

10:47
 05-MAY-2009
 FINAL PLANS
 r:\gang2\projects\064010040\dgn\1 Title Sheet.dgn

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

PLANS OF PROPOSED
STATE HIGHWAY

F.A.P. NO. 5201(001)
STATE PROJECT NO. 064-01-0040

CAMINADA BAY BRIDGE

JEFFERSON PARISH

LA 1

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET & LAYOUT MAP
2 - 2c	TYPICAL SECTIONS AND DETAILS
3 - 3c	SUMMARY SHEETS
4 - 10	PLAN AND PROFILE SHEETS
11 - 12	GEOMETRIC DETAILS
13	SUMMARY OF DRAINAGE STRUCTURES
14 - 16	SEQUENCE OF CONSTRUCTION
17 - 19	TRAFFIC CONTROL DETAIL SHEETS 00, 01, 02
20 - 25	RIGHT-OF-WAY MAPS

101 - 198 BRIDGE PLANS

STANDARD PLAN	REVISION DATE
301 - 302	BM-01 08/22/07
303	CB-01 11/02/00
304	DW-03 9/21/82
305 - 306	EC-01 10/01/08
307 - 316	GR200-1 01/26/09
317 - 321	MC-01 08/11/06
322 - 325	PED-01 05/05/08
326 - 329	PM-01 1/21/98
330	RM-01 7/02/03
331	RW-01 01/26/09
332 - 333	SAM-01 10/05/05
334	HS-03 01/03/05
335	WP-01 04/03/08
336	SWBS-100 12/04/00
337-340	CP-01 06/26/01

401 - 407 CROSS SECTIONS
 TOTAL SHEETS WITHOUT CROSS SECTIONS = 173
 TOTAL SHEETS WITH CROSS SECTIONS = 180

TRAFFIC DATA
 2006 A.D.T. = 3,000
 2026 A.D.T. = 3,700
 D = 55%
 K = 10%
 T = 10%

DESIGN SPEED = 40 M.P.H.
 DESIGN CLASSIFICATION: RC-3

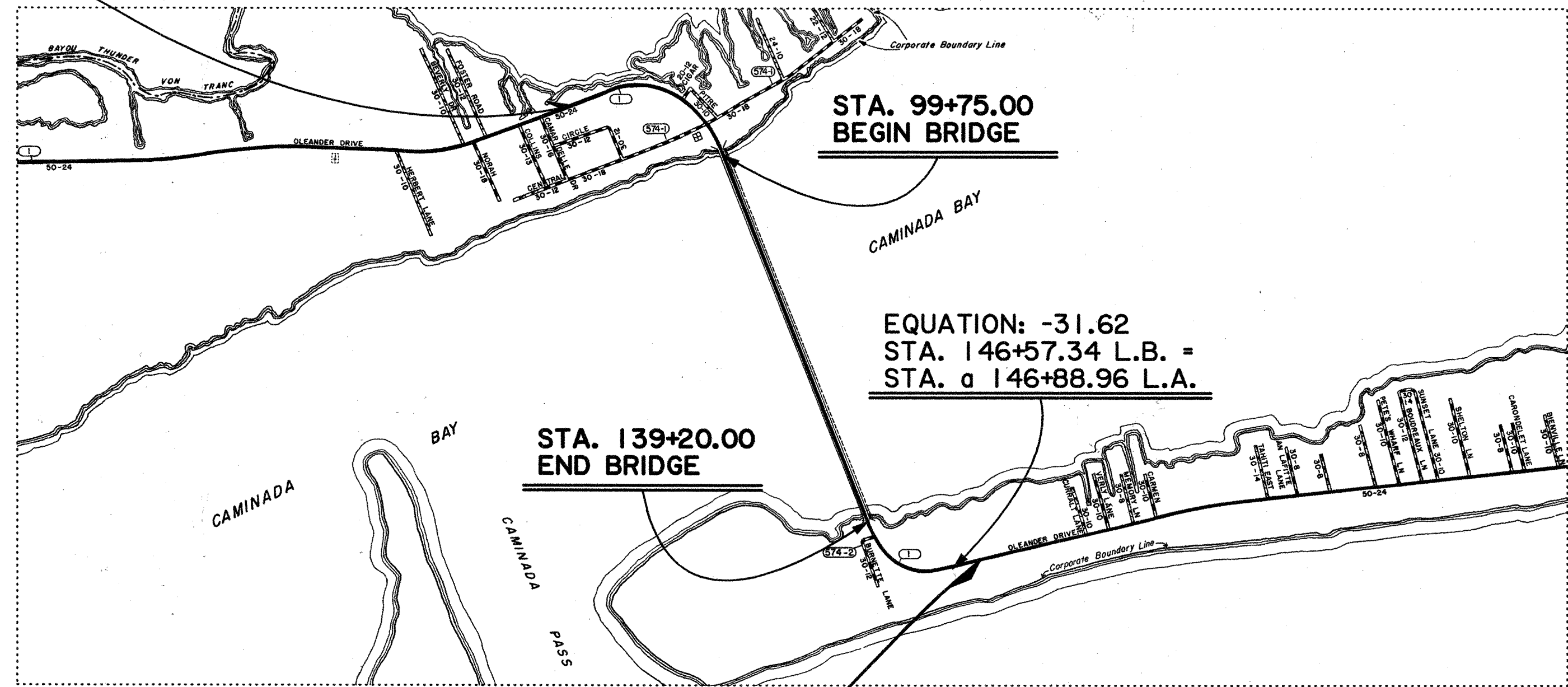
DATE	REVISION	DATE	RECOMMENDED DATE	APPROVED

SCHEDULE OF REVISIONS

TYPE OF CONSTRUCTION :
 SLAB AND GIRDER SPAN STRUCTURE, ASPHALTIC CONCRETE
 APPROACH ROADWAY, GRADING EARTHWORK AND RELATED WORK.

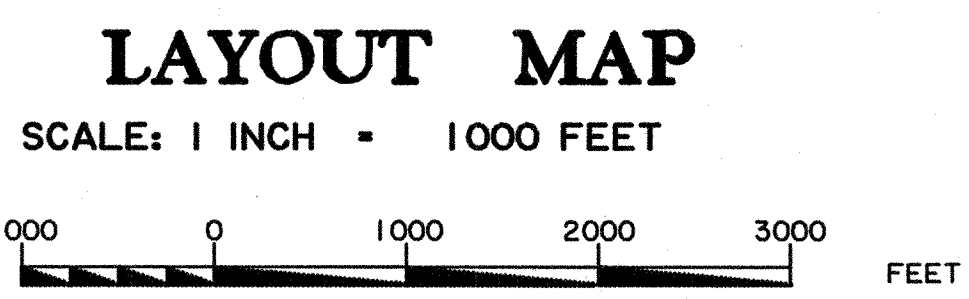
DATUM USED : NAVD 88
 MAG. VAR. :
 BEARINGS ARE GPS
 TRANSIT BOOKS :
 LEVEL BOOKS : 182-261
 SCALES
 PLAN : 1" : 50'
 PROFILE : HOR. 1" : 50'
 VERT. 1" : 10'

C.S. LOG MILE 7.54
STA. 86+04.00
BEGIN S.P. NO. 064-01-0040
BEGIN F.A.P. NO. 5201(001)

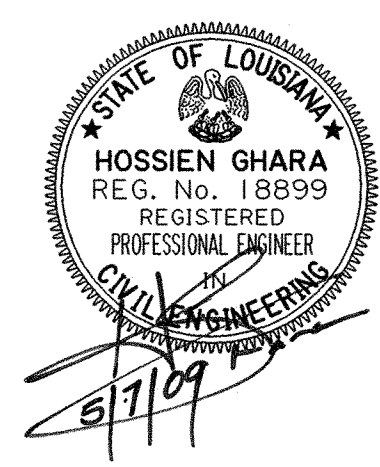
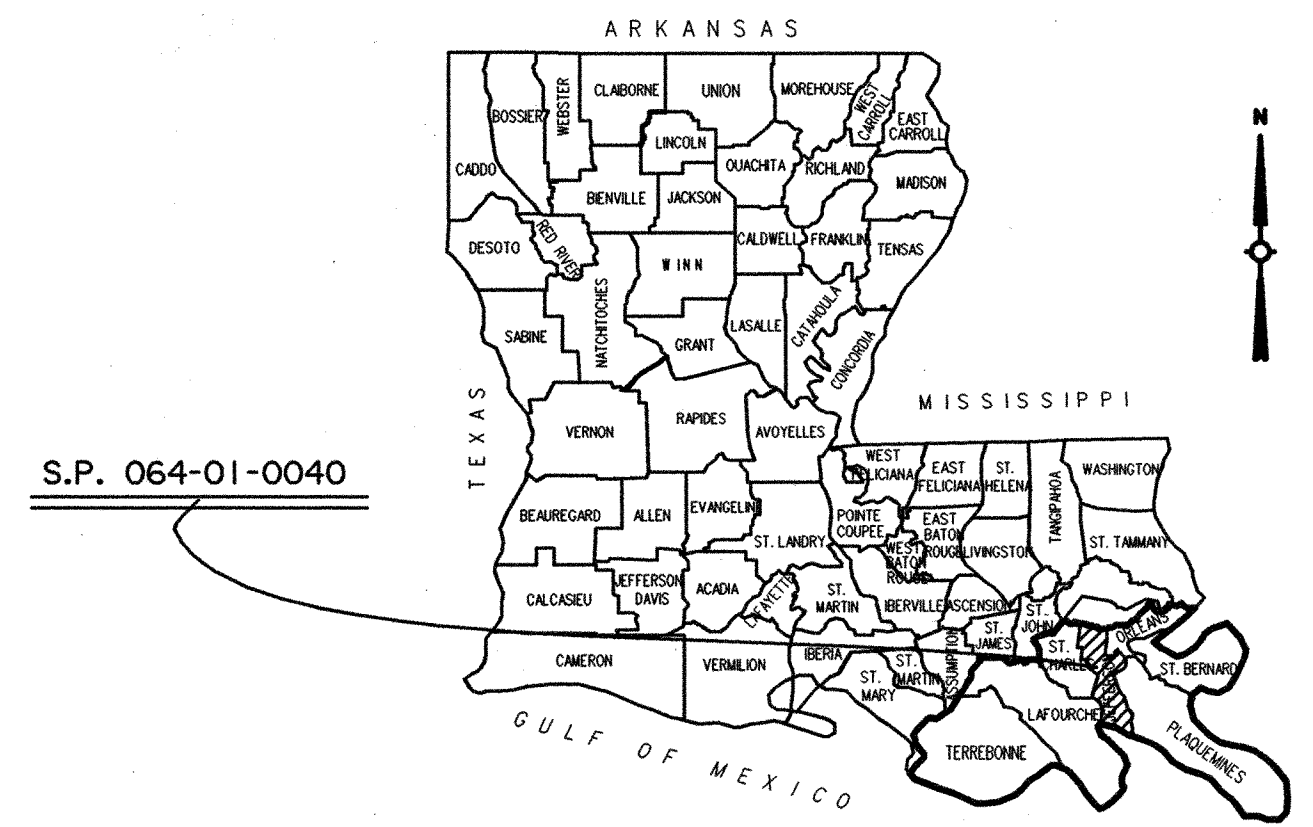


C.S. LOG MILE 6.37
STA. a 148+00.96
END S.P. NO. 064-01-0040
END F.A.P. NO. 5201(001)

DESIGN EXCEPTION:
 1. DESIGN SPEED: 40 M.P.H. DATE: 00/05 BY WT
 2. MINIMUM HORIZONTAL CLEARANCE FROM EOP: 12' DATE: 00/05 BY WT



NOTE:
 THE 2006 EDITION OF THE LOUISIANA DOTD
 STANDARD SPECIFICATIONS FOR ROADS AND
 BRIDGES, AS AMENDED BY THE PROJECT
 SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT

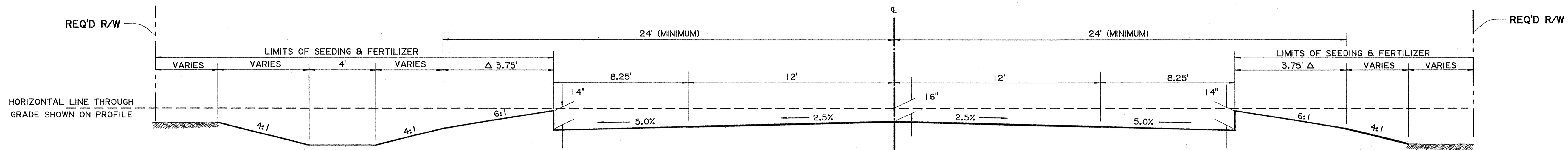


APPROVED
Richard L. Davis
 for D.O.T.D. CHIEF ENGINEER
 DATE 5.7.09

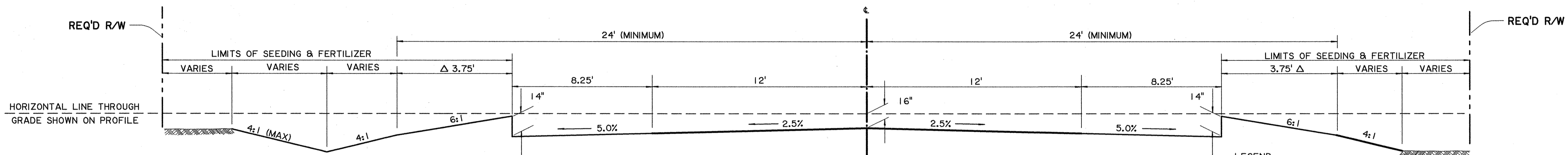
LENGTH OF PROJECT

DESCRIPTION	ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	EXCEPTION	BRIDGE LENGTH		ROADWAY LENGTH	
				FEET	MILES	FEET	
STATION TO STATION	FEET	FEET	FEET	FEET	MILES	FEET	
86+04 - a 148+01	-31.62	6165.38		3945	0.747	2220.38	0.421
TOTAL LENGTH OF BRIDGES				3945	0.747		
TOTAL LENGTH OF ROADWAY						2220.38	0.421
TOTAL MILES					1.168		

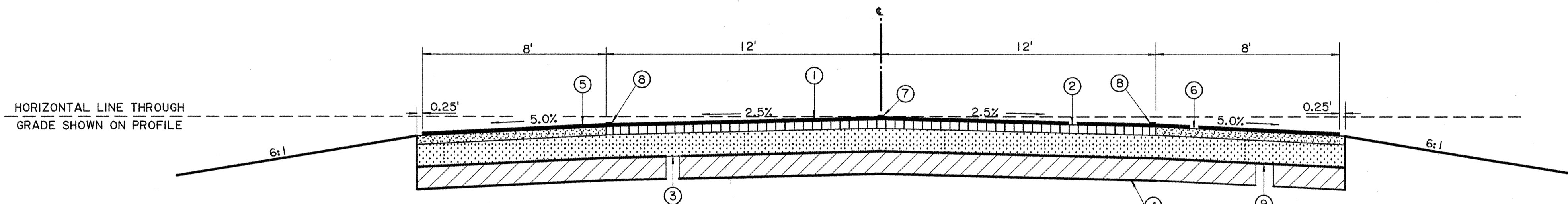
SHEET NUMBER	1	PARISH	JEFFERSON	FEDERAL PROJECT	5201(001)	STATE PROJECT	064-01-0040
DESIGNED	B. DELATTE	CHECKED	K. YAP	DATE	MAY, 2009	SHEET	1 OF 1
REVISION DESCRIPTION							
NO. DATE							
TITLE SHEET							
CAMINADA BAY BRIDGE ROUTE LA 1							
BRIDGE AND STRUCTURAL DESIGN							



TYPICAL GRADING SECTION
 APPLIES STA. 93+54.00 TO STA. 94+70.00
 APPLIES STA. 97+36.00 TO STA. 99+25.00
 APPLIES STA. 139+60.00 TO STA. 146+29.34



GRADING SECTION - DRAINAGE DITCH
 APPLIES STA. 94+70.00 TO STA. 97+36.00

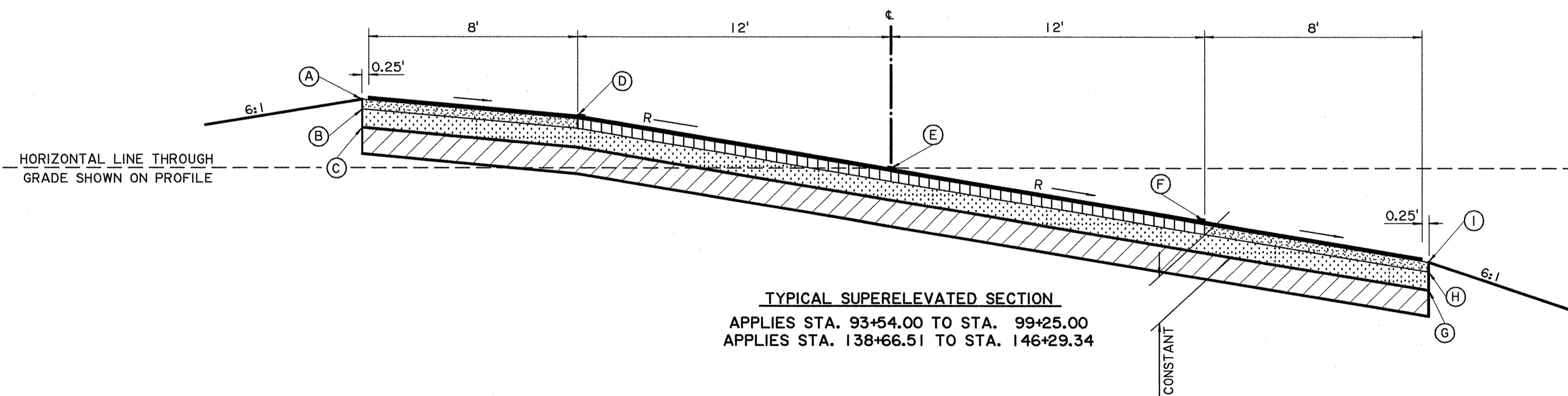
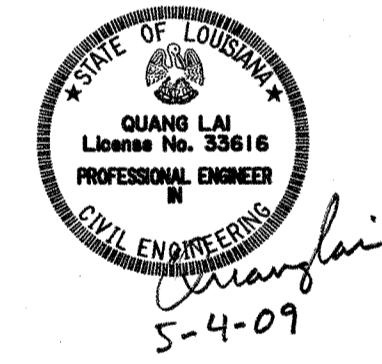


TYPICAL FINISHED SECTION
 APPLIES STA. 93+54.00 TO STA. 99+25.00
 APPLIES STA. 139+60.00 TO STA. 146+29.34 *

* INCLUDES SUPERELEVATION TRANSITION

- LEGEND:**
- ① 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL I)
 - ② 4" SUPERPAVE ASPHALTIC CONCRETE BINDER COURSE (LEVEL I)
 - ③ 10" CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PCCP)
 - ④ 12" TYPE D LIME TREATMENT (9% BY VOLUME OR AS DIRECTED BY PROJECT ENGINEER)
 - ⑤ 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL A) **
 - ⑥ 4" SUPERPAVE ASPHALTIC CONCRETE BINDER COURSE (LEVEL A) **
 - ⑦ PAVEMENT STRIPING & REFLECTORIZED MARKERS
 - ⑧ PAVEMENT STRIPING
 - ⑨ GEOTEXTILE FABRIC
- Δ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS
- ** SUPERPAVE OF THE SAME DESIGN LEVEL AS THE ADJACENT TRAVEL LANES MAY BE USED AT THE CONTRACTOR'S OPTION.
- ☒ IF NEEDED, SLURRY LIME SHALL BE USED AS THIS IS A DUST SENSITIVE AREA.
- ⊕ TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS II BASE COURSE

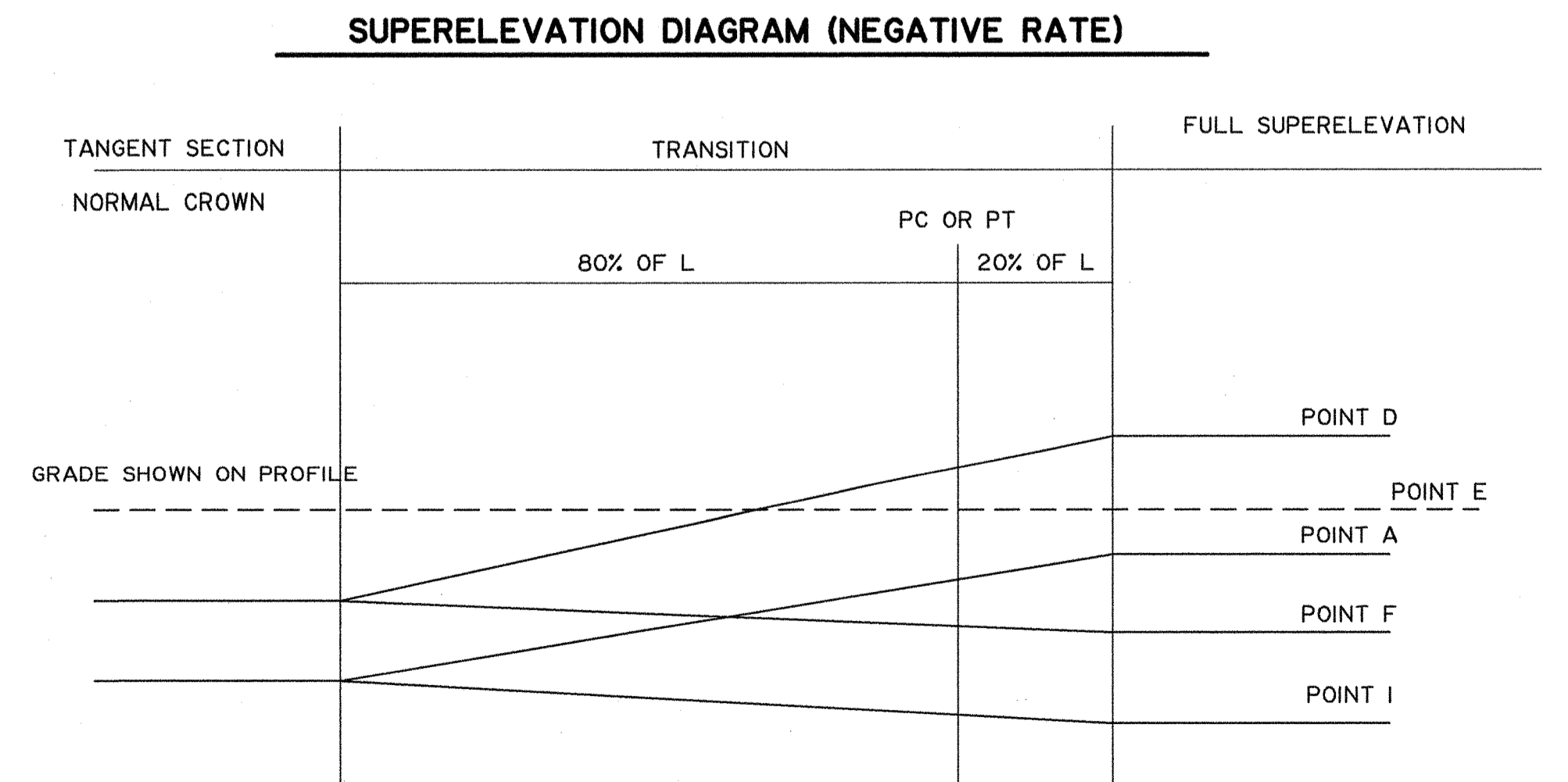
FLEXIBLE STRUCTURAL DESIGN	
18-kip ESALs OVER INITIAL PERFORMANCE PERIOD	1,397,423
INITIAL SERVICEABILITY	4.3
TERMINAL SERVICEABILITY	2.5
RELIABILITY LEVEL	95%
OVERALL STANDARD DEVIATION	0.47
ROADBED SOIL RESILIENT MODULUS	8,000 psi
STAGE CONSTRUCTION	I
CALCULATED DESIGN STRUCTURAL NUMBER	3.80 in



TYPICAL SUPERELEVATED SECTION
 APPLIES STA. 93+54.00 TO STA. 99+25.00
 APPLIES STA. 138+66.51 TO STA. 146+29.34

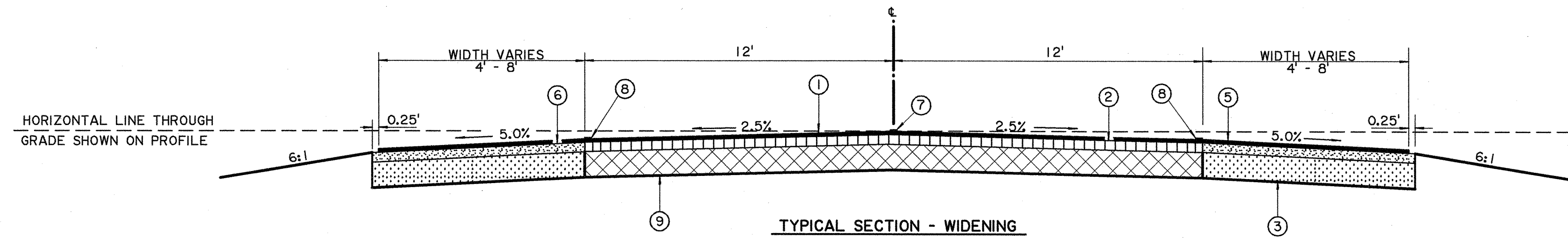
RADIUS OF CURVE (FEET)	R	A	B	C	D	E	F	G	H	I	TRANSITION LENGTH	INSIDE SHOULDER RATE	OUTSIDE SHOULDER RATE
5,000 & GREATER	N.C.	-0.88	-1.21	-2.05	-0.30	0	-0.30	-2.05	-1.21	-0.88	N/A	-5.0%	5.0%
1066.20	-3.4%	-0.06	-0.39	-1.22	0.41	0	-0.41	-2.15	-1.32	-0.99	130'	-5.0%	3.6%
716.20	-3.9%	-0.05	-0.29	-1.12	0.47	0	-0.47	-2.21	-1.38	-1.05	140'	-5.0%	3.1%
572.96	4.0%	-1.06	-1.39	-2.23	-0.48	0	0.48	-1.1	-0.27	-0.07	140'	5.0%	-3.0%

NEGATIVE RATES DENOTE DOWN FROM LEFT TO RIGHT
 CURVE TO RIGHT SHOWN - CURVE TO LEFT SIMILAR BUT OPPOSITE

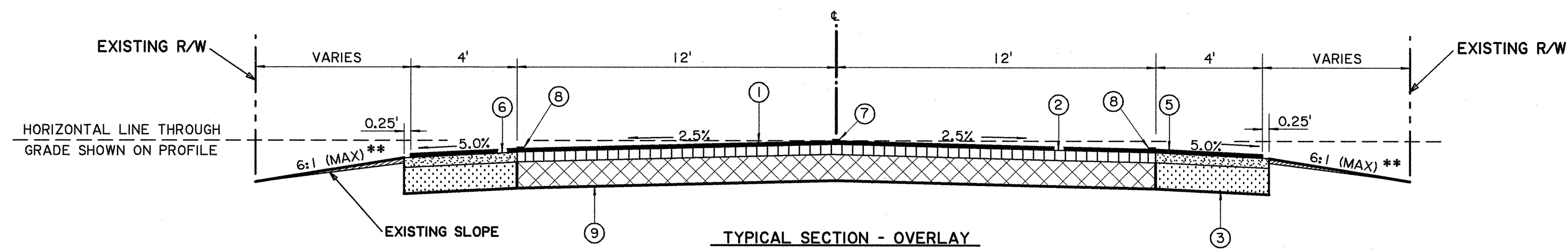


LOCATION OF TANGENT CROWN IN RELATION TO P.C. OR P.T. VARIES WITH TRANSITION LENGTH. SUPERELEVATION TO BE ATTAINED BY ROTATING THE OUTSIDE LANE ABOUT THE CENTERLINE (E) UNTIL THE ROADWAY CROSS SLOPE EQUAL 2.5% (TANGENT CROWN). IF ADDITIONAL SUPERELEVATION IS REQUIRED, THE ENTIRE ROADWAY WILL THEN ROTATE ABOUT THE CENTERLINE (E) UNTIL A MAXIMUM CROSS SLOPE OF "R" IS OBTAINED (SEE TABLE).

SHEET NUMBER	2
PROJECT	064-01-0040
STATE	LA
DATE	APRIL 2009
SHEET	1 OF 4
DESIGNED/MRG	
CHECKED Q.LAI	
DATE	
REVISION DESCRIPTION	
NO.	
DATE	
BY	
TYPICAL SECTIONS	
RC-3	LA 1
ROAD DESIGN	

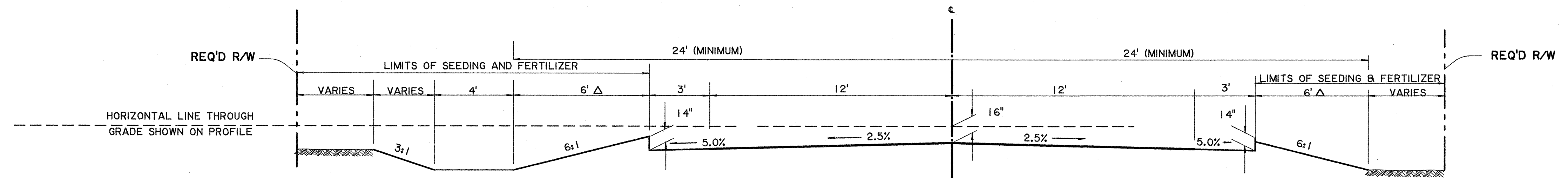


TYPICAL SECTION - WIDENING
 APPLIES STA. 92+47.00 TO STA. 93+54.00
 APPLIES STA. 146+29.34 TO STA. 147+45.96

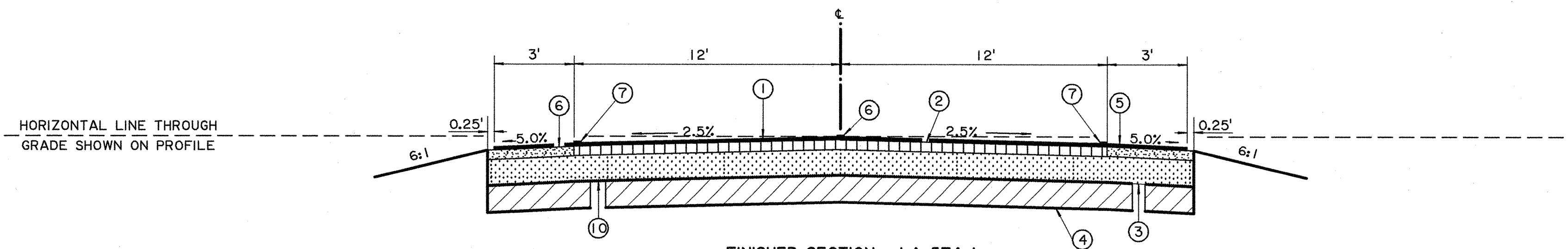


TYPICAL SECTION - OVERLAY
 APPLIES STA. 86+04.00 TO STA. 92+47.00
 APPLIES STA. 147+45.96 TO STA. 148+00.96

** CONSTRUCT 6:1 MAXIMUM SLOPE UNTIL MATCHING EXISTING SLOPE.
 DO NOT EXCEED LIMITS OF EXISTING RIGHT-OF-WAY.



TYPICAL GRADING SECTION - LA 574-1
 APPLIES STA. 49+04.97 TO STA. 50+83.75



FINISHED SECTION - LA 574-1
 APPLIES STA. 49+04.97 TO STA. 50+83.75

LEGEND:

- ① 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL I)
- ② 4" SUPERPAVE ASPHALTIC CONCRETE BINDER COURSE (LEVEL I)
- ③ 10" CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PCCP)
- ④ 12" TYPE D LIME TREATMENT (9% BY VOLUME AS DIRECTED BY PROJECT ENGINEER)
- ⑤ 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL A)**
- ⑥ 4" SUPERPAVE ASPHALTIC CONCRETE BINDER COURSE (LEVEL A)**
- ⑦ PAVEMENT STRIPING & REFLECTORIZED MARKERS
- ⑧ PAVEMENT STRIPING
- ⑨ EXISTING PAVEMENT TO REMAIN AFTER COLD PLANING. *
- ⑩ GEOTEXTILE FABRIC

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

* DEPTH OF COLD PLANING VARIES FROM 0" - 11.8"

**SUPERPAVE OF THE SAME DESIGN LEVEL AS THE ADJACENT TRAVEL LANES MAY BE USED AT THE CONTRACTOR'S OPTION.

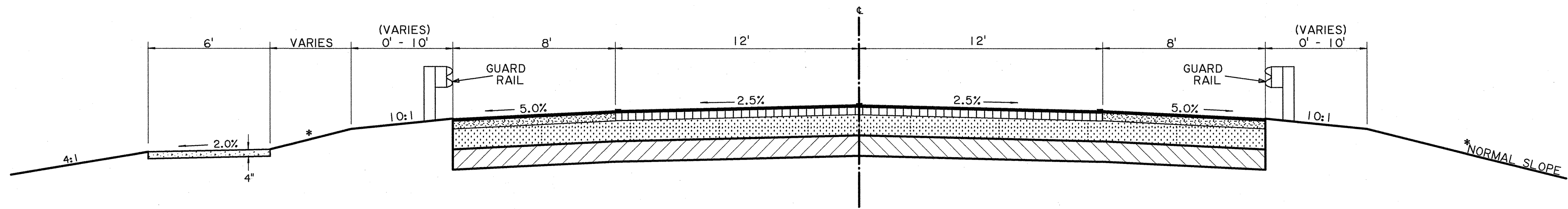
☐ IF NEEDED, SLURRY LIME SHALL BE USED AS THIS IS A DUST SENSITIVE AREA.

⊕ TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS II BASE COURSE



Quang Lai
 4/17/09

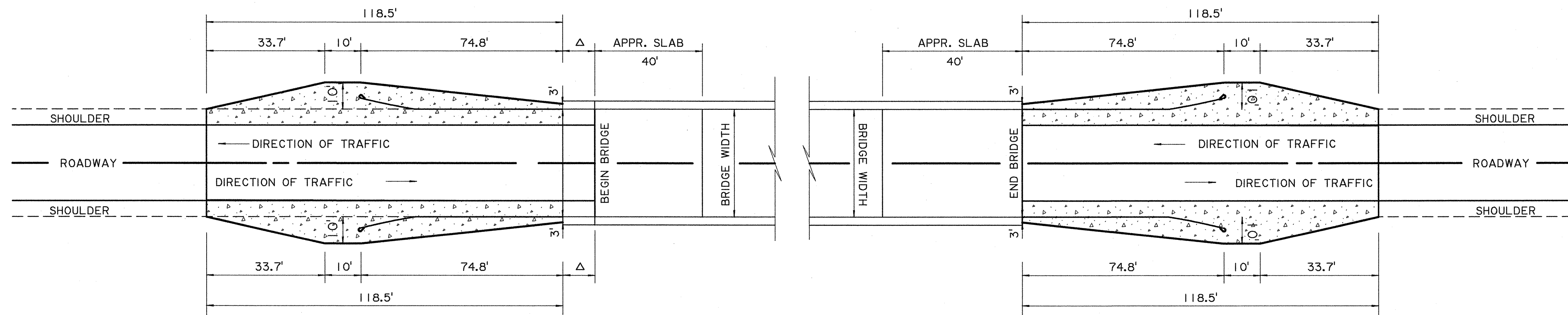
SHEET NUMBER	20
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED MRG	
CHECKED Q.LAI	
DATE	APRIL, 2009
SHEET	2 OF 4
BY	
NO.	
DATE	
REVISION DESCRIPTION	
TYPICAL SECTIONS EAST CENTRAL AVENUE	
ROAD DESIGN	



TYPICAL PAVEMENT WIDENING SECTION

APPLIES STA. 98+19.19 TO STA. 99+25.00
 APPLIES STA. 98+03.79 TO STA. 99+25.00
 APPLIES STA. 139+60.00 TO STA. 140+89.58
 APPLIES STA. 139+60.00 TO STA. 140+70.57


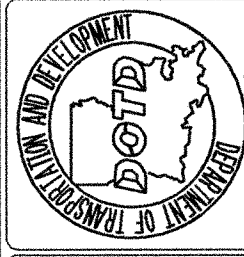
* 3:1 SLOPE BEHIND GUARD RAIL

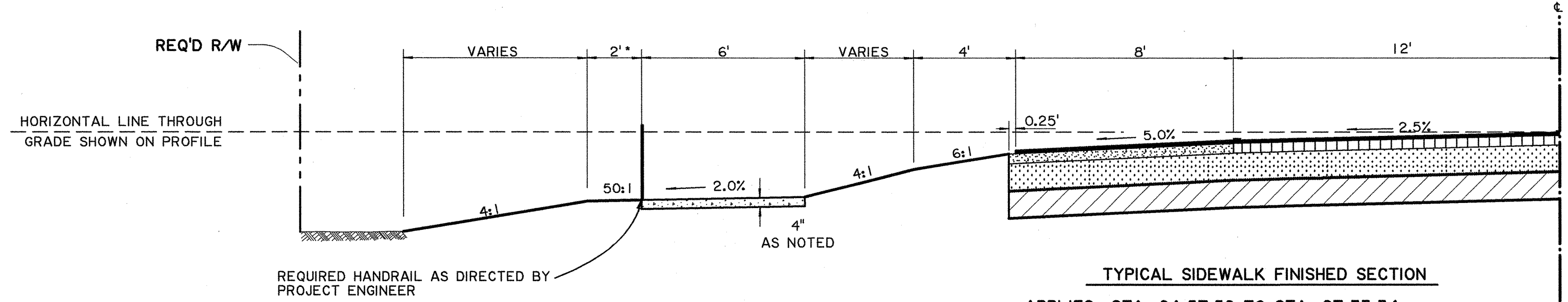


△ 10' SLEEPER LAB

TYPICAL EMBANKMENT WIDENING DETAIL

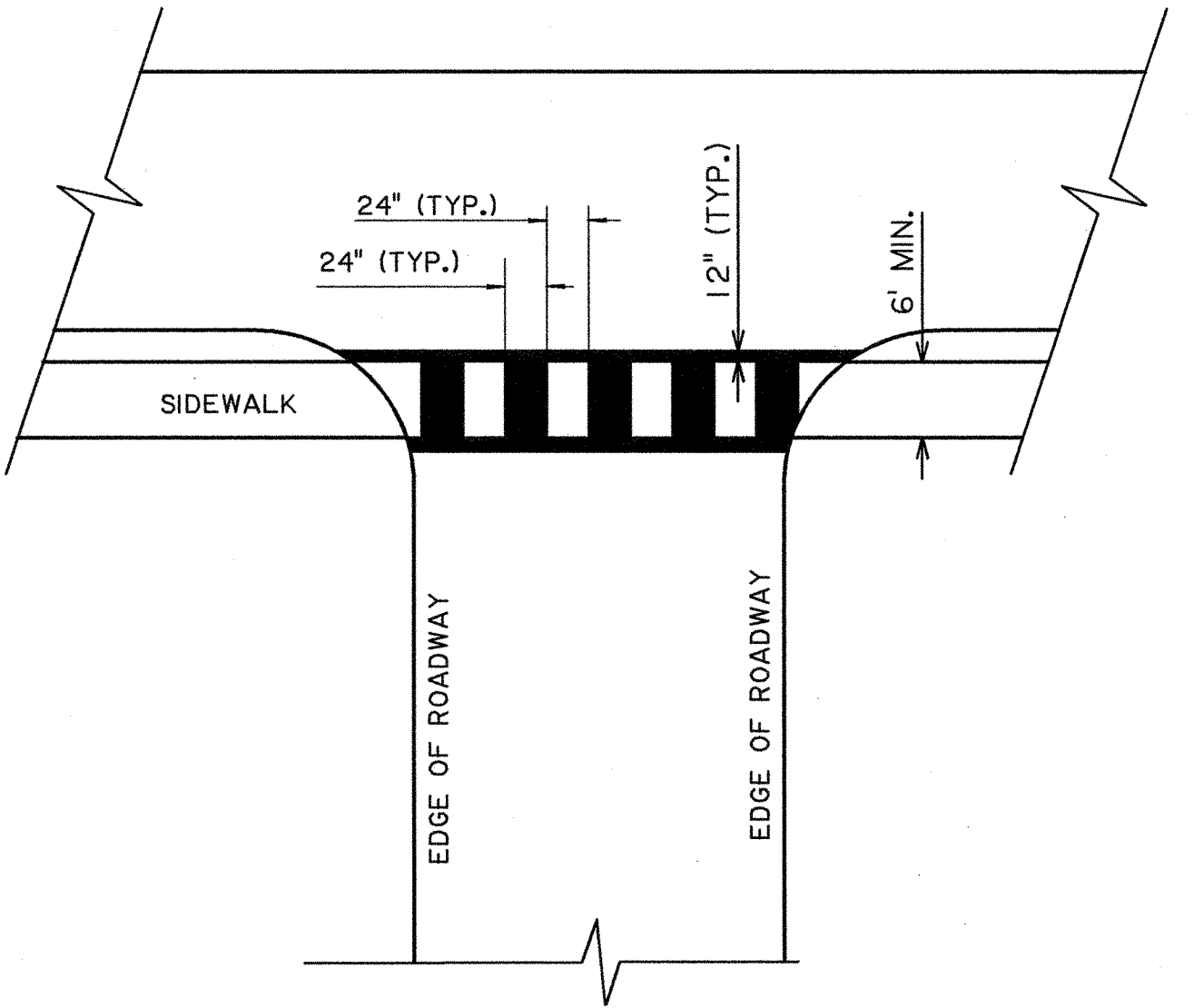
STATE OF LOUISIANA
 QUANG LAI
 License No. 33616
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 5-5-09

SHEET NUMBER	2b
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED MRG	
CHECKED Q.L.A.I.	
DATE	APRIL, 2009
DESIGNED MRG	
CHECKED Q.L.A.I.	
DATE	APRIL, 2009
NO.	3 OF 4
REVISION DESCRIPTION	
BY	
DATE	
 TYPICAL SECTIONS EMBANKMENT WIDENING DETAIL	
 ROAD DESIGN	



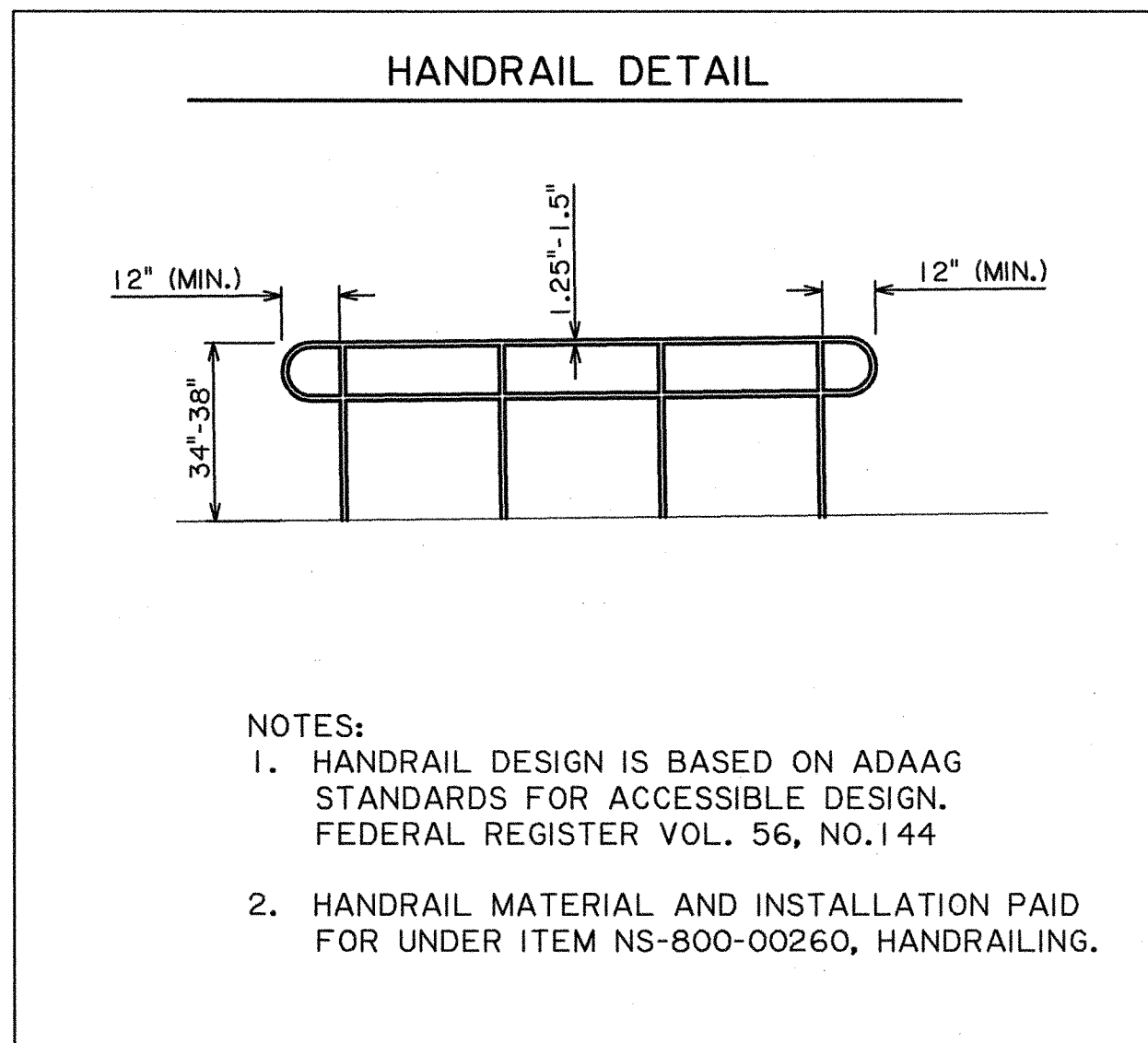
TYPICAL SIDEWALK FINISHED SECTION
 APPLIES STA. 94+57.59 TO STA. 97+33.34
 STA. 97+78.11 TO STA. 99+25.00
 STA. 139+20.00 TO STA. 140+75.00

* 4:1 FORESLOPE CAN BEGIN FROM THE EDGE OF THE SIDEWALK IF HANDRAIL IS REQUIRED.



DETAIL OF THERMOPLASTIC TRAFFIC STRIPPING (FOR CROSSWALKS)

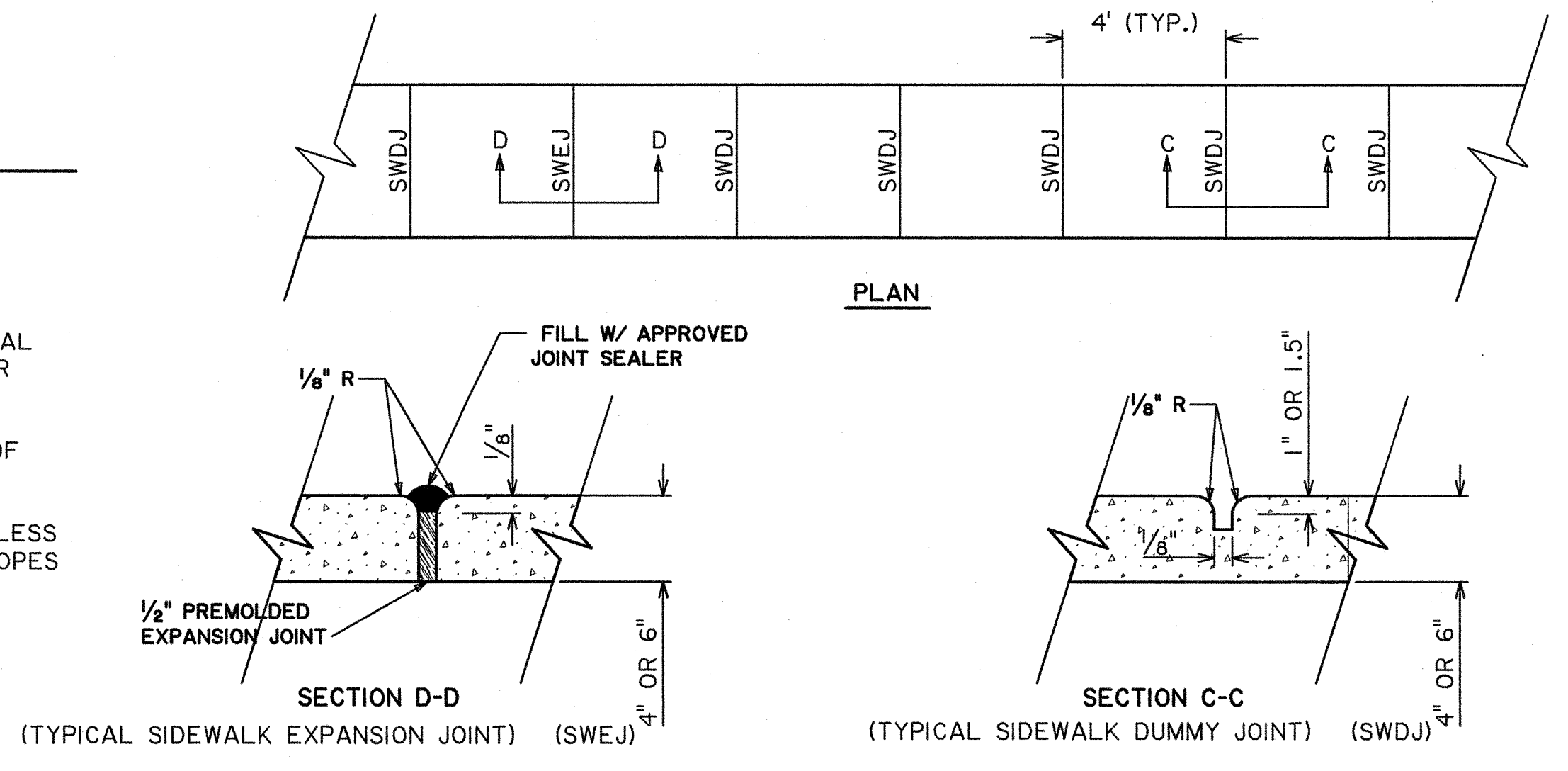
NOTES:
 CROSSWALK SHALL EXTEND ACROSS THE FULL WIDTH OF PAVEMENT INCLUDING SHOULDER.



NOTES:
 1. HANDRAIL DESIGN IS BASED ON ADAAG STANDARDS FOR ACCESSIBLE DESIGN. FEDERAL REGISTER VOL. 56, NO.144
 2. HANDRAIL MATERIAL AND INSTALLATION PAID FOR UNDER ITEM NS-800-00260, HANDRAILING.

CONCRETE SIDEWALK DETAILS

- NOTES:
1. CONTRATOR SHALL NOT START OR END CONCRETE WALK AT A ROUGH BROKEN LINE.
 2. INSTALL EXPANSION JOINTS (SWEJ) WITH 1/2" PREMOLDED EXPANSION JOINT MATERIAL OR 1" X 4" REDWOOD WITH JOINT SEALER AT 100' MAX. INTERVALS.
 3. SEE PLANS FOR LOCATIONS AND USAGE OF RESPECTIVE DETAILS.
 4. HORIZONTAL RUNNING SLOPES SHALL BE LESS THAN 1:20 (5%) AND VERTICAL CROSS SLOPES SHALL NOT EXCEED 1:50 (2%).



SHEET NUMBER	2c
PROJECT	064-01-0040
DATE	APRIL, 2009
SHEET	4 OF 4
DESIGNED/MRG	
CHECKED/Q.L.A.I	
DATE	
NO.	
DATE	
REVISION DESCRIPTION	
BY	
TYPICAL SECTIONS	
SIDEWALK	
ROAD DESIGN	

EARTHWORK

STATION	STATION	GENERAL EXCAVATION	EMBANKMENT
		CU. YDS.	CU. YDS.
86+04.00	99+75.00	1383	1148
139+20.00	148+01.00	859	1627
TOTAL		2250	2775

*** REMOVAL OF SURFACING AND STABILIZED BASE**

STATION	STATION	DESCRIPTION	LENGTH	AVG. WIDTH	SQ. YDS.
			FEET	FEET	
93+53.96	97+06.57	ROADWAY (LA1)	352.61	26.32	1031.2
97+06.57	97+89.74	INTERSECTION (LA574)	VARIES	VARIES	461.7
97+89.74	100+08.30	ROADWAY (LA1)	218.56	26.67	647.7
137+29.29	146+60.97	ROADWAY (LA1)	931.68	26.38	2730.9
49+04.97	49+48.38	ROADWAY (EAST LA574)	43.41	19.54	94.3
50+30.91	50+83.75	ROADWAY (WEST LA574)	52.84	17.58	103.2
TOTAL					5069.0

* STA. IS ALONG SURV. & ABAND. C.

CLASS II BASE COURSE

STATION	STATION	EQUATION	DESCRIPTION	LENGTH	WIDTH	SQ. YDS.
		FEET		FEET	FEET	
86+04.00	92+47.00		SHOULDER (RT. & LT. SIDE)	643.00	8.50	607.3
92+47.00	93+54.00		SHOULDER (RT. & LT. SIDE)	107.00	VARIES	145.2
93+54.00	96+72.75		ROADWAY (RT. SIDE)	318.75	20.25	717.2
96+72.75	98+04.21		TURNOUT (RT. SIDE)	VARIES	VARIES	600.5
98+04.21	99+25.00		ROADWAY (RT. SIDE)	120.79	20.25	271.8
93+54.00	96+94.66		ROADWAY (LT. SIDE)	340.66	20.25	766.5
96+94.66	98+14.81		TURNOUT (LT. SIDE)	VARIES	VARIES	560.4
98+14.81	99+25.00		ROADWAY (LT. SIDE)	110.19	20.25	247.9
139+60.00	146+29.34		ROADWAY (RT. & LT. SIDE)	669.34	40.50	3012.0
146+29.34	147+45.96	-31.62	SHOULDER (RT. & LT. SIDE)	85.00	VARIES	126.0
147+45.96	148+01.00		SHOULDER (RT. & LT. SIDE)	55.04	8.50	52.0
TOTAL						7106.8

RURAL DRIVEWAYS

STATION	SIDE	DESCRIPTION	LENGTH	WIDTH	AGGREGATE SURFACE COURSE (4" THICK)	SUPERPAVE ASPHALTIC CONCRETE (6" THICK)
			FEET	FEET	CU. YDS.	TONS
86+52.85	RT.	TYPE "C" DRIVE (OVERLAY)	VARIES	57	16.9	
87+88.73	RT.	TYPE "C" DRIVE (OVERLAY)	VARIES	31	8.9	
88+66.50	RT.	TYPE "C" DRIVE (OVERLAY)	VARIES	25	7.2	
90+91.52	RT.	TYPE "C" DRIVE (OVERLAY)	VARIES	10	2.8	
92+85.17	RT.	TYPE "C" DRIVE (OVERLAY)	VARIES	25	6.4	
93+80.62	LT.	TYPE "C" DRIVE	VARIES	35	15.3	5.6
94+40.52	LT.	TYPE "C" DRIVE	VARIES	35	16.4	5.6
98+24.94	RT.	TYPE "C" DRIVE	VARIES	36	12.2	6.0
141+17.91	LT.	TYPE "C" DRIVE	VARIES	37	14.0	6.2
141+17.91	RT.	TYPE "D" DRIVE	VARIES	32		40.0
145+91.50	RT.	TYPE "D" DRIVE	VARIES	34		17.4
146+22.90	RT.	TYPE "D" DRIVE	VARIES	13		5.9
147+06.60	RT.	TYPE "D" DRIVE	VARIES	38		16.0
49+27.95	RT.	TYPE "C" DRIVE ON CENTRAL AVE.	VARIES	22	7.3	3.0
49+17.36	RT.	TYPE "D" DRIVE ON CENTRAL AVE.	VARIES	12	33.9	3.6
48+91.59	LT.	TYPE "A" DRIVE ON CENTRAL AVE.	VARIES	17	2.7	3.6
TOTAL					144.0	112.9

CONCRETE WALKS AND DRIVES

STATION	STATION	SIDE	DESCRIPTION	AVE. LENGTH	WIDTH	SQ. YDS.
				FEET		FEET
94+57.59	97+33.34	LT.	SIDE WALK	287.5	6.0	191.7
97+78.11	99+25.00	LT.	SIDE WALK	203.7	6.0	135.8
139+60.00	140+75.00	LT.	SIDE WALK	100.7	6.0	67.1
TOTAL						394.6

STATE OF LOUISIANA
 QUANG LAI
 License No. 53616
 PROFESSIONAL ENGINEER IN
 CIVIL ENGINEERING
 4/10/09

SHEET NUMBER	3
DESIGNED/MRG	JEFFERSON
CHECKED Q.LAI	
DATE APRIL, 2009	
REVISION DESCRIPTION	
BY	
NO.	
DATE	
STATE PROJECT	064-01-0040
FEDERAL PROJECT	
PARISH	JEFFERSON
SUMMARY SHEET	
L.A. I	
ROAD DESIGN	

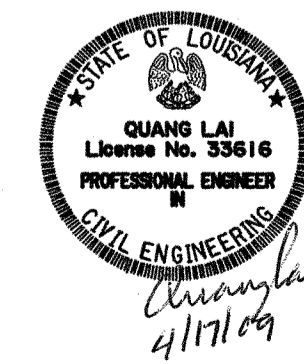
SUPERPAVE ASPHALTIC CONCRETE

STATION	STATION	DESCRIPTION	EXCEPTION	EQUATION	SUPERPAVE ASPHALTIC CONCRETE - ROADWAY					SUPERPAVE ASPHALTIC CONCRETE - SHOULDERS						
					LENGTH	AVG. WIDTH	SQ. YDS.	TONS		LENGTH	AVG. WIDTH	SQ. YDS.	TONS			
								2" WEARING COURSE (LEVEL I)	4" BINDER COURSE (LEVEL I)				2" WEARING COURSE (LEVEL A)	4" BINDER COURSE (LEVEL A)		
FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET					
86+04.00	92+47.00	ROADWAY & SHOULDER (RT. & LT. SIDE)			643.00	24.00	1714.67	188.6	377.2	643.00	8.00	571.56	62.9	8.50	607.28	133.6
92+47.00	93+54.00	ROADWAY & SHOULDER (RT. & LT. SIDE)			107.00	24.00	285.33	31.4	62.8	VARIES	VARIES	145.16	16.0	VARIES	145.16	31.9
93+54.00	96+72.75	ROADWAY & SHOULDER (RT. SIDE)			318.75	12.00	425.00	46.8	93.6	318.75	8.00	283.33	31.2	8.25	292.19	64.3
98+04.21	99+25.00	ROADWAY & SHOULDER (RT. SIDE)			120.79	12.00	161.05	17.7	35.4	120.79	8.00	107.37	11.8	8.25	110.72	24.4
93+54.00	96+94.66	ROADWAY & SHOULDER (LT. SIDE)			340.66	12.00	454.21	50.0	100.0	340.66	8.00	302.81	33.3	8.25	312.27	68.7
98+14.81	99+25.00	ROADWAY & SHOULDER (LT. SIDE)			110.19	12.00	146.9	16.2	32.4	110.19	8.00	97.95	10.8	8.25	101.01	22.2
139+60.00	146+29.34	ROADWAY & SHOULDER (RT. & LT. SIDE)			669.34	24.00	1784.91	196.3	392.6	669.34	16.00	1189.94	130.9	16.50	1227.12	269.7
146+29.34	147+45.96	ROADWAY & SHOULDER (RT. & LT. SIDE)		-31.62	85.00	24.00	226.7	24.9	49.8	85.00	VARIES	126.03	13.9	VARIES	126.03	27.7
147+45.96	148+01.00	ROADWAY & SHOULDER (RT. & LT. SIDE)			55.04	24.00	146.7	16.1	32.2	55.04	8.00	48.92	5.4	8.50	51.98	11.4
SUBTOTAL								587.5	1176.0			316.2				
TOTAL ALL SUPERPAVE ASPHALTIC CONCRETE								2733.6 TONS								

SUPERPAVE ASPHALTIC CONCRETE (DRIVES, TURNOUTS, AND MISC.)

STATION	STATION	DESCRIPTION	EXCEPTION	EQUATION	LENGTH	SUPERPAVE ASPHALTIC CONCRETE - ROADWAY				SUPERPAVE ASPHALTIC CONCRETE - SHOULDERS					
						AVG. WIDTH	SQ. YDS.	TONS		AVG. WIDTH	SQ. YDS.	TONS			
								2" WEARING COURSE (LEVEL I)	4" BINDER COURSE (LEVEL I)			2" WEARING COURSE (LEVEL A)	4" BINDER COURSE (LEVEL A)		
FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET			
96+72.75	98+04.21	TURNOUT (RT. SIDE)			VARIES	VARIES	518.43	57.0	114.1	VARIES	82.06	9.0	18.1		
96+94.66	98+14.81	TURNOUT (LT. SIDE)			VARIES	VARIES	478.45	52.6	105.3	VARIES	81.94	9.0	18.0		
98+03.79	99+25.00	GUARDRAIL WIDENING (LT. SIDE)			VARIES					VARIES	26.6	8.9	17.7		
98+19.19	99+25.00	GUARDRAIL WIDENING (RT. SIDE)			VARIES					VARIES	59.9	6.6	13.2		
139+60.00	140+70.57	GUARDRAIL WIDENING (LT. SIDE)			VARIES					VARIES	67.0	7.4	14.7		
139+60.00	140+89.58	GUARDRAIL WIDENING (RT. SIDE)			VARIES					VARIES	73.2	8.1	16.1		
SUBTOTAL								109.6	219.4			49.0	97.8		
* TOTAL ALL SUPERPAVE ASPHALTIC CONCRETE, DRIVES & TURNOUTS								588.7 TONS							

* INCLUDED PAVED DRIVES. (SEE SHEET 03--RURAL DRIVEWAYS)



SHEET NUMBER 3a

PARISH JEFFERSON

FEDERAL PROJECT

STATE PROJECT 064-01-0040

DESIGNED/MRG CHECKED Q.LAI

DATE APRIL, 2009

SHEET 2 OF 3

REVISION DESCRIPTION

NO. DATE

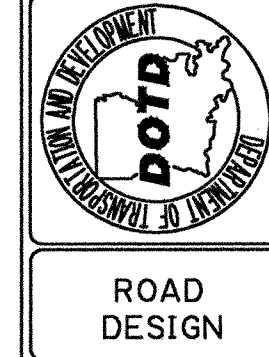
SUMMARY SHEET

LA 1

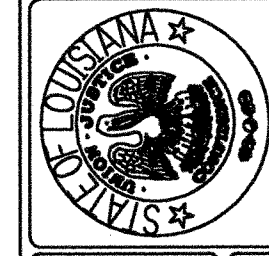
ROAD DESIGN

SUMMARY OF ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
201-01-00100	Clearing and Grubbing	LUMP	LUMP
202-01-00100	Removal of Structures and Obstructions	LUMP	LUMP
202-02-04000	Removal of Bridge [STA. 100+09.30, 28' X 3720' CONCRETE BRIDGE]	EACH	1
202-02-38500	Removal of Surfacing and Stabilized Base	SGYD	5,069
203-01-00100	General Excavation	CUYD	2,250
203-03-00100	Embankment	CUYD	2,775
204-02-00100	Temporary Hay or Straw Bales	EACH	3
204-05-00100	Temporary Sediment Check Dams (Hay)	EACH	9
204-05-00200	Temporary Sediment Check Dams (Stone)	EACH	2
204-06-00100	Temporary Silt Fencing	LNFT	3,524
302-02-05120	Class II Base Course (10" Thick) (Stone or Recycled Portland Cement Concrete)	SGYD	7,106.8
304-01-00100	Lime	TON	90.73
304-04-00400	Lime Treatment (Type D) (12" Thick)	SGYD	6,401
401-01-00100	Aggregate Surface Course (Net Section)	CUYD	144
402-01-00100	Traffic Maintenance Aggregate (Vehicular Measurement)	CUYD	1,500
502-01-00100	Superpave Asphaltic Concrete	TON	2,755.9
502-01-00200	Superpave Asphaltic Concrete, Drives, Turnouts and Miscellaneous	TON	588.7
509-01-00100	Cold Planing Asphaltic Pavement	SGYD	2,373
509-02-00100	Contractor Retained Reclaimed Asphaltic Pavement	CUYD	-33
701-05-01040	Side Drain Pipe (18" RCP/PP/CMP)	LNFT	174
701-05-01060	Side Drain Pipe (24" RCP/PP/CMP)	LNFT	276
702-03-00100	Catch Basins (CB-01)	EACH	3
704-03-00100	Blocked Out Guard Rail	LNFT	50
704-08-00200	Guard Rail Transitions (Double Thrie Beam)	LNFT	100
704-11-00100	Guard Rail End Treatment (Flared)	EACH	4
706-01-00100	Concrete Walk (4" Thick)	SGYD	394.6
706-04-00100	Handicapped Curb Ramps	EACH	6
708-01-00100	Right-of-Way Monument	EACH	10
711-03-00500	Riprap (130 lb)	TON	2,913
711-04-00100	Geotextile Fabric	SGYD	2,088
713-01-00100	Temporary Signs and Barricades	LUMP	LUMP
713-04-01000	Temporary Pavement Markings (Solid Line) (4" Width)	MILE	1.197
716-01-00100	Mulch (Vegetative)	TON	2.81
717-01-00100	Seeding	LB	84
718-01-00100	Fertilizer	LB	2,810
722-02-00100	Project Site Laboratory (Equipped)	EACH	1
725-01-00100	Temporary Detour Roads	SGYD	172.3
726-01-00100	Bedding Material	CUYD	42.3
727-01-00100	Mobilization	LUMP	LUMP
729-16-00300	Object Marker Assembly (Type 3)	EACH	4
730-09-00100	Electrical System	LUMP	LUMP
731-01-00100	NonreflectORIZED Raised Pavement Markers	EACH	880
731-02-00100	ReflectORIZED Raised Pavement Markers	EACH	805
732-02-02000	Plastic Pavement Striping (Solid Line) (4" Width) (Thermoplastic 90 mil)	MILE	4.684
732-03-02000	Plastic Pavement Striping (Broken Line) (4" Width) (Thermoplastic 90 mil)	MILE	0.1
740-01-00100	Construction Layout	LUMP	LUMP
804-01-00800	Precast Concrete Piles (36")	LNFT	48,403
804-05-00800	Precast Concrete Test Piles (36")	EACH	7
804-09-00100	Loading Test Piles	EACH	7
804-10-00100	Reloading Test Piles	EACH	1
804-11-00100	Redriving Test Piles	EACH	1
804-12-00100	Loading Permanent Piles	EACH	1
804-17-00100	Dynamic Monitoring	EACH	55
805-02-00200	Class A (M) Concrete (Footings)	CUYD	2,498.94
805-02-00300	Class A (M) Concrete (Piers)	CUYD	685.18
805-02-00400	Class A (M) Concrete (Bents)	CUYD	1,170.03
805-04-00100	Class AA (M) Concrete	CUYD	2,227.87
805-11-00100	Strip Seal Joints	LNFT	429.39
806-01-00100	Deformed Reinforcing Steel	LB	2,168,943
807-06-00100	Structural Metalwork	LUMP	LUMP
810-04-00100	Steel and Concrete Railing	LNFT	8,070
813-01-00100	Concrete Approach Slabs	SGYD	279.89
NS-203-00001	Bucket Dredging	CUYD	74,800
NS-722-00001	Resident Engineers Housing Allowance	MNTH	41
NS-727-00001	Demobilization-Remobilization	EACH	6
NS-800-00080	Dynamic Analysis	EACH	15
NS-800-00160	Steel Finger Joints	LNFT	190.16
NS-800-00181	Precast Prestressed Concrete Girder (Type III) Class P (HPC)	LNFT	8,495.2
NS-800-00184	Precast Prestressed Concrete Girder (Type BT-78) Class P (HPC)	LNFT	8,070.6
NS-800-00202	Class A (HPC) Concrete (Piers)	CUYD	876.71
NS-800-00203	Class A (HPC) Concrete (Bents)	CUYD	826.53



SUMMARY OF ESTIMATED QUANTITIES

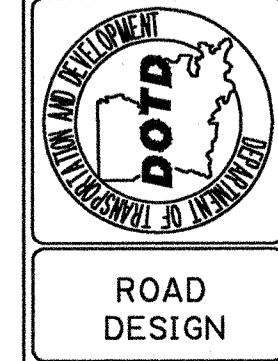


DESIGNED	CHECKED	DATE	BY
RETAILED	CHECKED	DATE	BY
NO.	DATE	NO.	DATE

PARISH	JEFFERSON
FEDERAL PROJECT	BR-52-01 (001)
STATE PROJECT	064-01-0040
DATE	5/6/09
SHEET	01 of 02
SHEET NUMBER	3b

SUMMARY OF ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
NS-800-00204	Class AA (HPC) Concrete	CUYD	5, 287.51
NS-800-00224	Precast Prestressed Concrete Girder (Type BT-78) (HPC)	LNFT	747.5
NS-800-00241	Bearing (Elastomeric) (Slab Span)	EACH	70
NS-800-00244	Bearing (Elastomeric) (Type III Girder)	EACH	228
NS-800-00248	Bearing (Elastomeric) (Type BT-78 Girder)	EACH	130
NS-800-00260	Hand Railing	LNFT	3, 995.71
NS-800-00300	Instrumentation Installation for Integral Bridge Abutment	LUMP	1
NS-800-00540	Pile Dynamic Monitoring Instrumentation	LUMP	1
NS-800-00560	Deformed Reinforcing Steel (Stainless Steel)	LB	1, 576, 930
NS-805-00006	Special Surface Finish for Concrete	SOFT	176, 040
NS-814-00004	Navigational Clearance Gauge (Painted)	EACH	2
NS-IIS-06120	Pullbox, Structure Mount, Furnish & Install - New	EACH	2
NS-P26-01000	Air Release Valve (1") (Jefferson Parish)	EACH	1
NS-P26-03000	Concrete Pipe Support Blister (Jefferson Parish)	EACH	202
NS-P26-05000	Expansion/Contraction Coupling (Jefferson Parish)	EACH	2
NS-P26-06000	Fire Hydrants (Jefferson Parish)	EACH	2
NS-P26-06020	Fittings for Waterlines (DI) (Jefferson Parish)	LB	1, 900
NS-P26-07000	Gate Valve and Valve Box (8") (Jefferson Parish)	EACH	7
NS-P26-07020	Gate Valve and Valve Box (12") (Jefferson Parish)	EACH	2
NS-P26-12000	Long Body Transitional Coupling (4") (Jefferson Parish)	EACH	4
NS-P26-12020	Long Body Transitional Coupling (6") (Jefferson Parish)	EACH	1
NS-P26-12040	Long Body Transitional Coupling (8") (Jefferson Parish)	EACH	2
NS-P26-15000	Offset Pipe Clamp Assembly (Jefferson Parish)	EACH	202
NS-P26-18000	Removal and Disposal of Existing AC Waterline (Jefferson Parish)	LNFT	1, 220
NS-P26-18020	Removal and Disposal of Existing DI Waterline (Jefferson Parish)	LNFT	4, 000
NS-P26-23000	Water Service Connections (Jefferson Parish)	EACH	2
NS-P26-23020	Waterline (12" DI) (Jefferson Parish)	LNFT	4, 000
NS-P26-23040	Waterline (12" DI) (Restrained) (Jefferson Parish)	LNFT	240
NS-P26-23060	Waterline (8" PVC) (Jefferson Parish)	LNFT	650
NS-P26-23080	Waterline (12" PVC) (Jefferson Parish)	LNFT	800
NS-P26-23100	Waterline (4" PVC) (Restrained) (Jefferson Parish)	LNFT	60
NS-P26-23120	Waterline (6" PVC) (Restrained) (Jefferson Parish)	LNFT	100
NS-P26-23140	Waterline (8" PVC) (Restrained) (Jefferson Parish)	LNFT	150
NS-P26-23160	Waterline (12" PVC) (Restrained) (Jefferson Parish)	LNFT	200



SUMMARY OF ESTIMATED QUANTITIES

DESIGNED CHECKED	DATE	BY
RETAILED CHECKED	5/6/09	
SHEET	02 of 02	
PARISH	Jefferson	
FEDERAL PROJECT	BR-52-01 (001)	
STATE PROJECT	064-01-0040	

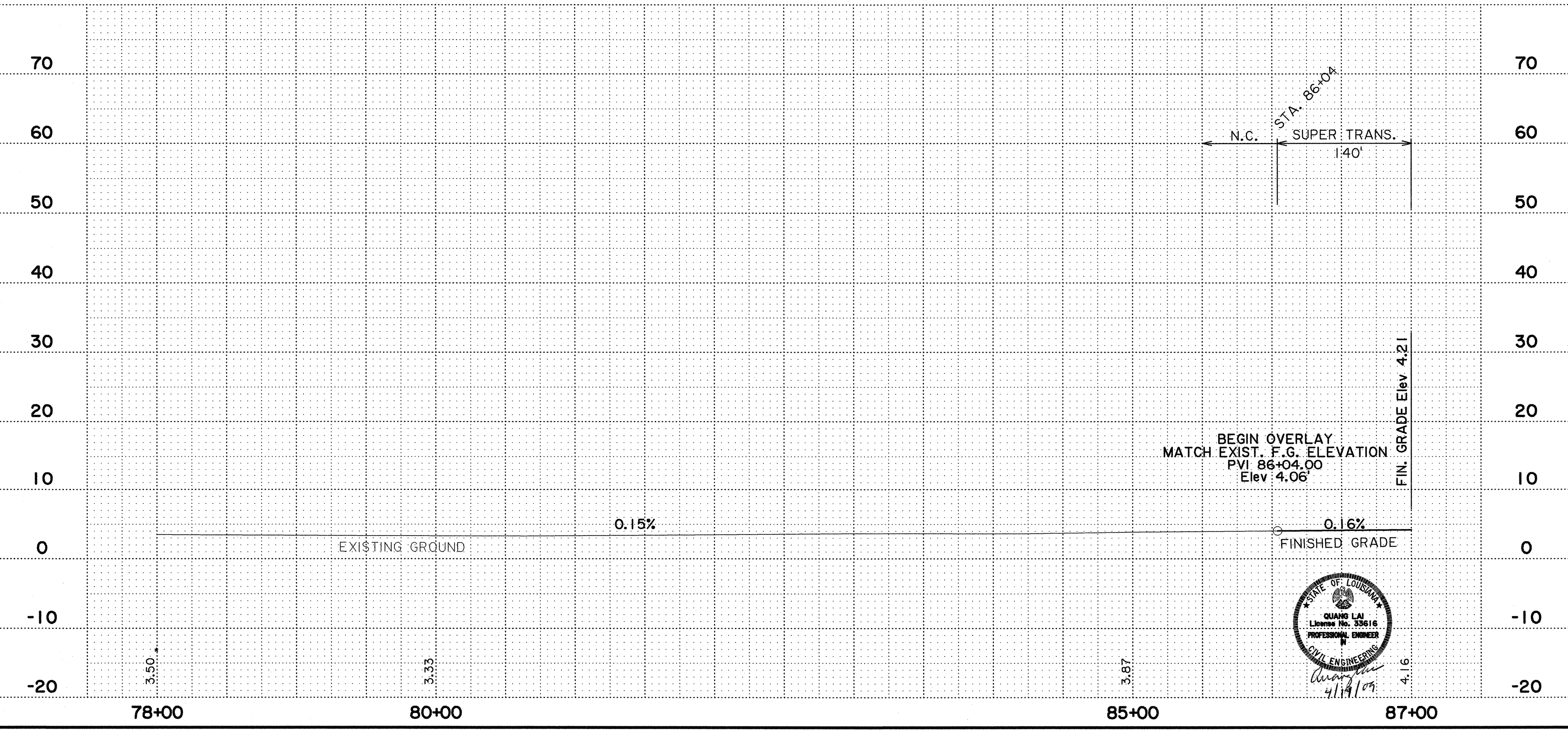
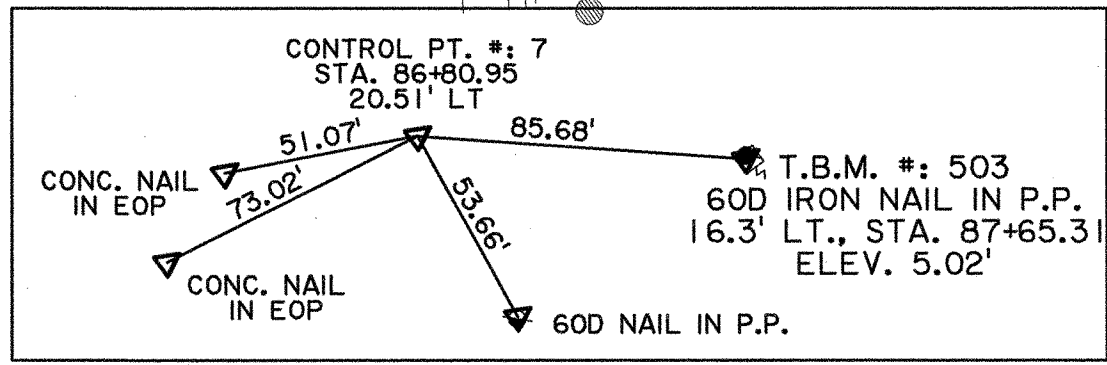
ROAD DESIGN

LEGEND - EXISTING TOPOGRAPHY

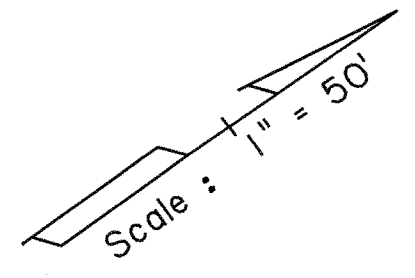
CONTROL POINT		GAS LINE	
PHOTO TARGET		GAS METER	
PAVEMENT EDGE		GAS SERVICE (NO METER)	
SHOULDER EDGE		GAS REGULATOR	
SLOPE TOE		GAS RISER	
GUARDRAIL TOP		GAS TEST BOX	
HIGH BANK		GAS VALVE	
WATER'S EDGE		GAS LINE/CASING	
HIGH WATER MARK		GAS VENT	
BOX CULVERT		RAILROAD MILEPOST	
PIPE CULVERT		RAILROAD SIGNAL	
CATCH BASIN TOP (ROUND)		RAILROAD SWITCH	
DROP INLET TOP (ROUND)		RAILROAD TRACK	
DRAINAGE MANHOLE TOP		RR TRAFFIC SIGNAL BOX	
LEVEE TOP		SEWER LINE	
DITCH CENTERLINE		SEWER MANHOLE TOP	
TREE		SEWER BLOWOUT VALVE	
WOODS EDGE		SEWER CLEANOUT	
MARSH LINE		SEPTIC TANK	
SWAMP LINE		SEWER PUMP (PRIVATE)	
TREE CLUSTER		SEWER TREATMENT (INDIVIDUAL)	
HEDGE		FEDERAL AID MARKER	
BUSH		TRAFFIC CONTROLLER BOX	
TREE LINE		TRAFFIC COUNTER	
FENCE LINE		TRAFFIC SIGNAL	
GATE		TRAFFIC SIGNAL SUPPORT POLE	
CATTLE GUARD		LIGHT POLE	
PROPERTY CORNER		LIGHT PEDESTAL	
RIGHT OF WAY MONUMENT		LIGHT POWER VAULT	
SECTION CORNER		TRAFFIC SIGN	
FENCE CORNER		PARKING METER	
TELEVISION CABLE		TELEPHONE POLE	
TELEVISION PEDESTAL		TELEPHONE LINE	
POWER POLE		TELEPHONE BOOTH	
DEADMAN		TELE CROSS CONNECT BOX	
POWER LINE		TELEPHONE PEDESTAL	
POWER JUNCTION BOX		TELEPHONE PRESSURE BOX	
POWER VAULT		WATER LINE	
TRANSFORMER		WATER LINE/CASING	
COMBINATION POLE		WATER CLEANOUT	
POWER DROP		WATER METER	
PIPELINE		WATER VALVE	
PIPELINE VENT		WATER VALVE VAULT	
PIPELINE REGULATOR		WATER WELL	
GAS WELL		FIRE HYDRANT	
OIL WELL		BILLBOARD	
		FUEL PUMP	
		POST	
		SIGN POST	
		STORAGE TANK (ROUND)	
		GRAVE	
		MAIL BOX	
		ORNAMENTAL LIGHT	
		FLAG POLE	

NOTES:

- ALL EXISTING DRAINAGE STRUCTURES WITHIN THE LIMITS OF FULL CONSTRUCTION ARE TO BE REMOVED, UNLESS OTHERWISE SPECIFIED. PAID UNDER PAY ITEM "REMOVAL OF STRUCTURES AND OBSTRUCTIONS".
- REMOVE ABANDONED ROADWAY AND GRADE TO DRAIN. WORK TO BE INCLUDED AND PAID UNDER PAY ITEM "GENERAL EXCAVATION".
- STATION AND OFFSETS FOR ALL BENCHMARKS AND CONTROL POINTS BASED ON SURVEY & ABAND. ϵ .
- REMOVAL OF TIMBER RETAINING WALL FROM STA. 91+14 TO STA. 92+48 IS TO BE PAID UNDER PAY ITEM "REMOVAL OF STRUCTURES AND OBSTRUCTIONS".



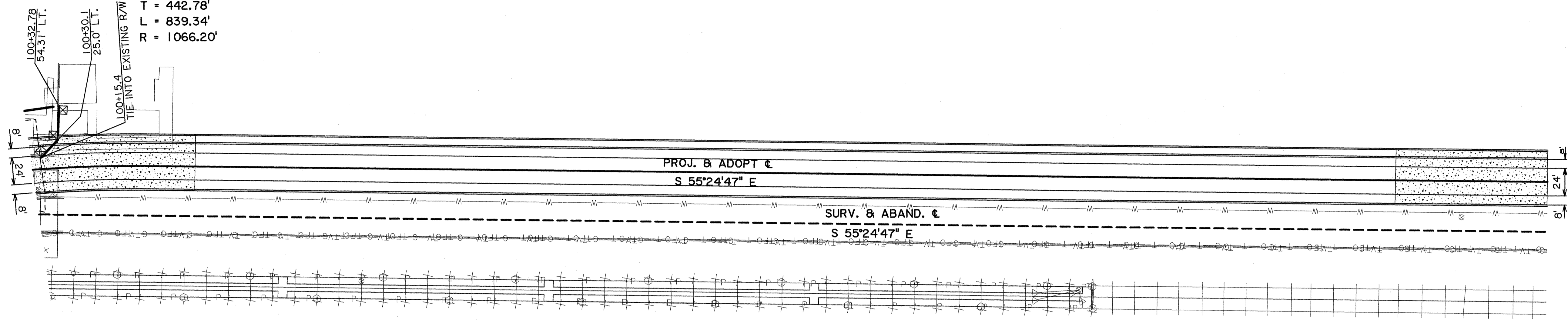
STA. 86+04.00
 BEGIN S.P. NO. 064-01-0040
 BEGIN F.A.P. NO. 5201(001)
 BEGIN OVERLAY



SHEET NUMBER	4
DESIGNED/MRG	Q.L.LAI
CHECKED/Q.L.LAI	Q.L.LAI
DATE	APRIL, 2009
PROJECT	064-01-0040
PARISH	JEFFERSON
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
BY	
DATE	
NO.	
PLAN AND PROFILE SHEET	
ROAD DESIGN	

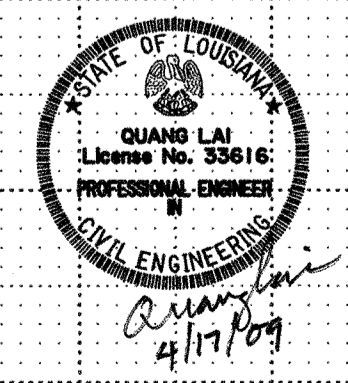
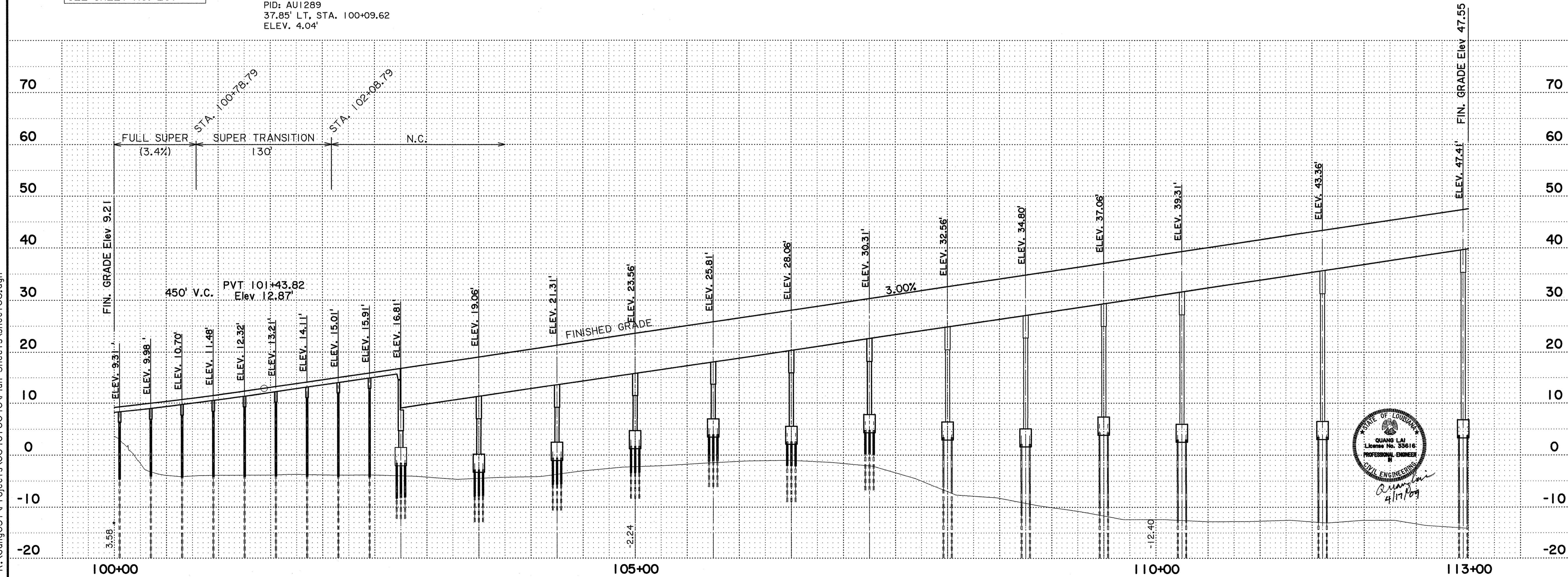
14-APR-2009 13:10

PROJ. & ADOPT ϵ
 CURVE DATA
 P.I. STA. 97+08.23
 $\Delta = 45^{\circ}06'16''$
 $D = 5^{\circ}22'26''$
 $T = 442.78'$
 $L = 839.34'$
 $R = 1066.20'$



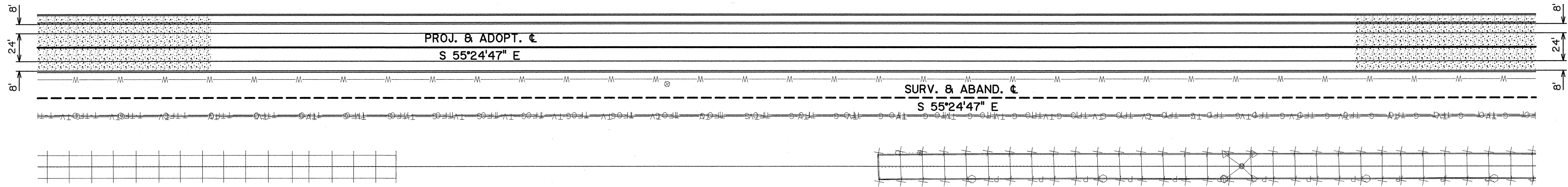
FOR DETAILS OF BRIDGE
 SEE SHEET NO. 201

B.M. #403
 NATIONAL GEODETIC SURVEY
 3"D BRASS CAP NE RETAINING WALL OF BRIDGE
 DESIGNATION: P221 1965
 PID: AU1289
 37.85' LT, STA. 100+09.62
 ELEV. 4.04

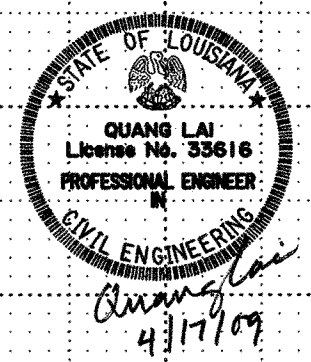
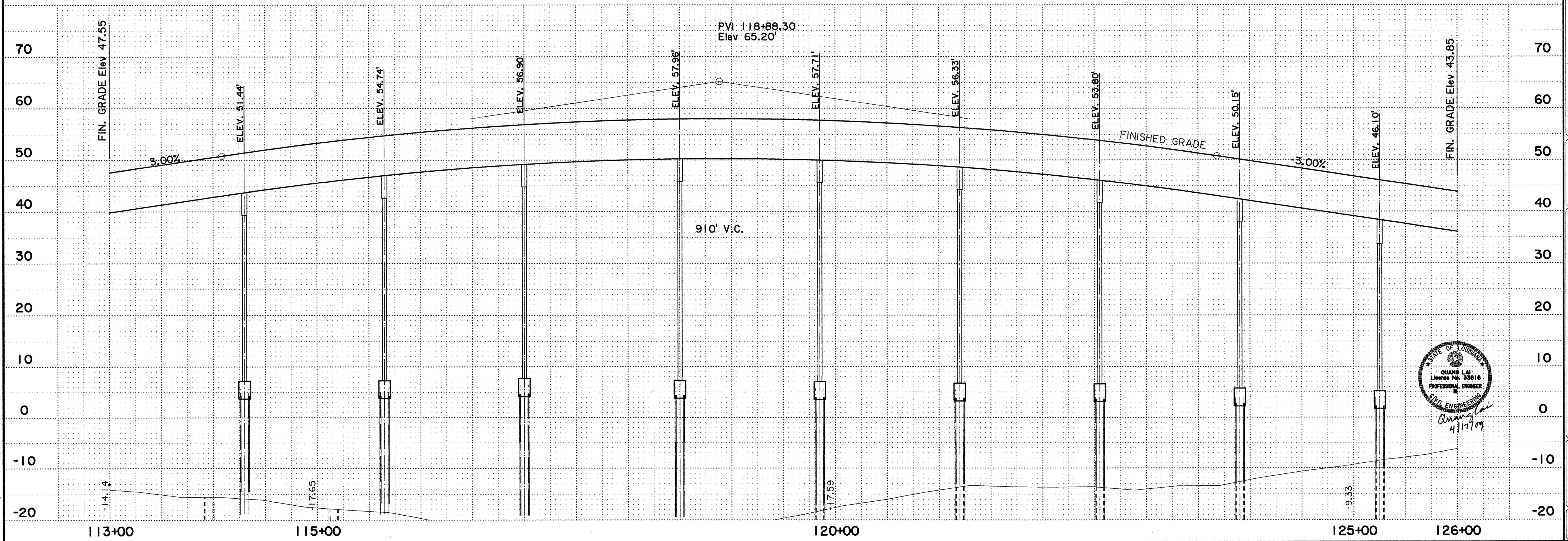


SHEET NUMBER	6
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED MRG	
CHECKED Q.LAI	
DATE	APRIL, 2009
DATE	APRIL, 2009
SHEET	3 OF 7
REVISION DESCRIPTION	
NO.	DATE
BY	
PLAN AND PROFILE SHEET LA 1	
ROAD DESIGN	

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FOR DETAILS OF BRIDGE
SEE SHEET NO. 201



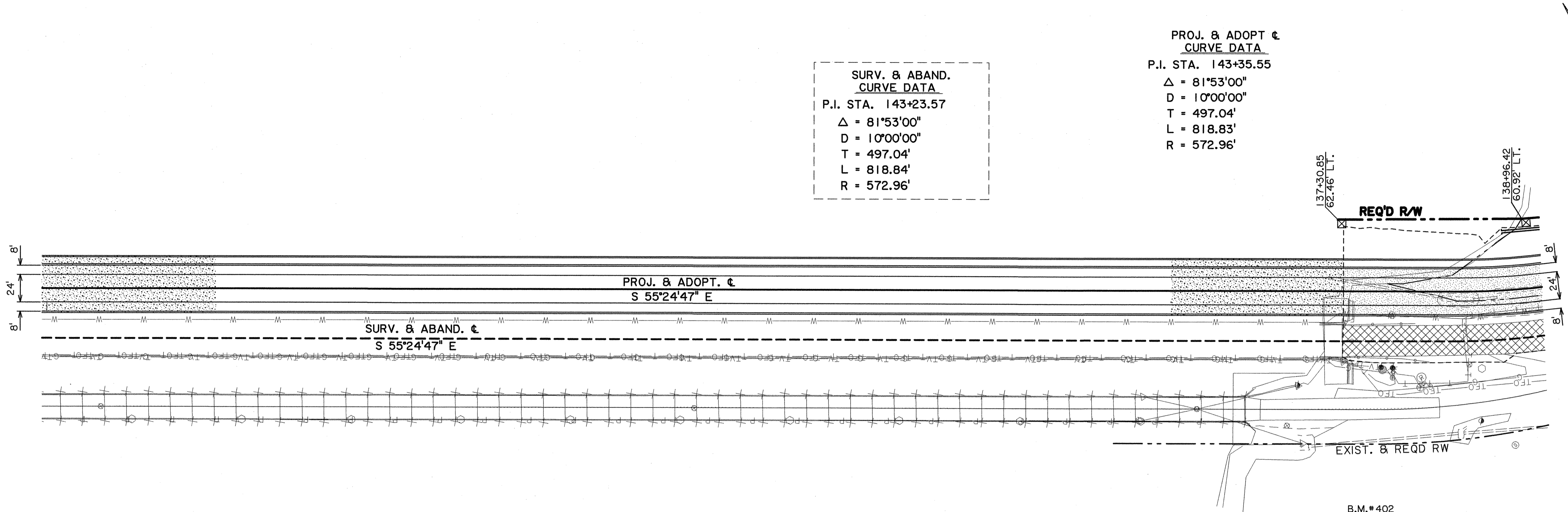
Scale: 1" = 40'

SHEET NUMBER		7	
PARISH		JEFFERSON	
DESIGNED/MRG		CHECKED/Q.LAI	
DATE		APRIL 2009	
SHEET		4 OF 7	
FEDERAL PROJECT			
STATE PROJECT		064-01-0040	
REVISION DESCRIPTION			
NO.		DATE	
BY			

PLAN AND PROFILE SHEET

ROAD DESIGN

LA

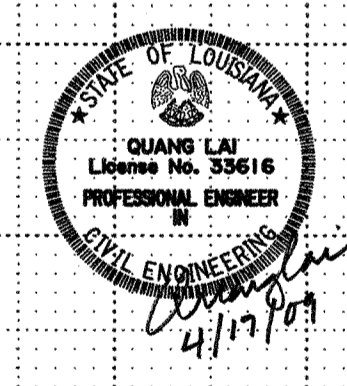
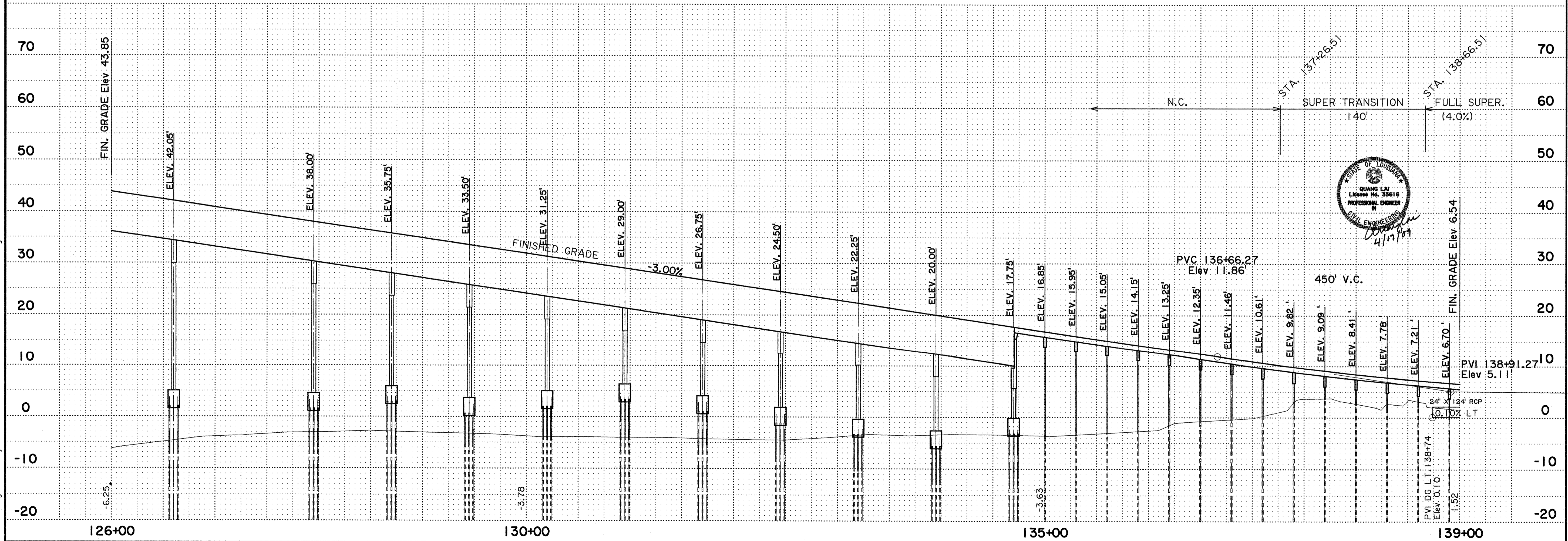


FOR DETAILS OF BRIDGE SEE SHEET NO. 201

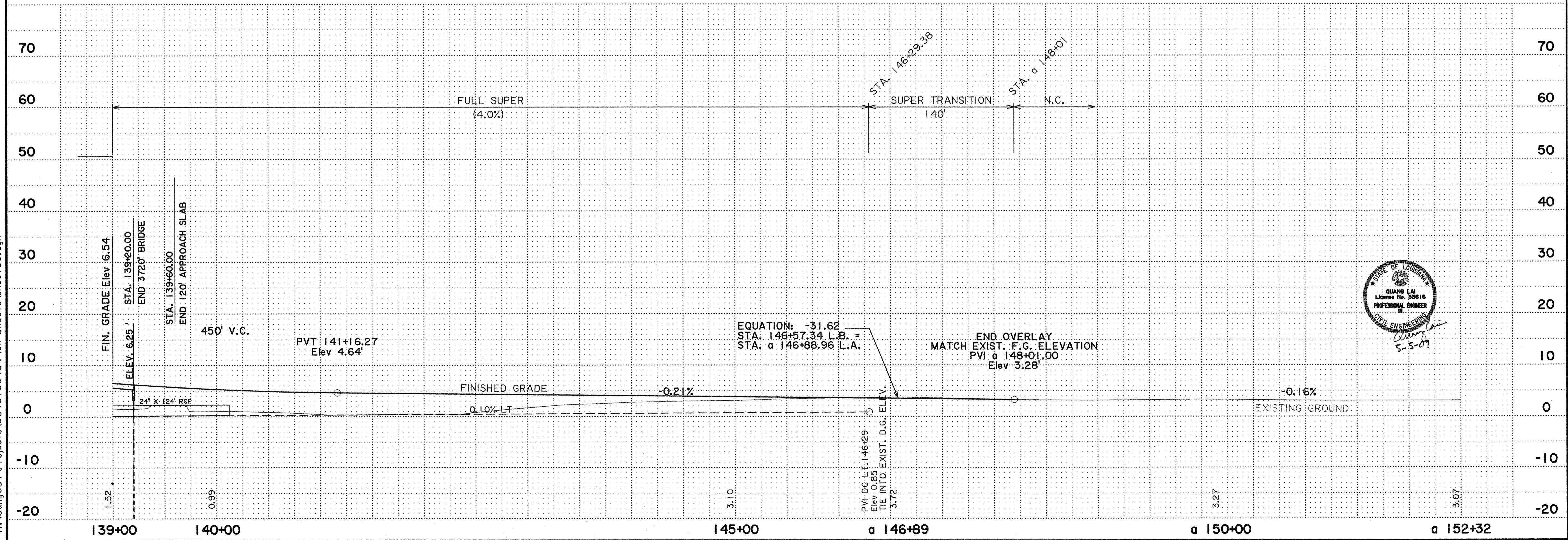
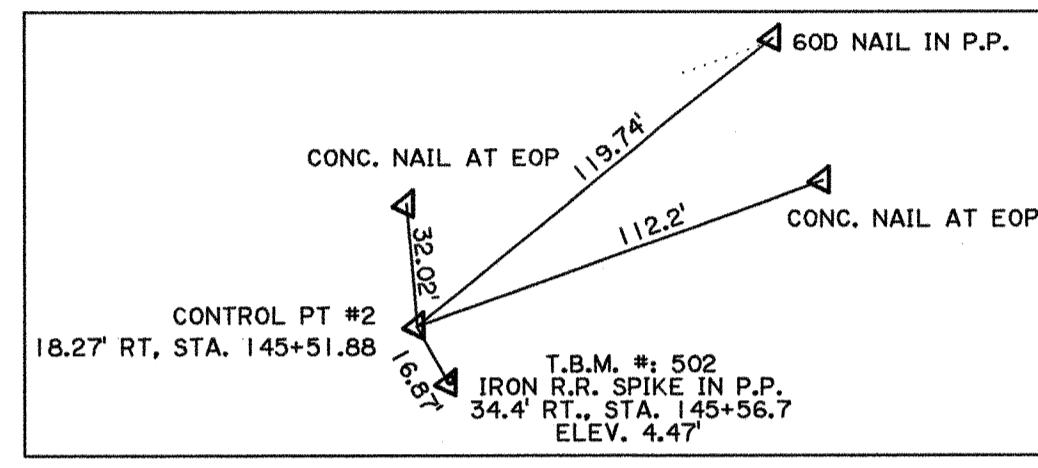
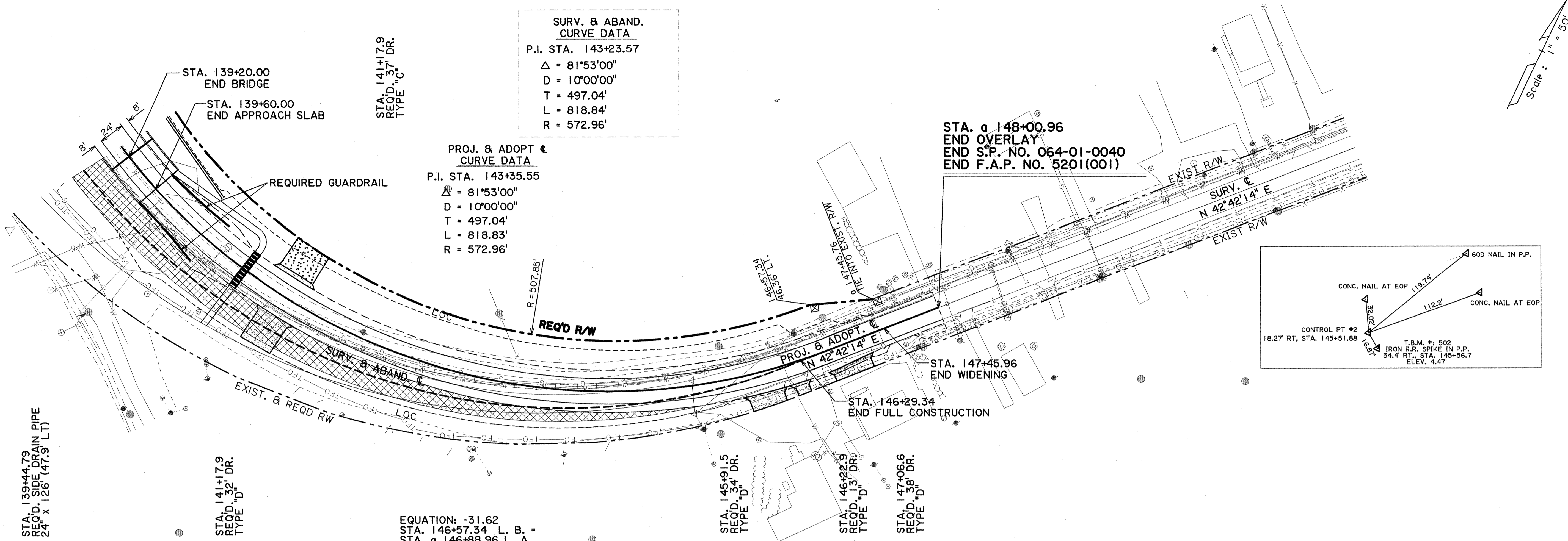
FOR DETAILS OF SIDEWALK SEE SHEET NO. 12

FOR DETAILS OF EMBANKMENT WIDENING, SEE SHEET NO. 2b

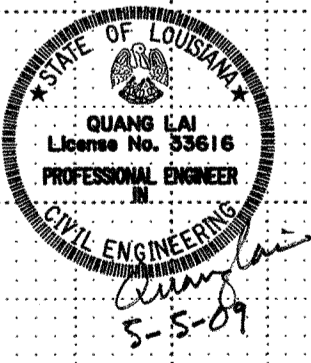
B.M.#402
 NATIONAL GEODETIC SURVEY
 BRASS DISK SW CORNER OF BRIDGE
 DESIGNATION: N221 1965
 PID: AU1291
 17.96' RT, STA. 137+29.85
 ELEV. 6.17'



SHEET NUMBER	8
DESIGNED MRG	JEFFERSON
CHECKED Q.L.A.I.	
DATE	APRIL, 2009
REVISION DESCRIPTION	
NO.	DATE
BY	
STATE PROJECT	064-01-0040
FEDERAL PROJECT	
PARISH	JEFFERSON
PLAN AND PROFILE SHEET	
ROAD DESIGN	



SHEET NUMBER		9	
PARISH		JEFFERSON	
FEDERAL PROJECT			
STATE PROJECT		064-01-0040	
DESIGNED	MRG	DATE	APRIL, 2009
CHECKED	Q.LAI	SHEET	6 OF 7
DATE			
BY			
REVISION DESCRIPTION			
LA I			
PLAN AND PROFILE SHEET			
ROAD DESIGN			



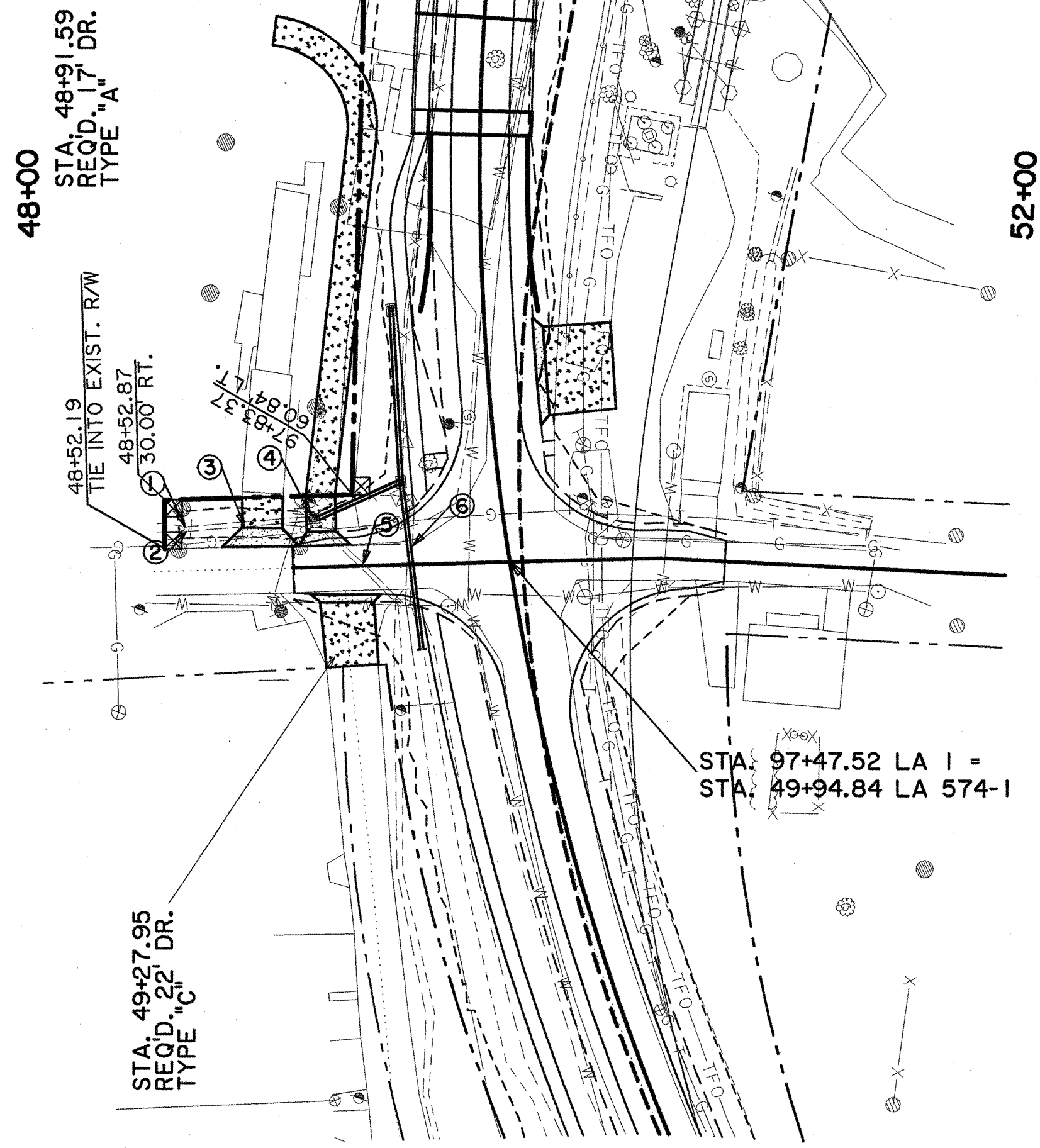
DRAINAGE STRUCTURES TO BE REMOVED:

①	STA. 48+60.62	6" X 2' PLASTIC PIPE
②	STA. 48+61.44	CATCH BASIN
③	STA. 48+85.45	12" X 52' RCP
④	STA. 49+14.57	CATCH BASIN
⑤	STA. 49+32.19	20" X 50' RCP
⑥	STA. 49+53.54	30" X 42' RCP

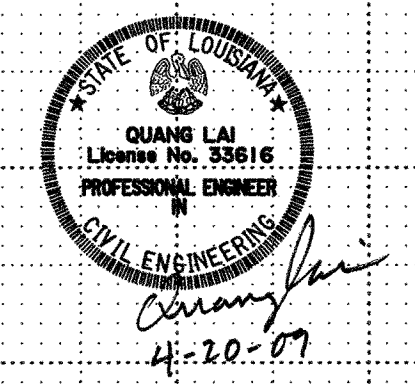
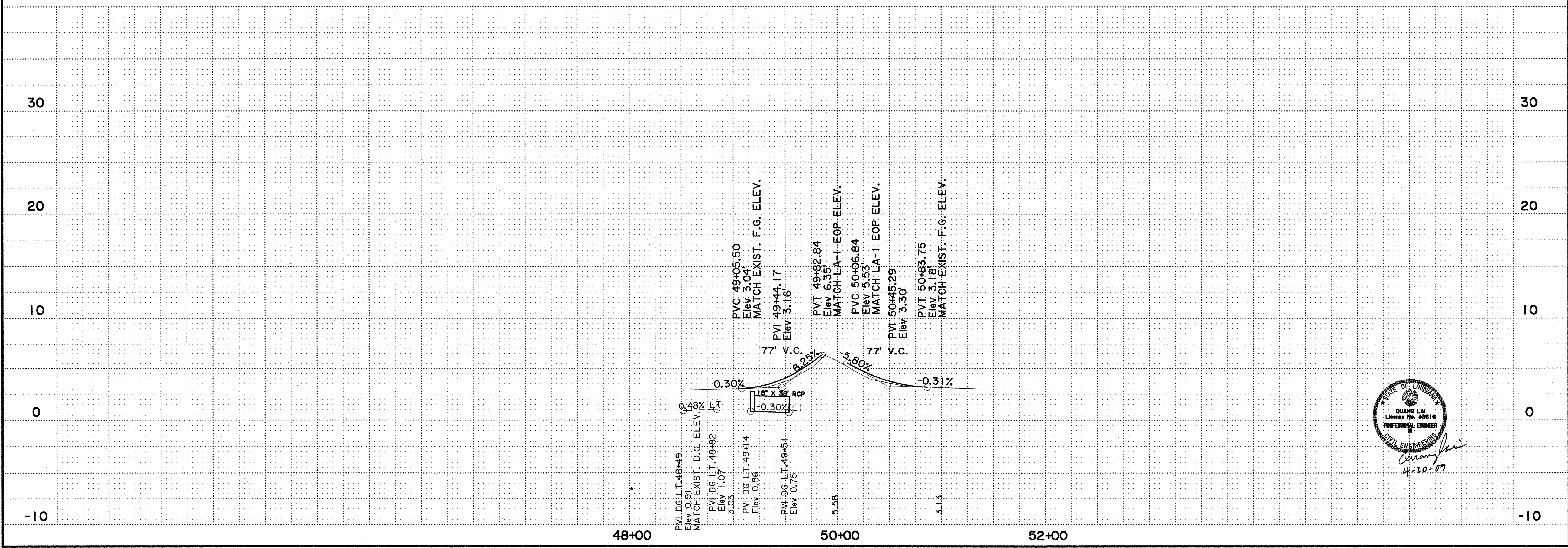
NOTES:
 REMOVE EXIST. CATCH BASIN AT STA. 48+61.44 AND 12" RCP AT STA. 48+85.45. CONSTRUCT DITCH FROM STA. 48+49 TO DRIVE AT STA. 48+92.

STA. 49+14
 REQ'D CB-01, RT.
 (F.L. 0.66')

STA. 49+32.75
 REQ'D 18" x 36"
 STORM DRAIN PIPE, L.T.

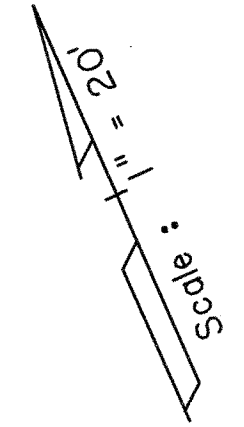
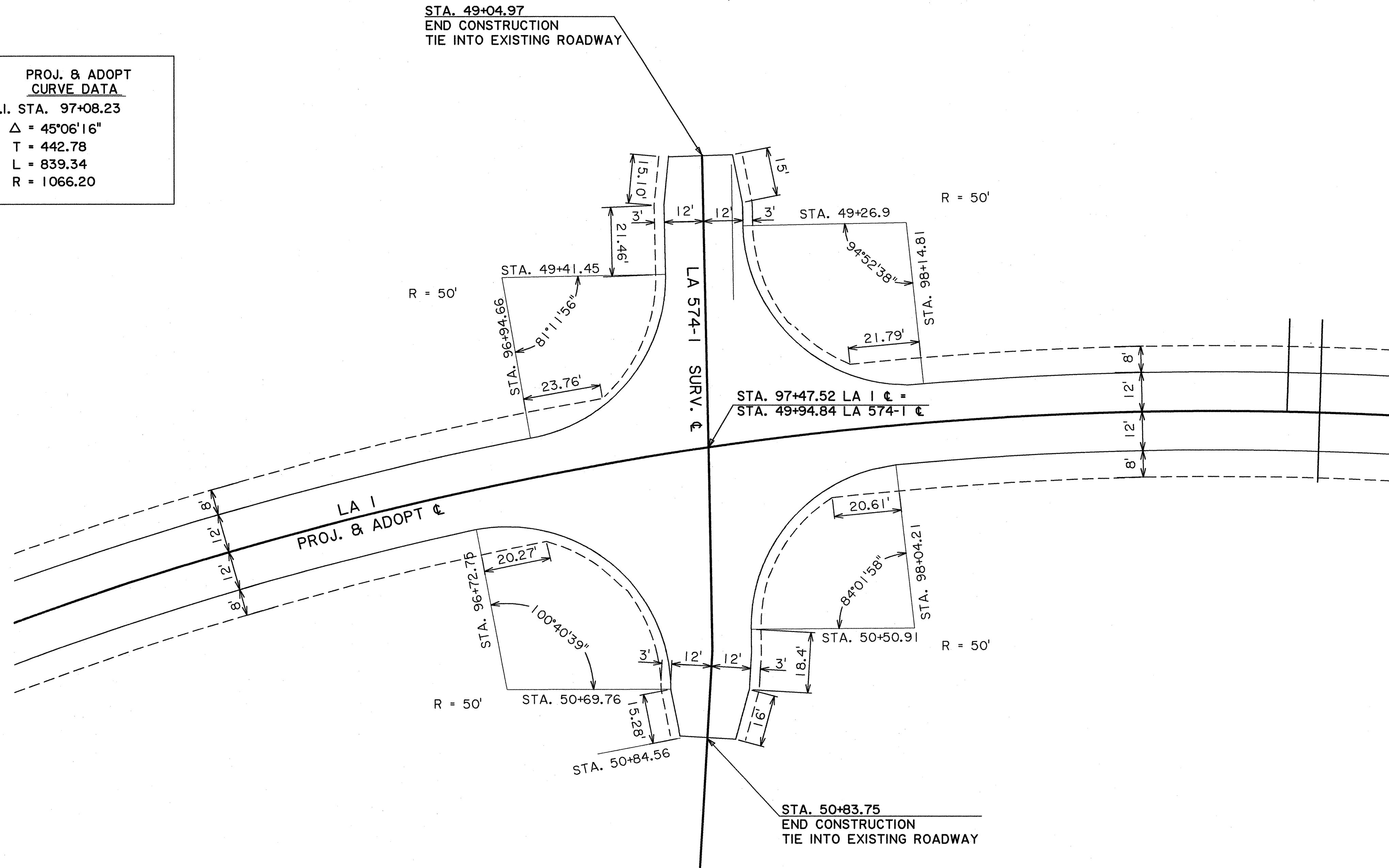


FOR DETAILS OF INTERSECTION
 SEE SHEET NO. 11



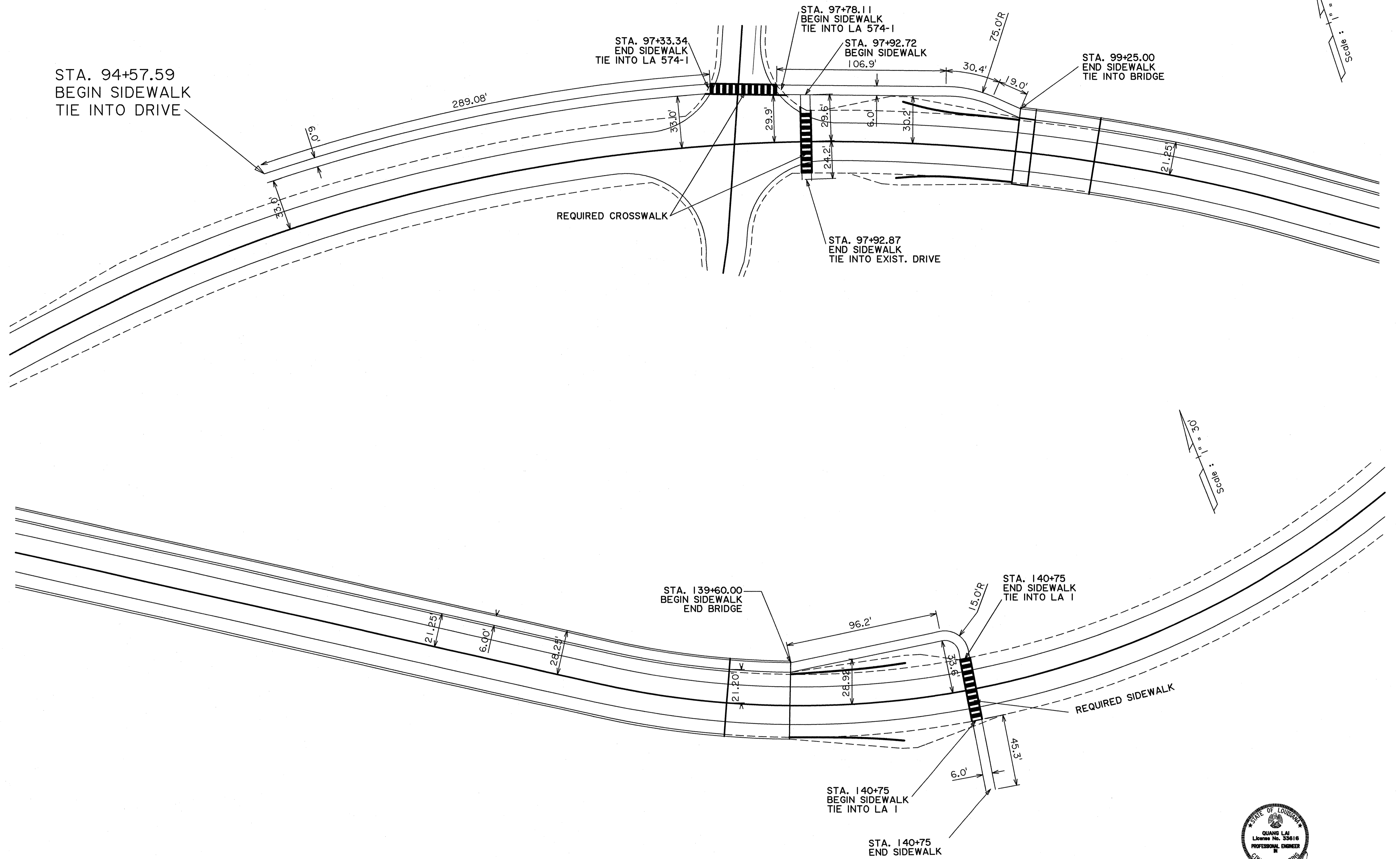
SHEET NUMBER		10	
PARISH		JEFFERSON	
DESIGNED/MRG		CHECKED/Q.LAI	
DETAILED/MRG		CHECKED/Q.LAI	
DATE		APRIL, 2009	
SHEET		7 OF 7	
PROJECT		064-01-0040	
STATE		LA	
REVISION DESCRIPTION		BT	
NO.		DATE	
PLAN AND PROFILE SHEET		LA 574-1	
ROAD DESIGN			

**PROJ. & ADOPT
CURVE DATA**
 P.I. STA. 97+08.23
 $\Delta = 45^{\circ}06'16''$
 $T = 442.78$
 $L = 839.34$
 $R = 1066.20$



STATE OF LOUISIANA
 QUANG LAI
 License No. 53616
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
Quang Lai
 4-26-09

SHEET NUMBER		11	
DESIGNED MRG	CHECKED Q.LAI	DATE	APRIL, 2009
PARISH	FEDERAL PROJECT	STATE PROJECT	064-01-0040
REVISION DESCRIPTION	NO.	DATE	BY
GEOMETRIC DETAILS			
LA 574-1 INTERSECTION			
ROAD DESIGN			

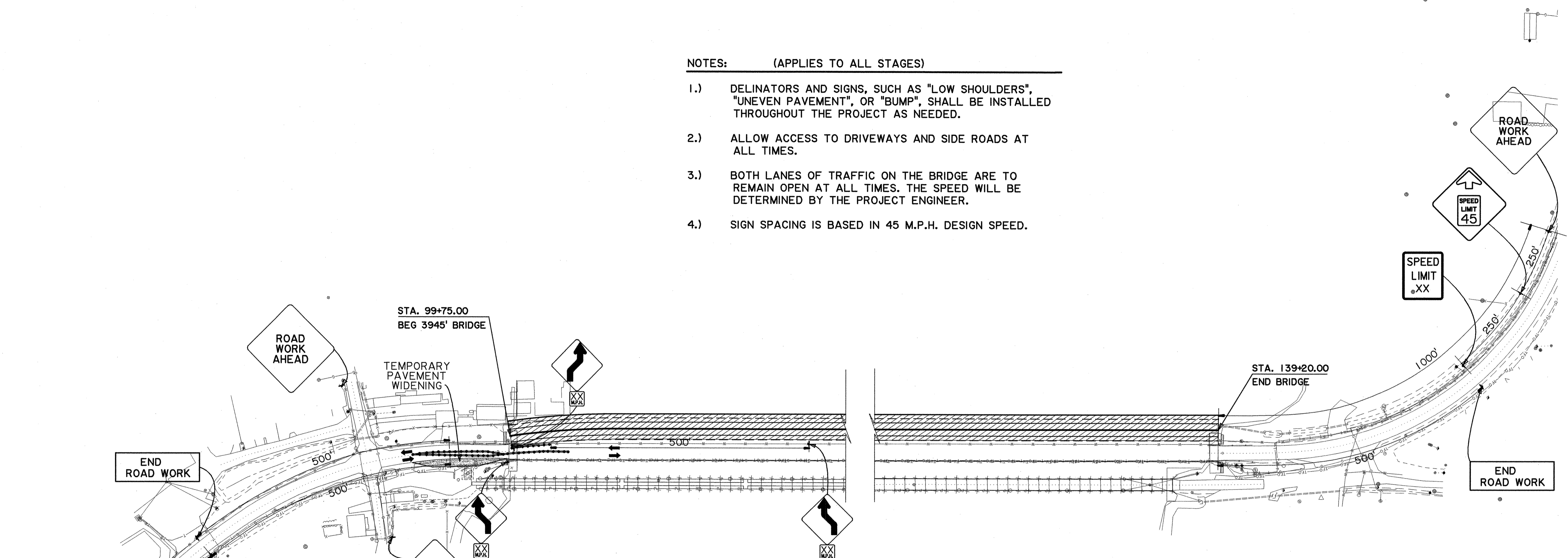


STATE OF LOUISIANA
 QUANG LAI
 License No. 53616
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
Quang Lai
 4-20-09

SHEET NUMBER		12	
PARISH		JEFFERSON	
DESIGNED MRG		CHECKED Q.LAI	
DATE		APRIL, 2009	
SHEET		2 OF 2	
FEDERAL PROJECT		064-01-0040	
STATE PROJECT		064-01-0040	
REVISION DESCRIPTION		BY	
NO.		DATE	
		GEOMETRIC DETAILS SIDEWALKS	
		ROAD DESIGN	

NOTES: (APPLIES TO ALL STAGES)

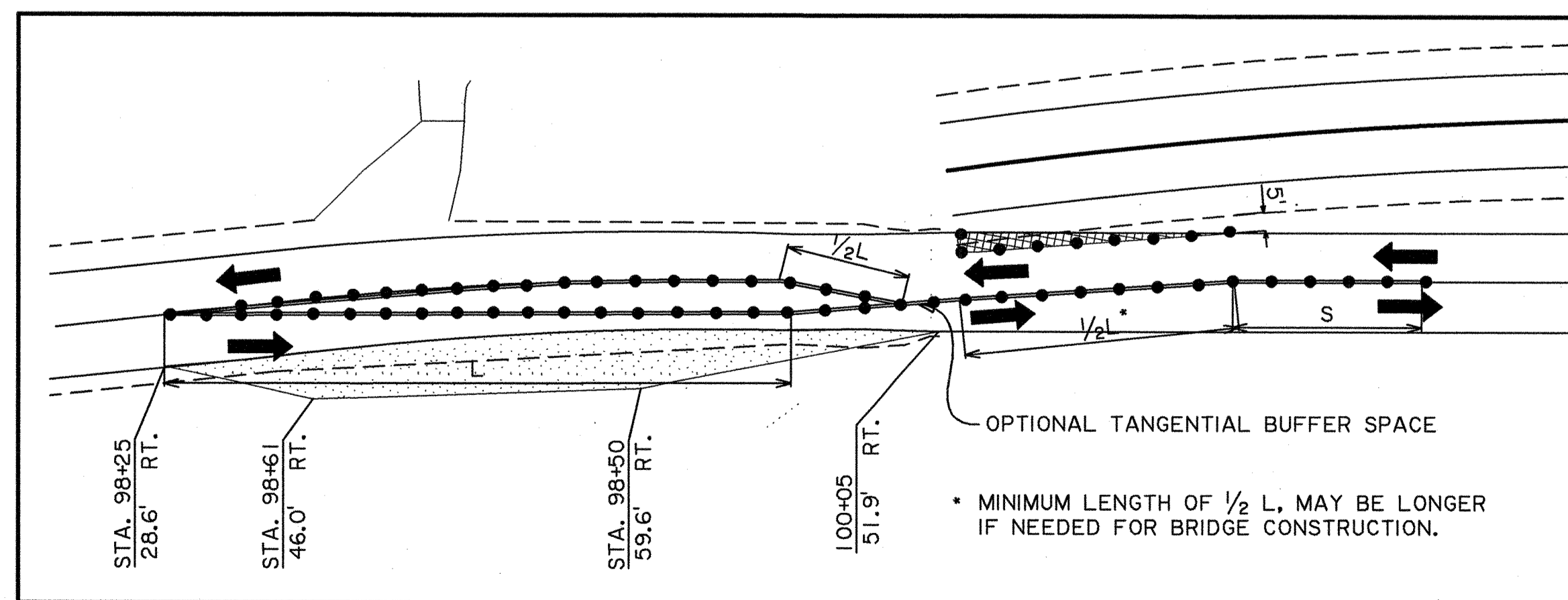
- 1.) DELINATORS AND SIGNS, SUCH AS "LOW SHOULDERS", "UNEVEN PAVEMENT", OR "BUMP", SHALL BE INSTALLED THROUGHOUT THE PROJECT AS NEEDED.
- 2.) ALLOW ACCESS TO DRIVEWAYS AND SIDE ROADS AT ALL TIMES.
- 3.) BOTH LANES OF TRAFFIC ON THE BRIDGE ARE TO REMAIN OPEN AT ALL TIMES. THE SPEED WILL BE DETERMINED BY THE PROJECT ENGINEER.
- 4.) SIGN SPACING IS BASED IN 45 M.P.H. DESIGN SPEED.



PHASE I

- A. WIDEN PAVEMENT FROM CENTRAL AVENUE TO THE BRIDGE. A MINIMUM LANE WIDTH OF 12' WILL BE MAINTAINED THROUGHOUT THE TRANSITION.
- B. PLACE TEMPORARY PAVEMENT, MARKINGS, BARRICADES AND SIGNS TO DIRECT TRAFFIC
- C. BEGIN CONSTRUCTION OF THE NEW BRIDGE.

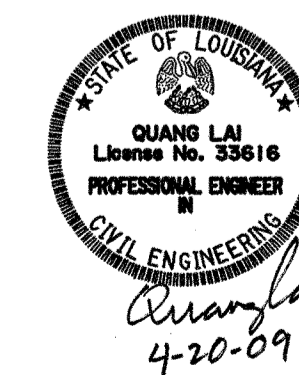
DETAIL OF TAPERS AND BUFFER SPACES



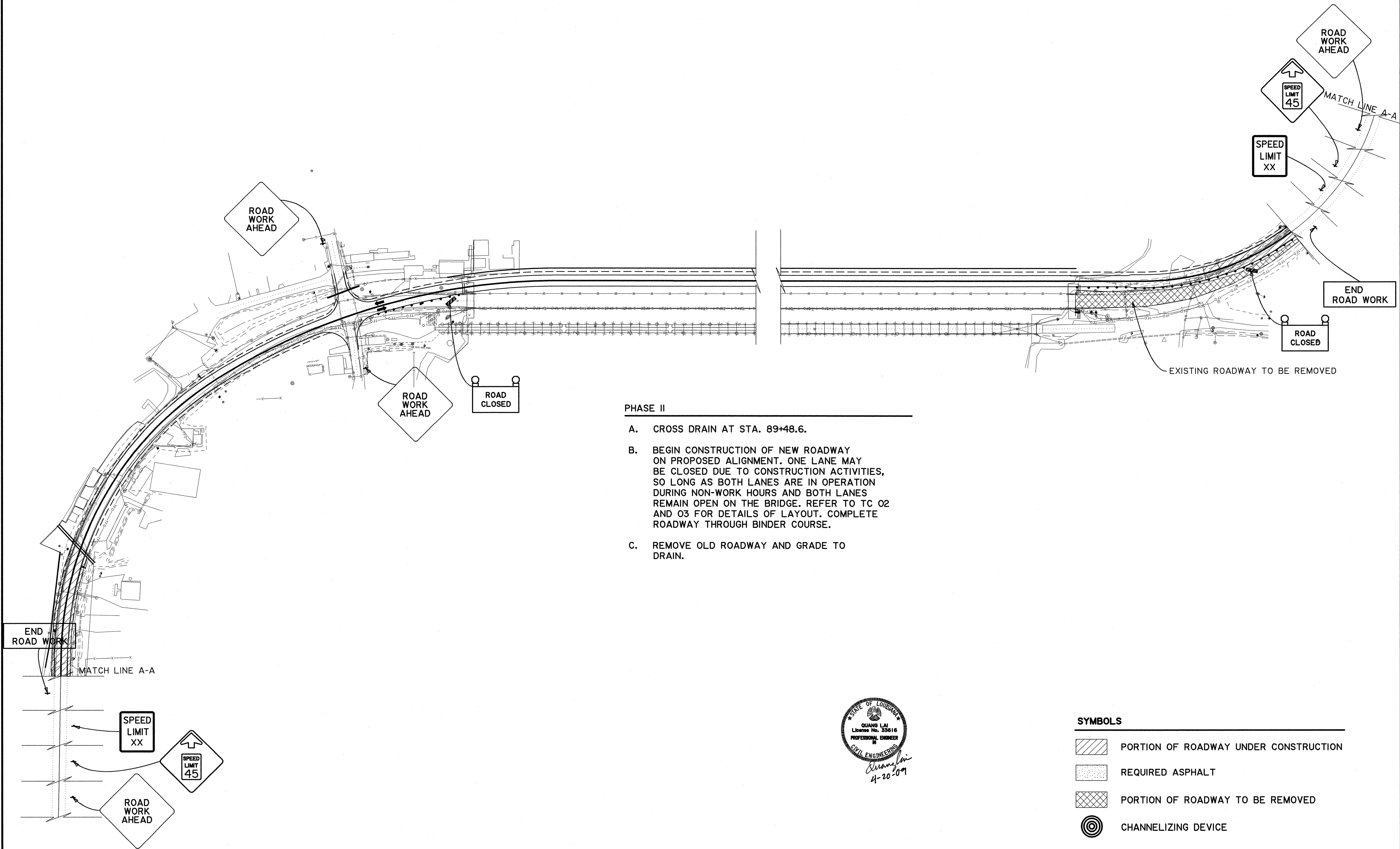
POSTED SPEED (MPH)	LENGTH, L (FEET)	TANGENTIAL LENGTH, S (FEET)
55	385	220
50	350	200
45	315	180
40	187	160
35	143	140
30	105	120

SYMBOLS

- PORTION OF ROADWAY UNDER CONSTRUCTION
- REQUIRED ASPHALT
- PORTION OF ROADWAY TO BE REMOVED
- CHANNELIZING DEVICE



SHEET NUMBER	14	PARISH	JEFFERSON	FEDERAL PROJECT	064-01-0040
DESIGNED/MRG	CHECKED Q.L.LAI	DATE	APRIL, 2009	SHEET	1 OF 3
DETAILS/MRG	CHECKED Q.L.LAI	REVISION DESCRIPTION		BY	
<p>SEQUENCE OF CONSTRUCTION</p> <p>PHASE I</p>					
ROAD DESIGN					



PHASE II

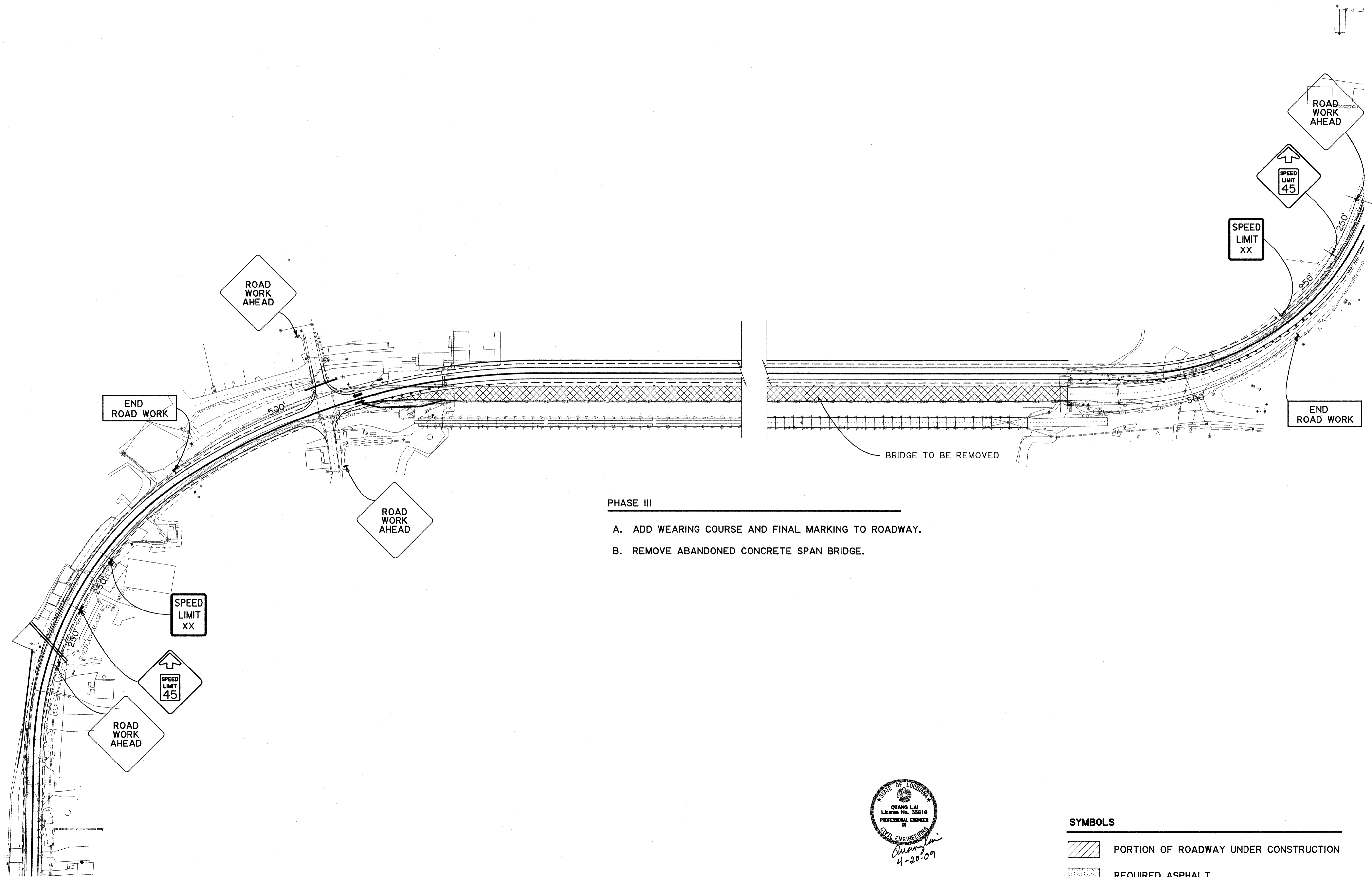
- A. CROSS DRAIN AT STA. 89+48.6.
- B. BEGIN CONSTRUCTION OF NEW ROADWAY ON PROPOSED ALIGNMENT. ONE LANE MAY BE CLOSED DUE TO CONSTRUCTION ACTIVITIES, SO LONG AS BOTH LANES ARE IN OPERATION DURING NON-WORK HOURS AND BOTH LANES REMAIN OPEN ON THE BRIDGE. REFER TO TC 02 AND 03 FOR DETAILS OF LAYOUT. COMPLETE ROADWAY THROUGH BINDER COURSE.
- C. REMOVE OLD ROADWAY AND GRADE TO DRAIN.



SYMBOLS

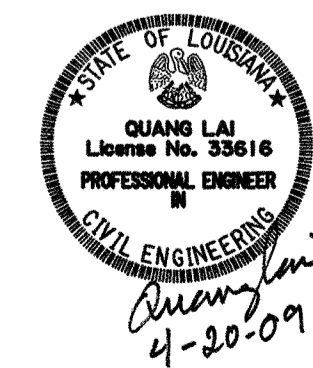
	PORTION OF ROADWAY UNDER CONSTRUCTION
	REQUIRED ASPHALT
	PORTION OF ROADWAY TO BE REMOVED
	CHANNELIZING DEVICE

SHEET NUMBER	15	PARISH	JEFFERSON	FEDERAL PROJECT	064-01-0040
DESIGNED/MRG	Q.LAI	CHECKED/MRG	Q.LAI	DATE	APRIL 2009
DETAILER/MRG	Q.LAI	CHECKED/MRG	Q.LAI	SHEET	2 OF 3
REVISION DESCRIPTION					
NO.	DATE	BY			
SEQUENCE OF CONSTRUCTION					
PHASE II					
ROAD DESIGN					



PHASE III

- A. ADD WEARING COURSE AND FINAL MARKING TO ROADWAY.
- B. REMOVE ABANDONED CONCRETE SPAN BRIDGE.



SYMBOLS

- PORTION OF ROADWAY UNDER CONSTRUCTION
- REQUIRED ASPHALT
- PORTION OF ROADWAY TO BE REMOVED
- CHANNELIZING DEVICE

SHEET NUMBER		16	
PARISH		JEFFERSON	
DESIGNED/MRG	CHECKED/O.LAI	FEDERAL PROJECT	STATE PROJECT
DATE	APRIL 2009	064-01-0040	
SHEET	3 OF 3		
REVISION DESCRIPTION			
NO. DATE BY			
SEQUENCE OF CONSTRUCTION PHASE III			
ROAD DESIGN			

GENERAL PROVISIONS

- All Temporary Traffic Control Devices used shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges, the Manual on Uniform Traffic Control Devices (MUTCD), and shall meet the National Cooperative Highway Research Program (NCHRP) 350 for Test Level 3 requirements.
Materials used for Temporary Traffic Controls shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges and when applicable the LaDOTD Qualified Products List (QPL).
No temporary traffic controls shall be erected without the approval of the Project Engineer and until work is about to begin, unless they are covered.
No lane closures, lane shifts, diversions, or detours shall occur without the authorization of the Project Engineer.
Responsibility is hereby placed upon the contractor for the installation, maintenance, and operation of all temporary traffic control devices called for in these plans or required by the Project Engineer for the protection of the traveling public as well as all Department and construction personnel.
The contractor shall also be responsible for the maintenance of all permanent signs and pavement markings left in place as essential to the safe movement and guidance of traffic within the project limits.
The District Traffic Operations Engineer (DTOE) shall serve as a technical advisor to the Project Engineer for all Traffic Control matters.
"Road Work Next XX Miles" sign shall be required on all projects equal to or greater than 2 miles and located at the beginning of the project unless otherwise noted.
Warning signs used for lane closures or lane shifts in which the roadway shall be returned to full public use within 12 hours or less may be placed on NCHRP350 approved portable sign frames.
If the spacing on the plans need to be altered, the new spacings need to be approved by the Project Engineer.

SPEED LIMITS

- Speed limits shall be lowered by 10 mph for any construction, maintenance, or utility operation that requires one or more of the following:
(A) the condition of the original highway is degraded due to milled surfaces or uneven pavements;
(B) work is in progress in the immediate vicinity of the travel way requiring lane closures, lane width reductions, or low speed diversions;
(C) workers present on the shoulder within 2' of the edge of traveled way without barrier protection.
The reduced speed zone shall only apply to those portions of the project limits affected.
At the end of the reduced speed zone, a speed limit sign displaying the original speed limit before construction shall be installed.
If conditions warrant, the District Traffic Operations Engineer may authorize the reduction of the speed limit by more than 10 mph.

PAVEMENT MARKINGS (see QPL)

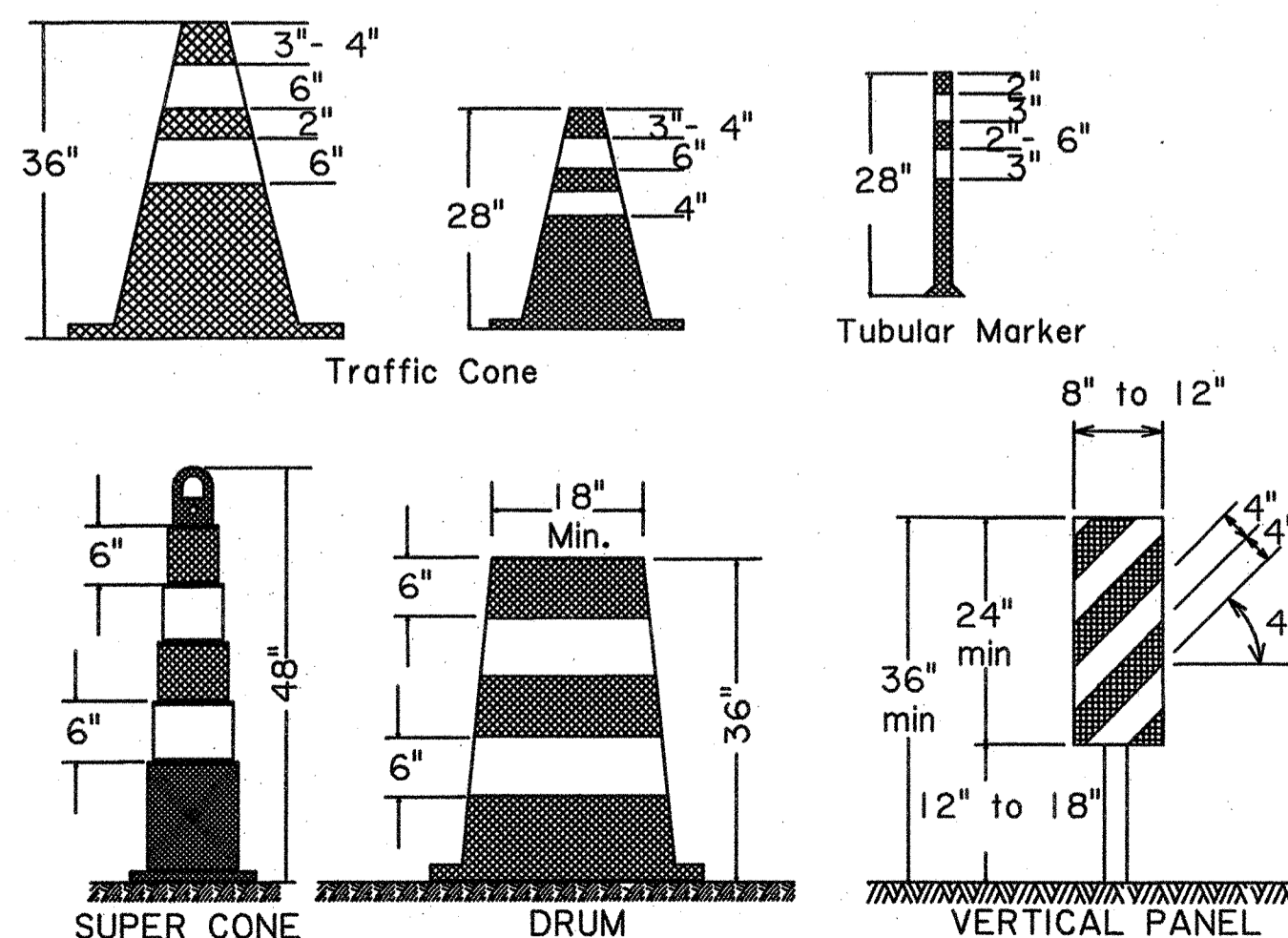
- All pavement markings within the limits of the project that are in conflict with the project signing or the required traffic movements shall be removed from the pavement by blast cleaning or grinding.
If special pavement markings are needed, they shall be reflectorized, removable, and accompanied by the proper signage.
Temporary Raised Pavement Markers (RPMs) may be added to supplement temporary striping in areas of transition, in tapers, in detours, and in other areas of need as directed by the Project Engineer.
Materials and placement of temporary pavement markings shall conform to section 713 of the Standard Specifications. If no item exists, temporary markings will be considered incidental to traffic control.

SIGNS

- All signs used for temporary traffic controls shall follow the Department's Traffic Control (TC) details and the MUTCD. Signs shown in the TC illustrations are typical and may vary with each specific condition.
More appropriate signing for a specific condition may be required or substituted with the approval of the Project Engineer and reviewed by the District Traffic Operations Engineer.
When projects are separated by less than one mile, they shall be signed as one project.
At no time shall signs warning against a particular operation be left in place once the operation has been completed or where the obstacle has been removed.
Signs over 10 sq ft shall be mounted on two post and signs over 20 sq ft shall be mounted on at least three post.
Signs shall have a minimum of two bolts per post.
Permanent signs no longer applicable or in conflict shall be removed or covered with a strong, lightweight, opaque material.
Warning signs used for temporary traffic controls shall meet the following guidelines unless otherwise noted in the plans: (A) size shall be 48" x 48", (B) see the Departments Standard Specifications and the QPL for sheeting information, (C) a minimum of a 2 lb U-Channel post shall be used driven to a minimum depth of 3', (D) sign height shall be a minimum of 5' above the roadway surface unless there is a concern for pedestrians or bicycle traffic in which it shall be a minimum of 7', (E) lateral distance of signs shall be a minimum of 6' from the edge of shoulder or edge of pavement if no shoulder exist and 2' from the back of curb in urban areas.
Vinyl Roll Up signs will be allowed for short term (less than 12 hours) daytime work provided that they meet all size, color, retroreflectivity requirements, and NCHRP 350.
Mesh rollup signs shall not be allowed on any project.
All signs shall be removed or covered when no longer applicable.
Contractor shall use caution not to damage existing signs which remain in place. Any DOTD signs damaged by work operations shall be replaced.

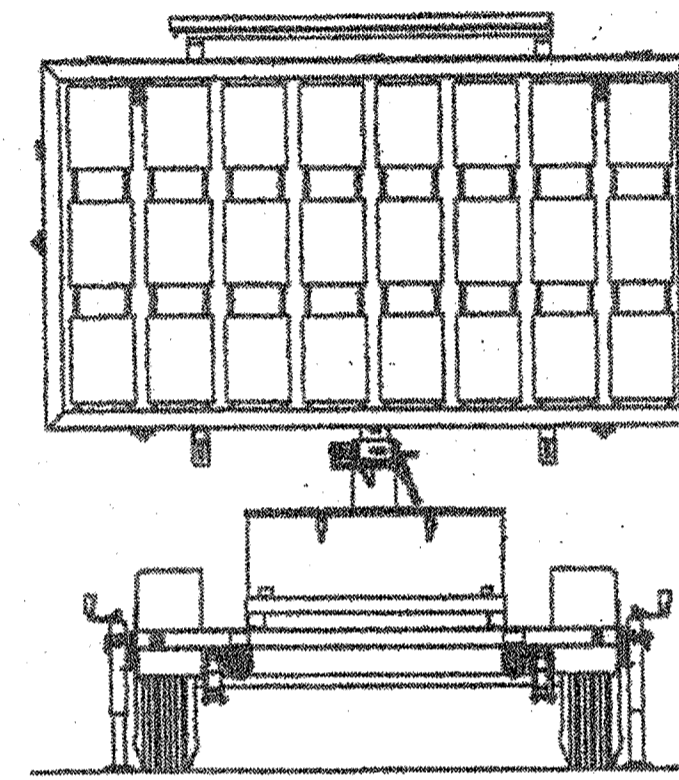
CHANNELIZING DEVICES

- The following devices may be used: Tubular Markers, Vertical Panels, Cones, Drums, and Super Cones. Drums (at standard spacing) and Super Cones (at 1/2 standard spacing) are the only devices allowed to be used in taper areas on the interstate system during daylight hours. Only drums can be used in tapers during night operations.
The spacing of channelizing devices in a taper should not exceed a distance in feet equal to 1.0 times the posted speed limit in mph (with a maximum of 50 feet).
The spacing of channelizing devices in a tangent should not exceed a distance in feet equal to 2.0 times the posted speed limit in mph (with a maximum of 100 feet) unless otherwise noted.
Retroreflective material pattern used on super cones shall match that used on drums.
28" traffic cones are not allowed on: 1) Interstates, 2) Highways with speeds greater than 40 mph. During night time operations: 1) 28" and 36" cones are not allowed, 2) drums are the only device allowed in the taper.



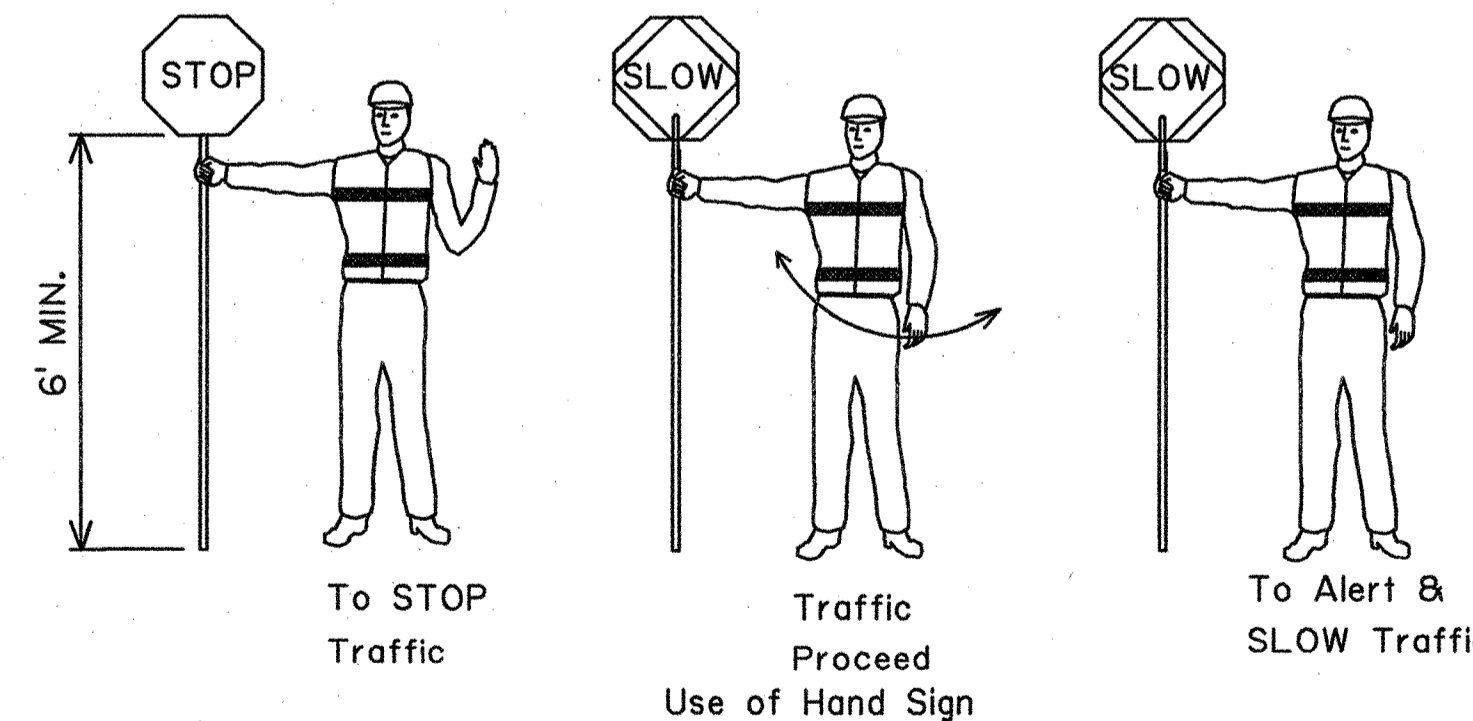
PORTABLE CHANGEABLE MESSAGE SIGNS

- When working within the traveled way, including shoulders and auxiliary lanes, Changeable Message Signs (CMS) shall be used on all Interstate Highways and on all other roadways (where space is available) with an ADT greater than 20,000 and should be delineated with retroreflective TTC devices. CMS will be paid for by each.
When used in advance of a lane closure or a lane shift, the CMS should be placed on the right hand side of the road a minimum distance of 2 miles in advance of the taper for Interstates and to be determined by the Engineer on other highways.
If vehicles are queuing beyond the 2 mile CMS, an additional CMS should be placed on the right hand side of the road approximately 5 miles in advance of the taper for interstates.
CMS messages shall be approved by the District Traffic Operations Engineer (DTOE).
When Portable Changeable Message signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.



FLAGGERS

- All flaggers must be qualified. The contractor shall be responsible for training or assuring that all flaggers are qualified to perform flagging duties. A Qualified Flagger is one that has completed courses such as those offered by the American Traffic Safety Services Association (ATSSA), The Associated General Contractors of America (AGC) or other courses approved by the Louisiana DOTD's Work Zone Task Force. The contractor shall be responsible for getting the flagger course approved.
When utilized, a flagger shall use a minimum 18 inch octagonal shape sign on a minimum 6' stop/slow paddle and wear ANSI Class 2 Lime Green vest during day time operations and ANSI Class 3 Lime Green ensemble during night operations. In all flagging operations, the flagger must be visible from the flagger advance warning sign.



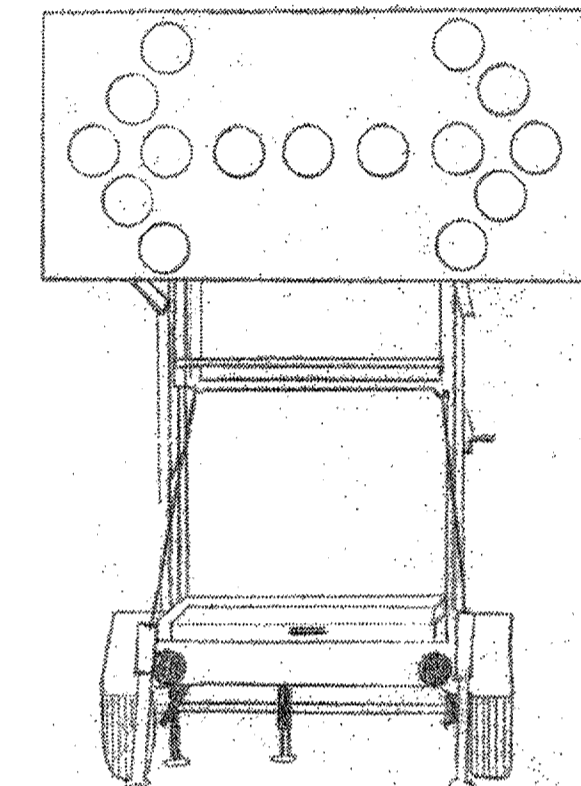
TYPE III BARRICADES

- All barricades shall use Type 3 High Intensity Sheeting on both sides of the barricade.
All Type III Barricades shall be a minimum of 8 feet in length and must meet NCHRP 350 requirements.
When signs and lights are to be mounted to a barricade, they must meet NCHRP 350 requirements.

MUTCD Website: http://mutcd.fhwa.dot.gov/

FLASHING ARROW PANELS

- Flashing Arrow Panels shall be used for lane closures on all facilities with 2 or more lanes in a single direction and a speed limit greater than 35 mph.
When used, flashing arrow panels should be located on the shoulder at the beginning of the taper.
Where the shoulder width is limited, the flashing arrow panel should be placed within the closed lane as close to the beginning of the taper as practical.
All Flashing Arrow Panels used on high speed roadways (45 mph and greater) shall be 4' x 8' Type C.
When Flashing Arrow Panels signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.

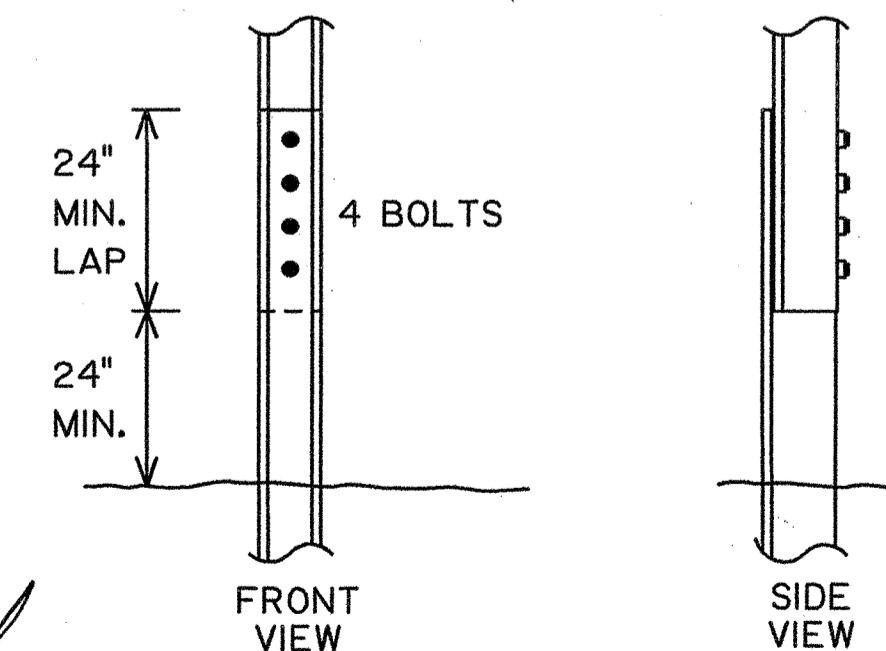


LIGHTING (see QPL)

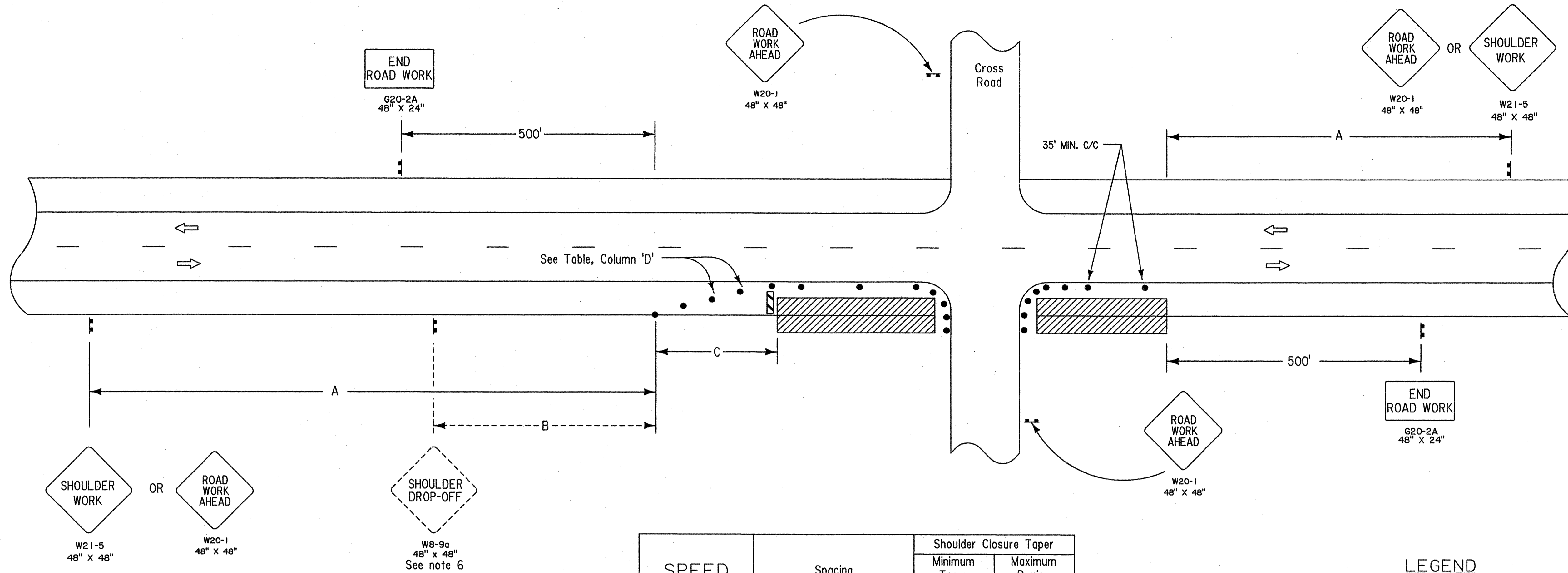
- When used for overnight closures, lighting shall supplement all barricades that are placed in a closed lane or that extend across a highway. Two Type B High Intensity lights shall be used per lane closed in rural areas. In urban areas two Type A Low Intensity Lights may be used where adequate ambient lighting is available.
One Type B High Intensity light shall be used to supplement the first sign (or pair of signs) that gives warning about a lane closure during night time operations.
Type C steady burn lights shall be used on all channelizing devices in the taper as well as the first two devices in the tangent, for night use.

ALLOWABLE LAP SPLICE FOR U-CHANNEL POST

- U-Channel posts may be spliced where long lengths are required. The upper section shall overlap the lower section by at least 24 inches. The bottom edge of the upper section of the splice shall be a minimum of 24 inches above the ground. The spliced sections shall be secured with at least four 5/16 inch diameter hex bolts spaced equally along the splice.



Project information block including SHEET NUMBER 17, PROJECT NAME TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET, and various revision and approval fields.



SPEED LIMIT	Spacing		Shoulder Closure Taper	
	'A'	'B'	Minimum Taper Length	Maximum Device Spacing
35 mph	500'	250'	100'	25'
45 mph	1000'	350'	200'	45'
≥55 mph	1500'	500'	250'	50'

If horizontal curve radius is less than 300', devices spacing shall be 25'.

LEGEND

- Traffic Sign
- Channelizing Devices
- Work Area
- Type III Barricades

NOTES

THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. THIS LAYOUT REPRESENTS TRAFFIC CONTROLS REQUIRED FOR WORKERS AND EQUIPMENT OPERATING WITHIN THE CLEAR ZONE FOR MORE THAN 1 HOUR. LESS THAN 1 HOUR, SEE FIG. TA-4 OF THE MUTCD. PORTABLE SIGNS MAY BE USED FOR WORK LASTING LESS THAN 3 DAYS.
2. NO SIGNS OR BARRICADES ARE REQUIRED FOR EQUIPMENT OPERATING OR WORK IN PROGRESS OUTSIDE THE CLEAR ZONE.
3. SIGNS AND BARRICADES SHALL BE COVERED OR REMOVED DURING NONWORKING HOURS UNLESS A DROP-OFF OR PHYSICAL OBSTRUCTION REMAINS WITHIN THE CLEAR ZONE.
4. TRAFFIC CONES MAY BE USED AS CHANNELIZING DEVICES ALONG THE WORK AREA DURING DAYLIGHT HOURS ONLY.
5. WORK OR EQUIPMENT CONFINED TO A SPOT LOCATION (LESS THAN 200 FEET) SHALL BE MARKED BY CHANNELIZING DEVICES SPACED AT 25 FEET OR BY A VEHICLE WITH A YELLOW REVOLVING LIGHT OR YELLOW STROBE LIGHT VISIBLE TO ONCOMING TRAFFIC. WORK EXTENDING MORE THAN 200 FEET OF ROADWAY LENGTH SHALL BE MARKED WITH APPROPRIATE DEVICES SPACED AS NOTED IN THE TABLE.

6. SHOULDER DROP-OFFS

- A. WHEN A SHOULDER DROP-OFF GREATER THAN 2" BUT LESS THAN 6" EXISTS, A "SHOULDER DROP-OFF" SIGN WILL FOLLOW THE "SHOULDER WORK" SIGN. WHEN THE DROP-OFF EXCEEDS 6", THE "SHOULDER DROP-OFF" SIGN SHALL BE REPLACED BY A "NO SHOULDER" SIGN.
- B. IF THE SPEED LIMIT IS GREATER THAN 45 MPH AND THE DROPOFF IS 10" OR GREATER WITHIN 2' OF THE TRAVEL LANE DURING NONWORKING HOURS, A PORTABLE BARRIER SHALL BE USED.

7. A TEMPORARY EDGELINE OR CHANNELIZING DEVICE SHALL BE PLACED AT THE PAVEMENT EDGE ADJACENT TO THE DROP-OFF DURING NONWORKING HOURS WHEN THE DROPOFF IS GREATER THAN 2".

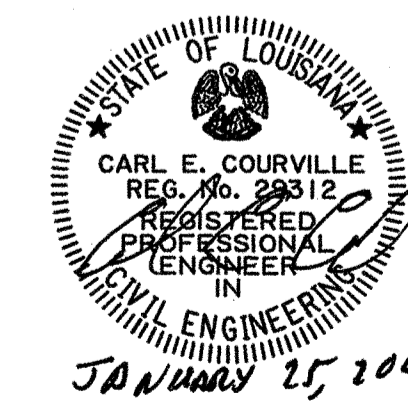
8. SPEED LIMIT IN THE ABOVE TABLE REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION. IF WORKERS ARE PRESENT WITHIN 2' OF TRAVEL LANE, SPEED LIMIT MAY NEED TO BE REDUCED.

9. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO CONFLICTING OPERATIONS OR PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.

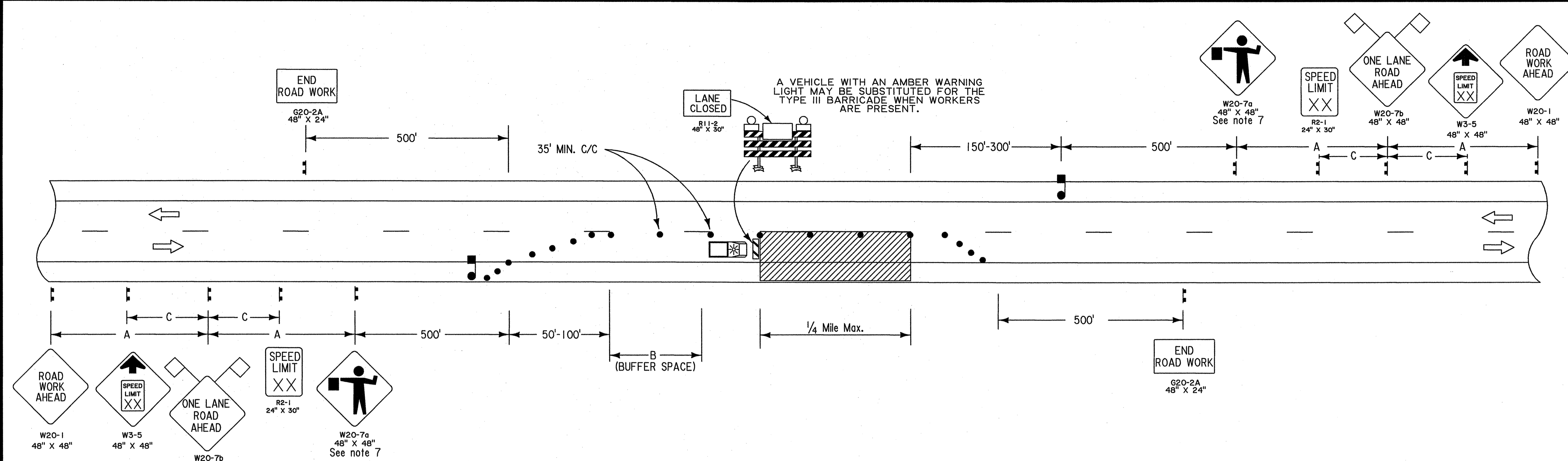
10. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.

11. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.

12. TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.



SHEET NUMBER	18
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DATE	01/25/2008
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	
DATE	
BY	
TRAFFIC CONTROL LAYOUT FOR WORK LESS THAN 15' FROM THE TRAVELED LANE	
TC-01	
TRAFFIC ENGINEERING	



SPEED LIMIT (See note 5)	Spacing		
	"A"	"B"	"C"
35 mph	500'	250'	N/A
45 mph	1000'	360'	500'
55 mph	1500'	495'	800'

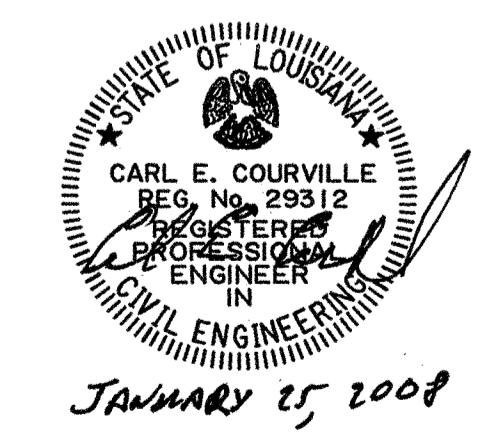
SIGN SPACING TO BE ADJUSTED FOR HORIZONTAL & VERTICAL CURVES.

- LEGEND**
- Traffic Sign
 - Flagger
 - Channelizing Devices
 - Type III Barricades
 - Work Area
 - Type B Light

NOTES

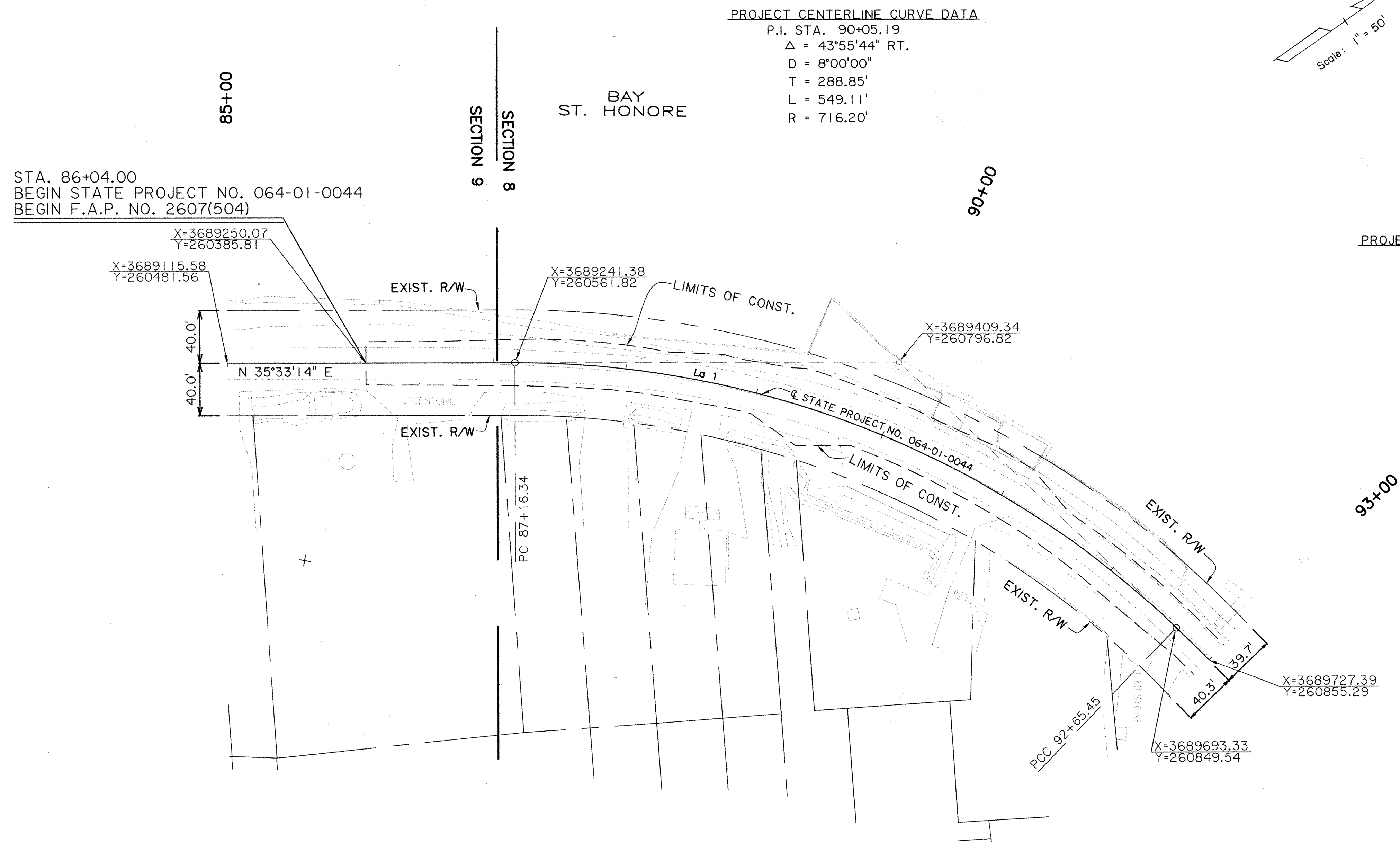
THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

1. CONDITIONS REPRESENTED ARE FOR WORK WHICH REQUIRES CLOSING TRAFFIC LANES DURING DAYLIGHT HOURS ONLY. PORTABLE SIGNS MAY BE USED FOR WORK LASTING LESS THAN 3 DAYS.
2. WHEN A WORK AREA HAS BEEN ESTABLISHED ON ONE SIDE OF THE ROADWAY ONLY, THERE SHALL BE NO PARKING ON THE OPPOSITE SHOULDER WITHIN 500 FEET OF THE WORK AREA.
3. CHANNELIZING DEVICES MAY BE PLACED UP TO 2' BEYOND CENTERLINE ONLY AT SPECIFIC LOCATIONS WHERE ACTUAL WORK ACTIVITY IS TAKING PLACE. A 10' MINIMUM TRAVELED LANE SHOULD BE MAINTAINED WHERE PRACTICAL. CHANNELIZING DEVICES SHALL BE RETURNED TO THE CENTERLINE WHEN THE WORK ACTIVITY HAS PASSED.
4. SPACING OF CHANNELIZING DEVICES IN THE TAPER SHOULD BE NO MORE THAN 20'. A MINIMUM OF 5 CHANNELIZING DEVICES ARE TO BE USED IN THE TAPER.
5. SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.
6. TO PREVENT VEHICLES FROM ENTERING THE WORK AREA AGAINST THE FLOW OF TRAFFIC, AN ADDITIONAL FLAGGER SHALL BE STATIONED AT EACH INTERSECTION, MAJOR DRIVEWAY, RAILROAD CROSSING OR CROSSING WITHIN THE WORK AREA.
7. VISUAL OR RADIO CONTACT SHALL BE REQUIRED BETWEEN FLAGGERS AT ALL TIMES. THE FLAGGER SHALL BE VISIBLE FROM FLAGGER SIGN.
8. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED BY THE CONTRACTOR.
9. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.
10. TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.
11. NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.



SHEET NUMBER	19	PARISH	JEFFERSON	STATE PROJECT	064-01-0040
DESIGNED BY	E. COURVILLE	CHECKED BY	J. COLVIN	DATE	01/25/2008
DETAILS BY	D. SOWARDS	CHECKED BY	J. COLVIN	REVISION DESCRIPTION	
TRAFFIC CONTROL LAYOUT FOR LANE CLOSURE LESS THAN 1/4 MILE IN LENGTH					
TRAFFIC ENGINEERING					

SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER
T22S - R24E
SECTIONS 8 & 9



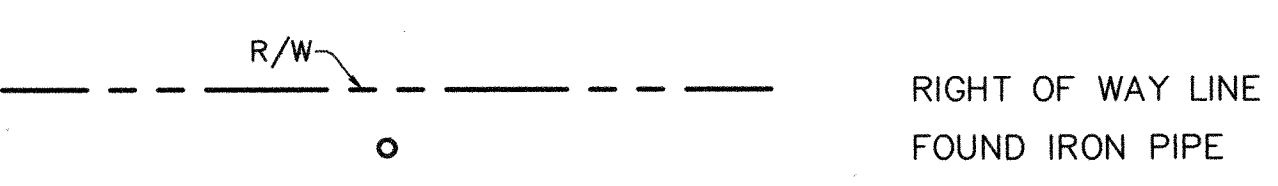
PROJECT CENTERLINE CURVE DATA
P.I. STA. 90+05.19
 $\Delta = 43^{\circ}55'44''$ RT.
D = 8^{\circ}00'00"
T = 288.85'
L = 549.11'
R = 716.20'

PROJECT CENTERLINE CURVE DATA
P.I. STA. 97+08.23
 $\Delta = 45^{\circ}06'16''$ RT.
D = 5^{\circ}22'26"
T = 442.78'
L = 839.34'
R = 1066.20'

STA. 86+04.00
BEGIN STATE PROJECT NO. 064-01-0044
BEGIN F.A.P. NO. 2607(504)

PARCEL	OWNER	ACQUISITION	AREA

LEGEND



NOTE: THE COORDINATES & BEARINGS SHOWN HEREON ARE GRID BEARINGS & COORDINATES BASED ON THE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM (NAD 83-92), TO CONVERT TO GEODETIC BEARINGS USE $\theta = 0^{\circ}38'30''$ WHERE $\theta = \begin{matrix} - & + \\ + & - \end{matrix}$
TO CONVERT GRID DISTANCES TO GROUND DISTANCES USE SCALE FACTOR OF S = 1.000020001

NOTE: GOTECH, INC. CONSULTING ENGINEERS 8383 BLUEBONNET BLVD. BATON ROUGE, LA.

DATE: 3/19/07
COMPUTED BY: MPM
DRAWN BY: GAB
SCALE: 1" = 50'
FILE NO. 03-18-1-059
R/W SHEET NO. 1

PARISH: GAB
FEDERAL PROJECT NO.: 5201(001)
STATE PROJECT NO.: 064-01-0040

JEFFERSON

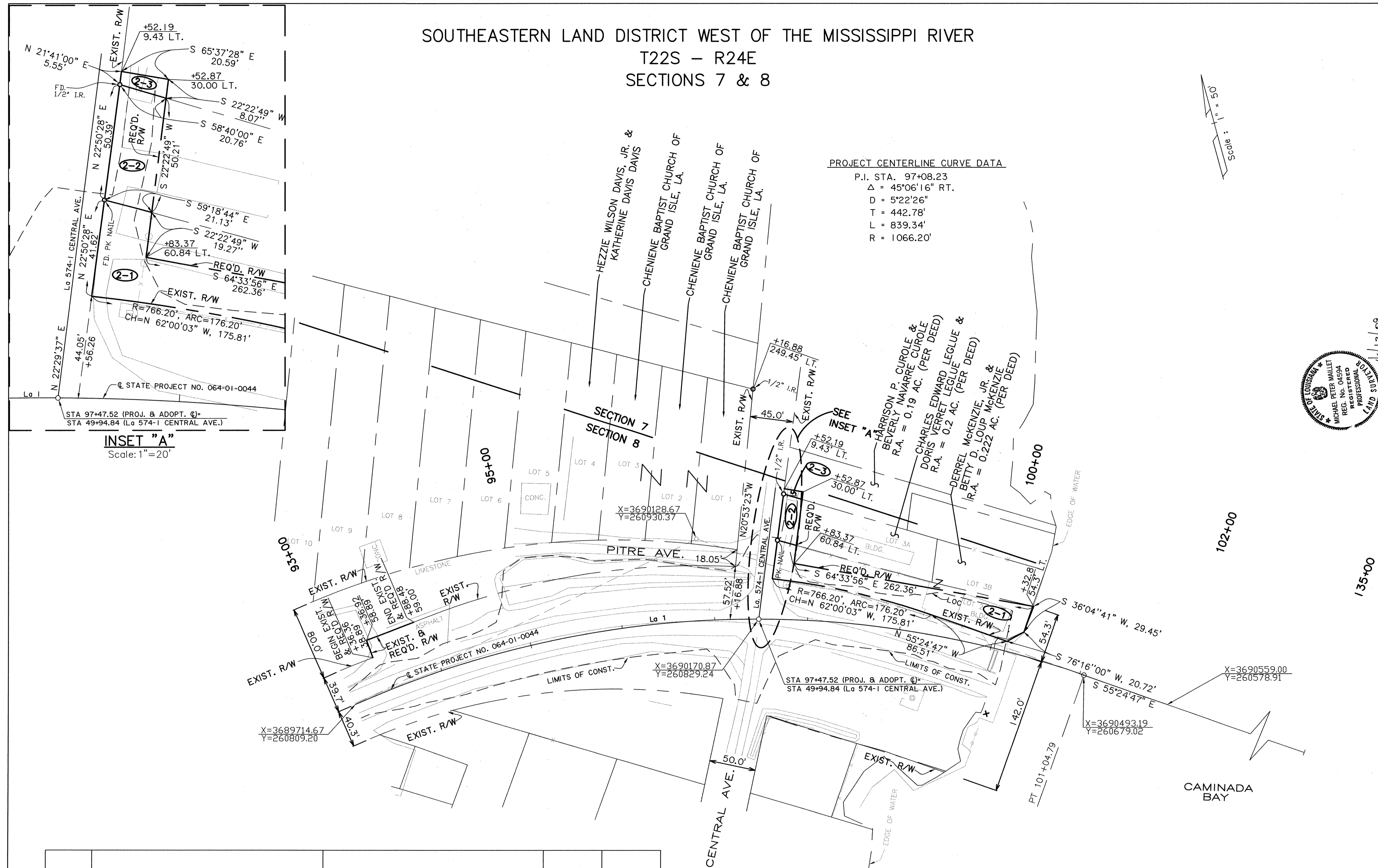
STATE PROJECT NO. 064-01-0044
F.A.P. NO. 2607(504)
CAMINADA BAY BRIDGE
JEFFERSON PARISH

LOCATION AND SURVEY

DATE	BY	DESCRIPTION
07-17-2007	JMD	REVISED NORTH ARROW

FILE NO. 03-18-1-059 R/W SHEET NO. 1

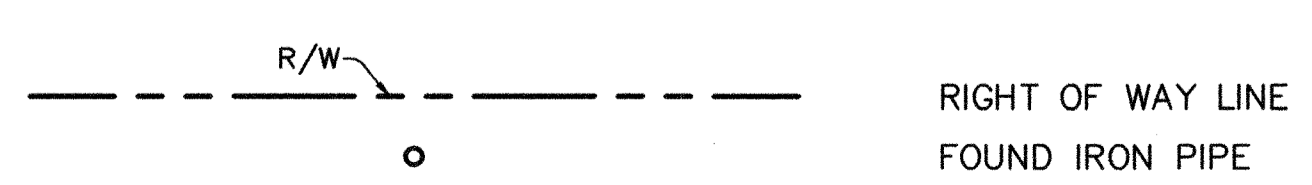
SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER
T22S - R24E
SECTIONS 7 & 8



INSET "A"
Scale: 1" = 20'

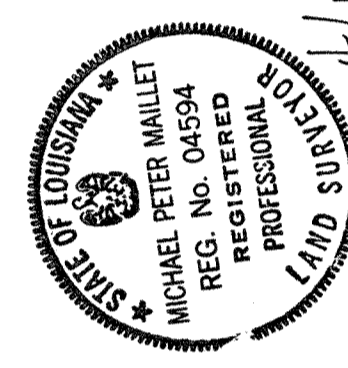
PARCEL	OWNER	ACQUISITION	AREA
2-3	HARRISON P. CUROLE & BEVERLY NAVARRE CUROLE	COB 2288, FOLIO 43, 10/8/1990	0.003 AC. 139.8 S.F.
2-2	CHARLES EDWARD LEGLUE & DORIS VERRET LEGLUE	COB 3040, FOLIO 47, 10/4/2000	0.024 AC. 1042.2 S.F.
2-1	DERREL MCKENZIE, JR. & BETTY D. LOUP MCKENZIE	COB 3039, FOLIO 790, 10/2/2000	0.178 AC. 7765.2 S.F.

LEGEND



NOTE: THE COORDINATES & BEARINGS SHOWN HEREON ARE GRID BEARINGS & COORDINATES BASED ON THE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM (NAD 83-92), TO CONVERT TO GEODETIC BEARINGS USE $\phi = 0^{\circ}38'31''$ WHERE $\phi = \begin{matrix} + \\ - \end{matrix}$

TO CONVERT GRID DISTANCES TO GROUND DISTANCES USE SCALE FACTOR OF S = 1.000020153



NOTE: GOTECH, INC. CONSULTING ENGINEERS 8383 BLUEBONNET BLVD. BATON ROUGE, LA.

DATE: 3/19/07
 COMPUTED BY: MPM
 DRAWN BY: GAB
 SCALE: 1" = 50'
 FILE NO. 03-18-1-059
 R/W SHEET NO. 2

STATE PROJECT NO. 064-01-0044
 CAMINADA BAY BRIDGE
 JEFFERSON PARISH

STATE PROJECT NO. 064-01-0044
 CAMINADA BAY BRIDGE
 JEFFERSON PARISH

DATE: 4/09/09
 3/24/08
 10/17/07
 4/26/07

REVISIONS

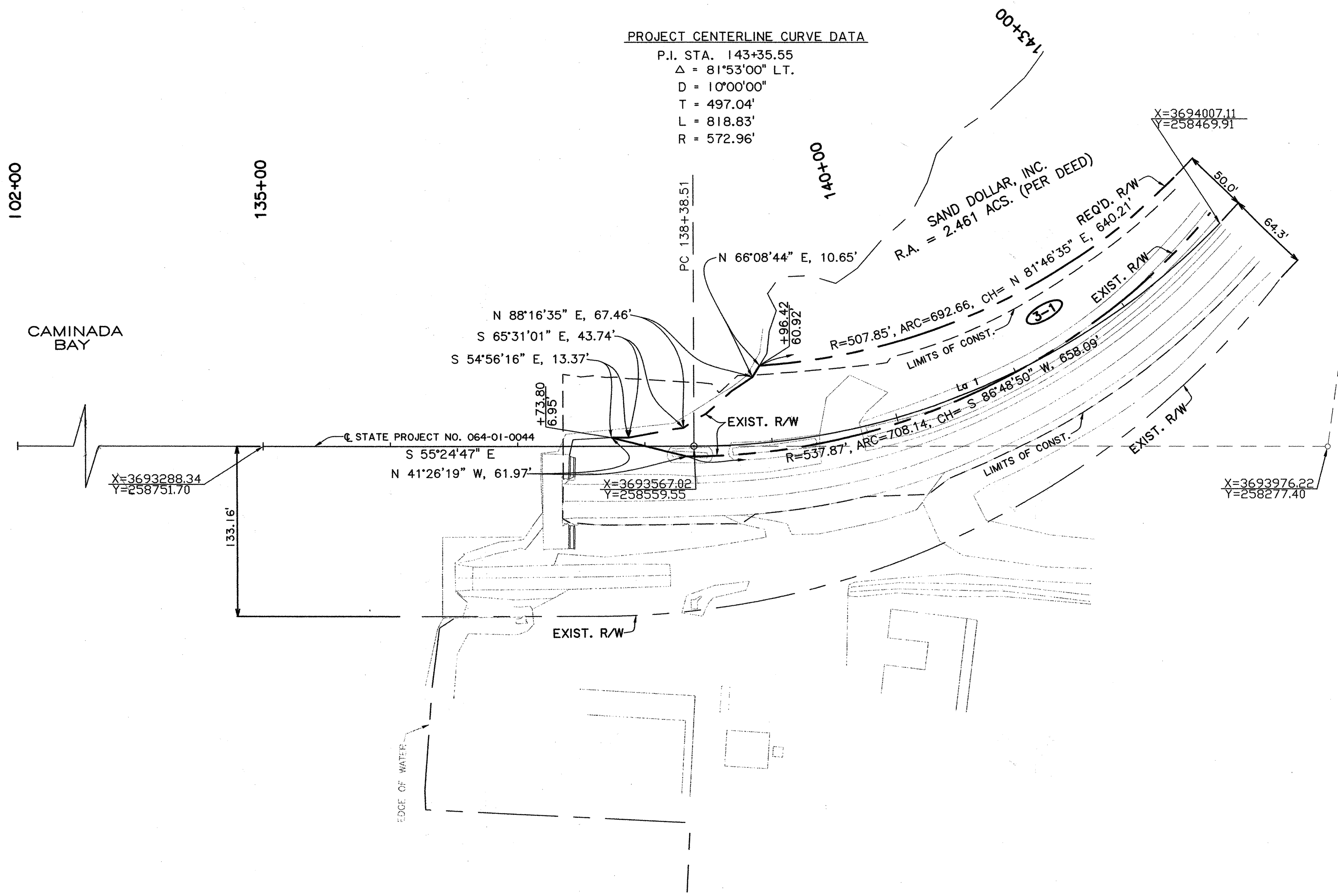
FILE NO. 03-18-1-059 R/W SHEET NO. 2

SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER
T22S - R24E
SECTION 26

PROJECT CENTERLINE CURVE DATA

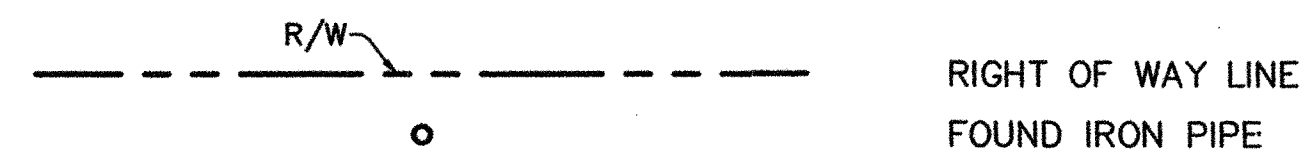
P.I. STA. 143+35.55
 $\Delta = 81^{\circ}53'00''$ LT.
 $D = 10^{\circ}00'00''$
 $T = 497.04'$
 $L = 818.83'$
 $R = 572.96'$

Scale: 1" = 50'



PARCEL	OWNER	ACQUISITION	AREA
3-1	SAND DOLLAR, INC.	COB 3171, FOLIO 767, 8/21/2006	0.709 AC. 30883.4 S.F.

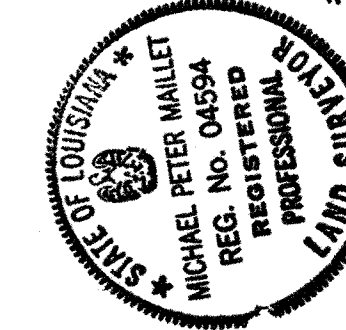
LEGEND



NOTE: THE COORDINATES & BEARINGS SHOWN HEREON ARE GRID BEARINGS & COORDINATES BASED ON THE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM (NAD 83-92), TO CONVERT TO GEODETIC BEARINGS USE $\phi = 0^{\circ}38'49''$ WHERE $\phi = \begin{matrix} + \\ - \end{matrix}$

TO CONVERT GRID DISTANCES TO GROUND DISTANCES USE SCALE FACTOR OF S = 1.000021572

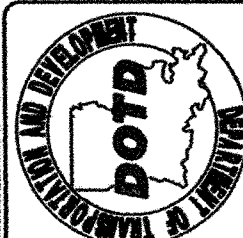
NOTE: SEE SHEET 3A FOR REVISIONS



3/19/07
 MICHAEL P. MALLET
 PROFESSIONAL LAND SURVEYOR



RIGHT OF WAY MAP
 STATE PROJECT NO. 064-01-0044
 F.A.P. NO. 2607(504)
 CAMINADA BAY BRIDGE
 JEFFERSON PARISH
 LG 1

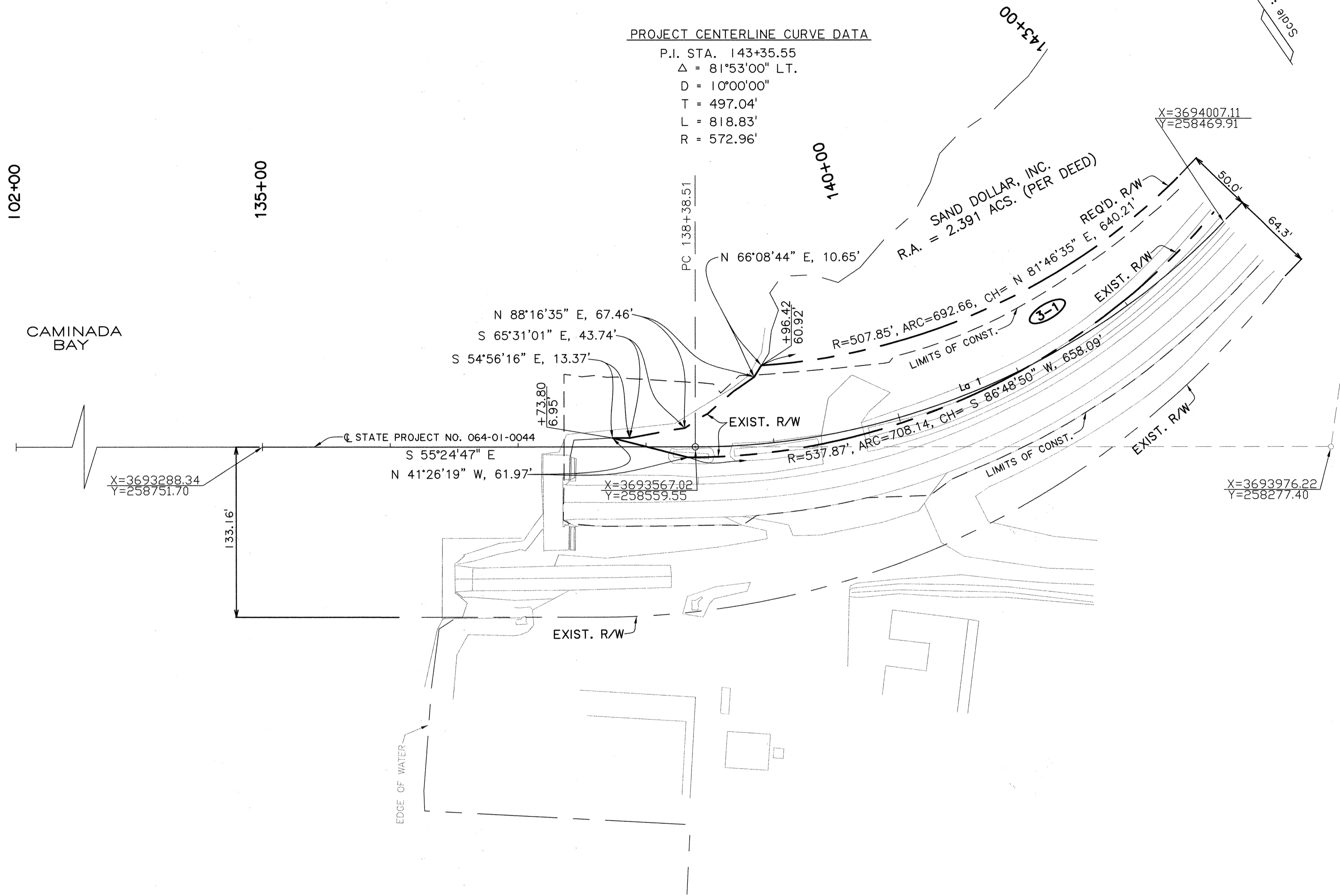


LOCATION AND SURVEY

NO.	DATE	REVISION	BY
10/17/2007	REVISED	NORTH ARROW	JMD
		DESCRIPTION	
		REVISIONS	

NOTE:	GOTTECH, INC. CONSULTING ENGINEERS 8383 BLUEBONNET BLVD. BATON ROUGE, LA.
DATE:	3/19/07
COMPUTED BY:	MPM
DRAWN BY:	GAB
SCALE:	1" = 50'
FILE NO.:	03-18-1-059
R/W SHEET NO.:	3
PARISH:	JEFFERSON
FEDERAL PROJECT NO.:	5201(001)
STATE PROJECT NO.:	064-01-0040
SHEET NO.:	23

SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER
T22S - R24E
SECTION 26

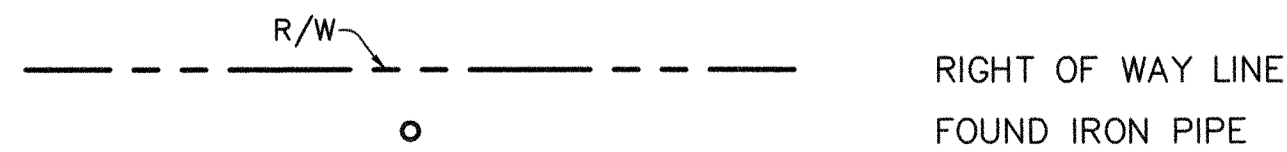


PROJECT CENTERLINE CURVE DATA

P.I. STA. 143+35.55
 $\Delta = 81^{\circ}53'00''$ LT.
 $D = 10^{\circ}00'00''$
 $T = 497.04'$
 $L = 818.83'$
 $R = 572.96'$

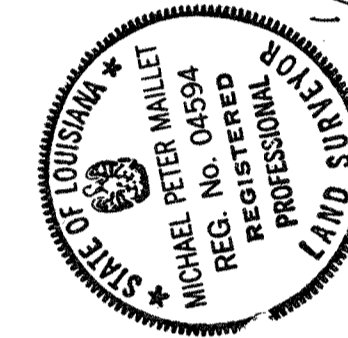
PARCEL	OWNER	ACQUISITION	AREA
3-1	SAND DOLLAR, INC.	COB 3171, FOLIO 767, 8/21/2006	0.779 AC. 33932.6 S.F.

LEGEND



NOTE: THE COORDINATES & BEARINGS SHOWN HEREON ARE GRID BEARINGS & COORDINATES BASED ON THE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM (NAD 83-92), TO CONVERT TO GEODETIC BEARINGS USE $\phi = 0^{\circ}38'49''$ WHERE $\phi = \begin{matrix} - & + \\ + & - \end{matrix}$

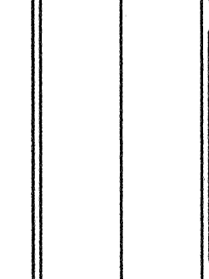
TO CONVERT GRID DISTANCES TO GROUND DISTANCES USE SCALE FACTOR OF S = 1.000021572



NOTE: GOTECH, INC.
 CONSULTING ENGINEERS
 8383 BLUEBONNET BLVD.
 BATON ROUGE, LA.

DATE: 3/19/07
 COMPUTED BY: MPM
 DRAWN BY: GAB
 SCALE: 1" = 50'
 FILE NO. 03-18-1-059
 R/W SHEET NO. 3A

RIGHT OF WAY MAP
 STATE PROJECT NO. 064-01-0044
 F.A.P. NO. 2607(504)
 CAMINADA BAY BRIDGE
 JEFFERSON PARISH
 LG 1



LOCATION AND SURVEY

DATE	DESCRIPTION	BY
1/6/09	REVISED PARCEL AREA AND RESIDUAL AREA OF PARCEL 3-1	GOTECH
10/17/2007	REVISED NORTH ARROW	JMD

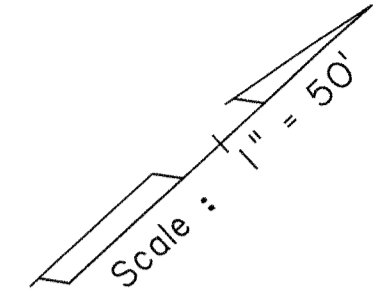
SHEET NO. 24

JEFFERSON 5201(001) 064-01-0040

PARISH PROJECT NO. STATE PROJECT NO. 3A

FILE NO. 03-18-1-059 R/W SHEET NO. 3A

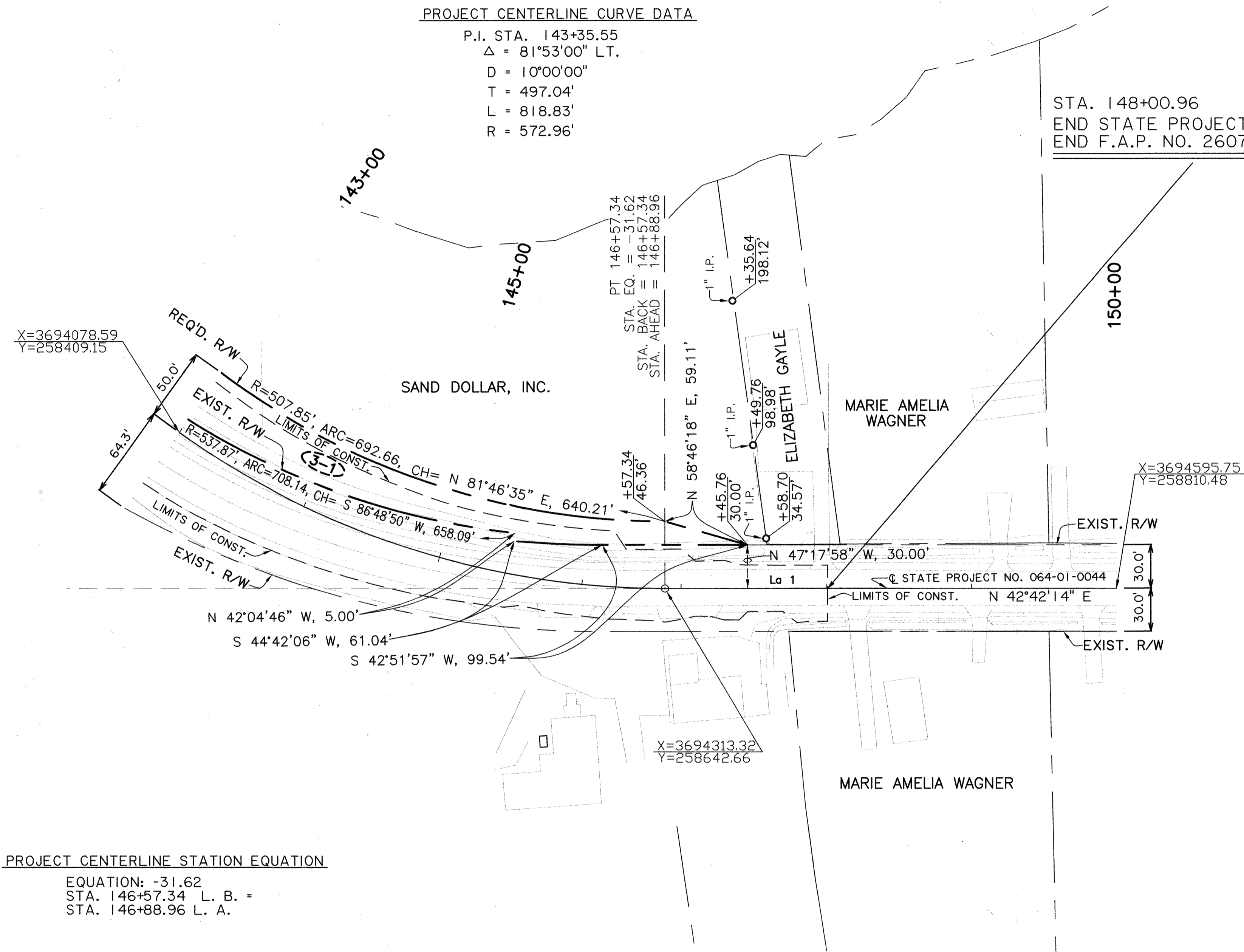
SOUTHEASTERN LAND DISTRICT WEST OF THE MISSISSIPPI RIVER
T22S - R24E
SECTION 26



PROJECT CENTERLINE CURVE DATA

P.I. STA. 143+35.55
 $\Delta = 81^{\circ}53'00''$ LT.
 $D = 10^{\circ}00'00''$
 $T = 497.04'$
 $L = 818.83'$
 $R = 572.96'$

STA. 148+00.96
 END STATE PROJECT NO. 064-01-0044
 END F.A.P. NO. 2607(504)

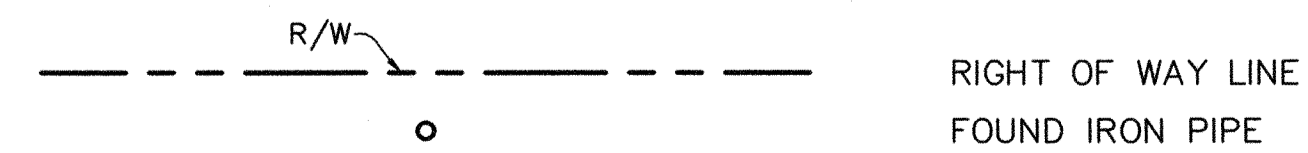


PROJECT CENTERLINE STATION EQUATION

EQUATION: -31.62
 STA. 146+57.34 L. B. =
 STA. 146+88.96 L. A.

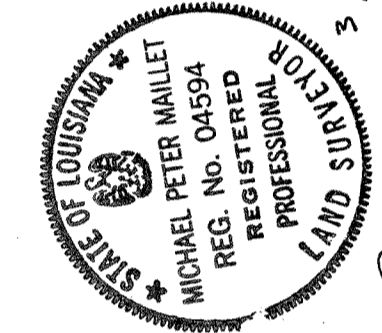
PARCEL	OWNER	ACQUISITION	AREA

LEGEND



NOTE: THE COORDINATES & BEARINGS SHOWN HEREON ARE GRID BEARINGS & COORDINATES BASED ON THE LOUISIANA LAMBERT SOUTH ZONE GRID SYSTEM (NAD 83-92), TO CONVERT TO GEODETIC BEARINGS USE $\phi = 0^{\circ}38'53''$ WHERE $\phi = \begin{matrix} -|+ \\ +|- \end{matrix}$

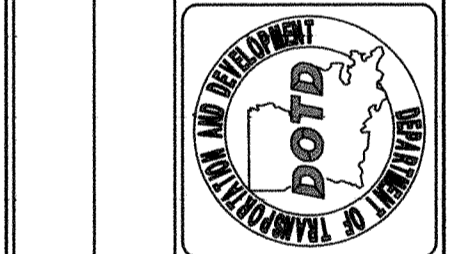
TO CONVERT GRID DISTANCES TO GROUND DISTANCES USE SCALE FACTOR OF $S = 1.000021522$



NOTE: GOTECH, INC. CONSULTING ENGINEERS
 8383 BILLORENET BLVD.
 BATON ROUGE, LA.

DATE: 3/19/07
 COMPUTED BY: MPM
 DRAWN BY: GAB
 SCALE: 1" = 50'
 FILE NO. 03-18-1-059
 R/W SHEET NO. 4

RIGHT OF WAY MAP
 STATE PROJECT NO. 064-01-0044
 F.A.P. NO. 2607(504)
 CAMINADA BAY BRIDGE
 JEFFERSON PARISH



LOCATION AND SURVEY

DATE	DESCRIPTION	BY

SUMMARY OF ESTIMATED BRIDGE QUANTITIES					
ITEM NO.	DESCRIPTION	UNIT	BRIDGE	APPROACHES	TOTAL QUANTITY
202-01-00100	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP		LUMP	LUMP
202-02-04000	REMOVAL OF BRIDGE (STA. 100+09.30, 28' x 3720' CONCRETE BRIDGE)	EACH	1		1
502-01-00100	SUPERPAVE ASPHALTIC CONCRETE	TON		22.3	22.3
704-03-00100	BLOCKED OUT GUARD RAIL	LIN. FT.		50.0	50.0
704-08-00200	GUARD RAIL TRANSITIONS (DOUBLE THRIE BEAM)	LIN. FT.		100.0	100.0
704-11-00100	GUARD RAIL END TREATMENT (FLARED)	EACH		4	4
711-01-05000	RIP RAP (130 LB, 24" THICK)	SQ. YD.		2088	2088
711-04-00100	GEOTEXTILE FABRIC	SQ. YD.		2088	2088
729-16-00300	OBJECT MARKER ASSEMBLY (TYPE 3)	EACH		4	4
730-09-00100	ELECTRICAL SYSTEM	LUMP	LUMP		LUMP
731-01-00100	NONREFLECTORIZED RAISED PAVEMENT MARKERS	EACH	880		880
731-02-00100	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	744		744
732-02-01000	PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH)	MILE	3.049		3.049
804-01-00800	PRECAST CONCRETE PILES (36")	LIN. FT.	48403		48403
804-05-00800	PRECAST CONCRETE TEST PILES (36")	EACH	7		7
804-09-00100	LOADING TEST PILES	EACH	7		7
804-10-00100	RELOADING TEST PILES	EACH	1		1
804-11-00110	REDRIVING TEST PILES	EACH	1		1
804-12-00100	LOADING PERMANENT PILES	EACH	1		1
804-17-00100	DYNAMIC MONITORING	EACH	55		55
805-02-00200	CLASS A(M) CONCRETE (FOOTINGS)	CU. YD.	2498.94		2498.94
805-02-00300	CLASS A(M) CONCRETE (PIERS)	CU. YD.	685.18		685.18
805-02-00400	CLASS A(M) CONCRETE (BENTS)	CU. YD.	1170.03		1170.03
805-04-00100	CLASS AA(M) CONCRETE	CU. YD.	2227.87		2227.87
805-11-00100	STRIP SEAL JOINTS	LIN. FT.	429.39		429.39
806-01-00100	DEFORMED REINFORCING STEEL	POUND	2168943		2168943
* 807-08-00100	STRUCTURAL METALWORK	LUMP	LUMP		LUMP
810-04-00100	STEEL AND CONCRETE RAILING	LIN. FT.	8070.00		8070.00
813-01-00100	CONCRETE APPROACH SLABS	SQ. YD.	279.89		279.89
NS-203-00001	BUCKET DREDGING	CU. YD.	74800		74800
NS-800-00080	DYNAMIC ANALYSIS	EACH	15		15
NS-800-00160	STEEL FINGER JOINT	LIN. FT.	190.16		190.16
NS-800-00181	PRECAST-PRESTRESSED CONCRETE GIRDER (TYPE III) CLASS P(HPC)	LIN. FT.	8495.2		8495.2
NS-800-00184	PRECAST-PRESTRESSED CONCRETE GIRDER (TYPE BT-78) CLASS P(HPC)	LIN. FT.	8070.6		8070.6
NS-800-00202	CLASS A(HPC) CONCRETE (PIERS)	CU. YD.	876.71		876.71
NS-800-00203	CLASS A(HPC) CONCRETE (BENTS)	CU. YD.	826.53		826.53
NS-800-00204	CLASS AA(HPC) CONCRETE	CU. YD.	5287.51		5287.51
NS-800-00224	PRECAST-PRESTRESSED CONCRETE GIRDER (TYPE BT-78) (HPC)	LIN. FT.	747.5		747.5
NS-800-00241	BEARING (ELASTOMERIC) (SLAB SPANS)	EACH	70		70
NS-800-00244	BEARING (ELASTOMERIC) (TYPE III GIRDERS)	EACH	228		228
NS-800-00248	BEARING (ELASTOMERIC) (TYPE BT-78 GIRDERS)	EACH	130		130
NS-800-00260	HAND RAILING	LIN. FT.	3995.71		3995.71
NS-800-00300	INSTRUMENTATION INSTALLATION FOR INTEGRAL BRIDGE ABUTMENT	LUMP	LUMP		LUMP
NS-800-00540	PILE DYNAMIC MONITORING INSTRUMENTATION	LUMP	LUMP		LUMP
NS-800-00560	DEFORMED REINFORCING STEEL (STAINLESS STEEL)	POUND	1576930		1576930
NS-805-00006	SPECIAL SURFACE FINISH FOR CONCRETE	SQ. FT.	176040		176040
NS-811-00004	NAVIGATIONAL CLEARANCE GAUGE (PAINTED)	EACH	2		2
NS-ITS-06120	PULL BOX, STRUCTURE MOUNT, FURNISH & INSTALL - NEW	EACH	2		2
NS-P26-01000	AIR RELEASE VALVE (1") (JEFFERSON PARISH)	EACH		1	1
NS-P26-03000	CONCRETE PIPE SUPPORT BLISTER (JEFFERSON PARISH)	EACH		202	202
NS-P26-05000	EXPANSION / CONTRACTION COUPLING (JEFFERSON PARISH)	EACH		2	2
NS-P26-06000	FIRE HYDRANTS (JEFFERSON PARISH)	EACH		2	2
NS-P26-06020	FITTINGS FOR WATERLINES (DI) (JEFFERSON PARISH)	POUND		1900	1900
NS-P26-07000	GATE VALVE AND VALVE BOX (8") (JEFFERSON PARISH)	EACH		7	7
NS-P26-07020	GATE VALVE AND VALVE BOX (12") (JEFFERSON PARISH)	EACH		2	2
NS-P26-12000	LONG BODY TRANSITIONAL COUPLING (4") (JEFFERSON PARISH)	EACH		4	4
NS-P26-12020	LONG BODY TRANSITIONAL COUPLING (6") (JEFFERSON PARISH)	EACH		1	1
NS-P26-12040	LONG BODY TRANSITIONAL COUPLING (8") (JEFFERSON PARISH)	EACH		2	2
NS-P26-15000	OFFSET PIPE CLAMP ASSEMBLY (JEFFERSON PARISH)	EACH		202	202
NS-P26-18000	REMOVAL AND DISPOSAL OF EXISTING AC WATERLINE (JEFFERSON PARISH)	LIN. FT.		1220	1220
NS-P26-18020	REMOVAL AND DISPOSAL OF EXISTING DI WATERLINE (JEFFERSON PARISH)	LIN. FT.		4000	4000
NS-P26-23000	WATER SERVICE CONNECTIONS (JEFFERSON PARISH)	EACH		2	2
NS-P26-23020	WATERLINE (12" DI) (JEFFERSON PARISH)	LIN. FT.		4000	4000
NS-P26-23040	WATERLINE (12" DI) (RESTRAINED) (JEFFERSON PARISH)	LIN. FT.		240	240
NS-P26-23060	WATERLINE (8" PVC) (JEFFERSON PARISH)	LIN. FT.		650	650
NS-P26-23080	WATERLINE (12" PVC) (JEFFERSON PARISH)	LIN. FT.		800	800
NS-P26-23100	WATERLINE (4" PVC) (RESTRAINED) (JEFFERSON PARISH)	LIN. FT.		60	60
NS-P26-23120	WATERLINE (6" PVC) (RESTRAINED) (JEFFERSON PARISH)	LIN. FT.		100	100
NS-P26-23140	WATERLINE (8" PVC) (RESTRAINED) (JEFFERSON PARISH)	LIN. FT.		150	150
NS-P26-23160	WATERLINE (12" PVC) (RESTRAINED) (JEFFERSON PARISH)	LIN. FT.		100	100

INDEX	
SHEET NUMBER	DESCRIPTION
101	SUMMARY OF BRIDGE QUANTITIES AND INDEX
102-103	GENERAL NOTES
104-108	GENERAL PLANS
109	GUARD RAIL AND REVETMENT DETAILS
110-113	SUPERELEVATION TRANSITION
114-116	FOUNDATION LAYOUT
117	PILE DETAILS
118	PILE DATA TABLE
119	BENT TYPE SL-1
120	BENT TYPE SL-2
121-122	BENT TYPE SL-3
123	BENT TYPE SL-4
124	BENT TYPE SL-5
125	BENT TYPE IIIIG-1
126	BENT TYPE IIIIG-2
127	BENT TYPE IIIIG-3
128	BENT TYPE IIIIG-4
129-130	BTC-1 CAP
131-134	BTC-2 TO BTC-4 CAP
135	BENT & RISER ELEVATION TABLE
136	BTC-1 TO BTC-4 RISERS
137	BTC-1 TO BTC-4 COLUMNS
138-139	BTC-1 FOOTING
140-141	BTC-2 TO BTC-4 FOOTING
141a	NAVIGATIONAL CLEARANCE GAUGE
142-143	PILE CONNECTION DETAILS
144-148	SLAB SPANS
149	SLAB SPAN CONNECTION ASSEMBLY
150	TYPE III GIRDER DETAILS
151-152	BT-78 GIRDER DETAILS
153-155	FRAMING PLAN (TYPE III SPANS)
156-158	FRAMING PLAN (BT-78 SPANS)
159-162	TYPE III SPANS
163-168	BT-78 SPANS
169-170	SPAN & GIRDER DETAILS
171-173	STEEL & CONCRETE RAILING DETAILS
174-175	SIDEWALK RAILING DETAILS
176-177	FINGER JOINT DETAILS
178	APPROACH SLAB (END OF BRIDGE)
179-179c	BRIDGE NAVIGATIONAL LIGHTING SYSTEM
180-181	STRIP SEAL DETAILS
182	ASD-SS
183	FR-OI
184	YP-OI
185-192	BORINGS
193	WATERLINE SUPPORT LAYOUT
194	WATERLINE SUPPORT DETAILS
195-198	POTABLE WATER DISTRIBUTION SYSTEM RELOCATION

TOTAL BRIDGE SHEETS = 102


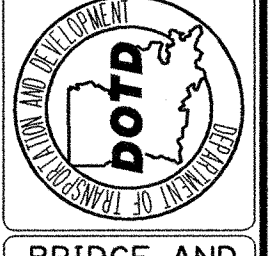
* TOTAL STRUCTURAL METALWORK = 7439 LBS. (FOR INFORMATION PURPOSES ONLY)



SHEET NUMBER	101
DESIGNED BY	B. DELATTE
CHECKED BY	K. YAP
DATE	04/18/2009
PROJECT	064-01-0040
PARISH	JEFFERSON
STATE	LA
PROJECT	064-01-0040
NO.	1 OF 1
DATE	
REVISION DESCRIPTION	
BY	

CAMINADA BAY BRIDGE
ROUTE LA 1

SUMMARY OF QUANTITIES AND INDEX

BRIDGE AND STRUCTURAL DESIGN

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006, EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

ELEVATIONS: ALL ELEVATIONS ARE NAVD 88.

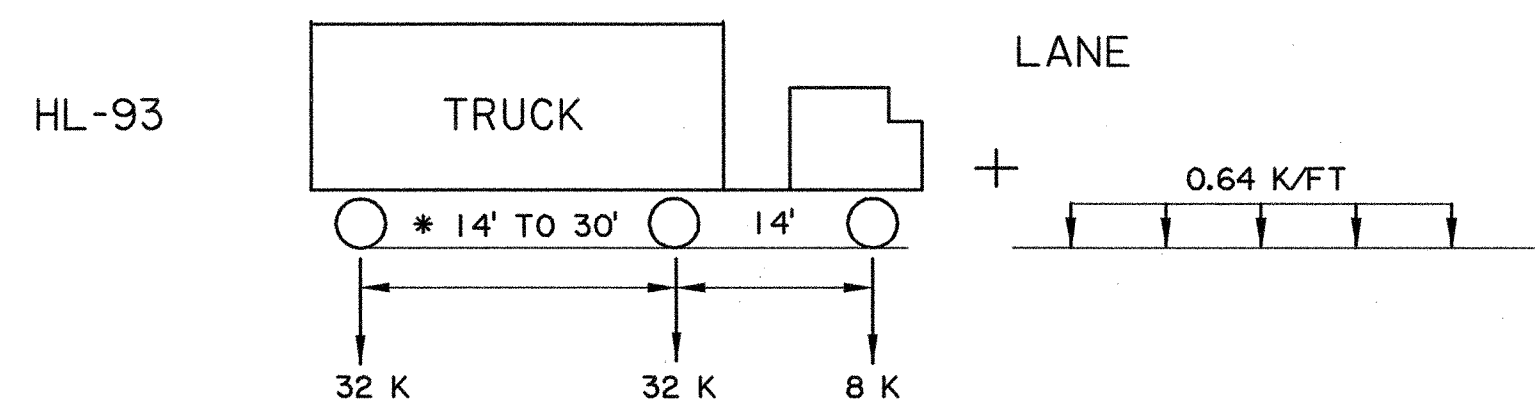
DIMENSIONS: ALL DIMENSIONS ARE GIVEN AT NORMAL TEMPERATURE (68° F).

DESIGN SPEED: 40 MPH

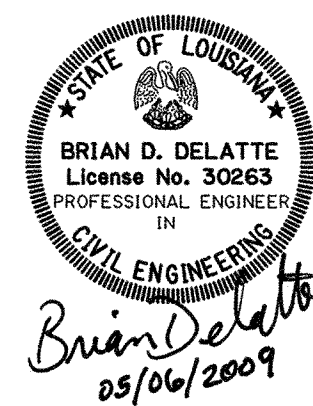
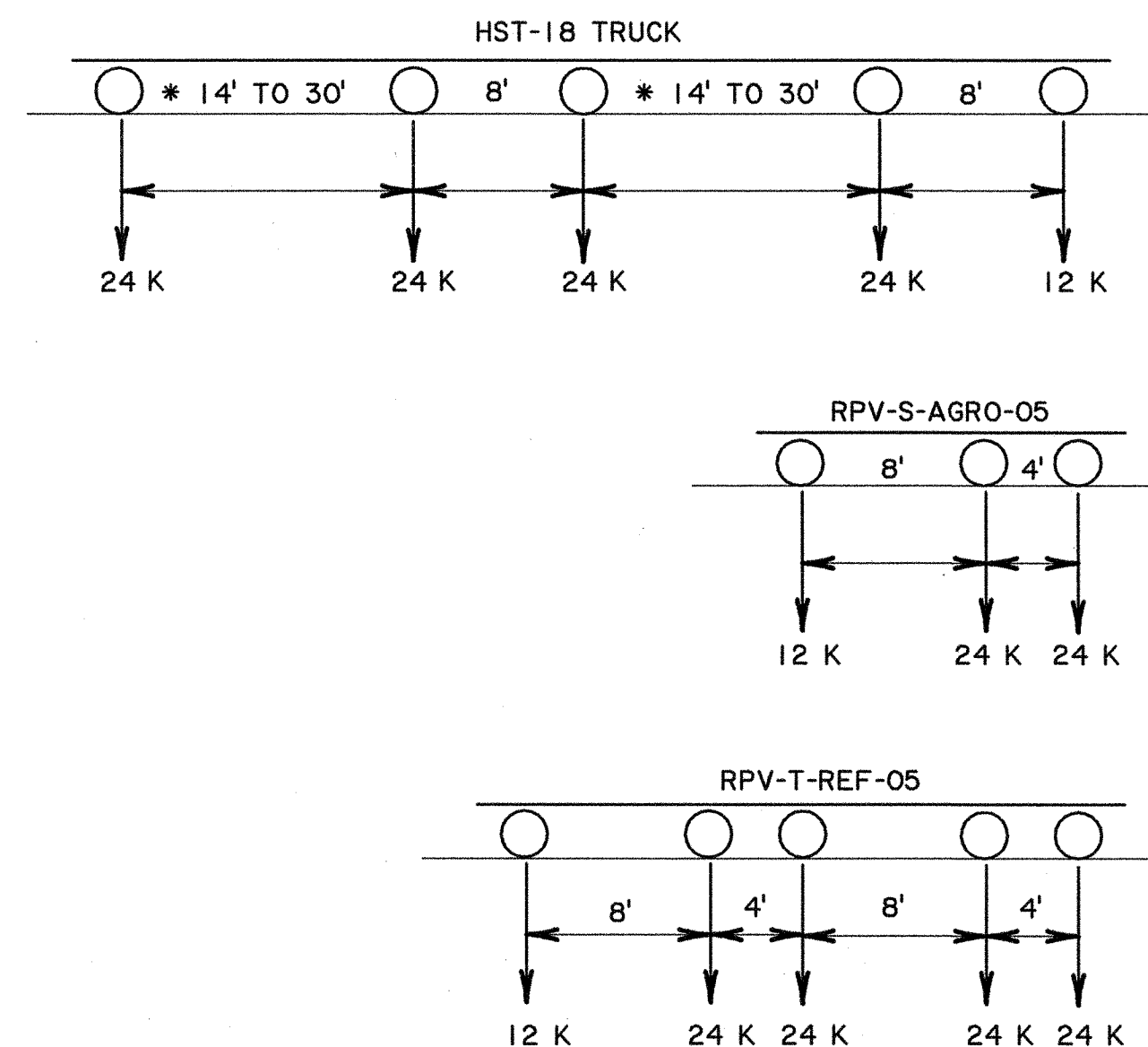
DESIGN SPECIFICATIONS: STRUCTURE DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 3RD EDITION, 2005 AND AS AMENDED BY THE CURRENT AASHTO INTERIM SPECIFICATIONS FOR BRIDGES. GEOMETRIC DESIGN IS IN ACCORDANCE WITH "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2001". VESSEL COLLISION DESIGN IS IN ACCORDANCE WITH:
1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 3RD EDITION, 2005 INTERIM REVISIONS,
2. AASHTO GUIDE SPECIFICATION COMMENTARY FOR VESSEL COLLISION DESIGN OF HIGHWAY BRIDGES (FEB 1991),

DESIGN CRITERIA: THE BRIDGE IS DESIGNED FOR A FUTURE WEARING SURFACE EQUAL TO 12 P.S.F. LIVE LOAD SHALL BE HL-93.

DESIGN LIVE LOADS CONFIGURATION:



AND LOUISIANA ROUTINE PERMIT VEHICLES



CONCRETE: SUPERSTRUCTURE CONCRETE TO BE CLASS AA(M) CONCRETE FOR SPANS 1-10 & SPANS 43-57; AND CLASS AA(HPC) CONCRETE FOR SPANS 11-42. SUBSTRUCTURE CONCRETE TO BE CLASS A(M) CONCRETE FOR PILE FILL, BENTS 1-10, BENTS 44-58, AND BENTS 21-34 (COLUMNS AND FOOTINGS ONLY); AND CLASS A(HPC) CONCRETE FOR BENTS 11-20, BENTS 35-43, AND BENTS 21-34 (BENT CAPS AND RISERS ONLY). CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" EXCEPT ALL CORNERS OF BENTS WHICH SHALL BE CHAMFERED 1/2" UNLESS OTHERWISE NOTED. NO DEDUCTIONS ARE TO BE MADE IN CONCRETE QUANTITIES FOR CHAMFERS 1/2" OR LESS.

PRECAST CONCRETE: PRECAST CONCRETE FOR THE PRECAST PRESTRESSED HIGH PERFORMANCE CONCRETE (HPC) GIRDERS WILL BE CLASS P(HPC) OR CLASS P(X)(HPC). THE DESIGN UNIT WEIGHT FOR THE CLASS P(HPC) AND CLASS P(X)(HPC) CONCRETE IS ASSUMED TO BE 154 PCF. REFER TO PROJECT SPECIFICATIONS FOR INFORMATION ON HPC MIX DESIGN. PRECAST CONCRETE FOR THE PRECAST PRESTRESSED CONCRETE PILES WILL BE CLASS P(M)(HPC)CONCRETE.

HIGH PERFORMANCE CONCRETE (HPC): THESE ITEMS CONSISTS OF FURNISHING AND CONSTRUCTING A HIGH PERFORMANCE CONCRETE BRIDGE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. ALL WORK SHALL CONFORM TO APPLICABLE PLAN DETAILS AND PROJECT SPECIFICATIONS ALL TO THE SATISFACTION OF THE ENGINEER. HIGH PERFORMANCE CONCRETE SHALL CONFORM TO SECTION 804, 805, 810, 813, AND 901 OF THE STANDARD SPECIFICATIONS AND THE SPECIFICATIONS FOR STRUCTURE CONCRETE (HPC) THIS WORK SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THESE ITEMS.

MASS CONCRETE PLACEMENT: CONCRETE PLACEMENT HAVING A LEAST DIMENSION OF 48 INCHES OR GREATER SHALL BE DEFINED AS MASS CONCRETE PLACEMENT. ALL MASS CONCRETE PLACEMENTS SHALL BE IN ACCORDANCE WITH LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006, OR AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

FINISH OF CONCRETE: ALL CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 805.13 "CONCRETE SURFACE FINISHES" OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. ALL VISUALLY EXPOSED FACES (EXCEPT TOP HORIZONTAL SURFACES OF CAPS AND RISERS) OF THE ENTIRE SUBSTRUCTURE WILL RECEIVE CLASS 2A, SPECIAL SURFACE FINISH. PAYMENT FOR CLASS 2A, SPECIAL SURFACE FINISH WILL BE MADE UNDER ITEM NS-805-00006, PER SQUARE FOOT.

DEFORMED REINFORCING STEEL: REINFORCING STEEL IN BENTS 1-10, BENTS 21-34 (COLUMNS & FOOTINGS ONLY), BENTS 44-58, SPANS 1-10, AND SPANS 43-57 SHALL BE STAINLESS STEEL. ALL OTHER REINFORCING STEEL TO BE GRADE 60 BLACK STEEL. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR. THE MINIMUM COVERING FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY DEFORMED REINFORCING BAR SHALL NOT BE LESS THAN THE FOLLOWING:

- TOP OF DECK = 2"
- BOTTOM OF DECK = 3" (30 FT SLAB SPANS) & 2" (TYPE III GIRDER SPANS & TYPE BT-78 GIRDER SPANS)
- FOOTINGS = 4"

ALL OTHER REINFORCING STEEL COVER SHALL BE 3" UNLESS OTHERWISE NOTED IN THE PLANS. SEE STANDARD PLAN S.W.B.S.100 FOR BAR SUPPORTS FOR REINFORCING STEEL.

DEFORMED REINFORCING STEEL (STAINLESS STEEL): ALL STAINLESS STEEL REINFORCING SHALL CONFORM TO ASTM A955, A959, AND A276. THE STAINLESS STEEL SHALL BE TYPE 316LN (UNS DESIGNATION S31653), TYPE 2205 (UNS DESIGNATION S31803), OR TYPE 2304 (UNS DESIGNATIONS S32304). ROLLING SCALE IS TO BE REMOVED FROM THE SURFACE OF THE STAINLESS BAR BY ACID PICKLING LEAVING THE STAINLESS STEEL SURFACE IN A 100% PASSIVE STATE.

WELDED WIRE FABRIC: WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR THE DETAILED CONCRETE REINFORCING STEEL ON AN AREA FOR AREA BASIS FOR ALL BRIDGE COMPONENTS. IT SHALL MEET THE REQUIREMENTS OF ASTM A185 OR A1022, EXCEPT THE WELD AREA STRENGTH.

STRUCTURAL METALWORK: ALL STRUCTURAL STEEL SHALL BE AASHTO-M270(GR36), UNLESS OTHERWISE NOTED. THIS MATERIAL SHALL BE HOT DIPPED GALVANIZED OR METALIZED IN ACCORDANCE WITH SECTION 811 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006, OR AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. PAYMENT FOR STRUCTURAL STEEL IS MADE FOR UNDER ITEM 807-08-00100, STRUCTURAL METALWORK , PER LUMP SUM, UNLESS SPECIFIED OTHERWISE, SUCH AS POST RAILING AND FINGER JOINTS.


WELDING: WELDING OF ALL STRUCTURAL STEEL SHALL CONFORM TO SECTION 815 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006, AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

ANCHOR BOLTS: ALL WASHERS, NUTS, AND ANCHOR BOLTS (EITHER A325, A449 TYPE II, OR AS SHOWN IN THE PLANS) SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH SECTION 811.12 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006. ANY NECESSARY SUBSTITUTIONS MUST HAVE PRIOR APPROVAL OF THE BRIDGE DESIGN ENGINEER. INSTALLING ANCHOR BOLTS BY DRILLING WILL NOT BE ALLOWED. ONE OF THE FOLLOWING ALTERNATES SHALL BE UTILIZED:

1. CAST ANCHOR BOLT IN-PLACE WITH CAP.
2. PREFORMED HOLE WITH A BLOCK-OUT AND THEN SET ANCHOR BOLT WITH A NON-SHRINK GROUT FORM QPL-47. PAYMENT FOR ANCHOR BOLTS IS MADE UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, PER LUMP SUM.

ERECTION DRAWINGS AND STRUCTURAL SHOP DRAWINGS: ALL SHOP AND ERECTION DRAWINGS SHALL BE IN ACCORDANCE WITH SECTION 801.03 OF THE SPECIFICATIONS.

YEAR PLATE: DATE OF CONSTRUCTION IS REQUIRED AT EACH END OF THE BRIDGE. IT SHALL BE LOCATED ON THE RIGHT SIDE OF THE STRUCTURE FOR ONCOMING TRAFFIC LANES, SEE STANDARD DETAIL YP-01 AND STEEL AND CONCRETE RAILING SHEET 3 OF 3.

SHEET NUMBER	102
DESIGNED BY	B. DELATTE
CHECKED BY	K. YAP
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DATE	2-28-2007
SHEET	1 OF 2
REVISION DESCRIPTION	
NO.	
DATE	
	
CAMINADA BAY BRIDGE ROUTE LA 1	
BRIDGE AND STRUCTURAL DESIGN	

GENERAL NOTES (CONT.):

PILE DYNAMIC MONITORING INSTRUMENTATION: PILE DYNAMIC MONITORING INSTRUMENTATION SHALL INCLUDE ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTALS, AND THE PERFORMANCE OF ALL WORK NECESSARY TO COMPLETE THE ITEM. SEE SHEET 118 FOR ALL NECESSARY QUANTITIES. PILE DYNAMIC MONITORING INSTRUMENTATION SHALL BE PAID FOR UNDER ITEM NS-800-00540, PER LUMP SUM.

PILES: ALL PILE REQUIREMENTS INCLUDING SIZE, TYPE, AND MAXIMUM DESIGN LOAD SHALL BE AS DESCRIBED ON THE PLANS, IN THE SPECIAL PROVISIONS, OR IN THE SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE A PILE DRIVING PLAN TO THE PROJECT ENGINEER, FOR APPROVAL BY THE GEOTECHNICAL SECTION, PRIOR TO DRIVING ANY PILES. PLAN PILE TIP ELEVATIONS AND PLAN PILE LENGTHS ARE FOR ESTIMATING PURPOSES ONLY. FINAL PILE TIP ELEVATIONS SHALL BE PLAN PILE TIP ELEVATIONS OR AS DETERMINED FROM THE TEST PILE RESULTS AND CPT PROBINGS. FINAL PILE ORDER LENGTHS SHALL BE DETERMINED FROM THE TEST PILE RESULTS AND CPT PROBINGS. FILL TO BE IN PLACE PRIOR TO DRIVING AFFECTED PILES. FOR PILE DETAILS SEE SHEET 117.

TEST PILE: ALL TEST PILE REQUIREMENTS INCLUDING SIZE, LOCATION AND TEST LOADING SHALL BE AS DESCRIBED IN THE PLANS, IN THE SPECIAL PROVISIONS, OR IN THE SPECIFICATIONS. SEE SHEET 118 FOR TEST PILE DATA TABLE AND TEST PILE REQUIREMENTS. FOR PILE DETAILS SEE SHEET 117.

CPT PROBINGS: CONE PENETROMETER TEST (CPT) PROBINGS WILL BE REQUIRED AT THE LOCATIONS NOTED ON THE GENERAL PLANS AND THE TEST PILE LOCATIONS. CPT PROBINGS WILL BE PERFORMED BY THE DEPARTMENT OR DEPARTMENT'S REPRESENTATIVE IN ACCORDANCE WITH SECTION 804.7 OF THE SPECIFICATIONS.

MONITOR PILES: MONITOR PILES WILL BE AS SHOWN IN THE PLANS. SEE PILE DATA TABLE FOR MONITOR PILE REQUIREMENTS.

PDA MONITORING: PILE DRIVING ANALYZER (PDA) MONITORING SHALL BE REQUIRED AT EACH TEST PILE & MONITOR PILE LOCATION OR AS DIRECTED BY THE PROJECT ENGINEER.

JETTING/PREBORING: JETTING AND/OR PREBORING MAY BE NECESSARY AND SHALL REQUIRE THE APPROVAL OF THE PROJECT ENGINEER AND THE GEOTECHNICAL DESIGN SECTION.

PILE DRIVING PRECAUTION: TO REDUCE PILE EDGE CRUSHING, THE CONTRACTOR SHALL ENSURE THE PILE REMAINS IN FULL CONTACT WITH THE PILE CUSHION DURING DRIVING BY THE USE OF:
1. ALIGNMENT SPACERS ATTACHED TO THE CUSHION PERIMETER WHICH EXTEND BELOW THE TOP OF THE PILE AND THAT TAKE UP THE ANNULAR SPACE BETWEEN THE HELMET AND PILE, OR
2. CUSHIONS WITH OUTSIDE DIAMETER EQUAL TO THE HELMET INSIDE DIAMETER AND A WIDTH THAT ACCOUNTS FOR MAXIMUM PILE SHIFT INSIDE THE HELMET, OR
3. ANOTHER METHOD ACCEPTABLE TO THE PROJECT ENGINEER.

PRECAST PRESTRESSED CONCRETE GIRDERS: FOR GENERAL NOTES ON PRECAST PRESTRESSED CONCRETE GIRDERS, SEE SPAN AND GIRDER DETAILS. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF THE GIRDERS.

PRESTRESSED GIRDER SPAN ERECTION: THE CONTRACTOR WILL BE REQUIRED TO PROVIDE BRACING BETWEEN GIRDERS DURING ERECTION TO ENSURE THAT GIRDERS ARE HELD IN PROPER ALIGNMENT DURING THE DECK POURING SEQUENCE. DETAILED ERECTION DRAWINGS OUTLINING COMPLETE PROCEDURES ALONG WITH THE EQUIPMENT TO BE USED FOR ERECTION SHALL BE SUBMITTED TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL (SEE SPECIAL PROVISIONS).

OPTIONAL FORM WORK: PRECAST PRESTRESSED CONCRETE PANELS AND NON-LAMINATED STEEL STAY-IN-PLACE FORMS WILL NOT BE ALLOWED ON THIS BRIDGE. THE CONTRACTOR WILL BE ALLOWED TO USE POLYMER LAMINATE STEEL STAY-IN-PLACE FORMS PROVIDED THAT THE WEIGHT OF STAY-IN-PLACE FORMS SHALL NOT EXCEED 4 LBS PER SQUARE FOOT OR ADD THICKNESS TO THE CONCRETE DECK. THE POLYMER LAMINATE STEEL STAY-IN-PLACE FORMS MUST CONFORM TO ASTM A653 AND ASTM A924 HAVING AN MINIMUM COATING CLASS OF G210. THE USE OF POLYMER LAMINATE STEEL STAY-IN-PLACE FORMS SHALL BE IN ACCORDANCE WITH SUBSECTION 805.09 OF THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND THE PLANS.

OPTIONAL PRECAST FORM FOR BENTS 21-34: NO ADJUSTMENT WILL BE ALLOWED TO THE BOTTOM ELEVATION OF FOOTINGS AND FOOTING DIMENSIONS. THE FOOTINGS HAVE BEEN DESIGNED TO SUPPORT THE WEIGHT OF A ONE FOOT THICK PRECAST FORM. THE PRECAST FORM SHALL BE ATTACHED TO THE FOOTING WITH STAINLESS REINFORCING STEEL DISTRIBUTED EQUALLY AND ADEQUATELY TO DEVELOP THREE (3) TIMES THE DESIGN DEAD LOAD OF THE PRECAST FORM. THE CONTRACTOR IS REQUIRED TO SUBMIT DESIGN CALCULATIONS AND CONSTRUCTION CONCEPTS, STAMPED BY A LICENSED ENGINEER IN LOUISIANA, TO LADOTD BRIDGE DESIGN ENGINEER AND CONSTRUCTION SECTIONS FOR APPROVAL. PAYMENT FOR THE MATERIAL, DESIGN AND CONSTRUCTION OF THE PRECAST FORM SHALL BE INCLUDED IN THE COST OF ITEM 805-02-00200, CLASS A(M)CONCRETE (FOOTINGS).

CONSTRUCTION JOINT: WHERE DECK CONSTRUCTION JOINTS ARE USED, NOT LESS THAN SEVEN (7) DAYS SHALL HAVE ELAPSED BETWEEN ADJACENT POURS. THE VERTICAL SURFACES OF THE DECK CONSTRUCTION JOINTS BETWEEN ADJACENT POURS SHALL BE COATED, PRIOR TO EACH SUCCEEDING POUR, WITH A TYPE II, EPOXY RESIN SYSTEM IN ACCORDANCE WITH SUBSECTION 805.06(B)(2) OF THE STANDARD SPECIFICATIONS. EPOXY IS TO BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

ACCESS EQUIPMENT FOR DEPARTMENT PERSONNEL: THE CONTRACTOR IS TO FURNISH A BOAT AND PILOT FOR THE DEPARTMENT PERSONNEL AT ALL TIMES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR WILL FURNISH LIFE JACKETS TO DEPARTMENT PERSONNEL WHEN WORKING NEAR OR OVER WATER. THE BOAT, PILOT, AND LIFE JACKETS ARE TO BE INCLUDED IN THE COST OF ITEM 727-01-00100, MOBILIZATION.

GAS PIPELINE: BP OIL 12" PIPELINE AND CHEVRON 20" PIPELINE COORDINATES ARE SHOWN BELOW AND THE ALIGNMENT IS SHOWN IN THE BRIDGE GENERAL PLANS. THE CONTRACTOR NEEDS TO BE CAUTIOUS WITH BARGE OPERATIONS IN THE AFFECTED AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS EQUIPMENT AND OPERATIONS.

Table with 5 columns: POINT, STATION, OFFSET (ft), X, Y. Rows include PT1, PT2, PT3 with stationing like 112+60.67 and offsets like 124.05 ft LEFT.

Table with 5 columns: POINT, STATION, OFFSET (ft), X, Y. Rows include PT1, PT2, PT3, PT4 with stationing like 120+37.26 and offsets like 147.05 ft LEFT.

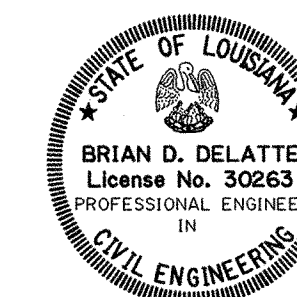
TEMPORARY NAVIGATIONAL LIGHTING: DURING CONSTRUCTION, TEMPORARY LIGHTING SHALL BE PROVIDED FOR NAVIGATIONAL OBSTRUCTIONS IN THE WATERWAY, SUCH AS DERRIK, MATERIALS BARGES, PIERS AND CONSTRUCTION EQUIPMENT, TO ALERT TO THESE HAZARDS. MODIFICATION TO THE EXISTING NAVIGATIONAL LIGHT MAY BE NEEDED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONSULT THE U.S. COAST GUARD IN THESE SITUATIONS TO ESTABLISH THE APPROPRIATE LIGHTING SCHEME, SUBMITTING AT THE TIME AN 8 1/2" BY 11" DRAWING OF THE OBSTRUCTION AND ITS LOCATION. ALL TEMPORARY NAVIGATIONAL LIGHTING, MODIFICATIONS TO EXISTING NAVIGATIONAL LIGHTING, CONSULTATIONS AND SUBMITTALS WITH THE US COAST GUARD WILL BE INCLUDED IN THE COST OF ITEM 727-01-00100, MOBILIZATION.

ACCESS, ASSISTANCE, AND COORDINATION FOR INSTRUMENTATION INSTALLATION FOR INTEGRAL BRIDGE ABUTMENT: THE CONTRACTOR IS TO PROVIDE ACCESS, ASSISTANCE, NECESSARY EQUIPMENT AND MATERIALS, AND ALLOW REASONABLE TIME FOR THE DEPARTMENT PERSONNEL, DEPARTMENT'S REPRESENTATIVES, OR A SUBCONTRACTOR TO INSTALL THE INSTRUMENTATION ON THE SUPERSTRUCTURE AND SUBSTRUCTURE OF THE BRIDGE. THE INSTRUMENTATION WILL BE PURCHASED AND INSTALLED ACCORDING TO THE PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS. THE CONTRACTOR IS TO COORDINATE WITH THE PILE FABRICATION YARD FOR THE INSTALLATION OF INSTRUMENTATION IN THE PILES. THE CONTRACTOR SHALL USE REASONABLE CARE DURING CONSTRUCTION TO AVOID ANY DAMAGE TO THE INSTRUMENTATION. THE WORK INVOLVED SHALL BE PAID UNDER ITEM NS-800-00300, INSTRUMENTATION INSTALLATION FOR INTEGRAL BRIDGE ABUTMENT.

REMOVAL OF EXISTING BRIDGE: THE EXISTING BRIDGE TO BE REMOVED UNDER ITEM 202-02-04000, REMOVAL OF BRIDGE (STA. 100+09.30. 28' X 3720' CONCRETE BRIDGE), PER EACH. THE CONTRACTOR IS TO REMOVE ALL PARTS OF THE EXISTING BRIDGE IN THEIR ENTIRETY AS STIPULATED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. EXISTING PILES SHALL BE REMOVED TO AT LEAST 5'-0" BELOW THE CURRENT BAY BOTTOM (MUD LINE). FOR BENTS BETWEEN STATIONS 116+00 & 120+00 PILES SHALL BE REMOVED TO AN ELEVATION OF -36.4. IF DREDGING IS REQUIRED FOR REMOVAL OF THE BRIDGE, THEN REMOVE EXISTING PILES BETWEEN STATIONS 100+30 & STA. 107+75 AND BETWEEN STATIONS 127+70 & 137+14 TO A ELEVATION OF -15.0. ALL MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IS TO BE DISPOSED OF BY THE CONTRACTOR OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.

BUCKET DREDGING: THIS WORK CONSISTS OF POSSIBLE LOCALIZED DREDGING THAT MAY BE REQUIRED TO FACILITATE BRIDGE CONSTRUCTION OR REMOVAL. WHEN AND WHERE NECESSARY, THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT ONE (1) WEEK IN ADVANCE PRIOR TO COMMENCE DREDGING. DREDGING OPERATION SHALL BE DONE IN ACCORDANCE WITH THE GUIDELINES AND TERMS SET FORTH BY THE PROJECT PERMITS. THE DREDGED MATERIAL SHALL BE DELIVERED BY THE CONTRACTOR TO A FENCED SITE OWNED BY THE TOWN OF GRAND ISLE. ONCE THIS MATERIAL IS DELIVERED TO THE SITE THEY BECOME THE PROPERTY OF THE TOWN OF GRAND ISLE FOR THEIR BENEFICIAL USE. THIS SITE IS APPROXIMATELY 3 MILES SOUTHWEST OF GRAND ISLE ALONG LA 1. THIS ITEM WILL BE PAID FOR UNDER ITEM NS-203-00001, BUCKET DREDGING, PER CUBIC YARD.

REMOVAL OF STRUCTURES AND OBSTRUCTIONS: THE CONTRACTOR IS TO REMOVE ALL STRUCTURES AND OBSTRUCTIONS FROM THE PROJECT RIGHT-OF-WAY AS STIPULATED IN THE PLANS AND SPECIFICATIONS. THIS INCLUDES BUT IS NOT LIMITED TO: REMOVAL OF ALL NAVIGATION LIGHTS, JUNCTION BOXES, STRUCTURE MOUNTED AND UNDERGROUND CONDUIT WITH CONDUCTORS, CONTROLLERS, DISCONNECTS, AND SERVICE POLE, CONCRETE REVETMENT, RIP RAP, AND RETAINING WALLS. ALL REMOVALS AND DISPOSALS SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. TO BE PAID FOR UNDER ITEM 202-01-00100, REMOVAL OF STRUCTURES AND OBSTRUCTIONS.



Vertical sidebar containing project metadata: SHEET NUMBER 103, PROJECT NAME CAMINADA BAY BRIDGE ROUTE LA 1, DESIGNER/ENGINEER DELATTE, B. YAP, CHECKED K. YAP, DATE 102-28-2007, SHEET 2 OF 2, and various logos including the Louisiana State Seal and BOFA logo.

04-MAY-2009 13:44

NOTES:

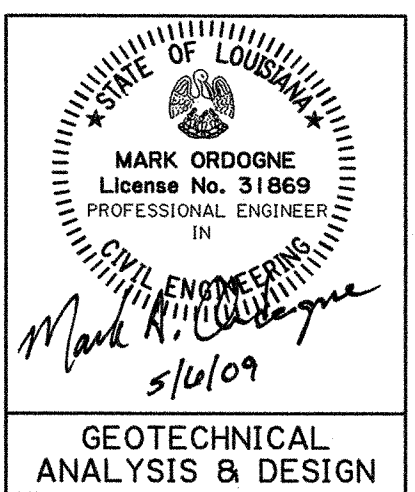
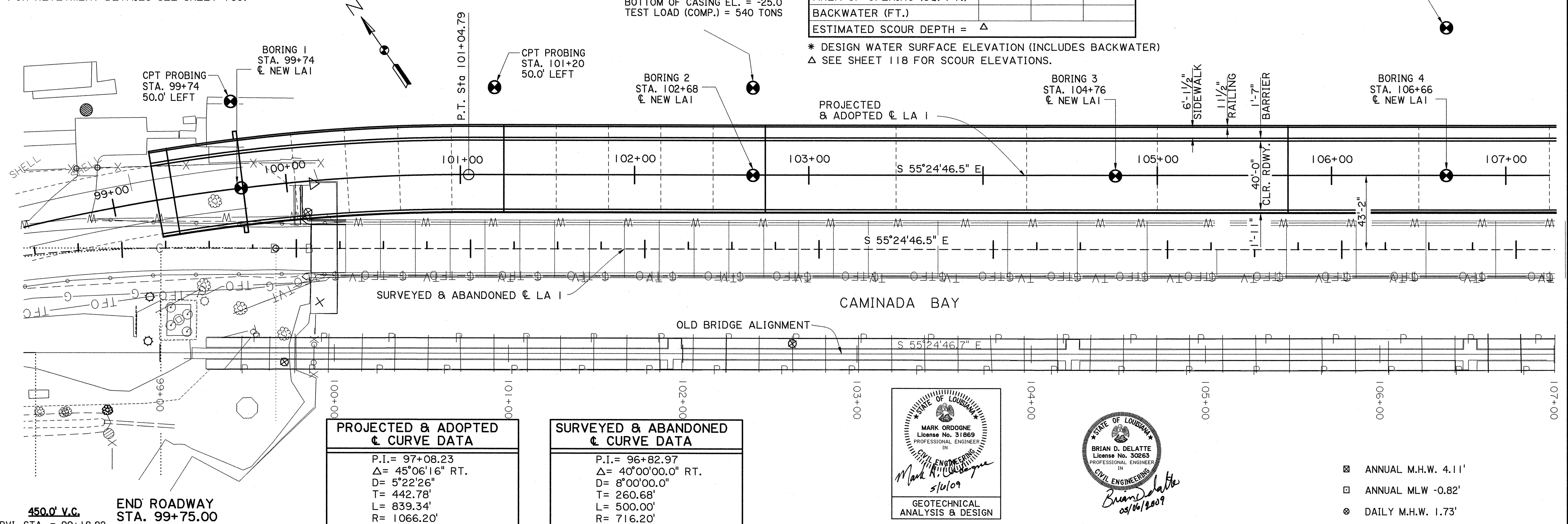
FOR GUARD RAIL INFORMATION, SEE SHEET 109 AND STANDARD PLAN GR-200.
 FILL TO BE IN PLACE AND EXCAVATION TO BE MADE PRIOR TO DRIVING PILES AFFECTED.
 FIELD BOOKS: 182-261 AND 181-753.
 EXISTING PILES ARE TO BE REMOVED 5'-0" BELOW MUD LINE. EXISTING PILES WHICH INTERFERE WITH NEW PILES ARE TO BE COMPLETELY REMOVED.
 FOR REVETMENT DETAILS SEE SHEET 109.

HYDRAULIC DATA		
DRAINAGE AREA = INDET. SQUARE MILES		
FLOOD FREQUENCY (YEARS)	50	100
DISCHARGE (C.F.S.)	INDET.	INDET.
D.W.S. ELEV. (FT./M.S.L.) *	8.80	10.70
AVERAGE VELOCITY (F.P.S.)	WAVE & TIDE	
AREA OF OPENING (SQ. FT.)		
BACKWATER (FT.)		
ESTIMATED SCOUR DEPTH = Δ		

* DESIGN WATER SURFACE ELEVATION (INCLUDES BACKWATER)
 Δ SEE SHEET 118 FOR SCOUR ELEVATIONS.

CPT PROBING & TEST PILE #2
 STA. 106+66
 50.0' LEFT
 36" # PPC PILE
 TIP EL. = -130.0
 BOTTOM OF CASING EL. = -34.0
 TEST LOAD (COMP.) = 625 TONS

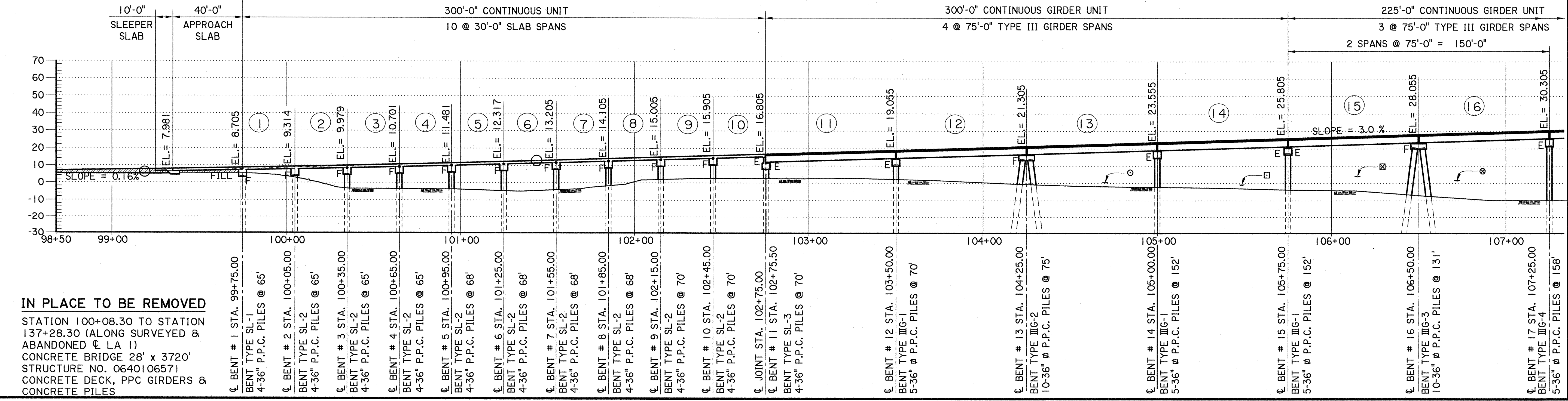
CPT PROBING & TEST PILE #1
 STA. 102+68
 50.0' LEFT
 36" # PPC PILE
 TIP EL. = -60.0
 BOTTOM OF CASING EL. = -25.0
 TEST LOAD (COMP.) = 540 TONS



- ⊠ ANNUAL M.H.W. 4.11'
- ⊠ ANNUAL MLW -0.82'
- ⊙ DAILY M.H.W. 1.73'
- ⊙ DAILY M.L.W. 0.59'

TOTAL LENGTH OF BRIDGE = 3945'-0"

450.0' V.C.
 PVI. STA. = 99+18.82
 PVI. ELEV. = 6.12'
 G1 = 0.16%
 G2 = 3.0%



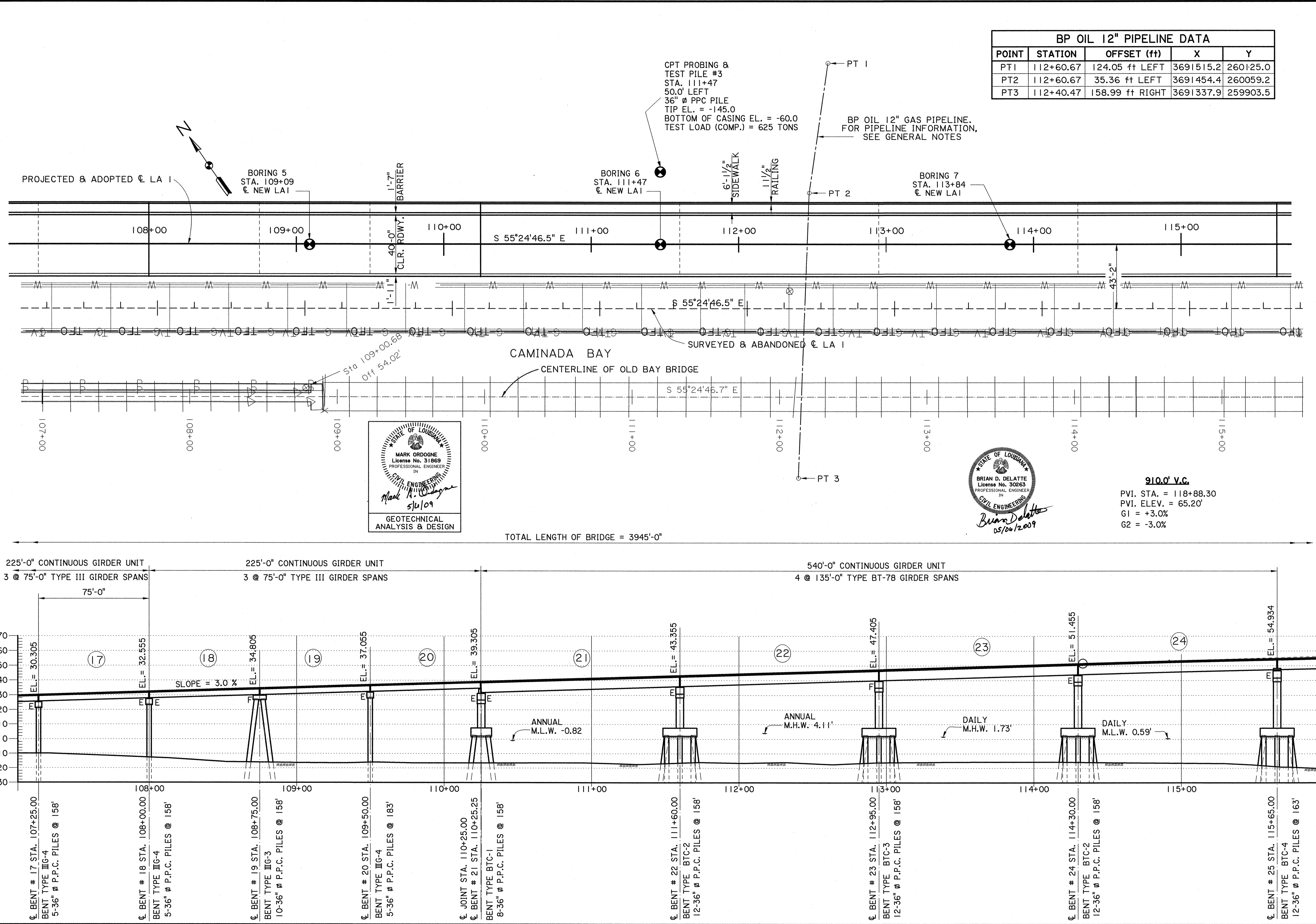
FINAL PLANS

R:\Gang2\Projects\064010040\dgm\104_General_Plan_1.dgn

SHEET NUMBER	104
DESIGNED BY	JEFFERSON
CHECKED BY	B. DELATTE
DATE	OCT. 2006
SHEET	1 OF 5
PROJECT	064-01-0040
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	
REVISION DESCRIPTION	
NO.	DATE
CAMINADA BAY BRIDGE ROUTE LA 1 GENERAL PLAN	
BRIDGE AND STRUCTURAL DESIGN	

FINAL PLANS

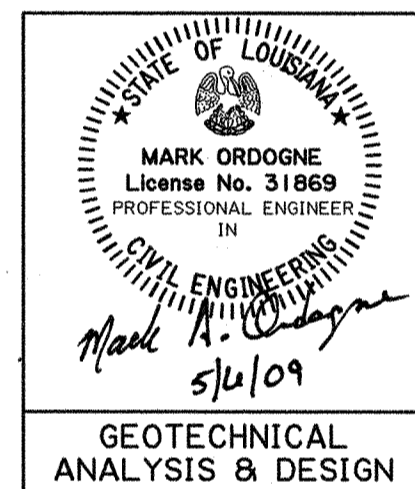
R:\Gang2\Projects\064010040\dgn\105 General Plan_2.dgn



BP OIL 12" PIPELINE DATA				
POINT	STATION	OFFSET (ft)	X	Y
PT1	112+60.67	124.05 ft LEFT	3691515.2	260125.0
PT2	112+60.67	35.36 ft LEFT	3691454.4	260059.2
PT3	112+40.47	158.99 ft RIGHT	3691337.9	259903.5

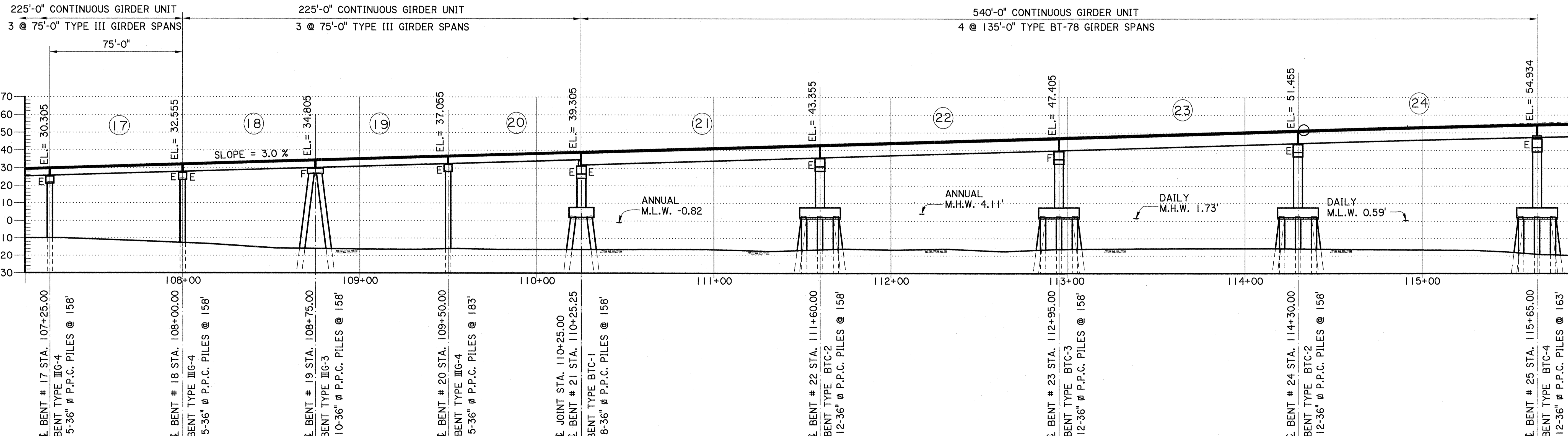
CPT PROBING & TEST PILE #3
 STA. 111+47
 50.0' LEFT
 36" # PPC PILE
 TIP EL. = -145.0
 BOTTOM OF CASING EL. = -60.0
 TEST LOAD (COMP.) = 625 TONS

BP OIL 12" GAS PIPELINE.
 FOR PIPELINE INFORMATION,
 SEE GENERAL NOTES



910.0' V.C.
 PVI. STA. = 118+88.30
 PVI. ELEV. = 65.20'
 G1 = +3.0%
 G2 = -3.0%

TOTAL LENGTH OF BRIDGE = 3945'-0"



SHEET NUMBER 105

DESIGNED BY: DELATTE, B. CHECKED BY: NAKHLEH, J. DATE: JUL. 2005 SHEET 2 OF 5

PARISH: JEFFERSON FEDERAL PROJECT: STATE PROJECT: 064-01-0040

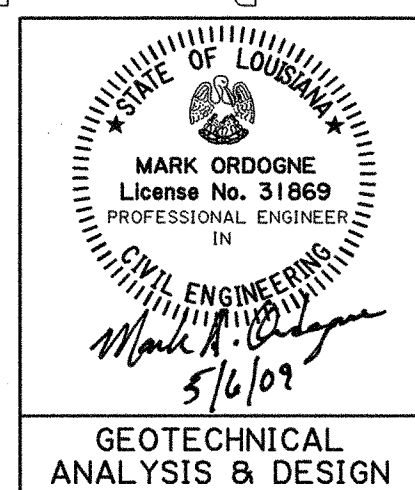
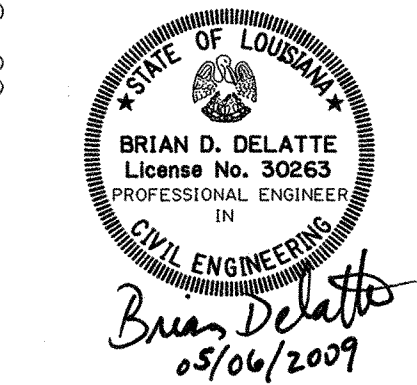
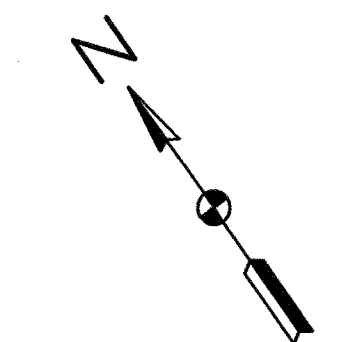
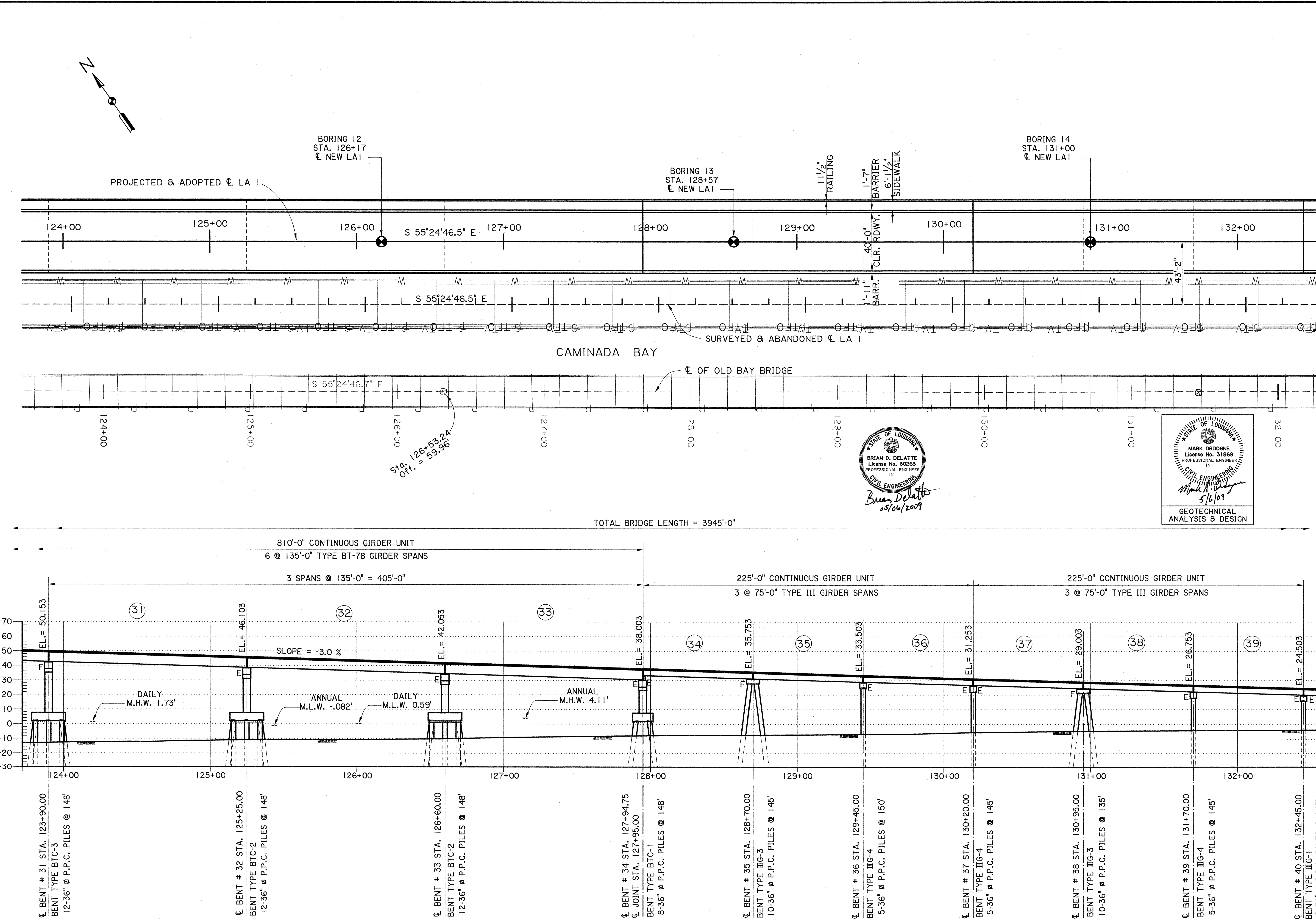
REVISION DESCRIPTION: NO. DATE BY

CAMINADA BAY BRIDGE ROUTE LA 1

BRIDGE AND STRUCTURAL DESIGN

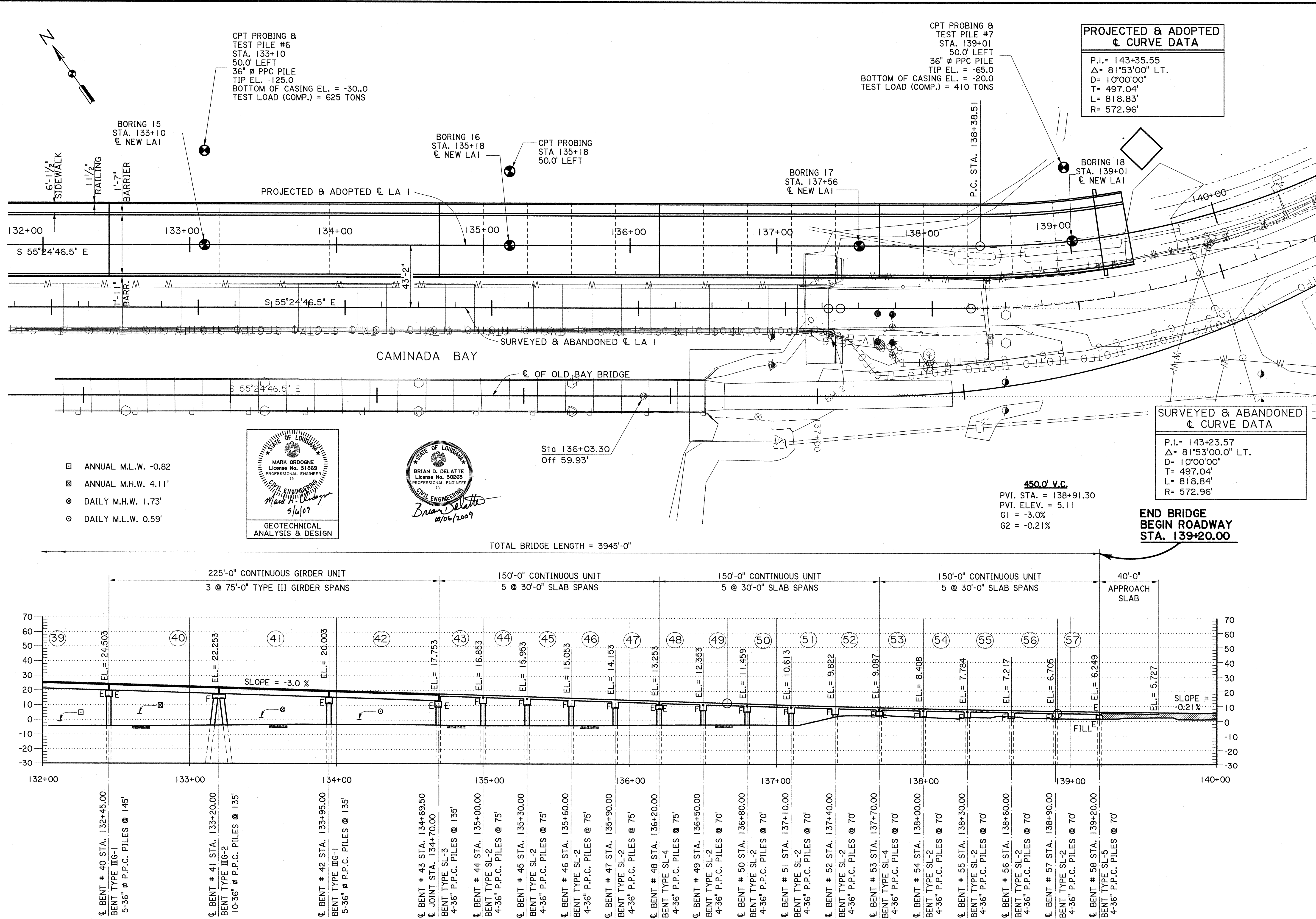
FINAL PLANS

R:\Gang2\Projects\064010040\dgn\107_General_Plan_4.dgn



SHEET NUMBER		107	
DESIGNED BY	B. DELATTE	PARISH	JEFFERSON
CHECKED BY	J. NAKHLEH	FEDERAL PROJECT	
DATE	JUL 2005	STATE PROJECT	064-01-0040
CHECKED BY	D. HYMEL		
CHECKED BY	B. DELATTE		
DATE	JUL 2005		
SHEET	4 OF 5		
REVISION DESCRIPTION			
NO.		DATE	
CAMINADA BAY BRIDGE ROUTE LA 1			
GENERAL PLAN			
BRIDGE AND STRUCTURAL DESIGN			

R:\Gang2\Projects\064010040\dgn\108_General Plan_5.dgn
 04-MAY-2009 13:45
 FINAL PLANS



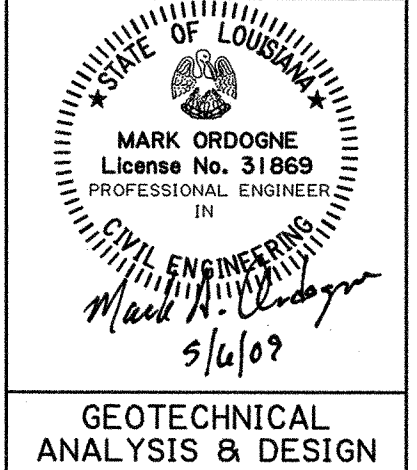
PROJECTED & ADOPTED C& CURVE DATA

P.I. = 143+35.55
Δ = 81°53'00" LT.
D = 10°00'00"
T = 497.04'
L = 818.83'
R = 572.96'

SURVEYED & ABANDONED C& CURVE DATA

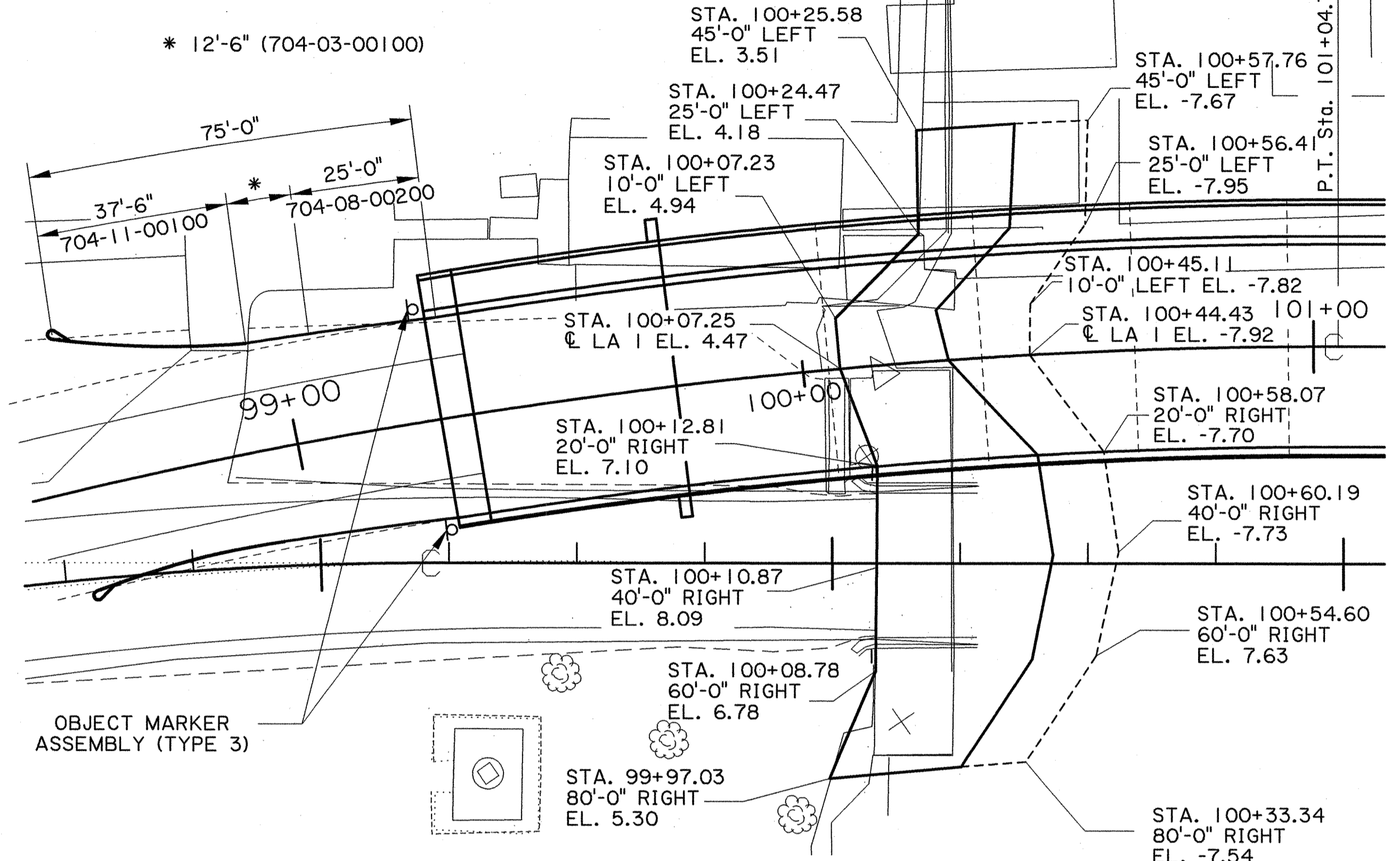
P.I. = 143+23.57
Δ = 81°53'00.0" LT.
D = 10°00'00"
T = 497.04'
L = 818.84'
R = 572.96'

- ANNUAL M.L.W. -0.82
- ▣ ANNUAL M.H.W. 4.11'
- ⊗ DAILY M.H.W. 1.73'
- DAILY M.L.W. 0.59'



TOTAL BRIDGE LENGTH = 3945'-0"

SHEET NUMBER	108	PARISH	JEFFERSON	STATE PROJECT	064-01-0040
CHECKED	J. NAKHLEH	FEDERAL PROJECT		DATE	JUL. 2005
DESIGNED	B. DELATTE	CHECKED	B. DELATTE	SHEET	15 OF 5
REVISION DESCRIPTION					
NO.					
DATE					
CAMINADA BAY BRIDGE ROUTE LA 1 GENERAL PLAN					
BRIDGE AND STRUCTURAL DESIGN					



SURVEYED & ABANDONED C CURVE DATA
P.I.= 143+23.57
$\Delta = 81^{\circ}53'00.0''$ LT.
D= 10'00'00"
T= 497.04'
L= 818.84'
R= 572.96'

PROJECTED & ADOPTED C CURVE DATA
P.I.= 143+35.55
$\Delta = 81^{\circ}53'00''$ LT.
D= 10'00'00"
T= 497.04'
L= 818.83'
R= 572.96'

CURVED GUARDRAIL DESIGN STANDARD (ENDING OF BRIDGE)			
HWY. DESIGN CLASS	DESIGN SPEED	ADT	L.C.
RC-3	40	3700	12

GUARDRAIL LENGTH REQUIREMENTS				
RADIUS	CZC	A	X	Y
572.96	21.966	6.04	62.50	8.0

NOTES:
FOR GENERAL NOTES SEE SHEET N° 102 & 103.
FOR RIP RAP DETAILS NOT SHOWN, SEE STANDARD DETAIL FR-01.

