grout cover.



**EXCAVATION & BACKFILL LIMITS**  
NO SCALE

**LEGEND:**

	STRUCTURE EXCAVATION (SOIL NAIL WALL)
	ROADWAY EXCAVATION SEE "ROAD PLANS"
	STRUCTURE BACKFILL (SOIL NAIL WALL)



**TYPICAL ELEVATION - GEOCOMPOSITE DRAIN**  
NO SCALE

**NOTES:**

1. Center Geocomposite drain between Soil Nail assemblies.
2. - Indicates Soil Nail Assembly.
3. Adjust Geocomposite Drain to clear Test Soil Nails.
4. Start Geocomposite Drain at elevation of top row of nails.

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY SNW-392
DETAILS	BY R. KIRKLAND	CHECKED M. VO			57E0121	
QUANTITIES	BY R. ANDERSON	CHECKED M. VO			M5.668	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES
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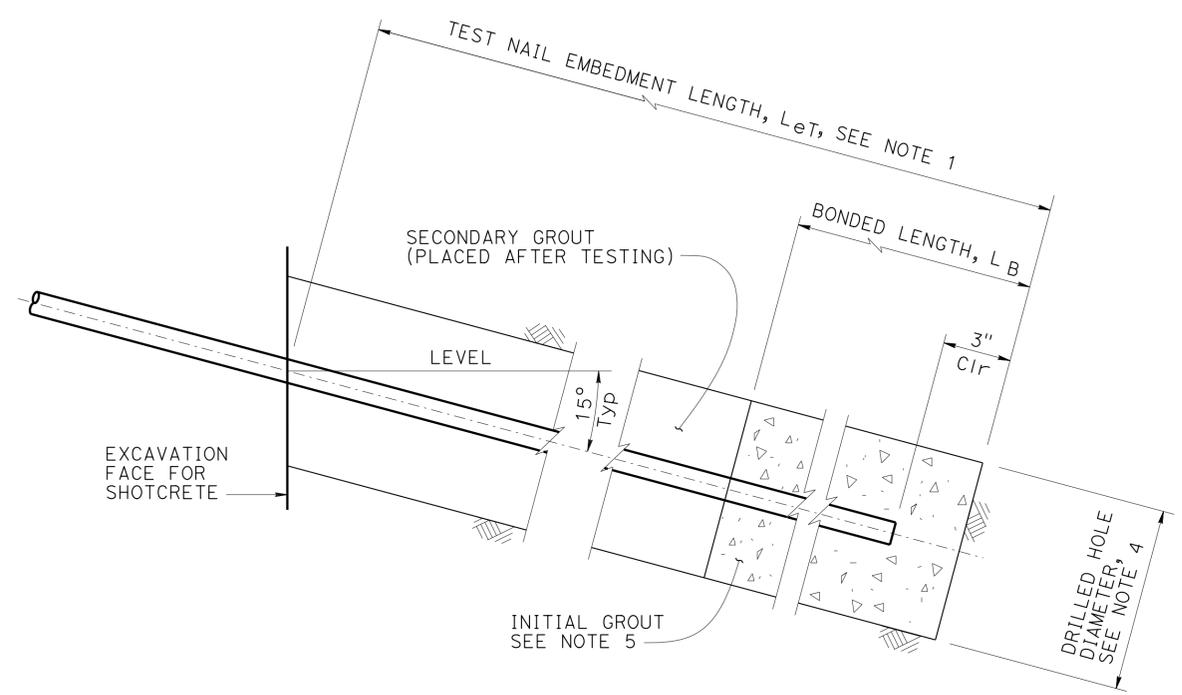
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	255	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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NOTES:

1. The test nail embedment length  $L_{eT}$ , shall be equal to  $2/3$  of the embedment length,  $L_e$ , of adjacent production soil nail assemblies, but not less than 12'-0".
2. The total length of the test nail assembly equals the embedment length plus the length required for jacking equipment.
3. For location of proof test nail see "STRUCTURE PLAN" sheets. Additional proof test nails will be installed and tested per special provisions.
4. Contractor to determine drilled hole diameter.
5. Finished grout surface to be normal to the bar.

**TEST NAIL DETAIL**  
3" = 1'-0"

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STANDARD DRAWING		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. 57E0121		MID CITY BIKE FACILITY SNW-392	
FILE NO. xs12-020	APPROVAL DATE July 2011					POST MILE M5.668		TEST NAIL DETAILS	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11))		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291		CONTRACT NO.: 11-2T1900	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 11-14-14 05-26-15	
								SHEET 6 OF 10	

FILE => 57e0121xs12-020-06.dgn

TIME PLOTTED => 15:24  
DATE PLOTTED => 28-MAY-2015  
USERNAME => s127400

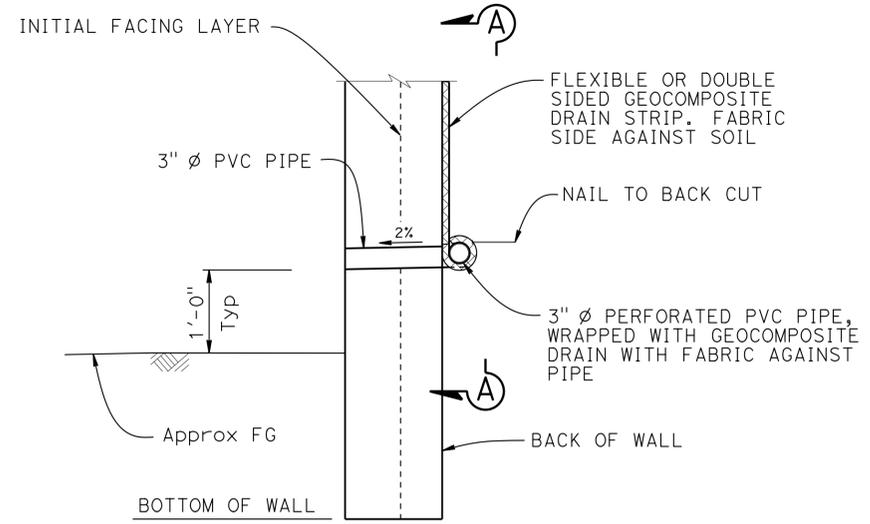
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	256	287

*Renee M. Anderson* 11-14-14  
REGISTERED CIVIL ENGINEER DATE

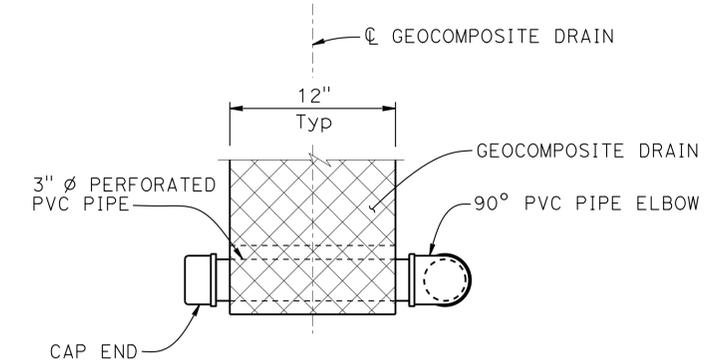
05-26-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
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.

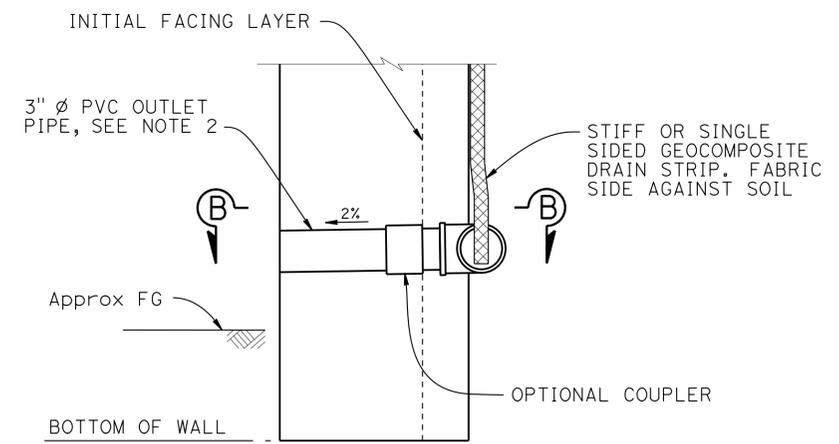


**WALL DRAIN DETAIL AT WEEPHOLE**  
**OPTION A**  
No scale

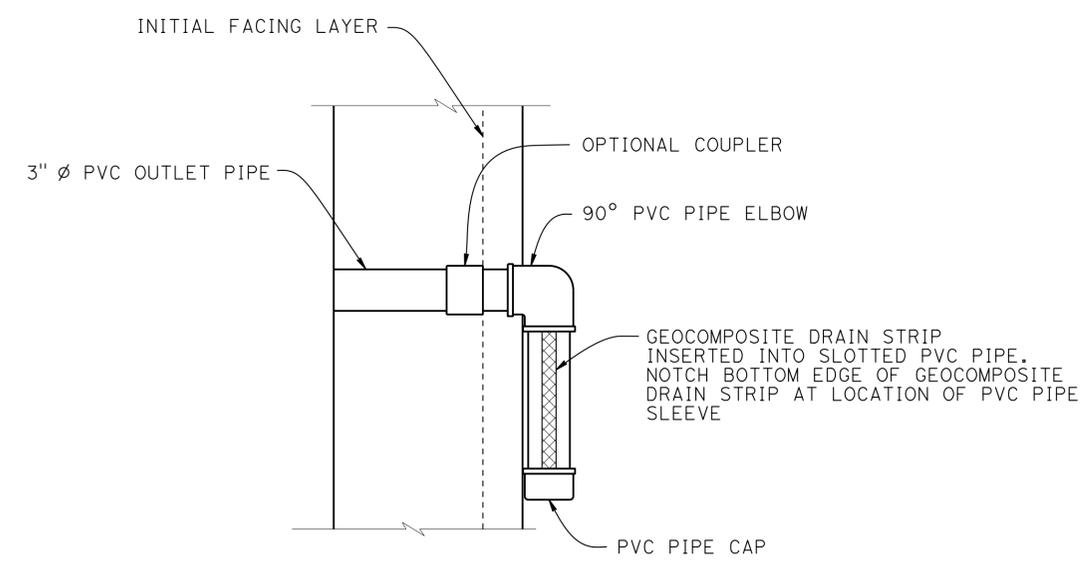


**VIEW A-A**  
No scale

- NOTES:
1. Geocomposite drain strip per Section 88 Geosynthetics of the Standard Specifications
  2. Elevation of drains and weepholes as shown on "SOIL NAIL DETAILS" sheet.



**WALL DRAIN DETAIL AT WEEPHOLE**  
**OPTION B**  
No scale



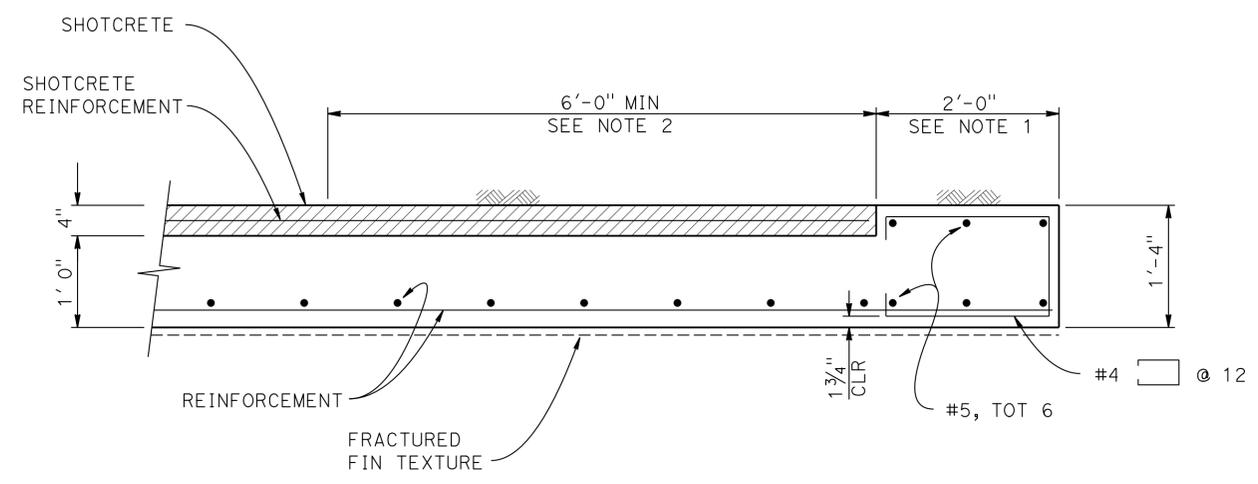
**SECTION B-B**  
No Scale

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN DETAILS QUANTITIES	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO. 57E0121	<b>MID CITY BIKE FACILITY SNW-392</b> <b>WALL DRAIN DETAILS</b>			
	BY R. KIRKLAND	CHECKED M. VO			POST MILE M5.668				
	BY R. ANDERSON	CHECKED M. VO							
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 6/28/12 9/28/14 11-14-14	SHEET 7	OF 10

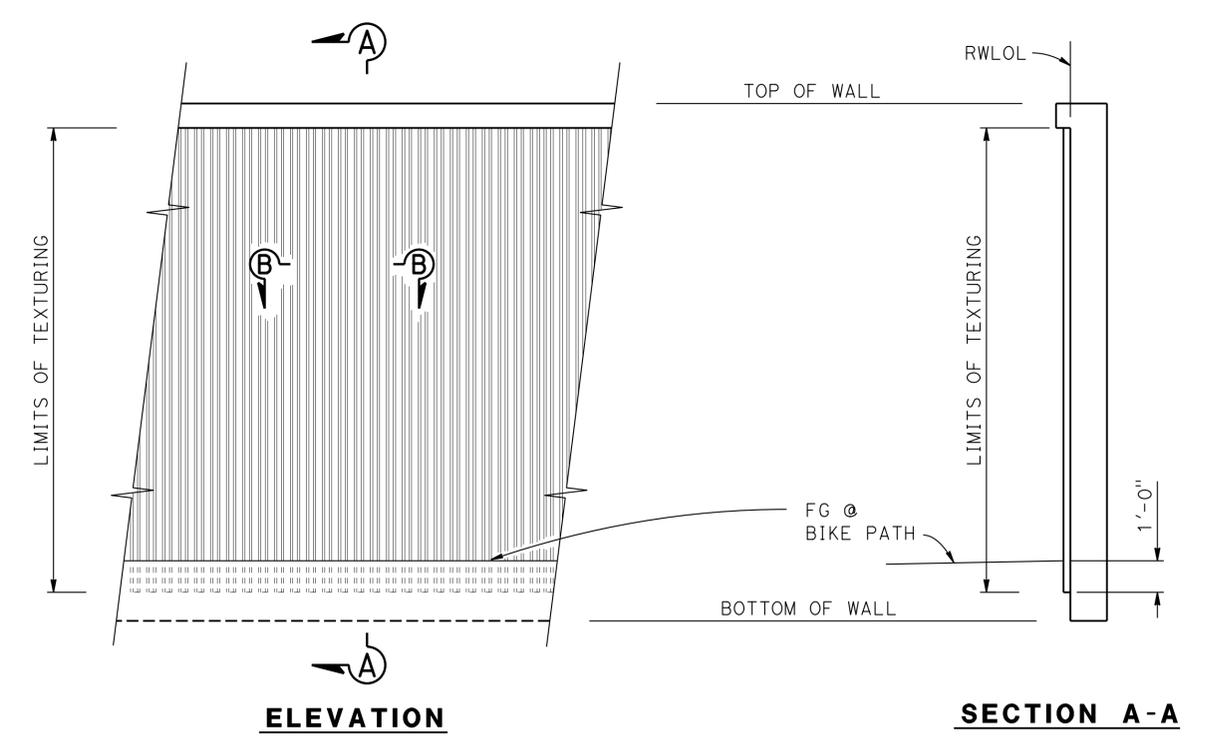
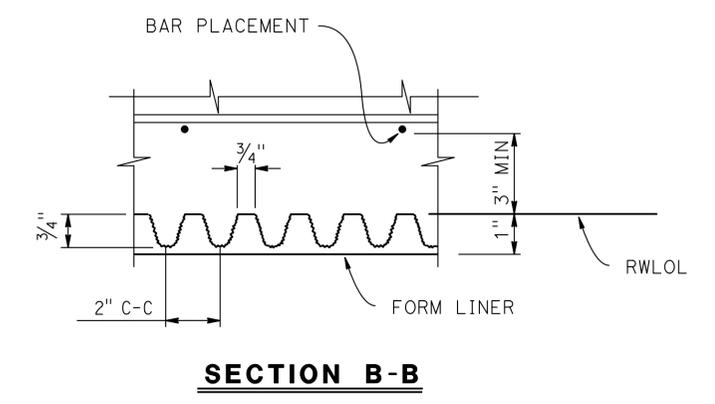
DATE PLOTTED => 15/24  
28-MAY-2015  
57E0121X12-021-07.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	257	287
Renee M. Anderson		11-14-14			
REGISTERED CIVIL ENGINEER		DATE			
05-26-15					
PLANS APPROVAL DATE					
REGISTERED PROFESSIONAL ENGINEER RENEE ANDERSON No. 61040 Exp. 12-31-2016 CIVIL STATE OF CALIFORNIA					
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- NOTES:
- Upper 2'-0" of inside face to be placed against form. Remainder may be placed against undisturbed material.
  - Abrasive blast methods shall be used to clean the shotcrete surface to the extent that clean aggregate is exposed within these limits prior to constructing cast in place concrete.

**BEGIN/END OF WALL PLAN**  
1"=1'-0"

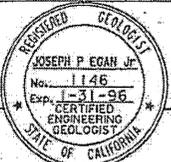


**FRACTURED FIN TEXTURE**  
NO SCALE

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY	R. ANDERSON	CHECKED	M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	57E0121	MID CITY BIKE FACILITY SNW-392 DETAILS NO. 1		
	DETAILS	BY	R. KIRKLAND	CHECKED			M. VO	POST MILE		M5.668	
	QUANTITIES	BY	R. ANDERSON	CHECKED			M. VO				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 8 OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	R3.8/R6.0	763	1049

  
 CERTIFIED ENGINEERING GEOLOGIST  
 11-27-95  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

**GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES**

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	258	287

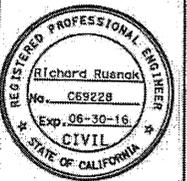
REGISTERED ENGINEER-CIVIL  
 DATE: 5/13/2014

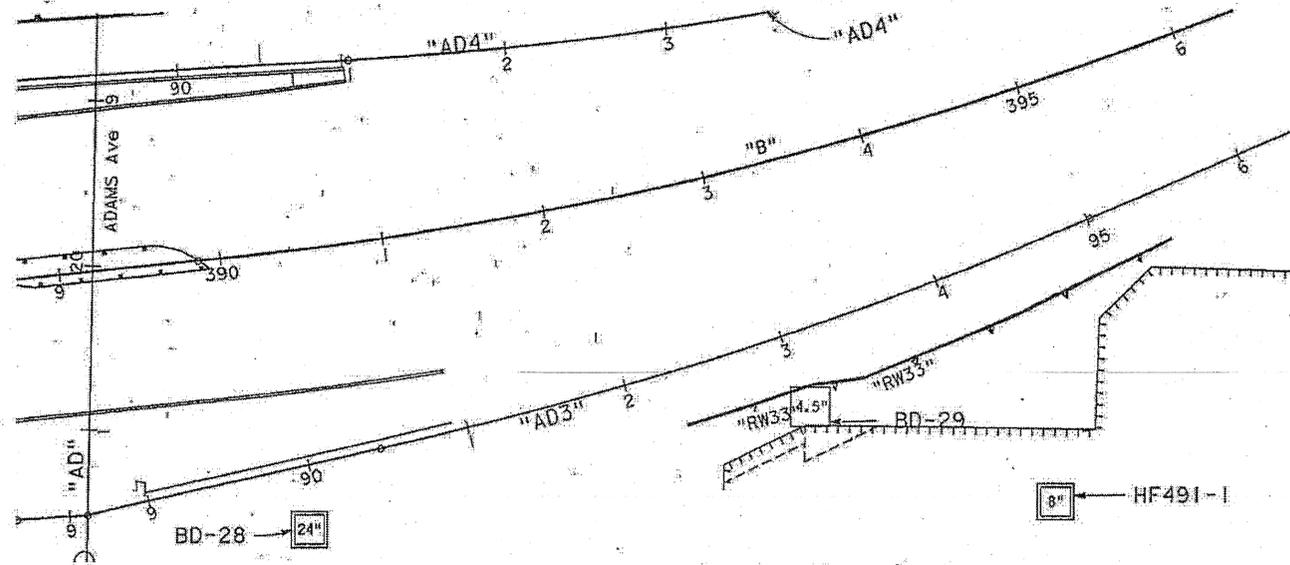
**BIKE FACILITY SNW-302**

**LOG OF TEST BORINGS** 1 OF 2

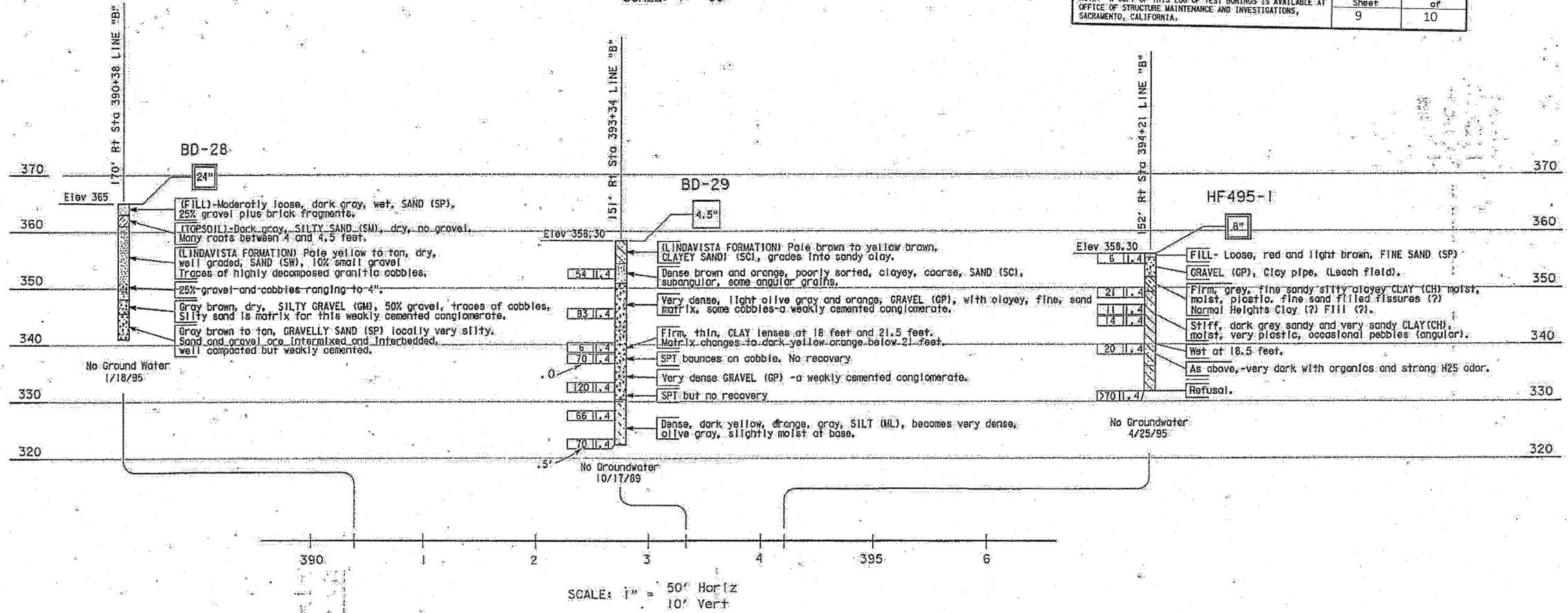
UNIT: 3643	CONTRACT No. 11-2T1901	BRIDGE No.
PROJECT NUMBER AND PHASE: 1100020291	Sheet 9	of 10

NOTES: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA.

