

301477

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9-18-73				6	ARK.	PF-025 2/31			
				JOB NO.		2782	16	157	
① 5500, 5501 A&B, - QUANT. - B.C. 74									

SCHEDULE OF BRIDGE QUANTITIES

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	ITEM NO.	801	SP# 802	SP# 802	803	804	805	806	SP# 807	SP# 807	SP# 807	809	812	816
			UNIT	UNCLASS. EXCAVATION FOR STRUCTURES-BRIDGE	CLASS "S" CONCRETE	CLASS "SAE" CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL	BEARING PILING (16")	ALTERNATE #1- METAL (ALUMINUM) BRIDGE RAILING TYPE "A" ALTERNATE #2- METAL (STEEL) BRIDGE RAILING TYPE "A"	STRUCTURAL STEEL IN BEAM SPANS (A36)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A36)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A572-50)	PREFORMED JOINT SEALER	BRIDGE NAME PLATES (TYPE "C")	CONCRETE RIPRAP
			UNIT	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LIN. FT.	LIN. FT.	LB.	LB.	LB.	LIN. FT.	EACH	CU. YD.
5500A	X271	HWY 270 OVERPASS	END BENTS 1#4	222	56.78		.4	5634	420			1914			1	190
			INTERMEDIATE BENTS 2#3	53	108.52			13916	761							
			226'-0" CONTINUOUS PLATE GIRDER UNIT			264.80	22.5	66570		452		166986	34460	104.0		
			TOTALS FOR BRIDGE NO. 5500A	275	165.30	264.80	22.9	86120	1181	452		168900	34460	104.0	1	190
5500B	X271	HWY 270 OVERPASS	END BENTS 1#4	222	56.51		.4	5634	425			1914			1	190
			INTERMEDIATE BENTS 2#3	60	108.49			13916	756							
			226'-0" CONTINUOUS PLATE GIRDER UNIT			264.80	22.5	66570		452		166986	34460	104.0		
			TOTALS FOR BRIDGE NO. 5500B	282	165.00	264.80	22.9	86120	1181	452		168900	34460	104.0	1	190
5501A	X271	HOLLAND ST OVERPASS	END BENTS 1#4	141	45.99		.4	4474	420		1456				1	150
			INTERMEDIATE BENTS 2#3	38	75.71			9863	635							
			168'-0" CONTINUOUS W-BEAM UNIT			187.80	16.8	43563		336	149654			95.0		
			TOTALS FOR BRIDGE NO. 5501A	179	121.70	187.80	17.2	57900	1055	336	151110			95.0	1	150
5501B	X271	HOLLAND ST OVERPASS	END BENTS 1#4	141	45.93		.4	4474	425		1456				1	150
			INTERMEDIATE BENTS 2#3	40	75.67			9863	630							
			168'-0" CONTINUOUS W-BEAM UNIT			187.80	16.8	43563		336	149654			95.0		
			TOTALS FOR BRIDGE NO. 5501B	181	121.60	187.80	17.2	57900	1055	336	151110			95.0	1	150
TOTALS FOR JOB NO. 2782			917	573.60	905.20	80.2	288040	4472	1576	302220	337600	68920	343.0	4	680	

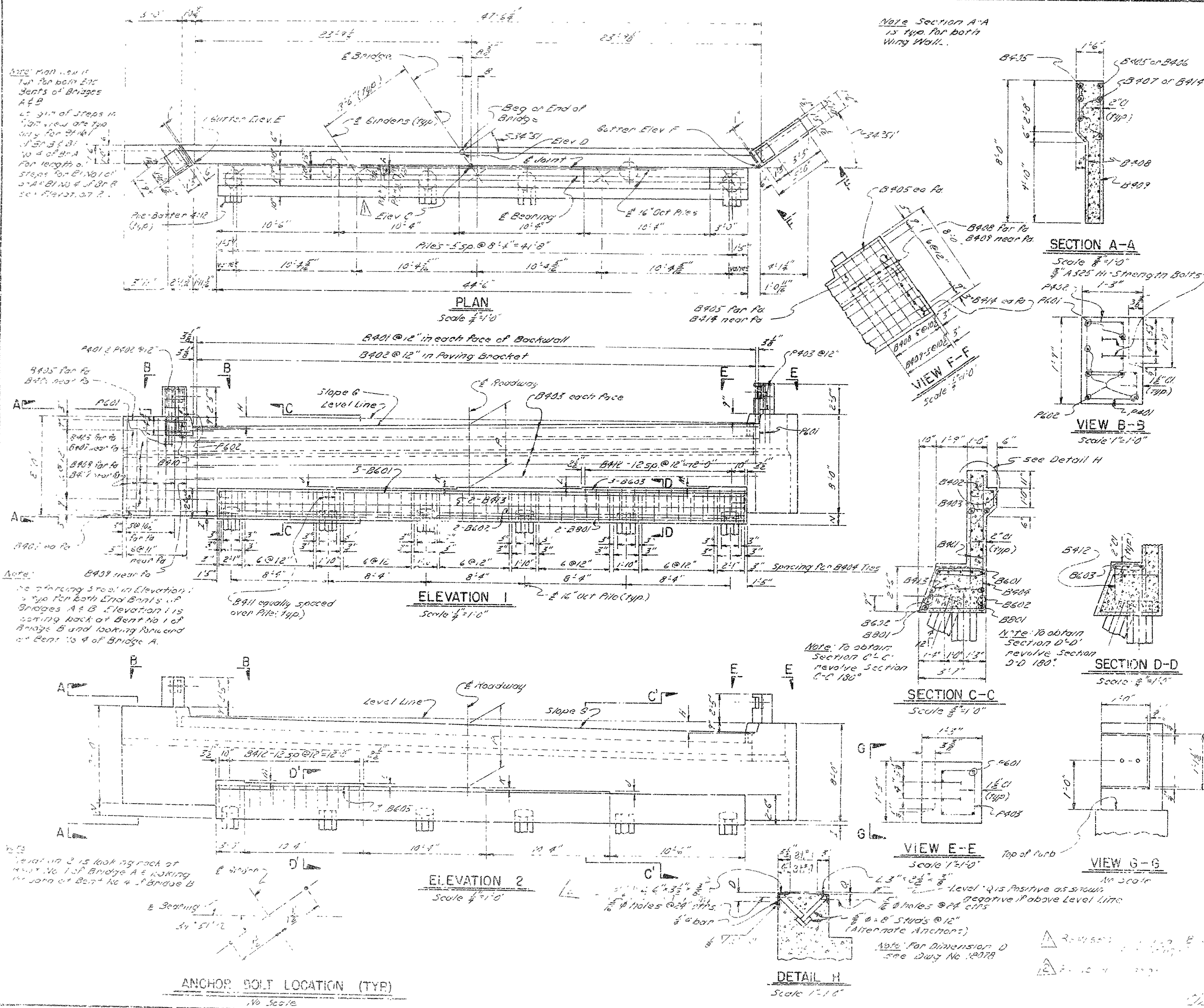
SCHEDULE OF BRIDGE QUANTITIES  
HWY. 270 - HWY. 104  
JEFFERSON COUNTY  
ROUTE 65 SEC. 14  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: H. A. B. DATE: 8 February 73  
TRACED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ SCALE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: 8 Feb 73  
BRIDGE NO. 5500 A & B 5501 A & B DRAWING NO. 18074  
BRIDGE ENGINEER





512 L-101

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	PROJ. NO.	STATE	FED. AID FUND NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7-12-53				6	ARK.	PA-025			
2-12-74	90921274								
7-17-74	547-1-1-74								
JOB NO. 2782 12 197									
5500A8B DTL'S END BENT 12076									



BAR LIST PER BENT						
BAR	NO	Length	A	B	PIV DIA	Bending Diagrams
						Dimensions are out to out of bent
B401	96	6'-11"	-	-	51"	

TABLE OF VARIABLES							
	A	B	Elev. C	Elev. D	Elev. E	Elev. F	Slope G
Bridge A Bent No. 1	11"	10 1/2"	319.61	319.61	319.29	319.12	0.0181%
Bridge A Bent No. 4	14"	13 1/2"	319.04	319.03	318.66	319.41	0.0157%
Bridge B Bent No. 1	5"	10 1/2"	319.50	319.49	319.17	319.82	0.0139%
Bridge B Bent No. 4	16"	15 1/2"	319.34	319.34	319.53	319.10	0.0100%
	H	I	J	K	L	M	N
Bridge A Bent No. 1	6 3/4"	4 5/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	11 3/8"
Bridge A Bent No. 4	8 1/2"	4 5/8"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	14 1/2"
Bridge B Bent No. 1	7 3/8"	4 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1'-0 3/8"
Bridge B Bent No. 4	5 1/2"	4 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	10 3/4"

**Note:**  
All concrete shall be Class 5 and shall be poured in the dry. All exposed corners to be chamfered 1/2" unless otherwise noted. Reinforcing Steel to be ASTM A615, Grade 40. Shop List & Bending Diagrams must be submitted & approved. Secured before fabrication is begun. All Piling shall be 16" Oct. Precast Piling or 16" Concrete Filled Metal Shells.