ESTIMATED STONE REVETMENT QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL
711-01-05000	RIP-RAP (130 LB., 24" THICK)	SQ. YD.	1049
711-04-00100	GEOTEXTILE FABRIC	SQ. YD.	1049

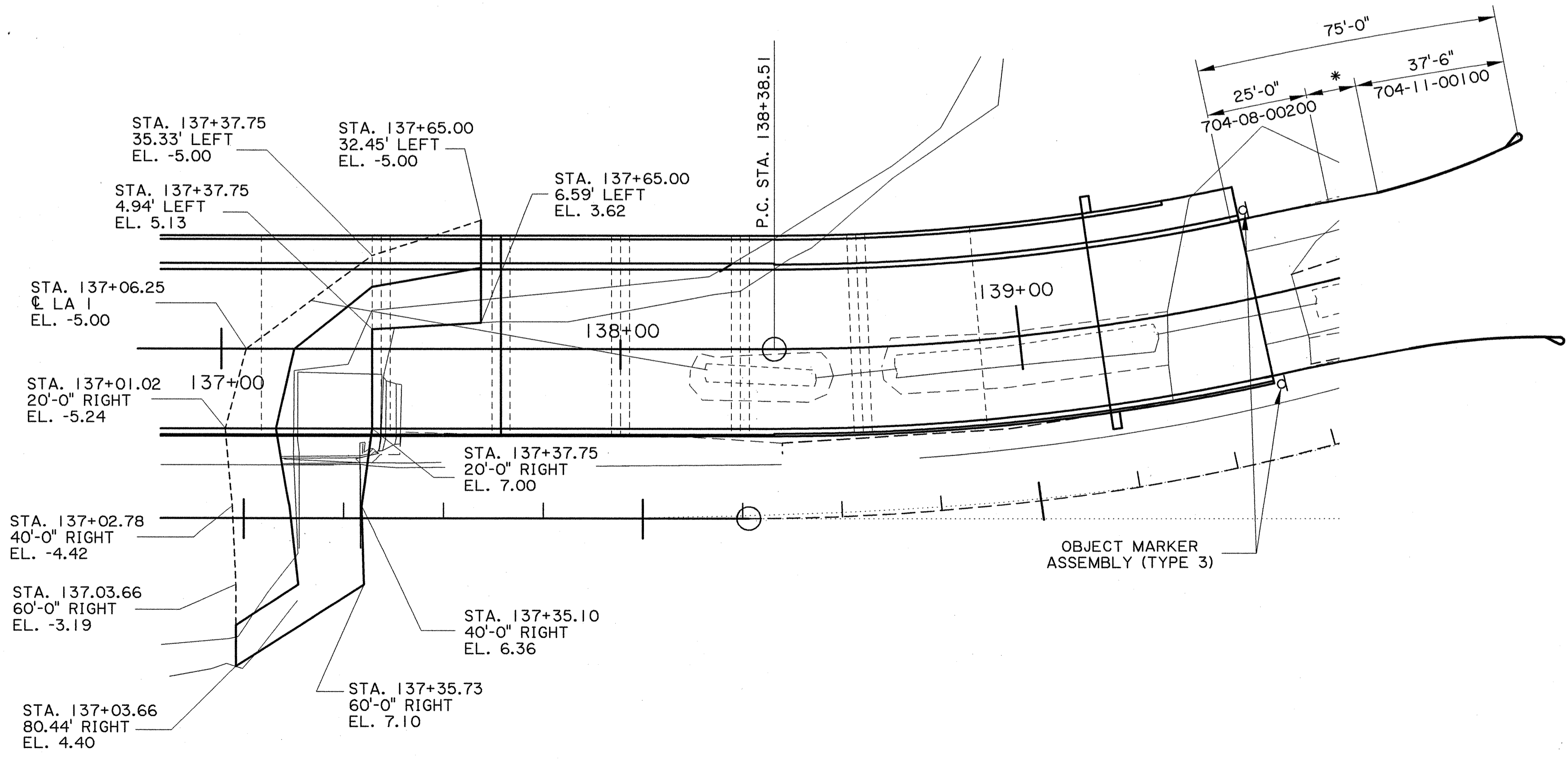


PROJECTED & ADOPTED C CURVE DATA
P.I.= 97+08.23
$\Delta = 45^{\circ}06'16''$ RT.
D= 5'22'26"
T= 442.78'
L= 839.34'
R= 1066.20'

SURVEYED & ABANDONED C CURVE DATA
P.I.= 96+82.97
$\Delta = 40^{\circ}00'00.0''$ RT.
D= 8'00'00.0"
T= 260.68'
L= 500.00'
R= 716.20'

CURVED GUARDRAIL DESIGN STANDARD (BEGINNING OF BRIDGE)			
HWY. DESIGN CLASS	DESIGN SPEED	ADT	L.C.
RC-3	40	3700	12

GUARDRAIL LENGTH REQUIREMENTS				
RADIUS	CZC	A	X	Y
1066.20	17.504	3.297	62.50	8.0



SHEET NUMBER	109
DESIGNED BY	JEFFERSON
CHECKED BY	B. DELATTE
DATE	JUL 2005
PROJECT	064-01-0040
STATE	LOUISIANA
FEDERAL PROJECT	
PARISH	
REVISION DESCRIPTION	
NO.	
DATE	
BY	

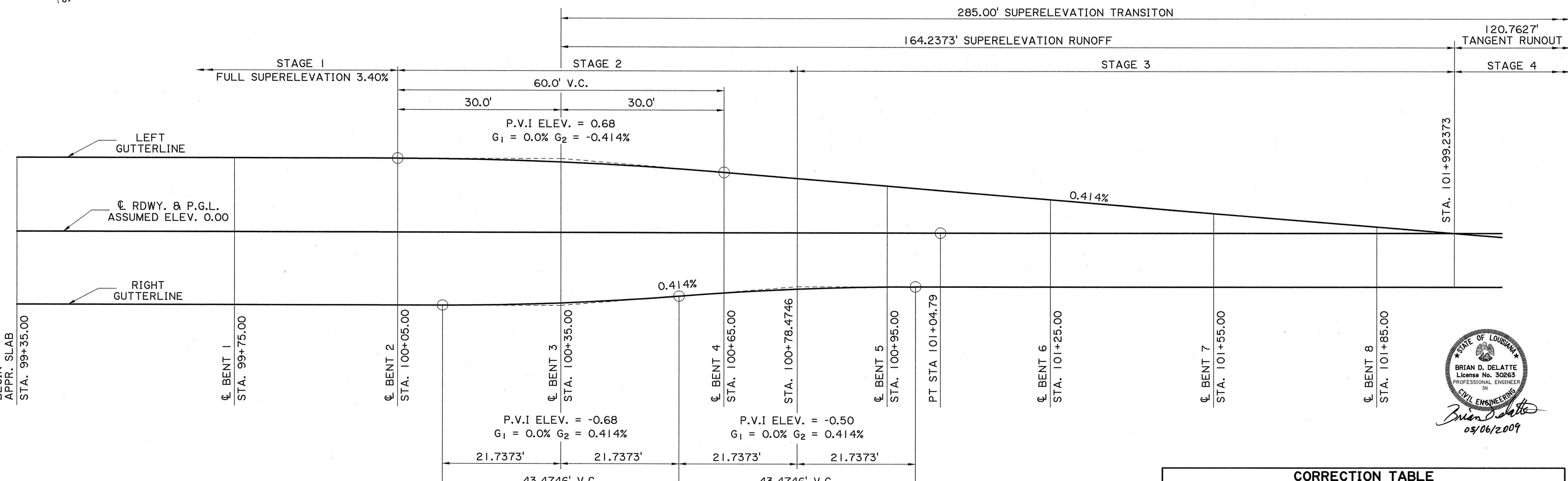
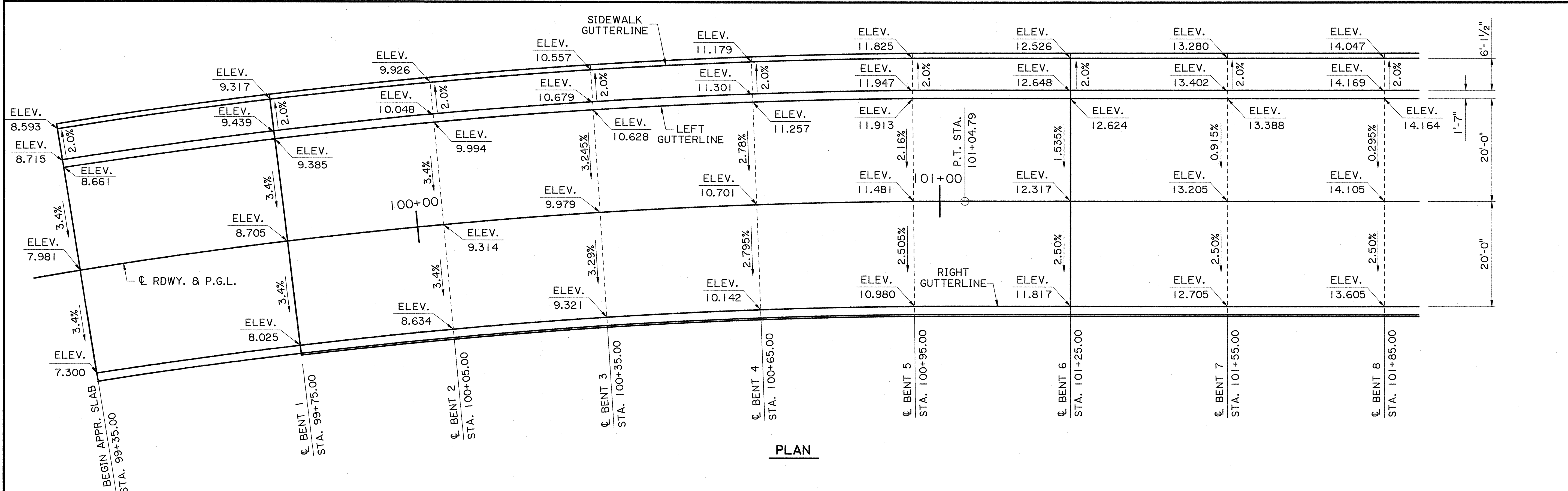
CAMINADA BAY BRIDGE
ROUTE LA 1

GUARDRAIL AND REVETMENT DETAILS

BRIDGE AND STRUCTURAL DESIGN

FINAL PLANS

R:\Gang2\Projects\064010040\dgm\110_Superelevation.dgn



NOTE:
 1) THIS SUPER ELEVATION DIAGRAM IS TO BE USED ONLY FOR THE BRIDGE. THE CONTRACTOR IS TO TRANSITION TO MEET THE VERTICAL CURVE IN ROADWAY, AND MATCH ROADWAY SUPERELEVATION DIAGRAM SHOWN ELSEWHERE IN THE PLANS.
 2) CONTRACTOR IS TO INTERPOLATE GUTTER LINE ELEVATIONS BETWEEN BENTS ASSUMING A PARABOLIC VARIATION.

SCALE:
 VERTICAL = 20
 HORIZONTAL = 1

CORRECTION TABLE				
LOCATION	JOINT STATION	PROFILE GRADE ELEV.	CORRECTION RIGHT GUTTER	CORRECTION LEFT GUTTER
APPR. SLAB	99+35.00	7.981	-0.680'	0.680'
BENT #1	99+75.00	8.705	-0.680'	0.680'
BENT #2	100+05.00	9.314	-0.680'	0.680'
BENT #3	100+35.00	9.979	-0.658'	0.649'
BENT #4	100+65.00	10.701	-0.559'	0.556'
BENT #5	100+95.00	11.481	-0.501'	0.432'
BENT #6	101+25.00	12.317	-0.500'	0.307'
BENT #7	101+55.00	13.205	-0.500'	0.183'
BENT #8	101+85.00	14.105	-0.500'	0.059'

SHEET NUMBER 110

DESIGNED BY: B. DeLatta
 CHECKED BY: J. NAKHLEH
 DETAILED BY: J. Krumm
 CHECKED BY: C. DELATTE

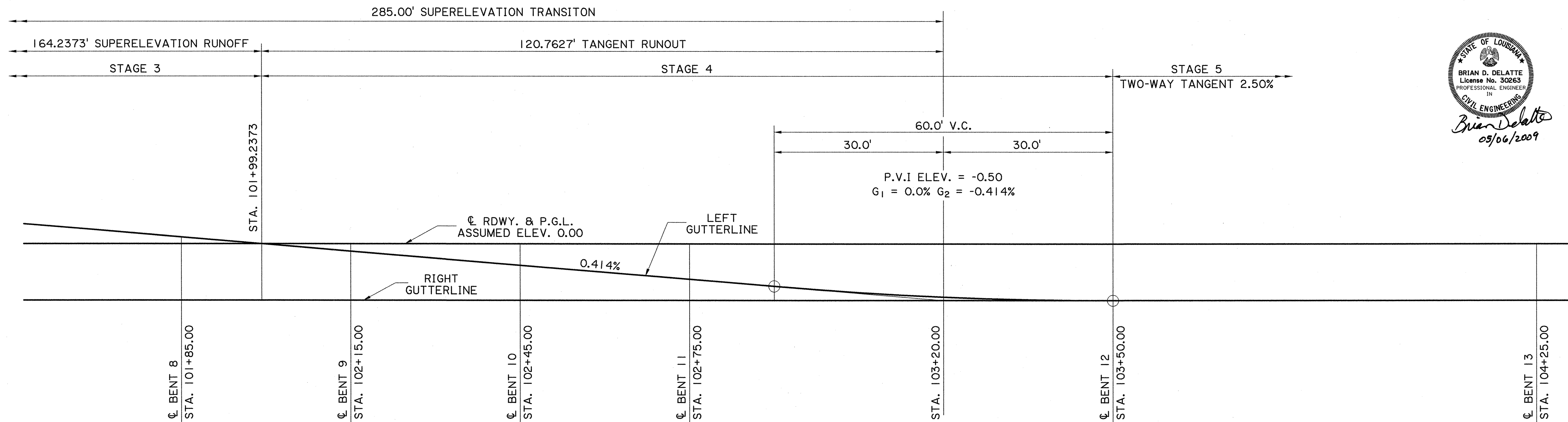
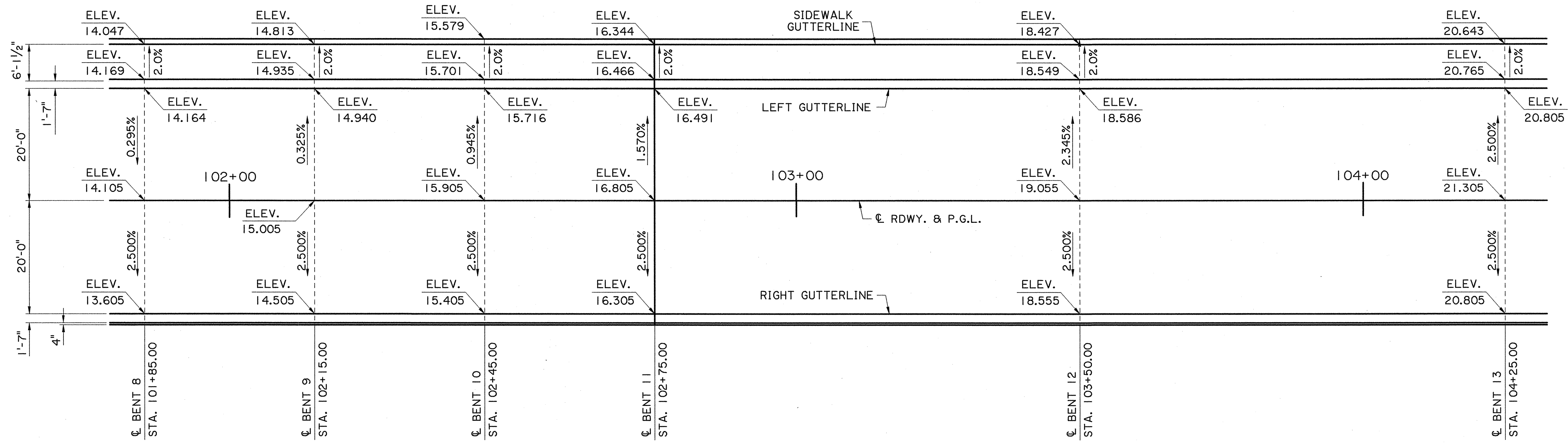
PARISH: JEFFERSON
 FEDERAL PROJECT: 064-01-0040
 STATE PROJECT: 064-01-0040

DATE: 05/06/2009
 SHEET: 1 OF 4

BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE
 ROUTE LA 1
 SUPERELEVATION TRANS. (BEG. BR.)

STATE OF LOUISIANA
 BRIAN D. DELATTE
 License No. 32853
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 05/06/2009



NOTE:
 1) THIS SUPER ELEVATION DIAGRAM IS TO BE USED ONLY FOR THE BRIDGE. THE CONTRACTOR IS TO TRANSITION TO MEET THE VERTICAL CURVE IN ROADWAY, AND MATCH ROADWAY SUPERELEVATION DIAGRAM SHOWN ELSEWHERE IN THE PLANS.
 2) CONTRACTOR IS TO INTERPOLATE GUTTER LINE ELEVATIONS BETWEEN BENTS ASSUMING A PARABOLIC VARIATION.

SCALE:
 VERTICAL = 20
 HORIZONTAL = 1

TRANSITION DIAGRAM

CORRECTION TABLE				
LOCATION	JOINT STATION	PROFILE GRADE ELEV.	CORRECTION RIGHT GUTTER	CORRECTION LEFT GUTTER
BENT #8	101+85.00	14.105	-0.500'	0.059'
BENT #9	102+15.00	15.005	-0.500'	-0.065'
BENT #10	102+45.00	15.905	-0.500'	-0.189'
BENT #11	102+75.00	16.805	-0.500'	-0.314'
BENT #12	103+50.00	19.055	-0.500'	-0.469'
BENT #13	104+25.00	21.305	-0.500'	-0.500'

SHEET NUMBER III

DESIGNED BY: B. Delatte
 CHECKED BY: J. Norklieh
 DETAILED BY: C. J. Krumm
 CHECKED BY: B. Delatte

PARISH: JEFFERSON
 FEDERAL PROJECT: 064-01-0040
 STATE PROJECT: 064-01-0040

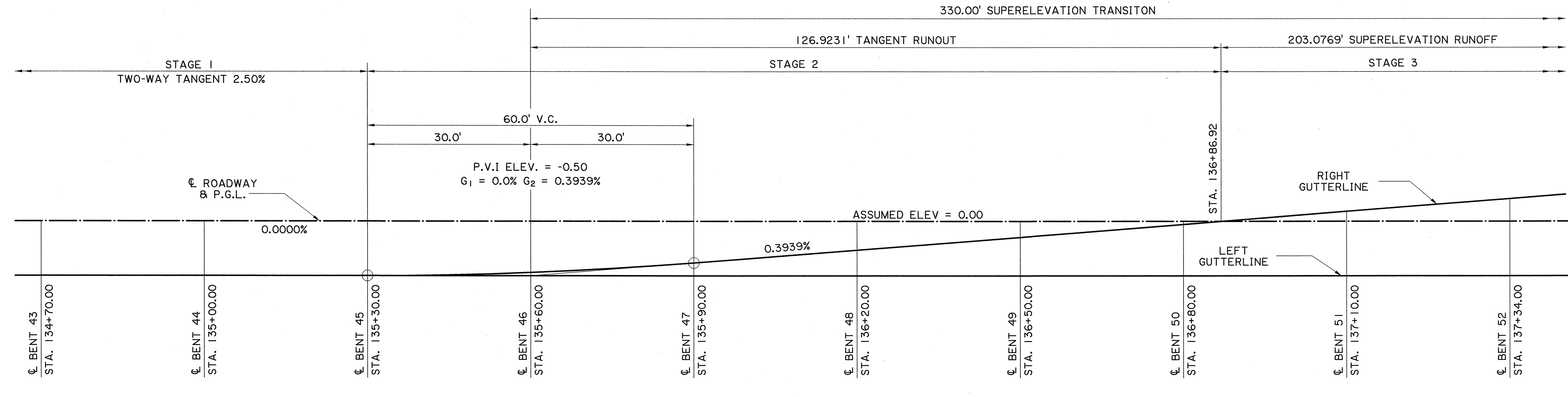
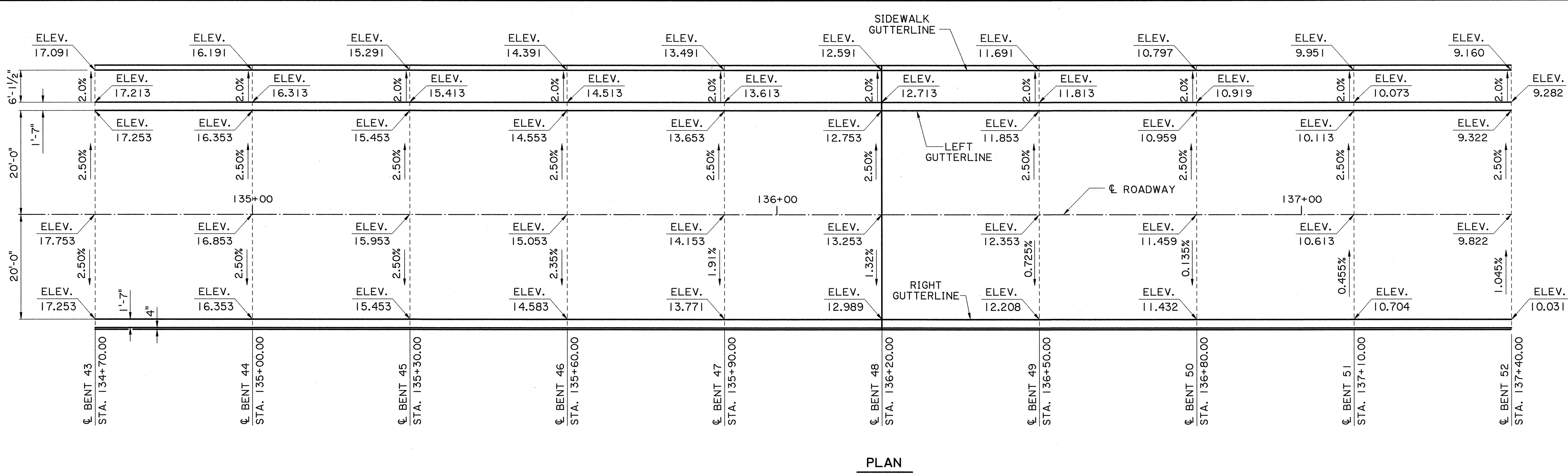
DATE: 05/06/2009
 SHEET: 2 OF 4

BRIDGE NO. 111
 ROUTE LA 1
 SUPERELEVATION TRANS. (BEG. BR.)

BRIDGE AND STRUCTURAL DESIGN

FINAL PLANS

R:\Gang2\Projects\064010040\dgn\112_Superelevation.dgn



CORRECTION TABLE				
LOCATION	JOINT STATION	PROFILE GRADE ELEV.	CORRECTION RIGHT GUTTER	CORRECTION LEFT GUTTER
BENT #43	134+70.00	17.753	-0.500'	-0.500'
BENT #44	135+00.00	16.853	-0.500'	-0.500'
BENT #45	135+30.00	15.953	-0.500'	-0.500'
BENT #46	135+60.00	15.053	-0.470'	-0.500'
BENT #47	135+90.00	14.153	-0.382'	-0.500'
BENT #48	136+20.00	13.253	-0.264'	-0.500'
BENT #49	136+50.00	12.353	-0.145'	-0.500'
BENT #50	136+80.00	11.459	-0.027'	-0.500'
BENT #51	137+10.00	10.613	0.091'	-0.500'
BENT #52	137+40.00	9.822	0.209'	-0.500'

SHEET NUMBER 112

DESIGNED BY B. Delatte
CHECKED BY J. Nakhien
DATE 05/16/2009

PARISH PROJECT JEFFERSON
STATE PROJECT 064-01-0040

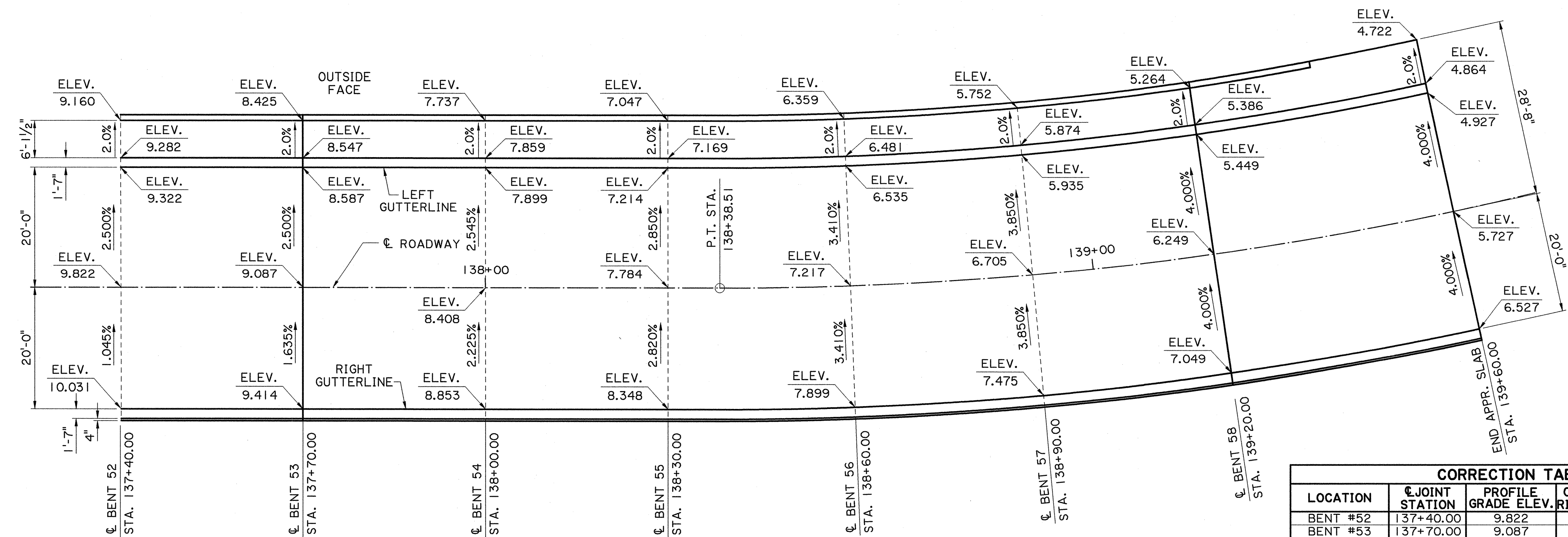
DATE 05/16/2009
SHEET 3 OF 4

BRIDGE DETAILS SUPERELEVATION TRANS. (END. BR.)

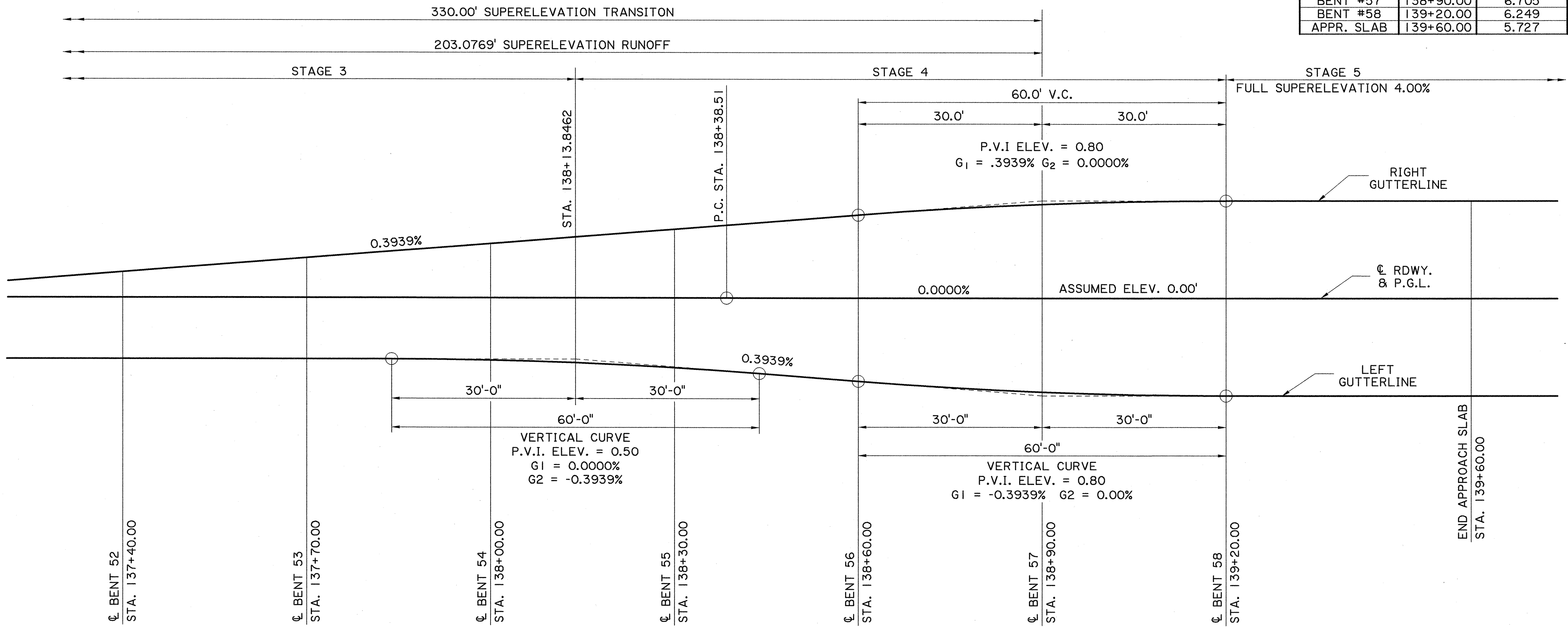
CAMINADA BAY BRIDGE
ROUTE LA 1

BRIDGE AND STRUCTURAL DESIGN

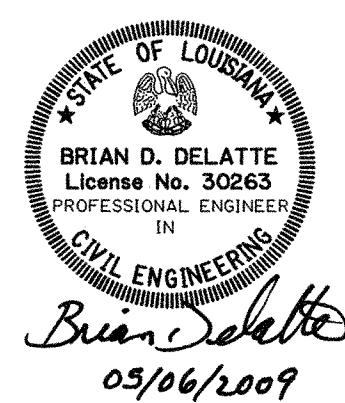
FINAL PLANS



CORRECTION TABLE				
LOCATION	JOINT STATION	PROFILE GRADE ELEV.	CORRECTION RIGHT GUTTER	CORRECTION LEFT GUTTER
BENT #52	137+40.00	9.822	0.209'	-0.500'
BENT #53	137+70.00	9.087	0.327'	-0.500'
BENT #54	138+00.00	8.408	0.445'	-0.509'
BENT #55	138+30.00	7.784	0.564'	-0.570'
BENT #56	138+60.00	7.217	0.682'	-0.682'
BENT #57	138+90.00	6.705	0.770'	-0.770'
BENT #58	139+20.00	6.249	0.800'	-0.800'
APPR. SLAB	139+60.00	5.727	0.800'	-0.800'

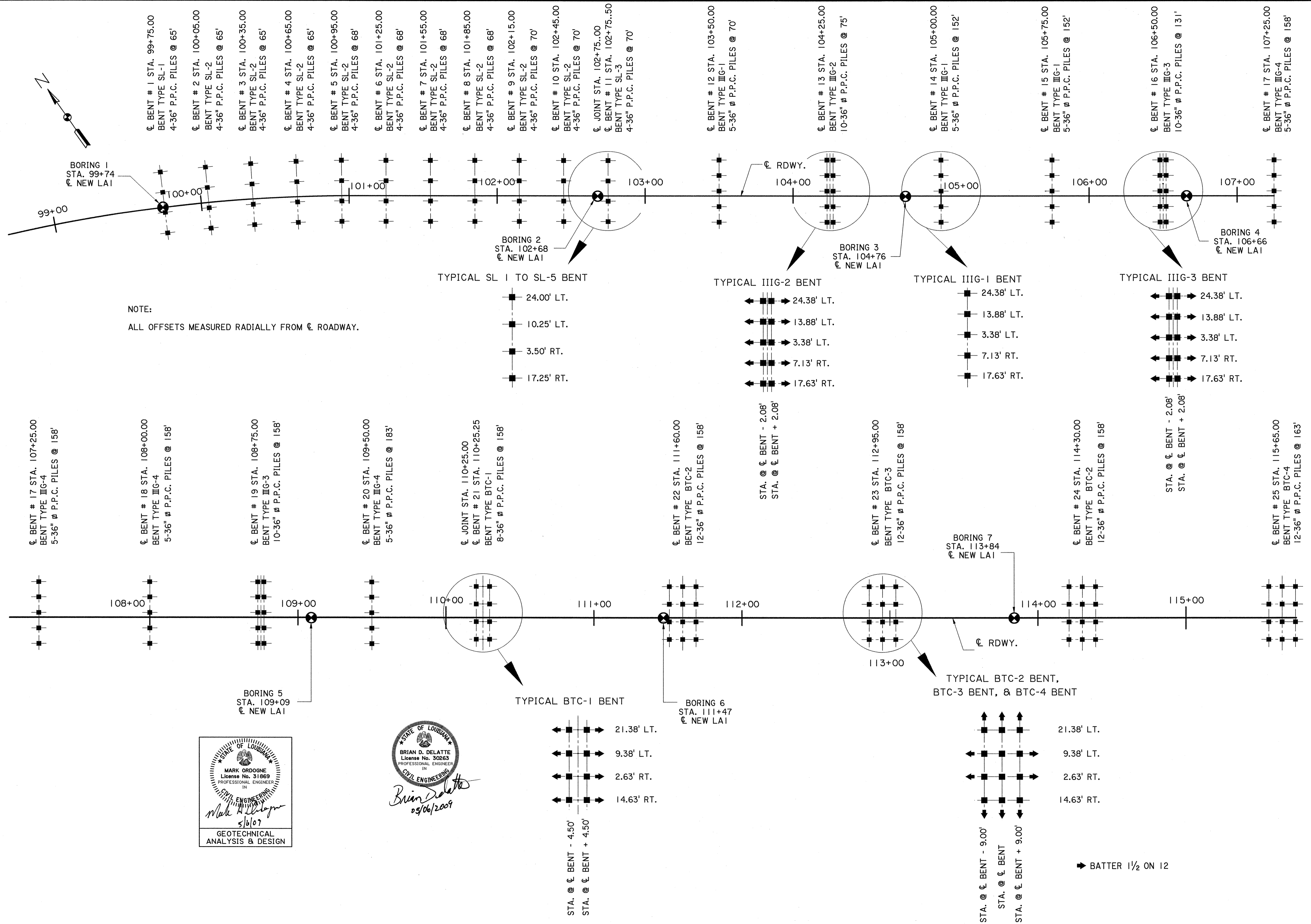


TRANSITION DIAGRAM

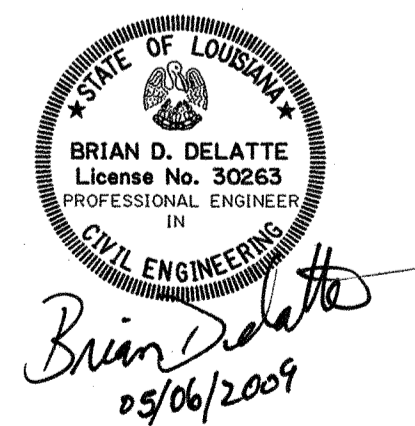
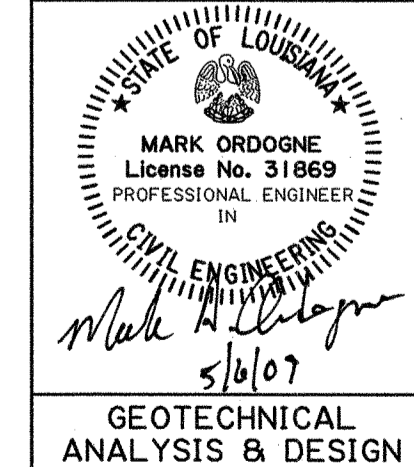



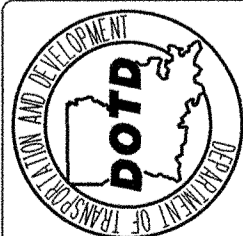
SHEET NUMBER 113
 PROJECT 064-01-0040
 STATE PROJECT
 PARISH JEFFERSON
 FEDERAL PROJECT
 DESIGNED BY B. Delatte
 CHECKED BY J. Nakhieh
 DETAILED BY C. J. Krumm
 CHECKED BY B. Delatte
 DATE 4 OF 4
 SHEET 4 OF 4
 REVISION DESCRIPTION
 NO. DATE
 CAMINADA BAY BRIDGE
 ROUTE LA 1
 SUPERELEVATION TRANS. (END. BR.)
 BRIDGE AND STRUCTURAL DESIGN

FINAL PLANS

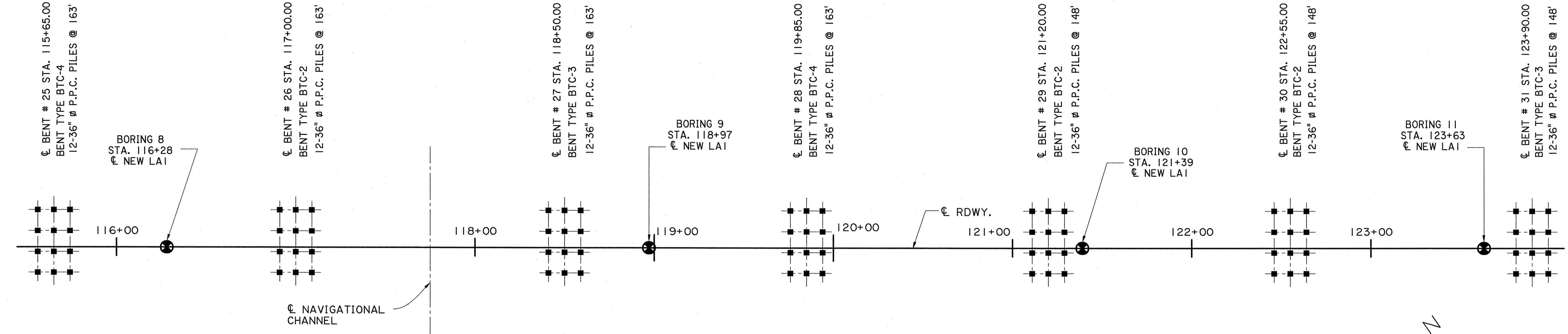


NOTE:
ALL OFFSETS MEASURED RADIALLY FROM C.RDWAY.

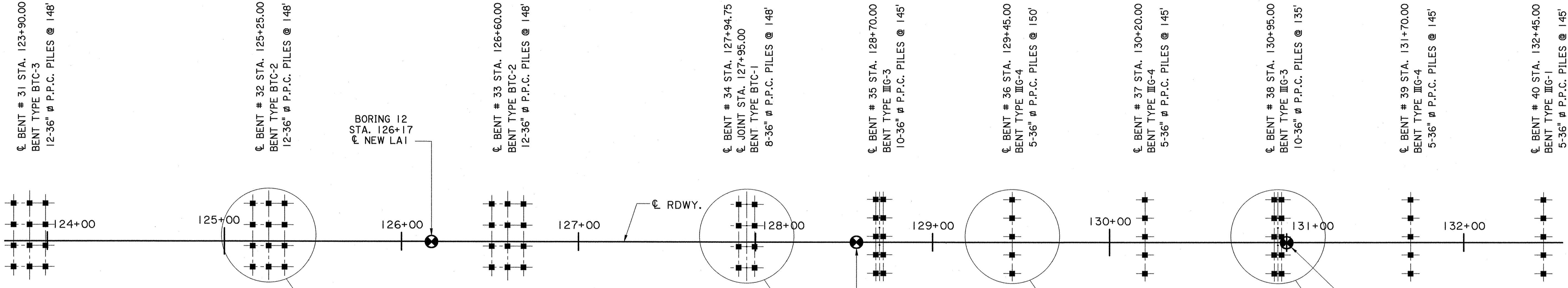
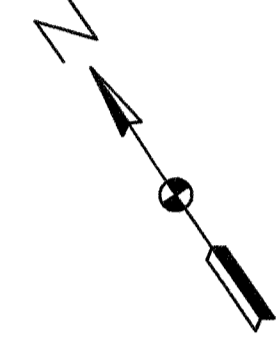


SHEET NUMBER		114	
DESIGNED		JEFFERSON	
CHECKED		PARISH	
DETAILED		FEDERAL PROJECT	
CHECKED		STATE PROJECT	
DATE		064-01-0040	
SHEET		1 OF 3	
REVISION DESCRIPTION		BY	
NO.		DATE	
		CAMINADA BAY BRIDGE ROUTE LA 1 FOUNDATION LAYOUT	
		BRIDGE AND STRUCTURAL DESIGN	

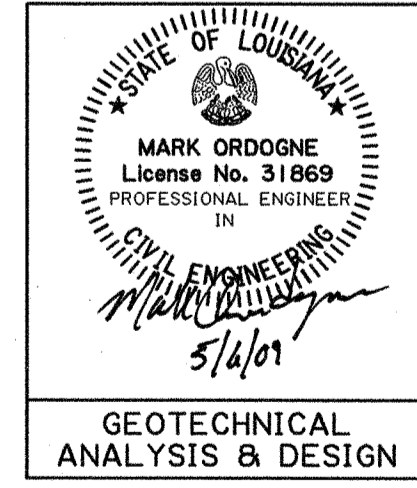
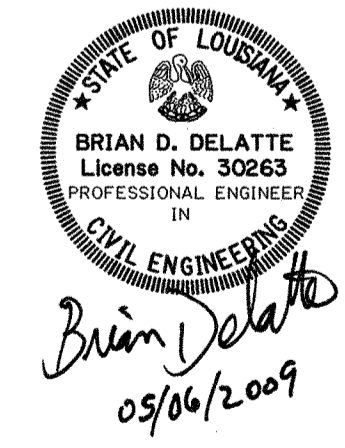
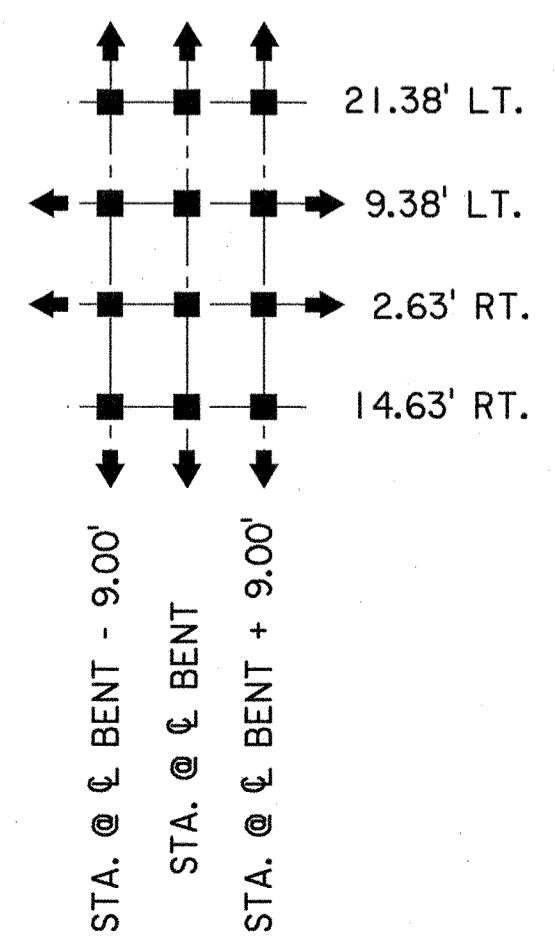
FINAL PLANS



NOTE:
ALL OFFSETS MEASURED RADIALLY FROM ϕ ROADWAY.

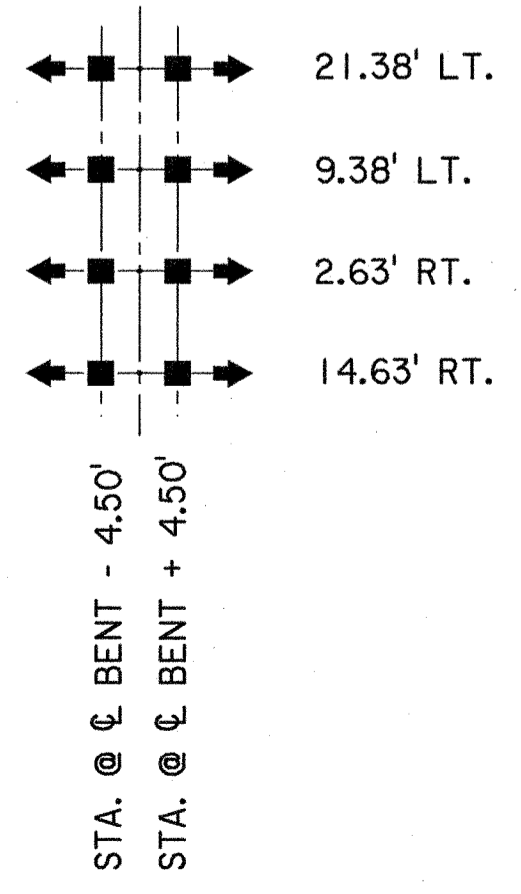


TYPICAL BTC-2 BENT, BTC-3 BENT, & BTC-4 BENT

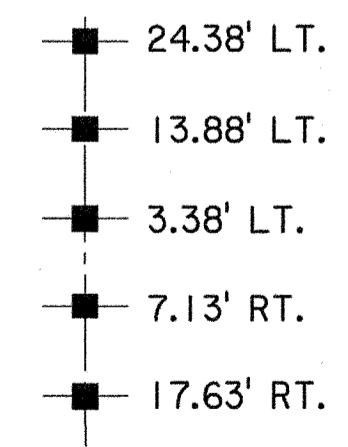


BATTER 1/2 ON 12

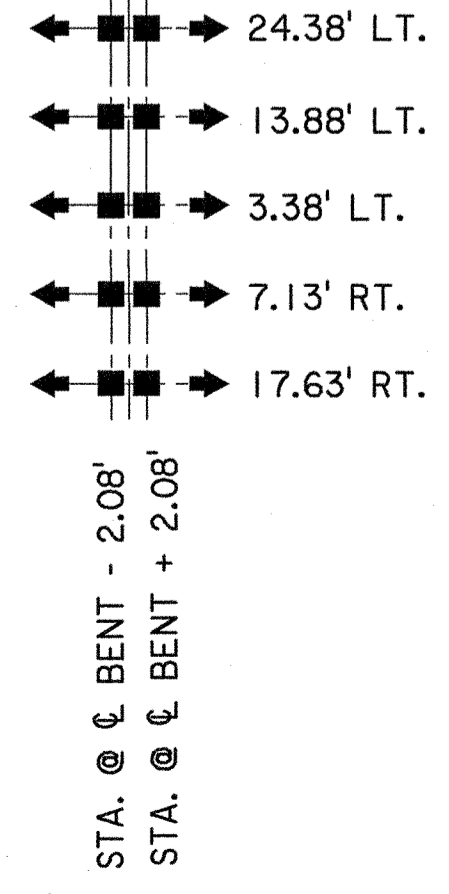
TYPICAL BTC-1 BENT



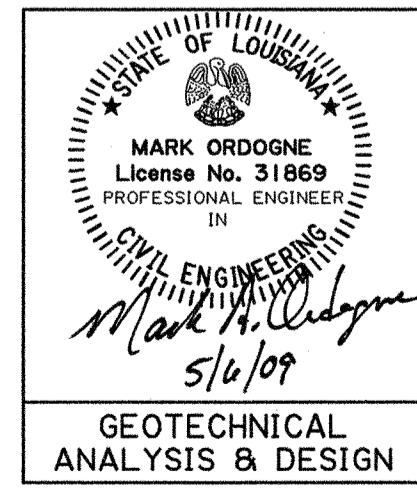
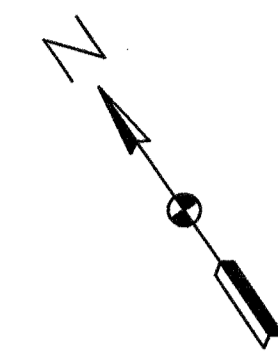
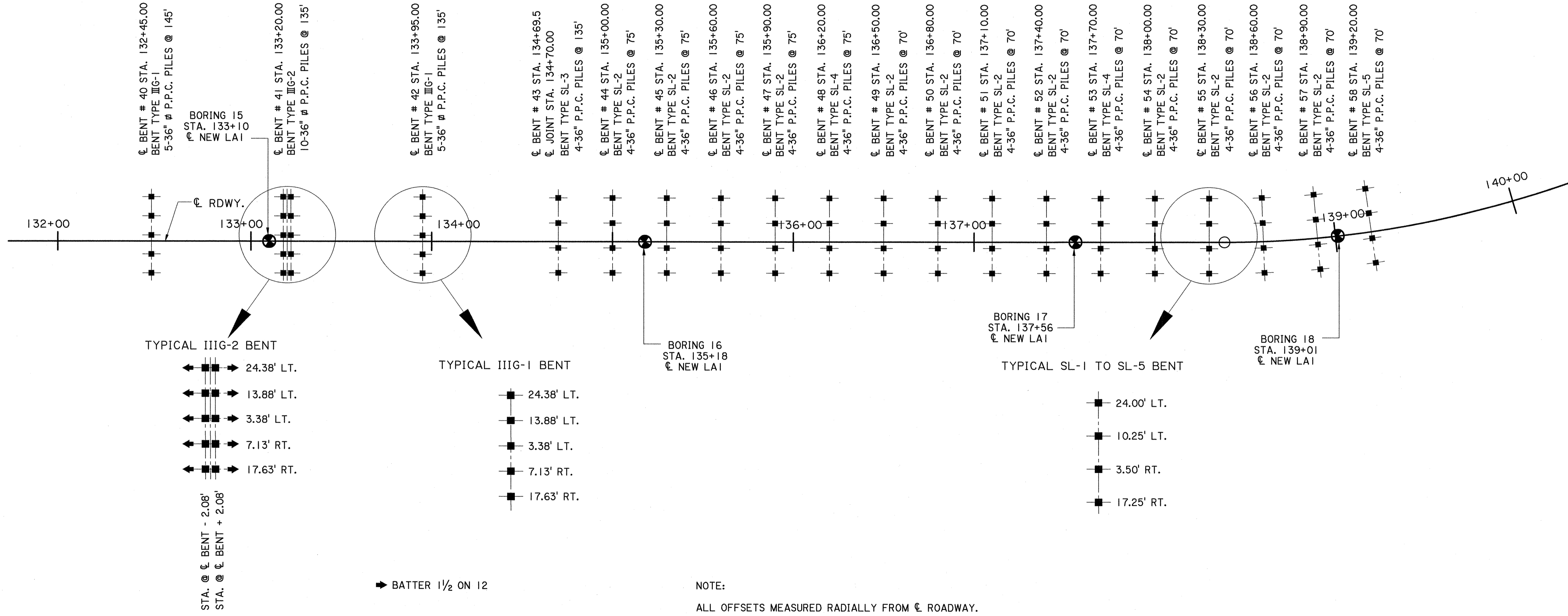
TYPICAL III-G-1 BENT


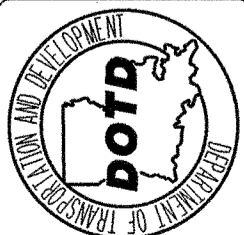


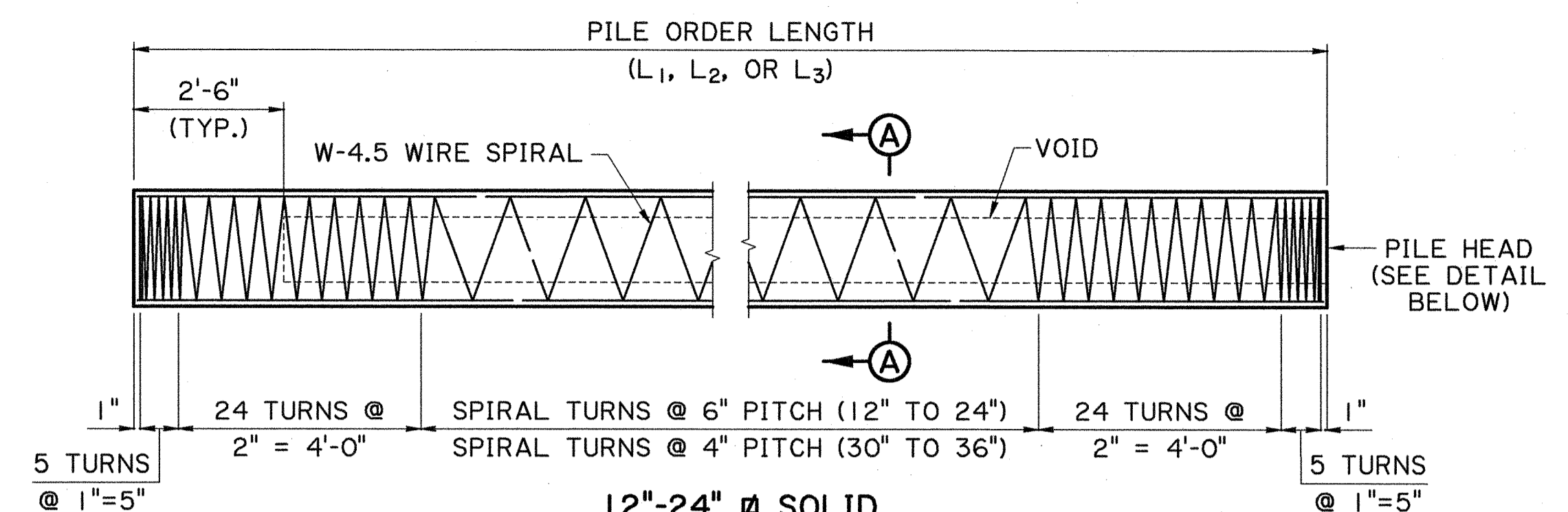
TYPICAL III-G-3 BENT



SHEET NUMBER		115	
PARISH		JEFFERSON	
DESIGNED		D. BASTION	
CHECKED		JAN. 2008	
DATE		2 OF 3	
REVISION DESCRIPTION		BY	
NO.		DATE	
STATE PROJECT		064-01-0040	
BRIDGE DETAILS		FOUNDATION LAYOUT	
BRIDGE AND STRUCTURAL DESIGN		bota	

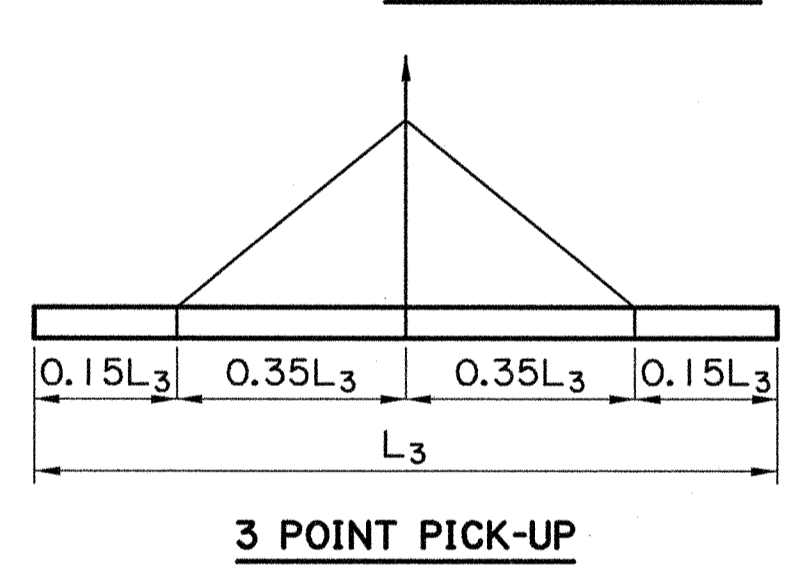
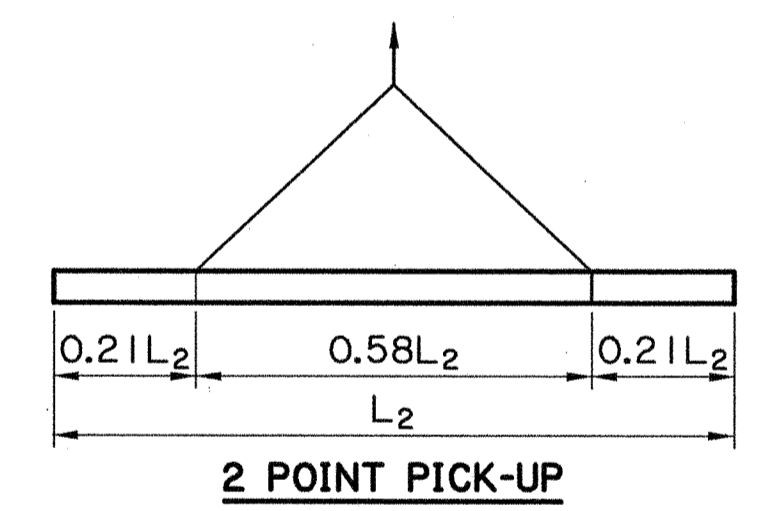
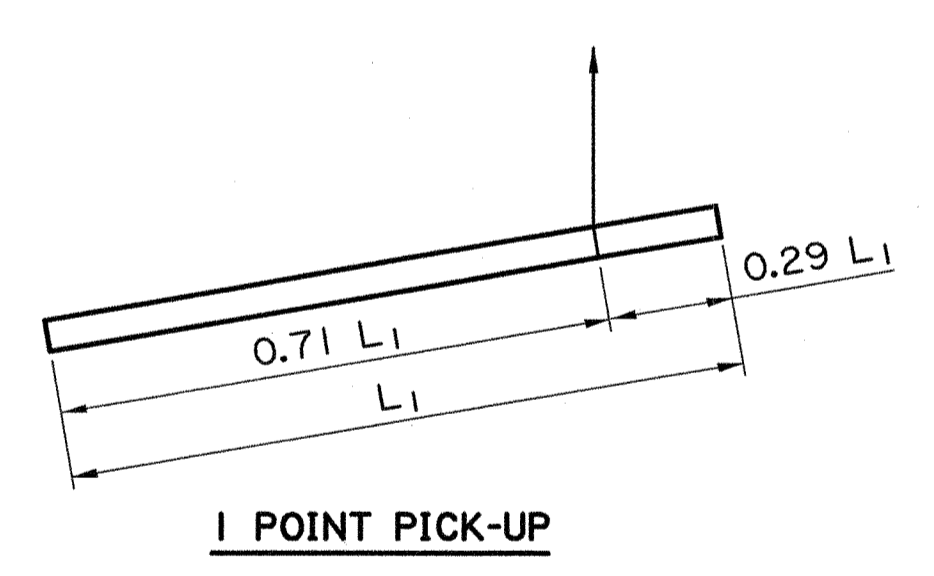
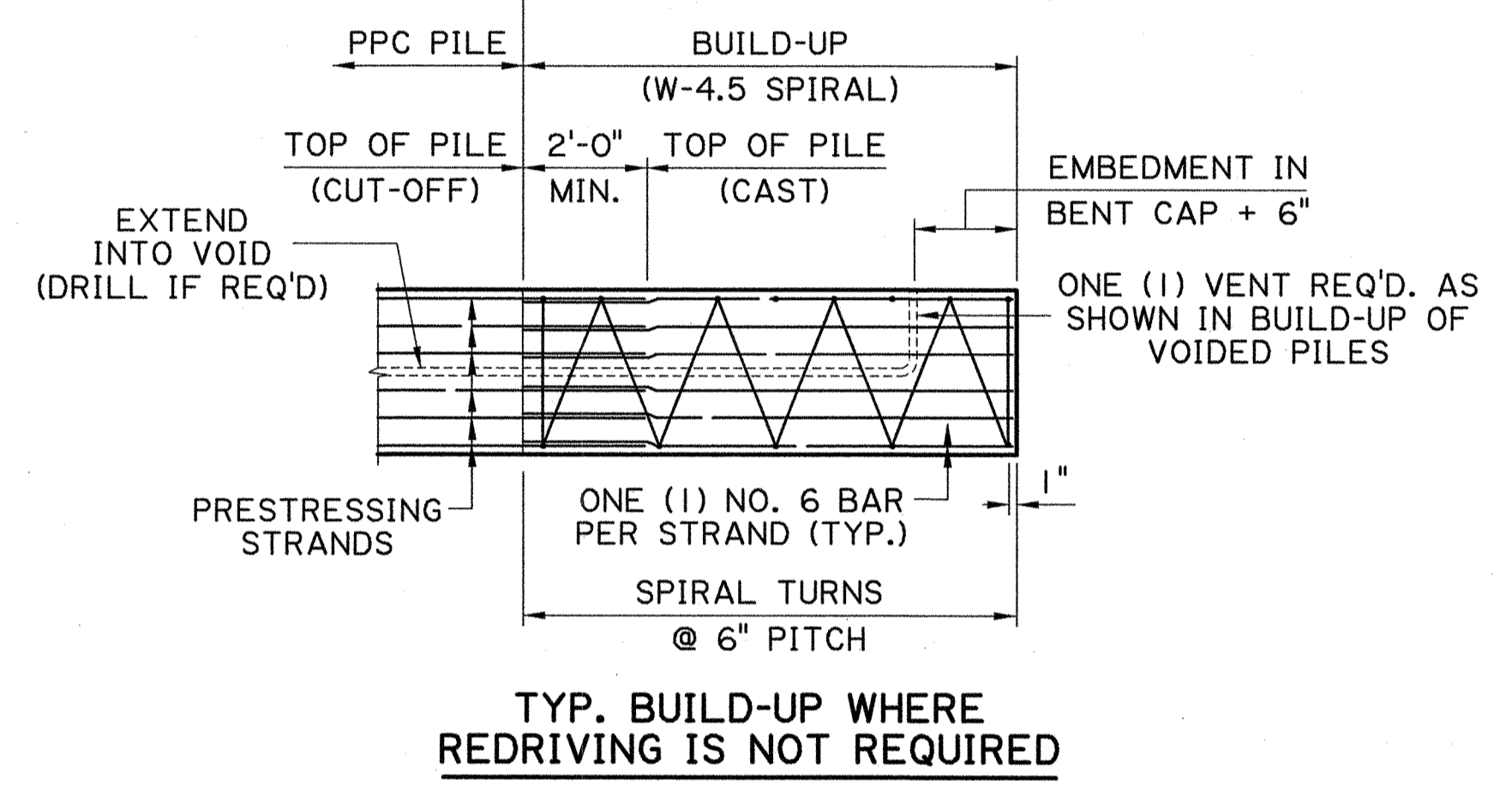


SHEET NUMBER 116	
DESIGNED BY B. DELATTE	PARISH JEFFERSON
CHECKED BY D. BASTION	FEDERAL PROJECT
DATE JAN. 2008	STATE PROJECT 064-01-0040
REVISION DESCRIPTION	DATE JAN. 2008
NO.	DATE
BY	SHEET 3 OF 3
	
CAMINADA BAY BRIDGE ROUTE LA 1 FOUNDATION LAYOUT	
	
BRIDGE AND STRUCTURAL DESIGN	

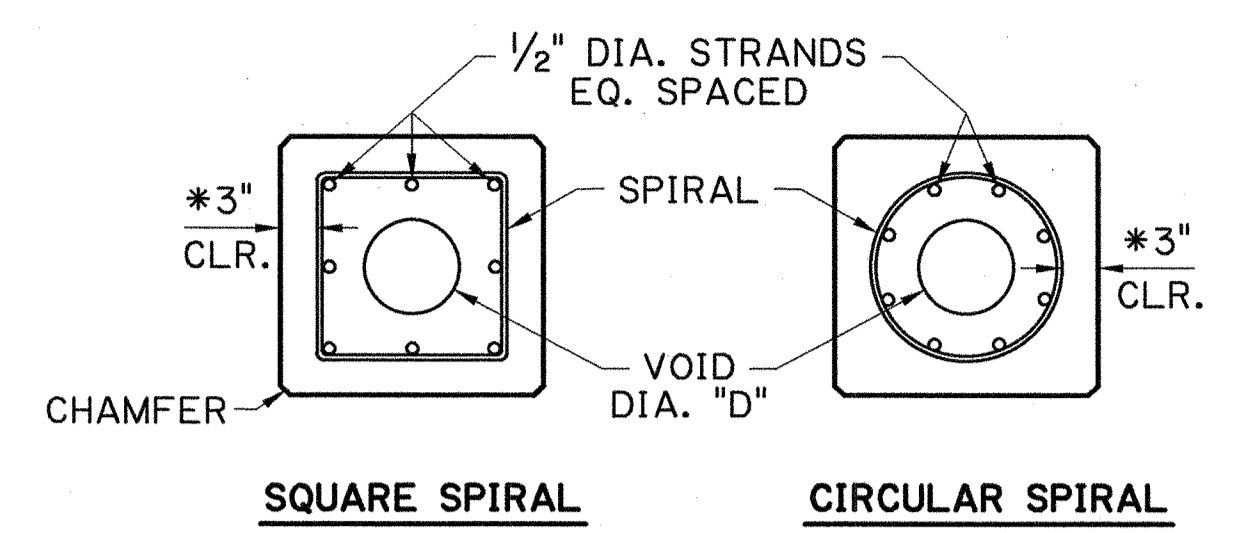


**12"-24" Ø SOLID
24", 30", 36" Ø VOIDED
PRECAST-PRESTRESSED CONCRETE PILES**
(FOR CIRCULAR AND SQUARE SPIRAL LAYOUT)

COLLARS OR OTHER APPROVED METHODS MAY BE USED AT CUT-OFF POINT TO AVOID SPALLING

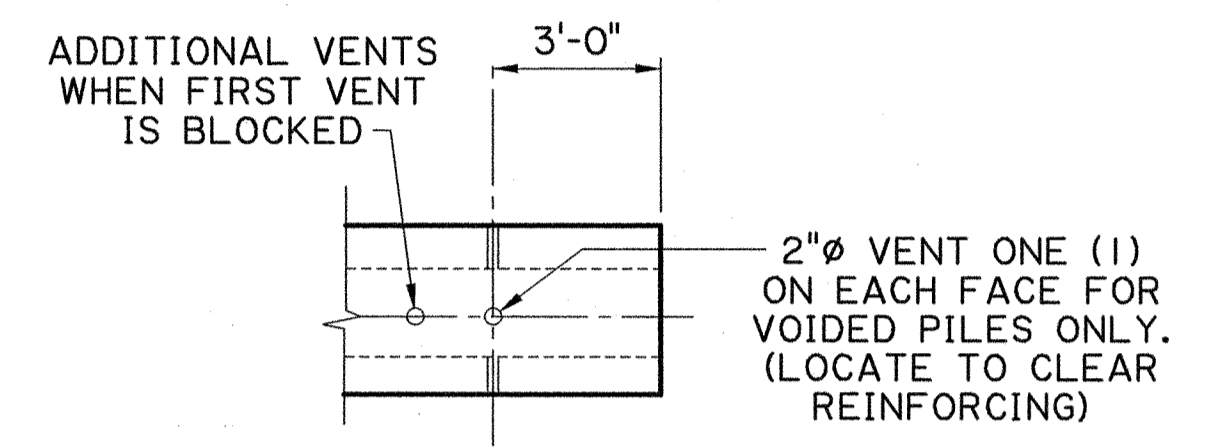


PICK-UP DETAILS

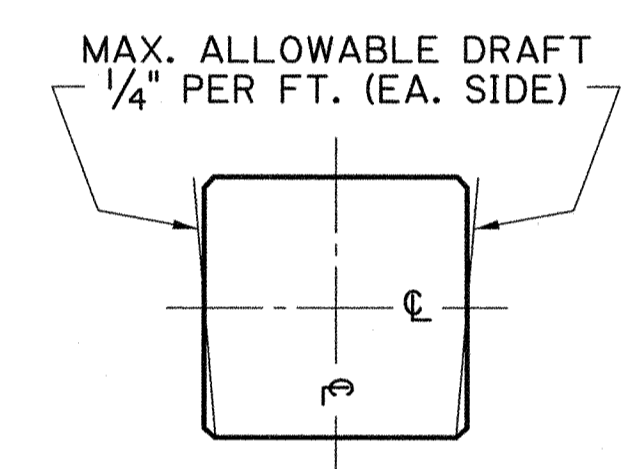


SECTION A-A

* 2" FOR 12" & 14" PILE SIZE



NOTE: VENTS REQUIRED FOR PILE HEAD ONLY



GENERAL NOTES

CONCRETE: CONCRETE SHALL BE CLASS P(M)(HPC) CONCRETE. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A CONCRETE MIX WITH MINIMUM COMPRESSIVE CYLINDER STRENGTH OF 6000 psi AT 28 DAYS. CONCRETE STRENGTH AT THE TIME OF TRANSFER OF PRESTRESSED FORCE SHALL BE 4500 psi OR GREATER. BUILD-UP CONCRETE SHALL BE THE SAME DESIGN AS THE PRESTRESS CONCRETE.

PRESTRESSING STEEL: PRETENSIONED REINFORCEMENT SHALL BE 1/2" Ø SEVEN-WIRE, UNCOATED LOW-RELAXATION, GRADE 270 AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M203. AN INITIAL TENSION OF 30,980 LBS. SHALL BE APPLIED TO EACH STRAND. 0.6" Ø STRANDS WILL BE ALLOWED FOR ONLY THE 36" PILES, WITH AN INITIAL TENSION OF 43,980 LBS SHALL BE APPLIED TO EACH OF THOSE STRANDS.

DEFORMED REINFORCING STEEL: REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL BARS, GRADE 60 AND SHALL MEET THE REQUIREMENTS OF AASHTO M31.

SPIRAL REINFORCING STEEL: SPIRAL REINFORCEMENT SHALL BE SIZE W-4.5 COLD-DRAWN STEEL WIRE AND SHALL CONFORM TO AASHTO M32M.

FABRICATION TOLERANCES: MANUFACTURE OF THE PILING AND FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH THE "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS (MNL-116, LATEST EDITION)" PUBLISHED BY PCI.

CHAMFERS AND CORNERS: ON PILES 18" Ø OR SMALLER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE 3/4" CHAMFERS. ON PILES 20" Ø OR LARGER, ALL EXPOSED CONCRETE CORNERS ARE TO HAVE 1 1/2" CHAMFERS. A 1" RADIUS CURVE WILL BE PERMITTED IN LIEU OF CHAMFERS SHOWN ABOVE. HOWEVER, ALL PILES FURNISHED SHALL BE OF THE SAME CONFIGURATION.

PICK-UP AND HANDLING: LOADING CRITERIA ARE BASED ON CAREFUL HANDLING OF THE PILE. ROTATION OF THE PILE IN THE SLING IS TO BE PREVENTED UNTIL THE PILE IS IN THE VERTICAL POSITION. PICK-UP POINTS FOR ALL PILES ARE TO BE CLEARLY MARKED ON PILES. SUPPORT FOR STORAGE SHALL BE AT PICK-UP POINTS (FOR 1-POINT PICK-UP USE SUPPORT 0.29L₁ FROM EACH END). PILES WILL BE MADE AT A CENTRAL PLANT AND BE TRANSPORTED TO THE BRIDGE SITE. ALL PRESTRESSED PILING SHALL BE HELD AT THE PLANT FOR 14 DAYS AFTER CASTING, PROVIDING THE COMPRESSIVE STRENGTH OF 6000 psi HAS BEEN ATTAINED. PICK-UP POINTS SHOWN MAY BE MODIFIED FOR TRANSPORTATION PURPOSES, PROVIDED THE PILE STRESSES ARE IN ACCORDANCE WITH DESIGN CRITERIA. THE MODIFIED PICK-UP POINTS SHALL BE SENT TO THE BRIDGE DESIGN ENGINEER FOR REVIEW. ALL EMBEDDED LIFTING LOOPS SHALL BE PROVIDED WITH 2" DEEP FOAM BLOCKOUTS. PRIOR TO TRANSPORT, LIFTING LOOPS SHALL BE REMOVED TO PROVIDE 2" MINIMUM CLEAR COVER. THE REMAINING CAVITIES SHALL BE CLEANED OF ALL SLAG AND LOOSE MATERIAL, AND THEN FILLED WITH A PATCHING MATERIAL FROM QPL NO. 49. THE PATCHING MATERIAL MUST MEET OR EXCEED PILE CONCRETE REQUIREMENTS FOR STRENGTH AND PERMEABILITY.

VENT HOLES: FOR VOIDED PILES THAT REQUIRE BUILD-UP OR CUT-OFF, THE 2" VENT HOLES SHALL BE RE-ESTABLISHED AT 6" BELOW THE BOTTOM OF THE BENT CAP.

DRIVING: PILES SHALL BE DRIVEN TO AT LEAST THE MINIMUM TIP ELEVATION AS SHOWN ON CONTRACT PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PILES SHALL BE DRIVEN TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.

PRESTRESS LOSSES: BASED ON "RECOMMENDATION FOR ESTIMATING PRESTRESSED LOSSES" PCI JOURNAL VOL. 20 JULY/AUGUST, 1975. PERCENT OF ULTIMATE SHRINKAGE EQUAL TO 31% AND 62% FOR 14 DAYS AND 90 DAYS RESPECTIVELY. PERCENT ULTIMATE CREEP EQUAL TO 26% AND 51% FOR 14 DAYS AND 90 DAYS RESPECTIVELY.

ALLOWABLE STRESSES: THE MAXIMUM LENGTHS FOR PICK-UP HAVE BEEN DETERMINED USING THE FOLLOWING ALLOWABLE STRESS (2007 AASHTO LRFD BRIDGE SPECS. 5.9.4.2.1, 5.9.4.2.2 & 5.13.4.4.3) AT BOTH 14 DAYS AND 90 DAYS.

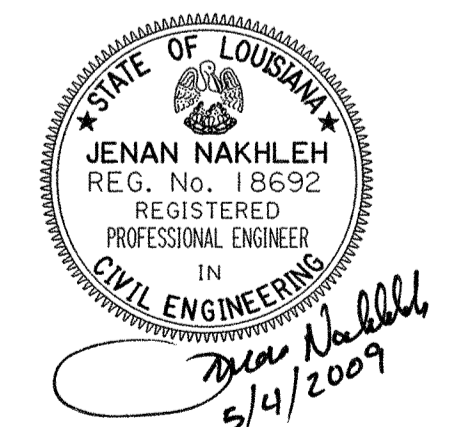
ALLOWABLE TENSILE STRESS (ksi): $19 \sqrt{f'_c}$
 ALLOWABLE COMPRESSIVE STRESS (ksi): $0.45 f'_c$
 IMPACT FACTOR: 1.5
 MIN. FINAL COMPRESSIVE STRESS: 0.7 ksi

DETAILS THIS SHEET NOT TO SCALE

PILE INFORMATION

PILE SIZE (in.)	SECTION PROPERTIES					SQUARE SPIRAL LAYOUTS					CIRCULAR SPIRAL LAYOUTS						
	VOID "D" (in.)	AREA (in.)	SECTION MODULUS OF (in. ³ x 10 ³)	WEIGHT PER FOOT (lb/ft)	CHAMFER (in.)	NO. OF STRANDS	PRESTRESS IN CONCRETE (psi)		MAX. CASTING LENGTH (ft)			NO. OF STRANDS	PRESTRESS IN CONCRETE (psi)		MAX. CASTING LENGTH (ft)		
							AT RELEASE	AT 90 DAYS	L ₁	L ₂	L ₃		AT RELEASE	AT 90 DAYS	L ₁	L ₂	L ₃
12 SOLID	0	144	288	150	3/4"	4	830	774	53.7	76.1	108.6	6	1227	1133	61.5	87.0	124.2
14 SOLID	0	196	457	204	3/4"	8	1203	1116	66.0	93.4	133.4	8	1203	1116	66.0	93.4	133.4
16 SOLID	0	256	683	267	3/4"	12	1373	1273	67.6	95.7	136.7	11	1264	1175	70.1	99.2	141.7
18 SOLID	0	324	972	338	3/4"	12	1096	1026	72.6	102.7	146.7	13	1183	1106	74.6	105.6	150.8
20 SOLID	0	400	1333	417	1/2"	16	1180	1106	78.7	111.3	159.0	16	1180	1106	78.7	111.3	159.0
24 SOLID	0	576	2304	600	1/2"	24	1227	1154	86.7	122.7	175.2	24	1227	1154	86.7	122.7	175.2
24 VOIDED	10.5	489	2254	510	1/2"	20	1204	1119	92.9	131.4	187.7	20	1204	1119	92.9	131.4	187.7
30 VOIDED	16.5	686	4257	715	1/2"	28	1203	1120	107.8	152.6	217.9	28	1203	1120	107.8	152.6	217.9
36 VOIDED	22.5	898	7077	936	1/2"	36	1182	1102	120.8	170.9	244.1	37	1213	1131	121.9	172.5	246.4
36 VOIDED	22.5	898	7077	936	1/2"	28	1298	1207	119.2	168.6	240.8						

← 1/2" Ø STRANDS ONLY.
 ← 0.6" Ø STRANDS ONLY.



SHEET NUMBER 117

JEFFERSON

PARISH

FEDERAL PROJECT

STATE PROJECT

064-01-0040

J. NAKHLEH B. DELATTE
 J. NAKHLEH B. DELATTE
 J. NAKHLEH B. DELATTE

DESIGNED BY
 CHECKED BY
 DATE 04-29-2009

REVISION DESCRIPTION

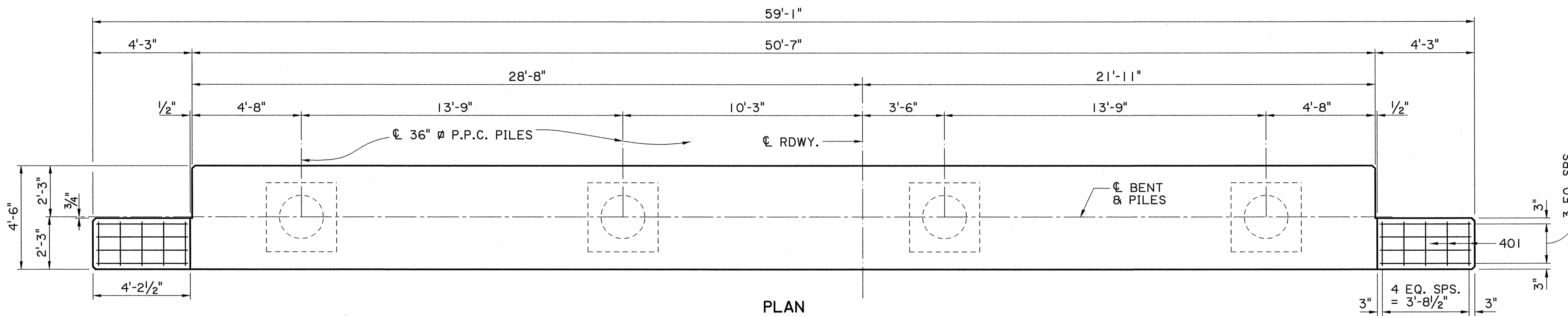
NO. DATE

CAMINADA BAY BRIDGE ROUTE LA 1

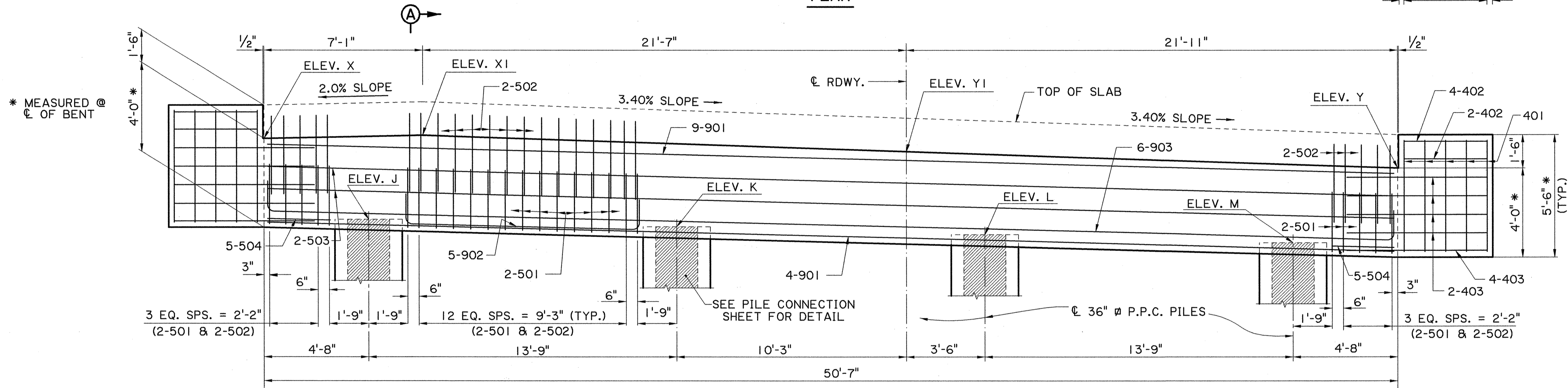
BRIDGE DETAILS

PILE DETAILS

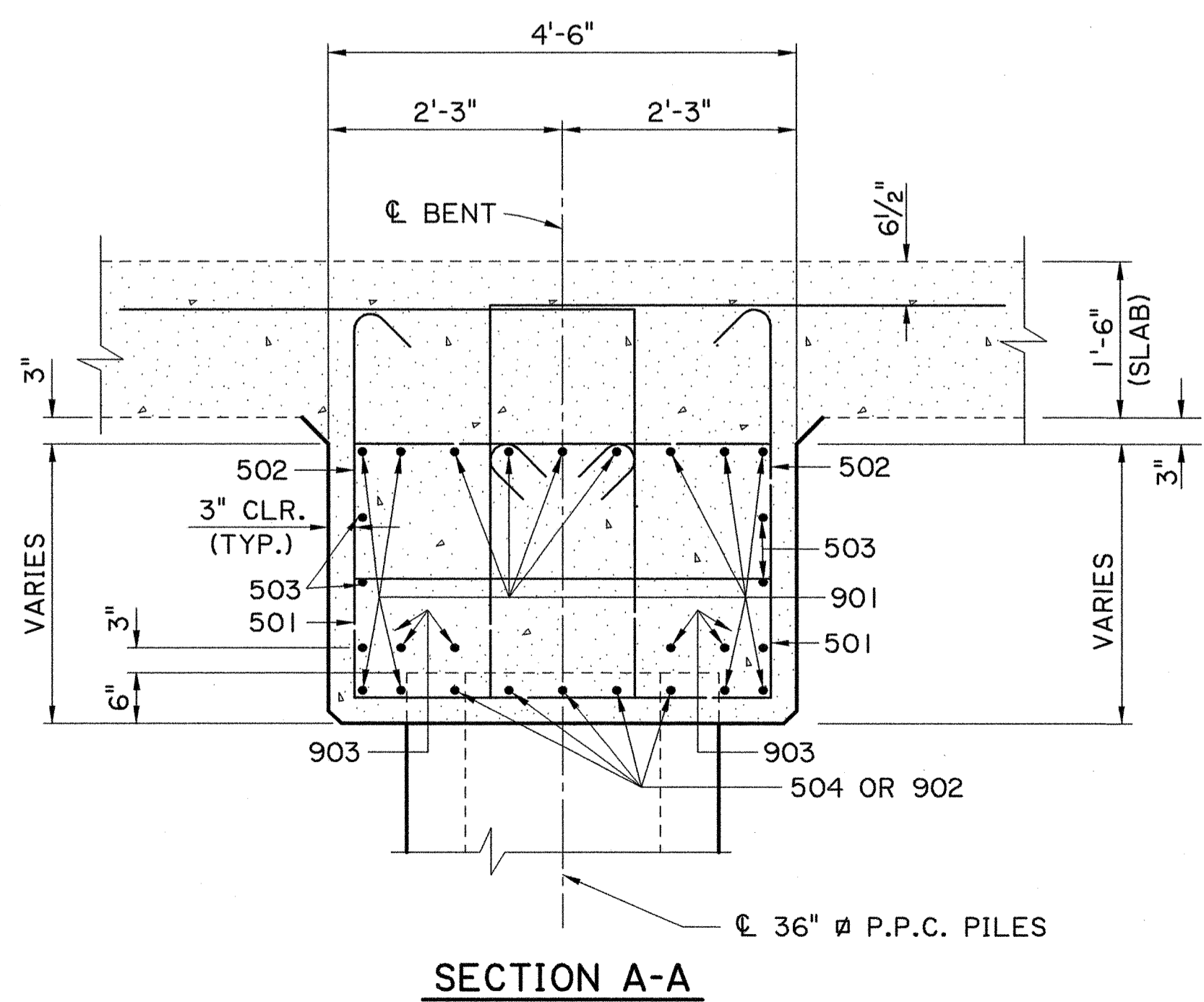
BRIDGE AND STRUCTURAL DESIGN



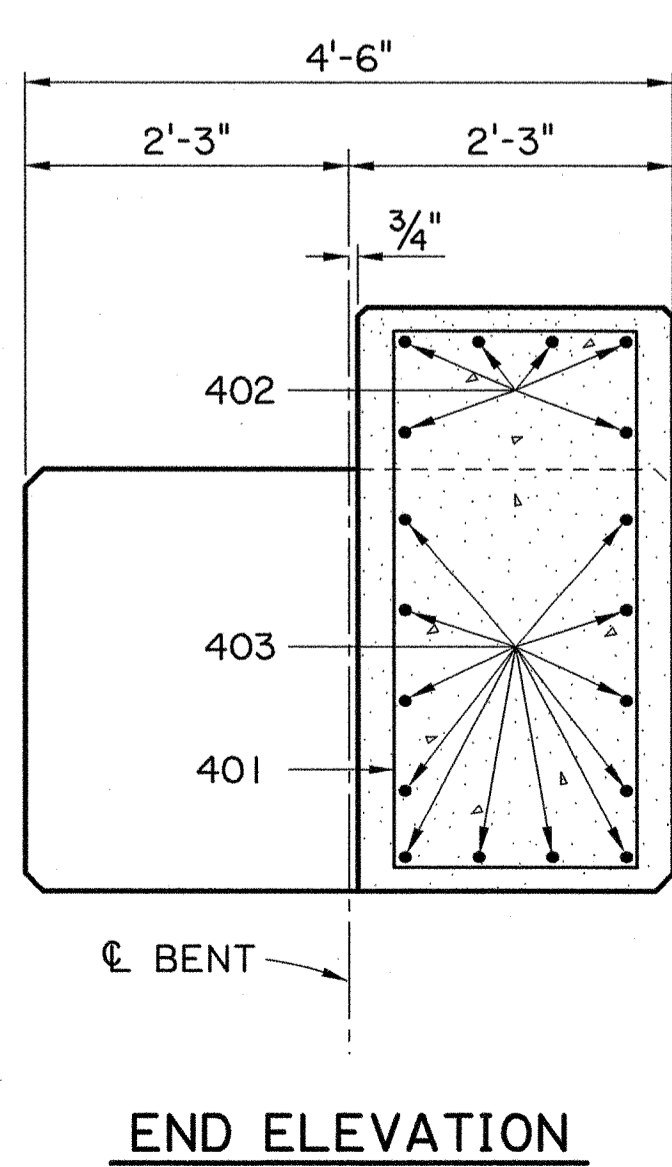
PLAN



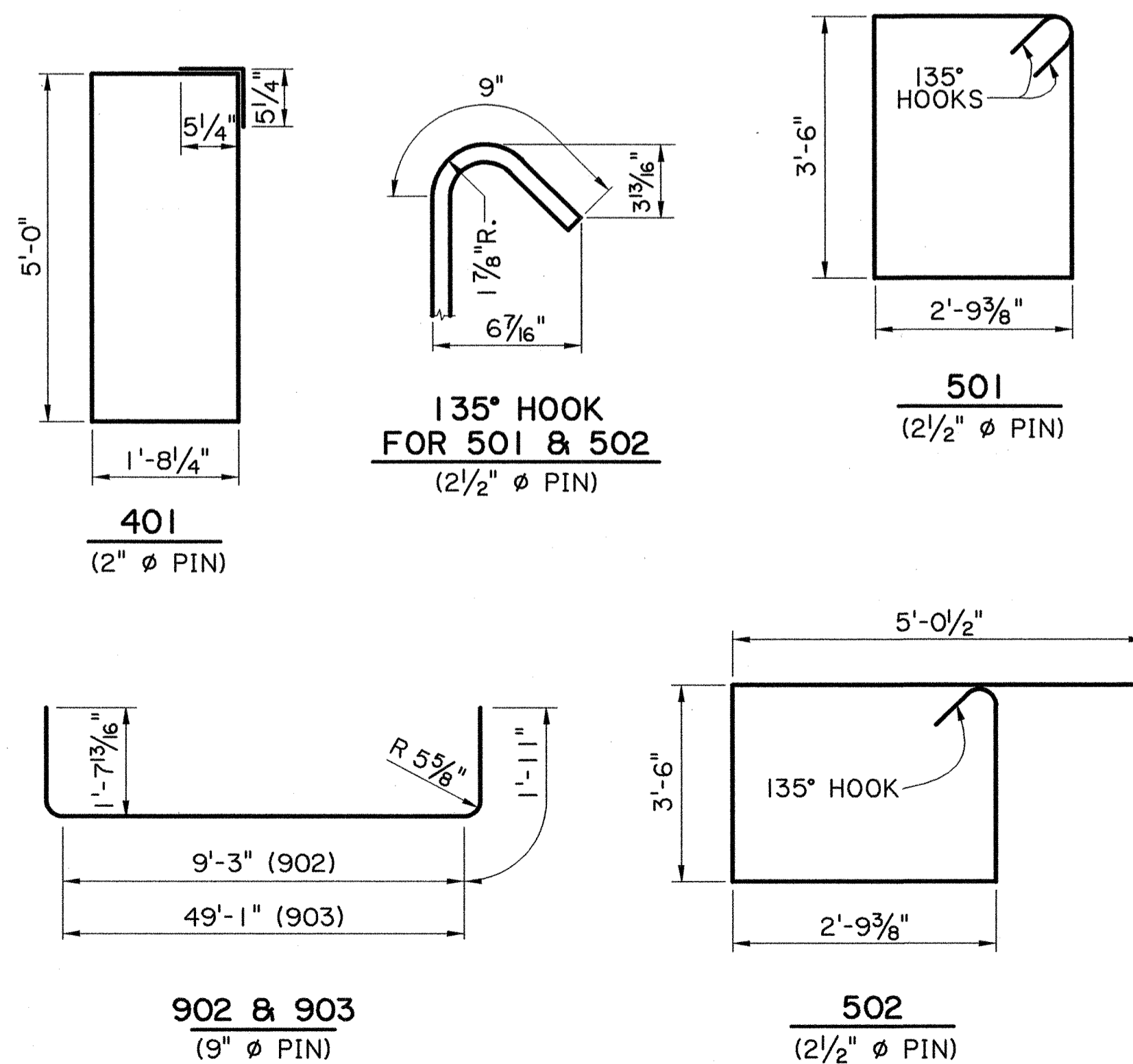
ELEVATION



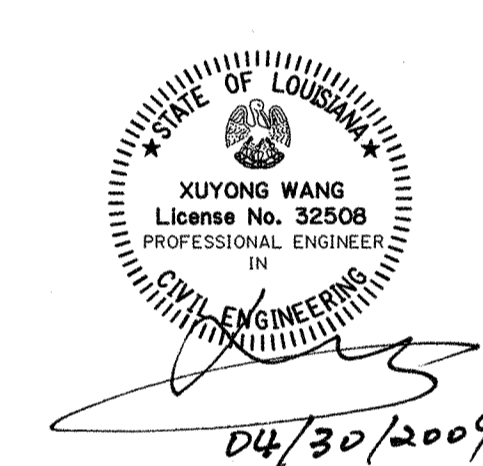
SECTION A-A



END ELEVATION



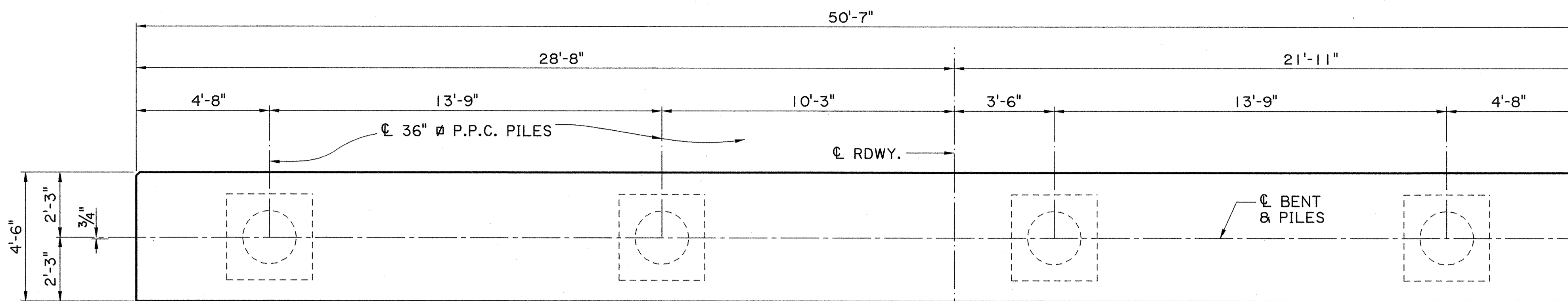
ESTIMATED QUANTITIES (BENT 1)				
BAR NO.	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	13	50'-1"	651'-1"	LONGIT. IN TOP & BOT. OF CAP
902	15	13'-1"	196'-3"	LONGIT. IN BOTTOM OF CAP
903	6	52'-11"	317'-6"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 9 BARS = 1164'-10" = 3960 LBS.				
501	110	13'-9"	1512'-6"	STIRRUPS IN CAP
502	110	15'-5"	1695'-10"	CONNECTION STIRRUPS
503	4	50'-1"	200'-4"	LONGIT. IN CAP
504	10	2'-8"	26'-8"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 5 BARS = 3435'-4" = 3583 LBS.				
401	10	14'-3"	142'-6"	STIRRUPS IN WINGWALL
402	12	3'-8"	44'-0"	LONGIT. IN WINGWALL
403	24	6'-3"	150'-0"	LONGIT. IN WINGWALL
TOTAL NO. 4 BARS = 336'-6" = 225 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL)				= 7768 LBS.
CLASS (AM) CONCRETE (BENTS)				= 38.38 CU. YDS.
MAX. FACTORED PILE LOAD:				COMP. = 210 TONS
				TENSION = 89 TONS



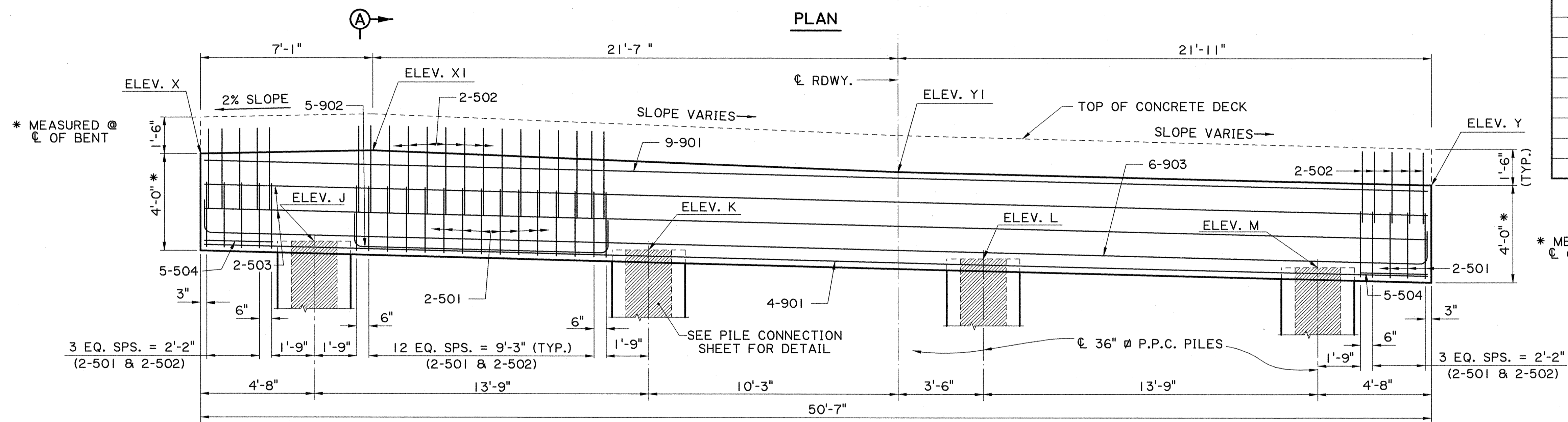
SHEET NUMBER	119
DESIGNED	X. WANG
CHECKED	B. DELATTE
DATE	12-11-2007
PROJECT	064-01-0040
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	
REVISION DESCRIPTION	
NO.	
DATE	
BY	

CAMINADA BAY BRIDGE
ROUTE LA 1
BRIDGE DETAILS
BENT TYPE SL-1

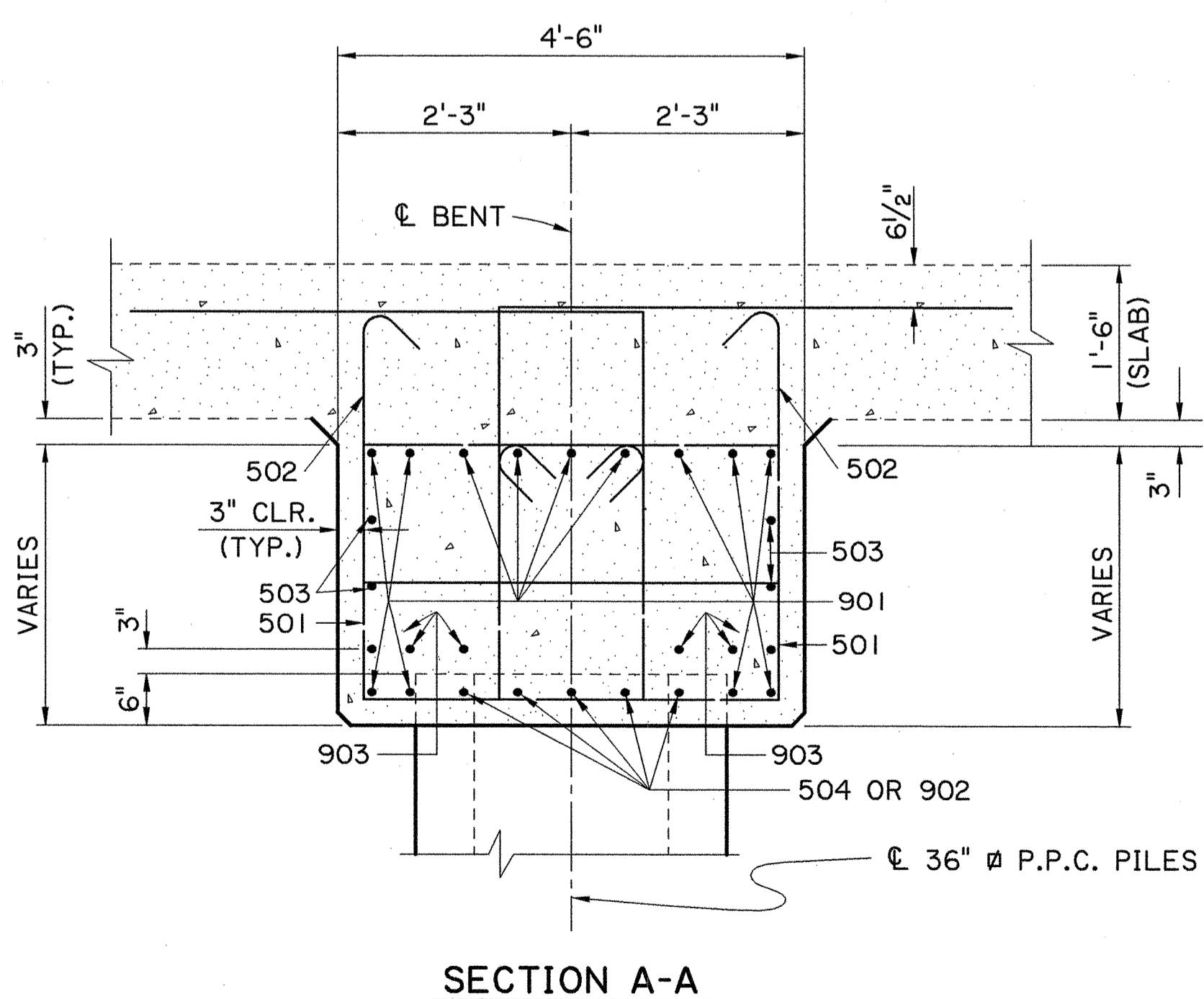
BRIDGE AND STRUCTURAL DESIGN



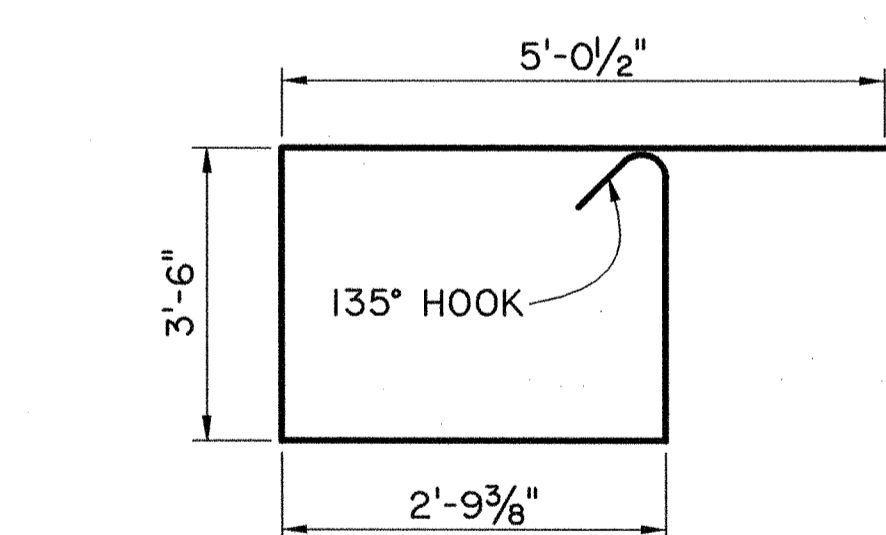
PLAN



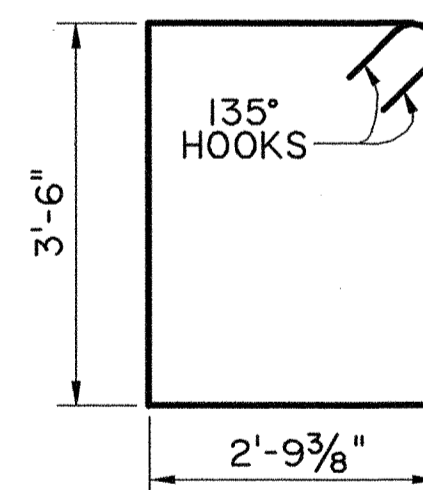
ELEVATION



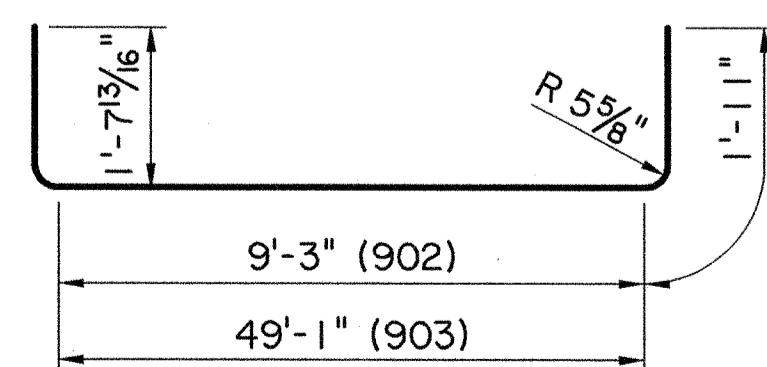
SECTION A-A



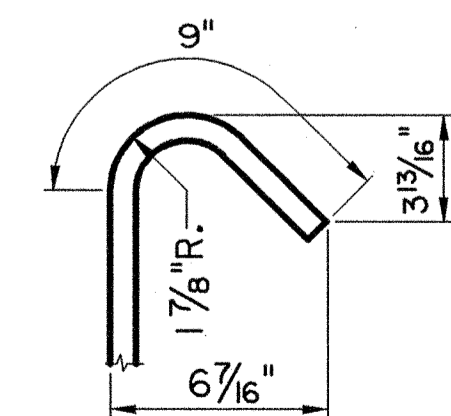
502
(2 1/2" Ø PIN)



501
(2 1/2" Ø PIN)



902 & 903
(9" Ø PIN)

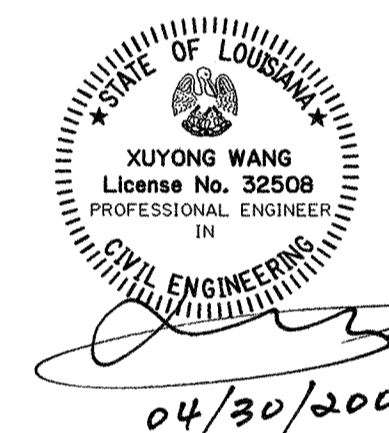


135° HOOK
FOR 501 & 502
(2 1/2" Ø PIN)

ESTIMATED CONCRETE QUANTITIES

BENT NO.	CLASS A(M) CONCRETE (BENTS)
3	34.59 CU. YDS.
4	34.45 CU. YDS.
5	34.46 CU. YDS.
6	34.61 CU. YDS.
7	34.77 CU. YDS.
8	34.94 CU. YDS.
9	35.10 CU. YDS.
10	35.26 CU. YDS.
44	35.66 CU. YDS.
45	35.66 CU. YDS.
46	35.58 CU. YDS.
47	35.35 CU. YDS.
49	34.73 CU. YDS.
50	34.42 CU. YDS.
51	34.11 CU. YDS.
52	33.80 CU. YDS.
54	33.20 CU. YDS.
55	32.96 CU. YDS.
56	32.80 CU. YDS.
57	32.68 CU. YDS.

* MEASURED @ CL OF BENT



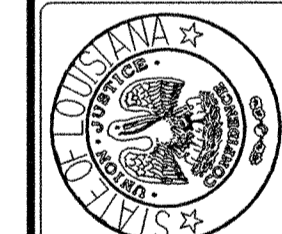
NOTE:

FOR SLOPES, SEE SUPERELEVATION TRANSITION DETAILS SHEETS 110-113.

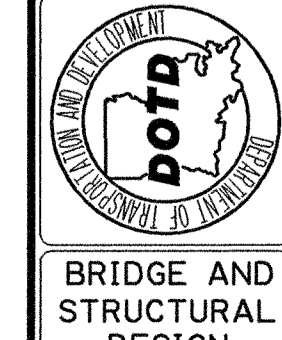
ESTIMATED QUANTITIES (BENT 2)

BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	13	50'-1"	651'-1" LONGIT. IN TOP & BOTTOM OF CAP
902	15	13'-1"	196'-3" LONGIT. IN BOTTOM OF CAP
903	6	52'-11"	317'-6" LONGIT. IN BOTTOM OF CAP
TOTAL NO. 9 BARS = 1164'-10" = 3960 LBS.			
501	110	13'-9"	1512'-6" STIRRUPS IN CAP
502	110	15'-5"	1695'-10" CONNECTION STIRRUPS
503	4	50'-1"	200'-4" LONGIT. IN CAP
504	10	2'-8"	26'-8" LONGIT. IN BOTTOM OF CAP
TOTAL NO. 5 BARS = 3435'-4" = 3583 LBS.			
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) = 7543 LBS.			
CLASS A(M) CONCRETE (BENTS) = 34.60 CU. YDS.			
MAX. FACTORED PILE LOAD: COMP. = 210 TONS TENSION = 89 TONS			

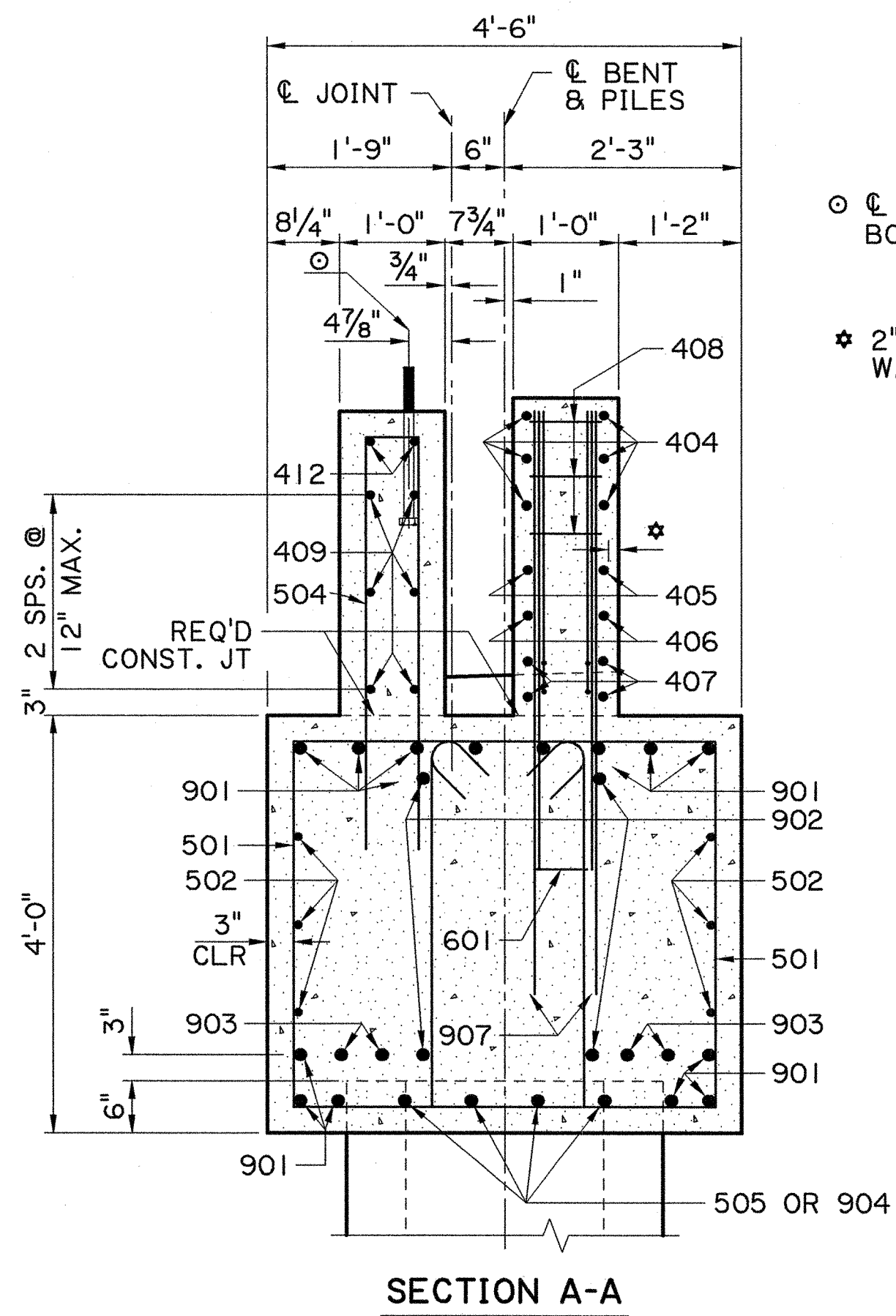
* THE ESTIMATED QUANTITIES FOR BENT 2 ARE SHOWN. SEE ESTIMATED CONCRETE QUANTITY TABLE FOR OTHER BENTS.



CAMINADA BAY BRIDGE
ROUTE LA 1
BENT TYPE SL-2

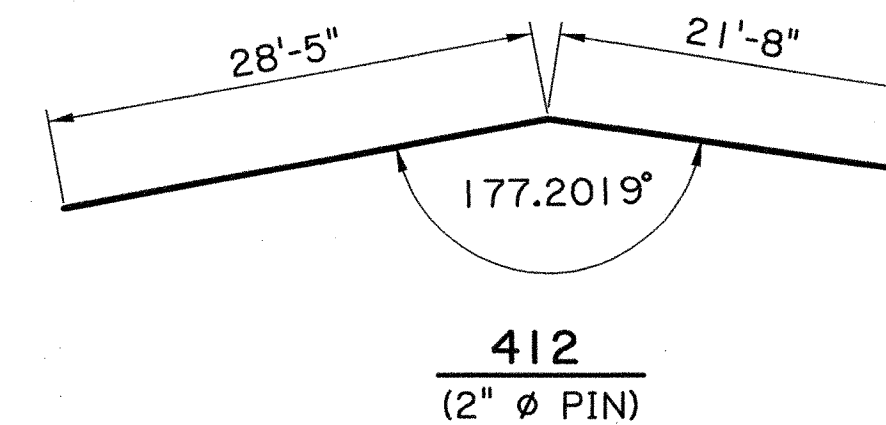
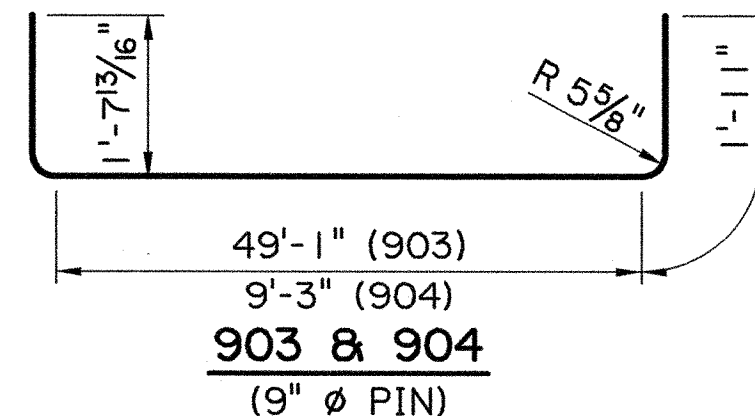
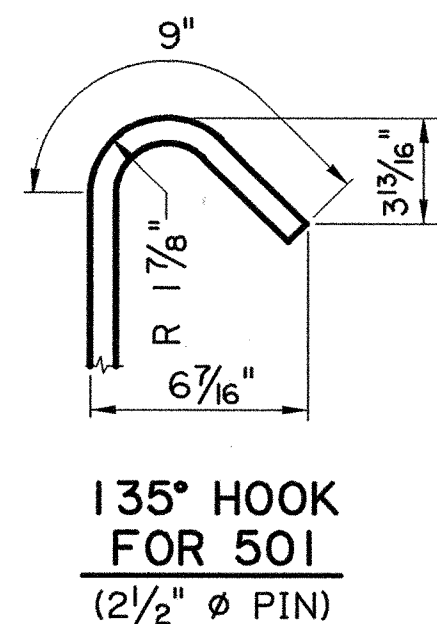
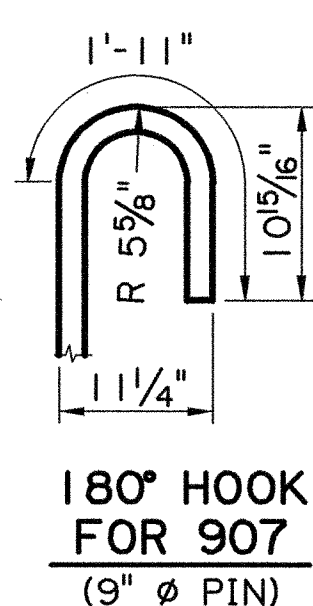
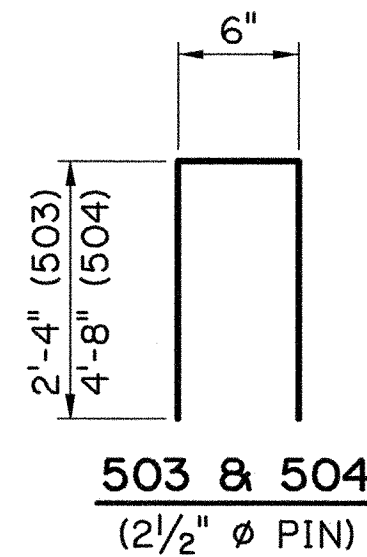
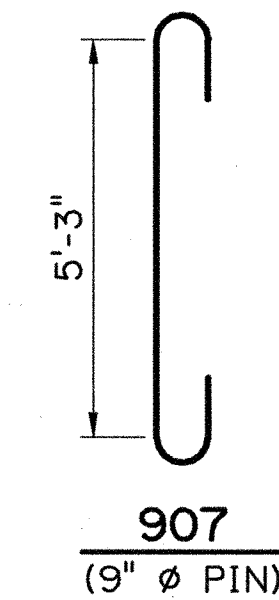
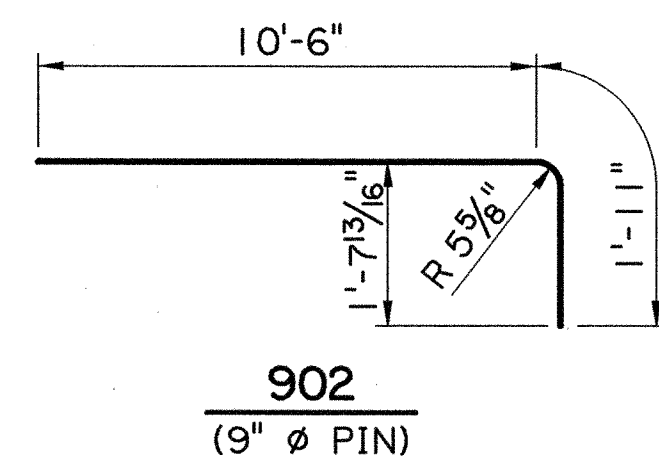
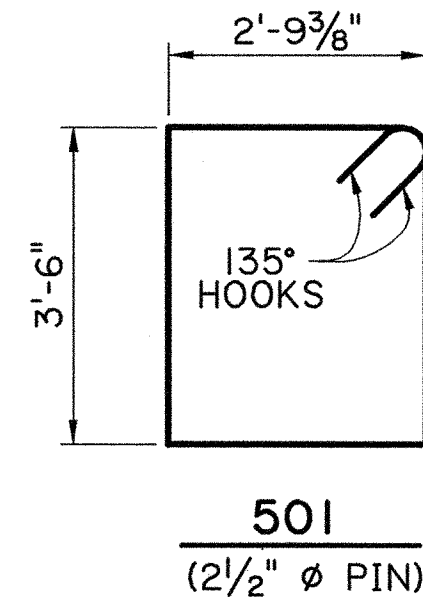
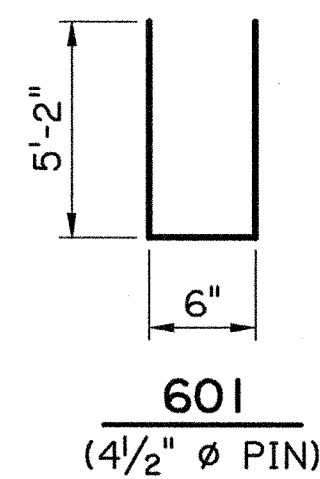
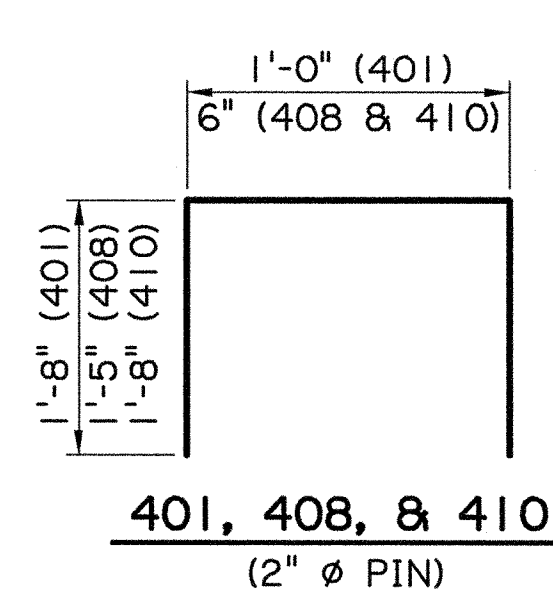
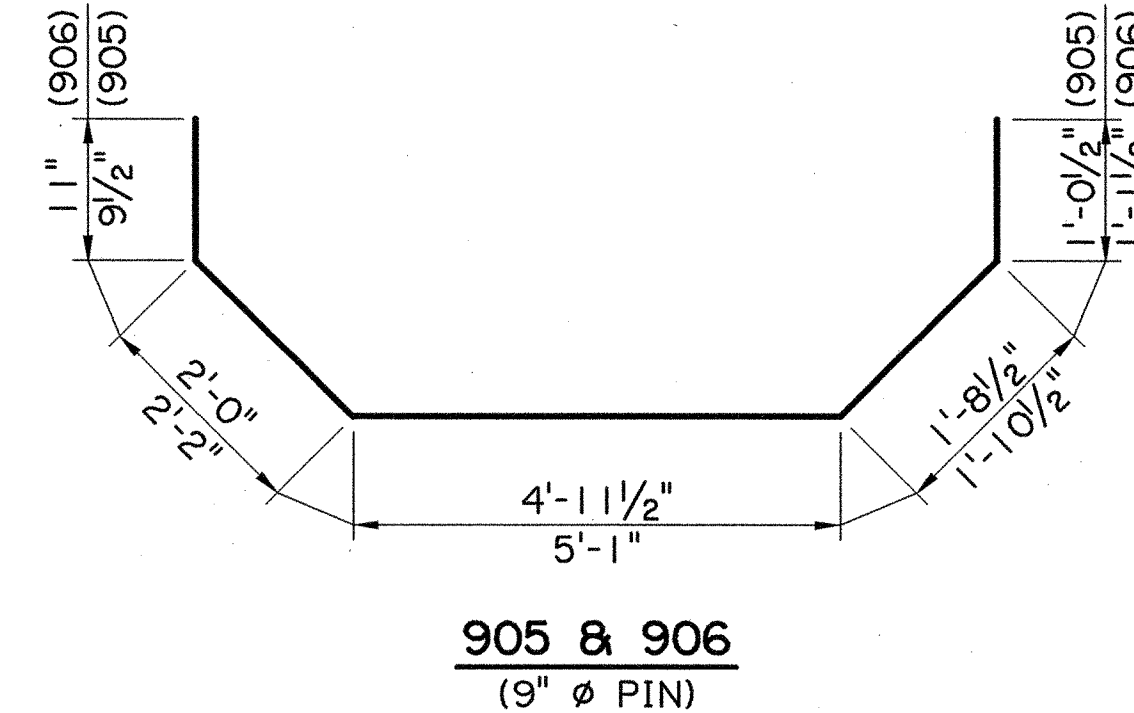
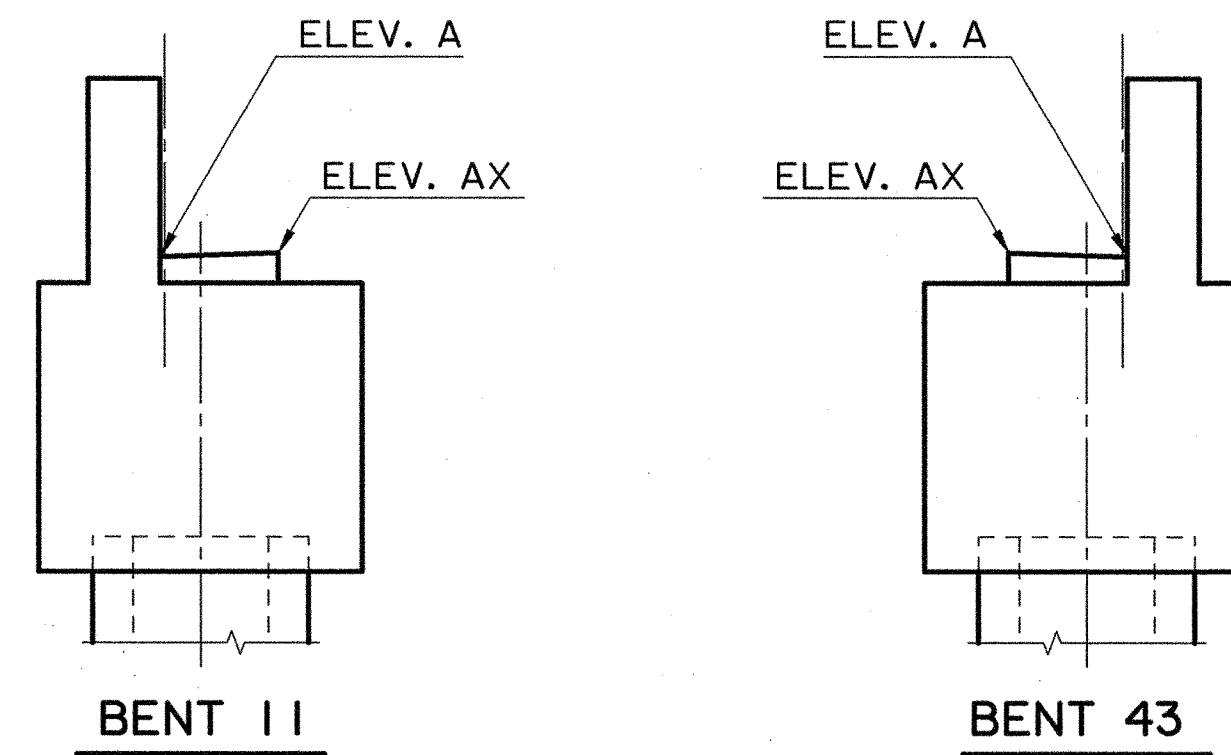


BRIDGE AND STRUCTURAL DESIGN



⊙ $\frac{1}{8}$ " ϕ x 1'-5" ASTM A-325 TYPE 1 ANCHOR BOLTS W/1- HEX NUT & 1- WASHER EACH.

* 2" CLR. @ RESTR. WALL ONLY

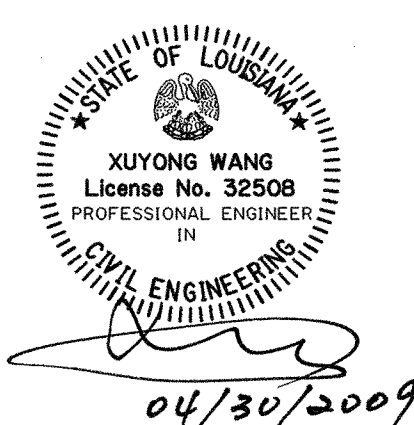


ESTIMATED QUANTITIES (BENT 11)				
BAR NO.	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	14	50'-1"	701'-2"	LONGIT. IN TOP & BOT. OF CAP
902	8	12'-5"	99'-4"	LONGIT. IN TOP & BOT. OF CAP
903	4	52'-11"	211'-8"	LONGIT. IN BOTTOM OF CAP
904	12	13'-1"	157'-0"	LONGIT. IN BOTTOM OF CAP
905	10	10'-6"	105'-0"	LONGIT. IN RESTRAINING WALL
906	10	11'-2"	111'-8"	LONGIT. IN RESTRAINING WALL
907	40	9'-1"	363'-4"	TIE B/W CAP & RESTR. WALL
TOTAL NO. 9 BARS = 1749'-2" = 5947 LBS.				
601	35	10'-10"	379'-2"	TIE B/W CAP & RESTR. WALL
TOTAL NO. 6 BARS = 379'-2" = 570 LBS.				
501	110	13'-9"	1512'-6"	STIRRUPS IN CAP
502	6	50'-1"	300'-6"	LONGIT. IN CAP
503	6	5'-2"	31'-0"	STIRRUPS IN EXT. RISER
504	52	9'-10"	511'-4"	STIRRUPS IN BACKWALL
505	8	2'-8"	21'-4"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 5 BARS = 2376'-8" = 2479 LBS.				
401	24	4'-4"	104'-0"	STIRRUPS IN RISER
402	18	2'-6"	45'-0"	LONGIT. IN RISER
403	4	1'-0"	4'-0"	TRANSVERSE IN EXT. RISER
404	30	8'-0"	240'-0"	LONGIT. IN RESTRAINING WALL
405	10	7'-1"	70'-10"	LONGIT. IN RESTRAINING WALL
406	10	6'-9"	67'-6"	LONGIT. IN RESTRAINING WALL
407	20	5'-9"	115'-0"	LONGIT. IN RESTRAINING WALL
408	30	3'-4"	100'-0"	TIES IN RESTRAINING WALL
409	6	51'-9"	310'-6"	LONGIT. IN BACKWALL
410	4	3'-10"	15'-4"	STIRRUPS IN BACKWALL KEY
411	2	1'-6"	3'-0"	LONGIT. IN BACKWALL KEY
412	2	51'-9"	103'-6"	LONGIT. IN BACKWALL
TOTAL NO. 4 BARS = 1178'-8" = 787 LBS.				
DEFORMED REINFORCING STEEL = 9,783 LBS.				
CLASS A(HPC) CONCRETE (BENTS) = 44.16 CU. YDS.				
STRUCTURAL METALWORK = 147 LBS.				
MAX. FACTORED PILE LOAD: COMP. = 210 TONS				
TENSION = 89 TONS				

⊙ INCLUDES ONE (1) 1'-8" MIN. LAP SPLICE.
 □ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.
 ● ADD 0.38 CU. YDS. OF CLASS A(HPC) CONCRETE (BENTS) FOR BENT 43.

NOTES:
 APPROPRIATE MEASURES MUST BE TAKEN TO ENSURE THAT THE $\frac{1}{8}$ " ϕ CAST-IN-PLACE ANCHOR BOLTS ARE LOCATED SUCH THAT THEY ARE CENTERED IN THE SLOTTED HOLES SHOWN ON THE SLAB SPAN CONNECTION ASSEMBLY DETAILS (SHEET NO. 149).

GIRDER RESTRAINING WALL TO BE CAST-IN-PLACE AFTER PLACEMENT OF GIRDERS.



04/30/2009

SHEET NUMBER 122

PARISH: JEFFERSON

FEDERAL PROJECT: CAMINADA BAY BRIDGE ROUTE LA 1

STATE PROJECT: 064-01-0040

DESIGNED BY: X. WANG

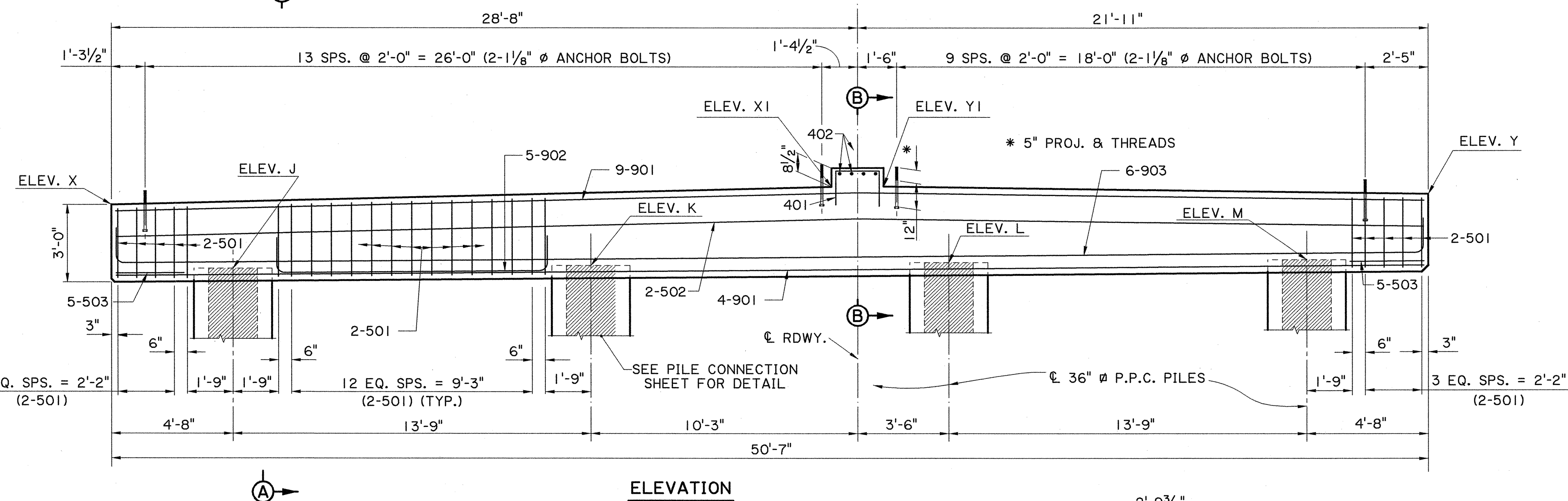
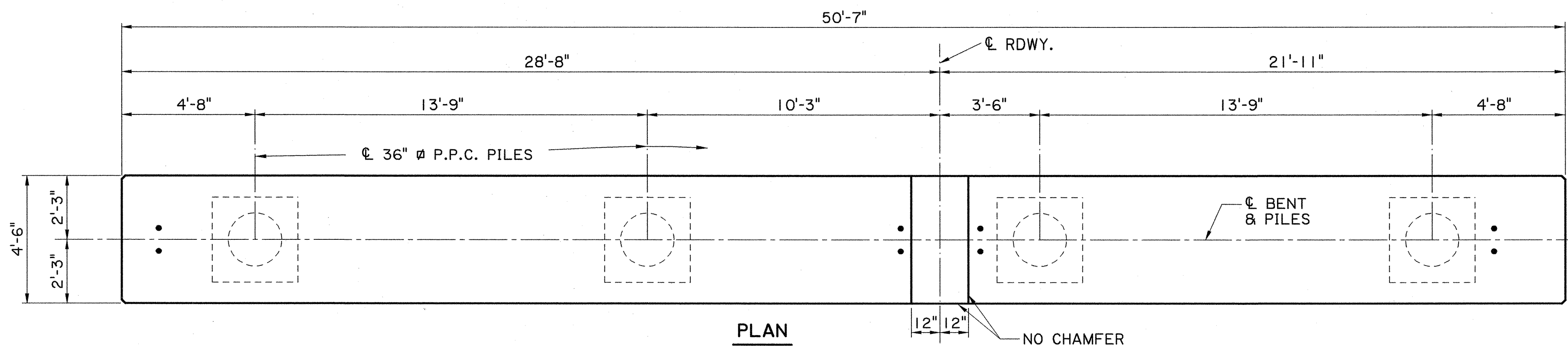
CHECKED BY: B. DELATTE

DATE: OCT. 2007

SHEET: 2 OF 2

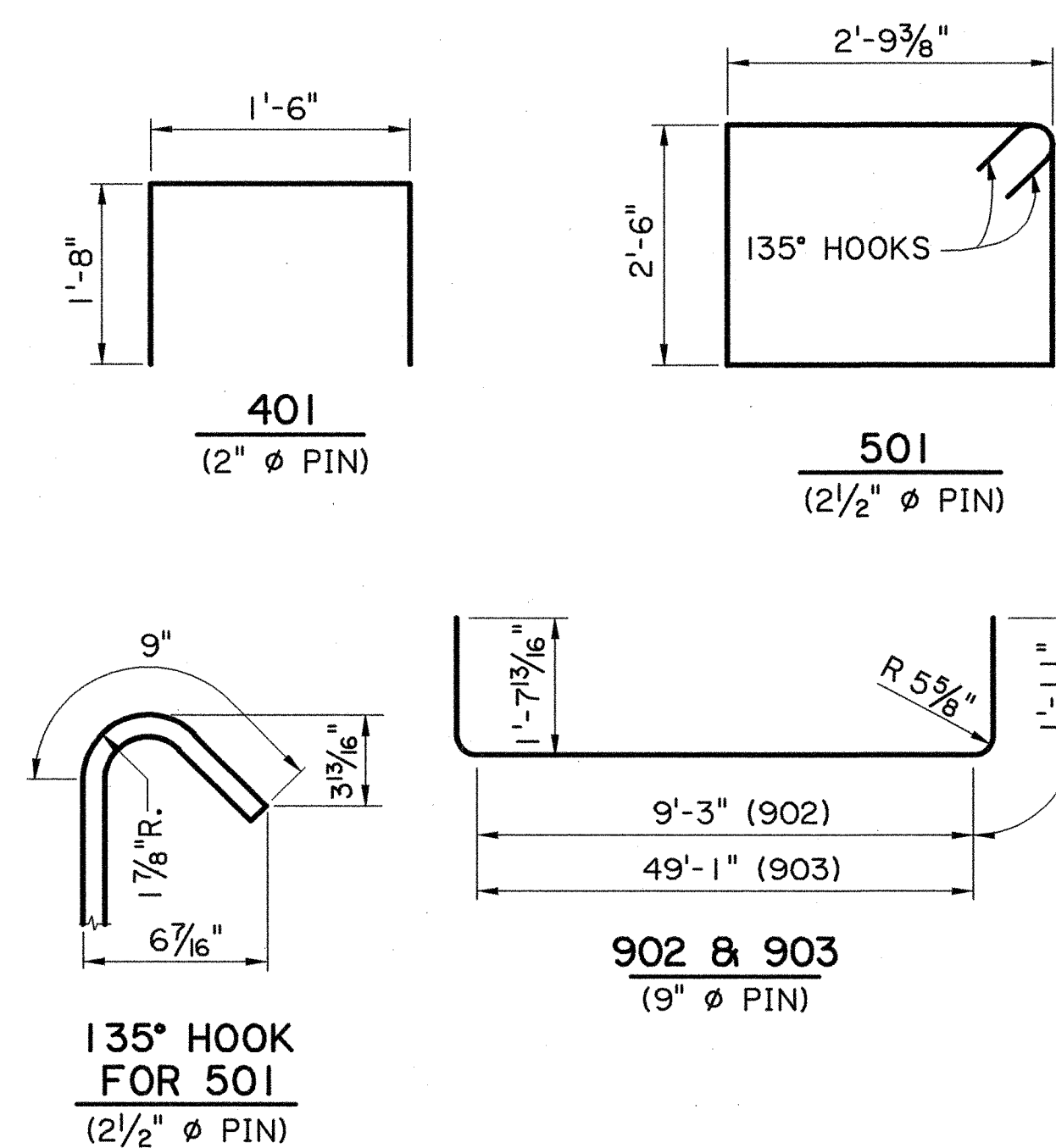
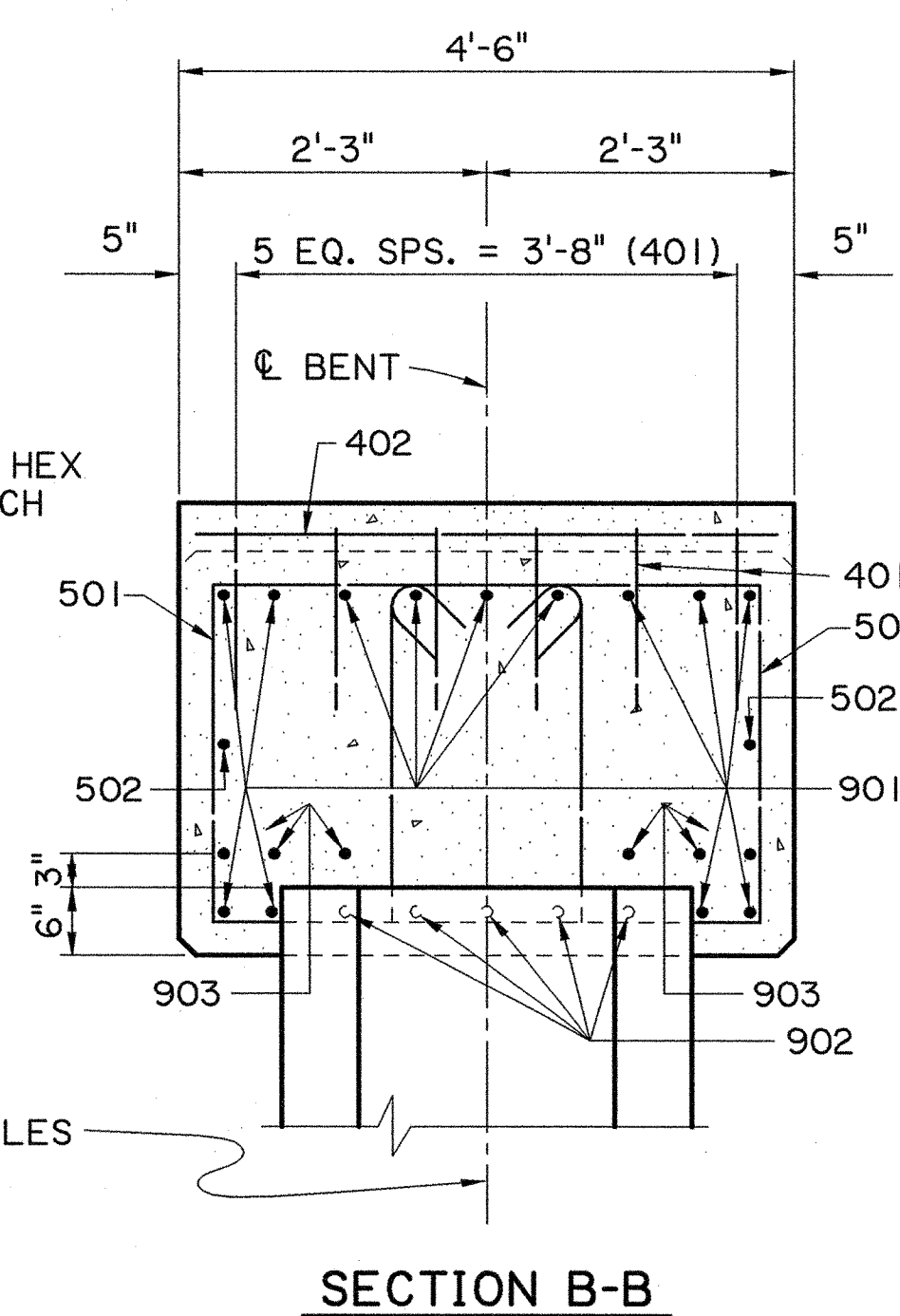
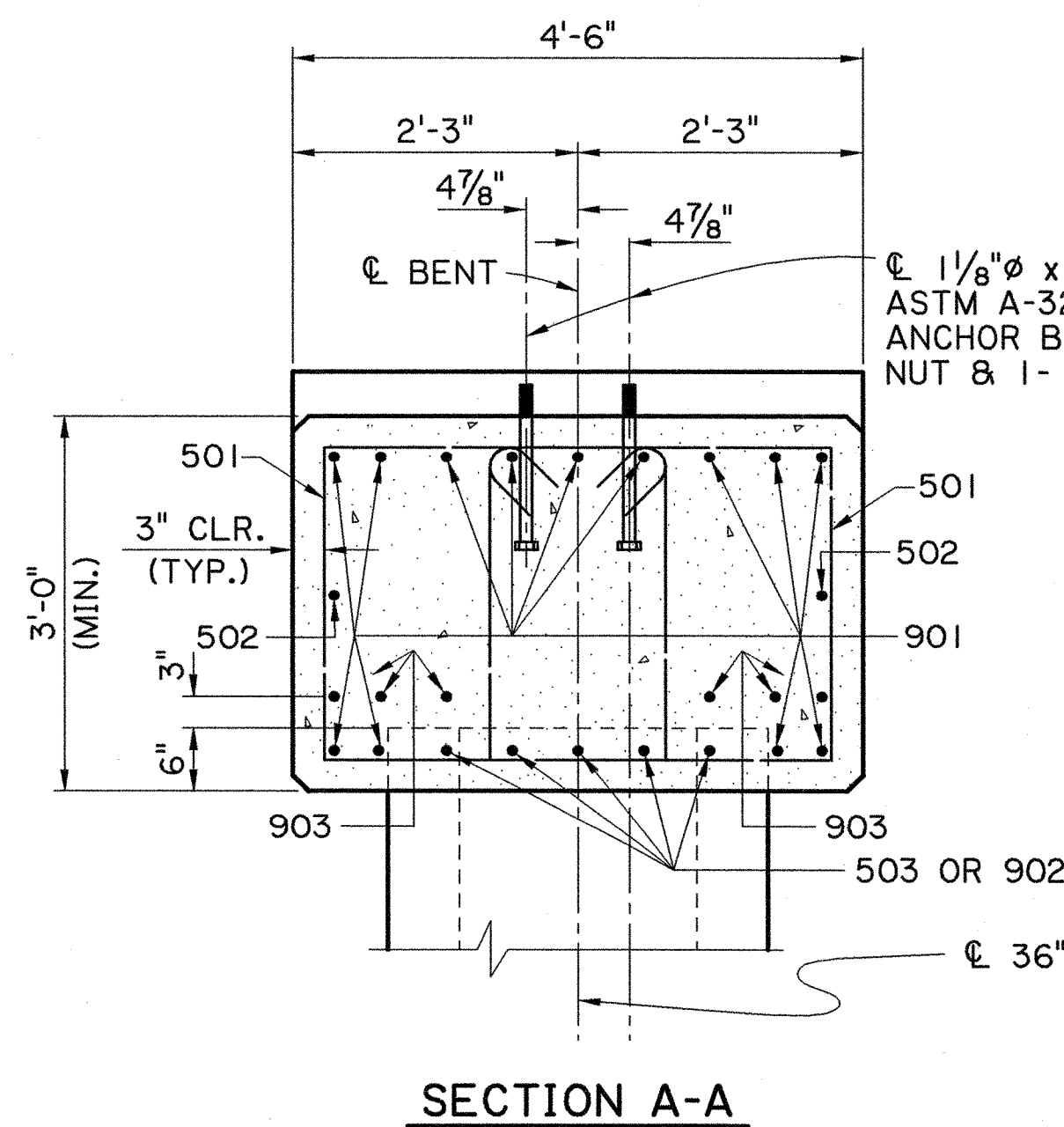
BRIDGE DETAILS: BENT TYPE SL-3

BRIDGE AND STRUCTURAL DESIGN



STATE OF LOUISIANA
 XUYONG WANG
 License No. 32509
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 04/30/2009

NOTE:
 APPROPRIATE MEASURES MUST BE TAKEN TO ENSURE THAT THE 1/8" Ø CAST-IN-PLACE ANCHOR BOLTS ARE LOCATED SUCH THAT THEY ARE CENTERED IN THE SLOTTED HOLES SHOWN ON THE SLAB SPAN CONNECTION ASSEMBLY DETAILS (SHEET NO. 149).



ESTIMATED QUANTITIES (BENT 48)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
901	13	50'-1"	651'-1"	LONGIT. IN TOP & BOT. OF CAP
902	15	13'-1"	196'-3"	LONGIT. IN BOTTOM OF CAP
903	6	52'-11"	317'-6"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 9 BARS = 1164'-10" = 3960 LBS.				
501	110	11'-9"	1292'-6"	STIRRUPS IN CAP
502	2	50'-1"	100'-2"	LONGIT. IN CAP
503	10	2'-8"	26'-8"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 5 BARS = 1419'-4" = 1480 LBS.				
401	6	4'-10"	29'-0"	STIRRUPS IN KEY
402	4	4'-0"	16'-0"	TRANSVERSE IN KEY
TOTAL NO. 4 BARS = 45'-0" = 30 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) = 5470 LBS.				
⊖ CLASS A(M) CONCRETE (BENTS) = 26.86 CU. YDS.				
⊚ STRUCTURAL METALWORK = 295 LBS.				
MAX. FACTORED PILE LOAD: COMP. = 210 TONS				
TENSION = 89 TONS				

⊖ MINUS 1.55 CU. YDS. OF CLASS A(M) CONCRETE (BENTS) FOR BENT 53.
 ⊚ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.

SHEET NUMBER 123

DESIGNED BY X. WANG
 CHECKED BY B. DELATTE
 DETAILED BY D. HYMEL
 CHECKED BY D. BASTION

DATE 12-11-2007

PROJECT 064-01-0040

PARISH JEFFERSON

STATE PROJECT

REVISION DESCRIPTION

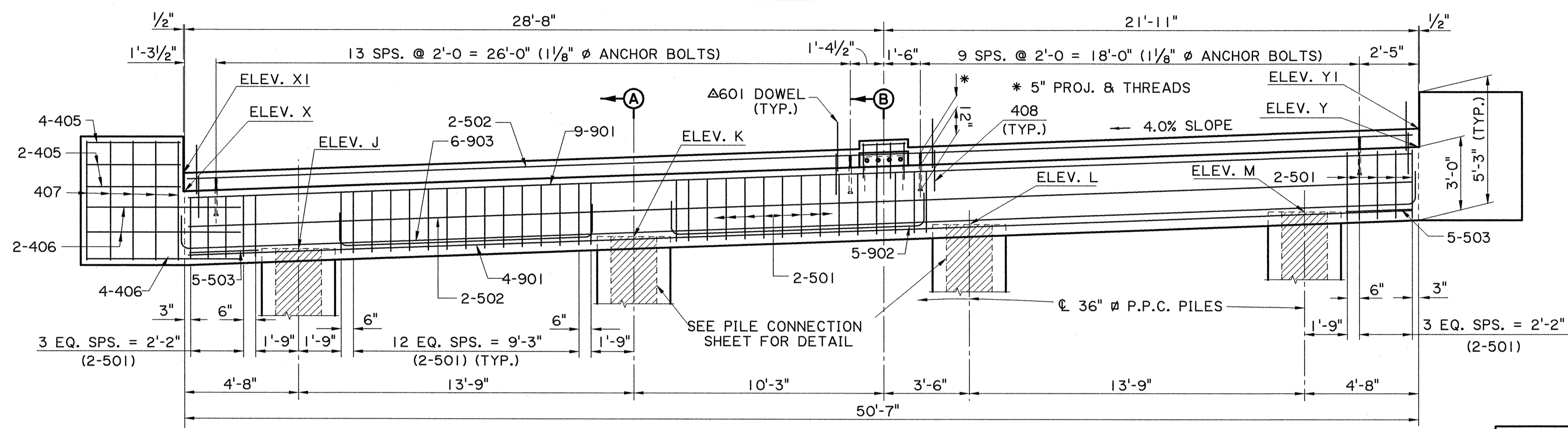
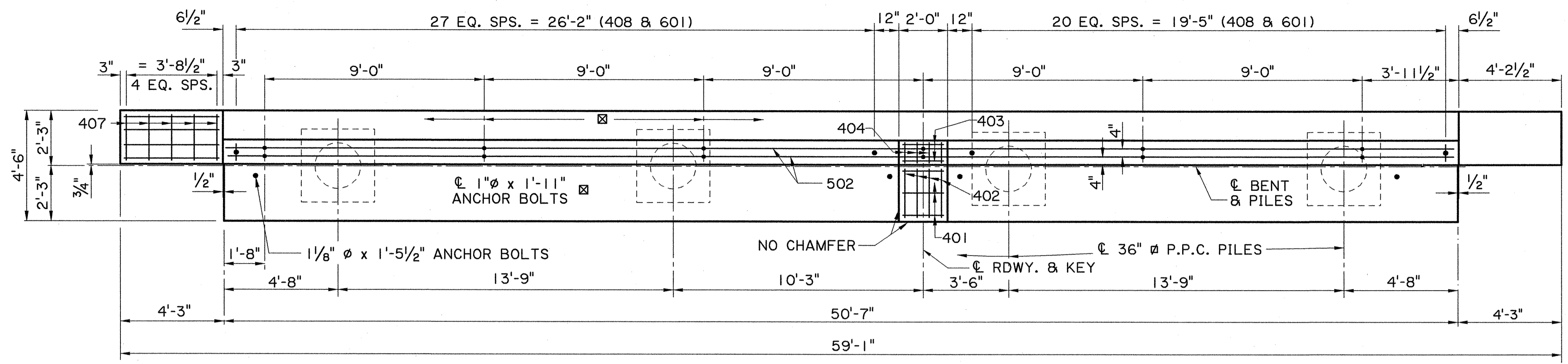
NO. DATE

BY

BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE
 ROUTE LA 1

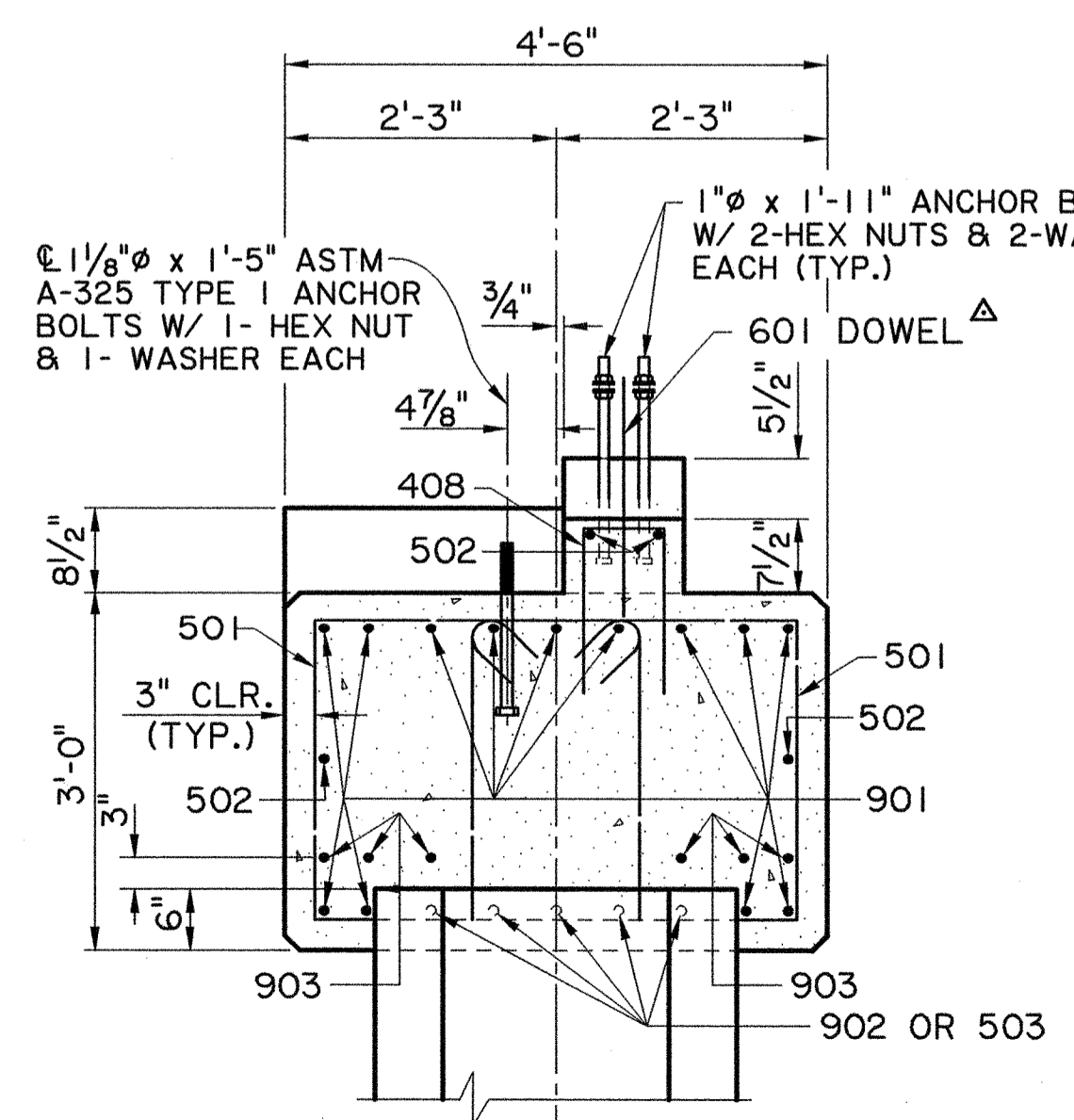
BENT TYPE SL-4



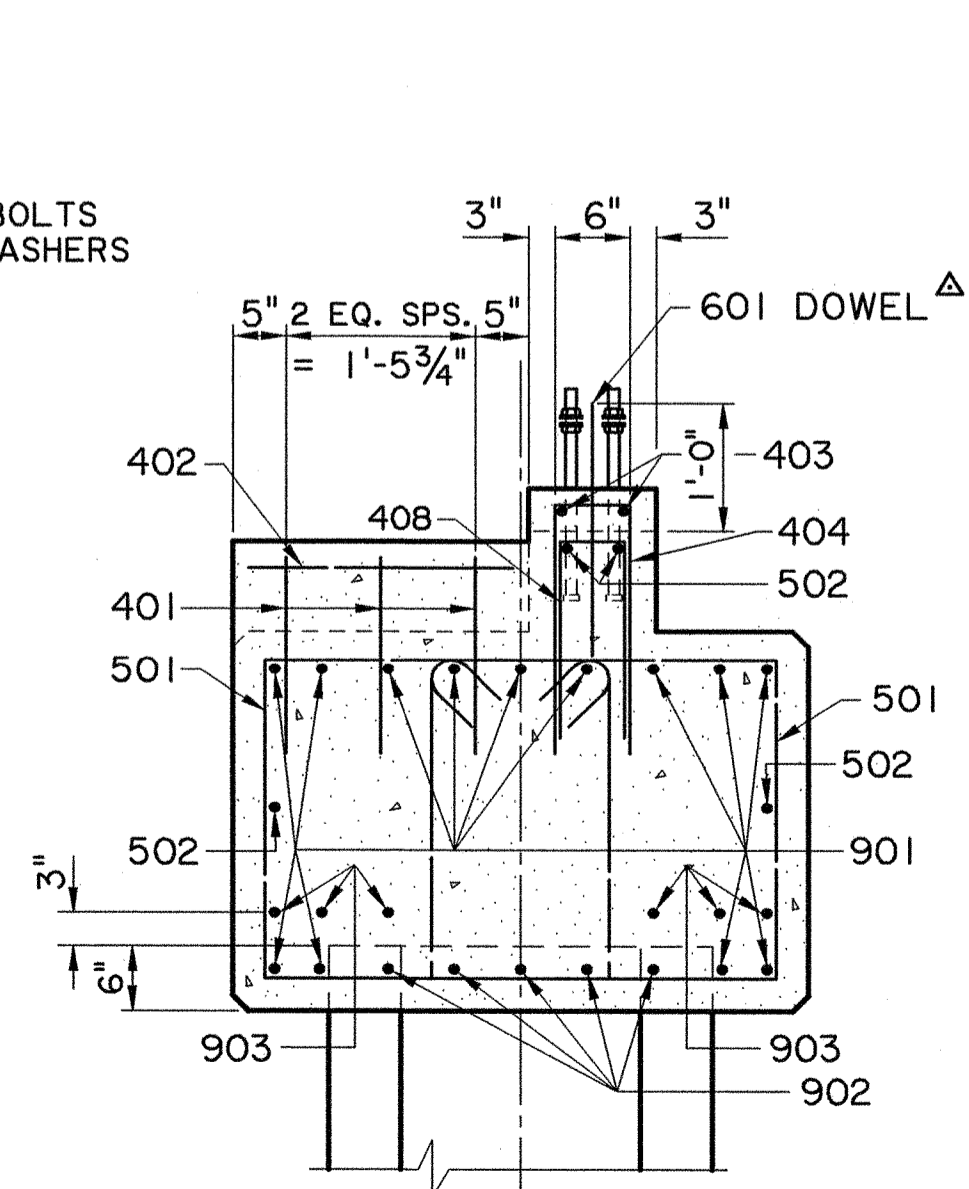
NOTES:

- APPROPRIATE MEASURES MUST BE TAKEN TO ENSURE THAT THE 1/8" Ø CAST-IN-PLACE ANCHOR BOLTS ARE LOCATED SUCH THAT THEY ARE CENTERED IN THE SLOTTED HOLES SHOWN ON THE SLAB SPAN CONNECTION ASSEMBLY DETAILS (SHEET NO. 149).
- 1" Ø x 1'-11" ANCHOR BOLTS SHALL BE INSTALLED SO THAT THE TOP OF THE ANCHOR BOLTS IS 3" LOWER THAN THE TOP OF THE APPROACH SLAB.

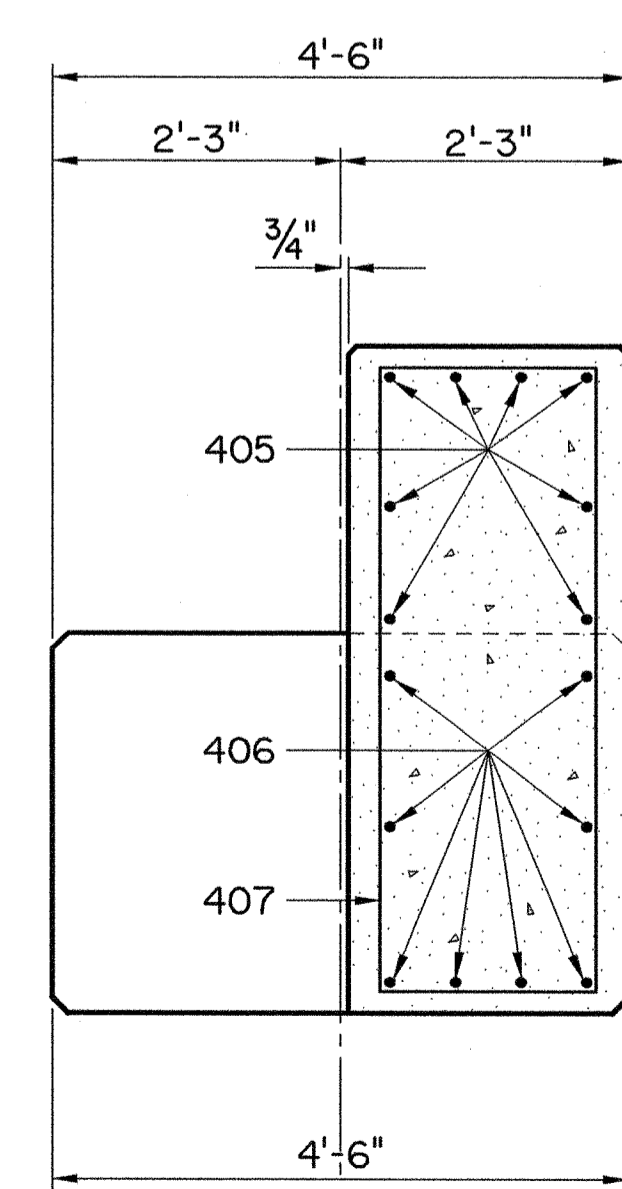
△ ALL EXPOSED ENDS OF 601 DOWELS TO BE WRAPPED WITH TWO LAYERS OF 15 LB. ASPHALT SATURATED FELT. CLOSE FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3/16" THICK MAY BE SUBSTITUTED. NO DIRECT PAY.



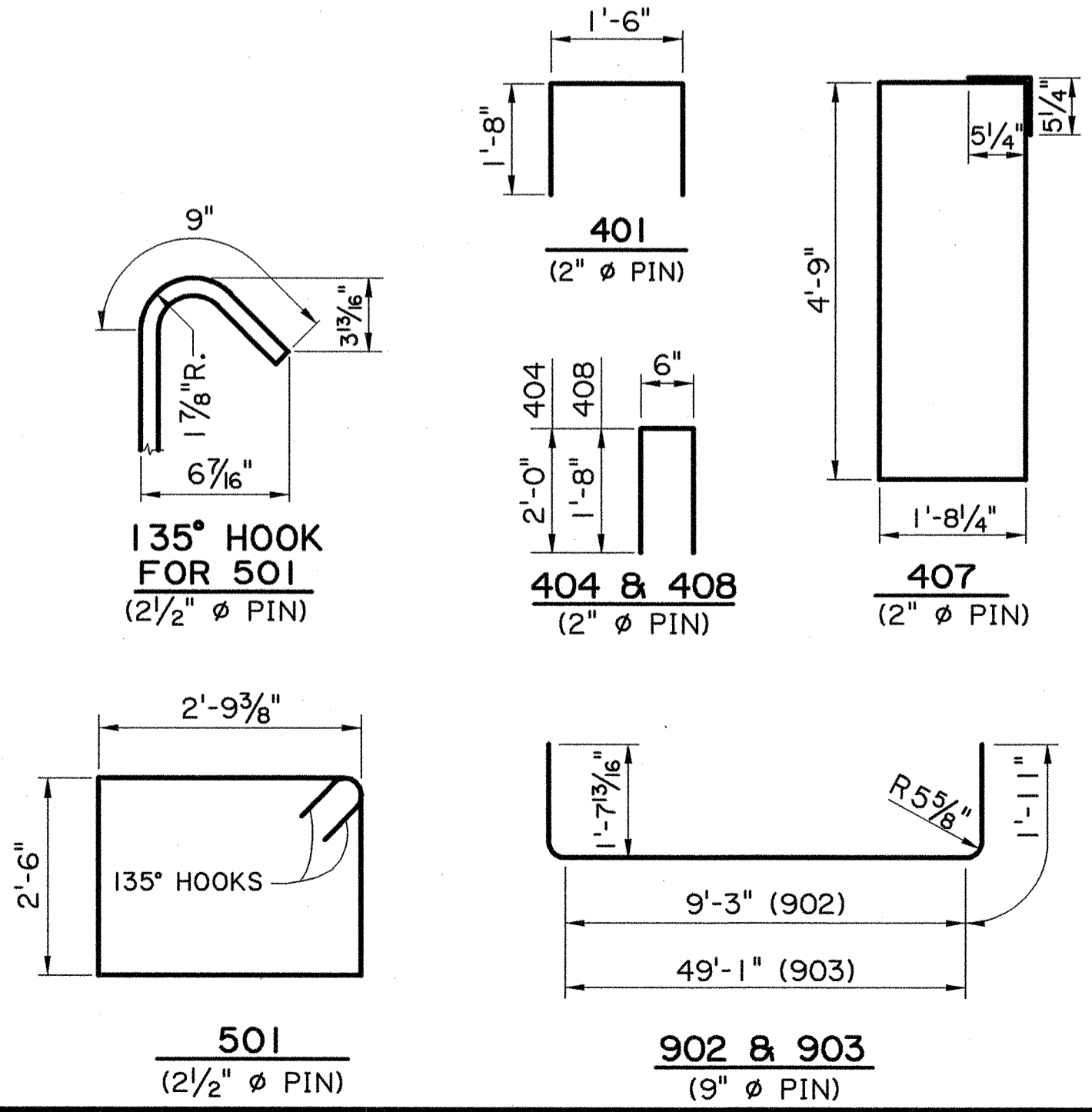
SECTION A-A



SECTION B-B

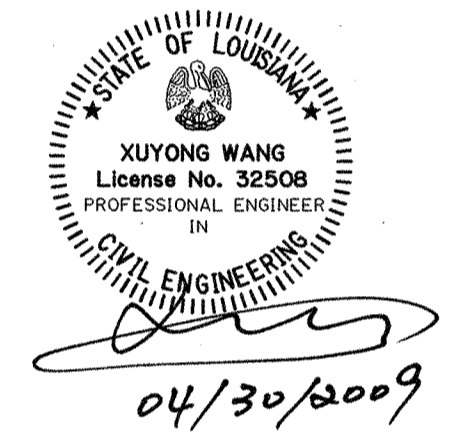


END ELEVATION



ESTIMATED QUANTITIES (BENT 58)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
901	13	50'-1"	651'-1"	LONGIT. IN TOP & BOT. OF CAP
902	15	13'-1"	196'-3"	LONGIT. IN BOTTOM OF CAP
903	6	52'-11"	317'-6"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 9 BARS = 1164'-10"		= 3960 LBS.		
601	49	2'-0"	98'-0"	DOWELS IN BACKWALL
TOTAL NO. 6 BARS = 98'-0"		= 147 LBS.		
501	110	11'-9"	1292'-6"	STIRRUPS IN CAP
502	4	50'-1"	200'-4"	LONGIT. IN CAP & BACKWALL
503	10	2'-8"	26'-8"	LONGIT. IN BOTTOM OF CAP
TOTAL NO. 5 BARS = 1519'-6"		= 1585 LBS.		
401	3	4'-10"	14'-6"	STIRRUPS IN KEY
402	4	1'-10"	7'-4"	TRANSVERSE IN KEY
403	2	1'-6"	3'-0"	LONGIT. IN BACKWALL KEY
404	4	4'-6"	18'-0"	STIRRUPS IN BACKWALL KEY
405	16	3'-8"	58'-8"	LONGIT. IN WINGWALL
406	16	6'-3"	100'-0"	LONGIT. IN WINGWALL
407	10	13'-9"	137'-6"	STIRRUPS IN WINGWALL
408	49	3'-10"	187'-10"	STIRRUPS IN BACKWALL
TOTAL NO. 4 BARS = 526'-10"		= 352 LBS.		
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL)		= 6044 LBS.		
CLASS A(M) CONCRETE (BENTS)		= 29.59 CU. YDS.		
STRUCTURAL METALWORK		= 218 LBS.		
MAX. FACTORED PILE LOAD:		COMP. = 210 TONS		
		TENSION = 89 TONS		

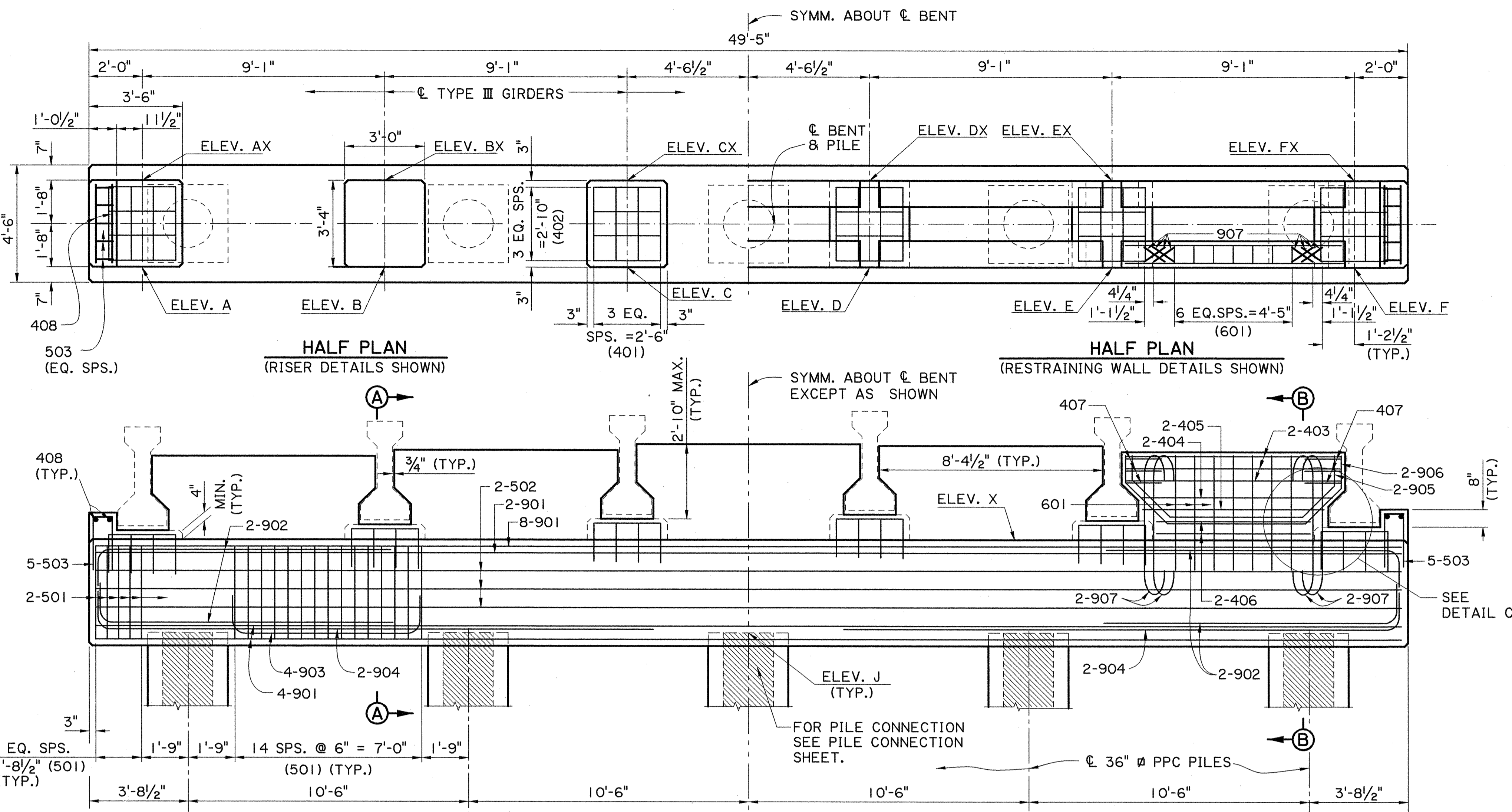
FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.



DESIGNED BY: X. WANG
 CHECKED BY: B. DELATTE
 FEDERAL PROJECT NO.:
 CHECKED BY: B. DELATTE
 STATE PROJECT NO.: 064-01-0040
 DATE: 12-20-2007
 SHEET NO.: 124
 REVISION DESCRIPTION:
 NO. DATE BY

CAMINADA BAY BRIDGE
 ROUTE LA 1
 BENT TYPE SL-5

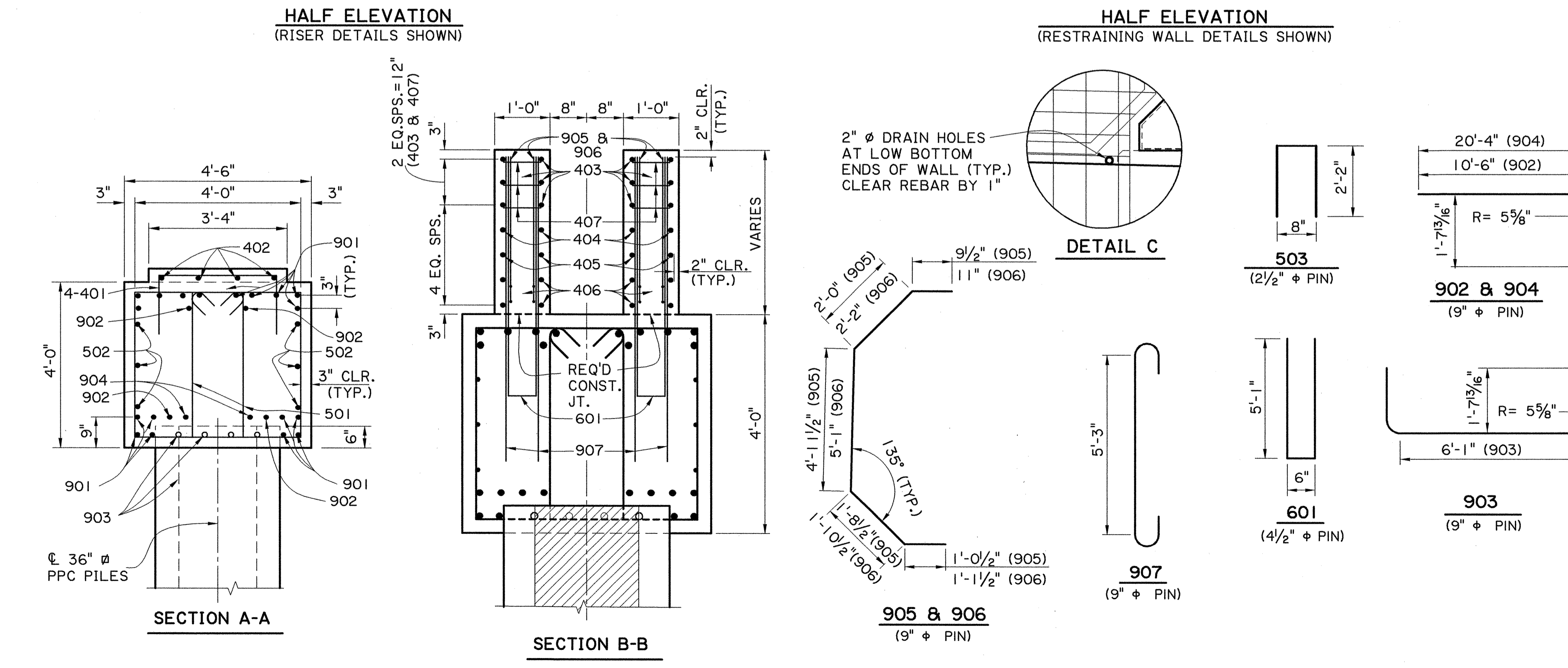
BRIDGE AND STRUCTURAL DESIGN



ESTIMATED QUANTITIES (ONE BENT TYPE IIIG-1)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	18	48'-11"	880'-6"	LONGIT. IN CAP
902	8	12'-5"	99'-4"	LONGIT. IN CAP
903	16	9'-11"	158'-8"	LONGIT. IN CAP
904	4	22'-3"	89'-0"	LONGIT. IN CAP
905	20	10'-6"	210'-0"	LONGIT. IN WALL
906	20	11'-2"	223'-4"	LONGIT. IN WALL
907	80	9'-1"	726'-8"	TIE B/W CAP AND WALL
TOTAL NO. 9 BARS =		2387'-6"	8118 LBS	
601	70	10'-8"	746'-8"	TIE B/W CAP AND WALL
TOTAL NO. 6 BARS =		746'-8"	1121 LBS	
501	140	13'-7"	1901'-8"	STIRRUPS IN CAP
502	6	48'-11"	293'-6"	LONGIT. IN CAP
503	10	5'-0"	50'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 5 BARS =		2245'-2"	2342 LBS	
401	24	7'-4"	176'-0"	RISER
402	24	2'-8"	64'-0"	RISER
403	60	8'-0"	480'-0"	LONGIT. IN WALL
404	20	7'-1"	141'-8"	LONGIT. IN WALL
405	20	6'-9"	135'-0"	LONGIT. IN WALL
406	40	5'-9"	230'-0"	LONGIT. IN WALL
407	60	3'-4"	200'-0"	TIE AT ENDS IN WALL
408	4	3'-0"	12'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 4 BARS =		1438'-8"	961 LBS	
TOTAL DEFORMED REINFORCING STEEL			12542 LBS.	
TOTAL CLASS A(HPC) CONCRETE (BENTS)			43.27 CU.YDS.	
MAXIMUM FACTORED PILE LOAD			COMP. = 290 TONS TENSION = 110 TONS	

△ MINUS 0.10 CU. YDS. FOR BENT 12.



SHEET NUMBER 125

JEFFERSON

DESIGNED BY X. WANG
CHECKED BY B. DELATTE

FEDERAL PROJECT
CHECKED BY D. HYMEL

STATE PROJECT
CHECKED BY I. BASTION

DATE OCT. 2007

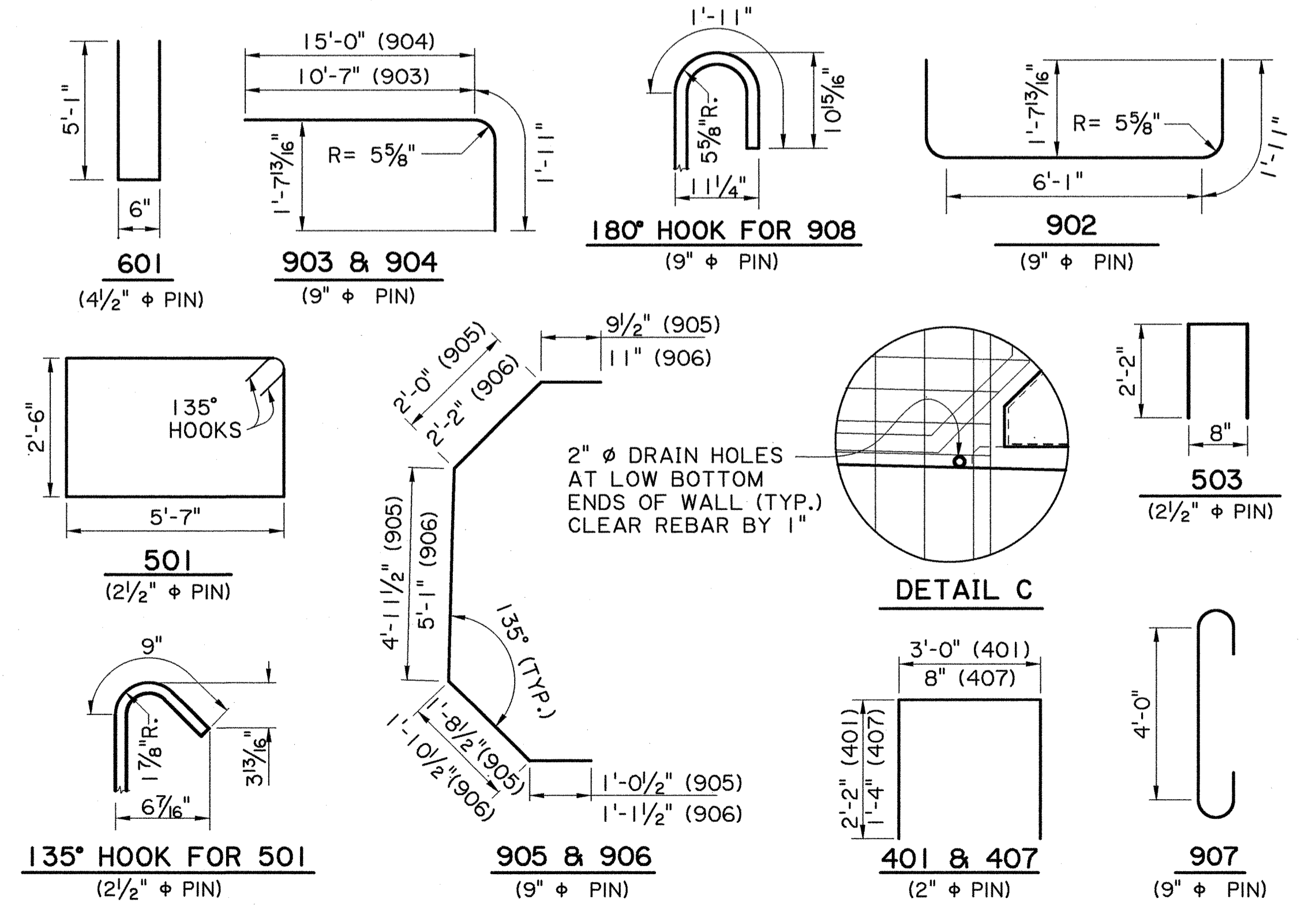
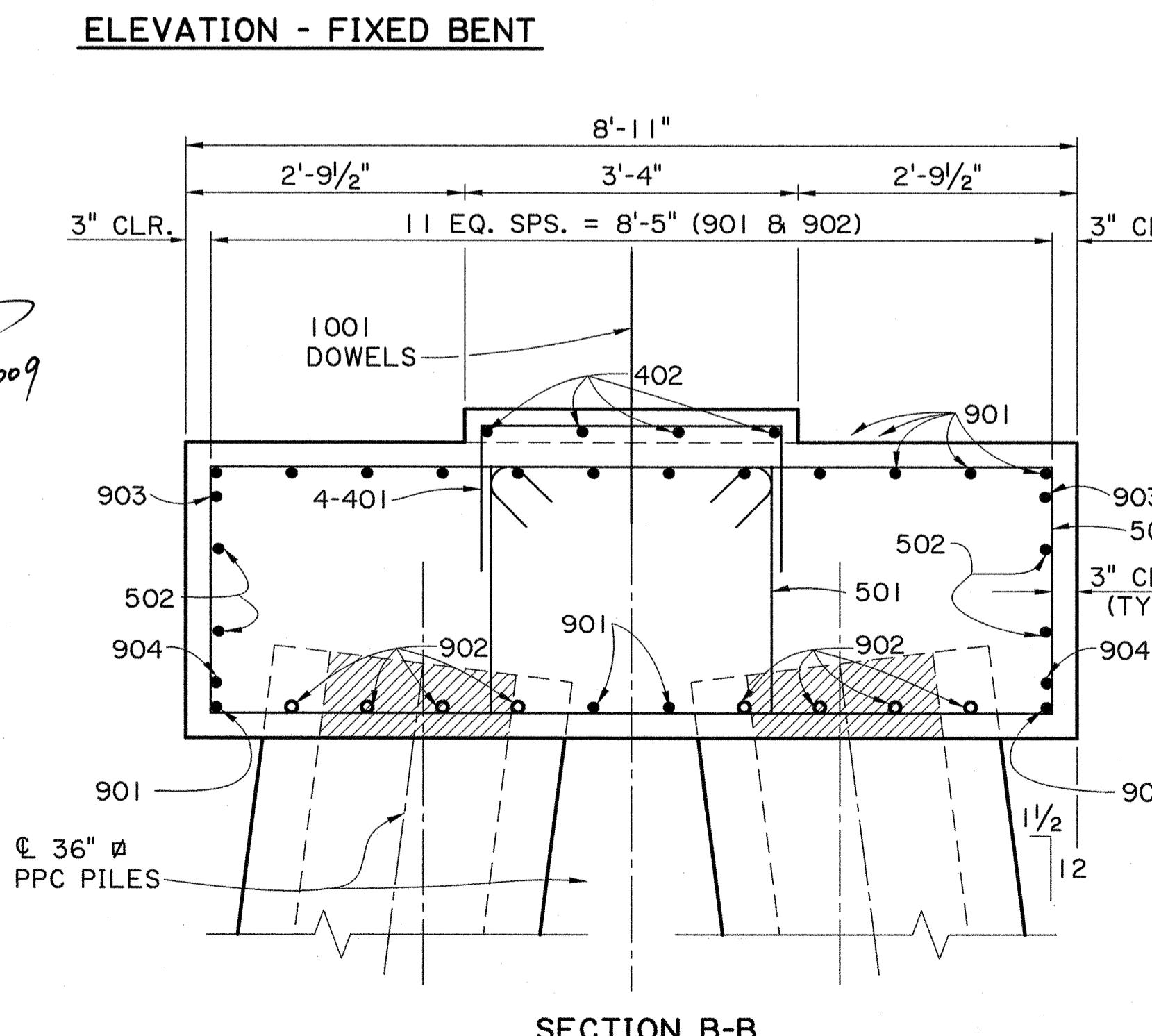
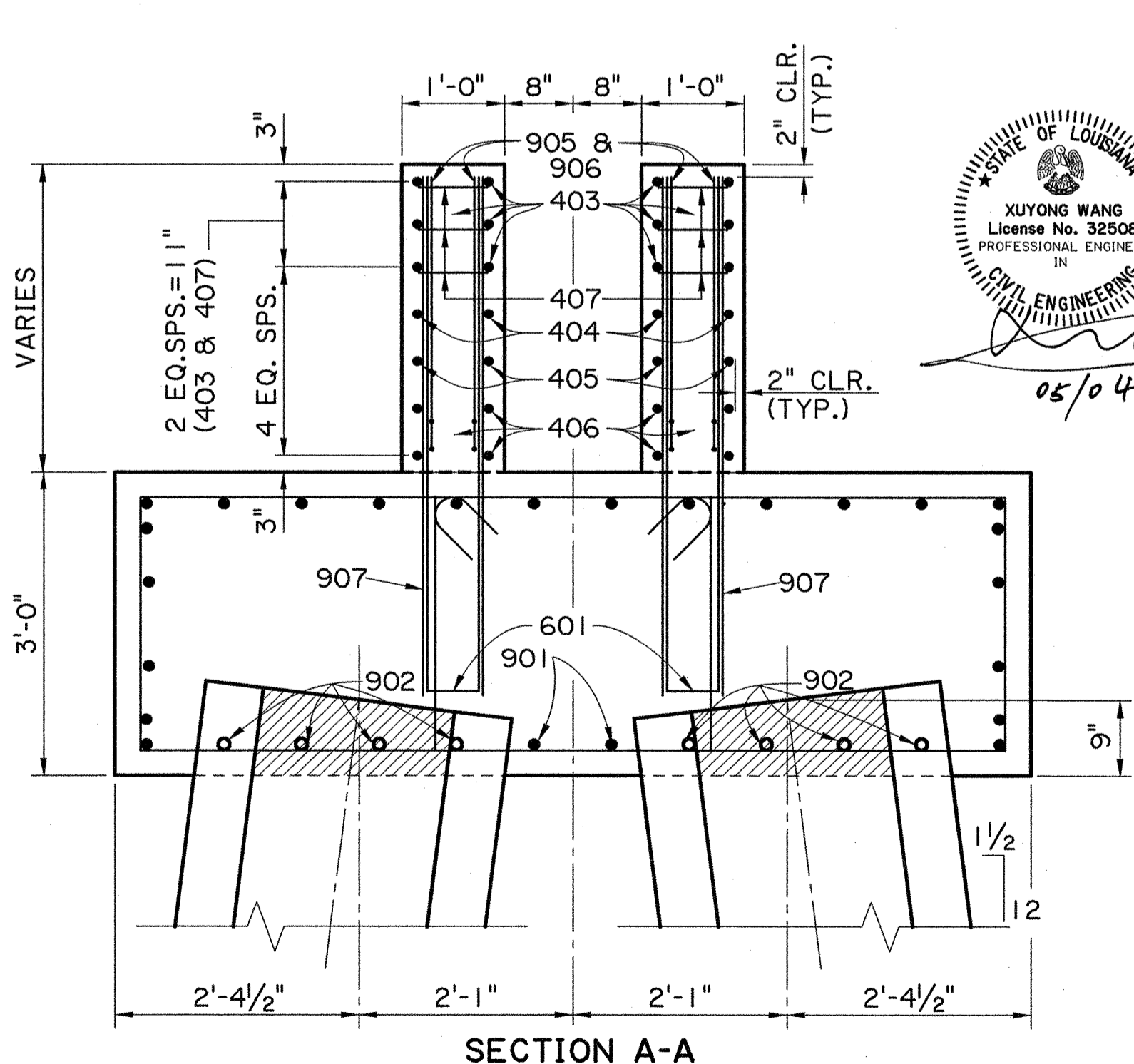
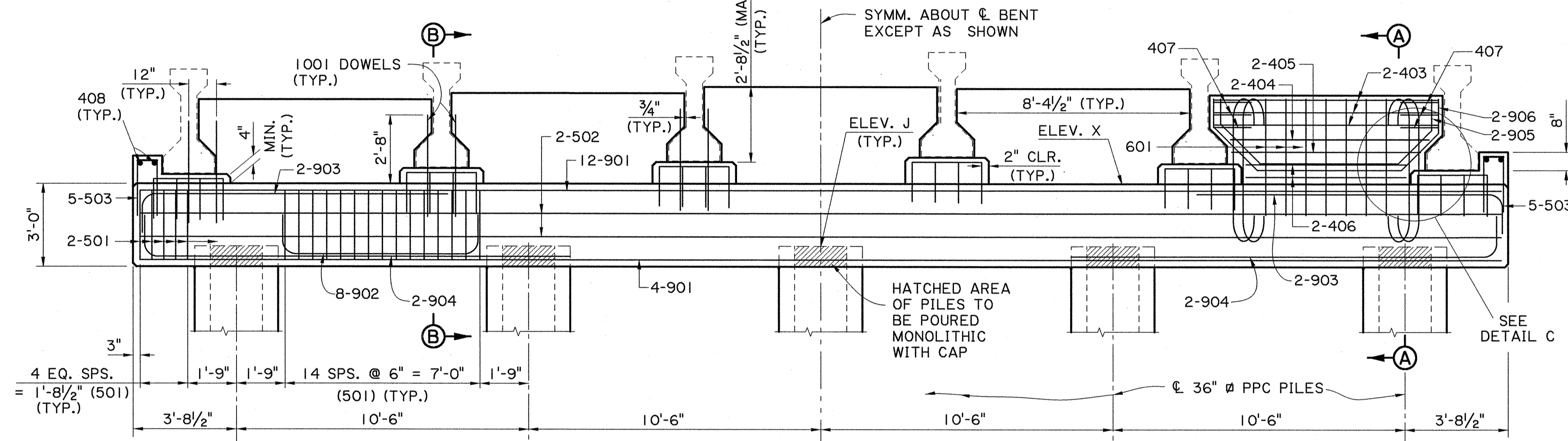
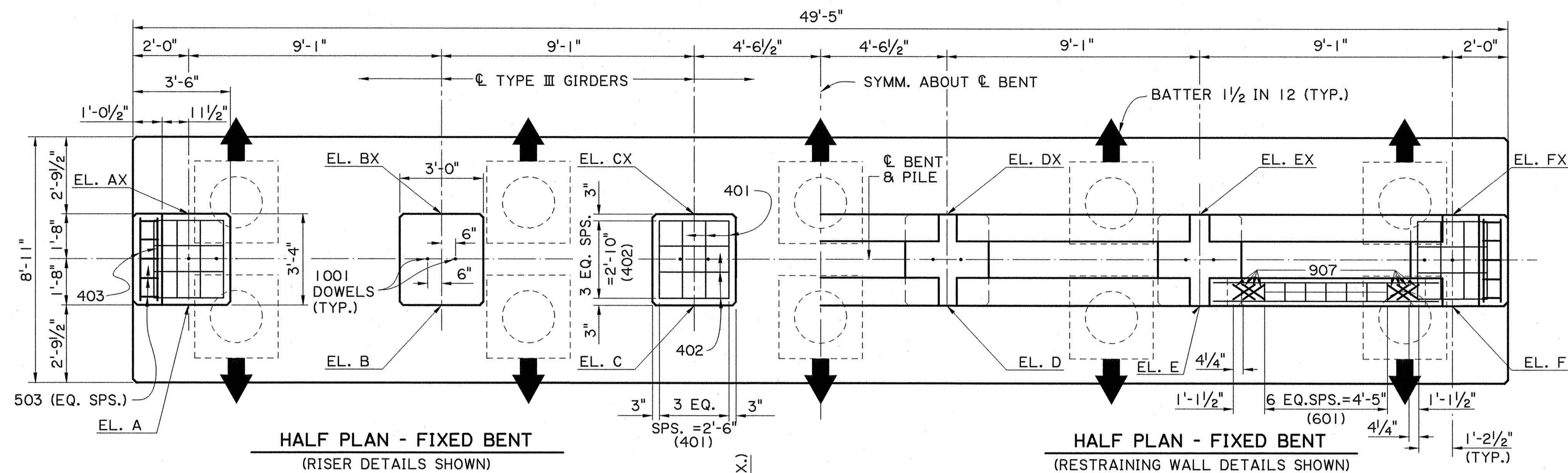
PROJECT 064-01-0040

REVISION DESCRIPTION

CAMINADA BAY BRIDGE
ROUTE LA 1

BENT TYPE IIIG-1

BRIDGE AND STRUCTURAL DESIGN



ESTIMATED QUANTITIES (ONE BENT TYPE IIIG-2)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1001	12	3'-8"	44'-0"	DOWELS
TOTAL NO. 10 BARS = 44'-0" = 189 LBS.				
901	16	48'-11"	782'-8"	LONGIT. IN CAP
902	32	9'-11"	317'-4"	LONGIT. IN CAP
903	4	12'-6"	50'-0"	LONGIT. IN CAP
904	4	16'-11"	67'-8"	LONGIT. IN CAP
905	20	10'-6"	210'-0"	LONGIT. IN WALL
906	20	11'-2"	223'-4"	LONGIT. IN WALL
907	80	7'-10"	626'-8"	TIE B/W CAP AND WALL
TOTAL NO. 9 BARS = 2277'-8" = 7744 LBS				
601	70	10'-8"	746'-8"	TIE B/W CAP AND WALL
TOTAL NO. 6 BARS = 746'-8" = 1121 LBS				
501	140	17'-5"	2438'-4"	STIRRUPS IN CAP
502	4	48'-11"	195'-8"	LONGIT. IN CAP
503	10	5'-0"	50'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 5 BARS = 2684'-0" = 2799 LBS				
401	24	7'-4"	176'-0"	STIRRUPS IN RISER
402	24	2'-8"	64'-0"	LONGIT. IN RISER
403	60	8'-0"	480'-0"	LONGIT. IN WALL
404	20	7'-1"	141'-8"	LONGIT. IN WALL
405	20	6'-9"	135'-0"	LONGIT. IN WALL
406	40	5'-9"	230'-0"	LONGIT. IN WALL
407	60	3'-4"	200'-0"	TIE AT ENDS IN WALL
408	4	3'-0"	12'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 4 BARS = 1438'-8" = 961 LBS				
TOTAL DEFORMED REINFORCING STEEL = 12814 LBS.				
TOTAL CLASS A(HPC) CONCRETE (BENTS) = 58.05 CU.YDS.				
MAXIMUM FACTORED PILE LOAD COMP. = 160 TONS				

STATE OF LOUISIANA
 XUYONG WANG
 License No. 32508
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
 05/04/2009

SHEET NUMBER 126

DESIGNED BY: X. WANG
 CHECKED BY: B. DELATTE
 DETAILED BY: D. HYMEL
 CHECKED BY: D. BASTION

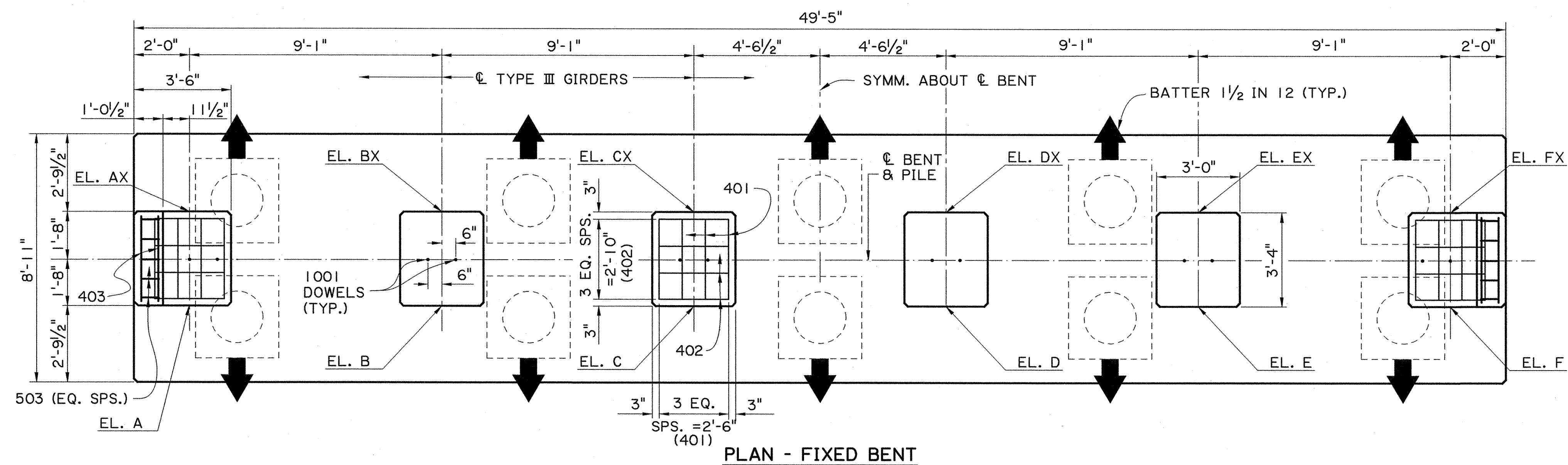
DATE: OCT. 2007

PROJECT: 064-01-0040

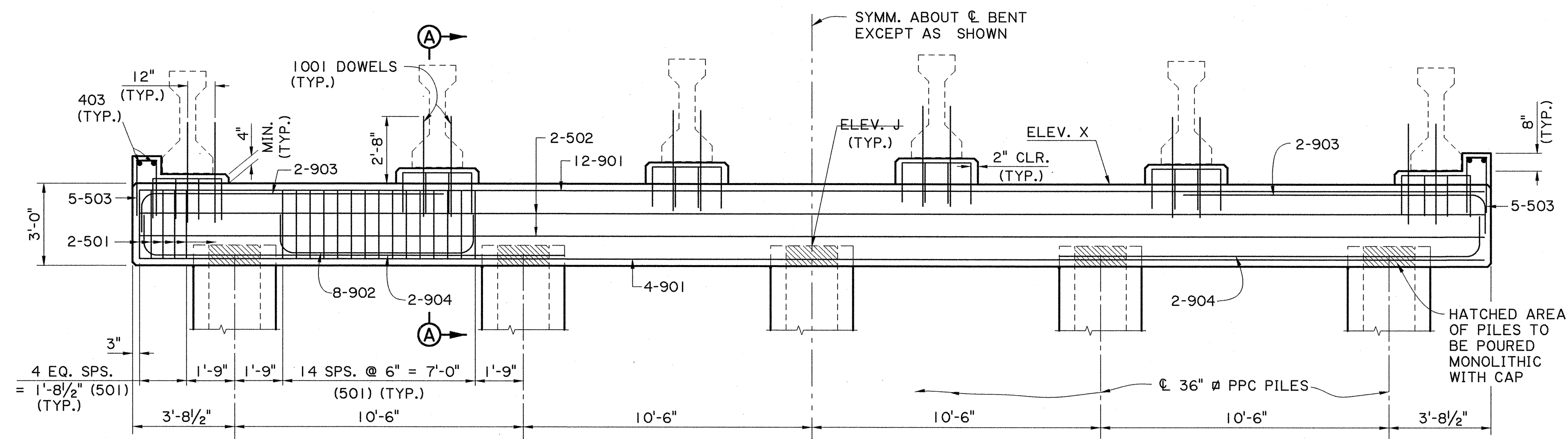
BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE
 ROUTE LA 1

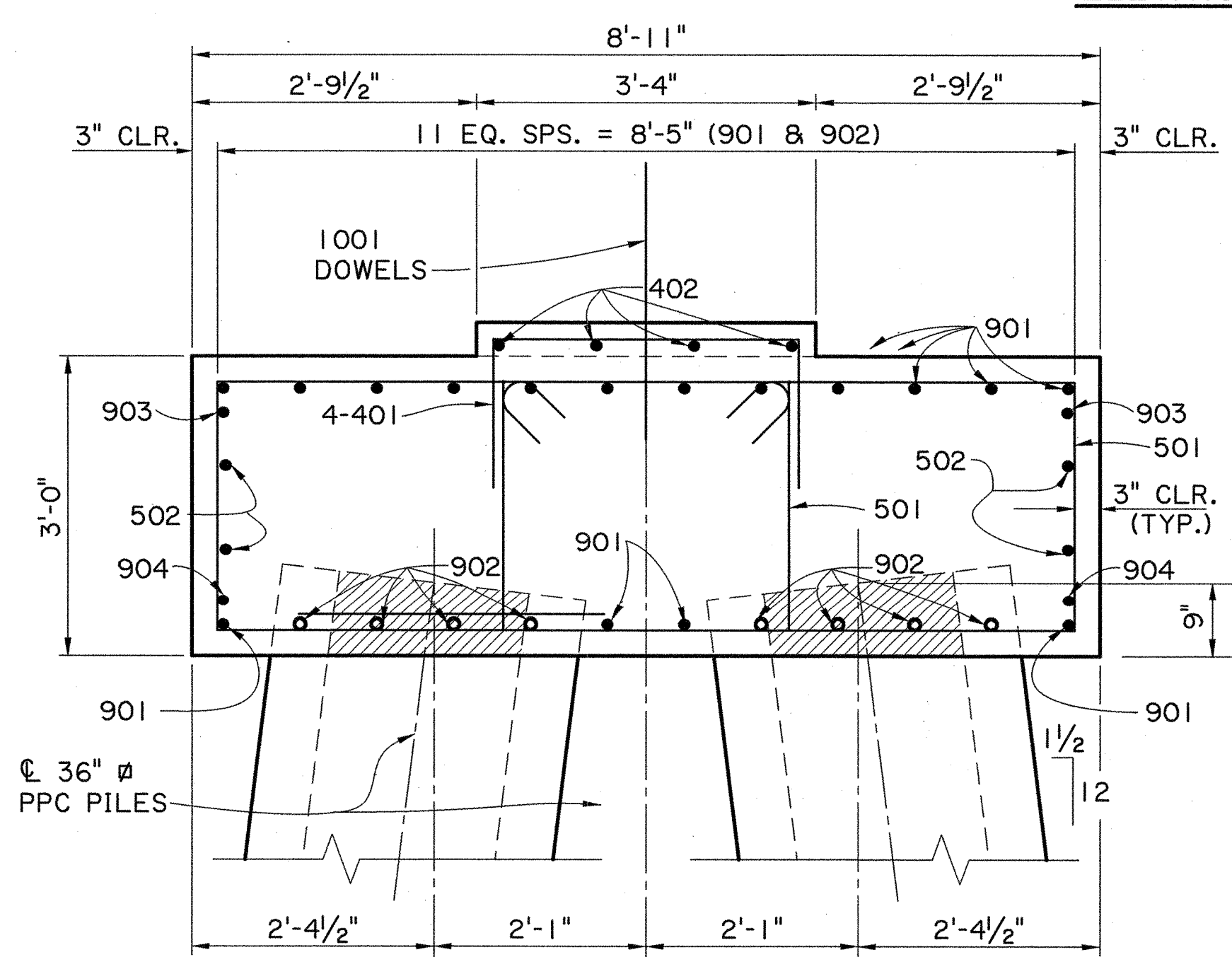
BENT TYPE IIIG-2



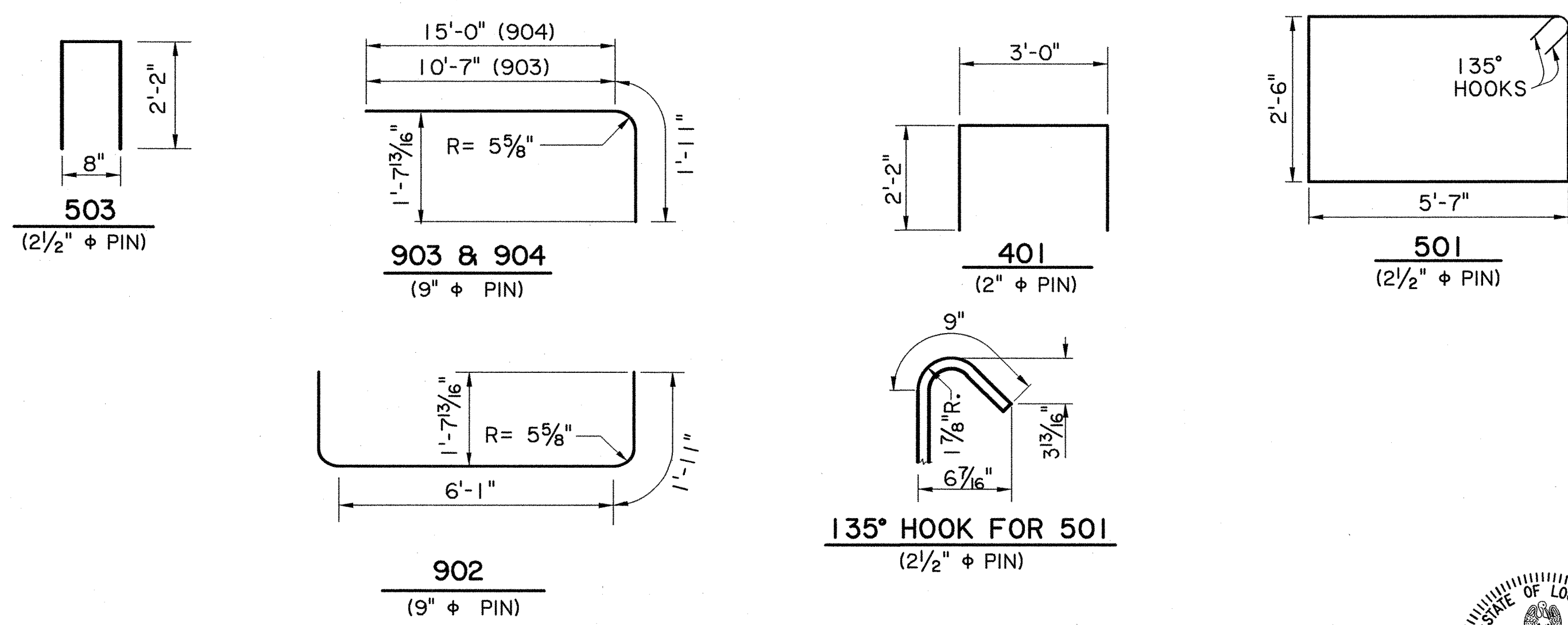
PLAN - FIXED BENT



ELEVATION - FIXED BENT



SECTION A-A



ESTIMATED QUANTITIES (ONE BENT TYPE IIIG-3)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
1001	12	3'-8"	44'-0"	DOWELS
TOTAL NO. 10 BARS = 44'-0"				= 189 LBS.
901	16	48'-11"	782'-8"	LONGIT. IN CAP
902	32	9'-11"	317'-4"	LONGIT. IN CAP
903	4	12'-6"	50'-0"	LONGIT. IN CAP
904	4	16'-11"	67'-8"	LONGIT. IN CAP
TOTAL NO. 9 BARS = 1217'-8"				= 4140 LBS
501	140	17'-5"	2438'-4"	STIRRUPS IN CAP
502	4	48'-11"	195'-8"	LONGIT. IN CAP
503	10	5'-0"	50'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 5 BARS = 2684'-0"				= 2799 LBS
401	24	7'-4"	176'-0"	STIRRUPS IN RISER
402	24	2'-8"	64'-0"	LONGIT. IN RISER
403	4	3'-0"	12'-0"	EXTERIOR SHEAR BLOCK
TOTAL NO. 4 BARS = 252'-0"				= 168 LBS
TOTAL DEFORMED REINFORCING STEEL				= 7296 LBS.
TOTAL CLASS A(HPC) CONCRETE (BENTS)				= 48.87 CU.YDS.
MAXIMUM FACTORED PILE LOAD				COMP.= 160 TONS

SHEET NUMBER 127

DESIGNED BY X. WANG
 CHECKED BY B. DELATTE
 DATE OCT. 2007

PARISH PROJECT STATE PROJECT
 FEDERAL PROJECT STATE PROJECT
 JEFFERSON PROJECT STATE PROJECT
 064-01-0040

REVISION DESCRIPTION

NO. DATE

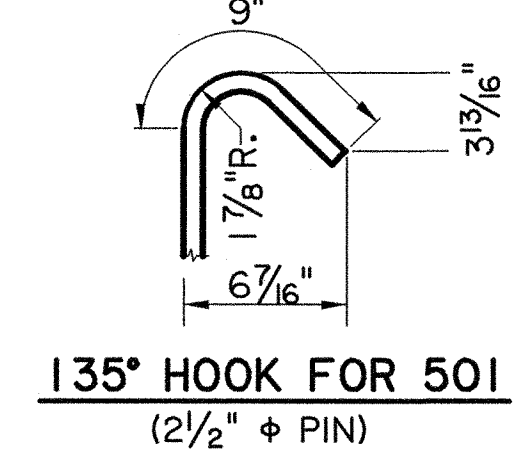
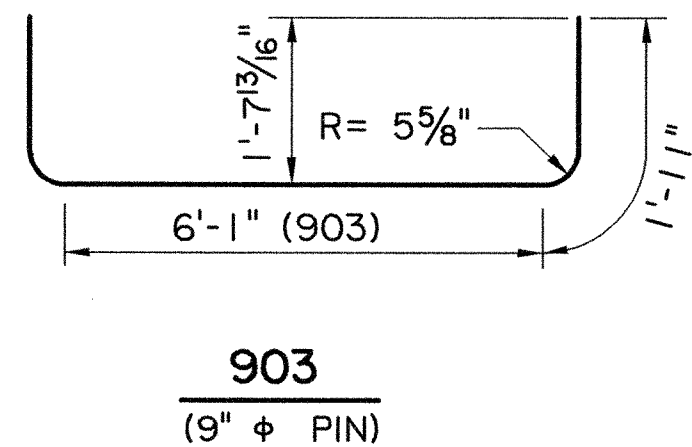
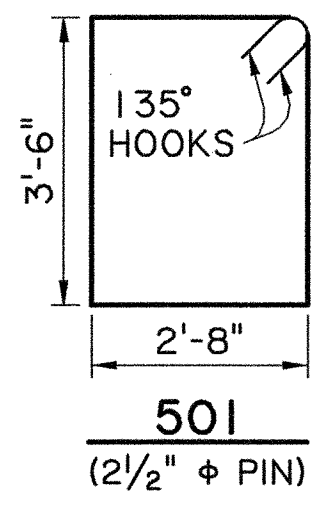
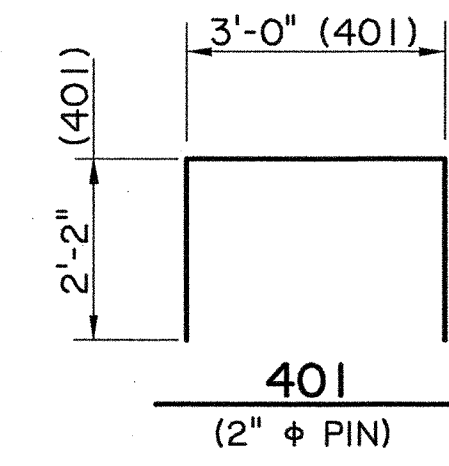
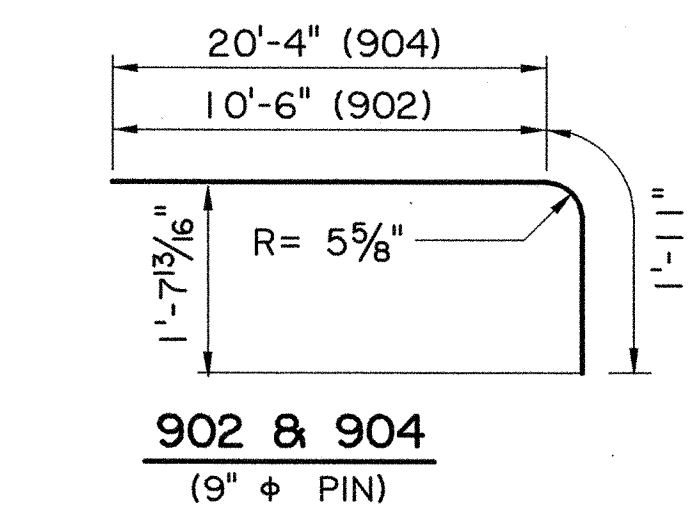
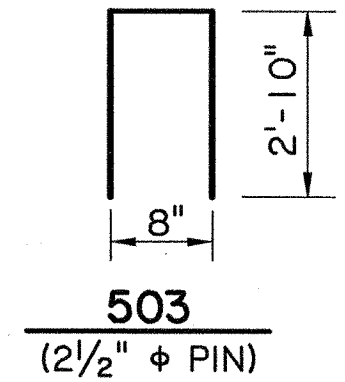
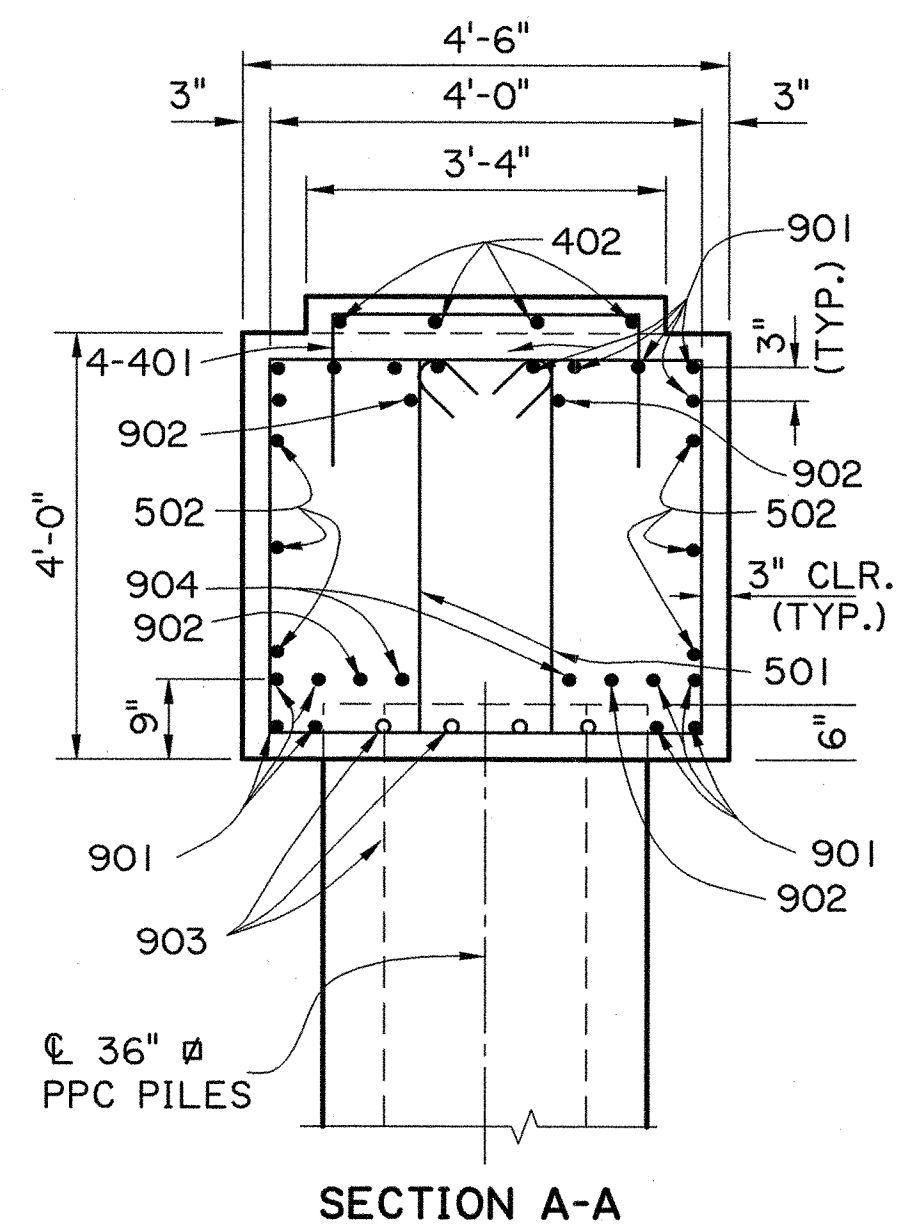
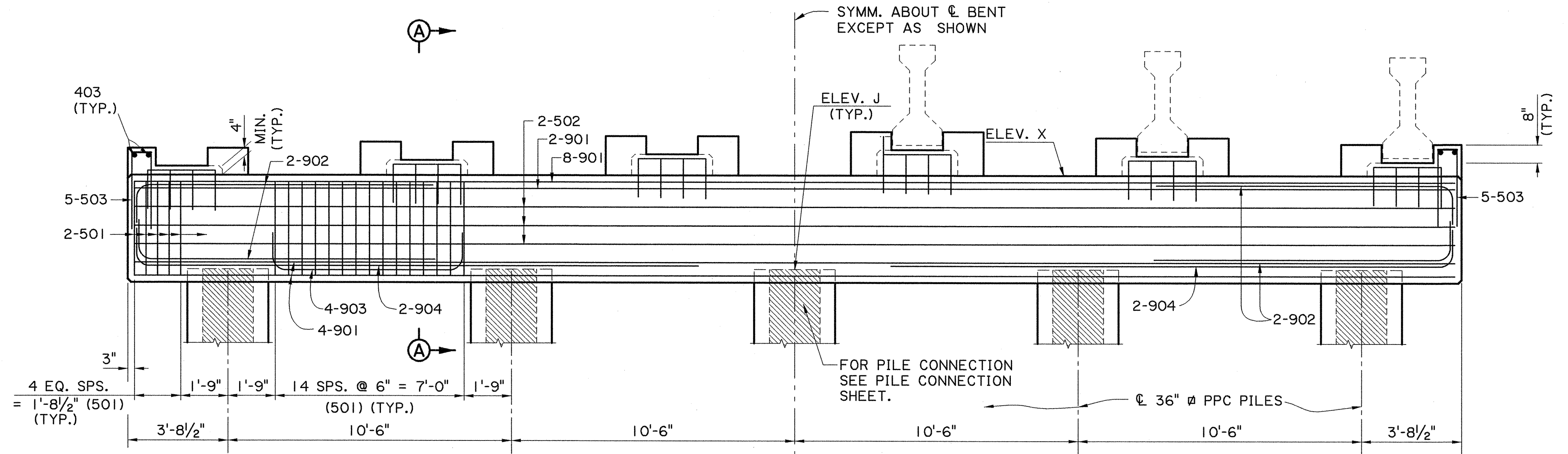
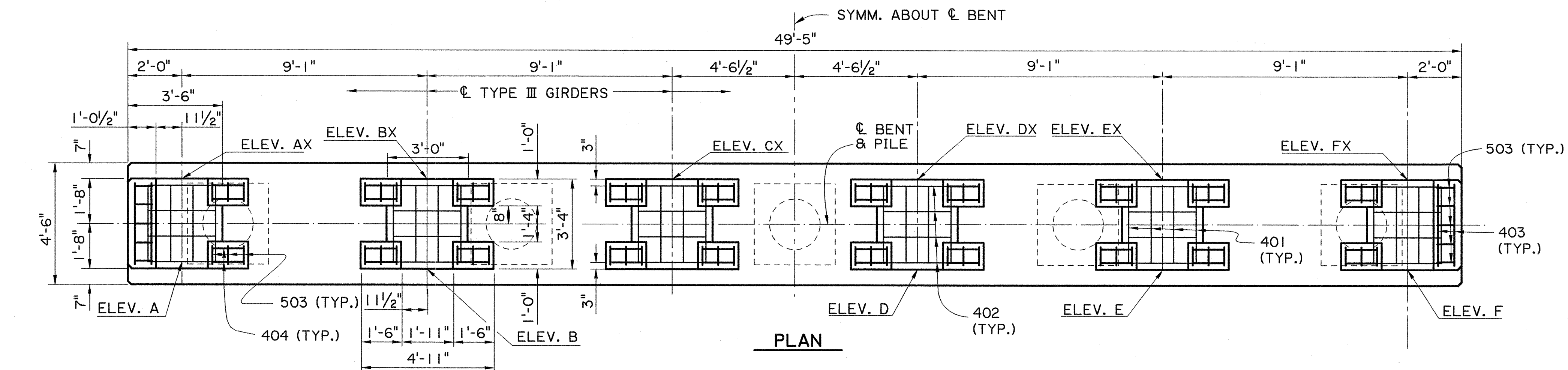
BY

STATE OF LOUISIANA
 PROFESSIONAL ENGINEER
 XUYONG WANG
 License No. 32508
 CIVIL ENGINEERING

02/04/2009

CAMINADA BAY BRIDGE
 ROUTE LA 1
 BENT TYPE IIIG-3

BRIDGE AND STRUCTURAL DESIGN



ESTIMATED QUANTITIES (ONE BENT TYPE IIIIG-4)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
901	18	48'-11"	880'-6"	LONGIT. IN CAP
902	8	12'-5"	99'-4"	LONGIT. IN CAP
903	8	9'-11"	79'-4"	LONGIT. IN CAP
904	4	9'-5"	37'-8"	LONGIT. IN CAP
TOTAL NO. 9 BARS = 1096'-10"			= 3729 LBS	
501	128	13'-7"	1738'-8"	STIRRUPS IN CAP
502	6	48'-11"	293'-6"	LONGIT. IN CAP
503	70	6'-4"	443'-4"	STIRRUPS IN RISER
TOTAL NO. 5 BARS = 2475'-6"			= 2582 LBS	
401	24	7'-4"	176'-0"	STIRRUPS IN RISER
402	24	2'-8"	64'-0"	LONGIT. IN RISER
403	4	2'-10"	11'-4"	RISER
404	40	1'-2"	46'-8"	RISER
TOTAL NO. 4 BARS = 251'-4"			= 168 LBS	
TOTAL DEFORMED REINFORCING STEEL			= 6479 LBS.	
TOTAL CLASS A(HPC) CONCRETE (BENTS)			= 35.00 CU.YDS.	
MAXIMUM FACTORED PILE LOAD			COMP. = 290 TONS TENSION = 110 TONS	

SHEET NUMBER 128

JEFFERSON

DESIGNED BY X. WANG
CHECKED BY B. DELATTE

STATE PROJECT 064-01-0040

DATE OCT. 2007

REVISION DESCRIPTION

CAMINADA BAY BRIDGE
ROUTE LA 1

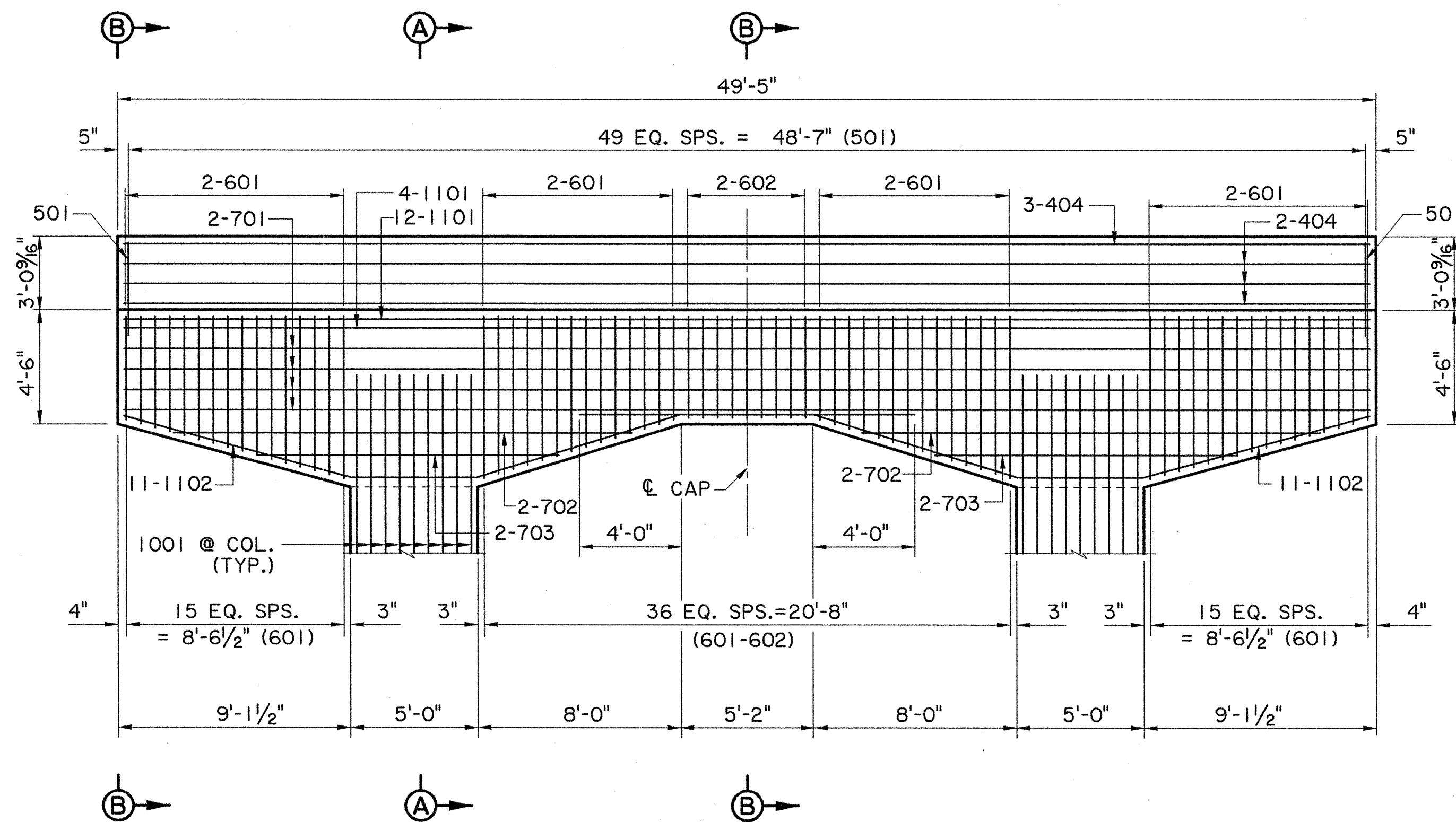
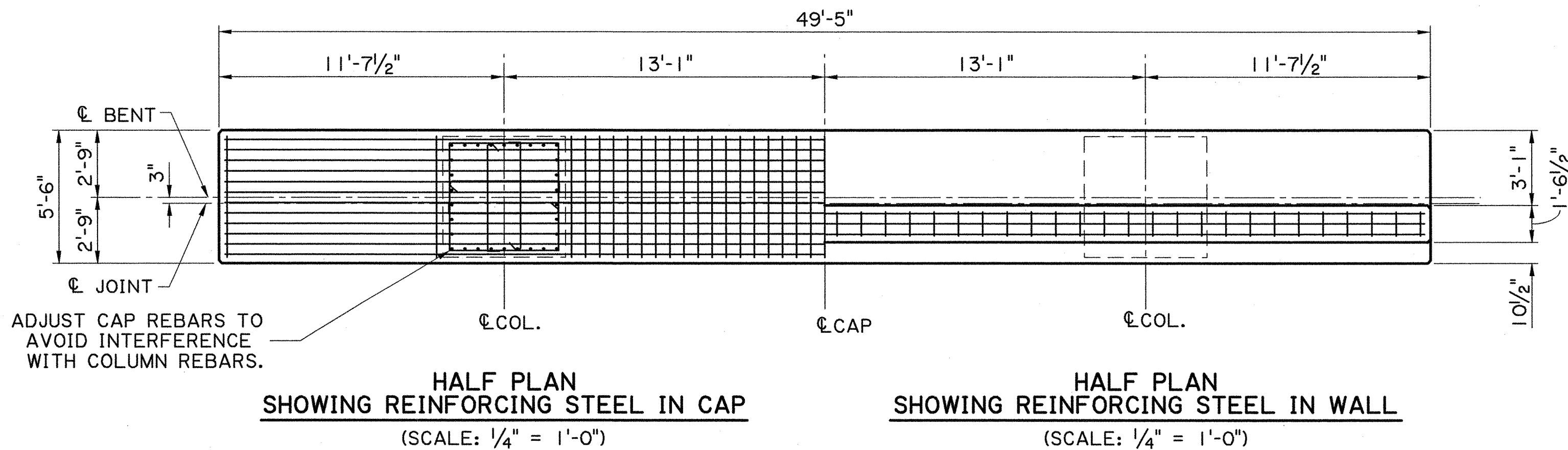
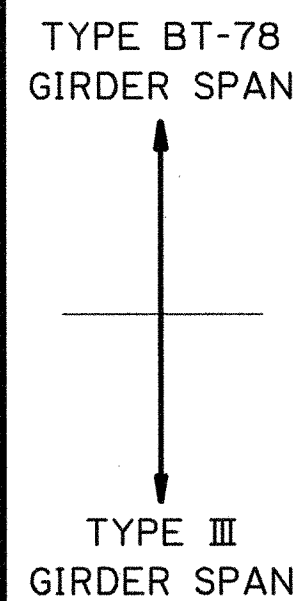
BENT TYPE IIIIG-4

BRIDGE AND STRUCTURAL DESIGN

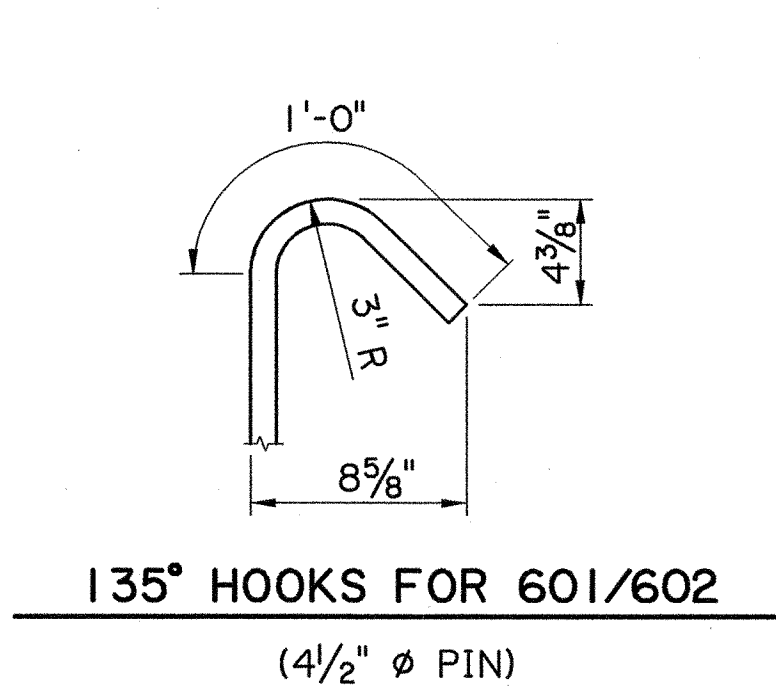
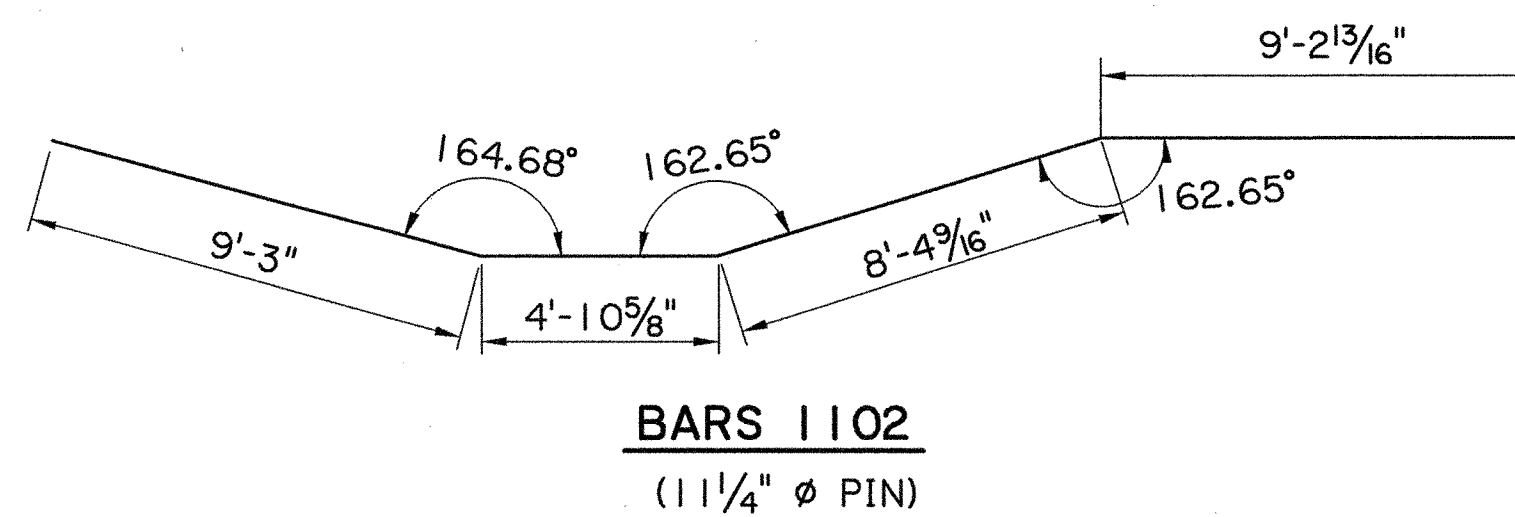
XUYONG WANG
License No. 32508
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

04/30/2009

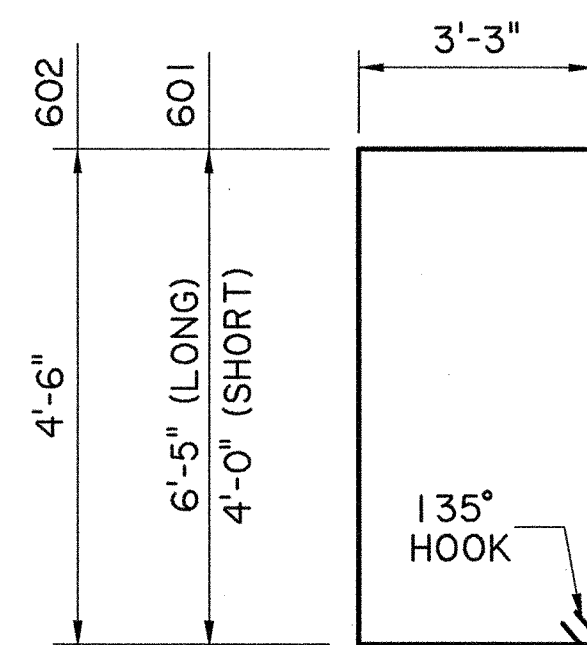
FINAL PLANS



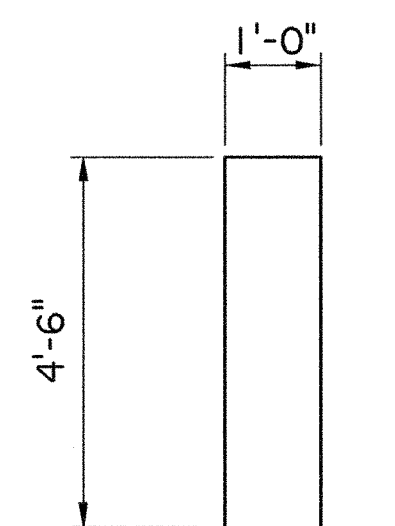
ELEVATION
(LOOKING UPSTATION AT BENT 21)
(SCALE: 1/4" = 1'-0")



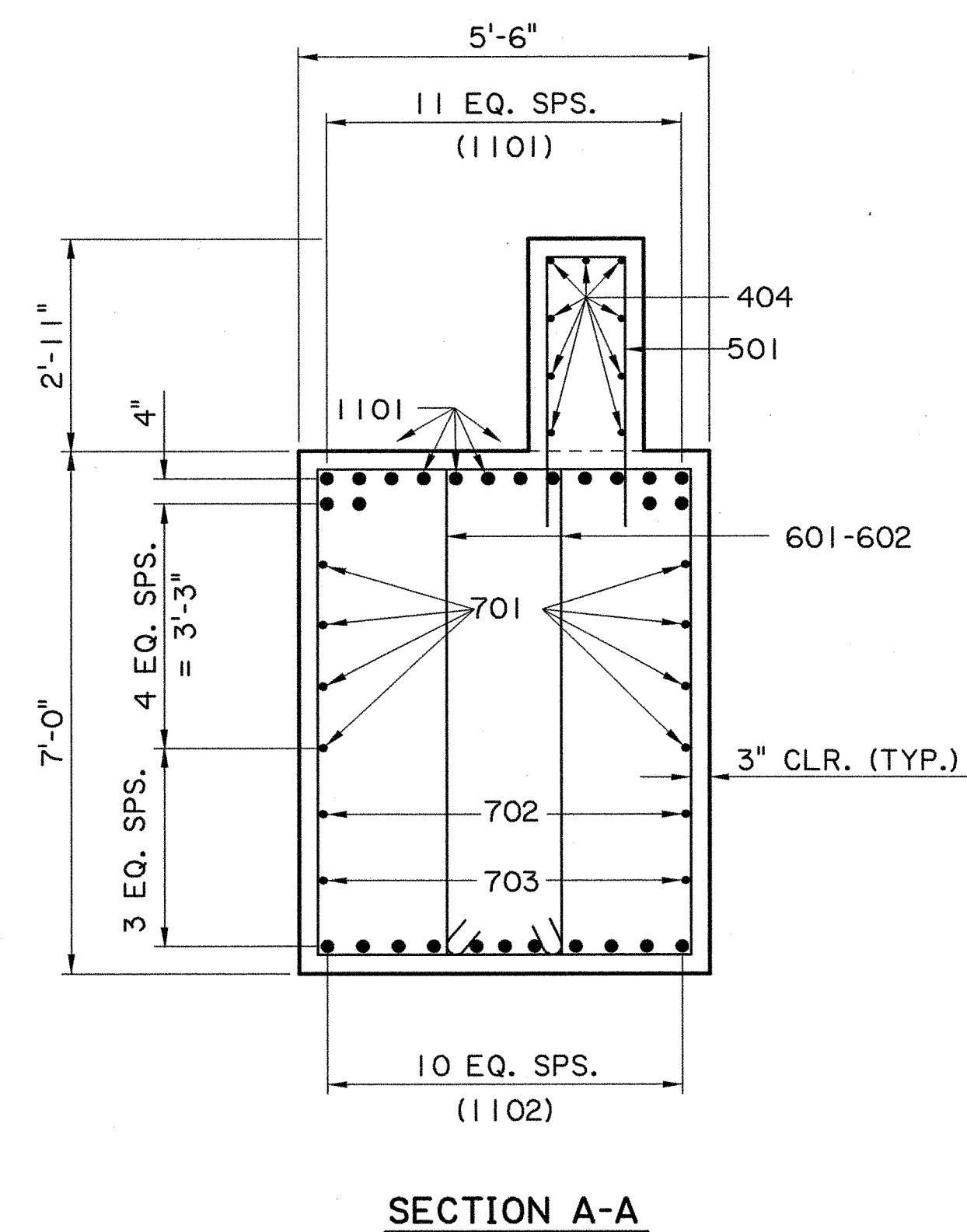
135° HOOKS FOR 601/602
(4 1/2" Ø PIN)



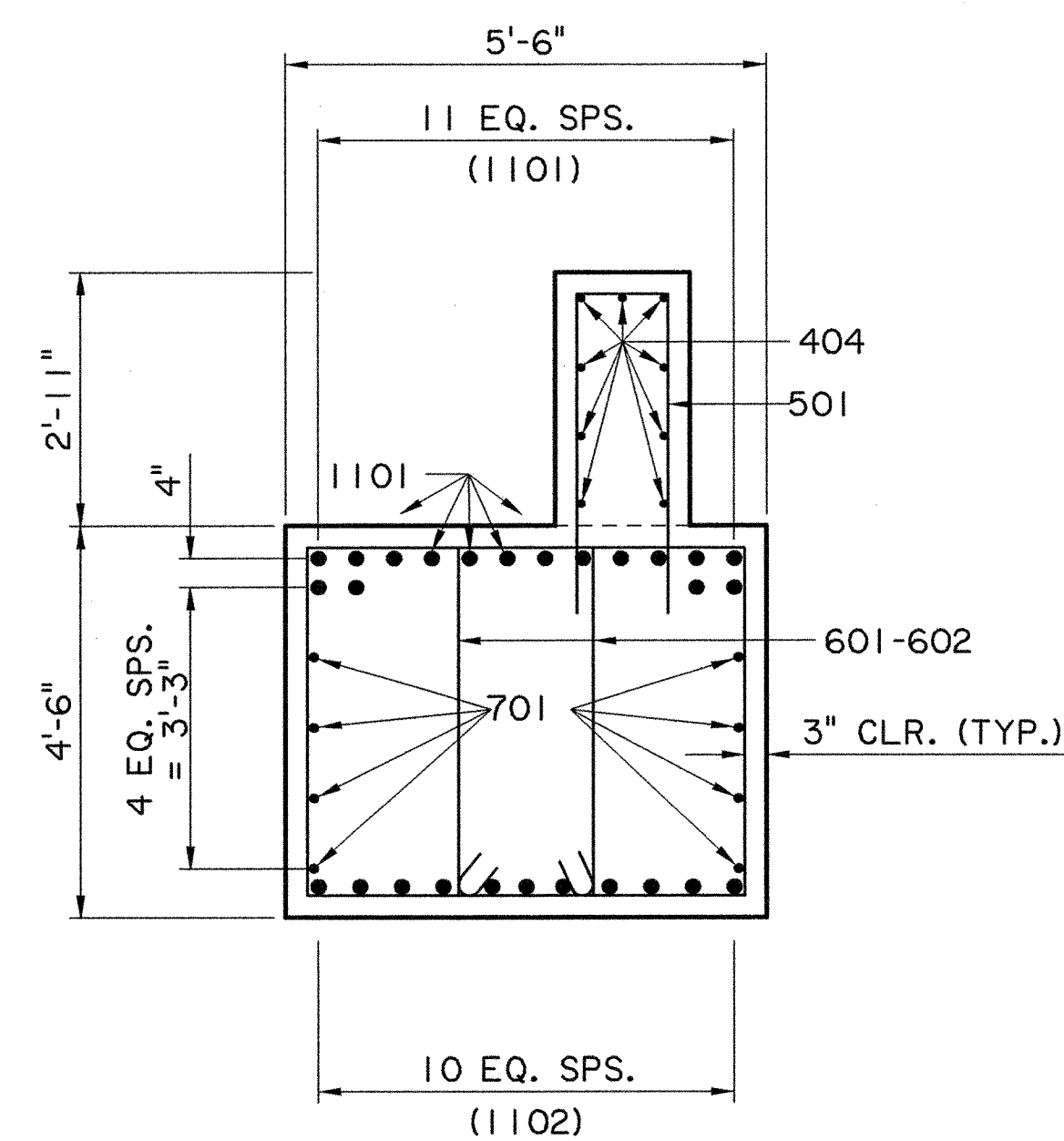
BARS 601/602
(4 1/2" Ø PIN)



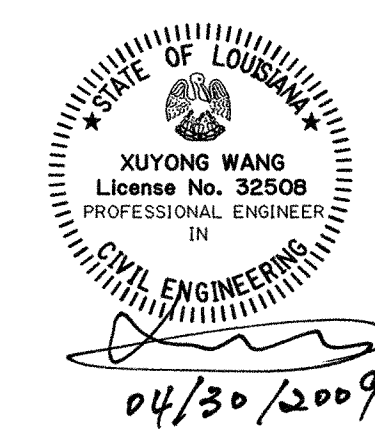
BARS 501
(2 1/2" Ø PIN)



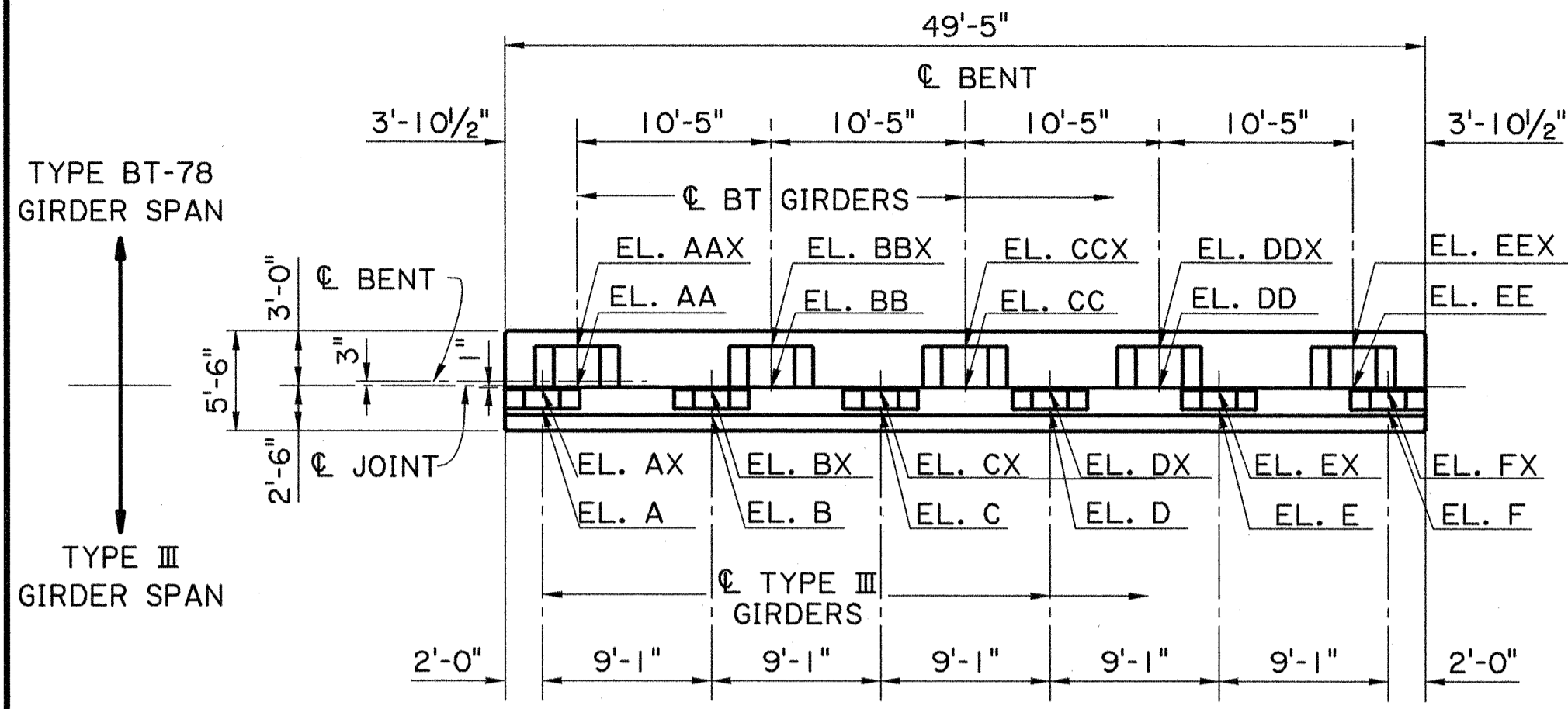
SECTION A-A



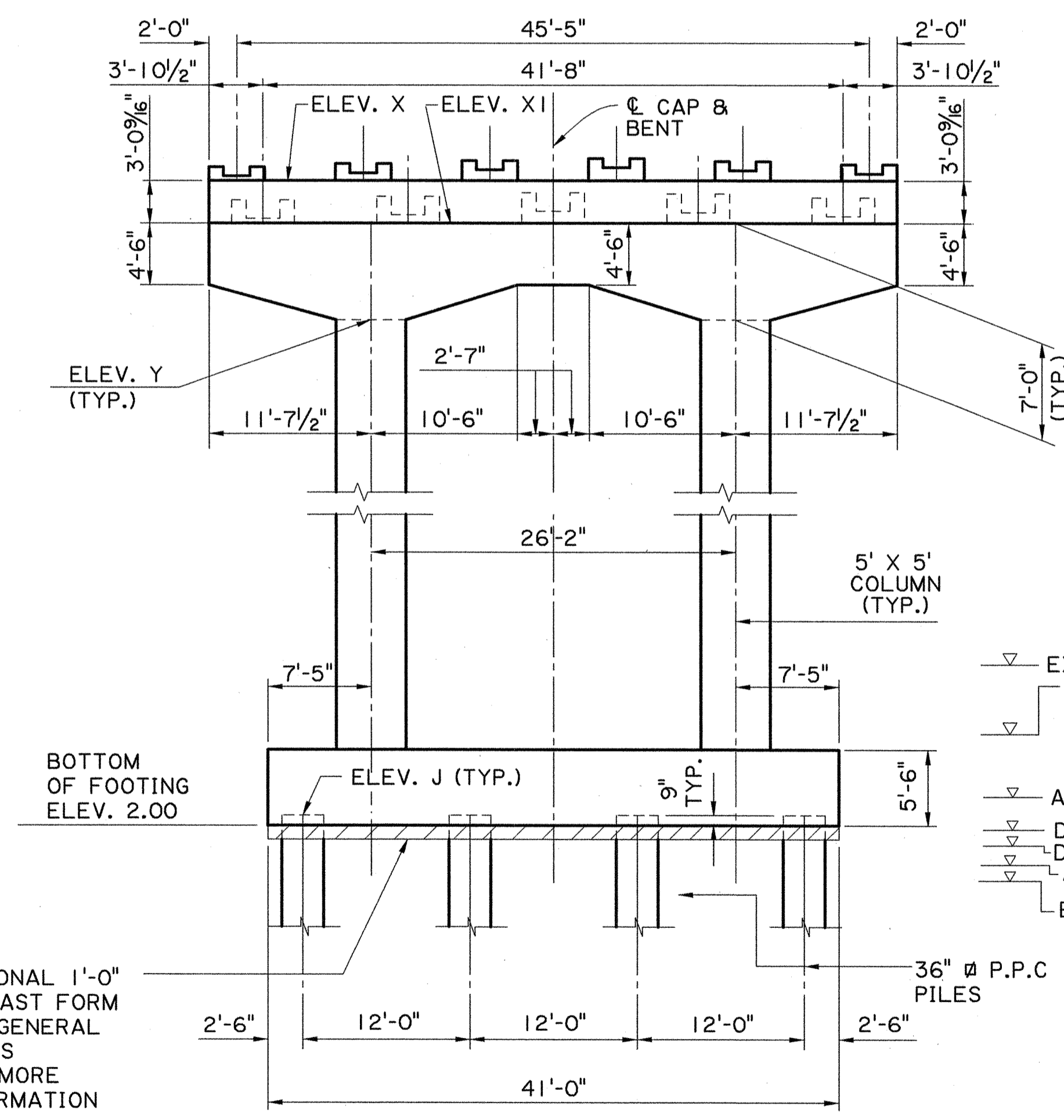
SECTION B-B



SHEET NUMBER	129
PROJECT	JEFFERSON
DESIGNED	X. WANG
CHECKED	B. DELATTE
DATE	NOV. 2007
NO.	1 OF 2
REVISION DESCRIPTION	
NO.	
DATE	
BY	
CAMINADA BAY BRIDGE ROUTE LA 1 BENT TYPE BTC-1 (CAP)	
BRIDGE AND STRUCTURAL DESIGN	

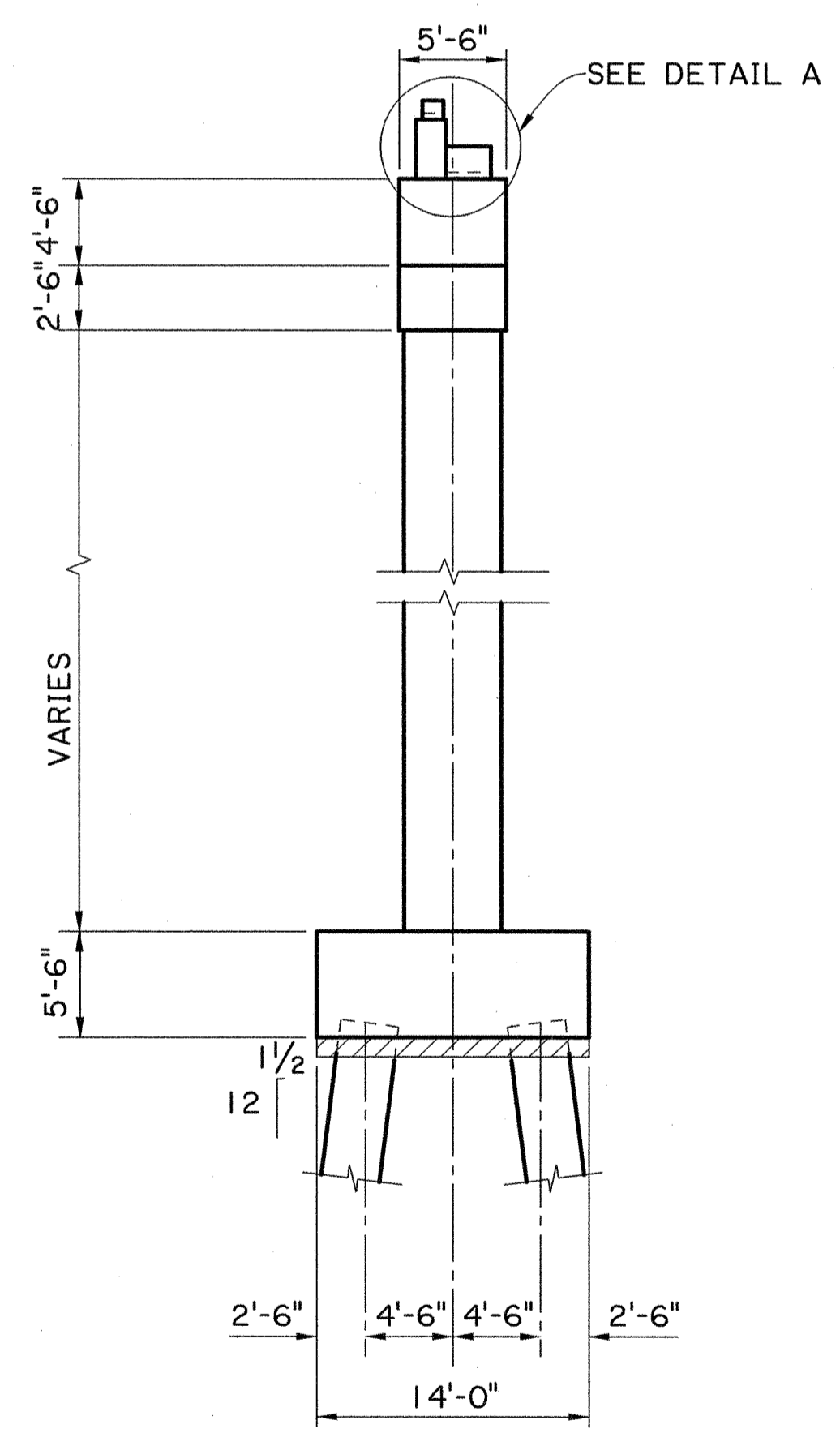


PLAN
SCALE: 1/8" = 1'-0"

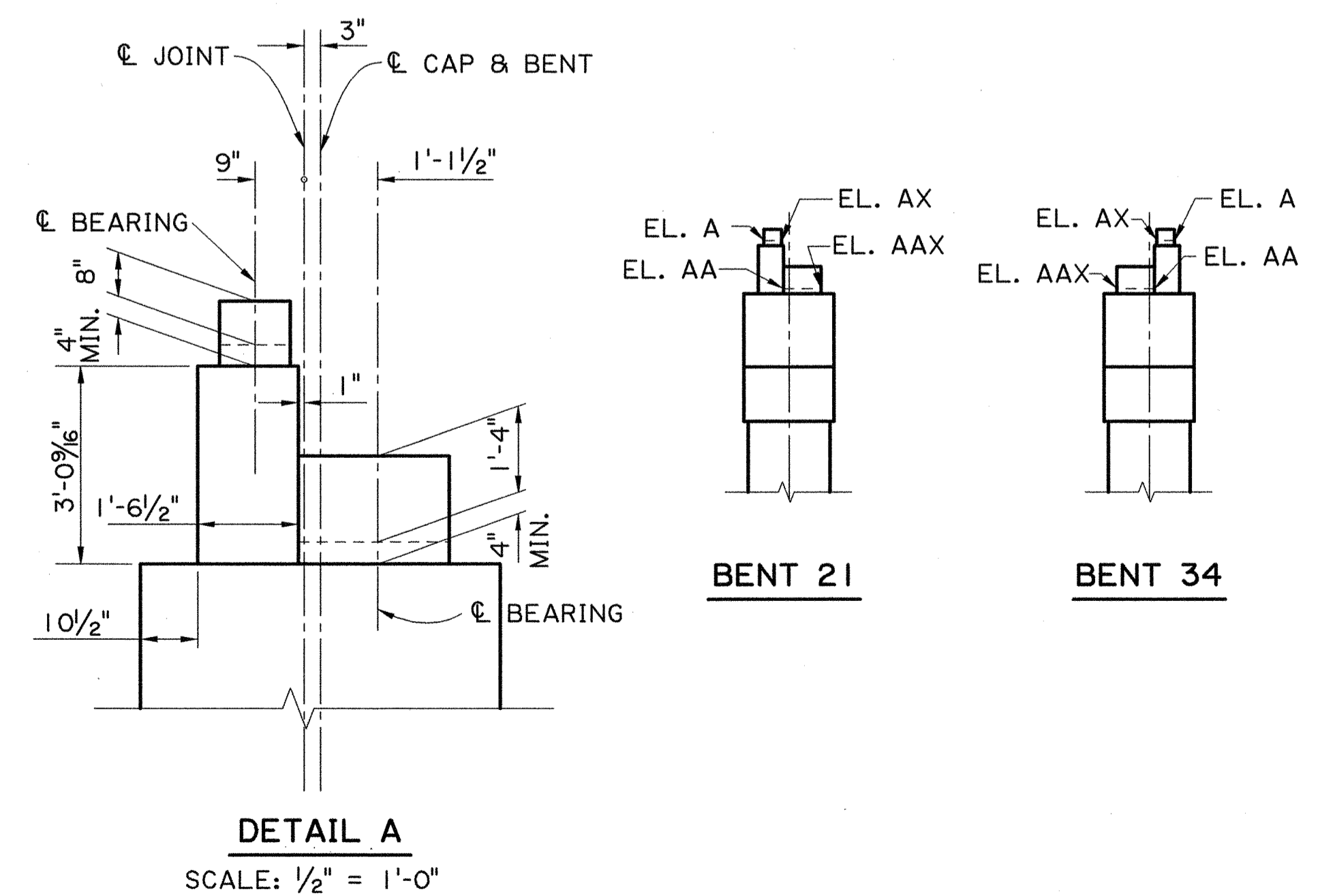


ELEVATION
(LOOKING UPSTATION AT BENT 21)
SCALE: 1/8" = 1'-0"

- NOTES:**
- 1) SEE SHEET 135 FOR BENT & RISER ELEVATIONS.
 - 2) SEE SHEET 136 FOR RISER DETAILS.
 - 3) SEE SHEET 137 FOR COLUMN DETAILS AND QUANTITIES.
 - 4) SEE SHEETS 138-139 FOR FOOTING DETAILS AND QUANTITIES.
 - 5) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS AND QUANTITIES.