  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL



**PLAN RW-33**  
SCALE: 1" = 50'



- LEGEND OF EARTH MATERIALS**
- CLAY
  - SILT
  - SAND
  - GRAVEL
  - SANDY CLAY
  - CLAYEY SAND
  - SANDY SILT
  - SILTY SAND
  - SILTY CLAY

- LEGEND OF EARTH MATERIALS**
- CLAYEY SILT
  - ORGANIC MATTER AND/OR PEAT
  - SEDIMENTARY METAMORPHIC ROCK
  - IGNEOUS ROCK
  - CLAY
  - SILT
  - SAND
  - GRAVEL
  - SANDY CLAY
  - CLAYEY SAND
  - SANDY SILT
  - SILTY SAND
  - SILTY CLAY

- LEGEND OF EARTH MATERIALS**
- CLAY
  - SILT
  - SAND
  - GRAVEL
  - SANDY CLAY
  - CLAYEY SAND
  - SANDY SILT
  - SILTY SAND
  - SILTY CLAY

**CONSISTENCY CLASSIFICATION FOR SOILS**

According to the Standard Penetration Test

Penetration (blows/ft)	Consistency
0-4	Very soft
5-9	Soft
10-19	Slightly compact
20-24	Compact
25-29	Very stiff
30-34	Stiff
35-39	Very stiff
40-44	Hard
45-49	Very hard
50-54	Very hard
55-59	Very hard
60-64	Very hard
65-69	Very hard
70	Very hard

**NOTE:** Classification of earth material as shown on this sheet may be based upon field inspection and is not to be construed to imply mechanical analysis.

DRAWN BY: A. RAMOS  
 CHECKED BY: R. OQUITA, Z. YAZDANI

ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

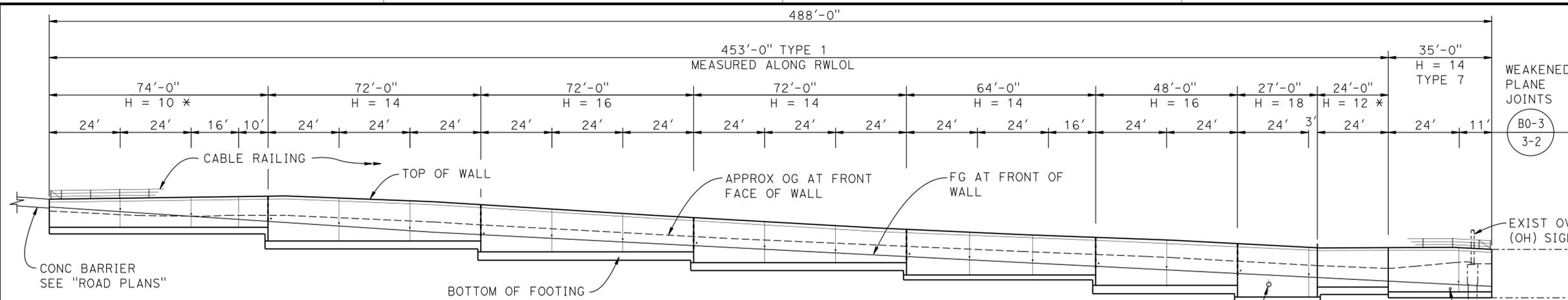
**CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.	<b>SOIL NAIL WALL RW-33</b>		
POST MILE	<b>LOG OF TEST BORINGS</b>		
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF
	5/15/95	8	9



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	260	287

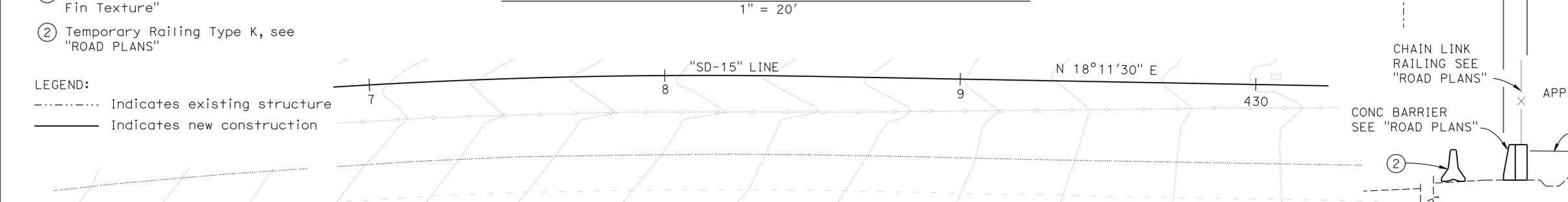
Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE  
 05-26-15  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



- NOTES:
- Architectural treatment "Fractured Fin Texture"
  - Temporary Railing Type K, see "ROAD PLANS"
- LEGEND:
- Indicates existing structure
  - Indicates new construction

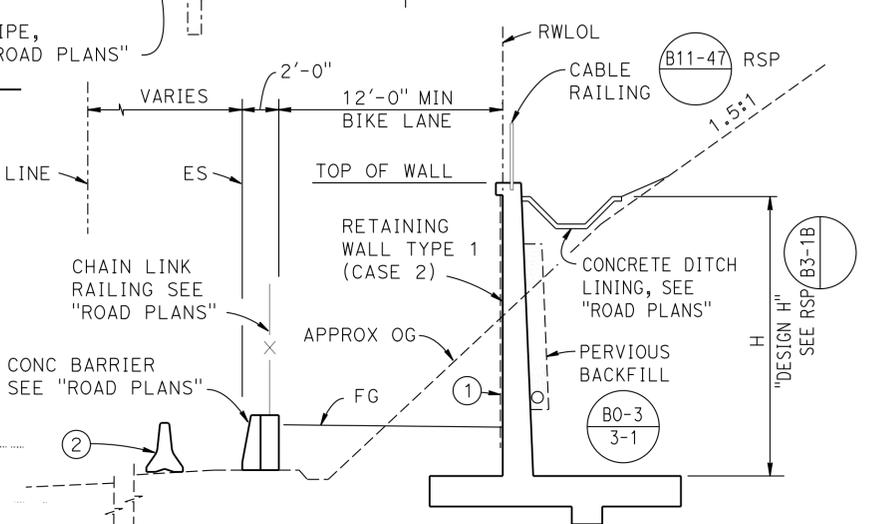
**MIRRORED DEVELOPED ELEVATION**

1" = 20'



**TYPICAL SECTION**

1" = 5'



- NOTE:
- \* = Ⓞ bar is #7 for H = 10
  - Ⓞ bar is #8 for H = 12
  - see RSP B3-1B for Ⓞ bar

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**PLAN**

1" = 20'

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	
LAYOUT	BY R. ANDERSON	CHECKED M. VO
SPECIFICATIONS	BY V. RENGANATHAN	PLANS AND SPECS COMPARED V. RENGANATHAN

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	
DIVISION OF ENGINEERING SERVICES	
STRUCTURE DESIGN	
DESIGN BRANCH 10	

BRIDGE NO.	57E0122
POST MILE	R5.708

**MID CITY BIKE FACILITY RW-426**

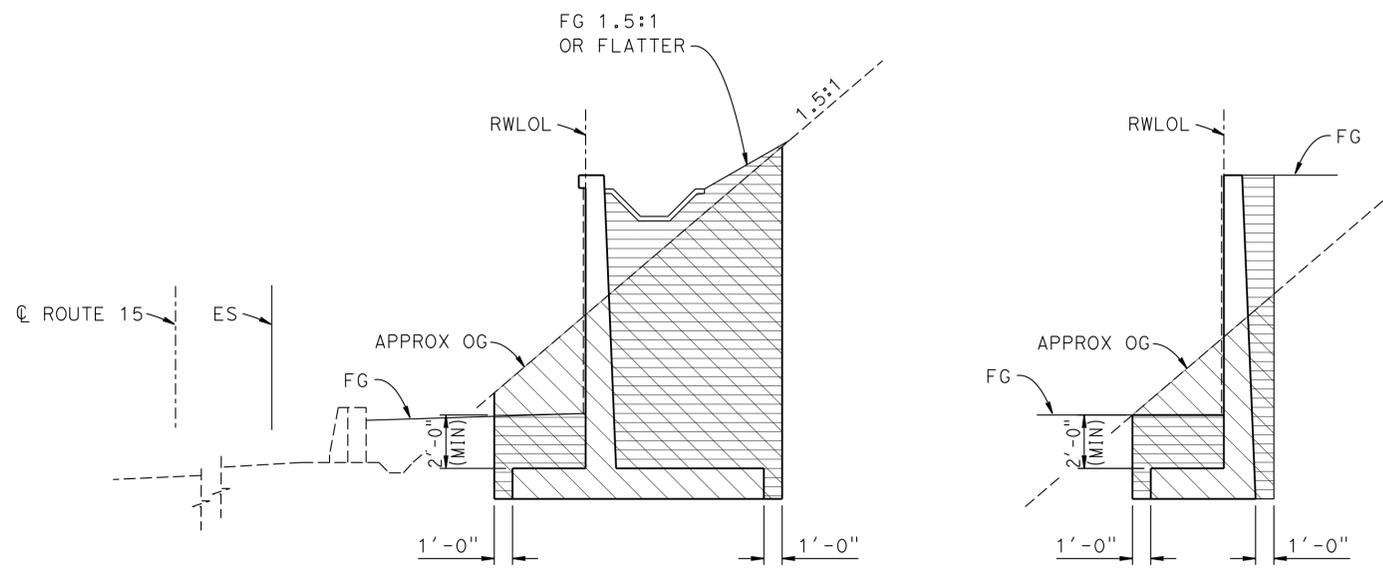
**GENERAL PLAN**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	261	287

Renee M. Anderson  
REGISTERED CIVIL ENGINEER  
11-14-14 DATE  
05-26-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**TYPE 1 WALL (TYP)**

**TYPE 7 WALL (TYP)**

STRUCTURE EXCAVATION (RETAINING WALL)  
 STRUCTURE BACKFILL (RETAINING WALL)

**EXCAVATION & BACKFILL LIMITS**  
NO SCALE

**INDEX TO PLANS**

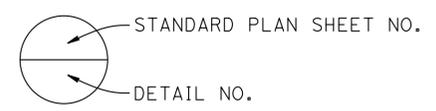
Sheet No.	Title
1	GENERAL PLAN
2	INDEX TO PLANS
3	STRUCTURE PLAN NO. 1
4	STRUCTURE PLAN NO. 2
5	STRUCTURE PLAN NO. 3
6	STRUCTURE PLAN NO. 4
7	DETAILS NO. 1
8	DETAILS NO. 2
9	RETAINING WALL TYPE 7 DETAILS
10	LOG OF TEST BORINGS

**STANDARD PLANS DATED 2010**

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
(RSP) A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-3	BRIDGE DETAILS
(RSP) B3-1B	RETAINING WALL TYPE 1 (CASE 2)
(RSP) B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
(RSP) B11-47	CABLE RAILING

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	3,848	CY
STRUCTURE BACKFILL (RETAINING WALL)	2,827	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	110	CY
STRUCTURAL CONCRETE, RETAINING WALL	1,181	CY
FRACTURED FIN TEXTURE	4,805	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	125,245	LB
CABLE RAILING	498	LF



RSP = REVISED STANDARD PLAN

NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY RW-426				
DETAILS	BY R. KIRKLAND	CHECKED M. VO			57E0122					
QUANTITIES	BY R. ANDERSON	CHECKED M. VO			R5.708					
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 2 OF 10

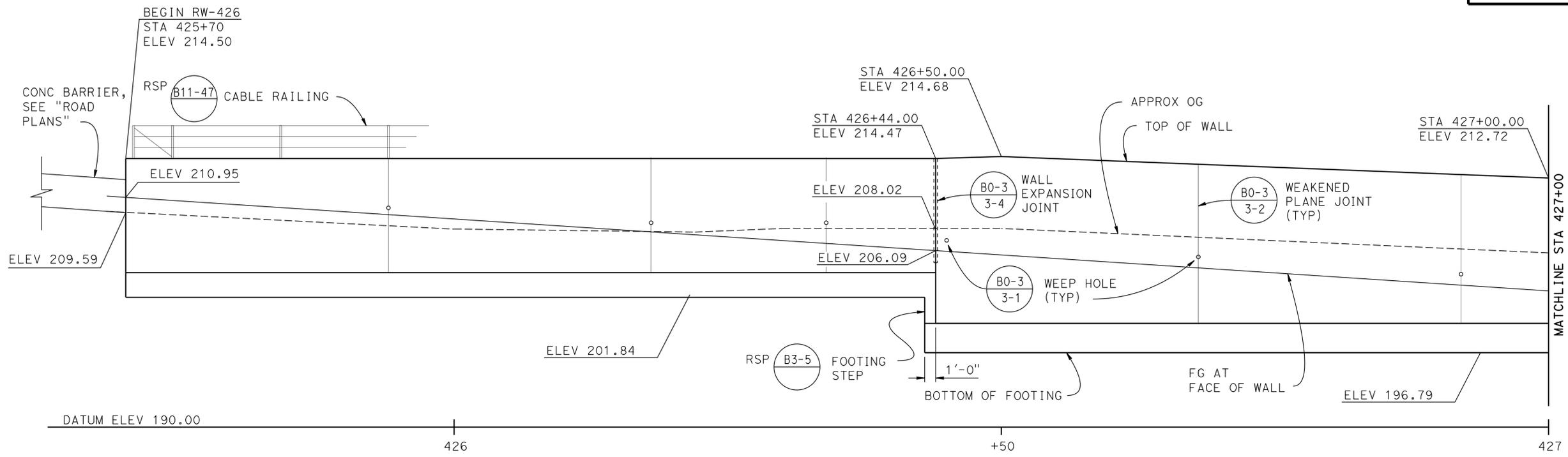
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	262	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

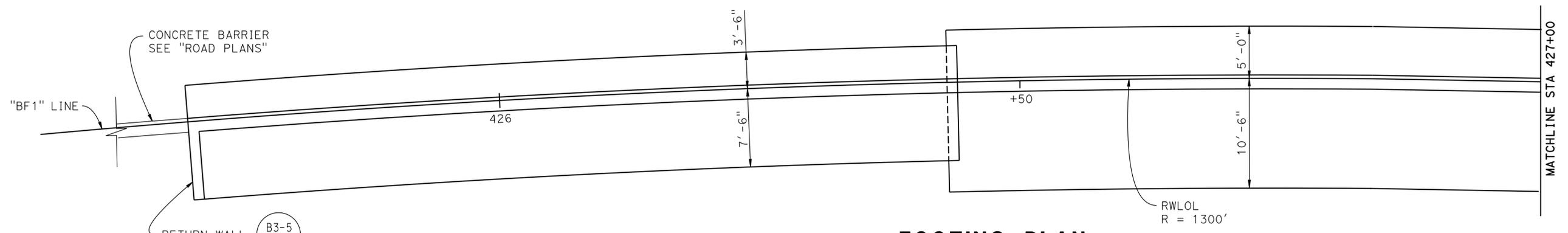
05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**DEVELOPED MIRRORED ELEVATION**  
 $\frac{3}{16}'' = 1' - 0''$



**FOOTING PLAN**  
 $\frac{3}{16}'' = 1' - 0''$

NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 10**

BRIDGE NO.	57E0122
POST MILE	R5.708

**MID CITY BIKE FACILITY RW-426**  
**STRUCTURE PLAN NO. 1**



REVISION DATES	SHEET	OF
6/22/12 11-14-14 9/23/14	3	10

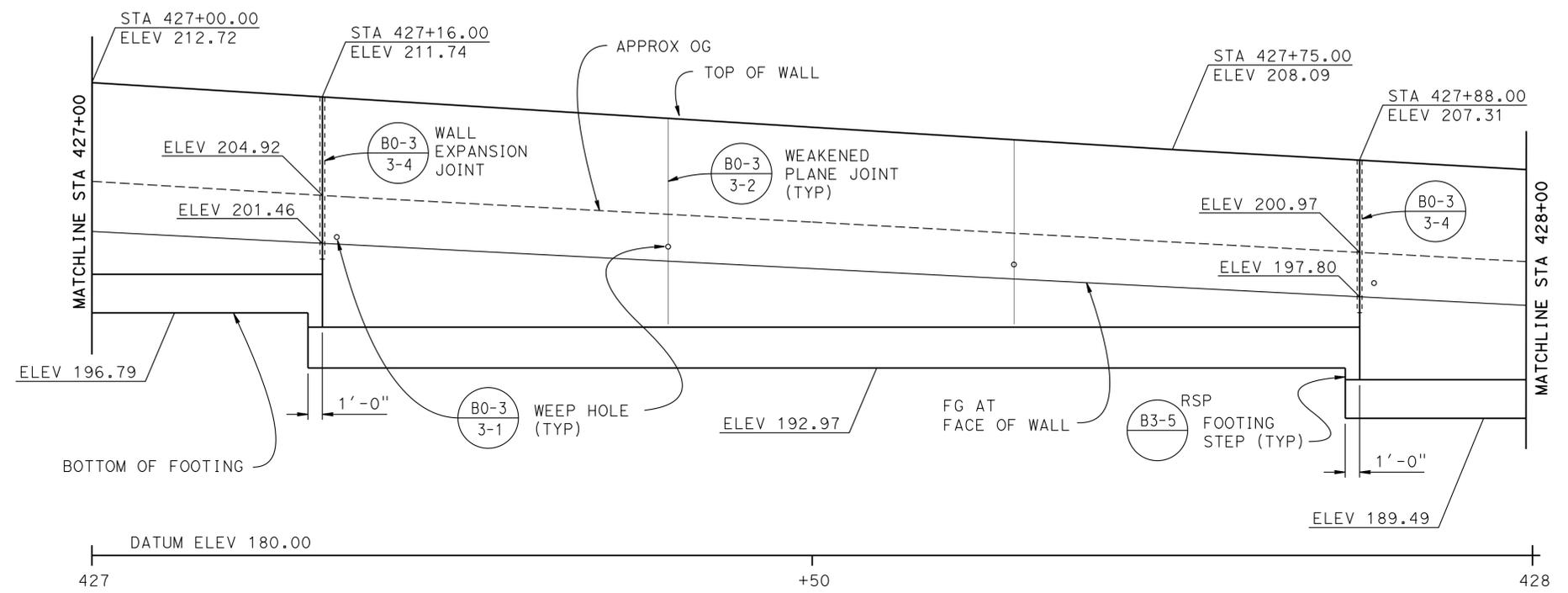
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	263	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

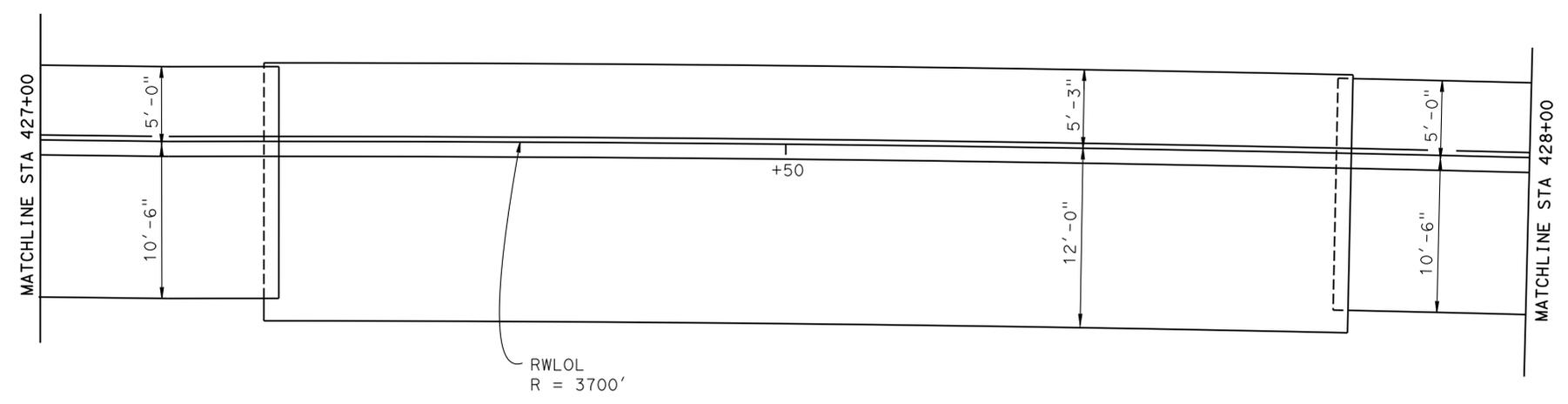
05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**DEVELOPED MIRRORED ELEVATION**  
 $\frac{3}{16}'' = 1' - 0''$



**FOOTING PLAN**  
 $\frac{3}{16}'' = 1' - 0''$

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY RW-426 STRUCTURE PLAN NO. 2
	DETAILS	BY R. KIRKLAND	CHECKED M. VO			57E0122	
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO			R5.708	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES
0 1 2 3					REVISION DATES	SHEET 4	OF 10

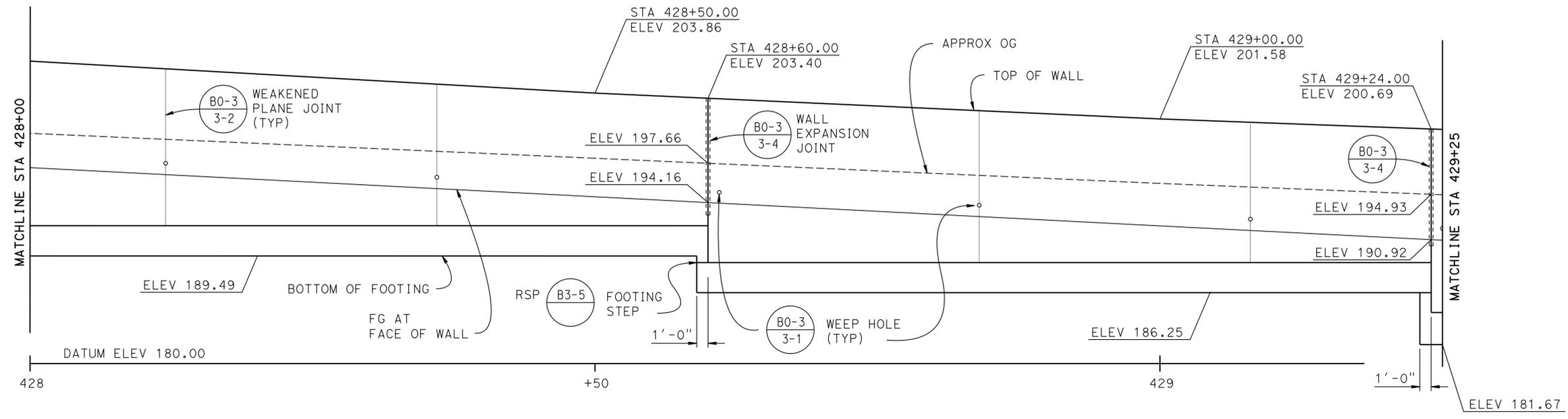
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	264	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

