

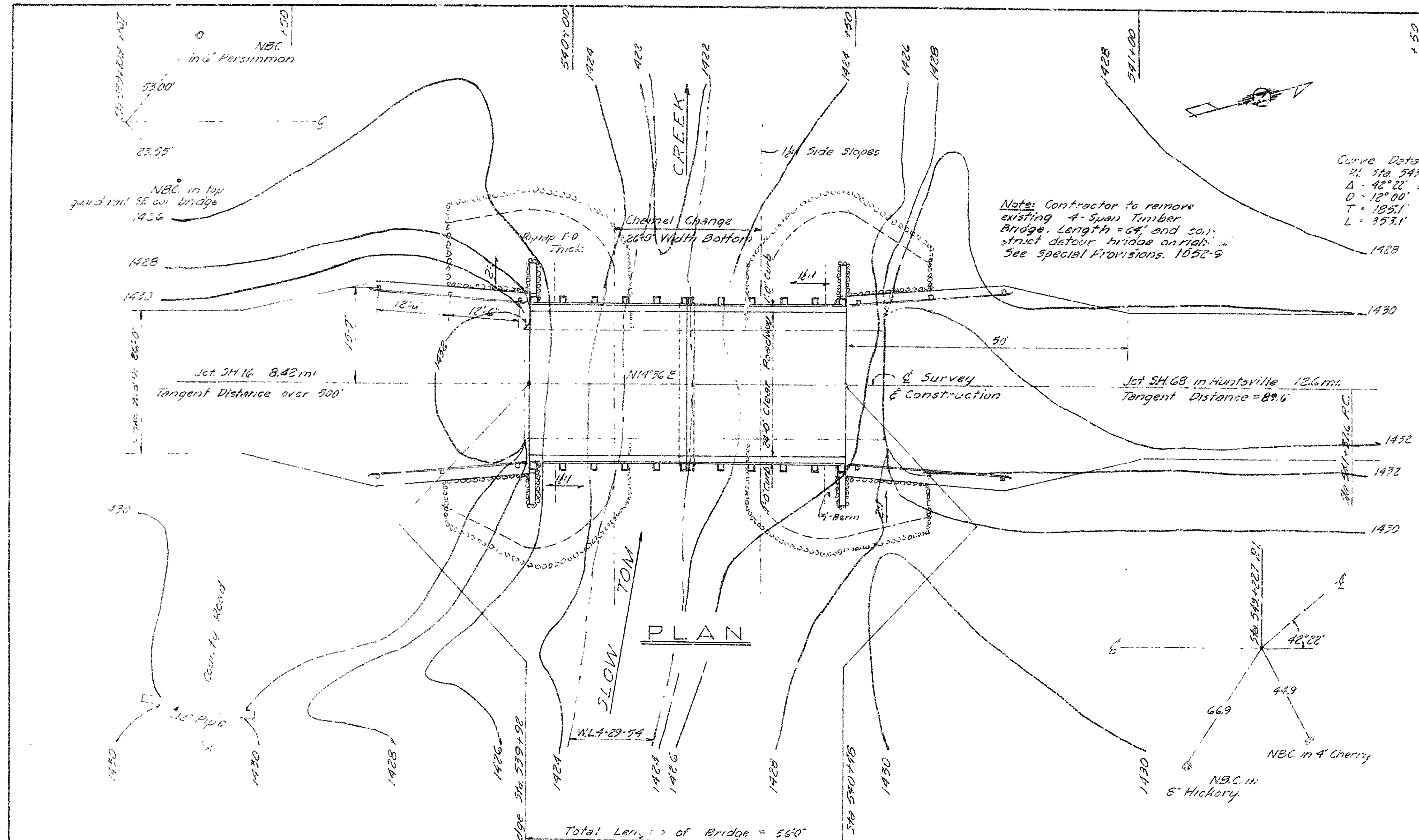
SUMMARY OF BRIDGE QUANTITIES CODE NO. X020

ITEM NO.	ITEM	UNIT	BRIDGE No. 2946						BRIDGE No. 2947				TOTAL	JOB NO. 9338
			BENT No. 1	BENTS No. 2-4 INCL.	BENT No. 5	SPANS No. 1 & 4	SPANS No. 2 & 3	TOTAL	BENT No. 1	BENT No. 2	BENT No. 3	SPANS No. 1 & 2		
103	DRY EXCAVATION FOR STRUCTURES	CU. YD.	30		36			66	28		28		56	122
103	WET EXCAVATION FOR STRUCTURES	CU. YD.	28	47	13			88						88
103	SOLID ROCK EXCAVATION FOR STRUCTURES	CU. YD.	8	20	10			38						38
SP#802	CLASS "A" CONCRETE FOR BRIDGES	CU. YD.	10.17	21.33	10.17			41.67						41.67
SP#802	CLASS "S" CONCRETE FOR BRIDGES	CU. YD.	8.58	21.17	9.04	78.77	77.72	195.28	6.80	5.78	6.80	77.88	97.26	292.54
SP#803	REINFORCING STEEL	L.B.	2,599	6,738	2,671	13,000	13,010	38,018	1,029	1,015	1,029	13,494	16,567	54,585
SP805-3	STEEL PLATE GUARD RAIL (10 GAGE)	LIN. FT.				114.66	112.00	226.66				116	116	342.66
SP807-7	STEEL BEARING PILING (12")	LIN. FT.							55	93	85		263	263
909	RIPRAP	CU. YD.	69		70			139	60		54		114	253
929	BRIDGE NAME PLATES (TYPE "C")	EACH	1					1	1				1	2
SP1052-9	REMOVAL OF EXISTING BRIDGES AND MAINTENANCE OF TRAFFIC	COMP. ITEM											* 42 %	** 42 %

* Temporary detour structure required at this bridge site.
 ** For balance of Item No.SP-1052-9 see Roadway Items.

