





7

# SUMMARY OF BRIDGE QUANTITIES - JOB 11705

BRIDGE NO.	CODE NO.	NAME	PLATE TITLE	UNIT OF BRIDGE	ITEM NO.	801	802	803	804	804	SP-1005 (A11.1) 805 (A11.2)	812	1006	SP-1005-1	SP-802-9	SP-806	SP-1005-1705
					ITEM	COMMON EXCAVATION FOR STRUCTURES	CLASS S CONCRETE	REINFORCING STEEL	PRECAST CONCRETE PILING (16" DIA.)	PROVIDING EQUIPMENT FOR DRIVING TEST PILES	(A11.1) METAL (ALUMINUM) BRIDGE RAILING (TYPE C) (A11.2) METAL (STEEL) BRIDGE RAILING (TYPE C)	BRIDGE NAME PLATES (TYPE C)	REMOVAL OF EXISTING BRIDGE STRUCTURES	DETENTION CONSTRUCTION	Boiled Linseed Oil	Structural Steel in Beam Spans	Remodeling Existing Bridge Structures
					UNIT	Cu. Yd.	Cu. Yd.	Lb.	Lin. Ft.	Comp. Item	Lin. Ft.	Plate	Comp. Item	Comp. Item	Gal.	Lb.	Comp. Item
5154	X020	DITCH 49		END BENTS 1 & 4	86	21.44	2895	430									
				INT. BENT 2		10.02	1485	245									
				INT. BENT 3		10.02	1433	240									
				END SPANS 1 & 3		119.33	24,860				113	1			6.2		
				INT. SPAN 2		58.94	12,384				56				3.1		
5155	X020	DITCH 50		TOTALS FOR Bridge	88	219.80	43,060	905	0.25	169	1	0.5	0.4	9.3			
				END BENTS 1 & 4	66	20.80	2907	350									
				INT. BENT 2		9.63	1466	205									
				INT. BENT 3		9.63	1416	200									
				END SPANS 1 & 3		100.90	20,573				101.5	1			5.6		
3490A	X020	DITCH 50		INT. SPAN 2		49.64	10,233				50				2.8		
				TOTALS FOR Bridge	66	190.60	36,600	755	0.25	151.5	1	0.4	0.4	8.4			
				End Bents 1 & 4	32	8.48	1,382	140									
				Int. Bents 2 & 3		6.78	1,218	165									
				End Spans 1 & 3		47.57	8,780				101.5	1					
2563A	X071	H. Jeanette Bayou Ten Mile Paved		Int. Span 2		23.57	4,390				50						
				TOTALS FOR Bridge	32	86.40	15,770	305	0.25	151.5	1						0.4
				Abut. 1 & 2	182	67.80	10,422	280		6'	1					110	
				Int. Bents 1, 2 & 3		29.30	2,520	485									
				Spans 1, 2, 3 & 4		69.60	17,588				280				63,950		
2563A	X071	H. Jeanette Bayou Ten Mile Paved		TOTALS FOR Bridge	182	166.70	30,530	765	0.25	347	1					63,950	0.6
				TOTALS FOR Job	368	663.50	125,960	2,730	1.0	819	4	1.0	1.0	17.7	63,950		1.0

\*See SP 806-10

## SUMMARY OF BRIDGE QUANTITIES

LOUISE - LEHI

CRITTENDEN COUNTY

ROUTE 79 SEC. 18

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

Revised 6-29-67. FMH  
Added Bridge No. 3490A & 2563A.

DRAWN BY: RVM DATE: 2-29-66

TRACED BY: DATE: SCALE: 1" = 40'

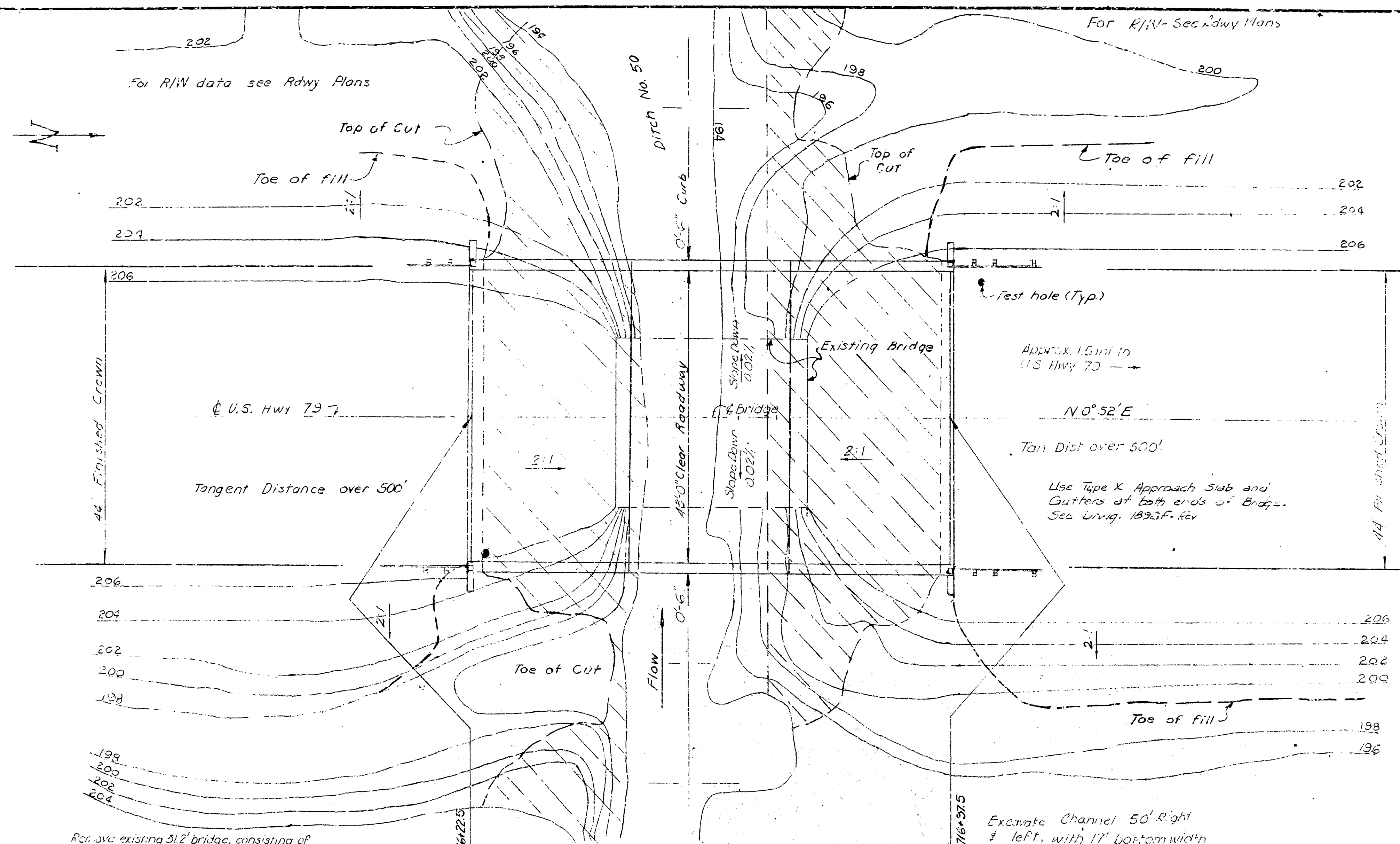
CHECKED BY: FMH DATE: 2-29-66

L. P. Pearson  
BRIDGE ENGINEER

BRIDGE NO. 5134, 5135  
3490A, 2563A DRAWING NO. 13833

FED. ROAD NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	F-295-3(11)			
JOB NO.	11705			9	83

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Remove existing 31.2' bridge, consisting of 1 beam span with concrete deck & concrete abutments. Construct 30' detour bridge 45' upstream from old, deck elev 204.0. See sec. 1006 of the Standard Specifications & SP-1008-1. Detour Bridge shall have a 20' rdwy. (minimum) and be designed for H-15 loading.

### PLAN OF BRIDGE

Total Length of Bridge = 75'-0"  
3-25' R.C. Slab Spans w/Voids

Excavate Channel 50' Right  
# left, with 17' bottom width  
& 2:1 side slopes. Channel  
bottom Elev. 194.0. Approx.  
420 cu yds excavation.

### SOILS LEGEND

- a - Brown Sandy Clay & Gravel Fill
- b - Grey Clay
- c - Blue Clay
- d - Grey Silty Sand
- e - Fine Grey Sand

### GENERAL NOTES

Bench Mark - Top wheel guard S.E. end bridge (13' Rt. of Station 716+45), Elev. 208.45.

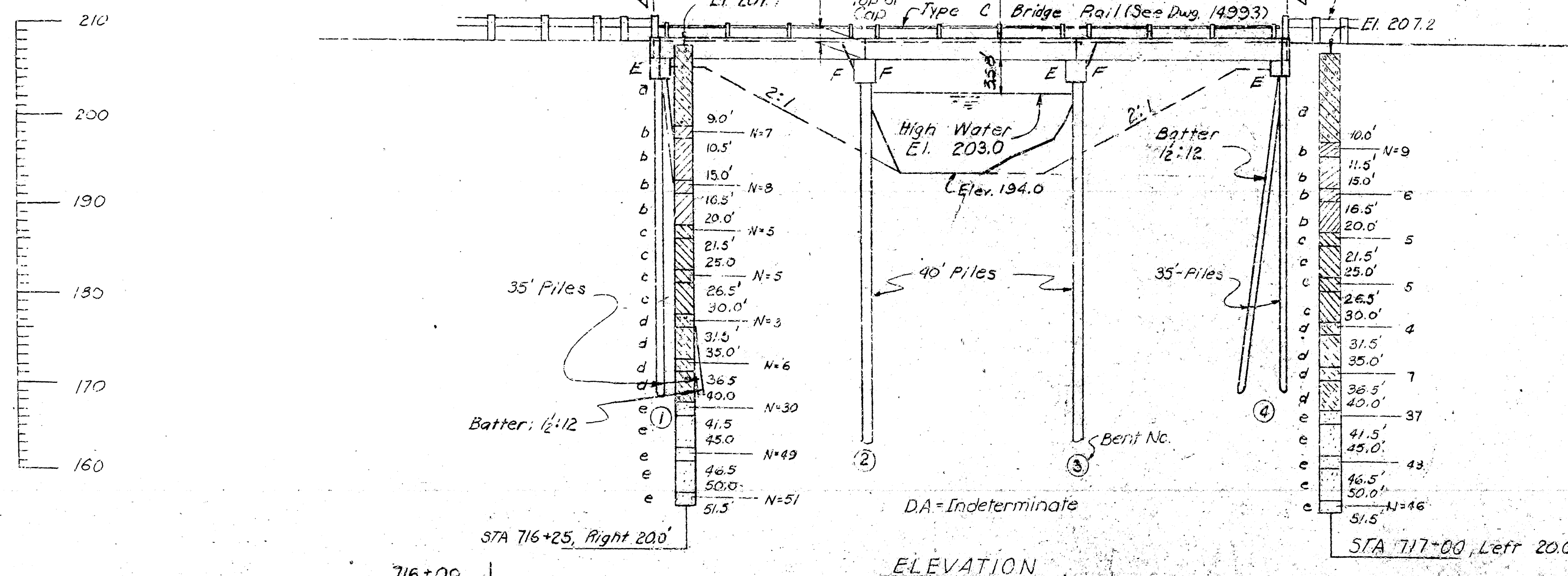
All piling shall be 16" Octagonal Precast Concrete driven with an approved air, steam, or diesel hammer to a minimum bearing capacity of 44 tons per pile and to a minimum penetration of 20'. Lengths of piles shown are for estimating purposes only. Actual lengths to be determined in the field. Drive one 45' test pile in bent 2.