SIDE VIEW
SCALE: 1/8" = 1'-0"

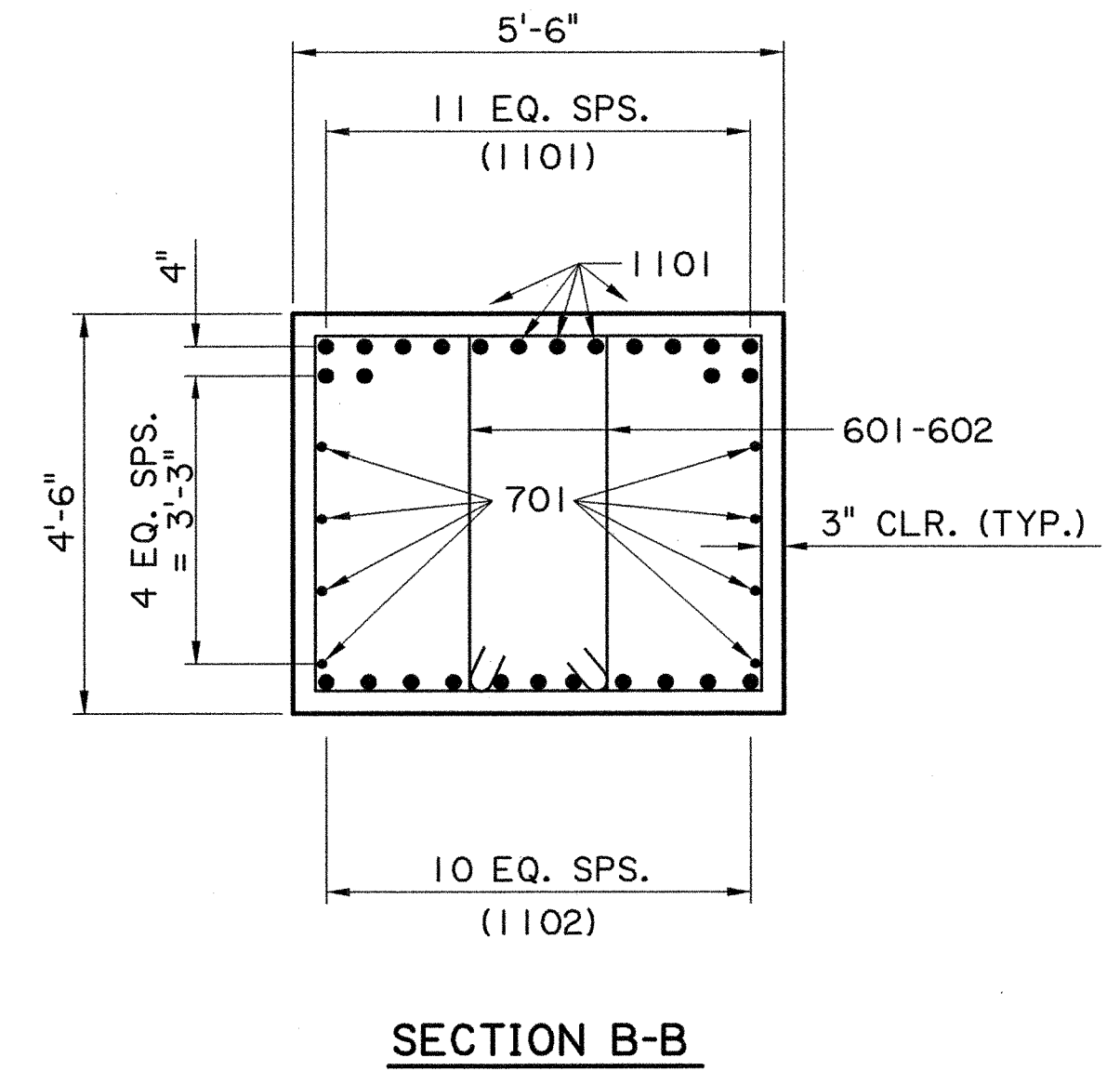
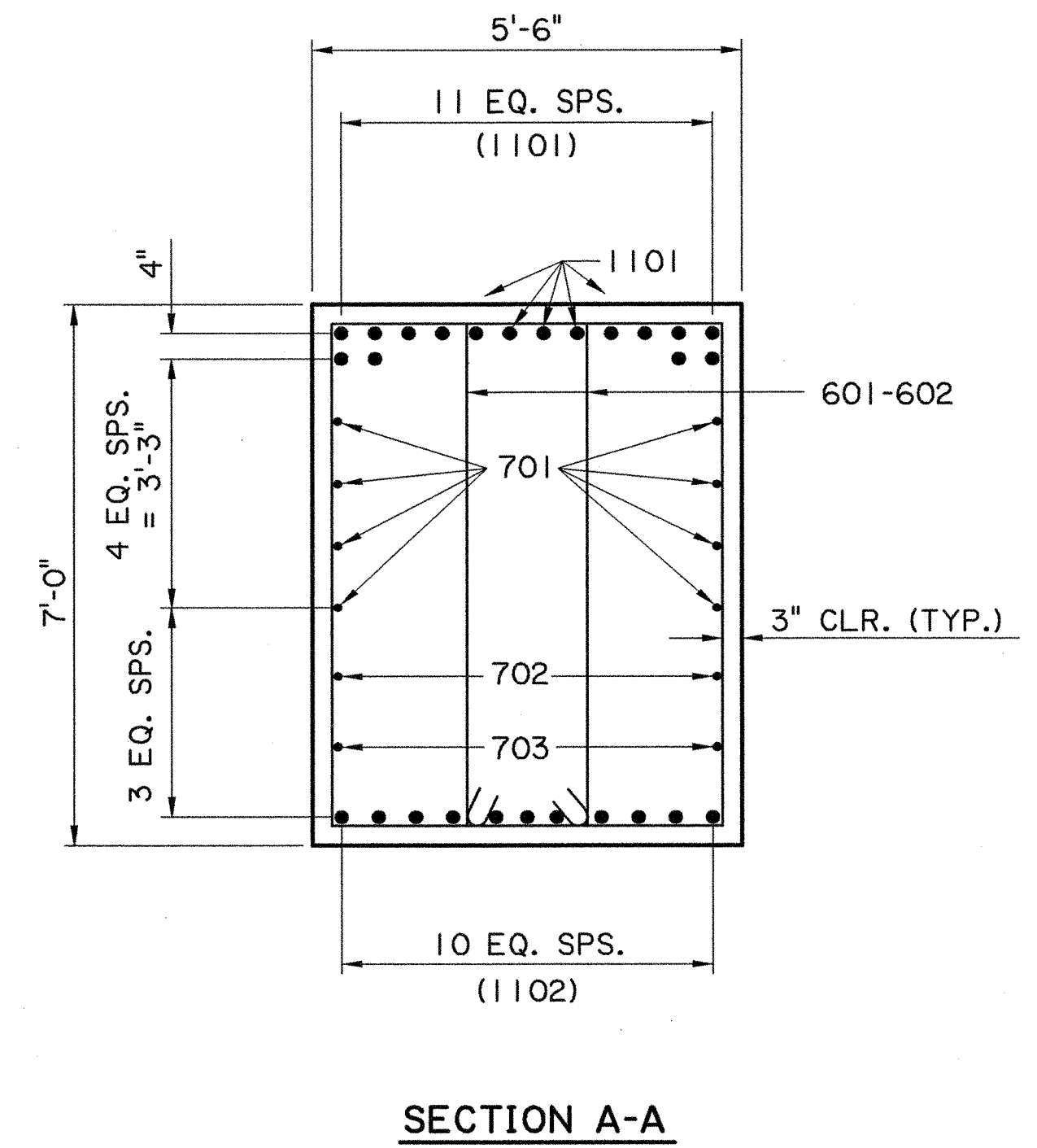
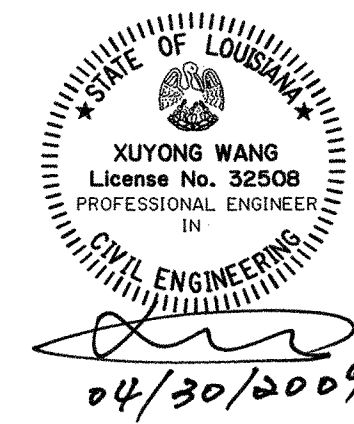
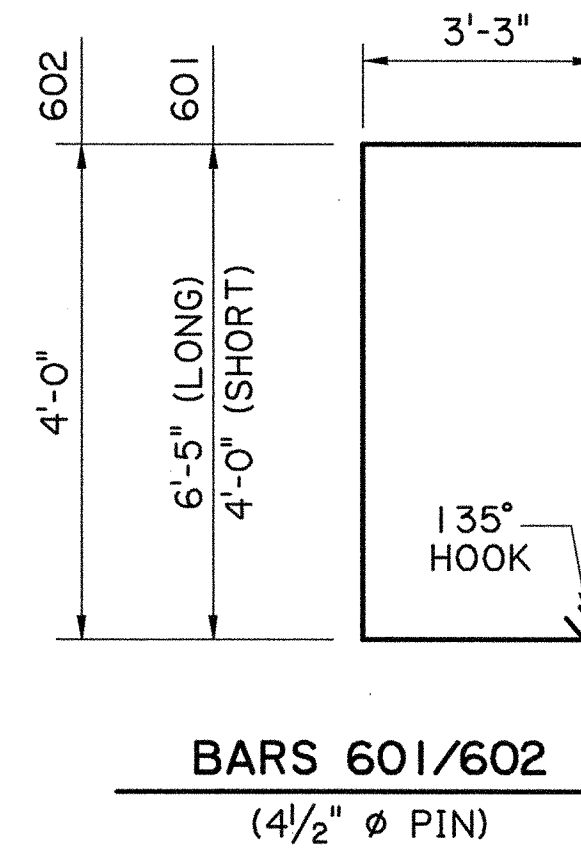
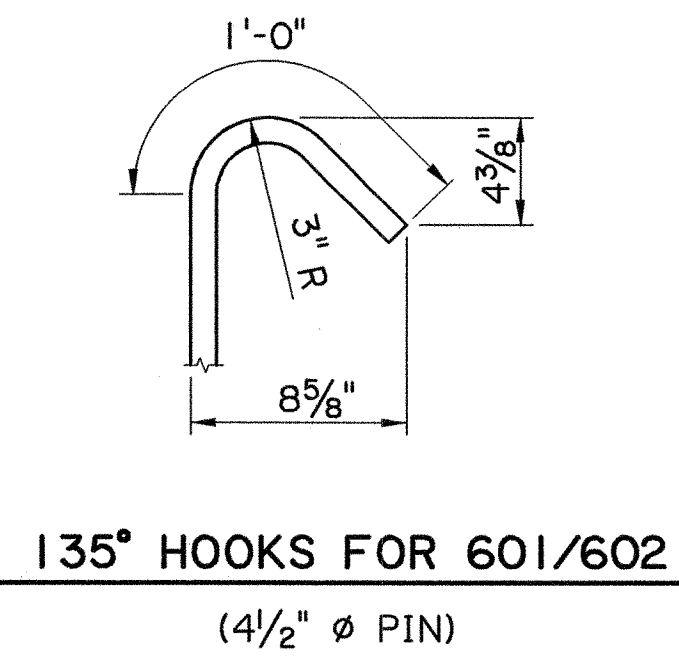
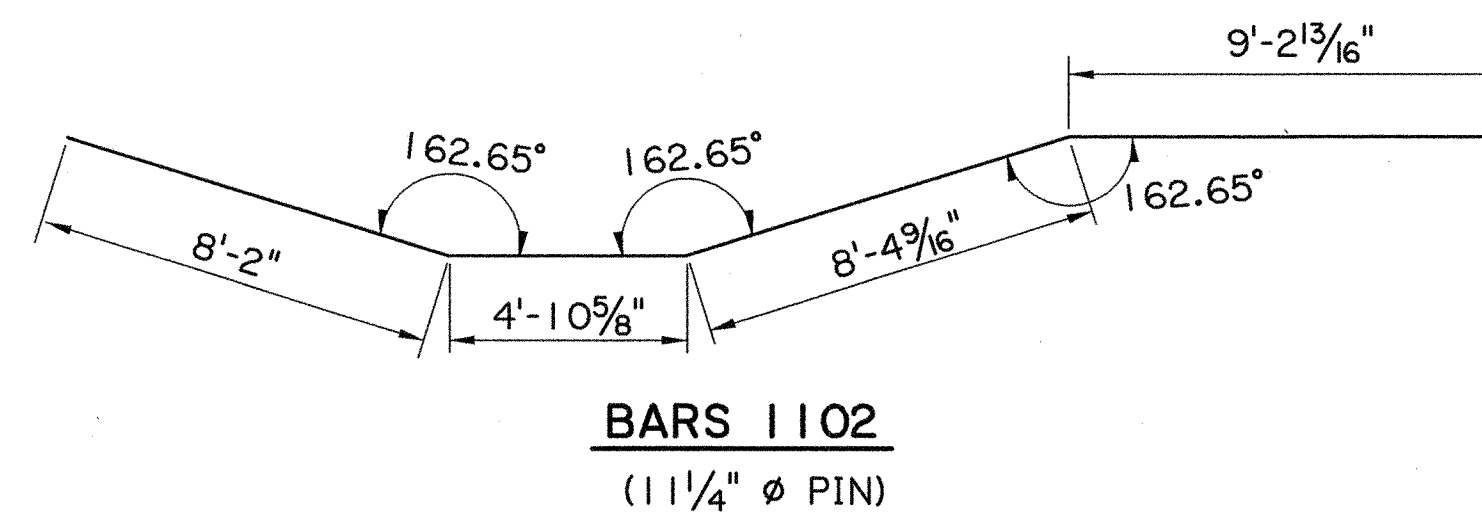
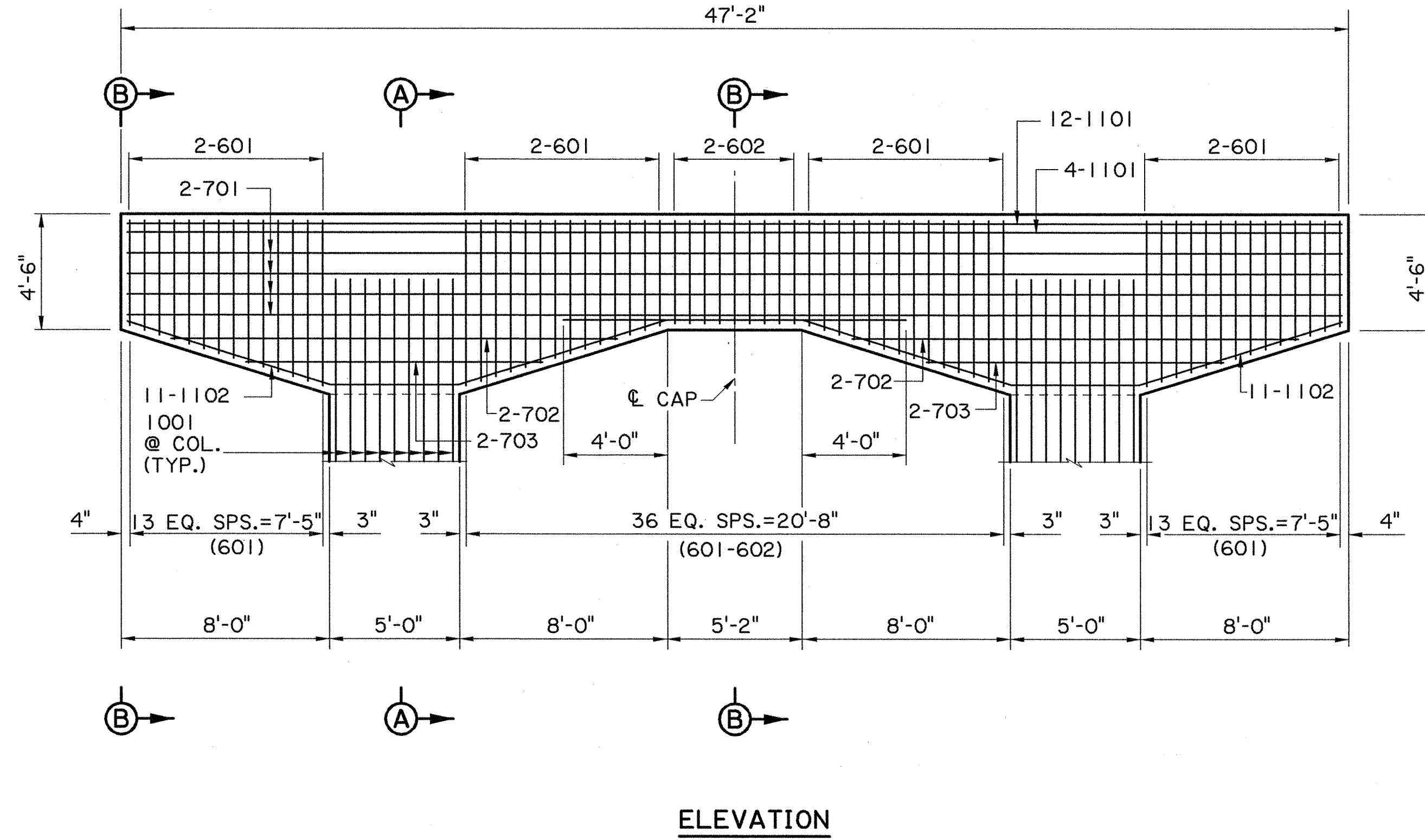
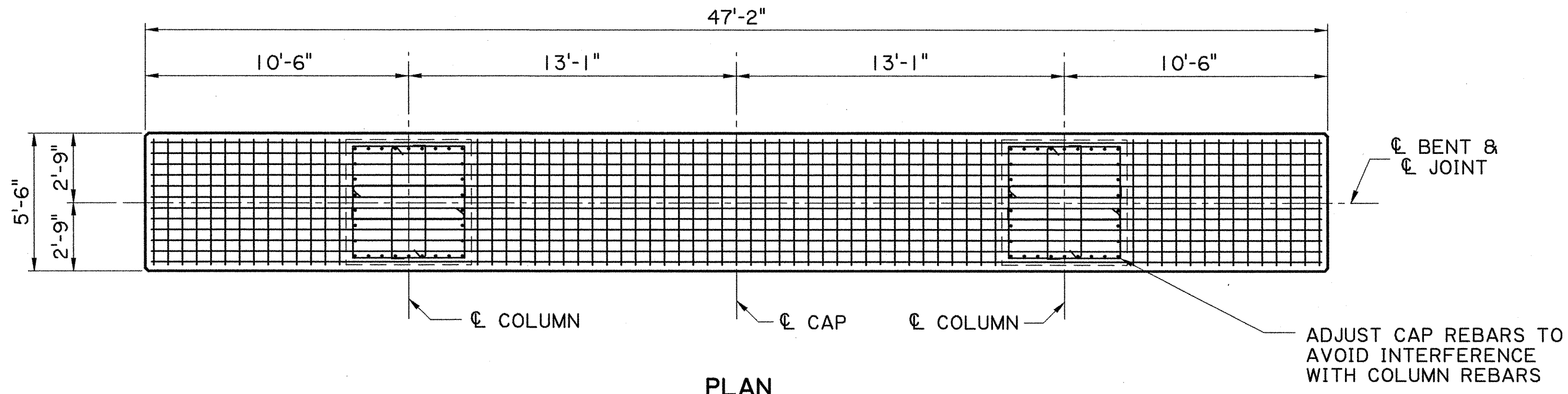


DETAIL A
SCALE: 1/2" = 1'-0"

ESTIMATED QUANTITIES BENT CAP TYPE BTC-1						
BAR NO.	SHORT BAR	VAR. (INS.)	LONG BAR	TOTAL LENGTH	LOCATION	
1101	16		48'-11"	782'-8"	LONGITUDINAL IN CAP	
1102	22		31'-9"	698'-6"	LONGITUDINAL IN CAP	
TOTAL NO. 11 BARS = 1481'-2" =				7869 LBS.		
701	8		48'-11"	391'-4"	LONGITUDINAL IN CAP	
702	4		18'-0"	72'-0"	LONGITUDINAL IN CAP	
703	4		11'-10"	47'-4"	LONGITUDINAL IN CAP	
TOTAL NO. 7 BARS = 510'-8" =				1044 LBS.		
601	128	16'-0"	3.867	20'-10"	STIRRUPS IN CAP	
602	18			16'-0"	STIRRUPS IN CAP	
TOTAL NO. 6 BARS = 2645'-4" =				3973 LBS.		
501	50			10'-0"	STIRRUP IN CAP WALL	
502	24			5'-7"	STIRRUP IN TYPE-3 RISER	
503	30			6'-7"	STIRRUP IN TYPE-BT RISER	
TOTAL NO. 5 BARS = 831'-6" =				867 LBS.		
401	20			1'-11"	TYPE-BT RISER	
402	15			4'-2"	TYPE-BT RISER	
403	25			6'-3"	STIRRUP IN TYPE-BT RISER	
404	9			50'-7"	LONGIT. IN CAP WALL	
405	24			0'-9"	TYPE-3 RISER	
406	12			3'-8"	TYPE-3 RISER	
407	30			4'-1"	STIRRUPS IN TYPE-3 RISER	
TOTAL NO. 4 BARS = 896'-10" =				599 LBS.		
TOTAL DEFORMED REINFORCING STEEL				14 352 LBS.		
CLASS A(HPC) CONCRETE (PIERS)				70.97 CU. YDS.		
MAX. FACTORED PILE LOAD				COMP. = 230 TONS		

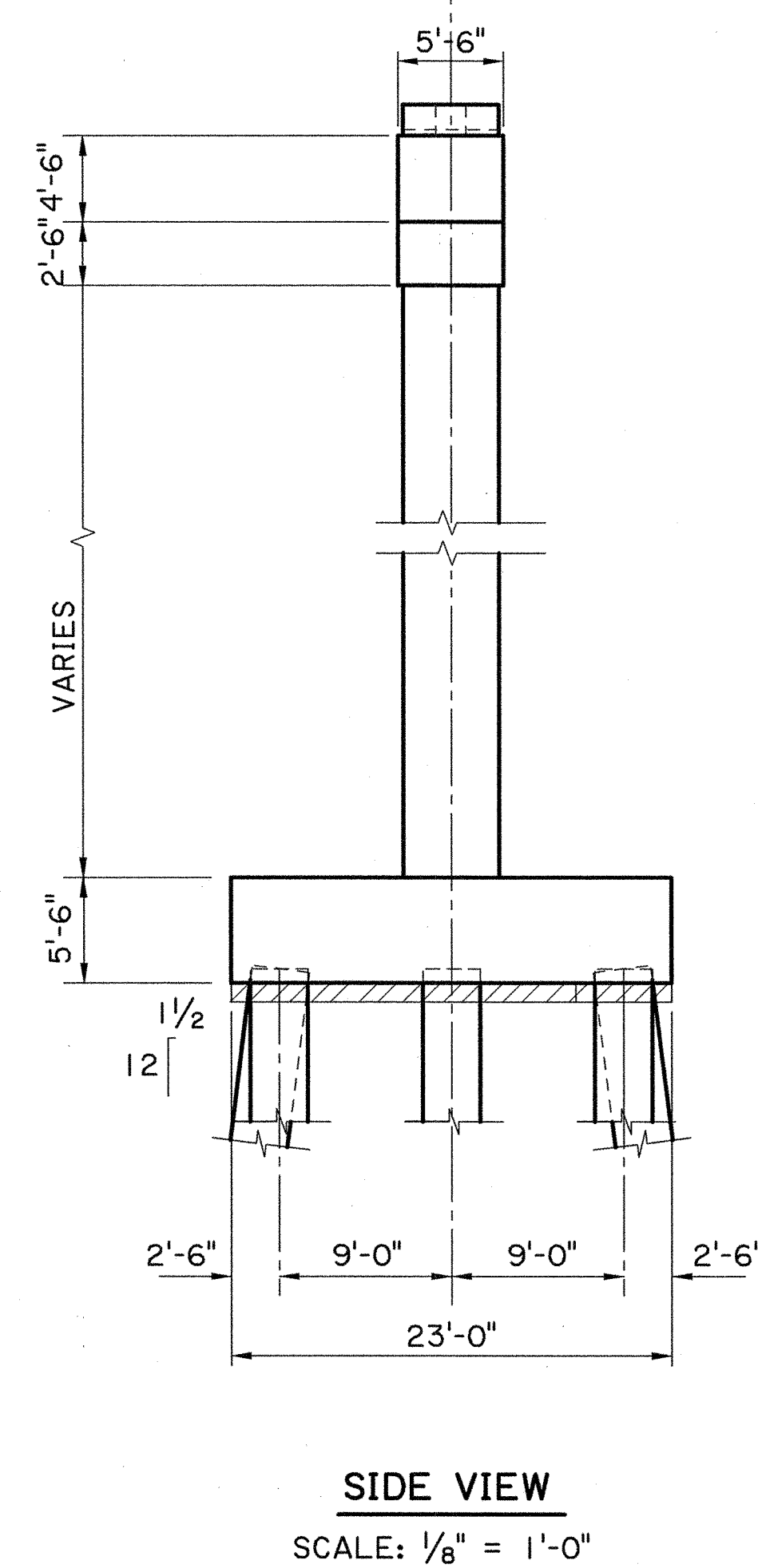
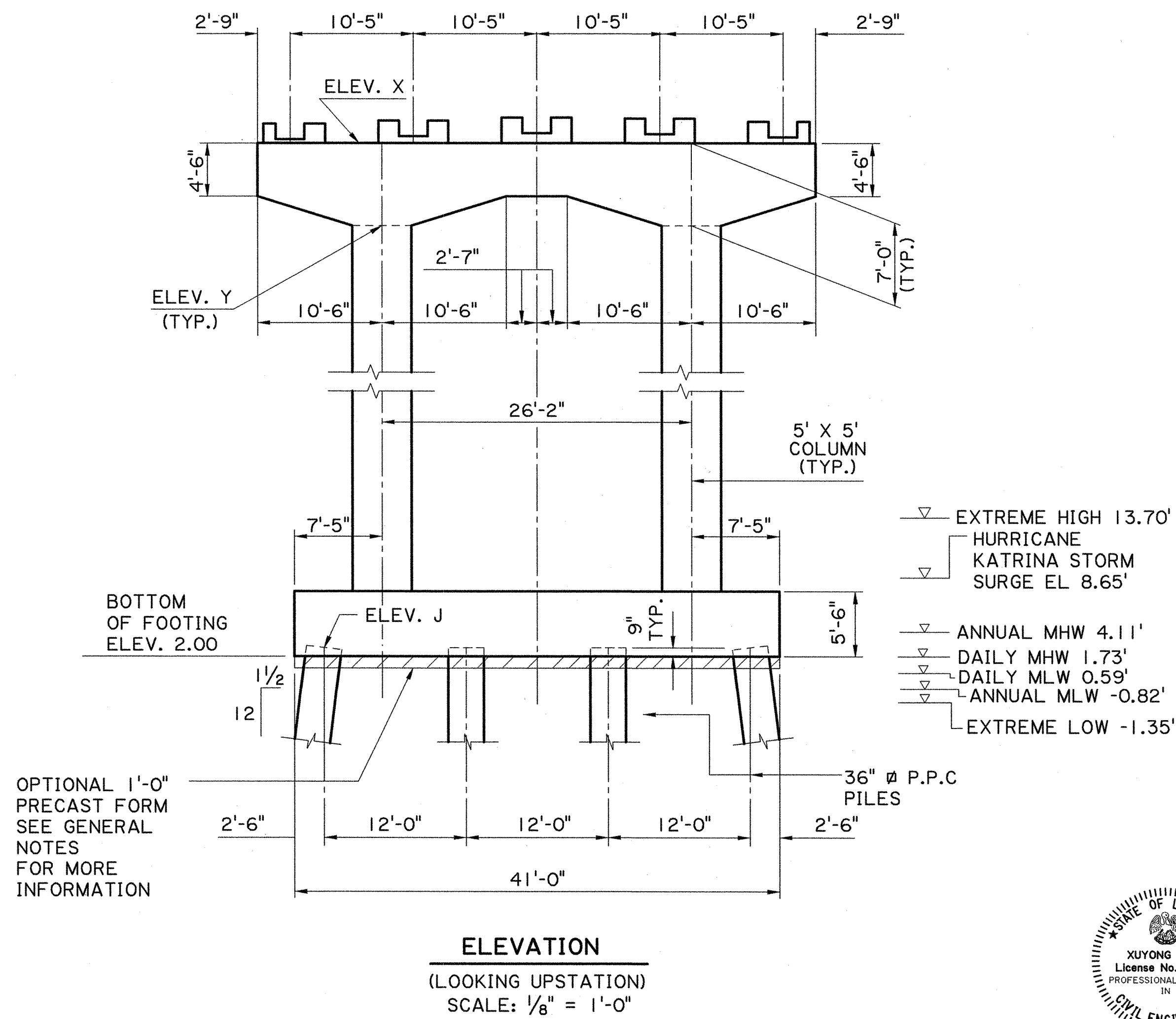
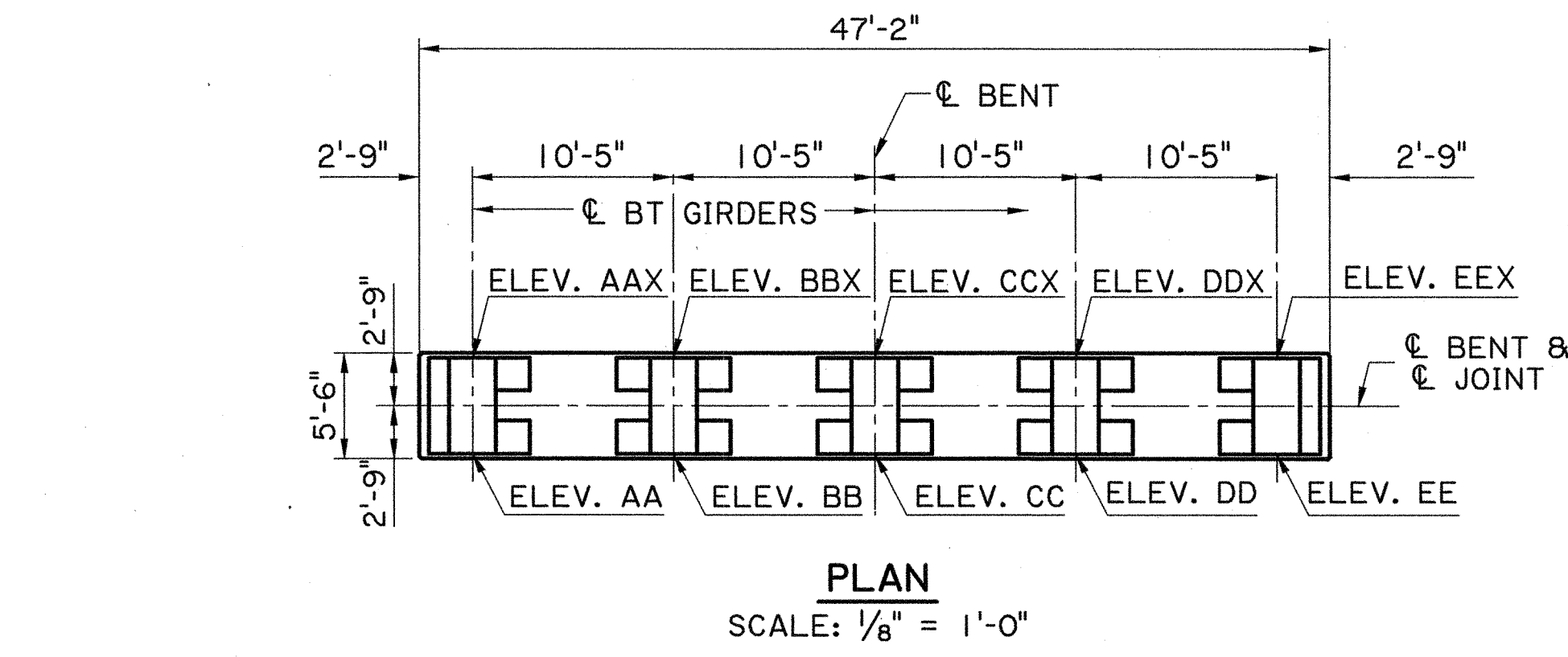
* INCLUDES ONE (1) 1'-8" MIN. LAP SPLICE.

SHEET NUMBER	130								
PROJECT	JEFFERSON	PARISH	JEFFERSON	FEDERAL PROJECT		STATE PROJECT		DATE	NOV. 2007
DESIGNED	X. WANG	CHECKED	B. DELATTE	DETAILED	D. HYMEL	CHECKED	D. BASTION	SHEET	2 OF 2
BRIDGE	CAMINADA BAY BRIDGE	ROUTE	LA 1	DETAILS	BENT TYPE BTC-1 (LAYOUT)	REVISION DESCRIPTION		NO.	
BRIDGE AND STRUCTURAL DESIGN									



SHEET NUMBER	131
DESIGNED	X. WANG
CHECKED	B. DELATTE
PARISH	JEFFERSON
DETAILED	D. HYMEL
FEDERAL PROJECT	
CHECKED	D. BASTION
STATE PROJECT	
DATE	NOV. 2007
SHEET	1 OF 4
NO.	
REVISION DESCRIPTION	
BY	
DATE	
CAMINADA BAY BRIDGE ROUTE LA 1 BENT TYPE BTC-2 TO BTC-4 (CAP)	
BRIDGE AND STRUCTURAL DESIGN	

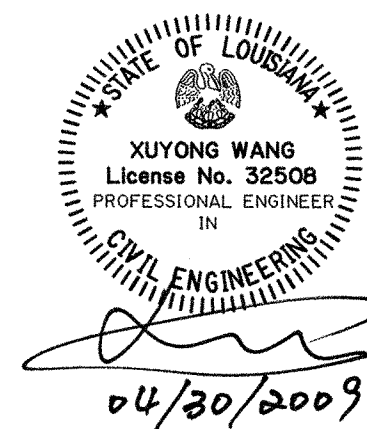
FINAL PLANS



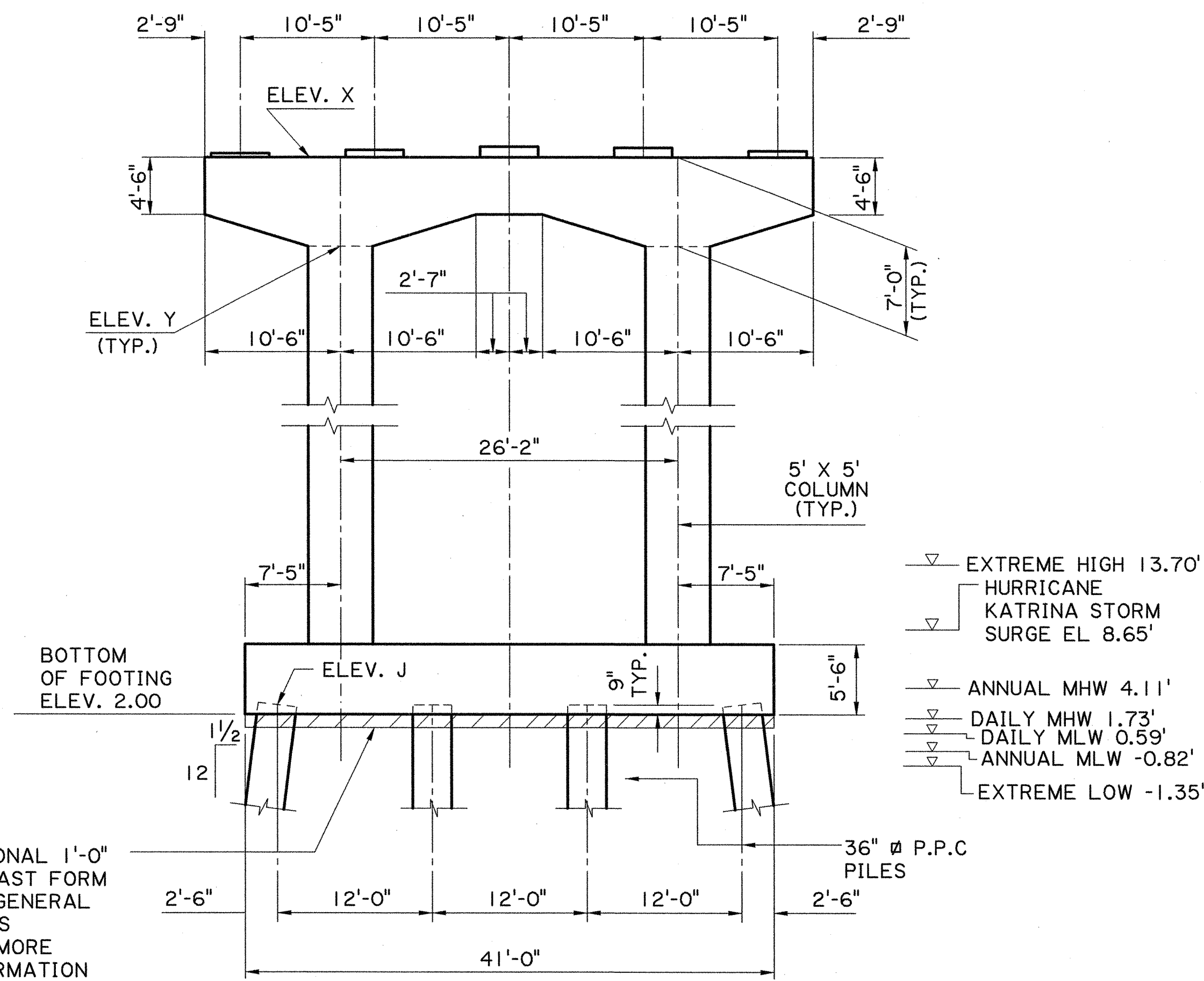
NOTES:

- 1) SEE SHEET 135 FOR BENT & RISER ELEVATIONS.
- 2) SEE SHEET 136 FOR RISER DETAILS.
- 3) SEE SHEET 137 FOR COLUMN DETAILS AND QUANTITIES.
- 4) SEE SHEETS 140-141 FOR FOOTING DETAILS AND QUANTITIES.
- 5) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS AND QUANTITIES.

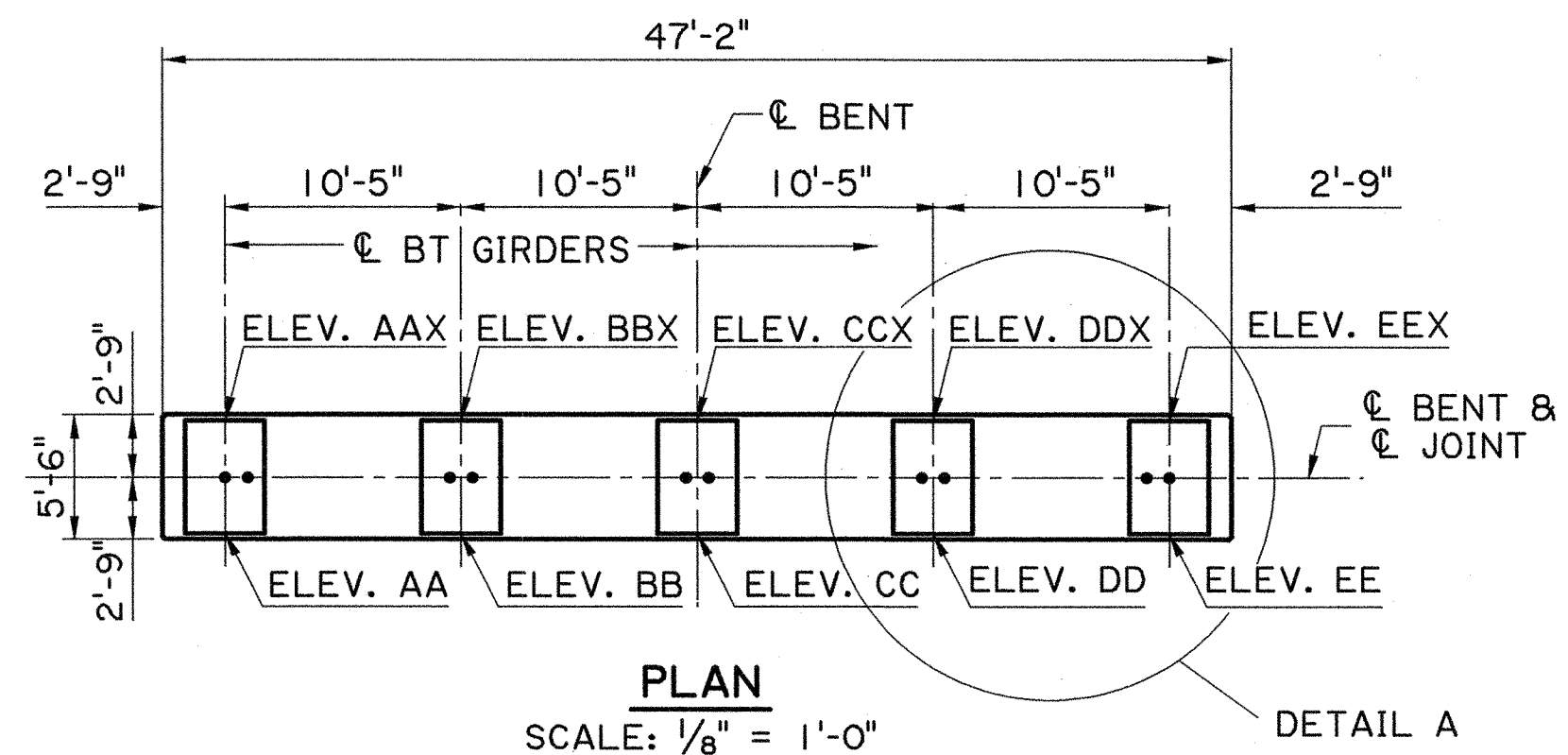
ESTIMATED QUANTITIES BENT CAP TYPE BTC-2						
BAR	NO.	SHORT BAR	VAR. (INS.)	LONG BAR	TOTAL LENGTH	LOCATION
1101	16			46'-8"	746'-8"	LONGITUDINAL IN CAP
1102	22			30'-8"	674'-8"	LONGITUDINAL IN CAP
TOTAL NO. 11 BARS = 1421'-4" =					7552 LBS.	
701	8			46'-8"	373'-4"	LONGITUDINAL IN CAP
702	4			17'-1"	68'-4"	LONGITUDINAL IN CAP
703	4			11'-4"	45'-4"	LONGITUDINAL IN CAP
TOTAL NO. 7 BARS = 487'-0" =					995 LBS.	
601	112	16'-0"	4.462	20'-10"	2062'-8"	STIRRUPS IN CAP
602	18			16'-0"	288'-0"	STIRRUPS IN CAP
TOTAL NO. 6 BARS = 2350'-8" =					3531 LBS.	
504	12			7'-7"	91'-0"	STIRRUPS IN OUTSIDE RISERS
505	32			1'-5"	45'-4"	INSIDE & OUTSIDE RISERS
506	48			8'-3"	396'-0"	INSIDE & OUTSIDE RISERS
TOTAL NO. 5 BARS = 532'-4" =					555 LBS.	
408	4			4'-8"	18'-8"	OUTSIDE RISERS
409	17			8'-2"	138'-10"	INSIDE & OUTSIDE RISERS
411	12			5'-7"	67'-0"	INSIDE RISERS
412	6			2'-1"	12'-6"	INSIDE RISERS
413	8			4'-10"	38'-8"	OUTSIDE RISERS
414	4			3'-1"	12'-4"	OUTSIDE RISERS
TOTAL NO. 4 BARS = 288'-0" =					192 LBS.	
TOTAL DEFORMED REINFORCING STEEL					12825 LBS.	
CLASS A(HPC) CONCRETE (PIERS)					62.08 CU. YDS.	
MAX. FACTORED PILE LOAD					COMP. = 270 TONS	
					TENSION = 50 TONS	



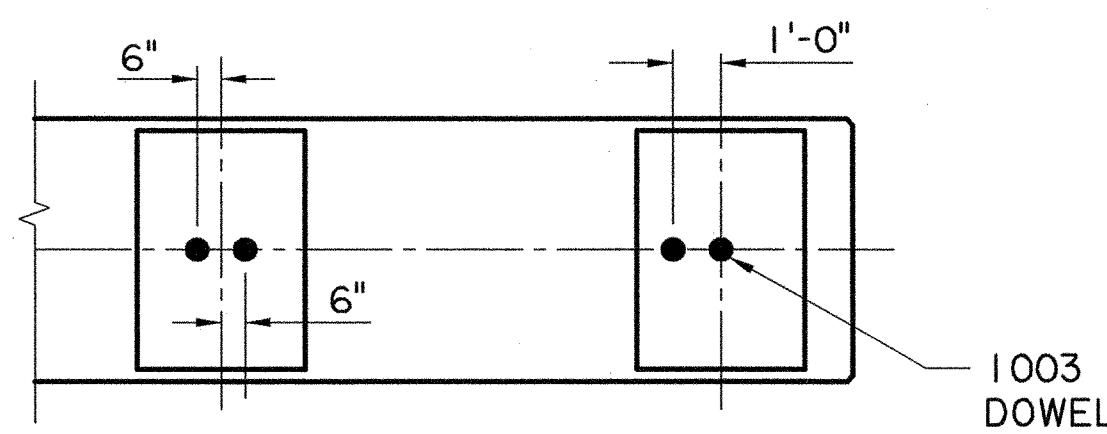
OPTIONAL 1'-0"
PRECAST FORM
SEE GENERAL
NOTES
FOR MORE
INFORMATION



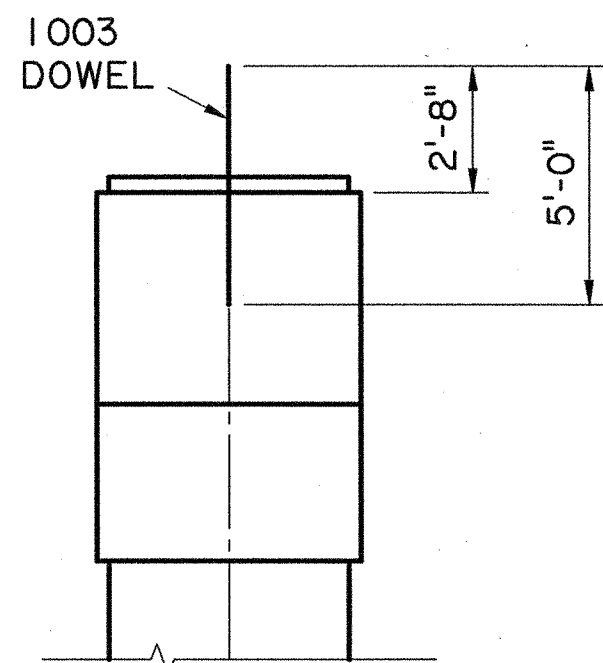
ELEVATION
(LOOKING UPSTATION)
SCALE: 1/8" = 1'-0"



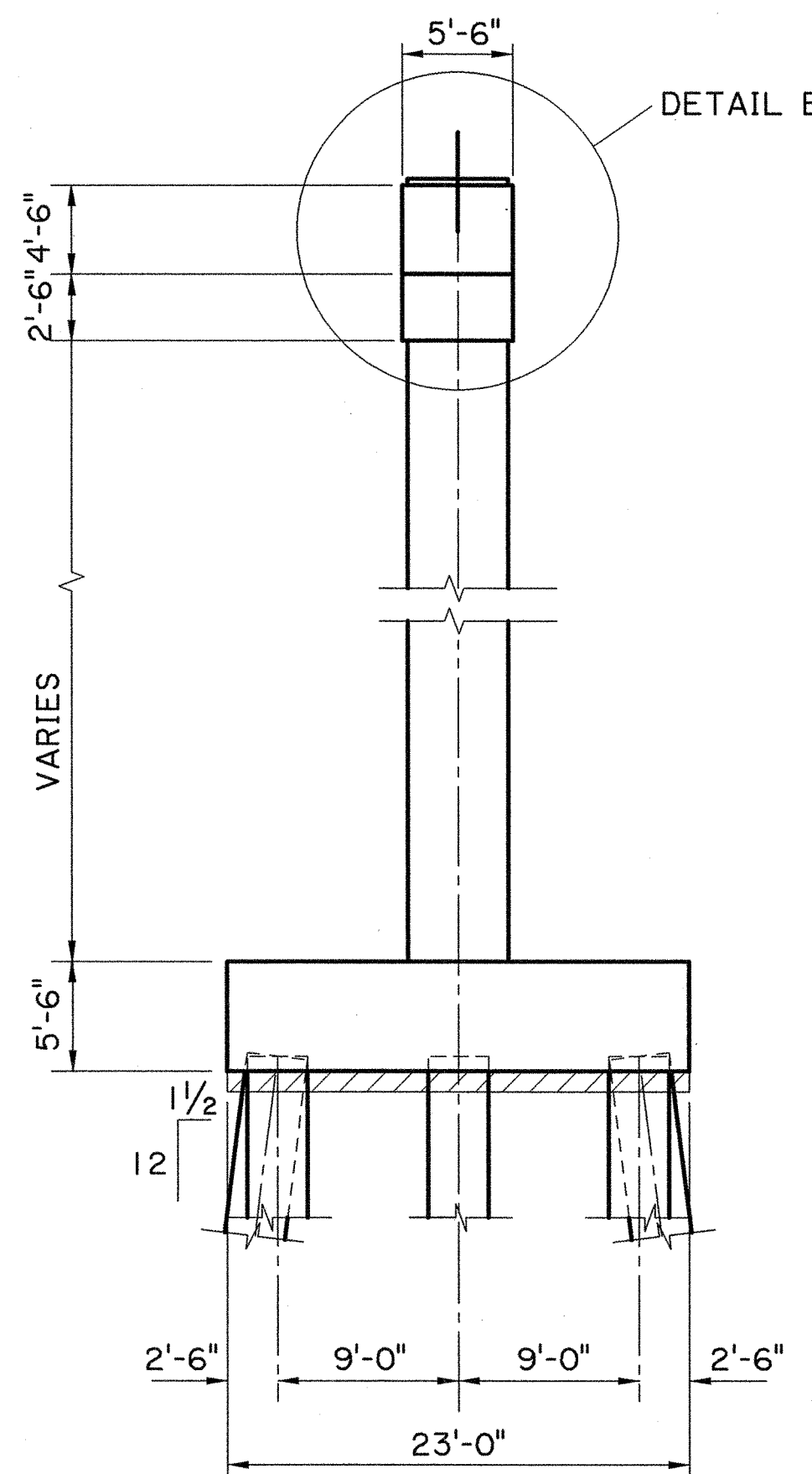
PLAN
SCALE: 1/8" = 1'-0"



DETAIL A
SCALE: 1/4" = 1'-0"



DETAIL B
SCALE: 1/4" = 1'-0"



SIDE VIEW
SCALE: 1/8" = 1'-0"

ESTIMATED QUANTITIES BENT CAP TYPE BTC-3						
BAR	NO.	SHOR T BAR	VAR. (INS.)	LONG BAR	TOTAL LENGTH	LOCATION
1101	16			46'-8"	746'-8"	LONGITUDINAL IN CAP
1102	22			30'-8"	674'-8"	LONGITUDINAL IN CAP
TOTAL NO. 11 BARS = 1421'-4" =					7552 LBS.	
1003	10			5'-0"	50'-0"	DOWELS IN CAP & RISER
TOTAL NO. 10 BARS = 50'-0" =					215 LBS.	
701	8			46'-8"	373'-4"	LONGITUDINAL IN CAP
702	4			17'-1"	68'-4"	LONGITUDINAL IN CAP
703	4			11'-4"	45'-4"	LONGITUDINAL IN CAP
TOTAL NO. 7 BARS = 487'-0" =					995 LBS.	
601	112	16'-0"	4.462	20'-10"	2062'-8"	STIRRUPS IN CAP
602	18			16'-0"	288'-0"	STIRRUPS IN CAP
TOTAL NO. 6 BARS = 2350'-8" =					3531 LBS.	
409	25			8'-2"	204'-2"	STIRRUPS IN RISER
410	30			3'-2"	95'-0"	TRANSVERSE IN RISER
TOTAL NO. 4 BARS = 299'-2" =					200 LBS.	
TOTAL DEFORMED REINFORCING STEEL					12 493 LBS.	
CLASS A(HPC) CONCRETE (PIERS)					59.01 CU. YDS.	
MAX. FACTORED PILE LOAD					COMP. = 270 TONS	
					TENSION = 50 TONS	

- NOTES:**
- 1) SEE SHEET 135 FOR BENT & RISER ELEVATIONS.
 - 2) SEE SHEET 136 FOR RISER DETAILS.
 - 3) SEE SHEET 137 FOR COLUMN DETAILS AND QUANTITIES.
 - 4) SEE SHEETS 140-141 FOR FOOTING DETAILS AND QUANTITIES.
 - 5) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS AND QUANTITIES.

XUYONG WANG
License No. 32508
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
04/30/2009

SHEET NUMBER 133

PARISH: JEFFERSON

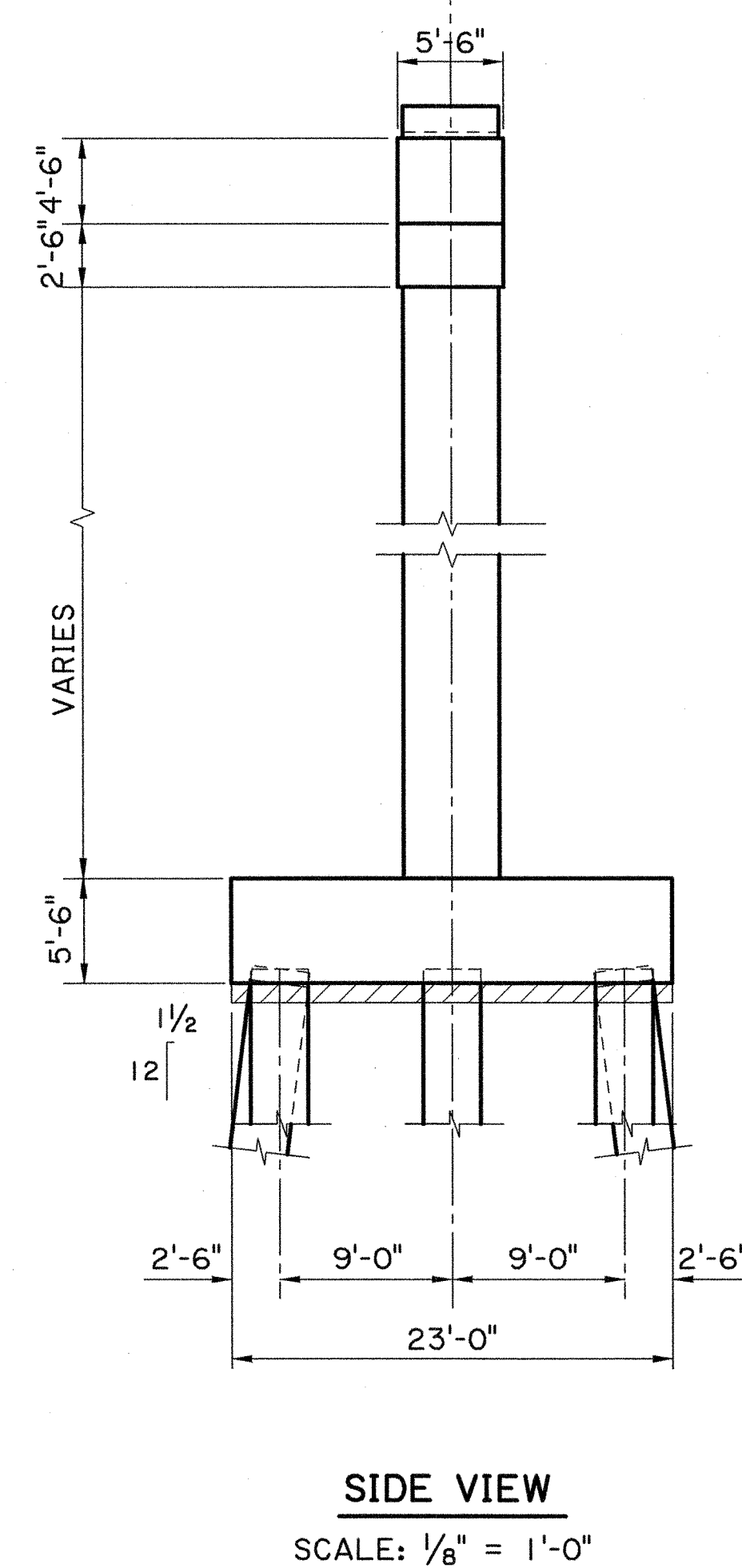
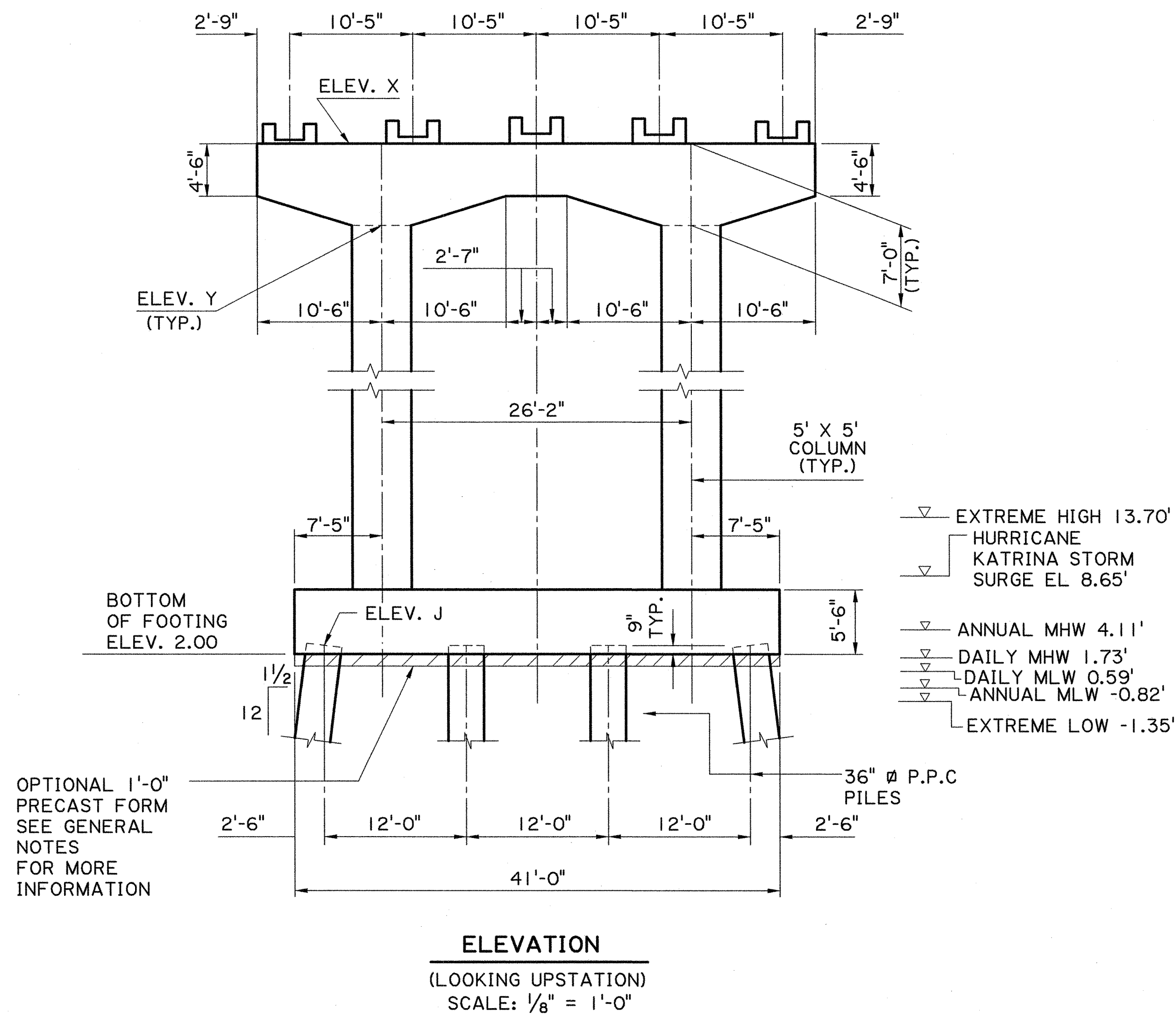
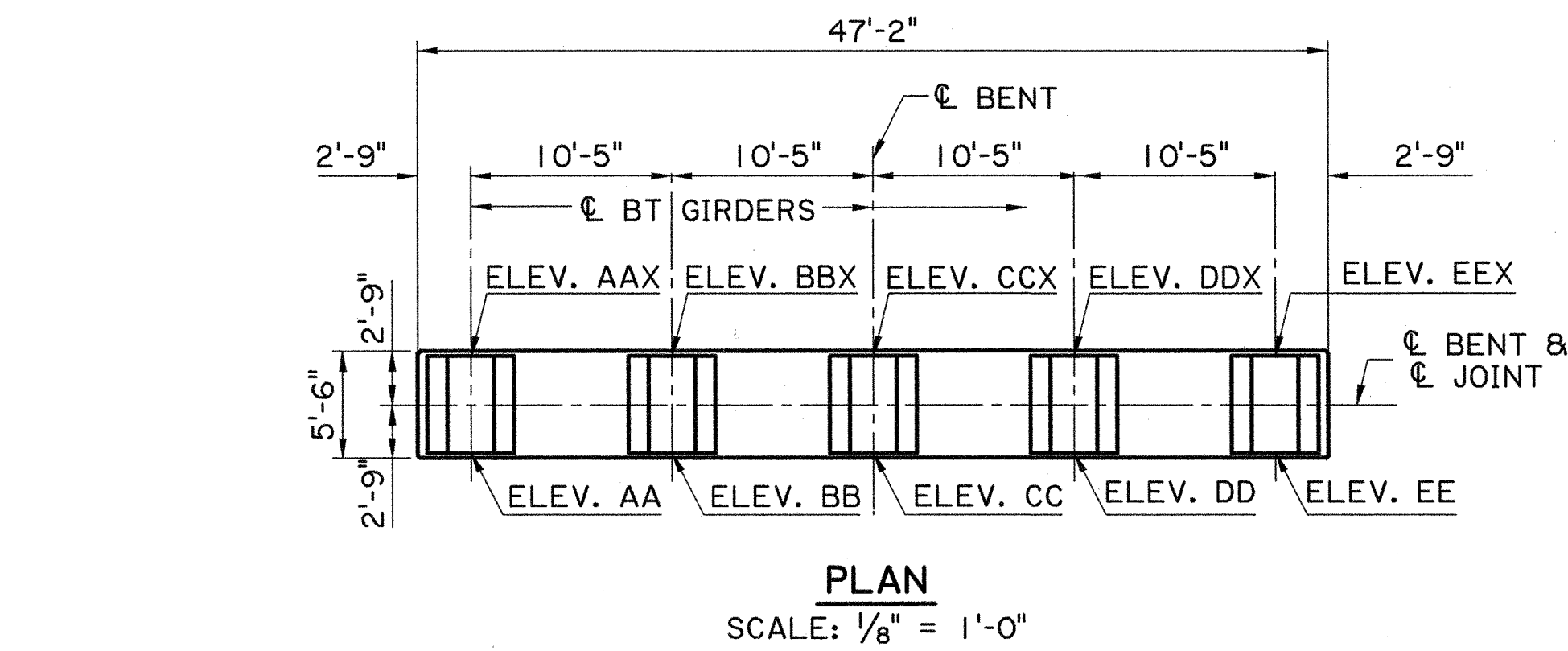
DESIGNED BY: X. WANG
CHECKED BY: B. DELATTE
DATE: NOV. 2007

FEDERAL PROJECT: D. HAMEL
STATE PROJECT: D. BASTION
SHEET: 3 OF 4

REVISION DESCRIPTION

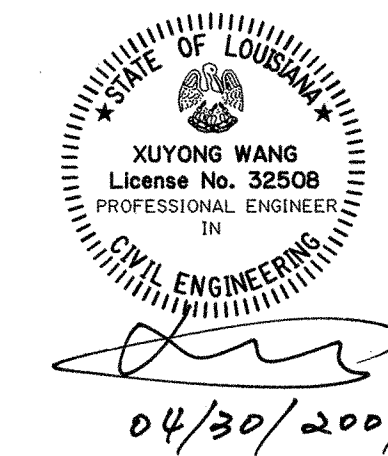
CAMINADA BAY BRIDGE
ROUTE LA 1
BENT TYPE BTC-3 (LAYOUT)

BRIDGE AND STRUCTURAL DESIGN



- NOTES:**
- 1) SEE SHEET 135 FOR BENT & RISER ELEVATIONS.
 - 2) SEE SHEET 136 FOR RISER DETAILS.
 - 3) SEE SHEET 137 FOR COLUMN DETAILS AND QUANTITIES.
 - 4) SEE SHEETS 140-141 FOR FOOTING DETAILS AND QUANTITIES.
 - 5) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS AND QUANTITIES.

ESTIMATED QUANTITIES BENT CAP TYPE BTC-4						
BAR NO.	NO.	SHORT BAR	VAR. (INS.)	LONG BAR	TOTAL LENGTH	LOCATION
1101	16			46'-8"	746'-8"	LONGITUDINAL IN CAP
1102	22			30'-8"	674'-8"	LONGITUDINAL IN CAP
TOTAL NO. 11 BARS = 1421'-4" = 7552 LBS.						
701	8			46'-8"	373'-4"	LONGITUDINAL IN CAP
702	4			17'-1"	68'-4"	LONGITUDINAL IN CAP
703	4			11'-4"	45'-4"	LONGITUDINAL IN CAP
TOTAL NO. 7 BARS = 487'-0" = 995 LBS.						
601	112	16'-0"	4.462	20'-10"	2062'-8"	STIRRUPS IN CAP
602	18			16'-0"	288'-0"	STIRRUPS IN CAP
TOTAL NO. 6 BARS = 2350'-8" = 3531 LBS.						
504	60			7'-7"	455'-0"	STIRRUPS IN RISER
TOTAL NO. 5 BARS = 455'-0" = 475 LBS.						
408	20			4'-8"	93'-4"	TRANSVERSE IN RISER
409	25			8'-2"	204'-2"	STIRRUPS IN RISER
415	30			4'-2"	125'-0"	LONGITUDINAL IN RISER
TOTAL NO. 4 BARS = 422'-6" = 282 LBS.						
TOTAL DEFORMED REINFORCING STEEL						12835 LBS.
CLASS A(HPC) CONCRETE (PIERS)						61.59 CU. YDS.
MAX. FACTORED PILE LOAD						COMP. = 270 TONS TENSION = 50 TONS



SHEET NUMBER 134

PARISH PROJECT STATE PROJECT
JEFFERSON

DESIGNED BY X. WANG
CHECKED BY B. DELATTE
DATE NOV. 2007
SHEET 4 OF 4

REVISION DESCRIPTION

NO. DATE BY

STATE OF LOUISIANA
XUYONG WANG
License No. 32508
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
04/30/2009

CAMINADA BAY BRIDGE
ROUTE LA 1
BRIDGE DETAILS BENT TYPE BTC-4 (LAYOUT)

BRIDGE AND STRUCTURAL DESIGN

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FINAL PLANS

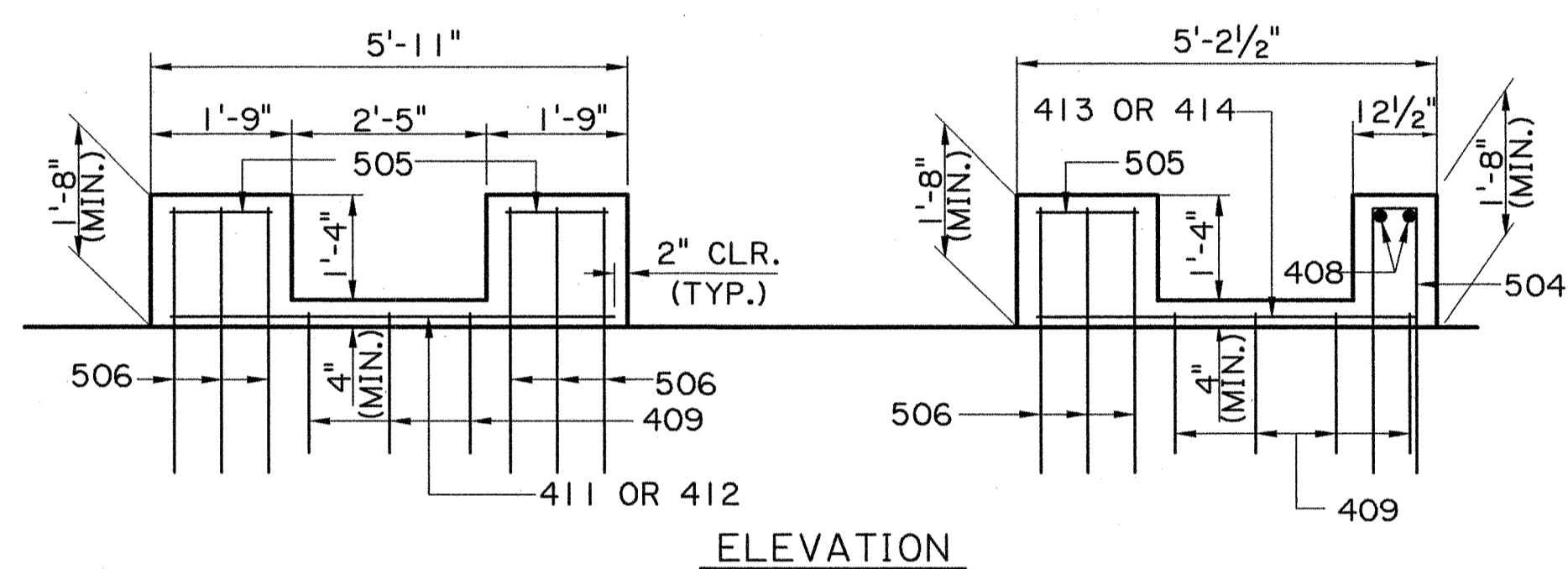
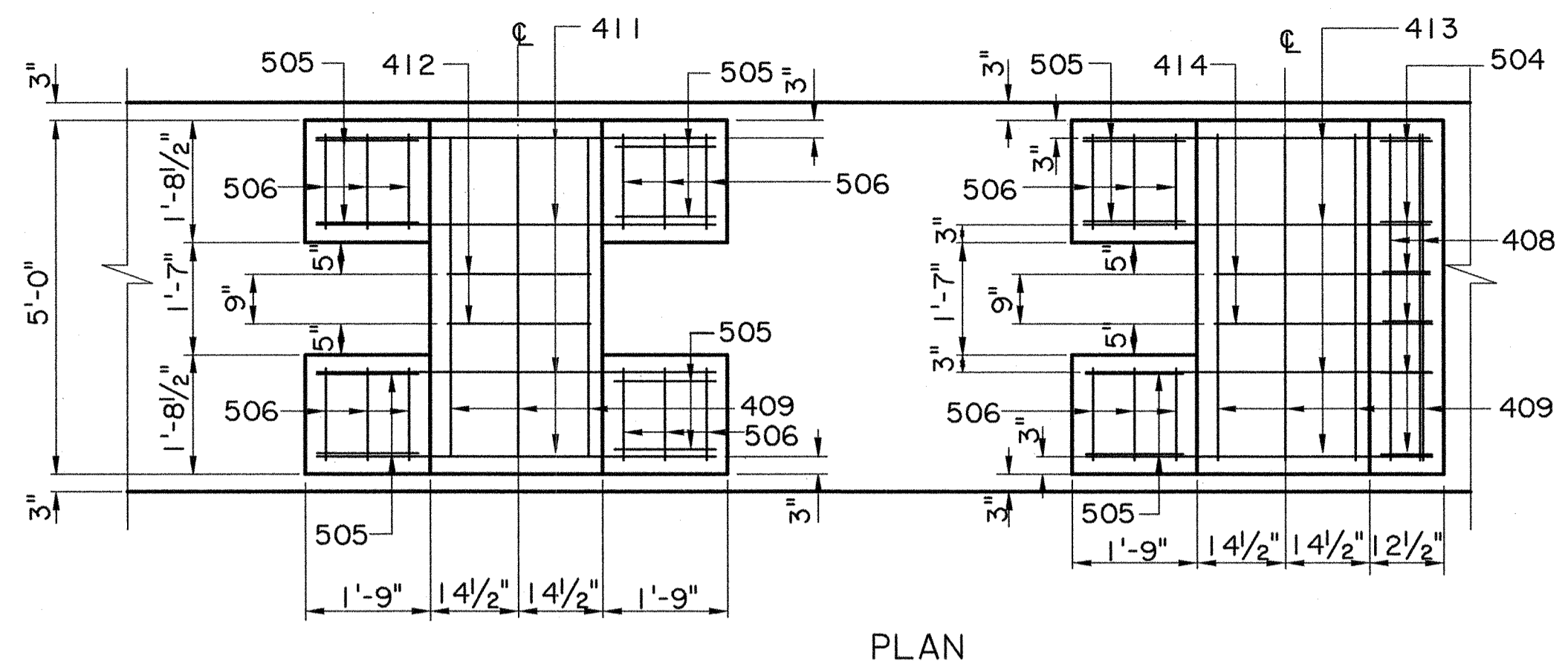
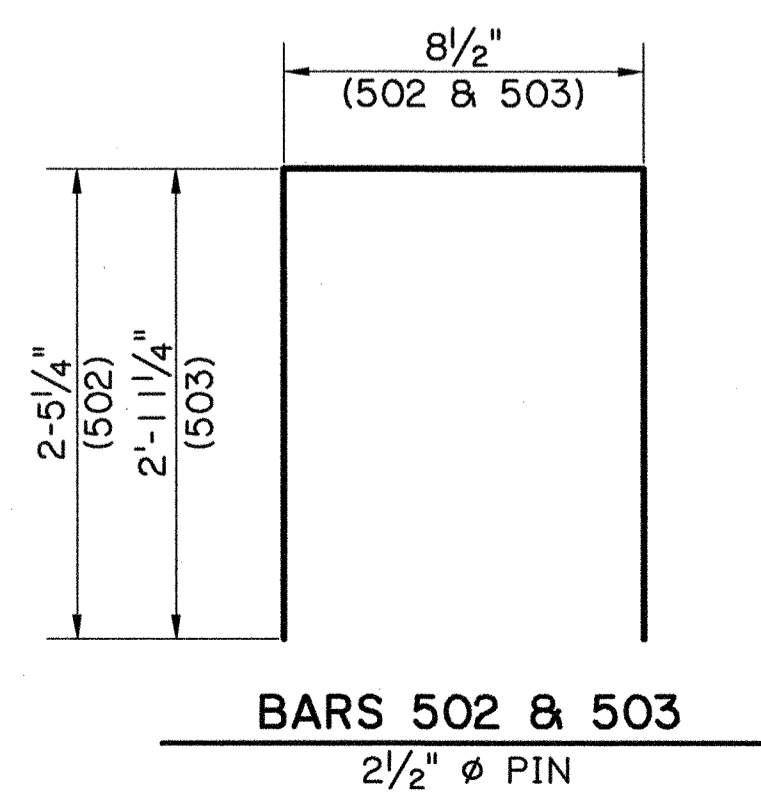
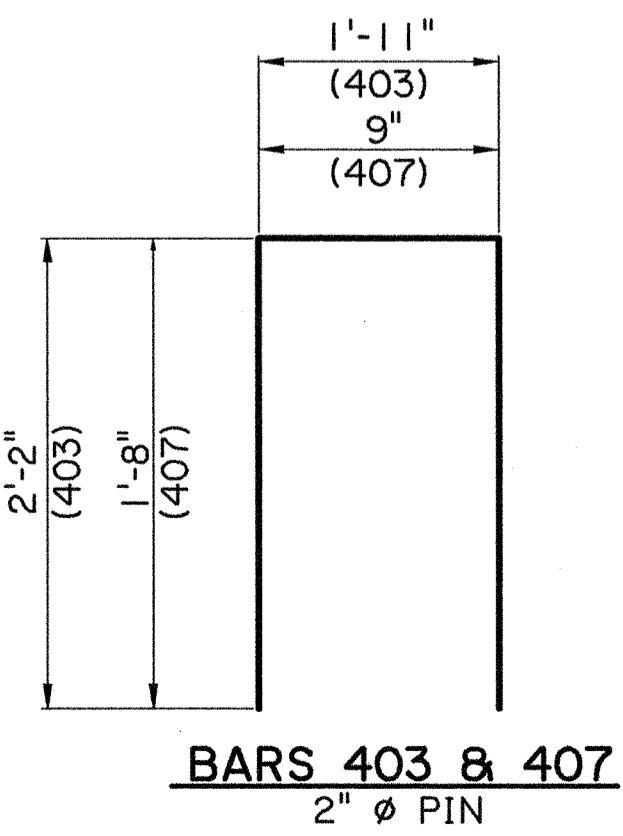
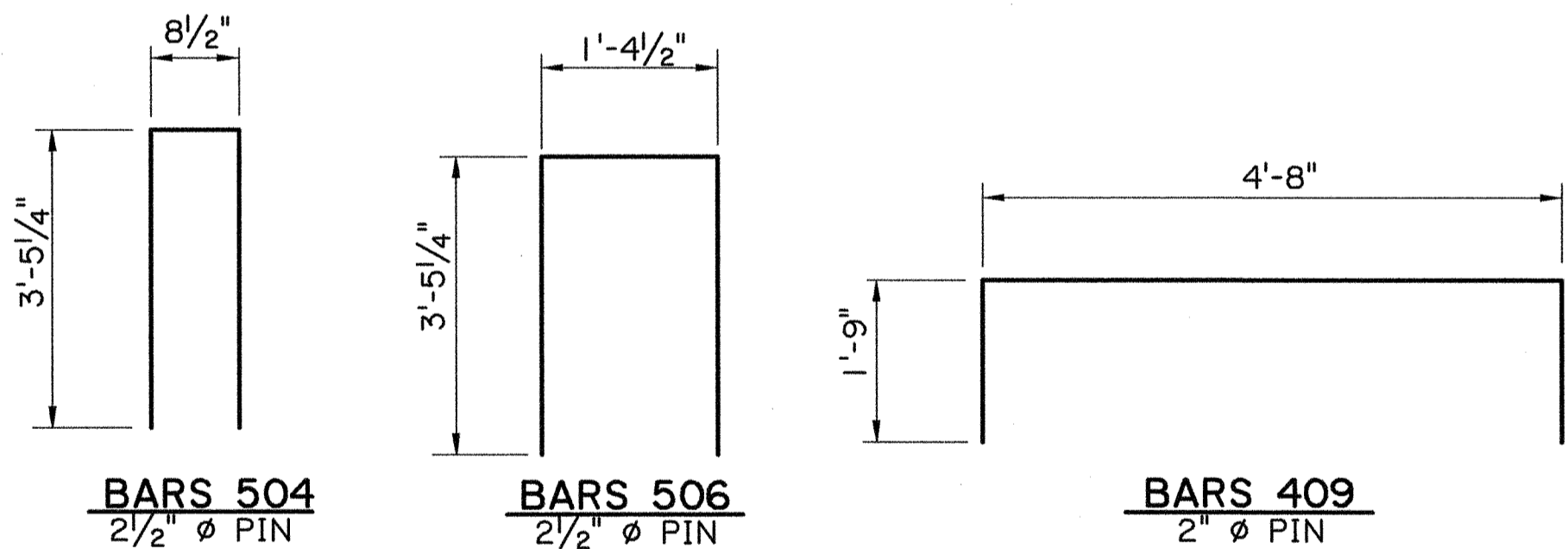
ELEVATION TABLE																												
BENT	BENT TYPE	STATION	CAP ELEVATIONS				RISER ELEVATIONS																					
			X	X1	Y	Y1	A	AX	B	BX	C	CX	D	DX	E	EX	F	FX	AA	AAX	BB	BBX	CC	CCX	DD	DDX	EE	EEX
1	SL-1	99+75.00	7.797	7.939	6.460	7.205																						
2	SL-2	100+05.00	8.406	8.547	7.068	7.814																						
3	SL-2	100+35.00	9.038	9.179	7.758	8.479																						
4	SL-2	100+65.00	9.660	9.801	8.589	9.201																						
5	SL-2	100+95.00	10.305	10.447	9.432	9.981																						
6	SL-2	101+25.00	11.006	11.148	10.269	10.817																						
7	SL-2	101+55.00	11.761	11.903	11.157	11.705																						
8	SL-2	101+85.00	12.527	12.669	12.057	12.605																						
9	SL-2	102+15.00	13.294	13.435	12.957	13.505																						
10	SL-2	102+45.00	14.060	14.201	13.857	14.405																						
11	SL-3	102+75.00	11.230	14.105		14.007	11.617	11.667	11.779	11.829	11.922	11.971	12.017	12.066	11.790	11.839	11.563	11.612										
12	III-G-1	103+50.00	13.319				13.652	13.752	13.849	13.949	14.062	14.162	14.219	14.319	13.992	14.092	13.765	13.865										
13	III-G-2	104+25.00	15.665				15.999	16.099	16.203	16.303	16.430	16.530	16.599	16.699	16.372	16.472	16.145	16.245										
14	III-G-1	105+00.00	17.785				18.118	18.218	18.323	18.423	18.550	18.650	18.719	18.819	18.492	18.592	18.265	18.365										
15	III-G-1	105+75.00	20.035				20.368	20.468	20.573	20.673	20.800	20.900	20.969	21.069	20.742	20.842	20.515	20.615										
16	III-G-3	106+50.00	22.415				22.749	22.849	22.953	23.053	23.180	23.280	23.349	23.449	23.122	23.222	22.895	22.995										
17	III-G-4	107+25.00	24.535				24.868	24.968	25.073	25.173	25.300	25.400	25.469	25.569	25.242	25.342	25.015	25.115										
18	III-G-4	108+00.00	26.785				27.118	27.218	27.323	27.423	27.550	27.650	27.719	27.819	27.492	27.592	27.265	27.365										
19	III-G-3	108+75.00	29.165				29.499	29.599	29.703	29.803	29.930	30.030	30.099	30.199	29.872	29.972	29.645	29.745										
20	III-G-4	109+50.00	31.285				31.618	31.718	31.823	31.923	32.050	32.150	32.219	32.319	31.992	32.092	31.765	31.865										
21	BTC-1	110+25.00	33.546	30.499	23.499		33.880	33.925	34.084	34.129	34.311	34.356	34.480	34.525	34.253	34.298	34.026	34.071	30.832	30.900	31.080	31.147	31.340	31.407	31.248	31.316	30.988	31.055
22	BTC-2	111+60.00	34.476		27.476														34.810	34.960	35.057	35.207	35.317	35.467	35.226	35.376	34.965	35.115
23	BTC-3	112+95.00	38.714		31.714														39.047	39.197	39.295	39.445	39.555	39.705	39.463	39.613	39.203	39.353
24	BTC-2	114+30.00	42.577		35.577														42.911	43.050	43.158	43.297	43.418	43.558	43.327	43.466	43.066	43.206
25	BTC-4	115+65.00	46.068		39.068														46.401	46.508	46.648	46.755	46.909	47.015	46.817	46.924	46.557	46.663
26	BTC-2	117+00.00	48.368		41.368														48.701	48.762	48.948	49.009	49.209	49.270	49.117	49.178	48.857	48.917
27	BTC-3	118+50.00	49.699		42.699														50.033	50.047	50.280	50.294	50.540	50.554	50.449	50.463	50.188	50.202
28	BTC-4	119+85.00	49.243		42.243														49.608	49.577	49.856	49.824	50.116	50.084	50.024	49.993	49.764	49.732
29	BTC-2	121+20.00	47.477		40.477														47.887	47.810	48.134	48.058	48.394	48.318	48.303	48.226	48.042	47.966
30	BTC-2	122+55.00	45.073		38.073														45.525	45.406	45.773	45.653	46.033	45.914	45.942	45.822	45.681	45.562
31	BTC-3	123+90.00	41.462		34.462														41.941	41.795	42.188	42.043	42.448	42.303	42.357	42.211	42.096	41.951
32	BTC-2	125+25.00	37.224		30.224														37.708	37.558	37.955	37.805	38.215	38.065	38.124	37.974	37.863	37.713
33	BTC-2	126+60.00	32.893		25.893														33.376	33.226	33.624	33.474	33.884	33.734	33.792	33.642	33.532	33.382
34	BTC-1	127+95.00	32.244	29.197	22.197		32.578	32.610	32.782	32.815	33.009	33.042	33.178	33.211	32.951	32.984	32.724	32.756	29.530	29.598	29.778	29.845	30.038	30.105	29.946	30.014	29.686	29.753
35	III-G-3	128+70.00	30.113				30.547	30.447	30.751	30.651	30.978	30.878	31.147	31.047	30.920	30.820	30.693	30.593										
36	III-G-4	129+45.00	27.733				28.166	28.066	28.371	28.271	28.598	28.498	28.767	28.667	28.540	28.440	28.313	28.213										
37	III-G-4	130+20.00	25.483				25.916	25.816	26.121	26.021	26.348	26.248	26.517	26.417	26.290	26.190	26.063	25.963										
38	III-G-3	130+95.00	23.363				23.797	23.697	24.001	23.901	24.228	24.128	24.397	24.297	24.170	24.070	23.943	23.843										
39	III-G-4	131+70.00	20.983				21.416	21.316	21.621	21.521	21.848	21.748	22.017	21.917	21.790	21.690	21.563	21.463										
40	III-G-1	132+45.00	18.733				19.166	19.066	19.371	19.271	19.598	19.498	19.767	19.667	19.540	19.440	19.313	19.213										
41	III-G-2	133+20.00	16.613				17.047	16.947	17.251	17.151	17.478	17.378	17.647	17.547	17.420	17.320	17.193	17.093										
42	III-G-1	133+95.00	14.233				14.666	14.566	14.871	14.771	15.098	14.998	15.267	15.167	15.040	14.940	14.813	14.713										
43	SL-3	134+70.00	12.031	14.787		14.955	12.365	12.414	12.569	12.619	12.796	12.846	12.965	13.014	12.738	12.787	12.511	12.560										
44	SL-2	135+00.00	14.672	14.814	14.805	15.353																						
45	SL-2	135+30.00	13.772	13.914	13.905	14.453																						
46	SL-2	135+60.00	12.872	13.014	13.038	13.553																						
47	SL-2	135+90.00	11.972	12.114	12.235	12.653																						
48	SL-4	136+20.00	10.287	10.978	10.714	10.990																						
49	SL-2	136+50.00	10.172	10.314	10.695	10.853																						
50	SL-2	136+80.00	9.278	9.420	9.930	9.959																						
51	SL-2	137+10.00	8.431	8.573	9.212	9.113																						
52	SL-2	137+40.00	7.641	7.782	8.551	8.322																						
53	SL-4	137+70.00	6.120	6.812	7.195	6.853																						
54	SL-2	138+00.00	6.217	6.358	7.395	6.908																						
55	SL-2	138+30.00	5.527	5.669	6.902	6.284																						
56	SL-2	138+60.00	4.839	4.981	6.464	5.717																						
57	SL-2	138+90.00	4.232	4.374	6.048	5.205																						
58	SL-5	139+20.00	2.852	3.475	4.875	5.502																						

SHEET NUMBER	135	DESIGNED BY	B. DELATTE	CHECKED BY	D. BASTION
PARISH	JEFFERSON	DATE	NO		

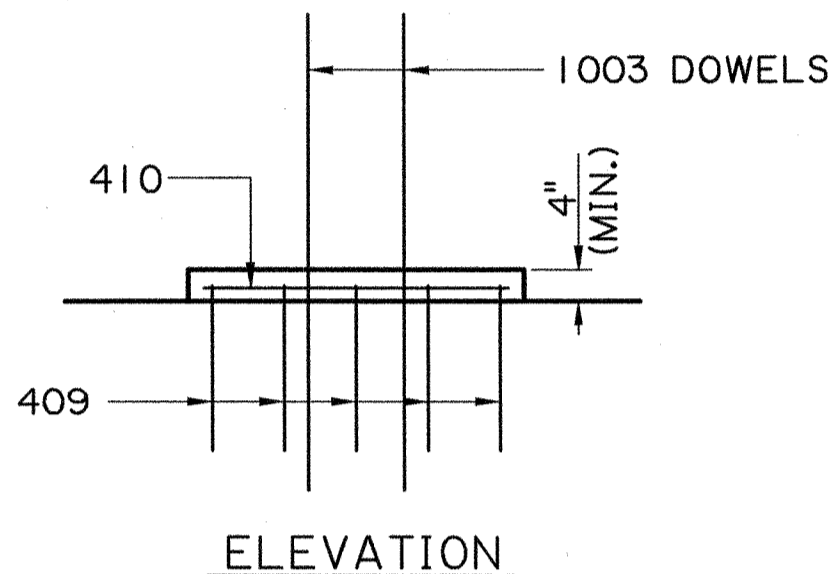
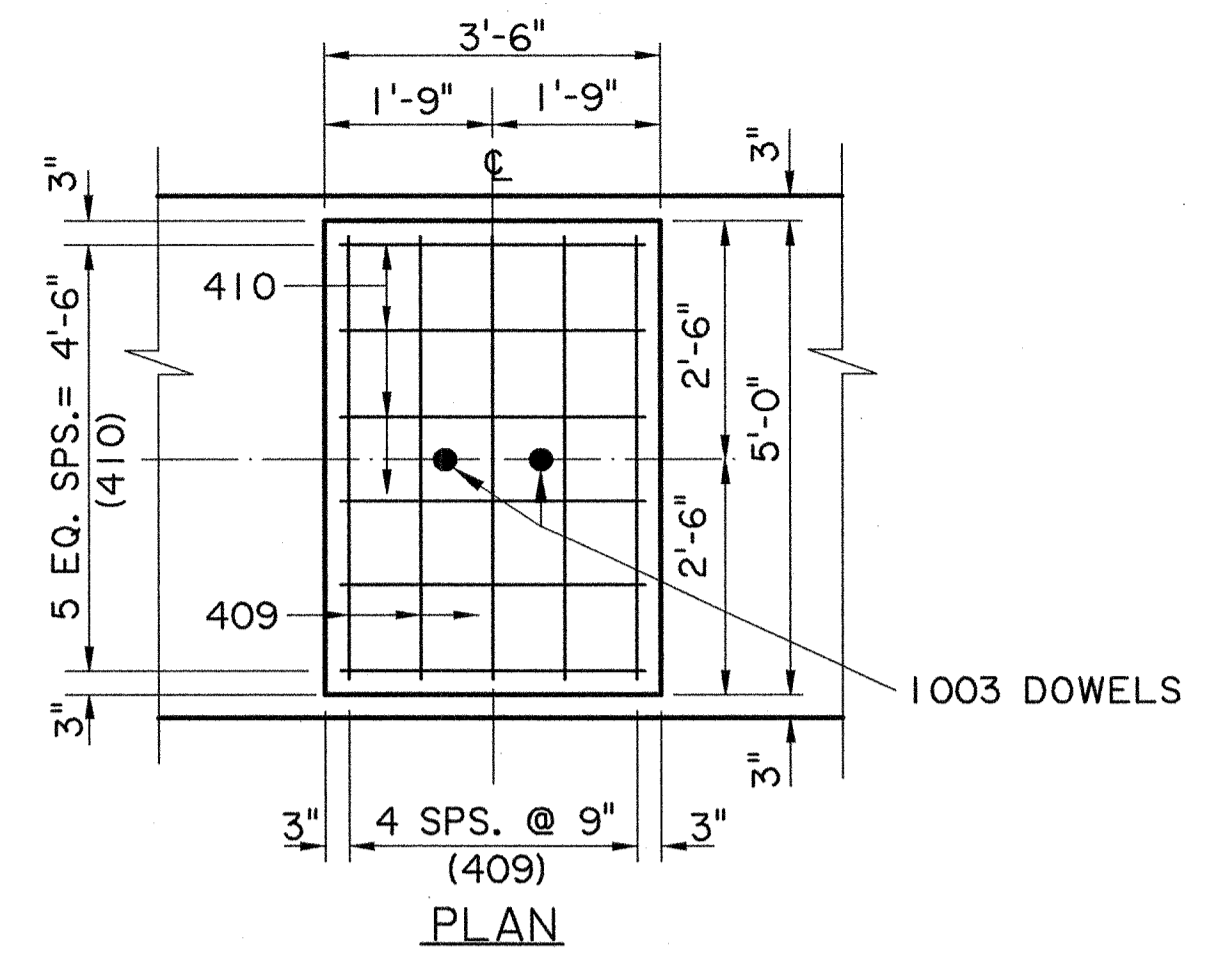
FINAL PLANS

NOTES:

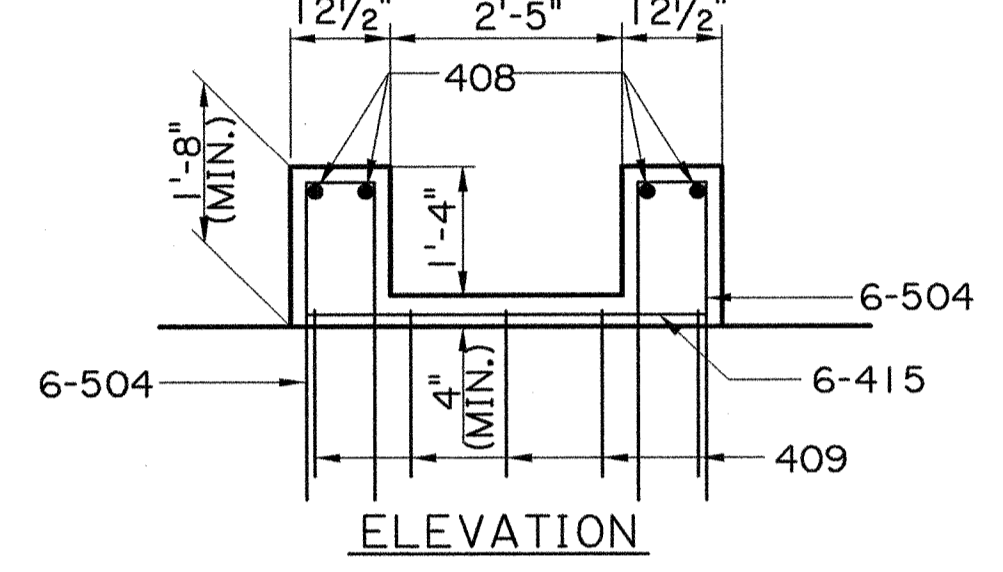
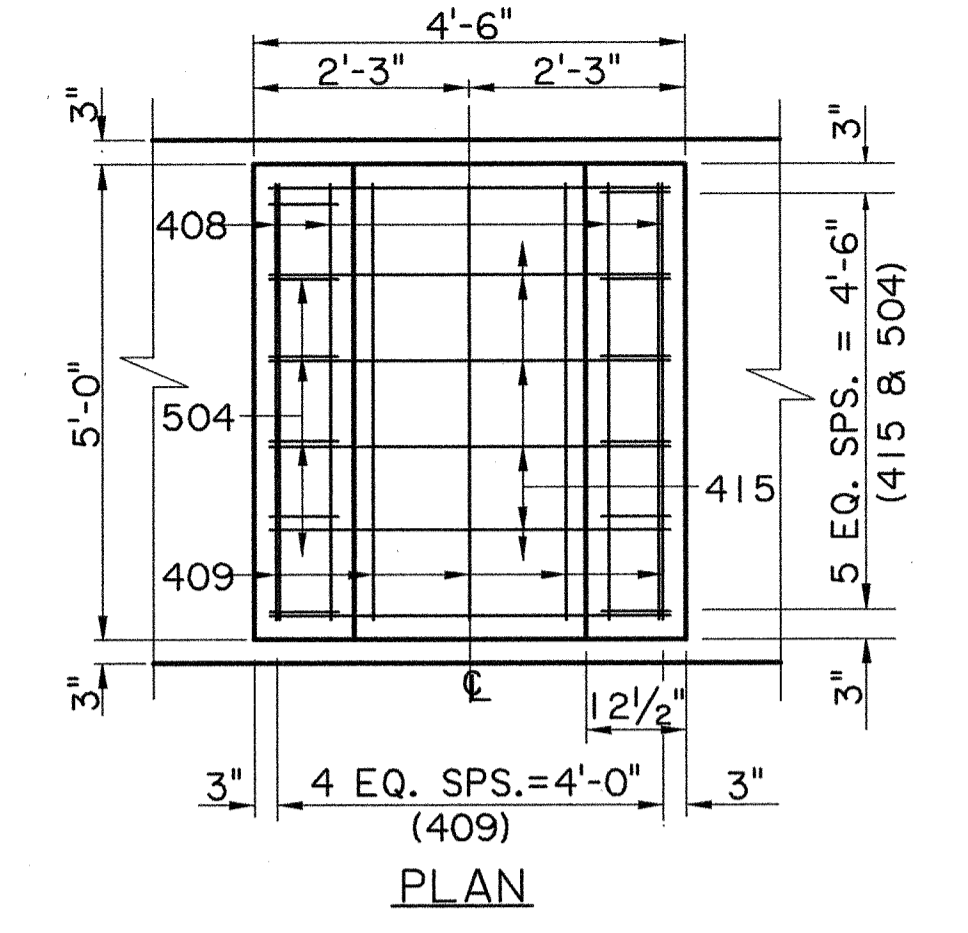
1) SEE SHEETS 129-134 FOR CAP DETAILS.



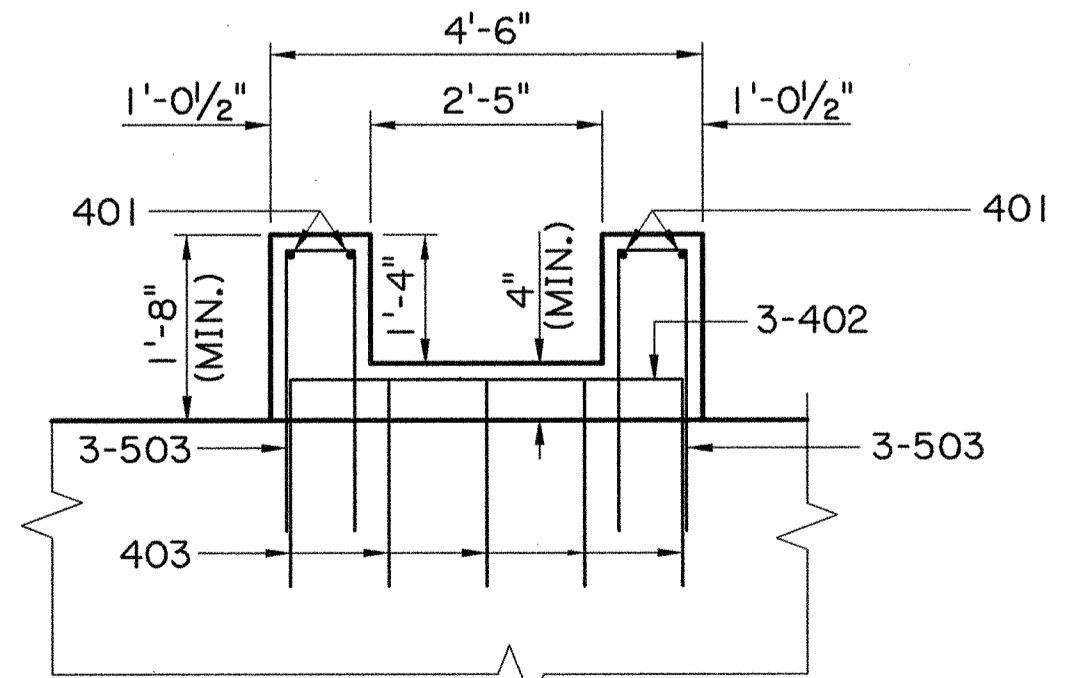
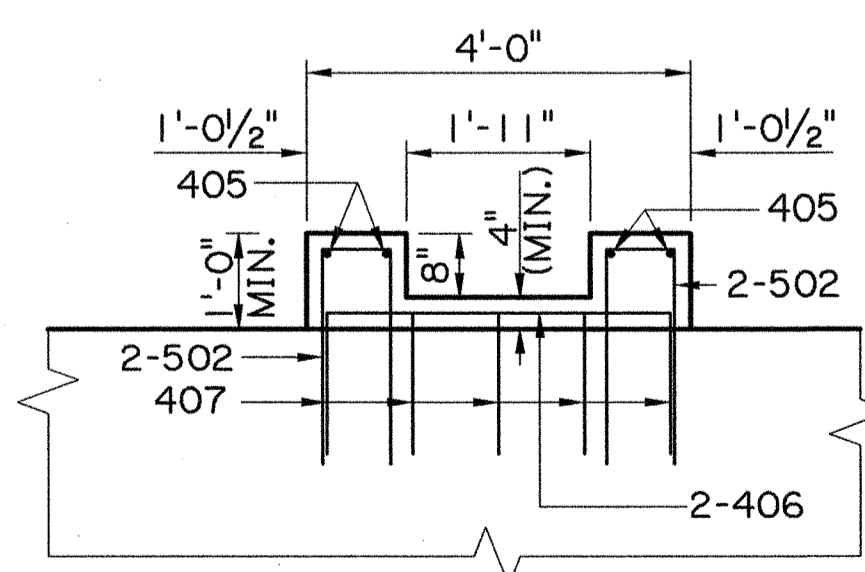
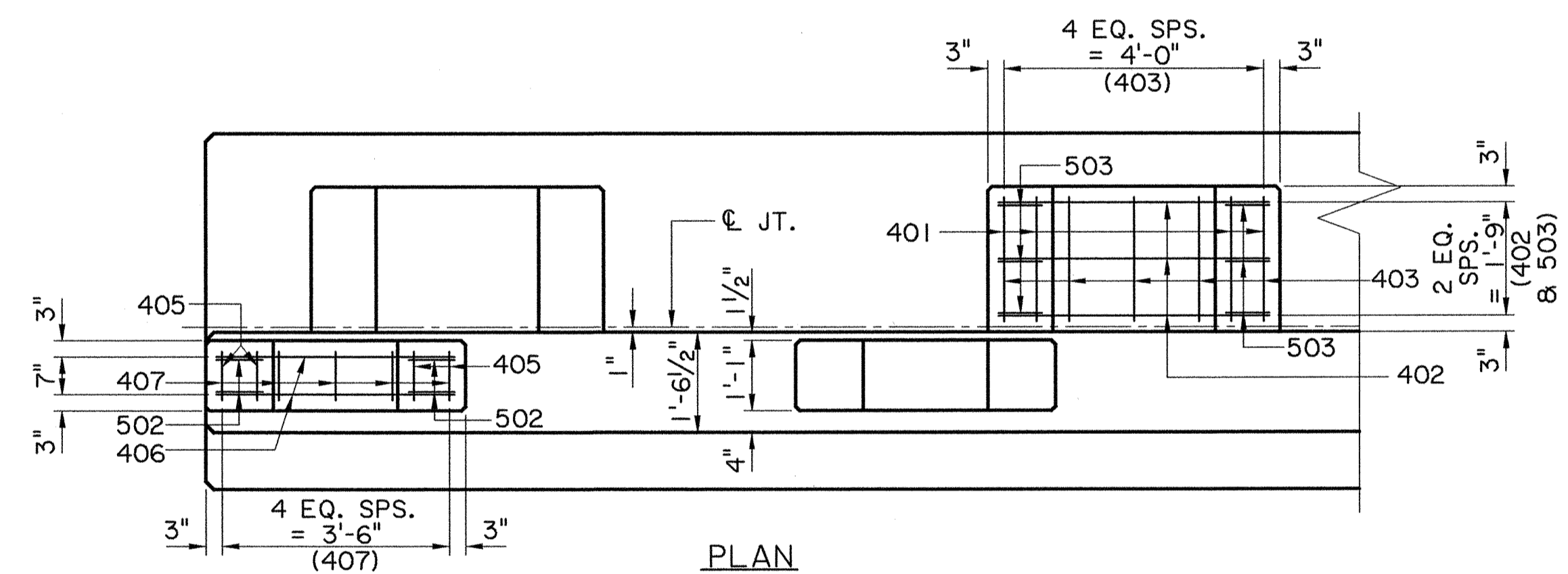
BTC-2 RISER DETAIL



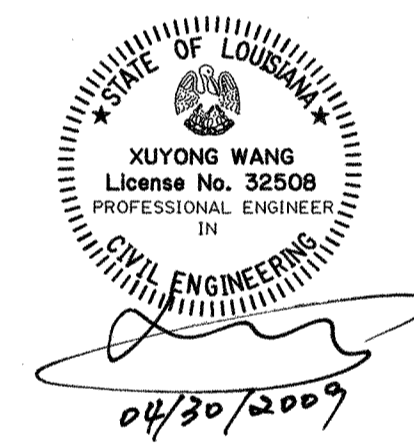
BTC-3 RISER DETAIL



BTC-4 RISER DETAIL

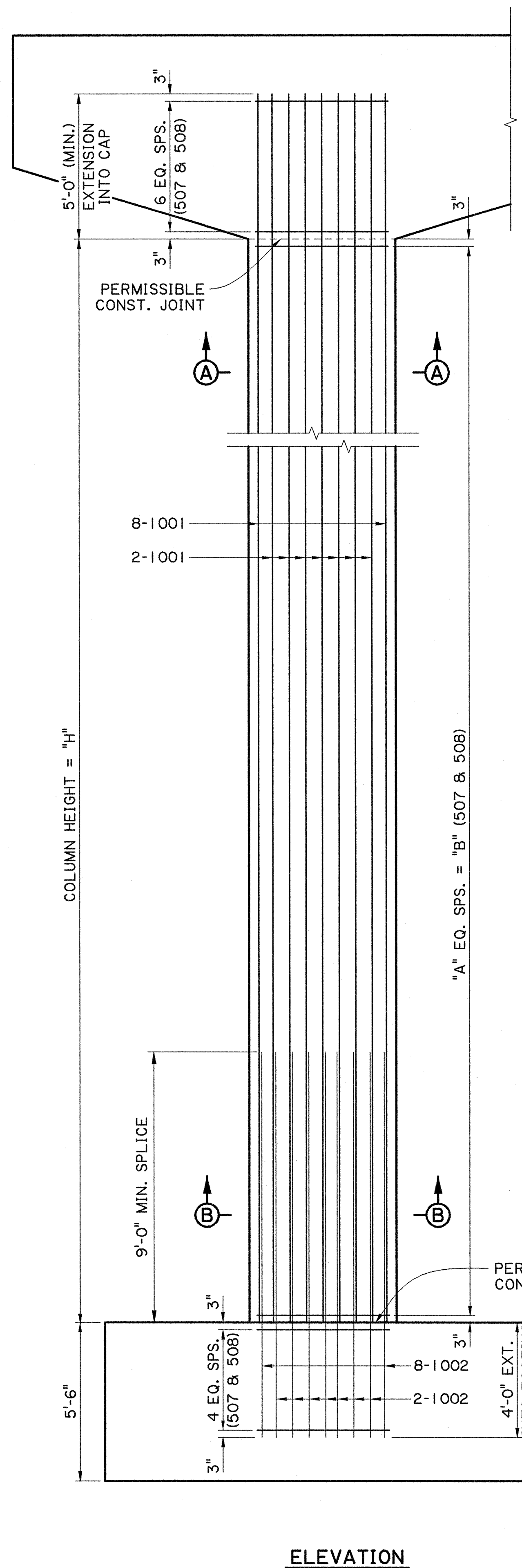


BTC-1 RISER DETAIL



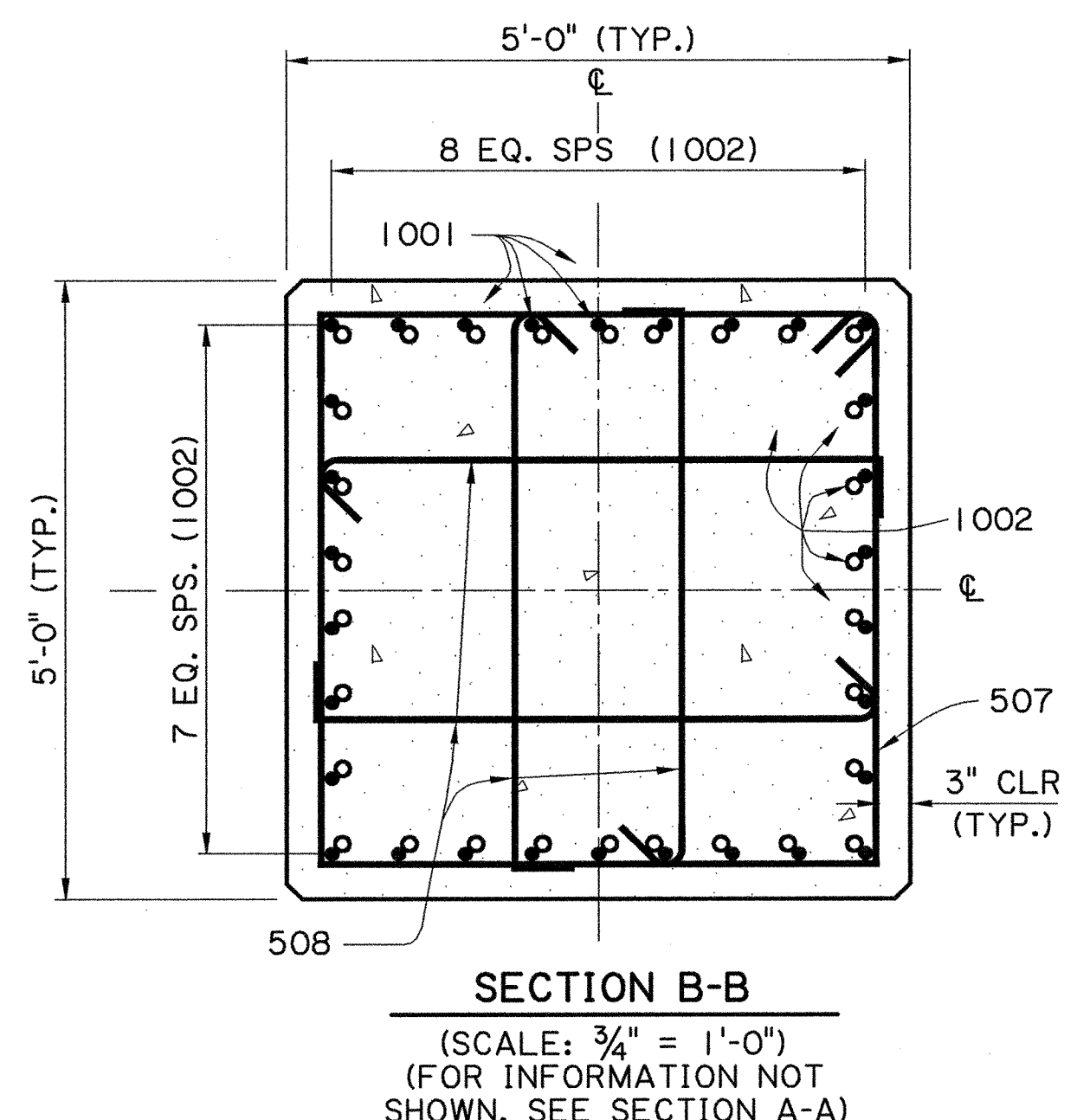
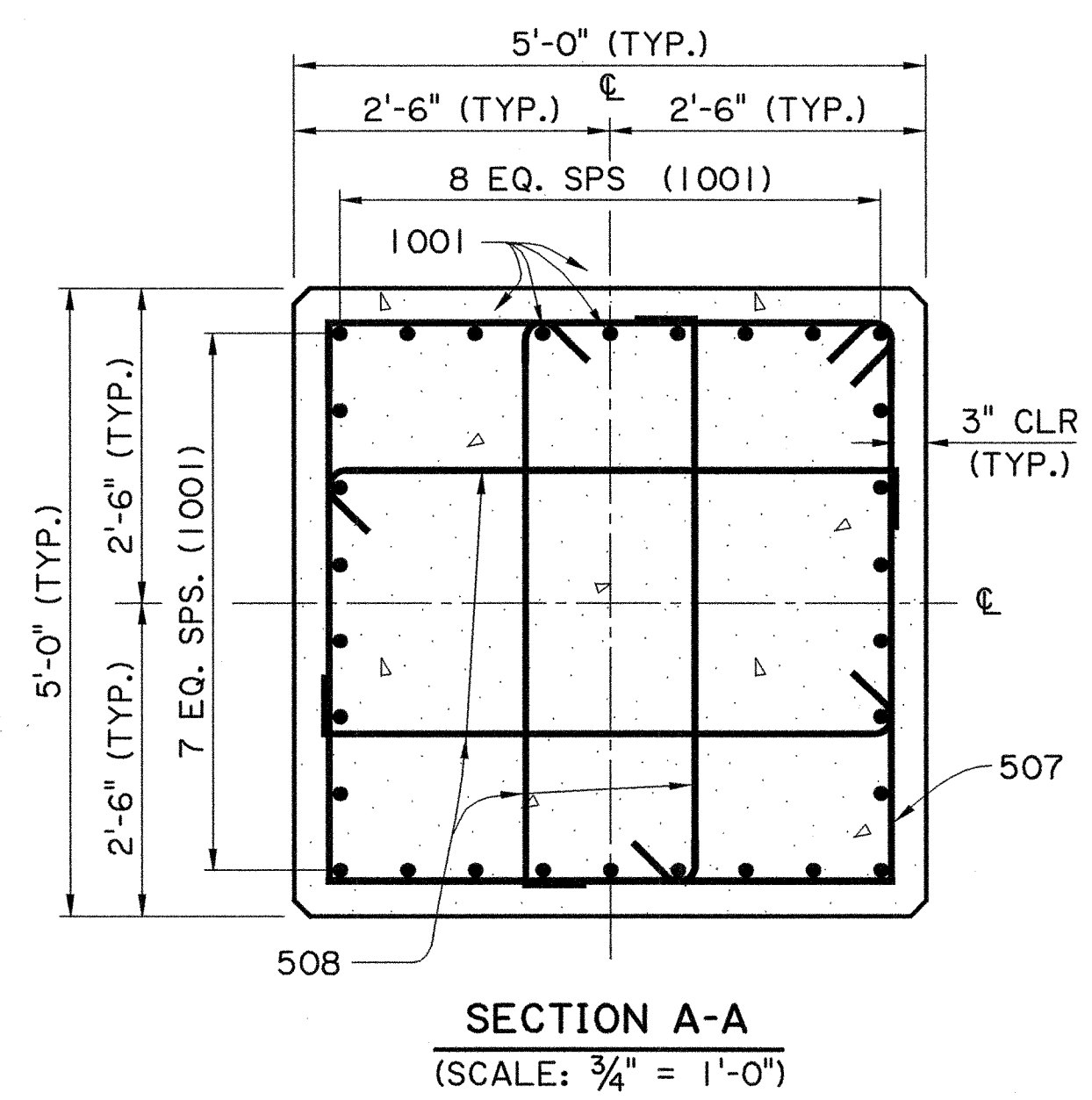
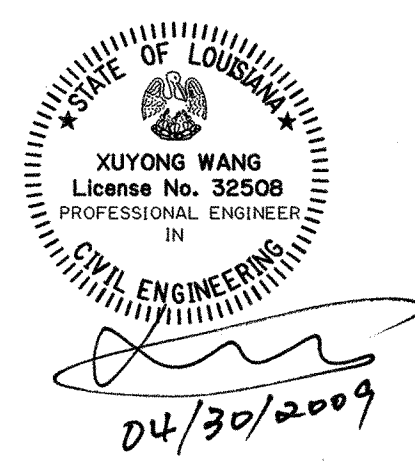
SHEET NUMBER	136
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED BY	X. WANG
CHECKED BY	B. DELATTE
DETAILED BY	D. HYMEL
CHECKED BY	D. BASTION
DATE	NOV. 2007
SHEET	
REVISION DESCRIPTION	
BY	
DATE	
NO.	
CAMINADA BAY BRIDGE ROUTE LA 1	
BTC-1 TO BTC-4 RISERS	
BRIDGE AND STRUCTURAL DESIGN	

FINAL PLANS



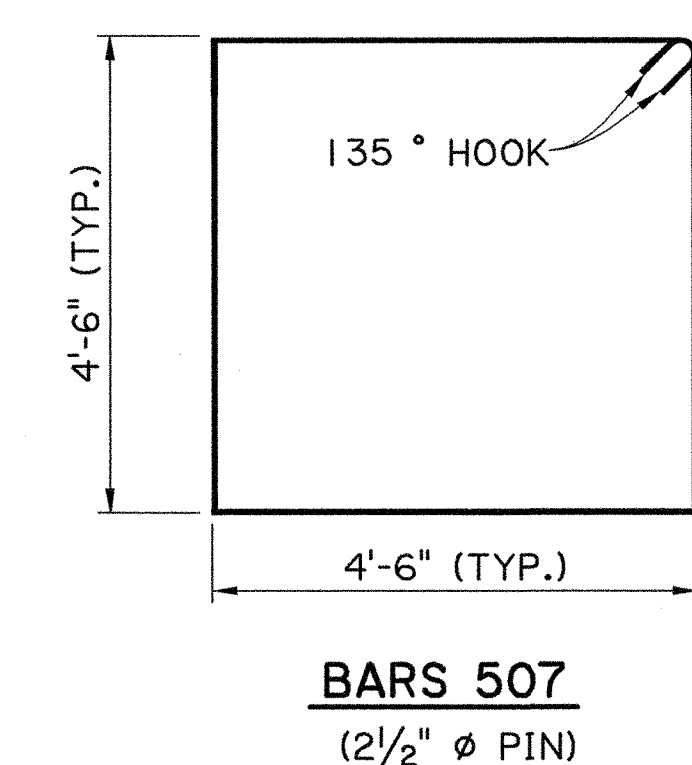
ELEVATION

ESTIMATED QUANTITIES FOR ONE COLUMN																		
BENT	NO. 507 STIRRUPS				NO. 508 STIRRUPS				NO. 1001 VERTICAL BARS				NO. 1002 VERTICAL BARS				TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL)	TOTAL CLASS A(M) CONCRETE (PIERS)
	NO.	UNIT LENGTH	TOTAL LENGTH	TOTAL WEIGHT	NO.	UNIT LENGTH	TOTAL LENGTH	TOTAL WEIGHT	NO.	UNIT LENGTH	TOTAL LENGTH	TOTAL WEIGHT	NO.	UNIT LENGTH	TOTAL LENGTH	TOTAL WEIGHT		
21	34	19' - 3"	654' - 6"	683	136	5' - 8"	770' - 8"	804	60	21' - 0"	1260' - 0"	5422	60	13' - 0"	780' - 0"	3356	10265	14.81
22	39	19' - 3"	750' - 9"	783	156	5' - 8"	884' - 0"	922	60	25' - 0"	1500' - 0"	6455	60	13' - 0"	780' - 0"	3356	11516	18.50
23	45	19' - 3"	866' - 3"	903	180	5' - 8"	1020' - 0"	1064	60	29' - 3"	1755' - 0"	7552	60	13' - 0"	780' - 0"	3356	12875	22.43
24	50	19' - 3"	962' - 6"	1004	200	5' - 8"	1133' - 4"	1182	60	33' - 1"	1985' - 0"	8541	60	13' - 0"	780' - 0"	3356	14083	26.00
25	55	19' - 3"	1058' - 9"	1104	220	5' - 8"	1246' - 8"	1300	60	36' - 7"	2195' - 0"	9445	60	13' - 0"	780' - 0"	3356	15205	29.23
26	58	19' - 3"	1116' - 6"	1165	232	5' - 8"	1314' - 8"	1371	60	38' - 11"	2335' - 0"	10048	60	13' - 0"	780' - 0"	3356	15940	31.36
27	60	19' - 3"	1155' - 0"	1205	240	5' - 8"	1360' - 0"	1418	60	40' - 3"	2415' - 0"	10392	60	13' - 0"	780' - 0"	3356	16371	32.59
28	59	19' - 3"	1135' - 9"	1185	236	5' - 8"	1337' - 4"	1395	60	39' - 9"	2385' - 0"	10263	60	13' - 0"	780' - 0"	3356	16199	32.17
29	57	19' - 3"	1097' - 3"	1144	228	5' - 8"	1292' - 0"	1348	60	38' - 0"	2280' - 0"	9811	60	13' - 0"	780' - 0"	3356	15659	30.54
30	53	19' - 3"	1020' - 3"	1064	212	5' - 8"	1201' - 4"	1253	60	35' - 7"	2135' - 0"	9187	60	13' - 0"	780' - 0"	3356	14860	28.31
31	49	19' - 3"	943' - 3"	984	196	5' - 8"	1110' - 8"	1158	60	32' - 0"	1920' - 0"	8262	60	13' - 0"	780' - 0"	3356	13760	24.96
32	43	19' - 3"	827' - 9"	863	172	5' - 8"	974' - 8"	1017	60	27' - 9"	1665' - 0"	7164	60	13' - 0"	780' - 0"	3356	12400	21.05
33	37	19' - 3"	712' - 3"	743	148	5' - 8"	838' - 8"	875	60	23' - 5"	1405' - 0"	6046	60	13' - 0"	780' - 0"	3356	11020	17.03
34	32	19' - 3"	616' - 0"	642	128	5' - 8"	725' - 4"	757	60	19' - 9"	1185' - 0"	5099	60	13' - 0"	780' - 0"	3356	9854	13.61
TOTAL =																190 007	342.59	

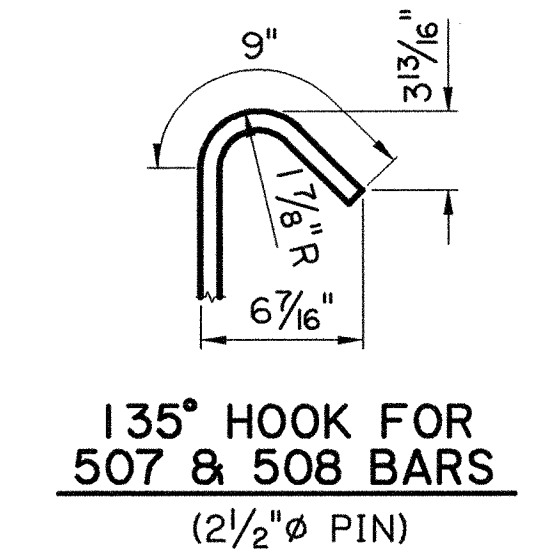
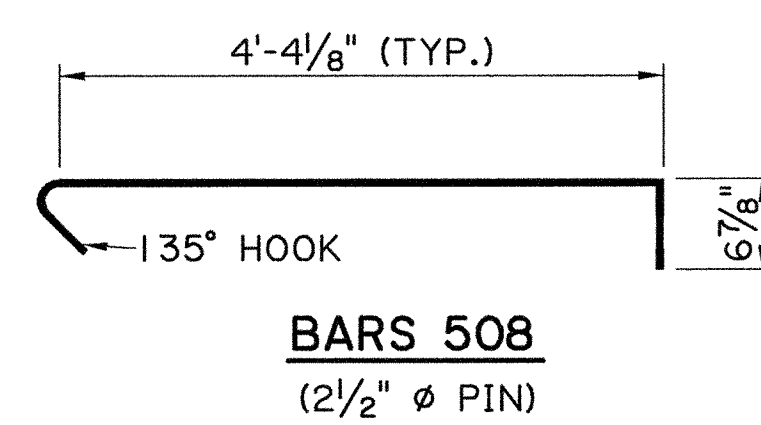


TYPICAL COLUMN

COLUMN DIMENSIONS			
BENT	"H"	"A"	"B"
21	16.00	21	15.50
22	19.98	26	19.48
23	24.21	32	23.71
24	28.08	37	27.58
25	31.57	42	31.07
26	33.87	45	33.37
27	35.20	47	34.70
28	34.74	46	34.24
29	32.98	44	32.48
30	30.57	40	30.07
31	26.96	36	26.46
32	22.72	30	22.22
33	18.39	24	17.89
34	14.70	19	14.20



- NOTES:
 1) SEE SHEETS 129 TO 134 FOR CAP DETAILS AND QUANTITIES.
 2) SEE SHEETS 138 TO 141 FOR FOOTING DETAILS AND QUANTITIES.



SHEET NUMBER 137

JEFFERSON

DESIGNED BY: X. WANG
 CHECKED BY: B. DELATTE
 PARISH PROJECT

DETAILED BY: D. RYMEL
 CHECKED BY: D. BASTION
 FEDERAL PROJECT

DATE: NOV. 2007
 SHEET

STATE PROJECT 064-01-0040

NO. DATE

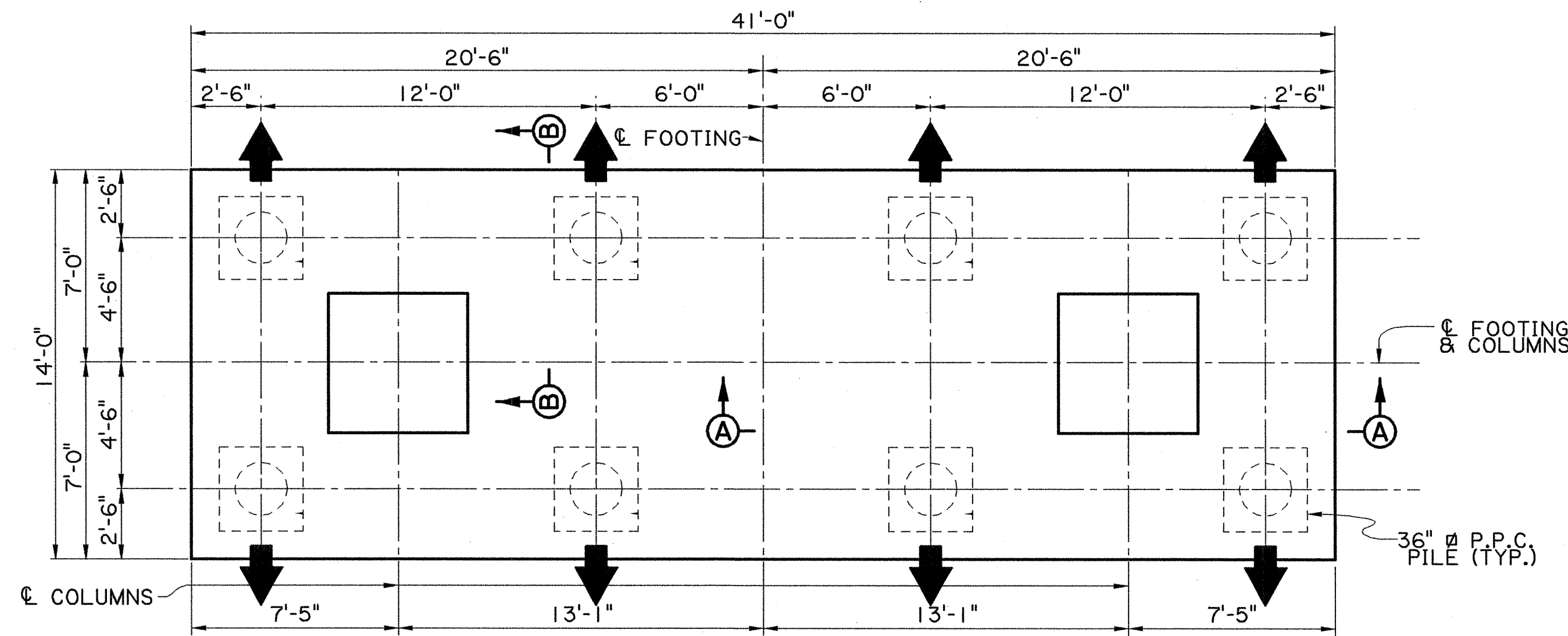
REVISION DESCRIPTION

BY

CAMINADA BAY BRIDGE
 ROUTE LA 1

BTC-1 TO BTC-4 COLUMN

BRIDGE AND STRUCTURAL DESIGN



FOOTING & PILE PLAN

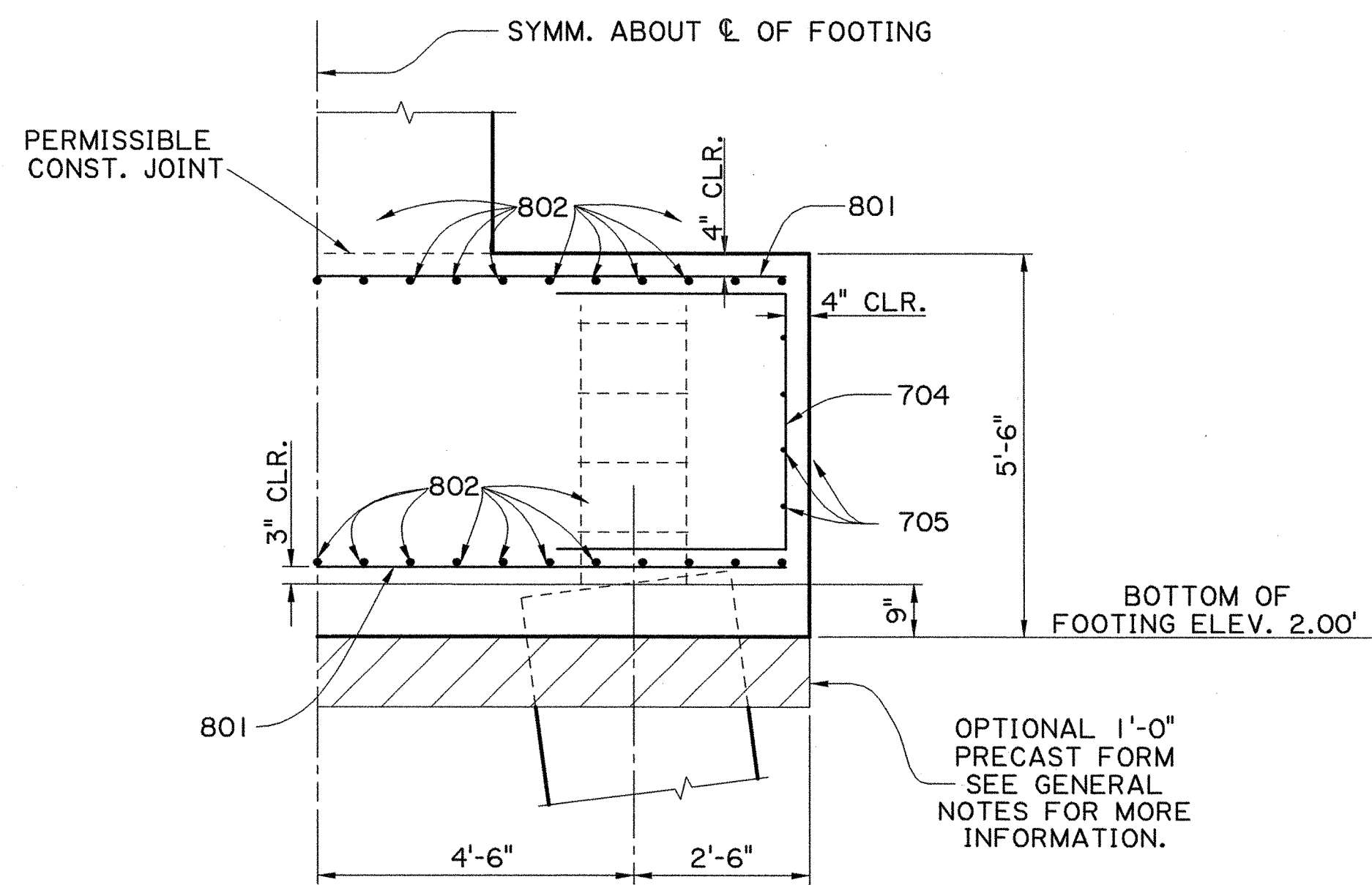
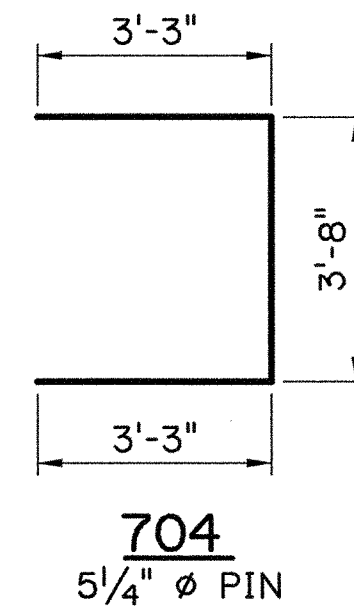
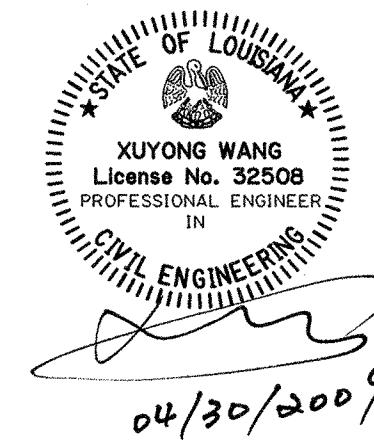
SCALE: 1/4" = 1'-0"

BATTER 1/2 ON 12

ESTIMATED QUANTITIES (ONE FOOTING)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	82	13'-4"	1093'-4"	TRANSV. TOP & BOT. OF FOOTING
802	42	40'-4"	1694'-0"	LONGIT. TOP & BOT. OF FOOTING
TOTAL NO. 8 BARS = 2787'-4" = 7442 LBS.				
704	124	10'-2"	1260'-8"	OUTSIDE EDGE OF FOOTING
705	8	40'-4"	322'-8"	OUTSIDE EDGE OF FOOTING
706	8	13'-4"	106'-8"	OUTSIDE EDGE OF FOOTING
TOTAL NO. 7 BARS = 1690'-0" = 3454 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) =				10896 LBS.
CLASS A(M) CONCRETE (FOOTINGS)				114.93 CU. YDS.

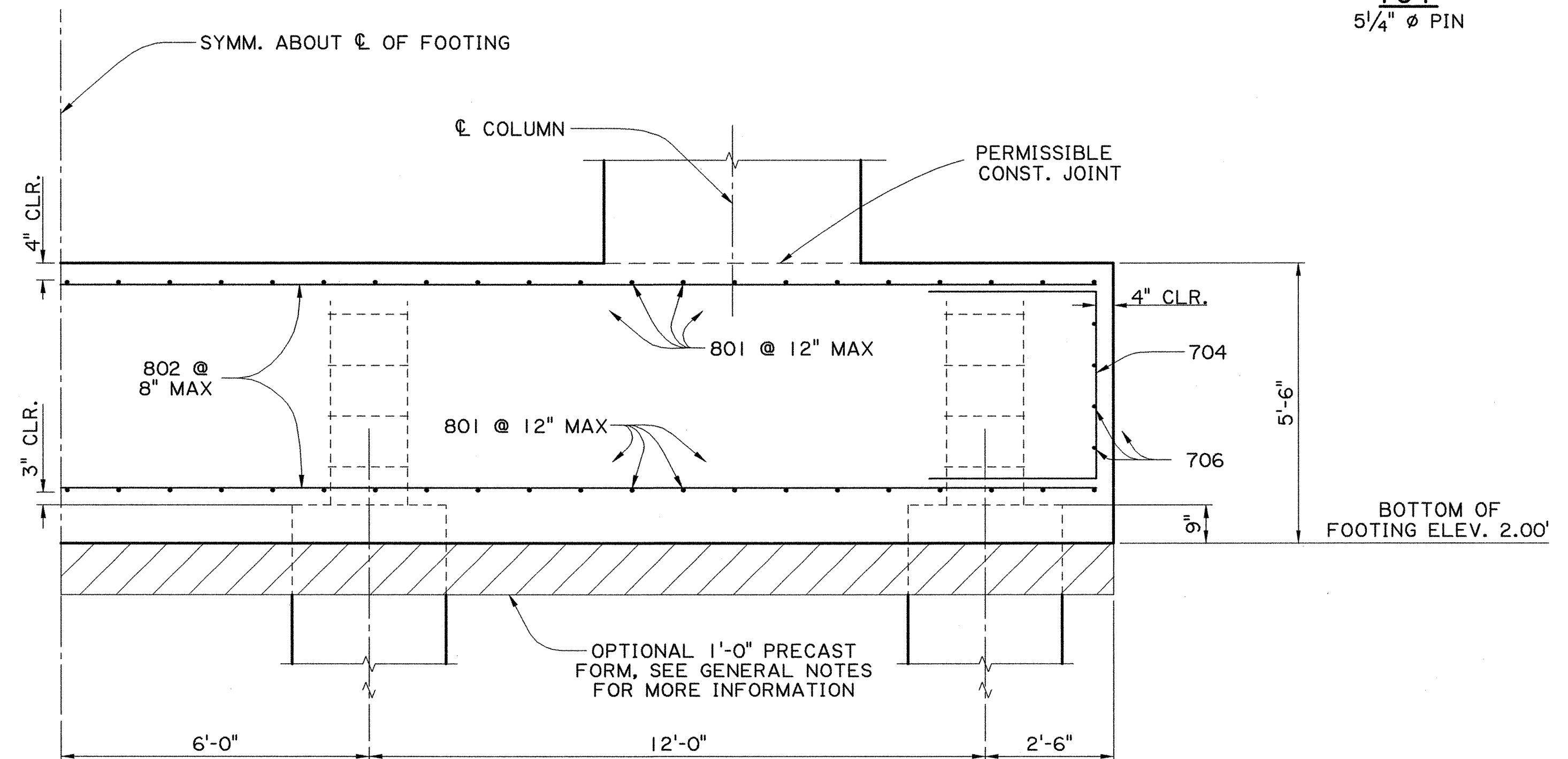
NOTES:

- 1) SEE SHEETS 129-130 FOR BENT TYPE BTC-1 DETAILS AND QUANTITIES.
- 2) SEE SHEET 137 FOR COLUMN DETAILS AND QUANTITIES.
- 3) SEE SHEET 117 FOR PILE DETAILS.
- 4) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS AND QUANTITIES.



SECTION B-B

SCALE: 1/2" = 1'-0"



SECTION A-A

SCALE: 1/2" = 1'-0"

SHEET NUMBER 138

JEFFERSON

REGISTERED X. WANG, B. DELATTE, D. BASTION, X. WANG

CAMINADA BAY BRIDGE ROUTE LA 1

BRIDGE DETAIL BTC-1 FOOTING

BRIDGE AND STRUCTURAL DESIGN

DATE: OCT. 2007

SHEET 1 OF 2

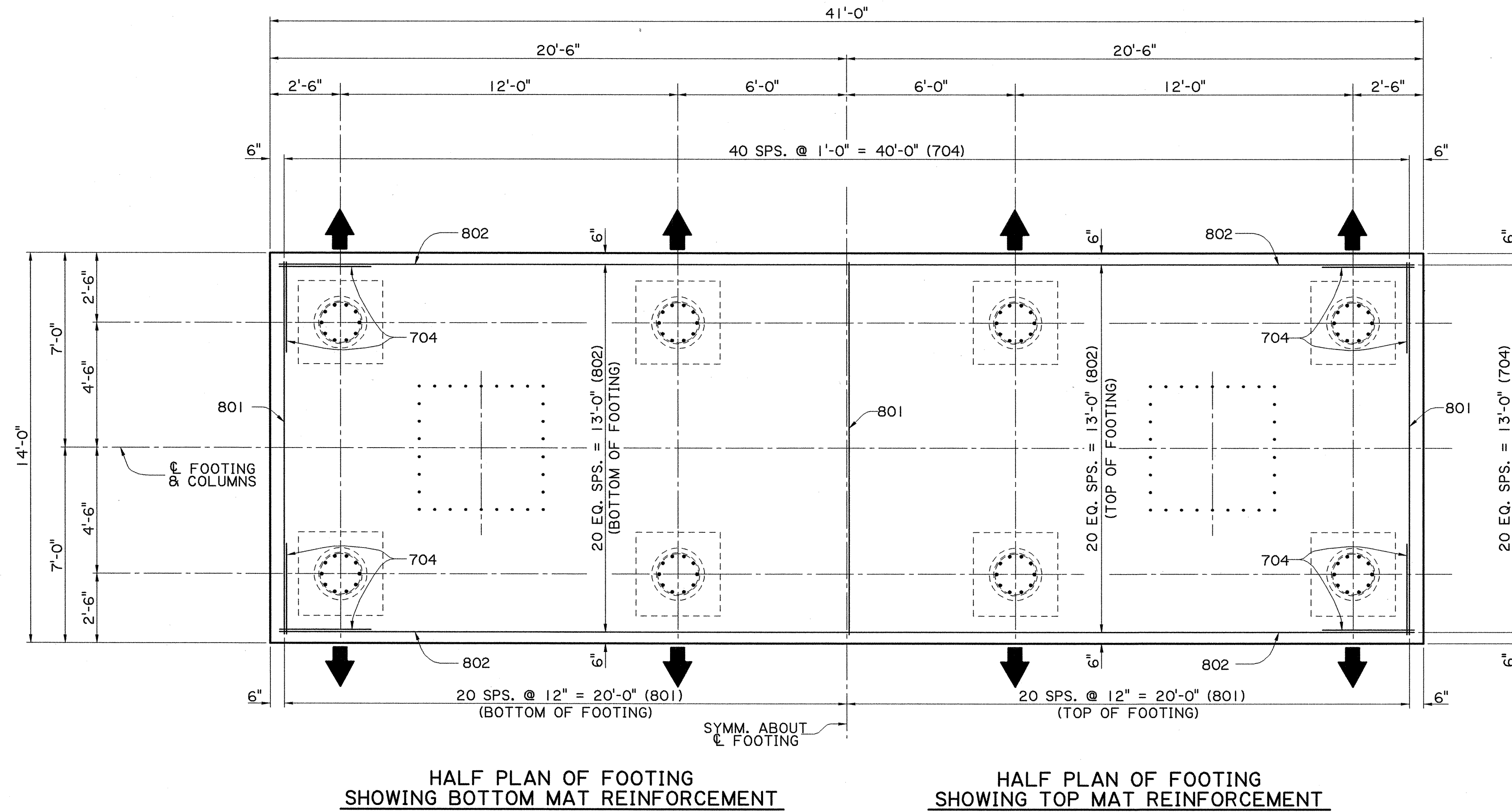
PROJECT 064-01-0040

FINAL PLANS

R:\Gang2\Projects\064010040\dgn\139_BTC-1 Footing_2.dgn

30-APR-2009

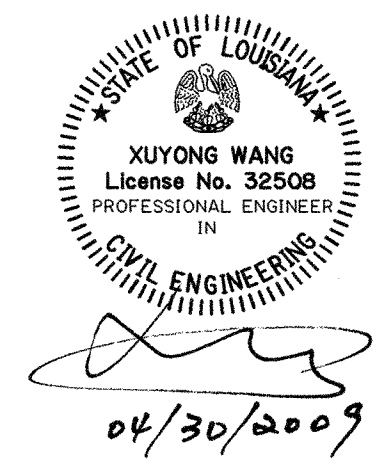
10:17




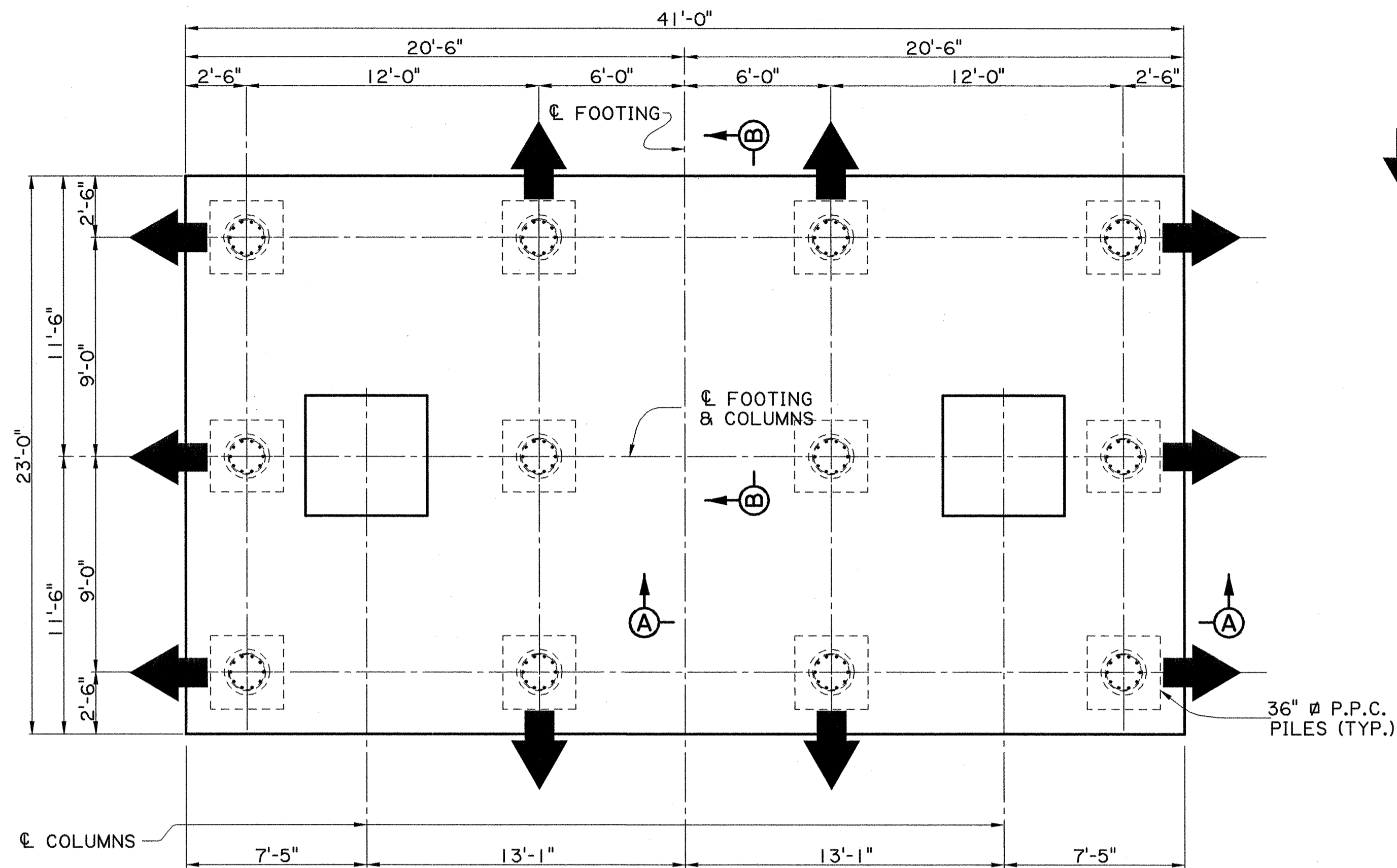
↓ BATTER 1/2 ON 12

SCALE: 3/8" = 1'-0"

- NOTES:
- ADJUST REINFORCEMENT AT FOOTING TO AVOID INTERFERENCE WITH REINFORCEMENT FROM COLUMN AND PILES.

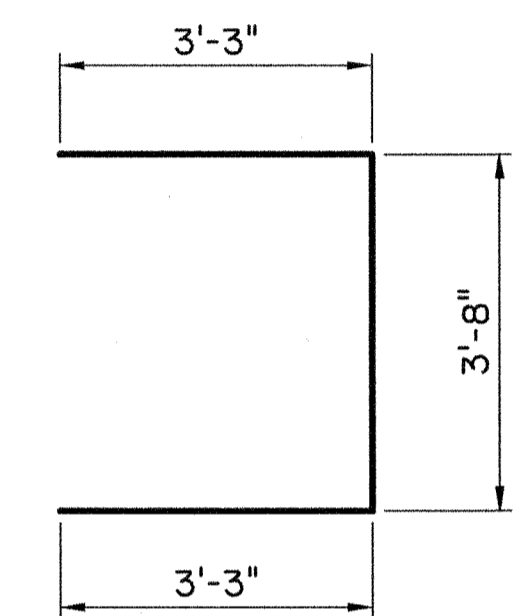


SHEET NUMBER		139	
DESIGNED	X. WANG	PARISH	JEFFERSON
CHECKED	B. DELATTE	FEDERAL PROJECT	
DATE	OCT. 2007	STATE PROJECT	064-01-0040
BY		SHEET	2 OF 2
REVISION DESCRIPTION			
NO.	DATE	BY	
			
CAMINADA BAY BRIDGE ROUTE LA 1			
BRIDGE AND STRUCTURAL DESIGN		BTC-1 FOOTING	



FOOTING & PILE PLAN
SCALE: 1/4" = 1'-0"

BATTER 1/2 ON 12

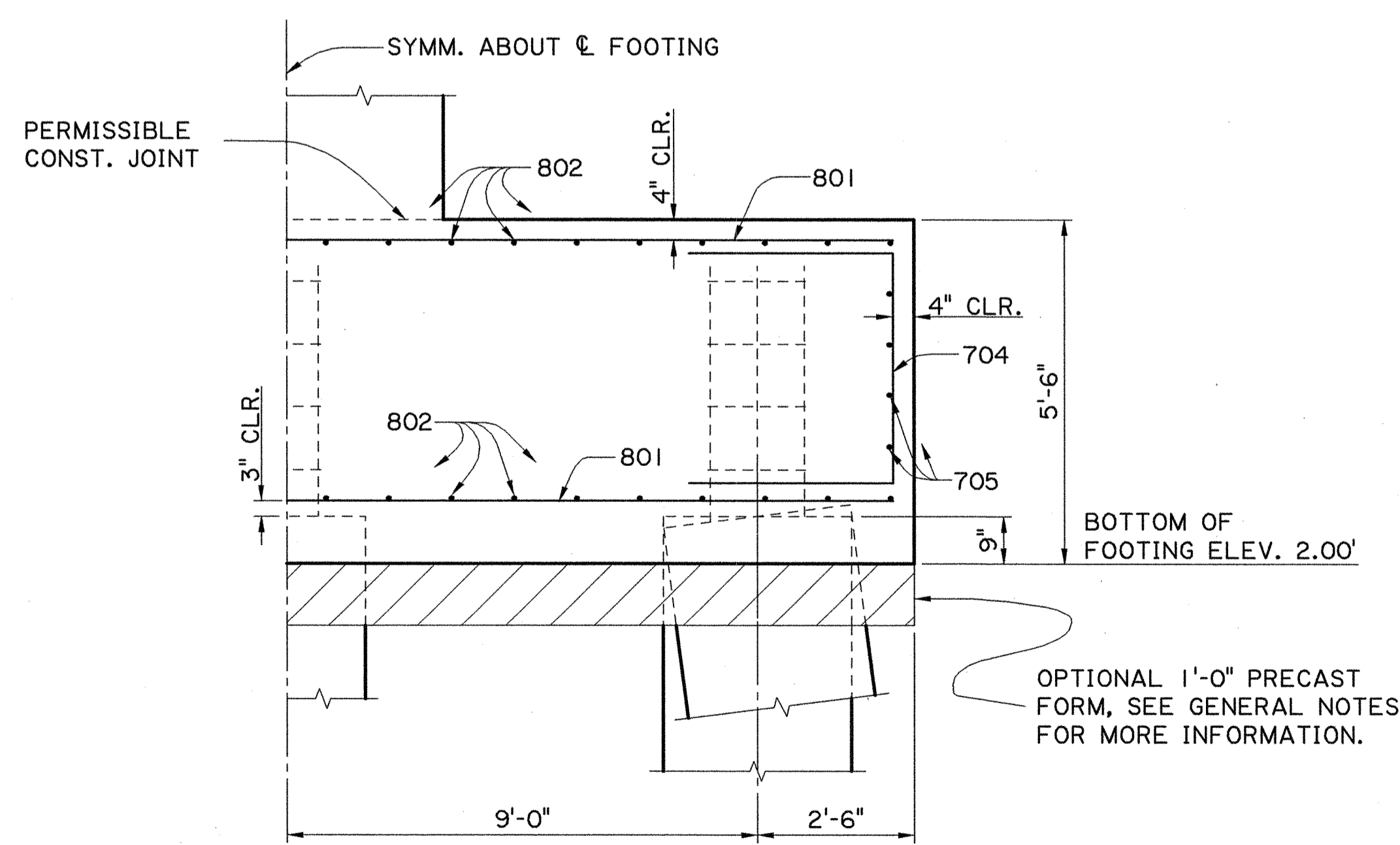


704
5/4" Ø PIN

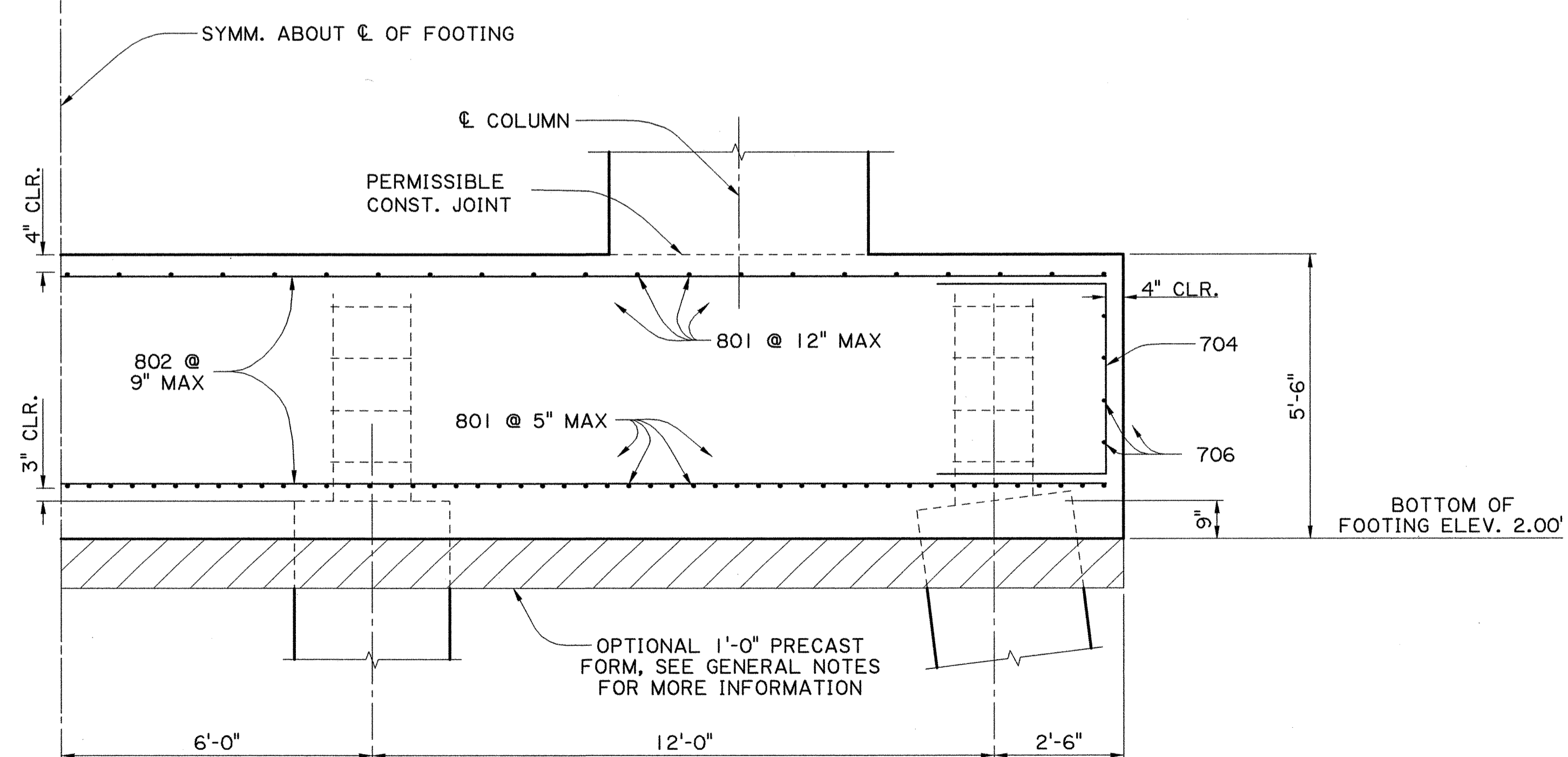
ESTIMATED QUANTITIES (ONE FOOTING)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	152	22'-4"	3394'-8"	TRANV. TOP & BOT. OF FOOTING
802	62	40'-4"	2500'-8"	LONGIT. TOP & BOT. OF FOOTING
TOTAL NO. 8 BARS = 5895'-4" = 15741 LBS.				
704	164	10'-2"	1667'-4"	OUTSIDE EDGE OF FOOTING
705	8	40'-4"	322'-8"	OUTSIDE EDGE OF FOOTING
706	8	22'-4"	178'-8"	OUTSIDE EDGE OF FOOTING
TOTAL NO. 7 BARS = 2168'-8" = 4433 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) =				20174 LBS.
CLASS A(M) CONCRETE (FOOTINGS)				189.09 CU. YDS.

NOTES:

- 1) SEE SHEETS 131-134 FOR BENT TYPE BTC-2 TO BTC-4 DETAILS AND FOOTING QUANTITIES.
- 2) SEE SHEET 137 FOR COLUMN DETAILS.
- 3) SEE SHEET 117 FOR PILE DETAILS.
- 4) SEE SHEETS 142-143 FOR PILE CONNECTION DETAILS.



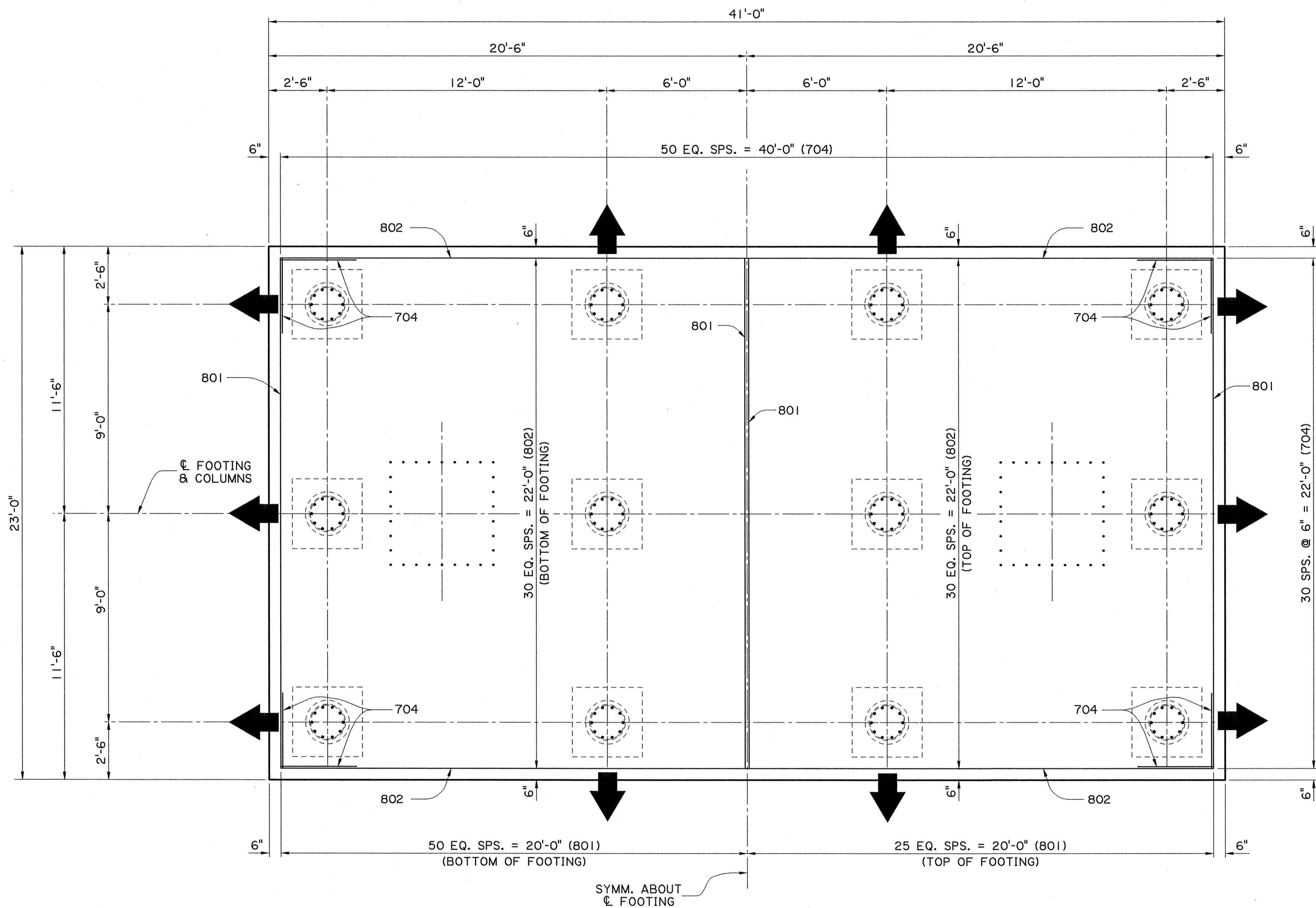
SECTION B-B
SCALE: 1/2" = 1'-0"



SECTION A-A
SCALE: 1/2" = 1'-0"

SHEET NUMBER	140
DESIGNED BY	X. WANG
CHECKED BY	B. DELATTE
DATE	OCT. 2007
PROJECT	064-01-0040
STATE	LA
FEDERAL PROJECT	
PARISH	JEFFERSON
BRIDGE DETAIL	BTC-2 TO BTC-4 FOOTING
BRIDGE AND STRUCTURAL DESIGN	

FINAL PLANS



HALF PLAN OF FOOTING SHOWING BOTTOM MAT REINFORCING (BOTTOM OF FOOTING)

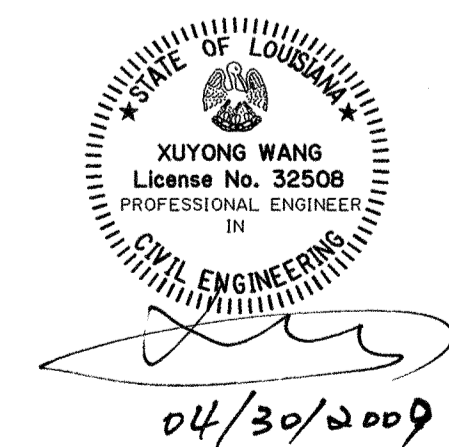
HALF PLAN OF FOOTING SHOWING TOP MAT REINFORCING (TOP OF FOOTING)

SCALE: 3/8" = 1'-0"

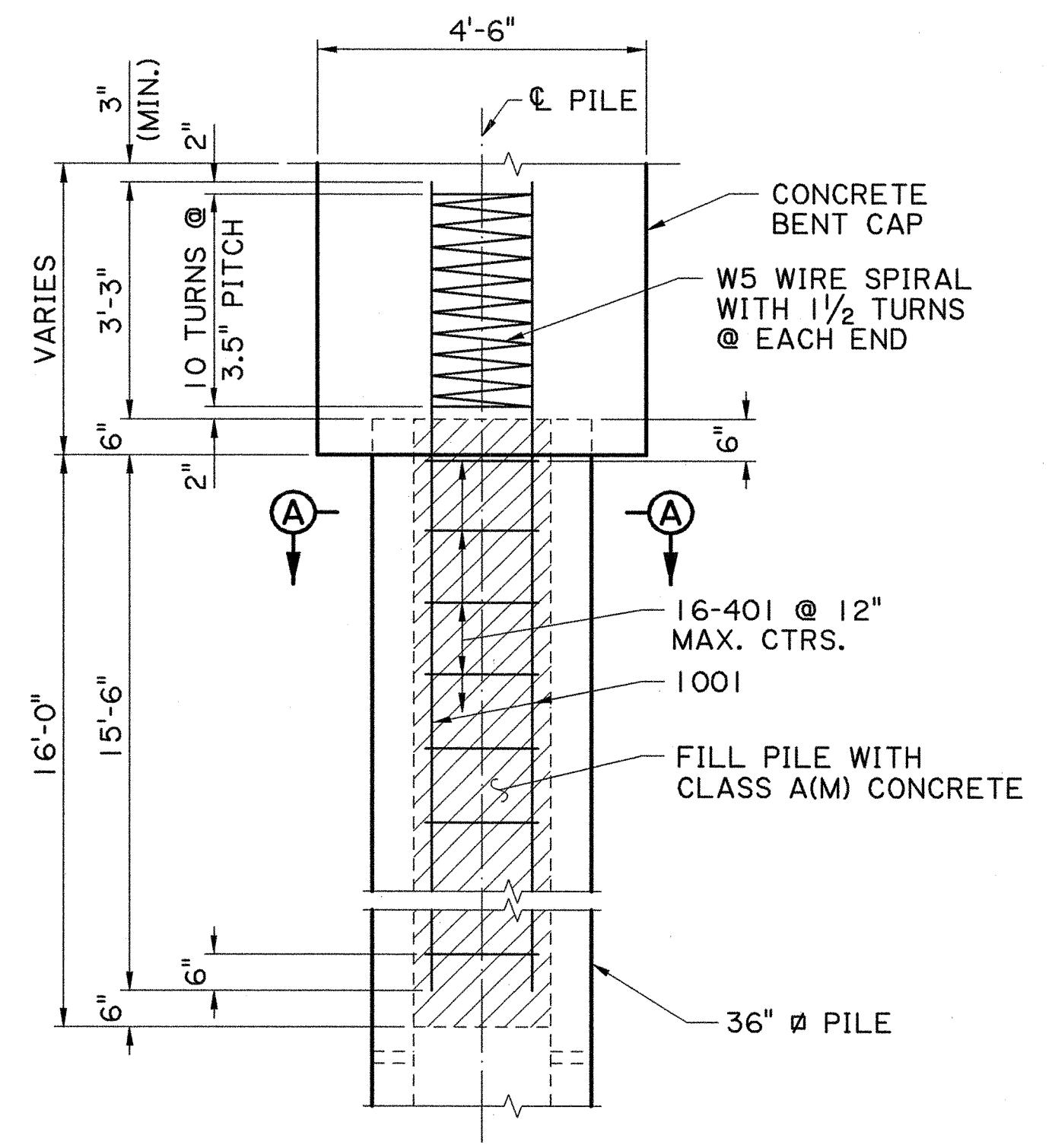
BATTER 1/2 ON 12

NOTES:

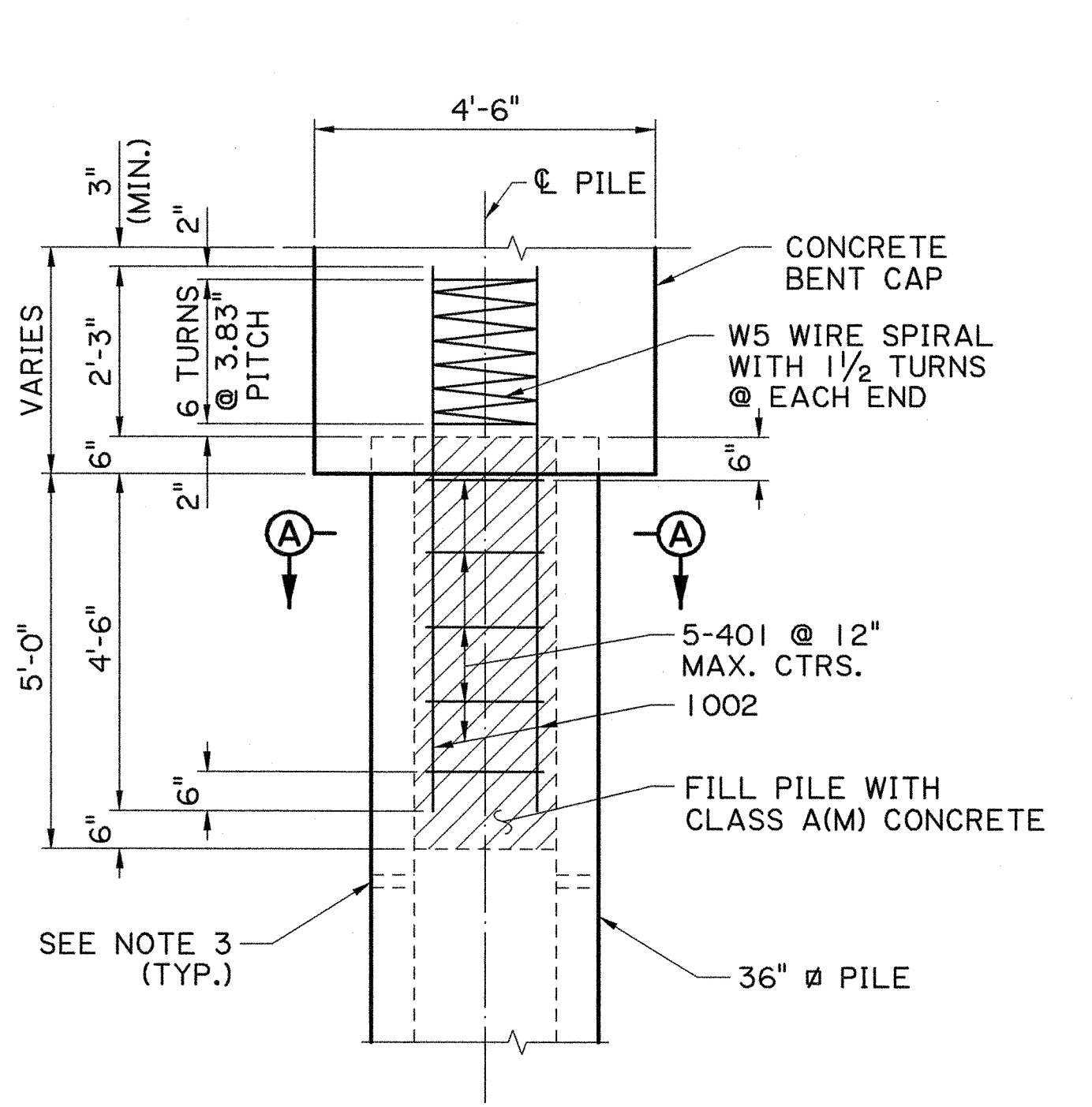
- 1) ADJUST REINFORCEMENT AT FOOTING TO AVOID INTERFERENCE WITH REINFORCEMENT FROM COLUMN AND PILES.



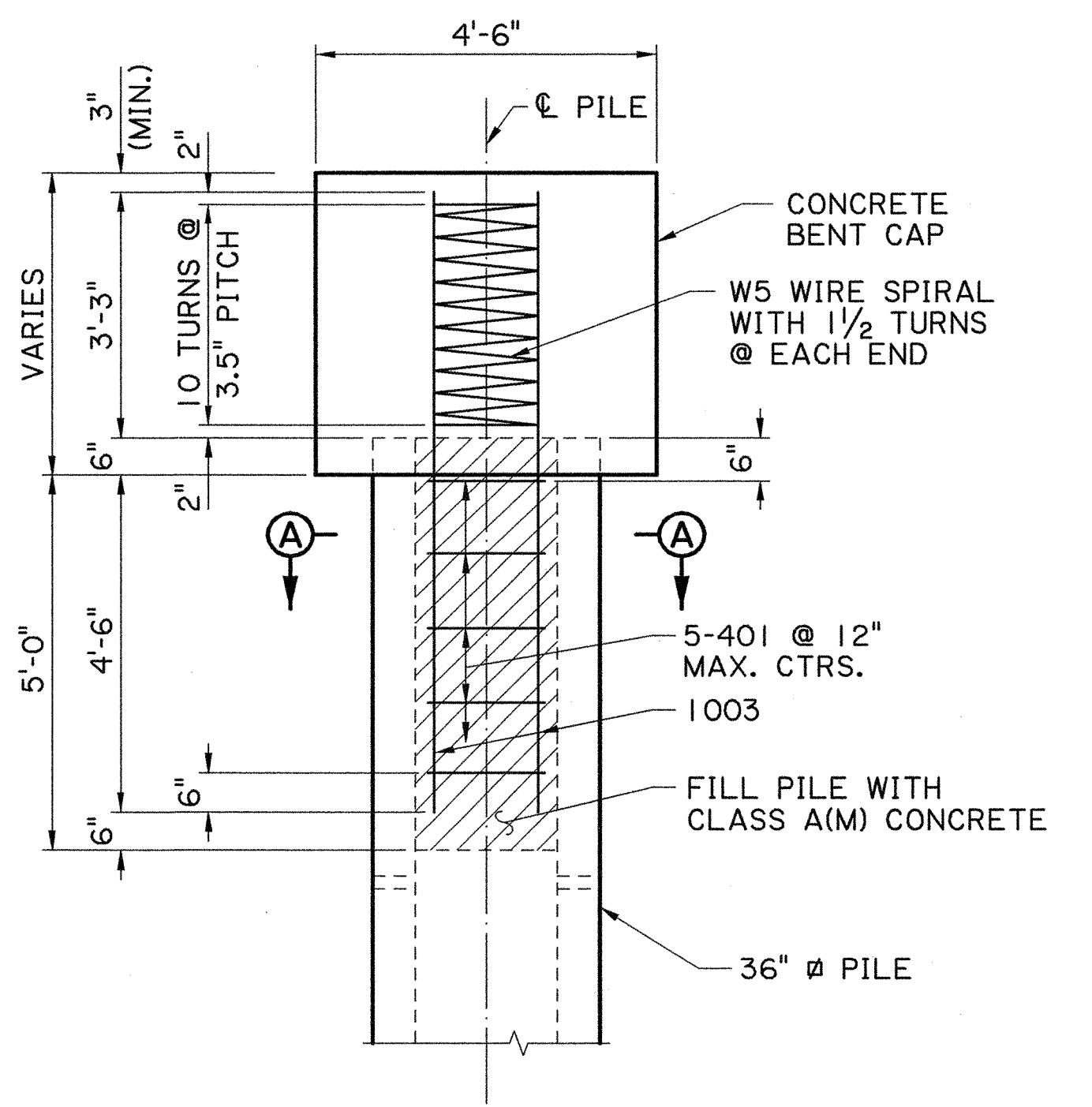
SHEET NUMBER 141	
JEFFERSON	
PARISH	FEDERAL PROJECT
REGISTERED X. WANG	DATE OCT 2007
CHECKED B. DELATTE	SHEET 2 OF 2
DETAILED D. BASTION	REVISION DESCRIPTION
CHECKED X. WANG	BY
NO.	DATE
CAMINADA BAY BRIDGE ROUTE LA 1	
BRIDGE DETAIL	BTC-2 TO BTC-4 FOOTING
BRIDGE AND STRUCTURAL DESIGN	



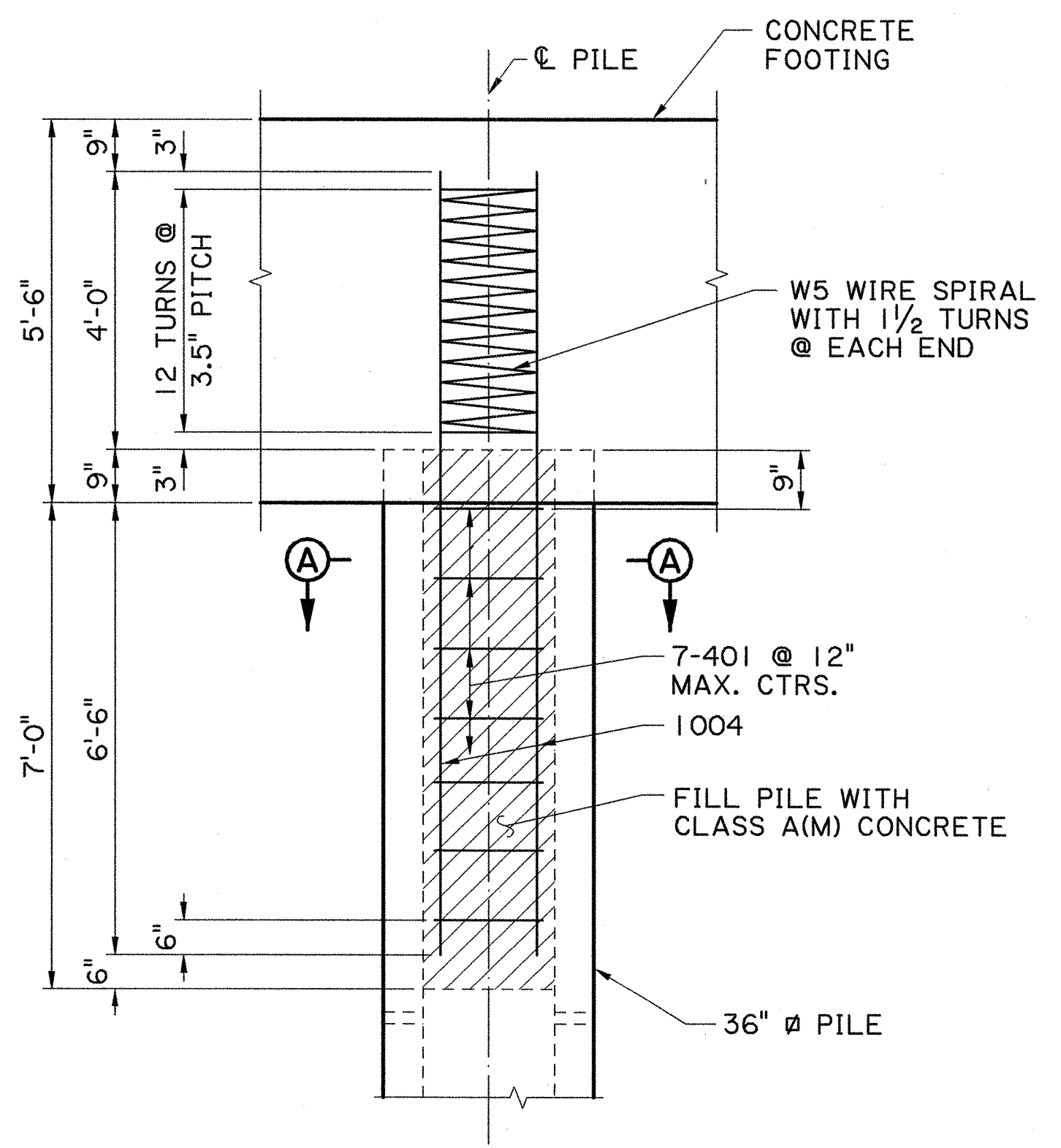
PILE CONNECTION 1
VERTICAL PILE
WITH TENSION CONNECTOR



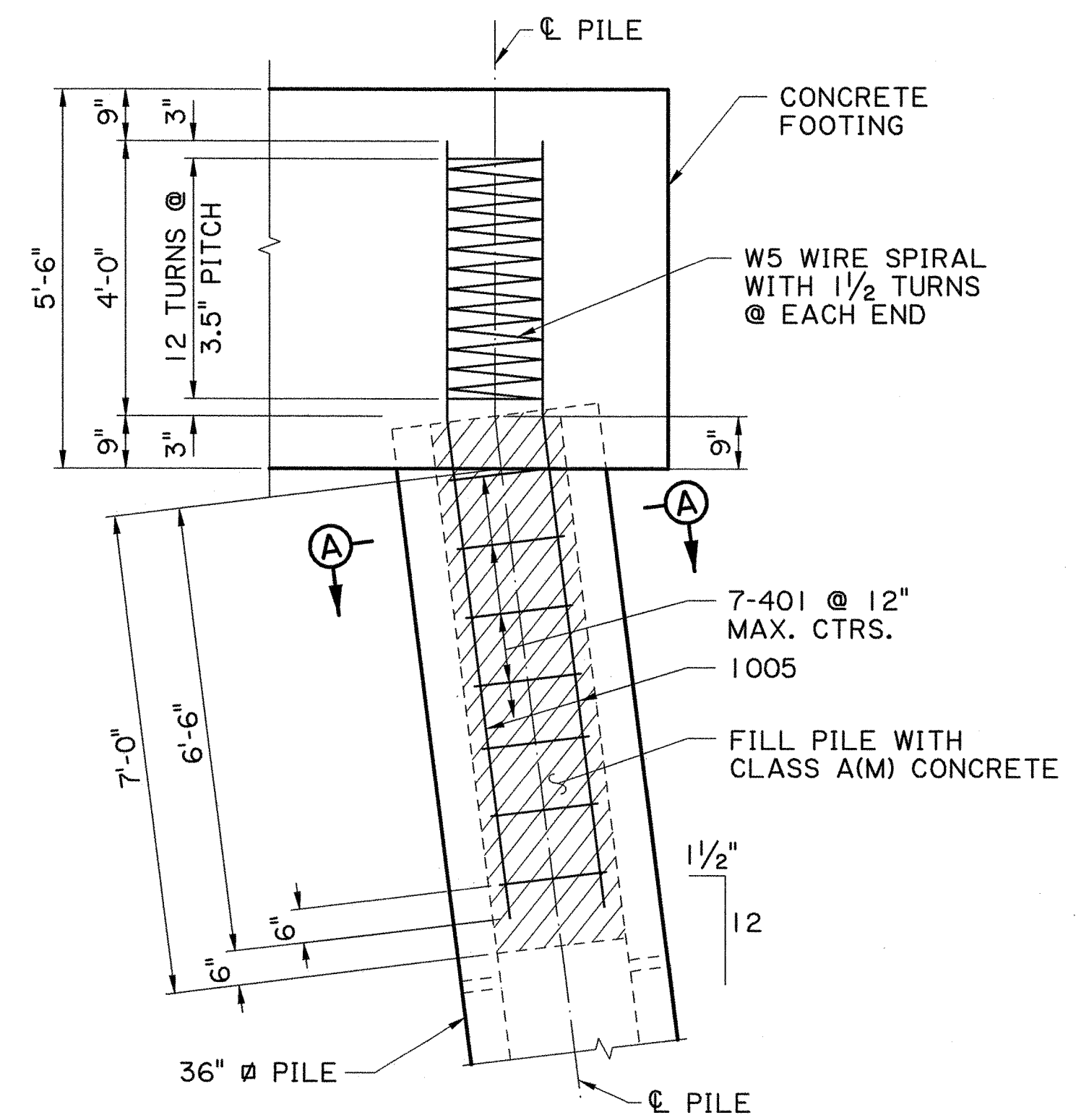
PILE CONNECTION 2
VERTICAL PILE
WITH TENSION CONNECTOR



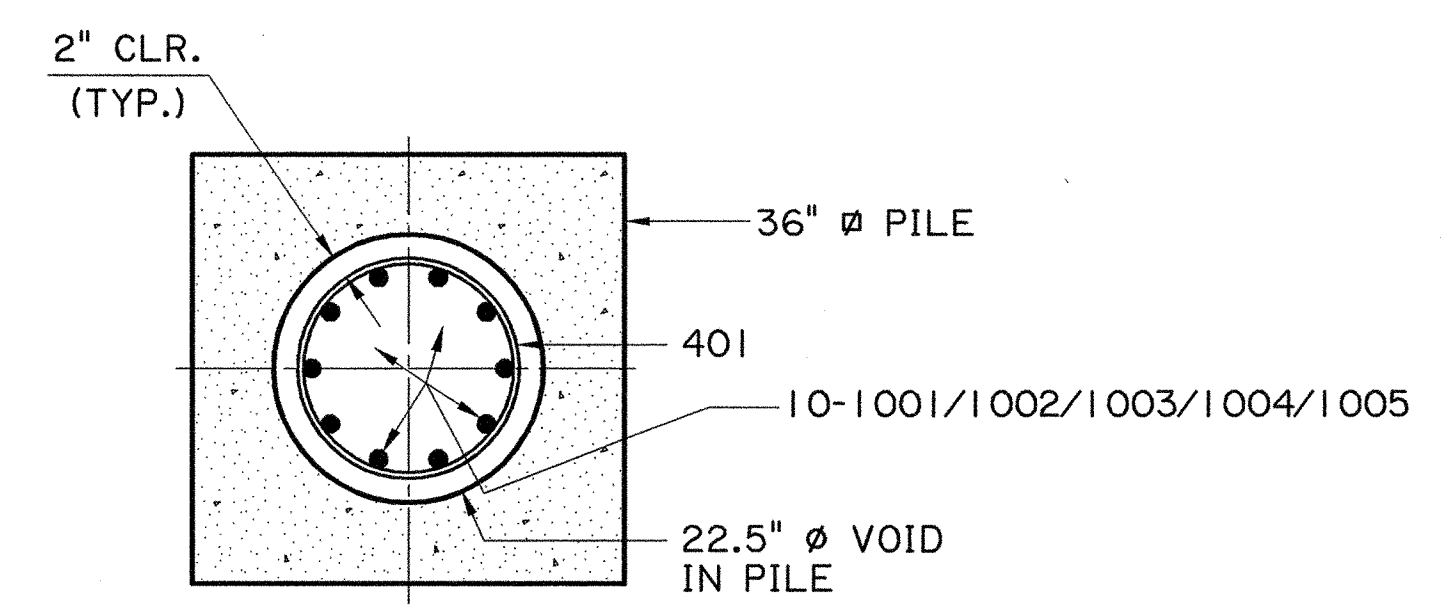
PILE CONNECTION 3
VERTICAL PILE
WITH TENSION CONNECTOR



PILE CONNECTION 4
FOOTING VERTICAL PILE
WITH TENSION CONNECTOR



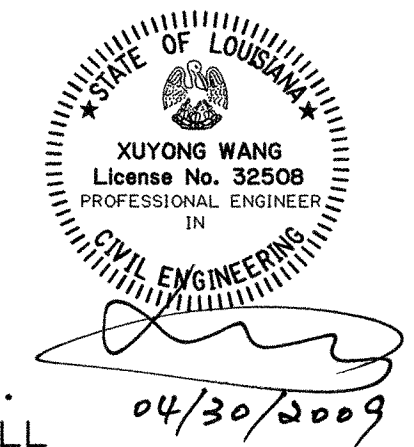
PILE CONNECTION 5
FOOTING BATTERED PILE
WITH TENSION CONNECTOR



SECTION A-A

NOTES:

- 1) SEE BENT DETAILS FOR REINFORCEMENT AT CAP.
- 2) SEE SHEET 143 FOR QUANTITIES AND PILE CONNECTION TABLE.
- 3) FOUR (4) - 2" Ø VENT HOLES (ONE ON EACH SIDE OF PILE) SHALL BE PLACED BELOW THE PILE FILL, TYPICAL FOR ALL PILES.
- 4) THE TOP OF THE PILE VOID SHALL BE FREE OF ANY FORM MATERIAL FOR THE FULL HEIGHT OF THE CONCRETE FILL. THE CONCRETE SURFACE OF THE VOID SHALL BE CLEAN BEFORE THE PILE FILL CAN BE Poured AS SHOWN ON THE DRAWING. HOWEVER, STAY-IN-PLACE CORRUGATED STEEL PIPE OR PVC PIPE FORM WILL BE ALLOWED ONLY IF THE REBAR CAGE EMBEDMENT TO PILE AND THE CONCRETE FILL ARE INCREASED FIVE (5) FEET MORE THAN THE DESIGN LENGTH.
- 5) CONCRETE TO BE PAID UNDER ITEM 805-02-00400, CLASS A(M) CONCRETE (BENTS), PER CU. YD.



SHEET NUMBER	142
DESIGNED	X. WANG
CHECKED	B. DELATTE
DATE	12/20/2007
PROJECT	JEFFERSON
STATE	LA
PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	
DATE	
BY	
CIVIL ENGINEERING	
STATE OF LOUISIANA	
XUYONG WANG	
License No. 32508	
PROFESSIONAL ENGINEER	
IN	
CIVIL ENGINEERING	
04/30/2009	
BRIDGE AND STRUCTURAL DESIGN	

ESTIMATED QUANTITIES (ONE PILE CONN. 1)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1001	10	19'-3"	192'-6"	LONGIT. IN PILE CONNECTION
TOTAL NO. 10 BARS = 192'-6" = 828 LBS.				
401	16	6'-6"	104'-0"	TIES IN PILE CONNECTION
TOTAL NO. 4 BARS = 104'-0" = 69 LBS.				
W5	†	63'-1"	63'-1"	WIRE SPIRAL IN CAP
TOTAL NO. W5 WIRE = 63'-1" = 11 LBS.				
DEFORMED REINFORCING STEEL			= 908 LBS.	
CLASS A(M) CONC. (BENTS)			= 1.69 CU. YDS.	

ESTIMATED QUANTITIES (ONE PILE CONN. 2)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1002	10	7'-3"	72'-6"	LONGIT. IN PILE CONNECTION
TOTAL NO. 10 BARS = 72'-6" = 312 LBS.				
401	5	6'-6"	32'-6"	TIES IN PILE CONNECTION
TOTAL NO. 4 BARS = 32'-6" = 22 LBS.				
W5	†	43'-8"	43'-8"	WIRE SPIRAL IN CAP
TOTAL NO. W5 WIRE = 43'-8" = 7 LBS.				
DEFORMED REINFORCING STEEL			= 341 LBS.	
CLASS A(M) CONC. (BENTS)			= 0.56 CU. YDS.	

ESTIMATED QUANTITIES (ONE PILE CONN. 3)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1003	10	7'-3"	72'-6"	LONGIT. IN PILE CONNECTION
TOTAL NO. 10 BARS = 72'-6" = 312 LBS.				
401	5	6'-6"	32'-6"	TIES IN PILE CONNECTION
TOTAL NO. 4 BARS = 32'-6" = 22 LBS.				
W5	†	63'-1"	63'-1"	WIRE SPIRAL IN CAP
TOTAL NO. W5 WIRE = 63'-1" = 11 LBS.				
DEFORMED REINFORCING STEEL			= 345 LBS.	
CLASS A(M) CONC. (BENTS)			= 0.56 CU. YDS.	

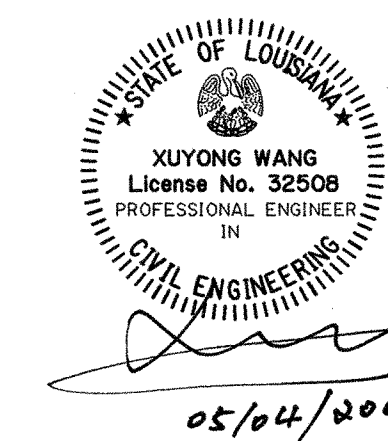
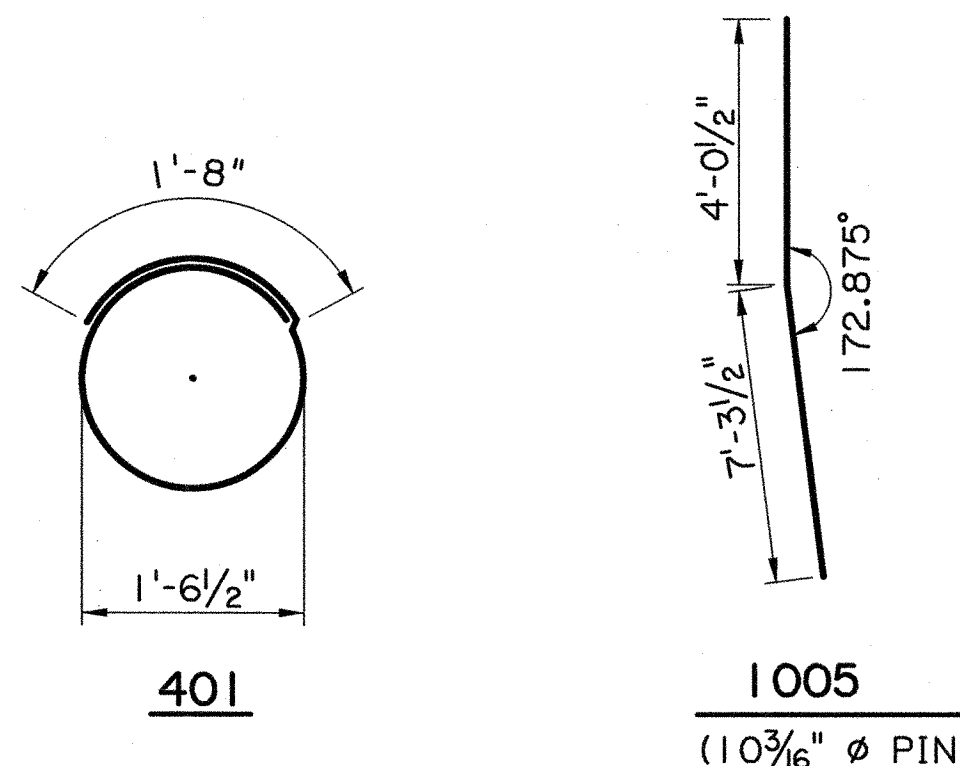
ESTIMATED QUANTITIES (ONE PILE CONN. 4)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1004	10	11'-3"	112'-6"	LONGIT. IN PILE CONNECTION
TOTAL NO. 10 BARS = 112'-6" = 484 LBS.				
401	7	6'-6"	45'-6"	TIES IN PILE CONNECTION
TOTAL NO. 4 BARS = 45'-6" = 30 LBS.				
W5	†	72'-10"	72'-10"	WIRE SPIRAL IN CAP
TOTAL NO. W5 WIRE = 72'-10" = 12 LBS.				
DEFORMED REINFORCING STEEL			= 526 LBS.	
CLASS A(M) CONC. (BENTS)			= 0.79 CU. YDS.	

ESTIMATED QUANTITIES (ONE PILE CONN. 5)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
1005	10	11'-4"	113'-4"	LONGIT. IN PILE CONNECTION
TOTAL NO. 10 BARS = 113'-4" = 488 LBS.				
401	7	6'-6"	45'-6"	TIES IN PILE CONNECTION
TOTAL NO. 4 BARS = 45'-6" = 30 LBS.				
W5	†	72'-10"	72'-10"	WIRE SPIRAL IN CAP
TOTAL NO. W5 WIRE = 72'-10" = 12 LBS.				
DEFORMED REINFORCING STEEL			= 530 LBS.	
CLASS A(M) CONC. (BENTS)			= 0.79 CU. YDS.	

ESTIMATED QUANTITIES (TOTAL PILE FILL)	
NO. 10 BARS =	178,376 LBS.
NO. 4 BARS =	12,898 LBS.
W5 WIRE =	3,689 LBS.
DEFORMED REINFORCING STEEL =	194,939 LBS.
CLASS A(M) CONC. (BENTS) =	326.16 CU. YDS.

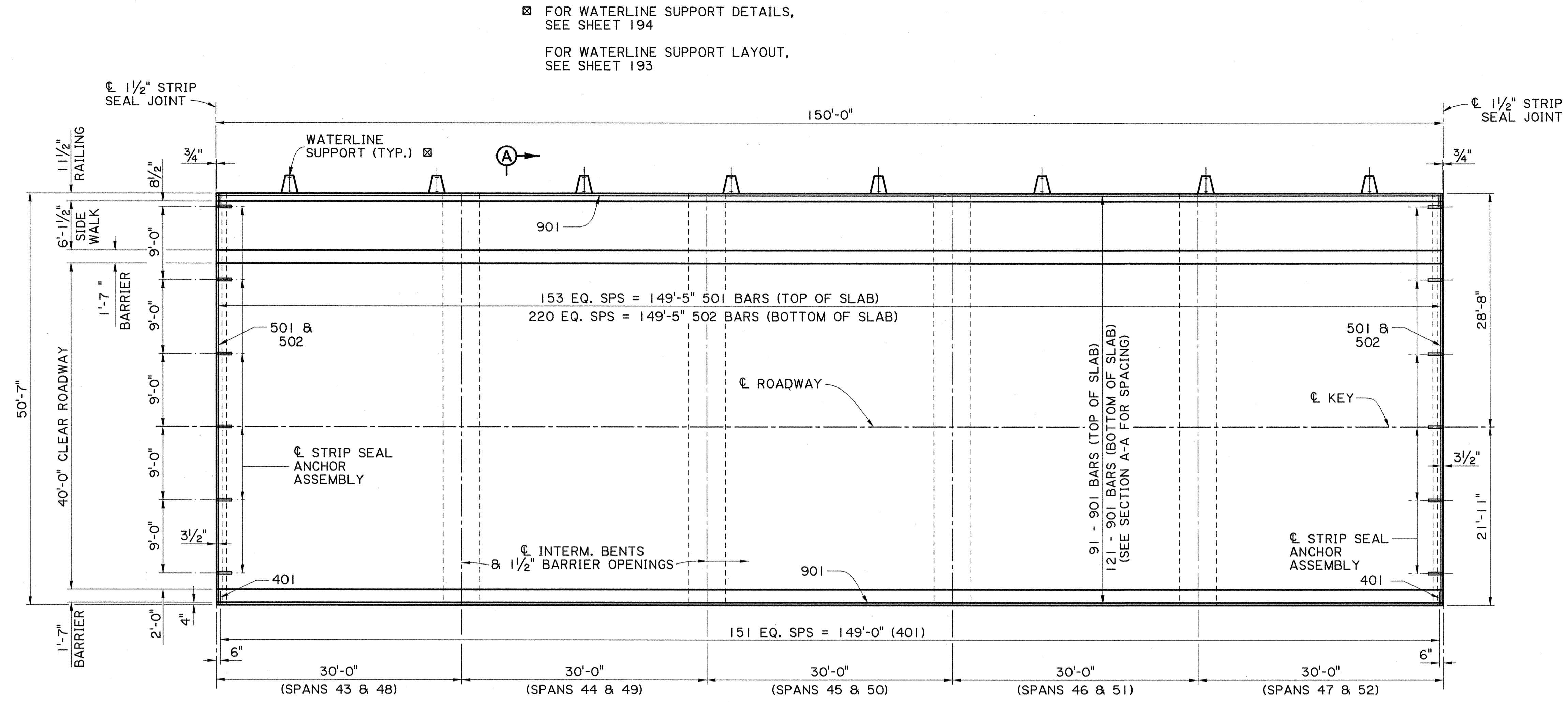
PILE CONNECTION TABLE				
BENT	VERTICAL PILE		BATTERED PILE	
	CONN. NO.	QUANTITY	CONN. NO.	QUANTITY
1-11, 43-47, 49-52, 54-57	PILE CONN. 1	96		
48, 53, 58	PILE CONN. 2	12		
12, 14, 15, 17, 18, 20, 36, 37, 39, 40, 42	PILE CONN. 3	55		
21-34	PILE CONN. 4	24	PILE CONN. 5	136
13 & 14	☒			
16, 19, 35, & 38	☐			

☒ SEE SHEET 126 FOR PILE CONNECTION DETAIL.
 ☐ SEE SHEET 127 FOR PILE CONNECTION DETAIL.



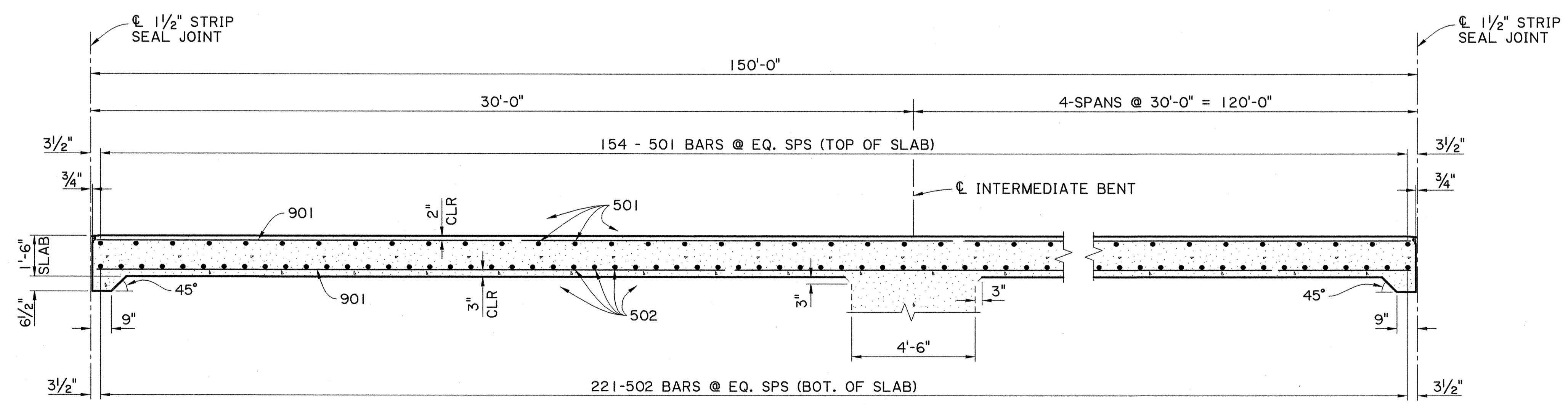
SHEET NUMBER	143
DESIGNED BY	X. WANG
CHECKED BY	B. DELATTE
DATE	12/20/2007
PROJECT	JEFFERSON
STATE	LA
PROJECT NO.	064-01-0040
SHEET	2 OF 2
REVISION DESCRIPTION	
NO.	
DATE	
BY	
CAMINADA BAY BRIDGE ROUTE LA 1	
PILE CONNECTION	
BRIDGE AND STRUCTURAL DESIGN	

R:\Gang2\Projects\064010040\dgn\145_Slab Spans_2_Plan_spans_43-52.dgn
 30-APR-2009 10:18
 FINAL PLANS



NOTES:
 FOR SECTION A-A SEE SHEET 4 OF 5.

PLAN
 (SCALE: 1/8" = 1'-0")

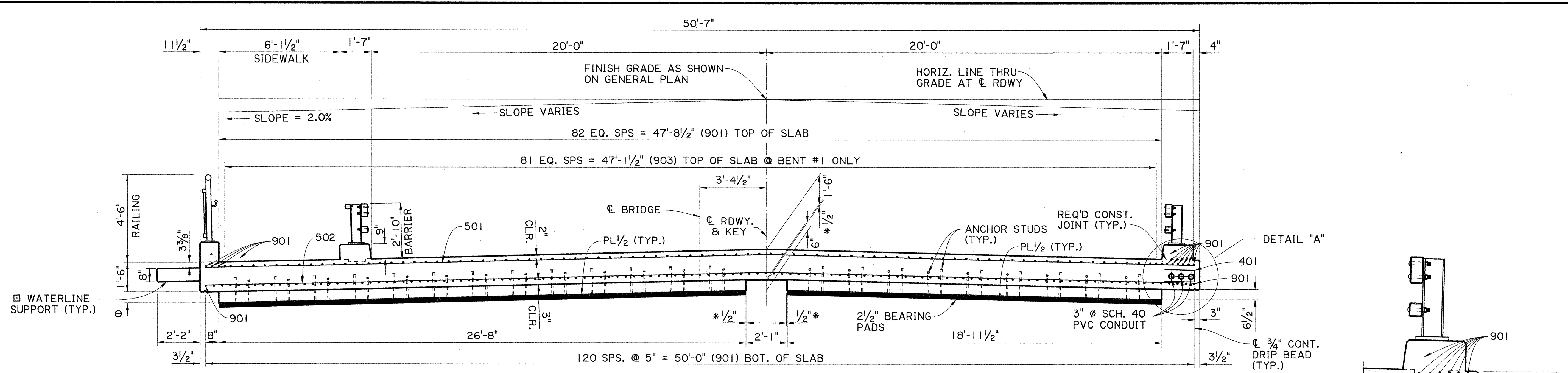


SECTION ALONG ϕ ROADWAY
 (SCALE: 3/4" = 1'-0")

☒ FOR WATERLINE SUPPORT DETAILS,
 SEE SHEET 194
 FOR WATERLINE SUPPORT LAYOUT,
 SEE SHEET 193

STATE OF LOUISIANA
 BRIAN D. DELATTE
 License No. 30263
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
Brian Delatte
 03/06/2009

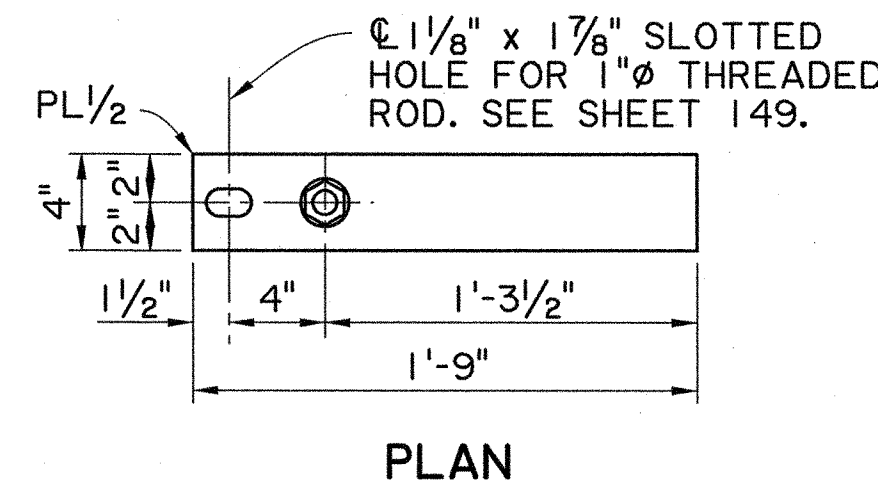
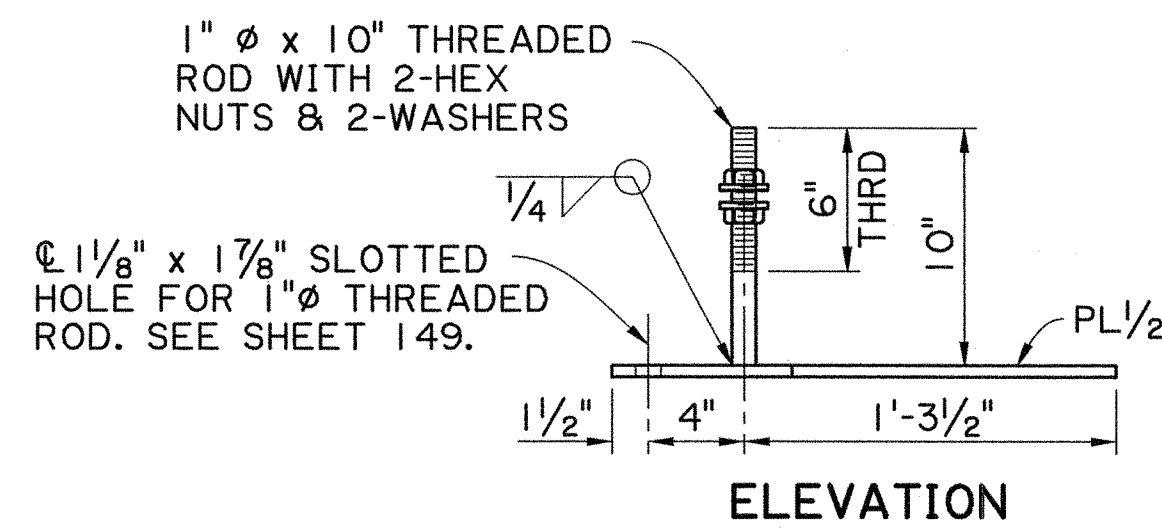
SHEET NUMBER	145	PARISH	JEFFERSON	STATE PROJECT	064-01-0040
DESIGNED BY	B. DELATTE	FEDERAL PROJECT	B. DELATTE	DATE	OCT. 2007
CHECKED BY	X. WANG	CHECKED BY	D. BASTION	SHEET	2 OF 3
REVISION DESCRIPTION					
NO.	DATE	BY			
CAMINADA BAY BRIDGE ROUTE LA 1					
BRIDGE DETAILS SLAB SPANS (SPANS 43-52)					
BRIDGE AND STRUCTURAL DESIGN					



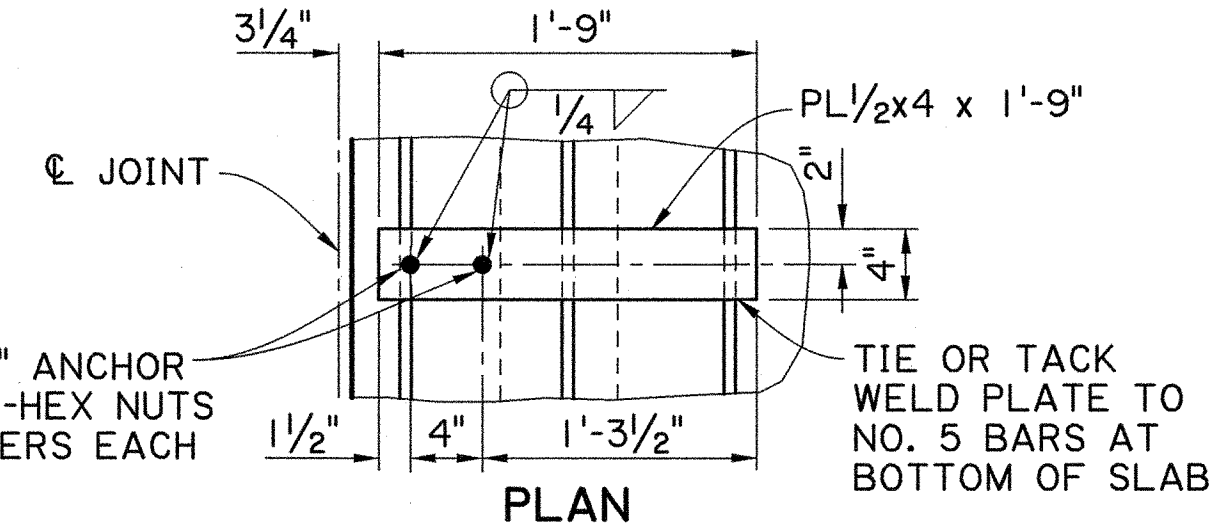
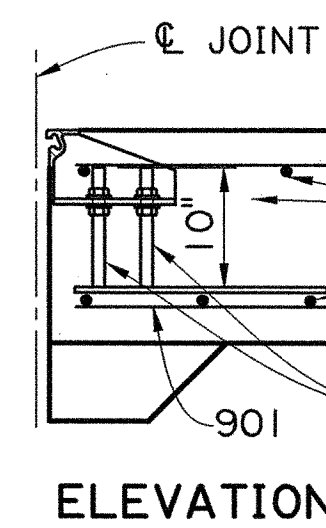
6 3/16" @ BENT 11
 6 7/8" @ BENTS 43, 48, & 53
 8" @ BENT 58

SECTION A-A
(SCALE: 3/8" = 1'-0")

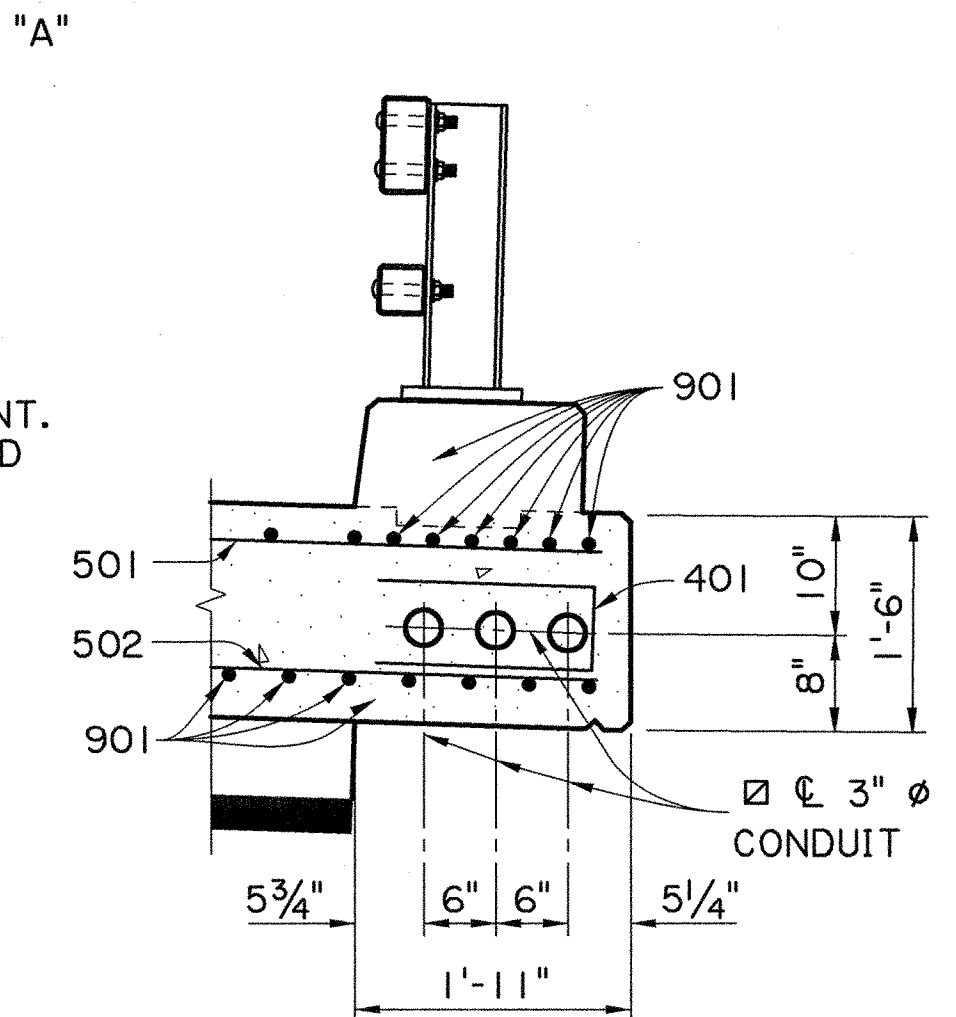
* PREFORMED JOINT MATERIAL ON INT. TRANS. OR END BENT SHEAR KEY



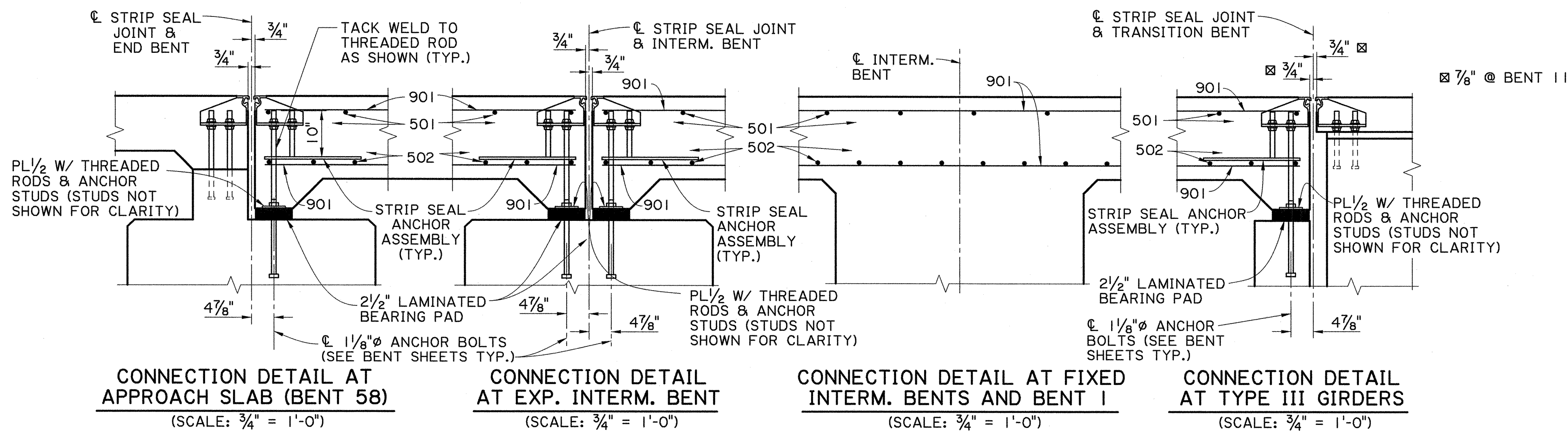
STRIP SEAL ANCHOR ASSEMBLY
(NTS)



STRIP SEAL ANCHOR ASSEMBLY AT KEY ONLY
(NTS)

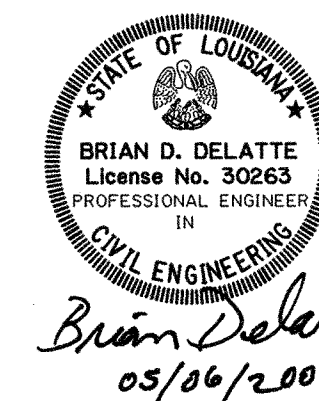


DETAIL "A"
(SCALE: 3/4" = 1'-0")



NOTES:

- FOR GENERAL NOTES, SEE "GENERAL NOTES", SHEETS 102-103.
- FOR ROADWAY SLOPES SEE SUPERELEVATION TRANSITION DIAGRAMS, SHEETS 110-113.
- FOR RAILING DETAILS, SLOTTED DRAINS AND CONDUIT LOCATIONS SEE STEEL & CONCRETE RAILING DETAILS, SHEETS 171-173.
- FOR DETAILS AND QUANTITIES OF 1/2" PLATES, ANCHOR STUDS & BEARING PADS SEE SLAB SPAN CONNECTION ASSEMBLY DETAILS, SHEET SHEET 149.
- SEE SPAN NOTES ON SPAN AND GIRDER DETAILS, SHEETS 169-170 FOR POURING REQUIREMENTS.
- SUPPLEMENTAL SUPPORT BEAM REQUIRED ON SPANS WHERE COMMUNICATION BLOCKOUTS OR JUNCTION BOXES ARE REQUIRED.
- FOR SIDEWALK RAILING DETAILS, SEE SHEETS 174-175.
- 3" Ø CONDUIT SHALL BE SCHEDULE 40 PVC AND INCLUDES FIBERGLASS EXPANSION FITTINGS AT EXPANSION JOINTS TO ALLOW FOR 10" OF MOVEMENT. TO BE INCLUDED IN THE BID PRICE FOR ITEM 805-04-00100, CLASS AA(M) CONCRETE.
- FOR WATERLINE SUPPORT LAYOUT AND DETAILS, SEE SHEETS 193-194.



SHEET NUMBER	147
DESIGNED	B. DELATTE
CHECKED	X. WANG
DATE	APRIL 2006
PROJECT	064-01-0040
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	
BY	
NO.	
DATE	
REVISION DESCRIPTION	
BRIDGE DETAILS	SLAB SPANS (CROSS SECTION)
CAMINADA BAY BRIDGE ROUTE LA 1	
BRIDGE AND STRUCTURAL DESIGN	

ESTIMATED QUANTITIES (ONE 340'-0" CONT. SLAB SPAN UNIT) (SPANS 1-10 & APPR. SLAB)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
* 901	212	389'-0"	82468'-0"	LONGIT. IN TOP AND BOTTOM OF SLAB
902	6	25'-2"	151'-0"	LONGITUDINAL IN SUPPORT BEAM
903	82	13'-0"	1066'-0"	LONGITUDINAL IN SUPPORT BEAM
TOTAL NO. 9 BARS = 83685'-0" = 284529 LBS.				
501	348	50'-1"	17429'-0"	TRANSVERSE IN TOP OF SLAB
502	500	50'-1"	25041'-8"	TRANSVERSE IN BOTTOM SLAB
503	26	6'-10"	177'-8"	TRANSV. IN TOP OF SLAB @ SUPPORT BEAM
TOTAL NO. 5 BARS = 42648'-4" = 44482 LBS.				
401	263	3'-7"	942'-5"	TRANSVERSE IN SLAB AT BARRIER
402	27	8'-2"	220'-6"	STIRRUPS IN SUPPORT BEAM
TOTAL NO. 4 BARS = 1162'-11" = 777 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) = 29788 LBS.				
CLASS AA(M) CONCRETE = 957.48 CU. YDS.				
☒ STRUCTURAL METALWORK	= 94 LBS.			
STEEL AND CONCRETE RAILING	= 680.00 LIN. FT.			

* INCLUDES SIX (6) 7'-6" MIN. LAP SPLICES, TO BE STAGGERED.
 ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.

ESTIMATED QUANTITIES (ONE 150'-0" CONT. SLAB SPAN UNIT) (SPANS 43-47 & 48-52)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
* 901	212	164'-6"	34874'-0"	LONGIT. IN TOP AND BOTTOM OF SLAB
902	6	25'-2"	151'-0"	LONGITUDINAL IN SUPPORT BEAM
TOTAL NO. 9 BARS = 35025'-0" = 119085 LBS.				
501	154	50'-1"	7712'-10"	TRANSVERSE IN TOP OF SLAB
502	221	50'-1"	11068'-5"	TRANSVERSE IN BOTTOM SLAB
503	26	6'-10"	177'-8"	TRANSV. IN TOP OF SLAB @ SUPPORT BEAM
TOTAL NO. 5 BARS = 18958'-11" = 19774 LBS.				
401	152	3'-7"	544'-8"	TRANSVERSE IN SLAB AT BARRIER
402	27	8'-2"	220'-6"	STIRRUPS IN SUPPORT BEAM
TOTAL NO. 4 BARS = 765'-2" = 511 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) = 139370 LBS.				
CLASS AA(M) CONCRETE = 424.25 CU. YDS.				
☒ STRUCTURAL METALWORK	= 189 LBS.			
STRIP SEAL JOINTS	= 47.71 LIN. FT.			
STEEL AND CONCRETE RAILING	= 300.00 LIN. FT.			

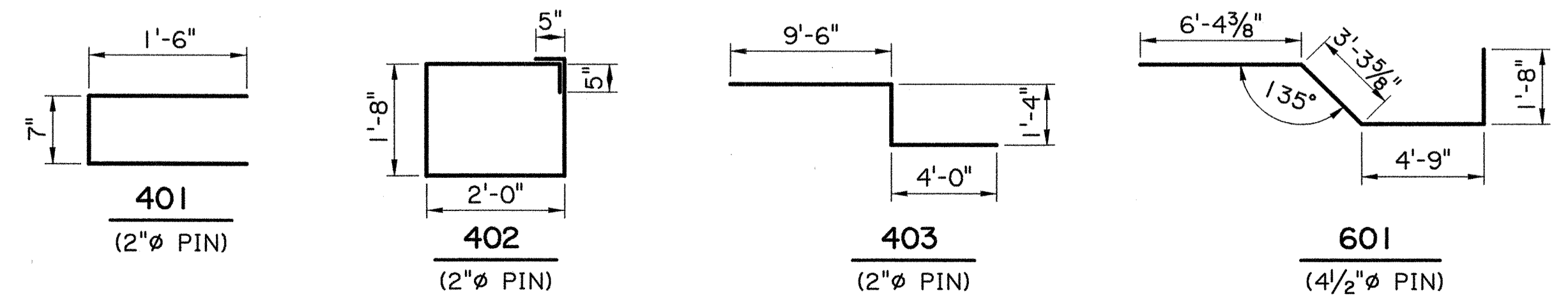
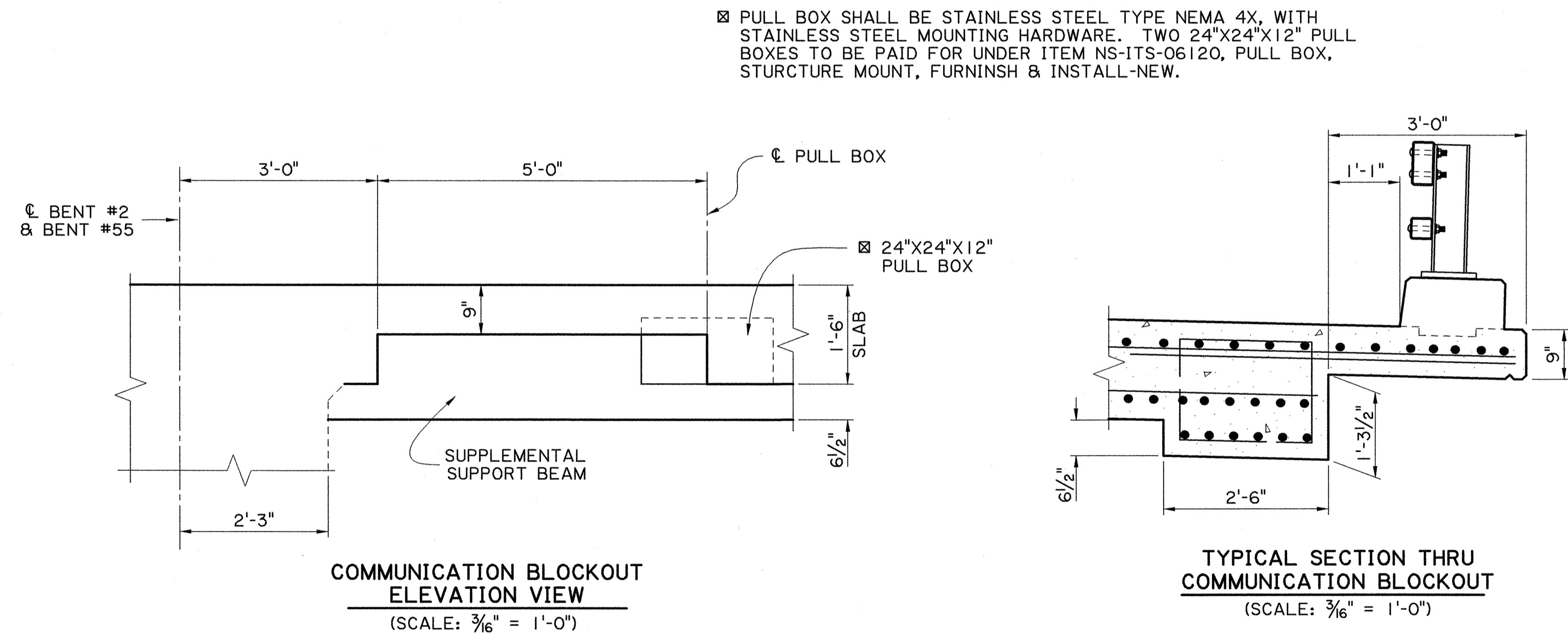
* INCLUDES TWO (2) 7'-6" MIN. LAP SPLICES, TO BE STAGGERED.
 ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.

ESTIMATED QUANTITIES (ONE 150'-0" CONT. SLAB SPAN UNIT) (SPANS 53-57)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
* 901	212	167'-7"	35527'-8"	LONGIT. IN TOP AND BOTTOM OF SLAB
902	6	25'-2"	151'-0"	LONGITUDINAL IN SUPPORT BEAM
TOTAL NO. 9 BARS = 35679'-0" = 121307 LBS.				
501	154	50'-1"	7712'-10"	TRANSVERSE IN TOP OF SLAB
502	221	50'-1"	11068'-5"	TRANSVERSE IN BOTTOM SLAB
503	26	6'-10"	177'-8"	TRANSV. IN TOP OF SLAB @ SUPPORT BEAM
TOTAL NO. 5 BARS = 18958'-11" = 19774 LBS.				
401	52	3'-7"	186'-4"	TRANSVERSE IN SLAB AT BARRIER
402	27	8'-2"	220'-6"	STIRRUPS IN SUPPORT BEAM
TOTAL NO. 4 BARS = 406'-10" = 272 LBS.				
TOTAL DEFORMED REINFORCING STEEL (STAINLESS STEEL) = 141353 LBS.				
CLASS AA(M) CONCRETE = 421.89 CU. YDS.				
☒ STRUCTURAL METALWORK	= 189 LBS.			
STRIP SEAL JOINTS	= 47.71 LIN. FT.			
STEEL AND CONCRETE RAILING	= 300.00 LIN. FT.			

* INCLUDES TWO (2) 7'-6" MIN. LAP SPLICES, TO BE STAGGERED.
 ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.

ESTIMATED QUANTITIES (ONE 10'-0" SLEEPER SLAB)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
601	51	16'-1"	820'-3"	LONGIT. IN BOTTOM OF SLEEPER SLAB
602	24	50'-3"	1206'-0"	TRANSV. IN BOTTOM OF SLEEPER SLAB
TOTAL NO. 6 BARS = 2026'-3" = 3043 LBS.				
403	51	15'-2"	773'-6"	LONGIT. IN TOP OF SLEEPER SLAB
404	18	51'-11"	934'-6"	TRANSV. IN TOP OF SLEEPER SLAB
TOTAL NO. 4 BARS = 1708'-0" = 1141 LBS.				
△ TOTAL DEFORMED REINFORCING STEEL	= 4184 LBS.			
☒ SUPERPAVE ASPHALTIC CONCRETE	= 4.2 TONS			
△ CONCRETE SLEEPER SLAB	= 56.40 SQ. YDS.			
STEEL AND CONCRETE RAILING	= 20.00 LIN. FT.			

⊙ INCLUDES ONE (1) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED.
 △ TO BE INCLUDED IN THE PRICE BID FOR CONCRETE APPROACH SLAB.
 ☒ PAID FOR UNDER ITEM 502-01-00100.



STATE OF LOUISIANA
 BRIAN D. DELATTE
 License No. 30263
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 Brian Delatte
 05/06/2009

SHEET NUMBER 148

JEFFERSON

PARISH PROJECT STATE PROJECT

DESIGNED BY: B. DELATTE
 CHECKED BY: X. WANG

DATE: APRIL 2006

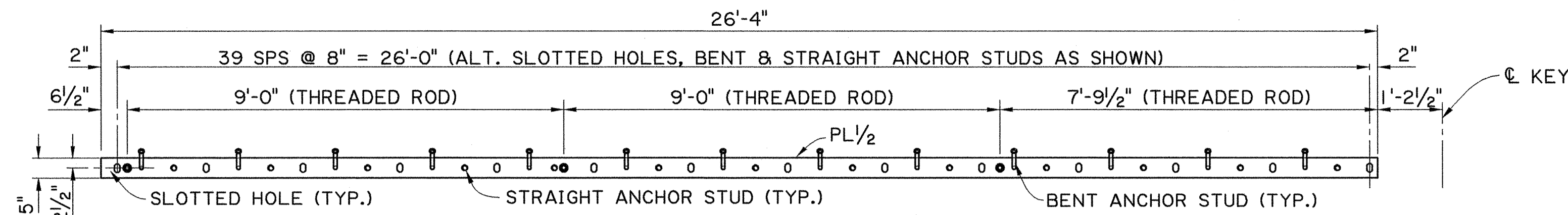
SHEET 5 OF 5

REVISION DESCRIPTION

CAMINADA BAY BRIDGE ROUTE LA 1

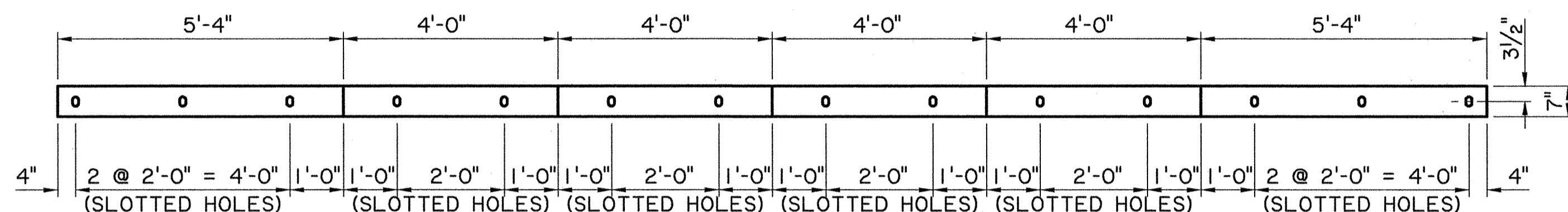
SLAB SPANS

BRIDGE AND STRUCTURAL DESIGN



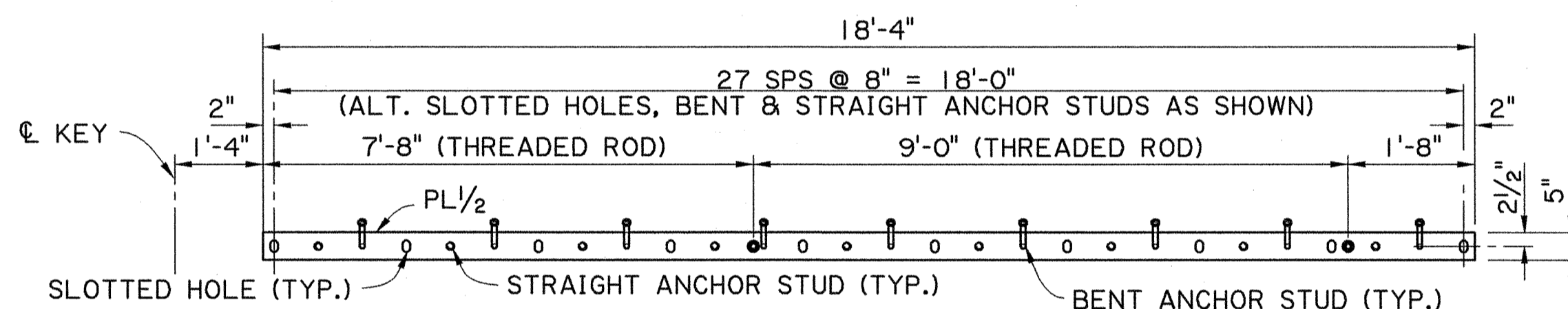
PLAN OF LEFT CONNECTION ASSEMBLY AT BENT 11, 43, 48, 53, & 58

306 LBS EA. (7 REQ'D)



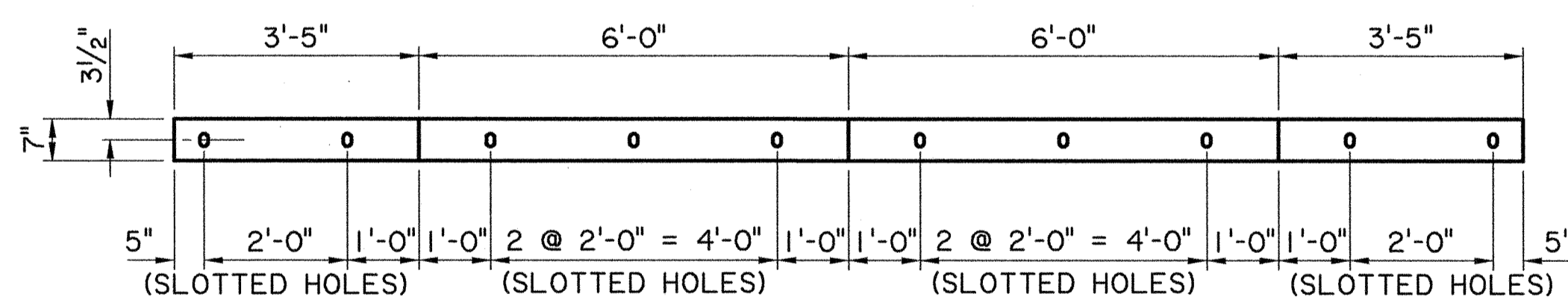
PLAN OF LEFT BEARING PAD ASSEMBLY AT BENT 11, 43, 48, 53, & 58

(7 REQ'D)



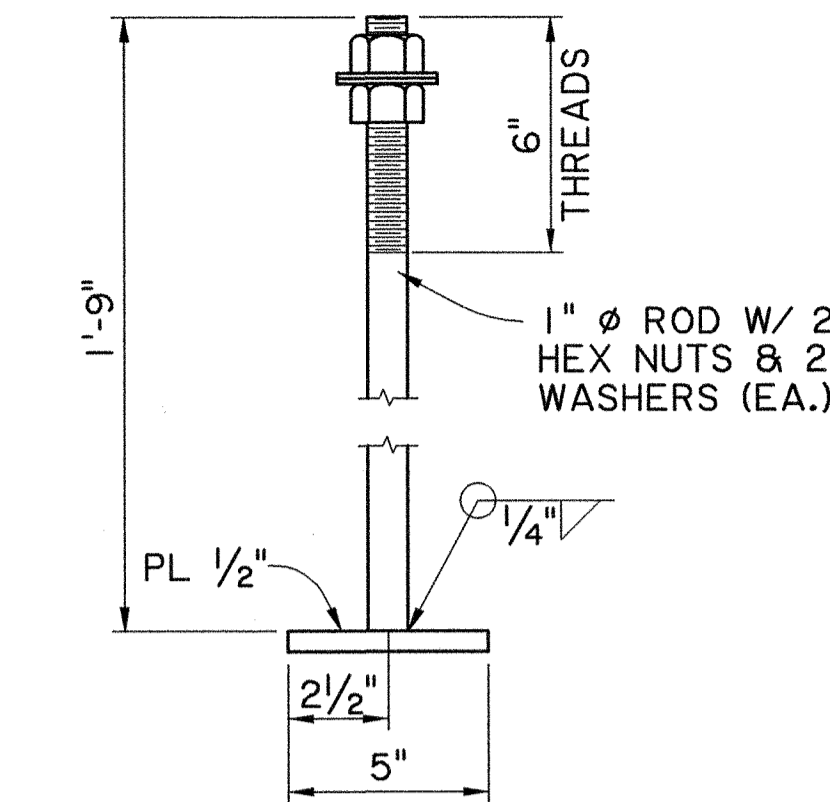
PLAN OF RIGHT CONNECTION ASSEMBLY AT BENT 11, 43, 48, 53, & 58

212 LBS EA. (7 REQ'D)



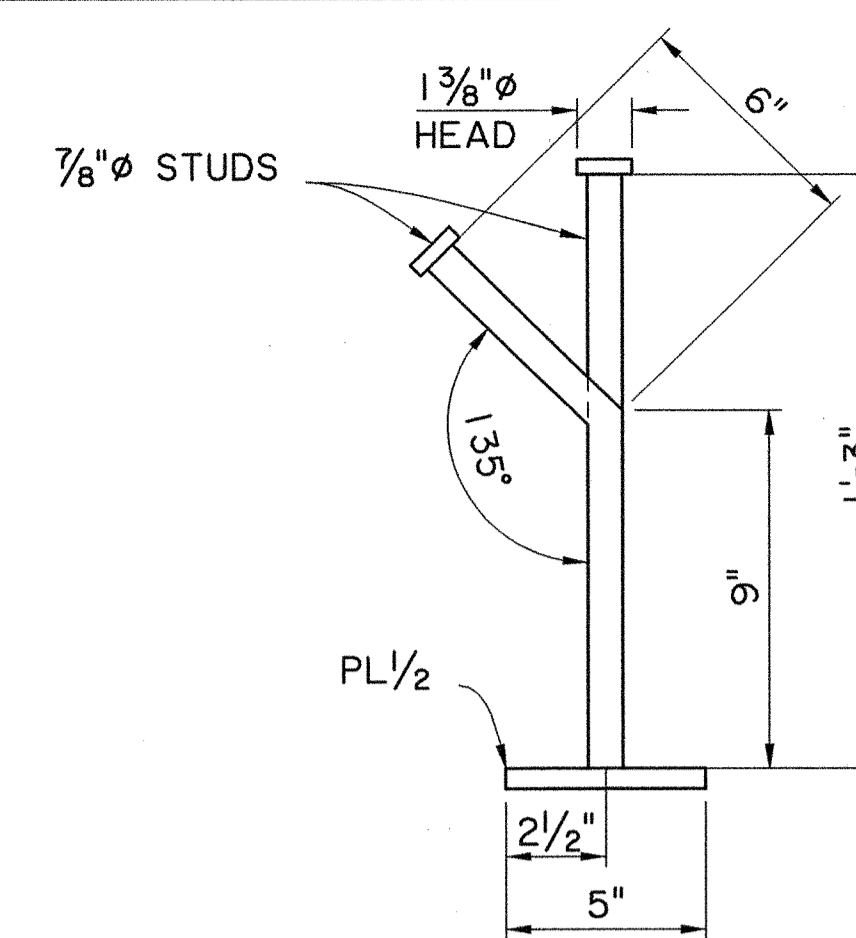
PLAN OF RIGHT BEARING PAD ASSEMBLY AT BENT 11, 43, 48, 53 & 58

(7 REQ'D)



THREADED ROD DETAILS

(NTS)



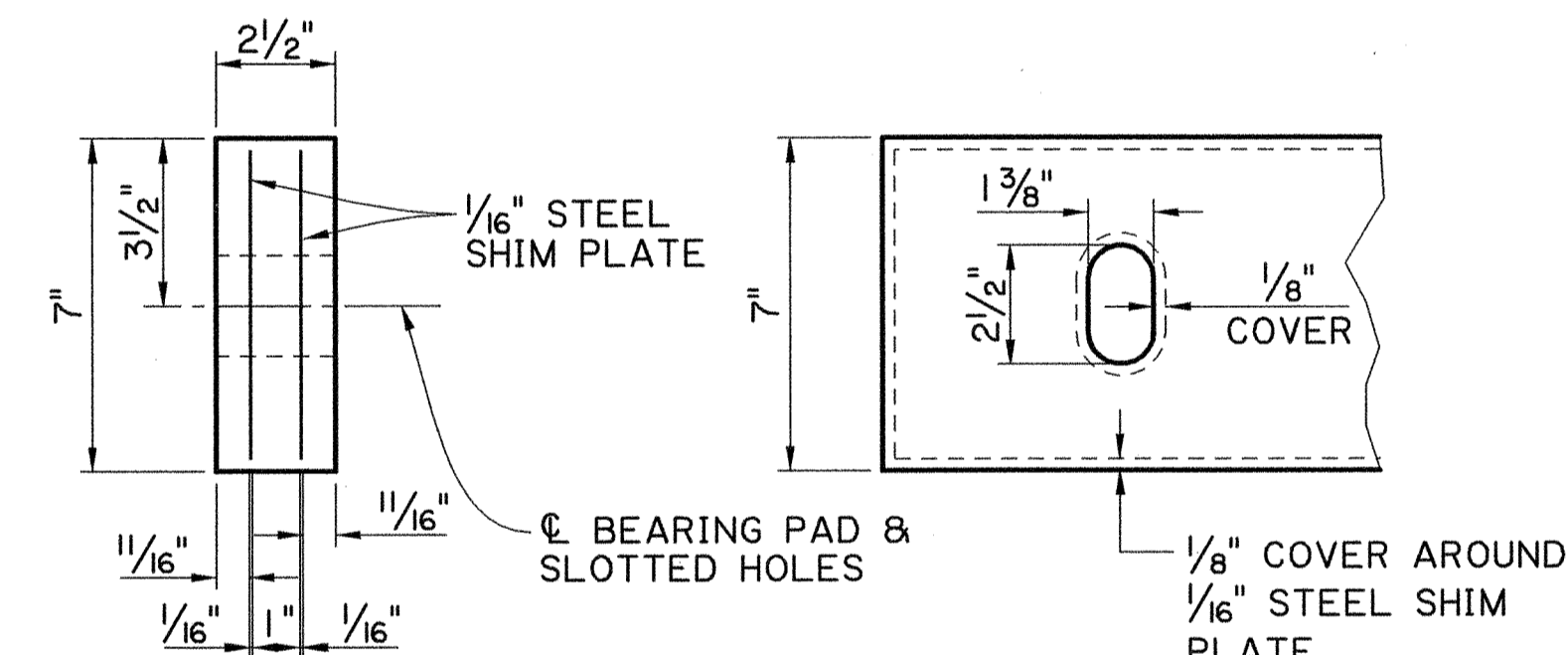
ANCHOR STUD DETAILS

(NTS)

ANCHOR STUDS SHALL BE 7/8"Ø x 1'-3" AUTOMATIC END WELDED TYPE. ALL BENDS ARE TO BE MADE PRIOR TO WELDING. OMIT ANCHOR STUDS WHERE THREADED RODS INTERFERE.

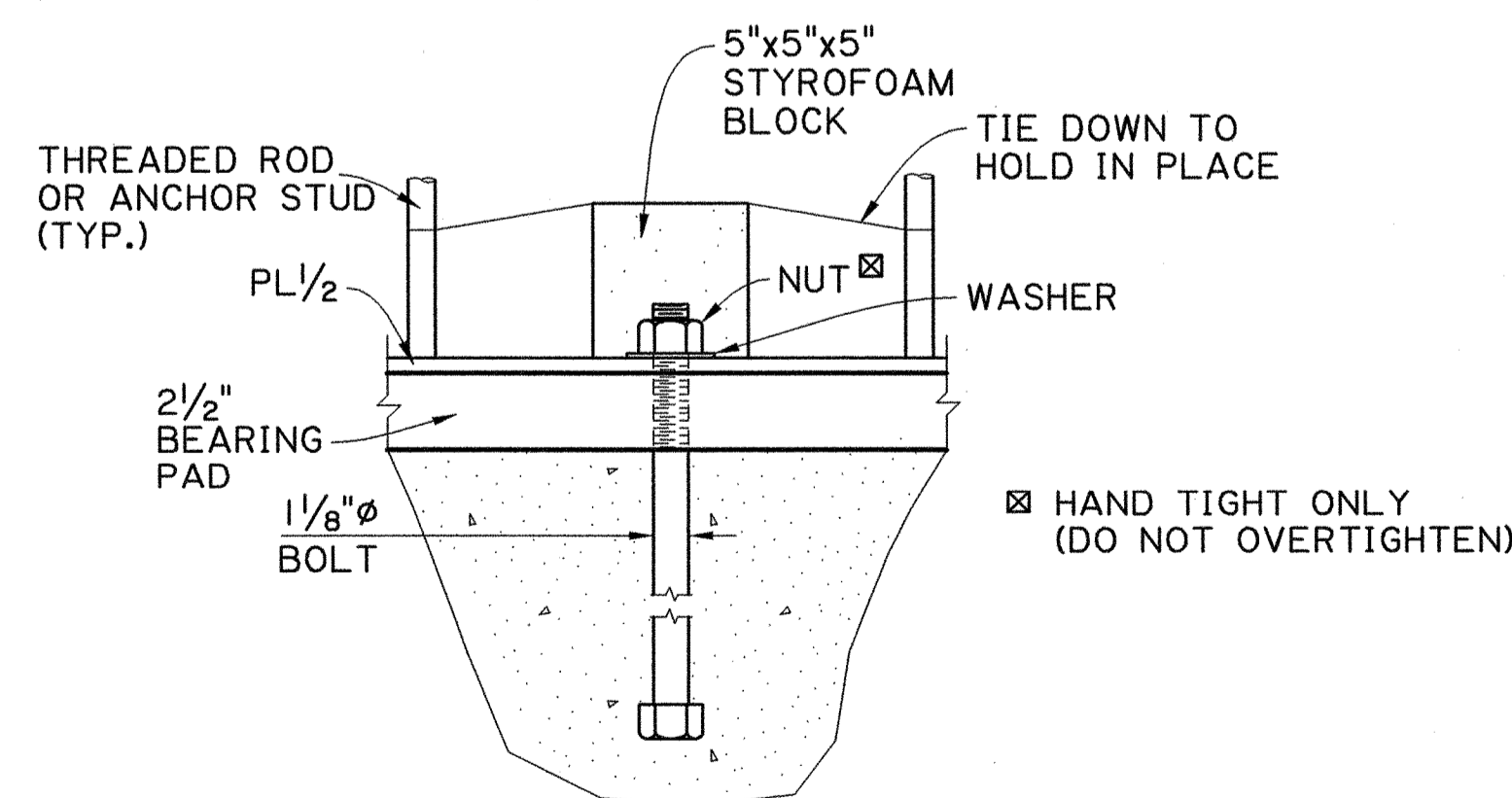
STRUCTURAL METALWORK:
TOTAL STRUCTURAL METALWORK = 3626 LBS.
FOR ESTIMATION PURPOSES ONLY.
TO BE INCLUDED UNDER ITEM 807-08-00100 "STRUCTURAL METALWORK", LUMP SUM.

BEARING PADS (70 TOTAL):
14 - 6'-0" x 7" x 2 1/2"
28 - 4'-0" x 7" x 2 1/2"
14 - 5'-4" x 7" x 2 1/2"
14 - 3'-5" x 7" x 2 1/2"
TO BE PAID FOR UNDER ITEM NS-800-00241, BEARING (ELASTOMERIC) (SLAB SPANS), PER EACH.



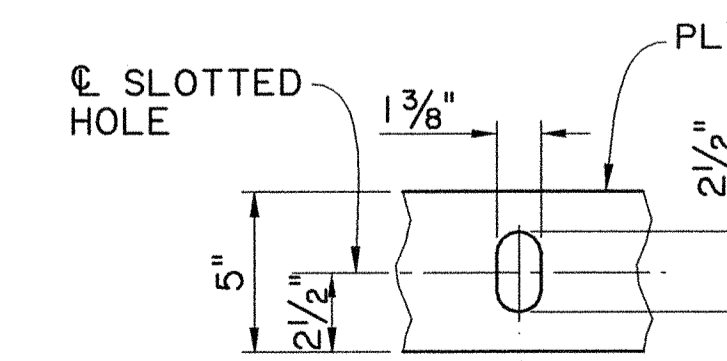
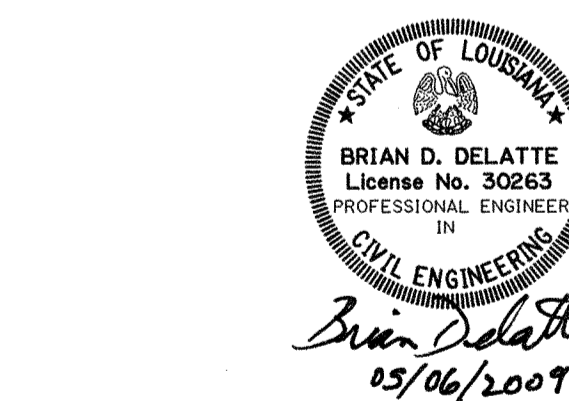
BEARING PAD DETAILS

(NTS)



ANCHOR BOLT TIGHTENING AND PROTECTION DETAIL

BLOCK TO BE CENTERED ON 1/8" Ø BOLT AND BE PLACED SUCH THAT BOLT, NUT, & WASHER WILL NOT BE ENCASED IN CONCRETE (NTS)

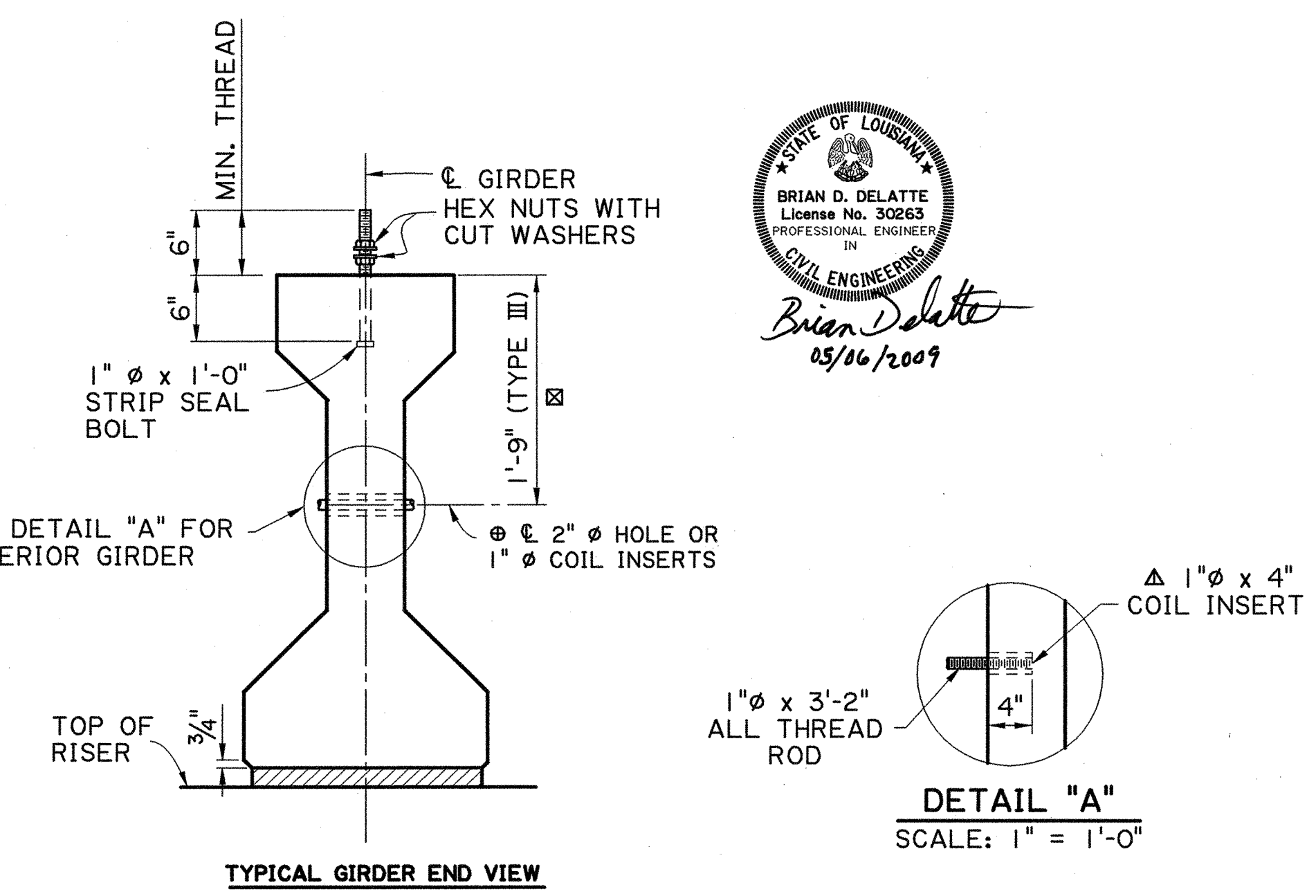
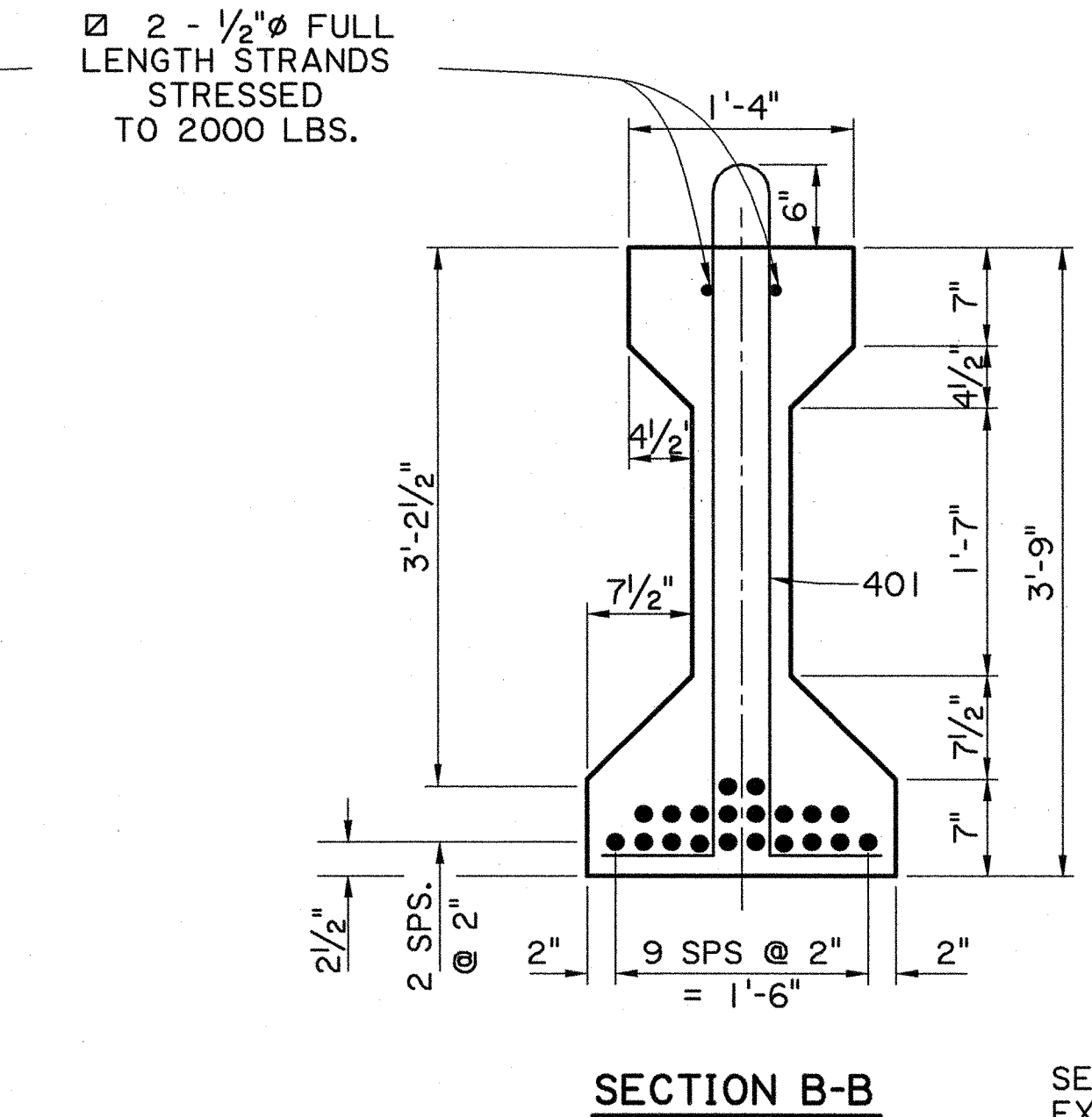
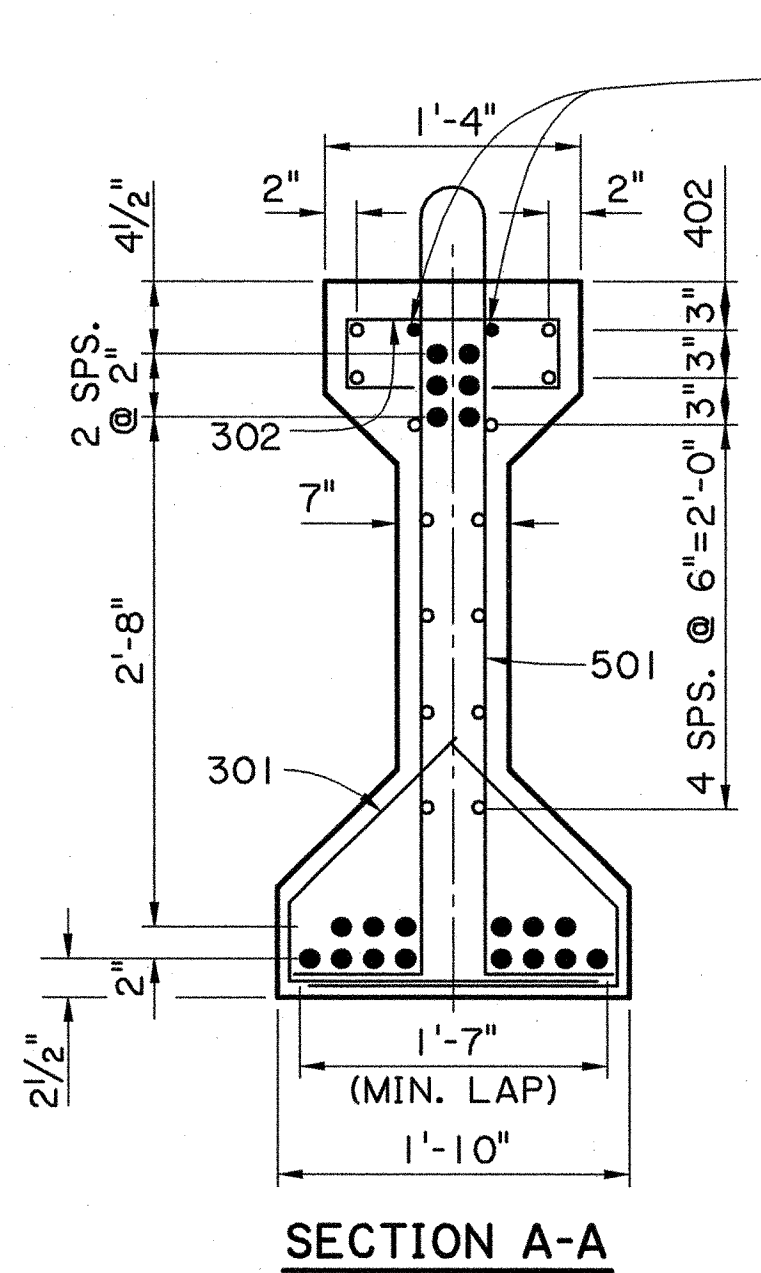
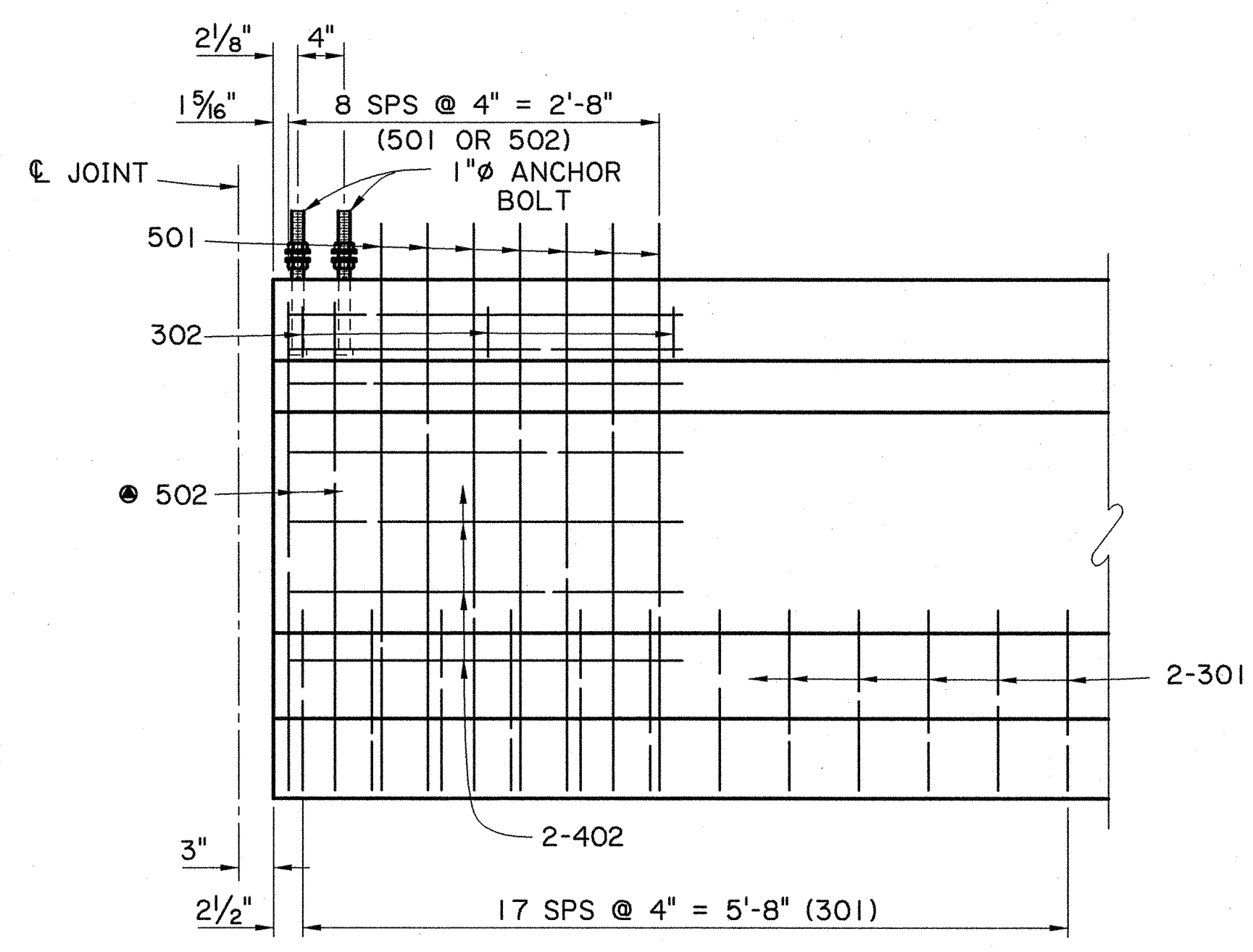
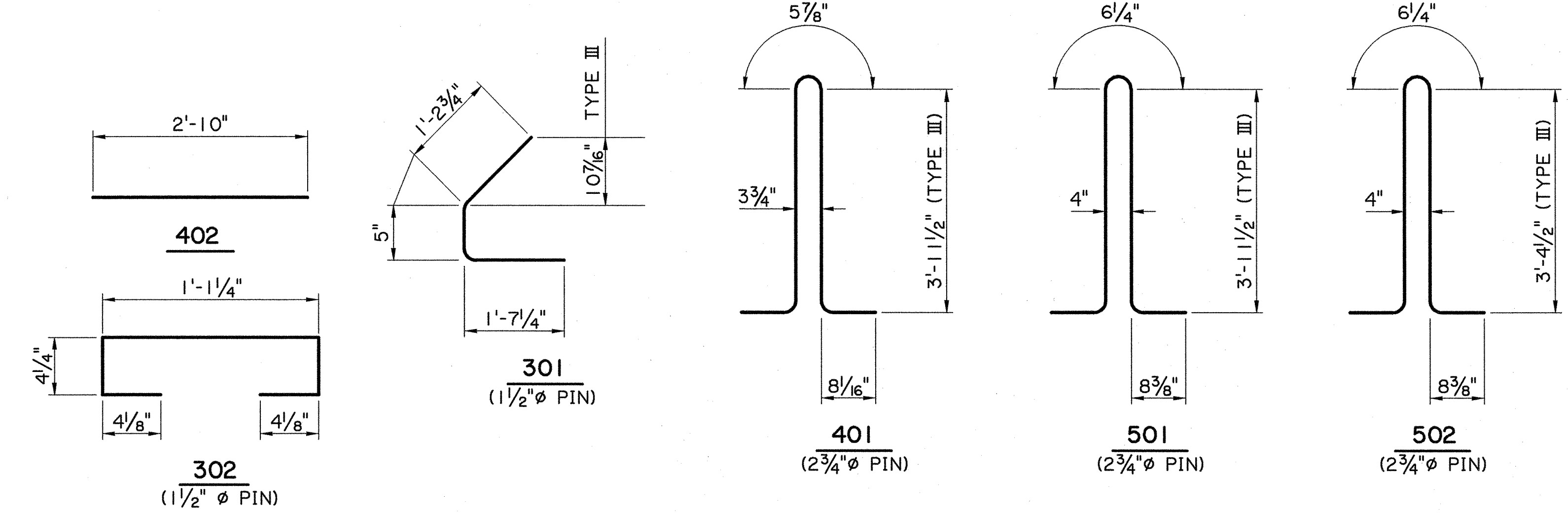
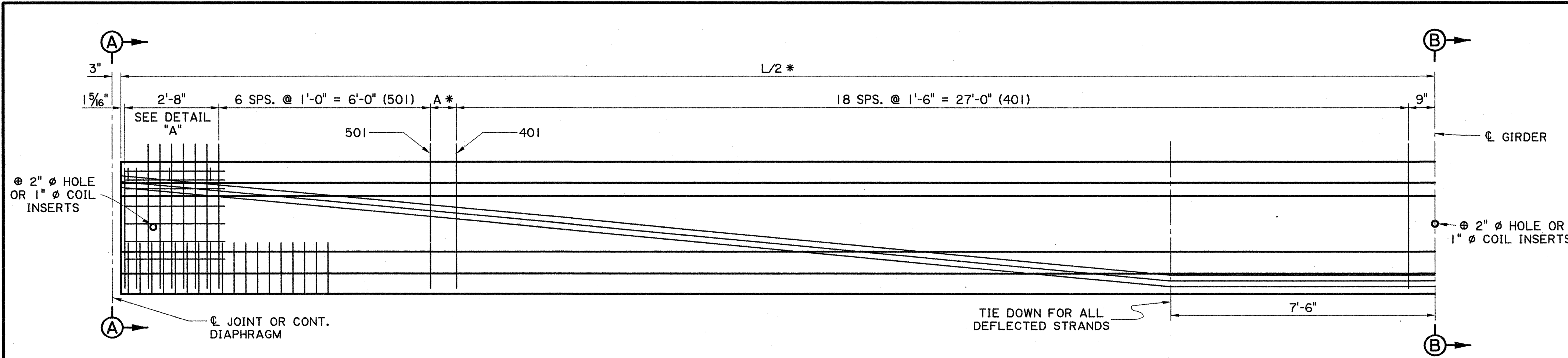


SLOTTED HOLE DETAIL AT PLATE

(NTS)

SHEET SCALE: 1/2" = 1'-0" EXCEPT AS NOTED

SHEET NUMBER	149
DESIGNED BY	B. DELATTE
CHECKED BY	J. NAKHLEH
DATE	04-29-2009
PROJECT	CAMINADA BAY BRIDGE ROUTE LA 1
STATE	LOUISIANA
PROJECT	SLAB SPAN CONNECTION ASSEMBLY
BY	JEFFERSON
PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	
DATE	



**ESTIMATED QUANTITIES (ONE 74'-6" GIRDER)
(END SPAN OF CONTINUOUS UNIT)**

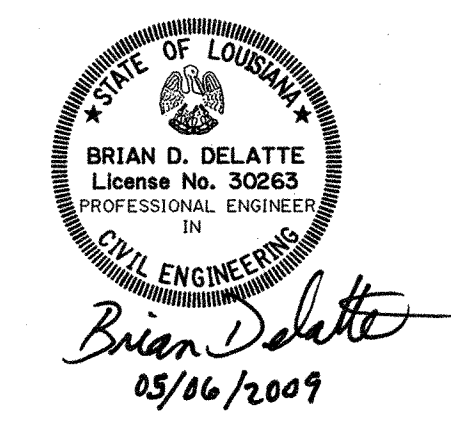
BAR NO.	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
501	28	9'-10"	275'-4"	END OF GIRDER
502	2	8'-8"	17'-4"	END OF GIRDER
TOTAL NO. 5 BARS = 292'-8"				= 305 LBS.
401	38	9'-10"	373'-8"	VERTICAL
402	28	2'-10"	79'-4"	HORIZONTAL END OF GIRDER
TOTAL NO. 4 BARS = 453'-0"				= 303 LBS.
301	72	3'-3"	234'-0"	TRANSV. BOT. OF GIRDER
302	6	2'-6"	15'-0"	TRANSV. TOP OF GIRDER
TOTAL NO. 3 BARS = 249'-0"				= 94 LBS.
TOTAL DEFORMED REINFORCING STEEL				= 702 LBS.
CLASS P(HPC) CONCRETE				= 10.78 CU. YDS.
20 - 0.6" STRANDS (270k)				= 1103 LBS.
STRUCTURAL METALWORK (ASTM-A709(GR36))				= 8 LBS.
ELASTOMERIC BEARING PADS				= 2 EACH

QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY, PAYMENT SHALL BE MADE UNDER ITEM NS-800-00181, PER LINEAR FOOT.

NOTES:

- FOR DETAILS NOT SHOWN SEE FRAMING PLAN (SHEETS 153-155) AND SPAN AND GIRDER DETAILS (SHEETS 169-170).
- CAMBER AT RELEASE SHOULD FALL WITHIN THE MAX AND MIN INDICATED ON THE GIRDER DATA TABLE.
- FOR GIRDER DIMENSIONS AND CAMBER SEE GIRDER DATA TABLE, SHEET 155.
- FOR JOINT DETAILS, SEE STRIP SEAL DETAILS (SHEETS 178-179) AND FINGER JOINT DETAILS (SHEETS 176-177).
- 2" HOLE (INTERIOR GIRDEES) AND 1" COIL INSERT (EXTERIOR GIRDEES) ARE REQUIRED AT INTERMEDIATE DIAPHRAGMS OF ALL SPANS AND END DIAPHRAGMS OF SPANS 20 & 34. (SEE FRAMING PLAN FOR LOCATION)
- FULL LENGTH STRANDS ARE GENERALLY PULLED TO 2,000 POUNDS BUT MAY BE PULLED UP TO 5,400 POUNDS TO REDUCE UNDESIRABLE SAG.
- USE 501 IN LIEU OF 502 @ CONTINUITY ENDS OF GIRDEES.
- THIS DIMENSION MAY BE ADJUSTED TO CLEAR DRAPED STRANDS WHEN NECESSARY AND IS TYPICAL FOR ALL GIRDEES REGARDLESS OF ROADWAY CROWN.
- COIL INSERTS SHALL BE WILLIAMS TYPE C17-1x4 THIN SLAB LIFTING INSERT OR AN APPROVED EQUAL.

• FULLY BONDED
 STRAND GRADE 270k-LL, 20 - 0.6" LOW RELAXATION STRANDS @ 43,950 LBS. EACH
 TOTAL INITIAL FORCE = 879,000 LBS.
 MINIMUM RELEASE STRENGTH = 6,500 PSI
 MINIMUM 28 DAY STRENGTH = 8,500 PSI



SHEET NUMBER 150

JEFFERSON

DESIGNED BY B. DELATTE
 CHECKED BY C. FOURNERAT

PARISH FEDERAL PROJECT
 DETAILED BY D. HYMEL
 CHECKED BY B. DELATTE

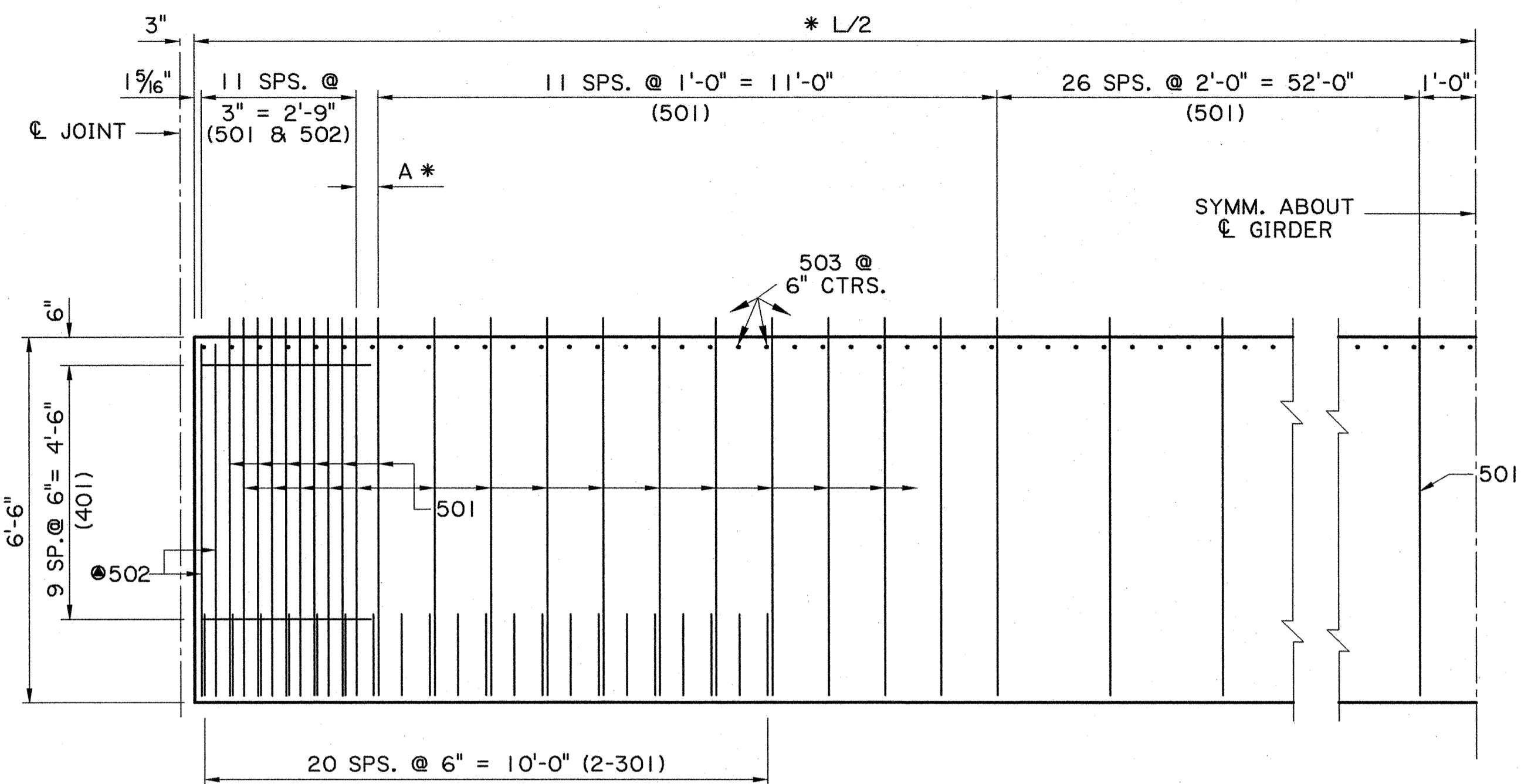
STATE PROJECT
 DATE DEC 2006
 SHEET 1 OF 1

064-01-0040

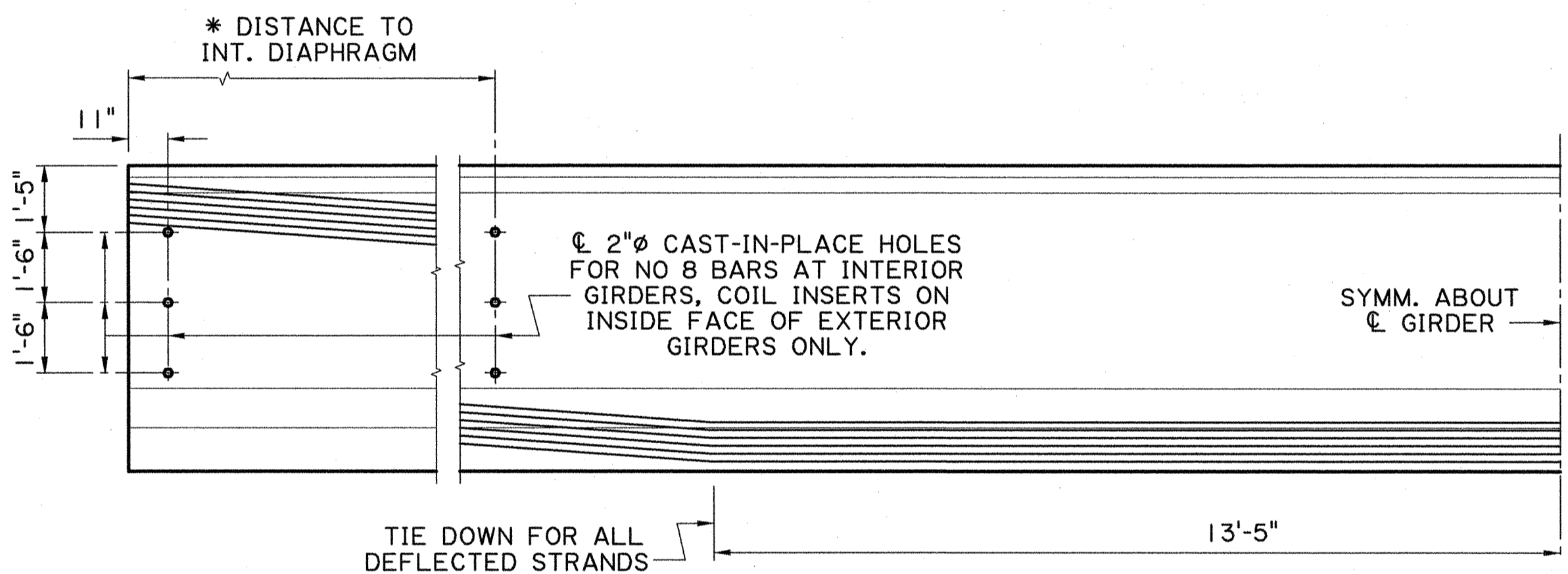
BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE
 ROUTE LA 1

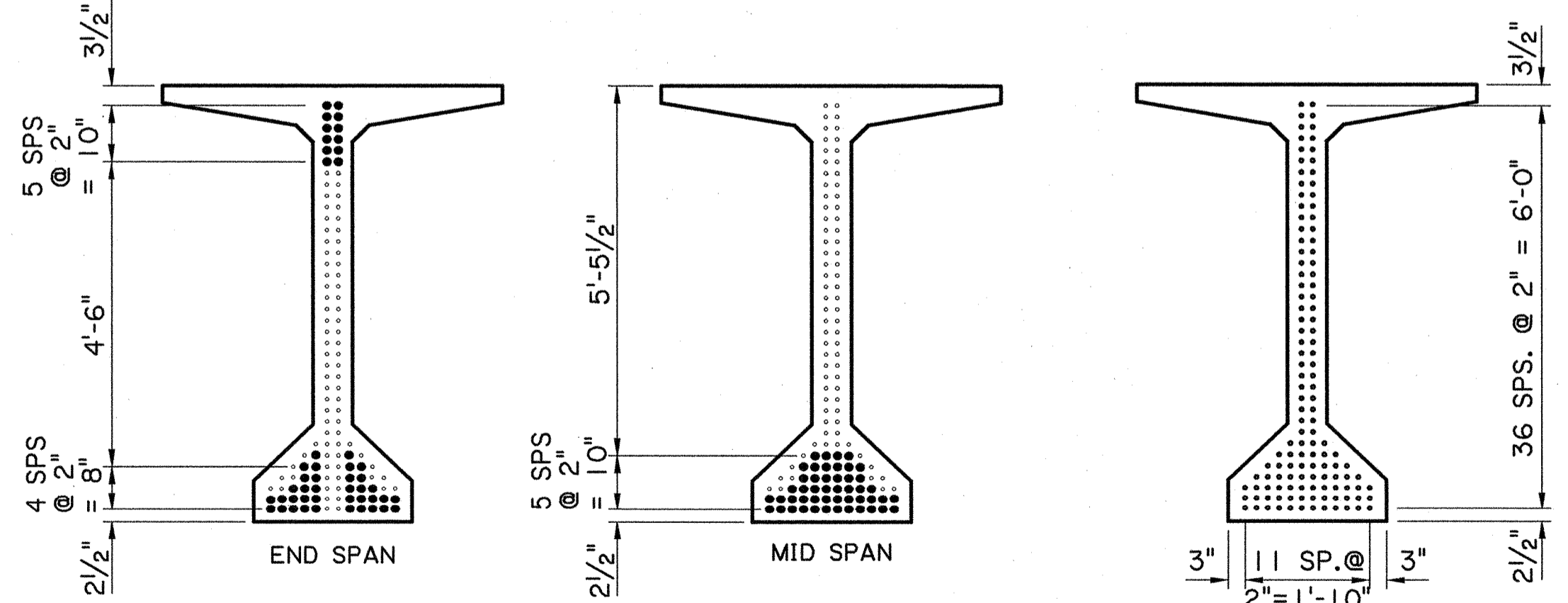
TYPE III GIRDER DETAILS



TYPICAL GIRDER END
 SCALE: 1/2" = 1'-0"



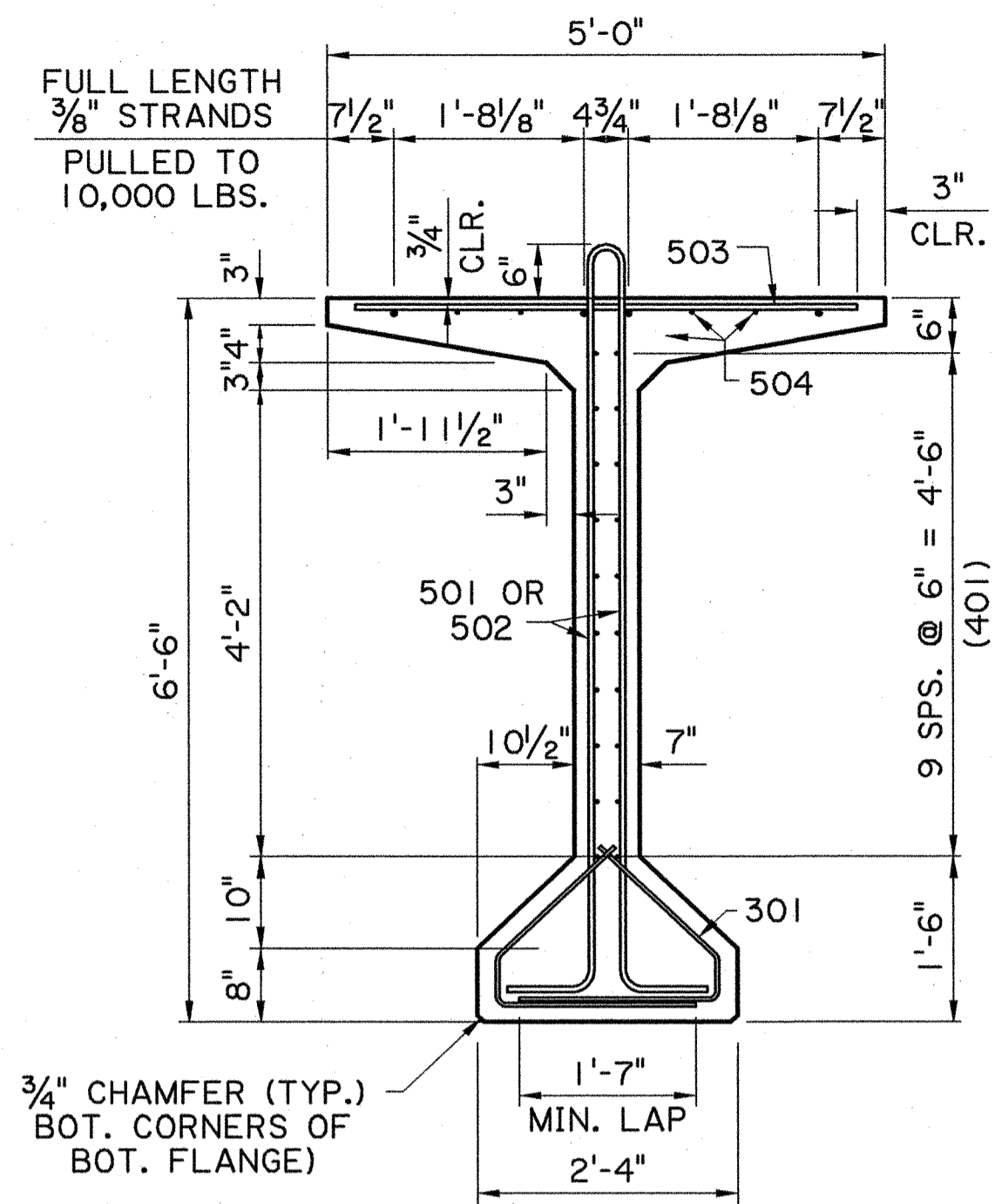
PLAN
 SCALE: 3/8" = 1'-0"



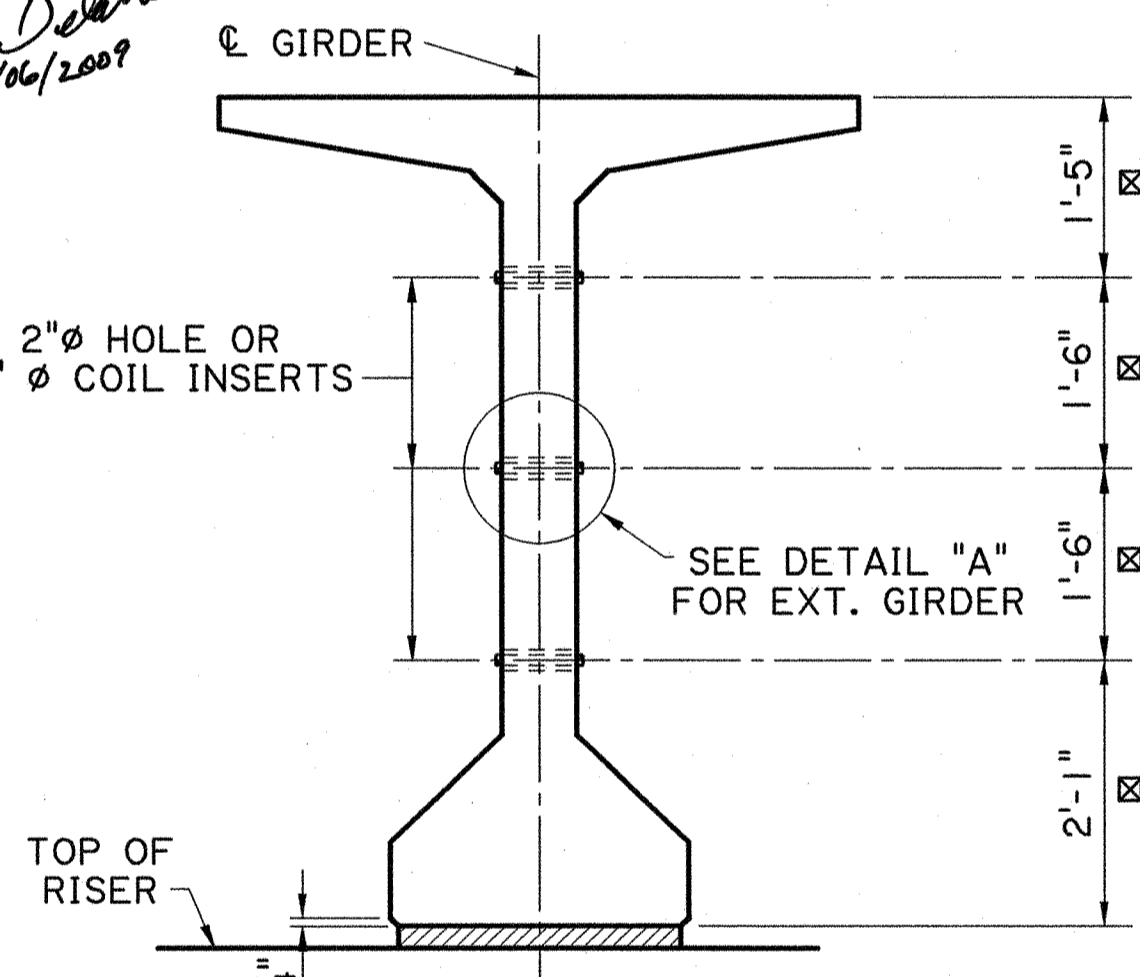
STRAND PATTERN K
 SCALE: 1/2" = 1'-0"

TYPICAL STRAND LAYOUT
 SCALE: 1/2" = 1'-0"

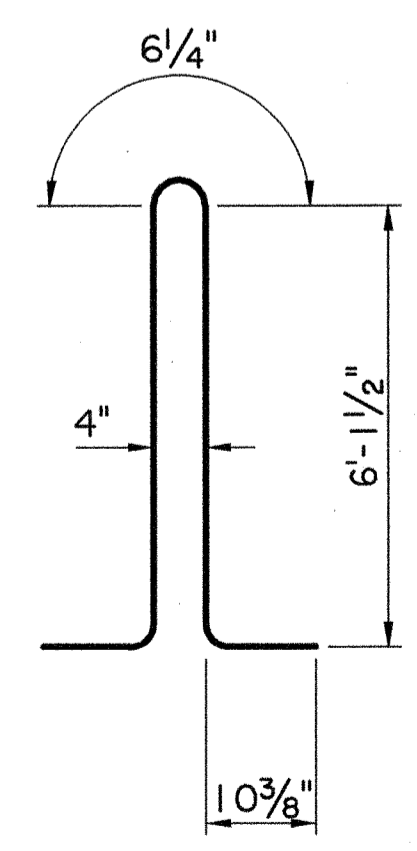
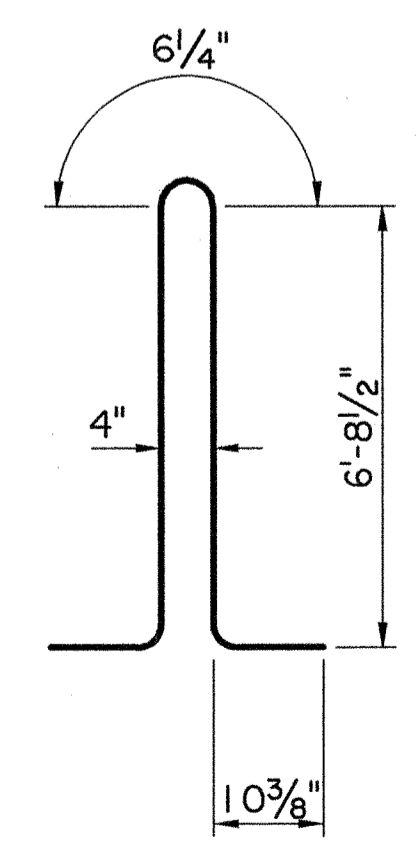
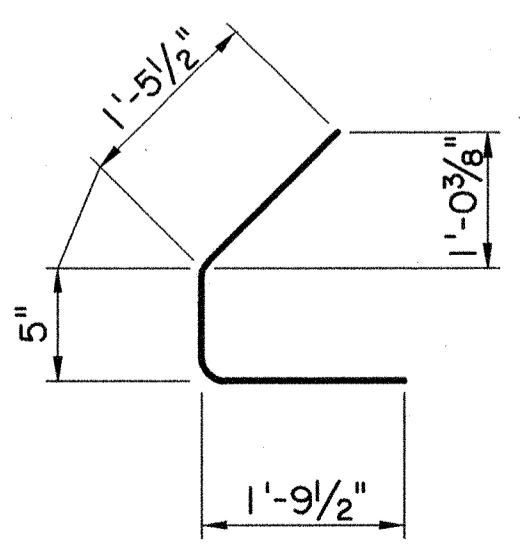
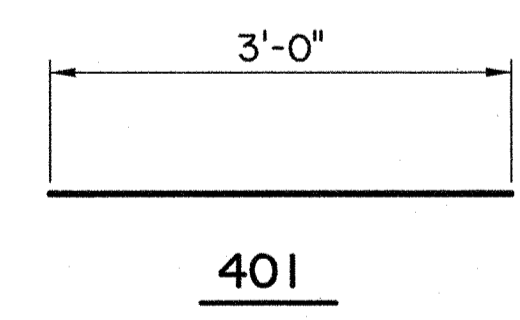
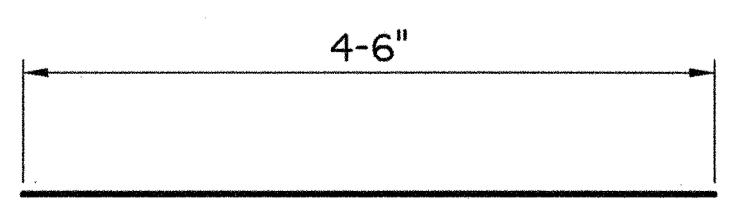
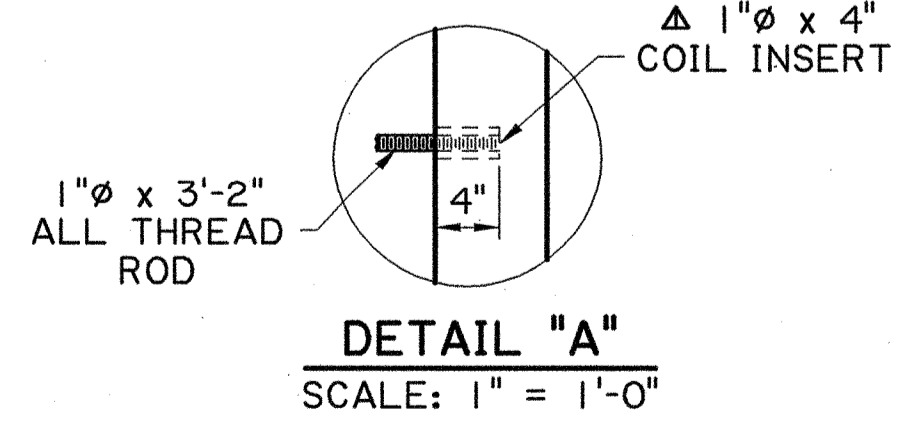
STRAND GRADE 270 KSI, 48 - 0.6" LOW RELAXATION STRANDS @ 43,943 LBS. WITH TOTAL INITIAL FORCE OF 2,109,264 LBS. RELEASE STRENGTH = 6.5 KSI 56-DAY STRENGTH = 8.5 KSI



TYPE BT-78
 (SHOWING END REINFORCEMENT)
 SCALE: 3/4" = 1'-0"



TYPICAL GIRDER END VIEW
 SCALE: 3/4" = 1'-0"



ESTIMATED QUANTITIES (ONE 134'-6" GIRDER)

BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
501	98	15'-8"	1535'-4"	STIRRUPS IN GIRDER
502	2	14'-6"	29'-0"	STIRRUPS IN END OF GIRDER
503	269	4'-6"	1210'-6"	TRANS. TOP OF GIRDER
504	4	137'-6"	550'-0"	LONGIT. TOP OF GIRDER
TOTAL NO. 5 BARS = 3324'-10"			=	3468 LBS.
401	40	3'-0"	120'-0"	END OF GIRDER
TOTAL NO. 4 BARS = 120'-0"			=	80 LBS.
301	84	3'-8"	308'-0"	END OF GIRDER
TOTAL NO. 3 BARS = 308'-0"			=	116 LBS.
DEFORMED REINFORCING STEEL			=	3664 LBS.
CLASS P(HPC) CONCRETE			=	38.23 CU. YDS.
48 - 0.6" STRANDS (GRADE 270) LOLAX			=	4782 LBS.
ELASTOMERIC BEARING PADS			=	2 EACH

- INCLUDES TWO (2) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED.
- QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY, PAYMENT SHALL BE MADE UNDER ITEM NS-800-00184, PER LINEAR FOOT.

