

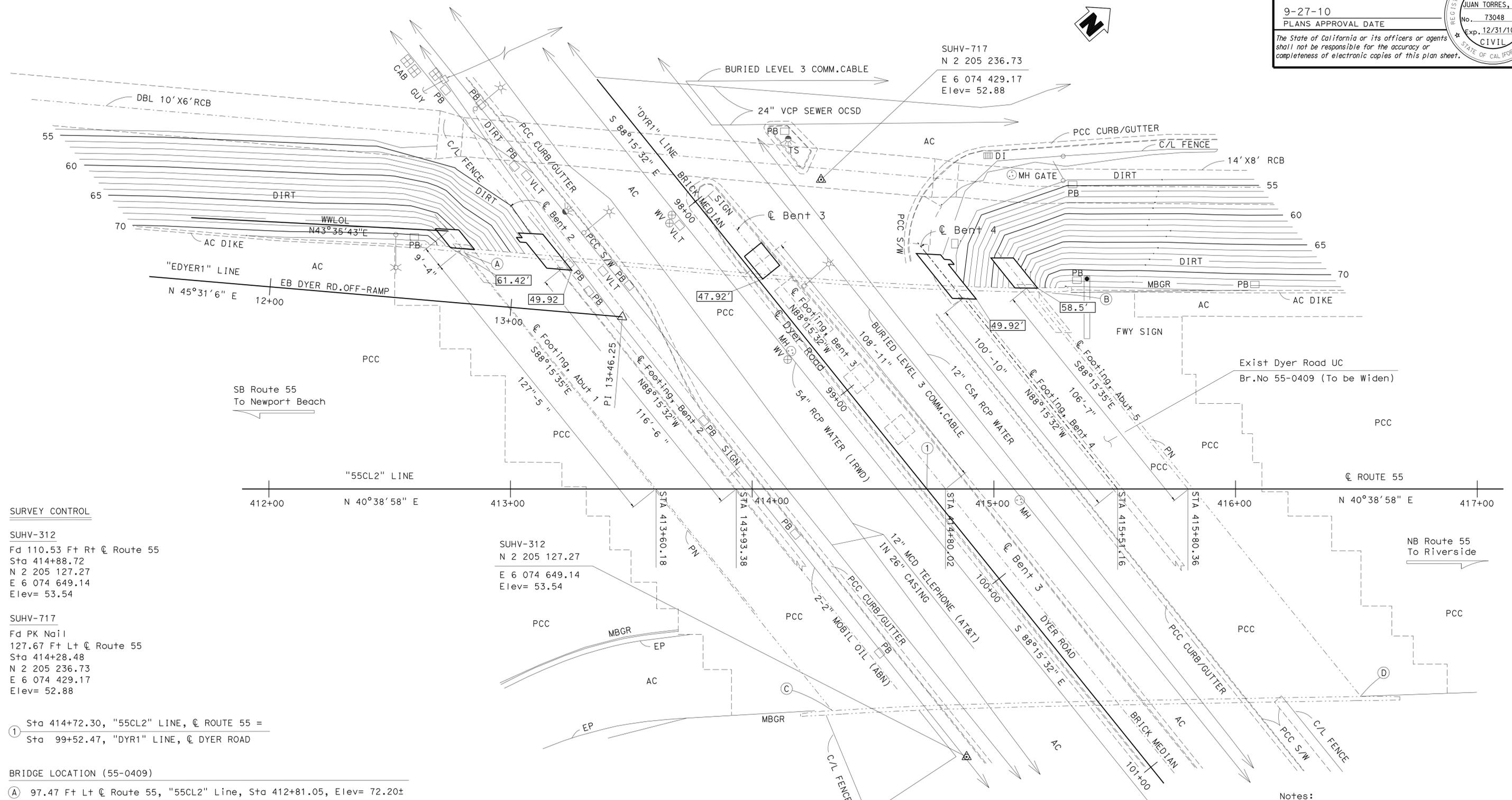
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	201	218

*Juan Torres Jr.* 06-14-2010  
REGISTERED CIVIL ENGINEER DATE

9-27-10  
PLANS APPROVAL DATE

*JUAN TORRES, JR.*  
No. 73048  
Exp. 12/31/10  
CIVIL  
STATE OF CALIFORNIA

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**SURVEY CONTROL**

SUHV-312  
Fd 110.53 Ft Rt @ Route 55  
Sta 414+88.72  
N 2 205 127.27  
E 6 074 649.14  
Elev= 53.54

SUHV-717  
Fd PK Nail  
127.67 Ft Lt @ Route 55  
Sta 414+28.48  
N 2 205 236.73  
E 6 074 429.17  
Elev= 52.88

- ① Sta 414+72.30, "55CL2" LINE, @ ROUTE 55 =
- ① Sta 99+52.47, "DYR1" LINE, @ DYER ROAD

**BRIDGE LOCATION (55-0409)**

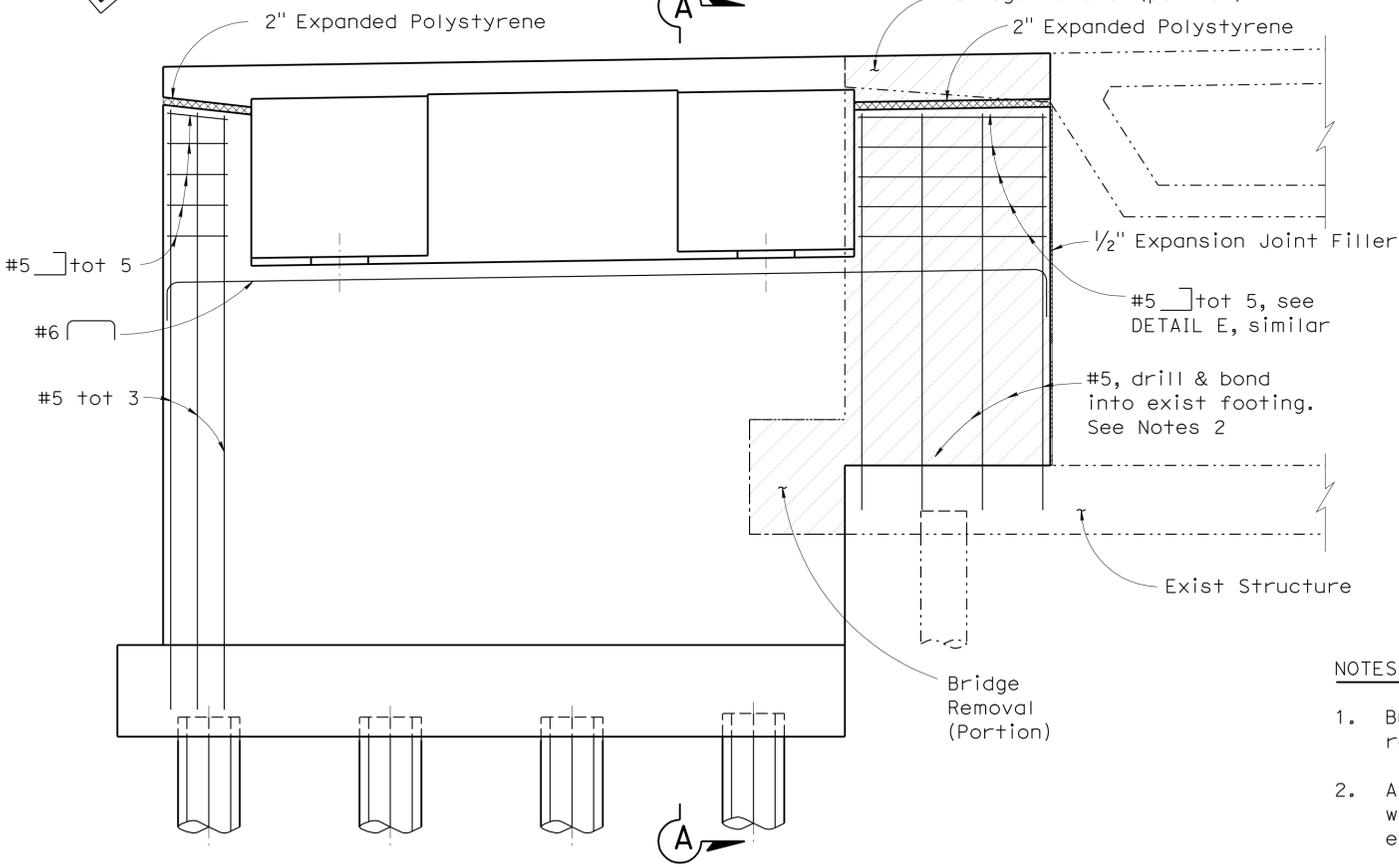
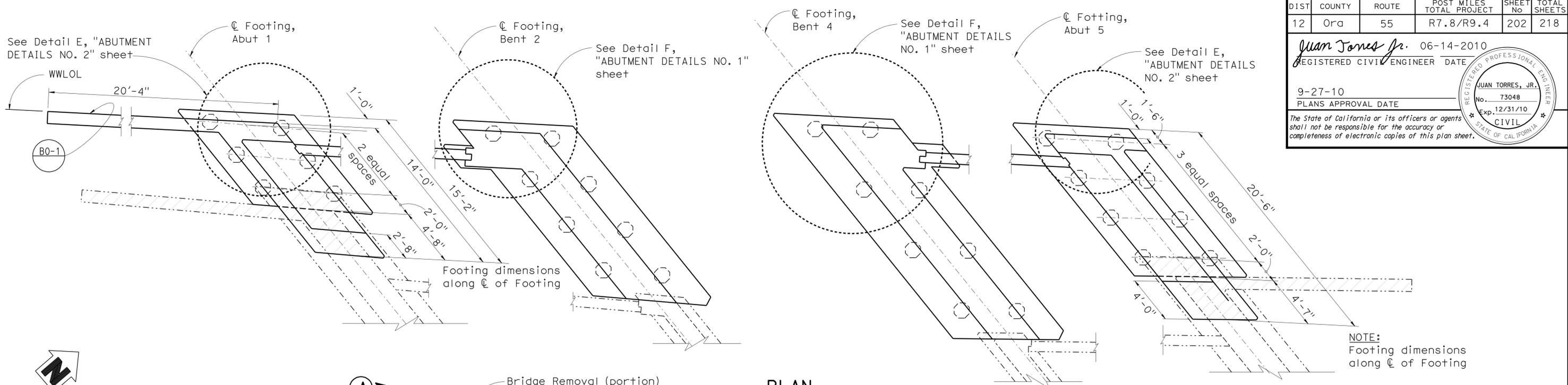
- Ⓐ 97.47 Ft Lt @ Route 55, "55CL2" Line, Sta 412+81.05, Elev= 72.20±
- Ⓑ 81.09 Ft Lt @ Route 55, "55CL2" Line, Sta 415+18.68, Elev= 73.49±
- Ⓒ 91.31 Ft Rt @ Route 55, "55CL2" Line, Sta 414+32.94, Elev= 73.37±
- Ⓓ 85.50 Ft Rt @ Route 55, "55CL2" Line, Sta 416+51.78, Elev= 73.20±

**Notes:**  
Underground Utilities As Shown Are Approximate.  
□ Indicates bottom of footing elevation.

<b>PRELIMINARY INVESTIGATION SECTION</b>				DESIGN BY J. TORRES	CHECKED R. WANG	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	<b>DIVISION OF ENGINEERING SERVICES</b> STRUCTURE DESIGN <b>DESIGN BRANCH 19</b>	BRIDGE NO. 55-0409	<b>DYER ROAD UC (Widen)</b> <b>FOUNDATION PLAN</b>
SCALE 1"=20'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY H. INIGUEZ	CHECKED J. TORRES	POST MILE 7.87				
ALIGNMENT TIES	DIST. TRAVERSE SHEETS	DRAFTED BY V. PHAM 09/2009	QUANTITIES BY J. TORRES	CHECKED R. WANG					
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 10/25/05)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 12-233 EA 0G9601	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 3 OF 20

FILENAME => H:\engard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:53

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	202	218
Juan Jones Jr. 06-14-2010 REGISTERED CIVIL ENGINEER DATE					
9-27-10 PLANS APPROVAL DATE					
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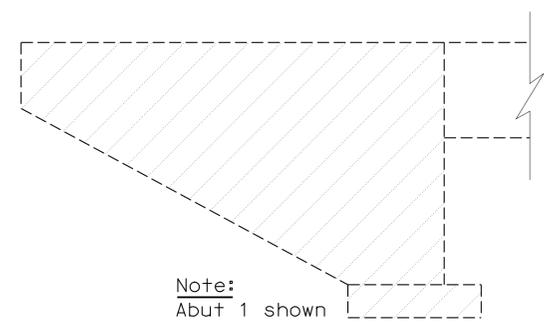
**ABUTMENT NO. 5 ELEVATION**

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

1/2" = 1'-0"

NOTE: Abut 5 shown, Abut 1 similar

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



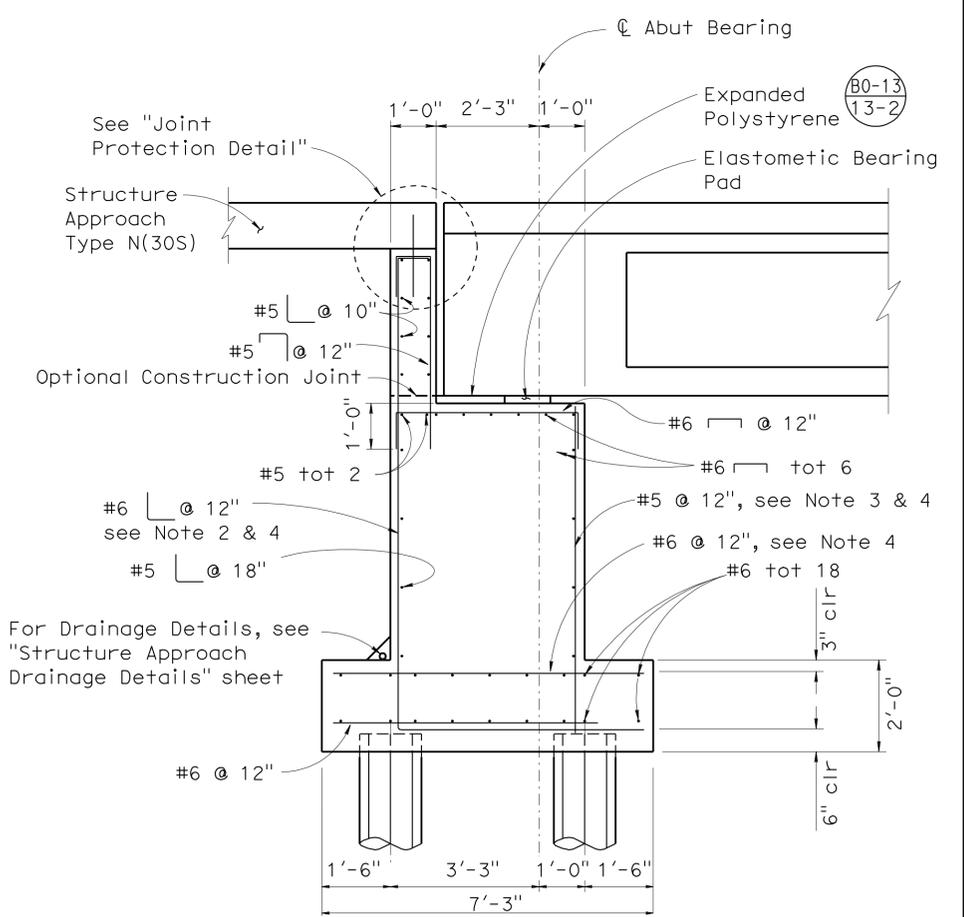
**BRIDGE REMOVAL**

No Scale

**NOTES:**

- Burn off exposed existing wing wall reinforcement.
- At existing structure footing, replace #6 @ 12" with #6 vertical bars @ 12", drill and bond into existing footing.
- #5 @ 12", drill & bond into exist footing.
- Footing Reinforcement to Edge of Deck.