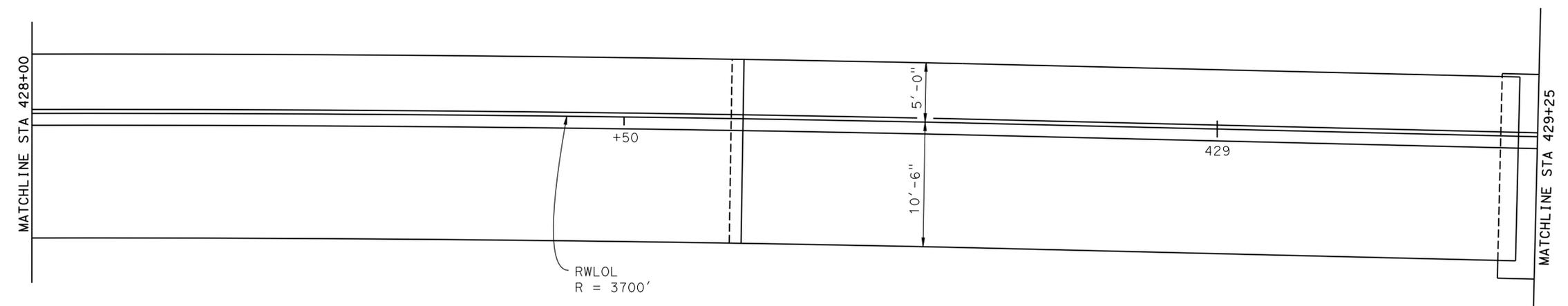
05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**DEVELOPED MIRRORED ELEVATION**  
 $\frac{3}{16}'' = 1' - 0''$



**FOOTING PLAN**  
 $\frac{3}{16}'' = 1' - 0''$

NOTE:  
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STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	57E0122	MID CITY BIKE FACILITY RW-426 STRUCTURE PLAN NO. 3	
	DETAILS	BY R. KIRKLAND	CHECKED M. VO			POST MILE	R5.708		
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
								REVISION DATES	SHEET 5 OF 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	265	287

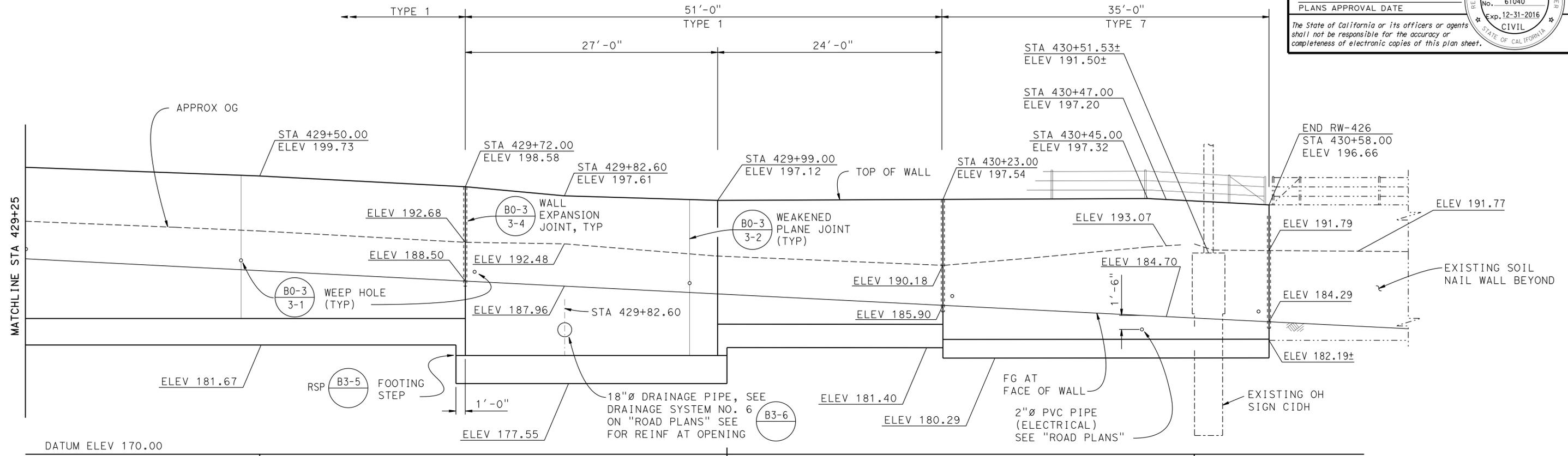
*Renee M. Anderson* 11-14-14  
 REGISTERED CIVIL ENGINEER DATE

05-26-15  
 PLANS APPROVAL DATE

RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL

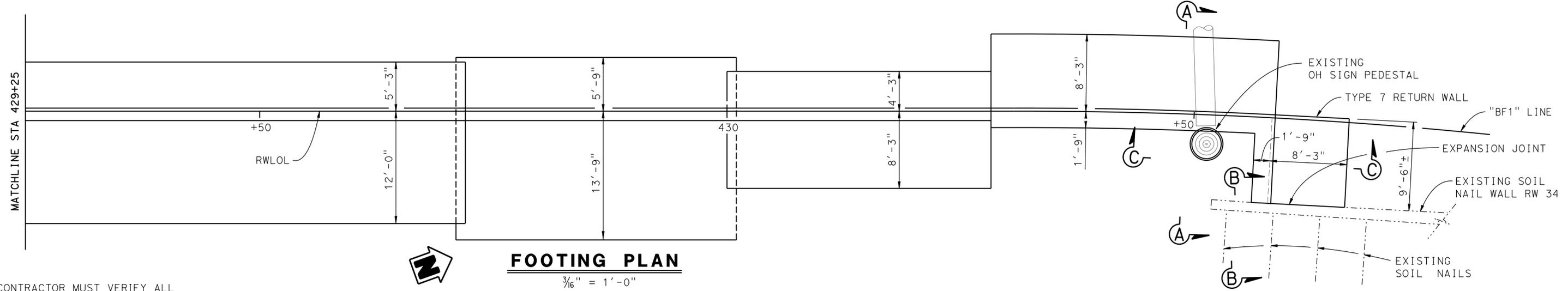
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTE:  
 For SECTION A-A, SECTION B-B AND SECTION C-C, see "DETAILS NO. 1" sheet.



**DEVELOPED MIRRORED ELEVATION**

3/16" = 1'-0"



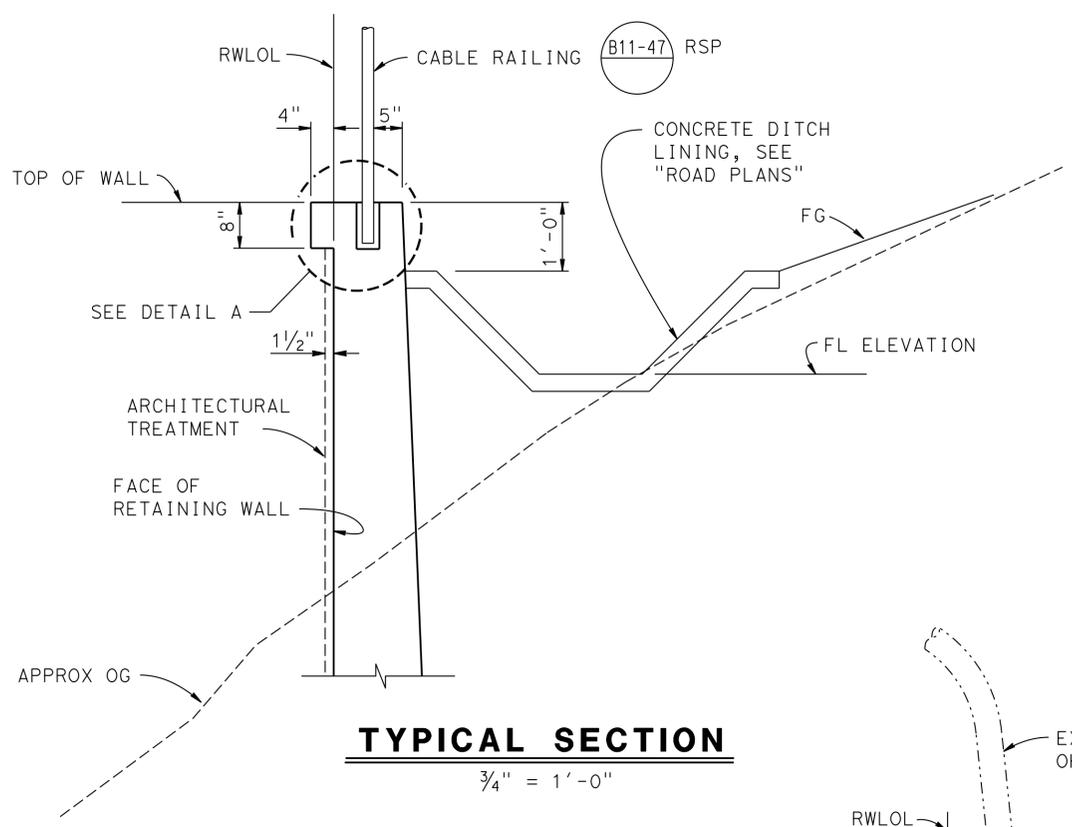
**FOOTING PLAN**

3/16" = 1'-0"

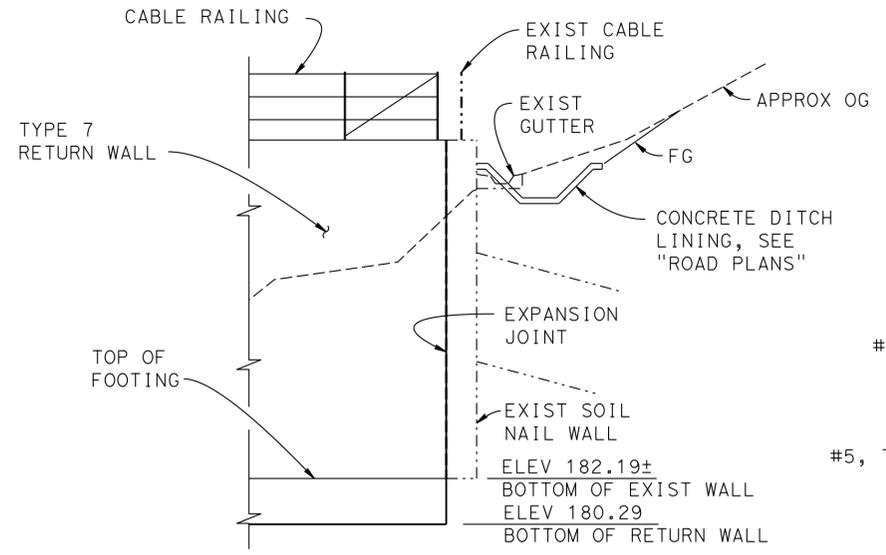
NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY RW-426 STRUCTURE PLAN NO. 4
DETAILS	BY R. KIRKLAND	CHECKED M. VO			57E0122	
QUANTITIES	BY R. ANDERSON	CHECKED M. VO			POST MILE R5.708	

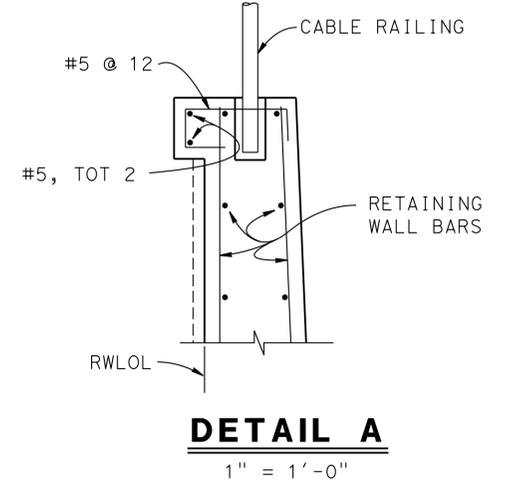
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	266	287
Renee M. Anderson		11-14-14		DATE	
REGISTERED CIVIL ENGINEER		No. 61040		Exp. 12-31-2016	
05-26-15		PLANS APPROVAL DATE		CIVIL	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



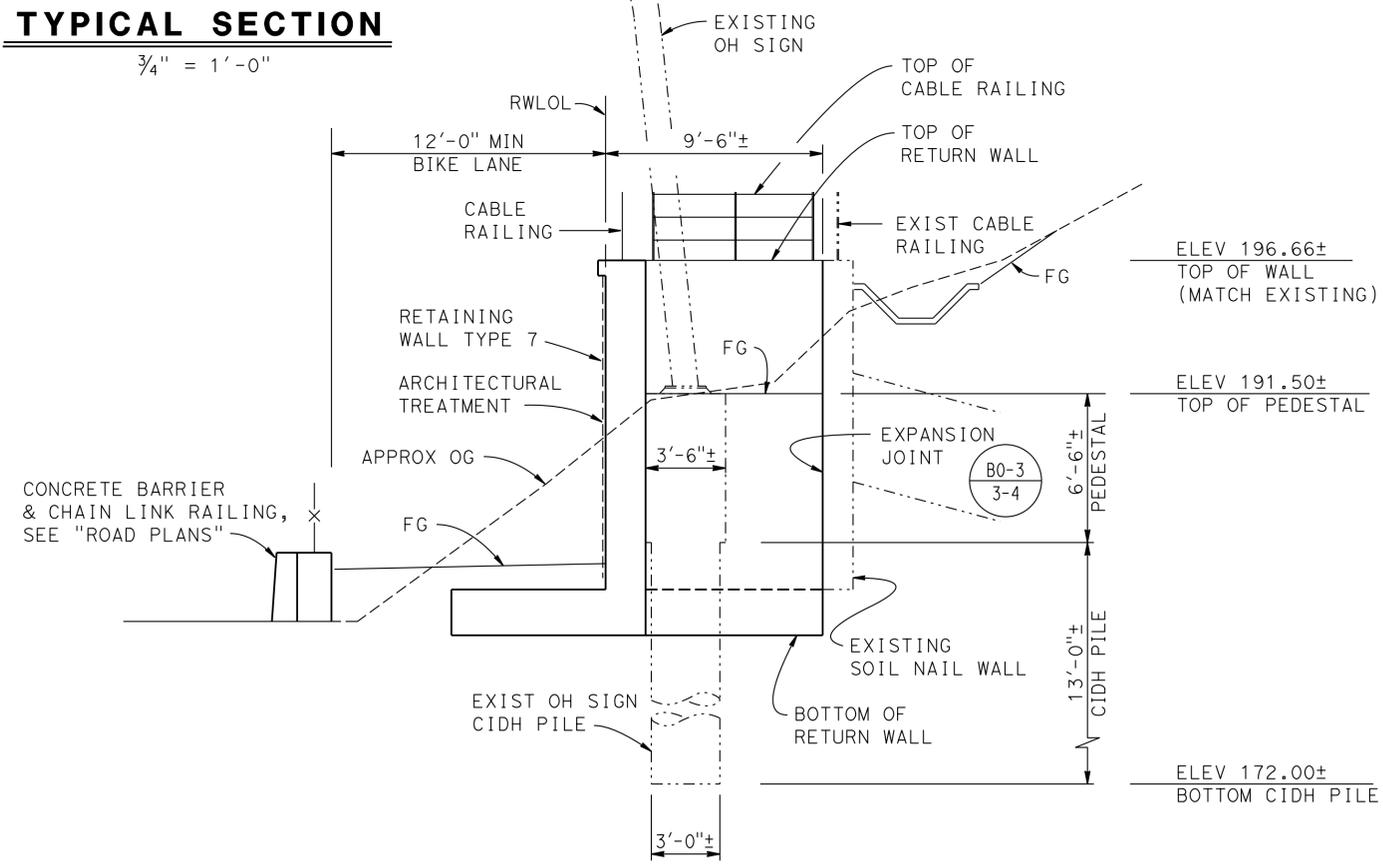
**TYPICAL SECTION**  
3/4" = 1'-0"



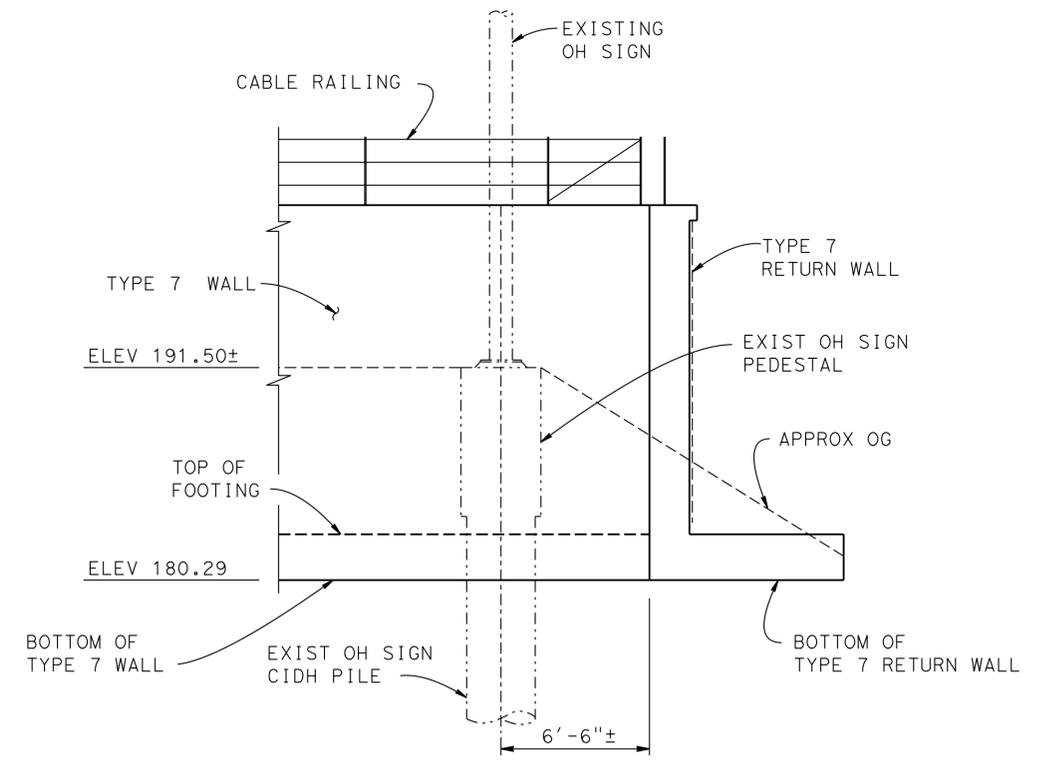
**SECTION B-B**  
1/4" = 1'-0"



**DETAIL A**  
1" = 1'-0"



**SECTION A-A**  
1/4" = 1'-0"



**SECTION C-C**  
1/4" = 1'-0"

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO.	57E0122
POST MILE	R5.708

MID CITY BIKE FACILITY RW-426  
DETAILS NO.1

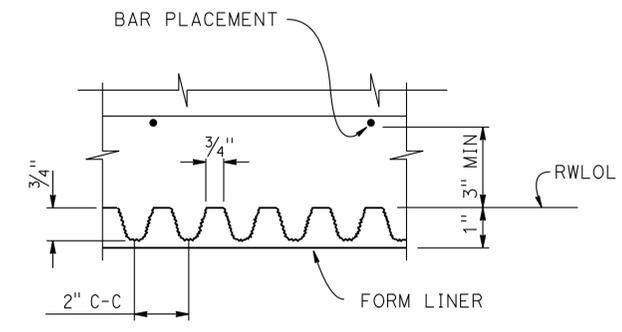
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	267	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

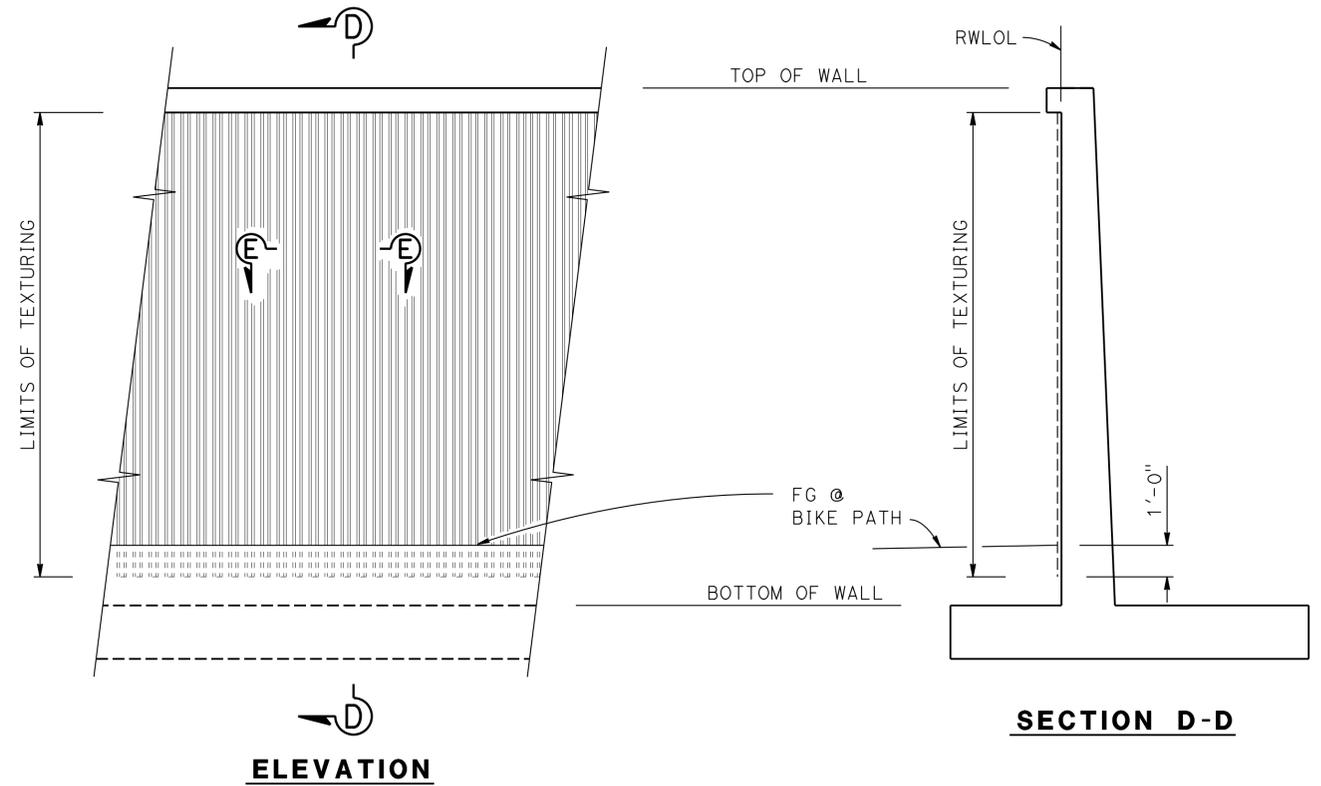
05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**SECTION E-E**



