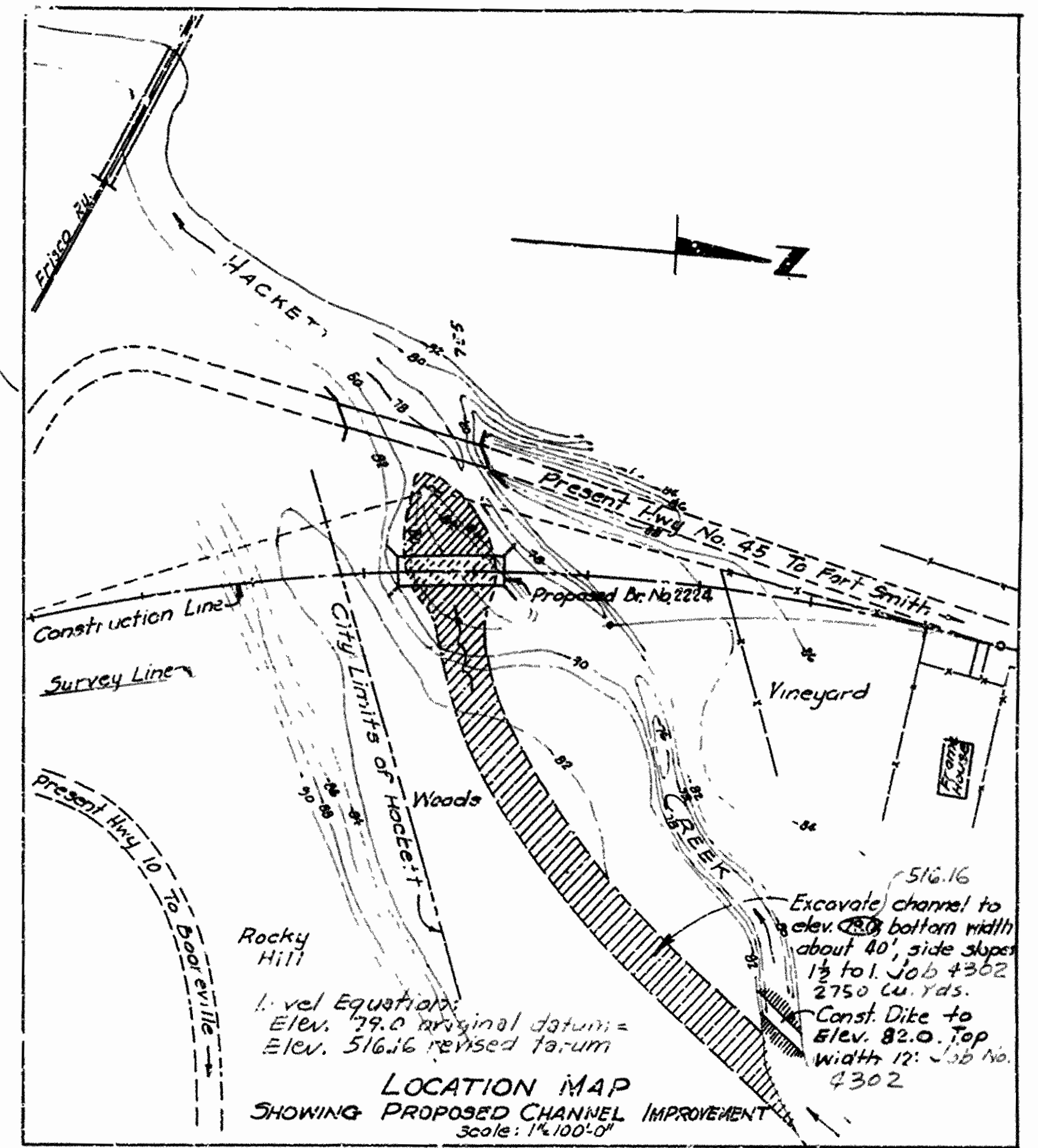
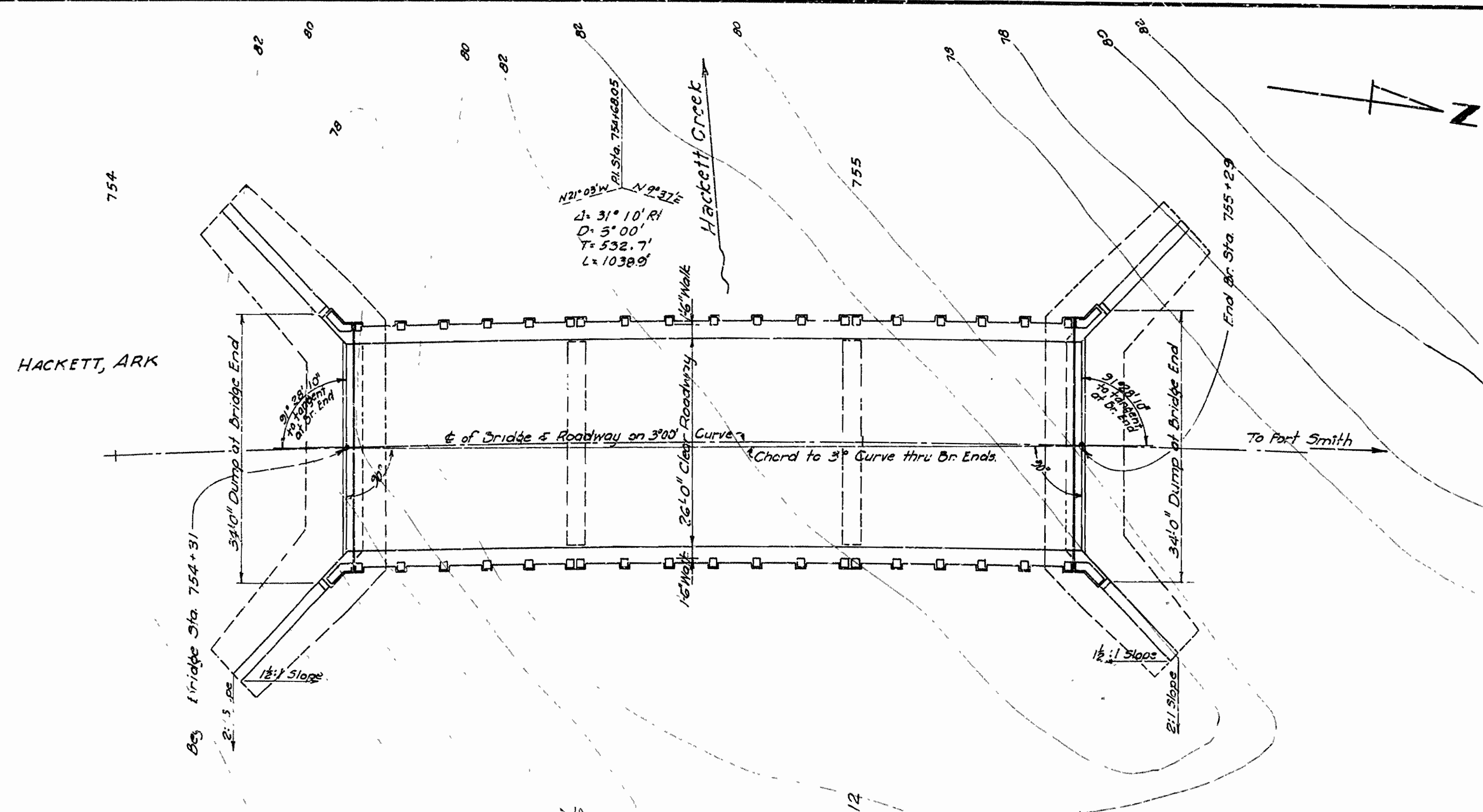


FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313(6)	1946	22	32
STATE JOB NO. 4295		1946 22 32			