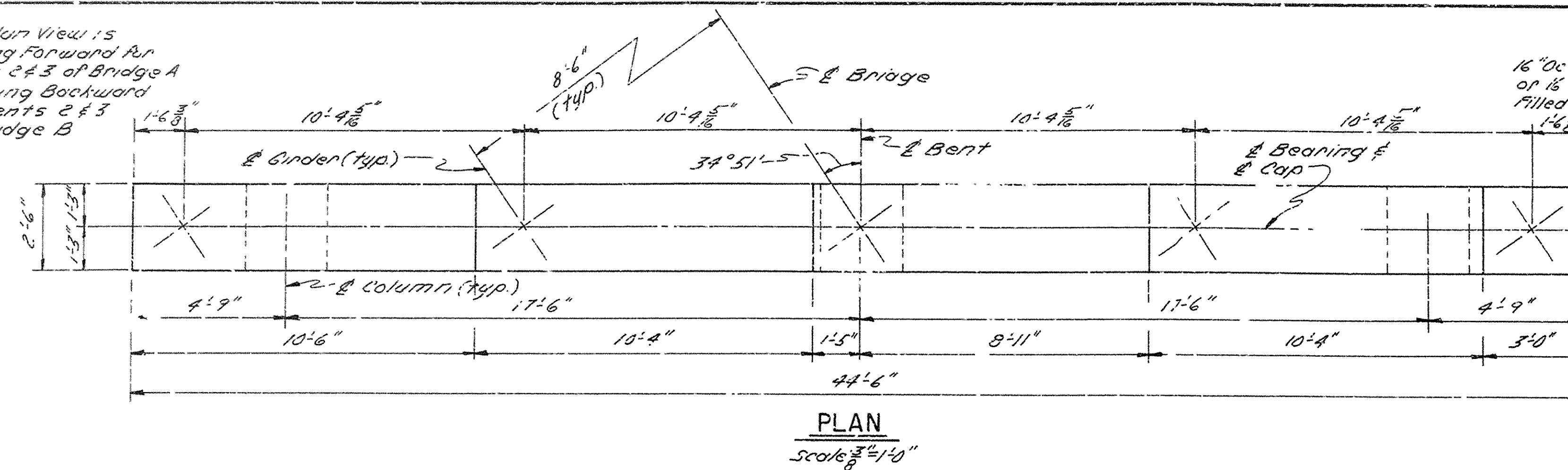
**DETAILS OF END BENTS**  
**BRIDGE OVER HWY 70**  
**HWY. 270 - HWY. 104**  
**JEFFERSON COUNTY**  
**ROUTE 65 SEC. 14**  
**ARKANSAS STATE HIGHWAY COMMISSION**  
**LITTLE ROCK, ARK.**  
**DRAWN BY: JPS DATE: 1-19-53**  
**TRACED BY: DATE: 1-19-53**  
**CHECKED BY: DATE: 1-19-53**  
**BRIDGE NO. 5500 A8B DRAWING NO. 18076**



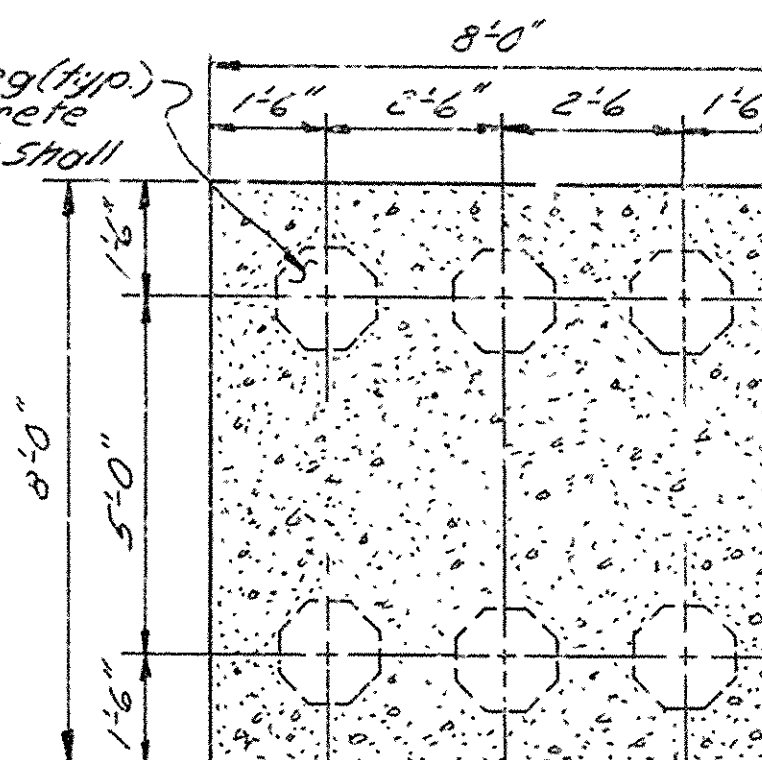




Note: Plan View 1:5  
Looking Forward for  
Bents 2 & 3 of Bridge A  
& Looking Backward  
for Bents 2 & 3  
of Bridge B



16" Oct. Piling (typ.)  
or 16" Concrete  
Filled Metal Shell

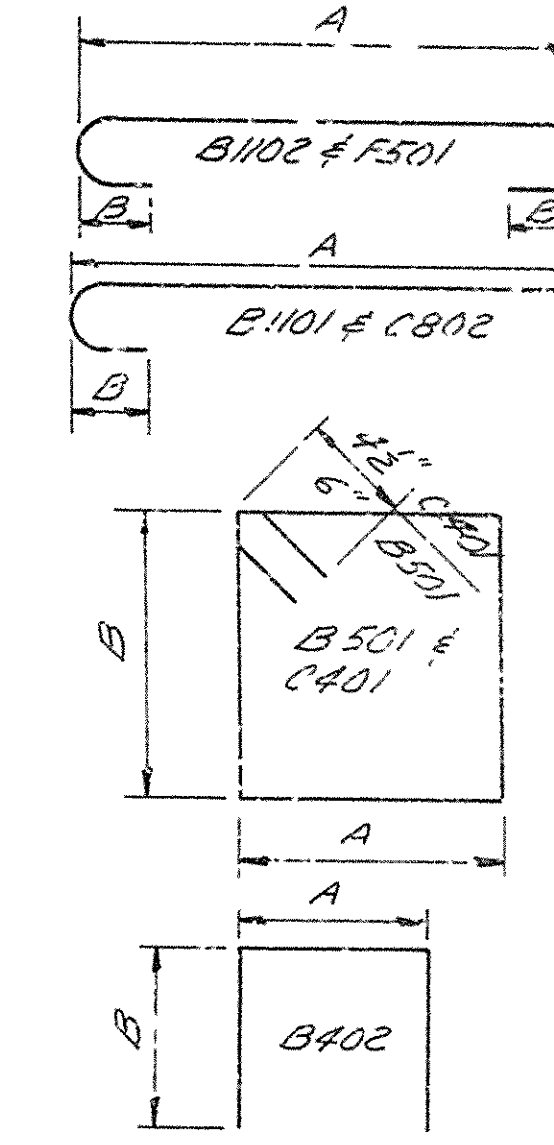


SECTION D-D  
Scale: 3/8"=1'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9-12-73				6	ARK.	RF-225 -2(B)		9	18077
				JOB NO. 2782					
				5500 DTL'S INT. BTS 18077					

