

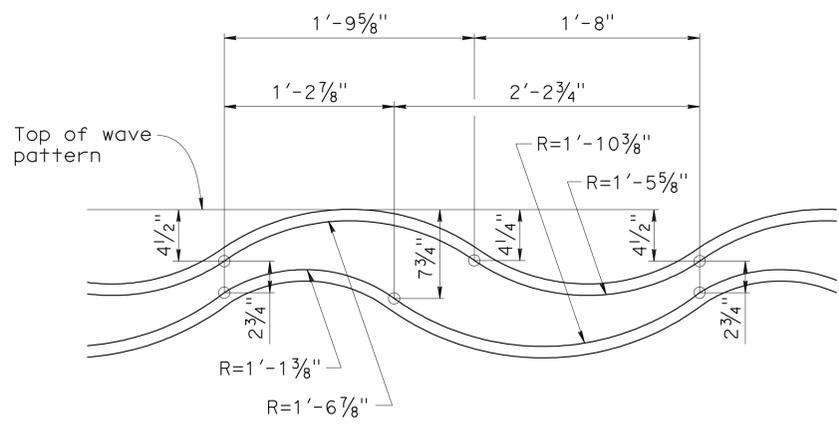
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	501	535

*Jan M. Hueser*  
 REGISTERED CIVIL ENGINEER DATE 2-17-12  
 9-10-12  
 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  
 Jan M. Hueser  
 No. C050215  
 Exp. 6/30/13  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954

URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997

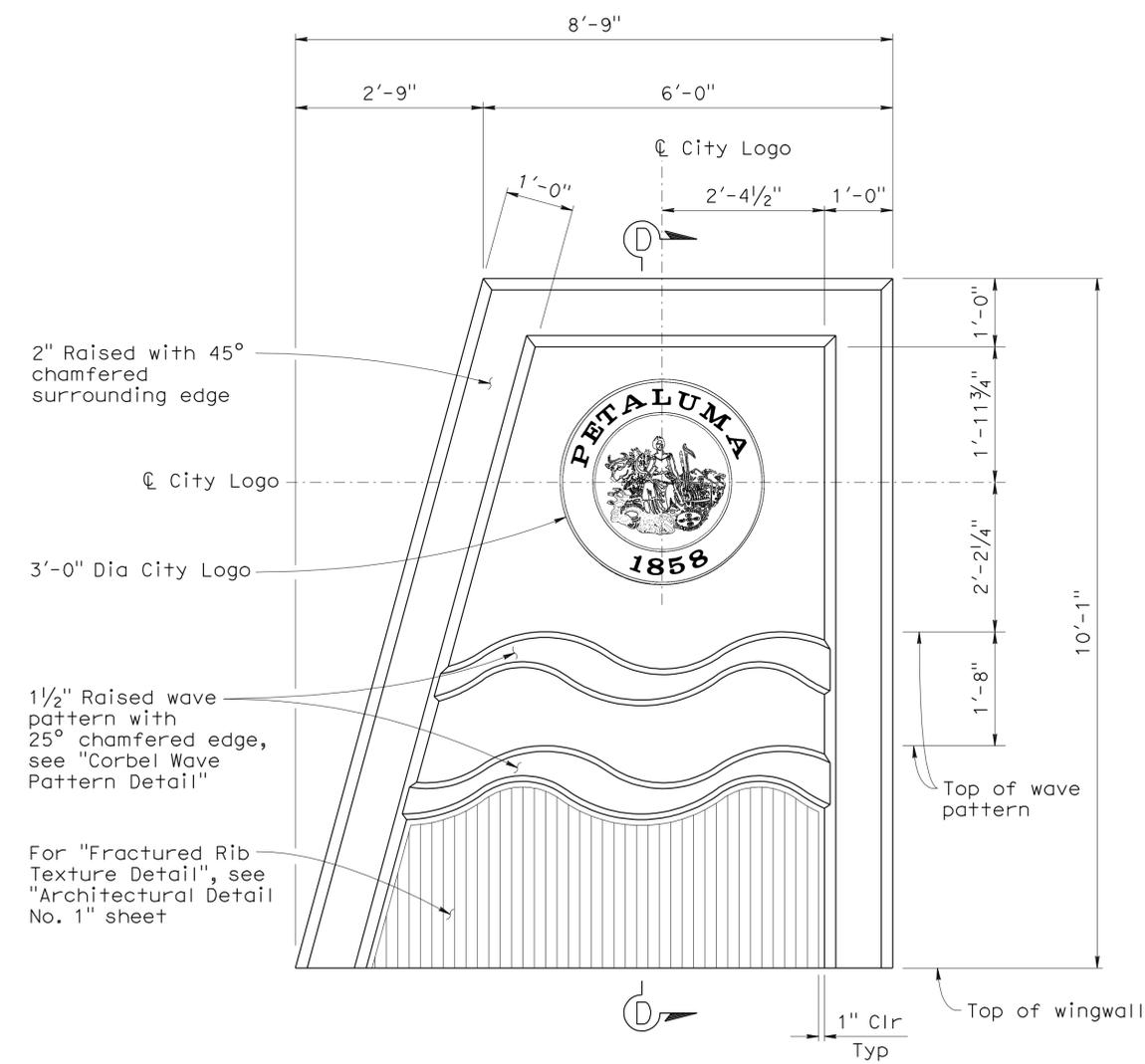


**CORBEL WAVE PATTERN DETAIL**

1/2" = 1'-0"

**NOTES:**

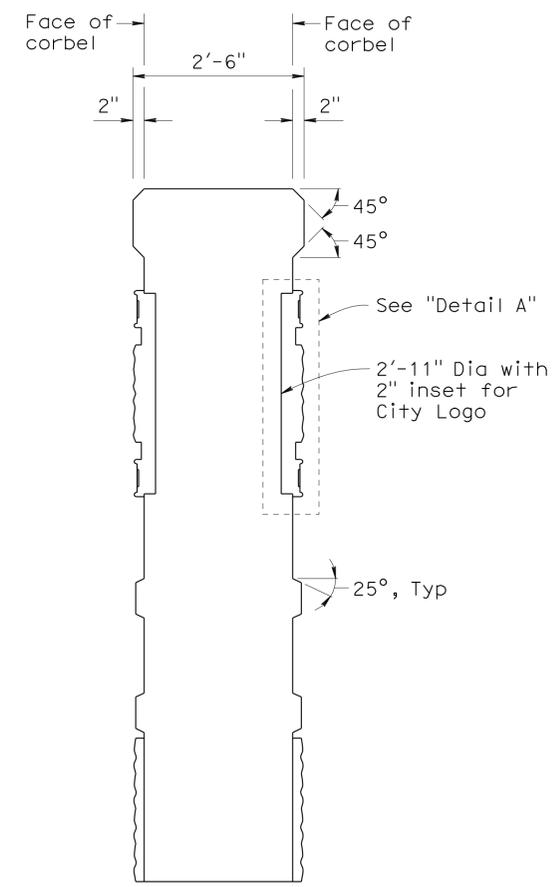
1. Painted figures on City Logo shall stand out beyond smooth logo field with a minimum relief of 0" and a maximum relief of 1/2". The seated figure, gold pan, rocks and mechanical gear shall stand out from the other elements.
2. Clear, non-staining, sacrificial anti-graffiti finish shall be applied to corbels and city logo.
3. Letters and numbers shall be 3" high x 1/4" thick black anodized aluminum matching city font.



**CORBEL LAYOUT**

3/4" = 1'-0"

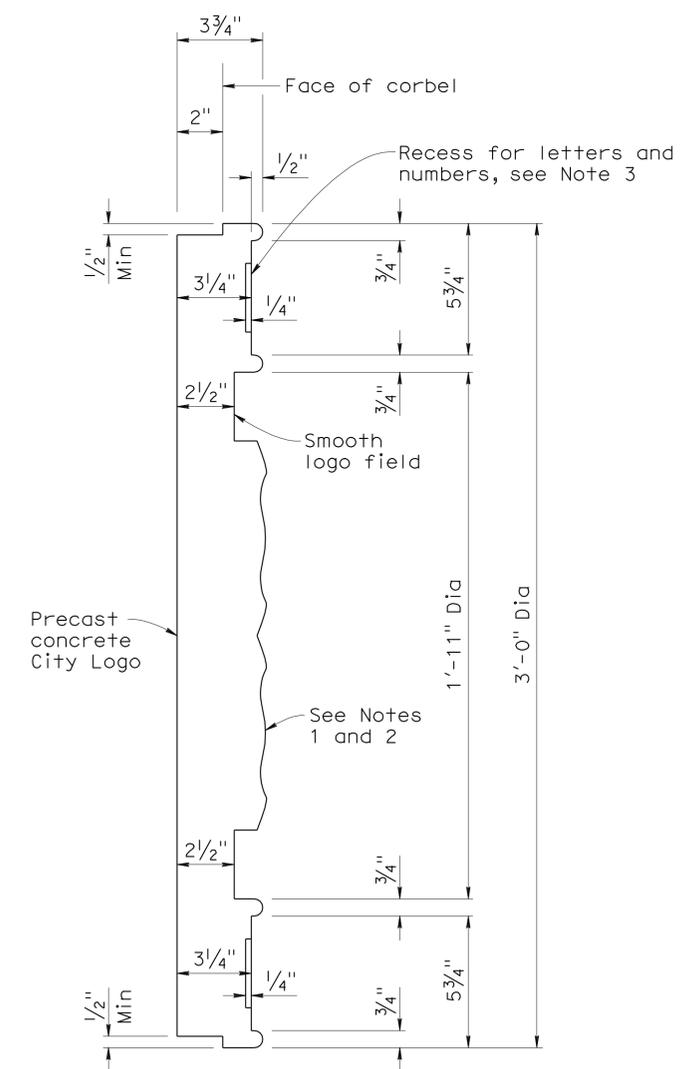
NOTE:  
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



**SECTION D-D**

3/4" = 1'-0"

Note:  
 Architectural layout on both sides of corbel.



**DETAIL A**

3" = 1'-0"

*Tracy L. Bertram*  
 DESIGN OVERSIGHT Tracy L. Bertram  
 3-26-12  
 SIGN OFF DATE

DESIGN	BY S. Landis/J. Hueser	CHECKED G. Rowe
DETAILS	BY L. Davis	CHECKED G. Rowe
QUANTITIES	BY S. Landis	CHECKED L. Davis

**PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**

Walt LaFranchi  
 PROJECT ENGINEER

BRIDGE NO. 20-0291  
 POST MILES 7.65  
**OLD REDWOOD HWY OC (REPLACE)**  
**ARCHITECTURAL DETAILS No. 3**

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: 0751  
 PROJECT NUMBER & PHASE: 0400020652

CONTRACT NO.: 04-0A1851

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-16-10 5-13-11 9-28-11 2-17-12	35	41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	502	535

*Jan M. Hueser*  
 REGISTERED CIVIL ENGINEER  
 2-17-12  
 DATE

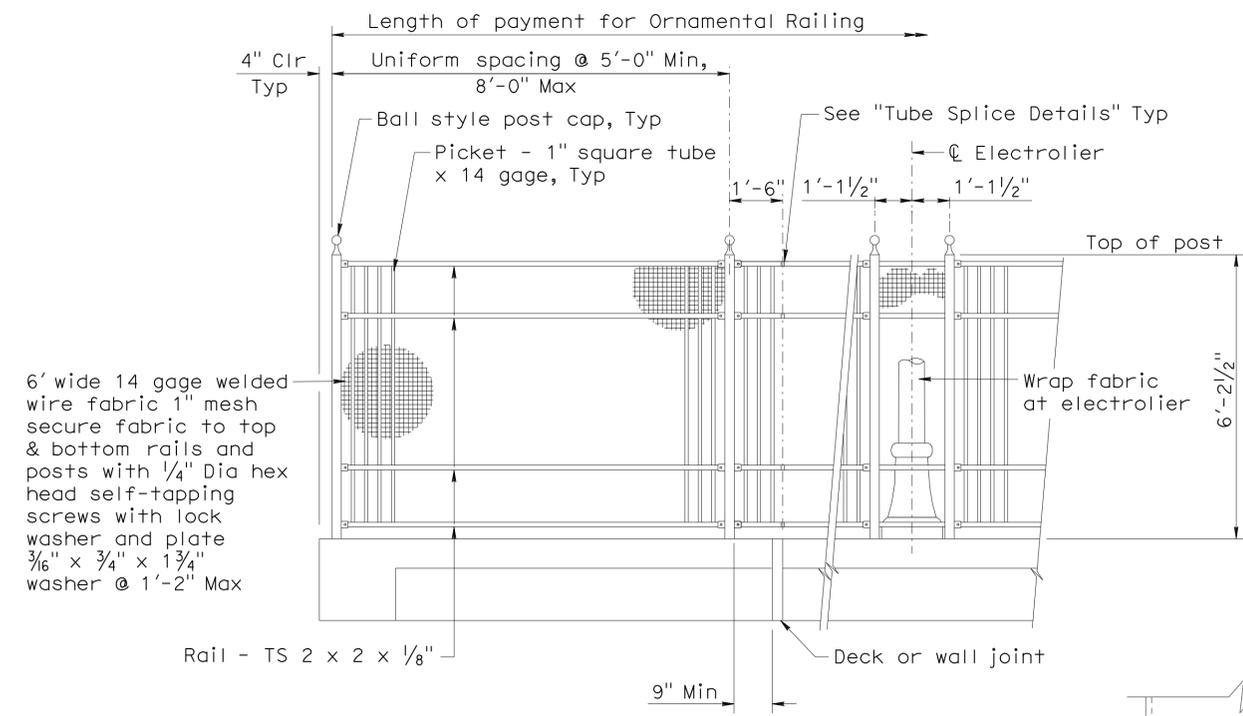
9-10-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jan M. Hueser  
 No. C050215  
 Exp. 6/30/13  
 CIVIL  
 STATE OF CALIFORNIA

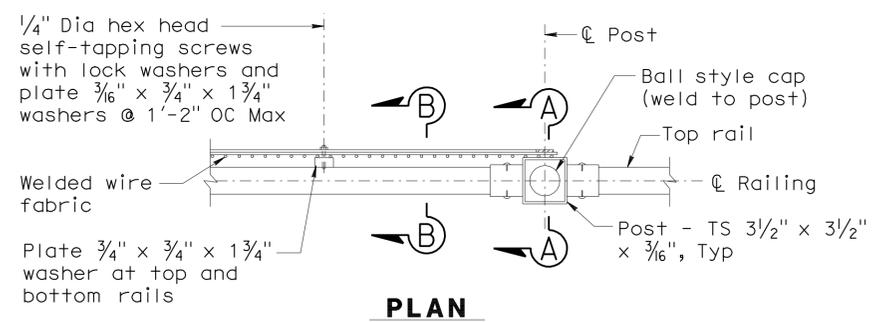
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CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954

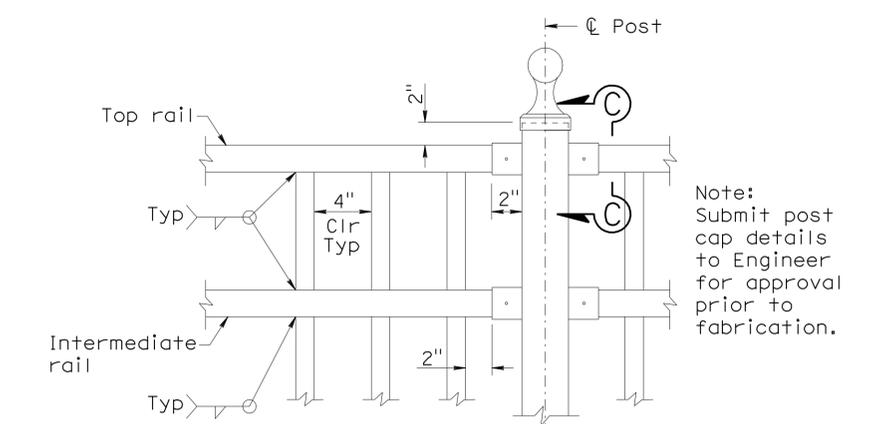
URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997



**PARTIAL ELEVATION**  
 No Scale



**PLAN**

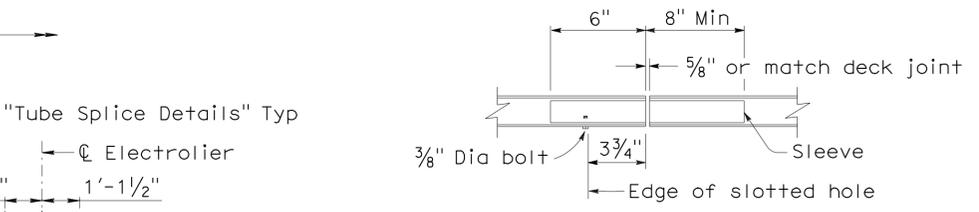


**ELEVATION**

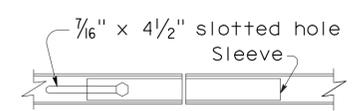
**RAILING CONNECTION DETAILS**

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

*Tracy L. Bertram*  
 DESIGN OVERSIGHT  
 Tracy L. Bertram  
 3-26-12  
 SIGN OFF DATE



**VIEW G-G**

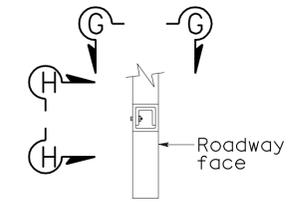


**VIEW H-H**

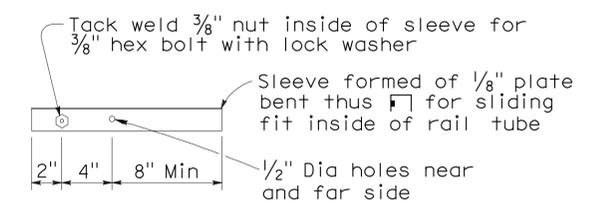
Note:  
 3/8" Dia nut tack welded to sleeve may be replaced by drilled and tapped in sleeve.

**TUBE SPLICE DETAILS**

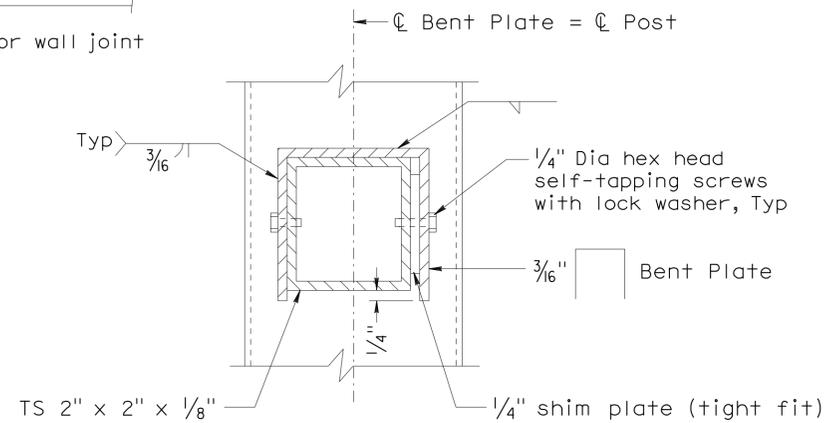
No Scale



**SECTION**

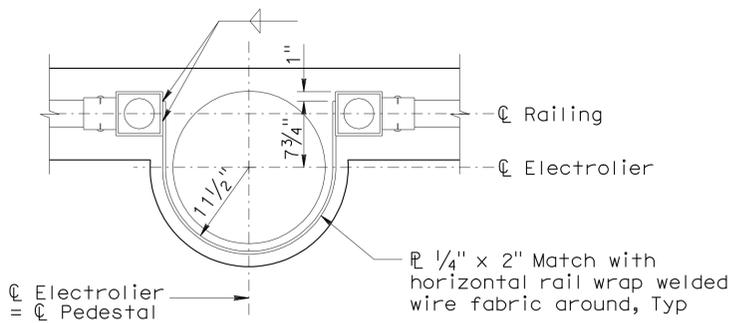


**SLEEVE**



**SECTION C-C**

No Scale

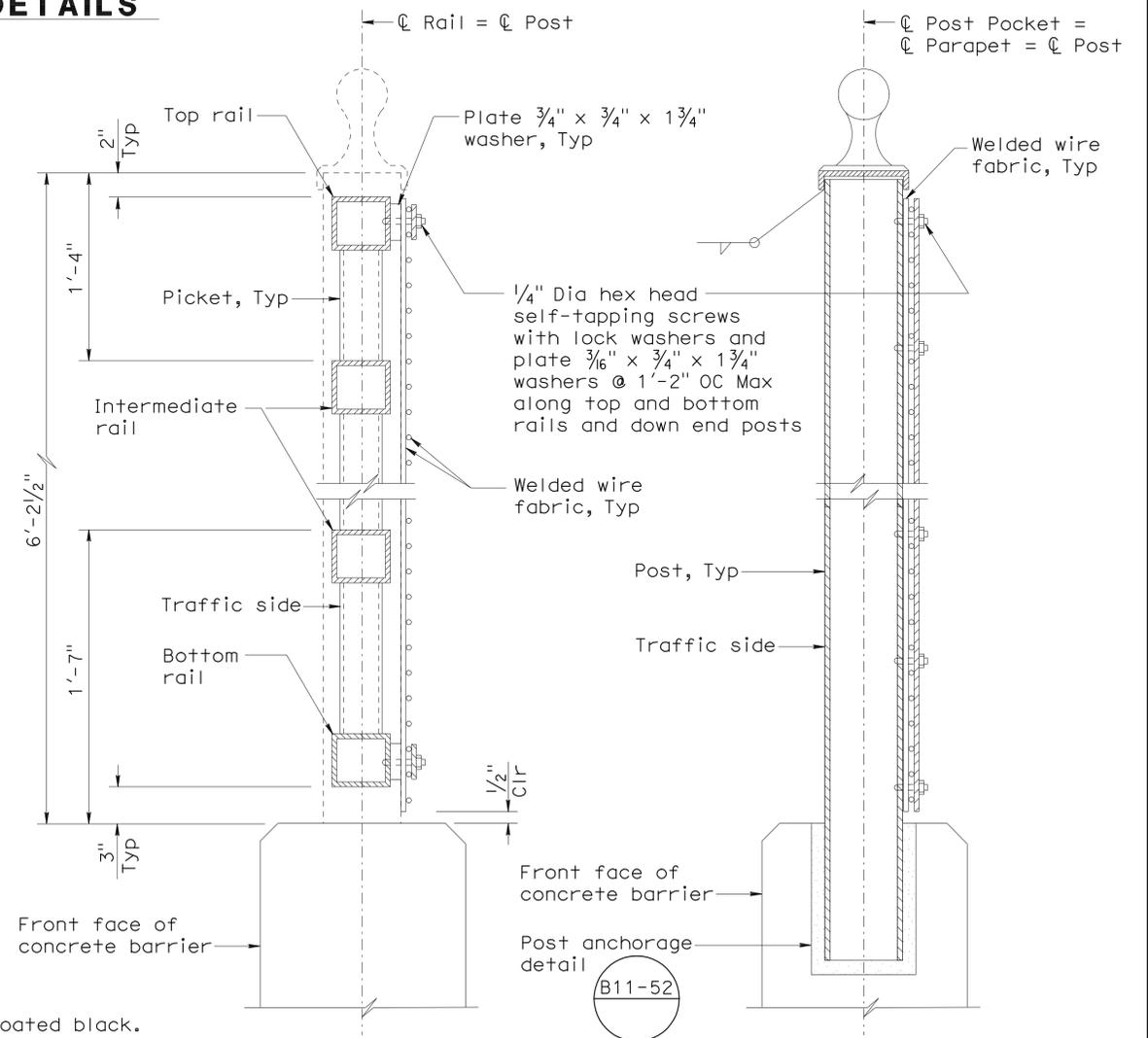


**ELECTROLIER DETAIL**

No Scale

**NOTES:**

- All metal parts of railing including welded wire fabric shall be powder coated black.
- Post and pickets shall be vertical, rail shall be parallel to top of concrete barrier.



**SECTION B-B**

No Scale

**SECTION A-A**

No Scale

DESIGN	BY S. Landis/J. Hueser	CHECKED G. Rowe
DETAILS	BY L. Davis	CHECKED G. Rowe
QUANTITIES	BY S. Landis	CHECKED L. Davis

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

Walt LaFranchi  
 PROJECT ENGINEER

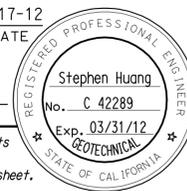
BRIDGE NO.	20-0291
POST MILES	7.65

**OLD REDWOOD HWY OC (REPLACE)**  
**ORNAMENTAL RAILING DETAILS**

REVISION DATES	SHEET	OF
3-16-10 5-13-11 9-20-11 2-17-12	36	41

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (JUNE 2007)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	503	535


 2-17-12  
 DATE  
 GEOTECHNICAL PROFESSIONAL  
 PLANS APPROVAL DATE  
 9-10-12  
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CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 100 WEST SAN FERNANDO STREET, SUITE 200  
 SAN JOSE, CA 95113

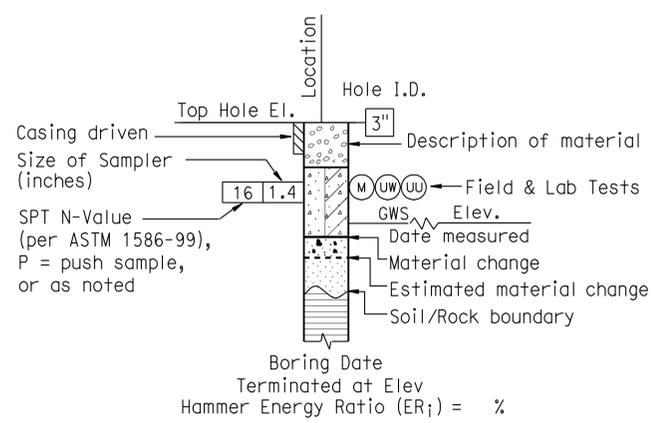
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

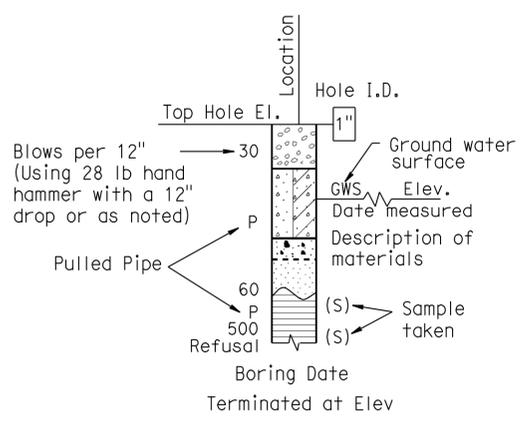
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

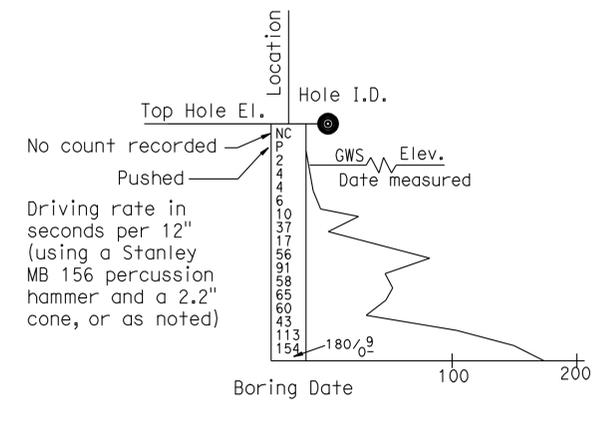
PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



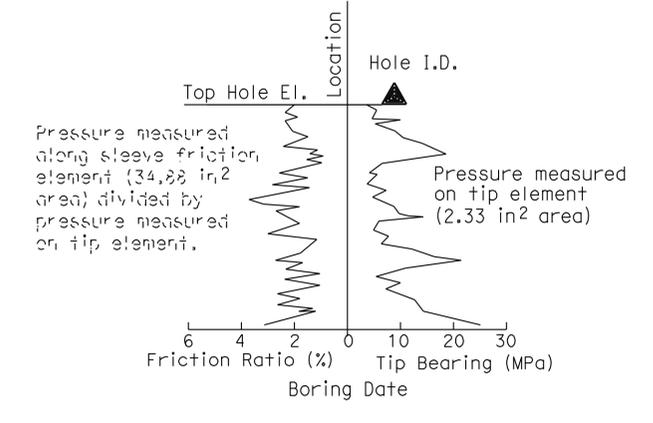
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY	A. CHEUNG	FIELD INVESTIGATION BY:	C. RAMBO	BRIDGE NO.	20-0291	<b>OLD REDWOOD HWY OC (REPLACE)</b> <b>LOG OF TEST BORINGS 1 OF 5</b>
	CHECKED BY	M. THUMMALURU	DATE:	N/A	POST MILES	7.65	
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)					UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652		CONTRACT NO.: 04-0A1851
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12
FILE => 20-0291-2-1tb01.dgn					SHEET 37 OF 41		USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	504	535

2-17-12  
DATE

9-10-12  
PLANS APPROVAL DATE

Stephen Huang  
No. C 42289  
Exp. 03/31/12  
REGISTERED PROFESSIONAL ENGINEER  
GEOTECHNICAL  
STATE OF CALIFORNIA

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CITY OF PETALUMA PUBLIC WORKS  
11 ENGLISH STREET  
PETALUMA, CA 94954

URS CORPORATION  
100 WEST SAN FERNANDO STREET, SUITE 200  
SAN JOSE, CA 95113

GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	Well-graded GRAVEL Well-graded GRAVEL with SAND		Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND		SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	SILTY GRAVEL SILTY GRAVEL with SAND		ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
	Well-graded SAND Well-graded SAND with GRAVEL		
	Poorly graded SAND Poorly graded SAND with GRAVEL		Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
	SILTY SAND SILTY SAND with GRAVEL		
	CLAYEY SAND CLAYEY SAND with GRAVEL		ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
	PEAT		ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

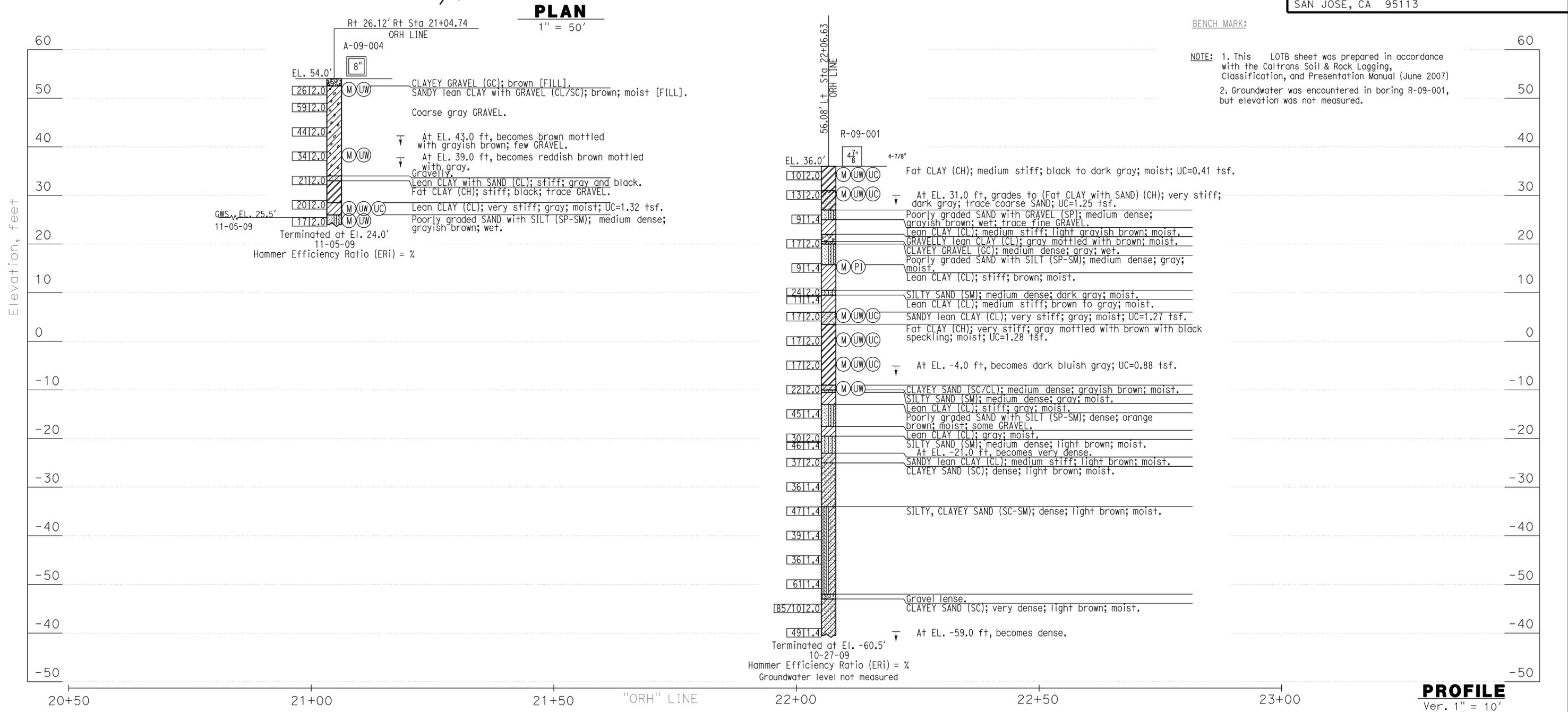
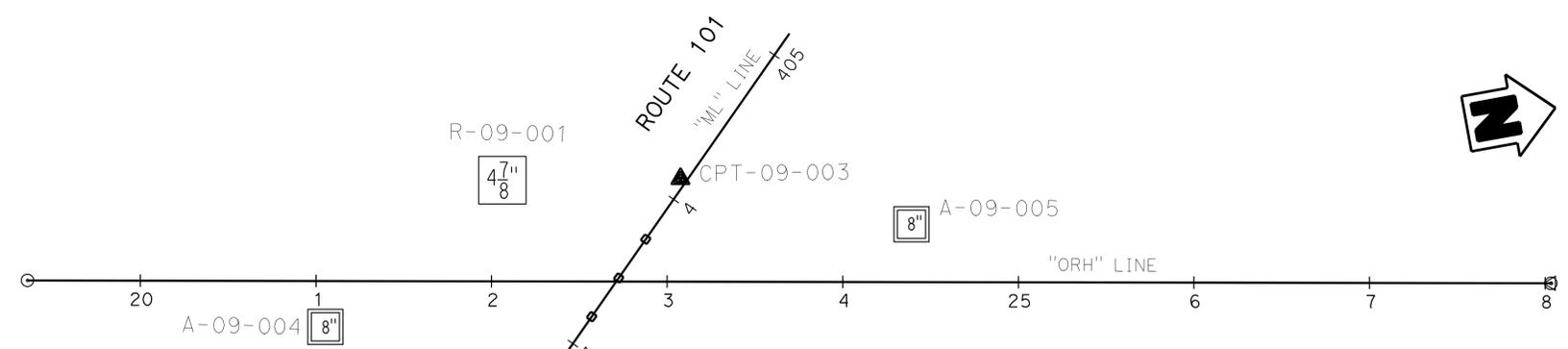
 DESIGN OVERSIGHT Tracy L Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHECKED BY M. THUMMALURU	FIELD INVESTIGATION BY: C. RAMBO DATE: N/A	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20-0291 POST MILES 7.65	PROJECT ENGINEER S. HUANG	<b>OLD REDWOOD HWY OC (REPLACE)</b> <b>LOG OF TEST BORINGS 2 OF 5</b>
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	505	535


 2-17-12  
 DATE  
 9-10-12  
 PLANS APPROVAL DATE  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
 STATE OF CALIFORNIA  
 GEOTECHNICAL PROFESSIONAL

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 100 WEST SAN FERNANDO STREET, SUITE 200  
 SAN JOSE, CA 95113



**BENCH MARK:**  
**NOTE:** 1. This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)  
 2. Groundwater was encountered in boring R-09-001, but elevation was not measured.

