

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
1928	868	1	6
Paper No. 1014, P.P.C. Code 1121			

STATE OF ARKANSAS
STATE HIGHWAY DEPARTMENT

PLAN OF PROPOSED BRIDGE
OVER
ILLINOIS BAYOU
POPE COUNTY

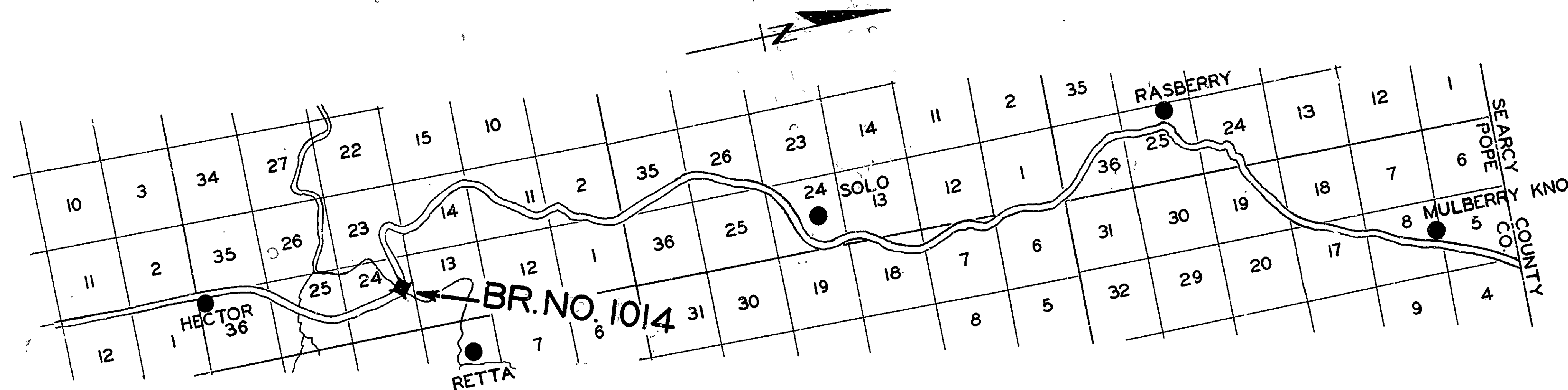
ROUTE 27 SEC. 11
JOB No 868
FEDERAL AID PROJECT No.

INDEX OF SHEETS

- Sh #1 - Drawg # 1121 Title Sheet - Br. # 1014
- " #2 - " # 1122 Layout Br. # 1014
- " #3 - " # 39 Standard Plan - 120'-0" Steel Span - 16'-0" Clear Rdy.
- " #4 - " # 1022 Standard Plan - 30'-0" R.C.D. Span - 16'-0" Cl. Rdy. - 2 Girder Type
- " #5 - " # 1123 Details Of Piers 1 & 2
- " #6 - " # 1124 Details Of Bents 1, 2, & 3

QUANTITIES

Item # 13 Dry Excavation For Structures	126.0	Cu. Yds.
" # 13 Wet " " "	72.0	Cu. Yds.
" # 13 Rock " " "	27.0	Cu. Yds.
" # 54 Class 'A' Concrete	136.56	Cu. Yds.
" # 54 Class 'S' Concrete	136.10	Cu. Yds.
" # 55 Reinforcing Steel	47,850.0	Lbs.
" # 56 Structural Steel In Trusses	88000.0	Lbs.
" # 69 Rip-Rap	355.0	Sq. Yds.
" # 74 Concrete Hand Rail	176.0	Lin. Ft.



LAYOUT
Scale: 1"=100'

GROSS LENGTH OF PROJECT
NET LENGTH OF PROJECT

APPROVED
COMMISSIONER - STATE LAWS, HIGHWAYS AND IMPROVEMENTS

APPROVED
STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER - U. S. BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL
CHIEF ENGINEER - U. S. BUREAU OF PUBLIC ROADS

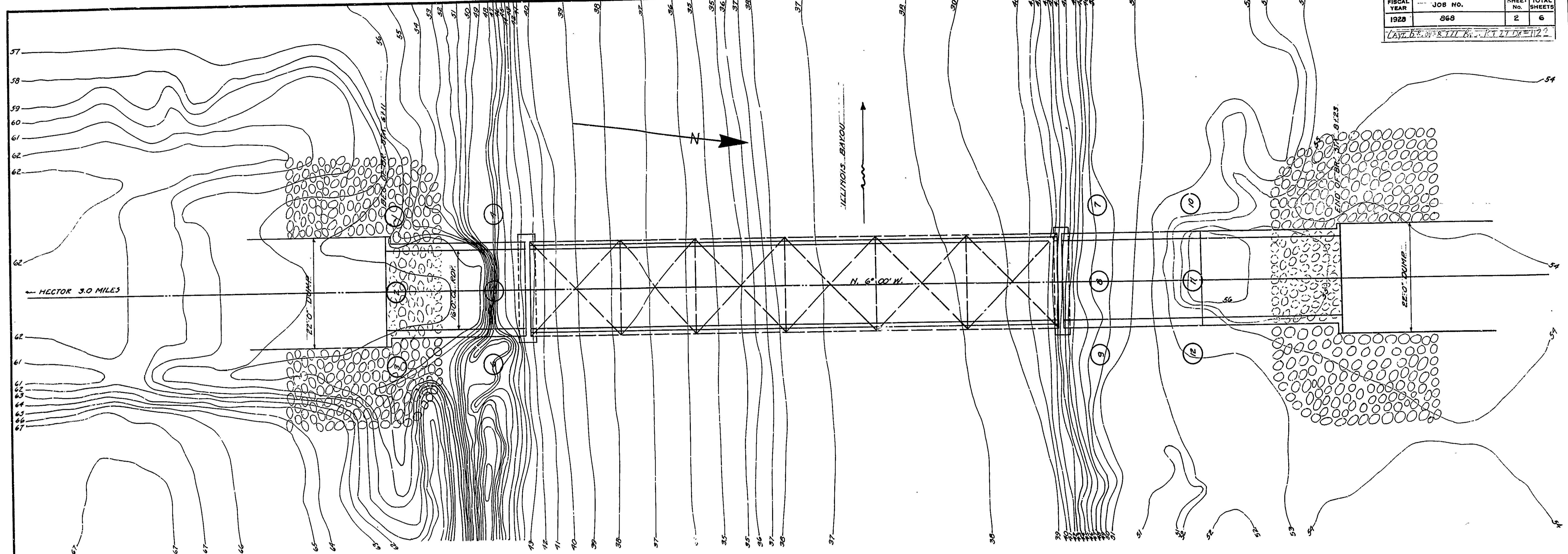
APPROVED
DIRECTOR - U. S. BUREAU OF PUBLIC ROADS