#### BAR LIST PER BENT

MK.	No. Req'd.	Length	A	B	P.R. Dist.	Bending Diagrams (Dimensions one out to outer bar)
B401	4	22'-11"	-	-	57"	
B402	9	8'-4"	2'-2"	3'-2"	2"	
B501	58	11'-4"	2'-2"	3'-2"	22"	
B1101	4	12'-4"	10'-6"	12'-6"	11 1/2"	
B1102	4	47'-4"	44'-2"	12'-6"	11 1/2"	
B1103	2	44'-2"	-	-	57"	
B1104	4	32'-6"	-	-	57"	
C401	60	8'-10"	2'-1"	2'-1"	2"	
C801	36	19'-9"	-	-	57"	
C802	36	7'-0"	6'-1"	8"	6"	
F501	90	8'-8"	7'-6"	5"	3 3/4"	



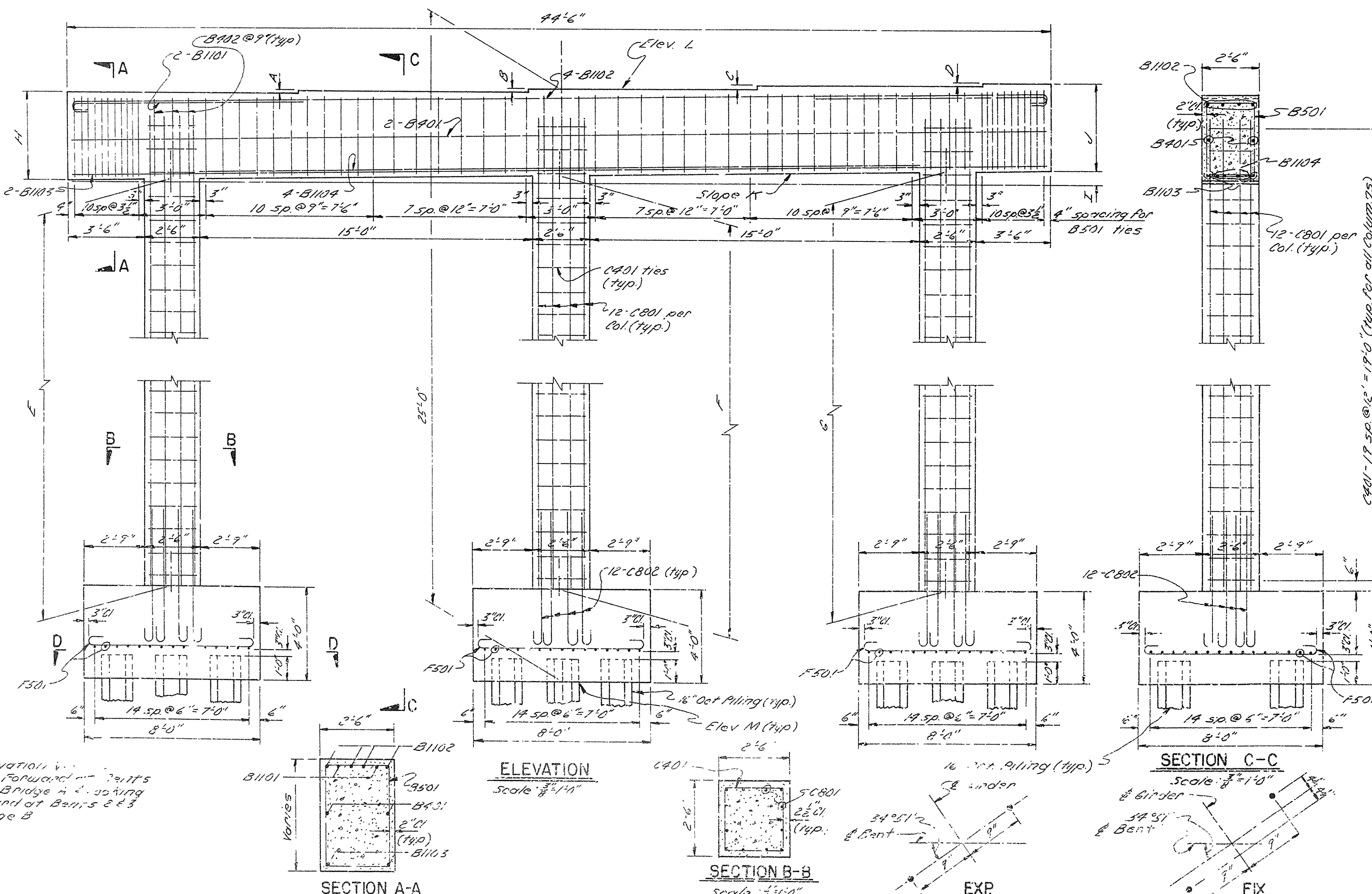
#### TABLE OF VARIABLES

	A	B	C	D	E	F	G
Bridge A Bent 2	1 5/8"	1 5/8"	1 5/8"	1 5/8"	17'-4 1/2"	17'-4 1/2"	17'-7 3/8"
Bridge A Bent 3	1 13/16"	1 13/16"	1 13/16"	1 13/16"	17'-1 3/8"	17'-1 3/8"	17'-7 1/2"
Bridge B Bent 2	1 5/8"	1 5/8"	1 5/8"	1 5/8"	17'-1 1/2"	17'-4 1/2"	17'-1 1/2"
Bridge B Bent 3	1 3/8"	1 3/8"	1 3/8"	1 3/8"	17'-2 1/2"	17'-4 1/2"	17'-7 1/2"
	4	1	1	5.1000	Elev L	Elev M	
Bridge A Bent 2	3'-7 1/8"	6 1/2"	3'-7 1/2"	0.0125211	314.28	289.28	
Bridge A Bent 3	3'-7 1/2"	7 1/2"	3'-7 1/2"	0.0145111	313.95	288.93	
Bridge B Bent 2	3'-7 1/8"	6 1/2"	3'-7 1/2"	0.0125211	314.28	289.28	
Bridge B Bent 3	3'-7 3/8"	5 5/8"	3'-7"	0.0110311	314.13	289.13	

NOTE:  
ALL CONCRETE SHALL BE CLASS "S" AND SHALL BE POURED IN THE  
DRY. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS  
OTHERWISE NOTED. REINFORCING STEEL TO BE ASTM A615,  
GRADE 40.  
SHOP LIST AND BENDING DIAGRAMS MUST BE SUBMITTED AND  
APPROVAL SECURED BEFORE FABRICATION IS BEGUN.  
ALL PILING SHALL BE 16" OCT. PRECAST OR 16" CONCRETE FILLED  
METAL SHELL.