NOTES:

- FOR DETAILS NOT SHOWN SEE FRAMING PLAN (SHEETS 156-158) AND SPAN AND GIRDER DETAILS (SHEETS 169-170).
- CAMBER AT RELEASE SHOULD FALL WITHIN THE MAX AND MIN. INDICATED ON THE GIRDER DATA TABLE.
- FOR GIRDER DIMENSIONS AND CAMBER SEE GIRDER DATA TABLE, SHEET 158.
- FOR JOINT DETAILS, SEE FINGER JOINT DETAILS, SHEETS 176-177.
- 2" HOLE (INTERIOR GIRDERS) AND 1" COIL INSERT (EXTERIOR GIRDERS) ARE REQUIRED AT INTERMEDIATE AND END DIAPHRAGMS OF SPANS.
- THIS DIMENSION MAY BE ADJUSTED TO CLEAR DRAPED STRANDS WHEN NECESSARY AND IS TYPICAL FOR ALL GIRDERS REGARDLESS OF ROADWAY CROWN.
- COIL INSERTS SHALL BE WILLIAMS TYPE C17-1x4 THIN SLAB LIFTING INSERT OR AN APPROVED EQUAL.
- USE 501 IN LIEU OF 502 @ CONTINUITY ENDS OF GIRDERS.

SHEET NUMBER 151

JEFFERSON

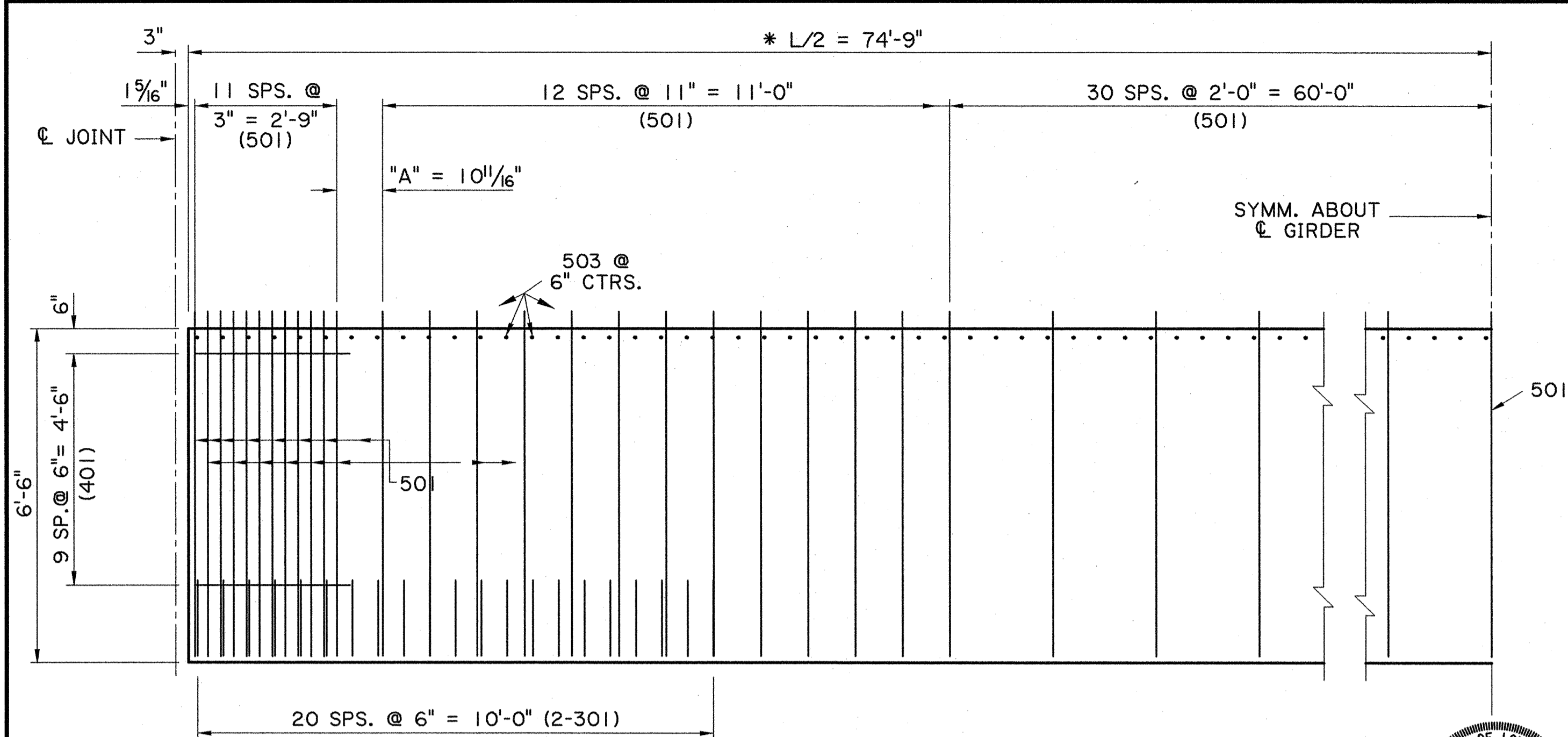
DESIGNED BY B. DELATTE
 CHECKED BY C. FOURNERAT
 DETAILED BY C. J. KRUMM
 CHECKED BY B. DELATTE

PROJECT 064-01-0040
 STATE 01-25-2007
 SHEET 1 OF 2

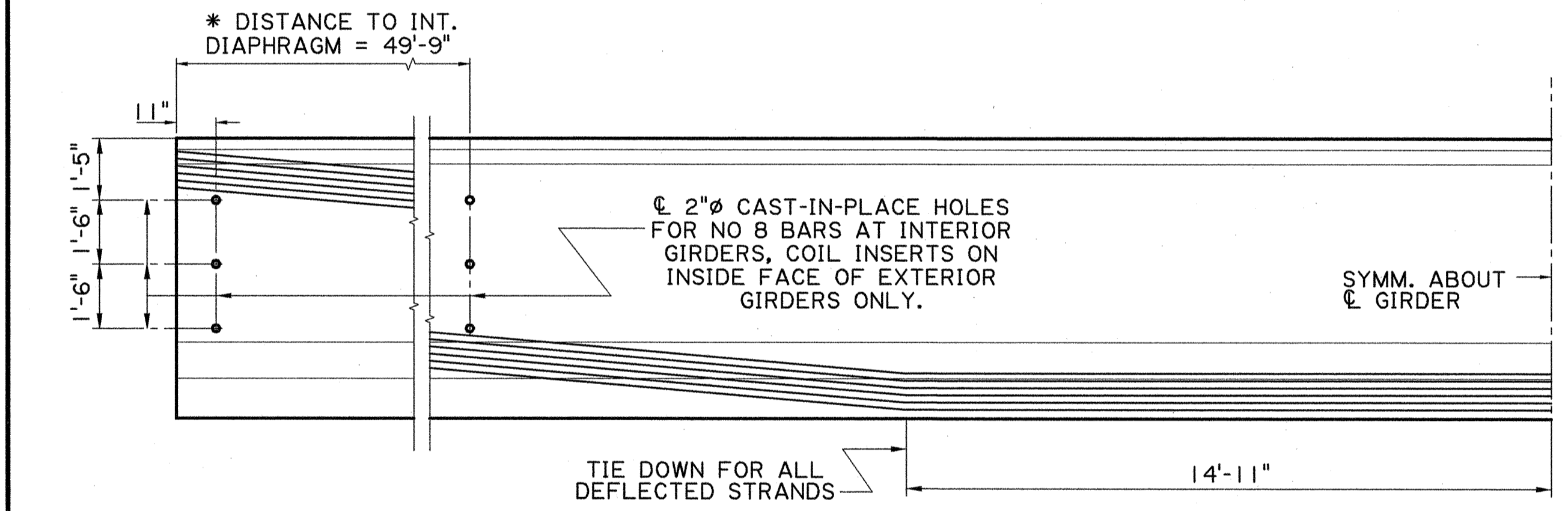
CAMINADA BAY BRIDGE
 ROUTE LA 1

BT-78 GIRDER DETAILS

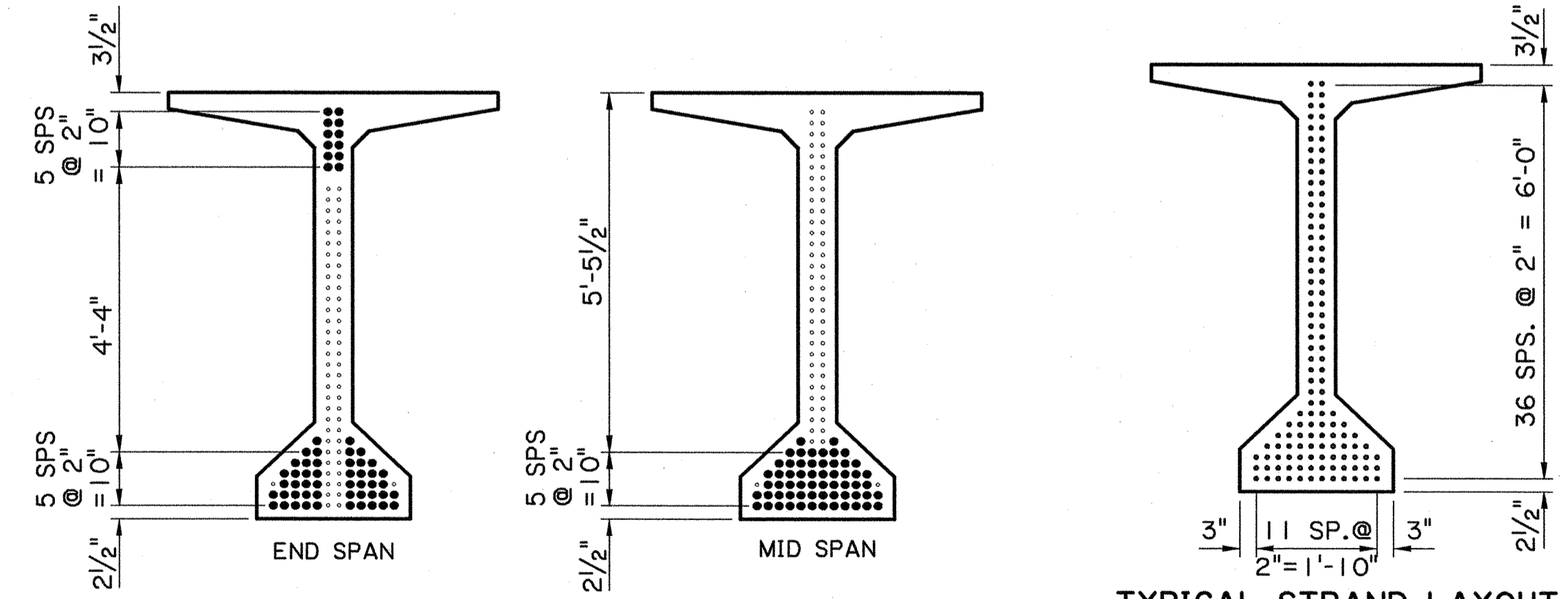
BRIDGE AND STRUCTURAL DESIGN



TYPICAL GIRDER END
 SCALE: 1/2" = 1'-0"



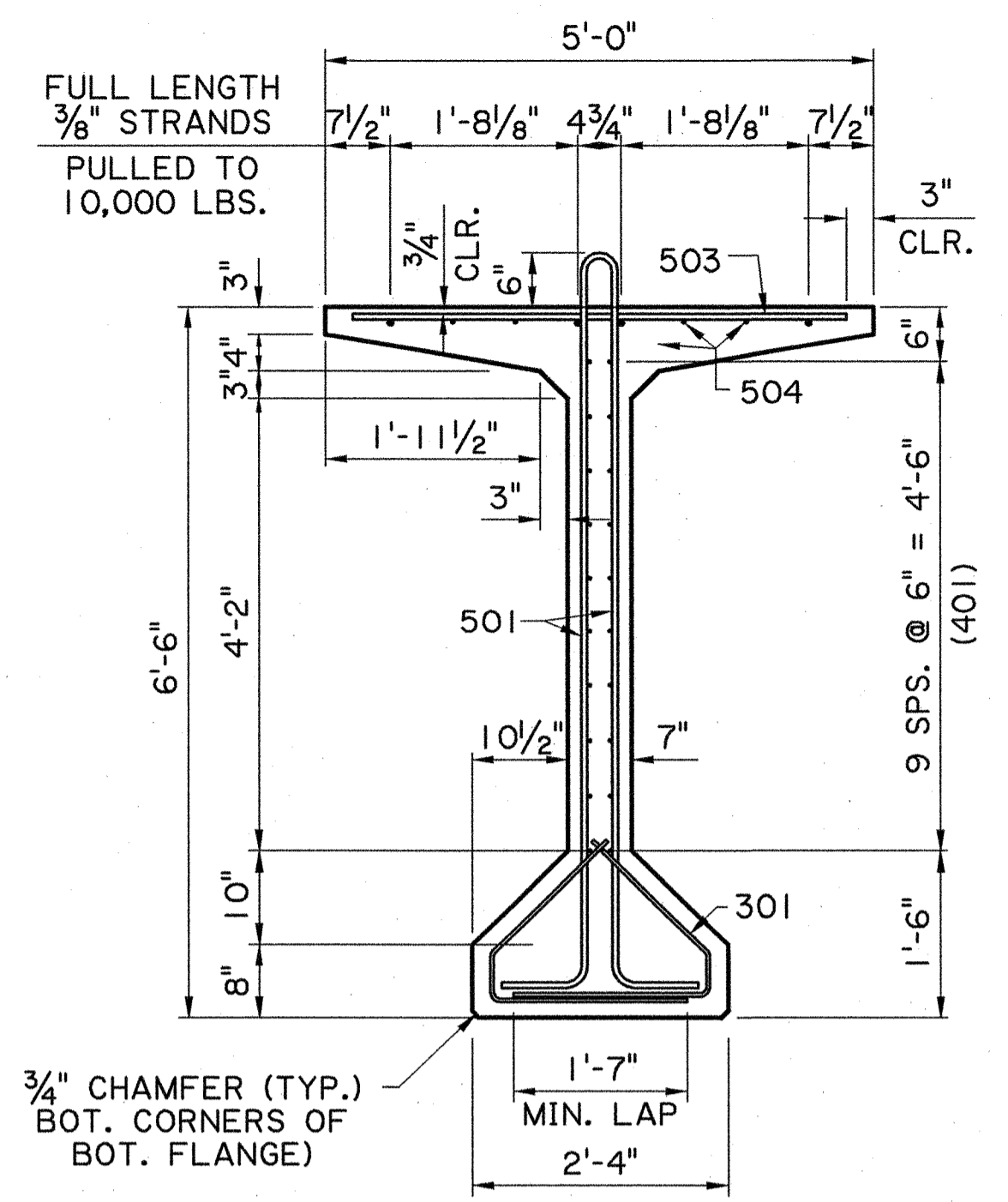
PLAN
 SCALE: 3/8" = 1'-0"



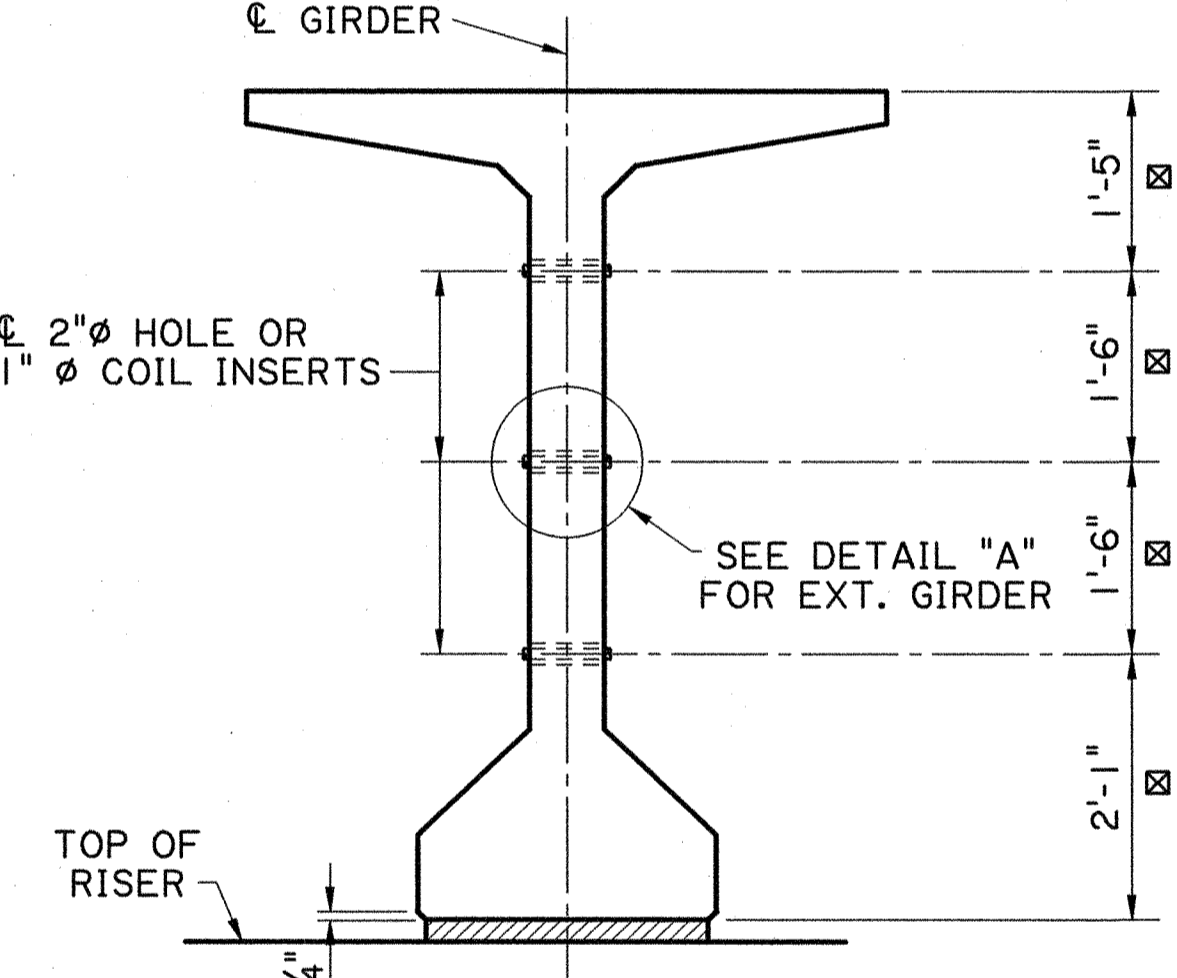
STRAND PATTERN L
 SCALE: 1/2" = 1'-0"

TYPICAL STRAND LAYOUT
 SCALE: 1/2" = 1'-0"

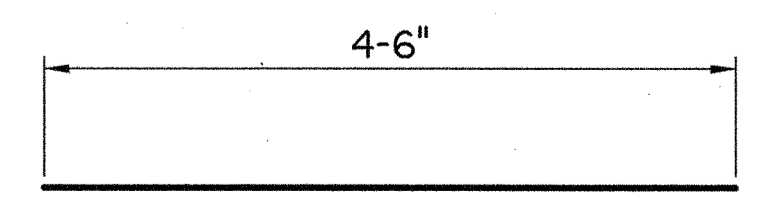
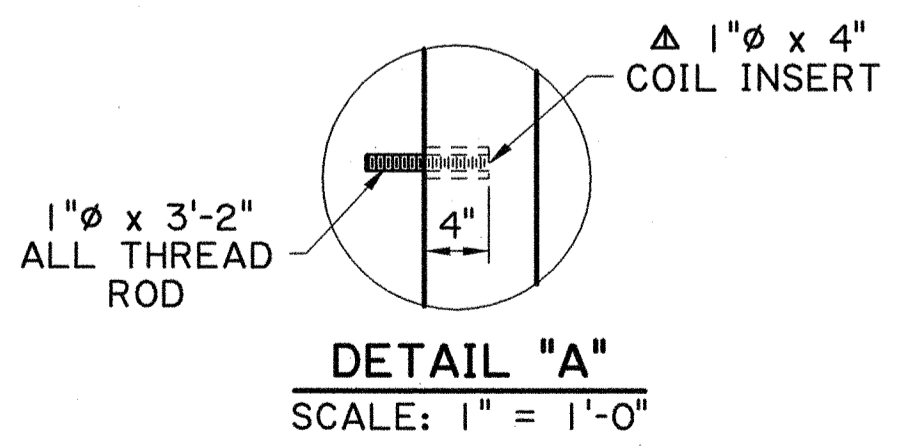
STRAND GRADE 270 KSI, 60 - 0.6" LOW RELAXATION STRANDS @ 43,943 LBS. WITH TOTAL INITIAL FORCE OF 3,636,580 LBS. RELEASE STRENGTH = 7.5 KSI 56-DAY STRENGTH = 10.0 KSI



TYPE BT-78
 (SHOWING END REINFORCEMENT)
 SCALE: 3/4" = 1'-0"



TYPICAL GIRDER END VIEW
 SCALE: 3/4" = 1'-0"



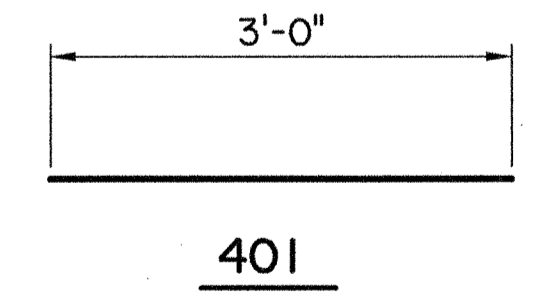
503

ESTIMATED QUANTITIES (ONE 149'-6" GIRDER)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
501	109	15'-8"	1707'-8"	STIRRUPS IN GIRDER
503	269	4'-6"	1210'-6"	TRANS. TOP OF GIRDER
504	4	152'-6"	610'-0"	LONGIT. TOP OF GIRDER
TOTAL NO. 5 BARS = 3528'-2"			=	3680 LBS.
401	40	3'-0"	120'-0"	END OF GIRDER
TOTAL NO. 4 BARS = 120'-0"			=	80 LBS.
301	84	3'-8"	308'-0"	END OF GIRDER
TOTAL NO. 3 BARS = 308'-0"			=	116 LBS.
TOTAL DEFORMED REINFORCING STEEL			=	3876 LBS.
TOTAL CLASS P(X)(HPC) CONCRETE			=	42.49 CU. YDS.
TOTAL 60 - 0.6" STRANDS (GRADE 270) LOLAX			=	6642 LBS.
TOTAL ELASTOMERIC BEARING PADS			=	2 EACH

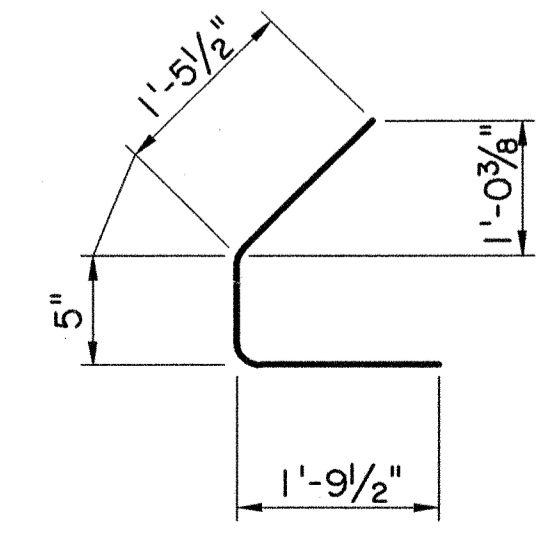
Ø INCLUDES TWO (2) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED.
 □ QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY, PAYMENT SHALL BE MADE UNDER ITEM NS-800-00224, PER LINEAR FOOT.

NOTES:

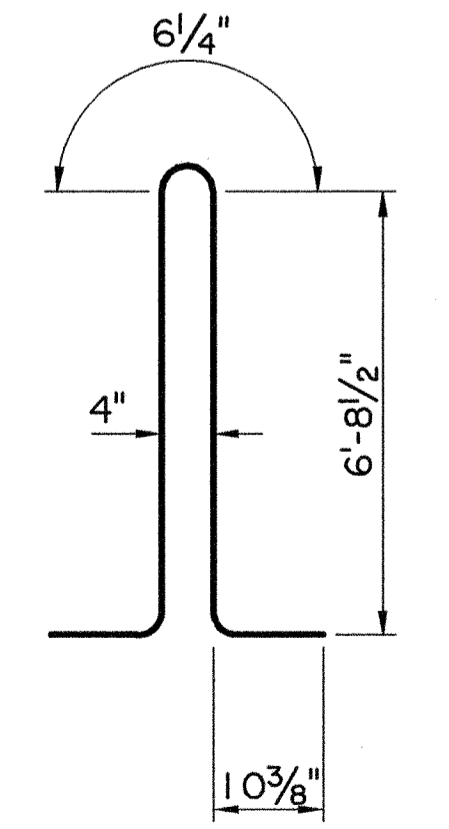
- FOR DETAILS NOT SHOWN SEE FRAMING PLAN (SHEETS 156-158) AND SPAN AND GIRDER DETAILS (SHEETS 169-170).
- CAMBER AT RELEASE SHOULD FALL WITHIN THE MAX AND MIN. INDICATED ON THE GIRDER DATA TABLE.
- * FOR GIRDER DIMENSIONS AND CAMBER SEE GIRDER DATA TABLE, SHEET 158.
- FOR JOINT DETAILS, SEE FINGER JOINT DETAILS, SHEETS 176-177.
- 2" HOLE (INTERIOR GIRDERS) AND 1" HOLE COIL INSERT (EXTERIOR GIRDERS) ARE REQUIRED AT INTERMEDIATE AND END DIAPHRAGMS OF SPANS.
- △ THIS DIMENSION MAY BE ADJUSTED TO CLEAR DRAPED STRANDS WHEN NECESSARY AND IS TYPICAL FOR ALL GIRDERS REGARDLESS OF ROADWAY CROWN.
- ▲ COIL INSERTS SHALL BE WILLIAMS TYPE C17-1x4 THIN SLAB LIFTING INSERT OR AN APPROVED EQUAL.
- USE 501 IN LIEU OF 502 @ CONTINUITY ENDS OF GIRDERS.



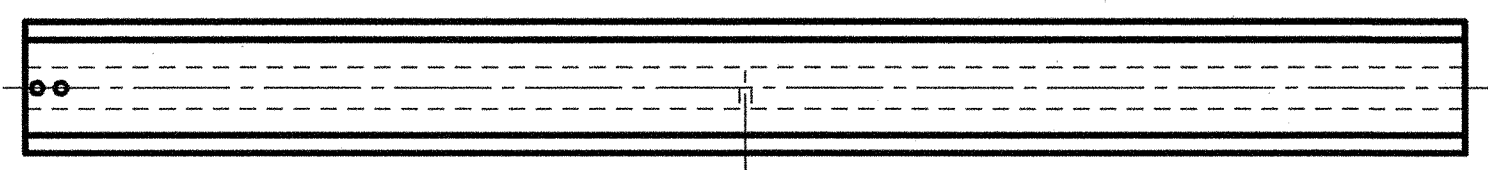
401



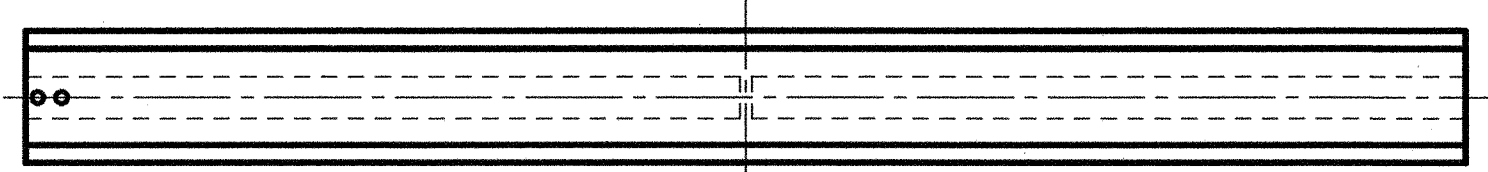
301
 (1 1/2" PIN)



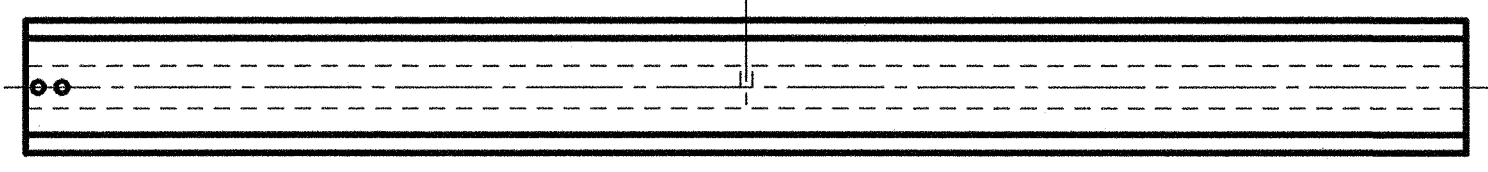
501
 (2 3/4" PIN)



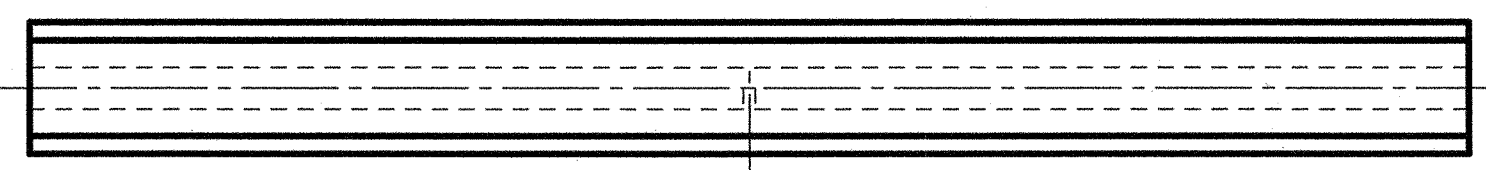
DETAIL 1



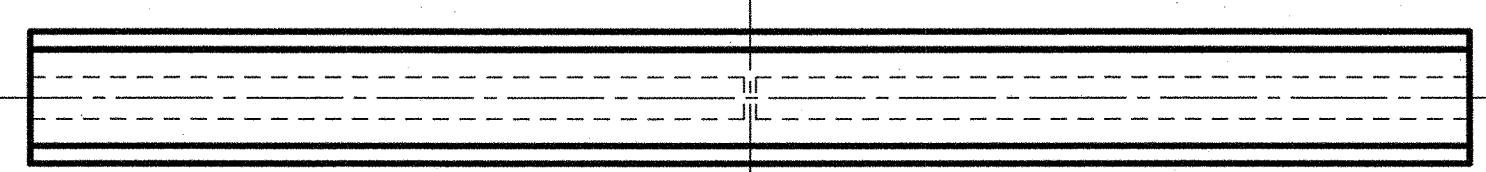
DETAIL 2



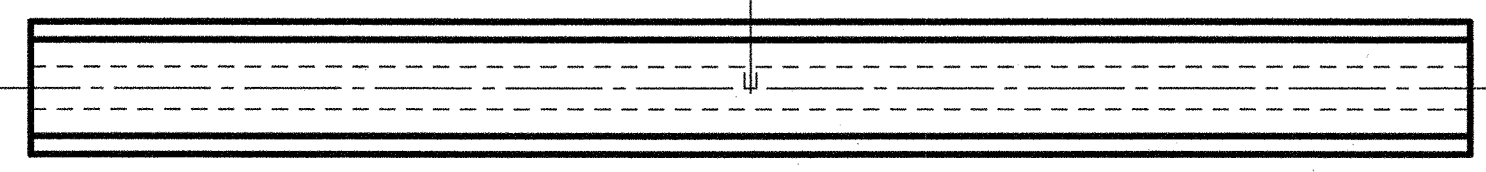
DETAIL 3



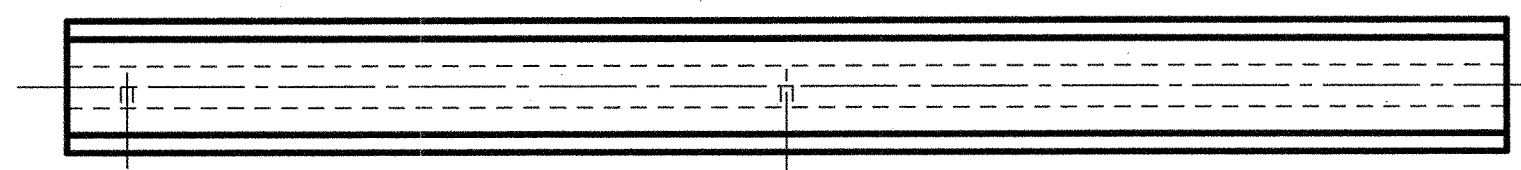
DETAIL 4



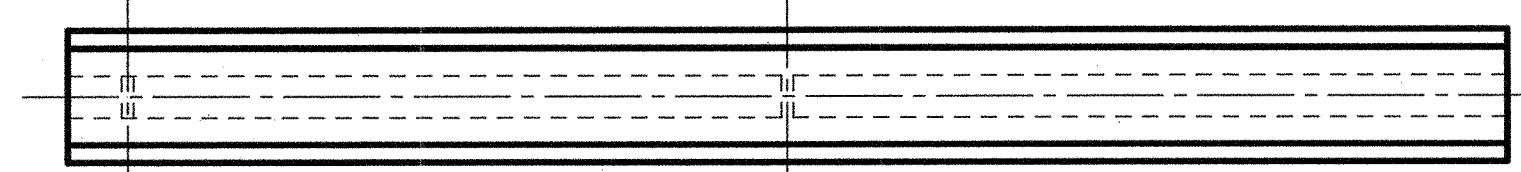
DETAIL 5



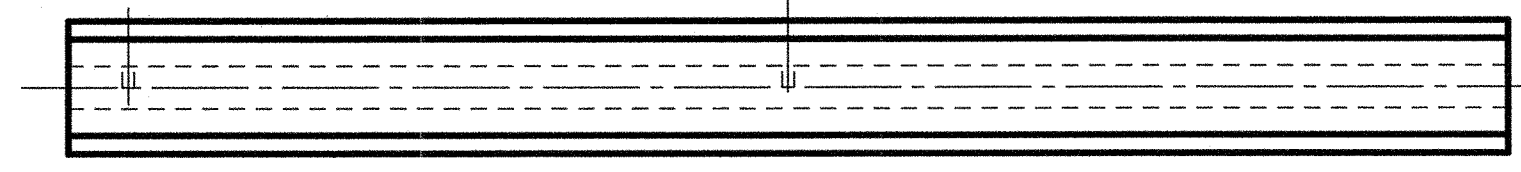
DETAIL 6



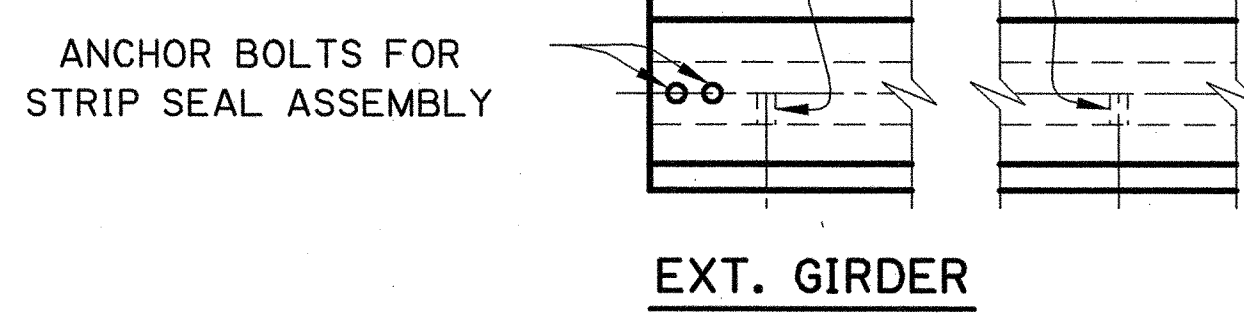
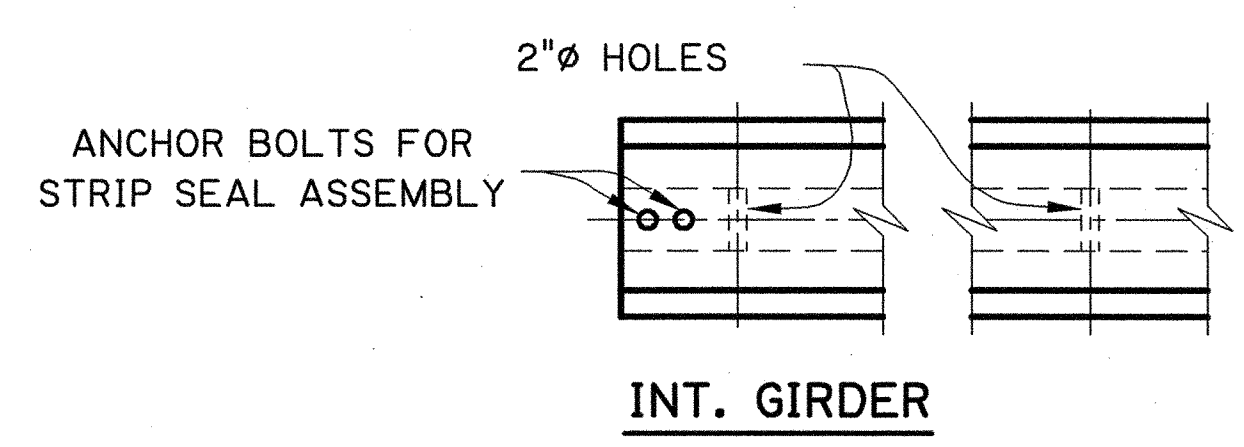
DETAIL 7



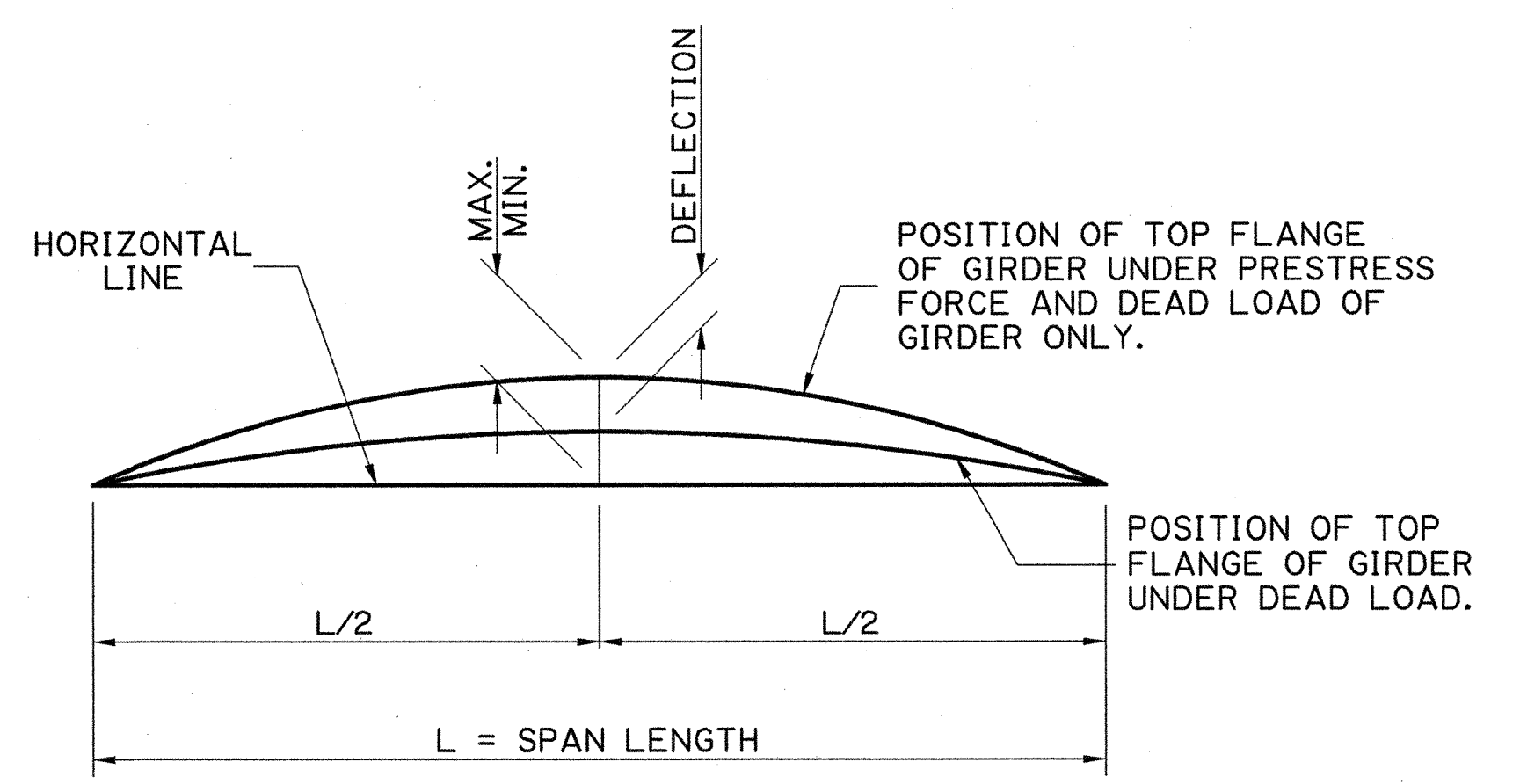
DETAIL 8



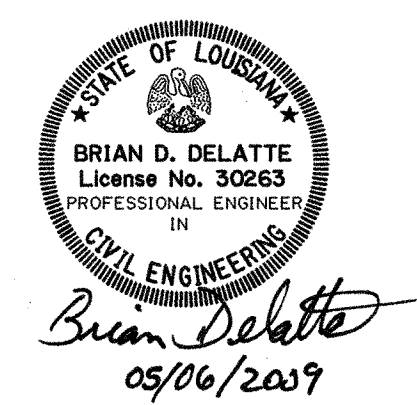
DETAIL 9



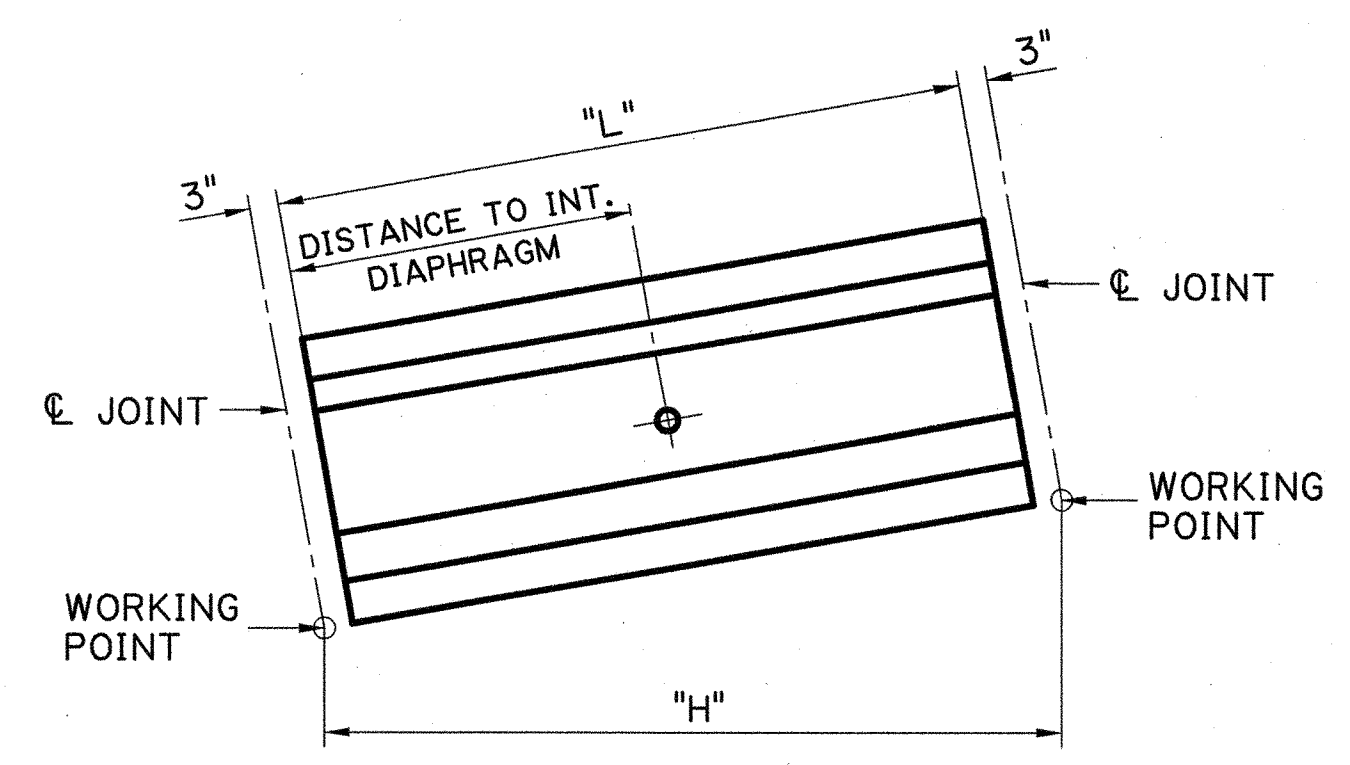
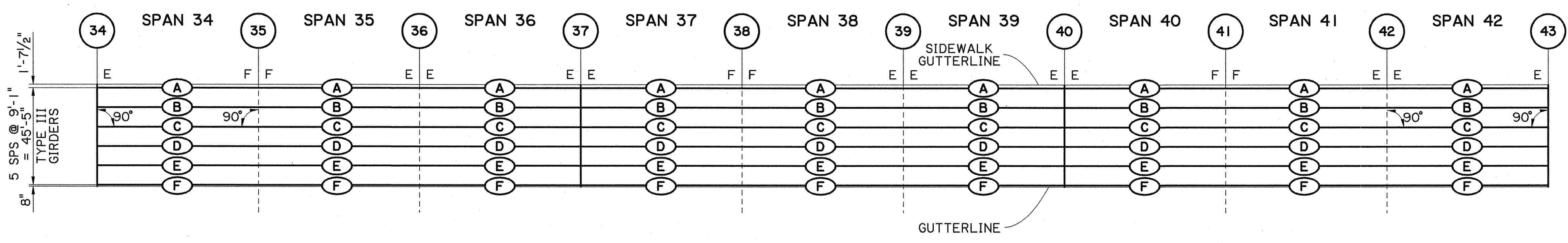
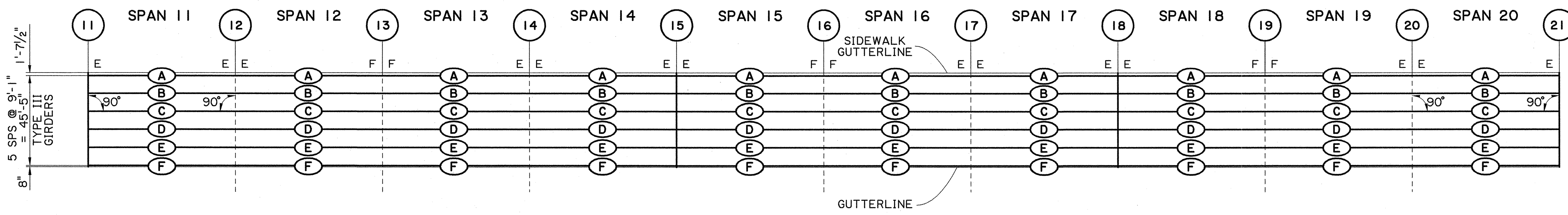
LEGEND
FOR DETAILS NOT SHOWN SEE MISC. GIRDER DETAILS



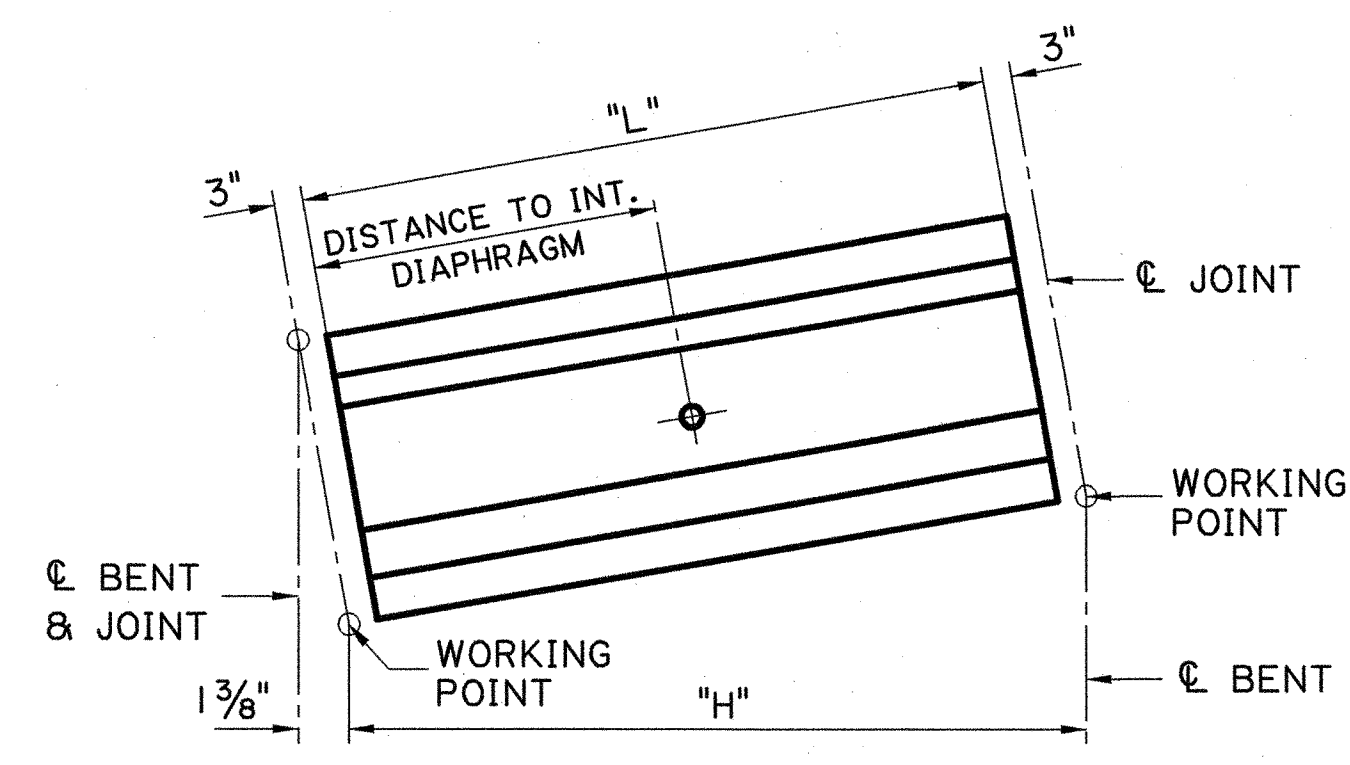
CAMBER DIAGRAM
(NTS)



SHEET NUMBER		153	
DESIGNED	B. DELATTE	PARISH	JEFFERSON
CHECKED	C. FOURNERA	FEDERAL PROJECT	
DATE	02/21/2007	STATE PROJECT	064-01-0040
SHEET	1 OF 3		
REVISION DESCRIPTION			
NO.	DATE	BY	
CAMINADA BAY BRIDGE			
ROUTE LA 1			
FRAMING PLAN (TYPE III SPANS)			
BRIDGE AND STRUCTURAL DESIGN			



SPANS S12-S25 & N25-N34

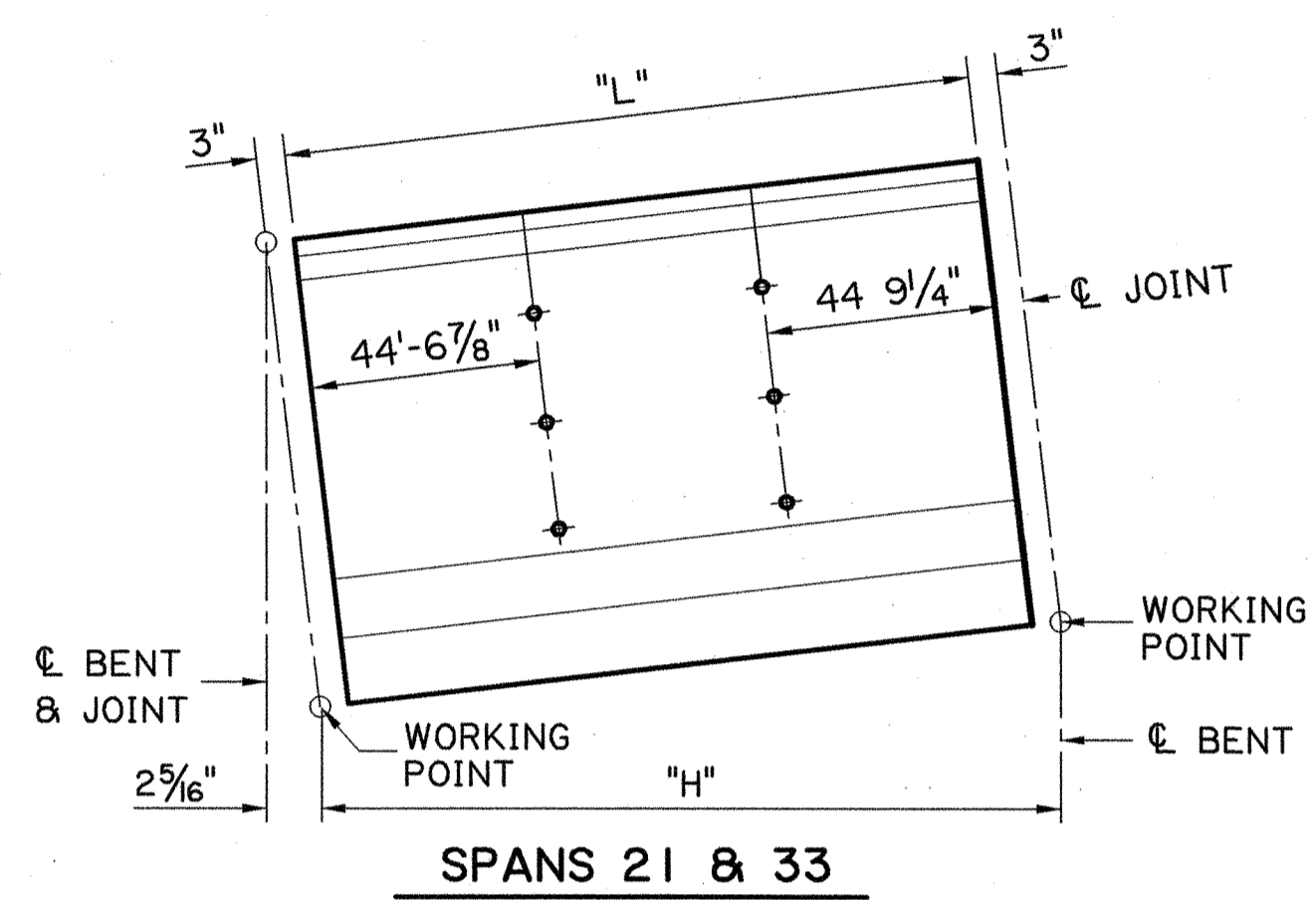


SPAN S11 & N35

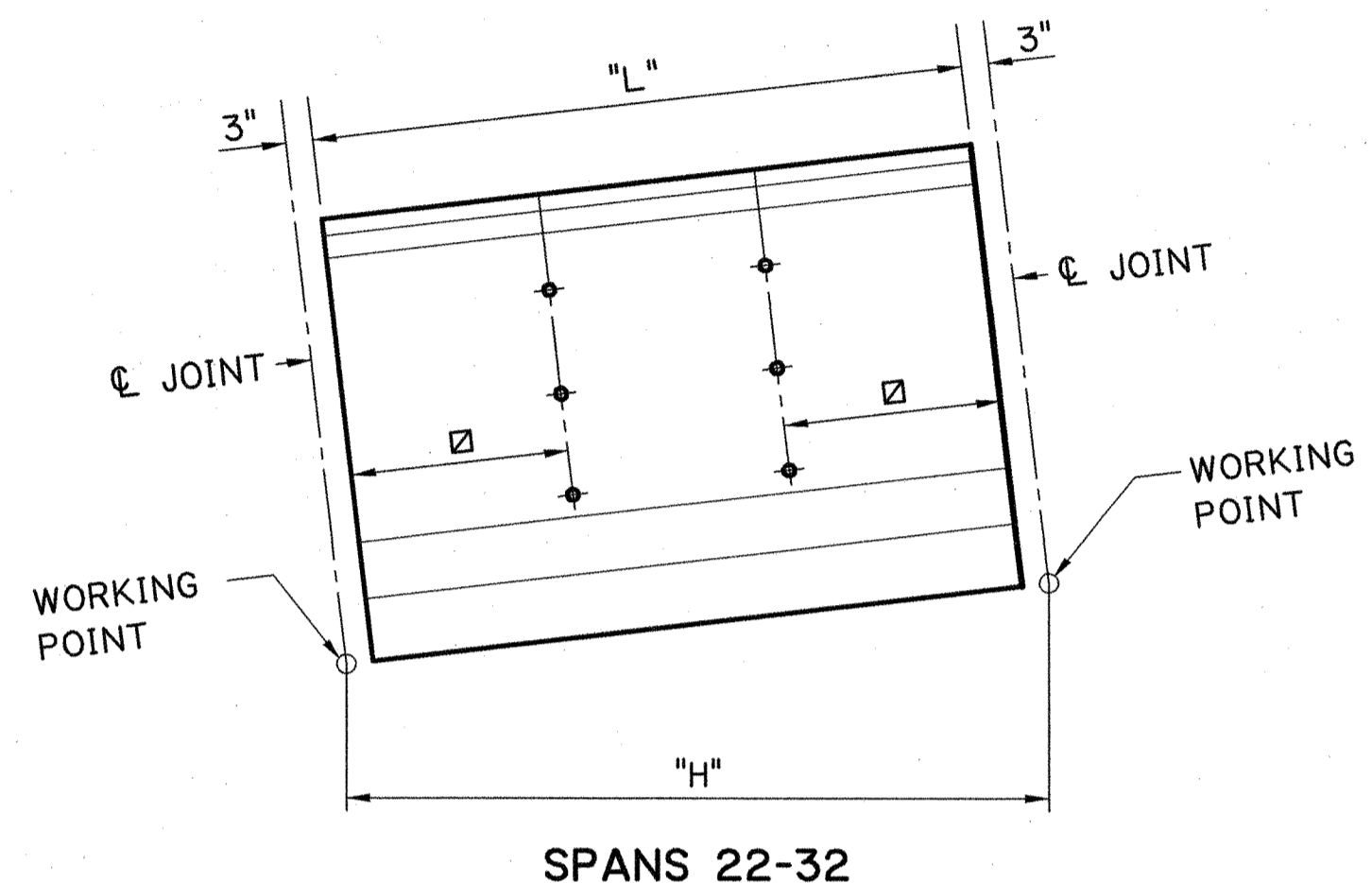


SHEET NUMBER	154
DESIGNED BY	B. DELATTE
CHECKED BY	C. FOURNERA
DATE	FEB. 2006
PROJECT	JEFFERSON
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	
DATE	
BY	
BRIDGE DETAILS	FRAMING PLAN (TYPE III SPANS)
CAMINADA BAY BRIDGE	ROUTE LA 1
BRIDGE AND STRUCTURAL DESIGN	

FINAL PLANS

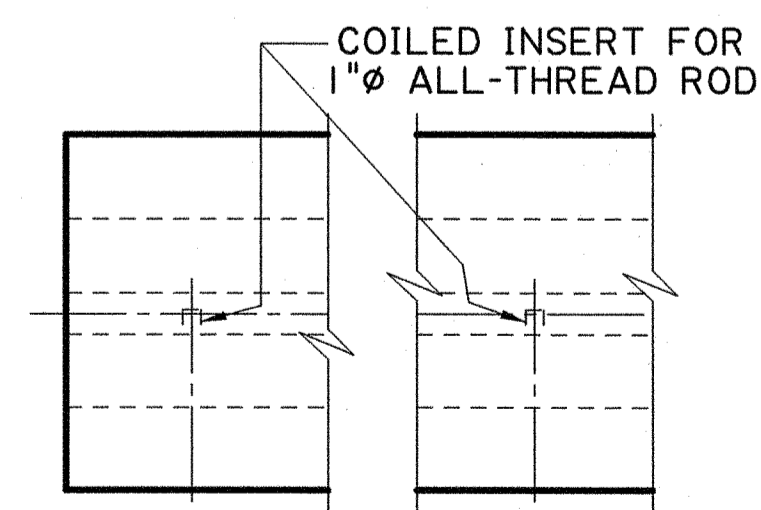


SPANS 21 & 33

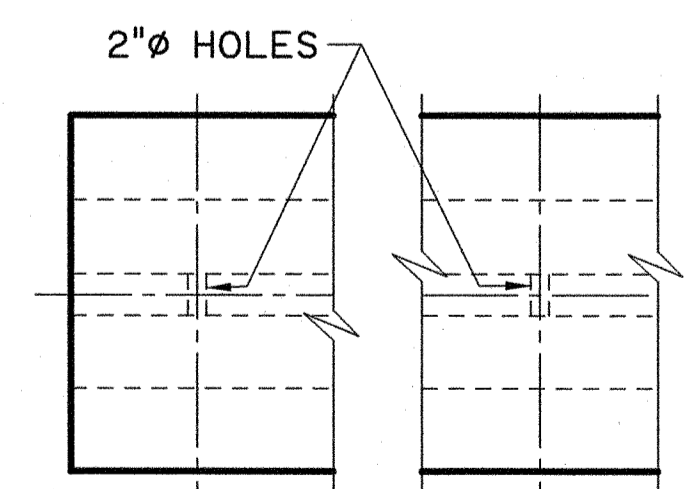


SPANS 22-32

□ FOR DISTANCE TO INTERMEDIATE DIAPHRAGM
SEE GIRDER DATA TABLES

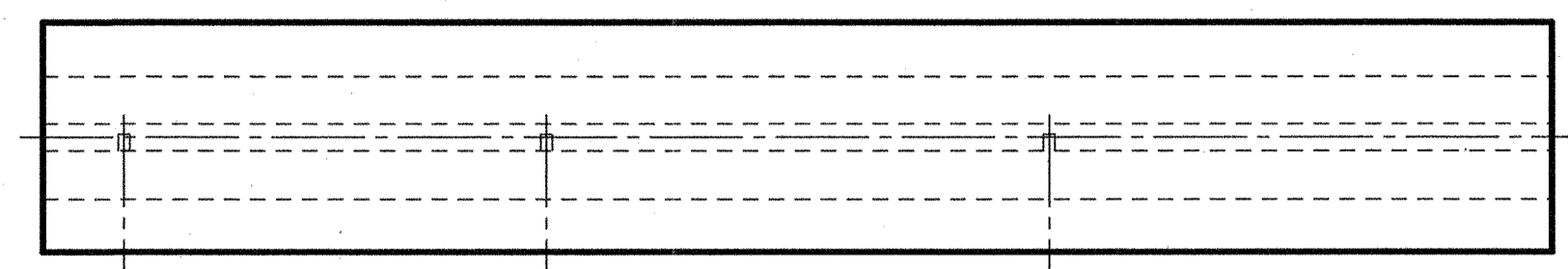


EXT. GIRDER

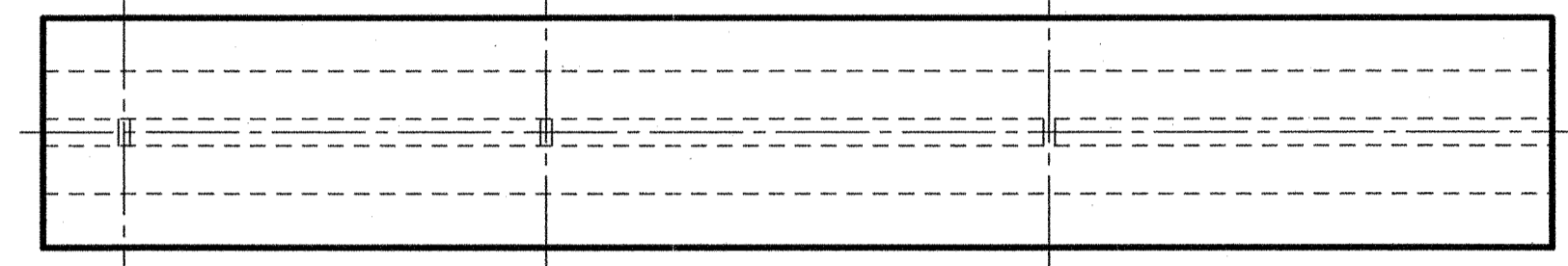


INT. GIRDER

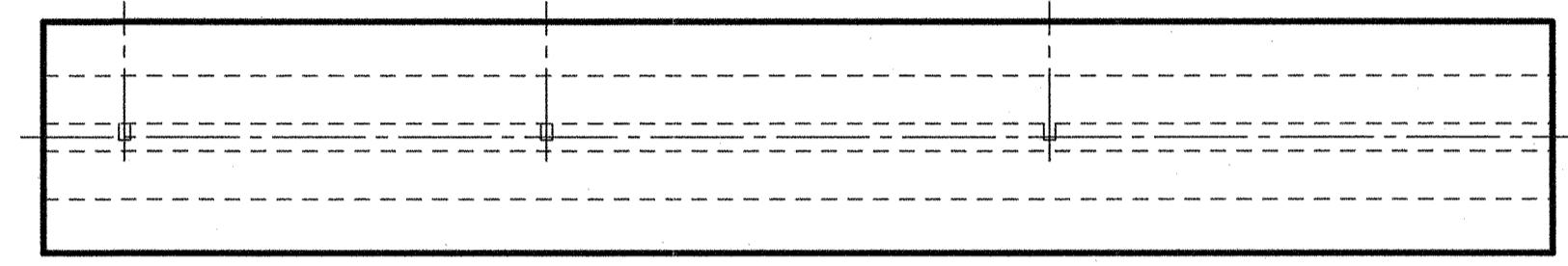
LEGEND
FOR DETAILS NOT SHOWN SEE
SPAN & GIRDER DETAILS



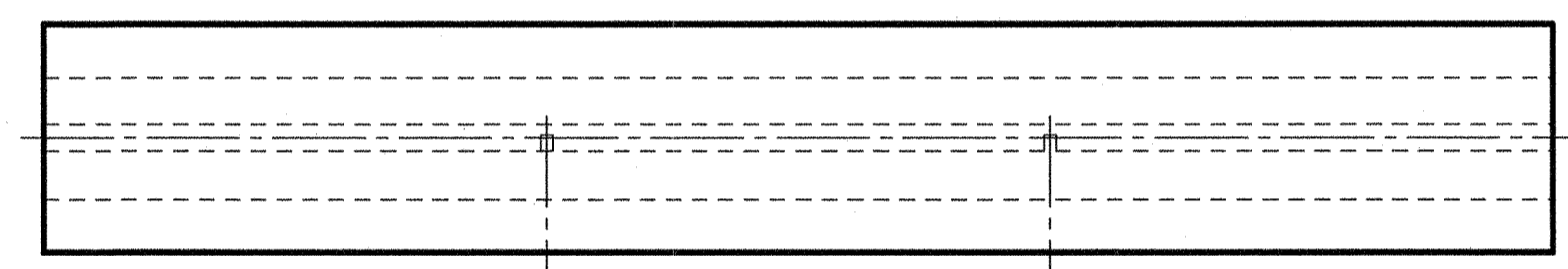
DETAIL 1



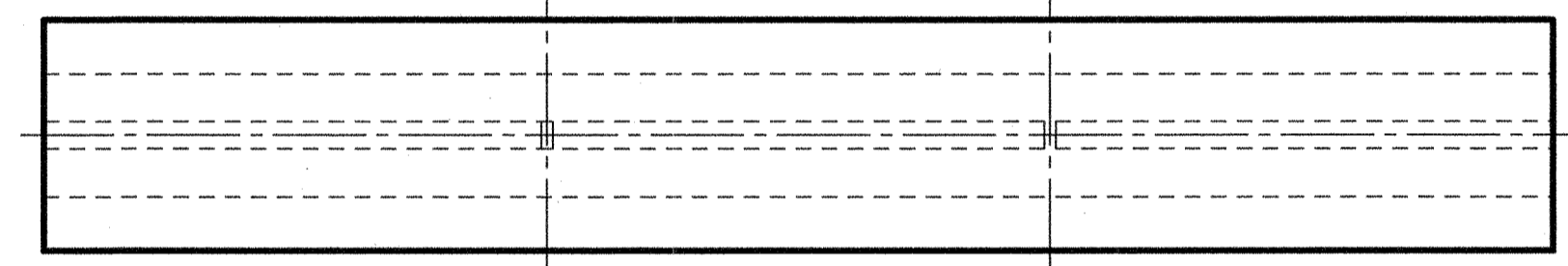
DETAIL 2



DETAIL 3



DETAIL 4

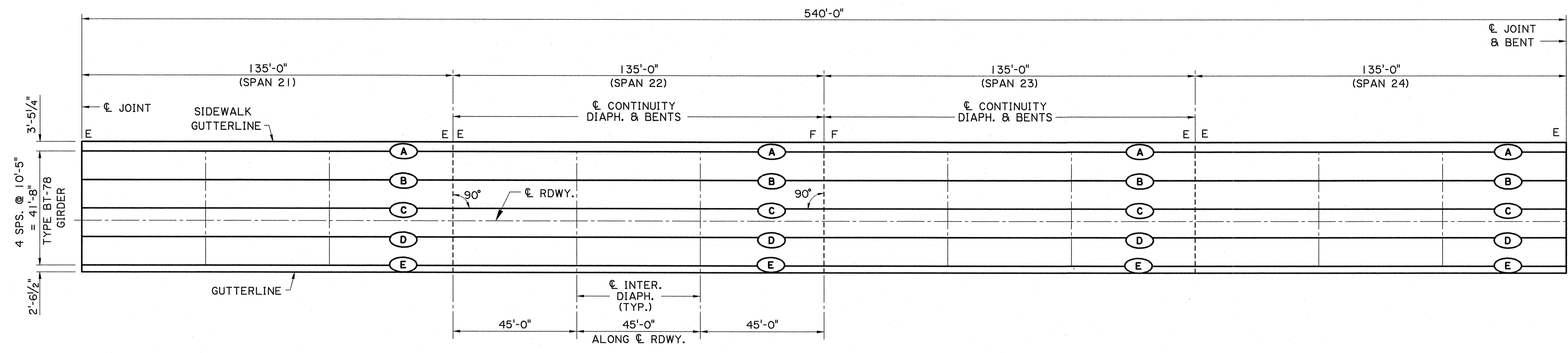


DETAIL 5

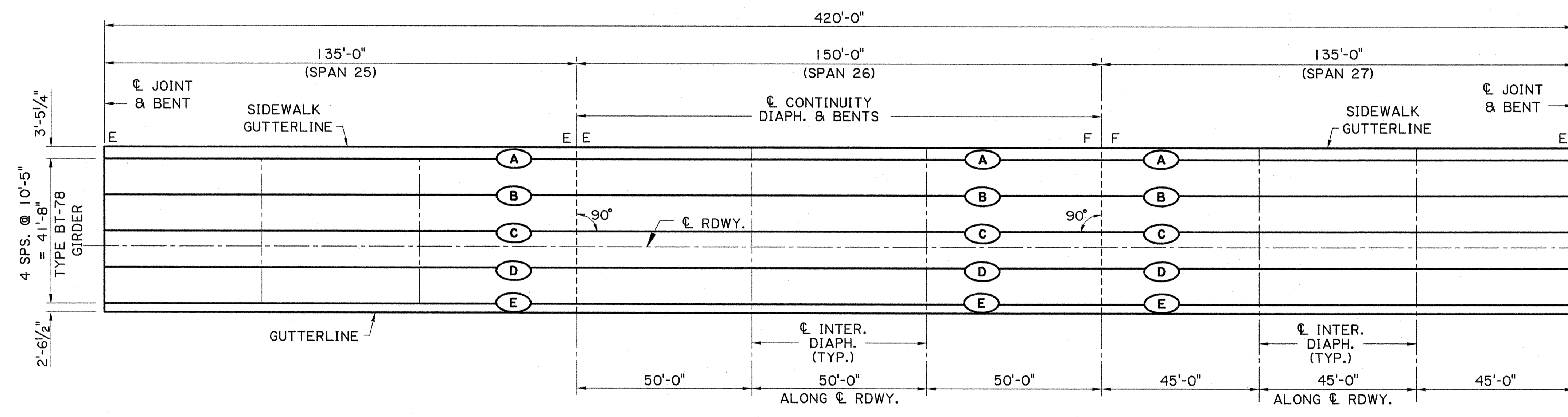
STATE OF LOUISIANA
BRIAN D. DELATTE
License No. 30253
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
Brian Delatte
03/06/2009

SHEET NUMBER 156	
DESIGNED BY: B. DELATTE	PARISH: JEFFERSON
CHECKED BY: C. FOURNERAT	FEDERAL PROJECT:
DATE: 01/25/2007	STATE PROJECT: 064-01-0040
SHEET 1 OF 3	
BRIDGE AND STRUCTURAL DESIGN	
CAMINADA BAY BRIDGE ROUTE LA 1	
FRAMING PLAN (BT-78 SPANS)	

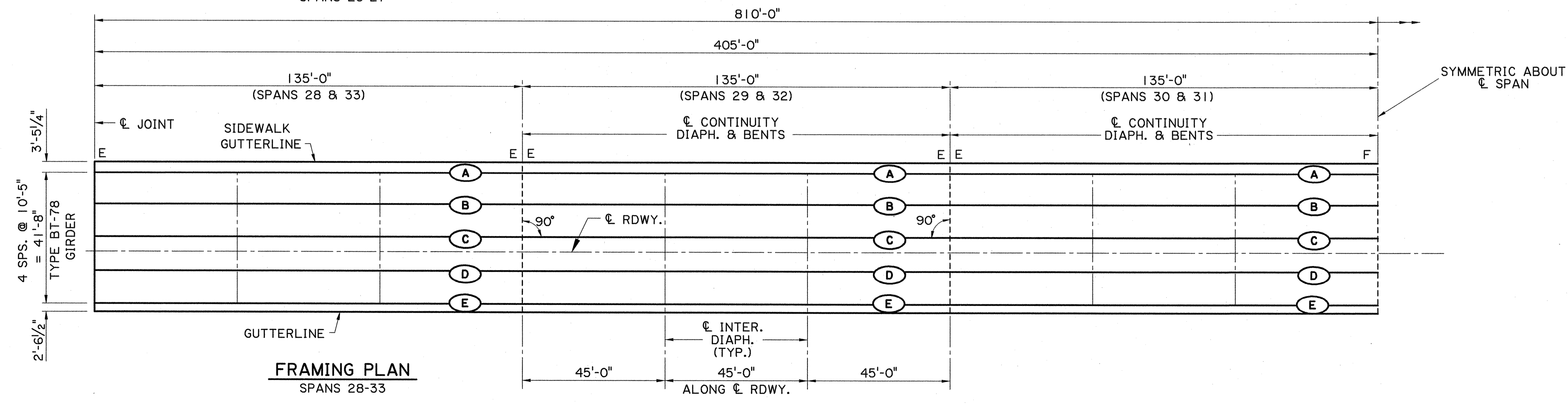
FINAL PLANS



FRAMING PLAN
SPANS 21-24



FRAMING PLAN
SPANS 25-27



FRAMING PLAN
SPANS 28-33



SHEET NUMBER	157
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED	B. DELATTE
CHECKED	C. FOURNERAT
DATE	JAN, 2007
SHEET	2 OF 3
BRIDGE AND STRUCTURAL DESIGN	
BRIDGE	CAMINADA BAY BRIDGE
DETAIL	ROUTE LA 1
FRAMING PLAN (BT-78 SPANS)	
REVISION DESCRIPTION	
NO.	DATE
BY	

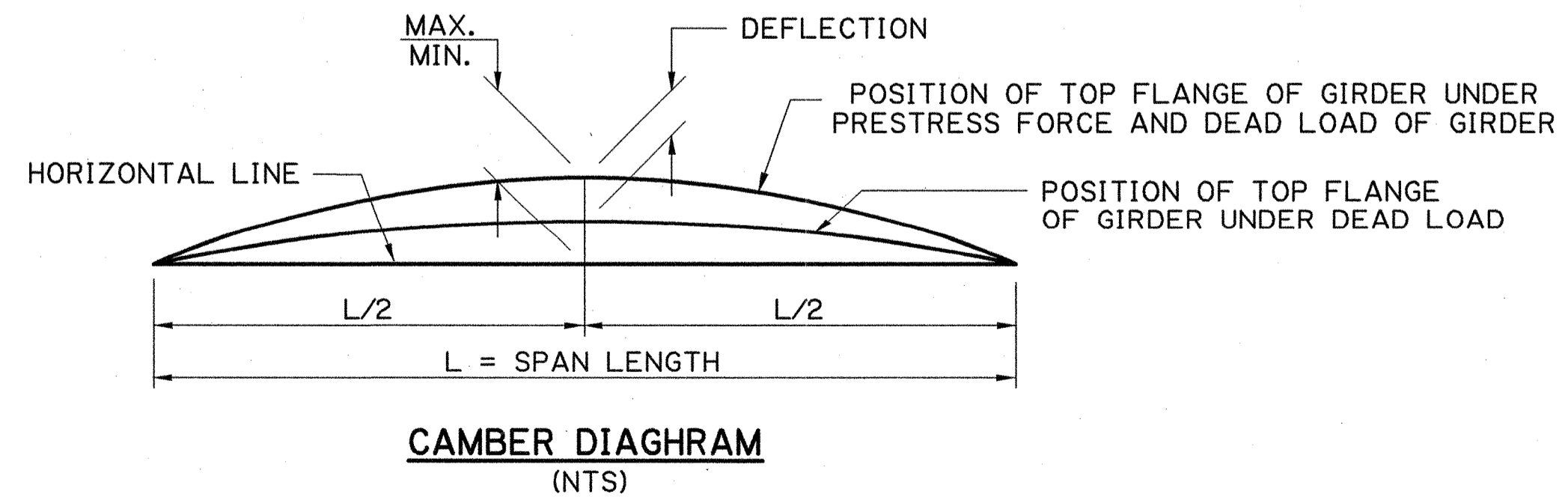
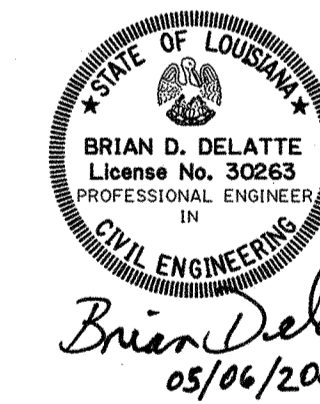
540'-0" CONTINUOUS UNIT											
SPAN NO	GRDR. NO	STRAND PATTERN	BEAM DETAIL	LENGTH "L"	JT. TO JT. "H"	VARIABLE SPACING "A"	DIST. TO INTER. DIAPH.	CAMBER		DEF.	GIRDER LENGTHS (PER SPAN)
								MAX	MIN		
21	A	K	1	134'-4 ³ / ₈ "	134'-9 ¹ / ₁₆ "	3 ⁷ / ₈ "	*	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	671'-9 ⁷ / ₈ "
	B	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	3	134'-4 ³ / ₈ "	134'-9 ¹ / ₁₆ "	3 ⁷ / ₈ "	*	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
22	A	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-9 ³ / ₄ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
23	A	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-9 ³ / ₄ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
24	A	K	3	134'-6 ¹ / ₂ "	135'-0"	4 ¹⁵ / ₁₆ "	44.7639'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-8 ¹ / ₂ "
	B	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	1	134'-6 ¹ / ₂ "	135'-0"	4 ¹⁵ / ₁₆ "	44.7639'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
TOTAL P.P.C. GIRDER (TYPE BT-78) CLASS P(HPC) LENGTHS											2690'-1 ⁷ / ₈ "

* SEE FRAMING PLAN SHEET 1 OF 3

810'-0" CONTINUOUS UNIT											
SPAN NO	GRDR. NO	STRAND PATTERN	BEAM DETAIL	LENGTH "L"	JT. TO JT. "H"	VARIABLE SPACING "A"	DIST. TO INTER. DIAPH.	CAMBER		DEF.	GIRDER LENGTHS (PER SPAN)
								MAX	MIN		
28	A	K	1	134'-6 ¹ / ₈ "	135'-0"	4 ³ / ₄ "	44.7535'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-6 ⁵ / ₈ "
	B	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	3	134'-6 ¹ / ₈ "	135'-0"	4 ³ / ₄ "	44.7535'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
29	A	K	4	134'-6 ¹ / ₄ "	135'-0"	4 ³ / ₁₆ "	44.7569'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-7 ¹ / ₄ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ¹ / ₄ "	135'-0"	4 ³ / ₁₆ "	44.7569'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
30	A	K	4	134'-6 ⁵ / ₈ "	135'-0"	5"	44.7674'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-9 ¹ / ₈ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ⁵ / ₈ "	135'-0"	5"	44.7674'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
31	A	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-9 ³ / ₄ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
32	A	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-9 ³ / ₄ "
	B	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	5	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	4	134'-6 ³ / ₄ "	135'-0"	5 ¹ / ₁₆ "	44.7708'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
33	A	K	3	134'-4 ³ / ₈ "	134'-9 ¹ / ₁₆ "	3 ⁷ / ₈ "	*	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	671'-9 ⁷ / ₈ "
	B	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	*	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	1	134'-4 ³ / ₈ "	134'-9 ¹ / ₁₆ "	3 ⁷ / ₈ "	*	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
TOTAL P.P.C. GIRDER (TYPE BT-78) CLASS P(HPC) LENGTHS											4035'-4 ³ / ₈ "

420'-0" CONTINUOUS UNIT											
SPAN NO	GRDR. NO	STRAND PATTERN	BEAM DETAIL	LENGTH "L"	JT. TO JT. "H"	VARIABLE SPACING "A"	DIST. TO INTER. DIAPH.	CAMBER		DEF.	GIRDER LENGTHS (PER SPAN)
								MAX	MIN		
25	A	K	1	134'-6 ¹ / ₄ "	135'-0"	4 ¹³ / ₁₆ "	44.7569'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-7 ¹ / ₄ "
	B	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	3	134'-6 ¹ / ₄ "	135'-0"	4 ¹³ / ₁₆ "	44.7569'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
26	A	L	4	149'-6"	150'-0"	4 ¹¹ / ₁₆ "	49.75'	3 ⁷ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ¹ / ₂ "	747'-6"
	B	L	5	↓	↓	↓	↓	3 ⁷ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ⁵ / ₈ "	
	C	L	5	↓	↓	↓	↓	3 ⁷ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ⁵ / ₈ "	
	D	L	5	↓	↓	↓	↓	3 ⁷ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ⁵ / ₈ "	
	E	L	4	149'-6"	150'-0"	4 ¹¹ / ₁₆ "	49.75'	3 ⁷ / ₁₆ "	2 ¹¹ / ₁₆ "	2 ¹¹ / ₁₆ "	
27	A	K	3	134'-6"	135'-0"	4 ¹¹ / ₁₆ "	44.75'	2 ¹ / ₂ "	1 ¹³ / ₁₆ "	1 ¹³ / ₁₆ "	672'-6"
	B	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	C	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	D	K	2	↓	↓	↓	↓	2 ¹ / ₂ "	1 ⁷ / ₈ "	1 ⁷ / ₈ "	
	E	K	1	134'-6"	135'-0"	4 ¹¹ / ₁₆ "	44.75'	2 ¹ / ₂ "	1 ¹⁵ / ₁₆ "	1 ¹⁵ / ₁₆ "	
TOTAL P.P.C. GIRDER (TYPE BT-78) CLASS P(HPC) LENGTHS											1345'-1 ¹ / ₄ "
TOTAL P.P.C. GIRDER (TYPE BT-78) (HPC) LENGTHS											747'-6"

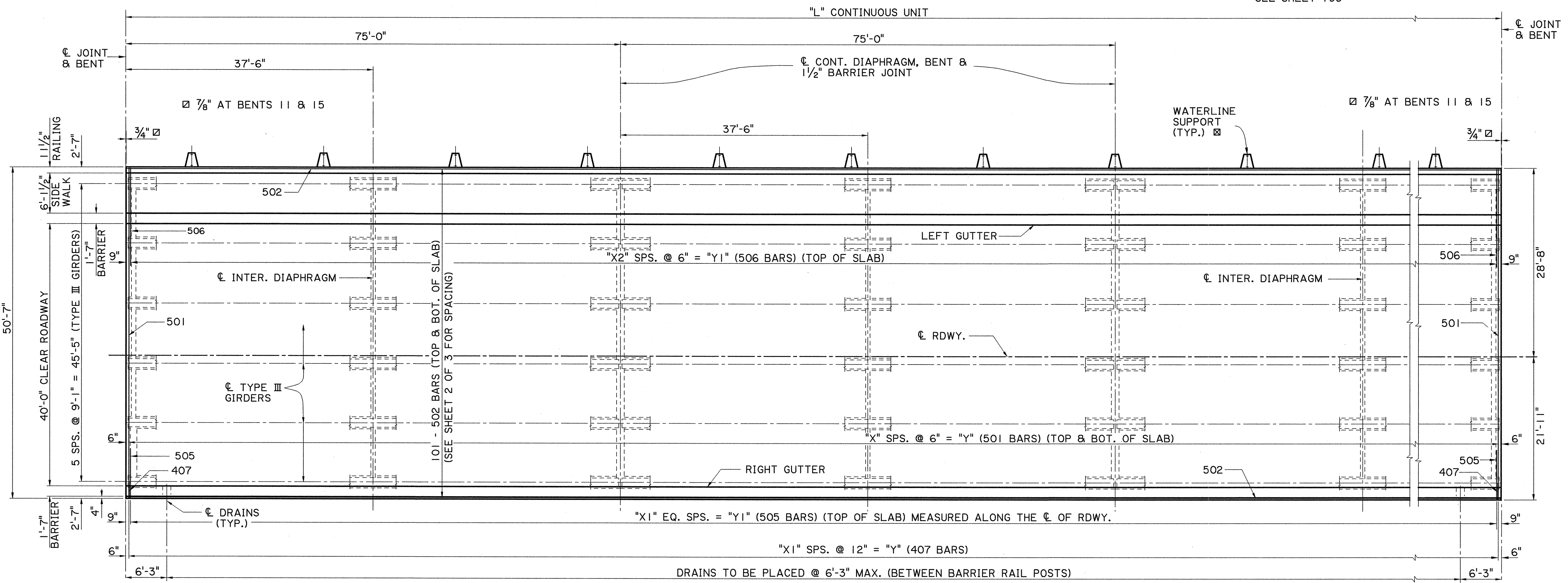
TOTAL GIRDER LENGTHS



SHEET NUMBER	158
DESIGNED BY	JEFFERSON
CHECKED BY	B. DELATTE
DATE	02/06/2007
BRIDGE NO.	064-01-0040
BRIDGE TYPE	FRAMING PLAN (TYPE BT-78 SPANS)
BRIDGE AND STRUCTURAL DESIGN	

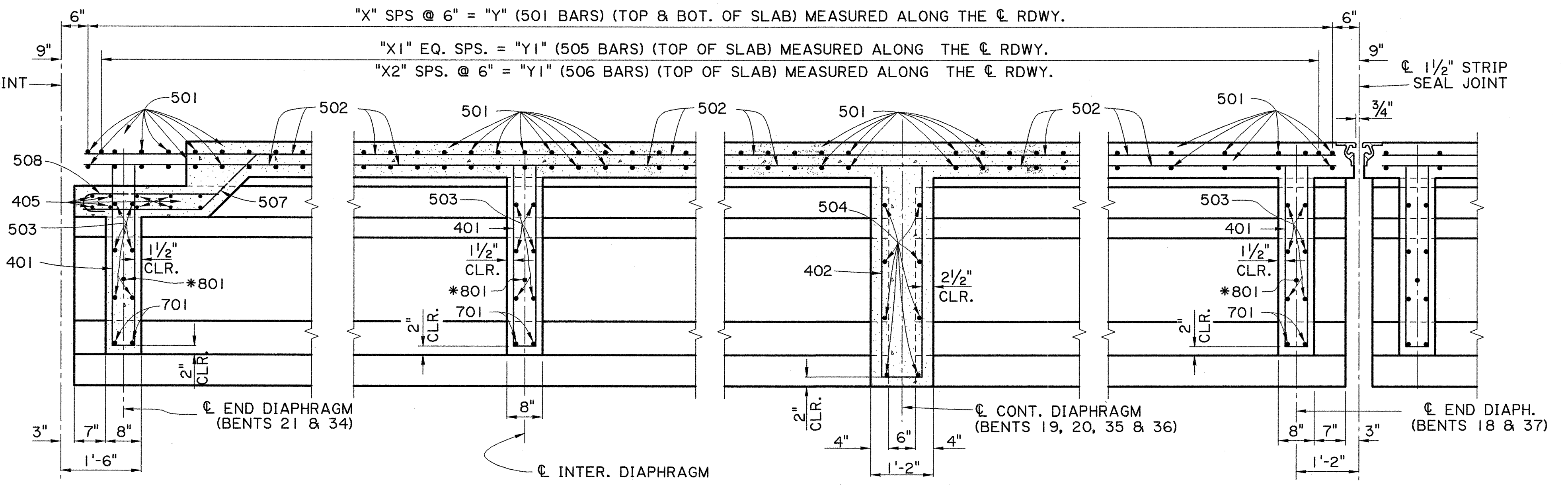
14:19
30-APR-2009
FINAL PLANS
R:\Gang2\Projects\064010040\dgn\159_Type III Spans_1_Plan.dgn

FOR WATERLINE SUPPORT DETAILS, SEE SHEET 194
FOR WATERLINE SUPPORT LAYOUT, SEE SHEET 193



NOTE: FOR SECTIONS AT FINGER JOINT, SEE SHEET 3 OF 4.

SPAN	"L"	"X"	"Y"	"X1"	"X2"	"Y1"
11-14	300'-0"	598	299'-0"	299	597	298'-6"
15-17	225'-0"	448	224'-0"	224	447	223'-6"
18-20	225'-0"	448	224'-0"	224	447	223'-6"
34-36	225'-0"	448	224'-0"	224	447	223'-6"
37-39	225'-0"	448	224'-0"	224	447	223'-6"
40-42	225'-0"	448	224'-0"	224	447	223'-6"



SHEET NUMBER 159

JEFFERSON

DESIGNED BY: DELATTE, B. NAKHLEN
CHECKED BY: HYMEL, D. DELATTE, B.

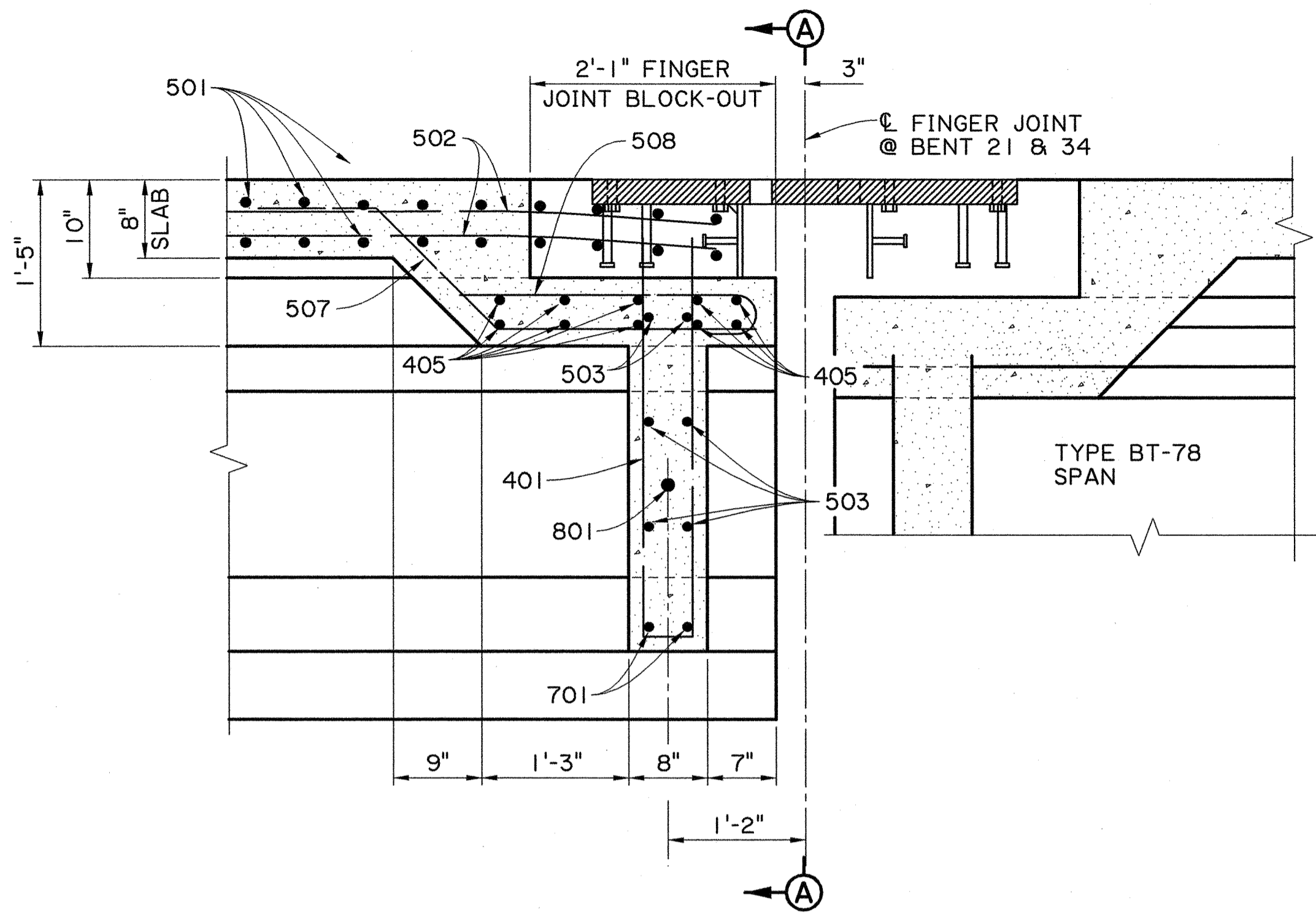
DATE: JAN 2007
SHEET: 1 OF 4

PROJECT: 064-01-0040

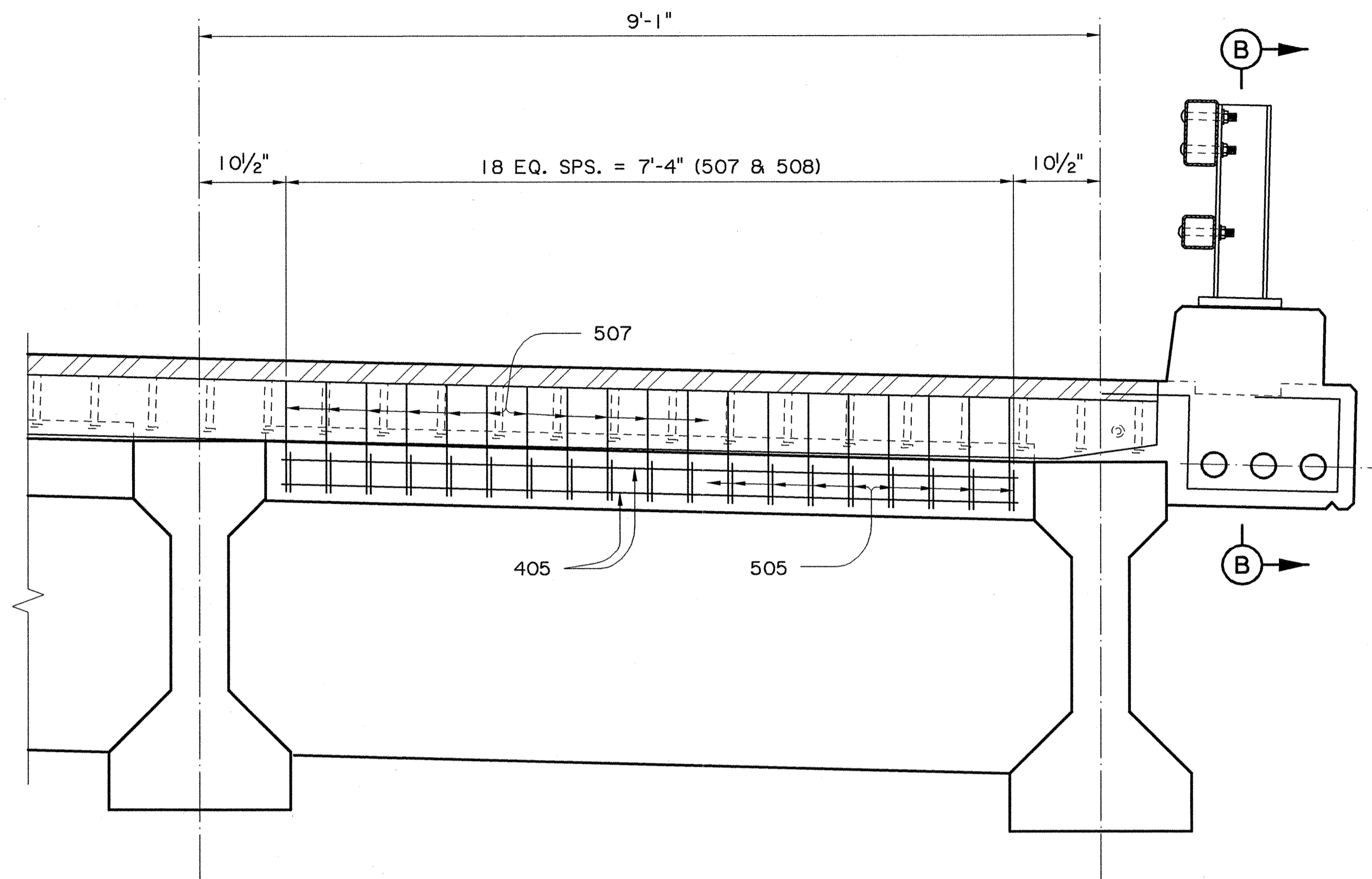
BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE ROUTE LA 1

TYPE III SPANS



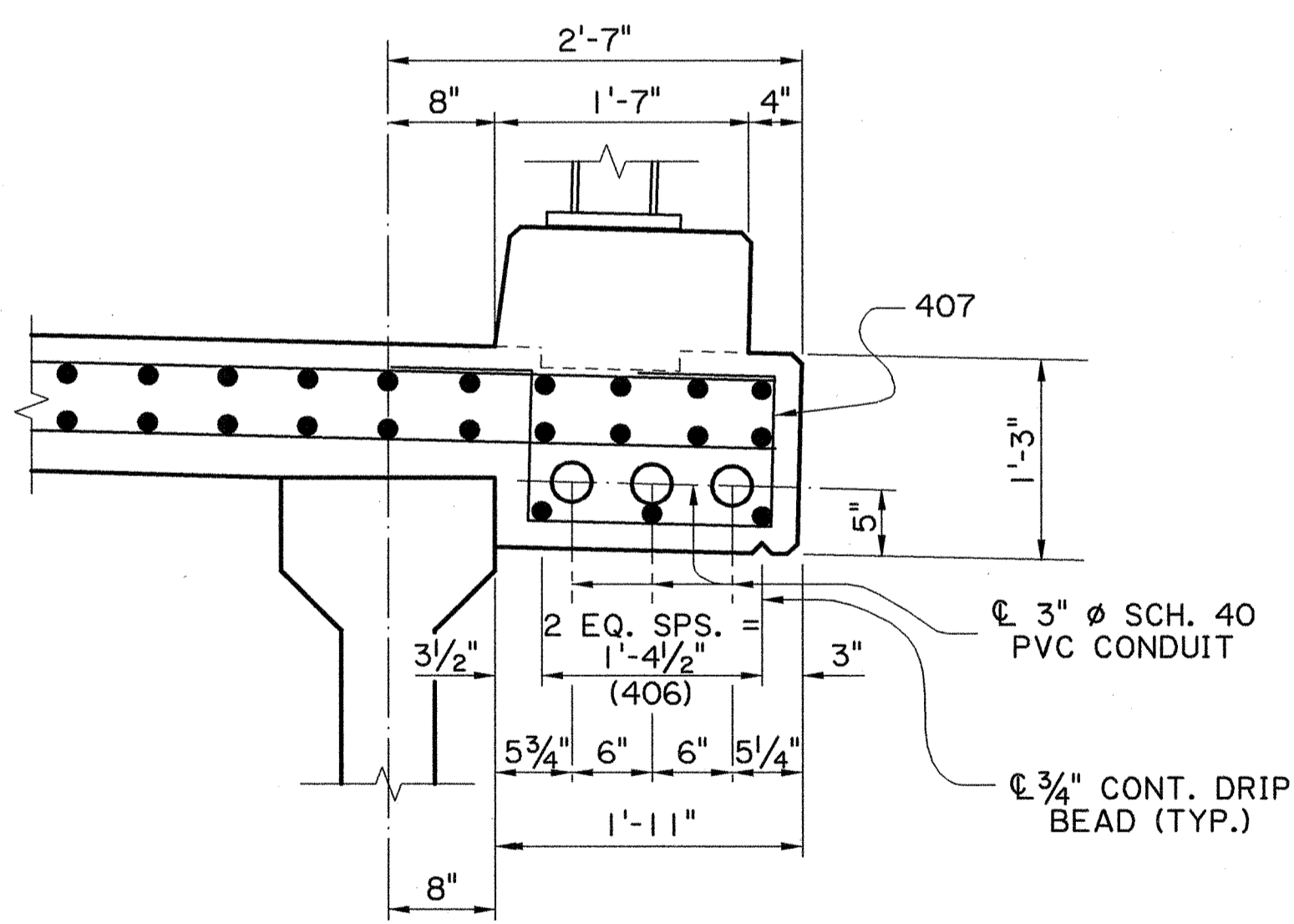
PARTIAL SECTION AT END DIAPHRAGM
(SCALE: 1" = 1'-0")



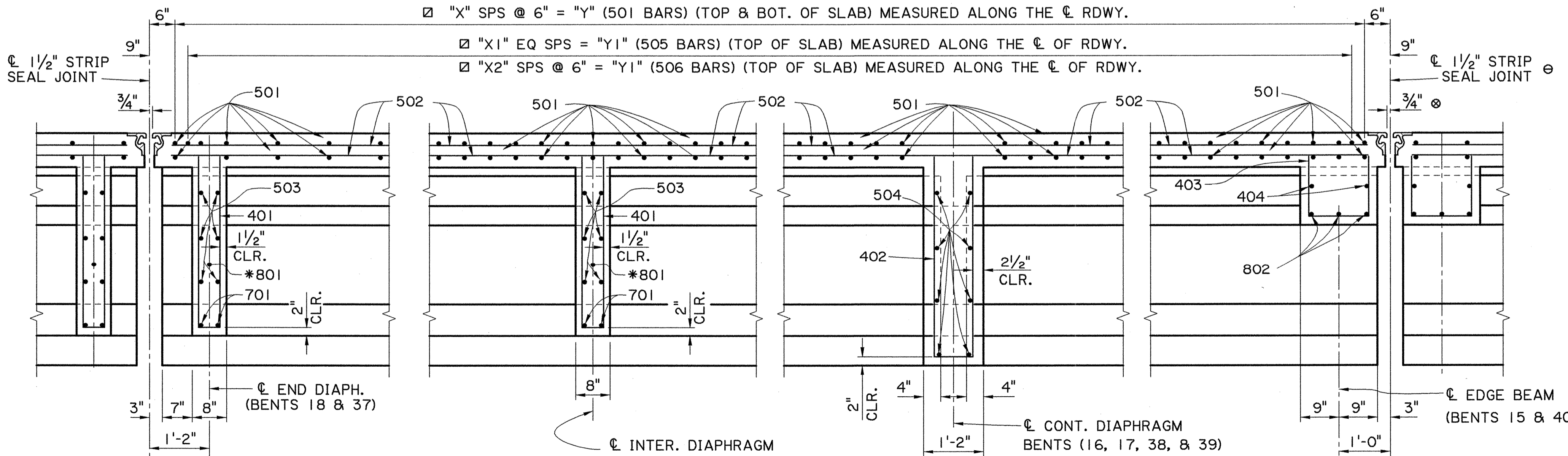
PART ELEVATION A-A
(SCALE: 1" = 1'-0")

NOTES:

- FOR FINGER JOINT DETAILS, SEE FINGER JOINT "DETAILS", SHEETS 176-177.
- Ø 1 3/4" STRIP SEAL JOINT AT BENT 15.
- Ø 7/8" AT BENT 15.
- ☐ SEE TABLE ON SHEET 1 OF 4.
- * USE 1"Ø x 3'-2" ALL THREADED ROD @ EXTERIOR GIRDER ONLY (TO BE PAID FOR UNDER ITEM 807-08-00100).



DETAIL "A"
(SCALE: 1" = 1'-0")



TYPICAL SECTION ALONG ROADWAY
(NTS) (SPANS 15-17 & 37-39)

SHEET NUMBER	161
DESIGNED	B. DELATTE
CHECKED	K. YAP
DATE	04-29-2009
SHEET	3 OF 4
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	
DATE	
BY	

CAMINADA BAY BRIDGE
ROUTE LA 1

BRIDGE AND STRUCTURAL DESIGN

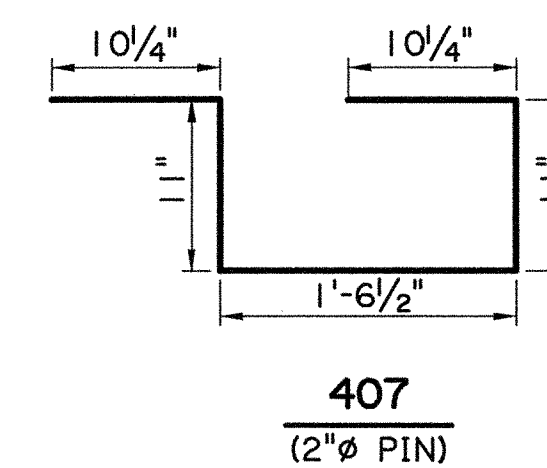
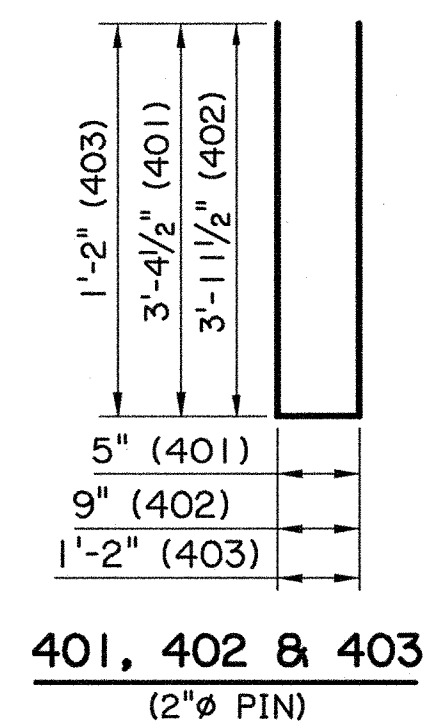
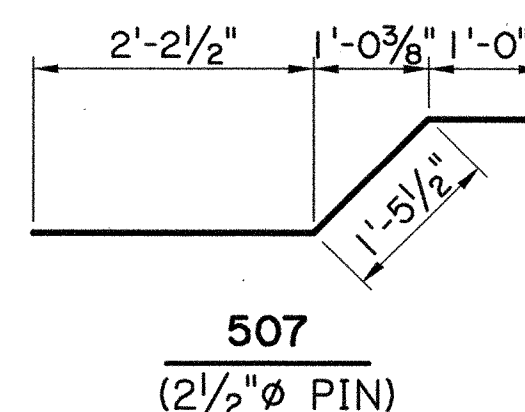
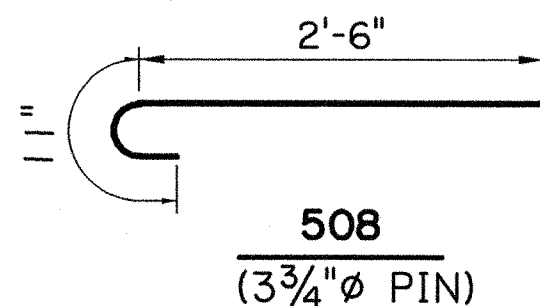
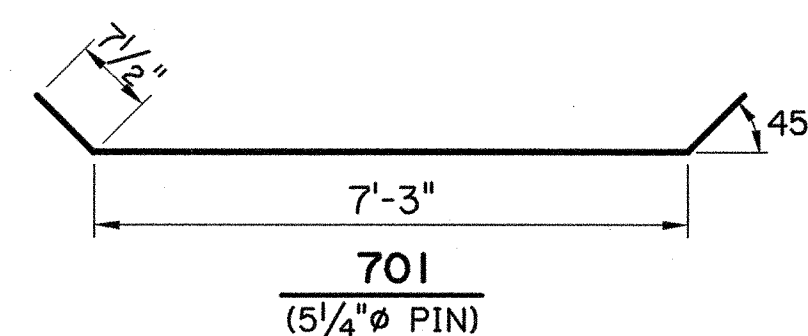
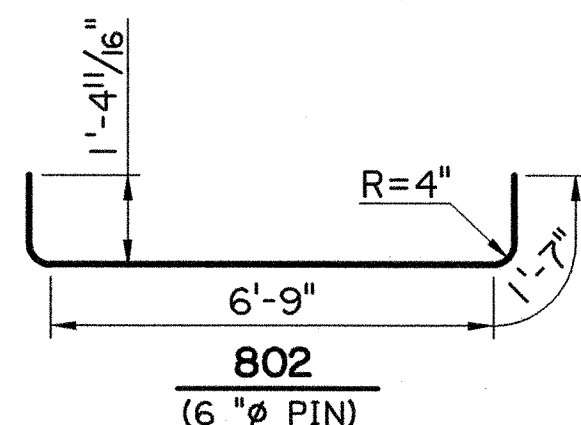
EST. QUANTITIES (ONE 300'-0" CONT. UNIT) (SPANS 11-14)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	16	6'-6"	104'-0"	INTERMEDIATE DIAPHRAGM
802	30	9'-11"	297'-6"	EDGE BEAM
TOTAL NO. 8 BARS = 401'-6" = 1072 LBS.				
701	40	8'-6"	340'-0"	INTERMEDIATE DIAPHRAGM
TOTAL NO. 7 BARS = 340'-0" = 695 LBS.				
501	1198	50'-1"	59999'-10"	TRANSV. TOP & BOT. SLAB
502	202	310'-4"	62687'-4"	LONGIT. TOP & BOT. SLAB
503	120	7'-5"	890'-0"	INTERMEDIATE DIAPHRAGM
504	24	45'-5"	1090'-0"	CONTINUITY DIAPHRAGM
505	300	4'-7"	1375'-0"	TRANSV. AT BARRIER
506	598	14'-1"	8421'-10"	TRANSV. AT BARRIER
TOTAL NO. 5 BARS = 134464'-0" = 140246 LBS.				
401	180	7'-2"	1290'-0"	INTERMEDIATE DIAPHRAGM
402	135	8'-8"	1170'-0"	CONTINUITY DIAPHRAGM
403	100	3'-6"	350'-0"	STIRRUPS IN EDGE BEAM
404	20	7'-5"	148'-4"	EDGE BEAM
406	3	311'-2"	933'-6"	LONGIT. IN DUCT BANK
407	300	5'-1"	1525'-0"	STIRRUPS IN DUCT BANK
TOTAL NO. 4 BARS = 5416'-10" = 3618 LBS.				
DEFORMED REINFORCING STEEL = 145631 LBS.				
CLASS AA(HPC) CONCRETE = 443.75 CU. YDS.				
* STRUCTURAL METALWORK = 68 LBS.				
STEEL AND CONCRETE RAILING = 600.00 LIN. FT.				
STRIP SEAL JOINTS = 47.71 LIN. FT.				

EST. QUANTITIES (ONE 225'-0" CONT. UNIT) (SPANS 15-17 & 37-39)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	16	6'-6"	104'-0"	END & INTERM. DIAPH.
802	15	9'-11"	148'-9"	EDGE BEAM
TOTAL NO. 8 BARS = 252'-9" = 675 LBS.				
701	40	8'-6"	340'-0"	END & INTERM. DIAPH.
TOTAL NO. 7 BARS = 340'-0" = 695 LBS.				
501	898	50'-1"	44974'-10"	TRANSV. TOP & BOT. SLAB
502	202	231'-0"	46662'-0"	LONGIT. TOP & BOT. SLAB
503	120	7'-5"	890'-0"	END & INTERM. DIAPH.
504	16	45'-5"	726'-8"	CONTINUITY DIAPHRAGM
505	225	4'-7"	1031'-3"	TRANSV. AT BARRIER
506	448	14'-1"	6309'-4"	TRANSV. AT BARRIER
TOTAL NO. 5 BARS = 100594'-1" = 104920 LBS.				
401	180	7'-2"	1290'-0"	END & INTERM. DIAPH.
402	90	8'-8"	780'-0"	CONTINUITY DIAPHRAGM
403	50	3'-6"	175'-0"	STIRRUPS IN EDGE BEAM
404	10	7'-5"	74'-2"	EDGE BEAM
406	3	232'-10"	698'-6"	LONGIT. IN DUCT BANK
407	225	5'-1"	1143'-9"	STIRRUPS IN DUCT BANK
TOTAL NO. 4 BARS = 4161'-5" = 2780 LBS.				
DEFORMED REINFORCING STEEL = 109070 LBS.				
CLASS AA(HPC) CONCRETE = 333.08 CU. YDS.				
* STRUCTURAL METALWORK = 68 LBS.				
STEEL AND CONCRETE RAILING = 450.00 LIN. FT.				
STRIP SEAL JOINTS = 47.71 LIN. FT.				

EST. QUANTITIES (ONE 225'-0" CONT. UNIT) (SPANS 18-20 & 34-36)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	20	6'-6"	130'-0"	END & INTERM. DIAPH.
TOTAL NO. 8 BARS = 130'-0" = 347 LBS.				
701	50	8'-6"	425'-0"	END & INTERM. DIAPH.
TOTAL NO. 7 BARS = 425'-0" = 869 LBS.				
501	898	50'-1"	44974'-10"	TRANSV. TOP & BOT. SLAB
502	202	231'-0"	46662'-0"	LONGIT. TOP & BOT. SLAB
503	150	7'-5"	1112'-5"	END & INTERM. DIAPH.
504	16	45'-5"	726'-8"	CONTINUITY DIAPHRAGM
505	225	4'-7"	1031'-3"	TRANSV. AT BARRIER
506	448	14'-1"	6309'-4"	TRANSV. AT BARRIER
507	95	4'-8"	443'-4"	TIES AT FINGER JOINT
508	95	3'-5"	324'-7"	TIES AT FINGER JOINT
TOTAL NO. 5 BARS = 101584'-6" = 105953 LBS.				
401	225	7'-2"	1612'-6"	END & INTERM. DIAPH.
402	90	8'-8"	780'-0"	CONTINUITY DIAPHRAGM
405	50	7'-5"	370'-10"	LONGIT. AT FINGER JT.
406	3	232'-10"	698'-6"	LONGIT. IN DUCT BANK
407	225	5'-1"	1143'-9"	STIRRUPS IN DUCT BANK
TOTAL NO. 4 BARS = 4605'-7" = 3077 LBS.				
DEFORMED REINFORCING STEEL = 110246 LBS.				
CLASS AA(HPC) CONCRETE = 333.98 CU. YDS.				
* STRUCTURAL METALWORK = 85 LBS.				
STEEL AND CONCRETE RAILING = 450.00 LIN. FT.				
STRIP SEAL JOINTS = 47.71 LIN. FT.				

EST. QUANTITIES (ONE 225'-0" CONT. UNIT) (SPANS 40-42)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	12	6'-6"	78'-0"	INTERMEDIATE DIAPHRAGM
802	30	9'-11"	297'-6"	EDGE BEAM
TOTAL NO. 8 BARS = 375'-6" = 1003 LBS.				
701	30	8'-6"	255'-0"	INTERMEDIATE DIAPHRAGM
TOTAL NO. 7 BARS = 255'-0" = 521 LBS.				
501	898	50'-1"	44974'-10"	TRANSV. TOP & BOT. SLAB
502	202	231'-0"	46662'-0"	LONGIT. TOP & BOT. SLAB
503	90	7'-5"	667'-6"	INTERMEDIATE DIAPHRAGM
504	16	45'-5"	726'-8"	CONTINUITY DIAPHRAGM
505	225	4'-7"	1031'-3"	TRANSV. AT BARRIER
506	448	14'-1"	6309'-4"	TRANSV. AT BARRIER
TOTAL NO. 5 BARS = 100371'-7" = 104688 LBS.				
401	135	7'-2"	967'-6"	INTERMEDIATE DIAPHRAGM
402	90	8'-8"	780'-0"	CONTINUITY DIAPHRAGM
403	100	3'-6"	350'-0"	STIRRUPS IN EDGE BEAM
404	20	7'-5"	148'-4"	EDGE BEAM
406	3	232'-10"	698'-6"	LONGIT. IN DUCT BANK
407	225	5'-1"	1143'-9"	STIRRUPS IN DUCT BANK
TOTAL NO. 4 BARS = 4088'-1" = 2731 LBS.				
DEFORMED REINFORCING STEEL = 108943 LBS.				
CLASS AA(HPC) CONCRETE = 332.18 CU. YDS.				
* STRUCTURAL METALWORK = 51 LBS.				
STEEL AND CONCRETE RAILING = 450.00 LIN. FT.				
STRIP SEAL JOINTS = 47.71 LIN. FT.				

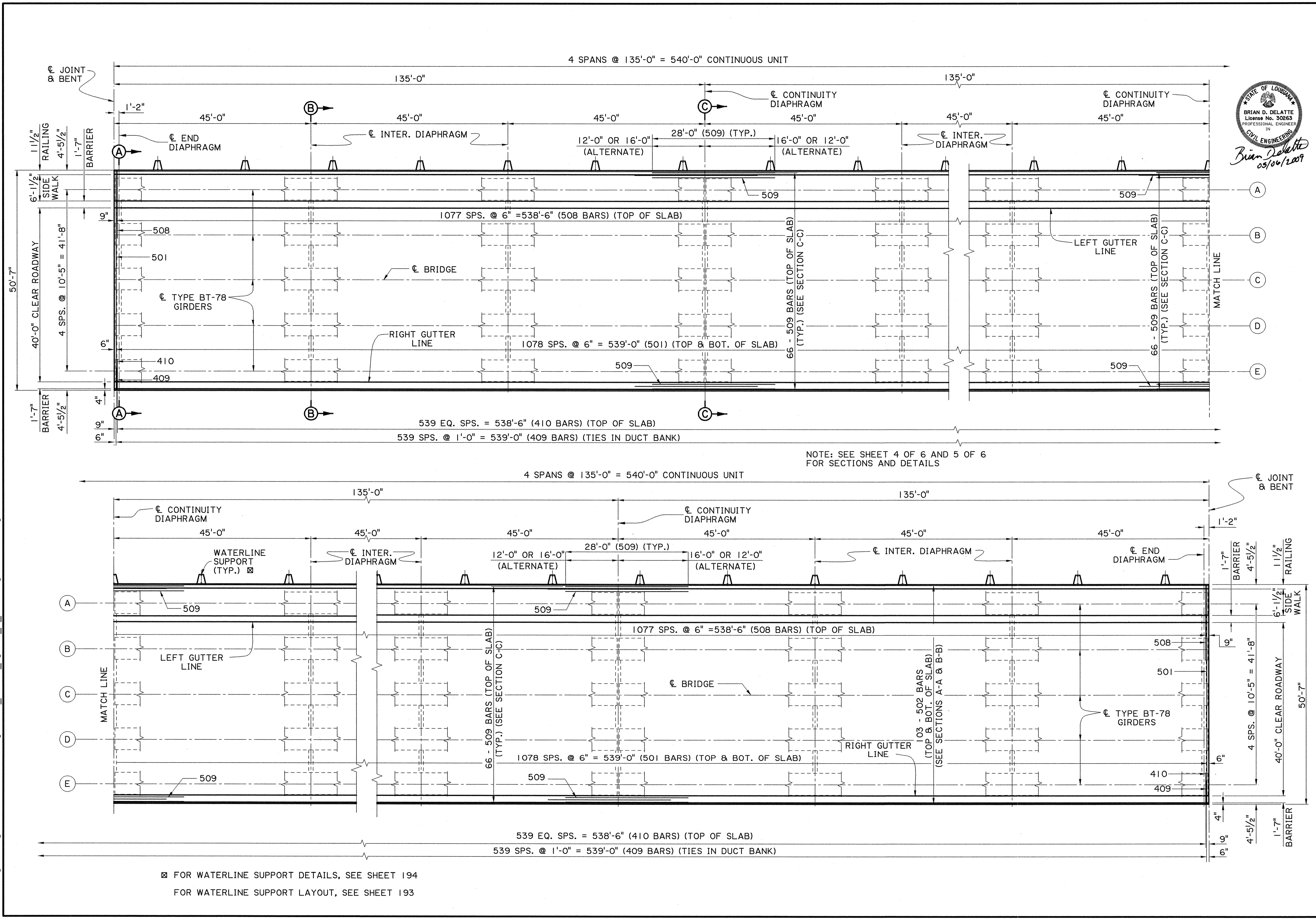
- ⊗ INCLUDES THREE (3) 2'-2" MIN. LAP SPLICE, TO BE STAGGERED
- △ INCLUDES FIVE (5) 2'-2" MIN. LAP SPLICE, TO BE STAGGERED
- ⊠ INCLUDES FIVE (5) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED
- # INCLUDES SEVEN (7) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED
- * ESTIMATION PURPOSES ONLY. TO BE INCLUDED UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, LUMP SUM.



SHEET NUMBER	162
DESIGNED BY	JEFFERSON
CHECKED BY	B. DELATTE
DATE	JAN. 2007
PROJECT	064-01-0040
SHEET	4 OF 4
BRIDGE	CAMINADA BAY BRIDGE
DETAILS	ROUTE LA 1
TYPE	TYPE III SPANS
BRIDGE AND STRUCTURAL DESIGN	

FINAL PLANS

P:\Gang2\Projects\064010040\dgn\163_Br-78_Spans_1_Four Span Unit.dgn

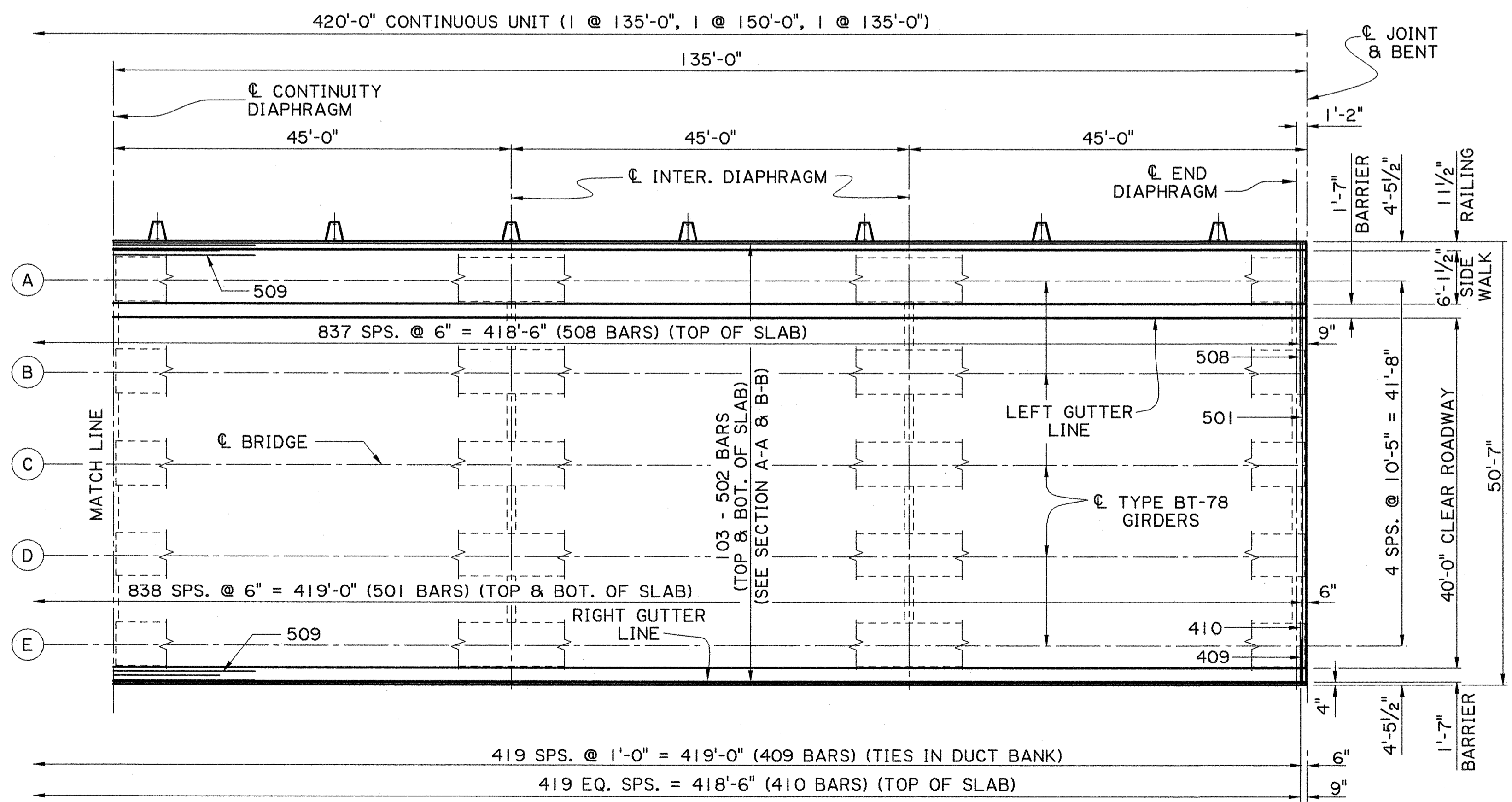
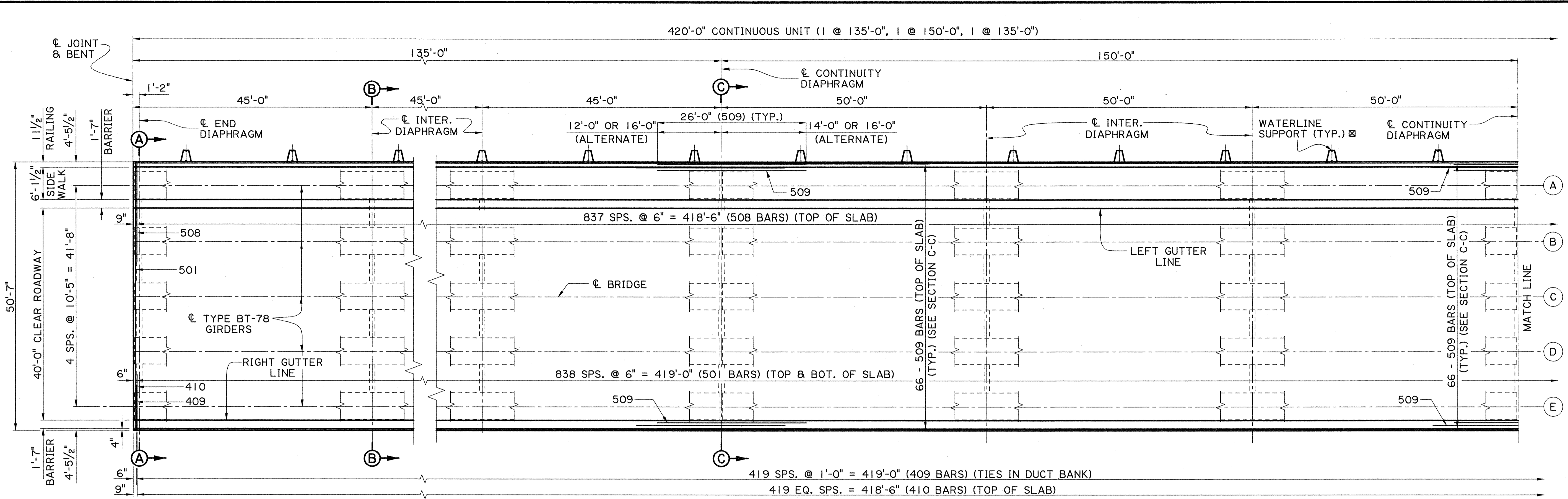


DESIGNED BY	B. DELATTE	PARISH	JEFFERSON
CHECKED BY	J. NAKHLEH	FEDERAL PROJECT	
DATE	JAN. 2007	STATE PROJECT	064-01-0040
SHEET	1 OF 6	REVISION DESCRIPTION	

BRIDGE AND STRUCTURAL DESIGN

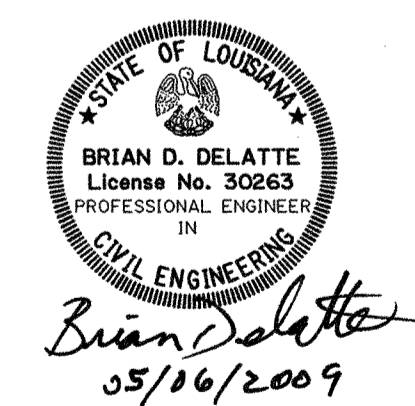
CAMINADA BAY BRIDGE
ROUTE LA 1
BR-78 SPANS (4 SPAN UNIT)

R:\Gang2\Projects\064010040\agn\164_BT-78_Spans_2_Three Span Unit.dgn
 30-APR-2009 14:19
 FINAL PLANS



NOTE: SEE SHEET 4 OF 6 & 5 OF 6 FOR SECTIONS AND DETAILS

☒ FOR WATERLINE SUPPORT DETAILS, SEE SHEET 194
 FOR WATERLINE SUPPORT LAYOUT, SEE SHEET 193



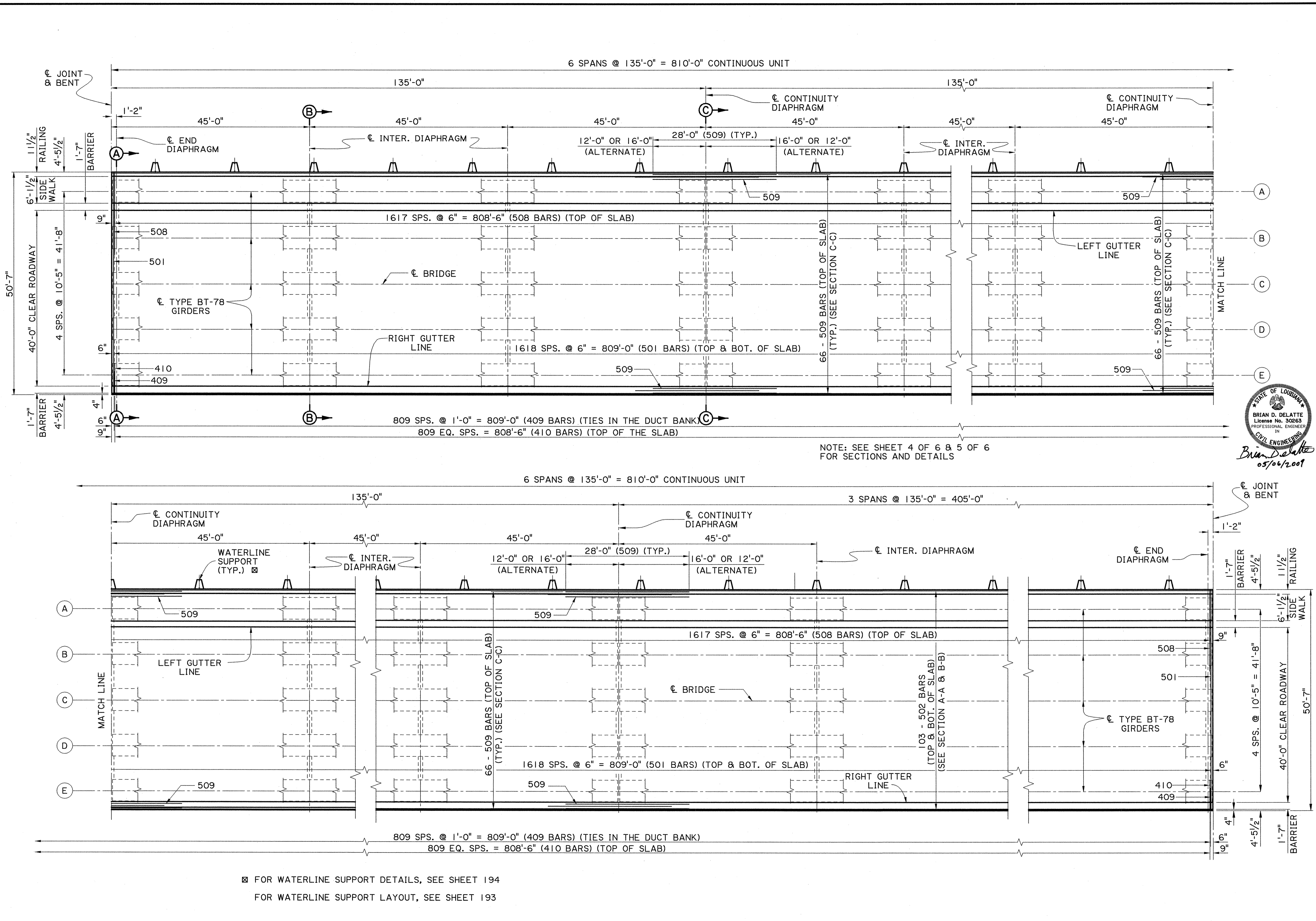
SHEET NUMBER 164	
DESIGNED BY B. DELATTE	PARISH JEFFERSON
CHECKED BY J. NAKHLEH	FEDERAL PROJECT
DATE JAN. 2007	STATE PROJECT 064-01-0040
CHECKED BY B. DELATTE	DATE JAN. 2007
DATE JAN. 2007	SHEET 2 OF 6
REVISION DESCRIPTION	BY
CAMINADA BAY BRIDGE ROUTE LA 1 BT-78 SPANS (3 SPAN UNIT)	
BRIDGE AND STRUCTURAL DESIGN	

14:19

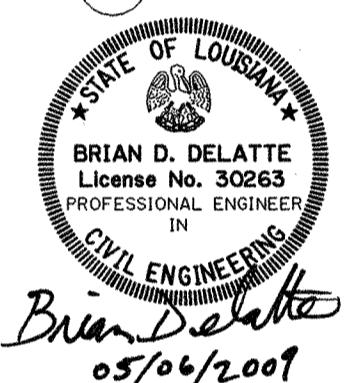
30-APR-2009

FINAL PLANS

R:\Gaug2\Projects\064010040\dgn\165_Bt-78_spans_3_Six Span Unit.dgn



NOTE: SEE SHEET 4 OF 6 & 5 OF 6 FOR SECTIONS AND DETAILS

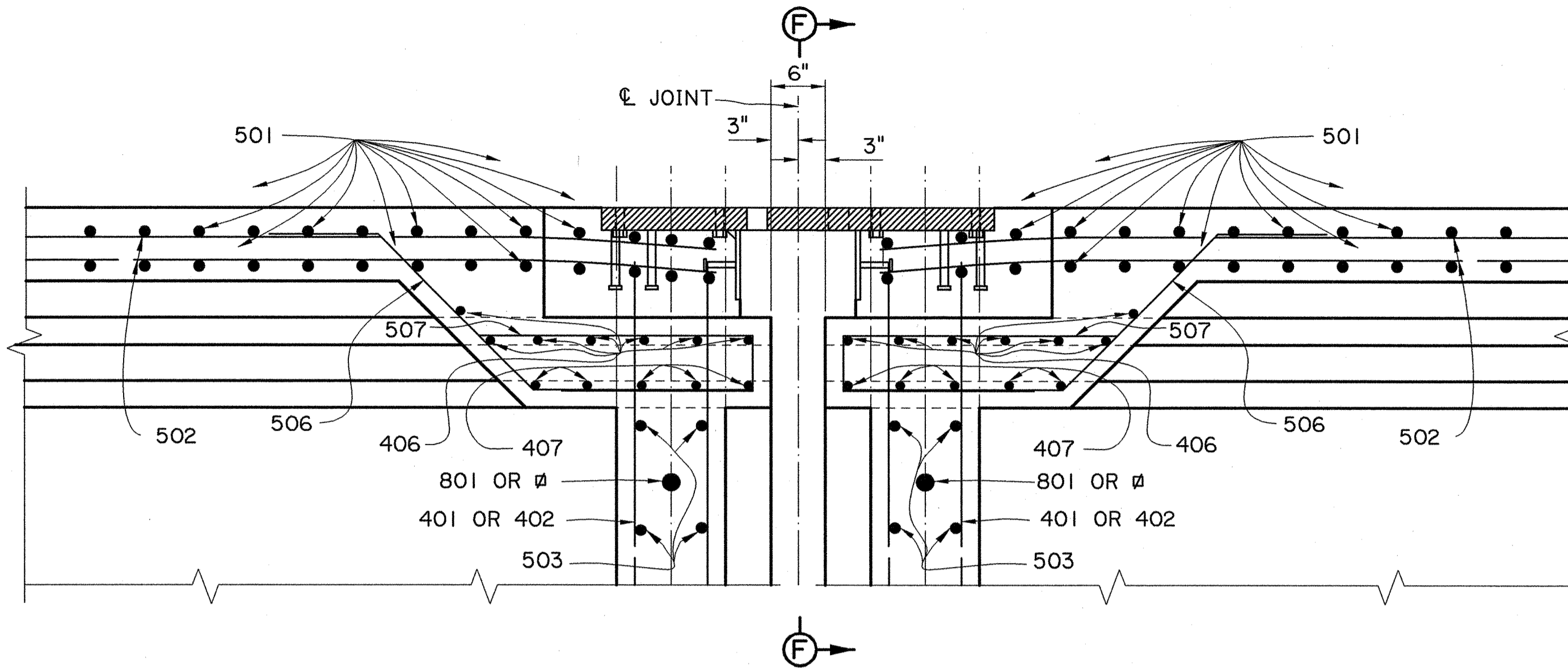


FOR WATERLINE SUPPORT DETAILS, SEE SHEET 194
FOR WATERLINE SUPPORT LAYOUT, SEE SHEET 193

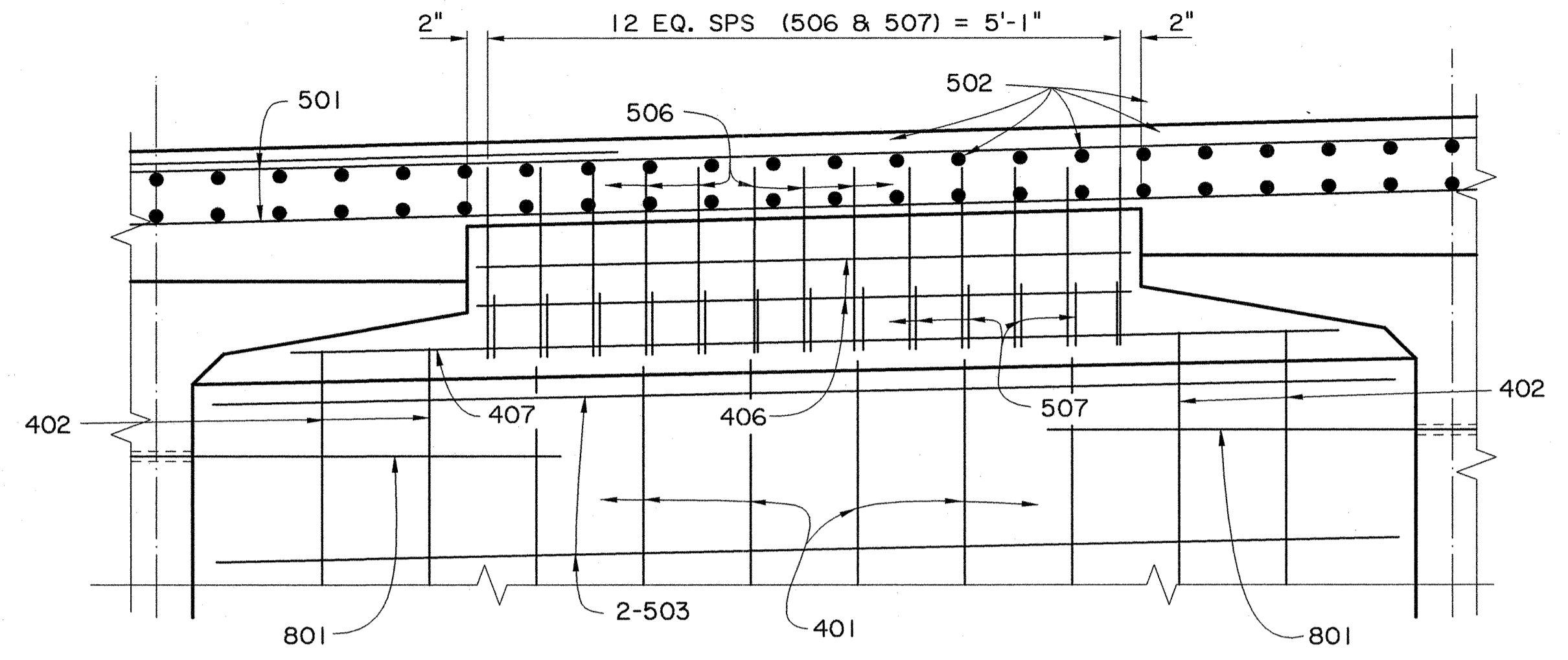
SHEET NUMBER		165	
DESIGNED BY		JEFFERSON	
CHECKED BY		B. DELATTE	
DATE		JAN. 2007	
PROJECT		064-01-0040	
STATE		LA	
SHEET		3 OF 6	
REVISION DESCRIPTION			
NO.		DATE	
BY			

CAMINADA BAY BRIDGE
ROUTE LA 1

BRIDGE AND STRUCTURAL DESIGN

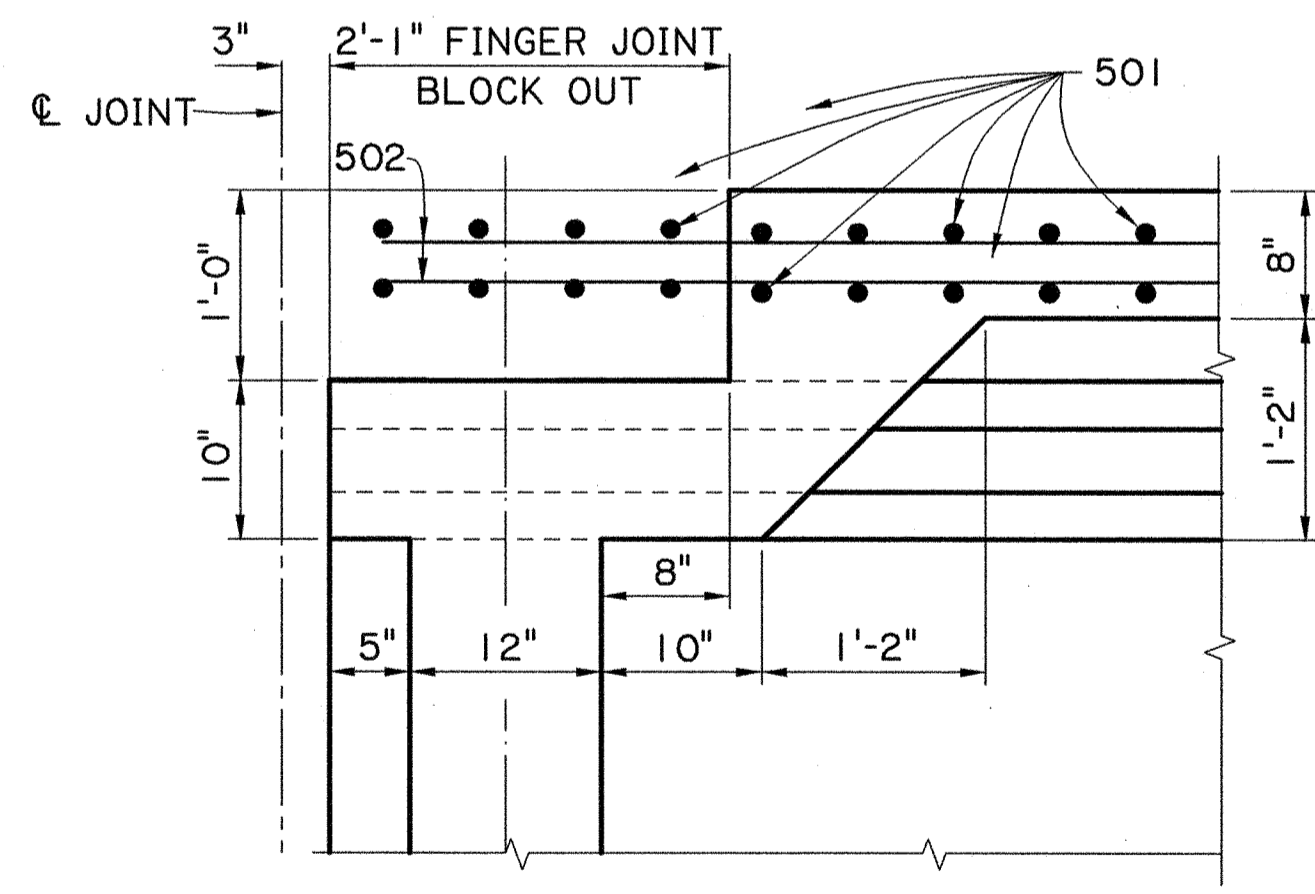


PARTIAL SECTION AT END DIAPHRAGM
(SCALE: 1" = 1'-0")

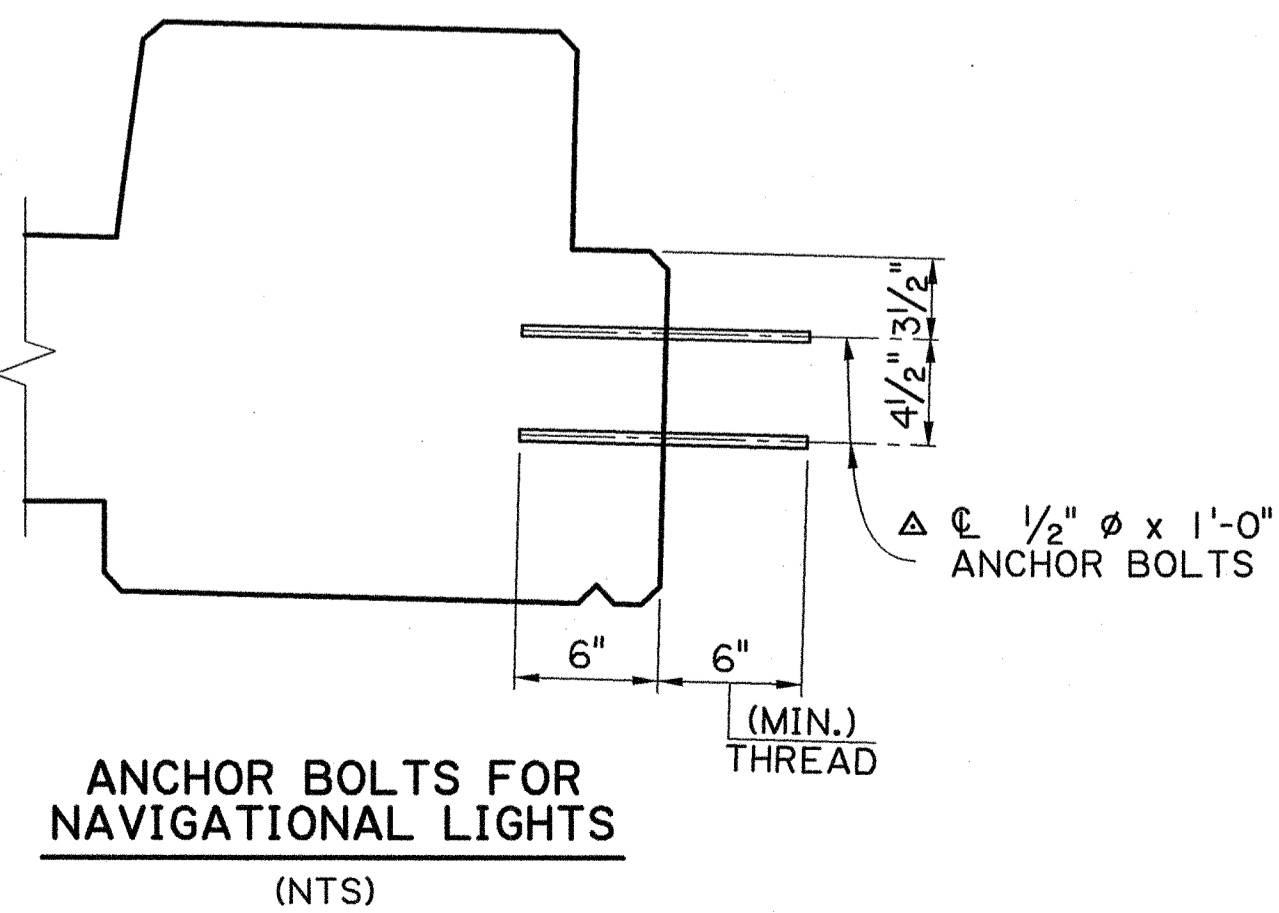
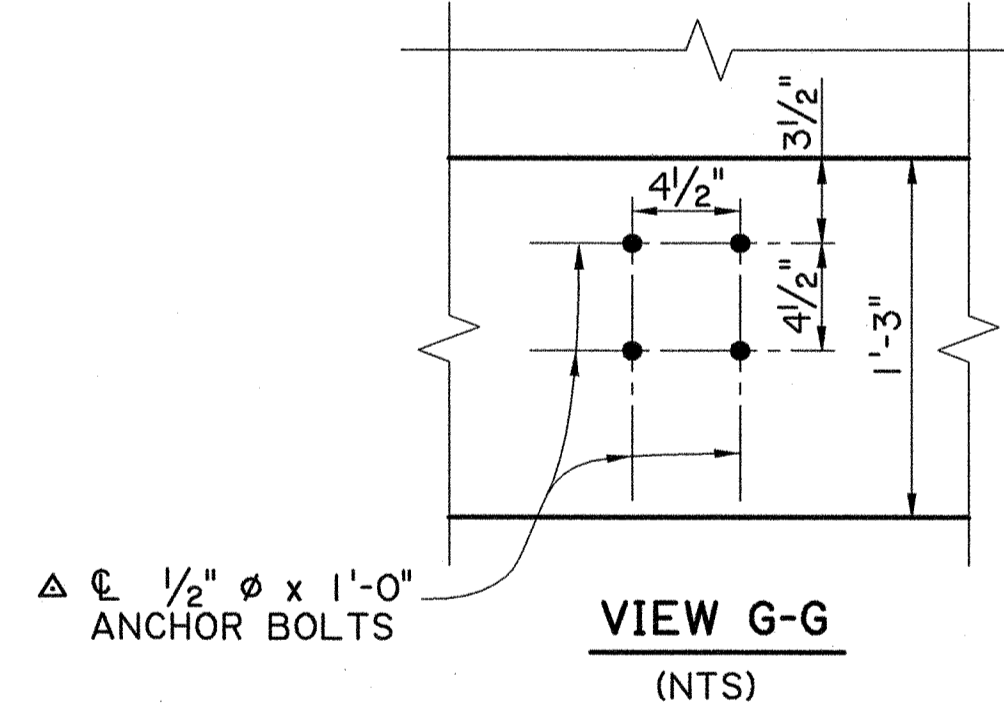


VIEW F-F
(SCALE: 1" = 1'-0")

Ø 1" Ø x 3'-2" ALL THREADED ROD (EXT. GIRDERS ONLY). TO BE PAID FOR UNDER ITEM 807-08-00100.

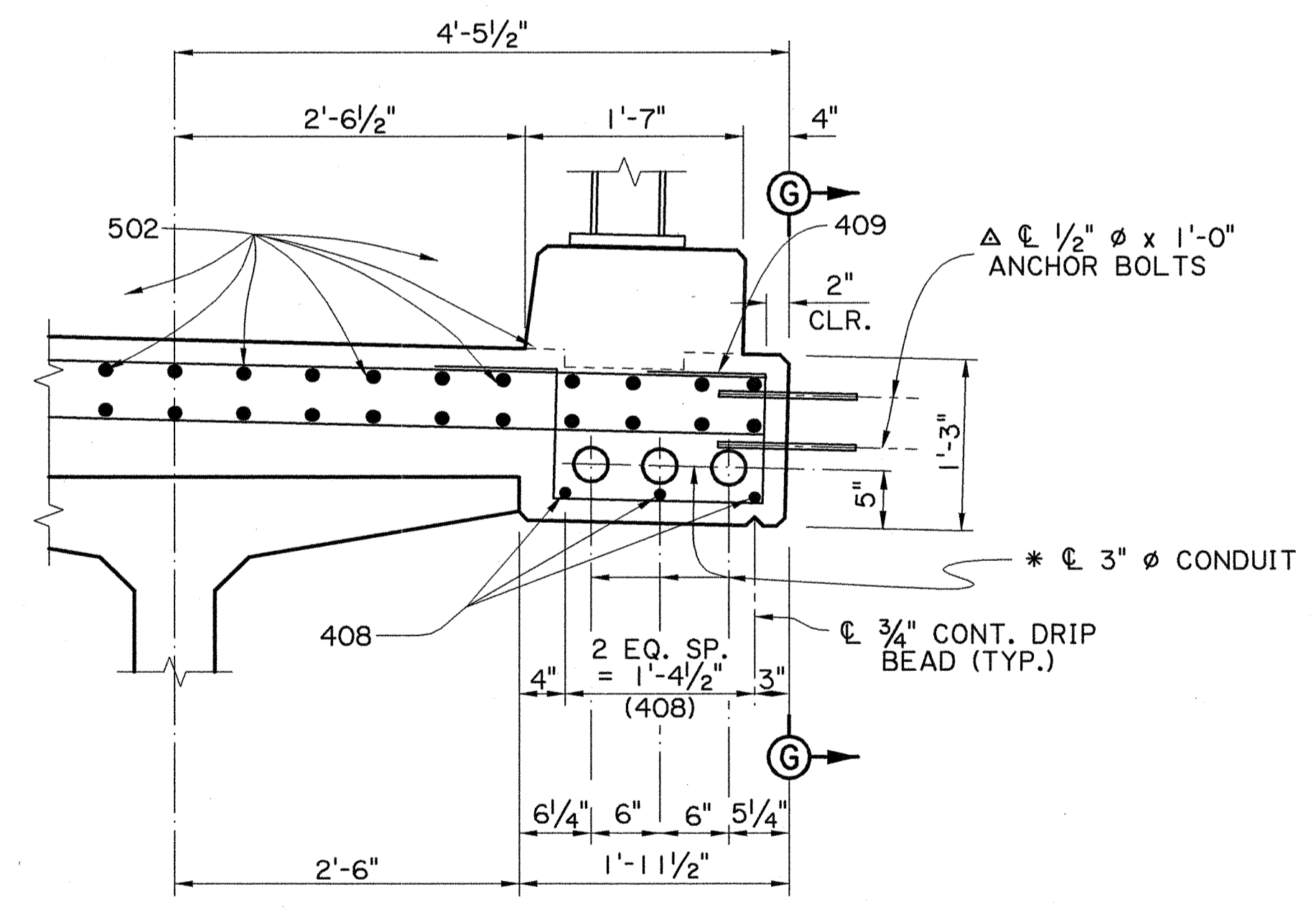


FINGER JOINT BLOCK OUT
(SCALE: 1" = 1'-0")



Δ FOR ANCHOR BOLTS REQUIREMENTS SEE NOTES ON SHEET 179a. TO BE PAID FOR UNDER ITEM 730-09-00100.

ANCHOR BOLTS FOR NAVIGATIONAL LIGHTS
(NTS)



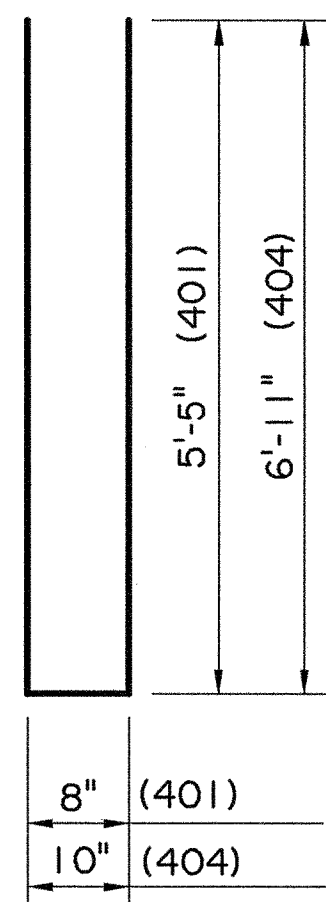
DETAIL "A"
(SCALE: 1" = 1'-0")

* 3" Ø CONDUIT SHALL BE SCHEDULE 40 PVC AND INCLUDES FIBERGLASS EXPANSION FITTINGS AT EXPANSION JOINTS TO ALLOW FOR 10" OF MOVEMENT. TO BE INCLUDED IN THE BID PRICE FOR ITEM NS-800-00204, CLASS AA(HPC) CONCRETE.

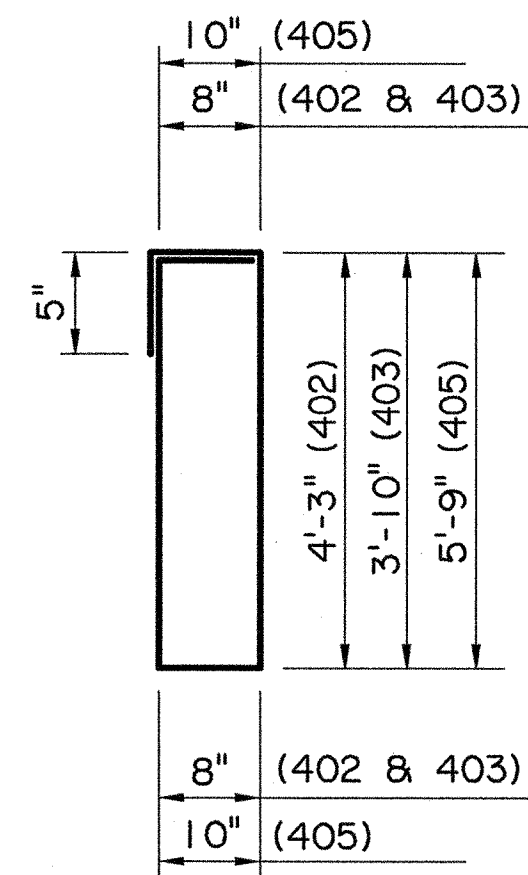
SHEET NUMBER	167
DESIGNED	K. YAP
CHECKED	B. DELATTE
DATE	12-15-2005
PROJECT	064-01-0040
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	
DATE	12-15-2005
SHEET	5 OF 6
BRIDGE DETAILS	BT-76 SPANS
BRIDGE AND STRUCTURAL DESIGN	
BRIDGE DESCRIPTION	CAMINADA BAY BRIDGE ROUTE LA 1
NO.	
DATE	
BY	

ESTIMATED QUANTITIES (BT-78 4 SPAN UNIT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	90	6'-6"	585'-0"	END & INTERM. DIAPHRAGM
802	256	9'-6"	2432'-0"	INTERMEDIATE DIAPHRAGM
TOTAL NO. 8 BARS = 3017'-0" = 8055 LB.				
701	15	41'-11"	628'-9"	CONTINUITY DIAPHRAGM
TOTAL NO. 7 BARS = 628'-9" = 1285 LB.				
501	2158	50'-3"	108439'-6"	TRANSV. TOP & BOTTOM OF SLAB
502	206	558'-6"	115051'-0"	LONGIT. TOP & BOTTOM OF SLAB
503	64	9'-6"	608'-0"	END DIAPHRAGM
504	96	9'-6"	912'-0"	CONTINUITY DIAPHRAGM
505	24	10'-4"	248'-0"	CONTINUITY DIAPHRAGM
506	104	5'-0"	520'-0"	FINGER JOINT BLOCK OUT
507	104	4'-9"	494'-0"	FINGER JOINT BLOCK OUT
508	1078	18'-5"	19853'-2"	TRANSV. AT BARRIER
509	198	28'-0"	5544'-0"	LONGIT. TOP OF SLAB @ CONT.DIAPH.
TOTAL NO. 5 BARS = 251669'-8" = 262491 LB.				
401	48	11'-6"	552'-0"	END DIAPHRAGM
402	32	10'-11"	349'-4"	END DIAPHRAGM
403	352	10'-1"	3549'-4"	INTERMEDIATE DIAPHRAGM
404	72	14'-8"	1056'-0"	CONTINUITY DIAPHRAGM
405	48	14'-5"	692'-0"	CONTINUITY DIAPHRAGM
406	56	5'-3"	294'-0"	FINGER JOINT BLOCK OUT
407	40	8'-5"	336'-8"	FINGER JOINT BLOCK OUT
408	3	562'-10"	1688'-6"	DUCT BANK
409	540	5'-1"	2745'-0"	DUCT BANK
410	540	7'-0"	3780'-0"	TRANSV. AT BARRIER
TOTAL NO. 4 BARS = 15042'-10" = 10049 LB.				
TOTAL DEFORMED REINFORCING STEEL = 281880 LBS.				
TOTAL CLASS AA(HPC) CONCRETE = 970.71 CU. YDS.				
STRUCTURAL METALWORK = 508 LBS.				
STEEL & CONCRETE RAILING = 1080 LIN FT.				

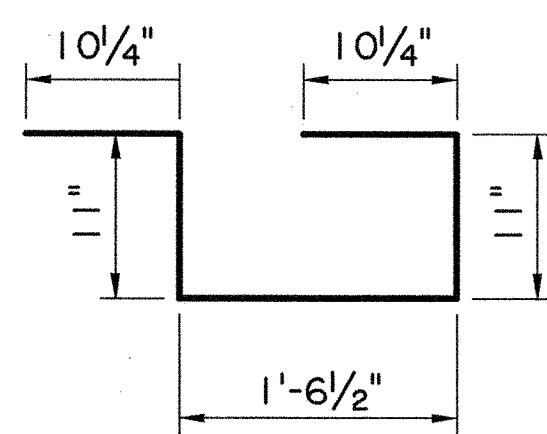
- * INCLUDES NINE (9) 2'-2" MIN. LAP SPLICES (TO BE STAGGERED).
- # INCLUDES FOURTEEN (14) 1'-8" MIN. LAP SPLICES (TO BE STAGGERED).
- ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED IN ITEM 807-08-00100 "STRUCTURAL METALWORK".



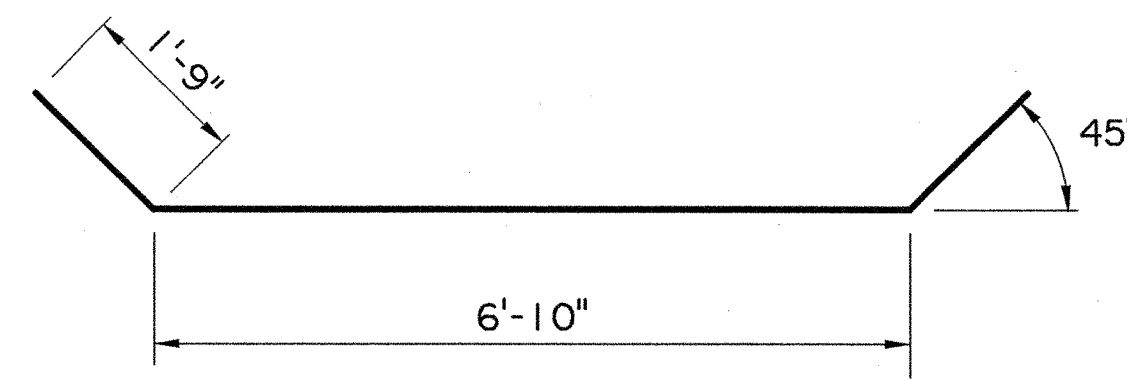
401 & 404
(2" Ø PIN)



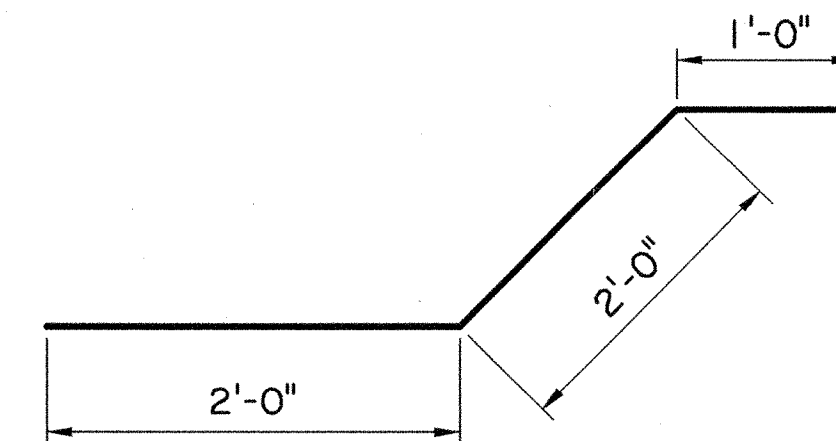
402, 403 & 405
(2" Ø PIN)



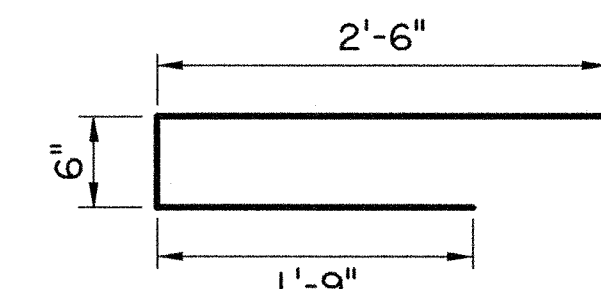
409
(2" Ø PIN)



505
(2 1/2" Ø PIN)



506
(2 1/2" Ø PIN)



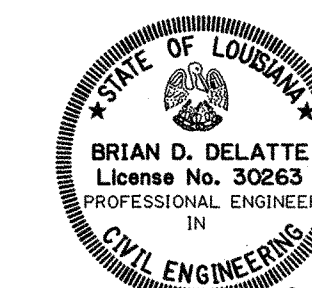
507
(2 1/2" Ø PIN)

ESTIMATED QUANTITIES (BT-78 3 SPAN UNIT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	72	6'-6"	468'-0"	END & INTERM. DIAPHRAGM
802	192	9'-6"	1824'-0"	INTERMEDIATE DIAPHRAGM
TOTAL NO. 8 BARS = 2292'-0" = 6120 LB.				
701	10	41'-11"	419'-2"	CONTINUITY DIAPHRAGM
TOTAL NO. 7 BARS = 419'-2" = 857 LB.				
501	1678	50'-3"	84319'-6"	TRANSV. TOP & BOTTOM OF SLAB
502	206	434'-2"	89438'-4"	LONGIT. TOP & BOTTOM OF SLAB
503	64	9'-6"	608'-0"	END DIAPHRAGM
504	64	9'-6"	608'-0"	CONTINUITY DIAPHRAGM
505	16	10'-4"	165'-4"	CONTINUITY DIAPHRAGM
506	104	5'-0"	520'-0"	FINGER JOINT BLOCK OUT
507	104	4'-9"	494'-0"	FINGER JOINT BLOCK OUT
508	838	18'-5"	15433'-2"	TRANSV. AT BARRIER
509	132	28'-0"	3696'-0"	LONGIT. TOP OF SLAB @ CONT.DIAPH.
TOTAL NO. 5 BARS = 195282'-4" = 203679 LB.				
401	48	11'-6"	552'-0"	END DIAPHRAGM
402	32	10'-11"	349'-4"	END DIAPHRAGM
403	264	10'-1"	2662'-0"	INTERMEDIATE DIAPHRAGM
404	48	14'-8"	704'-0"	CONTINUITY DIAPHRAGM
405	32	14'-5"	461'-4"	CONTINUITY DIAPHRAGM
406	56	5'-3"	294'-0"	FINGER JOINT BLOCK OUT
407	40	8'-5"	336'-8"	FINGER JOINT BLOCK OUT
408	3	436'-2"	1308'-6"	DUCT BANK
409	420	5'-1"	2135'-0"	DUCT BANK
410	420	7'-0"	2940'-0"	TRANSV. AT BARRIER
TOTAL NO. 4 BARS = 11742'-10" = 7844 LB.				
TOTAL DEFORMED REINFORCING STEEL = 218500 LBS.				
TOTAL CLASS AA(HPC) CONCRETE = 753.74 CU. YDS.				
STRUCTURAL METALWORK = 406 LBS.				
STEEL & CONCRETE RAILING = 840 LIN FT.				

- * INCLUDES SEVEN (7) 2'-2" MIN. LAP SPLICES (TO BE STAGGERED).
- # INCLUDES TEN (10) 1'-8" MIN. LAP SPLICES (TO BE STAGGERED).
- ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED IN ITEM 807-08-00100 "STRUCTURAL METALWORK".

ESTIMATED QUANTITIES (BT-78 6 SPAN UNIT)				
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION
801	126	6'-6"	819'-0"	END & INTERM. DIAPHRAGM
802	384	9'-6"	3648'-0"	INTERMEDIATE DIAPHRAGM
TOTAL NO. 8 BARS = 4467'-0" = 11927 LB.				
701	25	41'-11"	1047'-11"	CONTINUITY DIAPHRAGM
TOTAL NO. 7 BARS = 1047'-11" = 2142 LB.				
501	3238	50'-3"	162709'-6"	TRANSV. TOP & BOTTOM OF SLAB
502	206	837'-2"	172456'-4"	LONGIT. TOP & BOTTOM OF SLAB
503	64	9'-6"	608'-0"	END DIAPHRAGM
504	160	9'-6"	1520'-0"	CONTINUITY DIAPHRAGM
505	40	10'-4"	413'-4"	CONTINUITY DIAPHRAGM
506	104	5'-0"	520'-0"	FINGER JOINT BLOCK OUT
507	104	4'-9"	494'-0"	FINGER JOINT BLOCK OUT
508	1618	18'-5"	29798'-2"	TRANSV. AT BARRIER
509	330	28'-0"	9240'-0"	LONGIT. TOP OF SLAB @ CONT.DIAPH.
TOTAL NO. 5 BARS = 377759'-4" = 394003 LB.				
401	48	11'-6"	552'-0"	END DIAPHRAGM
402	32	10'-11"	349'-4"	END DIAPHRAGM
403	528	10'-1"	5324'-0"	INTERMEDIATE DIAPHRAGM
404	120	14'-8"	1760'-0"	CONTINUITY DIAPHRAGM
405	80	14'-5"	1153'-4"	CONTINUITY DIAPHRAGM
406	56	5'-3"	294'-0"	FINGER JOINT BLOCK OUT
407	40	8'-5"	336'-8"	FINGER JOINT BLOCK OUT
408	3	844'-6"	2533'-6"	DUCT BANK
409	810	5'-1"	4117'-6"	DUCT BANK
410	810	7'-0"	5670'-0"	TRANSV. AT BARRIER
TOTAL NO. 4 BARS = 22090'-4" = 14756 LB.				
TOTAL DEFORMED REINFORCING STEEL = 422828 LBS.				
TOTAL CLASS AA(HPC) CONCRETE = 1453.01 CU. YDS.				
STRUCTURAL METALWORK = 711 LBS.				
STEEL & CONCRETE RAILING = 1620 LIN FT.				

- Δ INCLUDES THIRTEEN (13) 2'-2" MIN. LAP SPLICES (TO BE STAGGERED).
- ☒ INCLUDES TWENTY-ONE (21) 1'-8" MIN. LAP SPLICES (TO BE STAGGERED).
- ☒ FOR ESTIMATION PURPOSES ONLY. TO BE INCLUDED IN ITEM 807-08-00100 "STRUCTURAL METALWORK".



Brian D. Delatte
05/06/2009

SHEET NUMBER	168
PROJECT	JEFFERSON
DESIGNED	B. DELATTE
CHECKED	J. NAKHLEH
DATE	06-14-2006
PROJECT	CAMINADA BAY BRIDGE
STATE	LA
PROJECT	ROUTE LA 1
PROJECT	BT-78 SPANS
PROJECT	064-01-0040
PROJECT	6 OF 6
PROJECT	REVISION DESCRIPTION
PROJECT	NO.
PROJECT	DATE
PROJECT	BY
PROJECT	BRIDGE AND STRUCTURAL DESIGN

PRESTRESSED GIRDER NOTES

GENERAL:

FABRICATION TOLERANCES, STRESSING AND DETENSIONING OF THE PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE AS SPECIFIED IN THE "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS (MNL-116, LATEST EDITION)" PUBLISHED BY PCI.

PAY ITEMS:

BIDS WILL BE TAKEN FOR PRECAST-PRESTRESSED CONCRETE GIRDER IN PLACE, UNDER ITEMS NS-800-00181, P.P.C. GIRDER (TYPE III) CLASS P(HPC), NS-800-10184, P.P.C. GIRDER (TYPE BT-78) CLASS P(HPC) AND ITEM NS-800-00224, P.P.C. GIRDERS (TYPE BT-78) (HPC), PER LINEAR FT. INCLUDED IN THE BID PRICE WILL BE THE COST OF ALL MATERIALS AND LABOR REQUIRED TO MANUFACTURE AND ERECT THE GIRDER AS SHOWN ON THE DESIGN DRAWINGS, EXCLUDING ELASTOMERIC BEARING PADS. THE FOLLOWING MATERIALS ARE TO BE PAID FOR IN THE BID PRICE PER LINEAR FOOT OF GIRDER:

CLASS P(HPC) OR CLASS P(X)(HPC) CONCRETE, REINFORCING STEEL AND PRESTRESSING STRANDS, BOLTS, NUTS, AND WASHERS FOR STRIP SEAL ANCHORAGE (TYPE III GIRDERS ONLY), AND COIL INSERTS.

STEEL:

DIMENSIONS SHOWN ON REINFORCING BAR DETAILS ARE OUT-TO-OUT OF BAR. REINFORCING STEEL FOR PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE FABRICATED TO CLOSE DIMENSIONAL TOLERANCES TO PROVIDE ONE (1) INCH MINIMUM CLEARANCE FROM EDGE OF BAR TO FACE OF GIRDER.

PRESTRESSING STEEL SHALL BE 1/2"Ø AND 0.6"Ø (NOMINAL), UNCOATED, SEVEN-WIRE STRANDS, GRADE 270, CONFORMING TO ASTM DESIGNATION A 416M. THE STRANDS SHALL BE LOW-RELAXATION WITH AN INITIAL APPLIED FORCE OF 30,980 POUNDS FOR 1/2"Ø AND 43,950 POUNDS FOR 0.6"Ø.

FULL LENGTH STRANDS FOR TYPE III GIRDERS ARE GENERALLY PULLED TO 2,000 POUNDS BUT MAY BE PULLED UP TO 5,400 POUNDS TO REDUCE UNDESIRABLE SAG. FOR BT-78 GIRDERS FULL LENGTH STRANDS ARE PULLED TO 10,000 POUNDS.

THE CONTRACTOR SHALL SUBMIT A METHOD OF HOLDING DRAPED STRANDS IN PLACE AND SHALL SUBMIT METHOD AND SCHEDULE FOR RELEASE OF HOLDDOWNS AND CABLE STRAND TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL. PRESTRESSED GIRDERS SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES DURING STORAGE AND HANDLING AND MUST BE SUPPORTED FROM POINTS WITHIN 3'-0" OF GIRDER ENDS. DISREGARDING THIS REQUIREMENT MAY LEAD TO THE COLLAPSE OF THE MEMBER.

CONCRETE:

CONCRETE IN PRECAST-PRESTRESSED CONCRETE GIRDERS SHALL BE CLASS P(HPC) CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 6,500 PSI AT RELEASE OF STRANDS AND 8,500 PSI AT 28 DAYS, OR P(X)(HPC) CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 7,500 PSI AT RELEASE OF STRANDS AND 10,000 PSI AT 28 DAYS.

CAMBER:

CONTRACTOR SHOULD NOTE THAT THE CAMBER SHOWN ELSEWHERE IN THE PLANS IS APPROXIMATE AND ASSUMES DECK PLACEMENT 90 DAYS AFTER STRAND RELEASE. THE CONTRACTOR SHOULD ATTEMPT TO HAVE THE GIRDERS CAST NO MORE THAN 90 DAYS BEFORE DECK PLACEMENT. ANY ADJUSTMENTS TO THE PROJECT THAT ARE REQUIRED DUE TO AN INCREASE IN CAMBER FROM THE VALUES SHOWN IS THE CONTRACTOR'S RESPONSIBILITY AND COST.

SPAN NOTES

PAY ITEMS:

1"Ø ALL THREADED RODS ARE TO BE PAID FOR UNDER ITEM 807-08-00100, STRUCTURAL METALWORK.

POUR RATES:

MINIMUM BRIDGE DECK POUR RATES WILL BE ESTABLISHED BASED ON THE VOLUME OF CONCRETE CONTAINED IN ANY TWO ADJACENT SPANS TO BE POURED CONTINUOUSLY DIVIDED BY FOUR (4) HOURS. IF THE CONTRACTOR ELECTS TO POUR MORE THAN TWO (2) ADJACENT SPANS DURING THE SAME POURING OPERATION, NO MORE THAN FOUR (4) HOURS CAN ELAPSE BETWEEN THE COMPLETION OF THE POUR ON ANY TWO (2) ADJACENT SPANS.

THE POURING RATES ARE TO BE COMPUTED BY THE CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER TWO WEEKS PRIOR TO BEGINNING ANY BRIDGE DECK POUR. IF THE CONTRACTOR FAILS TO MEET THE MINIMUM PLACEMENT RATE, THE PROJECT ENGINEER MAY REJECT THE POUR, FURTHER PLACEMENT OF SIMILAR NATURE AND SIZE WILL NOT BE PERMITTED UNTIL CORRECTIVE MEASURES HAVE BEEN TAKEN TO ENSURE THAT THE MINIMUM PLACEMENT RATE CAN BE MET.

POURING SEQUENCE:

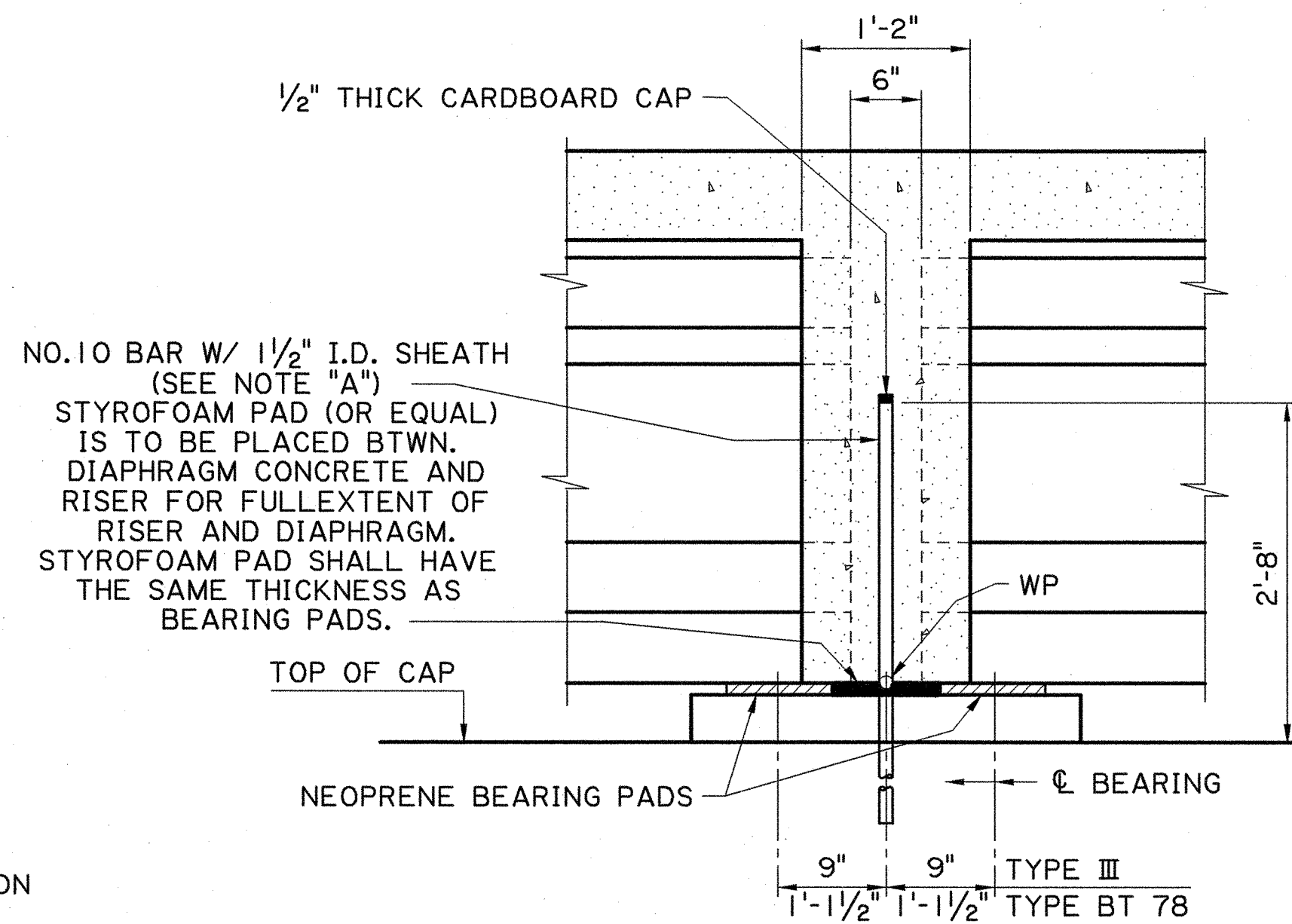
THE CONTRACTOR SHALL POUR AND SATISFACTORILY FINISH THE SLAB USING ANY OF THE FOLLOWING SEQUENCES AT HIS OPTION:

FOR PRESTRESSED GIRDER SPANS ONLY:

- 1) SEGMENTS "A" MAY BE POURED FIRST FOLLOWED BY SEGMENTS "B".
2) ADJACENT SEGMENTS "A" AND "B" MAY BE POURED TOGETHER BEGINNING AND ENDING WITH A SEGMENT "A". BEGINNING WITH A SEGMENT "B" MAY BE ALLOWED ONLY IF THE ADJACENT SEGMENT "A" WAS POURED PREVIOUSLY.
3) THE ENTIRE TYPE III UNIT MAY BE POURED IN ONE CONTINUOUS POUR. CONTINUITY DIAPHRAGMS ARE TO BE POURED AT THE SAME TIME AS SEGMENTS "B". OTHER DIAPHRAGMS ARE TO BE POURED PRIOR TO THE DECK POUR.

FOR CONCRETE SLAB SPANS ONLY:

- 1) SEGMENTS "A" MAY BE POURED FIRST FOLLOWED BY SEGMENTS "B".
2) ADJACENT SEGMENTS "A" AND "B" MAY BE POURED TOGETHER BEGINNING AND ENDING WITH A SEGMENT "A". BEGINNING WITH A SEGMENT "B" MAY BE ALLOWED ONLY IF THE ADJACENT SEGMENT "A" WAS POURED PREVIOUSLY. MAXIMUM FIVE (5) SPANS MAY BE POURED TOGETHER.
3) THE ENTIRE 150'-0" SLAB SPAN CONTINUOUS UNIT MAY BE POURED IN ONE CONTINUOUS POUR. THE 340'-0" SLAB SPAN CONTINUOUS UNIT MAY BE POURED IN THREE (3) POURS AS SHOWN ON THE POURING SEQUENCE DIAPHRAGM. SLAB SPAN BENTS ARE TO BE POURED AT THE SAME TIME AS SEGMENT "B".



CONNECTION DETAIL AT CONTINUITY DIAPHRAGM (FOR BENT TYPES: III G-2, III G-3 & BTC-3) (NTS)

CONSTRUCTION JOINTS:

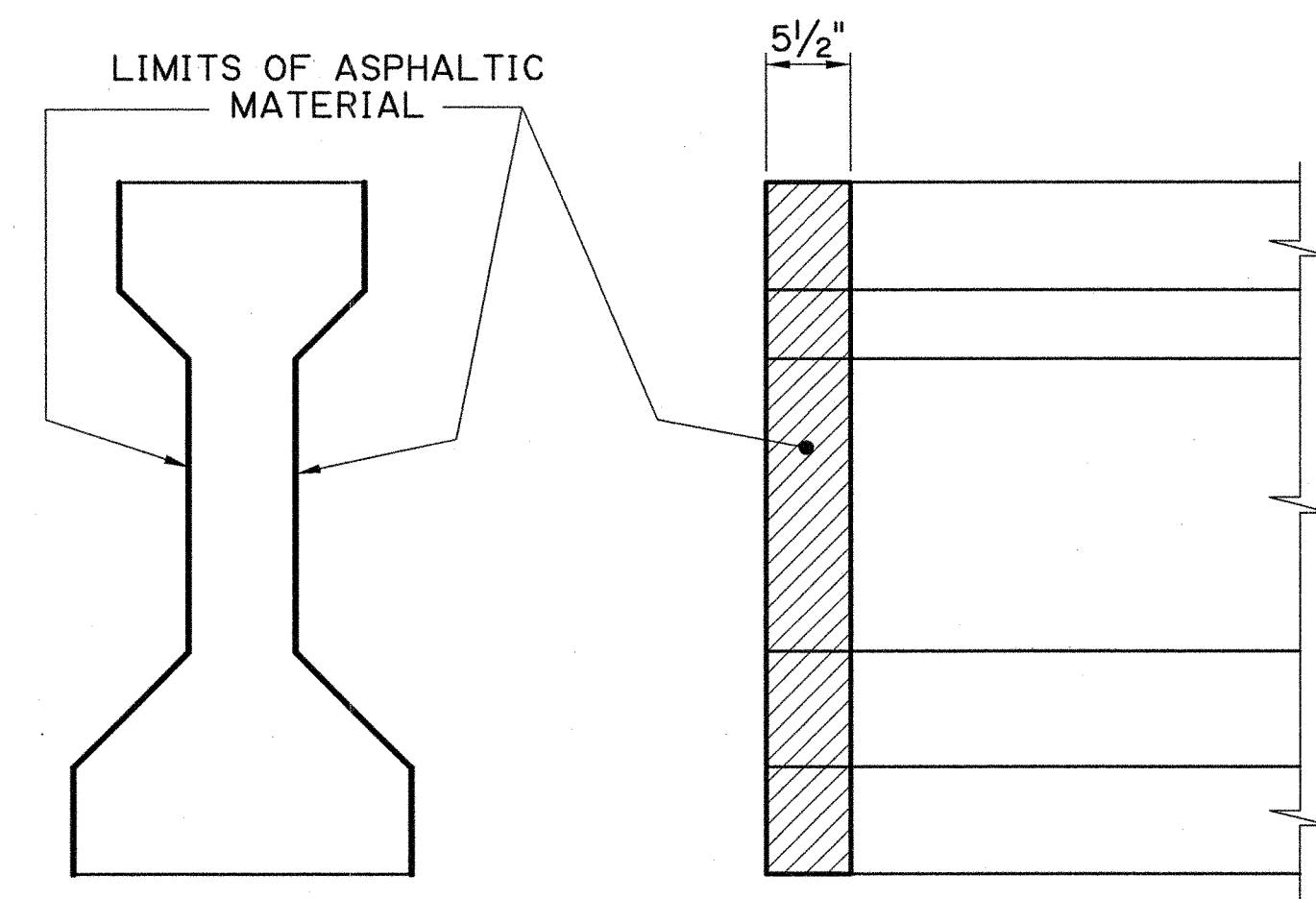
WHEN CONSTRUCTION JOINTS ARE USED, NOT LESS THAN SEVEN (7) DAYS SHALL HAVE ELAPSED BETWEEN ADJACENT POURS. THE VERTICAL SURFACES OF THE DECK CONSTRUCTION JOINTS BETWEEN ADJACENT POURS SHALL BE COATED, PRIOR TO EACH SUCCEEDING POUR, WITH A TYPE II EPOXY RESIN SYSTEM IN ACCORDANCE WITH SUBSECTION 805.06(B)(2) OF THE STANDARD SPECIFICATIONS. THE EPOXY SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

NOTE "A":

DOWELS IN THE CAP SHALL BE GALVANIZED NO. 10 DEFORMED REINFORCING STEEL. THE REQUIRED NUMBER SHALL BE PER DESIGN DRAWINGS. PRIOR TO POURING THE CONTINUITY DIAPHRAGM, THE DOWELS SHALL BE SHEATHED BY A 1/2 inch I.D. RIGID SLEEVE WITH A 1/2 inch THICK CARDBOARD CAP ABOVE THE TOP OF THE DOWELS TO ALLOW THE GIRDERS TO DEFLECT ON THEIR BEARING PADS UNDER FUTURE LOADS.

TO FACILITATE PLACEMENT OF GIRDERS, THE CONTRACTOR SHALL SET THE NO. 10 DOWELS BY ONE OF THE FOLLOWING METHODS:

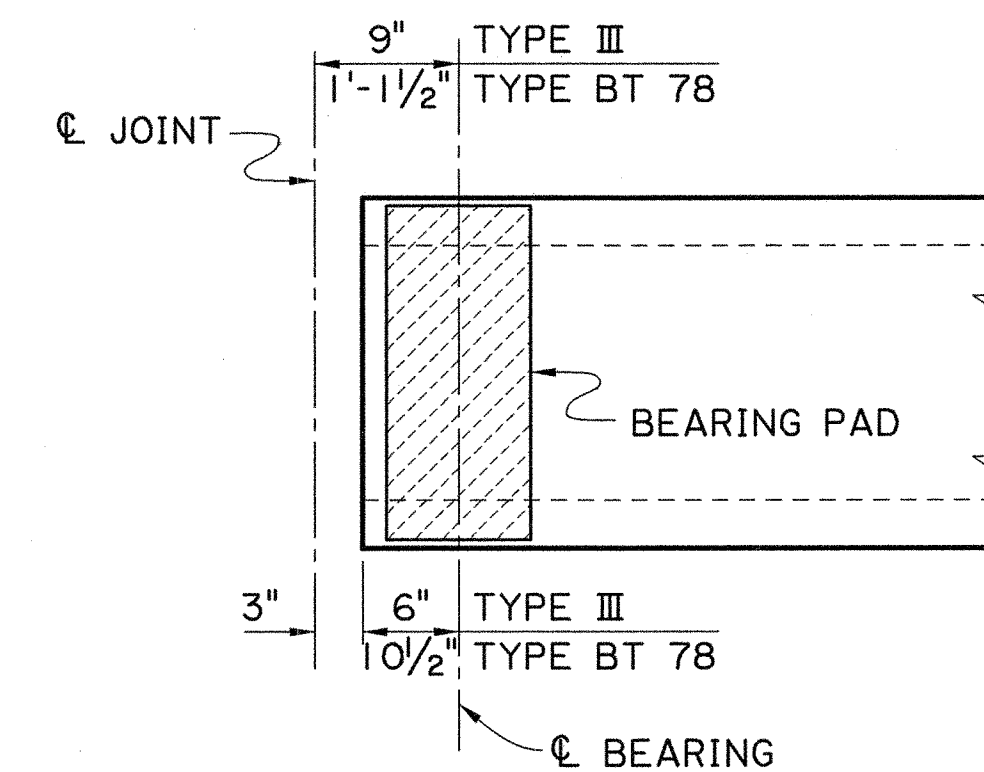
- 1) SETTING DOWELS IN APPROVED NON-SHRINK GROUT IN PREFORMED HOLES HAVING A MINIMUM DIAMETER OF 3".
2) SETTING DOWELS AT INITIAL CASTING OF CAP.



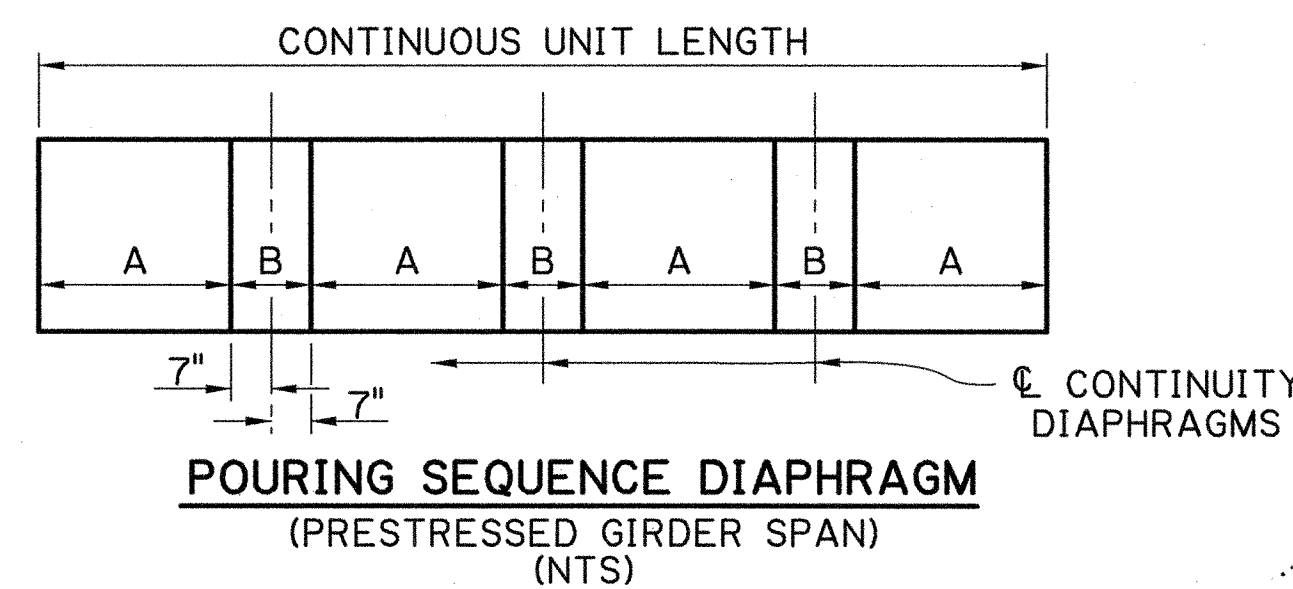
NOTES: 1) UPON REMOVAL OF BEAM FROM FORMS, ALL EXPOSED ENDS OF STRANDS SHALL BE CUT OFF FLUSH WITH THE CONCRETE FACE AND COATED WITH ONE (1) COAT OF SIKA SIKADUR 31HI-MOD GEL EPOXY PASTE ADHESIVE, OR APPROVED EQUAL. 2) APPLY ASPHALTIC MATERIAL WITH A BRUSH TO ENDS OF GIRDERS AS SHOWN AT CONTINUITY DIAPHRAGMS WHERE GIRDERS ARE EMBEDDED IN CONCRETE. PAINT INSIDE FACE OF EXTERIOR GIRDERS AND BOTH SIDES OF INTERIOR GIRDERS. ASPHALTIC MATERIAL TO MEET ASTM D 1187 AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATION. COST FOR THE ABOVE SHALL BE INCLUDED IN THE GIRDER PRICE, PER LINEAR FOOT.

COATING ENDS OF PRESTRESSING STRANDS AND BONDBREAKER AT CONTINUITY DIAPHRAGM

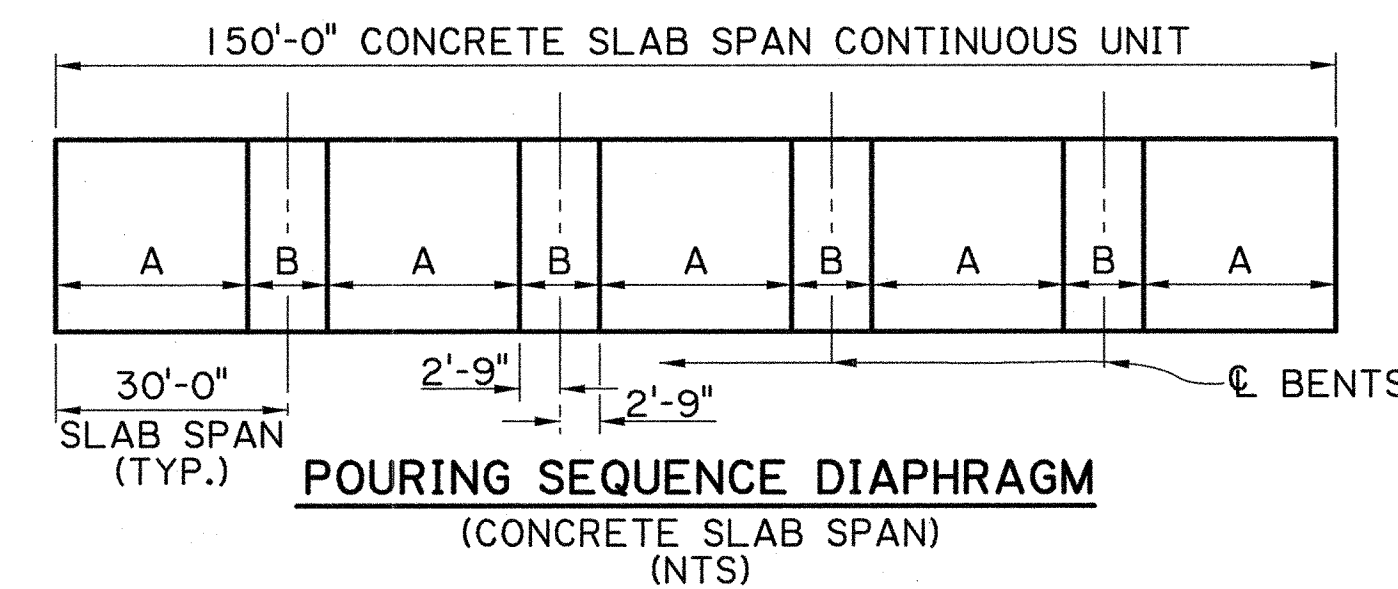
(TYPE III GIRDER SHOWN, BT-78 GIRDER SIMILAR)



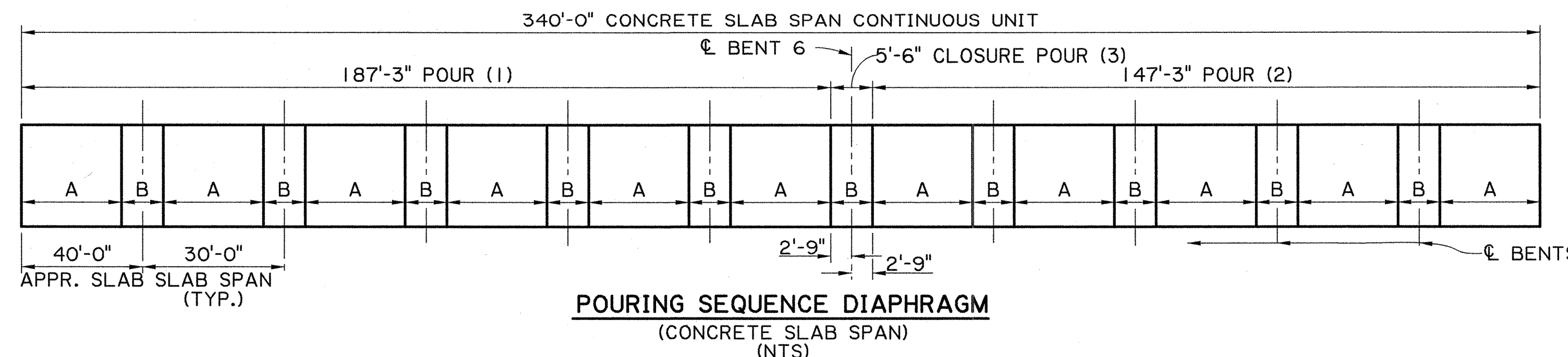
PART PLAN AT END OF GIRDER



POURING SEQUENCE DIAPHRAGM (PRESTRESSED GIRDER SPAN) (NTS)

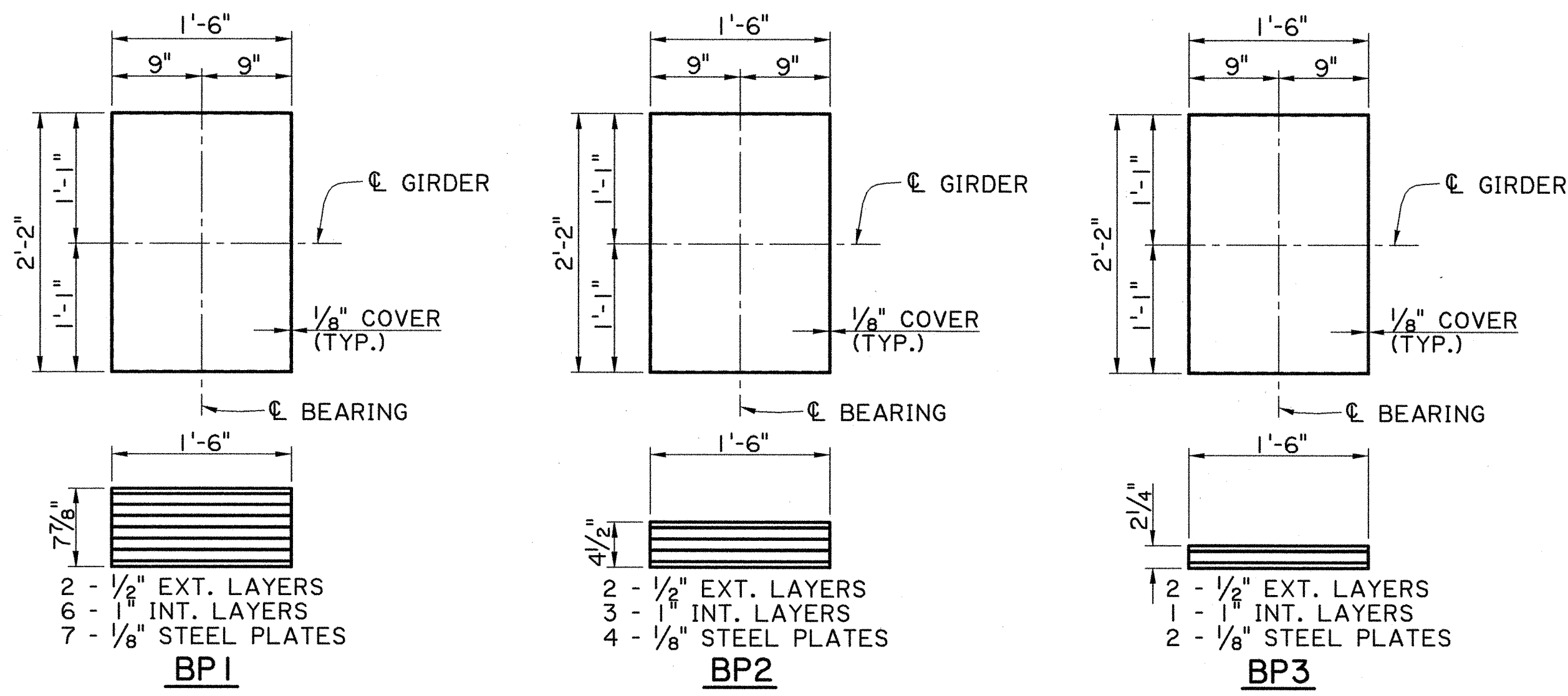


POURING SEQUENCE DIAPHRAGM (CONCRETE SLAB SPAN) (NTS)



POURING SEQUENCE DIAPHRAGM (CONCRETE SLAB SPAN) (NTS)

Sheet information including SHEET NUMBER 169, PROJECT 064-01-0040, DATE 03-01-2007, and project details for CAMINADA BAY BRIDGE ROUTE LA 1.



2 - 1/2" EXT. LAYERS
6 - 1/8" INT. LAYERS
7 - 1/8" STEEL PLATES

BP1

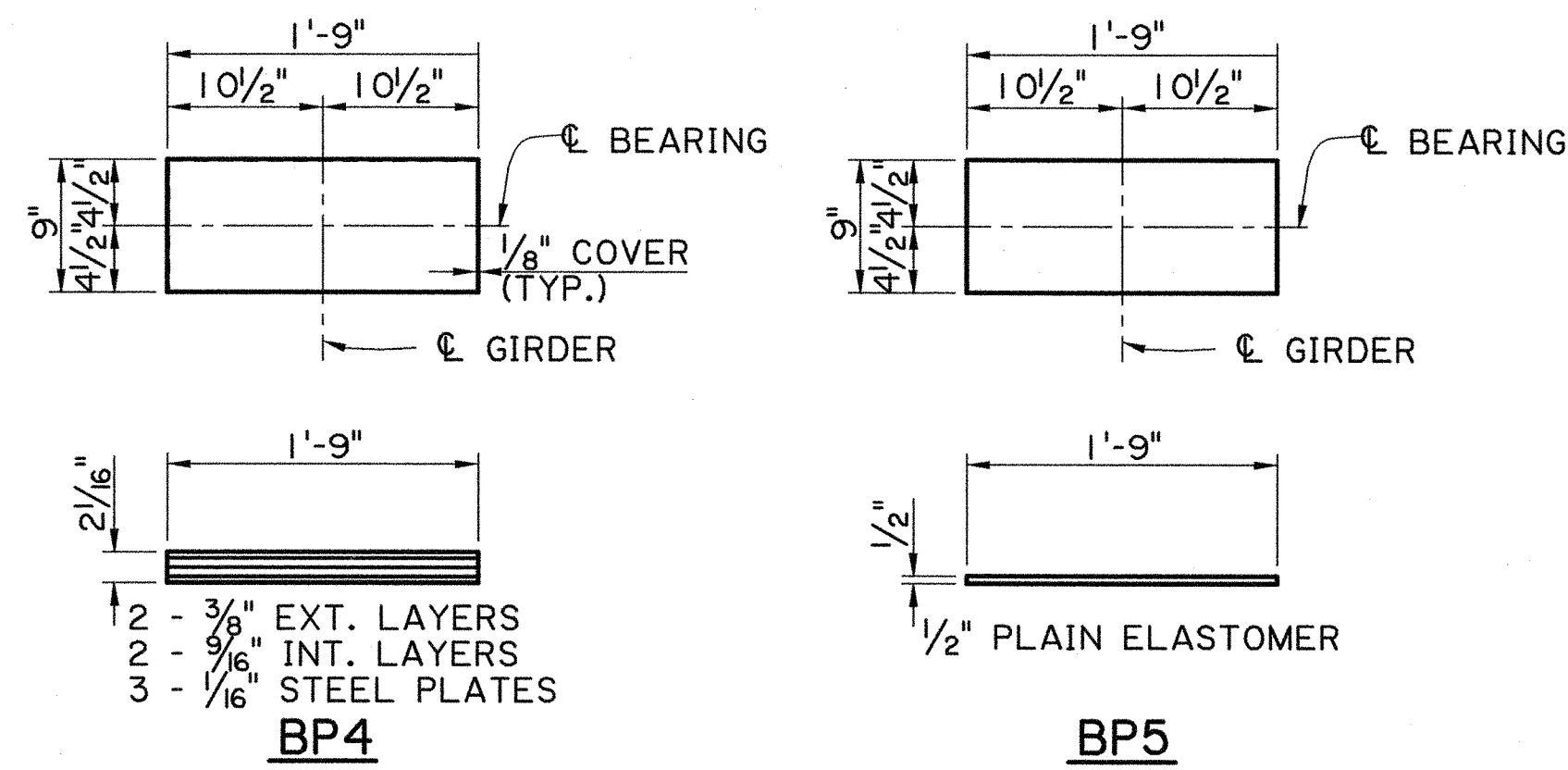
2 - 1/2" EXT. LAYERS
3 - 1/8" INT. LAYERS
4 - 1/8" STEEL PLATES

BP2

2 - 1/2" EXT. LAYERS
1 - 1/8" INT. LAYERS
2 - 1/8" STEEL PLATES

BP3

ELASTOMERIC BEARING PADS
(TYPE BT-78 GIRDERS)
(130 TOTAL)



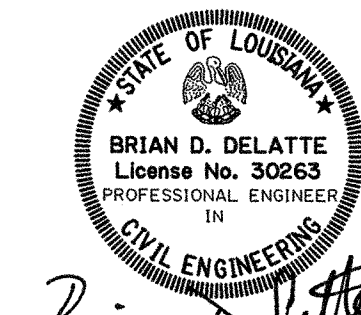
2 - 3/8" EXT. LAYERS
2 - 9/16" INT. LAYERS
3 - 1/16" STEEL PLATES

BP4

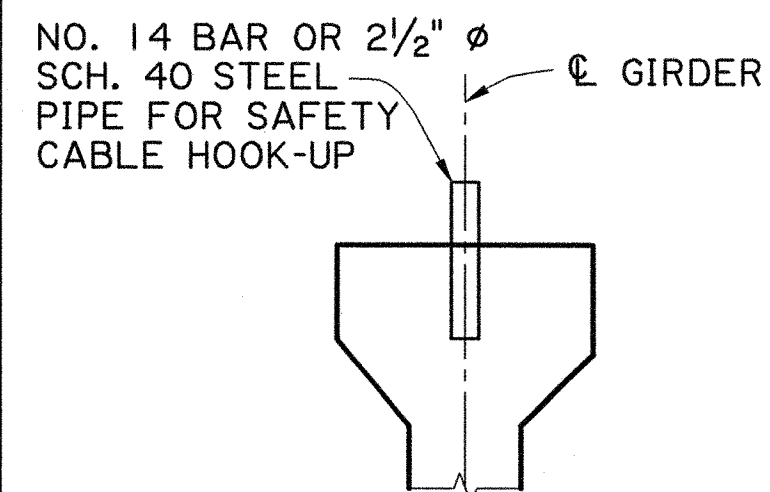
1/2" PLAIN ELASTOMER

BP5

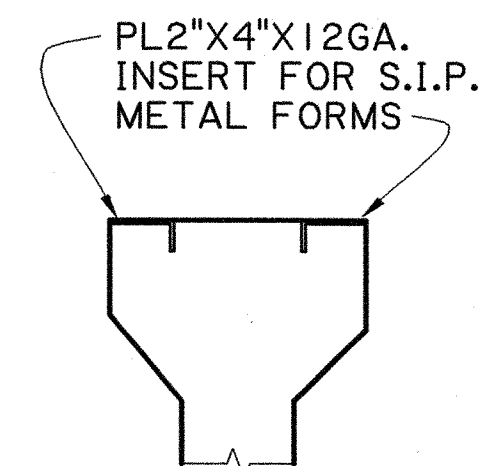
ELASTOMERIC BEARING PADS
(TYPE III GIRDERS)
(228 TOTAL)



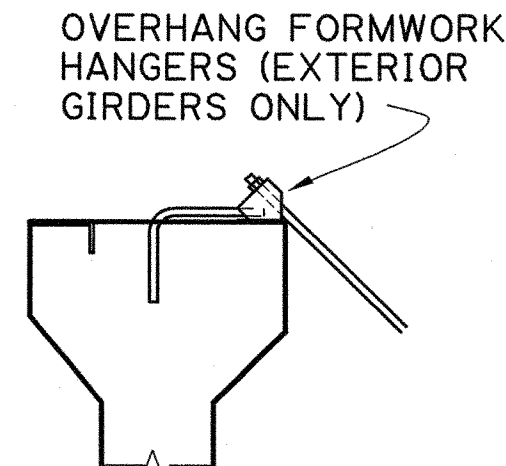
Brian Delatte
05/06/2009



ALL GIRDERS



INTERIOR GIRDER



EXTERIOR GIRDER

ELEVATION - TOP FLANGE
SHOWING MISC. ATTACHMENTS
(TYPE I SHOWN)
(TYPE BT-78 SIMILAR)

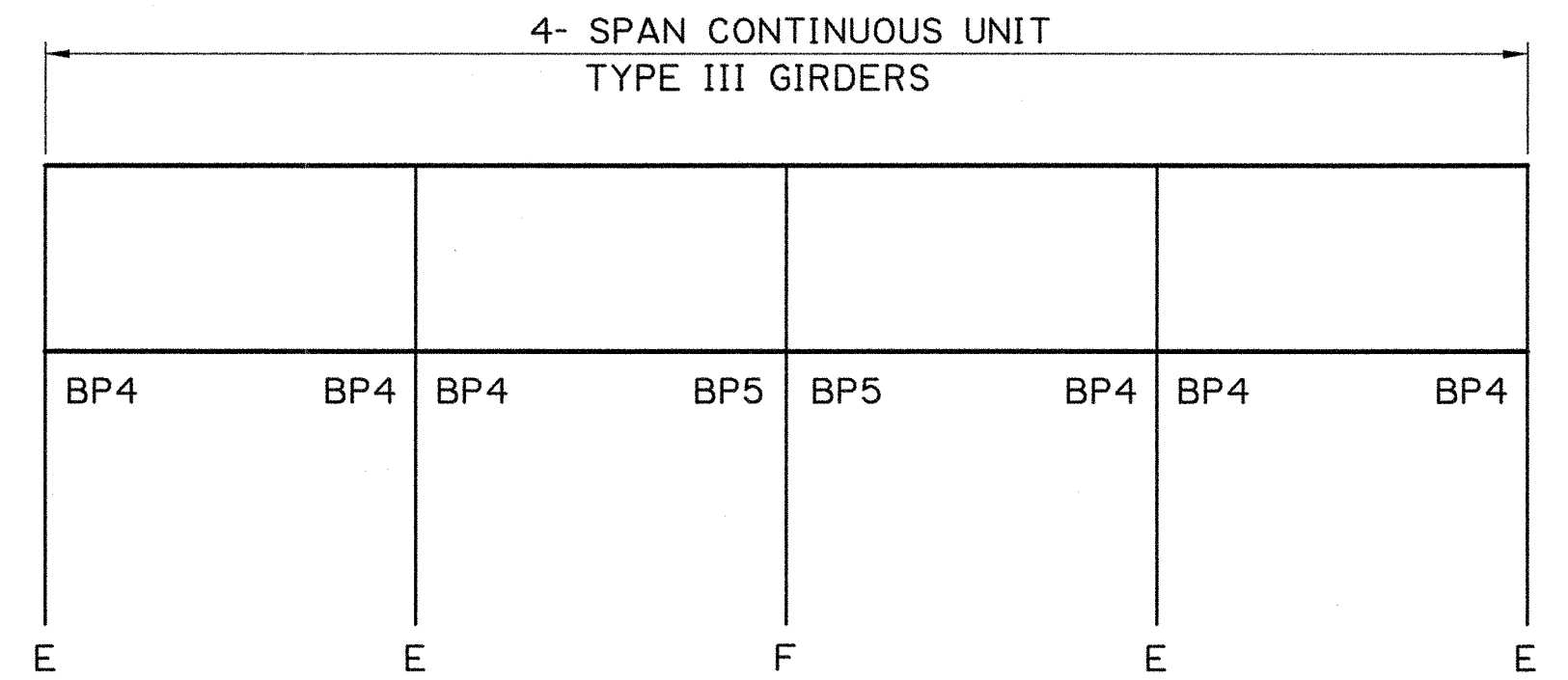
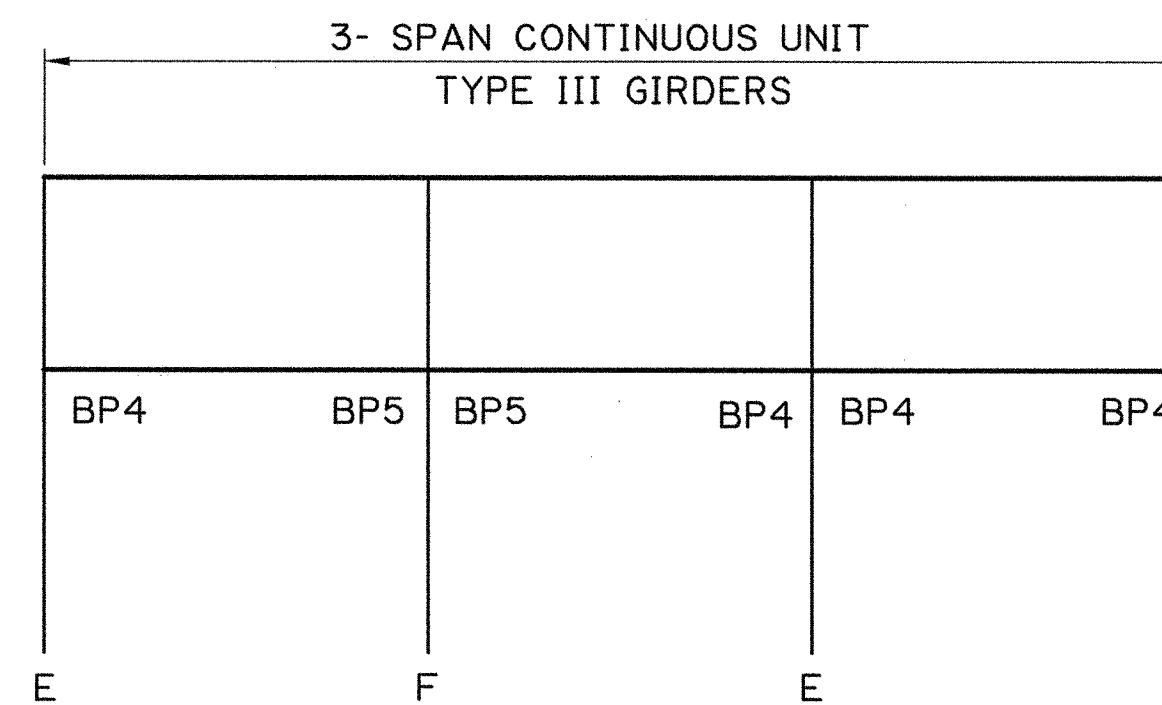
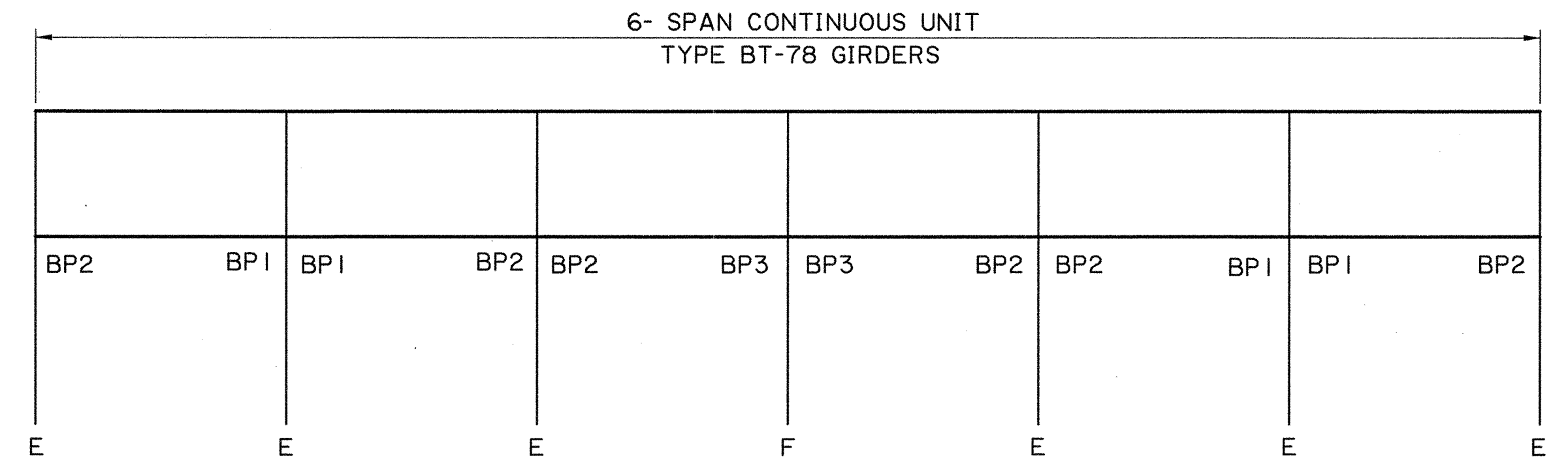
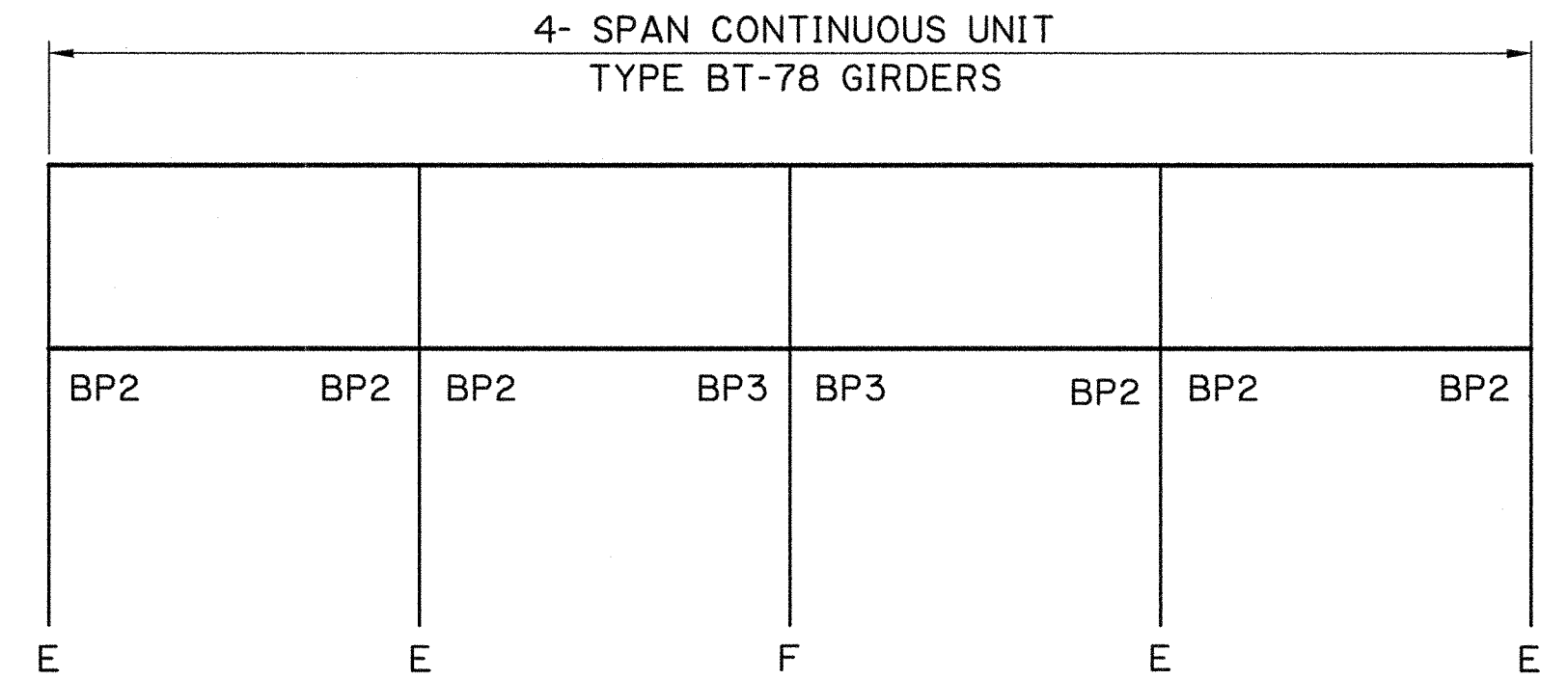
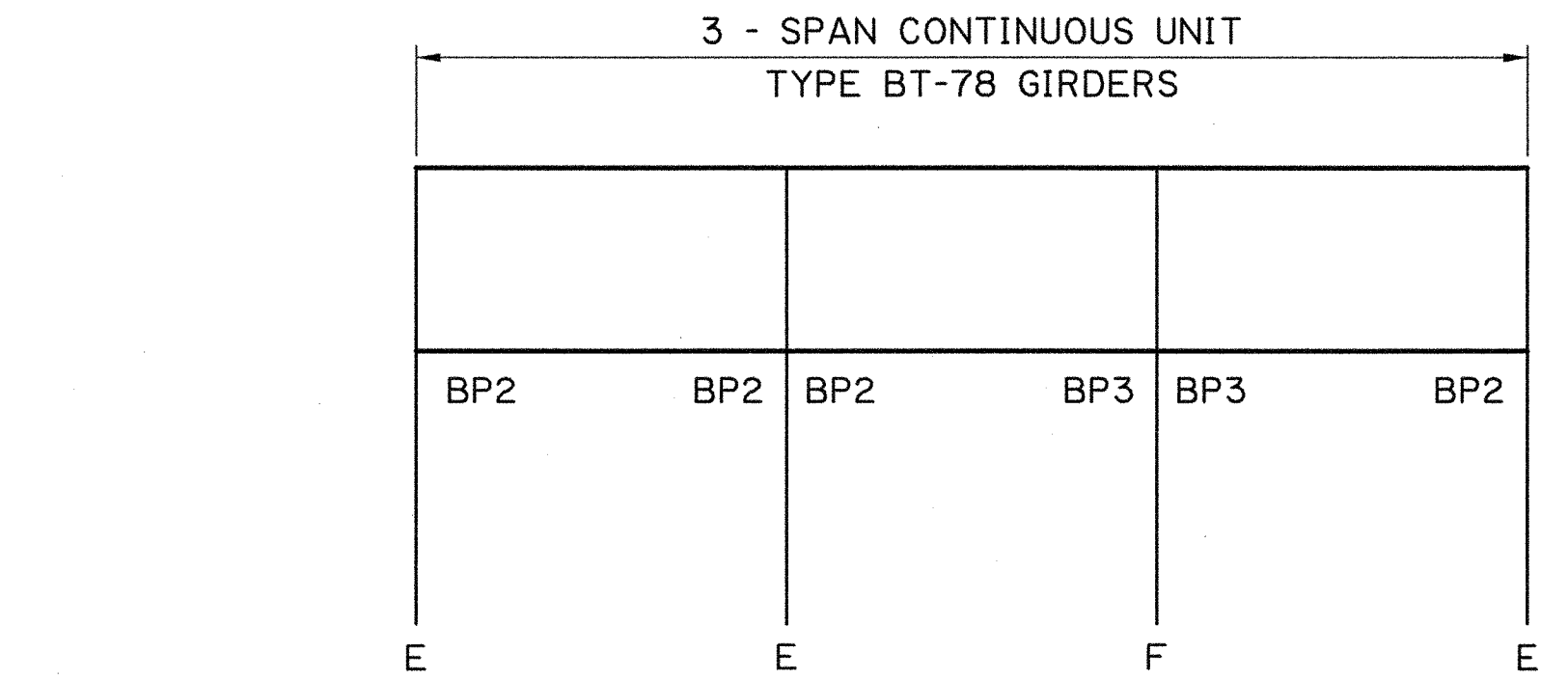
BEARING PAD NOTES:

- ELASTOMERIC BEARING PADS ARE DESIGNED IN ACCORDANCE WITH THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- ELASTOMERIC PADS ARE TO BE PLACED UNDER ALL GIRDERS AS SHOWN.
- FOR SLAB SPAN BEARING PAD DETAILS AND LOCATIONS, SEE SLAB SPAN DETAIL SHEETS.
- ELASTOMERIC BEARING PADS SHALL UTILIZE A GRADE O ELASTOMER (ZONE A) AND A 60 HARDNESS (SHORE A).
- REINFORCING STEEL PLATES SHALL CONFORM TO AASHTO-M270, GRADE 36 (MIN.).
- ELASTOMERIC BEARING PADS SHALL BE PAID FOR UNDER THE FOLLOWING PAY ITEMS.

NS-800-00244, BEARING (ELASTOMERIC) (TYPE III GIRDERS), PER EACH.
NS-800-00248, BEARING (ELASTOMERIC) (TYPE BT-78 GIRDERS), PER EACH.

ESTIMATED QUANTITIES ELASTOMERIC BEARING PADS (TYPE III)			
SPANS	BP4	BP5	TOTAL
11-14	36	12	48
15-17	24	12	36
18-20	24	12	36
34-36	24	12	36
37-39	24	12	36
40-42	24	12	36
TOTAL	156	72	228

ESTIMATED QUANTITIES ELASTOMERIC BEARING PADS (BT-78)				
SPANS	BP1	BP2	BP3	TOTAL
21-24		30	10	40
25-27		20	10	30
28-36	20	30	10	60
TOTAL	20	80	30	130



ELASTOMERIC BEARING PADS
LOCATION SCHEMATICS
E OR F = EXPANSION OR FIXED BENTS
BP1 - BP5 = BEARING PAD TYPES

SHEET NUMBER 170

DESIGNED BY: B. DELATTE
CHECKED BY: J. NAKHLEH

DATE: 04-29-2009

PROJECT: CAMINADA BAY BRIDGE ROUTE LA 1

BRIDGE DETAILS: SPAN AND GIRDER DETAILS

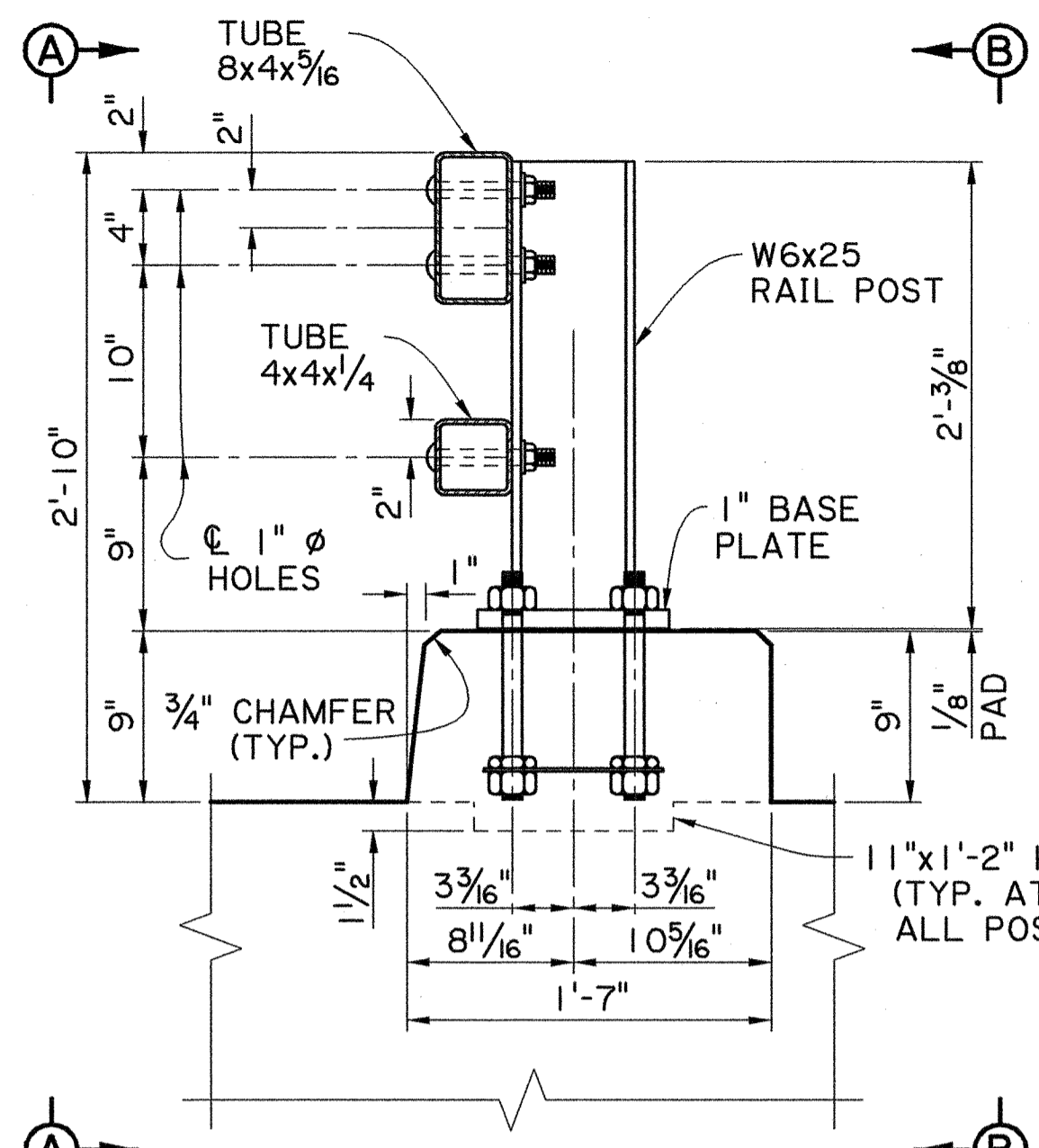
STATE PROJECT: 064-01-0040

DATE: 04-29-2009

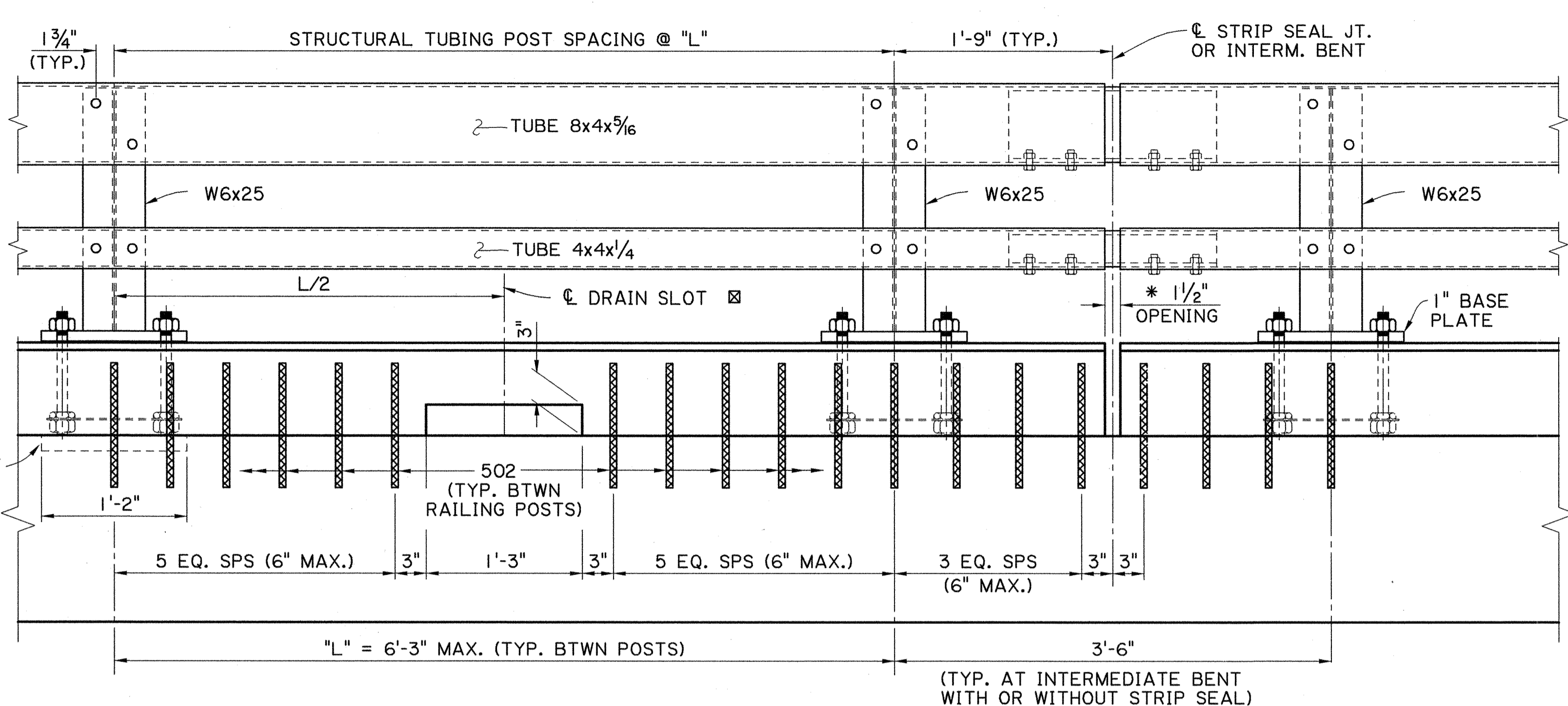
SHEET: 2 OF 2

BRIDGE AND STRUCTURAL DESIGN

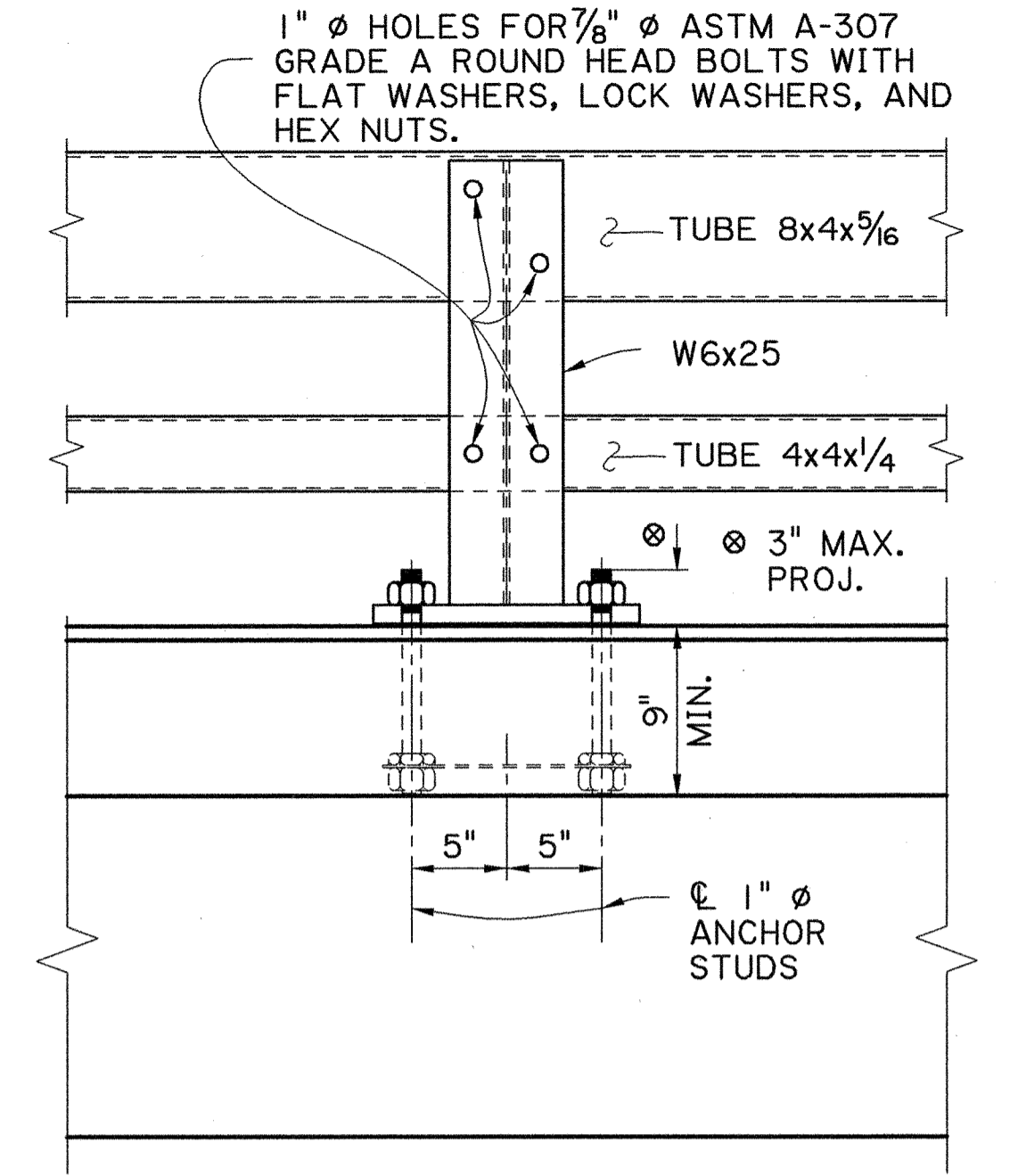
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 FINAL PLANS



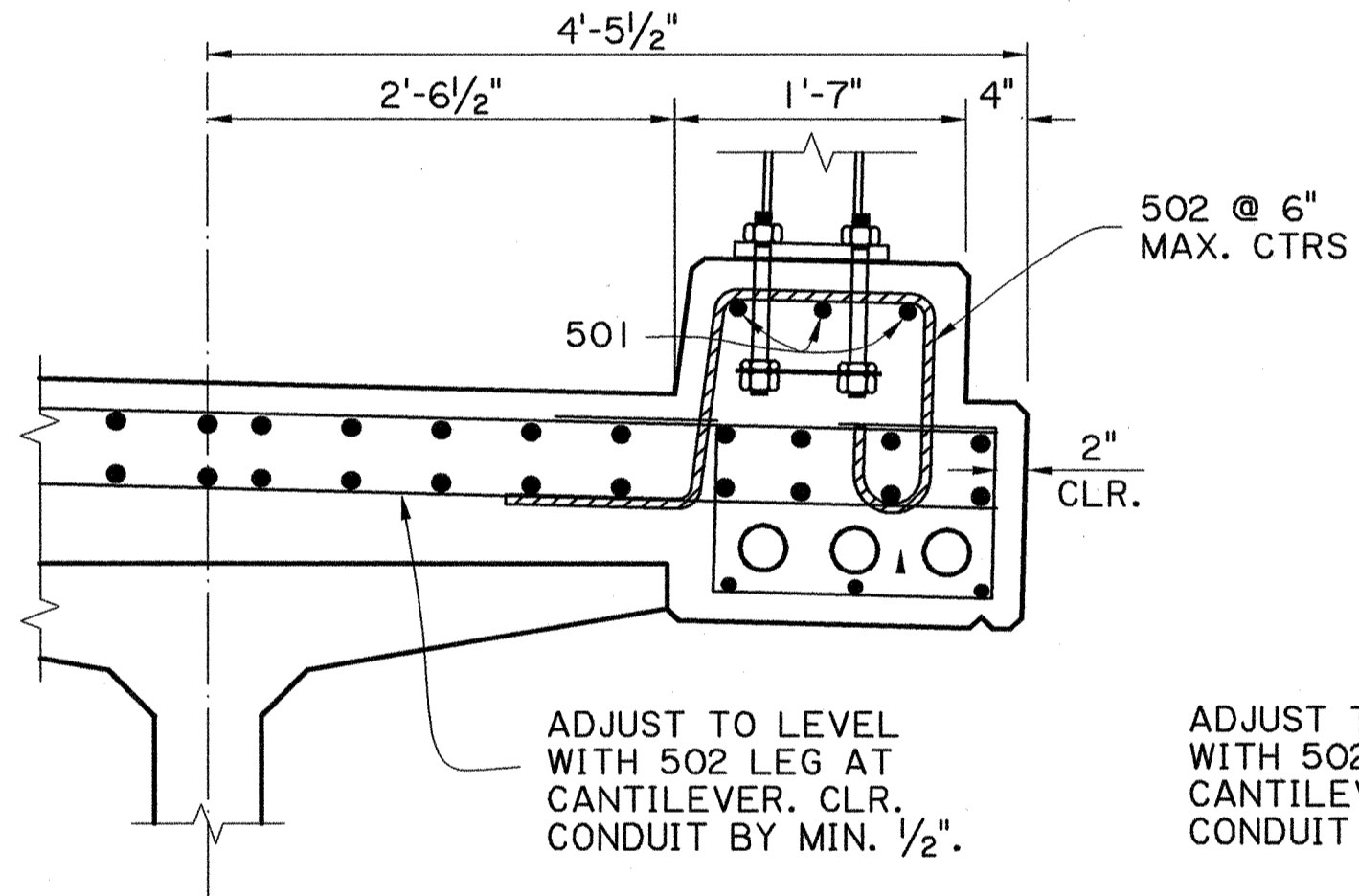
SECTION SHOWING BARRIER AT SPAN
(SCALE: 1" = 1'-0")



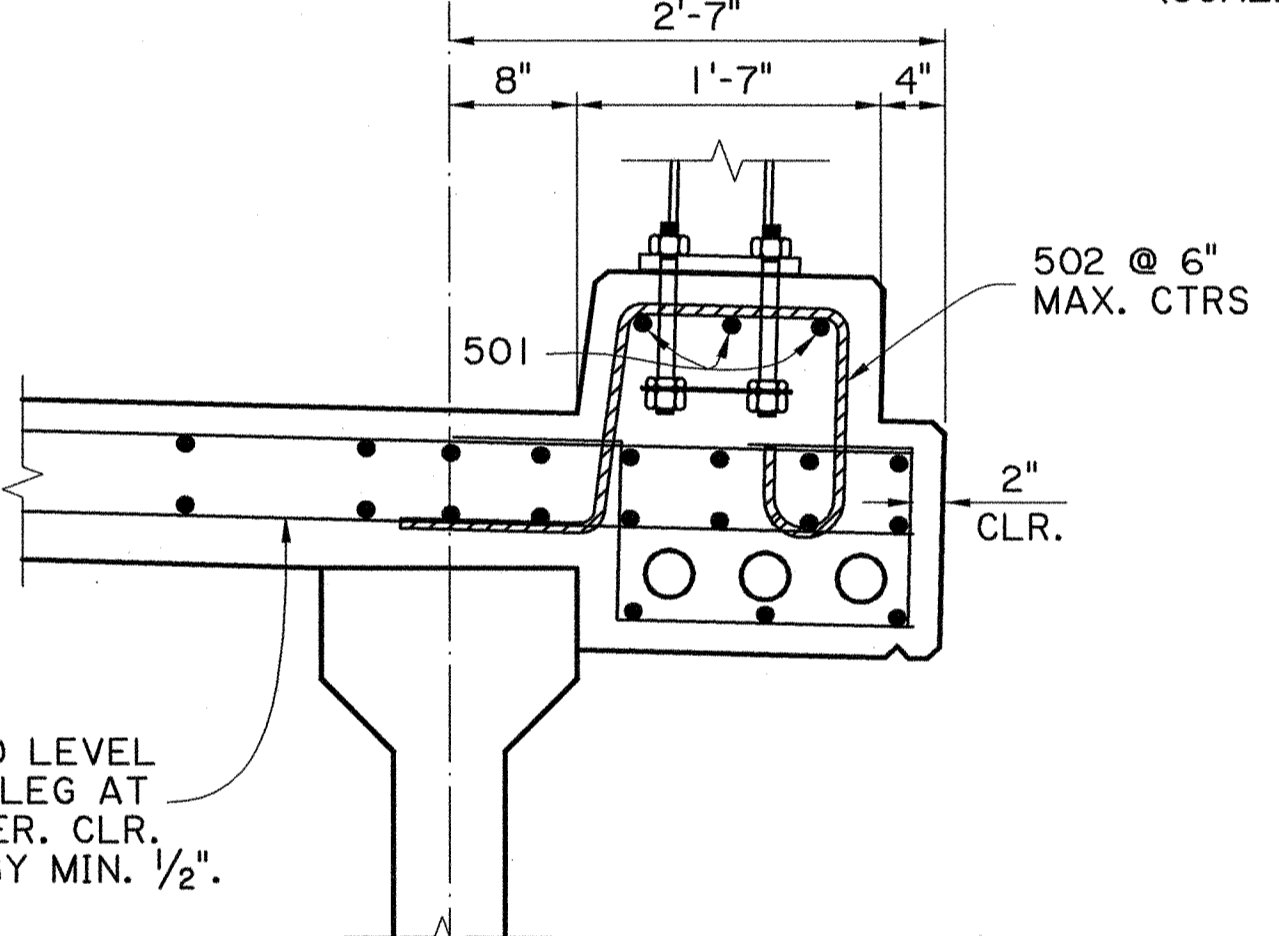
PART VIEW A-A AT 1/2" BARRIER OPENING
(SCALE: 1" = 1'-0")



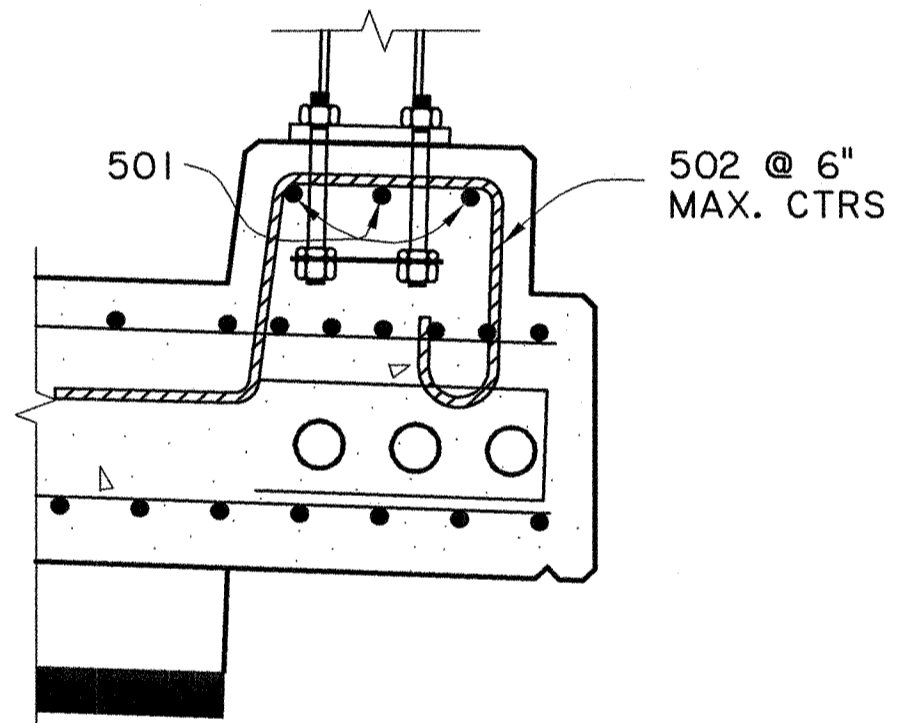
PART VIEW B-B
(SCALE: 1" = 1'-0")



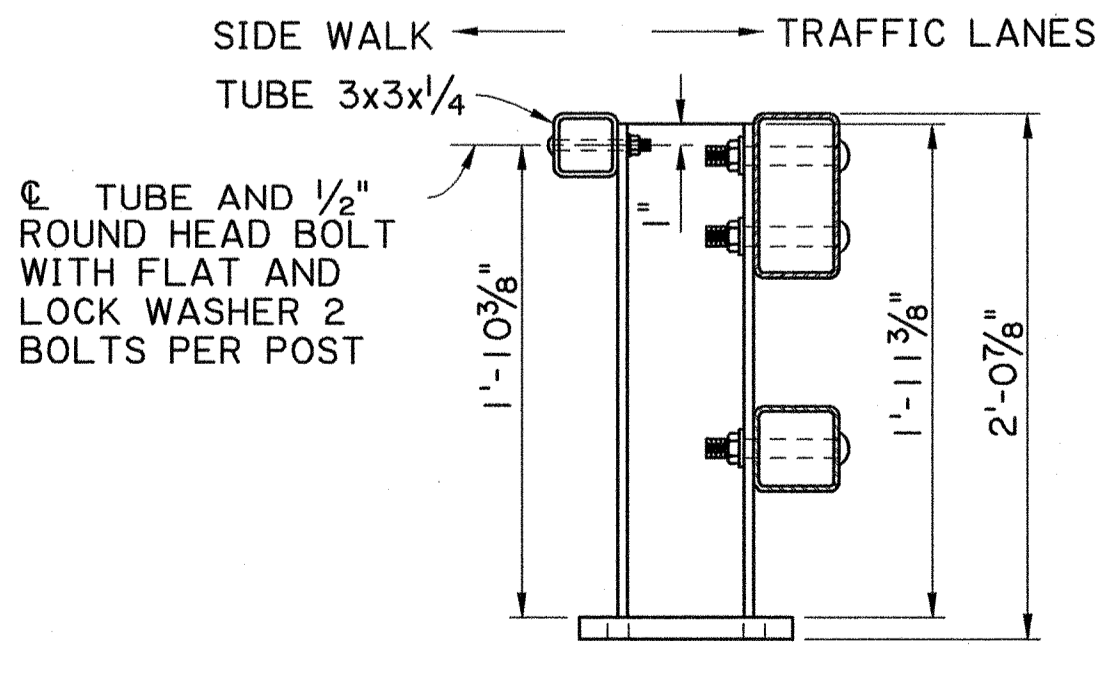
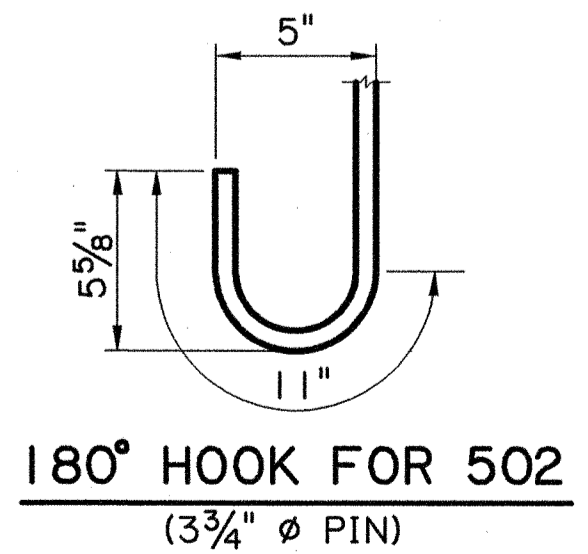
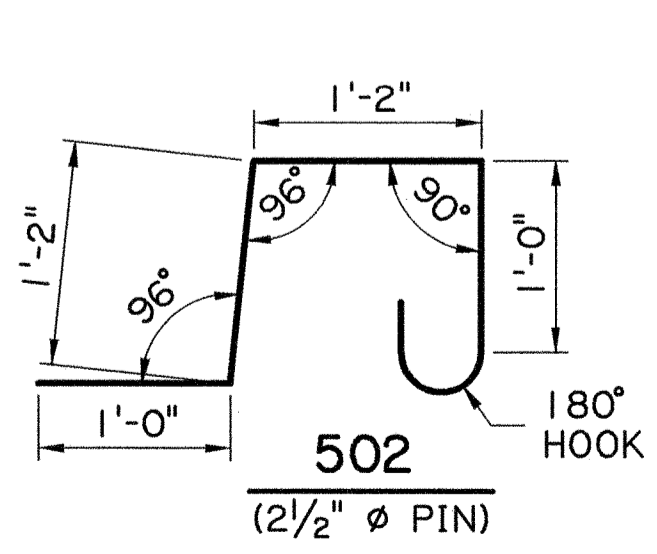
PART SECTION SHOWING BARRIER AT BT-78 GIRDER SPAN
(SCALE: 1" = 1'-0")



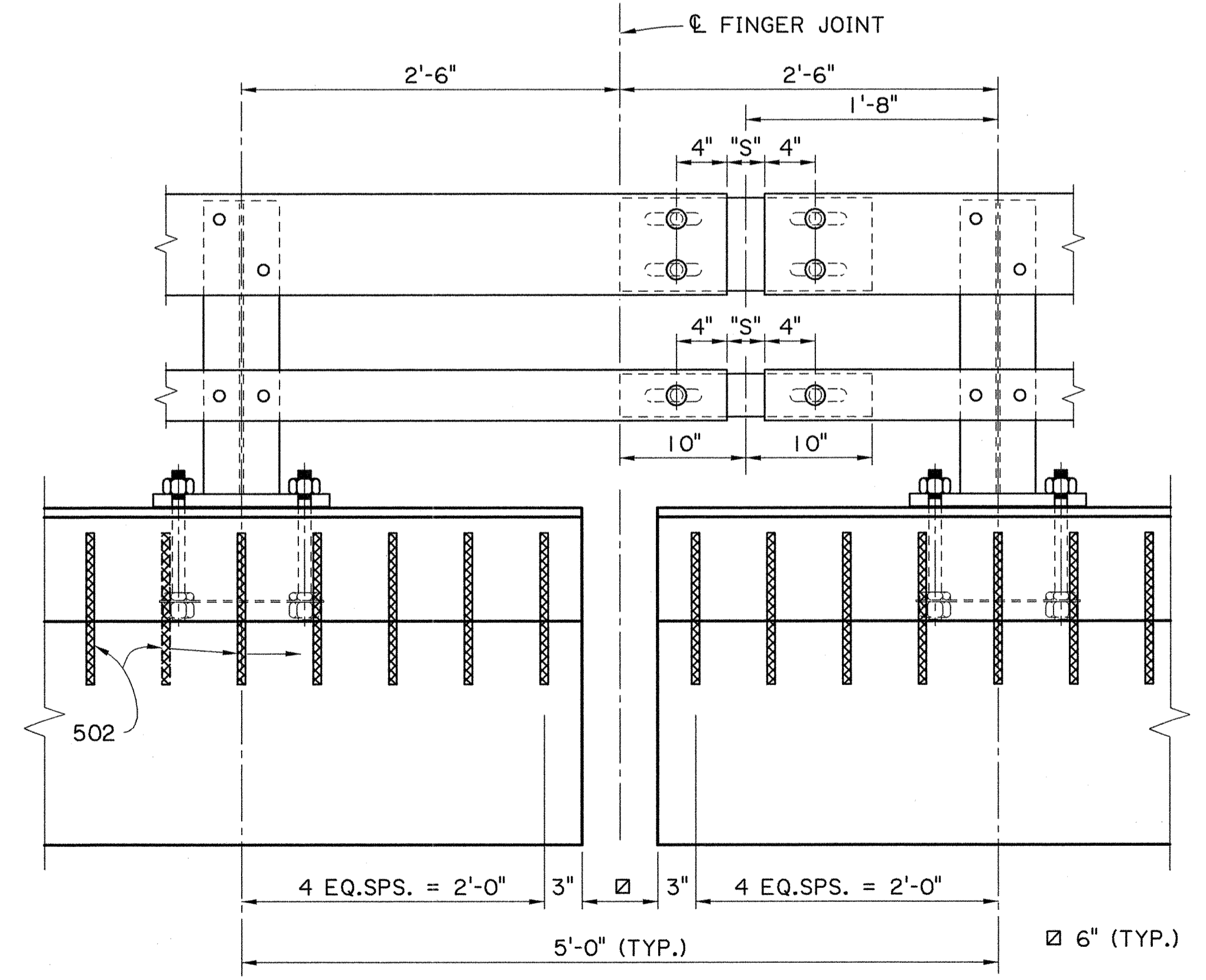
PART SECTION SHOWING BARRIER AT TYPE III GIRDER SPAN
(SCALE: 1" = 1'-0")



PART SECTION SHOWING BARRIER AT SLAB SPAN
(SCALE: 1" = 1'-0")



BARRIER NEXT TO SIDE WALK
(NTS)



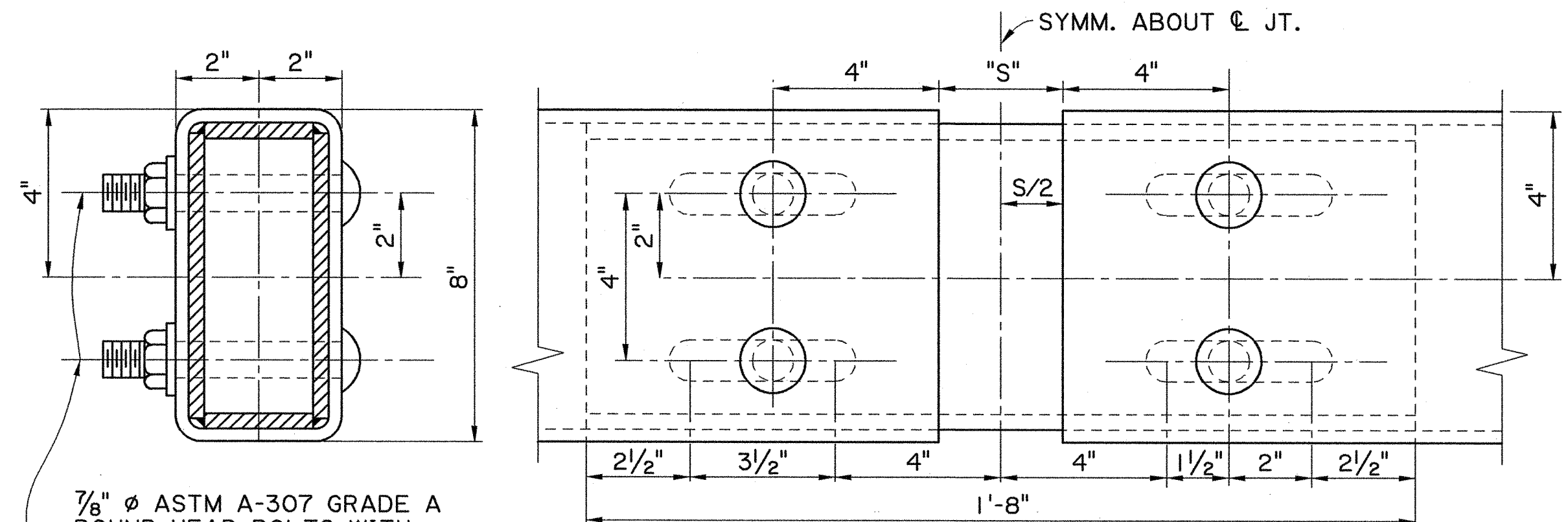
PART VIEW A-A AT FINGER JOINT
(NTS)

* 1 3/4" @ BENTS 11 & 15

☒ DRAIN SLOT TO BE OMITTED ON HIGH SIDE; SEE NOTES ON SHEET 2 OF 3. INCLUDE TWO ADDITIONAL 502 BARS @ EQ. SPS WHERE SLOT IS OMITTED.

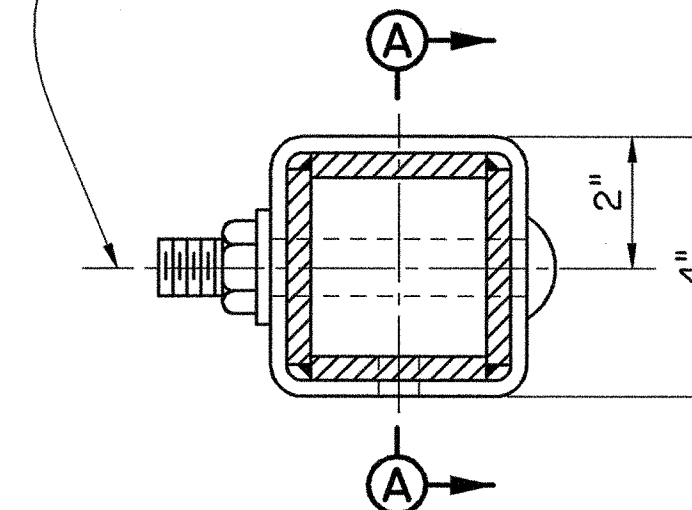
Brian D. Delatte
 05/06/2009

SHEET NUMBER	171
PROJECT	JEFFERSON
DESIGNED	K. YAP
CHECKED	B. DELATTE
DATE	03-09-2009
SHEET	1 OF 3
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	DATE
CAMINADA BAY BRIDGE ROUTE LA 1	
BRIDGE AND STRUCTURAL DESIGN	STEEL AND CONCRETE RAILING

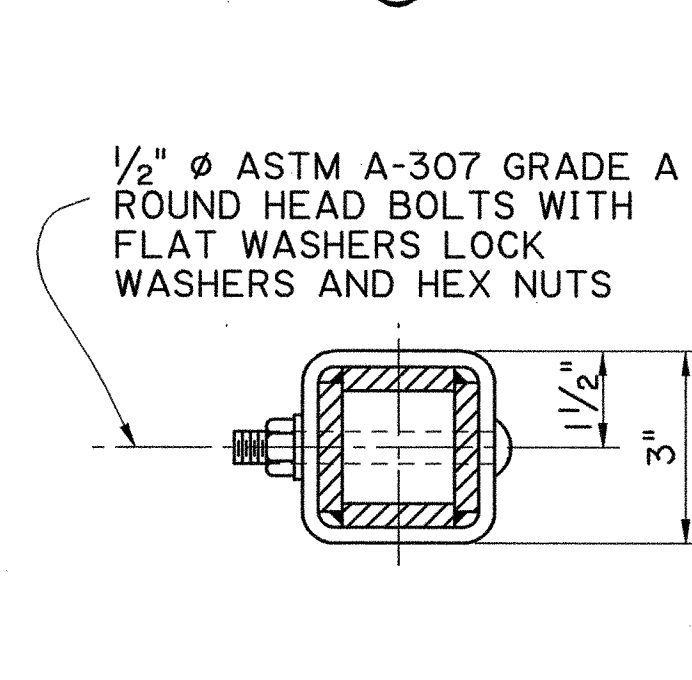


7/8" ϕ ASTM A-307 GRADE A ROUND HEAD BOLTS WITH FLAT WASHERS LOCK WASHERS AND HEX NUTS

TOP RAIL



TYPICAL SECTION AT SPLICE



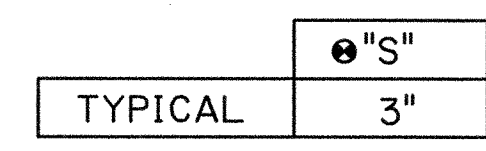
1/2" ϕ ASTM A-307 GRADE A ROUND HEAD BOLTS WITH FLAT WASHERS LOCK WASHERS AND HEX NUTS

BOTTOM RAIL

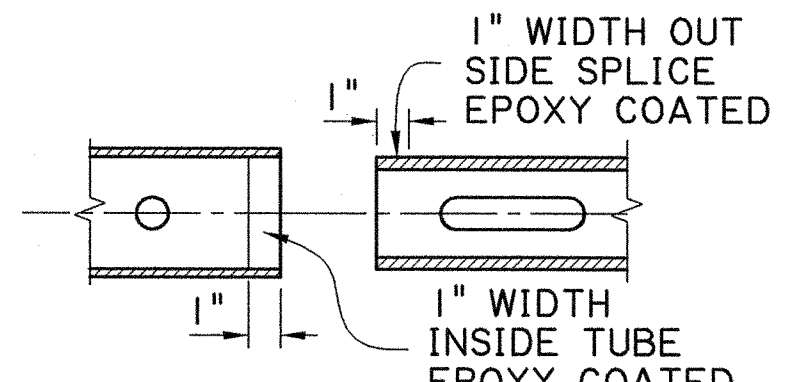
SIDE WALK TOP RAIL

FRONT VIEW - INTERNAL SPLICE

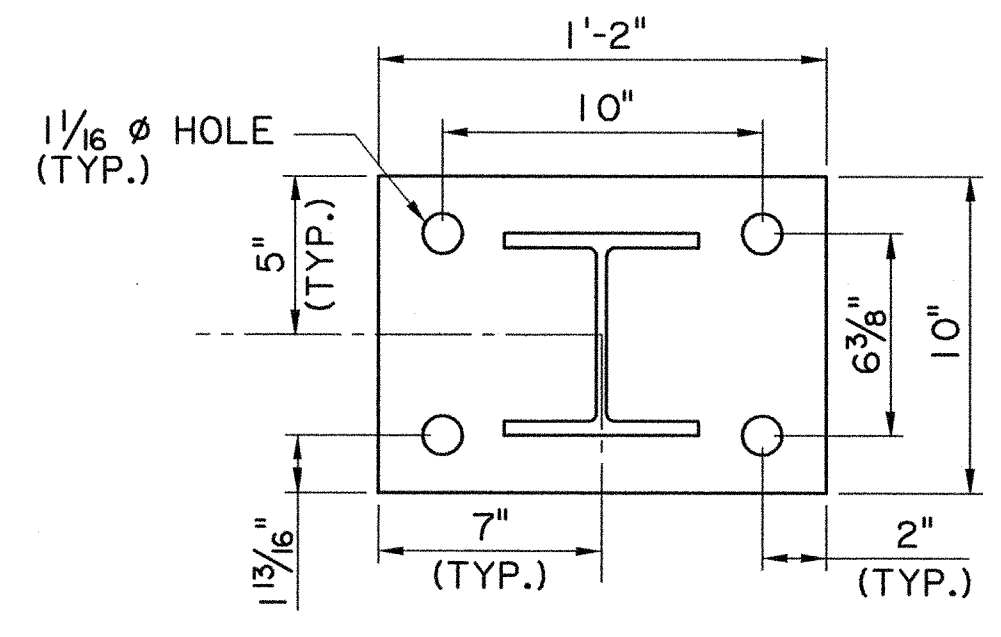
RAIL SPLICE AT FINGER JOINT



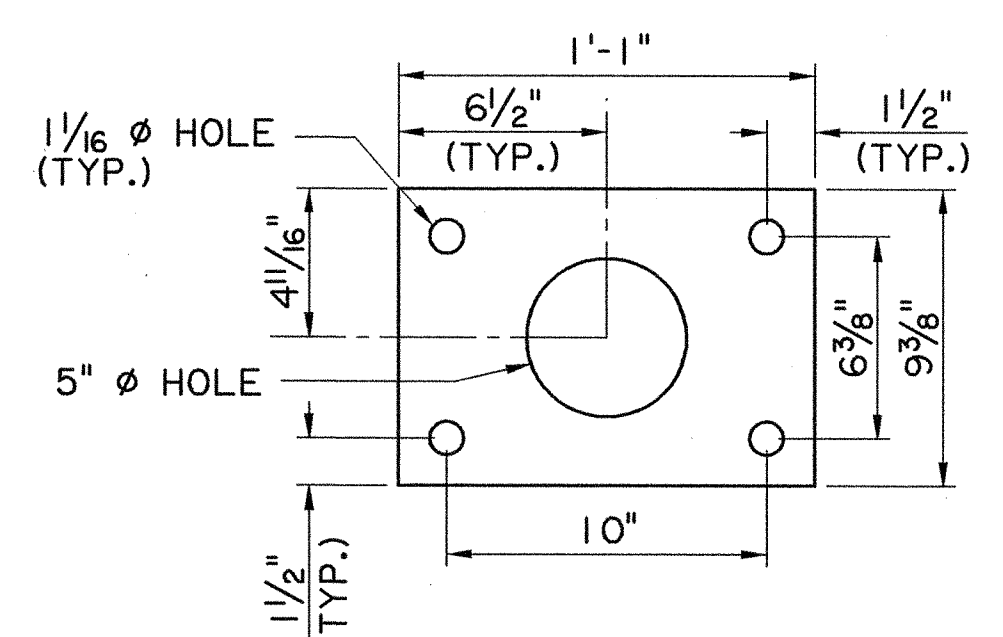
DIMENSIONS SHOWN ARE FOR INSTALLATION AT NORMAL TEMPERATURE (68°F). SEE FINGER JOINT DETAILS FOR DIMENSION CORRECTIONS FOR OTHER TEMPERATURES.