Indicates limits of Bridge removal (portion)

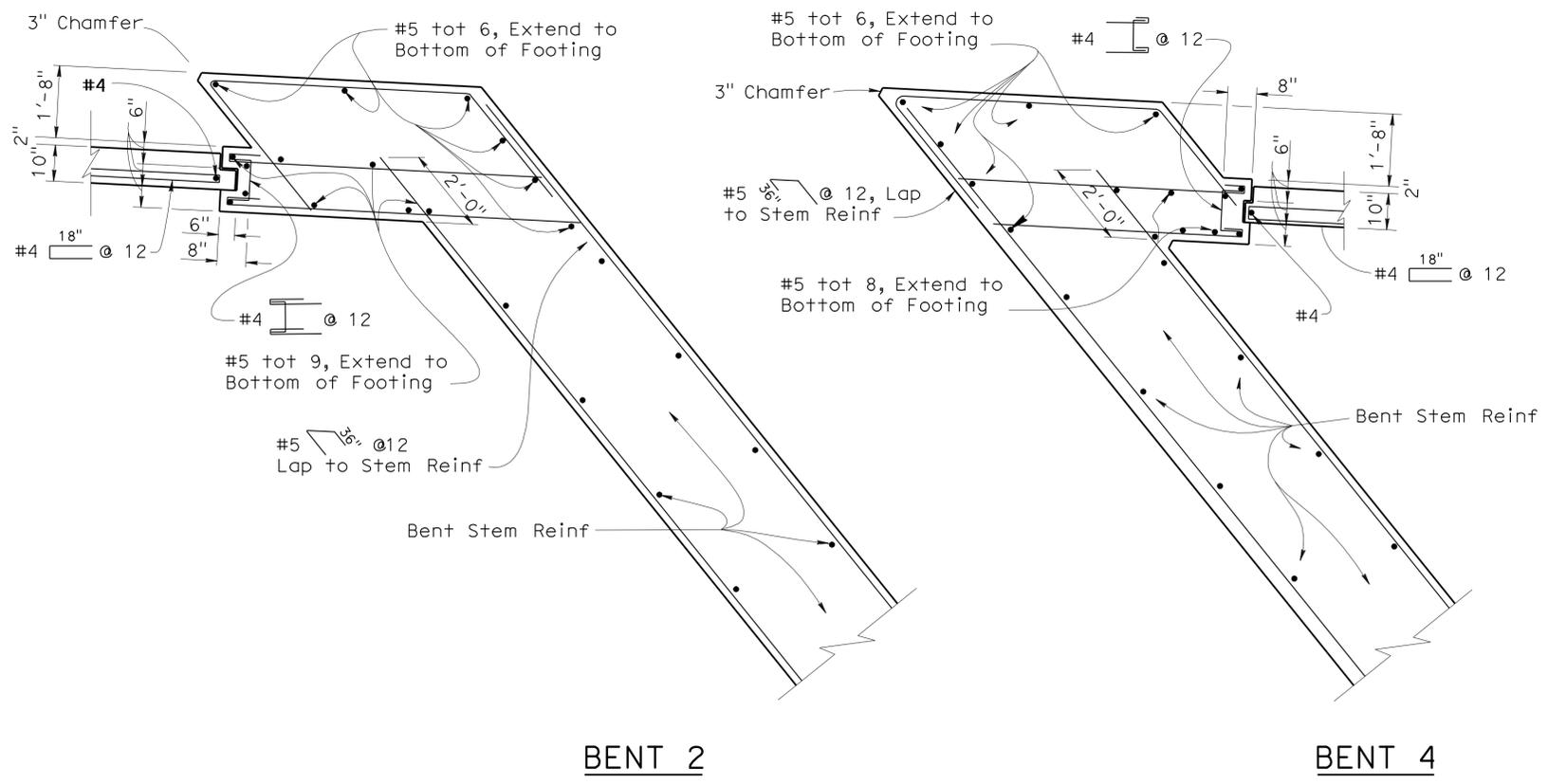


**SECTION A-A**

1/2" = 1'-0"

DESIGN	BY E. MERCADO	CHECKED R. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 19</b>	BRIDGE NO.	55-0409	DYER ROAD UC WIDENING ABUTMENT LAYOUT	
DETAILS	BY H. INIGUEZ	CHECKED J. TORRES			POST MILE	7.8		
QUANTITIES	BY C. LEONG	CHECKED B. BALBAS						
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 269 EA 0G9601	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES 9-13-09 05-04-10 05-06-10 06-03-10 06-08-10 03-04-10 03-16-10 03-29-10	SHEET 4 OF 20

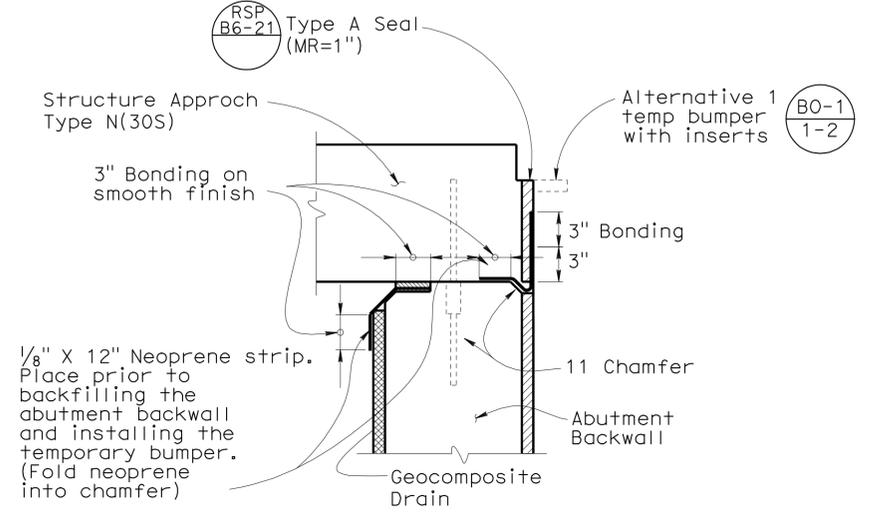
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	203	218
Juan Jones Jr. 06-14-2010 REGISTERED CIVIL ENGINEER DATE					
9-27-10 PLANS APPROVAL DATE					
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**BENT 2**

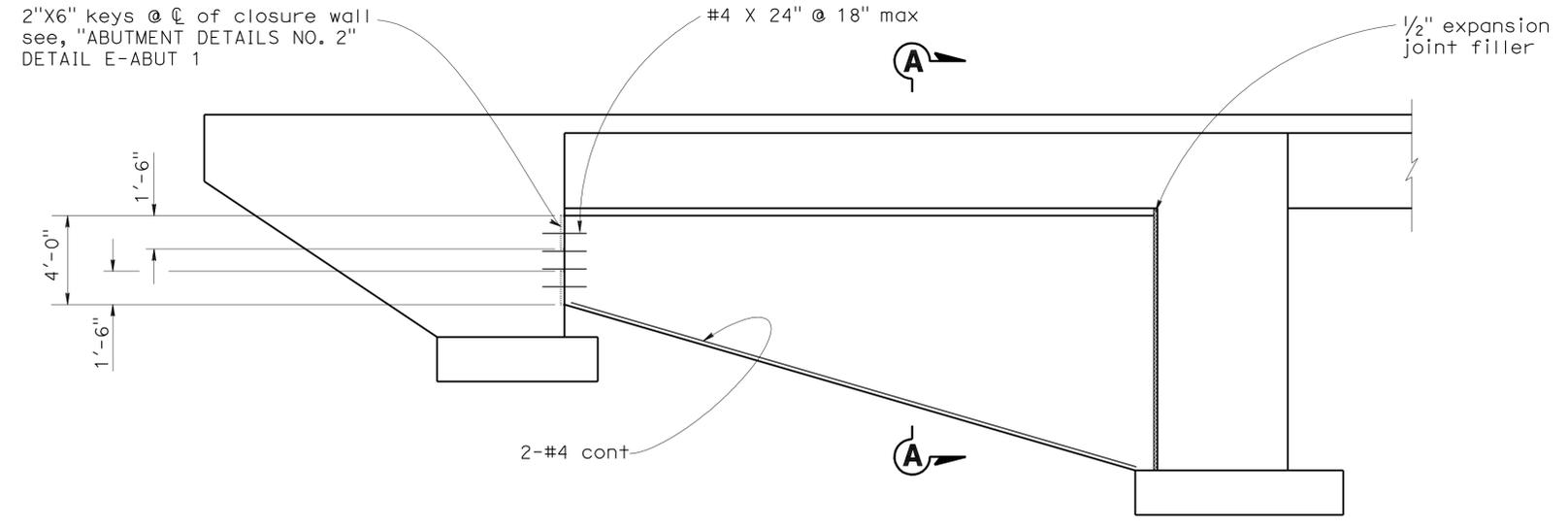
**BENT 4**

**DETAIL F**  
1/2" = 1'-0"

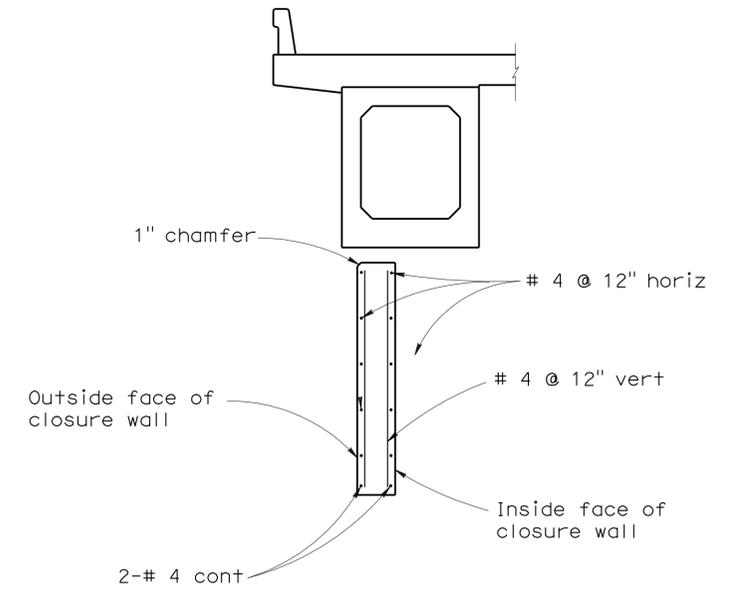


**JOINT PROTECTION DETAIL**

No Scale



**ELEVATION**  
1/4" = 1'



**SECTION A-A**  
1/2" = 1'

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

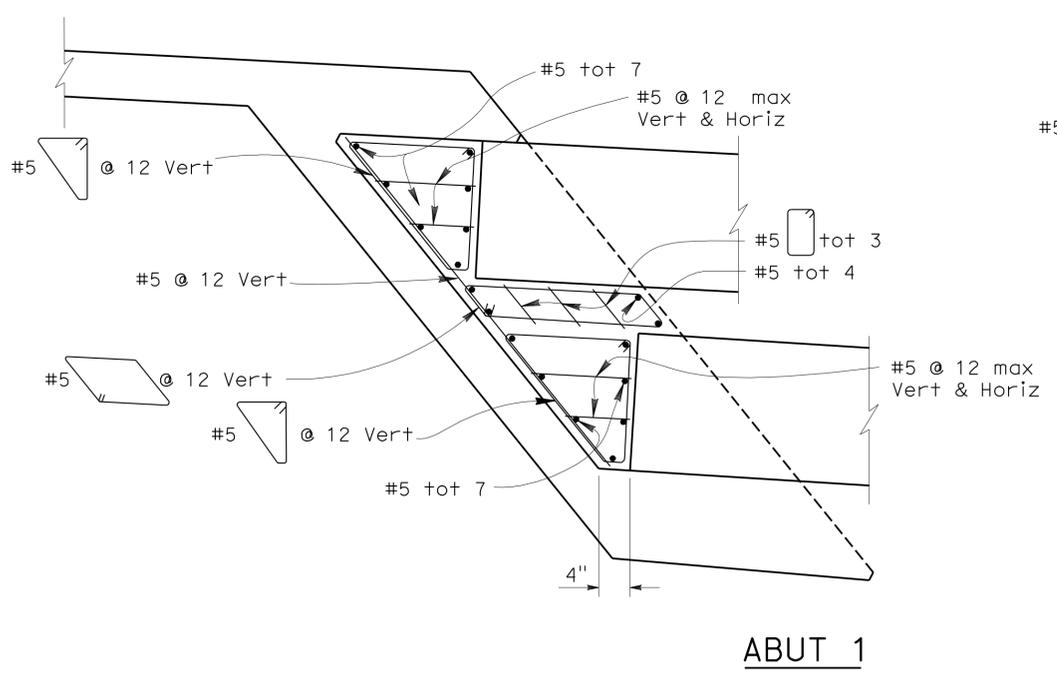
DESIGN BY J. TORRES DETAILS BY H. INIGUEZ QUANTITIES BY J. TORRES	CHECKED M. RAHMAN CHECKED J. TORRES CHECKED R. WANG	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 19</b>	BRIDGE NO. 55-0409	<b>DYER ROAD UC WIDENING</b> <b>ABUTMENT DETAILS NO. 1</b>	
				POST MILE 7.8		
				REVISION DATES 09-29-09 05-04-10 06-07-10 06-08-10 10-14-09 11-05-09 12-17-09 03-08-10 03-25-10		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				CU 269 EA 0G9601	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 5 OF 20

USERNAME => h1tenard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:53

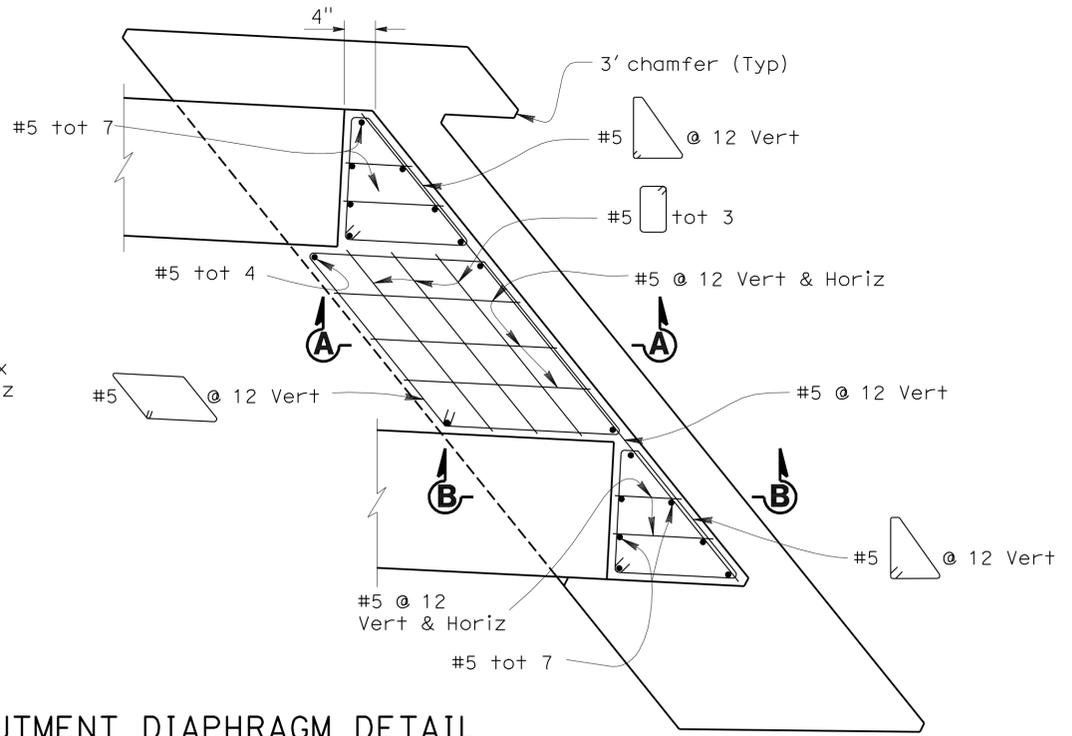
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	204	218

Juan Jones Jr. 06-14-2010  
 REGISTERED CIVIL ENGINEER DATE  
 9-27-10  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER
JUAN TORRES, JR.
No. 73048
Exp. 12/31/10
CIVIL
STATE OF CALIFORNIA