DETAILS OF INT. BENTS  
BRIDGE OVER HWY. 270  
HWY. 270-HWY. 104  
JEFFERSON COUNTY  
ROUTE 05 SEC. 14  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: J.P.S. DATE: 12-5-73  
CHECKED BY: J.A. DATE: 1-1-74  
SCALE: 3/8"=1'-0"  
BRIDGE NO. 5500 A & B DRAWING NO. 18077

Note: Elevation View  
Looking Forward for  
Bents 2 & 3 of Bridge A & Looking  
Backward at Bents 2 & 3  
of Bridge B



SECTION A-A  
Scale: 3/8"=1'-0"

SECTION B-B  
Scale: 3/8"=1'-0"

SECTION C-C  
Scale: 3/8"=1'-0"

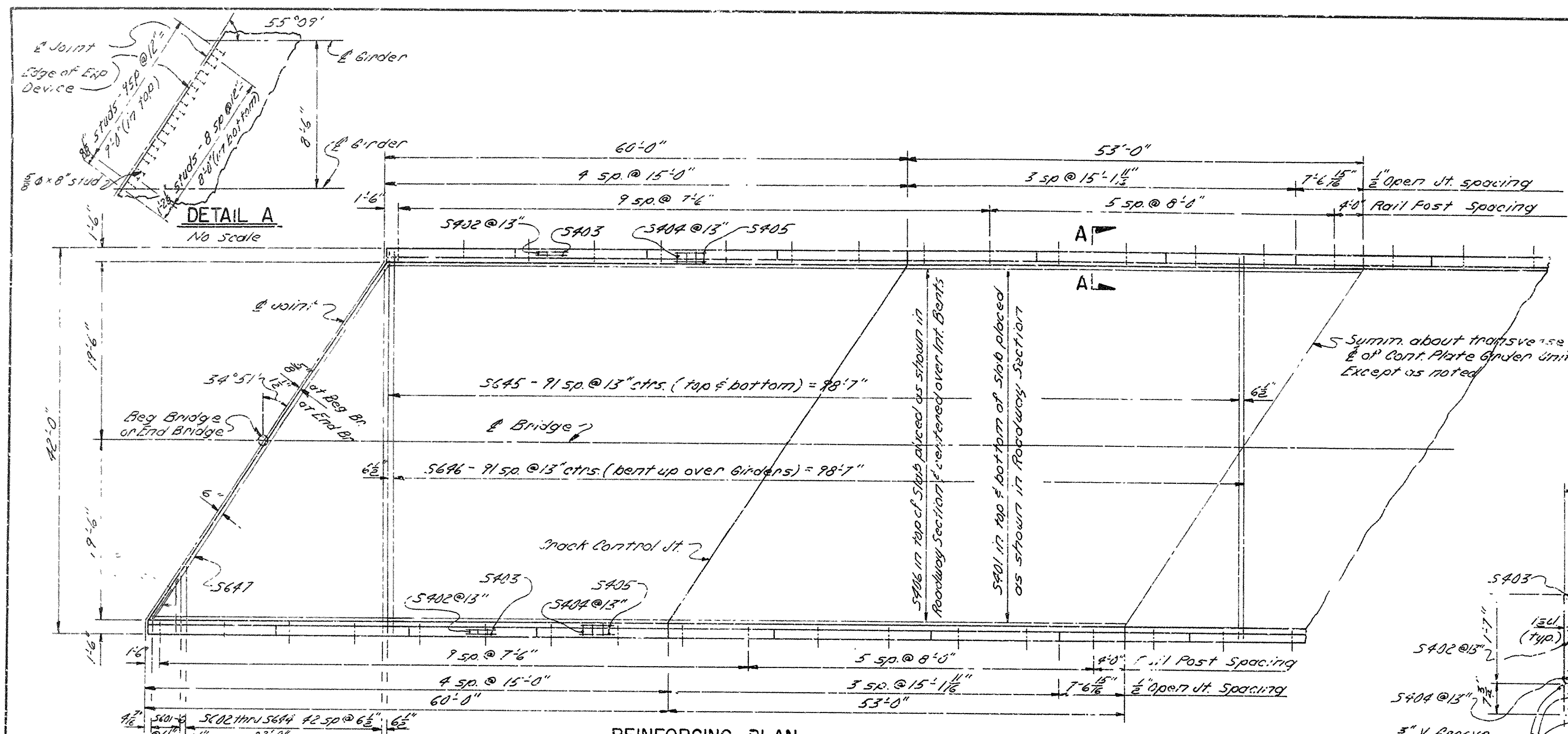
EXP

ANCHOR BOLT DETAILS

1/4" Scale

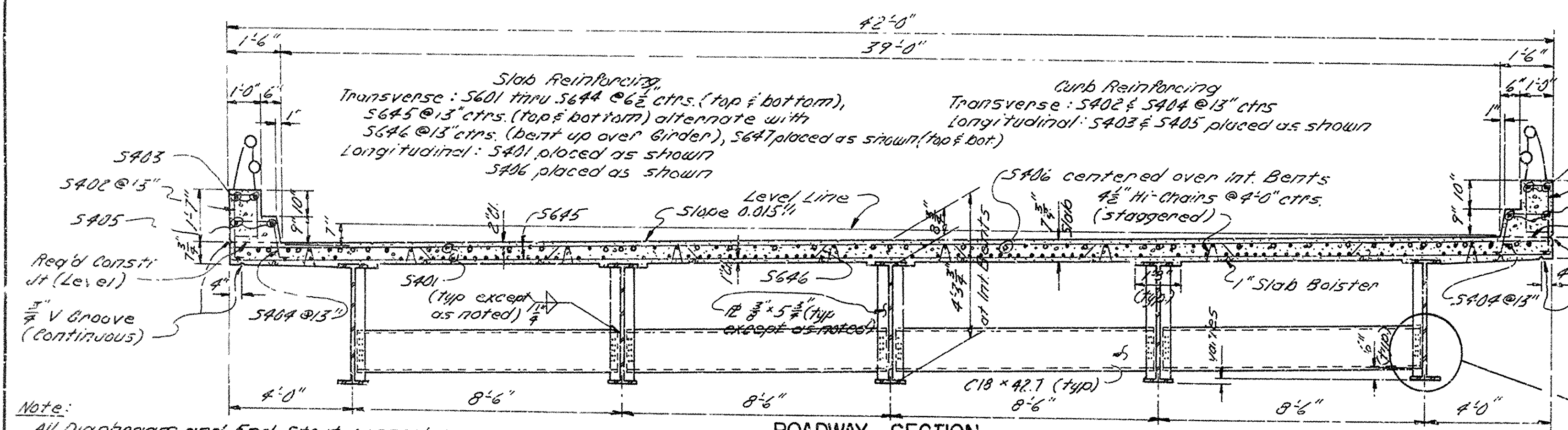
BRIDGE ENGINEER





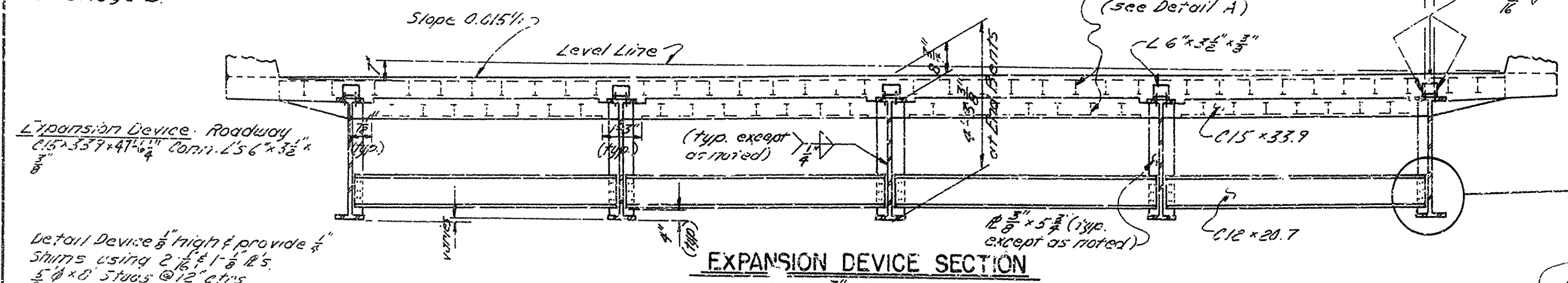
**REINFORCING PLAN**  
Scale:  $\frac{1}{8}'' = 1'-0''$

Note: S601 thru S645 & S647 are placed in top & bottom of slab.