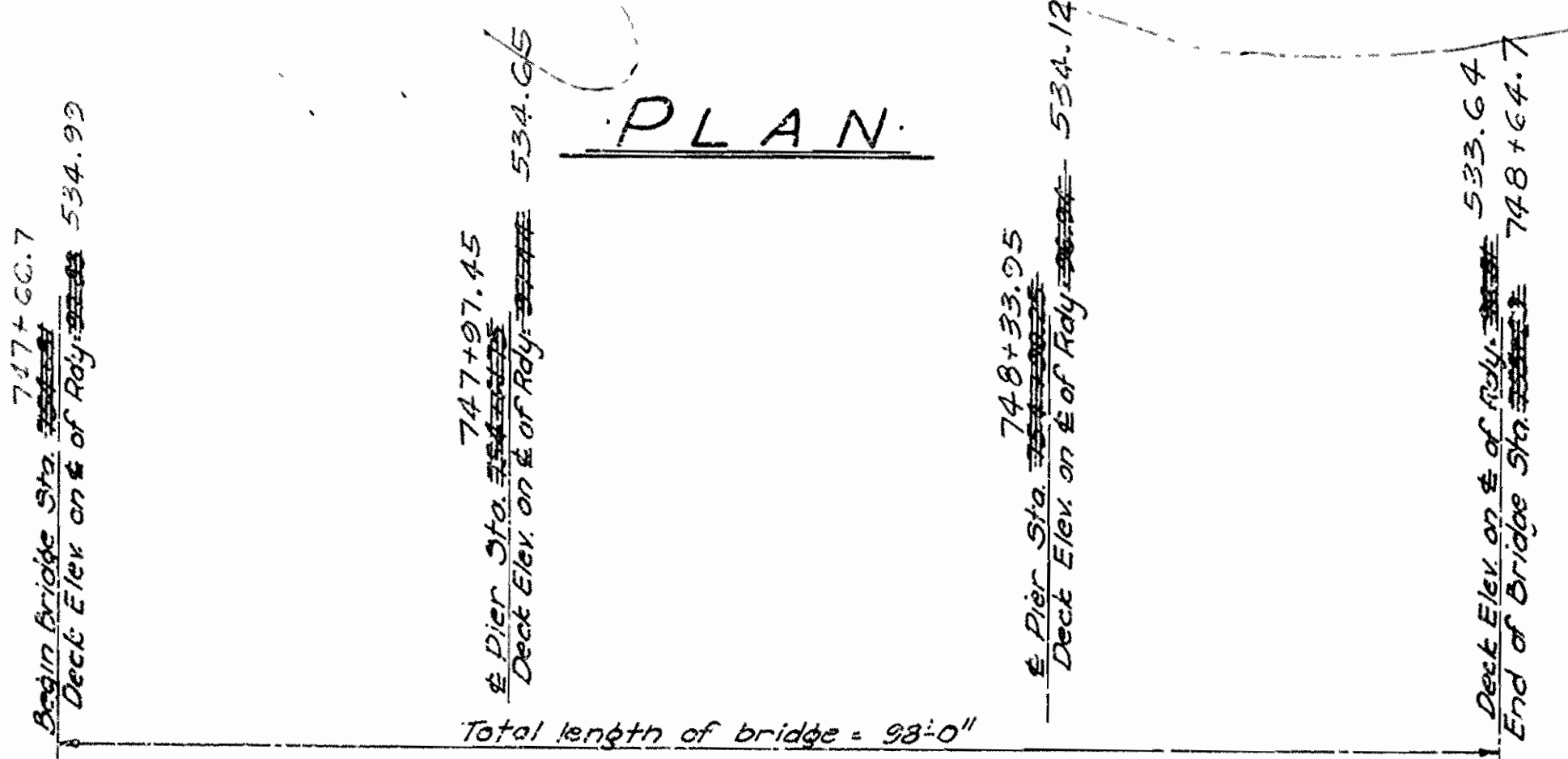
4266



General Notes

All concrete to be poured in the dry. Exposed corners to be chamfered  $\frac{3}{8}$ " unless otherwise noted.  
 Abutment and Pier Caps to be Class "A" Concrete. Remainder of Abutments and Piers to be Cement Rubble Masonry.  
 Excavate channel to elev. 516.16 - Job 4302  
 Excavate channel as shown to bottom elev. 516.16 - Job 4302  
 Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted March 1, 1940.  
 For Details of Abutments, See Dwg Nos. 6248, 6249, 6251 & 6252  
 For Details of Piers, See Dwg No. 6250  
 For Details of Superstructure, See Dwg Nos. 6253 & 6254  
 If suitable foundation material is encountered at elevations other than that shown, construct piers and abutments to orders shown on detail piers.  
 Bridge Contractor shall remove existing bridge located approximately 120 feet downstream, consisting of 7 @ 14'0" treated timber spans. See Special Provisions.

PLAN



ELEVATION

QUANTITIES

Item No.	Item	Quantity	Unit
SP4 802	Class "A" Concrete for Bridges	11.0	Cu. Yds
SP4 802	Class "B" Concrete for Bridge	73.0	Cu. Yds
SP4 803	Reinforcing Steel	13890	Lbs.
805	Concrete Railing	212	Lin. Ft.
904	Cement Rubble Masonry	2.2	Cu. Yds
SP4 907	Conditioning & Erecting Structural Steel on Span	4.4	800 Lbs
	Bridge Name Plates - Type 'B'	2	Each
	Conditioning Substructure Units in Place	100%	Complete J.
	Removal of Existing Bridge Structures and Maintaining Traffic	2570	Complete J.

LAYOUT OF BRIDGE  
 OVER HACKETT CREEK  
 AT HACKETT, ARK.  
 SEBASTIAN COUNTY  
 ROUTE 45 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 Drawn By: H.B. Date: 10-3-41  
 Traced By: H.B. Date: 10-6-41  
 Checked By: Date:  
 BRIDGE NO. 2224 DRAWING NO. 6247  
 Scale: 1 in. = 10 ft.

Revisions: Portions constructed indicated; quantities; level datum; 1-16-46. H.B.

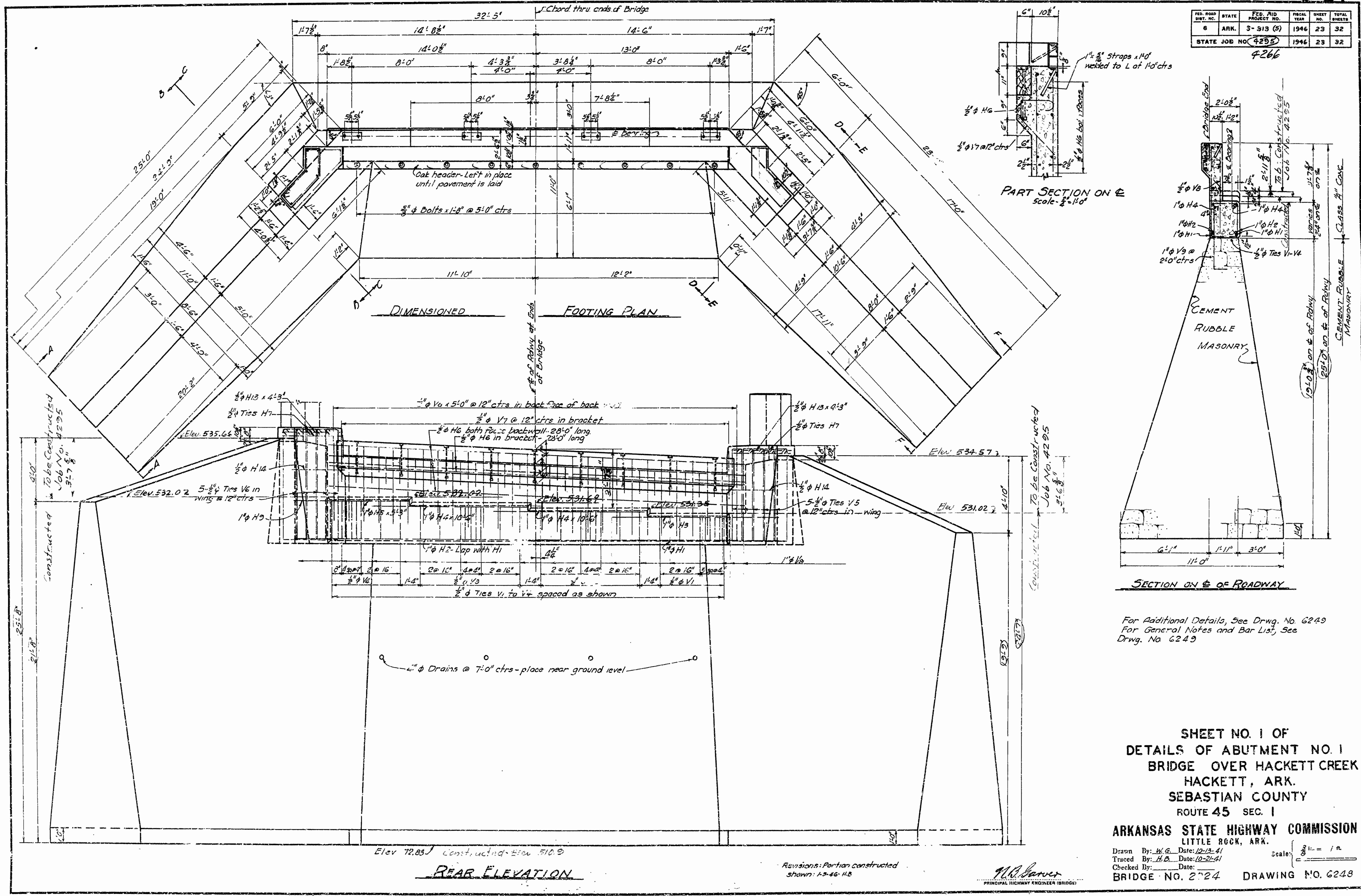
DRAINAGE AREA  
 7.59 miles<sup>2</sup> C.10  
 Top of bottom water  
 S.E. wing of timber bridge  
 15 ft. of Sta 747+00.  
 B.M. Elev. 521.70

Notes: Piers and major portions of abutments designed by cross-sections shown, and have been constructed.

H.B. HENNER  
 PRINCIPAL HIGHWAY ENGINEER (BRIDGE)



FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	3-513 (5)	1946	23	32
STATE JOB NO. 4295					
4266					



SECTION ON E OF ROADWAY

For Additional Details, See Drwg. No. 6249  
 For General Notes and Bar List, See  
 Drwg. No. 6249

SHEET NO. 1 OF  
 DETAILS OF ABUTMENT NO. 1  
 BRIDGE OVER HACKETT CREEK  
 HACKETT, ARK.  
 SEBASTIAN COUNTY  
 ROUTE 45 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.

Drawn By: *W.G.* Date: 10-13-41  
 Traced By: *H.B.* Date: 10-21-41  
 Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
 BRIDGE NO. 2724 DRAWING NO. 6248

REAR ELEVATION

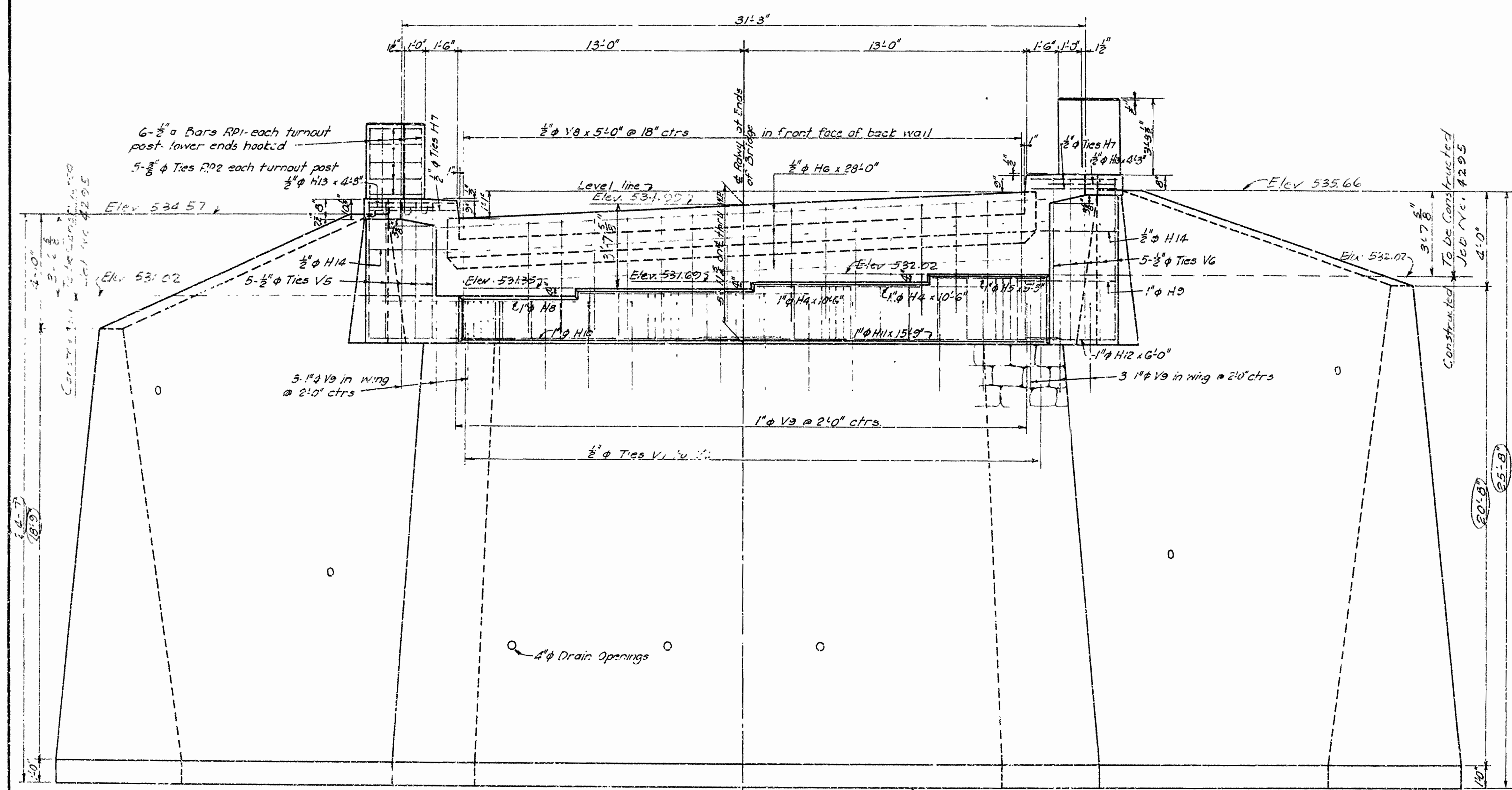
Revisions: Portion constructed  
 shown: 1-3-46 H.B.