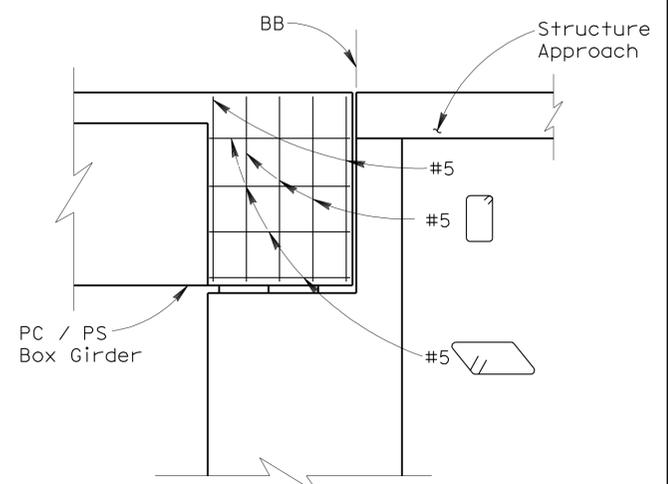


**ABUT 1**

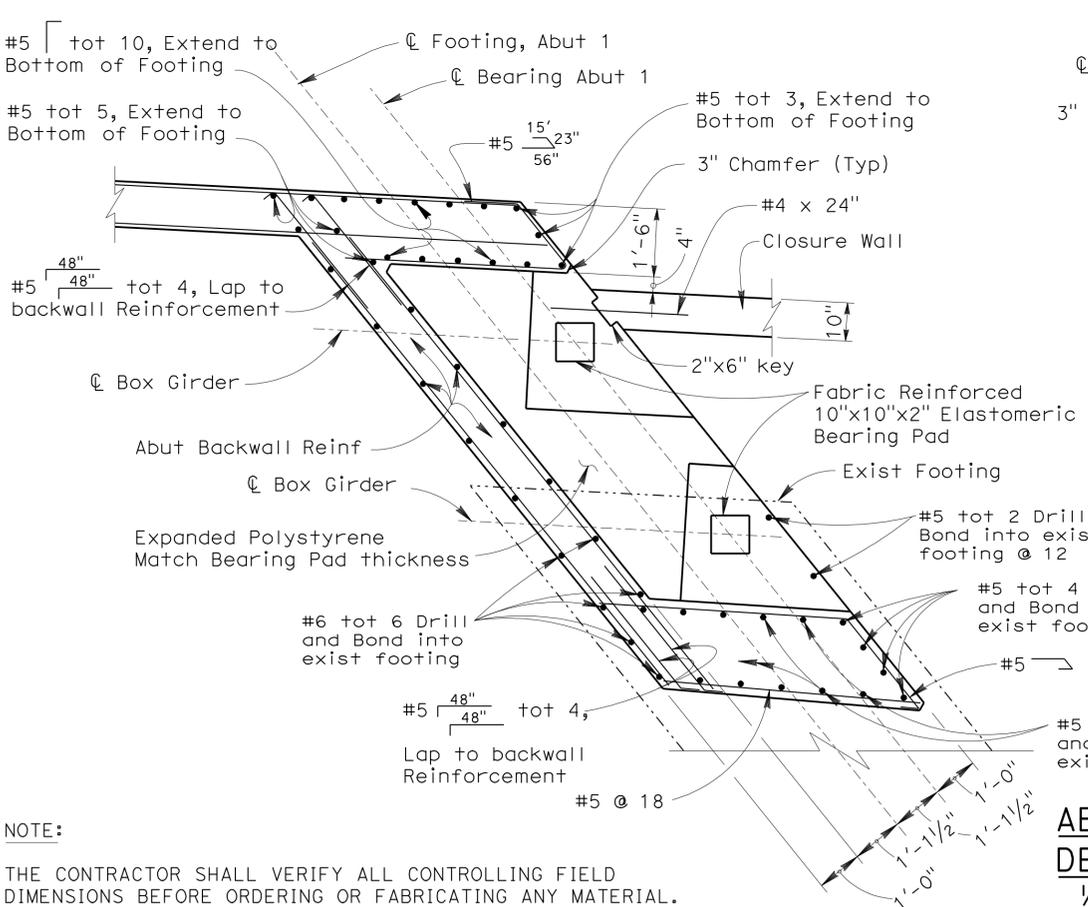


**ABUT 5**

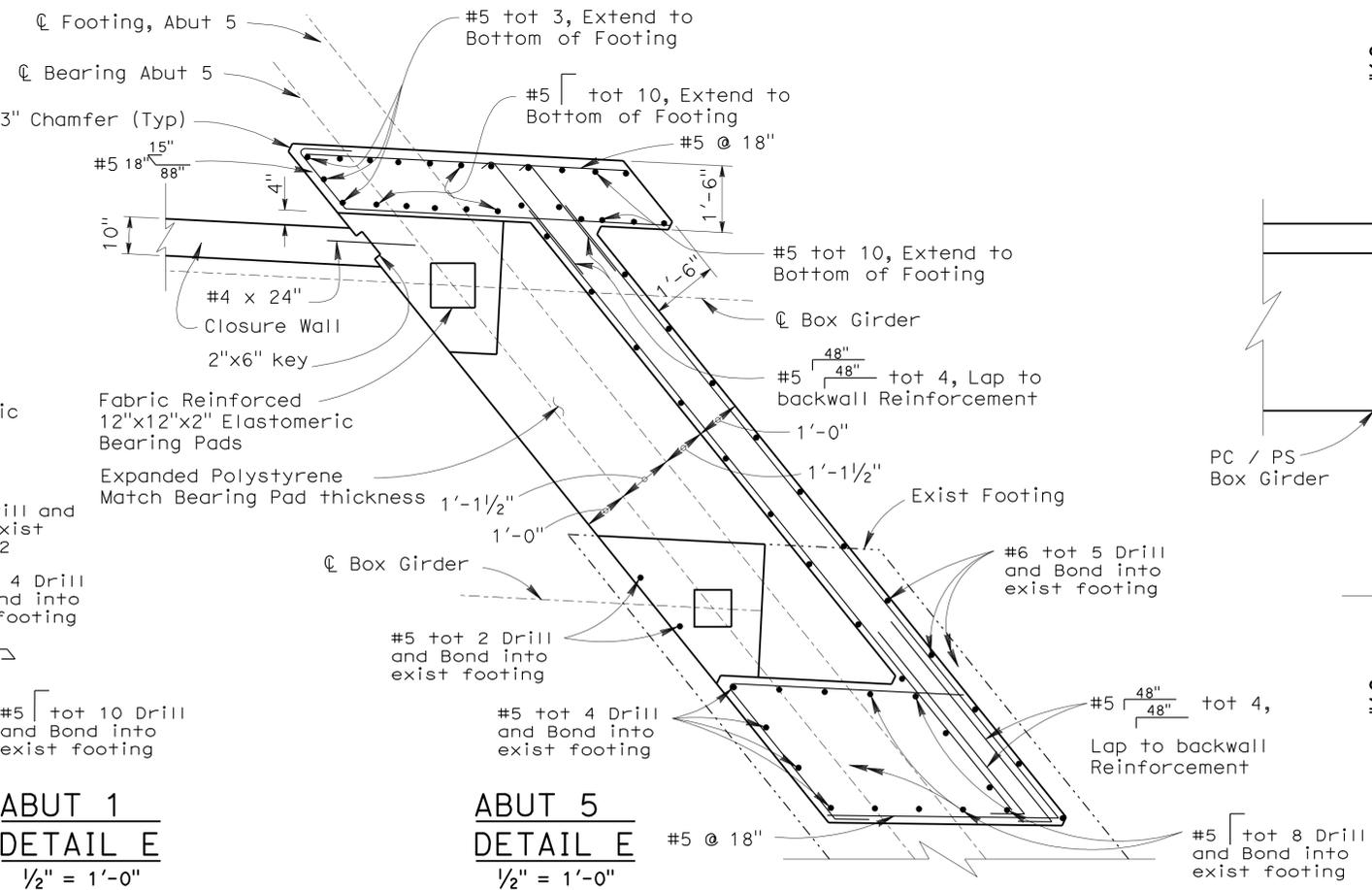
**ABUTMENT DIAPHRAGM DETAIL**  
1/2" = 1'-0"



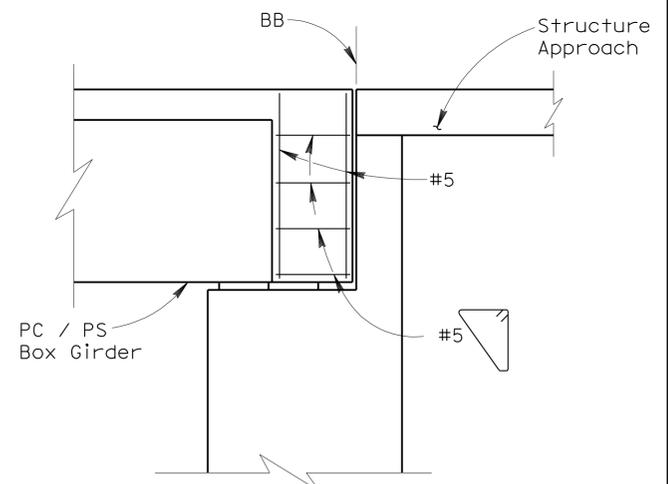
**SECTION A-A**  
1/2" = 1'-0"  
NOTE: Abut 1 and 5 similar



**ABUT 1  
DETAIL E**  
1/2" = 1'-0"



**ABUT 5  
DETAIL E**  
1/2" = 1'-0"



**SECTION B-B**  
1/2" = 1'-0"  
NOTE: Abut 1 and 5 similar

NOTE:  
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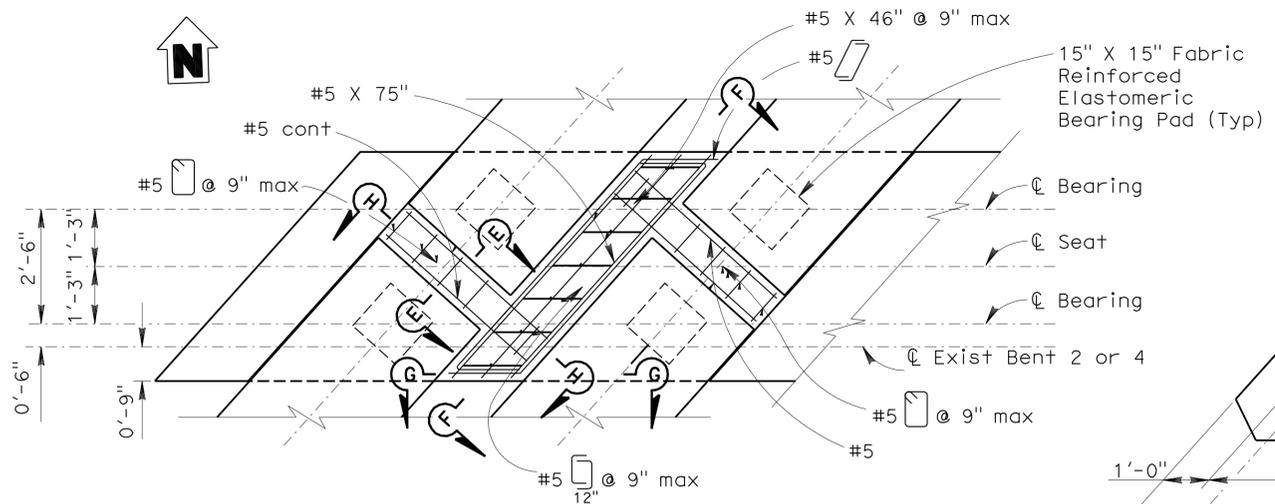
DESIGN	BY E. MERCADO	CHECKED R. WANG	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH 19</b>	BRIDGE NO.	55-0409	<b>DYER ROAD UC WIDENING</b> <b>ABUTMENT DETAILS NO. 2</b>
DETAILS	BY H. MAHBOOBI	CHECKED J. TORRES			POST MILE	7.8	
QUANTITIES	BY C. LEONG	CHECKED D. BALBAS					

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 269 EA 0G9601 DISREGARD PRINTS BEARING EARLIER REVISION DATES

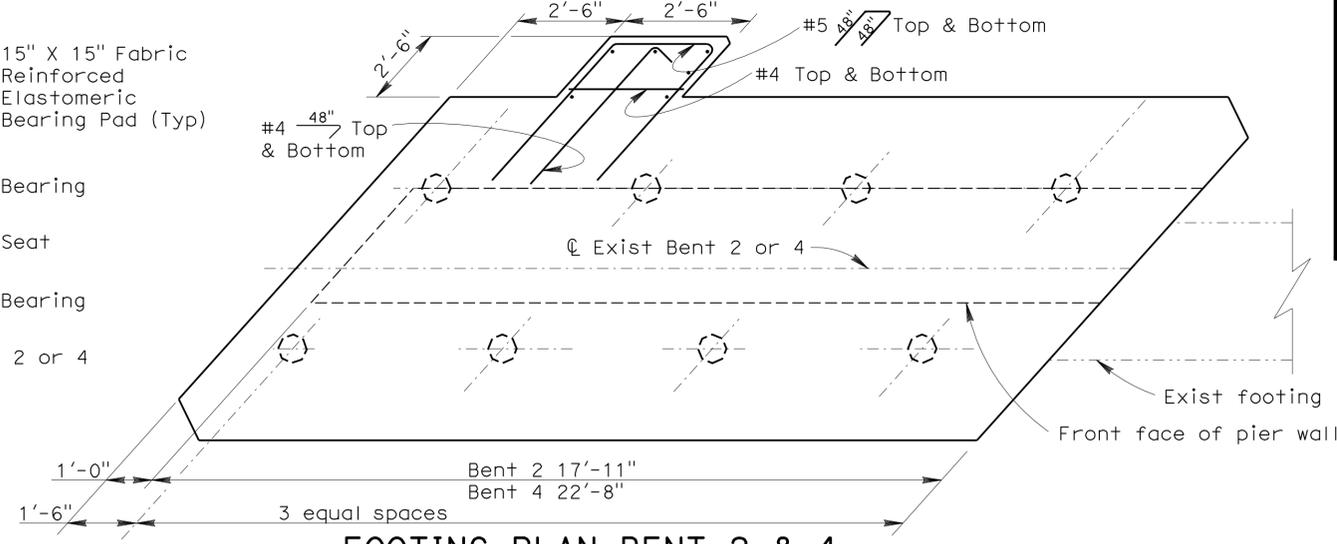
REVISION DATES	11-09-09	11-24-09	12-17-09	03-10-10	05-28-10	05-28-10	05-04-10	06-07-10	06-08-10
SHEET	6								
OF	20								

FILE => 55-0409-f-adet\_02.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	205	218
Juan Jones Jr. 06-14-2010 REGISTERED CIVIL ENGINEER DATE					
9-27-10 PLANS APPROVAL DATE					
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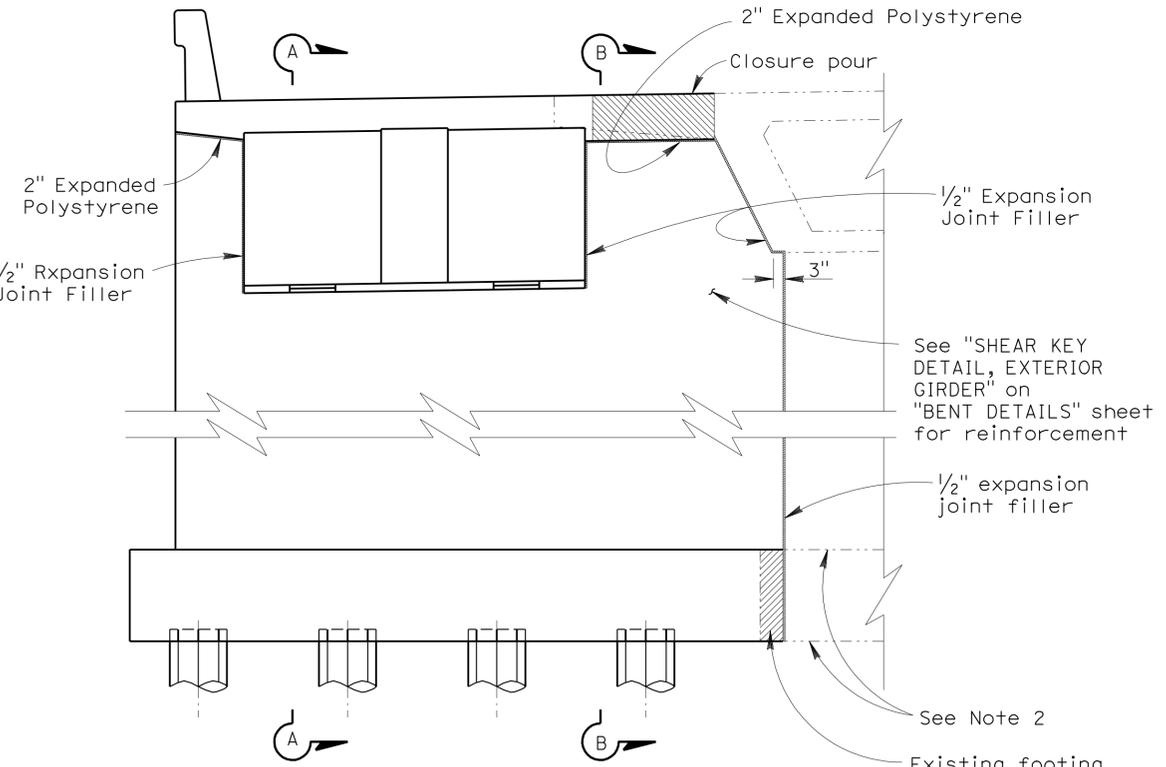


**PLAN - BENT 2 & 4**  
1/2" = 1'-0"

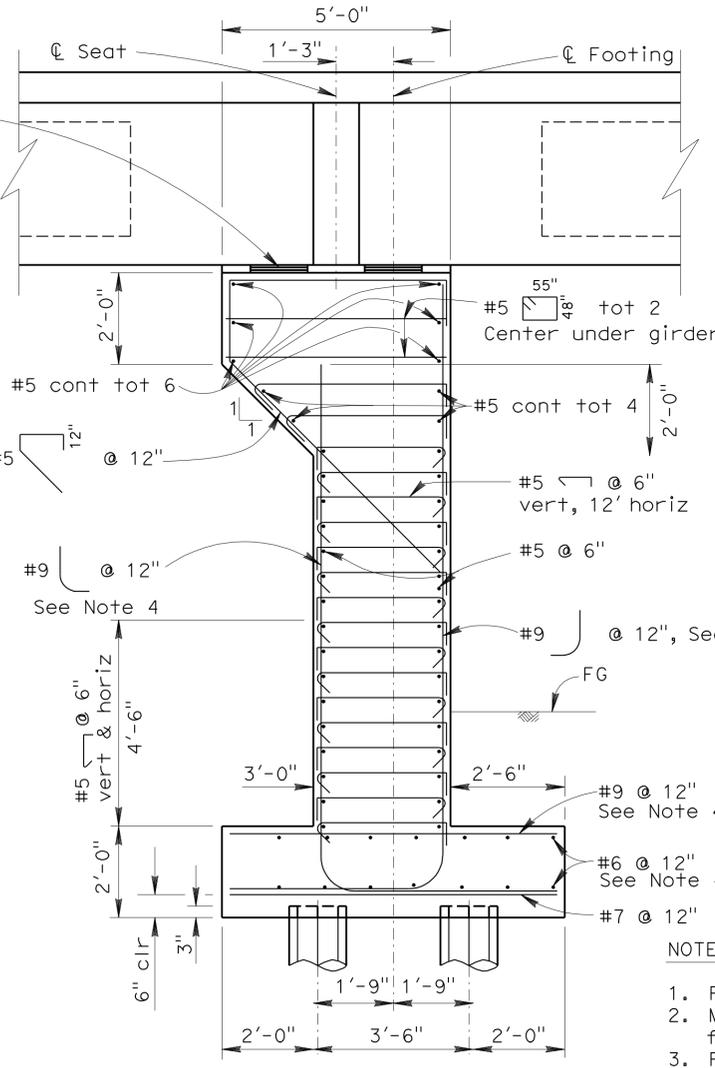


**FOOTING PLAN BENT 2 & 4**  
1/4" = 1'-0"

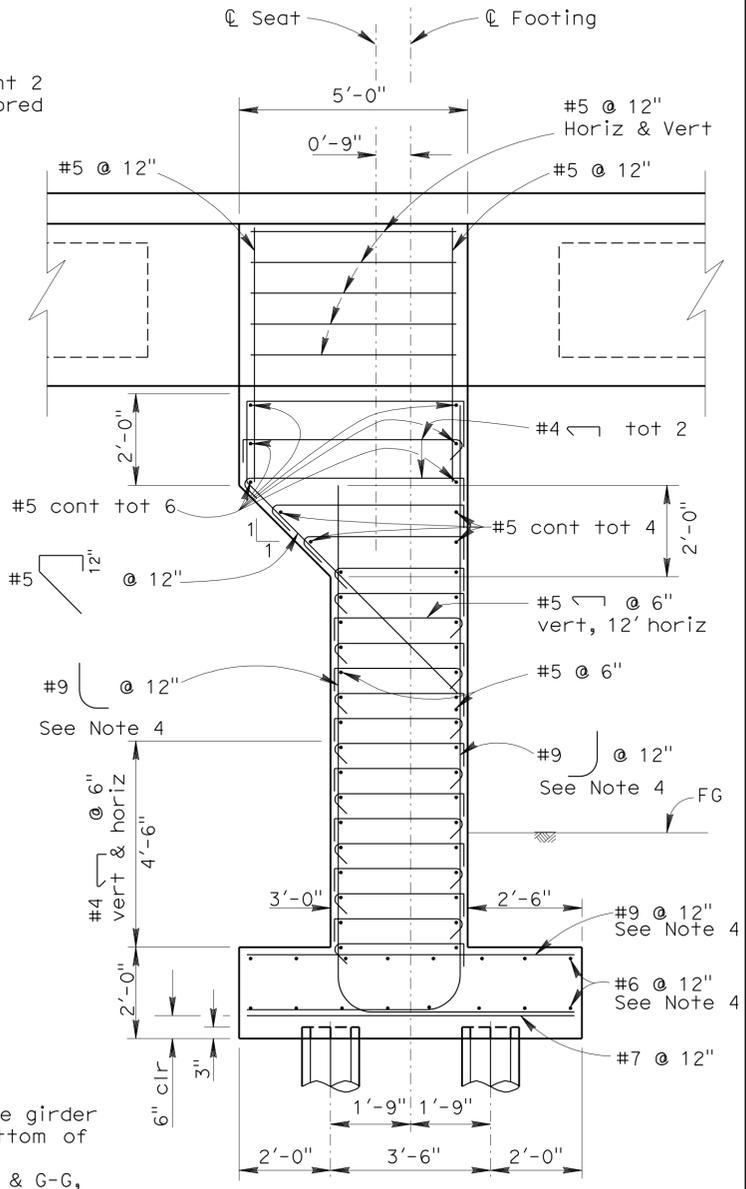
\* Bent 4 shown. Bent 2 similar but mirrored



**ELEVATION - BENT 2 & 4**  
1/2" = 1'-0"



**SECTION A-A**  
1/2" = 1'-0"



**SECTION B-B**  
1/2" = 1'-0"

- NOTES:**
1. Field bend #16 inside @ the girder
  2. Match existing top and bottom of footing elevation
  3. For Sections D-D, E-E, F-F & G-G, see "BENT DETAILS" sheet
  4. Footing reinforcement parallel to edge of deck