**PROFILE**  
 Ver. 1" = 10'  
 Hor. 1" = 50'

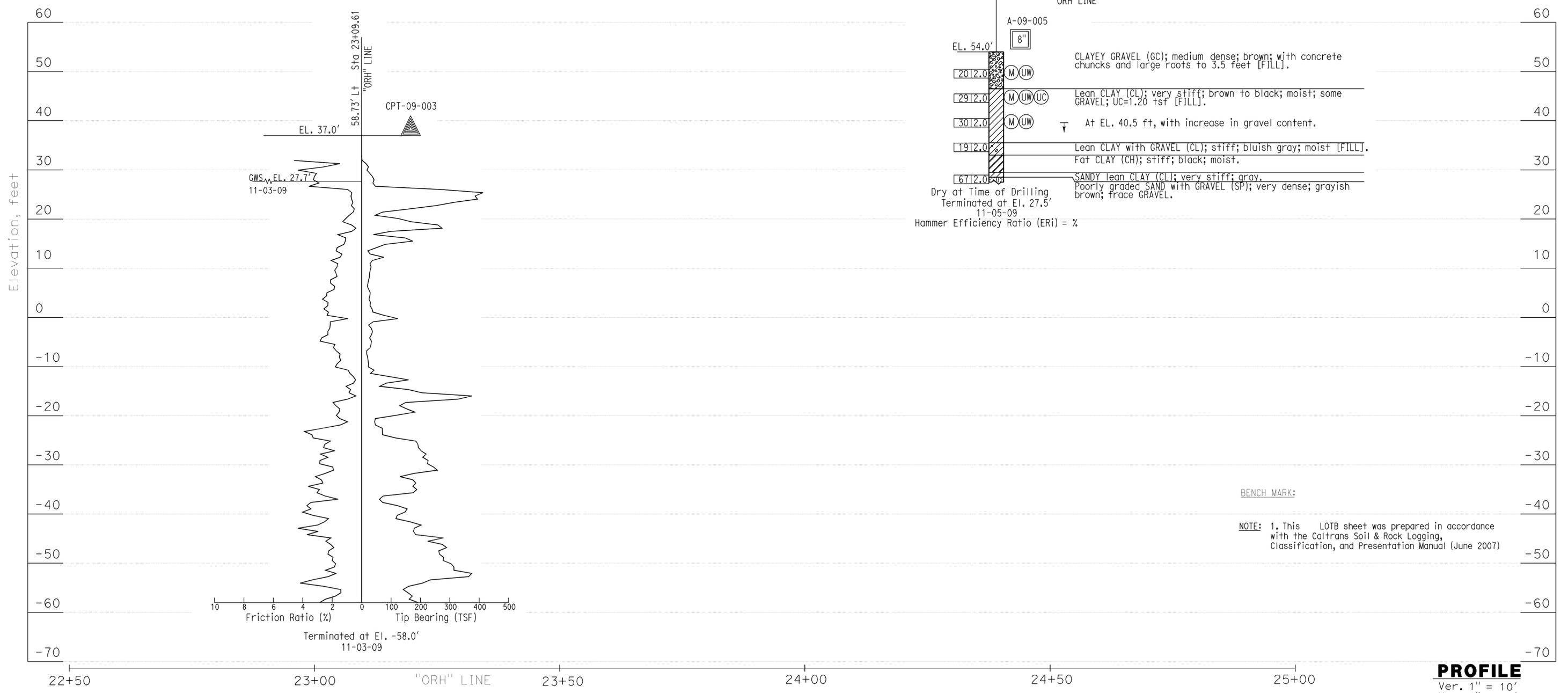
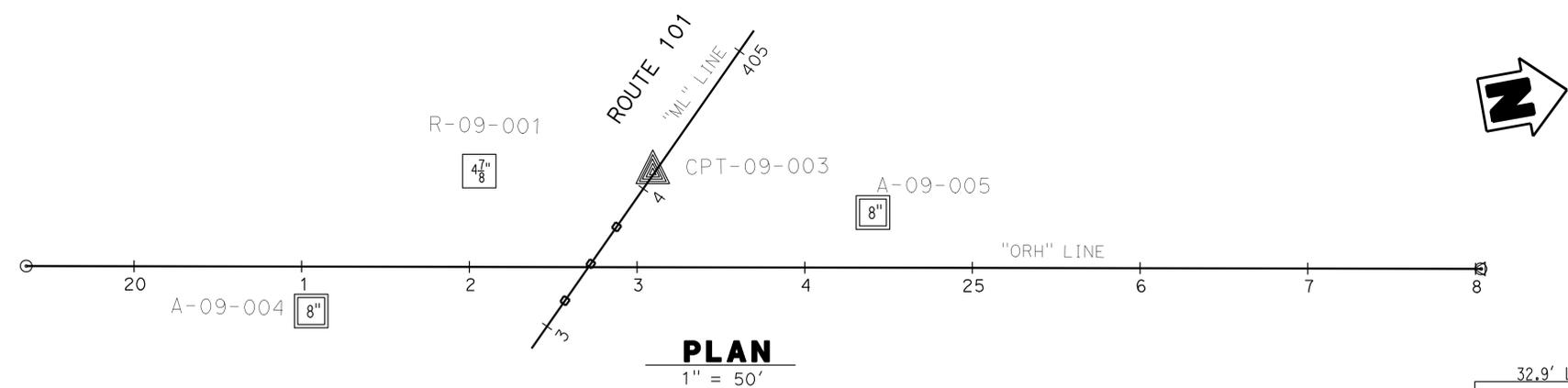
 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	FIELD INVESTIGATION BY: C. RAMBO	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20-0291	<b>OLD REDWOOD HWY OC (REPLACE)</b> <b>LOG OF TEST BORINGS 3 OF 5</b>	
	CHECKED BY M. THUMMALURU	DATE: 10/27/09 AND 11/05/09		PROJECT ENGINEER S. HUANG		POST MILES 7.65
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)						
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES 09-16-10 5-13-11 9-28-11 2-17-12	SHEET 39	OF 41

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	506	535

  
 GEOTECHNICAL PROFESSIONAL DATE 2-17-12  
 9-10-12  
 PLANS APPROVAL DATE  
 REGISTERED PROFESSIONAL ENGINEER  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
 STATE OF CALIFORNIA  
 GEOTECHNICAL

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 CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 100 WEST SAN FERNANDO STREET, SUITE 200  
 SAN JOSE, CA 95113



BENCH MARK:

NOTE: 1. This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	FIELD INVESTIGATION BY: C. RAMBO	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER S. HUANG	BRIDGE NO. 20-0291	<b>OLD REDWOOD HWY OC (REPLACE)</b> <b>LOG OF TEST BORINGS 4 OF 5</b>					
	CHECKED BY M. THUMMALURU	DATE: 11/03/09 AND 11/05/09		PROJECT NUMBER & PHASE: 0400020652	POST MILES 7.65		CONTRACT NO.: 04-0A1851				
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652 CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12	SHEET 40	OF 41

FILE => 20-0291-z-1tb04.dgn

IV. Ser. 10. F. -88-73  
 March 15, 1954

TO ACCOMPANY PLANS DATED 9-10-12

**DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL 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. 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
04	Son	101	7.1/8.1	507	535

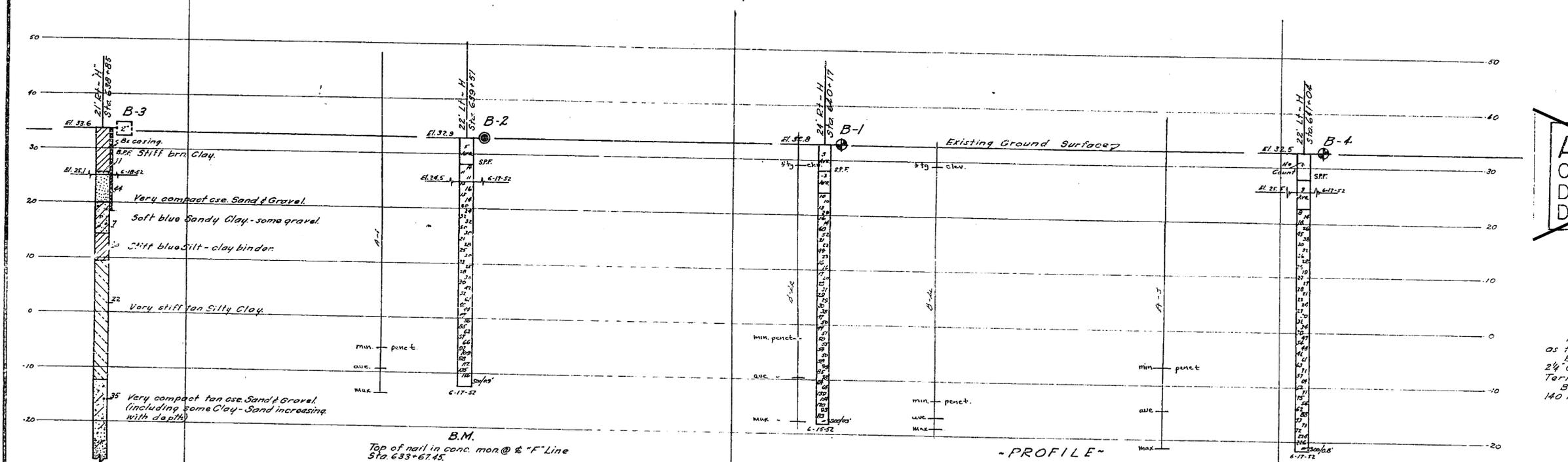
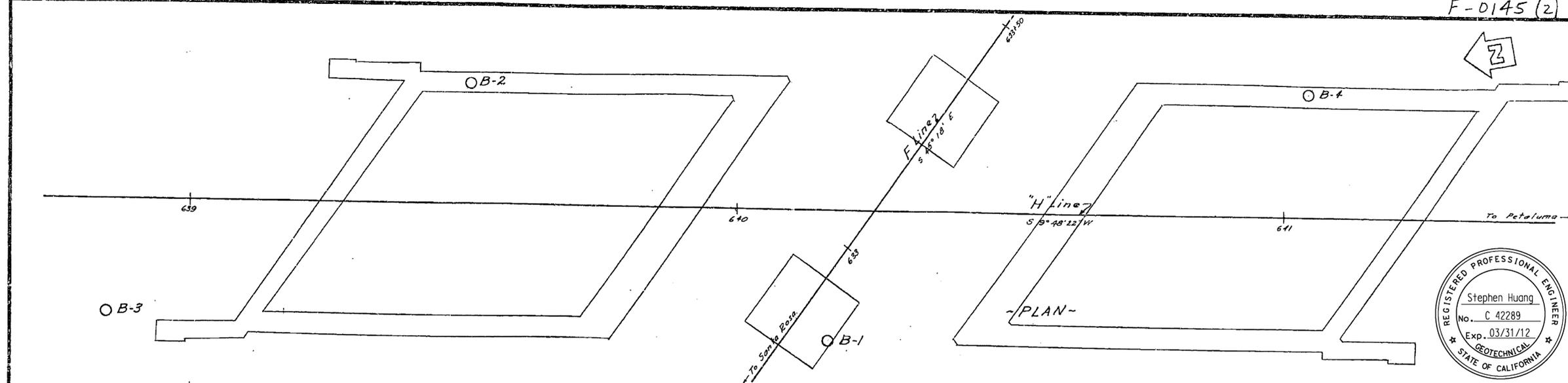
CERTIFIED ENGINEER/GEOLOGIST  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
 STATE OF CALIFORNIA

**OLD REDWOOD HWY OC (REPLACE)**  
**LOG OF TEST BORINGS 5 OF 5**

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA. UNIT: 0751 PROJECT NUMBER & PHASE: 04000200652

Revisions made to this Log of Test Borings from the original Log of Test Borings are the addition of the following table and notes:

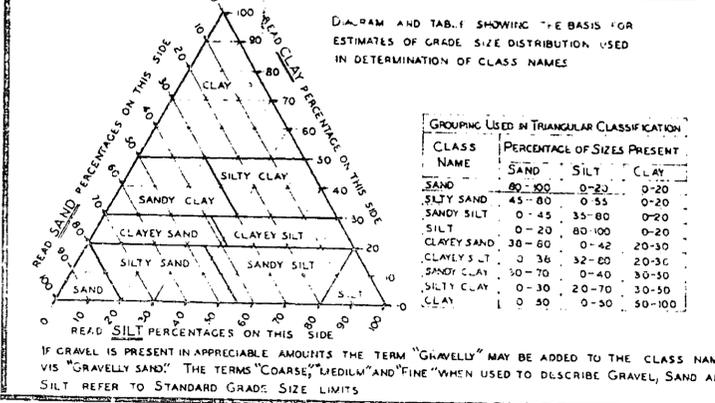
Boring	Station	Offset from A Line
B-1	22+86	21.4 Lt
B-2	23+96	0.6 Lt
B-3	24+56	27.7 Lt
B-4	21+62	2.9 Rt



~~AS BUILT PLANS~~  
 Contract No. 4-47C63  
 Date Completed  
 Document No. 40007280

**Notes**  
 Relative rates of penetration were obtained as follows:  
 B-1, 2 & 4 (secs. per foot) driving 1 3/8" A-Rod or 2 1/4" Cone Penetrometer with No. 2 1/2" diameter Terry air hammer at 115 p.s.i. gage pressure.  
 B-3 (blows per foot) driving 1 1/2" sampler with 140 lb hammer and a 30" free fall.

**CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS**



**LEGEND OF BORING OPERATIONS**

- PLAN OF AIL BORING
- 1" SAMPLER BORING
- ROTARY WASH BORING
- 1" CLOSED SAMPLER DRIVEN
- CORE BORING
- 2 1/2" PENETROMETER DRIVEN
- 1 3/8" SAMP. EX. BORING
- 2" TO 5" AUGER BORING
- 6" TO 20" AUGER BORING
- CASING DRIVEN
- JET BORING
- SAMPLE TAKEN
- 1 3/8" A-ROD DRIVEN

**LEGEND OF EARTH MATERIALS**

- GRAVEL - G
- SAND - S
- SILT - SI
- CLAY - C
- SILTY SAND - S-S
- CLAYEY SAND - C-S
- SANDY SILT - S-SI
- CLAYEY SILT - C-SI
- SANDY CLAY - SC
- SILTY CLAY - SI-C
- PEAT AND ORGANIC CLAY - O
- SANDSTONE - SS
- SHALE - SH
- BROKEN ROCK (FRAGMENTS) - BR
- ROCK - R
- FILL MATERIAL

**ABBREVIATIONS**

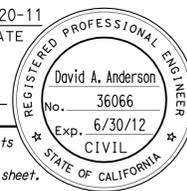
- EL 69.4 ELEVATION OF GROUND AT TEST HOLE
- bpf BLOWS PER FOOT - (SEE NOTE ABOVE)
- P PULLED PIPE
- M MOISTURE AS % DRY WEIGHT
- EL 64.3, 6-12-52 ELEVATION OF GROUND WATER AND DATE

**NOTES**

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 2, ARTICLE (C) OF THE STANDARD SPECIFICATIONS AND TO THE SPECIAL PROVISIONS ACCOMPANYING THIS SET OF PLANS.  
 CLASSIFICATION OF EARTH MATERIAL AS SHOWN ON THIS SHEET IS BASED UPON FIELD INSPECTION AND IS NOT TO BE CONSTRUED TO IMPLY MECHANICAL ANALYSIS.

CONTRACT No. 4-47C63  
 DATE ACCEPTED DEC 2, 1958  
**AS BUILT**  
 REGISTERED ENGINEER  
 DENMAN OVERCROSSING

**DENMAN OVERCROSSING**  
**LOG OF TEST BORINGS**  
 SCALE 1" = 10'  
 BRIDGE NO. 20-159  
 DRAWING NO. 2921-8

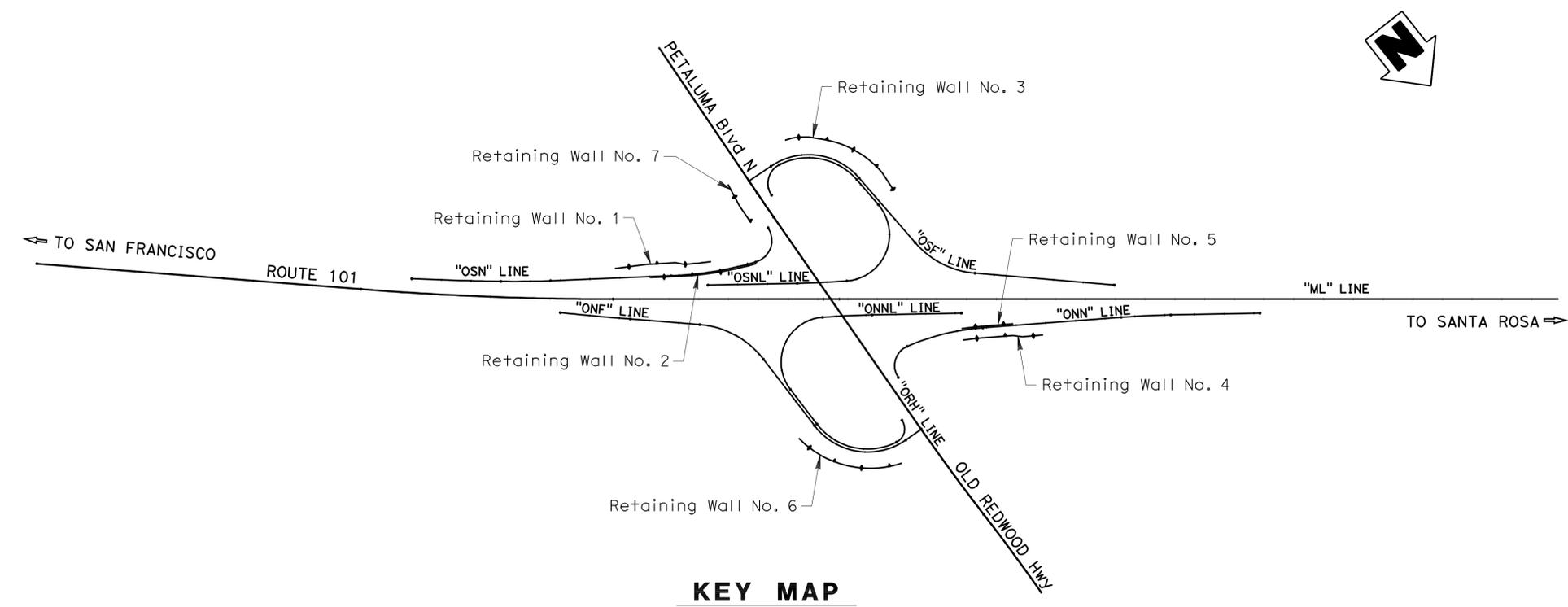
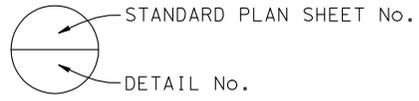
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	508	535
REGISTERED CIVIL ENGINEER			9-20-11	DATE	
9-10-12			PLANS APPROVAL DATE		
					
<i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</i>					
CITY OF PETALUMA PUBLIC WORKS 11 ENGLISH STREET PETALUMA, CA 94954					
URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					

### INDEX TO PLANS

SHEET No.	TITLE
1	RETAINING WALLS No. 1 THRU No. 7 GENERAL NOTES
2	RETAINING WALL No. 1 GENERAL PLAN
3	RETAINING WALL No. 2 GENERAL PLAN
4	RETAINING WALL No. 3 GENERAL PLAN
5	RETAINING WALL No. 4 GENERAL PLAN
6	RETAINING WALL No. 5 GENERAL PLAN
7	RETAINING WALL No. 6 GENERAL PLAN
8	RETAINING WALL No. 7 GENERAL PLAN
9	RETAINING WALLS No. 1 AND No. 2 PANEL LAYOUT
10	RETAINING WALLS No. 3 THRU No. 5 PANEL LAYOUT
11	RETAINING WALLS No. 6 AND No. 7 PANEL LAYOUT
12	RETAINING WALLS No. 1 THRU No. 7 CONCRETE BARRIER SLAB DETAILS
13	RETAINING WALLS No. 1 THRU No. 7 MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 1
14	RETAINING WALLS No. 1 THRU No. 7 MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 2
15	RETAINING WALLS No. 1 THRU No. 7 MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 3
16	RETAINING WALLS No. 1 THRU No. 7 MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 4
17	RETAINING WALLS No. 1 THRU No. 7 MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 6
18	RETAINING WALLS No. 1 THRU No. 7 MISCELLANEOUS DETAILS
19	RETAINING WALLS No. 1 THRU No. 7 ARCHITECTURAL TREATMENT DETAILS
20	RETAINING WALLS No. 1 THRU No. 7 LOG OF TEST BORINGS 1 OF 9
21	RETAINING WALLS No. 1 THRU No. 7 LOG OF TEST BORINGS 2 OF 9
22	RETAINING WALL No. 1 LOG OF TEST BORINGS 3 OF 9
23	RETAINING WALL No. 2 LOG OF TEST BORINGS 4 OF 9
24	RETAINING WALL No. 3 LOG OF TEST BORINGS 5 OF 9
25	RETAINING WALL No. 4 LOG OF TEST BORINGS 6 OF 9
26	RETAINING WALL No. 5 LOG OF TEST BORINGS 7 OF 9
27	RETAINING WALL No. 6 LOG OF TEST BORINGS 8 OF 9
28	RETAINING WALL No. 7 LOG OF TEST BORINGS 9 OF 9

### STANDARD PLANS DATED MAY 2006

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
A62B	LIMIT OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
RSP A85	CHAIN LINK FENCE
B3-9	RETAINING WALL DETAILS No. 2
B11-47	CABLE RAILING
B11-56	CONCRETE BARRIER TYPE 736



**KEY MAP**

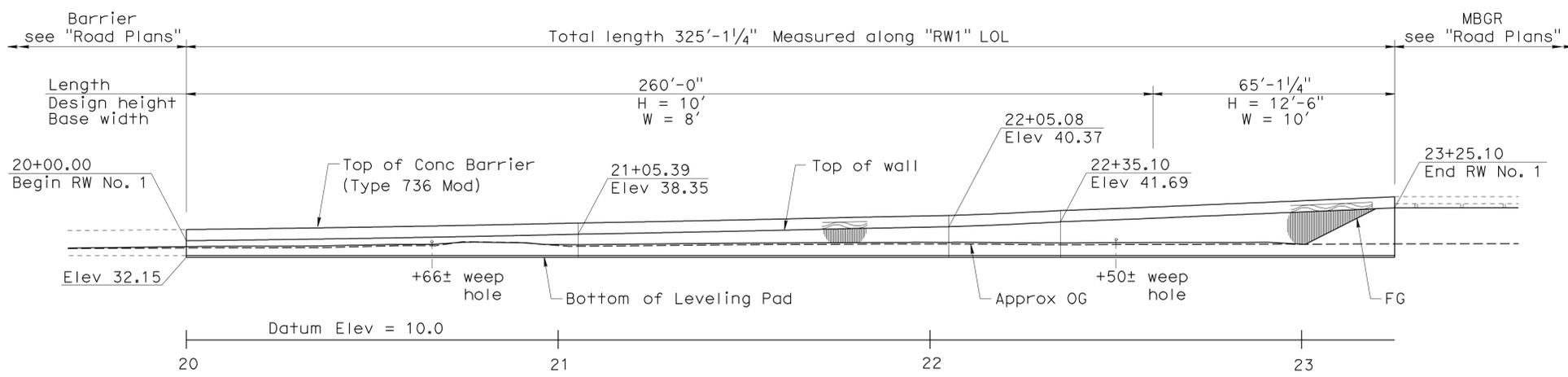
 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DESIGN	BY D. Anderson	CHECKED S. Landis	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	<b>RETAINING WALLS No. 1 THRU No. 7</b> <b>GENERAL NOTES</b>					
	DETAILS	BY L. Davis	CHECKED S. Landis		LAYOUT		BY D. Anderson	CHECKED S. Landis	Varies		
	QUANTITIES	BY D. Anderson	CHECKED S. Landis	SPECIFICATIONS	BY D. Harnage	PLANS AND SPECS COMPARED D. Anderson	PROJECT ENGINEER	Walt LaFranchi	POST MILES		
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 0751	PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-12-11 9-20-11 2-17-12	SHEET 1 OF 28

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:39

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	509	535

REGISTERED CIVIL ENGINEER  
 DATE 2-17-12  
 9-10-12  
 PLANS APPROVAL DATE  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

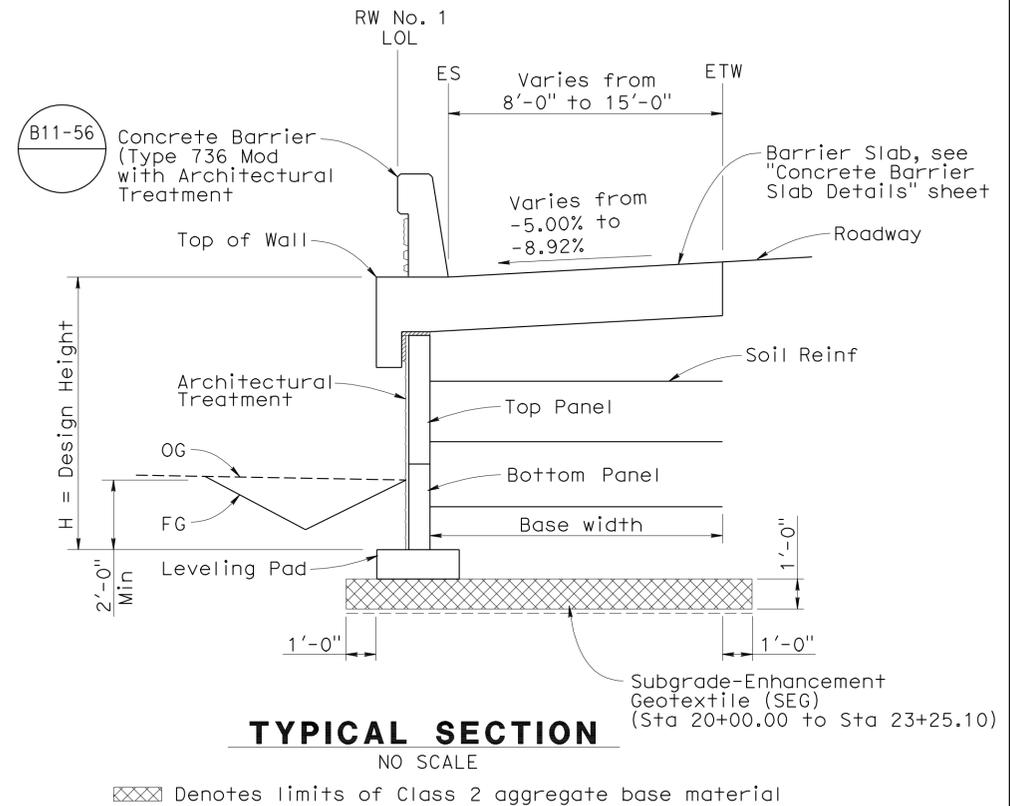
CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997



TOP OF WALL Elev

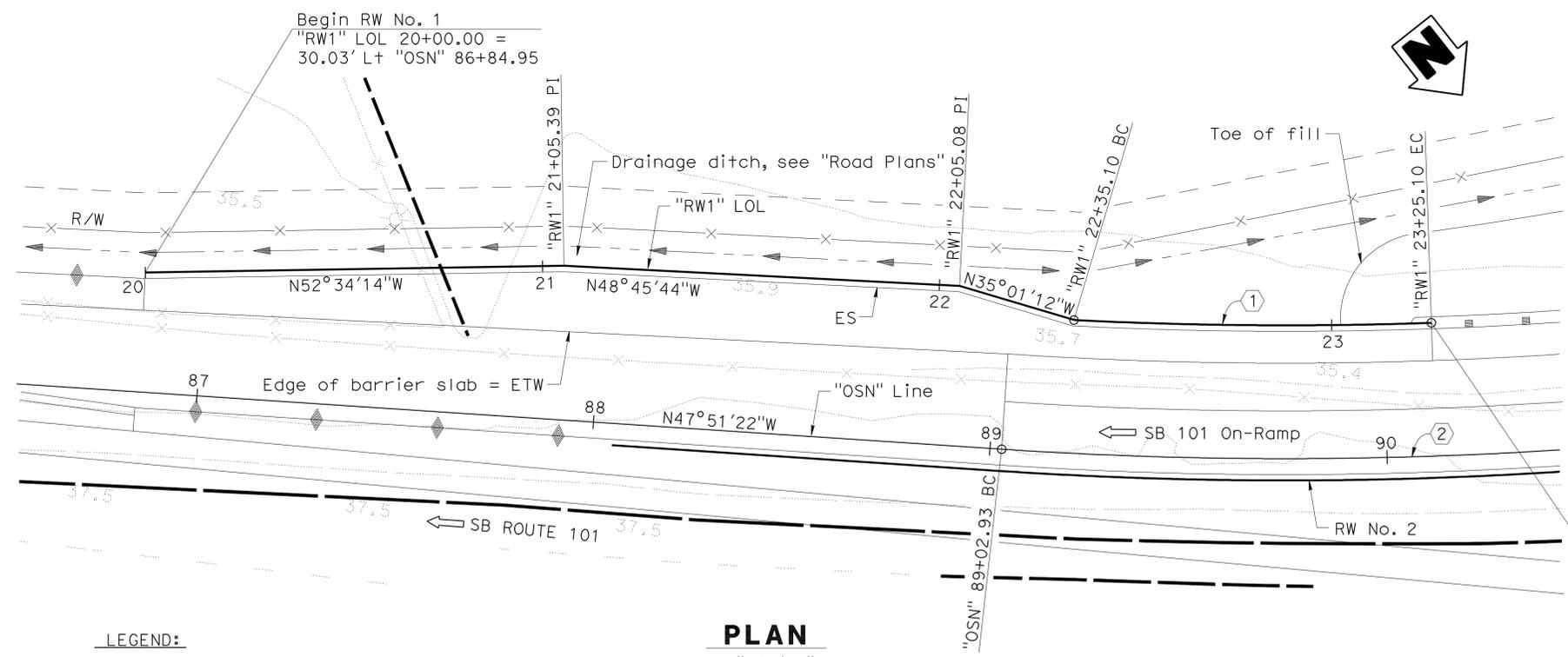
Sta	Elev
20+00	36.61
20+25	36.91
20+50	37.27
20+75	37.72
21+00	38.23
21+25	38.70
21+50	39.20
21+75	39.77
22+00	40.27
22+25	41.16
22+50	42.24
22+75	43.26
23+00	44.31
23+25.10	45.40

**DEVELOPED & MIRRORED ELEVATION**  
1"=20'-0"



**TYPICAL SECTION**  
NO SCALE

Denotes limits of Class 2 aggregate base material



**PLAN**  
1"=20'-0"

**LEGEND:**  
Indicates direction of traffic

**CURVE DATA**

No.	R	Δ	T	L
①	1072.19'	4°48'33"	45.02'	90.00'
②	1080.00'	13°44'59"	130.21'	259.18'

- NOTES:**
- For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
  - For layout of panels, see "Panel Layout" sheets.
  - For inspection wires, see "Miscellaneous Details" sheet.
  - The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
  - For Architectural Treatment, see "Architectural Treatment Details" sheet.

