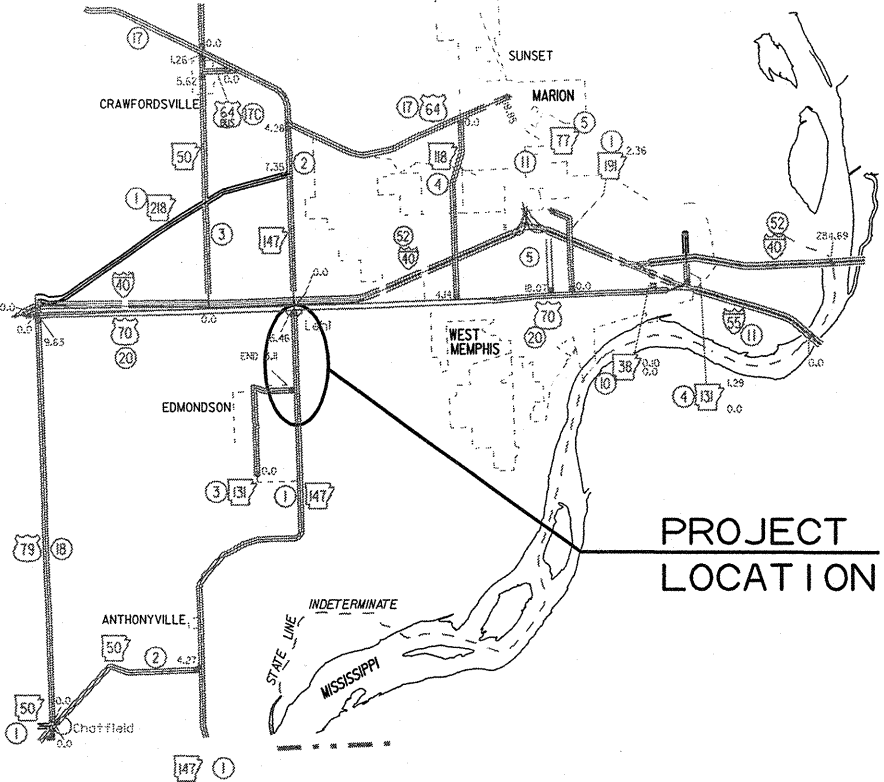


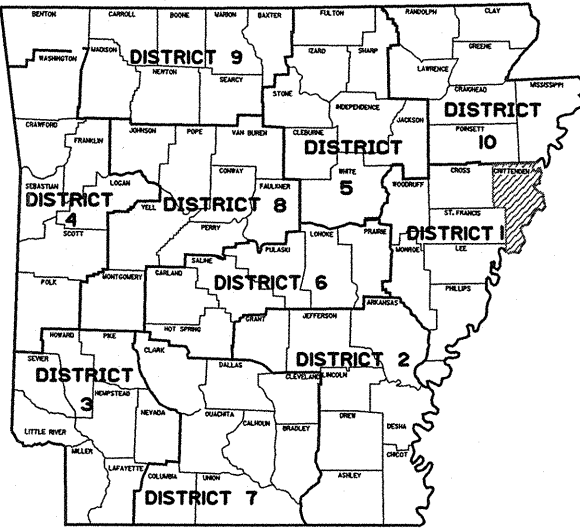
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

FIFTEEN MILE BAYOU
STR. & APPRS.
(HWY. 147, LM 14.21) (C.E) (S)
CRITTENDEN COUNTY
ROUTE 147 SECTION I
JOB 110528

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	1	85
(2) FIFTEEN MILE BAYOU STR. & APPRS. (HWY. 147, LM 14.2)(C&E)(S)								



VICINITY MAP



ARK. HWY. DIST. NO. 1

DESIGN TRAFFIC DATA

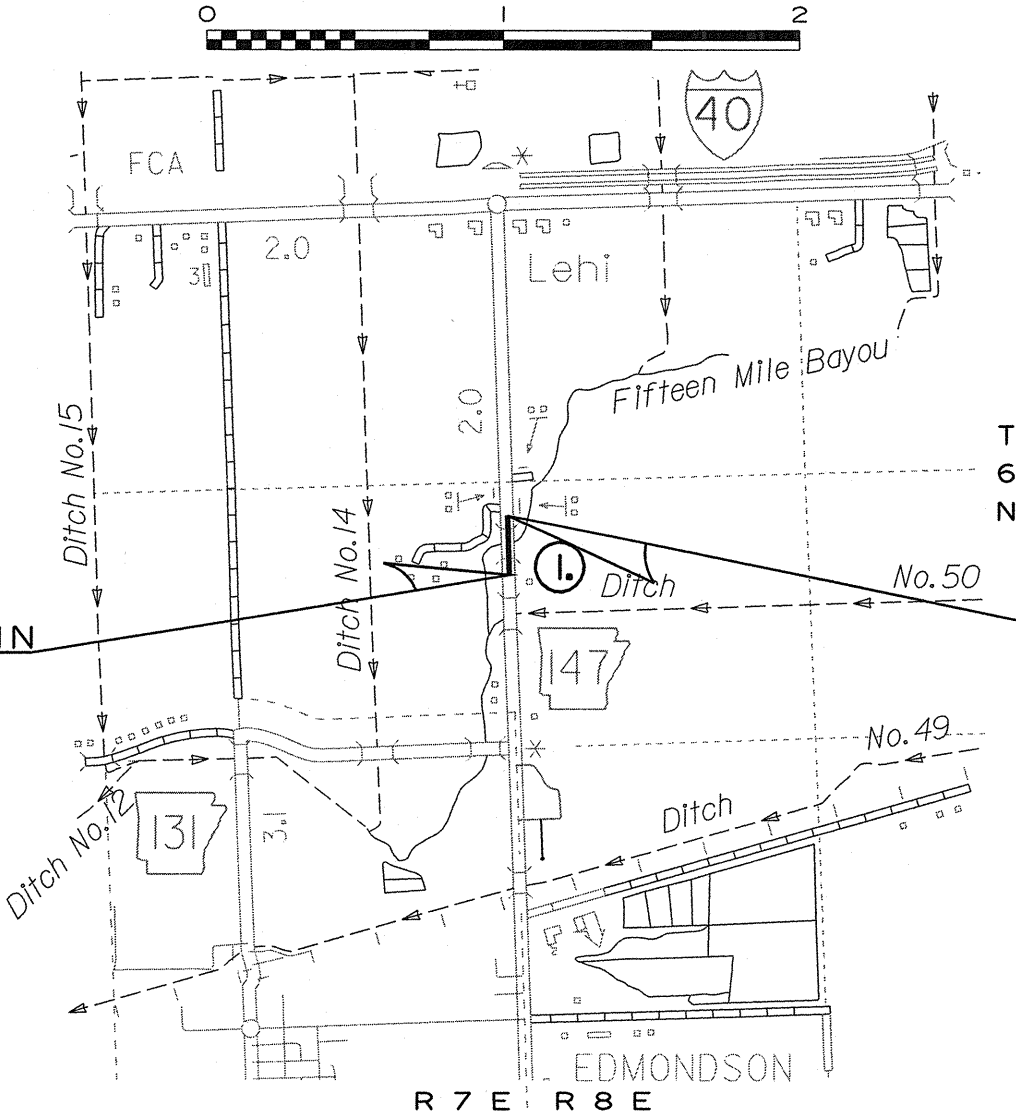
DESIGN YEAR	2030
2010 ADT	3500
2030 ADT	4200
2030 DHV	462
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	5%
DESIGN SPEED	60 MPH

BRIDGE CONSTRUCTION DATA

1. STA. 104+32.47 BRIDGE END
BRIDGE NO. 07183
221' CONTINUOUS COMPOSITE W-BEAM UNIT
40' CLEAR ROADWAY
45° RT. FWD. SKEW
224'-0 3/4" BRIDGE LENGTH
STA. 106+56.53 BRIDGE END

STA. 98+22.96 BEGIN
JOB 110528
LOG MILE 14.09

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°07' 39"	N 35°07' 47"	N 35°07' 54"
LONGITUDE	W 90°17' 35"	W 90°17' 35"	W 90°17' 35"



GROSS LENGTH OF PROJECT	1596.72	FEET OR	0.302	MILES
NET " " ROADWAY	1372.66	" "	0.260	"
NET " " BRIDGES	224.06	" "	0.042	"
NET " " PROJECT	1596.72	" "	0.302	"

P.E. 110528
9980

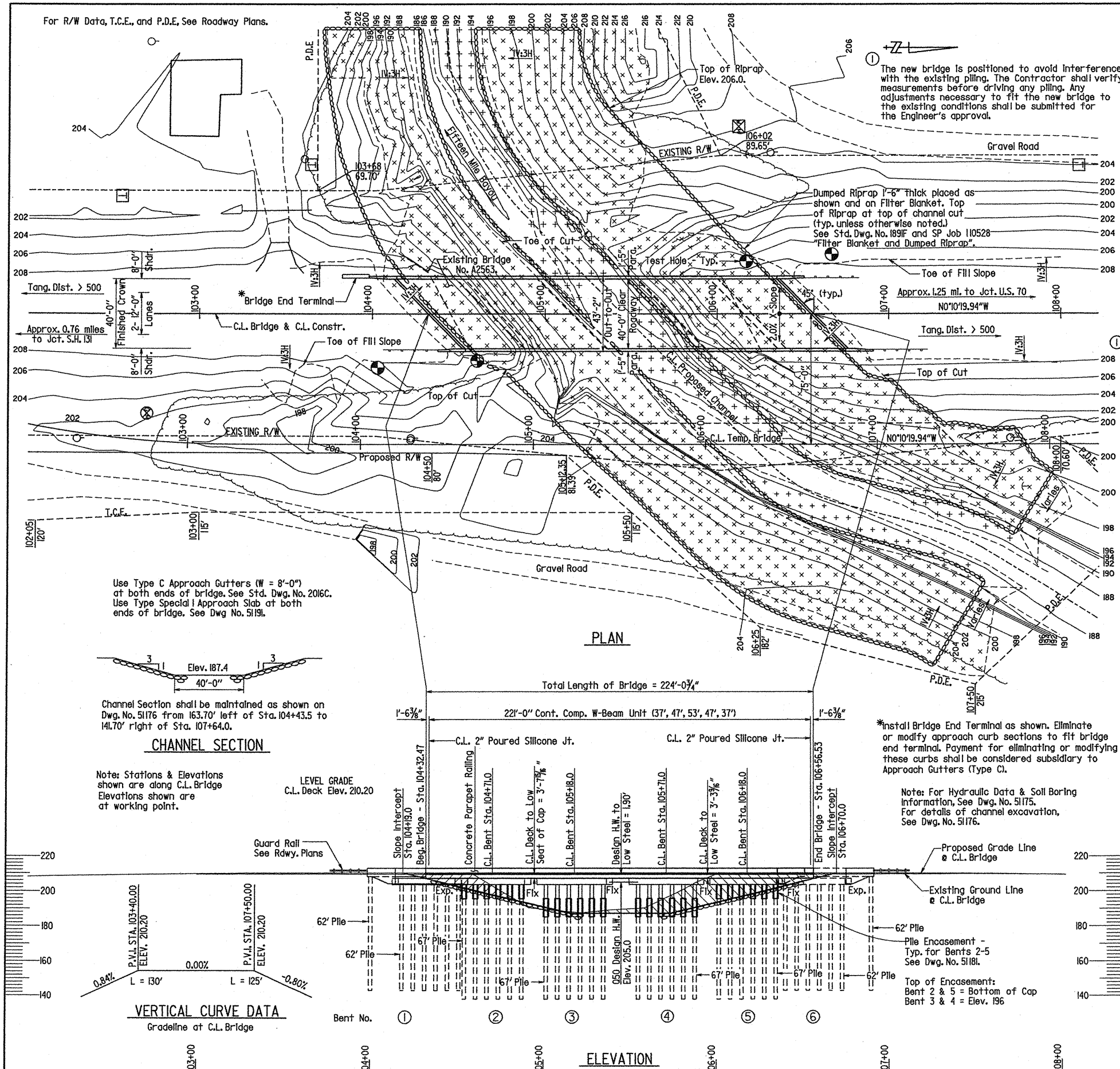


APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 3917
FRANK VOZEL
6/25/10
DEPUTY DIRECTOR
AND CHIEF ENGINEER

For R/W Data, T.C.E., and P.D.E. See Roadway Plans.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	110528		23	85
				07183	- LAYOUT -		51174	



GENERAL NOTES

BENCH MARK: Corps of Eng. BM Stamped "0-12-68-6", 19.69' Lt. of C.L. Constr. Sta. 104+34.99, Elev. 206.18.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition), with applicable supplemental specifications and special provisions. Section and Subsection refer to the Standard Construction Specification unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (4th Edition, 2007 with 2008 and 2009 Interims).

LIVE LOADING: HL-93 SEISMIC ZONE: 4

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure) $f'_c = 4,000$ psi
Class S Concrete (substructure) $f'_c = 3,500$ psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) $f_y = 60,000$ psi
Structural Steel (AASHTO M270, Gr. 36) $F_y = 36,000$ psi
Structural Steel (AASHTO M270, Gr. 50W) $F_y = 50,000$ psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL SHELL PILING: Piling for Bents 1 & 6 shall be 18" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 165 tons per pile and to a tip elevation of 143 or lower. Piling for Bents 2 thru 5 shall be 24" diameter concrete filled steel shell piles and shall be driven to a minimum ultimate bearing capacity of 261 tons per pile and to a tip elevation of 138 or lower. All piling shall be driven with an approved air, steam, or diesel hammer. Piling in and bents shall be driven after embankment to bottom of cap is in place.

Length of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. No payment will be made for cut-off or build-up. Test piles are not required but may be driven for the Contractor's information in accordance with Subsection 805.08(g). No piles will be paid for as test piles.

DRIVING SYSTEM: The driving system approval and ultimate bearing capacity determination for piling shall be based on the requirements of Subsection 805.09(b) "Method B - Wave Equation Analysis (WEAP)". It is estimated that a minimum rated hammer energy of 34,500 ft.-lb. per blow will be required to obtain the ultimate bearing capacity at Bent Nos. 1 & 6. It is estimated that a minimum rated hammer energy of 55,500 ft.-lb. per blow will be required to obtain the ultimate bearing capacity at Bent Nos. 2 - 5.

PILE DESIGN CAPACITY: Bent Nos. 1 & 6: Steel Shell Piling (18" Dia.) = 60 tons
Bent Nos. 2 - 5: Steel Shell Piling (24" Dia.) = 95 tons

PILE ENCASEMENTS: Pile encasements are required for Bents 2 thru 5. See Dwg. No. 51181.

PREBORING: Water jetting, preboring, or other methods as approved by the Engineer may be needed to achieve the minimum tip elevation. Any cost associated with achieving the minimum tip elevation shall be included in the item "Steel Shell Piling (24" dia.)".

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS:

End Bents
Int. Bents
22' Cont. Comp. W-Beam Unit
Elastomeric Bearings
Concrete Filled Steel Shell Piles
Type C Approach Gutters
Type Special Approach Slab

DRAWING NO.
51177-51179
51180
51182-51189
51190
51181
2016C
51191

EXISTING BRIDGE: Existing Bridge No. A2563 (log mile 14.20) is 47' long and consists of four steel beam spans with concrete deck supported by concrete trestle pile bents. The existing bridge occupies the same location as the proposed new bridge.

REMOVAL AND SALVAGE: After the temporary bridge is opened to traffic, the Existing Bridge No. A2563 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

TEMPORARY BRIDGE: Construct a minimum 205' long temporary bridge approximately 75' upstream from centerline construction with a minimum deck elevation of 205.1 and bents skewed 45 degrees right forward. See roadway plans for actual detour grade and alignment. The temporary bridge shall have a minimum span length of 31' over the main channel, a minimum clear roadway width of 24', and a minimum live load capacity of H15. See Section 603 and drawing numbers 51192 thru 51197 and 2465 for temporary bridge details. Neither a timber deck nor timber piles will be allowed in the construction of the temporary bridge structure.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

SHEET 1 OF 3
LAYOUT OF BRIDGE OVER
FIFTEEN MILE BAYOU
FIFTEEN MILE BAYOU STR. & APPRS.
(Hwy. 147, LM 14.21) (CoE) (S)
CRITTENDEN COUNTY
ROUTE 147 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.



DRAWN BY: MCB DATE: 10/19/09 FILENAME: bil0528_11.dgn
CHECKED BY: JSM DATE: 12-09-09 SCALE: 1" = 30'
DESIGNED BY: GLE DATE: 7/09
BRIDGE NO. 07183 DRAWING NO. 51174

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	24	85
				07183	- LAYOUT -		5175	

BORING LEGEND

A1-Molst, Loose, Gray and Brown Sand with Clay
 B1-Molst, Stiff, Gray and Brown Clay
 C1-Wet, Medium Stiff, Gray Clay
 D1-Molst, Medium Stiff, Gray and Brown Clay with Sand
 E1-Molst to Wet, Soft, Gray Clay
 F1-Wet, Very Loose, Gray Clayey Sand
 G1-Wet, Soft, Gray Clay with Sand
 H1-Wet, Loose, Gray Sand
 J1-Wet, Medium Dense, Gray Sand
 K1-Wet, Medium Dense, Gray Sand with Trace of Gravel
 L1-Wet, Medium Dense, Gray Sand with Trace of Gravel and Organic Matter
 M1-Wet, Dense, Gray Sand with Organic Matter and Trace of Gravel
 N1-Wet, Dense, Gray Sand
 P1-Organic Matter (Wood)
 Q1-Wet, Medium Dense, Gray Sand with some Gravel and Trace of Organic Matter
 R1-Wet, Medium Dense, Gray Sand with some Gravel
 S1-Wet, Dense, Gray Sand with some Organic Matter and Trace of Gravel
 T1-Wet, Medium Dense, Gray Sand with Trace of Organic Matter and Gravel
 U1-Wet, Dense, Gray Sand with Trace of Gravel
 V1-Wet, Dense, Gray Sand with Trace of Organic Matter and Gravel
 W1-Wet, Dense, Gray Sand with some Gravel
 X1-Molst, Loose, Brown Sand
 Y1-Molst, Medium Stiff, Gray and Brown Sandy Clay
 Z1-Molst, Soft, Gray Sandy Clay
 A2-Molst, Medium Stiff, Gray Clay
 B2-Molst, Medium Stiff, Gray Clay with some Sand
 C2-Wet, Loose, Gray Silty Sand
 D2-Wet, Very Loose, Gray Silty Sand
 E2-Wet, Medium Dense, Gray Silty Sand
 F2-Wet, Medium Dense, Gray Sand with Trace of Clay
 G2-Wet, Medium Dense, Gray Sand with some Gravel and Organic Matter
 H2-Molst, Soft, Brown and Gray Clay with some Sand and Gravel
 J2-Wet, Medium Stiff, Brown and Gray Clay with some Sand
 K2-Wet, Soft, Gray Sandy Clay
 L2-Wet, Medium Dense, Gray Sand with Trace of Organic Matter
 M2-Wet, Medium Dense, Gray Sand with some Organic Matter
 N2-Wet, Medium Dense, Gray Sand with Gravel
 P2-Wet, Medium Dense, Gray Sand with some Organic Matter and Trace of Gravel
 Q2-Wet, Dense, Gray Sand with Trace of Organic matter
 R2-Wet, Very Dense, Gray Sand
 S2-Molst, Medium Stiff, Gray and Brown Clay
 T2-Wet, Medium Stiff, Gray and Brown Clay
 U2-Wet, Soft, Gray Clay
 V2-Wet, Very Loose, Dark Gray Sand
 W2-Wet, Medium Dense, Gray Sand with Clay
 X2-Wet, Medium Dense, Gray Sand with some Gravel and Trace of Organic Matter
 Y2-Wet, Dense, Gray Sand with Gravel
 Z2-Wet, Very Dense, Gray Sand with Trace of Organic Matter and Gravel

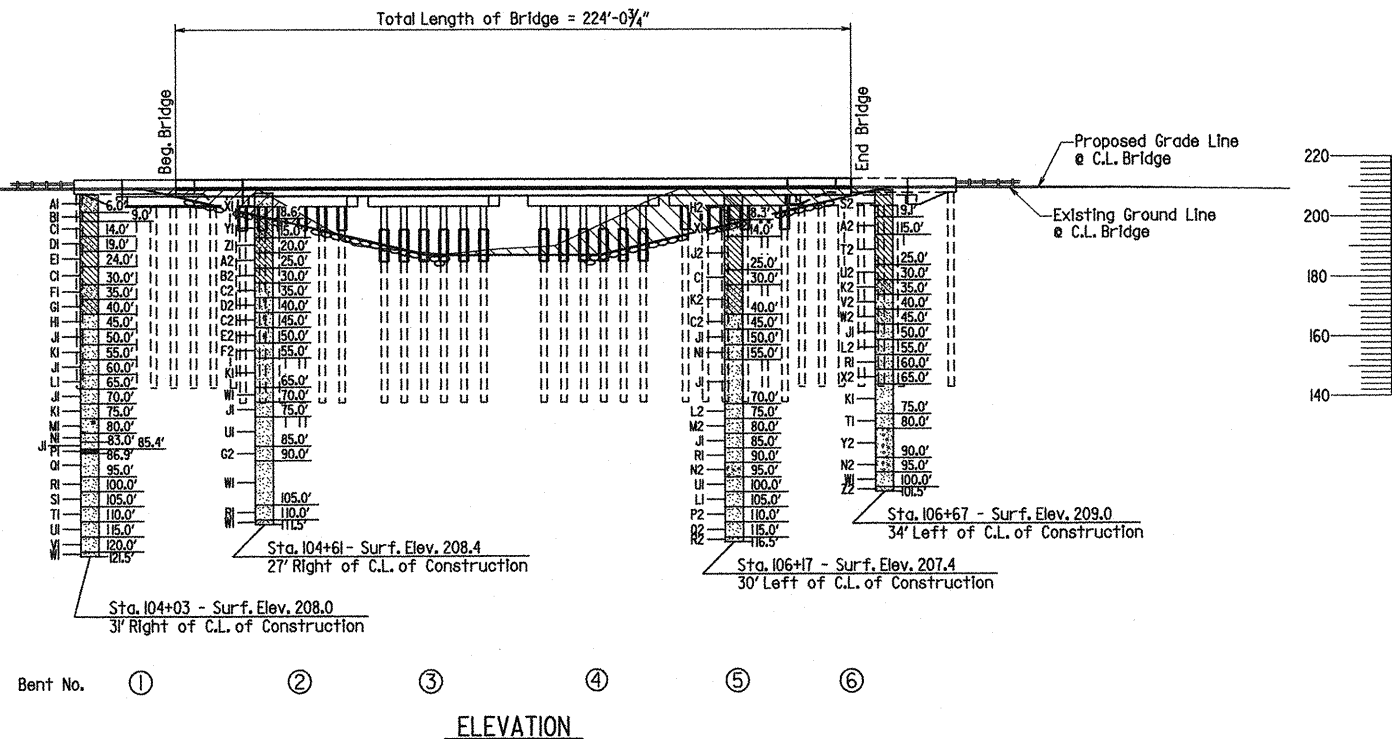
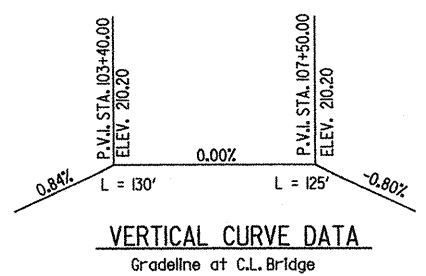
HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	*NATURAL WATER SURFACE ELEVATION FEET	WATER SURFACE ELEV. WITH BACKWATER FEET
Design	50	7410	205.0	205.2
Base	100	8080	205.5	205.7
Extreme	500	9510	206.4	206.6
Overtopping	>500	-	-	-

*Unconstricted water surface without structure
 or roadway approaches.
 Drainage area = 10.1 square miles.