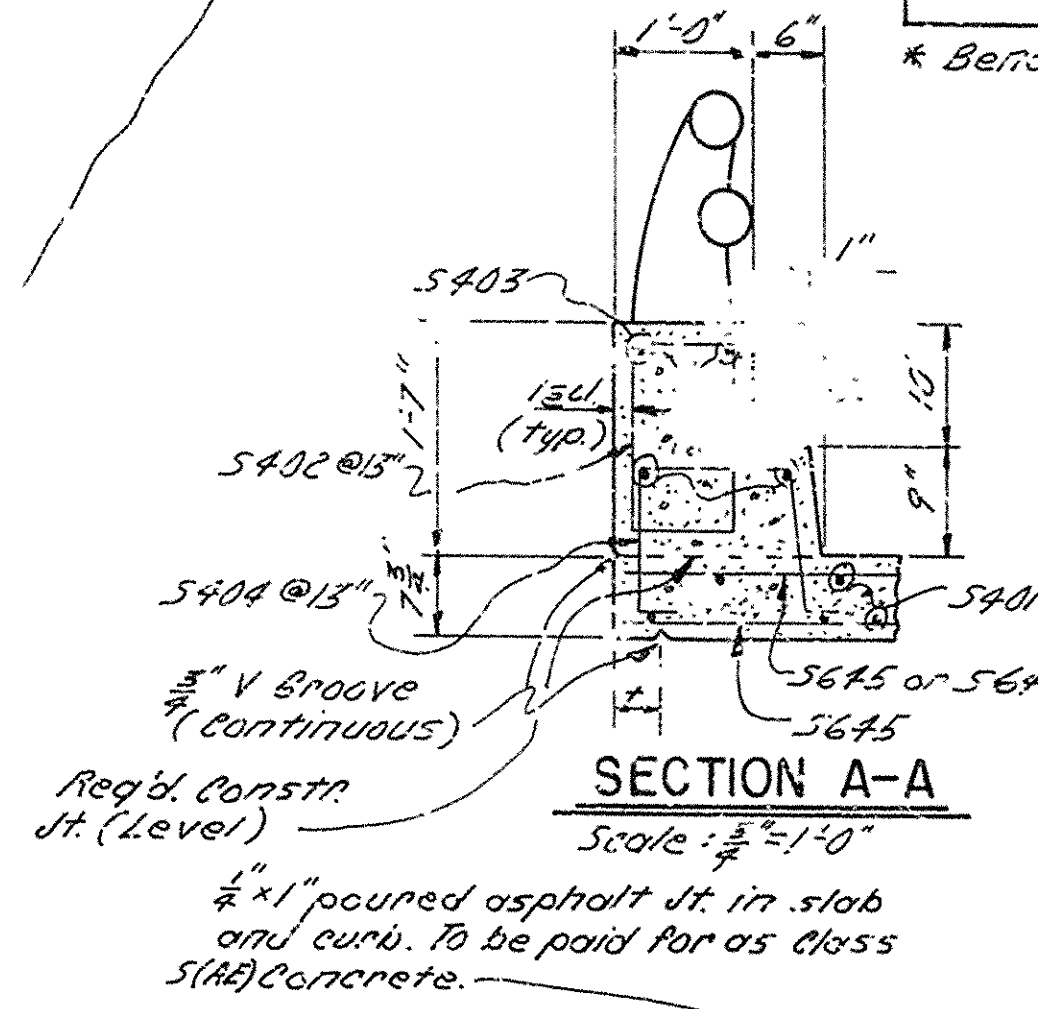
**ROADWAY SECTION**  
Scale:  $\frac{1}{8}'' = 1'-0''$

Note: All Diaphragm and End Strut connectors are 12" x 12" x 1/2" except when Diaphragms and End Struts are connected to Stiffeners. Roadway Section & Expansion Device Section are Looking Forward at Bridge A & Looking Backward at Bridge B.



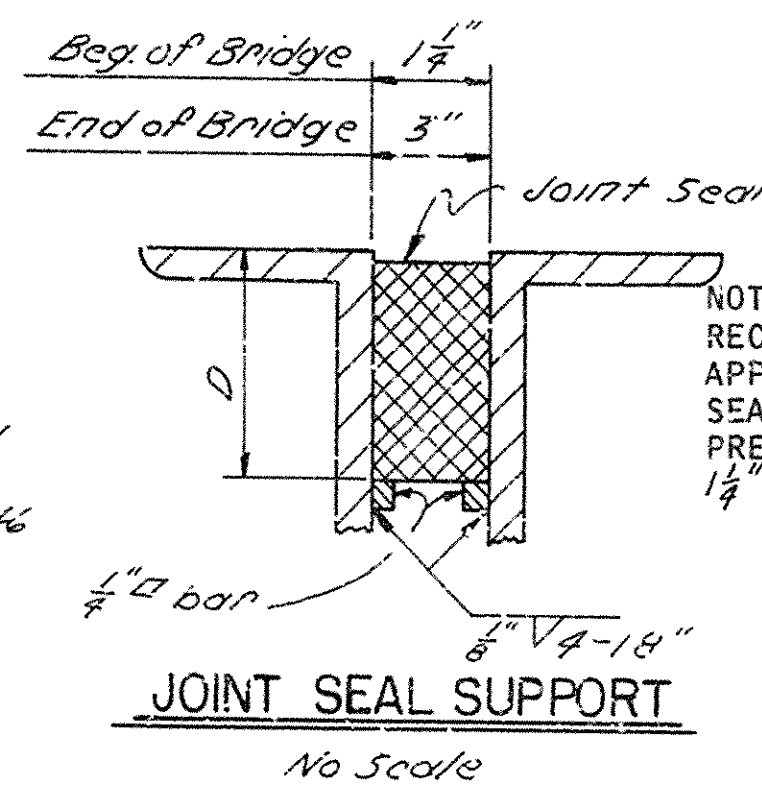
**EXPANSION DEVICE SECTION**  
Scale:  $\frac{1}{8}'' = 1'-0''$

Detail Device & height provide 1/2" Shims using 2" x 1/2" x 1/2" S. 5/8" x 8" Studs @ 12" cts.



**SECTION A-A**  
Scale:  $\frac{1}{8}'' = 1'-0''$

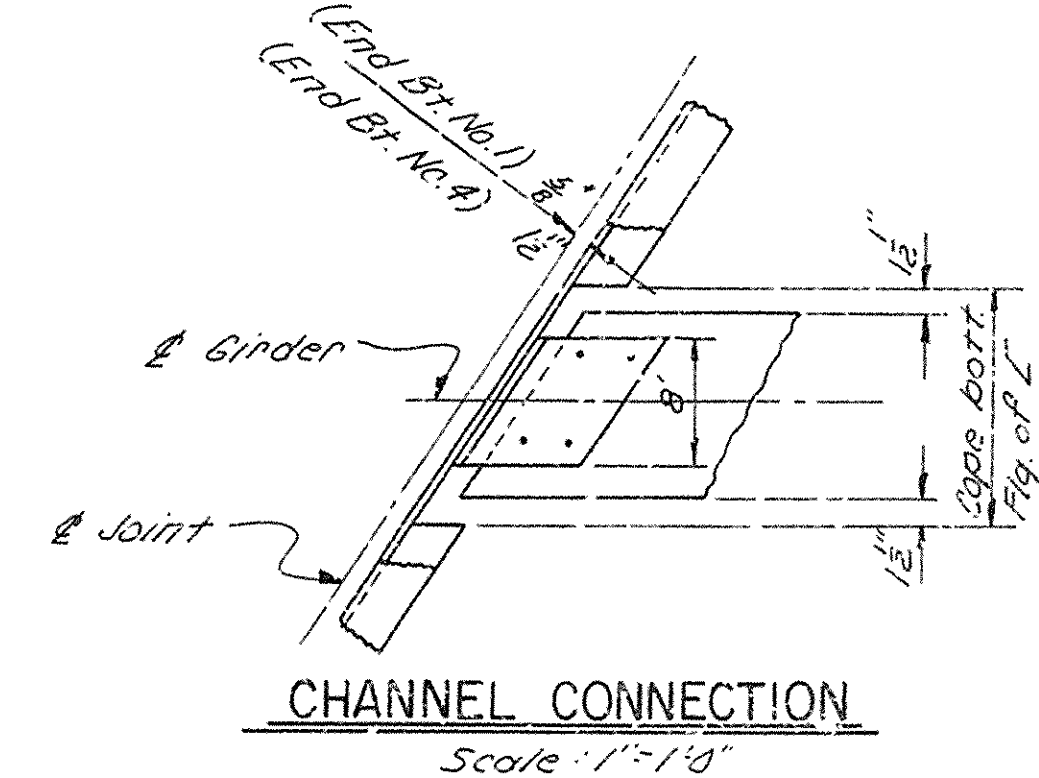
Note: 1/2" x 1" poured asphalt in slab and curb. To be paid for as class SHALCONcrete.