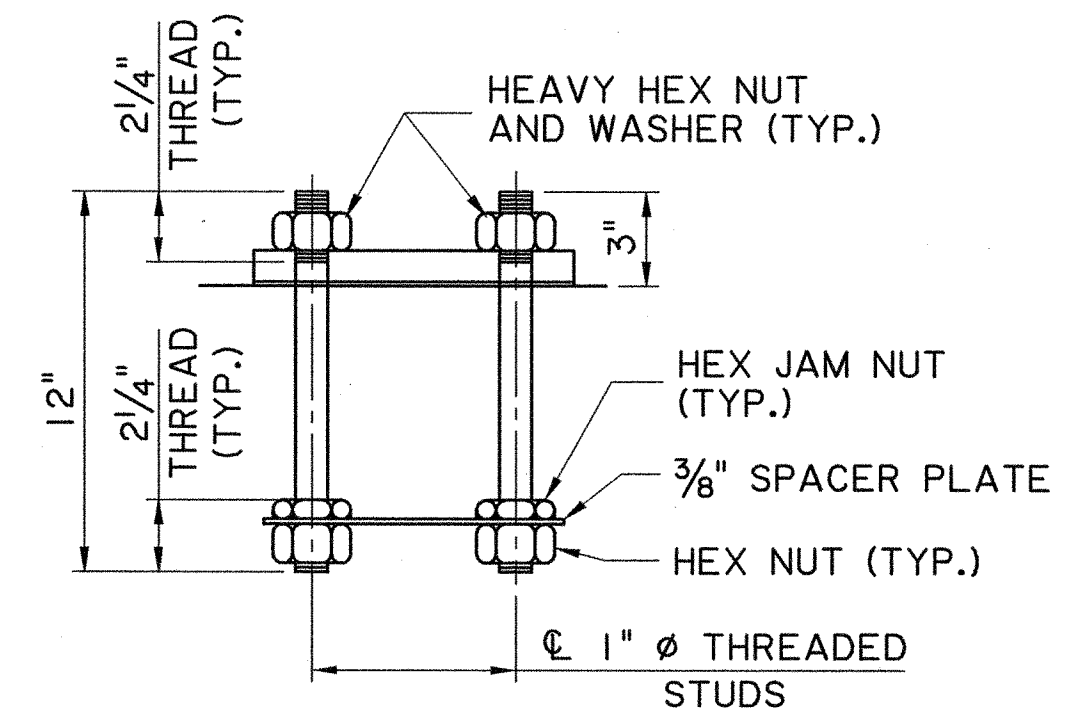
SECTION A-A (EPOXY COATED LIMITS - ALL SPLICES)



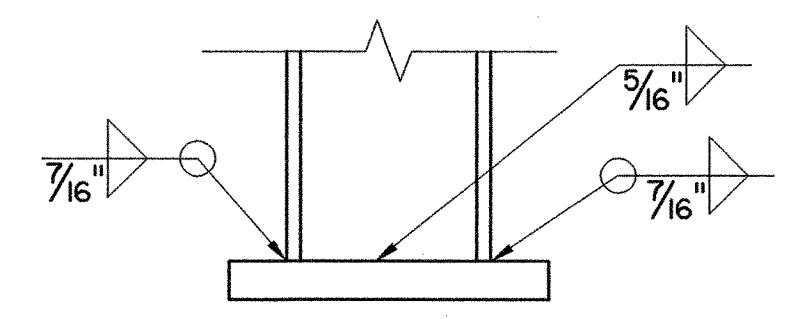
1" BASE PLATE DETAIL GALV. (NTS)



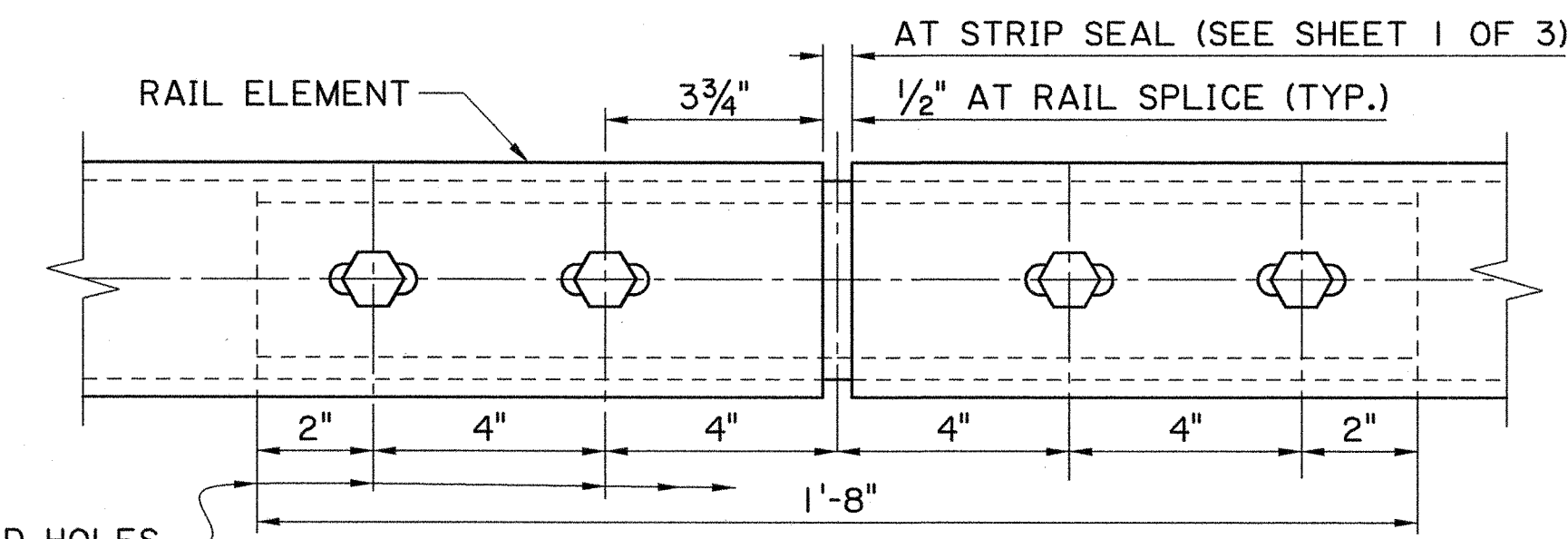
3/8" SPACER PLATE DETAIL GALV. (NTS)



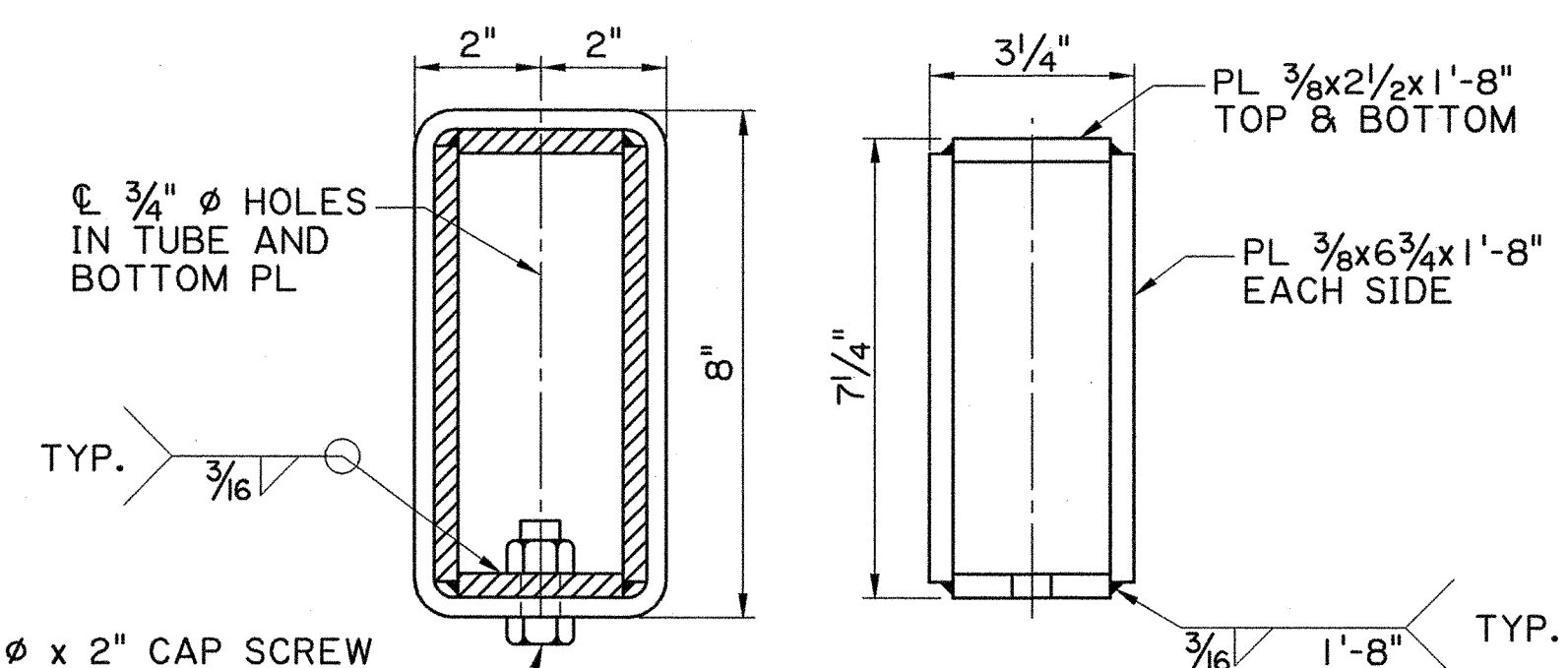
RAIL POST ANCHORAGE GALV. (NTS)



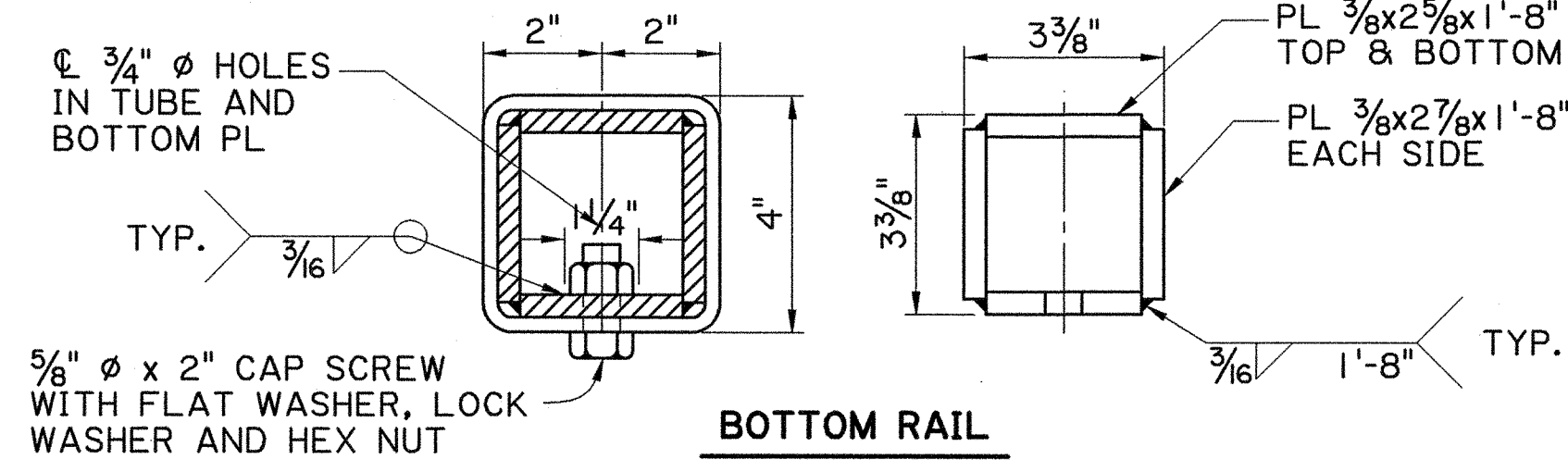
BASE WELD DETAIL (NTS)



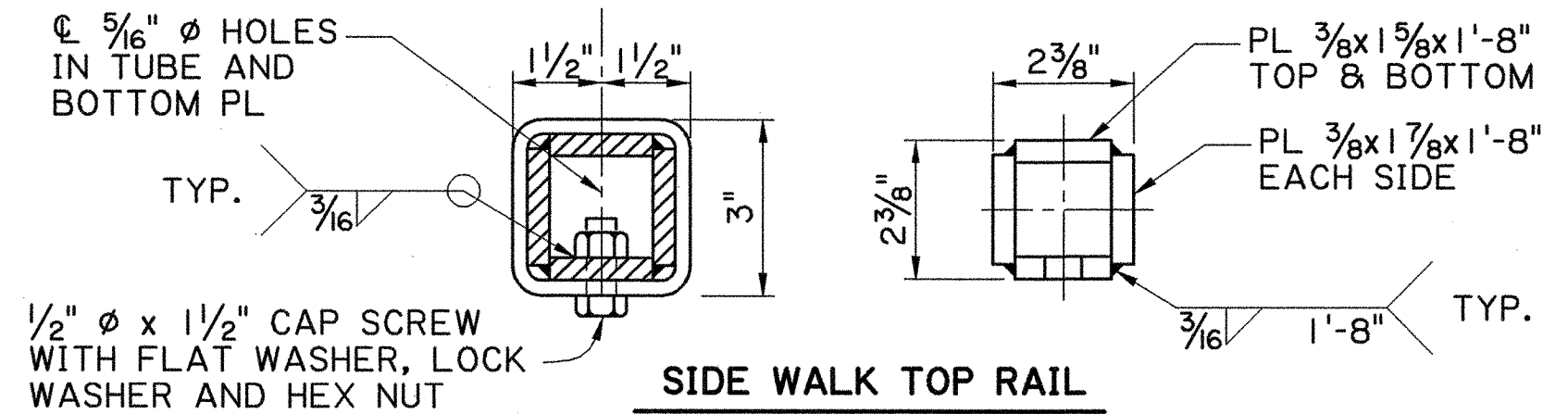
BOTTOM VIEW INTERNAL SPLICE



TOP RAIL



BOTTOM RAIL



SIDE WALK TOP RAIL

TYPICAL SECTION AT SPLICE

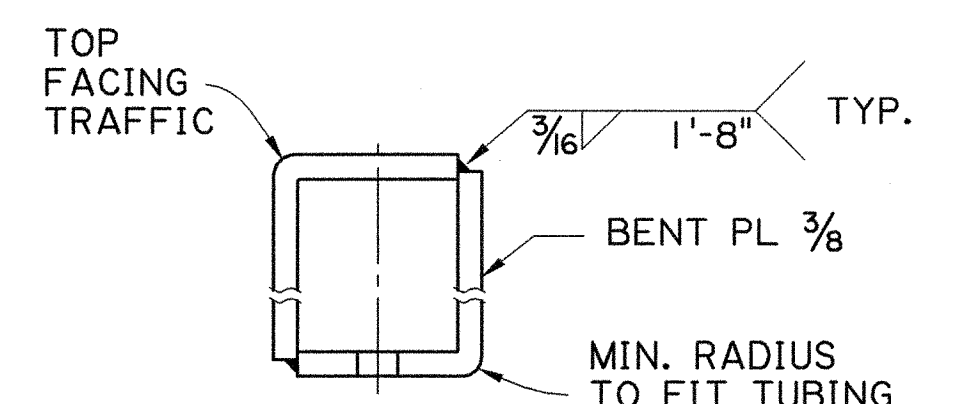
FINISHED DIMENSIONS OF INNER SLEEVE

TYPICAL RAIL SPLICE

INNER SLEEVE DETAILS APPLY TO TYPICAL RAIL SPLICE, INCLUDE RAIL SPLICE AT FINGER JOINT, EXCEPT AS SHOWN.

NOTES:

1. CONCRETE SHALL BE CLASS AA(M) FOR INTERGRAL APPROACH SLAB, SPANS 1-10, AND SPANS 43-57. CONCRETE TO BE CLASS AA (HPC) FOR SPANS 11-42, SLEEPER SLAB, AND END APPROACH SLAB.
2. REINFORCING STEEL SHALL BE STAINLESS STEEL FOR INTERGRAL APPROACH SLAB, SPANS 1-10, AND SPANS 43-57. REINFORCING STEEL TO BE GRADE 60 BLACK STEEL FOR SPANS 11-42, SLEEPER SLAB, AND END APPROACH SLAB.
3. ALL STRUCTURAL TUBING SHALL BE ASTM A-500, GRADE B MATERIAL. ALL RAIL POST, BASE PLATES, AND RAIL SPLICES SHALL BE A709, GRADE 50. ANCHOR STUDS TO BE ASTM F1554 GRADE 105, A449, OR A193 B7.
4. 1/8" PAD SHALL ACCORDANCE WITH SUBSECTION 1018.06.
5. STRUCTURAL TUBING, POSTS, AND PLATES TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION. HARDWARE SHALL BE GALVANIZED. REPAIRS TO GALVANIZED SURFACES SHALL BE MADE IN ACCORDANCE WITH SUBSECTION 811.12.
6. ALL RAILING BOLTS SHALL BE SNUG TIGHT.
7. TUBES SHALL BE AT MINIMUM 28'-4" SEGMENT CONTINUOUS OVER MINIMUM 5 POSTS. RAIL SPLICES ARE TYPICALLY 1'-8" FROM THE NEAREST POST. RAIL OPEN JOINT IS NOT ALLOWED. NO WELDED BUTT SPLICES WILL BE ALLOWED IN THE TUBE SECTIONS EXCEPT AS SHOWN OTHERWISE.
8. POSTS SHALL BE PERPENDICULAR TO THE LONGITUDINAL ROADWAY GRADE AND ROADWAY CROSS SLOPE.
9. SEAL WELD 1/4" CAP AT THE ENDS OF RAILING EXCEPT AS SHOWN OTHERWISE.
10. SMOOTH ALL EXPOSED EDGES AND SHALL BE FREE OF BURRS.
11. DRAIN SLOTS ARE ALONG THE RIGHT GUTTER LINE FOR SPANS 1-8, AND ALONG THE LEFT GUTTERLINE FOR SPANS 51-57. DRAIN SLOTS ARE ALONG THE RIGHT AND LEFT GUTTER LINES FOR SPANS 9-50. NO DRAIN SLOTS ON SPAN 26.
12. STEEL AND CONCRETE RAILING, INCLUDING END CONCRETE BARRIER TO BE PAID FOR UNDER ITEM 810-04-00100, STEEL AND CONCRETE RAILING, PER LINEAR FOOT.



ALTERNATE INNER SLEEVE



SHEET NUMBER 172

DESIGNED BY K. YAP
CHECKED BY B. DELATTE
DATE 03-09-2009

JEFFERSON PARISH PROJECT
FEDERAL PROJECT
STATE PROJECT
064-01-0040 PROJECT
2 OF 3 SHEET

BRIDGE AND STRUCTURAL DESIGN

CAMINADA BAY BRIDGE ROUTE LA 1

STEEL AND CONCRETE RAILING

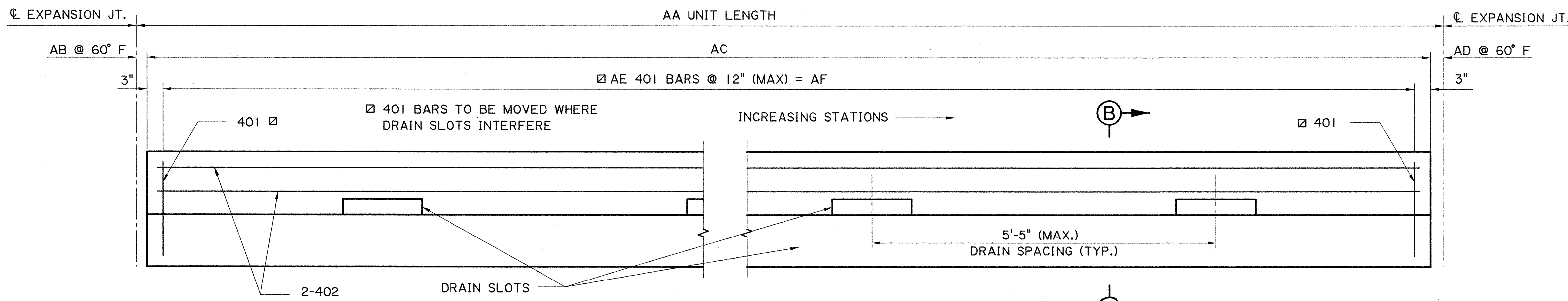
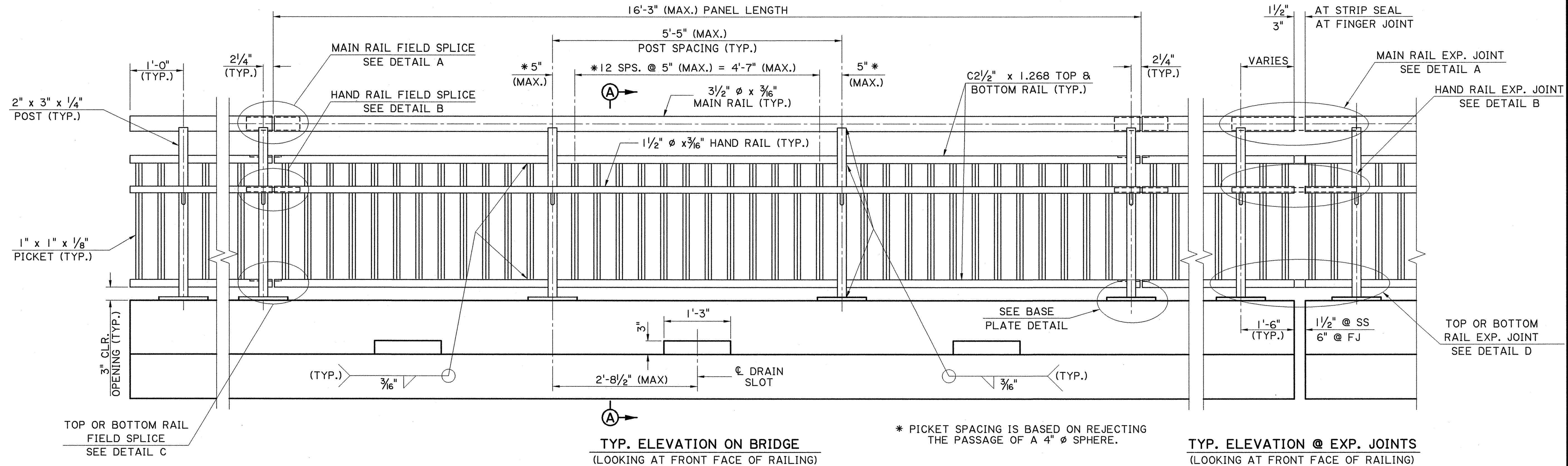
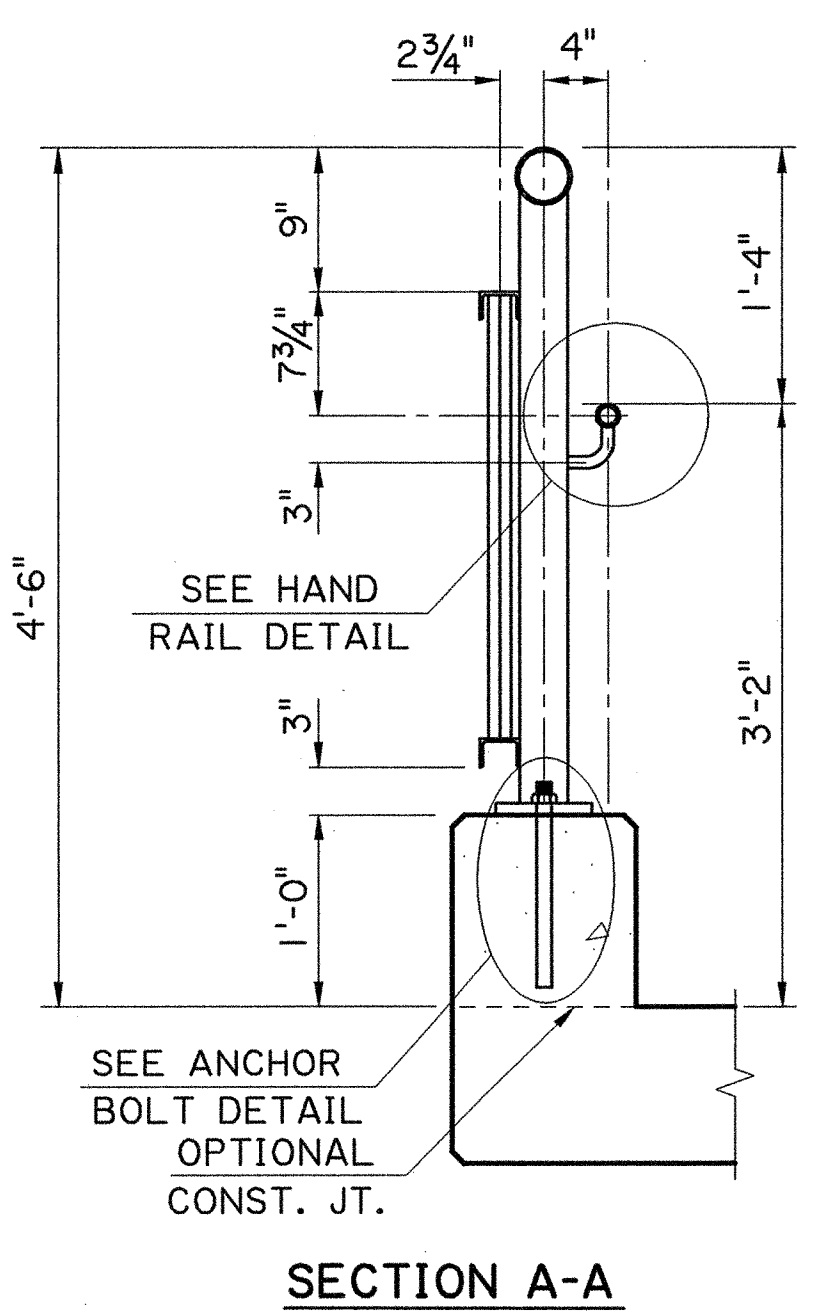


TABLE OF DIMENSIONS

UNIT	AA	AB	AC	AD	AE	AF	* NO. OF 1'-9" (MIN.) LAP SPLICES.	LENGTH OF 402 BARS
SLEEPER SLAB	10'-3 1/8"	1"	10'-0 1/8"	2"	10	9'-6 1/8"	0	9'-8 1/8"
SPANS 1-10	344'-4 15/16"	0"	344'-4 3/16"	3/4"	344	343'-10 3/16"	8	358'-0 3/16"
SPANS 11-14	300'-0"	3/4"	299'-10 1/2"	3/4"	300	299'-4 1/2"	7	311'-10"
SPANS 15-17	225'-0"	3/4"	224'-10 1/2"	3/4"	225	224'-4 1/2"	5	233'-4"
SPANS 18-20	225'-0"	3/4"	224'-8 1/4"	3"	225	224'-2 1/4"	5	233'-2"
SPANS 21-24	540'-0"	3"	539'-6"	3"	539	539'-0"	14	563'-8"
SPANS 25-27	420'-0"	3"	419'-6"	3"	419	419'-0"	10	436'-8"
SPANS 28-33	810'-0"	3"	809'-6"	3"	809	809'-0"	21	845'-11"
SPANS 34-36	225'-0"	3"	224'-8 1/4"	3/4"	225	224'-2 1/4"	5	233'-2"
SPANS 37-39	225'-0"	3/4"	224'-10 1/2"	3/4"	225	224'-4 1/2"	5	233'-4"
SPANS 40-42	225'-0"	3/4"	224'-10 1/2"	3/4"	225	224'-4 1/2"	5	233'-4"
SPANS 43-47	150'-0"	3/4"	149'-10 1/2"	3/4"	150	149'-4 1/2"	3	154'-10"
SPANS 48-52	150'-0"	3/4"	149'-10 1/2"	3/4"	150	149'-4 1/2"	3	154'-10"
SPANS 53-57	146'-0 7/16"	3/4"	145'-10 5/16"	3/4"	146	145'-4 5/16"	3	150'-9 5/16"
TOTAL	3995'-8 1/2"				3992			4152'-7 1/4"

NOTES:

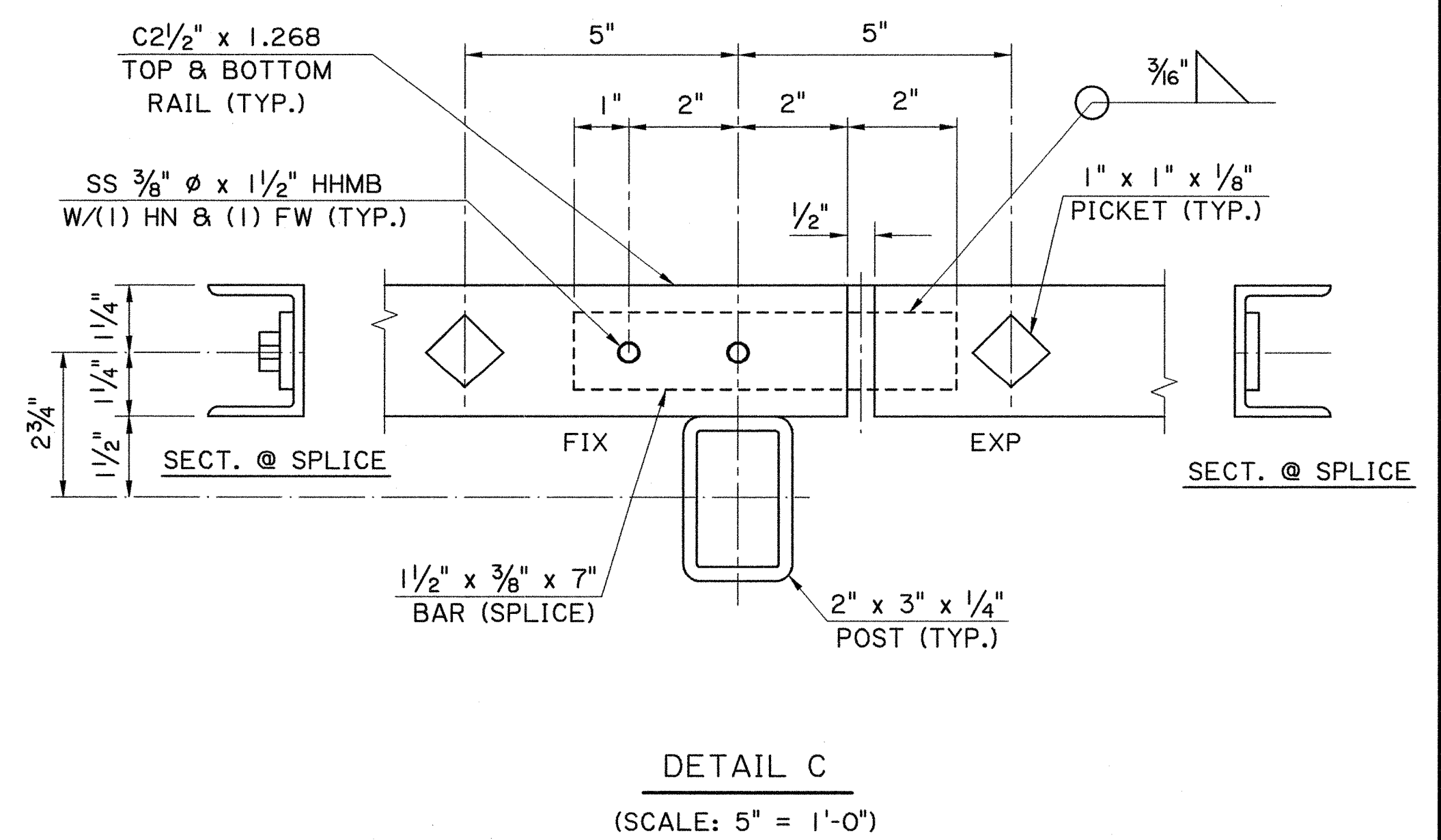
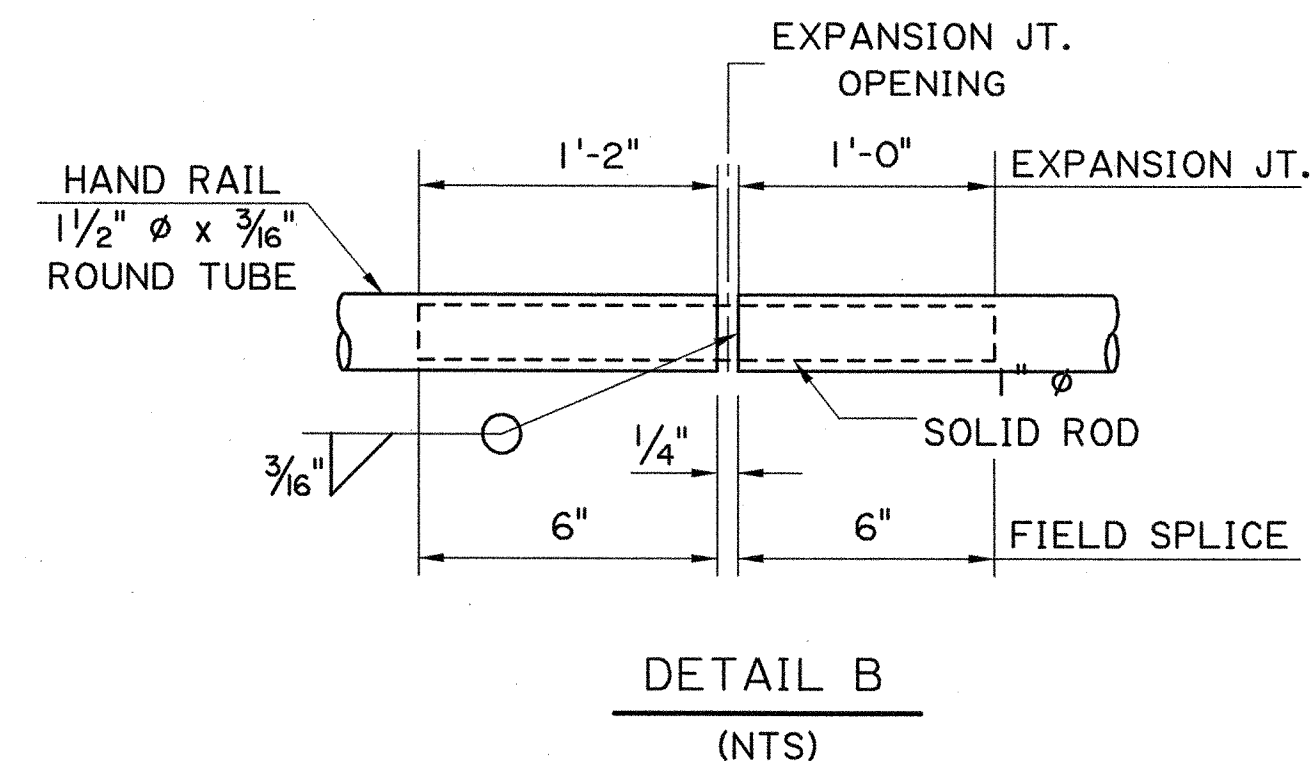
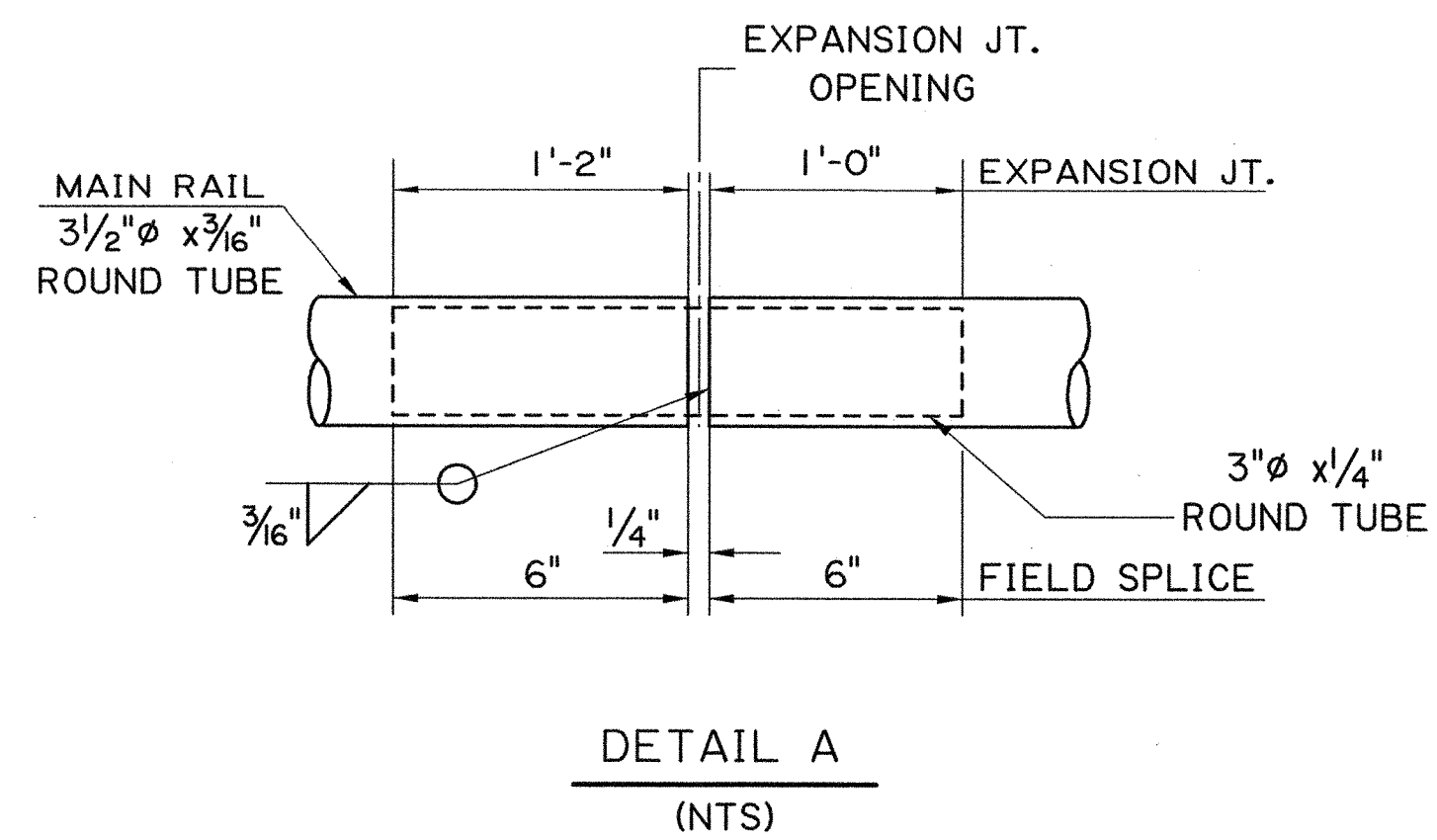
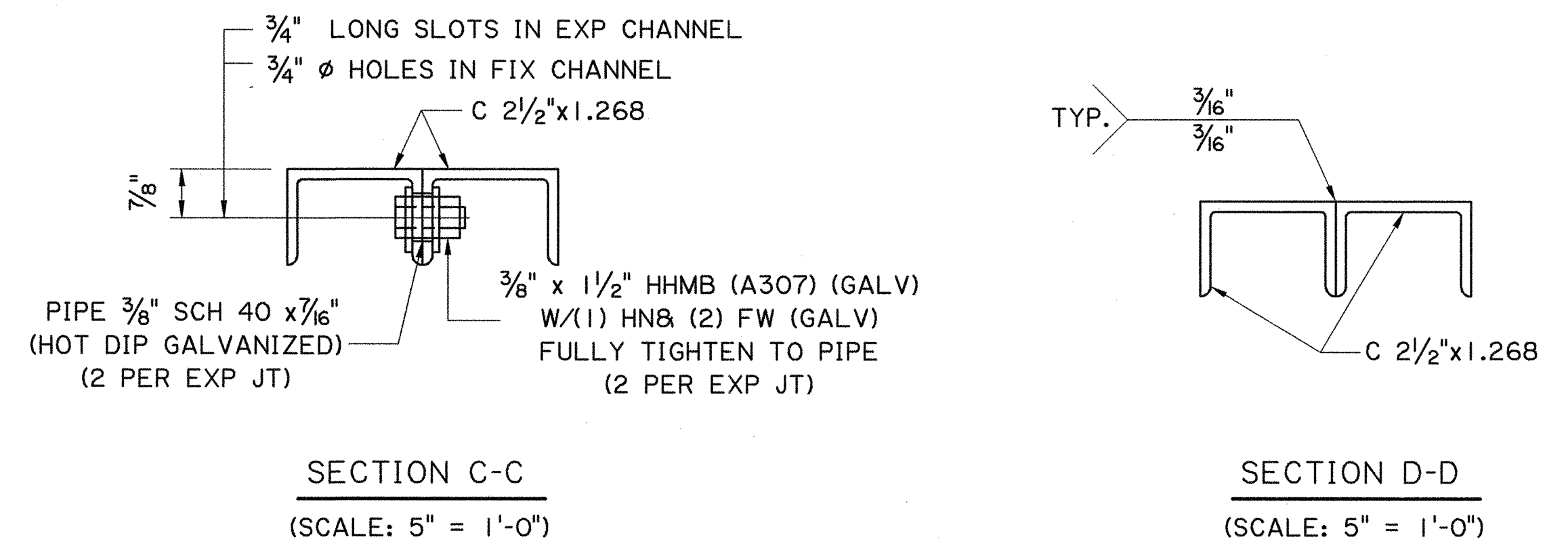
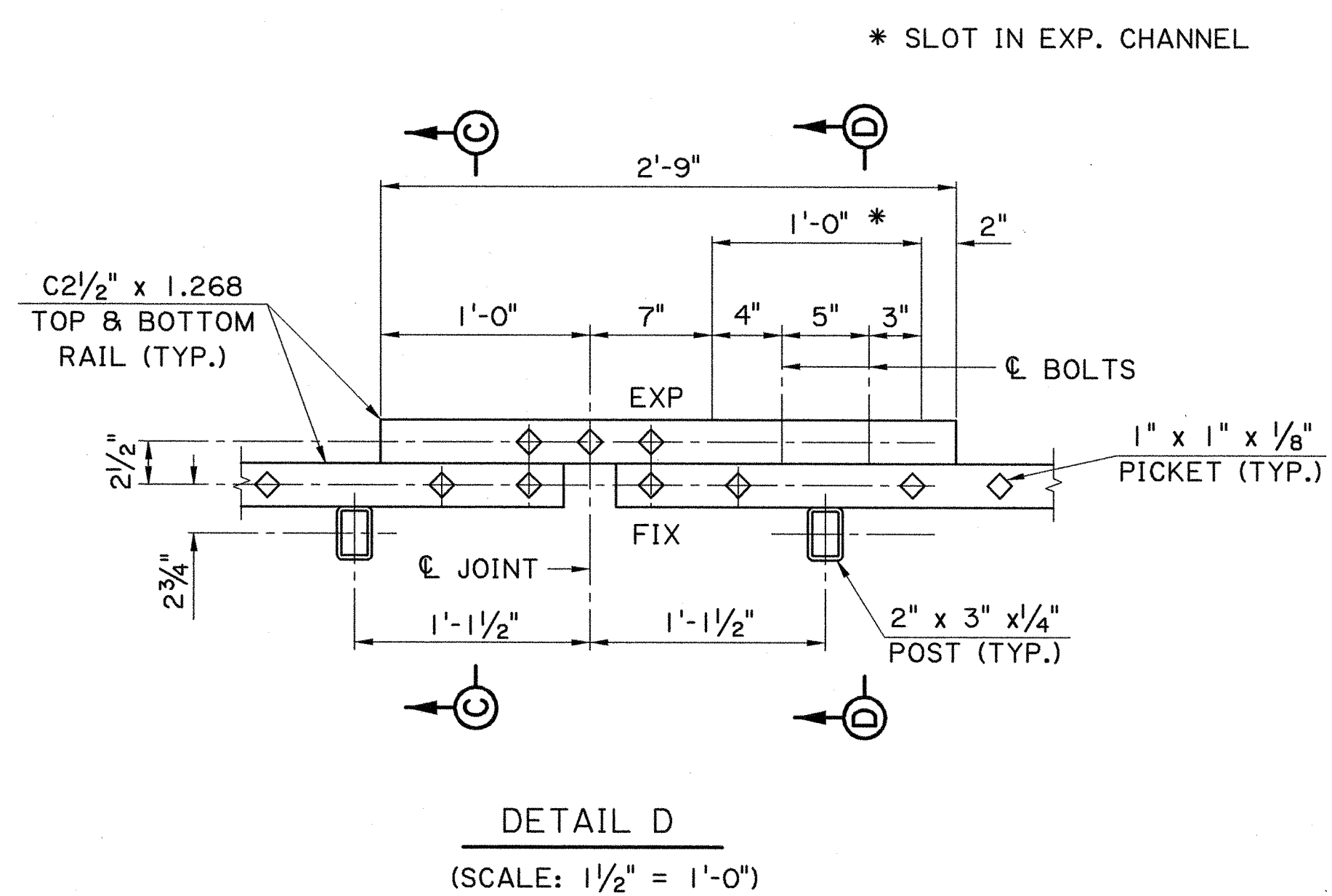
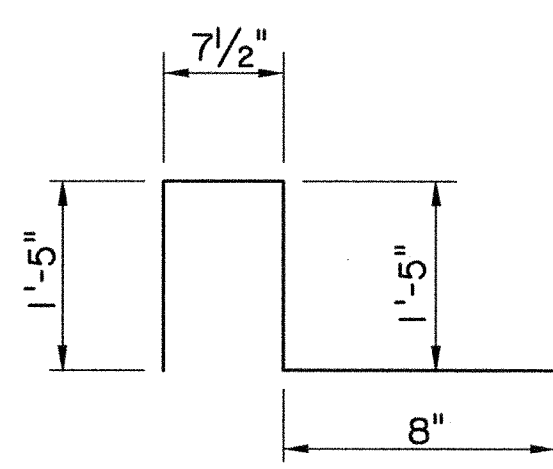
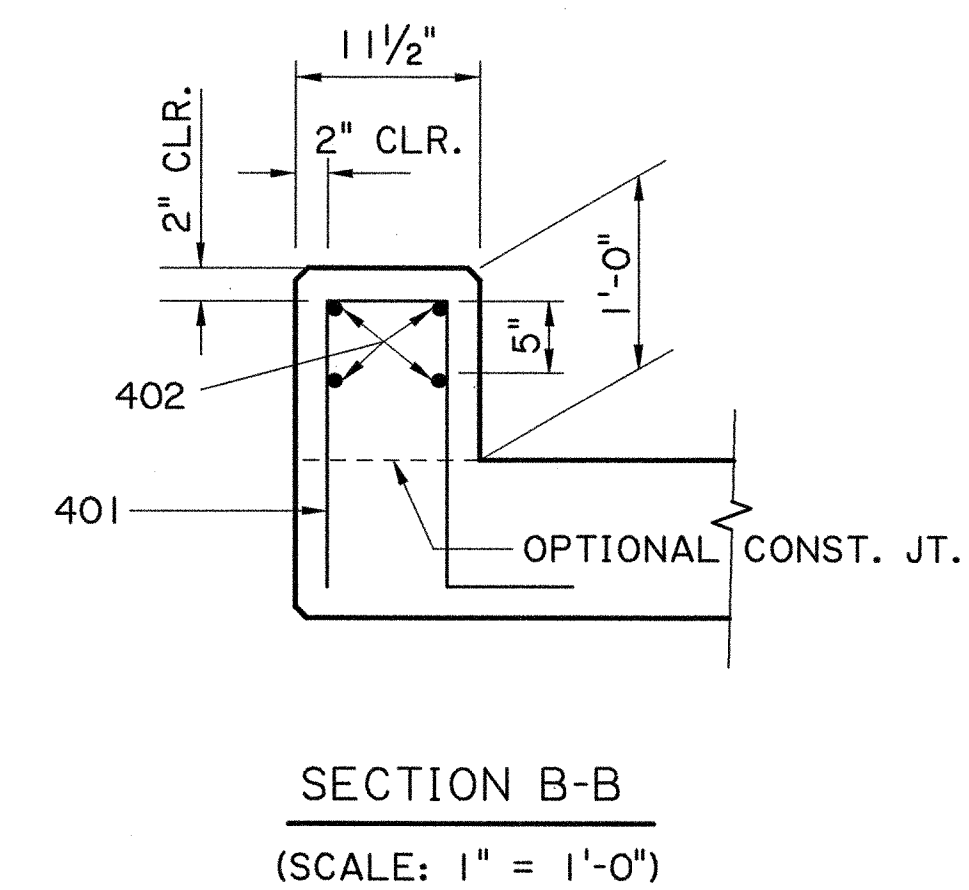
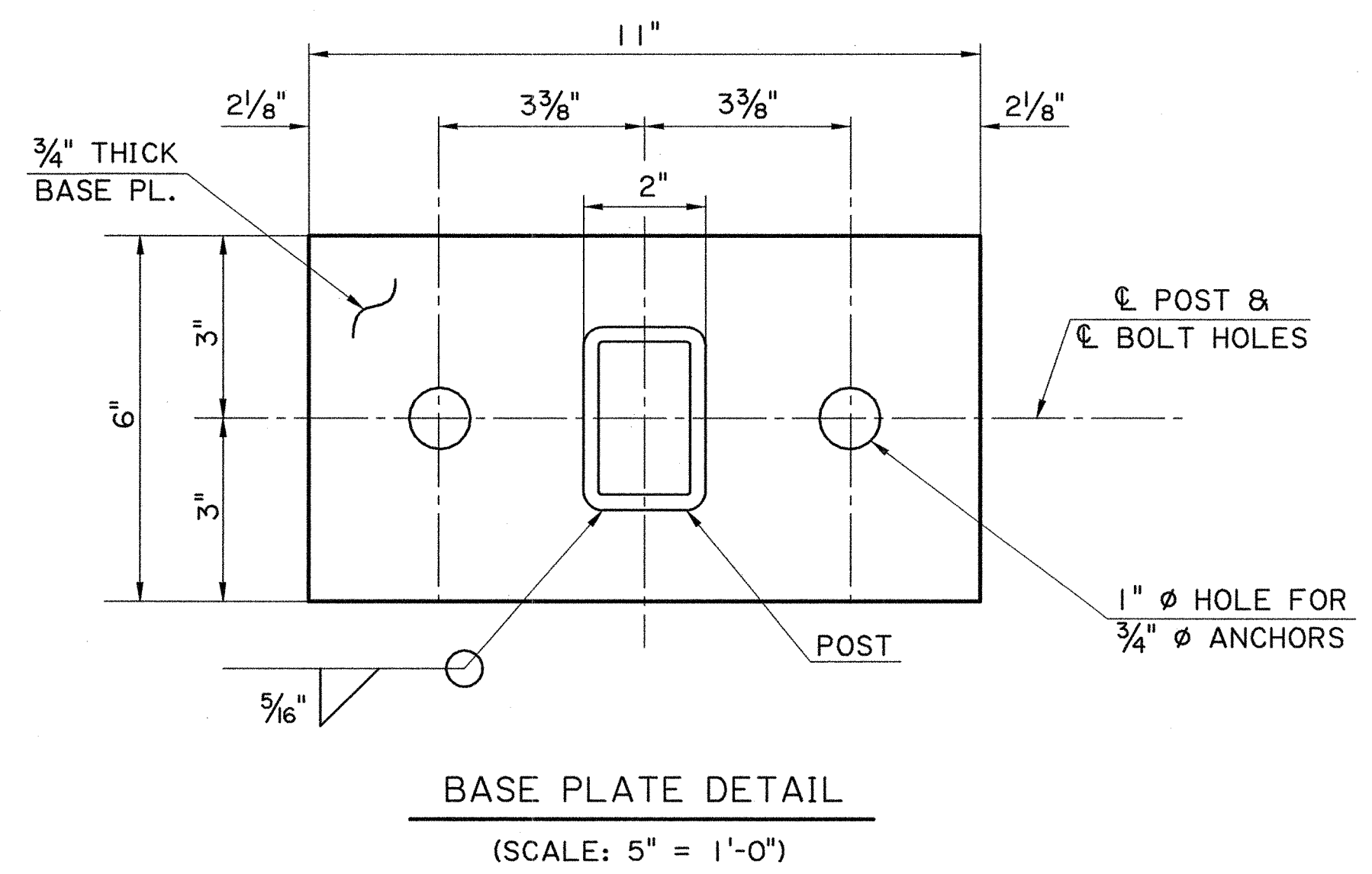
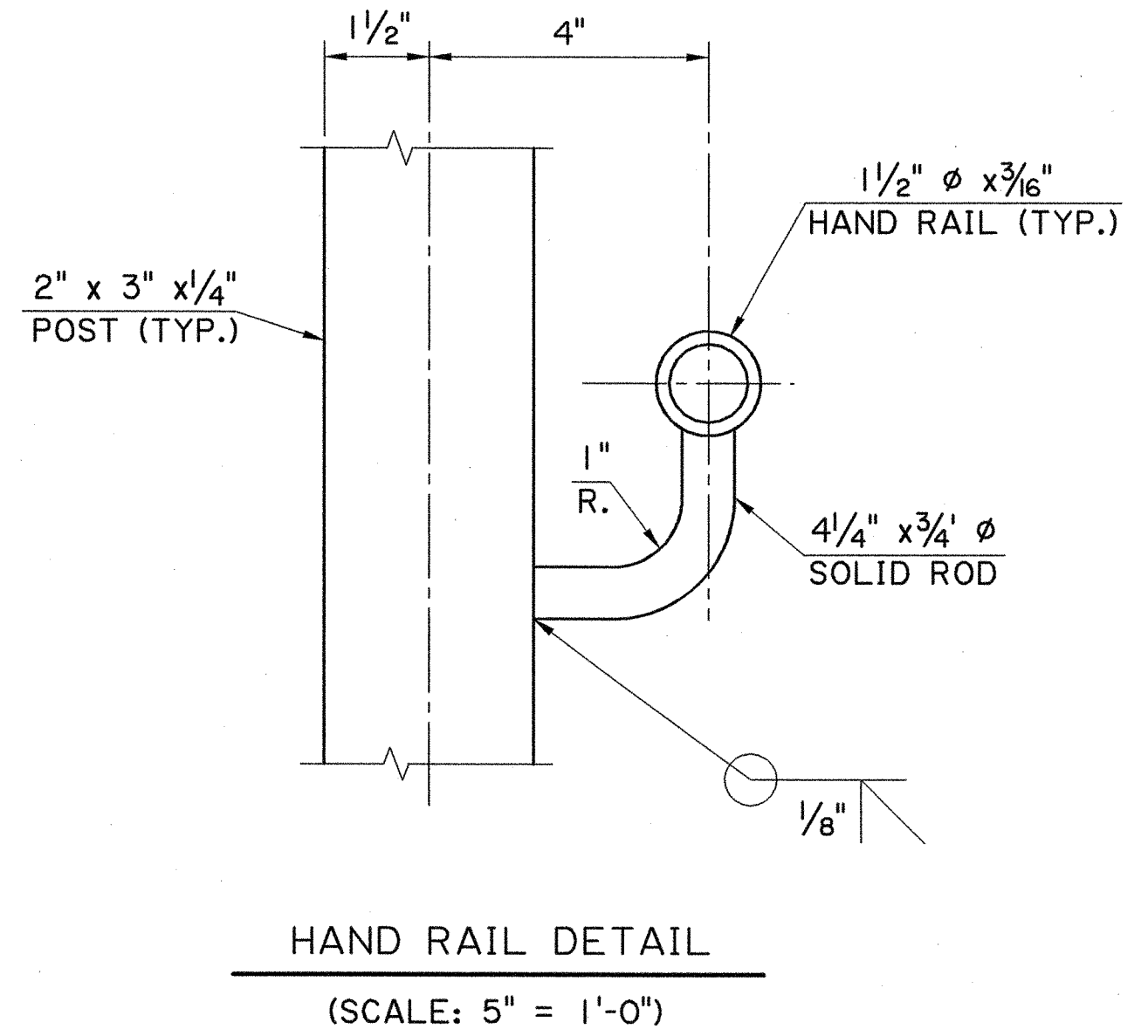
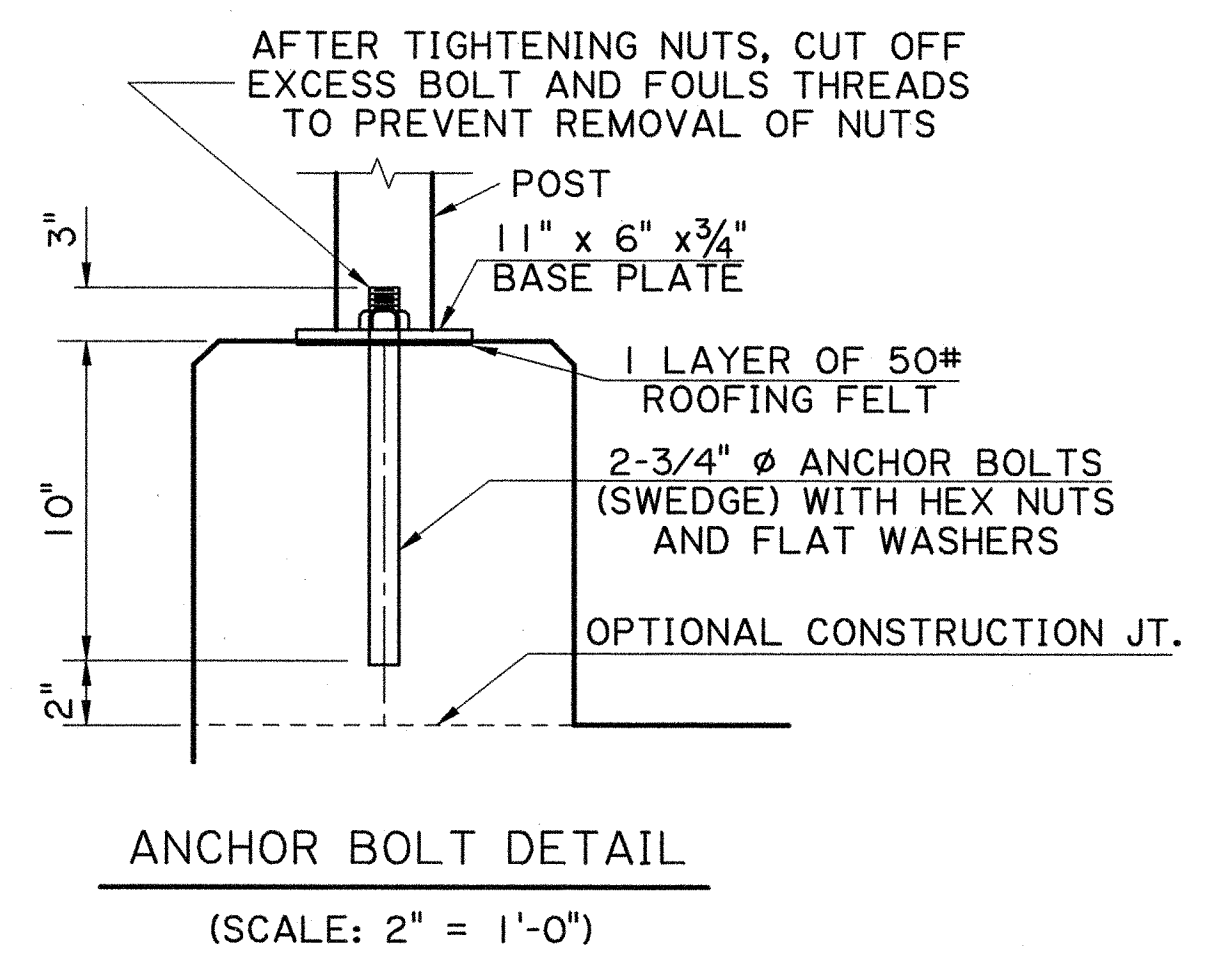
- ALL POST SHALL BE NORMAL (PERPENDICULAR) TO GRADE.
- PICKET SPACING IS BASED ON A DIAGONALLY PLACED 1" x 1" x 1/8" PICKET.
- THE EXPOSED ENDS OF HORIZONTAL RAIL MEMBERS SHALL BE CAPPED WITH 1/4" PLATE CAP AND SEAL WELDED ON ALL SIDES.
- ALL FIXED JOINTS ARE TO BE WELDED ALL AROUND AND GROUND SMOOTH. EXPANSION JOINTS SHALL BE SPACED AT 35'-0" MAXIMUM, BUT THE HORIZONTAL RAILING MUST BE CONTINUOUS ACROSS A MINIMUM OF TWO POSTS, SPACED AT 5'-5" (MAX.), WITH A MAXIMUM LENGTH OF 16'-3".
- STRUCTURAL TUBE, PIPE, AND CHANNEL ARE ALUMINUM AND SHALL BE IN ACCORDANCE WITH ASTM B221 OR ASTM B429, ALLOY 6061-T6.
- BASE PLATE AND POST CAPS SHALL BE ALUMINUM IN ACCORDANCE WITH ASTM B209, ALLOY 6061-T6.
- ANCHOR BOLTS SHALL BE 3/4" Ø ASTM F1554 GRADE 36. ALL ANCHOR BOLTS SHALL HAVE SINGLE HEX NUT AND FLAT WASHER. THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. THE ANCHORS MAY BE CAST-IN-PLACE OR DRILLED AND DOWELED.
- WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (ALUMINUM) ANSI/AWS D1.1-2006 AND AMERICAN WELDING SOCIETY BRIDGE WELDING CODE (STEEL) ANSI/AWS D1.5-2002.
- CONCRETE TO BE CLASS AA(M) FOR INTERGRAL APPROACH SLAB, SPANS 1-10, AND SPANS 43-57. FOR SPANS 11-42 AND THE SLEEPER SLAB, CONCRETE TO BE CLASS AA(M)(HPC).
- REINFORCING STEEL TO BE 1.4362 DUPLEX STAINLESS STEEL FOR INTERGRAL APPROACH SLAB, SPANS 1-10, AND SPANS 43-57. FOR SPANS 11-42 AND THE SLEEPER SLAB, REINFORCING STEEL TO BE GRADE 60 STEEL.
- TO BE PAID FOR UNDER ITEM NS-800-00260, HAND RAILING, PER LINEAR FOOT.



SHEET NUMBER	174
PROJECT	JEFFERSON
DATE	11/01/2007
BY	B. DELATTE
NO.	1 OF 2
REVISION DESCRIPTION	
STATE PROJECT	064-01-0040
FEDERAL PROJECT	
PARISH PROJECT	

CAMINADA BAY BRIDGE
ROUTE LA 1
SIDEWALK RAILING

BRIDGE AND STRUCTURAL DESIGN

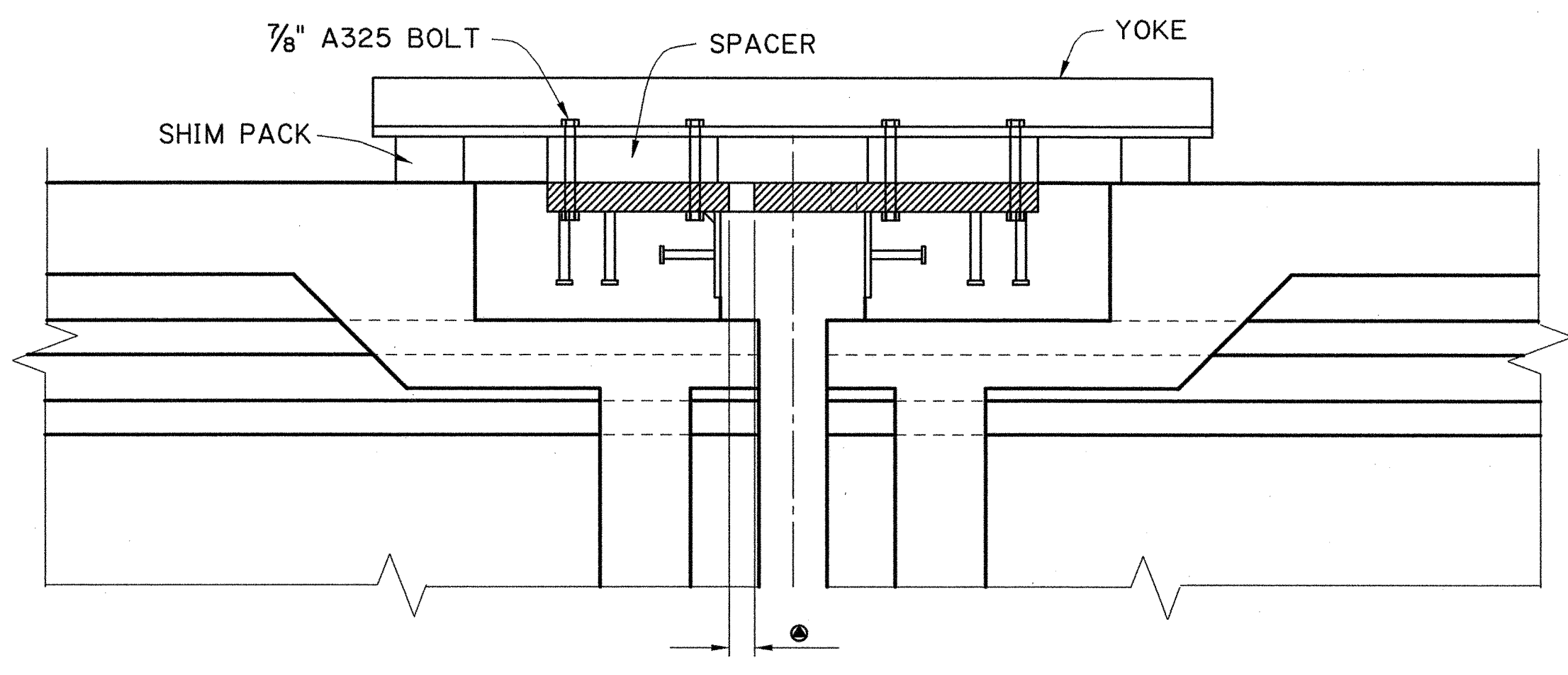


SHEET NUMBER	175
PROJECT	064-01-0040
DATE	11/01/2007
SHEET	2 OF 2
REGISTERED	B. DELATTE
CHECKED	K. YAP
DETAILED	D. HYMEL
CHECKED	B. DELATTE
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	
REVISION DESCRIPTION	
NO.	
DATE	
BY	
CAMINADA BAY BRIDGE ROUTE LA 1 SIDEWALK RAILING	
BRIDGE AND STRUCTURAL DESIGN	

30-APR-2009 10:18

FINAL PLANS

F:\Gang2\Projects\064010040\dgn\177_finger_joint_b.dgn



FINGER JOINT INSTALLATION
(SCALE: 1" = 1'-0")

NOTES:
THIS DETAIL IS TAKEN FROM S.P. NO. 450-17-0025, I-10 BRIDGE OVER LAKE PONTCHARTRAIN, AND MODIFIED TO FIT THIS JOB.

ALL STRUCTURAL STEEL SHALL BE A709, GRADE 50 EXCEPT WHERE SHOWN OTHERWISE.

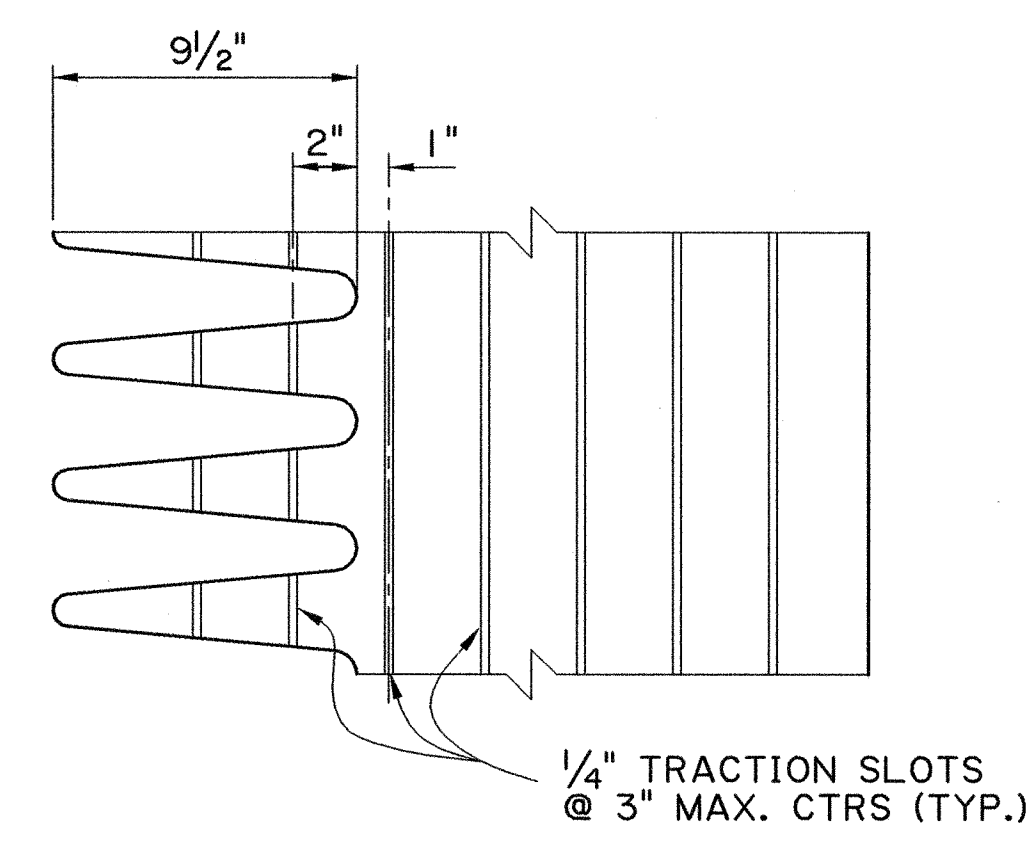
ALL MEMBERS OF THE EXPANSION ASSEMBLIES TO BE WELDED SHALL BE WELDED PRIOR TO BEING GALVANIZED. ALL MEMBERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH REQUIREMENTS OF THE SPECIFICATIONS.

FINGER JOINT ASSEMBLIES TO BE PAID FOR AS ITEM NS-800-00160, STEEL FINGER JOINT, PER LINEAR FOOT.

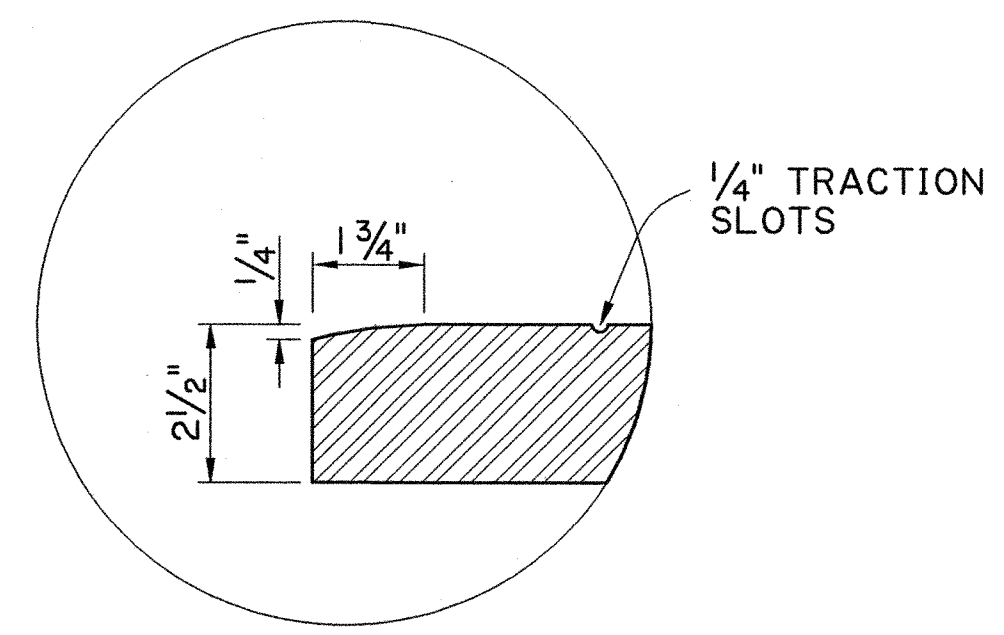
THE FINGER JOINT SHALL BE COMPLETELY SHOP ASSEMBLED, ADJUSTED TO POSITION IT WILL TAKE IN THE STRUCTURE AND MESHING OF FINGERS CHECKED, FITTED AND MATCH MARKED FOR FIELD ERECTION. THE TOP OF THE FINGER JOINT PLATES SHALL CONFORM TO THE ROADWAY GRADE AND CROSS-SLOPE. ALIGNMENT SHALL BE CHECKED PRIOR TO LAST POUR.

THE YOKES SHALL SECURELY HOLD THE EXPANSION ASSEMBLIES IN THE REQUIRED POSITIONS DURING PLACING OF CONCRETE IN THE BLOCK OUT AND REMAIN IN PLACE UNTIL AFTER THE CONCRETE HAS OBTAINED INITIAL SET. SUBJECT TO APPROVAL BY THE ENGINEER, THE CONTRACTOR MAY USE ANY ALTERNATE BUT EQUAL TYPE OF YOKE.

ESTIMATED QUANTITIES	= 4 EXP. JOINTS
FINGER JOINTS	= 190.16 LIN. FT.

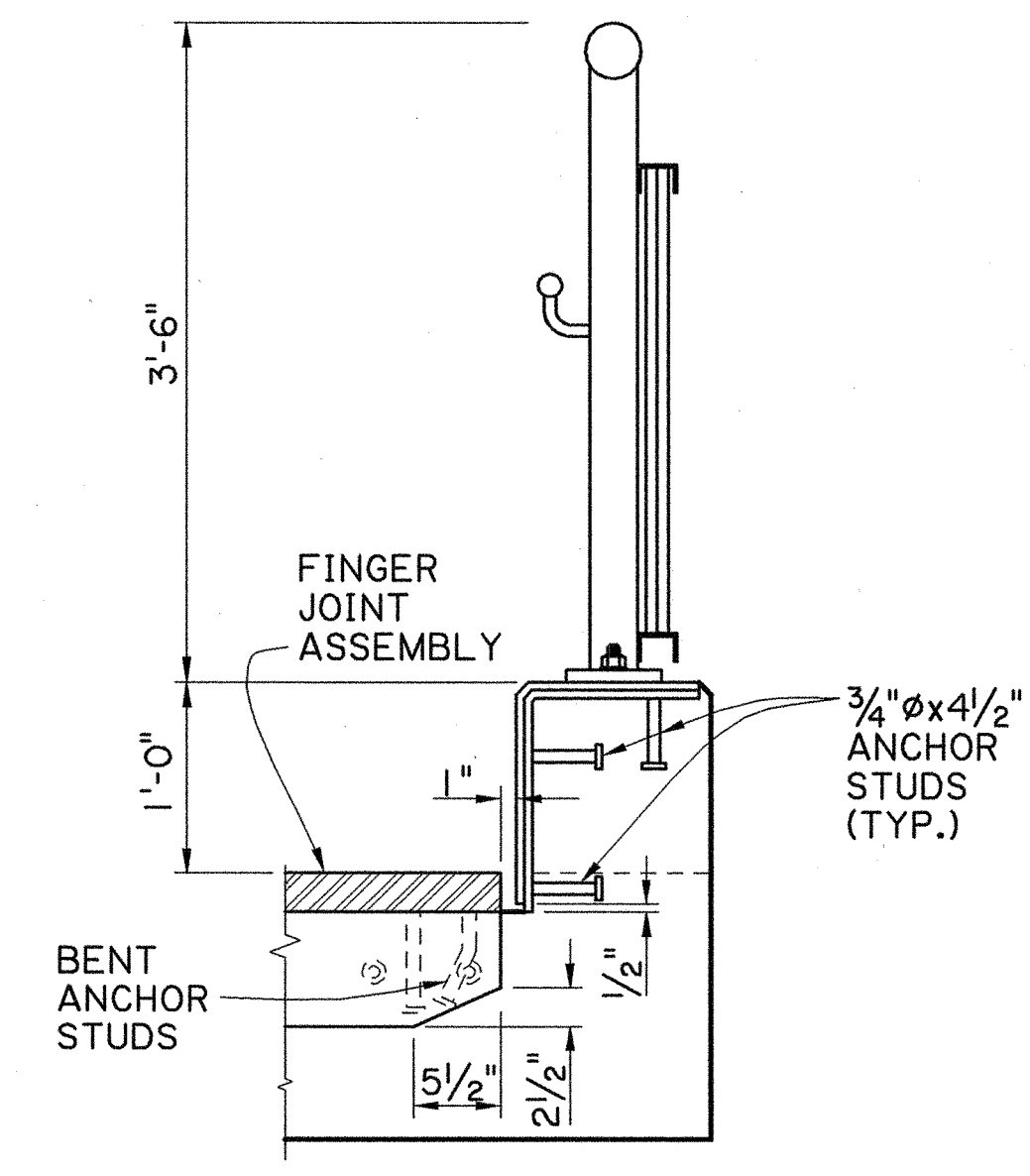


VIEW J-J
(SCALE: 2" = 1'-0")

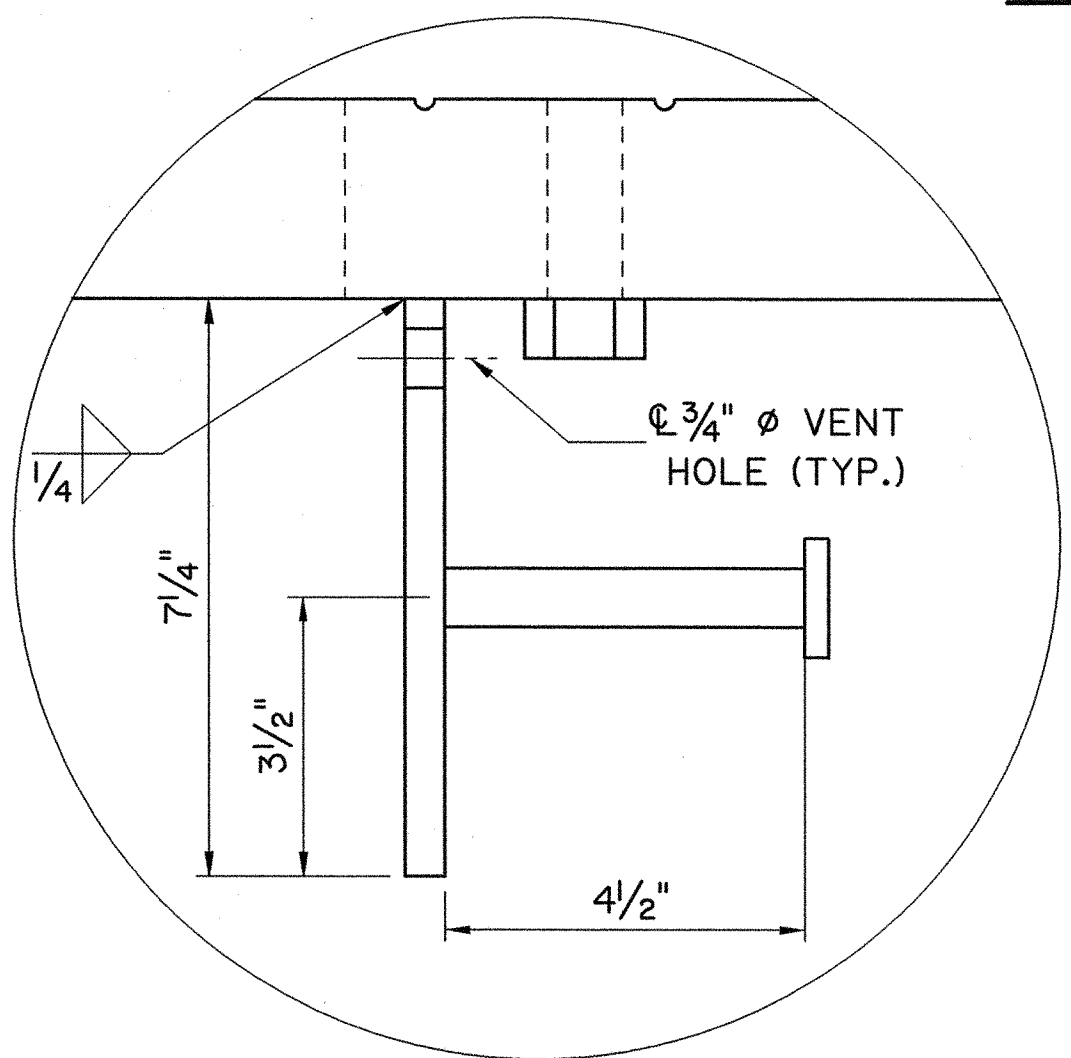


DETAIL A
(SCALE: 4" = 1'-0")

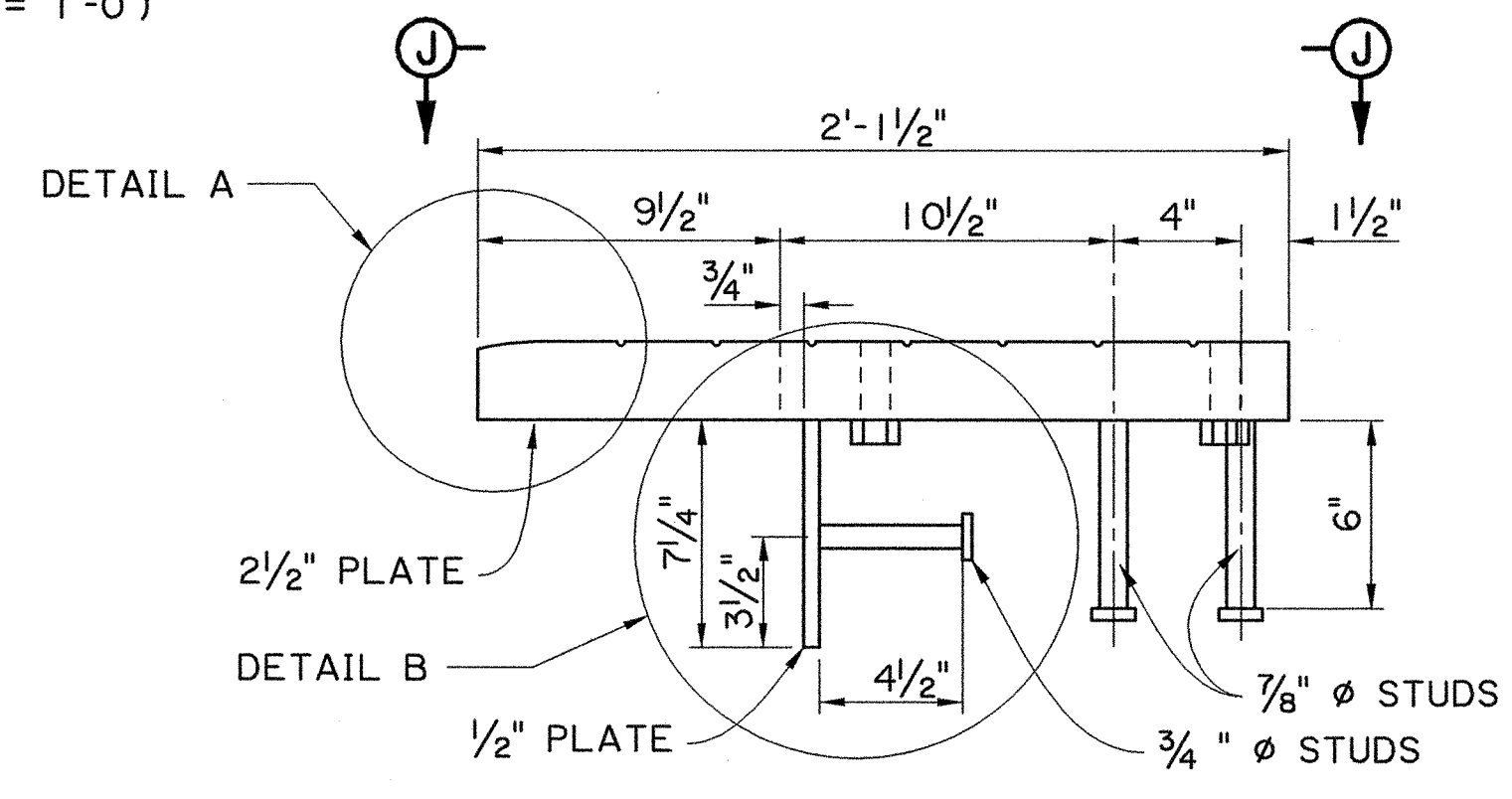
JOINT OPENINGS	
INSTALL TEMP.	GAP
68° F	2 7/8"
+10° F	-0.58"
-10° F	+0.58"



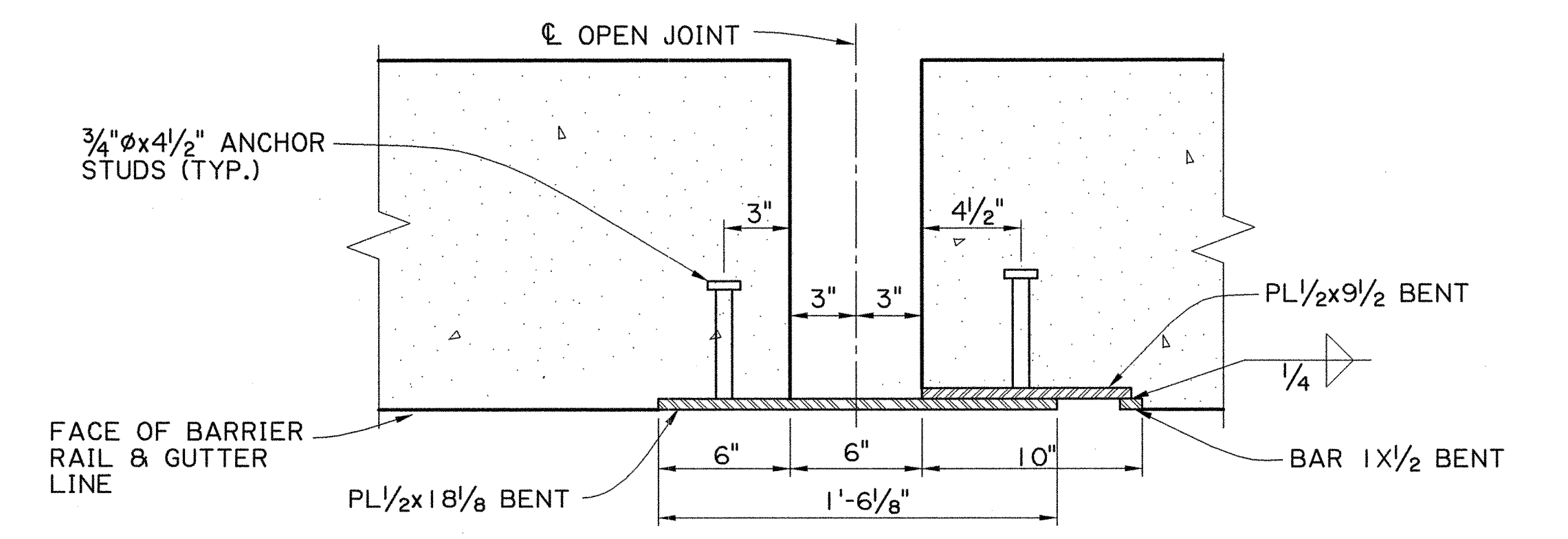
SECTION H-H



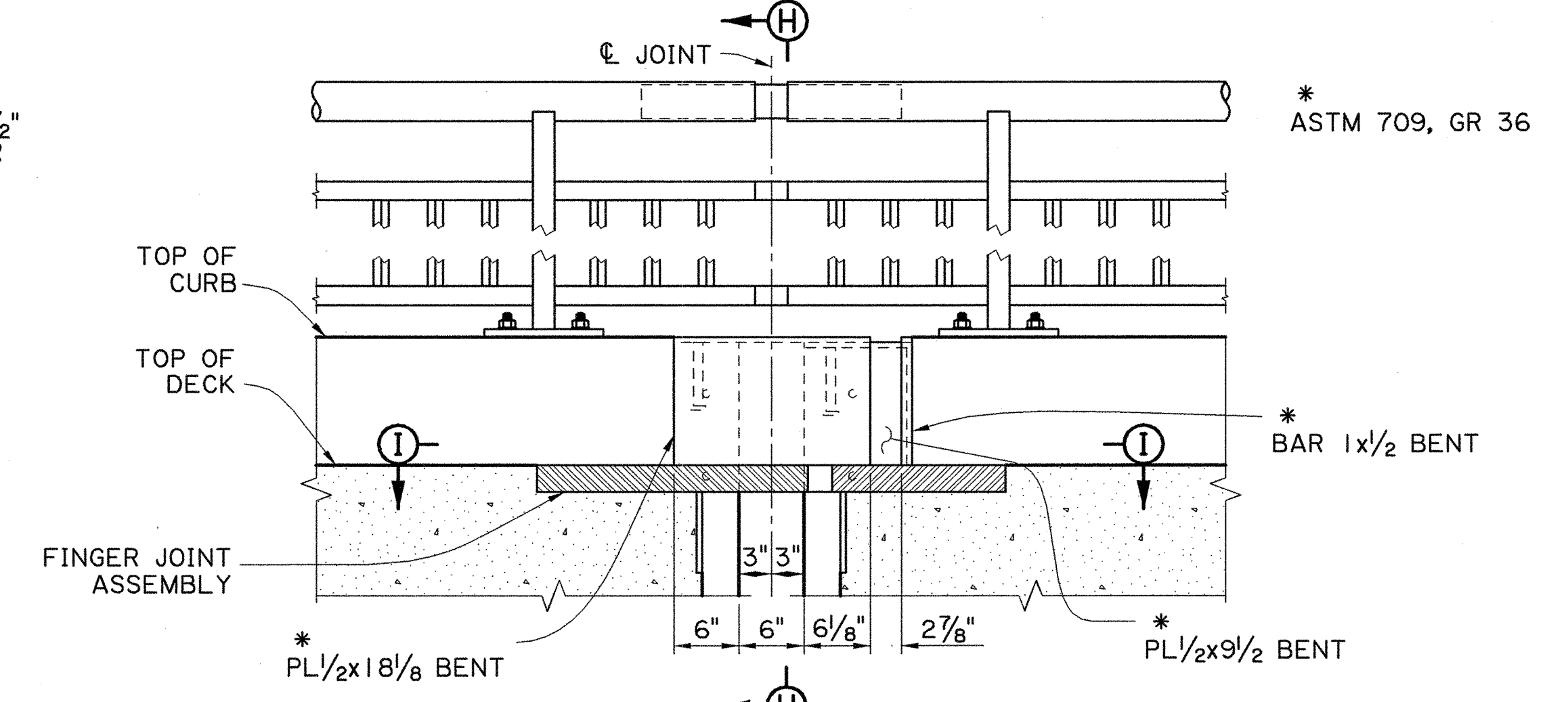
DETAIL B
(SCALE: 5" = 1'-0")



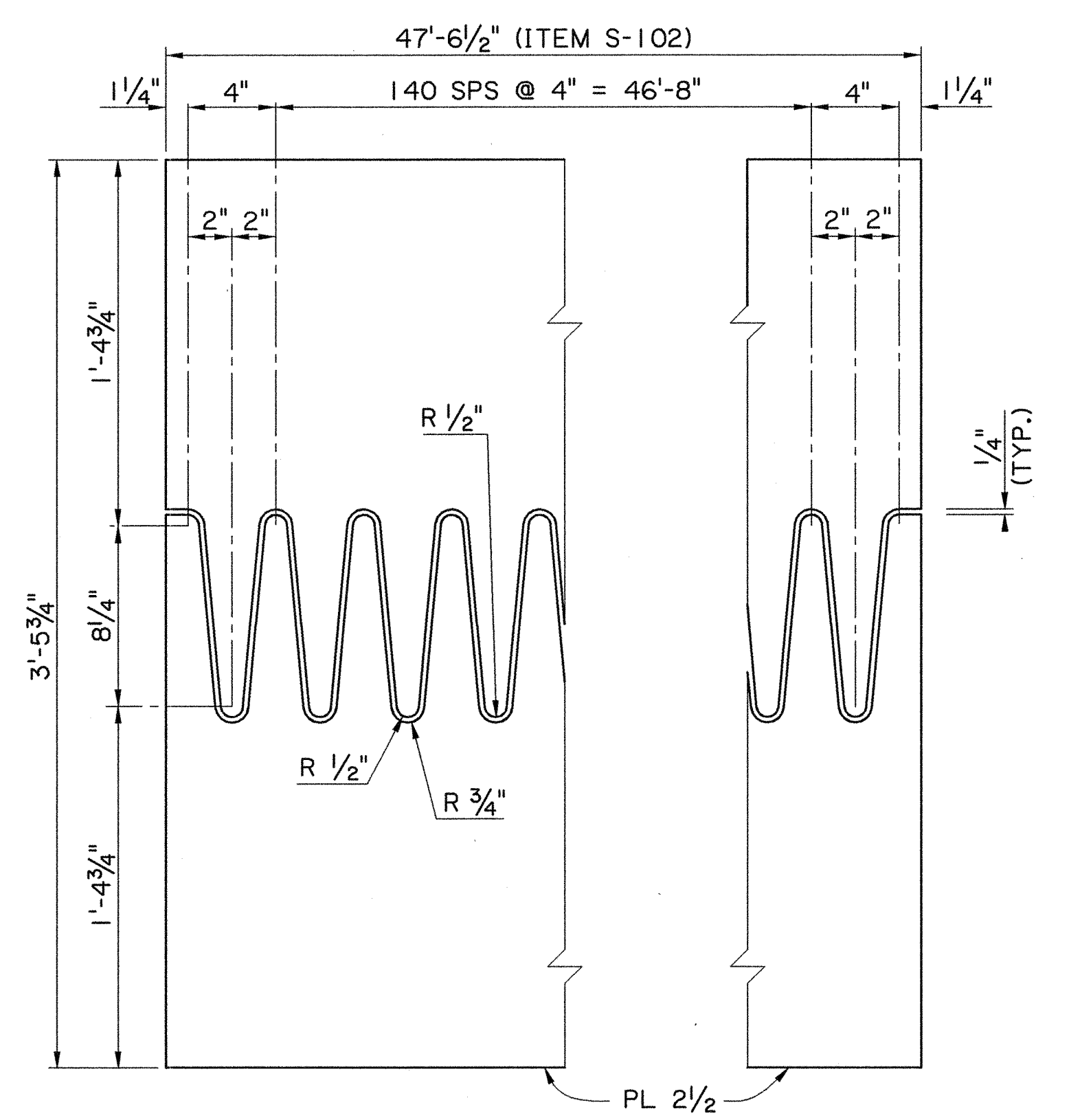
FINGER PLATE
(SCALE: 2" = 1'-0")



SECTION I-I
(SLIDING PLATE DETAIL)

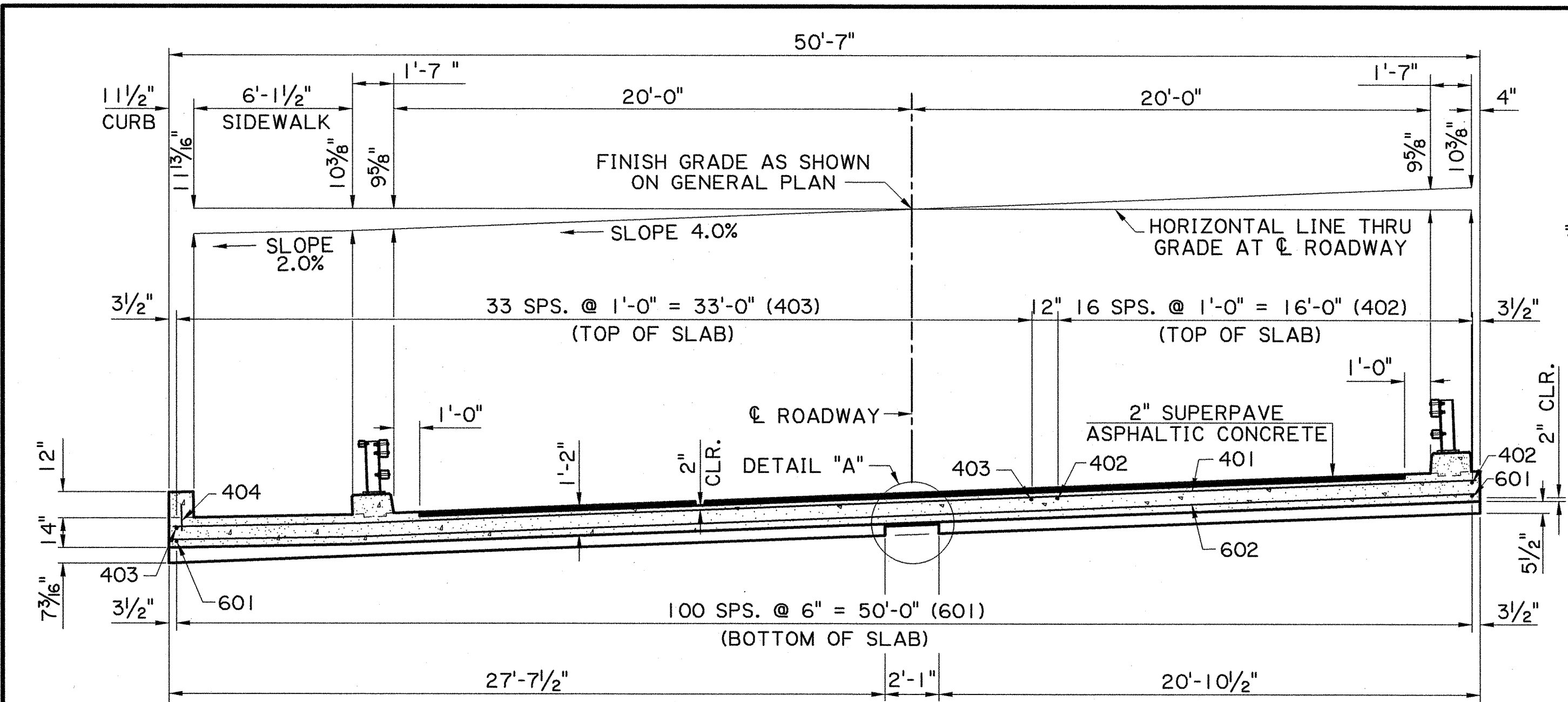


SECTION C-C

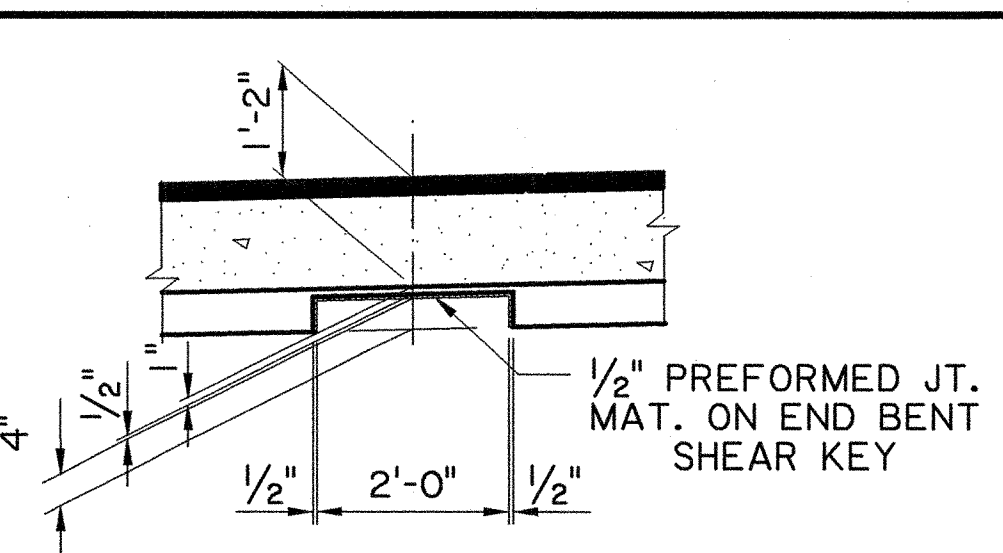


FINGER CUTTING DIAGRAM
(SCALE: 2" = 1'-0")

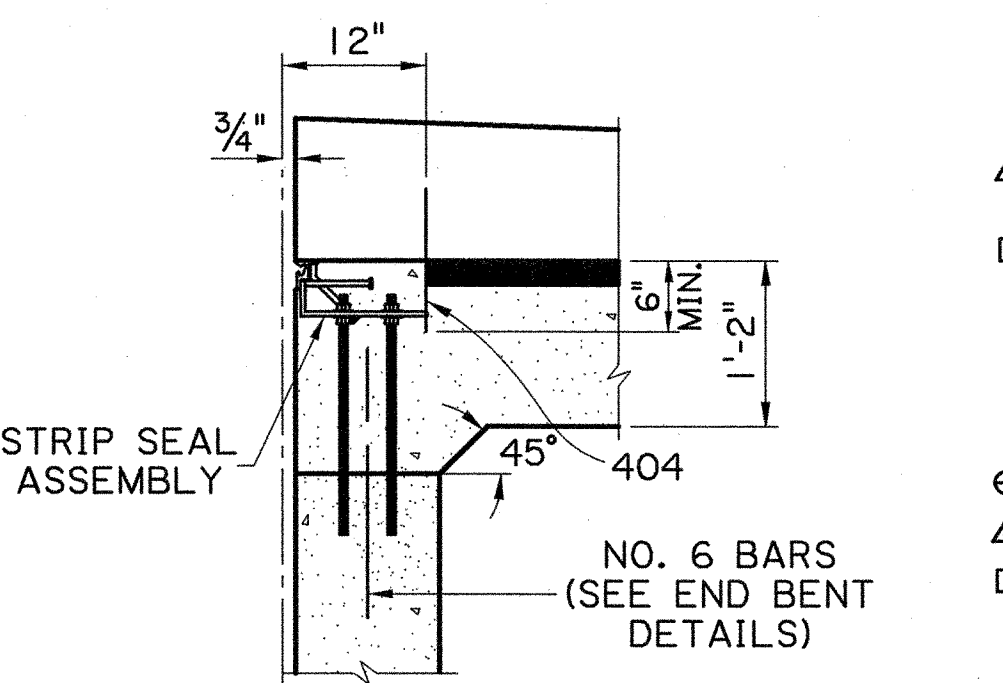
SHEET NUMBER	177
PROJECT	JEFFERSON
DATE	11-30-2005
STATE	LA
PROJECT	064-01-0040
DESIGNED	K. YAP
CHECKED	B. DELATTE
DRAWN	J. NAKHLEH
CHECKED	B. DELATTE
DATE	11-30-2005
SHEET	2 OF 2
REVISION DESCRIPTION	
NO.	
DATE	
BY	
CAMINADA BAY BRIDGE ROUTE LA 1	
TYPICAL FINGER JOINT DETAILS	
BRIDGE AND STRUCTURAL DESIGN	



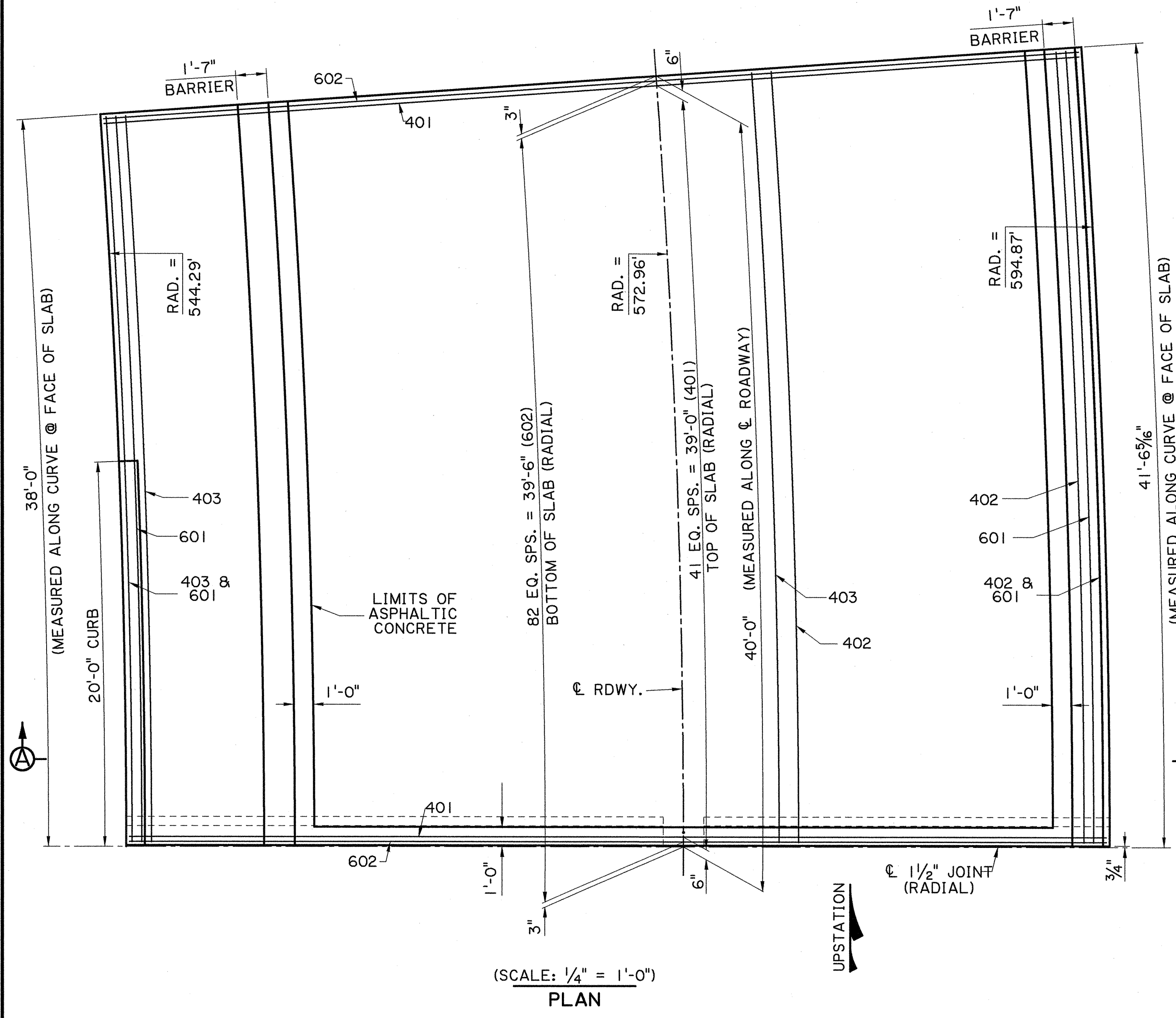
SECTION A-A
(SCALE: 1/4" = 1'-0")



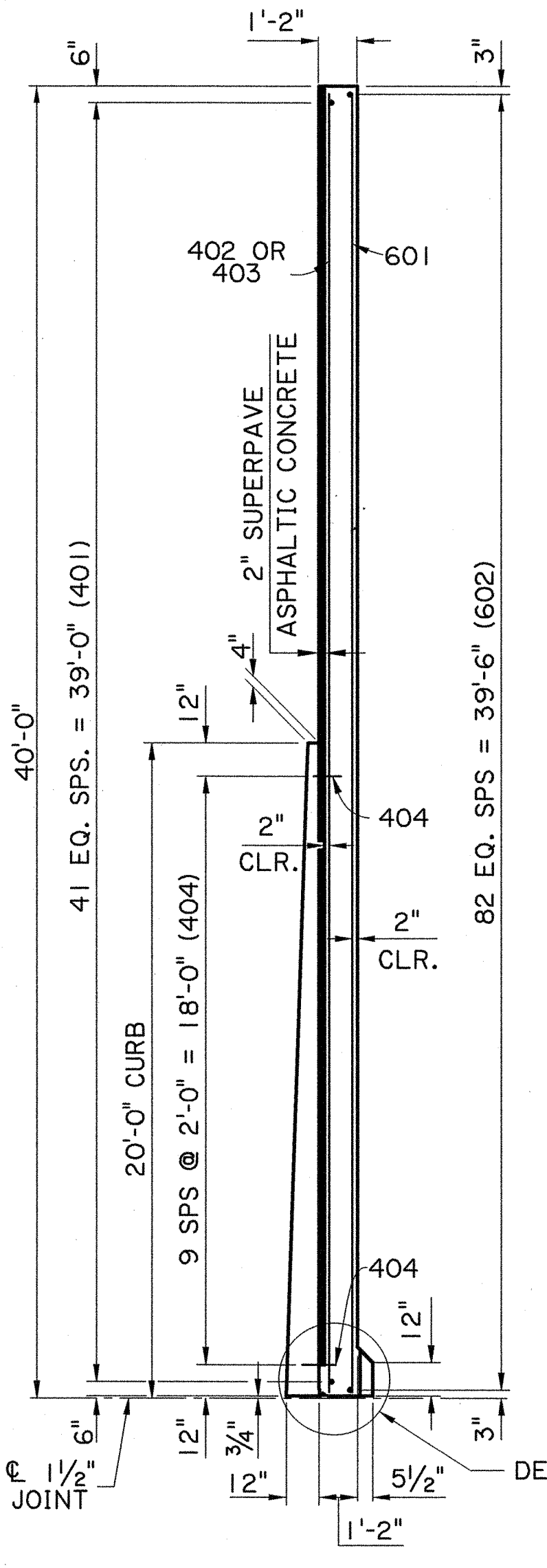
DETAIL "A"
(SCALE: 1/2" = 1'-0")



DETAIL "B"
(NTS)



PLAN
(SCALE: 1/4" = 1'-0")



SECTION ALONG CURVE @ ROADWAY
(SCALE: 1/4" = 1'-0")

NOTE: CURB SHOWN TO BE POURED MONOLITHIC WITH SLAB

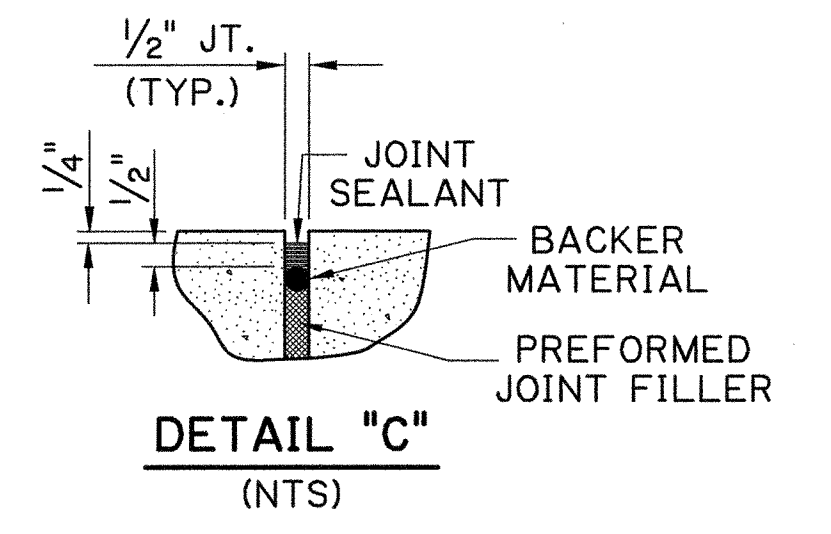
DETAIL "B"

NOTES:

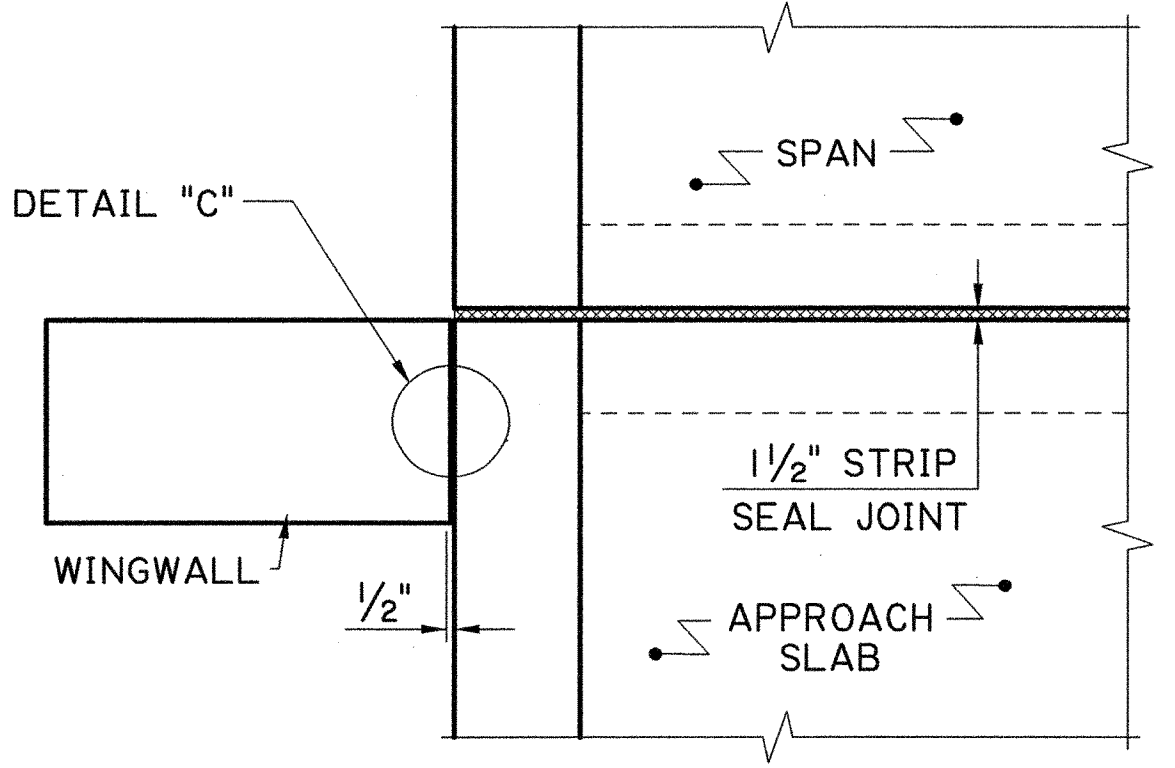
- FOR GENERAL NOTES, SEE SHEETS 102-103.
- FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS, SEE SPECIAL DETAIL ASD-SS.
- SEE STRIP SEAL DETAILS, SEE SHEETS 178-179.
- COST OF PREFORMED JOINT MATERIAL, BACKER MATERIAL, AND JOINT SEALANT TO BE INCLUDED IN THE PRICE BID FOR CONCRETE APPROACH SLABS.
- FOR STEEL AND CONCRETE RAILING DETAILS, SEE SHEETS 171-173.



Brian D. Delatte
05/06/2009



DETAIL "C"
(NTS)



JOINT DETAIL
(SCALE: 1/2" = 1'-0")

ESTIMATED QUANTITIES (ONE SLAB)						
BAR	NO.	SHORT BAR	VARIES (FT.)	LONG BAR	TOTAL LENGTH	LOCATION
601	101	37'-7"	.0347	41'-1"	3972'-8"	LONGIT. IN BOTTOM OF SLAB
602	83	50'-3"			4170'-9"	TRANSV. IN BOTTOM OF SLAB
TOTAL NO. 6 BARS = 8143'-5"						= 12231 LBS.
401	42	51'-11"			2180'-6"	TRANSV. IN TOP OF SLAB
402	17	41'-9"	.0637	42'-10"	719'-0"	LONGIT. IN TOP OF SLAB
403	34	37'-7"	.0686	39'-11"	1317'-6"	LONGIT. IN TOP OF SLAB
404	10	1'-0"			10'-0"	DOWELS IN CURB
TOTAL NO. 4 BARS = 4227'-0"						= 2824 LBS.
DEFORMED REINFORCING STEEL						= 15055 LBS.
SUPERPAVE ASPHALTIC CONCRETE						= 18.1 TONS
CONCRETE APPROACH SLAB						= 223.49 SQ. YDS.
STEEL & CONCRETE RAILING						= 80.00 LIN. FT.

- INCLUDES ONE (1) 1'-8" MIN. LAP SPLICE, TO BE STAGGERED.
- TO BE INCLUDED IN THE PRICE BID FOR CONCRETE APPROACH SLAB.
- PAID FOR UNDER ITEM 502-01-00100.



GENERAL REQUIREMENTS:

SCOPE OF WORK:

THE WORK COVERED BY THIS SECTION SHALL INCLUDE FURNISHING, INSTALLING, CONNECTING, AND PLACING INTO SATISFACTORY OPERATING CONDITION THE NAVIGATION LIGHTING SYSTEM AS INDICATED IN THE PLANS, SPECIFICATIONS, OR AS DIRECTED BY THE PROJECT ENGINEER. THE WORK SHALL BE IN ACCORDANCE WITH PLAN DETAILS AND SPECIFICATIONS AND THE CONTRACTOR SHALL MAKE ANY NECESSARY MODIFICATIONS OR FABRICATIONS REQUIRED FOR A COMPLETE, OPERATIONAL, AND SAFE NAVIGATION LIGHTING SYSTEM. EVERY FITTING, MINOR DETAIL, OR FEATURE MAY NOT BE SHOWN OR DESCRIBED. THE CONTRACTOR PERFORMING THE WORK IS ASSUMED TO BE SKILLED IN THE TRADE, CAPABLE OF UNDERSTANDING THE INTENT OF THE PLANS AND SPECIFICATIONS, AND CONSTRUCTING THE NAVIGATION LIGHTING SYSTEM IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE.

NAVIGATIONAL LIGHTING SYSTEM SHALL BE PAID UNDER ITEM 730-09-00100, ELECTRICAL SYSTEM, PER LUMP SUM.

A. PLANS AND SPECIFICATIONS

THESE PLANS AND SPECIFICATIONS ARE SUPPLEMENTAL TO THE 2006 EDITION OF LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES (HEREINAFTER CALLED THE STANDARD SPECIFICATIONS), APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND BEST PREVAILING CONSTRUCTION TRADE PRACTICES.

B. EQUIPMENT AND MATERIALS

EQUIPMENT AND MATERIAL SHALL BE SUITABLE FOR THE INTENDED USE AND SHALL BE FURNISHED WITH ALL NECESSARY HARDWARE AND COMPONENTS. UNLESS SPECIFIED OTHERWISE, ALL EQUIPMENT AND MATERIAL SHALL BE NEW AND ALL LIKE EQUIPMENT AND MATERIAL SHALL BE OF THE SAME MANUFACTURER. REFERENCE TO A SPECIFIC MANUFACTURER'S NAME AND/OR CATALOG/MODEL NUMBER IS INTENDED TO DENOTE THE QUALITY OF THE EQUIPMENT OR MATERIAL AND NOT TO SPECIFICALLY EXCLUDE OTHER ACCEPTABLE PRODUCTS. DESCRIPTIVE SPECIFICATIONS, PLANS, AND SYSTEM COMPATIBILITY SHALL GOVERN OVER SPECIFIED MANUFACTURER'S NAMES AND CATALOG OR MODEL NUMBERS. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT CATALOG OR MODEL NUMBERS, AND AVAILABILITY WITH SUPPLIERS, AND COORDINATE WITH ALL OTHER SUB-CONTRACTORS.

C. EXISTING CONDITIONS

THE CONTRACTOR SHALL VISIT THE CONSTRUCTION SITE TO DETERMINE EXISTING CONDITIONS AND ALLOW FOR SUCH CONDITIONS WHEN COMPUTING THE BID. THE CONTRACTOR SHALL THOROUGHLY INSPECT THE SITE AND SURROUNDING AREA FOR EVIDENCE OF UNDERGROUND FACILITIES AND CONTACT COMPANIES OR AGENCIES LIKELY TO HAVE UNDERGROUND FACILITIES IN THE VICINITY OF THE PROJECT BEFORE DIGGING OR TRENCHING. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGES TO EXISTING UNDERGROUND FACILITIES CAUSED BY CONTRACTOR OPERATIONS. WHEN NEW EQUIPMENT IS INSTALLED REPLACING EXISTING EQUIPMENT, THE EXISTING EQUIPMENT AND MATERIAL SHALL BE REMOVED BY THE CONTRACTOR IN THE FOLLOWING MANNER: IF ANY MATERIAL AND EQUIPMENT IS DECLARED SALVAGEABLE BY THE PROJECT ENGINEER IT SHALL REMAIN PROPERTY OF THE DEPARTMENT AND STORED AT A LOCATION AS DIRECTED BY THE PROJECT ENGINEER. THE REMAINING MATERIAL AND EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO DIRECT PAY.

D. COORDINATION

THE CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID INTERFERENCE AND CONFLICTS. UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL RECEIVE AND RELATE ALL COMMUNICATIONS ONLY THROUGH THE PROJECT ENGINEER OR HIS DESIGNATED REPRESENTATIVE.

E. VERIFICATION

THE CONTRACTOR SHALL VERIFY MOUNTING SPACE, EQUIPMENT DIMENSIONS, INSTALLATION REQUIREMENTS, AND ELECTRICAL CIRCUIT REQUIREMENTS OF ALL EQUIPMENT BEING SERVED PRIOR TO ORDERING ANY EQUIPMENT AND MATERIAL. WHERE CIRCUITS ARE TO SERVE SPECIFIC EQUIPMENT OR FEEDERS, THE CONTRACTOR SHALL VERIFY THE ELECTRICAL REQUIREMENTS AND EXACT LOCATION OF ALL CONNECTIONS PRIOR TO THE INSTALLATION OF THE SERVICE TO THE EQUIPMENT.

F. WARRANTIES AND GUARANTEES

THE CONTRACTOR GUARANTEES, BY HIS SIGNING OF THIS CONTRACT, ALL EQUIPMENT, APPARATUS, MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL FURNISH TO THE BRIDGE DESIGN ENGINEER THE FOLLOWING ADDITIONAL WARRANTIES AND GUARANTIES PERTAINING TO EACH PIECE OF MECHANICAL AND ELECTRICAL EQUIPMENT FURNISHED:

THE MANUFACTURER'S STANDARD WRITTEN WARRANTIES ON ALL EQUIPMENT FURNISHED ON THE PROJECT; THE CONTRACTOR'S WRITTEN GUARANTEE THAT, DURING A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE, ALL NECESSARY REPAIRS TO OR REPLACEMENT OF SAID WARRANTED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT; OTHER WARRANTIES AND GUARANTEES AS REQUIRED UNDER THE SPECIFIC ITEMS ELSEWHERE HEREIN.

G. SUBMITTALS

AFTER THE START OF THE ASSEMBLY PERIOD AND PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL PROVIDE TWO (2) INITIAL SETS OF SUBMITTALS TO THE BRIDGE DESIGN ENGINEER THAT INCLUDE, BUT ARE NOT LIMITED TO, CATALOG CUT SHEETS, SHOP DRAWINGS, DESCRIPTIVE DATA, INSTALLATION AND OPERATING INSTRUCTIONS, BROCHURES, ETC., FOR ALL MATERIAL TO BE INSTALLED ON THE PROJECT. THE STATE AND FEDERAL PROJECT NUMBER, PROJECT NAME, FABRICATOR OR MANUFACTURER'S NAME, AND CONTRACTOR'S COMPANY NAME SHALL BE ON EVERY SHEET OF THE SUBMITTAL AND BE IN A TYPED OR STAMP FORMAT. ALL CUT SHEETS WITHIN THE SUBMITTAL SHALL HAVE ALL PERTINENT DATA ON EACH ITEM CLEARLY MARKED TO INDICATE MATERIAL DESCRIPTION, BRAND NAME, MODEL NUMBER, SIZE, RATING, AND MANUFACTURING SPECIFICATION. ADDITIONAL SUBMITTALS OR RANDOM SAMPLES MAY BE REQUESTED AT THE DISCRETION OF THE BRIDGE DESIGN OR PROJECT ENGINEER. SHOP DRAWINGS AND EQUIPMENT SUBMITTALS SHALL MEASURE EITHER 8 1/2" X 11" OR 22" X 34". EQUIPMENT BROCHURES SHALL BE ORIGINALS WHERE COLORS OR PATTERNS ARE SHOWN. OTHERWISE, ORIGINALS, OR COPIES EQUAL TO ORIGINALS, SHALL BE ACCEPTABLE. ONE (1) SUBMITTAL WILL BE

G. SUBMITTALS (CONTINUED)

RETURNED WITH REQUIRED REVISIONS (IF ANY) NOTED THEREON. THE REQUIRED REVISIONS (IF ANY) SHALL BE MADE AND THE CONTRACTOR SHALL RE-SUBMIT IN THE PREVIOUSLY DESCRIBED MANNER UNTIL THE CONTRACTOR RECEIVES A SET HAVING NO COMMENTS. AT THAT TIME THE CONTRACTOR SHALL SUBMIT IN THE FOLLOWING MANNER: THE BRIDGE DESIGN SECTION SHALL REQUIRE 15 (MINIMUM) SETS OF EACH SUBMITTAL FOR FINAL APPROVAL STAMPING AND DISTRIBUTION. THE BRIDGE DESIGN ENGINEER WILL DISTRIBUTE SEVEN (7) APPROVED SETS WITHIN THE DEPARTMENT AND RETURN EIGHT (8) SETS TO THE CONTRACTOR. (NOTE: 6 OF 8 SETS SHOULD BE SET ASIDE FOR FUTURE O & M MANUALS REQUIRED AT THE END OF THE PROJECT). ANY COMMENTS ON SUBMITTALS ARE NOT INTENDED TO RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. APPROVAL OF SUBMITTALS AND DRAWINGS DO NOT IMPLY THAT THE EQUIPMENT AND MATERIALS DESCRIBED IS COMPLETE, CAN BE CONSTRUCTED OR INSTALLED, WILL OPERATE SUCCESSFULLY, OR WILL COORDINATE WITH EXISTING OR OTHER EQUIPMENT SPECIFIED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF THE WORK, PERFORMING THE WORK IN A SAFE AND SATISFACTORY MANNER, AND FOR SATISFACTORY INSTALLATION AND OPERATION OF EQUIPMENT. NO DIRECT PAYMENT SHALL BE MADE FOR FURNISHING SUBMITTALS, SHOP DRAWINGS, SAMPLES, ETC. AS REQUIRED HEREIN. NO MATERIAL SHALL BE ORDERED AND NO FABRICATION OR INSTALLATION OF EQUIPMENT SHALL BEGIN UNTIL THE RELATED SUBMITTAL HAS BEEN APPROVED BY THE BRIDGE DESIGN ENGINEER AND A COPY HAS BEEN RECEIVED BY THE PROJECT ENGINEER.

EQUIPMENT TO SUBMIT ON:

THE CONTRACTOR SHALL FURNISH, TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL, BROCHURES AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ALL ELECTRICAL EQUIPMENT LISTED BELOW BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE EQUIPMENT LISTED BELOW DOES NOT INCLUDE ALL MATERIAL THAT THE CONTRACTOR SHALL PROVIDE.

NAVIGATION LIGHTS, GROUND RODS, GROUND CLAMPS, EXOTHERMIC WELDS, LIGHTING CONTROLLERS, PHOTOCELLS AND RECEPTACLES, CIRCUIT BREAKERS, TERMINAL LUGS, SPLICE AND TAP CONNECTORS, CONTACTORS, SURGE ARRESTORS, JUNCTION BOXES, TERMINAL BLOCKS, CONDUITS, CONDUCTORS, CONDUIT CLAMPS, FASTENERS, CONCRETE ANCHORING SYSTEMS, FABRICATED SUPPORTS, MOUNTING STRUCTURES, AND HARDWARE.

NOTE: AT ANY TIME AND AT NO DIRECT PAYMENT, BOTH THE BRIDGE DESIGN AND/OR PROJECT ENGINEER CAN REQUEST ADDITIONAL EQUIPMENT SUBMITTALS ON ITEMS NOT LISTED ABOVE AND REQUEST RANDOM TEST SAMPLES FROM THE MATERIALS, EQUIPMENT, AND APPARATUS FURNISHED.

H. RECORD "AS-BUILT" DRAWINGS

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL FURNISH, TO THE BRIDGE DESIGN ENGINEER, ONE (1) FULL SIZE COPY OF THE COMPLETE SET OF PLANS REFLECTING THE FINAL "AS-BUILT" CONDITION OF THE PROJECT. DRAWINGS SHALL BE "PROJECT ENGINEER CERTIFIED" (I.E. SIGNED AND DATED BY PROJECT ENGINEER AS AN OFFICIAL SET). DRAWINGS SHALL BE 22" X 34" (MIN.), BE BOND MATERIAL, AND INCLUDE A COMPLETE EQUIPMENT LIST INDICATING MANUFACTURER'S NAME AND CATALOG OR SHOP DRAWING NUMBER FOR EACH PIECE OF EQUIPMENT FURNISHED. DRAWINGS SHALL SHOW EXACT LOCATIONS OF ALL INSTALLED EQUIPMENT SUCH AS SERVICE POINTS, METERING, NAVIGATION LIGHTS, CONDUIT, CONDUCTORS, LIGHTING CONTROLLERS, ROADWAY BORES, JUNCTION BOXES, PLAN OR FIELD CHANGES, ADDITIONAL NOTES, ETC. EVERY SHEET SHALL INCLUDE PROJECT NUMBER, PROJECT NAME, PARISH, CONTRACTOR'S NAME, DATE, AND PHONE NUMBER WITH AREA CODE. ONE (1) HALF SIZE COPY SHALL ALSO BE INCLUDED WITHIN EACH O & M MANUAL (SEE PARAGRAPH I "OPERATION AND MAINTENANCE MANUALS"). NOTE: PRIOR TO THE PROJECT ENGINEER CERTIFICATION, THE CONTRACTOR SHALL FURNISH ONE (1) FULL SET TO THE BRIDGE DESIGN ENGINEER FOR REVIEW AND SHALL BE RETURNED WITH REQUIRED REVISIONS (IF ANY) NOTED THEREON. THE CONTRACTOR SHALL MAKE THE REQUIRED REVISIONS, HAVE THE PROJECT ENGINEER CERTIFY ACCORDINGLY, AND THEN CREATE THE REQUIRED COPIES AS PREVIOUSLY DESCRIBED FOR FINAL APPROVAL AND DISTRIBUTION. NO DIRECT PAYMENT SHALL BE MADE FOR FURNISHING "AS-BUILT" DRAWINGS AS REQUIRED HEREIN.

I. OPERATION AND MAINTENANCE MANUALS

THE CONTRACTOR MUST SUBMIT TWO (2) O & M MANUALS WITH MATERIAL BOUND IN 3-RING BINDERS TO THE BRIDGE DESIGN ENGINEER FOR REVIEW. ONE (1) MANUAL WILL BE RETURNED TO THE CONTRACTOR WITH REQUIRED REVISIONS (IF ANY) NOTED THEREON. NOTE: WHEN BINDING MATERIAL IN EACH MANUAL, IF PERTINENT INFORMATION IS REMOVED WHEN BINDING, THE MANUALS WILL BE IMMEDIATELY RETURNED. THE CONTRACTOR SHALL MAKE CORRECTIONS AND RE-SUBMIT MANUALS AS PREVIOUSLY DESCRIBED UNTIL THE MANUALS ARE CONSIDERED SATISFACTORY BY THE BRIDGE DESIGN ENGINEER. THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SATISFACTORY MANUALS TO THE BRIDGE DESIGN ENGINEER FOR FINAL DISTRIBUTION. ALL MANUALS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: WARRANTIES AND GUARANTEES AS REQUIRED UNDER PARAGRAPH F, "APPROVED" SUBMITTALS, "APPROVED" FABRICATION DRAWINGS; MAINTENANCE AGREEMENTS (IF ANY); LUBRICATION SCHEDULES; RECOMMENDED LUBRICANTS; ELECTRICAL AND MECHANICAL EQUIPMENT AND APPARATUS BROCHURES (INCLUDING MAINTENANCE PROCEDURES; PARTS BREAKDOWNS, ETC.); HALF SIZE (11"X17") "PROJECT ENGINEER CERTIFIED" AS-BUILT DRAWINGS; TEST RECORDINGS; AND CERTIFICATION LETTERS.

J. CODES AND FEES

ALL MATERIAL FURNISHED AND ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH ALL NATIONAL AND STATE LAWS, CODES, RULES AND REGULATIONS. THE CONTRACTOR SHALL FILE FOR AND OBTAIN ALL NECESSARY STATE PERMITS. THE CONTRACTOR SHALL PAY ALL FEES FOR STATE PERMITS AND LICENSES REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

K. QUANTITIES

ESTIMATED QUANTITIES ARE GIVEN ON THE PLANS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS REQUIRED TO COMPUTE AND FURNISH THE QUANTITY OF MATERIALS NECESSARY TO COMPLETE THE WORK AS DETAILED ON THE PLANS AND SPECIFIED HEREIN.

L. IDENTIFICATION

EACH PIECE OF EQUIPMENT FURNISHED SHALL HAVE PERMANENT IDENTIFICATION PLATES AND SHALL BE IDENTIFIED AS FOLLOWS:

CONDUCTOR IDENTIFICATION: CONDUCTOR SIZES AWG #8 AND SMALLER SHALL BE IDENTIFIED BY COLOR CODING THEIR ENTIRE LENGTH. ALL OTHER CONDUCTORS SHALL HAVE INDIVIDUAL PERMANENT IDENTIFICATION AT EACH TERMINATION, SPLICE, TAP, JUNCTION BOX, AND EQUIPMENT ENCLOSURE.

NAVIGATION LIGHTING CONTROLLER: EACH CONTROLLER SHALL BE IDENTIFIED BY A LABEL LOCATED ON THE FRONT DOOR. LABELS SHALL BE A PERMANENTLY ENGRAVED PLATE ATTACHED TO THE FRONT DOOR. REFER TO SHEET E4 DETAIL "ELECTRICAL LABEL" FOR ADDITIONAL REQUIREMENTS. THE PLATE SHALL CLEARLY IDENTIFY THE COMPONENTS FUNCTION AND THE SPECIFIC EQUIPMENT SERVED.

CIRCUIT SCHEDULES: EACH CONTROLLER SHALL HAVE A TYPED CIRCUIT SCHEDULE PERMANENTLY MOUNTED INSIDE THE CONTROLLER. THE CIRCUIT SCHEDULE SHALL LIST WHICH LUMINAIRES ARE CONTROLLED BY EACH CIRCUIT BREAKER.

M. TESTS

THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO CONDUCT THE FOLLOWING TEST(S) IN ADDITION TO APPLICABLE TESTS SPECIFIED WITHIN SECTION 730.06 "SYSTEM TESTING" OF THE STANDARD SPECIFICATIONS:

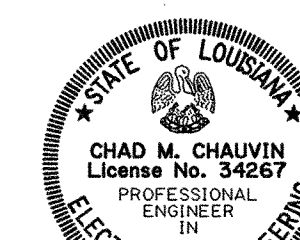
GROUND RESISTANCE TEST: THE CONTRACTOR SHALL PERFORM GROUND RESISTANCE TESTS OF EACH GROUNDING ELECTRODE AND THE GROUNDING SYSTEM. TESTS SHALL BE CONDUCTED USING A 3- OR 4-POINT FALL-OF-POTENTIAL METHOD AS DEFINED IEEE STANDARD #81 OR OTHER INDUSTRY APPROVED TEST METHOD. EACH GROUNDING ELECTRODE SHALL BE TESTED PRIOR TO CONNECTION TO THE GROUND SYSTEM. RESISTANCE-TO-GROUND MEASUREMENTS SHALL NOT EXCEED 25 OHMS. GROUND RESISTANCE MEASUREMENTS SHALL BE CONDUCTED IN NORMALLY DRY CONDITIONS NOT LESS THAN 48 HOURS AFTER THE LATEST RAINFALL. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE PROJECT ENGINEER AND THE DEPARTMENT'S ELECTRICAL INSPECTOR. THE CONTRACTOR SHALL DOCUMENT ALL TEST RECORDINGS AND PROVIDE A COPY OF ALL TESTS REPORTS TO THE PROJECT ENGINEER AND ELECTRICAL INSPECTOR UPON COMPLETION.

N. CLEAN-UP AND MAINTENANCE OF THE WORK AREAS

THE CONTRACTOR SHALL NOT ALLOW THE ACCUMULATION OF SCRAP, DEBRIS, WASTE, AND OTHER ITEMS NOT REQUIRED FOR CONSTRUCTION OF THIS WORK. THE CONTRACTOR SHALL RETAIN ALL STORED ITEMS IN AN ORDERLY ARRANGEMENT ALLOWING MAXIMUM ACCESS, NOT IMPEDING DRAINAGE OR TRAFFIC AND PROVIDING REQUIRED PROTECTION OF MATERIALS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL TOOLS, SURPLUS MATERIALS, EQUIPMENT, SCRAP, DEBRIS, AND WASTE FROM THE JOB SITE AND CLEAN ALL PAVED AREAS ON AND ADJACENT TO THE SITE SOILED BY CONSTRUCTION.

GENERAL NOTES:

1. IN ANY CASE WHERE THE DESIGN HEREIN DIFFERS FROM THE MINIMUM REQUIREMENTS SET DOWN BY THE NATIONAL ELECTRICAL CODE (N.E.C.), THE CONTRACTOR SHALL MAINTAIN THE HIGHER LEVEL.
2. THE EQUIPMENT LAYOUTS ARE DIAGRAMMATIC, AND THEY DO NOT SHOW EXACT EQUIPMENT LOCATIONS.
3. A BARE COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL UNDERGROUND CONDUIT.
4. UNLESS APPROVED BY THE BRIDGE DESIGN ENGINEER, FIELD WELDING WILL NOT BE PERMITTED; MOUNTING OF EQUIPMENT SHALL BE ACCOMPLISHED WITH BOLTED CONNECTION ONLY.
5. THE CONTRACTOR SHALL CLEARLY IDENTIFY THE LOAD SIDE CONDUCTORS FEEDING THE NAVIGATION LIGHTS ON THE NORTH AND SOUTH SIDE OF THE BRIDGE.
6. NAVIGATION LIGHT COUNTERWEIGHTS SHALL BE SIZED IN ACCORDANCE WITH THE NAVIGATION LIGHT MANUFACTURER'S RECOMMENDATION. THE TOP OF ALL COUNTERWEIGHT STEMS SHALL BE INSTALLED LOWER THAN THE TOP OF THE RAILING.



04-30-2009

SHEET NUMBER	179
DESIGNED	C.M. CHAUVIN
CHECKED	M. ARMINTOR
DRAWN	C.M. CHAUVIN
DATE	APRIL 2009
SHEET	1 OF 4
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
REVISION DESCRIPTION	
NO.	DATE
CAMINADA BAY BRIDGE ROUTE LA 1	
ELECTRICAL - NAVIGATION LIGHTS	
BRIDGE AND STRUCTURAL DESIGN	

E1

ELECTRICAL SPECIFICATIONS:

A. ORDINANCES, RULES, AND REGULATIONS

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF ALL BUILDING CODES, SANITARY CODES AND ORDINANCES IN FORCE IN THE LOCALITY IN WHICH THE WORK IS TO BE DONE. ALL MATERIALS AND CONSTRUCTION SHALL ALSO CONFORM TO THE RULES AND REGULATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), UNDERWRITER LABORATORIES (UL), NATIONAL ELECTRIC CODE (NEC), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), INSULATED CABLE ENGINEER'S ASSOCIATION (ICEA), NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), AMERICAN WIRE GAUGE (AWG), AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG), AND SECTION 730 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. THE CONTRACTOR SHALL PAY FOR ANY REQUIRED PERMITS AND INSPECTIONS.

B. CONDUIT SYSTEM

ALL CONDUITS SHALL BE INSTALLED CONCEALED UNLESS NOTED OTHERWISE ON THE PLANS. UNDERGROUND CONDUITS SHALL BE INSTALLED 3'-0" BELOW GRADE UNLESS SPECIFIED OTHERWISE. MARKER TAPE SHALL BE PLACED ABOVE ALL UNDERGROUND CONDUITS CARRYING ELECTRICAL CONDUCTORS. SEE SHEET E4 FOR MARKER TAPE SPECIFICATIONS. ALL CONDUITS WITHIN TRENCHES SHALL BE HAND PLACED INSIDE THE TRENCH, AND THE TRENCH BACKFILLED TO THE SATISFACTION OF THE ENGINEER ON THE SAME DAY. WHEN POSSIBLE, MULTIPLE CONDUIT RUNS SHALL BE PLACED IN A COMMON TRENCH.

PVC COATED GALVANIZED RIGID STEEL CONDUIT, FITTINGS, EXPANSION JOINTS, CLAMPS, SUPPORTS, AND MOUNTING HARDWARE

PVC COATED CONDUIT, FITTINGS, JUNCTION/PULL BOXES, EXPANSION JOINTS, CLAMPS, SUPPORTS, AND MOUNTING HARDWARE SHALL BE THOMAS & BETTS "OCAL-BLUE", PLASTI-BOND "REDH2OT", PERMA-COTE, OR KOR-KAP. ALL CONDUIT AND ASSOCIATED EQUIPMENT SHALL BE SUPPLIED BY THE SAME MANUFACTURER, BE UL LISTED AND BE INSTALLED IN THE LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. ALL CONDUIT AND ASSOCIATED EQUIPMENT SHALL HAVE LEGIBLE AND PERMANENT IDENTIFICATION MARKINGS FOR TYPE AND MANUFACTURER AND BE TRACEABLE TO LOCATION OF PLANT AND DATE MANUFACTURED. ALL EQUIPMENT CONTAINING CONDUCTORS SHALL BE RATED FOR USE WITH CONDUCTORS HAVING 90°C MINIMUM INSULATION RATING. ALL HARDWARE SHALL BE CORROSION RESISTANT TYPE 316 STAINLESS STEEL.

NON-METALLIC CONDUITS (NM) AND FITTINGS

NON-METALLIC CONDUIT AND FITTINGS SHALL BE EITHER SCHEDULE 40 OR 80 PVC OR SCHEDULE 40 OR 80 HDPE AND BE INSTALLED IN LOCATIONS AS INDICATED ON THE PLANS. NON-METALLIC CONDUIT AND FITTINGS SHALL BE UL LISTED, SUNLIGHT RESISTANT, AND CONFORM TO CURRENT UL-651, UL-514, NEMA TC-2, NEMA TC-3 AND NEC ARTICLES 352 AND 353. CONDUIT AND FITTINGS SHALL BE IDENTIFIED FOR TYPE AND MANUFACTURER AND SHALL BE TRACEABLE TO LOCATION OF PLANT AND DATE MANUFACTURED. THE MARKINGS SHALL BE LEGIBLE AND PERMANENT. CONDUIT SHALL BE RATED FOR USE WITH 90°C CONDUCTORS. (NM) CONDUITS SHALL NOT BE INSTALLED ABOVE GROUND OR SLABS, SHALL BE INSTALLED 4 FEET (MINIMUM) FROM SHOULDERS, AND BURIED 3'-0" MINIMUM UNDERGROUND UNLESS INSTALLED UNDER CONCRETE SLABS. WITH THE EXCEPTION OF PVC COATED RIGID STEEL SECTIONS, UNDERGROUND CONDUITS SHALL HAVE NO VERTICAL BENDS OR RUNS.

LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) AND FITTINGS

LFMC SHALL CONFORM TO CURRENT UL-360 AND NEC ARTICLE 350, BE INSTALLED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER. LFMC SHALL BE CONSTRUCTED OF A HOT-DIPPED GALVANIZED, CONTINUOUS INTERLOCKING STEEL STRIP HAVING A HEAVY COATING OF ZINC HELICALLY FORMED INTO A METAL CORE. LFMC SHALL HAVE A GRAY THERMOPLASTIC JACKET EXTRUDED OVER THE METAL CORE THAT IS MOISTURE RESISTANT [TEMPERATURE RANGE -30(-22)°C(°F)≤80(176)], OIL RESISTANT [TEMPERATURE RANGE 60°C(140°F)], AND UV SUNLIGHT RESISTANT. THE THERMOPLASTIC JACKET SHALL HAVE MINIMUM PRINTINGS WHICH IDENTIFY MANUFACTURER'S NAME, PRODUCT NAME, SIZE, UL, CSA, AND SUNLIGHT AND OIL RESISTIVITY. LFMC SHALL ACCEPT STANDARD LFMC FITTINGS HAVING INSULATED THROATS AND BE CONSTRUCTED SUCH THAT THE MATERIALS FORMING THE CONDUIT/RACEWAY WILL SEAL OUT, BUT NOT LIMITED TO, WEATHER, WATER, LIQUIDS, ABRASIVES, ALCOHOL, COOLANTS, CORROSIVE FUMES AND GASES, DIRT, GREASE, MINERAL ACIDS, NON-CONCENTRATED FIXED ALKALINES, PETROLEUM OILS, AND SALT AIR AND SPRAY. LFMC SHALL HAVE SMOOTH METAL INTERIORS FOR EASY WIRE PULLING, BE APPROVED FOR USE EXPOSED, CONCEALED, DIRECT BURIED, OR CONCRETE ENCASED. WHEN LFMC IS REQUIRED IT SHALL HAVE LENGTHS OF 3'-0" (MAX.).

C. WIRE AND CABLE

UNLESS NOTED OTHERWISE IN THE PLANS, ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS AND SHALL BE CLASS B STRANDED COPPER HAVING 600 VOLT RATED TYPE XHHW-2 INSULATION CONFORMING TO ICEA STANDARD S-95-658, IEEE 1202, FEDERAL SPECIFICATION A-A-59544, NEMA WC-70, AND THE NEC FOR CROSS-LINKED THERMOSETTING POLYETHYLENE INSULATED WIRE AND POWER CABLE. WHERE CONDUCTORS ARE CONNECTED TO, OR INSTALLED NEAR HEAT PRODUCING EQUIPMENT, THE CONDUCTOR INSULATION FOR THE AFFECTED CONDUCTORS SHALL HAVE A TEMPERATURE RATING IN EXCESS OF THE TEMPERATURE EXPECTED TO BE ENCOUNTERED.

D. WIRE CONNECTIONS AND DEVICES

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY CONNECTIONS TO ALL EQUIPMENT REQUIRING ELECTRICAL SERVICE. UNLESS NOTED OTHERWISE, ALL SPLICES, JOINTS, TAPS, AND CONNECTIONS SHALL BE MADE IN JUNCTION BOXES OR EQUIPMENT ENCLOSURES. SPLICES WILL NOT BE PERMITTED IN CONDUIT BODIES OR RACEWAYS. SPLICES IN AERIAL CABLES SHALL BE MADE WITH INSULATED COMPRESSION TYPE CONNECTORS. SCREW-ON TYPE WIRE NUTS ARE PROHIBITED. SERVICE AND FEEDER CONDUCTORS SHALL BE INSTALLED THEIR ENTIRE LENGTH WITHOUT SPLICES. WHEN TAPS ARE REQUIRED FROM FEEDER OR SERVICE CONDUCTORS, THE TAPS SHALL BE MADE WITHOUT CUTTING THE MAIN CONDUCTORS. TAPS SHALL BE MADE WITH PARALLEL TYPE GUTTER TAP CONNECTORS HAVING INSULATED COVERS.

E. SUPPORTING DEVICES, JUNCTION BOXES, AND MOUNTING HARDWARE

EQUIPMENT SUPPORTS:

ALL SUPPORTS SHALL BE SUITABLE FOR THE ENVIRONMENT AND SHALL BE CAPABLE OF SUPPORTING A MINIMUM OF FIVE (5) TIMES THE ACTUAL LOAD OF THE EQUIPMENT ALONG WITH THE ANY ADDITIONAL LOADS LIKELY TO BE ENCOUNTERED.

FABRICATED SUPPORTS:

EQUIPMENT SUPPORTS SHALL BE SUITABLE FOR THE ENVIRONMENT AND SHALL BE CAPABLE OF SUPPORTING A MINIMUM OF FIVE (5) TIMES THE ACTUAL LOAD OF THE EQUIPMENT ALONG WITH THE ANY ADDITIONAL LOADS LIKELY TO BE ENCOUNTERED. FABRICATED SUPPORTS FOR EQUIPMENT, WHEN APPLICABLE, SHALL BE SUBMITTED FOR APPROVAL BEFORE FABRICATION AND INSTALLATION.

CONDUIT SUPPORTS

CONDUCTORS IN HORIZONTAL AND VERTICAL RACEWAYS (BOTH RIGID AND FLEXIBLE) SHALL BE SUPPORTED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

STRUCTURE MOUNTED JUNCTION/PULL BOXES:

UNLESS DIRECTED OTHERWISE IN THE PLANS, ALL STRUCTURE MOUNTED JUNCTION/PULL BOXES SHALL BE UL LISTED NEMA 4X STAINLESS STEEL, WITH NEOPRENE GASKET, MOUNTING FEET, CONTINUOUS HINGED DOOR, AND INTERNAL BACKPLATE. BOX SHALL BE A GENERAL PURPOSE ENCLOSURE SUITABLE FOR BOTH INDOOR AND OUTDOOR APPLICATIONS OR WHERE SUBJECT TO RAIN, DRIPPING, SPLASHING, OR HOSE DIRECTED WATER. ALL HARDWARE SHALL BE AS DESCRIBED IN PARAGRAPH E "MOUNTING HARDWARE, FASTENERS, NUTS, BOLTS, AND WASHERS". BOX SIZE SHALL BE AS INDICATED IN THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER.

MOUNTING HARDWARE, FASTENERS, NUTS, BOLTS, AND WASHERS:

UNLESS DIRECTED OTHERWISE IN THE PLANS, ALL MOUNTING HARDWARE, FASTENERS, NUTS, BOLTS, AND WASHERS SHALL BE MARINE DUTY STAINLESS STEEL WITH A MINIMUM 30,000 P.S.I. YIELD STRENGTH. ANCHORS USED FOR MOUNTING EQUIPMENT TO CONCRETE STRUCTURES SHALL ONLY BE AS DESCRIBED BY CURRENT LADOTD MATERIALS LAB Q.P.L. NO. 40 "CONCRETE ANCHOR SYSTEMS".

F. GROUNDING AND BONDING

THE CONTRACTOR SHALL GROUND AND BOND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. THE NEUTRAL CONDUCTOR BAR AND GROUND BAR SHALL BE BONDED ONLY AT THE LIGHTING CONTROLLER.

GROUNDING ELECTRODES:

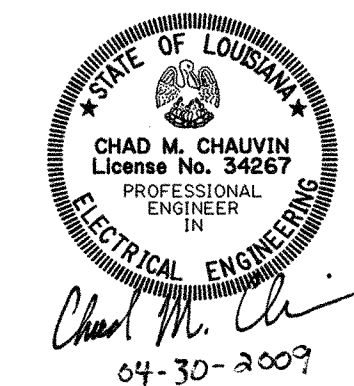
GROUNDING ELECTRODES SHALL BE 3/4" DIAMETER X 10' (MINIMUM) RODS CONSTRUCTED FROM NICKEL-SEALED HIGH QUALITY CARBON STEEL HAVING A CONSISTENT COVERING OF ELECTROLYTICALLY APPLIED COPPER (I.E. COPPER BONDED OR COPPER CLAD). ALL GROUNDING ELECTRODES SHALL BE UL LISTED.

GROUNDING ELECTRODE CONDUCTORS:

UNLESS NOTED OTHERWISE ON THE PLANS, GROUNDING ELECTRODE CONDUCTORS UTILIZED WITH BONDING GROUNDING ELECTRODES SHALL BE #2 SOLID BARE COPPER MINIMUM. WHEN CONNECTING GROUNDING ELECTRODE CONDUCTORS TO GROUNDING ELECTRODES, THE CONTRACTOR SHALL USE EXOTHERMIC WELDS ("CADWELD" OR APPROVED EQUAL). REFER TO MANUFACTURER'S SPECIFIC INSTRUCTIONS AND MOLDS FOR EACH WELD TO PROVIDE PERMANENT, LOW-RESISTANCE LIFETIME CONNECTIONS THAT WILL NOT LOOSEN OR CORRODE. WHEN MULTIPLE GROUND ELECTRODES ARE REQUIRED, GROUNDING ELECTRODE CONDUCTORS MAY BE CUT PROVIDED AN APPROPRIATE EXOTHERMIC WELD IS UTILIZED TO ATTACH THE GROUNDING ELECTRODE CONDUCTOR TO EACH GROUNDING ELECTRODE. ALL GROUNDING ELECTRODE CONDUCTORS SHALL BE INSTALLED UNBROKEN FROM THE GROUNDING ELECTRODES TO THE RESPECTIVE SERVICE EQUIPMENT (I.E. SERVICE DISCONNECT, SERVICE PANEL, LIGHTING CONTROLLER, TRANSFORMER SECONDARIES, ETC.). ALL EXPOSED GROUNDING ELECTRODE CONDUCTOR DROPS FROM ENCLOSURES TO GROUNDING ELECTRODES OUTSIDE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT (MINIMUM).

EQUIPMENT GROUNDING CONDUCTORS:

UNLESS NOTED OTHERWISE ON THE PLANS, EQUIPMENT GROUNDING CONDUCTORS INSTALLED IN NONMETALLIC CONDUITS SHALL BE BARE, SOLID, COPPER CONDUCTORS. ALL OTHER EQUIPMENT GROUNDING CONDUCTORS INSTALLED IN CONDUIT SHALL BE STRANDED, COPPER CONDUCTORS, WITH GREEN INSULATION OF TYPE AS INDICATED IN THE PLANS.

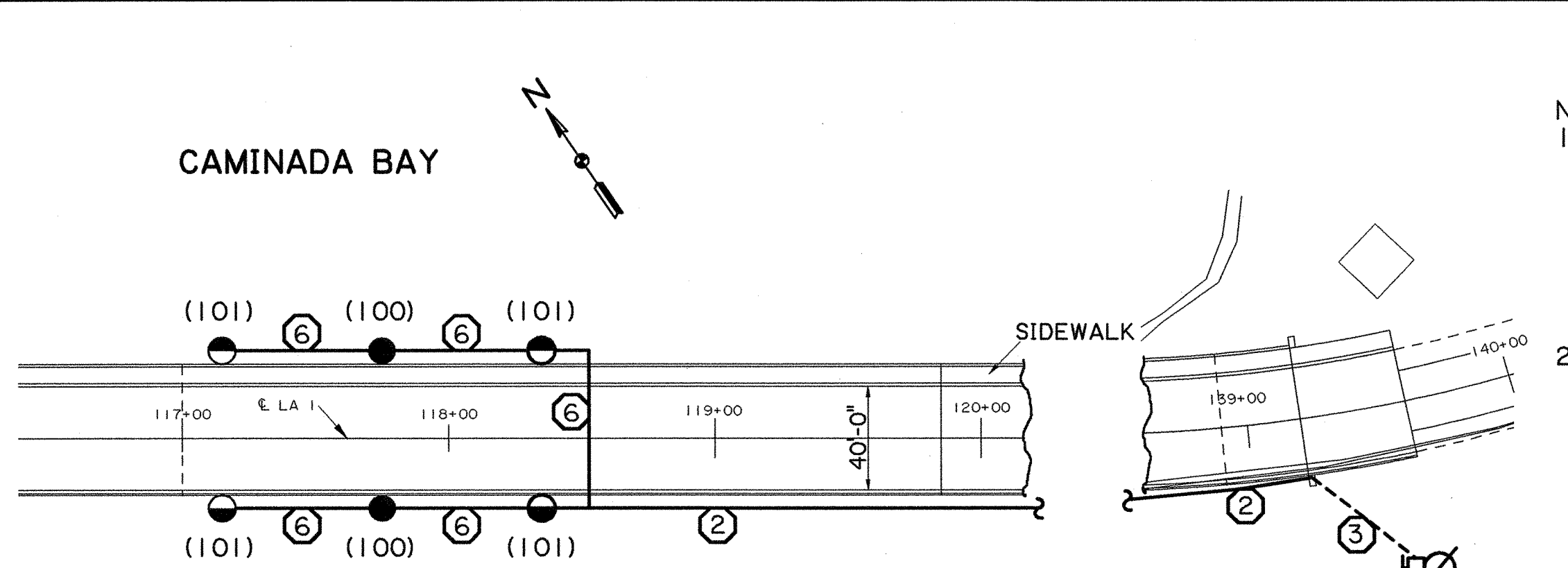


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FINAL PLANS

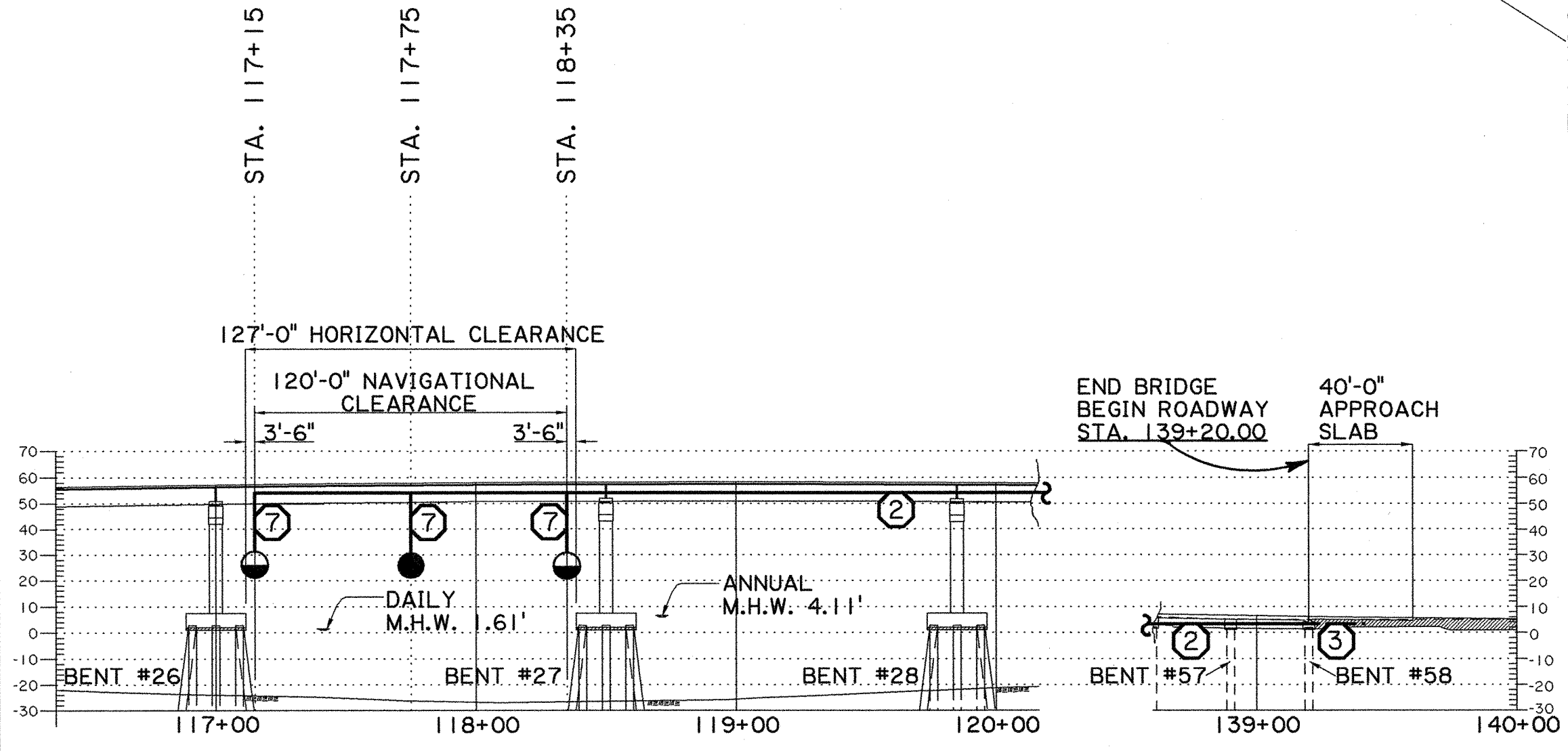
SHEET NUMBER 179a	
JEFFERSON	064-01-0040
C.M. CHAUVIN	APRIL 2009
M. ARMENTOR	2 OF 4
RESIGNED	DATE
CHECKED	SHEET
DETAILER	BY
CHECKED	NO.
CHECKED	DATE
CHECKED	REVISION DESCRIPTION
CAMINADA BAY BRIDGE ROUTE LA 1	
ELECTRICAL - NAVIGATION LIGHTS	
BRIDGE AND STRUCTURAL DESIGN	

E2



NOTE:
 1. INSTALL 2 - 3/4" Ø x 10' COPPER OR COPPER CLAD STEEL GROUND RODS HAVING BRONZE CLAMPS U.L. LISTED FOR DIRECT BURIAL. INSTALL GND. RODS 10' APART (MIN.). INSTALL #2 AWG BARE SOLID CU. GNDG. ELECT. CONDUCTOR THRU BRZ. CLAMPS ON GND. RODS, UNBROKEN, INTO NEW LTG. CONTROLLER. BOND SERVICE NEUT. & GNDG. ELECT. CONDUCTOR ONLY AT NEW LIGHTING CONTROLLER.
 2. EXPOSED GRDG. ELECTRODE WIRE DROPS FROM ELECT. EQUIP. TO GND. RODS OUTSIDE SHALL BE IN SBO PVC CONDUIT. INSTALL 1 OR 2 (SEE PLANS) 3/4"x10' GND. RODS W/#2 BARE SOLID CU GRDG. ELECTRODE WIRE; EXOTHERMIC WELDS (CADWELD OR APPROVED EQUAL).

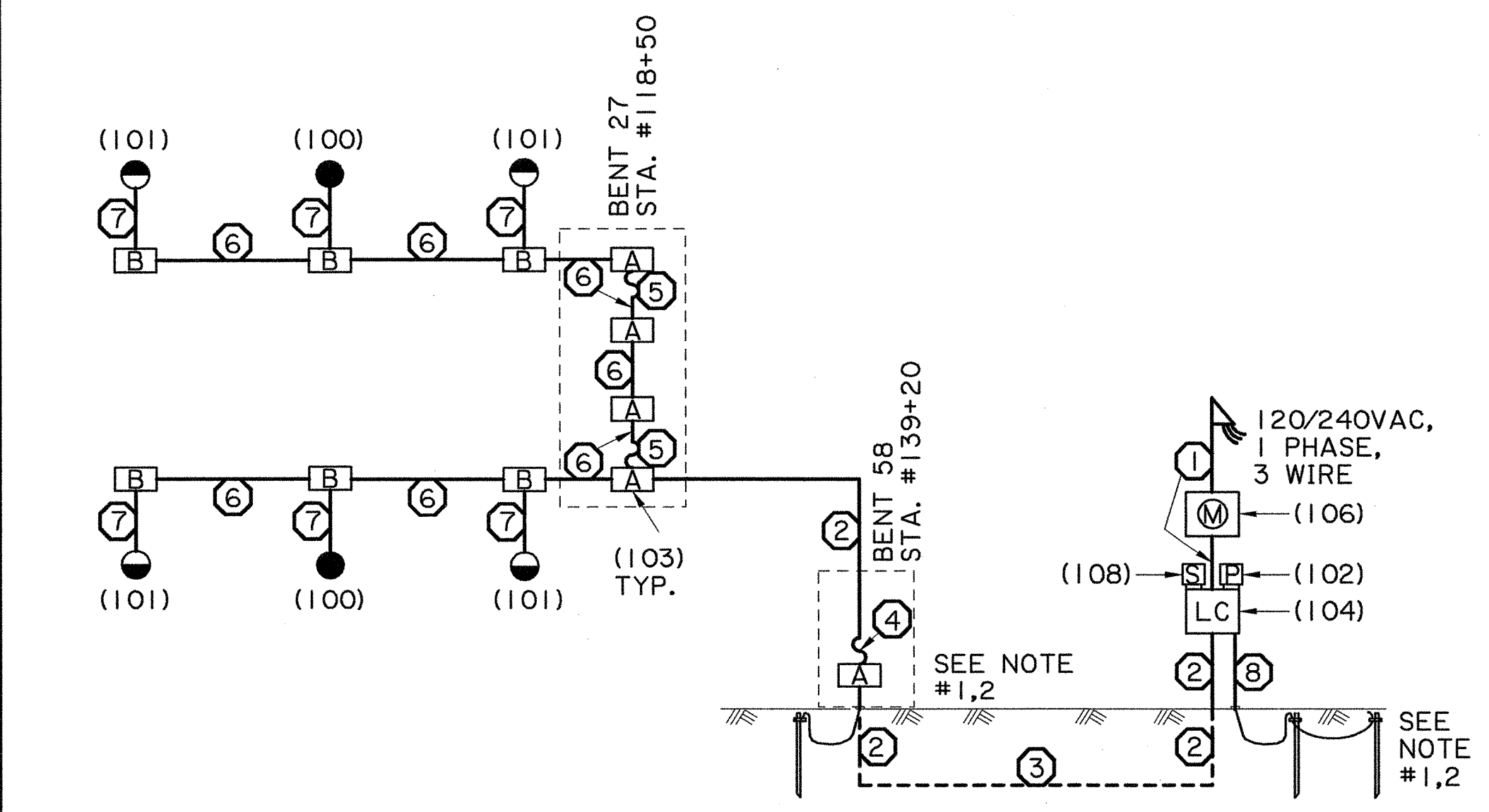
(EAST SIDE) SERVICE POLE WITH LIGHTING CONTROLLER @ STA. 139+50. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER AND THE UTILITY COMPANY REP. TO COORDINATE INSTALLATION OF THE ELECTRICAL SERVICE POINT.



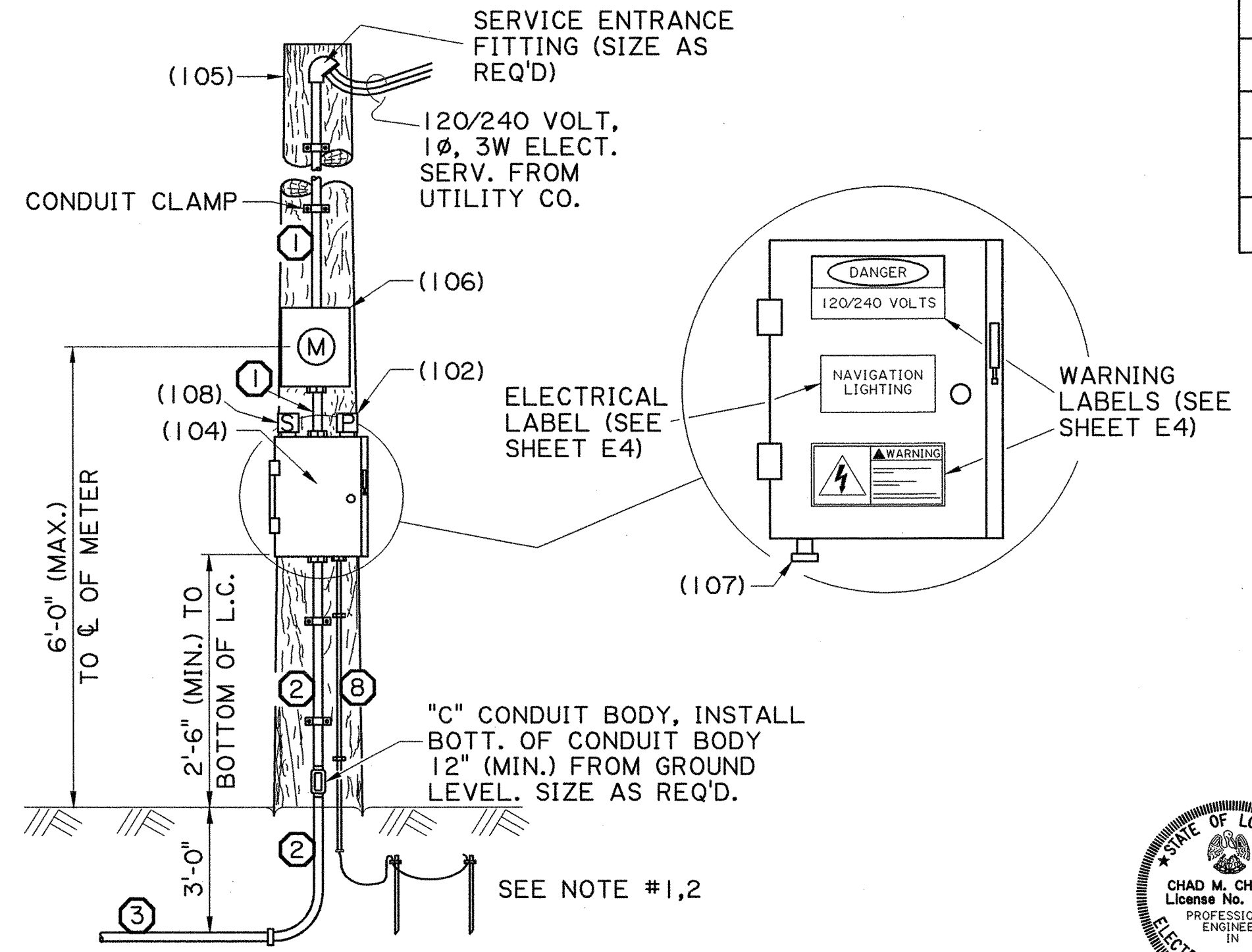
ELEVATION VIEW

NAVIGATIONAL LIGHTING	
AMPS	KVA
6.0	0.720

DESIGN LOAD @ 120VAC, 1 PHASE



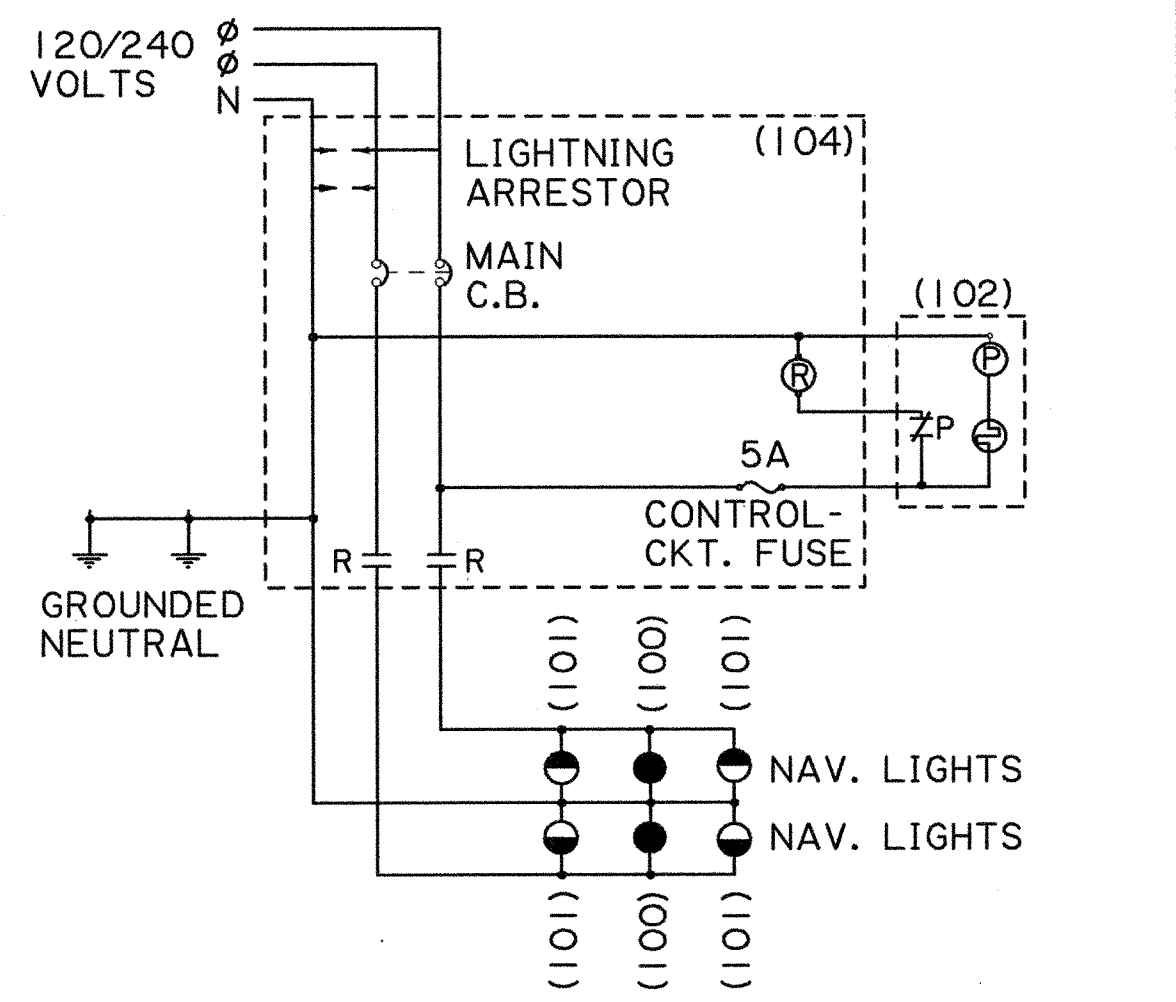
RISER DIAGRAM



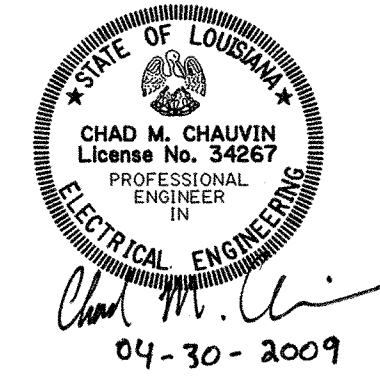
SERVICE POLE WITH LIGHTING CONTROLLER

EQUIPMENT LIST			
ITEM NO.	ITEM NAME	MANUFACTURER AND CAT NO.	DESCRIPTION
100	NAVIGATION LIGHT	B&B/ROADWAY #CC	DPLX. CENT. CHANN. MARINE SIG. LGT., CAST SILICON BRONZE HOUSING, PIVOTED MTG. BKT. W/ S.S. LOCK & CHAIN & S.S. STEMS, COUNTERWEIGHT, AUTO RELAY HOUSING WITH BREATH. & DRAIN, 360° GREEN FRES. LENS. 2-100W (MIN.), 120 VAC, A-19, CLR. LAMPS, 20KHS (EA.,MIN.) RATED LIFE. RECEPT., PORC., MED. BASE, 250 VAC, 660W, NICK.-PLATED BRASS SHELL.
101	NAVIGATION LIGHT	B&B/ROADWAY #CM	DPLX. CHANN. MARG. MARINE SIG. LGT., CAST SILICON BRONZE HOUSING, PIVOTED MTG. BKT. W/ S.S. LOCK & CHAIN & S.S. STEMS, COUNTERWEIGHT, AUTO RELAY HOUSING WITH BREATH. & DRAIN, 180° RED FRES. LENS. 2-100W (MIN.), 120 VAC, A-19, CLR. LAMPS, 20KHS (EA.,MIN.) RATED LIFE. RECEPT., PORC., MED. BASE, 250 VAC, 660W, NICK.-PLATED BRASS SHELL.
102	PHOTO-CONTROL	UNIMAR #18001-001 COOPER/CROUSE HINDS	OUTDOOR, FAA TYPE, CAST ALUMINUM HOUSING WITH 1" HUB, 15A PER POLE AT 120 VAC 60 HZ. CLOSE CONTACT AT 35 F.C. AND OPEN CONTACT AT 58 F.C. NOTE: ORIENT PHOTOCELL EYE IN NORTH DIRECTION.
103	JCT. BOX "A" JCT. BOX "B"	B-LINE #16166-4XSS6 #12126-4XSS6 SAGINAW C&E	NEMA 4X, 316 STAINLESS STEEL HOUSING W/S.S. HARDWARE, CONT. HINGES, U.L. LISTED, DRAIN HOLE AND GROUND LUG, 1-PIECE TERM. BLOCK ON MTG. PANEL. JCT. BOX "A" = 16"x16"x6"; JCT. BOX "B" = 12"x12"x6"
104	LIGHTING CONTROLLER	SQUARE D # 8903SMW81-VO2 -Y1532 EATON/CUT-HAMM.	COMBINATION LIGHTING CONTACTOR, 30A CONTACT RATING, 600 VAC, 3P, ELEC. HELD, 120 VAC COIL, 60 HZ; CIRCUIT BREAKER, 30A, 600 VAC, 3P, THER.-MAG., 22KAIC (MIN.); ENCL., NEMA 4X, S.S., PADLOCK PROVISIONS; SEC. SURGE ARR., 40KA (MIN.) SURGE AMPS, 1 PH., 3 W, 120/240 VAC; FUSE, 5 AMP, CLASS CC, FAST-ACTING (EQ. TO COOPER-BUSSMAN #KTK-R-5); FUSE HOLDER, 30 A, CLASS CC, 600 VAC, 1 POLE, COPPER BOX LUG TERMINALS (EQ. TO COOPER-BUSSMAN #BCG031B).
105	SERVICE POLE	COLFAX NORTH PACIFIC	CLASS 5, SOUTHERN PINE, CRESOTED OR PENTA TREATED, 12 LBS./FT ³ FINAL RETENTION, 35' LENGTH.
106	METERING EQUIPMENT	MILBANK SQUARE D	METER PROV. BY ELEC. UTILITY CO. CONTRACTOR SHALL SUPPLY ALL ADDITIONAL REQUIRED METERING EQUIPMENT.
107	DRAIN/BREATH	C-H #ECD15; #RE-21 SQUARE D #B075 APPELTON	DRAIN/BREATH, UNIVERSAL, 1/2" THREADS, STAIN. STEEL; 3/4"-1/2" REDUCER BUSHING, THREADED; 3/4" THREADED HUB. INSTALL ON BOTTOM OF ENCLOSURE.
108	SURGE ARRESTOR	SQUARE D #SDSA1175 EATON/CUT-HAMM.	240 VAC RATED PHASE TO GND. (MAX.) SURGE ARRESTOR, 50/60 HZ, 40kA/Ø (MAX.) SURGE AMPS, THERMAL FUSING, LED STATUS INDICATOR, U.L. LISTED.

CONDUIT & WIRE SCHEDULE			
CONDUIT NO.	CONDUIT SIZE & TYPE	LENGTH	# WIRES & WIRE SIZE
1	1" PVC COATED RIGID CONDUIT	20'	3 #2
2	1" PVC COATED RIGID CONDUIT	2250'	4 #4
3	1" SCHEDULE 80 PVC	60'	4 #4
4	1" LIQ. TIGHT FLEX. METALLIC	5'	4 #4
5	1" LIQ. TIGHT FLEX. METALLIC	10'	3 #4
6	1" PVC COATED RIGID CONDUIT	350'	3 #4
7	TYPE SOOW SERVICE CORD. (100) & (101) TO JUNCTION BOX.	AS NEEDED	3 #10
8	3/4" SCHEDULE 80 PVC	AS NEEDED	1 #2 BARE



LIGHTING CONTROLLER SCHEMATIC



SHEET NUMBER 179b

PROJECT 064-01-0040

DATE APRIL 2009

SHEET 3 OF 4

NO. DATE

REVISION DESCRIPTION

BY

JEFFERSON

C.M. CHAUVIN (REGISTERED)

M. ARMENTOR (CHECKED)

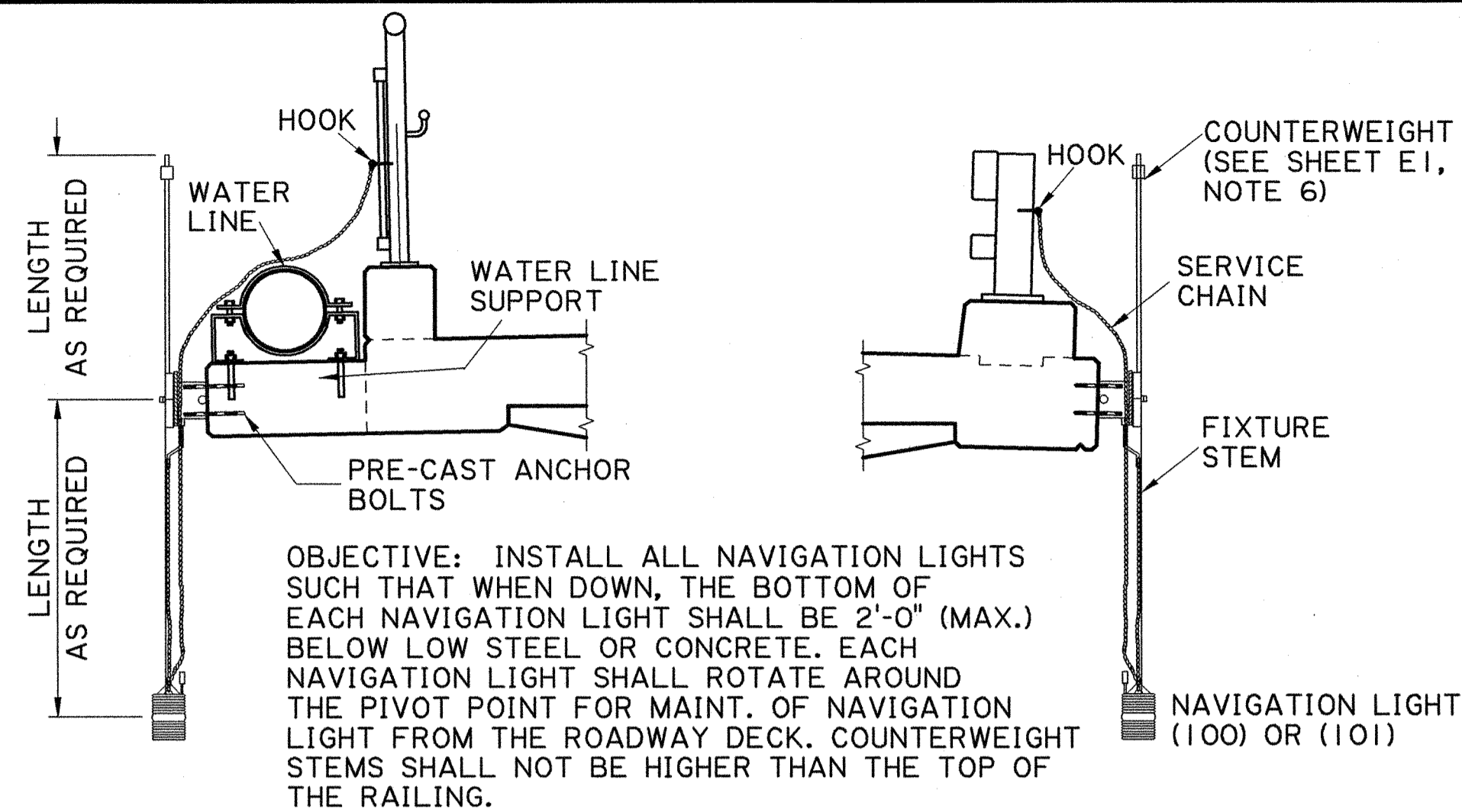
C.M. CHAUVIN (DETAILED)

M. ARMENTOR (CHECKED)

PARISH FEDERAL PROJECT

STATE PROJECT

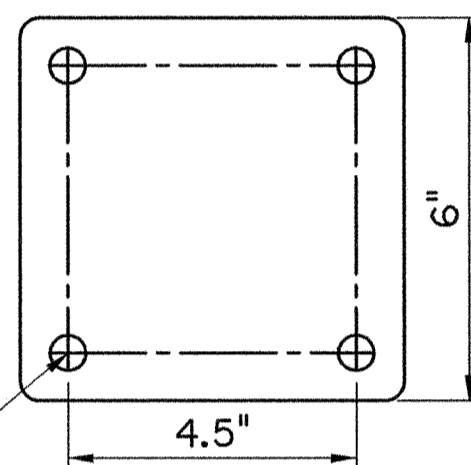
BRIDGE AND STRUCTURAL DESIGN



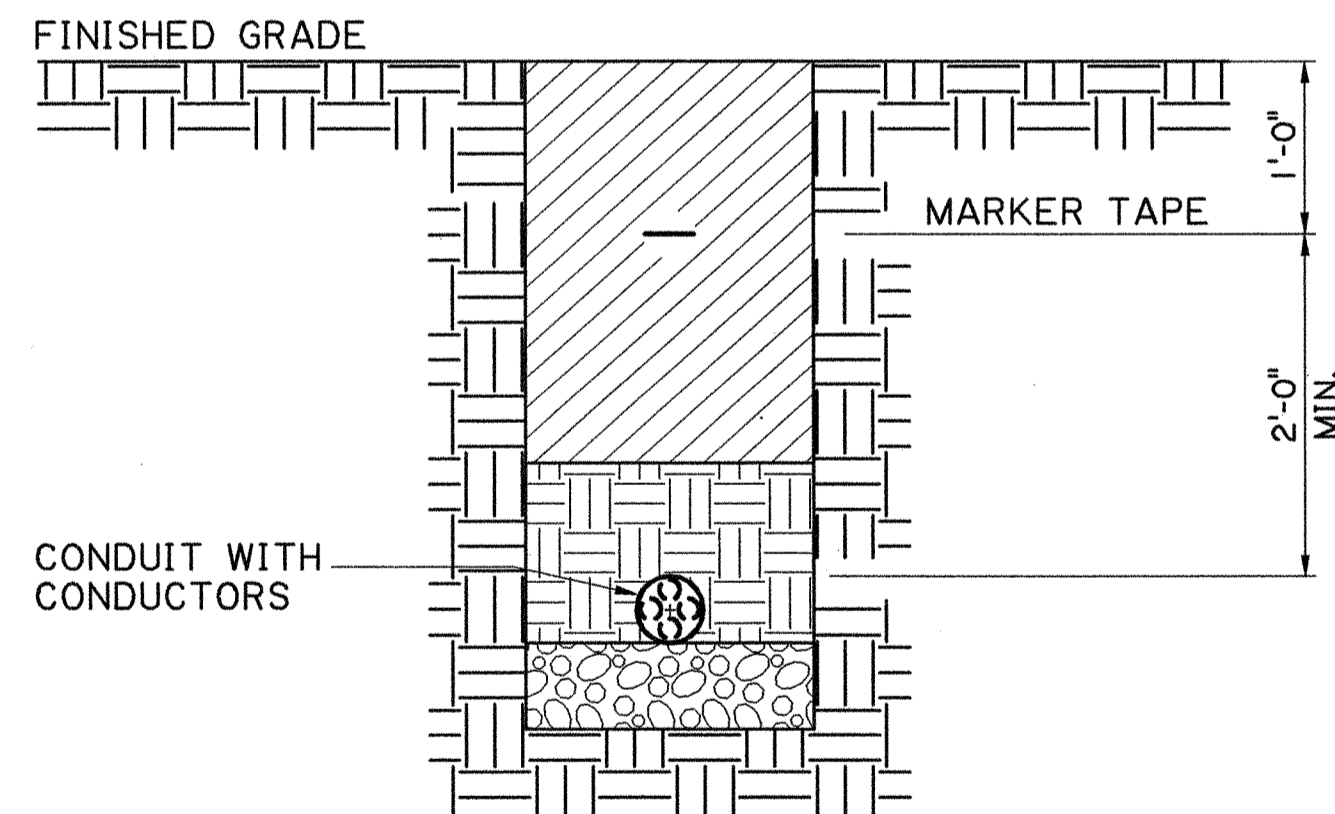
OBJECTIVE: INSTALL ALL NAVIGATION LIGHTS SUCH THAT WHEN DOWN, THE BOTTOM OF EACH NAVIGATION LIGHT SHALL BE 2'-0" (MAX.) BELOW LOW STEEL OR CONCRETE. EACH NAVIGATION LIGHT SHALL ROTATE AROUND THE PIVOT POINT FOR MAINT. OF NAVIGATION LIGHT FROM THE ROADWAY DECK. COUNTERWEIGHT STEMS SHALL NOT BE HIGHER THAN THE TOP OF THE RAILING.

NAVIGATION LIGHT MOUNTING DETAIL

12" x 1/2" Ø THREADED ANCHOR BOLTS (4 REQ'D PER BRACKET) TO BE PRE-CAST 6" DEEP IN CONCRETE. SEE STRUCTURAL SHEETS 167 AND 194 FOR ANCHOR BOLT LOCATIONS.

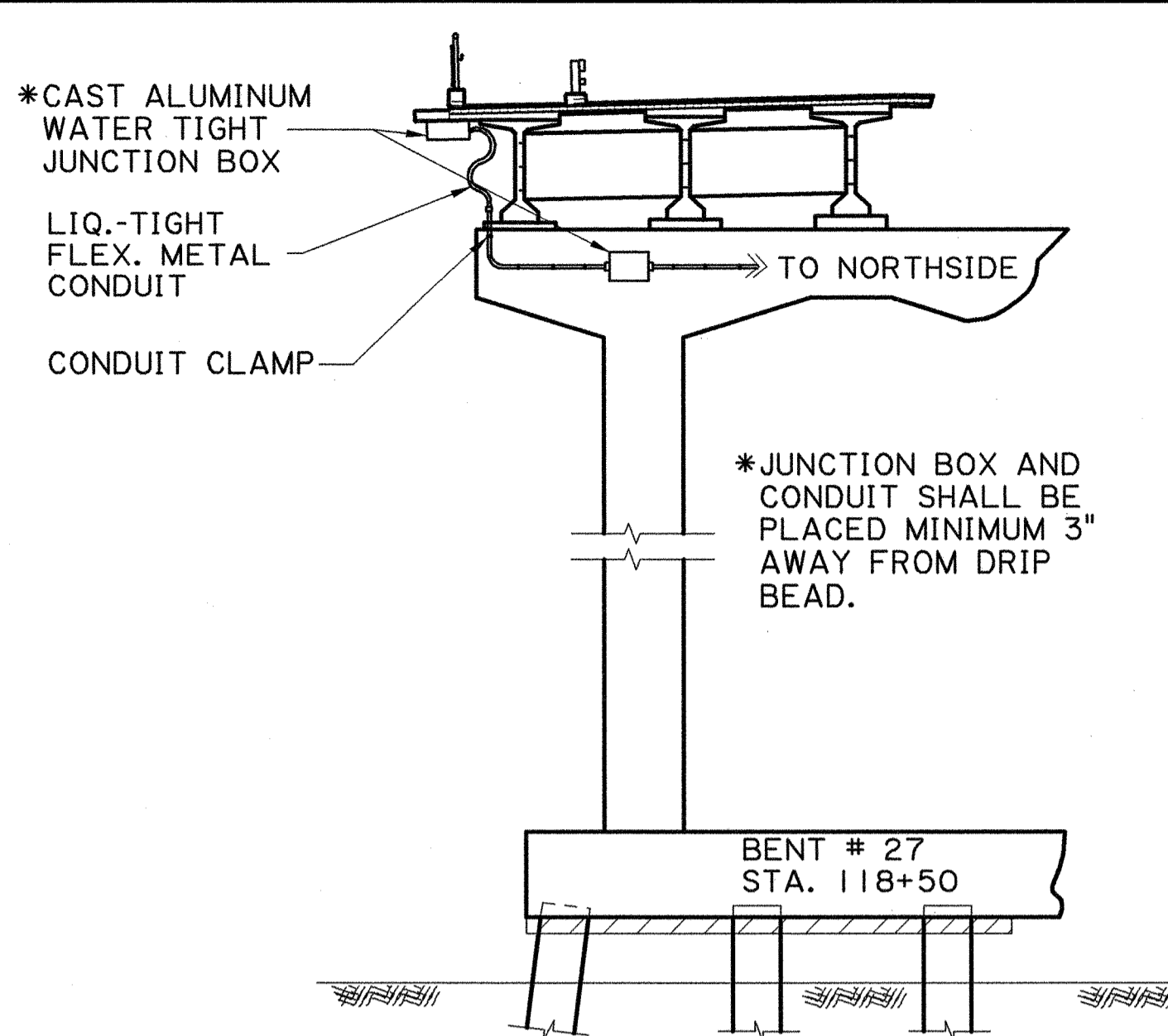


NAV. LIGHT MOUNTING PLATE DETAIL

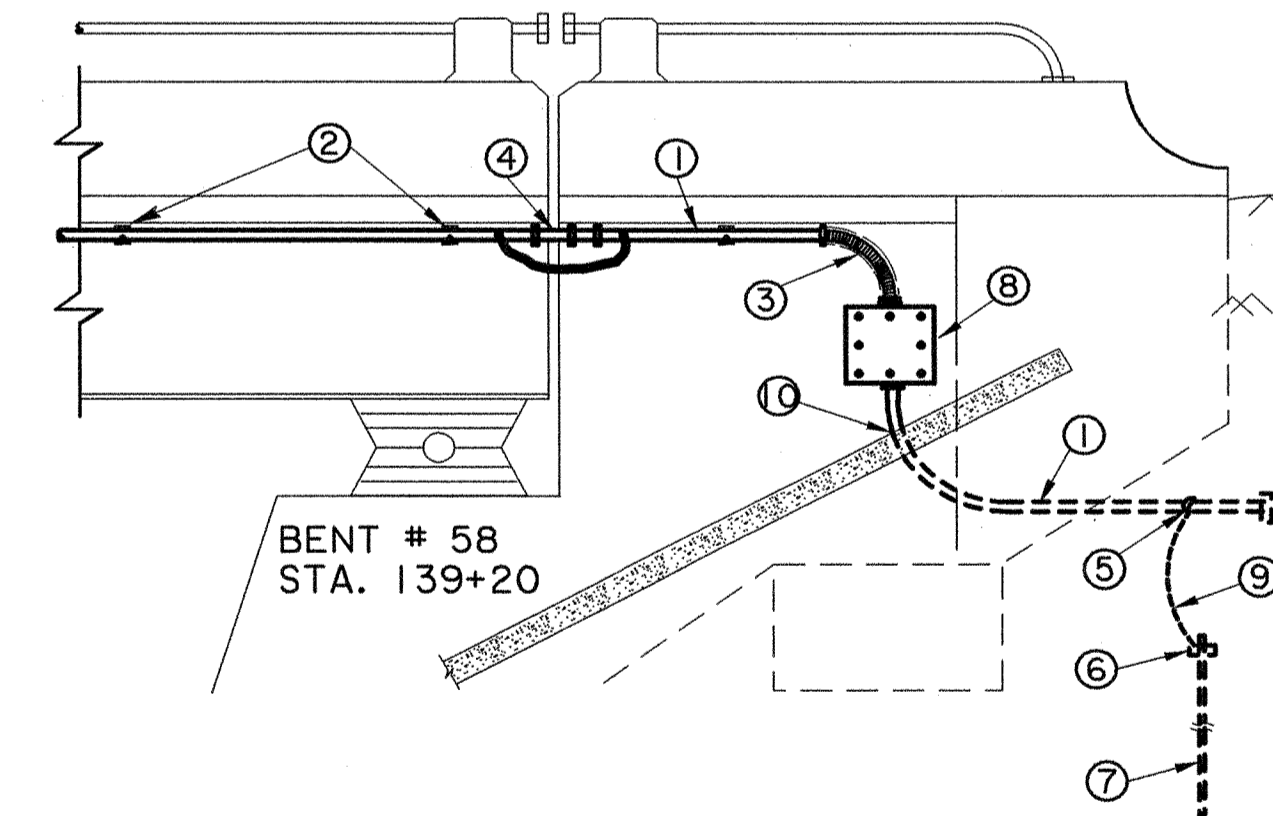


MARKER TAPE SHALL BE UDG. DETECTABLE-TYPE, CONSTRUCTED FROM A FLEXIBLE AND DURABLE LAMINATE HAVING HIGH-VISIBILITY. MARKER TAPE SHALL ENDURE TEMPERATURE RANGES FROM -60°F TO 250°F (MINIMUM). MARKER TAPE SHALL BE 3" WIDE, HAVE 5 MIL (MIN.) THICKNESS, AND BE PRINTED POLYETHYLENE WITH A METALLIC CORE (OR BACKING). MARKER TAPE SHALL PROVIDE FULL LATERAL COVERAGE, REMAIN CENTERED AND IN VERTICAL ALIGNMENT 12" BELOW FINISHED GRADE, AND BE CONTINUOUS OVER THE ENTIRE LENGTH. MARKER TAPE SHALL HAVE RED COLOR AS SPECIFIED BY A.W.P.A./U.L.C.C. UNIFORM COLOR CODE FOR BURIED ELECTRIC LINES AND HAVE TWO (2) CONT. AND PERMANENT LINES OF PRINTED WARNING AND LABELING IN BOLD, BLACK, BLOCK-TYPE INK OVER THE ENTIRE TAPE LENGTH. THE TOP LINE SHALL READ "CAUTION". BOTTOM LINE SHALL READ "BURIED ELECTRIC LINE BELOW". MARKER TAPE SHALL HAVE PROVEN UNDERGROUND DURABILITY, RESIST ACIDS, ALKALIS, WATER, AND BE MANUFACTURED FROM A HIGH QUALITY MATERIAL THAT MEETS OR EXCEEDS ALL INDUSTRY MINIMUM SPECIFICATIONS TO ASSURE LONG-TERM PERFORMANCE.

UNDERGROUND MARKER TAPE

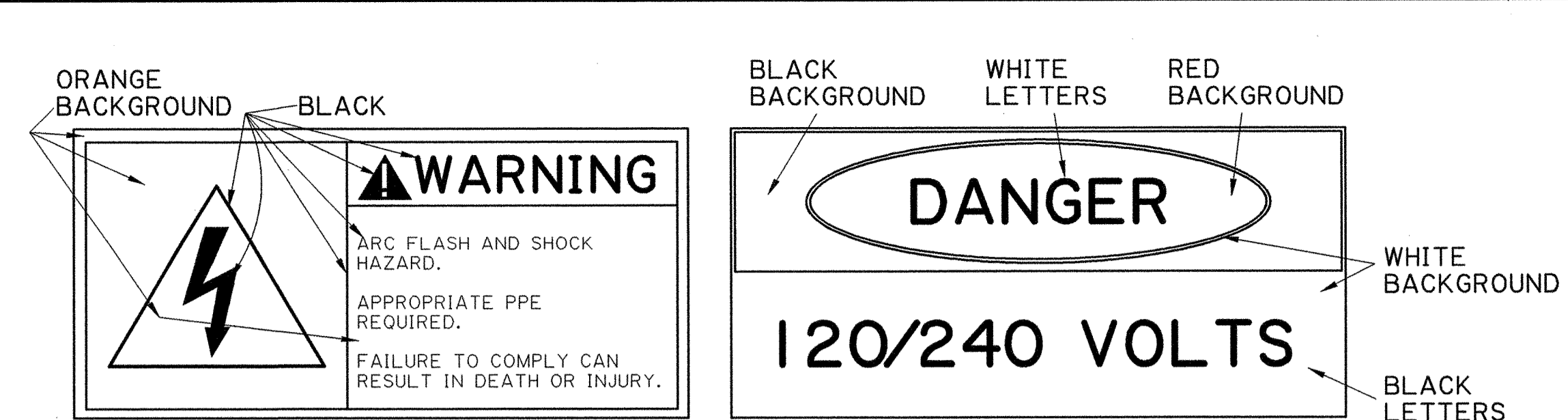


CONDUIT CROSSOVER TO NORTHSIDE



- ① PVC COATED RIGID CONDUIT (SIZE AS REQUIRED)
- ② CONDUIT CLAMP
- ③ LFMC CONDUIT WITH EXTERNAL BONDING JUMPER, 3' MAX LENGTH (SIZE AS REQUIRED)
- ④ EXPANSION FITTING WITH BONDING JUMPER
- ⑤ BRONZE GROUND CLAMP (U.L. LISTED FOR DIRECT BURIAL)
- ⑥ EXOTHERMIC WELD (CADCWELD OR APPROVED EQUAL; U.L. LISTED FOR DIRECT BURIAL)
- ⑦ 3/4" DIAMETER X 10' COPPER OR COPPER-CLAD GROUND ROD
- ⑧ STAINLESS STEEL JUNCTION BOX WITH TERMINAL BLOCK, UNION OR BOLT-ON HUBS AND ONE 1/8" Ø DRAIN HOLE, INSTALL 1/32" LEAD OR OTHER APPROVED SHIM MATERIAL BETWEEN BOX AND CONCRETE
- ⑨ #2 AWG BARE SOLID COPPER GROUNDING ELECTRODE CONDUCTOR
- ⑩ CUT AND PATCH CONCRETE

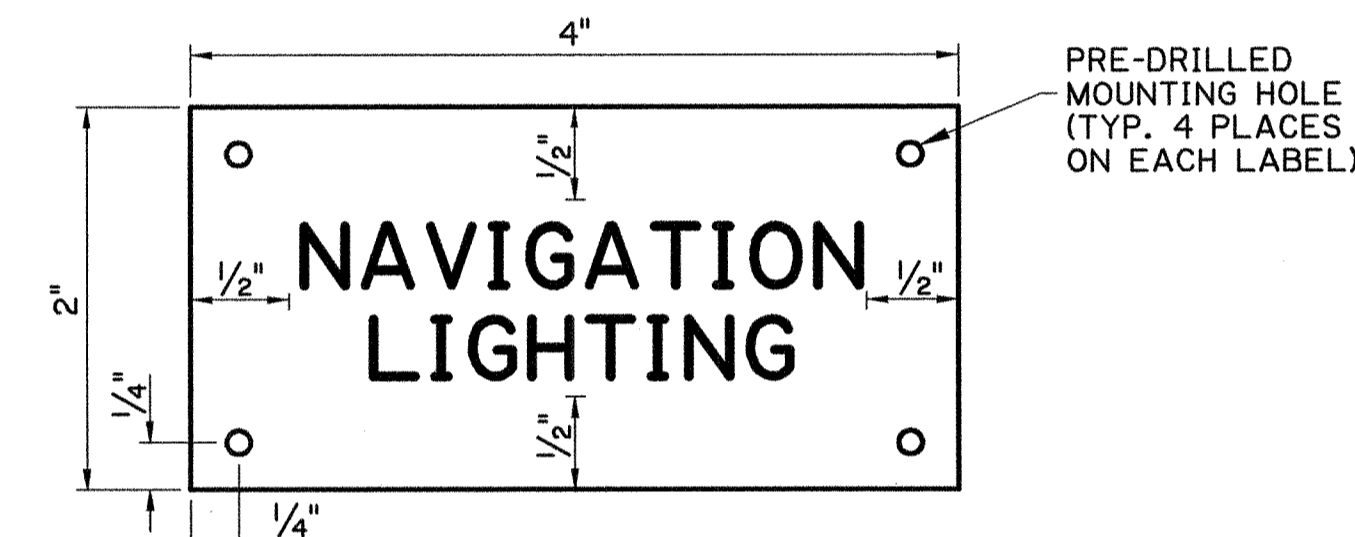
CONDUIT ON STRUCTURE



THE LIGHTING CONTROLLER AND ANY OTHER ENCLOSURES CONTAINING MOVABLE CONTACTS OR WIRE SIZE(S) #2 CU OR LARGER SHALL BE FIELD MARKED ACCORDING TO N.E.C. 110.16 TO WARN QUALIFIED PERSONNEL OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS AND DANGER.

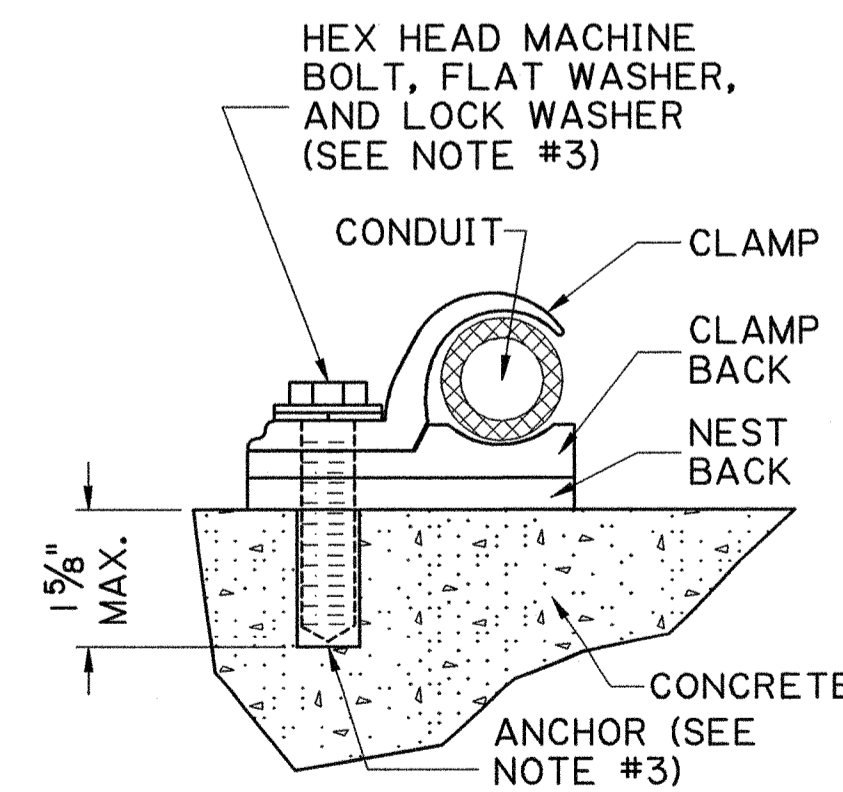
LABEL(S) SHALL BE MADE OF HIGH QUAL., SELF-ADHESIVE, REFLECTIVE, WATER- AND CHEMICAL RES., FLEXIBLE VINYL. LABEL(S) SHALL BE 5"x7" (MIN.). LABEL(S) SHALL BE OUTDOOR RATED & PROTECTED FROM U.V. RADIATION, MOISTURE, OXIDATION, AND OTHER POLLUTANTS. LABEL(S) SHALL BE SURF. MOUNT & SUITABLE FOR INSTALLING ON FLAT, ROUND OR IRREGULAR SURFACES OF METAL, FIBERGLASS, OR PAINT. LABEL(S) SHALL BE OVERLAMINATED WITH A CLEAR FILM TO PROVIDE PRINT PROTECTION. COLORS SHALL BE AS INDICATED ON THIS DETAIL OR AS REQUIRED BY CODE, REFER TO PLAN SHEET E3 AND DETAILS FOR LOCATION OF LABELS. ARC FLASH PROTECTION (SEE NEC 110.16). ANY VARIATIONS IN LABEL SIZE MUST BE SUBMITTED TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL.

WARNING LABELS



THE LIGHTING CONTROLLER SHALL HAVE LABEL AS SHOWN ABOVE. REFER TO PLAN SHEET E3 AND DETAILS FOR LOCATION OF LABEL. LABEL SHALL BE FABRICATED FROM 1/16" THICK (MINIMUM) PHENOL PLATE ENGRAVED STOCK. LABEL SHALL HAVE SATIN BLACK OUTER LAYER. LABEL SHALL HAVE WHITE INNER LAYER. LABEL SHALL HAVE 45° BEVELED EDGES. LABEL NAME SHALL HAVE 1" SIZE (MINIMUM) BLOCK-STYLE LETTERS. LABEL SHALL HAVE FOUR (4) 1/8" (MINIMUM) DIAMETER PRE-DRILLED HOLES, ONE (1) LOCATED AT EACH CORNER, FOR MOUNTING LABEL. LABEL SHALL BE FASTENED TO EQUIPMENT USING #6-32 (MINIMUM) MARINE DUTY STAINLESS STEEL SELF-TAPPING MACHINE SCREWS HAVING 30000 PSI (MINIMUM) YIELD STRENGTH. LABEL SHALL BE LEVEL AFTER INSTALLATION. ANY VARIATIONS IN LABEL SIZE MUST BE SUBMITTED TO THE BRIDGE DESIGN ENGINEER FOR APPROVAL.

ELECTRICAL LABEL



- BOLT SCHEDULE:
- 3/4" & 1" CLAMPS - 1/4" Ø BOLTS
 - 1 1/4" & 1 1/2" CLAMPS - 3/8" Ø BOLTS
 - 2" & LARGER CLAMPS - 1/2" Ø BOLTS

CONDUIT FASTENING

NOTE:

- 1. CLAMP, CLAMP BACK, AND NEST BACK SHALL BE OF THE SAME MANUFACTURER.
- 2. CLAMPS SHALL BE LOCATED ON 5'-0" (MAXIMUM) SPACING.
- 3. SEE SHEET E2, PARAGRAPH E, FOR MOUNTING HARDWARE REQUIREMENTS.



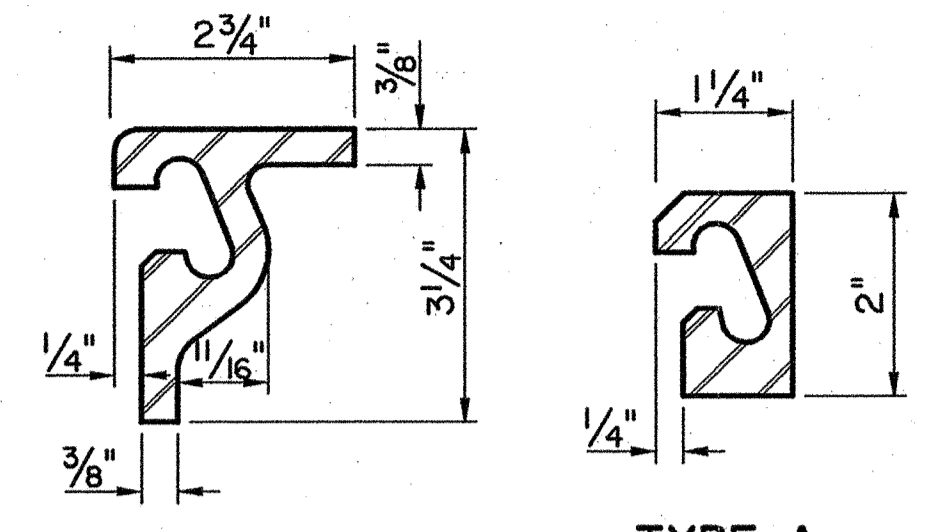
04-30-2009

SHEET NUMBER	179c
DESIGNED	C.M. CHAUVIN
CHECKED	M. ARMENTOR
DATE	APRIL 2009
PROJECT	JEFFERSON
STATE	LOUISIANA
PROJECT NUMBER	064-01-0040
DATE	APRIL 2009
SHEET	4 OF 4
NO.	
DATE	
REVISION DESCRIPTION	
BY	
CAMINADA BAY BRIDGE ROUTE LA 1	
ELECTRICAL - NAVIGATION LIGHTS	
BRIDGE AND STRUCTURAL DESIGN	

R:\Gang2\Projects\064010040\dgn\standards\standard details\160_Strip Seal Joint (1 of 2).dgn
 30-FER-2009
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 FINAL PLANS

WATSON-BOWMAN/ACME

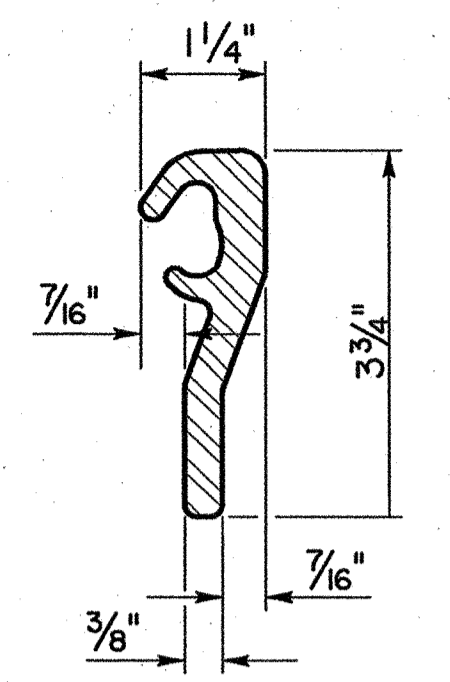
STEEL EXTRUSIONS



TYPE M
TYPE A
(CURB USE ONLY)

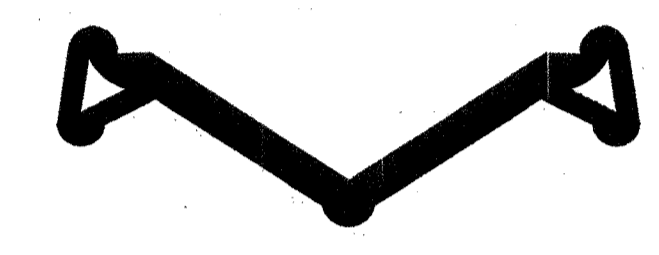
D.S.BROWN

STEEL EXTRUSIONS



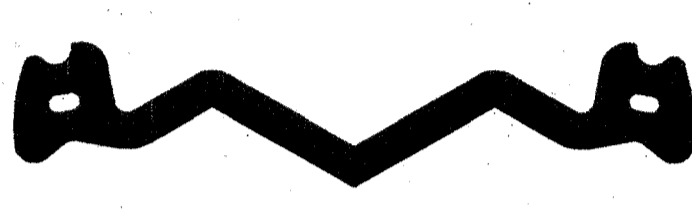
TYPE SSCM 2

NEOPRENE EXTRUSIONS



TYPE SE 400

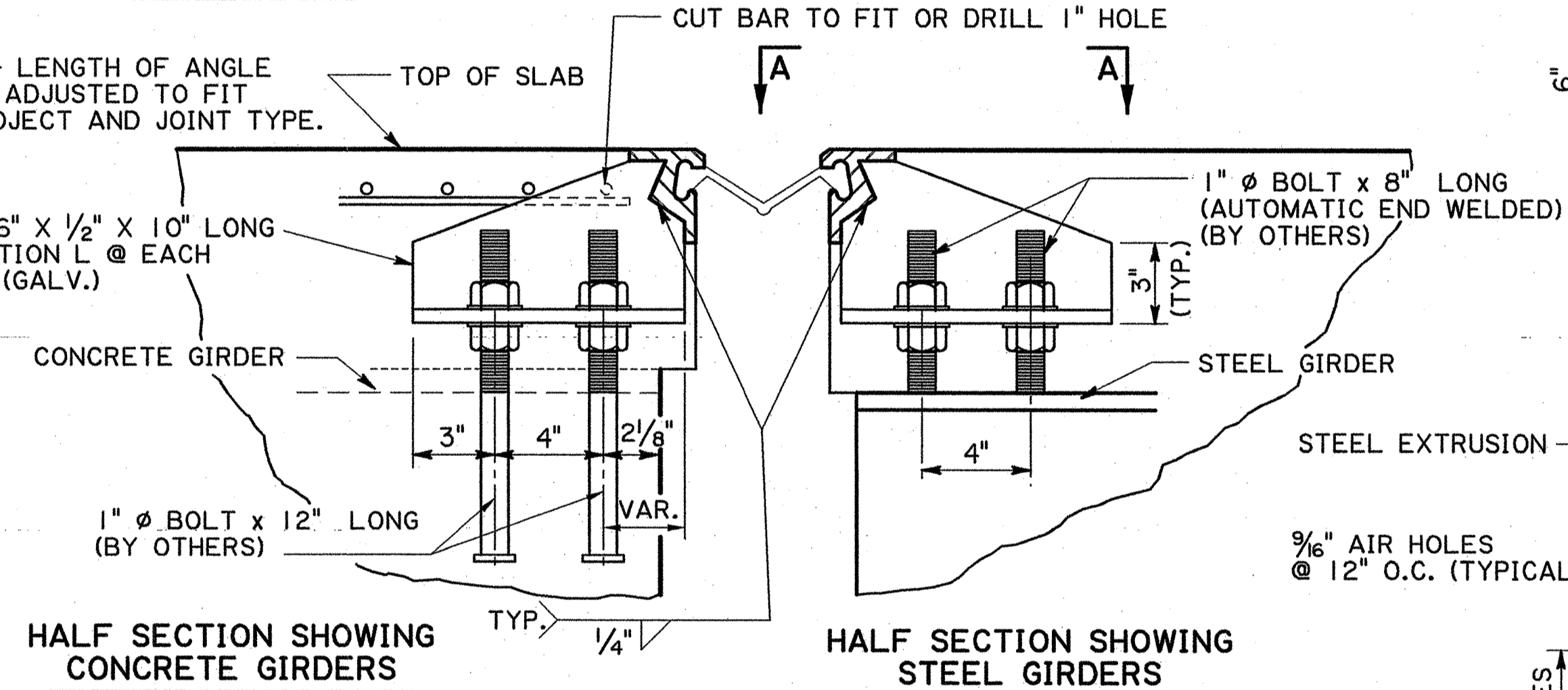
NEOPRENE EXTRUSIONS



A2R SEAL

* NOMINAL- LENGTH OF ANGLE MUST BE ADJUSTED TO FIT EACH PROJECT AND JOINT TYPE.

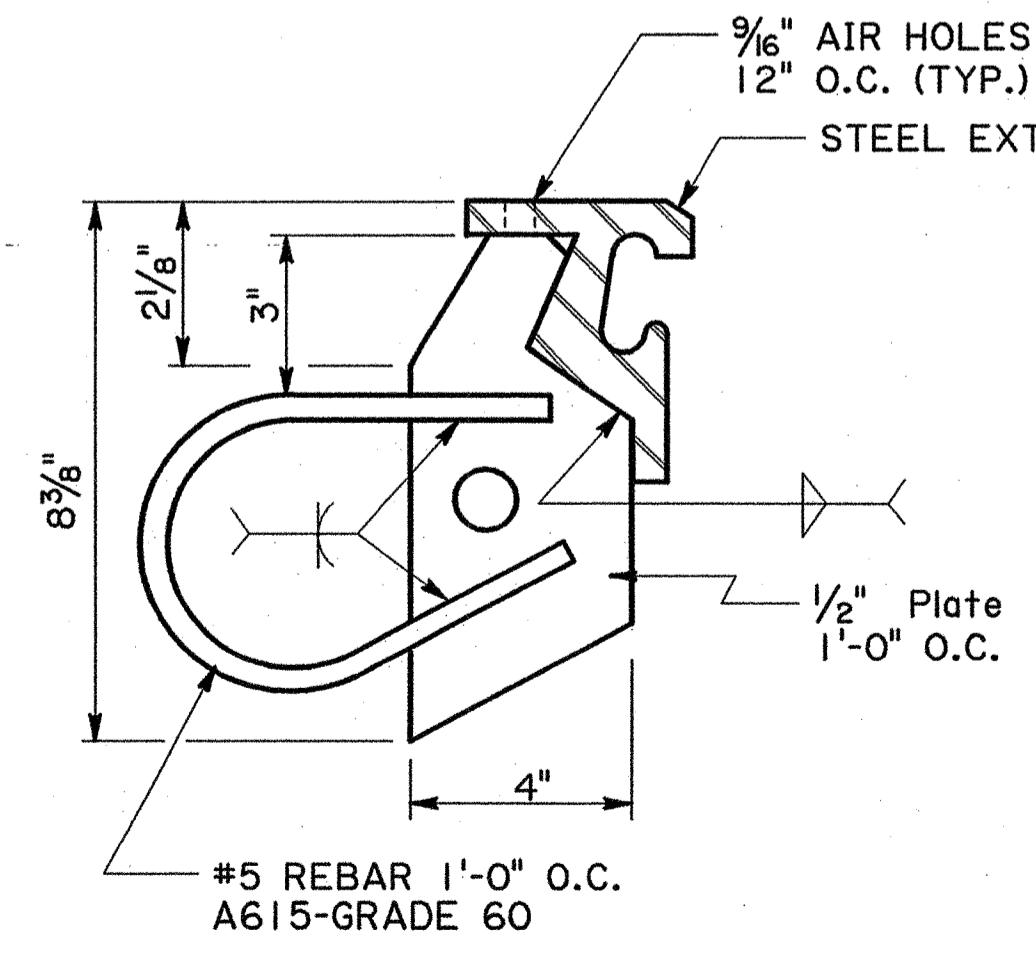
* L 6" X 6" X 1/2" X 10" LONG CONNECTION L @ EACH GIRDER (GALV.)



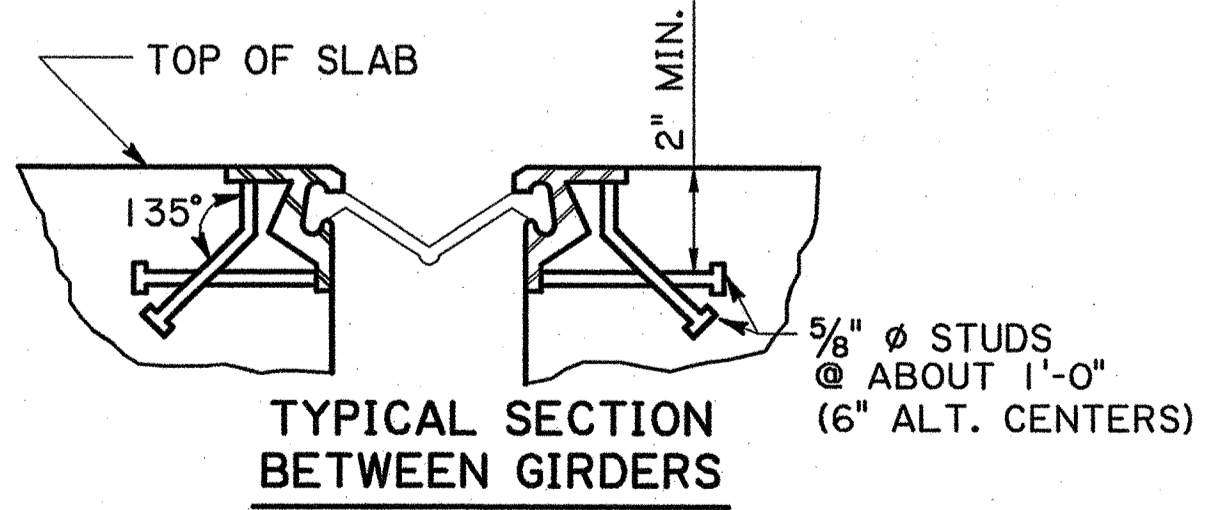
HALF SECTION SHOWING CONCRETE GIRDERS

HALF SECTION SHOWING STEEL GIRDERS

TYPICAL SECTION AT GIRDERS



ALTERNATE SECTION BETWEEN GIRDERS



TYPICAL SECTION BETWEEN GIRDERS

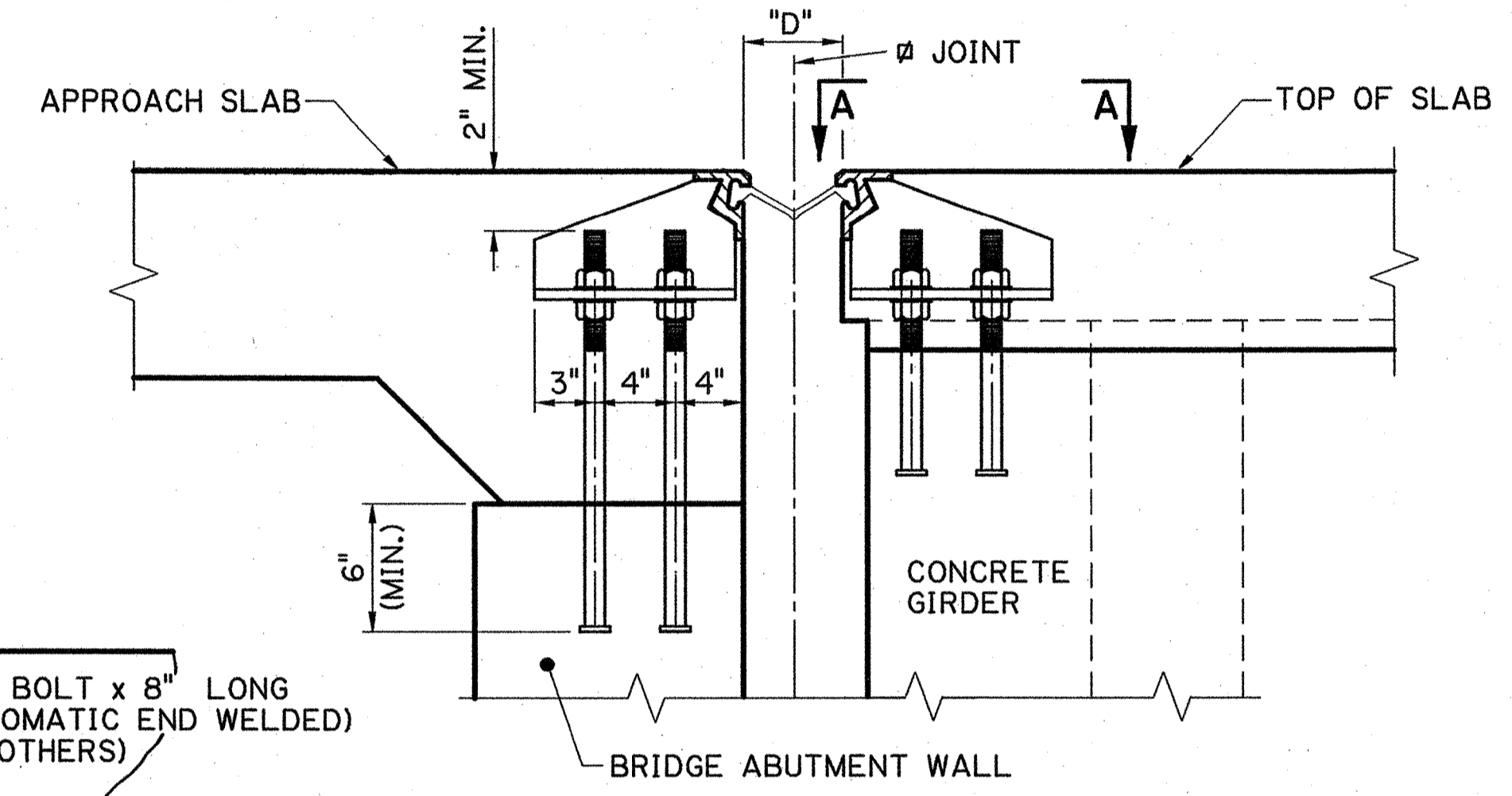
INSTALLATION :

CONDITION 1:

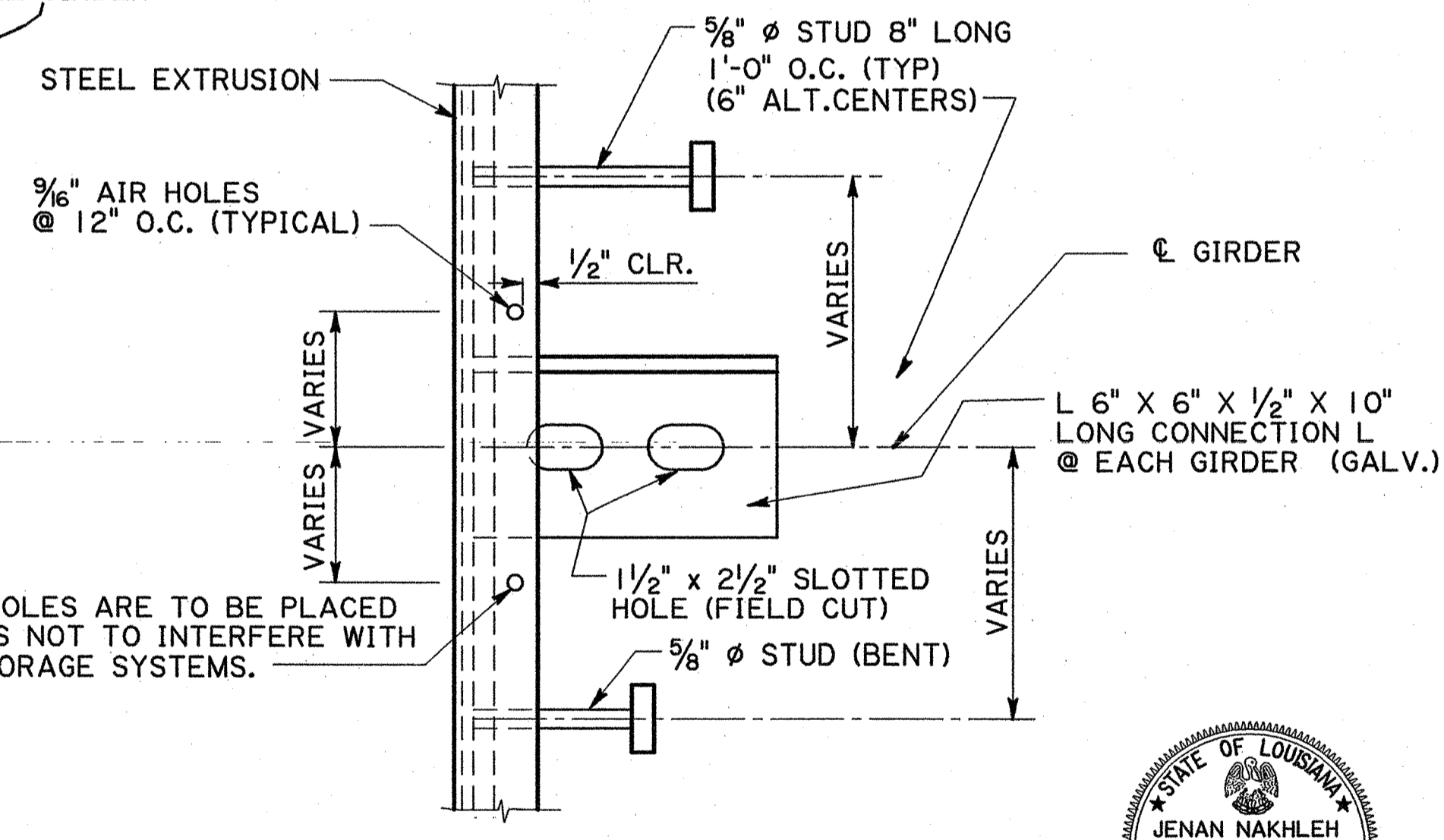
DECKS ON EACH SIDE OF JOINT POURED AT DIFFERENT TIME INTERVALS
 A-PLACE JOINT IN PLACE AS A UNIT (SPACER STILL IN PLACE).
 B-ADJUST TO PROPER VERTICAL POSITION.
 C-POUR DECK THAT IS TO BE POURED FIRST.
 D-PRIOR TO POURING THE ADJACENT DECK, REMOVE SPACER.
 E-JUST PRIOR TO POURING THE ADJACENT DECK, SET JOINT TO PROPER OPENING RELATIVE TO THE CURRENT TEMPERATURE FROM THE DESIGN TEMPERATURE OF 68° F

CONDITION 2:

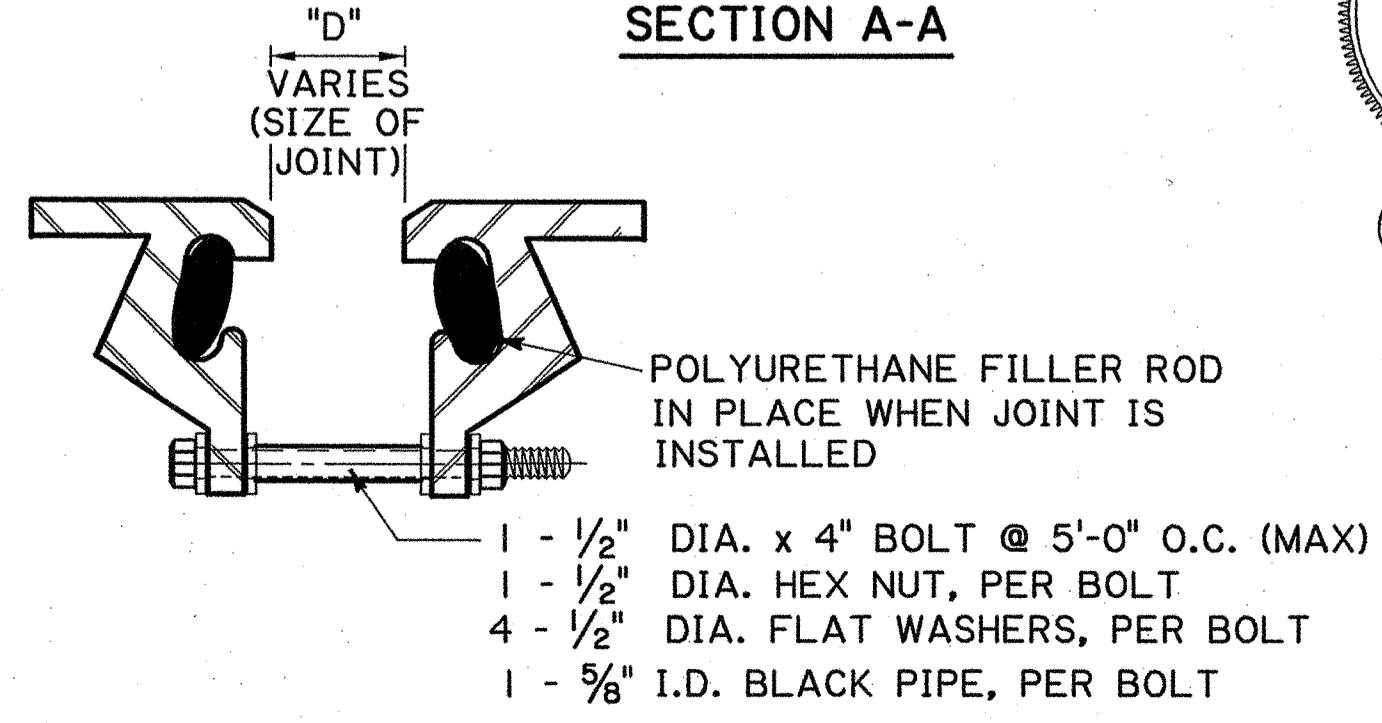
DECKS ON EACH SIDE OF JOINT POURED SIMULTANEOUSLY.
 A-PLACE JOINT IN PLACE AS A UNIT (SPACER STILL IN PLACE).
 B-ADJUST TO PROPER VERTICAL POSITION.
 C-PRIOR TO POURING DECKS, REMOVE SPACER
 D-JUST PRIOR TO POURING DECKS, SET JOINT TO PROPER OPENING RELATIVE TO THE CURRENT TEMPERATURE, FROM THE DESIGN TEMPERATURE OF 68° F



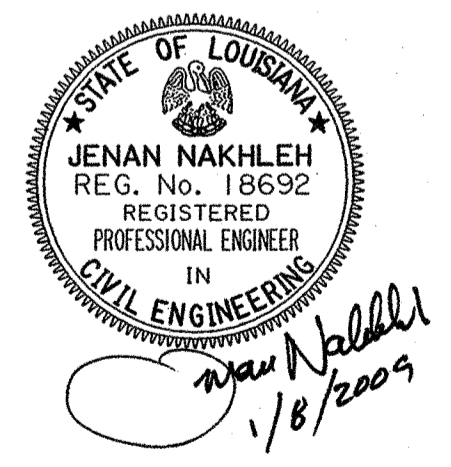
TYPICAL SECTION AT BRIDGE END



SECTION A-A



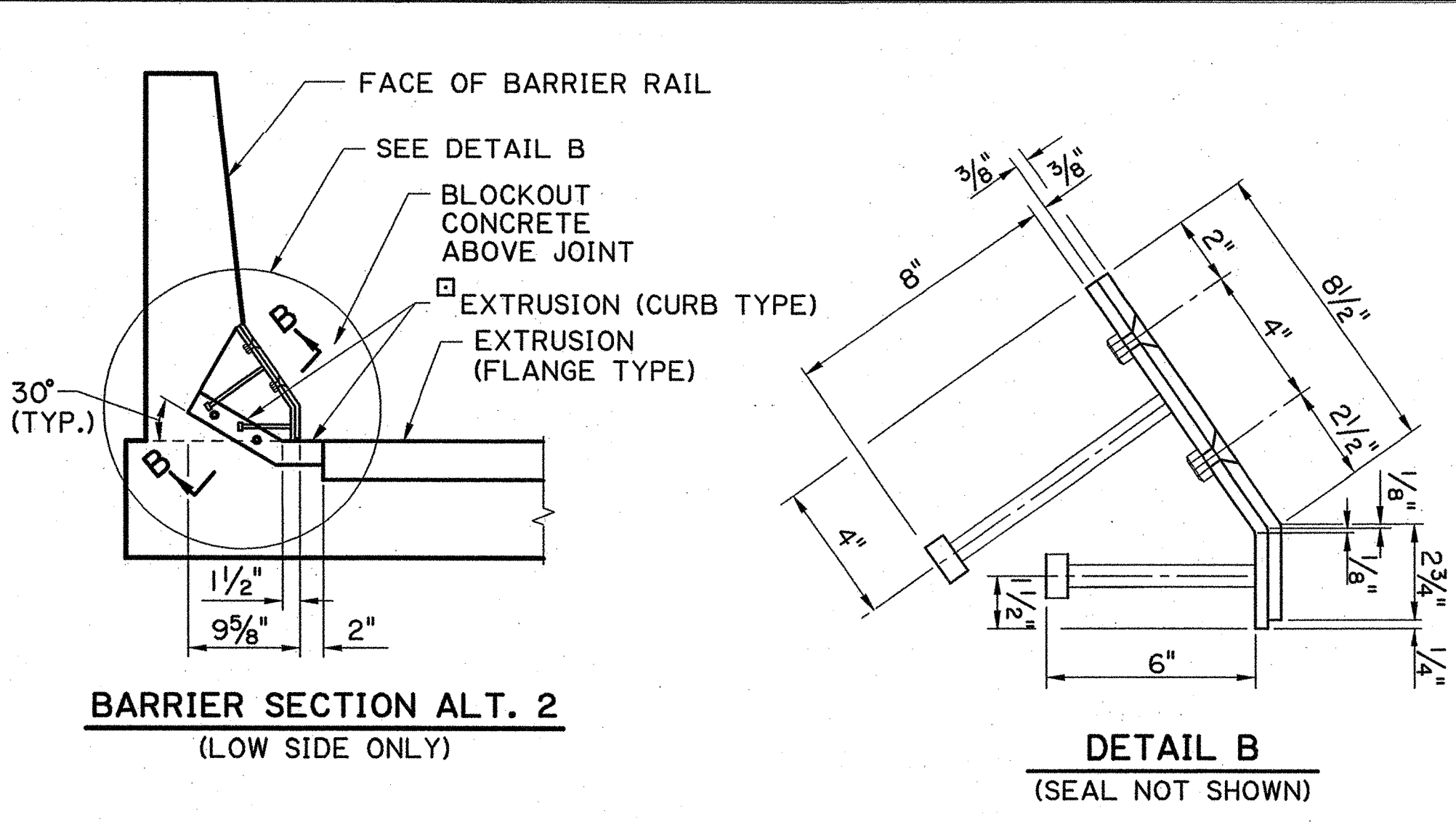
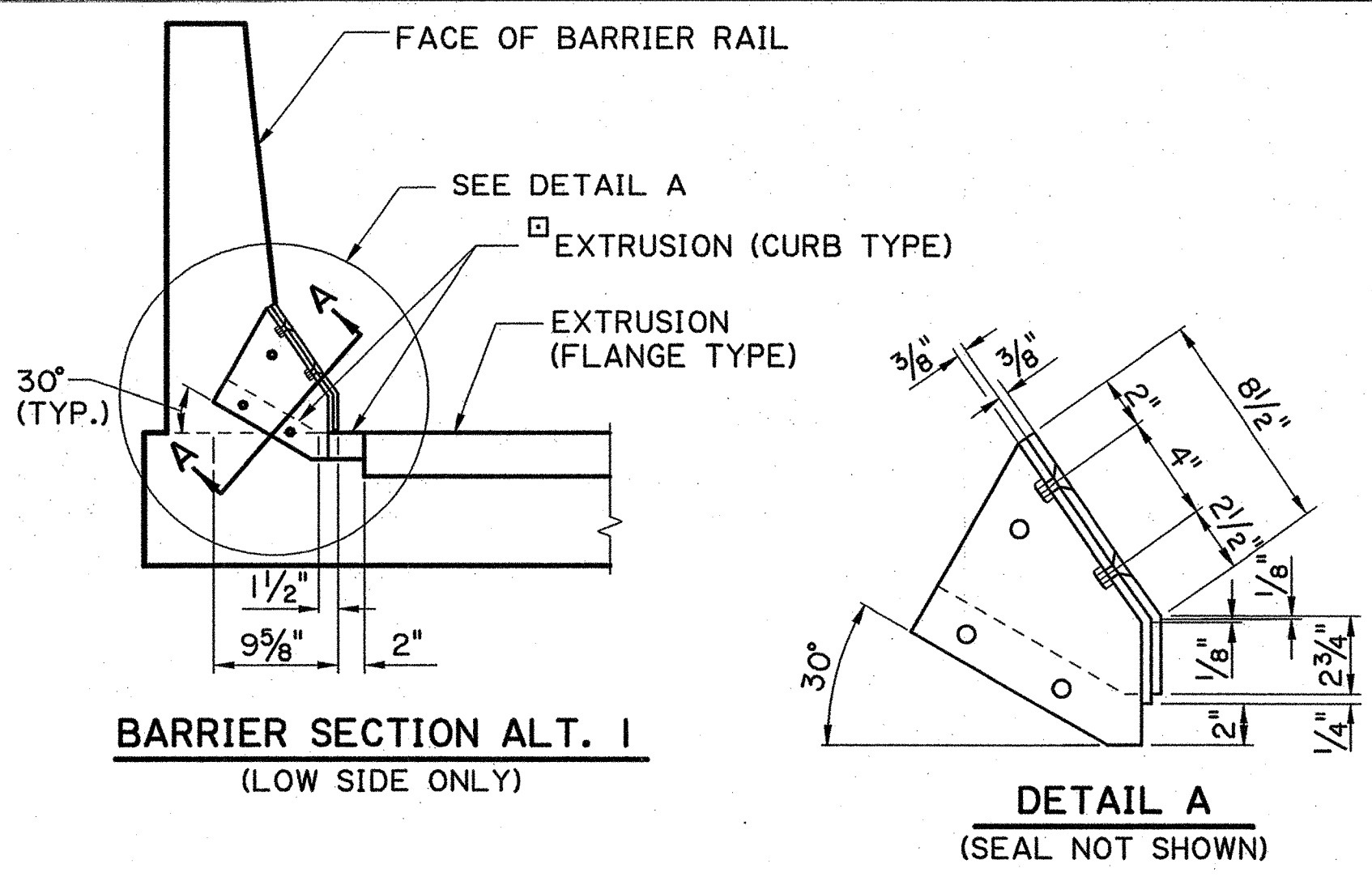
TYPICAL SHIPPING SECTION



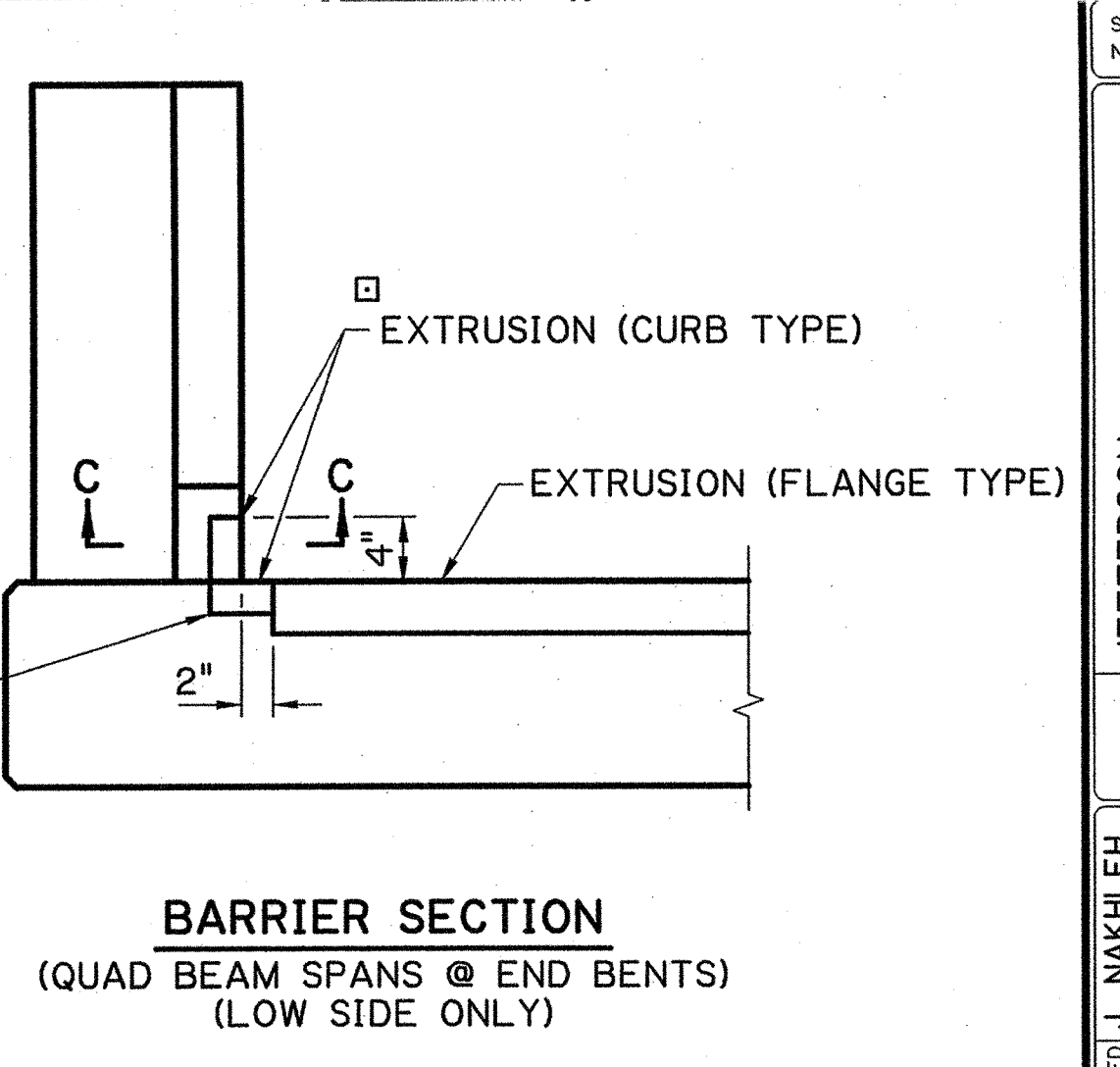
NOTES:

- THE FOLLOWING MATERIALS ARE TO BE PAID FOR IN THE BID PRICE PER LINEAR FOOT OF " STRIP SEAL".
 A. NEOPRENE EXTRUSION
 B. STEEL EXTRUSIONS
 C. 5/8" DIAMETER STUDS
 D. ALL STEEL PLATES REQUIRED FOR BARRIER SECTION
 E. CAP SCREWS AND NUTS, TEMPORARY STEEL SPACER BLOCKS AND POLYURETHANE FILLER ROD.
 F. 6" x 6" x 3/8" x 6" CONNECTION PLATES.
 G. No. 5 REBAR AND 1/2" PLATE.
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A-709, GRADE 36 OR GRADE 50.
- THE MANUFACTURER'S RECOMMENDED CONSTRUCTION METHODS SHALL BE FOLLOWED.
- A FACTORY REPRESENTATIVE IS TO BE PRESENT DURING THE INSTALLATION OF THE JOINT.
- SHOP DETAILS OF JOINTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
- STEEL EXTRUSIONS SHALL BE SHIPPED IN PAIRS.
- POLYURETHANE FILLER ROD WILL BE PLACED IN STEEL EXTRUSION'S CAVITY PRIOR TO SHIPMENT. THIS ROD WILL BE REMOVED ONLY WHEN THE NEOPRENE EXTRUSION IS TO BE INSTALLED IN PLACE.
- ALL WELDS SHALL CONFORM TO AWS D1.5-95 BRIDGE STRUCTURAL WELDING CODE AND D1.4-92 REINFORCING STEEL WELDING CODE.
- WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES AND EACH PORTION OF THE EXTRUSION SHALL BE NOT LESS THAN 15 FEET IN LENGTH EXCEPT THAT ONE SECTION, NOT LESS THAN 4 FEET IN LENGTH WILL BE ALLOWED IN THE SHOULDER AREA IF REQUIRED TO MATCH THE ROADWAY CROSS SECTION. ALL SPLICES SHALL BE MADE SO AS TO OCCUR OUTSIDE THE WHEEL PATHS. (SEE DETAIL ON SHEET 2 OF 2.)
 IF A SECTION LESS THAN 15 FEET IS USED, THE CONNECTION STUDS WILL BE SPACED AT 9 INCH ALTERNATE CENTERS. ALL SPLICE LOCATIONS WILL BE SHOWN ON THE SHOP DRAWINGS. DRAWINGS WILL NOT BE APPROVED UNLESS THE LOCATIONS ARE DESIGNATED ON THE DRAWINGS. THE LOCATIONS MAY BE DESIGNATED WITH A +/- 6 INCH TOLERANCE. WELDED SPLICES ARE ALSO REQUIRED WHERE TWO DIFFERENT STEEL SHAPES ARE JOINED AT THE CURB AREA AND WHERE THE CURB UNITS ARE TURNED UP.
 WELDED SPLICES WILL BE BUTT SPLICES AND CARE SHALL BE TAKEN NOT TO ALLOW WELD METAL TO INVAD THE GLAND CAVITY. WELD MATERIAL IN THE CAVITY WILL BE CAUSE FOR REJECTION. CONNECTION STUDS WILL BE LOCATED 3 INCHES EITHER SIDE OF WELDED SPLICES.
- NEOPRENE EXTRUSIONS HAVE TO BE MANUFACTURED AS A CONTINUOUS PIECE WITH ONLY ONE (1) SHOP SPLICE PER JOINT ALLOWED WHEN LENGTH EXCEEDS 50 FEET. THE NEOPRENE STRIP SEAL SHALL BE AN EXTRUDED NEOPRENE MATERIAL CONFORMING TO ASTM DESIGNATION: D2628 MODIFIED TO OMIT RECOVERY TEST TO REVISE THE REQUIRED TYPE A HARDNESS TO 55 -5/+10 AS DETERMINED BY ASTM D2240.
- SEAL SHALL BE BONDED TO STEEL WITH A PRE-MIXED LUBRICATING ADHESIVE SOLUTION WHICH SHALL BE USED TO FACILITATE THE SEAL INSTALLATION. THIS LUBRICANT ADHESIVE SHALL BE SELECTED FROM THE LA. DOT QUALIFIED PRODUCTS LIST, AS MAINTAINED BY THE DEPARTMENT'S MATERIALS SECTION. THE LUBRICANT SHOULD FLOW FREELY AND EVENLY COAT THE SEAL AND JOINT FACE. THE LUBRICANT SHOULD COMPLETELY COAT THE SEAL AND STEEL EXTRUSION CAVITY WHICH REMAIN IN CONTACT.
- AFTER METAL SURFACES HAVE BEEN PREPARED FOR PAINTING AND PRIOR TO PAINTING, THE POLYURETHANE FILLER RODS ARE TO BE PLACED IN THE EXTRUSIONS. ALL METAL SURFACES NOT EMBEDDED IN CONCRETE SHALL BE SHOP PAINTED WITH TWO COATS OF AN APPROVED ZINC PAINT SYSTEM FROM QPL NO. 78, EXCEPT FOR THE STEEL PLATES REQUIRED FOR THE BARRIER SECTION, WHICH SHALL RECEIVE THREE COATS. THE STEEL EXTRUSION CAVITY MAY NOT BE PAINTED. IF PAINTED, CARE SHALL BE TAKEN THAT A PAINT BUILD-UP DOES NOT OCCUR IN THE BOTTOM.
- IN LIEU OF PAINTING, EXPANSION JOINT ASSEMBLIES MAY BE HOT-DIP GALVANIZED AFTER FABRICATION AND ALL SHOP WELDING OPERATIONS, (INCLUDING STUD WELDING) HAVE BEEN COMPLETE, IN ACCORDANCE WITH SECTION 811 OF THE STANDARD SPECIFICATIONS. CARE SHALL BE TAKEN THAT A COATING BUILD-UP DOES NOT OCCUR IN THE BOTTOM OF THE CAVITY.
- JOINTS UP TO FIFTY FOUR (54) FEET IN LENGTH SHALL BE DELIVERED TO THE JOB SITE IN ONE PIECE. JOINTS OVER FIFTY FOUR (54) FEET IN LENGTH MAY HAVE PROVISIONS FOR A FIELD SPLICE IN THE STEEL EXTRUSIONS PROVIDING THE SPLICE IS PERFORMED IN SHOP LIKE CONDITIONS IN THE PRESENCE OF A STATE INSPECTOR AND MEET THE REQUIREMENTS OF NOTE 8 ABOVE. ALL OTHER WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES.
- ALL STUDS SHALL BE BENT PRIOR TO WELDING TO THE JOINT. NO FIELD BENDING OF STUDS WILL BE ALLOWED.
- ALL LABOR, MATERIALS, EQUIPMENT, MANUFACTURER SUPERVISION AND INCIDENTALS PERTAINING TO THE INSTALLATION OF THE JOINT SHALL BE PAID FOR UNDER ITEM STRIP SEAL JOINTS, PER LINEAR FOOT. MEASUREMENT SHALL BE ALONG THE CENTERLINE OF THE JOINT, FROM GUTTER LINE TO GUTTER LINE ONLY, UNLESS SPECIFIED OTHERWISE IN THE PLANS.

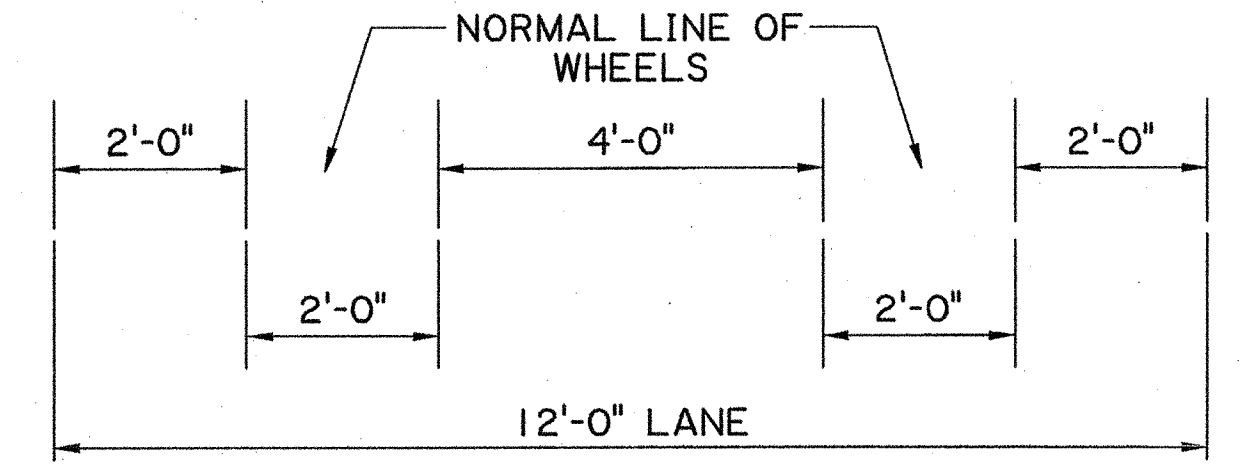
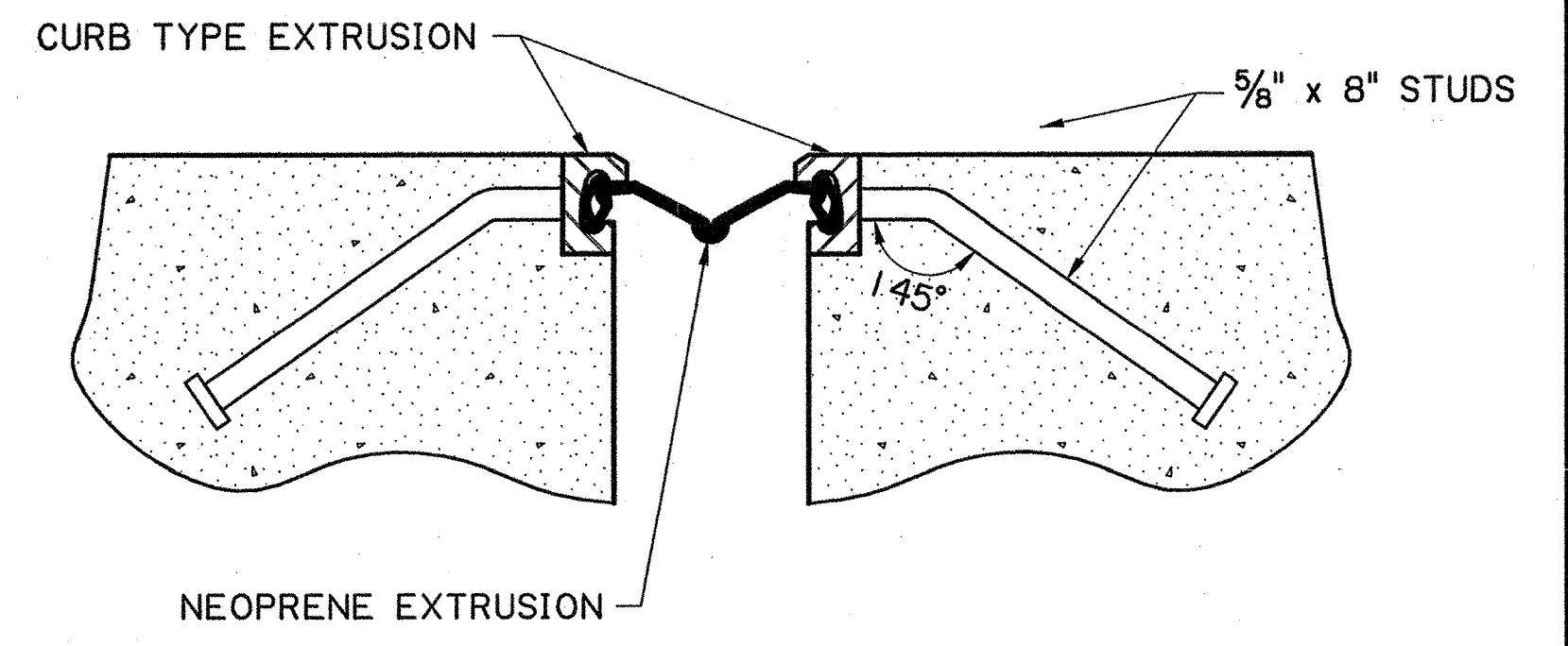
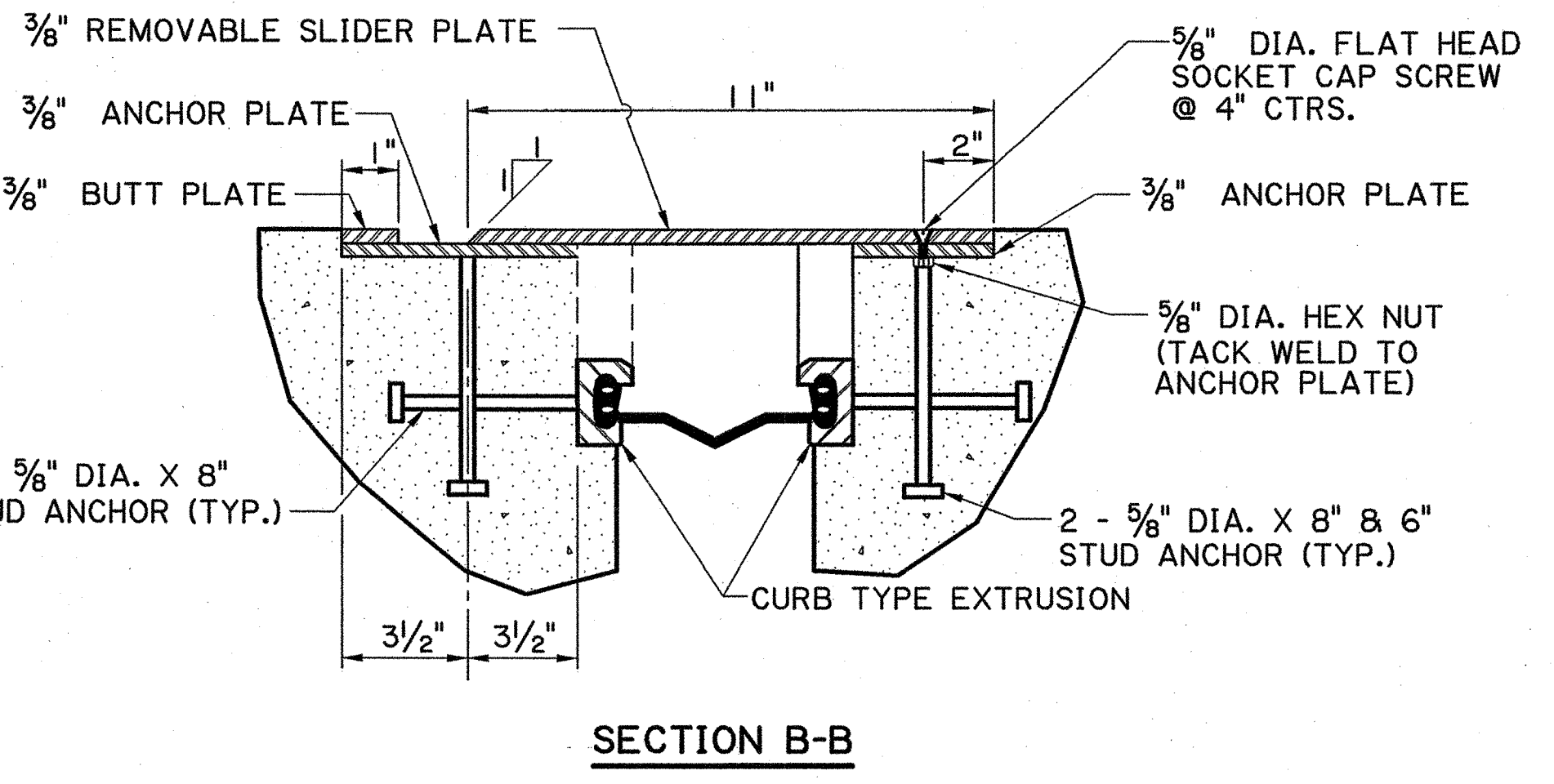
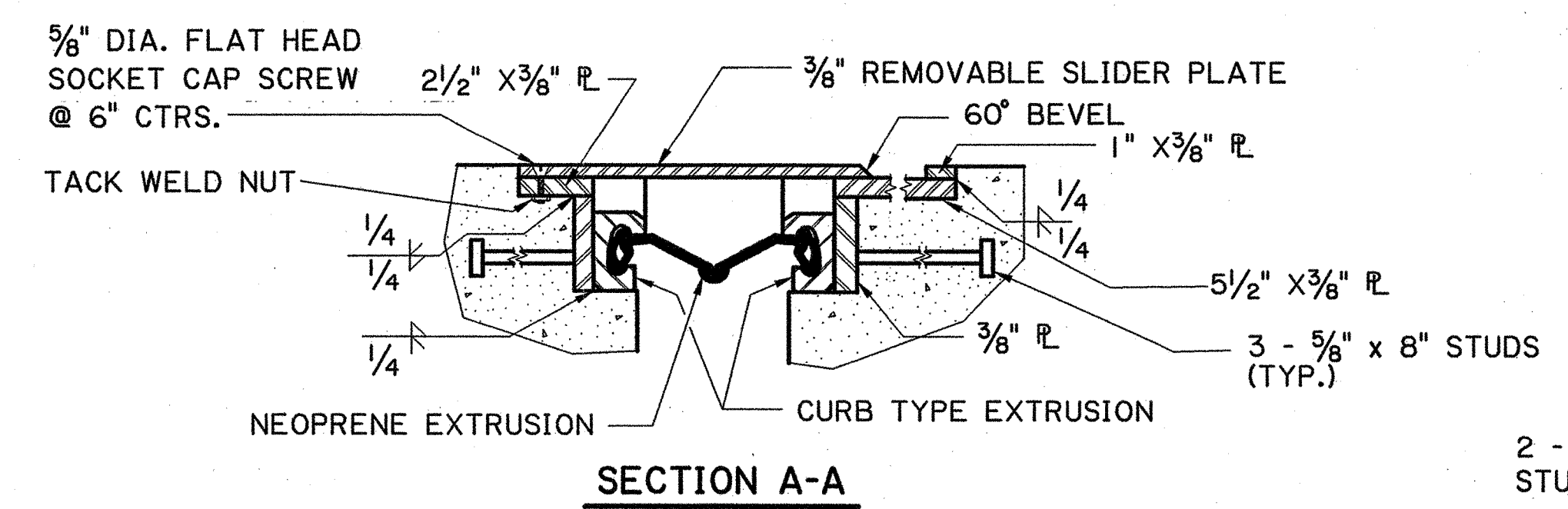
SHEET NUMBER	180
DESIGNED	J. NAKHLEH
CHECKED	A. NWAFOR
DATE	03-14-02
NO.	1 OF 2
REVISION DESCRIPTION	
DATE	
BY	
PROJECT	064-01-0040
STATE	MISSISSIPPI
FEDERAL PROJECT	
PARISH	JEFFERSON
STRIP SEAL JOINT DETAILS (4')	
BRIDGE AND STRUCTURAL DESIGN	



SPECIAL SEAL SECTION REQUIRED FOR 90° VERTICAL SKEW. ALL SPLICES TO BE HEAT VULCANIZED IN FACTORY.



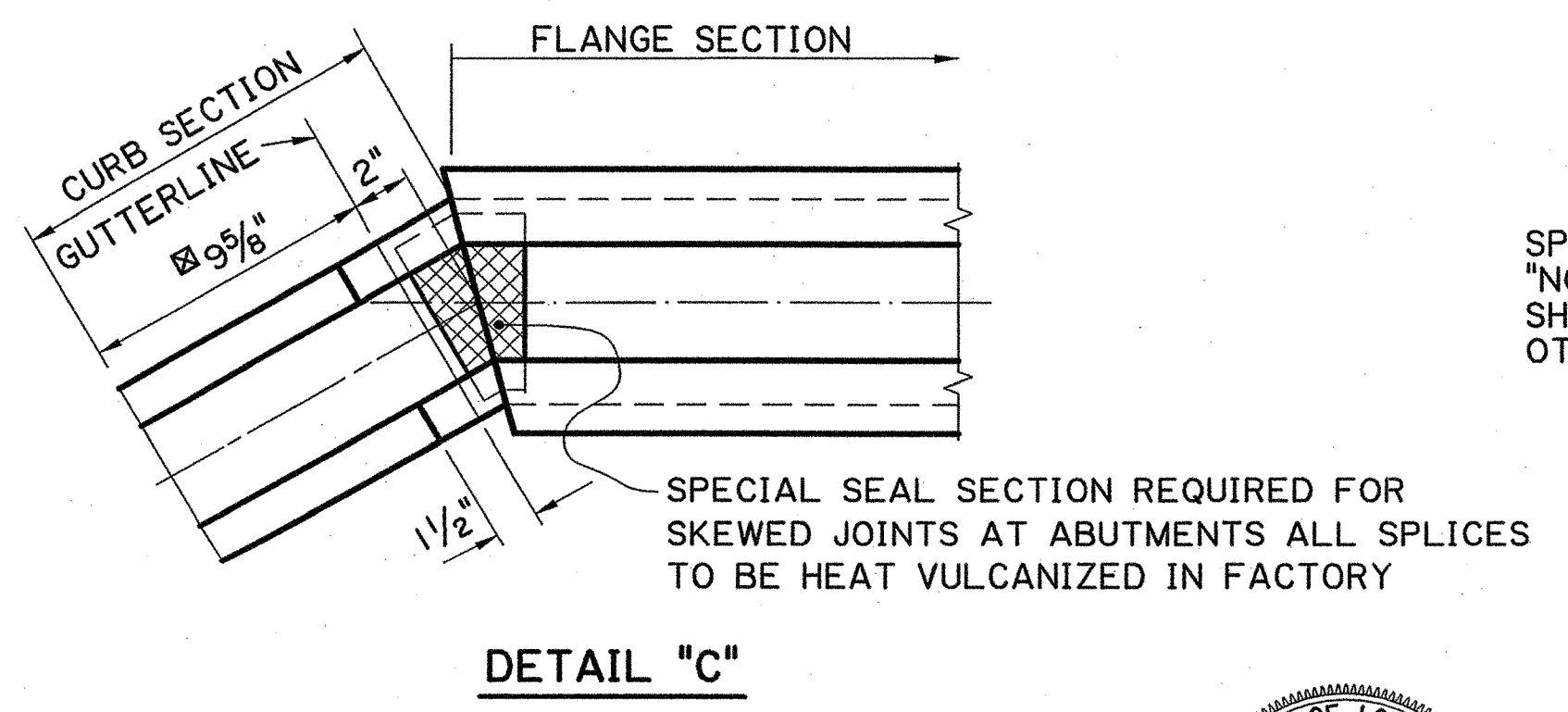
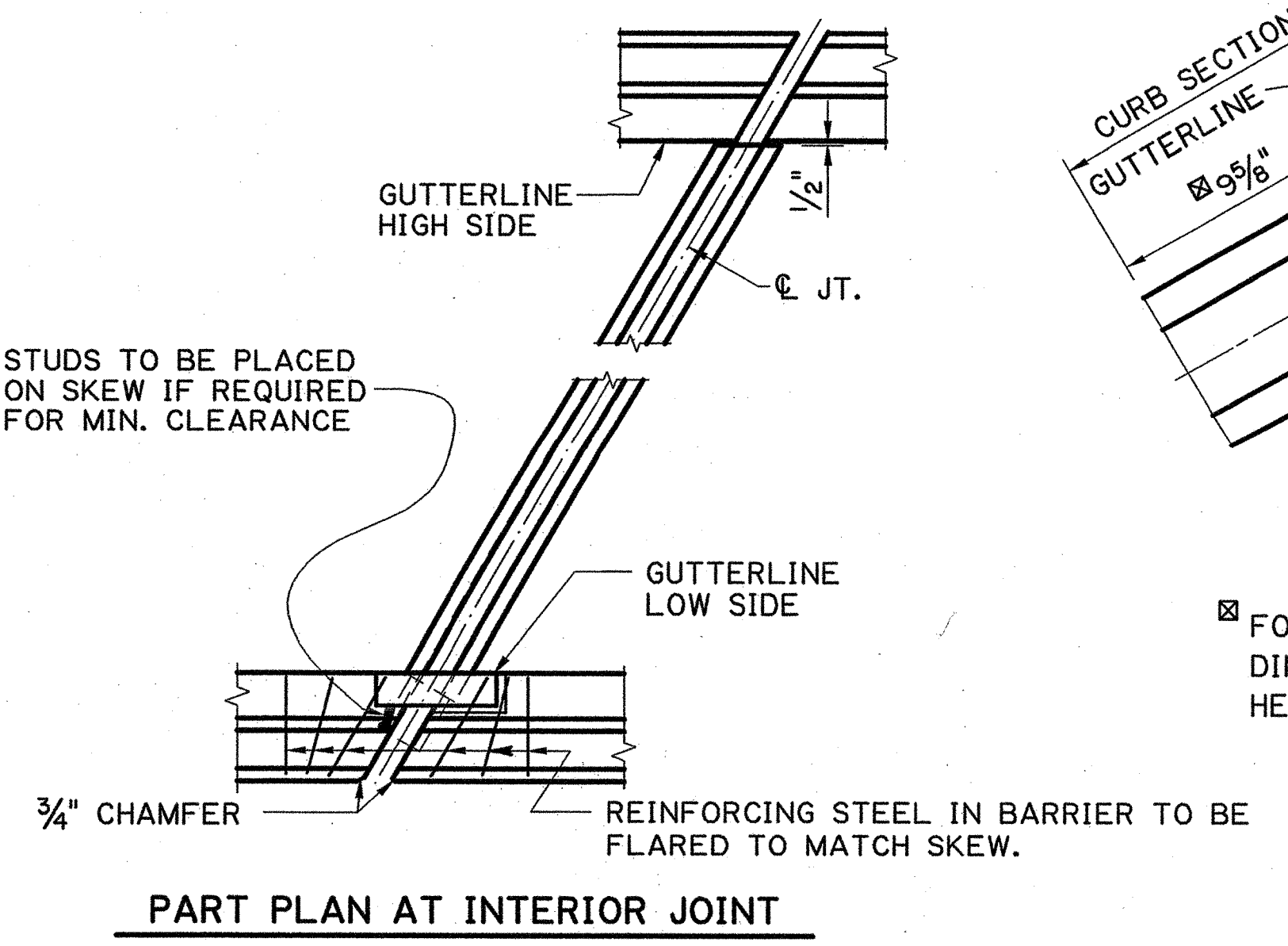
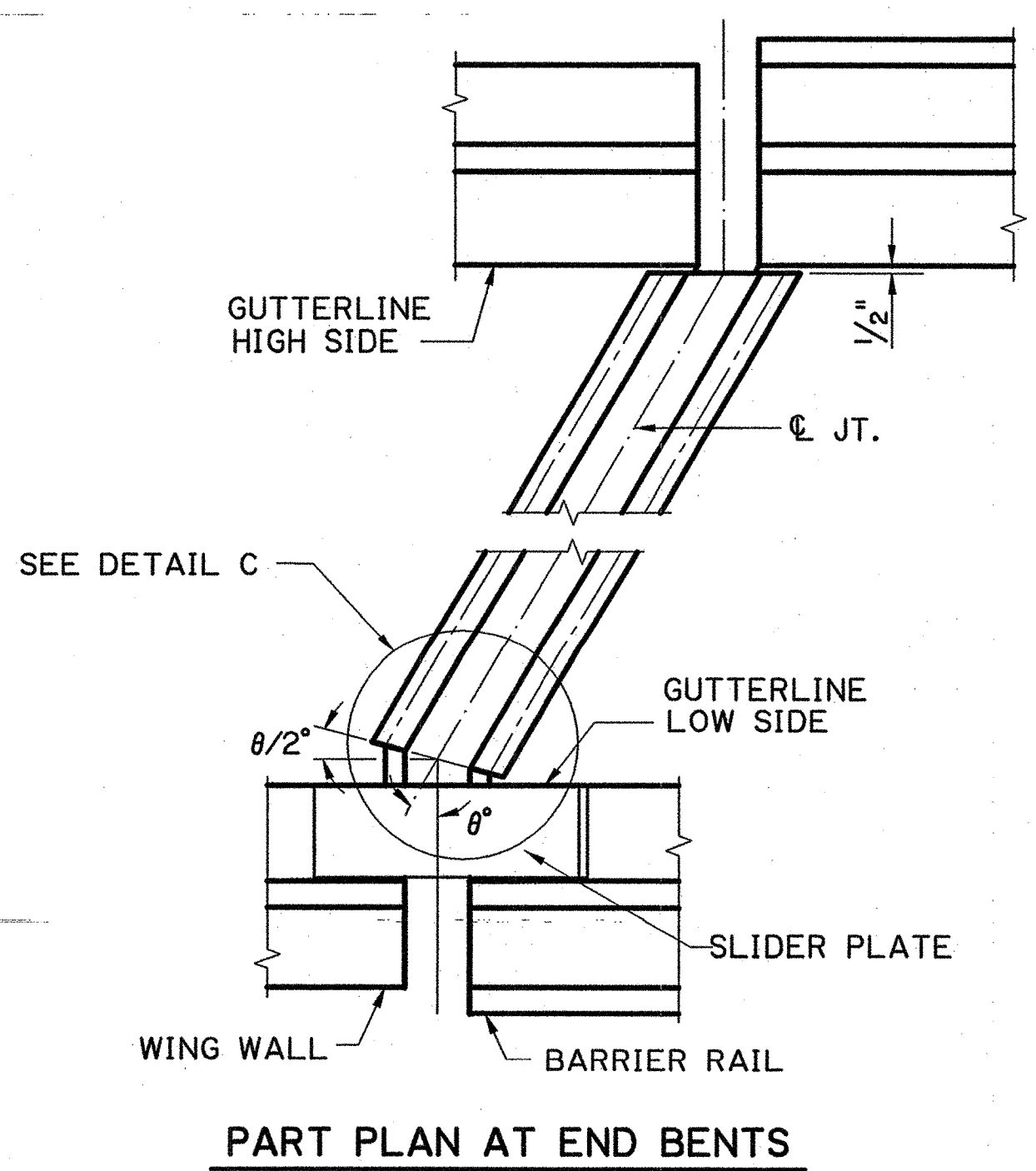
FLANGE TYPE EXTRUSION MAY BE USED IN LIEU OF CURB TYPE EXTRUSION IF SITE CONDITIONS PERMIT.



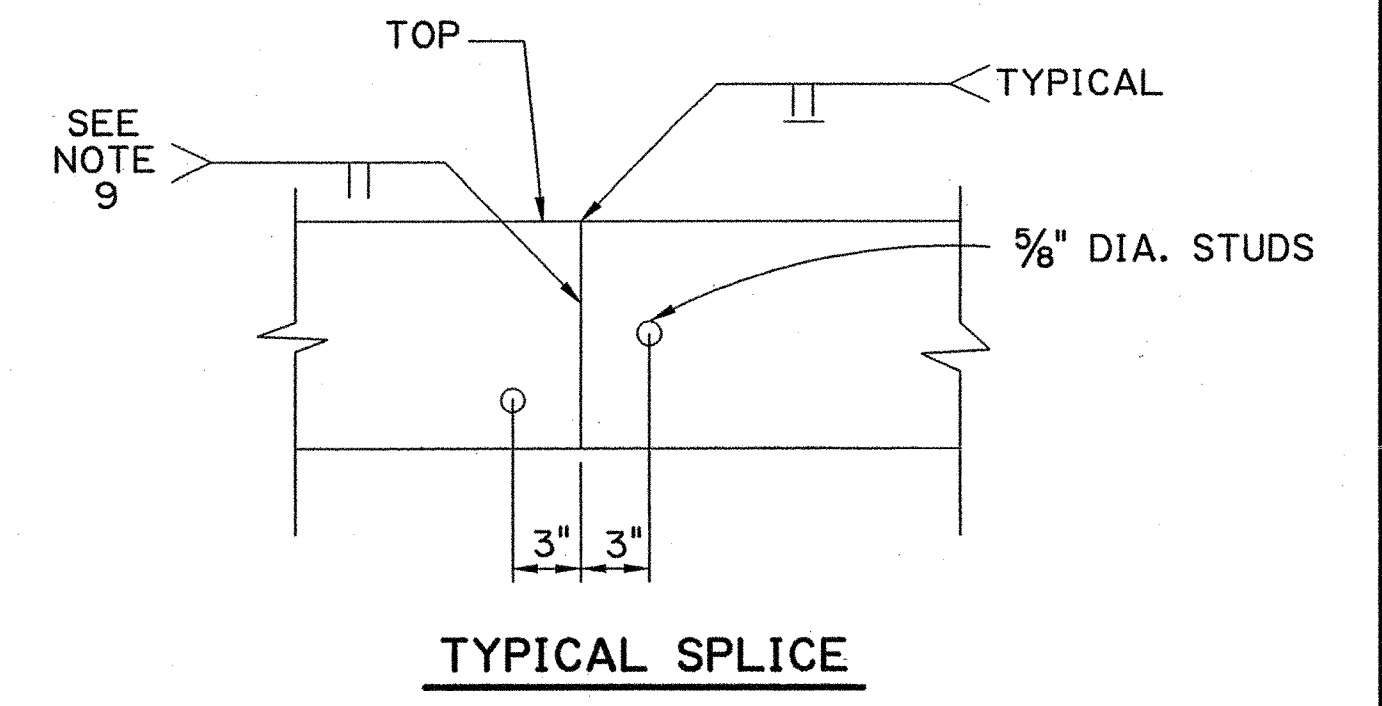
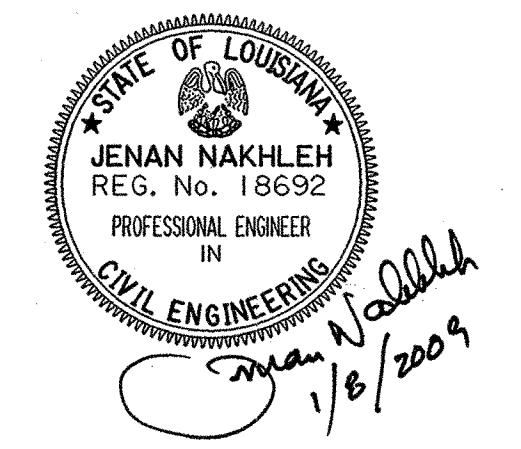
DIMENSIONS SHOWN ARE NORMAL TO ROADWAY WHEN JOINT IS PLACED ON SKEW THE DIMENSIONS SHOWN WILL VARY TO MEET THE SKEW DIMENSIONS ALONG THE C OF THE JOINT.

SPLICE LOCATIONS

SPLICE LOCATIONS SHALL BE LOCATED SO AS NOT TO FALL IN THE "NORMAL LINE OF WHEELS" EXCEPT FOR CURB SECTIONS, ALL EXTRUSIONS SHALL BE A MINIMUM OF 15 FT. BETWEEN SPLICES EXCEPT WHEN NOTED OTHERWISE ON THE SPAN SHEET.



FOR QUAD BEAM SPANS, THIS DIMENSION SHALL BE THE HEIGHT OF THE EXTRUSION.



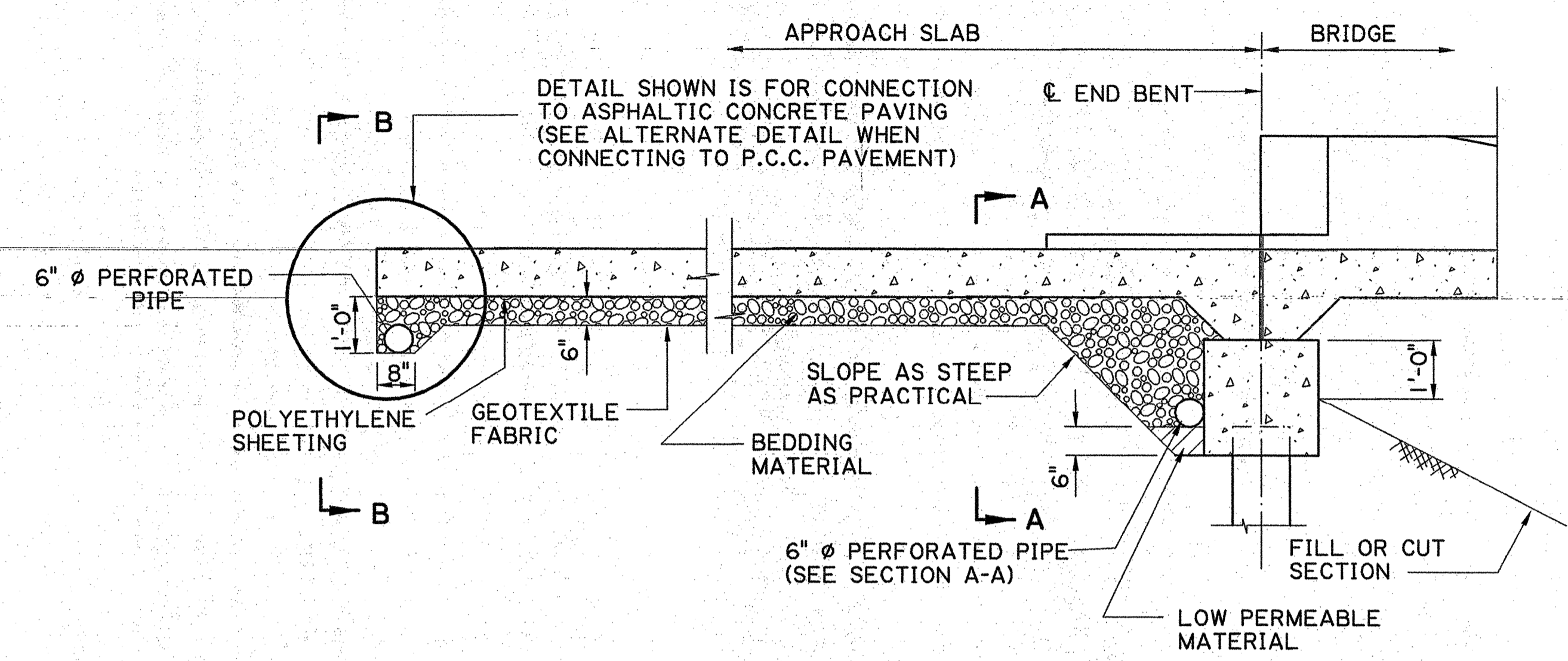
SHEET NUMBER	181
DESIGNED BY	J. NAKHLEH
CHECKED BY	A. NAWAFOR
DATE	03-14-02
SHEET	2 OF 2
PROJECT	064-01-0040
STATE	LA
FEDERAL PROJECT	
PARISH	JEFFERSON
BRIDGE AND STRUCTURAL DESIGN	

STRIP SEAL JOINT DETAILS (4")

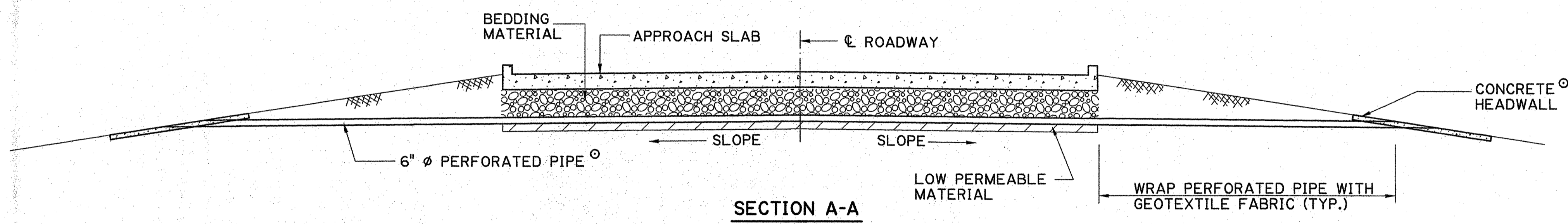
SSJ-4

NOTES:

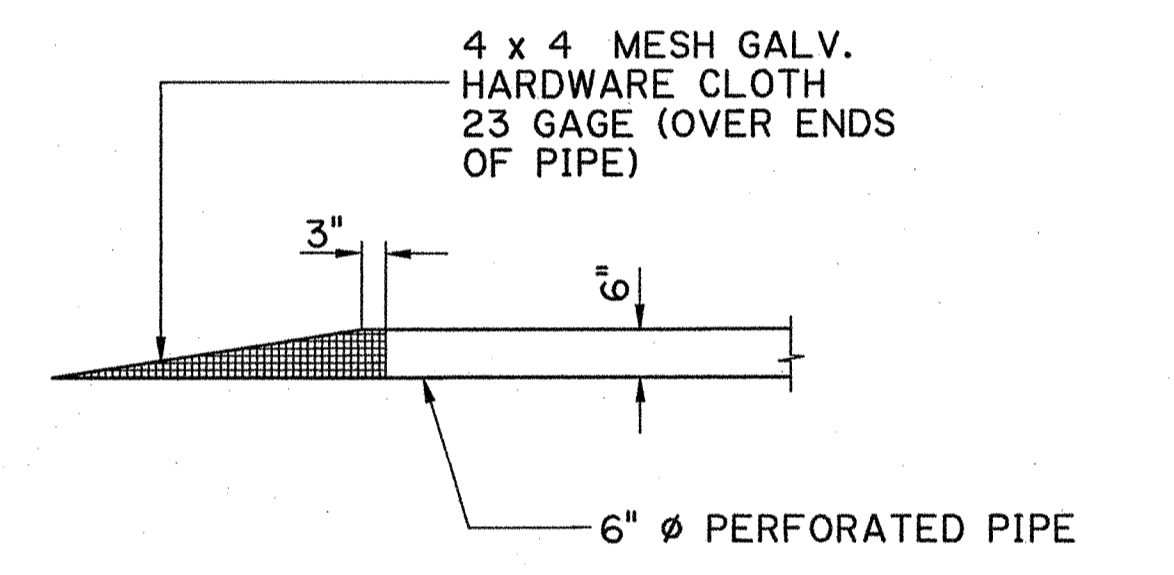
1. POLYETHYLENE SHEETING (6 MIL. THICKNESS) SHALL BE INSTALLED BETWEEN THE BEDDING MATERIAL AND THE APPROACH SLAB. GEOTEXTILE FABRIC SHALL BE INSTALLED DIRECTLY BELOW THE BEDDING MATERIAL. LIMITS SHALL BE THE OUTER EDGES OF THE APPROACH SLAB.
2. UNDERDRAIN MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE STANDARD SPECIFICATIONS.
3. FOR ROADWAYS WITH A ONE-WAY TANGENT SLOPE, THE 6" Ø PIPE MAY SLOPE ONE-WAY WITH ONLY ONE CONCRETE HEADWALL.
4. LOW PERMEABLE MATERIAL SHALL BE DEFINED AS A SOIL HAVING THE SAME PI LIMITS AS PLASTIC SOIL BLANKETS, SEE SECTION 203.10.
5. GEOTEXTILE FABRIC (CLASS C OR D) SHALL BE WRAPPED AROUND THE PERFORATED PIPE ONLY IN THE AREA OUTSIDE OF THE BEDDING MATERIAL.
6. BEDDING MATERIAL, LOW PERMEABLE MATERIAL, POLYETHYLENE SHEETING, GEOTEXTILE FABRIC, 6" Ø PERFORATED PIPE, 4x4 MESH, WELDED WIRE FABRIC, AND CONCRETE HEADWALL AT PIPE ENDS TO BE INCLUDED IN THE PRICE BID FOR 813-01-00100 "CONCRETE APPROACH SLABS."