SHEET 2 OF 3
 LAYOUT OF BRIDGE OVER
 FIFTEEN MILE BAYOU
 FIFTEEN MILE BAYOU STR. & APPRS.
 (Hwy. 147, LM 14.21) (CoE) (S)
 CRITTENDEN COUNTY
 ROUTE 147 SEC. 1
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: MCB DATE: 10/19/09 FILENAME: b110528_11.dgn
 CHECKED BY: JTB DATE: 12-01-09 SCALE: 1" = 30'
 DESIGNED BY: WBE DATE: 9/09
 BRIDGE NO. 07183 DRAWING NO. 51175



Sta. 104+03 - 31' Right of C.L. of Construction

6.5- 7.5, N=9
11.5- 12.5, N=8
16.5- 17.5, N=5
21.5- 22.5, N=3
26.5- 27.5, N=6
30.5- 31.5, N=3
35.5- 36.5, N=4
40.5- 41.5, N=7
45.5- 46.5, N=19
50.5- 51.5, N=23
55.5- 56.5, N=27
60.5- 61.5, N=25
65.5- 66.5, N=30
70.5- 71.5, N=27
75.5- 76.5, N=33
80.5- 81.5, N=32
85.5- 86.5, N=13
90.5- 91.5, N=29
95.5- 96.5, N=28
100.5- 101.5, N=31
105.5- 106.5, N=24
110.5- 111.5, N=49
115.5- 116.5, N=39
120.5- 121.5, N=39

Sta. 104+61 - 27' Right of C.L. of Construction

4.1- 5.1, N=10
9.1- 10.1, N=6
15.5- 16.5, N=2
20.5- 21.5, N=5
25.5- 26.5, N=5
30.5- 31.5, N=6
35.5- 36.5, N=2
40.5- 41.5, N=5
45.5- 46.5, N=12
50.5- 51.5, N=19
55.5- 56.5, N=24
60.5- 61.5, N=26
65.5- 66.5, N=46
70.5- 71.5, N=28
75.5- 76.5, N=42
80.5- 81.5, N=47
85.5- 86.5, N=12
90.5- 91.5, N=33
95.5- 96.5, N=43
100.5- 101.5, N=32
105.5- 106.5, N=29
110.5- 111.5, N=48

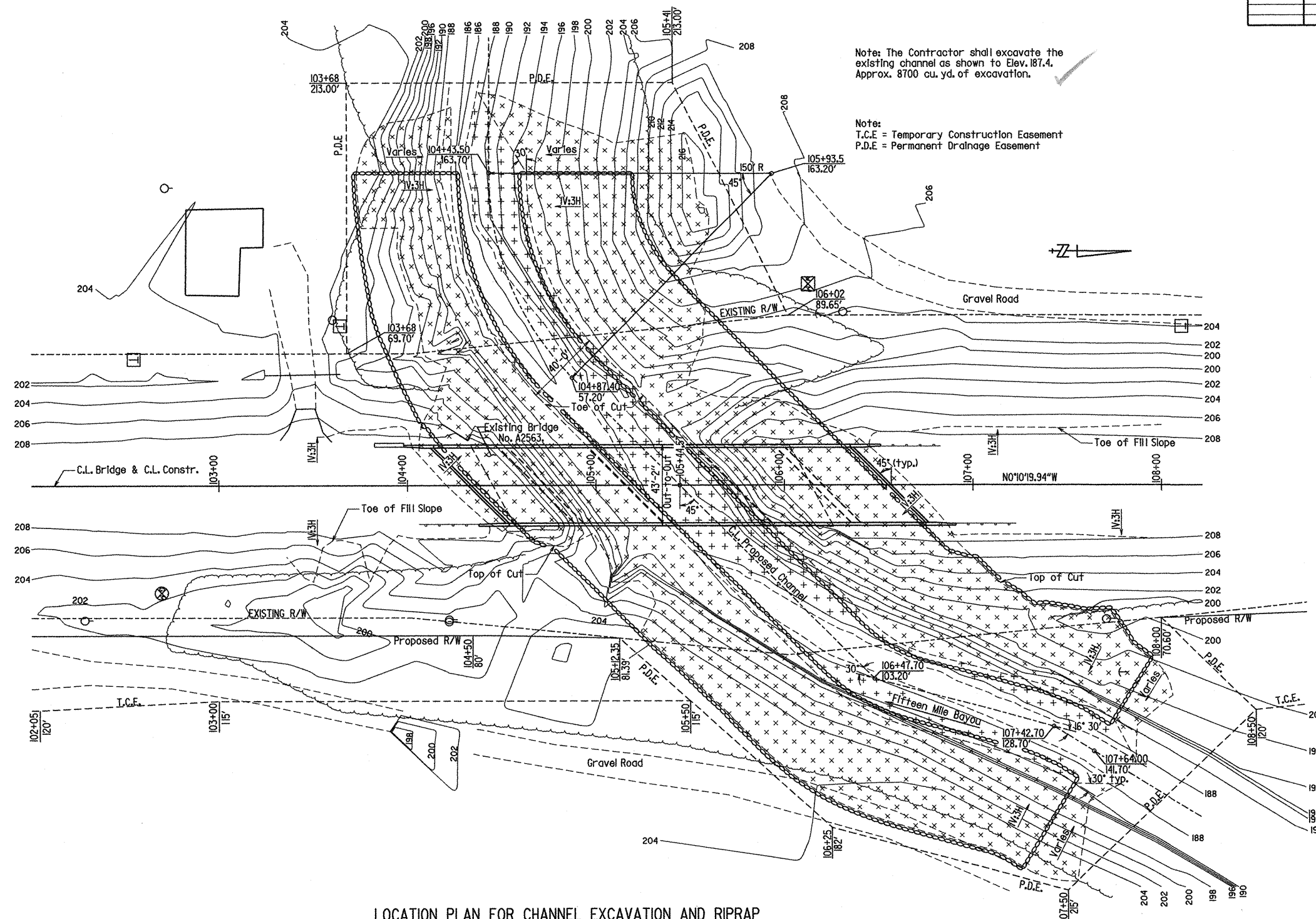
Sta. 106+17 - 30' Left of C.L. of Construction

3.8- 4.8, N=4
8.8- 9.8, N=8
15.5- 16.5, N=5
20.5- 21.5, N=5
25.5- 26.5, N=7
30.5- 31.5, N=3
35.5- 36.5, N=2
40.5- 41.5, N=10
45.5- 46.5, N=15
50.5- 51.5, N=32
55.5- 56.5, N=29
60.5- 61.5, N=27
65.5- 66.5, N=28
70.5- 71.5, N=24
75.5- 76.5, N=19
80.5- 81.5, N=20
85.5- 86.5, N=27
90.5- 91.5, N=15
95.5- 96.5, N=42
100.5- 101.5, N=29
105.5- 106.5, N=28
110.5- 111.5, N=45
115.5- 116.5, N=58

Sta. 106+67 - 34' Left of C.L. of Construction

4.6- 5.6, N=7
9.6- 10.6, N=7
15.5- 16.5, N=6
20.5- 21.5, N=5
25.5- 26.5, N=3
30.5- 31.5, N=2
35.5- 36.5, N=1
40.5- 41.5, N=12
45.5- 46.5, N=22
50.5- 51.5, N=20
55.5- 56.5, N=21
60.5- 61.5, N=25
65.5- 66.5, N=23
70.5- 71.5, N=31
75.5- 76.5, N=27
80.5- 81.5, N=41
85.5- 86.5, N=35
90.5- 91.5, N=30
95.5- 96.5, N=44
100.5- 101.5, N=51

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	25	85
				07183	- LAYOUT -		51176	



LOCATION PLAN FOR CHANNEL EXCAVATION AND RIPRAP

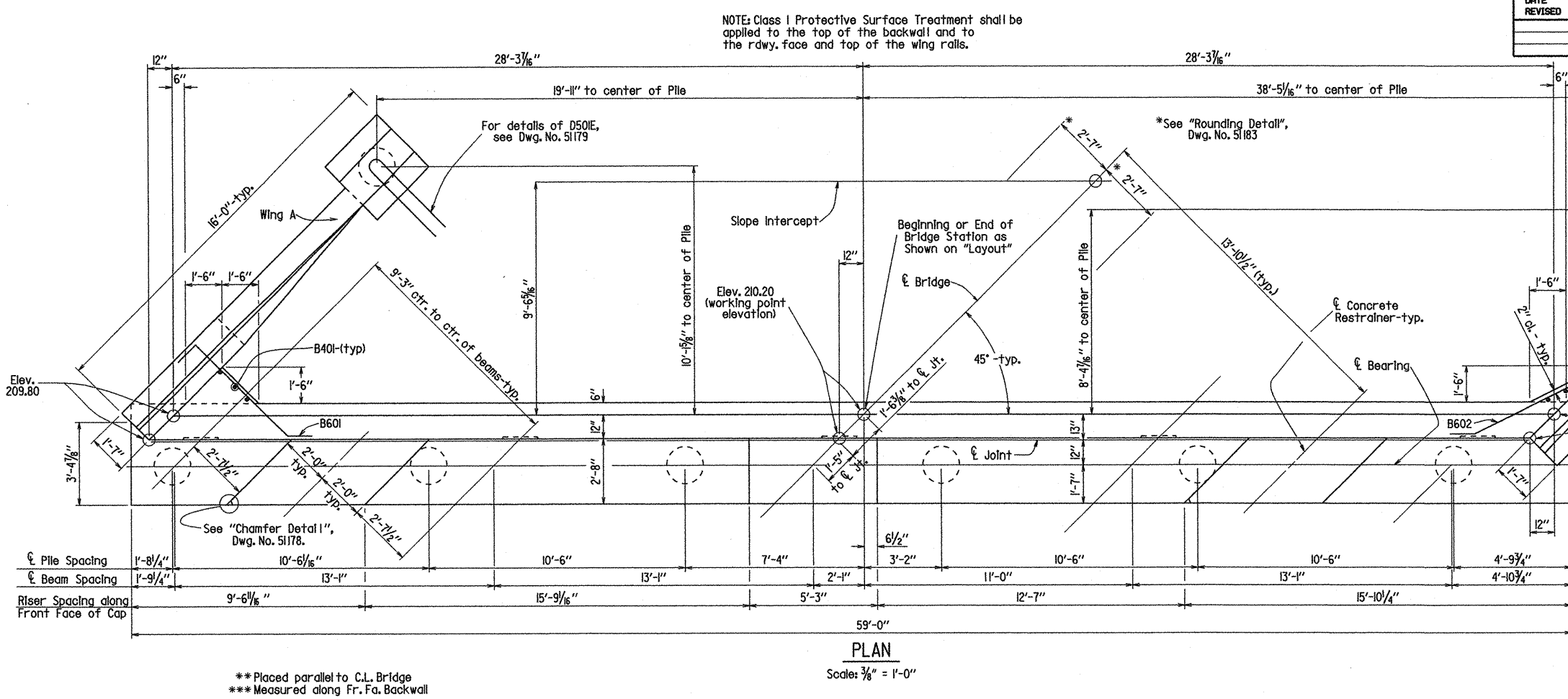
Note:
Details show limits of construction for channel excavation, riprap and filter blanket at the end of construction. It is anticipated that construction will be staged in multiple sequences; however, any additional work or materials (including shoring) required for constructing in stages will not be paid for directly but shall be considered subsidiary to the other items in the Contract.



SHEET 3 OF 3
LAYOUT OF BRIDGE OVER
FIFTEEN MILE BAYOU
FIFTEEN MILE BAYOU STR. & APPRS.
(Hwy. 147, LM 14.21) (CoE) (S)
CRITTENDEN COUNTY
ROUTE 147 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MCB DATE: 10/19/09 FILENAME: b110528_11.dgn
CHECKED BY: [Signature] DATE: 12-09-09 SCALE: 1" = 30'
DESIGNED BY: GAE DATE: 9/09
BRIDGE NO. 07183 DRAWING NO. 51176

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	110528		26	85
				07183 - END BENTS		- 51177		



GENERAL NOTES

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

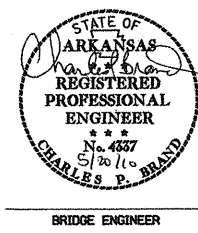
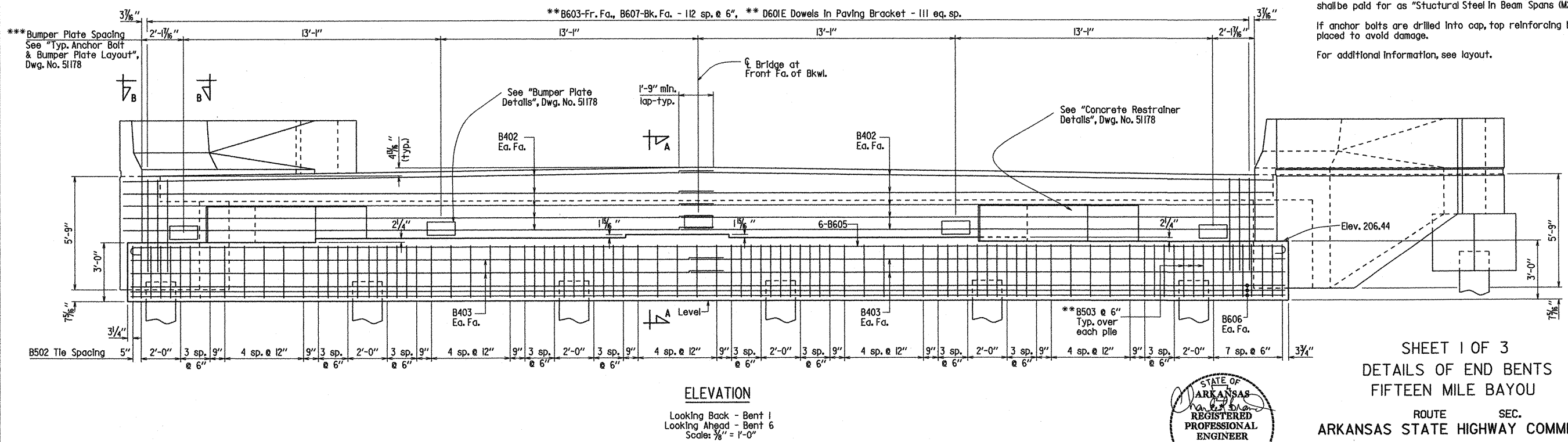
All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60.

No portion of the backwall shall be poured until the beams are in place. Refer to "Expansion Device Installation at End Bents" notes, Dwg. No. 51189.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

For additional information, see layout.



SHEET 1 OF 3
DETAILS OF END BENTS
FIFTEEN MILE BAYOU

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CJR DATE: 4-15-10 FILENAME: b110528_bll.dgn
CHECKED BY: BJR DATE: 05-05-10 SCALE: AS NOTED
DESIGNED BY: BJR DATE: 02-10
BRIDGE NO. 07183 DRAWING NO. 51177

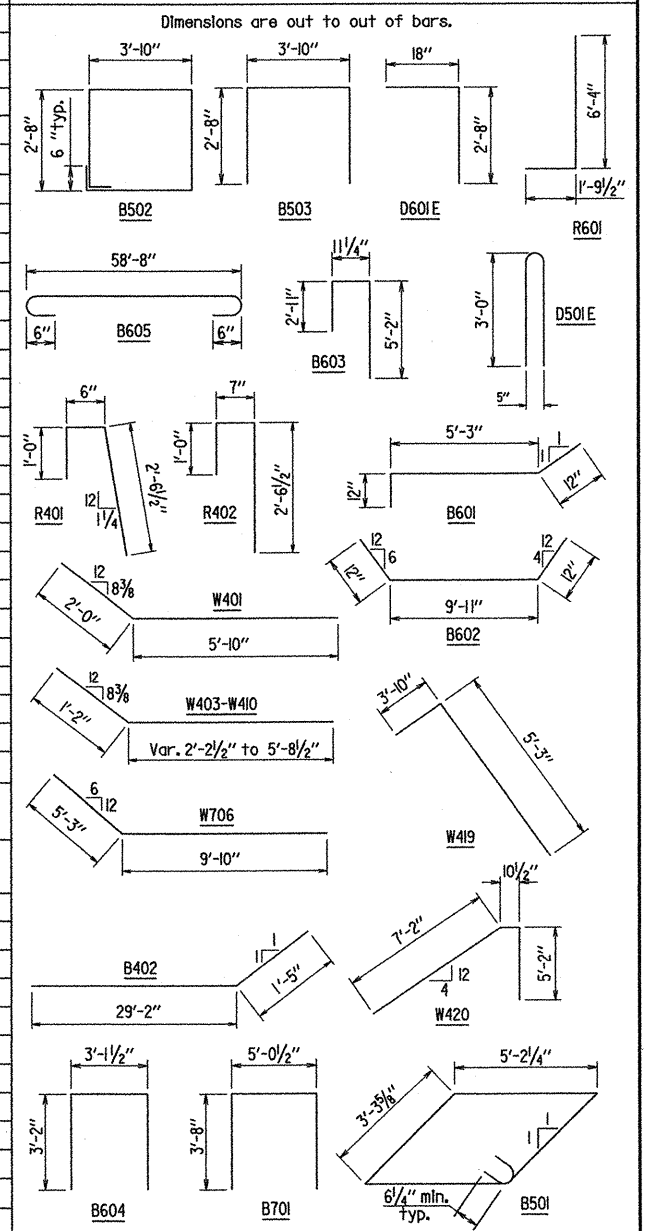
Note:
For bar list and details of wings, see Dwg. Nos. 51178 & 51179
For "Section A-A" and "View B-B", see Dwg. No. 51178

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	27	85
				07183 -	END BENTS	-	5178	

BAR LIST - PER BENT

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	4'-2"	Str.
B402	20	30'-7"	3"
B403	8	30'-3"	Str.
B501	10	17'-8"	3 3/4"
B502	75	13'-6"	2 1/2"
B503	18	8'-11"	2 1/2"
B601	4	7'-1"	4 1/2"
B602	4	11'-11"	4 1/2"
B603	113	8'-8"	4 1/2"
B604	12	9'-2"	4 1/2"
B605	6	60'-0"	4 1/2"
B606	6	58'-8"	Str.
B607	113	4'-0"	Str.
B701	18	12'-0"	5 1/4"
R401	20	3'-11"	2"
R402	8	4'-0"	2"
R403	12	15'-8"	Str.
R404	12	2'-8"	Str.
R601	20	8'-0"	4 1/2"
R602	6	5'-0"	Str.
F601	12	2'-8"	Str.
W401	12	7'-10"	2"
W402	12	8'-2"	Str.
W403-W410	2 each	Var. 3'-5" to 6'-11"	2"
W411-W418	2 each	Var. 4'-6" to 8'-0"	Str.
W419	2	9'-0"	2"
W420	2	13'-2"	2"
W701	12	15'-8"	Str.
W702	4	11'-5"	Str.
W703	4	9'-11"	Str.
W704	4	8'-5"	Str.
W705	4	6'-11"	Str.
W706	4	15'-1"	5 1/4"
D501E	22	6'-2"	3 3/4"
D601E	112	4'-0"	4 1/2"

BENDING DIAGRAMS



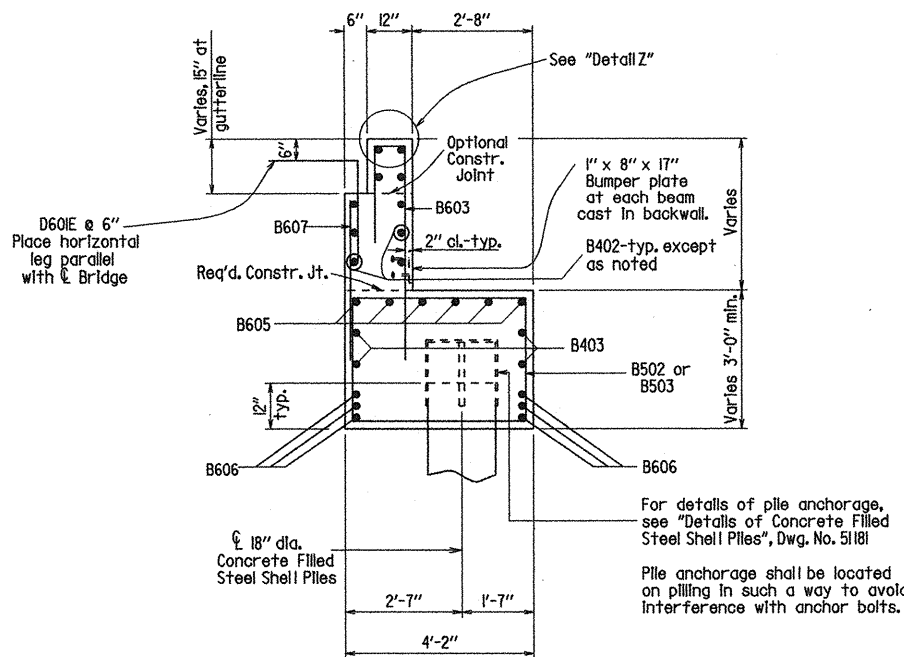
Note: Bars designated with an 'E' suffix shall be epoxy coated.

SHEET 2 OF 3 DETAILS OF END BENTS FIFTEEN MILE BAYOU

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: CJR DATE: 4-15-10 FILENAME: b110528_b12.dgn
CHECKED BY: [Signature] DATE: 05-05-10 SCALE: AS NOTED
DESIGNED BY: [Signature] DATE: 02-10
BRIDGE NO. 07183 DRAWING NO. 5178

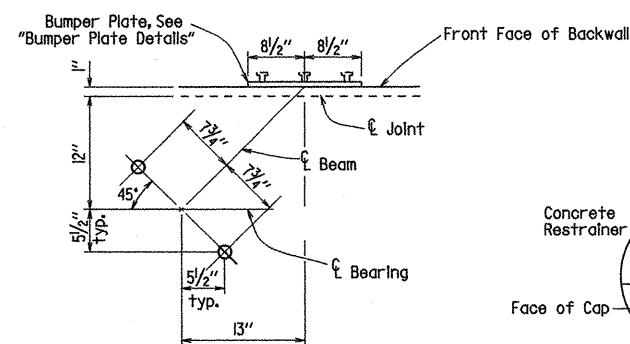


BRIDGE ENGINEER



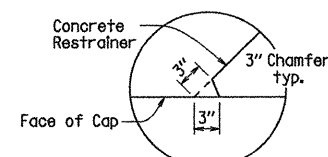
SECTION A-A

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



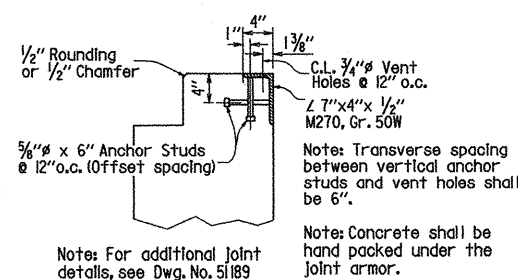
TYP. ANCHOR BOLT & BUMPER PLATE LAYOUT

No Scale



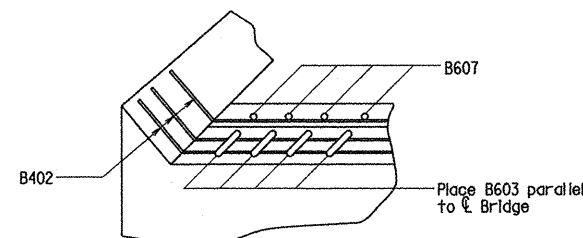
CHAMFER DETAIL

No Scale



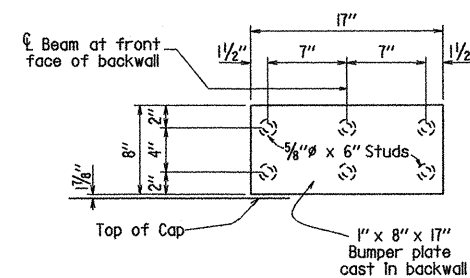
DETAIL Z

No Scale



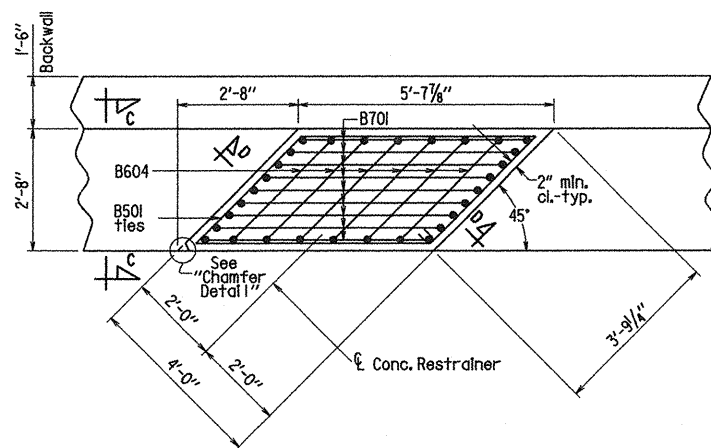
VIEW B-B

No Scale



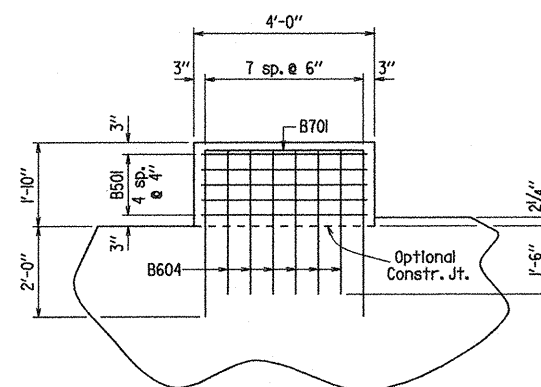
BUMPER PLATE DETAILS

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



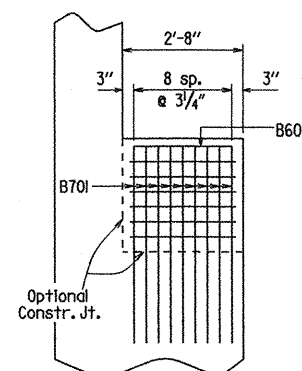
CONCRETE RESTRAINER DETAILS

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



SECTION D-D

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



VIEW C-C

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

BAR LIST - PER BENT

MARK	NO. REQ'D.	LENGTH	P.D.
B401	8	29'-0"	Str.
B402	4	10'-2"	2"
B501	64	13'-2"	2 1/2"
B502	24	9'-4"	2 1/2"
B503	6	15'-9"	3 3/4"
B601	6	57'-6"	4 1/2"
B602	16	8'-7"	4 1/2"
B701	6	56'-2"	Str.

