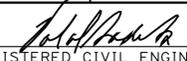
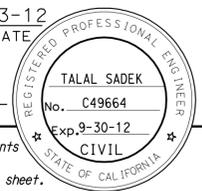
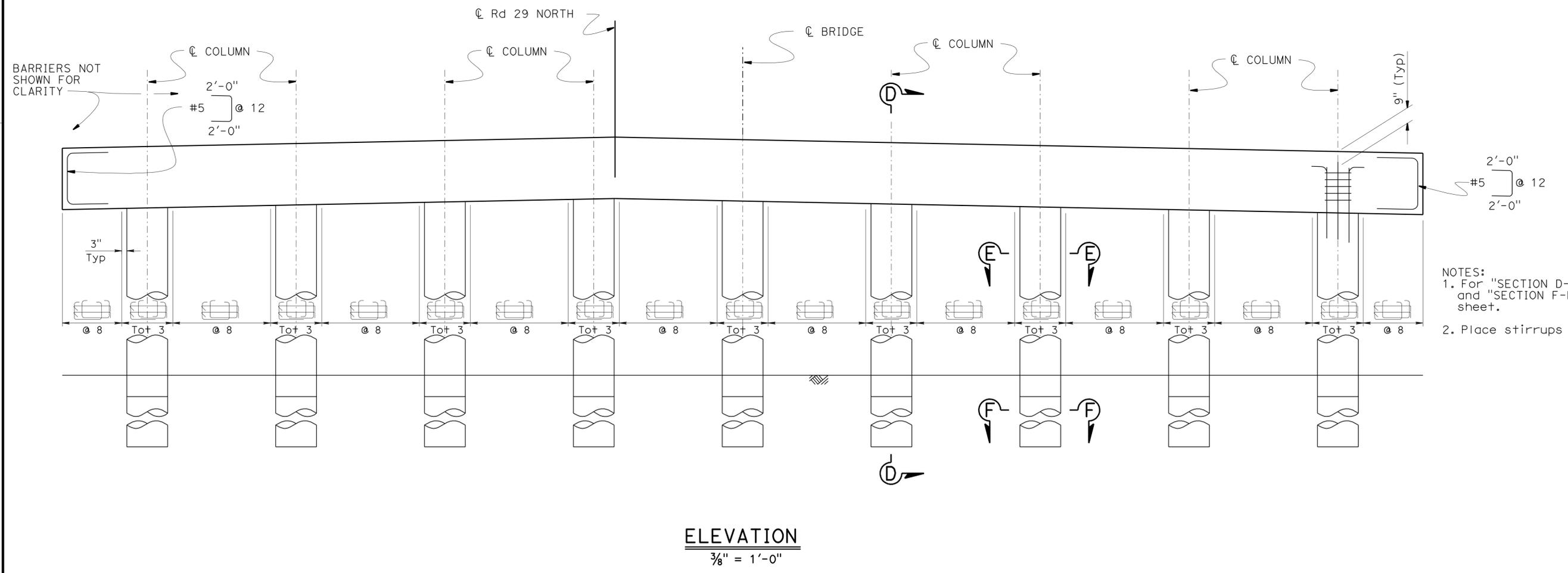
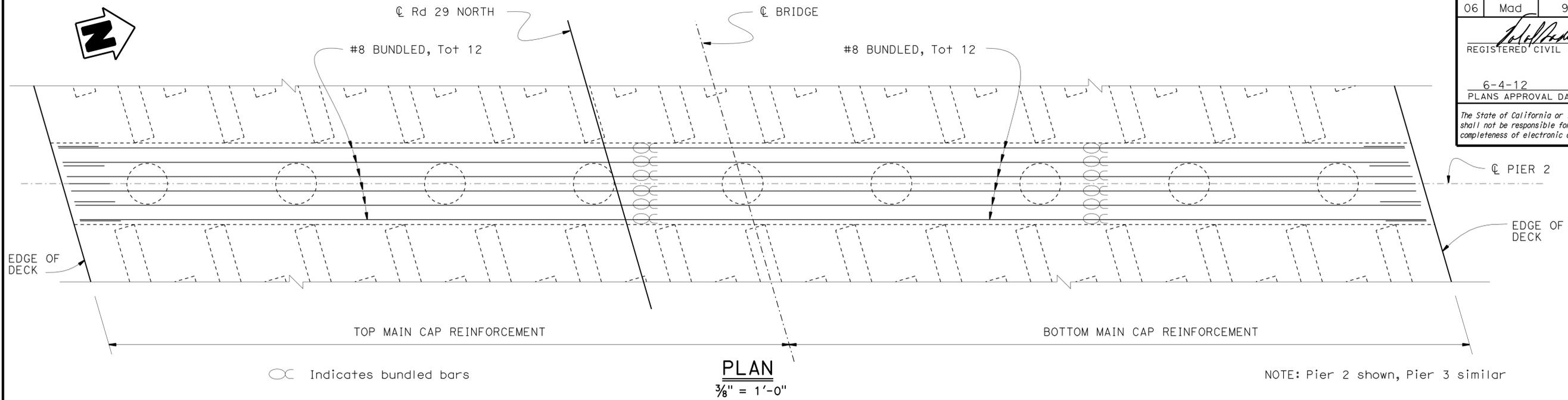
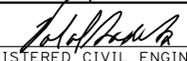


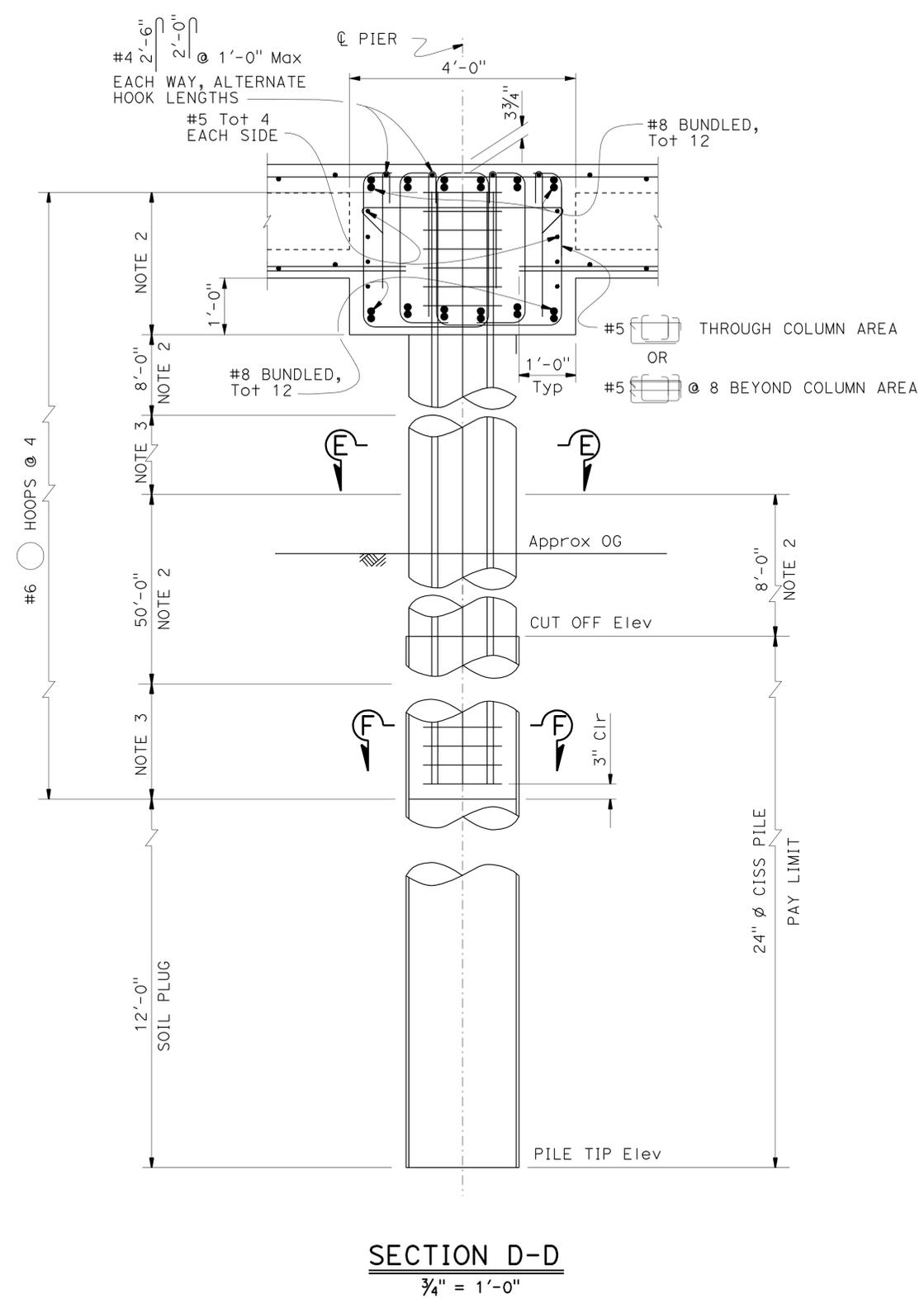
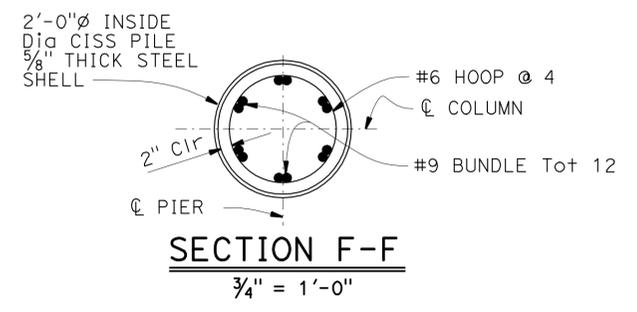
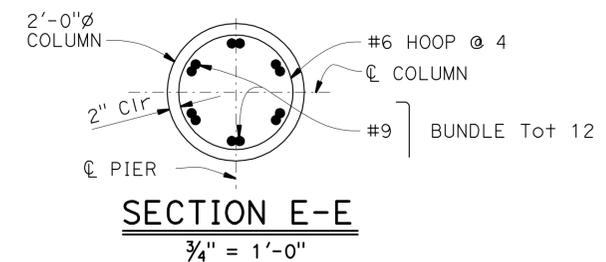
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	501	526
 REGISTERED CIVIL ENGINEER			1-3-12 DATE		
6-4-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



NOTES:
 1. For "SECTION D-D", "SECTION E-E" and "SECTION F-F" see "PIER DETAILS NO. 2" sheet.
 2. Place stirrups parallel to CL Bridge.

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">DESIGN</td> <td style="width: 33%;">BY R. Washington</td> <td style="width: 33%;">CHECKED T. Sadek</td> </tr> <tr> <td>DETAILS</td> <td>BY M. Lane</td> <td>CHECKED R. Washington</td> </tr> <tr> <td>QUANTITIES</td> <td>BY R. Washington</td> <td>CHECKED A. Salimi</td> </tr> </table>	DESIGN	BY R. Washington	CHECKED T. Sadek	DETAILS	BY M. Lane	CHECKED R. Washington	QUANTITIES	BY R. Washington	CHECKED A. Salimi	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO. 41C0208 POST MILE 7.1/7.9	RD 29 NORTH COTTONWOOD CREEK PIER DETAILS NO. 1
DESIGN	BY R. Washington	CHECKED T. Sadek											
DETAILS	BY M. Lane	CHECKED R. Washington											
QUANTITIES	BY R. Washington	CHECKED A. Salimi											
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	UNIT: X PROJECT NUMBER & PHASE: X CONTRACT NO.: X	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">REVISION DATES</td> <td style="width: 33%;">SHEET</td> <td style="width: 33%;">OF</td> </tr> <tr> <td>12-27-11</td> <td>8</td> <td>16</td> </tr> </table>	REVISION DATES	SHEET	OF	12-27-11	8	16		
REVISION DATES	SHEET	OF											
12-27-11	8	16											

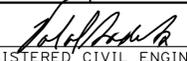
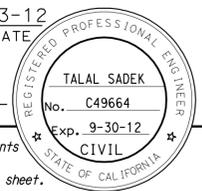
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	502	526
 REGISTERED CIVIL ENGINEER			1-3-12	DATE	
6-4-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

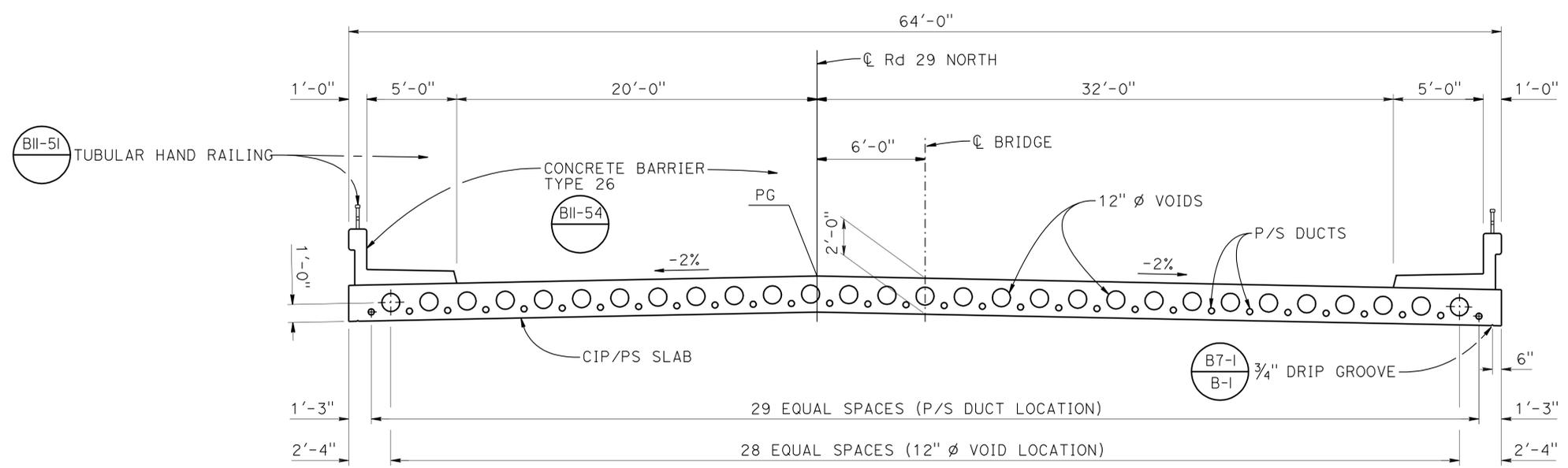


- NOTES:
1. All hoops are "Ultimate" butt spliced continuous.
 2. No splice allowed in main reinforcement.
 3. Only staggered "Ultimate" butt splices are allowed in main reinforcement in this zone.

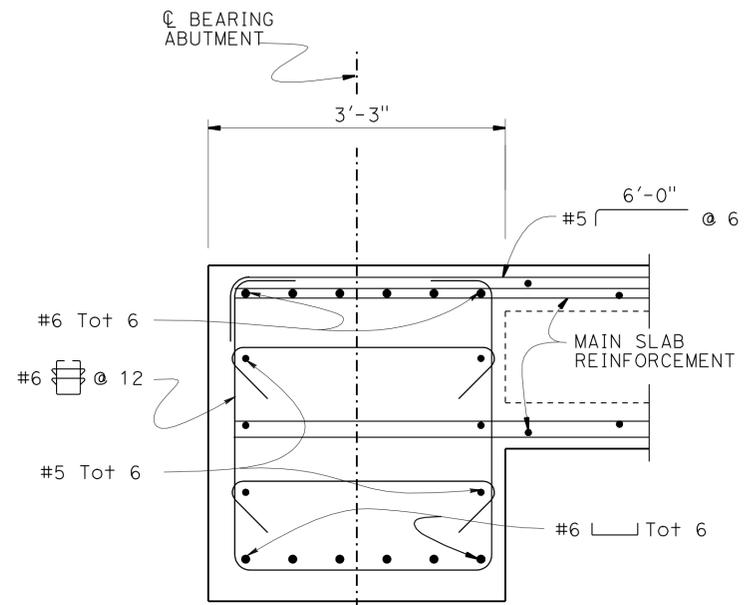
DESIGN BY R. Washington CHECKED T. Sadek		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO. 41C0208	RD 29 NORTH COTTONWOOD CREEK PIER DETAILS NO. 2
DETAILS BY M. Lane CHECKED R. Washington				POST MILE 7.1/7.9	
QUANTITIES BY R. Washington CHECKED A. Salimi				UNIT: X PROJECT NUMBER & PHASE: X CONTRACT NO.: X	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 8-8-11 11-25-11 12-18-11 01-04-12	SHEET 9 OF 16

USERNAME => 8124486 DATE PLOTTED => 08-JUN-2012 TIME PLOTTED => 1:34:43

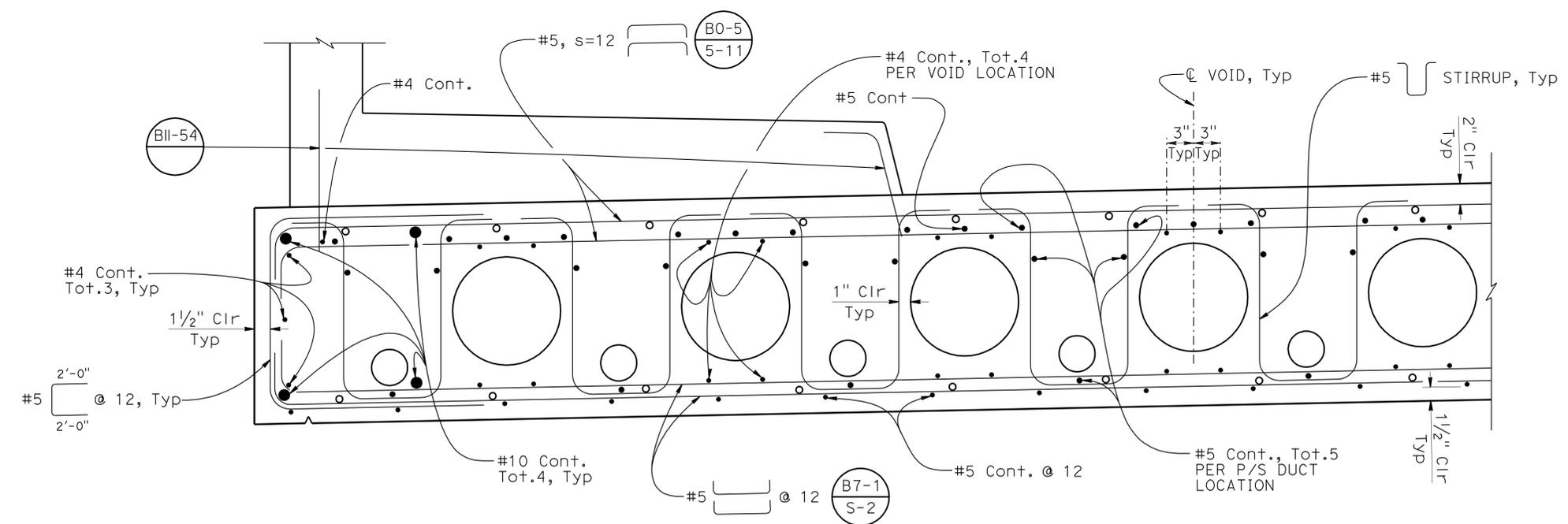
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	503	526
 REGISTERED CIVIL ENGINEER			1-3-12	DATE	
PLANS APPROVAL DATE 6-4-12					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



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



END DIAPHRAGM
1" = 1'-0"
NOTE: Place stirrups normal to centerline of Abutment Bearing



PART TYPICAL SECTION
1/2" = 1'-0"

NOTE:
o - Indicates additional reinforcement, see "VOID LAYOUT" sheet.