M.A. Lawrence
BRIDGE ENGINEER

BRIDGE No. 1014

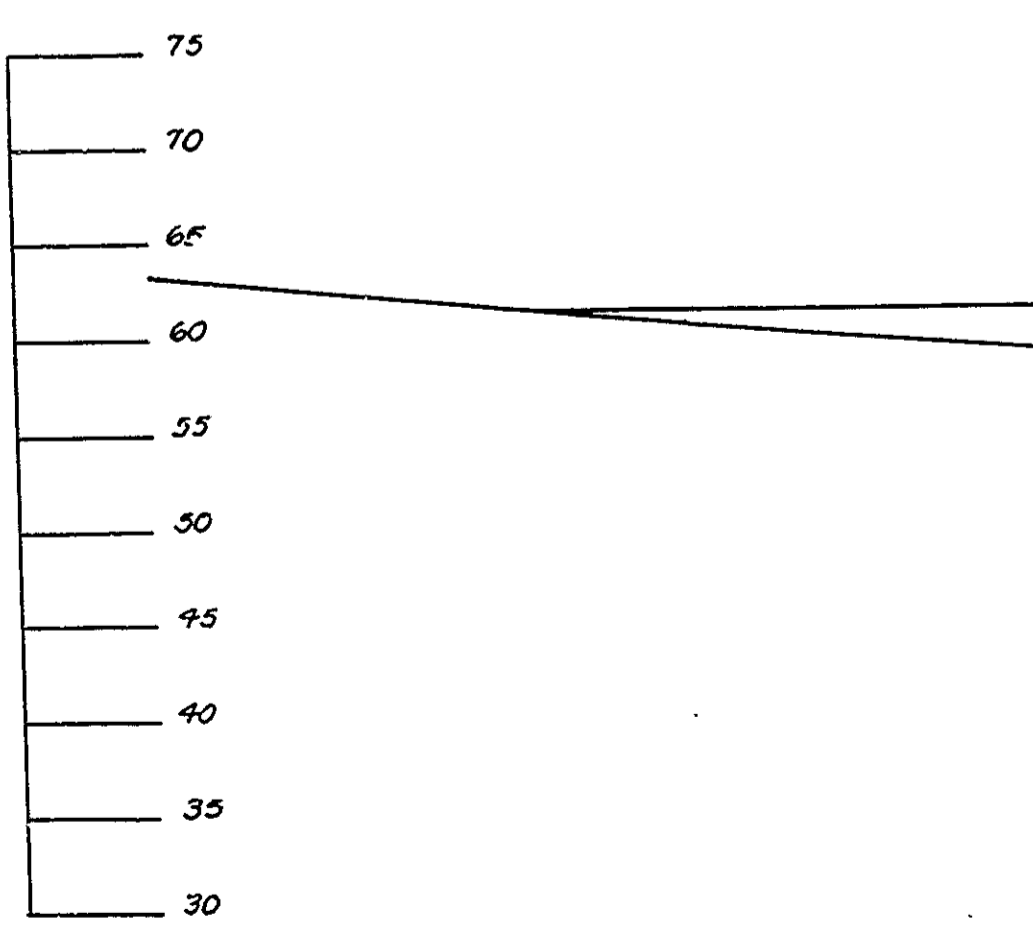
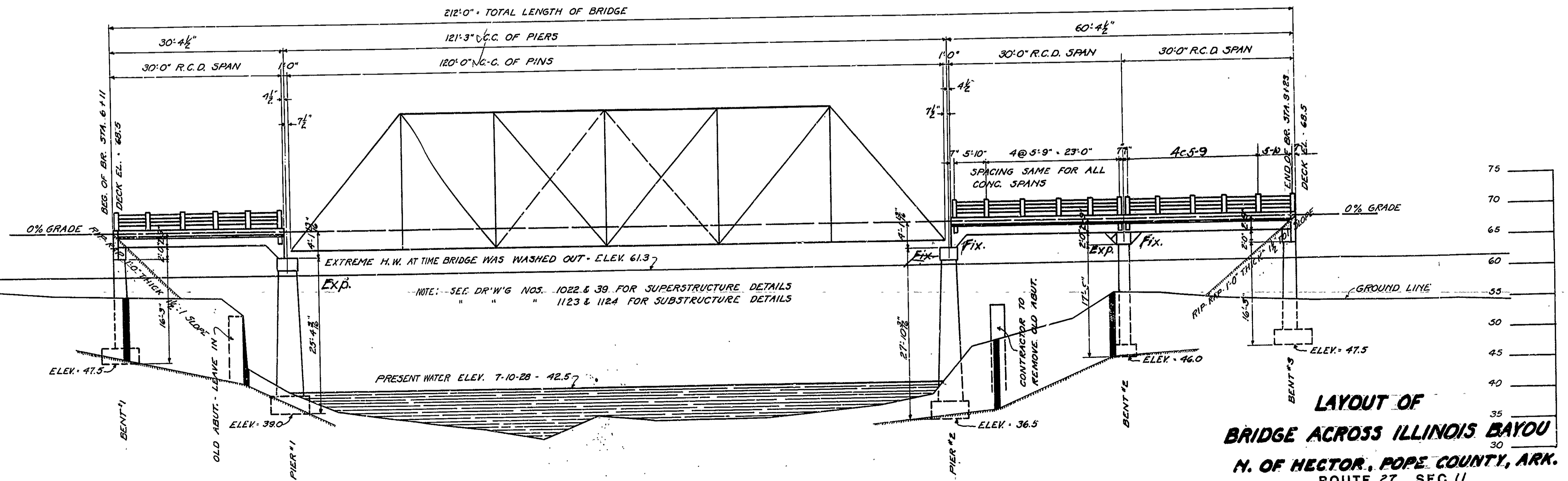
DRAWING No. 1121

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
1928	868	2	6
LAW 53.3V-K11 K.L. KT 27 DR 1122			



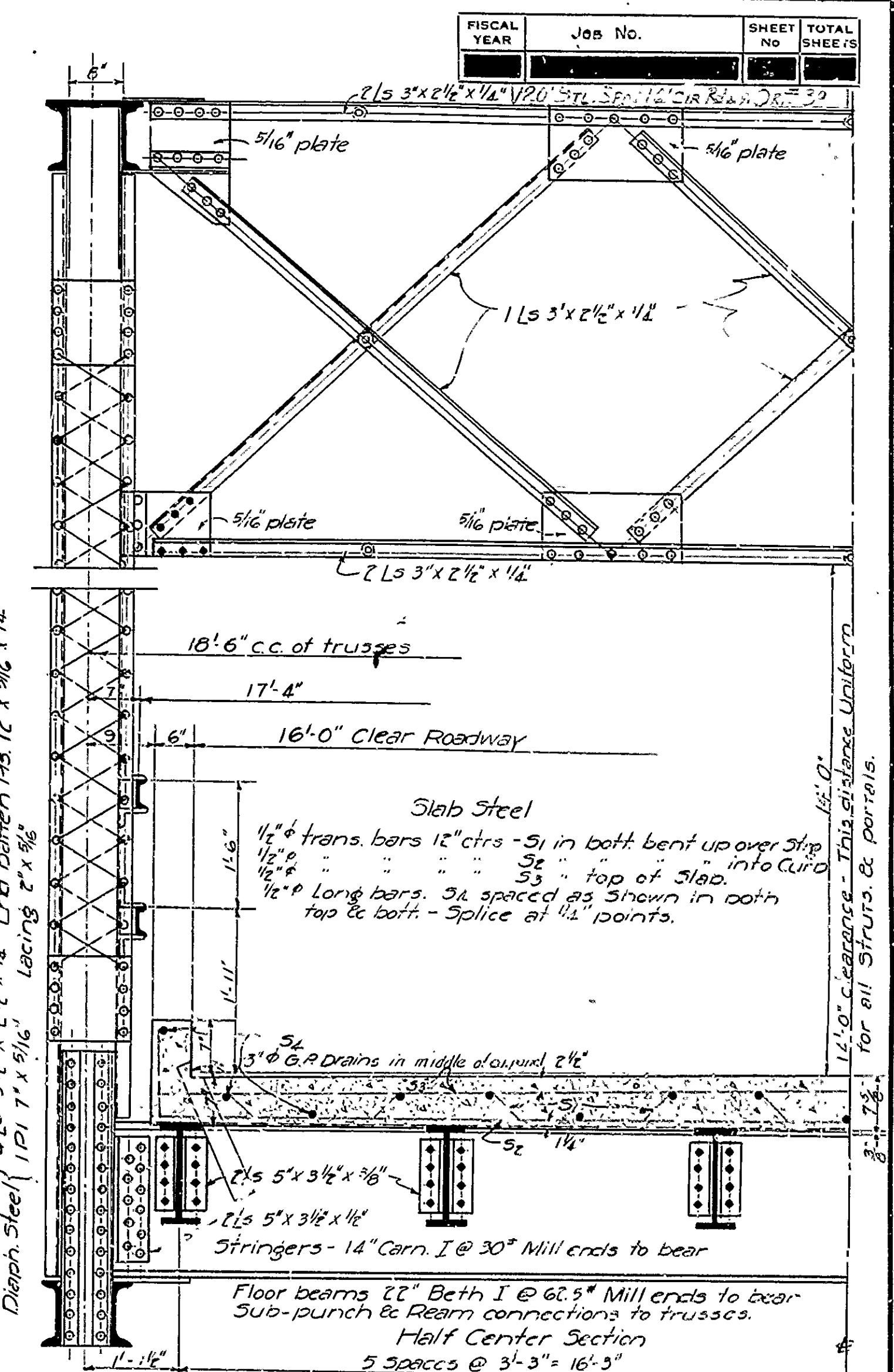
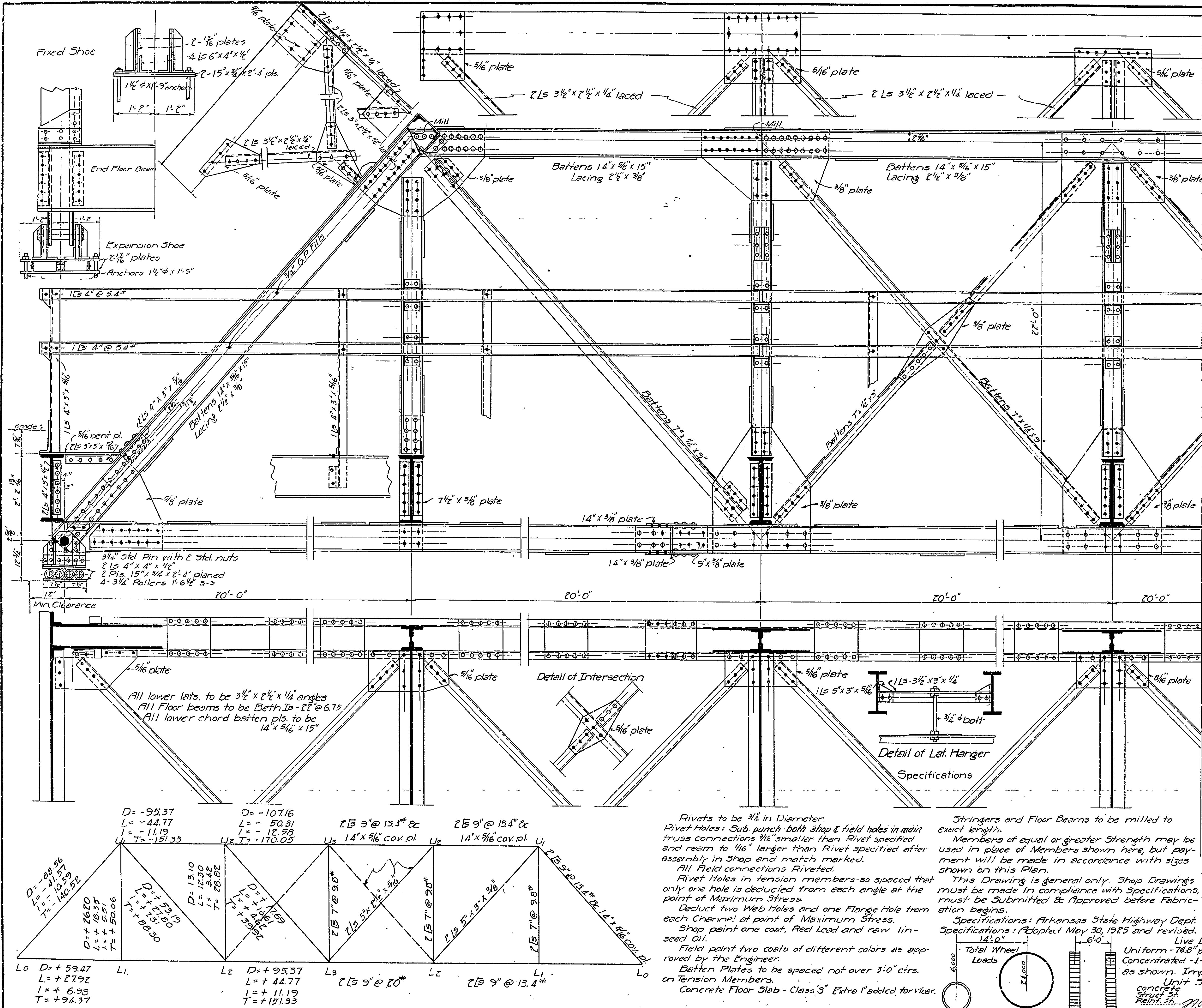
SOUNDINGS