*H.B. Barber*  
 PRINCIPAL HIGHWAY ENGINEER (BRIDGE)



FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
6	ARK.	S-313 (5)	1946	24
STATE JOB NO. 4295				32

4266



LIST OF BENT BARS

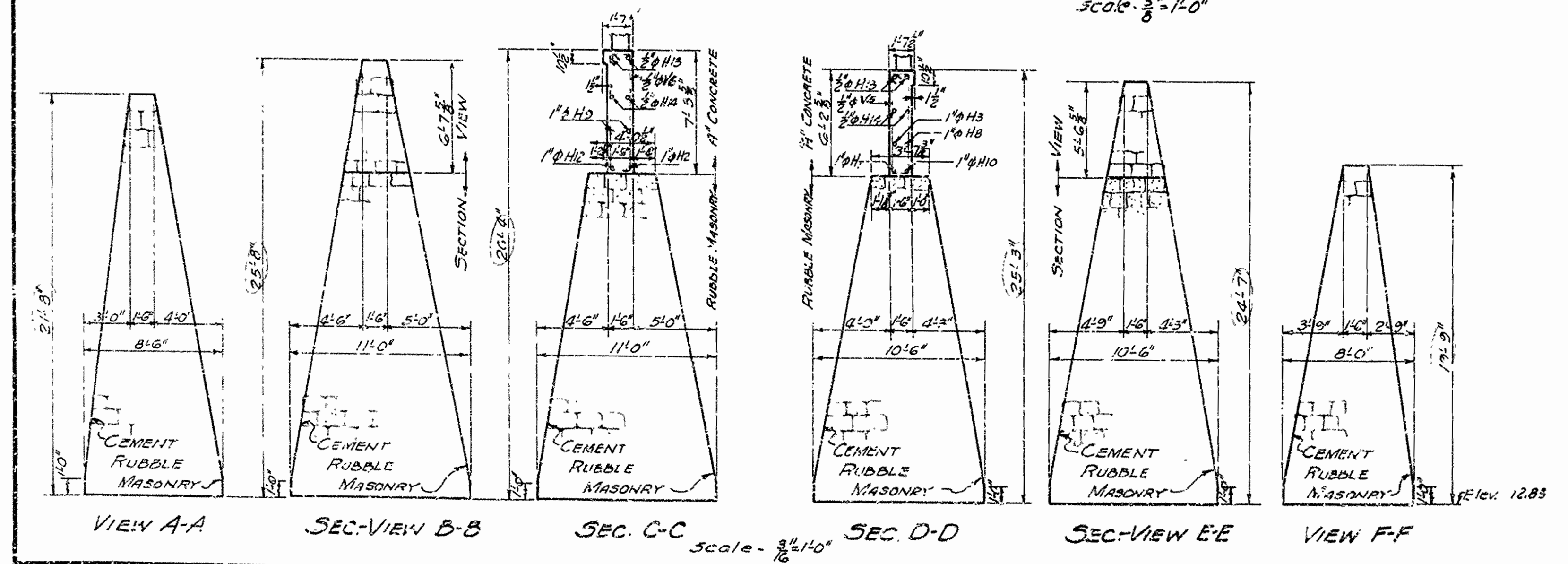
MARK	SIZE	LENGTH	A	B	C
H1	1"φ	19'-4"	14'-8"	4'-8"	
H2	1"φ	19'-4"	14'-8"	4'-8"	
H3	1"φ	13'-2"	8'-6"	4'-8"	
H4	1"φ	14'-2"	8'-6"	5'-8"	
H5	1"φ	7'-8"	5'-8"	2'-0"	
H6	1"φ	20'-4"	14'-8"	5'-8"	
H7	1"φ	6'-4"	4'-4"	2'-0"	
R1	1"φ	4'-6"			
R2	1"φ	9'-0"			
V1	1"φ	12'-11"			
V2	1"φ	7'-10"	1'-8"	1'-7"	
V3	1"φ	8'-6"	1'-8"	2'-3"	
V4	1"φ	9'-2"	1'-8"	2'-7"	
V5	1"φ	14'-10"	1'-1/2"	6'-0"	
V6	1"φ	16'-10"	1'-1/2"	7'-0"	
V7	1"φ	3'-5"			
V8	1"φ	4'-9"			

BENDING DIAGRAM

Dimensions relating to reinforcing are to centers of bars.

Notes:  
 All concrete to be Class "A". All exposed corners to be chamfered 3/4" unless otherwise shown.  
 Masonry to be "Cement Rubble Masonry". See Section 204 Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction dated March 1, 1940.  
 For additional Details, see Drawing No. G248  
 For details of sidewalk expansion devices, see Dwg. G254  
 For details of Superstructure, see Dwg Nos G253 & G254  
 Anchor bolt holes to be drilled into concrete, and anchor bolts to be grouted into place - Job No. 4295

FRONT ELEVATION  
 Scale: 3/8" = 1'-0"



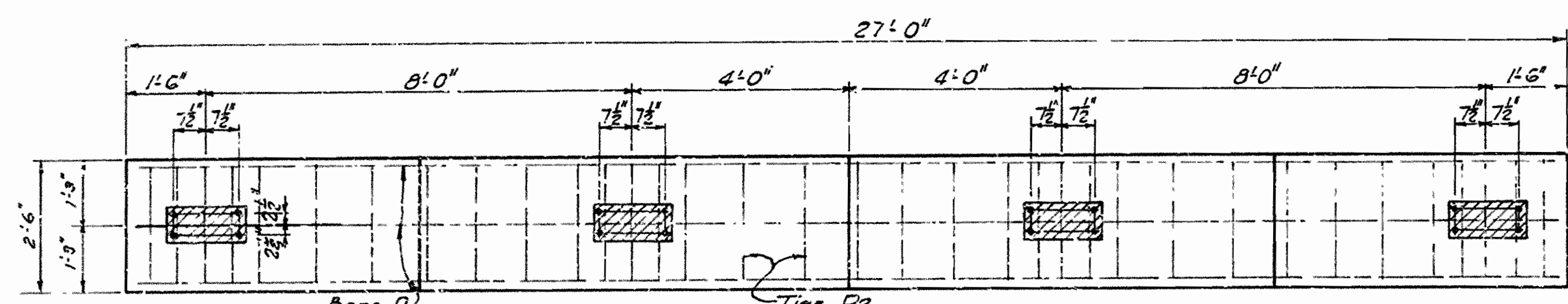
Revisions: Portion constructed shown. 1-4-46. H.B.

SHEET NO. 2 OF  
 DETAILS OF ABUTMENT NO. 1  
 BRIDGE OVER HACKETT CREEK  
 HACKETT, ARK.  
 SEBASTIAN COUNTY  
 ROUTE 45 SEC. 1  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 Scale: 3/8" = 1'-0"  
 Drawn By: W.G. Date: 10-14-41  
 Traced By: H.B. Date: 10-23-41  
 Checked By: Date:  
 BRIDGE NO. 2224 DRAWING NO. G249

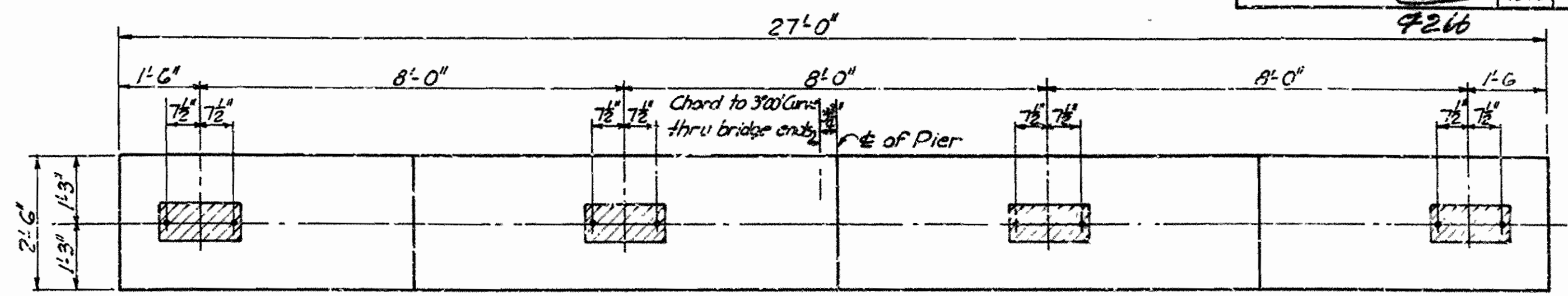
Principal Highway Engineer (Bridges)