DESIGN	BY R. Washington	CHECKED T. Sadek
DETAILS	BY D. Pato/M. Lane	CHECKED R. Washington
QUANTITIES	BY R. Washington	CHECKED A. Salimi

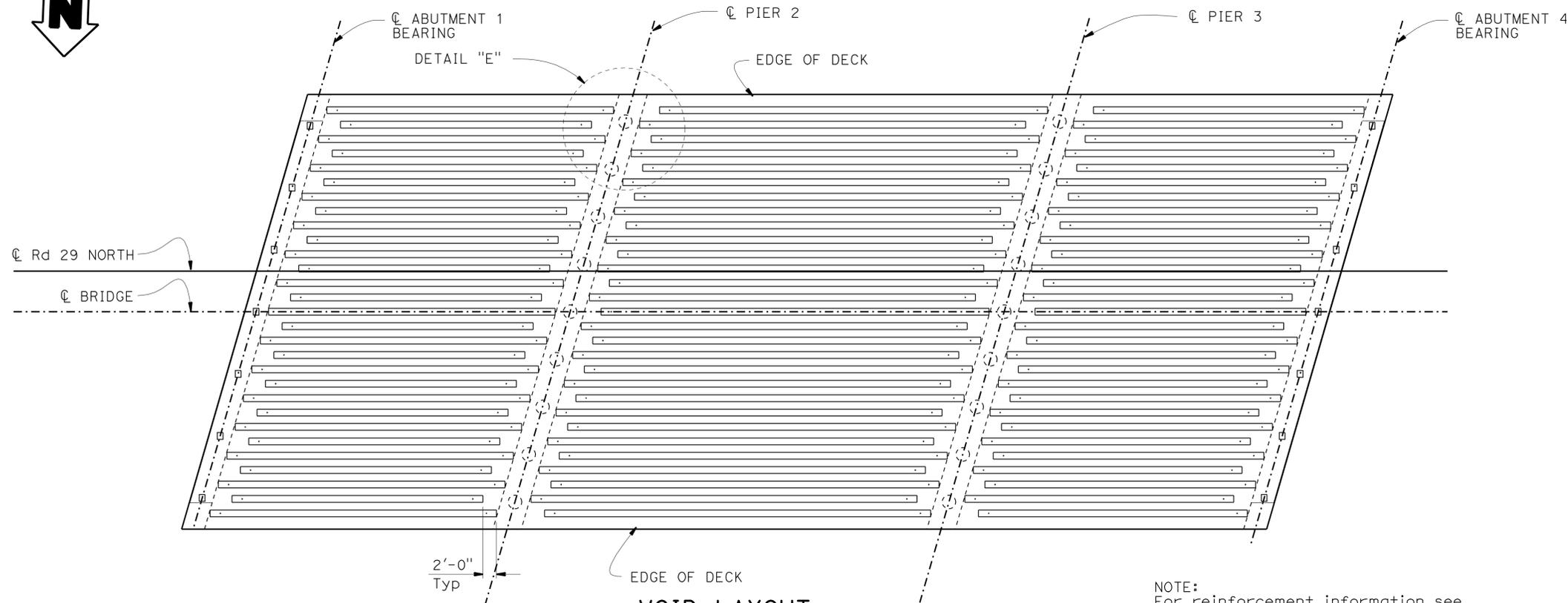
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO. 41C-0208
POST MILE 7.1/7.9
RD 29 NORTH COTTONWOOD CREEK
TYPICAL SECTION



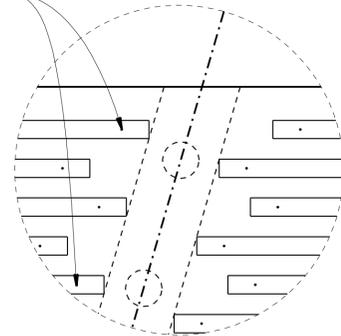
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	504	526
			REGISTERED CIVIL ENGINEER	DATE	
			1-3-12		
			PLANS APPROVAL DATE		
			6-4-12		
REGISTERED PROFESSIONAL ENGINEER No. C49664 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



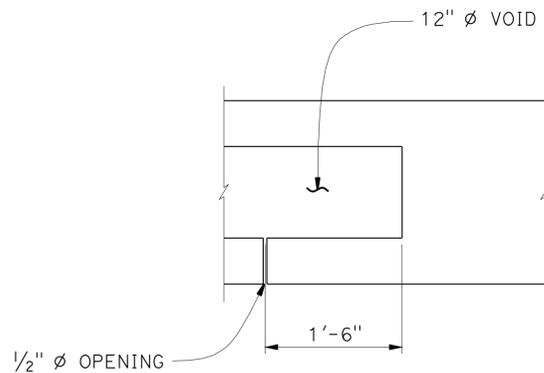
VOID LAYOUT
1" = 10'

NOTE:
For reinforcement information see "TYPICAL SECTION" sheet.

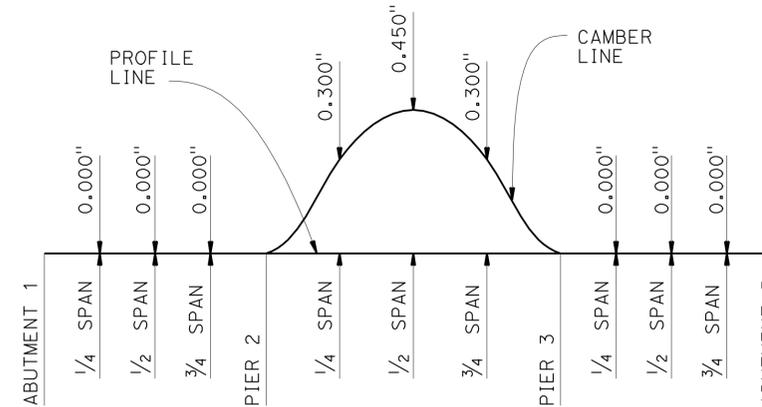
VENT HOLES AT EACH END OF VOID, FOR DETAILS SEE "VENT HOLE DETAIL"



DETAIL "E"
1" = 5'



VENT HOLE DETAIL
1" = 1'-0"



CAMBER DIAGRAM

DOES NOT INCLUDE ALLOWANCE FOR FALSEWORK SETTLEMENT.

PRESTRESSING NOTES

270 KSI Low Relaxation Strand:

- P_{jack} = 8225 kips
- Anchor Set = $\frac{3}{8}$ in
- Total Number of Voids = 29

Distribution of prestress force (P_{jack}) between girders shall not exceed the ratio of 3:2. Maximum final force variation between girders shall not exceed 725 kips.
 Concrete: f'_c = 4000 psi @ 28 days
 f'_{ci} = 3500 psi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at $\lambda = 0.888$ times jacking stress.

One end stressing shall be performed from Abutment 1.

DESIGN	BY R. Washington	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED R. Washington
QUANTITIES	BY R. Washington	CHECKED A. Salimi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

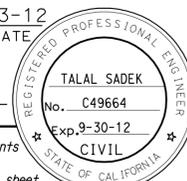
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POST MILE	7.1/7.9

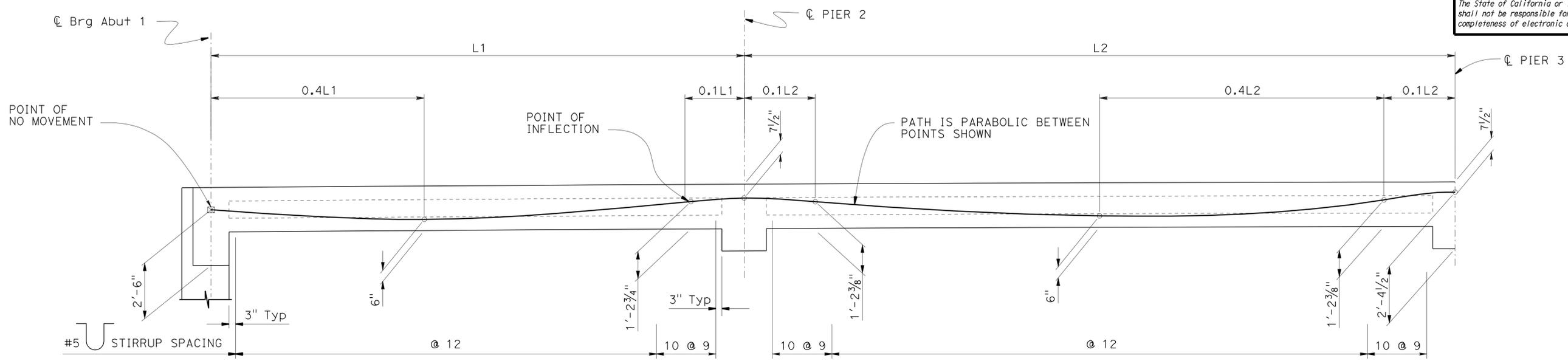
RD 29 NORTH COTTONWOOD CREEK

VOID LAYOUT

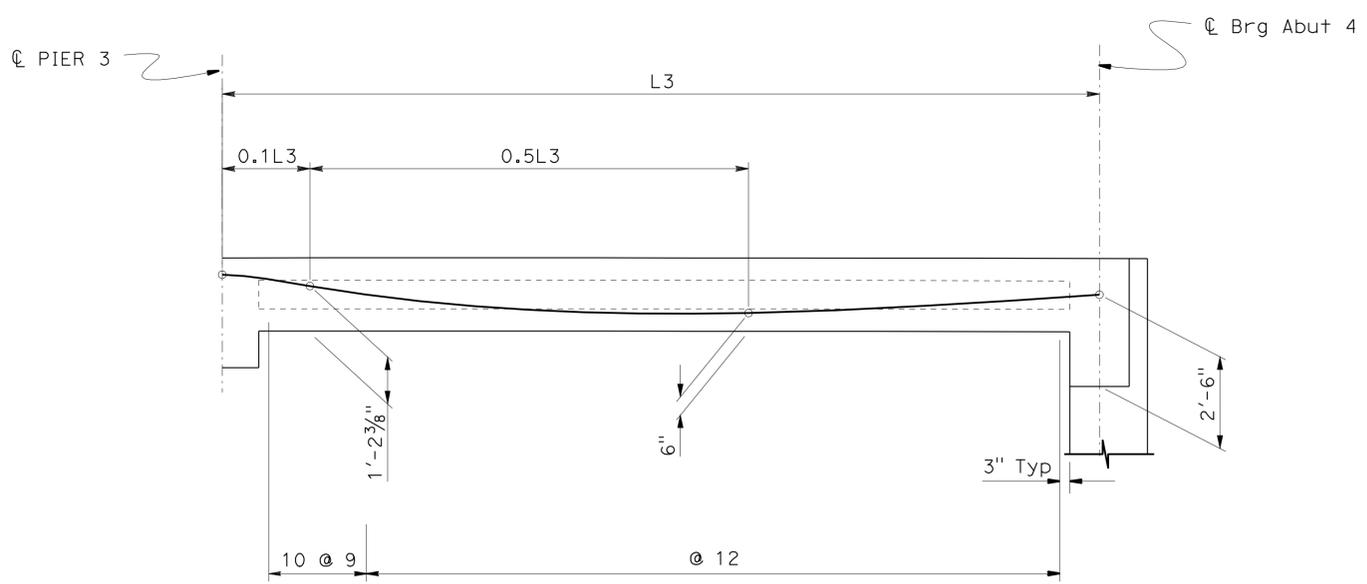


REVISION DATES	SHEET	OF
8-4-11 11-25-11 12-7-11	11	16

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	505	526
			 REGISTERED CIVIL ENGINEER DATE 1-3-12		
			PLANS APPROVAL DATE 6-4-12		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



LONGITUDINAL SECTION
NO SCALE



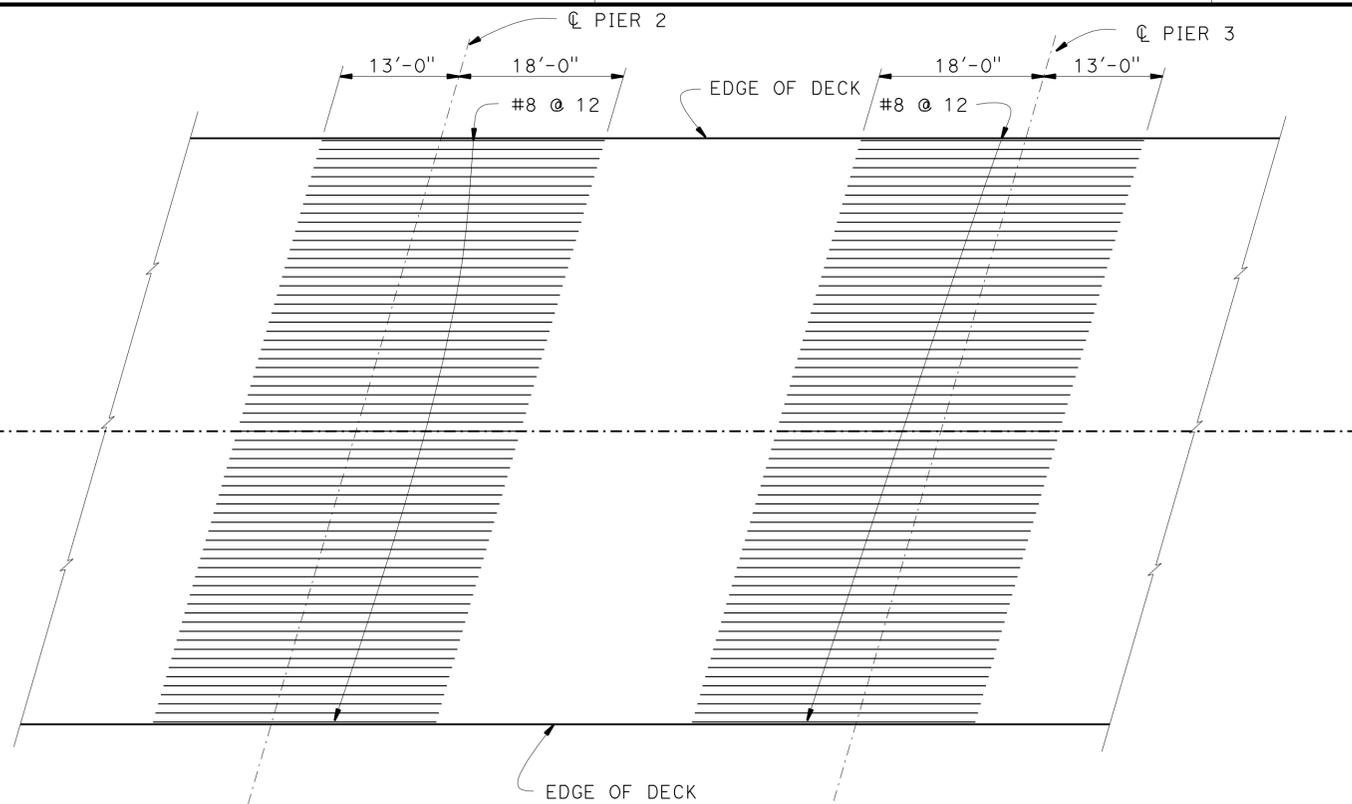
LONGITUDINAL SECTION
NO SCALE

DESIGN	BY R. Washington	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED R. Washington
QUANTITIES	BY R. Washington	CHECKED A. Salimi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

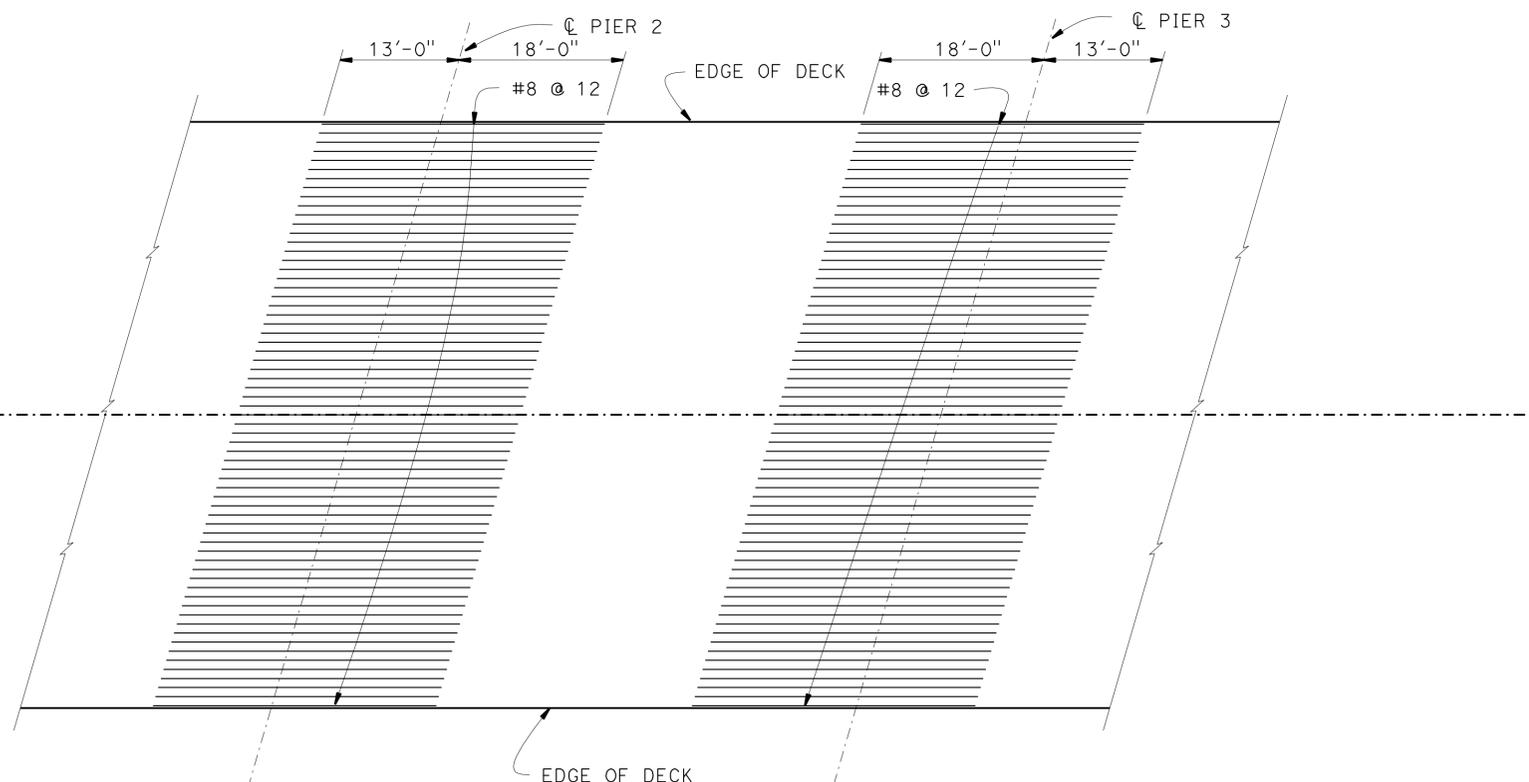
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO. 41C0208
POST MILE 7.1/7.9
RD 29 NORTH COTTONWOOD CREEK
LONGITUDINAL SECTION



TOP REINFORCEMENT

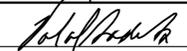
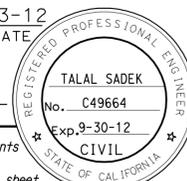
1" = 10'



BOTTOM REINFORCEMENT

1" = 10'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	506	526


 REGISTERED CIVIL ENGINEER DATE 1-3-12
 PLANS APPROVAL DATE 6-4-12


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DESIGN	BY R. Washington	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED R. Washington
QUANTITIES	BY R. Washington	CHECKED A. Salimi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.	41C0208
POST MILE	7.1/7.9

RD 29 NORTH COTTONWOOD CREEK
LONGITUDINAL REINFORCEMENT

BENCH MARK

SUHV612
 Fnd 1" I.P. w/Red C T Plug
 71.95' Rt @ Rte 99
 Sta 46+9.03
 Elev 273.05
 Datum: NGVD 29



PLAN

1" = 20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	507	526

REGISTERED CIVIL ENGINEER DATE 10-18-11

PLANS APPROVAL DATE 6-4-12

Qiang Huang
 No. C055671
 Exp. 12-31-12
 CIVIL

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).



PROFILE

Horiz: 1" = 10'
 Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		ROAD 29 NORTH COTTONWOOD CREEK	
FUNCTIONAL SUPERVISOR		DRAWN BY: C. Christian, I.G-Remmen		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		41C-0208		LOG OF TEST BORINGS 1 OF 3	
NAME: R. Bibbens		CHECKED BY: C. Zhen-Ru		W. Bertucci		DESIGN BRANCH 6		POST MILE			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		7.1/7.9		REVISION DATES	
						PROJECT NUMBER & PHASE: 06000004631		CONTRACT NO.: 06-471001		SHEET OF	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		09-28-11 10-17-11		14 16	

USERNAME => s124496 DATE PLOTTED => 08-JUN-2012 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	508	526

10-18-11
REGISTERED CIVIL ENGINEER DATE

6-4-12
PLANS APPROVAL DATE

Qiang Huang
No. C055671
Exp. 12-31-12
CIVIL

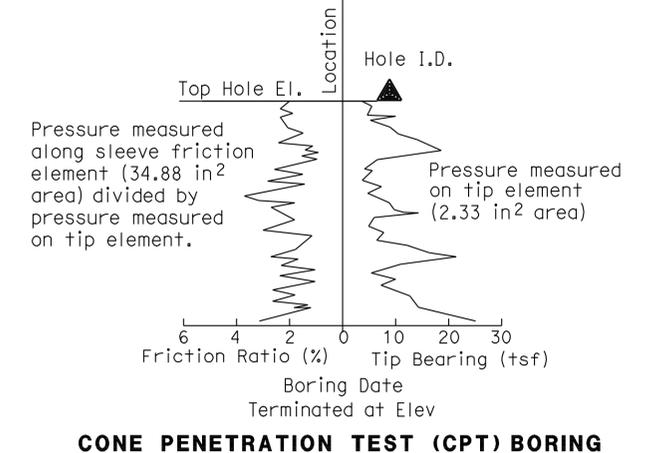
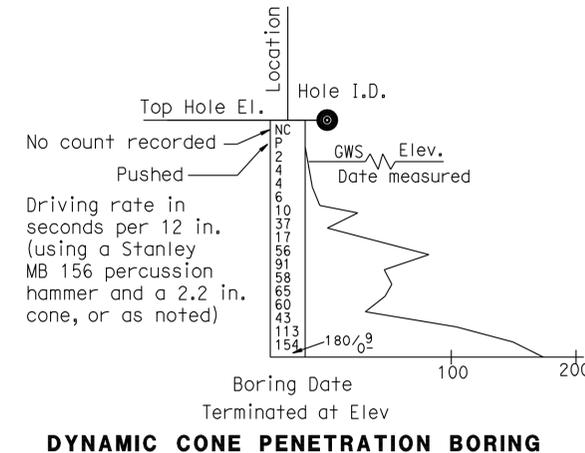
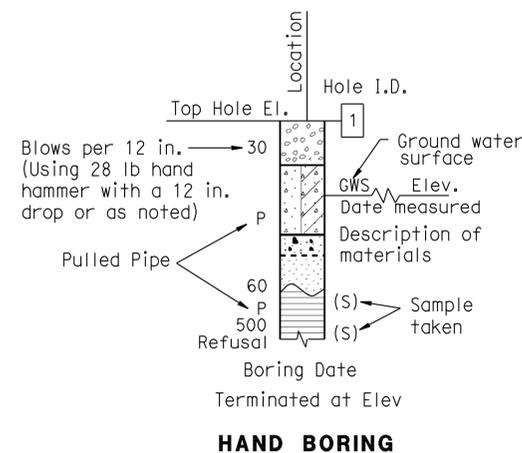
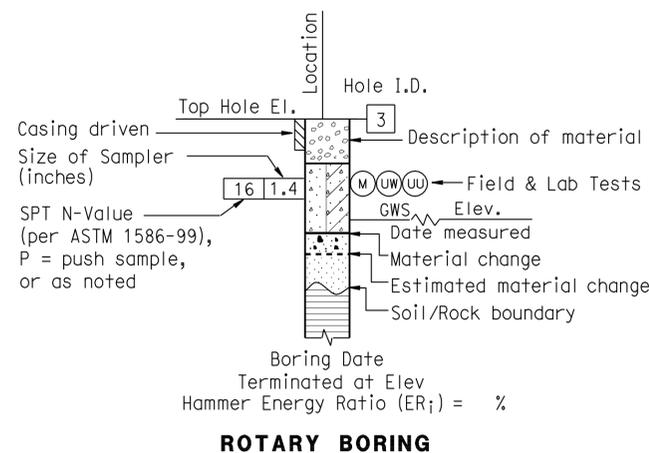
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CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	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)
	O	Other (note on LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	509	526
			10-18-11		
REGISTERED CIVIL ENGINEER			DATE		
			6-4-12		
			PLANS APPROVAL DATE		
					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