	GROUND ELEV.	SOLID ROCK EL.	STA.
1.	57.4	47.6	6+13.6
2.	58.2	48.7	6+13.6
3.	57.6	54.2	6+13.6
4.	48.2	43.4	6+34.5
5.	46.6	44.4	6+34.5
6.	48.5	46.7	6+34.5
7.	49.1	38.7	7+71.7
8.	49.3	47.0	7+71.7
9.	50.6	38.1	7+71.7
10.	52.5	46.5	7+91.7
11.	56.6	46.4	7+91.7
12.	52.9	46.5	7+91.7



LAYOUT OF
BRIDGE ACROSS ILLINOIS BAYOU
 N. OF HECTOR, POPE COUNTY, ARK.
 ROUTE 27 SEC. 11
 ARKANSAS STATE HIGHWAY DEPARTMENT
 LITTLE ROCK, ARK.

Drawn By: *NOE* Date: _____
 Traced By: *NOE* Date: _____
 Checked By: *ERB* Date: _____
 BRIDGE NO. 1014 DRAWING NO. 1122



Expansion Device for (R/L) Conc. Span
 Expansion Device for Multiple Spans
 Floor Beam Data
 Stringer Data
 Estimated Quantities

DL M. = 12,490 x 12.5 x 12 = 8	DL M. = 7,912.5 x 20 x 12 = 8
LL M. = 10,800 x 7.5 x 12 =	LL M. = 6,500 x 20 x 12 = 4
I @ 30% =	I @ 30% =
Tot. M. =	Tot. M. =
Reqd. Sec. Mod. = 2,494,810 = 180	Reqd. Sec. Mod. = 1,442,375 = 180,000 = 41.3
Sec. Mod. of Beth I - 22 @ 62.5% = 135,995 Sec. Mod. of Carn. I - 14 @ 30% = 41.8	

D = -95.37 L = -44.77 I = -11.19 U = -151.33	D = -107.16 L = -50.31 I = -17.98 U = -170.05	U ₂ 14' x 5/16" cov. pl.	U ₂ 14' x 5/16" cov. pl.	U ₁ 2 L ₅ 5" x 3" x 3/8"	U ₁ 2 L ₅ 5" x 3" x 3/8"	U ₁ 2 L ₅ 5" x 3" x 3/8"	U ₁ 2 L ₅ 5" x 3" x 3/8"
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Rivets to be 3/4 in Diameter.
 Rivet Holes: Sub-punch both shop & field holes in main truss connections 3/16" smaller than Rivet specified and ream to 1/16" larger than Rivet specified after assembly in Shop and match marked.
 Rivet Holes in tension members so spaced that only one hole is deducted from each angle at the point of Maximum Stress.
 Deduct two Web Holes and one Flange Hole from each Channel at point of Maximum Stress.
 Shop paint one coat, Red Lead and raw linseed Oil.
 Field paint two coats of different colors as approved by the Engineer.
 Batten Plates to be spaced not over 3'0" cirs. on Tension Members.
 Concrete Floor Slab - Class 5 Extra 1" added for wear.