**ELEVATION**

**SECTION D-D**

**FRACTURED FIN TEXTURE**  
NO SCALE

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN BY R. ANDERSON CHECKED M. VO DETAILS BY R. KIRKLAND CHECKED M. VO QUANTITIES BY R. ANDERSON CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO. 57E0122 POST MILE R5.708	<b>MID CITY BIKE FACILITY RW-426</b> <b>DETAILS NO.2</b>
	STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291 CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES
	0 1 2 3	FILE => 57e0122usnd+08.dgn	REVISION DATES 6/22/12 11-14-14 9/23/14	SHEET 8 OF 10

TIME PLOTTED => 15:24  
DATE PLOTTED => 28-MAY-2015  
USERNAME => s127400

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	268	287

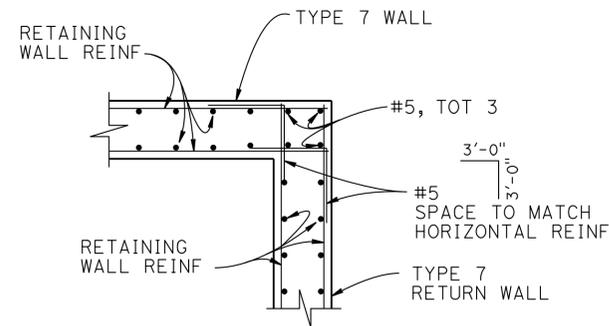
  

Renee M. Anderson		11-14-14
REGISTERED CIVIL ENGINEER	DATE	
05-26-15		
PLANS APPROVAL DATE		

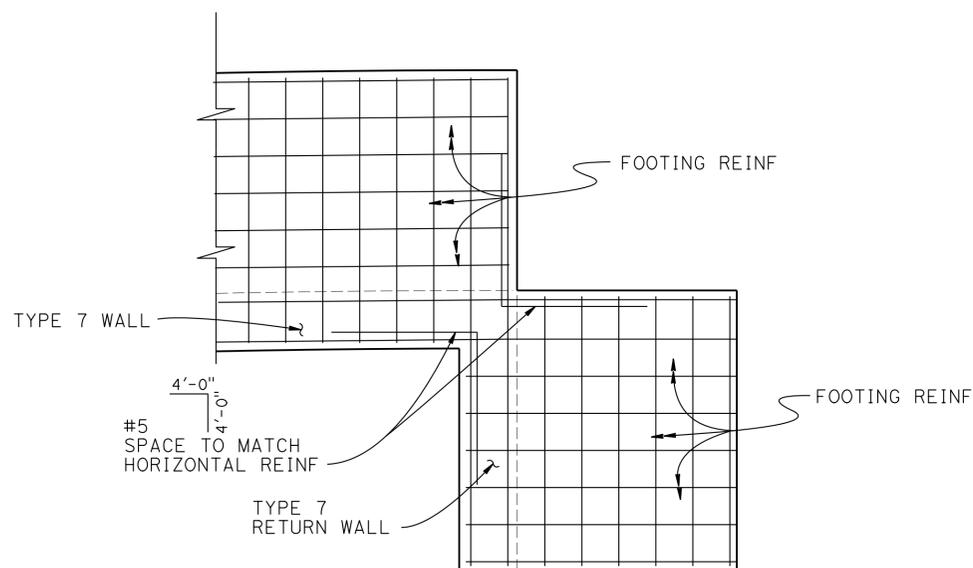
REGISTERED PROFESSIONAL ENGINEER	RENEE ANDERSON
No. 61040	Exp. 12-31-2016
CIVIL	

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



### TYPE 7 WALLS AT INTERSECTION

No Scale



### TYPE 7 WALLS AT FOOTING

No Scale

NOTE:  
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### DESIGN DATA

Design: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments

LS: Varied surcharge on level ground surface

CT: 54 kip maximum traffic impact loading evenly distributed over 10 feet at top of the barrier and 1:1 distribution down and outward

EQE: Mononabe-Okabe Method

$$K_h = 0.2$$

$$K_v = 0.0$$

Soil:  $\phi = 34^\circ$   
 $\gamma = 120$  pcf

Reinforced Concrete:  $f'_c = 3600$  psi  
 $f_y = 60,000$  psi

Load Combinations and Limit States

Service I  $Q=1.00DC+1.00EV+1.00EH+1.00LS+Td$

Strength I  $Q=aDC+\beta EV+1.50EH+1.75LS+Td$

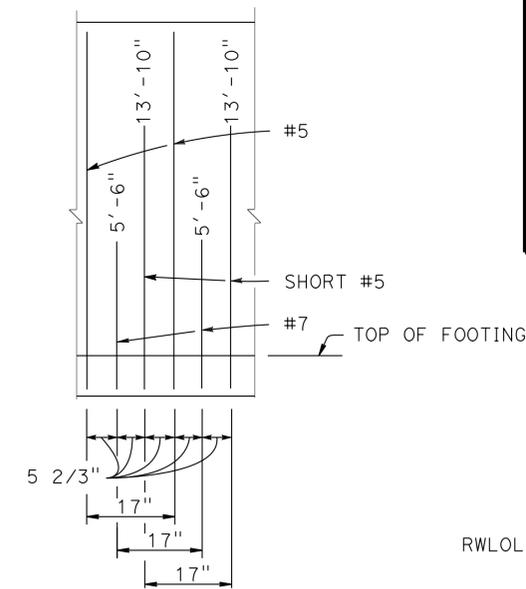
Extreme I  $Q=1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE+Td$

Extreme II  $Q=1.00DC+1.00EV+1.00EH+1.00CT+Td$

Where: Q: Force Effects  
a: 1.25 or 0.90, which ever Controls Design  
β: 1.35 or 1.00, which ever Controls Design  
DC: Dead Load of Structure Components  
EV: Vertical Earth Fill Pressure  
LS: Live Load Surcharge  
EQE: Seismic Earth Pressure  
EQD: Soil and Structure Components Inertia. Soil inertia ignored for stem design  
CT: Vehicular Collision Force  
Td: Anchor Design Load

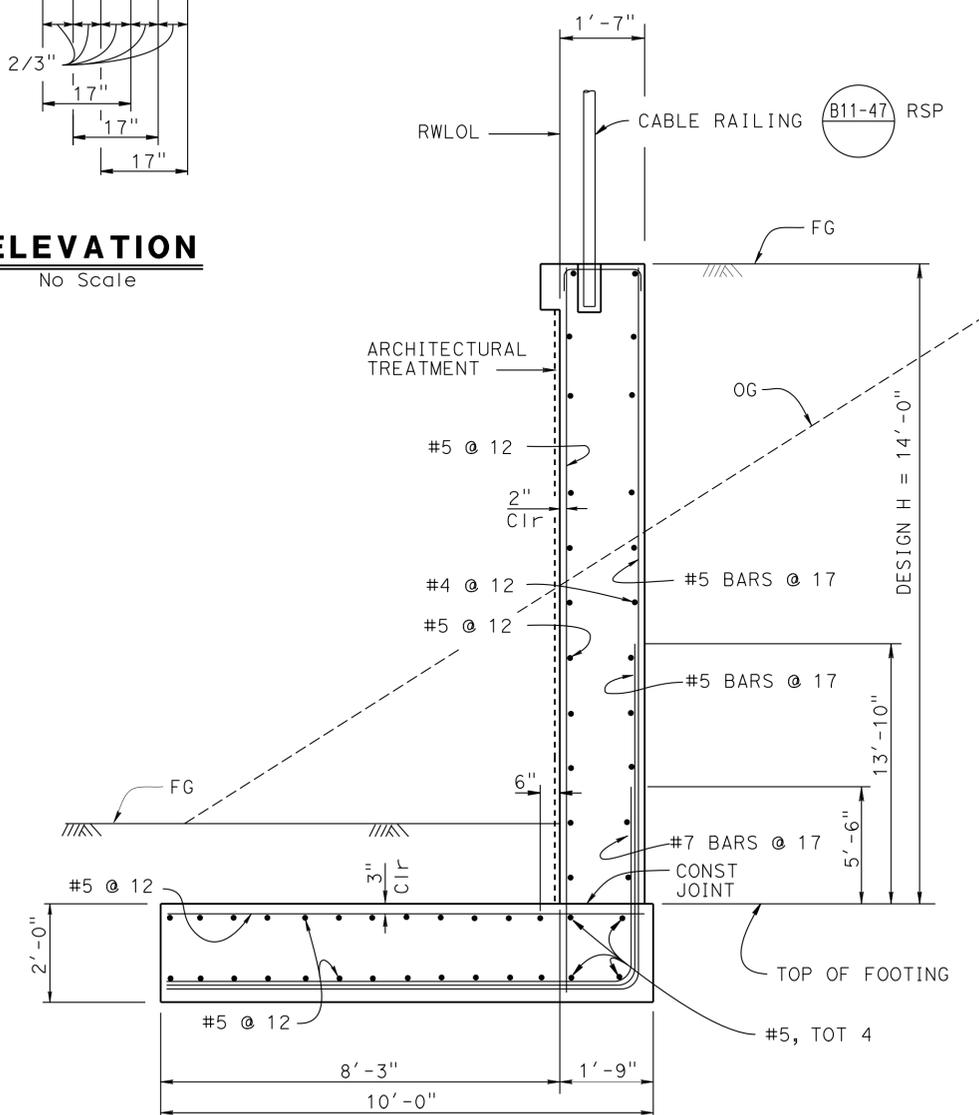
#### NOTES:

- For Retaining wall Architectural Treatment, see Details elsewhere in Project Plans
- For Details not shown and Drainage Notes see RSP (B3-5)
- Footing cover, 2'-0" minimum.



### ELEVATION

No Scale



### SPREAD FOOTING SECTION

No Scale

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO.	57E0122
POST MILE	R5.708

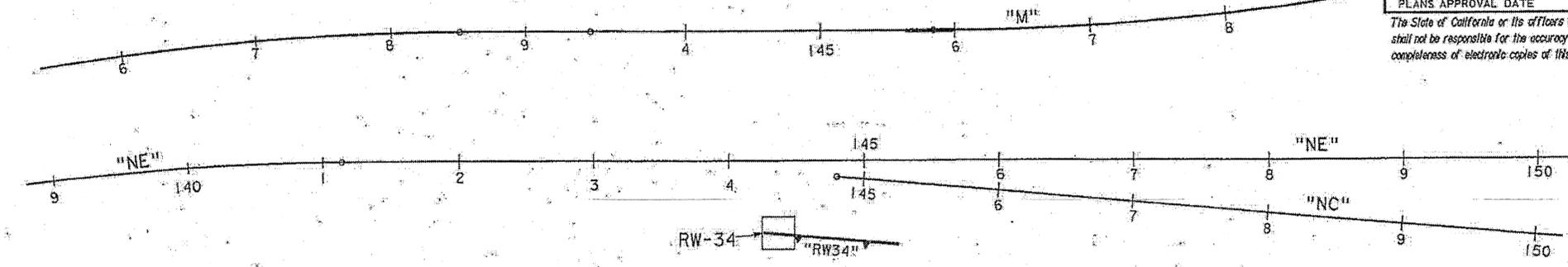
MID CITY BIKE FACILITY RW-426  
RETAINING WALL TYPE 7 DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	R3.8/R6.0	772	1049

Joseph P. Egan, Jr.  
 CERTIFIED ENGINEERING GEOLOGIST  
 11-27-95  
 PLANS APPROVAL DATE

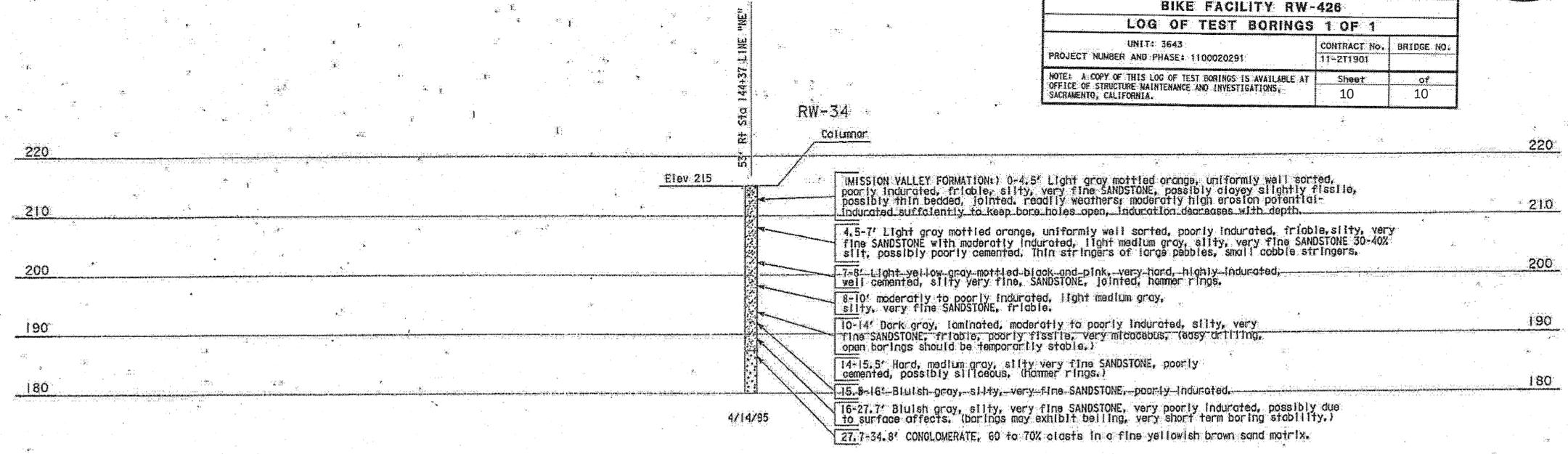
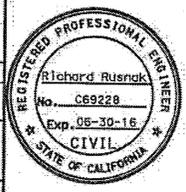
REGISTERED GEOLOGIST  
 JOSEPH P. EGAN, JR.  
 No. 1146  
 Exp. 1-31-96  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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.



**PLAN RW-34**  
SCALE: 1" = 50'

GEOTECHNICAL SERVICES-DIVISION OF ENGINEERING SERVICES					
As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.					
DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	269	287
REGISTERED ENGINEER-CIVIL			DATE		
Richard Rusnak			5/13/2014		
No. C69228			Exp. 05-30-16		
CIVIL			STATE OF CALIFORNIA		
BIKE FACILITY RW-426					
LOG OF TEST BORINGS 1 OF 1					
UNIT: 3643			CONTRACT No.	BRIDGE No.	
PROJECT NUMBER AND PHASE: 1100020291			11-2T1901		
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA.			Sheet	of	
			10	10	



**CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION

BRIDGE NO.	SOIL NAIL WALL RW-34	
POST MILE	LOG OF TEST BORINGS	
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
	5/19/95	8 8

DRAWN BY: A. RAMOS  
CHECKED BY: R. OQUITA, Z. YAZDANI

ORIGINAL SCALE IS IN INCHES. FOR REDUCED PLANS

CU 11288 EA 048661

**LEGEND OF EARTH MATERIALS**

OTHER LAB TESTS: DIRECT SHEAR, COMPACTION, CONSOLIDATION, UNIFORMABLE MATERIAL CHANGE, EXPANSION, SOLUBLE SALINATES, CHLORIDE, SAND TREATMENT.

DESCRIPTION OF MATERIAL: SAMPLE NUMBER AND LOCATION, MOISTURE CONTENT (% BY WT), AND ATTERBURG LIMITS (LL, PL, U), AND UNIFORMABLE MATERIAL CHANGE.

TEST PIT: TOP HOLE Elev., BOTTOM Elev., DATE MEASURED, REFILL PIPE, BORING DATE, SAMPLE (DRY?) BORING (WET?)

TEST PIT: 2" Dia. Cone Penetrometer, Sample Depth (ft), Date Boring, Test Pit, Atterburg Limits, Moisture Content, Penetration (lb/inch), Test Pit, Date Boring, Test Pit, Atterburg Limits, Moisture Content, Penetration (lb/inch).

**LEGEND OF EARTH MATERIALS**

FOR SOILS: According to the Standard Penetration Test (ASTM D1586/11): Penetration (lb/inch): 0-4, 5-9, 10-19, 20-34, 35-59, 60-79.

CLAY, SILT, SAND, GRAVEL, SANDY SILT, SANDY SILT, SILTY CLAY, CLAYEY SILT, ORGANIC MATTER SAND/GR PEST, ROCK, METAMORPHIC ROCK, IONIC ROCK.

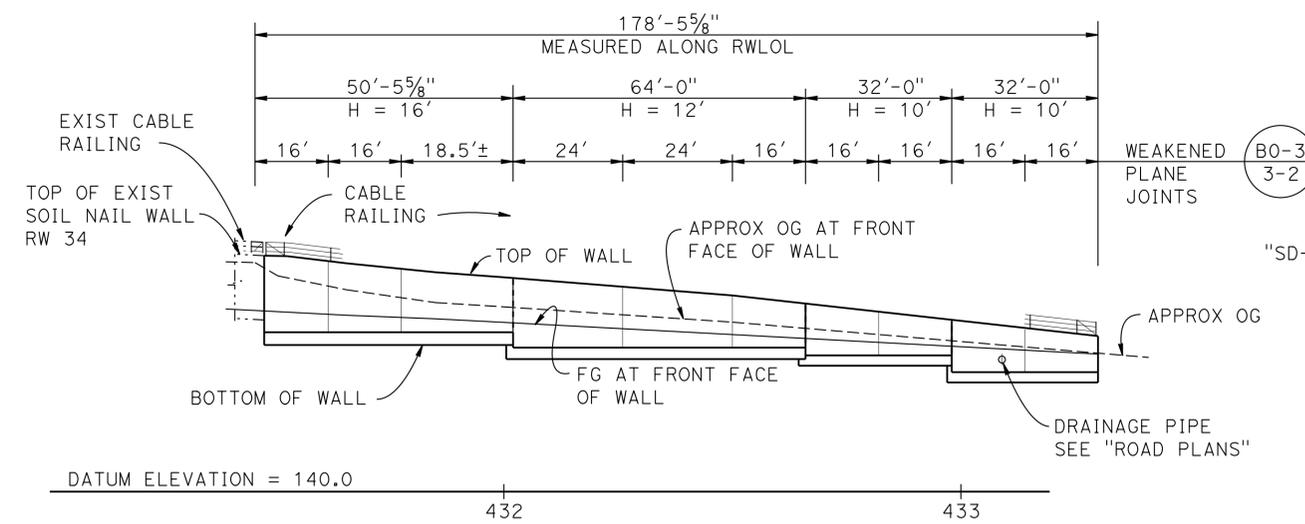
NOTE: Classification of earth material as shown on this sheet may be based upon field inspection and is not to be construed to imply mechanical analysis.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	270	287

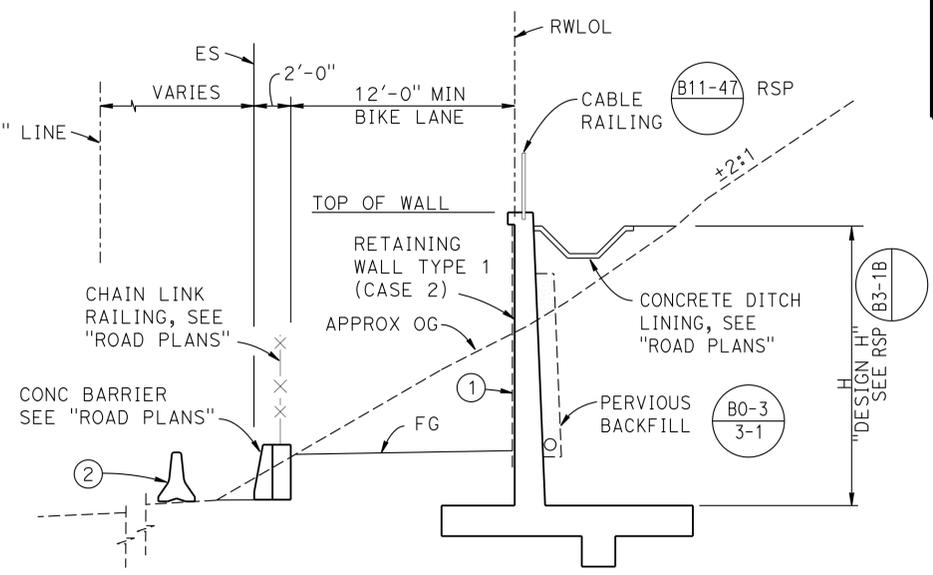
Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE  
 05-26-15  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL  
 STATE OF CALIFORNIA

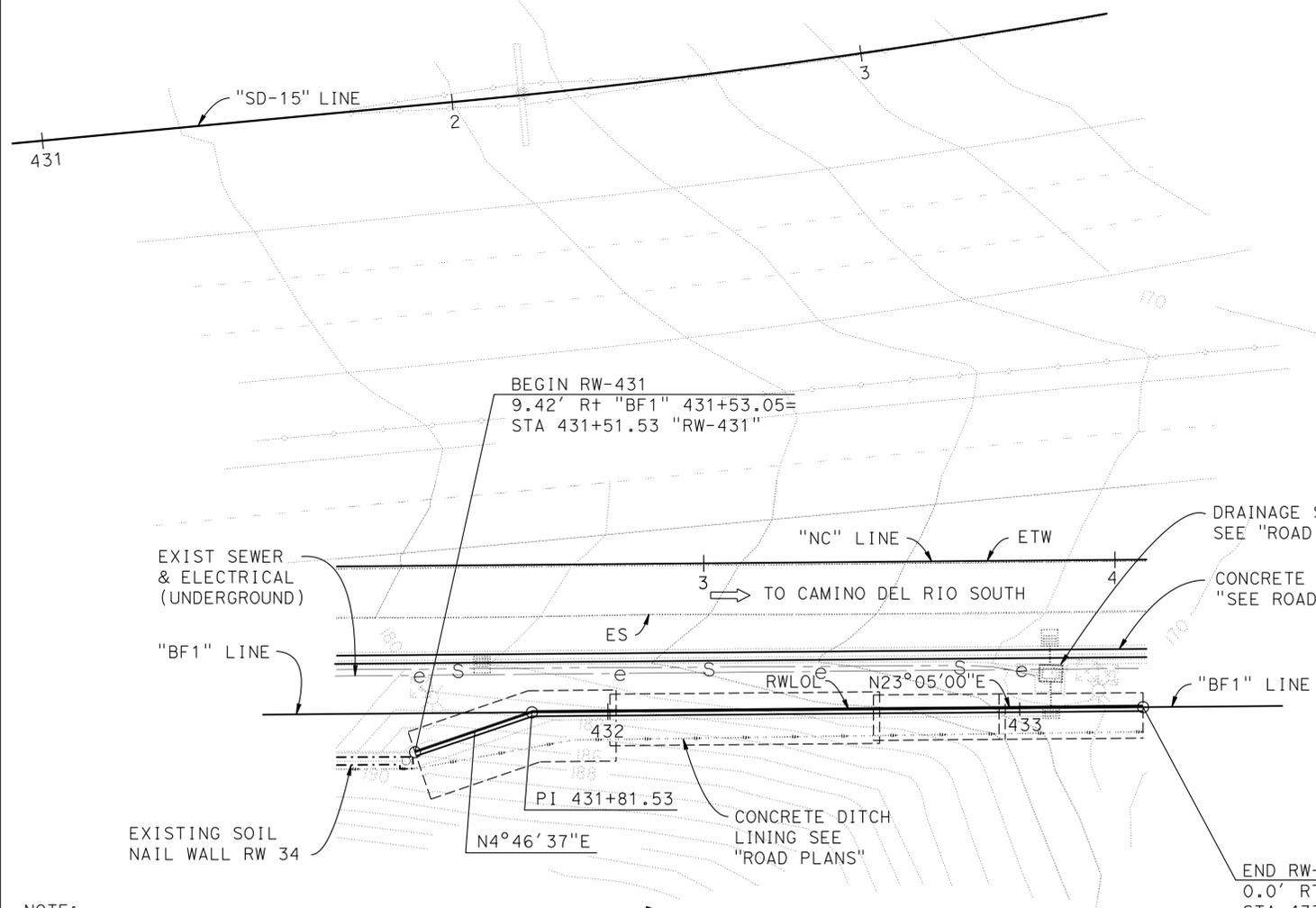
- NOTES:
- 1 Architectural treatment "Fractured Fin Texture"
  - 2 Temporary Railing Type K, see "ROAD PLAN"



**MIRRORED DEVELOPED ELEVATION**  
1" = 20'



**TYPICAL SECTION**  
1" = 5'



**PLAN**  
1" = 20'

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	STRUCTURE PLAN NO. 1
3	STRUCTURE PLAN NO. 2
4	DETAILS NO. 1
5	LOG OF TEST BORINGS 1 OF 1

**STANDARD PLANS DATED 2010**

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
(RSP) A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-3	BRIDGE DETAILS
(RSP) B3-1B	RETAINING WALL TYPE 1 (CASE 2)
(RSP) B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
(RSP) B11-47	CABLE RAILING

- LEGEND:
- Indicates existing structure
  - Indicates new construction
  - STANDARD PLAN SHEET NO.
  - DETAIL NO.