GROUP SYMBOLS AND NAMES					
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	GW		CL		Lean CLAY
	GW-GM				Lean CLAY with SAND
	GP		CL		Lean CLAY with GRAVEL
	GP-GM				SANDY lean CLAY
	GW-GM		CL-ML		SILTY CLAY
	GW-GC				SILTY CLAY with SAND
	GW-GC		CL-ML		SILTY CLAY with GRAVEL
	GP-GM				SANDY SILTY CLAY
	GP-GM		ML		SILT
	GP-GC				SILT with SAND
	GP-GC		ML		SILT with GRAVEL
	GM				SANDY SILT
	GM		OL		ORGANIC lean CLAY
	GC				ORGANIC lean CLAY with SAND
	GC		OL		ORGANIC lean CLAY with GRAVEL
	GC-GM				SANDY ORGANIC lean CLAY
	GC-GM		OL		ORGANIC SILT
	SW				ORGANIC SILT with SAND
	SW		CH		Fat CLAY
	SP				Fat CLAY with SAND
	SP		CH		Fat CLAY with GRAVEL
	SW-SM				SANDY fat CLAY
	SW-SM		MH		Elastic SILT
	SW-SC				Elastic SILT with SAND
	SW-SC		MH		Elastic SILT with GRAVEL
	SP-SM				SANDY elastic SILT
	SP-SM		OH		ORGANIC fat CLAY
	SP-SC				ORGANIC fat CLAY with SAND
	SP-SC		OH		ORGANIC fat CLAY with GRAVEL
	SM				SANDY ORGANIC fat CLAY
	SM		OH		GRAVELLY ORGANIC fat CLAY
	SC				GRAVELLY ORGANIC fat CLAY with SAND
	SC		OH		ORGANIC elastic SILT
	SC-SM				ORGANIC elastic SILT with SAND
	SC-SM		OH		ORGANIC elastic SILT with GRAVEL
	PT				SANDY ORGANIC elastic SILT
	PT		OL/OH		ORGANIC SOIL
					ORGANIC SOIL with SAND
			OL/OH		ORGANIC SOIL with GRAVEL
					SANDY ORGANIC SOIL
			OL/OH		GRAVELLY ORGANIC SOIL
					GRAVELLY ORGANIC SOIL with SAND

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
(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)
(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)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N ₆₀ (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE	
Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

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

PARTICLE SIZE		
Description	Size (in.)	
Boulder	Greater than 12	
Cobble	3 - 12	
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay	Less than 1/300	

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	ROAD 29 NORTH COTTONWOOD CREEK
				41C-0208	
	PREPARED BY: I.G-Remmen			POST MILE	LOG OF TEST BORINGS 3 OF 3
				7.1/7.9	
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3643	PROJECT NUMBER & PHASE: 06000004631	CONTRACT NO.: 06-471001	DISREGARD PRINTS BEARING EARLIER REVISION DATES
					REVISION DATES
					SHEET 16 OF 16

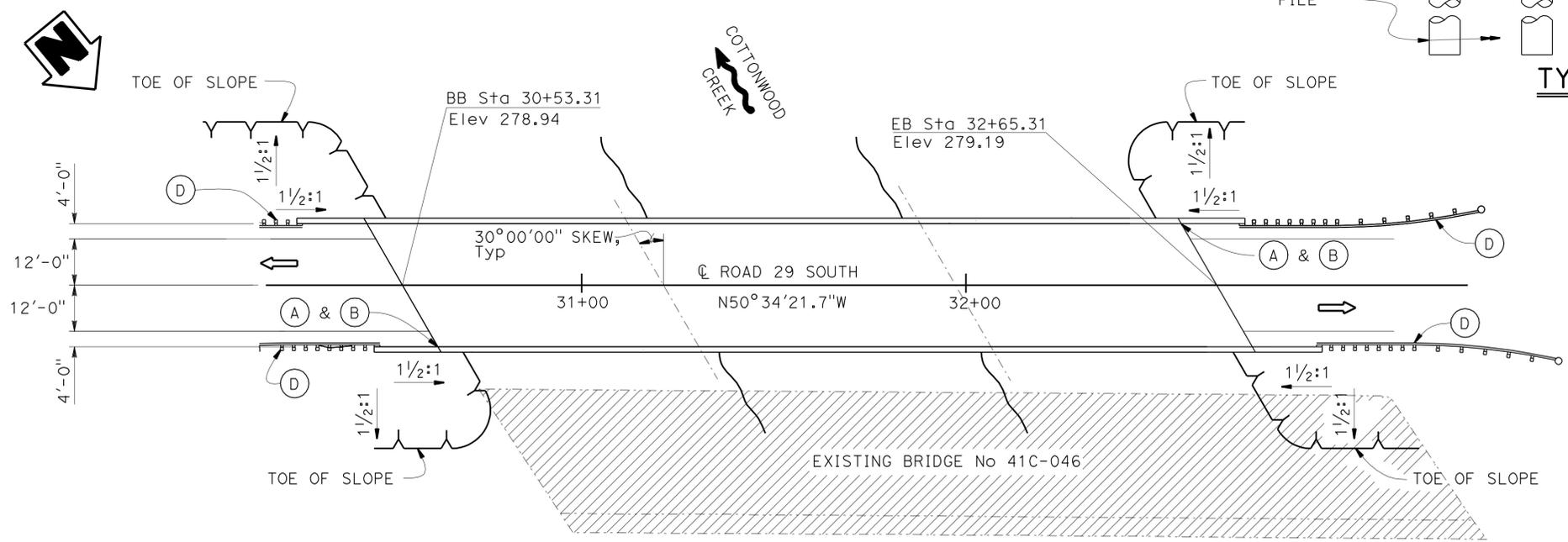
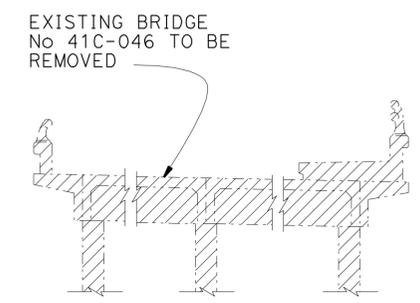
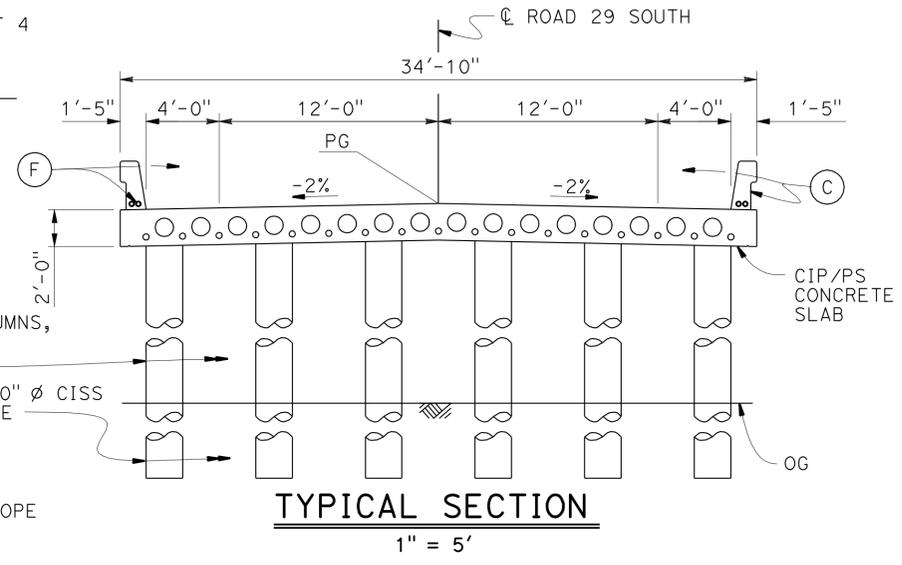
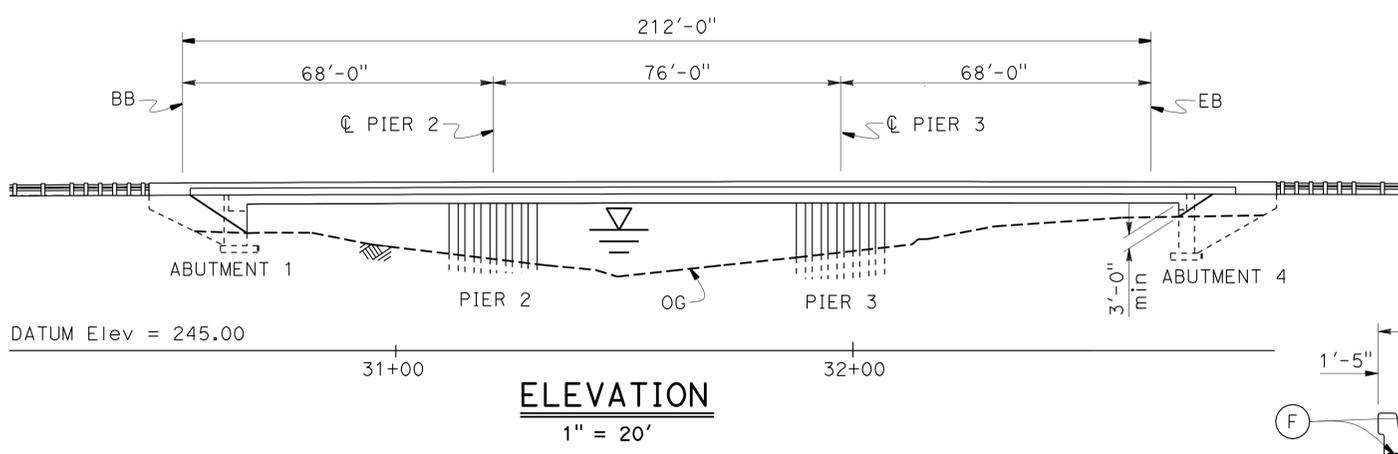
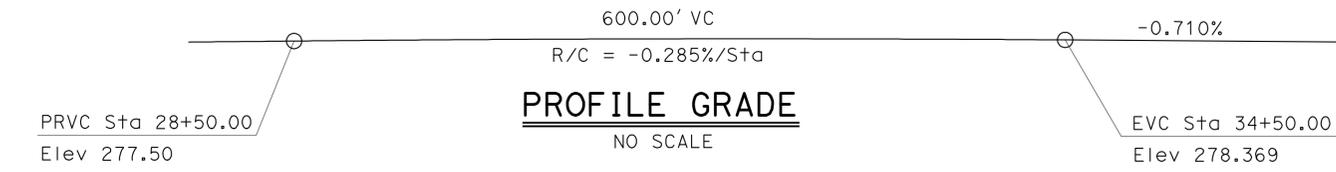
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	510	526

REGISTERED CIVIL ENGINEER	DATE
<i>Talal Sadek</i>	1-3-12
PLANS APPROVAL DATE	
6-4-12	

REGISTERED PROFESSIONAL ENGINEER
TALAL SADEK
No. C49664
Exp. 9-30-12
CIVIL

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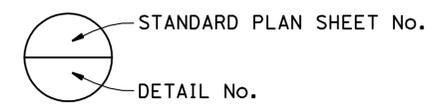
- NOTES:
- (A) Paint "Road 29 South Cottonwood Creek"
 - (B) Paint "Bridge No. 44-C0209"
 - (C) Concrete Barrier Type 732
 - (D) MBGR, see ""ROAD PLANS""
 - (E) Existing Bridge No. 41C-046 to be removed
 - (F) 2-3"Ø Conduits in both barriers
 - (G) Gas line shown on "FOUNDATION PLAN" to be relocated, see "ROAD PLANS"

Indicates Bridge Removal

QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	224	CY
STRUCTURE EXCAVATION (TYPE D)	82	CY
STRUCTURE BACKFILL (BRIDGE)	167	CY
FURNISH PILING (CLASS 140)	1,055	LF
(ALTERNATIVE W)		
DRIVE PILE (CLASS 140)	18	EA
(ALTERNATIVE W)		
FURNISH 24" CAST-IN-STEEL SHELL	916	LF
CONCRETE PILING		
DRIVE 24" CAST-IN-STEEL SHELL CONCRETE PILE	12	EA
PRESTRESSING CAST-IN-PLACE CONCRETE	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	44	CY
STRUCTURAL CONCRETE, BRIDGE	655	CY
JOINT SEAL (MR 1/2")	80	LF
BAR REINFORCING STEEL (BRIDGE)	240,283	LB
CONCRETE BARRIER (TYPE 26 MODIFIED)	647	LF
CONCRETE BARRIER (TYPE 732)	495	LF

PLAN
1" = 20'



FRITZ HOFFMAN DESIGN ENGINEER	DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	ROAD 29 SOUTH COTTONWOOD CREEK	
	DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez	LAYOUT	BY X			CHECKED X		41C0209
	QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Morimoto	SPECIFICATIONS	BY D. Klein			PLANS AND SPECS COMPARED D. Klein		POST MILE

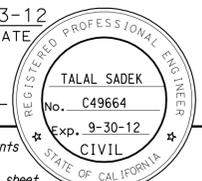
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3591 PROJECT NUMBER & PHASE: 0600000463 & 1 CONTRACT NO.: 471001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
9-08-11 9-15-11 12-28-11 01-04-12	1	17

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 41c0209-a-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	511	526
 REGISTERED CIVIL ENGINEER DATE 1-3-12					
PLANS APPROVAL DATE 6-4-12 <small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

PILE DATA TABLE

LOCATION	PILE TYPE	NOMINAL RESISTANCE (kips)		CUT OFF ELEVATION	DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)	NOMINAL DRIVING RESISTANCE (kips)
		COMPRESSION	TENSION				
Abut 1	14" CLASS 140 Ait "W"	280	N/A	266.86	207(a)	207	330
BENT 2	24" CISS	561	N/A	251.3	174(a)	174	630
BENT 3	24" CISS	561	N/A	251.3	181(a)	181	720
Abut 4	14" CLASS 140 Ait "W"	280	N/A	265.22	211(a)	211	330

NOTE:
1) Design tip elevations for Abutments and Bents are controlled by: (a) Compression.

 INDICATES LIMITS OF STRUCTURE EXCAVATION (TYPE D)

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	DECK CONTOURS
4	FOUNDATION PLAN
5	ABUTMENT 1 LAYOUT
6	ABUTMENT 4 LAYOUT
7	ABUTMENT DETAILS NO. 1
8	PIER DETAILS
9	TYPICAL SECTION
10	VOID LAYOUT
11	LONGITUDINAL SECTION
12	LONGITUDINAL REINFORCEMENT
13	LOG OF TEST BORINGS 1 OF 5
14	LOG OF TEST BORINGS 2 OF 5
15	LOG OF TEST BORINGS 3 OF 5
16	LOG OF TEST BORINGS 4 OF 5
17	LOG OF TEST BORINGS 5 OF 5

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, fourth edition with the California Amendments, preface date; December 2008 except that Concrete Barriers, and Wingwalls are designed using Bridge Design Specifications ('96 AASHTO w/Revisions by Caltrans)

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 1.4 dated JUNE 2006

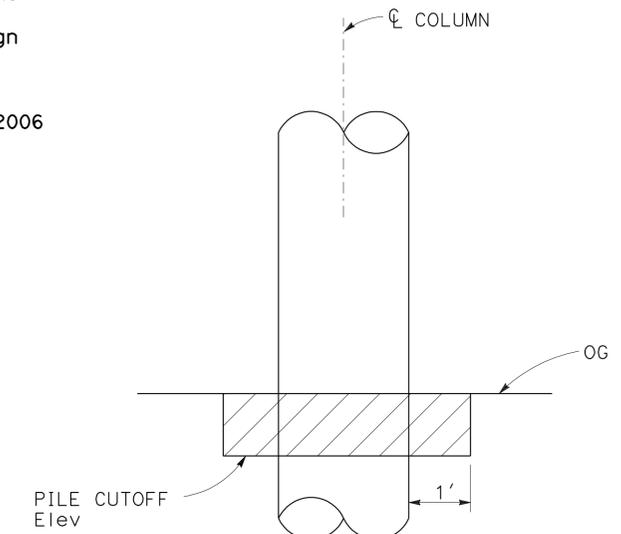
DEAD LOAD:
Includes 35 psf for future wearing surface.

LIVE LOADING:
HL93 and permit design load.

SEISMIC LOADING:
Site specific Acceleration Response Spectra
Soil Profile type D
Mmax = 7.9
Peak Rock Acceleration = 0.24g

CONCRETE:
fy = 60 ksi
f'c = 4.0 ksi
n = 8

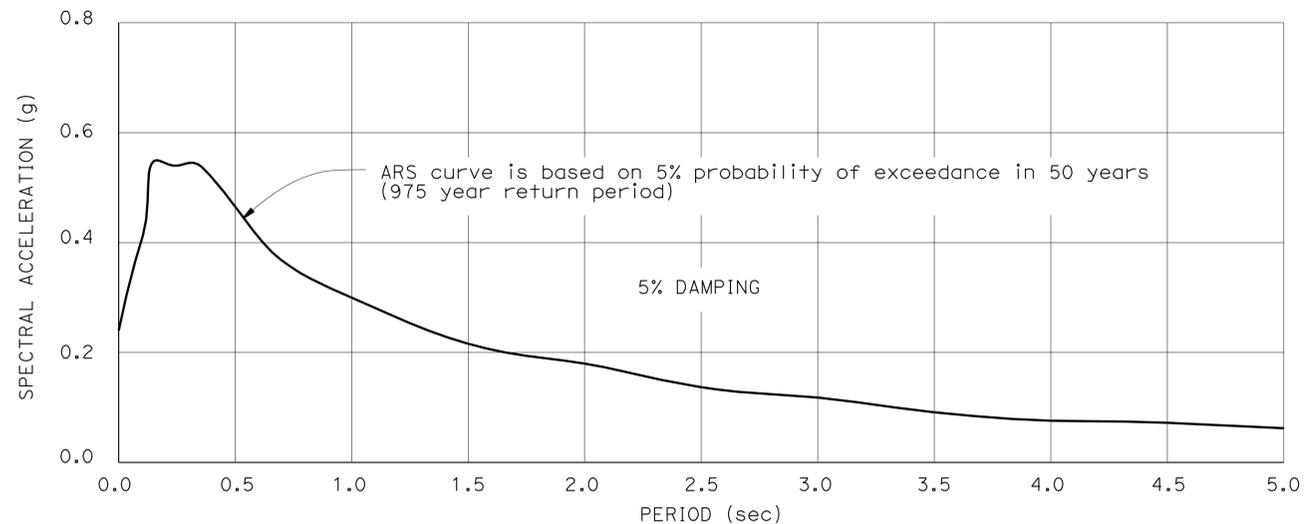
PRESTRESSED CONCRETE:
See prestressing notes on "Void Layout" sheet



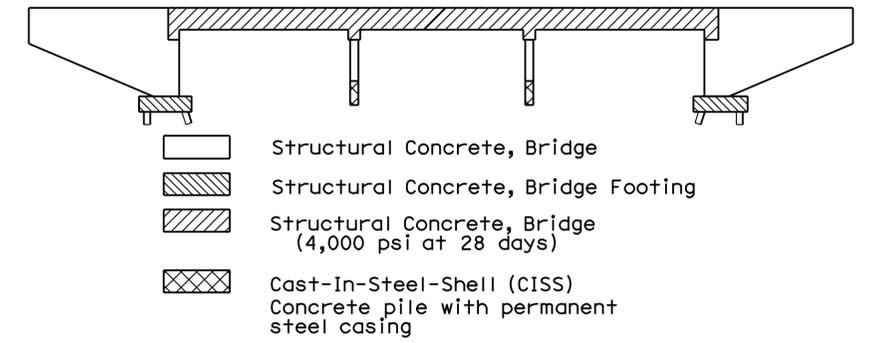
LIMITS OF TYPE D EXCAVATION

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)
A10C	SYMBOLS (SHEET 2 OF 2)
A62A	EXCAVATION AND BACKFILL-MISCELLANEOUS DETAILS
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL-BRIDGE SURCHARGE AND WALL
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL-BRIDGE
BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BO-13	BRIDGE DETAILS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING=2")
B7-1	BOX GIRDER DETAILS
B8-5	CAST-IN-PLACE-PRESTRESSED GIRDER DETAILS
B11-55	CONCRETE BARRIER TYPE 732



ARS CURVE
NO SCALE



CONCRETE STRENGTH AND TYPE LIMITS
No Scale

DESIGN	BY G. R.-Gutierrez	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED G. R.-Gutierrez
QUANTITIES	BY G. R.-Gutierrez	CHECKED Morimoto

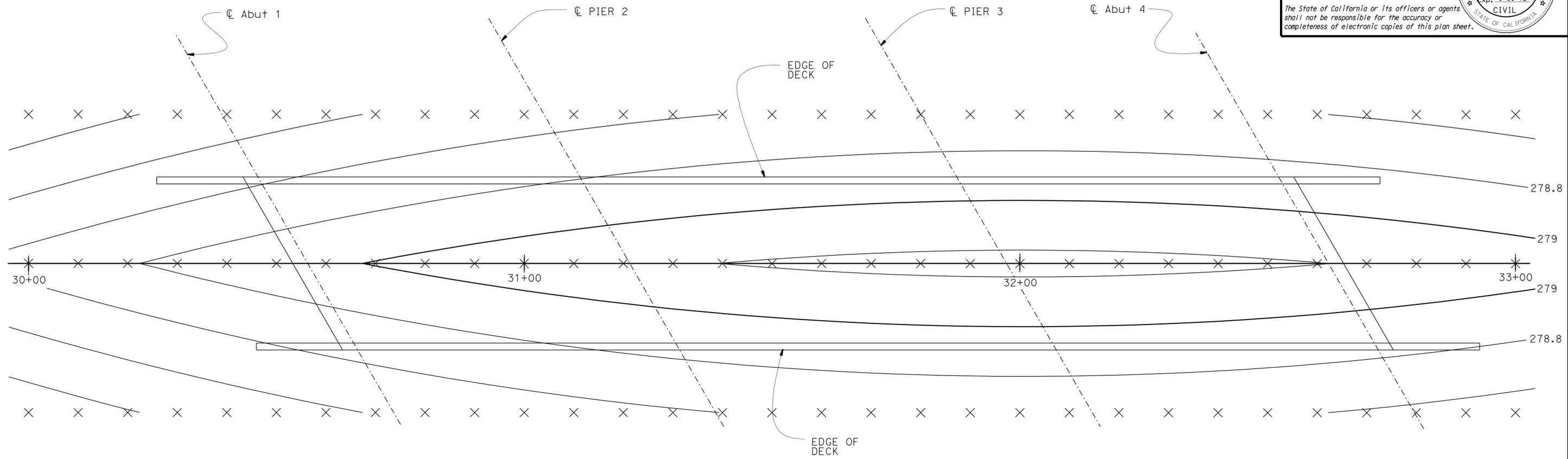
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.	41C0209
POST MILE	7.1/7.9

ROAD 29 SOUTH COTTONWOOD CREEK
INDEX TO PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	512	526
 REGISTERED CIVIL ENGINEER			1-3-12 DATE		
6-4-12 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



DECK CONTOURS
1" = 10'

- NOTES:
 1. X = 10' Intervals Along Station Lines.
 2. Contour Interval = 0.20'
 3. Contours Do Not Include Camber.