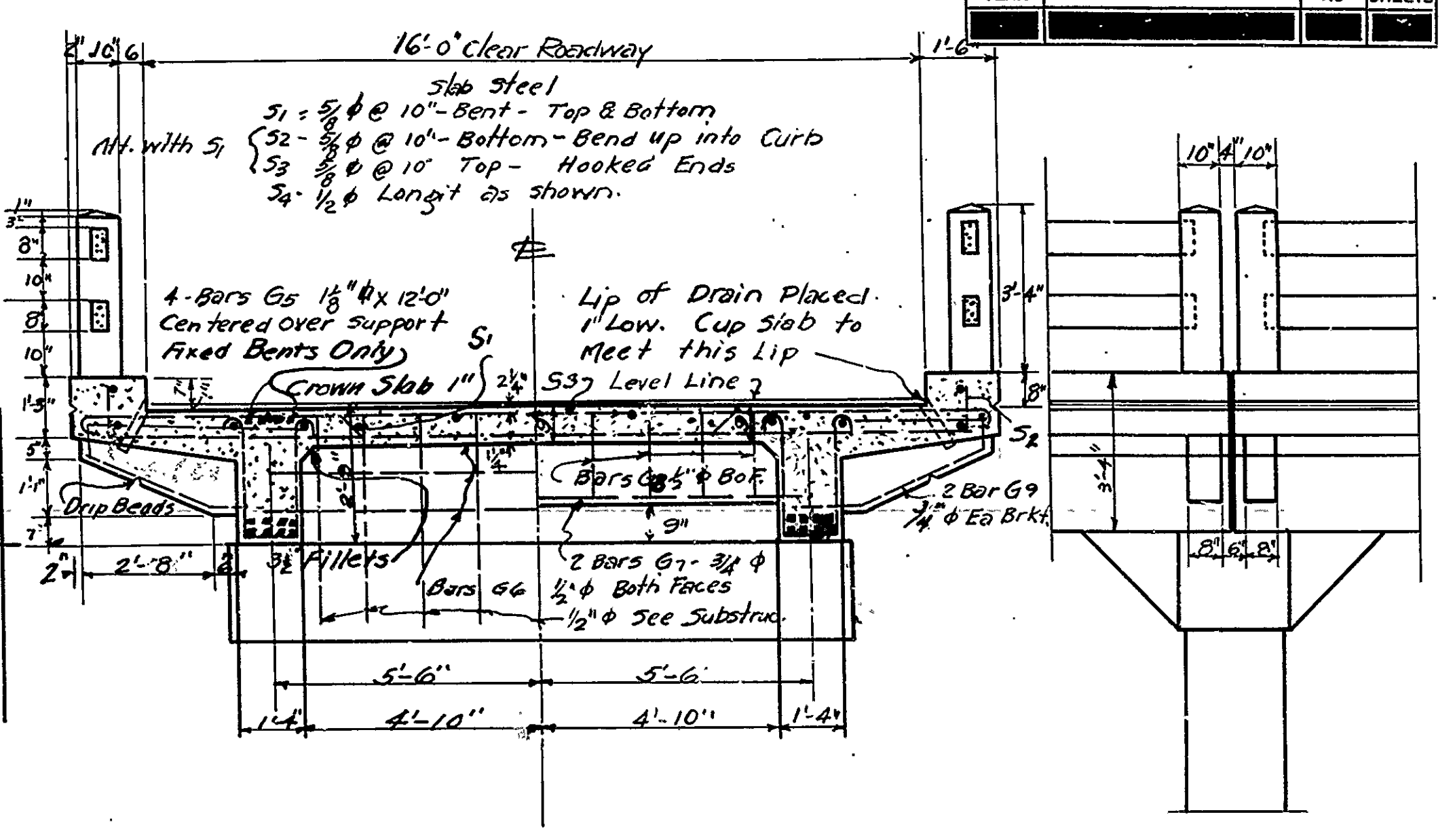
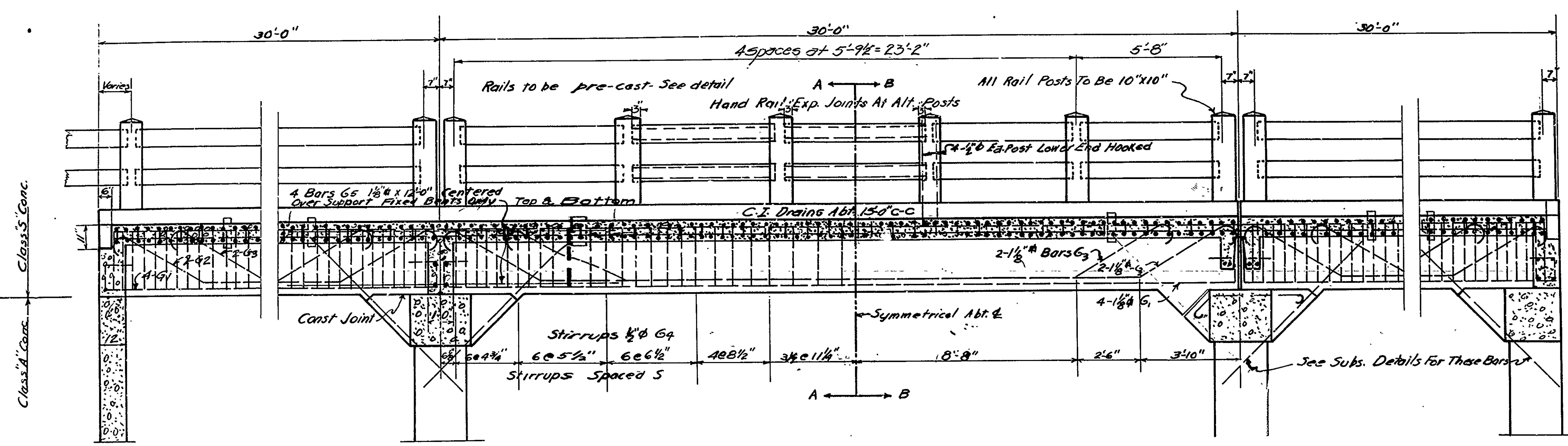
Stringers and Floor Beams to be milled to exact length.
 Members of equal or greater strength may be used in place of Members shown here, but payment will be made in accordance with sizes shown on this Plan.
 This Drawing is general only. Shop Drawings must be made in compliance with Specifications, must be Submitted & Approved before Fabrication begins.
 Specifications: Arkansas State Highway Dept. Specifications: Adopted May 30, 1925 and revised.

Live Load
 Uniform - 76.8" per 4' of Rwy
 Concentrated - 1-15 ton trucks as shown. Impact = 100+L+300
 Unit Stresses
 concrete 800# 12"
 steel 18,000# 14"
 Reinf. 30,000# 14"

Structural Steel without Expansion Devices 86,630 Lbs.
 Reinforcing Steel (0.10 c. of End 11. Bents) 6,350 Lbs.
 Class 5 Concrete (0.10 c. of End 11. Bents) 151.9 Cu yds.

Standard Plan
 120'-0" Steel Span
 16'-0" Clr. Roadway
 ROUTE SEC.
ARKANSAS STATE HIGHWAY DEPARTMENT
 LITTLE ROCK, ARK.
 Drawn By: Noe Date: 8/1/20
 Traced By: MCG Date: 8/9/20
 Checked By: EBB Date:
 Bridge No. DRAWING NO. 39
 Scale: 3/4" = 1' ft.

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS



ABUTMENT END
See Abutment Plan For Details

INT. FIXED BENT

INT. EXP. BENT
See Layout Sheet For Location Of Exp. Joints

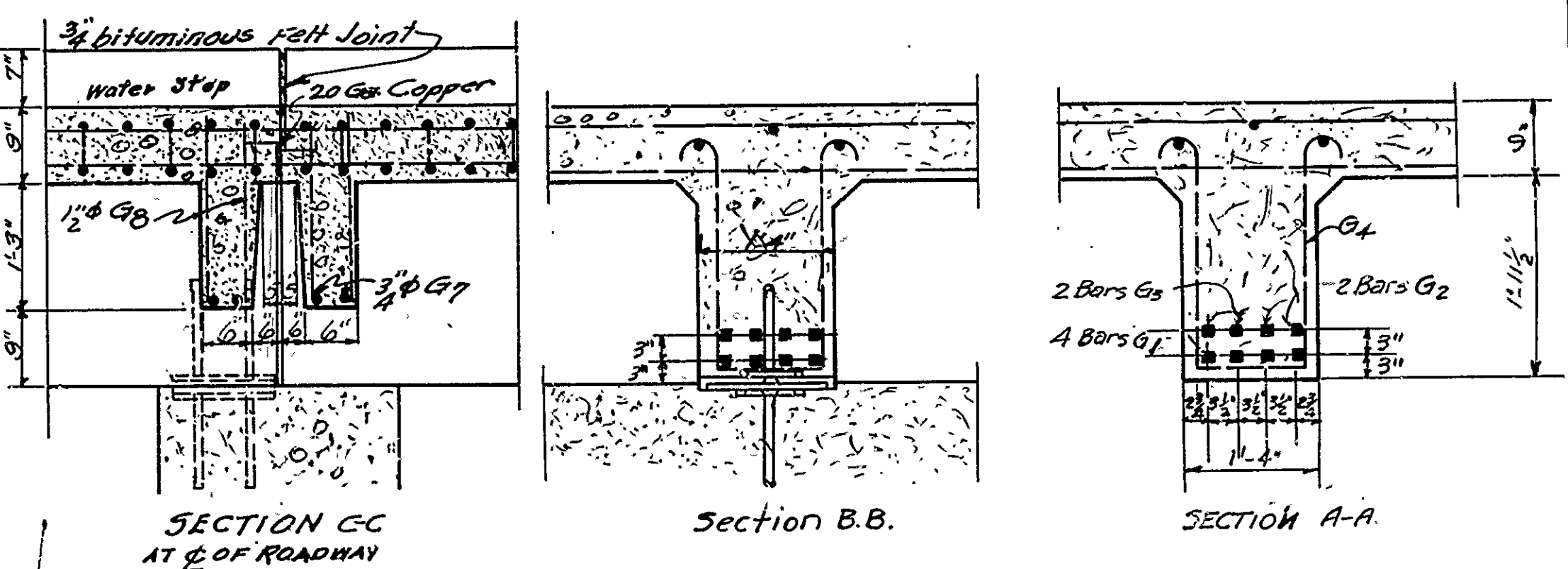
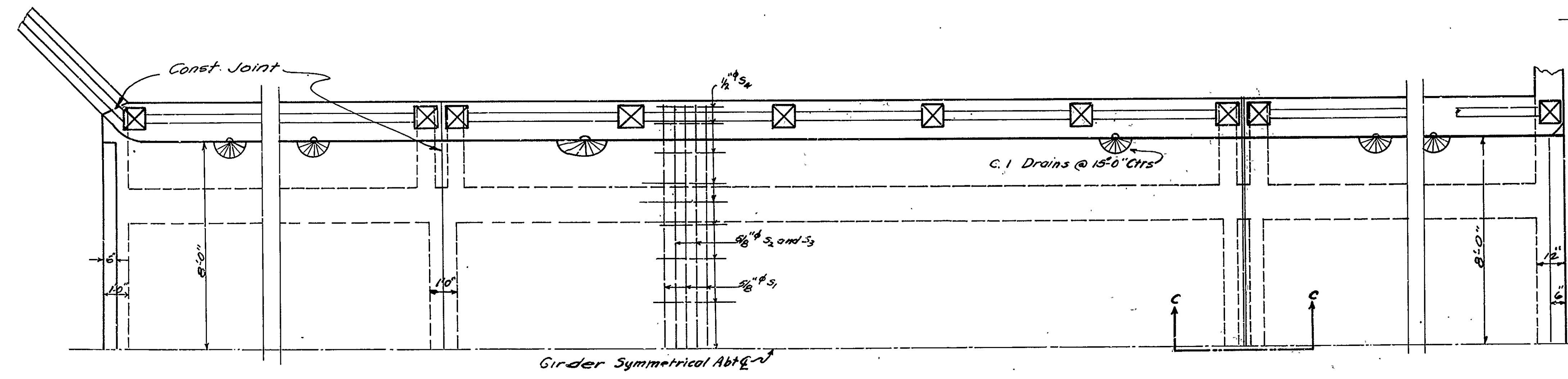
END BENT
See Subs. Plans For Details

Section A.A.