For details of Precast Concrete Piling see Dwg. 2382.  
For details of Substructure see Dwg. No. 15102A.  
For details of Superstructure see Dwg. No. 15102.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereto, and applicable Special Provisions.

DESIGN SPECIFICATIONS: AASHTO 1961

Live Loading: HS20  
Unit Stresses: Class S Concrete (A-10) 1,200 psi  
Reinforcing Steel 20,000 psi



LAYOUT OF BRIDGE  
OVER DITCH NO. 50  
LOUISE - LEHI  
CRITTENDEN COUNTY  
ROUTE 79 SEC. 18

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

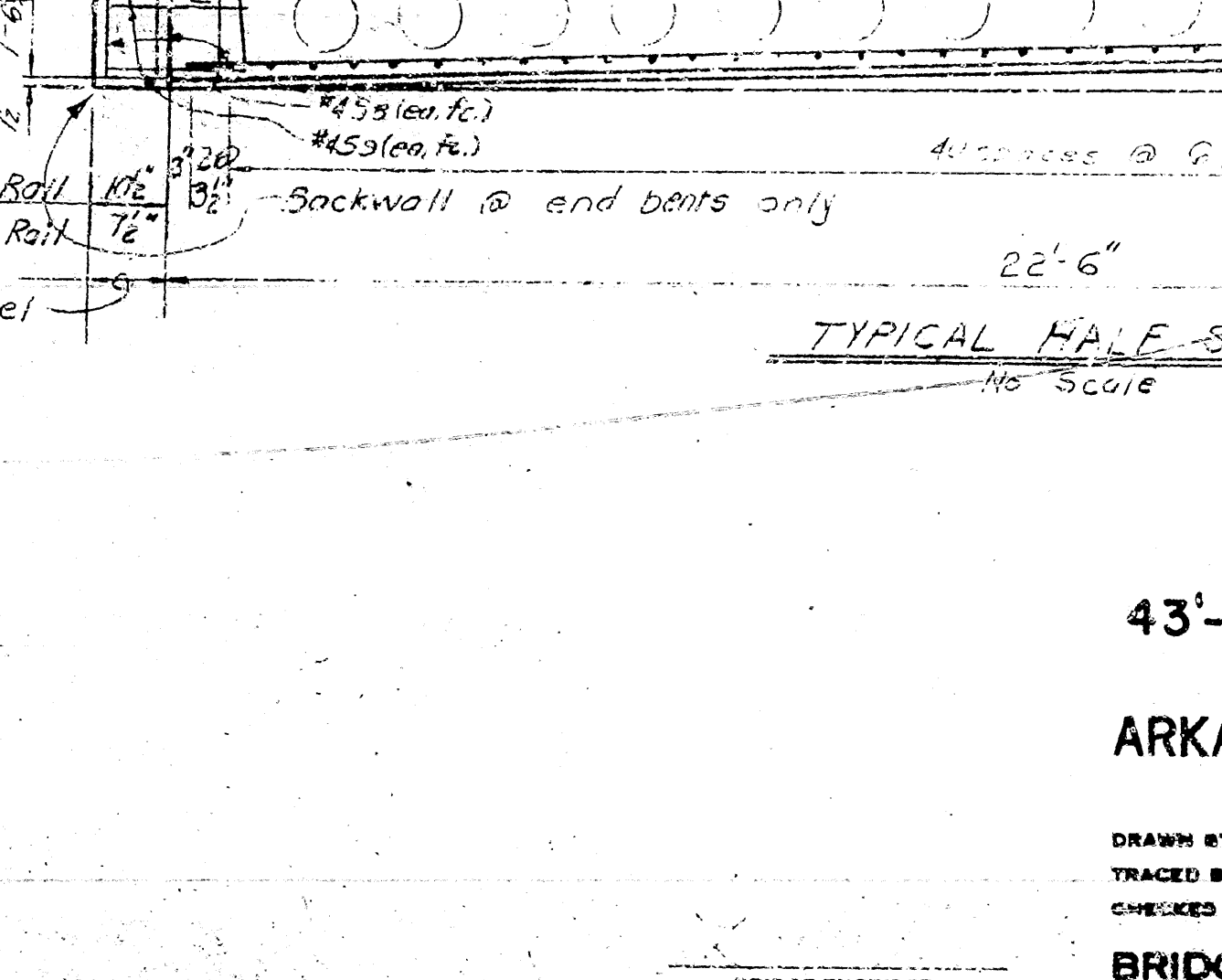
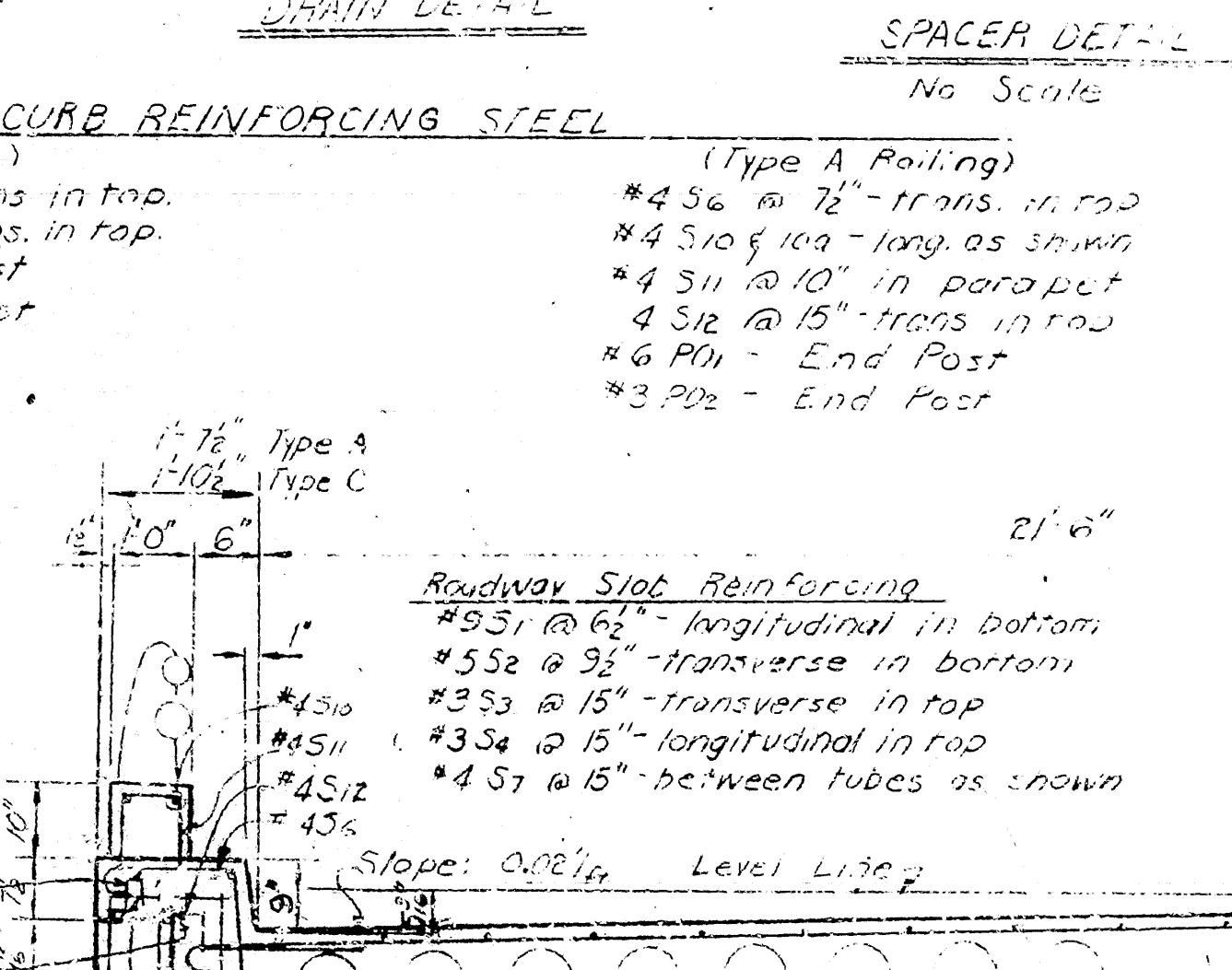
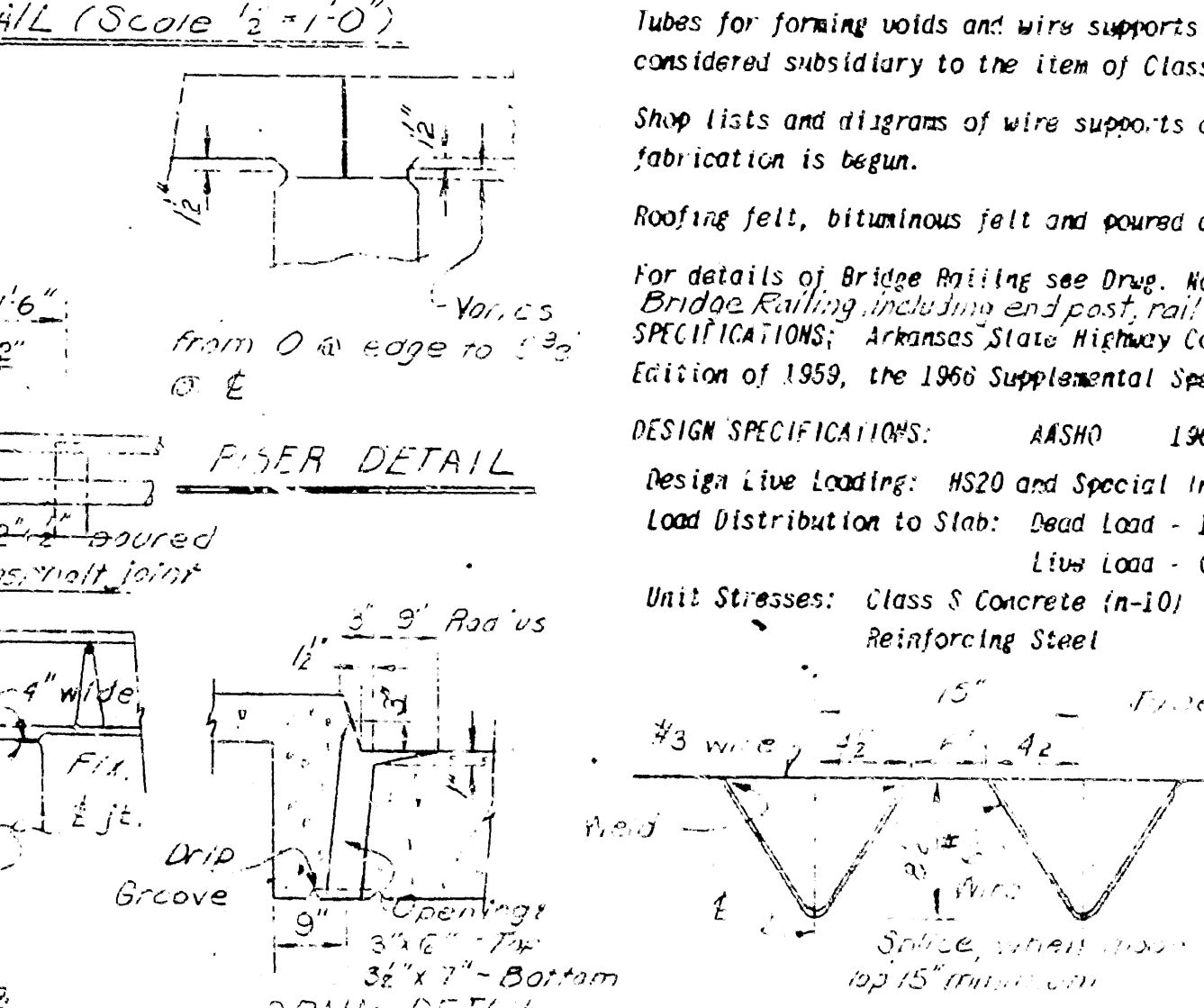
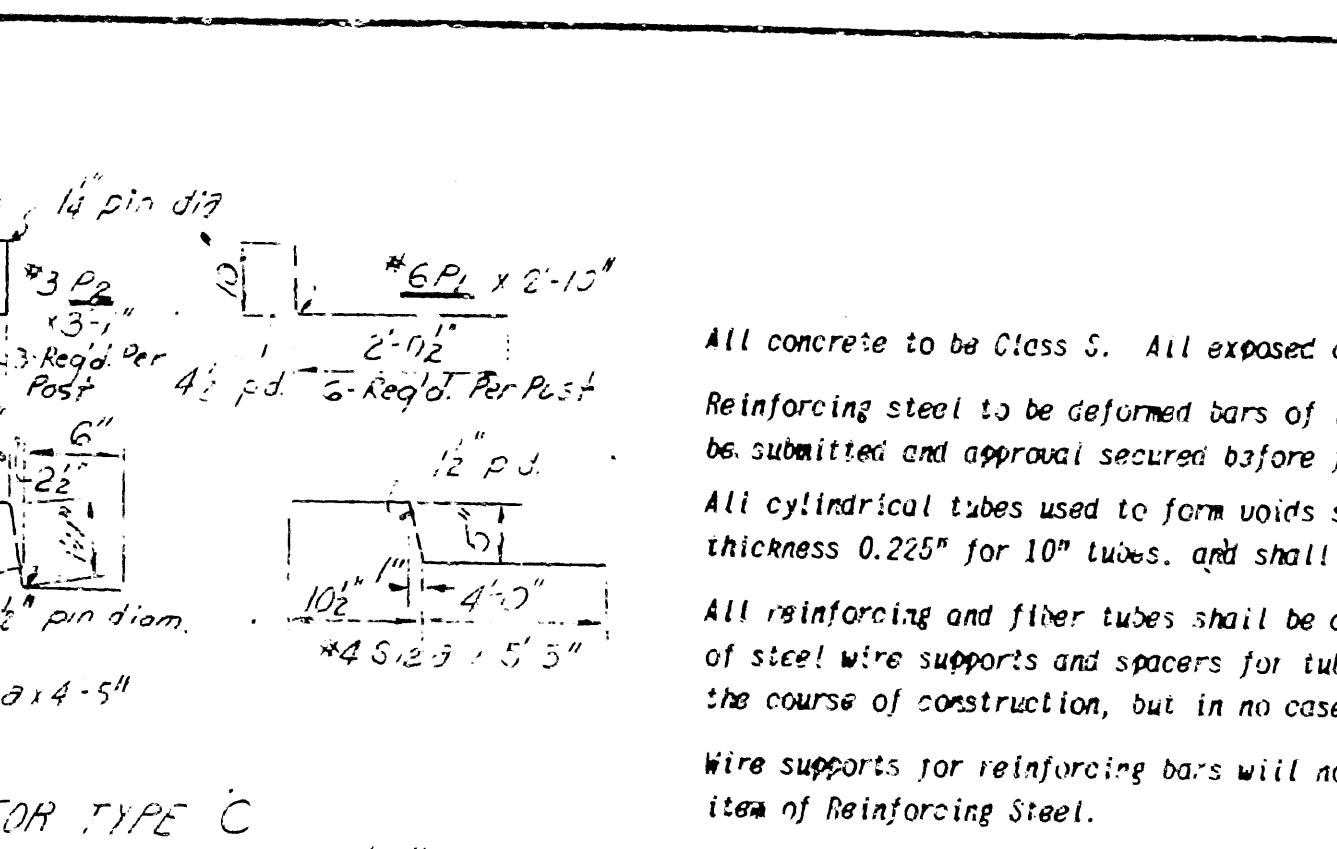