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	41C0209	ROAD 29 SOUTH COTTONWOOD CREEK DECK CONTOURS
	DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez			POST MILE	7.1/7.9	
	QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Morimoto					
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3591 PROJECT NUMBER & PHASE: 0600000463 & 1 CONTRACT NO.: 471001	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5-22-11 9-08-11 12-28-11	SHEET 3 OF 17	

USERNAME => s124486 DATE PLOTTED => 08-JUN-2012 TIME PLOTTED => 1:34:49

HYDROLOGIC/HYDRAULIC SUMMARY			
ROAD 29 SOUTH Br. No. 41C0209 DRAINAGE AREA = 88.5mi ²			
	DESIGN FLOOD	BASE FLOOD	OVERTOPPING FLOOD/ FLOOD OF RECORD
FREQUENCY	50-yr	100-yr	N/A
DISCHARGE	3,850 cfs	4,810 cfs	N/A
AVERAGE VELOCITY	4.9 fps	5.7 fps	N/A
WATER SURFACE ELEVATION (WSEL) AT BRIDGE	273.6 ft	274.2 ft	N/A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	513	526

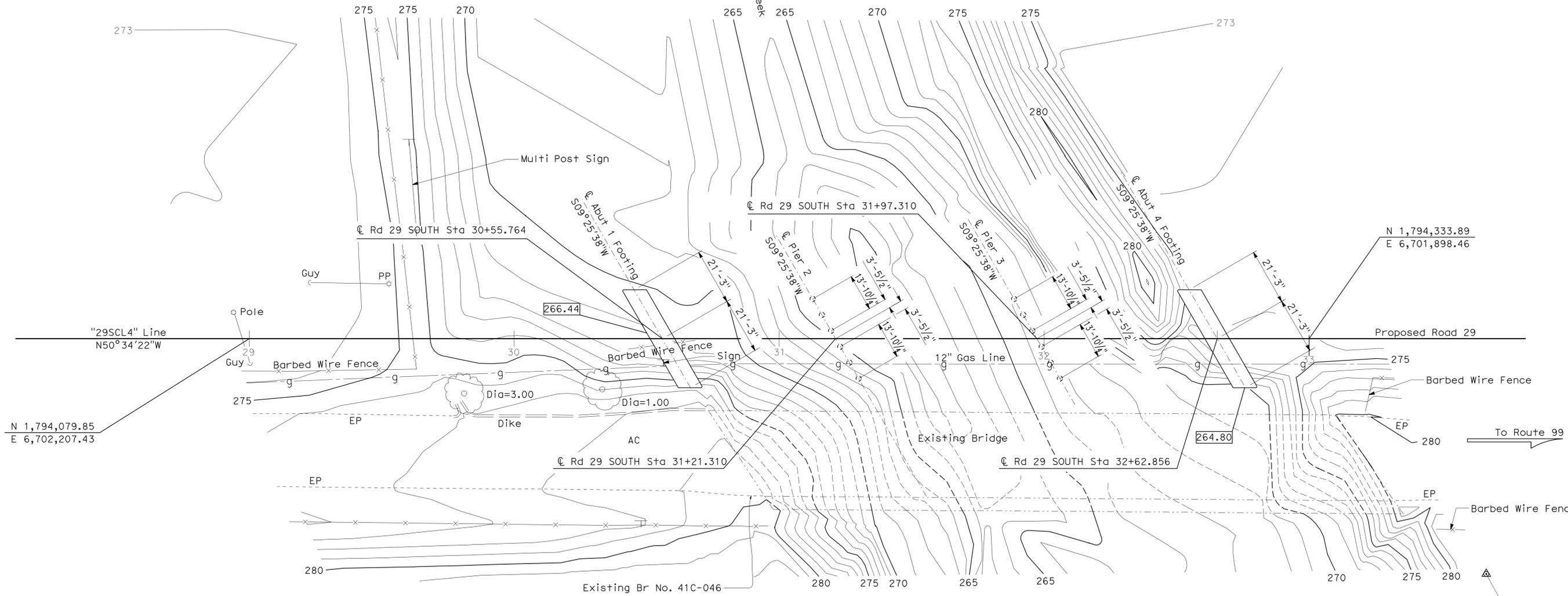
REGISTERED CIVIL ENGINEER DATE 1-3-12
TALAL SADEK
No. C49664
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

6-4-12
PLANS APPROVAL DATE

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ELEVATIONS ARE BASED ON VERTICAL DATUM NAVD88

Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.



SURVEY CONTROL
SUHV807
Fnd 1" IP w/ Red Caltrans Plug
88.58 Ft Rt "29SCL4" Line
Sta 33+66.86
N 1,794,444.77
E 6,701,903.08
Elev= 281.32

SUHV808 (Not Shown On Plan)
Fnd 1" IP w/ Red Caltrans Plug
114.08 Ft Rt "29SCL4" Line
Sta 24+08.72
N 1,793,767.57
E 6,702,648.42
Elev= 271.73

- NOTES:**
- ⊙ Indicates Vertical Pile
 - ⊙ Indicates 1:3 Battered Pile
 - Indicates Bottom of Footing Elevation
- : Potential Scour Elevation at Piers 2 & 3 = 251.3'

Note:
All Utility Lines Are Per District Utility Plan

PRELIMINARY INVESTIGATION SECTION				DESIGN BY G. R.-Gutierrez	CHECKED T. Sadek	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO. 41C0209	ROAD 29 SOUTH COTTONWOOD CREEK FOUNDATION PLAN
SCALE 1"=20'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY M. Lane	CHECKED G. R.-Gutierrez	POST MILE 7.46				
ALIGNMENT TIES Dist. Traverse Sheet	SURVEYED BY District 03/2008	CHECKED BY D.Ivy 08/2010	QUANTITIES BY G. R.-Gutierrez	CHECKED S. Morimoto					

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

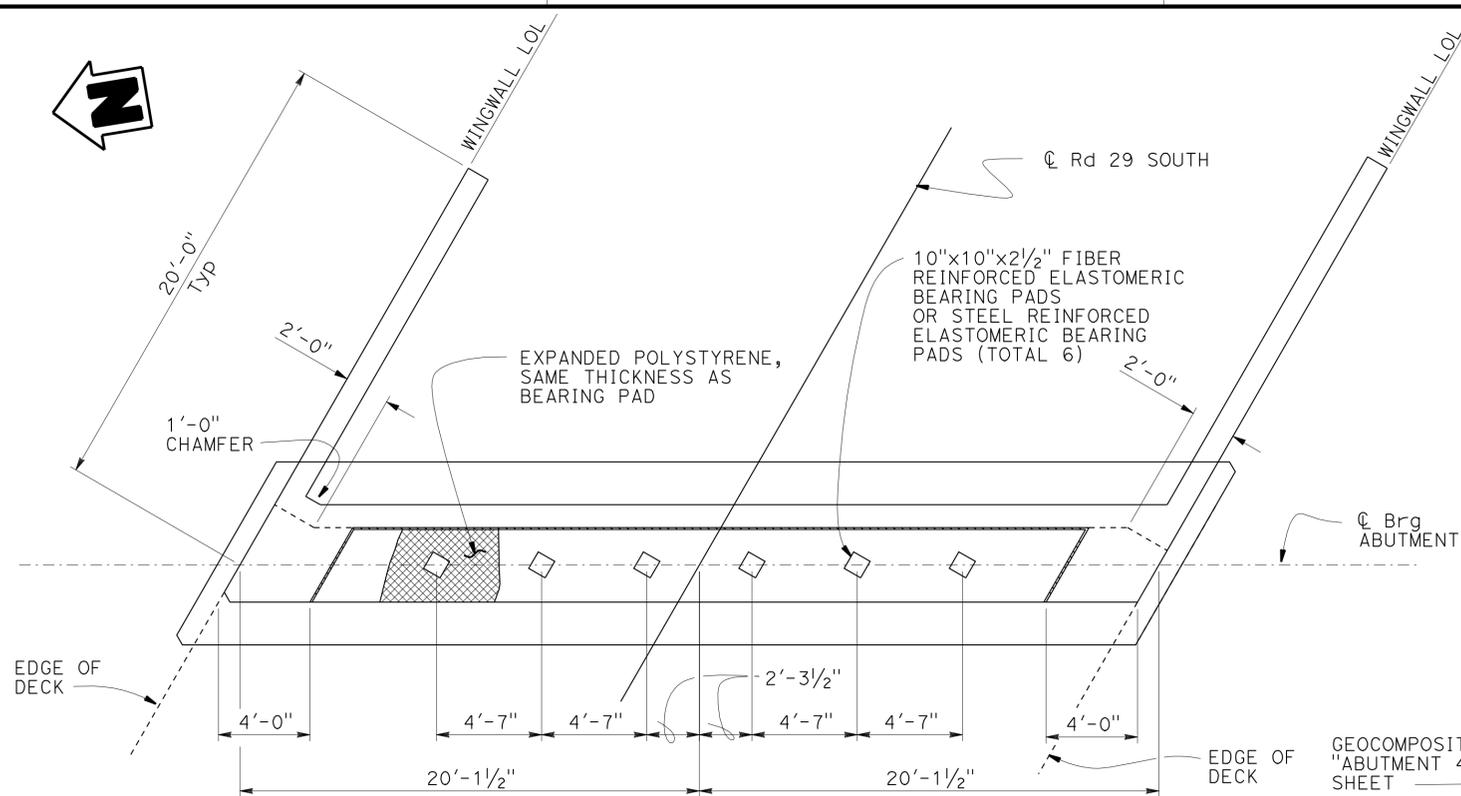
CU 06 EA 471001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

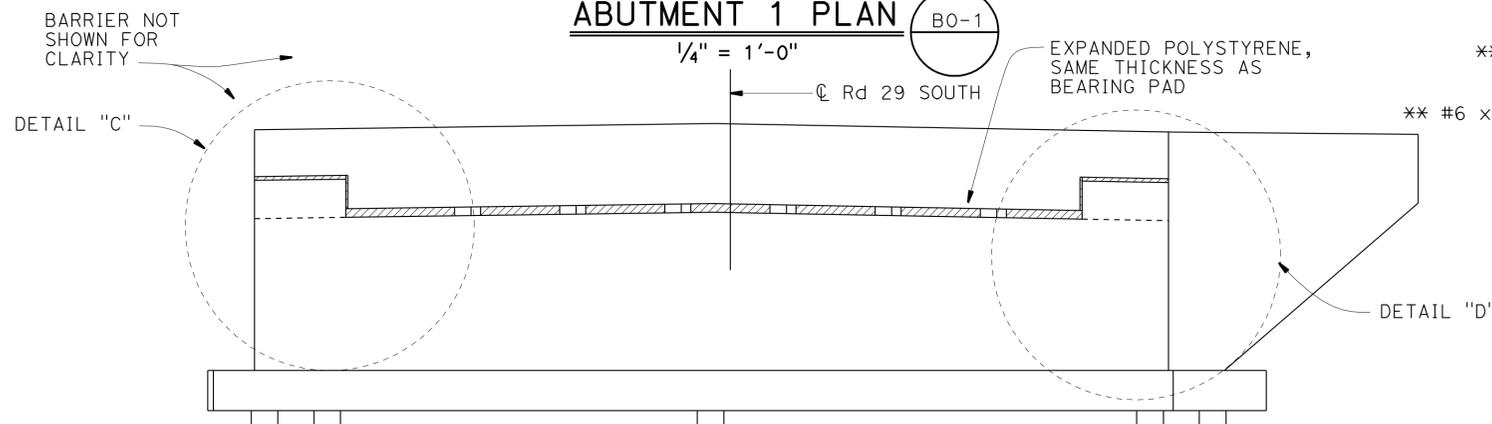
REVISION DATES	SHEET	OF
08/18/10 12/07/10 9/28/11 9/16/11 12-19-11	4	17

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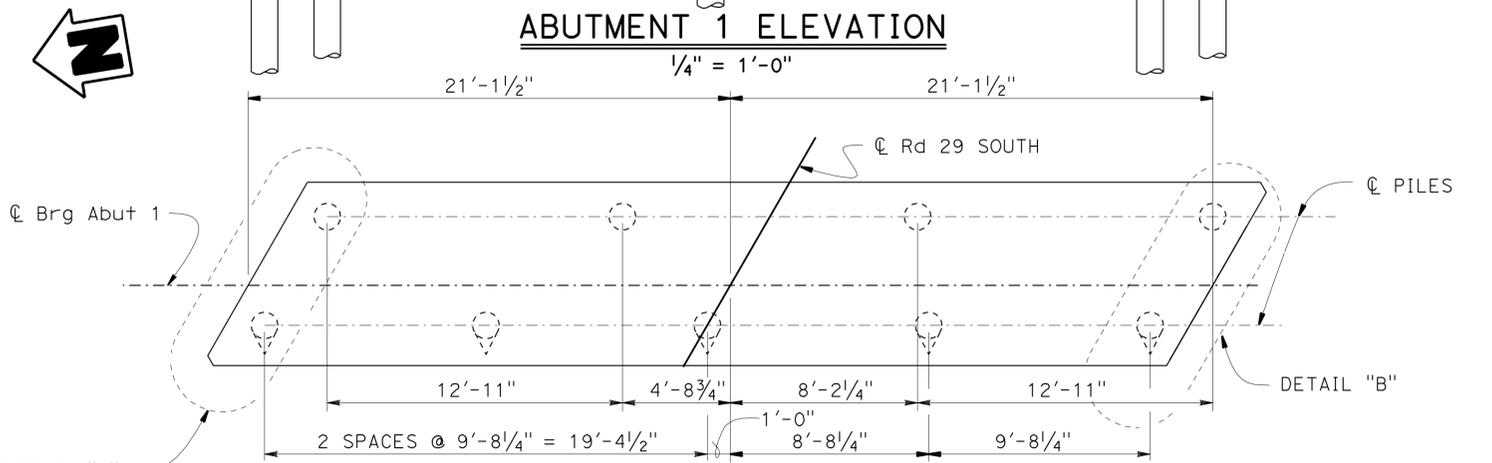
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	514	526
			1-3-12	DATE	
			6-4-12	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER TALA SADEK No. C49664 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA					
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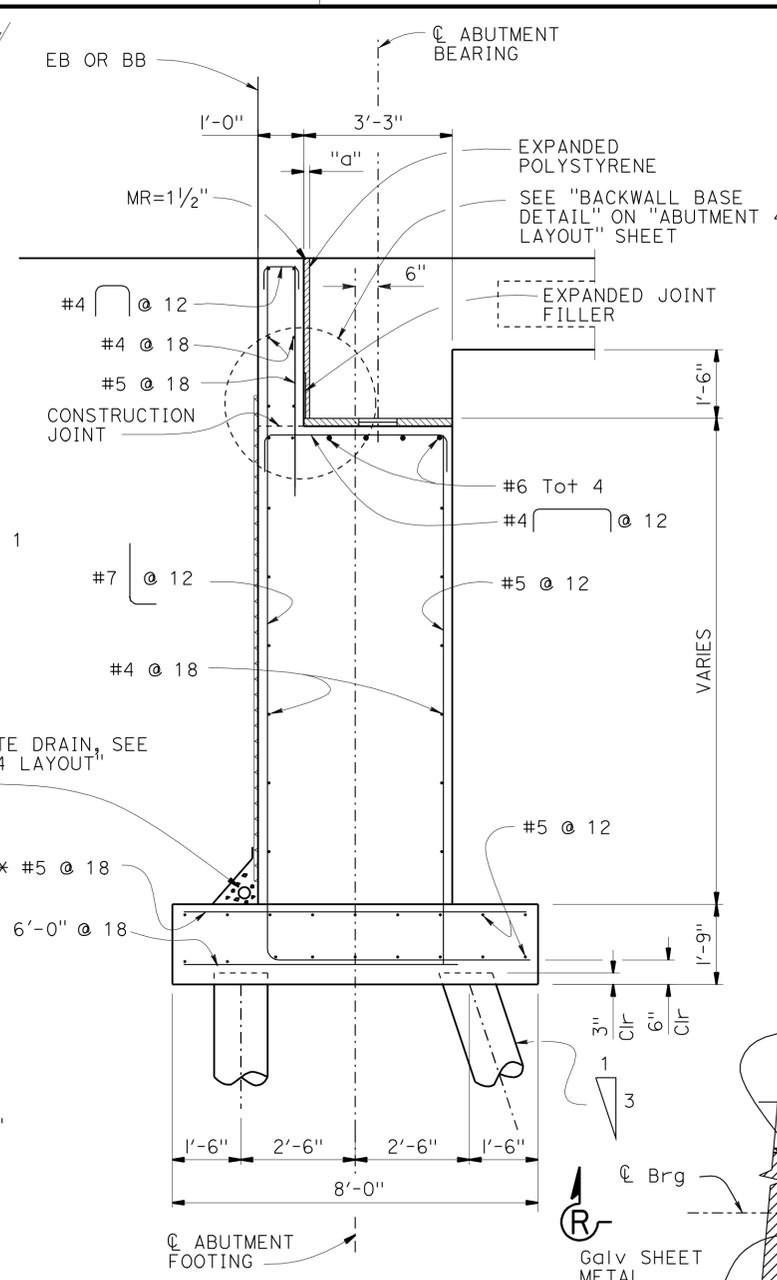
ABUTMENT 1 PLAN
1/4" = 1'-0"



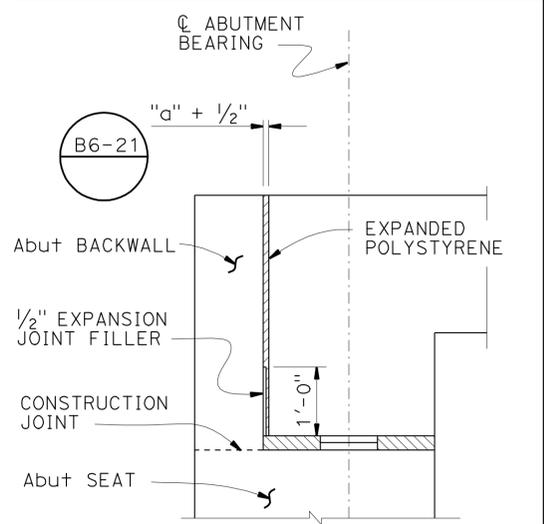
ABUTMENT 1 ELEVATION
1/4" = 1'-0"



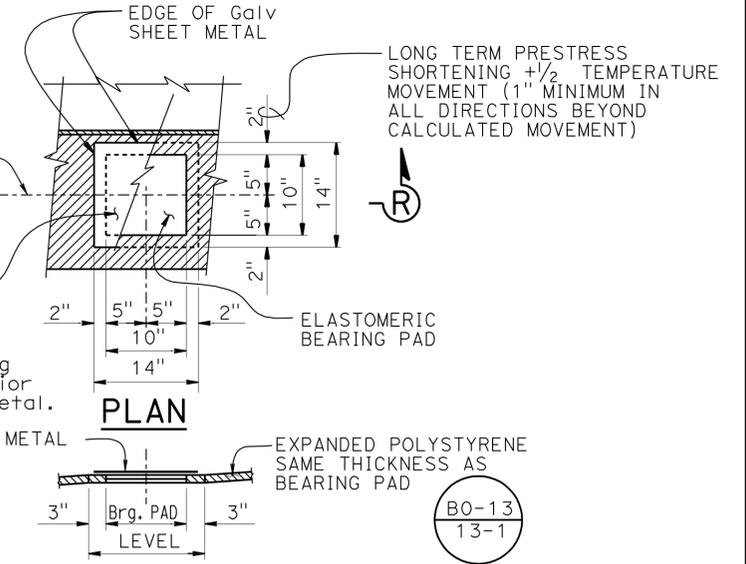
ABUTMENT 1 FOOTING PLAN
1/4" = 1'-0"