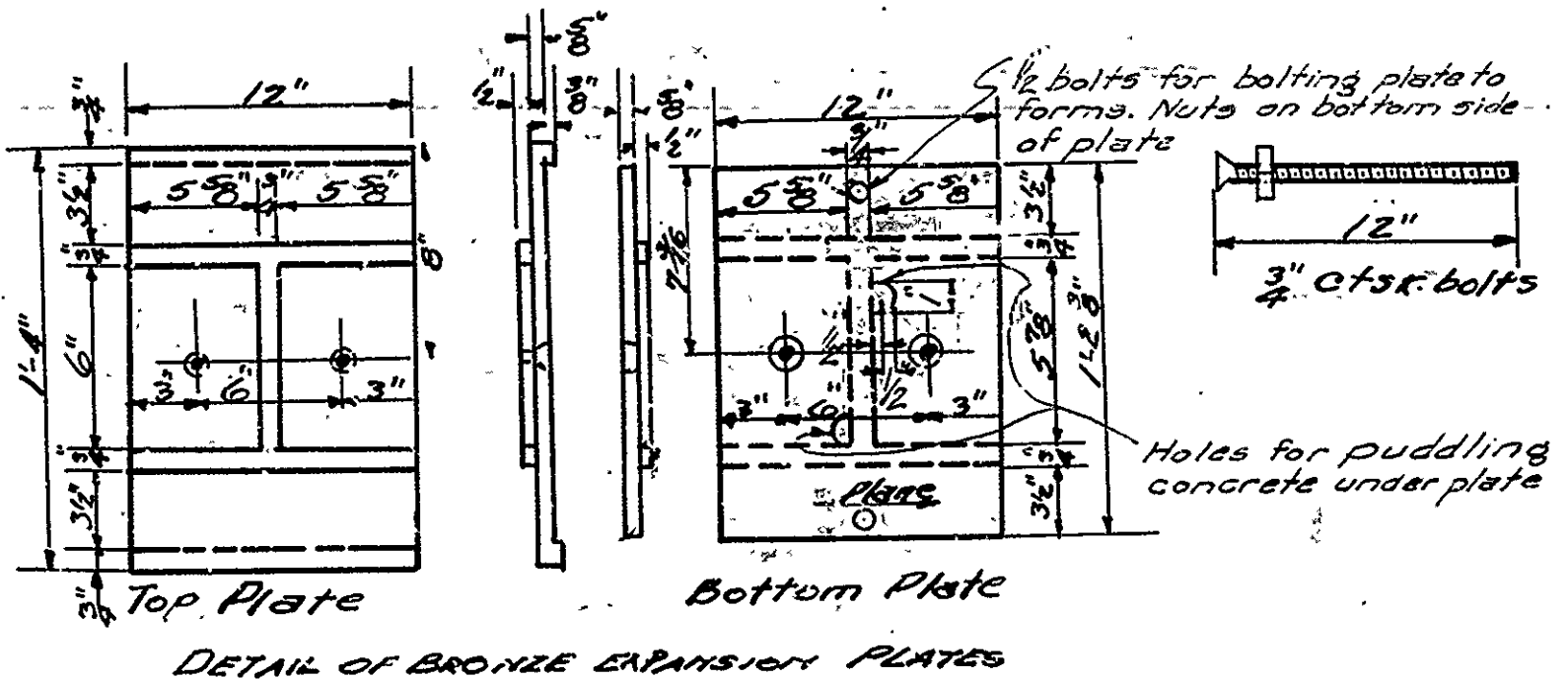
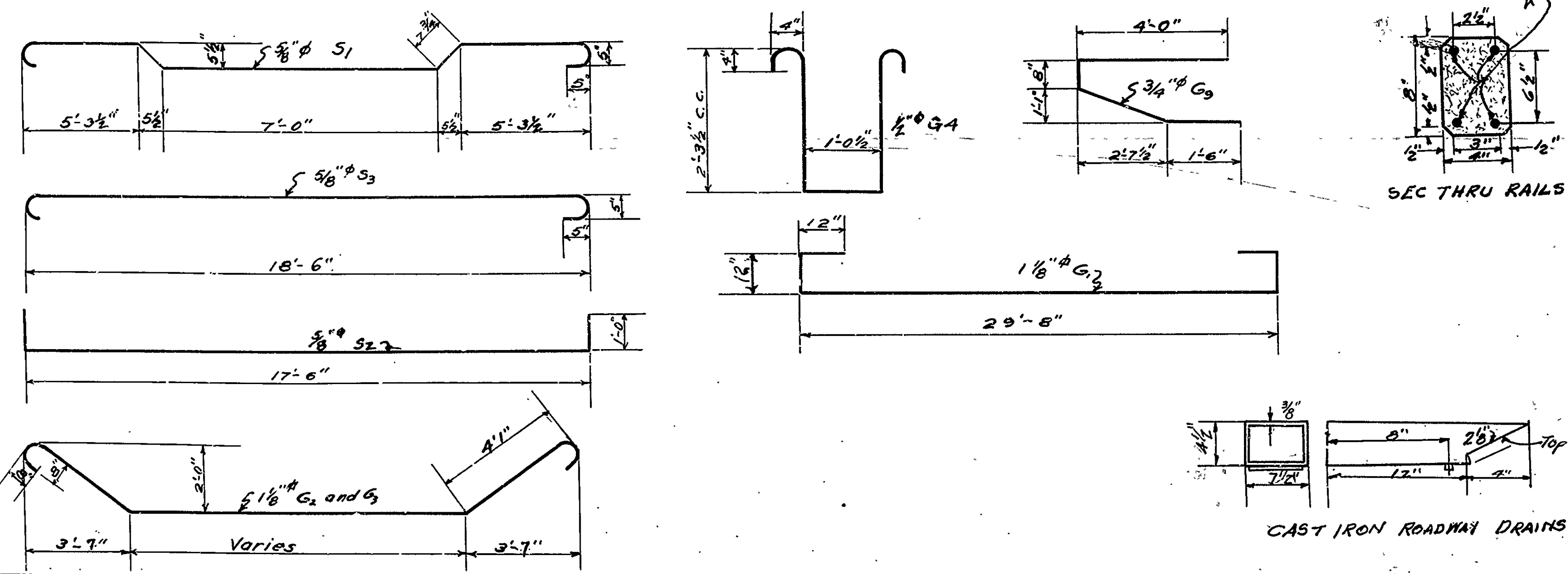
Section B.B.

Elevation of Brackets

LONGITUDINAL SECTION



PLAN VIEW



Bronze to be of Class C grade.
Plates to be planed in direction of traffic.
2 pair of plates required for each expansion joint

General Notes:
All exposed corners to have 3/4" chamfer unless noted otherwise.
Pre-cast concrete Handrails to be 1:1:2 Mix Maximum Agg. 7/8". Rail Posts to be Class 5 concrete. Concrete above top of Column Caps except Handrail to be Class 5. Below this point Class 4. All concrete to be poured in the dry.
Reinforcing steel to be deformed bars at structural or intermediate grade. Shop lists and bending diagrams shall be submitted by contractor before fabrication is begun. Roadway drains and expansion devices to be paid for at unit price bid for reinforcing steel.
Specifications: Arkansas Standard Road and Bridge Specifications, adopted 5/30/25 and Revised.

Added 4-G5 Bars to each Girder in bottom 9/23/29 E.P.B.

11-13-28
Dra. Spacing 3-26-29 (removed)
For General Revisions -
By Moe.