SUMMARY OF BRIDGE QUANTITIES
 ST. PAUL -- WITTER
 MADISON COUNTY
 ROUTE 23 SECTION 8
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By L.P.C. Date 6-2-54
 Traced By F.E.B. Date 6-9-54
 Checked By [Signature] Date 6-17-54
 BRIDGE NO. 2946-2947 DRAWING NO. 8546

6 24 5-168(1) 24 55
9738



RIGHT-OF-WAY

Left	Right	Total
40'	40'	80'

CONSTRUCTION EASEMENT

Sta 539+00 to Sta. 542+00, 70' Right

GENERAL NOTES

5M NW Corner Lt. Headwall Sta 532+88 Elev 1478.71

All piling shall be 12" BP#53 steel bearing piles, driven to refusal or to a minimum bearing capacity of 32 tons per pile. Lengths of piling shown are for estimating purposes only. Actual lengths shall be ordered on either of the following alternates at option of the Contractor:

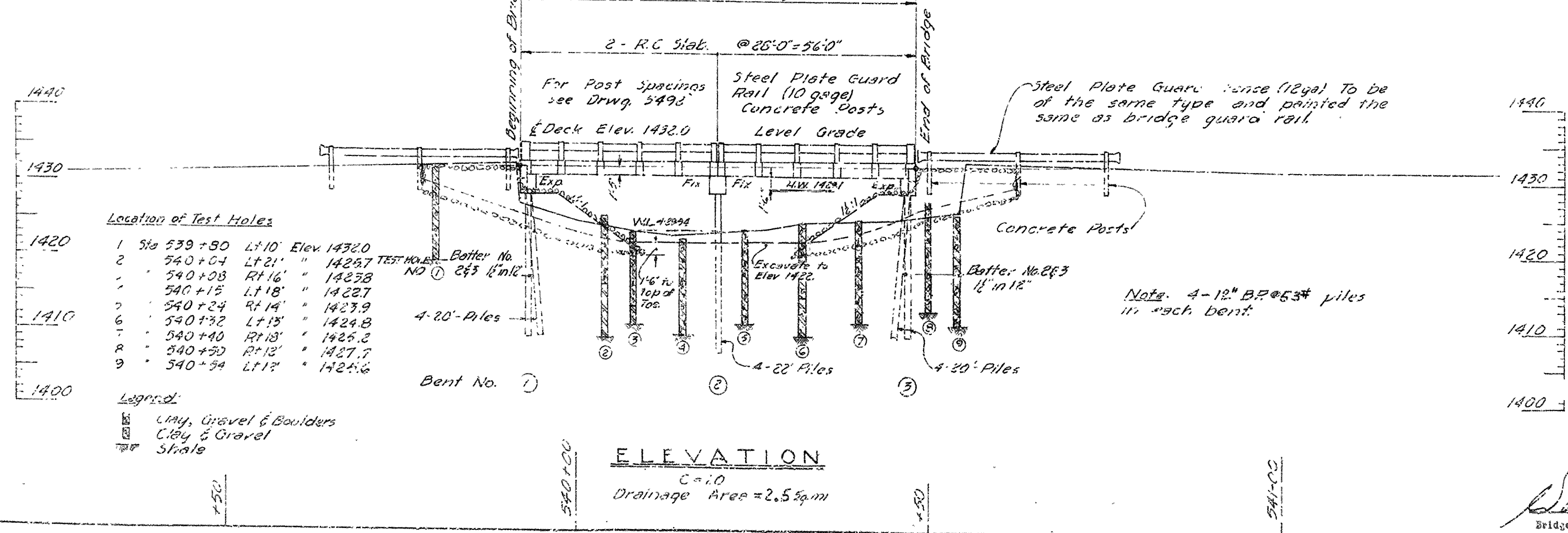
Alternate A - After the Contractor has driven a test pile in each bent the Engineer shall furnish an order list to the Contractor. Payment shall be made for the net length of pile in place with allowances for cut-off and splicing as set out in the Special Provisions.

Alternate B - The Contractor shall assume the responsibility for determining pile lengths, in which case payment shall be made for the net length of pile in place with no allowance nor payment for cut-off or splicing. Measurement for payment shall not include lengths driven beyond the minimum requirements for penetration into the rock, and capacity per pile. Unless specifically authorized in writing by the Engineer, not more than one splice per pile shall be permitted.

Piling in End Bents shall be driven after embankment is in place.

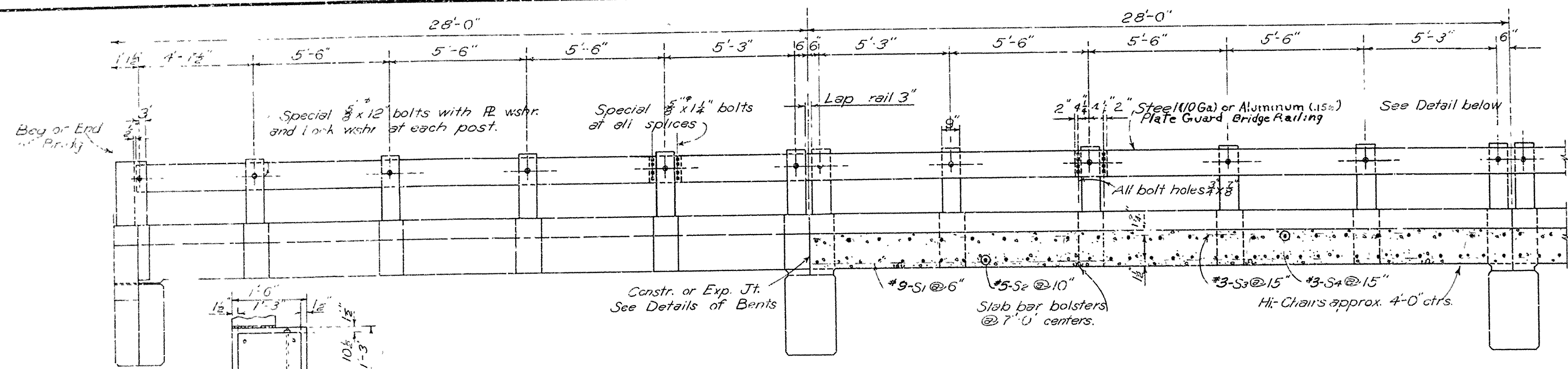
For details of structure, see Drawing No. 5492 & 5492-A.