ABUTMENT SECTION
1/2" = 1'-0"



BACKWALL BASE DETAIL
3/4" = 1'-0"



SECTION R-R BEARING PAD DETAIL
NO SCALE
DETAILS TYPICAL AT ALL BEARING PADS

- NOTES:
- For "DETAIL A" and "DETAIL B" see "ABUTMENT 4 LAYOUT" sheet.
 - For "DETAIL C" and "DETAIL D" see "ABUTMENT DETAILS NO. 1" sheet.
- ** Place transverse reinforcement parallel to ϕ bridge
- \circ indicates Vertical Pile
 - \bullet indicates 1:3 Battered Pile

DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez
QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Morimoto

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.	41C0209
POST MILE	7.1/7.9

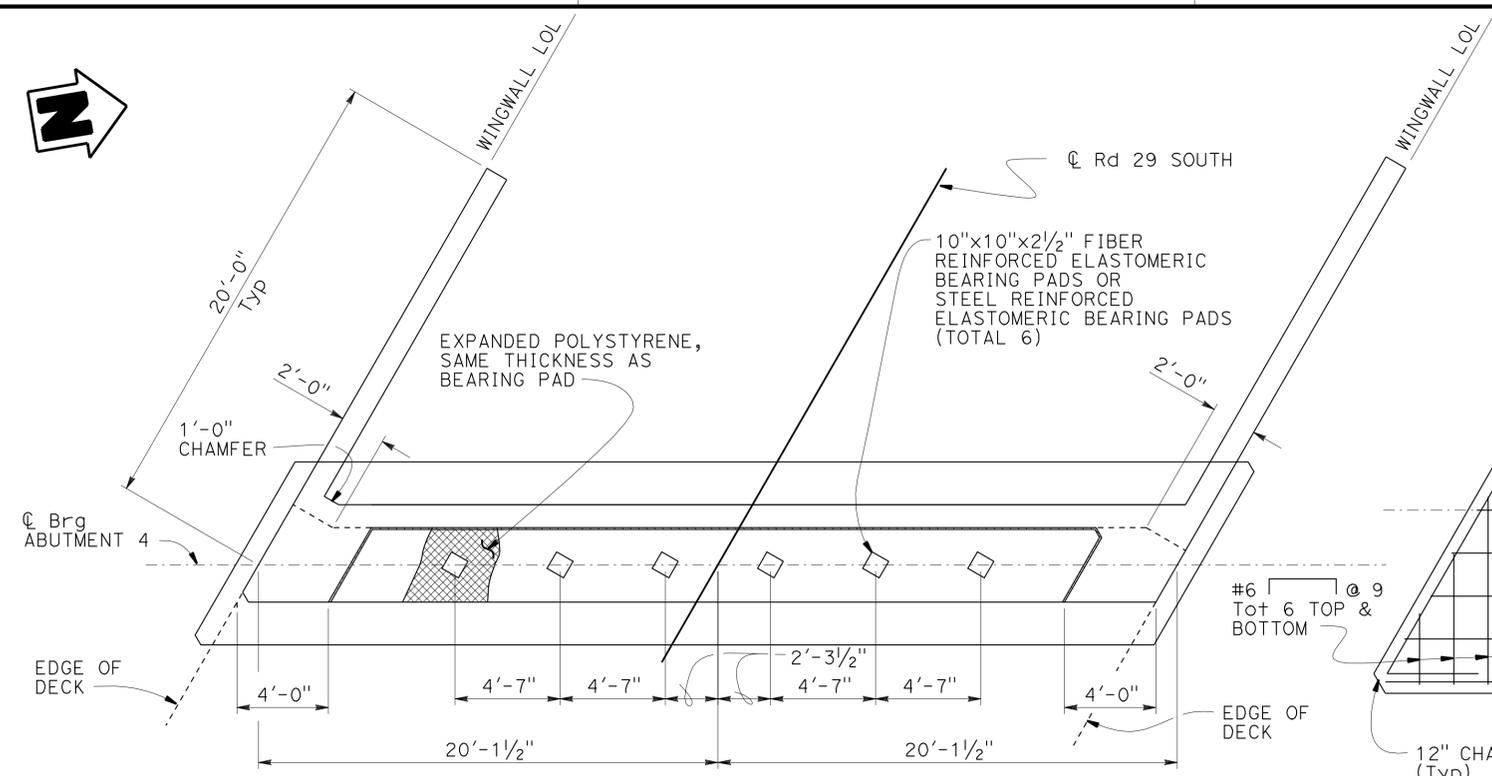
ROAD 29 SOUTH COTTONWOOD CREEK
ABUTMENT 1 LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	515	526
 REGISTERED CIVIL ENGINEER			1-3-12	DATE	
PLANS APPROVAL DATE 6-4-12					
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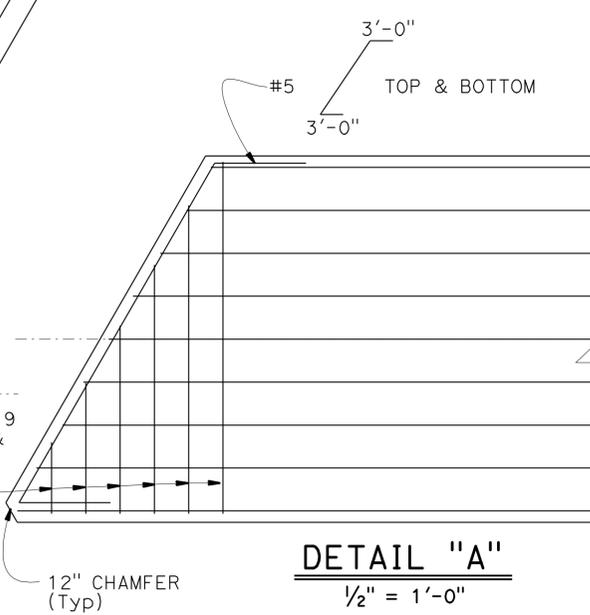


NOTES:
 * For "BEARING PAD DETAIL" see "ABUTMENT 1 LAYOUT" sheet.
 1. For "DETAIL C" and "DETAIL D" see "ABUTMENT DETAILS NO. 1" sheet.

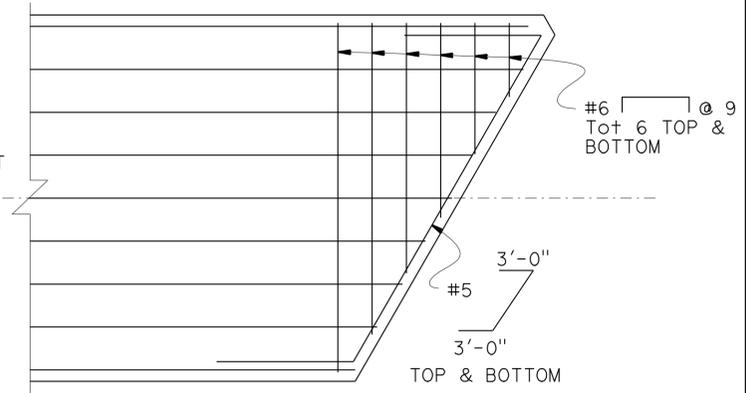
○ Indicates Vertical Pile
 ⊙ Indicates 1:3 Battered Pile



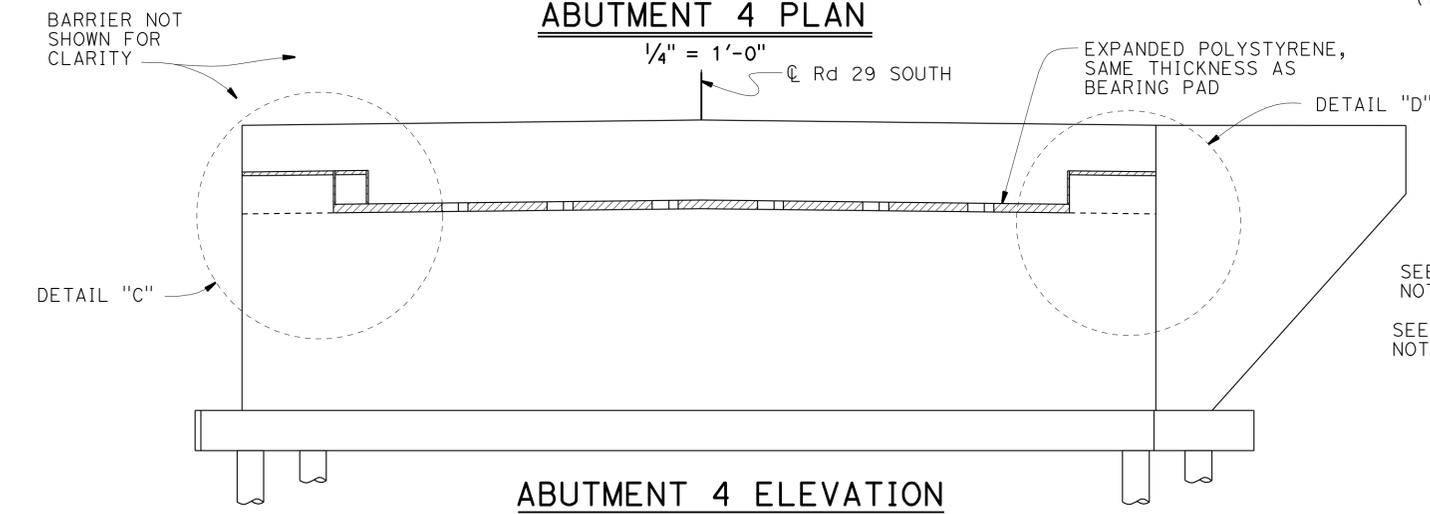
ABUTMENT 4 PLAN
 1/4" = 1'-0"



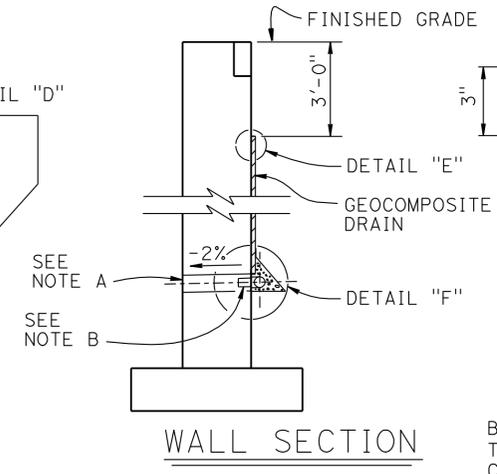
DETAIL "A"
 1/2" = 1'-0"



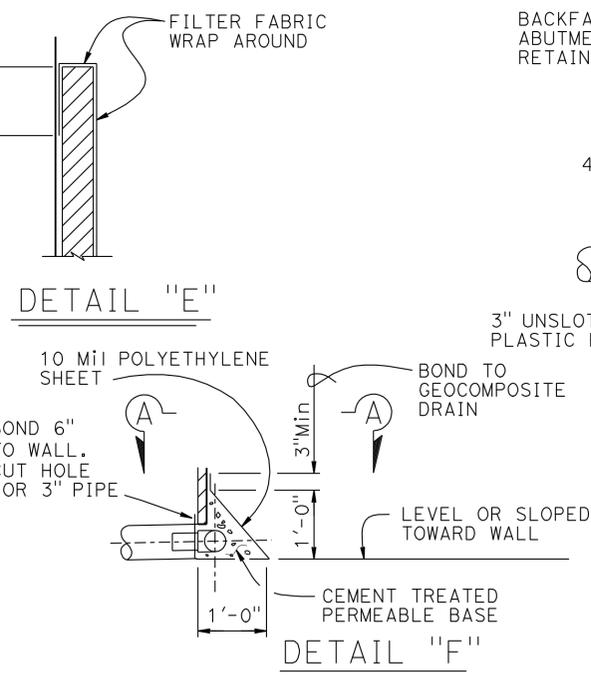
DETAIL "B"
 1/2" = 1'-0"



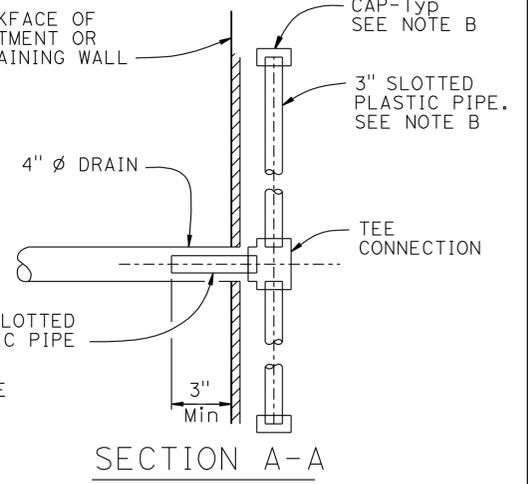
ABUTMENT 4 ELEVATION
 1/4" = 1'-0"



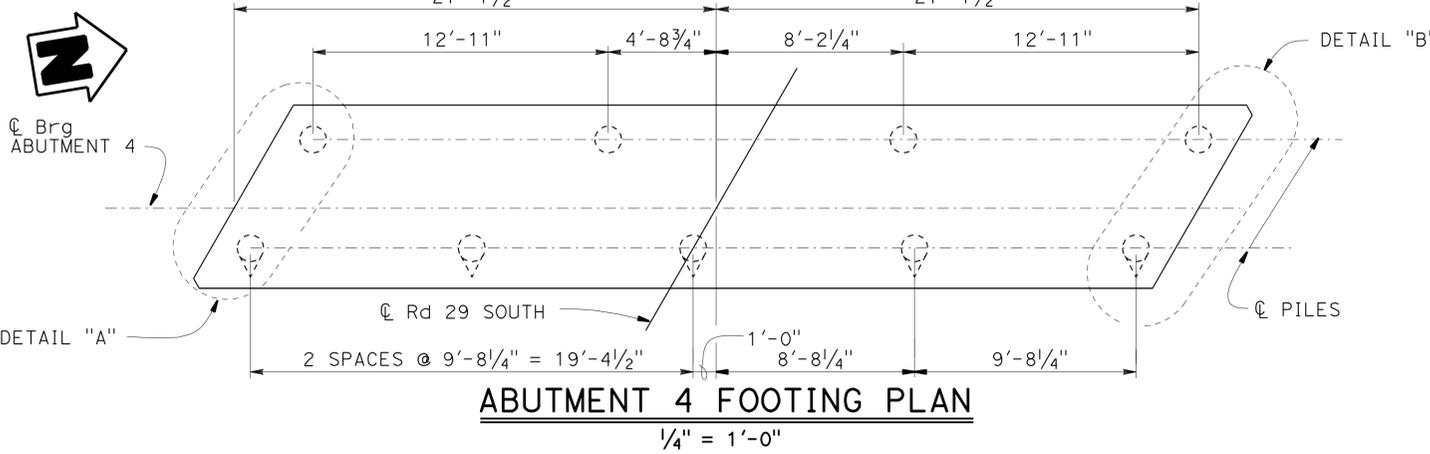
WALL SECTION



WEEP HOLE AND GEOCOMPOSITE DRAIN



SECTION A-A



ABUTMENT 4 FOOTING PLAN
 1/4" = 1'-0"

Notes:
 A. 4" Ø drains at intermediate sag points and at 25' max center to center (9' c-c for Type 3 and 9'-3" c-c for Type 4 retaining walls). For walls adjacent to sidewalks or curbs, provide 4" cast iron or asbestos cement pipe under the sidewalk to discharge through curb face. Exposed wall drains shall be located 3"± above finished grade.
 B. Geocomposite drain, cement treated permeable base, and 3" Ø slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Ø drain.
 C. Connect the low end of plastic pipe to the main outlet pipe as applicable.