Dra. 2-26-29 E.P.B.
Balls in Exp. pl. 3-30-29 (removed)
Diaphragms 4-29 (removed)
Girder 8-26-29 (removed)
3-34 Bars added 4-6-29 SA.

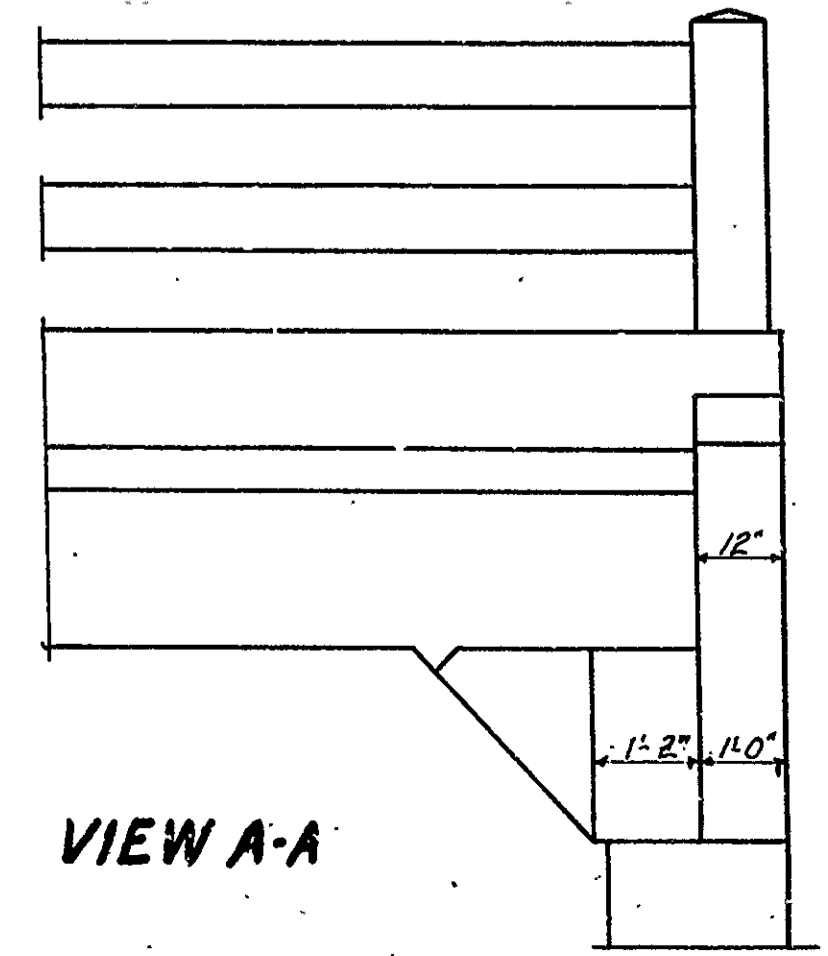
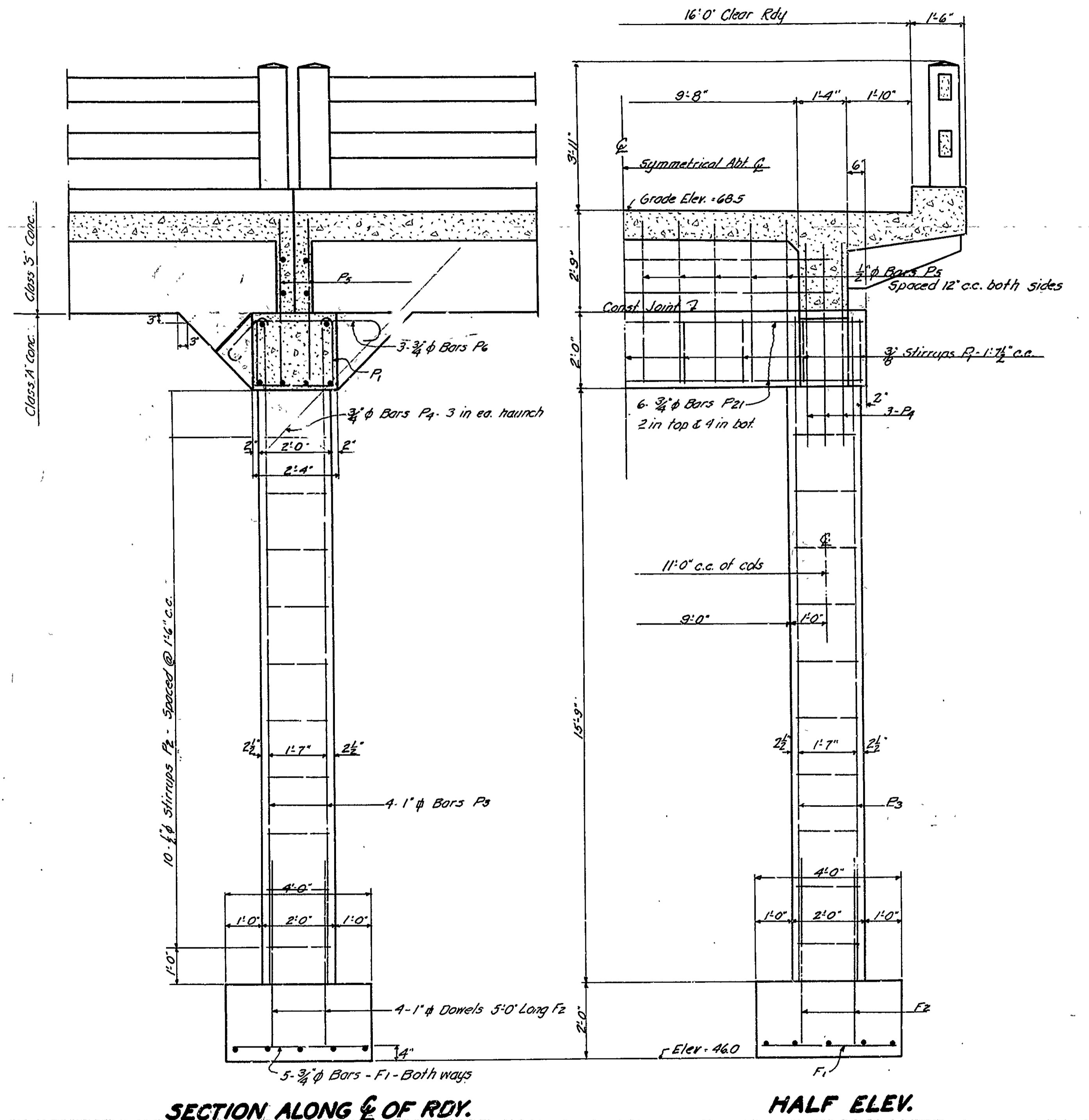
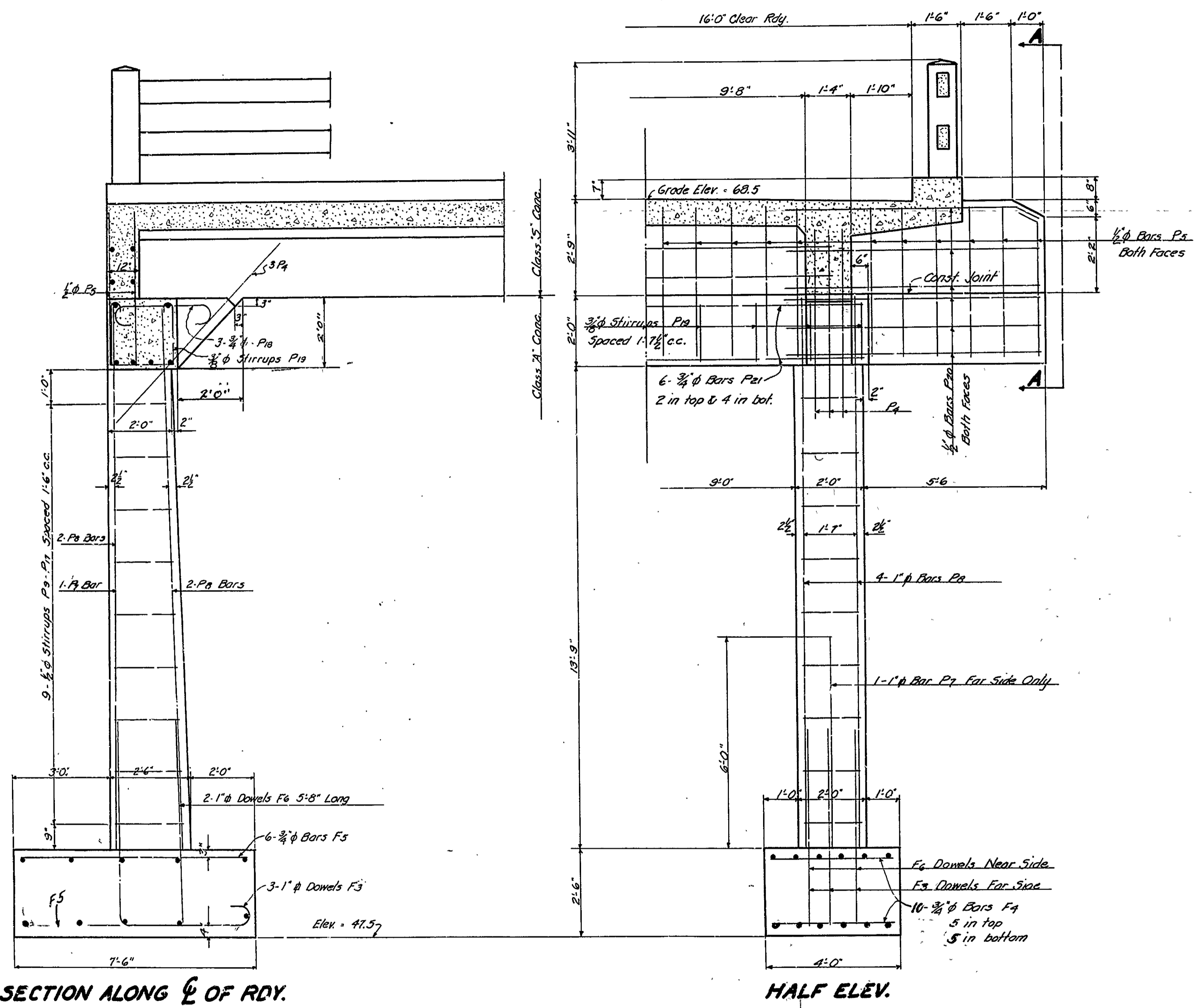
Standard Plan
30'-0" R.C. Girder
16'-0" cl. Rdwy.
ROUTE SEC.
ARKANSAS STATE HIGHWAY DEPARTMENT
LITTLE ROCK, ARK.