BENDING DIAGRAMS

Dimensions are out to out of bars.

3'-2"

B501

3'-2"

B502

B503

4'-4"

B402

2'-11"

B602

56'-2"

B601

3'-"

6 7/8" typ. Bts. 2 & 5
7 1/4" typ. Bts. 3 & 4

Bts. 2 & 5 6 7/8" typ.
Bts. 3 & 4 7 1/4" typ.

45°

9 1/2" / 10 1/4"

9 1/2" / 10 1/4"

⊥ Beam

⊥ Bearing

⊥ Elastomeric Sh

B402

1'-8"

Optional Constr. Joint

TYP. ANCHOR BOLT LAYOUT

No Scale

DETAILS OF INTERMEDIATE BENTS
FIFTEEN MILE BAYOU

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

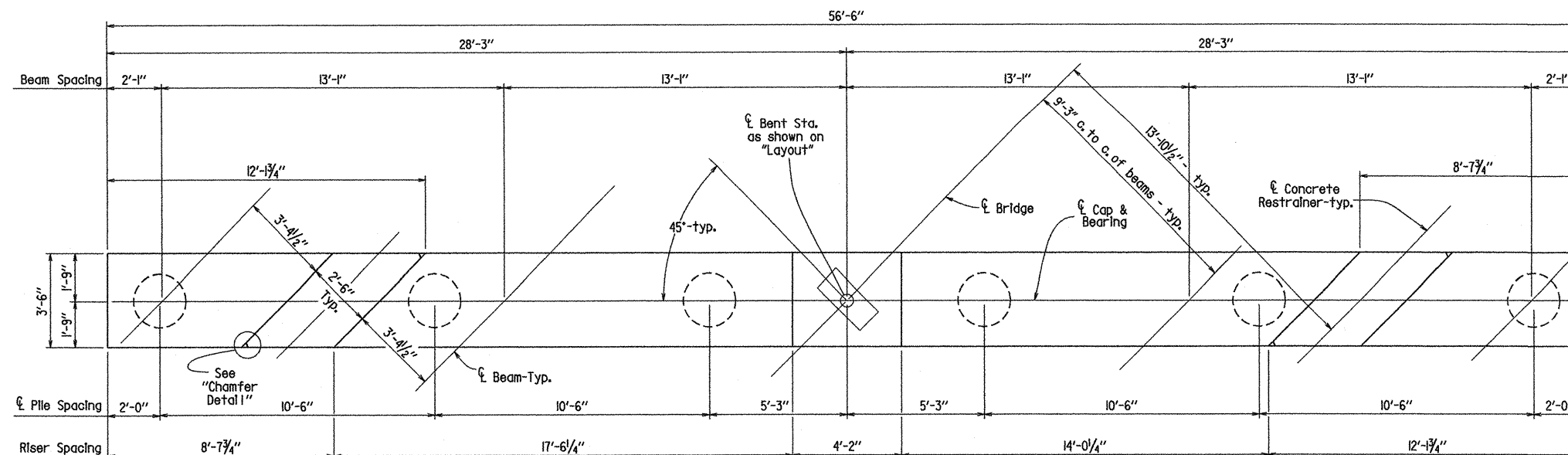
LITTLE ROCK, ARK.

DRAWN BY: CJR DATE: 4-8-10 FILENAME: bil0528_b2.dgn

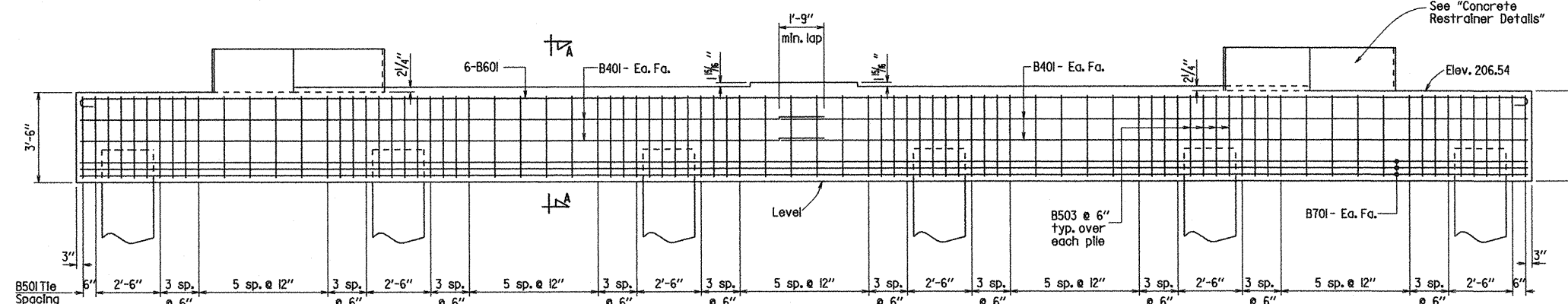
CHECKED BY: SP DATE: 05-05-10 SCALE: AS NOTED

DESIGNED BY: SP DATE: 02-10

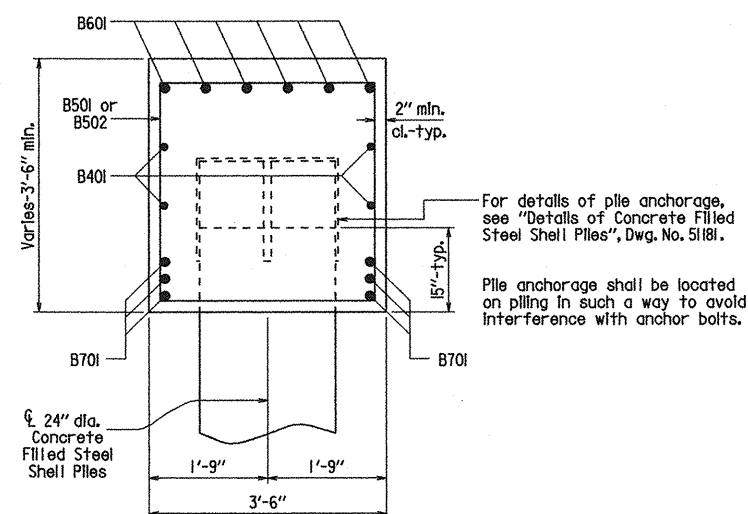
BRIDGE NO. 07183 DRAWING NO. 51180



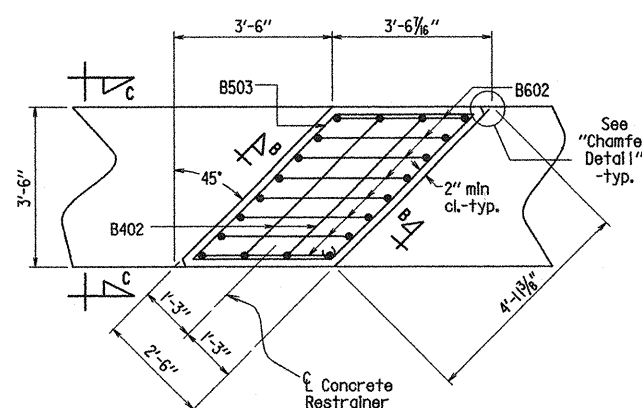
PLAN
Scale: $\frac{3}{8}'' = 1'-0''$



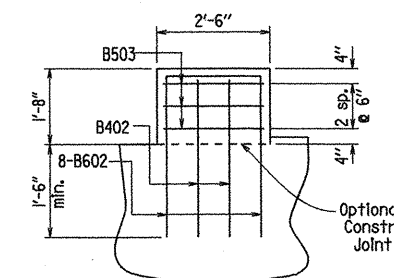
ELEVATION
Scale: $\frac{3}{8}'' = 1'-0''$



SECTION A-A
Scale: $\frac{3}{4}'' = 1'-0''$

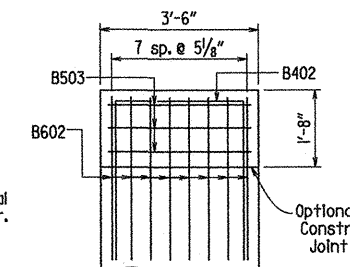


CONCRETE RESTRAINER DETAILS



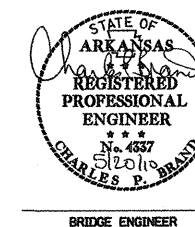
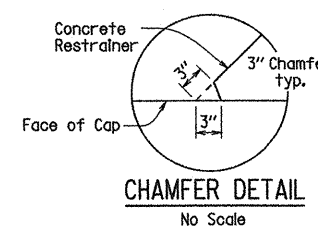
SECTION B-B

Scale: $\frac{1}{2}'' = 1'-0''$



VIEW C-C

Scale: $\frac{1}{2}'' = 1'-0''$



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	30	85
				07183	STEEL SHELL PILES		5181	

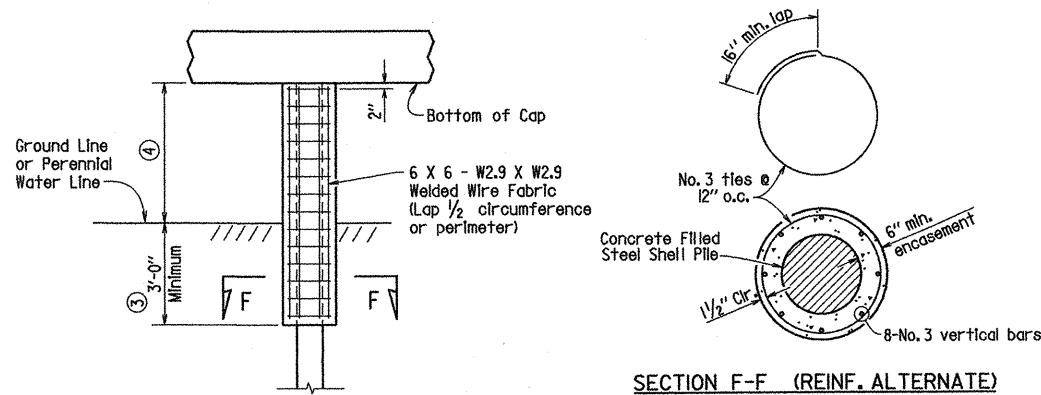
GENERAL NOTES FOR PILE ENCASEMENTS:

See Bridge Layout for required location of pile encasements. Only interior trestle pile bents shall have pile encasements.

Concrete shall be Class S with a minimum 28-day compressive strength, $f'_c = 3,500$ psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

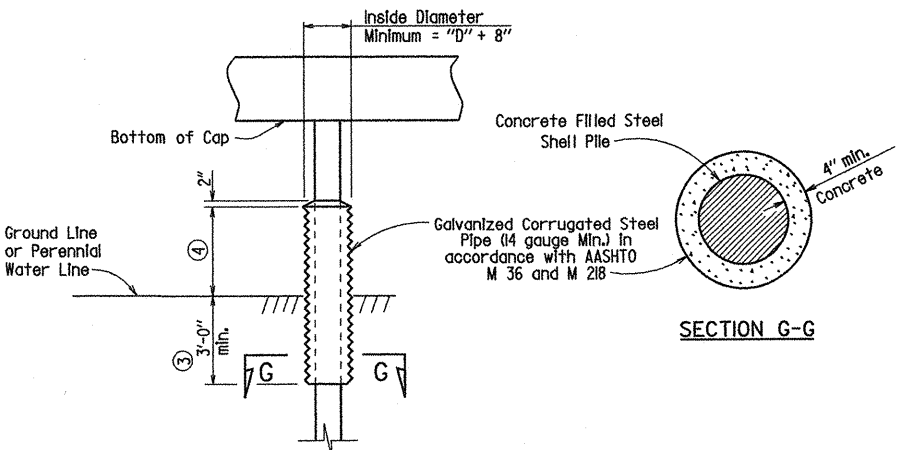
Reinforcing steel shall conform to AASHTO M 31 or M 53, Grade 60.

Concrete, welded wire fabric or reinforcing steel, and galvanized pipe will not be paid for separately, but will be considered included in the unit price bid for "Pile Encasement".



PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES
(Shown with Encasement to Bottom of Cap)

- Unless otherwise noted on Bridge Layout.
- See Bridge Layout for height of pile encasement (3'-0" Minimum).
- Pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the detail for partial height encasement.



ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES
(Shown with Partial Height Encasement)

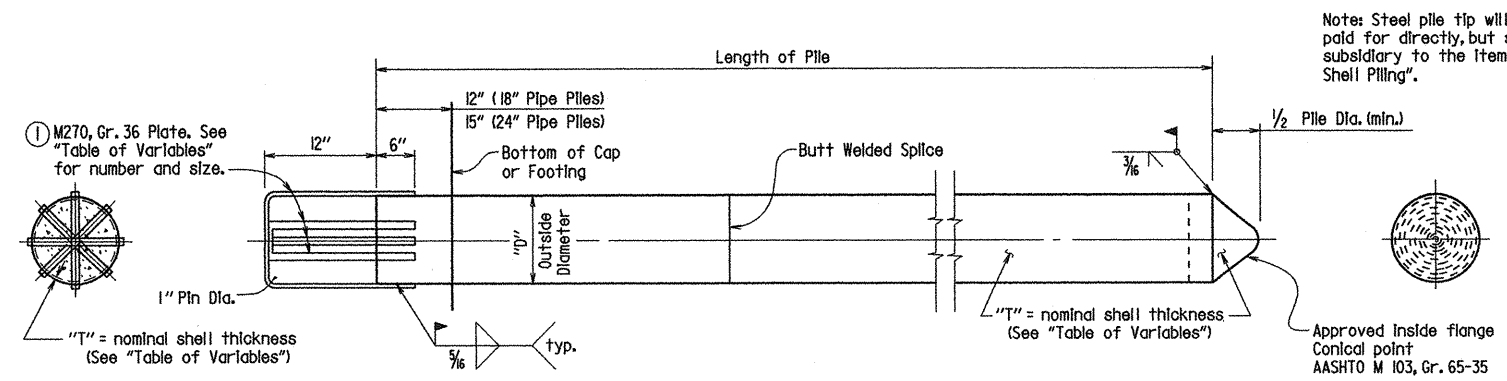
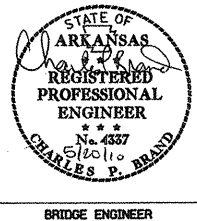
DETAILS OF
CONCRETE FILLED STEEL SHELL PILES
AND PILE ENCASEMENTS

ROUTE SECTION

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MCB DATE: 4/29/10 FILENAME: bli0528.ssp.dgn
CHECKED BY: DJS DATE: 05-06-10 SCALE: NONE
DESIGNED BY: STD DATE: BRIDGE NO. 07183 DRAWING NO. 51181



CONCRETE FILLED STEEL SHELL PILE

GENERAL NOTES FOR CONCRETE FILLED STEEL SHELL PILES:

Steel shells shall conform ASTM A252, Grade 3 ($F_y = 45,000$ psi).

Concrete used for filling of steel shell shall be Class S with a minimum 28-day compressive strength, $f'_c = 3,500$ psi, and shall be poured in the dry.

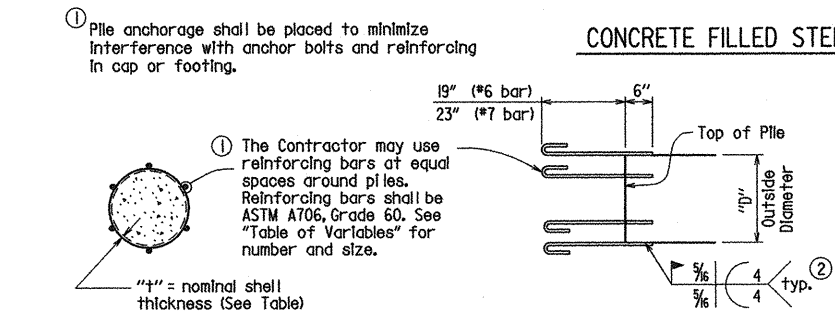
Steel shell piling that extends above the ground and is not protected by pile encasement shall be painted in accordance with subsection 805.02.

See Bridge Layout for size and estimated length of steel shell piles and for additional driving information.

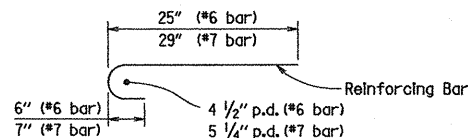
Concrete, structural steel, reinforcing steel (including welding), and painting will not be paid for separately, but will be considered subsidiary to the item "Steel Shell Piling".

TABLE OF VARIABLES

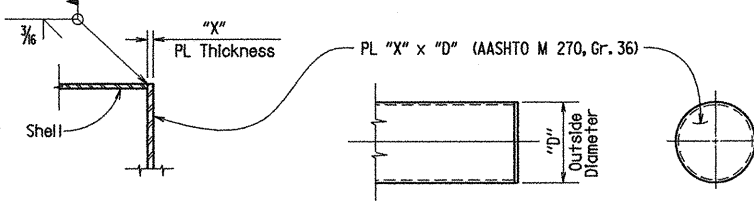
BRIDGE NUMBER	OUTSIDE DIAMETER "D"	NOMINAL SHELL THICKNESS "T"	PLATE THICKNESS "X"	PILE STRAPS	
				PLATE	REINFORCING
07183	18"	0.50"	1/4"	2 @ 1/2" x 1 3/8"	6 - #6
	24"	0.50"	1 3/4"	4 @ 1/2" x 2 1/4"	9 - #7



ALTERNATE PILE ANCHORAGE DETAIL



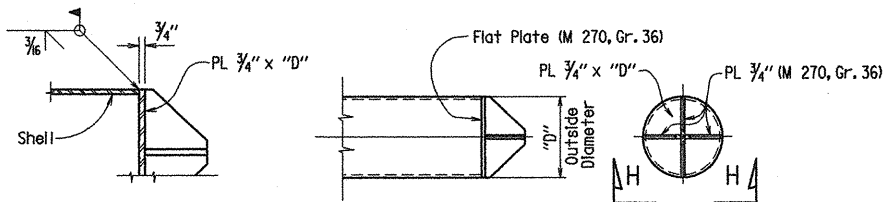
HOOKED BAR DETAIL



PART SECTION

ELEVATION

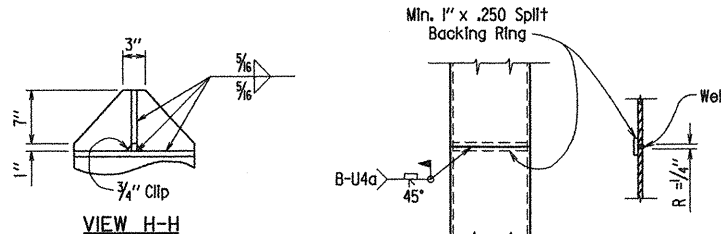
ALTERNATE FLAT TIP DETAIL



PART SECTION

ELEVATION

ALTERNATE VANED TIP DETAIL



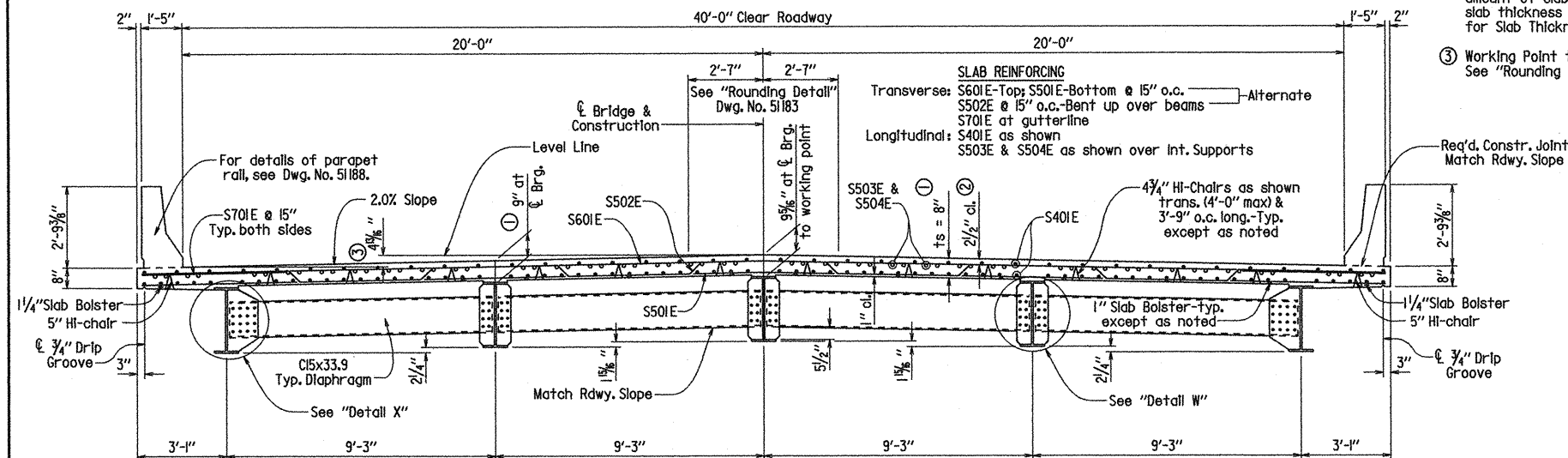
TYPICAL SPLICE DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	31	85
						07183 - 221 FT. UNIT - 51182		

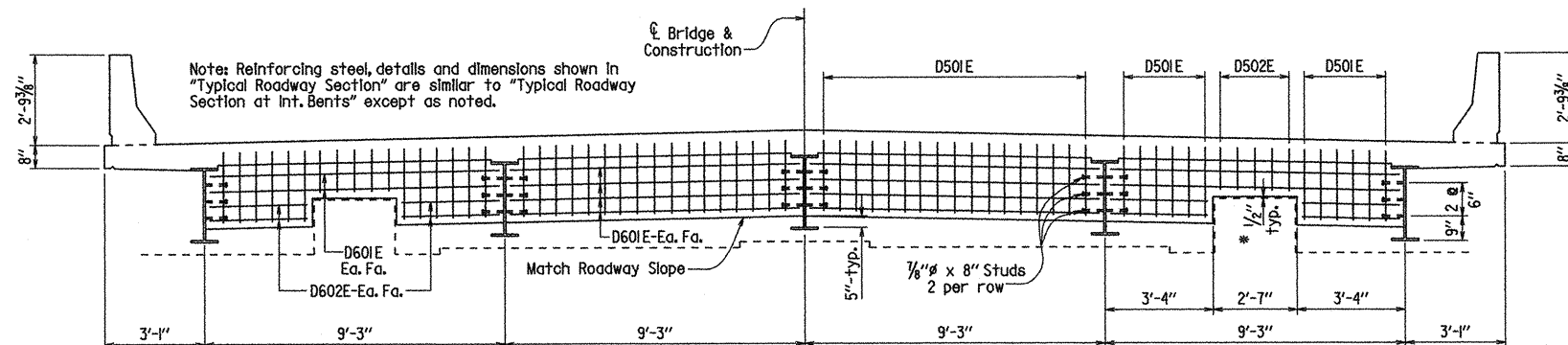
NOTE: Class I Protective Surface Treatment shall be applied to the Roadway Surface and to the Face & Top of the Concrete Parapet Wall.