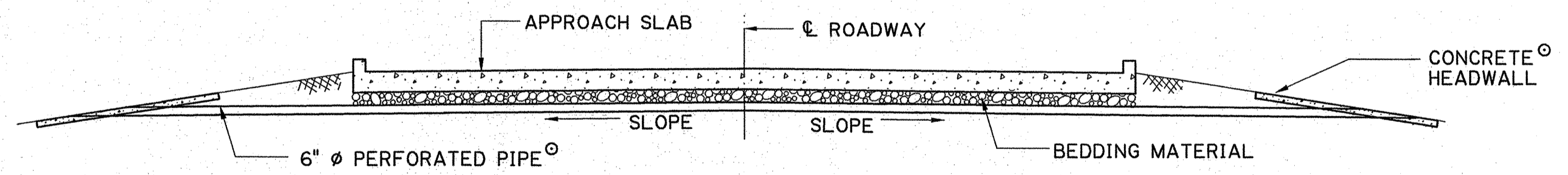
ELEVATION



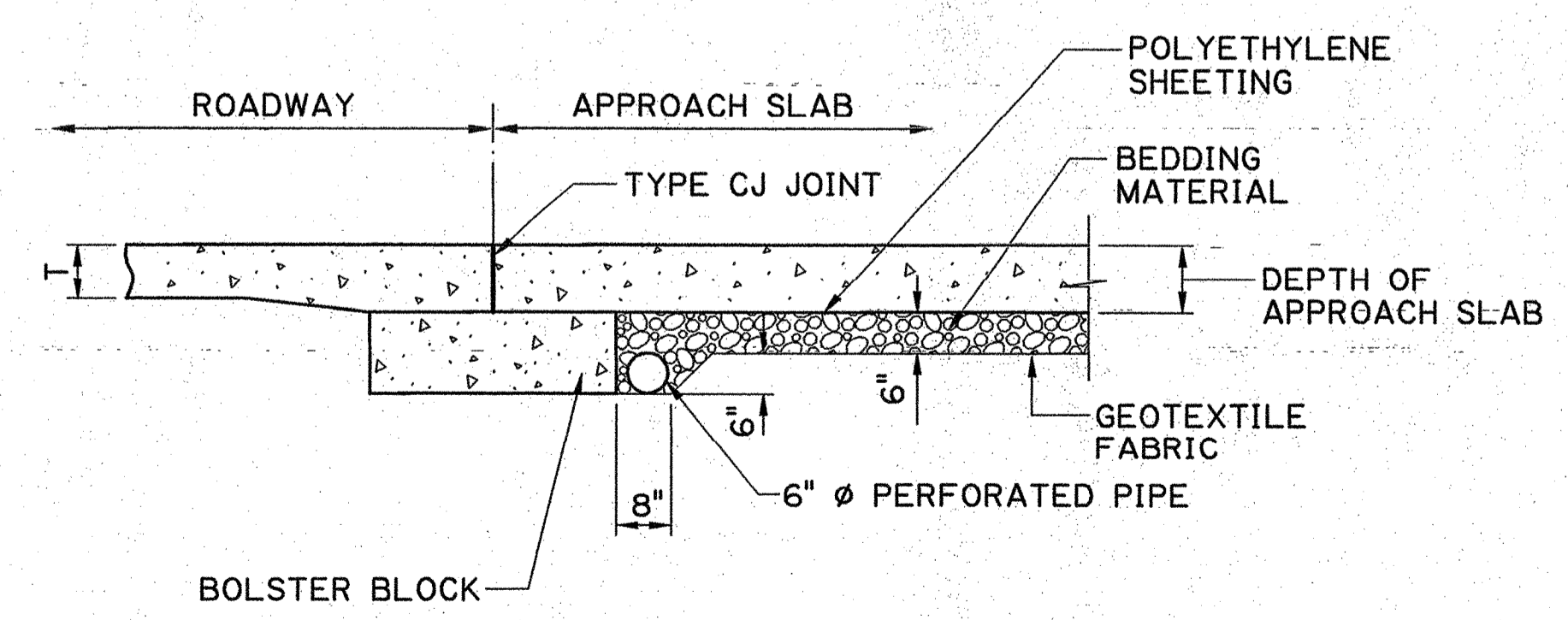
SECTION A-A



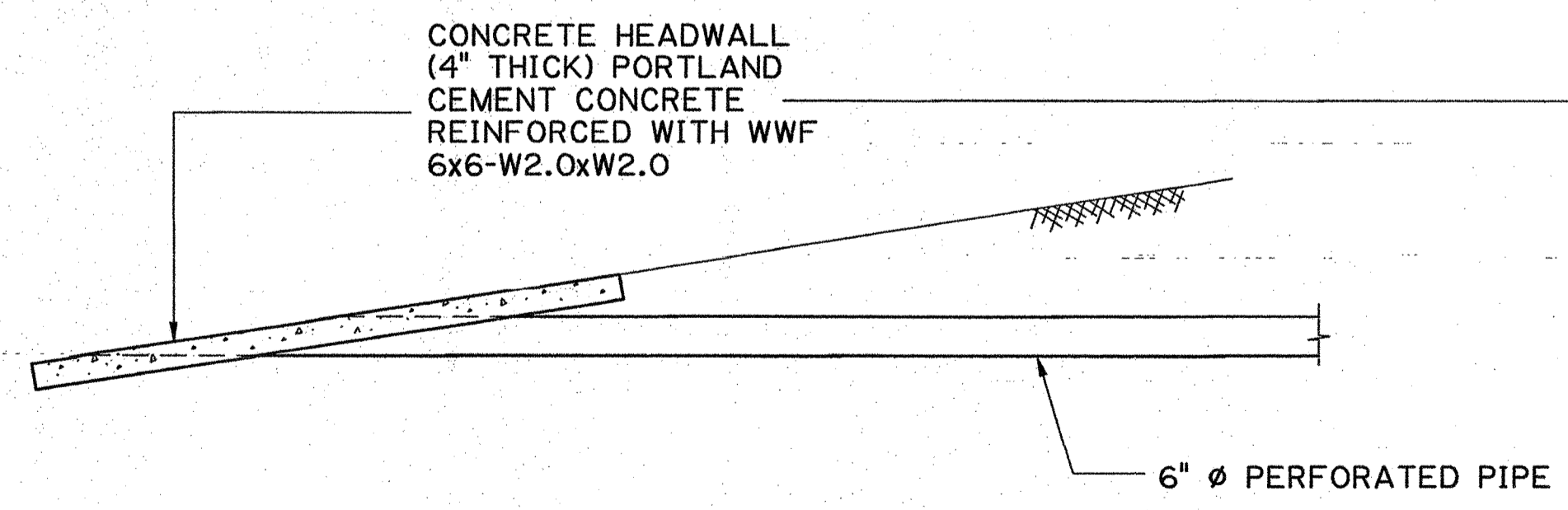
END TREATMENT FOR CROSS DRAIN PIPES
(SHOWING WIRE SCREEN MESH)



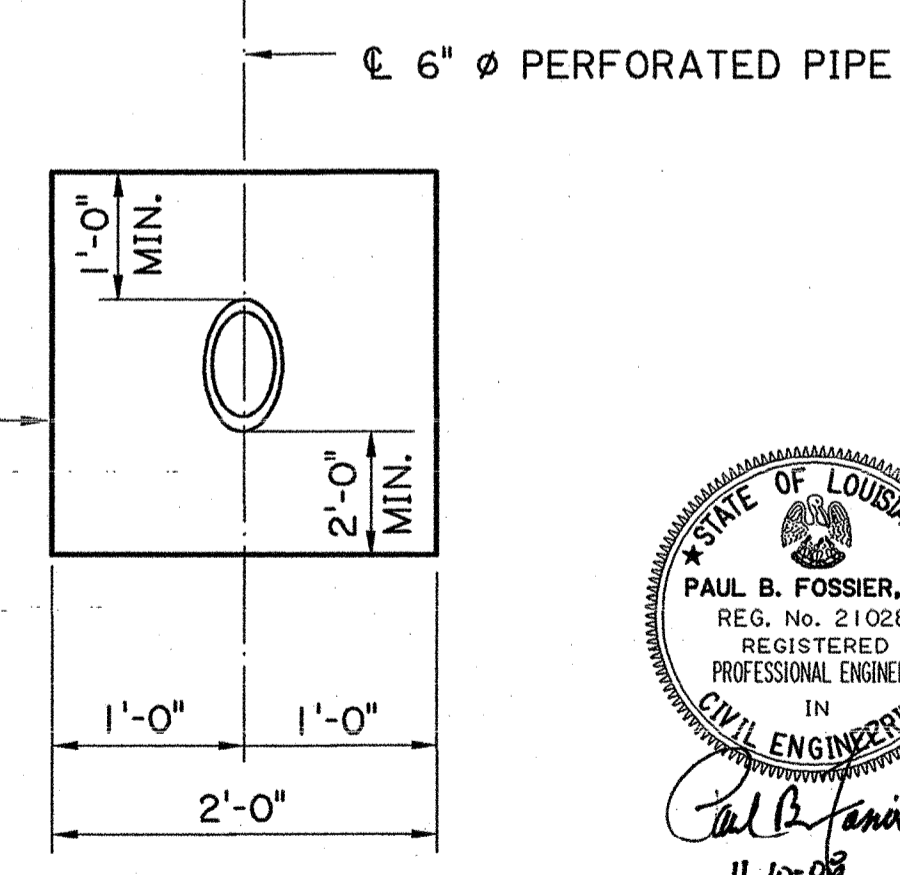
VIEW B-B



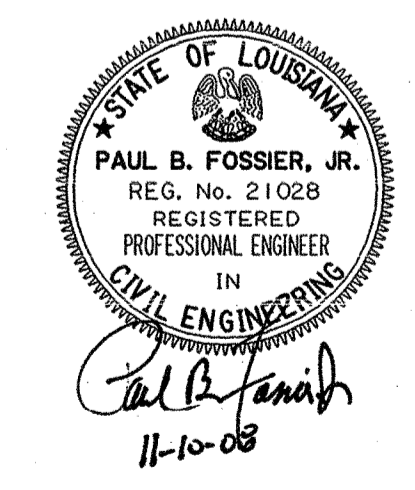
ALTERNATE DETAIL FOR P.C.C. PAVEMENT
(FOR CJ JOINT DETAIL, SEE STD. PLAN CP-01)



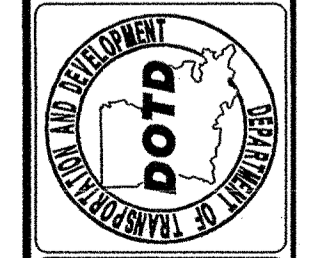
END TREATMENT FOR CROSS DRAIN PIPES
(SHOWING CONCRETE HEADWALL)



END VIEW CONCRETE HEADWALL

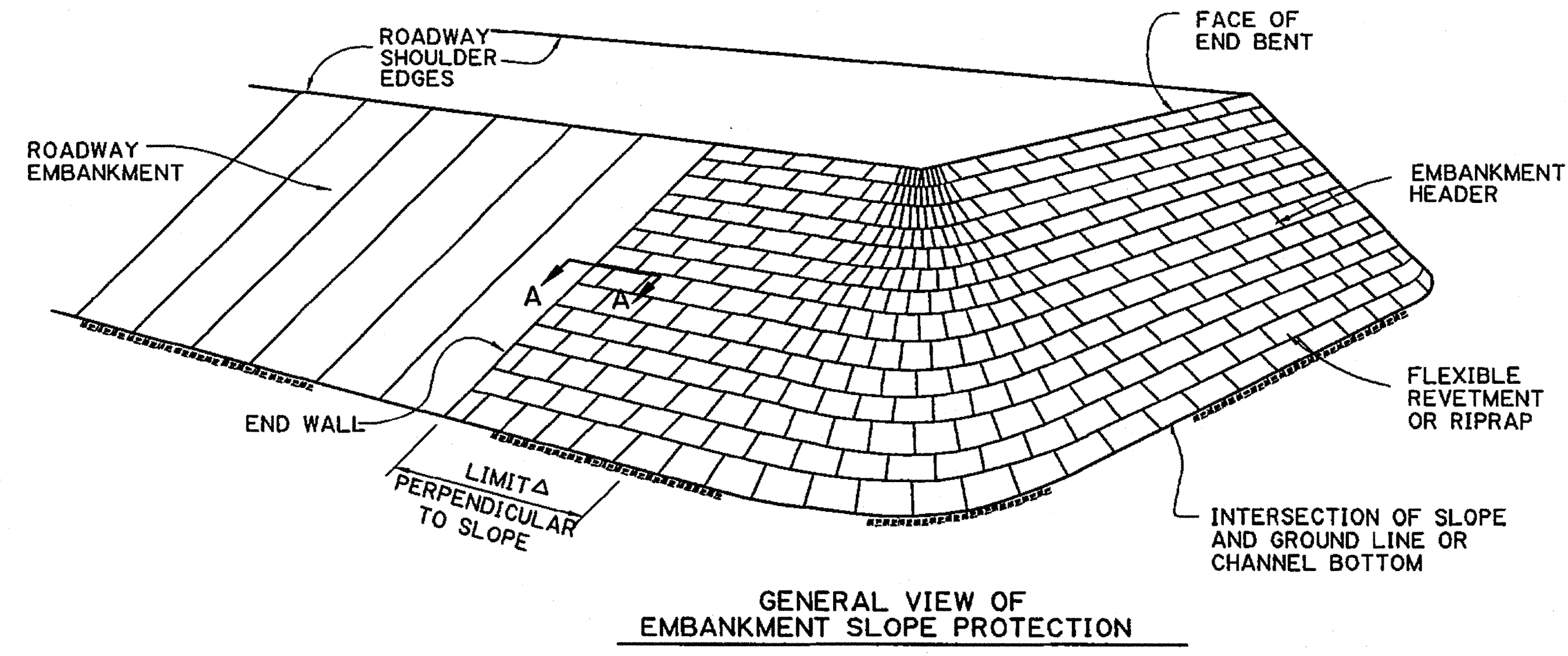
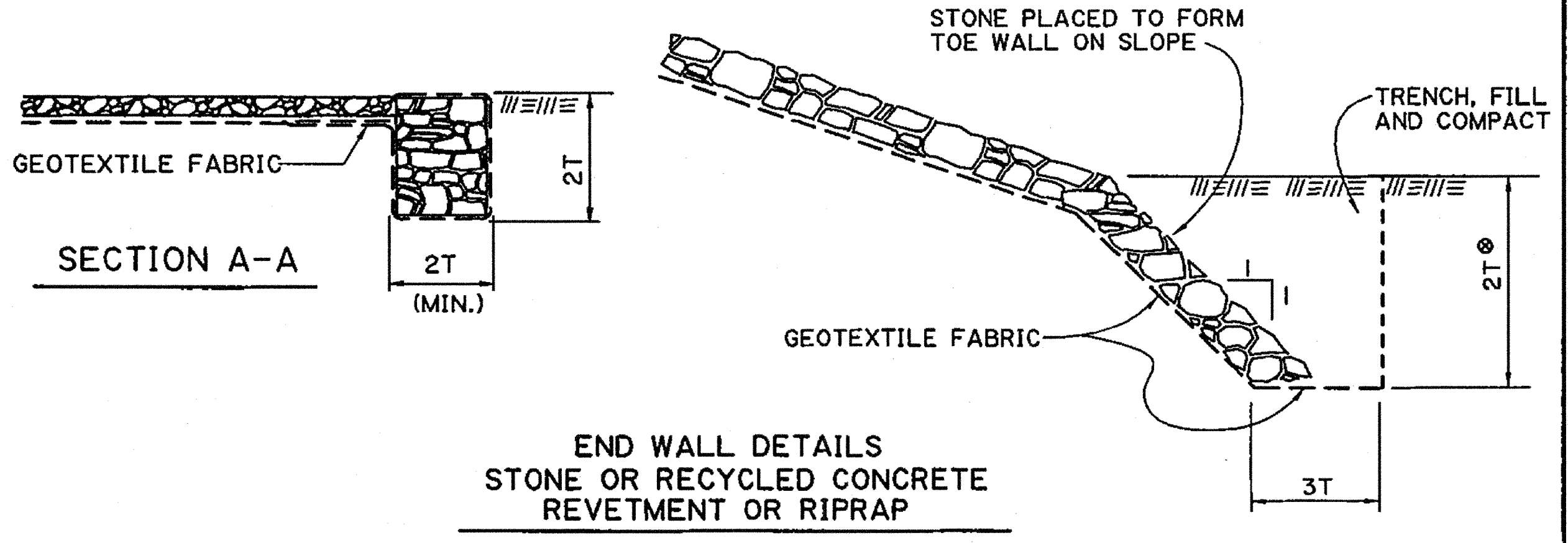
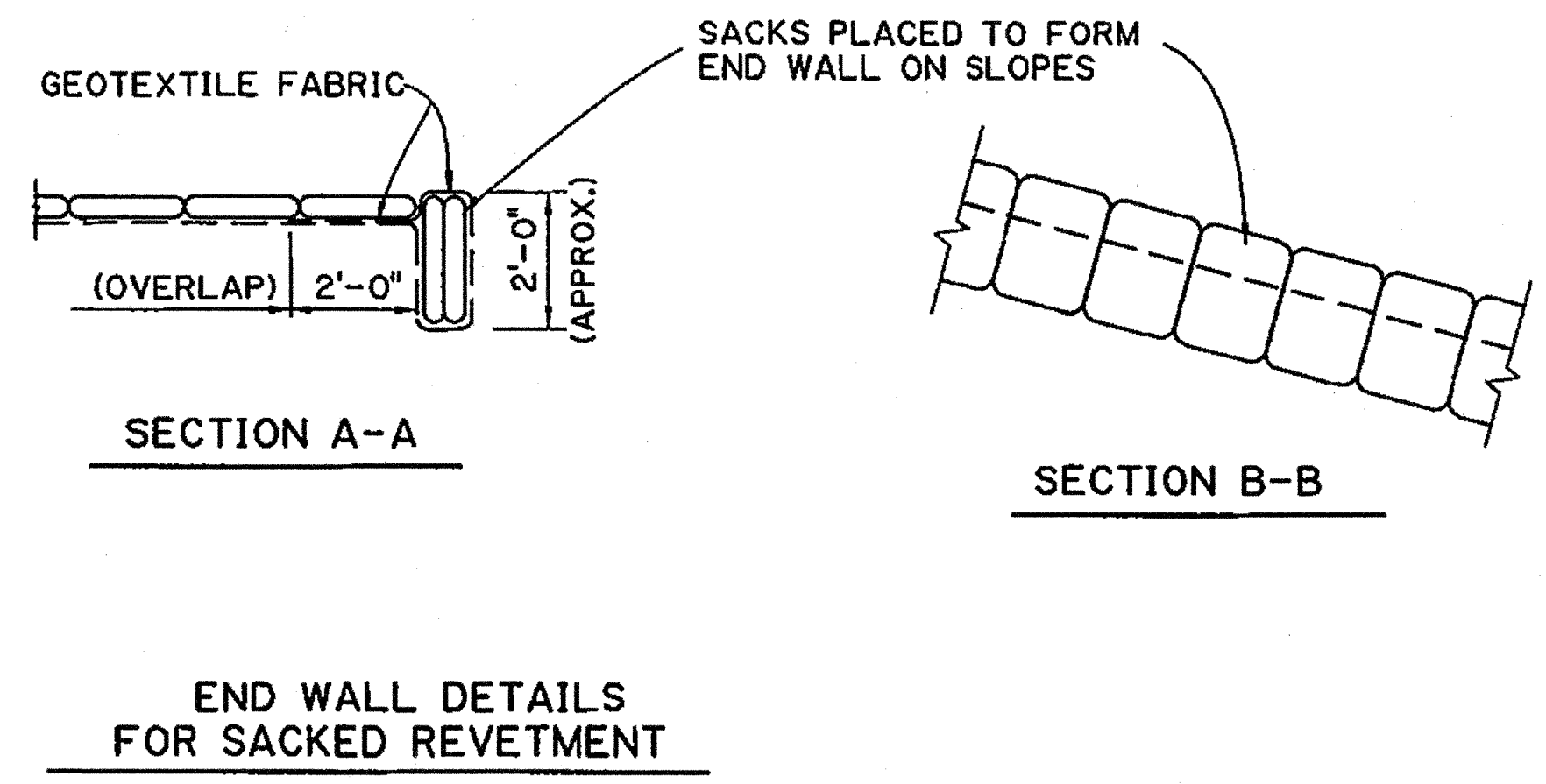
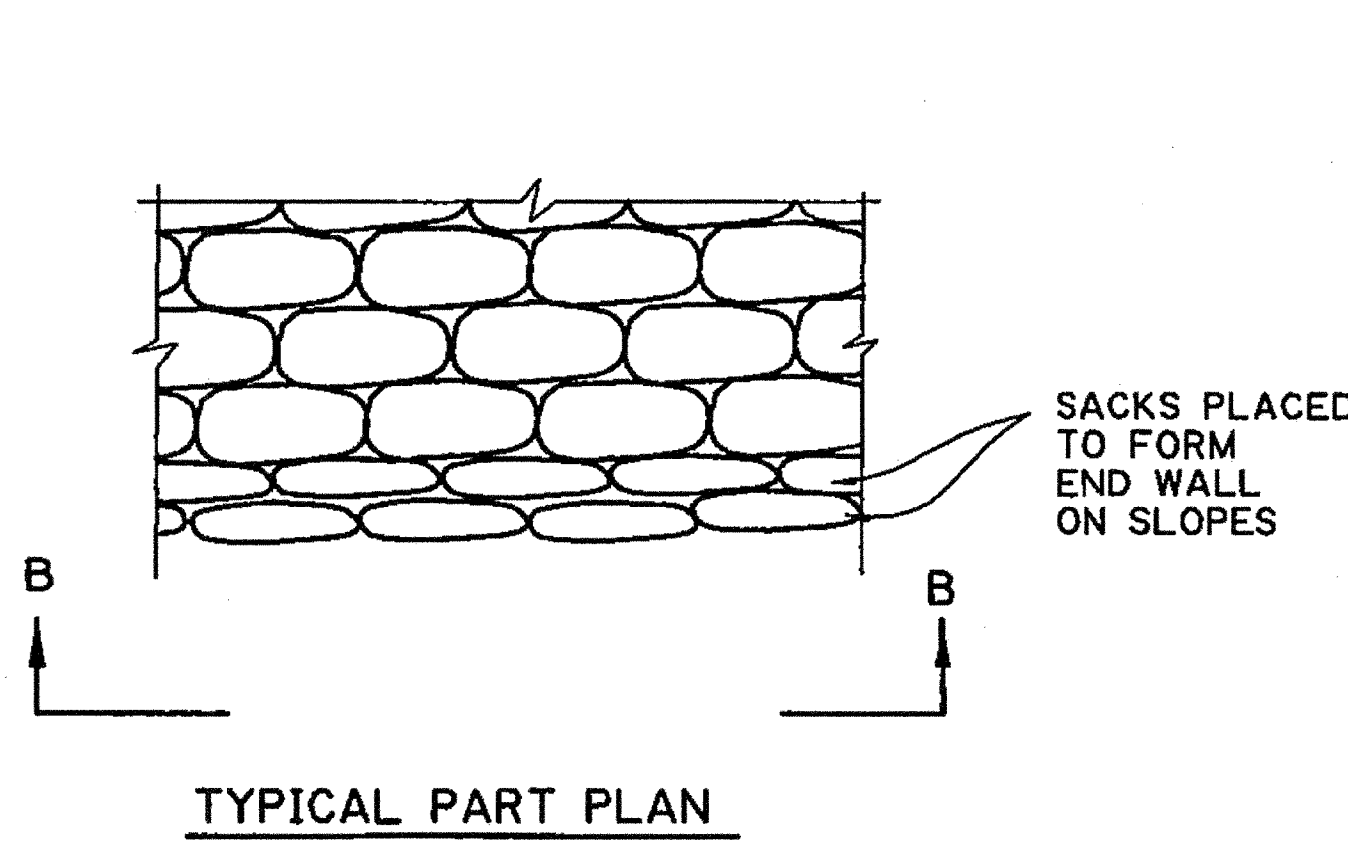
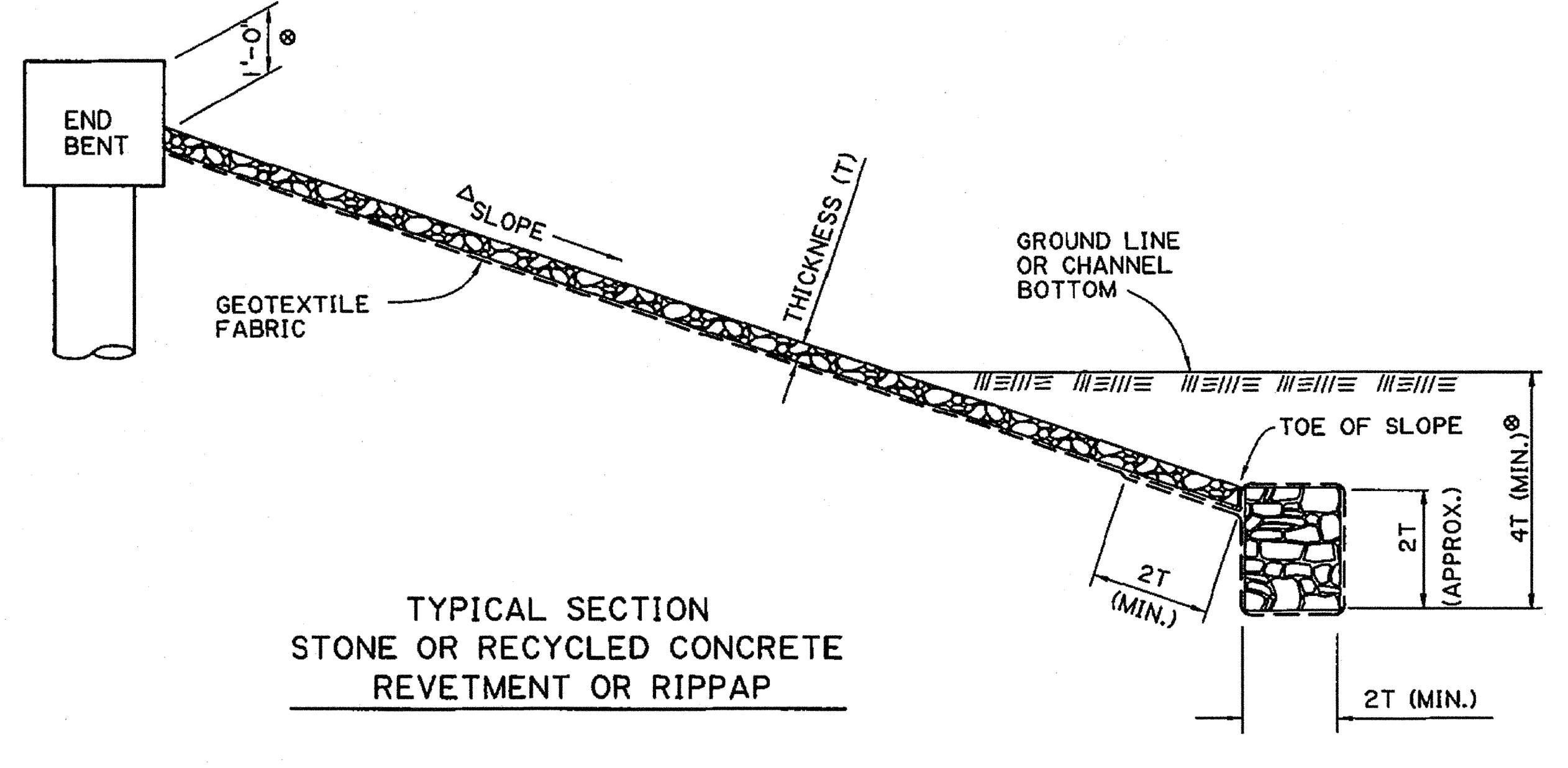
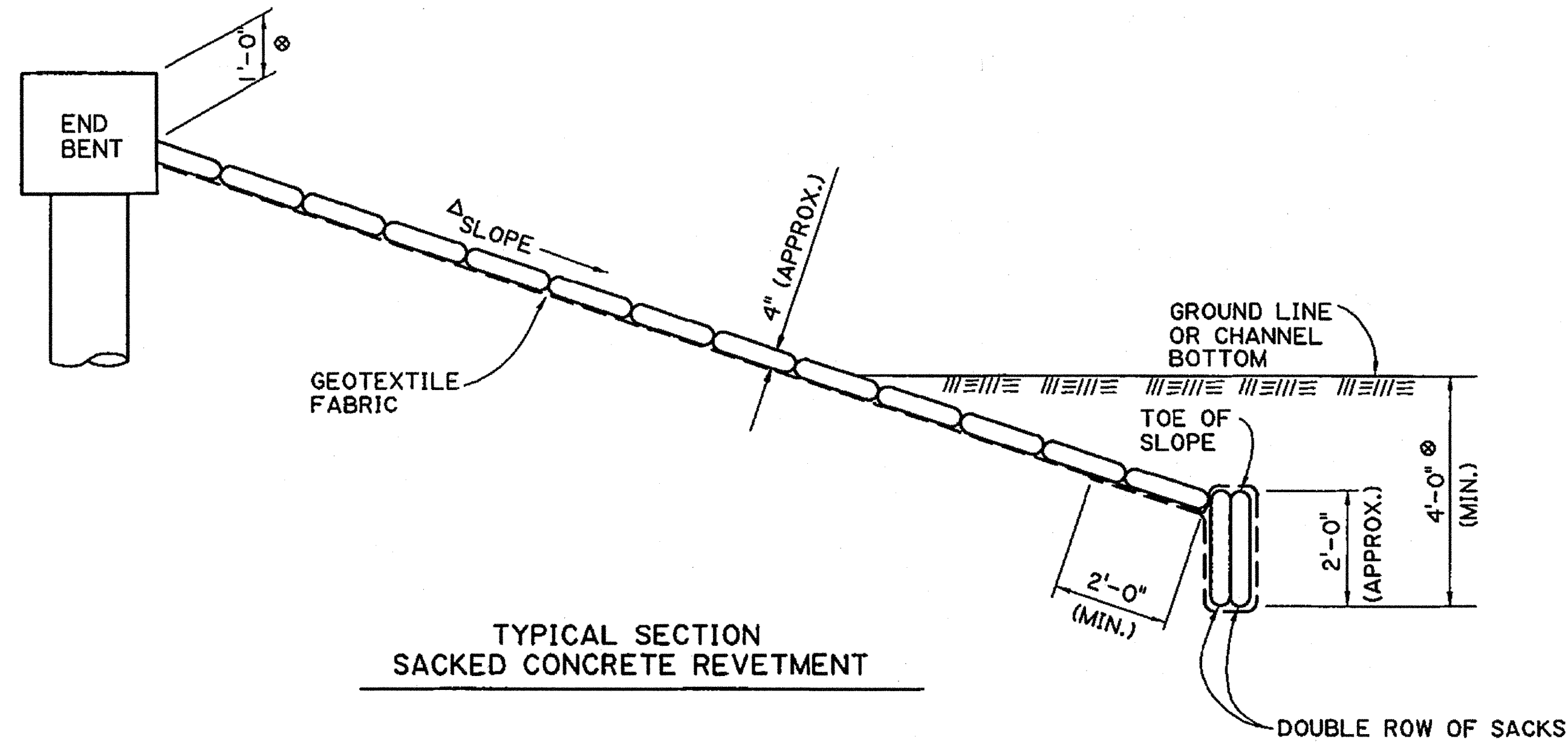


UNDERDRAINS FOR CONCRETE APPROACH SLABS (CROSS DRAINAGE)



BRIDGE AND STRUCTURAL DESIGN

I:\Gang2\Projects\064010040\dgn\standards\standard details\183_fr-01.dgn
 30-APR-2009 13:04
 FINAL PLANS



GENERAL NOTES:

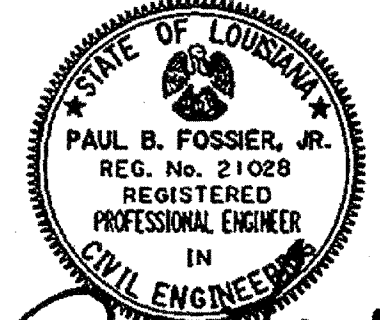
RIPRAP AND FLEXIBLE REVETMENT SHALL BE PLACED IN ACCORDANCE WITH THE LATEST SECTIONS 711 AND 712 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. GEOTEXTILE FABRIC WILL BE MEASURED AND PAID FOR UNDER IT'S OWN PAY ITEM WHEN USED WITH RIPRAP BUT WILL BE CONSIDERED AN INCIDENTAL ITEM AND BE INCLUDED IN THE PAY ITEM FOR REVETMENT. ALTERNATE DESIGNS MAY BE SUBMITTED TO THE HYDRAULIC ENGINEER FOR APPROVAL.

ELEVATION OF TOE OF SLOPE TO REMAIN CONSTANT FOR ALL PROTECTED SIDES OF THE EMBANKMENT, UNLESS OTHERWISE NOTED.


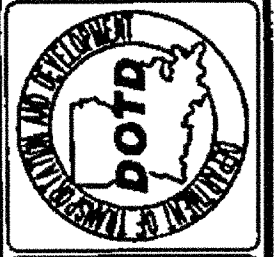
WHERE SLOPE PROTECTION FOR ADJACENT EMBANKMENTS INTERSECT, TERMINATE EACH WITH A TOE WALL AS DETAILED ON THIS SHEET EXCEPT WALLS ABUT.

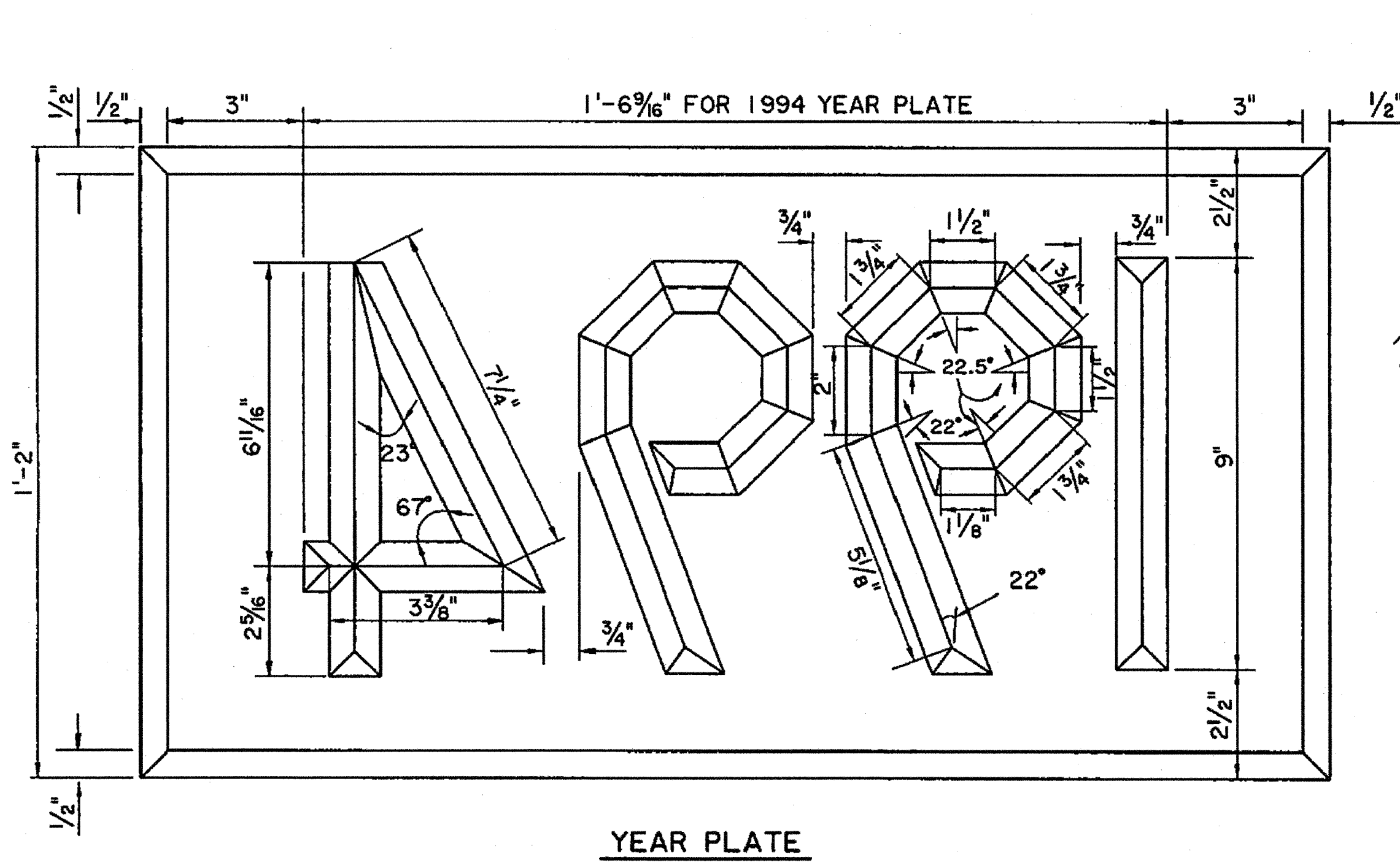
RIPRAP CLASS (LBS.)	MINIMUM THICKNESS (T) (INCHES)
□ 30	14
* 55	18
* 130	24
* 250	30

- * STONE ONLY
- EQUIVALENT TO STONE OR RECYCLED CONCRETE REVETMENT.
- ⊙ UNLESS OTHERWISE SHOWN ON PLANS.
- Δ SEE GENERAL PLAN FOR EMBANKMENT HEADER SLOPE AND LIMITS OF SLOPE PROTECTION ALONG ROADWAY EMBANKMENT.


 Paul B. Fossier, Jr.
 8/28/00

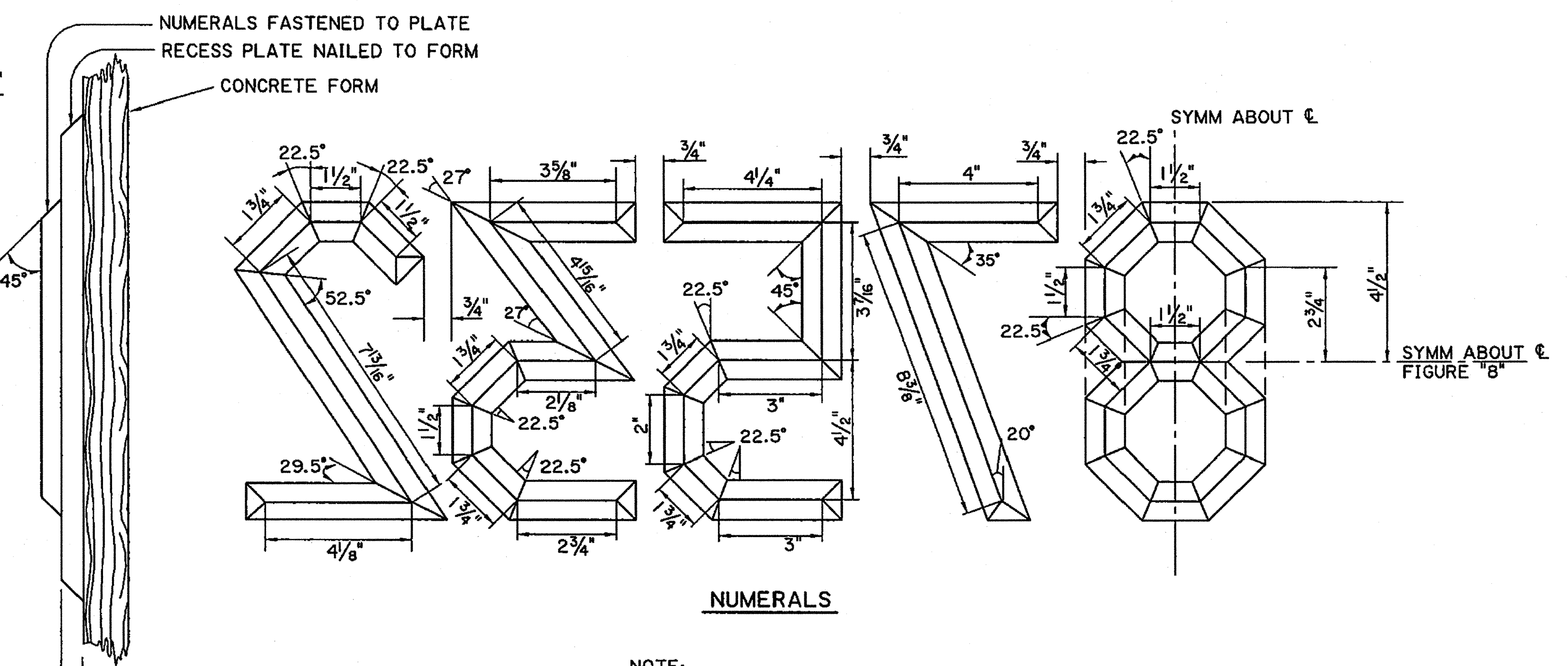
ALL DETAILS NTS

SHEET NUMBER	183	PARISH	JEFFERSON	DESIGNED	A. ALLEN
FEDERAL PROJECT		STATE	064-01-0040	CHECKED	G. GRASS
DATE	MAY, 2000	PROJECT		DATE	MAY, 2000
BY		REVISION DESCRIPTION		NO.	
 FLEXIBLE REVETMENT AND RIPRAP STANDARD DETAIL FR-01					
 BRIDGE AND STRUCTURAL DESIGN					



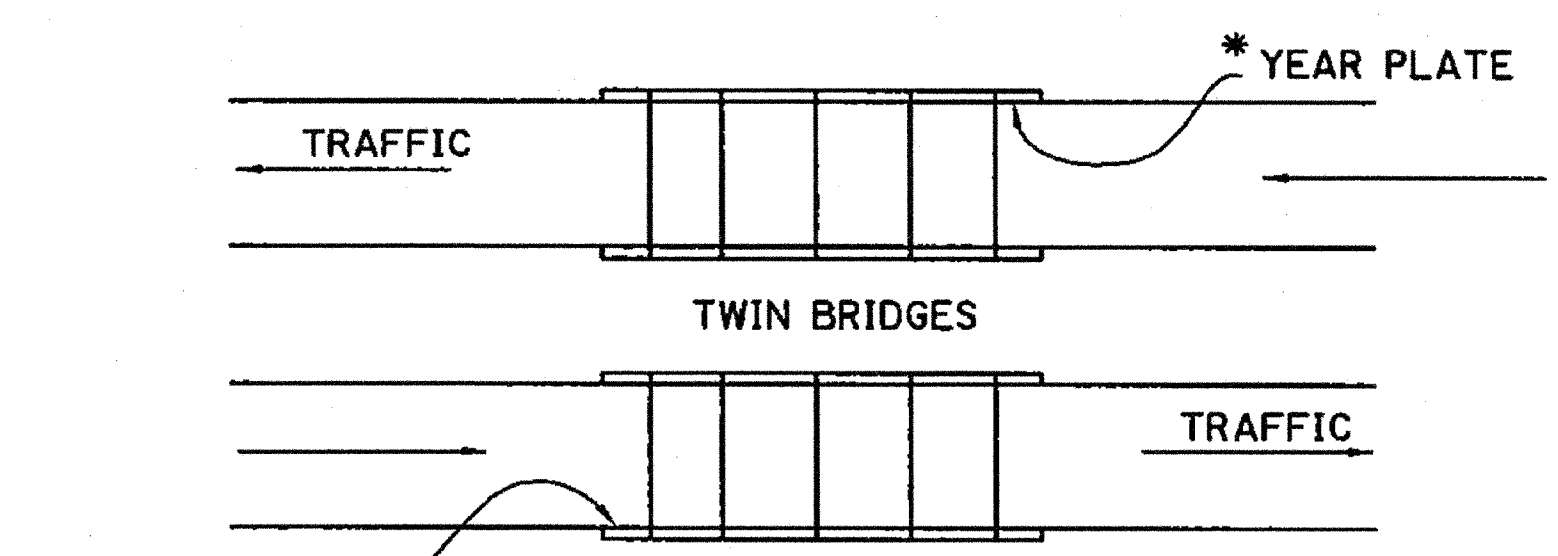
YEAR PLATE

DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
 USE ONE HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.
 YEAR PLATE TO CORRESPOND TO YEAR IN WHICH STRUCTURE IS COMPLETED.



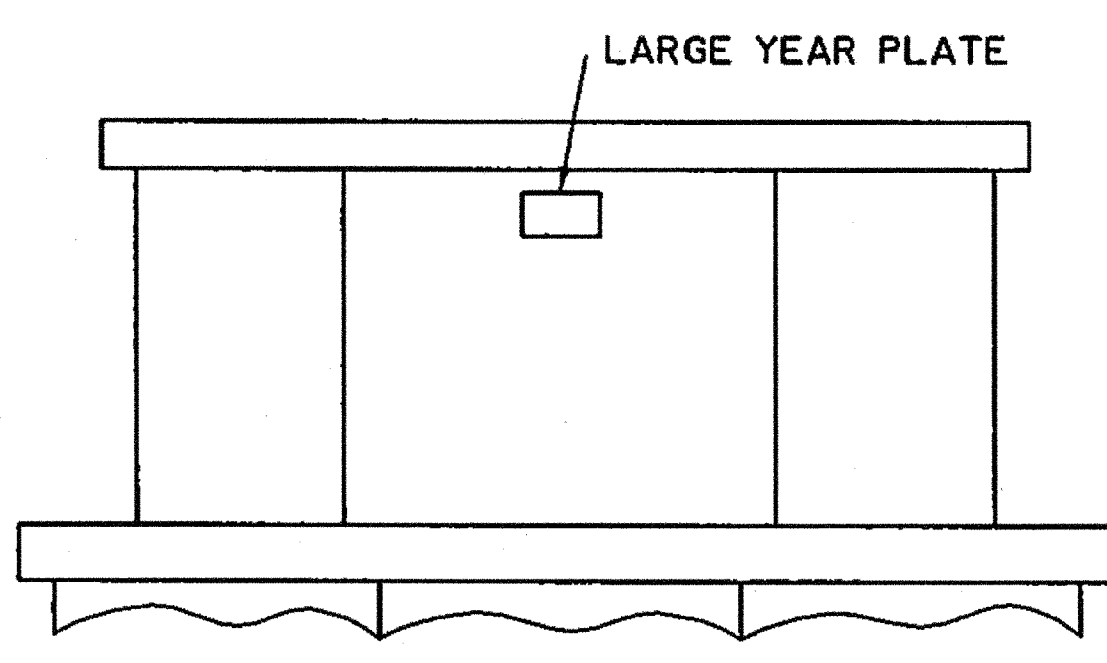
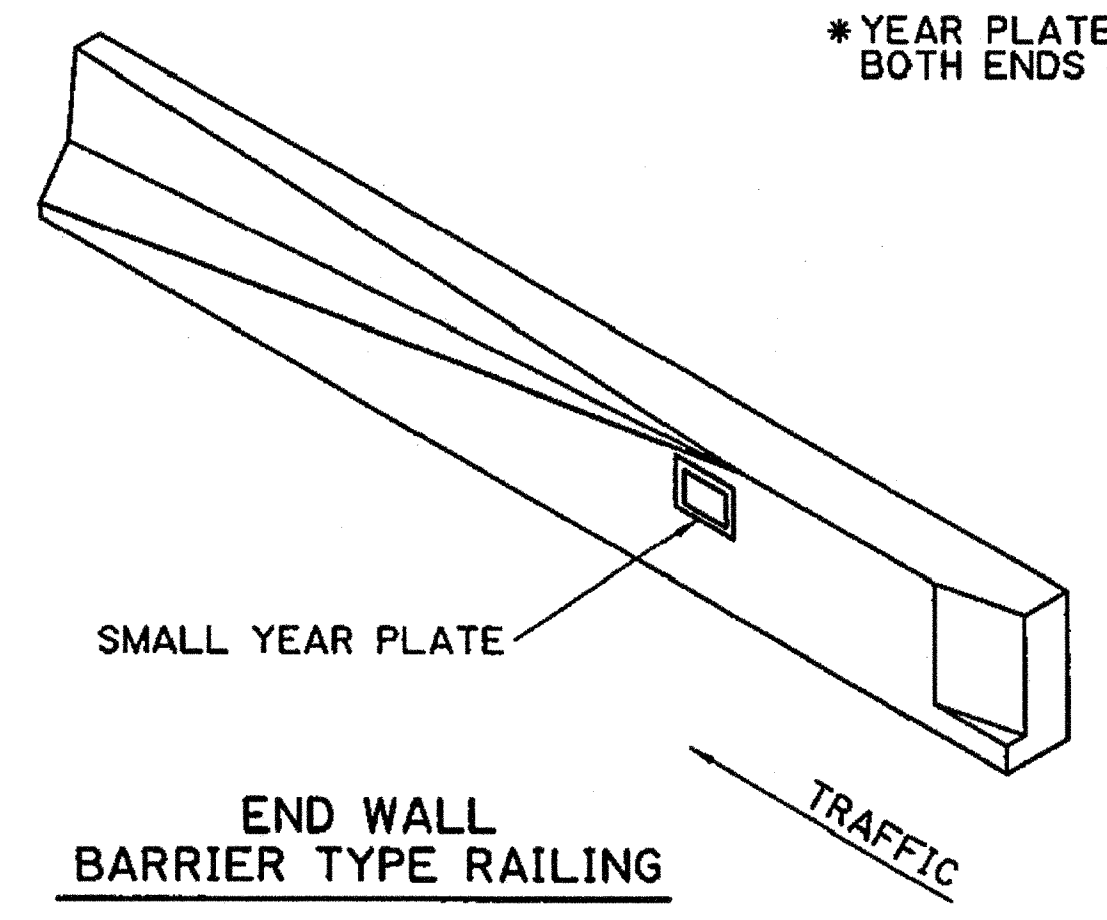
NUMERALS

NOTE:
 FIGURE "6" TO BE "9" INVERTED.
 FIGURE "0" TO BE MADE USING DASHED LINES INDICATED ON DETAIL OF FIGURE "8."
 DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
 USE ONE-HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.



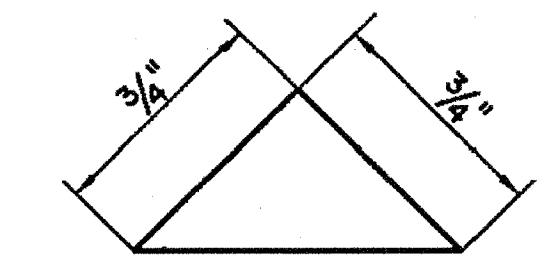
BRIDGE PLAN

* YEAR PLATE ON THE APPROACH SIDE OF BOTH ENDS ON TWO-WAY TRAFFIC BRIDGES.

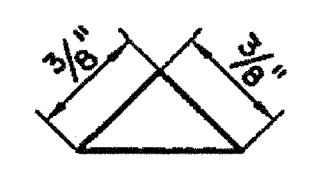


PIER ELEVATION

SKETCHES SHOWING LOCATION OF YEAR PLATE ON VARIOUS CONCRETE STRUCTURES



FULL SIZE CROSS-SECTION OF 3/4" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.
CHAMFER STRIP FOR LARGE YEAR PLATE



FULL SIZE CROSS SECTION OF 3/8" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.
CHAMFER STRIP FOR SMALL YEAR PLATE

STATE OF LOUISIANA
 PAUL B. FOSSIER, JR.
 REG. No. 21026
 REGISTERED PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING

Paul B. Fossier
 8/28/00

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	TEST PILE NO.	
											STA.:	LOCATION:
TN. FI. SA. W/ SI. TRS.						N=11				0	99+74	On Centerline
TN. FI. SA. W/ SI. TRS.						N=13				-5		
TN. FI. SA. W/ SI. TRS.						N=13				-10		
TN. FI. SA. W/ SI. TRS.						N=15				-15		
GR. FI. SA. W/ SI. TRS.						N=18				-20		
GR. FI. SA. W/ SI. TRS.						N=11				-25		
GR. FI. SA.						N=13				-30		
GR. FI. SA.						N=6				-35		
GR. FI. SA.						N=9				-40		
GR. FI. SA. W/ SI. TRS.						N=21				-45		
GR. SILTY FI. SA.						N=22				-50		
GR. SILTY FI. SA.						N=17				-55		
GR. SILTY FI. SA.						N=13				-60		
TN. AND GR. FI. SA.	101	31			0.87		BULGE			-65		
GR. FI. SA. W/ SI. TRS.						N=10				-70		
GR. FI. SA. W/ SI. TRS.						N=16				-75		
GR. FI. SA.	112	25			3.44		BULGE			-80		
GR. FI. SA. W/ SI. TRS.						N=44				-85		
GR. FI. SA. W/ SI. TRS.						N=42				-90		
GR. FI. SA. W/ SI. TRS.						N=33				-95		
GR. FI. SA. W/ SI. TRS.						N=35				-100		
GR. CL.						N=8				-105		
GR. CL.	106	51	86	55	0.92		M.S.			-110		
GR. CL. W/ SI. LENSES	112	28			0.68		YLD.			-115		
GR. CL.	113	48	51	29	1.35		M.S.			-120		
GR. CL.	112	48			1.35		M.S.			-125		
GR. SLIGHTLY SILTY CL.	118	33	42	24	0.70		M.S.			-130		
GR. CL. W/ SI. LENSES	109	44			1.44		M.S.			-135		
GR. VERY SANDY CL.	123	24	31	13	1.10		M.S.			-140		
GR. SANDY CL.	120	27			1.28		M.S.			-145		
GR. CL.	119	32	61	36	0.40		M.S.			-150		
GR. CL.	119	29			1.51		YLD.			-155		

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	TEST PILE NO.	
											STA.:	LOCATION:
GR. FI. SA.						N=2				-5	102+68	On Centerline
GR. FI. SA.						N=2				-10		
GR. FI. SA.						N=4				-15		
GR. FI. SA.						N=7				-20		
GR. FI. SA.						N=5				-25		
GR. FI. SA.						N=9				-30		
GR. FI. SA.						N=12				-35		
GR. FI. SA.						N=17				-40		
GR. FI. SA.						N=21				-45		
GR. FI. SA.						N=23				-50		
GR. FI. SA.						N=20				-55		
GR. FI. SA.						N=26				-60		
GR. FI. SA.						N=23				-65		
GR. FI. SA.						N=29				-70		
GR. FI. SA.						N=32				-75		
GR. FI. SA.						N=38				-80		
GR. FI. SA.						N=35				-85		
GR. FI. SA.						N=41				-90		
GR. FI. SA. W/ CL. TRS.						N=45				-95		
GR. CL.	105	48	75	45	0.48		YLD.			-100		
GR. CL. W/ SI. TRS.	111	49			0.48		M.S.			-105		
GR. SILTY CL. W/ 1" SI. LAYER	107	50	88	54	1.03		M.S.			-110		
GR. CL. W/ SA. PKTS.	108	41			0.45		M.S.			-115		
GR. CL. W/ SI. TRS.	102	40	80	53	0.42		M.S.			-120		
GR. CL.	105	35			0.76		M.S.			-125		
GR. CL.	105	40	82	50	0.64		YLD.			-130		
GR. CL. W/ 2" SA. LAYER	114	42			0.40		M.S.			-135		
GR. CL.	110	51	100	68	1.00		M.S.			-140		
GR. CL.	108	49			0.47		YLD.			-145		
GR. CL. W/ SI. PKTS.	102	52	96	64	0.36		M.S.			-150		
GR. CL. W/ SI. PKTS.	115	40			1.19		M.S.			-155		
GR. CL. W/ SI. PKTS.	112	48	78	52	0.66		YLD.			-160		
GR. SLIGHTLY SILTY CL.	107	33			0.66		YLD.			-165		

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	qu	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	TEST PILE NO.	
											STA.:	LOCATION:
GR. FI. SA. W/ SI. TRS.						N=2				-5	104+76	On Centerline
GR. FI. SA. W/ SI. TRS.						N=5				-10		
GR. FI. SA. W/ SI. TRS.						N=6				-15		
GR. FI. SA. W/ SI. TRS.						N=7				-20		
GR. FI. SA. W/ SI. TRS.						N=7				-25		
GR. FI. SA. W/ SI. AND CL. TRS.						N=10				-30		
GR. CL. W/ SA. STKS. AND PKTS.	104	50	69	42	0.16		YLD.			-35		
GR. FI. SA. W/ SI. TRS.						N=22				-40		
GR. FI. SA. W/ SI. TRS.						N=24				-45		
GR. FI. SA. W/ SI. TRS.						N=27				-50		
GR. FI. SA. W/ SI. TRS.						N=25				-55		
GR. FI. SA. W/ SI. TRS.						N=29				-60		
GR. FI. SA. W/ SI. TRS.						N=30				-65		
GR. FI. SA.						N=40				-70		
GR. FI. SA.						N=31				-75		
GR. FI. SA.						N=29				-80		
GR. FI. SA.						N=22				-85		
GR. CL. W/ SA. STKS. AND PKTS.	113	34	71	43	0.83		M.S.			-90		
GR. CL.	106	49			0.55		M.S.			-95		
GR. CL. W/ SA. STKS. AND PKTS.	108	47	73	47	0.41		YLD.			-100		
GR. CL. W/ SA. STKS. AND PKTS.	105	39			0.56		YLD.			-105		
GR. CL. W/ SA. LENSES	108	49	97	75	0.62		M.S.			-110		
GR. FI. SA. W/ SH.	124	25			0.54		BULGE			-115		
GR. CL. W/ SA. LENSES	106	47	91	64	0.75		M.S.			-120		
GR. CL.	110	48	66	39	0.75		M.S.			-125		
GR. CL.	108	61	91	65	0.27		M.S.			-130		
GR. CL. W/ SA. LENSES, STKS. AND PKTS.	114	32			0.57		M.S.			-135		
GR. CL. W/ SA. PKTS.	112	35	70	47	0.31		M.S.			-140		
GR. SANDY CL.	123	27			0.81		M.S.			-145		
GR. CL. W/ SA. STKS. AND PKTS.	116	51	63	39	0.74		M.S.			-150		
GR. CL.	112	34			0.54		M.S.			-155		
GR. CL. W/ SA. PKTS.	108	43	87	59	0.68		M.S.			-160		

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL: CL. = Clay CONC. = Concrete GRAV. = Gravel I.O. = Iron Ore L.I.G. = Lignite N.P. = Non-Plastic ORG. = Organic PT. = Peat RT. = Roots SA. = Sand SH. = Shell SI. = Silt VEG. = Vegetation WD. = Wood	COLOR: BR. = Brown BK. = Black BL. = Blue GR. = Gray GN. = Green PK. = Pink RD. = Red TN. = Tan WH. = White YE. = Yellow	STRUCTURE: ALT. = Alternating LAM. = Laminated LEN. = Lens LYR. = Layer MOT. = Mottled PKT. = Pocket STK. = Streak STR. = Strata TR. = Trace
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SOIL PROPERTIES

WET DENSITY = Wet density of in-place soil, (pounds per cu. ft.) MOISTURE CONTENT = Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%) LIQUID LIMIT & PLASTICITY INDEX = Atterberg limits and indices, DOTD TR 428 qu = Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.) SPT = Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise UU = Unconsolidated Undrained triaxial test, AASHTO T 236, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.) C = Soil cohesion (tons per sq. ft.) Δ = Soil angle of internal friction (degrees) * = Unconsolidated Undrained triaxial test, AASHTO T 236, three specimens, (c in TSF, φ) # = Pocket penetrometer strength, (tons per sq. ft.) [] = Consolidation test, AASHTO T 216

MISCELLANEOUS:

- () - Location and identification of thin-walled tube sample, AASHTO T 207
- () - Location and identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
- () - Location and identification of SPT sample, AASHTO T 206
- N.C. = No Cull, no preliminary 6 in. driving prior to securing SPT data
- NO PENT. = No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.
- NO RECV. = No Recovery, unable to recover sample for testing or classification.
- DIST. = Disturbed sample recovered with thin-walled tube sampler.
- 24 HRS. = Water Table depth below ground surface recorded at noted time after completion of bore hole.
- () = SOIL TYPE nomenclature is based on ASTM D 2487
- S_t = Sensitivity (AASHTO T208)

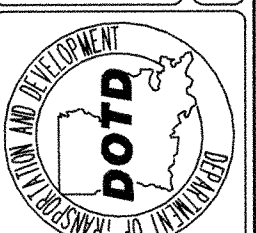
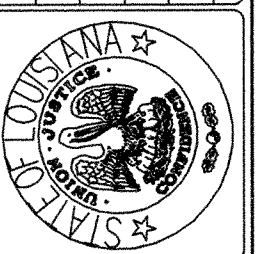
CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
SAND AND SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4
		LOOSE	4 - 10
		MEDIUM	10 - 30
		DENSE	30 - 50
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2
		SOFT	2 - 4
		MEDIUM	4 - 8
		STIFF	8 - 15
	VERY STIFF	15 - 30	2.00 - 4.00
	HARD	OVER 30	OVER 4.00

STATE OF LOUISIANA
 JAMES M. ARONSTEIN, JR.
 REG. No. 11794
 REGISTERED PROFESSIONAL ENGINEER
 LUIS J. CAPOZZOLI & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 BATON ROUGE, LOUISIANA
 THIS SIGNATURE AND SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

Task Order No. 701-65-0585
 Retainer Contract No. 700-99-0369

JEFFERSON
 FEDERAL PROJECT STP-9905(536)
 STATE PROJECT 061-01-0040
 DESIGNED CHECKED
 DETAILED CHECKED
 DATE SHEET
 SOIL BORING LOGS
 CAMINADA BAY BRIDGE
 DOTD
 PAVEMENT & GEOTECHNICAL SERVICES



SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT OR U	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.					
												STA.:	LOCATION:	TYPE OF PILE:	TYPE OF HAMMER:		
GR. CL.	109	37	73	47	1.11		YLD.			-160							
GR. CL. W/ FI. SA. PKTS. AND LENSES	108	39			1.64		M.S.			-170							
GR. CL. W/ FI. SA. LENSES	109	44	76	50	1.64		M.S.			-175							
GR. CL. W/ FI. SA. PKTS.	110	42			1.71		M.S.			-180							
GR. CL.	108	45	89	58	2.08		M.S.			-185							
GR. CL.	107	50			2.05		M.S.			-190							
GR. CL.	103	43	72	49	0.28		YLD.	☒		-195							
REDDISH BR. CL.	106	55			1.83		YLD.			-200							
BROWNISH RD. AND GR. CL.	106	58	101	69	0.88		YLD.			-205							
										-210							

BORING NO. 5 (continued)	STA.:	
LATITUDE:	LOCATION:	DRIVING RESISTANCE (TONS)
LONGITUDE:	DATE TAKEN:	STR. NO.:
CONT. SECT.:	LOG MILE:	SOD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT OR U	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.					
												STA.:	LOCATION:	TYPE OF PILE:	TYPE OF HAMMER:		
GR. CLAYEY SA. W/ SH.	127	25			0.03 AT 0.4		BULGE			-20							
GR. CLAYEY SA. W/ 1/2" CL. LAYER	123	34			0.29 AT 1.6		BULGE			-25							
GR. FI. SA. W/ SI. TRS.						N=5				-35							
GR. FI. SA. W/ SI. AND CL. TRS.						N=6				-40							
GR. SILTY FI. SA. W/ CL. TRS.						N=15				-40							
GR. SILTY FI. SA.	125	27			0.35 AT 7.6		BULGE			-45							
GR. FI. SA. W/ SI. TRS.						N=8				-50							
GR. FI. SA. W/ SI. TRS.						N=7				-50							
GR. FI. SA. W/ SI. TRS.						N=13				-55							
GR. FI. SA. W/ SI. TRS.						N=17				-60							
GR. FI. SA. W/ SI. TRS.						N=15				-60							
GR. CL. W/ SA. TRS.						N=5				-60							
GR. CL. W/ SA. LENSES	106	50	62	32	0.83		S/S			-65							
GR. CL. W/ SI. STKS. AND LENSES	106	49			0.50		M.S.			-70							
GR. CL. W/ FI. SA. PKTS.	111	49	87	57	1.03		M.S.			-75							
GR. CL.	107	53			1.16		M.S.			-80							
GR. CL. W/ FI. SA. STKS.	106	46	67	37	0.55		M.S.			-85							
GR. SILTY CL. W/ FI. SA. STKS.	114	26			0.44		M.S.			-90							
GR. FI. SA. W/ SI. AND CL. TRS.	116	24			0.48 AT 27.8		YLD.			-95							
GR. CL. W/ 3" SANDY CL. LAYER AND FI. SA. STKS.	116	27			1.94		M.S.			-100							
GR. CL.	106	47	75	52	0.16		YLD.			-105							
GR. CL. W/ FI. SA. LENSES	109	44			1.02		M.S.			-110							
GR. CL. W/ SA. STKS.	104	33	73	50	0.49		YLD.			-115							
GR. SILTY CL. W/ FI. SA. STKS. AND LENSES	118	27			0.92		M.S.			-120							
GR. SILTY CL. W/ FI. SA. STKS. AND LENSES	118	36	35	17	0.44		M.S.			-125							
GR. CL.	110	39			1.73		YLD.			-130							
GR. CL. W/ FI. SA. LENSES	100	49	107	74	0.63		YLD.	☒		-135							
GR. SLIGHTLY SILTY CL. W/ FI. SA. STKS.	115	22			0.68		M.S.			-140							
GR. CL. W/ FI. SA. TRS. AND SH.	107	39	102	72	1.44		M.S.			-145							
GR. CL. W/ FI. SA. STKS., LENSES, AND 1/2" SI. LAYER	107	31			0.78		M.S.			-150							
GR. CL. W/ FI. SA. STKS. AND LENSES	107	44	88	63	1.94		M.S.			-155							
GR. CL. W/ FI. SA. STKS. AND LENSES	107	44			1.64		M.S.			-160							

BORING NO. 5	STA.:	109+09
LATITUDE: N29° 12' 33.1"	LOCATION: On Centerline	DRIVING RESISTANCE (TONS)
LONGITUDE: W90° 02' 49.9"	DATE TAKEN: 18-19 JULY 2006	STR. NO.:
CONT. SECT.:	LOG MILE:	SOD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT OR U	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.					
												STA.:	LOCATION:	TYPE OF PILE:	TYPE OF HAMMER:		
GR. FI. SA. W/ SI. TRS.						N=5				-11.0 FEET							
GR. FI. SA. W/ SI. TRS.						N=3				-15							
GR. FI. SA. W/ SI. TRS.						N=13				-20							
GR. SANDY CL.						N=8				-25							
GR. SILTY FI. SA. W/ 2" CL. LAYER AND CL. STKS.	118	48			0.61 AT 5.2		BULGE			-25							
GR. CLAYEY FI. SA.						N=5				-30							
GR. FI. SA. W/ SI. TRS.						N=23				-35							
GR. FI. SA. W/ SH. AND SI. TRS.						N=11				-40							
GR. FI. SA. W/ SI. TRS.						N=16				-40							
GR. FI. SA. W/ SI. TRS.						N=20				-40							
GR. FI. SA. W/ SI. TRS.						N=16				-45							
GR. FI. SA. W/ SI. TRS.						N=26				-50							
GR. FI. SA. W/ SI. AND CL. TRS.						N=10				-50							
GR. CL. W/ SA. PKTS.	115	55	94	68	0.54		YLD.			-55							
GR. FI. SA. W/ SH. TRS.	120	43			1.20 AT 17.8		BULGE			-60							
GR. FI. SA. W/ SH. TRS.	121	30			0.49 AT 19.4		BULGE			-60							
GR. CL. W/ SA. LENSES	107	59			0.77		M.S.			-65							
GR. CL.	107	52	85	56	0.67		M.S.			-70							
GR. CL.	107	50			0.95		M.S.			-75							
GR. CL.	107	52	91	65	1.18		M.S.			-80							
GR. CL. W/ SA. LENSES	115	25			0.98		YLD.			-85							
GR. CL. W/ 3/2" SA. LAYER	105	53	74	45	0.31		M.S.			-90							
GR. CL. W/ SA. LENSES	103	49			0.48		YLD.			-95							
GR. SLIGHTLY SANDY CL.	118	24	46	23	0.62		M.S.			-100							
GR. CL.	105	39			0.29		M.S.			-105							
GR. CL.	110	44	91	63	1.02		M.S.			-110							
GR. CL.	119	35			1.51		M.S.			-115							
GR. CL.	106	42	91	62	1.44		M.S.			-120							
GR. CL.	107	43			1.03		M.S.			-125							
GR. CL.	106	44	70	41	0.47		M.S.			-130							
GR. CL.	106	52	76	47	0.69		M.S.	☒		-135							
GR. CL.	105	46	96	70	0.99		M.S.			-140							
GR. CL. W/ FI. SA. LENSES	113	54			1.72		M.S.			-145							
GR. CL.	110	38	66	40	1.15		YLD.			-150							
GR. CL. W/ SI. LENSES	104	53			0.69		M.S.			-155							

BORING NO. 4	STA.:	106+66
LATITUDE: N29° 12' 34.6"	LOCATION: On Centerline	DRIVING RESISTANCE (TONS)
LONGITUDE: W90° 02' 52.3"	DATE TAKEN: 15-16 JULY 2006	STR. NO.:
CONT. SECT.:	LOG MILE:	SOD. LDR.:

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL: CL. = Clay CONC. = Concrete GRAV. = Gravel I.O. = Iron Ore LIG. = Lignite N.P. = Non-Plastic ORG. = Organic PT. = Peat RT. = Roots SA. = Sand SH. = Shell S.L. = Silt VEG. = Vegetation WD. = Wood	COLOR: BR. = Brown BK. = Black BL. = Blue GR. = Gray GN. = Green PK. = Pink RD. = Red TN. = Tan WH. = White YE. = Yellow	STRUCTURE: ALT. = Alternating LAM. = Laminated LEN. = Lens LYR. = Layer MOT. = Mottled PKT. = Pocket STK. = Streak STR. = Strata TR. = Trace
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SOIL PROPERTIES

WET DENSITY	= Wet density of in-place soil, (pounds per cu. ft.)
MOISTURE CONTENT	= Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%)
LIQUID LIMIT & PLASTICITY INDEX	= Atterberg limits and indices, DOTD TR 428
q _c	= Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.)
SPT	= Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise
UU	= Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C	= Soil cohesion (tons per sq. ft.)

SOIL TYPE AND COLOR	WET DENSITY MUCLINE	MOISTURE CONTENT	LIQUID LIMIT ELEVATION	PLASTICITY INDEX AT	q	SPT U or U ₂	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	LOCATION:
GR. FI. SA. W/ SI. TRS.						N=20				-35		116+28	On Centerline
GR. FI. SA. W/ SI. TRS.						N=24				-40		28-30 JULY 2006	
GR. FI. SA. W/ SI. AND CL. TRS.						N=20				-45			
GR. FI. SA. W/ SI. TRS.						N=10				-45			
GR. FI. SA. W/ SI. TRS.						N=12				-45			
GR. SANDY CL.						N=10				-50			
GR. CL.	108	41	88	64	0.72		M.S.			-55			
GR. CL. W/ SI. LENSES	106	58			0.26		M.S.			-55			
GR. CL.	110	58	87	56	0.24		M.S.			-60			
GR. CL.	108	60			0.49		M.S.			-65			
GR. CL. W/ SI. LENSES	110	48	56	31	0.30		M.S.			-70			
GR. CL. W/ SI. LENSES	108	55			0.43		M.S.			-75			
GR. CL.	110	53	82	52	0.36		M.S.			-80			
GR. CL.	108	50			0.52		M.S.			-85			
GR. CL.		55	87	55						-90			
GR. CLAYEY SA.	119	34				0.28 AT 24.2	BULGE			-95			
GR. CL. W/ SA. LENSES	111	43	80	48	0.53		M.S.			-100			
GR. SLIGHTLY SANDY CL.	115	42			0.39		YLD.			-105			
GR. CL. W/ SI. LENSES	104	30	100	69	0.72		M.S.			-110			
GR. CL. W/ SA. PKTS.	103	51			0.21		M.S.			-115			
GR. SILTY CL.	111	34	57	31	0.71		YLD.			-120			
GR. SLIGHTLY SILTY CL.	106	29			0.40		YLD.			-125			
GR. CL.	105	41	67	43	0.51		M.S.			-130			
GR. CL.	111	35			1.23		M.S.			-135			
GR. CL. W/ SI. LENSES	107	47	92	63	0.90		M.S.			-140			
GR. CL. W/ SI. LENSES	109	40			1.45		M.S.			-145			
GR. CL. W/ SA. LENSES AND PKTS.	106	29	88	58	0.69		M.S.			-150			
GR. SLIGHTLY SILTY CL.	100	35			0.49		M.S.			-155			
GR. CL.	107	44	81	57	1.02		M.S.			-160			
GR. CL. W/ SA. STKS. AND PKTS.	111	25			0.85		M.S.			-165			
GR. CL. W/ SI. LENSES	106	48	83	63		0.89 AT 46.0	YLD.			-170			

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q	SPT U or U ₂	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	LOCATION:
GR. CL.	105	43			0.44		M.S.			-175		8 (continued)	
GR. CL. W/ SI. LENSES	105	44	97	70	1.12		M.S.			-180			
GR. CL.	106	44	96	66	0.90		M.S.			-185			
GR. CL. W/ SA. LENSES	110	41	67	37	1.15		M.S.			-190			
REDDISH BR. CL.	102	52			1.19		M.S.			-195			
REDDISH BR. CL.	105	52	114	86	1.85		M.S.			-200			
REDDISH BR. CL.	105	52			1.88		S/S			-205			
GREENISH GR. SANDY CL.	119	48	42	21	1.20		YLD.			-210			
BR. AND GN. FI. SA. W/ SI. TRS.						N=50/21				-215			
BR. FI. SA. W/ SI. TRS.						N=50/37				-215			

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q	SPT U or U ₂	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	LOCATION:
GR. FI. SA. W/ SI. TRS.						N=16				-35		118+97	On Centerline
GR. FI. SA. W/ SI. TRS.						N=17				-40		30-31 JULY 2006	
GR. SANDY CL.						N=11				-45			
GR. CL. W/ SA. LENSES, TWO 1" SA. LAYERS, AND ONE 2 1/2" CLAYEY SA. LAYER	110	49	93	64	0.35		M.S.			-45			
GR. SA. W/ CL. PKTS. AND 3" CL. LAYER	118	35				0.27 AT 6.2	BULGE			-50			
GR. SANDY CL.						N=9				-55			
GR. CL. W/ SA. PKTS. AND LENSES	107	59	59	33	0.36		YLD.			-55			
GR. CL.	103	53			0.35		M.S.			-60			
GR. CL. W/ SA. PKTS.	104	30	85	58	0.33		M.S.			-65			
GR. CL. W/ SI. LENSES	103	39			0.62		M.S.			-70			
GR. CL.	104	48	93	62	0.51		YLD.			-75			
GR. CL. W/ SI. LENSES	103	46			0.72		M.S.			-80			
GR. CL.	105	57	88	58	0.40		YLD.			-85			
GR. CL. W/ SA. TRS.	113	30			0.58		YLD.			-90			
GR. VERY SILTY CL.	120	26	32	14		0.37 AT 24.2	YLD.			-95			
GR. CL. W/ SI. TRS.	113	30			0.52		YLD.			-100			
GR. CL.	109	39	67	38	0.79		YLD.			-105			
GR. CL.	109	43			1.00		YLD.			-110			
GR. CL.	101	37	97	67	0.67		M.S.			-115			
GR. CL. W/ SI. STKS.	116	32			1.01		YLD.			-120			
GR. CL. W/ SI. STKS.	118	34	50	27	0.58		YLD.			-125			
GR. CL.	114	49			1.15		M.S.			-130			
GR. CL.	116	42	82	53	1.06		M.S.			-135			
GR. CL. W/ SI. STKS.	113	38			0.98		M.S.			-140			
GR. CL.	108	49	82	52	0.48		M.S.			-145			
GR. CL. W/ SI. PKTS.	114	39			0.95		M.S.			-150			
GR. CL. W/ SI. LENSES	112	49	97	61	1.31		M.S.			-155			
GR. CL. W/ SI. LENSES	118	44			1.66		M.S.			-160			
GR. CL. W/ SI. LENSES	119	45	72	42		1.28 AT 46.0	BULGE			-165			
GR. CL.	118	39				1.89 AT 8.0	BULGE			-170			
GR. CL.	117	36	69	42	1.55		M.S.			-175			

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL: CL. = Clay CONC. = Concretion GRAV. = Gravel I.O. = Iron Ore LIG. = Lignite N.P. = Non-Plastic ORG. = Organic PT. = Peat RT. = Roots SA. = Sand SH. = Shell SI. = Silt VEG. = Vegetation WD. = Wood	COLOR: BR. = Brown BK. = Black BL. = Blue GR. = Gray GN. = Green PK. = Pink RD. = Red TN. = Tan WH. = White YE. = Yellow	STRUCTURE: ALT. = Alternating LAM. = Laminated LEN. = Lens LYR. = Layer MOT. = Mottled PKT. = Pocket STK. = Streak STR. = Strata TR. = Trace M.S. = Multiple Shear SL. = Slump S/S = Slacksides V.S. = Vertical Shear YLD. = Yield 60 S. = Shear Angle
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SOIL PROPERTIES

WET DENSITY	= Wet density of in-place soil, (pounds per cu. ft.)
MOISTURE CONTENT	= Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%)
LIQUID LIMIT & PLASTICITY INDEX	= Atterberg limits and indices, DOTD TR 428
qu	= Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.)
SPT	= Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise
UU	= Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C	= Soil cohesion (tons per sq. ft.)
SL	= Soil angle of internal friction (degrees)
Δ	= Unconsolidated Undrained triaxial test, AASHTO T 296, three specimens, (c in TSF, φ)
*	= Consolidated drained direct shear test, AASHTO T 236, (c in TSF, φ)
#	= Pocket penetrometer strength, (tons per sq. ft.)
☐	= Consolidation test, AASHTO T 216

MISCELLANEOUS:

⊖	= Location and Identification of thin-walled tube sample, AASHTO T 207
⊗	= Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
⊙	= Location and Identification of SPT sample, AASHTO T 206
N.C.	= No Cull, no preliminary 6 in. driving prior to securing SPT data
NO PENT.	= No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.
NO RECV.	= No Recovery, unable to recover sample for testing or classification.
DIST.	= Disturbed sample recovered with thin-walled tube sampler.
24 HRS	= Water Table depth below ground surface recorded at noted time after completion of bore hole.
⊗	= SOIL TYPE nomenclature is based on ASTM D 2487

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
SAND AND SILT	VERY LOOSE	LESS THAN 4	
	LOOSE	4 - 10	
	MEDIUM DENSE	10 - 30	
CLAY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
	SOFT	2 - 4	0.25 - 0.50
	MEDIUM STIFF	4 - 8	0.50 - 1.00
	STIFF	8 - 15	1.00 - 2.00
	VERY STIFF	15 - 30	2.00 - 4.00
	HARD	OVER 30	OVER 4.00

Task Order No. 701-65-0585
Retainer Contract No. 700-99-0369

LOUISIANA PROFESSIONAL ENGINEERS
REGISTERED PROFESSIONAL ENGINEER
JAMES M. ARONSTEIN, JR.
REG. No. 11794

LOUIS J. CAPOZZOLI & ASSOCIATES, INC.
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

THIS SIGNATURE AND SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

JEFFERSON
PARISH
DESIGNED CHECKED
DETAILED CHECKED
DATE SHEET

FEDERAL PROJECT
STP-9905(536)

STATE PROJECT
061-01-0040

REVISION DESCRIPTION

DATE

NO.

BY

SOIL BORING LOGS
CAMINADA BAY BRIDGE

PAVEMENT & GEOTECHNICAL SERVICES

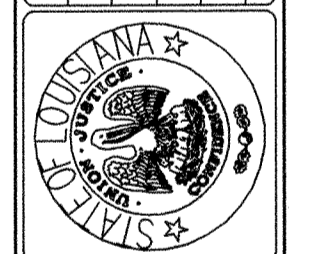


Table for Boring No. 10, Station 121+39. Columns include SOIL TYPE AND COLOR, WET DENSITY, MOISTURE CONTENT, LIQUID LIMIT, PLASTICITY INDEX, q, SPT, FAILURE MODE, SAMPLE NUMBER, DEPTH, ELEVATION, WATER TABLE, and TEST PILE NO. Data rows show soil types like GR. CL., GR. FI. SA., and GR. SANDY CL. with various test results.

Table for Boring No. 11, Station 123+63. Columns include SOIL TYPE AND COLOR, WET DENSITY, MOISTURE CONTENT, LIQUID LIMIT, PLASTICITY INDEX, q, SPT, FAILURE MODE, SAMPLE NUMBER, DEPTH, ELEVATION, WATER TABLE, and TEST PILE NO. Data rows show soil types like GR. SANDY CL., GR. FI. SA., and GR. CL. with various test results.

Table for Boring No. 12, Station 125+00. Columns include SOIL TYPE AND COLOR, WET DENSITY, MOISTURE CONTENT, LIQUID LIMIT, PLASTICITY INDEX, q, SPT, FAILURE MODE, SAMPLE NUMBER, DEPTH, ELEVATION, WATER TABLE, and TEST PILE NO. This table is mostly empty.

STANDARD ABBREVIATIONS & DEFINITIONS. Lists materials (CL, CONC, GRAV, etc.), colors (BR, BK, BL, etc.), structures (ALT, LAM, LEN, etc.), and failure modes (M.S., YLD, etc.).

SOIL PROPERTIES. Defines wet density, moisture content, liquid limit, plasticity index, SPT, UU, C, and Delta symbols.

MISCELLANEOUS. Defines symbols for location and identification of thin-walled tube sample, AASHTO T 207, and other testing procedures.

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES. Table mapping soil types (SAND AND SILT, CLAY) to designations (VERY LOOSE, LOOSE, MEDIUM, DENSE, VERY DENSE) and N values.

Professional Engineer Seal for James M. Aronstein, Jr., Registered Professional Engineer, No. 11794. Includes project information: Task Order No. 701-65-0585, Retainer Contract No. 700-99-0369.



SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA.:	LOCATION:	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA.												126+17	On Centerline	
GR. SILTY FI. SA. W/ CL. TRS.												126+17	On Centerline	
GR. CL. W/ FI. SA. STKS.	105	52			0.42		M.S.					126+17	On Centerline	
GR. CL. W/ FI. SA. STKS.	105	66	73	47	0.43		M.S.					126+17	On Centerline	
GR. SLIGHTLY SILTY CL.	117	29			0.99		M.S.					126+17	On Centerline	
GR. SLIGHTLY SILTY CL. W/ SI. STKS.	119	26	49	27	0.91		M.S.					126+17	On Centerline	
GR. CL. W/ SI. STKS.	116	28			0.60		M.S.					126+17	On Centerline	
GR. CL. W/ FI. SA. LENSES	102	56	96	60	0.66		M.S.					126+17	On Centerline	
GR. CL. W/ FI. SA. STKS.	116	27			0.43		M.S.					126+17	On Centerline	
GR. CL. W/ FI. SA. STKS. AND 1/2" CLAYEY SA. LAYER	111	45	60	36	0.68		M.S.					126+17	On Centerline	
GR. CL. W/ SI. LENSES	113	33			0.42		M.S.					126+17	On Centerline	
GR. CL.	111	48	82	52	0.50		M.S.					126+17	On Centerline	
GR. CL.	101	60			0.65		M.S.					126+17	On Centerline	
GR. CL. W/ SI. LENSES	111	39	78	54	1.11		M.S.					126+17	On Centerline	
GR. CL.	112	39			0.84		M.S.					126+17	On Centerline	
GR. CL. W/ SI. LENSES	111	54	69	43	0.88		M.S.					126+17	On Centerline	
GR. CL.	105	45			1.21		M.S.					126+17	On Centerline	
GR. CL.	107	46	94	59	1.55	46.0	M.S.					126+17	On Centerline	
GR. CL. W/ SI. PKTS.	105	39			1.10		M.S.					126+17	On Centerline	
GR. CL.	112	32	70	45	1.21		YLD.					126+17	On Centerline	
GR. CL. W/ SI. LENSES	105	46			1.17		YLD.					126+17	On Centerline	
GR. CL.	114	38	64	37	1.41		YLD.					126+17	On Centerline	
BORING NO. 12												STA.:	126+17	
LATITUDE: N29° 12' 23.3"												LOCATION:	On Centerline	DRIVING RESISTANCE (TONS)
LONGITUDE: W90° 02' 34.3"												DATE TAKEN:	13-15 AUGUST 2006	STR. NO.:
CONT. SECT.:												LOG MILE:		SQD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA.:	LOCATION:	
GR. CL. W/ SI. LENSES	105	52				0.79	M.S.					12 (continued)	On Centerline	
GR. CL. W/ SI. LENSES	104	32	79	59	0.91		M.S.					12 (continued)	On Centerline	
GR. CL.	111	42			1.56		M.S.					12 (continued)	On Centerline	
GR. CL.	106	72	78	45	0.13		M.S.					12 (continued)	On Centerline	
GR. SLIGHTLY SILTY CL.	110	48	46	23	0.35		M.S.					12 (continued)	On Centerline	
GR. CL.	111	45	95	62	1.41		M.S.					12 (continued)	On Centerline	
GR. CL.	112	45			2.17		M.S.					12 (continued)	On Centerline	
GR. CL.	112	40	90	60	1.83	46.0	M.S.					12 (continued)	On Centerline	
GR. CL. W/ SI. LENSES	110	44			1.92		M.S.					12 (continued)	On Centerline	
GR. CL. W/ SI. LENSES	107	47	100	65	1.41		M.S.					12 (continued)	On Centerline	
BORING NO. 12 (continued)												STA.:		
LATITUDE:												LOCATION:		DRIVING RESISTANCE (TONS)
LONGITUDE:												DATE TAKEN:		STR. NO.:
CONT. SECT.:												LOG MILE:		SQD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA.:	LOCATION:	
GR. SILTY FI. SA.												128+57	On Centerline	
GR. CLAYEY FI. SA.												128+57	On Centerline	
GR. FI. SA.	118	23					BULGE					128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA. W/ SI. TRS.												128+57	On Centerline	
GR. FI. SA.												128+57	On Centerline	
GR. FI. SA.												128+57	On Centerline	
GR. FI. SA.												128+57	On Centerline	
GR. SILTY FI. SA. W/ CL. TRS.												128+57	On Centerline	
GR. CLAYEY FI. SA.												128+57	On Centerline	
GR. CL.	101	61	88	55	0.71		M.S.					128+57	On Centerline	
GR. CL. W/ SI. LENSES	104	46			0.41		M.S.					128+57	On Centerline	
GR. CL.	104	48	95	63	0.91		M.S.					128+57	On Centerline	
GR. CL.	103	49			0.51		YLD.					128+57	On Centerline	
GR. CL.	108	46	76	44	0.86		M.S.					128+57	On Centerline	
GR. CL.	105	43			0.38		M.S.					128+57	On Centerline	
GR. SILTY CL.	119	29	36	15	0.34		M.S.					128+57	On Centerline	
GR. SILTY CL.	118	29			0.86		YLD.					128+57	On Centerline	
GR. CL.	114	35	54	29	0.65		YLD.					128+57	On Centerline	
GR. CL.	115	32			0.93		YLD.					128+57	On Centerline	
GR. CL.	114	36	58	37	1.07		YLD.					128+57	On Centerline	
GR. CL.	112	36			0.91		YLD.					128+57	On Centerline	
GR. CL.	108	36	62	35	0.57		YLD.					128+57	On Centerline	
GR. CL.	112	36			1.91	46.0	YLD.					128+57	On Centerline	
GR. CL.	113	34	57	31	1.23		YLD.					128+57	On Centerline	
GR. CL. W/ SA. PKTS.	106	55			0.45		YLD.					128+57	On Centerline	
GR. CL.	109	42	55	29	0.48		YLD.					128+57	On Centerline	
GR. CL.	109	45	82	53	0.73		YLD.					128+57	On Centerline	
GR. CL. W/ SI. LENSES	108	42			0.51		M.S.					128+57	On Centerline	
BORING NO. 13												STA.:	128+57	
LATITUDE: N29° 12' 22.0"												LOCATION:	On Centerline	DRIVING RESISTANCE (TONS)
LONGITUDE: W90° 02' 32.0"												DATE TAKEN:	15 AUGUST 2006	STR. NO.:
CONT. SECT.:												LOG MILE:		SQD. LDR.:

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL: CL. = Clay CONC. = Concrete GRAV. = Gravel I.O. = Iron Ore L.I.G. = Lignite N.P. = Non-Plastic ORG. = Organic PT. = Peat RT. = Roots SA. = Sand SH. = Shell SI. = Silt VEG. = Vegetation WD. = Wood	COLOR: BR. = Brown BK. = Black BL. = Blue GR. = Gray GN. = Green PK. = Pink RD. = Red TN. = Tan WH. = White YE. = Yellow	STRUCTURE: ALT. = Alternating LAM. = Laminated LEN. = Lens LYR. = Layer MOT. = Mottled PKT. = Pocket STR. = Strata TR. = Trace
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FAILURE MODES:
M.S. = Multiple Shear
SL. = Slump
S/S = Slickensides
V.S. = Vertical Shear
YLD. = Yield
60 S. = Shear Angle

SOIL PROPERTIES

WET DENSITY = Wet density of in-place soil, (pounds per cu. ft.)
MOISTURE CONTENT = Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%)
LIQUID LIMIT & PLASTICITY INDEX
qu = Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.)
SPT = Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise
UU = Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C = Soil cohesion (tons per sq. ft.)
Δ = Soil angle of internal friction (degrees)
Δ = Unconsolidated Undrained triaxial test, AASHTO T 296, three specimens, (c in TSF, φ)
* = Consolidated drained direct shear test, AASHTO T 236, (c in TSF, φ)
= Pocket penetrometer strength, (tons per sq. ft.)
[CN] = Consolidation test, AASHTO T 216

MISCELLANEOUS:

- [CN] - Location and Identification of thin-walled tube sample, AASHTO T 207
- [CN] - Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
- [CN] - Location and Identification of SPT sample, AASHTO T 206
- N.C. = No Cull, no preliminary 6 in. driving prior to securing SPT data
- NO PENT. = No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.
- NO RECV. = No Recovery, unable to recover sample for testing or classification.
- DIST. = Disturbed sample recovered with thin-walled tube sampler.
- 24 TRS = Water Table depth below ground surface recorded at noted time after completion of bore hole.
- [CN] = SOIL TYPE nomenclature is based on ASTM D 2487
- S_t = Sensitivity (AASHTO T208)

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
SAND AND SILT	VERY LOOSE	LESS THAN 4	
	LOOSE	4 - 10	
	MEDIUM DENSE	10 - 30	
CLAY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
	SOFT	2 - 4	0.25 - 0.50
	MEDIUM STIFF	4 - 8	0.50 - 1.00
	STIFF	8 - 15	1.00 - 2.00
	VERY STIFF	15 - 30	2.00 - 4.00
	HARD	OVER 30	OVER 4.00

Task Order No. 701-65-0585
Retainer Contract No. 700-99-0369

LOUISIANA
STATE OF LOUISIANA
JAMES M. ARONSTEIN, JR.
REG. No. 11794
REGISTERED PROFESSIONAL ENGINEER
Louisiana Professional Engineer No. 11794
26 JAN 2007

LOUIS J. CAPOZZOLI & ASSOCIATES, INC.
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

THIS SIGNATURE AND SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

SOIL TYPE AND COLOR	NET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
GR. FI. SA.						N=4				-5		131+00	
GR. FI. SA.						N=3				-10		131+00	
GR. SILTY CL.						N=2				-15		131+00	
GR. FI. SA.	123	33				1.03 6.9	BULGE			-20		131+00	
GR. SI. W/ FI. SA. AND CL. TRS.	126	29				1.07 8.9	BULGE			-25		131+00	
GR. SA. W/ CL. TRS.	118	25				0.94 8.4	BULGE			-30		131+00	
GR. FI. SA.						N=29				-35		131+00	
GR. FI. SA.						N=57				-40		131+00	
GR. FI. SA.						N=45				-45		131+00	
GR. FI. SA.						N=49				-50		131+00	
GR. FI. SA. W/ CL. TRS.						N=37				-55		131+00	
GR. CL.	105	43			0.67		M.S.			-60		131+00	
GR. CL.	103	59	110	77	0.81		M.S.			-65		131+00	
GR. CL. W/ SA. PKTS. AND LENSES	101	48			0.35		M.S.			-70		131+00	
GR. CL. W/ 2" SA. LAYER AND SA. PKTS.	102	29	80	57	0.37 22.9		BULGE			-75		131+00	
GR. CL.	106	54			0.81		M.S.			-80		131+00	
GR. CL. W/ SA. LENSES	105	57	86	54	0.48		M.S.			-85		131+00	
GR. CL.	103	56			0.79		M.S.			-90		131+00	
GR. CL.	104	50	87	51	0.54		M.S.			-95		131+00	
GR. CL. W/ SA. PKTS.	102	30			0.54		M.S.			-100		131+00	
GR. CL. W/ SH. FRAGMENTS	118	29	35	15	0.54 35.1		BULGE			-105		131+00	
GR. SLIGHTLY SILTY CL.	115	31			0.78		YLD.			-110		131+00	
GR. CL. W/ FI. SA. LENSES	110	41	66	42	0.79		M.S.			-115		131+00	
GR. CL. W/ FI. SA. LENSES	117	38			0.84		YLD.			-120		131+00	
GR. CL.	110	33	59	36	0.66		YLD.			-125		131+00	
GR. CL.	117	31			0.70		YLD.			-130		131+00	
GR. CL. W/ FI. SA. STKS.	116	27	61	37	0.73		YLD.			-135		131+00	
GR. CL.	114	34			0.95		YLD.			-140		131+00	
GR. CL. W/ FI. SA. LENSES	115	48	65	40	0.97		YLD.			-145		131+00	

STANDARD ABBREVIATIONS & DEFINITIONS			SOIL PROPERTIES			
MATERIAL: CL. = Clay CONC. = Concretion GRAV. = Gravel I.O. = Iron Ore L.I.G. = Lignite N.P. = Non-Plastic ORG. = Organic PT. = Peat RT. = Roots SA. = Sand SH. = Shell SI. = Silt VEG. = Vegetation WD. = Wood	COLOR: BR. = Brown BK. = Black BL. = Blue GR. = Gray GN. = Green PK. = Pink RD. = Red TN. = Tan WH. = White YE. = Yellow	STRUCTURE: ALT. = Alternating LAM. = Laminated LEN. = Lens LYR. = Layer MOT. = Mottled PKT. = Pocket STK. = Streak STR. = Strata TR. = Trace M.S. = Multiple Shear SL. = Slump S/S = Slickensides V.S. = Vertical Shear YLD. = Yield 60° S. = Shear Angle	WET DENSITY - Wet density of in-place soil, (pounds per cu. ft.) MOISTURE CONTENT - Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%) LIQUID LIMIT & PLASTICITY INDEX qu - Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.) SPT - Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise UU - Unconsolidated undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.) C - Soil cohesion (tons per sq. ft.) Δ - Soil angle of internal friction (degrees) Δ - Unconsolidated undrained triaxial test, AASHTO T 296, three specimens, (c in TSF, φ) * - Consolidated drained direct shear test, AASHTO T 236, (c in TSF, φ) # - Pocket penetrometer strength, (tons per sq. ft.)	MISCELLANEOUS: ③ - Location and Identification of thin-walled tube sample, AASHTO T 207 ④ - Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing ⑤ - Location and Identification of SPT sample, AASHTO T 206 N.C. - No Cull, no preliminary 6 in. driving prior to securing SPT data NO PENET. - No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test. NO REC.V. - No Recovery, unable to recover sample for testing or classification. DIST. - Disturbed sample recovered with thin-walled tube sampler. 24 HRS - Water Table depth below ground surface recorded at noted time after completion of bore hole. ⊗ - SOIL TYPE nomenclature is based on ASTM D 2487	CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES	
			SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
			SAND AND SILT	VERY LOOSE	LESS THAN 4	LESS THAN 0.25
				LOOSE	4 - 10	0.25 - 0.50
			CLAY	MEDIUM DENSE	10 - 30	0.50 - 1.00
				VERY DENSE	30 - 50	1.00 - 2.00
			RELATIVE DENSITY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
				SOFT	2 - 4	0.25 - 0.50
				MEDIUM STIFF	4 - 8	0.50 - 1.00
			CONSISTENCY	STIFF	8 - 15	1.00 - 2.00
				VERY STIFF	15 - 30	2.00 - 4.00
				HARD	OVER 30	OVER 4.00

SOIL TYPE AND COLOR	NET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
GR. SA.						N=2				-5		133+10	
GR. SA.						N=3				-10		133+10	
GR. SILTY CL.						N=3				-15		133+10	
GR. CL. W/ 2" SI. LAYER	114	42	52	26	0.20		M.S.			-20		133+10	
GR. CL. W/ SI. STKS.	105	33			0.21		M.S.			-25		133+10	
GR. SANDY SI. W/ CL. TRS.	121	22			0.84 10.8		BULGE			-30		133+10	
GR. FI. SA. W/ CL. TRS.						N=17				-35		133+10	
GR. FI. SA. W/ CL. TRS.						N=20				-40		133+10	
GR. FI. SA. W/ SI. TRS.						N=46				-45		133+10	
GR. FI. SA. W/ SI. TRS.						N=43				-50		133+10	
GR. FI. SA. W/ SI. AND CL. TRS.						N=26				-55		133+10	
GR. FI. SA. W/ SI. AND CL. TRS.						N=29				-60		133+10	
GR. CL.						N=4				-65		133+10	
GR. CL.	100	40	87	55	0.52		YLD.			-70		133+10	
GR. CL. W/ FI. SA. STKS.	104	47			0.21		M.S.			-75		133+10	
GR. CL.	102	53	95	63	0.45		M.S.			-80		133+10	
GR. CL.	103	54			0.44		YLD.			-85		133+10	
GR. CL.										-90		133+10	
GR. CL.										-95		133+10	
GR. CL. W/ SA. PKTS.	116	46			0.48		M.S.			-100		133+10	
GR. CL.	108	45	84	54	0.76		M.S.			-105		133+10	
GR. CL.	109	51			0.52		M.S.			-110		133+10	
GR. SLIGHTLY SANDY CL. W/ 2" SA. LAYER	116	53	44	23	0.43 37.0		YLD.			-115		133+10	
GR. CL.	107	47			0.74		YLD.			-120		133+10	
GR. CL. W/ SI. LENSES	107	43	72	45	0.85		YLD.			-125		133+10	
GR. CL.	107	51			0.25		M.S.			-130		133+10	
GR. CL.	111	36	62	37	0.51		YLD.			-135		133+10	
GR. CL.	114	33			0.69		YLD.			-140		133+10	
GR. CL.	111	40	69	42	0.85 46.0		M.S.			-145		133+10	
GR. SILTY CL. W/ SI. LENSES	110	36			0.53		YLD.			-150		133+10	

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES			
SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
SAND AND SILT	VERY LOOSE	LESS THAN 4	LESS THAN 0.25
	LOOSE	4 - 10	0.25 - 0.50
CLAY	MEDIUM DENSE	10 - 30	0.50 - 1.00
	VERY DENSE	30 - 50	1.00 - 2.00
RELATIVE DENSITY	VERY SOFT	LESS THAN 2	LESS THAN 0.25
	SOFT	2 - 4	0.25 - 0.50
	MEDIUM STIFF	4 - 8	0.50 - 1.00
CONSISTENCY	STIFF	8 - 15	1.00 - 2.00
	VERY STIFF	15 - 30	2.00 - 4.00
	HARD	OVER 30	OVER 4.00

SOIL TYPE AND COLOR	NET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	q _c	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
GR. SILTY FI. SA.						N=2				-5		135+18	
GR. SILTY FI. SA.						N=21				-10		135+18	
GR. SILTY FI. SA.						N=20				-15		135+18	
GR. SILTY FI. SA.						N=22				-20		135+18	
GR. SANDY CL.						N=2				-25		135+18	
GR. VERY SILTY CL.	119	20	28	13	1.80 9.7		BULGE			-30		135+18	
GR. SILTY FI. SA.	117	25			0.83 11.7		BULGE			-35		135+18	
GR. FI. SA. W/ SI. TRS.						N=20				-40		135+18	
GR. SA. W/ SI. STKS. AND CL. LENSES	120	51			0.8 13.7		BULGE			-45		135+18	
GR. FI. SA. W/ SI. TRS.						N=21				-50		135+18	
GR. FI. SA. W/ SI. TRS.						N=24				-55		135+18	
GR. FI. SA. W/ SI. TRS.						N=31				-60		135+18	
GR. FI. SA. W/ SI. TRS.						N=33				-65		135+18	
GR. FI. SA. W/ SH. TRS.						N=38				-70		135+18	
GR. FI. SA. W/ SH. TRS.						N=34				-75		135+18	
GR. CL.						N=7				-80		135+18	
GR. CL. W/ FI. SA. STKS. AND LENSES	112	38	66	46	0.67		M.S.			-85		135+18	
GR. CL. W/ FI. SA. PKTS.	106	53			0.39		M.S.			-90		135+18	
GR. CL.	103	53	88	53	0.45		M.S.			-95		135+18	
GR. CL.	100	51			0.80		M.S.			-100		135+18	
GR. CL.	106	40	91	58	0.45		M.S.			-105		135+18	
GR. CL.	107	49			0.17		M.S.			-110		135+18	
GR. CL. W/ SI. STKS.	116	40	51	27	0.72		YLD.			-115		135+18	
GR. SLIGHTLY SANDY CL.	121	28			0.50		M.S.			-120		135+18	
GR. SILTY CL. W/ FI. SA. STKS.	120	26	35	15	0.26		YLD.			-125		135+18	
GR. CL.	112	40			0.94		M.S.			-130		135+18	
GR. CL.	113	35	61	34	0.99		YLD.			-135		135+18	
GR. CL.	111	40			0.87								

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
SURFACE ELEVATION AT 5.4 FEET													
TN. FI. SA. W/ SI. TRS.						N=14				5			
TN. AND GR. SILTY FI. SA.						N=14				0			
GR. FI. SA. W/ SI. TRS.						N=11				-5			
GR. SILTY FI. SA. W/ CL. TRS.						N=10				-10			
GR. SILTY FI. SA. W/ CL. TRS.						N=11				-10			
GR. SILTY FI. SA. W/ CL. TRS.						N=12				-15			
GR. SILTY FI. SA. W/ CL. TRS.						N=14				-15			
GR. SILTY FI. SA. W/ CL. TRS.						N=11				-20			
GR. SILTY CL.						N=2				-20			
GR. VERY SILTY CL.	126	26	31	11		0.39 AT 10.8	YLD.			-25			
GR. SILTY FI. SA.						N=18				-25			
GR. FI. SA.						N=15				-30			
GR. FI. SA. W/ SI. AND CL. TRS.						N=16				-30			
GR. FI. SA. W/ SI. AND CL. TRS.	116	29				0.31 AT 14.4	BULGE			-30			
GR. FI. SA. W/ SI. TRS.						N=18				-35			
GR. FI. SA. W/ SI. TRS.						N=18				-40			
GR. FI. SA. W/ SI. TRS.						N=19				-45			
GR. FI. SA. W/ SI. TRS.						N=21				-45			
GR. FI. SA. W/ SI. TRS.						N=41				-50			
GR. FI. SA. W/ SI. TRS.						N=40				-50			
GR. CL.						N=6				-55			
GR. CL.	106	58	90	66	0.75		M.S.			-55			
GR. CL.	108	32			0.77		YLD.			-60			
GR. CL.	106	47	94	69	0.61		YLD.	☒		-65			
GR. CL.	110	47			1.03		M.S.			-70			
GR. CL.	115	37	75	51	1.13		M.S.			-75			
GR. CL. W/ SH.	105	42			0.72		M.S.			-80			
GR. CL. W/ SA. PKTS.	112	47	65	40	0.60		M.S.	☒		-85			
GR. CLAYEY SA.	114	39				0.31 AT 37.9	BULGE			-90			
GR. CL.	118	54	51	32	1.38		YLD.	☒		-95			
GR. CL.	112	45			1.33		M.S.			-100			
GR. CL.	115	38	71	48	0.66		YLD.			-105			
GR. CL.		44								-110			
GR. CL. W/ SI. STKS.	117	35	57	34	1.02		YLD.			-115			
										-120			

BORING NO. 17	STA.: 137+56
LATITUDE: N29° 12' 16.8"	LOCATION: On Centerline
LONGITUDE: W90° 02' 23.6"	DATE TAKEN: 1-2 JUNE 2006
CONT. SECT.:	LOG MILE:
	DRIVING RESISTANCE (TONS)
	STR. NO.:
	SQD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
SURFACE ELEVATION AT 1.4 FEET													
GR. SI.						N=16				0			
GR. FI. SA. W/ SI. TRS.						N=14				-5			
GR. SILTY FI. SA.						N=2				-10			
GR. SILTY FI. SA.						N=4				-10			
GR. SILTY FI. SA.						N=7				-15			
GR. SILTY FI. SA.						N=6				-15			
GR. SLIGHTLY SANDY CL.			52	32		N=4				-20			
GR. SANDY CL.	39					N=6				-20			
GR. SILTY FI. SA. W/ CL. TRS.						N=3				-25			
GR. SILTY FI. SA.						N=8				-30			
GR. SILTY FI. SA.						N=11				-30			
GR. FI. SA. W/ SI. TRS.						N=12				-35			
GR. FI. SA. W/ CL. TRS.						N=10				-35			
GR. FI. SA. W/ 1" CL. LAYER AND CL. STKS.	116	23				0.31 AT 15.7	BULGE			-40			
GR. FI. SA.						N=40				-45			
GR. FI. SA.						N=40				-45			
GR. CL.	51					N=9				-50			
GR. CL. W/ FI. SA. LENSES	101	47	87	60	0.81		YLD.			-50			
GR. CL. W/ FI. SA. STKS. AND LENSES	102	52			0.84		M.S.			-55			
GR. CL. W/ FI. SA. STKS. AND LENSES	103	58	95	63	0.77		M.S.	☒		-60			
GR. CL.	105	47			0.98		M.S.			-65			
GR. CL.	106	49	77	47	1.10		M.S.			-70			
GR. CL. W/ FI. SA. STKS.	102	52			1.11		M.S.			-75			
GR. SILTY CL. W/ FI. SA. STKS. AND LENSES	102	53	38	15	0.51		YLD.			-80			

BORING NO. 18	STA.: 139+01
LATITUDE: N29° 12' 16.3"	LOCATION: On Centerline
LONGITUDE: W90° 02' 22.1"	DATE TAKEN: 5-6 JUNE 2006
CONT. SECT.:	LOG MILE:
	DRIVING RESISTANCE (TONS)
	STR. NO.:
	SQD. LDR.:

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.	
												STA.:	DATE OF DRIVING:
SURFACE ELEVATION AT 1.4 FEET													

BORING NO.	STA.:
LATITUDE:	LOCATION:
LONGITUDE:	DATE TAKEN:
CONT. SECT.:	LOG MILE:
	DRIVING RESISTANCE (TONS)
	STR. NO.:
	SQD. LDR.:

STANDARD ABBREVIATIONS & DEFINITIONS

MATERIAL:	COLOR:	STRUCTURE:
CL. = Clay	BR. = Brown	ALT. = Alternating
CONC. = Concrete	BL. = Black	LAM. = Laminated
GRAV. = Gravel	BL. = Blue	LEN. = Lens
I.O. = Iron Ore	GR. = Gray	LYR. = Layer
LIG. = Lignite	GN. = Green	MOT. = Mottled
N.P. = Non-Plastic	PK. = Pink	PKT. = Pocket
ORG. = Organic	RD. = Red	STK. = Streak
PT. = Peat	TN. = Tan	STR. = Strata
RT. = Roots	WH. = White	TR. = Trace
SA. = Sand	YE. = Yellow	
SH. = Shell		
SI. = Silt	TEXTURE:	
VEG. = Vegetation	CO. = Coarse	M.S. = Multiple Shear
WD. = Wood	FI. = Fine	SL. = Slump
	MED. = Medium	S/S = Slickensides
		V.S. = Vertical Shear
		YLD. = Yield
		60° S. = Shear Angle

SOIL PROPERTIES

WET DENSITY	= Wet density of in-place soil. (pounds per cu. ft.)
MOISTURE CONTENT	= Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%)
LIQUID LIMIT & PLASTICITY INDEX	= Atterberg limits and indices, DOTD TR 428
qu	= Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.)
SPT	= Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise
UU	= Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C	= Soil cohesion (tons per sq. ft.)
Δ	= Soil angle of internal friction (degrees)
Δ	= Unconsolidated Undrained triaxial test, AASHTO T 296, three specimens, (c in TSF, φ)
*	= Consolidated drained direct shear test, AASHTO T 236, (c in TSF, φ)
#	= Pocket penetrometer strength, (tons per sq. ft.)
☒	= Consolidation test, AASHTO T 216

MISCELLANEOUS:

Ⓞ	= Location and Identification of thin-walled tube sample, AASHTO T 207
Ⓞ	= Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
Ⓞ	= Location and Identification of SPT sample, AASHTO T 206
N.C.	= No Cull, no preliminary 6 in. driving prior to securing SPT data
NO REC.V.	= No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.
DIST.	= No Recovery, unable to recover sample for testing or classification.
24 HRS	= Disturbed sample recovered with thin-walled tube sampler.
Ⓞ	= Water Table depth below ground surface recorded at noted time after completion of bore hole.
Ⓞ	= SOIL TYPE nomenclature is based on ASTM D 2487

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL	DESIGNATION	"N" (blows per ft.)	Approximate "qu" (tons per sq. ft.)
SAND AND SILT	VERY LOOSE	LESS THAN 4	
	LOOSE	4 - 10	
	MEDIUM	10 - 30	
CLAY	DENSE	30 - 50	
	VERY DENSE	OVER 50	
	VERY SOFT	LESS THAN 2	LESS THAN 0.25
	SOFT	2 - 4	0.25 - 0.50
	MEDIUM	4 - 8	0.50 - 1.00
	STIFF	8 - 15	1.00 - 2.00
	VERY STIFF	15 - 30	2.00 - 4.00
	HARD	OVER 30	OVER 4.00

Task Order No. 701-65-0585
Retainer Contract No. 700-99-0369

STATE OF LOUISIANA
REGISTERED PROFESSIONAL ENGINEER
JAMES M. ARONSTEIN, JR.
REG. No. 11794

LOUIS J. CAPOZZOLI & ASSOCIATES, INC.
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

THIS SIGNATURE AND SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

SHEET NUMBER **192**

JEFFERSON

STP-9905(536)

061-01-0040

DESIGNED CHECKED

DATE SHEET

BY

REVISION DESCRIPTION

NO.

DATE

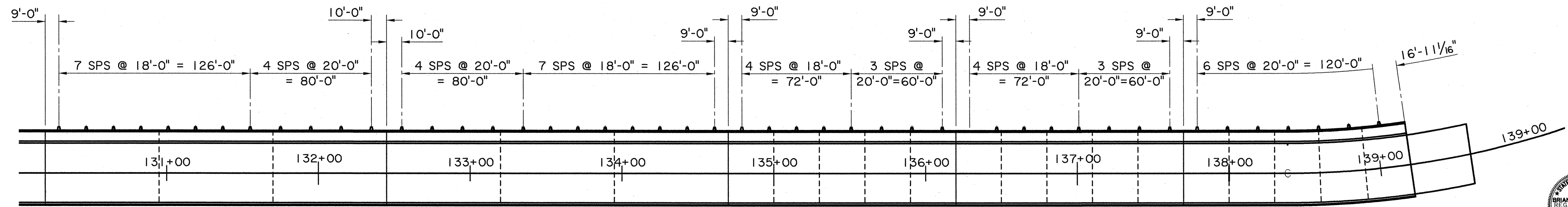
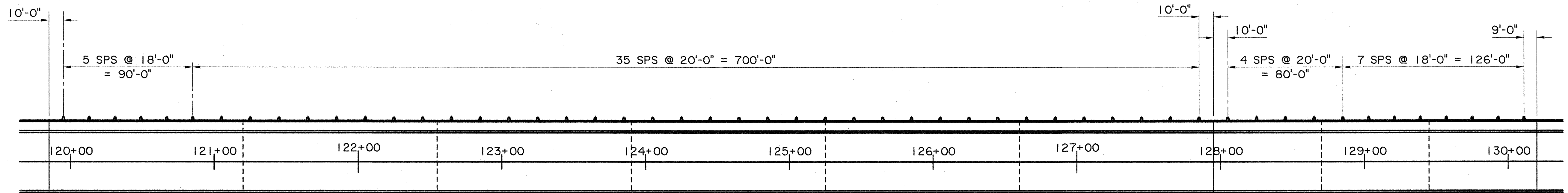
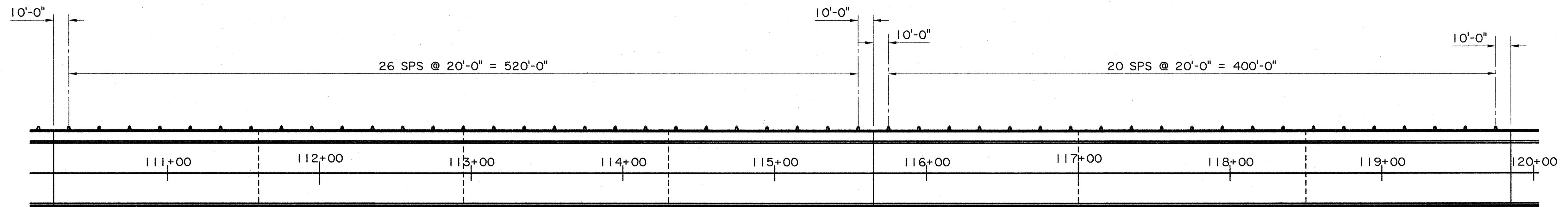
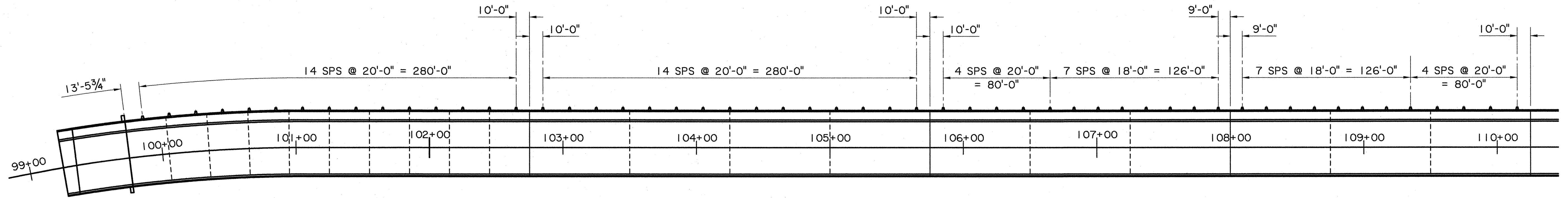
STATE OF LOUISIANA

SOIL BORING LOGS
CAMINADA BAY BRIDGE

DOTD

PAVEMENT & GEOTECHNICAL SERVICES

FINAL PLANS



NOTE:
FOR WATERLINE SUPPORT
DETAILS, SEE SHEET 194.

Brian D. Delatte
05/04/2009

SHEET NUMBER	193
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED	B. DELATTE
CHECKED	K. YAP
DATE	APRIL 2009
SHEET	1 OF 2
REVISION DESCRIPTION	
NO.	
DATE	
BY	

CAMINADA BAY BRIDGE
ROUTE LA 1

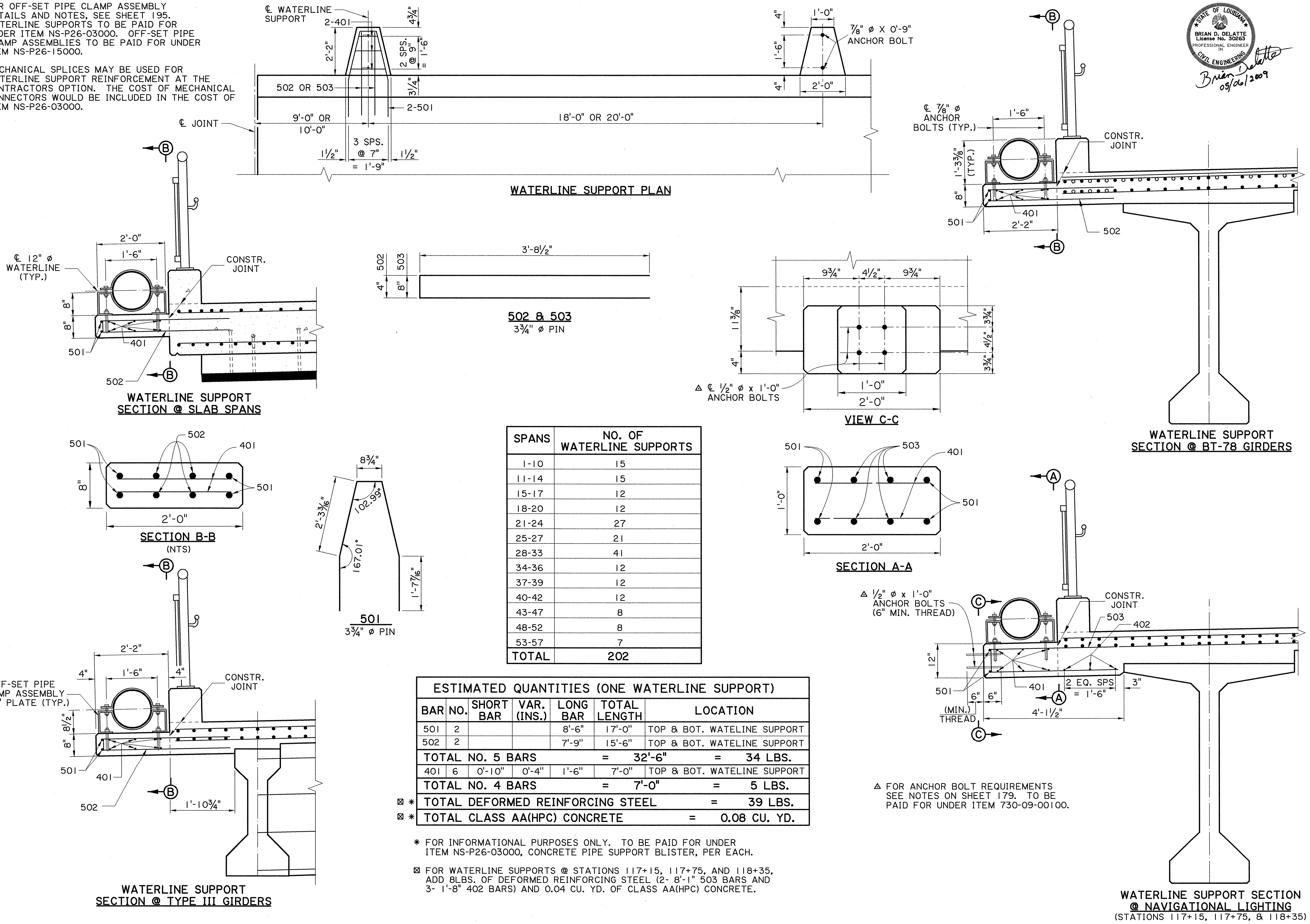
WATERLINE SUPPORT LAYOUT

BRIDGE AND STRUCTURAL DESIGN

07:12
 06-MAY-2009
 FINAL PLANS
 r:\gang2\projects\064010040\dgn\194_Waterline Support details.dgn

NOTES:

- FOR OFF-SET PIPE CLAMP ASSEMBLY DETAILS AND NOTES, SEE SHEET 195. WATERLINE SUPPORTS TO BE PAID FOR UNDER ITEM NS-P26-03000. OFF-SET PIPE CLAMP ASSEMBLIES TO BE PAID FOR UNDER ITEM NS-P26-15000.
- MECHANICAL SPLICES MAY BE USED FOR WATERLINE SUPPORT REINFORCEMENT AT THE CONTRACTORS OPTION. THE COST OF MECHANICAL CONNECTORS WOULD BE INCLUDED IN THE COST OF ITEM NS-P26-03000.



WATERLINE SUPPORT PLAN

WATERLINE SUPPORT SECTION @ SLAB SPANS

SECTION B-B (NTS)

WATERLINE SUPPORT SECTION @ TYPE III GIRDERS

WATERLINE SUPPORT SECTION @ BT-78 GIRDERS

WATERLINE SUPPORT SECTION @ NAVIGATIONAL LIGHTING (STATIONS 117+15, 117+75, & 118+35)

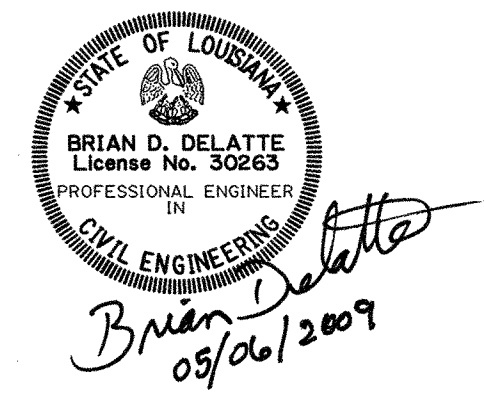
SPANS	NO. OF WATERLINE SUPPORTS
1-10	15
11-14	15
15-17	12
18-20	12
21-24	27
25-27	21
28-33	41
34-36	12
37-39	12
40-42	12
43-47	8
48-52	8
53-57	7
TOTAL	202

ESTIMATED QUANTITIES (ONE WATERLINE SUPPORT)						
BAR NO.	SHORT BAR	VAR. (INS.)	LONG BAR	TOTAL LENGTH	LOCATION	
501	2		8'-6"	17'-0"	TOP & BOT. WATERLINE SUPPORT	
502	2		7'-9"	15'-6"	TOP & BOT. WATERLINE SUPPORT	
TOTAL NO. 5 BARS				= 32'-6"	= 34 LBS.	
401	6	0'-10"	0'-4"	1'-6"	7'-0"	TOP & BOT. WATERLINE SUPPORT
TOTAL NO. 4 BARS				= 7'-0"	= 5 LBS.	
TOTAL DEFORMED REINFORCING STEEL				= 39 LBS.		
TOTAL CLASS AA(HPC) CONCRETE				= 0.08 CU. YD.		

* FOR INFORMATIONAL PURPOSES ONLY. TO BE PAID FOR UNDER ITEM NS-P26-03000, CONCRETE PIPE SUPPORT BLISTER, PER EACH.

* FOR WATERLINE SUPPORTS @ STATIONS 117+15, 117+75, AND 118+35, ADD 8LBS. OF DEFORMED REINFORCING STEEL (2- 8'-1" 503 BARS AND 3- 1'-8" 402 BARS) AND 0.04 CU. YD. OF CLASS AA(HPC) CONCRETE.

Δ FOR ANCHOR BOLT REQUIREMENTS SEE NOTES ON SHEET 179. TO BE PAID FOR UNDER ITEM 730-09-00100.

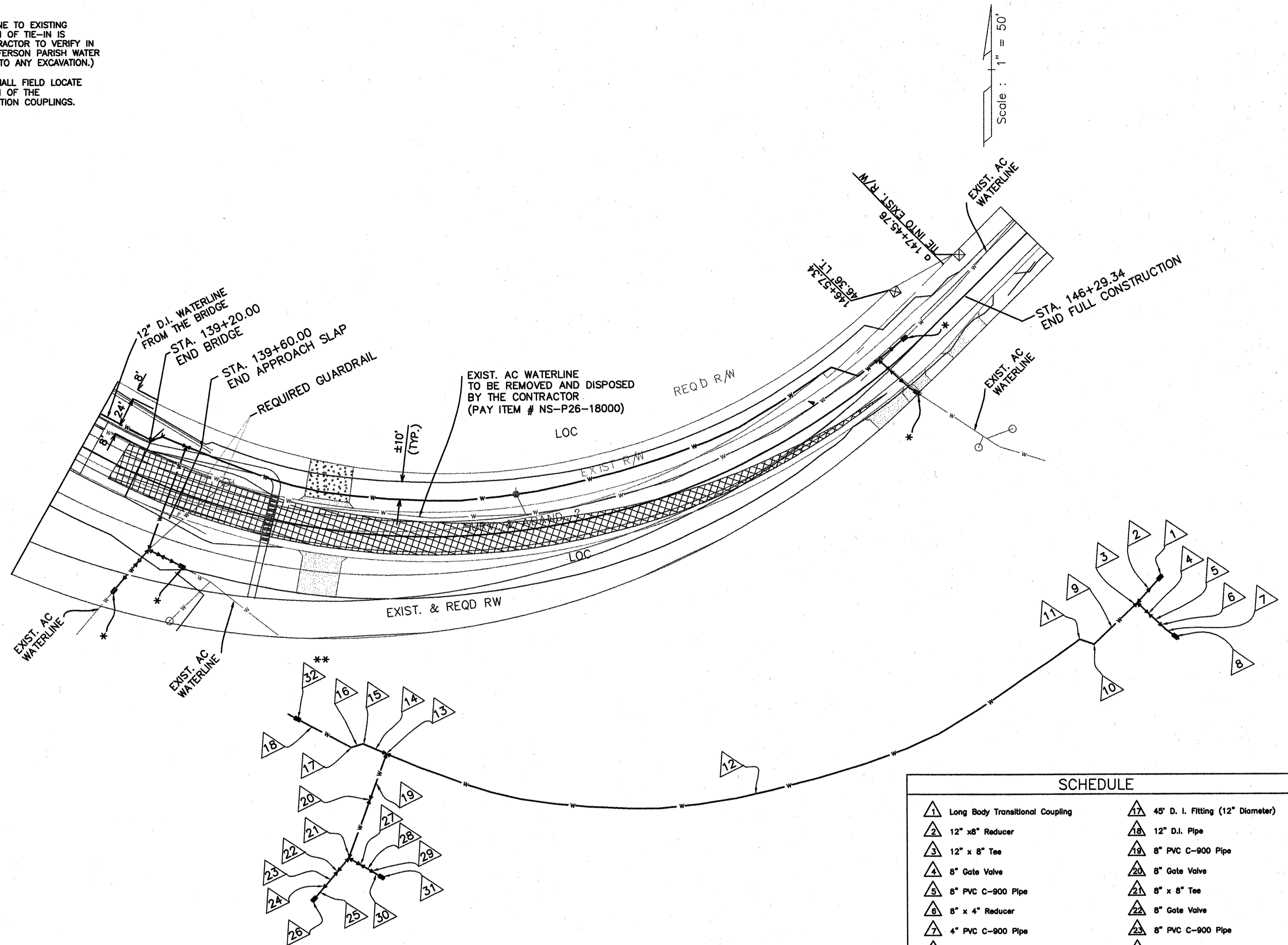


SHEET NUMBER	194	PROJECT	064-01-0040
DESIGNED	B. DELATTE	DATE	APRIL 2009
CHECKED	K. YAP	SHEET	2 OF 2
DETAILS	R. BROWN	REVISION DESCRIPTION	
PROJECT	JEFFERSON	BY	
 CAMINADA BAY BRIDGE ROUTE LA 1 WATERLINE SUPPORT DETAILS			
 BRIDGE AND STRUCTURAL DESIGN			

GENERAL NOTES:

- ALL WORK MUST CONFORM TO THE REQUIREMENTS OF JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS AND OTHER SUCH PARISH OR STATE STANDARDS THAT MIGHT BE APPLICABLE.
- IT IS STRONGLY SUGGESTED THAT THE CONTRACTORS UTILIZE THE PRE-BID AND PRE-CONSTRUCTION CONFERENCES TO CLARIFY ANY DISCREPANCIES AND CONCERNS. MODIFICATIONS TO THE PLANS AND SPECIFICATIONS ARE MUCH EASIER PRIOR TO BID.
- LIMITED TOPOGRAPHY INFORMATION HAS BEEN INCLUDED IN THESE WATER LINE RELOCATION DRAWINGS. THE CONTRACTOR SHALL REFER TO PLAN AND PROFILE SHEETS FOR ADDITIONAL INFORMATION NECESSARY TO INSTALL THE NEW/RELOCATED WATER DISTRIBUTION SYSTEM.
- WATER LINE FITTING LOCATIONS AND BEND ANGLES SHOWN ARE FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS WILL DICTATE THE ACTUAL ALIGNMENT OF THE PROPOSED WATER LINE. THE INTENTION OF THESE DRAWINGS IS TO ACHIEVE INSTALLATION AND/OR THE RELOCATION OF THE EXISTING WATER LINE WITH MINIMAL CONFLICT WITH EXISTING AND PROPOSED IMPROVEMENTS AND TO OBTAIN MINIMUM CLEARANCE REQUIREMENTS BETWEEN WATER LINES AND OTHER UTILITIES, SIDEWALKS, GUARDRAILS, BRIDGE FOUNDATION, BUILDINGS, ETC. (REFER TO "JEFFERSON PARISH DEPARTMENT OF ENGINEERING WATER DISTRIBUTION SYSTEM GENERAL STANDARD NOTES" AND "STANDARD DETAILS" FOR CLEARANCE GUIDELINES).
- THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL CAREFULLY VERIFY SAME AND TAKE THE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING UTILITIES. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM AVAILABLE RECORDS. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN, OR NOT IN THE LOCATION SHOWN. CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES WHETHER SHOWN OR NOT.
- IN GENERAL, WATER SERVICE CONNECTIONS AND METERS ARE NOT SHOWN. SERVICE CONNECTIONS TO THE RELOCATED WATER LINES SHALL BE REQUIRED AND METERS SHALL BE RE-INSTALLED AS PER JEFFERSON PARISH STANDARDS. CONTRACTOR SHALL COORDINATE THIS WORK WITH JEFFERSON PARISH WATER DEPARTMENT.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE FROM DAMAGE. ALL IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED TO THE ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THE SIZE AND TYPE OF ALL EXISTING WATER LINES PRIOR TO ORDERING MATERIAL.
- ALL EXISTING WATER LINES, VALVES, FITTINGS, ETC. TO BE RELOCATED/REPLACED SHALL BE REMOVED AND DISPOSED BY THE CONTRACTOR AT NO DIRECT PAYMENT, UNLESS OTHERWISE SPECIFIED.
- CONSTRUCTION OF WATER LINE ATTACHED TO THE BRIDGE SHALL BE IN ACCORDANCE WITH ALL APPLICABLE GUIDELINES OF "DUCTILE IRON PIPE RESEARCH ASSOCIATION" FOR "BRIDGE CROSSINGS FOR DUCTILE IRON PIPE" AND "DESIGN OF DUCTILE IRON PIPE ON SUPPORTS" LATEST DOCUMENTS.
- PUSH-ON JOINT DUCTILE IRON WATER LINE ATTACHED TO THE BRIDGE SHALL BE STRAPPED DOWN BEHIND EACH BELL. CARE MUST BE EXERCISED IN ASSEMBLING THE JOINTS. GENERALLY PUSH-ON JOINTS SHOULD NOT BE ASSEMBLED COMPLETELY "HOME" IF INSTALLED IN THE WINTER. TO ACCOUNT FOR THE BRIDGE EXPANSION AND CONTRACTION, IT IS RECOMMENDED FOR EACH PUSH-ON JOINT TO BE DRIVEN HOME AND PULLED BACK 1/4".
- DEVIATIONS FROM JEFFERSON PARISH WATER STANDARDS NOTES:
 - FACTORY ASPHALTIC EXTERIOR COATING OF DUCTILE IRON PIPE WILL BE SUFFICIENT FOR ALL PROPOSED EXPOSED DUCTILE IRON PIPES (BRIDGE SECTION); NO SPECIAL PAINTING WILL BE REQUIRED.
 - WITH THE EXCEPTION OF EACH BRIDGE END, DUCTILE IRON PIPES ATTACHED TO THE BRIDGE SHALL BE THICKNESS CLASS 51, PUSH-ON, NON-RESTRAINED PIPE MEETING ANS/AWWA A21.51/C151 AND ANS/AWWA A21.50/C150. AT EACH END OF THE BRIDGE THE PROPOSED WATER LINE SHALL BE PER JEFFERSON PARISH STANDARDS FOR RESTRAINED PIPE.
 - AT EACH END OF THE BRIDGE A MINIMUM 60' OF THE PROPOSED WATER LINE SHALL BE RESTRAINED PIPE PER MANUFACTURER AND JEFFERSON PARISH STANDARDS (AFTER INSTALLATION EACH JOINT IS TO BE FULLY EXTENDED TO PREVENT MOVEMENT UPON PRESSURIZATION, SEE PLANS). THE OFFSET PIPE CLAMP ASSEMBLY SHALL BE USED AS THRUST BLOCKING FOR THE ENTIRE RESTRAINED LENGTH OF THE WATER LINE ON THE BRIDGE. THIS MAY BE ACCOMPLISHED BY INSTALLING "MID SPAN TYPE RESTRAINTS" ("EBA IRON SERIES 1106SDB" OR APPROVED EQUAL) ADJACENT (BOTH SIDE) TO THE "OFFSET PIPE CLAMP ASSEMBLY" OR ANY OTHER METHOD OF THRUST BLOCKING ACCEPTABLE TO THE OWNER (JEFFERSON PARISH).

- NOTE:**
- * TIE IN NEW WATERLINE TO EXISTING WATERLINE. LOCATION OF TIE-IN IS APPROXIMATE (CONTRACTOR TO VERIFY IN FIELD. CONTACT JEFFERSON PARISH WATER DEPARTMENT PRIOR TO ANY EXCAVATION.)
 - ** THE CONTRACTOR SHALL FIELD LOCATE THE EXACT LOCATION OF THE EXPANSION/CONTRACTION COUPLINGS.
 - *** CONTINGENCY ITEMS.

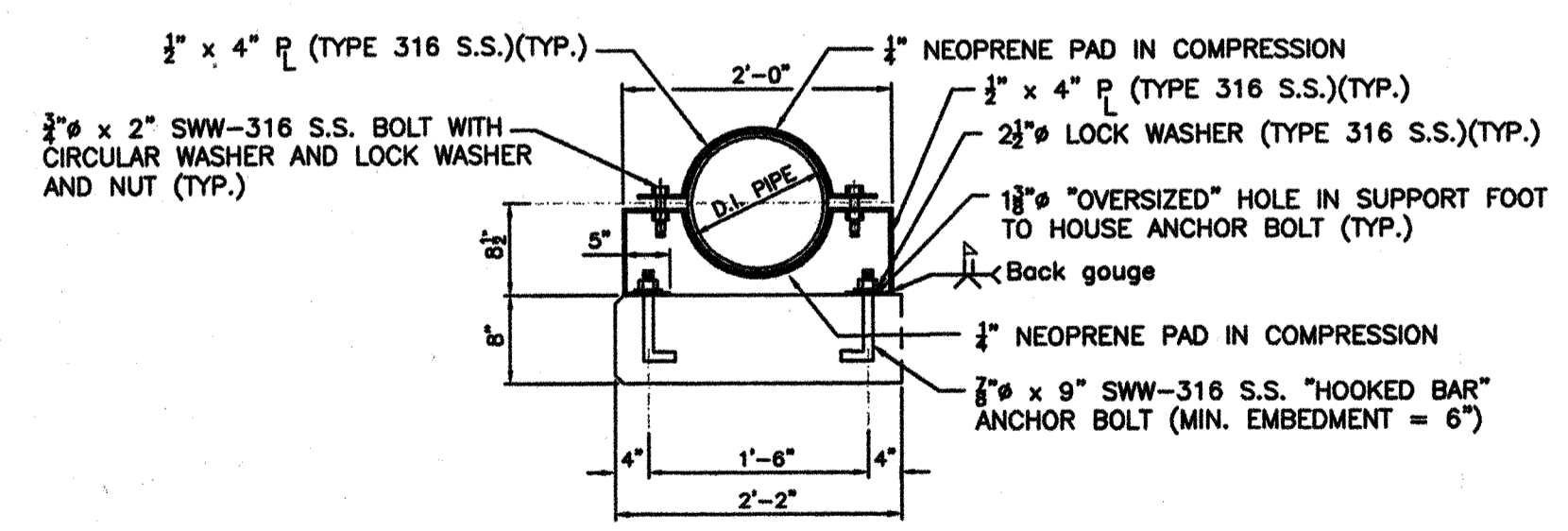


SCHEDULE

1	Long Body Transitional Coupling	45' D. I. Fitting (12" Diameter)
2	12" x 8" Reducer	12" D.I. Pipe
3	12" x 8" Tee	8" PVC C-900 Pipe
4	8" Gate Valve	8" Gate Valve
5	8" PVC C-900 Pipe	8" x 8" Tee
6	8" x 4" Reducer	8" Gate Valve
7	4" PVC C-900 Pipe	8" PVC C-900 Pipe
8	Long Body Transitional Coupling	8" x 4" Reducer
9	12" PVC C-900 Pipe	4" PVC C-900 Pipe
10	45' D. I. Fitting (12" Diameter)	Long Body Transitional Coupling
11	45' D. I. Fitting (12" Diameter)	8" Gate Valve
12	12" PVC C-900 Pipe	8" PVC C-900 Pipe
13	12" x 8" Tee	8" x 4" Reducer
14	12" PVC C-900 Pipe	4" PVC C-900 Pipe
15	45' D. I. Fitting (12" Diameter)	Long Body Transitional Coupling
16	12" PVC C-900 Pipe	Expansion/Contraction Coupling To Be Field Located

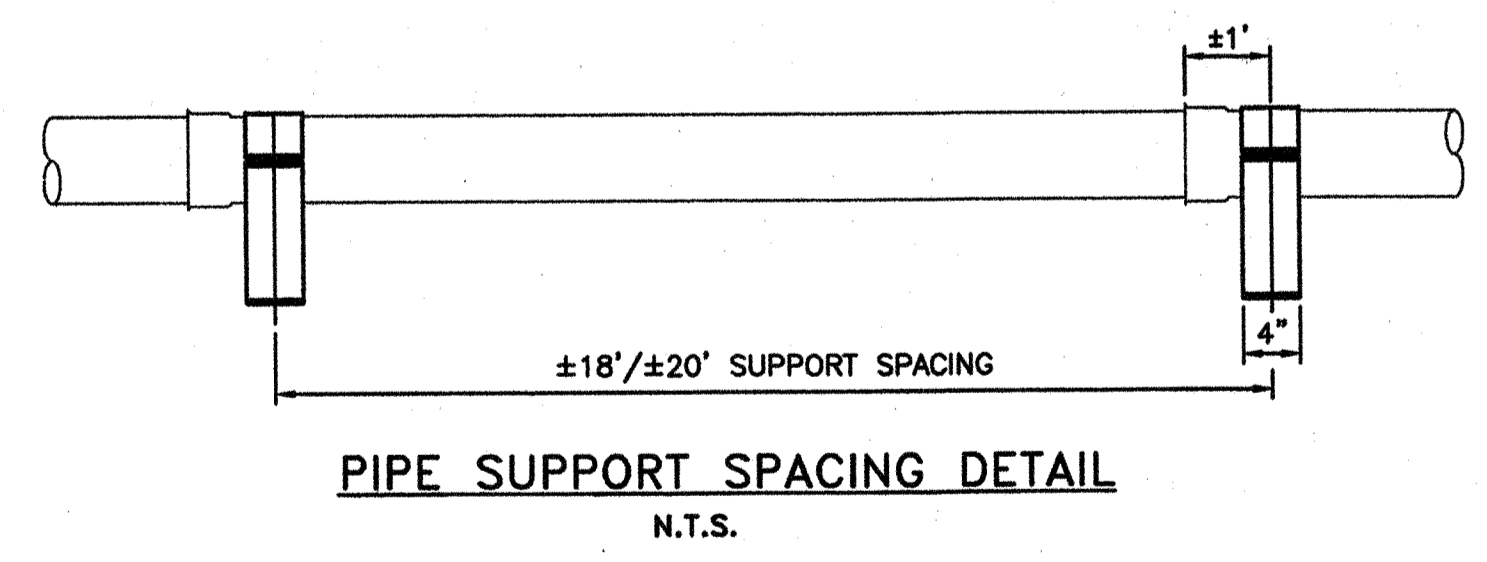
**Estimated Quantity Table
 Caminada Bay Bridge, Relocation of Water Infrastructure**

ITEM NO.	ITEM	UNIT	QUANTITY
NS-P26-01000	Air Release Valve (1")	EA	1
NS-P26-03000	Concrete Pipe Support Blister	EA	202
NS-P26-05000	Expansion / Contraction Coupling	EA	2
NS-P26-06000	Fire Hydrants***	EA	2
NS-P26-06020	Fittings for Waterlines (DI)	LBS	1,900
NS-P26-07000	Gate Valve and Valve Box (8")	EA	7
NS-P26-07020	Gate Valve and Valve Box (12")	EA	2
NS-P26-12000	Long Body Transitional Coupling (4")	EA	4
NS-P26-12020	Long Body Transitional Coupling (6")	EA	1
NS-P26-12040	Long Body Transitional Coupling (8")	EA	2
NS-P26-15000	Offset Pipe Clamp Assembly	EA	202
NS-P26-18000	Removal & Disposal of existing AC Waterline	LFT	1,220
NS-P26-18020	Removal & Disposal of existing DI Waterline	LFT	4,000
NS-P26-23000	Water Service Connections***	EA	2
NS-P26-23020	Waterline (12" DI)	LFT	4,000
NS-P26-23040	Waterline (12" DI) (Restrained)	LFT	240
NS-P26-23060	Waterline (8" PVC)	LFT	650
NS-P26-23080	Waterline (12" PVC)	LFT	800
NS-P26-23100	Waterline (4" PVC) (Restrained)	LFT	60
NS-P26-23120	Waterline (6" PVC) (Restrained)	LFT	100
NS-P26-23140	Waterline (8" PVC) (Restrained)	LFT	150
NS-P26-23160	Waterline (12" PVC) (Restrained)	LFT	100



**OFFSET PIPE CLAMP ASSEMBLY
 (SEE BRIDGE PLANS FOR LOCATIONS)**

NOTE:
 OFFSET PIPE CLAMP SHALL BE CONSTRUCTED FROM 1/2" x 4" STOCK IN TYPE 316 STAINLESS STEEL. ALL PARTS SHALL BE FORMED WITH THE EXCEPTION OF THE SUPPORT FEET, WHICH ARE TURNED INWARD AND SHALL BE WELDED. OFFSET PIPE CLAMPS SHALL BE "SP179SS" AS MANUFACTURED BY PHS INDUSTRIES, 434 LATIGUE ROAD, WAGGAMAN, LA 70094, PHONE NUMBER (800) 256-9383 OR APPROVED EQUAL.



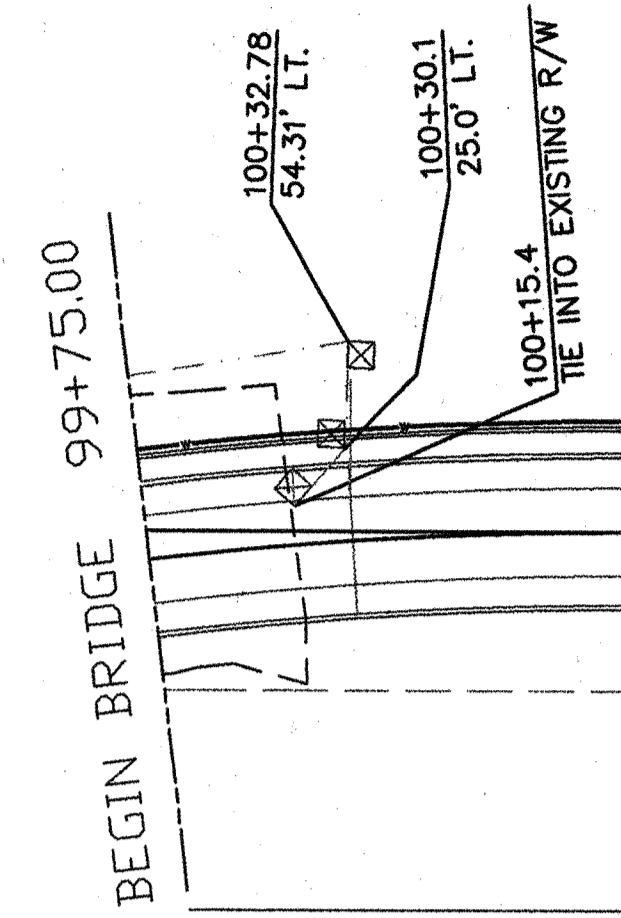
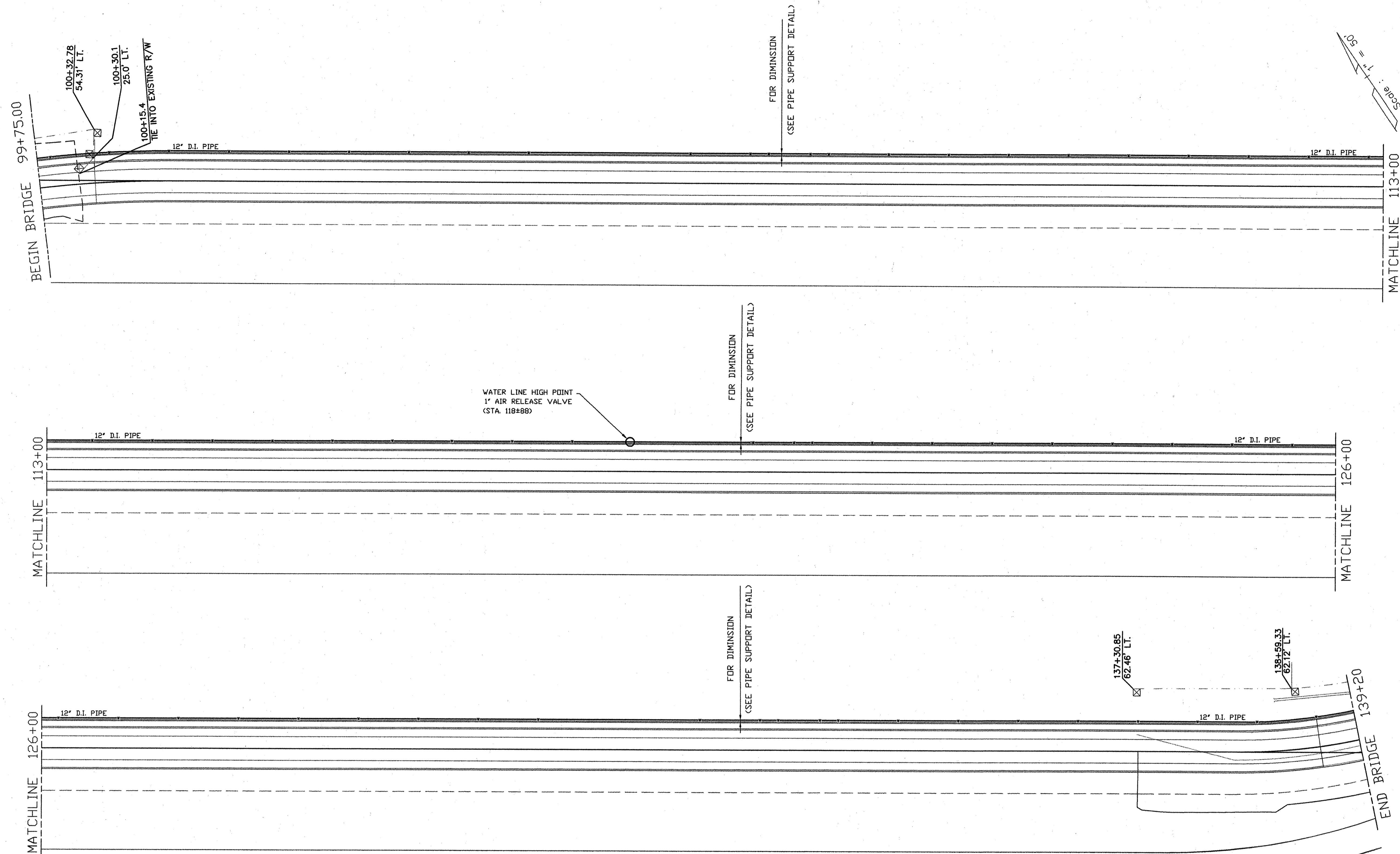
**PIPE SUPPORT SPACING DETAIL
 N.T.S.**

APPROVED:

 MARK R. DREWES, P.E.
 DIRECTOR, JEFFERSON PARISH DEPT. OF ENGINEERING

LEO J. LAY, JR.
 REG. No. 17044
 REGISTERED PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING

J.P. PUBLIC WORKS # 2008-030-WR



WATER LINE HIGH POINT
1" AIR RELEASE VALVE
(STA. 118+88)

FOR DIMENSION
(SEE PIPE SUPPORT DETAIL)

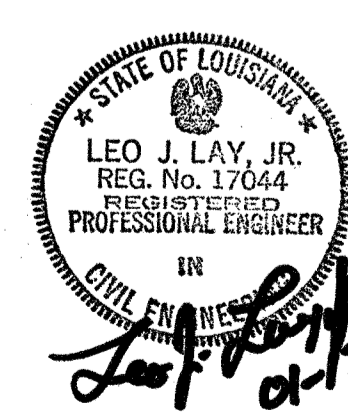
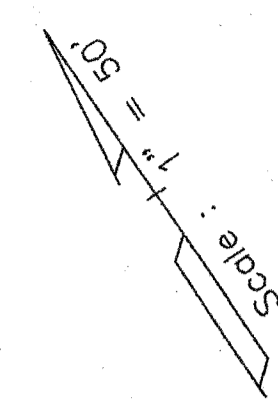
FOR DIMENSION
(SEE PIPE SUPPORT DETAIL)

FOR DIMENSION
(SEE PIPE SUPPORT DETAIL)

FOR DIMENSION
(SEE PIPE SUPPORT DETAIL)

137+30.85
62.46' LT.



138+59.33
62.12' LT.



APPROVED:
Mark R. Dreyes 4/13/09
MARK R. DREYES, P.E.
DIRECTOR, JEFFERSON PARISH DEPT. OF ENGINEERING

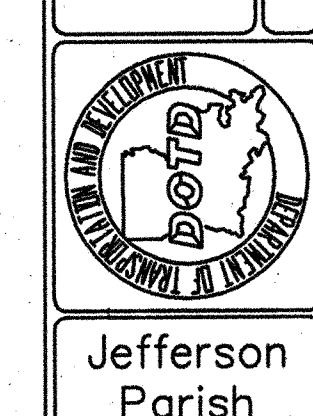
- APPROVAL OF THESE PLANS BY THE DIRECTOR OF ENGINEERING IS VALID FOR EIGHTEEN (18) MONTHS AFTER DATE OF SIGNATURE. IF CONSTRUCTION HAS NOT STARTED WITHIN THIS PERIOD, IT WILL BE NECESSARY TO RESUBMIT THESE PLANS TO THE DEPARTMENT OF ENGINEERING TO BE REVIEWED AND APPROVED AGAIN.
- REVISIONS MADE TO THIS PLAN AFTER THE DIRECTOR OR THE DEPARTMENT OF ENGINEERING HAS APPROVED IT WILL VOID THE DIRECTOR'S APPROVAL AND REQUIRE THE REVISED PLAN TO BE RESUBMITTED FOR REVIEW AND APPROVAL ONCE AGAIN.
- IF FACILITIES ARE NOT INSTALLED IN ACCORDANCE WITH THE PLAN, THE DIRECTOR'S APPROVAL WILL BE VOIDED, REQUIRING THE PLAN TO BE REVISED AND RESUBMITTED FOR REVIEW AND APPROVAL ONCE AGAIN.
- APPROVAL OF THIS PLAN IS BASED ON THE UNDERSTANDING THAT ALL PERTINENT DATA EITHER HAVE BEEN RECORDED OR WILL BE INCLUDED ON THE FINAL PLAN.
- ALL OR PART OF THIS PROJECT MAY BE LOCATED IN WETLANDS. APPROVAL OF THIS PROJECT BY THE PARISH OF JEFFERSON GRANTS NO PROPERTY RIGHTS AND DOES NOT ELIMINATE THE NEED TO OBTAIN APPROVAL FROM STATE AND FEDERAL AGENCIES PRIOR TO BEGINNING THE PROJECT.
- APPROVAL OF THESE PLANS BY THE JEFFERSON PARISH DIRECTOR OF ENGINEERING IS LIMITED TO THE WATER DISTRIBUTION SYSTEM ONLY.

J.P. PUBLIC WORKS # 2008-030-WR

SHEET NUMBER		196	
DESIGNED	CHKD	DATE	SHEET
CHECKED	DATE	NOV. 18, 2008	BY
DETAILS	DATE		
CHECKED	DATE		
AIR RELEASE VALVE NOTE		REVISION DESCRIPTION	
END BRIDGE STA. NO. CORRECTED			
1	01-13-09		
PARISH		JEFFERSON	
FEDERAL PROJECT			
STATE PROJECT		064-01-0040	
			
POTABLE WATER DISTRIBUTION SYSTEM RELOCATION BRIDGE SECTION CAMINADA BAY BRIDGE			
			
Jefferson Parish			

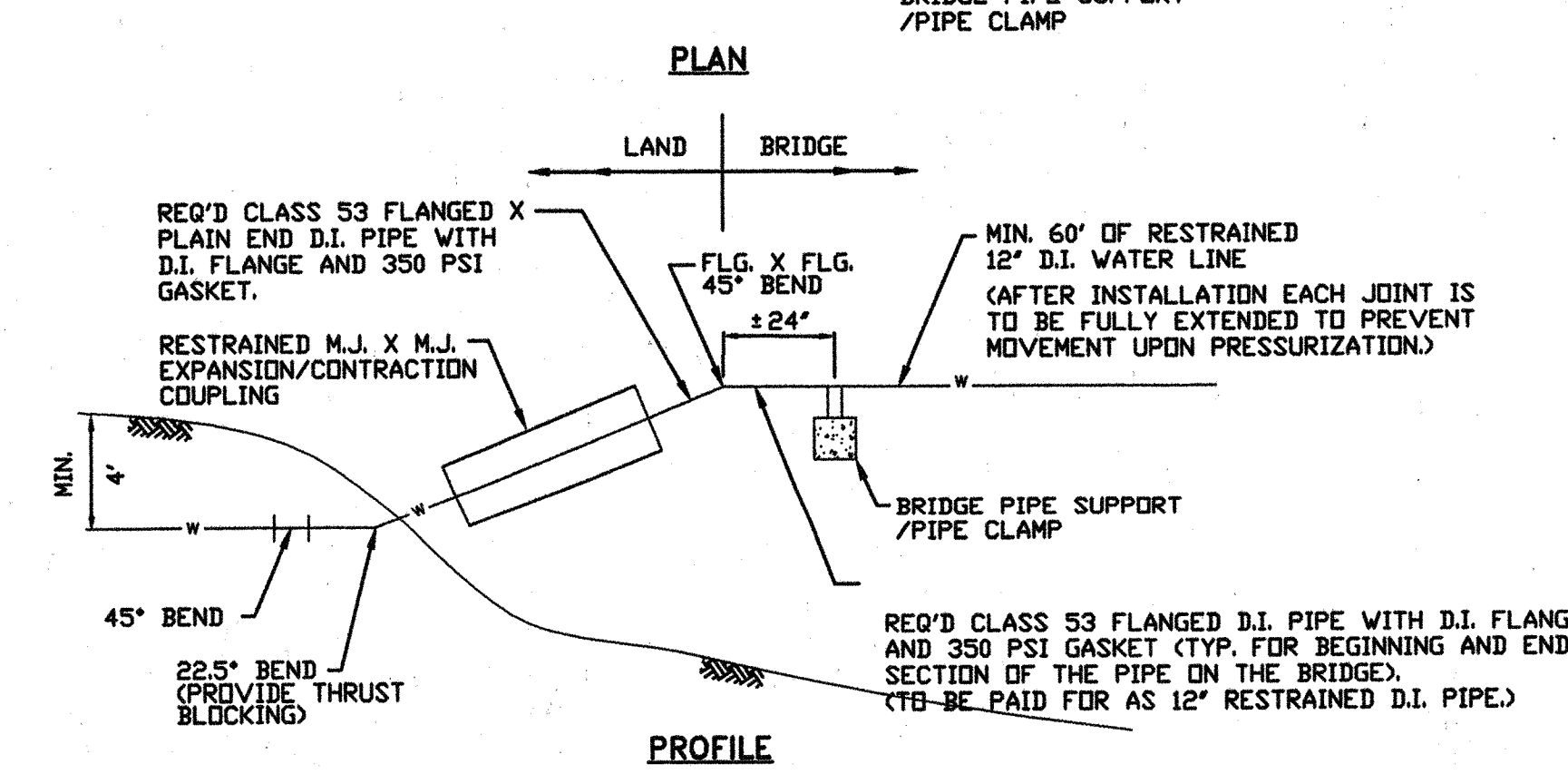
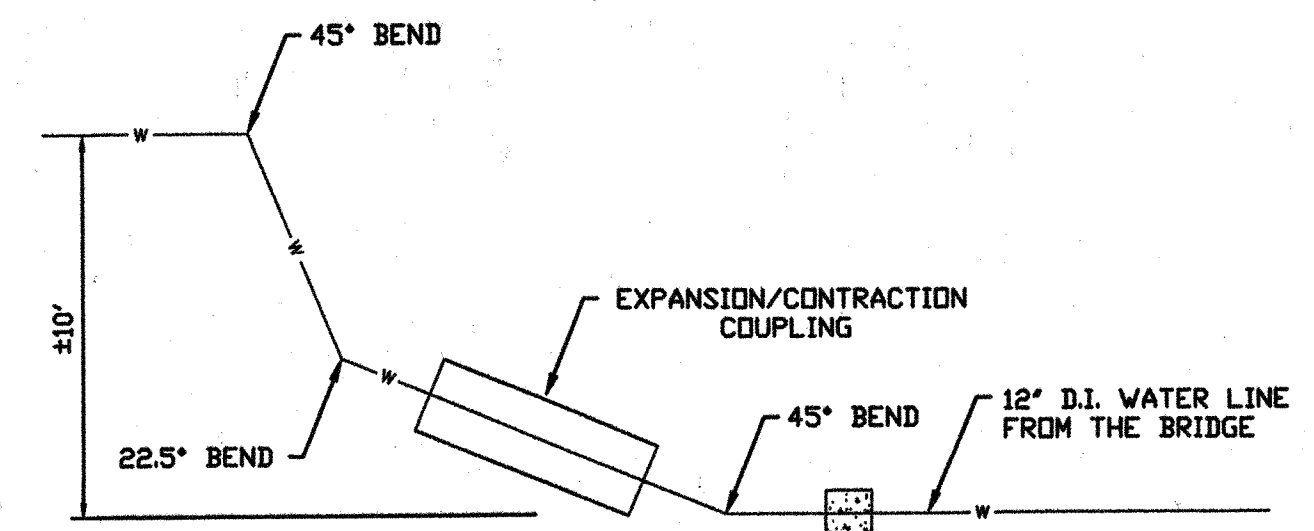
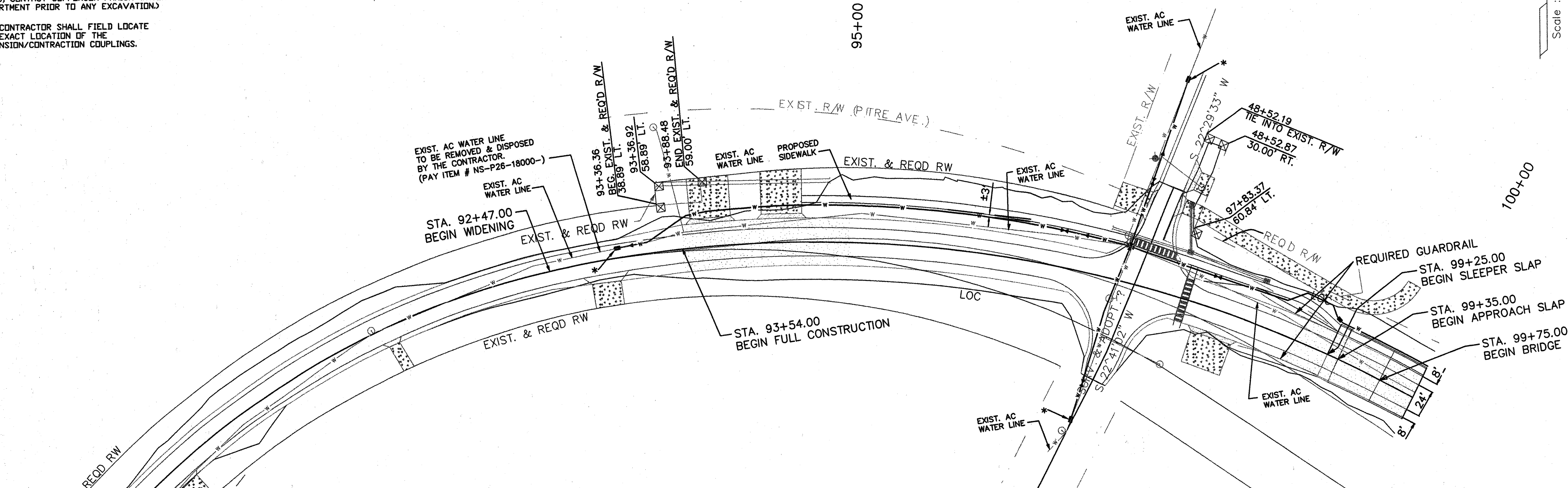


POTABLE WATER DISTRIBUTION SYSTEM RELOCATION
CAMINADA BAY BRIDGE

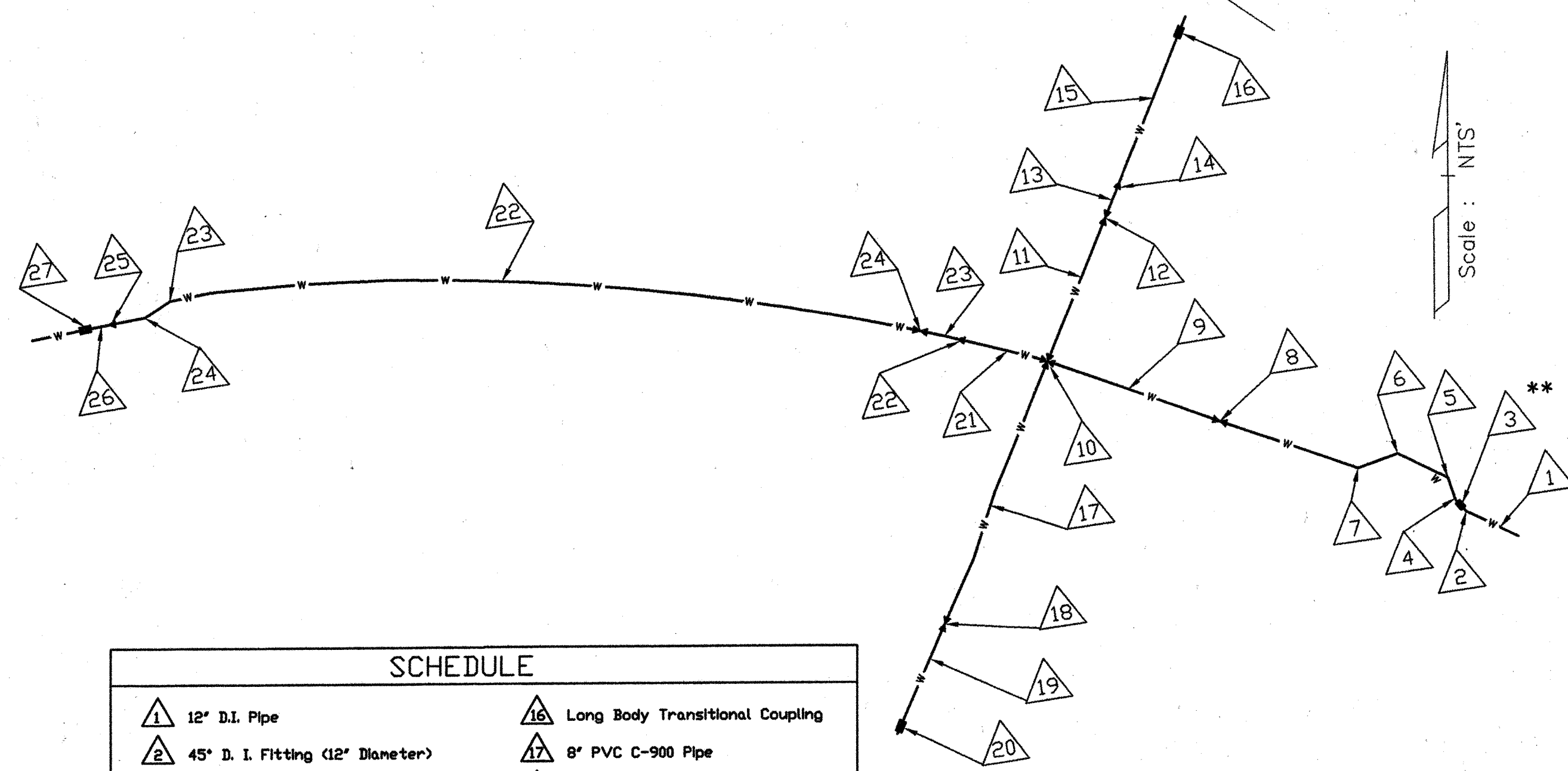


NOTE:
 * TIE IN NEW WATERLINE TO EXISTING WATERLINE. LOCATION OF TIE-IN IS APPROXIMATE (CONTRACTOR TO VERIFY IN FIELD, CONTACT JEFFERSON PARISH WATER DEPARTMENT PRIOR TO ANY EXCAVATION)
 ** THE CONTRACTOR SHALL FIELD LOCATE THE EXACT LOCATION OF THE EXPANSION/CONTRACTION COUPLINGS.

Scale: 1" = 50'



WATER, BRIDGE/LAND TRANSITION DETAIL INCLUDING EXPANSION/CONTRACTION COUPLING
NTS



SCHEDULE	
1 12" D.I. Pipe	16 Long Body Transitional Coupling
2 45° D. I. Fitting (12" Diameter)	17 8" PVC C-900 Pipe
3 Expansion/Contraction Coupling To Be Field Located	18 8" Gate Valve
4 22 1/2" D. I. Fitting (12" Diameter)	19 8" PVC C-900 Pipe
5 45° D. I. Fitting (12" Diameter)	20 Long Body Transitional Coupling
6 45° D. I. Fitting (12" Diameter)	21 12" PVC C-900 Pipe
7 45° D. I. Fitting (12" Diameter)	22 12" x 8" Reducer
8 12" Gate Valve	23 8" PVC C-900 Pipe
9 12" PVC C-900 Pipe	24 8" Gate Valve
10 12" x 8" Cross	25 8" PVC C-900 Pipe
11 8" PVC C-900 Pipe	26 22 1/2" D. I. Fitting (8" Diameter)
12 8" Gate Valve	27 22 1/2" D. I. Fitting (8" Diameter)
13 8" PVC C-900 Pipe	28 8" x 4" Reducer
14 8" x 6" Reducer	29 4" PVC C-900 Pipe
15 6" PVC C-900 Pipe	30 Long Body Transitional Coupling

APPROVED:
 Mark R. Drewes 1/12/09
 DIRECTOR, JEFFERSON PARISH DEPT. OF ENGINEERING

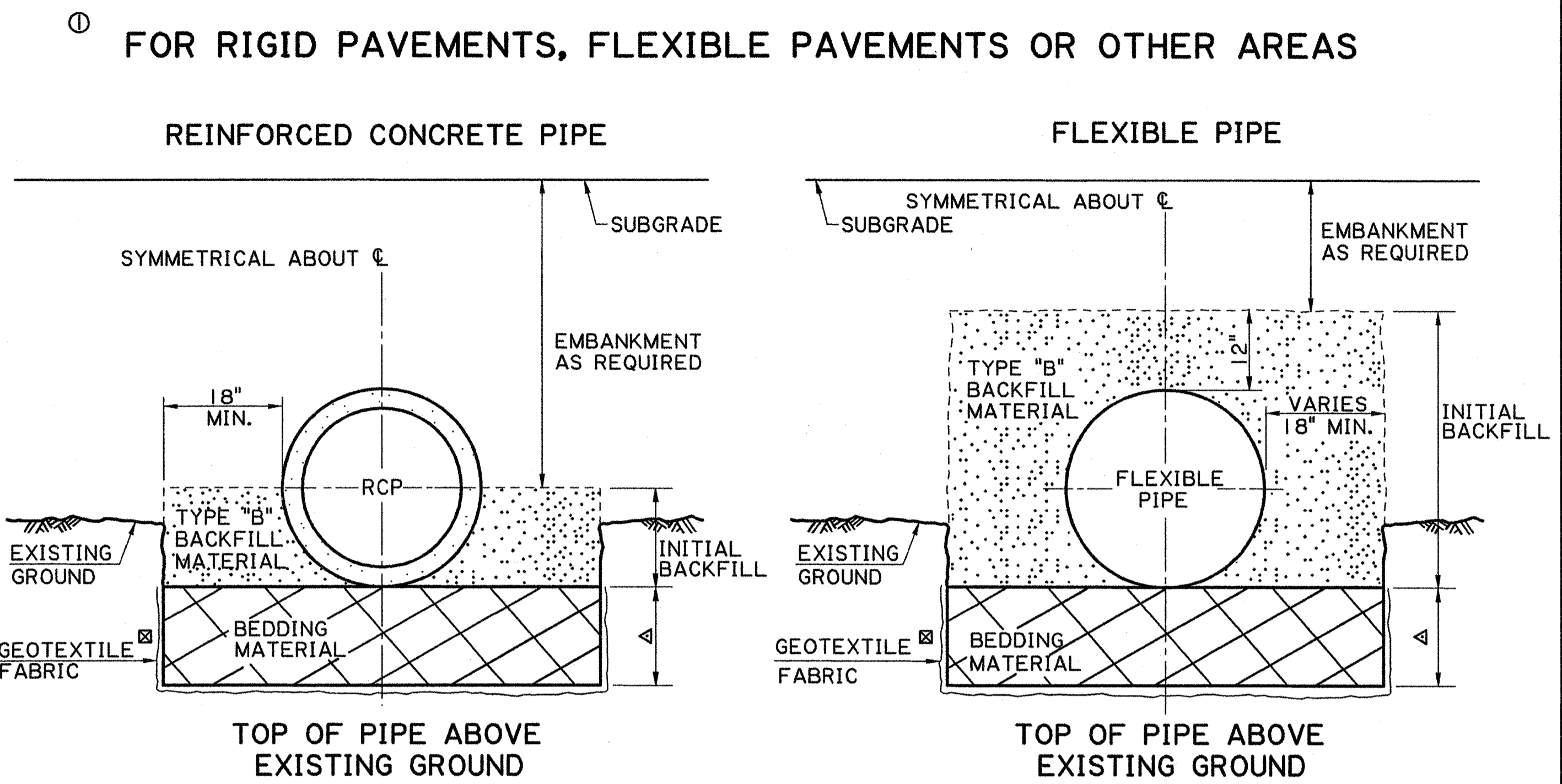
1. APPROVAL OF THESE PLANS BY THE DIRECTOR OF ENGINEERING IS VALID FOR EIGHTEEN (18) MONTHS AFTER DATE OF SIGNATURE. IF CONSTRUCTION HAS NOT STARTED WITHIN THIS PERIOD, IT WILL BE NECESSARY TO RE-SUBMIT THESE PLANS TO THE DEPARTMENT OF ENGINEERING TO BE REVIEWED AND APPROVED AGAIN.
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 5. ALL OR PART OF THIS PROJECT MAY BE LOCATED IN WETLANDS. APPROVAL OF THIS PROJECT BY THE PARISH OF JEFFERSON GRANTS NO PROPERTY RIGHTS AND DOES NOT ELIMINATE THE NEED TO OBTAIN APPROVAL FROM STATE AND FEDERAL AGENCIES PRIOR TO BEGINNING THE PROJECT.
 6. APPROVAL OF THESE PLANS BY THE JEFFERSON PARISH DIRECTOR OF ENGINEERING IS LIMITED TO THE WATER DISTRIBUTION SYSTEM ONLY.

J.P. PUBLIC WORKS # 2008-030-WR

R:\Gang2\Projects\064010040\dgn\standards\plans\302_BM-01(SHEET 2).dgn 30-APR-2009 13:05

TYPICAL PIPE INSTALLATION WITH BEDDING MATERIAL

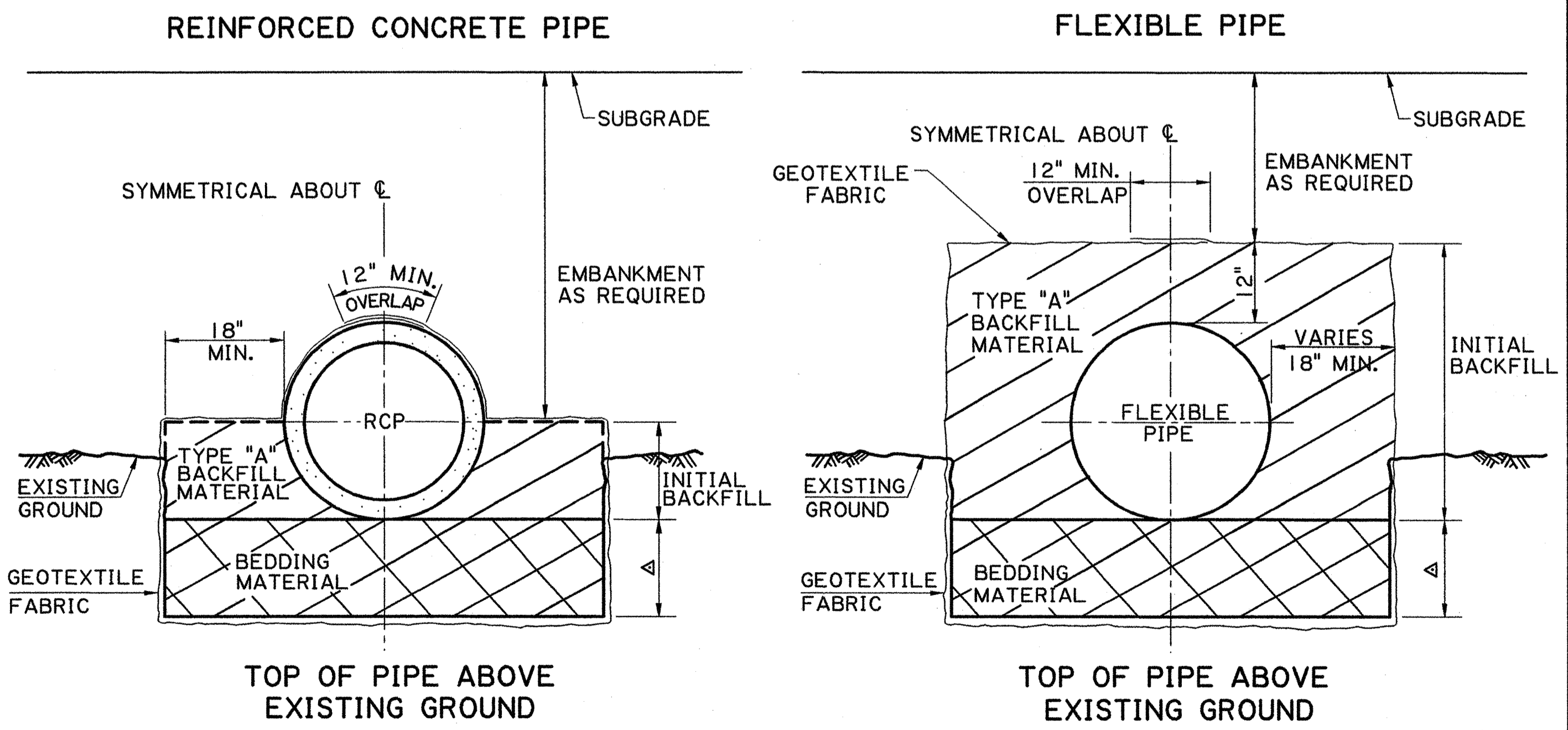
EMBANKMENT INSTALLATION



① FOR RIGID PAVEMENTS: APPLIES TO ALL PIPE UNDER RIGID PAVEMENT, EXCEPT AS NOTED FOR FLEXIBLE PAVEMENT NOTE ③ BELOW.
 FOR FLEXIBLE PAVEMENTS: APPLIES TO PIPES THAT DO NOT CROSS THE CENTERLINE OF NEW OR EXISTING ROADWAY
 FOR OTHER AREAS: APPLIES TO PIPES IN NONPAVED AREAS OR PAVED AREAS THAT SERVE AS DRIVEWAYS OR SHOULDERS

☒ IF DIRECTED BY THE PROJECT ENGINEER, GEOTEXTILE FABRIC WILL BE INSTALLED AROUND THE TYPE "B" BACKFILL AND PAID UNDER THE PAY ITEM FOR GEOTEXTILE FABRIC, SECTION 711 OR 203 OF LA DOTD STANDARD SPECIFICATIONS OR BY CHANGE ORDER.

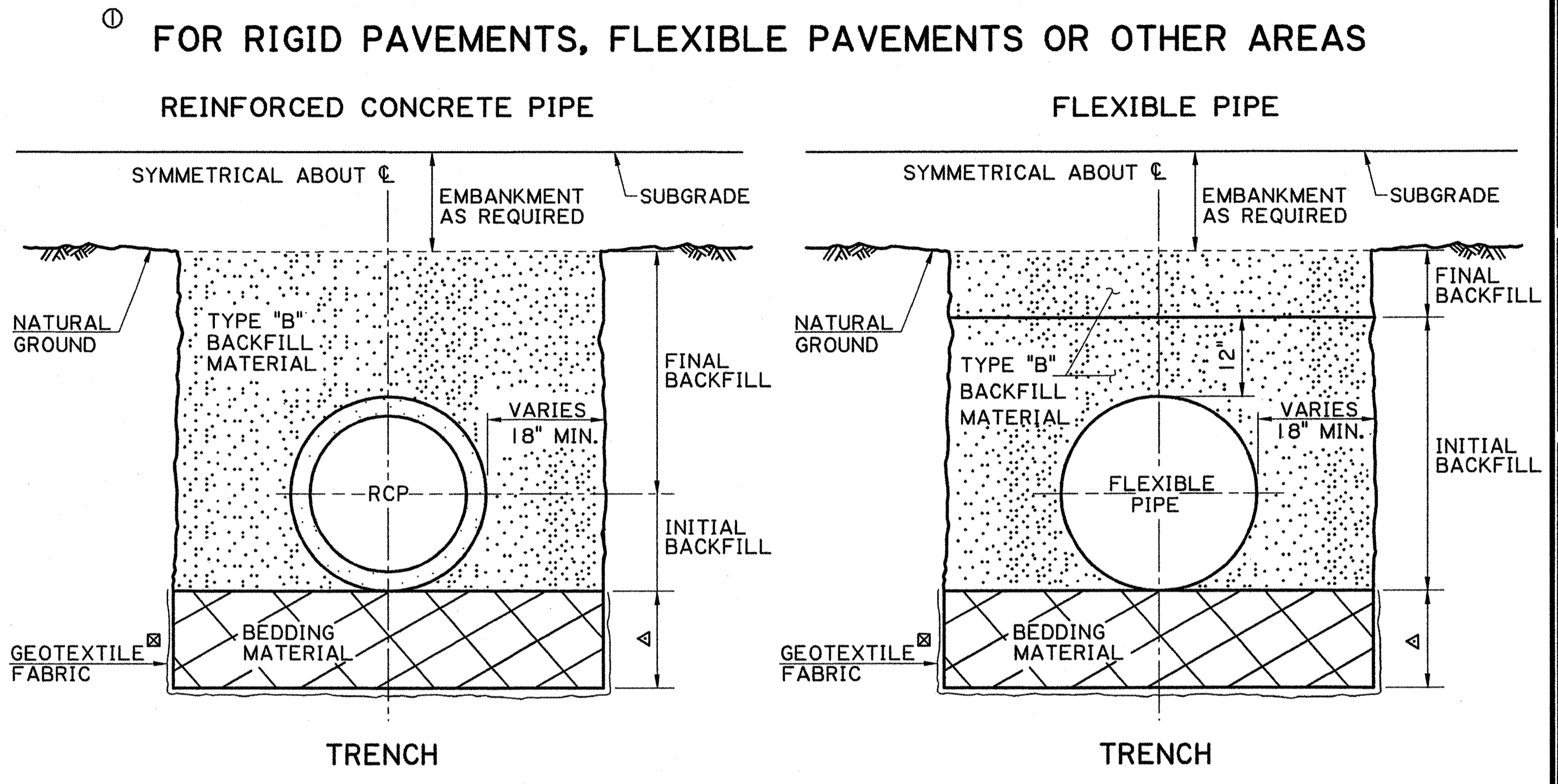
FOR FLEXIBLE PAVEMENTS ② ③



② APPLIES TO PIPE CROSSING THE CENTERLINE OF NEW OR EXISTING ROADWAYS
 ③ ALSO APPLIES UNDER RIGID PAVEMENTS FOR PIPES CROSSING THE CENTERLINE OF NEW OR EXISTING PAVEMENTS WHEN THE PROJECT IS BID USING A RIGID VS FLEXIBLE ALTERNATE (A + B + C) BID MODEL.

▲ THICKNESS AS SHOWN ON PLANS (6" MIN.) OR AS DIRECTED BY THE PROJECT ENGINEER

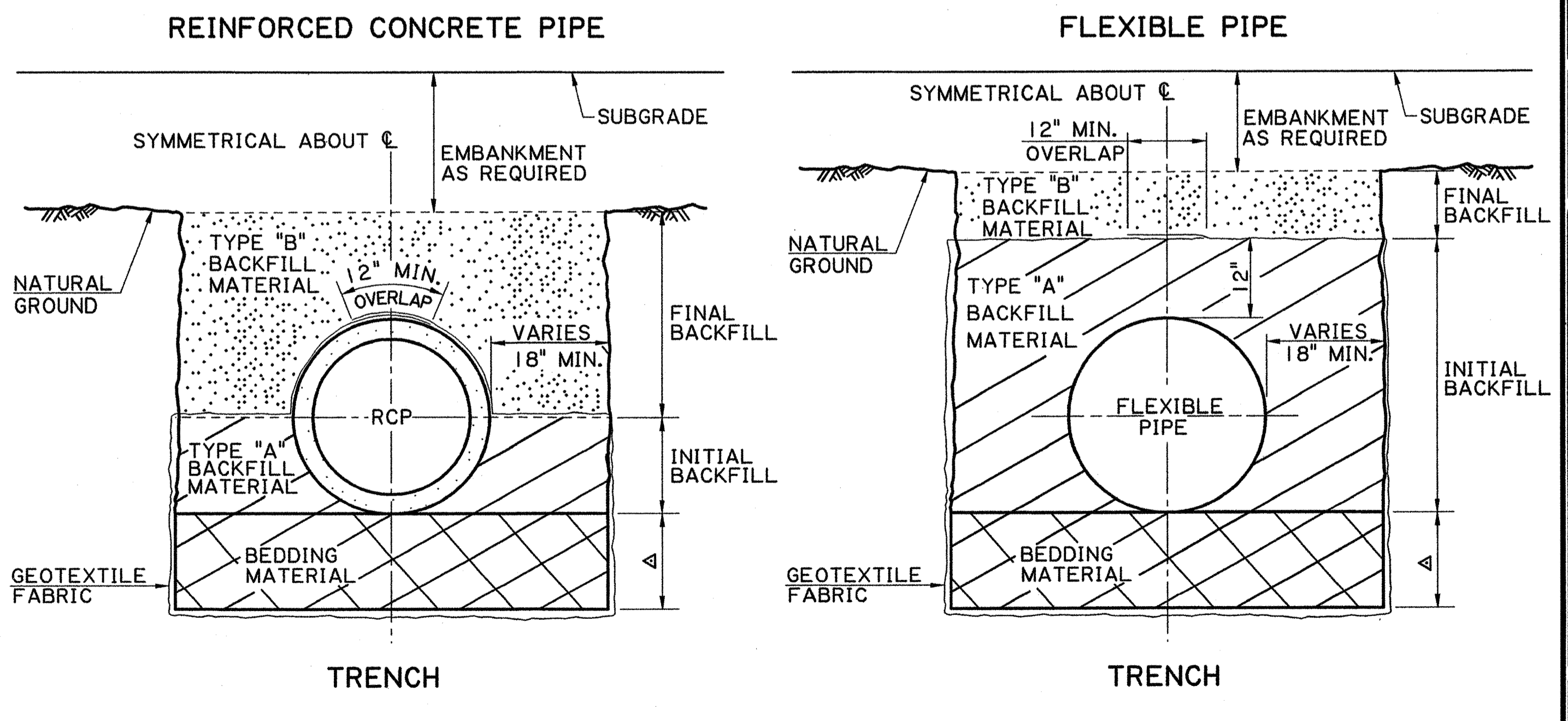
TRENCH INSTALLATION



① FOR RIGID PAVEMENTS: APPLIES TO ALL PIPE UNDER RIGID PAVEMENT, EXCEPT AS NOTED FOR FLEXIBLE PAVEMENT NOTE ③ BELOW.
 FOR FLEXIBLE PAVEMENTS: APPLIES TO PIPES THAT DO NOT CROSS THE CENTERLINE OF NEW OR EXISTING ROADWAY
 FOR OTHER AREAS: APPLIES TO PIPES IN NONPAVED AREAS OR PAVED AREAS THAT SERVE AS DRIVEWAYS OR SHOULDERS


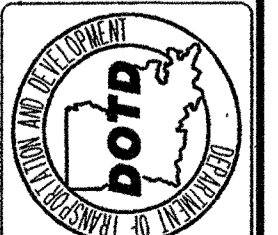
☒ IF DIRECTED BY THE PROJECT ENGINEER, GEOTEXTILE FABRIC WILL BE INSTALLED AROUND THE TYPE "B" BACKFILL AND PAID UNDER THE PAY ITEM FOR GEOTEXTILE FABRIC, SECTION 711 OR 203 OF LA DOTD STANDARD SPECIFICATIONS OR BY CHANGE ORDER.

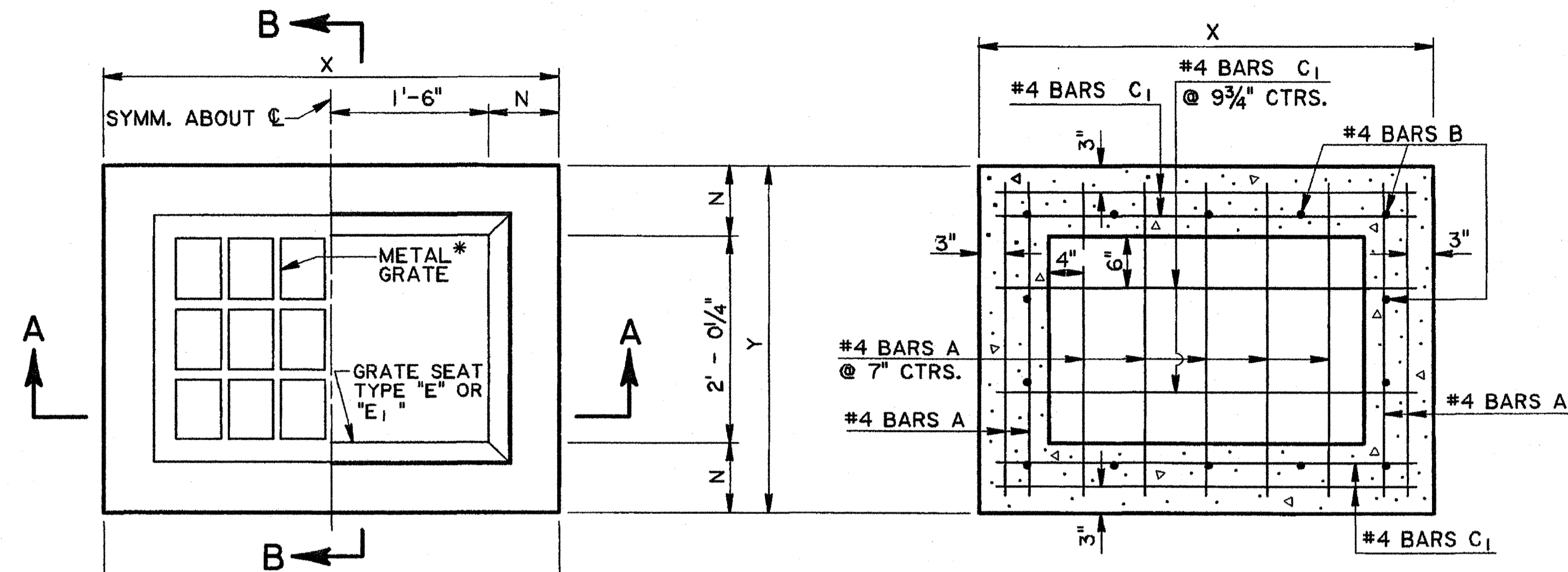
FOR FLEXIBLE PAVEMENTS ② ③



② APPLIES TO PIPE CROSSING THE CENTERLINE OF NEW OR EXISTING ROADWAYS
 ③ ALSO APPLIES UNDER RIGID PAVEMENTS FOR PIPES CROSSING THE CENTERLINE OF NEW OR EXISTING PAVEMENTS WHEN THE PROJECT IS BID USING A RIGID VS FLEXIBLE ALTERNATE (A + B + C) BID MODEL.

▲ THICKNESS AS SHOWN ON PLANS (6" MIN.) OR AS DIRECTED BY THE PROJECT ENGINEER

SHEET NUMBER	302
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED	
CHECKED	
DATE	6-8-71
REVISION DESCRIPTION	2 OF 2
JDK	BY
DATE	8-22-07
REVISION TO COMPLY WITH CURRENT SPECIFICATIONS	
ADDED FINAL AND INITIAL BACKFILL	
REDRAFTED, REVISED FOR TYPE A & B BACKFILL	
DATE	
APPROVED BY	
CHIEF ENGINEER	<i>William H. Temple</i>
	
BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES	
STANDARD PLAN	BM-01
	
HYDRAULICS SECTION	



PLAN

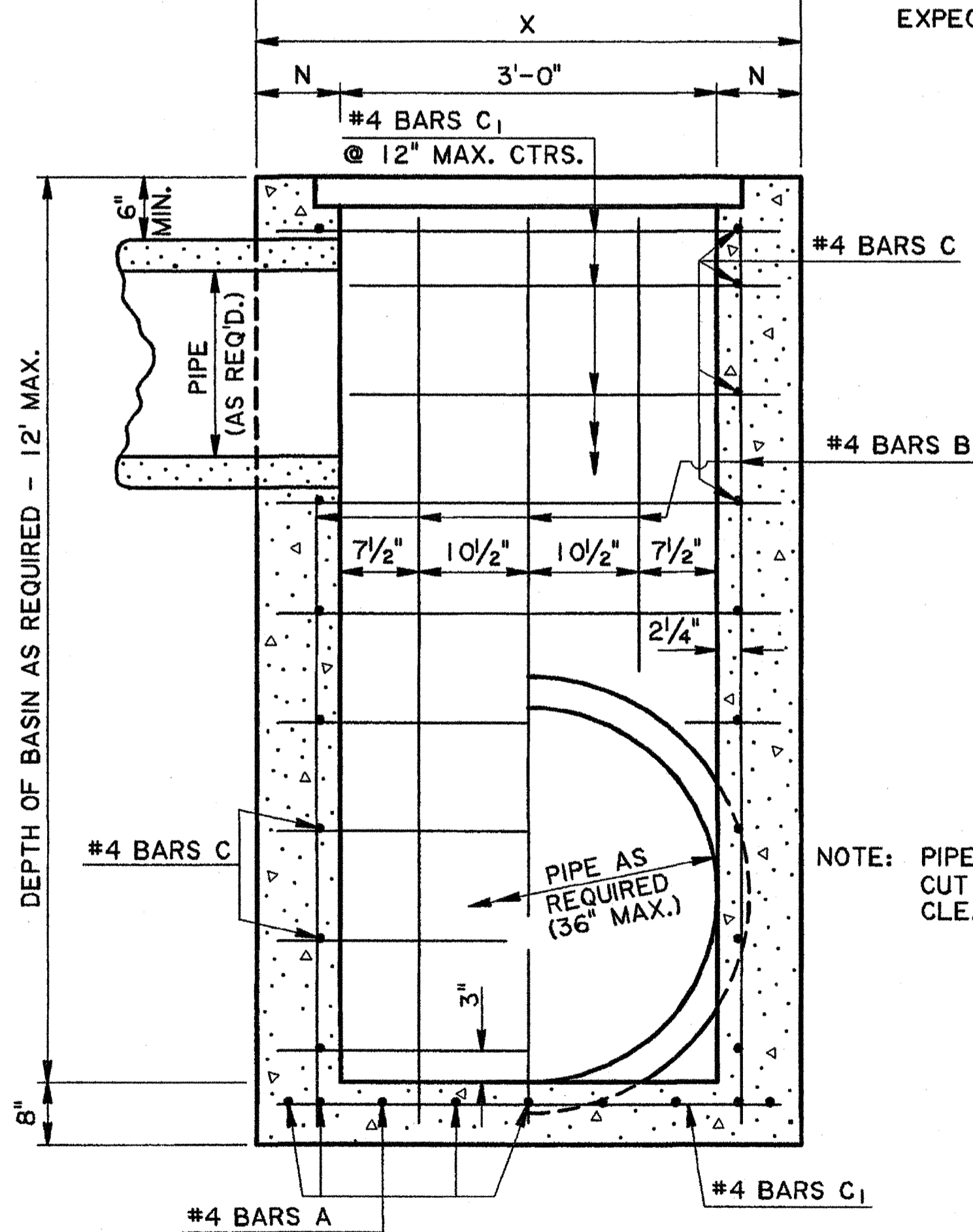
* GRATE TO BE TYPE "B" OR "C"
TYPE "B" SHOWN.

HORIZONTAL SECTION

SHOWING BOTTOM SLAB REINFORCING STEEL

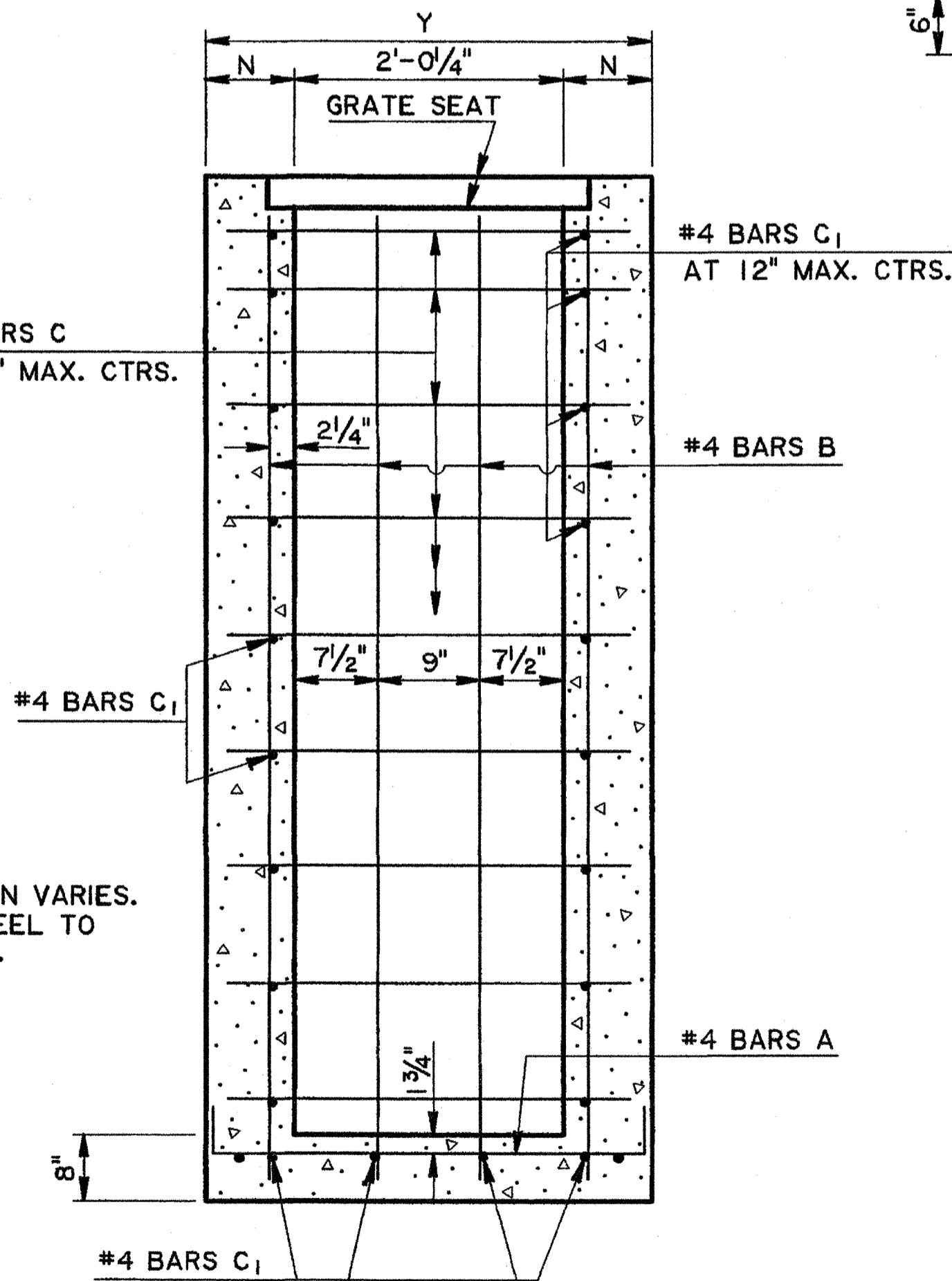
NOTE: TYPE "B" GRATE TO BE USED
WHERE NO PEDESTRIAN TRAFFIC
IS EXPECTED.

TYPE "C" GRATE TO BE USED
WHERE PEDESTRIAN TRAFFIC IS
EXPECTED.



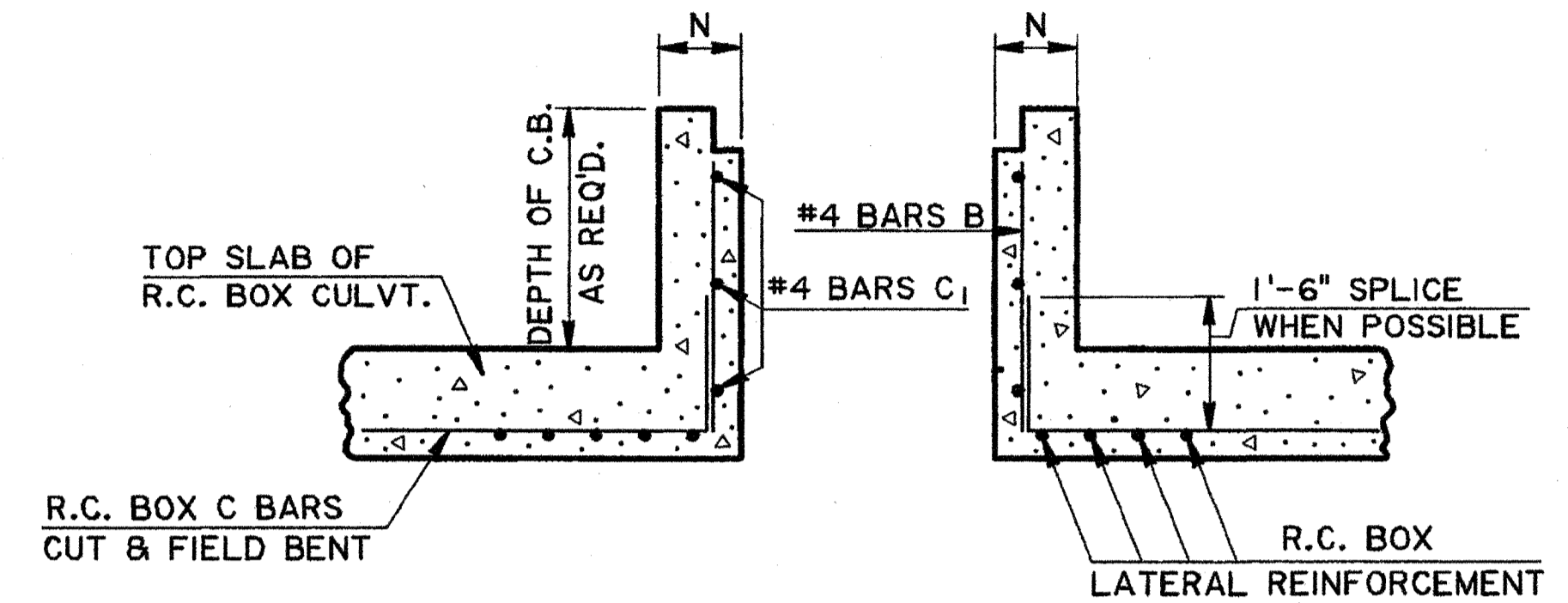
SECTION A-A

NOTE: PIPE SIZE & LOCATION VARIES.
CUT REINFORCING STEEL TO
CLEAR, AS REQUIRED.



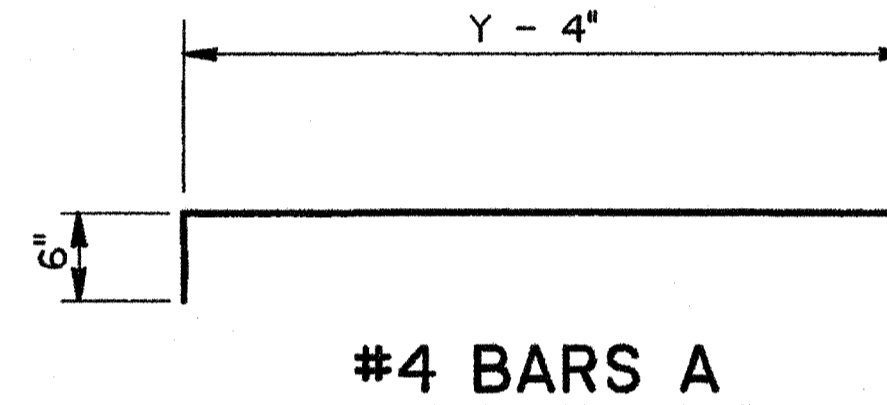
SECTION B-B

DIMENSIONS			
DEPTH OF BASIN	N	X	Y
FT.	IN.	FT.- IN.	FT.- IN.
0 - 8	7	4-2	3-2 1/4
8.1 - 12	8	4-4	3-4 1/4

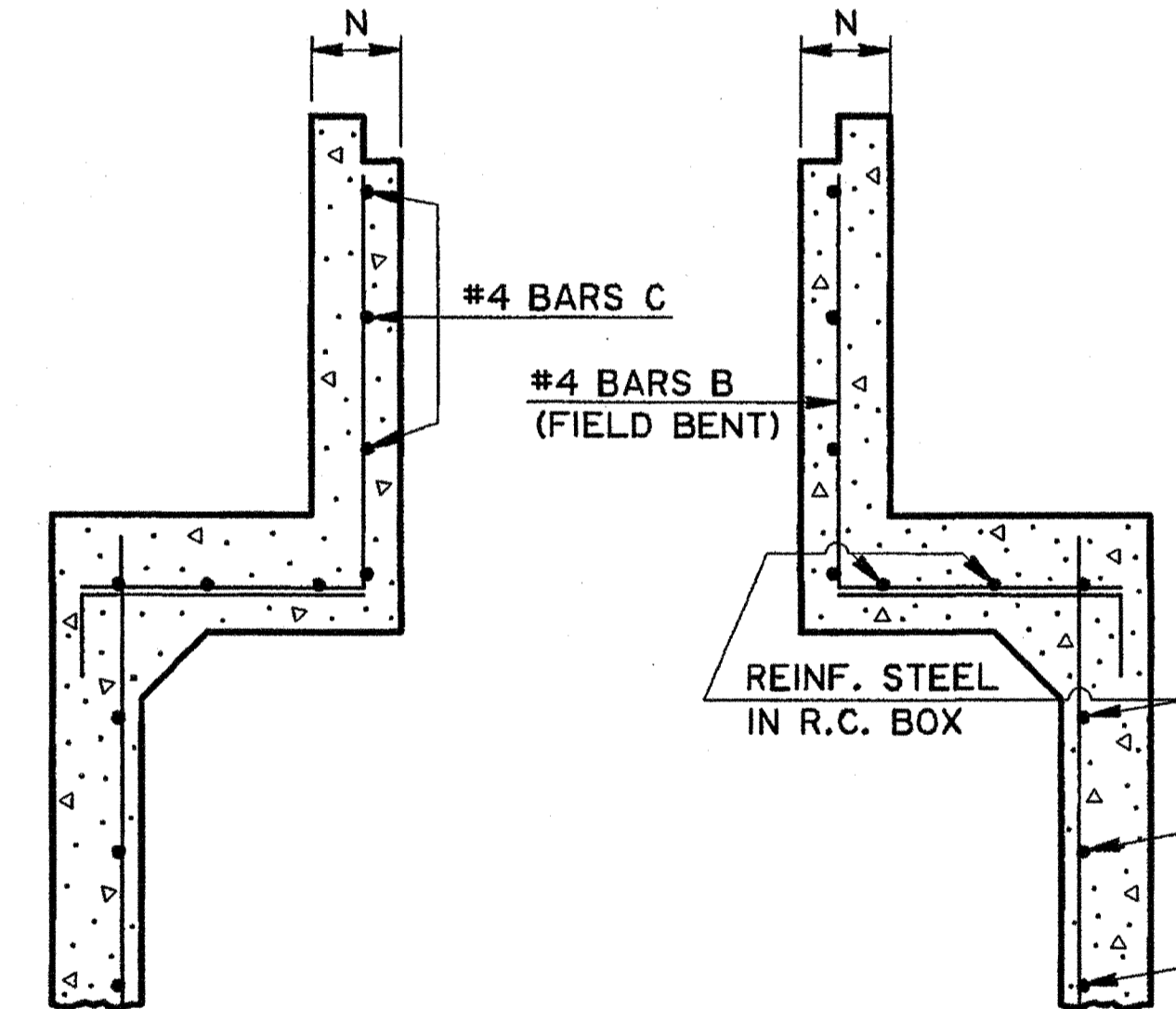


LONGITUDINAL SECTION

SHOWING CATCH BASIN
USED WITH R.C. BOX CULVERT.



#4 BARS A



TRANSVERSE SECTION

SHOWING CATCH BASIN
USED WITH R.C. BOX CULVERT.

GENERAL NOTES:

SECTION 702 OF THE CURRENT DOTD STANDARD
SPECIFICATIONS SHALL APPLY.

DIMENSIONS RELATING TO REINFORCING STEEL ARE
TO BAR CENTERS.

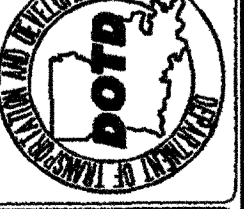
VERTICAL REINFORCING STEEL MAY BE SPLICED. SPLICE
LENGTH IS 35 DIAMETERS.

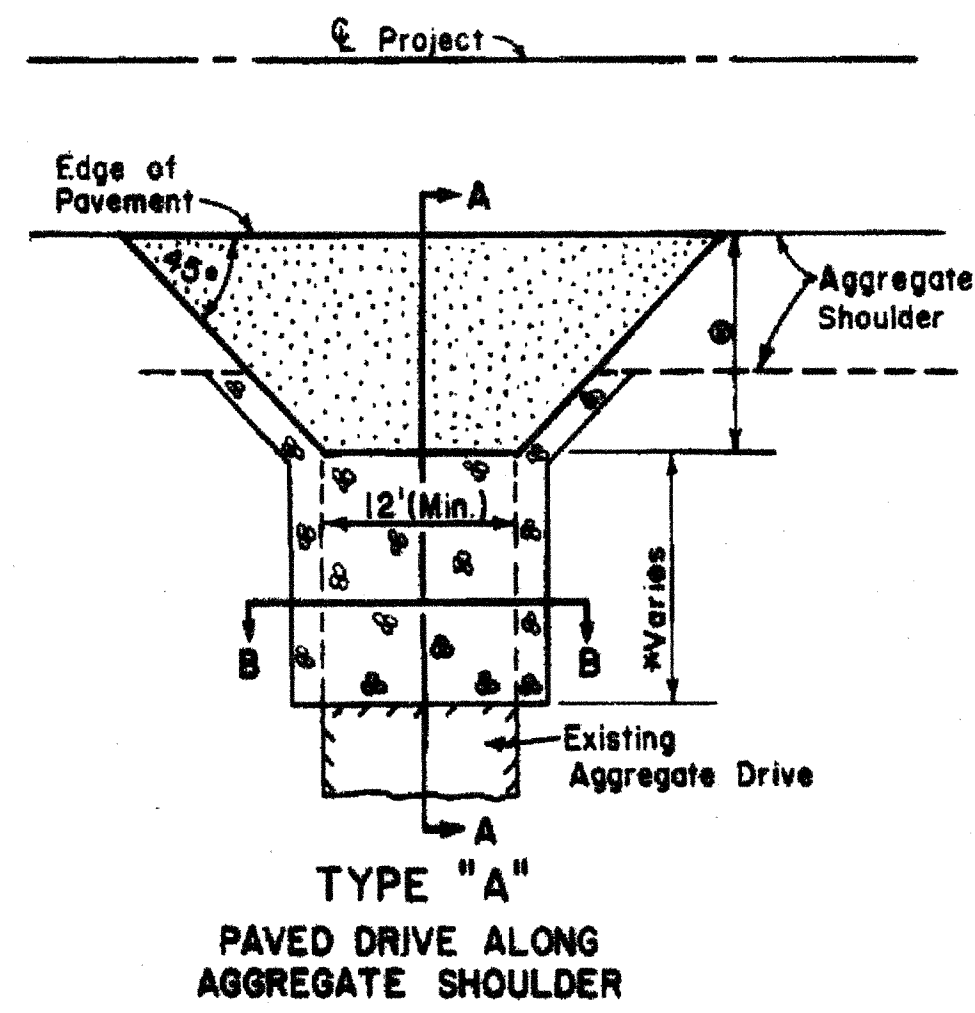
FOR DETAILS OF GRATE AND SEAT, SEE STD. PLAN MC-01
(TYPE B or C).

SEE PLANS FOR TYPE OF GRATE TO BE USED FOR
EACH CATCH BASIN.

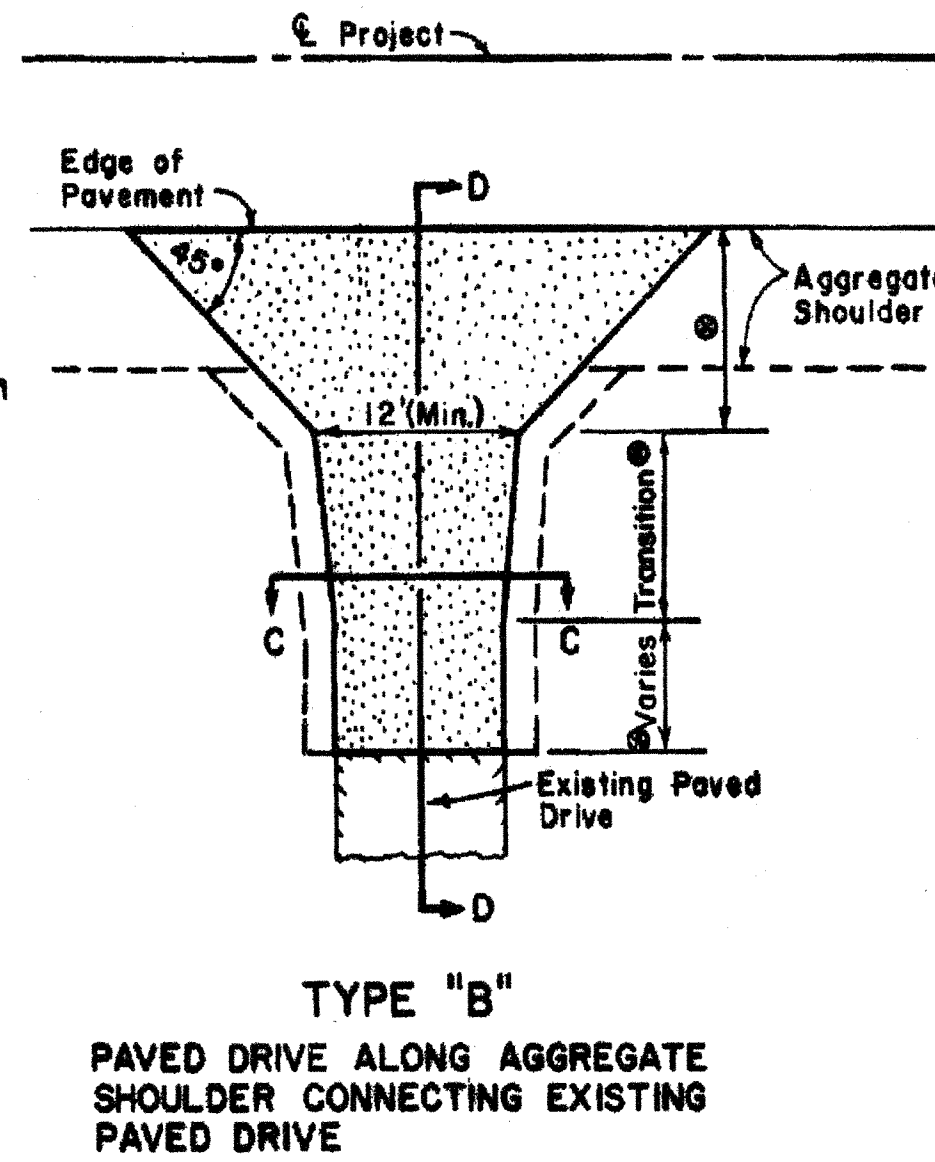


CONCRETE OPEN TOP CATCH BASIN
Max. Pipe: 36" x 24"
Max. Depth: 12'
To Be Used in Conjunction With Std. Plan MC-01

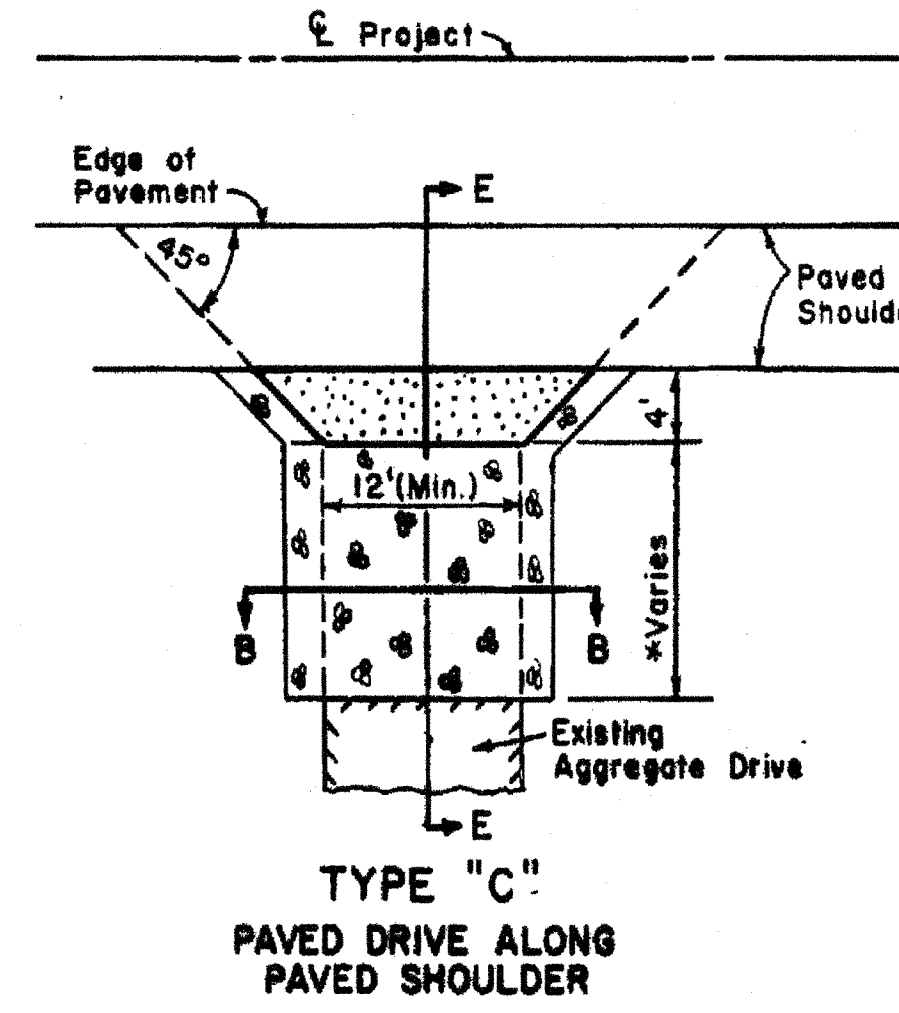




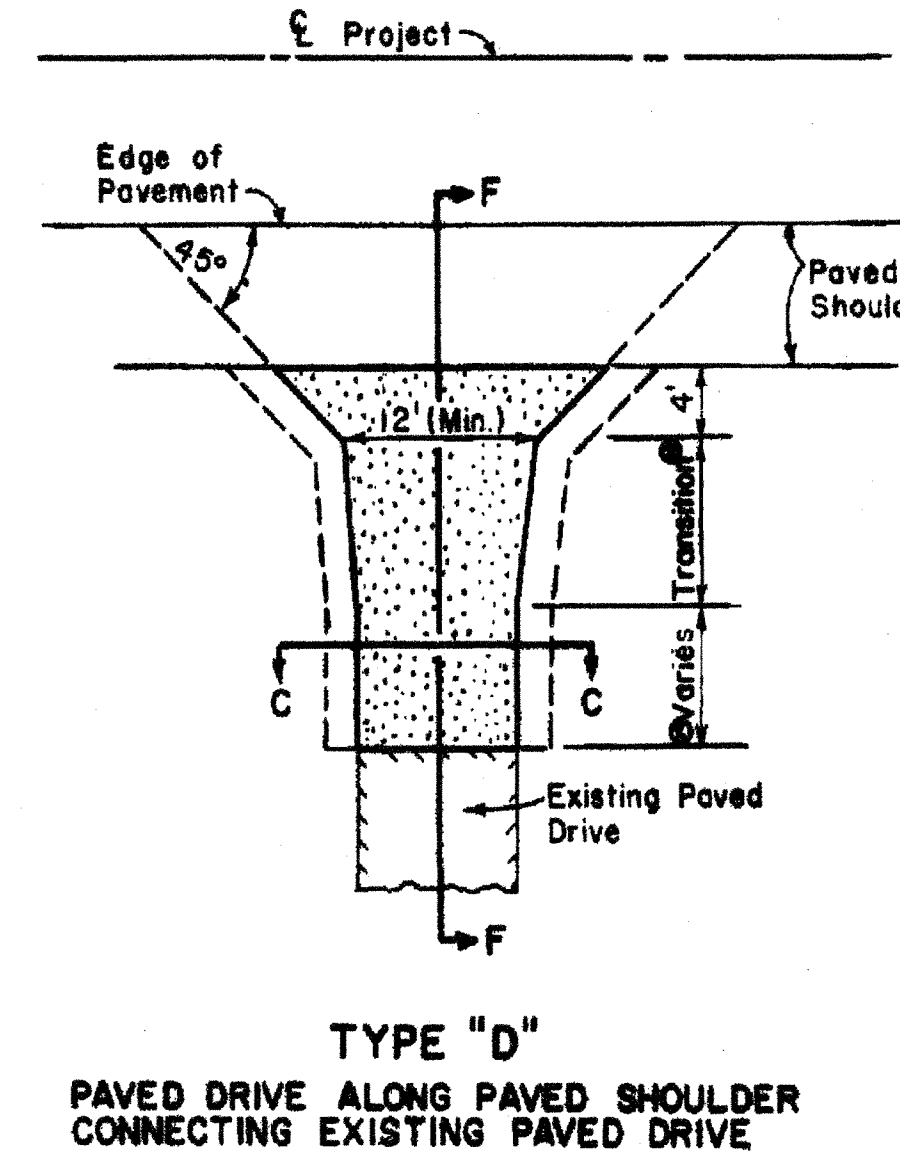
TYPE "A"
PAVED DRIVE ALONG
AGGREGATE SHOULDER



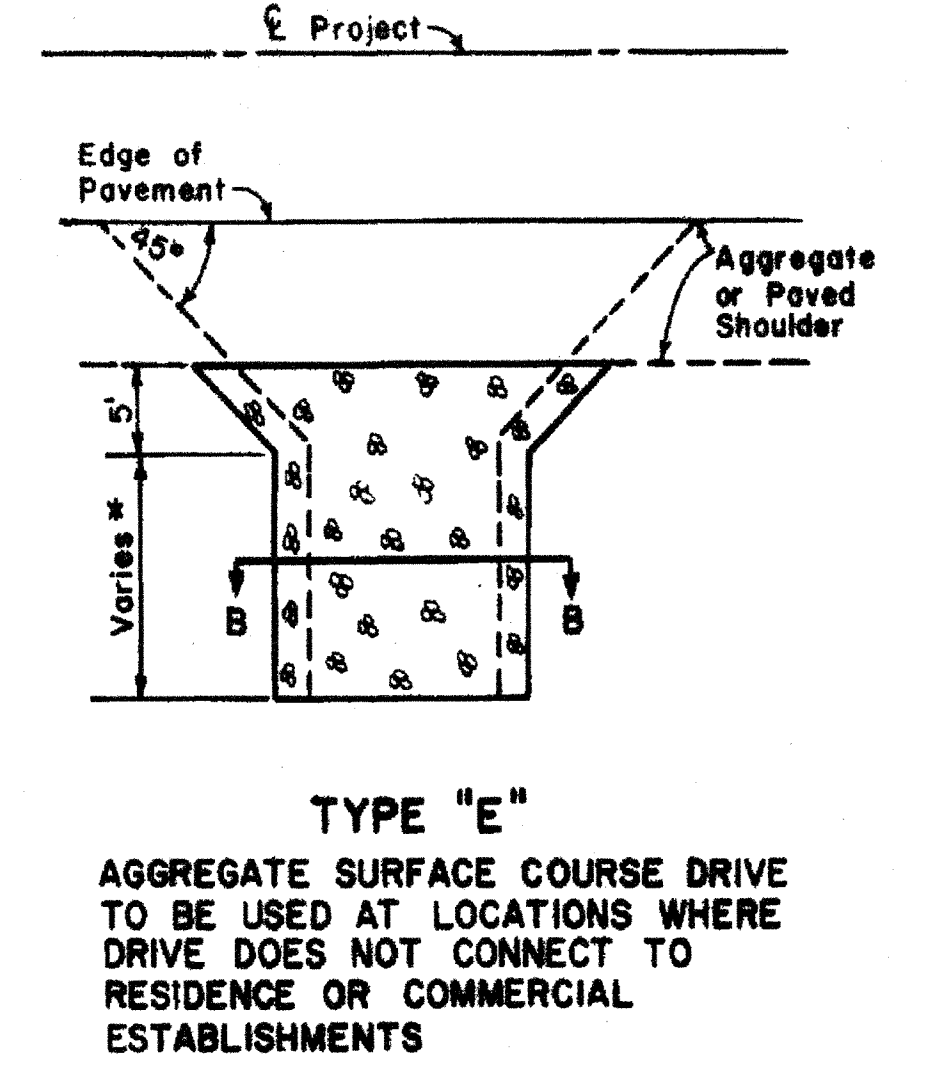
TYPE "B"
PAVED DRIVE ALONG AGGREGATE
SHOULDER CONNECTING EXISTING
PAVED DRIVE



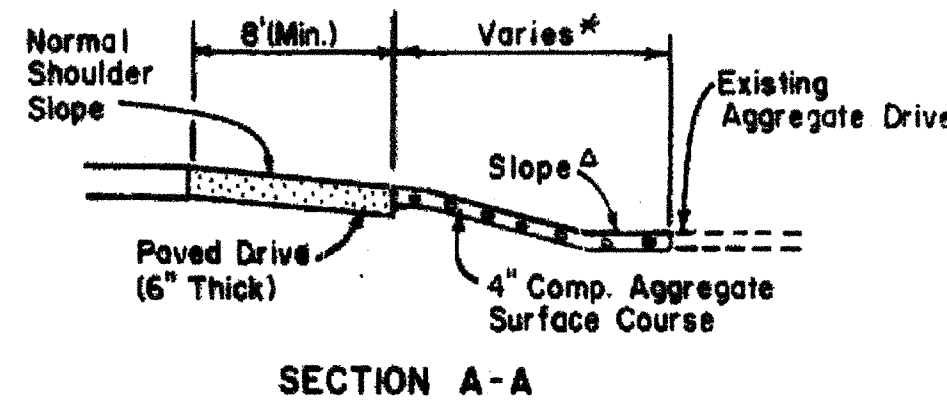
TYPE "C"
PAVED DRIVE ALONG
PAVED SHOULDER



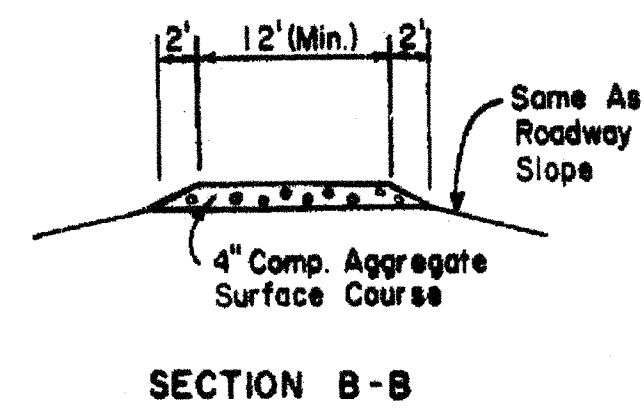
TYPE "D"
PAVED DRIVE ALONG PAVED SHOULDER
CONNECTING EXISTING PAVED DRIVE



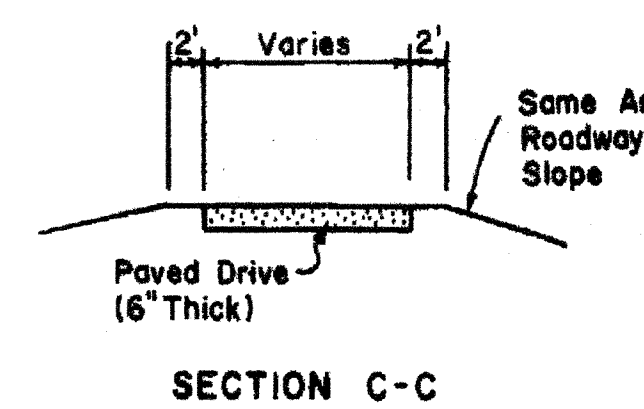
TYPE "E"
AGGREGATE SURFACE COURSE DRIVE
TO BE USED AT LOCATIONS WHERE
DRIVE DOES NOT CONNECT TO
RESIDENCE OR COMMERCIAL
ESTABLISHMENTS



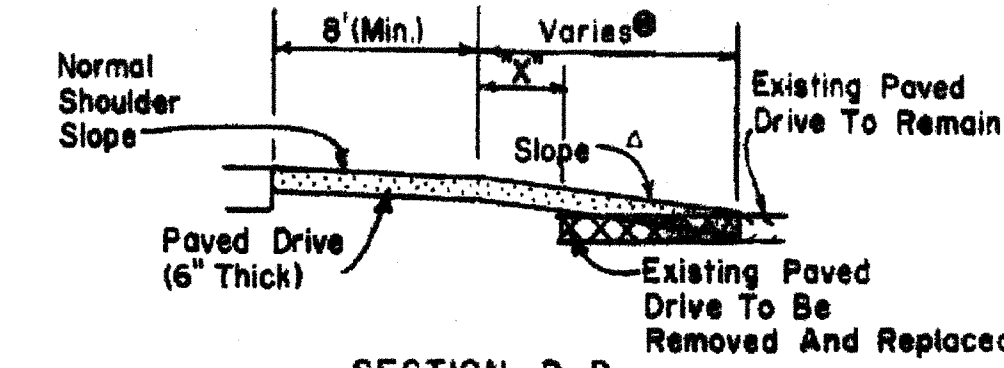
SECTION A-A



SECTION B-B

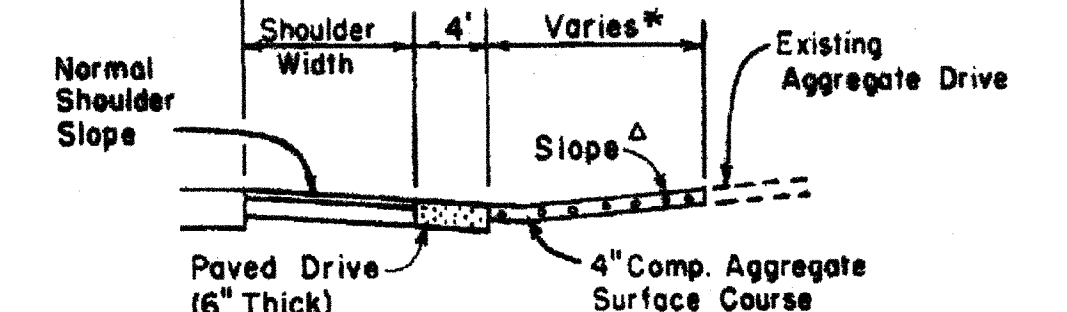


SECTION C-C



SECTION D-D

Note: If "X" is Greater Than 8', Aggregate Surface Course To Be Used Within Limits Of "X" Dimension

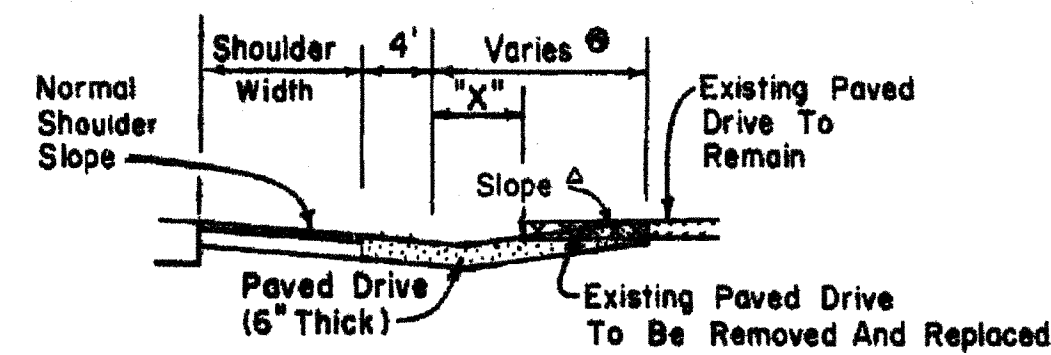


SECTION E-E

*Length To Be Set By The Project Engineer

Notes:

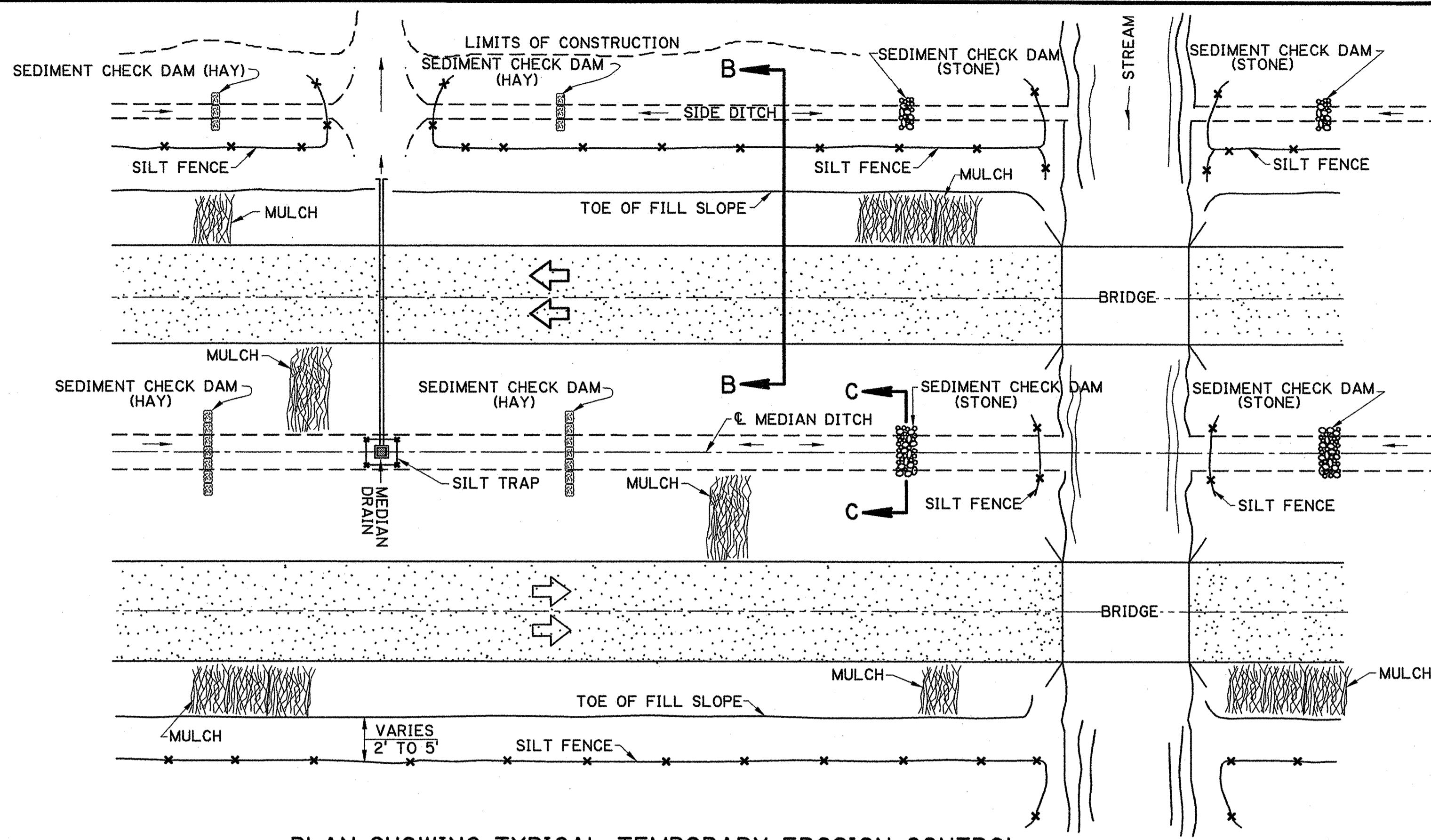
1. Portland Cement Concrete Drives [To Be Paid For Under Item No. 706(2)] Will Be Constructed Only To Replace Or Connect To Existing Concrete Drives. All Other Drives Are To Be Asphaltic Concrete, Except Aggregate Surface Course Is To Be Used On Infrequently Used Drives Which Do Not Connect To Residences Or Commercial Establishments.
2. Applies Where Existing Paved Drive Is To Be Removed For Roadway Construction And/Or To Achieve Vertical Geometry Requirements.
3. Asphaltic Concrete For Paved Drives Shall Be Asphaltic Concrete Wearing Course - (Type 1, 2 Or 4) Or At The Option Of The Contractor, Shoulder Mix May Be Used. Also, When Paved Drives Are Placed In Two Lifts, Binder Course May Be Used In The First Lift.
4. Compaction Of Subgrade And Grading Work For Construction Of The Paved Drives Shall Be Satisfactory To The Engineer And Shall Be At No Direct Payment.
5. Maximum Driveway Grade Shall Be 20% (25% For Special Cases). Maximum Breaks In Grade Shall Be 10%, At Not Less Than 10' Intervals.



SECTION F-F

Note: If "X" is Greater Than 8', Aggregate Surface Course To Be Used Within Limits Of "X" Dimension.

STANDARD PLAN NO.	DW-03	SHEET	1
RURAL DRIVEWAY DETAILS			
DATED <u>July 2, 81</u>			
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT OFFICE OF HIGHWAYS			
DESIGNED <u>W. JUEL</u>	DETAILED <u>C. LOUQUE</u>	TRACED <u>C. LOUQUE</u>	
CHECKED	CHECKED	CHECKED	
DATE <u>9-21-82</u>	DESCRIPTION <u>General Revisions</u>	BY <u>H.J.B.</u>	
APPROVED <u>[Signature]</u>	CHIEF ENGINEER	DATE <u>Sept. 2, 1982</u>	

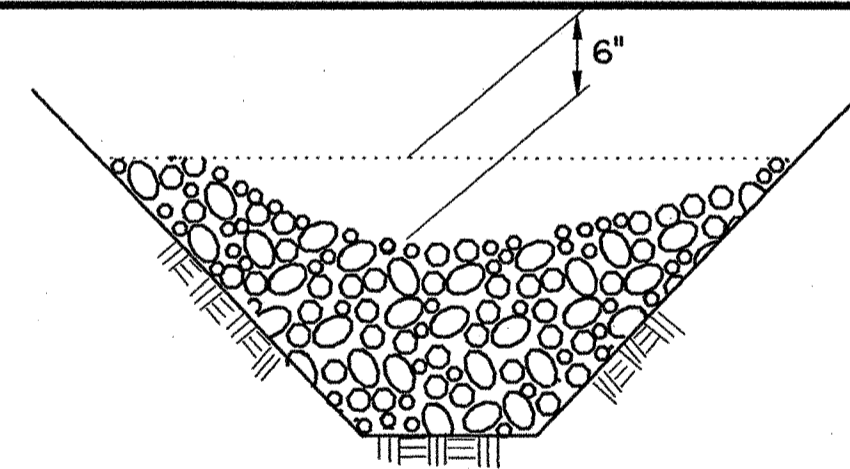


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

MULCHES

MULCHES ARE THE APPLICATION OF MATS OF MATERIAL PLACED ON THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND TO REDUCE THE VELOCITY OF OVERLAND FLOW. MULCHES CAN BE ORGANIC OR SYNTHETIC. MULCHES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW GUIDELINES FOR THE USE OF MULCHES ARE:

1. USE ON CUT AND EMBANKMENT SLOPES WHICH HAVE NOT BEEN COMPLETED TO PLAN GRADE OR WHERE THE WEATHER OR SOIL CONDITIONS WILL NOT PERMIT COMPLETING THEM WITHIN A REASONABLE TIME
2. USE ON CLEARED, GRUBBED, AND SCALPED AREAS WHERE SOIL EROSION IS LIKELY TO OCCUR
3. USE WITH TEMPORARY SEEDING



SECTION C-C

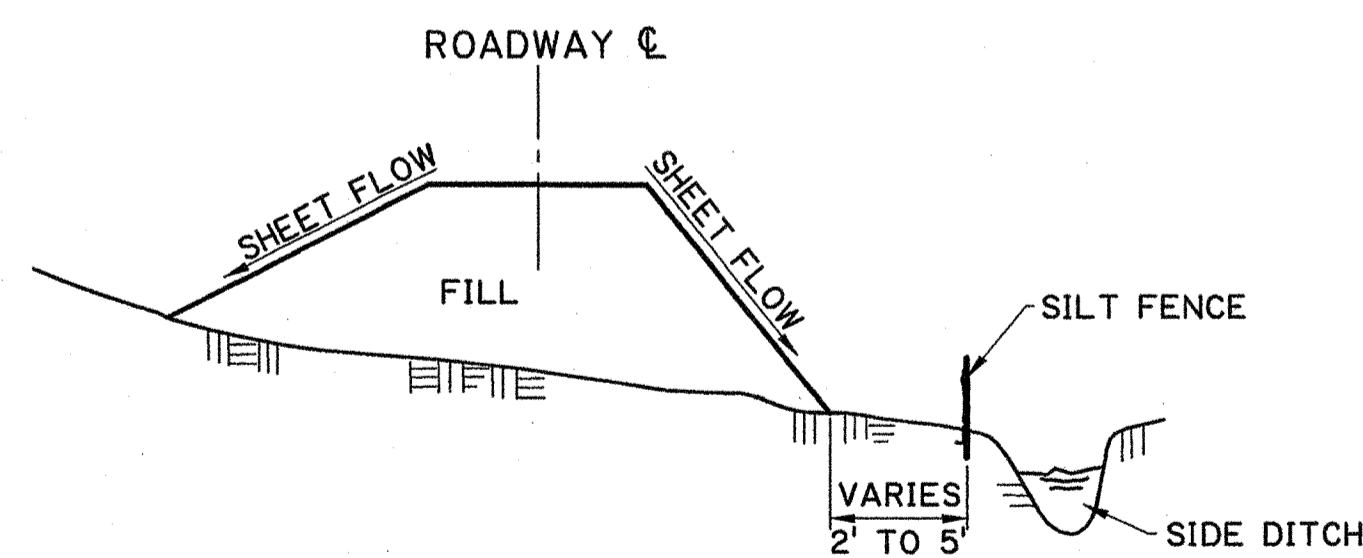
TEMPORARY SEDIMENT CHECK DAM (STONE)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (STONE)

NOTES:

A STONE CHECK DAM IS A SMALL TEMPORARY DAM CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. THE PURPOSE OF THIS MEASURE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THE STONE CHECK DAM WILL TRAP SMALL AMOUNTS OF SEDIMENTS GENERATED IN THE DITCH ITSELF, HOWEVER IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING DEVICE. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF STONE CHECK DAMS ARE:

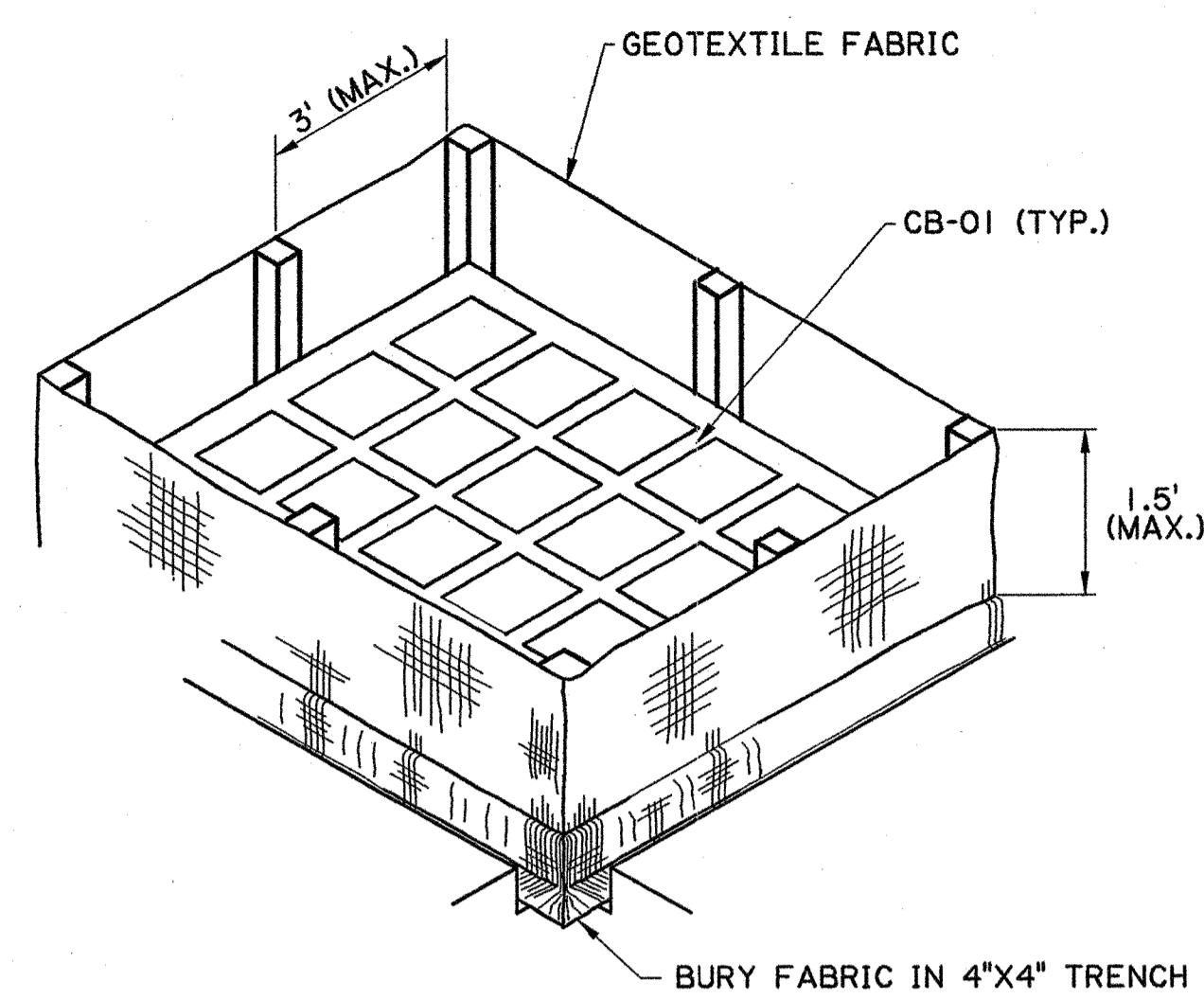
1. USE IN SMALL OPEN CHANNELS WHICH DRAIN 10 ACRES OR LESS
2. DO NOT USE IN A LIVE STREAM
3. USE IN A TEMPORARY DITCH OR SWALE WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, CANNOT RECEIVE A NON-ERODIBLE LINING
4. USE IN PERMANENT DITCHES OR SWALES WHICH WILL NOT RECEIVE A PERMANENT LINING FOR AN EXTENDED PERIOD OF TIME
5. USE IN TEMPORARY OR PERMANENT DITCHES OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS
6. FOR STONE SPECIFICATIONS, SEE PROJECT SPECIFICATIONS FOR RIPRAP, (CLASS 2 LB)



SECTION B-B

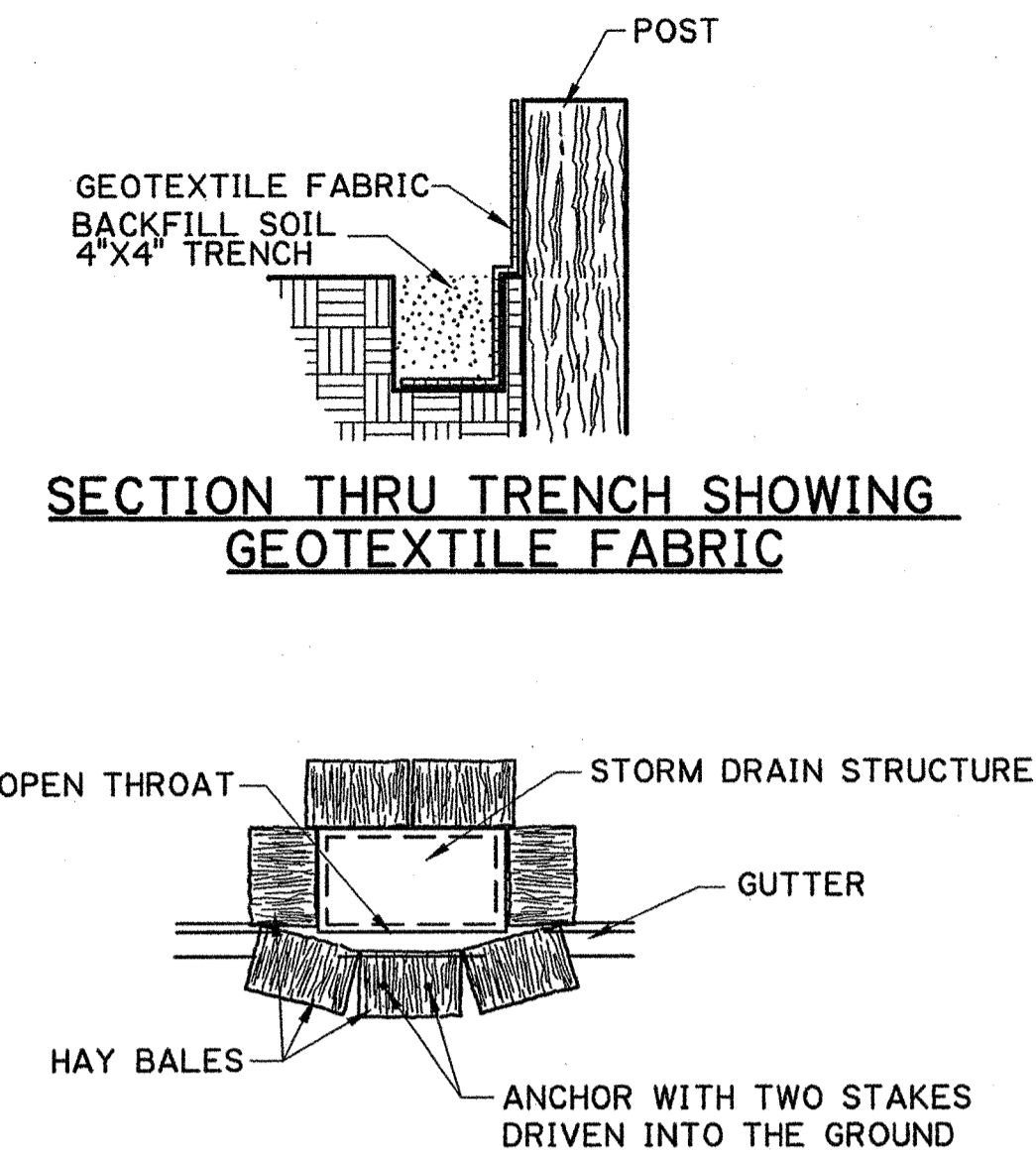
TEMPORARY SILT FENCE APPLICATION

(FOR CONSTRUCTION DETAILS AND SPECIFICATIONS SEE SHEET 2 OF 2.)



ISOMETRIC VIEW SHOWING GEOTEXTILE FABRIC

(BACKFILL SOIL NOT SHOWN)



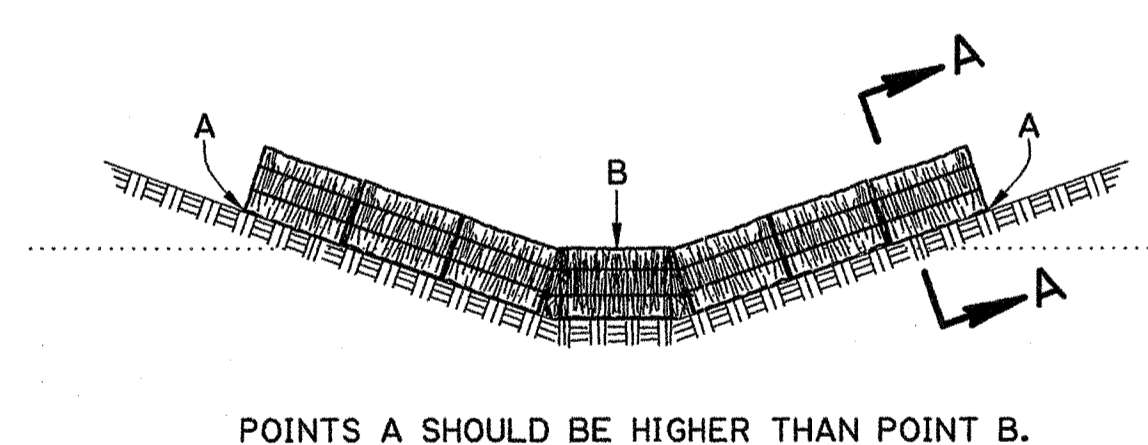
PLAN SHOWING HAY BALES

PAY ITEM: TEMPORARY HAY OR STRAW BALES

TEMPORARY INLET SILT TRAP

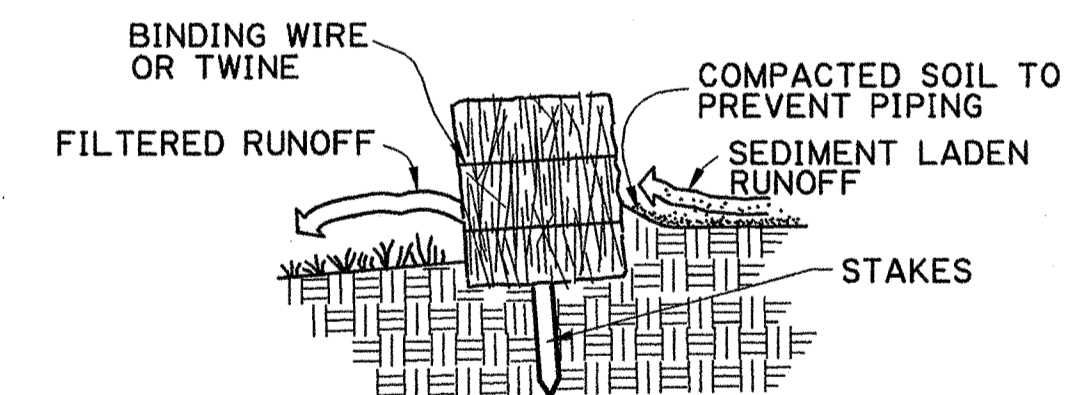
THE TEMPORARY DROP INLET SILT TRAP IS TO BE USED FOR SMALL DRAINAGE AREAS (LESS THAN 1 ACRE) WHERE THE STORM DRAIN IS FUNCTIONAL BEFORE THE AREA IS STABILIZED. THE TRAP CAN BE EITHER GEOTEXTILE FABRIC OR HAY BALES.

1. THE GEOTEXTILE FABRIC SHALL CONFORM TO PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS G).
2. WOODEN STAKES SUPPORTING THE FABRIC SHALL BE 2" X 2" OR 2" X 4" WITH A MINIMUM LENGTH OF 3 FEET. THE STAKES SHALL BE SPACED AROUND THE INLET AT A MAXIMUM SPACING OF 3 FEET.
3. THE HEIGHT OF THE FABRIC ABOVE THE INLET SHALL BE LIMITED TO 1.5' AND THE BOTTOM OF THE FABRIC SHALL BE BURIED IN A TRENCH APPROXIMATELY 4" WIDE BY 4" DEEP. THE FABRIC SHALL BE STAPLED TO THE POST WITH 1/2" STAPLES.
4. THE TRAP SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM. THE SEDIMENT SHOULD BE REMOVED AND EACH STAKE SHOULD BE FIRMLY IN THE GROUND.
5. HAY BALES SHALL BE PLACED SO THAT THE BINDING WIRE OR TWINE IS NOT IN CONTACT WITH THE GROUND.



POINTS A SHOULD BE HIGHER THAN POINT B.

ELEVATION



SECTION A-A

TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (HAY)

NOTES:

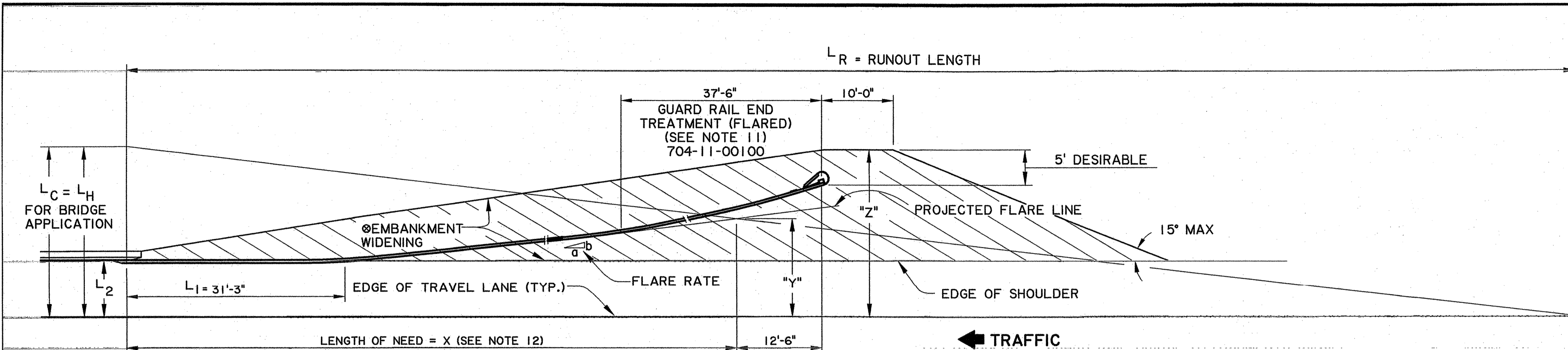
A HAY BALE BARRIER IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF STRAW OR HAY. THE HAY BALE BARRIER IS ALSO USED AS A CHECK DAM TO REDUCE THE VELOCITY IN SMALL DITCHES OR SWALES. THE HAY BALES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A HAY BALE BARRIER ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE IN MINOR SWALES OR DITCHES WHERE THE MAXIMUM DRAINAGE AREA IS 2 ACRES
3. ONLY USE WHERE THE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS
4. DO NOT USE IN LIVE STREAMS OR IN SWALES OR DITCHES WHERE THERE IS A POSSIBILITY OF A WASHOUT

SHEET NUMBER	305
PARISH	JEFFERSON
FEDERAL PROJECT	064-01-0040
STATE PROJECT	1-14-94
DATE	1-14-94
DESIGNED BY	JCM
CHECKED BY	KAJ
DATE	1-14-94
REVISION DESCRIPTION	1 OF 2
DATE	10-1-08
APPROVED BY	W. H. Temple
CHIEF ENGINEER	

TEMPORARY EROSION CONTROL DETAILS EC-01

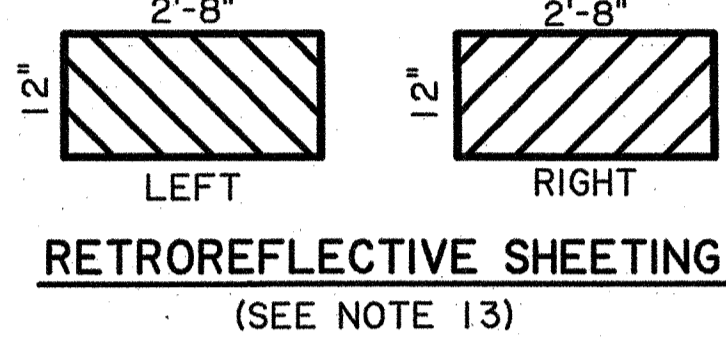
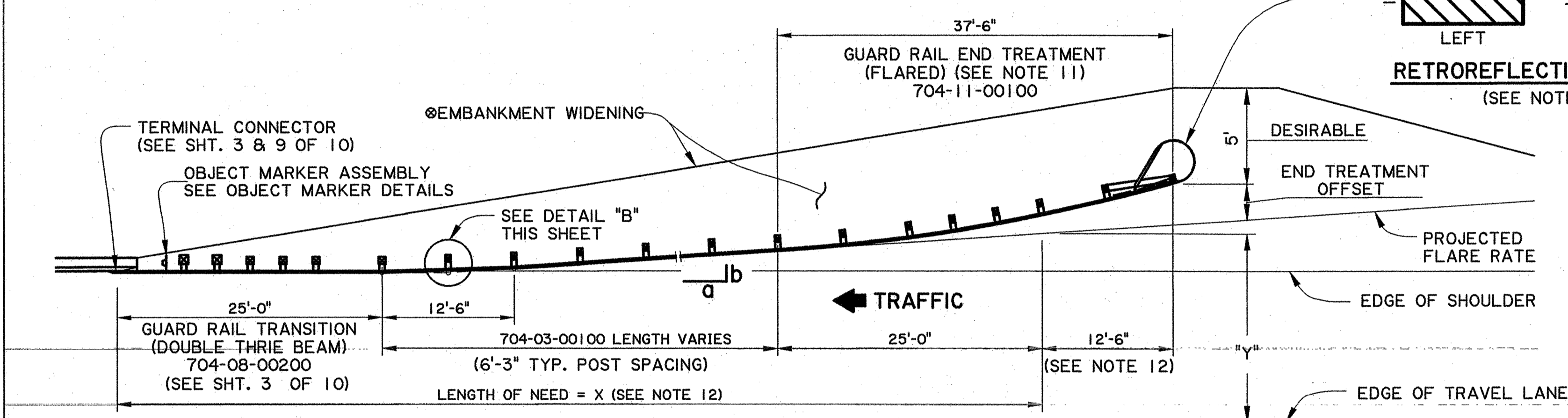
HYDRAULICS SECTION



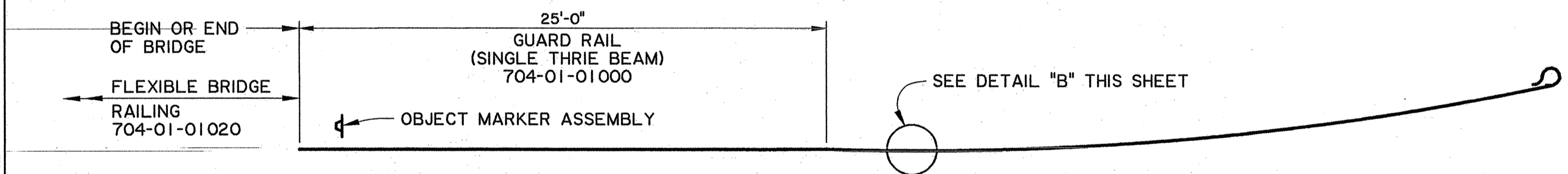
GUARD RAIL PAY ITEMS

704-01-01000	GUARD RAIL (SINGLE THRIE BEAM) (3'-1/2" POST SPA.)
704-01-01020	GUARD RAIL (SINGLE THRIE BEAM) (6'-3" POST SPA.)
704-01-02000	GUARD RAIL (DOUBLE THRIE BEAM) (3'-1/2" POST SPA.)
704-01-02020	GUARD RAIL (DOUBLE THRIE BEAM) (6'-3" POST SPA.)
704-03-00100	BLOCKED OUT GUARD RAIL
704-05-00100	GUARD RAIL ANCHOR SECTIONS (BCT)
704-06-00100	GUARD RAIL ANCHOR SECTIONS (TRAILING END)
704-06-00200	GUARD RAIL ANCHOR SECTIONS (TRAILING END) (SINGLE THRIE BEAM)
704-07-00200	GUARD RAIL BRIDGE ATTACHMENTS (SINGLE THRIE BEAM)
704-08-00200	GUARD RAIL TRANSITIONS (DOUBLE THRIE BEAM)
704-11-00100	GUARD RAIL END TREATMENT (FLARED)
704-11-00200	GUARD RAIL END TREATMENT (TANGENT)
704-11-00300	GUARD RAIL END TREATMENT (BI-DIRECTIONAL)
NS-800-00120	PIER PROTECTION SYSTEM
NS-700-00240	SPECIAL GUARD RAIL ANCHOR SECTION

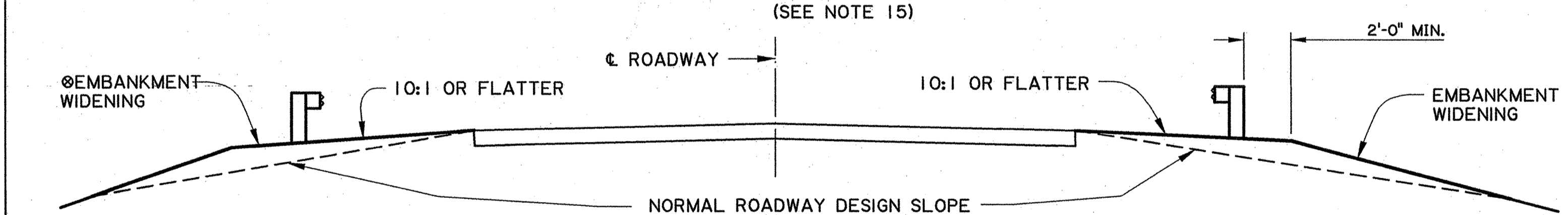
APPROACH GUARD RAIL VARIABLES-PLAN



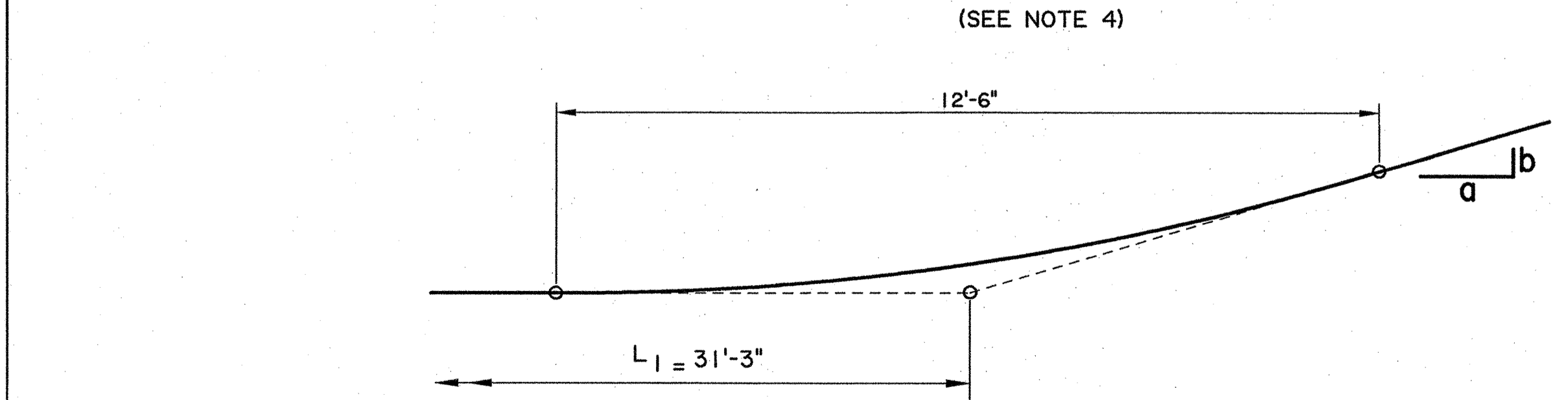
TYPICAL BRIDGE GUARD RAIL TREATMENT-PLAN



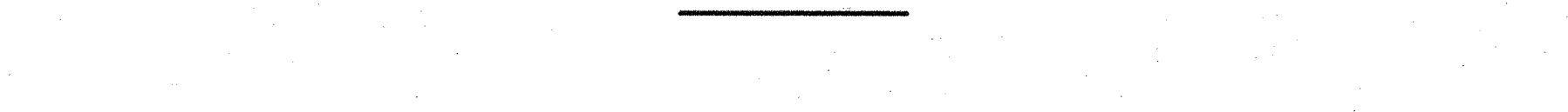
BEAM TRANSITION FOR FLEXIBLE BRIDGE RAILING-PLAN



TYPICAL EMBANKMENT WIDENING SECTION

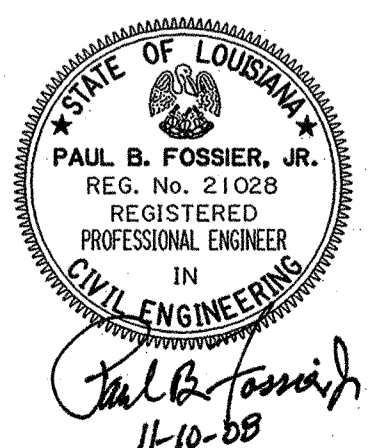


DETAIL "B"



GENERAL NOTES

1. LENGTH OF NEED (X) AND OFFSETS "Y" & "Z" SHALL BE COMPUTED IN ACCORDANCE WITH THE EQUATION ON SHEETS 2 OF 10. (X) DIMENSIONS TO BE USED SHALL BE A MULTIPLE OF 6'-3". TO FIND THE REQUIRED LENGTH OF NEED (X) WHEN OFFSET "Y" HAS TO BE SET, USE THE EQUATION $X = (LH - "Y") LR / LH$.
2. MINIMUM LENGTH OF GUARD RAIL IN ANY CASE SHALL BE 75'-0" (LENGTH OF NEED $X = 62'-6"$), FOR END TREATMENT SYSTEMS LESS THAN 50'-0", THE REMAINING LENGTH TO MEET THE 75'-0" MIN. WILL BE BASED ON USING ADDITIONAL W-BEAM BLOCKED OUT GUARD RAIL 704-03-00100 PLACED BETWEEN THE TRANSITION AND END TREATMENT. THE COST OF ADDITIONAL W-BEAM GUARD RAIL SHALL BE PAID FOR UNDER THE END TREATMENT PAY ITEM.
3. SEE TYPICAL INSTALLATION ELSEWHERE IN THESE PLANS.
4. EMBANKMENT WIDENING TO PROVIDE SLOPES NOT STEEPER THAN 10:1 IS REQUIRED TO MAINTAIN PROPER RAIL TO VEHICLES POSITION. WIDENING MAY BE ACCOMPLISHED AS DETERMINED BY THE DESIGNER OR THE PROJECT ENGINEER.
5. SEE OPPOSING TRAFFIC GUARD RAIL REQUIREMENTS ON SHEET 2 OF 10 FOR METHOD OF CALCULATING LENGTH OF NEED (X) AND OFFSET (Y) OF RAIL LEFT SIDE WHEN TRAFFIC IS TWO WAY.
6. PAY ITEMS FOR ALL GUARD RAIL COMPONENTS ARE TO BE IN ACCORDANCE WITH LAYOUT DETAILS AND/OR QUANTITY TABLES FURNISHED WITH PROJECT PLANS. GUARD RAIL PAY ITEMS SHALL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLETE THE GUARD RAIL INSTALLATION AS SHOWN ON THE PLANS.
7. LONGITUDINAL DIMENSIONS FOR GUARD RAIL ARE MEASURED ALONG THE FACE OF RAILING
8. THE QUANTITY FOR THE EMBANKMENT WIDENING AT BRIDGE ENDS IS INCLUDED IN THE EMBANKMENT QUANTITY OF THE ROADWAY.
9. FOR BRIDGES WITH GUARD RAILS IN URBAN AREAS WITH DESIGN SPEED OF 45 mph OR LESS, SEE DOTD EDSM NO. II. 3.1.4 FOR DESIGN INFORMATION.
10. FOR GUARD RAIL INFORMATION FOR EXISTING HIGHWAYS, SEE DOTD EDSM No. II. 3.1.3 FOR DESIGN INFORMATION.
11. A TANGENT END TREATMENT (704-11-00200) MAY BE USED AS AN ALTERNATE TO THE FLARED END TREATMENT. A ZERO END TREATMENT OFFSET AND A ZERO FLARE RATE ($A/B = 0$) IS REQUIRED WHEN THE TANGENT END TREATMENT IS USED AND THE LENGTH OF NEED "X" SHALL BE CALCULATED BASED ON A "ZERO" FLARE RATE.
12. THE POINT WITHIN THE GUARD RAIL END TREATMENT WHERE LENGTH OF NEED TERMINATES MAY VARY WITH EACH TYPE OF GUARD RAIL END TREATMENT. THE 12'-6" LENGTH APPLIES TO MOST END TREATMENTS. HOWEVER, REGARDLESS OF THE TYPE OF END TREATMENT USED, THIS POINT SHALL BE LOCATED AT THE SAME STATION ON THE ROADWAY.
13. THE RETROREFLECTIVE ADHESIVE SHEETING (12" X 2'-8") (TYPE III HIGH INTENSITY OBJECT MARKER PATTERN) SHALL BE APPLIED TO NOSE AFTER CURVING. SEE SECTION 1015 OF THE LATEST LA. STD. SPECS. FOR ROADS AND BRIDGES FOR SPECIFICATIONS AND THE SHEETING MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION. FOR PATTERN DETAIL, SEE OBJECT MARKER DETAILS.
14. UNLESS OTHERWISE NOTED, ALL GUARD RAIL COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF THE AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE, "A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE", CURRENT EDITION.
15. 704-01-01000 IS USED IN LIEU OF 704-08-00200 FOR BRIDGES WITH FLEXIBLE BRIDGE RAILING (REINFORCED CONCRETE BRIDGE RAILING IS CONSIDERED TO BE RIGID.)
16. GUARD RAIL INSTALLATIONS MAY BE PAVED BY USING INCIDENTAL CONCRETE PAVING (4" THICK) (706-03-00100) OR 4" MIN. ASPHALTIC CONCRETE. THE INCIDENTAL CONCRETE OR ASPHALT WILL BE USED IF A LAYOUT DETAIL, PAY ITEM AND QUANTITY IS INDICATED IN THE PLANS. SEE SHEET 10 FOR REQUIRED POST DETAILS WHEN PAVING IS USED AROUND POSTS.