**RETAINING WALL NO.1**  
QUANTITIES

MECHANICALLY STABILIZED EMBANKMENT, LOCATION A	2,390	SQFT
STRUCTURAL CONCRETE, BARRIER SLAB	278	CY
CONCRETE BARRIER (TYPE 736 MODIFIED)	325	LF

DESIGN OVERSIGHT Tracy L. Bertram 4-24-12 SIGN OFF DATE	DESIGN BY D. Anderson	CHECKED S. Landis	LAYOUT BY D. Anderson CHECKED S. Landis	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20E0067	<b>RETAINING WALL No. 1</b> <b>GENERAL PLAN</b>
	DETAILS BY L. Davis	CHECKED S. Landis			PLANS AND SPECS COMPARED D. Anderson	
QUANTITIES BY D. Anderson	CHECKED S. Landis	SPECIFICATIONS BY D. Harnagel		PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	REVISION DATES 09-16-10 5-12-11 9-20-11 2-17-12 SHEET 2 OF 28

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652 CONTRACT NO.: 04-0A1851 DISREGARD PRINTS BEARING EARLIER REVISION DATES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	510	535

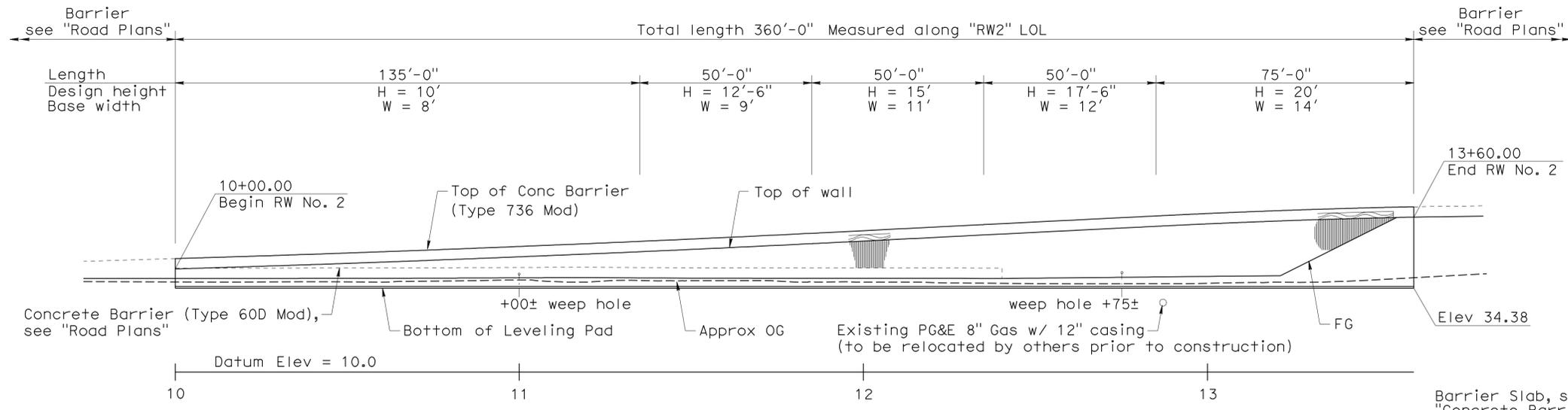
REGISTERED CIVIL ENGINEER  
DATE 2-17-12  
9-10-12  
PLANS APPROVAL DATE

David A. Anderson  
No. 36066  
Exp. 6/30/12  
CIVIL  
STATE OF CALIFORNIA

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CITY OF PETALUMA PUBLIC WORKS  
11 ENGLISH STREET  
PETALUMA, CA 94954

URS CORPORATION  
1380 LEAD HILL BLVD, SUITE 100  
ROSEVILLE, CA 95661-2997



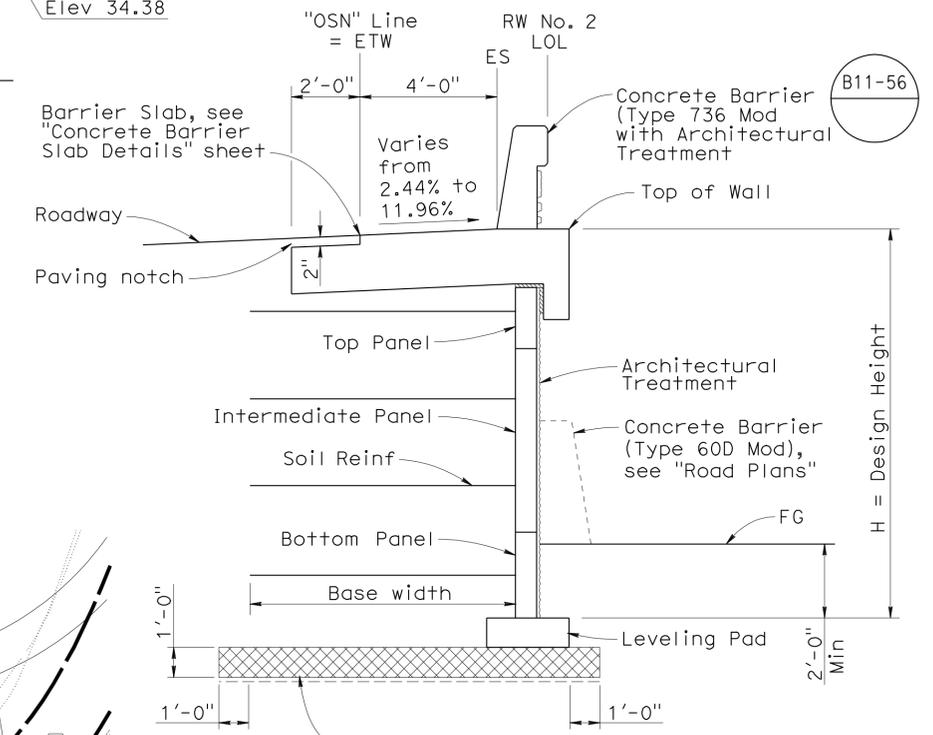
**TOP OF WALL Elev**

Sta	Elev	Sta	Elev
10+00	39.95	12+00	48.04
10+25	40.72	12+25	49.30
10+50	41.56	12+50	50.56
10+75	42.47	12+75	51.81
11+00	43.46	13+00	53.03
11+25	44.50	13+25	54.01
11+50	45.61	13+50	54.76
11+75	46.79	13+60	55.00

**DEVELOPED ELEVATION**  
1"=20'-0"

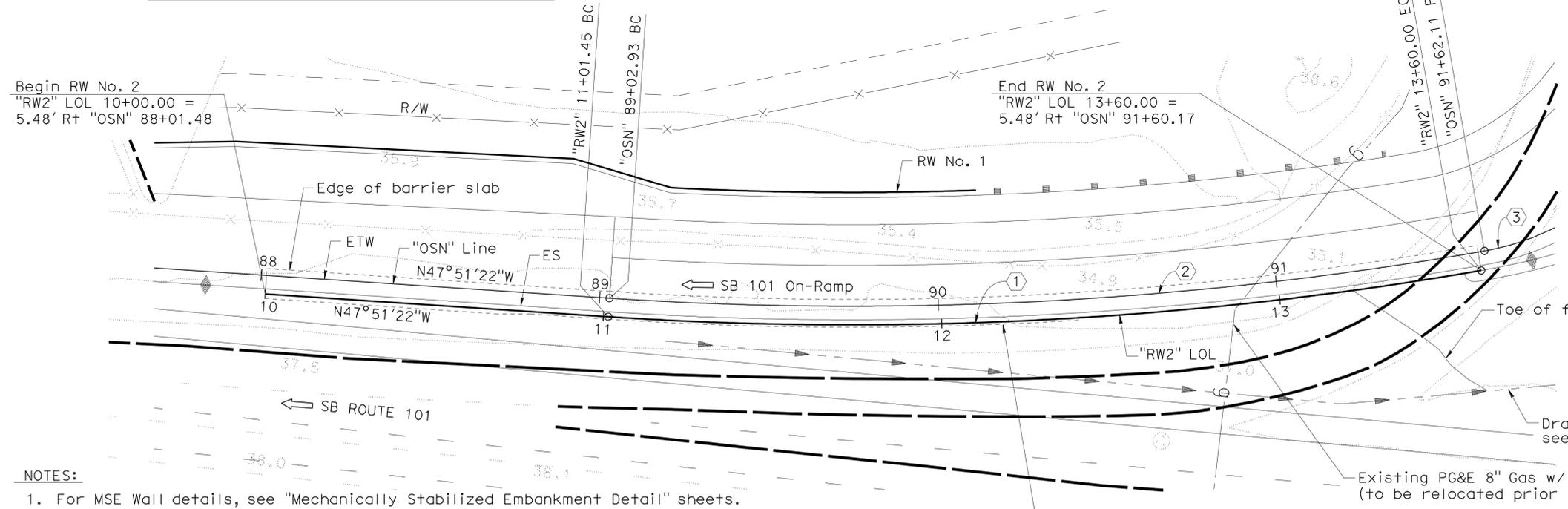
**CURVE DATA**

No.	R	Δ	T	L
①	1085.48'	13°38'50"	129.89'	258.55'
②	1080.00'	13°44'59"	130.21'	259.18'
③	75.00'	108°42'53"	104.59'	142.31'



**TYPICAL SECTION**  
NO SCALE

Denotes limits of Class 2 aggregate base material



**PLAN**  
1"=20'-0"

LEGEND:  
⇒ Indicates direction of traffic

- NOTES:**
- For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
  - For layout of panels, see "Panel Layout" sheets.
  - For inspection wires, see "Miscellaneous Details" sheet.
  - The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
  - For Architectural Treatment, see "Architectural Treatment Details" sheet.
  - Retaining Wall No. 2 to be built in stages, see "Road Plans".

**RETAINING WALL No.2**  
QUANTITIES

MECHANICALLY STABILIZED EMBANKMENT, LOCATION B	4,487	SQFT
STRUCTURAL CONCRETE, BARRIER SLAB	179	CY
CONCRETE BARRIER (TYPE 736 MODIFIED)	360	LF

DESIGN OVERSIGHT Tracy L Bertram 4-24-12 SIGN OFF DATE	DESIGN BY D. Anderson	CHECKED S. Landis	LAYOUT BY D. Anderson	CHECKED S. Landis	BRIDGE NO. 20E0068	POST MILES 7.9	<b>RETAINING WALL No. 2</b>		
	DETAILS BY L. Davis	CHECKED S. Landis						SPECIFICATIONS BY D. Harnagel	CHECKED D. Anderson
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12	SHEET 3 OF 28

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
Walt LaFranchi PROJECT ENGINEER

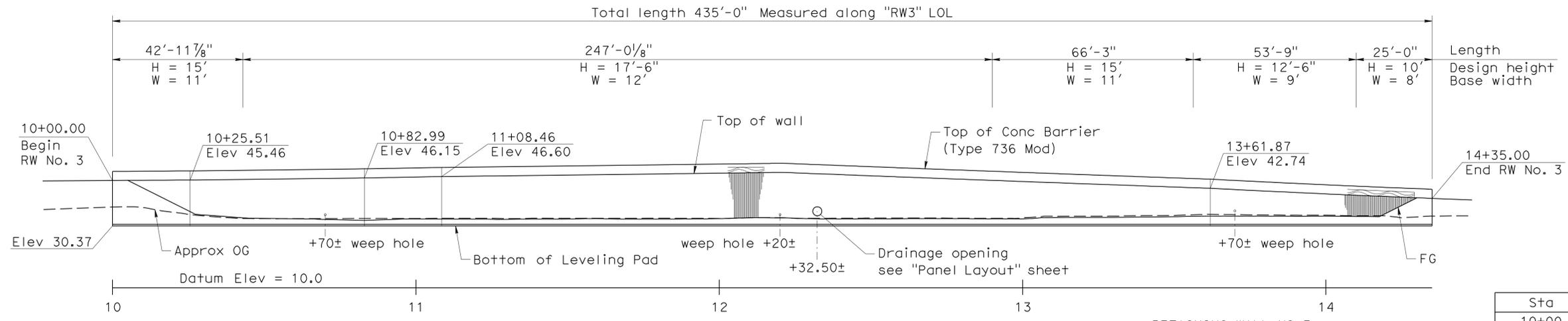
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	511	535

REGISTERED CIVIL ENGINEER  
 DATE 2-17-12  
 9-10-12  
 PLANS APPROVAL DATE  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954

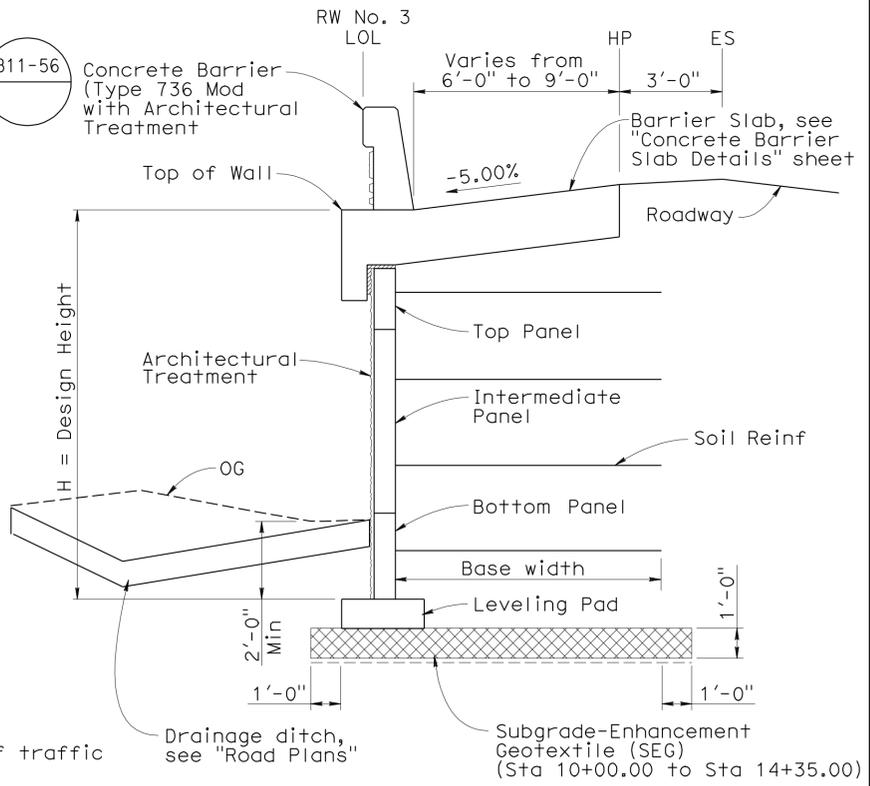
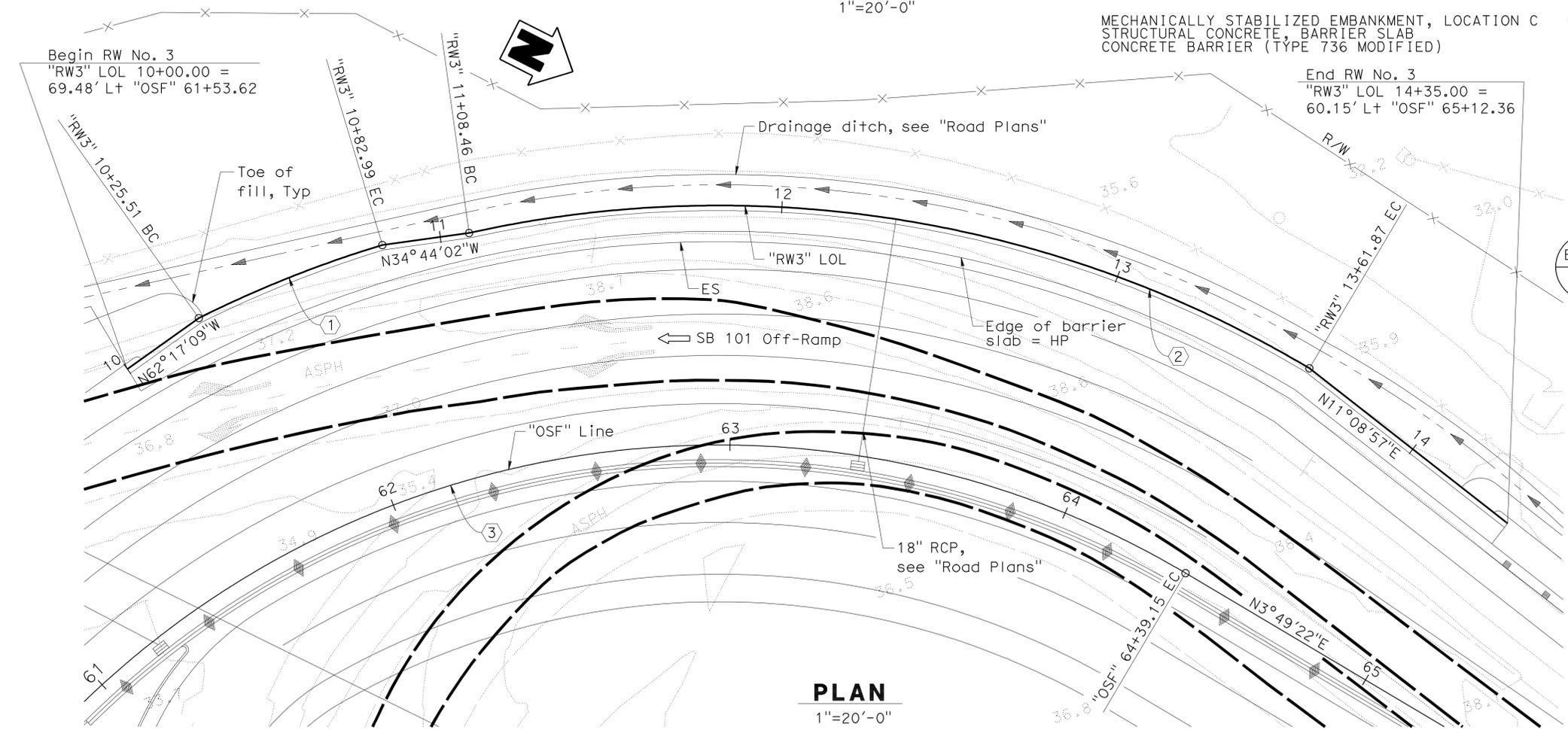
URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997



TOP OF WALL Elev

Sta	Elev	Sta	Elev
10+00	45.30	12+50	46.85
10+25	45.46	12+75	45.90
10+50	45.75	13+00	44.97
10+75	46.06	13+25	44.06
11+00	46.45	13+50	43.16
11+25	46.81	13+75	42.07
11+50	47.12	14+00	40.89
11+75	47.42	14+25	39.82
12+00	47.73	14+35	39.42
12+25	47.82		

RETAINING WALL NO.3  
 QUANTITIES  
 MECHANICALLY STABILIZED EMBANKMENT, LOCATION C 6,340 SQFT  
 STRUCTURAL CONCRETE, BARRIER SLAB 236 CY  
 CONCRETE BARRIER (TYPE 736 MODIFIED) 435 LF



CURVE DATA

No.	R	Δ	T	L
①	338.48'	9°43'43"	28.81'	57.47'
②	335.48'	43°16'48"	133.10'	253.41'
③	266.00'	83°12'42"	236.21'	386.32'

- NOTES:
1. For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
  2. For layout of panels, see "Panel Layout" sheets.
  3. For inspection wires, see "Miscellaneous Details" sheet.
  4. The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
  5. For Architectural Treatment, see "Architectural Treatment Details" sheet.
- LEGEND:  
 ⇨ Indicates direction of traffic

 DESIGN OVERSIGHT 4-24-12 SIGN OFF DATE	DESIGN BY D. Anderson	CHECKED S. Landis	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20E0069	<b>RETAINING WALL No. 3</b> <b>GENERAL PLAN</b>
	DETAILS BY L. Davis	CHECKED S. Landis		LAYOUT BY D. Anderson	
	QUANTITIES BY D. Anderson	CHECKED S. Landis	SPECIFICATIONS BY D. Harnagel	PROJECT ENGINEER Walt LaFranchi	

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652 CONTRACT NO.: 04-0A1851

DISREGARD PRINTS BEARING EARLIER REVISION DATES

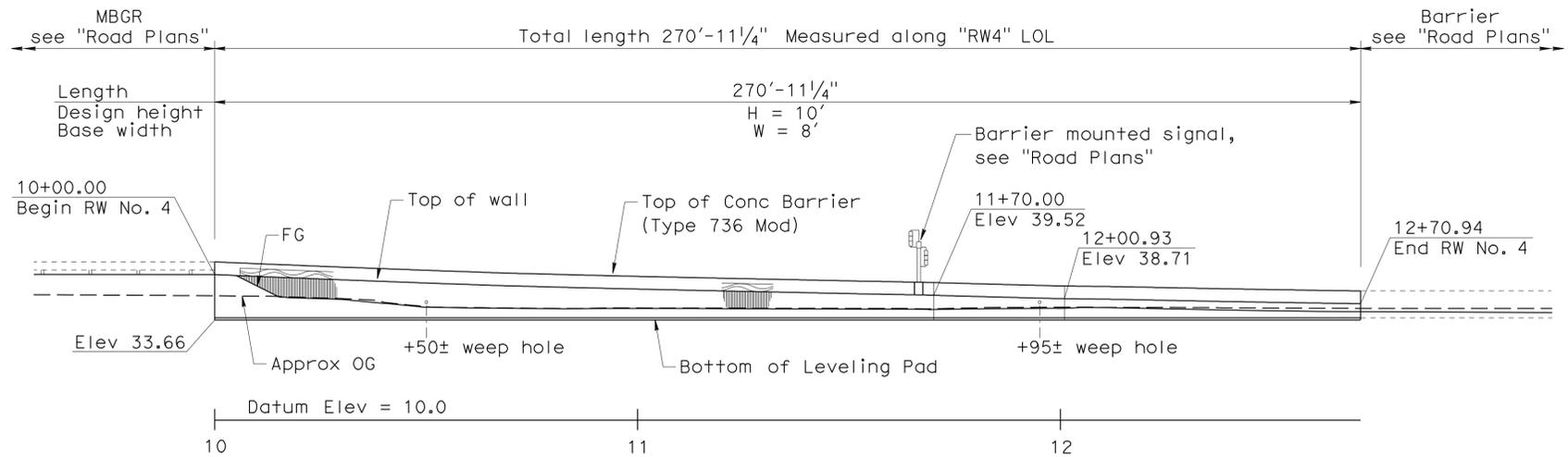
REVISION DATES	SHEET	OF
09-18-10 5-12-11 9-20-11 2-17-12	4	28

FILE => 20E0069-a-gp03.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	512	535

REGISTERED CIVIL ENGINEER  
 DATE 2-17-12  
 9-10-12  
 PLANS APPROVAL DATE  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997

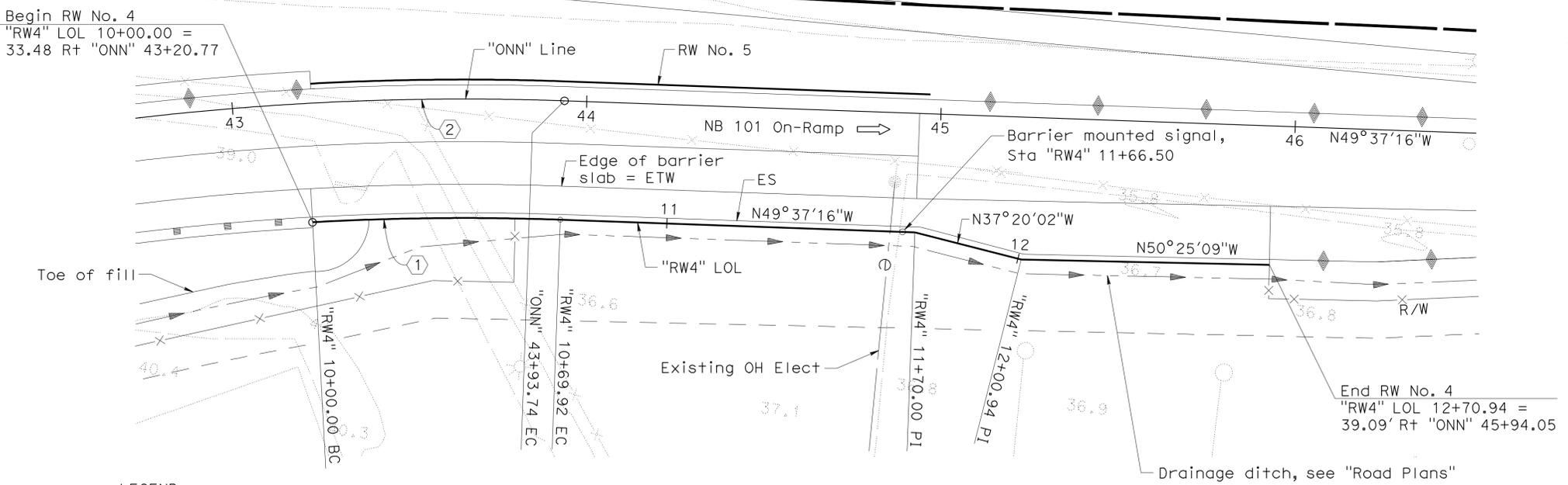


TOP OF WALL Elev

Sta	Elev
10+00	44.35
10+25	43.32
10+50	42.37
10+75	41.55
11+00	40.94
11+25	41.39
11+50	39.87
11+75	39.33
12+00	38.68
12+25	38.27
12+50	37.81
12+70.94	37.48

**DEVELOPED ELEVATION**  
 1"=20'-0"

Barrier Slab, see "Concrete Barrier Slab Details" sheet



**PLAN**  
 1"=20'-0"

**LEGEND:**

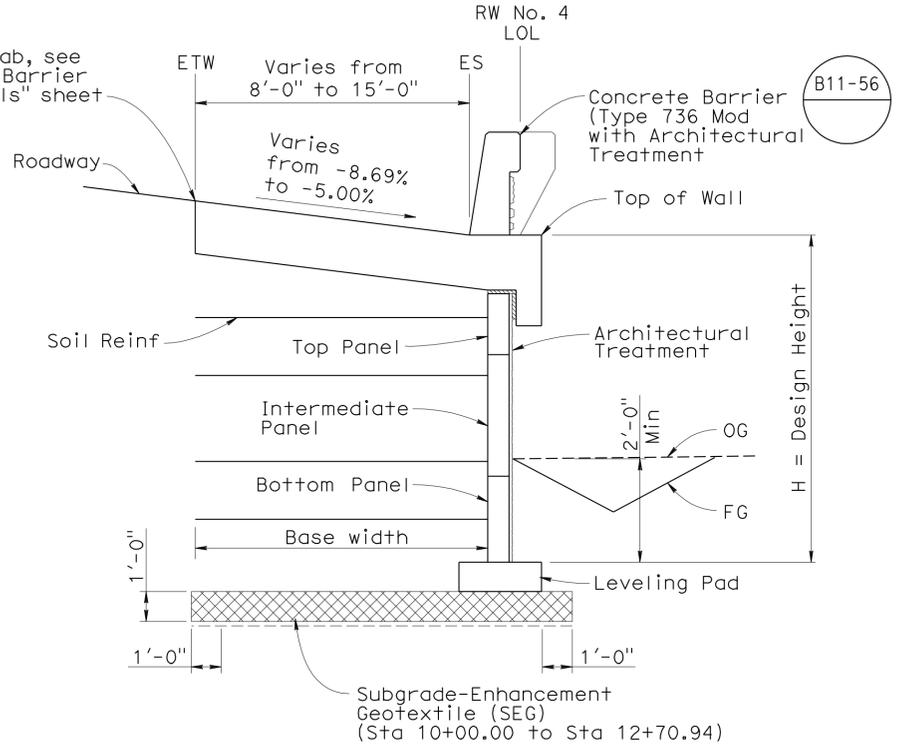
⇒ Indicates direction of traffic

**NOTES:**

1. For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
2. For layout of panels, see "Panel Layout" sheets.
3. For inspection wires, see "Miscellaneous Details" sheet.
4. The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
5. For Architectural Treatment, see "Architectural Treatment Details" sheet.