Drawn By: Noe Date: 8/8/28
Traced By: E.G. F.M.S. Date: 8/14/28
Checked By: E.P.B. Date:
BRIDGE NO. DRAWING NO. 1022

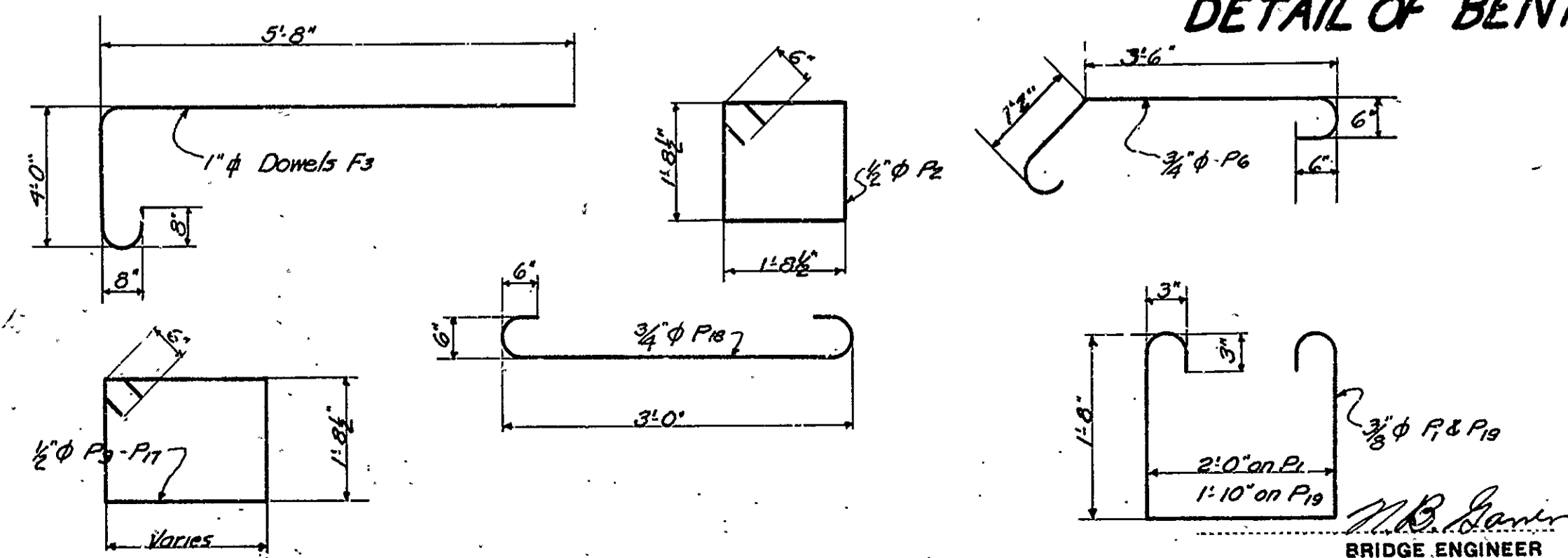
M.B. James
BRIDGE ENGINEER

Scale: 3/8" = 1'ft.

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DET. OF BENT, I, 2 & 3, ILL. BAYOU, D.C. #1124			



DETAILS OF BENTS 1 & 3

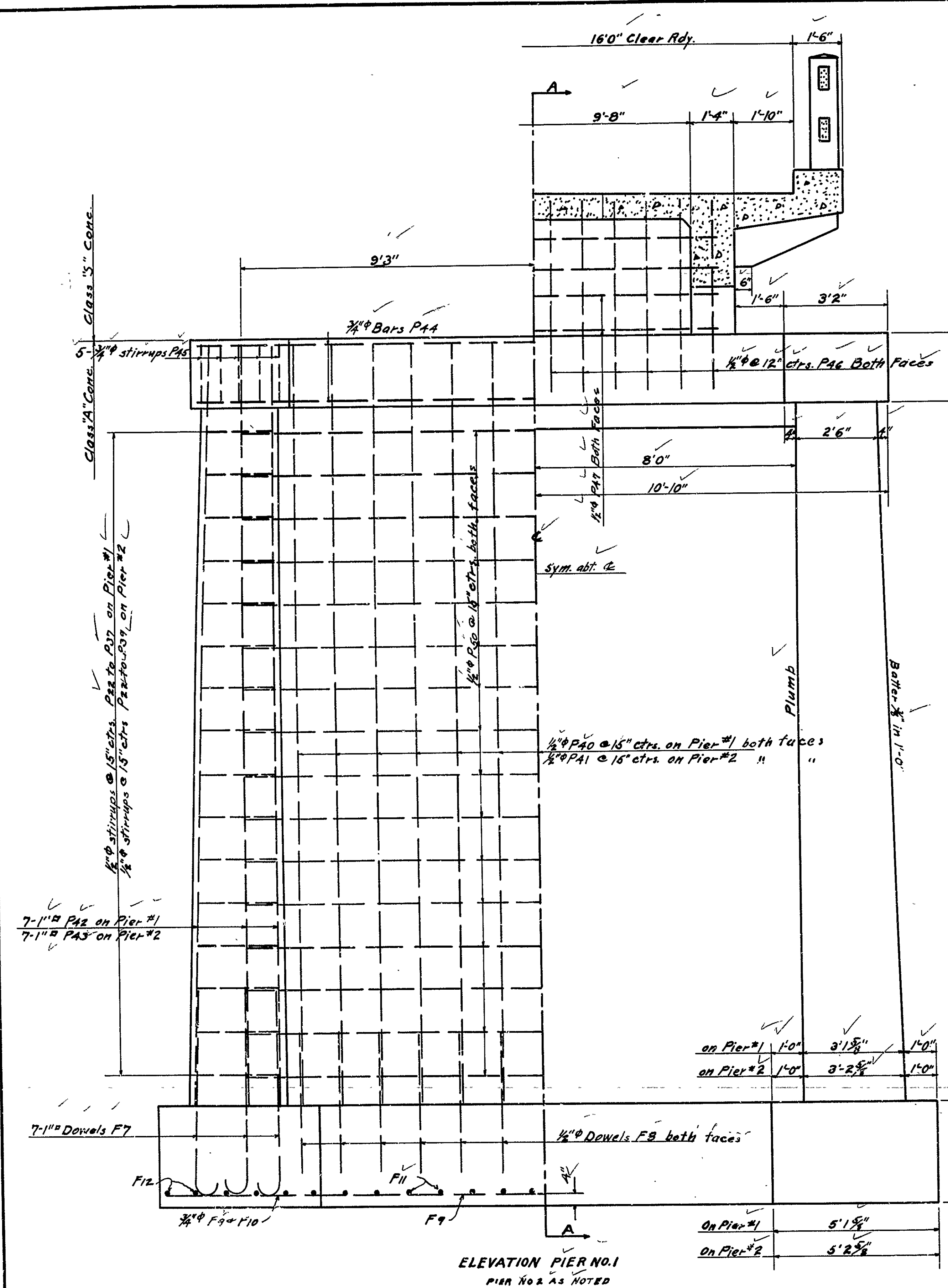


DETAILS OF BENTS 1, 2 & 3
BRIDGE OVER ILLINOIS BAYOU
N. OF HECTOR, POPE COUNTY, ARK.
 ROUTE 27, SEC. 11
ARKANSAS STATE HIGHWAY DEPARTMENT
 LITTLE ROCK, ARK.