**NOTE:**  
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DESIGN	BY J. TORRES	CHECKED M. RAHMAN
DETAILS	BY H. INIGUEZ/H. BARBHAIYA	CHECKED J. TORRES
QUANTITIES	BY J. TORRES	CHECKED R. WANG

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 19

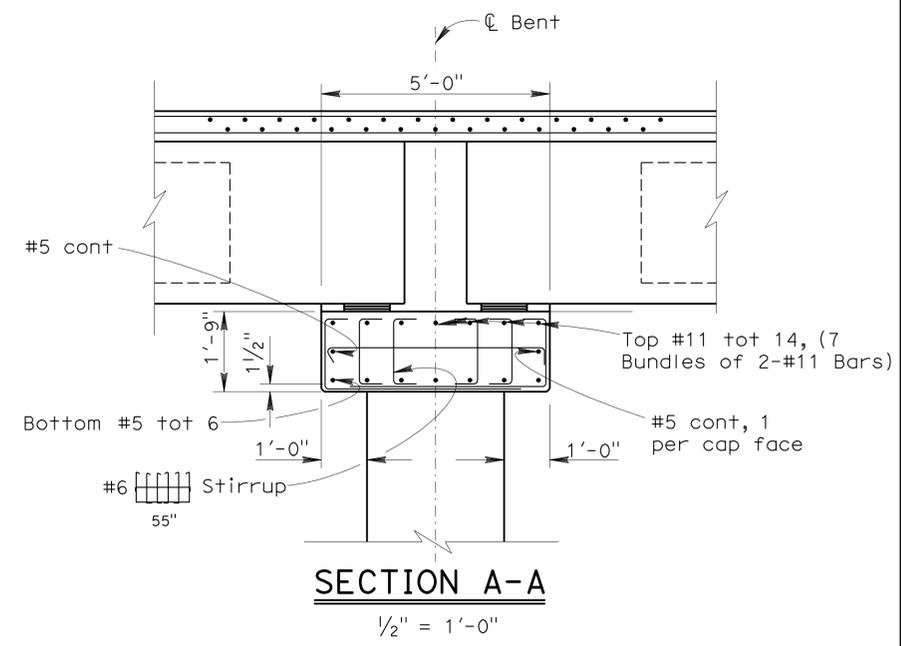
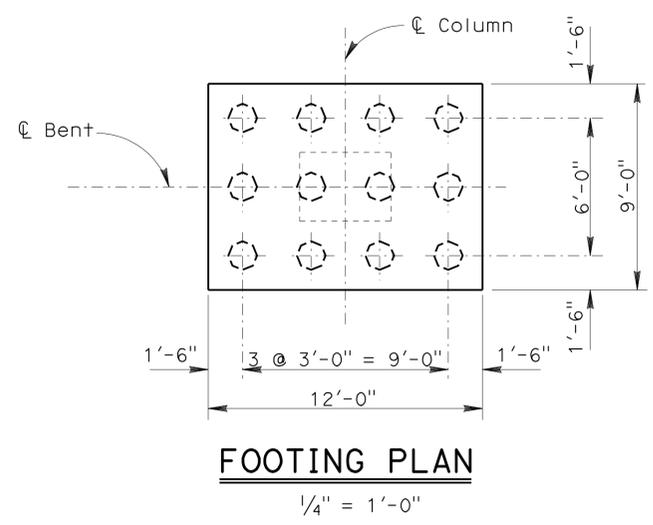
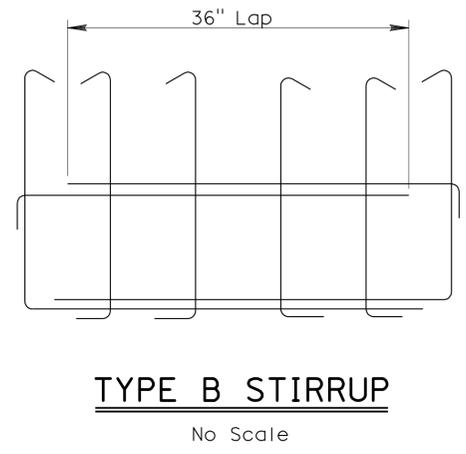
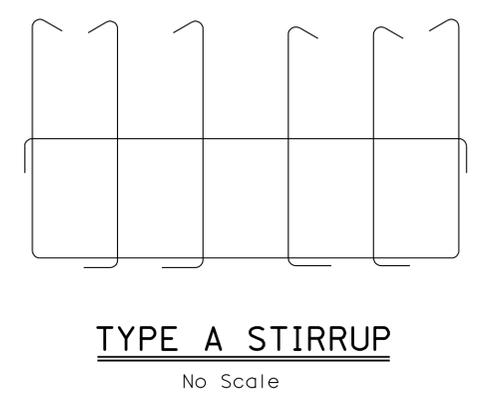
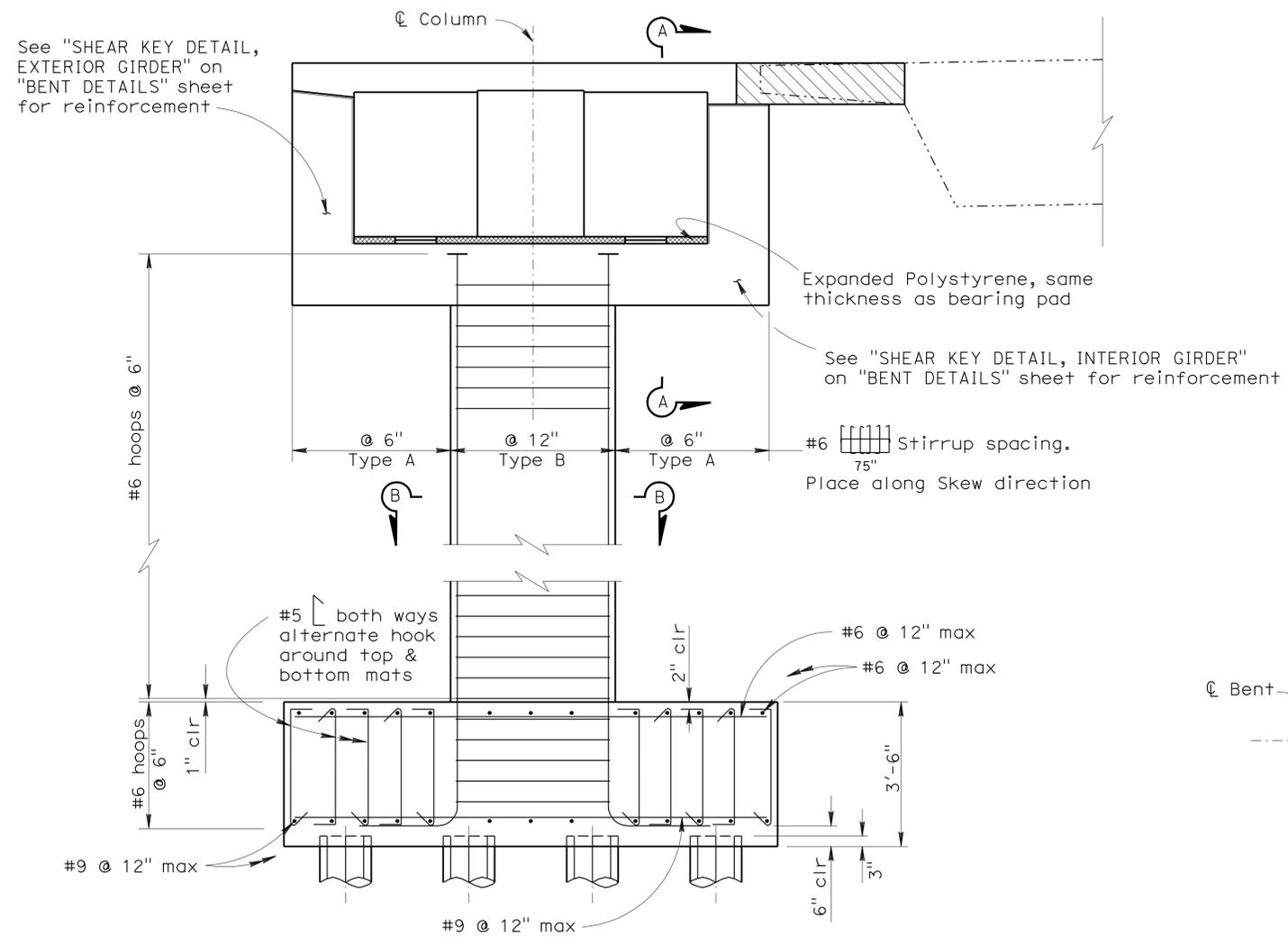
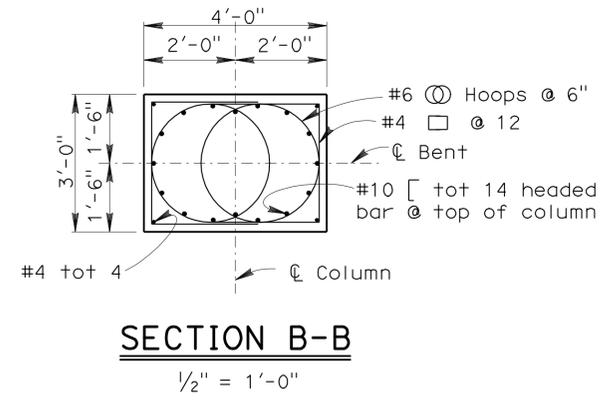
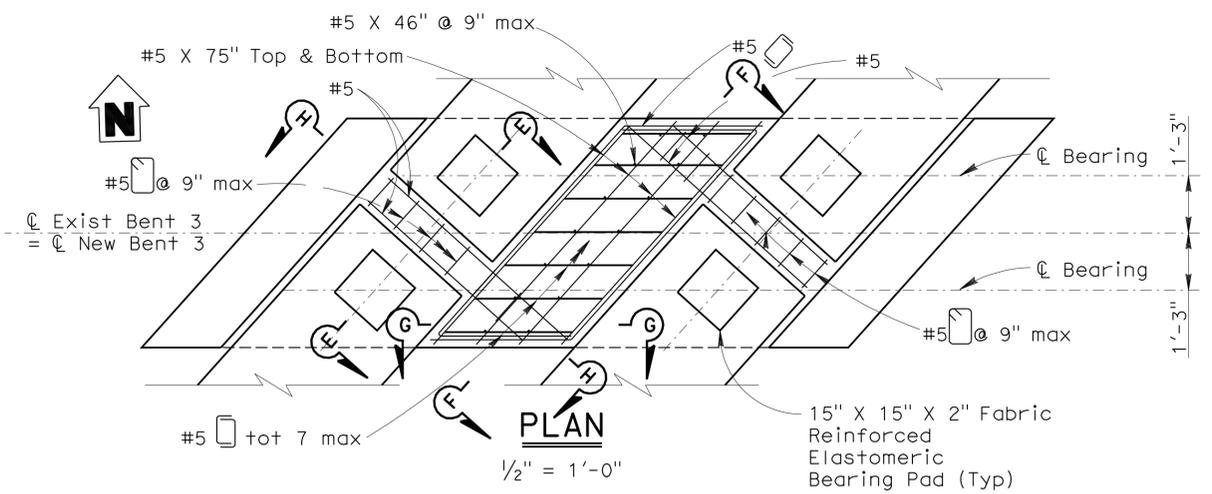
BRIDGE NO.	55-0409
POST MILE	7.8

DYER ROAD UC WIDENING  
BENTS 2 AND 4 LAYOUT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	206	218

Juan Jones Jr. 06-14-2010  
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DESIGN	BY J. TORRES	CHECKED R. WANG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 19	BRIDGE NO.	DYER ROAD UC WIDENING BENT 3 LAYOUT																		
	DETAILS BY H. INIGUEZ/H. BARBHAIYA	CHECKED J. TORRES			55-0409																			
	QUANTITIES BY J. TORRES	CHECKED R. WANG			POST MILE 7.8																			
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)				CU 269 EA 0G9601	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <th colspan="7">REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>9-14-09</td> <td>06-07-10</td> <td>06-08-10</td> <td>11-03-09</td> <td>11-04-09</td> <td>11-24-09</td> <td>03-24-10</td> <td>8</td> <td>20</td> </tr> </table>	REVISION DATES							SHEET	OF	9-14-09	06-07-10	06-08-10	11-03-09	11-04-09	11-24-09	03-24-10	8	20
REVISION DATES							SHEET	OF																
9-14-09	06-07-10	06-08-10	11-03-09	11-04-09	11-24-09	03-24-10	8	20																

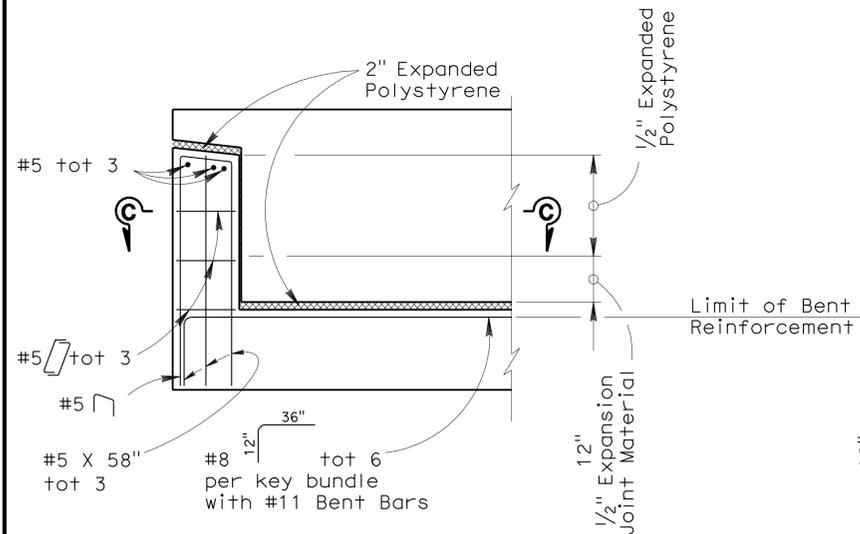
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	207	218

*Juan Torres Jr.* 06-14-2010  
 REGISTERED CIVIL ENGINEER DATE

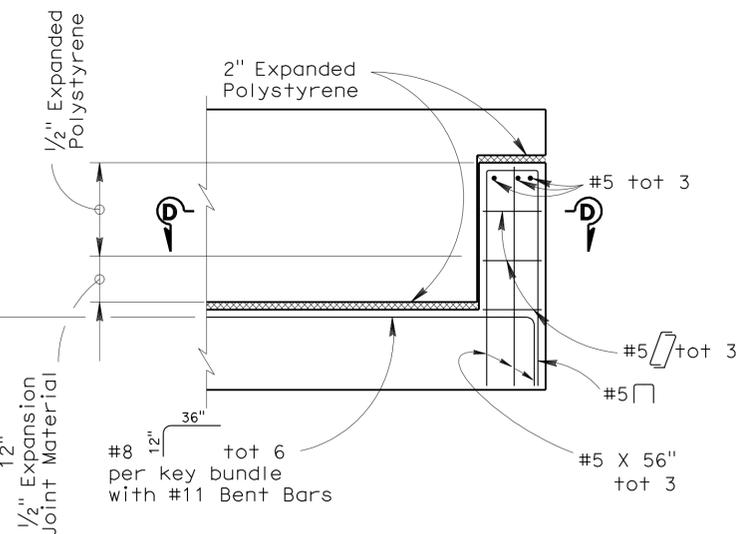
9-27-10  
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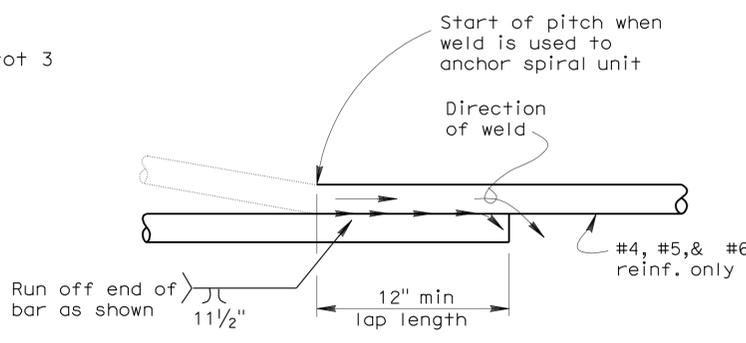
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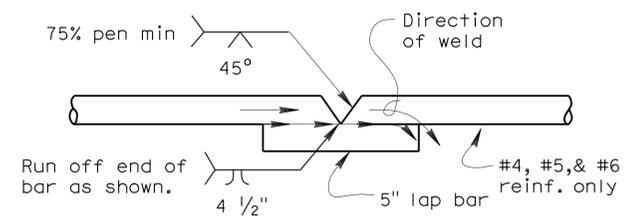
**SHEAR KEY DETAIL EXTERIOR GIRDER**  
 1/2" = 1'-0"



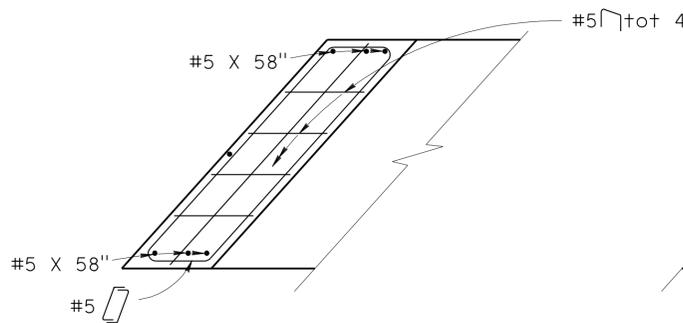
**SHEAR KEY DETAIL INTERIOR GIRDER**  
 1/2" = 1'-0"



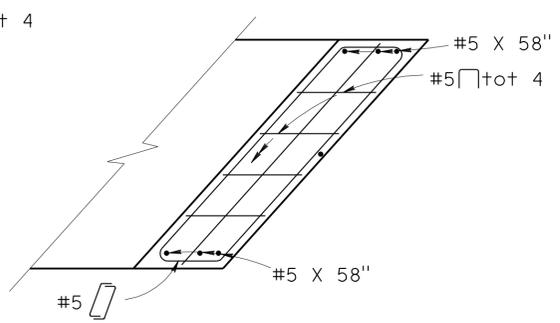
Note: Flare weld to be made in direction shown.  
**WELDED LAP SPLICE AND ANCHOR**