**CURVE DATA**

No.	R	Δ	T	L
①	766.52'	05°06'53"	34.24'	68.43'
②	800.00'	17°39'06"	124.22'	246.47'



**TYPICAL SECTION**  
 NO SCALE

⊠⊠⊠ Denotes limits of Class 2 aggregate base material

RETAINING WALL NO.4  
 QUANTITIES

MECHANICALLY STABILIZED EMBANKMENT, LOCATION D	1,686	SQFT
STRUCTURAL CONCRETE, BARRIER SLAB	208	CY
CONCRETE BARRIER (TYPE 736 MODIFIED)	271	LF

DESIGN OVERSIGHT Tracy L Bertram  
 4-24-12  
 SIGN OFF DATE

DESIGN	BY D. Anderson	CHECKED S. Landis
DETAILS	BY L. Davis	CHECKED S. Landis
QUANTITIES	BY D. Anderson	CHECKED S. Landis

LAYOUT	BY D. Anderson	CHECKED S. Landis
SPECIFICATIONS	BY D. Harnagel	PLANS AND SPECS COMPARED D. Anderson

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

Wall LaFranchi  
 PROJECT ENGINEER

BRIDGE NO.	20E0070
POST MILES	8.1

**RETAINING WALL No. 4**  
**GENERAL PLAN**

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 0751  
 PROJECT NUMBER & PHASE: 0400020652

CONTRACT NO.: 04-0A1851

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
09-18-10 5-12-11 9-20-11 2-17-12	5	28

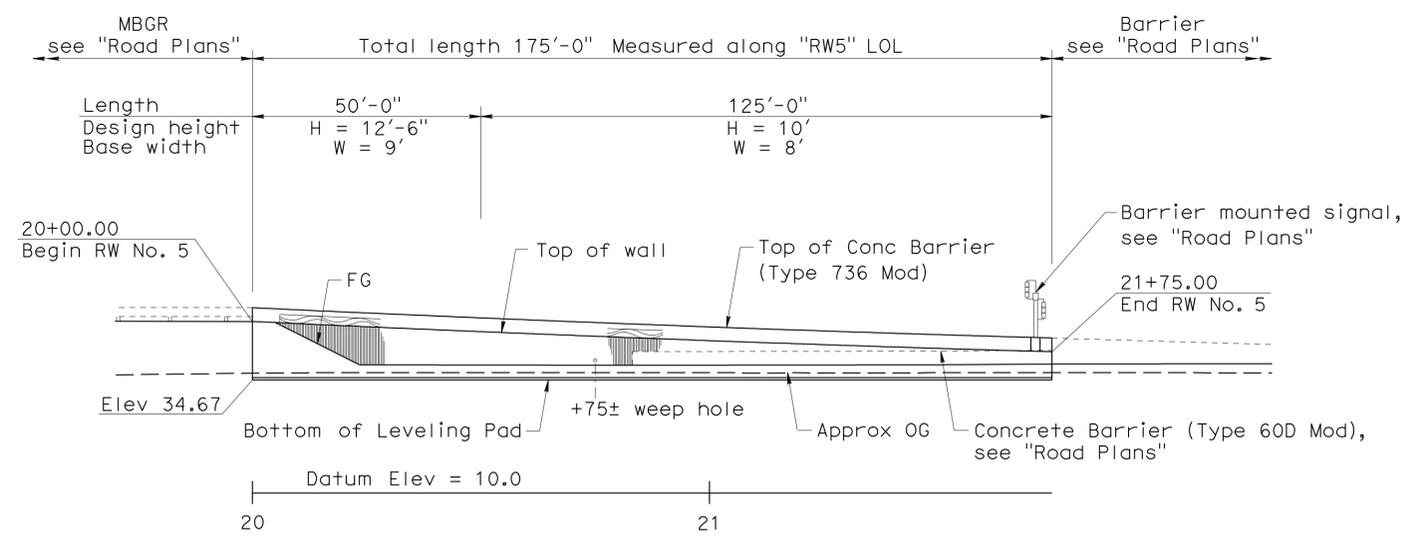
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	513	535

REGISTERED CIVIL ENGINEER  
 DATE 2-17-12  
 PLANS APPROVAL DATE 9-10-12  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954

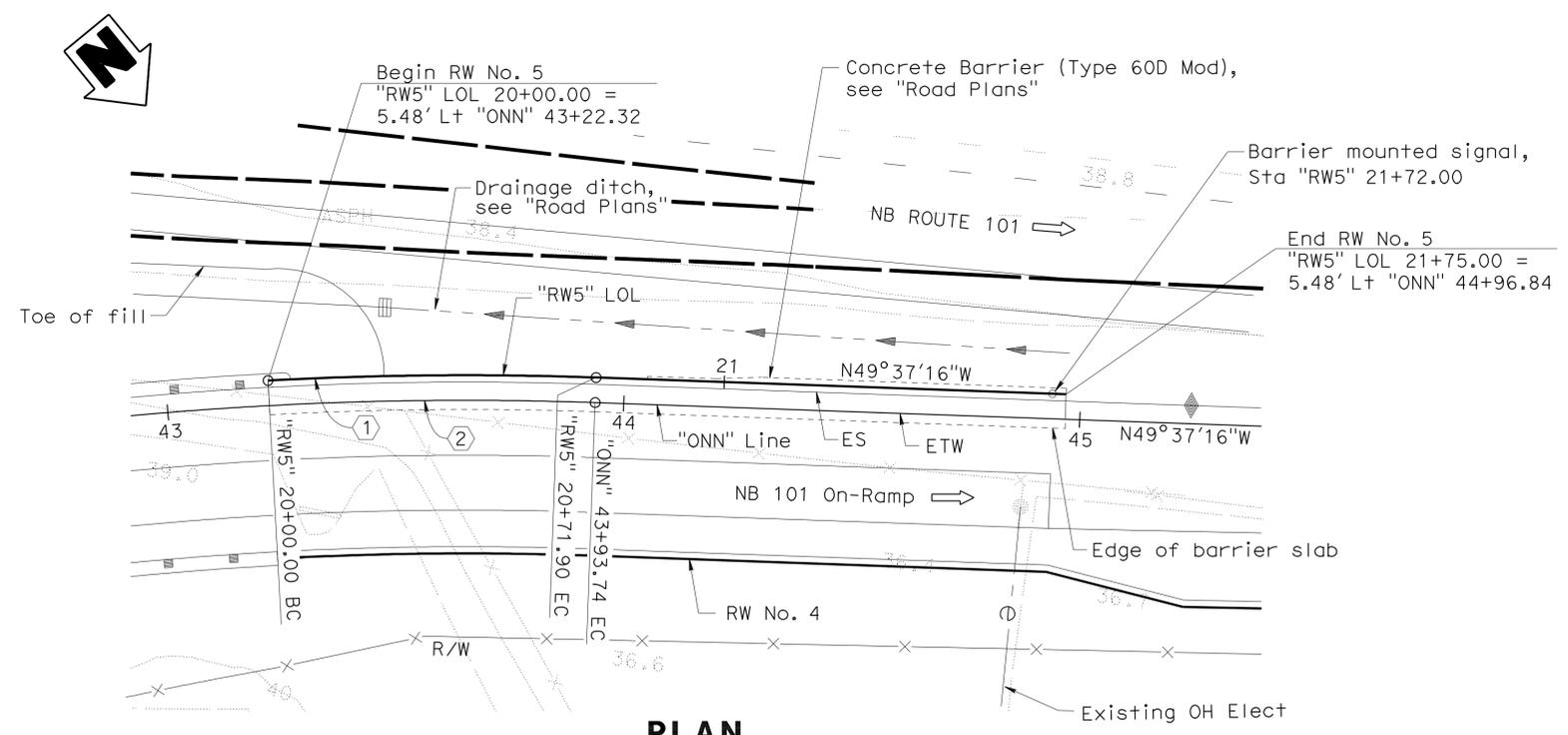
URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997



**TOP OF WALL Elev**

Sta	Elev
20+00	47.47
20+25	46.32
20+50	45.24
20+75	44.24
21+00	43.28
21+25	42.40
21+50	41.59
21+75	40.86

**DEVELOPED & MIRRORED ELEVATION**  
1"=20'-0"



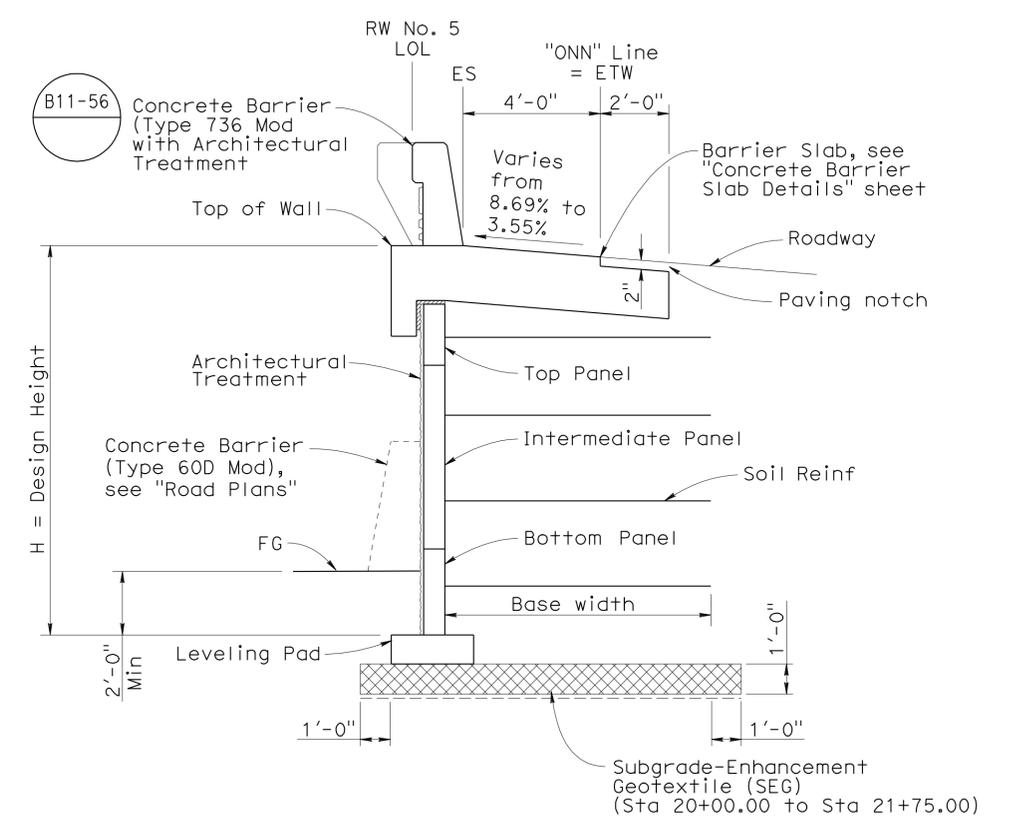
**PLAN**  
1"=20'-0"

**LEGEND:**  
⇒ Indicates direction of traffic

**CURVE DATA**

No.	R	Δ	T	L
①	805.48'	5°06'53"	35.98'	71.90'
②	800.00'	17°39'06"	124.22'	246.47'

- NOTES:**
1. For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
  2. For layout of panels, see "Panel Layout" sheets.
  3. For inspection wires, see "Miscellaneous Details" sheet.
  4. The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
  5. For Architectural Treatment, see "Architectural Treatment Details" sheet.



**TYPICAL SECTION**  
NO SCALE

⊠ Denotes limits of Class 2 aggregate base material

**RETAINING WALL NO.5 QUANTITIES**

MECHANICALLY STABILIZED EMBANKMENT, LOCATION E	1,532	SQFT
STRUCTURAL CONCRETE, BARRIER SLAB	87	CY
CONCRETE BARRIER (TYPE 736 MODIFIED)	175	LF

 DESIGN OVERSIGHT 4-24-12 SIGN OFF DATE	DESIGN BY D. Anderson	CHECKED S. Landis	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20E0071	<b>RETAINING WALL No. 5</b> <b>GENERAL PLAN</b>
	DETAILS BY L. Davis	CHECKED S. Landis		LAYOUT BY D. Anderson	
	QUANTITIES BY D. Anderson	CHECKED S. Landis	SPECIFICATIONS BY D. Harnagel	PLANS AND SPECS COMPARED D. Anderson	UNIT: 0751
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851
				REVISION DATES	SHEET 6 OF 28

DISREGARD PRINTS BEARING EARLIER REVISION DATES  
 09-18-10 5-13-11 9-28-11 2-17-12  
 FILE => 20E0071-a-gp05.dgn

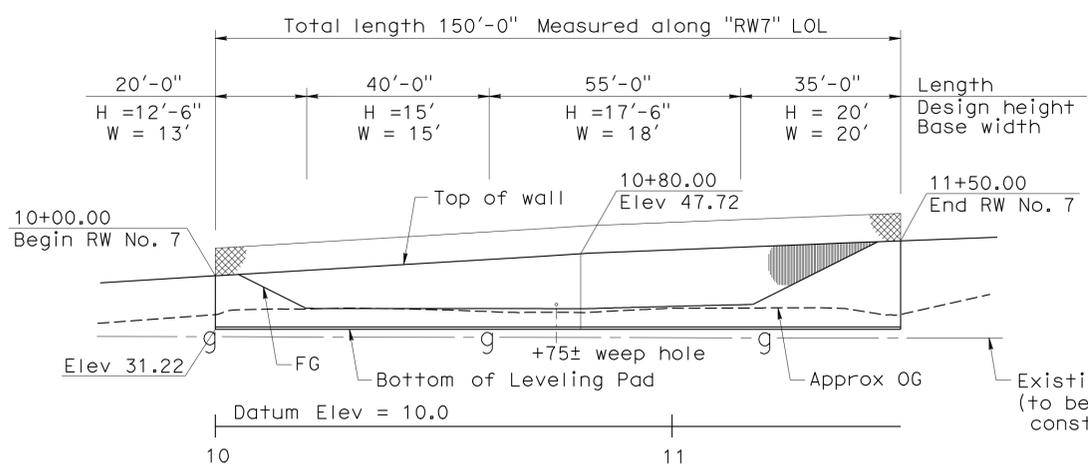


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	515	535

REGISTERED CIVIL ENGINEER  
DATE: 2-17-12  
PLANS APPROVAL DATE: 9-10-12  
David A. Anderson  
No. 36066  
Exp. 6/30/12  
CIVIL  
STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
11 ENGLISH STREET  
PETALUMA, CA 94954

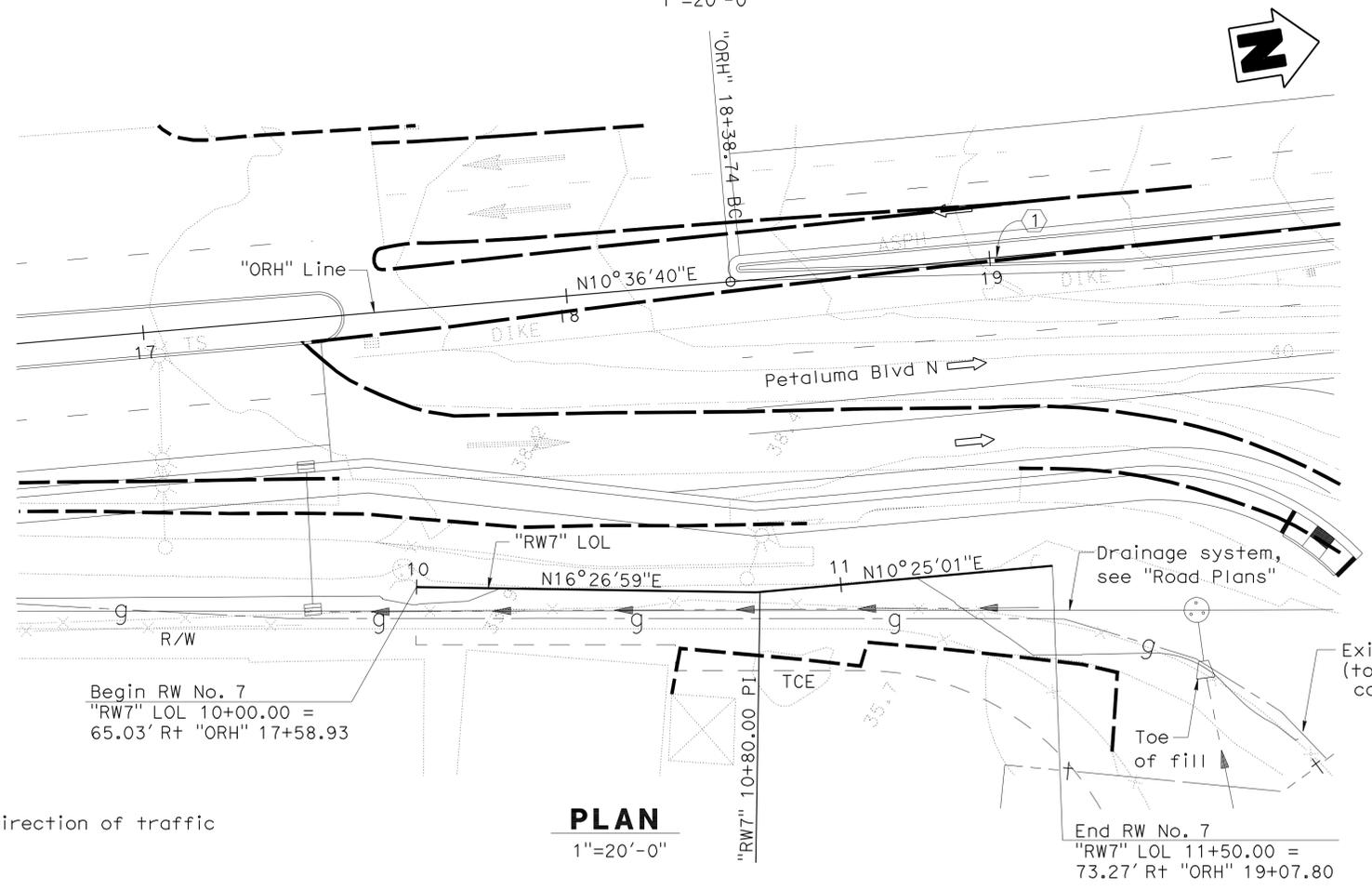
URS CORPORATION  
1380 LEAD HILL BLVD, SUITE 100  
ROSEVILLE, CA 95661-2997



TOP OF WALL Elev

Sta	Elev
10+00	42.91
10+25	44.42
10+50	45.92
10+75	47.42
11+00	48.59
11+25	49.58
11+50	50.55

**DEVELOPED ELEVATION**  
1"=20'-0"



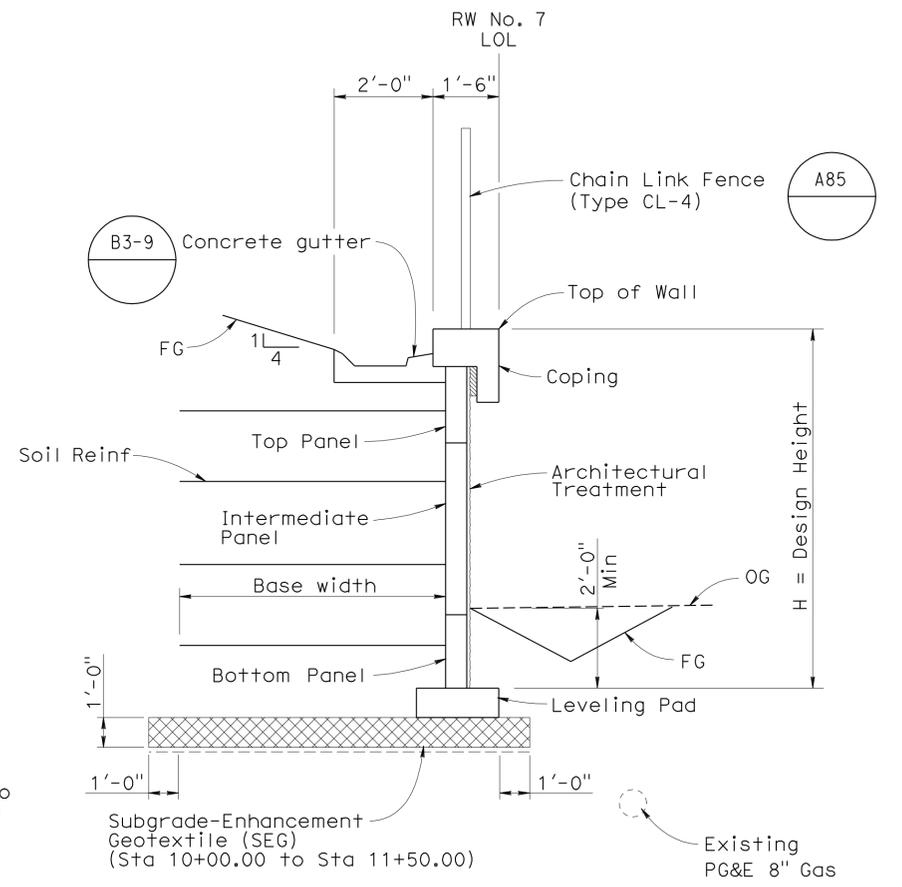
**PLAN**  
1"=20'-0"

LEGEND:  
⇒ Indicates direction of traffic

- NOTES:
- For MSE Wall details, see "Mechanically Stabilized Embankment Detail" sheets.
  - For layout of panels, see "Panel Layout" sheets.
  - For inspection wires, see "Miscellaneous Details" sheet.
  - The contractor shall verify controlling field dimensions before ordering or fabricating any materials.
  - For Architectural Treatment, see "Architectural Treatment Details" sheet.

CURVE DATA

No.	R	Δ	T	L
①	7,050.00'	0°47'18"	48.50'	97.00'



**TYPICAL SECTION**  
NO SCALE

Denotes limits of Class 2 aggregate base material

RETAINING WALL NO.7  
QUANTITIES

MECHANICALLY STABILIZED EMBANKMENT, LOCATION G	2,309	SOFT
STRUCTURAL CONCRETE BARRIER SLAB	11	CY
MINOR CONCRETE (GUTTER)	150	LF
CHAIN LINK FENCE (TYPE CL-4)	150	LF

DESIGN OVERSIGHT Tracy L Bertram 4-24-12 SIGN OFF DATE	DESIGN BY D. Anderson	CHECKED S. Landis	LAYOUT BY D. Anderson	CHECKED S. Landis
DETAILS BY L. Davis	CHECKED S. Landis	SPECIFICATIONS BY D. Harnagel	PLANS AND SPECS COMPARED D. Anderson	
QUANTITIES BY D. Anderson	CHECKED S. Landis			

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
DEPARTMENT OF TRANSPORTATION  
Walt LaFranchi  
PROJECT ENGINEER

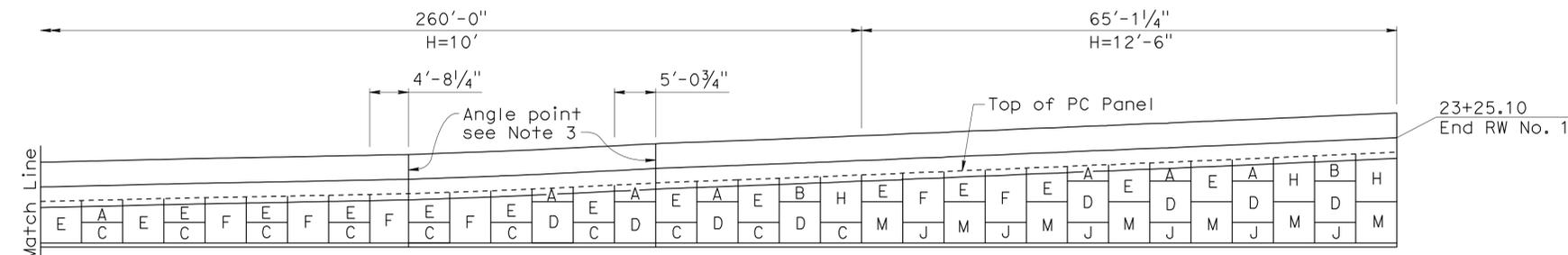
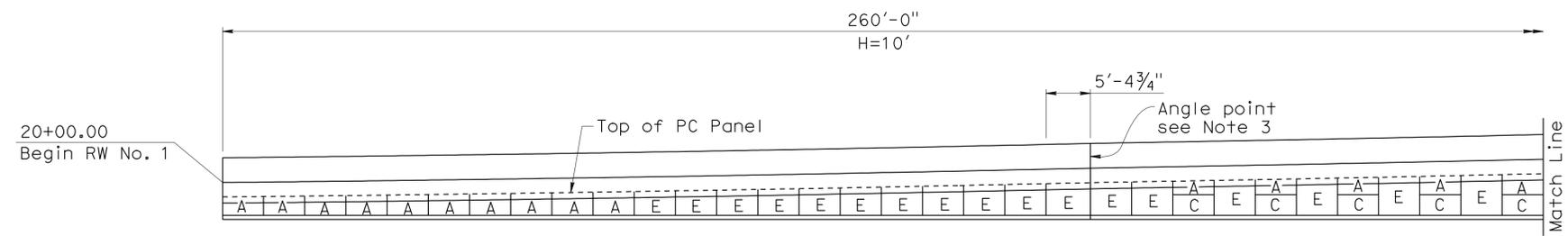
BRIDGE NO.	20E0073
POST MILES	7.9

**RETAINING WALL No. 7**  
**GENERAL PLAN**

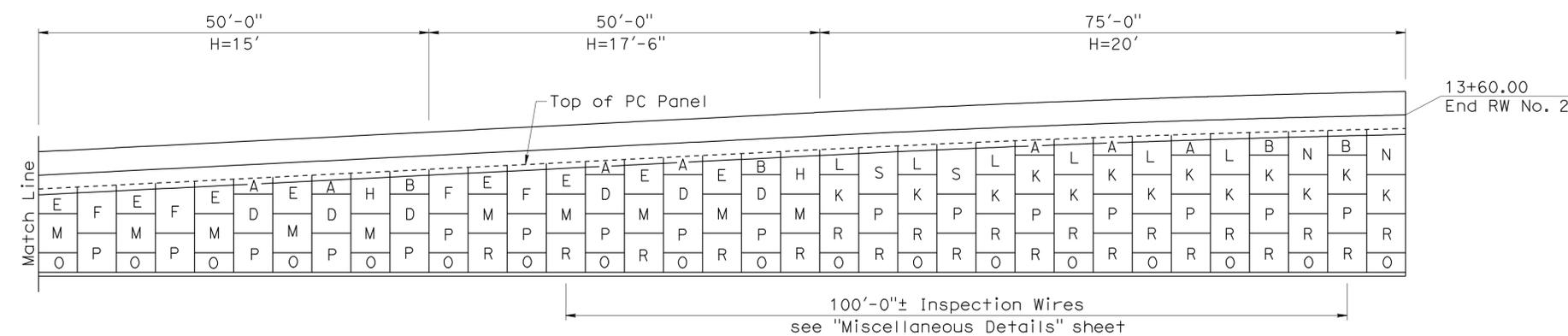
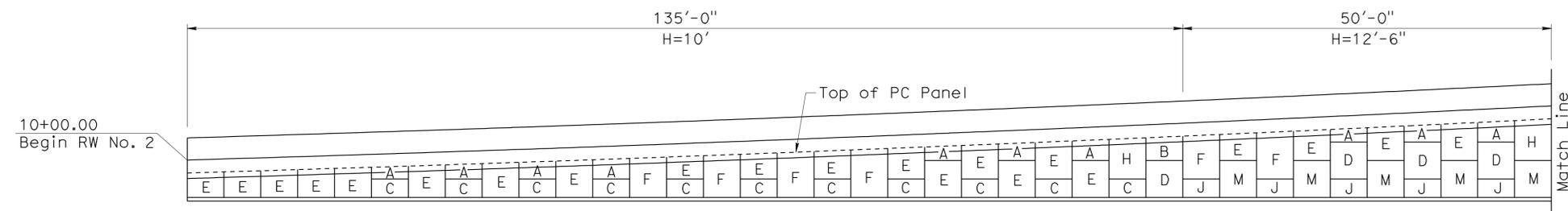
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	516	535

REGISTERED CIVIL ENGINEER  
 DATE 2-17-12  
 PLANS APPROVAL DATE 9-10-12  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

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 ROSEVILLE, CA 95661-2997



**RW No. 1 DEVELOPED & MIRRORED ELEVATION**  
 No Scale



**RW No. 2 DEVELOPED ELEVATION**  
 No Scale

- NOTES:**
1. For panel details, see "Mechanically Stabilized Embankment Details" sheets.
  2. Panel width = 5'-0" unless otherwise noted.
  3. For "Angled Joint Detail", see "Mechanically Stabilized Embankment Details No. 1" sheet.