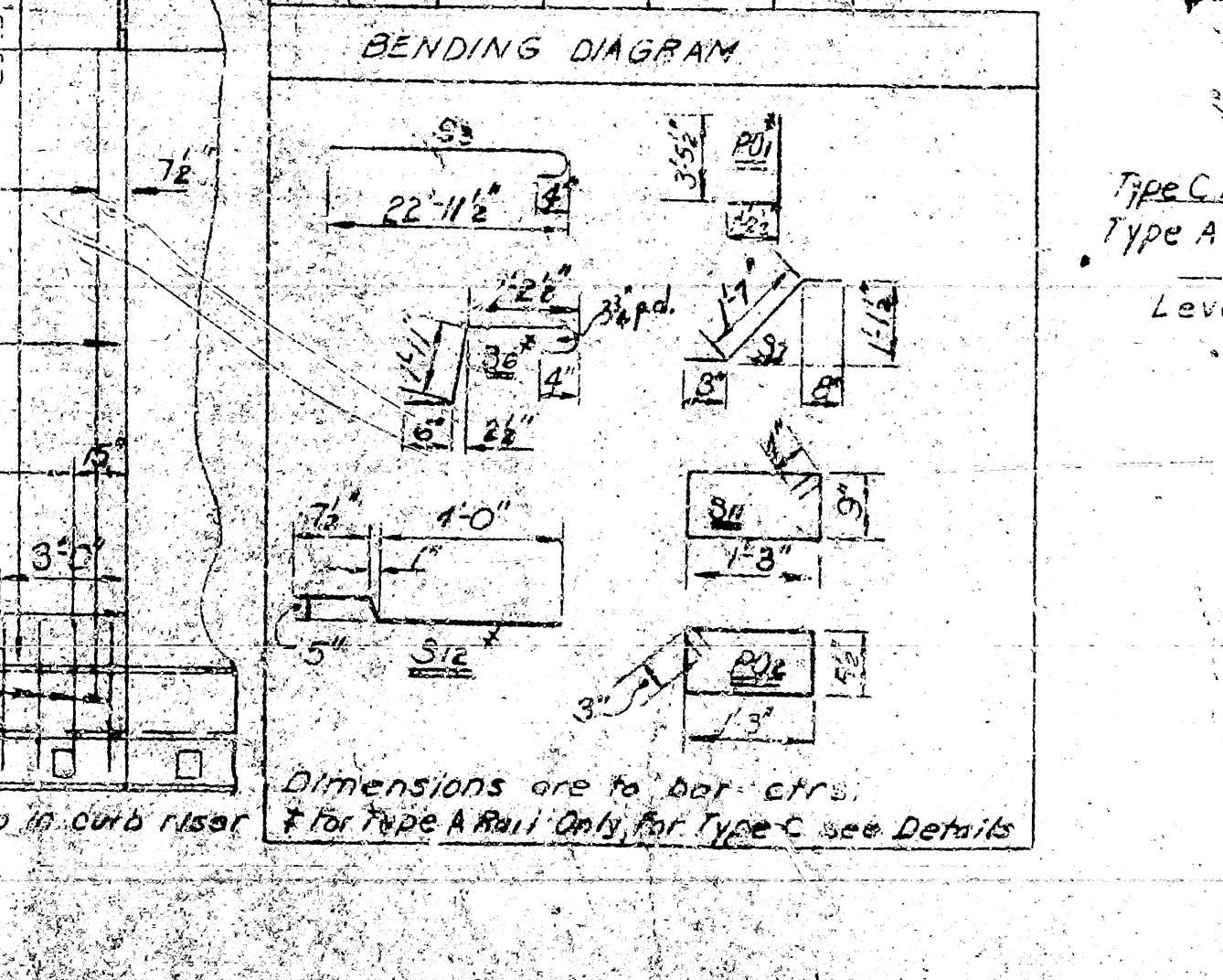
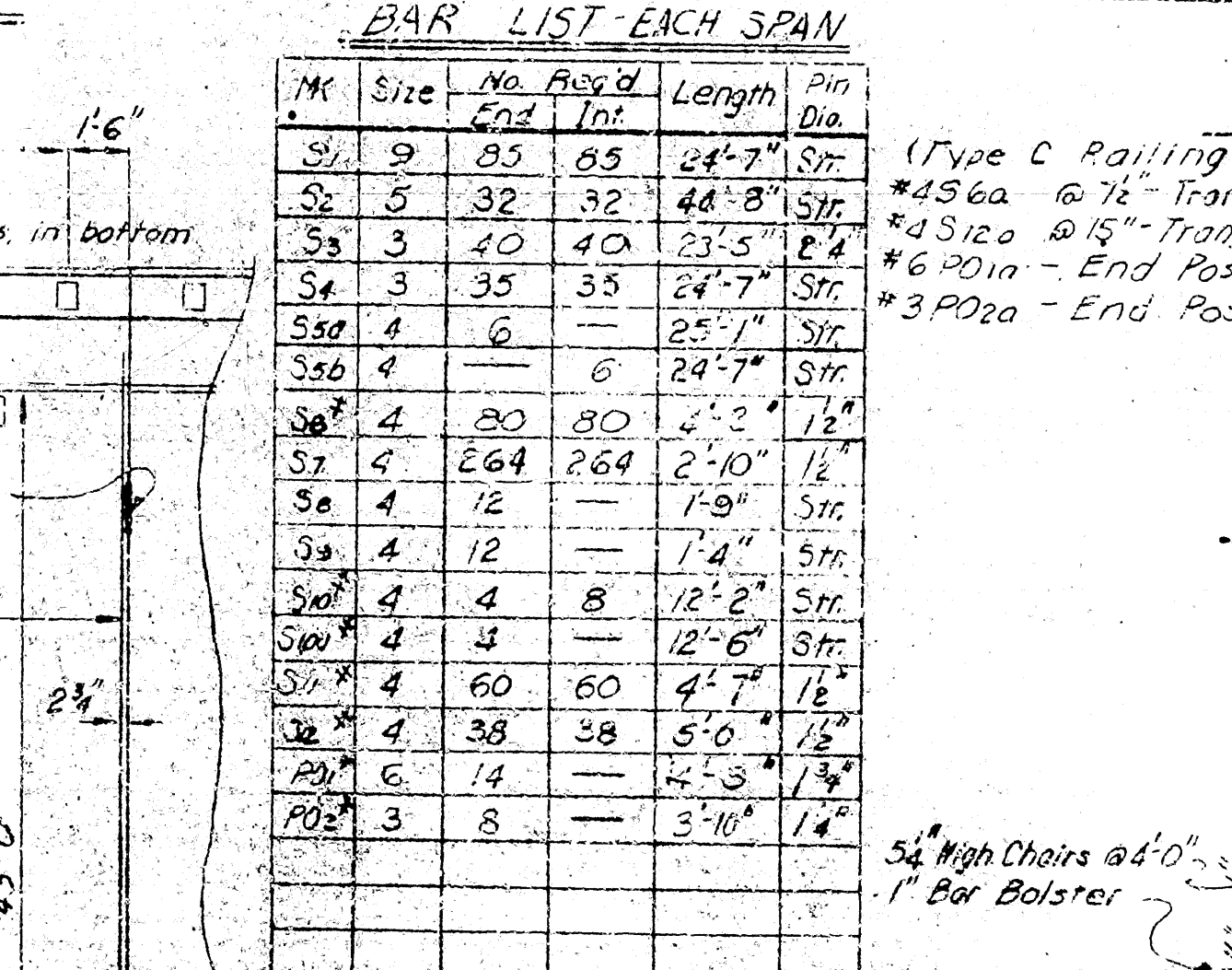
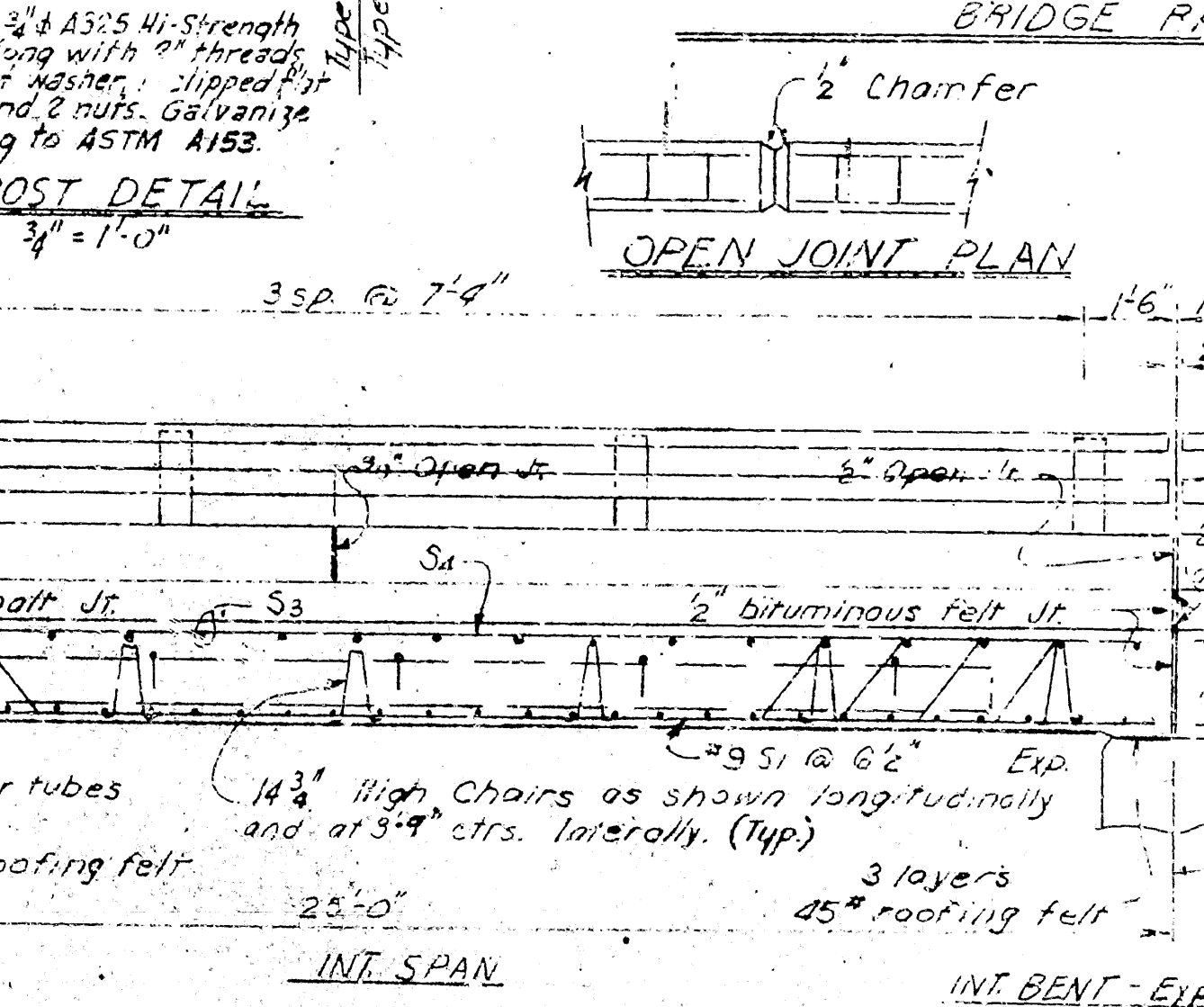
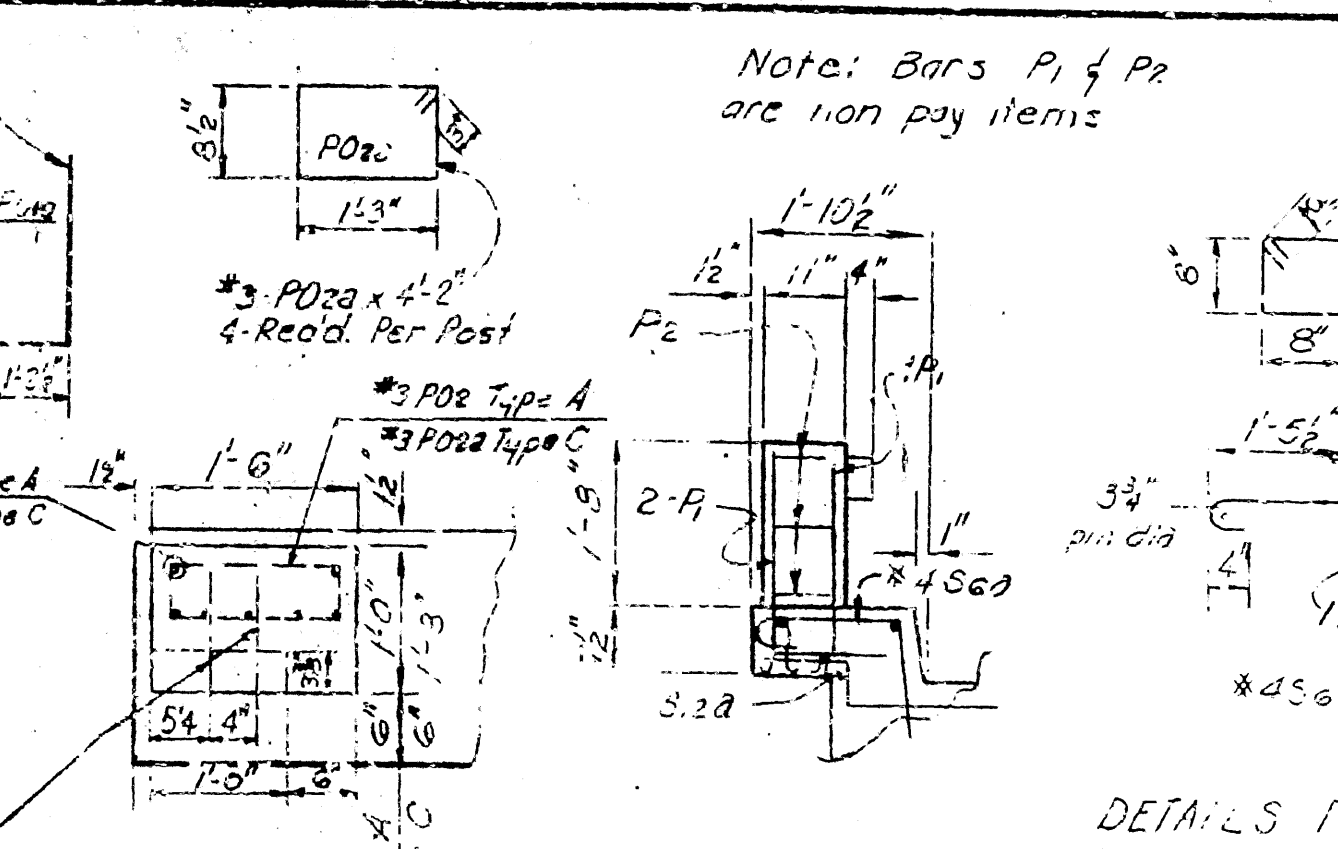
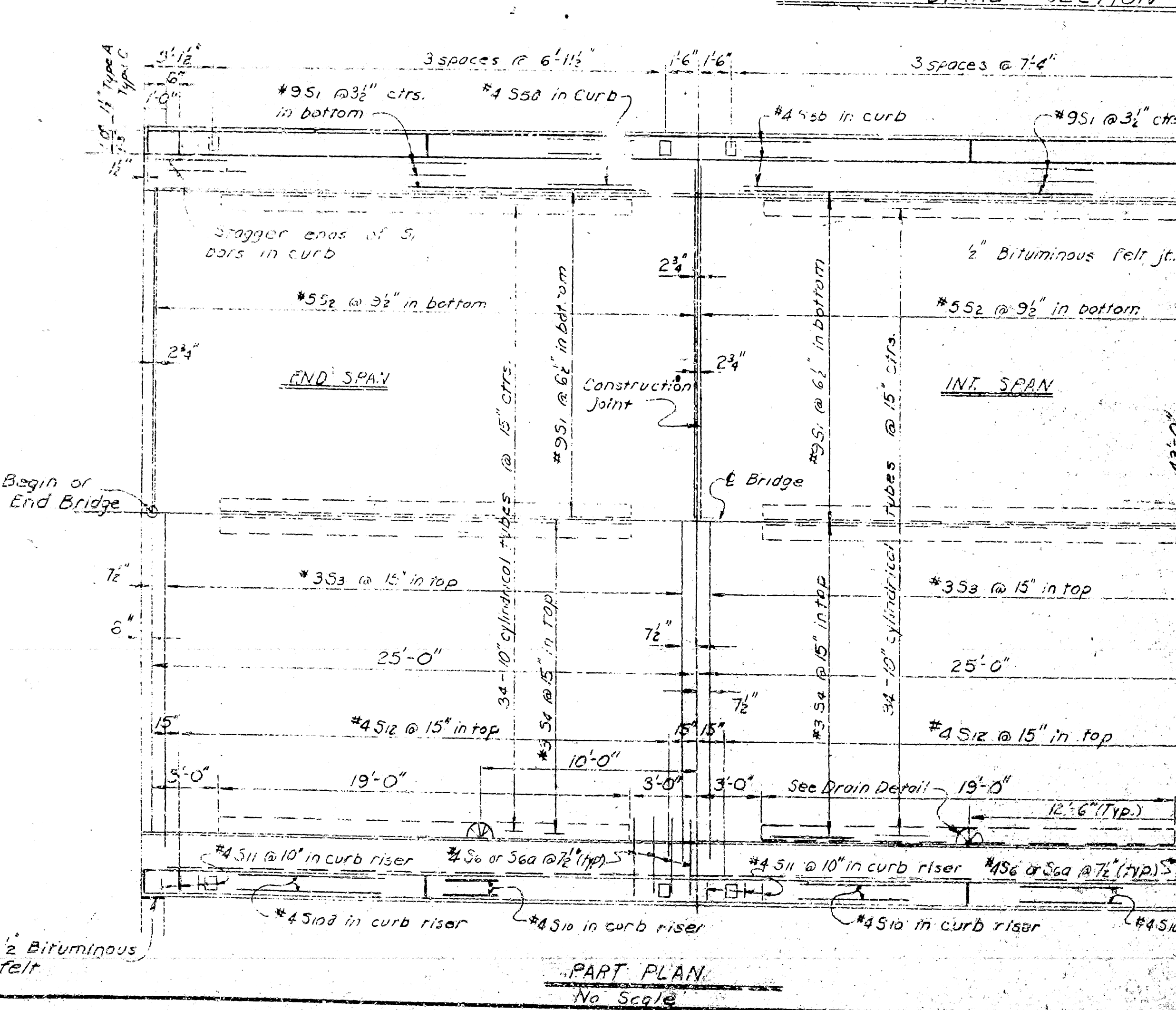
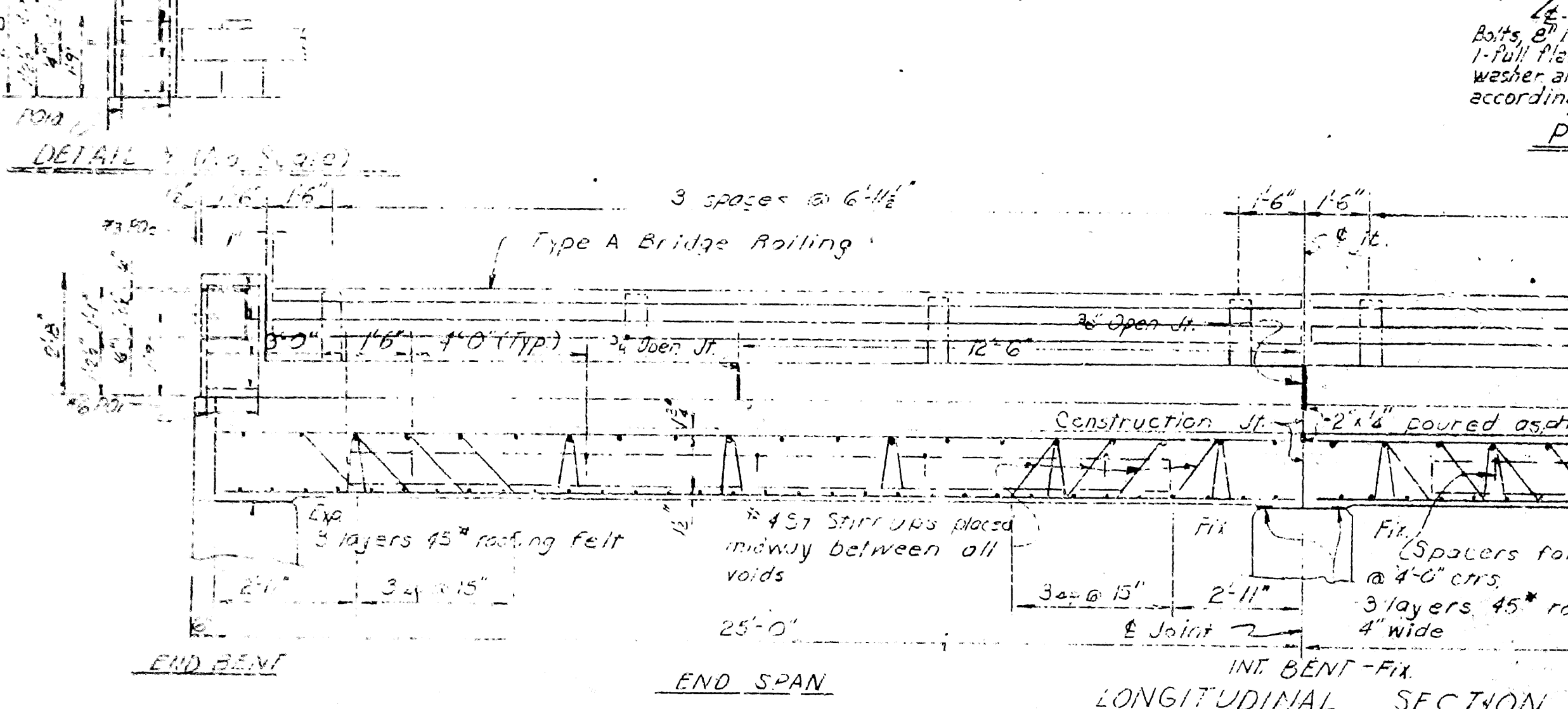
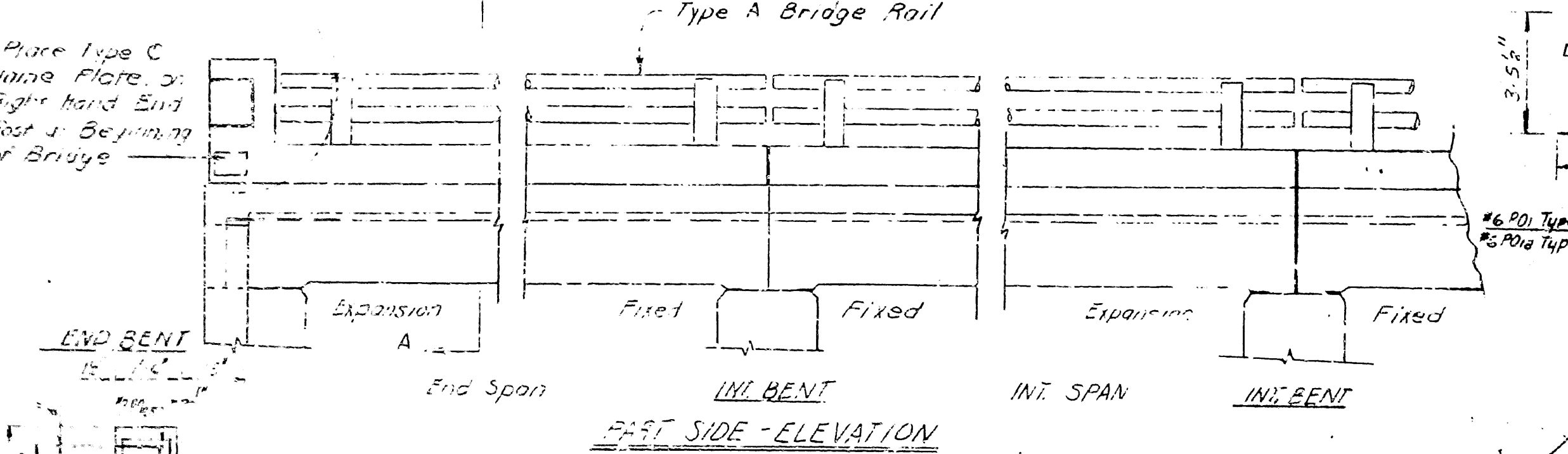
DRAWN BY: FLM DATE: 8-17-66  
TRACED BY: DATE: 8-12-66  
CHECKED BY: FMH DATE: 8-12-66