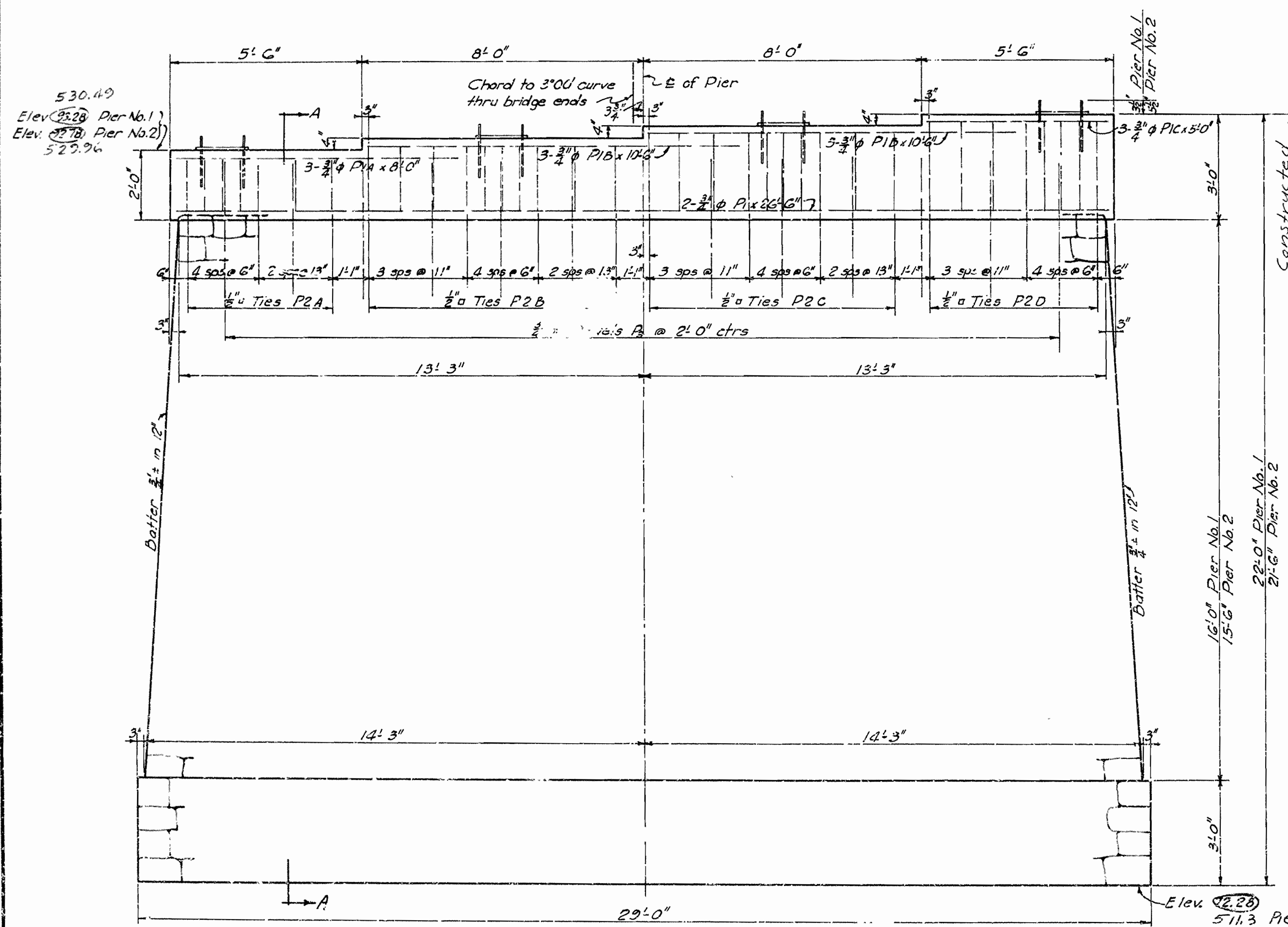
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313 (S)	1946	25	32
STATE JOB NO. 4225		1946	25	32	



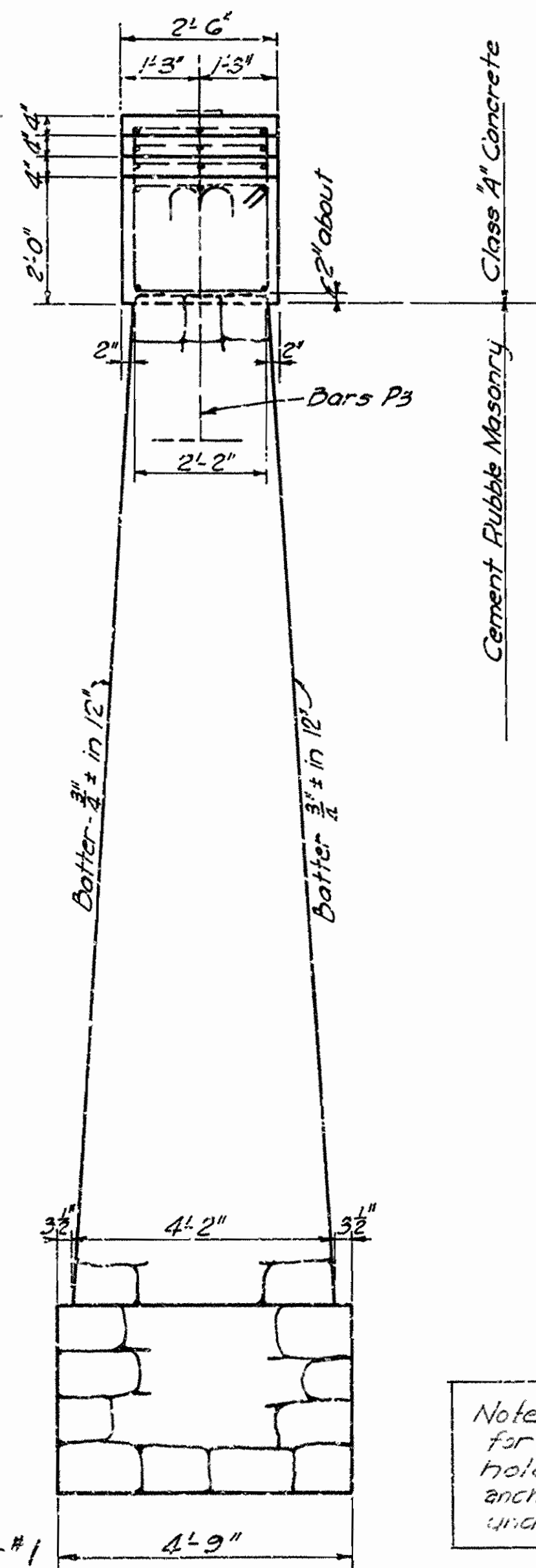
PLAN OF CAP-PIER NO. 1 & 2  
SHOWING ANCHOR BOLT PLAN FOR PIER NO. 1



PLAN OF CAP-PIER NO. 2  
SHOWING ANCHOR BOLT PLAN  
FOR DETAILS NOT SHOWN SEE PLAN OF CAP PIER NO. 1 & 2



SIDE ELEVATION



SECTION A-A

REINFORCING SCHEDULE						
No.	Pier No. 1	Pier No. 2	Size	Length	Mark	Bending Diagram
2	2		3/4"	26'-6"	P1	Straight
3	3		3/4"	8'-0"	P1A	"
6	6		3/4"	10'-0"	P1B	"
3	3		3/4"	5'-0"	P1C	"
7	7		5/8"	8'-4"	P2A	1'-7 1/2"
10	10		5/8"	9'-0"	P2B	1'-11 1/2"
10	10		5/8"	9'-8"	P2C	2'-3 1/2"
8	8		5/8"	10'-4"	P2D	2'-7 1/2"
13	13		3/8"	5'-6"	P3	4'-0"

General Notes  
 All concrete in caps to be Class #1. Exposed corners to be chamfered 3/8".  
 All dimensions relating to reinforcing steel are to centers of bars.  
 For Details of Superstructure, See Dwg Nos 6253 & 6254

Note: Piers are complete in place, except for placing anchor bolts. Anchor bolt holes to be drilled into concrete, and anchor bolts to be grouted into place under Job No 4225.

DETAILS OF PIERS  
 FOR BRIDGE OVER HACKETT CR  
 HACKETT, ARK.  
 SEBASTIAN COUNTY  
 ROUTE 45 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 Drawn By: H.B. Date: 10-8-41  
 Traced By: H.B. Date: 10-12-41  
 Checked By: Date:  
 BRIDGE NO. 2224 DRAWING NO. 6250

Revisions: Status of construction indicated- 1-7-46-H.B.

H.B. Lawler  
 PRINCIPAL HIGHWAY ENGINEER (BRIDGE)