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	1,447	CY
STRUCTURE BACKFILL (RETAINING WALL)	726	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	36	CY
STRUCTURAL CONCRETE, RETAINING WALL	335	CY
FRACTURED FIN TEXTURE	1,358	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	35,472	LB
CABLE RAILING	179	LF

DESIGN	BY R. ANDERSON	CHECKED M. VO	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY R. KIRKLAND	CHECKED M. VO	LAYOUT	BY R. ANDERSON
QUANTITIES	BY R. ANDERSON	CHECKED M. VO	SPECIFICATIONS	BY V. RENGANATHAN

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 10**

BRIDGE NO. 57E0123  
 POST MILE R5.816  
**MID CITY BIKE FACILITY RW-431**  
**GENERAL PLAN**

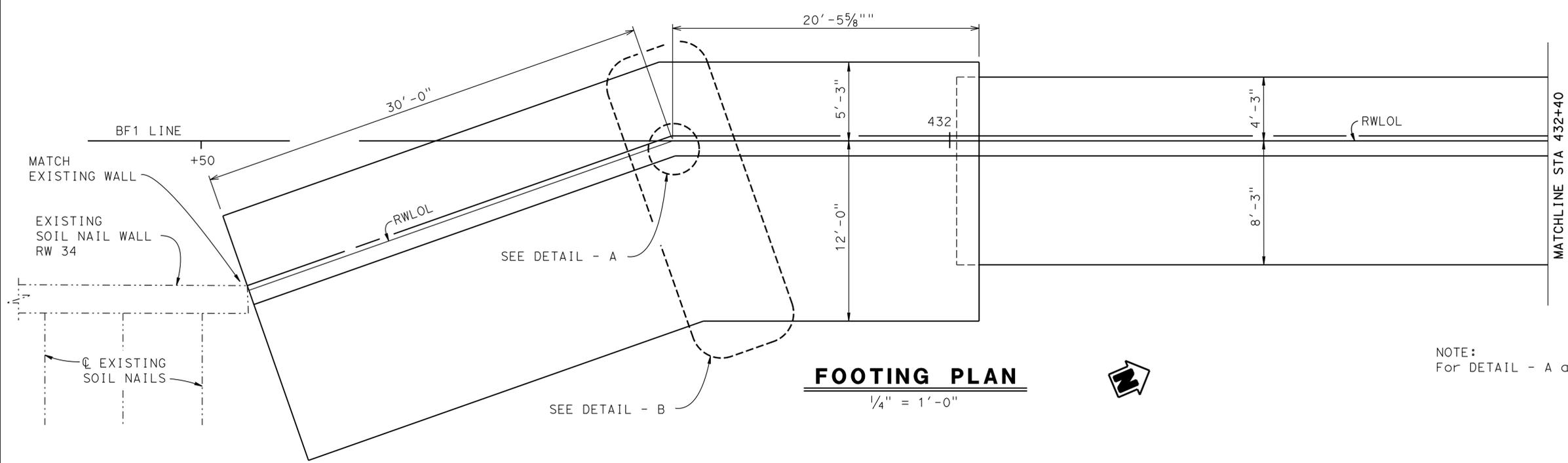
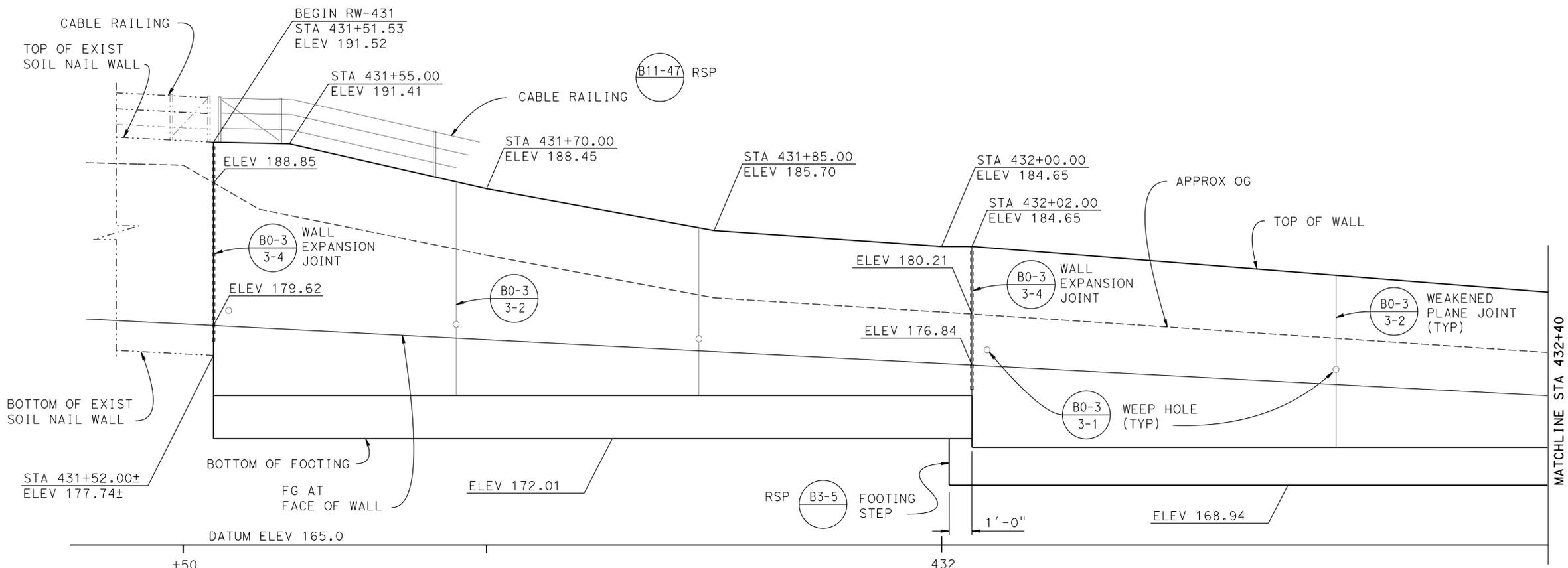
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	271	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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NOTE:  
For DETAIL - A and DETAIL - B, see "DETAILS NO. 1" sheet

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO.	57E0123
POST MILE	M5.816

MID CITY BIKE FACILITY RW-431  
STRUCTURE PLAN NO. 1

DATE PLOTTED => 15/24  
28-MAY-2015  
15224  
6127400  
USERNAME =>

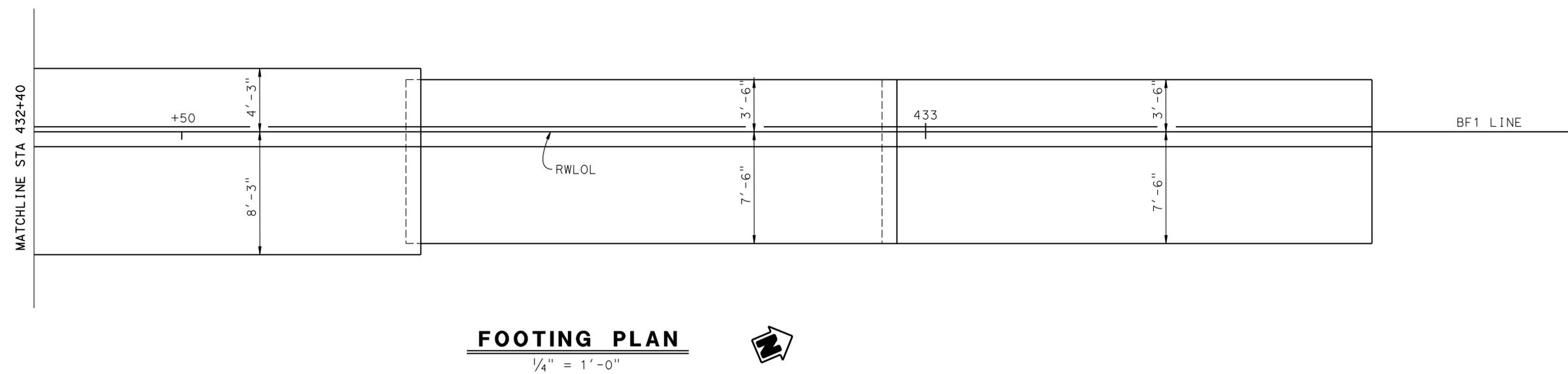
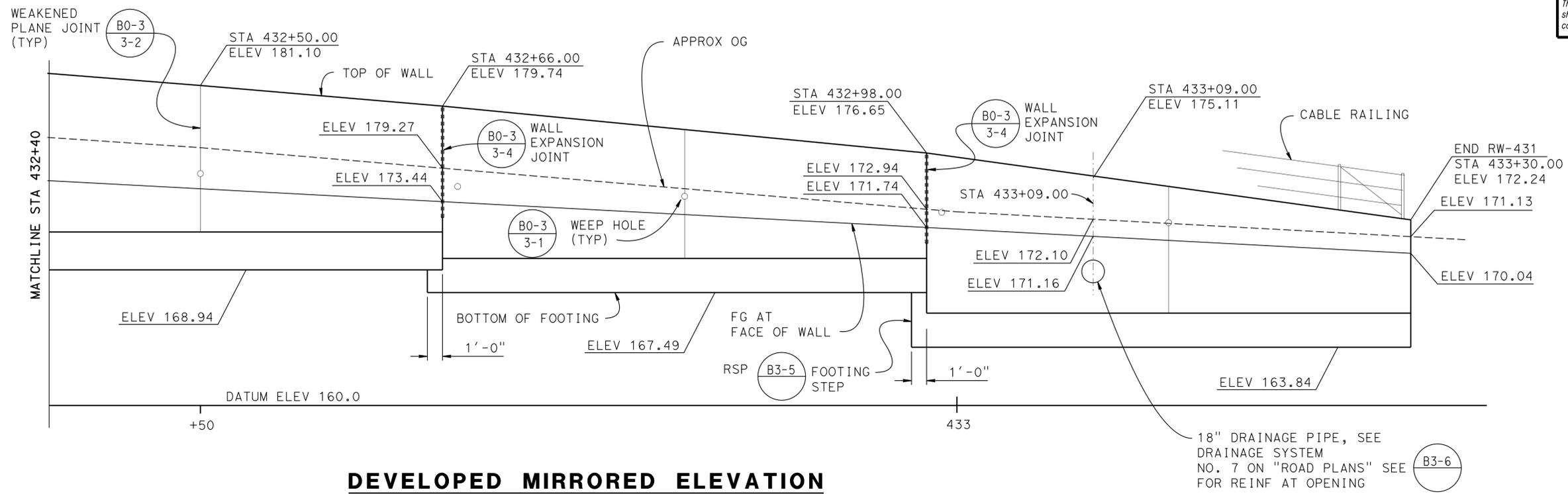
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	272	287

Renee M. Anderson 11-14-14  
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05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
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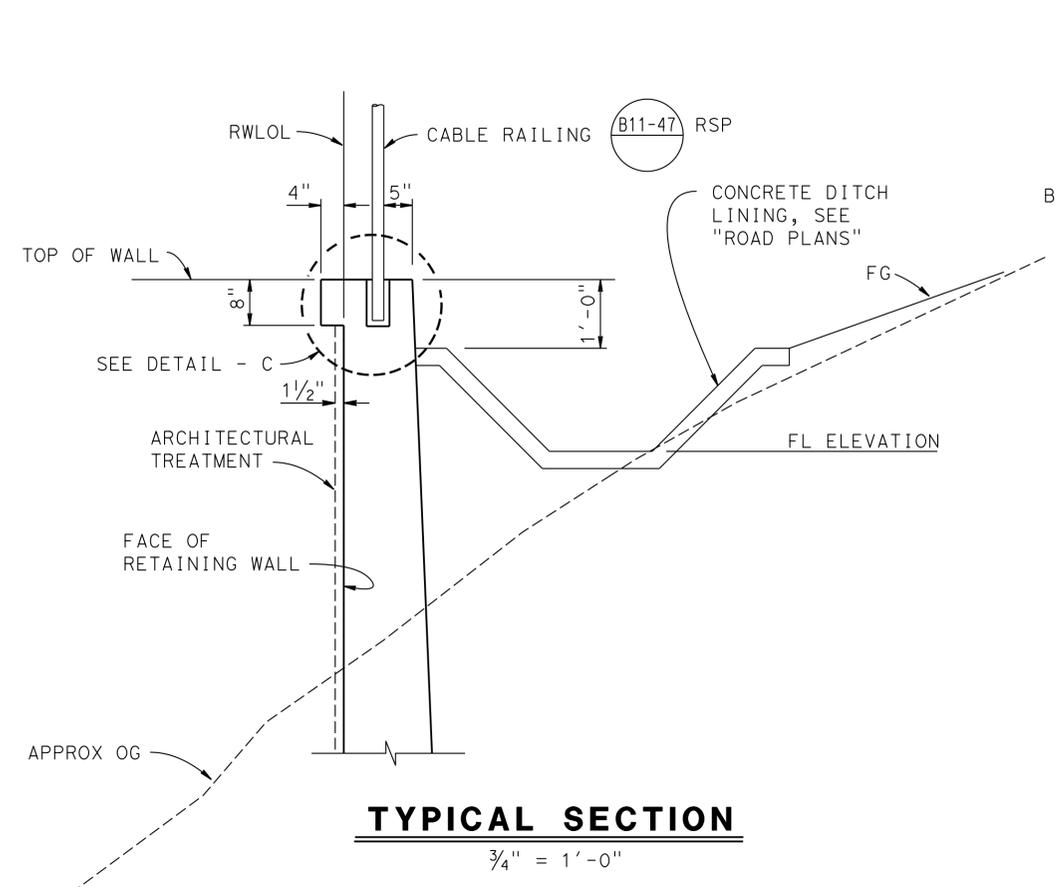
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DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

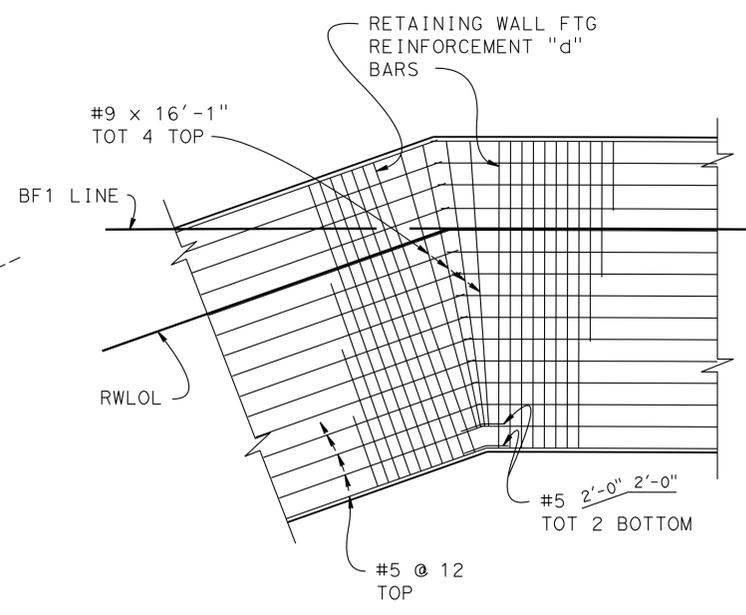
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO. 57E0123  
POST MILE M5.816  
MID CITY BIKE FACILITY RW-431  
STRUCTURE PLAN NO. 2

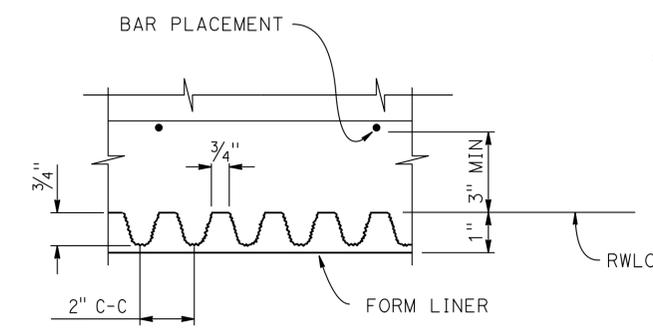
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	273	287
Renee M. Anderson REGISTERED CIVIL ENGINEER				11-14-14 DATE	
05-26-15 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



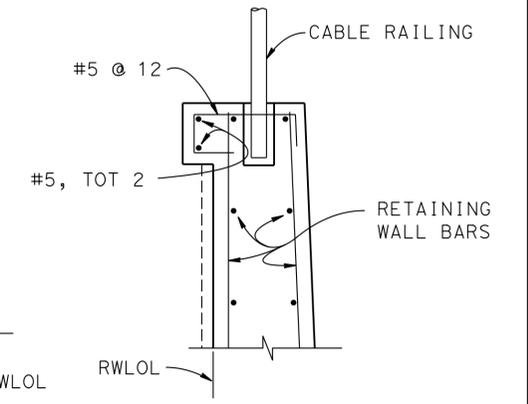
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3/4" = 1'-0"