1. Butt weld to be made first.  
 2. Butt weld to be made in flat or horizontal position.  
 3. Lap bar to be centered on splice.  
 4. Flare weld to be made in direction shown.  
 5. Lap bar equal size to spiral bar.  
**VEE GROOVE WELDED SPLICE**

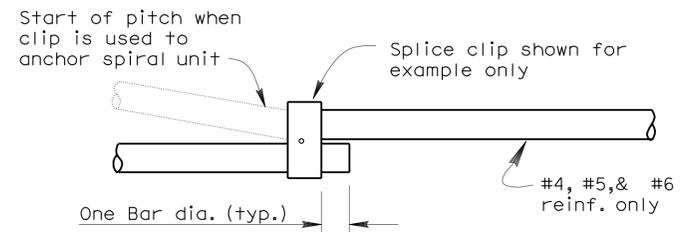


**SECTION C-C**  
 1/2" = 1'-0"

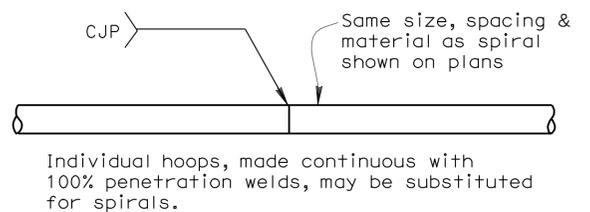


**SECTION D-D**  
 1/2" = 1'-0"

NOTE:  
 Sections E-E, F-F, G-G and H-H similar for Bent 3

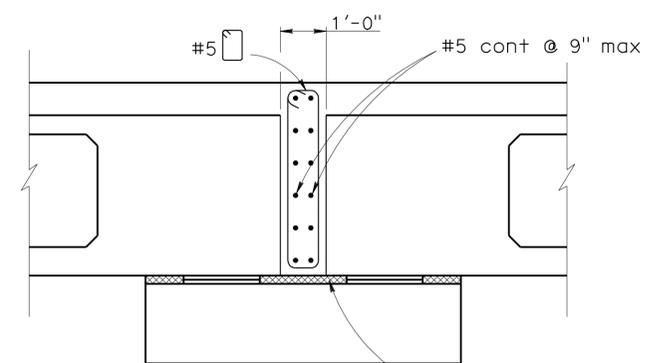


**MECHANICAL LAP SPLICE AND ANCHOR**

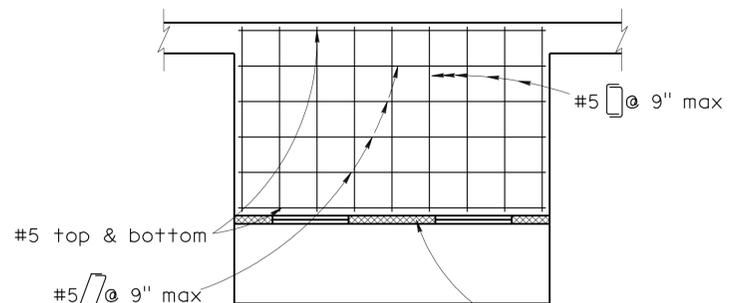


**BUTT WELDED CONTINUOUS HOOP**

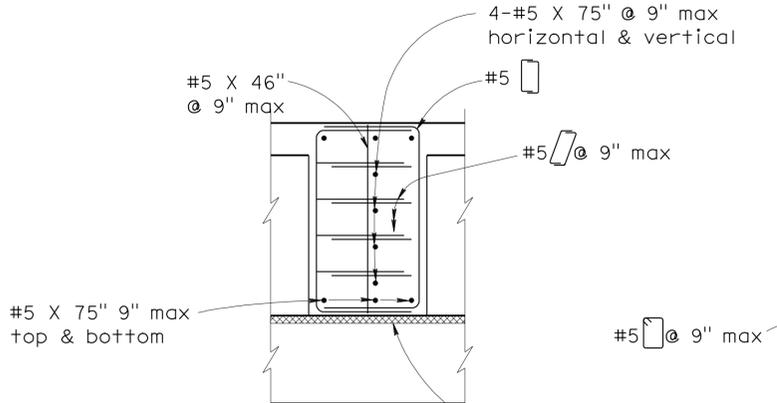
**BAR SPIRAL SPLICE & SPIRAL ANCHOR AND HOOP DETAIL**



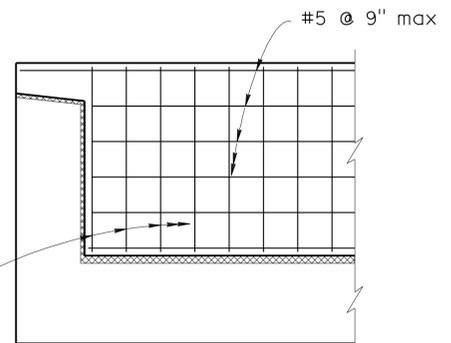
**SECTION E-E**  
 1/2" = 1'-0"



**SECTION F-F**  
 1/2" = 1'-0"



**SECTION G-G**  
 1/2" = 1'-0"



**SECTION H-H**  
 1/2" = 1'-0"

NOTE:  
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DESIGN	BY J. TORRES	CHECKED M. RAHMAN
DETAILS	BY H. INIGUEZ	CHECKED J. TORRES
QUANTITIES	BY J. TORRES	CHECKED M. RAHMAN

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 STRUCTURE DESIGN  
 DESIGN BRANCH 19

BRIDGE NO.	55-0409
POST MILE	7.8

DYER ROAD UC WIDENING  
 BENT DETAILS

REVISION DATES		SHEET	OF
10-14-09	10-21-09	9	20

USERNAME => hrlengard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:53



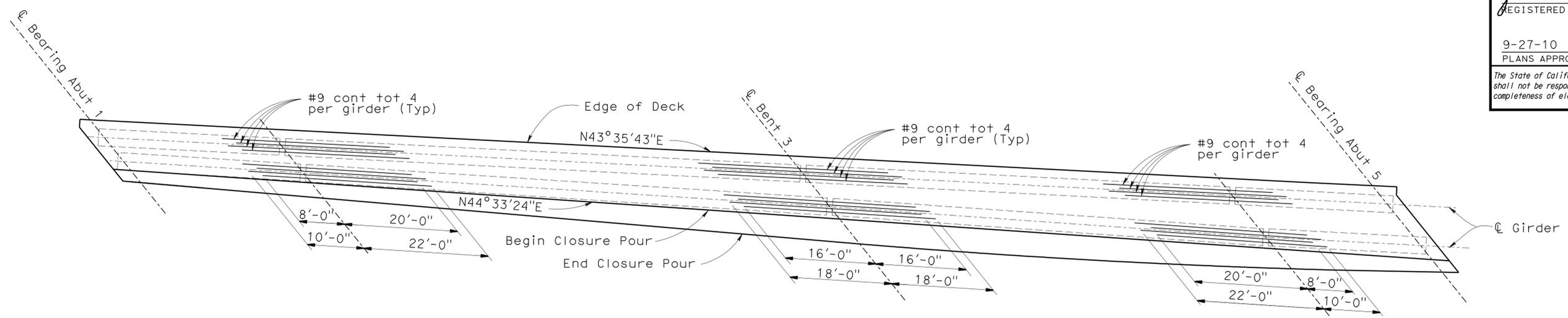
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	209	218

*Juan Jones Jr.* 06-14-2010  
REGISTERED CIVIL ENGINEER DATE

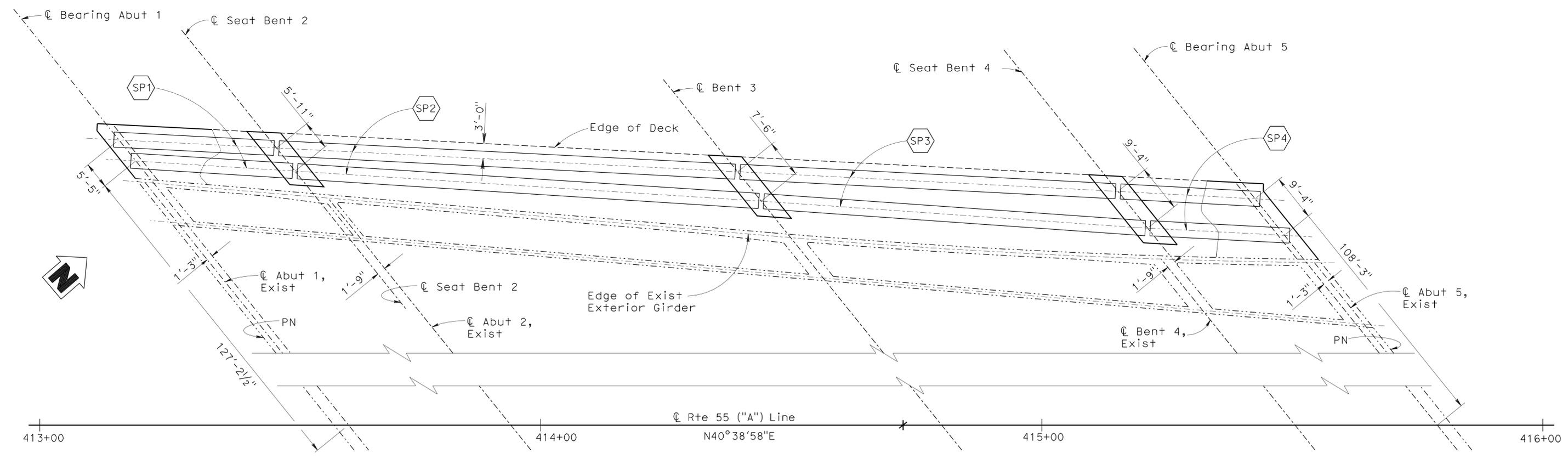
9-27-10  
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STATE OF CALIFORNIA

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**TOP GIRDER REINFORCEMENT**  
1" = 10'



**GIRDER LAYOUT**  
1" = 10'

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

SP Indicates Girder location

DESIGN	BY E. MERCADO	CHECKED M. RAHMAN
DETAILS	BY H. MAHBOOBI	CHECKED J. TORRES
QUANTITIES	BY J. TORRES	CHECKED M. RAHMAN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 19

BRIDGE NO.	55-0409
POST MILE	7.8

DYER ROAD UC WIDENING  
**GIRDER LAYOUT & REINFORCEMENT**



DISREGARD PRINTS BEARING EARLIER REVISION DATES	08-24-09	10-18-09	03-11-10	03-26-10	05-04-10	06-07-10	06-08-10
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USERNAME => hrlengard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:54

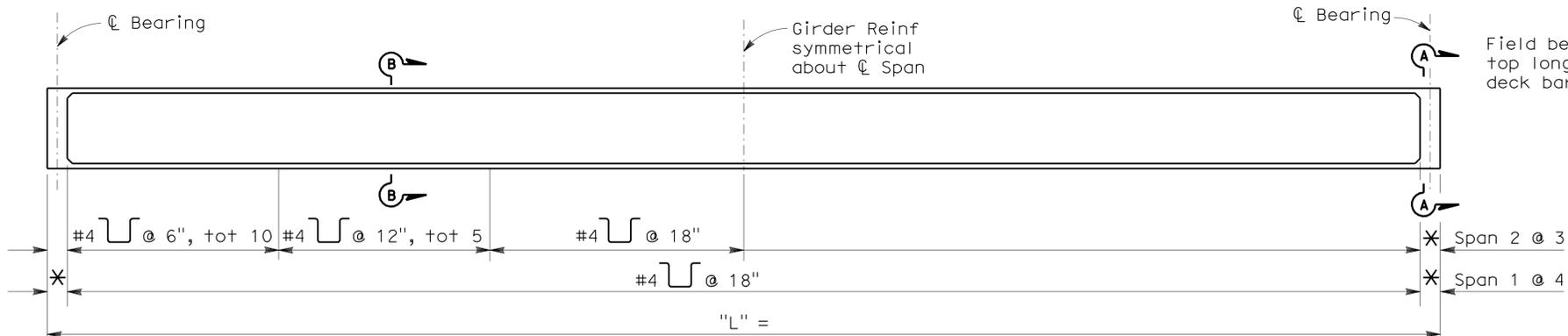
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12	Ora	55	R7.8/R9.4	210	218

*Juan Torres Jr.* 06-14-2010  
REGISTERED CIVIL ENGINEER DATE

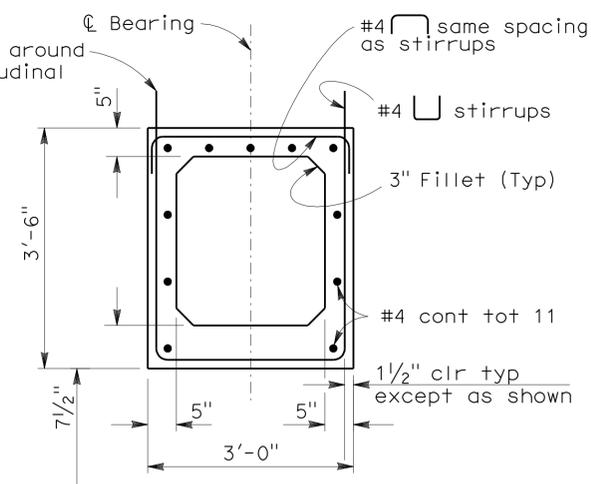
9-27-10  
PLANS APPROVAL DATE

*JUAN TORRES, JR.*  
No. 73048  
Exp. 12-31-10  
CIVIL  
STATE OF CALIFORNIA

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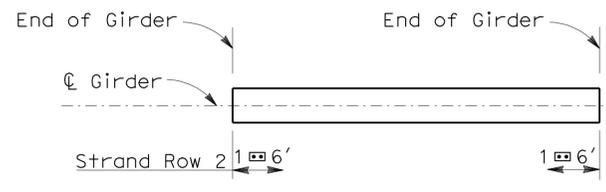


**ELEVATION**  
No Scale

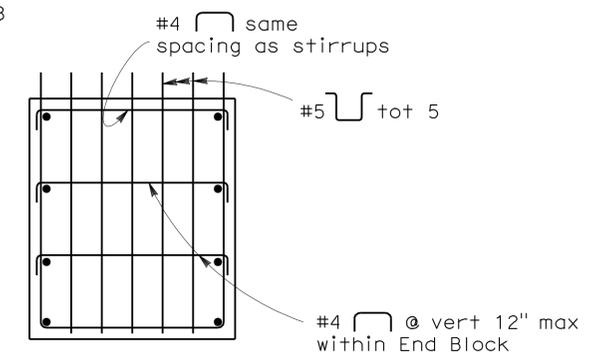


**SECTION B-B**  
3/4" = 1'

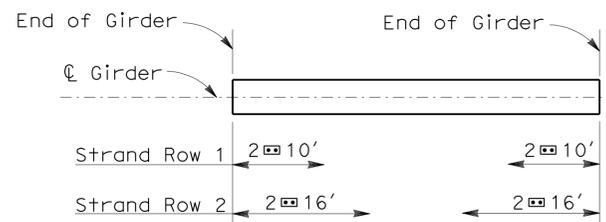
	Span 1	Span 2	Span 3	Span 4
Top Strands	2	2	2	2
Row 1		14	2	2
Row 2	6	16	16	6
<b>TOTAL</b>	<b>8</b>	<b>32</b>	<b>20</b>	<b>10</b>



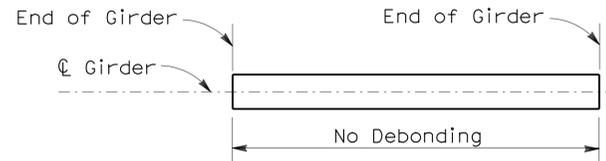
**GIRDER SPAN 3 DEBONDING DIAGRAM**  
No Scale



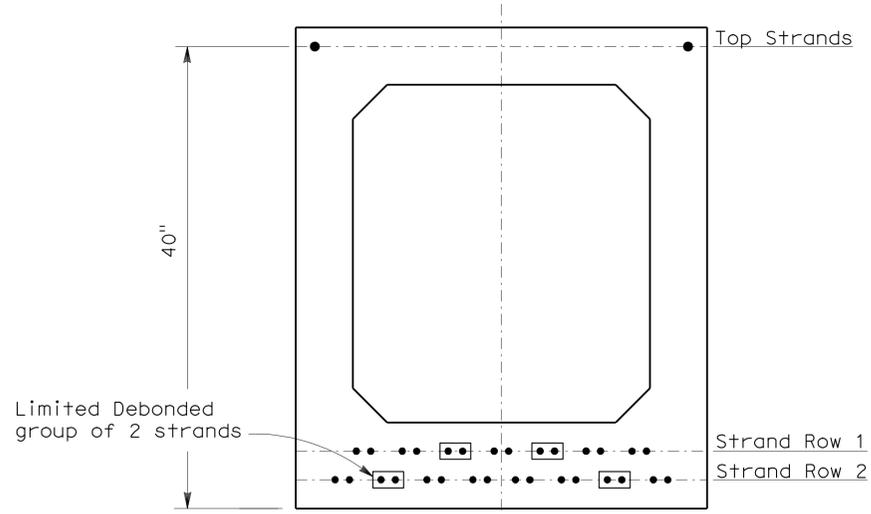
**SECTION A-A**  
3/4" = 1'



**GIRDER SPAN 2 DEBONDING DIAGRAM**  
No Scale



**GIRDER SPAN 1 & 4 DEBONDING DIAGRAM**  
No Scale



**CLEARANCES FOR PRETENSION STRANDS**  
No Scale

1. Strands shall be horizontally bundled into groups of 2 separated at the ends.
2. "S" is measured between centers of adjacent strand sets.
3. The minimum distance "S" between grasps or individual strands is 2" for 3/16" strands.
4. Approval of Engineer is required for deviation.
5. Corse broom finish on tops of girders.

☐ Denotes Debonded strands at ends

# of Prestressed Strands LL, 0.6" @ 270 K per girder  
**PRESTRESSING NOTES (Pretension)**

Pf = Working Force: The force required at center of span after all losses.

Concrete Strength: f'ci is at time of initial. f'c is at 28 days, psi.

Deflection Components: Informational - to be used in setting screed line elevations.

Screed line elevations for deck concrete will be determined by the Engineer.

Use 0.6" strands only.