LOADING: H-15 AASHTO (1953)
Unit Stresses:
Class 5 Concrete (n=10) 1200 psi
Reinforcing Steel 20,000 psi



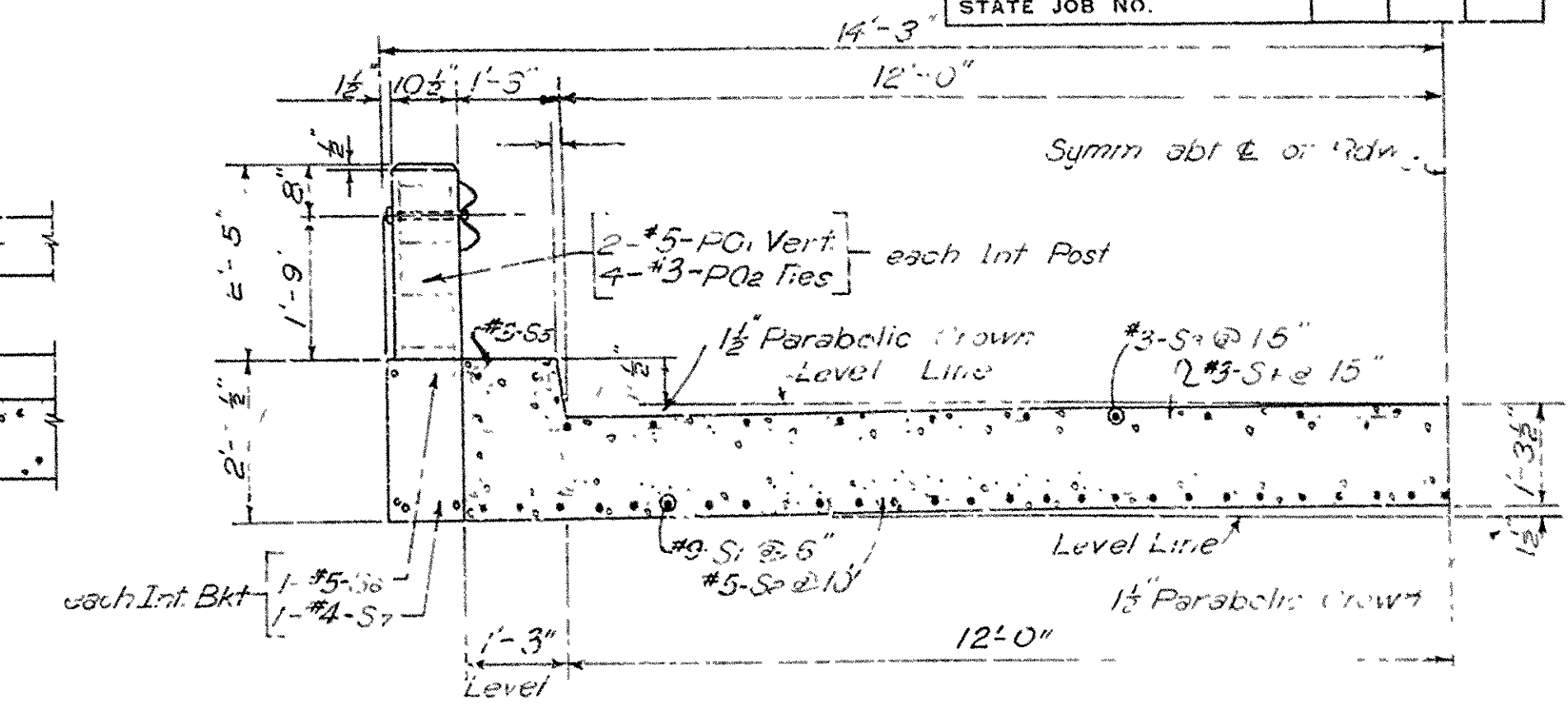
LAYOUT OF BRIDGE
OVER SLOW TOM CREEK
ST. PAUL - WITTER
MADISON COUNTY
ROUTE 23 SECTION 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: V.H. DATE: 5-17-59
CHECKED BY: F.B.B. DATE: 5-22-59
BRIDGE NO. 2947 DRAWING NO. 3548

FILE NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
6	ARK			
STATE JOB NO.				