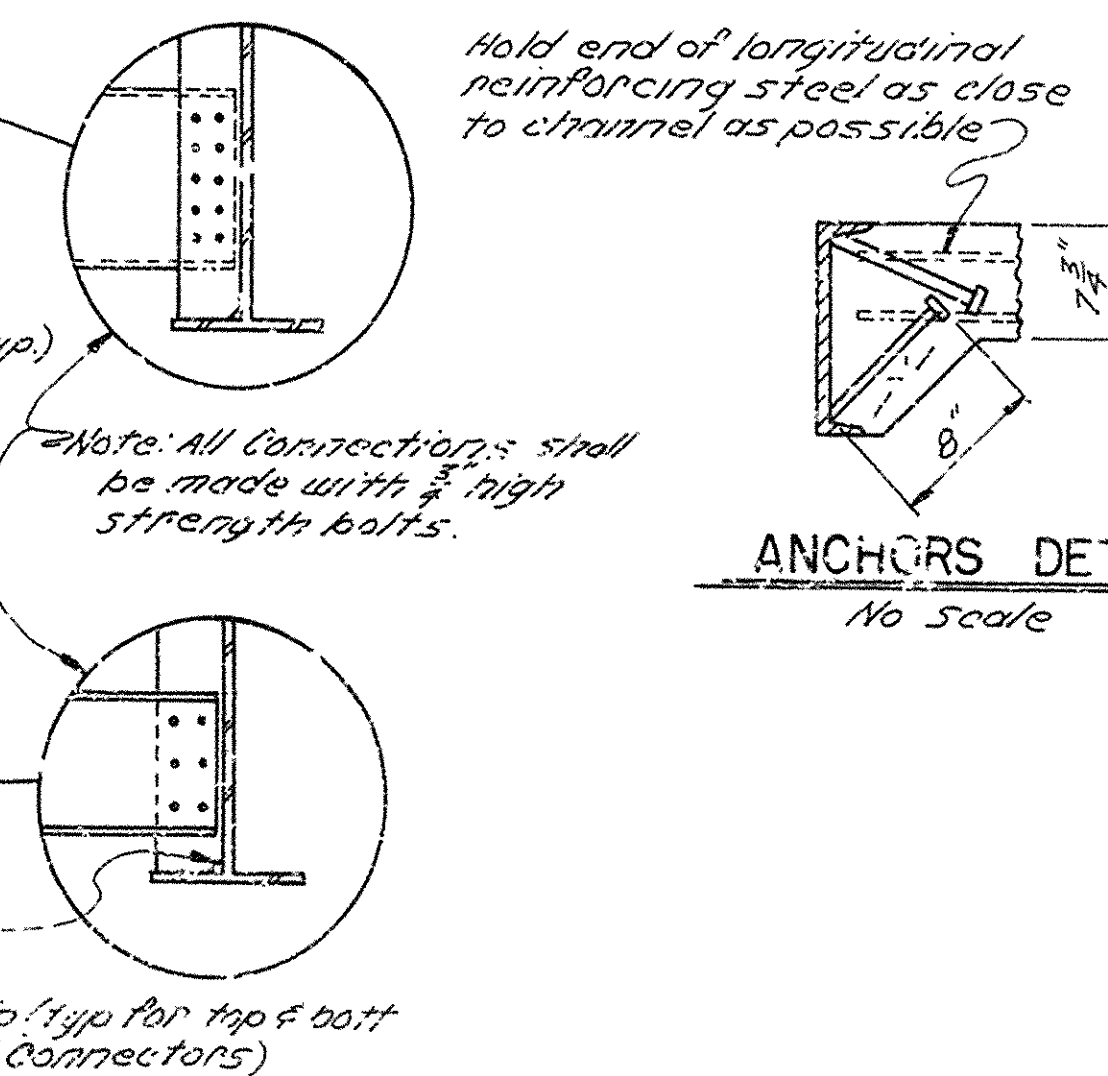
**JOINT SEAL SUPPORT**  
No Scale

NOTE: THE DIMENSION "D" SHALL CONFORM TO THE RECOMMENDATIONS OF THE SEAL MANUFACTURER AS APPROVED BY THE BRIDGE ENGINEER. THE DEPTH OF THE SEAL SHALL BE APPROXIMATELY EQUAL TO THE UNCOMPRESSED WIDTH OF THE SEAL. THE SEAL WIDTH FOR A 1/2" JOINT = 2"; THE SEAL WIDTH FOR A 3/4" JOINT = 5".

**CRACK CONTROL JOINT**  
No Scale



**CHANNEL CONNECTION**  
Scale:  $\frac{1}{8}'' = 1'-0''$



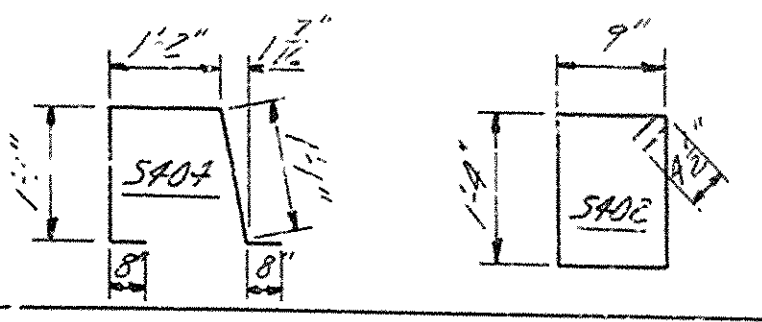
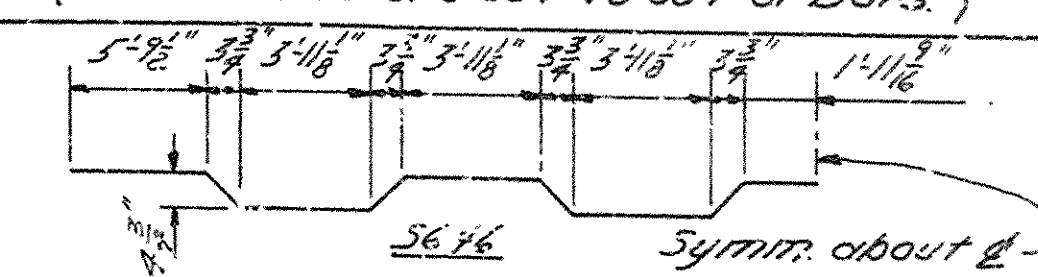
**ANCHORS DETAIL**  
No Scale

Note: All connectors shall be made with 1/2" high strength bolts.