Girder Location	at It = left rt = right	L = Length through Q Girder	Pretension Pf (Kips)	Concrete f'ci (psi)	Strength f'c (psi)	Deflection @ midspan in Inches	Girder Quantities
Span 1	It & rt	32'-1"	355	5000	6000	0.01	2
Span 2	It	91'-2"	1460	5000	6000	1.00	1
	rt	92'-3"	1460	5000	6000	1.00	1
Span 3	It	75'-0"	790	5000	6000	0.85	1
	rt	76'-3"	790	5000	6000	0.85	1
Span 4	It & rt	27'-10"	355	5000	6000	0.05	2

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

DESIGN	BY E. MERCADO	CHECKED M. RAHMAN
DETAILS	BY H. INIGUEZ	CHECKED J. TORRES
QUANTITIES	BY J. TORRES	CHECKED M. RAHMAN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

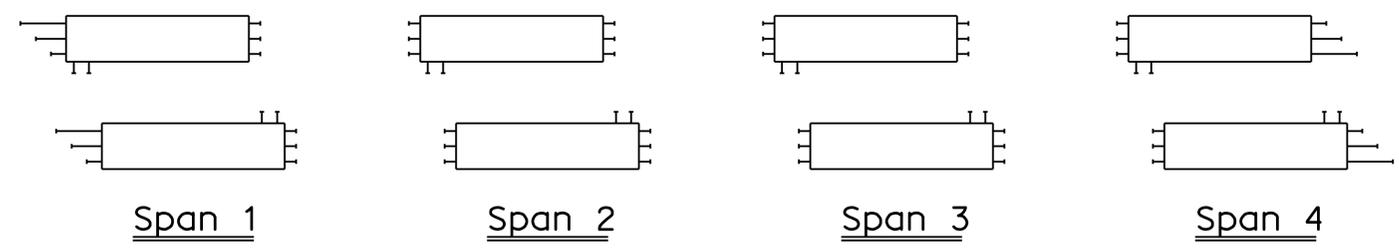
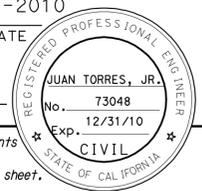
DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
**DESIGN BRANCH 19**

BRIDGE NO.	55-0409
POST MILE	7.8

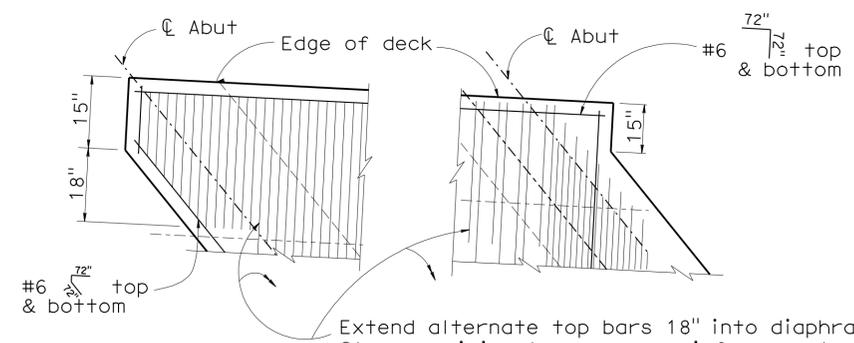
**DYER ROAD UC WIDENING  
GIRDER DETAILS NO. 1**

USERNAME => hrlernard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:54

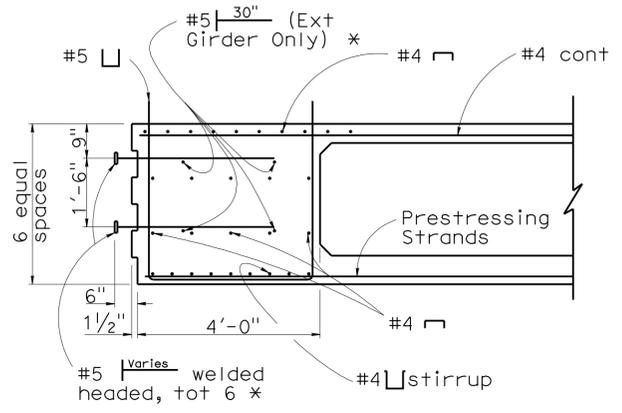
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	211	218
Juan Jones Jr. 06-14-2010 REGISTERED CIVIL ENGINEER DATE					
9-27-10 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					



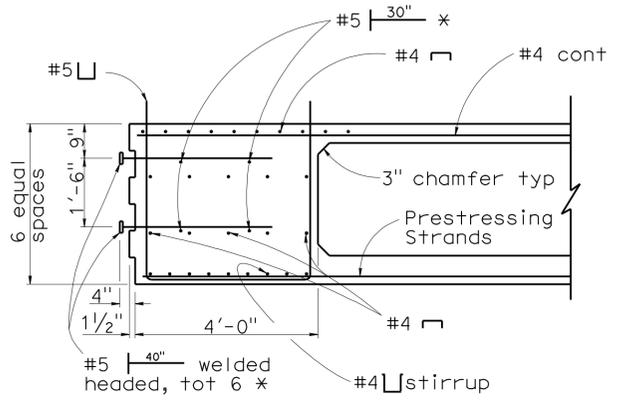
**HEADED BAR REINFORCEMENT PLAN**  
NO SCALE



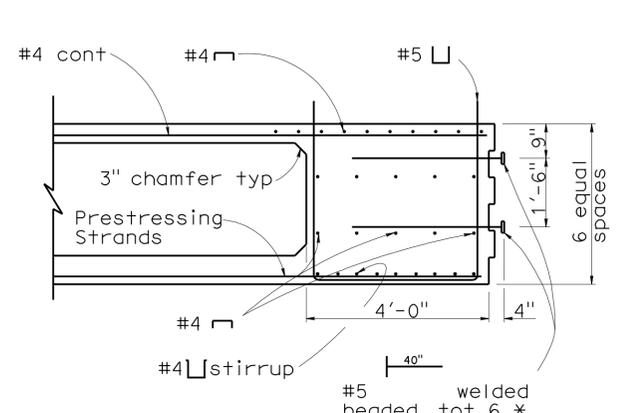
**DETAIL B** NO SCALE  
**DETAIL C** NO SCALE



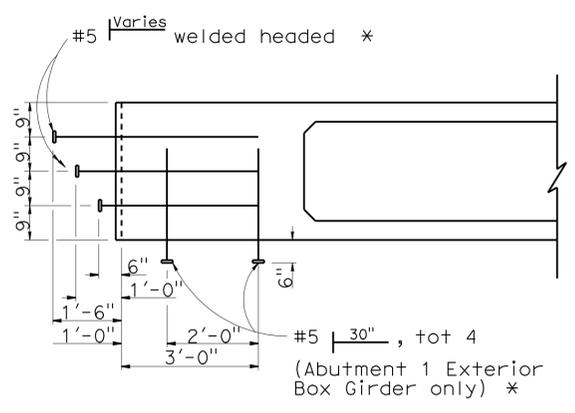
**GIRDER END DIAPHRAGM ABUTMENT 1 ELEVATION**  
1/2" = 1'-0"



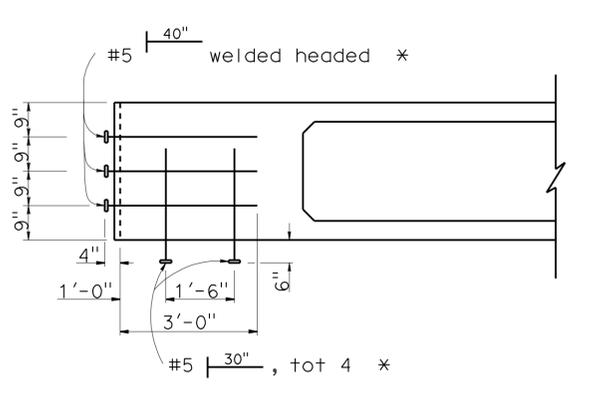
**GIRDER END DIAPHRAGM TYPICAL ELEVATION**  
1/2" = 1'-0"



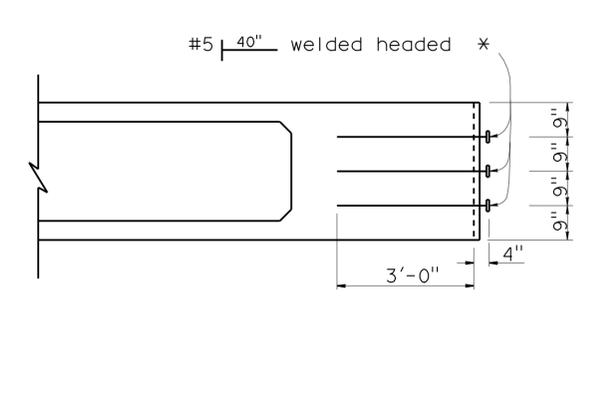
**GIRDER END DIAPHRAGM ABUTMENT 5 ELEVATION**  
1/2" = 1'-0"



**GIRDER END DIAPHRAGM ABUTMENT 1 PLAN**  
1/2" = 1'-0"



**GIRDER END DIAPHRAGM TYPICAL PLAN**  
1/2" = 1'-0"



**GIRDER END DIAPHRAGM ABUTMENT 5 PLAN**  
1/2" = 1'-0"

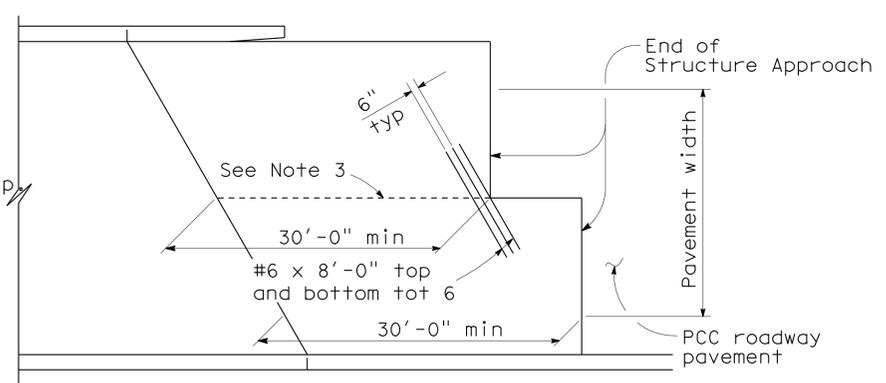
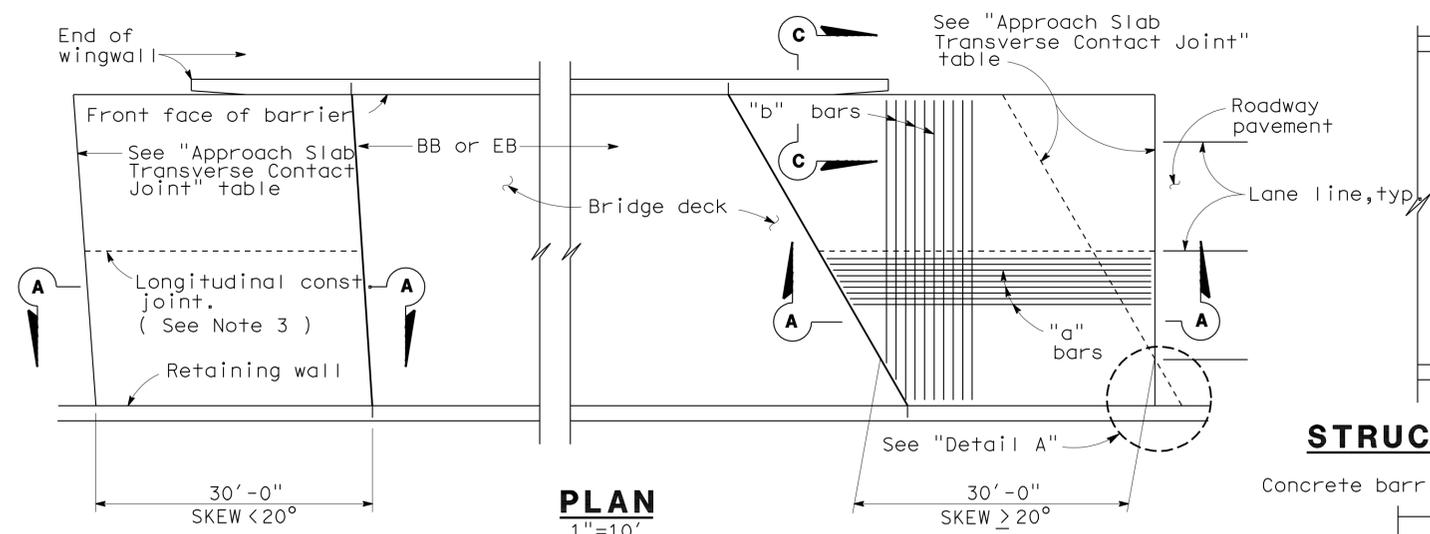
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	DESIGN	BY J. TORRES	CHECKED M. RAHMAN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH <b>19</b>	BRIDGE NO.	55-0409	DYER ROAD UC WIDENING GIRDER DETAILS NO. 2			
	DETAILS	BY H. BARBHAIIYA	CHECKED J. TORRES			POST MILE	7.8				
	QUANTITIES	BY J. TORRES	CHECKED M. RAHMAN			CU 269 EA 0G9601	REVISION DATES		11-02-09 11-03-09 11-24-09 03-10-10 05-26-10 05-04-10 06-07-10 06-08-10		
								SHEET	13	OF	20

USERNAME => h1tenard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:54

DIST.	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	212	218

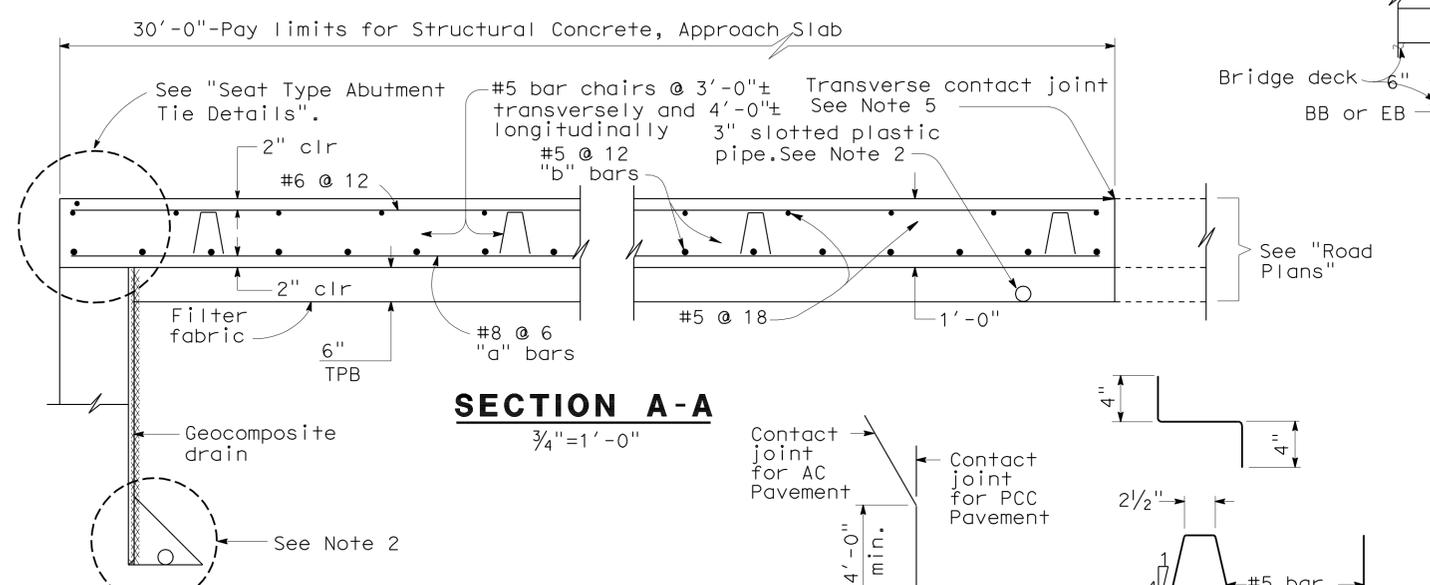
*Juan Torres Jr.*  
REGISTERED ENGINEER CIVIL  
No. 73048  
Exp. 12/31/10  
CIVIL  
STATE OF CALIFORNIA

9-27-10  
PLANS APPROVAL DATE  
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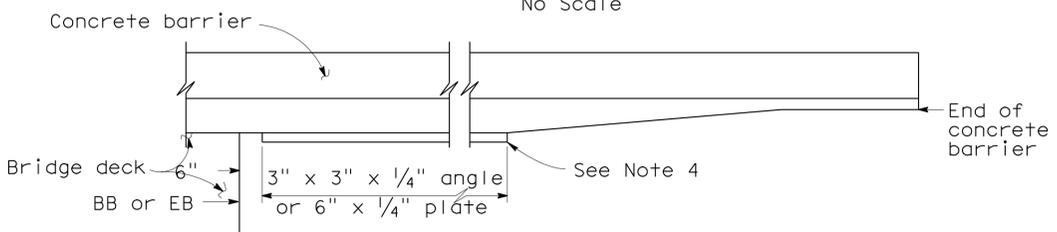


**STRUCTURE APPROACH - END STAGGER DETAIL**

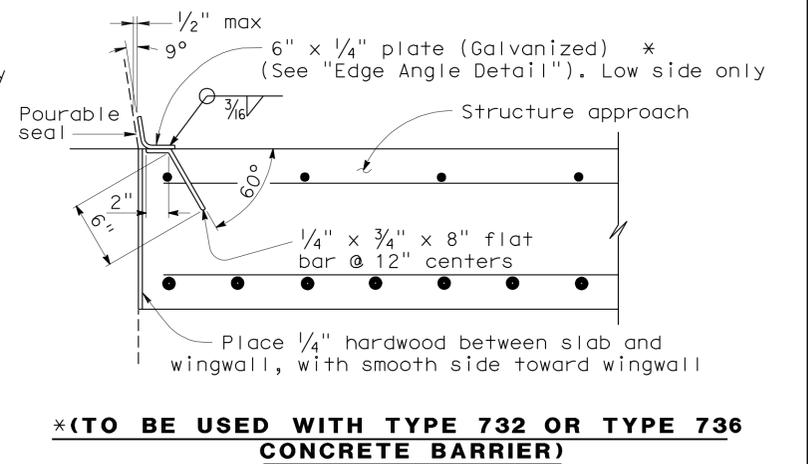
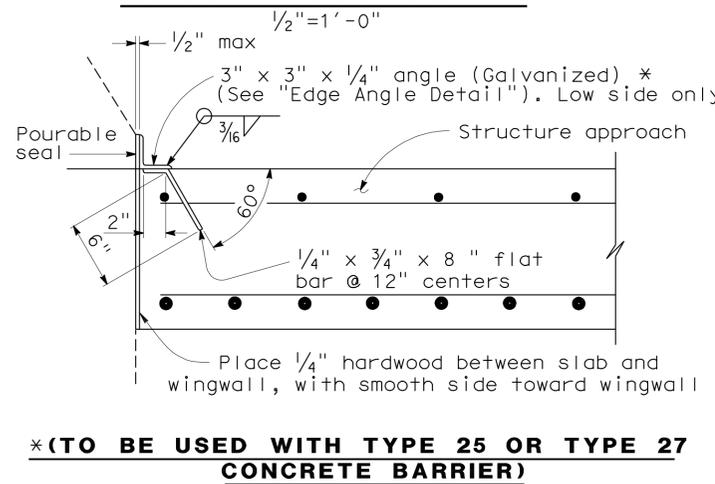
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	Parallel to face of paving notch	Parallel to face of paving notch
20° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart.
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line.