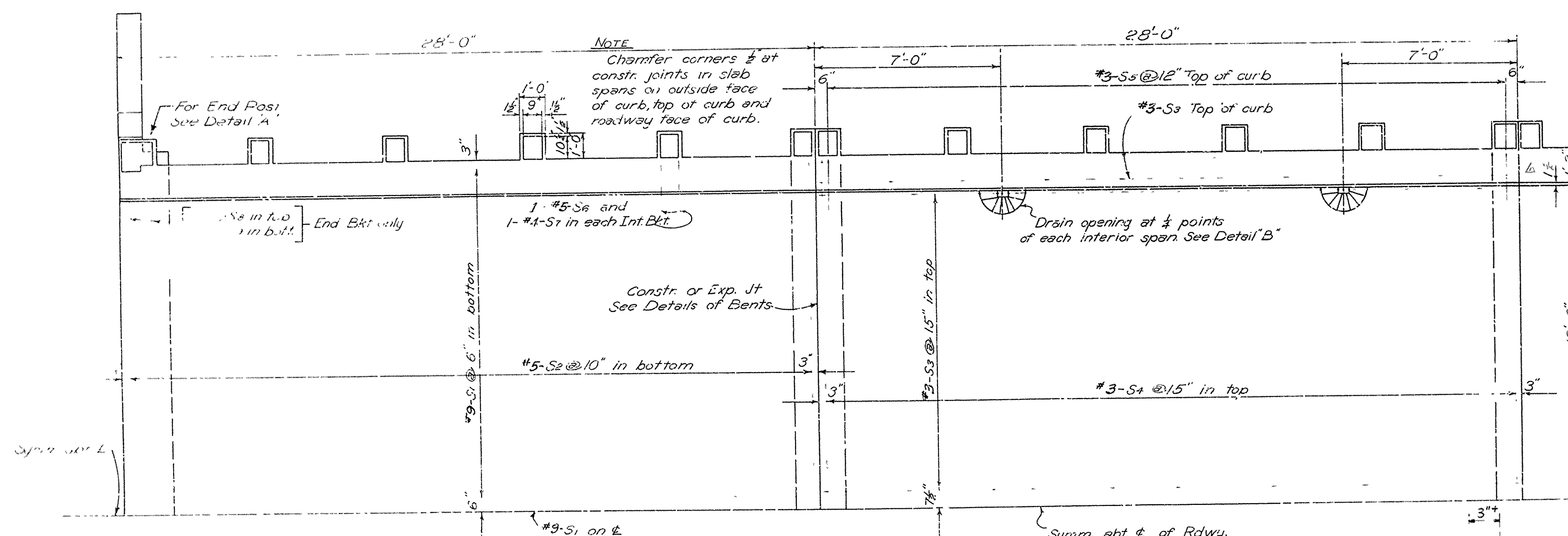
ELEVATION

SECTION ON C OF RDWY



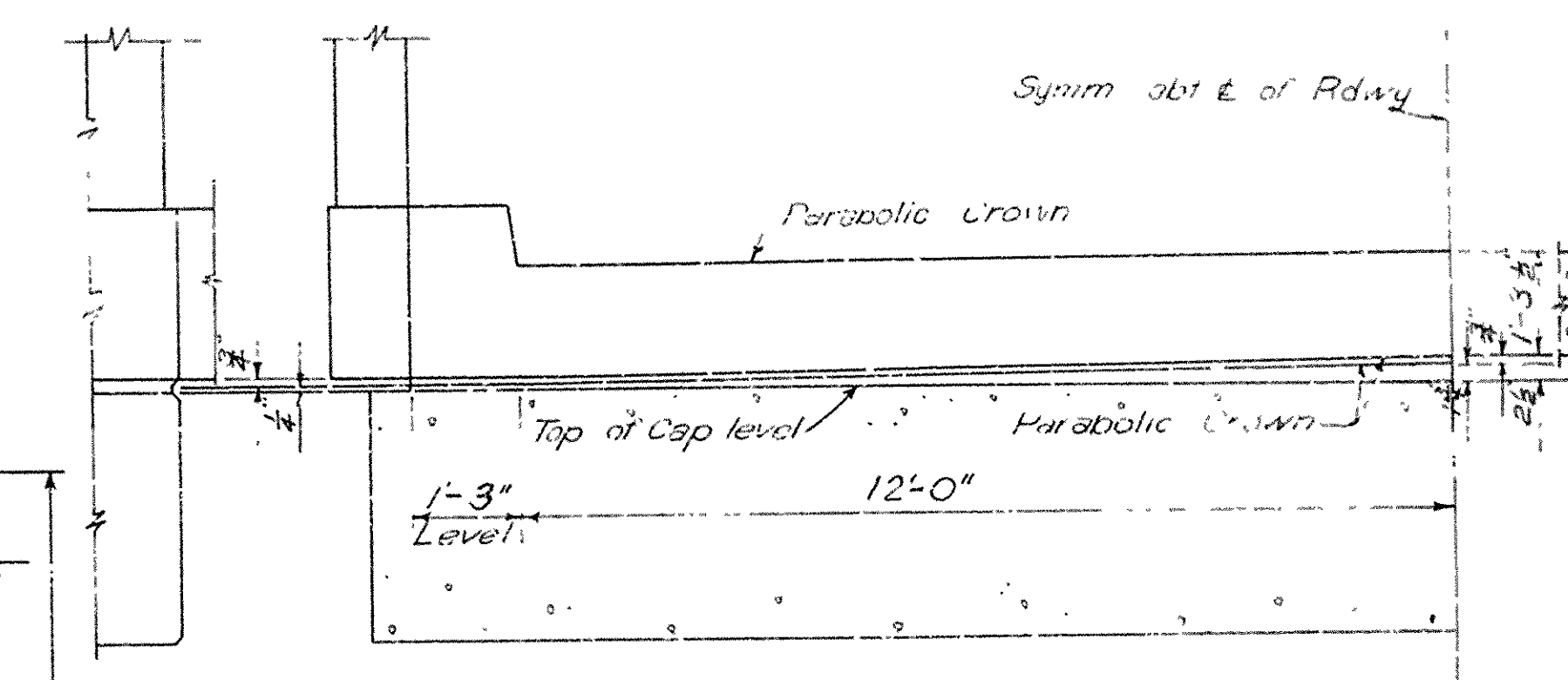
TYPICAL CROSS SECTION

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



HALF PLAN END SPAN

HALF PLAN INTERMEDIATE SPAN



SECTION AT BENT

SHOWING HOW THICKNESS OF PARABOLIC SLAB IS INCREASED AT BENT TO MEET LEVEL CAP.
SCALE 3/4" = 1'-0"

LIST OF REINFORCING STEEL

MARK	SIZE	LENGTH	BENDING DIAGRAM
S1	#9	27'-8"	
S2	#5	26'-2"	
S3	#3	27'-8"	
S4	#3	26'-2"	
S5	#3	5'-10"	
S6	#5	10'-2"	
S7	#4	6'-7"	
S8	#5	2'-7"	
S9	#4	3'-6"	
PO1	#5	9'-1"	
PO2	#3	2'-10"	
PO3	#3	4'-4"	
PO4	#5	4'-3"	

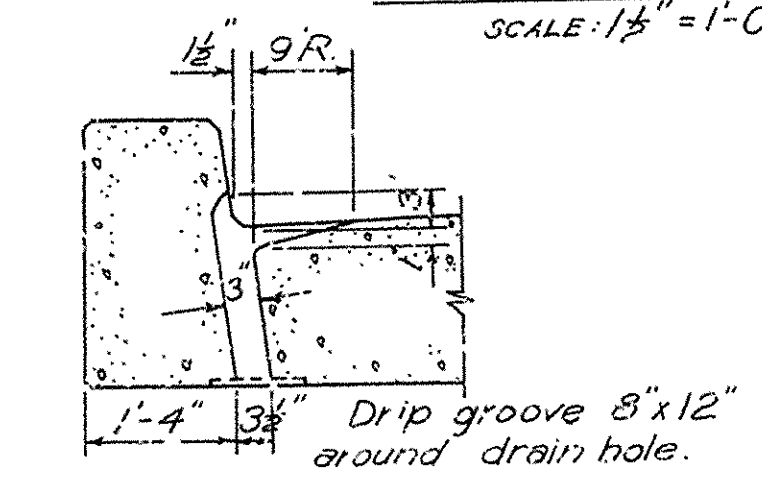
GENERAL NOTES

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.
An reinforcing steel shall be accurately located in the forms and firmly held in place by means of steel wire supports sufficient in number and size to prevent displacement during the course of construction and to keep the steel a proper distance from the forms. The wire supports will not be paid for directly but will be considered subsidiary to the item of Reinforcing Steel. Shop lists and bending diagrams of reinforcing steel including wire supports shall be submitted and approved secured before fabrication is begun.
Roofing and bituminous felt shall be measured and paid for as Class S Concrete.
The steel plate guard rail shall be of the type shown or an equivalent rigid type as approved by the Engineer. The steel plate guard rail, including post, and fastenings, shall be paid for at the unit price bid per linear foot for Steel or Aluminum Plate Guard Bridge Railing.
SPECIFICATIONS Arkansas State Highway Commission Standard Specifications for Highway Construction, adopted Edition - 1957