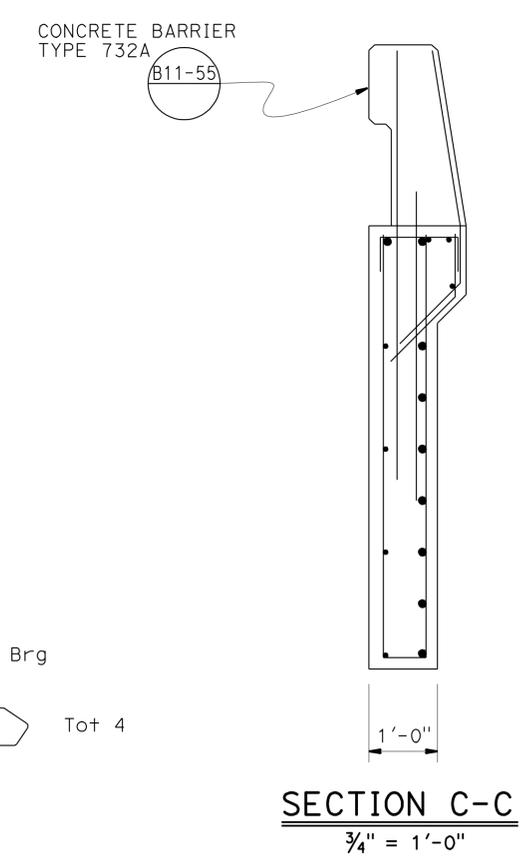
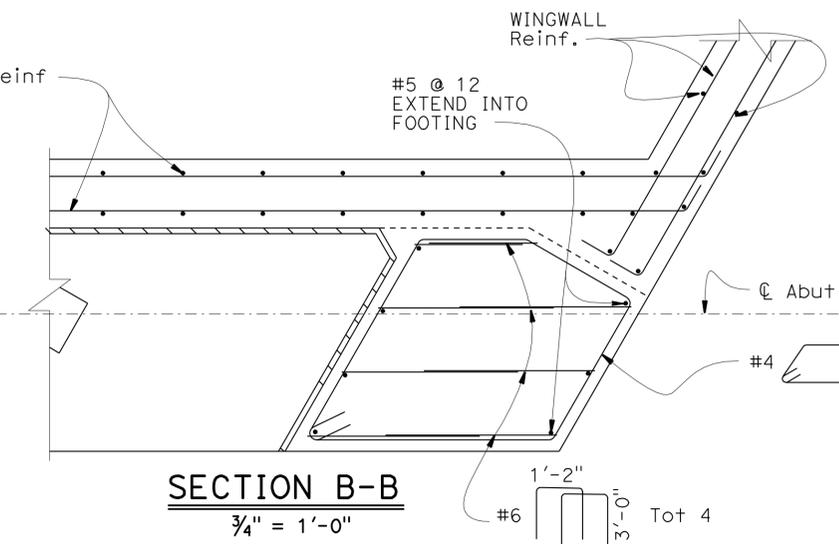
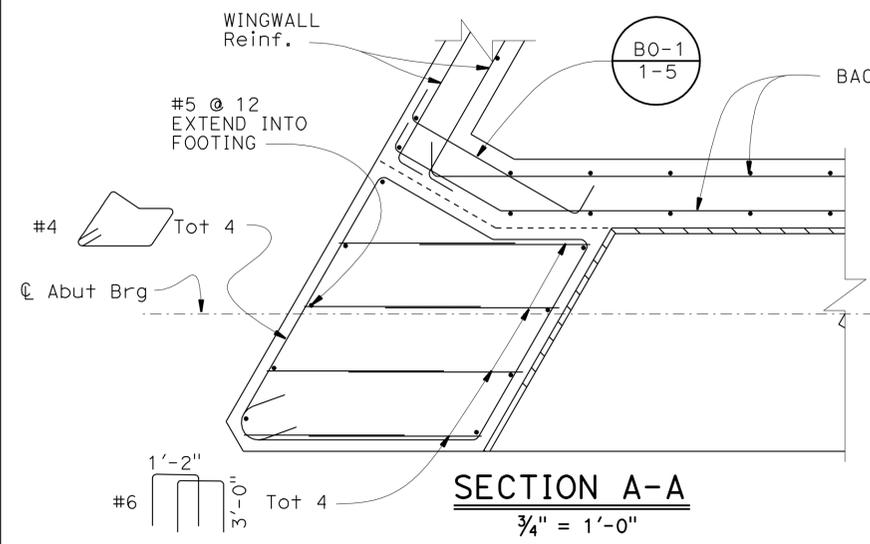
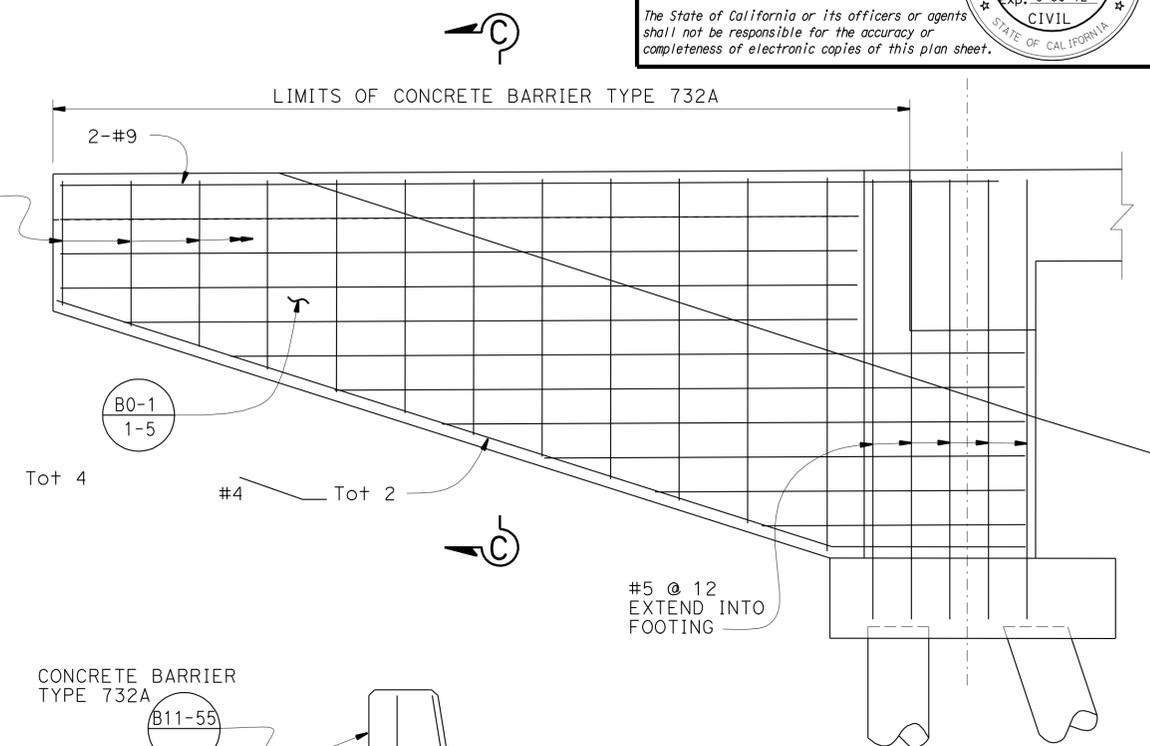
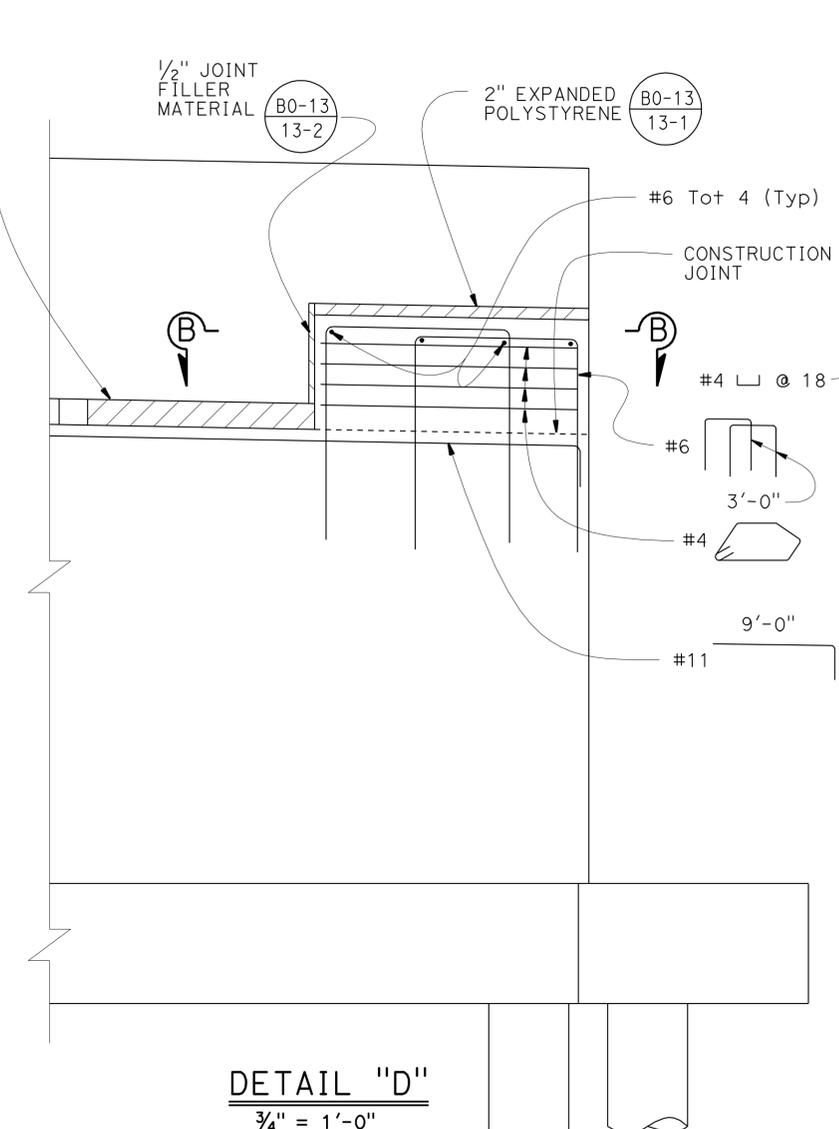
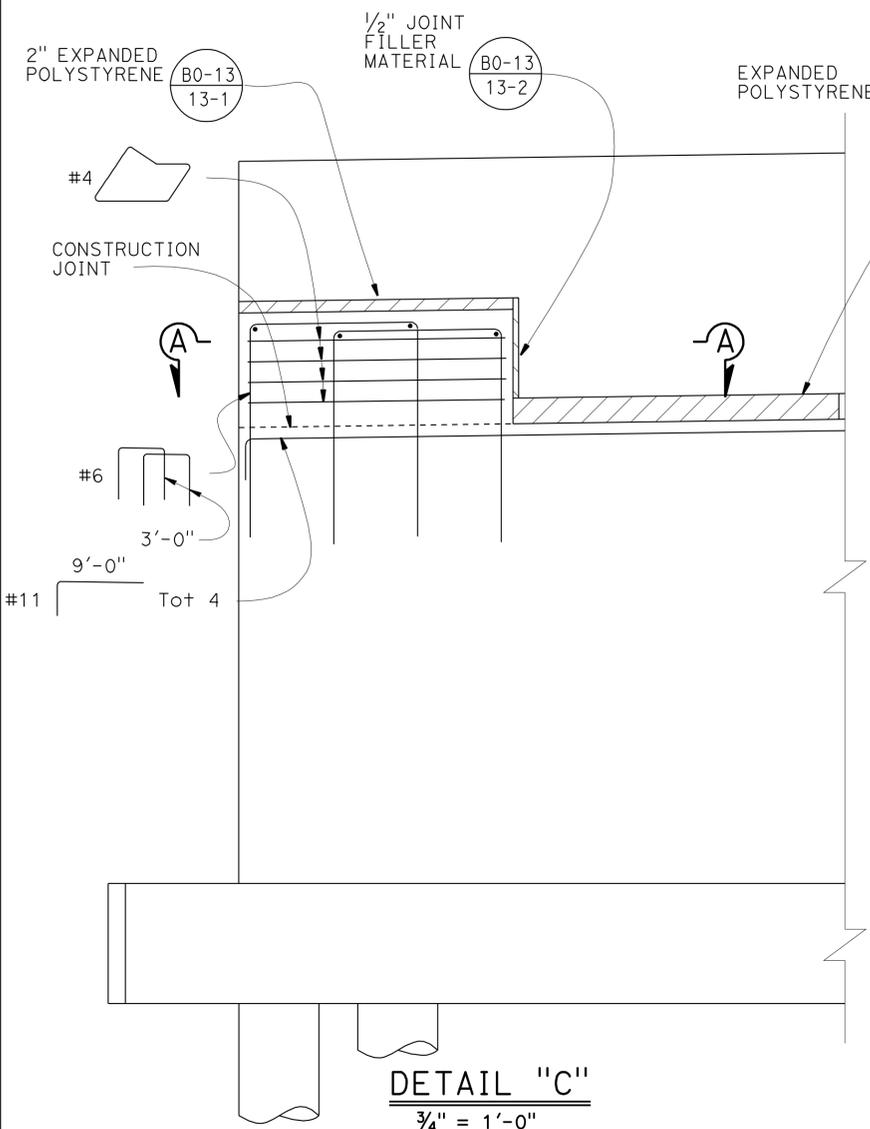
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DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez
QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Marimoto

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO. 41C0209
 POST MILE 7.1/7.9
ROAD 29 SOUTH COTTONWOOD CREEK
ABUTMENT 4 LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	516	526
			REGISTERED CIVIL ENGINEER	DATE	
			6-4-12	PLANS APPROVAL DATE	
			REGISTERED PROFESSIONAL ENGINEER		
			TALAL SADEK		
			No. C49664		
			Exp. 9-30-12		
			CIVIL		
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DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek
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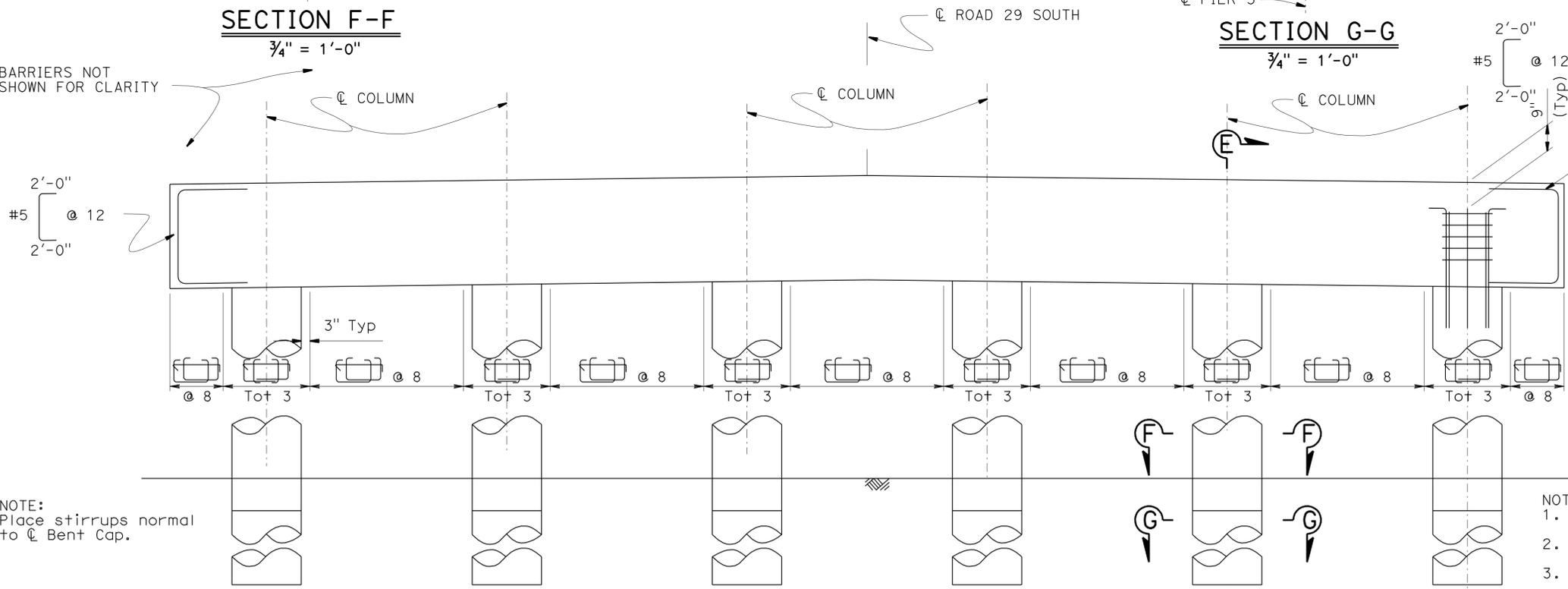
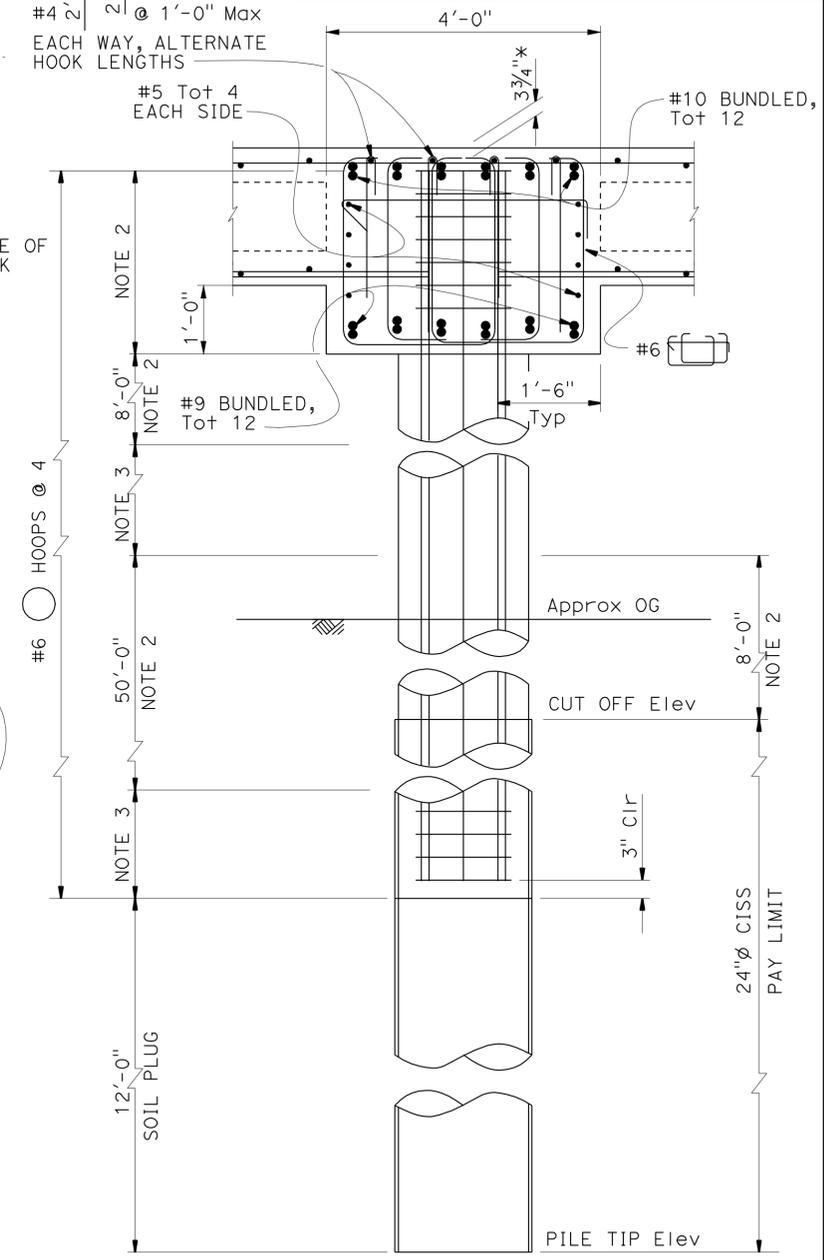
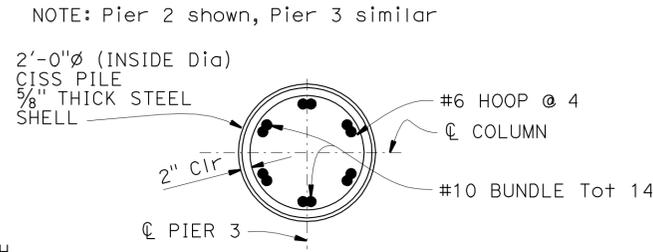
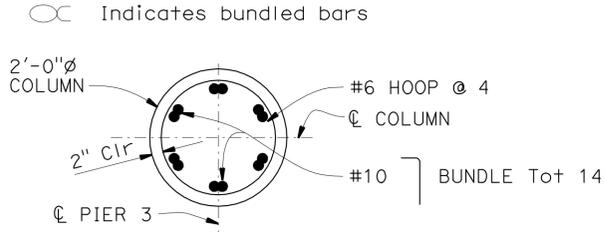
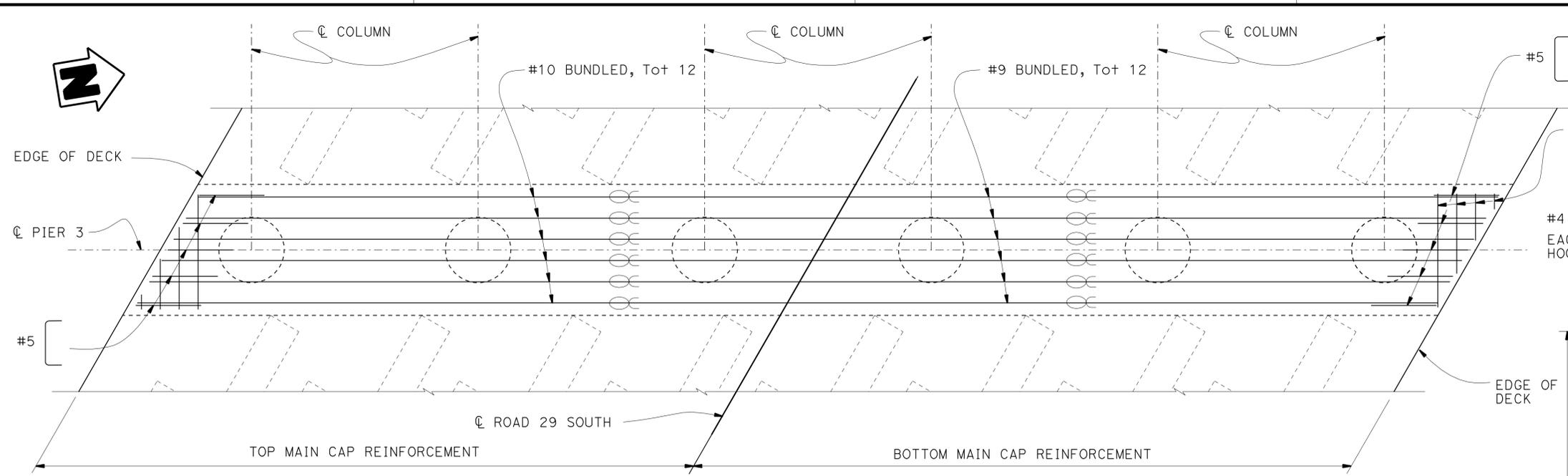
STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.	ROAD 29 SOUTH COTTONWOOD CREEK
DEPARTMENT OF TRANSPORTATION	STRUCTURE DESIGN	41C0209	ABUTMENT DETAILS NO. 1
	DESIGN BRANCH 6	POST MILE	
		7.1/7.9	

UNIT: 3591	PROJECT NUMBER & PHASE: 0600000463 & 1	CONTRACT NO.: 471001
------------	--	----------------------

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	09-08-11 01-04-12 12-18-11	7	17



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	517	526
			1-3-12	DATE	
REGISTERED CIVIL ENGINEER PLANS APPROVAL DATE 6-4-12					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



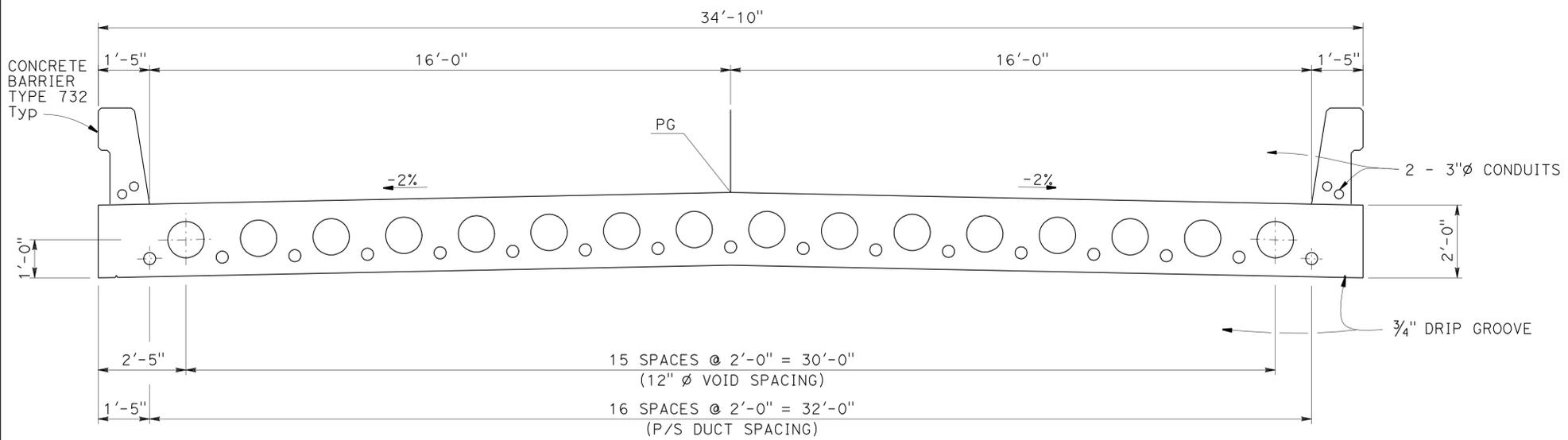
- NOTES:
- All hoops are "Ultimate" butt spliced continuous.
 - No splice allowed in Main reinforcement.
 - Only staggered "Ultimate" butt splices are allowed in main reinforcement in this zone.
- * To Main Cap reinforcement

BARRIERS NOT SHOWN FOR CLARITY

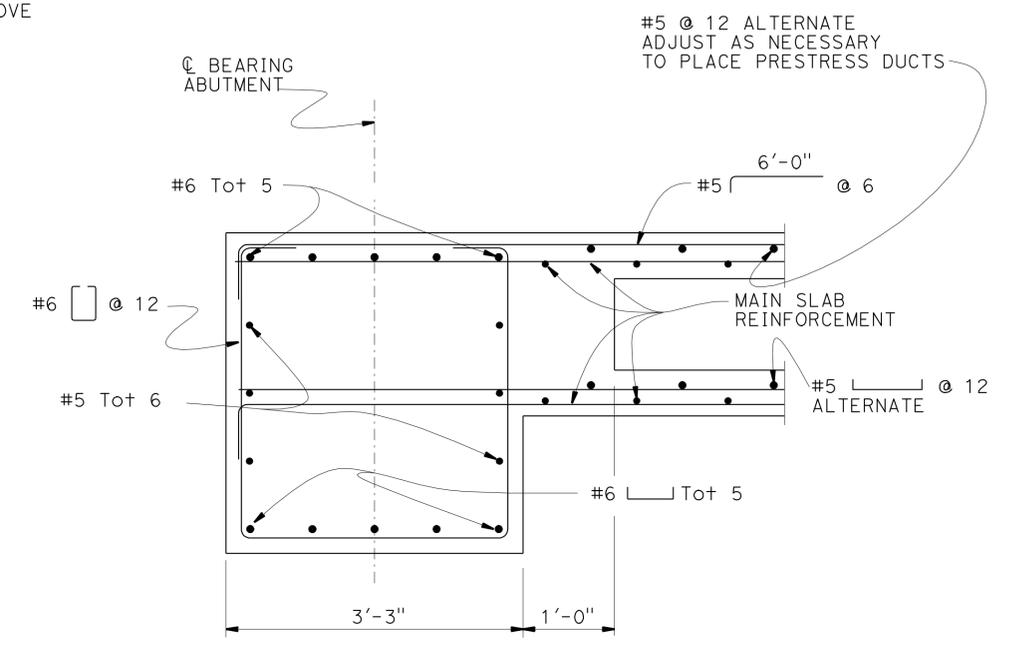
NOTE: Place stirrups normal to ϕ Bent Cap.