**WELDED WIRE MAT SCHEDULE**

A	1 @ W11 x W11 + 6" X 9"
B	2 @ W11 x W11 + 6" X 9"
C	1 @ W11 x W11 + 6" X 12"
D	2 @ W11 x W11 + 6" X 12"
E	1 @ W11 x W11 + 6" X 9" 1 @ W11 x W11 + 6" X 12"
F	1 @ W11 x W11 + 6" X 9" 2 @ W11 x W11 + 6" X 12"
H	2 @ W11 x W11 + 6" X 9" 1 @ W11 x W11 + 6" X 12"
J	1 @ W11 x W11 + 6" X 18"
K	2 @ W11 x W11 + 6" X 18"
L	1 @ W11 x W11 + 6" X 9" 1 @ W11 x W11 + 6" X 18"
M	1 @ W11 x W11 + 6" X 12" 1 @ W11 x W11 + 6" X 18"
N	2 @ W11 x W11 + 6" X 9" 1 @ W11 x W11 + 6" X 18"
O	1 @ W11 x W11 + 6" X 24"
P	1 @ W11 x W11 + 6" X 18" 1 @ W11 x W11 + 6" X 24"
R	2 @ W11 x W11 + 6" X 24"
S	1 @ W11 x W11 + 6" X 9" 2 @ W11 x W11 + 6" X 18"
U	2 @ W11 x W11 + 6" X 12" 1 @ W11 x W11 + 6" X 18"
V	1 @ W11 x W11 + 6" X 12" 2 @ W11 x W11 + 6" X 18"
W	3 @ W11 x W11 + 6" X 18"
X	2 @ W11 x W11 + 6" X 18" 1 @ W11 x W11 + 6" X 24"
Y	1 @ W11 x W11 + 6" X 18" 2 @ W11 x W11 + 6" X 24"
Z	1 @ W11 x W11 + 6" X 12" 1 @ W11 x W11 + 6" X 18" 1 @ W11 x W11 + 6" X 24"

**LEGEND:**  
 A W11 x W11 + 6" X 9"  
 Longitudinal wire spacing x traverse wire spacing  
 Longitudinal wire size x traverse wire size  
 Panel Type

DESIGN OVERSIGHT Tracy L Bertram  
 3-26-12  
 SIGN OFF DATE

DESIGN	BY D. Anderson	CHECKED S. Landis
DETAILS	BY L. Davis	CHECKED S. Landis
QUANTITIES	BY D. Anderson	CHECKED S. Landis

**PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**  
 Walt LaFranchi  
 PROJECT ENGINEER

BRIDGE NO.	Varies
POST MILES	

**RETAINING WALL No. 1 AND No. 2 PANEL LAYOUT**

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:40





**DESIGN DATA**

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

WS: 33 psf on sound wall

F<sub>t</sub> : 54 kips on barrier

EQE: k<sub>h</sub> = 0.2

k<sub>v</sub> = 0.0

REINFORCED CONCRETE: f'c = 3600 psi

fy = 60 ksi

n = 8

**NOTES:**

1. Clearance to reinforcing steel in concrete barrier to be 1".
2. Not all barrier reinforcement shown.
3. No expansion joints in concrete barrier or barrier slab within wall limits.
4. Specific concrete barrier to be used is shown elsewhere in Project Plans.
5. Sound Wall not permitted on MSE walls unless supported by a CIDH pile foundation. (See "Mechanically Stabilized Embankment Detail No. 5" sheet).
6. Install cable railing or chain link railing when indicated in Project Plans. Refer to Standard Plans B11-7 and B11-47 for anchorage details to top of concrete barrier.
7. Minimum slab length: 40 ft

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	519	535

REGISTERED CIVIL ENGINEER DATE 2-17-12

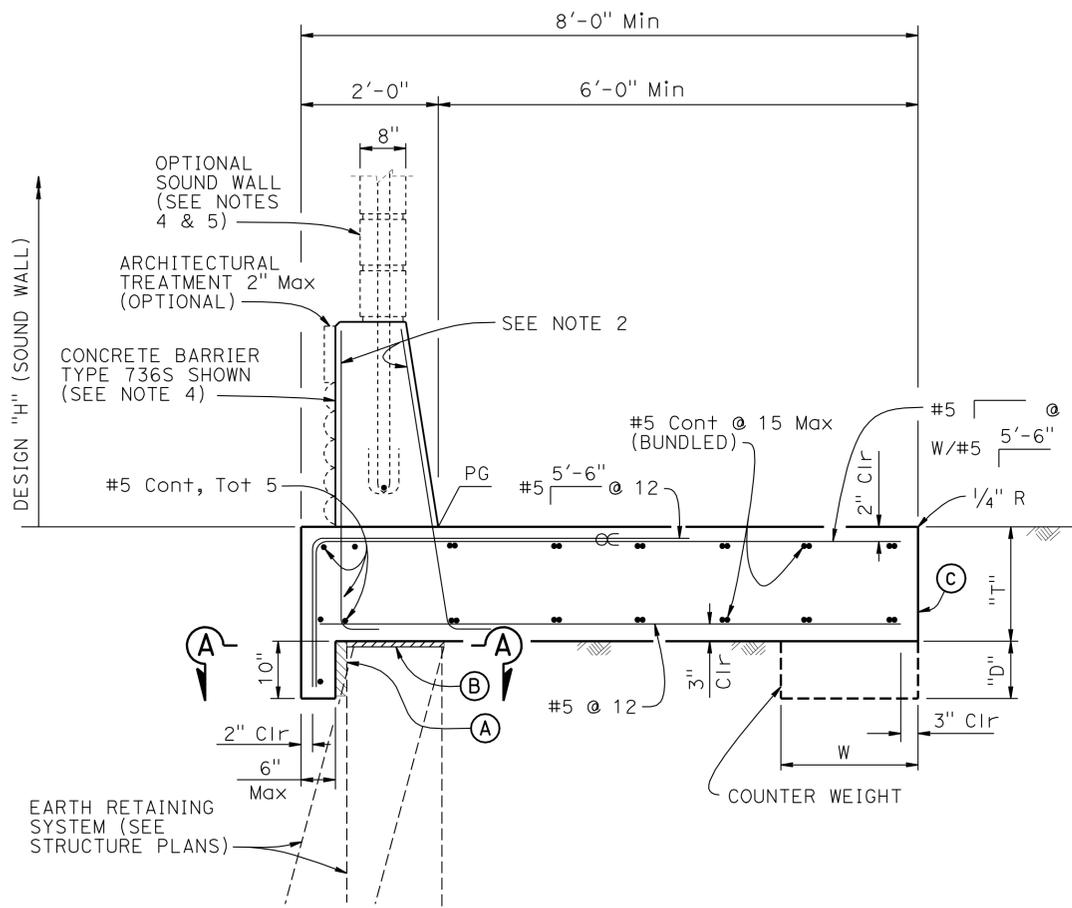
9-10-12 PLANS APPROVAL DATE

David A. Anderson  
No. 36066  
Exp. 6/30/12  
CIVIL  
STATE OF CALIFORNIA

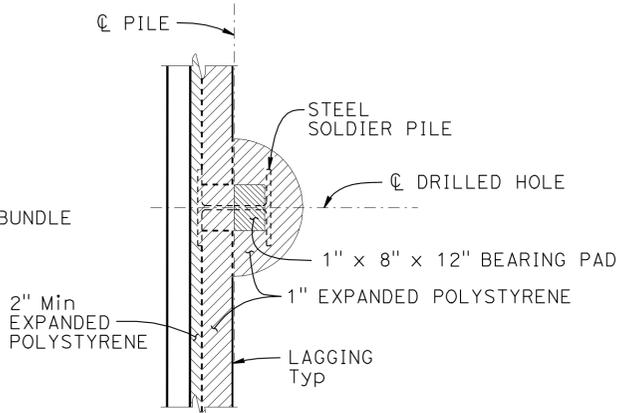
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PETALUMA, CA 94954

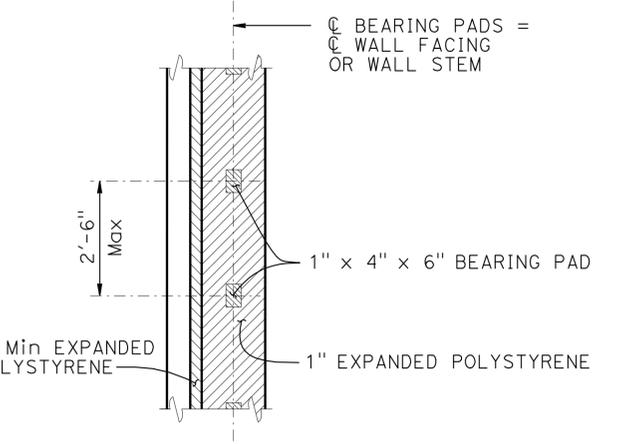
URS CORPORATION  
1380 LEAD HILL BLVD, SUITE 100  
ROSEVILLE, CA 95661-2997



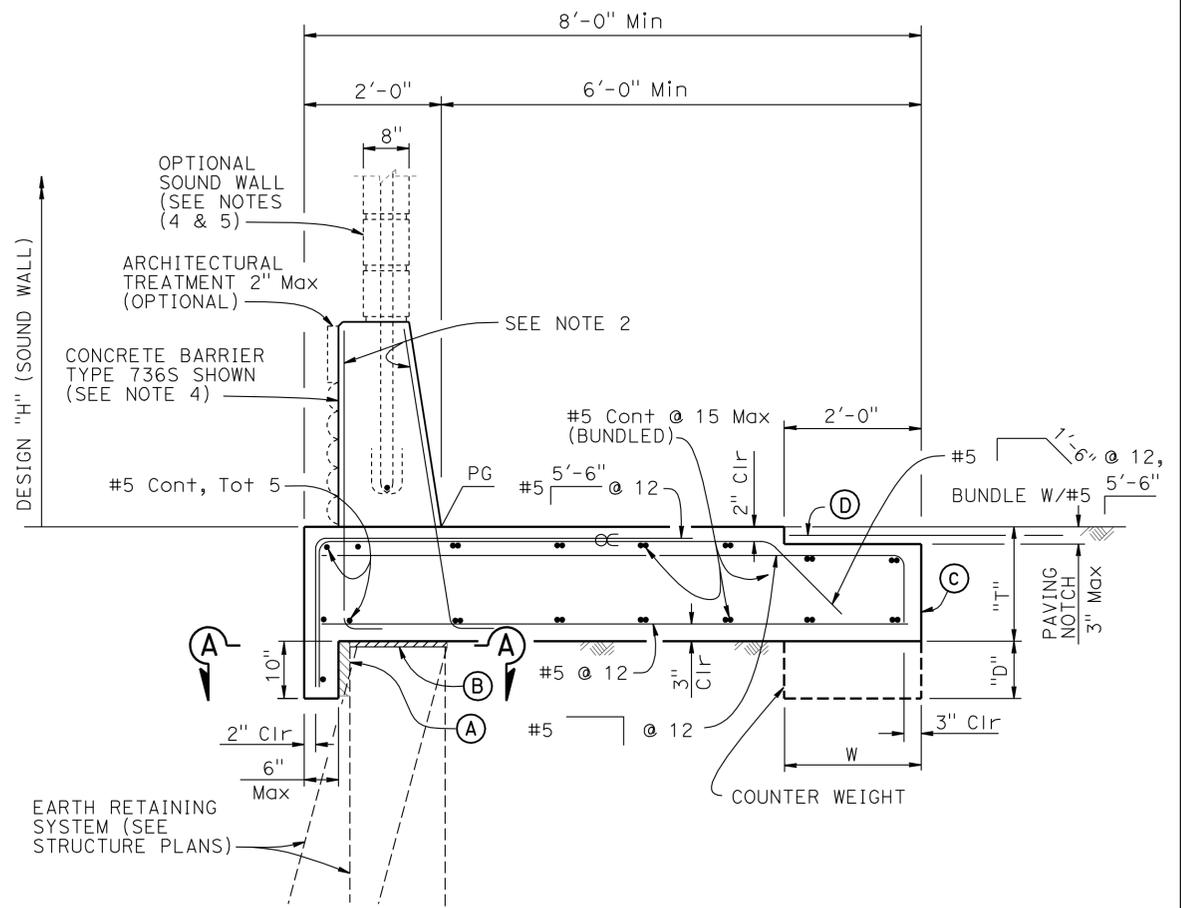
**CONCRETE BARRIER SLAB**  
3/4" = 1'-0"



**SECTION A-A**  
1/2" = 1'-0"  
(For Soldier Pile Wall only)



**SECTION A-A**  
1/2" = 1'-0"  
(For all other Earth Retaining Systems)



**CONCRETE BARRIER SLAB WITH PAVING NOTCH**  
3/4" = 1'-0"

**NOTES:**

- (A) 2" Min Expanded polystyrene
- (B) 1" Expanded Polystyrene on MSE and concrete stem walls, See "SECTION A-A" for Soldier Pile Walls
- (C) Contact joint
- (D) 4'-0" wide pavement reinforcing fabric
- ∞ Indicates bundled bars

**BARRIER SLAB DIMENSIONS**

DESIGN "H" OF SOUND WALL	NO SW	12'-4"	14'-4"	16'-4"
BARRIER TYPE	732 736 742	736 S	736 S	736 S
T	1'-8"	1'-8"	2'-0"	2'-0"
W	N/A	N/A	N/A	2'-0"
D	N/A	N/A	N/A	0'-9"

STANDARD DRAWING

FILE NO. **xs12-090**

APPROVAL DATE January 2012

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

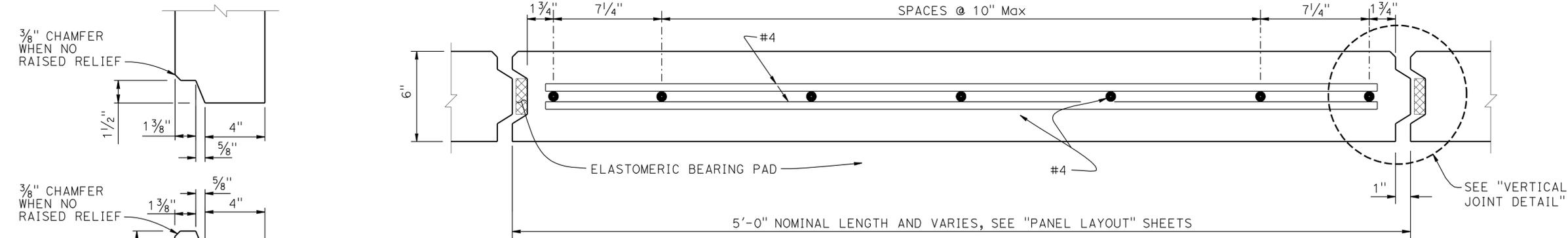
DIVISION OF ENGINEERING SERVICES

BRIDGE NO. Varies  
POST MILES

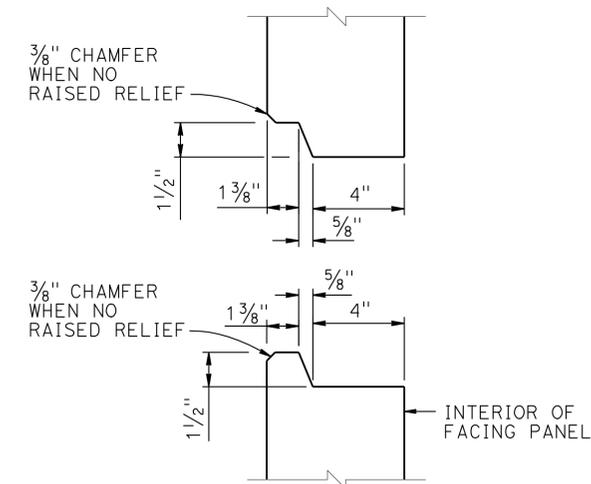
**RETAINING WALL No. 1 THRU No. 7**

**CONCRETE BARRIER SLAB DETAILS**

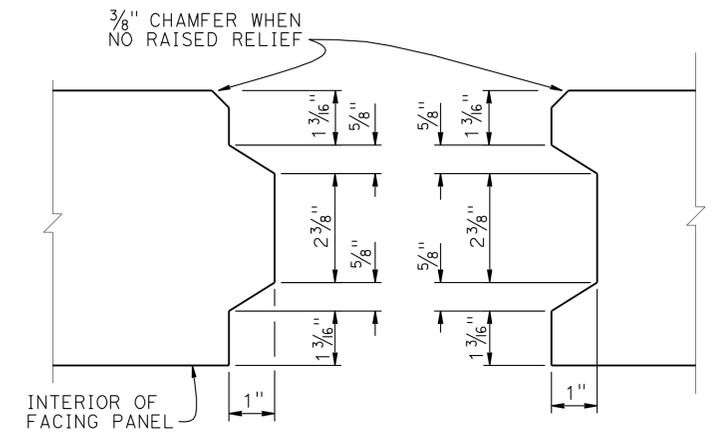
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	520	535
REGISTERED CIVIL ENGINEER			DATE	2-17-12	
PLANS APPROVAL DATE			9-10-12		
REGISTERED PROFESSIONAL ENGINEER David A. Anderson No. 36066 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA					
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URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					



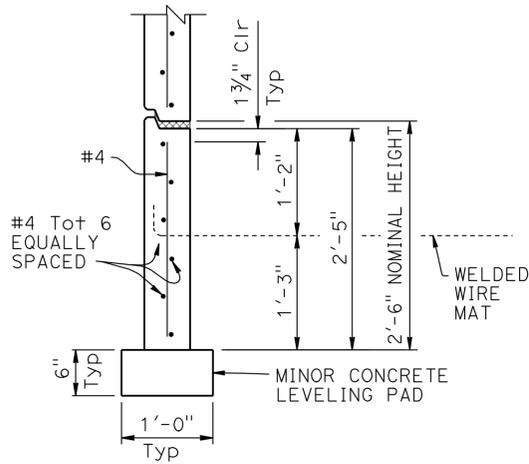
1 PLAN - FACING PANEL  
3" = 1'-0"



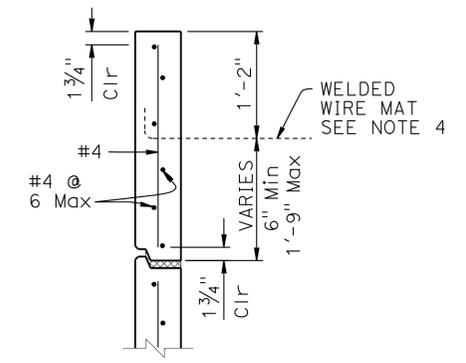
HORIZONTAL JOINT DETAIL  
3" = 1'-0"



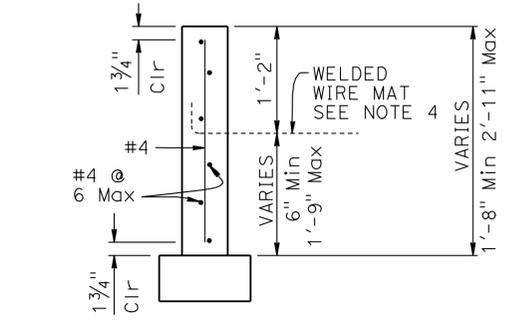
VERTICAL JOINT DETAIL  
6" = 1'-0"



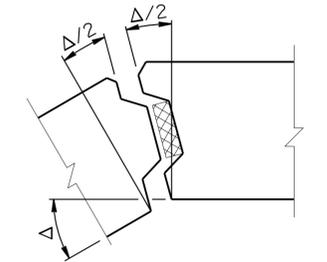
TOP HALF PANEL  
1" = 1'-0"



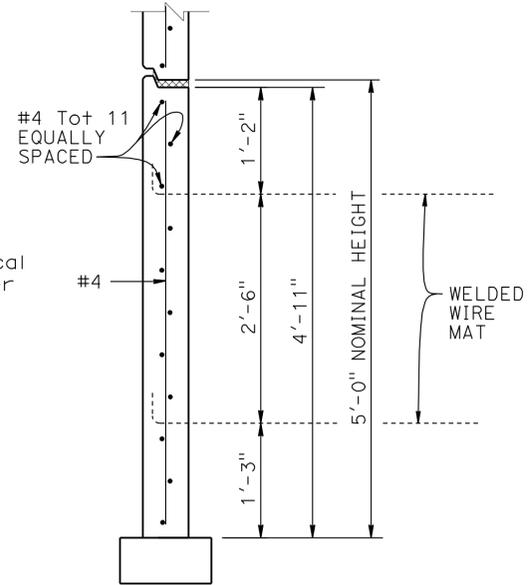
BOTTOM HALF PANEL  
1" = 1'-0"



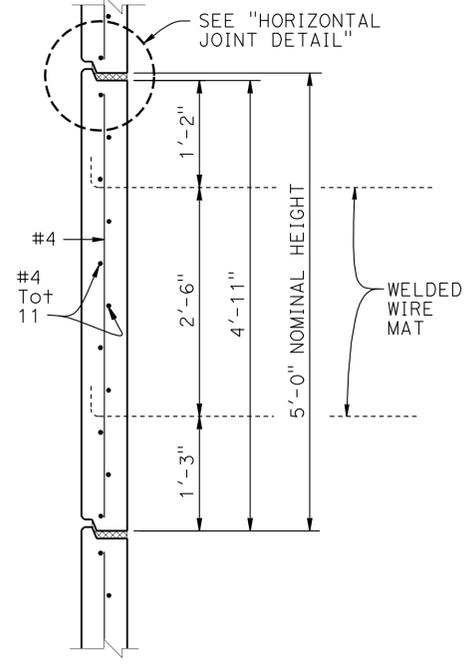
2 FULL HEIGHT HALF PANEL  
1" = 1'-0"



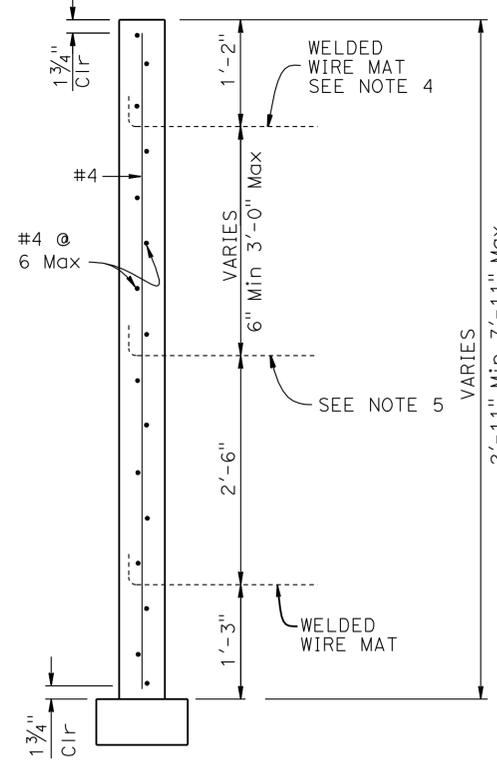
2 ANGLED JOINT DETAIL  
NO SCALE  
SEE NOTE 6



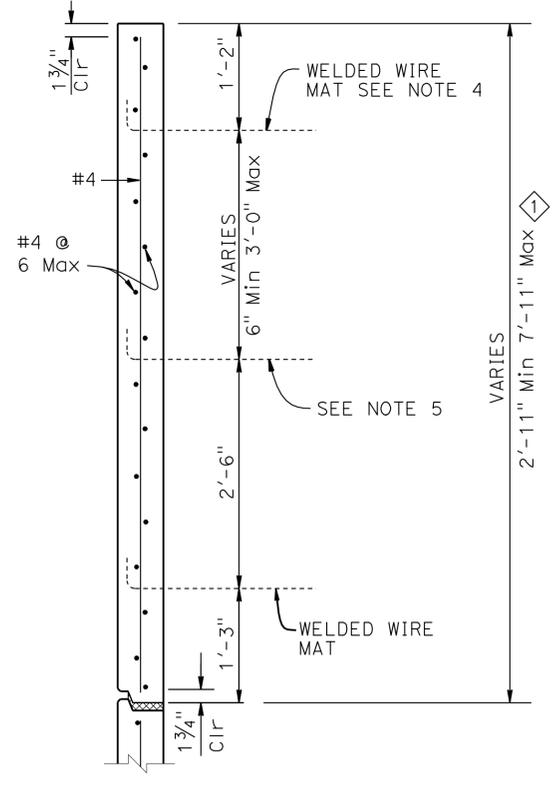
BOTTOM PANEL  
1" = 1'-0"



INTERMEDIATE PANEL  
1" = 1'-0"



2 FULL HEIGHT PANEL  
1" = 1'-0"



TOP PANEL WITH MULTIPLE MATS  
1" = 1'-0"

- NOTES:
1. Architectural treatment not shown
  2. Place reinforced elastomeric bearing pads in all of the panel joints between the panels. Place one in each vertical joint where the horizontal joints intersect. Place two per panel in each horizontal joint:  
 3/4" x 2 3/8" x 6" for vertical joints  
 3/4" x 4" x 6" for horizontal joints
  3. Bond a strip of filter fabric, 1'-0" wide, over the full length of all panel joints
  4. Top layer of welded wire mats attached parallel to top of panel when top of wall is angled or curved as shown elsewhere in "STRUCTURE PLANS"
  5. Eliminate mid level mat when closer than 6" to top mat, continue variable dimension between remaining mats
  6. Fabricate angled ends of panels when Δ > 5 degrees.

REVISED STANDARD DRAWING	
FILE NO. <b>xs13-020-1</b>	APPROVAL DATE <u>January 2012</u>

1 Detail revised	3 Note added
2 Detail added	

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES
---	----------------------------------

BRIDGE NO. Varies	RETAINING WALL No. 1 THRU No. 7
POST MILES	MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	521	535
REGISTERED CIVIL ENGINEER			DATE	2-17-12	
PLANS APPROVAL DATE			9-10-12		
David A. Anderson No. 36066 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA					
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CITY OF PETALUMA PUBLIC WORKS 11 ENGLISH STREET PETALUMA, CA 94954					
URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					

## GENERAL NOTES LOADS & RESISTANCE FACTOR DESIGN

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

LIVE LOAD: Surcharge = 240 lb/ft<sup>2</sup>

SOIL PARAMETERS:  
 Internal design  $\phi = 34^\circ$ ,  $\gamma = 120$  lb/ft<sup>3</sup>  
 External design  $\phi$  (Retained Backfill) =  $30^\circ$ ,  $\gamma = 120$  lb/ft<sup>3</sup>  
 $\phi$  (Foundation) =  $30^\circ$   
 $K_h = 0.2$

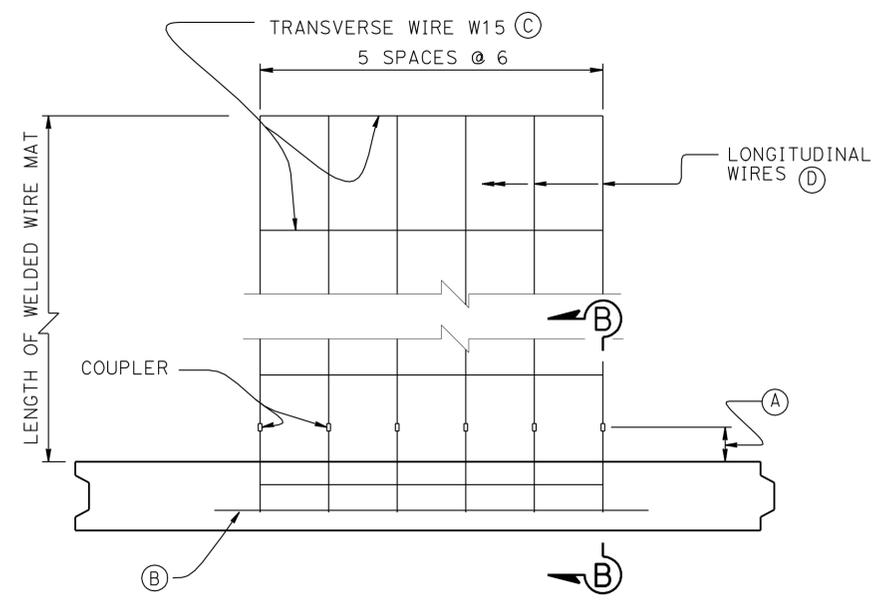
PRECAST CONCRETE PANELS:  
 $f'_c = 4,000$  psi (Concrete compressive strength at 28 days)  
 $f_y = 60,000$  psi (Yield strength of reinforcement)

SOIL REINFORCEMENT:  
 Welded wire mats:  $f_y = 65,000$  psi (Yield strength)  
 Coupler:  $f_y = 36,000$  psi (Yield strength)  
 Corrosion rate = 1.1 mils/year

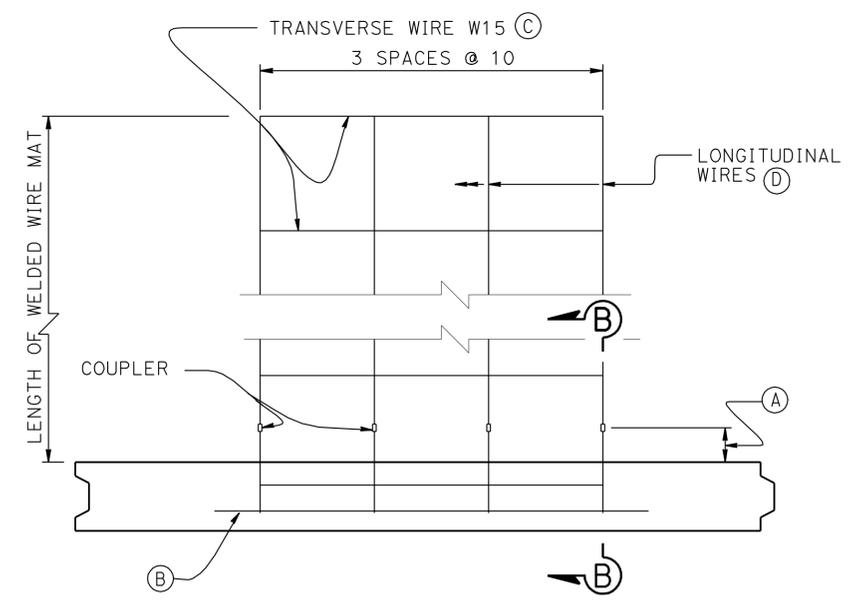
REINFORCED CONCRETE:  
 $f'_c = 3,600$  psi, except as noted  
 (Concrete compressive strength at 28 days)  
 $f_y = 60,000$  psi (Yield strength of reinforcement)

MSE = Mechanically Stabilized Embankment

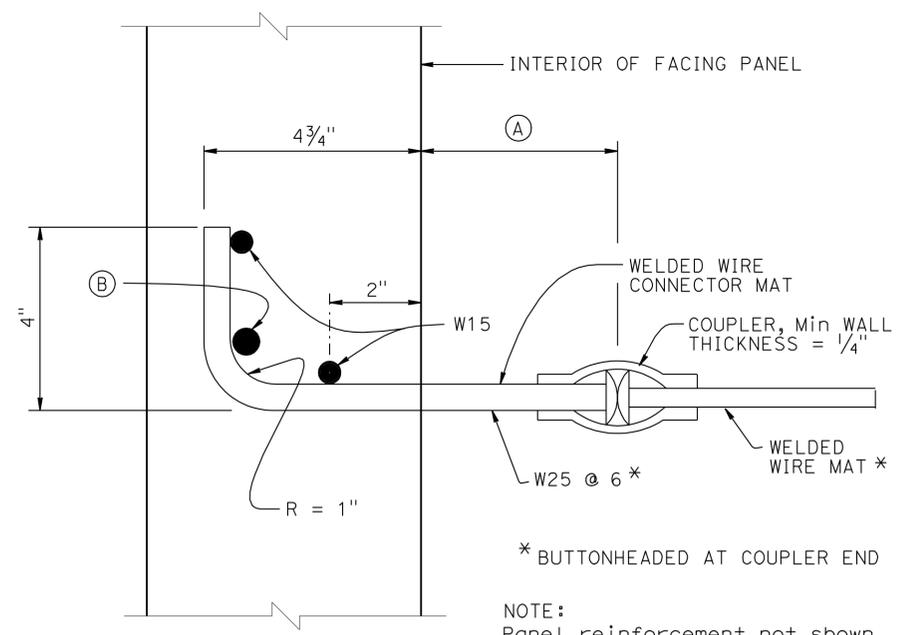
- NOTES:
- (A) Distance as required to permit coupler to be swaged
  - (B) Place #4 x 3'-2", centered on connector mat, but not welded to it
  - (C) All transverse wires size W15 at various spacing as shown elsewhere in plans
  - (D) Size of longitudinal wires shown elsewhere in plans
  - (E) 29" Opening dimension based on 18" RCP, see detail on "MISCELLANEOUS DETAILS" sheet



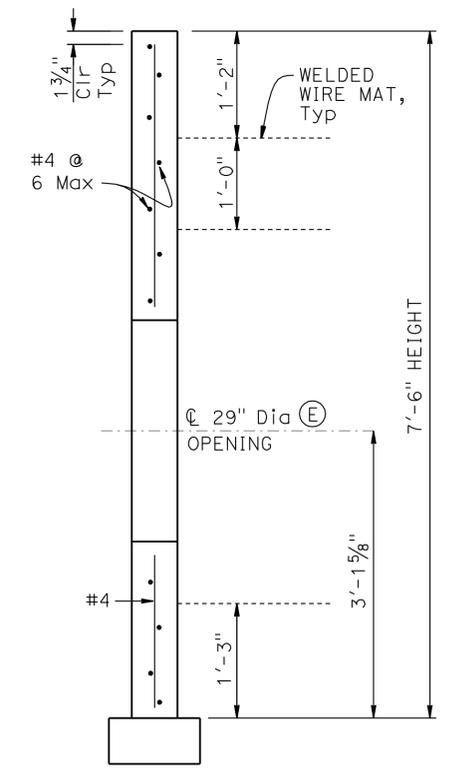
**PLAN OF PANEL WITH SIX WIRE MAT**  
 1/2" = 1'-0"