H 15 LOADING (A.A.S.H.O. 1957 REVISED)

LOAD DISTRIBUTION TO SLAB:
Dead Load = 209 #/ft.
Live Load = 0.182 Wheel/ft. width
Impact = 30%
OR LANE LOADS
Uniform Load = 436 #/ft.
Concentrated LL = 1227 #
Impact = 30%
UNIT STRESSES
Class "S" Concrete (n=10) 1200 #/ft.
Reinforcing Steel 20,000 #/ft.

SECT. OF GUARD RAIL



DETAIL B
SECTION THRU DRAIN OPENING
SCALE 3/4" = 1'-0"

Openings to taper from 3' x 6' at top of slab to 3' x 7' at bottom. Set entrance to openings low and throw out slab to meet.

Revisions:
Add 4' 2'-2 1/2" to S5 W.W.M. 5-26-54
Changed S2 to straight bar W.W.M. 11-1-54
Changed note for payment of Bituminous and Roofing felt F.R.B. 5-4-56
Changed bar designation and roadway to gutter line. W.W.M. 11-7-57
Steel Plate Guard splices; Notes for reinforcing steel and Bridge Railing; Design Loading (1957). L.H.T. 9-15-59
Revised Guard Rail Note J.M.H. 7-15-60

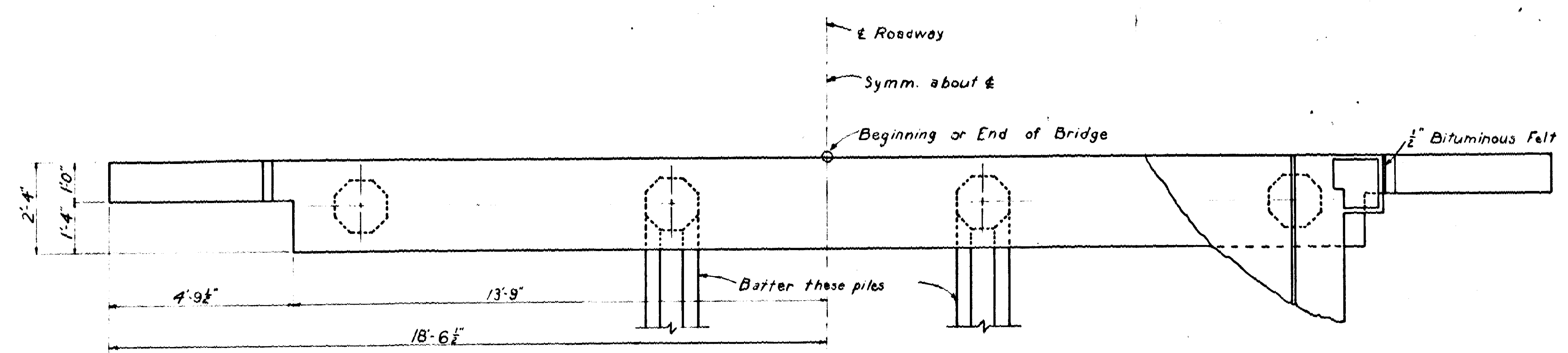
DETAILS OF STANDARD
28'-0" R.C. SLAB SPAN

24'-0" CLEAR RDWY. 1'-0" CURBS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: W.W.M. Date: 5-5-52
Traced By: L.W.H. Date: 6-15-55
Checked By: [Signature] Date: 7-12-56
BRIDGE NO. [Blank] DRAWING NO. 5492

FEED ROAD DIST NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
STATE JOB NO.				

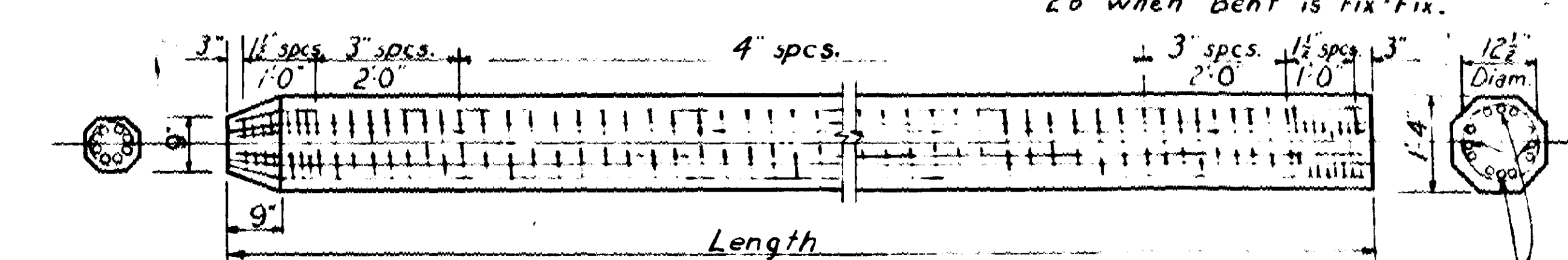


PLAN OF END BENT

BENT BARS									
NO. IN END BENT	NO. IN INTERM. BENT	MARK	SIZE	LENGTH	A	B	BENDING DIAGRAM		
4	4	P ₁	#6	29'-3"	14'-0"	1'-5"			
4	4	P ₂	#4	8'-9"	2'-1 1/2"	1'-11 1/2"			
12	12	P ₃	#6	6'-1"	2'-1 1/2"	1'-11 1/2"			
Dimensions are to centers of bars									