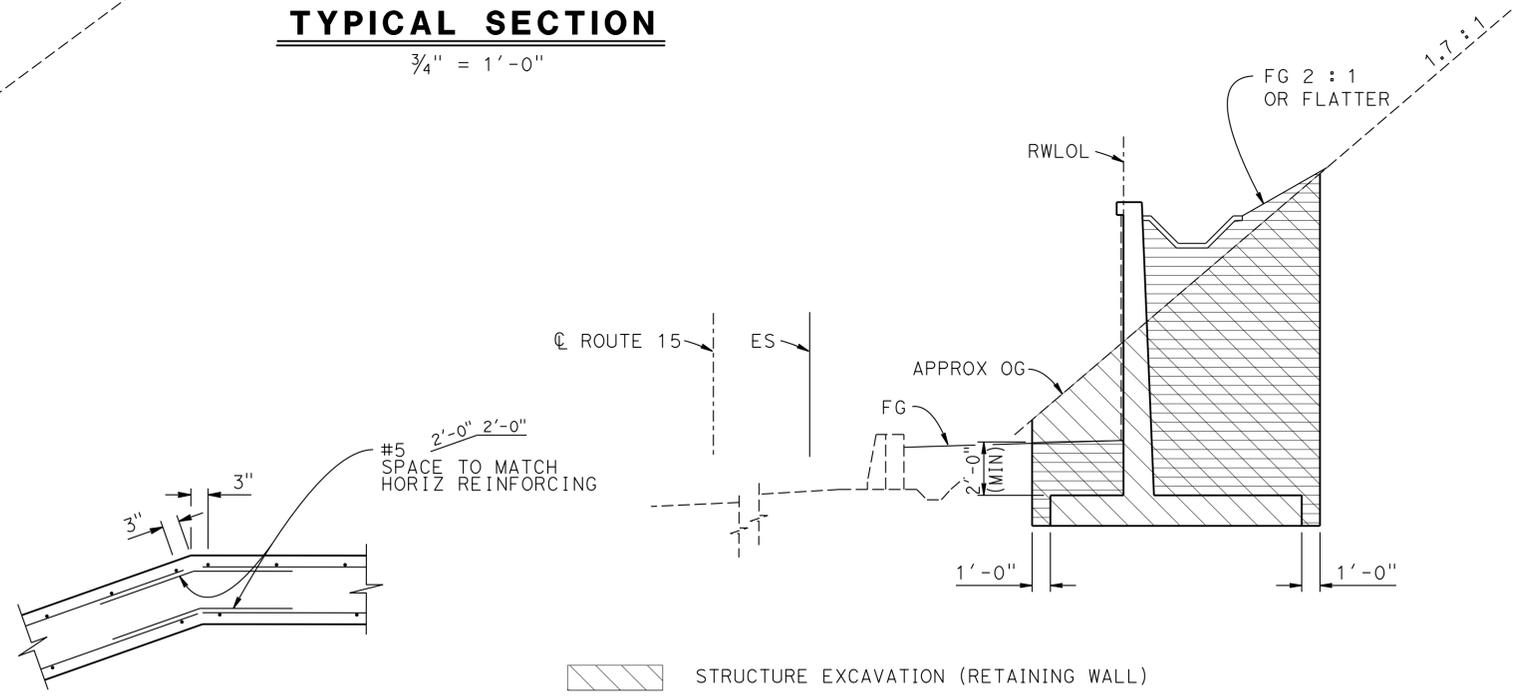
**DETAIL - B**  
NO SCALE



**SECTION B-B**

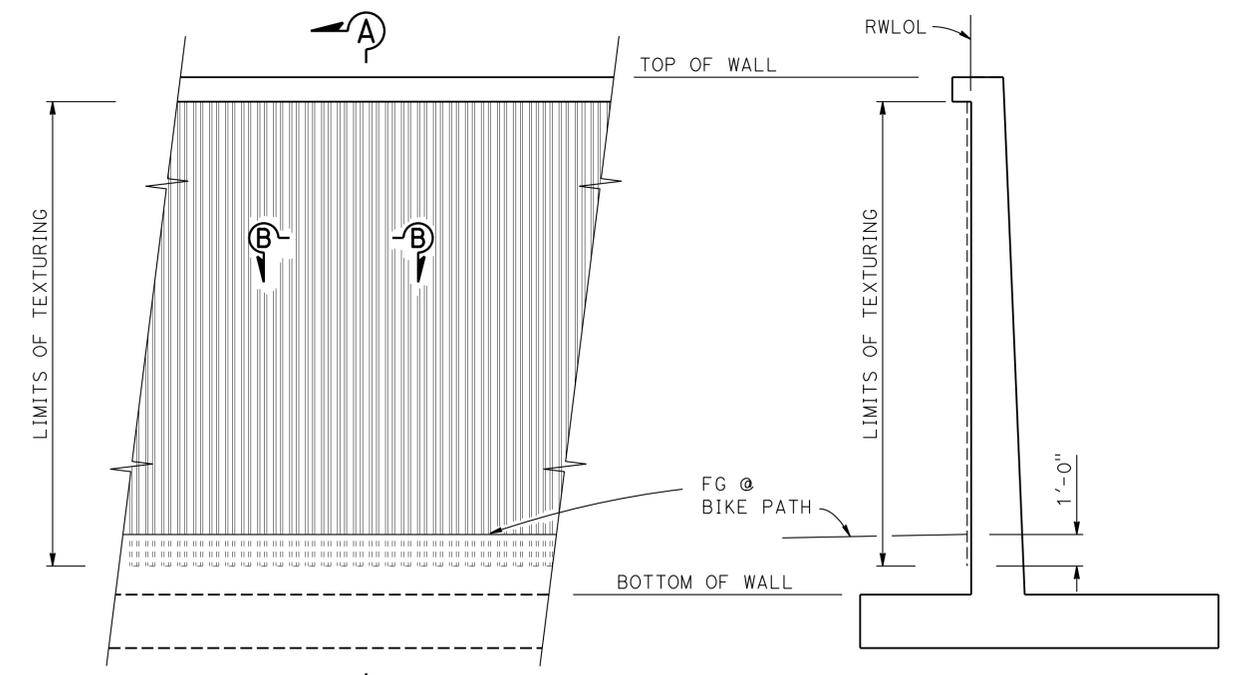


**DETAIL - C**  
1" = 1'-0"



**DETAIL - A**  
3/4" = 1'-0"

**EXCAVATION & BACKFILL LIMITS**  
NO SCALE



**ELEVATION**

**FRACTURED FIN TEXTURE**  
NO SCALE

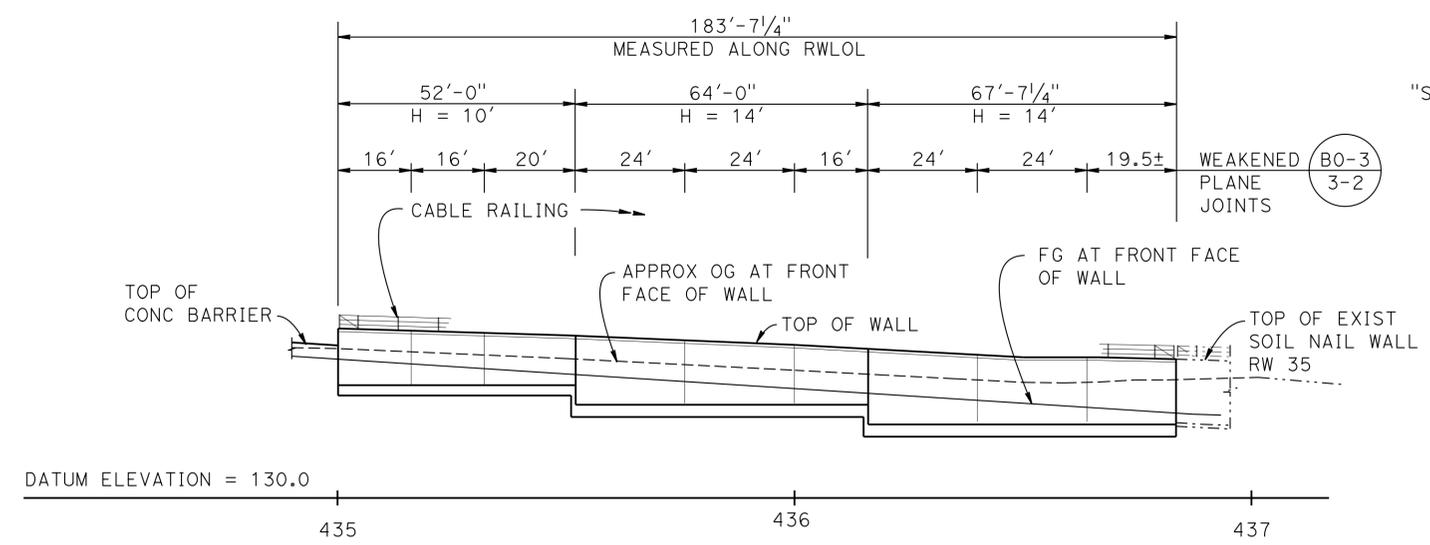
NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO.	57E0123	<b>MID CITY BIKE FACILITY RW-431</b> <b>DETAILS NO. 1</b>	
	DETAILS	BY R. KIRKLAND	CHECKED M. VO			POST MILE	M5.816		
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO			CONTRACT NO.:	11-2T1900		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3589	PROJECT NUMBER & PHASE: 1100020291	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 4 OF 5

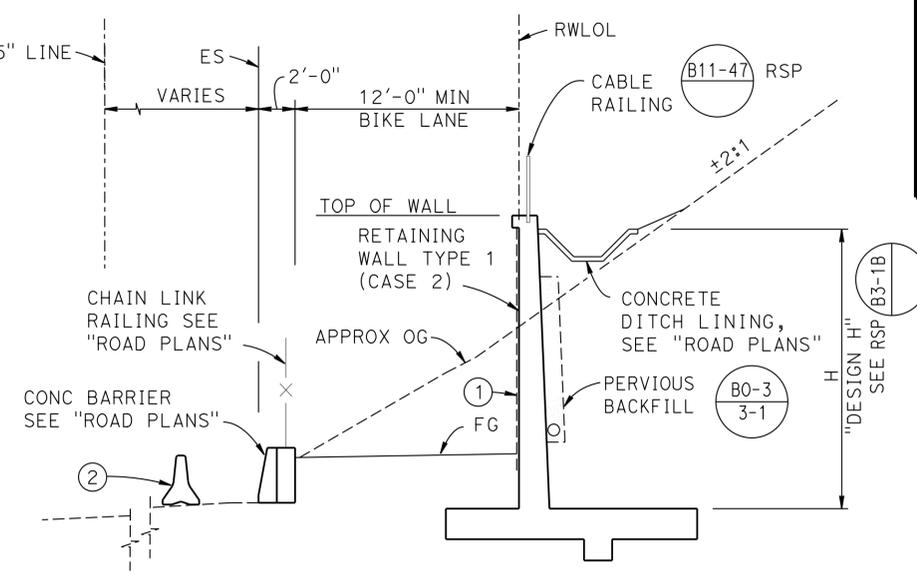


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	275	287

Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE  
 05-26-15  
 PLANS APPROVAL DATE  
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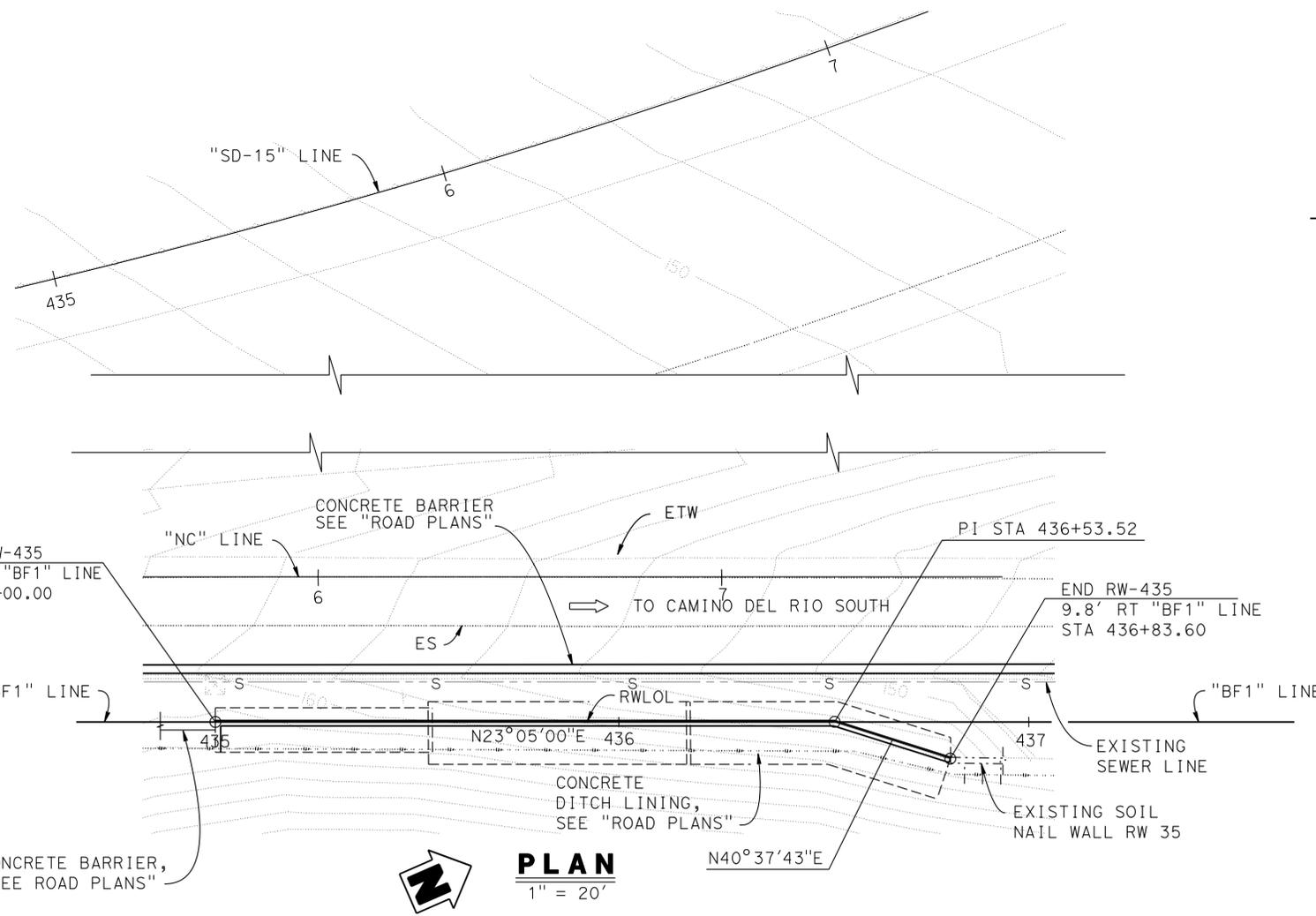


**MIRRORED DEVELOPED ELEVATION**  
1" = 20'



**TYPICAL SECTION**  
1" = 5'

- NOTES:
- ① Architectural treatment "Fractured Fin Texture"
  - ② Temporary Railing Type K, see "ROAD PLAN"



**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	STRUCTURE PLAN NO. 1
3	STRUCTURE PLAN NO. 2
4	DETAILS NO. 1
5	LOG OF TEST BORINGS 1 OF 1

**STANDARD PLANS DATED 2010**

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
(RSP) A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-3	BRIDGE DETAILS
(RSP) B3-1B	RETAINING WALL TYPE 1 (CASE 2)
(RSP) B3-5	RETAINING WALL DETAILS NO. 1
(RSP) B11-47	CABLE RAILING

- LEGEND:
- Indicates existing structure
  - Indicates new construction
  - ——— STANDARD PLAN SHEET NO.
  - ——— DETAIL NO.

QUANTITIES

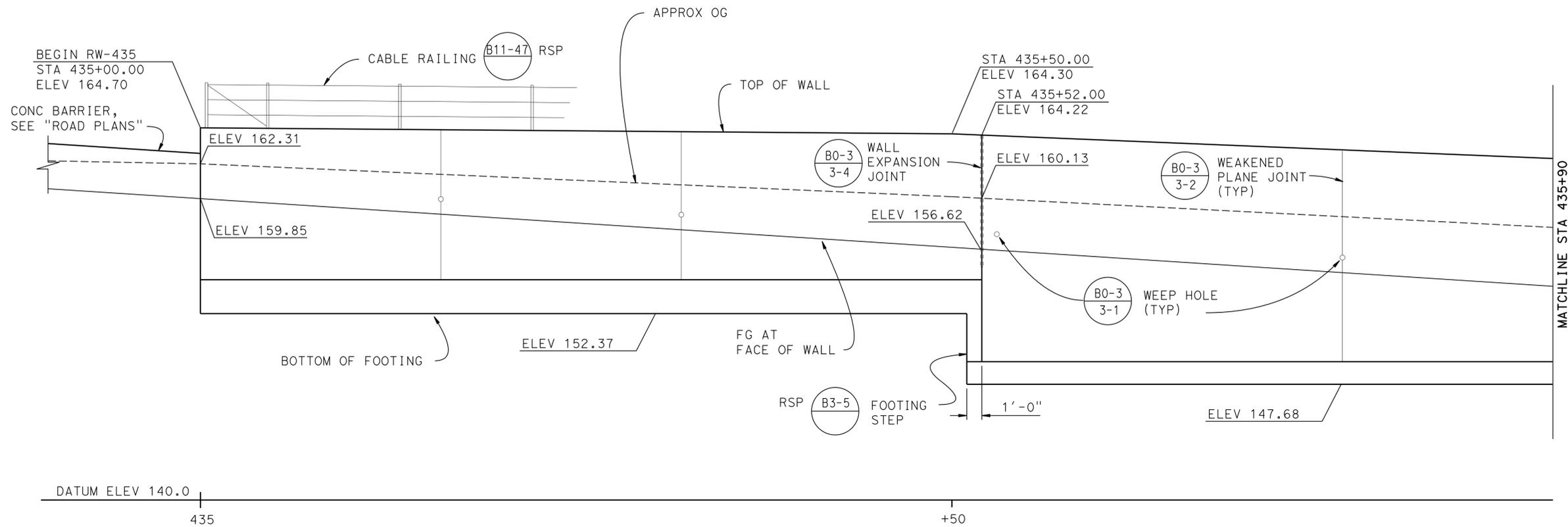
STRUCTURE EXCAVATION (RETAINING WALL)	1,563	CY
STRUCTURE BACKFILL (RETAINING WALL)	893	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	44	CY
STRUCTURAL CONCRETE, RETAINING WALL	390	CY
FRACTURED FIN TEXTURE	1,601	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	39,117	LB
CABLE RAILING	184	LF

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DANIEL T. ADAMS DESIGN ENGINEER	DESIGN	BY R. ANDERSON	CHECKED M. VO	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO.	<b>MID CITY BIKE FACILITY RW-435</b> <b>GENERAL PLAN</b>	
	DETAILS	BY R. KIRKLAND	CHECKED M. VO	LAYOUT	BY R. ANDERSON			CHECKED M. VO		POST MILE
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO	SPECIFICATIONS	BY V. Renganathan			PLANS AND SPECS COMPARED V. Renganathan		R5.870

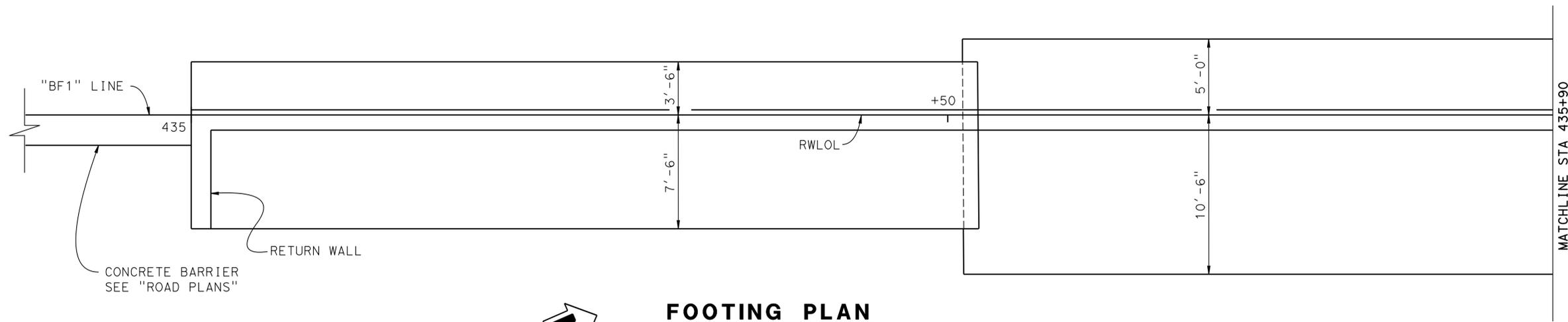
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 PROJECT NUMBER & PHASE: 1100020291  
 CONTRACT NO.: 11-2T1900  
 DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 REVISION DATES: 6/29/12, 10/30/14, 11-14-14  
 SHEET 1 OF 5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	276	287
Renee M. Anderson		11-14-14		DATE	
REGISTERED CIVIL ENGINEER		DATE		REGISTERED PROFESSIONAL ENGINEER	
05-26-15		PLANS APPROVAL DATE		RENEE ANDERSON	
				No. 61040	
				Exp. 12-31-2016	
				CIVIL	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



**DEVELOPED MIRRORED ELEVATION**

1/4" = 1'-0"



**FOOTING PLAN**

1/4" = 1'-0"

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

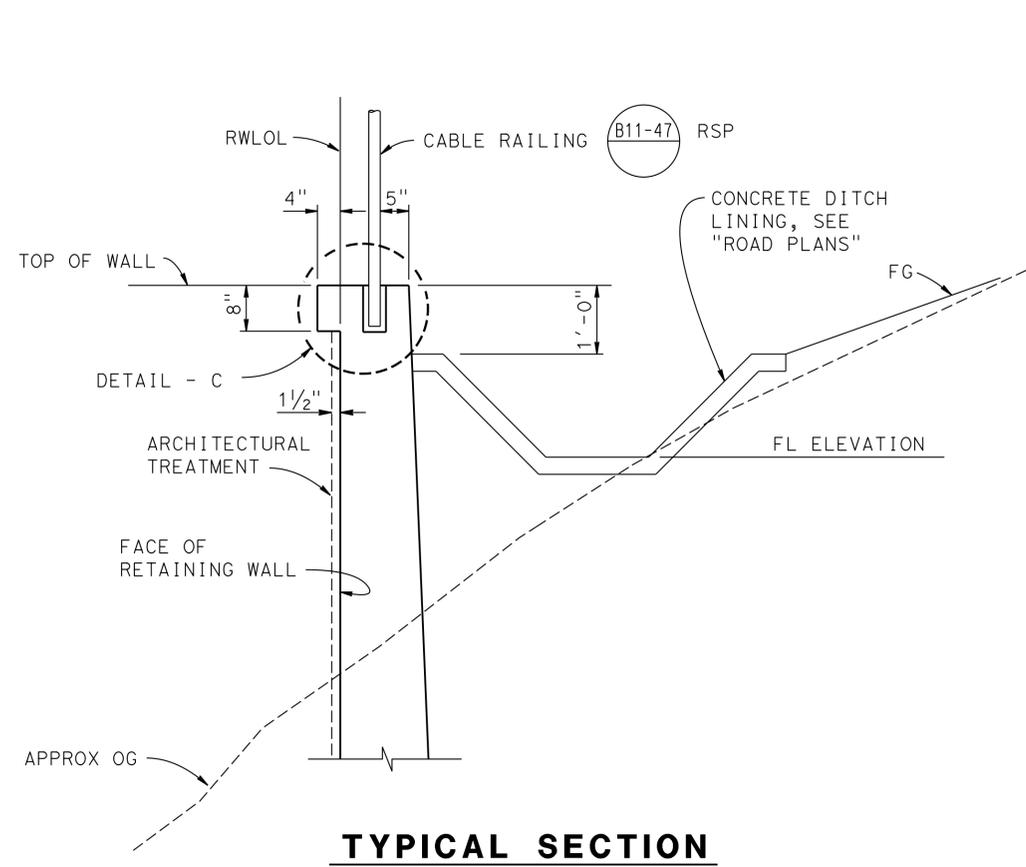
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO.	57E0124
POST MILE	M5.870

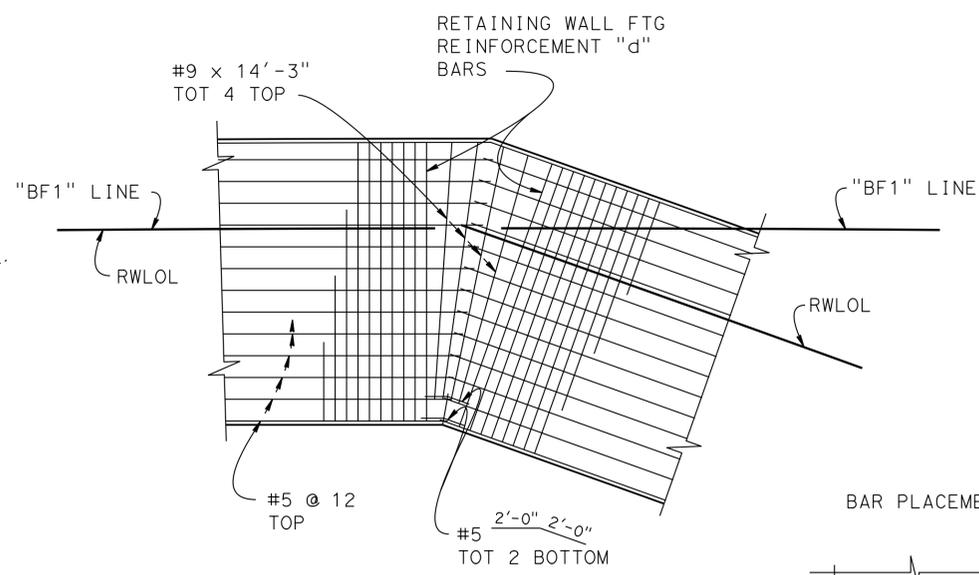
MID CITY BIKE FACILITY RW-435  
STRUCTURE PLAN NO. 1



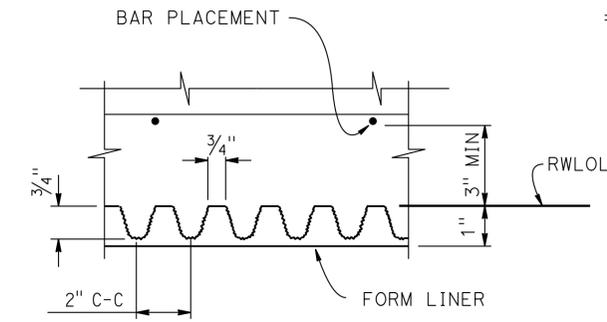
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	278	287
Renee M. Anderson		11-14-14		DATE	
REGISTERED CIVIL ENGINEER		DATE		REGISTERED PROFESSIONAL ENGINEER	
05-26-15		PLANS APPROVAL DATE		RENEE ANDERSON	
				No. 61040	
				Exp. 12-31-2016	
				CIVIL	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