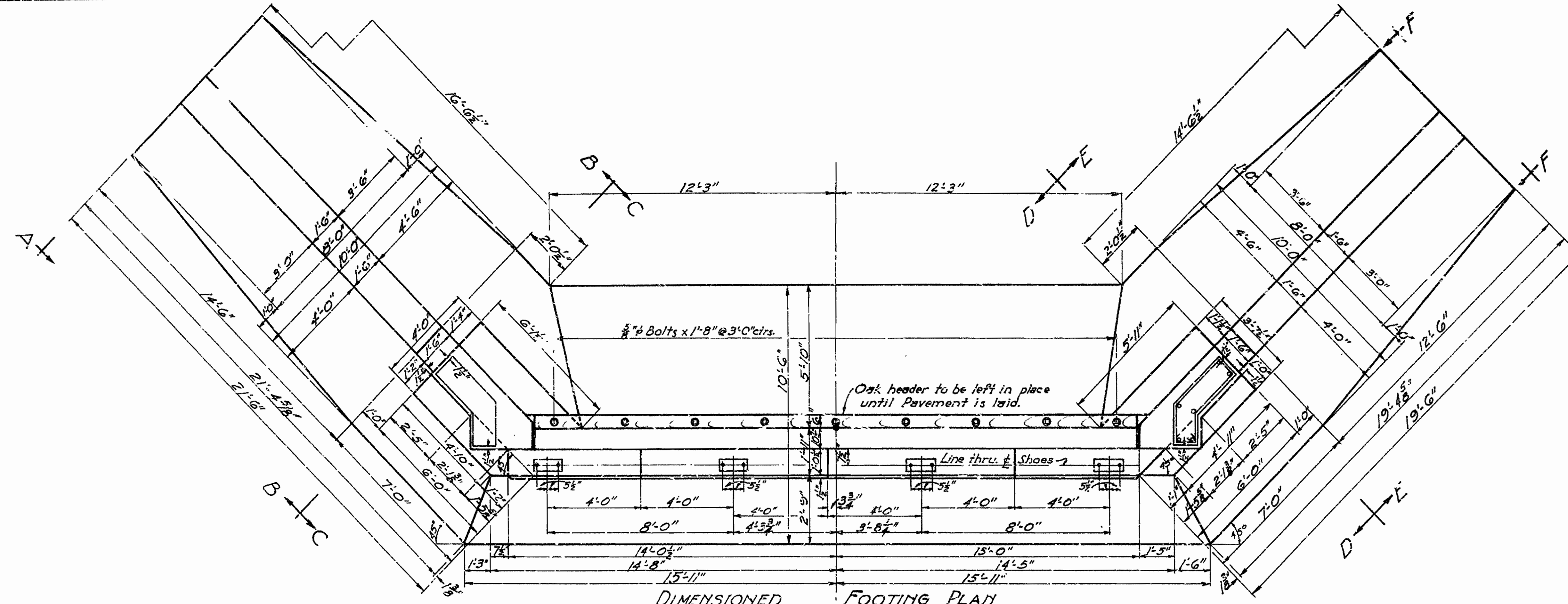


262

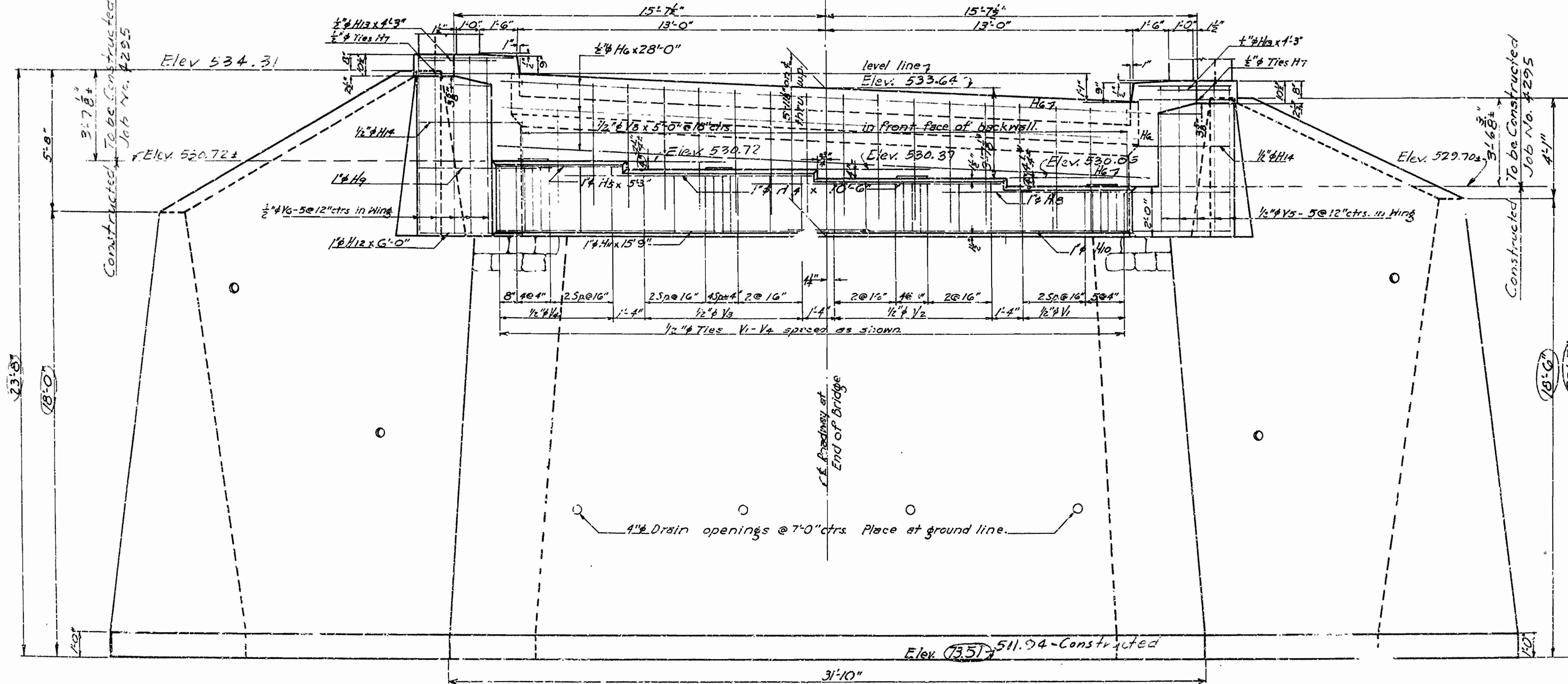
FED. ROAD DIST. NO.	STAFF	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313 (3)	1946	26	32
STATE JOB NO. 4295		1946	26	32	

4266

NOTES:  
 For auxiliary details see drawing No. G252  
 For General Note see drawing No. G249  
 See Note on Layout sheet regarding Size of Footings.  
 For Expansion Joint details see drawing No. G253-G254  
 Anchor bolt holes to be drilled into concrete, and anchor bolts to be grouted in place - Job No. 4295

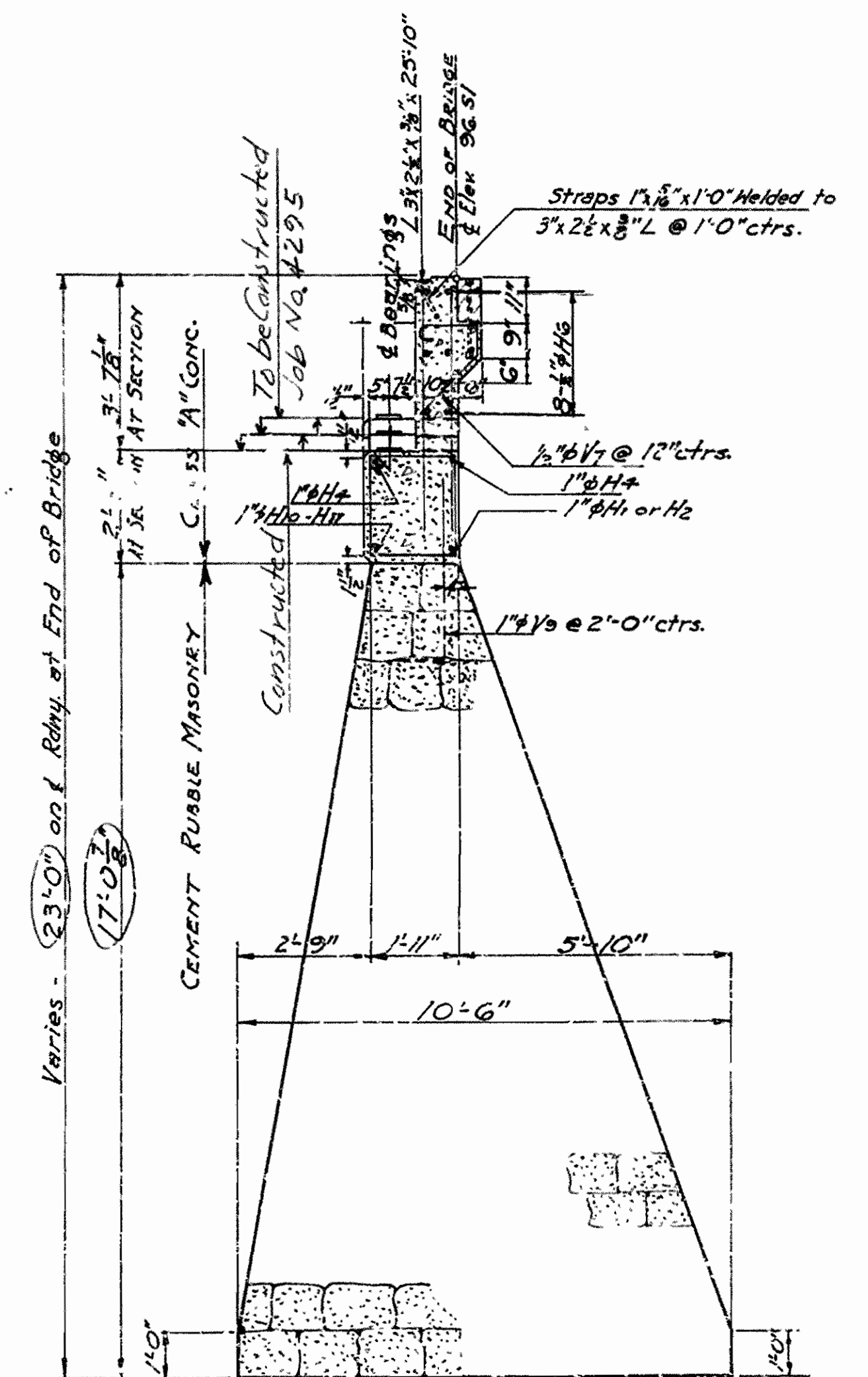


DIMENSIONED FOOTING PLAN



FRONT ELEVATION

Revision: Portion constructed shown. I.A.-G.G.H.B.



SECTION ON ROADWAY

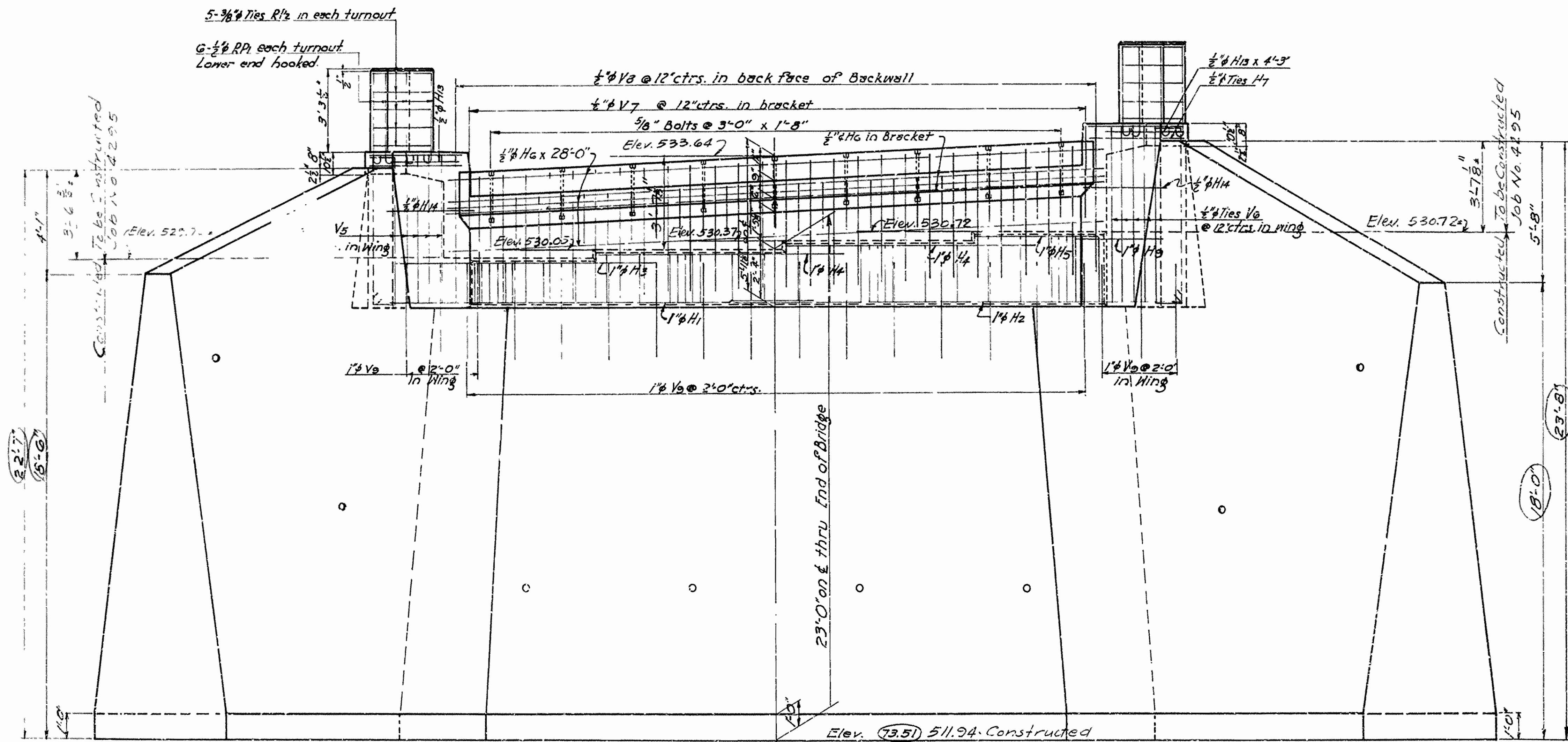
SHEET NO. 1 OF  
 DETAILS OF ABUTMENT NO. 2  
 BRIDGE OVER HACKETT CREEK  
 HACKETT, ARK.  
 SEBASTIAN CO.  
 ROUTE 45 SEC. 1  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 Drawn By: W.J.G. Date: 12-16-41  
 Checked By: G.L.P. Date: 10-22-41  
 Bridge No. 2224 DRAWING NO. G251