<u>STRAIGHT BARS</u>				
<u>NO. IN</u> <u>END</u> <u>BENT</u>	<u>NO. IN</u> <u>INTERM.</u> <u>BENT</u>	<u>MARK</u>	<u>SIZE</u>	<u>LENGTH</u>
4	4	P ₁	#6	27'-2"
3	3	P ₂	#8	27'-2"
14	14	P ₃	#6	2'-0"
4		P ₄	#4	1'-7"
4		P ₅	#4	2'-7"
4		P ₆	#4	2'-1"
4		P ₇	#4	2'-6"
8		P ₈	#4	7'-0"
4		P ₉	#4	5'-0"
4		P ₁₀	#4	4'-3"

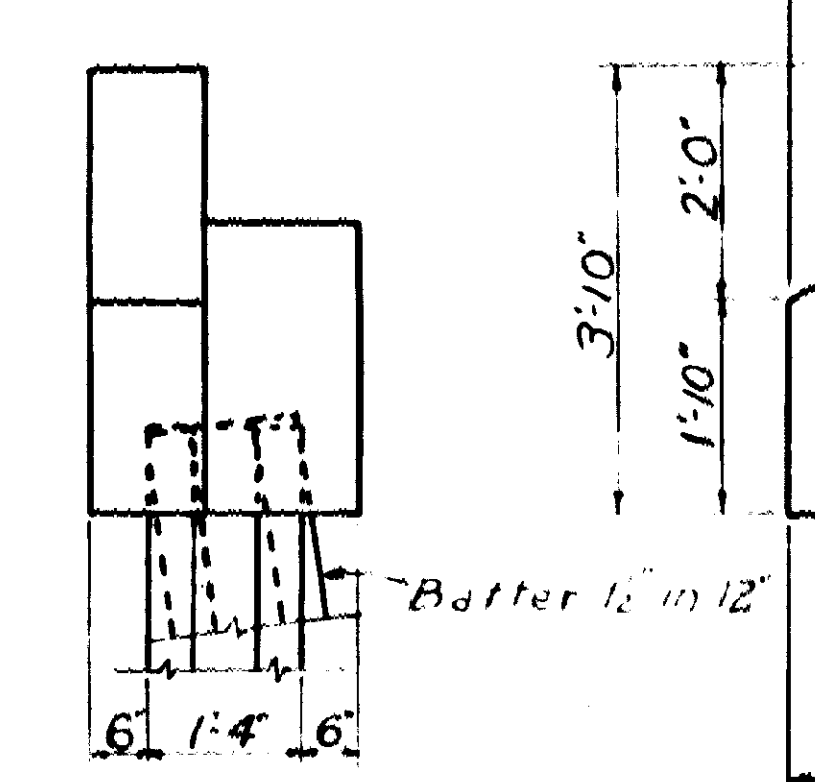
* Use only when end is fixed.
 ** Use 14 when Bent is fix-Exp and 28 when Bent is fix-Fix.



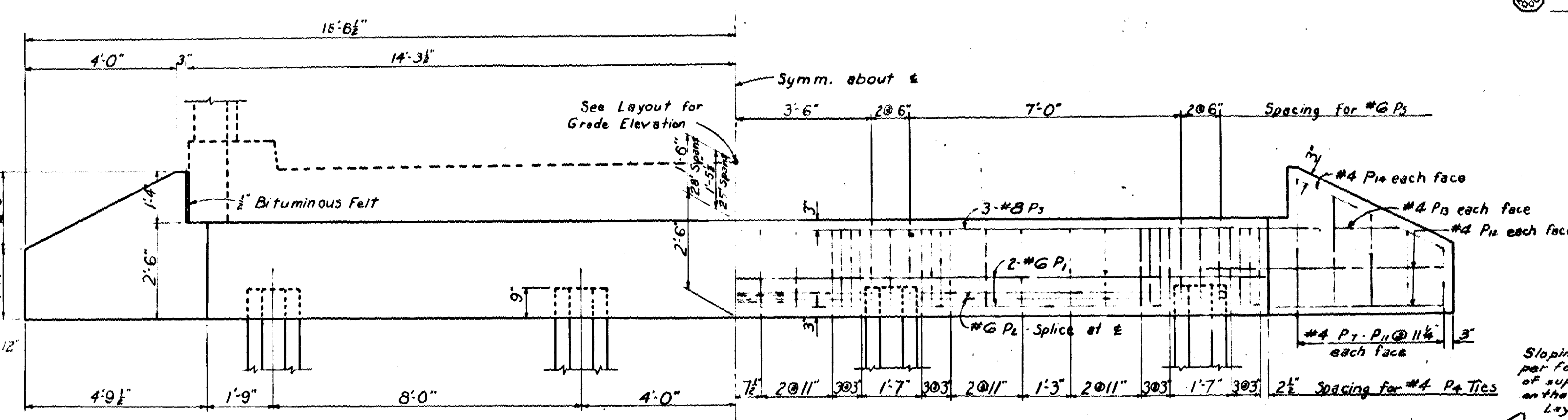
Reinforcing: Vertical Bars { 8-#6 Lengths to 35' } #2 Spiral
 For lengths over 45' add 4-#6 thru middle third of pile.

DETAILS OF 16" PRECAST CONCRETE PILES

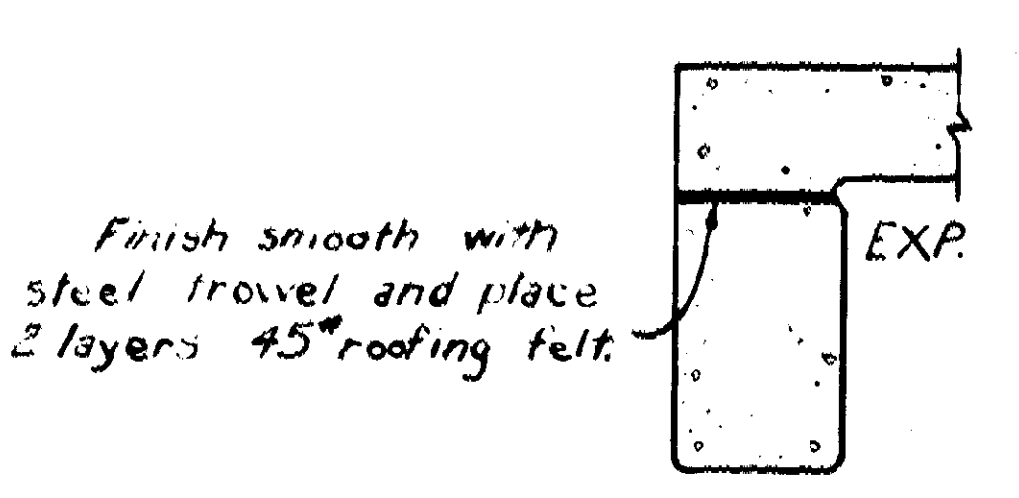
Drive piles in Intermediate Bents to a minimum bearing of 32 kips per pile.
 Drive piles in End Bents to a minimum bearing of 30 tons per pile.
 Use steel bearing piles when called for on layout.