NOTE: At the Contractor's option, two straight epoxy coated #5 bars may be substituted for bar S502E. Payment for reinforcing will be based on the weight of bar S502E.

- See "Adjustment for Slab Thickness Tolerance"
- Tolerance: Minus = $\frac{1}{4}$ " Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".
- Working Point to Gutterline See "Rounding Detail", Dwg. No. 51183

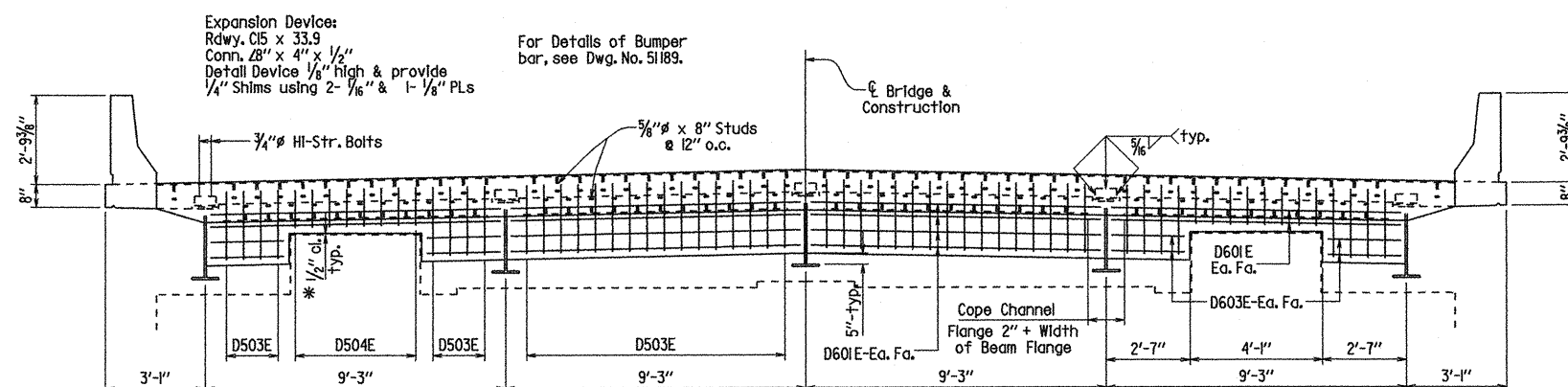


TYPICAL ROADWAY SECTION
Scale: $\frac{3}{8}$ " = 1'-0"



Note: For spacing and location of reinforcing bars in concrete diaphragms, see Dwg. No. 51183.
Longitudinal restrainers not shown for clarity.

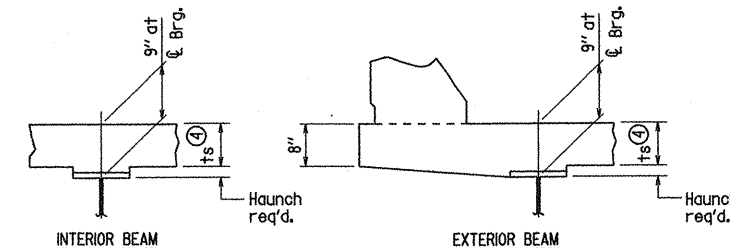
TYPICAL ROADWAY SECTION AT INT. BENTS
Scale: $\frac{3}{8}$ " = 1'-0"



Note: For spacing and location of reinforcing bars in concrete diaphragms, see Dwg. No. 51183.
Beam restrainers not shown for clarity.

TYPICAL SECTION THRU JOINT
Scale: $\frac{3}{8}$ " = 1'-0"

*Note: $\frac{1}{2}$ " polystyrene shall be used as a bond breaker between the concrete restrainer and the concrete diaphragm and may remain in place.

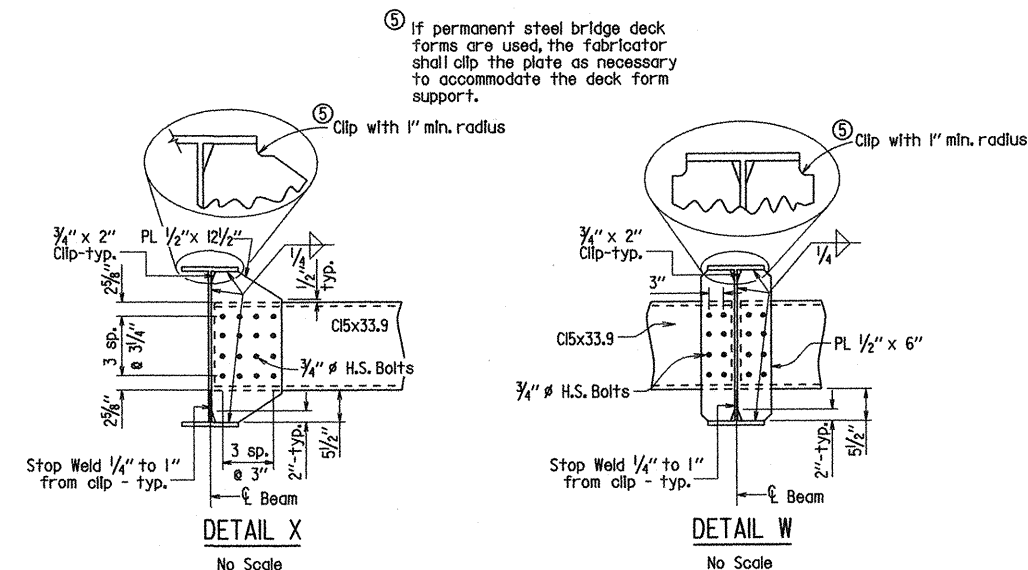


- Tolerance when removable deck forming is used is $\pm \frac{1}{2}$ ", $\pm \frac{1}{4}$ ". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

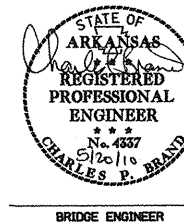
Note: ts = slab thickness as shown in "Typical Roadway Section".
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus $\frac{1}{4}$ ". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 14991 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE
No Scale

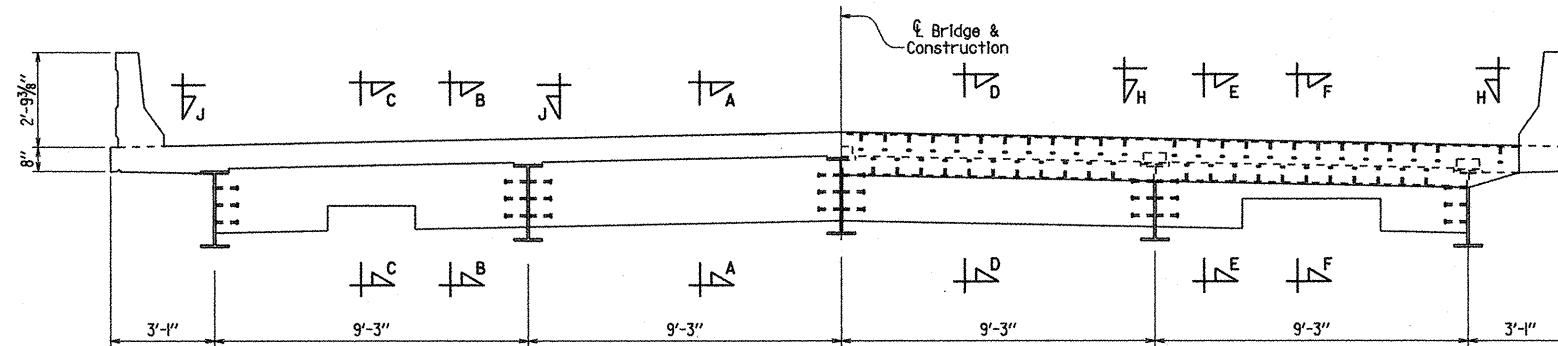


Note: Bolts in connections shall be properly installed and tightened in accordance with subsection 807.71.



SHEET 1 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 3-12-10 FILENAME: b110528x1.sil.dgn
CHECKED BY: CSR DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: DH DATE: 8-1-10
BRIDGE NO. 07183 DRAWING NO. 51182

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	32	85
				07183 - 221 FT. UNIT - 51183				



HALF-SECTION AT INT. BENTS

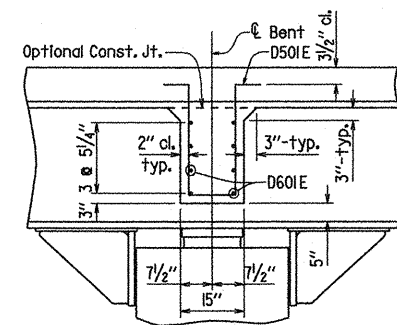
Note: Longitudinal restrainers are not shown for clarity.
See Dwg. No. 51187

ROADWAY SECTION AT BENTS
SHOWING CONCRETE DIAPHRAGMS

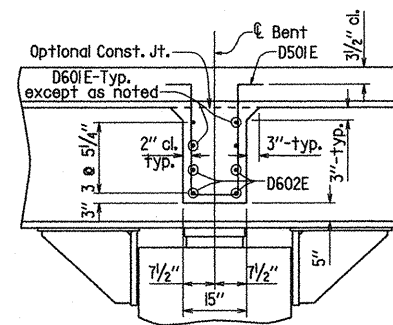
Scale: $\frac{3}{8}$ " = 1'-0"

HALF-SECTION AT END BENTS

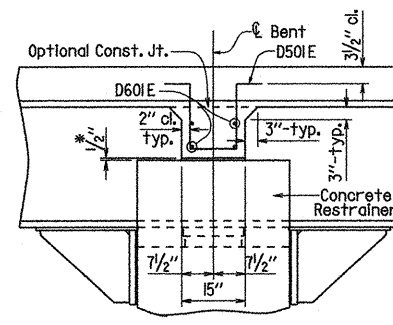
Note: Beam restrainers are not shown for clarity.
See Dwg. No. 51187



SECTION A-A
No Scale

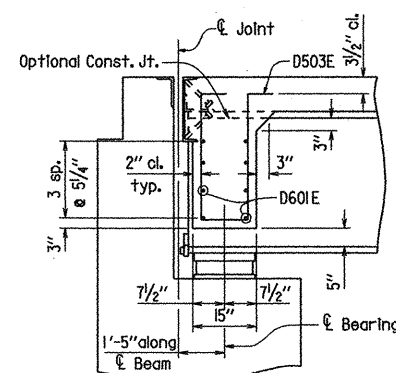


SECTION B-B
No Scale

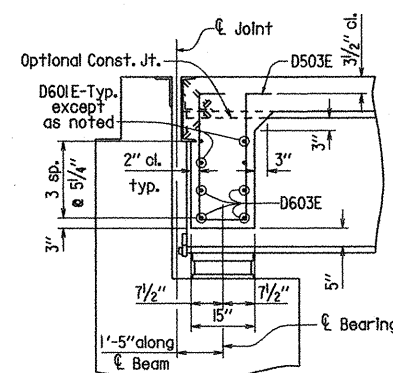


SECTION C-C
No Scale

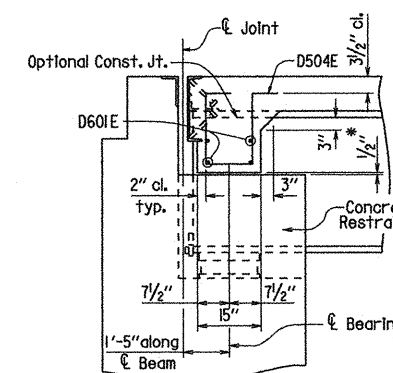
*Note: $\frac{1}{2}$ " polystyrene shall be used as a bond breaker between the concrete restrainer and the concrete diaphragm and may remain in place.



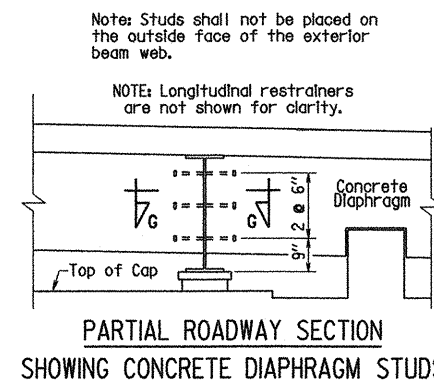
SECTION D-D
No Scale



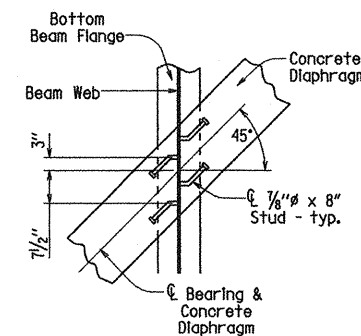
SECTION E-E
No Scale



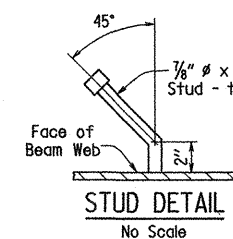
SECTION F-F
No Scale



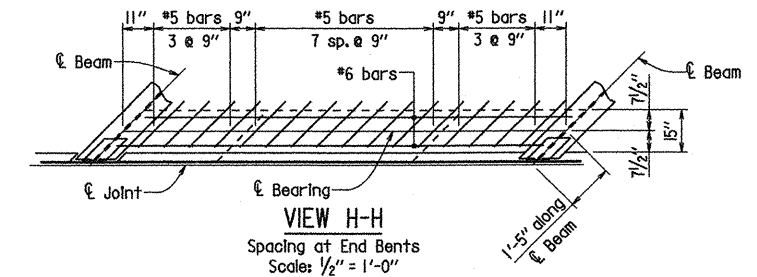
PARTIAL ROADWAY SECTION
SHOWING CONCRETE DIAPHRAGM STUDS
No Scale



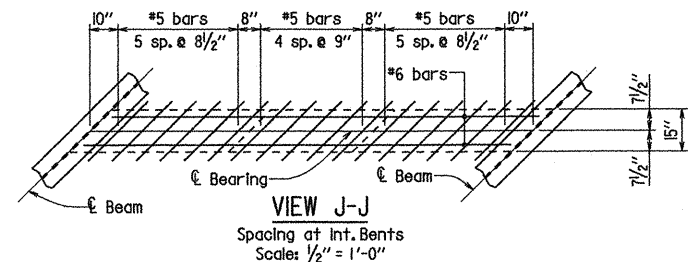
SECTION G-G
No Scale



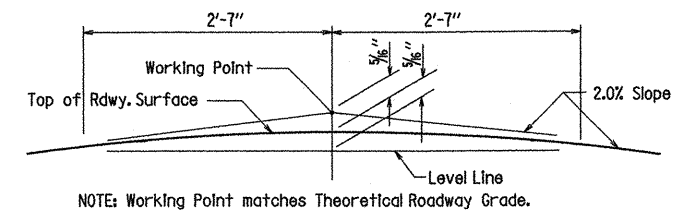
STUD DETAIL
No Scale



VIEW H-H
Spacing at End Bents
Scale: $\frac{1}{2}$ " = 1'-0"

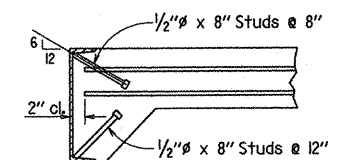


VIEW J-J
Spacing at Int. Bents
Scale: $\frac{1}{2}$ " = 1'-0"



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL
No Scale

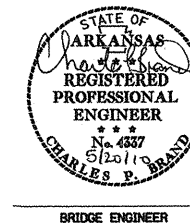


Note: As an alternate to $\frac{5}{8}$ " studs, $\frac{1}{2}$ " x 8" studs spaced as shown may be used. Use weight of $\frac{5}{8}$ " stud as basis of measurement of structural steel in anchors.

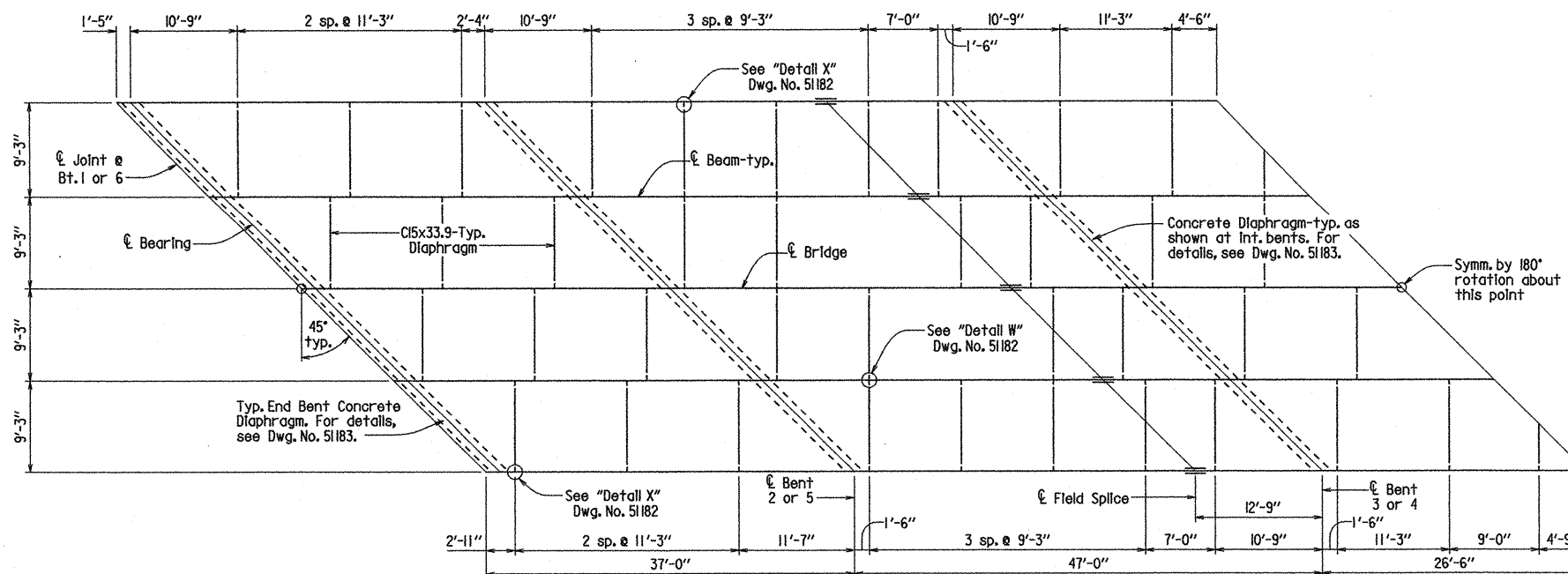
DETAILS OF ALTERNATE ANCHORS
No Scale

SHEET 2 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU

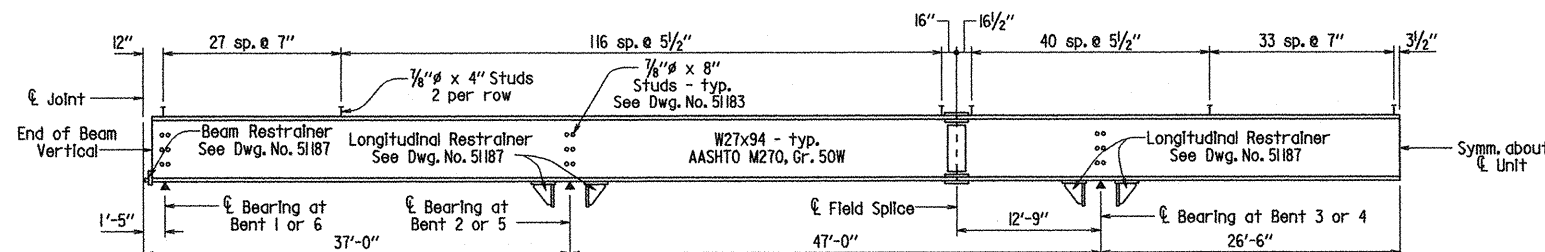
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 3-15-10 FILENAME: b110528x1.s12.dgn
CHECKED BY: CSH DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: DLT DATE: 8-1-10
BRIDGE NO. 07183 DRAWING NO. 51183



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	33	86
						07183 - 221 FT. UNIT - 51184		

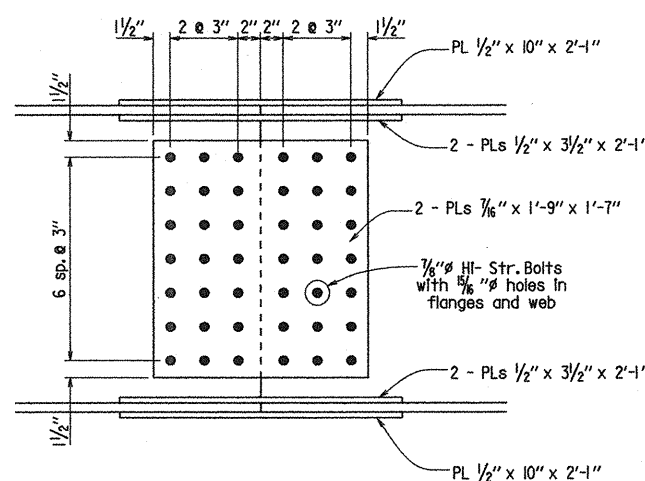


FRAMING PLAN
Scale: $\frac{1}{8}'' = 1'-0''$



BEAM ELEVATION
Scale: $\frac{1}{8}'' = 1'-0''$

Note: Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

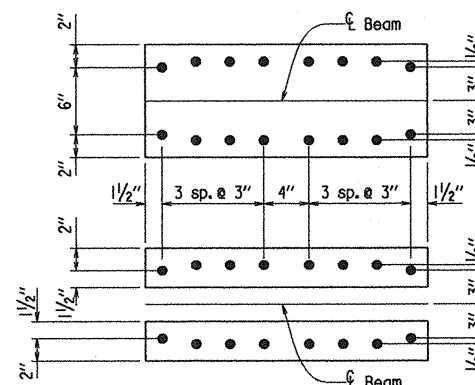


WEB SPlice

Note: All splice plates shall be AASHTO M270, Gr. 50W

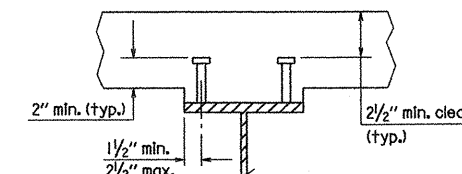
FIELD SPlice DETAIL

Scale: $\frac{1}{2}'' = 1'-0''$



FLANGE SPlice

Stud Shear Connectors shown shall be $\frac{7}{8}'' \times 4''$ long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. $\frac{3}{4}''$ studs may be used in place of the $\frac{7}{8}''$ studs shown, at the ratio of 1.361 - $\frac{3}{4}''$ studs in place of one $\frac{7}{8}''$ stud. $\frac{7}{8}''$ studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

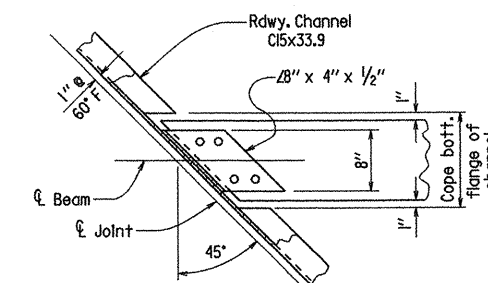


SHEAR CONNECTOR DETAIL
No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To $\frac{3}{4}''$ inclusive	$\frac{1}{4}''$	
Over $\frac{3}{4}''$	$\frac{5}{16}''$	

Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



CHANNEL CONNECTION DETAIL
No Scale

SHEET 3 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 3-16-10 FILENAME: b110528xl.sl3.dgn
CHECKED BY: CSH DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: Rth DATE: 01-10
BRIDGE NO. 07183 DRAWING NO. 51184



BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	34	85
07183 - 221 FT. UNIT - 51185								

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet	
		Interior	Exterior	Interior	Exterior	Interior	Exterior
1	0	0	0	0	0	0	0
	0.1	0.007	0.007	0.061	0.053	0.065	0.057
	0.2	0.014	0.012	0.113	0.097	0.120	0.104
	0.3	0.018	0.016	0.148	0.127	0.157	0.136
	0.4	0.019	0.017	0.162	0.140	0.172	0.150
	0.5	0.019	0.017	0.156	0.134	0.165	0.144
	0.6	0.016	0.014	0.130	0.112	0.138	0.120
	0.7	0.011	0.010	0.092	0.079	0.097	0.085
	0.8	0.006	0.005	0.049	0.042	0.052	0.045
	0.9	0.002	0.001	0.013	0.012	0.014	0.013
2	0	0	0	0	0	0	0
	0.1	0.004	0.003	0.032	0.028	0.034	0.030
	0.2	0.011	0.010	0.094	0.081	0.100	0.087
	0.3	0.019	0.017	0.157	0.135	0.166	0.145
	0.4	0.024	0.021	0.197	0.170	0.209	0.182
	0.5	0.025	0.022	0.206	0.177	0.218	0.190
	0.6	0.021	0.019	0.178	0.153	0.189	0.164
	0.7	0.015	0.013	0.123	0.106	0.130	0.114
	0.8	0.007	0.006	0.056	0.048	0.059	0.052
	0.9	0.000	0.000	0.004	0.003	0.004	0.003
1/2 Span 3	0	0	0	0	0	0	0
	0.1	0.010	0.009	0.087	0.075	0.092	0.080
	0.2	0.027	0.024	0.225	0.194	0.238	0.208
	0.3	0.043	0.039	0.362	0.311	0.384	0.334
	0.4	0.055	0.049	0.459	0.394	0.486	0.423
	0.5	0.059	0.053	0.494	0.424	0.523	0.455

Symm. about C Unit

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (4th Edition, 2007 with 2008 & 2009 Interims).