DESIGN BY G. R.-Guitierrez CHECKED T. Sadek DETAILS BY M. Lane CHECKED G. R.-Guitierrez QUANTITIES BY G. R.-Guitierrez CHECKED S. Morimoto	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO. 41C0209 POST MILE 7.1/7.9	ROAD 29 SOUTH COTTONWOOD CREEK PIER DETAILS
	UNIT: 3591 PROJECT NUMBER & PHASE: 0600000463 & 1 CONTRACT NO.: 471001			DISREGARD PRINTS BEARING EARLIER REVISION DATES
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			REVISION DATES 11-29-11 01-04-12 12-18-11

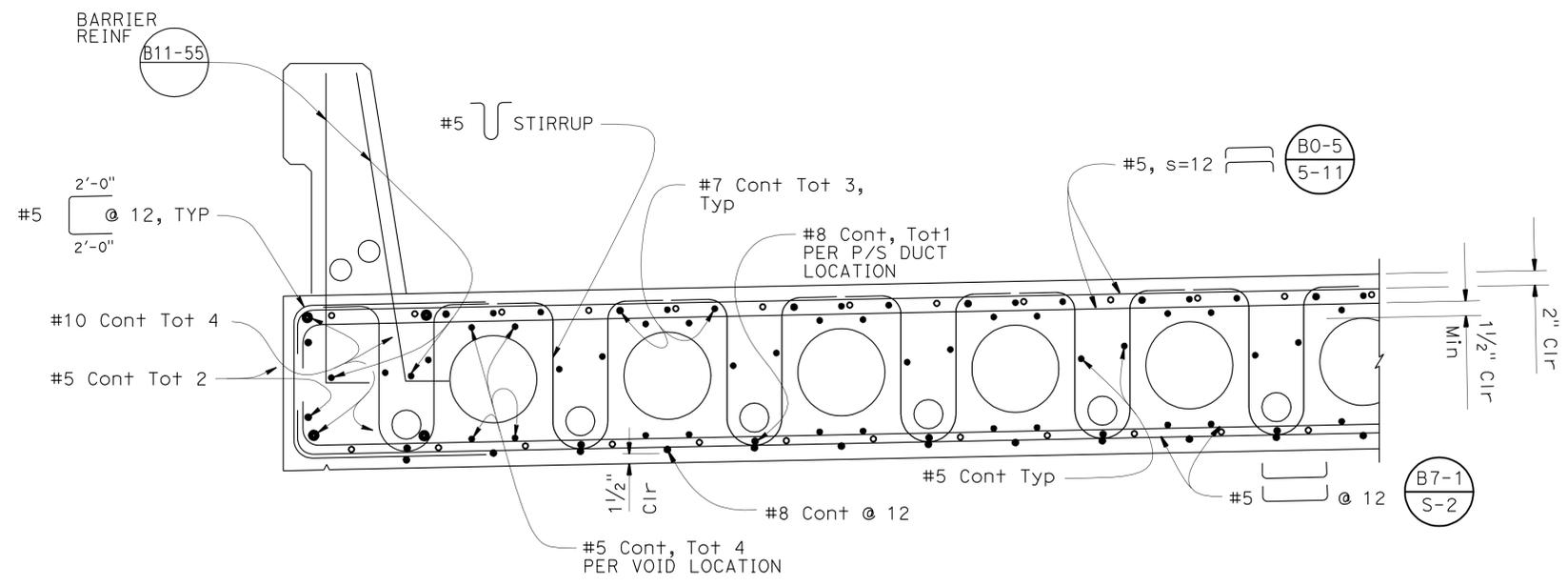
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	518	526
			REGISTERED CIVIL ENGINEER	DATE	
			1-3-12		
			REGISTERED PROFESSIONAL ENGINEER		
			TALAL SADEK		
			No. C49664		
			Exp. 9-30-12		
			CIVIL		
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TYPICAL SECTION
1/2" = 1'-0"



END DIAPHRAGM
1" = 1'-0"



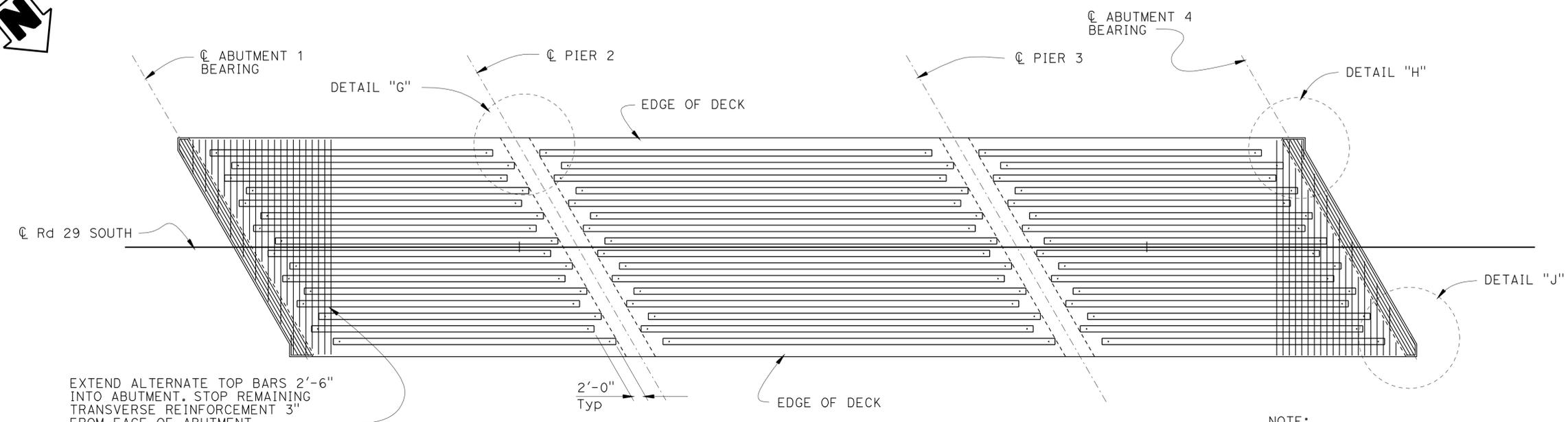
PART TYPICAL SECTION
1" = 1'-0"

NOTE:
o - Indicates additional reinforcement, see "VOID LAYOUT" sheet.

DESIGN	BY	G. R.-Guitierrez	CHECKED	T. Sadek	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO.	41C0209	ROAD 29 SOUTH COTTONWOOD CREEK TYPICAL SECTION			
	DETAILS	BY	M. Lane	CHECKED			G. R.-Guitierrez	POST MILE		7.1/7.9		
	QUANTITIES	BY	G. R.-Guitierrez	CHECKED			S. Morimoto					
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)						UNIT: 3591	PROJECT NUMBER & PHASE: 0600000463 & 1 CONTRACT NO.: 471001		REVISION DATES	SHEET	OF	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0	1	2	3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	9	17

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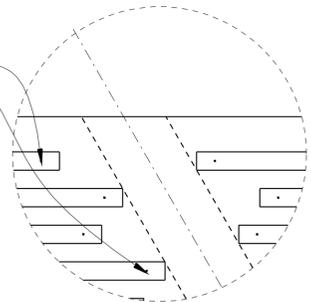
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	519	526
			REGISTERED CIVIL ENGINEER	DATE	
			1-3-12		
			6-4-12		
			PLANS APPROVAL DATE		
REGISTERED PROFESSIONAL ENGINEER TALAL SADEK No. C49664 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA					
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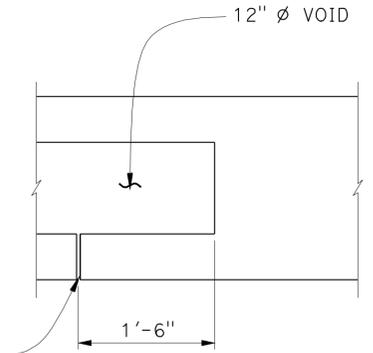
VOID LAYOUT
1" = 10'

NOTE:
For reinforcement information see "TYPICAL SECTION" sheet.

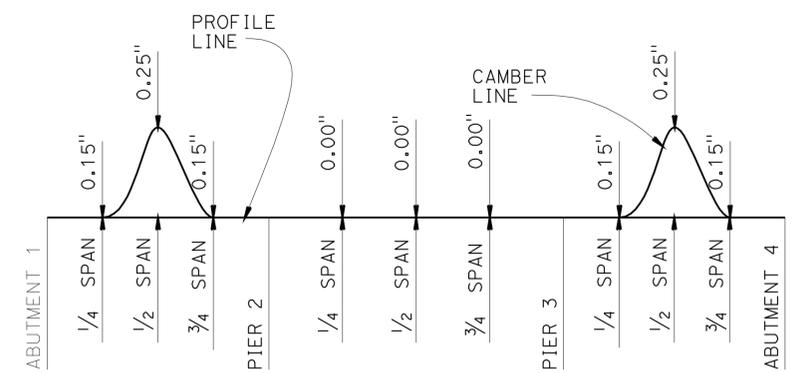
VENT HOLES AT EACH END OF VOID, FOR DETAILS SEE "VENT HOLE DETAIL"



DETAIL "G"
1" = 5'



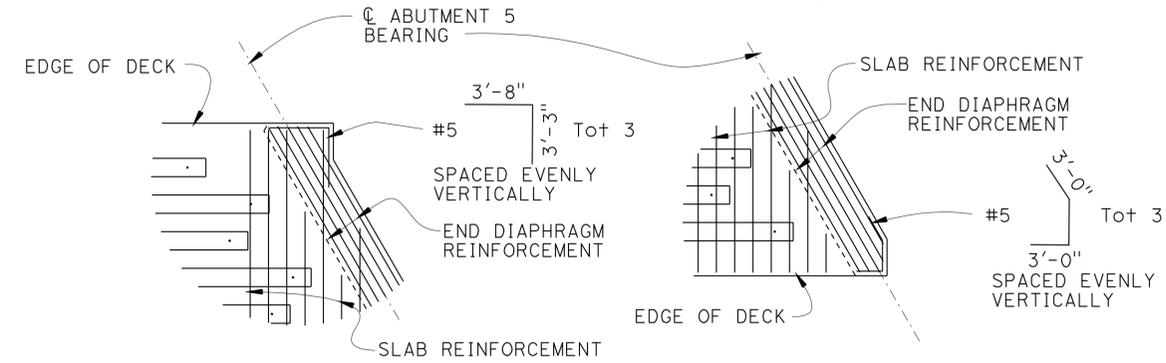
VENT HOLE DETAIL
1" = 1'-0"



CAMBER DIAGRAM

DOES NOT INCLUDE ALLOWANCE FOR FALSEWORK SETTLEMENT.

PRESTRESSING NOTES
 270 KSI Low Relaxation Strand:
 P_{jack} = 8600 kips
 Anchor Set = $\frac{3}{8}$ in
 Total Number of Voids = 16
 Distribution of prestress force (P_{jack}) between girders shall not exceed the ratio of 3:2.
 Maximum final force variation between girders shall not exceed 725 kips.
 Concrete: f'_c = 5000 psi @ 28 days
 f'_{ci} = 3500 psi @ time of stressing
 Contractor shall submit elongation calculations based on initial stress at
 λ = .9035 times jacking stress.
 One end stressing shall be performed from the long-span end only.

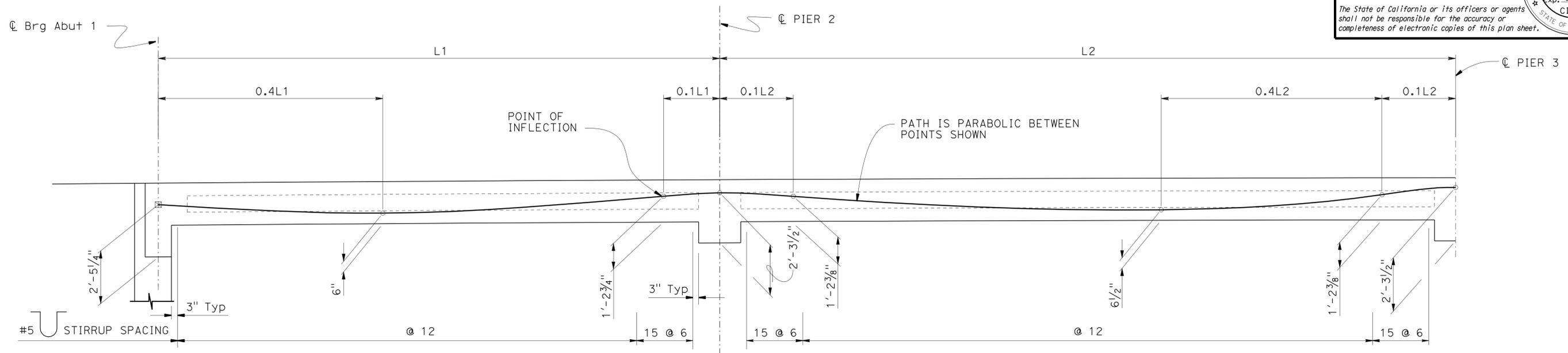


DETAIL "H"
1" = 5'

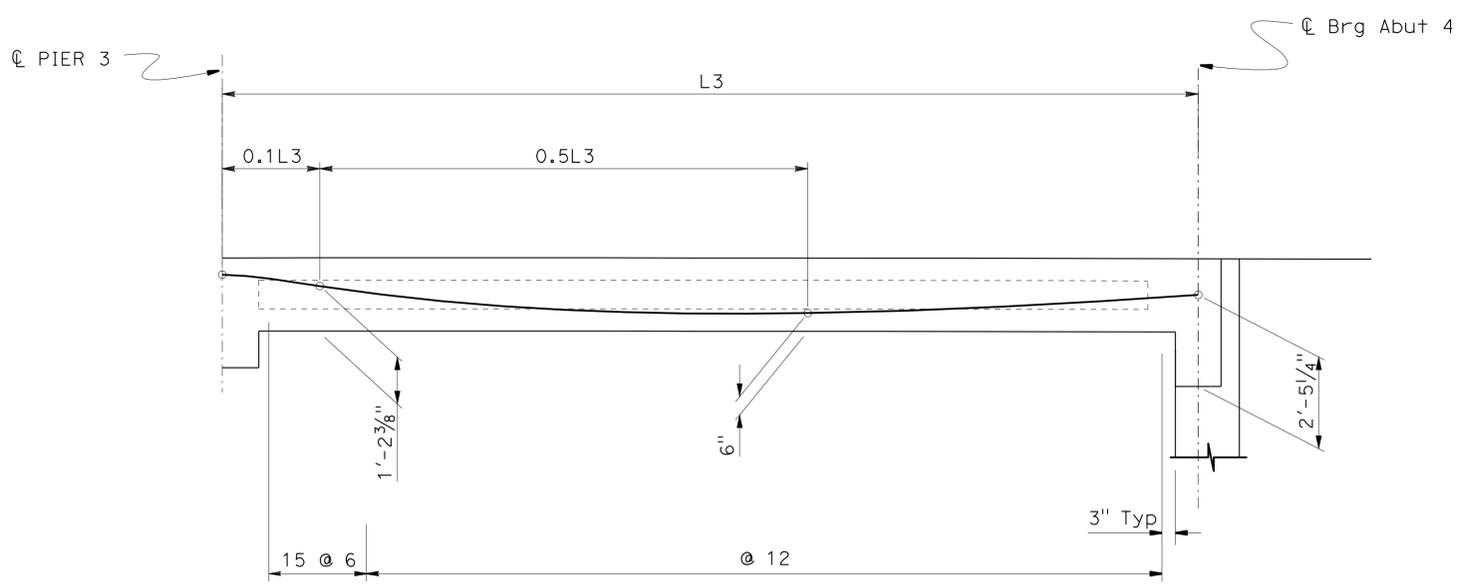
DETAIL "J"
1" = 5'

DESIGN BY G.R.-Gutierrez CHECKED T. Sadek		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN		BRIDGE NO. 41C0209	ROAD 29 SOUTH COTTONWOOD CREEK VOID LAYOUT
DETAILS BY M.Lane CHECKED G.R.-Gutierrez			DESIGN BRANCH 6		POST MILE 7.1/7.9	
QUANTITIES BY G.R.-Gutierrez CHECKED S. Morimoto			UNIT: 3591 PROJECT NUMBER & PHASE: 0600000463 & 1 CONTRACT NO.: 471001		REVISION DATES 6-28-11 01-04-12 11-29-11	
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						SHEET OF 10 17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	520	526
			1-3-12	DATE	
REGISTERED CIVIL ENGINEER			TALAL SADEK		
6-4-12			No. C49664		
PLANS APPROVAL DATE			Exp. 9-30-12		
			CIVIL		
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LONGITUDINAL SECTION
NO SCALE



LONGITUDINAL SECTION
NO SCALE

DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez
QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Morimoto

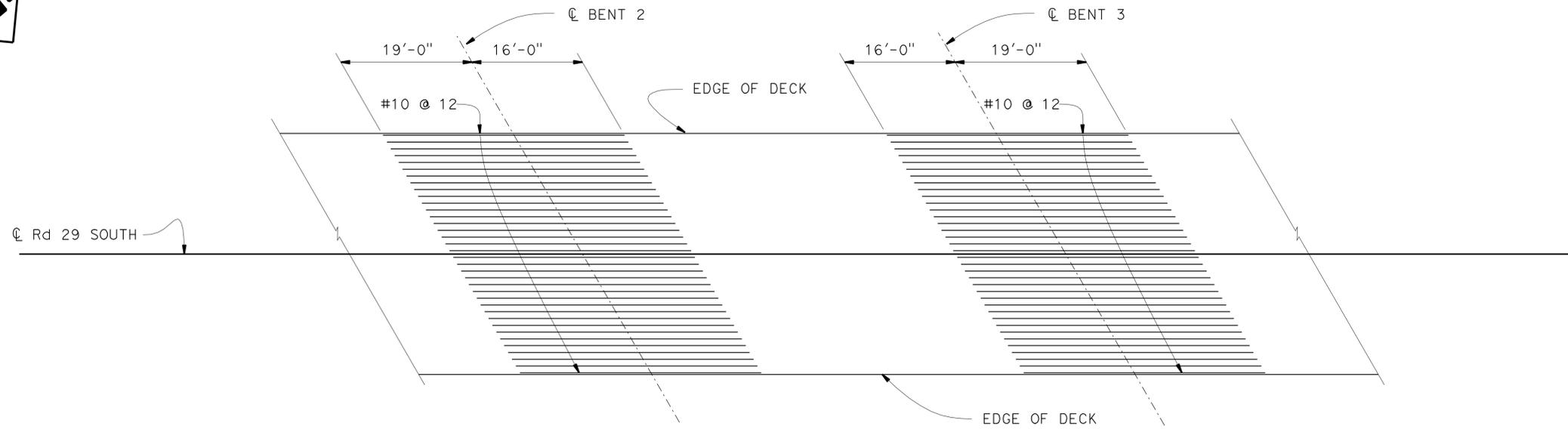
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

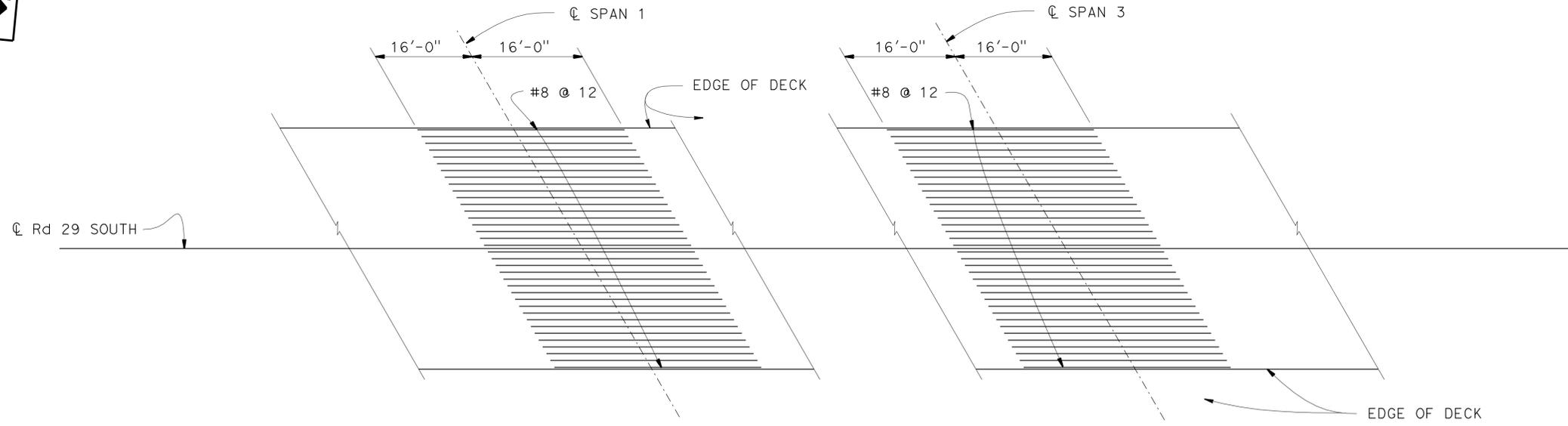
BRIDGE NO.	41C0209
POST MILE	7.1/7.9

ROAD 29 SOUTH COTTONWOOD CREEK
LONGITUDINAL SECTION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	521	526
			REGISTERED CIVIL ENGINEER	DATE	
			1-3-12		
			PLANS APPROVAL DATE		
			6-4-12		
REGISTERED PROFESSIONAL ENGINEER TALAL SADEK No. C49664 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA					
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TOP REINFORCEMENT
1" = 10'