1/2" tip (typ for top & bott of all connectors)

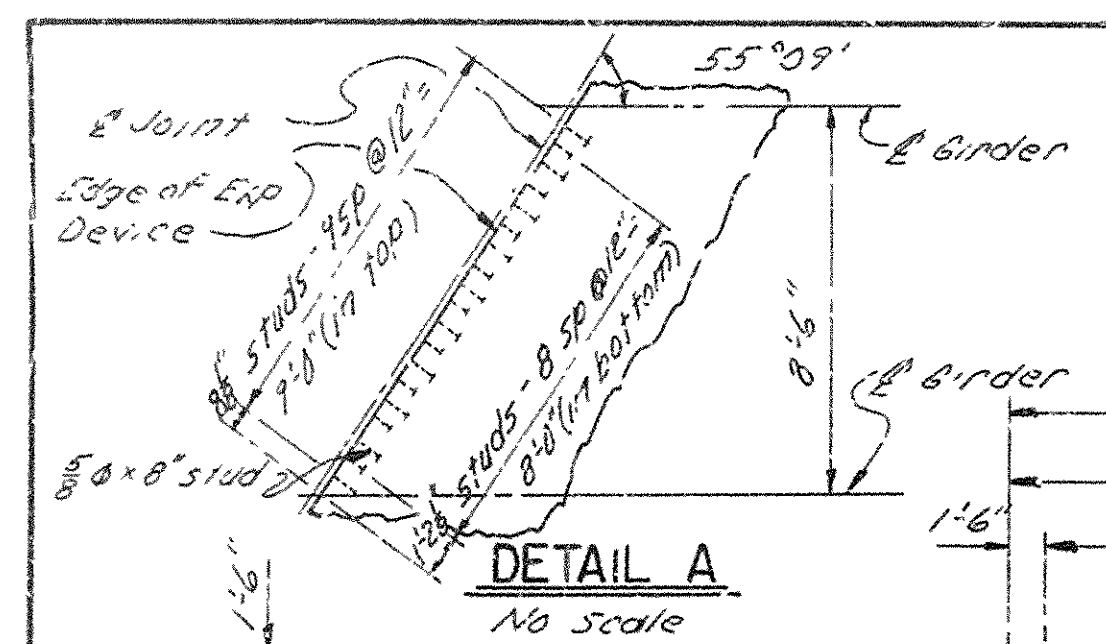
**BAR LIST - 226'-0" UNIT**

MR	No.	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of Bars)
S401	120	39'-0"	5/8"	
S402	420	4'-8"	2"	
S403	60	14'-8"	5/8"	
S404	420	4'-4"	2"	
S405	60	39'-0"	5/8"	
S601	28	6'-3"	5/8"	
S602 TO S644	4 ea.	6'-10" TO 39'-6"	5/8"	
S645	368	41'-8"	5/8"	
S646	183	42'-7"	3/4"	
S647	4	47'-6"	5/8"	
S648	70	40'-0"	5/8"	



\* Bend in field

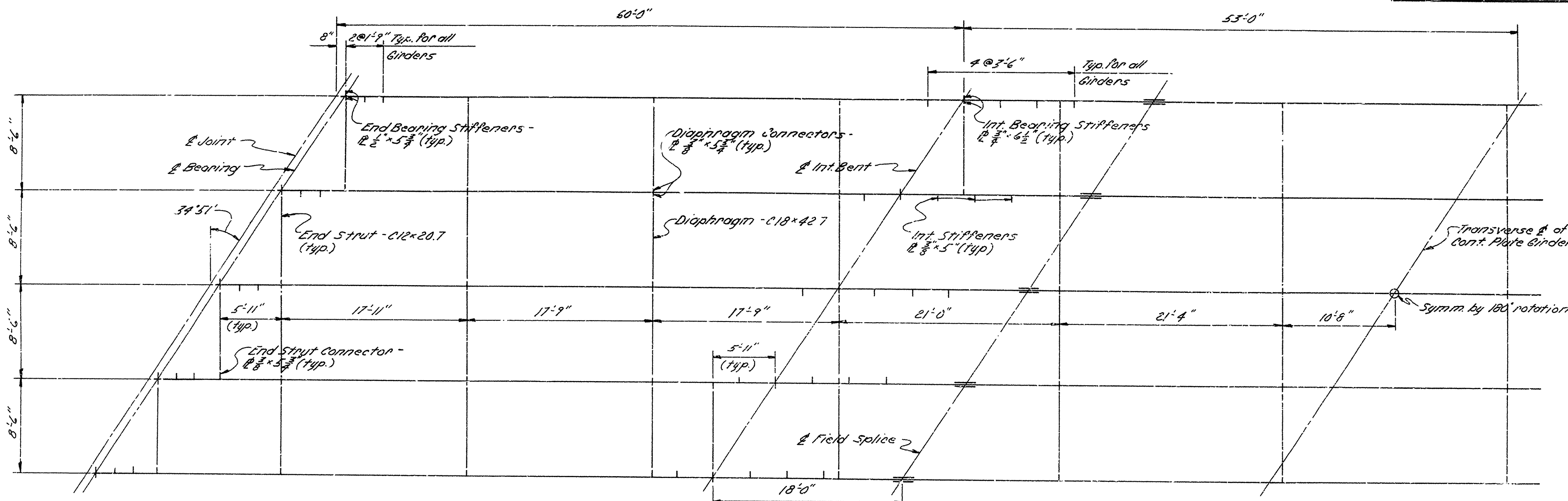
**DETAIL A**  
No Scale



SHEET 1 OF 3  
DETAILS OF 226'-0" CONTINUOUS  
PLATE GIRDER UNIT  
BRIDGE OVER HWY. 270  
HWY. 270 - HWY. 104  
JEFFERSON COUNTY  
ROUTE 65 SEC. 14  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: J.P.S. DATE: 1-5-73  
TRACED BY: GYA DATE: 1-5-73  
CHECKED BY: GYA DATE: 1-5-73  
SCALE: as noted  
BRIDGE NO. 5500A8B DRAWING NO. 18073

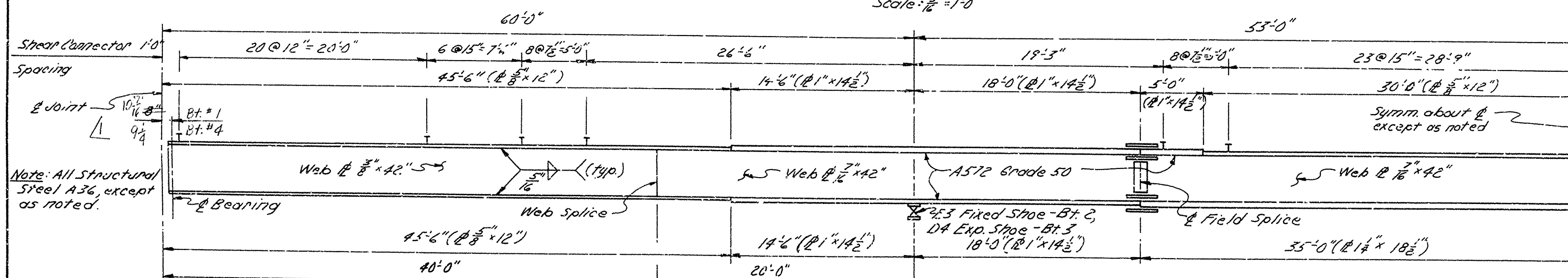


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7-18-73				6	ARK.	R-025			
2-12-74	910-2-12-74					-2(31)			
				JOB NO.	2782		21	187	
① 3300MB.DT.LS. 226' CONT. GIRDER 18079									



HALF FRAMING PLAN

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



HALF GIRDER ELEVATION

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

Note: All Structural Steel A36, except as noted.

DESIGN SPECIFICATIONS: AASHTO 1969  
DESIGN LIVE LOADING: HS20  
LOAD DISTRIBUTION:

DEAD LOAD TO GIRDER

DEAD LOAD TO COMPOSITE GIRDER (INCLUDES 116#/FT. FOR FUTURE WEARING SURFACES)

LIVE LOAD TO COMPOSITE GIRDER

UNIT STRESSES:  
CLASS 5 CONCRETE (N=10) 1,200 PSI  
REINFORCING STEEL 20,000 PSI  
STRUCTURAL STEEL (A36) 20,000 PSI  
STRUCTURAL STEEL (A572) 27,000 PSI

TO INTERIOR GIRDER 830#/FT. + WT. OF GIRDER

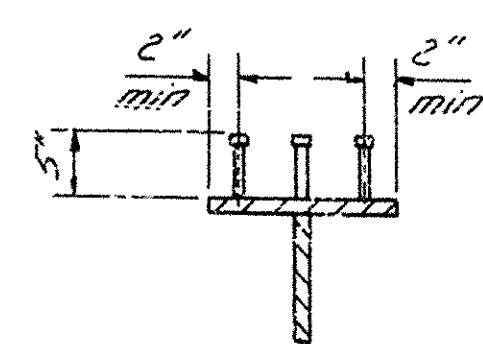
TO EXTERIOR GIRDER 815#/FT. + WT. OF GIRDER

243#/FT.