BRIDGE NO. 5135 DRAWING NO. 13835

L.P. Pearson  
BRIDGE ENGINEER



See Detail 1 for End Post Used with Type C Railing



FED. ROAD NO. 6

STATE ARK.

FED. AID PROJ. 1-015-3-00

FISCAL YEAR 1975

SHEET NO. 21

TOTAL SHEETS 83

GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered 3/4" unless otherwise noted.

Reinforcing steel to be deformed bars of intermediate or hard grade. Shop lists and bending diagrams must be submitted and approved before fabrication is begun.

All cylindrical tubes used to form voids shall be moisture protected, laminated type construction, minimum thickness 0.225" for 10" tubes, and shall be furnished complete with end closures.

All reinforcing and fiber tubes shall be accurately located in the forms and firmly held in place by means of steel wire supports and spacers for tubes of sufficient size and number to prevent displacement during the course of construction, but in no case of lesser design than that shown.

Wire supports for reinforcing bars will not be paid for directly but will be considered subsidiary to the item of Reinforcing Steel.

Tubes for forming voids and wire supports and spacers for tubes will not be paid for directly but will be considered subsidiary to the item of Class S Concrete.

Shop lists and diagrams of wire supports and spacers for tubes shall be submitted for approval before fabrication is begun.

Roofing felt, bituminous felt and poured asphalt joints shall be measured and paid for as Class S Concrete.

For details of Bridge Railing see Draw. No. 14993 or 14992 as shown on Bridge Layout.

Bridge Railing, including end post, rail posts (fasteners) shall be paid for at the price of Metal Br. Rail SPECIFICATIONS; Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications and designated Special Provisions.

DESIGN SPECIFICATIONS: AASHTO 1961

Design Live Loading: HS20 and Special Interstate Loading of 2-24,000 axles 4'-0" on centers.

Load Distribution to Slab: Dead Load - 175 psf

Live Load - 0.184 wheels/ft width plus 30% impact

Unit Stresses: Class S Concrete (in-10) 1,200 psi

Reinforcing Steel 20,000 psi

DETAILS OF STANDARD 25'-0" R.C. SLAB SPANS (W/VOIDS)

43'-0" CLEAR ROADWAY 6" CURBS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JIM DATE: 15 Sept 66