MATERIALS AND STRENGTHS

Class S(AE) Concrete $f'_c = 4,000$ psi.
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) $f_y = 60,000$ psi.
Structural Steel (AASHTO M 270, Gr. 50W) $F_y = 50,000$ psi.
Structural Steel (AASHTO M 270, Gr. 36) $F_y = 36,000$ psi.

CONCRETE: Concrete shall be poured in the dry and all exposed corners to be chamfered $\frac{3}{4}"$ unless otherwise noted. All concrete shall be Class S(AE) with a minimum 28 day compressive strength $f'_c = 4,000$ psi.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 14991 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Concrete in bridge superstructure shall be placed, consolidated and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck shall be given a fine finish in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. If a longitudinal strike-off is used, a vertical camber adjustment must be made in the strike-off to account for the future dead load deflection due to the railing. A minimum of 72 hours shall elapse between completion of the slab and the pouring of the parapet railing.

Removable forms shall be used for concrete diaphragms.

REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)".

STRUCTURAL STEEL: Structural steel shall be AASHTO M 270, Grade 50W unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50W)". Grade 50W steel shall not be painted. All exposed surfaces shall be cleaned in accordance with subsection 807.84(e) unless otherwise noted. Structural steel completely embedded in concrete may be AASHTO M 270, Gr. 36 unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

Beams and field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)".

All beams shall be blocked in their true position in the shop with webs horizontal in groups as specified in subsection 807.54(b)(2). The camber, length of sections, distance between bearings and openings of joints shall be measured with the beams in their true position and this information shall become part of the permanent records for this job. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60 degrees F. A tolerance of $\frac{1}{4}"$ +/- is allowed for camber.

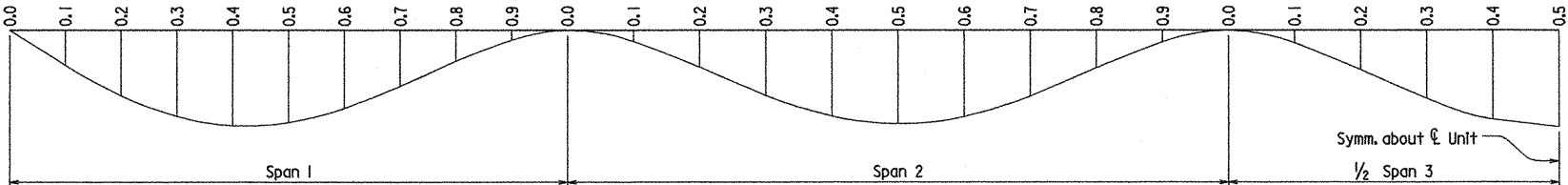
Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of subsection 802.13 will not require approval prior to construction. All welding shall conform to subsection 807.26.

Field connections shall be bolted with high-strength bolts and shall be $\frac{3}{4}"$ bolts unless otherwise noted. Open holes shall be $\frac{9}{16}"$ unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam webs and on the bottom of the beam flanges. Holes for $\frac{3}{4}"$ high-strength bolts may be $\frac{9}{16}"$ diameter if a washer is supplied for use under both the nut and head of the bolt.

Diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with subsection 807.71 prior to pouring the concrete deck.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the manufacturer.



DEAD LOAD DEFLECTIONS DIAGRAM

Note:
Camber for Dead Load Deflection plus Vertical curve $\pm \frac{1}{4}"$ tolerance.
Deflections shown are from a chord from C Bearing to C Bearing.

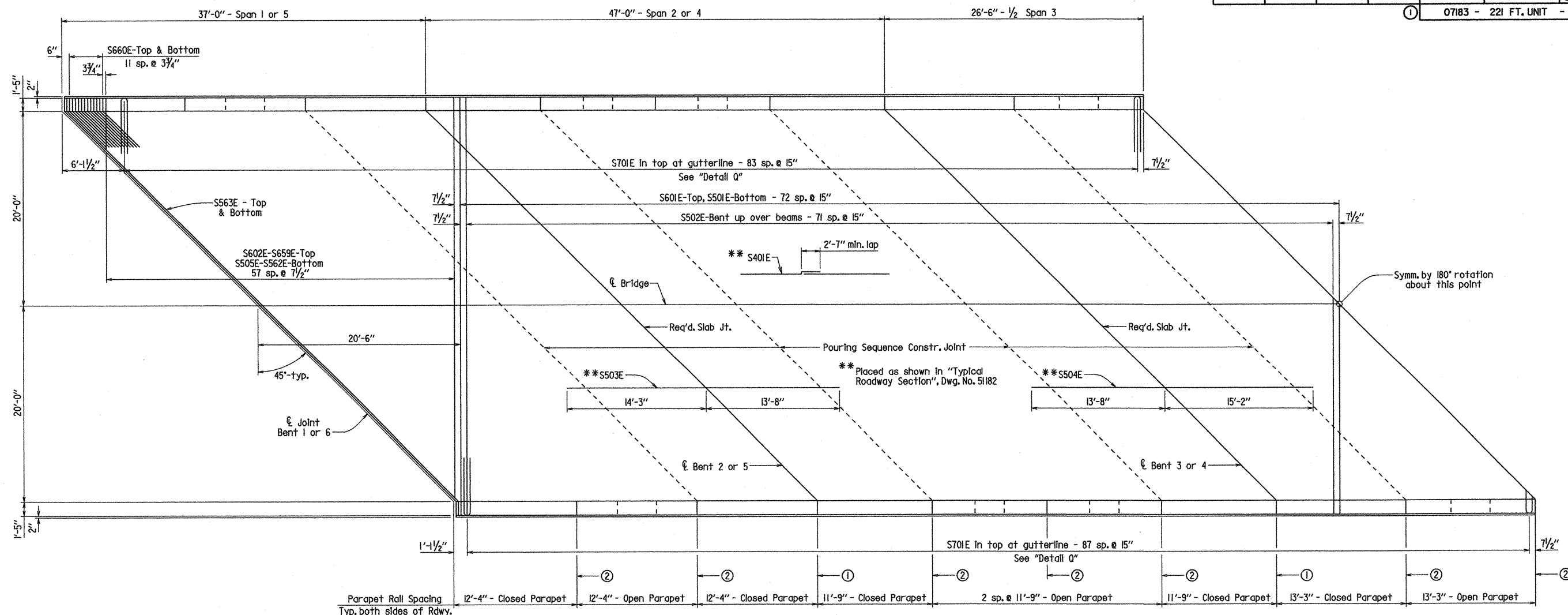


SHEET 4 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 3-17-10 FILENAME: b110528xl-s14.dgn
CHECKED BY: CSJ DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: DTH DATE: 4-1-10
BRIDGE NO. 07183 DRAWING NO. 51185

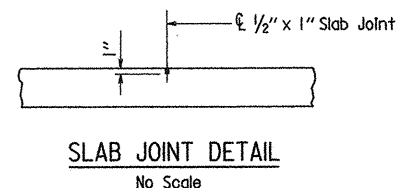
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				6	ARK.			
				JOB NO.		110528	35	85
						07183 - 221 FT. UNIT - 51186		



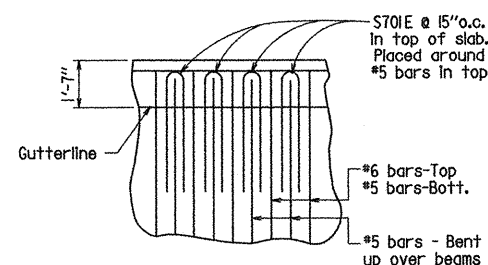
REINFORCING PLAN
Scale: $\frac{3}{16}'' = 1'-0''$

- ① Full-Depth Parapet Joint
($\frac{1}{4}''$ to $1''$ max.)
Stop 4" from top of slab.
Typ. both sides of Rdwy.
- ② Partial-Depth Parapet Joint
($\frac{1}{4}''$ to $1''$ max.)
Stop 1'-2" from top of slab.
Typ. both sides of Rdwy.

Use Type 3, 4, or 6 Joint Sealer. See subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck slab (gutterline to gutterline). Slab joints shall align with parapet open joints.



SLAB JOINT DETAIL
No Scale



DETAIL Q
No Scale



BRIDGE ENGINEER

SHEET 5 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU

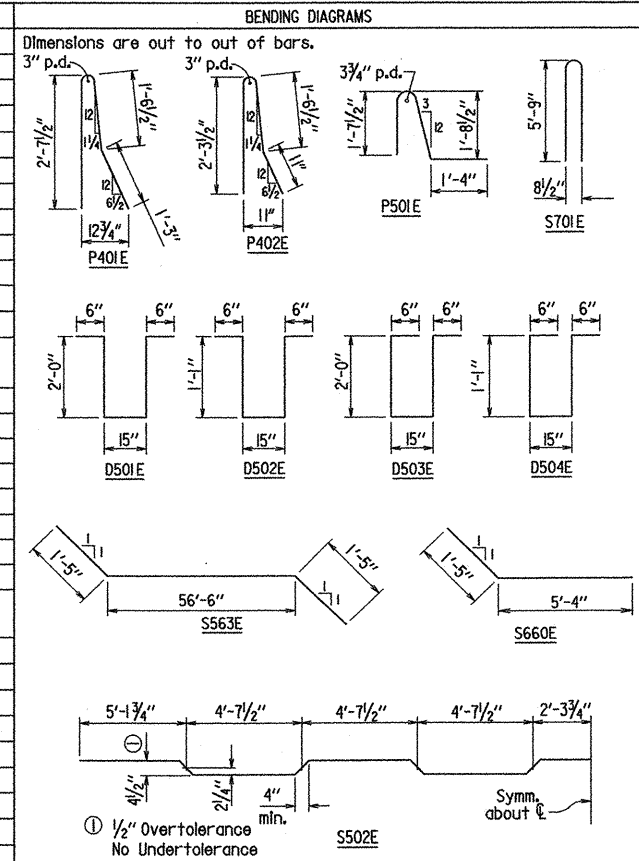
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 3-17-10 FILENAME: b110528xl.s15.dgn
CHECKED BY: CSK DATE: 8-10-10 SCALE: AS NOTED
DESIGNED BY: PJH DATE: 01-10
BRIDGE NO. 07183 DRAWING NO. 51186

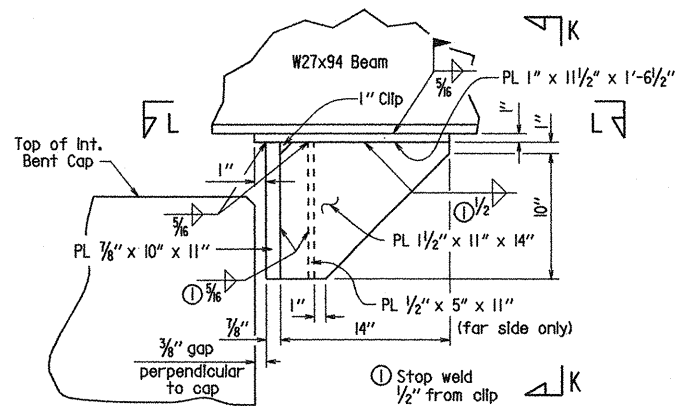
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				6	ARK.			
				JOB NO.		110528	36	85
						07183 - 221 FT. UNIT - 51187		

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401E	648	39'-0"	Str.
P401E	796	5'-6"	2"
P402E	112	4'-10"	2"
P403E	104	5'-6"	Str.
P404E	84	12'-0"	Str.
P405E	112	11'-5"	Str.
P406E	56	12'-11"	Str.
S501E	145	42'-10"	Str.
S502E	144	43'-6"	3"
S503E	128	27'-11"	Str.
S504E	128	28'-10"	Str.
S505E-S562E	2 ea.	Var. 5'-5" to 41'-0"	Str.
S563E	4	59'-4"	3 3/4"
D501E	232	5'-10"	2 1/2"
D502E	40	4'-0"	2 1/2"
D503E	96	5'-10"	2 1/2"
D504E	32	4'-0"	2 1/2"
P501E	796	4'-10"	3 3/4"
S601E	145	42'-10"	Str.
S602E-S659E	2 ea.	Var. 5'-5" to 41'-0"	Str.
S660E	24	6'-9"	4 1/2"
D601E	144	12'-7"	Str.
D602E	64	4'-3"	Str.
D603E	32	3'-2"	Str.
S701E	344	11'-10"	6 3/4"



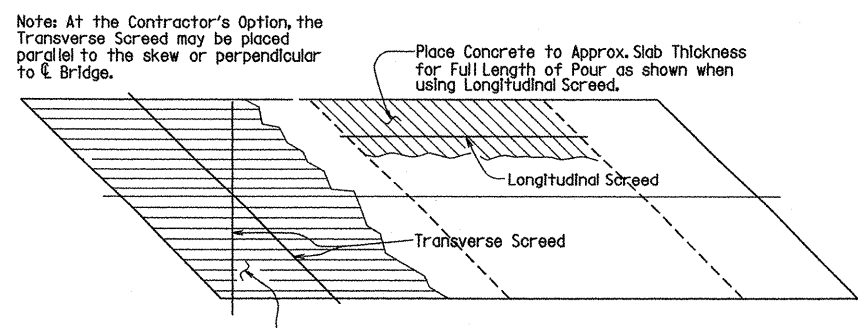
Note: Bars designated with an "E" suffix to be Epoxy Coated.



LONGITUDINAL RESTRAINER DETAIL

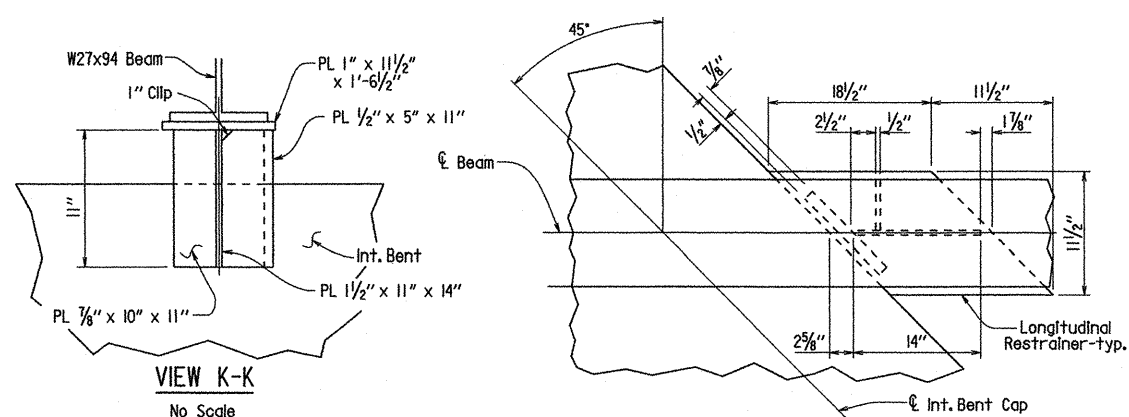
No Scale

NOTE: Weld longitudinal restrainer after deck has been poured.



CONCRETE PLACEMENT PROCEDURE

No Scale

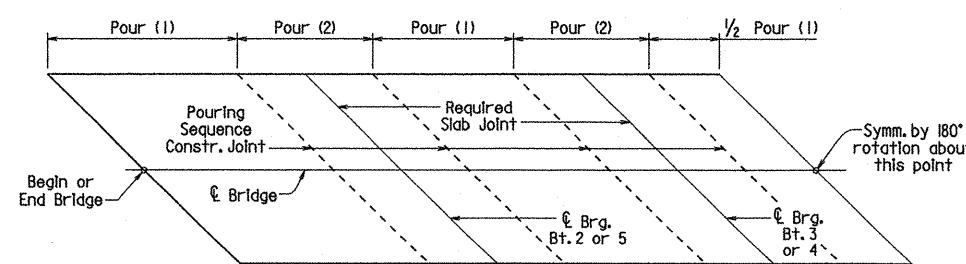


VIEW K-K

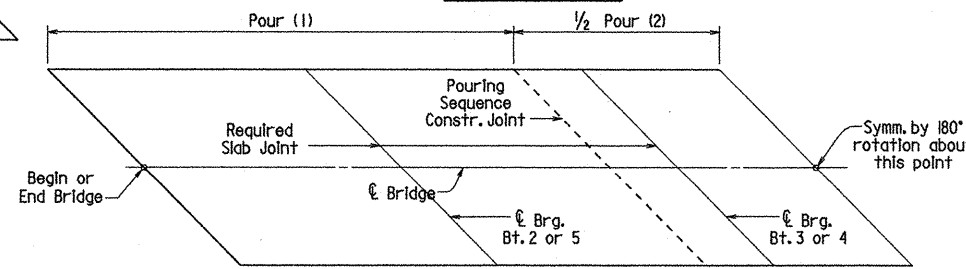
No Scale

VIEW L-L

No Scale



ALTERNATE NO. 1

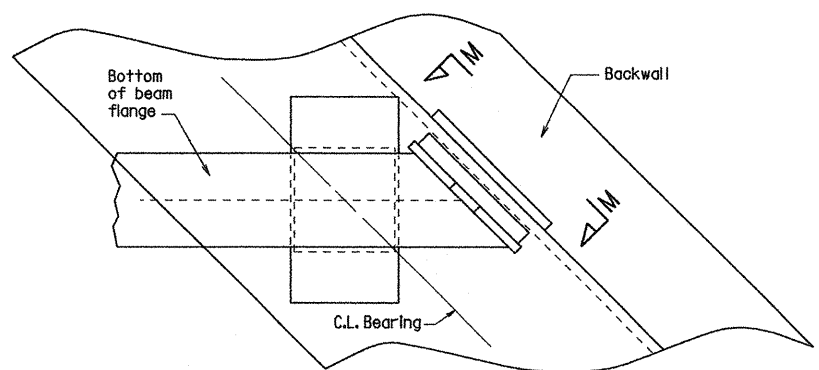


ALTERNATE NO. 2
CONCRETE POURING SEQUENCE

No Scale

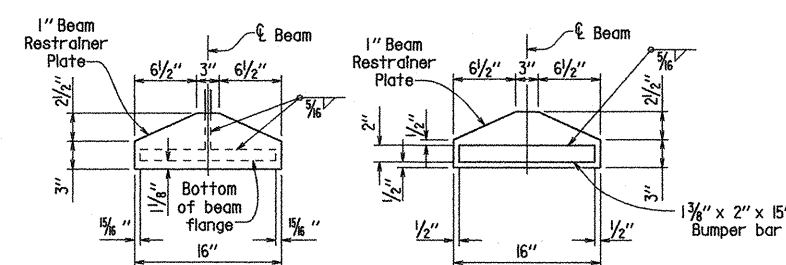
Note: Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequences shown.

If the concrete diaphragms are poured separately from the slab, 48 hours shall elapse between the end of the diaphragm pour and the start of the deck pour.



BEAM RESTRAINER DETAILS

No Scale



VIEW M-M

No Scale

NOTE: Beam restrainer plate shall be centered on each girder line.

Bumper bar not shown in this view.

NOTE: Hidden lines of beam are not shown in this view.



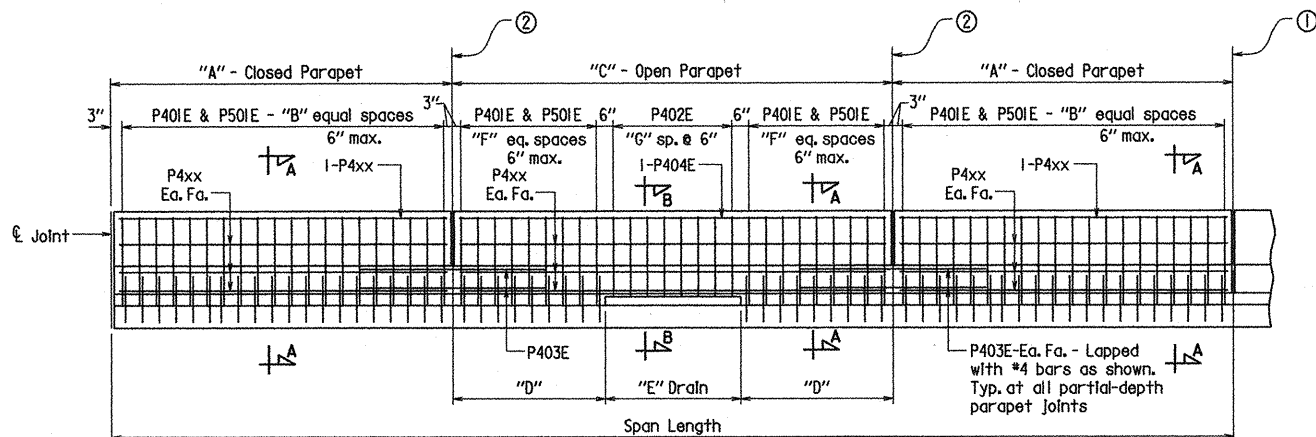
SHEET 6 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 3-18-10 FILENAME: bl10528x1.sl6.dgn
CHECKED BY: CSH DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: BL DATE: 6-1-10
BRIDGE NO. 07183 DRAWING NO. 51187

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	37	85

07183 - 221 FT. UNIT - 51188



① Full-Depth Parapet Joint (1/4" to 1" max.) as shown in "Reinforcing Plan", Dwg. No. 51186. Stop 4" from top of slab.

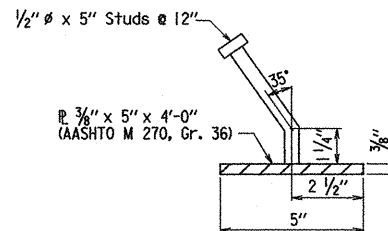
DETAILS OF PARAPET RAIL
Scale: 3/8" = 1'-0"

② Partial-Depth Parapet Joint (1/4" to 1" max.) as shown in "Reinforcing Plan", Dwg. No. 51186. Stop 1'-2" from top of slab.

TABLE OF PARAPET RAIL VARIABLES

"A" Closed Parapet	"B" P4xx Bar	"C" Open Parapet	"D"	"E"	"F"	"G"	P4xx Bar
12'-4"	24	12'-4"	4'-2"	4'-0"	8	7	P404E
11'-9"	23	11'-9"	4'-4 1/2"	3'-0"	8	5	P405E
13'-3"	26	13'-3"	4'-7 1/2"	4'-0"	9	7	P406E

Note: For location of Open and Closed Parapet panels, see "Reinforcing Plan", Dwg. No. 51186.