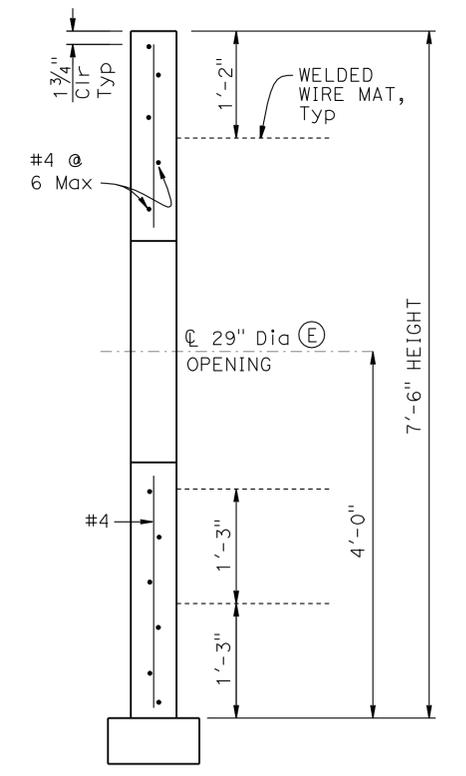
**PLAN OF PANEL WITH FOUR WIRE MAT**  
 1/2" = 1'-0"



**SECTION B-B**  
 6" = 1'-0"



**PANEL AT PIPE OUTLET RW No. 3**  
 1" = 1'-0"



**PANEL AT PIPE OUTLET RW No. 6**  
 1" = 1'-0"

REVISED STANDARD DRAWING	
FILE NO. <b>xs13-020-2</b>	APPROVAL DATE <u>January 2012</u>

- ① Detail added
- ② Note added

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

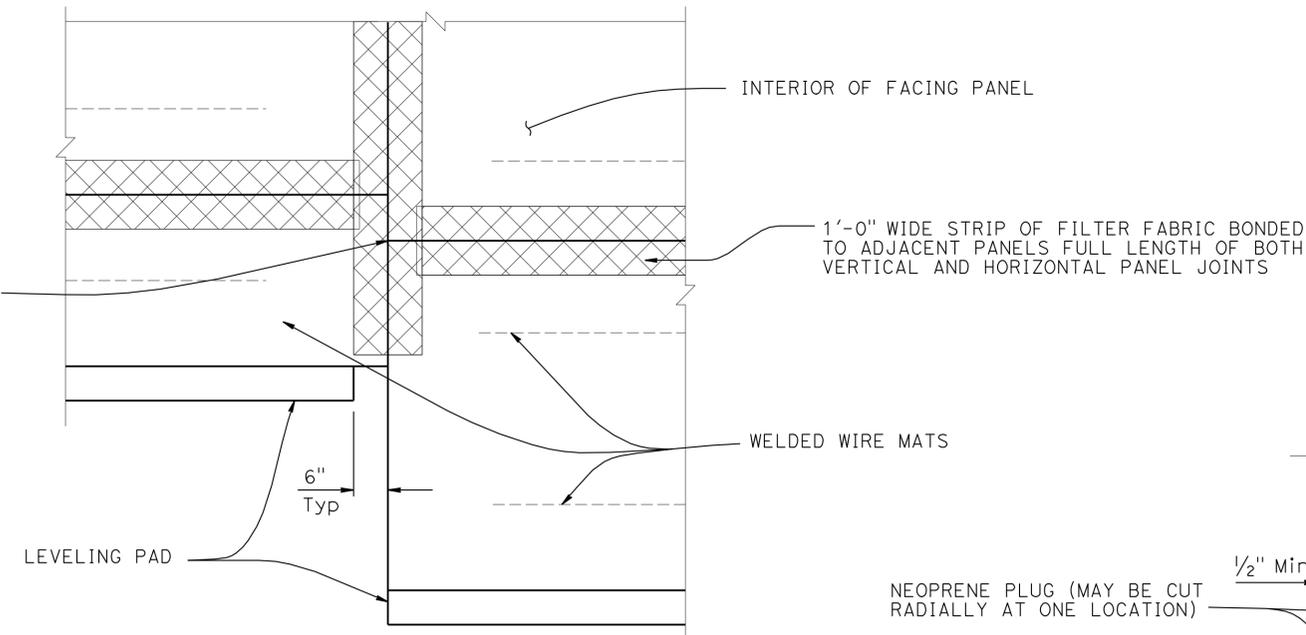
DIVISION OF ENGINEERING SERVICES

BRIDGE NO. **RETAINING WALL No. 1 THRU No. 7**  
 Varies  
 POST MILES  
**MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 2**

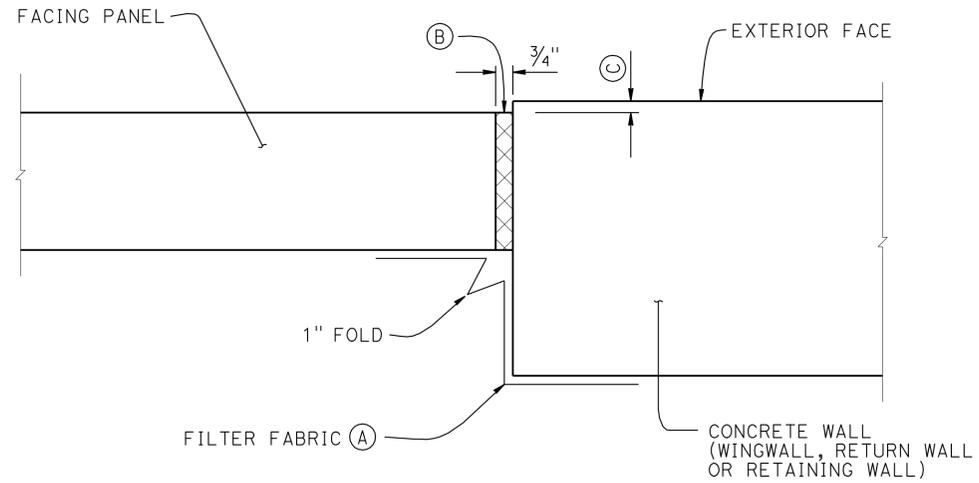
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	522	535

REGISTERED CIVIL ENGINEER DATE 2-17-12  
 9-10-12  
 PLANS APPROVAL DATE  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997

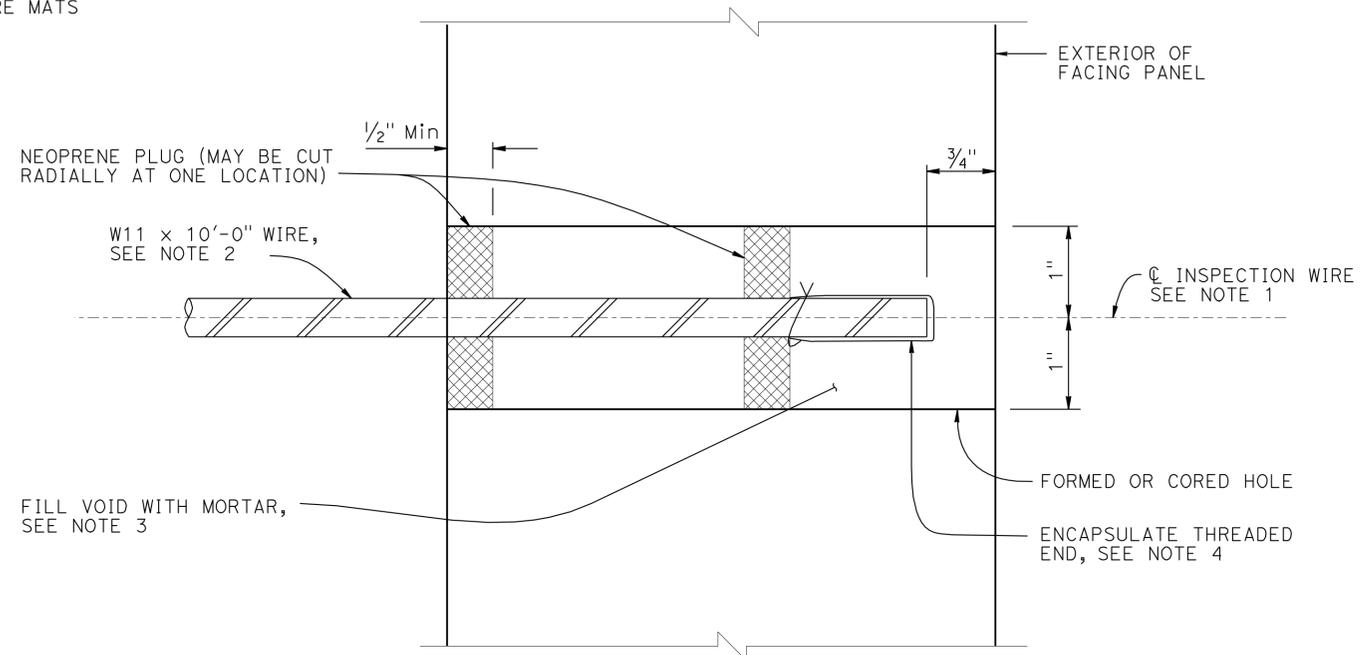


**PART ELEVATION**  
 $\frac{3}{4}'' = 1'-0''$



**MSE FACING PANEL-TO-CONCRETE WALL JOINT DETAIL**  
 $3'' = 1'-0''$

- NOTES:
- (A) Bond a strip of filter fabric, 1'-6" wide, to back of MSE panels and the adjacent concrete wall for entire length of vertical joint
  - (B) Bond expansion joint material to the concrete wall
  - (C) Offset between face of MSE facing panel and face of the concrete wall as dictated by location of layout lines shown elsewhere in "STRUCTURE PLANS"



**SECTION THRU INSPECTION WIRE**  
 NO SCALE

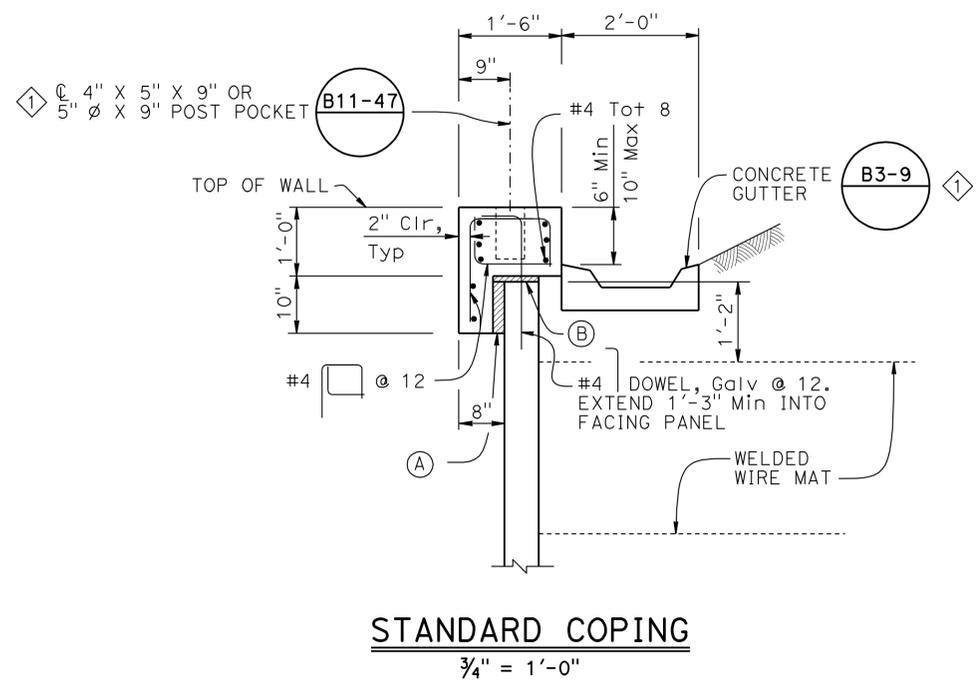
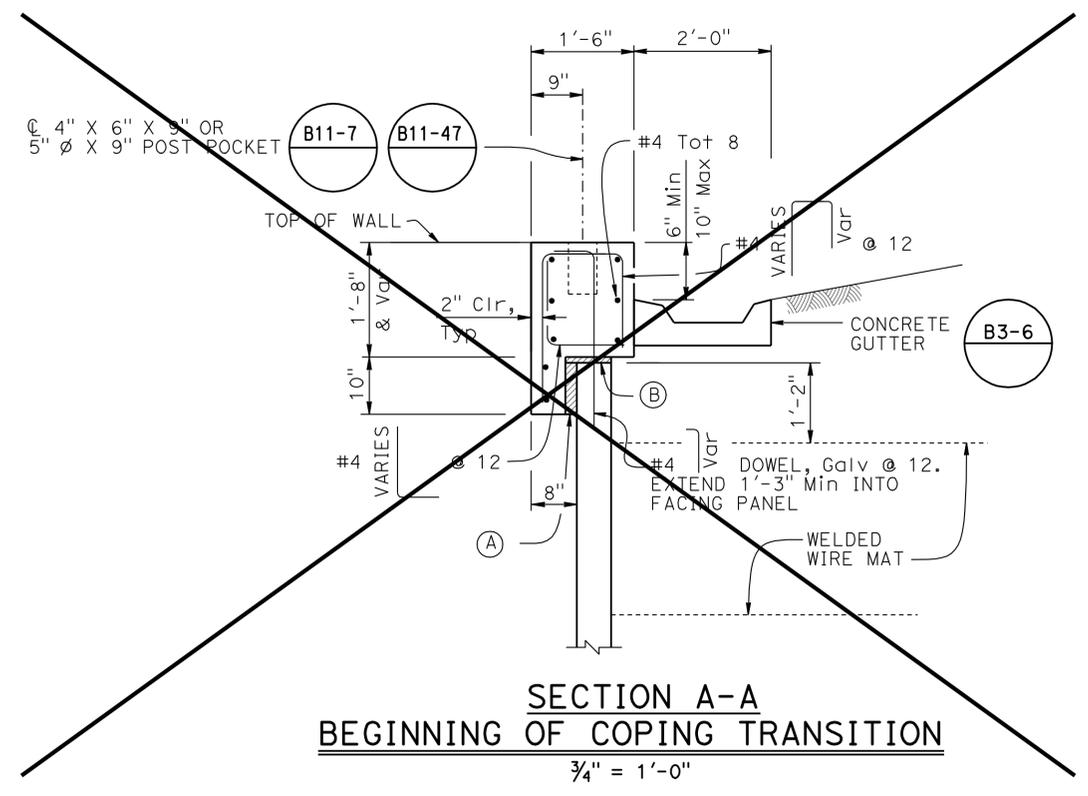
- NOTES:
1. Center inspection wire in facing panel
  2. Fabricated inspection wire from W11 wire representative of the welded wire mats, with  $\frac{3}{8}'' \text{ } \phi$  16 UNC threads for at least  $1\frac{1}{2}''$  of one end
  3. Place inspection wire horizontal and perpendicular to the wall panel prior to backfilling.
  4. Encapsulate threaded end with corrosion inhibiting mastic, vinyl covering, and secure with plastic tie
- UNC = Unified Coarse Threads

STANDARD DRAWING  
 FILE NO. **xs13-020-3**  
 APPROVAL DATE January 2012

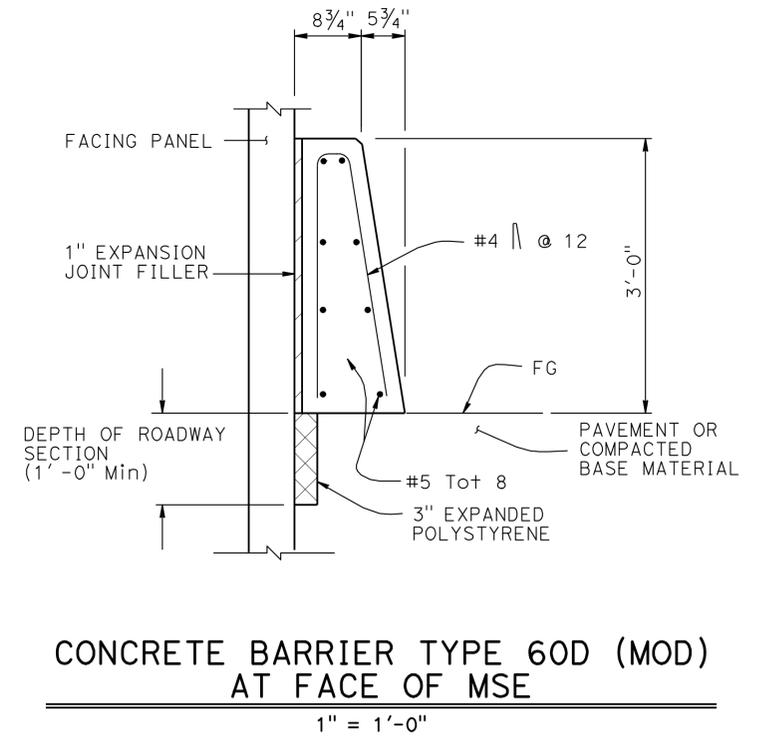
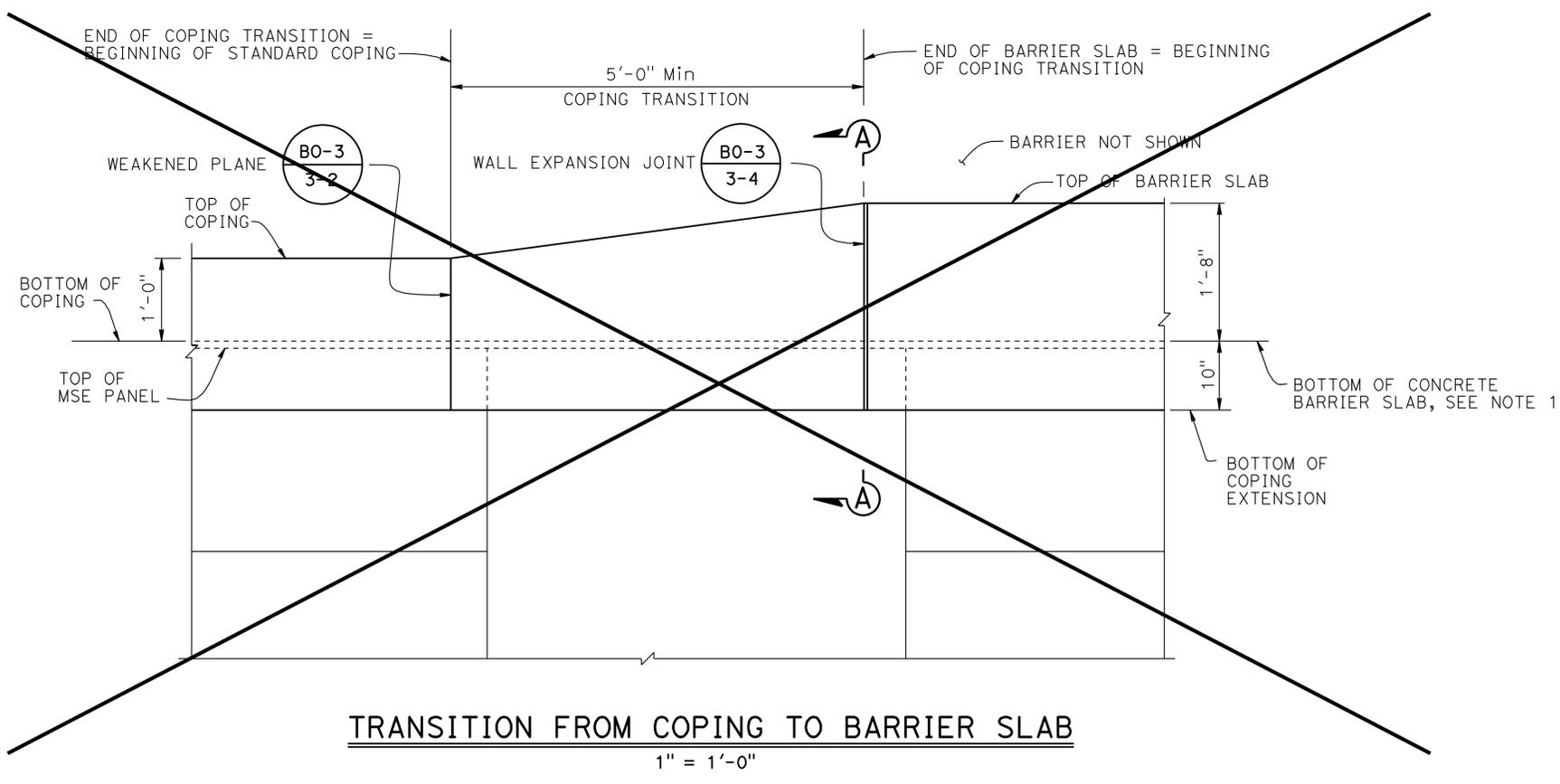
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES

BRIDGE NO. **RETAINING WALL No. 1 THRU No. 7**  
 Varies  
 POST MILES  
**MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	523	535
REGISTERED CIVIL ENGINEER			DATE	2-17-12	
PLANS APPROVAL DATE			9-10-12		
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CITY OF PETALUMA PUBLIC WORKS 11 ENGLISH STREET PETALUMA, CA 94954					
URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					



- NOTES:
- For Barrier slab details see "CONCRETE BARRIER SLAB DETAILS" xs12-090
  - Concrete gutter optional as needed
  - Install cable railing or chain link railing when indicated
- (A) 2" Expanded Polystyrene  
(B) 1" Expanded Polystyrene



REVISED STANDARD DRAWING	
FILE NO. <b>xs13-020-4</b>	APPROVAL DATE July 2011

Detail revised

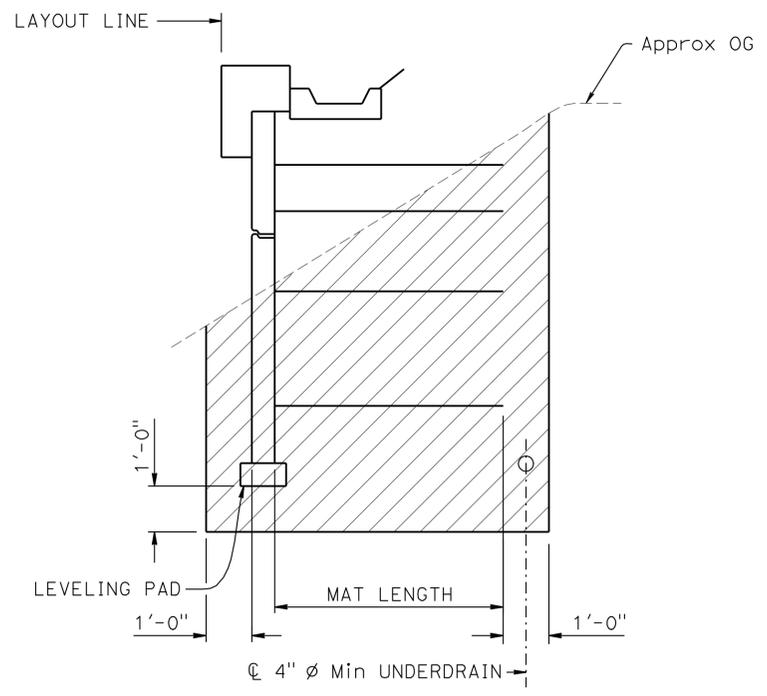
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

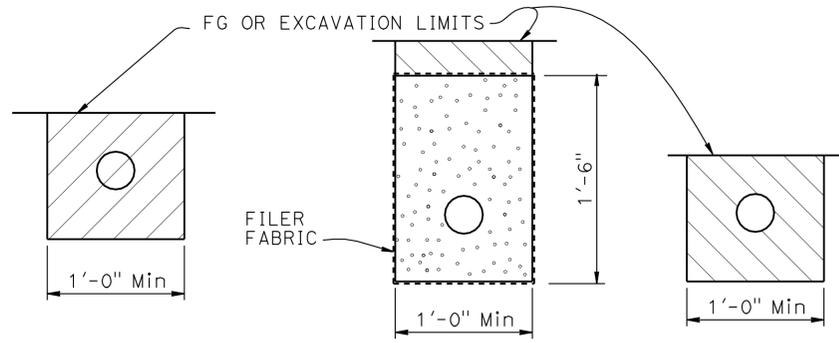
BRIDGE NO. Varies  
POST MILES

**RETAINING WALL No. 1 THRU No. 7**  
**MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 4**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	524	535
REGISTERED CIVIL ENGINEER			DATE	2-17-12	
PLANS APPROVAL DATE			9-10-12		
David A. Anderson No. 36066 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA					
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CITY OF PETALUMA PUBLIC WORKS 11 ENGLISH STREET PETALUMA, CA 94954					
URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					



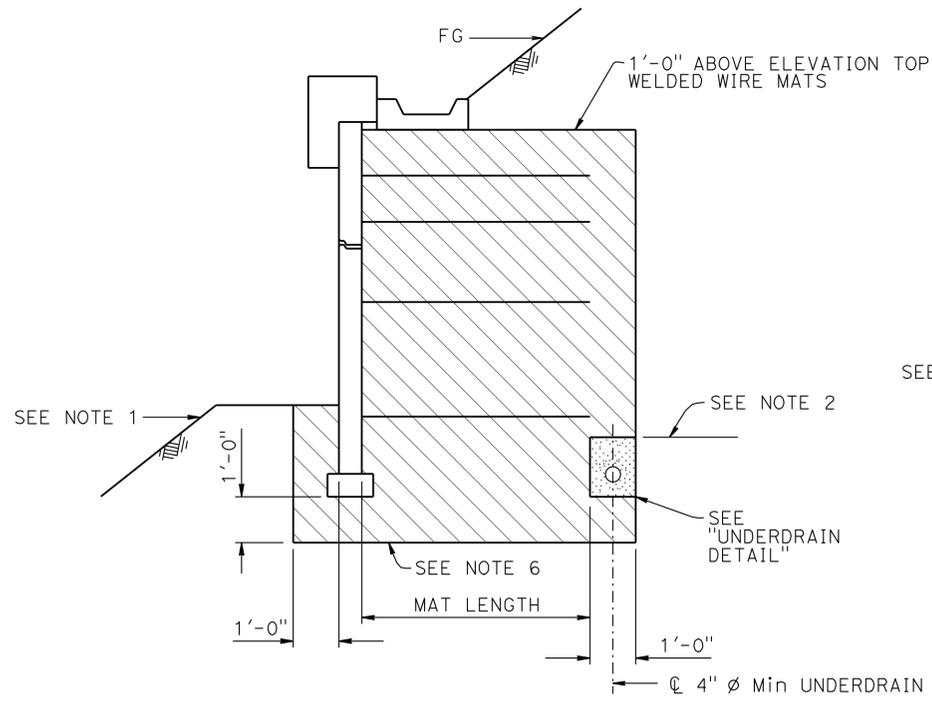
① LIMITS OF EXCAVATION  
1/2" = 1'-0"



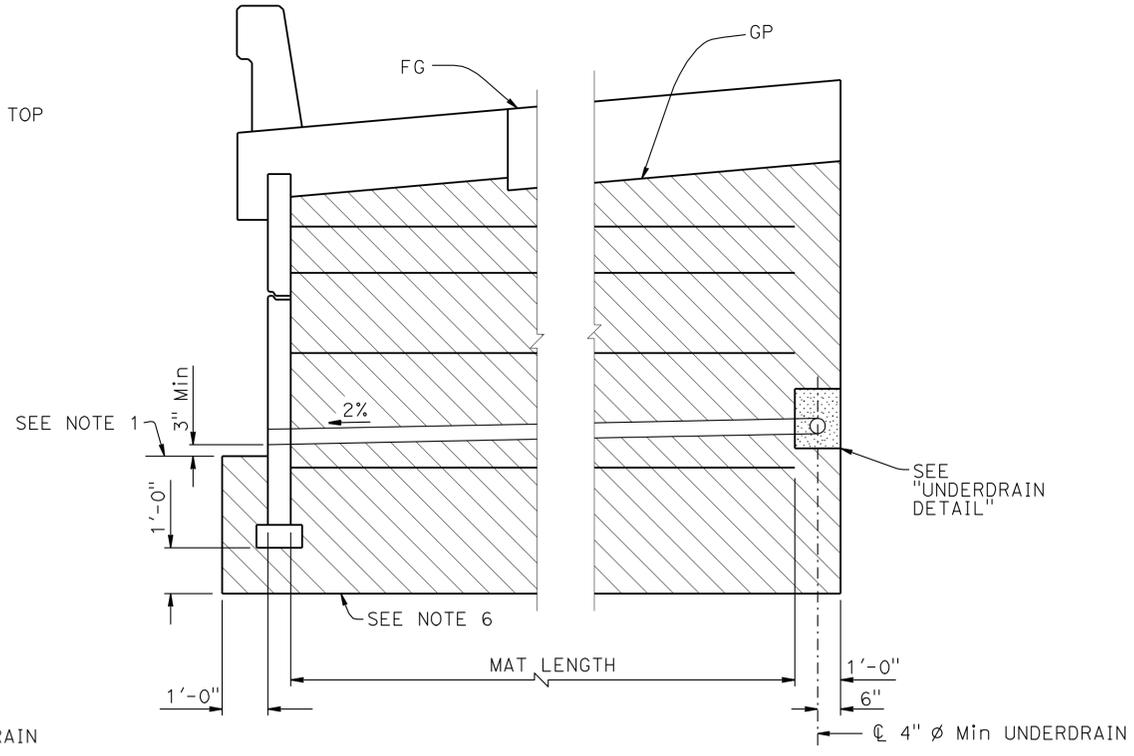
EXCAVATION      OUTLET PIPE      CLEANOUT PIPE  
BACKFILL  
UNPERFORATED OUTLET OR CLEAN OUT PIPE FOR UNDERDRAIN  
NO SACLE

NOTES:

- Limits to FG except to GP when in roadway section
- Locate underdrain behind bottom level of welded wire mats wherever possible, or at elevation needed to drain, as shown elsewhere on plans
- Place perforated pipe underdrain of diameter shown elsewhere on plans or minimum 4"  $\phi$  smoothed wall PVC or minimum 8"  $\phi$  corrugated HDPE
- Maximum spacing of outlet pipe is 200 feet
- At sags in profile of underdrain, install outlet pipe for each direction of flow
- Place subgrade enhancement geotextile (SEG) between subgrade and structural section



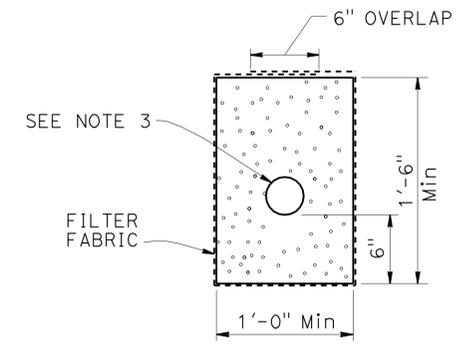
① ② SLOPING FINISHED SURFACE  
1/2" = 1'-0"



① ② ROADWAY SECTION  
1/2" = 1'-0"

LEGEND:

- Limits of Structure Excavation
- Limits of Structure Backfill
- Limits of Permeable Material