TRACED BY: DATE: SCALE: 3/4" = 1'-0" or as noted

CHECKED BY: J.A.S. DATE: 9-29-66

BRIDGE NO. 5135 DRAWING NO. 15102

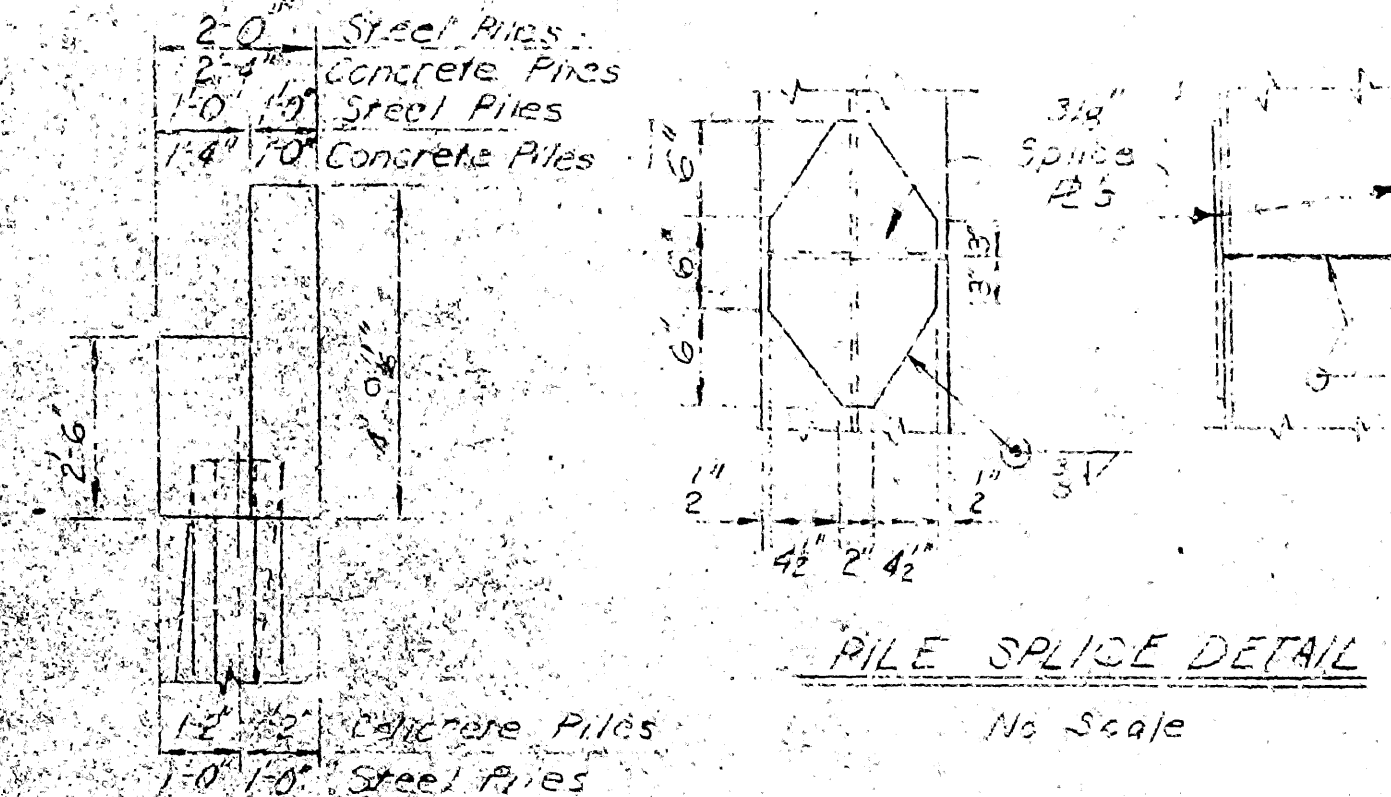
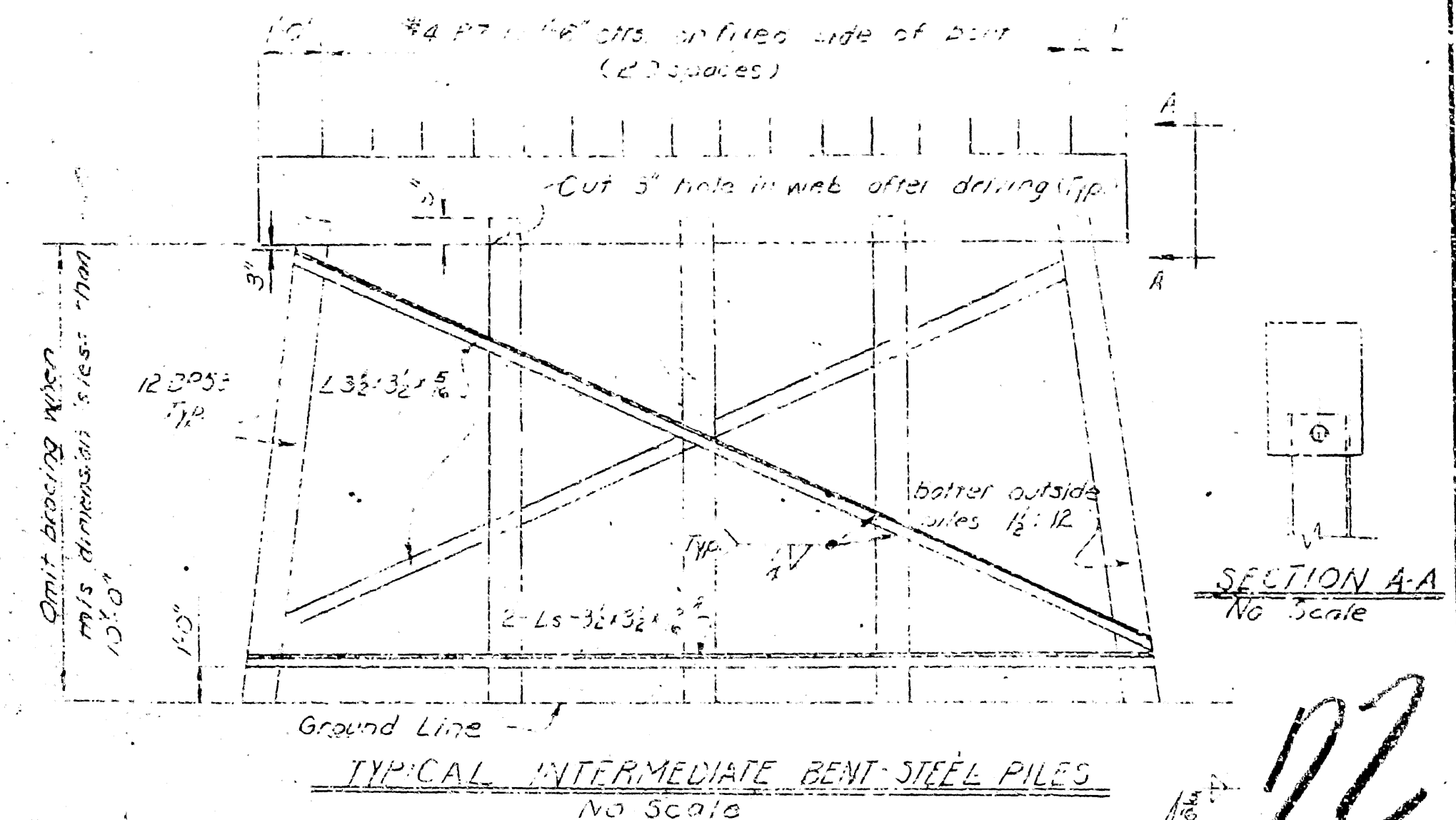
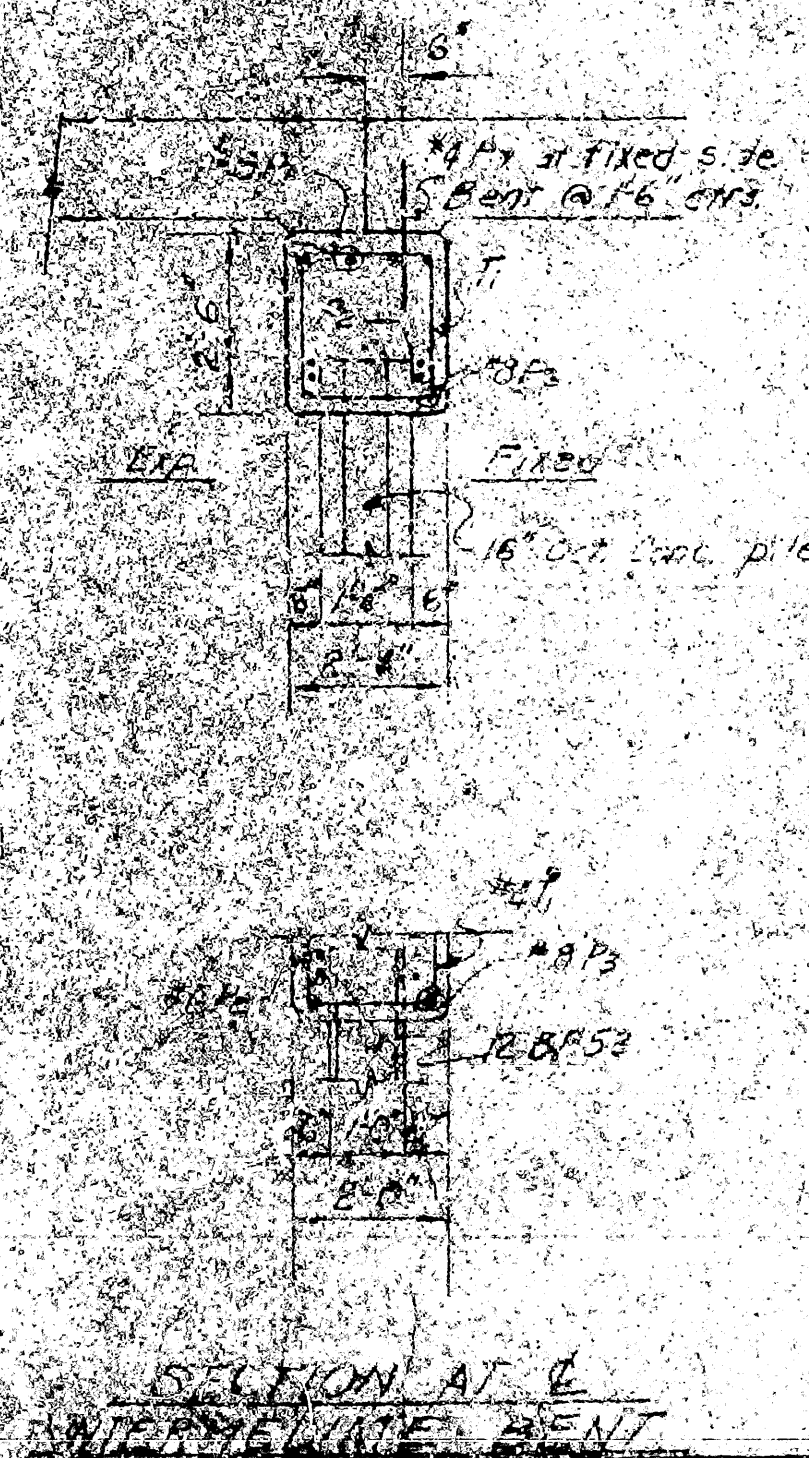
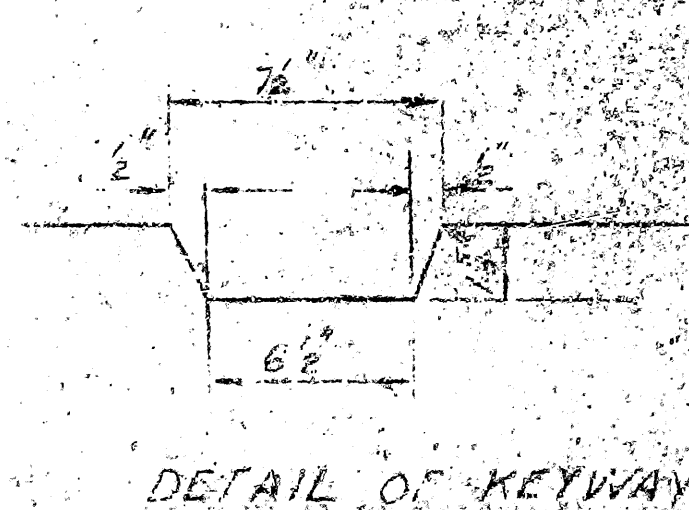
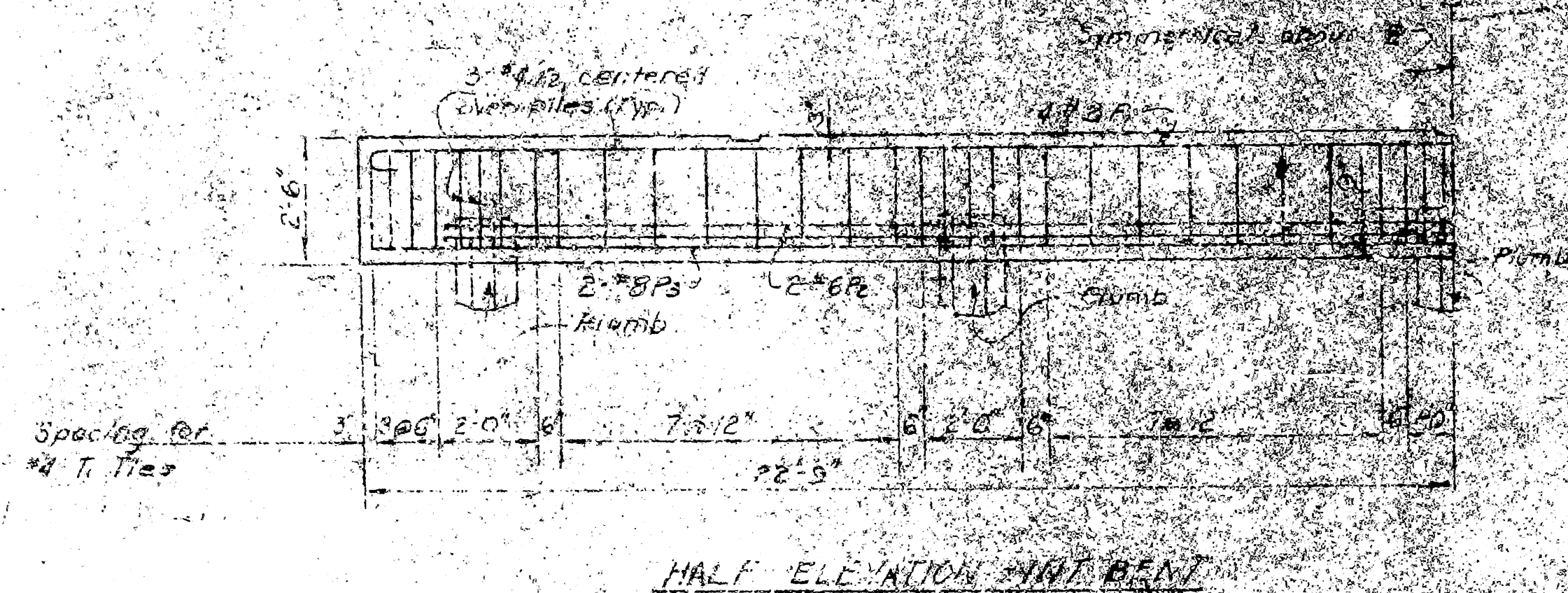
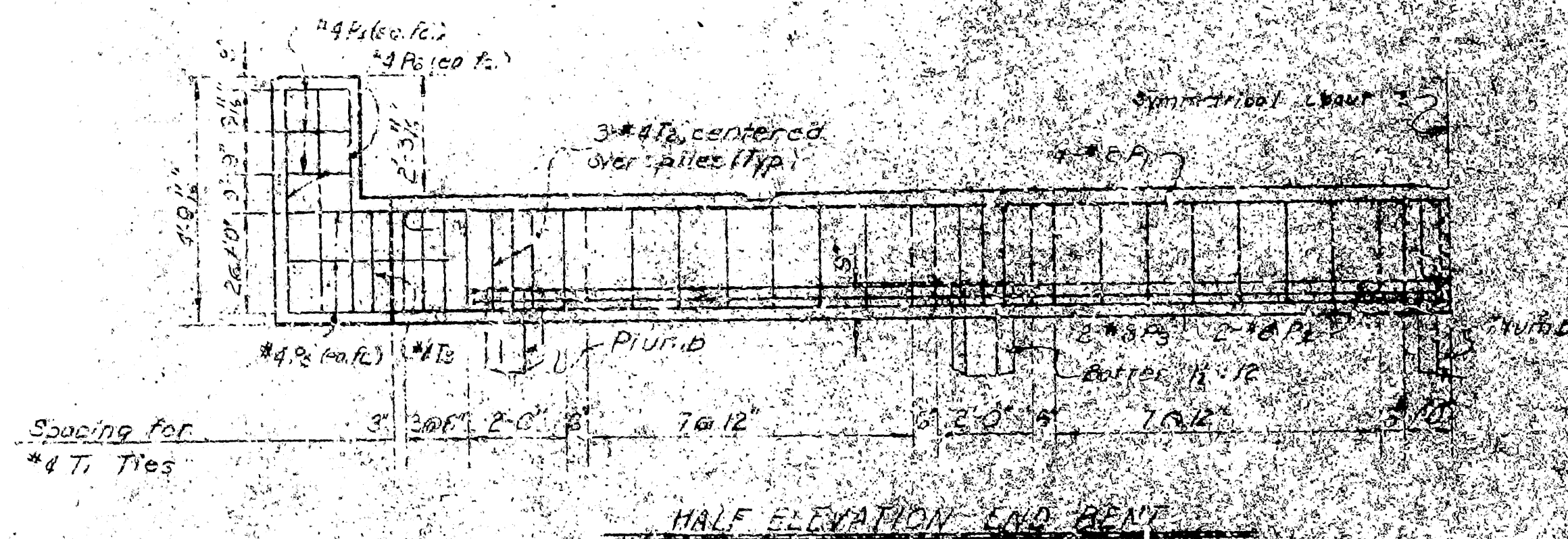
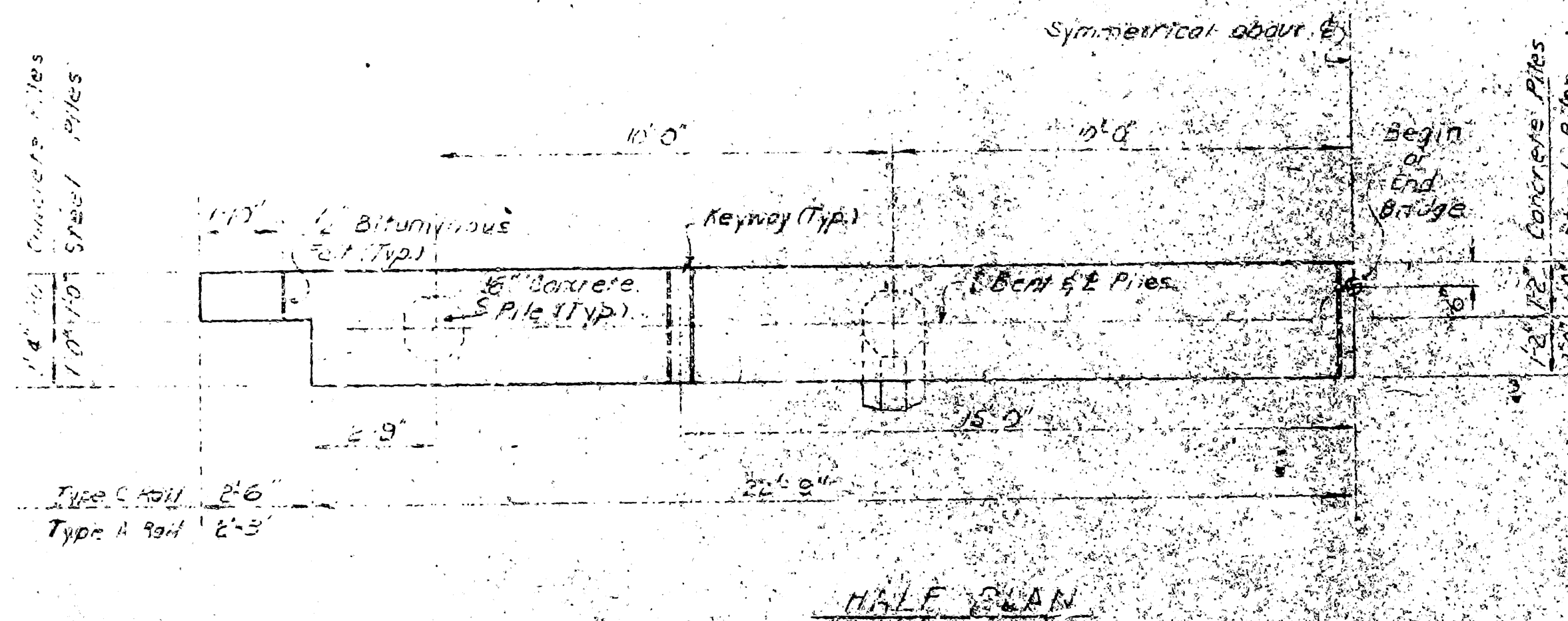
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21