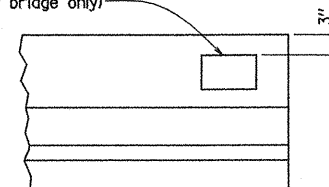


DETAIL Z
No Scale

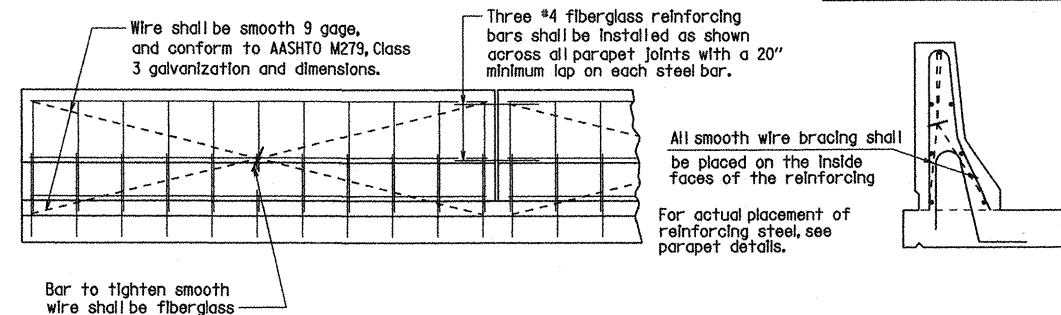
Note: The surfaces of the 3/8" plates which will not be in contact with concrete shall be painted with aluminum epoxy paint in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to "Structural Steel in Beam Spans (M270, Gr. 50W)."

Parapet studs shall be 5" long, granular flux filled, solid fluxed or equal, and automatically end welded to the plate. Studs and plates shall meet the requirements of Section 807 and shall be measured and paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)."

Place Type D Bridge Name Plate on right parapet rail approx. 2'-0" from front face of backwall. (Beg. of bridge only)



NAME PLATE DETAIL
No Scale

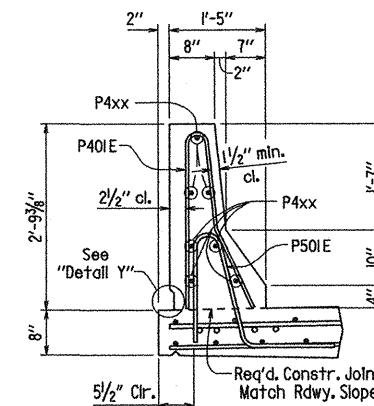


All panels shall be braced as required to prevent racking. All parapet joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

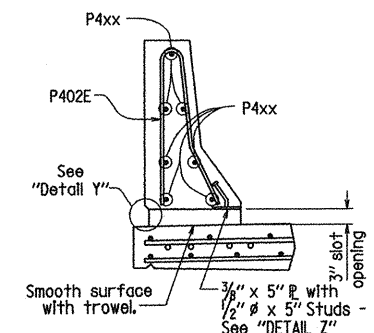
The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Exposed surface may be given a light brush finish or a Class 3, Textured Coating Finish, in place of the Class 2, Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

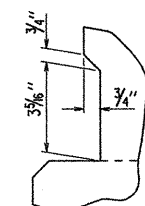
No Scale



SECTION A-A
Scale: 3/4" = 1'-0"

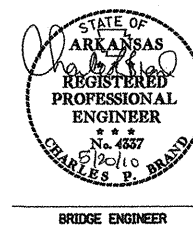


SECTION B-B
Scale: 3/4" = 1'-0"

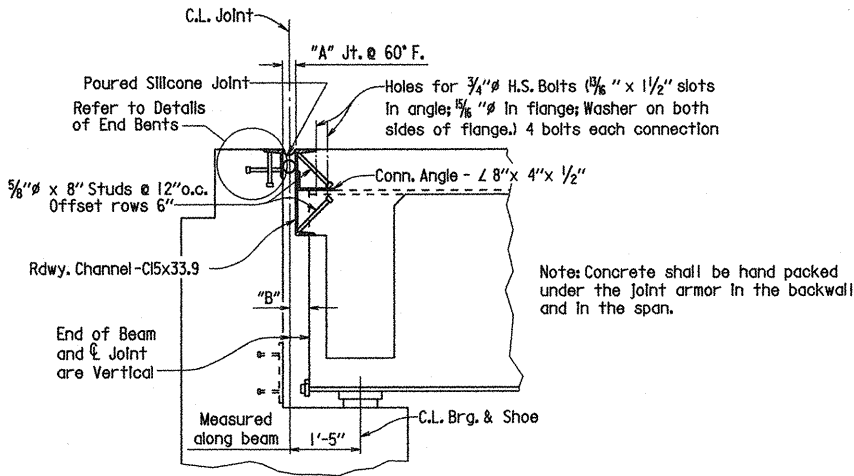


DETAIL Y
No Scale

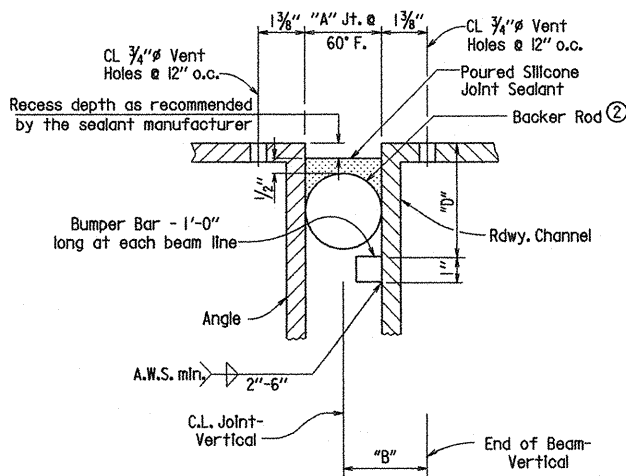
SHEET 7 OF 7
DETAILS OF 221' CONTINUOUS
COMPOSITE W-BEAM UNIT
FIFTEEN MILE BAYOU
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 3-19-10 FILENAME: b110528x1.s17.dgn
CHECKED BY: CSK DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: JH DATE: 01-10
BRIDGE NO. 07183 DRAWING NO. 51188



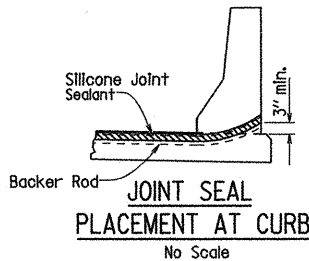
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				6	ARK.			
				JOB NO.		110528	38	85
				07183 -	JOINTS		-	5189



SECTION THRU JOINT AT BENTS 1 & 6
No Scale



DETAIL OF POURED SILICONE JOINT SEAL
No Scale



SILICONE JOINT DATA

Bent Number	"A" Width Perpendicular to Joint at 24 Hour Average Temperature ① 0°F:			"B" Perpendicular to Joint at 60°F	Bumper Bar Size	"D"
	40°F	60°F	80°F			
1 & 6	2 1/8"	2"	1 7/8"	2 1/4" ±	1" x 1"	4 1/2"

① The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

Notes: The temperature limitations recommended by the sealant manufacturer shall be observed.

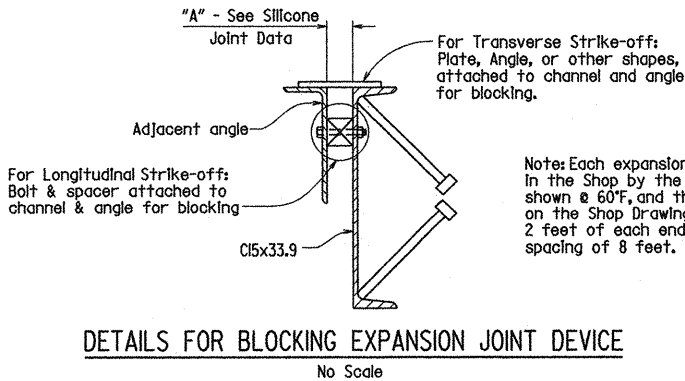
The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80°F.

② BACKER ROD NOTE:

Use an appropriately sized backer rod at the depth shown in the manufacturer's literature based on the joint width at the time of sealing.

Except as noted, do not install more backer rod that can be sealed in the same day.

The contractor shall verify separation of the backer rod from the joint material after the joint material has set.



EXPANSION DEVICE INSTALLATION AT END BENTS

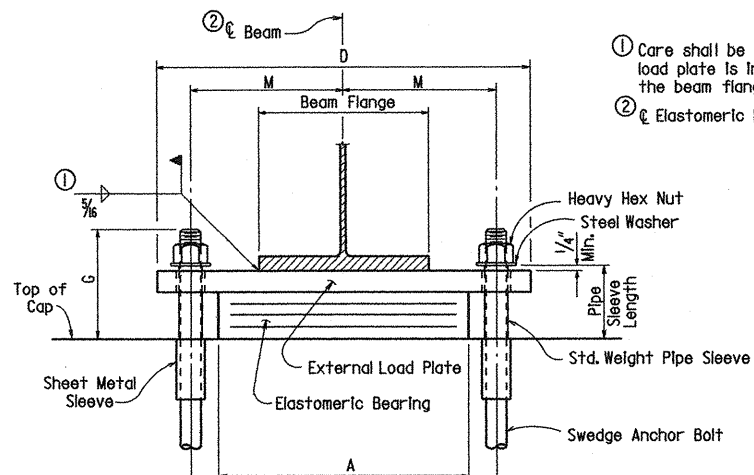
The Contractor may elect to install the expansion device for the end bents using one of the following two alternatives:

- 1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted for temperature, and the backwall constructed.
- 2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature. Backfill shall not be placed behind the backwall until the deck concrete on the adjacent span has been placed.

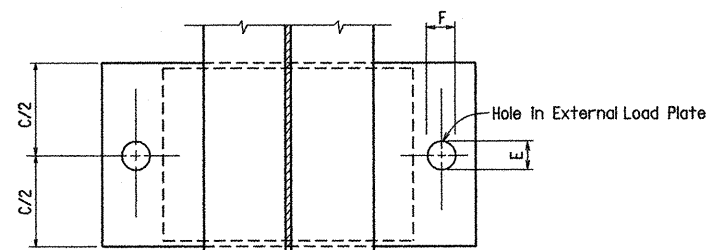


DETAILS OF JOINTS
FIFTEEN MILE BAYOU
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: KDH DATE: 3-22-10 FILENAME: b110528xl-jtl.dgn
CHECKED BY: CSK DATE: 5-10-10 SCALE: AS NOTED
DESIGNED BY: BL DATE: 8-1-10
BRIDGE NO. 07183 DRAWING NO. 51189

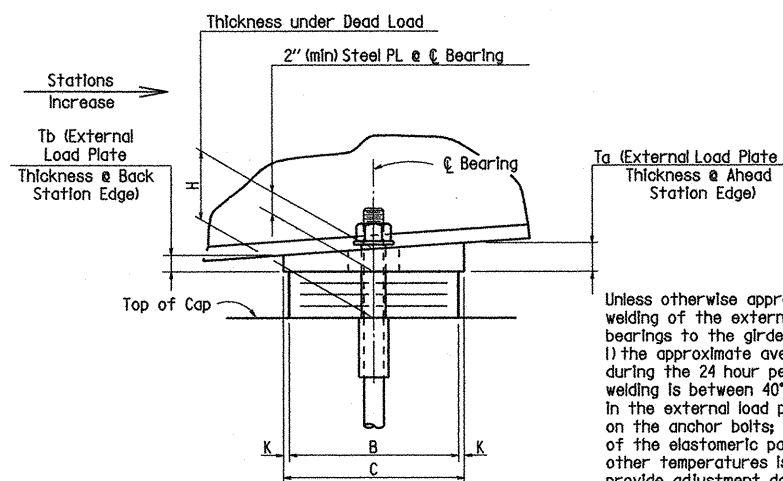
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				6	ARK.			
				JOB NO.		110528	39	85
						07183 - ELASTO. BRGS. - 51190		



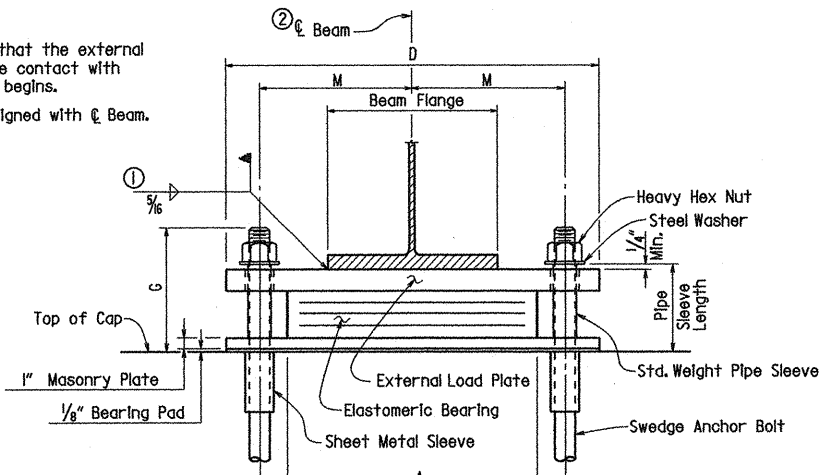
FRONT VIEW - BENTS 2 - 5



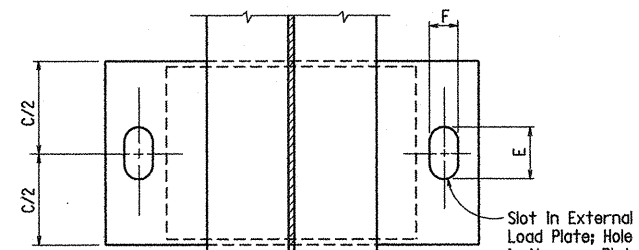
PLAN VIEW - BENTS 2 - 5



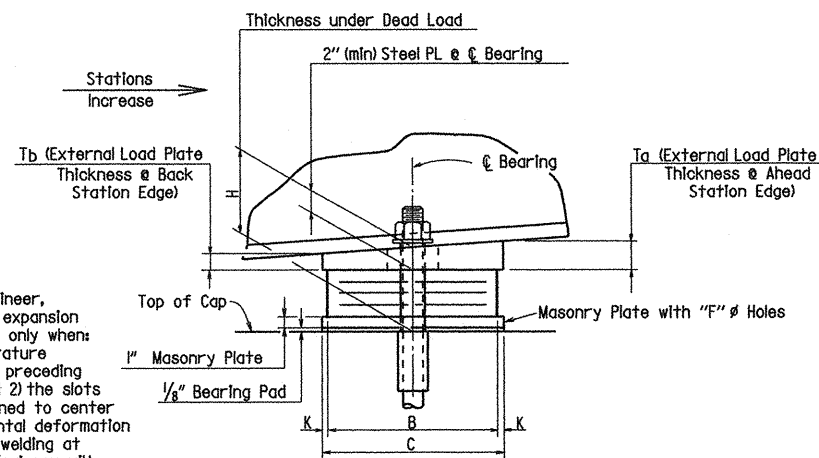
SIDE VIEW - BENTS 2 - 5



FRONT VIEW - BENTS 1 & 6



PLAN VIEW - BENTS 1 & 6



SIDE VIEW - BENTS 1 & 6

TABLE OF FABRICATOR VARIABLES

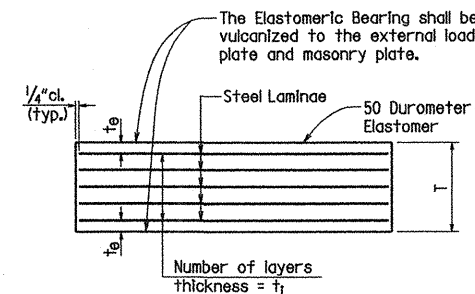
* Maximum Design Load = Service I Limit State								ELASTOMERIC PAD						EXTERNAL LOAD PLATE								ANCHOR BOLT					
BRIDGE NO.	LOCATION		BEARING	NO. of BEARINGS EACH BENT	*MAXIMUM DESIGN LOAD (KIPS)	G	H	A	B	N	t ₁	t ₂	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	**E	F	K	M	T _a	T _b	ANCHOR BOLT		PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
	BENT NO(S).	BEAM OR GIRDER NO.																					(ø x L)	GRADE			
07183	1 & 6	All	Exp.	5	94	8 1/4"	5 1/2"	11"	9 1/2"	3	1/2"	1/4"	4 @ 12 Gauge	2 1/8"	10 1/2"	21"	4"	2 1/4"	1/2"	7 3/4"	2"	2"	1 1/2" x 26"	55	1 1/2" x 5 3/4"	3" x 10"	3"
	2 & 5	All	Fix	5	162	7 5/8"	4 3/8"	13 1/2"	10 1/2"	3	1/2"	1/4"	4 @ 12 Gauge	2 1/8"	11 1/2"	25 1/2"	3 3/8"	3 3/8"	1/2"	9 1/2"	2"	2"	2" x 31"	55	2 1/2" x 4 5/8"	4" x 12"	3 3/4"
	3 & 4	All	Fix	5	176	7 5/8"	4 3/8"	15"	10"	3	1/2"	1/4"	4 @ 12 Gauge	2 1/8"	11"	27"	3 3/8"	3 3/8"	1/2"	10 1/4"	2"	2"	2" x 31"	55	2 1/2" x 4 5/8"	4" x 12"	3 3/4"

** The dimension "E" does not apply to masonry plates - See "SIDE VIEW - BENTS 1 & 6"

Tabular Data by: KDH Date: 3-22-10

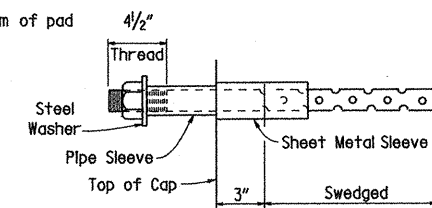
Checked by: CBL Date: 5-10-10

Designed by: RFL Date: 01-10



t₂ = thickness of elastomer cover on top and bottom of pad
t₁ = thickness of elastomer between steel laminas
N = number of elastomer layers of thickness t₁

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

NOTE: Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required. If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using a QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)".

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings."

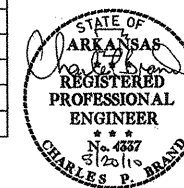
External load plates and masonry plates shall conform to AASHTO M270, Grade 50W. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or AASHTO M 298, Class 50.

External load plates and masonry plates shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with subsection 808.03. Other surfaces shall be blast cleaned in accordance with subsection 807.84(e) for unpainted Grade 50W steel.

Anchor Bolts, Washers and Nuts shall conform to subsection 807.07. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (M270, Gr. 50W)". External load plates, masonry plates and 1/8" bearing pads will not be measured or paid for separately but will be considered included in the unit bid price for "Elastomeric Bearings".

Bearings with masonry plates and 1/8" bearing pads shall be firmly seated in accordance with Subsection 807.66. Bearings without masonry plates shall be firmly seated in accordance with Subsection 808.08. This work and materials shall be considered subsidiary to the item "Elastomeric Bearings" and shall not be paid for directly.



BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS FIFTEEN MILE BAYOU

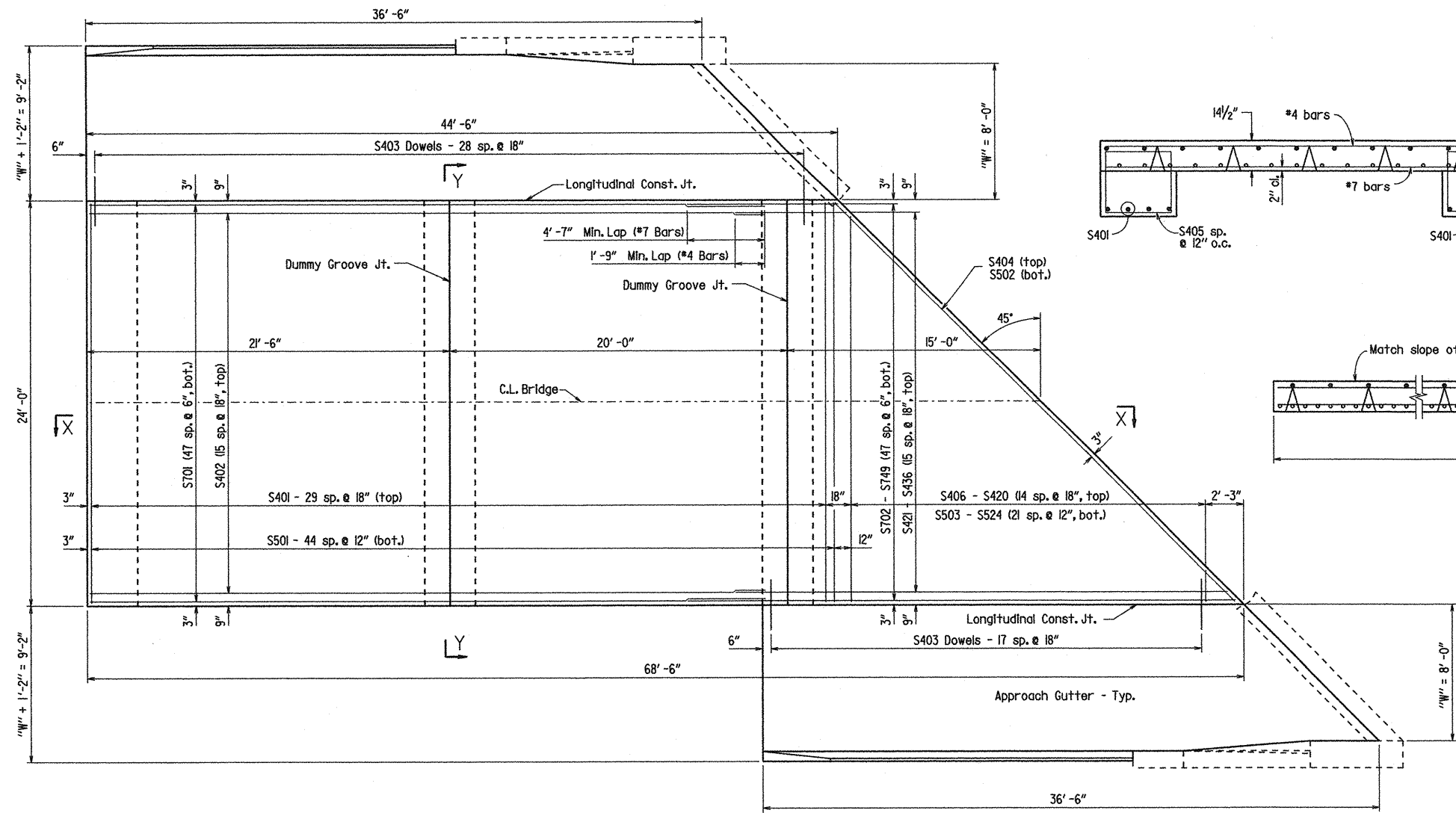
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: SAT DATE: 4-19-01 FILENAME: bil0528x1-el.dgn

CHECKED BY: JAC DATE: 4-25-01 SCALE: NONE

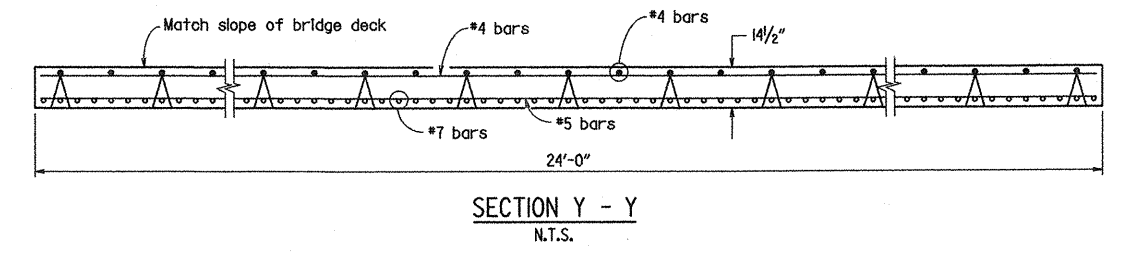
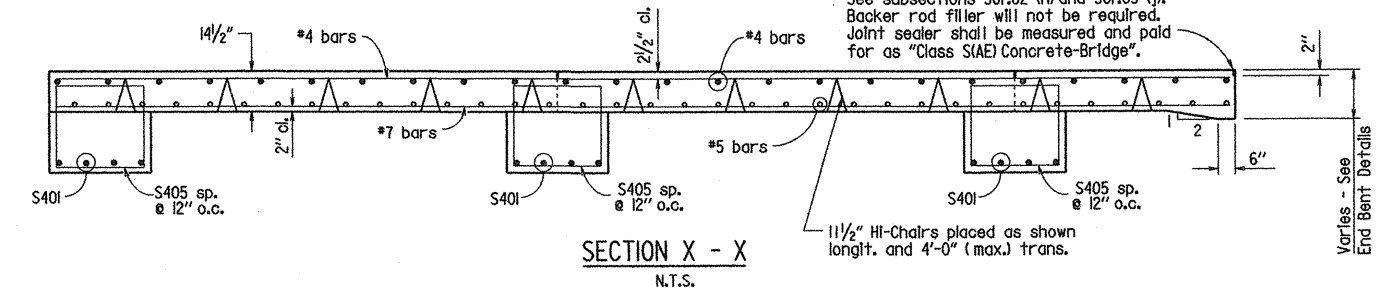
DESIGNED BY: Std. DATE: BRIDGE NO. 07183 DRAWING NO. 51190

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	40	85
				07183		APPR. SLAB		51191



PLAN - APPROACH SLAB
1/4" = 1'-0"

Note: Surface finish for Approach Slabs shall match that used on the bridge deck.
For details of Approach Gutters, See Std. Dwg. No. 2016C.