SHEET NUMBER 307

JEFFERSON

PARISH FEDERAL PROJECT STATE PROJECT

DESIGNED BY MAGEE

CHECKED BY FOSSIER

DATE OCT. 2008

REVISION DESCRIPTION

BY DATE

1.26.09

CHIEF ENGINEER: *Walter H. Temple*

6R-200

HIGHWAY GUARD RAILS BRIDGE APPLICATION

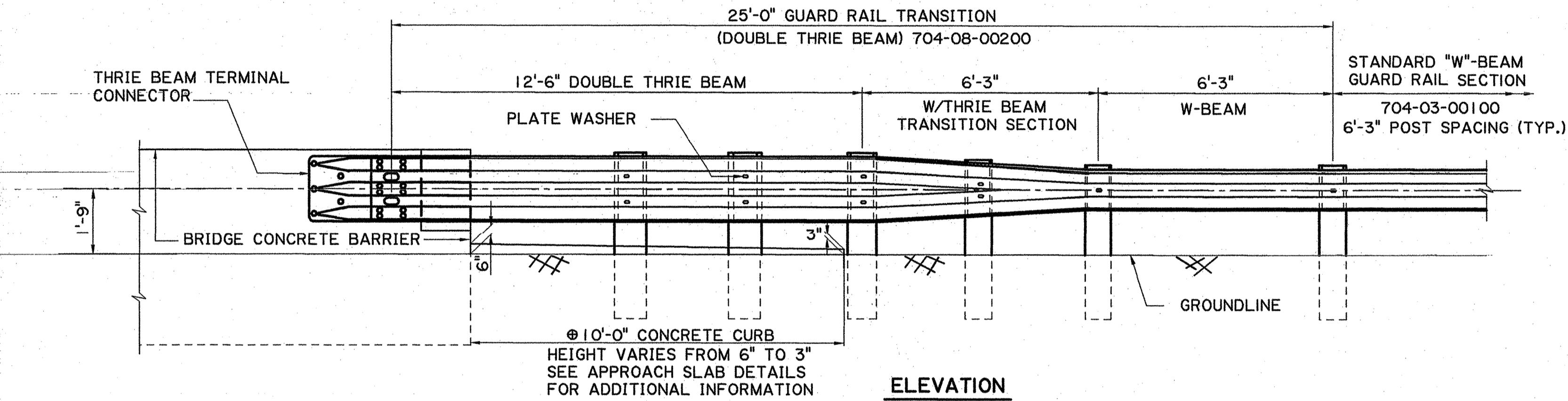
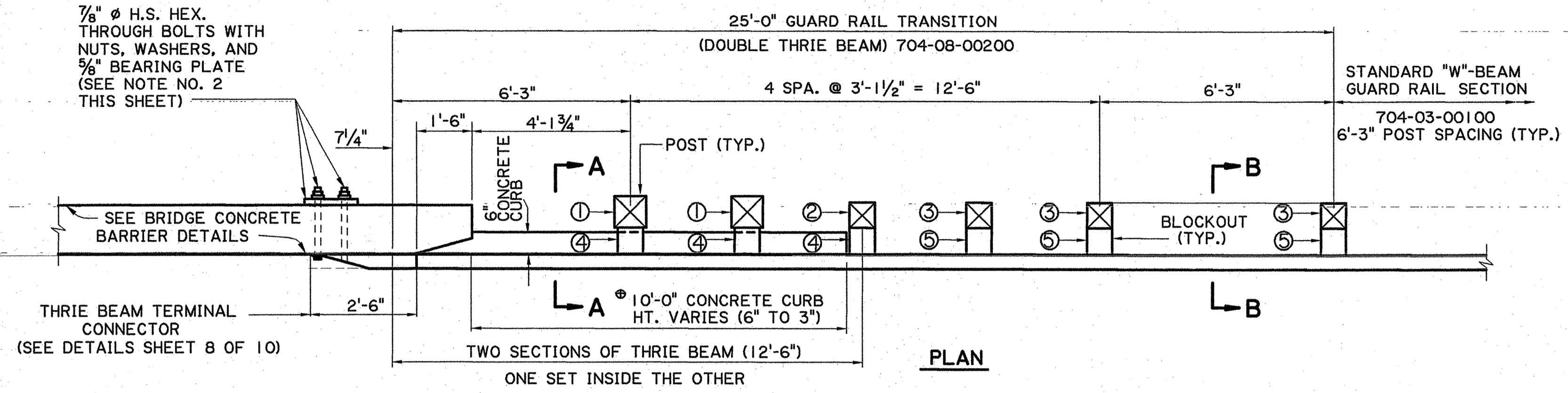
DOTD

BRIDGE AND STRUCTURAL DESIGN

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FINAL PLANS

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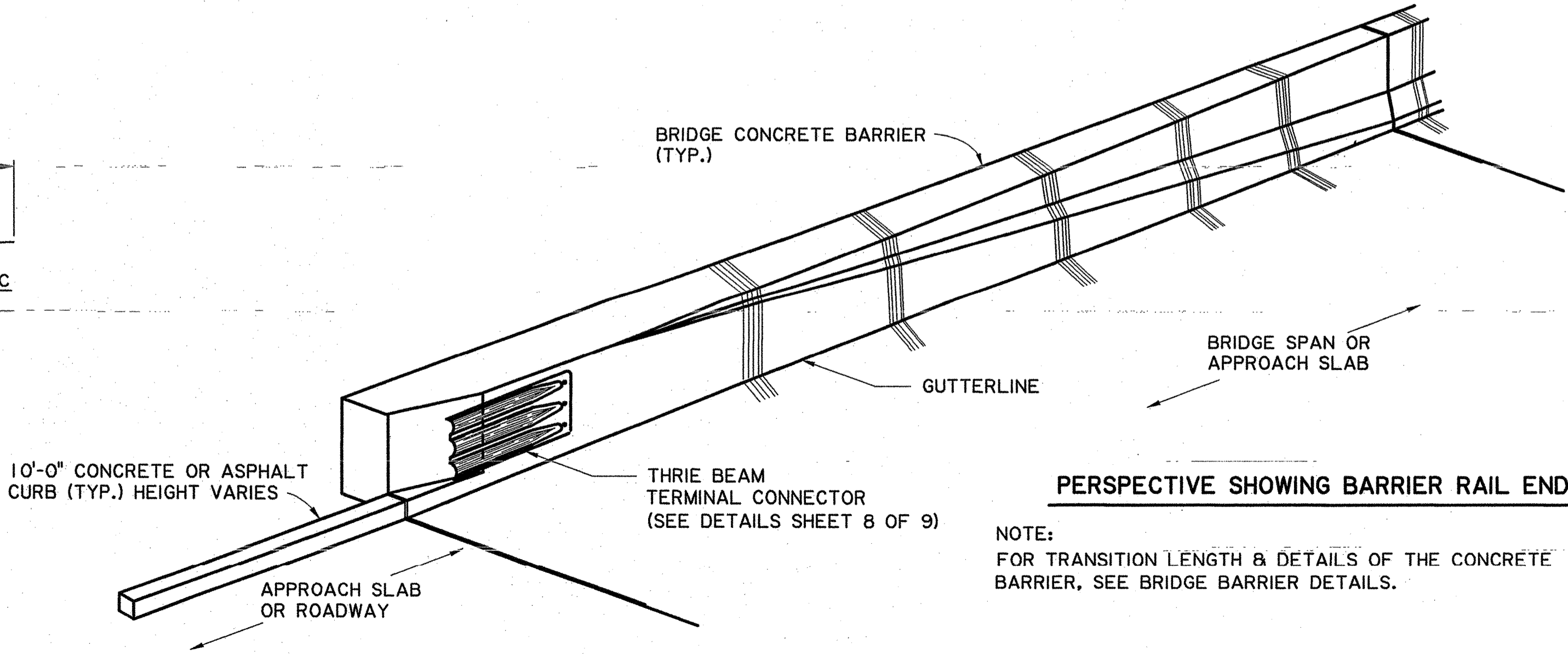
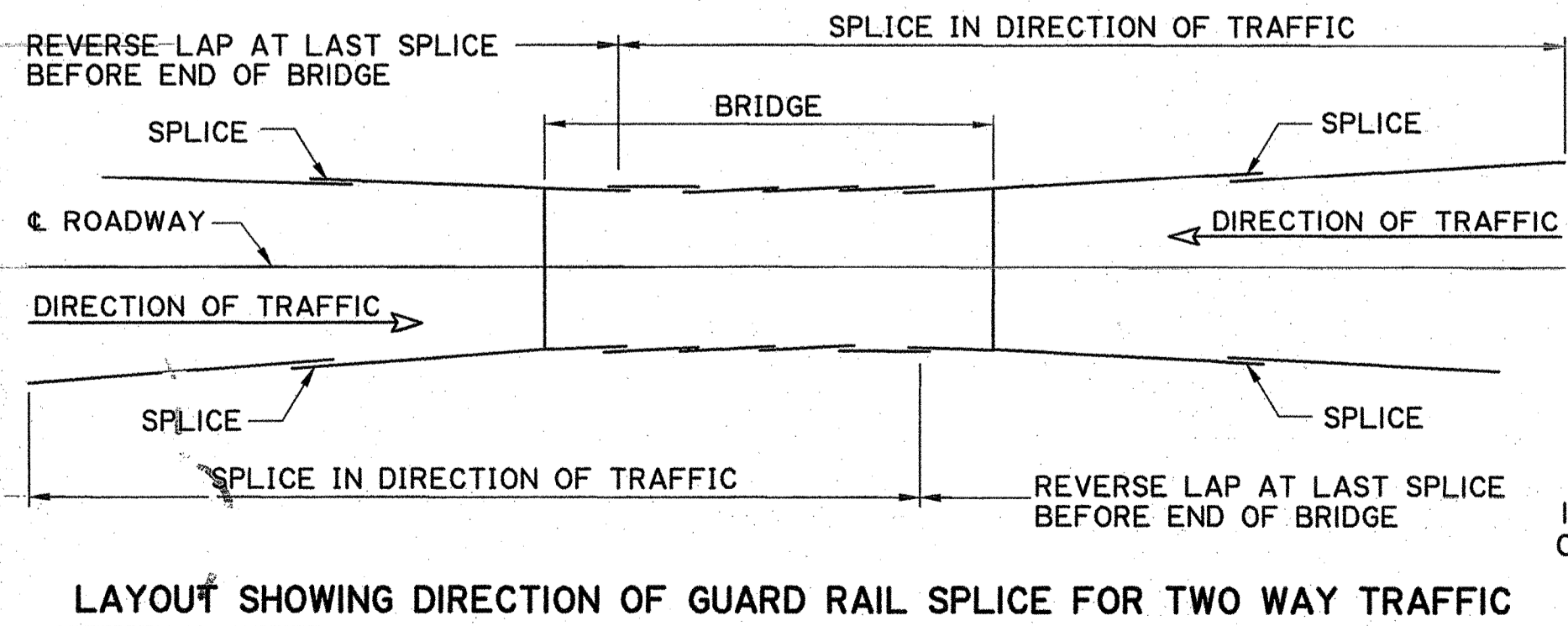
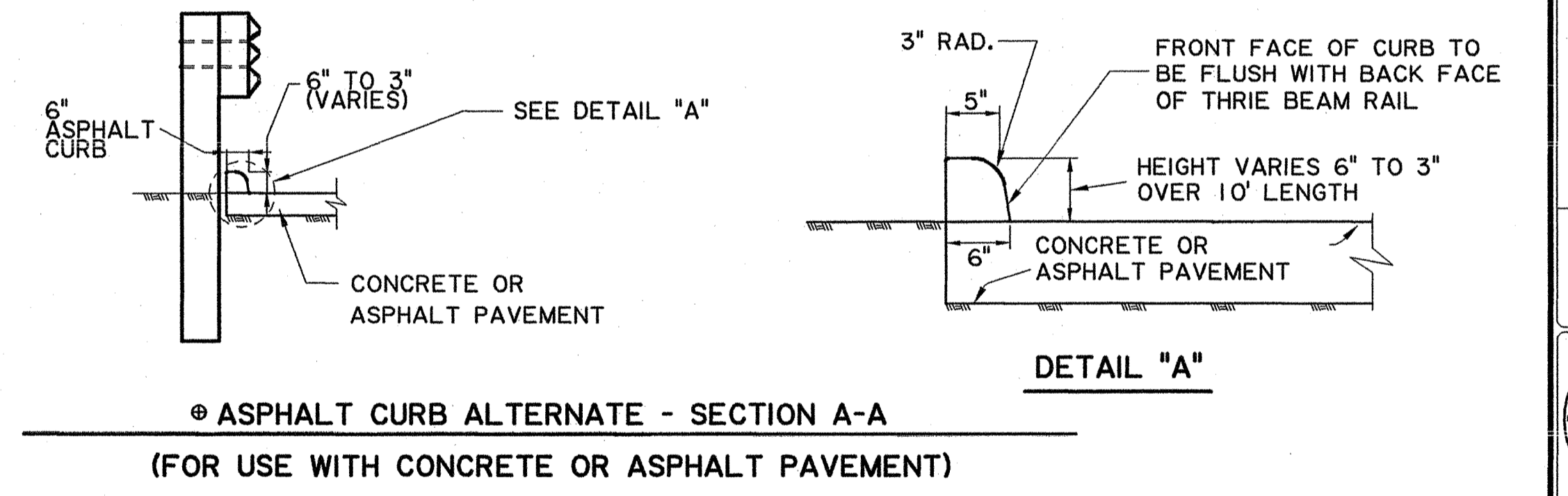
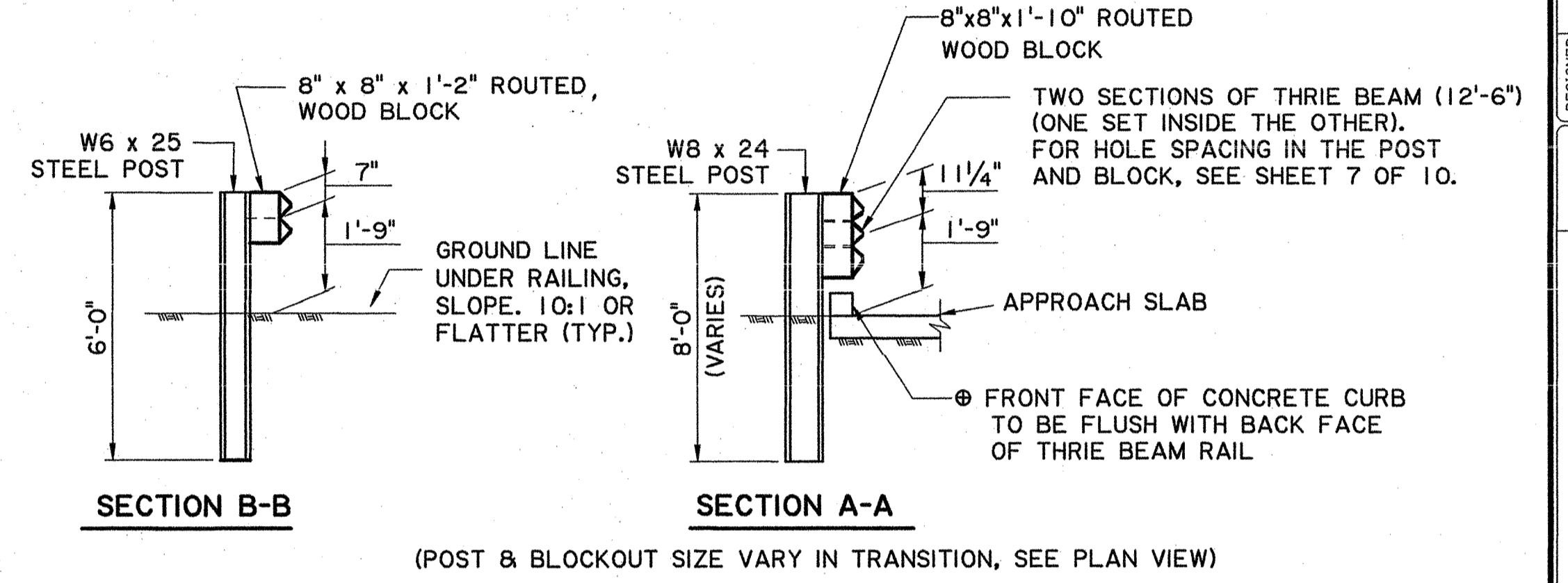
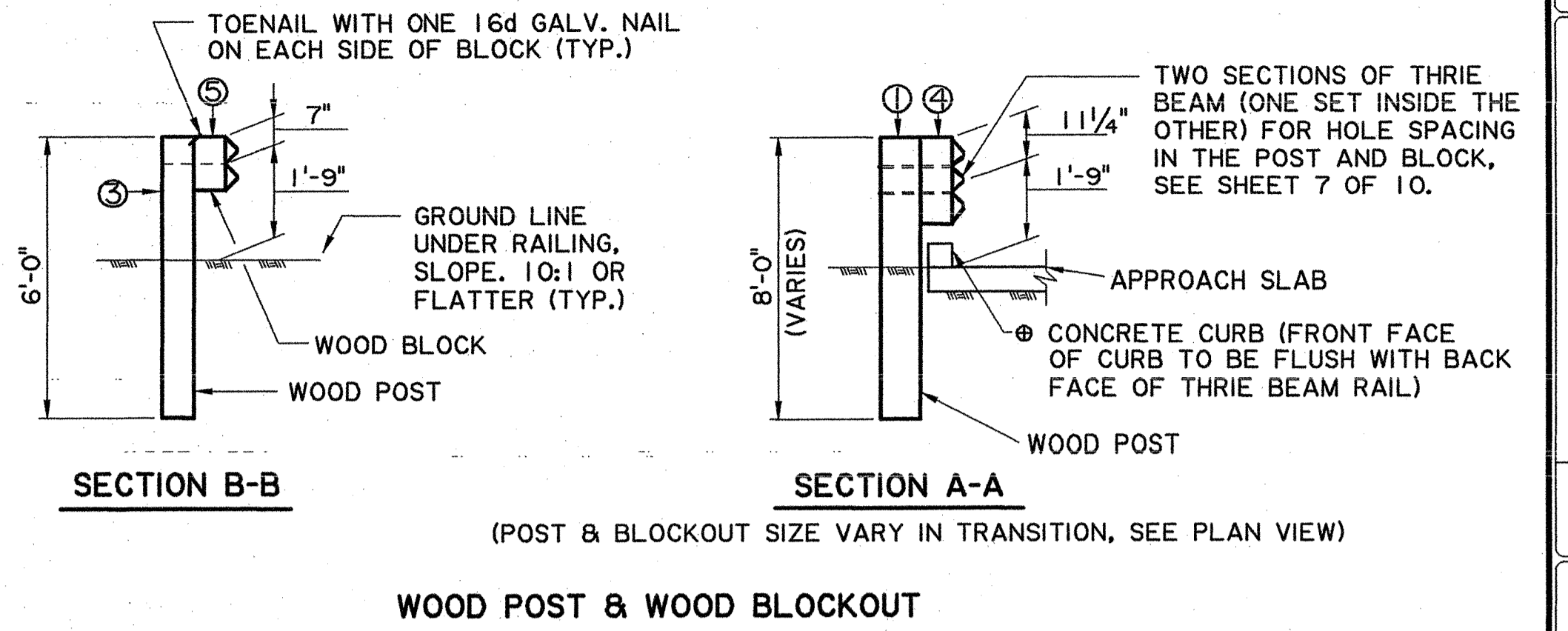
NOTES

1. THIS GUARD RAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO THE CONCRETE BARRIER SHAPE AS SHOWN. SEE BRIDGE BARRIER DETAILS BR-01 & BR-02 FOR INFORMATION
2. 7/8" H.S. BOLTS FOR CONCRETE BARRIER AND THRIE BEAM TERMINAL CONNECTOR SHALL BE ASTM A449. FOR 5/8" STEEL BEARING PLATE, SEE SHEET 9 OF 10. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A153.
- * 3. STEEL POST ALTERNATES: STEEL POSTS ARE ALLOWED AS AN ALTERNATE TO WOOD POSTS. USE W8 x 24 STEEL POST ALTERNATE FOR 10" x 10" WOOD POST. USE W6 x 25 STEEL POST ALTERNATE FOR 8" x 8" WOOD POST. USE SAME LENGTHS AS WOOD POSTS.
4. BLOCKOUTS: USE WOOD BLOCKOUTS ONLY, STEEL AND RECYCLED BLOCKOUTS ARE NOT PERMITTED FOR THE GUARDRAIL TRANSITION. ALL WOOD BLOCKOUTS ARE REQUIRED TO BE ROUTED WHEN USED WITH STEEL POSTS.
5. INTERMIXING OF STEEL AND WOOD POST IN THE TRANSITION SECTION IS NOT ALLOWED.
6. ASPHALT CURB ALTERNATE MAY BE USED WITH CONCRETE OR ASPHALT PAVEMENT. FOR GUARD RAIL TRANSITION CONSTRUCTED WITH NEW APPROACH SLAB, CONCRETE CURB TO BE PAID FOR UNDER APPROACH SLAB PAY ITEM. FOR GUARD RAIL TRANSITION CONSTRUCTED WHEN APPROACH SLAB OR PAVEMENT IS EXISTING AND A NEW CURB IS NEEDED, THE NEW ASPHALT CURB SHALL BE PAID UNDER AN ASPHALTIC CONCRETE PAY ITEM AS INDICATED IN THE PLANS.

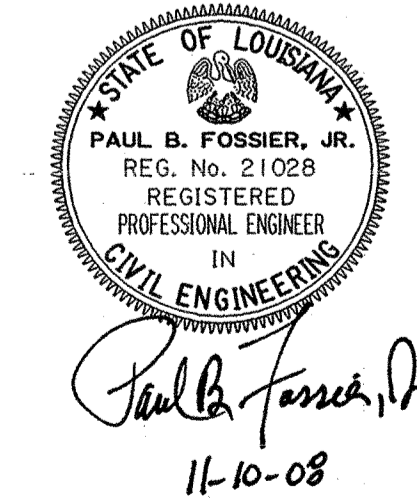
***WOOD POST & WOOD BLOCKOUT FOR GUARDRAIL TRANSITION**

NO.	SIZE (WIDTHxDEPTHxLENGTH)
1	10" x 10" x 8'-0"
2	8" x 8" x 8'-0"
3	8" x 8" x 6'-0"
4	8" x 8" x 1'-10"
5	8" x 8" x 1'-2"

* SEE NOTE FOR STEEL POST ALTERNATE



NOTE:
FOR TRANSITION LENGTH & DETAILS OF THE CONCRETE BARRIER, SEE BRIDGE BARRIER DETAILS.

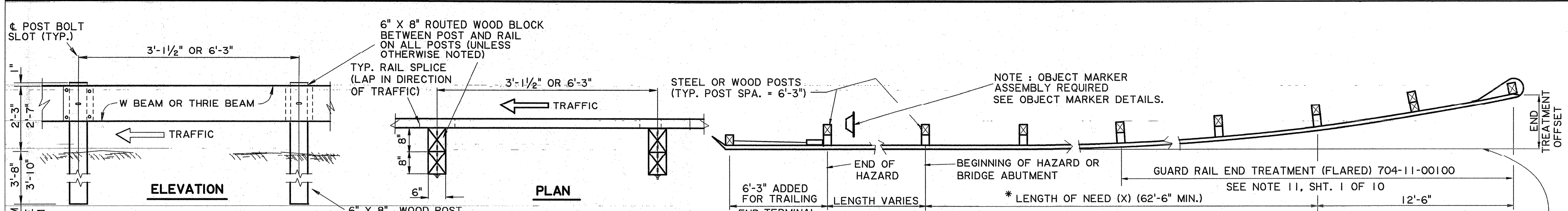


SHEET NUMBER	309	PARISH	JEFFERSON	PROJECT	064-01-0040
DESIGNED	G. GRASS	CHECKED	P. FOSSIER	DATE	OCT-2008
DATE	1-26-09	BY		SHEET	3 OF 10
HIGHWAY GUARD RAILS THRIE BEAM GUARD RAIL TRANSITION TO BRIDGE RAIL					
APPROVED BY: <i>Paul B. Fossier, Jr.</i> CHIEF ENGINEER					
11-10-08					
BRIDGE AND STRUCTURAL DESIGN					

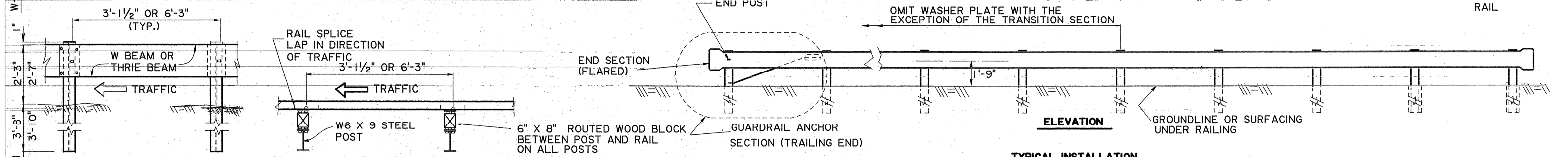
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FINAL PLANS

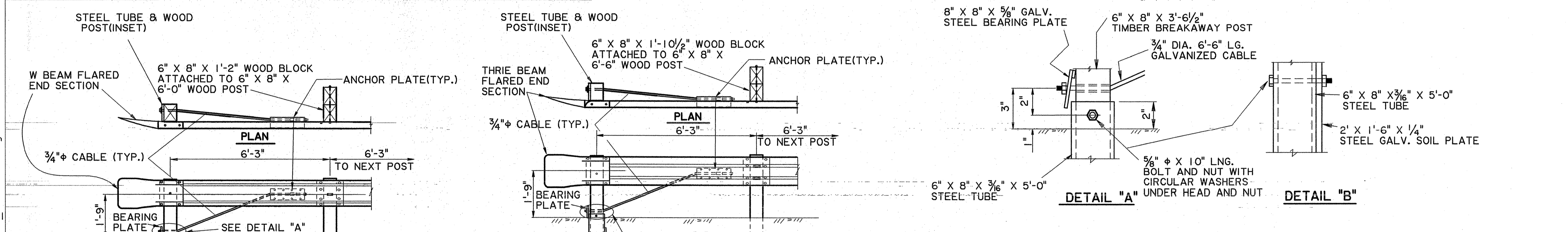
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DETAIL OF 6" X 8" WOOD POSTS AND WOOD BLOCKS-STD. GUARD RAIL



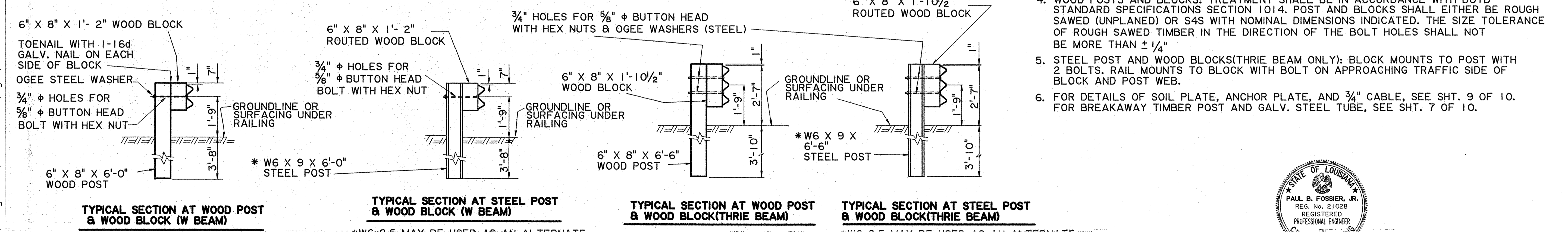
DETAIL OF W6 X 9 STEEL POSTS AND WOOD BLOCKS-STD. GUARD RAIL



TYPICAL W BEAM TRAILING END

TYPICAL THRIE BEAM TRAILING END

- NOTES:**
- INTERMIXING OF STEEL AND WOOD POSTS IN ANY ONE SECTION OF THE GUARD RAIL SHALL NOT BE PERMITTED.
 - GUARD RAIL SHALL NOT BE PLACED CLOSER TO THE TRAVELED WAY THAN THE OUTSIDE EDGE OF THE SHOULDER. THE OFFSET TO THE FACE OF THE NOSE OF THE END TREATMENT SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS, FROM THE PROJECTED FACE OF THE RAIL.
 - ALL MATERIAL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 - WOOD POSTS AND BLOCKS: TREATMENT SHALL BE IN ACCORDANCE WITH DOTD STANDARD SPECIFICATIONS SECTION 1014. POST AND BLOCKS SHALL EITHER BE ROUGH SAWED (UNPLANED) OR S4S WITH NOMINAL DIMENSIONS INDICATED. THE SIZE TOLERANCE OF ROUGH SAWED TIMBER IN THE DIRECTION OF THE BOLT HOLES SHALL NOT BE MORE THAN $\pm 1/4$ ".
 - STEEL POST AND WOOD BLOCKS (THRIE BEAM ONLY): BLOCK MOUNTS TO POST WITH 2 BOLTS. RAIL MOUNTS TO BLOCK WITH BOLT ON APPROACHING TRAFFIC SIDE OF BLOCK AND POST WEB.
 - FOR DETAILS OF SOIL PLATE, ANCHOR PLATE, AND 3/4" CABLE, SEE SHT. 9 OF 10. FOR BREAKAWAY TIMBER POST AND GALV. STEEL TUBE, SEE SHT. 7 OF 10.



TYPICAL SECTION AT WOOD POST & WOOD BLOCK (W BEAM)

TYPICAL SECTION AT WOOD POST & WOOD BLOCK (W BEAM)

TYPICAL SECTION AT WOOD POST & WOOD BLOCK (THRIE BEAM)

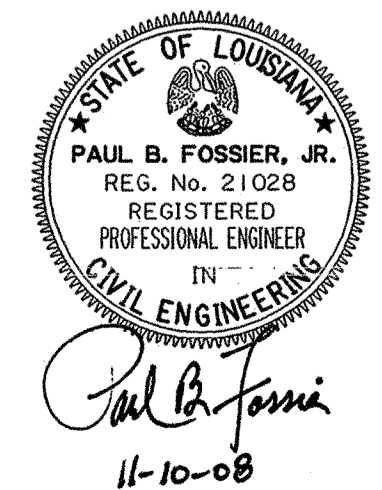
TYPICAL SECTION AT STEEL POST & WOOD BLOCK (THRIE BEAM)

*W6x8.5 MAY BE USED AS AN ALTERNATE

*W6x8.5 MAY BE USED AS AN ALTERNATE FOR STEEL POST ATTACHED TO CONCRETE, SEE SHT. 10 OF 10.

STANDARD W-BEAM & THRIE BEAM GUARDRAIL SECTIONS

(FOR BRIDGE CONCRETE BARRIER TO GUARDRAIL TRANSITION DETAILS, SEE SHEET 3 OF 10)



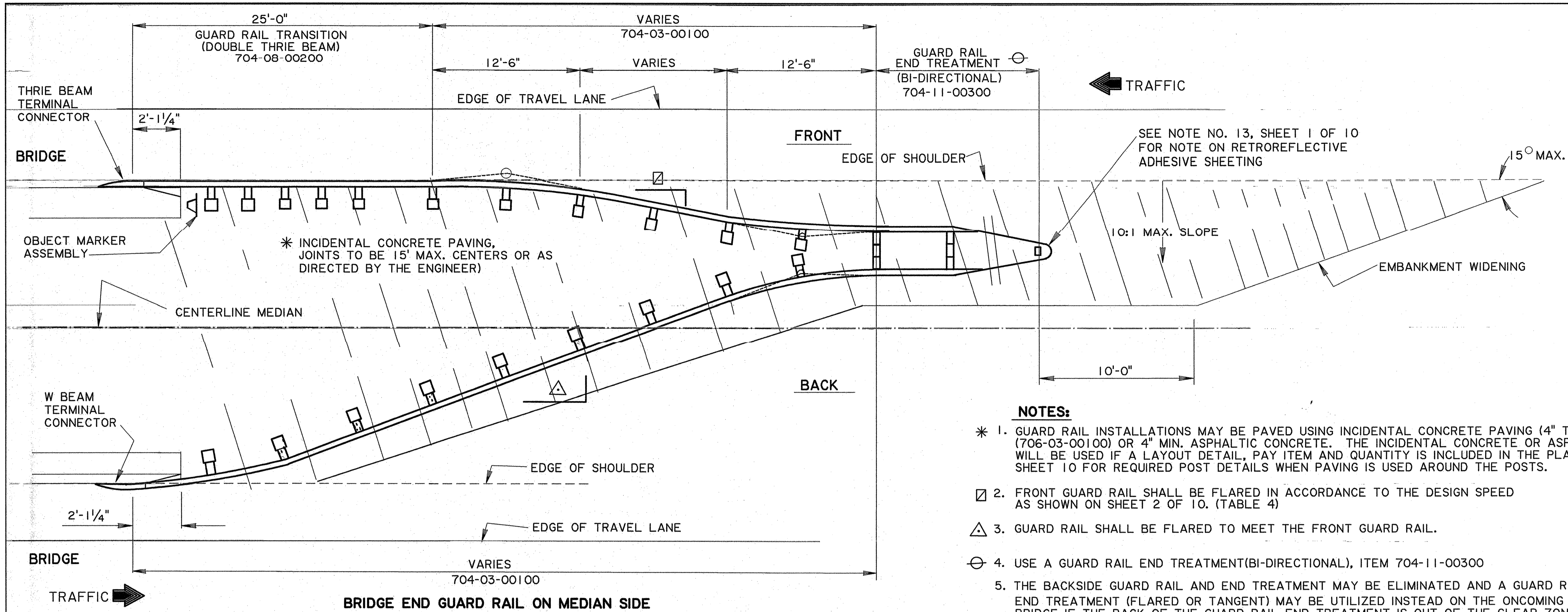
SHEET NUMBER	310
PROJECT	JEFFERSON
DATE	OCT. 2008
BY	G. WAGNER
CHECKED	P. FOSSIER
DATE	OCT. 2008
REVISION DESCRIPTION	
DATE	
APPROVED BY	
CHIEF ENGINEER	
DATE	11-10-08
PROJECT	064-01-0040
STATE	LA
FEDERAL PROJECT	
PARISH	JEFFERSON
BRIDGE AND STRUCTURAL DESIGN	

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30-APR-2009

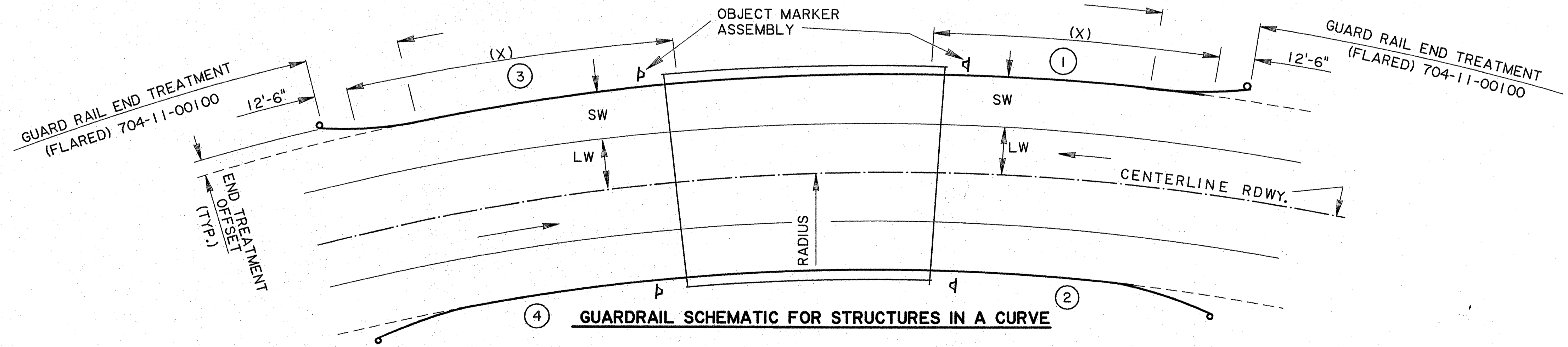
FINAL PLANS

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NOTES:

- * 1. GUARD RAIL INSTALLATIONS MAY BE PAVED USING INCIDENTAL CONCRETE PAVING (4" THICK) (706-03-00100) OR 4" MIN. ASPHALTIC CONCRETE. THE INCIDENTAL CONCRETE OR ASPHALT WILL BE USED IF A LAYOUT DETAIL, PAY ITEM AND QUANTITY IS INCLUDED IN THE PLANS. SEE SHEET 10 FOR REQUIRED POST DETAILS WHEN PAVING IS USED AROUND THE POSTS.
- ☑ 2. FRONT GUARD RAIL SHALL BE FLARED IN ACCORDANCE TO THE DESIGN SPEED AS SHOWN ON SHEET 2 OF 10. (TABLE 4)
- △ 3. GUARD RAIL SHALL BE FLARED TO MEET THE FRONT GUARD RAIL.
- ⊕ 4. USE A GUARD RAIL END TREATMENT(BI-DIRECTIONAL), ITEM 704-11-00300
- 5. THE BACKSIDE GUARD RAIL AND END TREATMENT MAY BE ELIMINATED AND A GUARD RAIL END TREATMENT (FLARED OR TANGENT) MAY BE UTILIZED INSTEAD ON THE ONCOMING END OF BRIDGE IF THE BACK OF THE GUARD RAIL END TREATMENT IS OUT OF THE CLEAR ZONE (Lc) FOR THE OPPOSING TRAFFIC
- 6. BOLT HOLE LOCATIONS ON THE CONCRETE BARRIER STANDARD ARE FOR THE THRIE BEAM TERMINAL CONNECTOR. WHEN W BEAM TERMINAL CONNECTORS ARE USED THE LOCATION OF THESE HOLES SHALL BE ADJUSTED TO FIT THE BOLT HOLE PATTERN FOR THE W BEAM TERMINAL CONNECTOR AS SHOWN ON SHEET 8 OF 10.



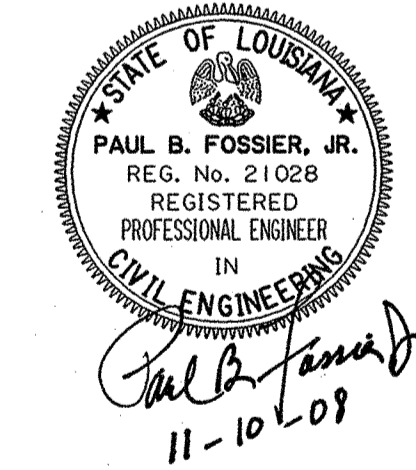
FORMULA FOR COMPUTING GUARD RAILS IN A CURVE

$$\textcircled{1} \textcircled{2} \quad A = \cos^{-1} \left[\frac{R+LW}{R+LW+CZ_c} \right] - \cos^{-1} \left[\frac{R+LW}{R+LW+SW} \right] \quad \textcircled{3} \textcircled{4} \quad A = \cos^{-1} \left[\frac{R}{R+CZ_c} \right] - \cos^{-1} \left[\frac{R}{R+LW+SW} \right]$$

$$X = \frac{A(R+LW+SW)}{57.3} \quad X = \frac{A(R+LW+SW)}{57.3}$$

- NOTES:**
- 1. GUARD RAILS COMPUTED IN ACCORDANCE WITH THE ABOVE EQUATIONS SHALL BE INSTALLED PARALLEL WITH THE CURVE OF THE ROADWAY. END TREATMENT SYSTEMS SHALL USE APPLICABLE OFFSETS WHEN REQUIRED.
 - 2. LENGTH OF NEED (X) ON ONE WAY TRAFFIC SHALL USE THE EQUATION SHOWN FOR LOCATION ①&②. WHEN A BRIDGE IS LOCATED IN A RADIUS > 2860 ft.; THE LENGTH OF NEED (X) SHALL BE COMPUTED AS STRAIGHT GUARD RAIL (USE X,Y,Z EQUATIONS ON SHEET 2 OF 10) WITH A FLARE RATE AS PER TABLE 4, SHEET 2 OF 10.

CZc : ADJUSTED CLEAR ZONE FOR HORIZONTAL CURVE, FT.
 SEE SHEET 2 OF 10.
 R : RADIUS OF CURVE @ C ROADWAY, FT
 LW : LANE WIDTH, FT.
 SW : SHOULDER WIDTH, FT.
 X : LENGTH OF NEED, FT.
 A : ANGLE AT CENTER FOR LENGTH OF NEED, DEGREE



SHEET NUMBER	311
PROJECT	JEFFERSON
DESIGNED	C. WAGGE
CHECKED	P. FOSSIER
DATE	OCT. 2008
SHEET	5 OF 10
DATE	1-26-09
BY	W.H. Fossier
REVISION DESCRIPTION	
CHIEF ENGINEER	
APPROVED BY	
DATE	

STATE OF LOUISIANA
 HIGHWAY GUARD RAILS
 BRIDGE END MEDIAN GUARD RAIL
 AND CURVE GUARD RAIL LAYOUT
 GR-200

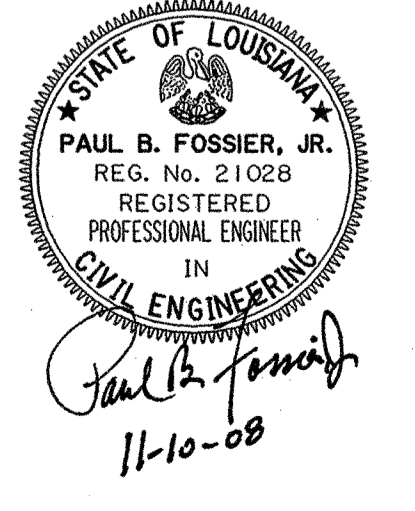
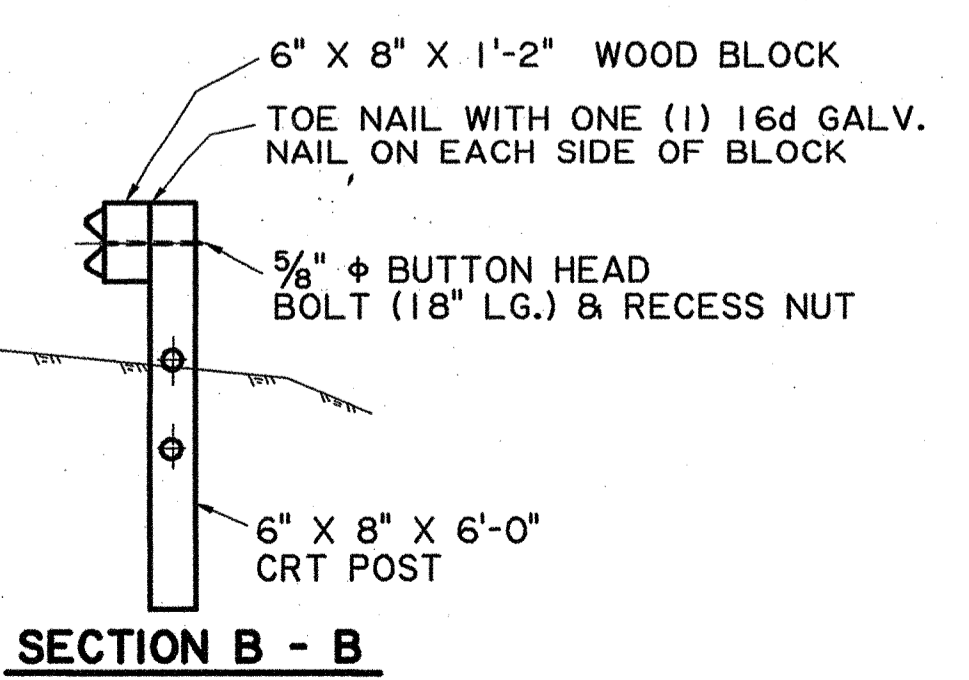
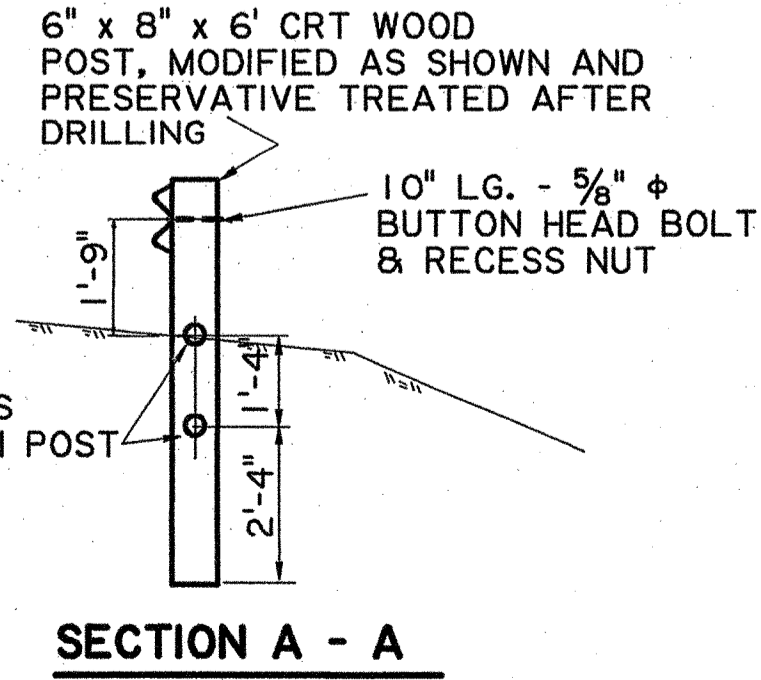
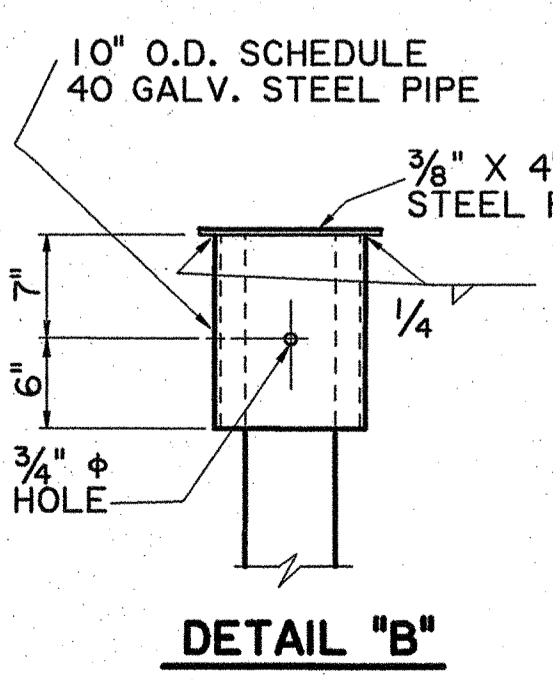
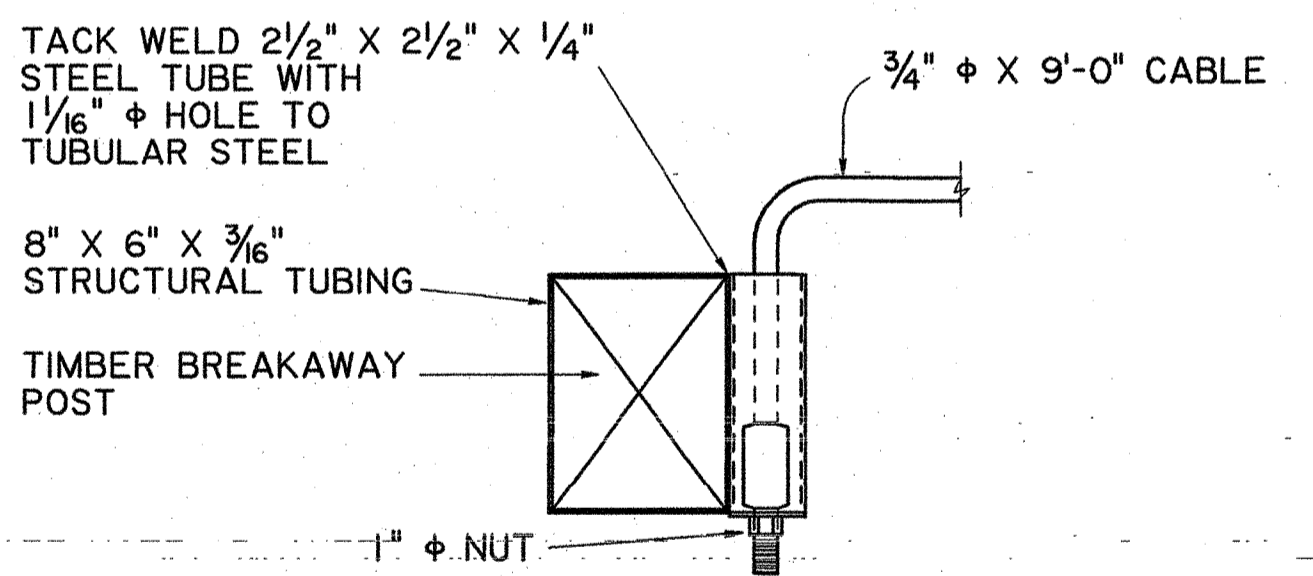
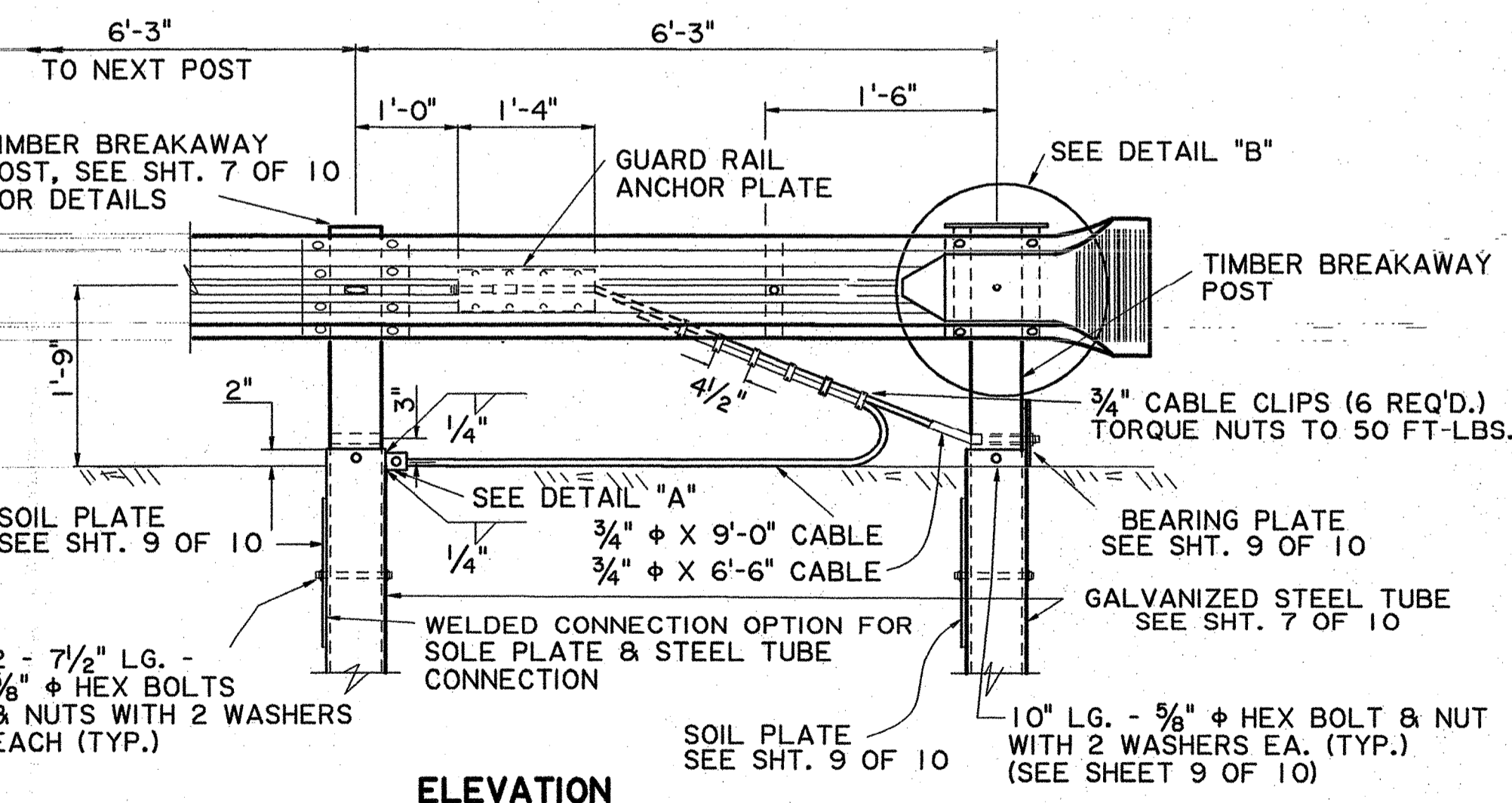
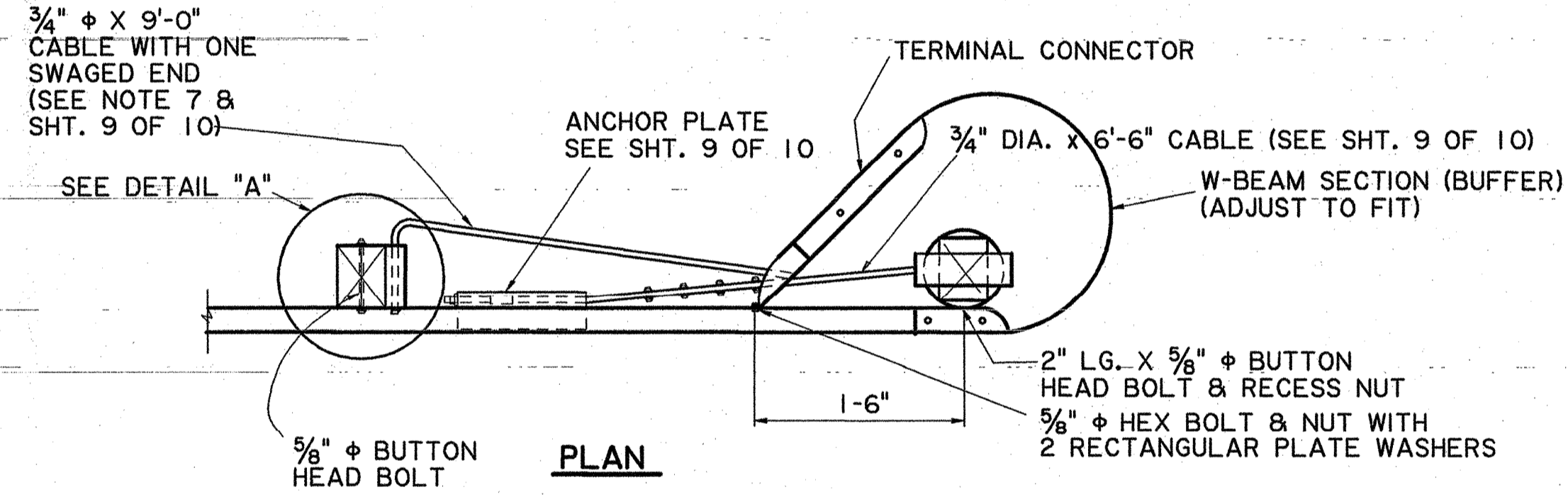
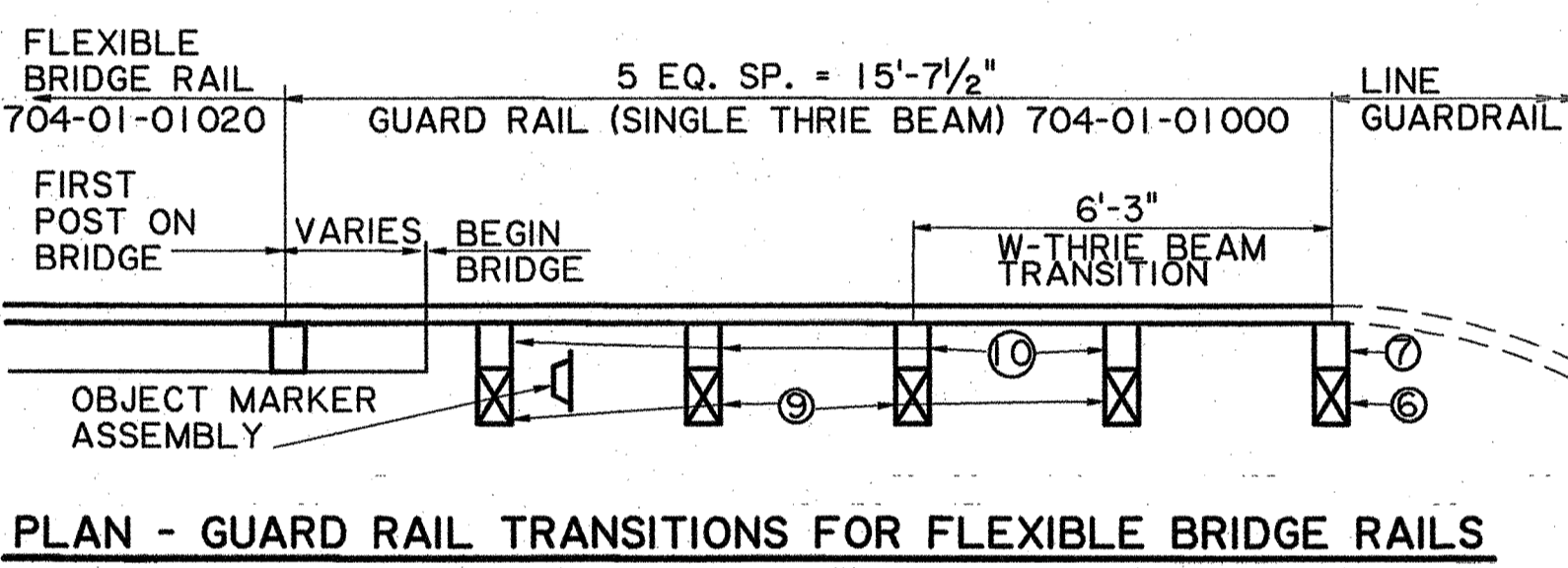
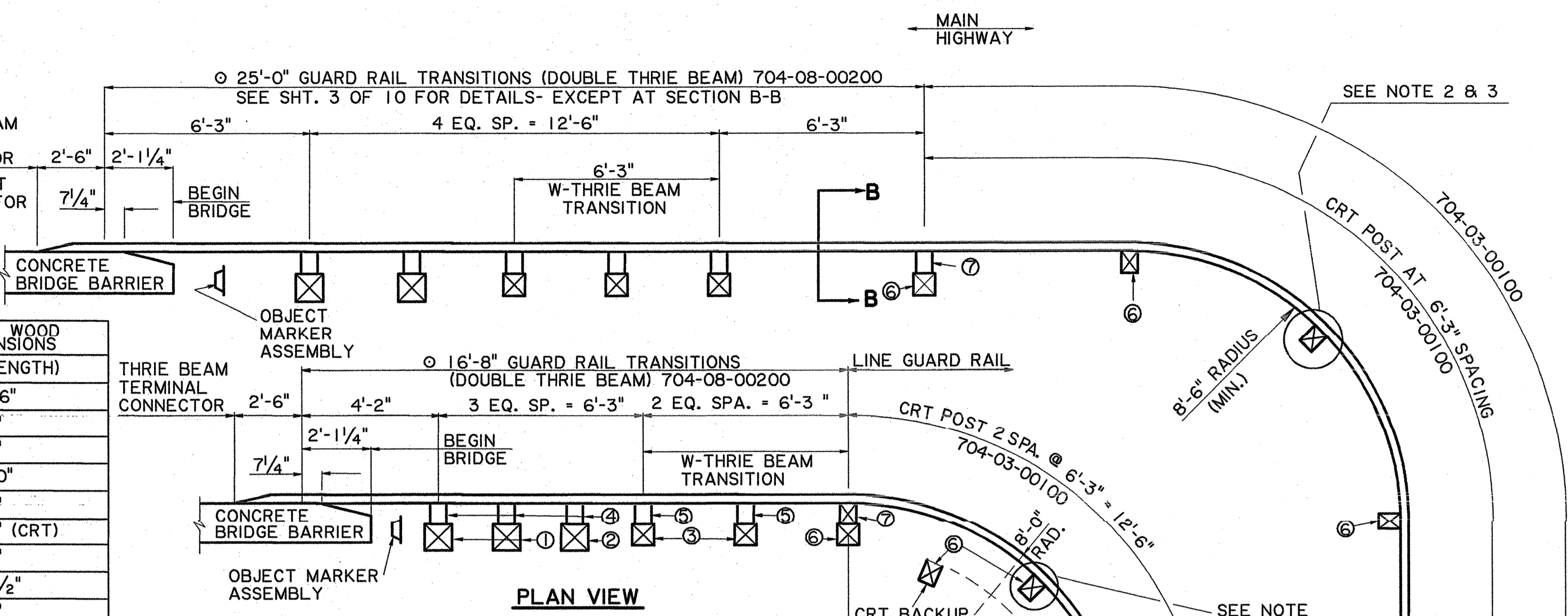
BRIDGE AND STRUCTURAL DESIGN

30-APR-2009 13:07
 FINAL PLANS
 R:\Gang2\Projects\064010040\dgn\standards\plans\312_GR200-06.dgn

NOTES

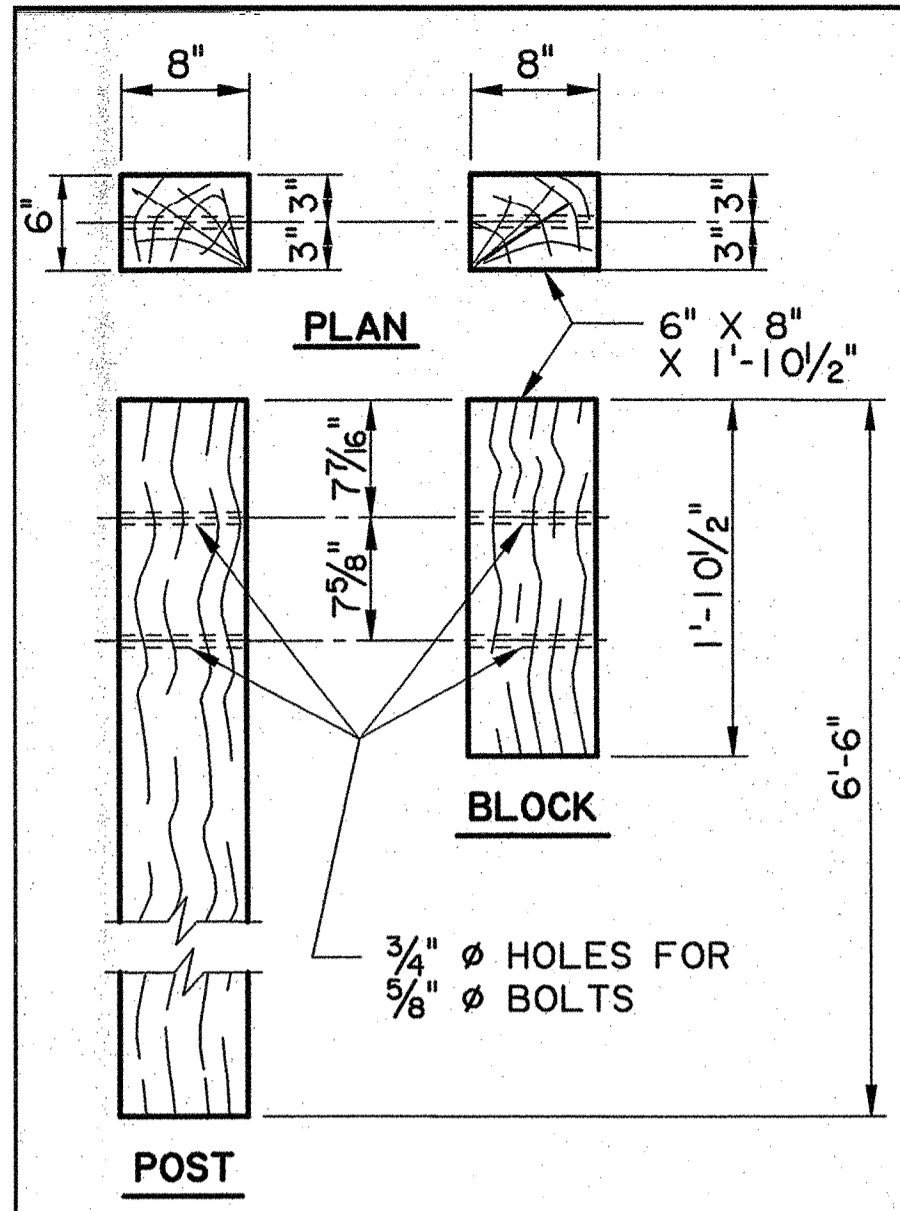
- THE SPECIAL ANCHOR SECTION HAS NOT BEEN TESTED AS A CRASHWORTHY END TREATMENT FOR APPROACHING TRAFFIC ON THE MAIN HIGHWAY. THEREFORE, ITS USE SHALL BE LIMITED TO THE APPROACH ROADWAY SUCH AS DRIVEWAYS OR SERVICE ROADWAYS. IF THE APPROACH ROADWAY CARRIES MAJOR TRAFFIC, A CRASHWORTHY END TREATMENT, PAY ITEM 704-11-00100, 704-11-00200, OR 704-11-00300, SHALL BE USED IN LIEU OF THE SPECIAL ANCHOR SECTION.
- THE CURVED GUARD RAIL SECTION SHALL BE SHOP BENT.
- THE RAIL IS NOT BOLTED TO THE CRT POST AT THE CENTER OF THE NOSE AS SHOWN.
- NO WASHERS ARE USED ON THE 5/8" ϕ BUTTON HEAD BOLTS CONNECTING THE RAIL TO THE CABLE RELEASE TERMINAL (CRT) POSTS.
- ATTACH W-BEAM TO STEEL PIPE WITH 2" LG X 5/8" BUTTON HEAD BOLT WITH NO WASHER. NO CONNECTION TO POST IS REQUIRED.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND NUTS TO THE REQUIREMENTS OF ASTM A 563, GRADE A OR BETTER, AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.
- WIRE ROPE CABLE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 30 AND SHALL BE 3/4" PREFORMED, 6 X 19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE, GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,000 LBS.
- ALL ANGLES, CHANNELS AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 36 AND STRUCTURAL TUBING TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE ANSI/AASHTO/AWS, BRIDGE WELDING CODE. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. NO PUNCHING, DRILLING, CUTTING OR WELDING WILL BE PERMITTED AFTER GALVANIZING.
- THE WOOD BREAKAWAY POST SHALL BE S4S TIMBER WITH A STRESS GRADE OF 1200 PSI AND SHALL BE GRADE MARKED OR CERTIFIED BY A RECOGNIZED ASSOCIATION OR AGENCY WHICH IS CERTIFIED BY THE BOARD OF REVIEW, AMERICAN LUMBER STANDARDS COMMITTEE, TO GRADE THE SPECIES.
- FOR BOLT DETAILS, SEE SHEET NO. 9 OF 10.
- WOOD POST AND BLOCKS SHALL BE TREATED IN ACCORDANCE WITH SECTION 1014 OF DOTD STD. SPECIFICATIONS.
- 10'-0" LONG CURB REQUIRED, SEE SHEET 3 OF 10 FOR DETAILS.

WOOD POST AND WOOD BLOCKOUT DIMENSIONS	
NO.	SIZE (WxDxLENGTH)
1	10" X 10" X 6'-6"
2	8" X 8" X 8'-0"
3	8" X 8" X 6'-0"
4	8" X 8" X 1'-10"
5	8" X 8" X 1'-2"
6	6" X 8" X 6'-0" (CRT)
7	6" X 8" X 1'-2"
8	6" X 8" X 3'-6 1/2"
9	6" X 8" X 6'-0"
10	6" X 8" X 1'-10 1/2"

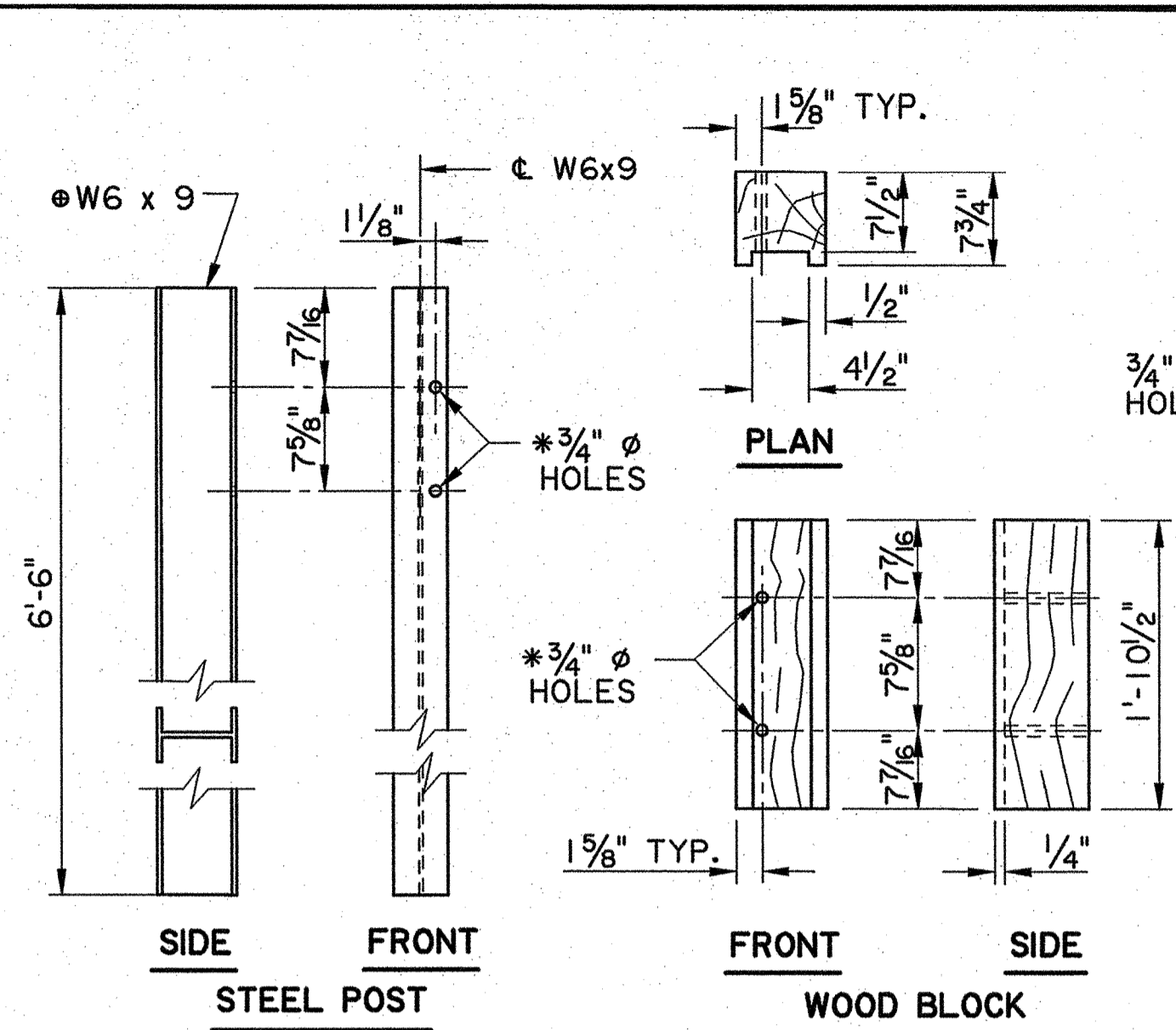


SHEET NUMBER	312	PARISH	JEFFERSON	FEDERAL PROJECT	064-01-0040
DESIGNED	BY	DATE	DATE	DATE	DATE
CHECKED	G. MAGEE	OCT. 2008	OCT. 2008	OCT. 2008	OCT. 2008
REVISION DESCRIPTION	P. FOSSIER	6 OF 10	6 OF 10	6 OF 10	6 OF 10
DATE	DATE	DATE	DATE	DATE	DATE
APPROVED BY	DATE	DATE	DATE	DATE	DATE
CHIEF ENGINEER	1-26-09				
HIGHWAY GUARD RAILS BRIDGE ENDS (T-INTERSECTION)					
BRIDGE AND STRUCTURAL DESIGN					

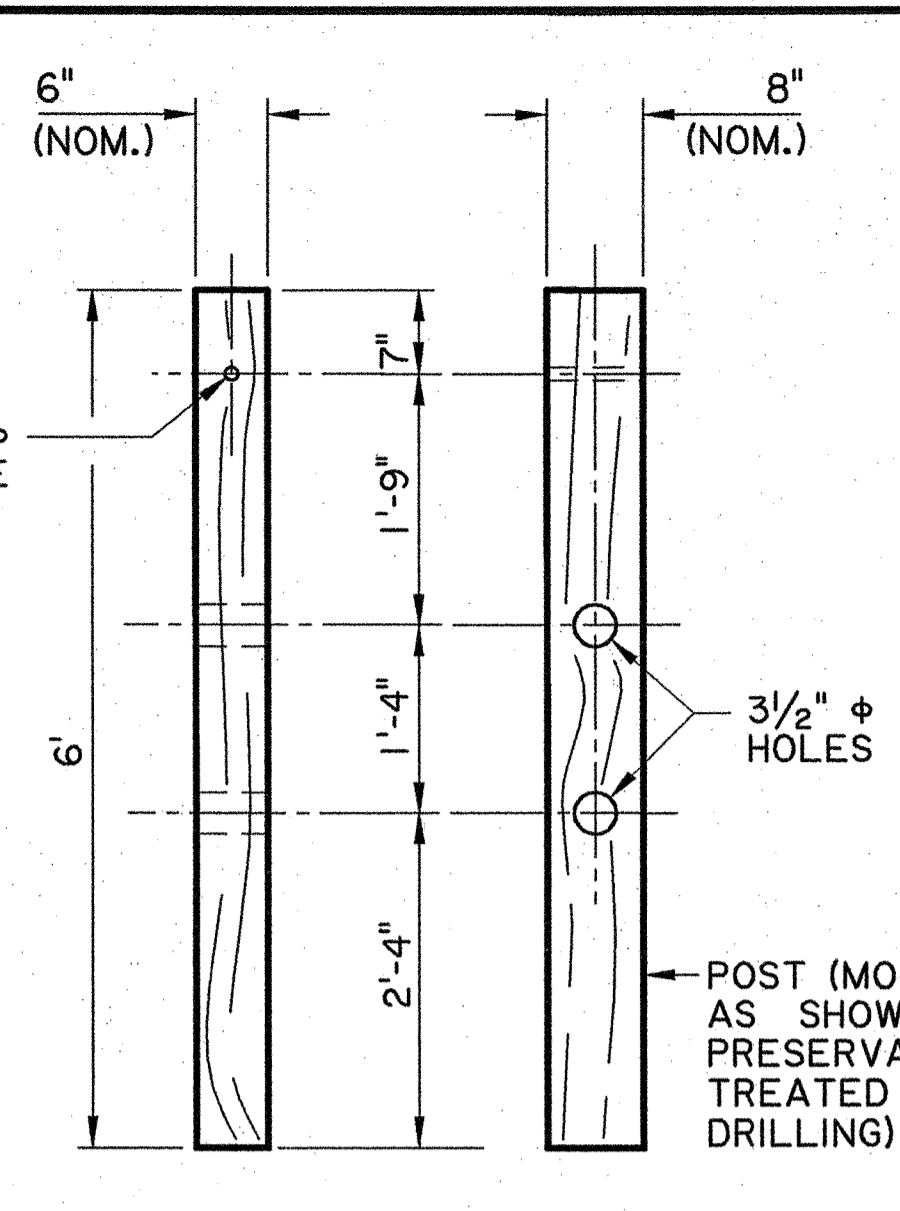
R:\Gang2\Projects\064010040\dgn\standards\standard_plans\313_GR200-07.dgn
 30-APR-2009 13:08
 FINAL PLANS



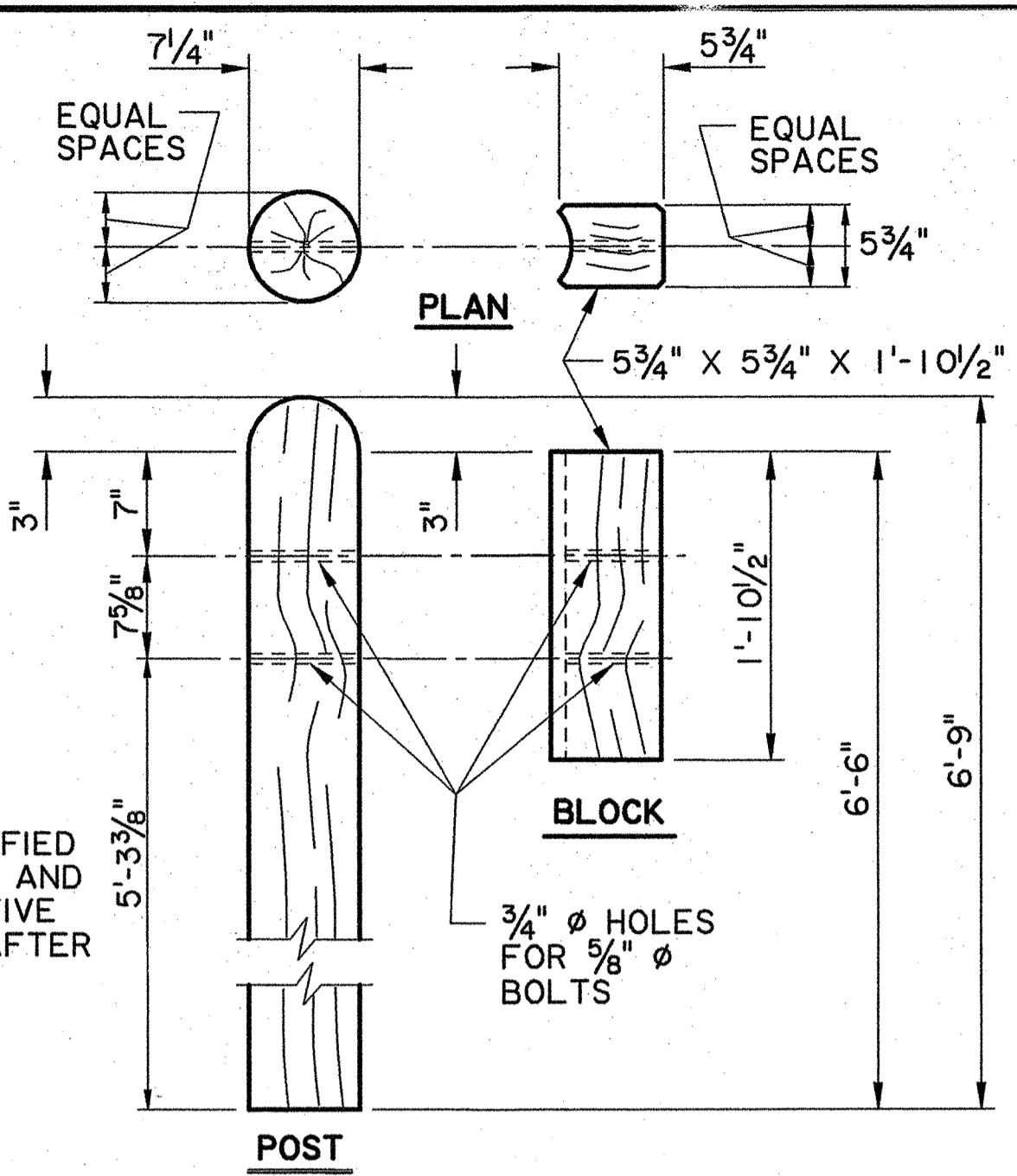
WOOD POST AND WOOD BLOCK FOR STANDARD THRIE BEAM GUARD RAIL



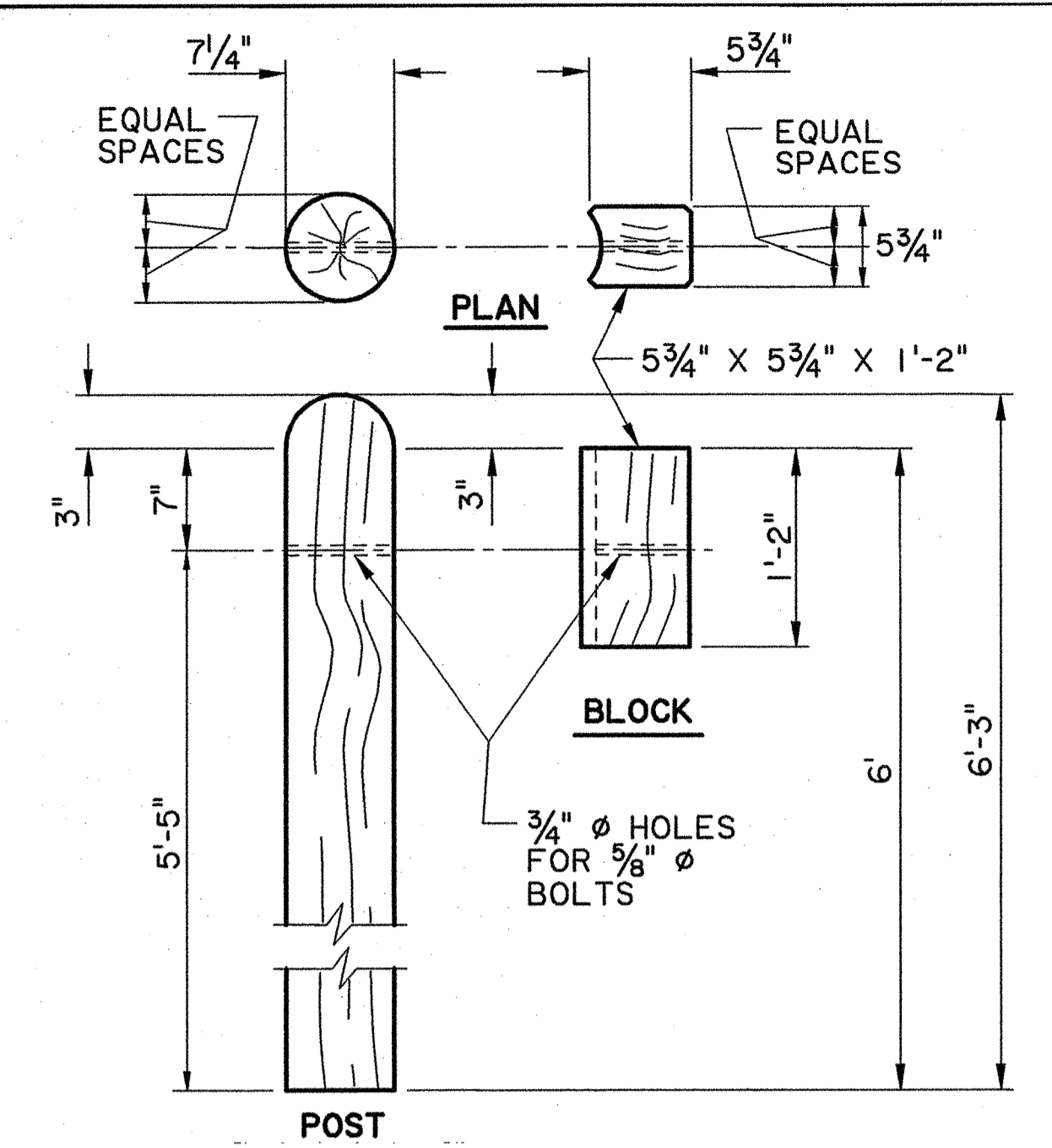
STEEL POST AND ROUTED WOOD BLOCK FOR STANDARD THRIE BEAM GUARD RAIL



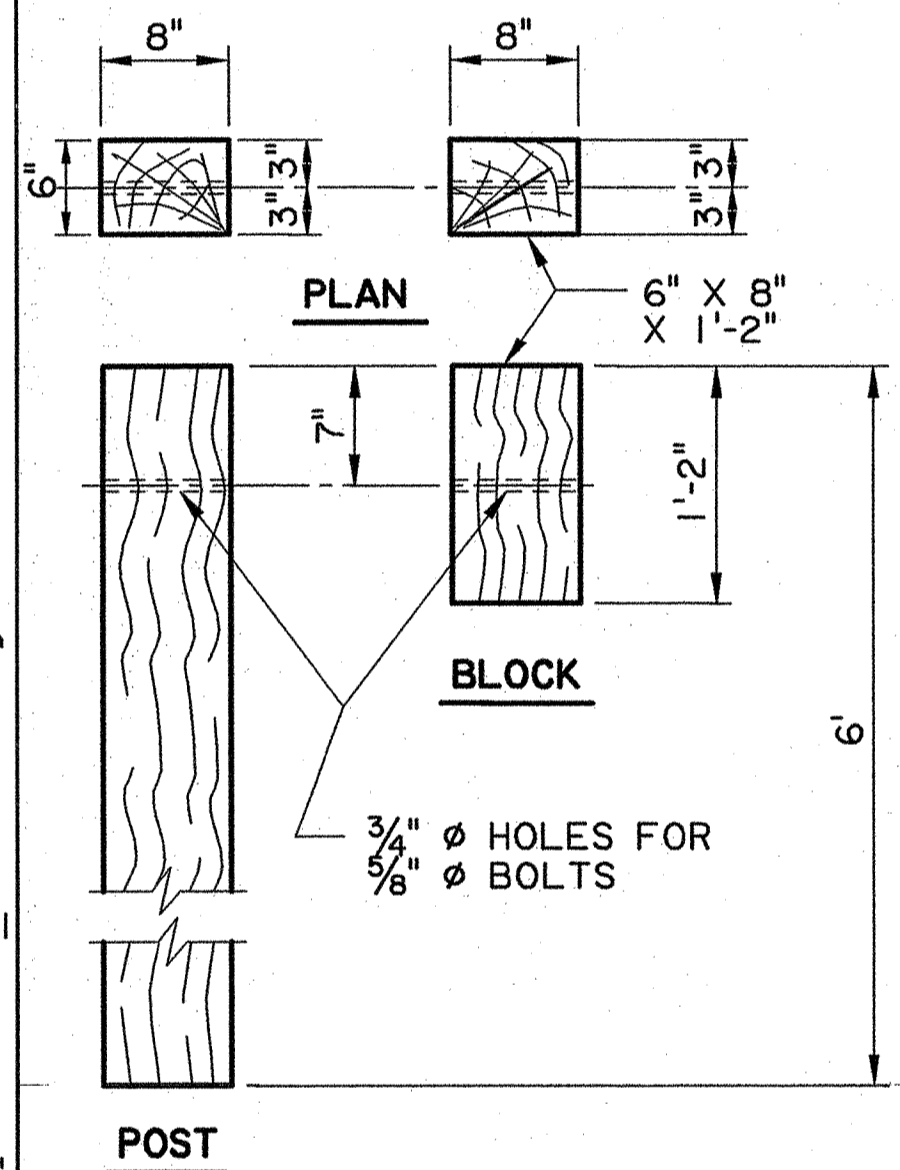
CONTROL RELEASING TERMINAL (CRT) WOOD POST
(USED AT T-INTERSECTION DETAILS, SEE SHT. 6 OF 10.)



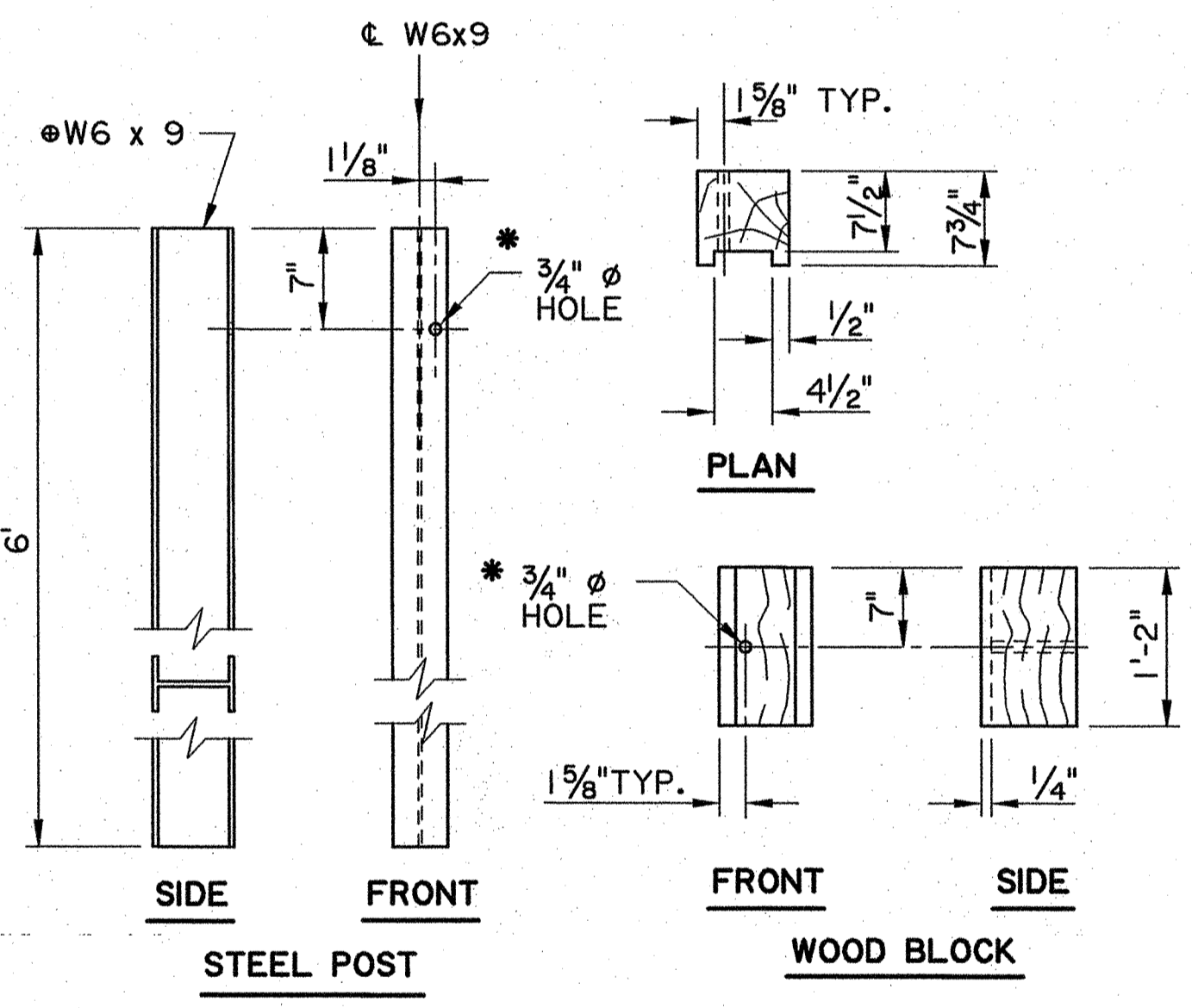
ROUND WOOD POST AND WOOD BLOCK FOR STANDARD THRIE BEAM GUARD RAIL



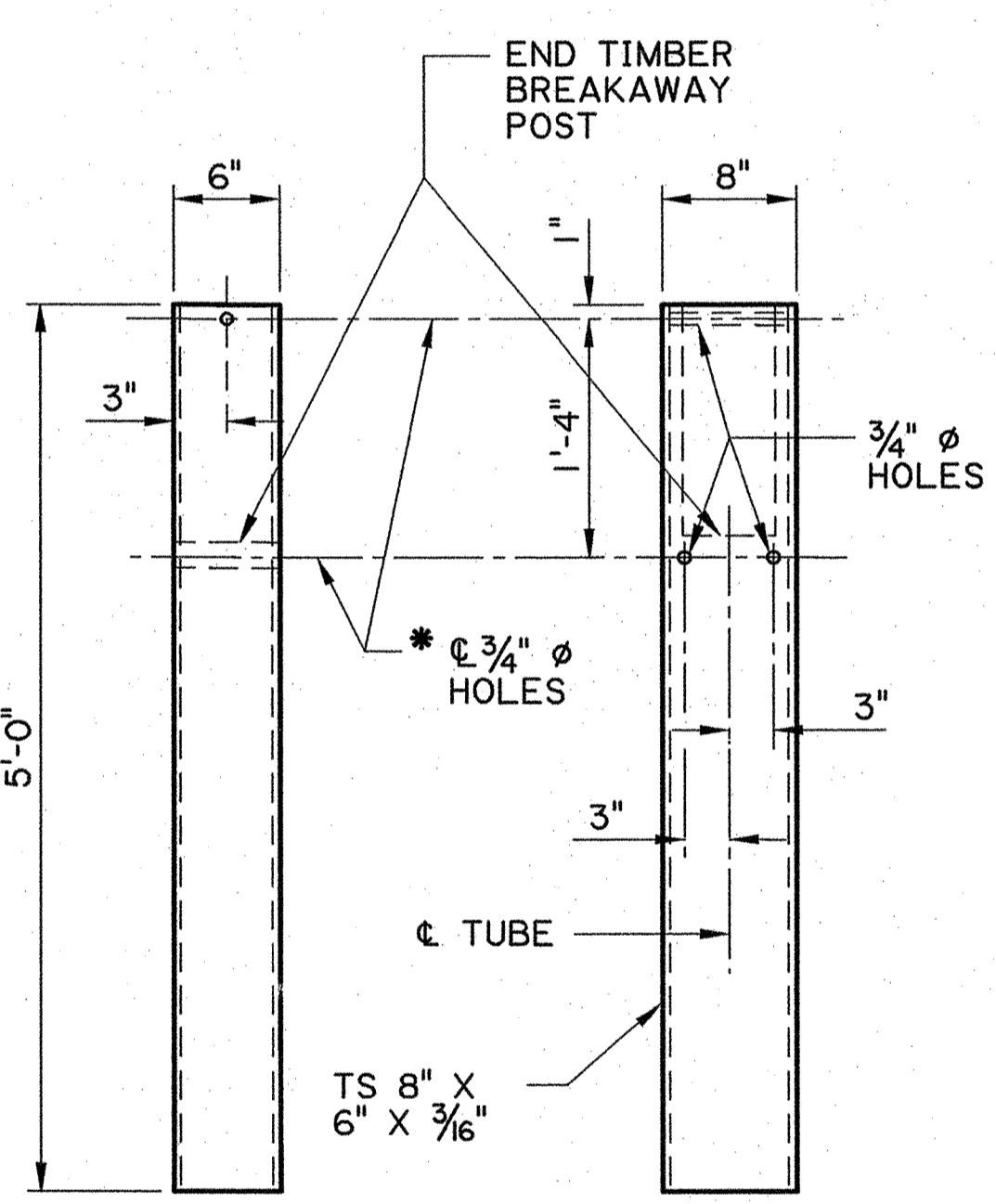
ROUND WOOD POST AND WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL



WOOD POST AND WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL

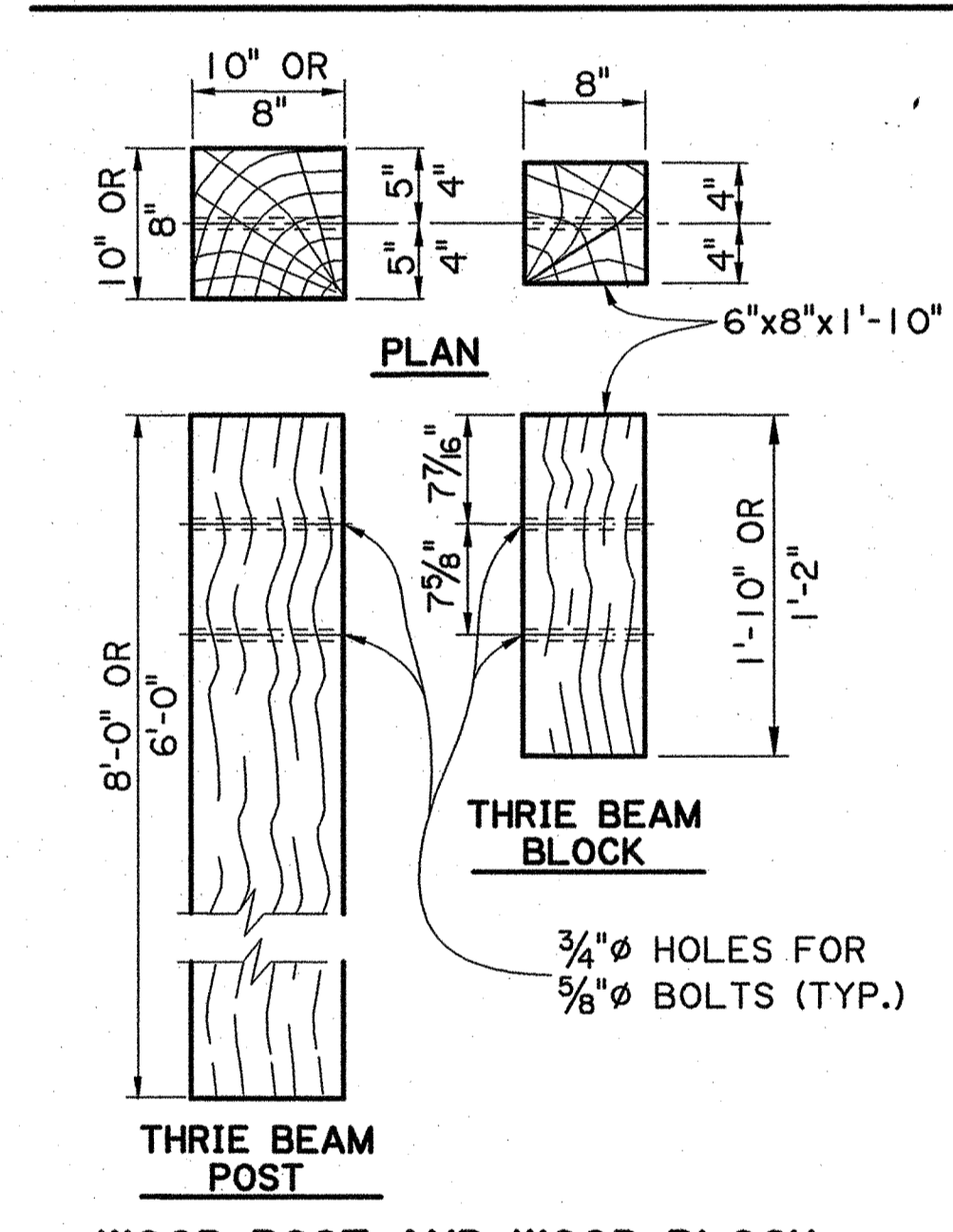


STEEL POST AND ROUTED WOOD BLOCK FOR STANDARD W-BEAM GUARD RAIL



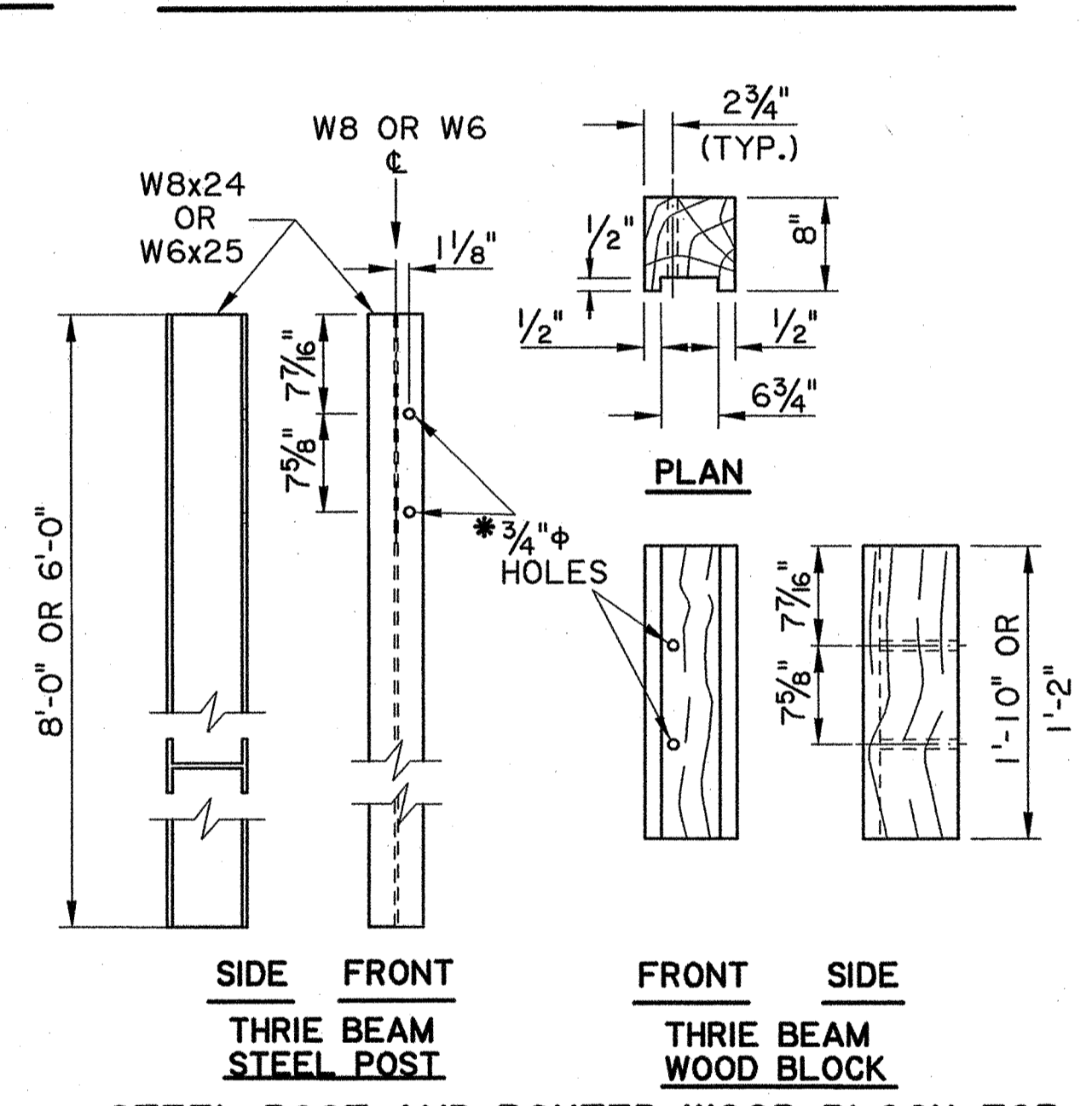
GALVANIZED STEEL TUBE

(FOR SPECIAL ANCHOR SECTION, TRAILING END SECTION OR BCT SECTION, SEE SHT. 4 OR 6 OF 10.)



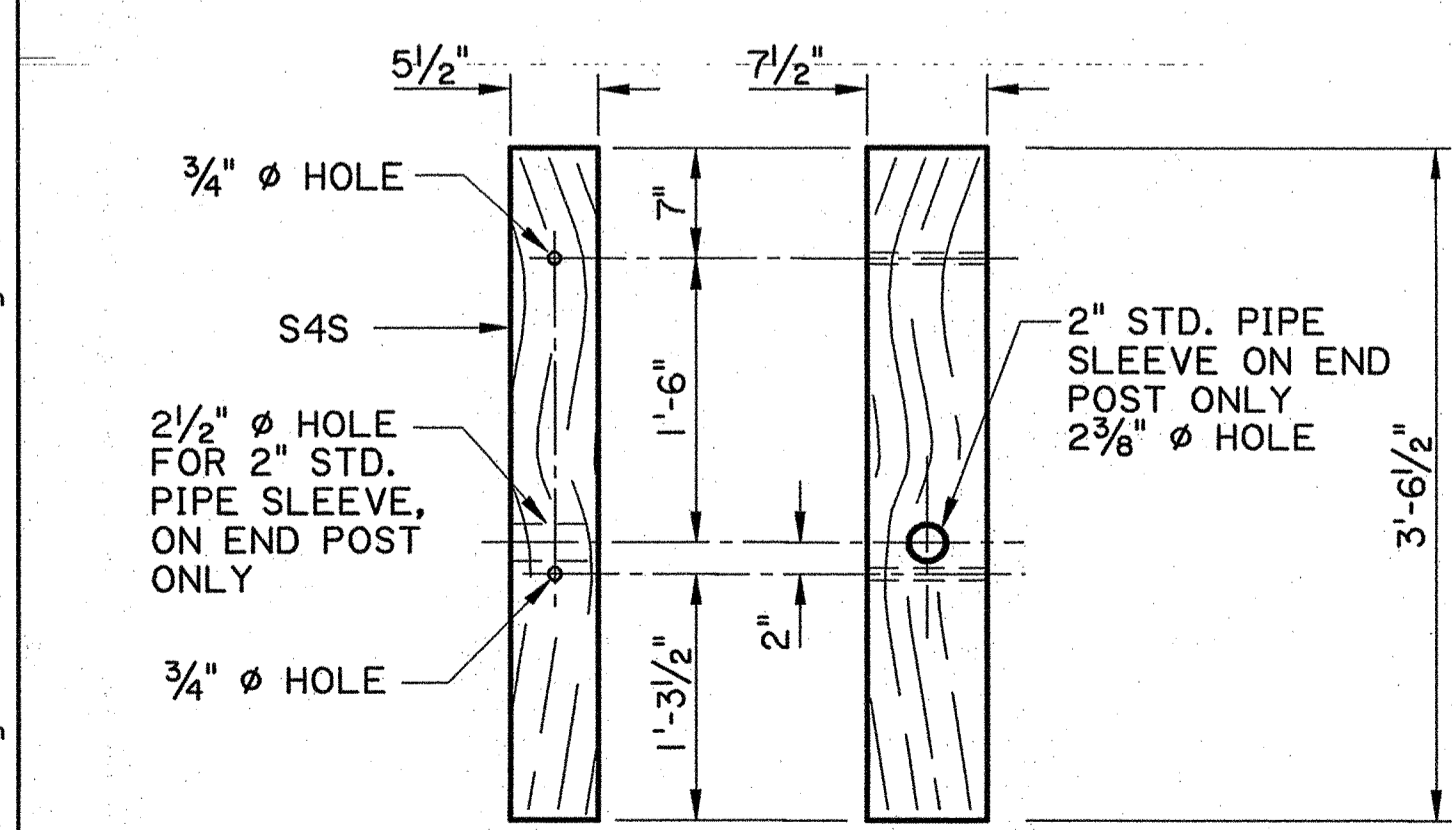
WOOD POST AND WOOD BLOCK FOR THRIE BEAM TRANSITION TO BRIDGE RAIL

(POST SIZE, BLOCK SIZE AND HOLE LOCATIONS VARIES WITH LOCATION IN TRANSITION, SEE SHEET 3 OF 10)



STEEL POST AND ROUTED WOOD BLOCK FOR THRIE BEAM TRANSITION TO BRIDGE RAIL

(POST SIZE, BLOCK SIZE AND HOLE LOCATIONS VARIES WITH LOCATION IN TRANSITION, SEE SHEET 3 OF 10)

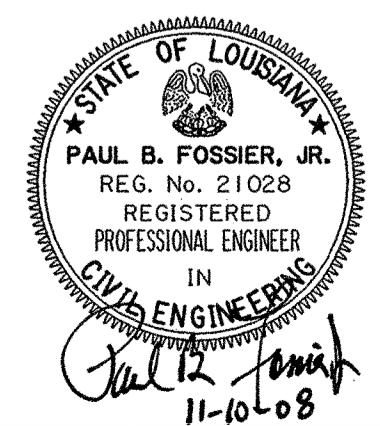


TIMBER BREAKAWAY POST

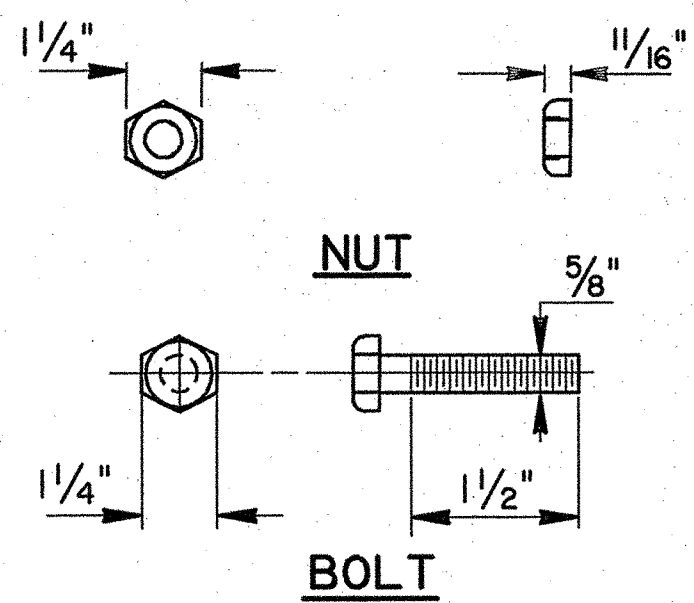
(FOR SPECIAL ANCHOR SECTION, TRAILING END SECTION OR BCT SECTION, SEE SHT. 4 OR 6 OF 10.)

NOTES:

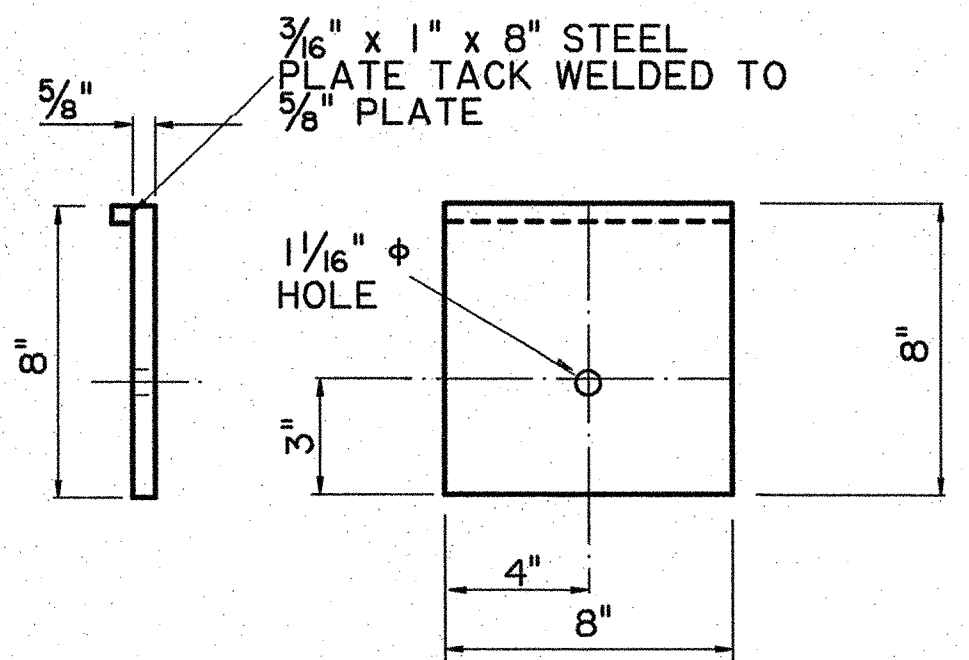
- ◆ 1. THE ROUND WOOD POST AND WOOD BLOCKOUT IS ALLOWED TO REPLACE THE 6" X 8" STANDARD LINE POST AND BLOCKOUT FOR W BEAM AND THRIE BEAM GUARD RAIL. THE ROUND WOOD POST SHALL NOT BE USED AS AN ALTERNATE FOR THE CRT POST, THE BCT POST, AND THE THRIE BEAM TRANSITION POSTS SECTION FOR THE CONCRETE BRIDGE RAIL.
- ◆ 2. A RECYCLED BLOCK ALTERNATE IS ALLOWED AS A SUBSTITUTE FOR THE WOOD BLOCK ON A I FOR I BASIS AT NO ADDITIONAL PAYMENT. THE RECYCLED BLOCK MUST HAVE FHWA APPROVAL AND MEET NCHRP 350 REQUIREMENTS.
- ◆ 3. A W6x8.5 STEEL POST MAY BE USED AS AN ALTERNATE FOR A W6 X 9 POST.
- ◆ 4. POST AND BLOCK HOLES SHOULD BE DRILLED ADJACENT TO THE DIRECTION OF TRAFFIC.



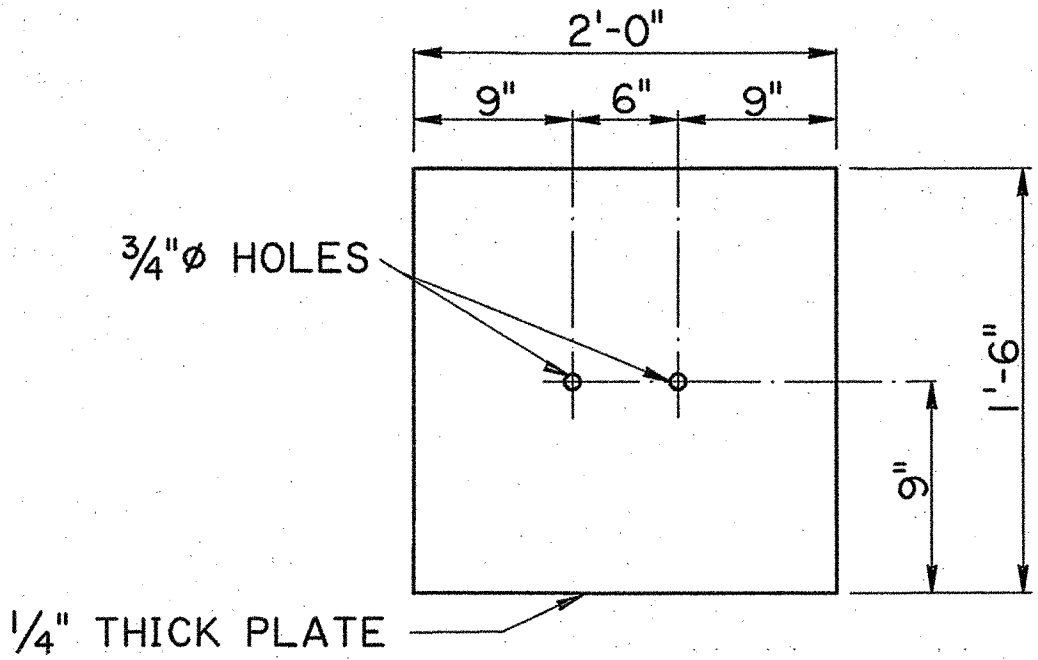
SHEET NUMBER	313	PARISH	JEFFERSON	DATE	OCT. 7 OF 10
DESIGNED	CHECKED	DATE	BY	DATE	BY
CHECKED	DATE	BY	DATE	BY	DATE
REVISION DESCRIPTION DATE APPROVED BY CHIEF ENGINEER: <i>W. H. Fossier</i>					
STATE OF LOUISIANA PROFESSIONAL ENGINEER					
HIGHWAY GUARD RAILS GUARD RAIL POST AND BLOCK GR-200					
BRIDGE AND STRUCTURAL DESIGN					



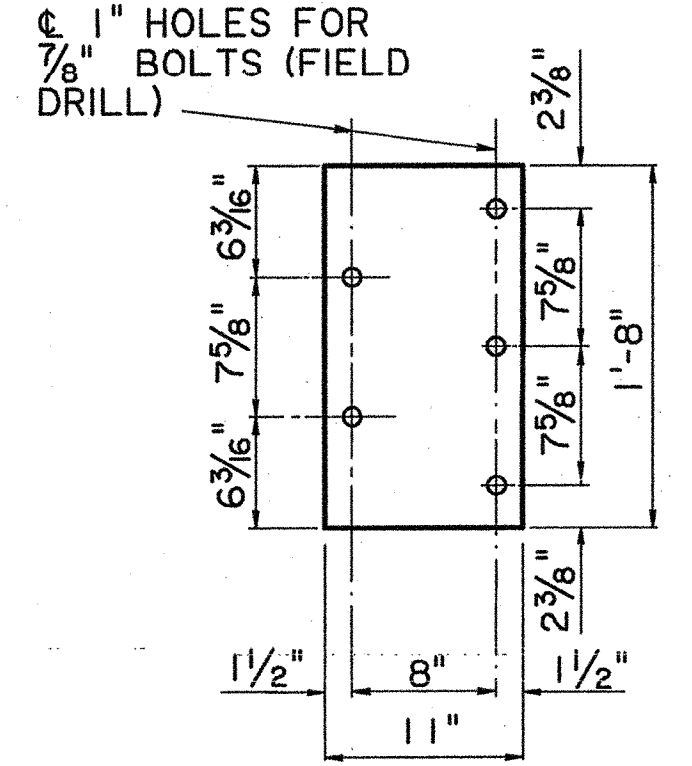
5/8" ϕ HEX BOLT & HEX NUT
(FOR FASTENING THE ANCHOR PLATE TO RAIL OR POST)



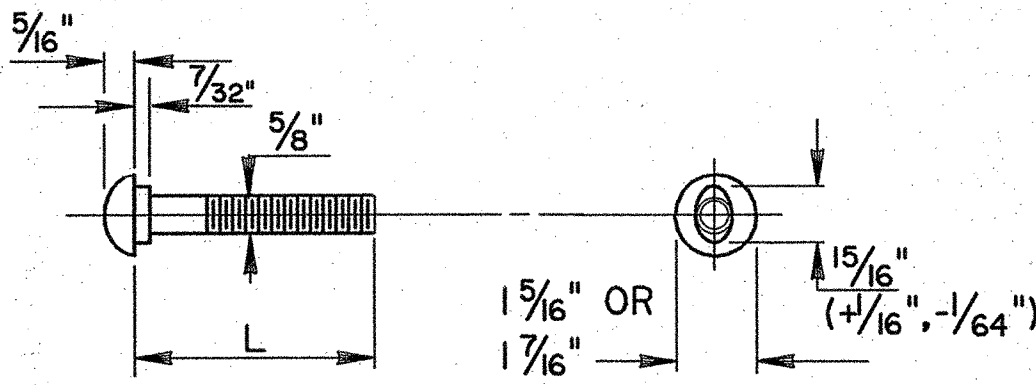
GALVANIZED STEEL BEARING PLATE
(FOR TRAILING END, SPECIAL ANCHOR SECTION OR BCT)



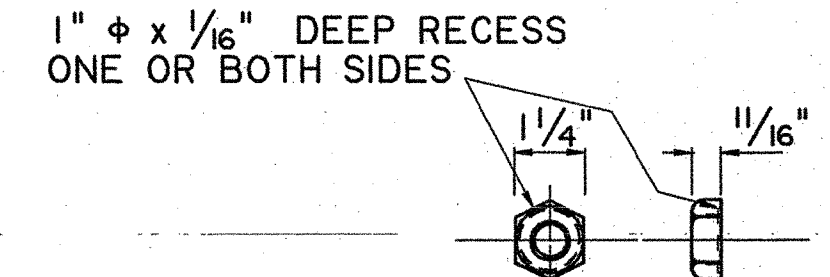
GALVANIZED SOIL PLATE
(FOR TRAILING END, SPECIAL ANCHOR SECTION OR BCT)



5/8" BEARING PLATE
(FOR ANCHORING THRIE BEAM TO CONCRETE BARRIER RAIL)



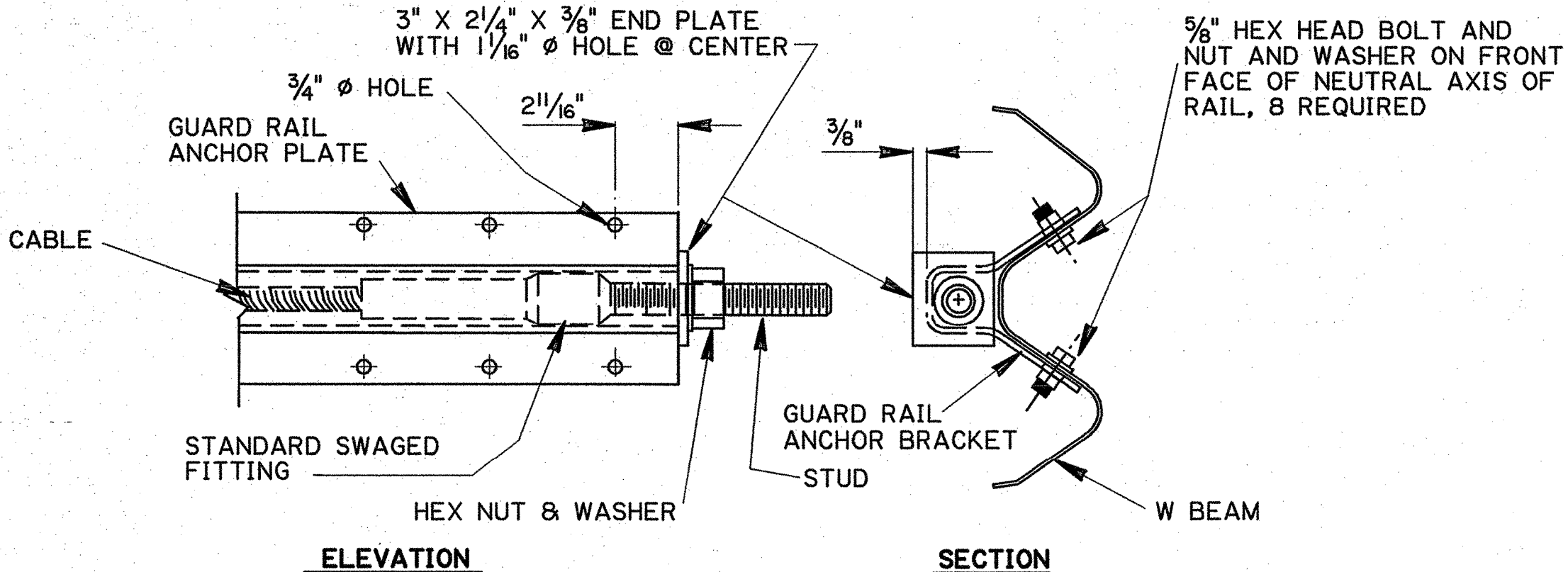
5/8" ϕ BUTTON HEAD BOLT



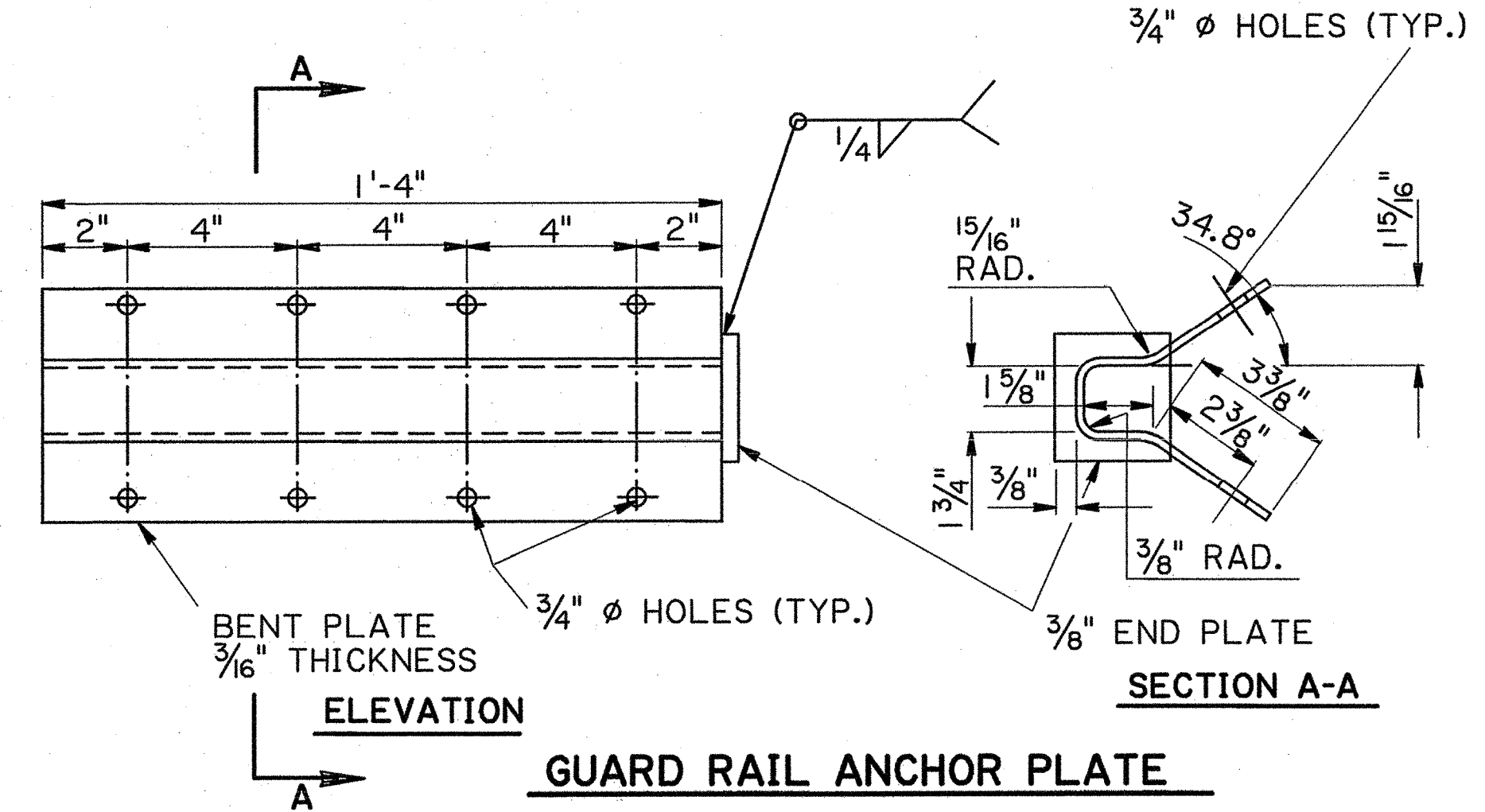
5/8" ϕ RECESS NUT

5/8" BUTTON HEAD BOLT	
L	THREAD LENGTH
1 1/4"	1 3/16"
2"	1 3/4"
10"	4"
1'-6"	4"
1'-8"	4"

GUARD RAIL SPLICE, POST BOLT AND RECESS NUT



ANCHOR PLATE ASSEMBLY DETAILS
(FOR TRAILING END, SPECIAL ANCHOR SECTION OR BCT)



GUARD RAIL ANCHOR PLATE

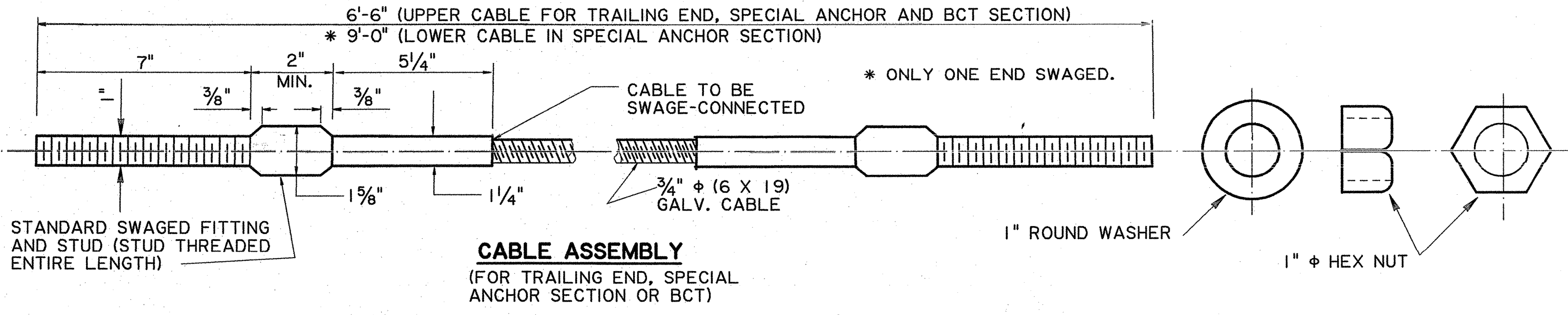
NOTES:

- 5/8" DIA. BUTTON HEAD BOLTS:**
- (1 1/4" LENGTH): THIS BOLT IS USED TO SPLICE RAIL ELEMENTS USED IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.
 - (2" LENGTH): THIS BOLT IS FOR FASTENING RAILS TO STEEL POSTS WHEN USED IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.
 - (10" LENGTH): THIS BOLT IS FOR FASTENING RAILS TO WOOD POSTS IN THE STANDARD CORRUGATED SHEET STEEL BEAM GUARD RAIL.
 - (1'-6" LENGTH): THIS BOLT IS FOR FASTENING RAILS TO WOOD BLOCKS & POSTS IN THE STANDARD CORRUGATED SHEET STEEL BEAM.
 - (1'-8" LENGTH): THIS BOLT IS FOR FASTENING NESTED THRIE BEAM TO WOOD BLOCKS AND POSTS AT THE FIRST TWO POST LOCATIONS AT THE ENDS OF A RIGID (CONCRETE) STRUCTURE, UNLESS OTHERWISE SHOWN IN THE PLANS.

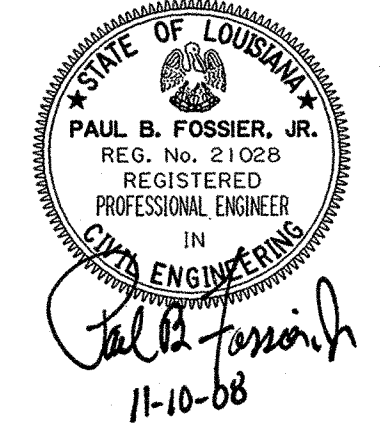
5/8" ϕ BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND NUTS TO THE REQUIREMENTS OF ASTM A 563 GRADE A OR BETTER. BOLTS AND NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

STEEL POSTS & PLATES:

ALL STEEL POSTS AND PLATES SHALL CONFORM TO ASTM A 36 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. NO PUNCHING, DRILLING OR CUTTING WILL BE PERMITTED AFTER GALVANIZING.

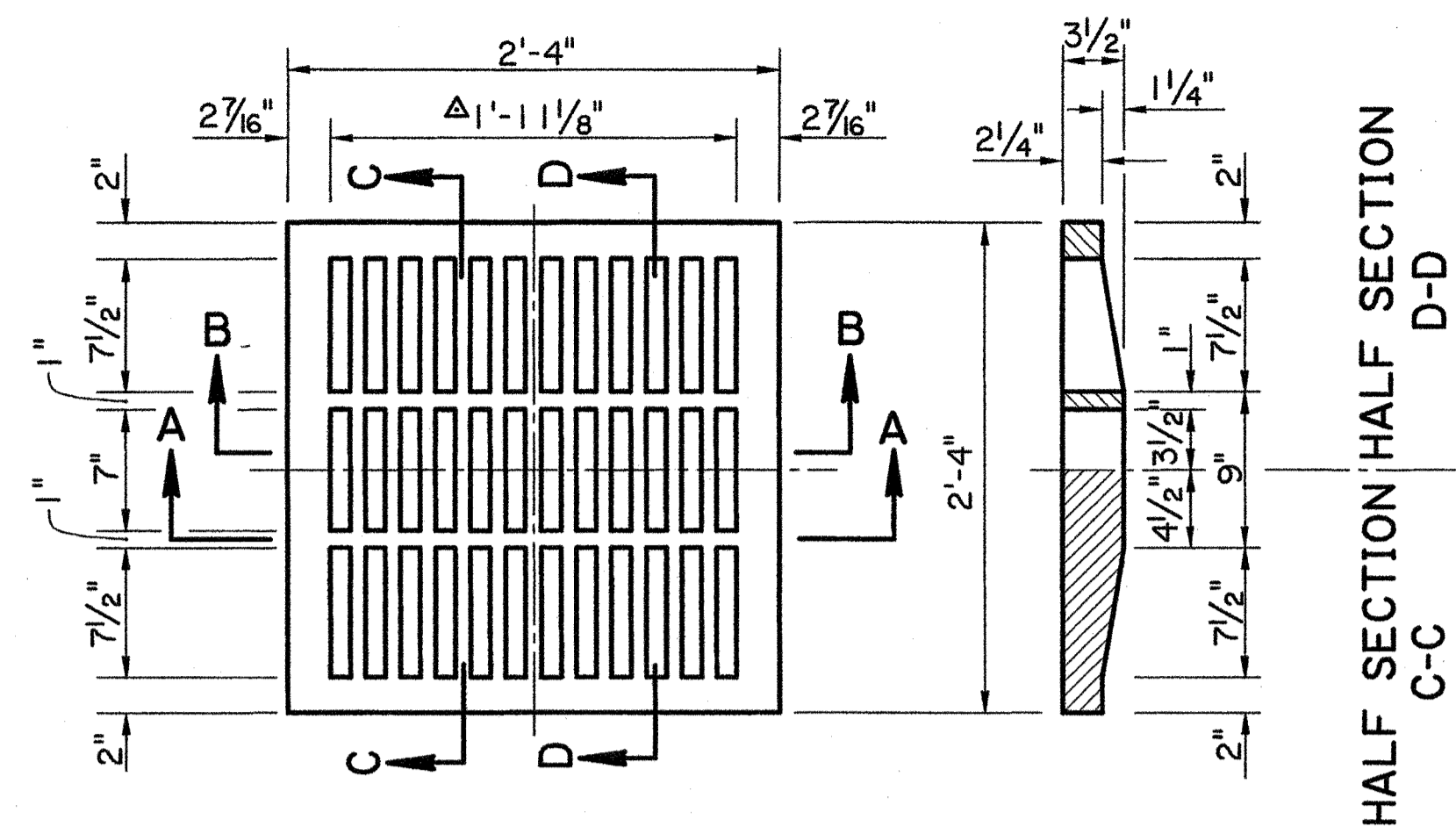


CABLE ASSEMBLY
(FOR TRAILING END, SPECIAL ANCHOR SECTION OR BCT)



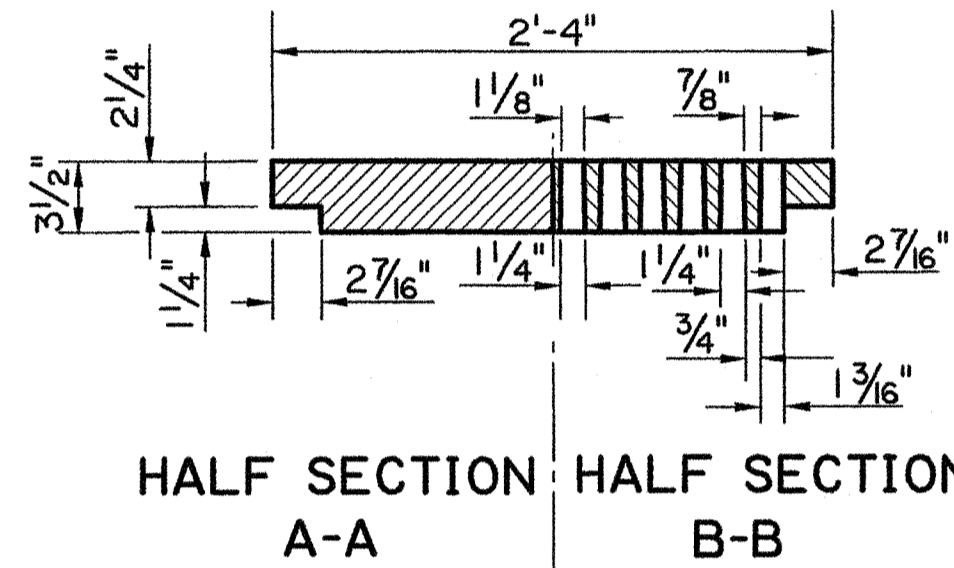
SHEET NUMBER	315
PARISH	JEFFERSON
FEDERAL PROJECT	G. MAGEE
STATE PROJECT	P. FOSSIER
DATE	OCT. 1, 2008
SHEET	9 OF 10
DESIGNED	
CHECKED	
DATE	
REVISION DESCRIPTION	
BY	
DATE	1-26-09
CHIEF ENGINEER	W. H. Temple

BRIDGE AND STRUCTURAL DESIGN

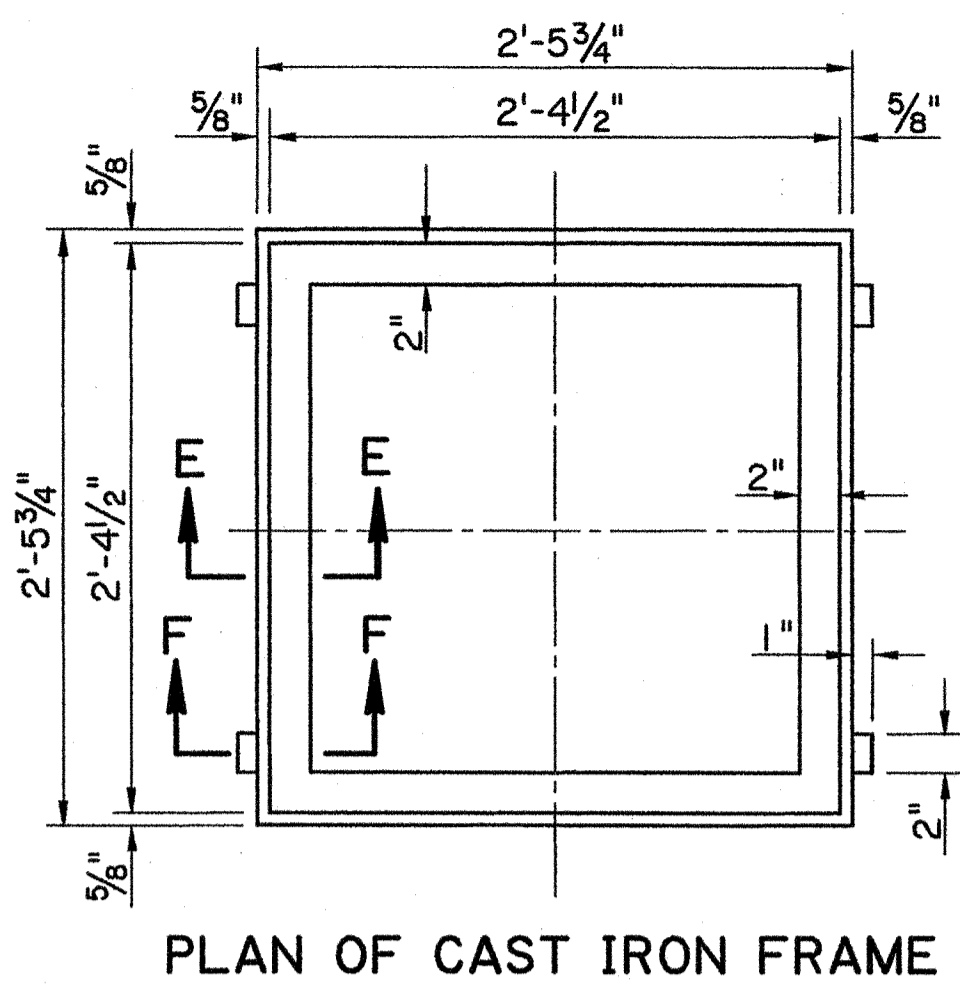


PLAN OF CAST IRON GRATE

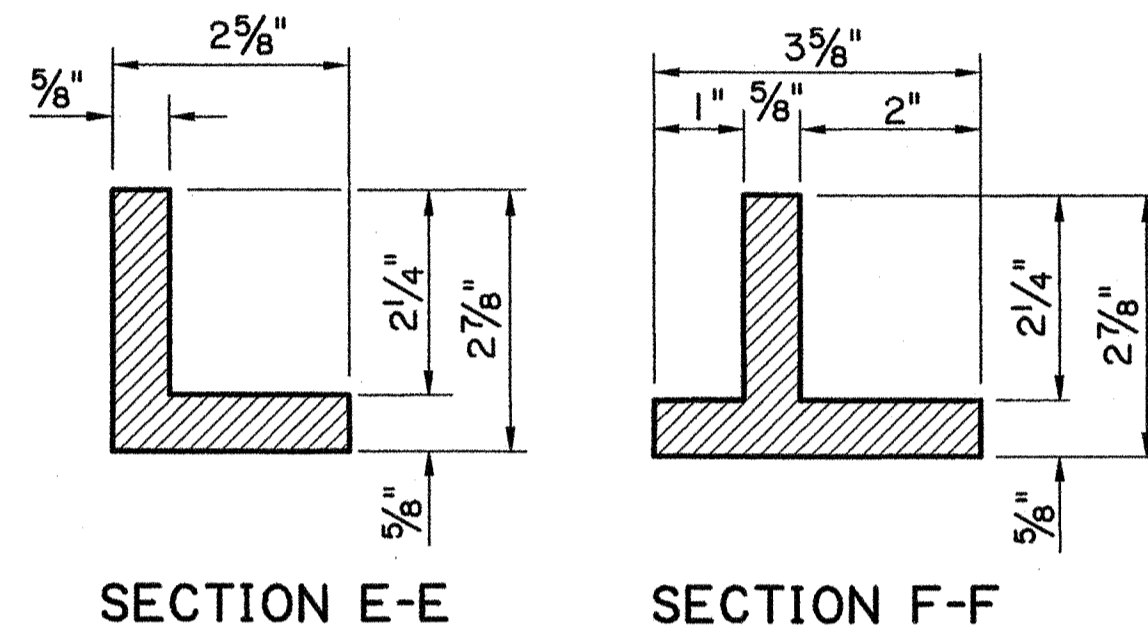
$\Delta 1'-11\frac{1}{8}'' = 12 \text{ OPENINGS @ } 1\frac{1}{8}''$
11 BARS @ $\frac{7}{8}''$



HALF SECTION HALF SECTION
A-A B-B



PLAN OF CAST IRON FRAME

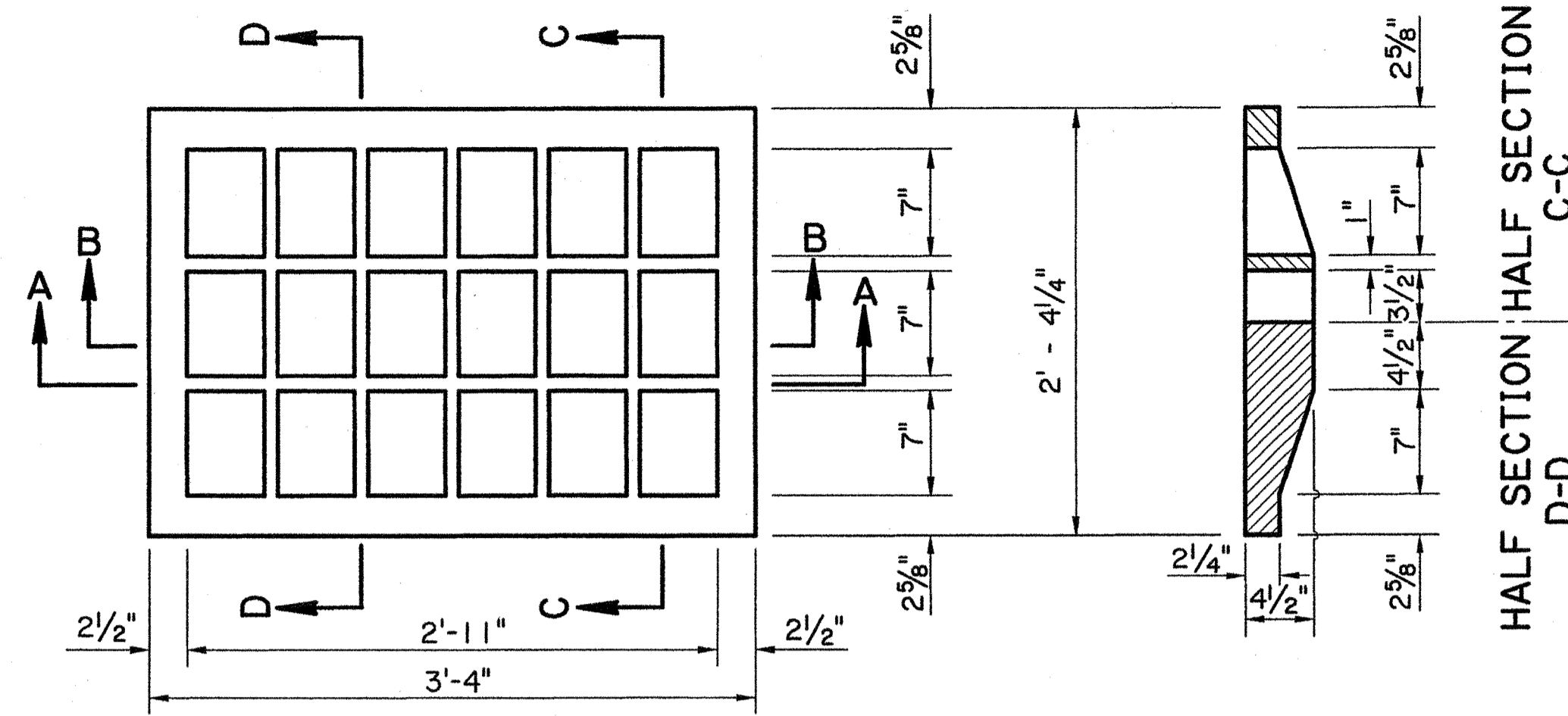


SECTION E-E SECTION F-F

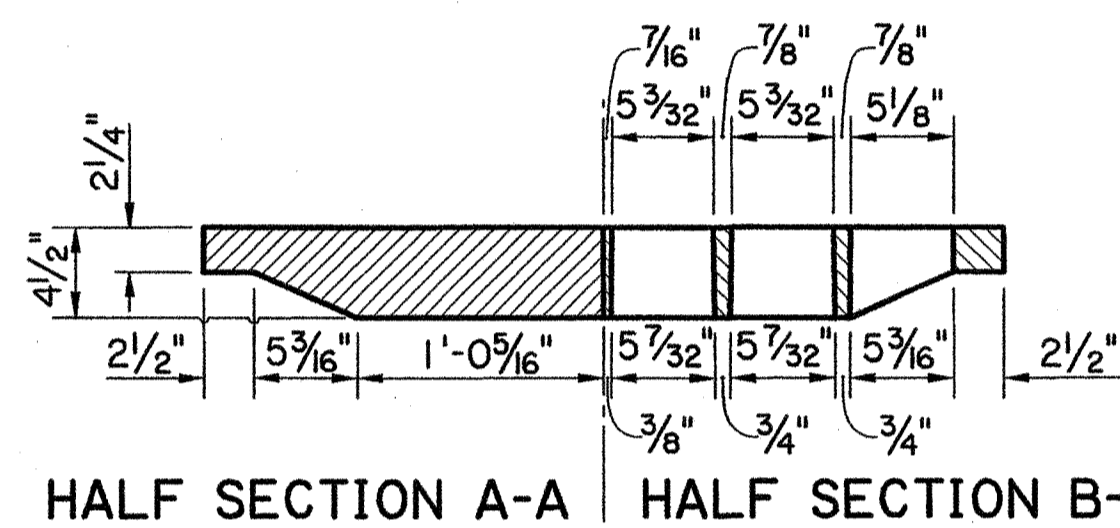
TYPE "A"

DETAILS OF CAST IRON GRATE & FRAME

NOTES: 1. WEIGHT OF CAST IRON GRATE = 334 LBS
2. WEIGHT OF CAST IRON FRAME = 90 LBS



PLAN OF CAST IRON GRATE



HALF SECTION A-A HALF SECTION B-B

TYPE "B"

DETAILS OF CAST IRON GRATE

NOTES: 1. WEIGHT OF CAST IRON GRATE = 350 LBS
2. UNLESS OTHERWISE STATED, TYPE "E" FRAME WILL BE USED WITH THIS GRATE.

TYPE "C"

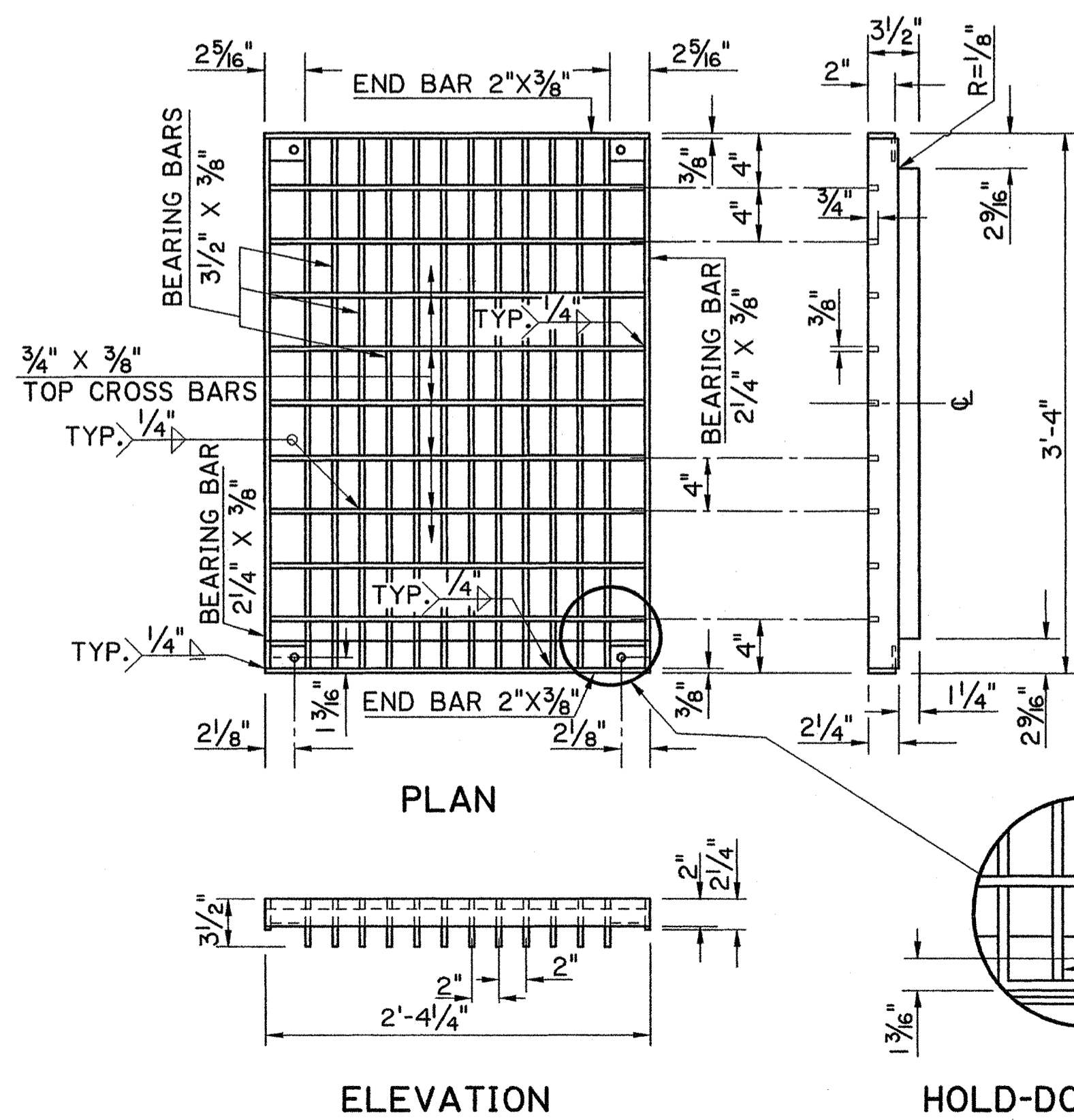
NOTES: 1. GRATES TO BE GALVANIZED AFTER FABRICATION.
2. UNLESS OTHERWISE STATED, TYPE "E" FRAME IS TO BE USED WITH THESE GRATES. (SEE SHEET 2)
3. SUPPLIER OF GRATE ALSO IS TO FURNISH PRE-FITTED GRATE FRAME.

DETAILS OF WELDED & SEALED DRAIN GRATE

CONTINUOUS WELD FOR FULL DEPTH EACH BEARING BAR TO END BARS AND CROSS BARS.
ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.
WEIGHT OF DRAIN GRATE = 233 LBS. \pm 5%

DETAILS OF RIVETED RETICULINE DRAIN GRATE ALTERNATE

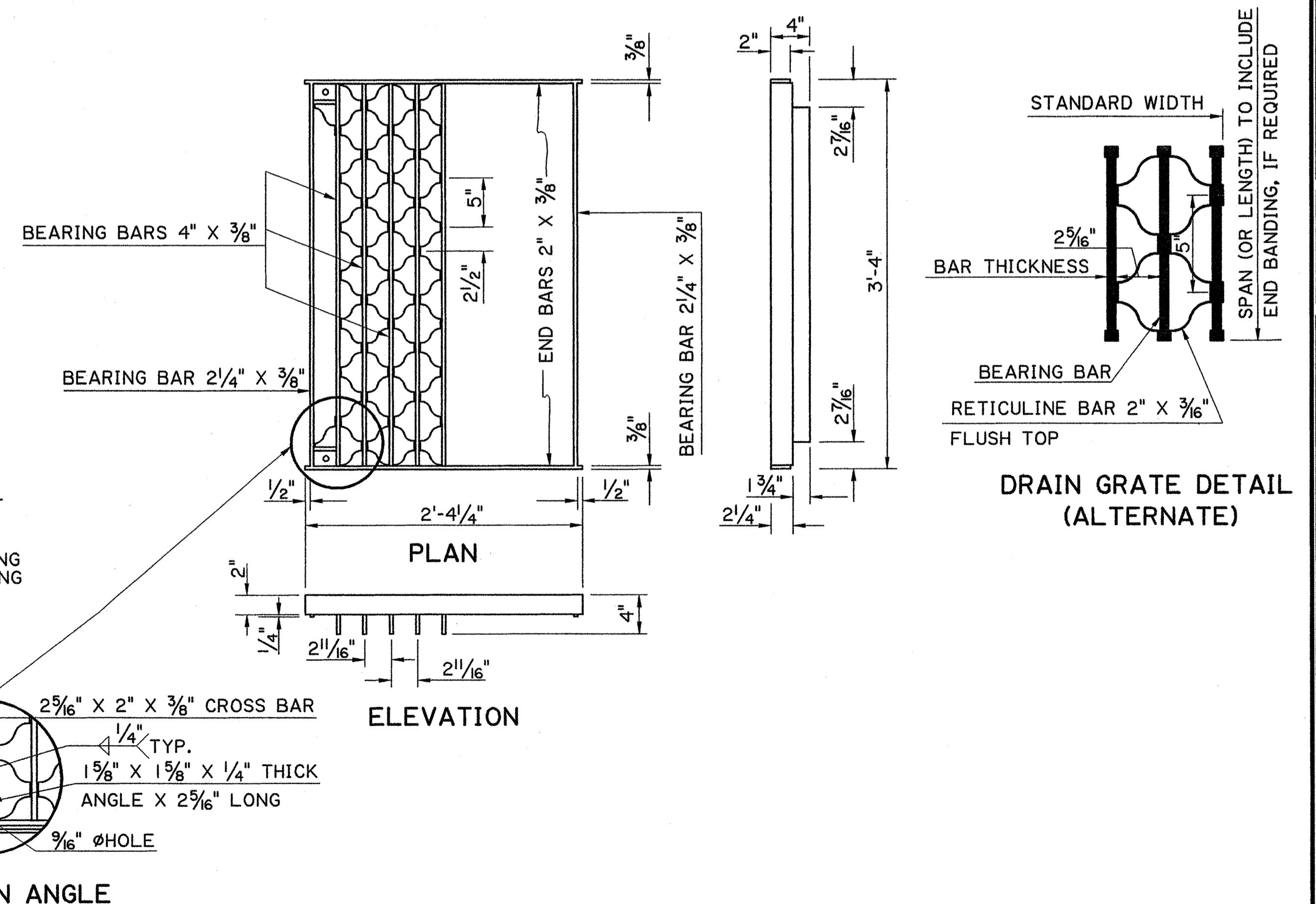
CONTINUOUS WELD FOR FULL DEPTH EACH BEARING BAR TO END BARS.
ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.
CENTER TO CENTER OF BEARING BARS EQUAL $2\frac{5}{16}''$ PLUS BEARING BAR THICKNESS.
WEIGHT OF DRAIN GRATE = 266 LBS. \pm 5%



PLAN

ELEVATION

HOLD-DOWN PLATE



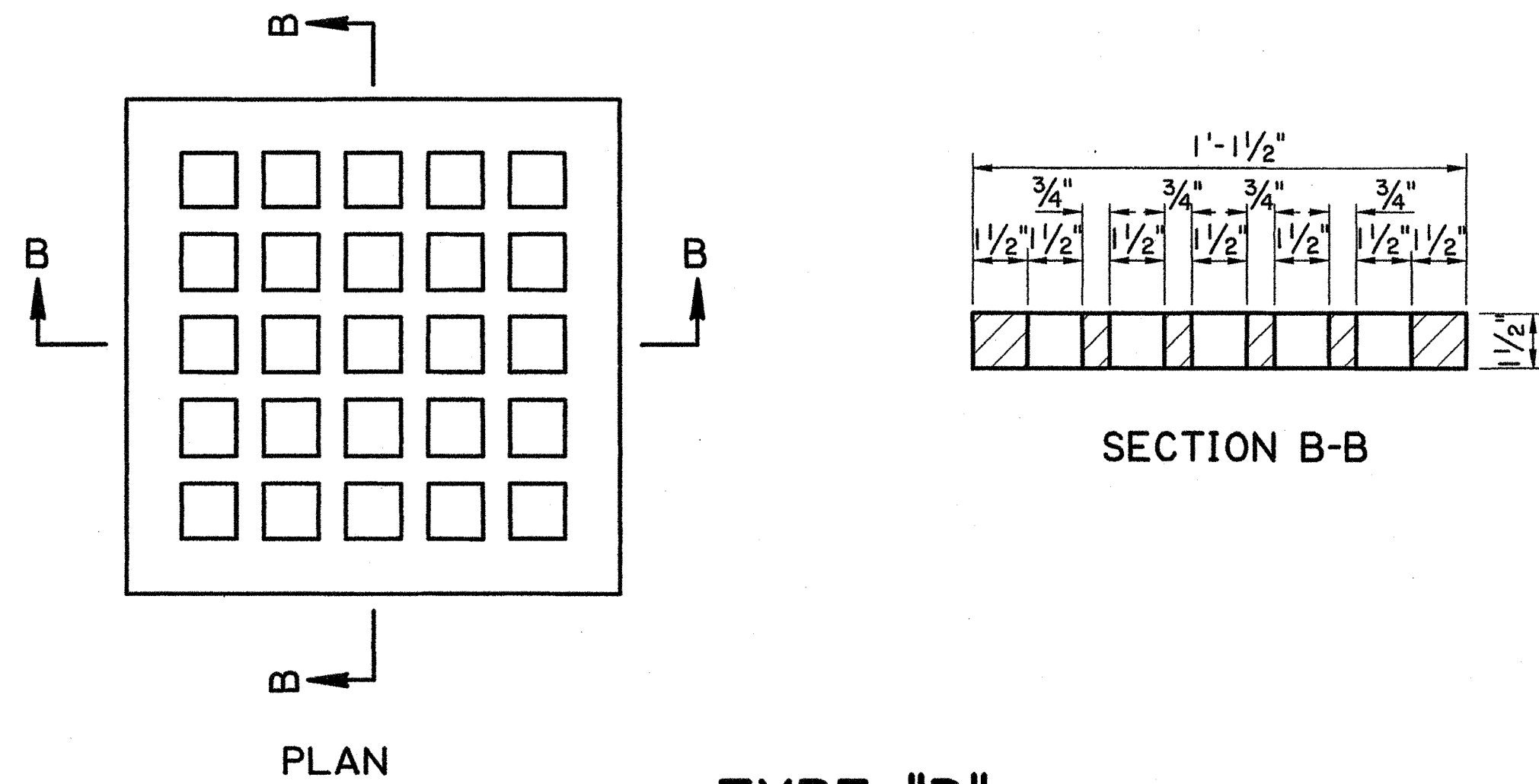
PLAN

ELEVATION

HOLD-DOWN ANGLE

DRAIN GRATE DETAIL (ALTERNATE)

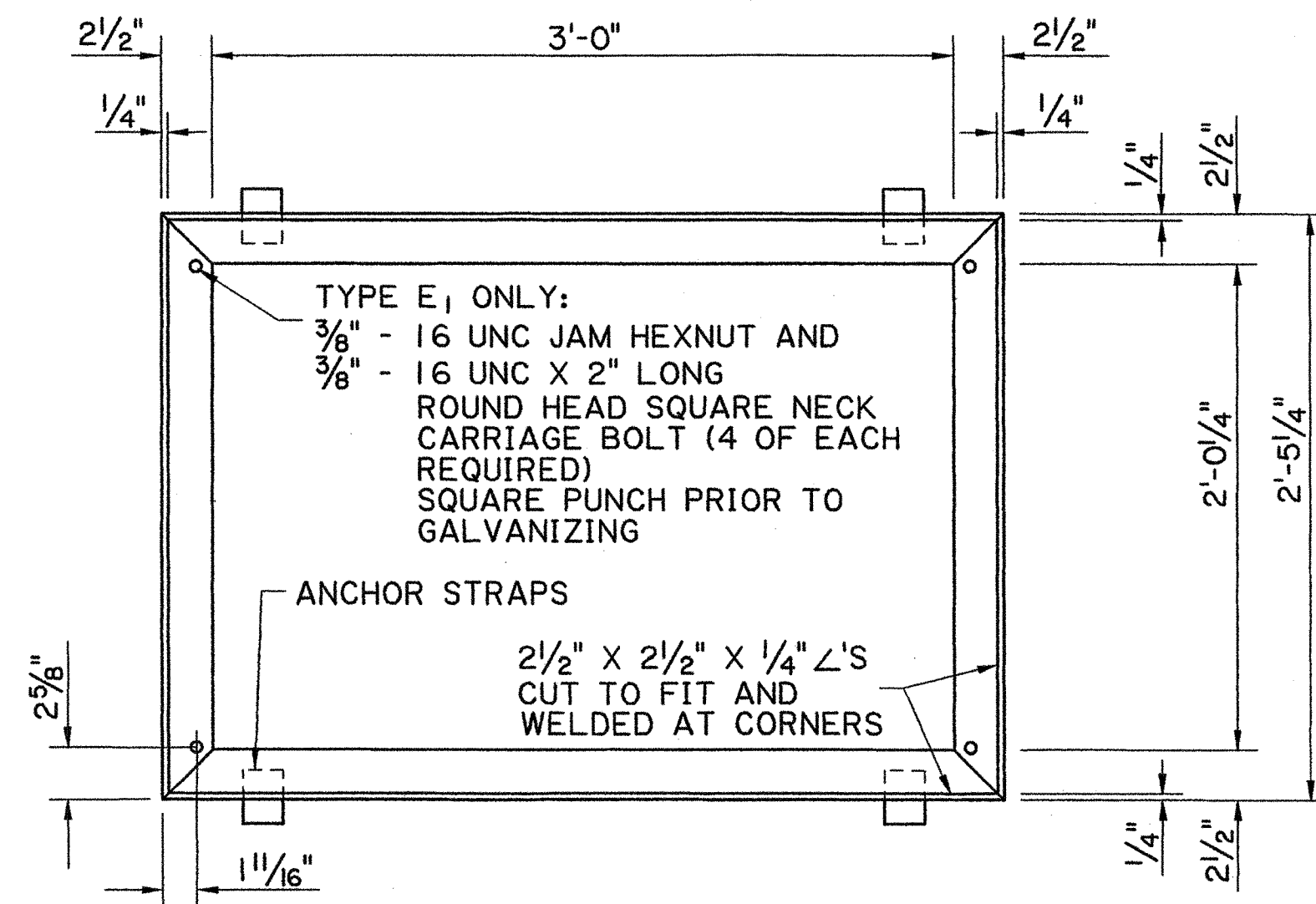
SHEET NUMBER	317
DESIGNED	JEFFERSON
CHECKED	
REVISIONS	
DATE	8-15-77
SHEET	1 OF 5
GENERAL REV.	8-11-06
GENERAL REV.	9-26-94
DATE	8-11-06
APPROVED BY	Wm. H. Temple
CHIEF ENGINEER	
REVISION DESCRIPTION	
BY	JCM
DATE	8-11-06
STATE PROJECT	064-01-0040
PARISH PROJECT	
HYDRAULICS SECTION	
DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES	
STANDARD PLAN	MC-01



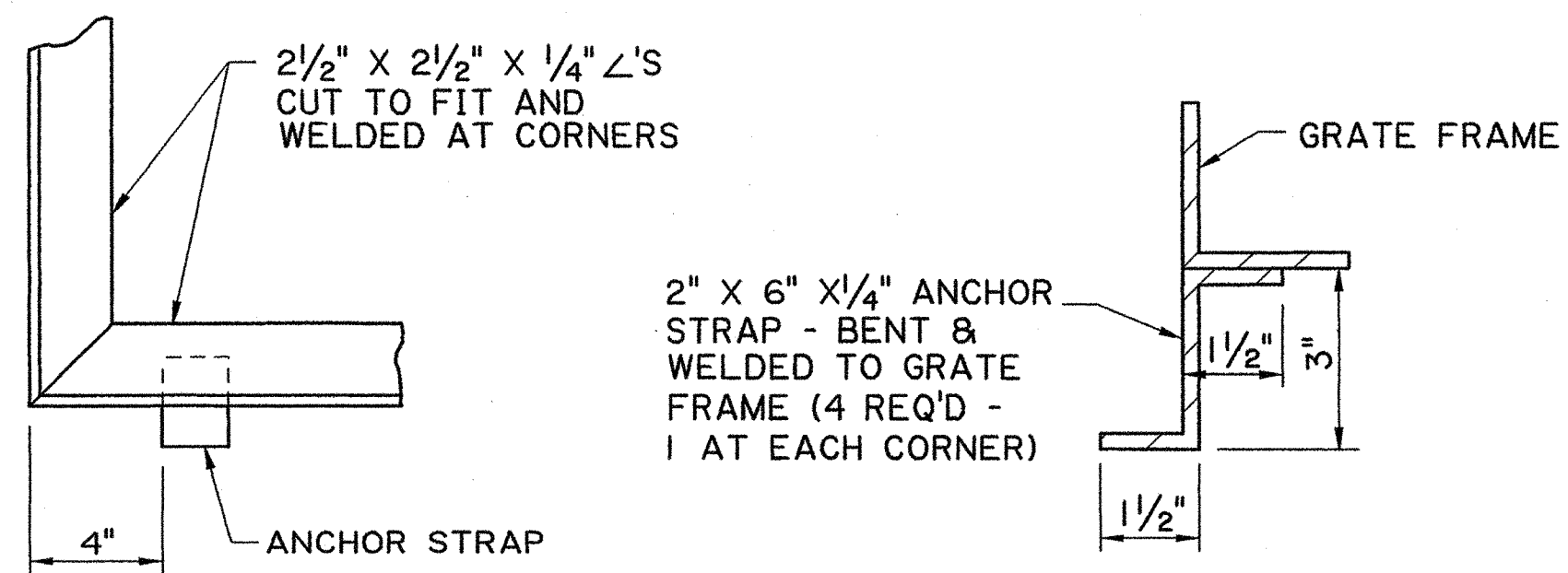
TYPE "D"

DETAILS OF CAST IRON GRATE

NOTES: 1. CASTING TO BE A.S.T.M. CLASS 30
2. WEIGHT OF CASTING = 49 LBS



PLAN

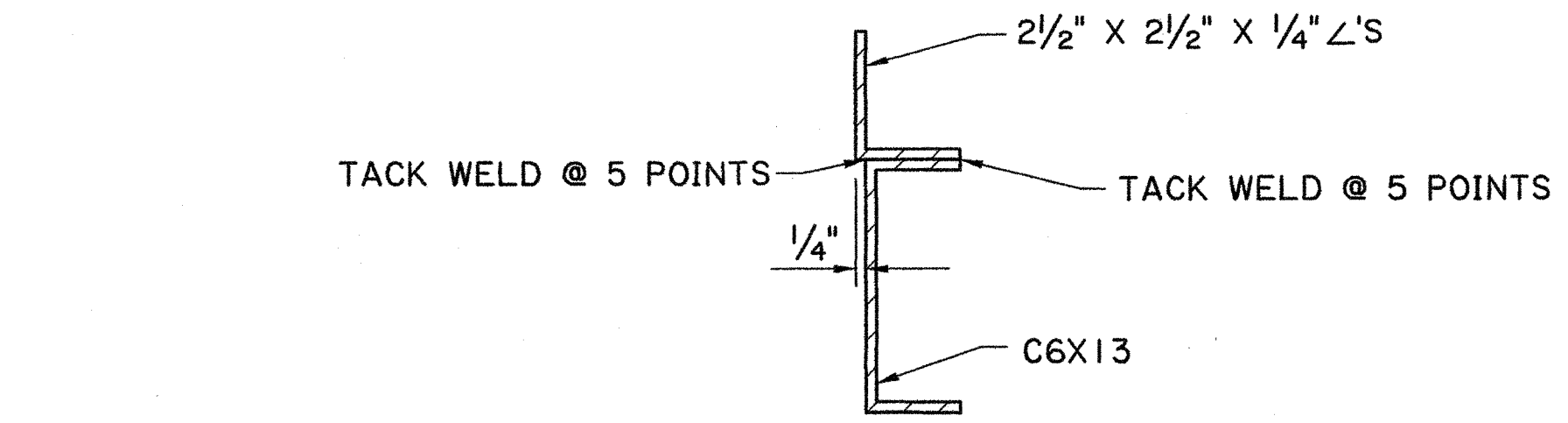


ANCHOR STRAP DETAILS

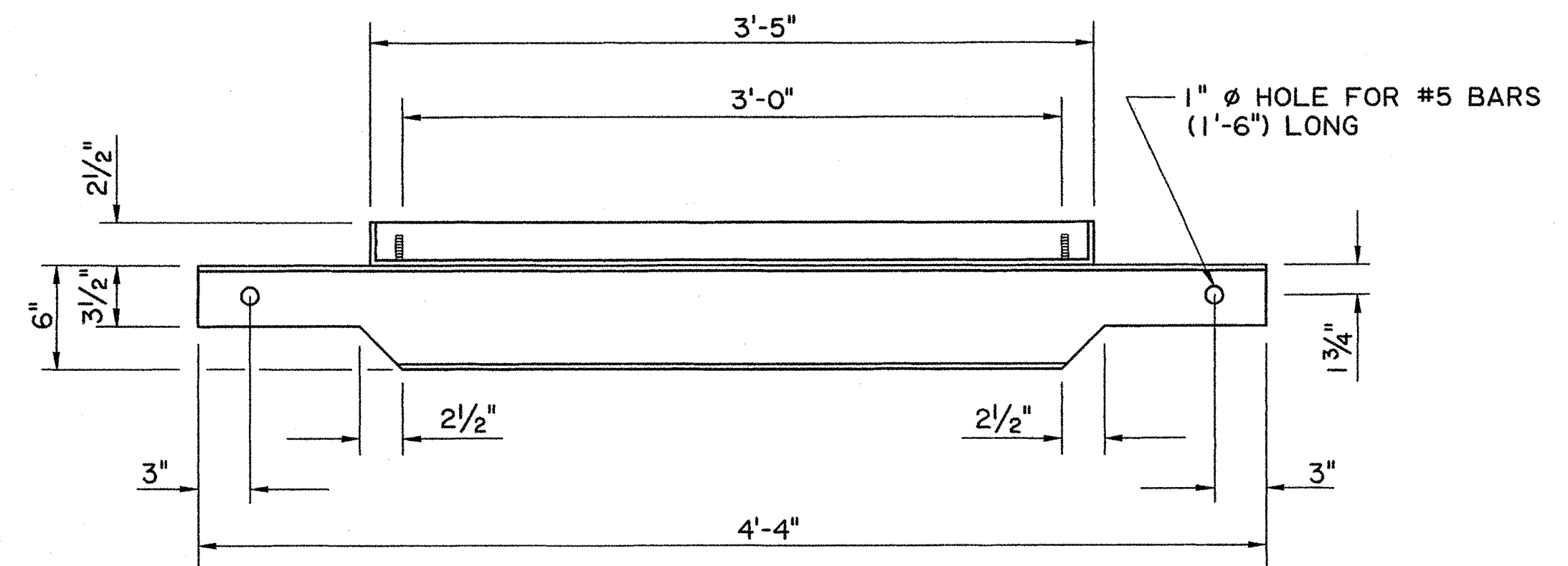
TYPE "E" OR "E1"

DETAILS OF GRATE FRAME

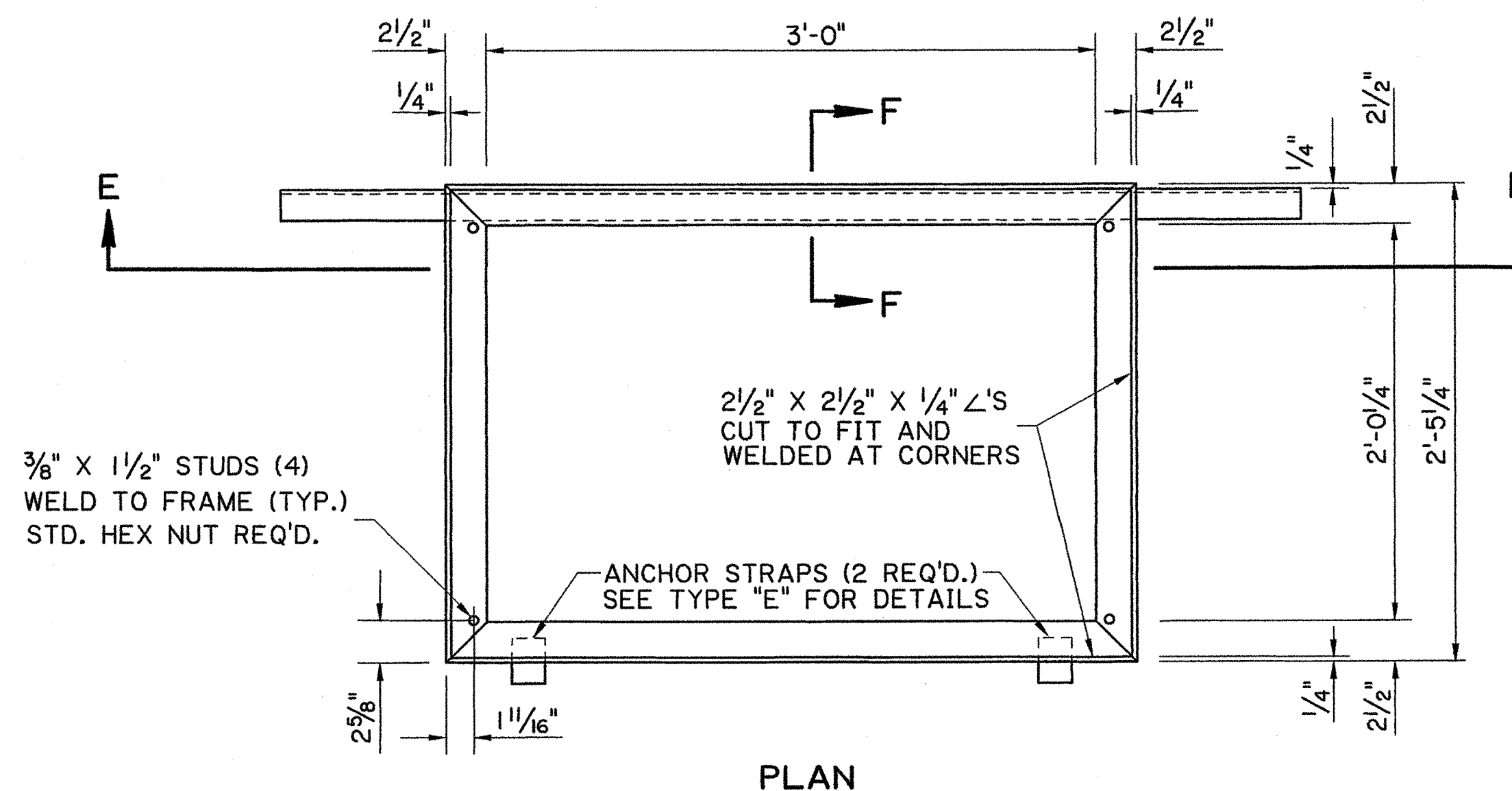
NOTES: 1. GRATE FRAME TO BE GALVANIZED AFTER FABRICATION
2. WEIGHT OF GRATE FRAME = 52 LBS



SECTION F-F



SECTION E-E


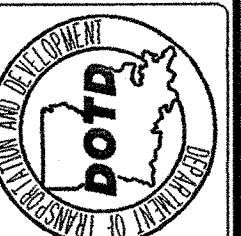


PLAN

TYPE "F"

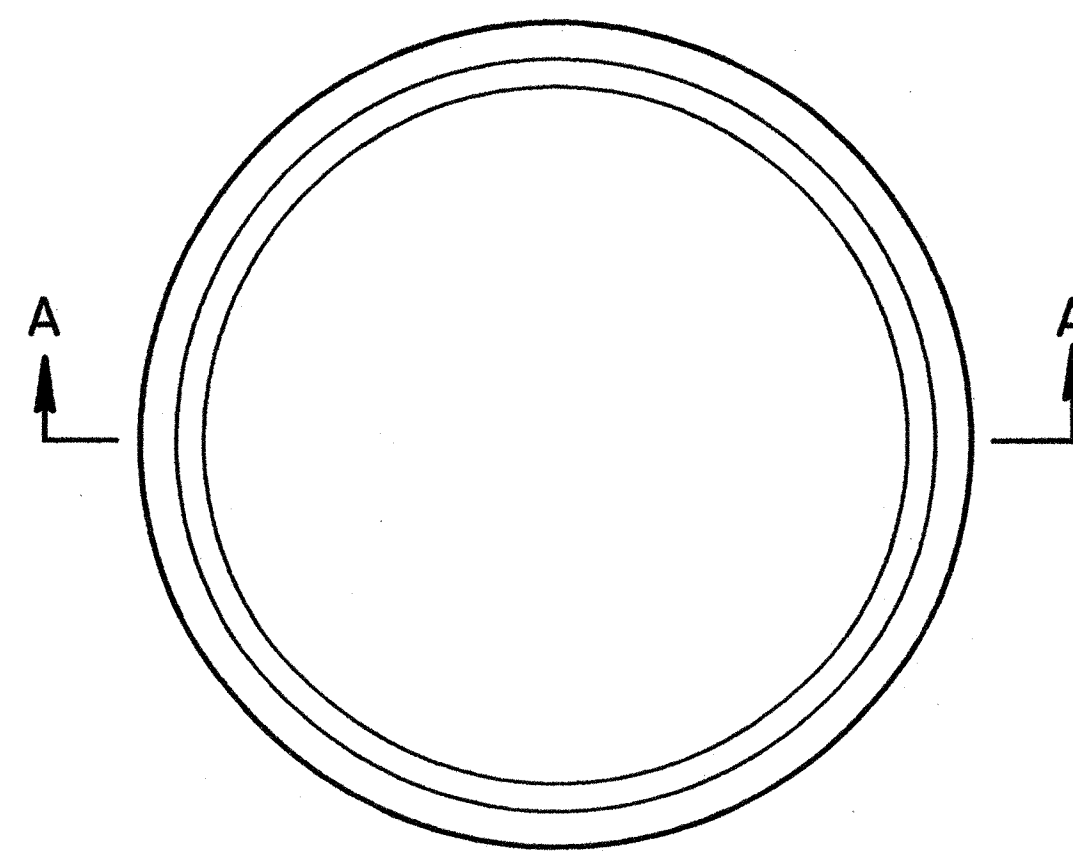
DETAILS OF GRATE FRAME

NOTES: 1. GRATE FRAME TO BE GALVANIZED AFTER FABRICATION
2. WEIGHT OF GRATE FRAME = 52 LBS ± 5%

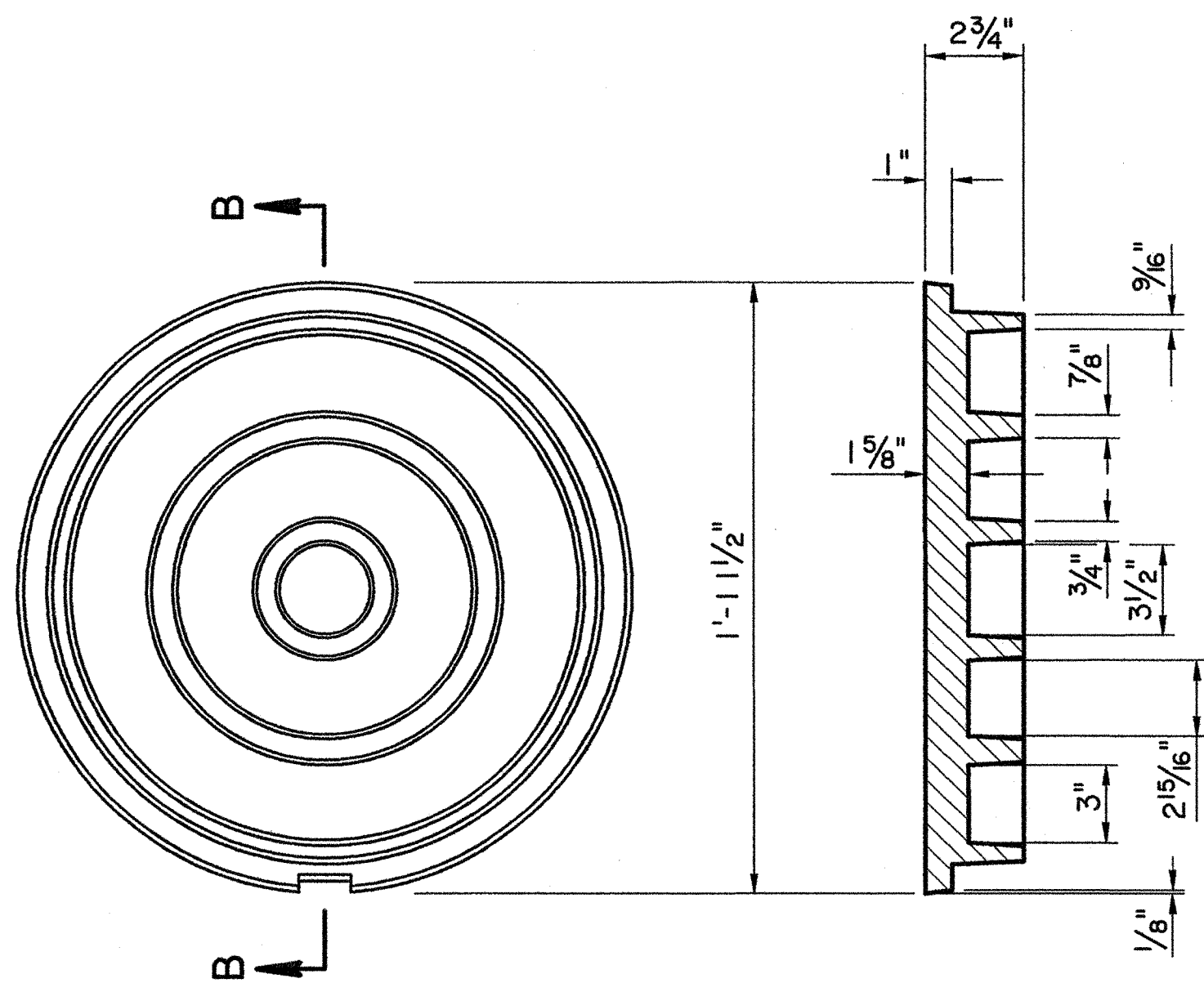
SHEET NUMBER		318	
PARISH		JEFFERSON	
FEDERAL PROJECT			
STATE PROJECT		064-01-0040	
DESIGNED	CHECKED	DATE	SHEET
RETAINER	CHEGRED	8-15-77	2 OF 5
GENERAL REV. - ADD TYPE K1, REVISED TYPES C,E,I,N		DATE	BY
GENERAL REVISIONS - DELETE TYPES G,J,L,M,O		8-11-06	B-1-06
REVISION DESCRIPTION		DATE	
		8-11-06	
APPROVED BY		DATE	
CHIEF ENGINEER		8-11-06	
			
DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES			
STANDARD PLAN		MC-01	
			
HYDRAULICS SECTION			



PLAN OF CAST IRON COVER

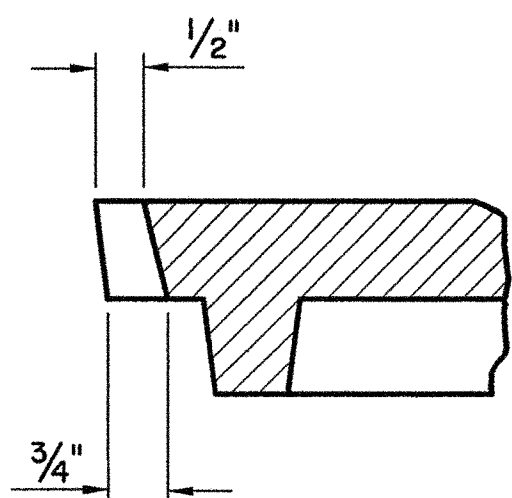


PLAN OF CAST IRON FRAME



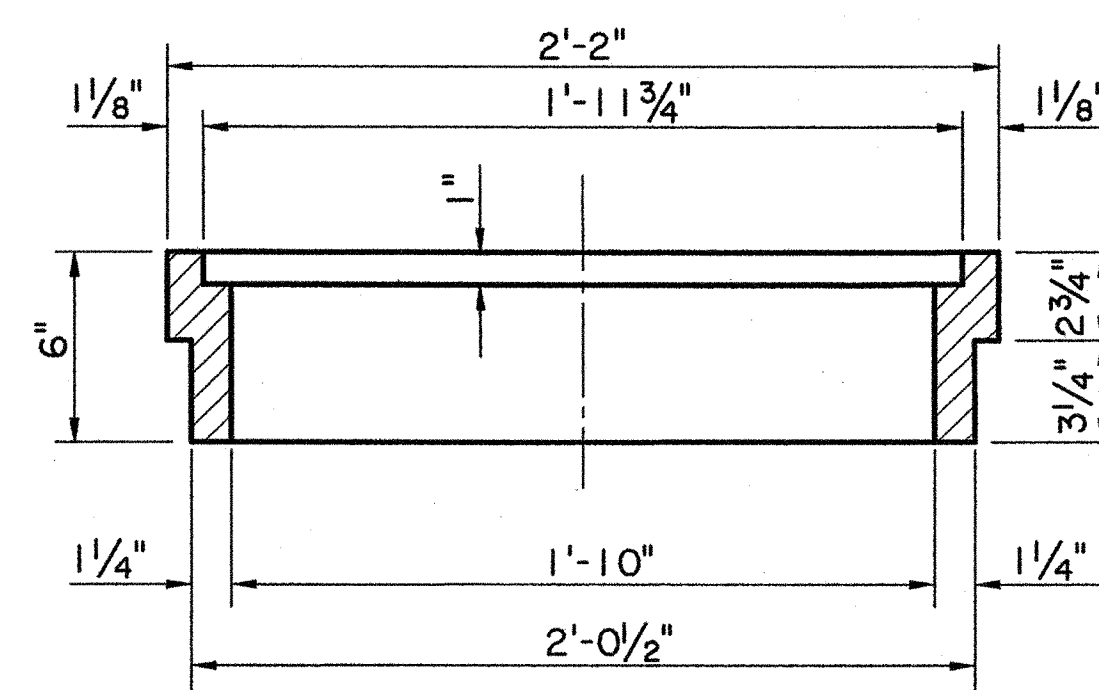
SECTION B-B

BOTTOM OF CAST IRON COVER



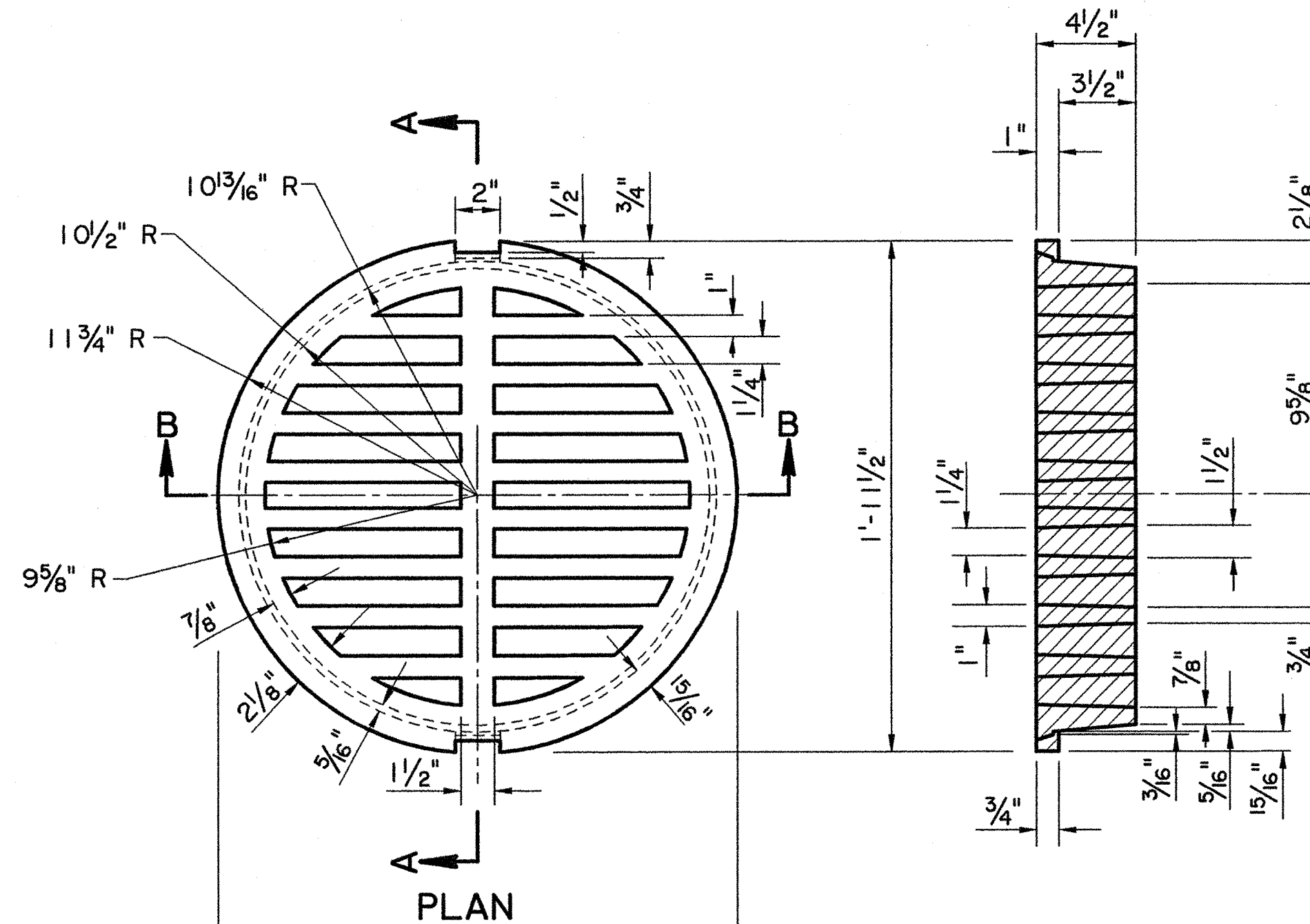
PICKSLOT DETAIL

DETAILS OF CAST IRON COVER & FRAME
NOTES: 1. APPROX. WEIGHT OF CAST IRON COVER = 196 LBS.
2. APPROX. WEIGHT OF CAST IRON FRAME = 180 LBS.



SECTION A-A

TYPE "K"



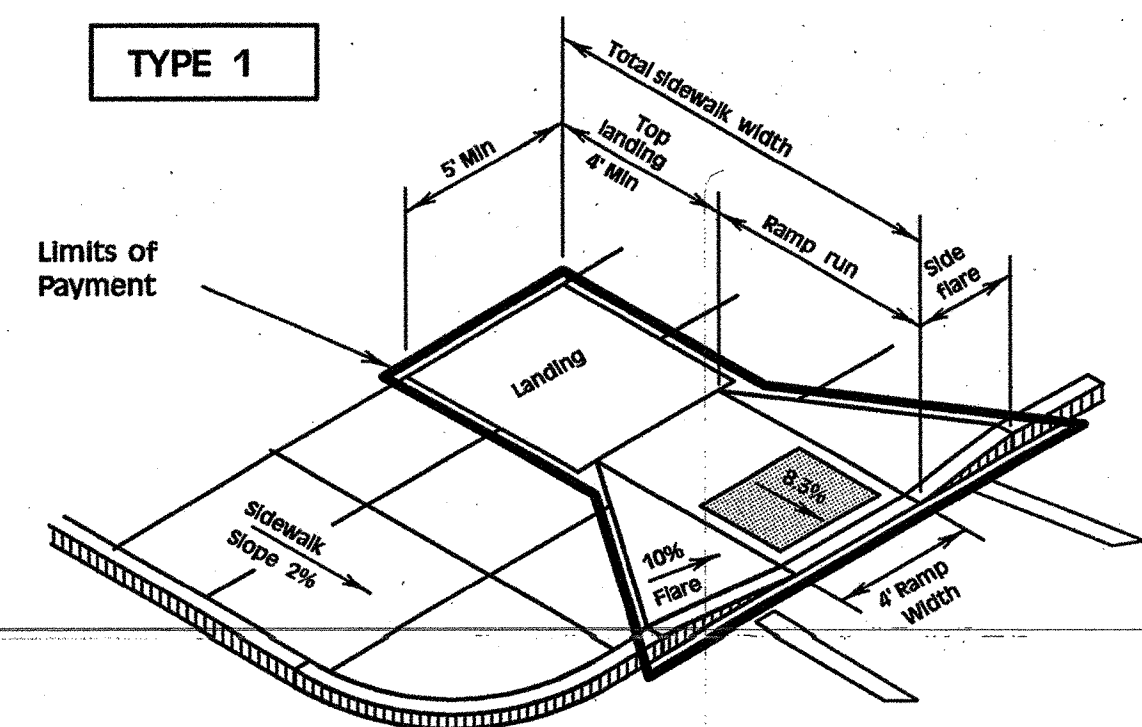
SECTION A-A

SECTION B-B

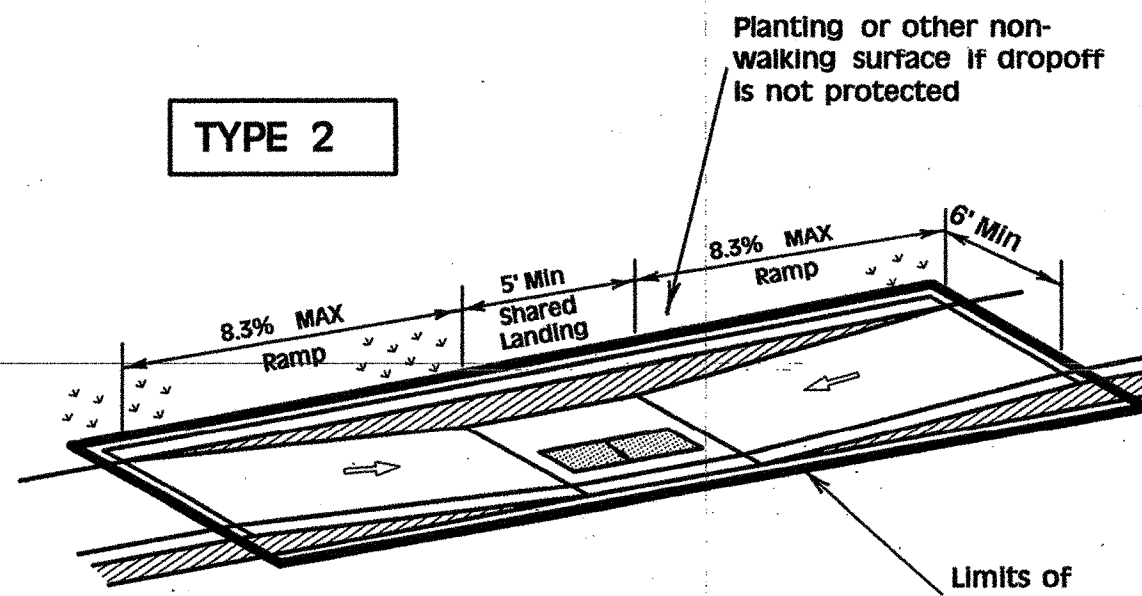
DETAILS OF CAST IRON GRATE
NOTES: 1. APPROX. WEIGHT OF CAST IRON COVER = 250 LBS.
2. TO BE USED WITH TYPE "K" CAST IRON FRAME.

TYPE "K1"

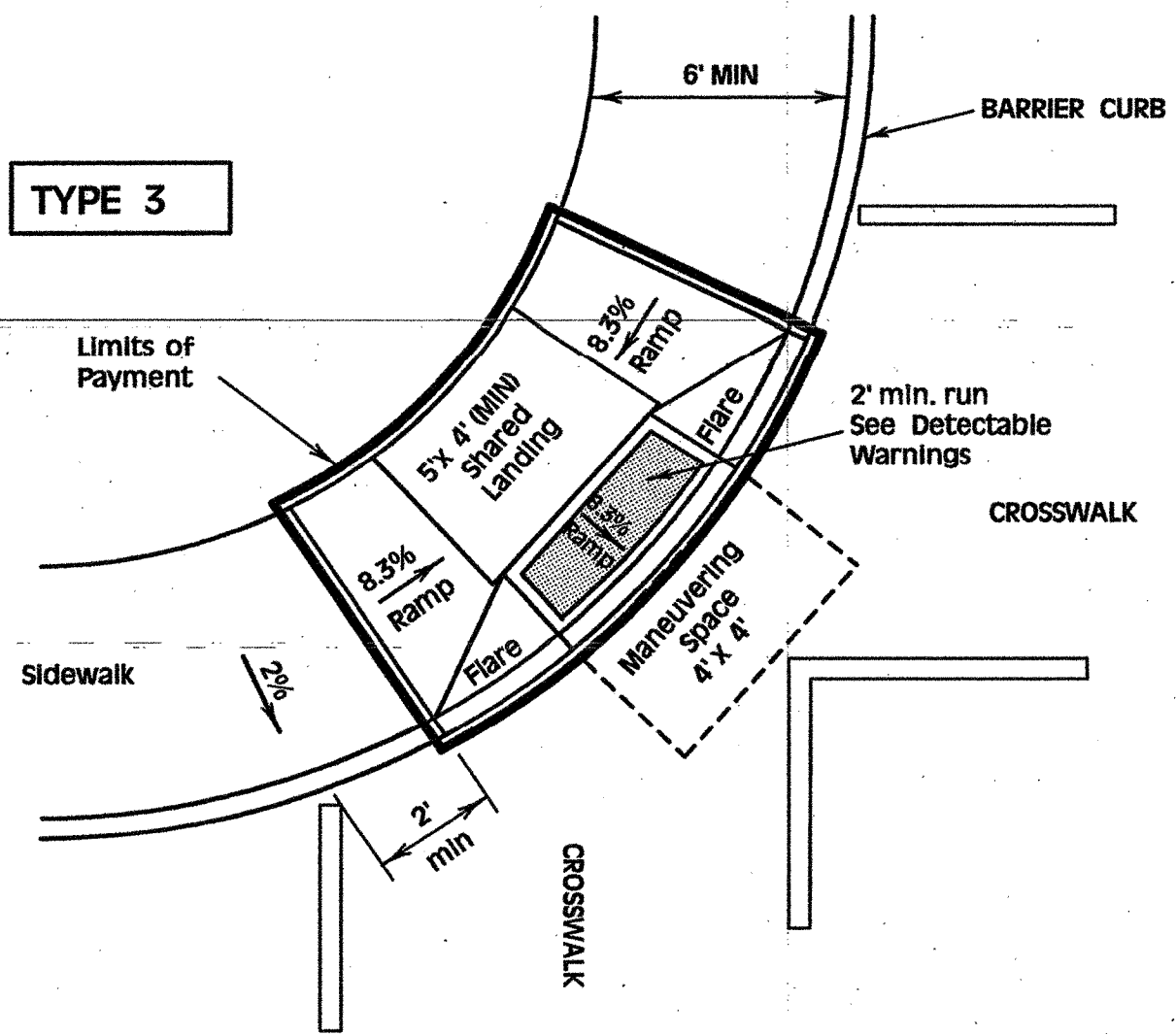
SHEET NUMBER 320		PARISH JEFFERSON	
DESIGNED		FEDERAL PROJECT	
CHECKED		STATE PROJECT	
RETAILED		DATE 8-15-77	
CHECKED		SHEET 4 OF 5	
DATE 8-11-04		PROJECT 064-01-0040	
REVISION DESCRIPTION		BY	
8-11-06 GENERAL REV. - ADD TYPE K1, REVISED TYPES C,E,I,N		JDK	
9-26-94 GENERAL REVISIONS - DELETE TYPES G,J,L,M,O		JCM	
APPROVED BY		DATE	
W. H. T. J.		8-11-04	
CHIEF ENGINEER			
STATE OF LOUISIANA			
DETAILS OF GRATES, GRATE FRAMES AND COVERS FOR CATCH BASINS AND MANHOLES			
STANDARD PLAN MC-01			
HYDRAULICS SECTION			



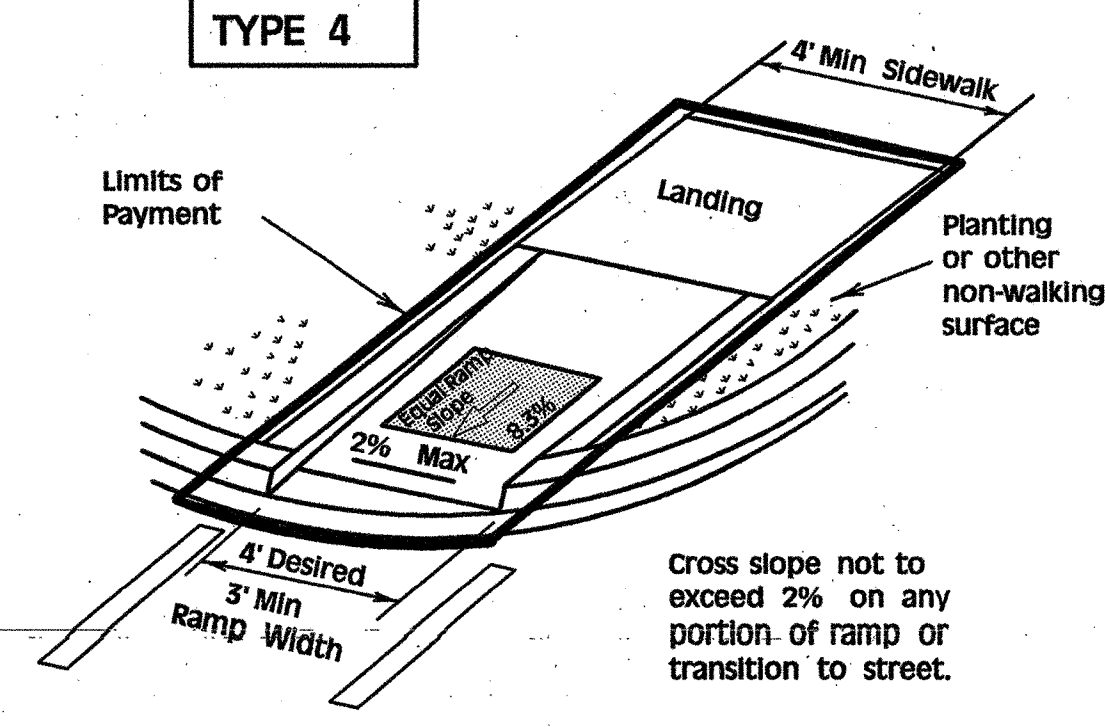
PERPENDICULAR CURB RAMP



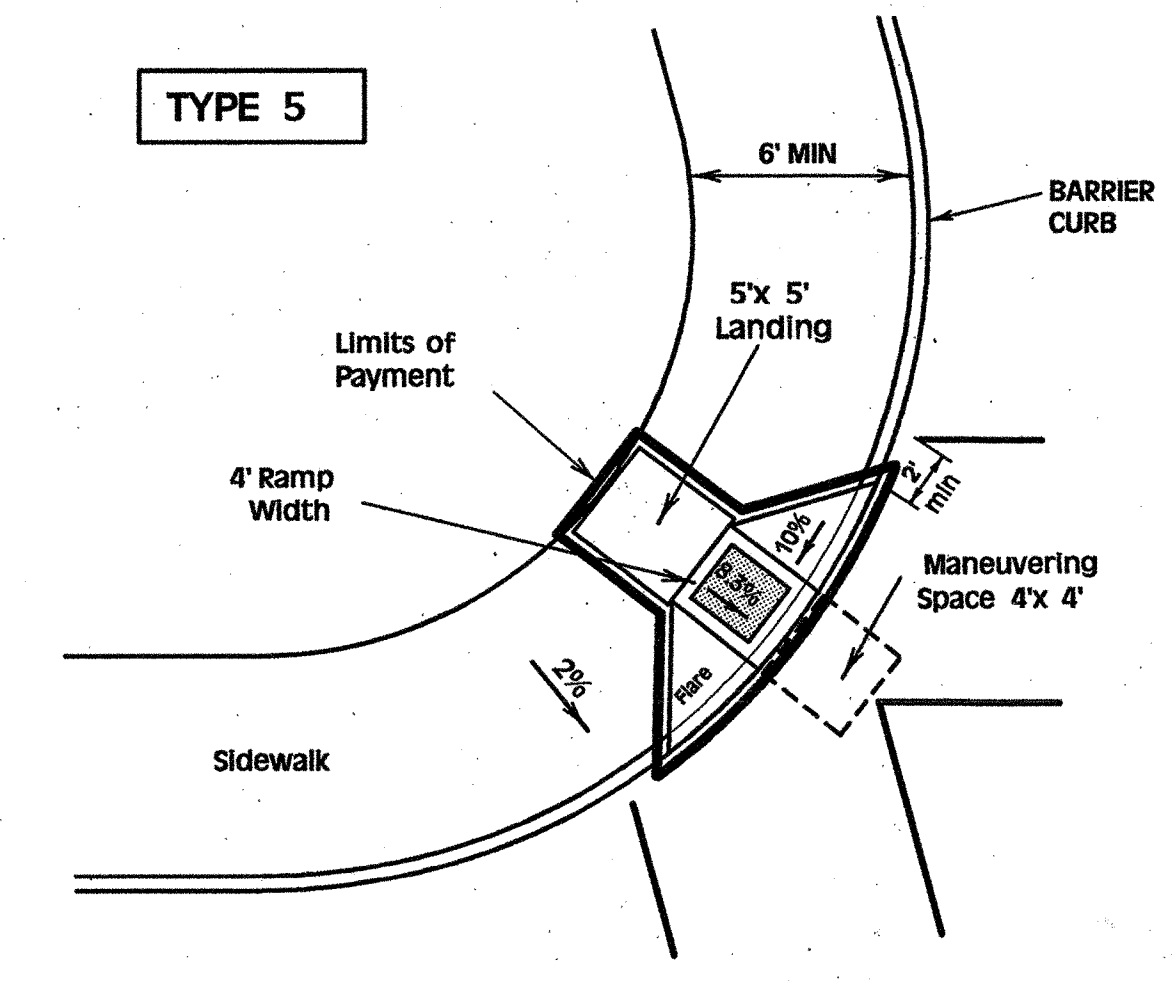
PARALLEL CURB RAMP
(Use only where water will not pond in the landing)



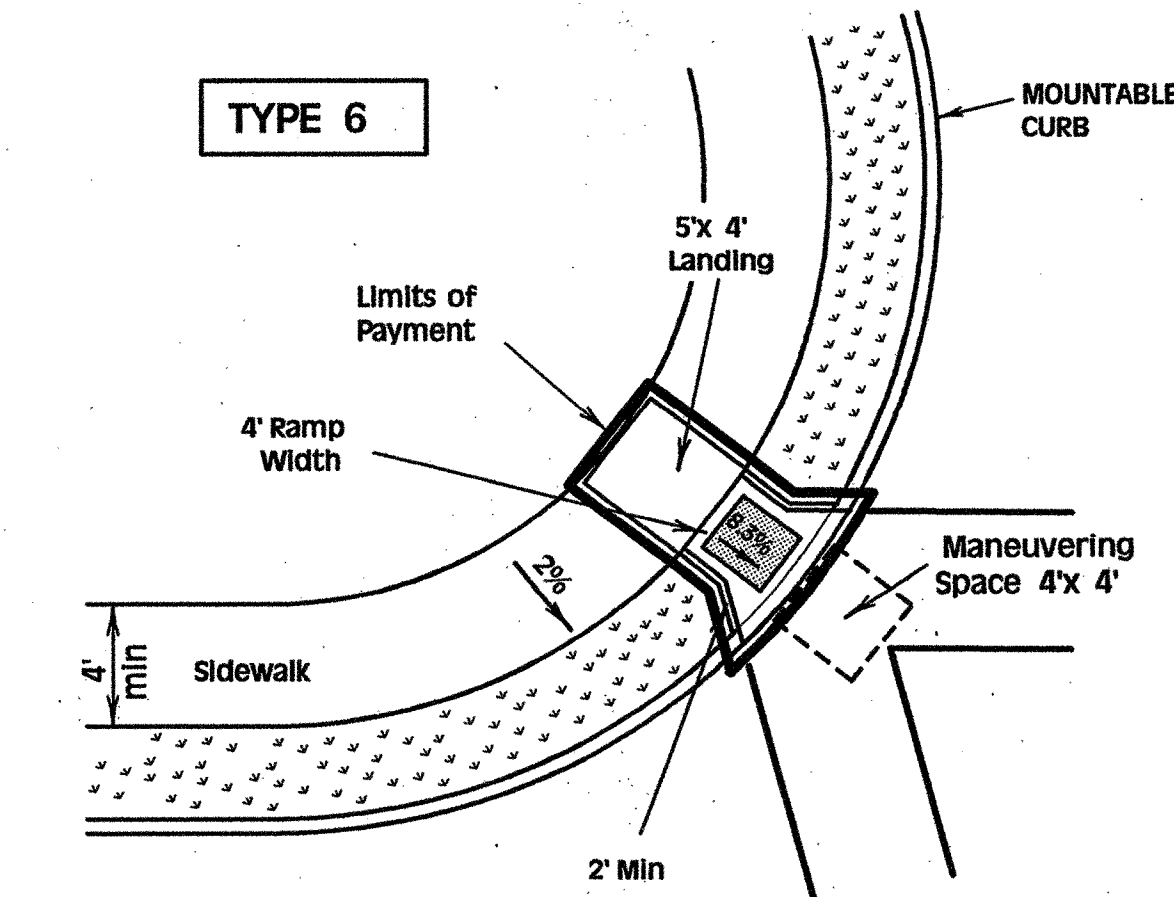
DIAGONAL COMBINATION CURB RAMP
Perpendicular to the Tangent of the Curb Radius and Contained in crosswalk



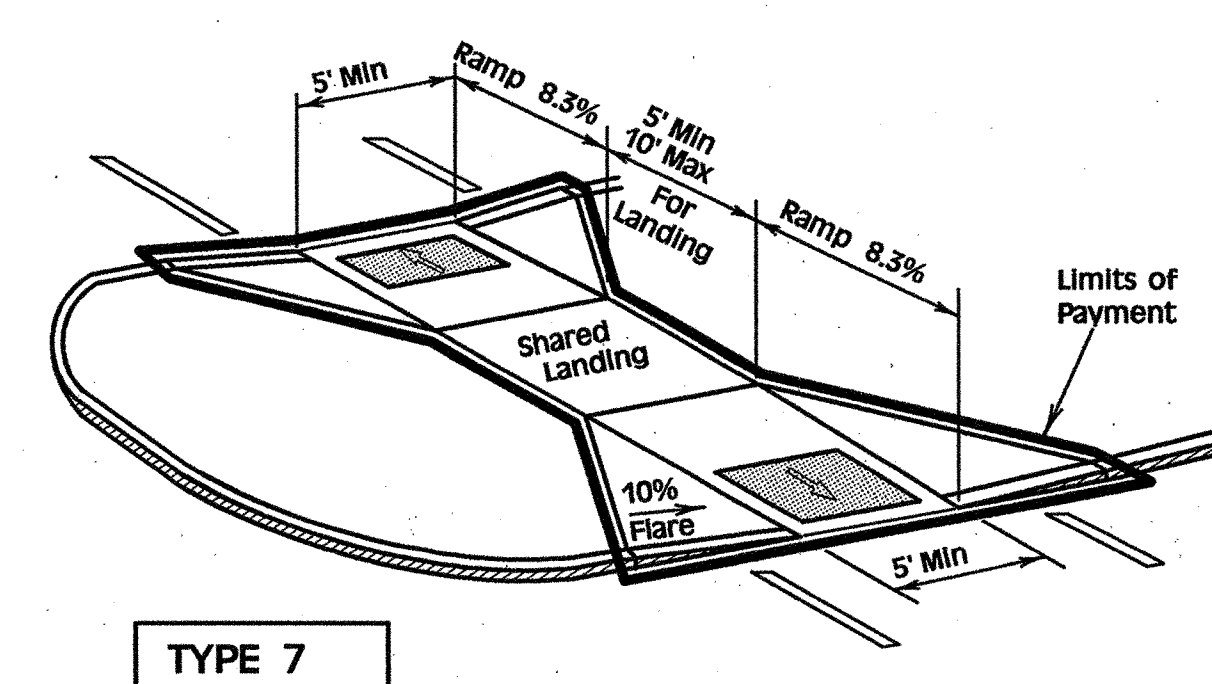
DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk set back from curb)



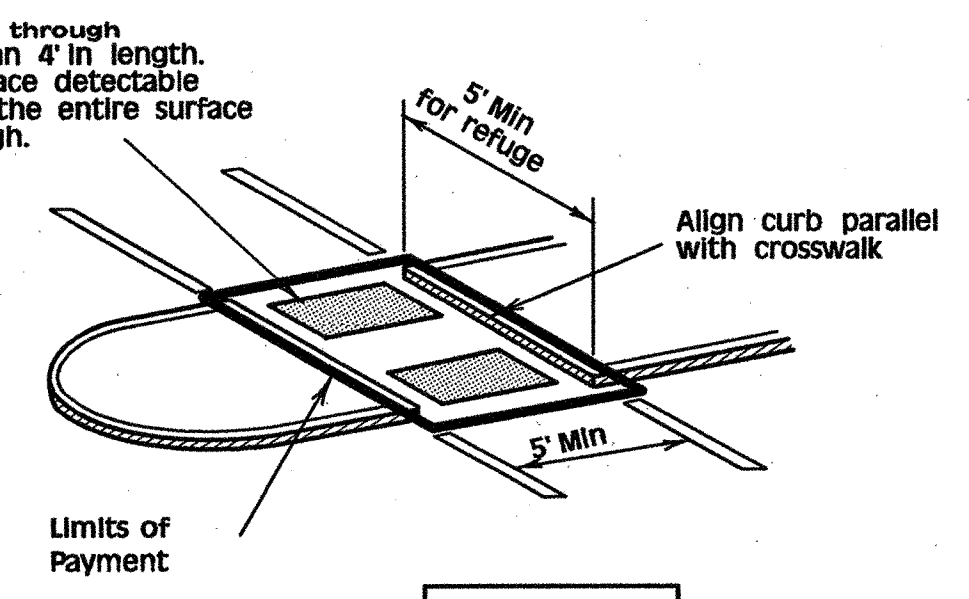
DIAGONAL CURB RAMP (FLARED SIDES)



DIAGONAL CURB RAMP (RETURNED CURB)

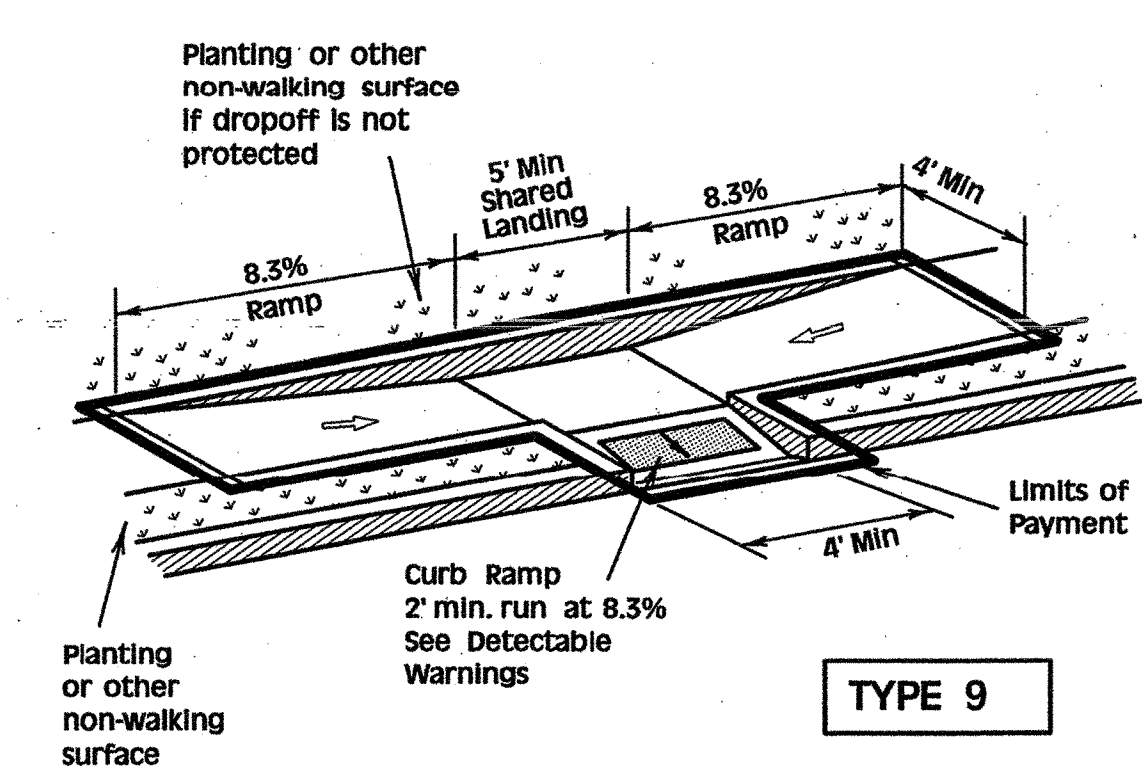


TYPE 7

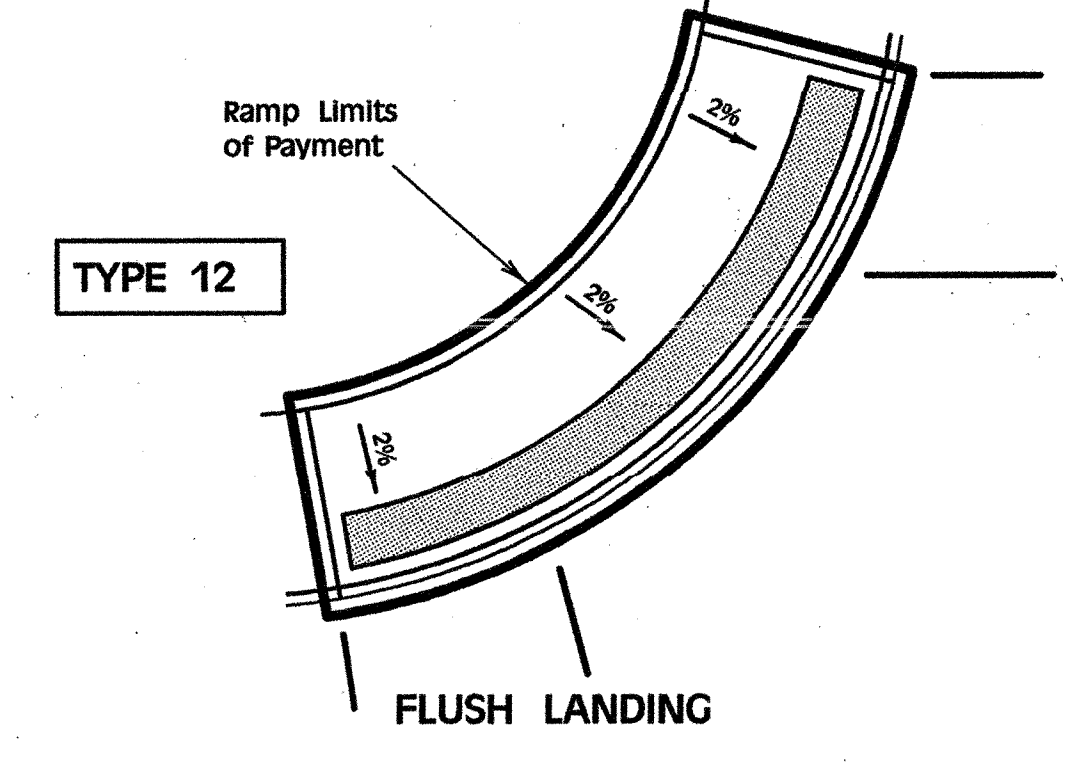


TYPE 8

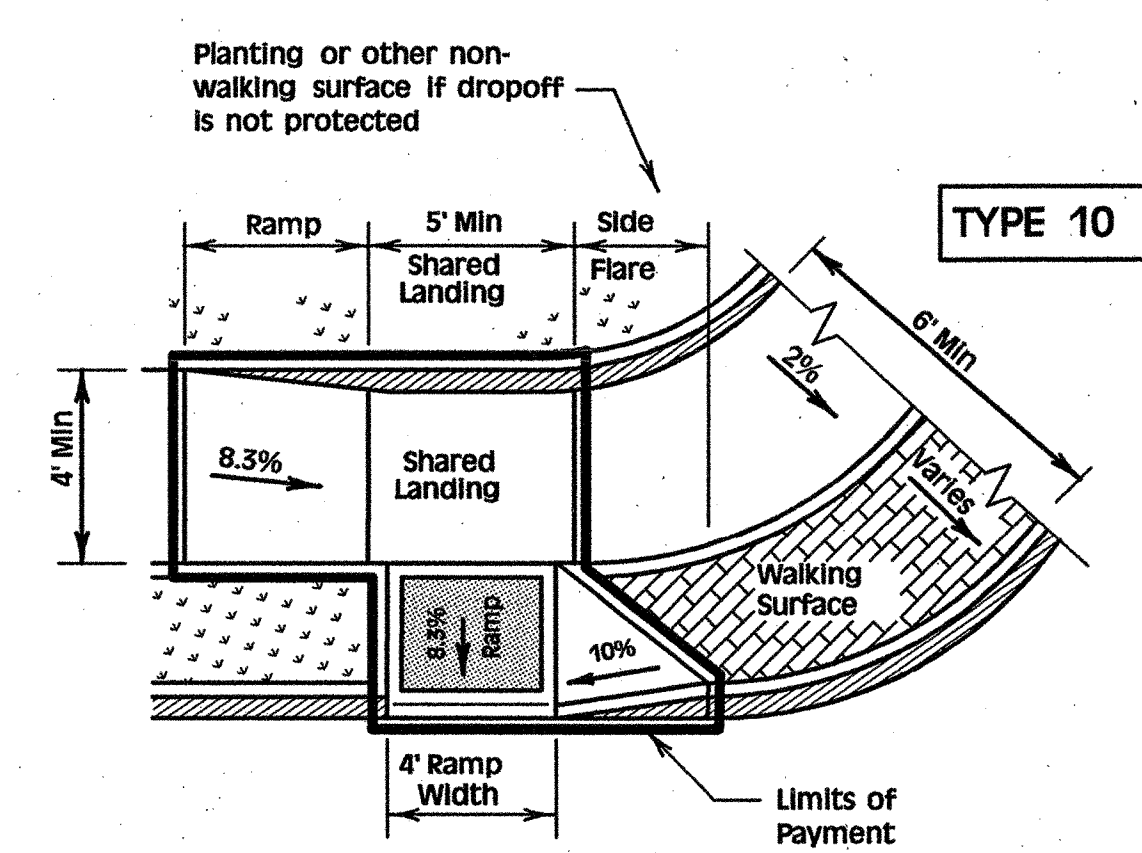
CURB RAMPS AT MEDIAN ISLANDS



TYPE 9

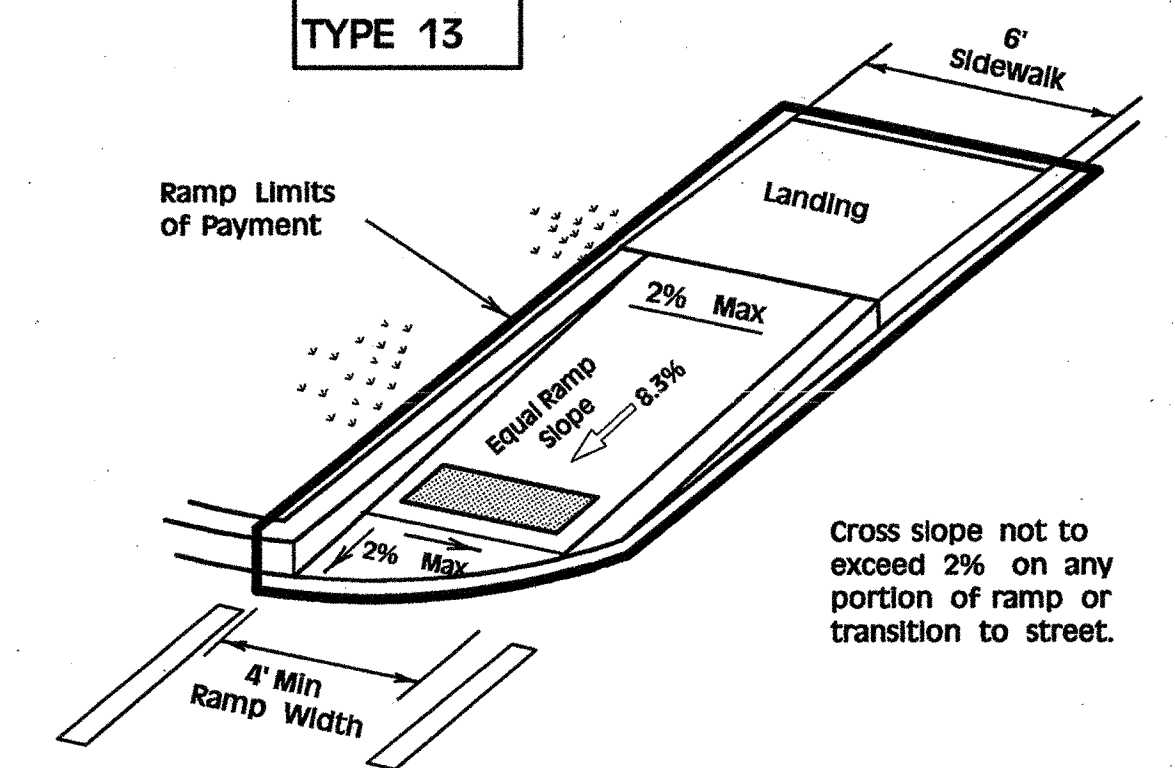


TYPE 12



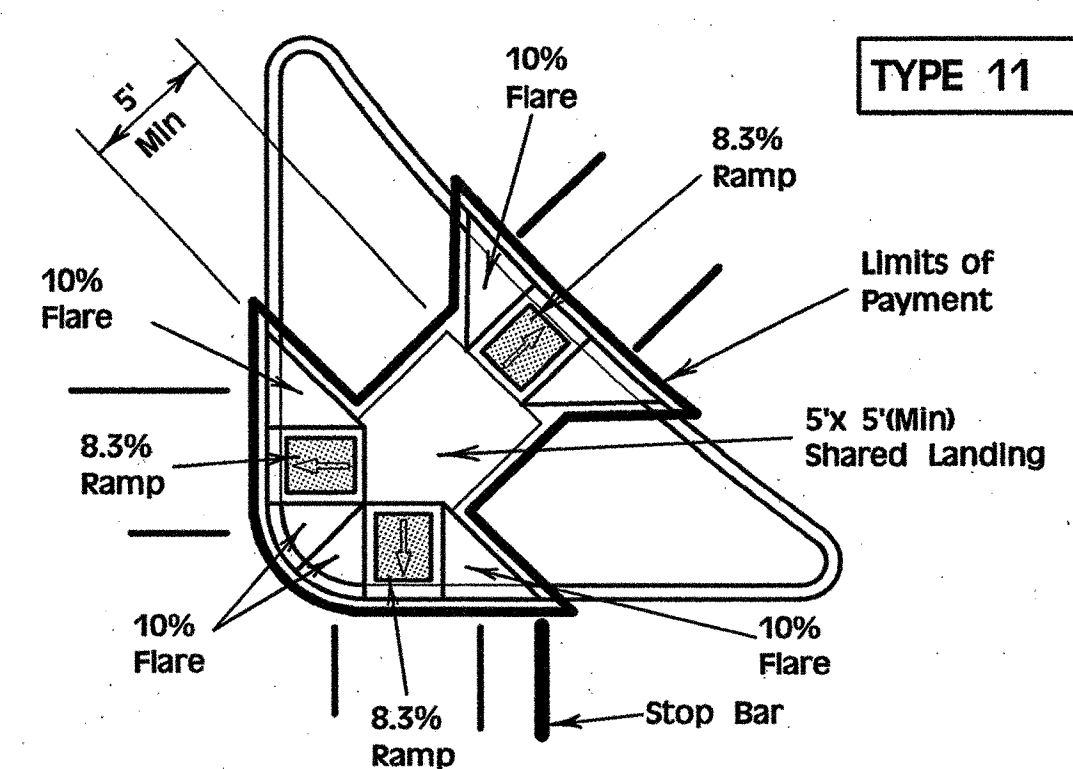
TYPE 10

PERPENDICULAR SIDEWALK RAMP WITH SINGLE FLARE DETAIL



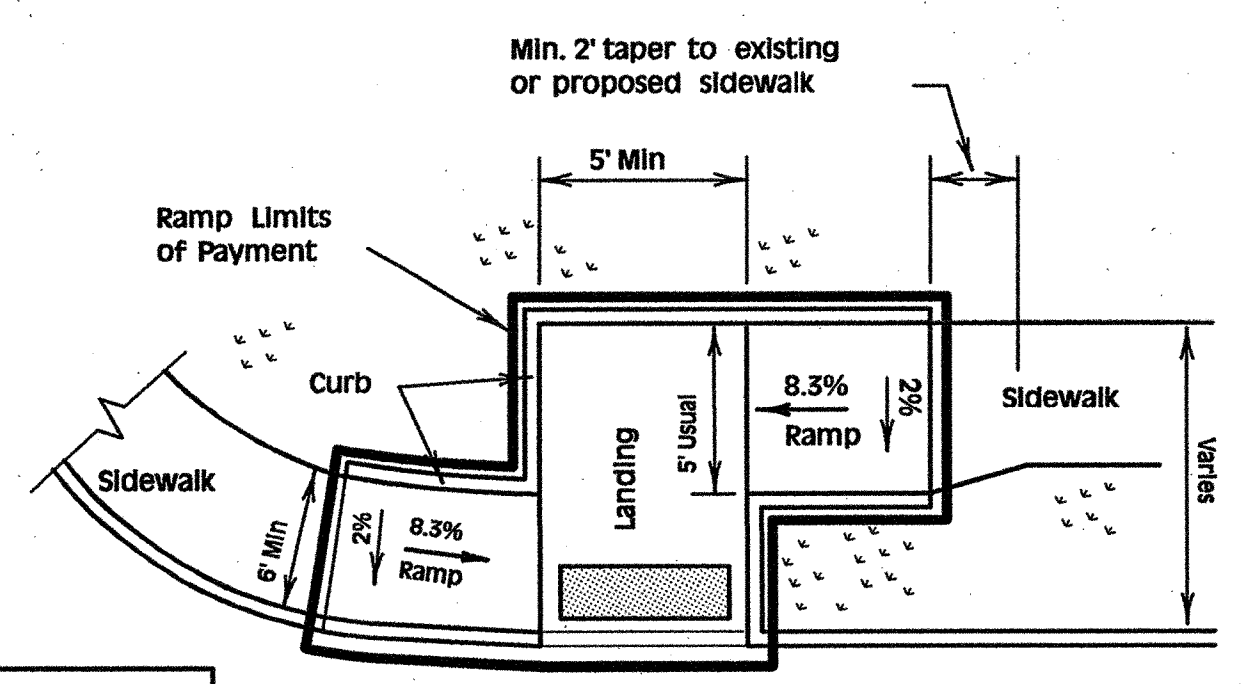
TYPE 13

DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk adjacent to curb)



TYPE 11

COMBINATION ISLAND RAMPS



TYPE 14

OFFSET PARALLEL CURB RAMP

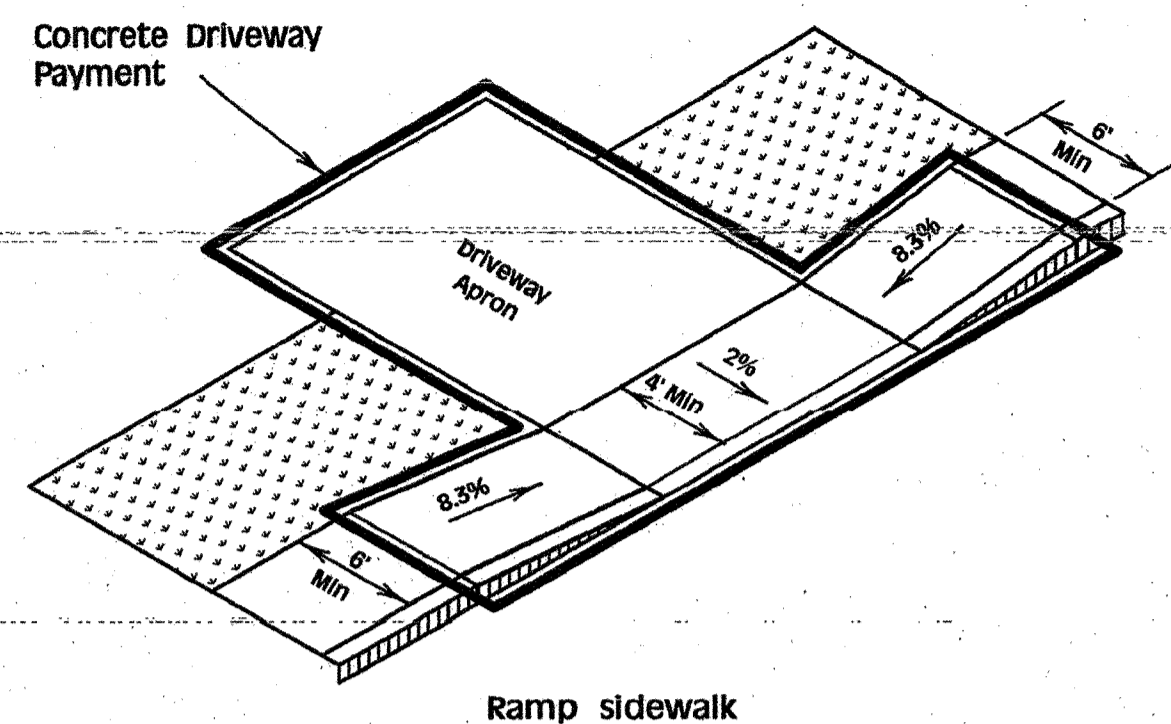
NOTES:
See General Notes on sheet 2 of 4 for more information.

Denotes planting or non-walking surface.

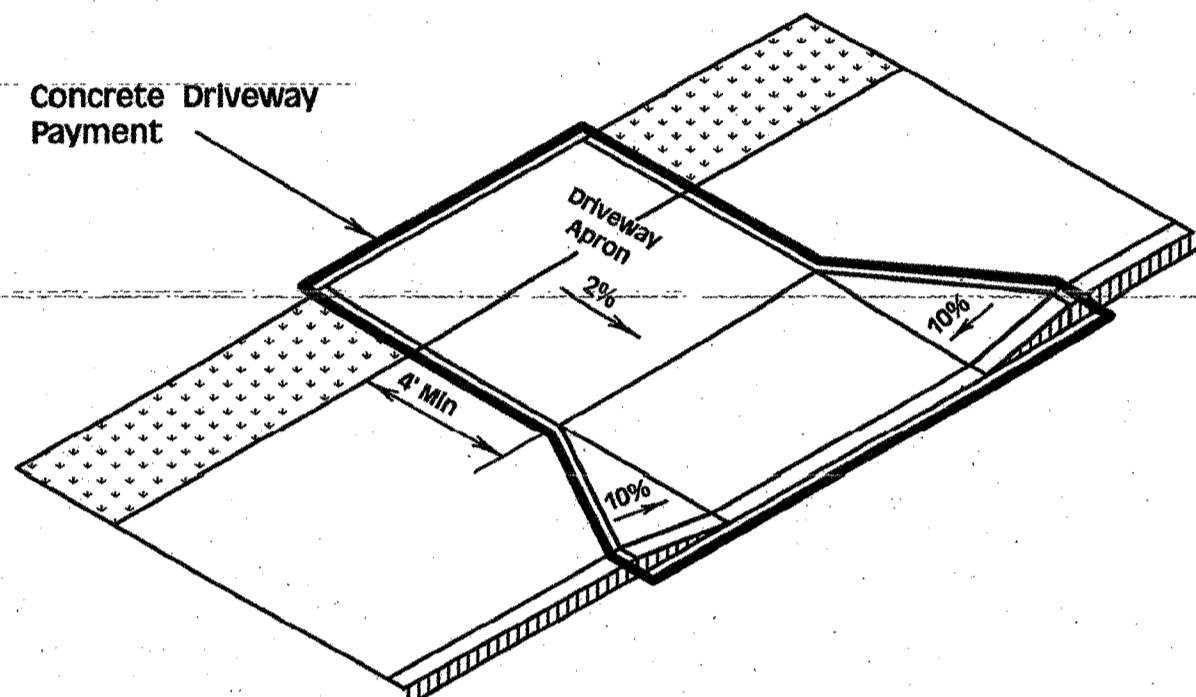
SHEET NUMBER	322
DESIGNED	V.A.H.
CHECKED	E.A.W.
DETAILED	B.H.C.
CHECKED	V.A.H.
DATE	05/23/07
NO.	5-5-08
BY	W. J. Long
DESCRIPTION	PEDESTRIAN FACILITIES CURB RAMPS
PROJECT	064-01-0040
STATE	LA
SHEET	4 of 4

VALERIE A. HORTON
REG. No. 22332
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

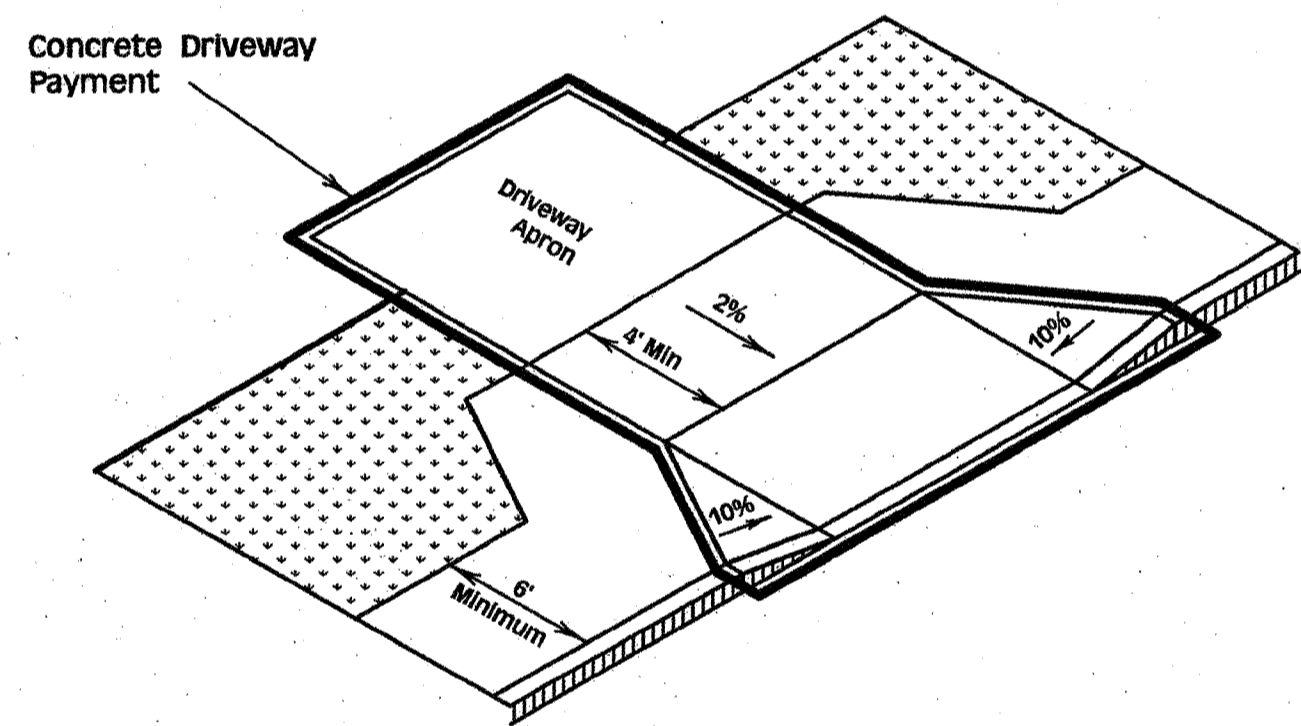
ROAD DESIGN



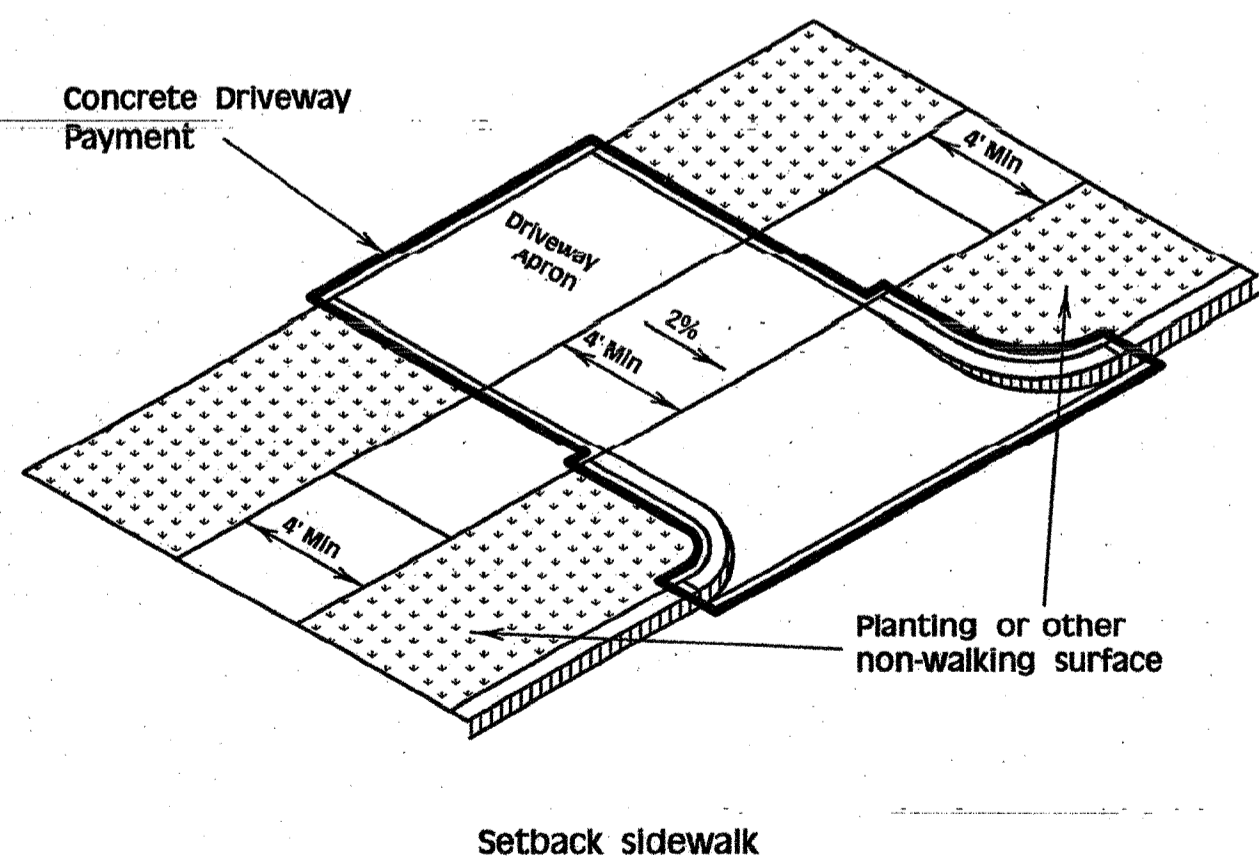
Ramp sidewalk



Wide sidewalk

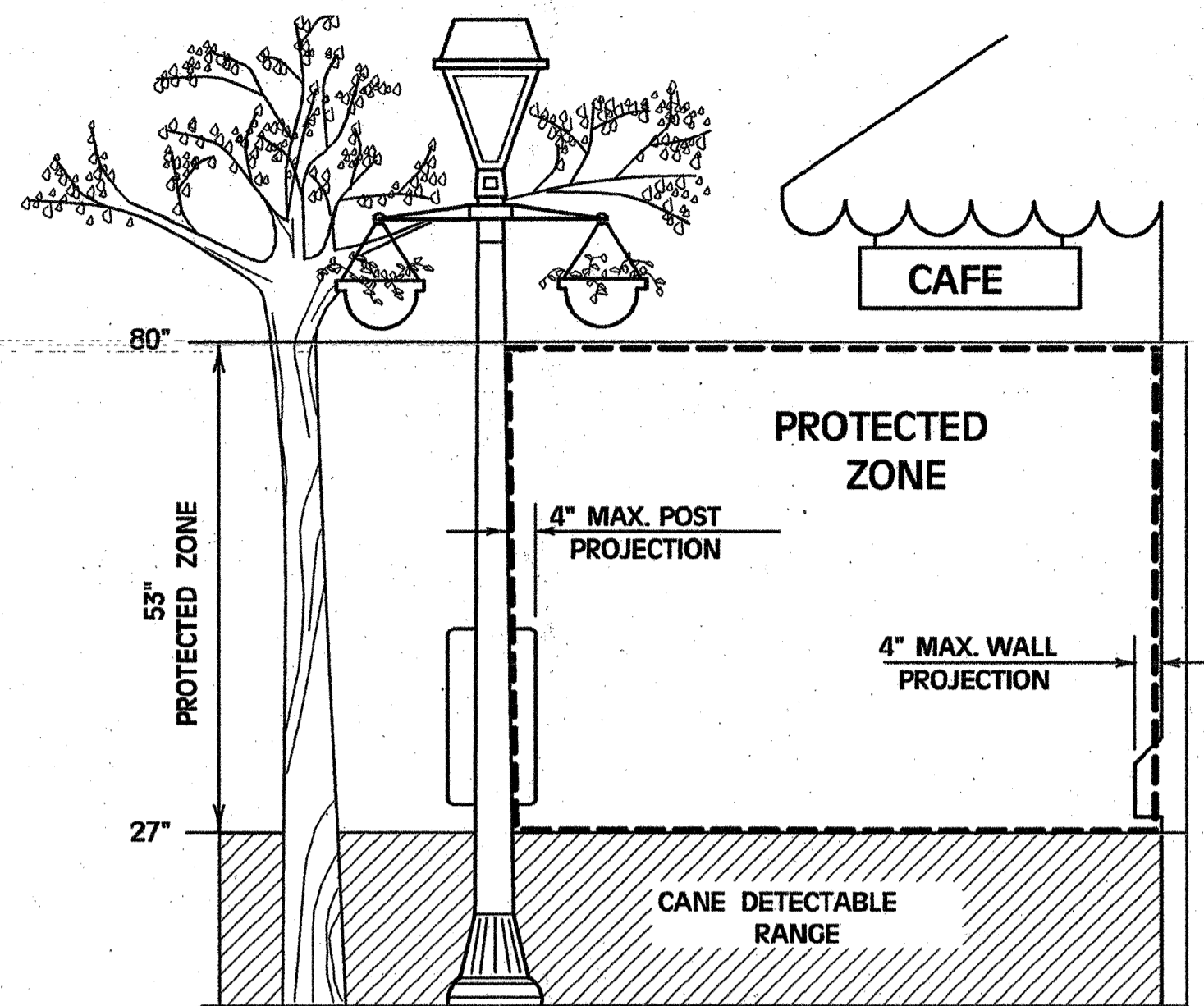


Apron offset sidewalk



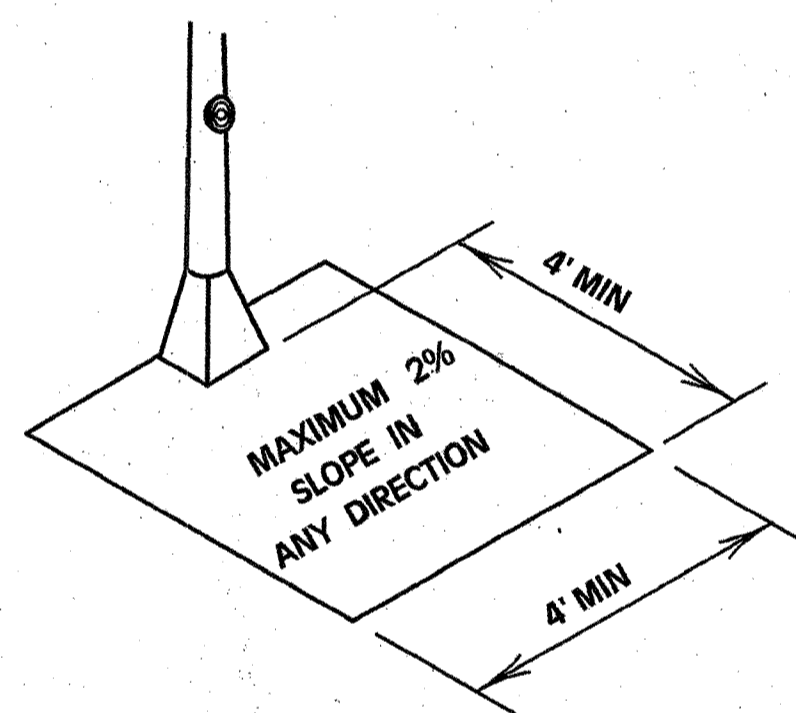
Setback sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

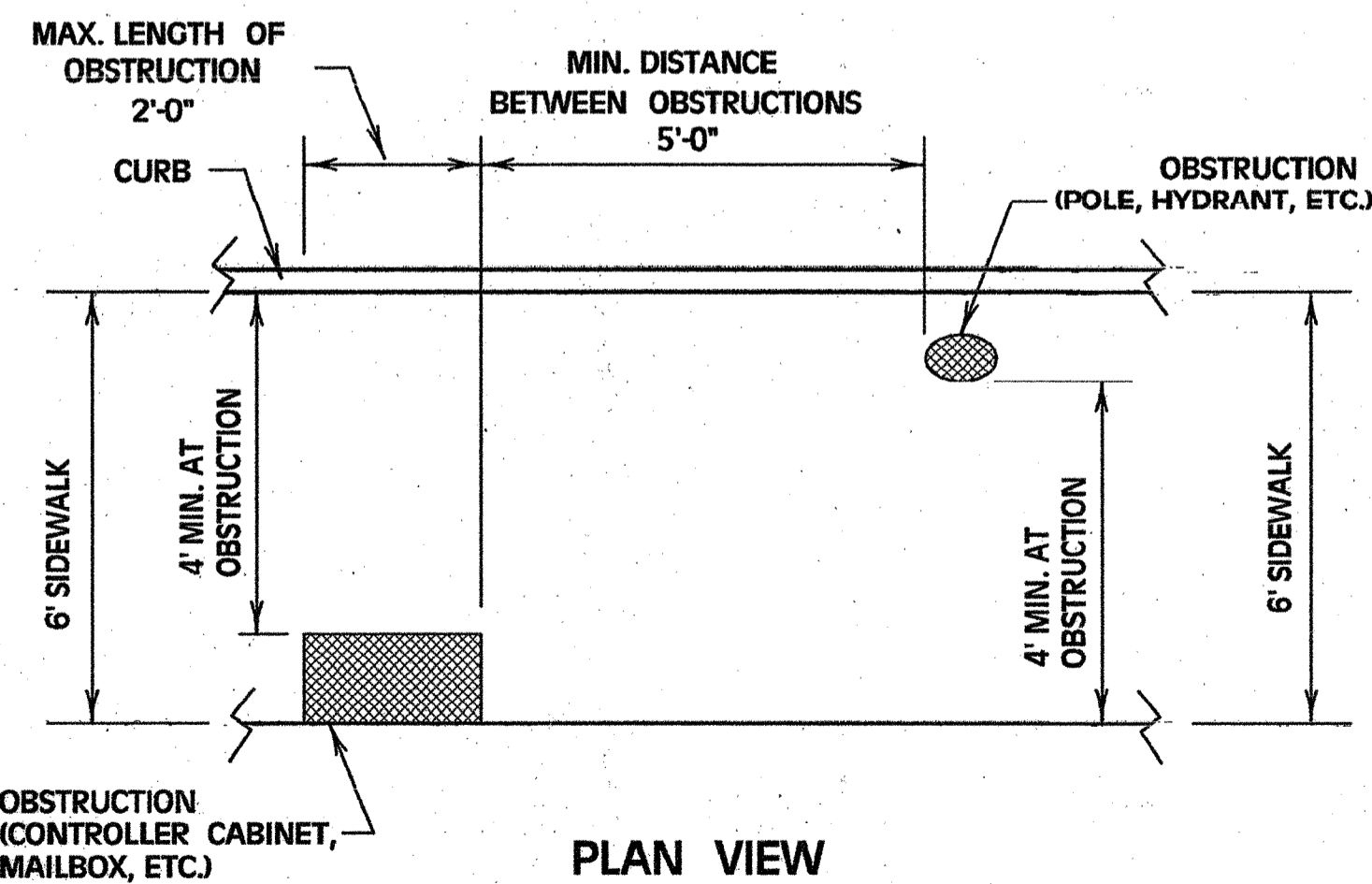


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.



CLEAR GROUND SPACE AT PEDESTRIAN PUSH BUTTON



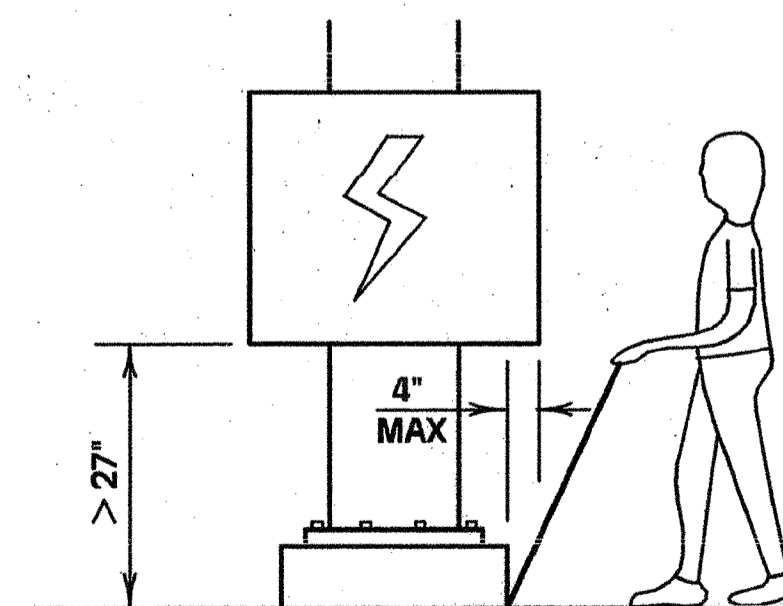
PLAN VIEW

PLACEMENT OF STREET FIXTURES

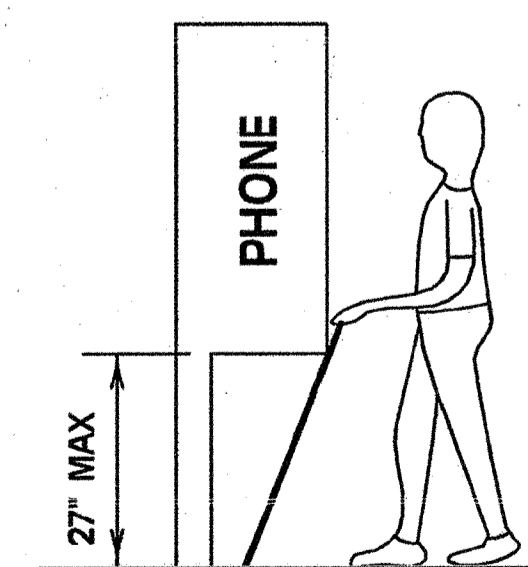
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

Pedestrian Facilities General Notes

- All slopes shown are maximum allowable. The least possible slope that will still drain properly should be used.
- The minimum sidewalk width is 4'. Where the sidewalk is adjacent to back of a barrier curb, the sidewalk width shall be 6'. Where a 4' sidewalk cannot be provided due to site constraints, a minimum 3' sidewalk with 5' x 5' passing areas at intervals not to exceed 200 ft is required.
- Changes in the level of sidewalk should be no more than 1/4". Changes in level greater than 1/4" but equal to or less than 1/2" may be beveled at a 1:2 maximum slope. Any change of level greater than 1/2" requires a ramp.
- The maximum desirable slope of a curb ramp shall be 7.1% (1:14). Ramp length or grade of approach sidewalks may be adjusted as directed by the Project Engineer. In alterations, curb ramp slopes may be 10% for a maximum rise of 6" or 12.5% for a maximum rise of 3". Curb ramps in alterations need not exceed 6' in length.
- Maneuvering space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
- Maximum allowable cross slope on sidewalk and ramp surfaces is 2%; desired cross slope is 1.5%.
- The desirable landing dimensions are 5' x 5' with a maximum 2% slope in any direction. If a level landing of at least 3' width cannot be provided, perpendicular curb ramps should not be used.
- Curb ramps with returned curbs may only be used where pedestrians would not normally walk across the ramp. Otherwise, flared sides shall be provided.
- All concrete surfaces shall receive a light broom finish unless noted otherwise in the plans.
- Separate curb ramps and landings from adjacent sidewalk and any other elements with pre-molded or board joint of 3/4" unless otherwise directed by the Project Engineer.
- Tooled joints are required at all sidewalk ramp or driveway slope break lines.
- Provide a smooth transition where the curb ramps connect to the street.
- Ramp textures must include truncated domed surfaces. Textures are required to be detectable underfoot. Surfaces that would allow water to accumulate are prohibited. Shaded areas indicate locations of detectable warnings. (Color: light reflective value and texture contrast)
- Note that where sidewalks intersect with streets, detectable warning systems are required at all street crossings.
- Ramps providing access to buildings shall follow the applicable requirements of the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG).
- To serve as a pedestrian refuge area, raised medians should be a minimum of 5' wide. Medians should be designed to provide accessible passage over or through them.
- Small channelization islands, which cannot provide a minimum 5' x 5' landing at the top of ramps, shall be cut through level with the surface of the street.
- On street parking will not be allowed within 20' of any crosswalks.
- Drainage structures in close proximity to curb ramps should be located on the upstream side of the ramp.
- Traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items shall be placed so as not to obstruct the accessible route.
- Street grades and cross-slopes shall be as shown elsewhere in the plans; however, parabolic crowns may require adjustment in crosswalk areas to limit crosswalk grade to 5%.
- Where existing driveway is in good condition and meets slope requirements, construct only as much as required for satisfactory connection with new work.
- Where gravel driveways occur, at least 10' of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
- Cross walk dimensions and crosswalk markings shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, ramps shall be aligned with theoretical crosswalks or as directed by the Project Engineer.
- Where crosswalks occur, a 24" solid white line shall be placed across all approach lanes to indicate the point behind which vehicles are to stop. Stop bars shall be placed 4' in advance of a crosswalk.
- Driveways, sidewalks, and ramps shall be constructed and paid for in accordance with the applicable sections of the Standard Specifications. The limits of payment for handicap ramps shall include but not be limited to curb transition, detectable warning system, gutter, landing and base.
- Though the least possible grade should be used to maximize accessibility, where it is structurally impractical to achieve ADA compliance, the running slope of sidewalks and crosswalks within the public right-of-way, may follow the grade of the parallel roadway without invoking variances or landings or handrails. Where a continuous grade greater than 5% must be provided, handrails may be desirable on one or both sides of the sidewalk to improve accessibility.

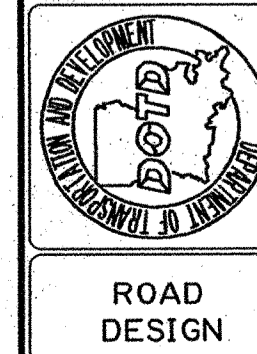
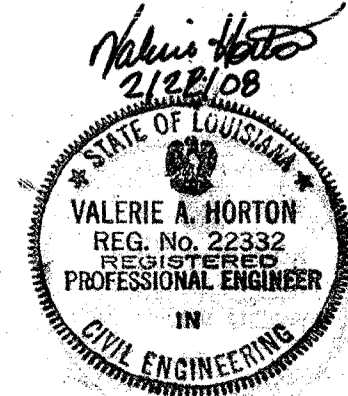


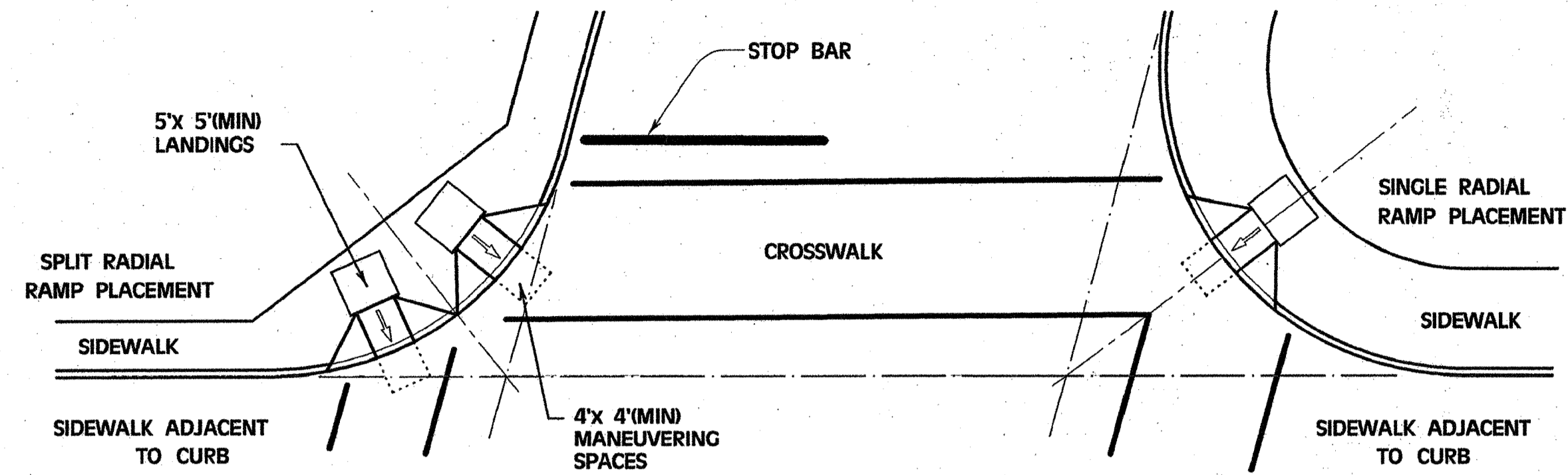
When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.



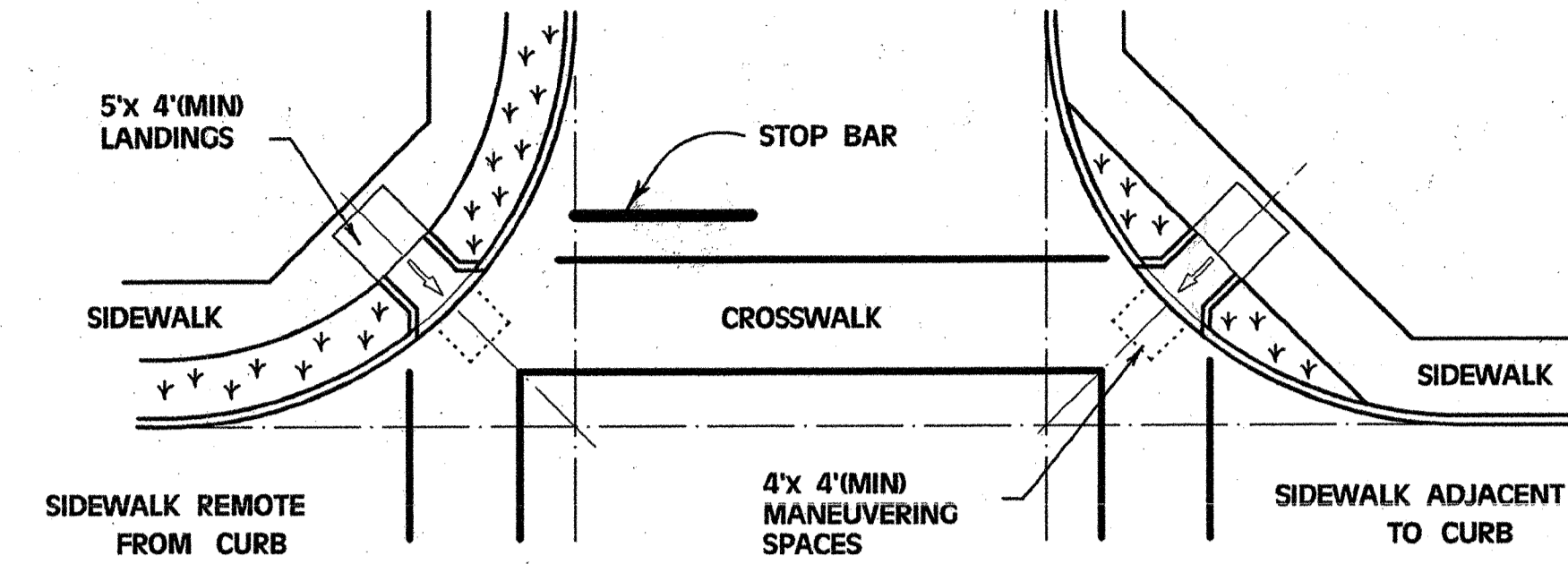
Protruding objects of a height less than or equal to 27" are detectable by cane and do not require additional treatment.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

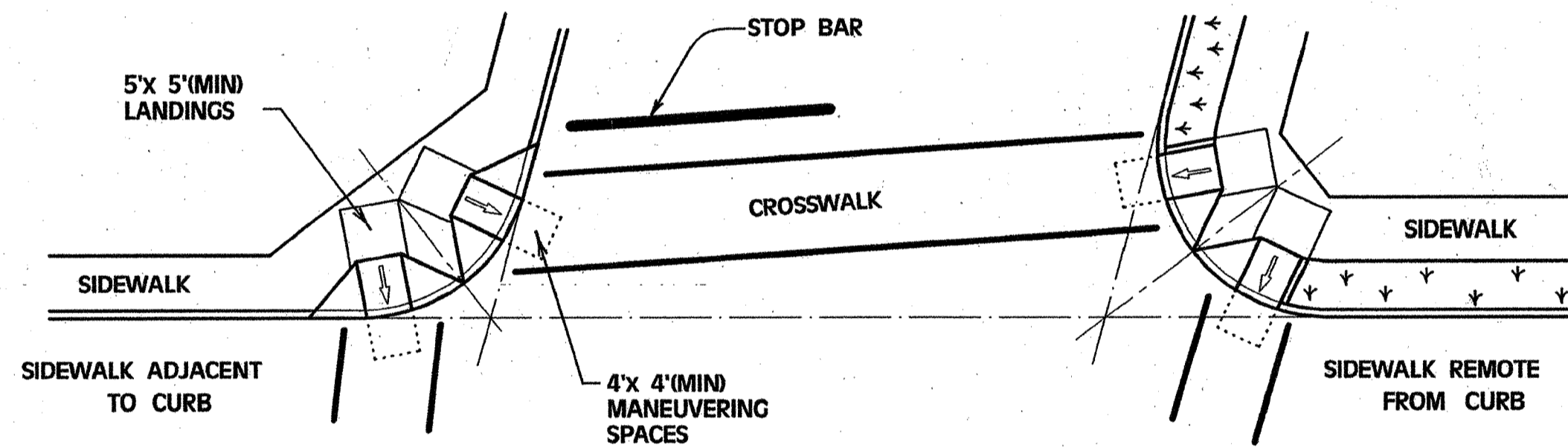




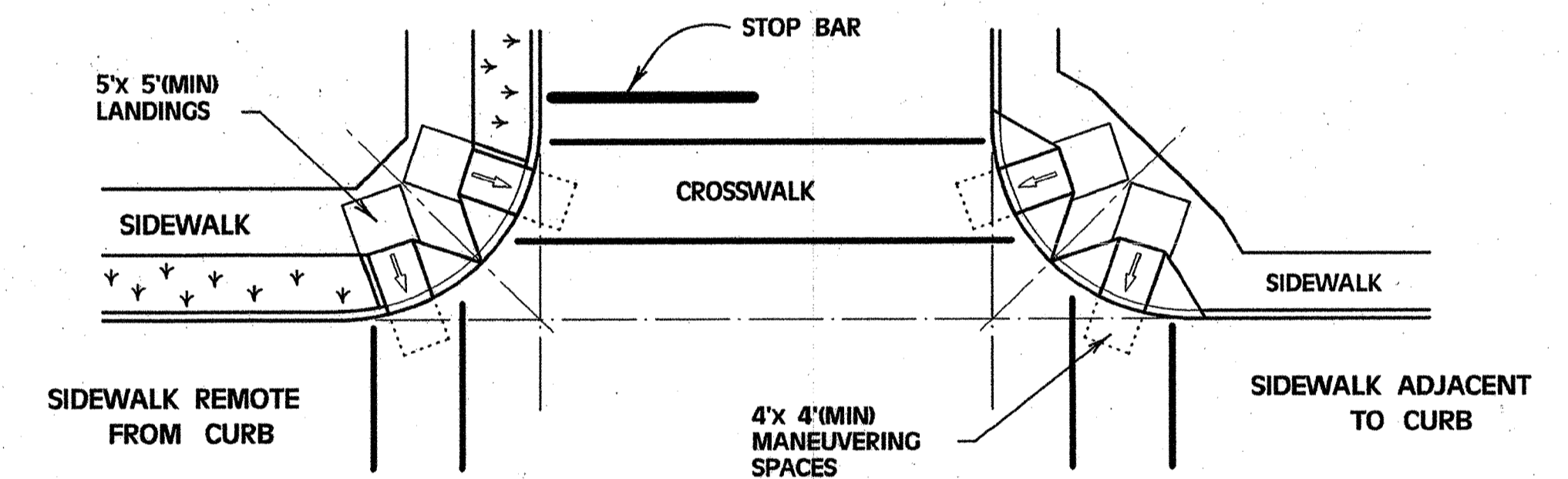
SKewed INTERSECTION WITH "LARGE" RADIUS



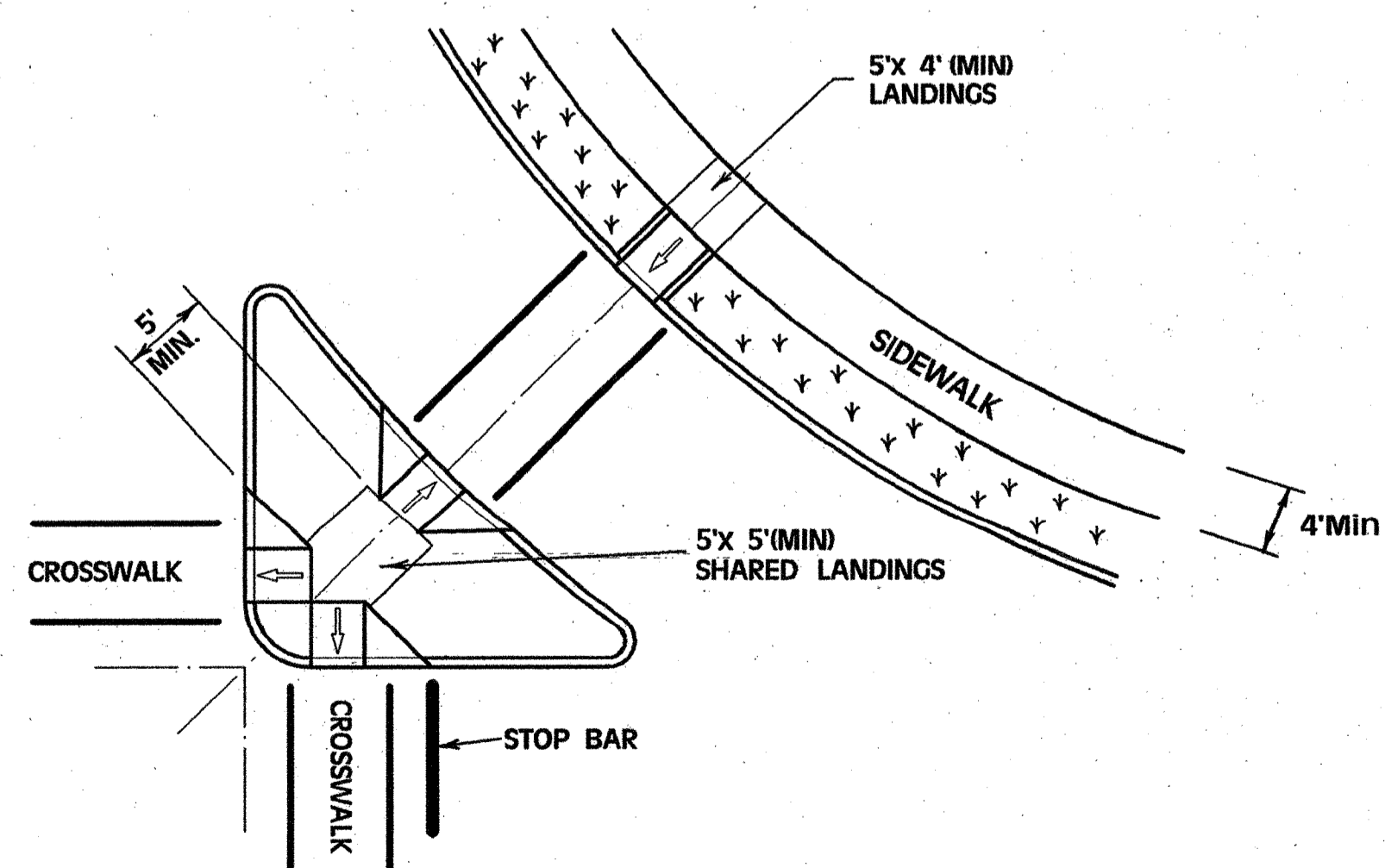
NORMAL INTERSECTION WITH "LARGE" RADIUS



SKewed INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND

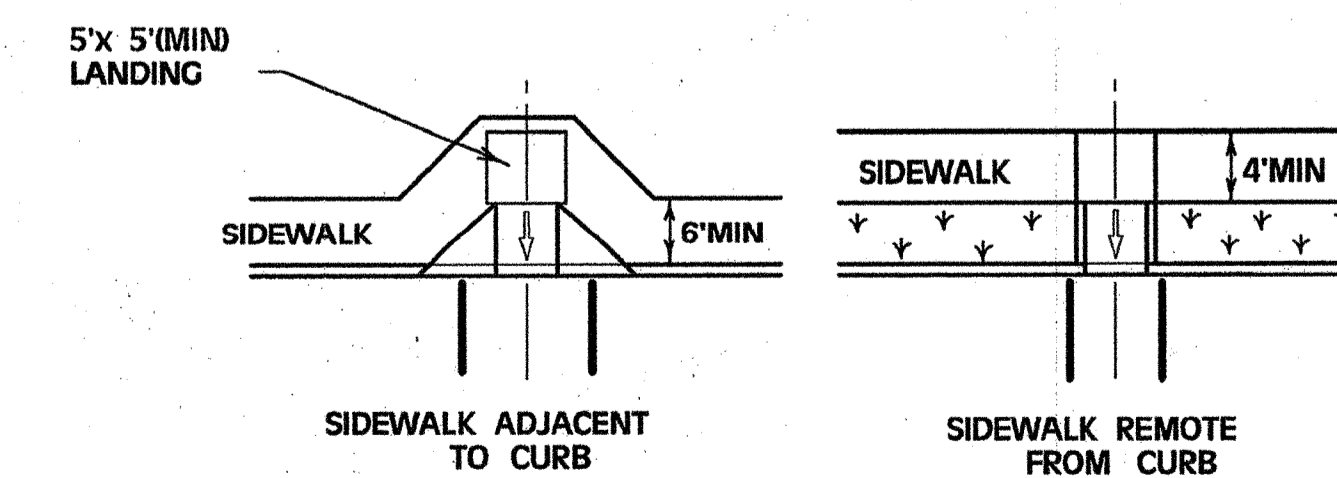
TYPICAL CROSSING LAYOUTS

SEE SHEET 2 OF 4 FOR DETAILS AND DIMENSIONS

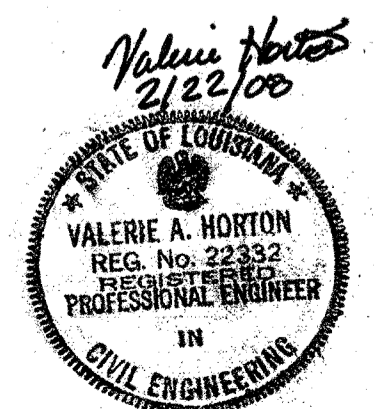
General Note:

Ramps are shown here without detectable warnings for simplicity. Detectable warnings are required at the locations shown on Sheet 1 of 4 and in accordance with the details shown elsewhere herein below.

Striping (Crosswalks and stop bars) is shown for reference only. See PM-01 for striping details.



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS



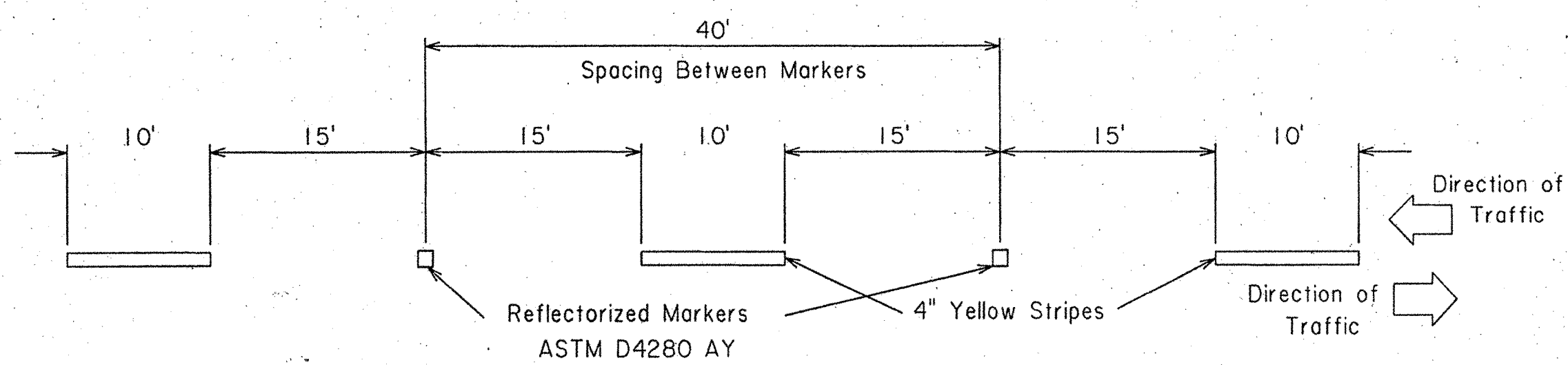
DESIGNED V.A.H.	PARISH	JEFFERSON	SHEET NUMBER	324
CHECKED E.A.W.	FEDERAL PROJECT			
DATE 03/23/07	STATE PROJECT	064-01-0040		
NO. 5-5-08	DATE	BY W. Temple	REVISION DESCRIPTION	SHEET 3 of 4



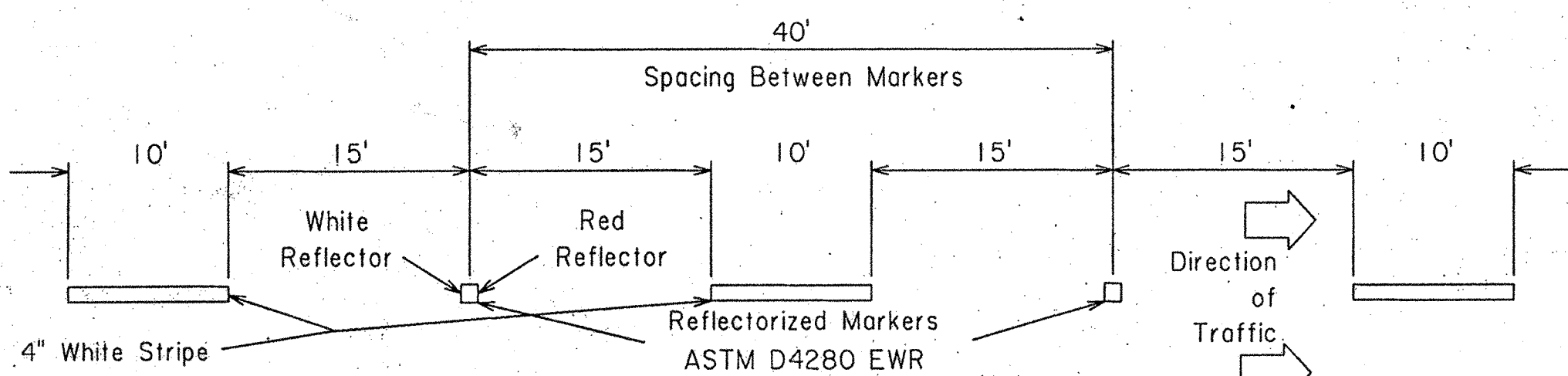
PEDESTRIAN FACILITIES
INTERSECTION LAYOUTS AND
DETECTABLE WARNINGS
PED-01



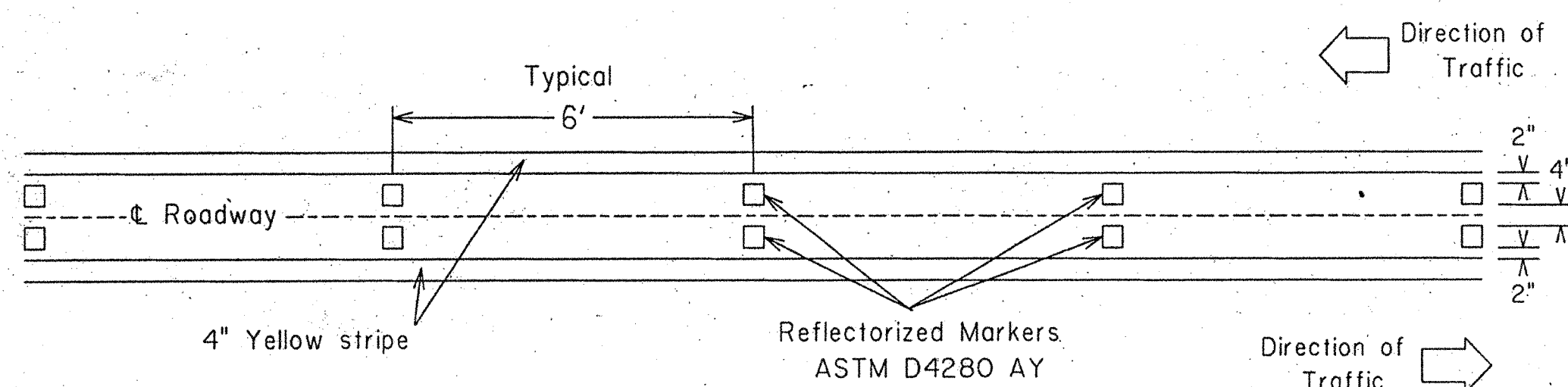
ROAD DESIGN



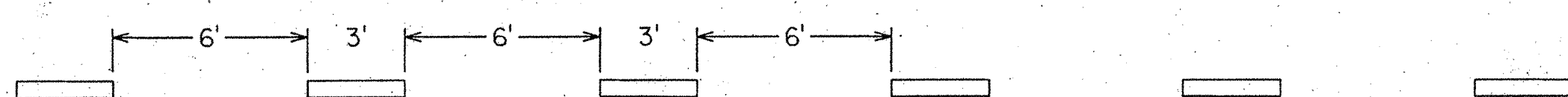
LAYOUT A
To Be Used Along Centerline of Two-Lane Roadway with Two-Way Traffic



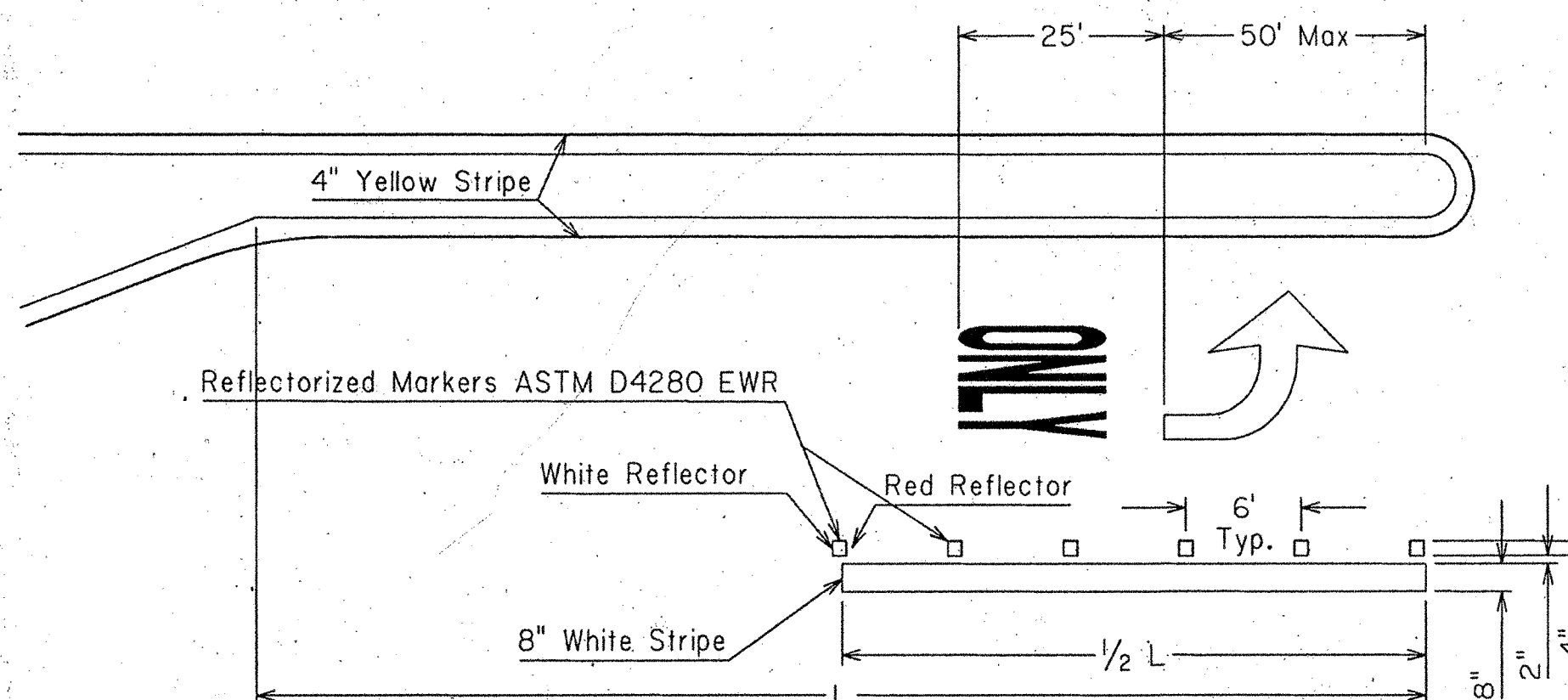
LAYOUT B
To Be Used for Lane Line Between Lanes of Traffic Traveling in the Same Direction



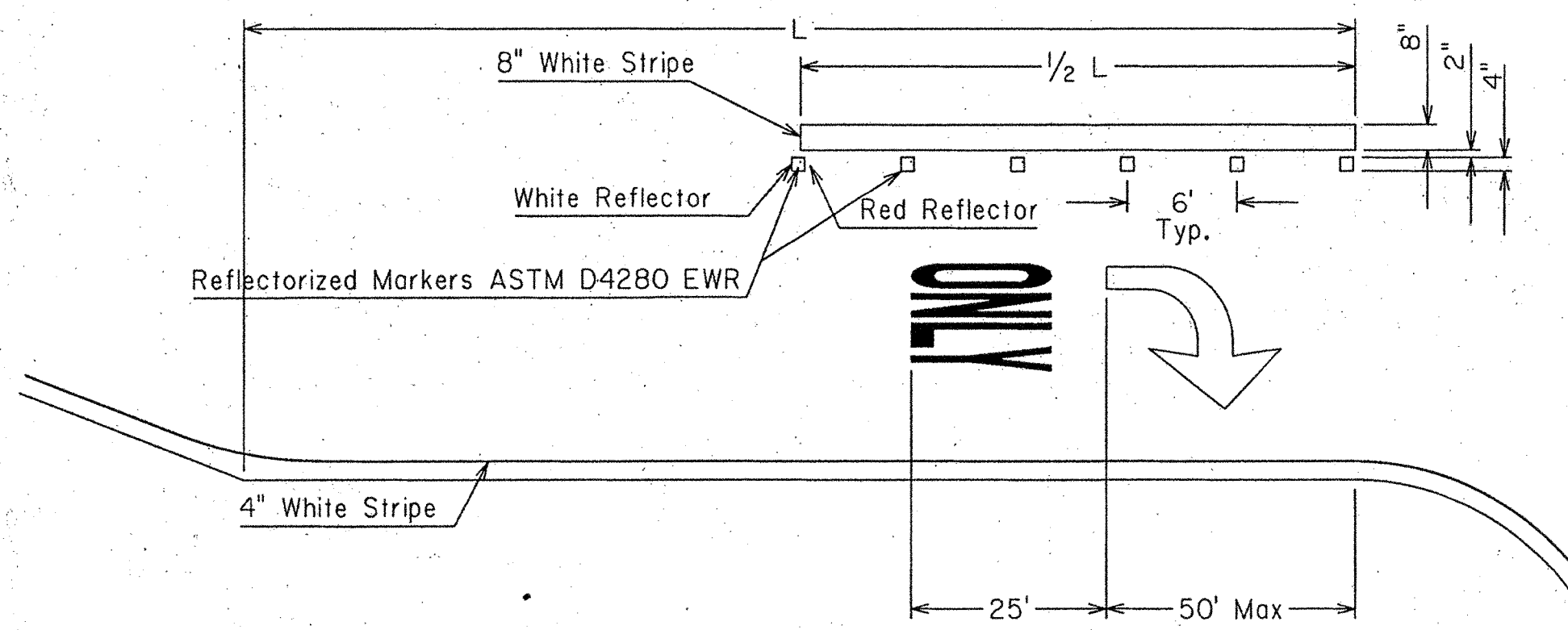
LAYOUT C
To Be Used Along Centerline of Multi-lane Undivided Roadway



LAYOUT D
To Be Used to Extend a Line Through an Intersection, an Interchange Area, or the Entrance of a Turn Bay, as Determined by the Plans or the District Traffic Operations Engineer. Color & width shall be the same as that of the extended line.