**SECTION A-A**

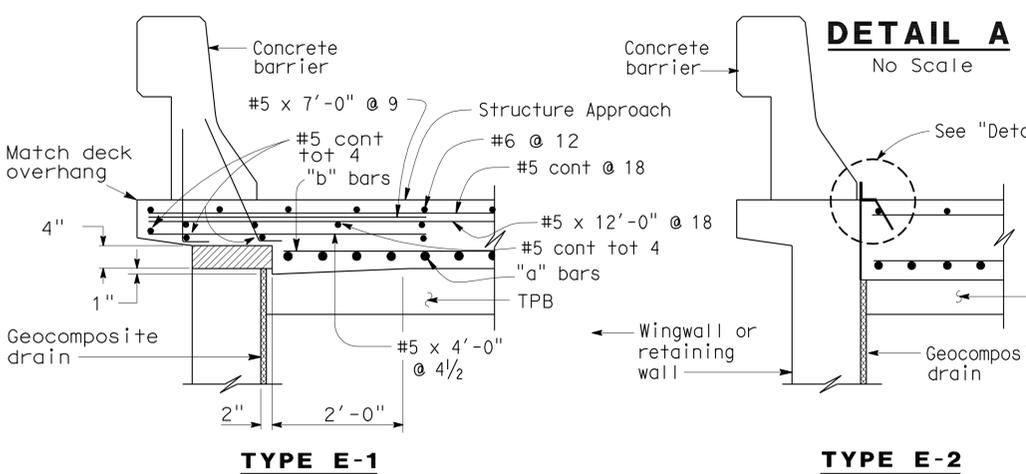


**EDGE ANGLE DETAIL**



\*(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)

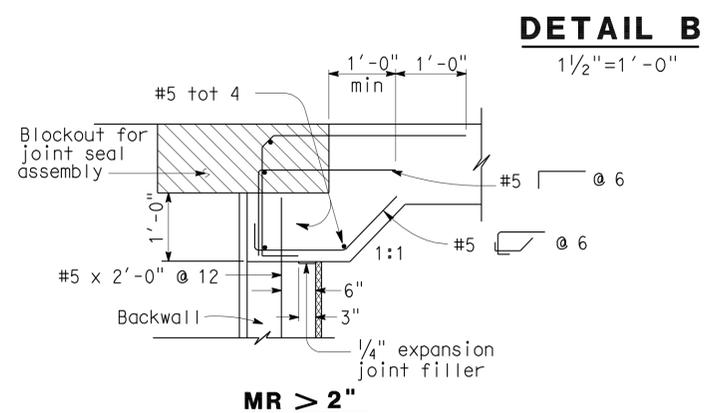
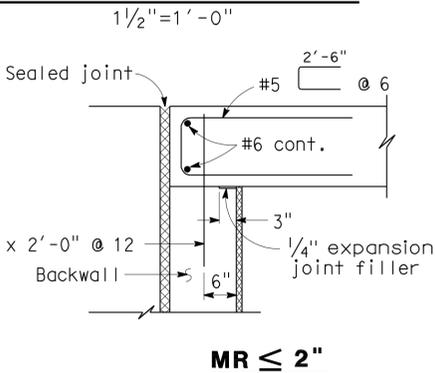
\*(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)



**SECTION C-C**

(Type E-1 to be used, unless otherwise shown on plans)

**BAR CHAIR DETAIL**



**DETAIL B**

**SEAT TYPE ABUTMENT TIE DETAILS (SEE NOTE 1)**

**NOTES:**

- For details not shown, see Structure Plans. For MR ≤ 2, adjust bar reinforcement to clear a sawcut for sealed joint, when required.
  - For drainage details, see "Structure Approach Drainage Details" sheet.
  - Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
  - End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
  - For transverse contact joint with new PCC paving, refer to Standard Plan P10.
  - At the contractor's option, approach slab transverse reinforcement may be placed parallel to paving notch. Spacing of transverse reinforcement is measured along roadway.
- Remove all polystyrene.

STANDARD DRAWING			
RELEASE DATE 3/14/05	DESIGN BY M. TRAFFALIS	CHECKED E. THORKILDSEN	RELEASED BY
FILE NO. xs3-120e	DETAILS BY R. YEE	CHECKED E. THORKILDSEN	
	SUBMITTED BY M. HA	DRAWING DATE 4/98	OFFICE CHIEF

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.  
55-0409

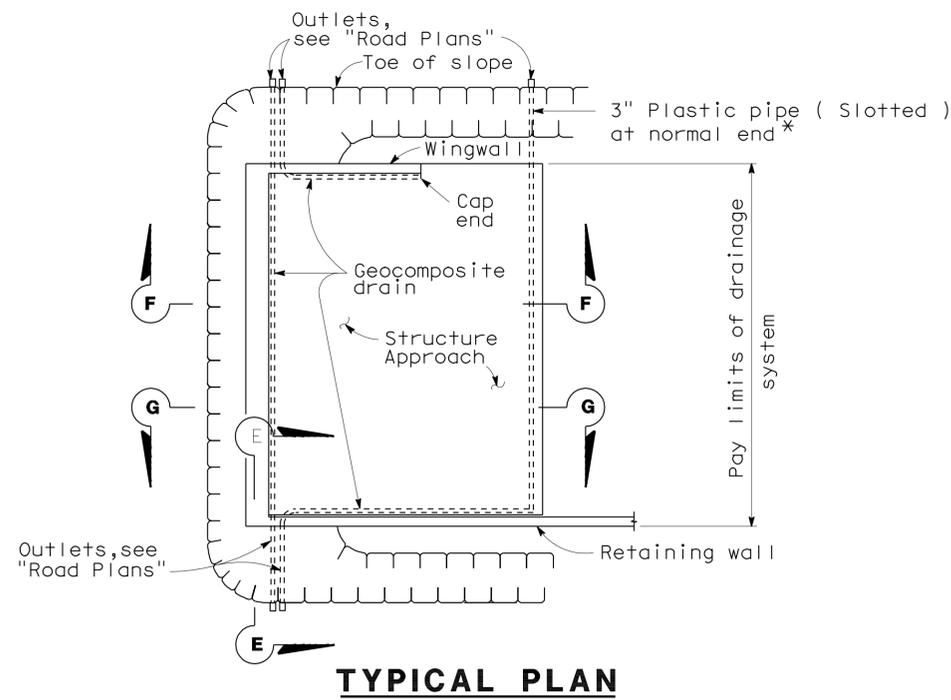
MILE POST  
7.8

DYER ROAD UC (WIDEN)  
STRUCTURE APPROACH TYPE N(30S)

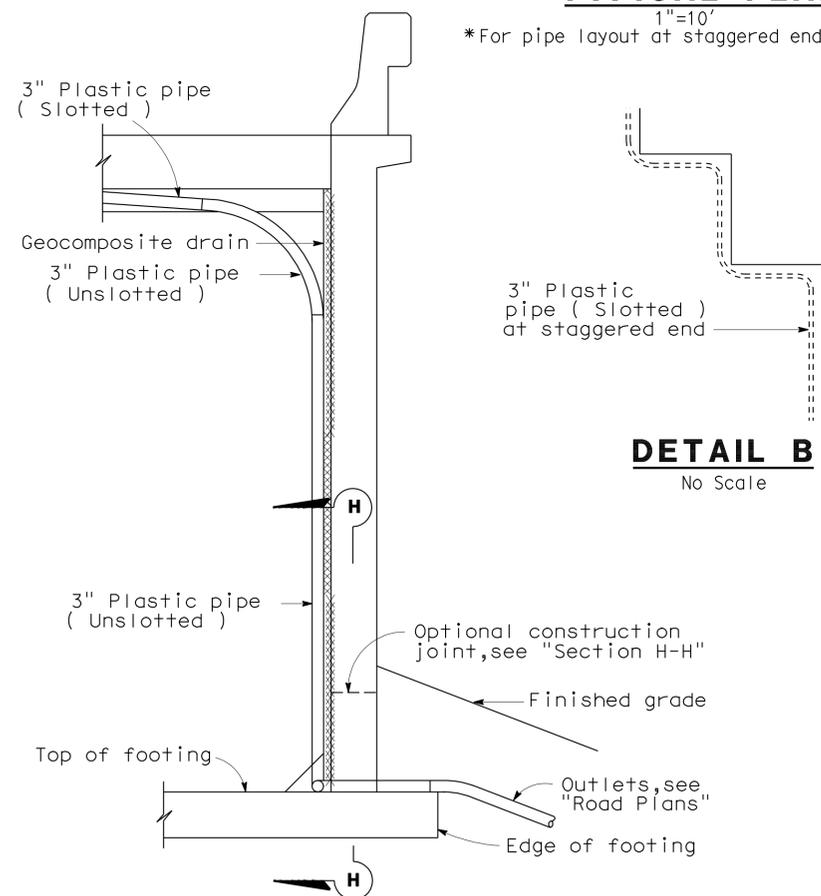
DISREGARD EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 14	OF 20
03-11-10	05-04-10 06-07-10 06-08-10		

DIST.	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	55	R7.8/R9.4	213	218

Juan Jones Jr.  
 REGISTERED ENGINEER CIVIL  
 9-27-10  
 PLANS APPROVAL DATE  
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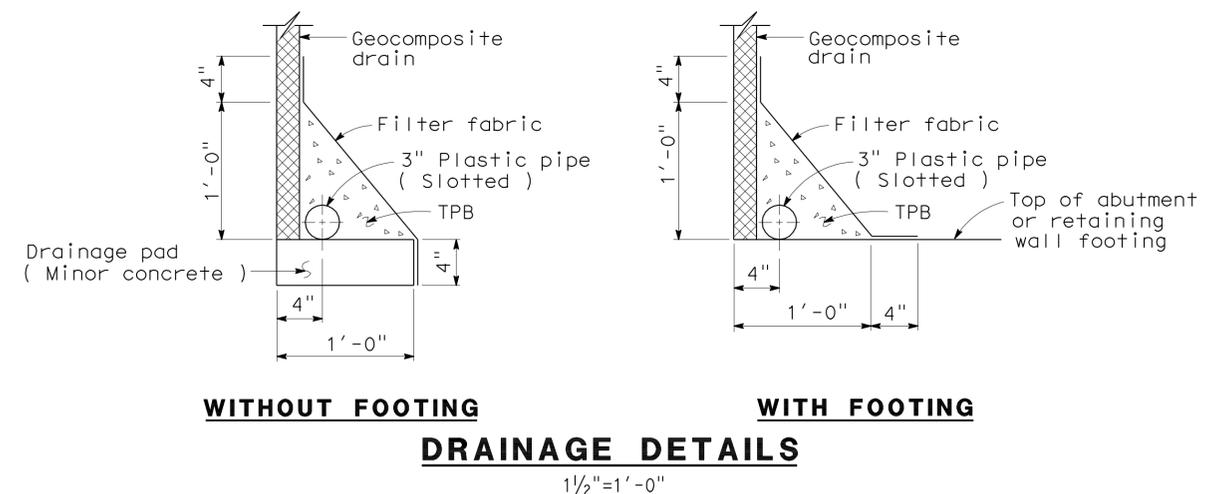
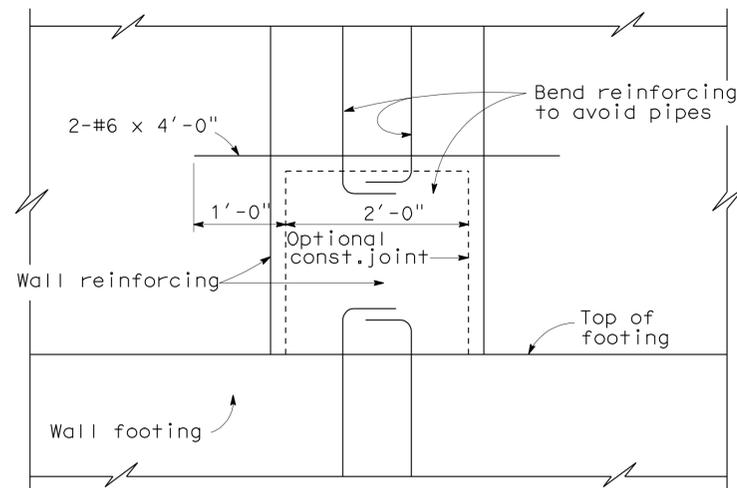
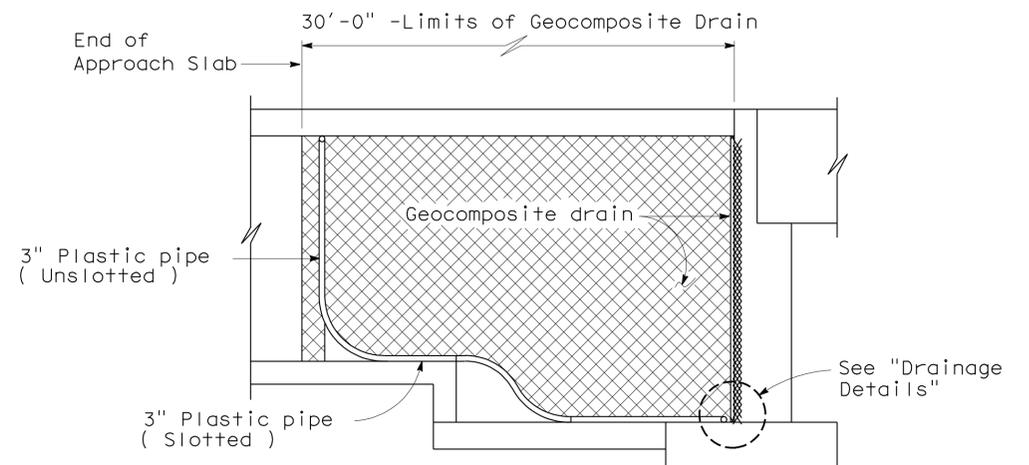
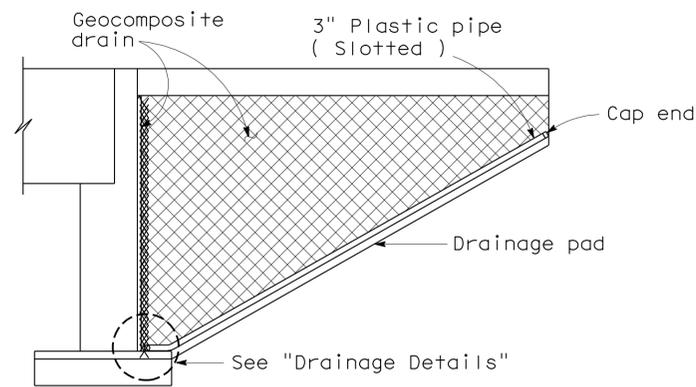


\*For pipe layout at staggered end, see "Detail B".



NOTE: Bends and junctions in 3" plastic pipe are 30" radius min.

**DETAIL B**  
No Scale



STANDARD DRAWING

RELEASE DATE <b>4/23/98</b>	DESIGN BY <i>M. TRAFFALIS</i>	CHECKED <i>E. THORKILDSEN</i>	RELEASED BY <i>[Signature]</i>
FILE NO. <b>xs3-110e</b>	DETAILS BY <i>R. YEE</i>	CHECKED <i>E. THORKILDSEN</i>	OFFICE CHIEF <i>[Signature]</i>
	SUBMITTED BY <i>M. HA</i>	DRAWING DATE <i>4/98</i>	

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 55-0409
MILE POST 7.8

**DYER ROAD UC (WIDEN)**

**STRUCTURE APPROACH DRAINAGE DETAILS**

DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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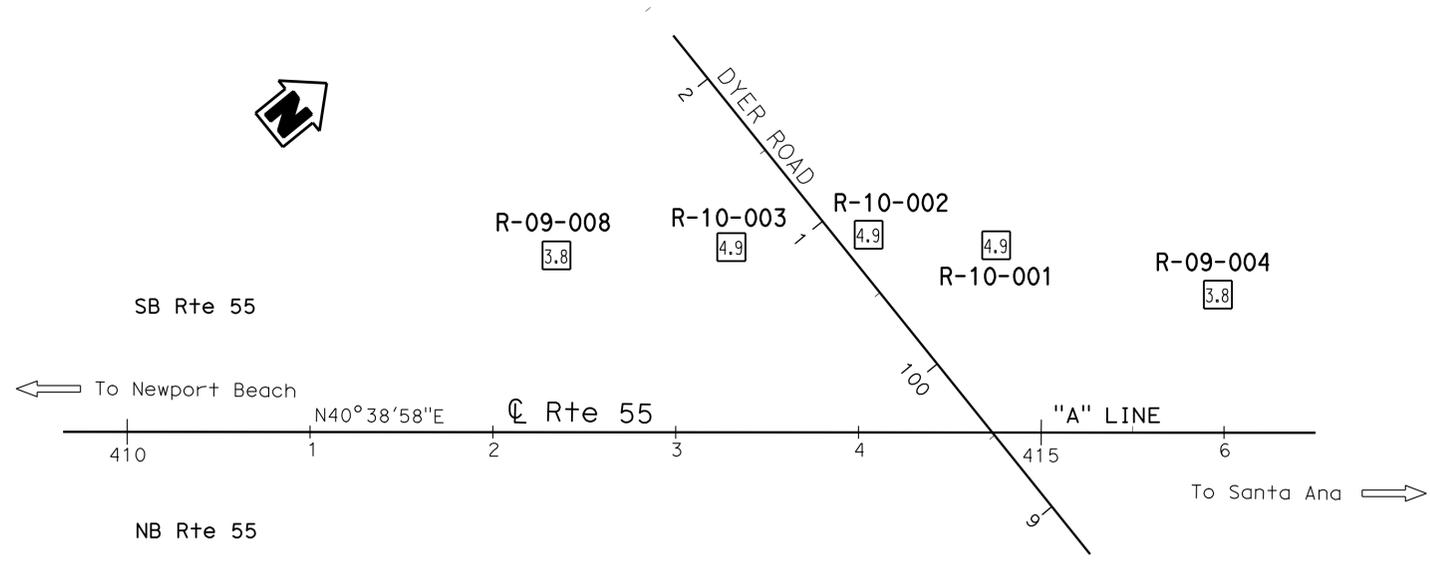
*Kristopher Barker* 6-2-10  
 CERTIFIED ENGINEERING GEOLOGIST