GENERAL NOTES
Concrete shall be Class S(AE) (f'c = 4,000 psi).
Reinforcement Steel shall conform to AASHTO M31 or M53, Grade 60 (fy = 60,000 psi).
Approach Slabs will be measured and paid for in accordance with Section 504.
Joint sealer Included in the pay item "Approach Slab".

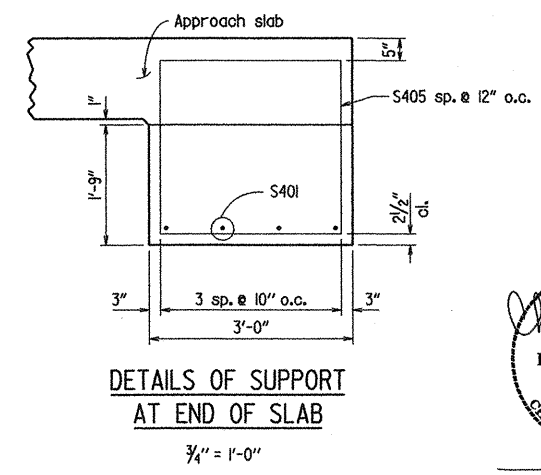
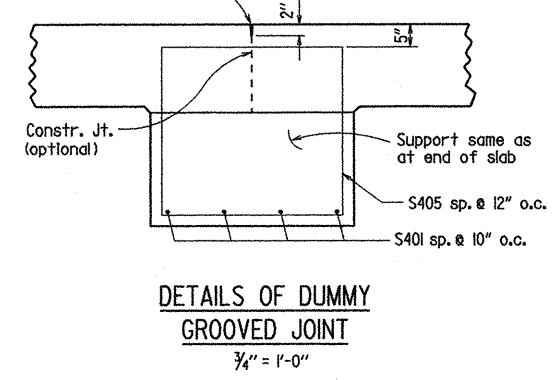
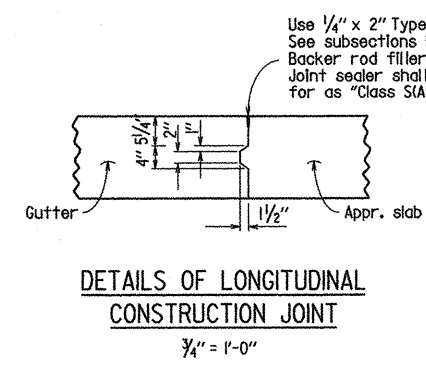
TABLE OF QUANTITIES FOR ONE APPROACH SLAB

Slab Width	Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
24'-0"	9409	75.71

BAR LIST

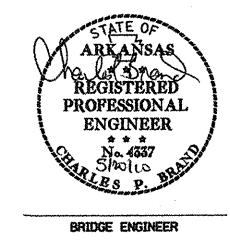
Mark	No. Req'd.	Length	Bending Diagrams
S401	42	23'-8"	
S402	16	40'-0"	
S403	47	3'-0"	
S404	1	33'-5"	
S405	72	10'-4"	
S406-S420	1 Each	22'-10" to 1'-10"	
S421-S436	1 Each	29'-2" to 6'-8"	
S501	45	23'-8"	
S502	1	33'-5"	
S503-S524	1 Each	22'-10" to 1'-10"	
S701	48	40'-0"	
S702-S749	1 Each	32'-6" to 9'-0"	

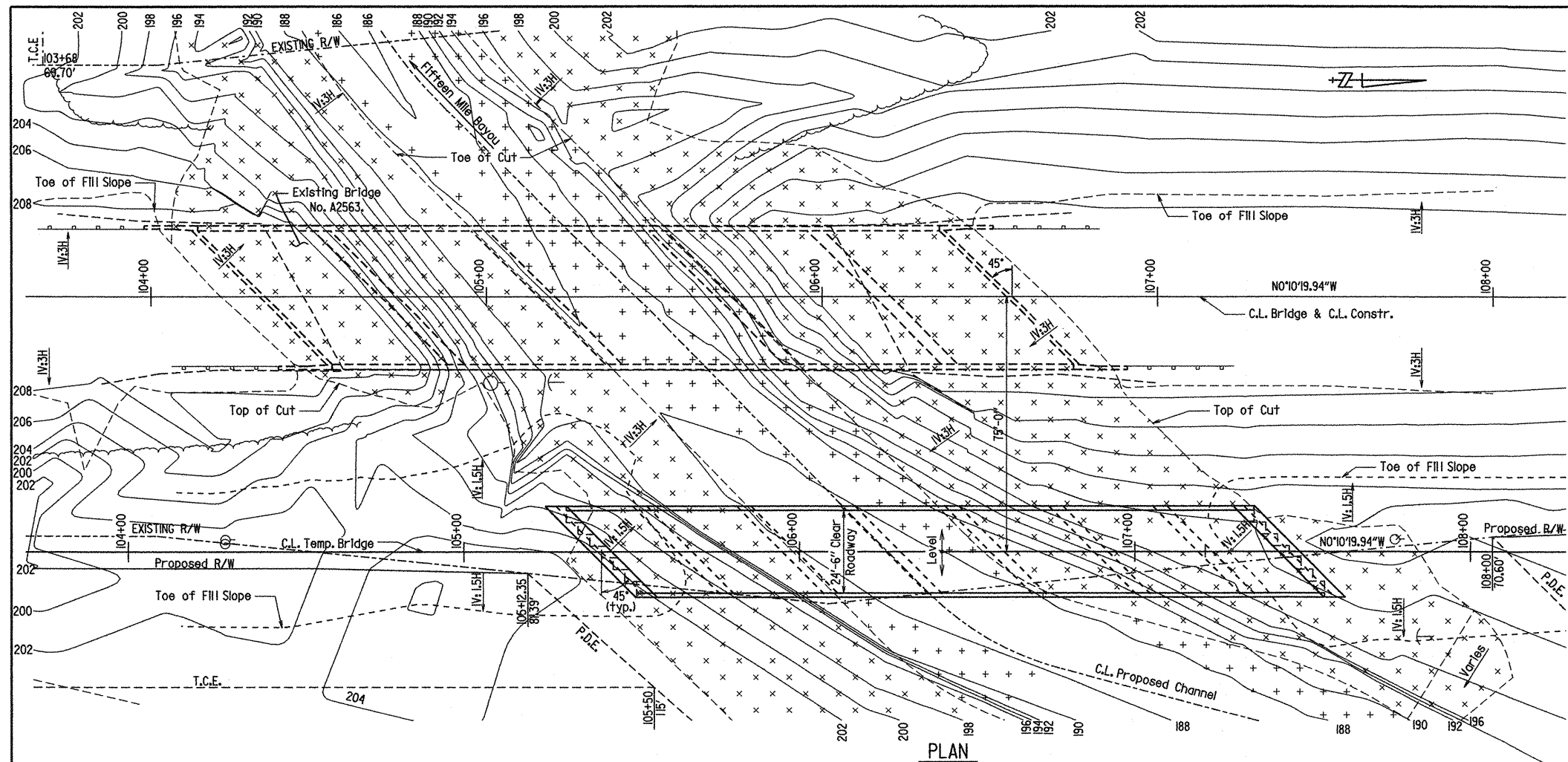
Dimensions are out to out of bar.



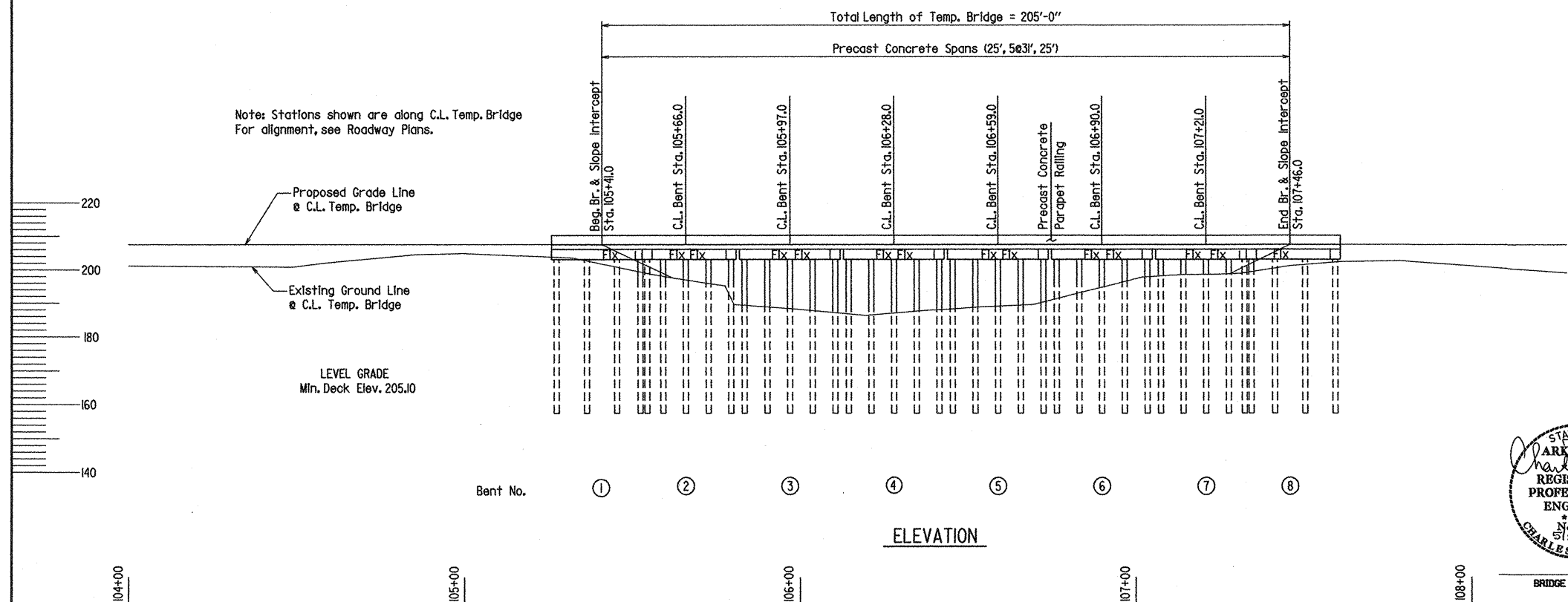
Note: The 1/2" Preformed Joint AASHTO M153 Type I shall be eliminated between concrete faces where dowel bars are used to tie approach slabs and gutters to the bent components. See Approach Gutter and End Bent details.

DETAILS OF TYPE SPECIAL I
APPROACH SLAB
FIFTEEN MILE BAYOU
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: CRE DATE: 4/14/10 FILENAME: b110528.as.dgn
CHECKED BY: CSP DATE: 5/10/10 SCALE: As Shown
DESIGNED BY: STD DATE: BRIDGE NO. 07183 DRAWING NO. 51191





PLAN



ELEVATION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	41	85
				07183	- LAYOUT -		51192	

GENERAL NOTES FOR TEMPORARY BRIDGE STRUCTURE

BENCH MARK: Corps of Eng. BM Stamped "0-12-68-6", 19.69' Lt. of C.L. Constr. Sta. 104+34.99, Elev. 206.18.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2003 edition, with applicable supplemental specifications and special provisions. Unless otherwise noted in the plans Section and Subsection refer to the Standard Construction Specifications.

SEISMIC PERFORMANCE CATEGORY: C

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002.

LIVE LOADING: H15 Method of Design: Load Factor

MATERIALS AND STRENGTHS:
Class S (AE) Concrete (superstructure) $f'_c = 4,000$ psi
Class S Concrete (substructure) $f'_c = 3,500$ psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60) $f_y = 60,000$ psi

PILING: Piling for Bents 1 thru 8 shall be 18" dia. unfilled steel shell piling and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 45 tons per pile. Drive piles in Bents 1 thru 8 to a minimum tip elevation of 163' or lower.

PRECAST CONCRETE UNITS: Precast concrete units within the drawings series 5190 thru 51400 may be used in lieu of units shown on Dwg. 51195 & 51197. Each precast unit shall be doweled to bent caps as shown on Dwg. No. 51193.

DETAIL DRAWINGS:
Bent Details 51193
25'-0" Precast Concrete Spans 51195 & 51196
31'-0" Precast Concrete Spans 51197
Unfilled Steel Shell Piles 51194

OPTIONAL TEMPORARY BRIDGE: If the Contractor elects to use an optional design for the detour bridge, as per subsection 603.02, a square bridge may be submitted if the span centered over the channel has a minimum span length of 55' with a total bridge length that provides a waterway opening that equals or exceeds the opening of the 205' bridge shown. Payment will be based on a 205' temporary length.

See Dwg. No. 51174 for additional notes.

LAYOUT OF TEMPORARY BRIDGE OVER
FIFTEEN MILE BAYOU
FIFTEEN MILE BAYOU STR. & APPRS.
(Hwy. 147, LM 14.21) (CoE) (S)
CRITTENDEN COUNTY

ROUTE 147 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MCB DATE: 10/30/09 FILENAME: b110528_11.dgn
CHECKED BY: JTB DATE: 12-09-09 SCALE: 1" = 20'
DESIGNED BY: JTB DATE: 9/09
BRIDGE NO. 07183 DRAWING NO. 51192



BRIDGE ENGINEER

BAR LIST - PER BENT

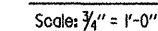
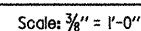
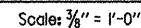
General Notes

If dowels are drilled into cap, top reinforcing shall be properly placed to avoid damage.

For Information Only

Bent Type	Class "S" Concrete -Bridge	Reinforcing Steel-Bridge (Gr. 60)
End or Int.	15.8 Cu. Yds.	1590 Lbs.

DRAWN BY: DGM DATE: 4-16-10 FILENAME: bil0528t.b.dgn
 CHECKED BY: mcg DATE: 4/23/10 SCALE: AS NOTED
 DESIGNED BY: ph DATE: 6-2-10
 BRIDGE NO. 07183 DRAWING NO. 51193

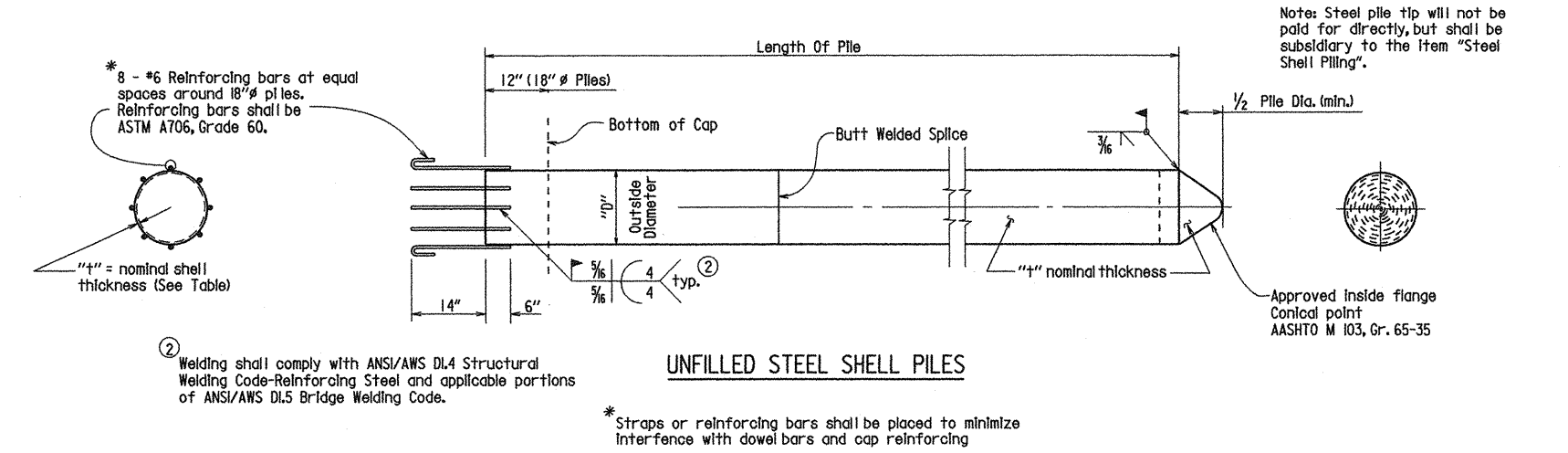


Pile Anchorage, see dwg no. 51194.
Position anchorage to avoid interference
with dowel bars and reinforcing bars.



BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110528	43	85
07183 - PILE DETAILS - 51194								



UNFILLED STEEL SHELL PILES

GENERAL NOTES FOR UNFILLED STEEL SHELL PILES

Steel shells shall conform ASTM A252, Grade 3, (Fy = 45,000 psi.).

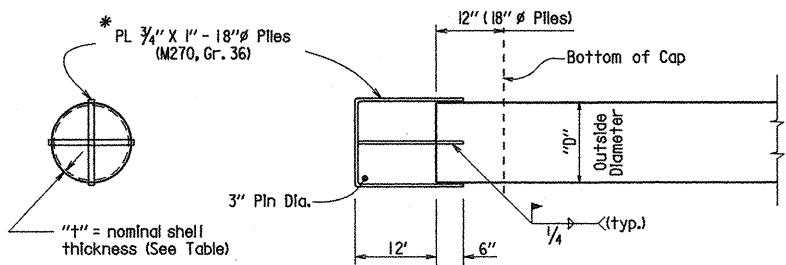
Steel Shell Piling shall comply with Section 805 except piling shall not be filled with concrete after driving.

See temporary bridge layout for additional driving information.

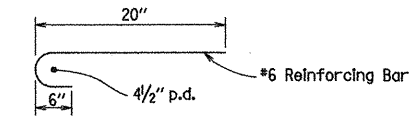
Steel Shell Piling will not be paid for directly but shall be included in the item "Temporary Bridge Structure (24' Roadway Width)".

Painting of steel piles will not be required.

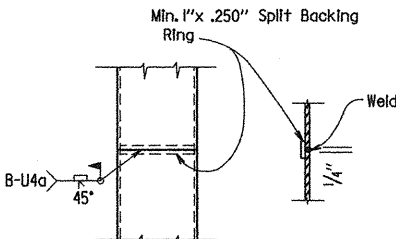
Steel shell piling may be driven open or closed ended.



ALTERNATE CONNECTION DETAIL



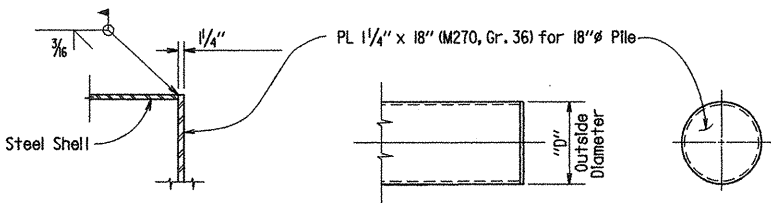
TYP. HOOKED BAR DETAIL



SPLICE DETAILS

TABLE FOR SHELL PILES

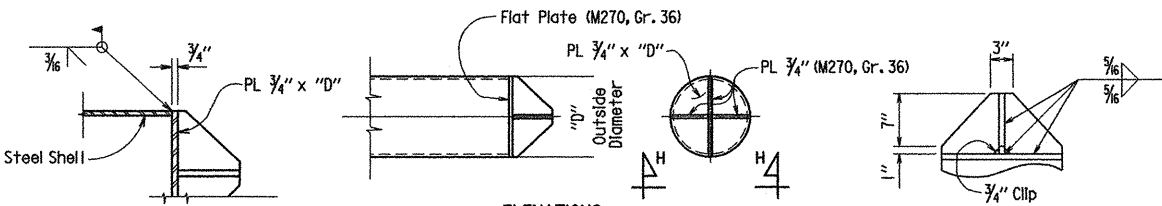
OUTSIDE DIAMETER D	"t" - NOMINAL SHELL THICKNESS
18"	0.50"



PART SECTION

ELEVATIONS

ALTERNATE FLAT TIP DETAIL



PART SECTION

ELEVATIONS

SECTION H-H

ALTERNATE VANED TIP DETAIL

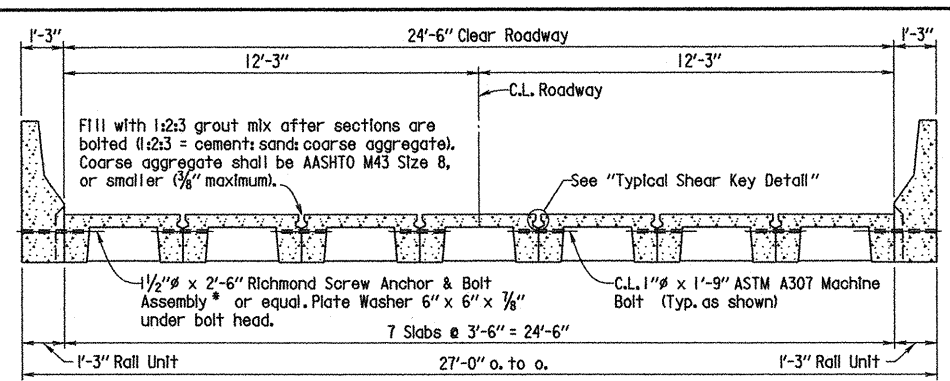


DETAILS OF
UNFILLED STEEL SHELL PILES FOR
TEMPORARY BRIDGE STRUCTURE
FIFTEEN MILE BAYOU

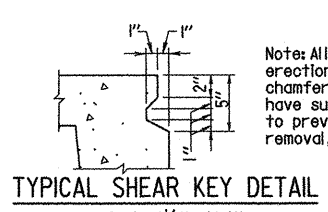
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: DGM DATE: 4-15-10 FILENAME: b110528t_ssp.dgn
CHECKED BY: mcb DATE: 4/23/10 SCALE: NONE
DESIGNED BY: bth DATE: 02-10
BRIDGE NO. 07183 DRAWING NO. 51194

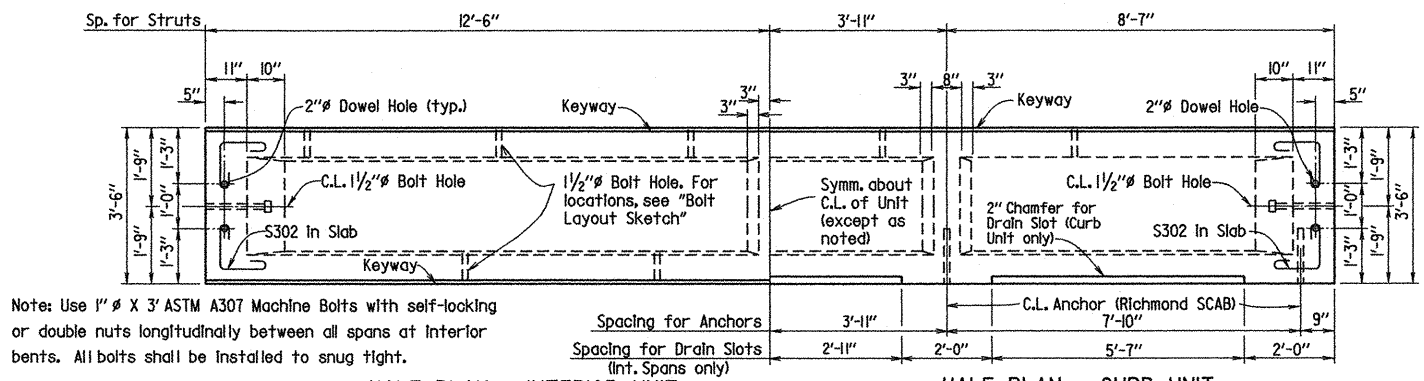
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 110528	44	85
07183 - 25' PRECAST SPAN - 51195								



Note: The deck shall be given a fine finish as specified for Class 5 Roadway Surface Finish in subsection 802.19.