M. Weaver  
 PRINCIPAL HIGHWAY ENGINEER (CIVIL)



FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SH. NO.	TOTAL SHEETS
6	ARK.	S-313 (5)	1946	27	32
STAT. JOB NO. 4295			1946	27	32

7266



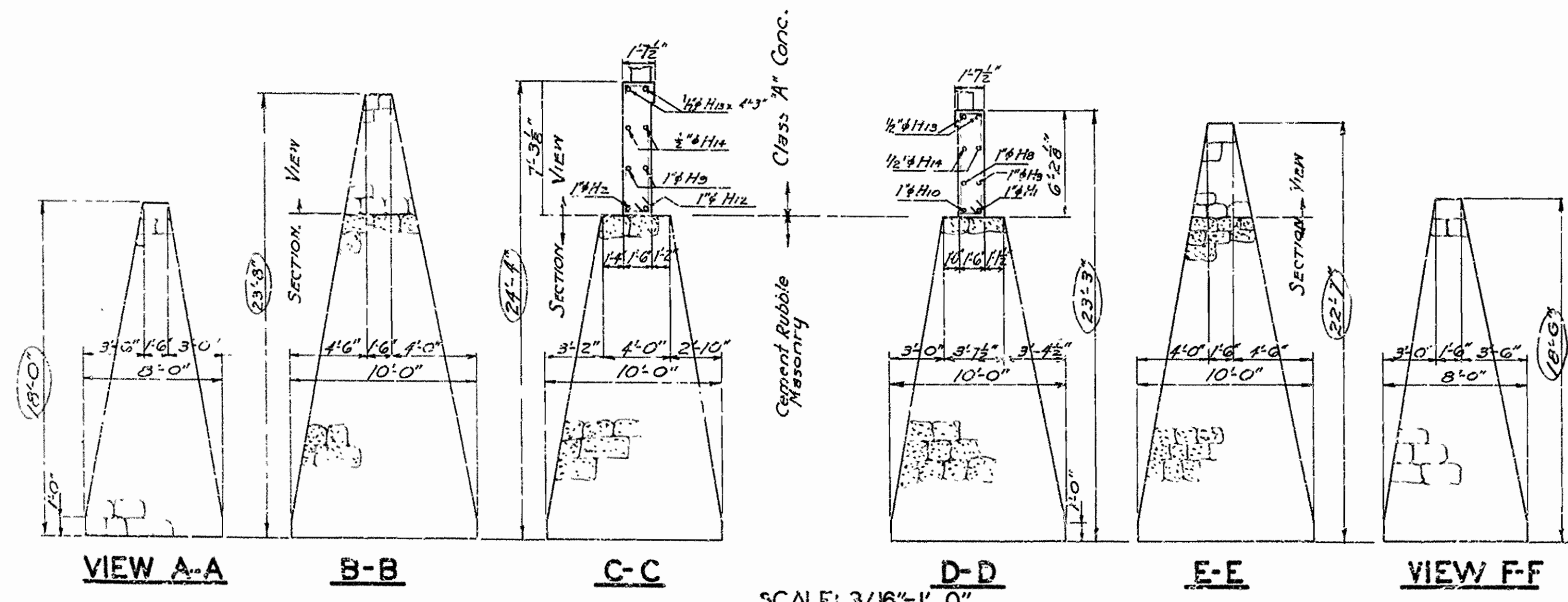
LIST OF BENT BARS

Mark	Size	Length	A	B	Bending Diagram
H1	1"φ	19'-4"	14'-8"	4'-8"	A
H2	1"φ	19'-4"	14'-8"	4'-8"	
H3	1"φ	13'-2"	8'-0"		B
H4	1"φ	14'-2"	8'-6"	5'-8"	
H5	1"φ	7'-8"	5'-8"	2'-0"	C
H10	1"φ	20'-4"	14'-8"	5'-8"	
H14	1/2"φ	6'-4"	4'-4"	2'-0"	D
RP1	1/2"φ	4'-6"			
RP2	3/8"φ	3'-9"			E
V1	1/2"φ	7'-2"	1'-8"	1'-7 1/2"	
V2	1/2"φ	7'-10"	1'-8"	1'-11 1/2"	F
V3	1/2"φ	8'-6"	1'-8"	2'-3 1/2"	
V4	1/2"φ	9'-2"	1'-8"	2'-7 1/2"	G
V5	1/2"φ	14'-10"	1'-1 1/2"	6'-0"	
V6	1/2"φ	16'-10"	1'-1 1/2"	7'-0"	H
V7	1/2"φ	3'-5"			
V9	1"φ	4'-9"			I
H7	1/2"φ	12'-1"			

Dimensions relating to reinforcing are to center of bars.

For additional details see 'Sheet 1 of Details of Abutment No. 2.  
For GENERAL NOTES see Drawing No. 6299

REAR ELEVATION



Revisions: Partion constructed shown - 4-4-46 N.B.

SHEET NO. 2 OF  
 DETAILS OF ABUTMENT NO. 2  
 BRIDGE OVER HACKETT CREEK  
 HACKETT, ARK.  
 SEBASTIAN COUNTY  
 ROUTE 45 SEC. 7

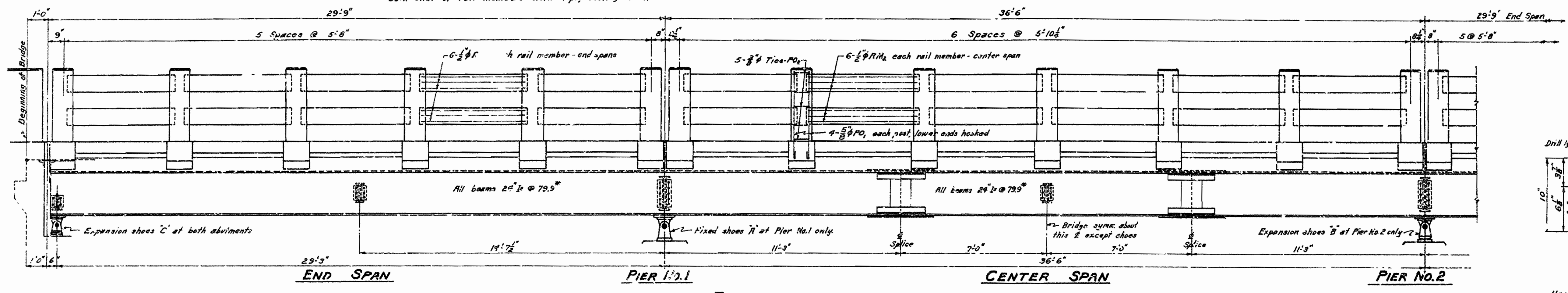
ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARK.  
 Drawn By: *WJ* Date: 10-18-41  
 Traced By: *WJ* Date: 10-20-41  
 Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
 BRIDGE NO. 2224 DRAWING NO. 6252

*M. B. ...*  
 PRINCIPAL HIGHWAY ENGINEER (BRIDGE)

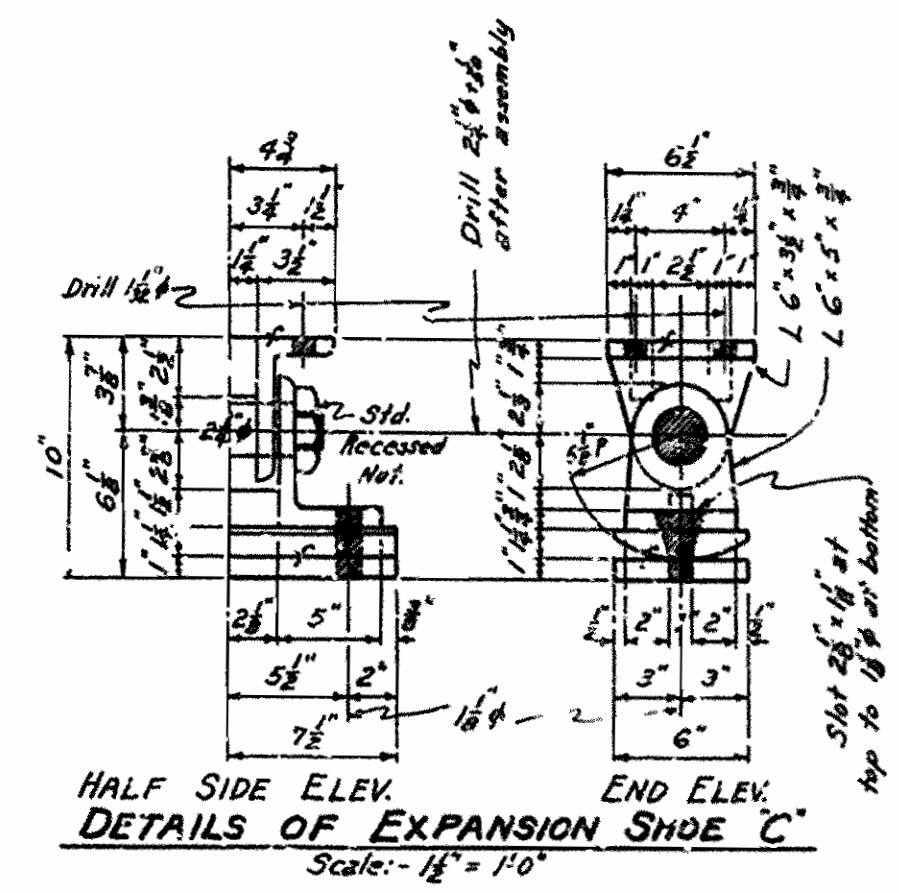


FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313 (5)	1946	28	32
STATE JOB NO. 4295		1946		28	32