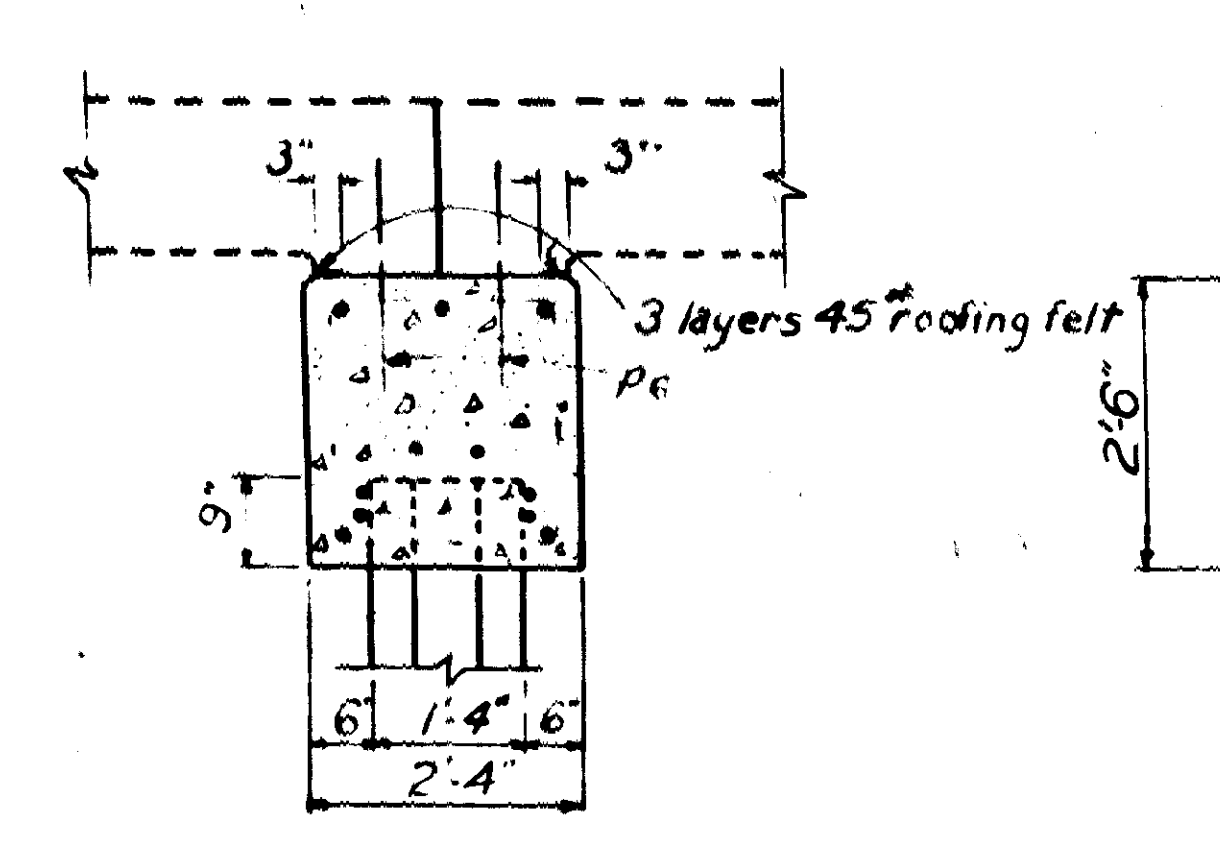
END VIEW



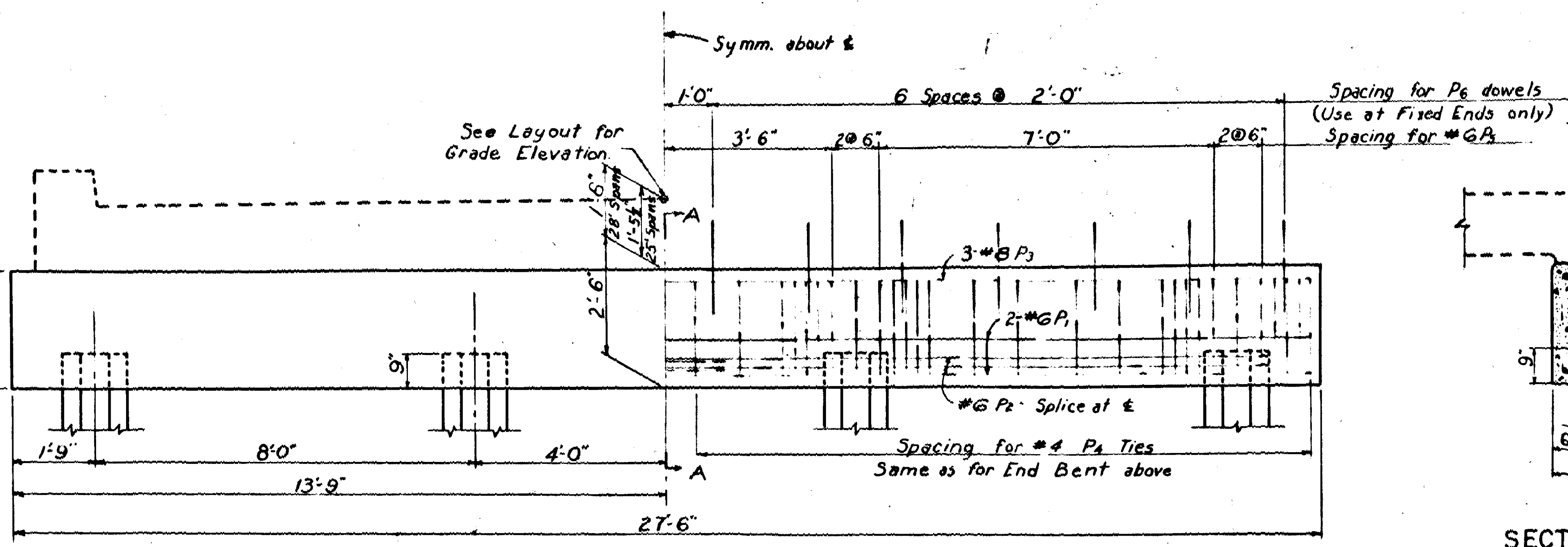
ELEVATION END BENT



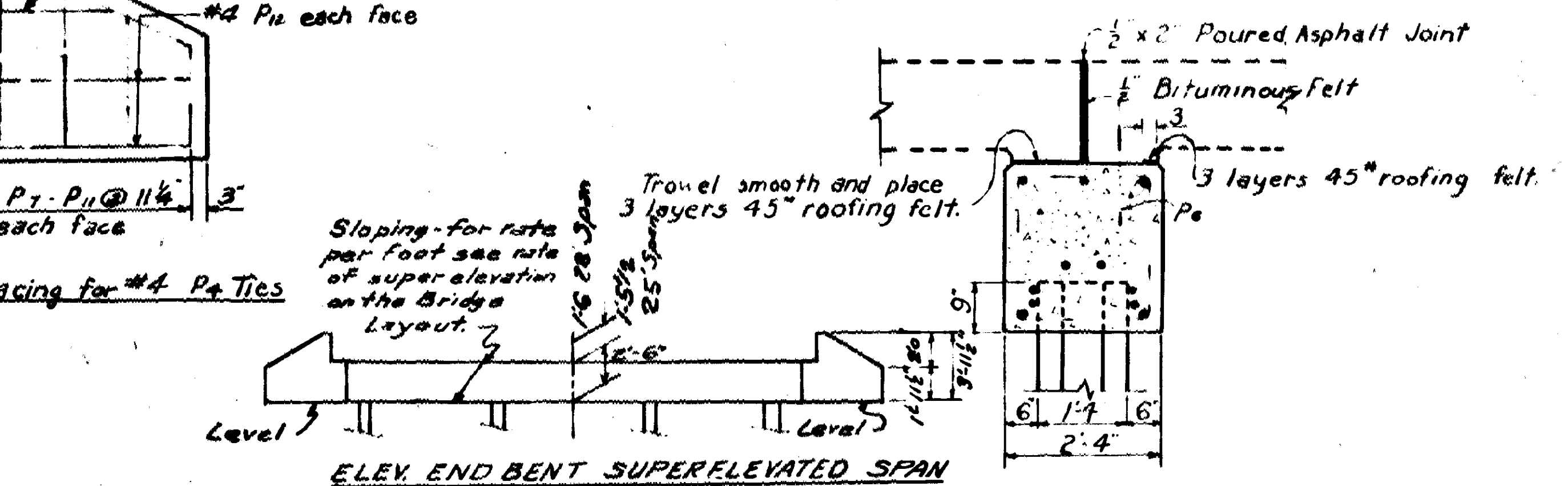
SECTION AT END BENT
No Scale



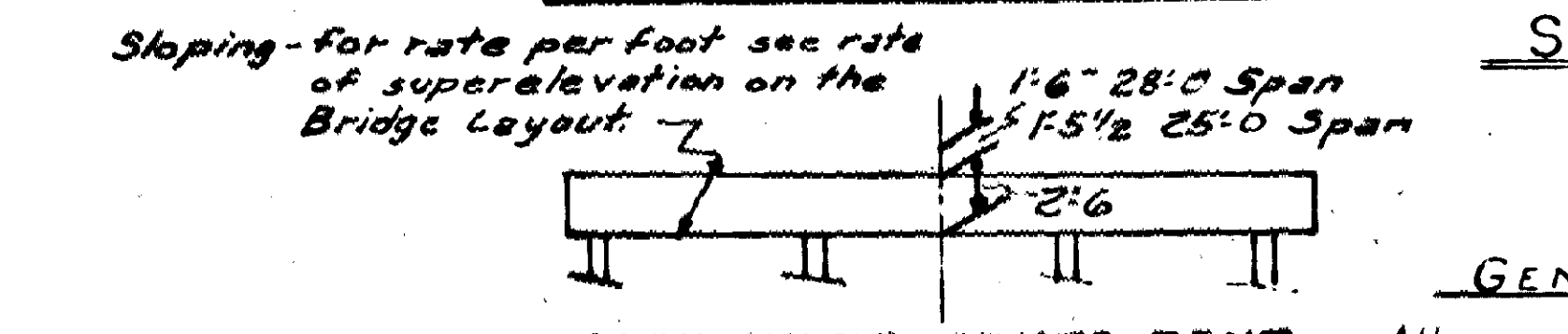
SECTION A-A
Fix - Fix



ELEVATION INTERMEDIATE BENT



ELEV END BENT SUPERELEVATED SPAN



ELEV INTERMEDIATE BENT SUPERELEVATED SPAN

SECTION A-A
Exp - Fix

GENERAL NOTES:

All concrete to be Class "5" and to be poured in the dry for additional General Notes and details of slab spans see Drwg. No. 5492 or 5463.

Revised to show Super-elevated Caps E.R.B. 7-18-59

DETAILS OF STANDARD R.C. PILE BENTS FOR 25'-0" & 28'-0" R.C. SLAB SPANS

Revised 6-2-54 To include steel bearing piling, L.P.C.
 6-30-55 To include 25'-0" spans, W.R.
 2-17-59 To show new reinforcing bar designations, R.L.C.

24'-0" CLEAR RDWY. - 1'-0" CURBS

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: A.R. Date: 8-3-53
 Traced By: A.E.C. Date: 6-15-55
 Checked By: W.W.M. Date: 8-10-53

DRAWING NO. 5492-A