DETAIL OF TYPICAL LEFT TURN LANE
(Traffic Markers To Be Placed To Avoid Longitudinal Joint As Directed By The Project Engineer)
Arrows and Legend will be of White Thermoplastic Material



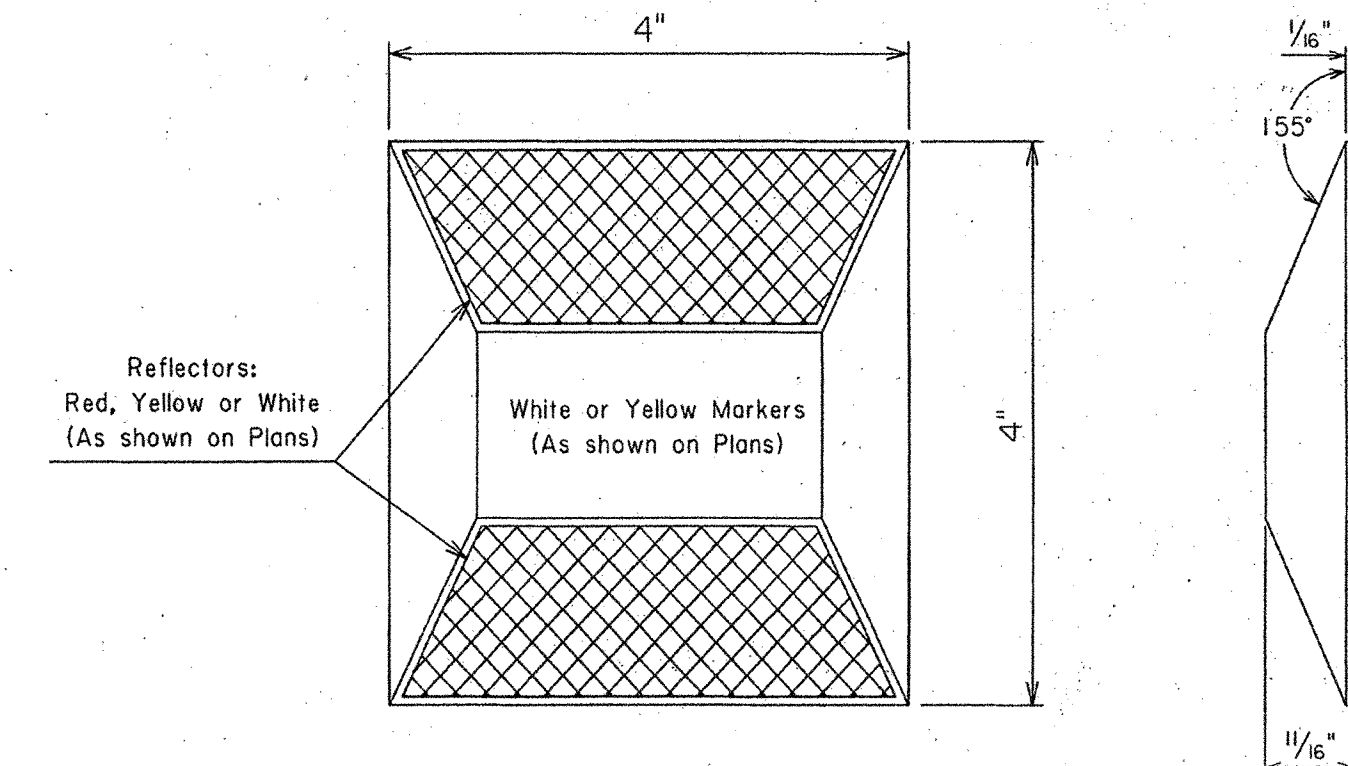
DETAIL OF TYPICAL RIGHT TURN LANE
(Traffic Markers To Be Placed To Avoid Longitudinal Joint As Directed By The Project Engineer)
Arrows and Legend will be of White Thermoplastic Material

SPECIAL NOTE ON TURN BAY LEGENDS:

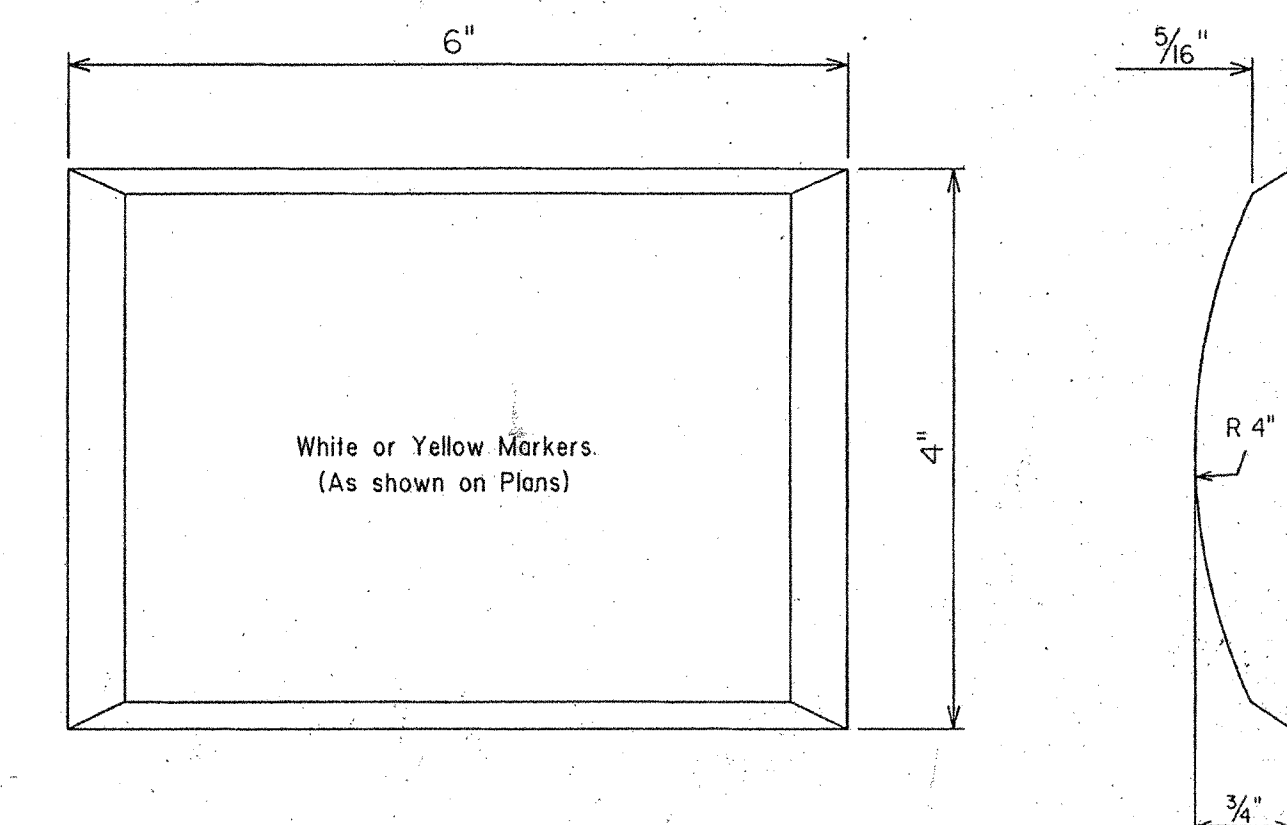
Additional arrows and 'ONLY's may be placed in long turn Bays.
A minimum of 125' shall separate each additional arrow from the previous arrow.
Additional 'ONLY's shall be placed 25' from their respective arrow

F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	064-01-0040	JEFFERSON	326

TYPICAL REFLECTORIZED MARKER CONFIGURATIONS	TYPICAL USES
ASTM D4280 CLASSIFICATION: EWR WHITE BODY WHITE REFLECTOR FACING ONCOMING TRAFFIC RED REFLECTOR FACING WRONG-WAY TRAFFIC	LANE LINES EDGE LINES & CHANNELIZING
ASTM D4280 CLASSIFICATION: AY YELLOW BODY YELLOW REFLECTORS FACING EACH DIRECTION OF TRAFFIC	CENTERLINES & NO PASSING ZONES



TYPICAL 4" x 4" REFLECTORIZED TRAFFIC MARKER



TYPICAL 4" x 6" NON-REFLECTORIZED TRAFFIC MARKER

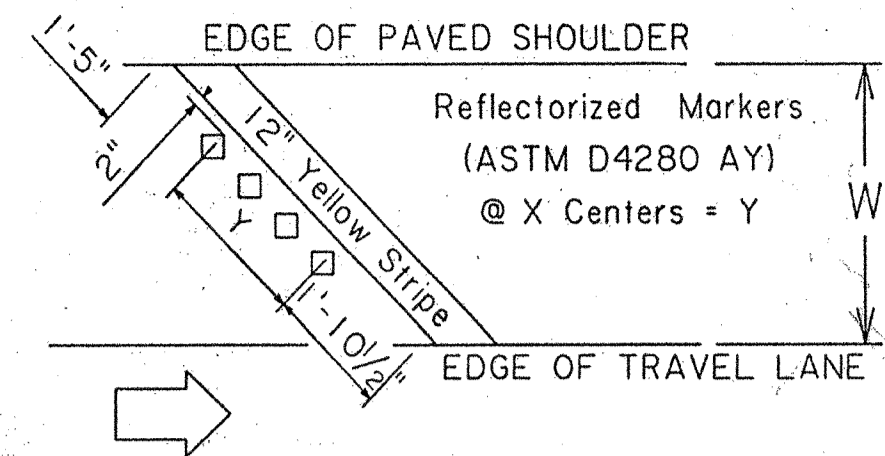
NOTE

A1 Channelized Intersections Traffic Markers are to be placed as directed by the Project Engineer and as approved by the District Traffic Operations Engineer.

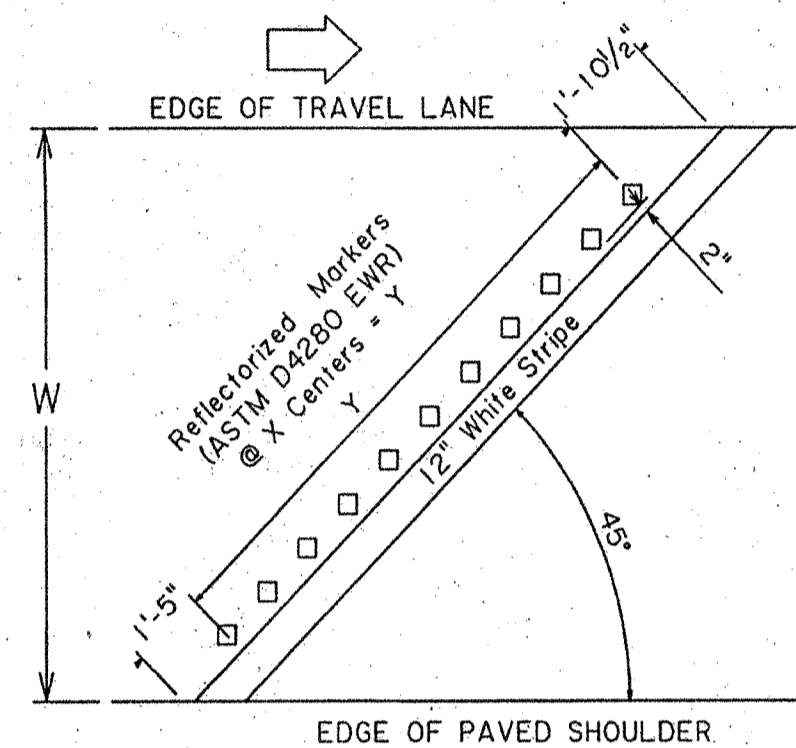
DATE	DESCRIPTION	BY	APPROVED
1-21-98	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

STANDARD PLAN NO.	PM-01	1 OF 4	
DETAILS OF RAISED TRAFFIC MARKERS and PAVEMENT MARKINGS DATED August 14, 1977			
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT			
DESIGNED	A. Caseres	DETAILED	P. Allain
CHECKED	D. Bealy	CHECKED	T. Swanson
APPROVED		DATE	1-21-98
REVISIONS CHIEF ENGINEER			

F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	064-01-004	JEFFERSON	327



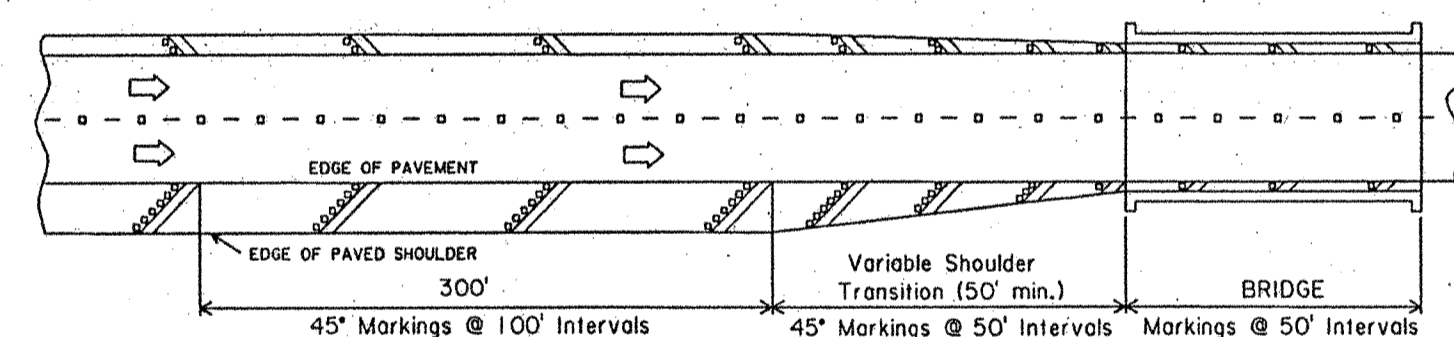
DETAIL OF INSIDE SHOULDER MARKINGS IN ADVANCE OF AND ON NARROW BRIDGES



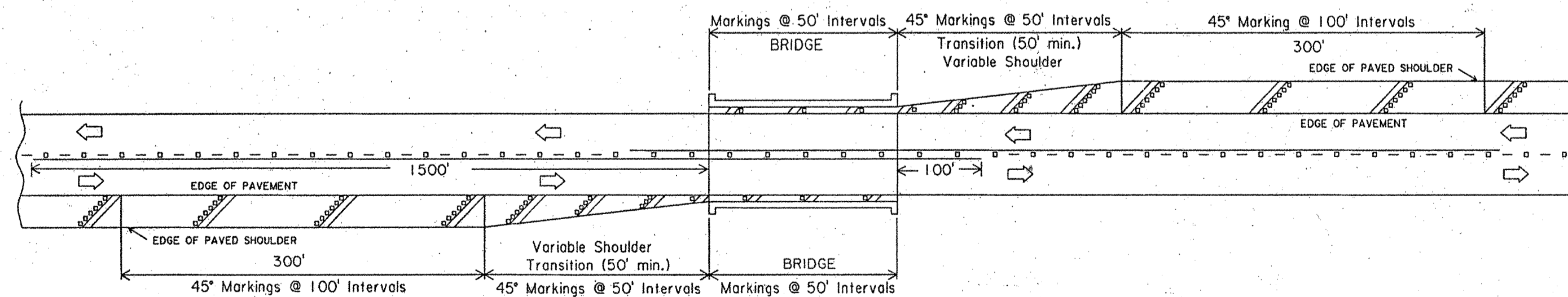
DETAIL OF OUTSIDE SHOULDER MARKINGS IN ADVANCE OF AND ON NARROW BRIDGES

Shoulder Width W	Number of Markers N	Spacing Width X	Total Width Y
3'	2	11 1/2"	0' 11 1/2"
4'	4	9 1/2"	2' 4 1/2"
5'	5	11 3/8"	3' 9 1/2"
6'	6	12 1/2"	5' 2 1/2"
7'	7	13 3/4"	6' 7 1/2"
8'	9	12"	8' 0"
9'	11	11 1/4"	9' 5"
10'	14	10"	10' 10"
11'	15	10 1/2"	12' 3"
12'	17	10 1/4"	13' 8"

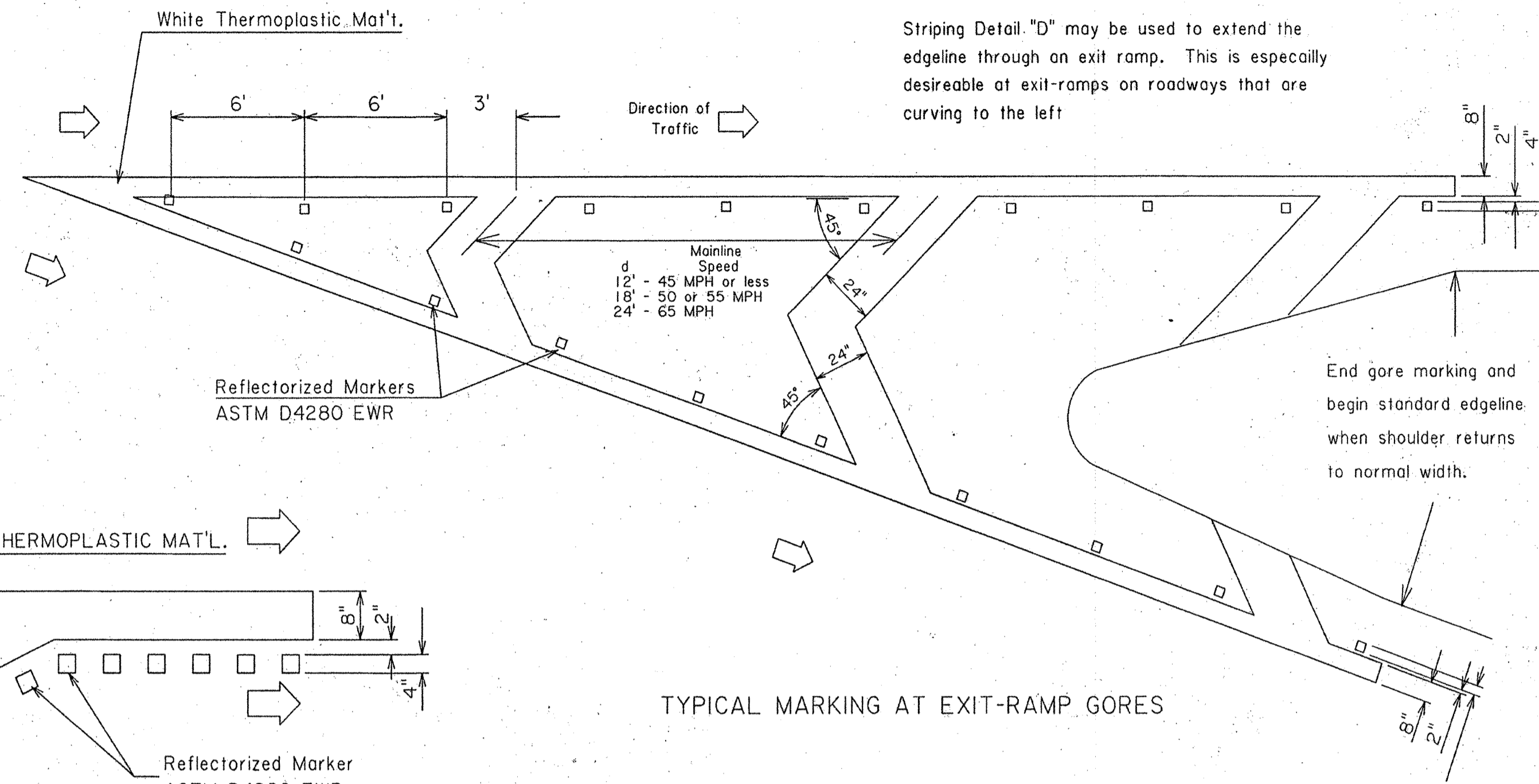
SPACING OF MARKINGS FOR VARIOUS WIDTH SHOULDERS



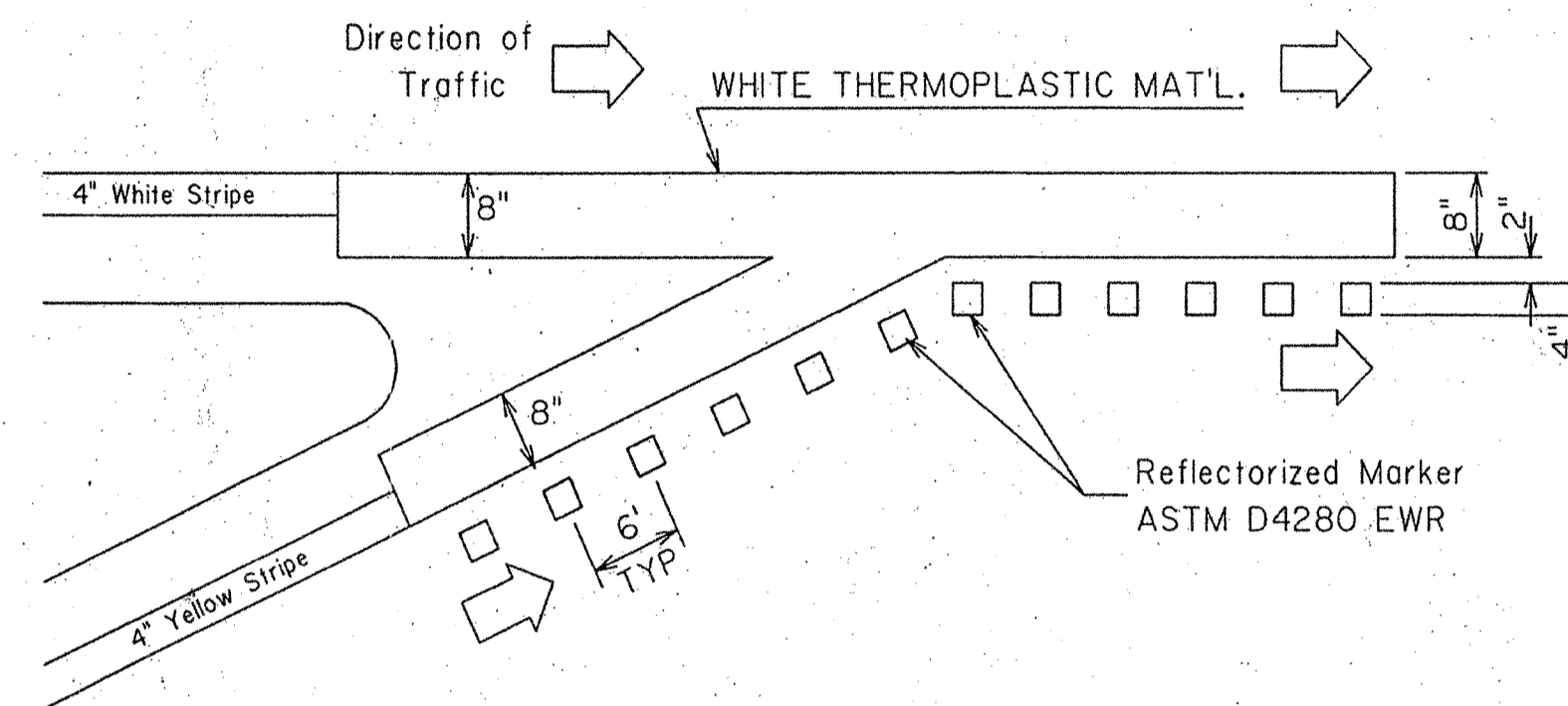
MULTILANE DIVIDED To be used on all bridges where the bridge width is less than the approach width (including paved shoulders)



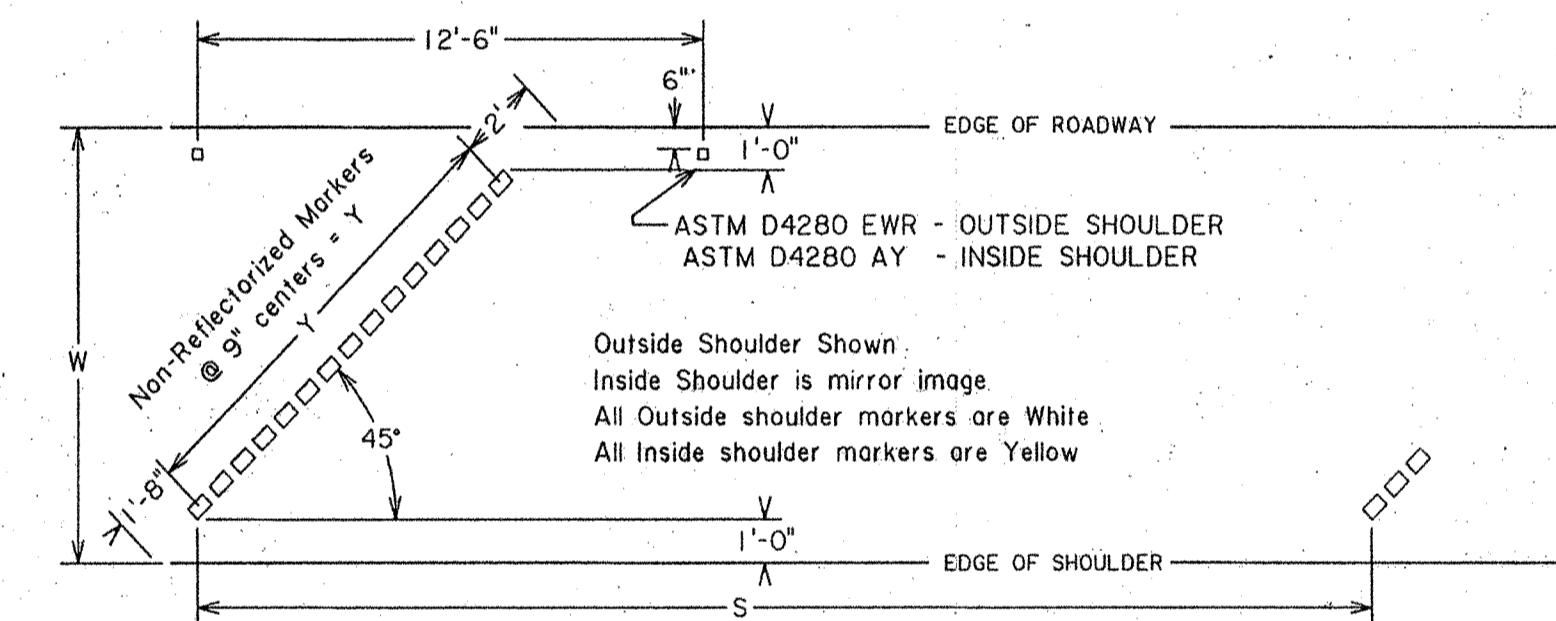
2 LANE 2 WAY To be used on all bridges where the bridge width is less than the approach width (including paved shoulders)
MARKING & STRIPING FOR NARROW BRIDGES



TYPICAL MARKING AT EXIT-RAMP GORES



TYPICAL MARKING AT ENTRANCE-RAMP GORES



Bridge Length	Required Spacing (S)
500 ft or more	100 ft
200 ft - 500 ft	50 ft
0 ft - 200 ft	No Marking Required

Shoulder Width W	Number of Markers N	Total Width Y
4'	3	1' 6"
6'	7	4' 6"
8'	11	7' 6"
10'	15	10' 6"
12'	18	13' 3"

TYPICAL TRAFFIC MARKER PLACEMENT ALONG BRIDGE OUTSIDE SHOULDER

STANDARD PLAN NO. **PM-01** 2 OF 4

DETAILS OF
RAISED TRAFFIC MARKERS
and PAVEMENT MARKINGS

DATED August 14, 1977

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED *A Casaris* DETAILED *P Allain*
CHECKED *D Bely* CHECKED *T Swanson*

APPROVED *[Signature]* DATE *1-21-98*
CHIEF ENGINEER

DATE	DESCRIPTION	BY	APPROVED
1-21-98	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

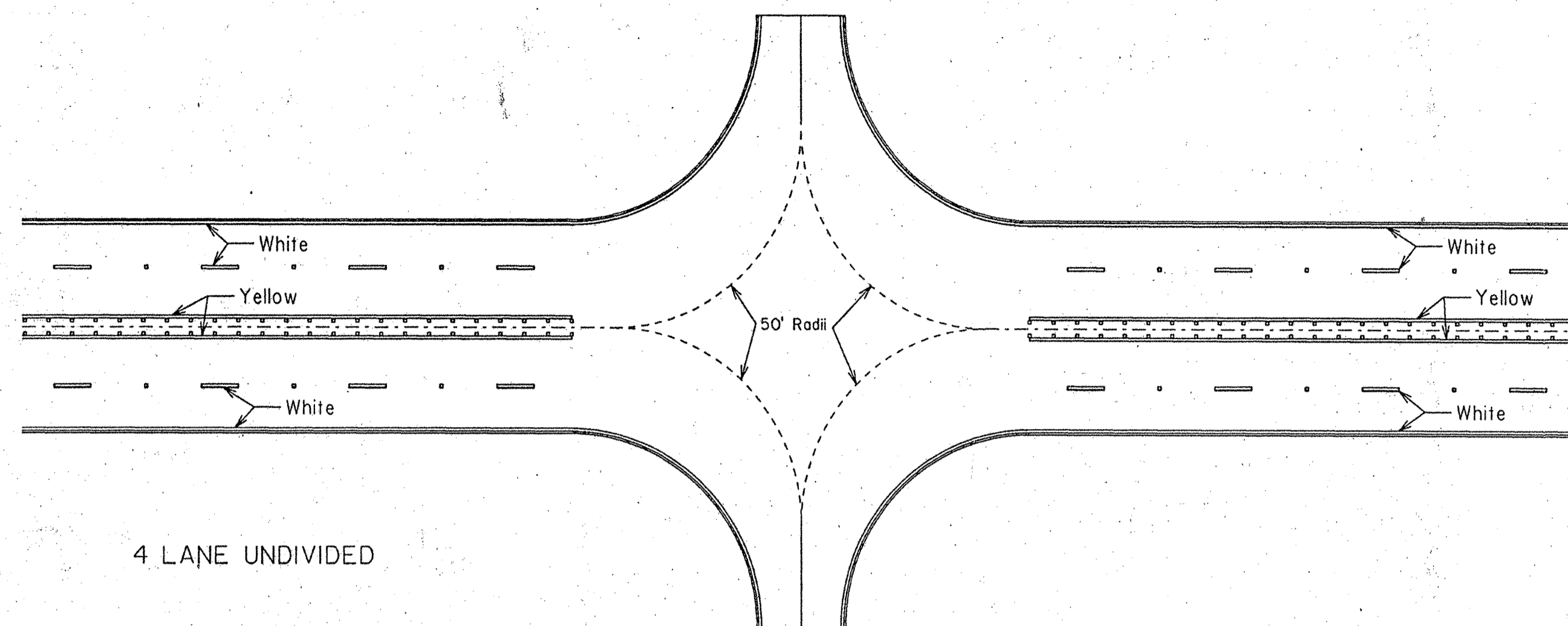
F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	064-01-004	JEFFERSON	328

LEGEND:

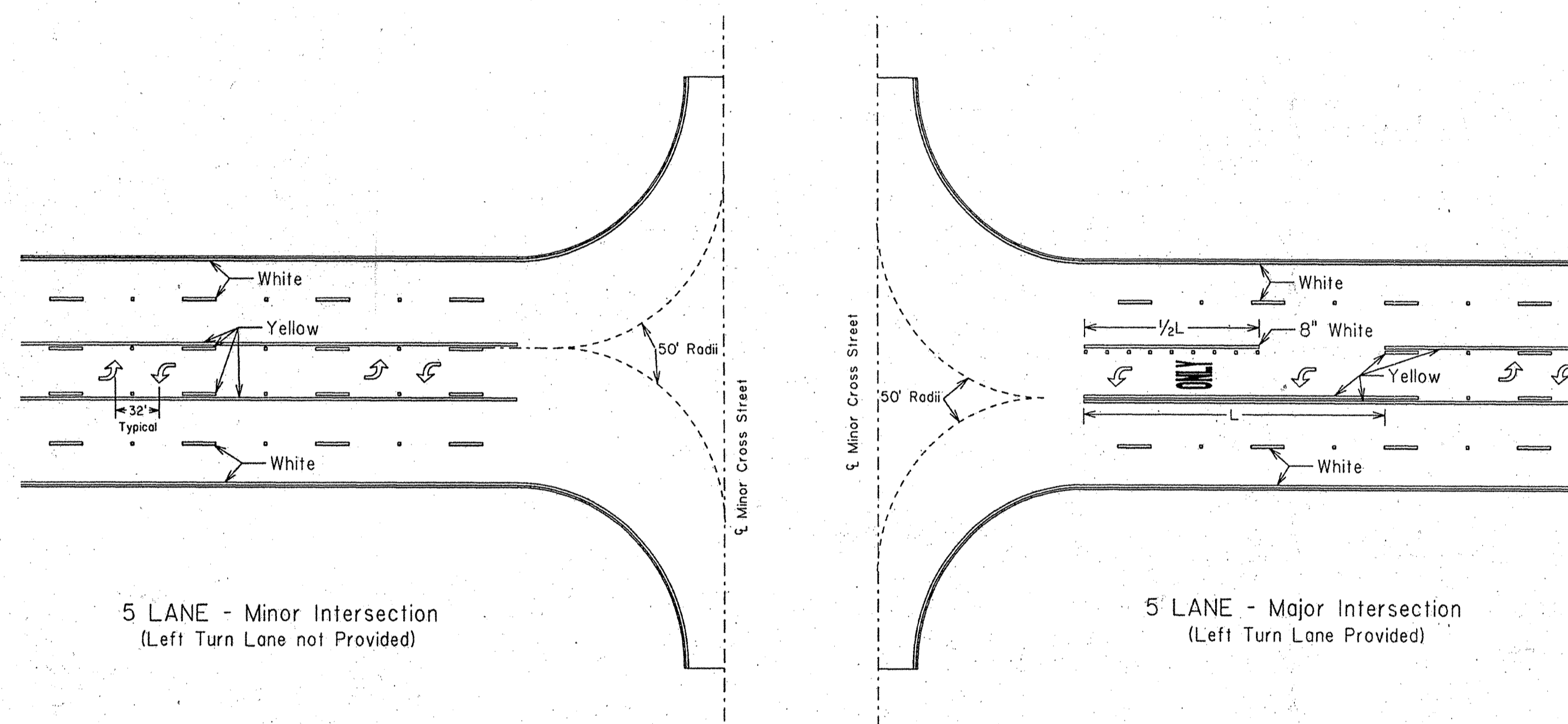
- Indicates Thermoplastic Pavement Striping. Typical Width is 4" Unless Shown Otherwise. For Longitudinal Dimensions and Spacings see Sheet 1 of 4. Colors shall be as Shown on this Sheet.
- Reflectorized Markers. See Sheets 1 of 4 and 2 of 4 for Spacings, Colors and Details.

NOTES:

- At all signalized and stop controlled intersections, a 24" solid white line shall be placed across all approach lanes to indicate the point behind which vehicles are to stop. Stop lines shall be placed 4 feet in advance of a crosswalk. In the absence of a crosswalk, the stop line should be placed at the desired stopping point, typically in line with the stop sign or traffic signal pole. In no case shall the stop line be more than 30 feet, or less than 4 feet from the nearest edge of the intersecting roadway.
- Word and symbol markings shall be white. In situations where through lanes become mandatory turn lanes, lane-use arrows shall be used and shall be accompanied by standard signs. Lane-use arrow pavement markings may also be used in two-way left turn lanes and in all right and left turn bays. The word marking "ONLY" may be used to supplement lane use arrows, as shown on sheet 1 of 4.
- Arrow symbol pairs for two-way left turn lanes shall be placed a minimum of 1 pair per block, with a maximum spacing of 750'.
- No pavement markings or markers shall be placed within an intersection, except for a dotted pattern line used to guide vehicles through the intersection. Edge-lines, center-lines, and lane-lines shall not be stopped for driveway turnouts.
- Edge-lines shall be required when pavement width is 22' or greater.
- Edge-lines, center-lines, and lane-lines shall be placed to avoid longitudinal joints as directed by the project engineer.
- Edge-lines in curb & gutter sections shall be placed so that the edge-line is kept out of the gutter, and is not covered by debris.

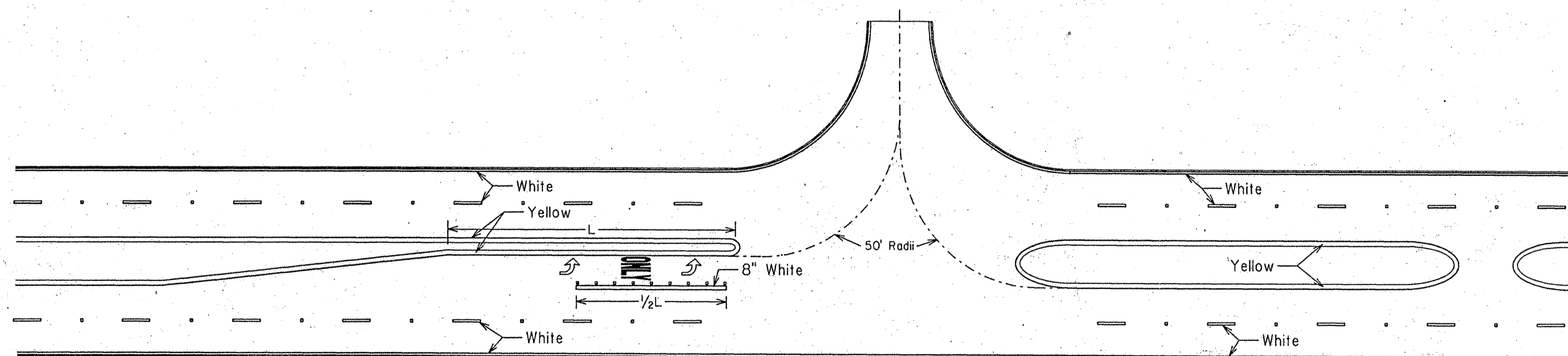


4 LANE UNDIVIDED

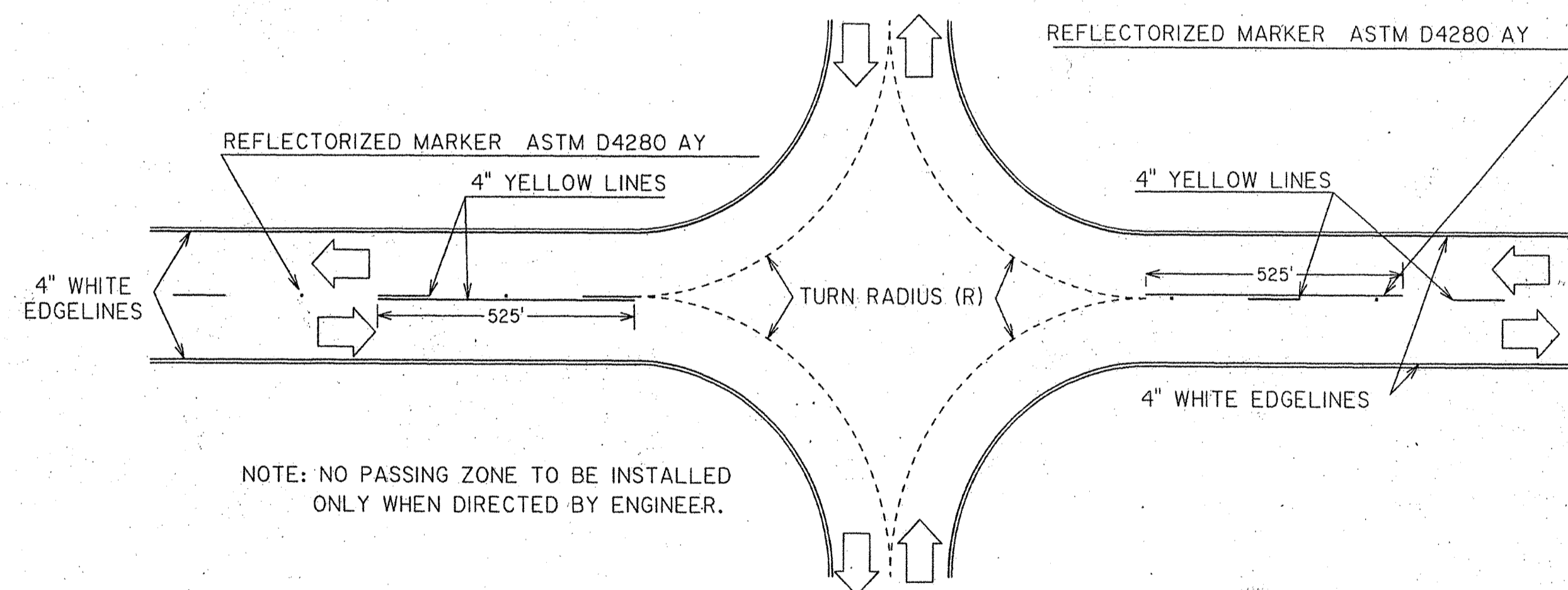


5 LANE - Minor Intersection (Left Turn Lane not Provided)

5 LANE - Major Intersection (Left Turn Lane Provided)



4 LANE DIVIDED



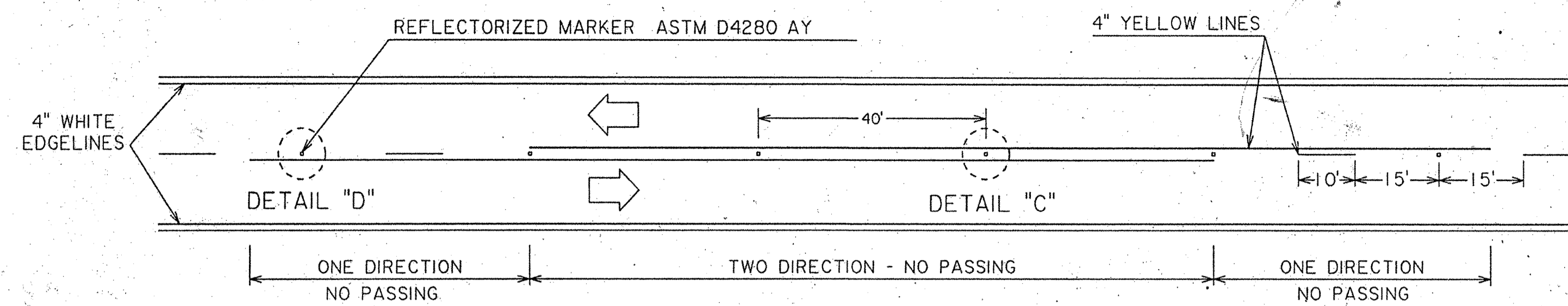
NOTE: NO PASSING ZONE TO BE INSTALLED ONLY WHEN DIRECTED BY ENGINEER.

TYPICAL INTERSECTION APPROACH OF TWO LANE, TWO WAY HIGHWAY

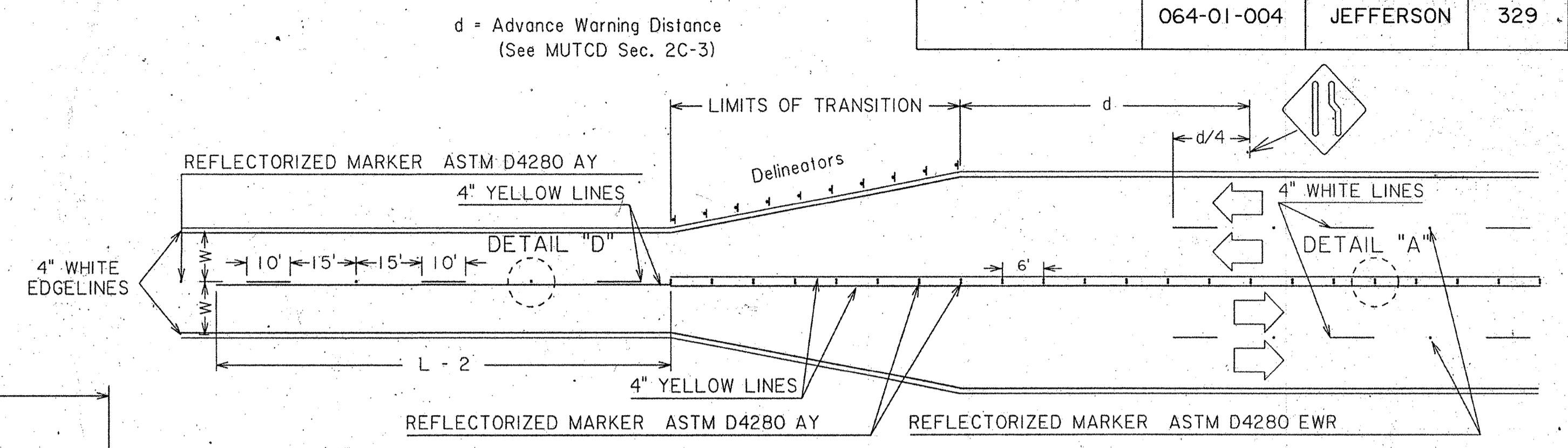
STANDARD PLAN NO.	PM-01	3 OF 4
DETAILS OF RAISED TRAFFIC MARKERS and PAVEMENT MARKINGS		
DATED August 14, 1977		
STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT		
DESIGNED	A. Coceres	DETAILED P. Allain
CHECKED	D. Betsy	CHECKED T. Swanson
DATE	DESCRIPTION	BY APPROVED
1-21-98	Complete Revision	PAA
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ
05-15-81	General Revision	WTJ
04-21-80	Rev. Layout A and Layout B	WTJ
APPROVED <i>[Signature]</i>		DATE 1-21-98

1-21-98	Complete Revision	PAA
12-29-81	Remove Br. End Appr. Mkrs.- Layout C	WTJ
05-15-81	General Revision	WTJ
04-21-80	Rev. Layout A and Layout B	WTJ
DATE	DESCRIPTION	BY APPROVED

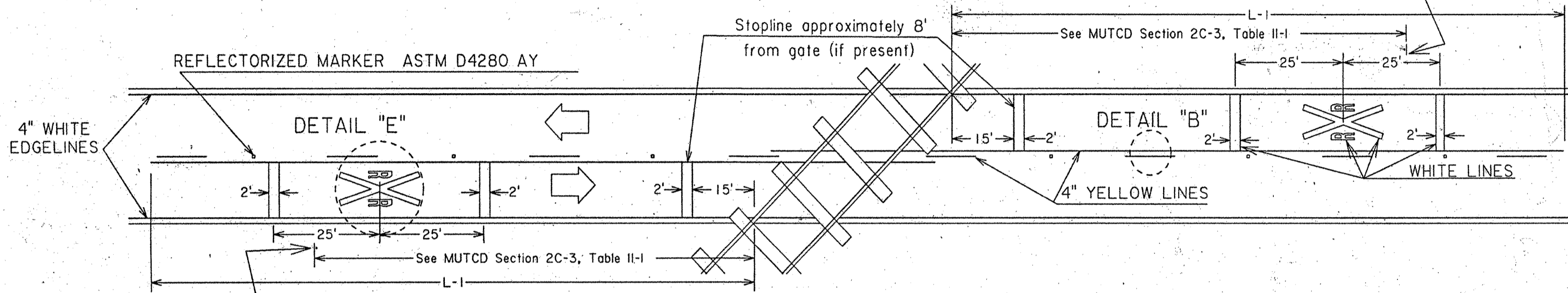
F.A.P.	STATE PROJECT	PARISH	SHEET NO.
	064-01-004	JEFFERSON	329



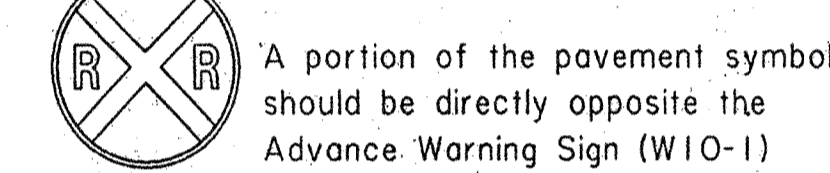
TYPICAL TWO LANE, TWO WAY ROADWAY



TYPICAL TWO LANE TO FOUR LANE UNDIVIDED HIGHWAY



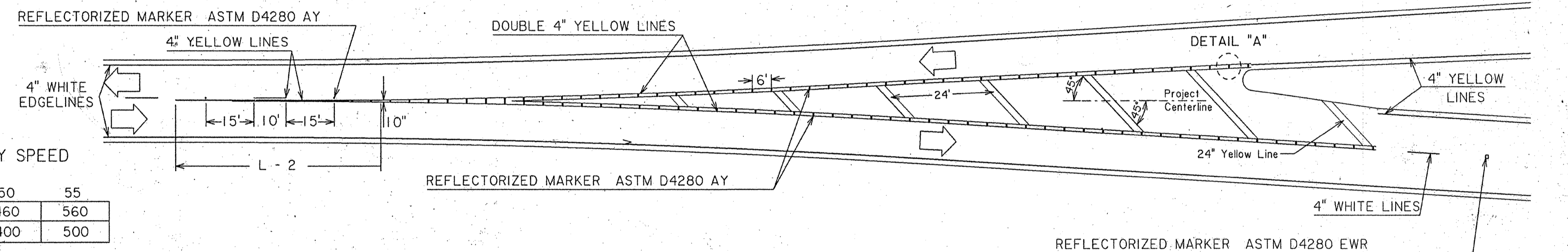
TYPICAL RAILROAD GRADE CROSSING



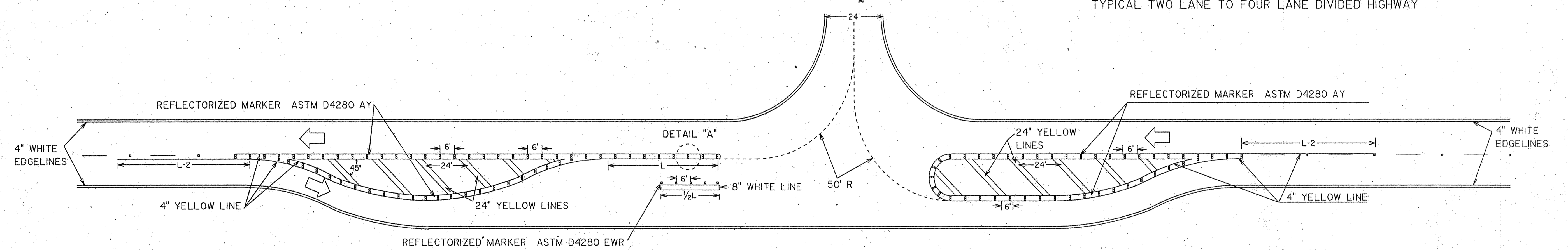
A portion of the pavement symbol should be directly opposite the Advance Warning Sign (W10-1)

"L" - DISTANCE (FT) OF NO PASSING ZONES FOR GIVEN HIGHWAY SPEED

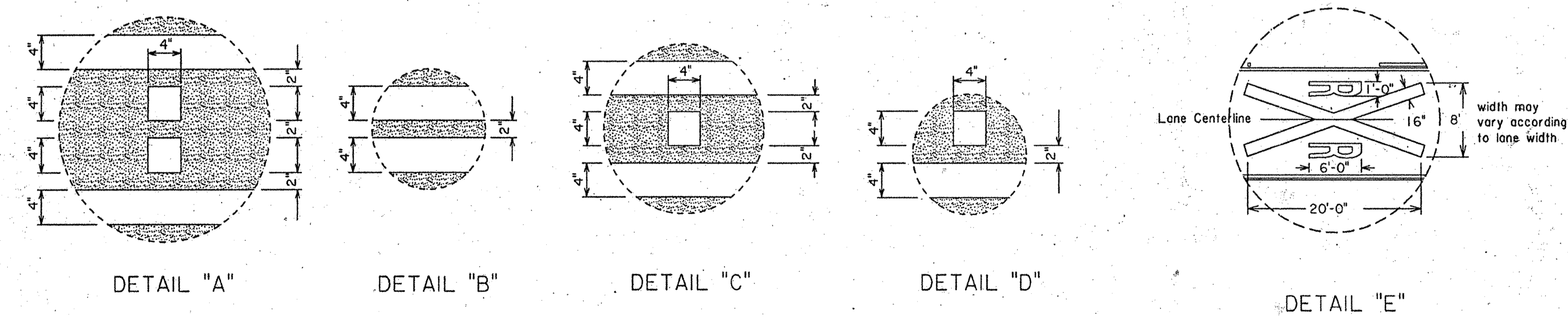
HIGHWAY SPEED (MPH)	25	30	35	40	45	50	55
L - 1 (RAILROAD GRADE CROSSING)	285	315	335	360	410	460	560
L - 2 (OBSTRUCTION)	225	250	275	300	350	400	500



TYPICAL TWO LANE TO FOUR LANE DIVIDED HIGHWAY



LEFT TURN LANE AT "T" INTERSECTION ON TWO LANE, TWO WAY ROADWAY



EDGE LINE ARE TO BE USED ON ALL PAVEMENTS 22' OR MORE IN WIDTH.

DATE	DESCRIPTION	BY	APPROVED
1-21-98	Complete Revision	PAA	
12-29-81	Remove Br. End Appr. Mkrs. - Layout C	WTJ	
05-15-81	General Revision	WTJ	
04-21-80	Rev. Layout A and Layout B	WTJ	

STANDARD PLAN NO. PM-01 4 OF 4

DETAILS OF
RAISED TRAFFIC MARKERS
and PAVEMENT MARKINGS

DATED August 14, 1977

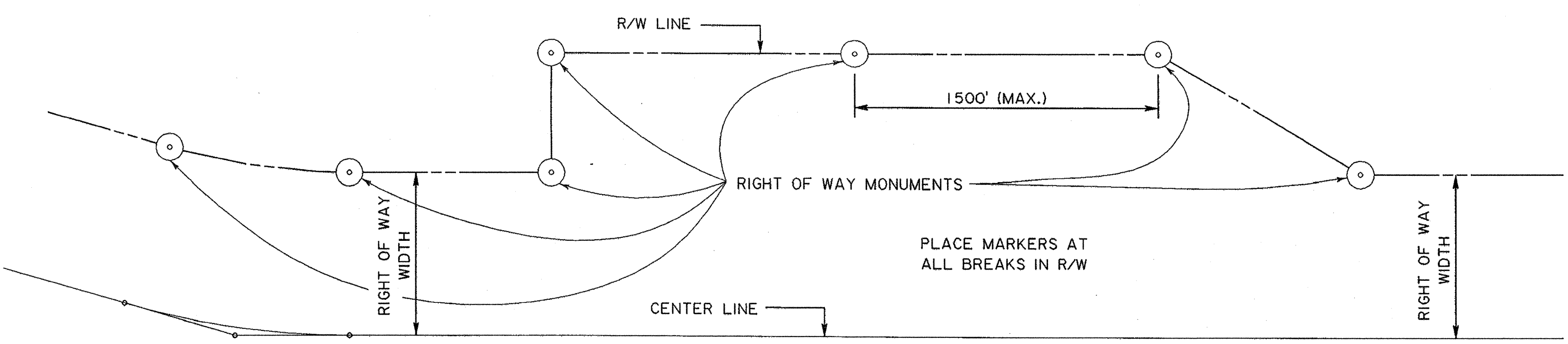
STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A Coors DETAILED P Allain
CHECKED D Bely CHECKED T Swanson

APPROVED *[Signature]* DATE 1-21-98
CHIEF ENGINEER

FINAL PLANS

R:\Gang2\Projects\064010040\dgn\standards\standard plans\330_RM-01.dgn



STANDARD RIGHT OF WAY MONUMENT PLAN
MONUMENTS TO BE PLACED AT RIGHT OF WAY INTERSECTIONS

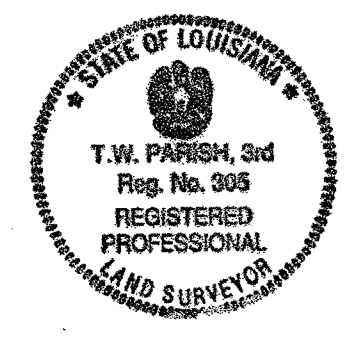
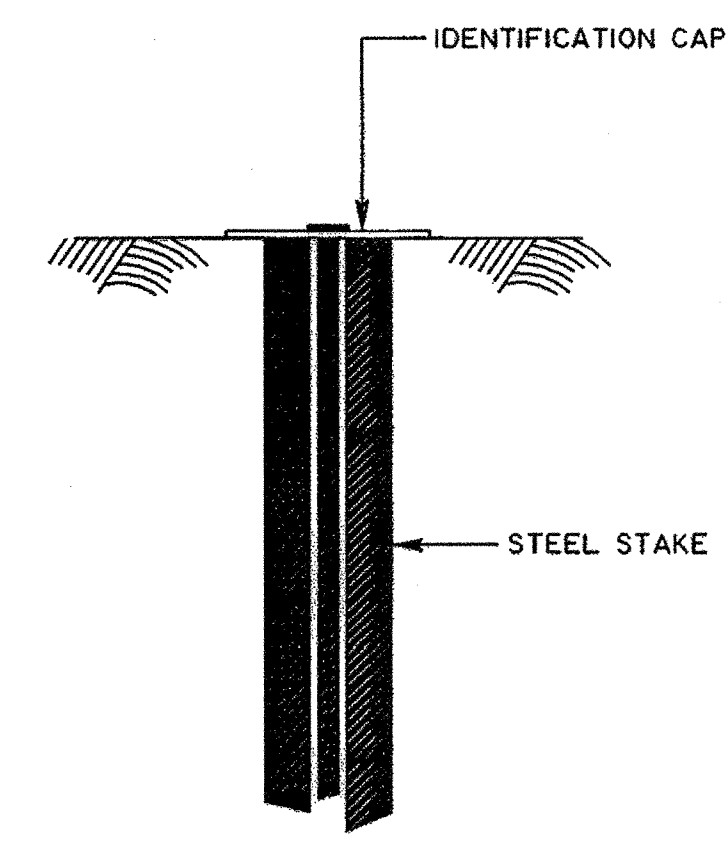
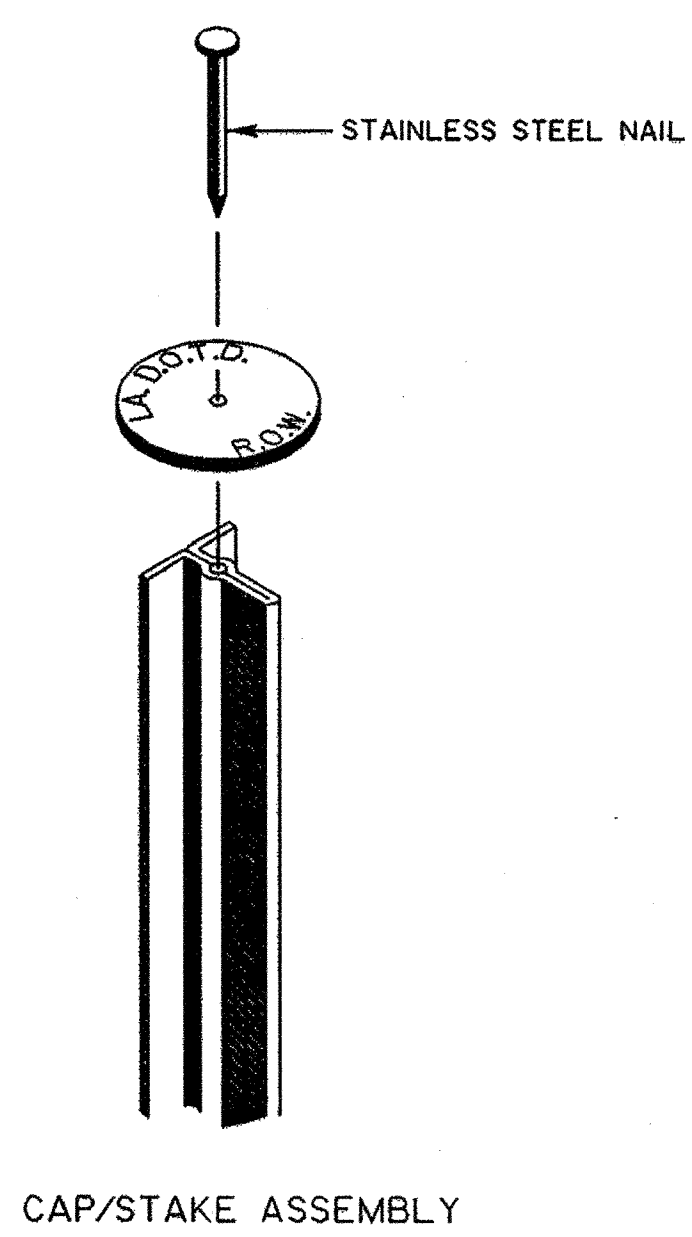
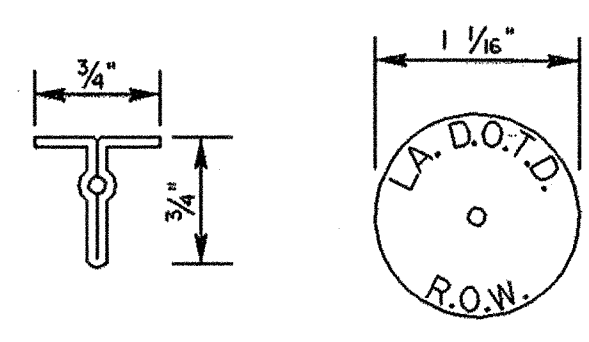
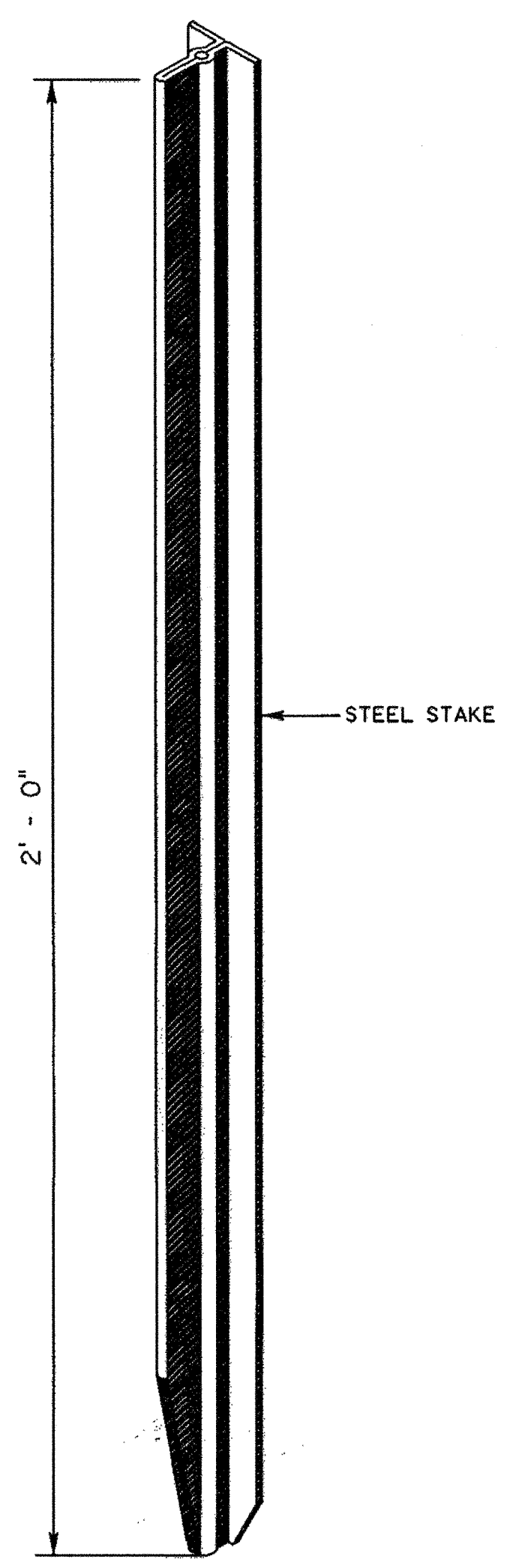
NOTES:

MONUMENTS ARE TO BE PLACED AT EVERY POINT WHERE BREAKS IN THE RIGHT OF WAY OCCUR: AT P.C.'S AND P.T.'S OF CURVES AND AT TOPS OF HILLS AND AT SUCH OTHER INTERMEDIATE POINTS AS ARE NECESSARY TO PROPERLY INDICATE THE RIGHT OF WAY. MONUMENTS SHOULD NOT BE MORE THAN ONE THOUSAND FEET (1000') APART ON CURVES, NOR MORE THAN FIFTEEN HUNDRED FEET (1500') APART ON TANGENTS.

MONUMENTS ARE INDICATED ON PLANS BY THE FOLLOWING SYMBOL:

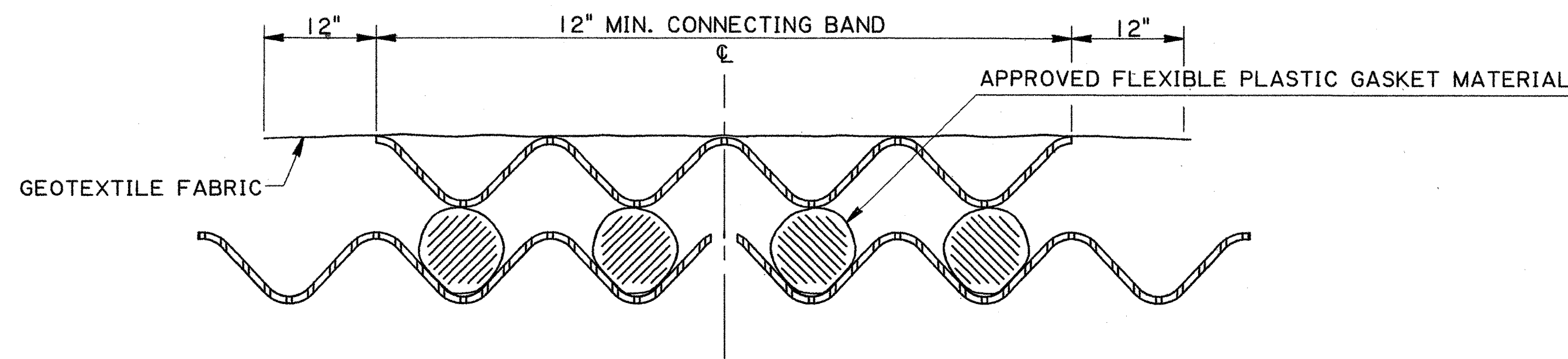
MONUMENTS SHALL BE MANUFACTURED BY BATHEY SURVEY MARKERS, INC. HOWELL, MICHIGAN, OR AN APPROVED EQUAL. SUBSTITUTE MONUMENTS MUST BE APPROVED BY THE LOCATION AND SURVEY ADMINISTRATOR, BATON ROUGE, LA.

RIGHT OF WAY MONUMENTS SHALL BE SET BY, OR UNDER THE RESPONSIBLE CHARGE OF A LOUISIANA REGISTERED PROFESSIONAL LAND SURVEYOR IN CONFORMANCE WITH CHAPTER 29, TITLE 46 PART LXI, OF THE RULES OF THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

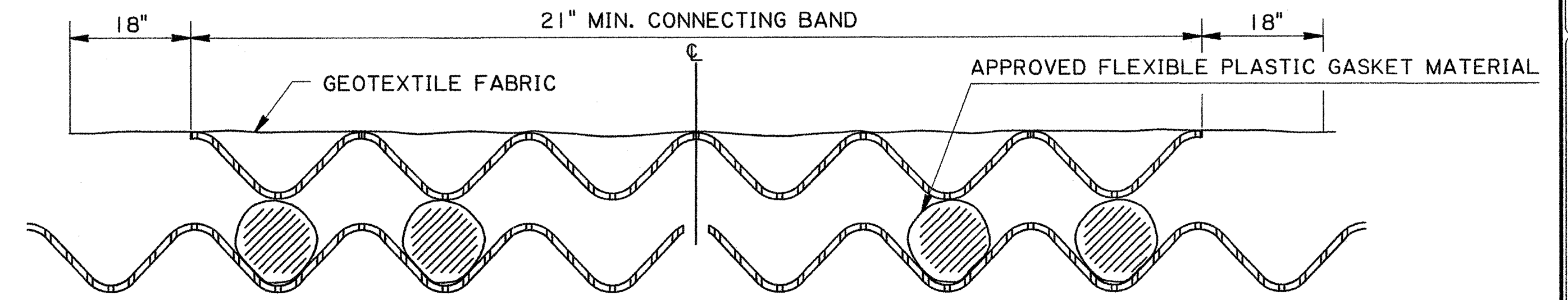


T. W. Parish

SHEET NUMBER		330	
PARISH		JEFFERSON	
FEDERAL PROJECT			
STATE PROJECT		064-01-0040	
DESIGNED	CHECKED	DATE	SHEET
REVISED	NO.	DATE	REVISION DESCRIPTION
3		6/25/03	REV. GENERAL NOTES TO CONFORM TO L.A.P.E.L.S.
2		3/17/98	REVISED STANDARD PLAN NO. TO RM-01
1		7/9/97	CREATED STANDARD PLAN
			BY
			T.W.P. <i>[Signature]</i>
			T.W.P. <i>[Signature]</i>
			T.W.P. <i>[Signature]</i>
RIGHT OF WAY MONUMENTS STANDARD PLAN RM-01 DATE: 7/2/03 APPROVED: <i>[Signature]</i> ENGINEER			
LOCATION AND SURVEY			



FOR PIPES LESS THAN OR EQUAL TO 36" ROUND OR EQUIVALENT ARCH

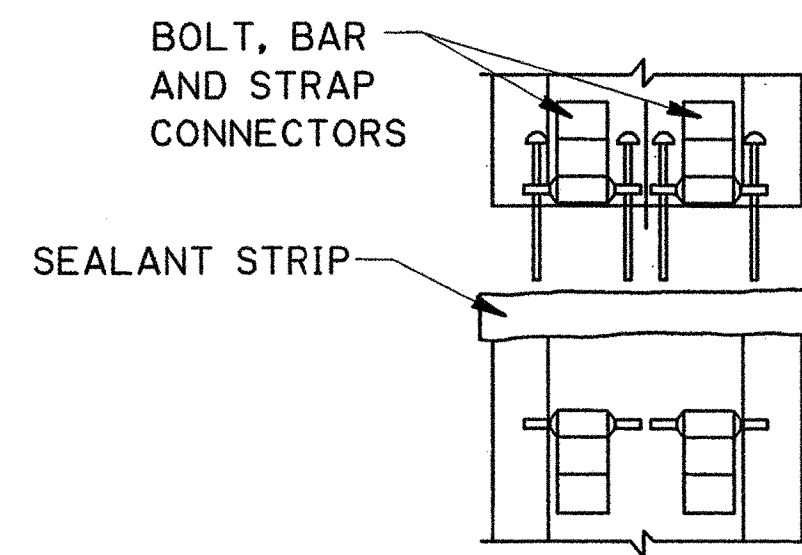


FOR PIPES GREATER THAN 36" ROUND OR EQUIVALENT ARCH AND FOR ALL SIZES OF 6 X 1 AND 5 X 1 CORRUGATIONS

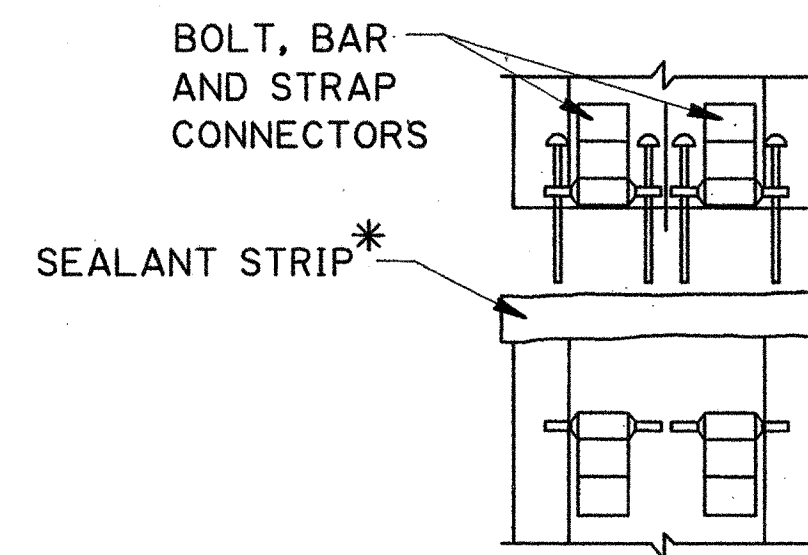
METHOD OF SEALING ANNULAR JOINT AT CONNECTING BAND WHERE TWO PIPE SECTIONS ARE JOINED

FLEXIBLE PLASTIC GASKET SYSTEM

T2 & T3 JOINTS AS SHOWN (WITH RODS & LUGS).
T1 JOINT SIMILAR, EXCEPT REQUIRES ONLY ONE STRIP OF PLASTIC GASKET MATERIAL IN SECOND CORRUGATION EACH SIDE OF JOINT.

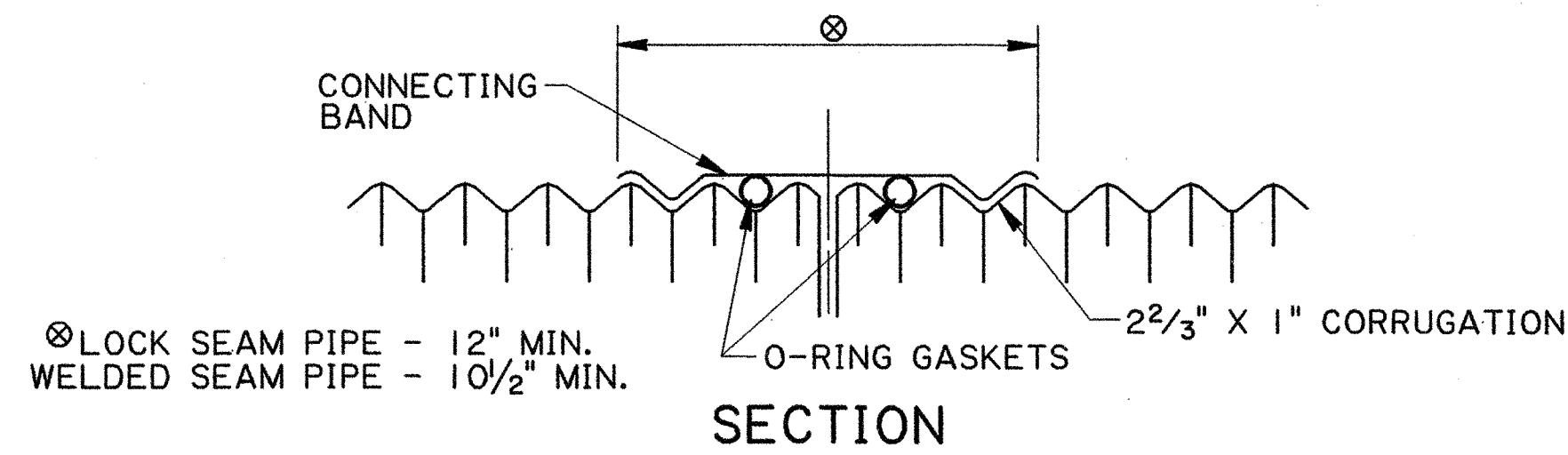


CONNECTION DETAIL DOUBLE HARNESS

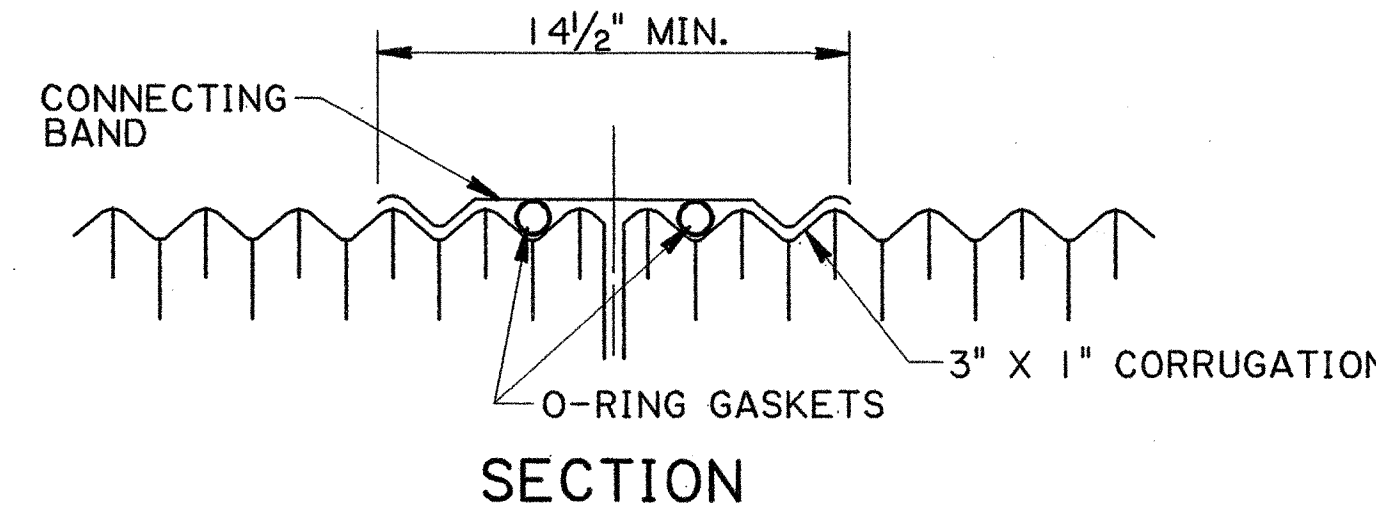


CONNECTION DETAIL DOUBLE HARNESS

* BAND LAP SEALANT TO BE FLEXIBLE PLASTIC GASKET MATERIAL. REQUIRED THICKNESS IN TABLE. REQUIRED WIDTH IS BAND WIDTH PLUS 2".



SECTION



SECTION

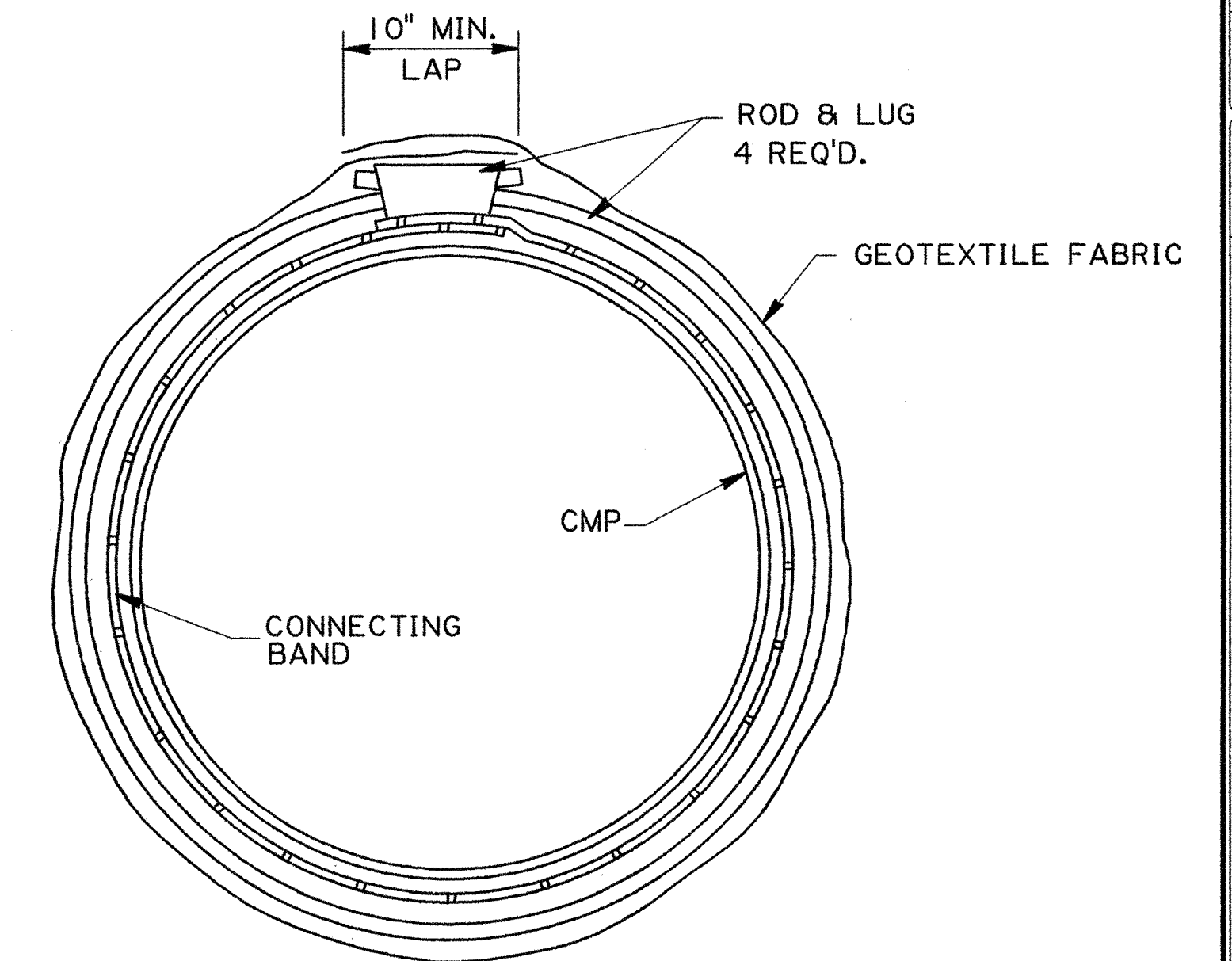
ALTERNATE CONNECTING BANDS O-RING SYSTEM

GEOTEXTILE FABRIC CLOTH REQUIRED - SAME AS SHOWN ABOVE.

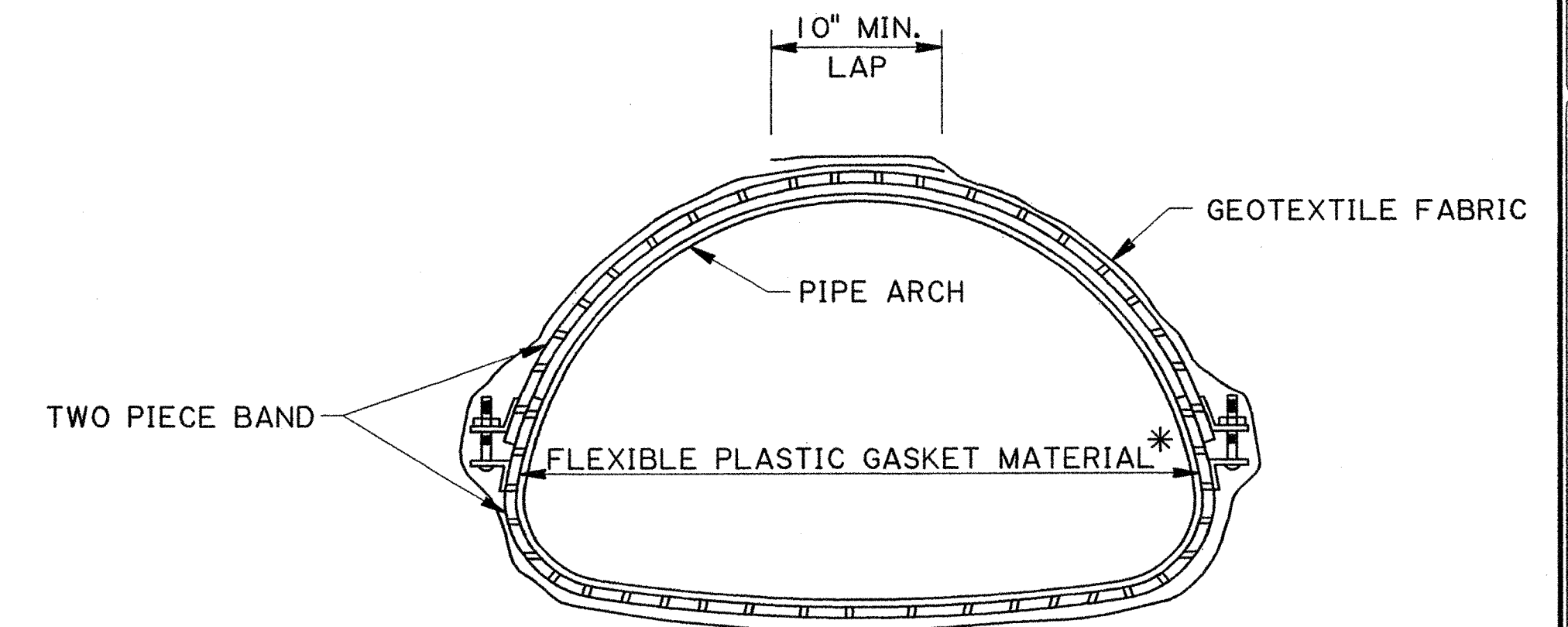
O-RING AND FLEXIBLE GASKET THICKNESS			
PIPE SIZE	CORRUGATION DEPTH	O-RING THICKNESS	FLEXIBLE GASKET THICKNESS
36" & UNDER	1/2"	13/16"	1"
LARGER THAN 36"	1/2"	7/8"	1"
ALL SIZES	1"	1 3/8"	1 1/2"

GENERAL NOTES:

- O-RING GASKETS WILL BE REQUIRED WHENEVER O-RING SYSTEM CONNECTING BANDS ARE USED. O-RING GASKETS SHALL BE IDENTIFIED BY SIZE, DIAMETER, BATCH OR REEL NUMBER AND PLANT.
- HELICAL ENDS SHALL BE RE-ROLLED AS PER CURRENT LA DOTD STANDARD SPECIFICATIONS.
- FOR O-RING JOINT SYSTEMS, BOLTS SHALL BE TORQUED TO A MINIMUM OF 40 FT.LBS.
- FOR FLEXIBLE PLASTIC GASKET SYSTEM ROUND PIPE, A MINIMUM OF 4 GALVANIZED 1/2" DIAMETER STEEL RODS AND LUGS SHALL BE PLACED OVER THE CONNECTING BAND. RODS MAY BE 2 PIECE FOR PIPE LARGER THAN 48".
- GEOTEXTILE FABRIC SHALL CONFORM TO CURRENT LA DOTD STANDARD SPECIFICATIONS.
- ARCH PIPE SHALL USE THE FLEXIBLE PLASTIC GASKET SYSTEM WITH APPROVED ANGLES OR STRAPS.
- ALL GASKET MATERIAL SHALL BE APPROVED PRODUCTS ON CURRENT LA DOTD QUALIFIED PRODUCTS LIST.
- PIPE JOINTS TO BE IN ACCORDANCE WITH CURRENT LA DOTD STANDARD SPECIFICATIONS.



CONNECTING BAND WITH ROD & LUG (FLEXIBLE PLASTIC GASKET SYSTEM)



METHOD OF SEALING LONGITUDINAL JOINTS AT TWO PIECE CONNECTING BAND (FLEXIBLE PLASTIC GASKET SYSTEM)

SHEET NUMBER 333

PARISH JEFFERSON

FEDERAL PROJECT 064-01-0040

STATE PROJECT 2 OF 2

RESIGNED CDJ HUB

CHECKED HUB

DATE

REVISION DESCRIPTION

DATE 10-5-05

BY WMR

DATE 10-5-05

CHIEF ENGINEER WMR

APPROVED BY

10-5-05 Eliminated all reference to Plastic Pipe and Table 9

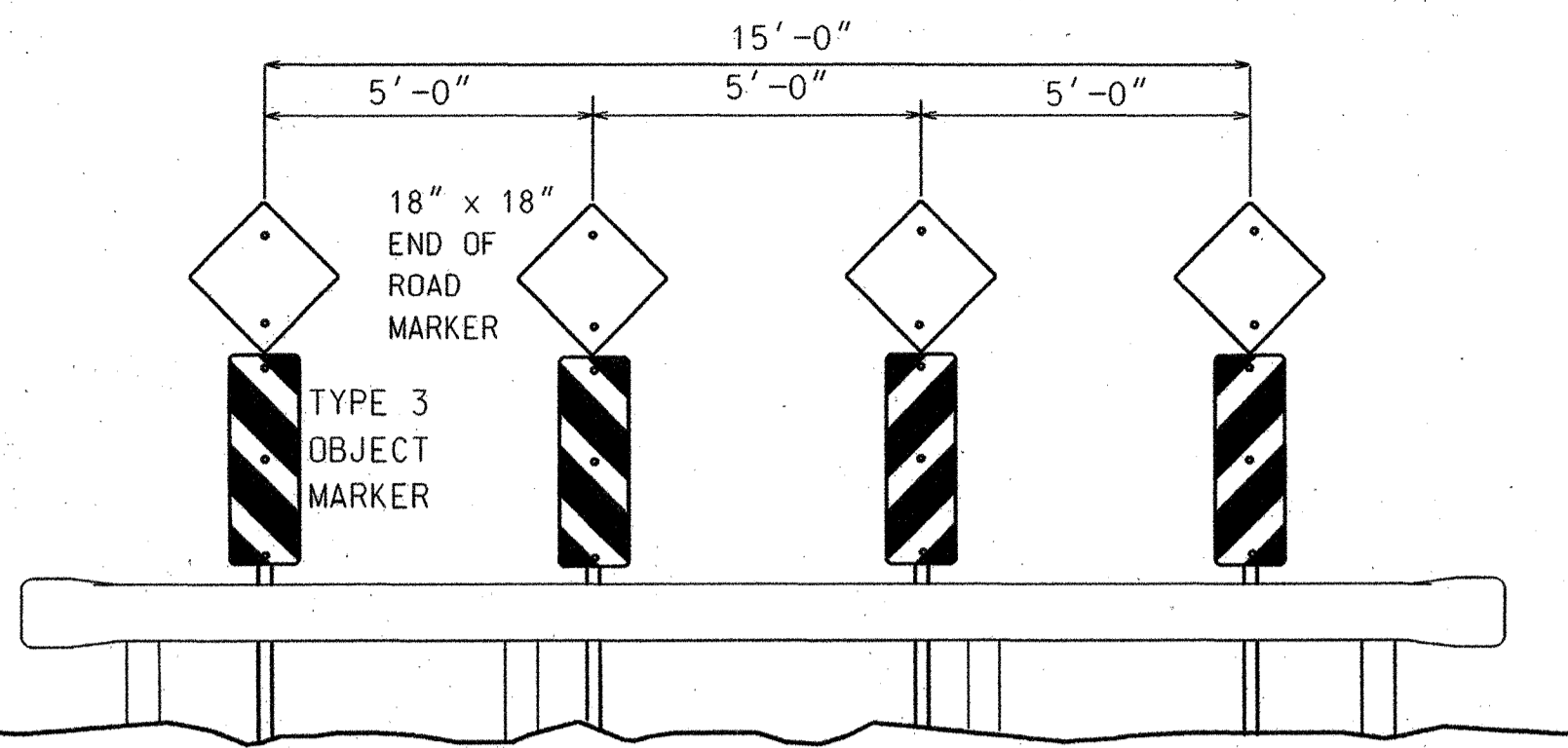
7-3-02 Redrafted, Added Plastic Pipe Table, General Revisions

3-27-84 Fill Height Tables - Connecting Bands

METAL PIPE WALL THICKNESS AND CONNECTING BANDS, FILL HEIGHT FOR METAL PIPE

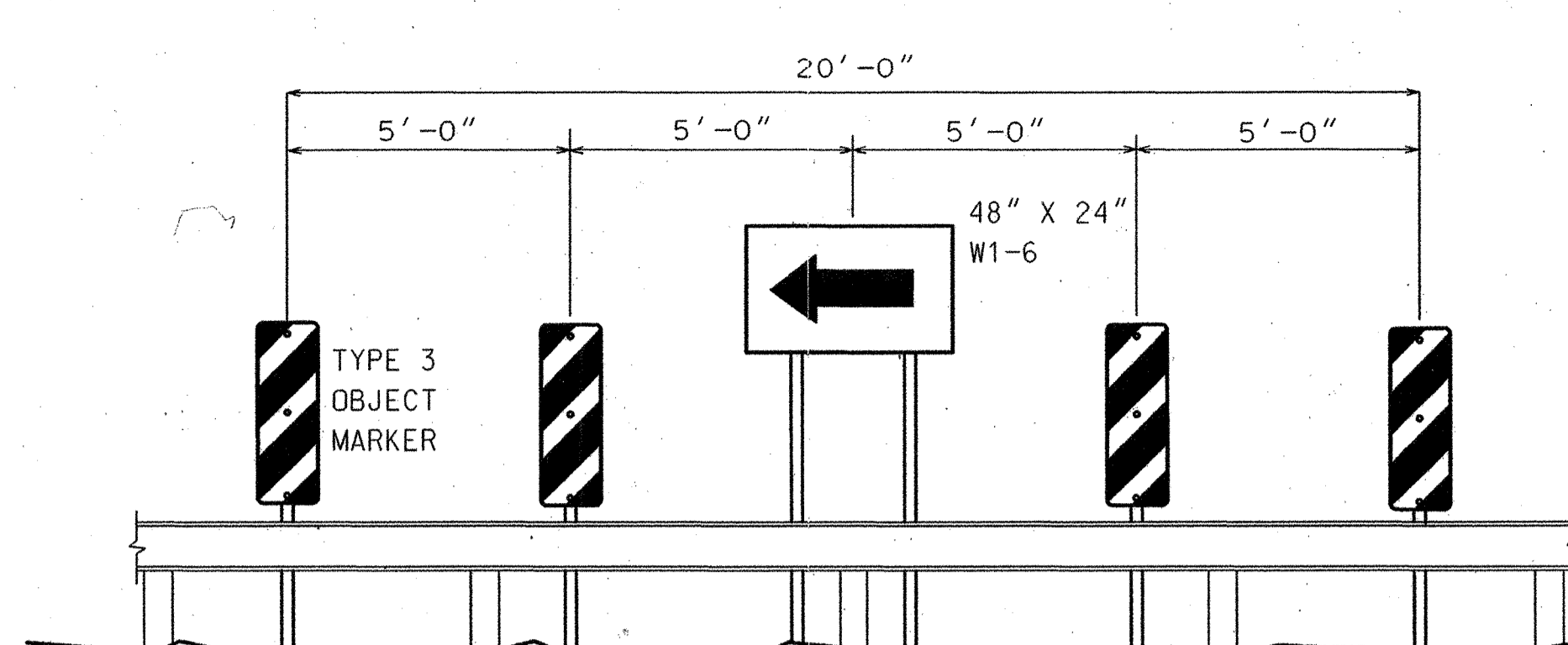
STANDARD PLAN SAM-1

HYDRAULICS SECTION



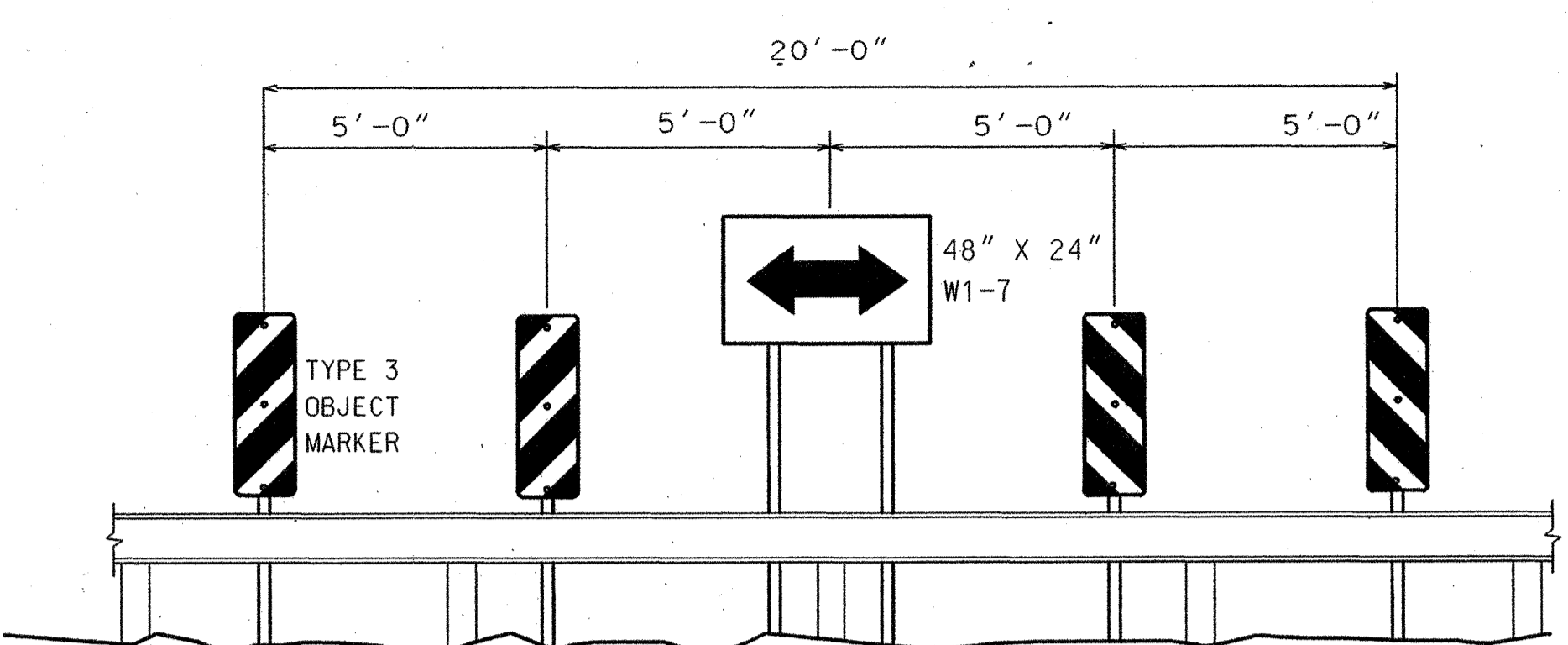
END-OF-ROADWAY INSTALLATION
DEAD END ROAD INSTALLATION
(TYPE A - WITH GUARD RAIL, TYPE D - WITHOUT GUARD RAIL)

For End of Road installation Object Marker stripes shall slope downward toward the center.
Guard Rail to be installed in accordance with guard rail Standard Plans.
Typical installation requires 25 ft of rail with flared end sections.



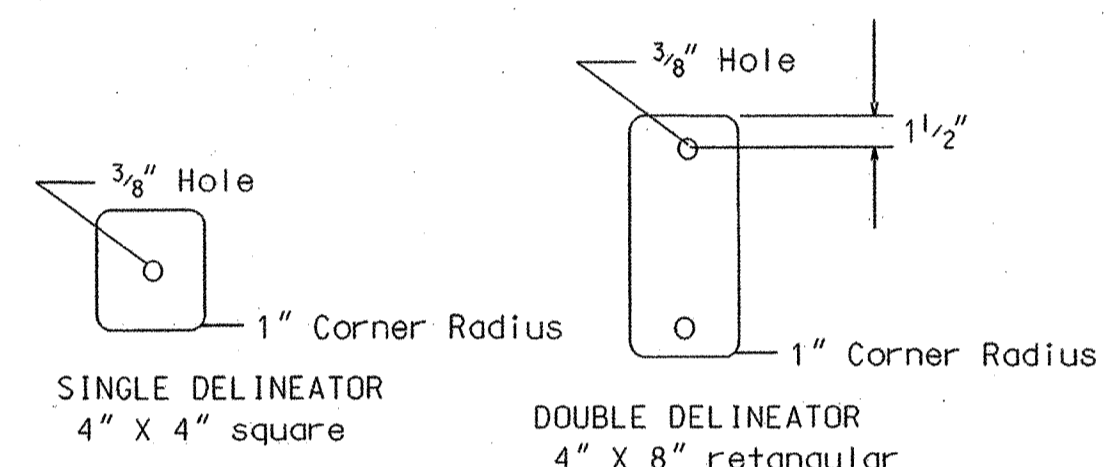
TURN INSTALLATION
DEAD END ROAD INSTALLATION
(TYPE B - WITH GUARD RAIL, TYPE C - WITHOUT GUARD RAIL)

For Turn installations Object Marker stripes shall slope downward toward the direction of travel.
Guard rail to be installed in accordance with guard rail Standard Plans.
Typical installation requires 25 feet of rail with flared end sections.



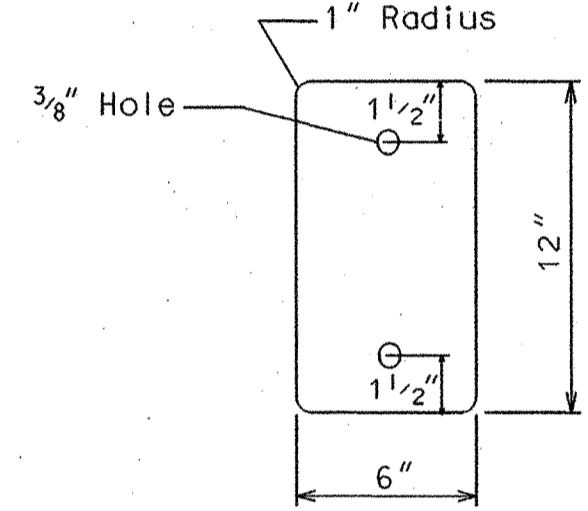
T-INTERSECTION INSTALLATION
DEAD END ROAD INSTALLATION
(TYPE B - WITH GUARD RAIL, TYPE C - WITHOUT GUARD RAIL)

For T-intersection installations Object Marker stripes shall slope away from center.
Guard rail to be installed in accordance with guard rail Standard Plans.
Typical installation requires 25 feet of rail with flared end sections.



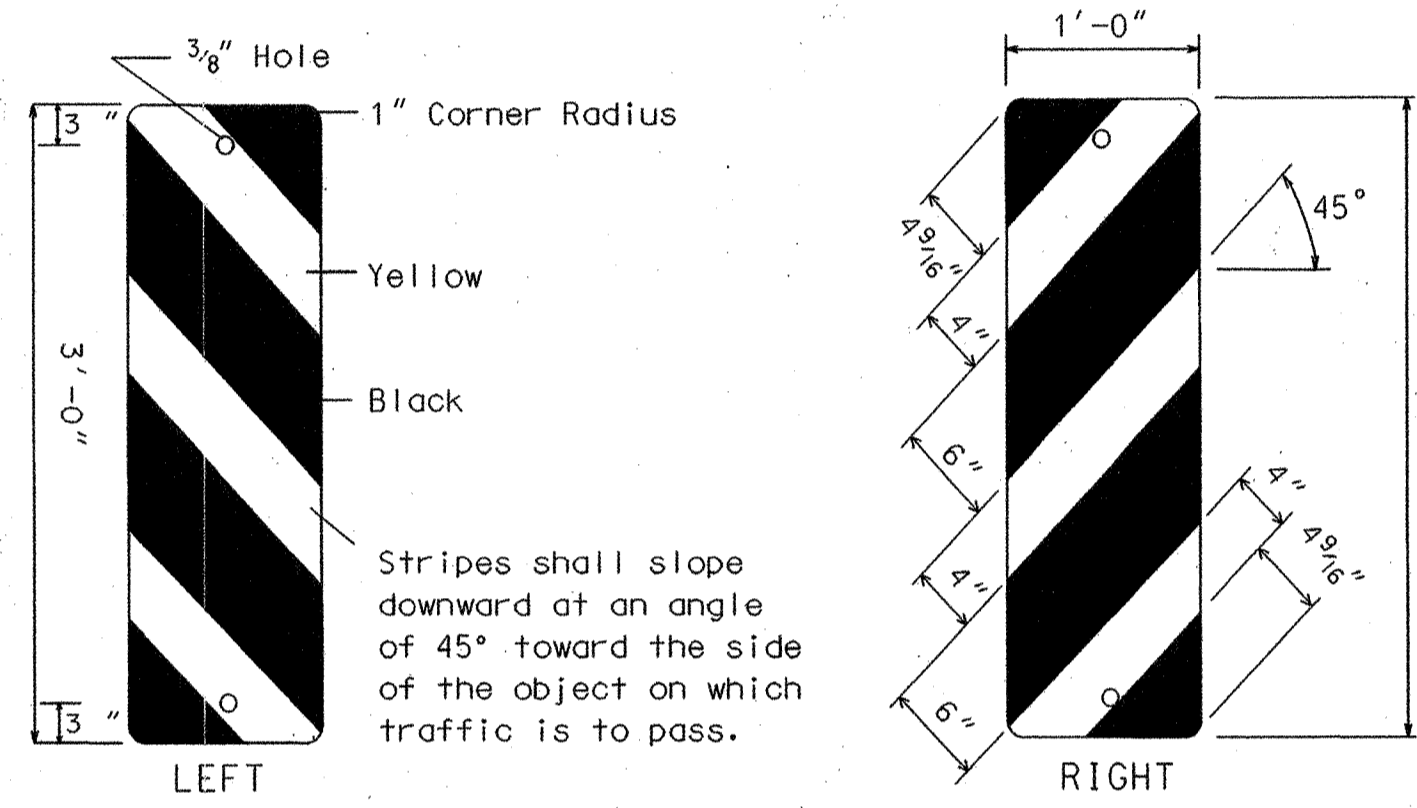
DETAIL OF DELINEATORS

Colors shall be red, white, or yellow.
The sheeting shall be in accordance with DOTD Standard Specification.
For alternate Delineator/Flexible Post systems see the DOTD Qualified Products List. Alternates shall have an equivalent area of sheeting and shall not be less than 3 in. wide.
The mounting height shall be the same as for Milepost Markers.
Post penetration in ground shall be a minimum of 2 ft.



DETAIL OF TYPE 2 OBJECT MARKER

The face shall be yellow. The sheeting shall be in accordance with DOTD Standard Specification.
The typical mounting height from the ground line to the bottom of the object marker shall be 36 in.
Post penetration in ground shall be a minimum of 2 ft.
Type 2 Object Markers are typically used to mark objects for mowing operations.

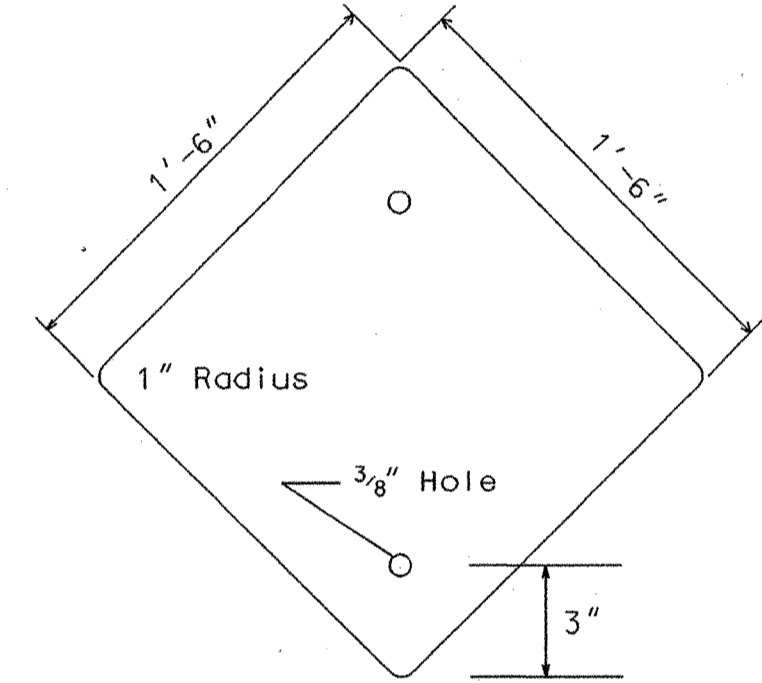


DETAIL OF TYPE 3 OBJECT MARKER

The markings on the Object Markers shall be diagonal, black and yellow stripes. The sheeting shall be in accordance with DOTD Standard Specifications.
Post penetration in ground shall be a minimum of 3 ft.
Type 3 Object Markers are typically used to mark objects in the roadway (travel lanes and shoulder) and to mark guard rail installation (see guard rail Standard Plans).

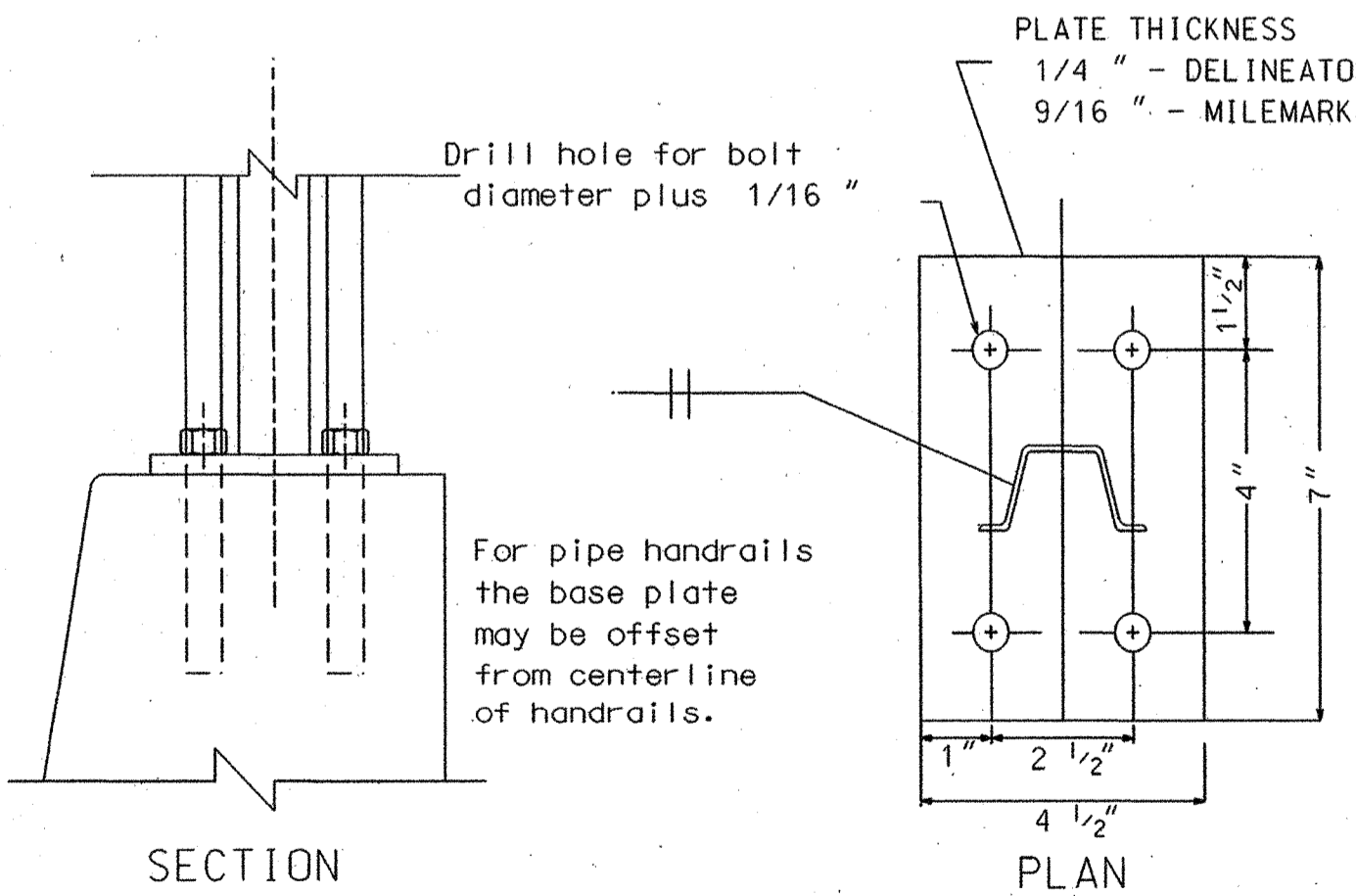
When used for marking objects in the roadway or objects that are 8 ft or less from the shoulder or curb, the mounting height to the bottom of the object marker should be at least 4 ft above the surface of the nearest traffic lane.

When used to mark objects more than 8 ft from the shoulder or curb, the mounting height to the bottom of the object marker should be at least 4 ft above the ground.

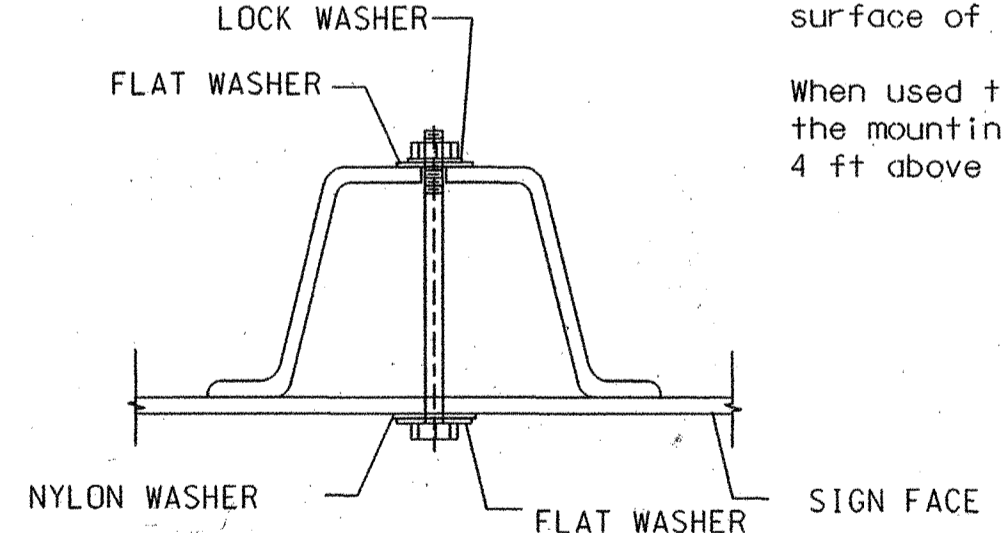


DETAIL OF END OF ROAD MARKER

Colors shall be red.
The sheeting shall be in accordance with DOTD Standard Specification.
The minimum mounting height from the ground line to the bottom of the marker shall be 5 ft.
Post penetration in ground shall be a minimum of 3 ft.



DETAIL FOR MOUNTING SIGN POST TO CONCRETE BARRIER RAIL
Anchor Bolts
1/4" plate - 5/16" x 4" bolt
9/16" plate - 1/2" x 5" bolt
For bolt anchors see DOTD Qualified Product List.
Steel base plate and channel posts shall be galvanized after fabrication.



DETAIL FOR MOUNTING SIGN TO U-CHANNEL POST
Steel U-channel sign post shall have 3/8" dia. holes drilled in channel on 1 in. centers from top of post.
Post Weight: 2.0 lbs/ft - DELINEATORS and TYPE 2 OBJECT MARKERS
2.5 lbs/ft - MILEMARKERS and TYPE 3 OBJECT MARKERS
3.0 lbs/ft - WARNING SIGNS, W1-6, W1-7
Fasteners shall be either bolts or rivets.

Bolts shall be 5/16 in. diameter electroplated steel hex head bolts with one nylon washer, two flat washers, one lock washer, and one vandal resistant hex nut.
Rivets shall be vandal resistant 1/4 in. diameter aluminum blind rivets with smooth, low profile heads on each end.

MILEPOST FACE DIMENSIONS

LOCATION	NUMERALS	A	B	C	D	E	F	BORDER WIDTH
CONVENTIONAL ROADS	1	18"						
	2	27"	10"	4"	6"	2.5"	3"	0.5"
	3	36"						
EXPRESSWAYS & FREEWAYS	1	24"				3.5"		
	2	36"	12"	4"	10"	3"	3"	0.5"
	3	48"				2.5"		
1/10 Mile Markers	2	12"				1.25"	1.5"	
	3	18"	6"	N/A	4"	1.5"	1.5"	N/A
	4	24"				1.75"	1.5"	

DETAIL OF MILEPOST MARKER

Dimension of Milepost Markers shall be in accordance with the dimensions given in the above table.
The Milepost Markers shall be green with a white legend and border.
The sheeting shall be in accordance with DOTD Standard Specification

The typical mounting height to the bottom of the marker should be 4 ft above the road surface when installed 8 ft or less from the edge of the travel lane, and 4 ft above the ground when installed more than 8 ft from the travel lane.
Post penetration in ground shall be a minimum of 3ft.

SHEET NUMBER 334

JEFFERSON

PARISH FEDERAL PROJECT STATE PROJECT

064-01-0040

LOUISIANA STATE UNIVERSITY

OBJECT MARKERS, MILEPOST AND DEAD END ROAD INSTALLATIONS

STANDARD PLAN HS-03

TRAFFIC ENGINEERING

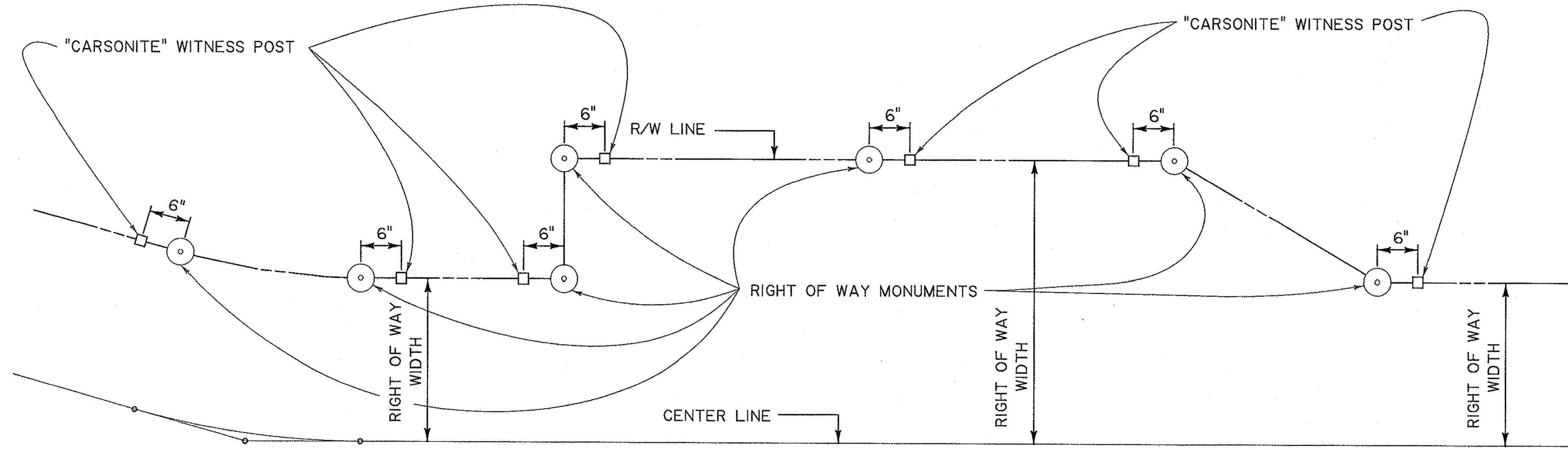
DESIGNED: P. Allain
CHECKED: C. Adams
DETAILED: J. Colvin
CHECKED: P. Allain
DATE: December 15, 2004
SHEET: 1 OF 1

REVISION DESCRIPTION

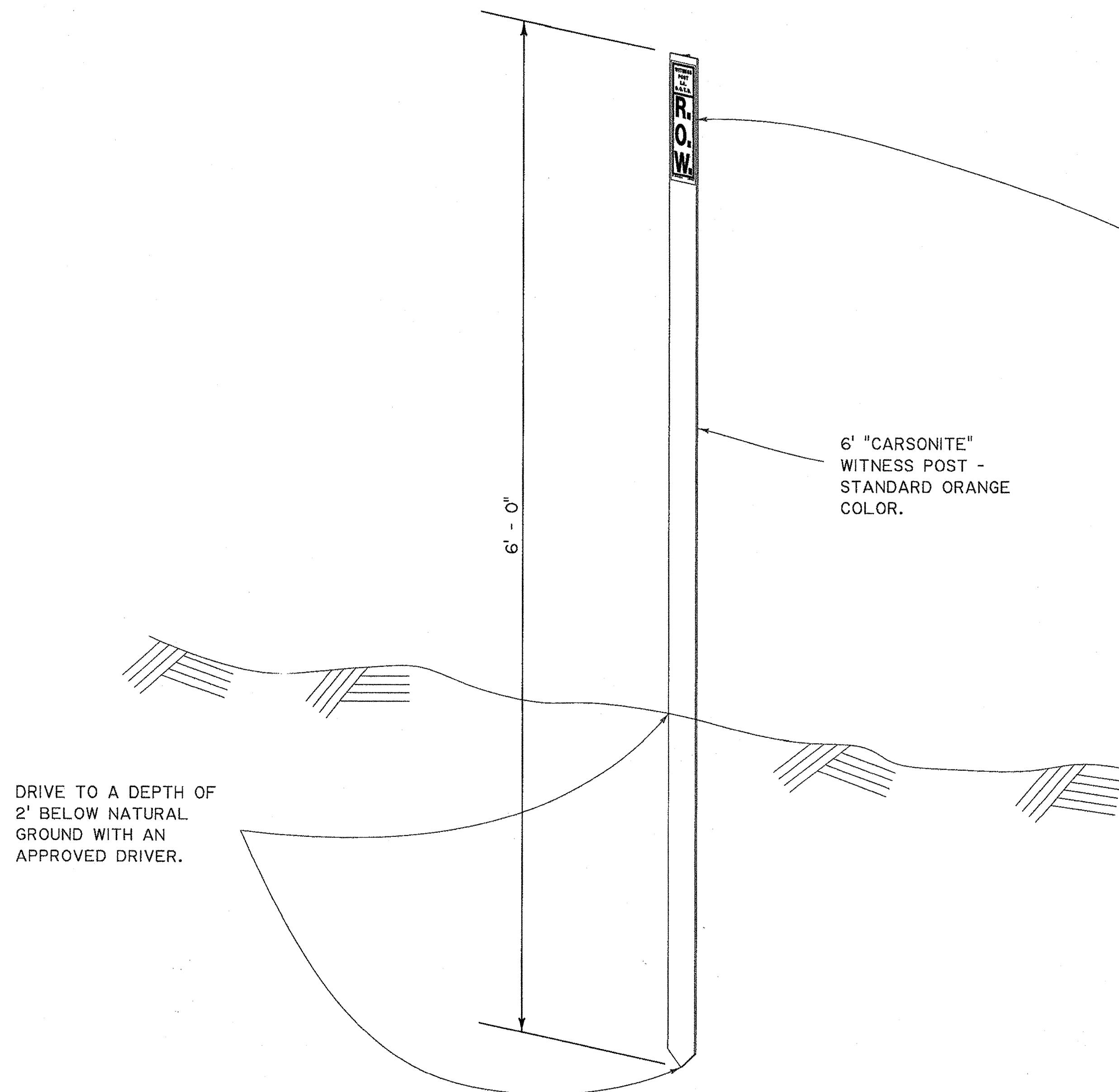
DATE: 1-3-05

APPROVED: *W. H. Temple* CHIEF ENGINEER

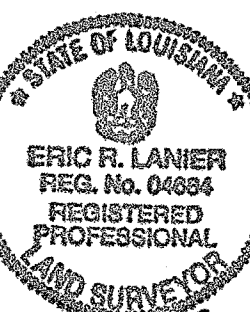
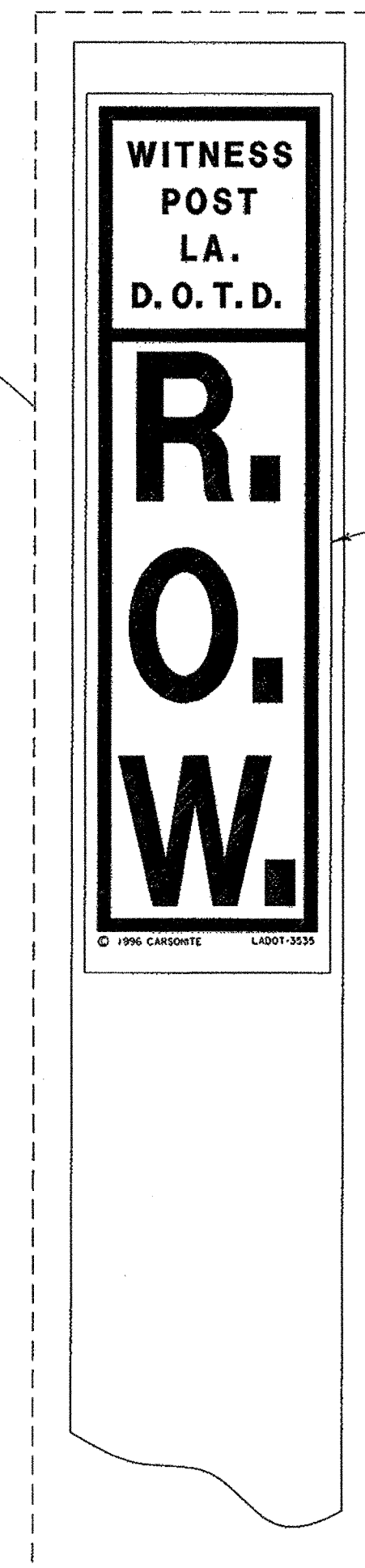
FINAL PLANS



STANDARD RIGHT OF WAY MONUMENT
WITNESS POST
PLAN SHOWING WHERE POSTS ARE TO BE PLACED



DRIVE TO A DEPTH OF
2' BELOW NATURAL
GROUND WITH AN
APPROVED DRIVER.



Eric Lanier
3-27-08

"CARSONITE" WITNESS POSTS SHALL BE AS SUPPLIED BY BERNTSEN INTERNATIONAL, INC., MADISON, WI., 53708-8670, OR AN APPROVED EQUAL. SUBSTITUTE WITNESS POSTS MUST BE APPROVED BY THE LOCATION AND SURVEY ADMINISTRATOR, BATON ROUGE, LA. NO SUBSTITUTION WILL BE ALLOWED ON COLOR OR ON THE REQUIRED DECAL LOGO. (LADOTD - 3535)

POST DRIVERS SHALL BE AS DESIGNED FOR THIS PURPOSE AND AVAILABLE FROM THE ABOVE SOURCE, OR AS APPROVED BY THE PROJECT ENGINEER.

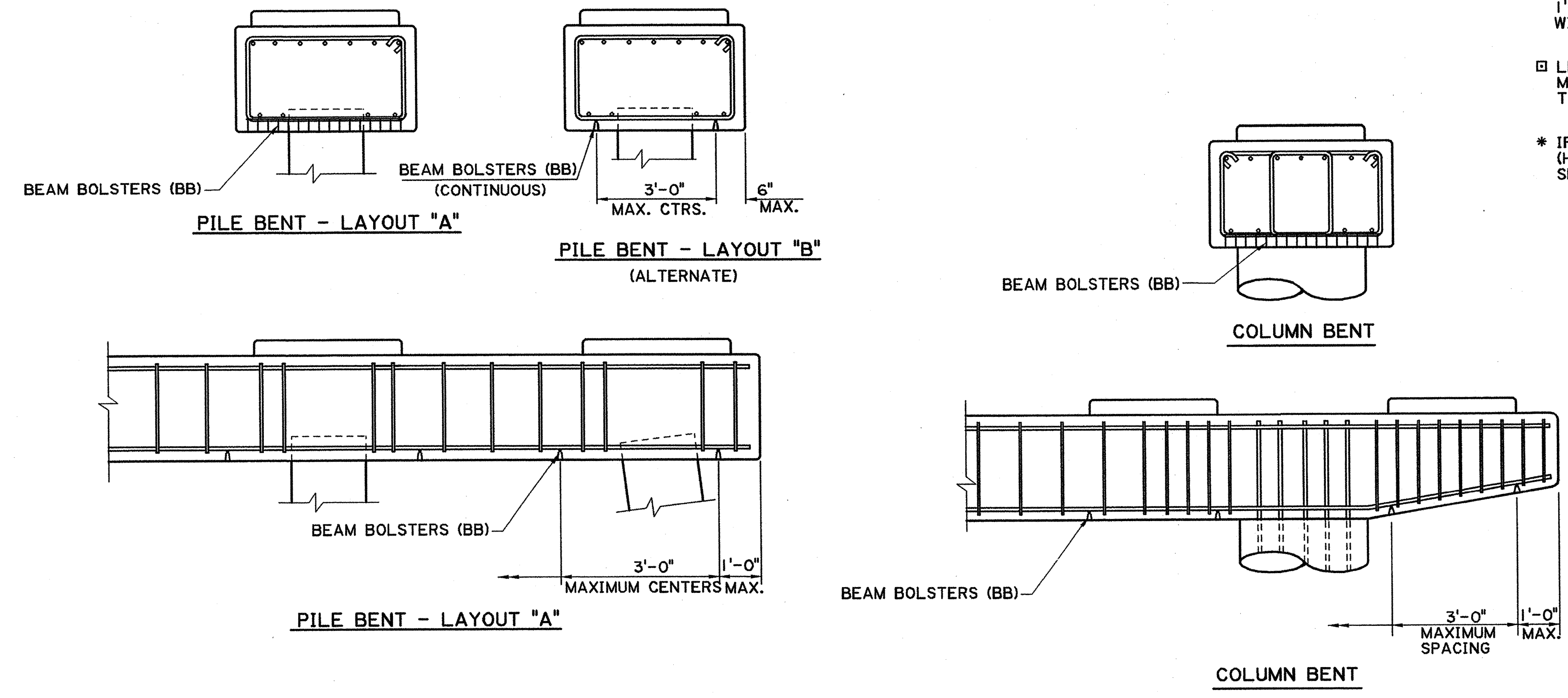
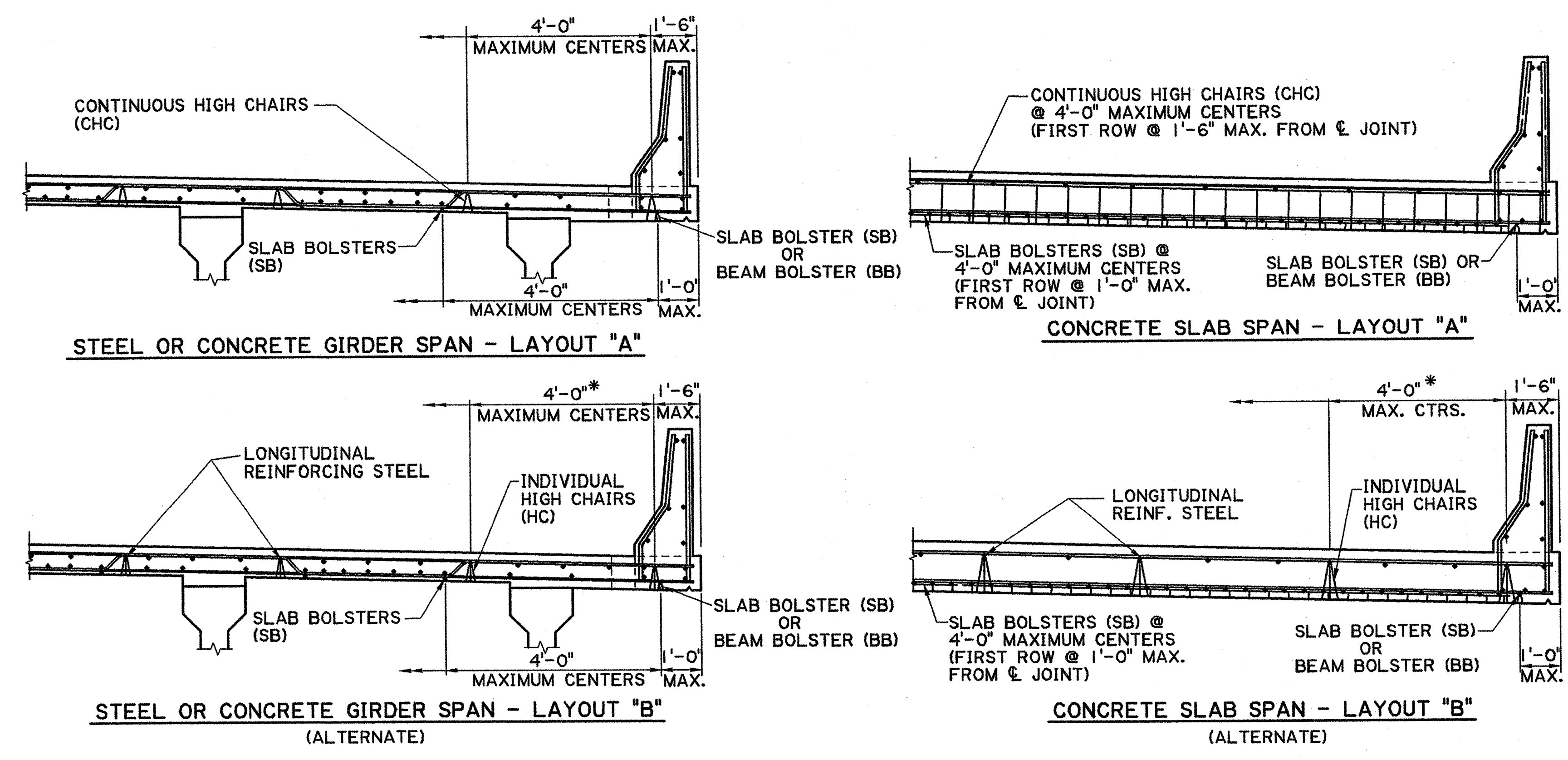
EACH POST SHALL HAVE THIS DECAL LOGO ATTACHED BY THE SUPPLIER. (LADOTD - 3535)

SHEET NUMBER		335	
DESIGNED	CHECKED	DATE	SHEET
DEFINED	CHECKED	DATE	SHEET
PARISH	FEDERAL PROJECT	STATE PROJECT	DATE
JEFFERSON			06-4-01-0040
REVISION NO.	DATE	DESCRIPTION	BY
2	3/27/08	REVISED TO UPDATE SHEET FORMAT	E.R.L.
1	7/9/97	CREATED STANDARD PLAN	T.W.P.
		REVISION DESCRIPTION	R.E.D.
			APPROVED
RIGHT OF WAY MONUMENT WITNESS POSTS			
STANDARD PLAN WP-01			
APPROVED: <i>Eric Lanier</i>			
DATE: 3-27-08			
LOCATION AND SURVEY			

30-APR-2009 14:19

FINAL PLANS

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GENERAL NOTES:

STEEL WIRE BAR SUPPORTS AND REINFORCING STEEL BARS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS AMENDED BY THE SPECIAL PROVISIONS AND/OR SUPPLEMENTAL SPECIFICATIONS.

HEIGHT OF BAR SUPPORTS ARE TO BE THAT REQUIRED TO SUPPORT THE REINFORCING BARS AT POSITIONS SHOWN IN THE PLANS. BAR SUPPORTS ARE NOT INTENDED, AND SHALL NOT BE USED, TO SUPPORT RUNWAYS FOR CONCRETE BUGGIES OR SIMILAR LOADS.

WHEN BAR SUPPORTS ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK THE LAST LEGS ON ADJOINING PIECES, BUT NO BAR SHALL BE PLACED MORE THAN 2" BEYOND THE LAST LEG AT THE END OF A RUN OF ANY CONTINUOUS SUPPORTS.

WHERE BAR SUPPORTS ARE USED ON EARTH OR AGGREGATE SUB GRADES, SUITABLE PLATES SHALL BE PROVIDED TO PREVENT DISPLACEMENT OF THE SUPPORT FOOT. ALL BAR SUPPORTS BEARING ON THE FORMS SHALL HAVE RADIUS BEARING LEGS IN THE FORM OF A HOOK (UPTURNED LEGS) OR SPHERICAL FOOT AT THE LOWER END OF THE LEGS.

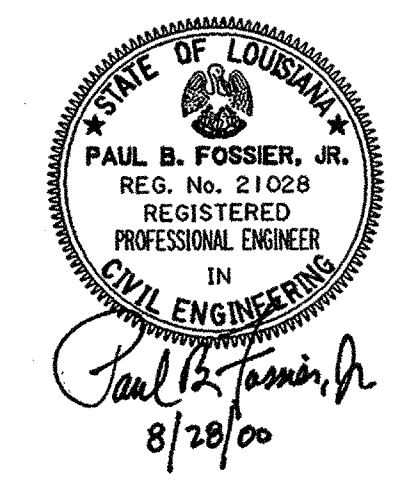
TYPE OF SUPPORT	BAR SUPPORT ILLUSTRATION	MINIMUM WIRE DIAMETER Δ			REMARKS
		HEIGHT	TOP	LEGS	
SLAB BOLSTER (SB)		ALL	NO. 4 CORRUGATED	NO. 6	VERTICAL CORRUGATIONS SPACED 1" ON CENTERS
BEAM BOLSTER (BB)		UP TO 2" OVER 2"	NO. 7 NO. 4	NO. 7 NO. 4	
CONTINUOUS HIGH CHAIR (CHC)		2" TO 5" 5" TO 9" OVER 9"	NO. 2 NO. 2 NO. 2	NO. 4 NO. 2 NO. 0	LAYOUT "A" FOR SPANS
INDIVIDUAL HIGH CHAIR (HC)		2" TO 5" 5" TO 9" OVER 9"	N/A N/A N/A	NO. 4 NO. 2 NO. 0	LAYOUT "B" FOR SPANS (ALTERNATE)

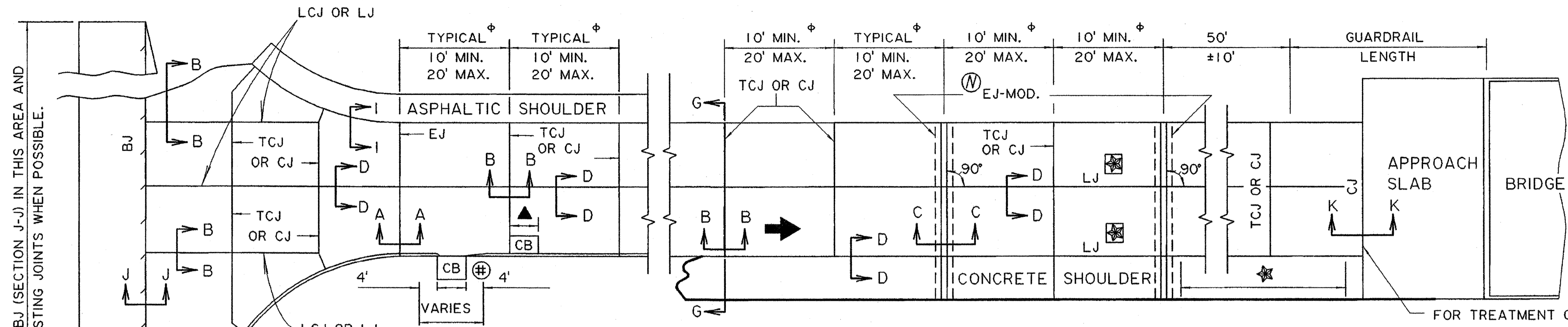
Δ AMERICAN STEEL AND WIRE GAUGES.

LEGS SHALL BE 20 DEGREES OR LESS WITH VERTICAL WHEN HEIGHT EXCEEDS 1'-0". REINFORCE LEGS WITH WELDED CROSS WIRES OR ENCIRCLING WIRES.

LEGS SHALL BE 20 DEGREES OR LESS WITH VERTICAL, ON 8/4" CENTER MAXIMUM, WITHIN 4" OF END CHAIR, AND SPREAD BETWEEN LEGS NOT LESS THAN 50% OF NORMAL HEIGHT.

* IF LONGITUDINAL REINFORCING BARS ARE NO. 4, SPACE THE INDIVIDUAL HIGH CHAIRS (HC) @ 3'-0" MAXIMUM CENTERS LONGITUDINALLY; FOR NO. 5 BARS OR LARGER, SPACE @ 4'-0" MAXIMUM CENTERS.





PLAN VIEW OF ROADWAY SHOWING JOINTS

USE TYPE BJ (SECTION J-J) IN THIS AREA AND MATCH EXISTING JOINTS WHEN POSSIBLE.

USE TYPE LBj (SECTION H-H) IN THIS AREA AND MATCH EXISTING JOINTS (JOINTS AT EQUAL SPACES NOT EXCEEDING 20' MAX.)

- ♦ MAXIMUM JOINT SPACING AT 18' WHEN PAVEMENT IS PLACED ON PERMEABLE BASE.
- ⊕ USE TYPE LCJ JOINT WITH SPLIT SLAB CONSTRUCTION.
- ⊕ WHEN POSSIBLE, AT CATCH BASINS NO JOINTS SHALL BE PLACED IN THE LIMITS SHOWN.
- ▲ TRANSVERSE JOINTS NEAR CATCH BASIN (CB-07, 08 & 09) THAT EXTEND INTO THE PAVEMENT SHALL BE ADJUSTED TO COINCIDE WITH ONE EDGE OF THE CATCH BASIN OR THE CENTER OF THE CATCH BASIN. SEE DETAIL G, SHEET 3.
- Ⓝ SEE SECTION C-C SHEET 2 FOR TYPE EJ-MODIFIED JOINT.
- ★ CJ OR TCJ JOINTS AT 20' MAX. CTRS.

NOTES:

- 1 PAVEMENT EDGES SHALL BE SLIGHTLY ROUNDED (1/4" APPROX.).
- 2 ASPHALTIC CONCRETE SHOULDER: THE SHOULDER JOINTS SHALL BE SAW CUT AND CONSTRUCTED IN ACCORDANCE WITH SECTION I-I.
- 3 FOR SECTIONS C-C, E-E, F-F, G-G, H-H, I-I & K-K, SEE SHEET 2 OF THIS STANDARD.
- 4 ALL JOINTS TO BE USED WHERE SHOWN ON THIS SHEET OR AS SHOWN ELSEWHERE IN THE PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER.
- 5 ON TYPE EJ JOINTS, SPOT WELD ALTERNATE ENDS OF DOWEL BARS TO DOWEL BASKETS AND PLACE EXPANSION TUBES ON FREE ENDS OF DOWEL BARS.
- 6 TYPE EJ JOINTS SHALL BE SEALED WITH PREFORMED ELASTOMERIC COMPRESSION JOINT SEALS CONFORMING TO SUBSECTION 1005.03 OR 2 COMPONENT SILICONE CONFORMING TO 1005.02(D). THE SEALS SHALL HAVE A NOMINAL WIDTH OF 2 1/4" BEFORE COMPRESSION. JOINTS SHALL BE CLEANED PRIOR TO SEALING.
- 7 FOR DESIGN SPEEDS GREATER THAN 45mph:
 - A. TYPE LJ JOINTS SHALL BE SAW CUT AND CONSTRUCTED AS IN DETAIL "F". THE JOINT SHALL BE SAW CUT AND CLEANED PRIOR TO SEALING WITH A JOINT SEALANT CONFORMING TO SUBSECTION 1005.02(A) OR (C).
 - B. TYPE TCJ OR CJ SHALL BE SAW CUT AS SHOWN IN DETAIL "C" OR "D" AND TO THE DEPTH SHOWN IN TABLE I. THE JOINT SHALL BE SAND BLASTED AND CLEANED IMMEDIATELY PRIOR TO SEALING. THE INITIAL CUT SHALL BE MADE WITH 1/8" MINIMUM BLADE. THE SEALANT SHALL BE A PREFORMED ELASTOMERIC SEAL IN ACCORDANCE WITH SUBSECTION 1005.03 OR A SILICONE SEALANT IN ACCORDANCE WITH SUBSECTION 1005.02(C).

- 8 FOR DESIGN SPEEDS OF 45mph OR LESS:
 - A. TYPE LJ JOINTS SHALL BE SAW CUT AND SEALED AS DESCRIBED IN 7(A).
 - B. TYPE TCJ OR CJ JOINTS SHALL BE CONSTRUCTED AS FOLLOWS:
 - (1) CONSTRUCTED AS DESCRIBED IN 7(B).
 - (2) WITH A REMOVABLE FORMING DEVICE AS SHOWN IN DETAILS "A" OR "B". THE JOINT SHALL BE SAND BLASTED AND CLEANED IMMEDIATELY PRIOR TO SEALING AND MAY REQUIRE SAWING TO ACHIEVE PROPER RESERVOIR DIMENSIONS.
 - (3) WITH A COMBINATION JOINT FORMER/SEALER AS SHOWN IN DETAIL "E". THE SEALER SHALL CONFORM TO SUBSECTION 1005.04 AND BE INSTALLED IN ACCORDANCE WITH SUBSECTION 601.09(C)(3) AND NO ADDITIONAL SEALANT IS REQUIRED.
- 9 EXCEPT AS NOTED BELOW, DOWEL BARS & TIE BARS SHALL BE HELD IN PLACE BY SUPPORTS SIMILAR TO THE ONES SHOWN, OR APPROVED EQUALS. APPROVED MECHANICAL PLACEMENT OF DOWEL BARS AND TIE BARS WILL BE ALLOWED WITH ALL PAVING METHODS. WHEN DOWEL BAR BASKETS ARE USED, APPROXIMATELY THE CENTER 7" OF SPACER WIRES, THAT SPAN ACROSS THE JOINT, SHALL BE CLIPPED AND REMOVED AFTER STAKING BASKETS IN PLACE.
- 10 INSTALL GEOTEXTILE FABRIC UNDER ALL TCJ, CJ, AND EJ JOINTS WHEN CONCRETE PAVEMENT IS PLACED ON UNSTABILIZED OR UNTREATED BASE COURSES OR SUBBASES. WHEN DOWEL BARS ARE MECHANICALLY IMPLANTED THE GEOTEXTILE FABRIC SHALL BE ANCHORED TO THE BASE COURSE WITH PINS.
- 11 WHEN CONSTRUCTING CONCRETE CURB AND GUTTER ADJACENT TO NEW P.C.C. PAVEMENT, USE TYPE LCJ JOINT. WHEN ADJACENT TO EXISTING P.C.C. PAVEMENT, USE TYPE LBj JOINT. THE FIRST LOAD TRANSFER DEVICE SHALL BE INSTALLED 18" FROM THE PAVEMENT EDGE.

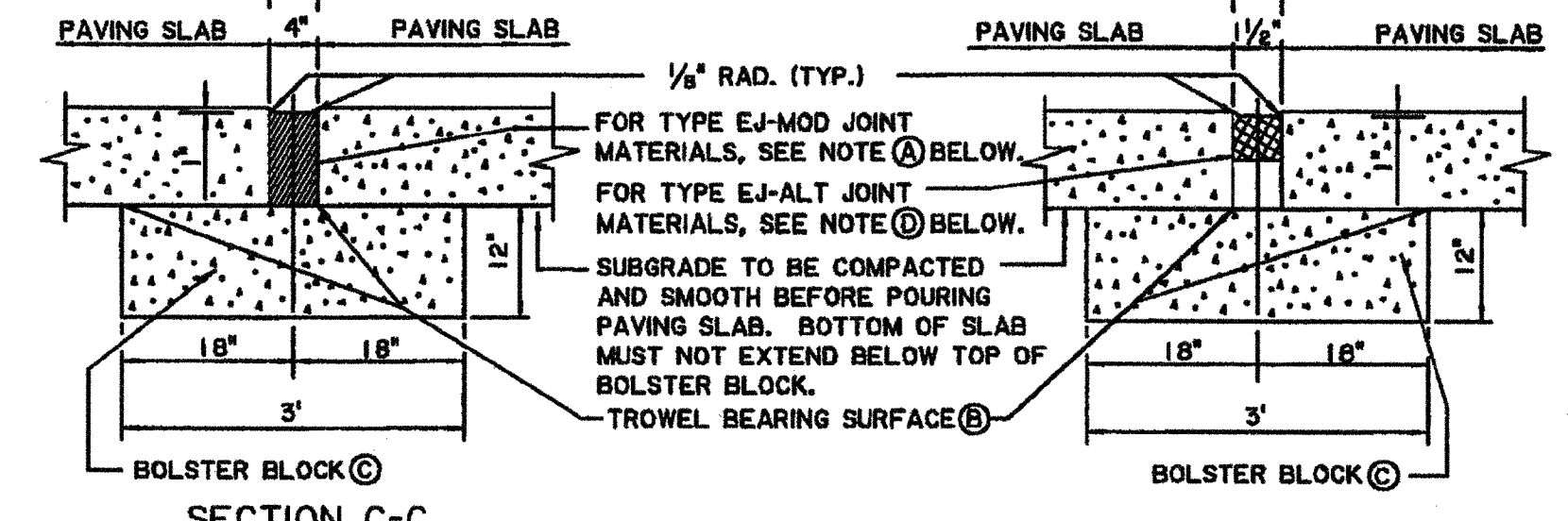
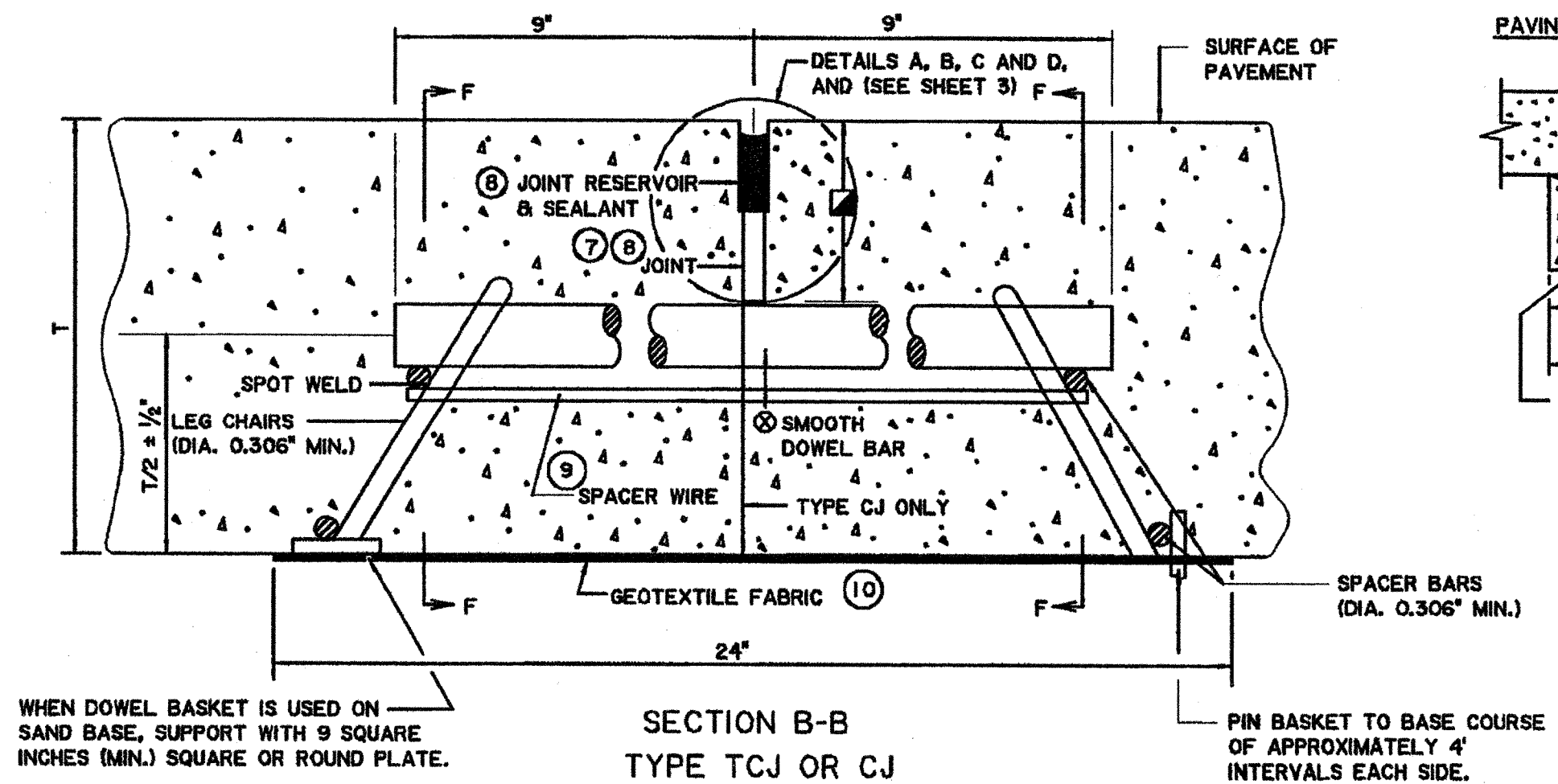
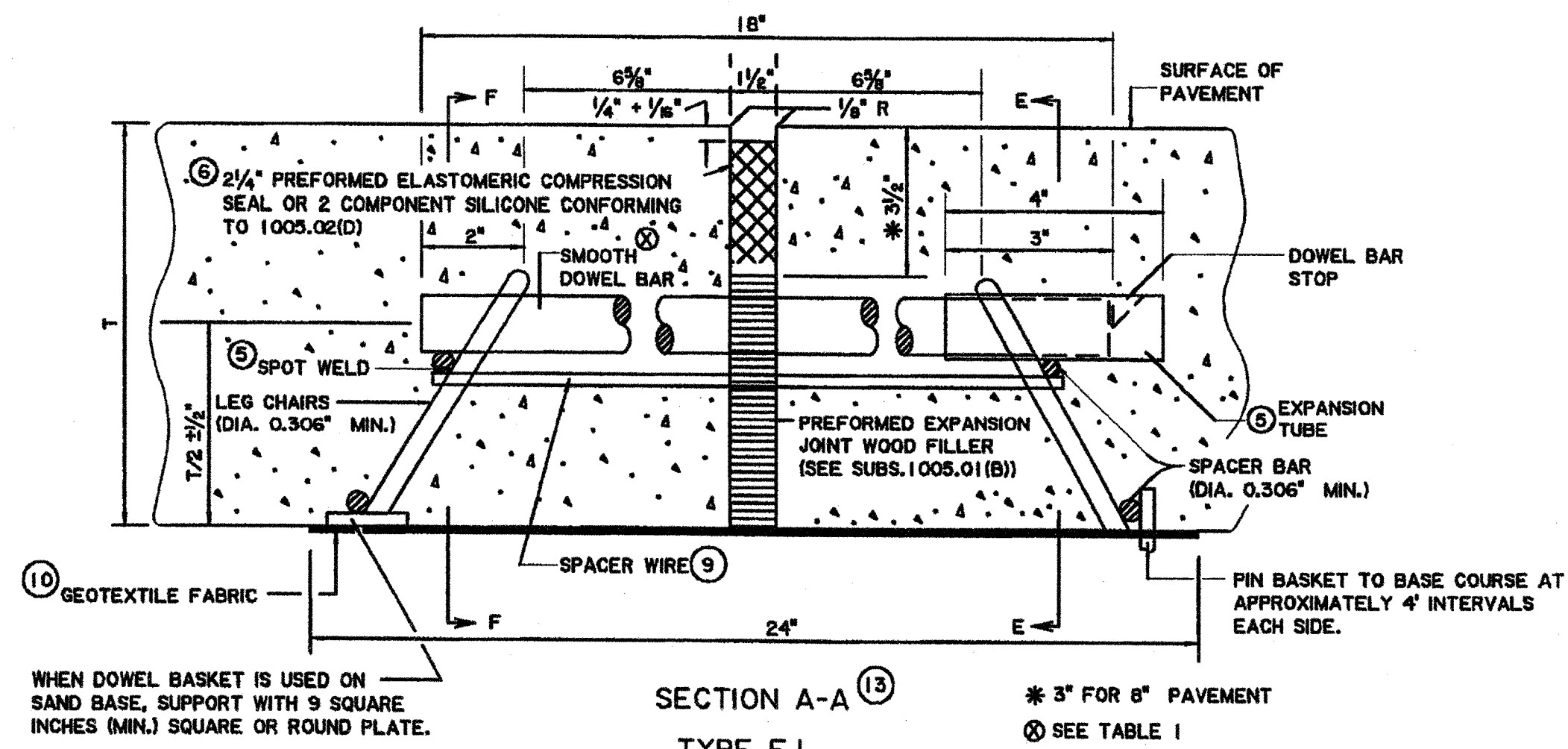
TABLE I
(ALL DIMENSIONS ARE IN INCHES)

PAVEMENT THICKNESS	SMOOTH DOWEL BARS			DEF. TIE BARS			MINIMUM DEPTH OF JOINT		KEYWAY	
	SIZE	LENGTH	SPACING	SIZE	LENGTH	SPACING	TCJ & CJ	LJ	A ±1/2"	B ±1/4"
8	1 1/4	18	12	1/2	24	24	2 3/4*	3	2 1/2	1 1/4
9	1 1/4	18	12	1/2	24	24	3 *	3 1/2	2 1/2	1 1/4
10	1 1/2	18	12	1/2	24	24	3 1/2 *	4	2 1/2	1 1/4
11	1 1/2	18	12	5/8	30	24	3 1/2	4	2 1/2	1 1/4
12	1 1/2	18	12	5/8	30	24	4	4 1/2	3	1 1/2
13	1 1/2	18	12	5/8	30	24	4	4 1/2	3	1 1/2
14	1 1/2	18	12	5/8	30	24	4 1/2	5	3	1 1/2

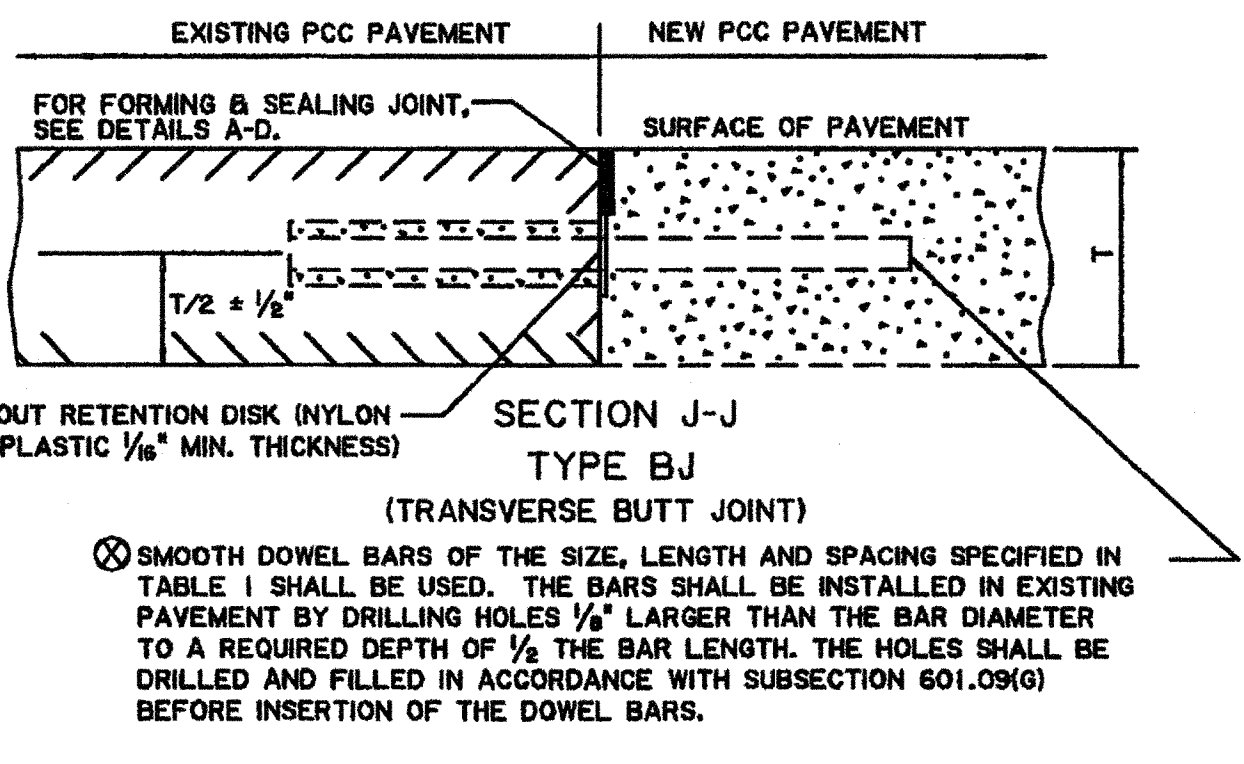
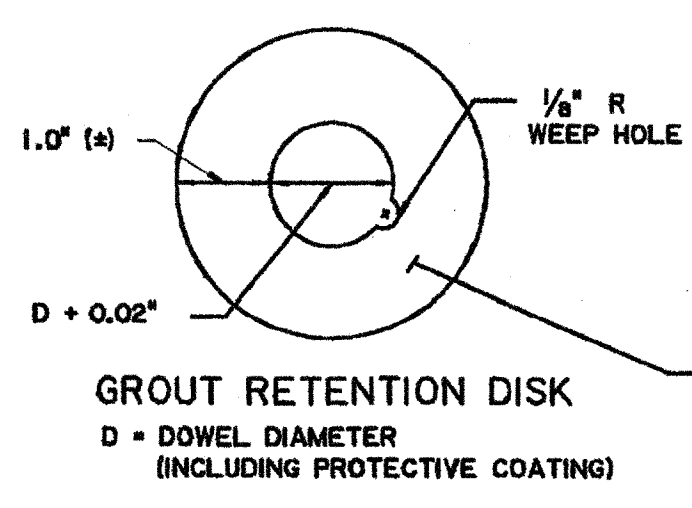
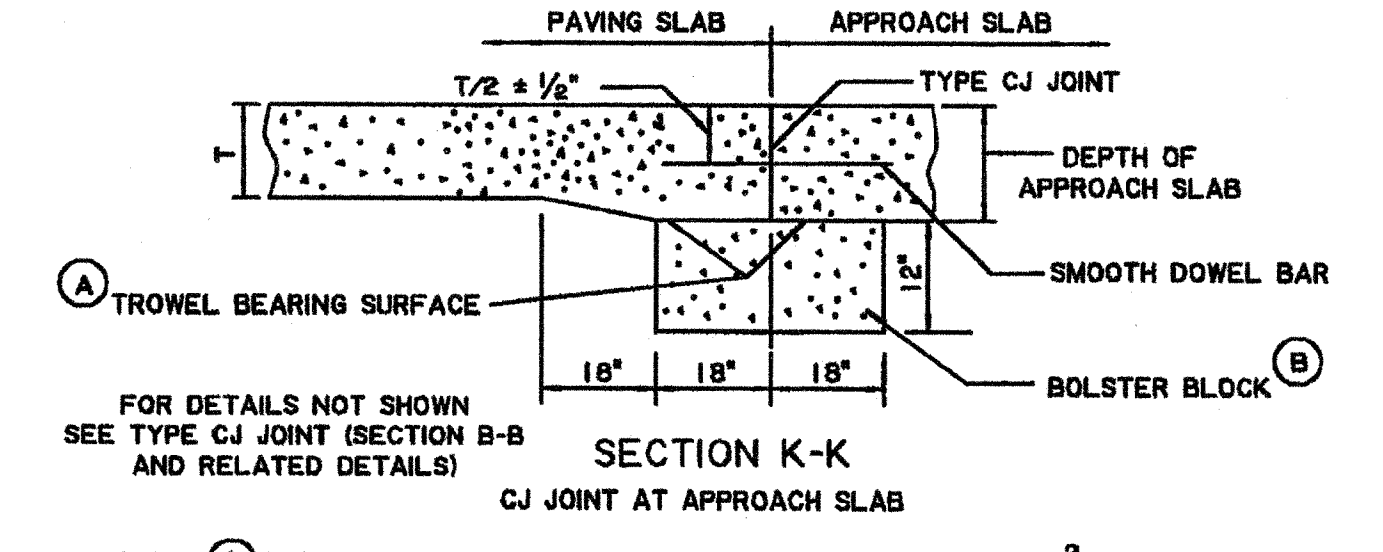
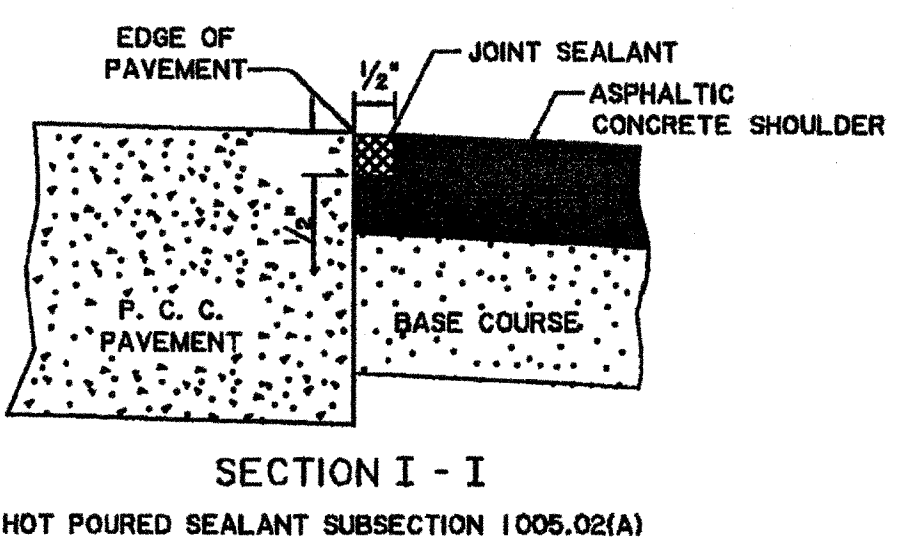
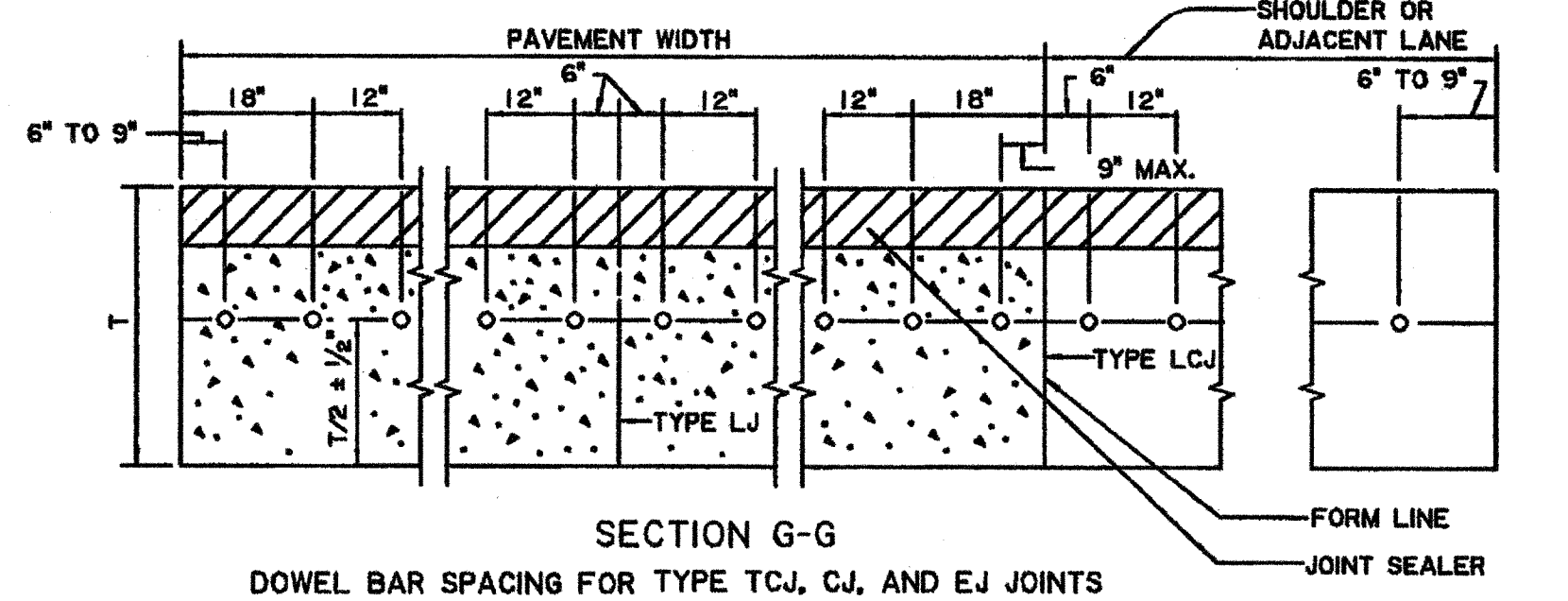
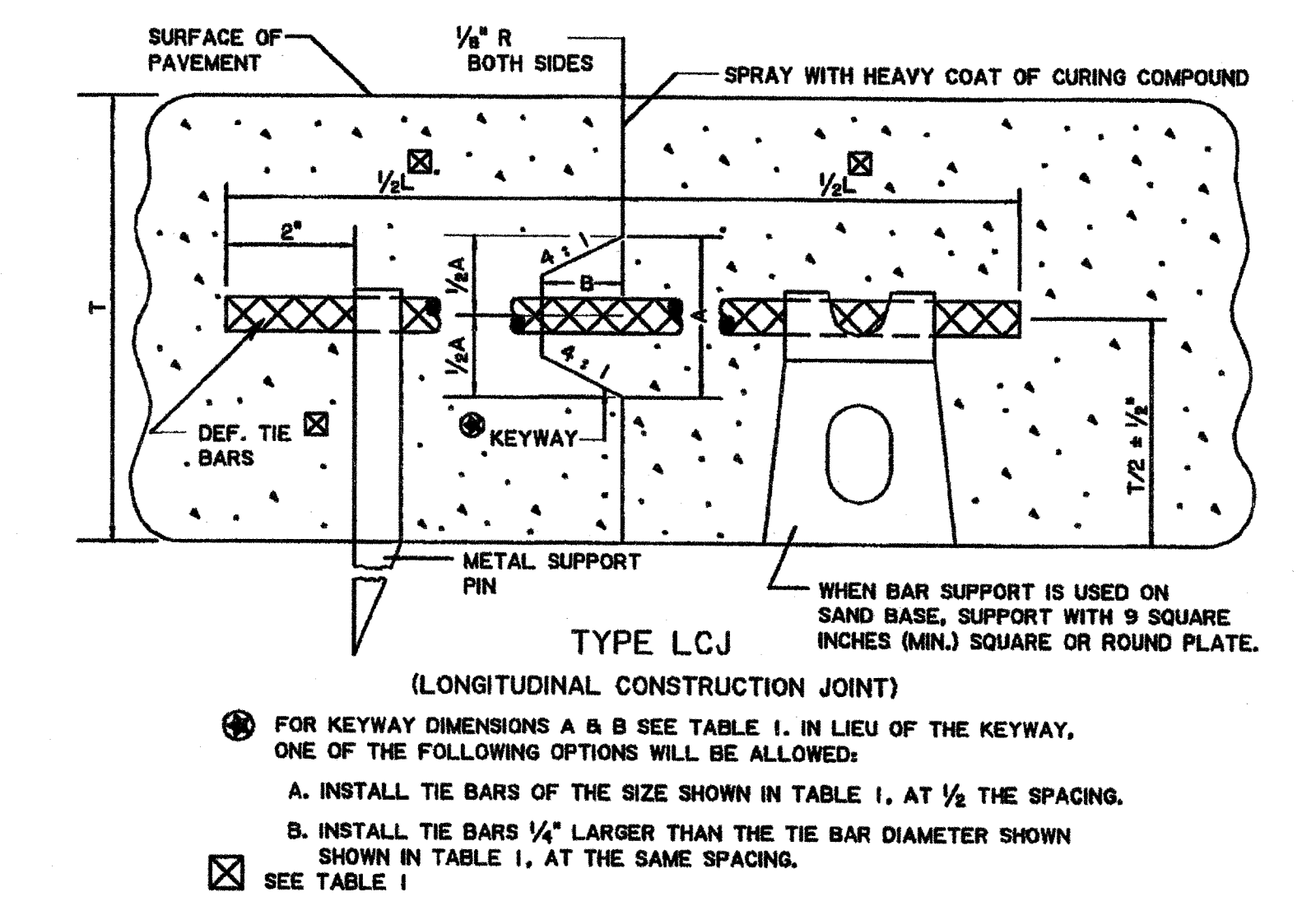
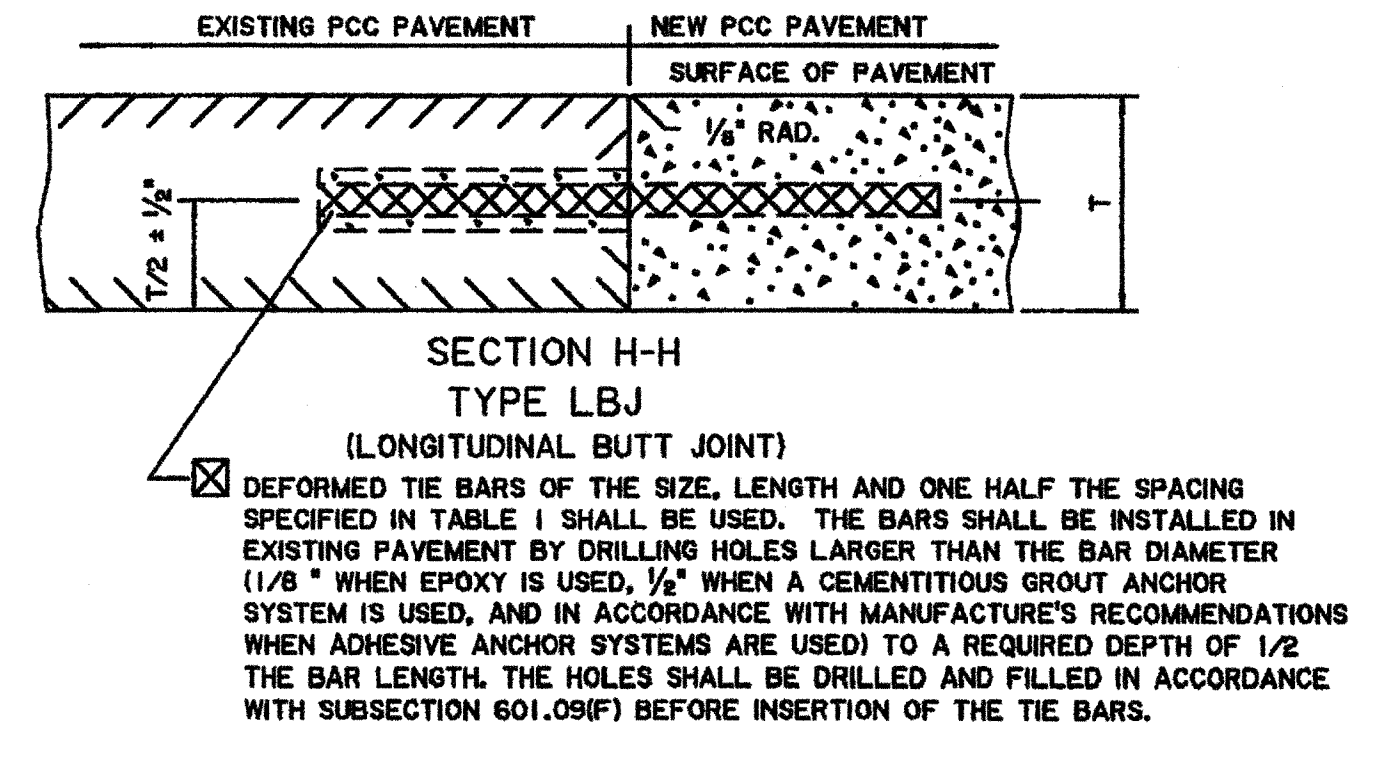
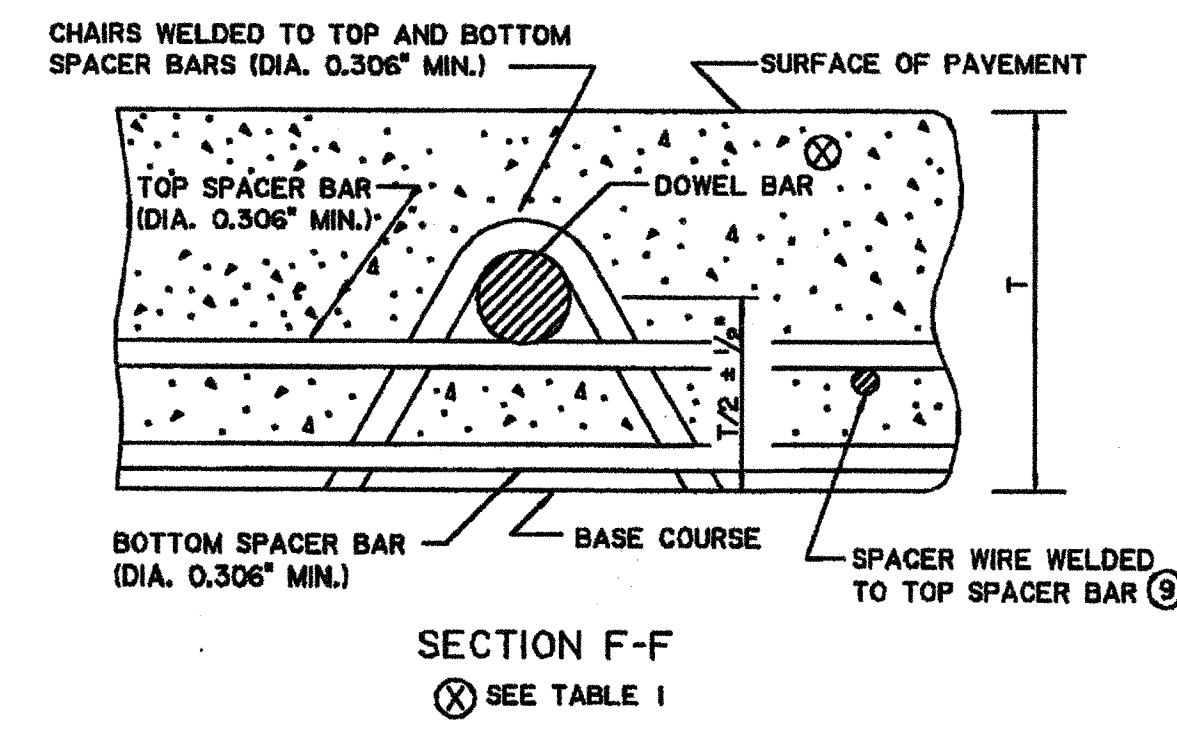
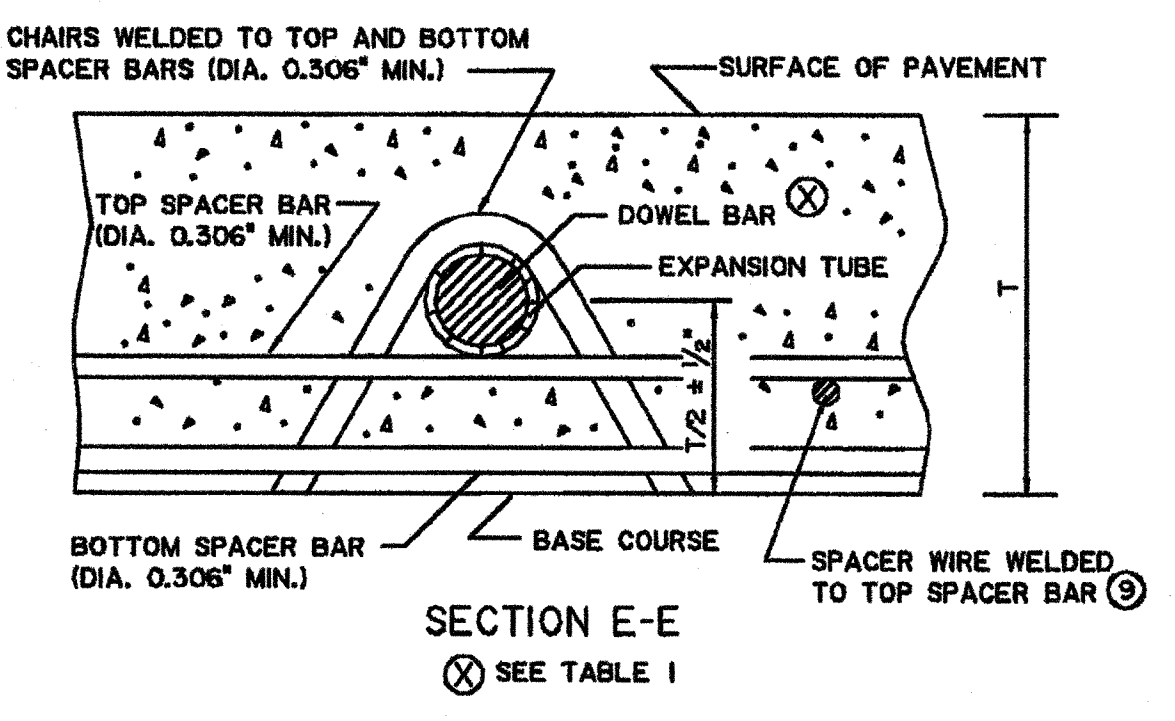
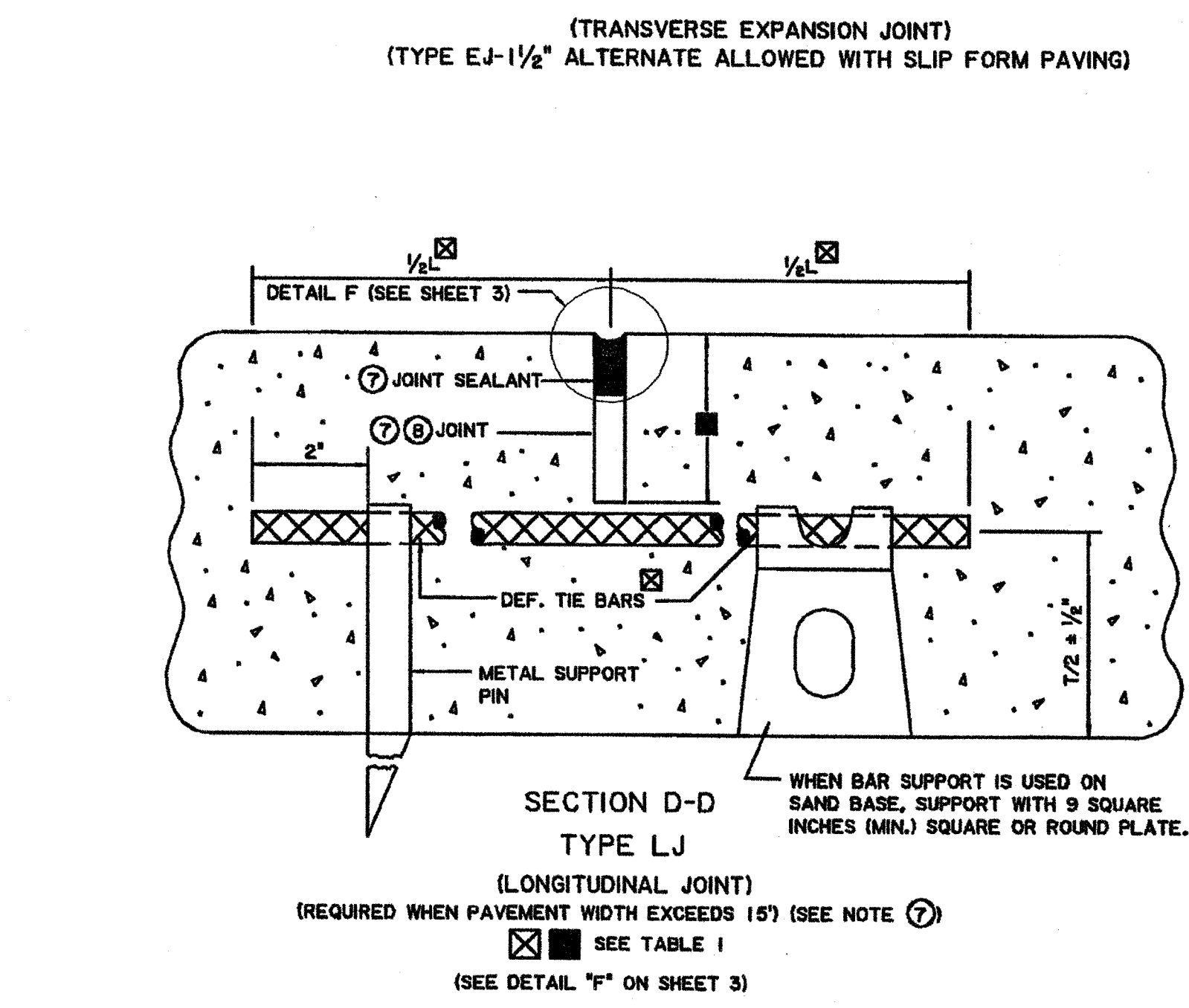
* SEE DETAIL "E"

- 12 TRANSVERSE EXPANSION JOINTS ARE NOT TO BE USED FOR CONSTRUCTION JOINTS.
- 13 CONCRETE SHOULDERS:
 - A. CONSTRUCT TCJ JOINTS IN ACCORDANCE WITH SECTION B-B.
 - B. CONSTRUCT LCJ JOINTS IN ACCORDANCE WITH TYPE LCJ DETAIL AND LJ JOINTS IN ACCORDANCE WITH SECTION D-D.
 - C. USE THE MAXIMUM SHOULDER THICKNESS WHEN DETERMINING DOWEL BAR AND TIE BAR SIZES IN TABLE I.
 - D. WHEN SKEWED JOINTS ARE USED ON MAINLINE PAVING THE SHOULDER TCJ JOINTS MAY BE SKEWED OR CONSTRUCTED AT 90°.
 - E. SHOULDER JOINTS AND JOINT MATERIALS SHALL MATCH THE MAIN LINE.
 - F. HEIGHT OF DOWEL BASKET SHALL BE BASED ON THE THINNEST SHOULDER THICKNESS. ALSO VARYING HEIGHT DOWEL BASKETS WILL BE ALLOWED.
- 14 TIEBARS SHALL NOT BE PLACED WITHIN 18" OF CONTRACTION OR EXPANSION JOINTS.

SHEET NUMBER	337	PARISH	JEFFERSON	FEDERAL PROJECT	064-01-0040
DESIGNED	CHECKED	DATE	BY	DATE	BY
			S. MCCAIN	4/26/01	W. H. Temple
PORTLAND CEMENT CONCRETE PAVEMENT DETAILS					
STANDARD PLAN CP-01					
ROAD DESIGN					



NOTES:
 (A) JOINT SHALL BE FILLED WITH A PREFORMED POLYURETHANE FOAM TYPE FILLER CONFORMING TO SUBSECTION 1005.07.
 (B) ONE LAYER OF TAR PAPER EQUIVALENT TO 30 lbs./100 ft² SHALL BE PLACED BETWEEN THE BOLSTER BLOCK AND THE PAVING SLAB.
 (C) BOLSTER BLOCK SHALL BE CONSTRUCTED OF CLASS "A" OR PAVEMENT TYPE CONCRETE AT NO DIRECT PAY.
 (D) 2 1/4" PREFORMED ELASTOMERIC COMPRESSION SEAL OR 2 COMPONENT SILICONE CONFORMING TO 1005.02(D).
 (E) SEE DETAILS FOR UNDERDRAIN FOR 4" EJ JOINT.



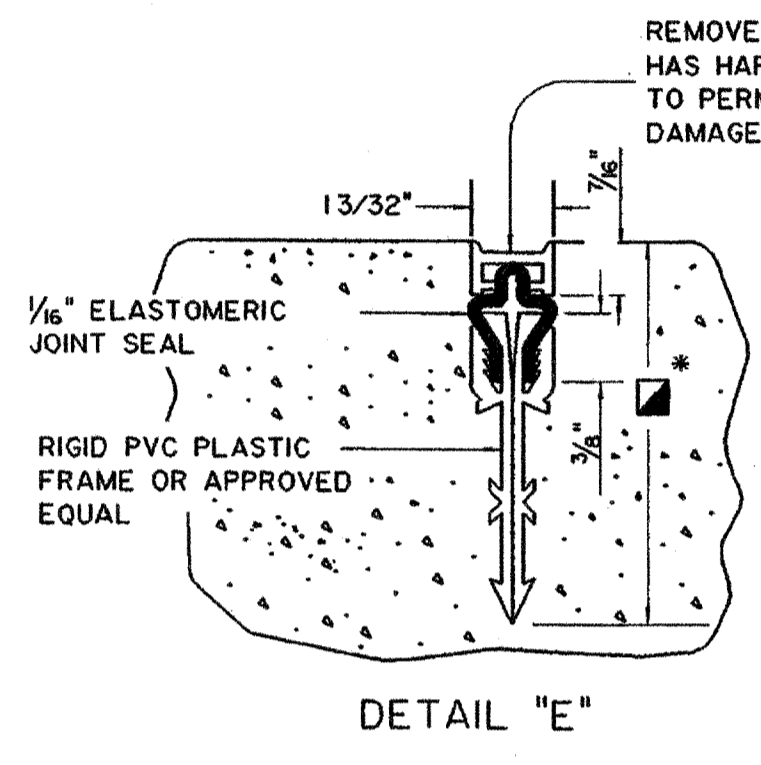
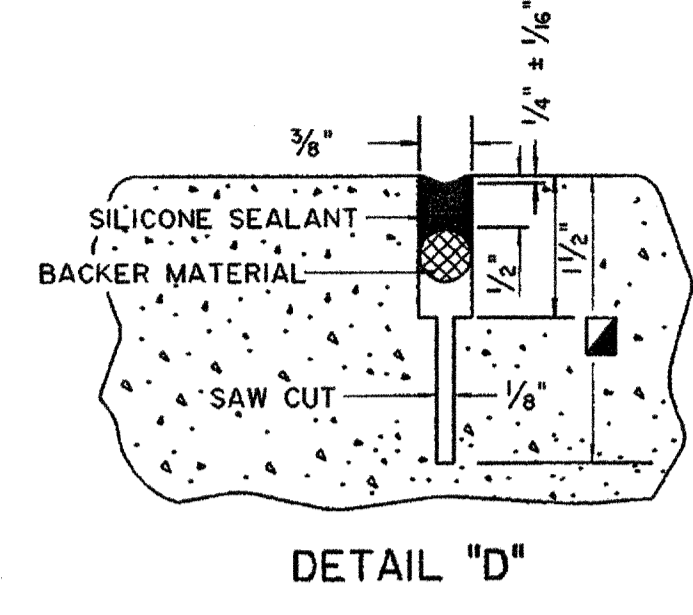
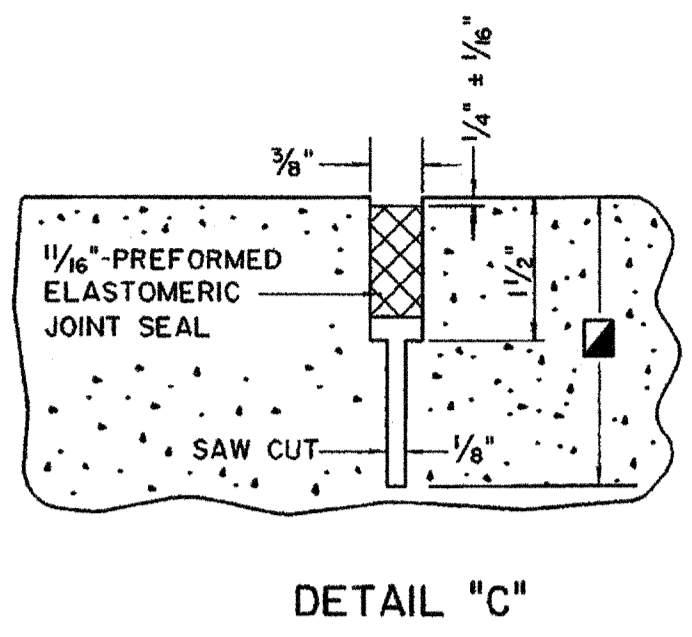
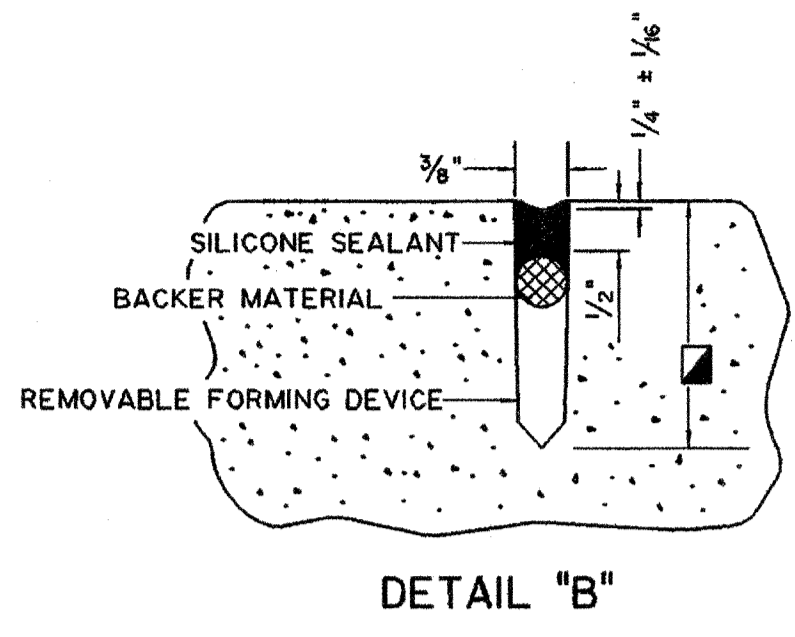
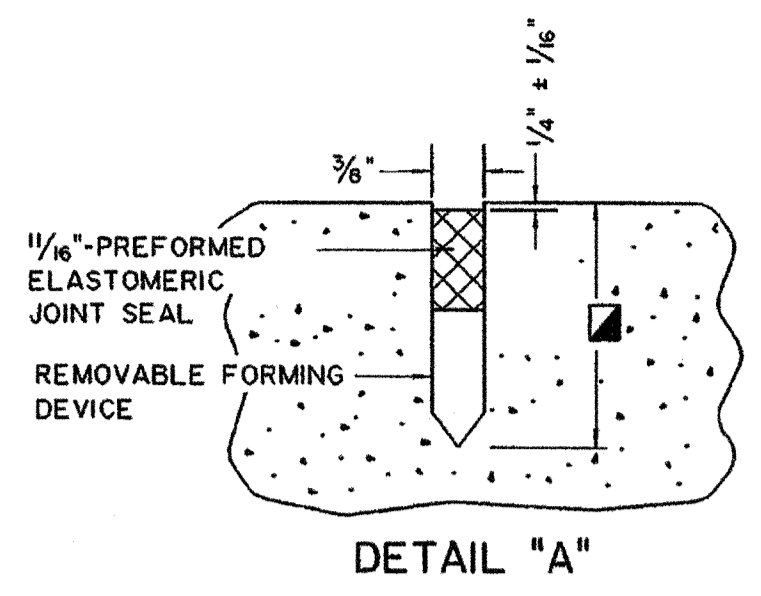
NOTES:
 (A) ONE LAYER OF TAR PAPER EQUIVALENT TO 30 lbs./100 ft² BE PLACED BETWEEN THE BOLSTER BLOCK AND THE PAVING SLAB.
 (B) BOLSTER BLOCK SHALL BE CONSTRUCTED OF CLASS "A" OR PAVEMENT TYPE CONCRETE AT NO DIRECT PAY.

SHEET NUMBER	338
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED	
CHECKED	
DATE	2 OF 4
BY	
DATE	4/26/01
REVISION DESCRIPTION	
NO.	
DATE	
APPROVED BY	William H. Temple
CHIEF ENGINEER	
PORTLAND CEMENT CONCRETE PAVEMENT DETAILS STANDARD PLAN CP-01	
ROAD DESIGN	

05-MAY-2009 11:17

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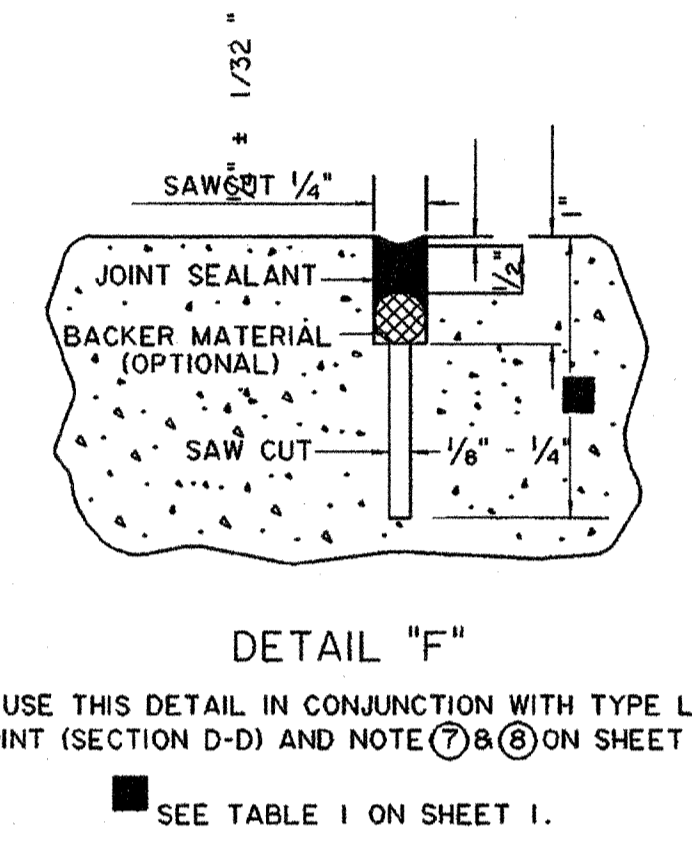
DETAILS "A-E" SEE TABLE I ON SHEET I.



REMOVE CAP AFTER CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT REMOVAL WITHOUT DAMAGE TO THE JOINT.

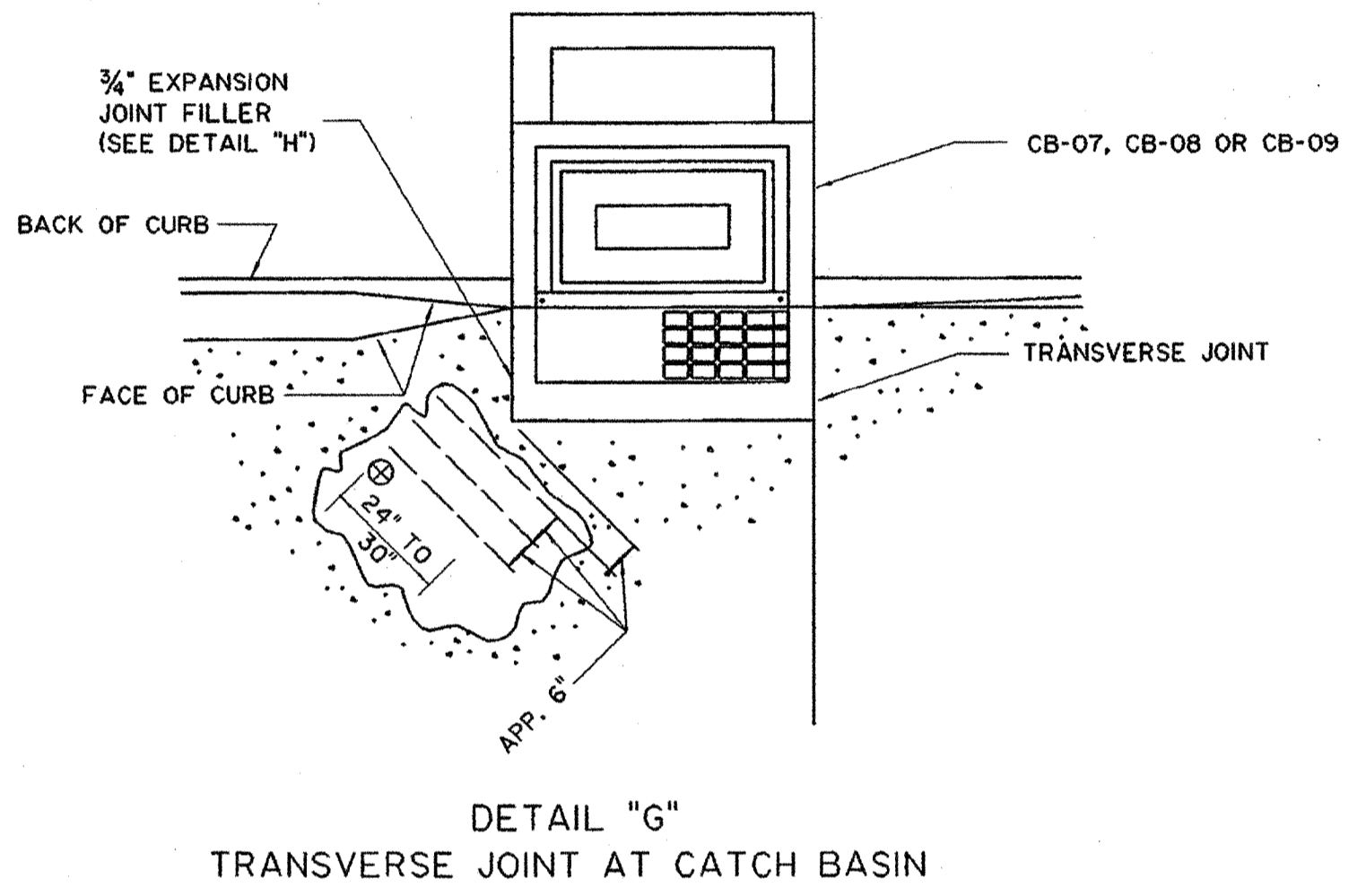
* FOR 8" PAVEMENT DEPTH OF INSERT 2 1/2"
 * FOR 9" PAVEMENT DEPTH OF INSERT 3"
 * FOR 10" PAVEMENT DEPTH OF INSERT 3"

THESE INSERT DEPTHS FOR 8" AND 10" PAVEMENTS WILL NOT BE ALLOWED WHEN THE PAVEMENT IS PLACED ON PERMEABLE BASES.



USE THIS DETAIL IN CONJUNCTION WITH TYPE L/J JOINT (SECTION D-D) AND NOTE (7) (8) (9) ON SHEET #1.

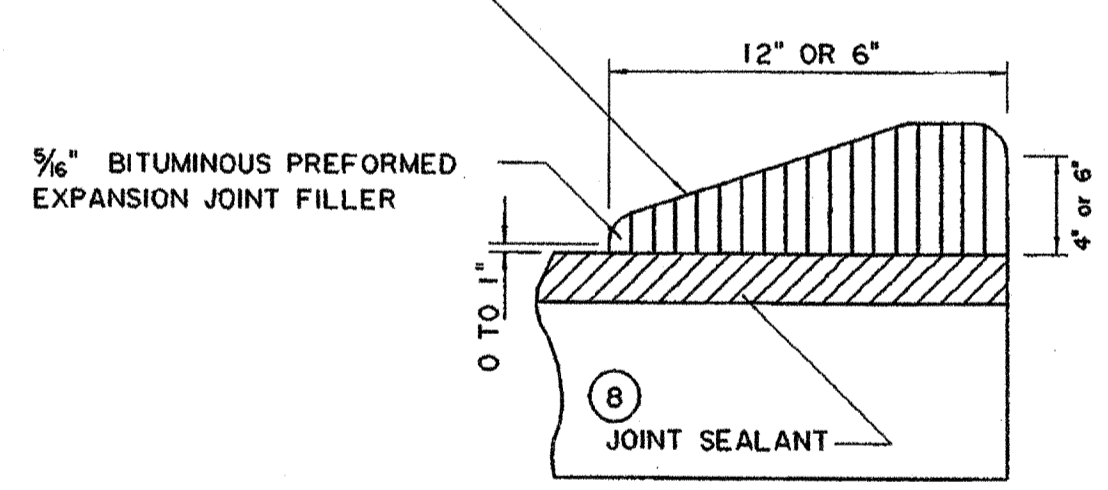
SEE TABLE I ON SHEET I.



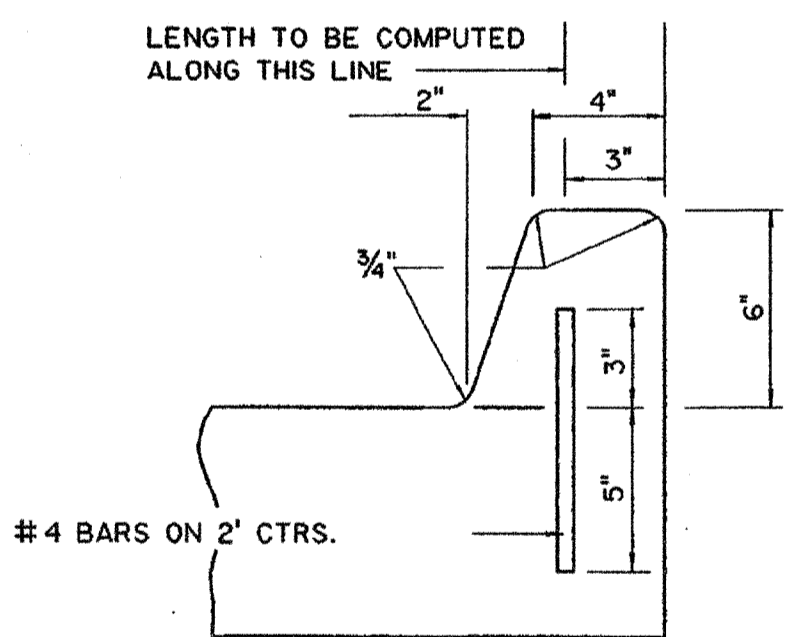
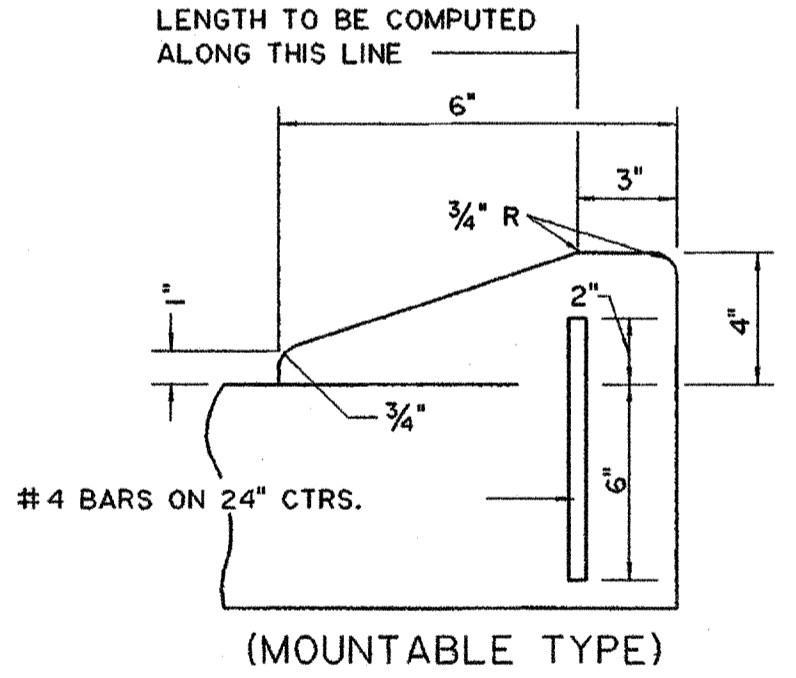
NOTE:

WHEN CURB IS POURED MONOLITHICALLY WITH PAVEMENT, THE BITUMINOUS PREFORMED EXPANSION JOINT FILLER SHALL EXTEND TO THE TOP OF JOINT INSERT. WHEN TRANSVERSE JOINTS ARE CONSTRUCTED BY SAWING, THE INITIAL SAW CUT SHALL EXTEND THRU THE CURBED SECTION (CURB AND UNDERLYING PAVEMENT). THE SUBSEQUENT WIDENING CUT FOR THE JOINT SEALANT RESEVOIR SHALL EXTEND INTO THE CURB FOR A DISTANCE NECESSARY TO ENSURE THE SPECIFIED RESEVOIR DEPTH IS BEING MAINTAINED AT THE GUTTER LINE. ALL CURB FACES REGARDLESS OF CURB TYPE SHALL BE SEALED WHEN TRANSVERSE JOINT IS SAWED THROUGH CURB.

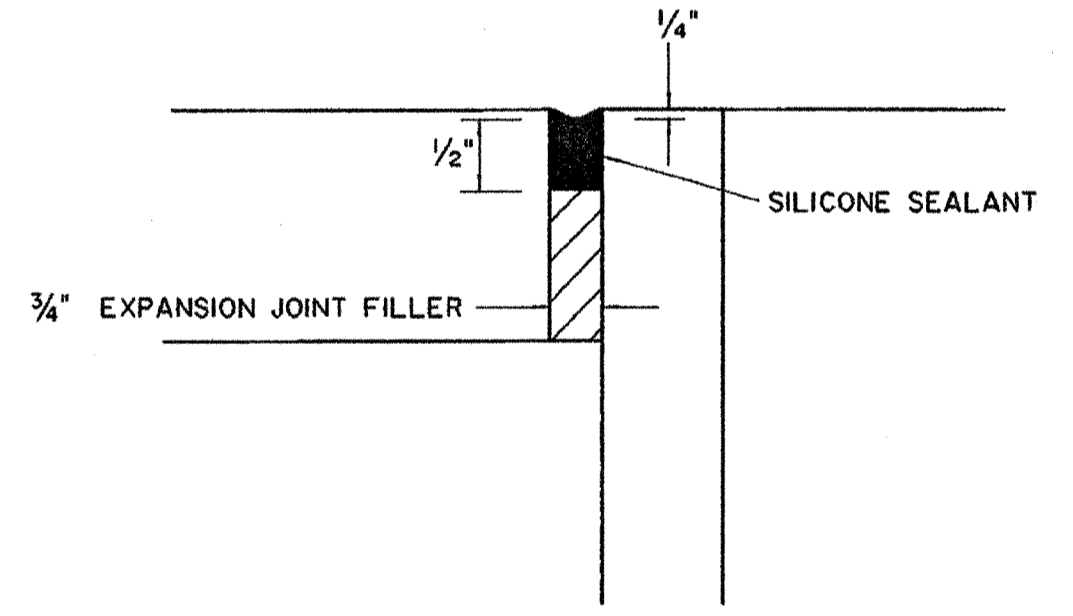
DEPTH IN TABLE ONE (1) IS TO BE USED WHEN PAVEMENT IS PLACED ON PERMEABLE BASES.



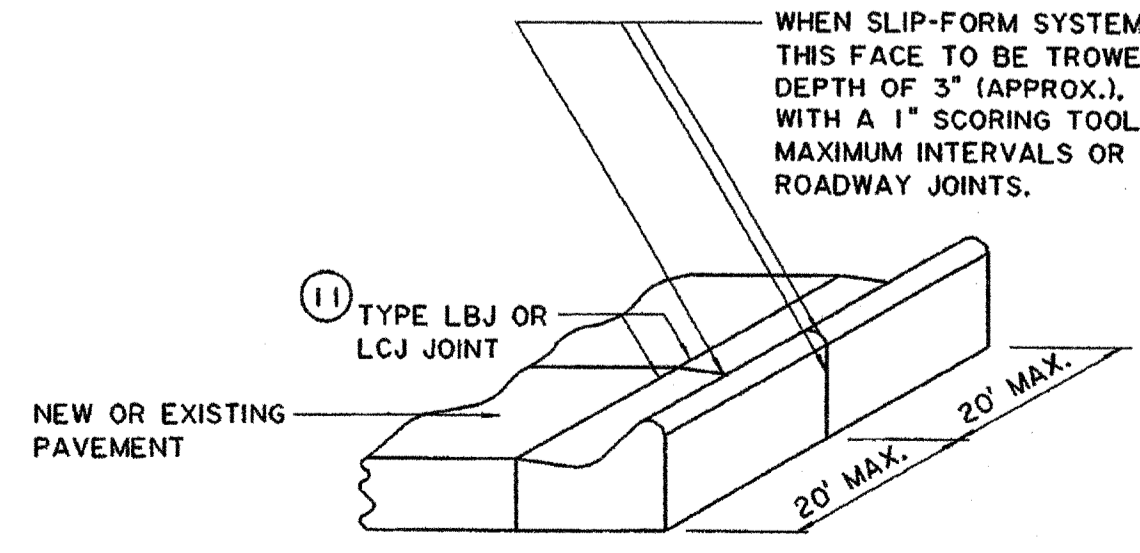
JOINT FILLER DETAIL FOR INTEGRAL CONCRETE CURB (MOUNTABLE OR BARRIER TYPE)



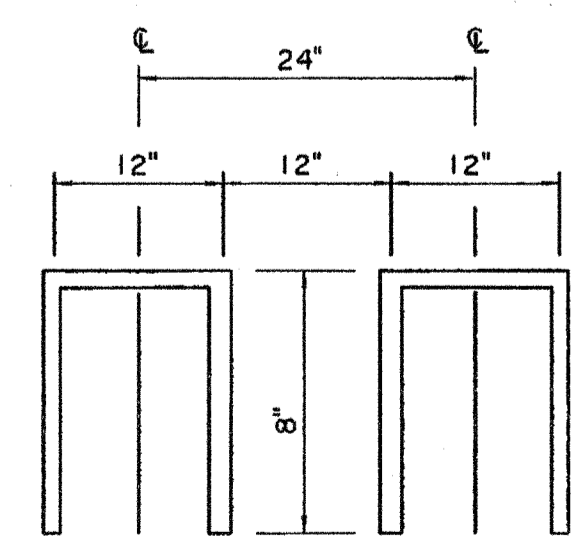
(BARRIER TYPE) INTEGRAL CONCRETE CURB



DETAIL "H"
 AFTER CATCH BASIN TOP IS POURED, THE TOP OF THE 3/4" JOINT FILLER IS TO BE REMOVED TO THE DEPTH SHOWN PRIOR TO SEALING. THE CURB FACES ADJACENT TO THE BASIN SHALL ALSO BE SEALED. JOINT FACES SHALL BE CLEANED IN ACCORDANCE WITH 601.13(A)



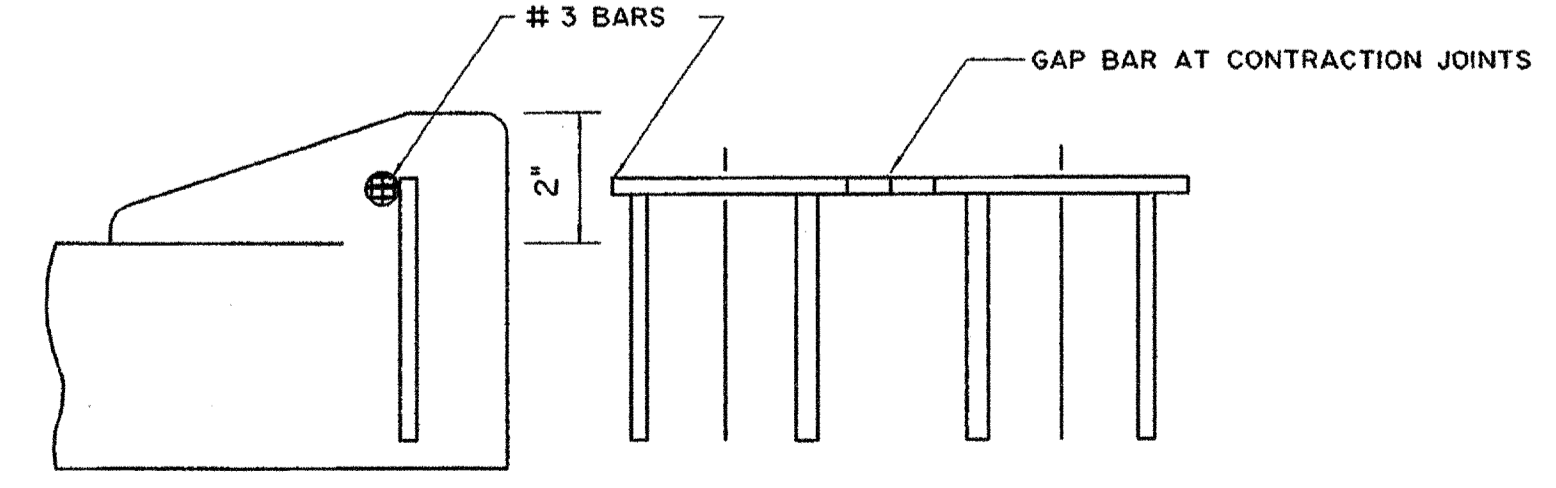
DETAIL SHOWING JOINTS IN CONCRETE CURB AND GUTTER



BAR DETAIL SHOWING DIMENSIONS AND SPACING OF #4 DEF. REIN. STEEL BARS FOR CONC. CURB

CURB BARS SHALL BE PLACED WITHIN 6" OF CONTRACTION OR EXPANSION JOINTS.

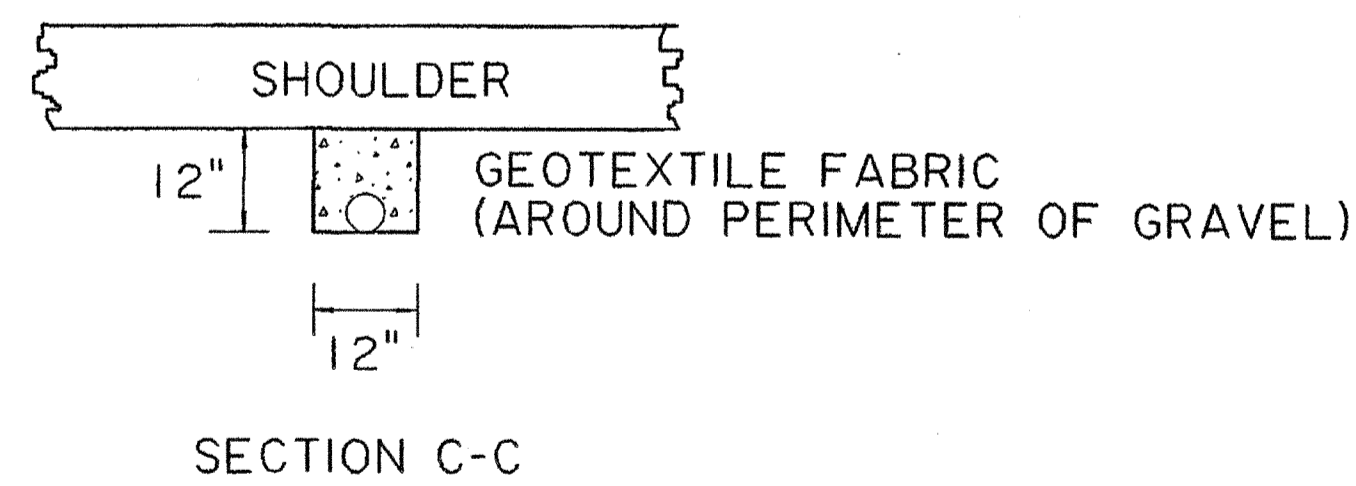
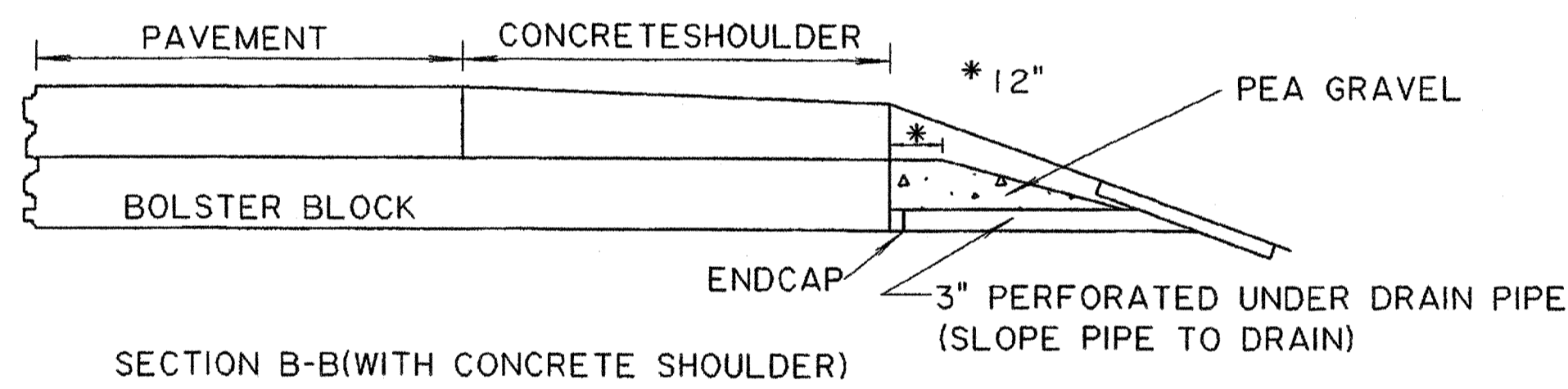
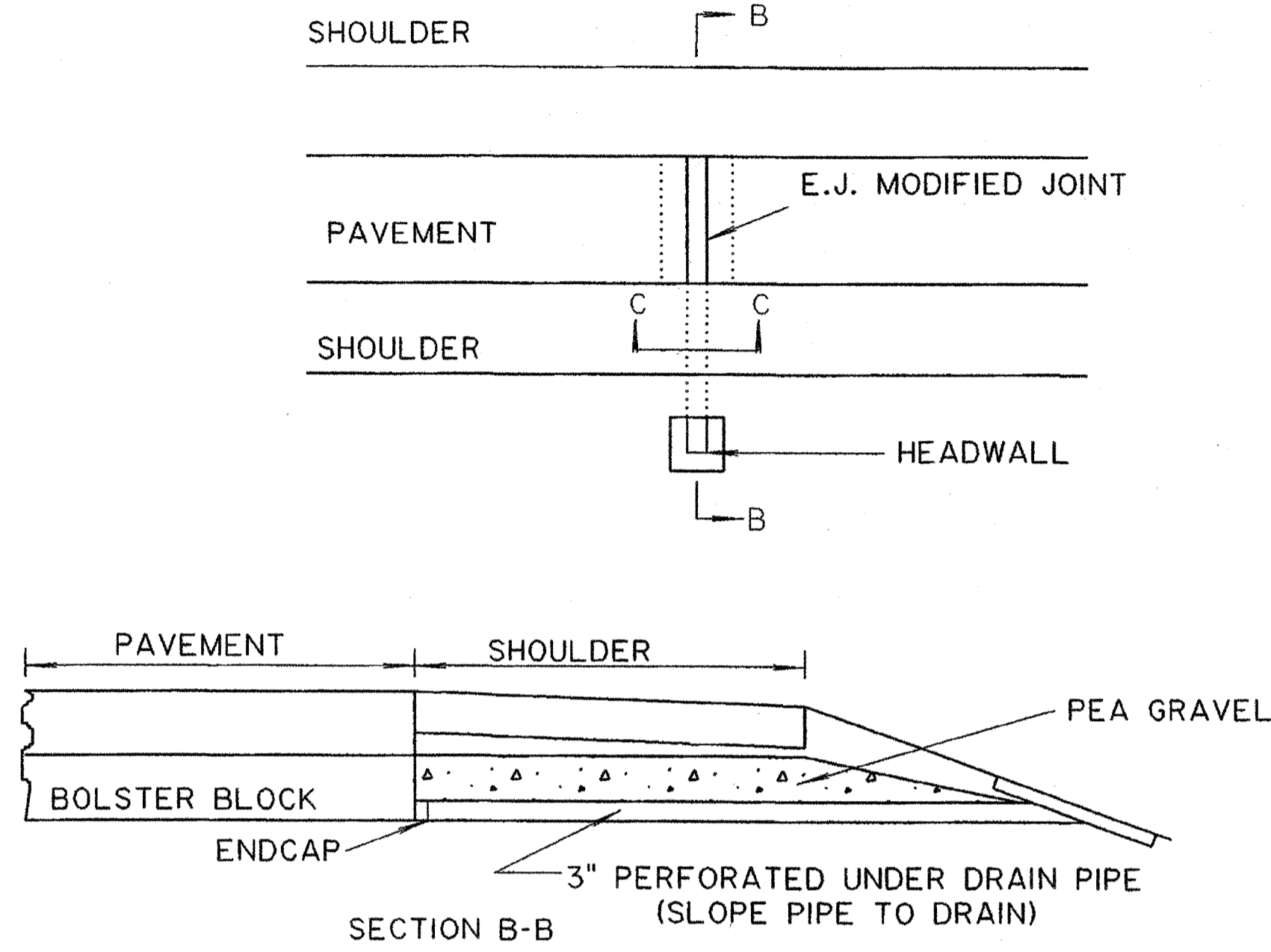
REINFORCING BARS SHOULD MATCH THE SIZE AND LENGTH OF THE TIE BARS USED IN THE PAVEMENT.



MODIFIED BARRIER OR MOUNTABLE CURB THRU DRIVEWAY

SHEET NUMBER	339
PARISH	JEFFERSON
FEDERAL PROJECT	
STATE PROJECT	064-01-0040
DESIGNED	
CHECKED	
DATE	
REVISION DESCRIPTION	
BY	
DATE	6/24/01
CHIEF ENGINEER	W. H. Temple
NO.	
DATE	
APPROVED BY	
CHIEF ENGINEER	
PORTLAND CEMENT CONCRETE PAVEMENT DETAILS CP-01	
ROAD DESIGN	

UNDER DRAIN AT 4" E.J. JOINTS
 AN UNDER DRAIN WILL BE REQUIRED AT E.J. MODIFIED JOINTS UNLESS A SHOULDER UNDER DRAIN SYSTEM IS SPECIFIED ON THE PLANS. IN A CURBED PAVEMENT SECTION THE UNDER DRAIN FOR THE E.J. JOINT SHALL BE CONNECTED TO THE NEAREST STORM SEWER OR DISCHARGED THROUGH A HEADWALL AS SHOWN. ALL MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF SECTION 703 OF THE STANDARD SPECIFICATIONS. THE UNDER DRAIN FOR THE E.J. JOINT IS TO BE PLACED AT NO DIRECT PAY.

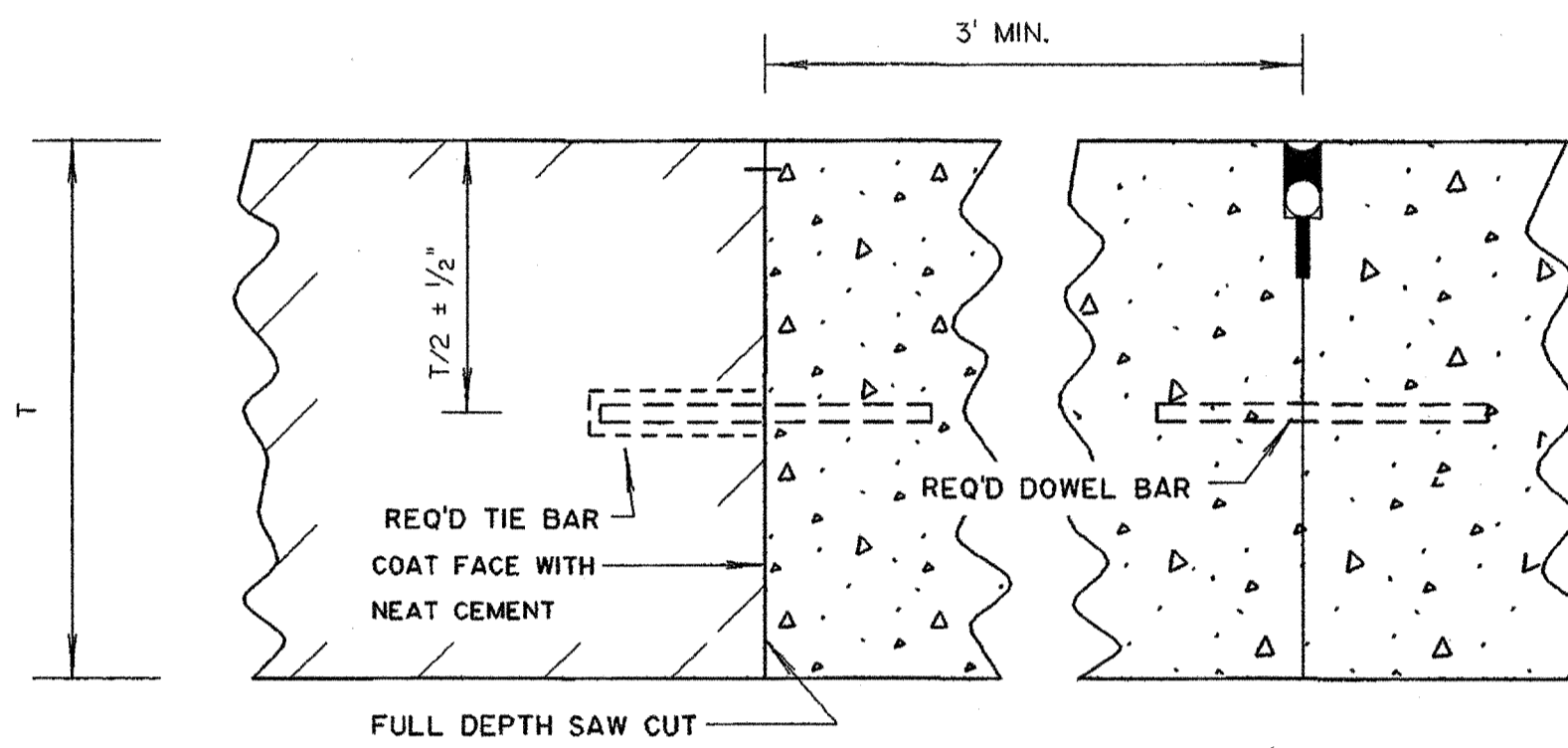
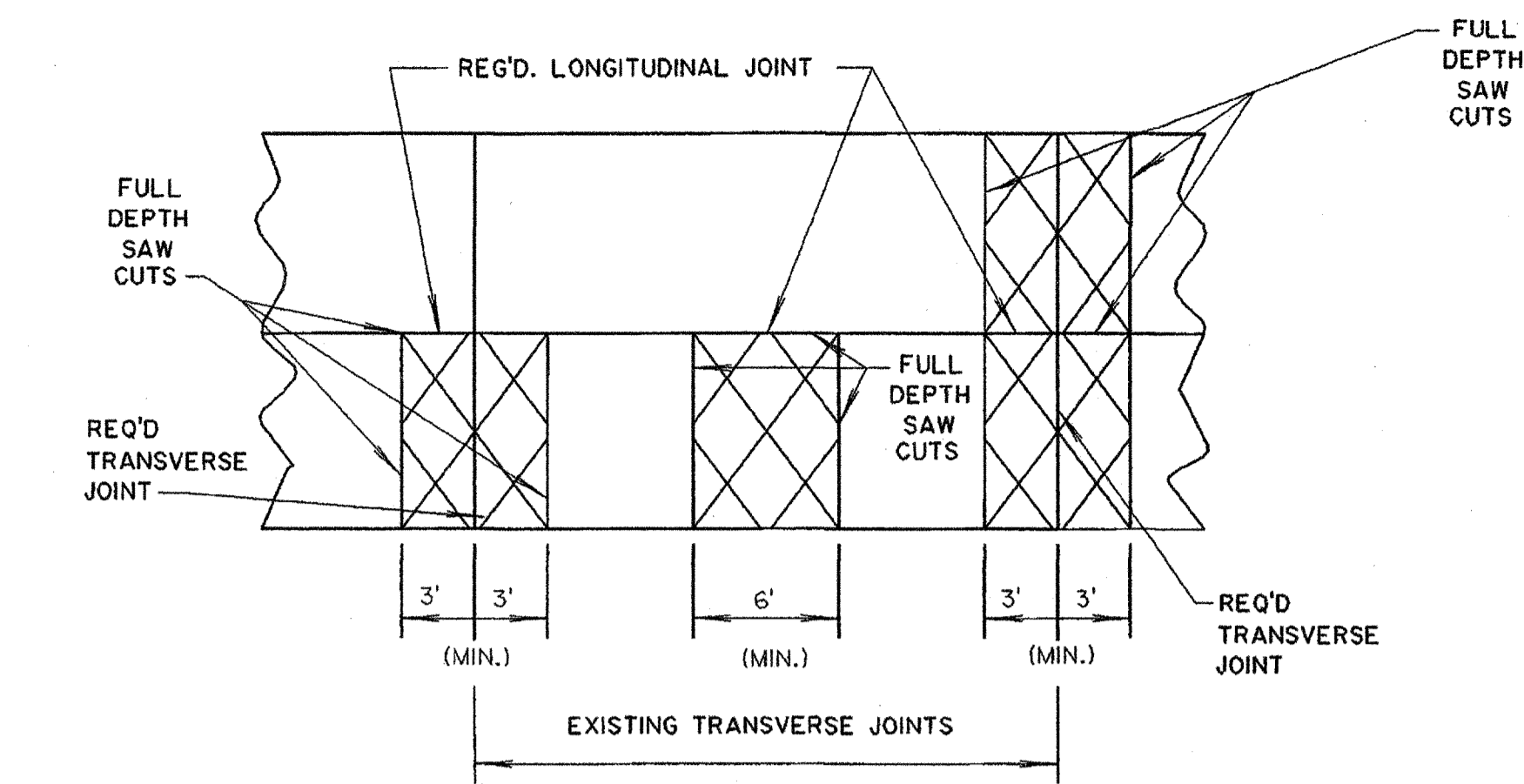
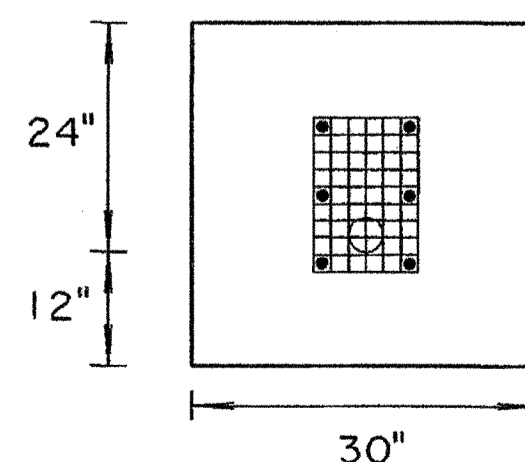


NOT TO SCALE

6" THICK CLASS M CONCRETE WITH 6 X 6 10 GAUGE WIRE MESH REINFORCEMENT.

6 - 1/4" X 2 1/2" GALVINIZED ANCHOR BOLTS WITH FLAT WASHERS.

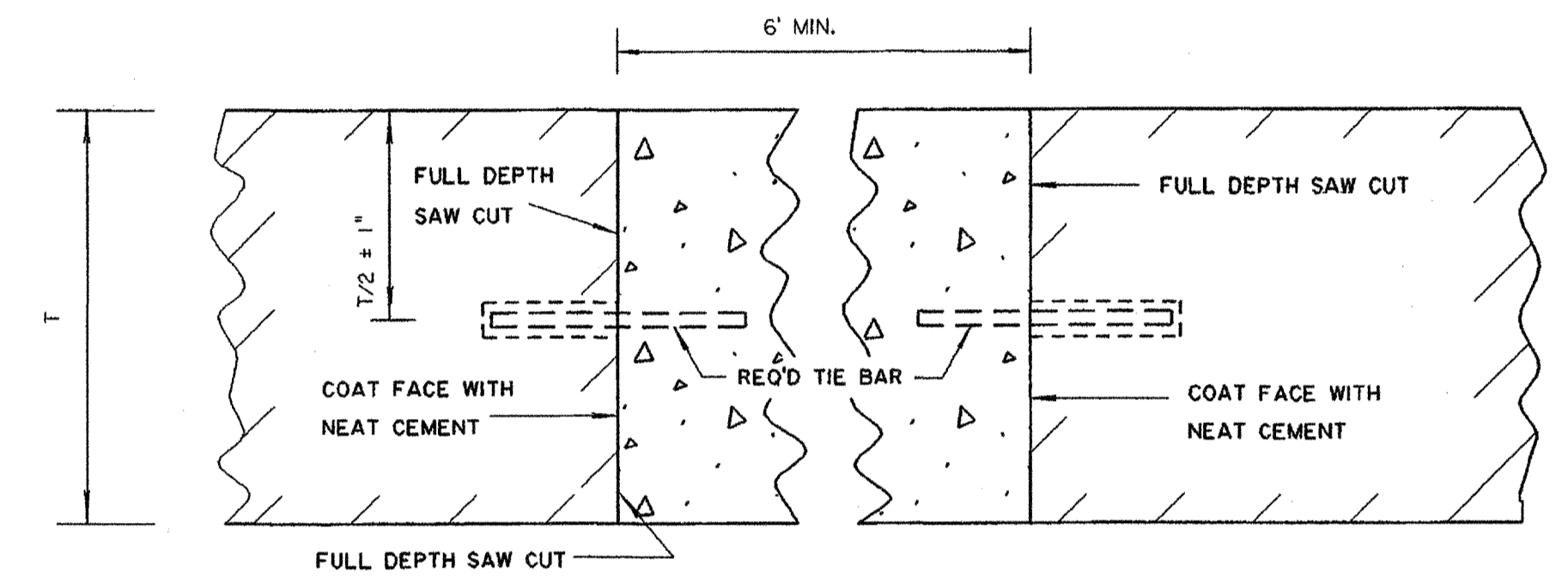
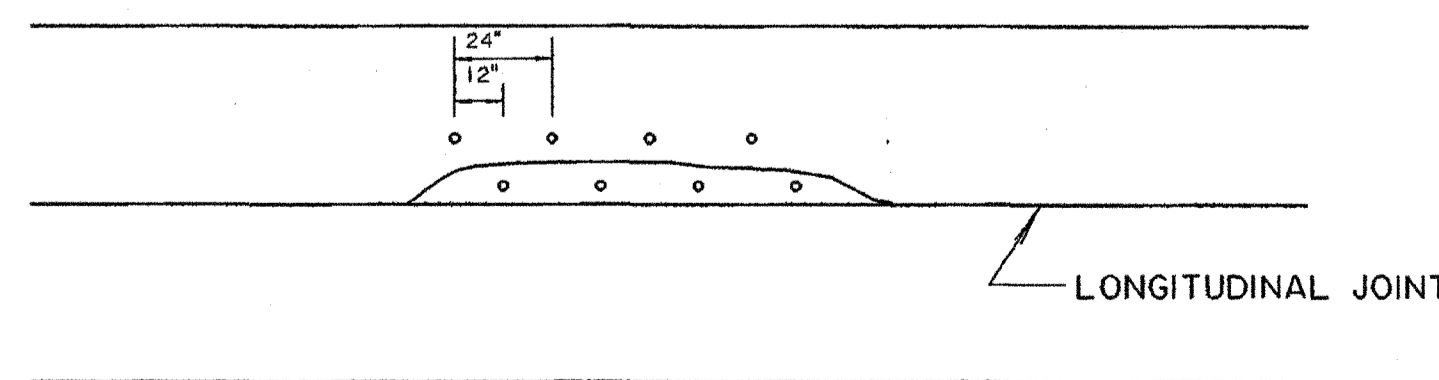
12" X 27" RODENT SCREEN 2 X 2 MESH HARDWARE CLOTHE (19 GAUGE.)



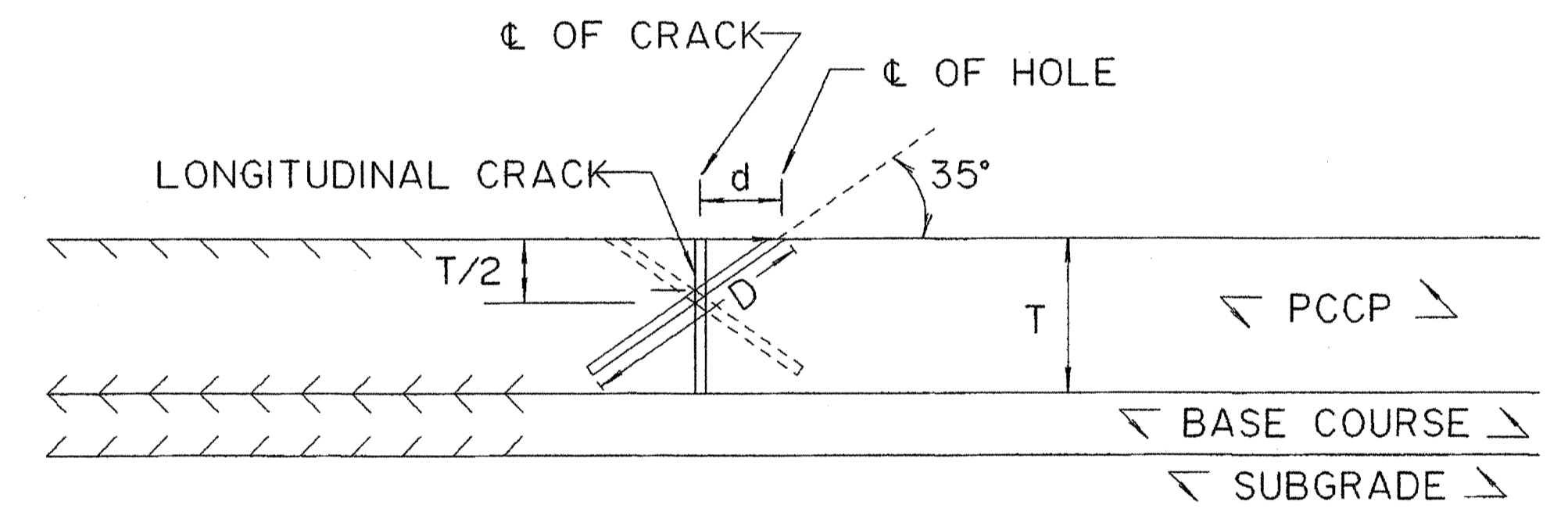
PATCHING DETAIL AT TRANSVERSE JOINT

DIMENSIONS
 (ALL DIMENSIONS ARE IN INCHES)

SLAB THICKNESS (T)	DEPTH OF HOLE (D)	LENGTH OF BAR	DISTANCE FROM ϵ (d)
8	12	11	5 1/2
9	14	13	6 1/2
10	16	15	7
11	18	17	8
12	19	18	8 1/2
13	21	20	9
14	23	22	10



PATCHING DETAIL BETWEEN TRANSVERSE JOINTS



CROSS - STITCHING LONGITUDINAL CRACKS

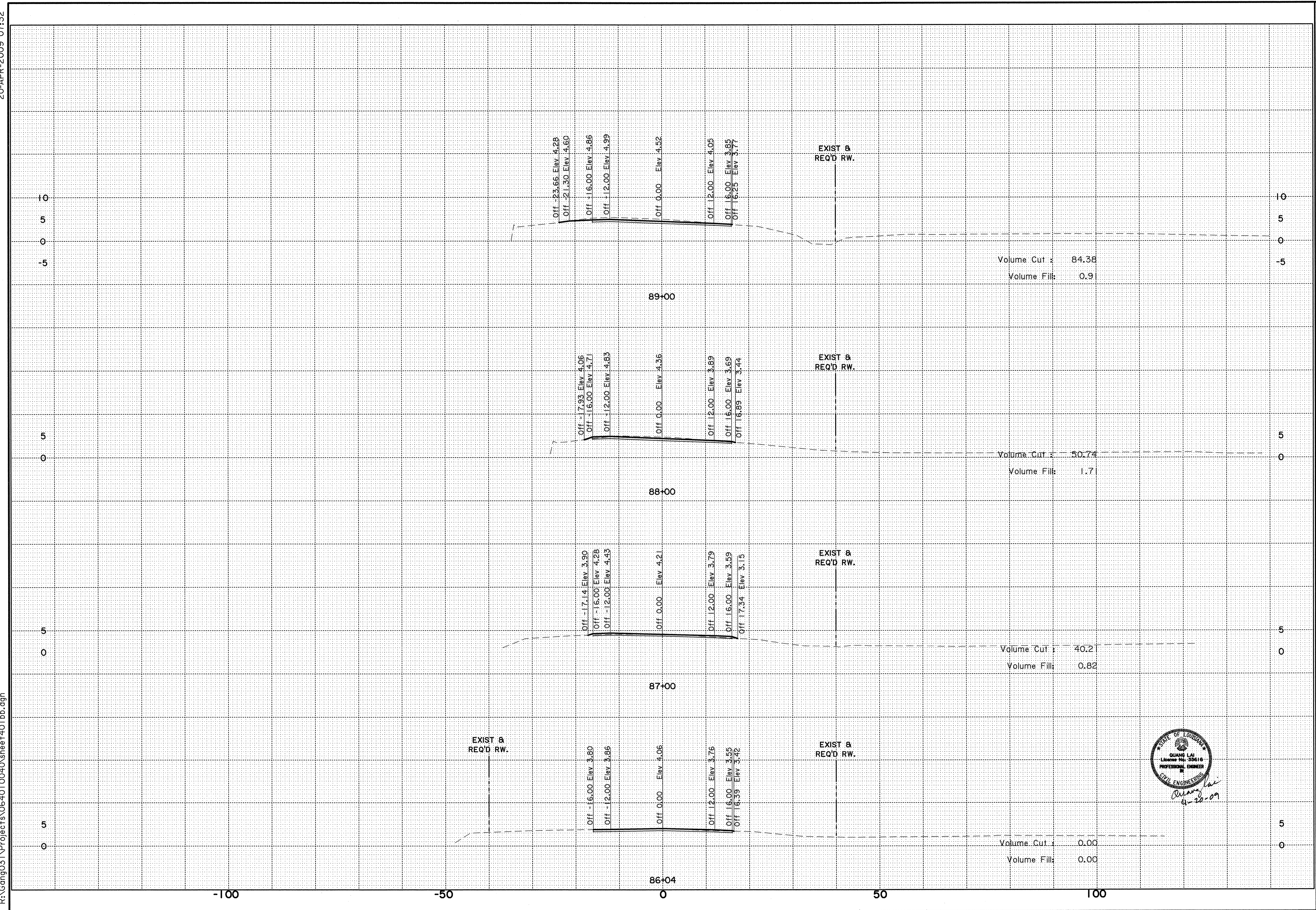
NOTES:

1. DOWEL BARS AND LONGITUDINAL TIE BARS SHALL CONFORM TO TABLE 1.
2. TRANSVERSE TIE BARS SPACED 12" CENTER TO CENTER. 1" TIE BAR FOR SLAB THICKNESS 8" TO 10". 1 1/4" TIE BAR FOR SLAB THICKNESS GREATER THAN 10".
3. RESAW TRANSVERSE JOINTS ON EACH SIDE OF MID PANEL PATCH TO A DEPTH TO NEAR THE TOP OF THE DOWELS PRIOR TO POURING PATCH.
4. EXISTING TRANSVERSE VERTICAL FACES TO BE COATED WITH NEAT CEMENT JUST PRIOR TO POURING PATCH.

NOTES:

1. HOLES WILL BE DRILLED ON 24" CENTERS ON ALTERNATE SIDES OF CRACK. AFTER DRILLING, HOLES WILL BE FILLED WITH AN APPROVED EPOXY RESIN SYSTEM THEN 3/8" REBAR WILL BE INSERTED. THE COLOR OF THE EPOXY SHALL APPROXIMATE THAT OF THE CONCRETE.
2. DIAMETER OF HOLE FOR CROSS STITCHING BAR SHALL BE 7/8". DIAMETER OF BAR SHALL BE 3/4"
3. LONGITUDINAL CRACK SHALL BE ROUTED AND SEALED IN ACCORDANCE WITH SUBSECTION 601(09)(K) OF THE STANDARD SPECIFICATIONS. SEALANT SHALL CONFORM TO SUBSECTION 1005.02(C).

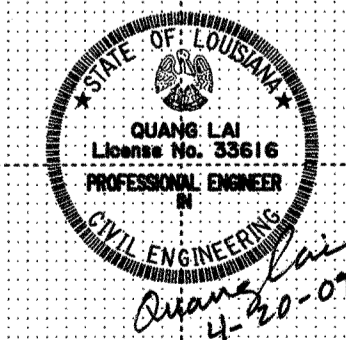
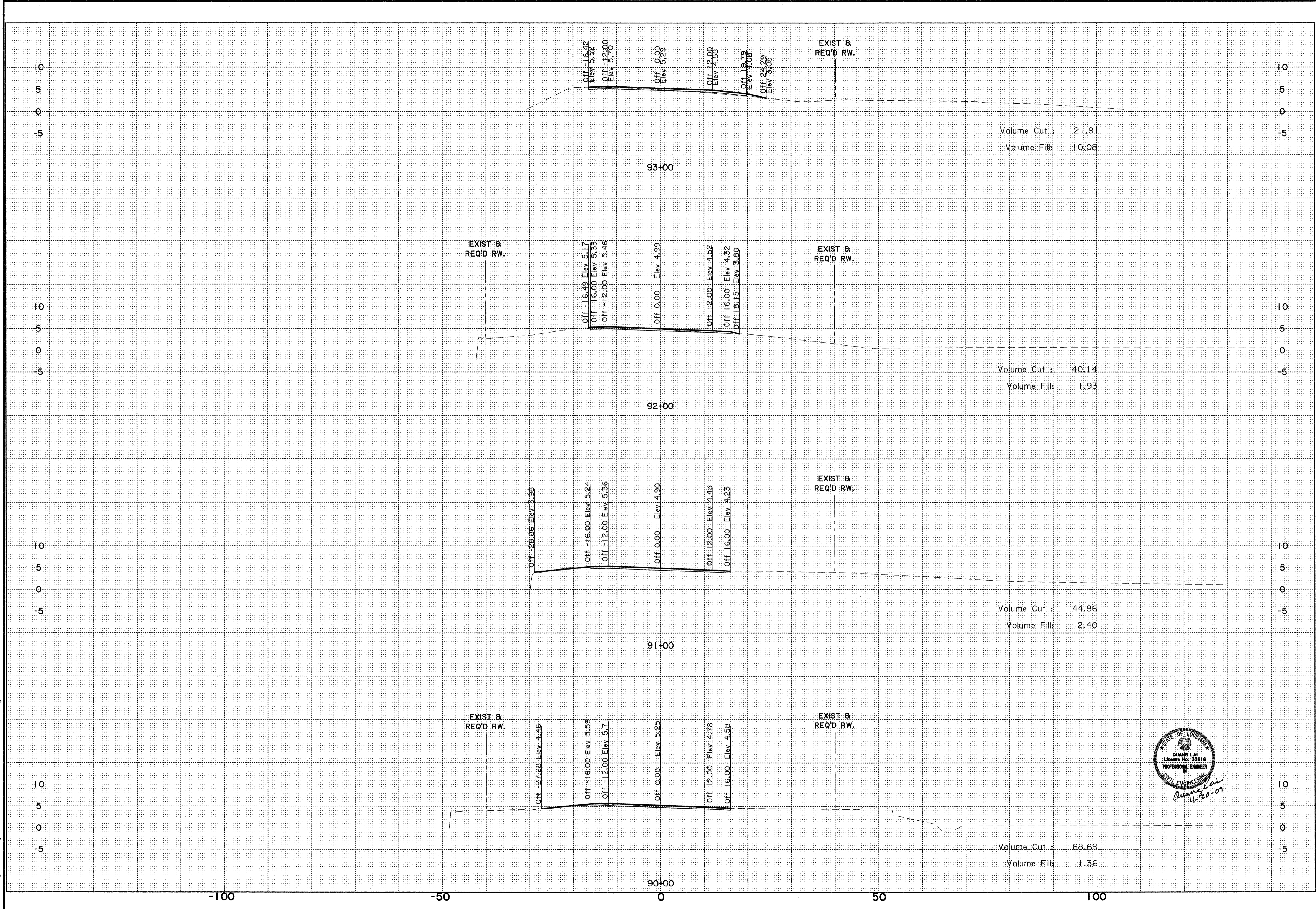
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DESIGNED	JEFFERSON
CHECKED	
DATE	4 OF 4
REVISION DESCRIPTION	S. MCCAIN
DATE	4/26/01
APPROVED BY	W. H. Temple
CHIEF ENGINEER	
NO.	
DATE	
STANDARD PLAN	CP-01
PORTLAND CEMENT CONCRETE PAVEMENT DETAILS	
ROAD DESIGN	



QUANG LAI
 License No. 33616
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 LA 20-09

SHEET NUMBER: 401
 PARISH: JEFFERSON
 FEDERAL PROJECT: 064-01-0040
 STATE PROJECT: 064-01-0040
 DESIGNED MRG: OLLAI
 CHECKED OLLAI
 DETAILED MRG: OLLAI
 CHECKED OLLAI
 DATE: APRIL 2009
 SHEET: 1 OF 7
 REVISION DESCRIPTION: _____
 NO. _____ DATE _____ BY _____
CROSS SECTIONS
 LA 1

 ROAD DESIGN



CROSS SECTIONS

LA 1

ROAD DESIGN

DESIGNED: MRG
CHECKED: QLAJ

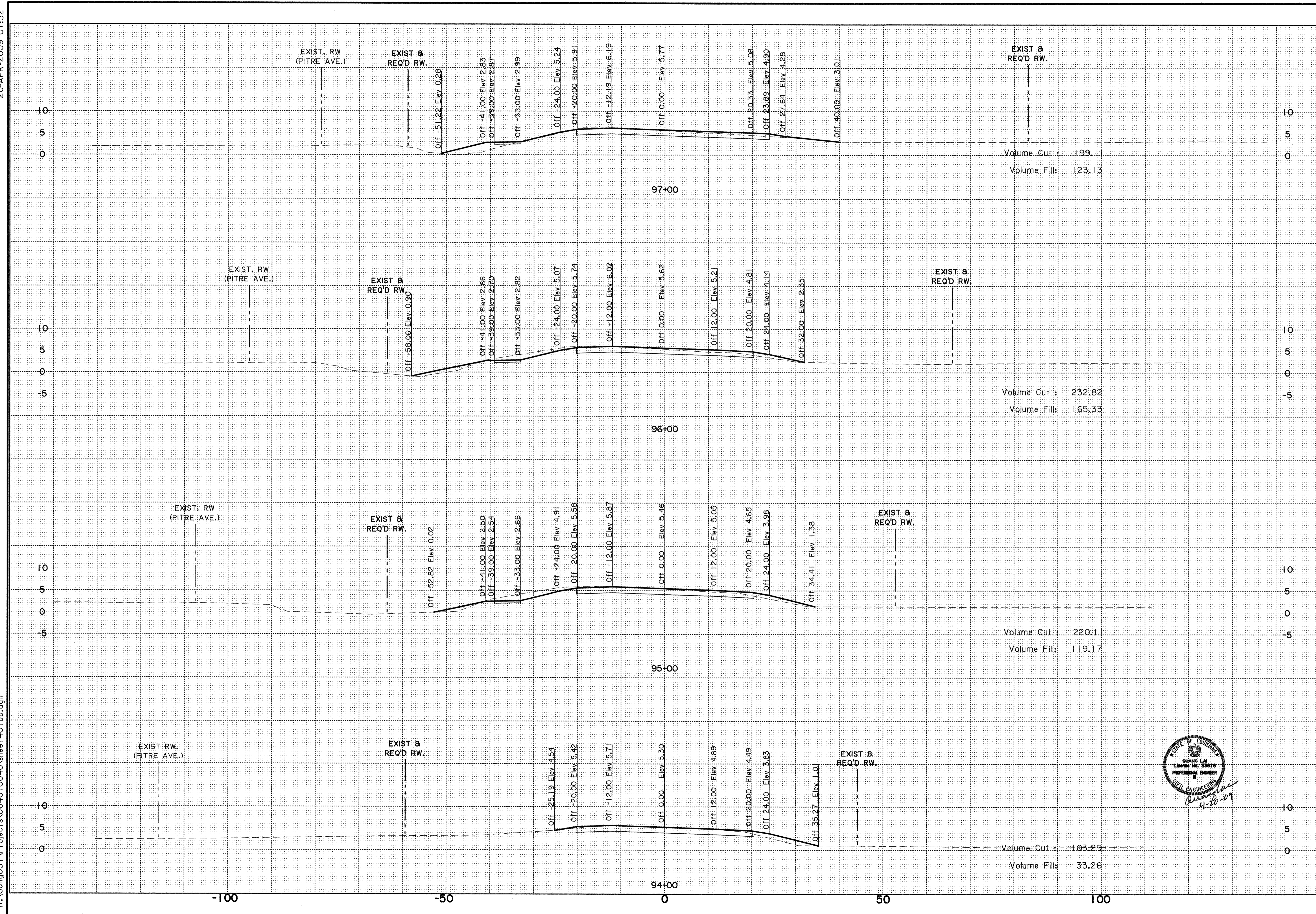
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DATE: APRIL, 2009
SHEET: SHEET 2 OF 7

PARISH: JEFFERSON
FEDERAL PROJECT: 064-01-0040
STATE PROJECT: 064-01-0040

NO. DATE REVISION DESCRIPTION BY

SHEET NUMBER 402



STATE OF LOUISIANA
 QUANG LAI
 License No. 33616
 PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
Quang Lai
 4-28-09

CROSS SECTIONS
 LA 1

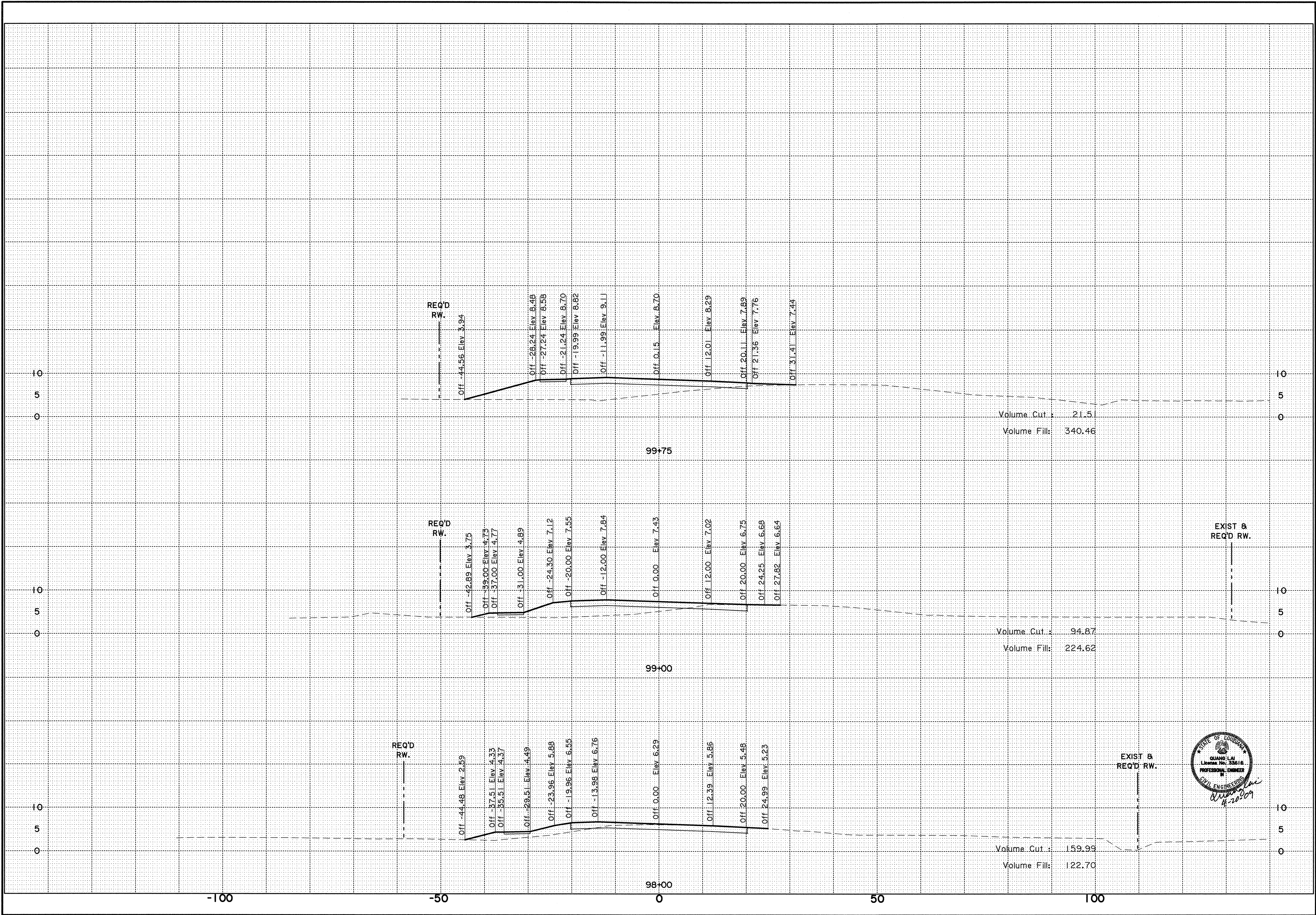
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 DATE APRIL, 2009
 SHEET 3 OF 7

PARISH JEFFERSON
 FEDERAL PROJECT
 STATE PROJECT 064-01-0040

SHEET NUMBER 403

REVISION DESCRIPTION
 NO. DATE BY



ROAD DESIGN

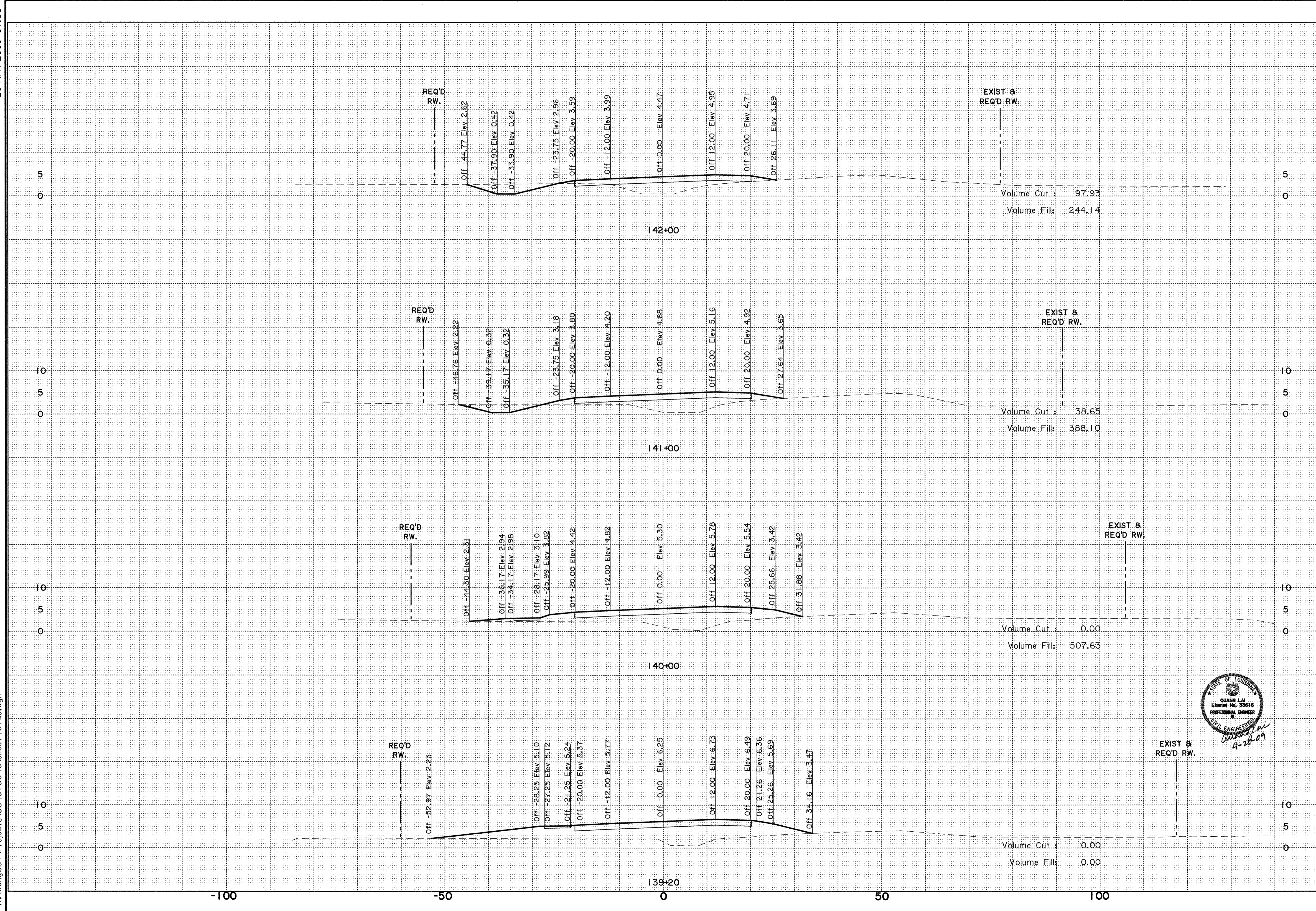
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LA 1

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CHECKED: Q.LAI
DATE: APRIL 2009

PARISH: JEFFERSON
FEDERAL PROJECT: 064-01-0040
STATE PROJECT: 064-01-0040

REVISION DESCRIPTION: _____
NO. _____ DATE _____ BY _____

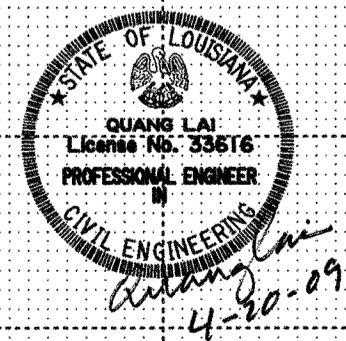
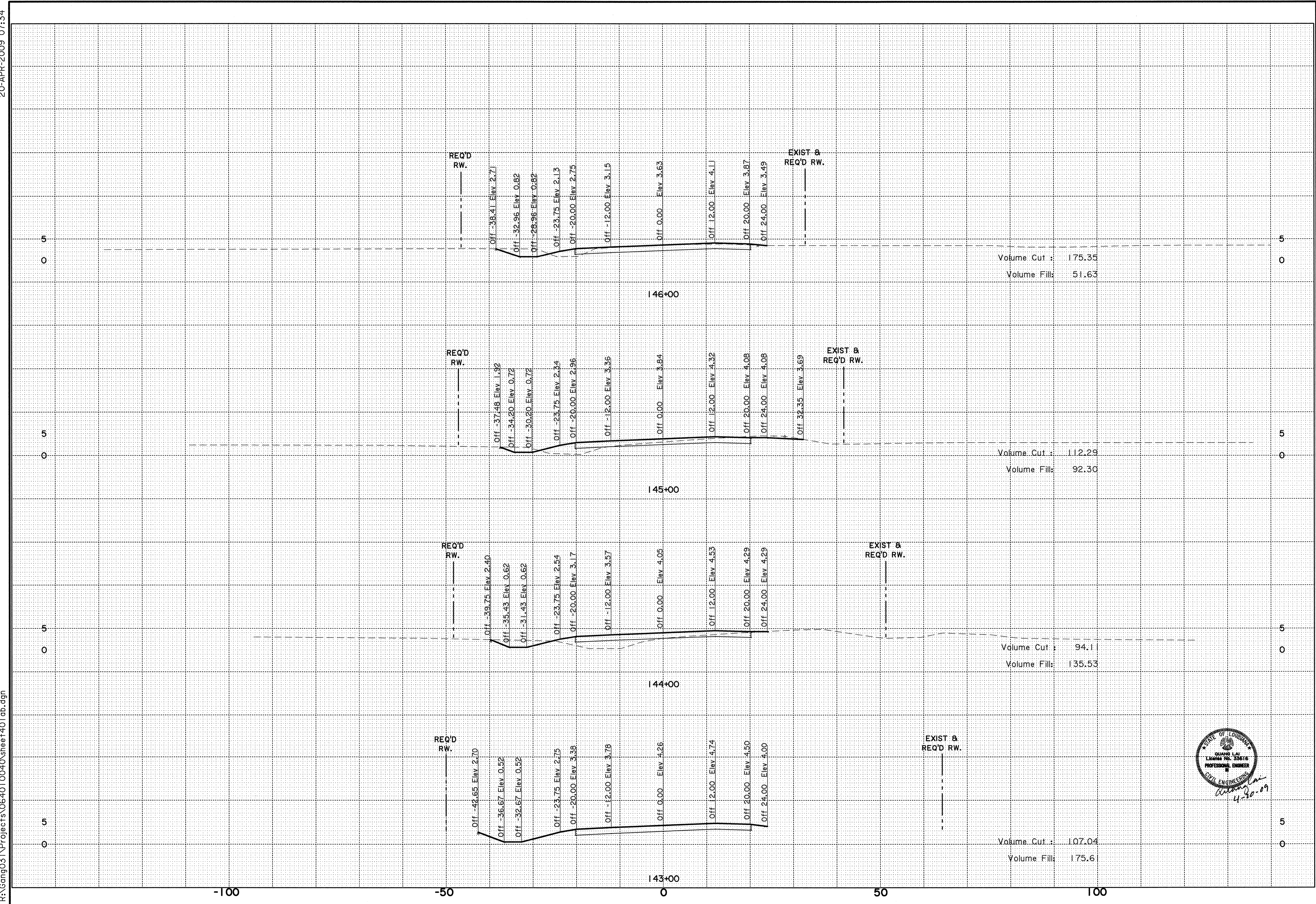
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SHEET 4 OF 7



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 State of Louisiana
 4-28-09

CROSS SECTIONS
 ROAD DESIGN
 LA 1

DESIGNED	MRG	CHECKED	GLAI
Detailed	MRG	Checked	GLAI
DATE	APRIL 2009	SHEET	5 OF 7
NO.		DATE	
REVISION DESCRIPTION			
BY			
PARISH	JEFFERSON	FEDERAL PROJECT	
STATE	LA	PROJECT	064-01-0040
SHEET NUMBER	405		



CROSS SECTIONS

LA 1

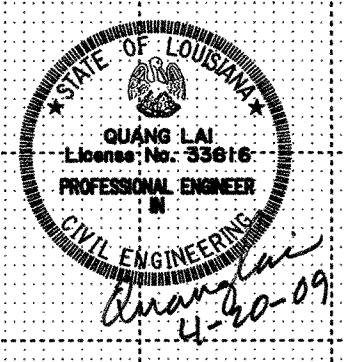
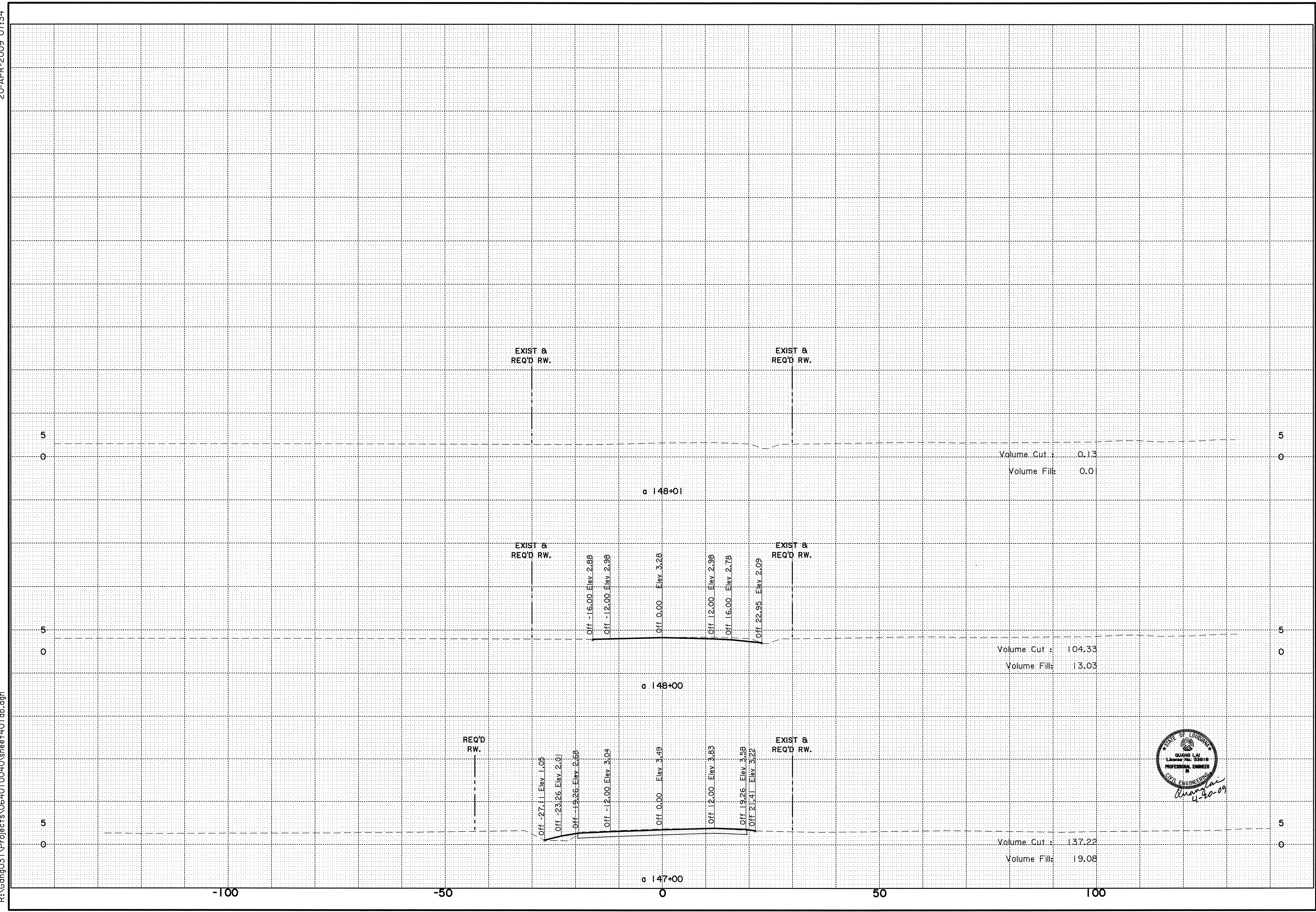
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JEFFERSON

PARISH: FEDERAL PROJECT: STATE: PROJECT: 064-01-0040

DESIGNED: MRG CHECKED: Q.LAI DETAILED: MRG CHECKED: Q.LAI DATE: APRIL 2009 SHEET: 6 OF 7

NO. DATE REVISION DESCRIPTION BY



ROAD DESIGN

LA 1

CROSS SECTIONS

DESIGNED MRG Q.LAI
 CHECKED Q.LAI
 DETAILED MRG Q.LAI
 CHECKED Q.LAI

DATE APRIL 2009
 SHEET SHEET 7 OF 7

PARISH JEFFERSON
 FEDERAL PROJECT
 STATE PROJECT 064-01-0040

SHEET NUMBER 407

REVISION DESCRIPTION

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