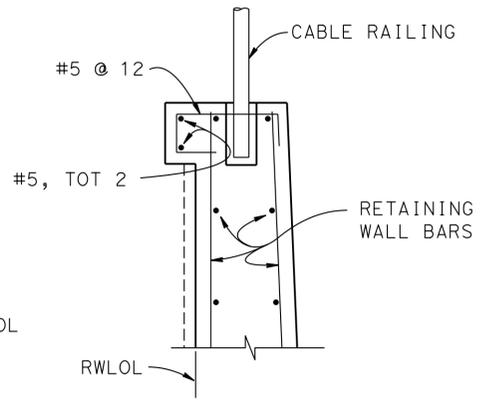
**TYPICAL SECTION**  
3/4" = 1'-0"



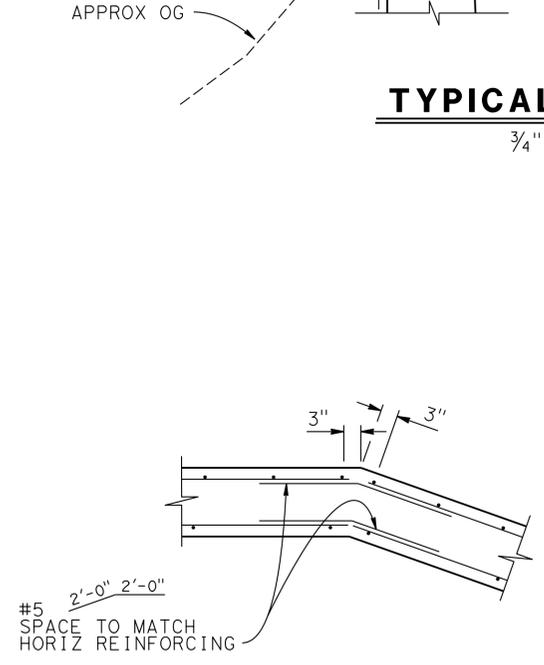
**DETAIL - B**  
NO SCALE



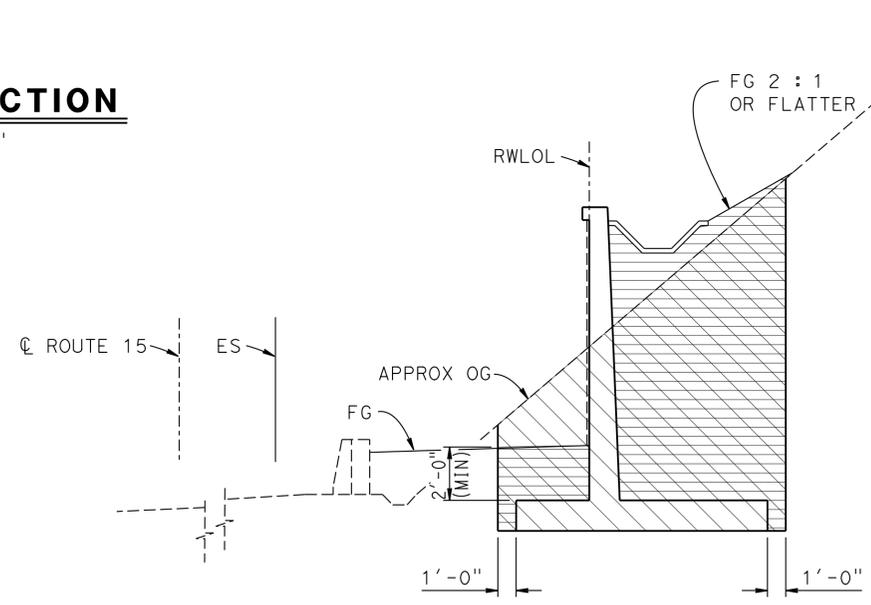
**SECTION B-B**



**DETAIL - C**  
1" = 1'-0"

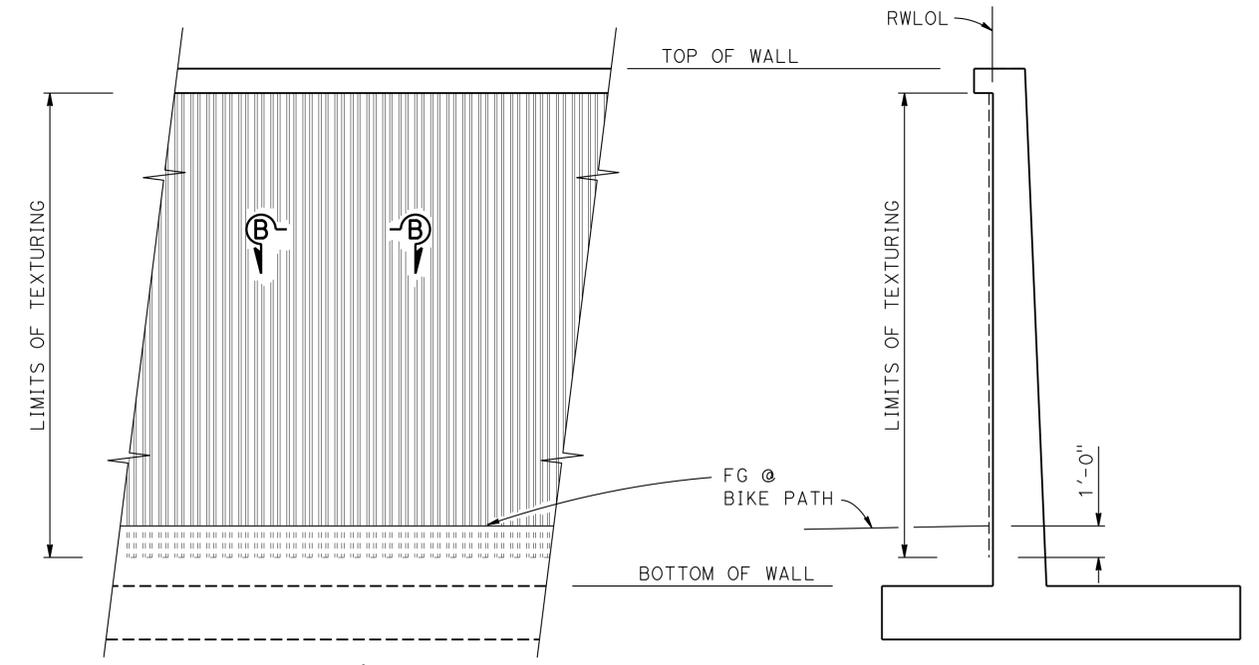


**DETAIL - A**  
3/4" = 1'-0"



**EXCAVATION & BACKFILL LIMITS**  
NO SCALE

STRUCTURE EXCAVATION (RETAINING WALL)  
 STRUCTURE BACKFILL (RETAINING WALL)



**ELEVATION**

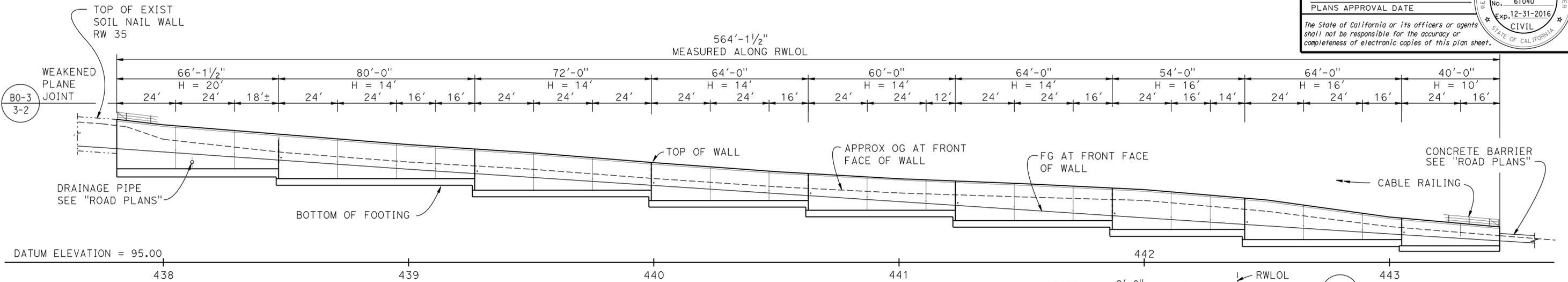
**FRACTURED FIN TEXTURE**  
NO SCALE

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY	R. ANDERSON	CHECKED	M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	57E0124	MID CITY BIKE FACILITY RW-435 DETAILS NO. 1	
	DETAILS	BY	R. KIRKLAND	CHECKED			M. VO	POST MILE		M5.870
	QUANTITIES	BY	R. ANDERSON	CHECKED			M. VO	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291		CONTRACT NO.: 11-2T1900
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)										
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0	1	2	3	REVISION DATES	SHEET 4 OF 5
FILE => 57e0124usndt04.dgn										

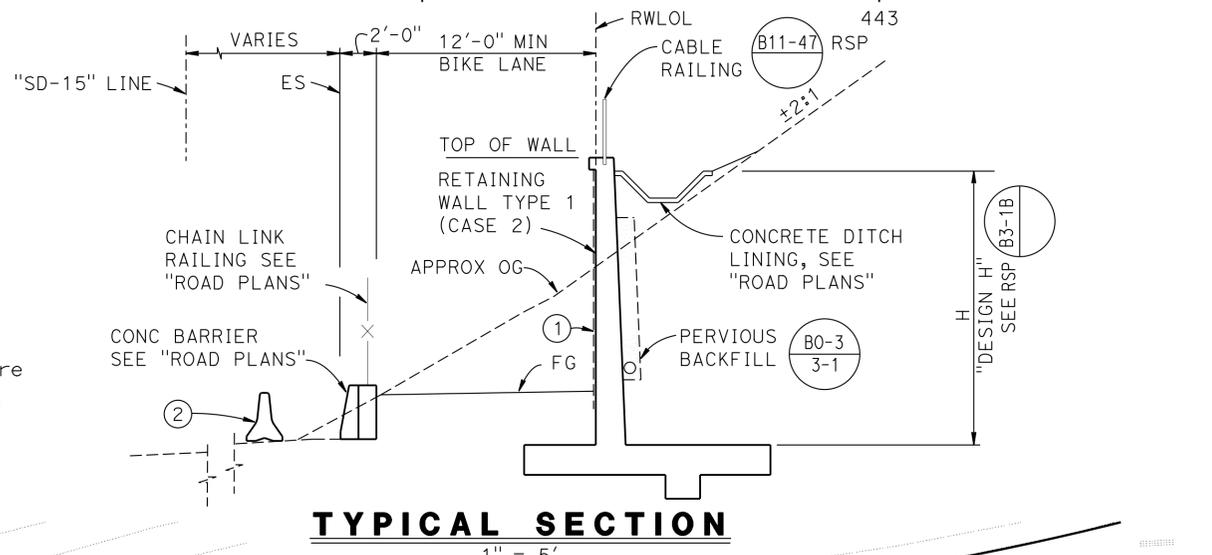


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	280	287
Renee M. Anderson		11-14-14		REGISTERED CIVIL ENGINEER DATE	
05-26-15		PLANS APPROVAL DATE			
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

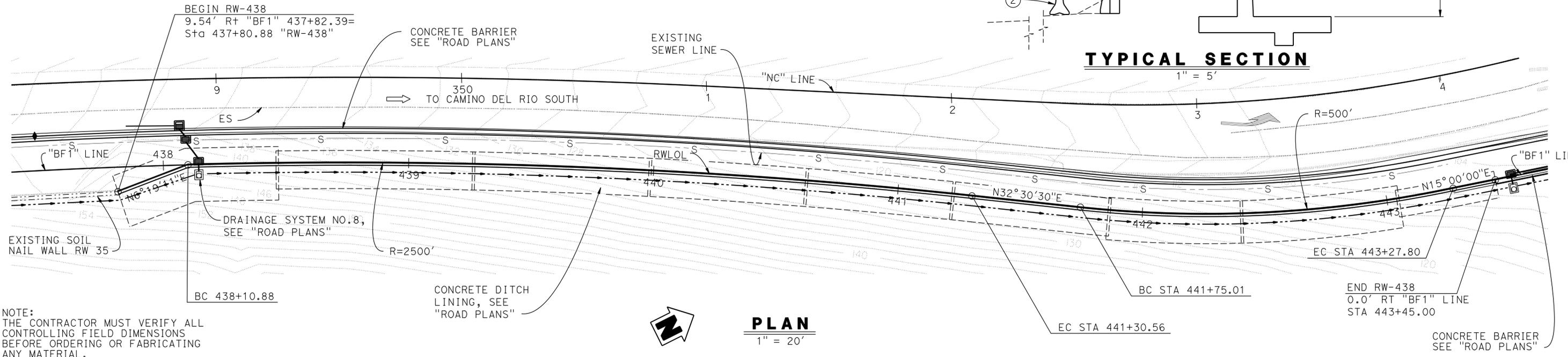


**MIRRORED DEVELOPED ELEVATION**  
1" = 20'

- NOTES:
- ① Architectural Treatment "Fractured Fin Texture"
  - ② Temporary Railing Type K, see "ROAD PLANS"
- LEGEND:
- Indicates existing structure
  - Indicates new construction



**TYPICAL SECTION**  
1" = 5'



**PLAN**  
1" = 20'

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN ENGINEER DANIEL T. ADAMS	DESIGN	BY R. ANDERSON	CHECKED M. VO	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 10</b>	BRIDGE NO.	57E0125	<b>MID CITY BIKE FACILITY RW-438</b> <b>GENERAL PLAN</b>	
	DETAILS	BY R. KIRKLAND	CHECKED M. VO	LAYOUT	BY R. ANDERSON			CHECKED M. VO	POST MILE		R5.921
	QUANTITIES	BY R. ANDERSON	CHECKED M. VO	SPECIFICATIONS	BY V. Renganathan			PLANS AND SPECS COMPARED V. Renganathan	UNIT: 3589		PROJECT NUMBER & PHASE: 1100020291
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3											

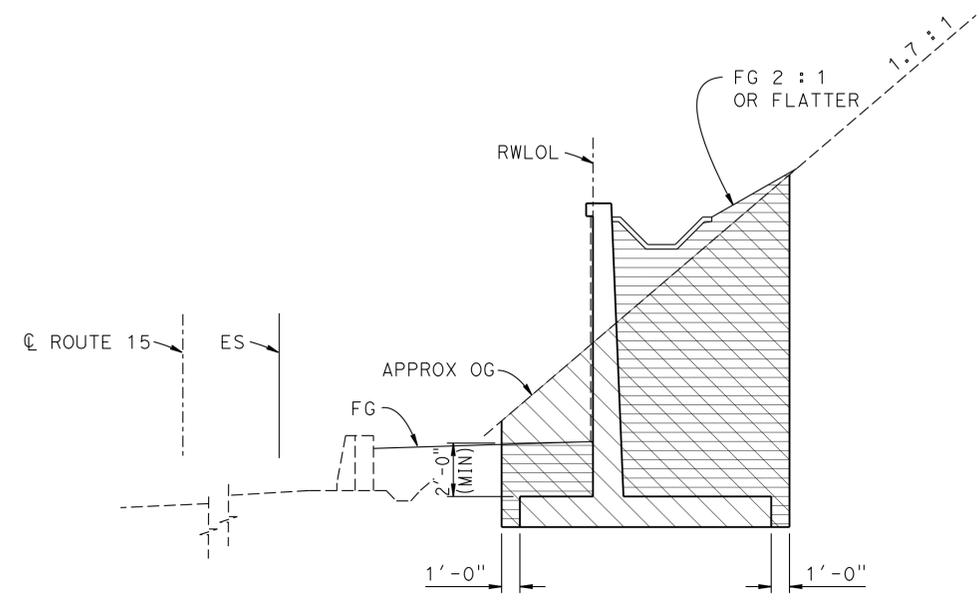
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	281	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

05-26-15  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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- STRUCTURE EXCAVATION (RETAINING WALL)
- STRUCTURE BACKFILL (RETAINING WALL)

**EXCAVATION & BACKFILL LIMITS**

NO SCALE

**INDEX TO PLANS**

Sheet No.	Title
1	GENERAL PLAN
2	INDEX TO PLANS
3	STRUCTURE PLAN NO. 1
4	STRUCTURE PLAN NO. 2
5	STRUCTURE PLAN NO. 3
6	STRUCTURE PLAN NO. 4
7	DETAILS NO. 1
8	LOG OF TEST BORINGS 1 OF 1

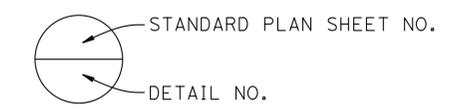
**STANDARD PLANS DATED 2010**

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
(RSP) A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-3	BRIDGE DETAILS
(RSP) B3-1B	RETAINING WALL TYPE 1 (CASE 2)
(RSP) B3-5	RETAINING WALL DETAILS NO. 1
B3-6	RETAINING WALL DETAILS NO. 2
(RSP) B11-47	CABLE RAILING

QUANTITIES

STRUCTURE EXCAVATION (RETAINING WALL)	5,583	CY
STRUCTURE BACKFILL (RETAINING WALL)	3,398	CY
PERVIOUS BACKFILL MATERIAL (RETAINING WALL)	113	CY
STRUCTURAL CONCRETE, RETAINING WALL	1,458	CY
FRACTURED FIN TEXTURE	4,920	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	157,155	LB
CABLE RAILING	564	LF

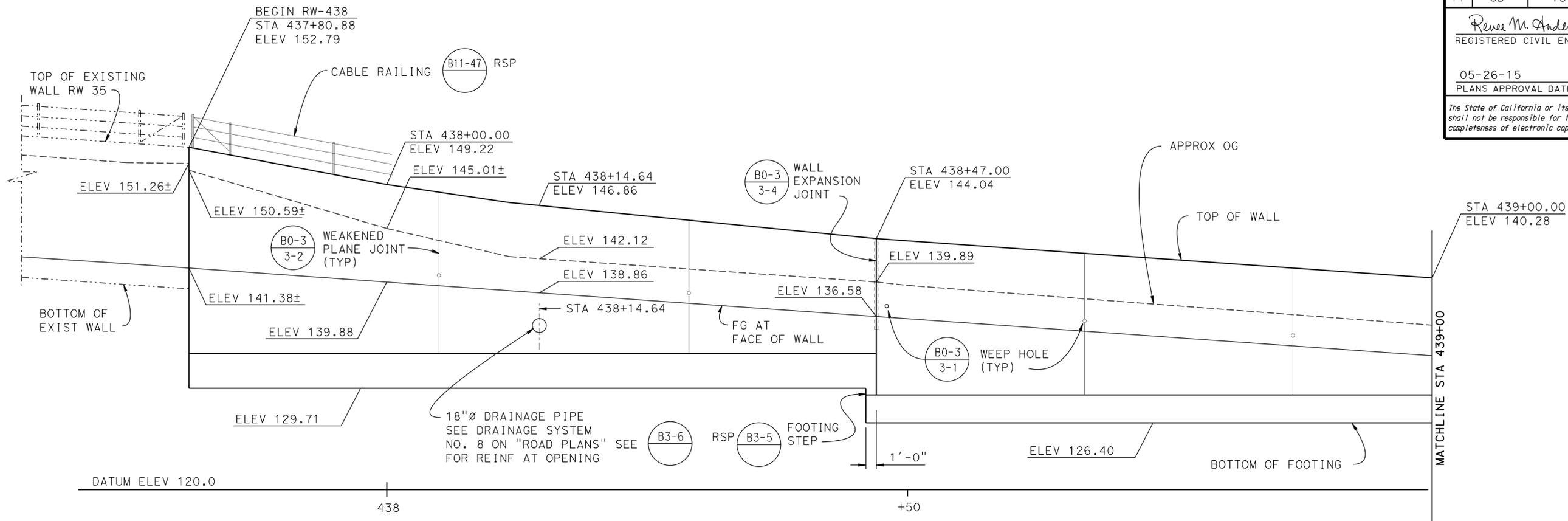
NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



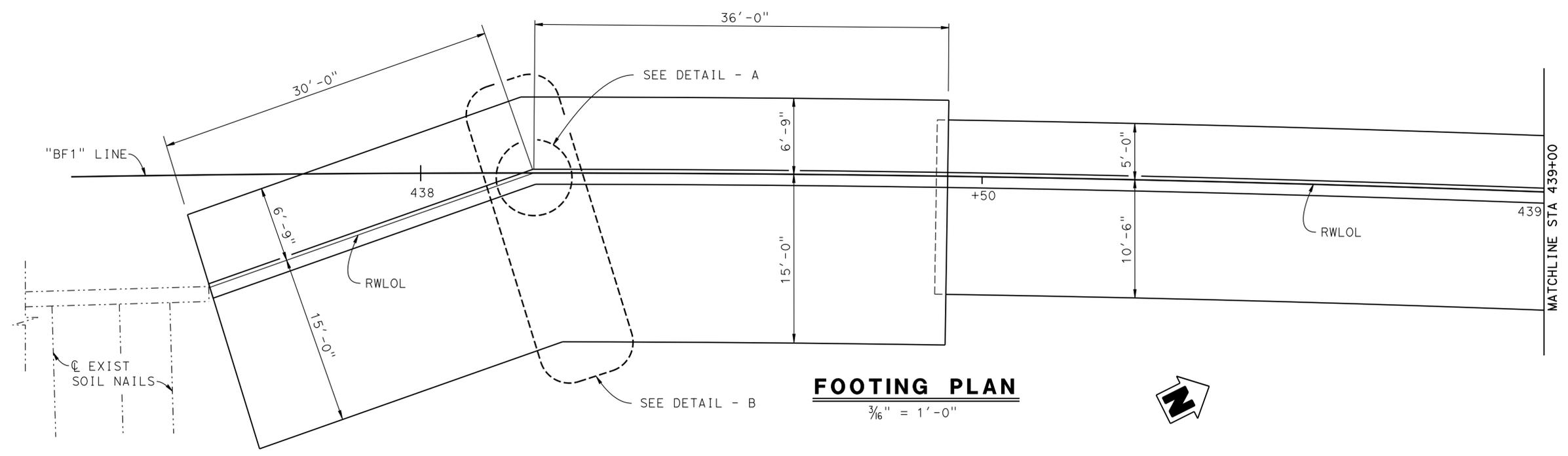
DESIGN BY R. ANDERSON CHECKED M. VO DETAILS BY R. KIRKLAND CHECKED M. VO QUANTITIES BY R. ANDERSON CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 57E0125	MID CITY BIKE FACILITY RW-438 INDEX TO PLANS
			POST MILE R5.921	
			UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291 CONTRACT NO.: 11-2T1900	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3				REVISION DATES 6/22/12 10/30/14 11-14-14 SHEET 2 OF 8

FILE => 57e0125a1+p02.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	282	287
Renee M. Anderson		11-14-14		DATE	
REGISTERED CIVIL ENGINEER		DATE			
05-26-15		PLANS APPROVAL DATE			
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NOTE:  
 For DETAIL - A and DETAIL - B, see "DETAILS NO. 1" sheet.



NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 10**

BRIDGE NO. 57E0125  
 POST MILE R5.921  
**MID CITY BIKE FACILITY RW-438**  
**STRUCTURE PLAN NO. 1**

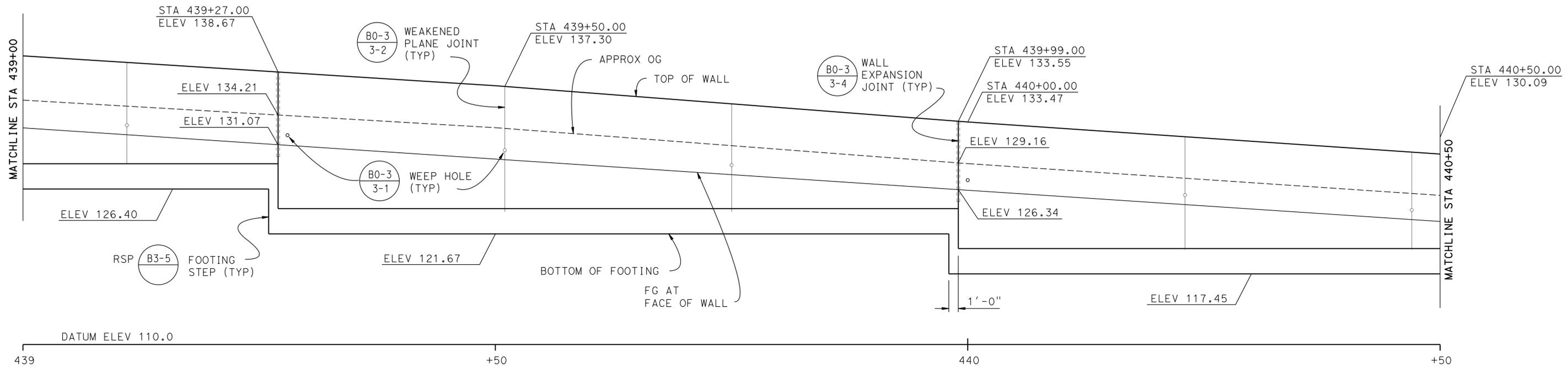
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	283	287

Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE

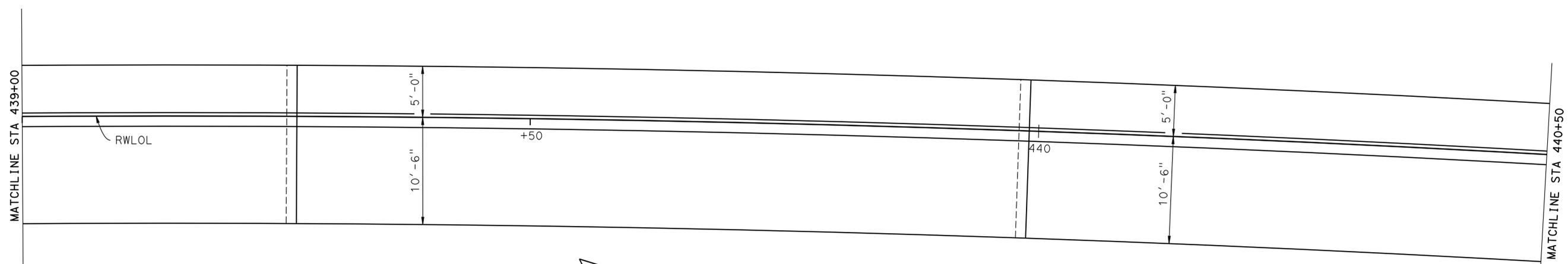
05-26-15  
 PLANS APPROVAL DATE

RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL  
 STATE OF CALIFORNIA

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**DEVELOPED MIRRORED ELEVATION**  
 $\frac{3}{16}'' = 1'-0''$



**FOOTING PLAN**  
 $\frac{3}{16}'' = 1'-0''$

NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO. 57E0125	MID CITY BIKE FACILITY RW-438 STRUCTURE PLAN NO. 2
	DETAILS BY R. KIRKLAND	CHECKED M. VO			POST MILE R5.921	
	QUANTITIES BY R. ANDERSON	CHECKED M. VO				
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3589 PROJECT NUMBER & PHASE: 1100020291	CONTRACT NO.: 11-2T1900	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				0 1 2 3	REVISION DATES	SHEET 4 OF 8

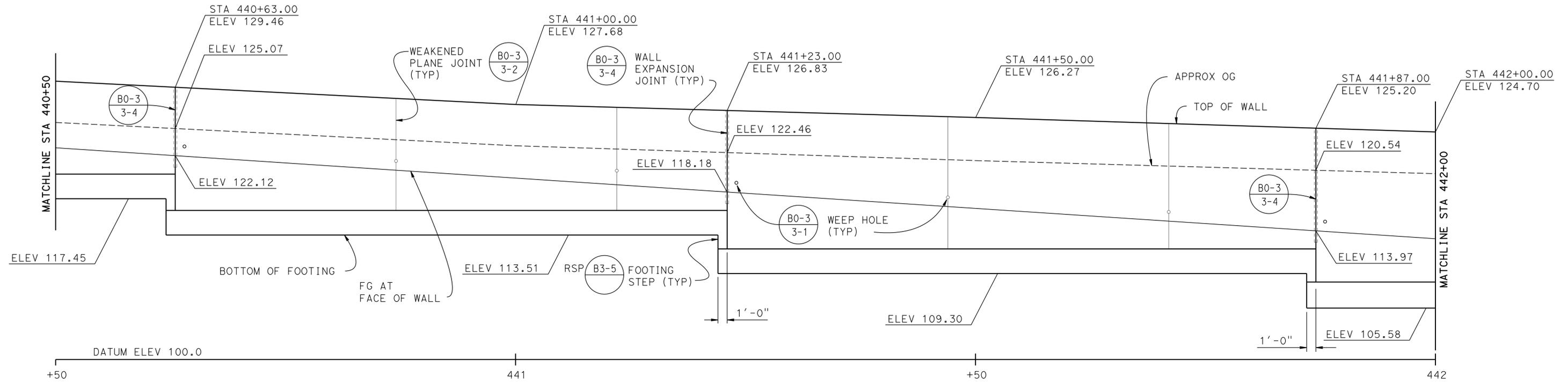
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	284	287

Renee M. Anderson 11-14-14  
REGISTERED CIVIL ENGINEER DATE

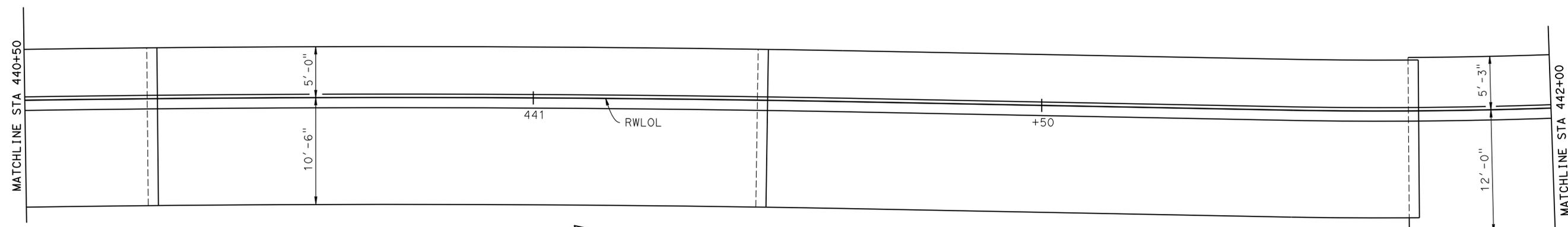
05-26-15  
PLANS APPROVAL DATE

RENEE ANDERSON  
No. 61040  
Exp. 12-31-2016  
CIVIL  
STATE OF CALIFORNIA

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**DEVELOPED MIRRORED ELEVATION**  
 $\frac{3}{16}'' = 1'-0''$



**FOOTING PLAN**  
 $\frac{3}{16}'' = 1'-0''$

NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 10

BRIDGE NO.	57E0125
POST MILE	R5.921

MID CITY BIKE FACILITY RW-438  
STRUCTURE PLAN NO. 3

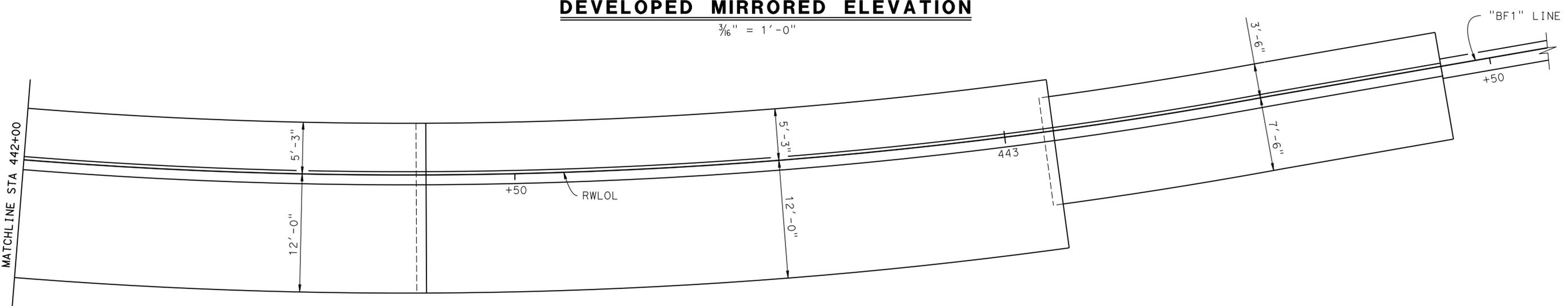
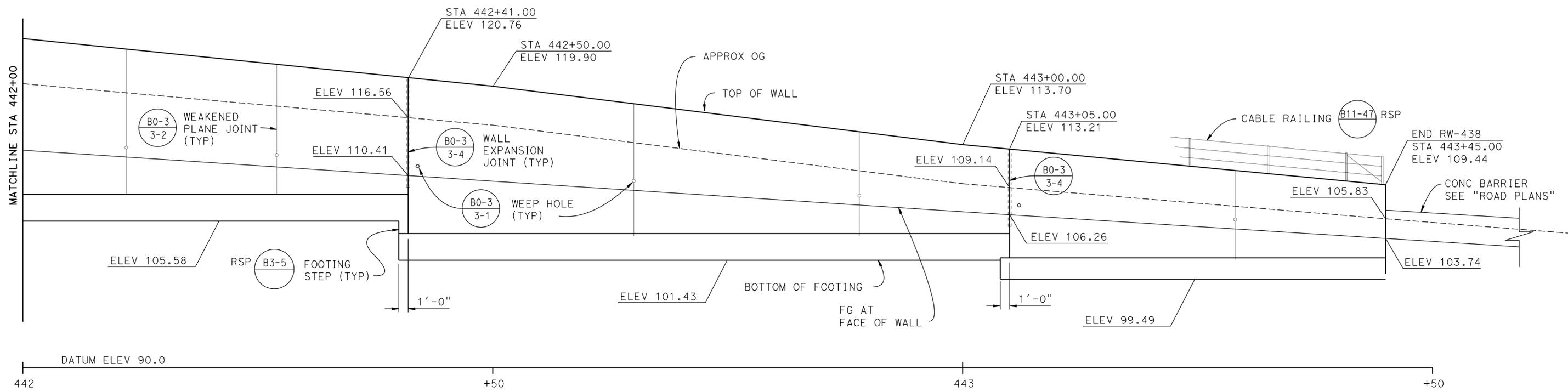
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	285	287

Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE

05-26-15  
 PLANS APPROVAL DATE

RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL  
 STATE OF CALIFORNIA

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NOTE:  
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DESIGN	BY R. ANDERSON	CHECKED M. VO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 10	BRIDGE NO.	MID CITY BIKE FACILITY RW-438 STRUCTURE PLAN NO. 4
DETAILS	BY R. KIRKLAND	CHECKED M. VO			57E0125	
QUANTITIES	BY R. ANDERSON	CHECKED M. VO			R5.921	

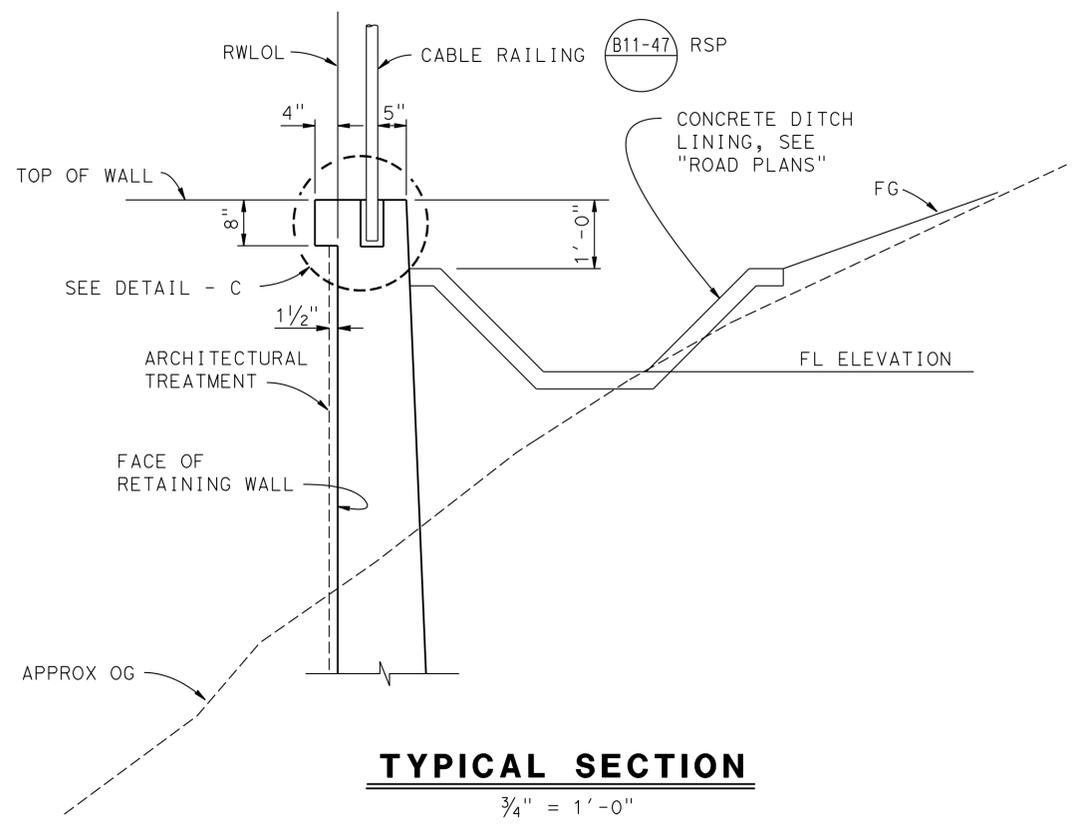
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	15	M5.6/R6.0	286	287

Renee M. Anderson 11-14-14  
 REGISTERED CIVIL ENGINEER DATE

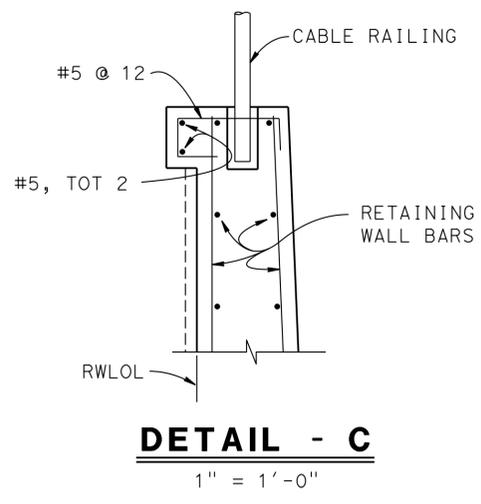
05-26-15  
 PLANS APPROVAL DATE

RENEE ANDERSON  
 No. 61040  
 Exp. 12-31-2016  
 CIVIL  
 STATE OF CALIFORNIA

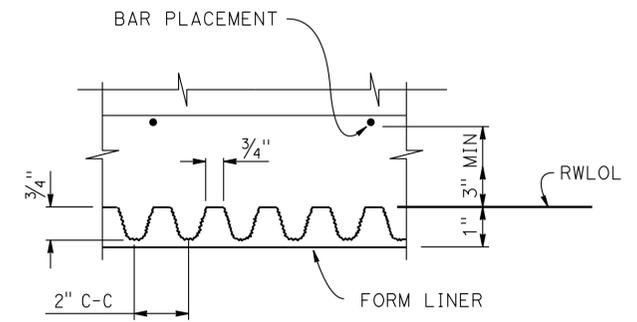
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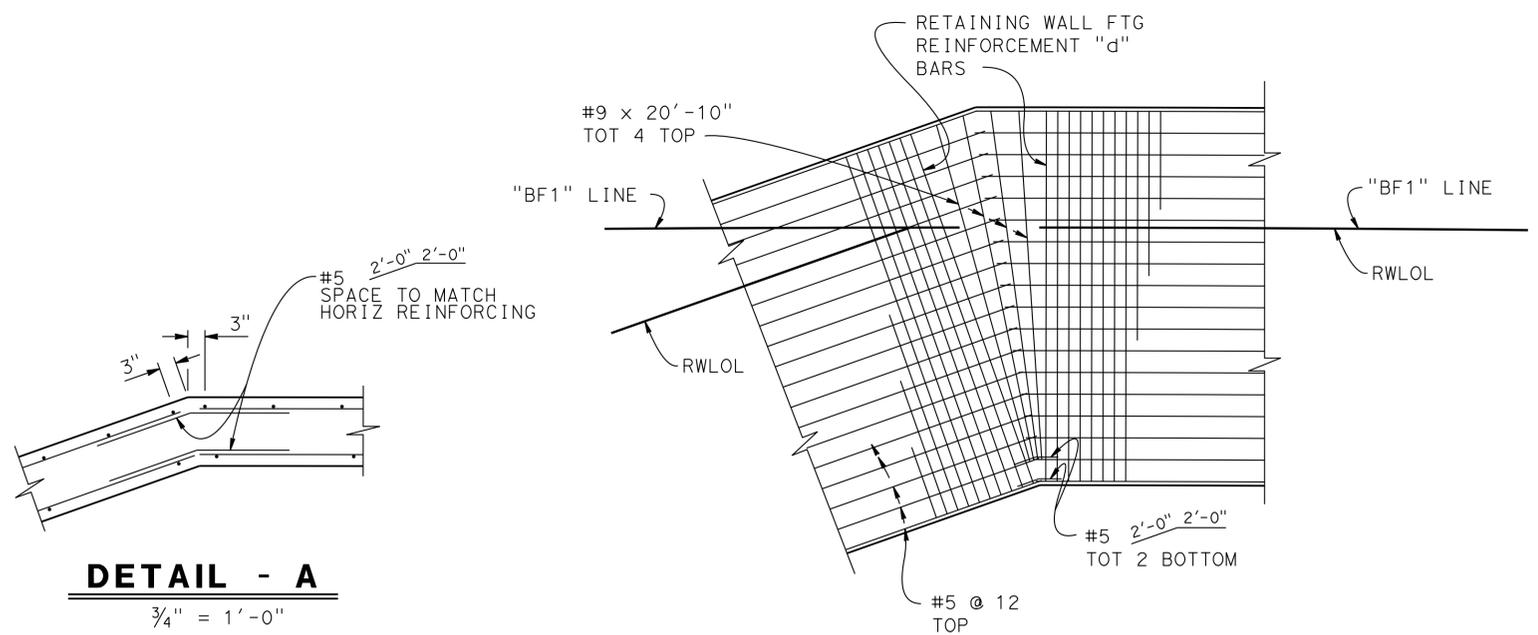
**TYPICAL SECTION**  
 $\frac{3}{4}'' = 1' - 0''$



**DETAIL - C**  
 $1'' = 1' - 0''$

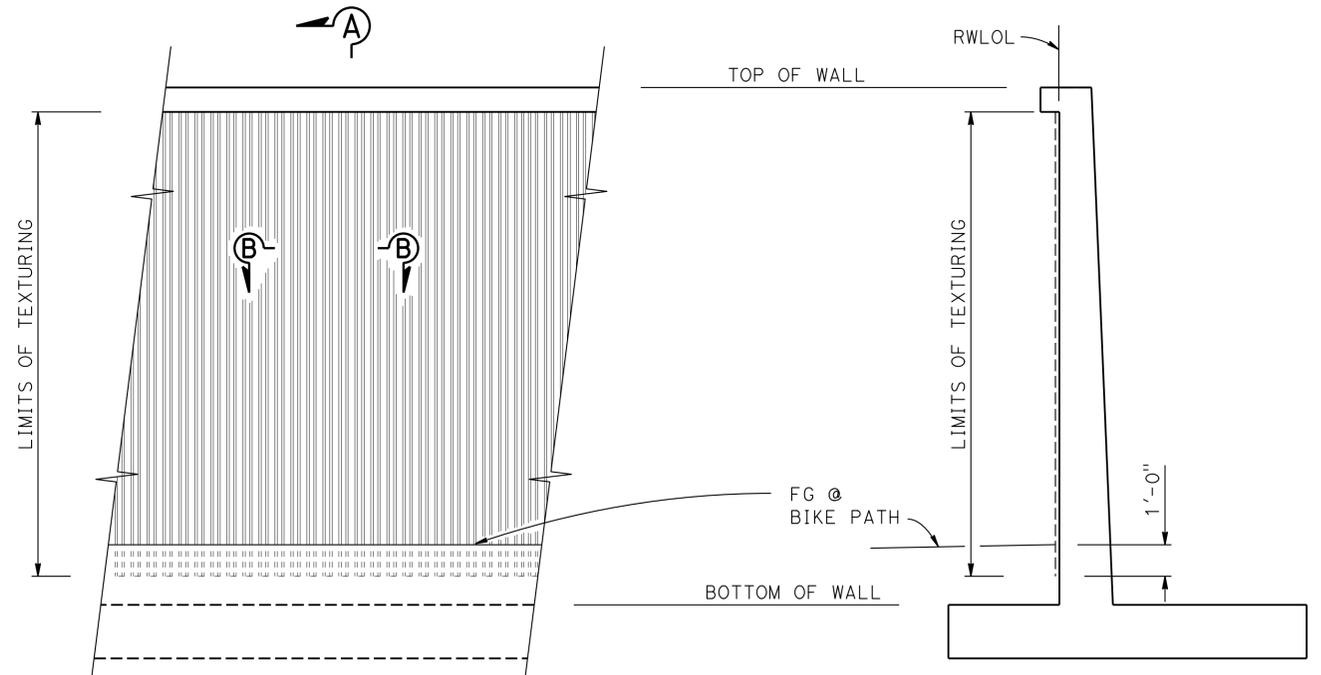


**SECTION B-B**



**DETAIL - A**  
 $\frac{3}{4}'' = 1' - 0''$

**DETAIL - B**  
 NO SCALE



**ELEVATION**

**FRACTURED FIN TEXTURE**  
 NO SCALE

**SECTION A-A**

NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY R. ANDERSON	CHECKED M. VO
DETAILS	BY R. KIRKLAND	CHECKED M. VO
QUANTITIES	BY R. ANDERSON	CHECKED M. VO

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
**DESIGN BRANCH 10**

BRIDGE NO.	57E0125
POST MILE	R5.921

**MID CITY BIKE FACILITY RW-438**  
**DETAILS NO. 1**