The lengths of bracing members shall be determined in the field. Each member shall be one continuous angle and shall be welded to steel bearing piling as shown. Angle bracing shall be measured and paid for as structural steel in beam spans.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	F-015-2(11)		22	83
JOB NO.		11735			



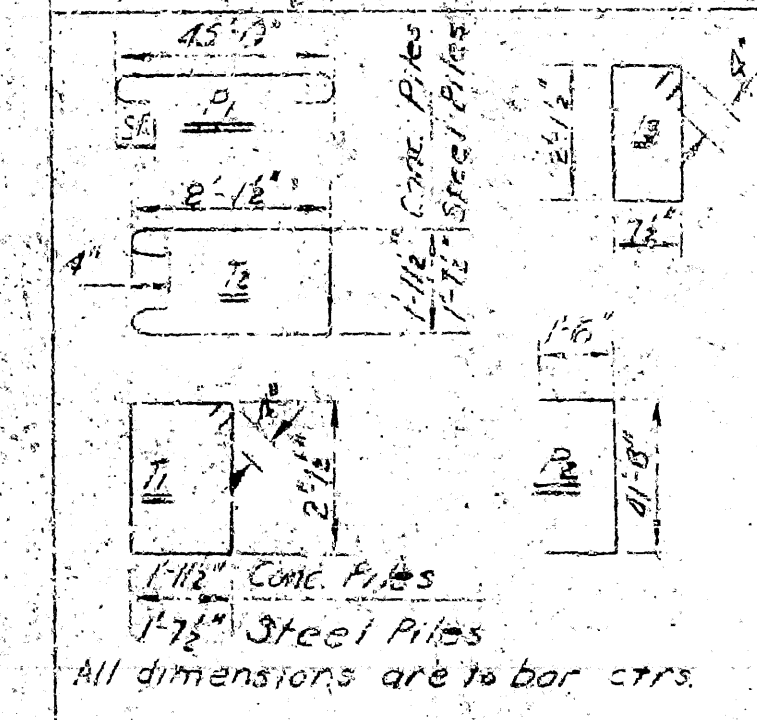
END VIEW  
No Scale

BAR LIST

NO.	SIZE	No. Per Bent	Length	Pile
P1	8"	4	47'-3"	5"
P2	6"	4	44'-7"	24"
P3	8"	2	45'-5"	5"
P4	12"	1	1'-6"	5"
P5	4"	12	2'-0"	5"
P6	4"	12	4'-3"	5"
P7	4"	30	2'-6"	5"
P8	4"	48	8'-9"	1 1/2"
P9	4"	48	8'-1"	1 1/2"
P10	4"	15	7'-2"	12"
P11	4"	15	6'-10"	12"
P12	4"	3	6'-1"	1 1/2"

\*\* 30 For 4x12-50, 60 For 4x12-50  
\* For Steel Piles \*\*\* For Conc. Piles

Bending Diagram



REINFORCING DETAIL  
FOR STEEL PILE TIP  
No Scale

The Contractor may for his convenience and at his own expense provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 feet.

GENERAL NOTES

All concrete to be Class 5 and to be poured in the dry. All exposed corners to be chamfered 3/4". Reinforcing steel to be deformed bars of intermediate or hard grade. Shop lists and bending diagrams are to be submitted and approval secured before fabrication is begun.  
All piling to be driven to a minimum capacity of 44 tons per pile. Piling shall be either 12-BF-53 steel bearing piles, or 16" octagonal precast concrete piles as shown on the layout.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications, and applicable Special Provisions.