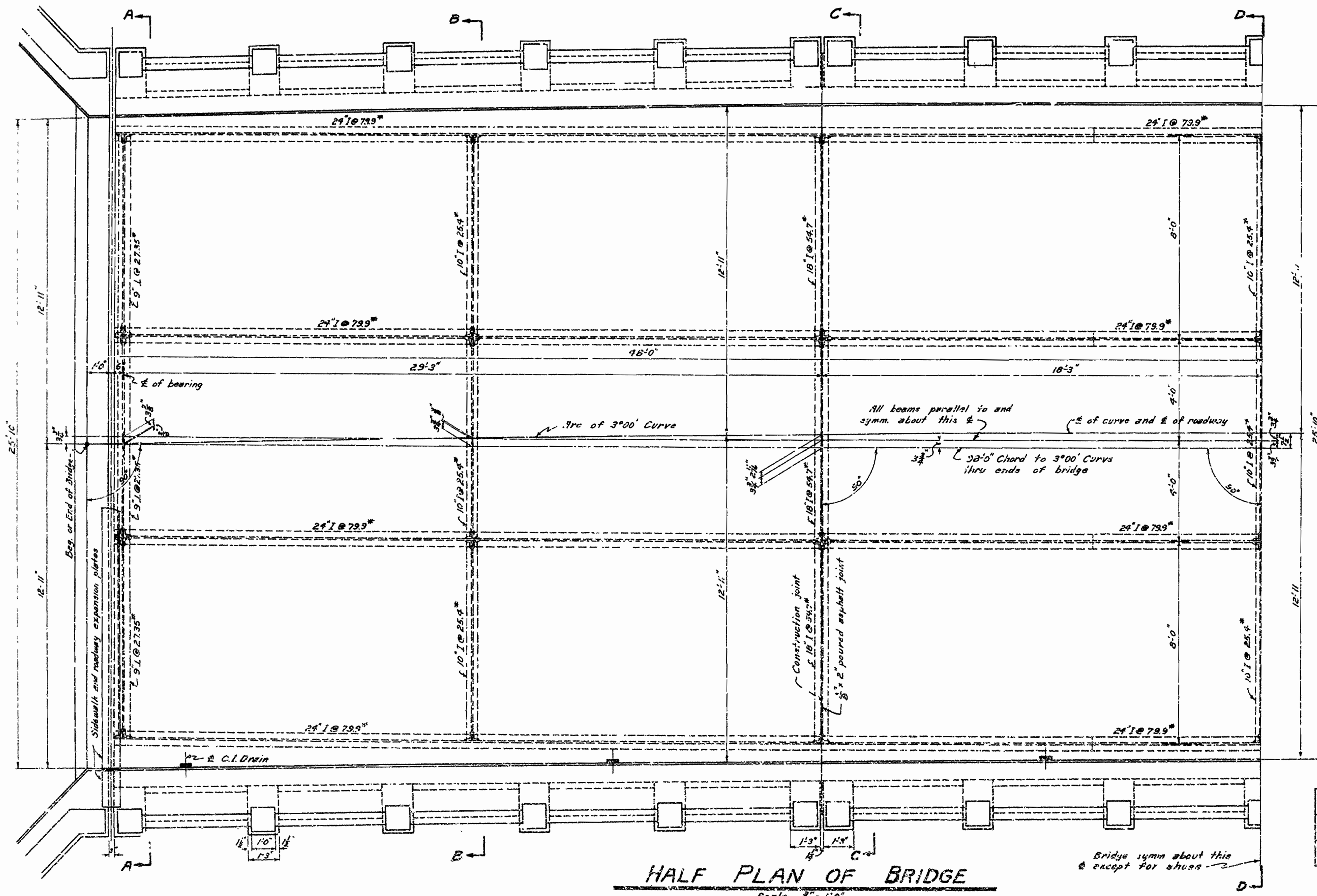
NOTE: Extend all rail members  $\frac{3}{8}$ " into posts and wrap both ends of rail members with 1-ply roofing felt.



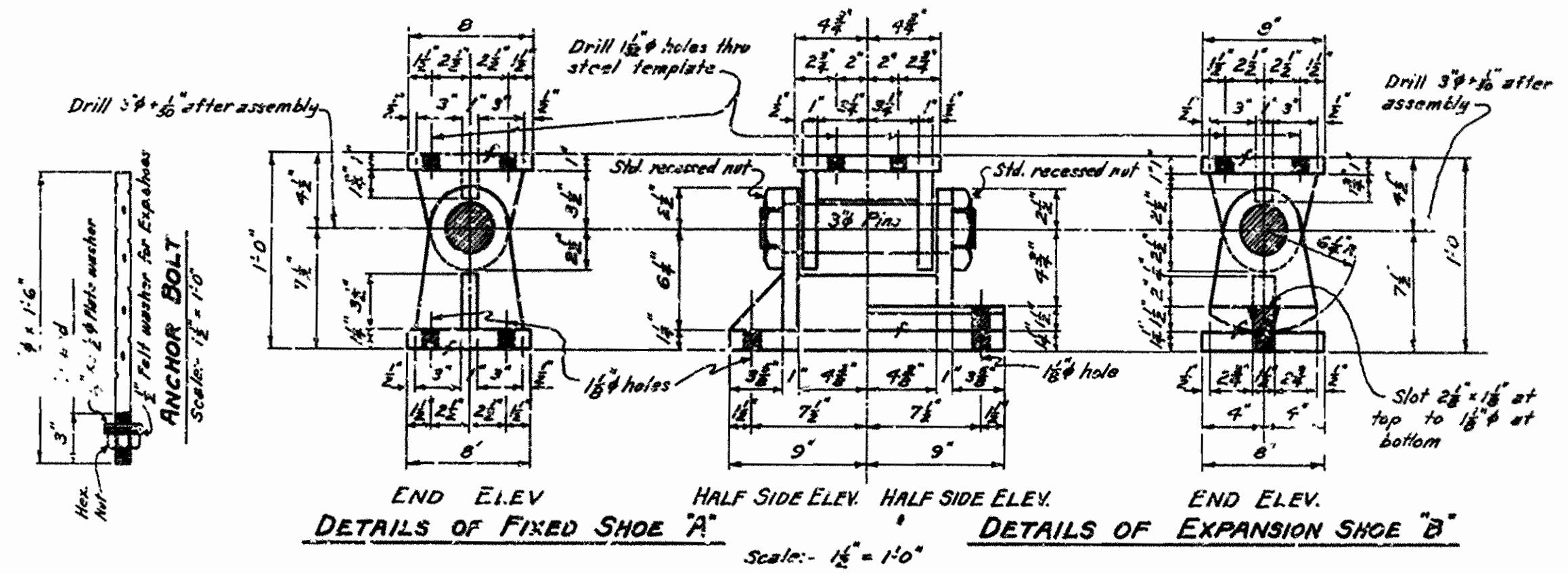
**ELEVATION**  
Scale:  $\frac{1}{8}'' = 1'-0''$



**HALF SIDE ELEV. END ELEV. DETAILS OF EXPANSION SHOE C**  
Scale:  $\frac{1}{4}'' = 1'-0''$



**HALF PLAN OF BRIDGE**  
Scale:  $\frac{1}{8}'' = 1'-0''$



**END ELEV. HALF SIDE ELEV. HALF SIDE ELEV. END ELEV. DETAILS OF FIXED SHOE A DETAILS OF EXPANSION SHOE B**  
Scale:  $\frac{1}{4}'' = 1'-0''$

**GENERAL NOTES**

All concrete to be Class "S" All corners to be chamfered  $\frac{3}{8}$ " unless otherwise noted.  
 Rivets  $\frac{3}{8}$ " Open holes  $\frac{1}{8}$ ". Unless noted bolts are specified use machine bolts where bolts are indicated.  
 The holes for all beam splices shall be sub-punched or drilled to  $\frac{3}{16}$ " and reamed to size while beams are assembled in the shop. While assembled for reaming all parts are to be match marked. A match marking diagram shall be furnished the Engineer.  
 Structural shapes of equal or greater strength may be substituted for shapes shown but payment will be made on shapes shown or actually used whichever is the lesser.  
 All shoes to be built from structural plates and shapes. All material to be welded together with  $\frac{5}{16}$ " fillet welds extending entire length of all edges and surfaces in contact. Surfaces in contact to be milled to bear before welding. All welded connections to be welded by the electric arc process. All design, material and workmanship to be made in accordance with the specifications for fusion welding.  
 All shoes and roadway expansion devices to be paid for as structural steel in beam spans.  
 Masonry plates shall finally be sealed on 3-layers of burlap saturated with red lead. This work and material to be included in the unit price bid for structural steel.  
 Cast iron drains to be paid for as reinforcing steel and to be painted same as structural steel.  
 All welded connections to be  $\frac{1}{4}$ " fillet shop welds except as noted.  
 Shop Paint: All structural steel shall be given one coat of red lead and raw linseed oil before shipment, except surfaces in contact with concrete.  
 Field Paint: 1st coat, white lead, 2nd coat, white lead tinted with lamp black or aluminum paint.  
 This drawing shows general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before fabrication is begun.  
 Reinforcing steel to be deformed bars of structural or intermediate grade. Shop lists and pending diagrams must be submitted and approval secured before fabrication is begun.  
 To provide for deflection of girders due to dead load, the slab is shown  $\frac{1}{2}$ " thicker at the mid-points of each span.  
 SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted March 1, 1940.

**DESIGN LIVE LOAD - H-15 LOADING**  
WIDTH OF LANE = 10 FEET

**LOAD DISTRIBUTION TO BEAMS**

	DEAD LOAD	ROADWAY LIVE LOAD	SIDEWALK LIVE LOAD
INTERIOR BEAMS	900#/in. ft.	1.75 Wheels or 4.80 Lanes	
OUTSIDE BEAMS	1150#/in. ft.	1.00 Wheels or 0.51 Lanes	90#/in. ft.