UNDERDRAIN DETAIL

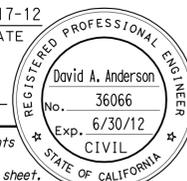
LIMITS OF BACKFILL

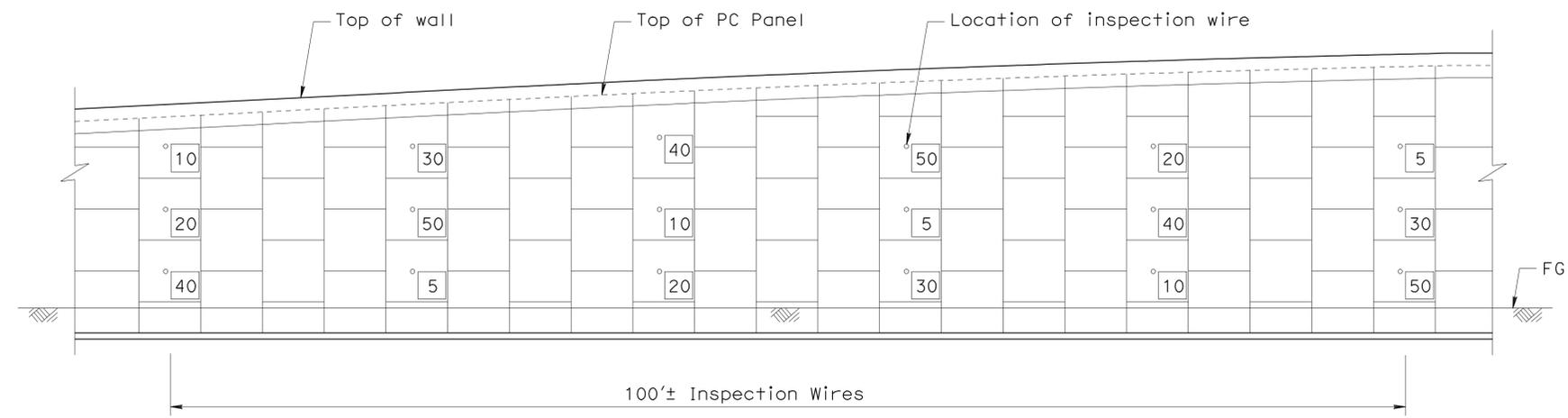
REVISED STANDARD DRAWING	
FILE NO. <b>xs13-020-6</b>	APPROVAL DATE <u>January 2012</u>

- ① Detail revised
- ② Note added

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES
---	----------------------------------

BRIDGE NO. Varies	<b>RETAINING WALL No. 1 THRU No. 7</b>
POST MILES	
<b>MECHANICALLY STABILIZED EMBANKMENT DETAILS No. 6</b>	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	525	535
REGISTERED CIVIL ENGINEER			DATE	2-17-12	
PLANS APPROVAL DATE			9-10-12		
					
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CITY OF PETALUMA PUBLIC WORKS 11 ENGLISH STREET PETALUMA, CA 94954					
URS CORPORATION 1380 LEAD HILL BLVD, SUITE 100 ROSEVILLE, CA 95661-2997					

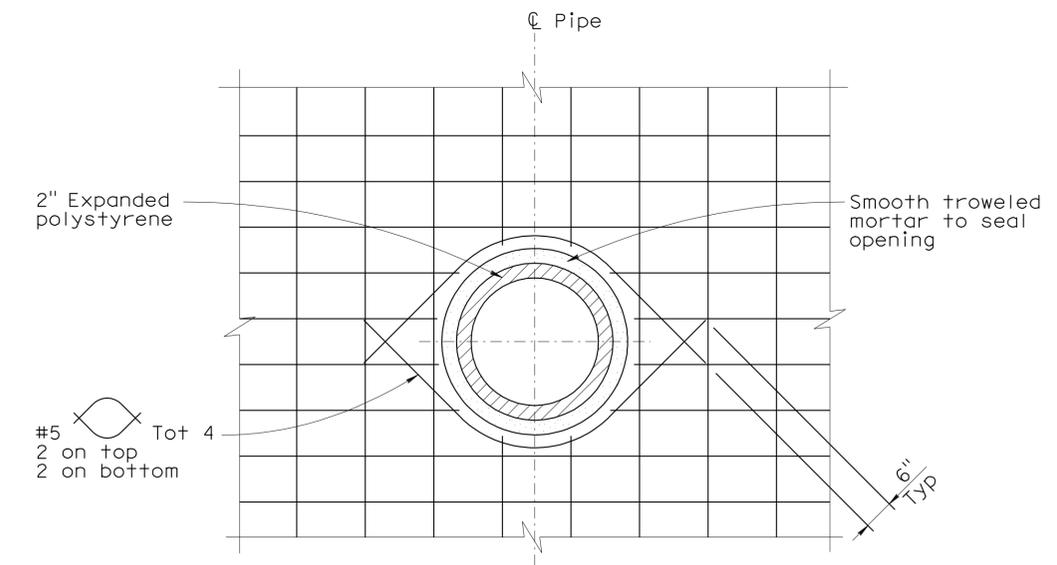


**TYPICAL INSPECTION WIRES LAYOUT**  
No Scale

INSPECTION WIRE NOTES:

- See "Mechanically Stabilized Embankment Detail No. 3" for additional details.
- A set of inspection wires is required for each individual wall which has a segment which is at least 100 ft long and which has an "H" equal to or greater than 17 ft.
- An additional set of inspection wires is required for each 100 ft long segment of wall with an "H" equal to or greater than 17 ft which is 500 ft or more from another set of inspection wires.
- The layout for the locations of the sets of inspection wires for a wall shall maximize the number of locations. The distance between sets of inspection wires need not be less than 500 ft.
- Walls which do not require a set of inspection wires based on the criteria in Note 2 shall have inspection wires installed. For these walls a single level of inspection wires shall be installed at a uniform spacing of 20 ft maximum along this level. The location of this level shall be at the first panels above the base of the wall which will be fully exposed after completion of the wall. A minimum of 6 inspection wires shall be installed.

20 Indicates interval in years from time of construction to time of removal of inspection wires.



**18" RCP WALL OPENING**  
No Scale

*Tracy L. Bertram*  
DESIGN OVERSIGHT Tracy L. Bertram  
3-26-12  
SIGN OFF DATE

DESIGN	BY D. Anderson	CHECKED S. Landis
DETAILS	BY L. Davis	CHECKED S. Landis
QUANTITIES	BY D. Anderson	CHECKED S. Landis

**PREPARED FOR THE  
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION**

Walt LaFranchi  
PROJECT ENGINEER

BRIDGE NO.	Varies
POST MILES	

**RETAINING WALL No. 1 THRU No. 7  
MISCELLANEOUS DETAILS**

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0751  
PROJECT NUMBER & PHASE: 0400020652

CONTRACT NO.: 04-0A1851

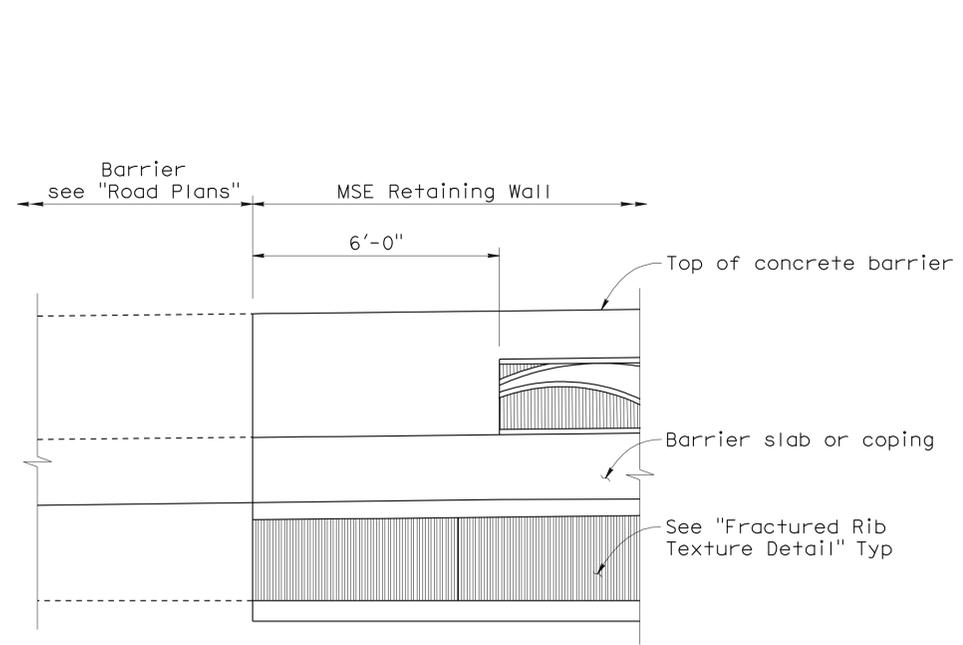
REVISION DATES	SHEET	OF
3-16-10 5-12-11 9-20-11 2-17-12	18	28

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:40

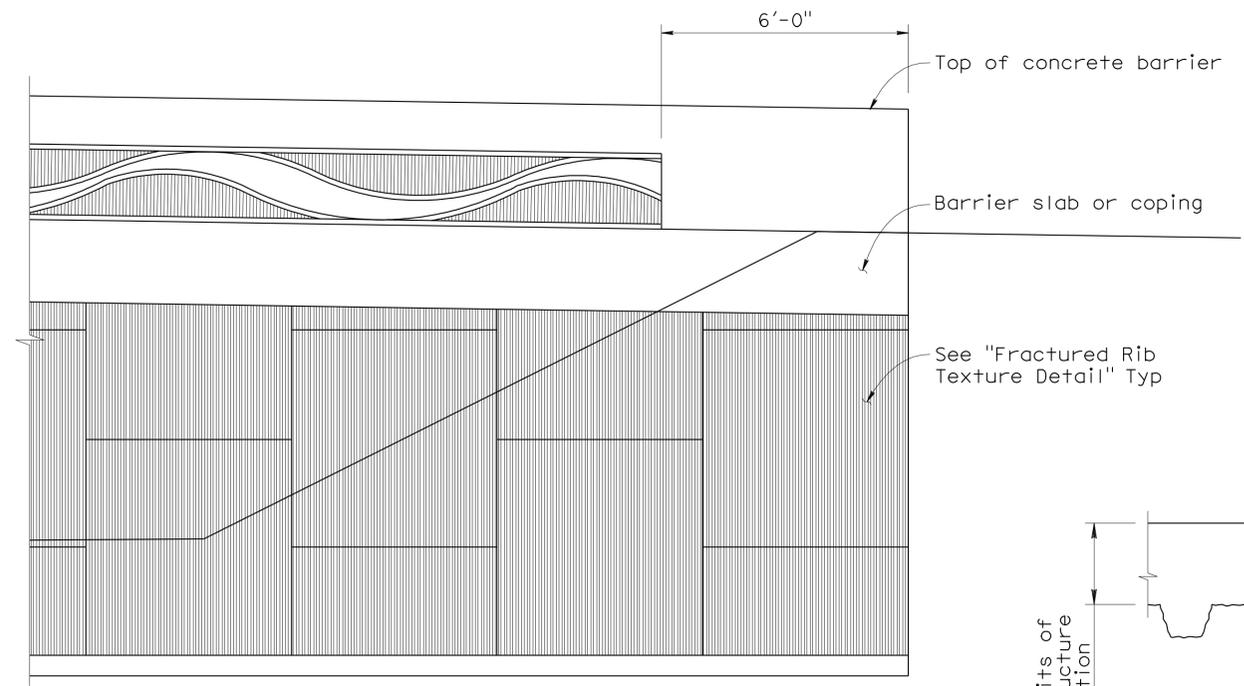
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Sonoma	101	7.1/8.1	526	535

REGISTERED CIVIL ENGINEER  
 DATE: 2-17-12  
 PLANS APPROVAL DATE: 9-10-12  
 David A. Anderson  
 No. 36066  
 Exp. 6/30/12  
 CIVIL  
 STATE OF CALIFORNIA

CITY OF PETALUMA PUBLIC WORKS  
 11 ENGLISH STREET  
 PETALUMA, CA 94954  
 URS CORPORATION  
 1380 LEAD HILL BLVD, SUITE 100  
 ROSEVILLE, CA 95661-2997

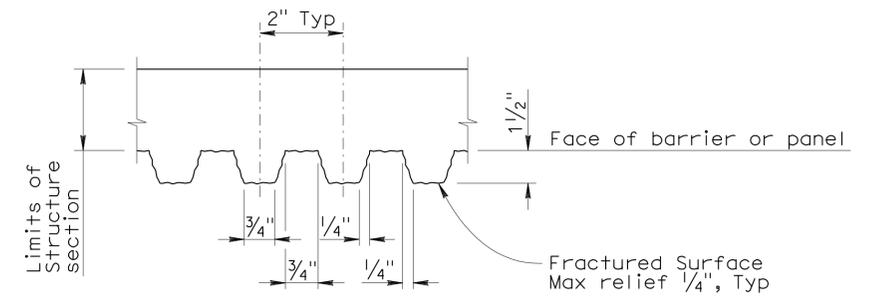


**AT BARRIER/MSE RETAINING WALL**



**AT BEGINNING OR END OF MSE RETAINING WALL**

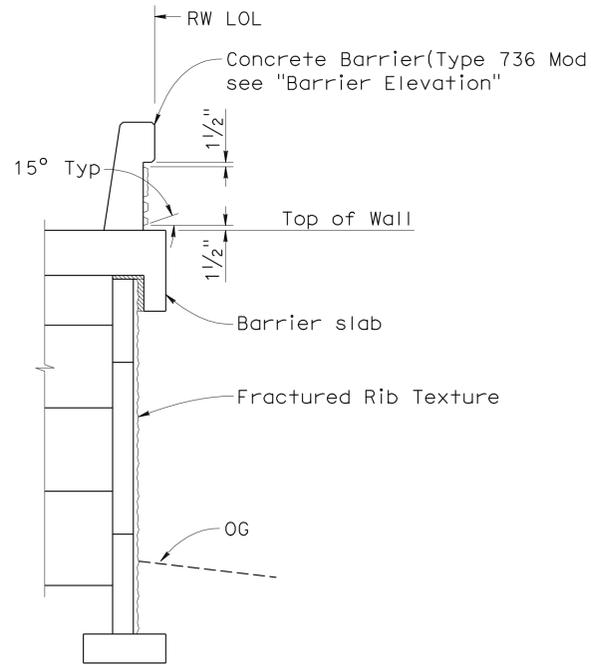
**TYPICAL ELEVATION**  
 No Scale



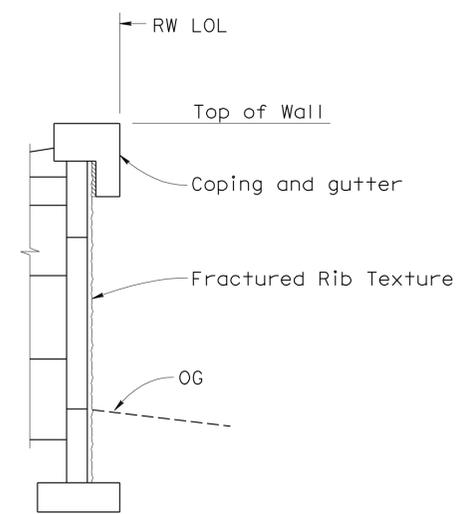
**FRACTURED RIB TEXTURE DETAIL**  
 No Scale

Notes:

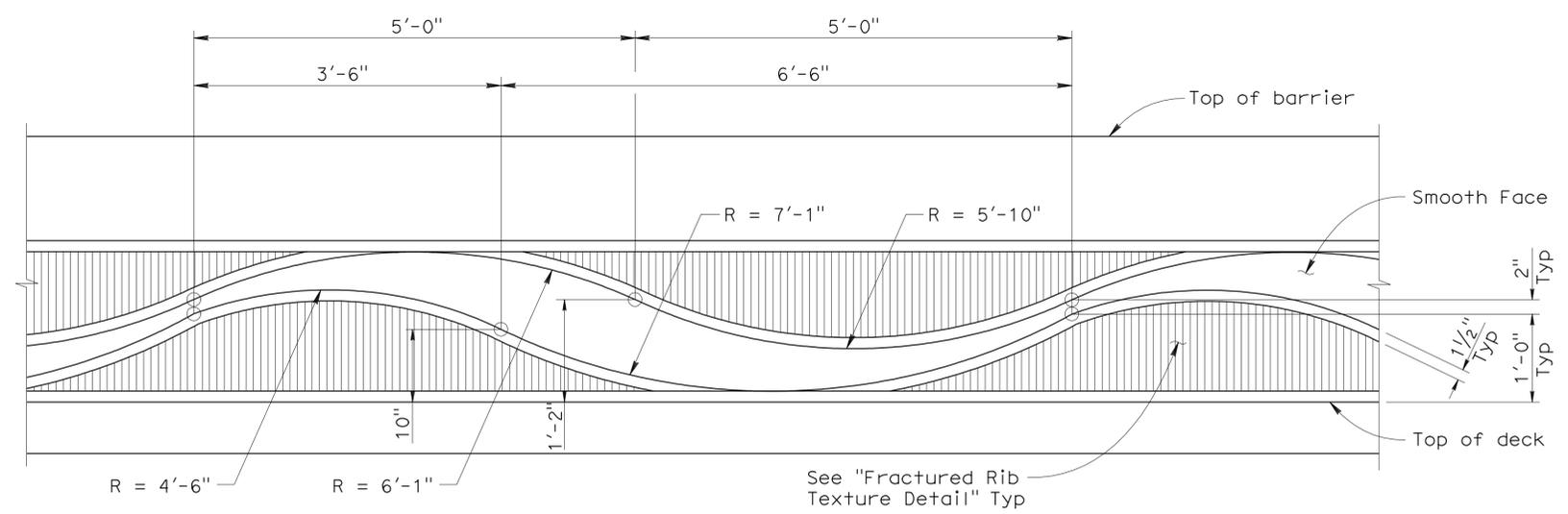
- Vertical joints in form liners will be at center of trough between ribs. Min spacing of form liner vertical joints will be 4'-0".
- No horizontal joints will be permitted in form liners.



**MSE WALL SECTION WITH BARRIER**  
 No Scale



**MSE WALL SECTION WITH COPING AND GUTTER**  
 No Scale



**BARRIER ELEVATION**  
 No Scale

DESIGN OVERSIGHT  
 Tracy L. Bertram  
 3-26-12  
 SIGN OFF DATE

DESIGN	BY D. Anderson	CHECKED S. Landis
DETAILS	BY L. Davis	CHECKED S. Landis
QUANTITIES	BY D. Anderson	CHECKED S. Landis

PREPARED FOR THE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

Walt LaFranchi  
 PROJECT ENGINEER

BRIDGE NO.	Varies
POST MILES	

**RETAINING WALL No. 1 THRU No. 7**  
**ARCHITECTURAL TREATMENT DETAILS**

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 0751  
 PROJECT NUMBER & PHASE: 0400020652

CONTRACT NO.: 04-0A1851

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
3-16-10	19	28

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	527	535

2-17-12  
DATE

9-10-12  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA

Stephen Huang  
No. C 42289  
Exp. 03/31/12  
GEOTECHNICAL

CITY OF PETALUMA PUBLIC WORKS  
11 ENGLISH STREET  
PETALUMA, CA 94954

URS CORPORATION  
100 WEST SAN FERNANDO STREET, SUITE 200  
SAN JOSE, CA 95113

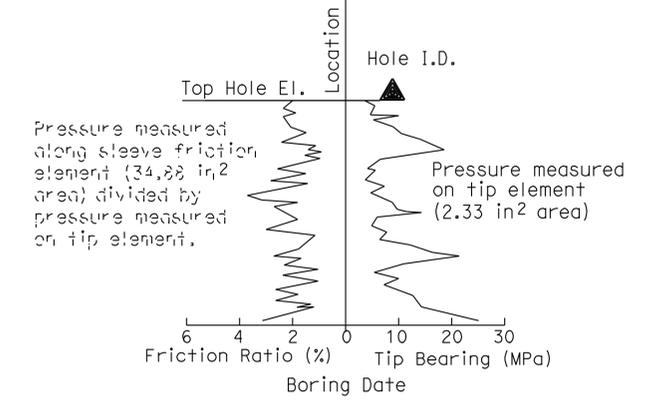
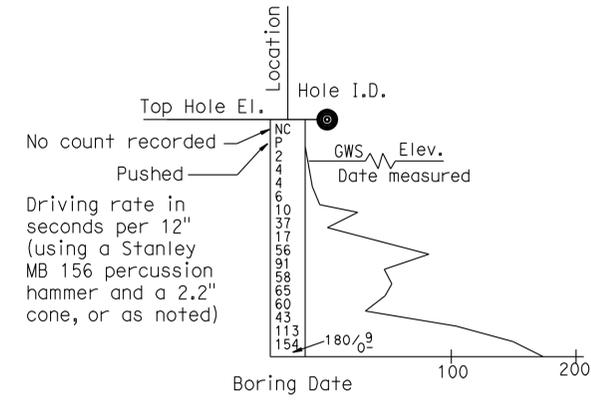
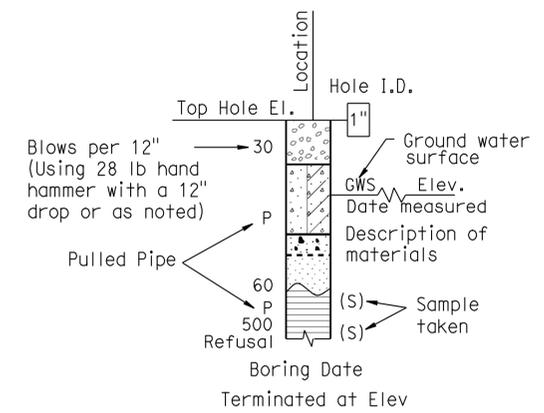
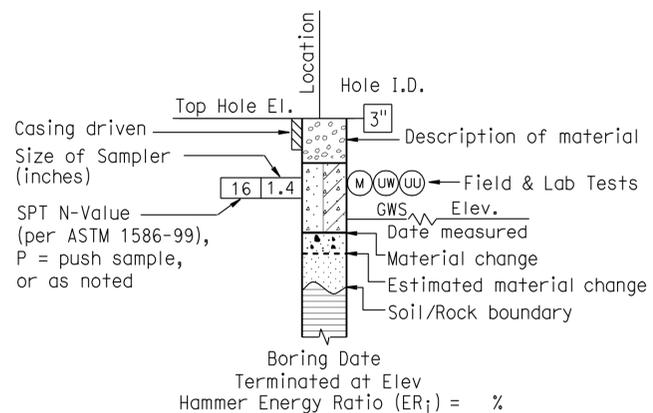
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY	A. CHEUNG	C. RAMBO	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	RETAINING WALL No. 1 THRU No. 7 <b>LOG OF TEST BORINGS 1 OF 9</b>
	CHECKED BY	M. THUMMALURU	FIELD INVESTIGATION BY:		S. HUANG PROJECT ENGINEER	
DATE: _____				PROJECT NUMBER & PHASE: 0400020652		CONTRACT NO.: 04-0A1851
GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 0751
				PROJECT NUMBER & PHASE: 0400020652		CONTRACT NO.: 04-0A1851
				DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 09-16-10   5-13-11   9-20-11   2-17-12 SHEET 20 OF 28

USERNAME => S124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	528	535

2-17-12  
DATE

9-10-12  
PLANS APPROVAL DATE

Stephen Huang  
No. C 42289  
Exp. 03/31/12  
GEOLOGICAL ENGINEER  
STATE OF CALIFORNIA

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CITY OF PETALUMA PUBLIC WORKS  
11 ENGLISH STREET  
PETALUMA, CA 94954

URS CORPORATION  
100 WEST SAN FERNANDO STREET, SUITE 200  
SAN JOSE, CA 95113

GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW Well-graded GRAVEL Well-graded GRAVEL with SAND		CL Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	GP Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
	GW-GM Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		
	GW-GC Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	GP-GM Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND		
	GP-GC Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	GM SILTY GRAVEL SILTY GRAVEL with SAND		
	GC CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
	GC-GM SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		
	SW Well-graded SAND Well-graded SAND with GRAVEL		
	SP Poorly graded SAND Poorly graded SAND with GRAVEL		
	SW-SM Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
	SW-SC Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		
	SP-SM Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
	SP-SC Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		
	SM SILTY SAND SILTY SAND with GRAVEL		
	SC CLAYEY SAND CLAYEY SAND with GRAVEL		
	SC-SM SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
	PT PEAT		
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166)
(UR)	Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N60 (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

## SOIL LEGEND

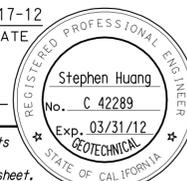
### RETAINING WALL No. 1 THRU No. 7

### LOG OF TEST BORINGS 2 OF 9

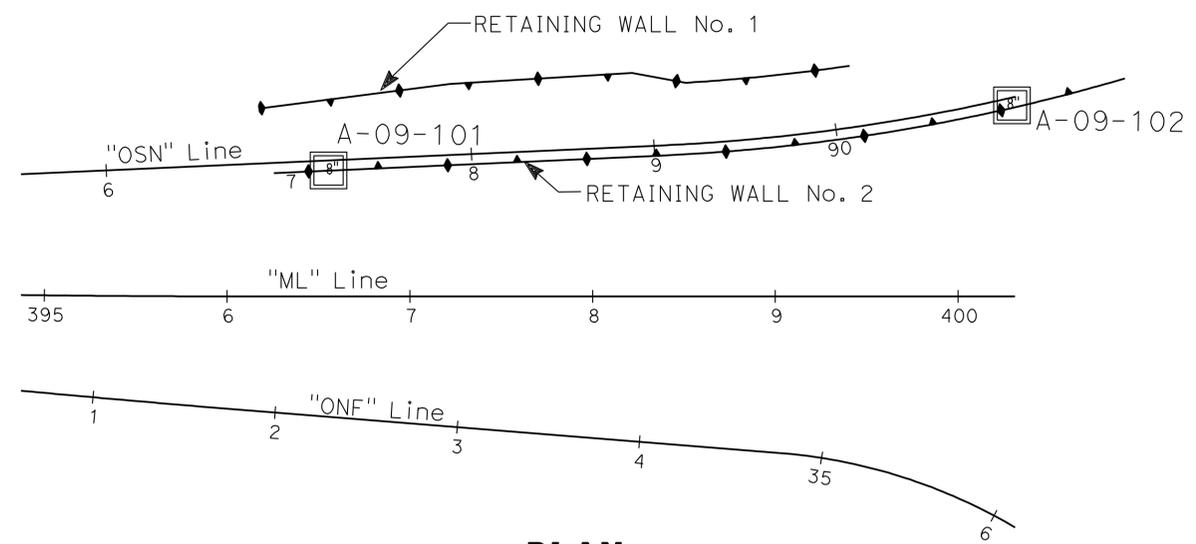
 DESIGN OVERSIGHT Tracy L Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHECKED BY M. THUMMALURU	FIELD INVESTIGATION BY: C. RAMBO	DATE:	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	S. HUANG PROJECT ENGINEER	BRIDGE NO. Varies POST MILES N/A	
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	529	535

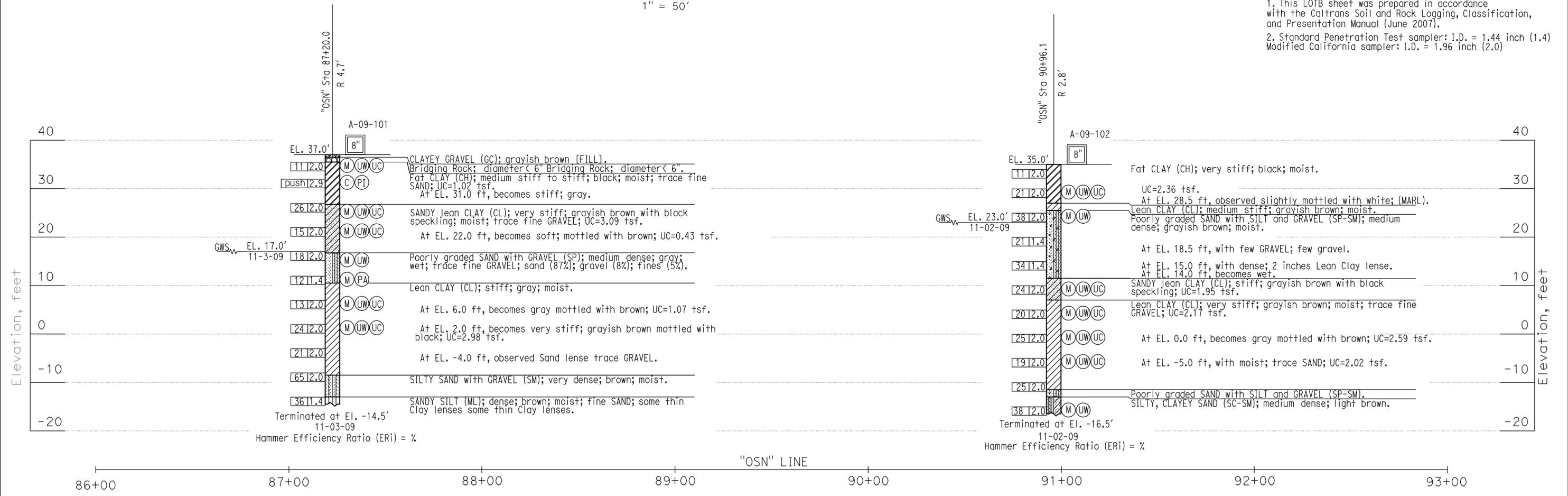

 2-17-12  
 DATE  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
 STATE OF CALIFORNIA  
 GEOTECHNICAL PROFESSIONAL

9-10-12  
 PLANS APPROVAL DATE  
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 SAN JOSE, CA 95113



**PLAN**  
1" = 50'

NOTE:  
 1. This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).  
 2. Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)

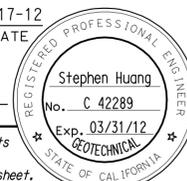


**PROFILE**  
Ver. 1" = 10'  
Hor. 1" = 25'

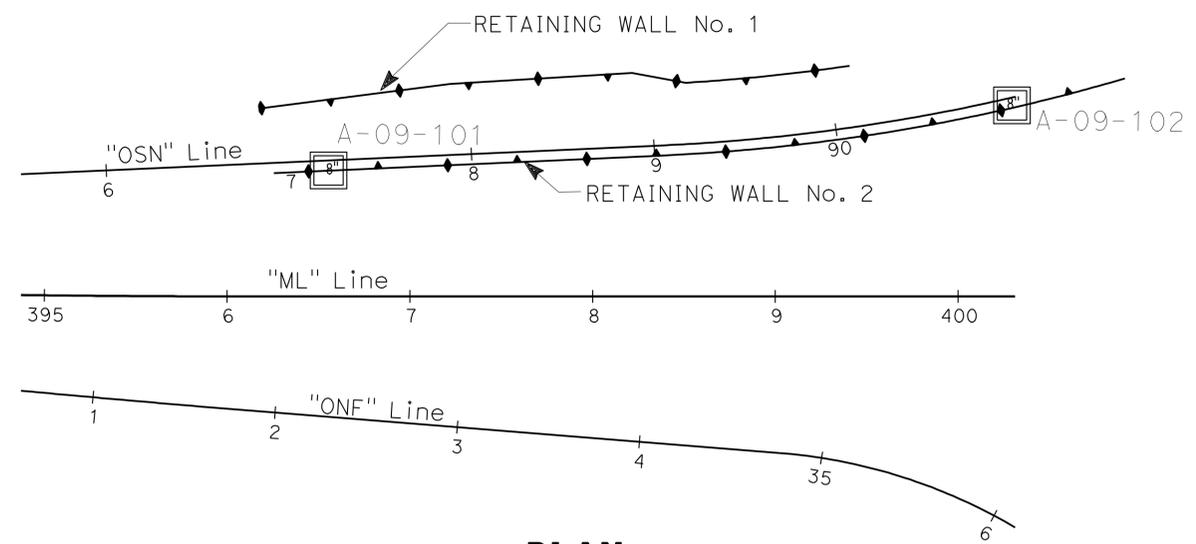
 DESIGN OVERSIGHT Tracy L Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHEKED BY M. THUMMALURU	FIELD INVESTIGATION BY C. RAMBO	DATE	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20E0067 PROJECT ENGINEER S. HUANG POST MILES N/A	<b>RETAINING WALL No. 1</b> <b>LOG OF TEST BORINGS 3 OF 9</b>
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652 CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12 SHEET 22 OF 28