# DETAILS OF STANDARD PILE BENTS

FOR 25'-0" R.C. SLAB SPANS  
43'-0" CLEAR RDWY. 0'-6" CURBS

ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

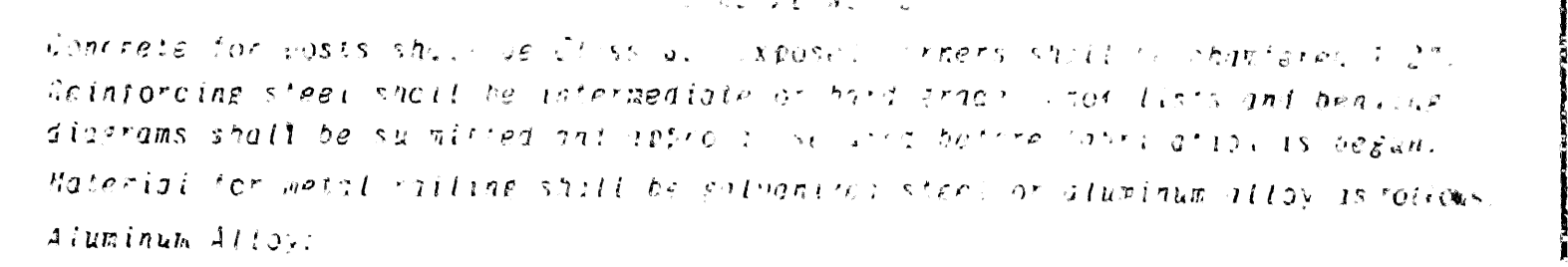
DRAWN BY: R.M. DATE: 9-26-66  
CHECKED BY: W.A.S. DATE: 9-27-66

BRIDGE NO. 5135 DRAWING NO. 15102A

FILE AS Dwg. 13835 B



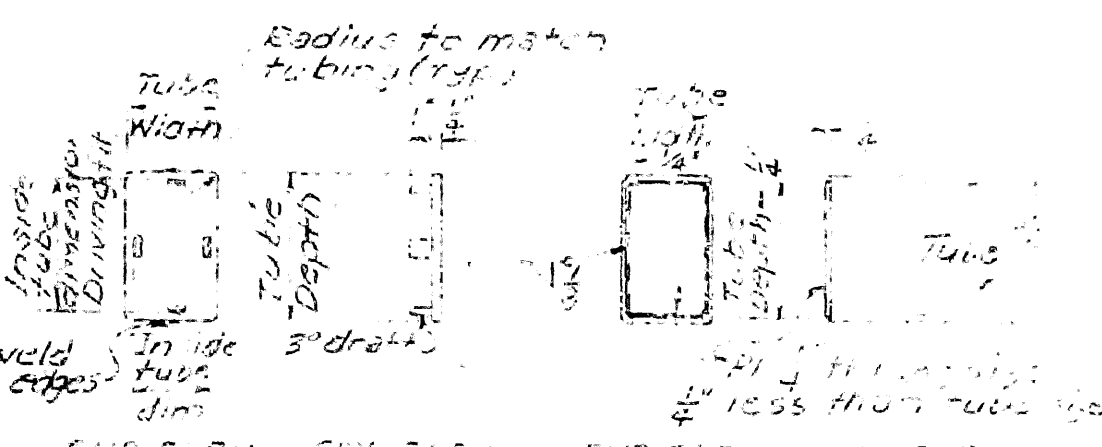
Provide spine of ball longitudinal no. 10 to 12 to insure continuous length to 10 maximum. Minimum continuous length shall be such as to provide attachment to at least 2 pages.



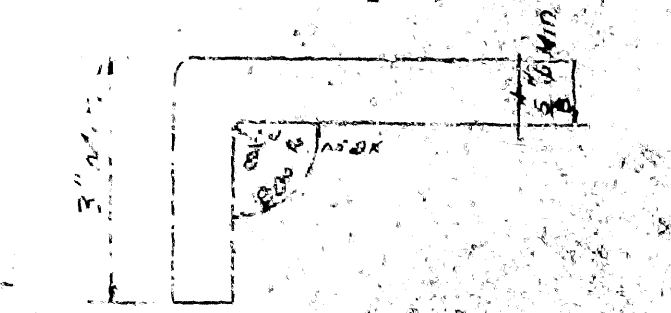
SECTION 4-A  
TYPE A RAIL

Technical drawing of a truck head on opposite ends of a shaft. The drawing shows a side view of the assembly with various dimensions and labels. Key components and dimensions include:

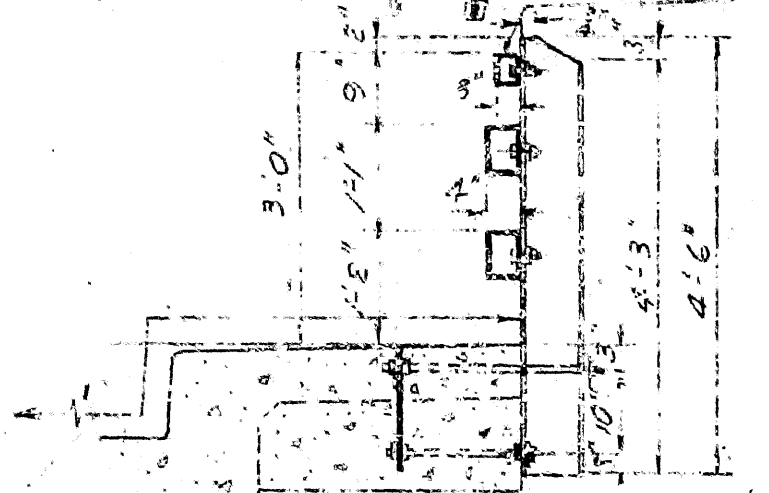
- Shaft:** Labeled "1 1/2\" (For Concrete Posts)".
- Trucks:** Labeled "Trucks" at the bottom left.
- Pin:** Labeled "3/8\" pin - 12\" spread ends".
- Washer:** Labeled "Washer" near the pin.
- Lock Washer:** Labeled "Lock Washer" near the pin.
- Heavy Hex Nut:** Labeled "Heavy hex NU".
- Dimensions:**
  - Overall length: 12"
  - Pin length: 12"
  - Pin diameter: 3/8"
  - Pin spread ends: 12"
  - Pin to washer distance: 1"
  - Washer to lock washer distance: 1"
  - Lock washer to nut distance: 1"
  - Nut diameter: 1/2"
  - Nut depth: 3/16"
  - Nut width: 1/2"
- Notes:** "Truck head on opposite ends" at the bottom right.



TOGGLE BOLT ASSEMBLY  
Size: 1/2 size

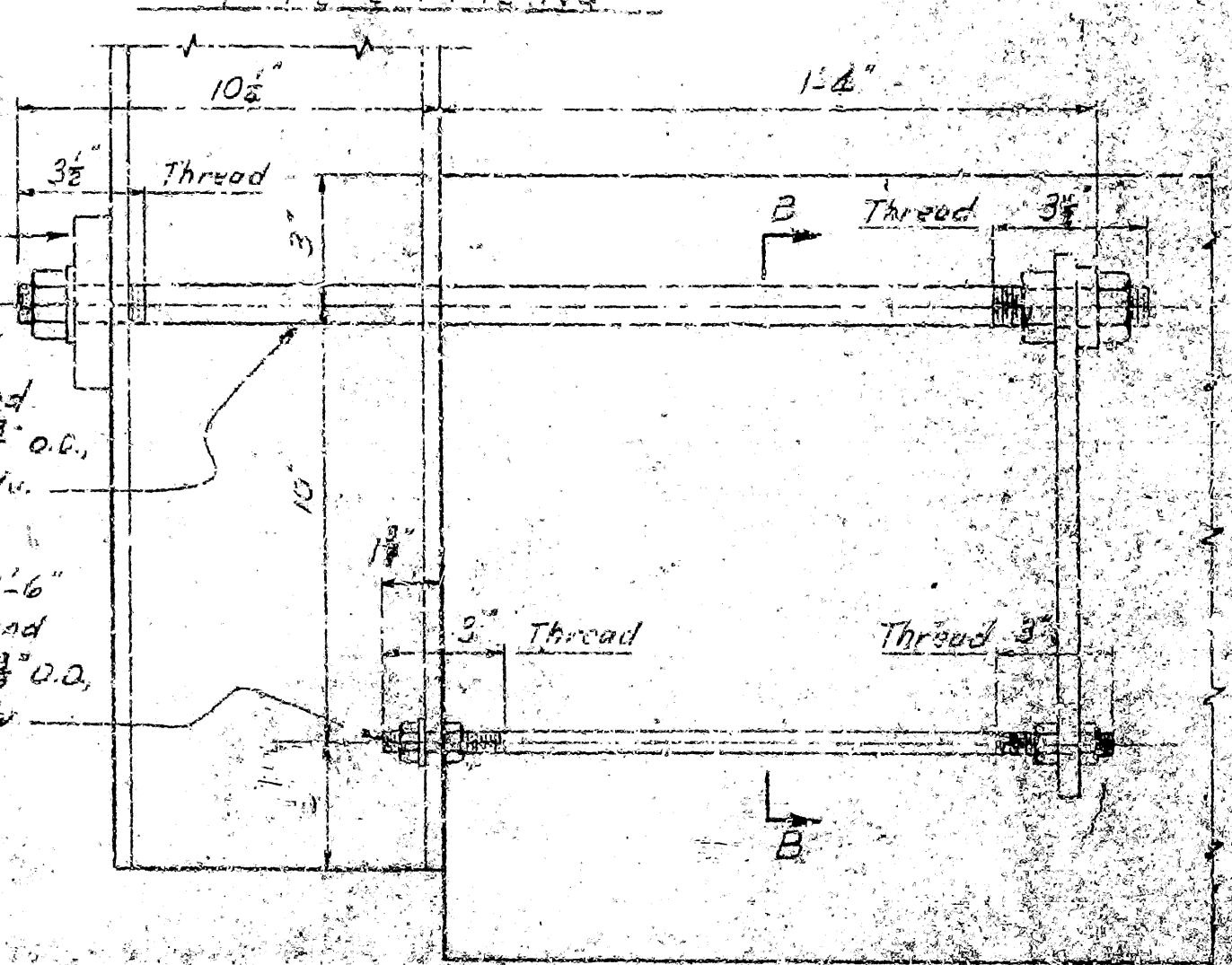


Perimeter - steel or  
aluminum - 4" x 3" x  $\frac{3}{16}$ " wall



SECTION A-A  
TYPE "C" RAILING  
FOR SHOULDER WIDTH BRIDGES

Note: For details not shown,  
see Section A-A at left.



Splice Set Screws: Aluminum alloy 6061-T6 or 2024 T4, ASTM Specification B 211,  
or stainless steel, ASTM Specification A 193 or A 194, Type 304, 308, or ASTM A 304  
equivalent.

Threads: Threads on bolts, screws and nuts shall conform to American Standard coarse Series, Class 2 Fit, ASA Specification B1.1.

longitudinal stiffeners shall be of sufficient length to provide attachment in at least three posts.

Shop drawings showing details of railing shall be submitted and approved secured before fabrication is begun.

\* Carbon steel, stainless material, or special alloy aluminum rivets and cordage with corrosion resistance 805-16 may be used for aluminum rail hangers in lieu of the specified material.

DETAILS OF

Eviction  
 Galvanizing Note 9-10-63 W  
 Notice Default 10-18-63 W  
 Alt Turnout to rail 11-1-63 W  
 Fastener Materials 12-1-63 W  
 Specifications \* 7-66 A.M.  
 Fastener Materials 4-10-66 F.R.B.  
 Neoprene Washers 12-6-66 D.V.  
 End Post & Post Spacing 1-5-67 R.W.M. or D.L.

DRAWN BY *H.B.* DATE *7-1-64*  
 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY *J.M.H.* DATE *9-3-64* SCALE *1" = 10' (copy 2.5 reduced)*

FILE AS DRWG. 13835C