9-27-10  
 PLANS APPROVAL DATE

*Kristopher Barker*  
 No. 2383  
 Exp. 8-31-11  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

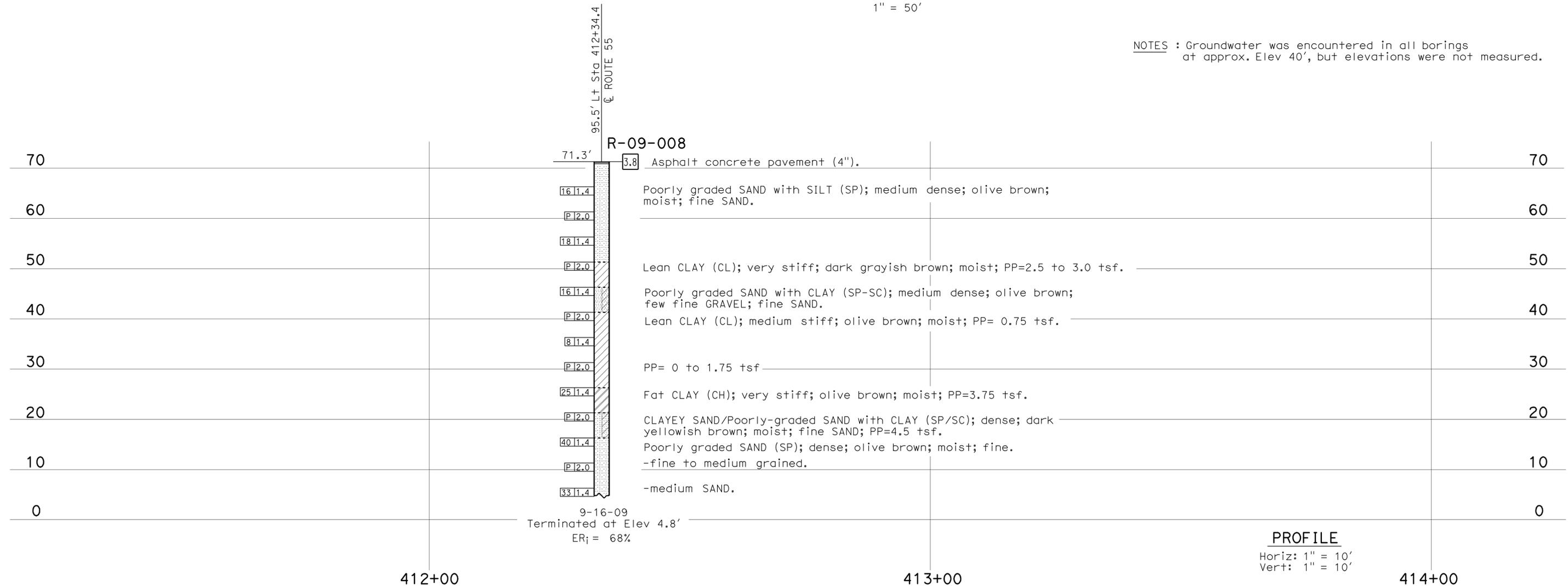
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**BENCH MARK**  
 Horizontal and vertical locations are derived from GPS.  
 Horizontal Datum = CCS83  
 Vertical Datum = NAVD 88.

**NOTES** : Groundwater was encountered in all borings at approx. Elev 40', but elevations were not measured.



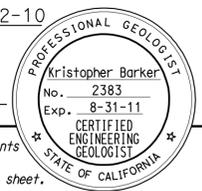
<b>ENGINEERING SERVICES</b>		<b>GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE NO.</b>		<b>DYER ROAD UNDERCROSSING</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: C. Christian, I.G-Remmen 4/10		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		55-0409		<b>LOG OF TEST BORINGS 1 OF 5</b>	
NAME: S. Sukiasian		CHECKED BY: M. Ahmed		K Barker, Q. Liao, E.J. Jeon		<b>DESIGN BRANCH</b>		POST MILES			
06S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 12 EA 0G9601		7.9		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	
				0 1 2 3				05-24-10 06-08-10		SHEET 16 OF 20	

USERNAME => H:\lenard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:54

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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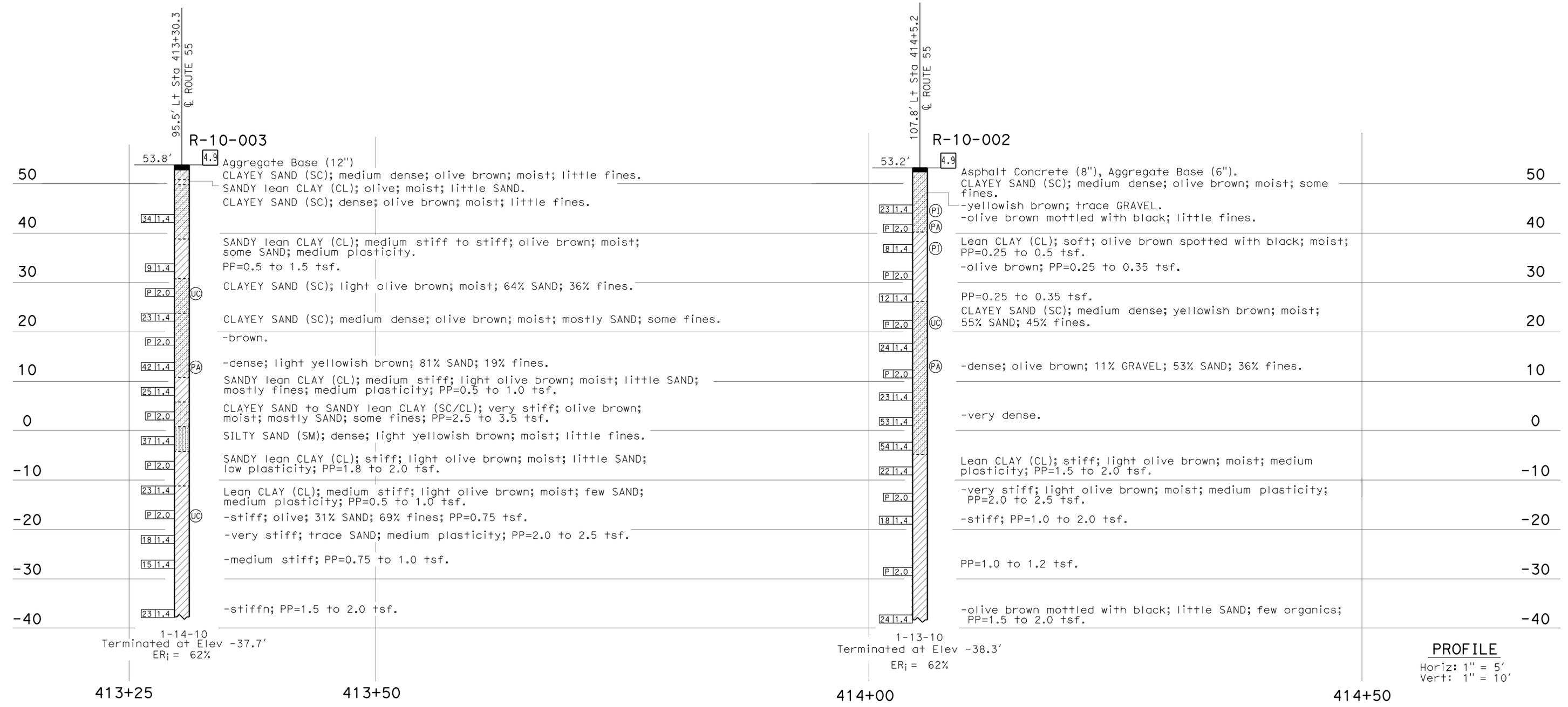
Kristopher Barker 6-2-10  
 CERTIFIED ENGINEERING GEOLOGIST  
 9-27-10  
 PLANS APPROVAL DATE

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

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



PROFILE  
 Horiz: 1" = 5'  
 Vert: 1" = 10'

<b>ENGINEERING SERVICES</b>		<b>GEOTECHNICAL SERVICES</b>		<b>STATE OF CALIFORNIA</b>		<b>DIVISION OF ENGINEERING SERVICES</b>		<b>BRIDGE No.</b>		<b>DYER ROAD UNDERCROSSING</b>	
FUNCTIONAL SUPERVISOR		DRAWN BY: C. Christian, I.G-Remmen 4/10		DEPARTMENT OF TRANSPORTATION		STRUCTURE DESIGN		55-0409		LOG OF TEST BORINGS 2 OF 5	
NAME: S. Sukiasian		CHECKED BY: M. Ahmed		FIELD INVESTIGATION BY:		DESIGN BRANCH		POST MILES		REVISION DATES	
				K Barker, Q. Liao, E.J. Jeon		CU 12		7.9		04-24-10 05-11-10 06-08-10	
O&S CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		EA 0G9601		DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 17 OF 20	

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
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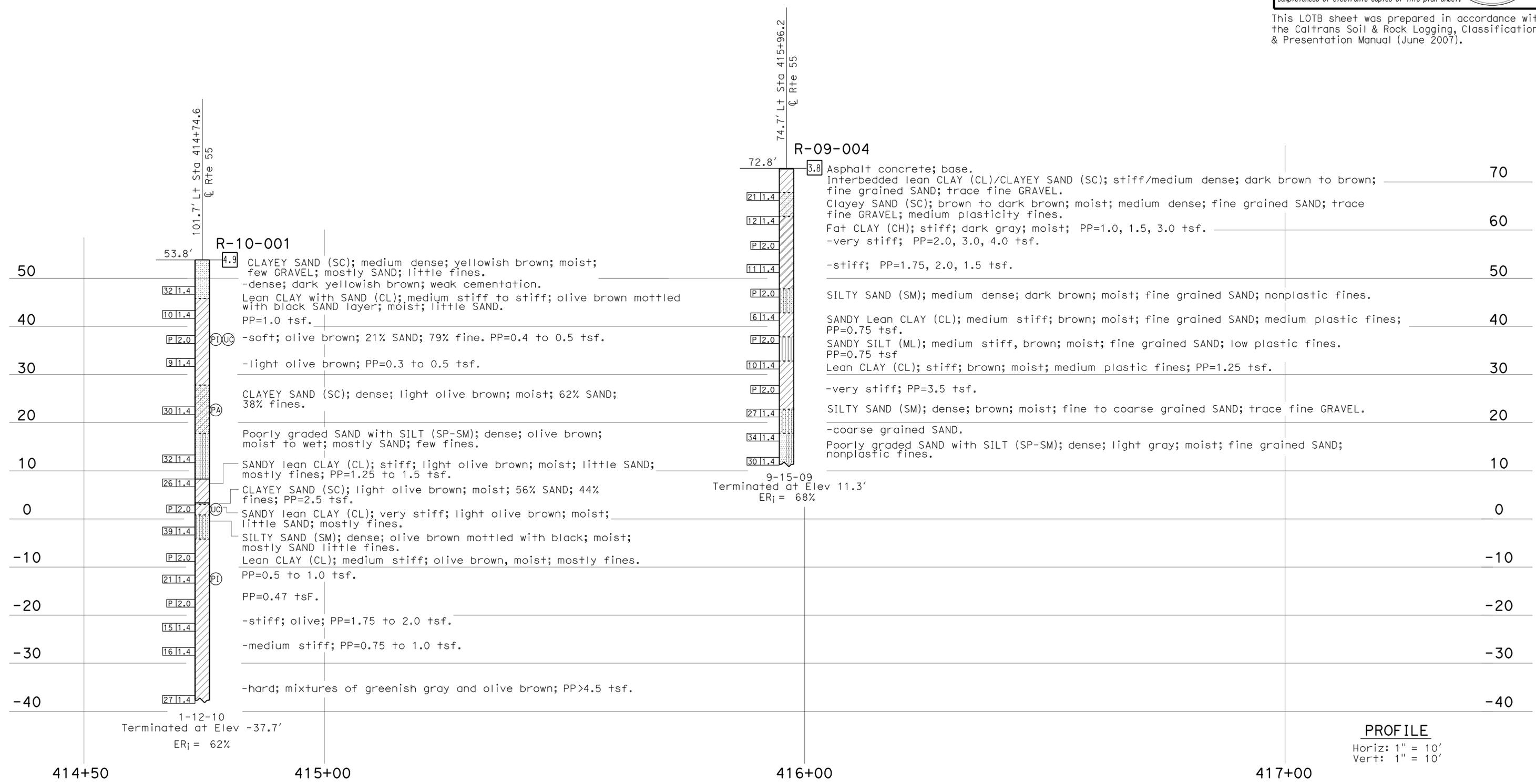
FOR PLAN VIEW, SEE  
"LOG OF TEST BORINGS 1 OF 5"

Kristopher Barker 6-2-10  
CERTIFIED ENGINEERING GEOLOGIST

9-27-10  
PLANS APPROVAL DATE

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

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH		BRIDGE NO. 55-0409 POST MILES 7.9		DYER ROAD UNDERCROSSING LOG OF TEST BORINGS 3 OF 5	
FUNCTIONAL SUPERVISOR NAME: S. Sukiasian		DRAWN BY: C. Christian, I.G.-Remmen 4/10 CHECKED BY: M. Ahmed		FIELD INVESTIGATION BY: K Barker, Q. Liao, E.J. Jeon		CU 12 EA 0G9601		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		FILE => 55-0409-z-1ofb_03.dgn		18		20	

*Kristopher Barker* 6-2-10  
 CERTIFIED ENGINEERING GEOLOGIST

9-27-10  
 PLANS APPROVAL DATE

*Kristopher Barker*  
 No. 2383  
 Exp. 8-31-11  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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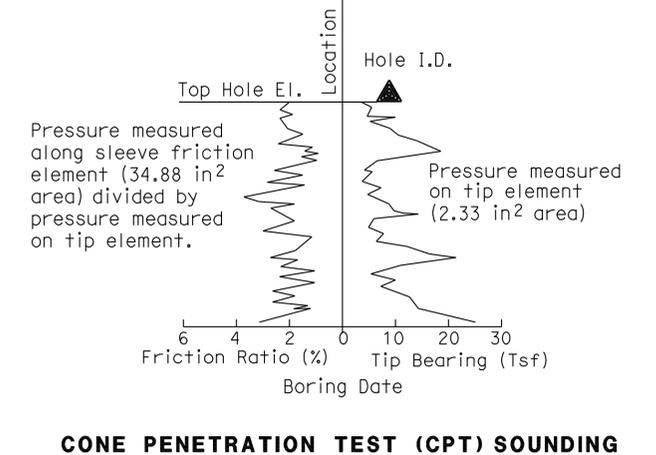
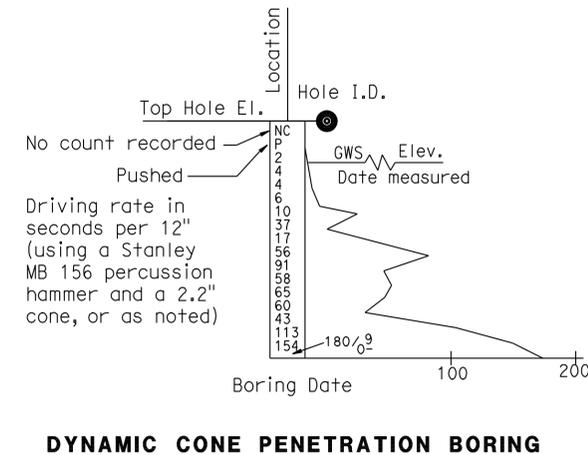
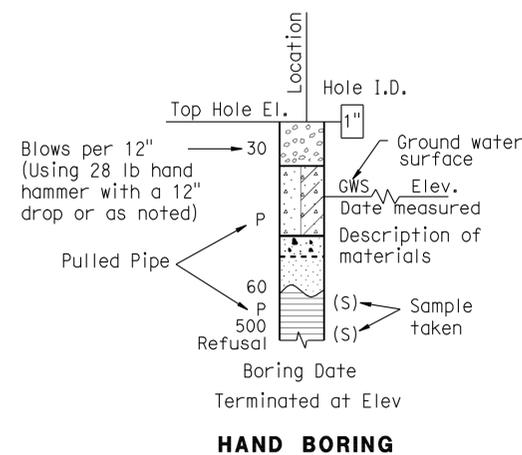
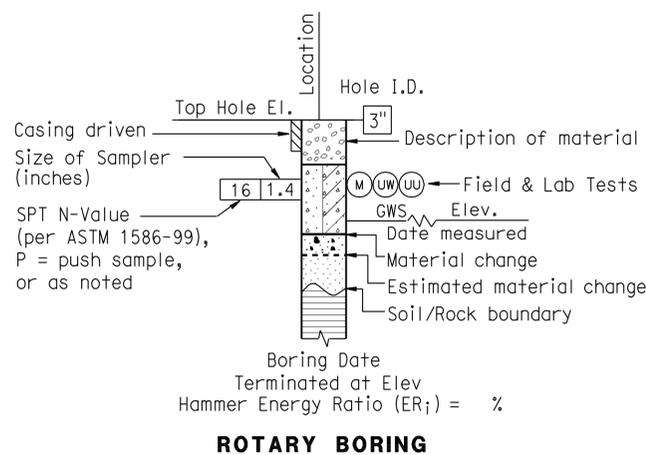
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

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.



*Kristopher Barker* 6-2-10  
 CERTIFIED ENGINEERING GEOLOGIST

9-27-10  
 PLANS APPROVAL DATE

*Kristopher Barker*  
 No. 2383  
 Exp. 8-31-11  
 CERTIFIED ENGINEERING GEOLOGIST  
 STATE OF CALIFORNIA

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

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

<b>ENGINEERING SERVICES</b>	<b>GEOTECHNICAL SERVICES</b>
	PREPARED BY: I.G-Remmen

<b>STATE OF CALIFORNIA</b>	<b>DIVISION OF ENGINEERING SERVICES</b>
<b>DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURE DESIGN</b>
	<b>DESIGN BRANCH</b>

BRIDGE NO. 55-0409	<b>DYER ROAD UNDERCROSSING</b>
POST MILE 7.9	

<b>LOG OF TEST BORINGS 5 OF 5</b>	
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES
06-08-10	

USERNAME => H11enard DATE PLOTTED => 01-OCT-2010 TIME PLOTTED => 12:55