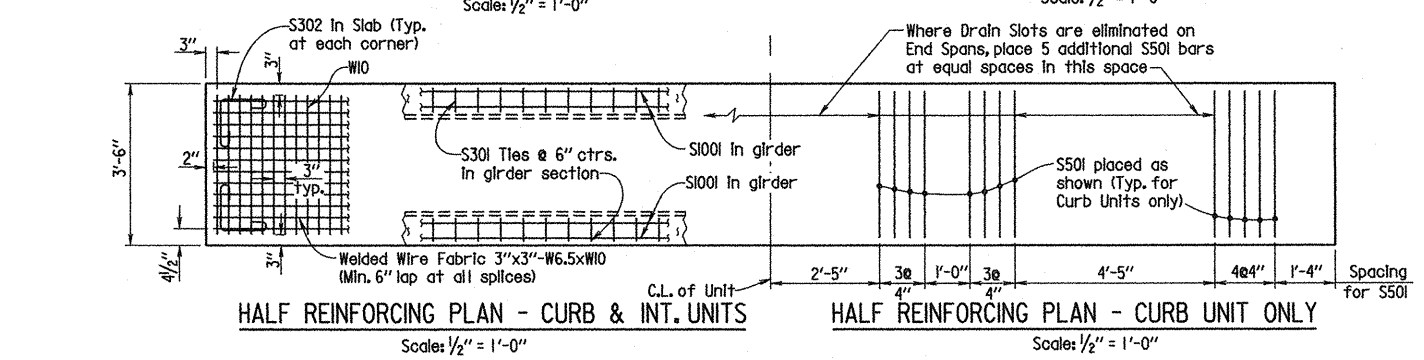


CROSS-SECTION OF RDWY. (SHOWING ASSEMBLY)
Scale: 3/8" = 1'-0"



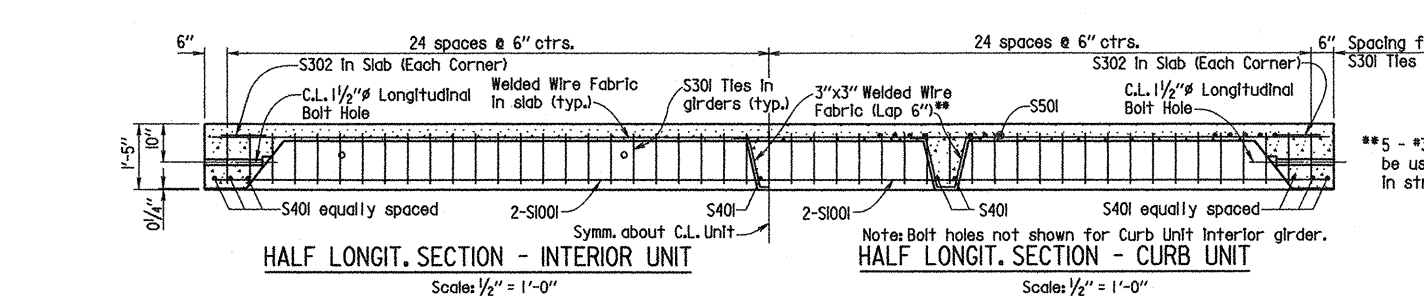
HALF PLAN - INTERIOR UNIT
Scale: 1/2" = 1'-0"

HALF PLAN - CURB UNIT
Scale: 1/2" = 1'-0"



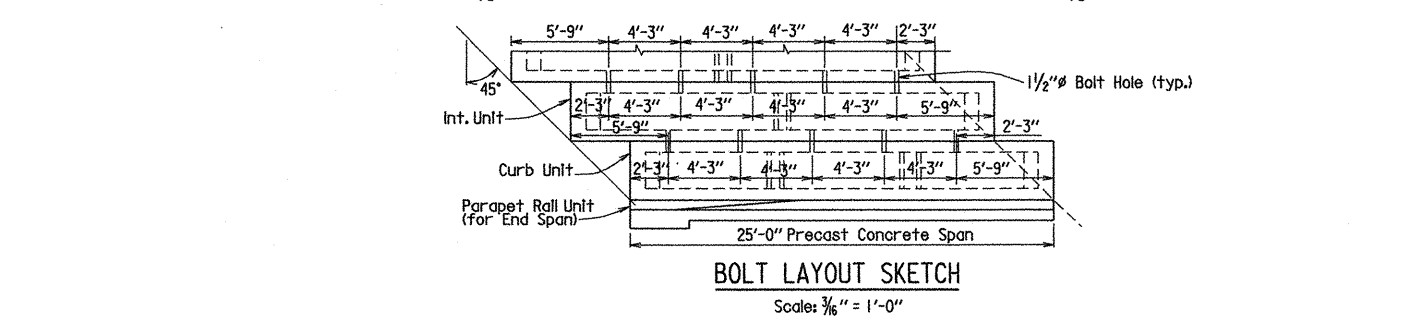
HALF REINFORCING PLAN - CURB & INT. UNITS
Scale: 1/2" = 1'-0"

HALF REINFORCING PLAN - CURB UNIT ONLY
Scale: 1/2" = 1'-0"



HALF LONGIT. SECTION - INTERIOR UNIT
Scale: 1/2" = 1'-0"

HALF LONGIT. SECTION - CURB UNIT
Scale: 1/2" = 1'-0"



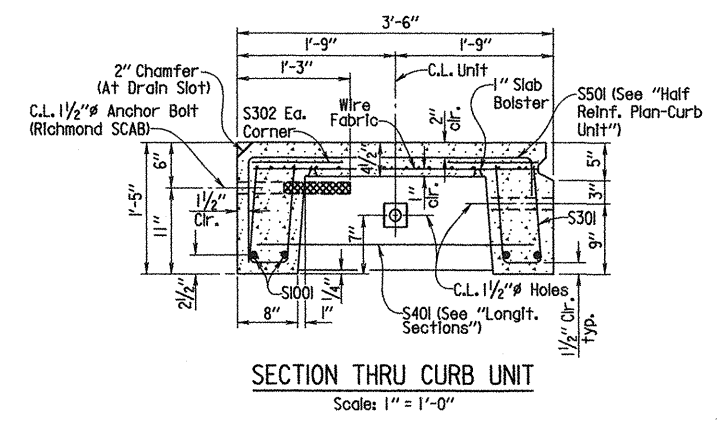
BOLT LAYOUT SKETCH
Scale: 3/8" = 1'-0"

BAR LIST FOR PRECAST BRIDGE COMPONENTS
PRECAST SLAB UNIT

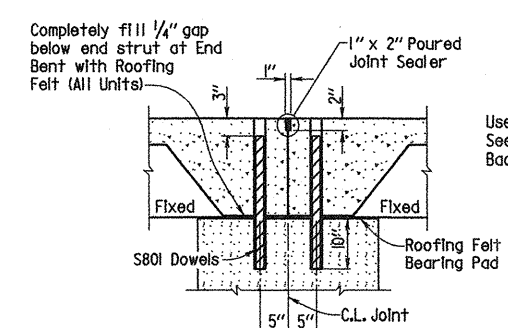
MARK	NUMBER REQUIRED		LENGTH	P.D.	BENDING DIAGRAMS (Dimensions are out to out of bars)
	CURB UNIT	INT. UNIT			
S301	98	98	3'-3 1/2"	1 1/2"	
S302	4	4	2'-9"	1 1/2"	
S401	10	8	3'-2"	Str.	
S501	26 (A)	-	4'-6"	2 1/2"	
S801	4	4	2'-0"	Str.	
S1001	4	4	24'-8"	Str.	

(A) Plus 5 additional for each Drain Slot eliminated

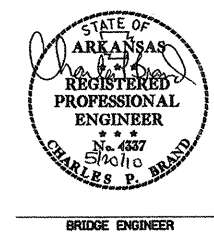
Note: For details and bar list for Precast Parapet Rail at End Span, see dwg. no. 51196.



SECTION THRU CURB UNIT
Scale: 1" = 1'-0"



SECTION AT FIXED BENT
No Scale



GENERAL NOTES
All Reinforcing steel shall be AASHTO M31 or M53, Grade 60. Wire fabric shall be AASHTO M55 or M221. Reinforcing steel and wire fabric shall be accurately located in the forms and securely held in place by steel wire supports.

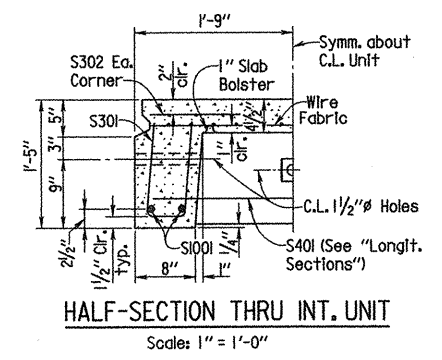
Concrete for precast units shall be Class (SAE) except that the coarse aggregate size shall meet AASHTO M43, Size 67 (3/4" Max.).

Standard washers shall be provided under head and nut of all bolts in connection with concrete. Bolts shall be A307. All bolts, washers and nuts shall be galvanized to meet AASHTO M232, Class C or M298, Class 50. Screw Anchor and Bolt Assembly (SCAB) shall be 1 1/2" x Richmond Screw Anchor or equal, and have a minimum ultimate strength of 58,000 psi in tension. Assembly shall be galvanized to meet AASHTO M232, Class C or M298, Class 50. Plate Washers for SCAB shall be AASHTO M270, Grade 36 and shall be galvanized to meet AASHTO M 111.

Camber required for dead load deflection is 1/4". Deviation of more than 1/4" in dimension of grade or line will be cause for rejection. Concrete, reinforcing, wire mesh, bar supports, bolts, nuts, washers, threaded anchors, grout, roofing felt bearing pad and expansion joint fillers are considered subsidiary to the pay item Temporary Bridge Structure. Roofing felt shall meet or exceed the requirements of ASTM D224 Type I. See Section 802.18(d). The roofing felt shall be in one piece for the full length of the cap and three layers shall be used.

Ends of adjacent units shall be coated (1/16") with asphaltic paint. The coating shall adhere and set firm and its softening point shall not be less than 140°F.

Design Specifications: AASHTO 2002
Method of Design: Load Factor
Live Loading: HS 20, 0.9 Wheels per Unit
Materials: 28 Day compressive strength of Concrete = 4,000 psi
Yield strength of Grade 60 Steel = 60,000 psi
Yield strength of Wire Fabric = 65,000 psi

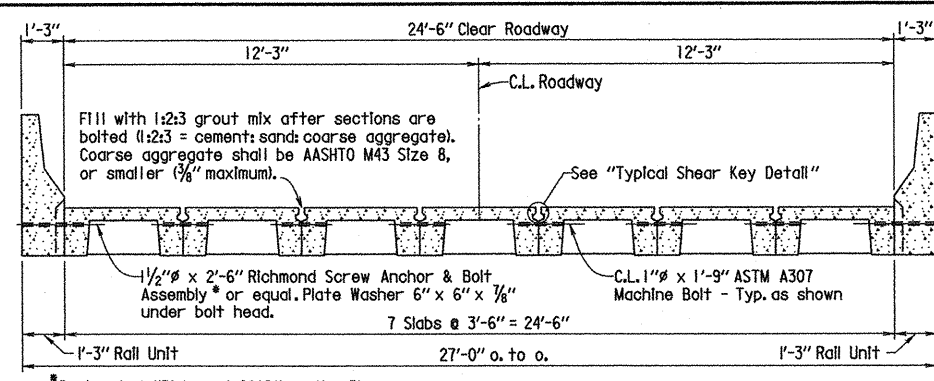


HALF-SECTION THRU INT. UNIT
Scale: 1" = 1'-0"

SHEET 1 OF 2
DETAILS OF
25'-0" PRECAST CONCRETE SPANS
FOR TEMPORARY BRIDGE STRUCTURE
FIFTEEN MILE BAYOU

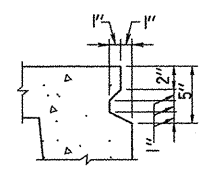
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: DGM DATE: 4-14-10 FILENAME: b110528t-sl.dgn
CHECKED BY: MCB DATE: 4/23/10 SCALE: AS NOTED
DESIGNED BY: JTB DATE: 02-10
BRIDGE NO. 07183 DRAWING NO. 51195



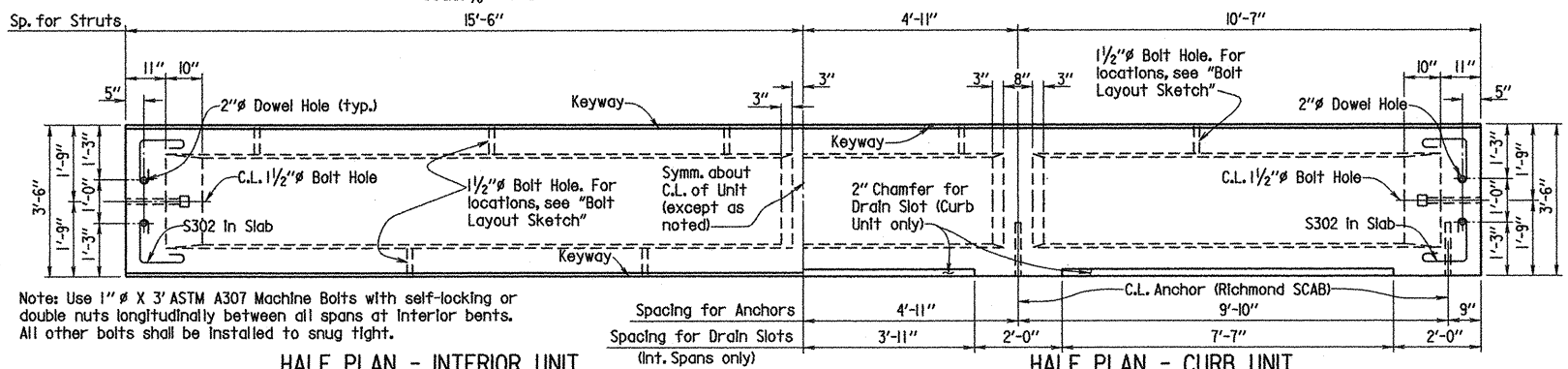
**CROSS-SECTION OF RDWY.
(SHOWING ASSEMBLY)**
Scale: 3/8" = 1'-0"

Note: The deck shall be given a fine finish as specified for Class 5 Roadway Surface Finish in subsection 802.19.



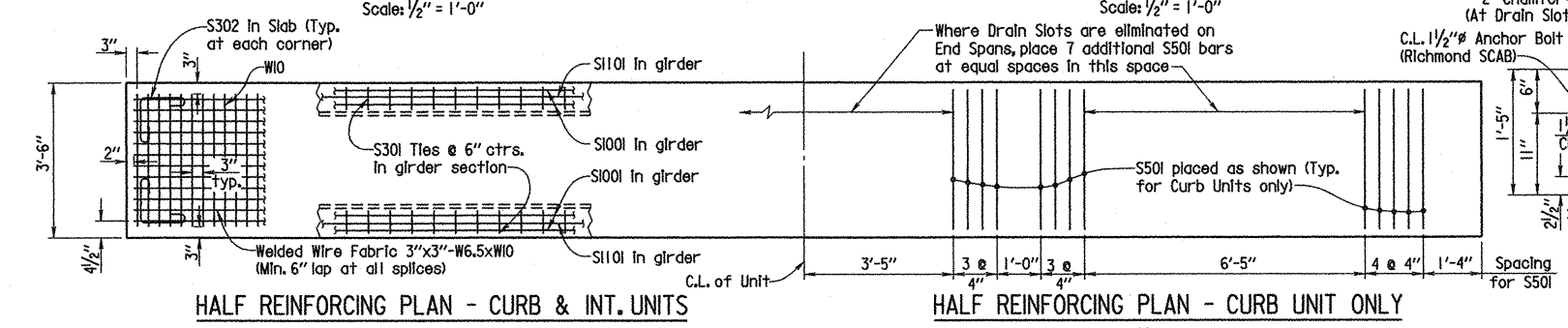
TYPICAL SHEAR KEY DETAIL
Scale: 1/2" = 1'-0"

Note: All corners exposed after erection shall have a 1/2" minimum chamfer. All other corners shall have sufficient chamfer or rounding to prevent breakage during form removal, handling and erection.



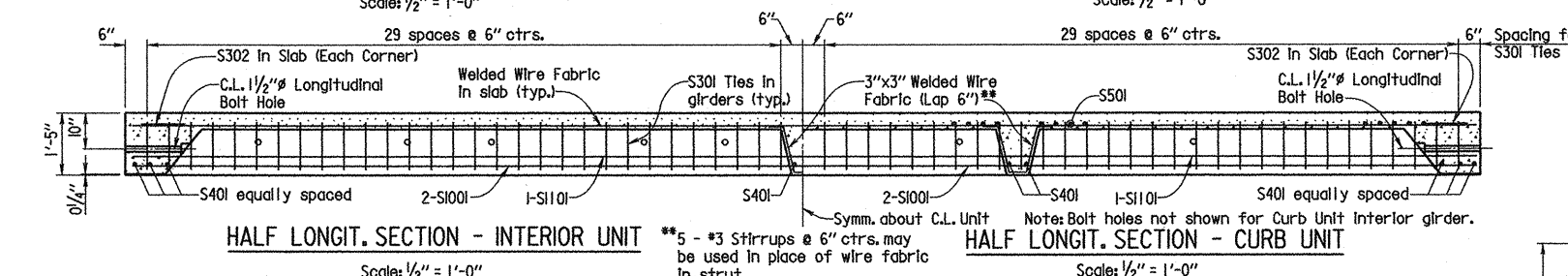
HALF PLAN - INTERIOR UNIT
Scale: 1/2" = 1'-0"

HALF PLAN - CURB UNIT
Scale: 1/2" = 1'-0"



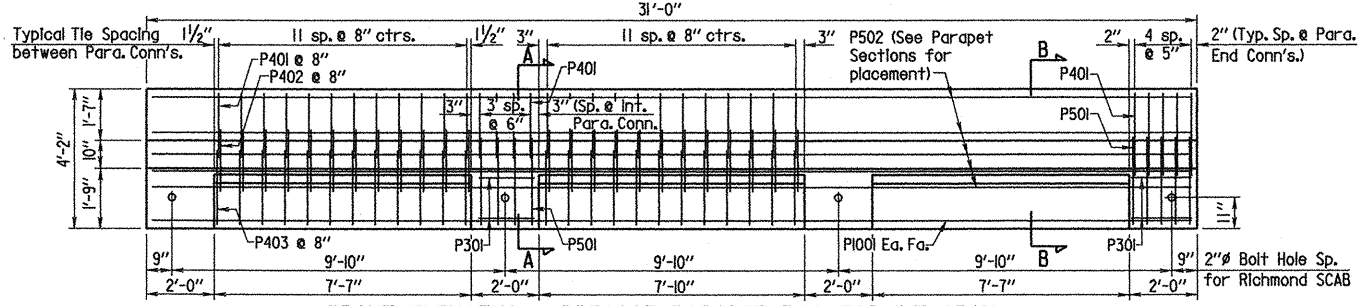
HALF REINFORCING PLAN - CURB & INT. UNITS
Scale: 1/2" = 1'-0"

HALF REINFORCING PLAN - CURB UNIT ONLY
Scale: 1/2" = 1'-0"



HALF LONGIT. SECTION - INTERIOR UNIT
Scale: 1/2" = 1'-0"

HALF LONGIT. SECTION - CURB UNIT
Scale: 1/2" = 1'-0"



FRONT ELEVATION - PRECAST PARAPET RAIL FOR INT. SPAN
Scale: 3/8" = 1'-0"

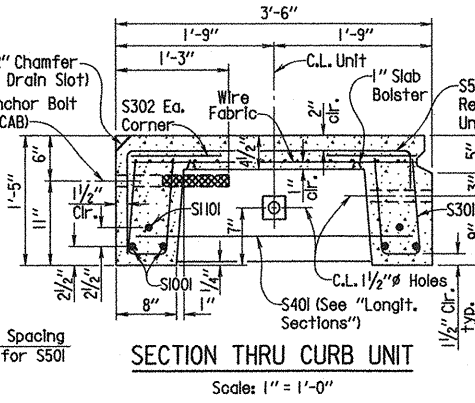
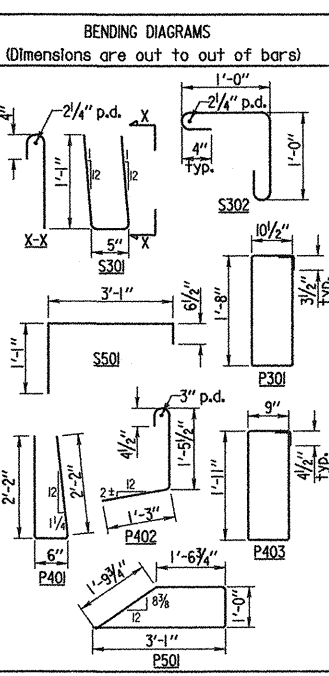
BAR LIST FOR PRECAST BRIDGE COMPONENTS
PRECAST SLAB UNIT

MARK	NUMBER REQUIRED		LENGTH	P.D.
	CURB UNIT	INT. UNIT		
S301	122	122	3'-3 1/2"	1 1/2"
S302	4	4	2'-9"	1 1/2"
S401	10	8	3'-2"	Str.
S501	26 (A)	-	4'-6"	2 1/2"
S701	4	4	2'-0"	Str.
S1001	4	4	30'-8"	Str.
S1101	2	2	30'-8"	Str.

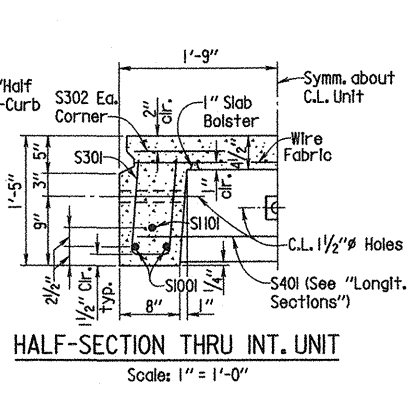
(A) Plus 7 additional for each Drain Slot eliminated

PRECAST PARAPET RAIL UNIT

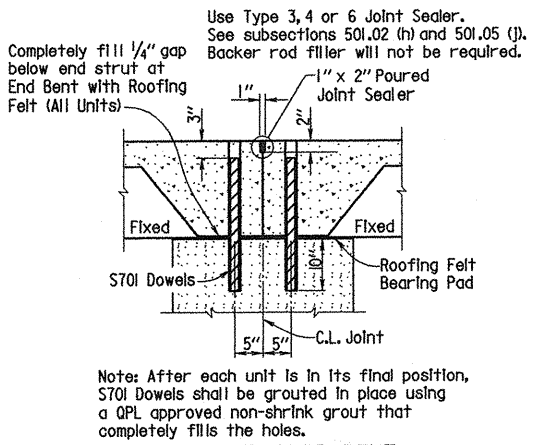
MARK	NO. REQUIRED	LENGTH	P.D.
P301	8	5'-4"	1 1/2"
P401	54	4'-8"	2"
P402	36	3'-1 1/2"	2"
P403	36	5'-8"	2"
P501	18	7'-2"	2 1/2"
P502	9	30'-8"	Str.
P1001	2	30'-8"	Str.



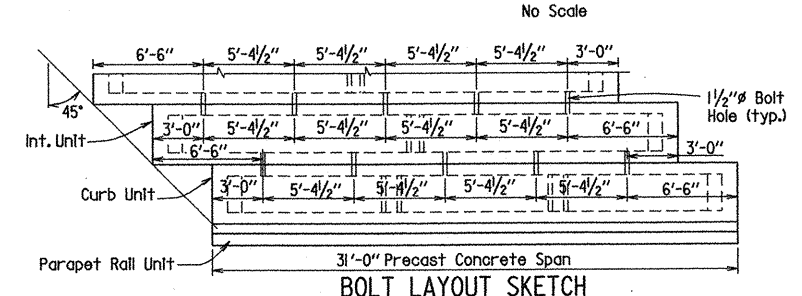
SECTION THRU CURB UNIT
Scale: 1" = 1'-0"



HALF-SECTION THRU INT. UNIT
Scale: 1" = 1'-0"



SECTION AT FIXED BENT
No Scale



BOLT LAYOUT SKETCH
Scale: 3/8" = 1'-0"

**DETAILS OF
31'-0" PRECAST CONCRETE SPANS
FOR TEMPORARY BRIDGE STRUCTURE
FIFTEEN MILE BAYOU
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.**



DRAWN BY: DGM DATE: 4-14-10
CHECKED BY: mcs DATE: 4/23/10
DESIGNED BY: B7- DATE: 02-10
BRIDGE NO. 07183 DRAWING NO. 51197

BRIDGE ENGINEER