243#/FT.

1.545 WHEELS + IMPACT

1.388 WHEELS + IMPACT

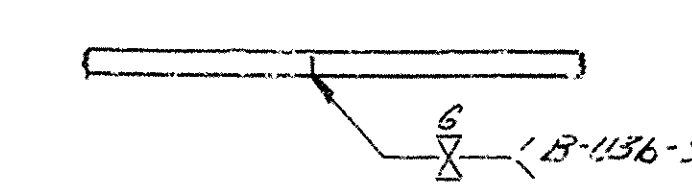


SHEAR CONNECTOR DETAIL

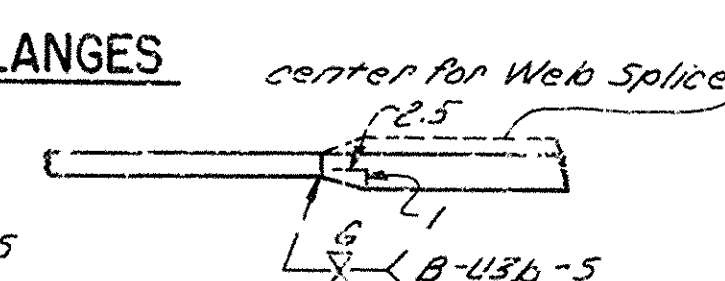
No Scale

STUD SHEAR CONNECTORS SHOWN SHALL BE 5" LONG, GRANULAR FLUX FILLED, SOLID FLUXED OR EQUAL, AND AUTOMATICALLY END WELDED TO GIRDER FLANGES IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER. 7/8" DIAMETER STUDS MAY BE SUBSTITUTED FOR THE 3/4" DIAMETER STUDS SHOWN AT THE RATIO OF 0.73 - 7/8" STUDS IN PLACE OF 1 - 3/4" STUDS. THE 3/4" STUDS SHALL BE USED AS THE BASIS OF PAYMENT OF 74.0 LBS. PER ONE HUNDRED STUDS.

PLAN-UNEQUAL WIDTH FLANGES



EQUAL THICKNESS



UNEQUAL THICKNESS

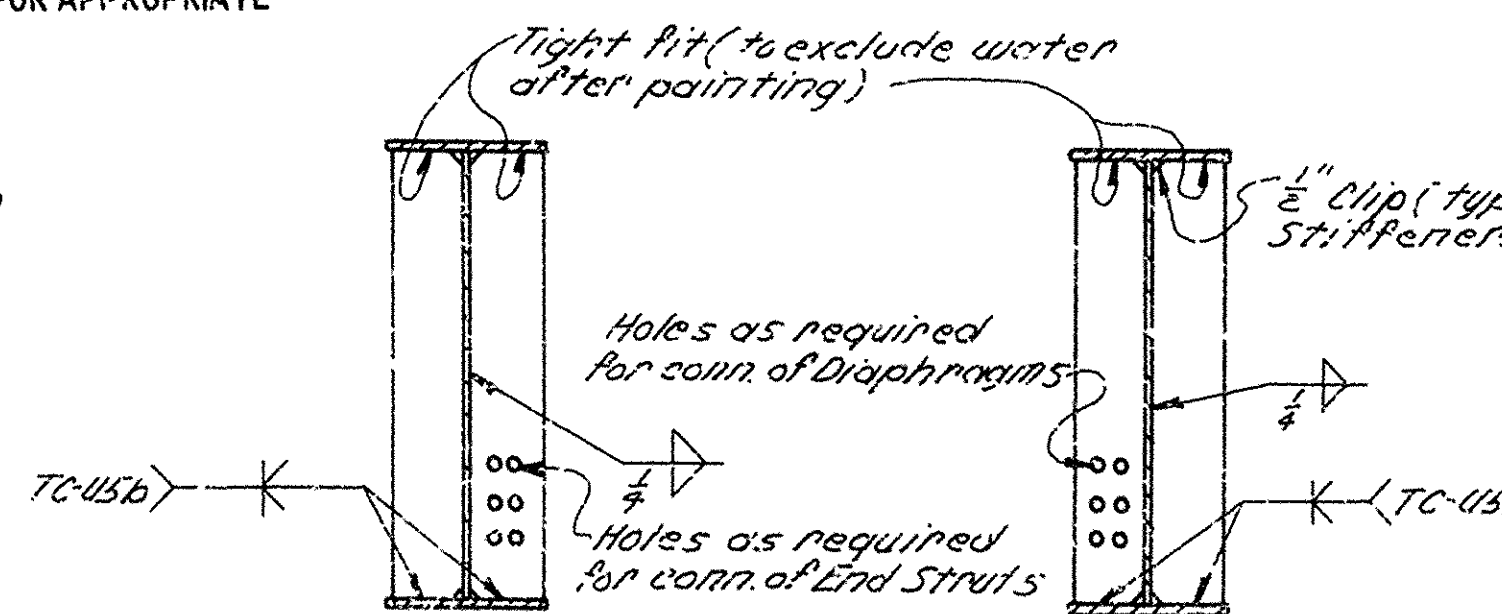
FLANGE & WEB SPLICE

BUTT WELD DETAILS

No Scale

JOINTS SHOWN ARE FOR MANUAL SHIELDED METAL ARC WELDING. SUBMERGED ARC WELDING MAY BE USED, IN WHICH CASE, REFER TO CURRENT AMERICAN WELDING SOCIETY SPECIFICATIONS D2.0 FOR APPROPRIATE JOINT DESIGNATION.

ALL GIRDERS SHALL BE SHOP ASSEMBLED IN THEIR TRUE POSITION. FIELD CONNECTION HOLES REAMED AND ALL PARTS MATCH MARKED. THE SHOP ASSEMBLY SHALL HAVE A MINIMUM ASSEMBLED SEQUENCE OF 3 SECTIONS.



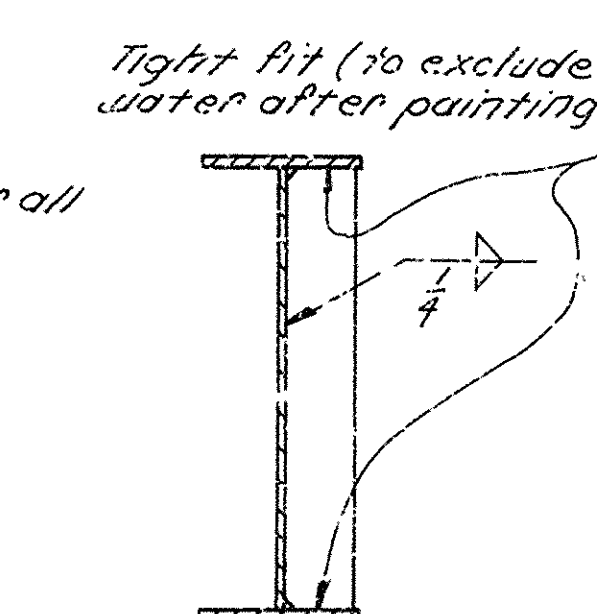
END BEARING STIFFENER

No Scale

INT. BEARING STIFFENER

No Scale

Note: See Framing Plan for size.



INT. STIFFENER

No Scale

Revised - changed & bearing is shown. 2-12-74 LDF

SHEET 2 OF 3  
DETAILS OF 226'-0" CONTINUOUS  
PLATE GIRDER UNIT  
BRIDGE OVER HWY. 270  
HWY. 270 -- HWY. 104  
JEFFERSON COUNTY  
ROUTE 65 SEC. 14

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: J.P.S. DATE: 1-7-73  
TRACED BY: DATE: 1-7-73  
CHECKED BY: G.V.A. DATE: 2-4-73

SCALE: as noted

BRIDGE NO. 5500 A & B DRAWING NO. 18079