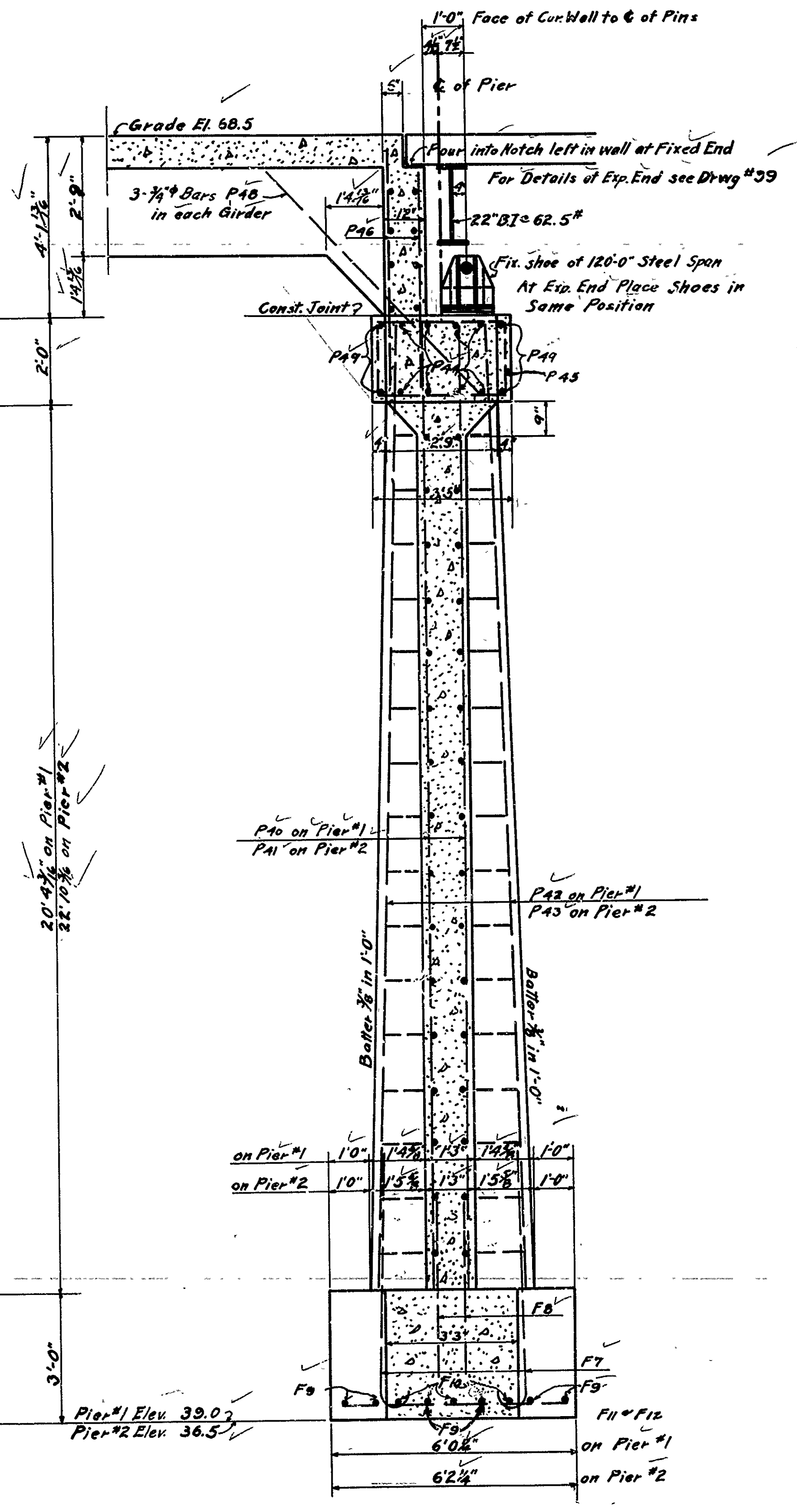
Drawn By: G.W.N. Date: _____
 Traced By: G.W.N. Date: _____
 Checked By: B.R.D. Date: _____

Scale: 1/2" = 1 ft.
BRIDGE NO. 1014 **DRAWING NO. 1124**

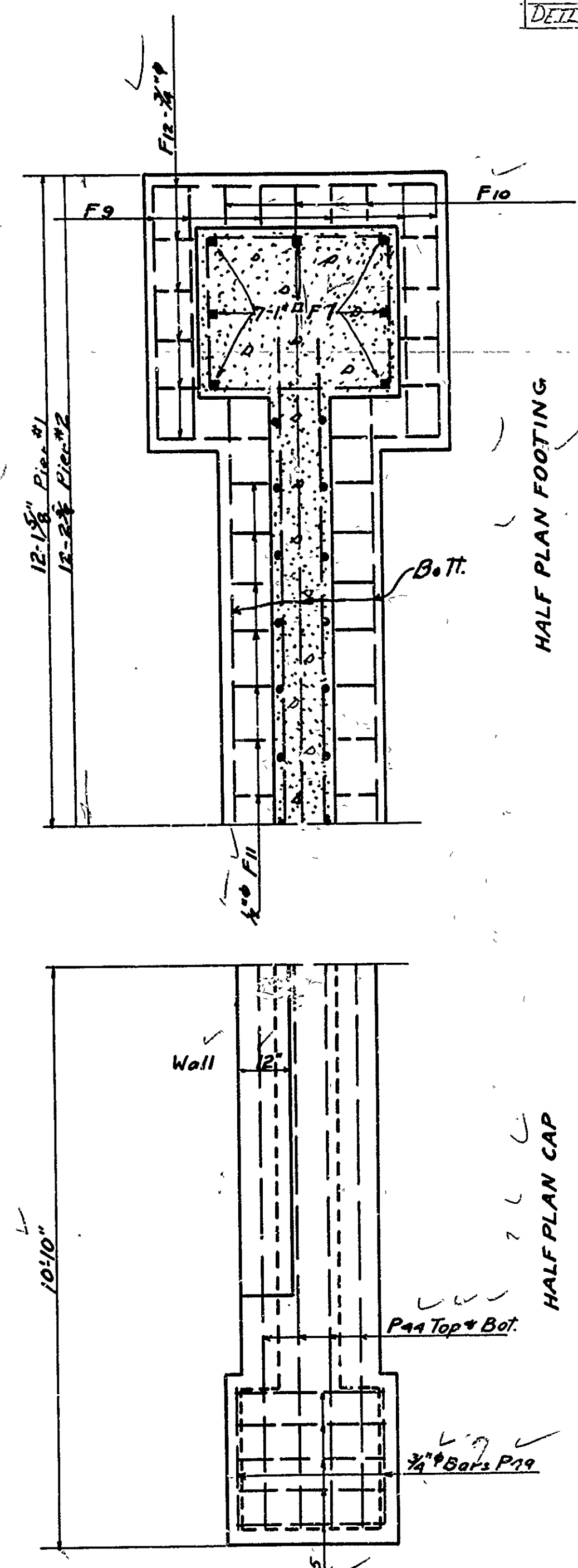
FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1929	868	5	6
DET. of Piers for Acc. Ill. Grade 1123			



ELEVATION PIER NO. 1
PIER No. 2 AS NOTED



SECTION A-A PIER NO. 1
PIER No. 2 AS NOTED



HALF PLAN FOOTING

HALF PLAN CAP

DETAL of PIERS 1 & 2
BRIDGE ACROSS ILLINOIS BAYOU
NORTH of HECTOR, POPE CO. ARK.
ROUTE 27 SEC. 11
ARKANSAS STATE HIGHWAY DEPARTMENT
LITTLE ROCK, ARK.
Drawn By: *NOE* Date: 2-12-29
Traced By: *F.B.B.* Date: 2-11-28
Checked By: *RB* Date: _____
Scale: 1/2 in. = 10 ft.
BRIDGE NO. 1014 DRAWING NO. 1123

M.B. Lawrence
BRIDGE ENGINEER