FILE => 20E0073-2-1tb03.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	530	535

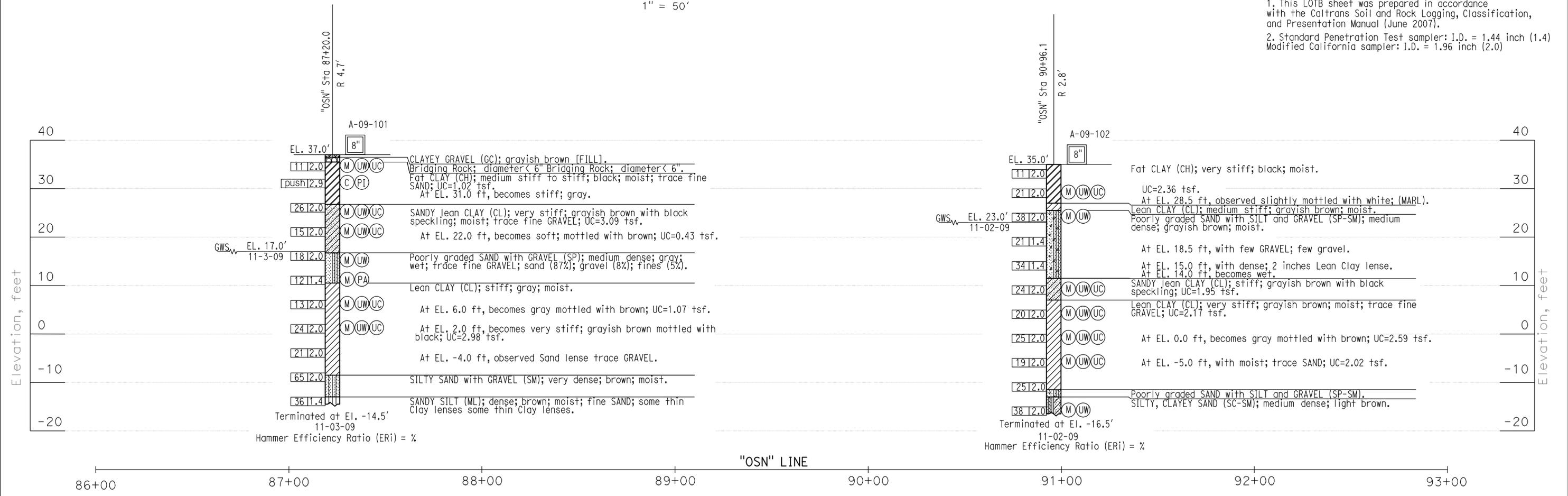

 2-17-12  
 DATE  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
 STATE OF CALIFORNIA  
 GEOTECHNICAL PROFESSIONAL

9-10-12  
 PLANS APPROVAL DATE  
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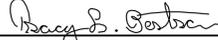


**PLAN**  
1" = 50'

NOTE:  
 1. This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).  
 2. Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)



**PROFILE**  
Ver. 1" = 10'  
Hor. 1" = 25'

 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHEKED BY M. THUMMALURU	FIELD INVESTIGATION BY C. RAMBO	DATE	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 20E0068 PROJECT ENGINEER S. HUANG	<b>RETAINING WALL No. 2</b> <b>LOG OF TEST BORINGS 4 OF 9</b>
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652 CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12 SHEET 23 OF 28

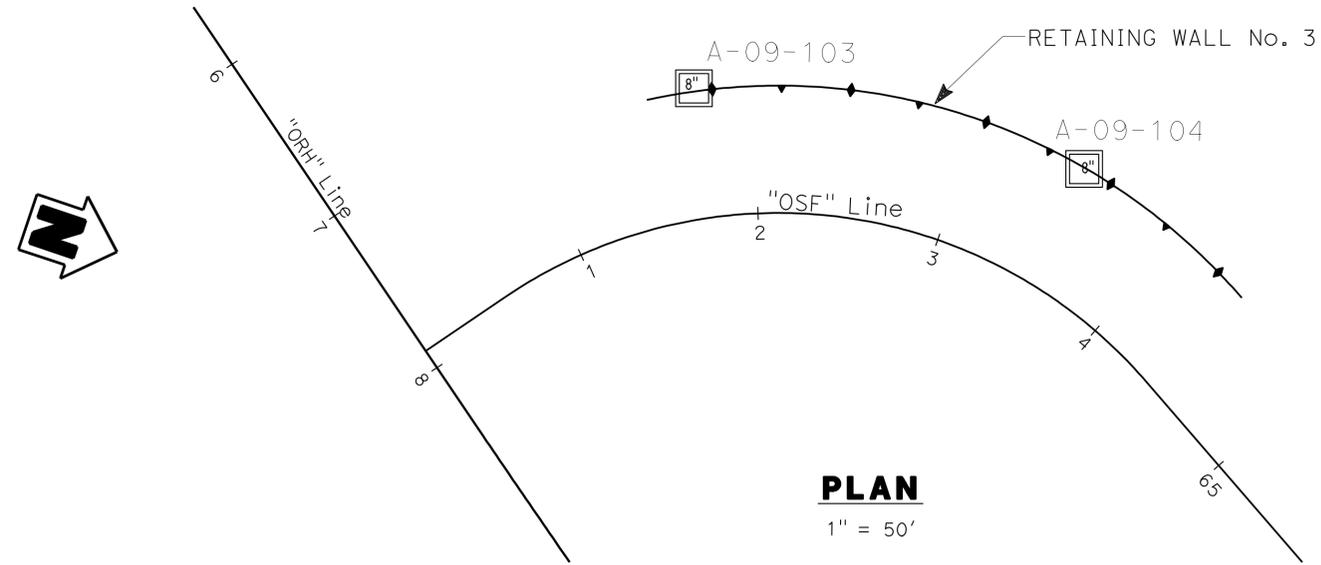
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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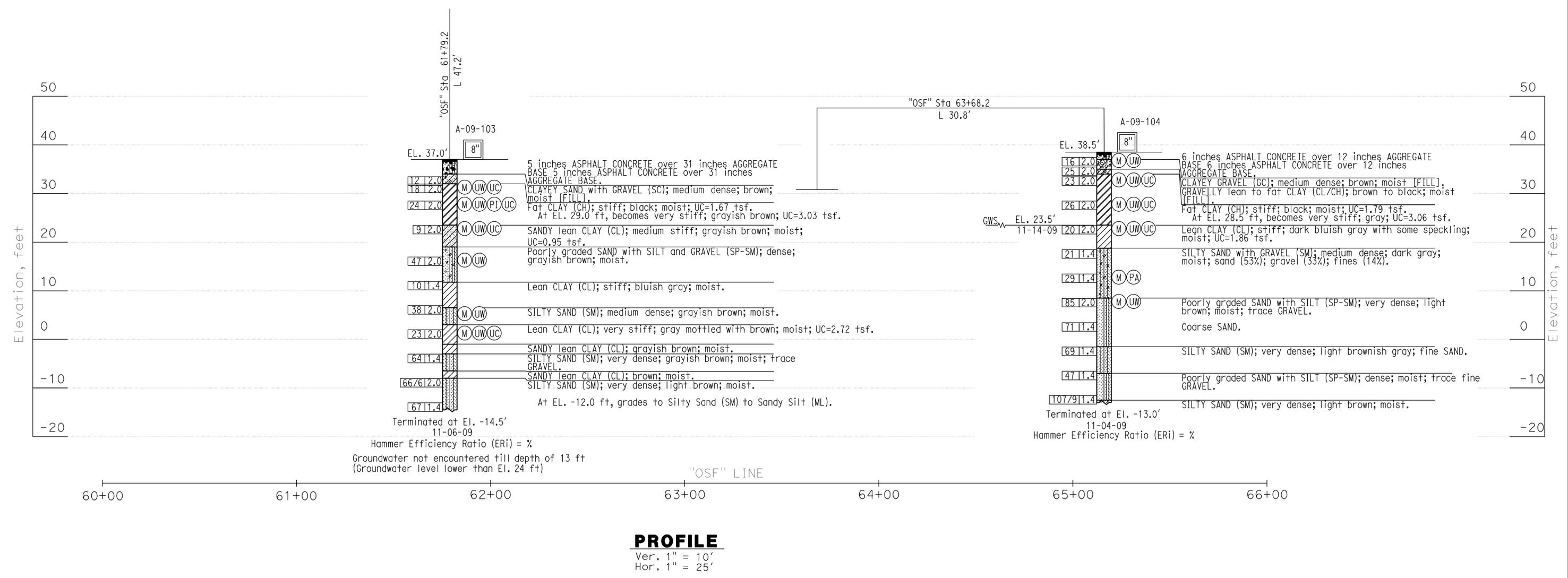
  
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 9-10-12  
 PLANS APPROVAL DATE  
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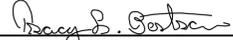


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 SAN JOSE, CA 95113



- NOTE:
- This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).
  - Groundwater was encountered in boring A-09-103, but elevation was not measured.
  - Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)



  
 DESIGN OVERSIGHT Tracy L. Bertram  
 3-26-12  
 SIGN OFF DATE

DRAWN BY A. CHEUNG  
 CHECKED BY M. THUMMALURU

FIELD INVESTIGATION BY: C. RAMBO  
 DATE:

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

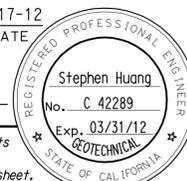
PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER S. HUANG

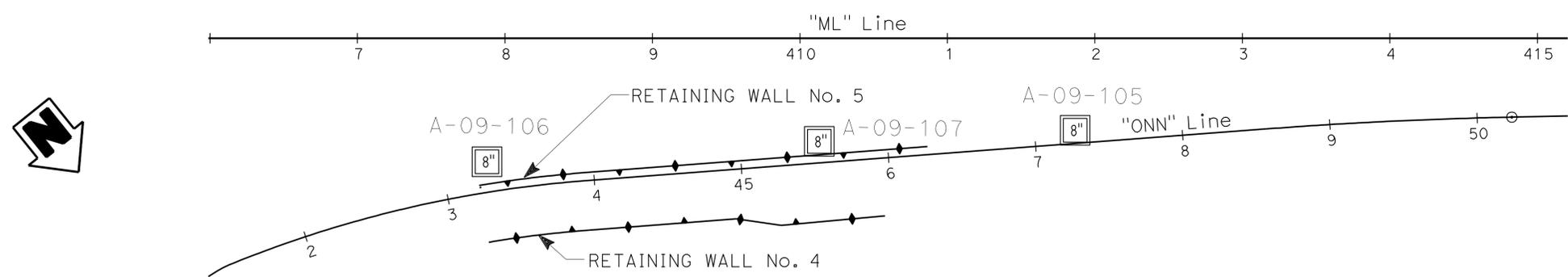
BRIDGE NO. 20E0069  
 POST MILES N/A

**RETAINING WALL No. 3**  
**LOG OF TEST BORINGS 5 OF 9**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	532	535

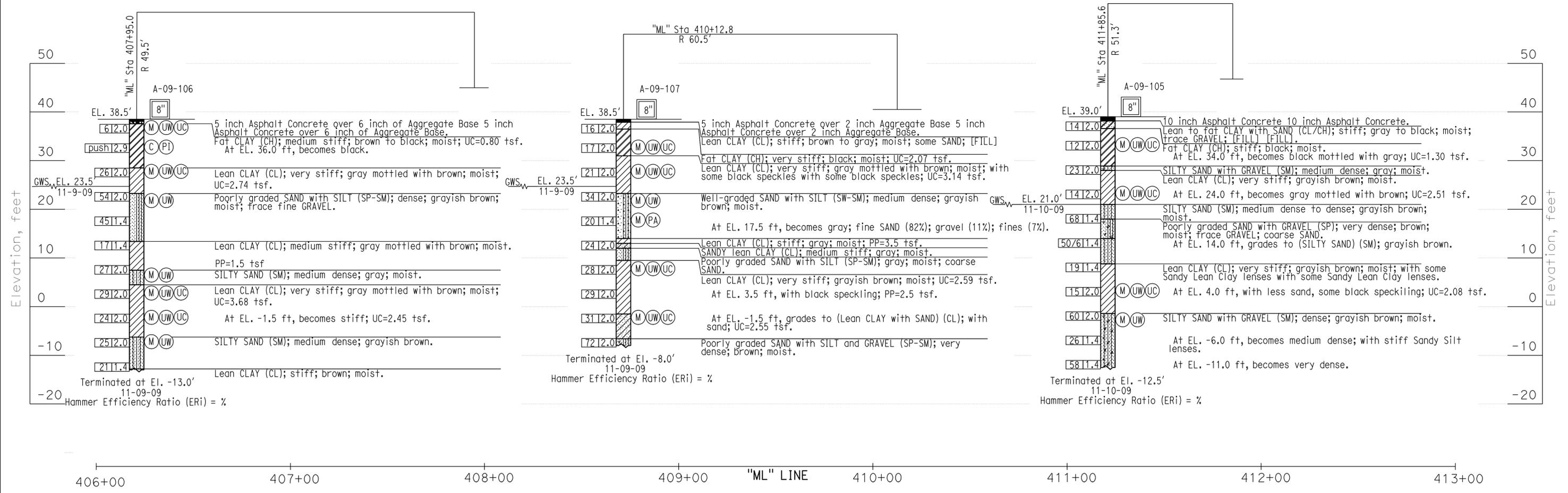

  
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 GEOTECHNICAL PROFESSIONAL  
 9-10-12 PLANS APPROVAL DATE  
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**PLAN**  
1" = 50'

- NOTE:
- This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).
  - Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)



**PROFILE**  
Ver. 1" = 10'  
Hor. 1" = 25'

Tracy L. Bertram  
 DESIGN OVERSIGHT  
 3-26-12  
 SIGN OFF DATE

DRAWN BY: A. CHEUNG  
 CHECKED BY: M. THUMMALURU

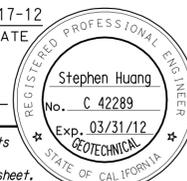
FIELD INVESTIGATION BY: C. RAMBO  
 DATE:

PREPARED FOR THE  
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 DEPARTMENT OF TRANSPORTATION

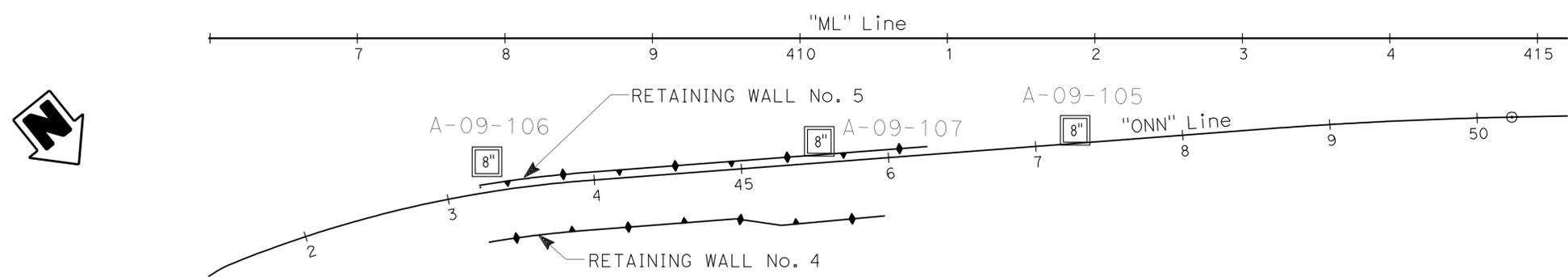
PROJECT ENGINEER: S. HUANG  
 BRIDGE NO.: 20E0070  
 POST MILES: N/A

**RETAINING WALL No. 4**  
**LOG OF TEST BORINGS 6 OF 9**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	533	535

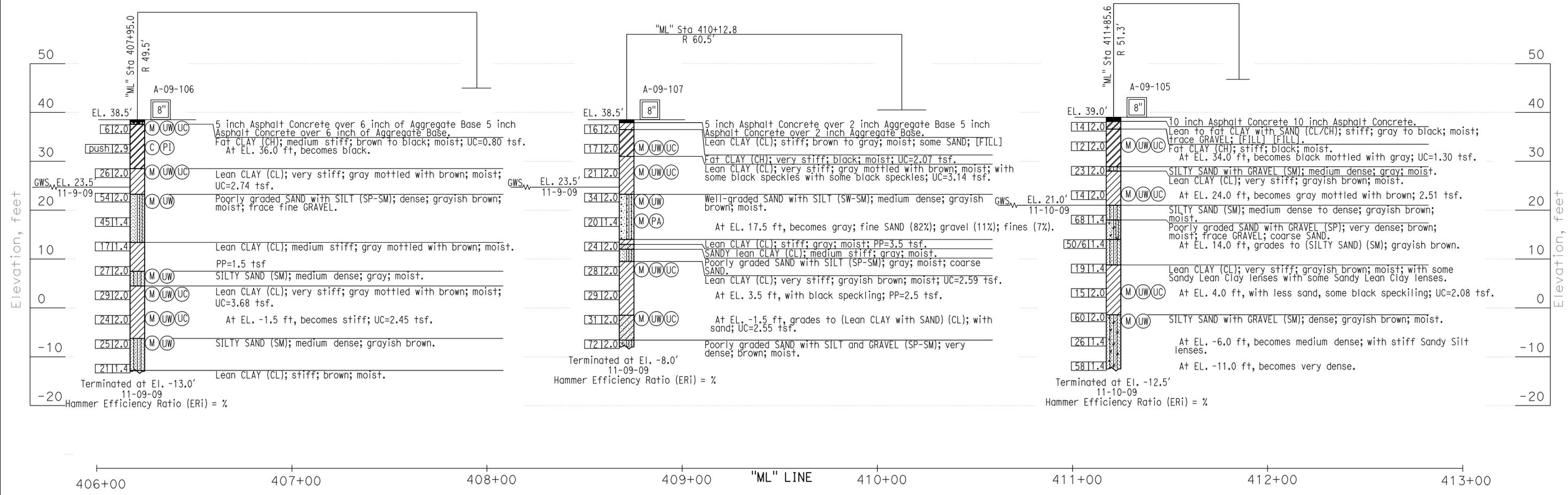

 2-17-12  
 DATE  
 GEOTECHNICAL PROFESSIONAL  
 PLANS APPROVAL DATE  
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**PLAN**  
1" = 50'

**NOTE:**  
 1. This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).  
 2. Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)



**PROFILE**  
Ver. 1" = 10'  
Hor. 1" = 25'

DESIGN OVERSIGHT  
 Tracy L Bertram  
 3-26-12  
 SIGN OFF DATE

DRAWN BY  
 A. CHEUNG  
 CHECKED BY  
 M. THUMMALURU

FIELD INVESTIGATION BY:  
 C. RAMBO  
 DATE:

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS  
 0 1 2 3

PREPARED FOR THE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

PROJECT ENGINEER  
 S. HUANG

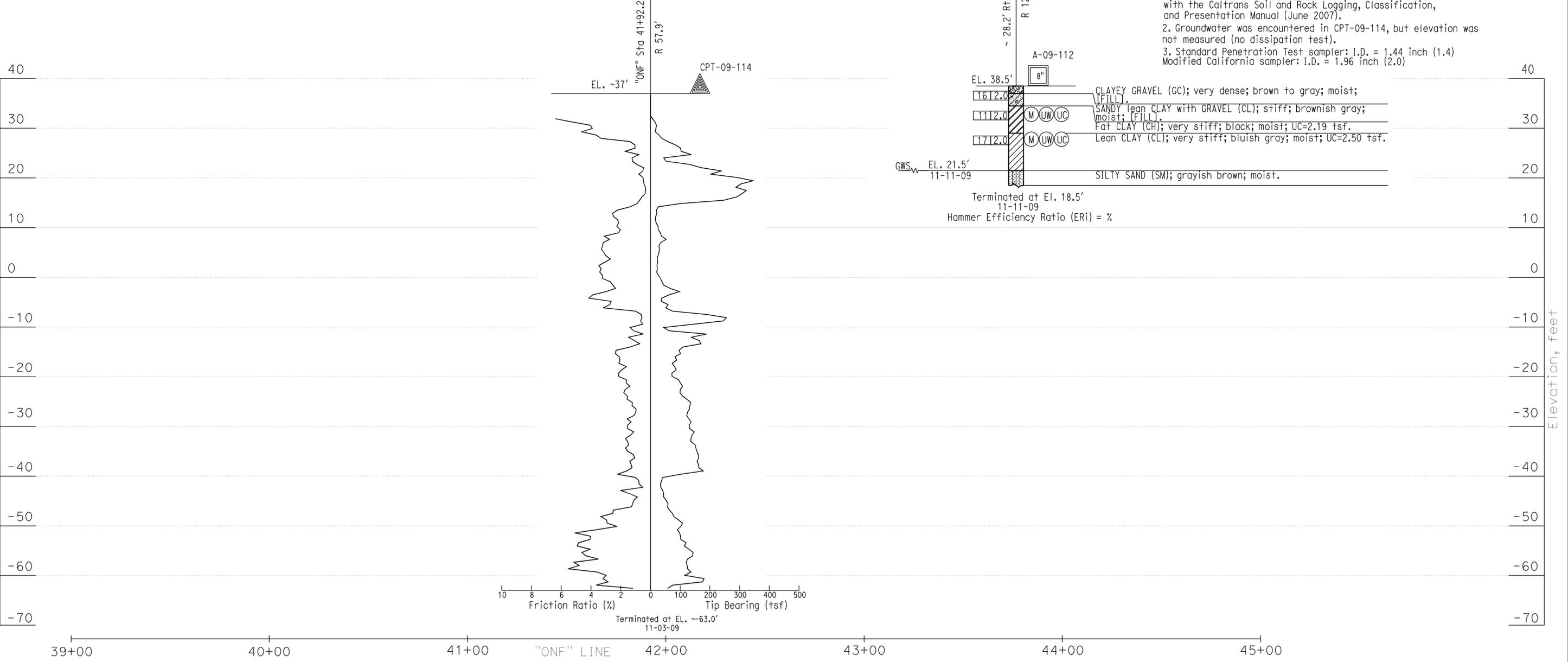
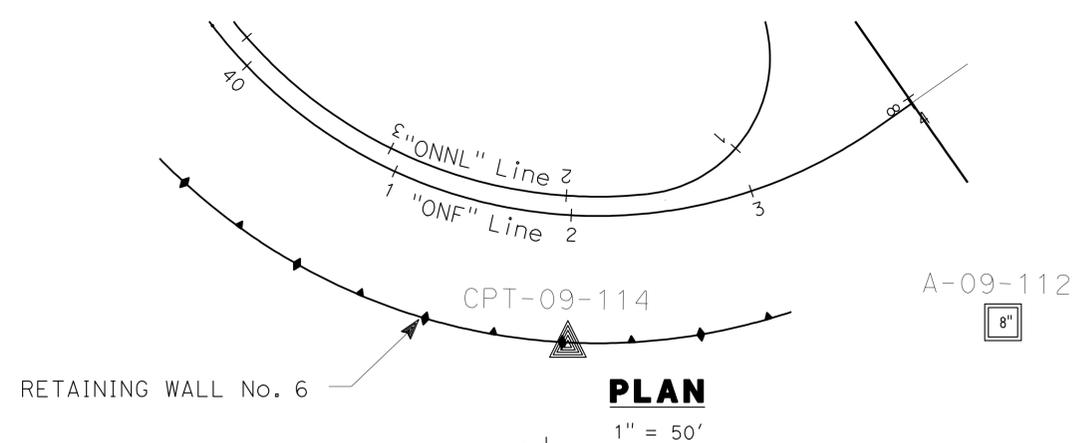
BRIDGE NO.  
 20E0071  
 POST MILES  
 N/A

**RETAINING WALL No. 5**  
**LOG OF TEST BORINGS 7 OF 9**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	534	535

 2-17-12  
 GEOTECHNICAL PROFESSIONAL DATE  
 9-10-12  
 PLANS APPROVAL DATE  
 Stephen Huang  
 No. C 42289  
 Exp. 03/31/12  
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 STATE OF CALIFORNIA

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- NOTE:
- This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).
  - Groundwater was encountered in CPT-09-114, but elevation was not measured (no dissipation test).
  - Standard Penetration Test sampler: I.D. = 1.44 inch (1.4)  
Modified California sampler: I.D. = 1.96 inch (2.0)

**PROFILE**

Ver. 1" = 10'  
Hor. 1" = 25'

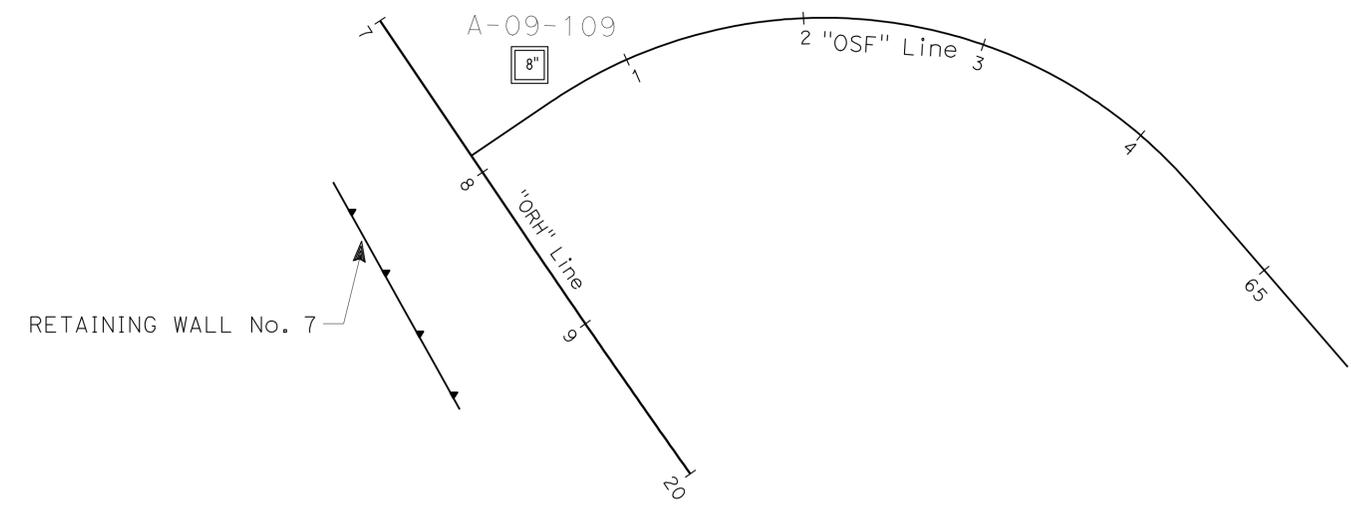
 DESIGN OVERSIGHT Tracy L Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHECKED BY M. THUMMALURU	FIELD INVESTIGATION BY: C. RAMBO	DATE:	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER S. HUANG	BRIDGE NO. 20E0072 POST MILES N/A	<b>RETAINING WALL No. 6</b> <b>LOG OF TEST BORINGS 8 OF 9</b>
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 09-16-10 5-13-11 9-20-11 2-17-12 SHEET 27 OF 28

USERNAME => s124496 DATE PLOTTED => 13-SEP-2012 TIME PLOTTED => 06:41

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Son	101	7.1/8.1	535	535

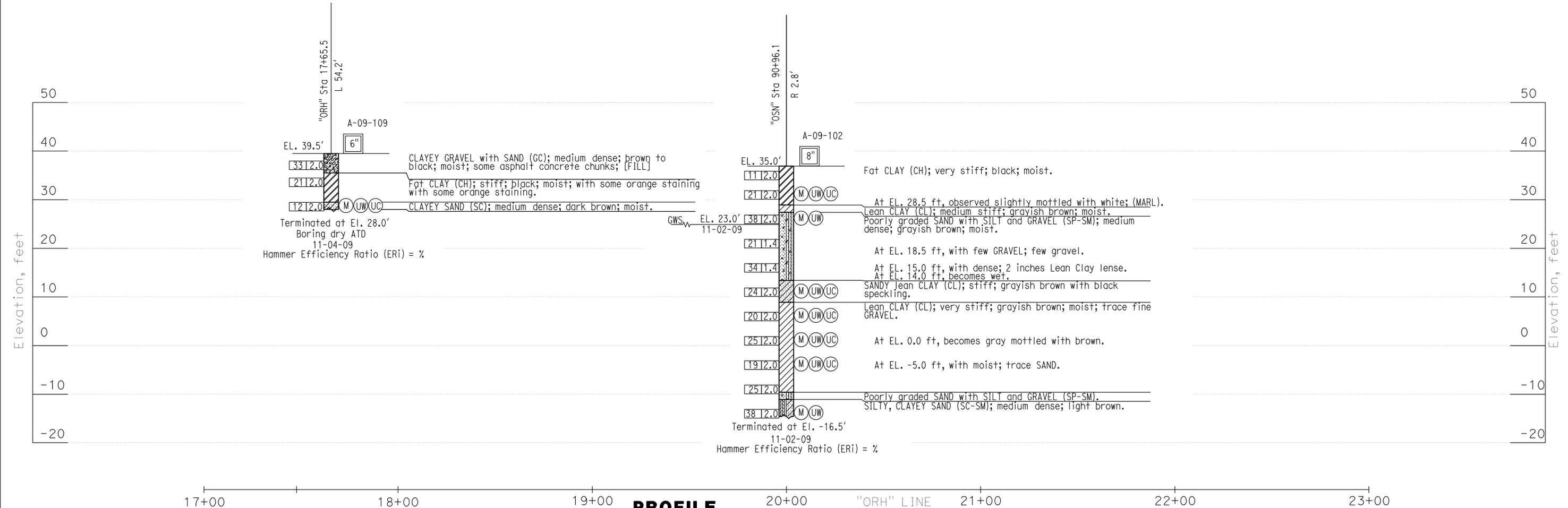
  
 GEOTECHNICAL PROFESSIONAL DATE 2-17-12  
 PLANS APPROVAL DATE 9-10-12  


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A-09-102  
  
**PLAN**  
 1" = 50'

NOTE:  
 1. This LOTB sheet was prepared in accordance with the Caltrans Soil and Rock Logging, Classification, and Presentation Manual (June 2007).  
 2. Standard Penetration Test sampler: I.D. = 1.44 inch (1.4) Modified California sampler: I.D. = 1.96 inch (2.0)



**PROFILE**  
 Ver. 1" = 10'  
 Hor. 1" = 25'

 DESIGN OVERSIGHT Tracy L. Bertram 3-26-12 SIGN OFF DATE	DRAWN BY A. CHEUNG	CHECKED BY M. THUMMALURU	FIELD INVESTIGATION BY: C. RAMBO	DATE:	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER S. HUANG	BRIDGE NO. 20E0073	<b>RETAINING WALL No. 7</b> <b>LOG OF TEST BORINGS 9 OF 9</b>
	GS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 7/16/10)				UNIT: 0751 PROJECT NUMBER & PHASE: 0400020652	CONTRACT NO.: 04-0A1851	DISREGARD PRINTS BEARING EARLIER REVISION DATES	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 20E0073-Z-1tb09.dgn