BOTTOM REINFORCEMENT
1" = 10'

DESIGN	BY G. R.-Guitierrez	CHECKED T. Sadek
DETAILS	BY M. Lane	CHECKED G. R.-Guitierrez
QUANTITIES	BY G. R.-Guitierrez	CHECKED S. Moimoto

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 6

BRIDGE NO.	41C0209
POST MILE	7.1/7.9

RD 29 SOUTH COTTONWOOD CREEK
LONGITUDINAL REINFORCEMENT

BENCH MARK

SUHV612
 Fnd 1" I.P. w/Red C T Plug
 71.95' Rt @ Rte 99
 Sta 46+9.03
 Elev 273.05
 Datum: NGVD 29



RC-11-003 4" 4" RC-11-003A

COTTONWOOD CREEK

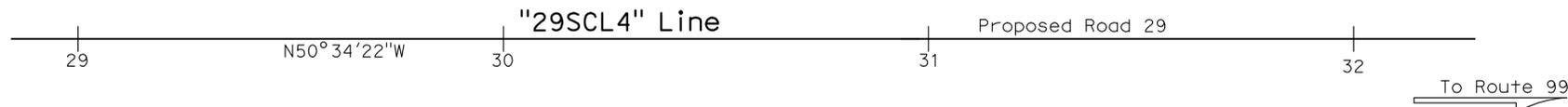
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	522	526

10-18-11
 REGISTERED CIVIL ENGINEER DATE

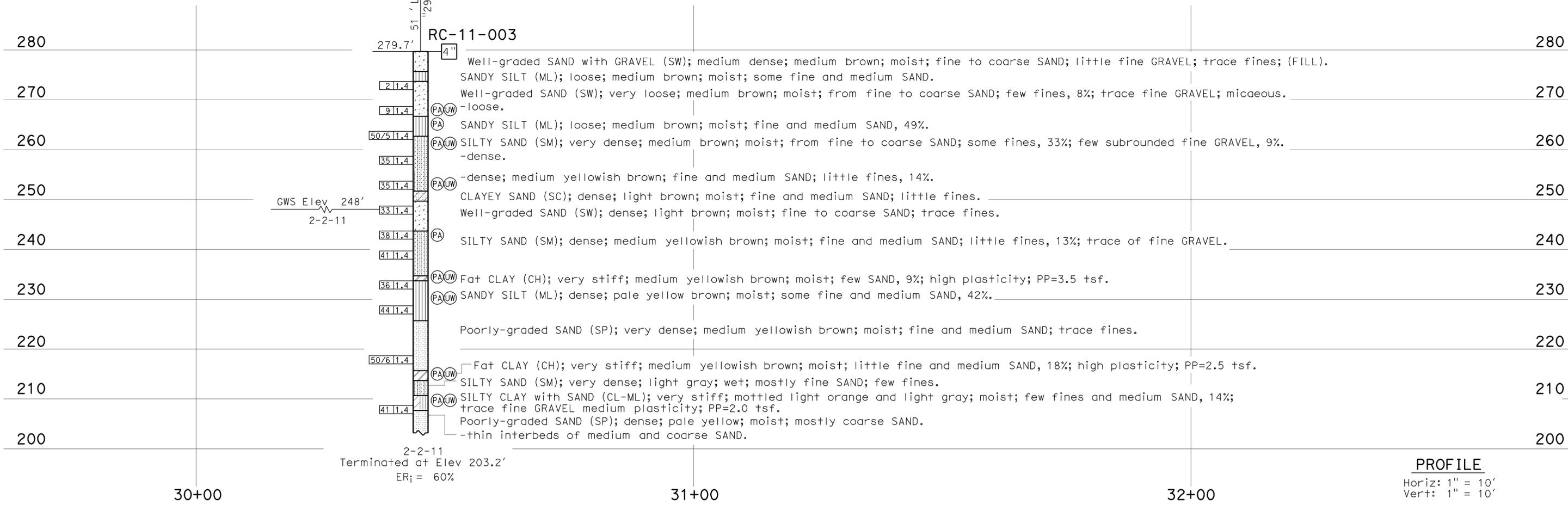
6-4-12
 PLANS APPROVAL DATE

Qiang Huang
 No. C055671
 Exp. 12-31-12
 CIVIL
 STATE OF CALIFORNIA

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PLAN
 1" = 20'



ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. 41C-0209		ROAD 29 SOUTH COTTONWOOD CREEK	
FUNCTIONAL SUPERVISOR NAME: R. Bibbens		DRAWN BY: C. Christian, I.G-Remmen CHECKED BY: C. Zhen-Ru		FIELD INVESTIGATION BY: W. Bertucci		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN DESIGN BRANCH 6		POST MILE 7.1/7.9	
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643 PROJECT NUMBER & PHASE: 06000004631		CONTRACT NO.: 06-471001		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 09-28-11 10-14-11	
										SHEET 13	OF 17

FILE => 41c0209-z-1ofb-1of5.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	523	526

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS" 1 OF 5

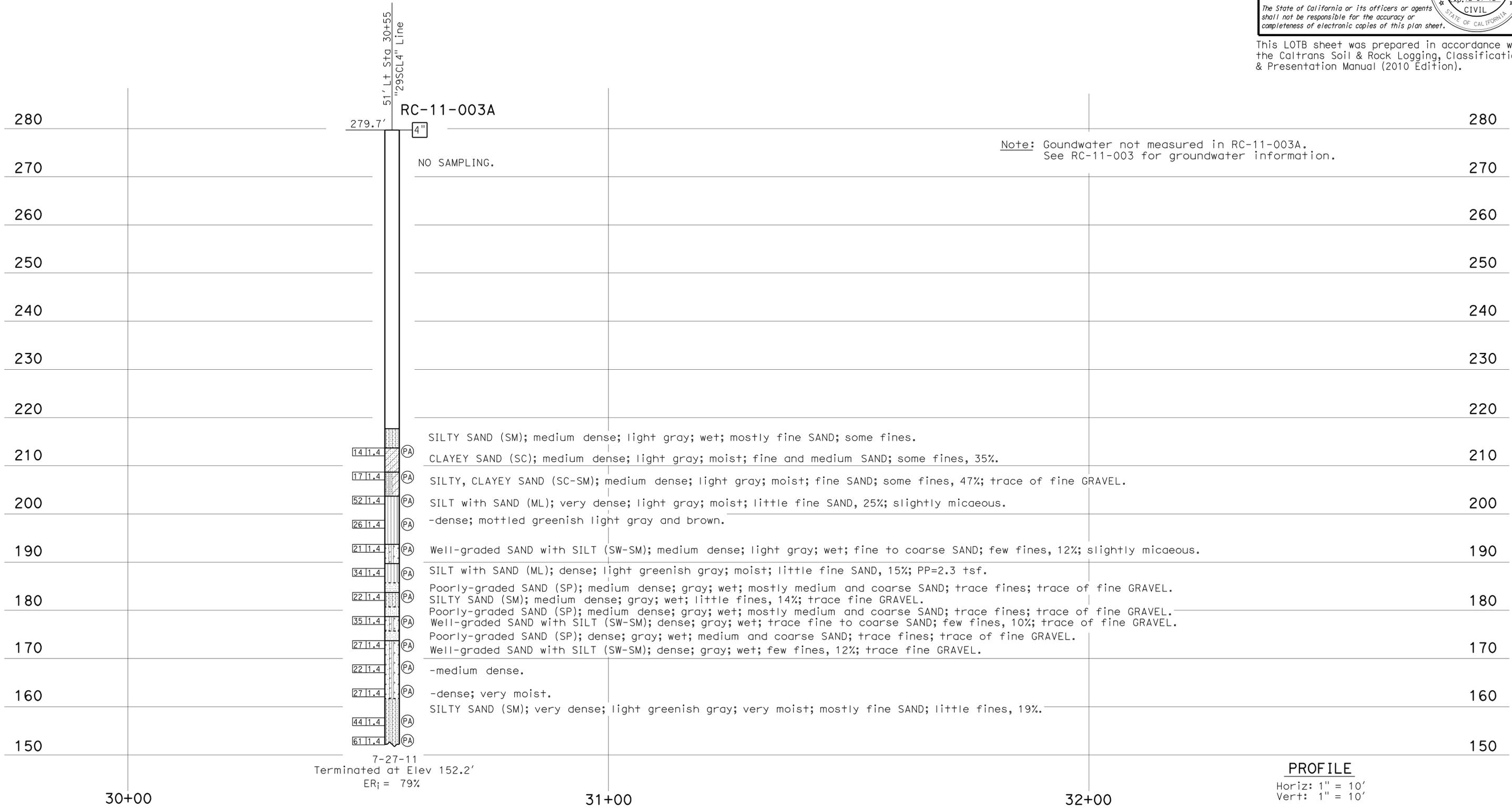
10-18-11
REGISTERED CIVIL ENGINEER DATE

6-4-12
PLANS APPROVAL DATE

Qiang Huang
No. C055671
Exp. 12-31-12
CIVIL

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).



Note: Goundwater not measured in RC-11-003A.
See RC-11-003 for groundwater information.

PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		ROAD 29 SOUTH COTTONWOOD CREEK	
FUNCTIONAL SUPERVISOR		DRAWN BY: C. Christian, I.G-Remmen		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		41C-0209		LOG OF TEST BORINGS 2 OF 5	
NAME: R. Bibbens		CHECKED BY: C. Zhen-Ru		FIELD INVESTIGATION BY: W. Bertucci		DESIGN BRANCH 6		POST MILE			
								7.1/7.9			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: 3643		PROJECT NUMBER & PHASE: 06000004631		CONTRACT NO.: 06-471001		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
				0 1 2 3						REVISION DATES	
										SHEET 14 OF 17	

DATE PLOTTED => 08-JUN-2012 TIME PLOTTED => 13:50 USERNAME => s124496

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Mad	99	R6.9/R8.2	524	526

10-18-11
REGISTERED CIVIL ENGINEER DATE

6-4-12
PLANS APPROVAL DATE

Qiang Huang
No. C055671
Exp. 12-31-12
CIVIL

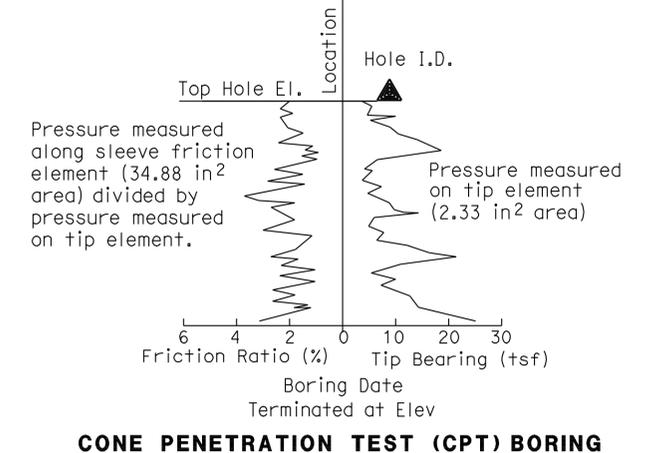
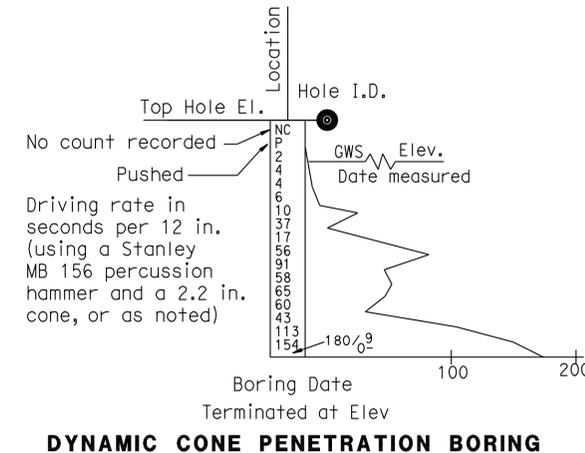
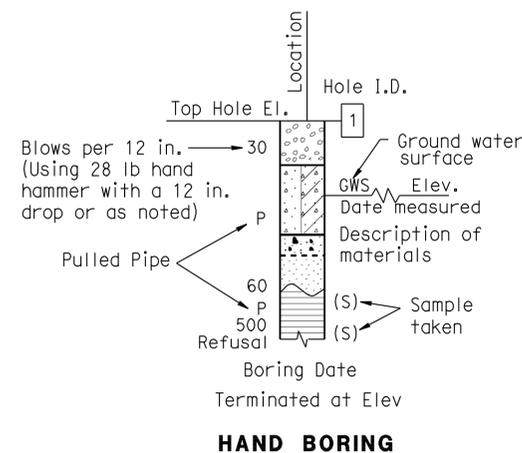
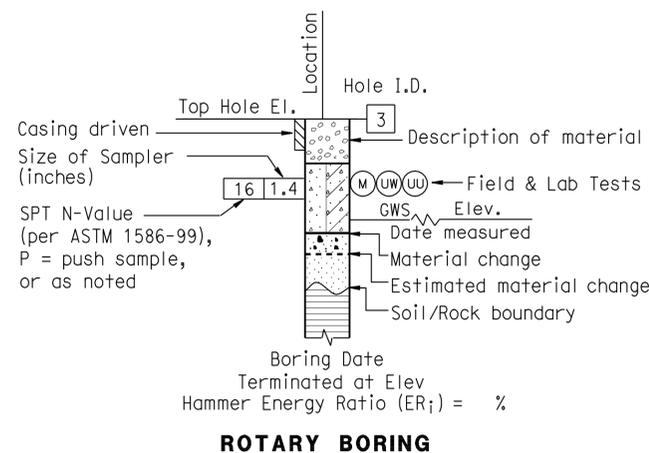
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CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	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)
	O	Other (note on LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 6	BRIDGE NO. 41C-0209 POST MILE 7.1/7.9	ROAD 29 SOUTH COTTONWOOD CREEK LOG OF TEST BORINGS 3 OF 5
	PREPARED BY: I.G-Remmen				
GS LOTB SOIL LEGEND	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3643 PROJECT NUMBER & PHASE: 06000004631	CONTRACT NO.: 06-471001	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES SHEET 15 OF 17

USERNAME => s124496 DATE PLOTTED => 08-JUN-2012 TIME PLOTTED => 13:50
 FILE => 41c0209-z-lotb-3of5.dgn

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

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
(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)
(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)

10-18-11
REGISTERED CIVIL ENGINEER DATE

6-4-12
PLANS APPROVAL DATE

Qiang Huang
No. C055671
Exp. 12-31-12
CIVIL
STATE OF CALIFORNIA

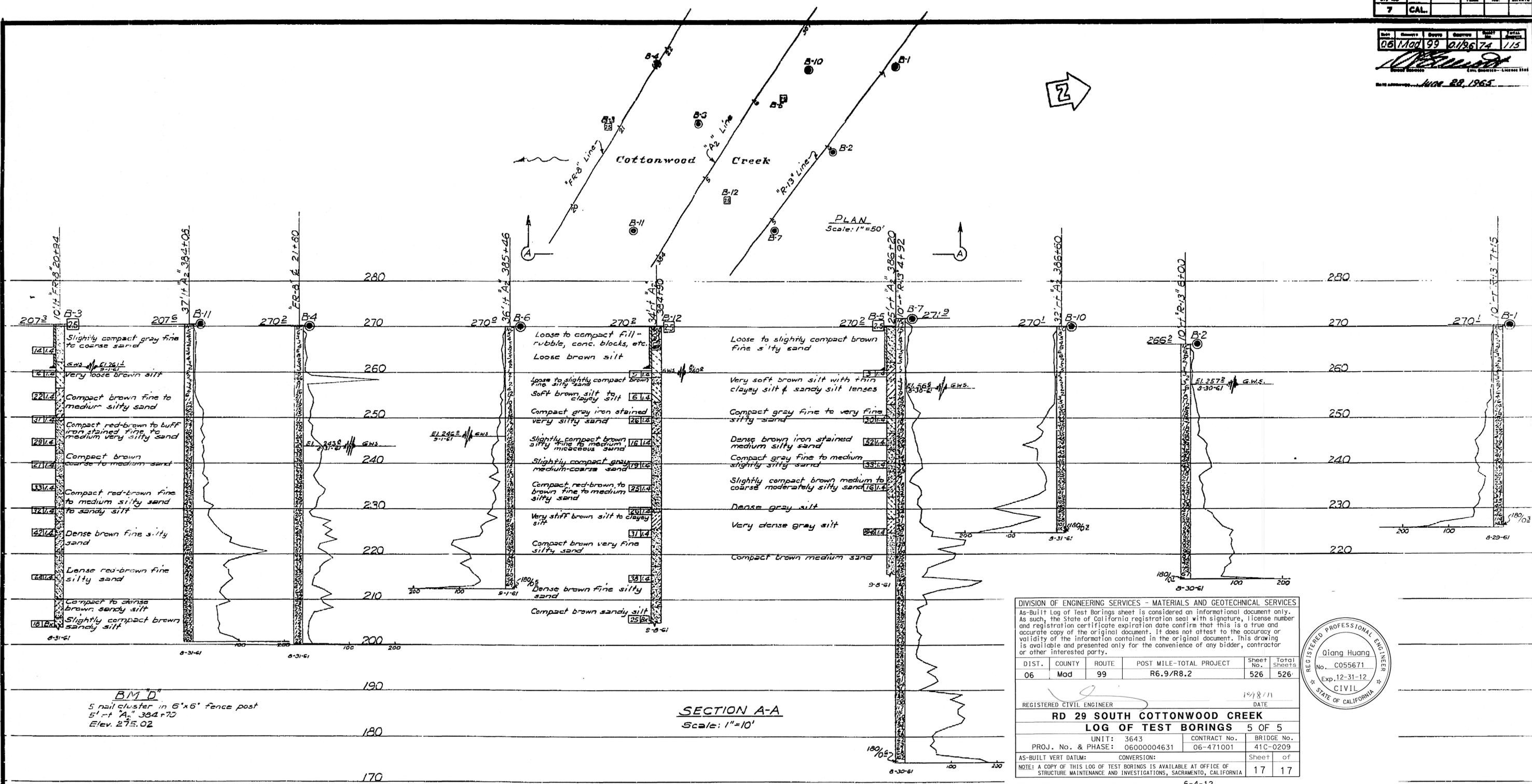
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APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N ₆₀ (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE	
Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

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

PARTICLE SIZE		
Description	Size (in.)	
Boulder	Greater than 12	
Cobble	3 - 12	
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay	Less than 1/300	



DIVISION OF ENGINEERING SERVICES - MATERIALS AND 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. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
06	Mad	99	R6.9/R8.2	526	526

REGISTERED CIVIL ENGINEER: Qiang Huang, No. C055671, Exp. 12-31-12, CIVIL, STATE OF CALIFORNIA

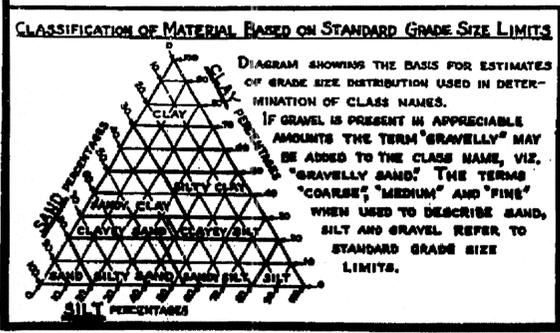
RD 29 SOUTH COTTONWOOD CREEK
LOG OF TEST BORINGS 5 OF 5

UNIT: 3643	CONTRACT No.:	BRIDGE No.:
PROJ. No. & PHASE: 06000004631	06-471001	41C-0209

AS-BUILT VERT DATUM: CONVERSION: Sheet of

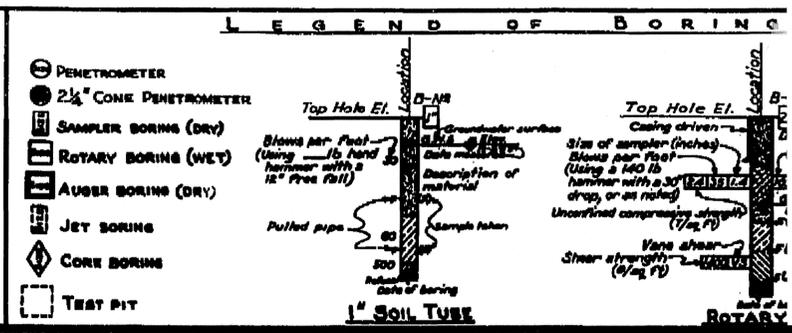
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA

17	17
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LEGEND OF EARTH MATERIALS

GRAVEL	SILTY CLAY OR CLAYEY SILT
SAND	PEAT AND/OR ORGANIC MATTER
SILT	FILL MATERIAL
CLAY	IGNEOUS ROCK
SANDY CLAY OR CLAYEY SAND	SEDIMENTARY ROCK
SANDY SILT OR SILTY SAND	METAMORPHIC ROCK



Revisions made to this Log of Test Borings from the original As-Built Log of Test Borings are the addition of the following table and note:

Boring	Station	Offset from C. Rte 99
B-1	31+25	60 ft Right
B-2	30+08	50 ft Right
B-3	29+15	175 ft Left
B-4	29+95	160 ft Left
B-5	30+32	25 ft Left
B-6	29+60	90 ft Left
B-7	29+05	40 ft Right
B-10	30+70	15 ft Left
B-11	28+25	85 ft Left
B-12	28+90	35 ft Left

Note: The data are the As-Built Test Borings referenced to the proposed new structure location. This table is presented on the As-Built Log of Test Boring sheet for the convenience of any bidder, contractor or other interested party.

NOTE

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

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

COTTONWOOD CREEK

LOG OF TEST BORINGS

SCALE: As shown | BRIDGE: 41-65-9/L | FILE | DRAWING: 4165-9