SHEET NO. 1  
**DETAILS OF CONTINUOUS I-BEAM SPANS**  
 29'-9" - 36'-6" - 29'-9"  
 ON 3'00" CURVE RIGHT  
 26'-0" CLEAR ROADWAY & SIDEWALKS @ 1'-6"  
 4 GIRDER TYPE  
 ROUTE 45 SEC. 1

**ARKANSAS STATE HIGHWAY COMMISSION**  
 LITTLE ROCK, ARK.  
 Drawn By: W.C.H. Date: 10-10-41  
 Traced By: W.C.H. Date: 10-15-41  
 Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
**BRIDGE NO. 2224 DRAWING NO. 6253**

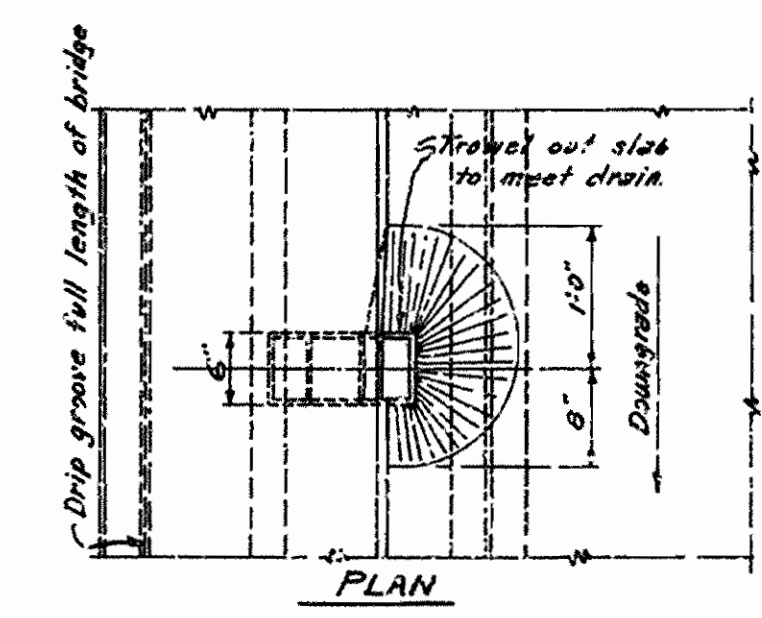
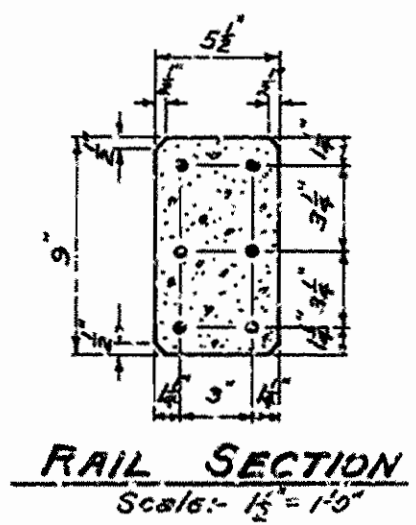
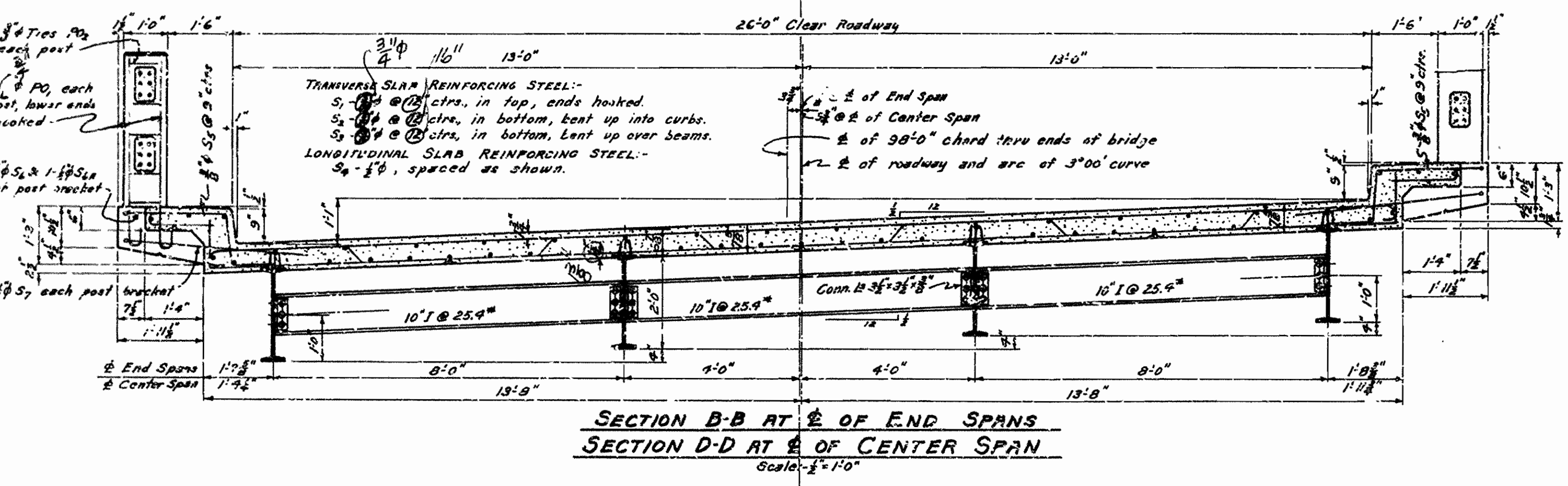
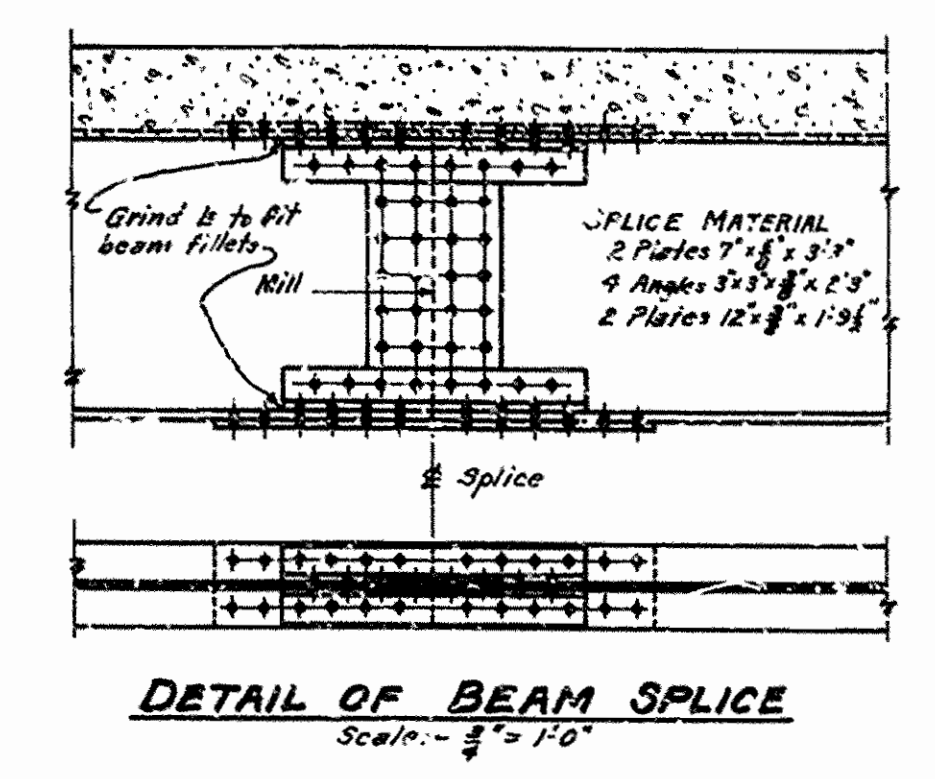
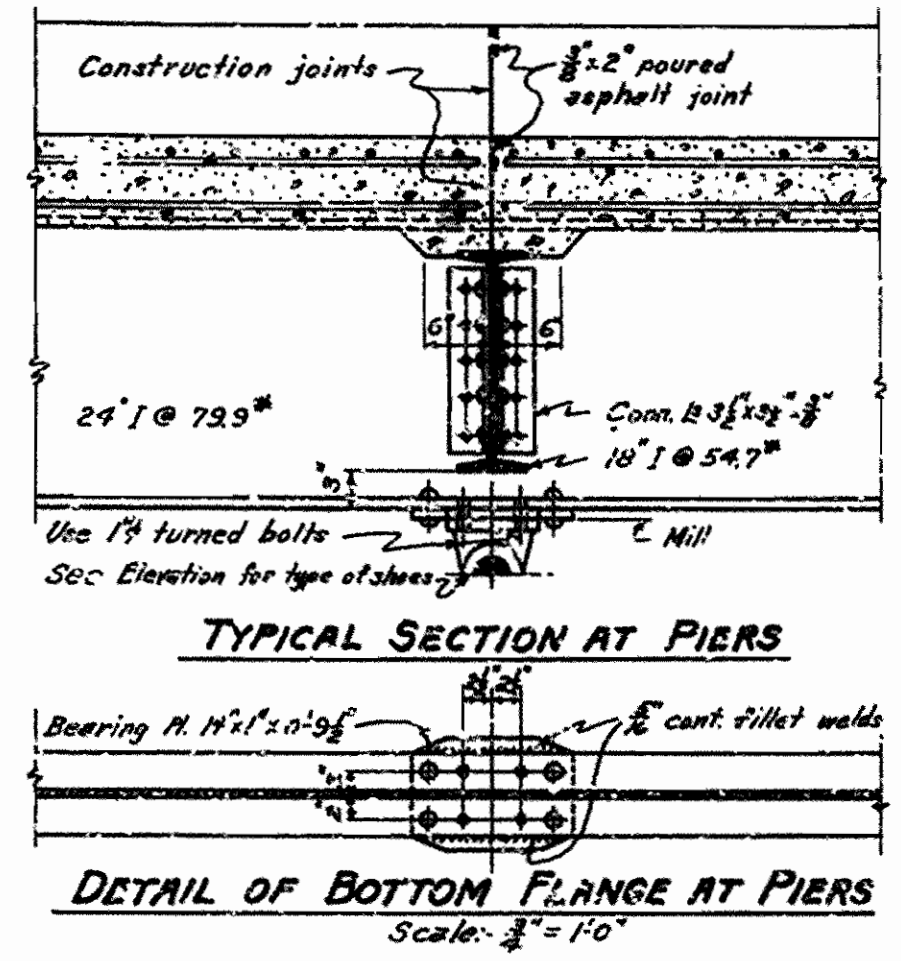
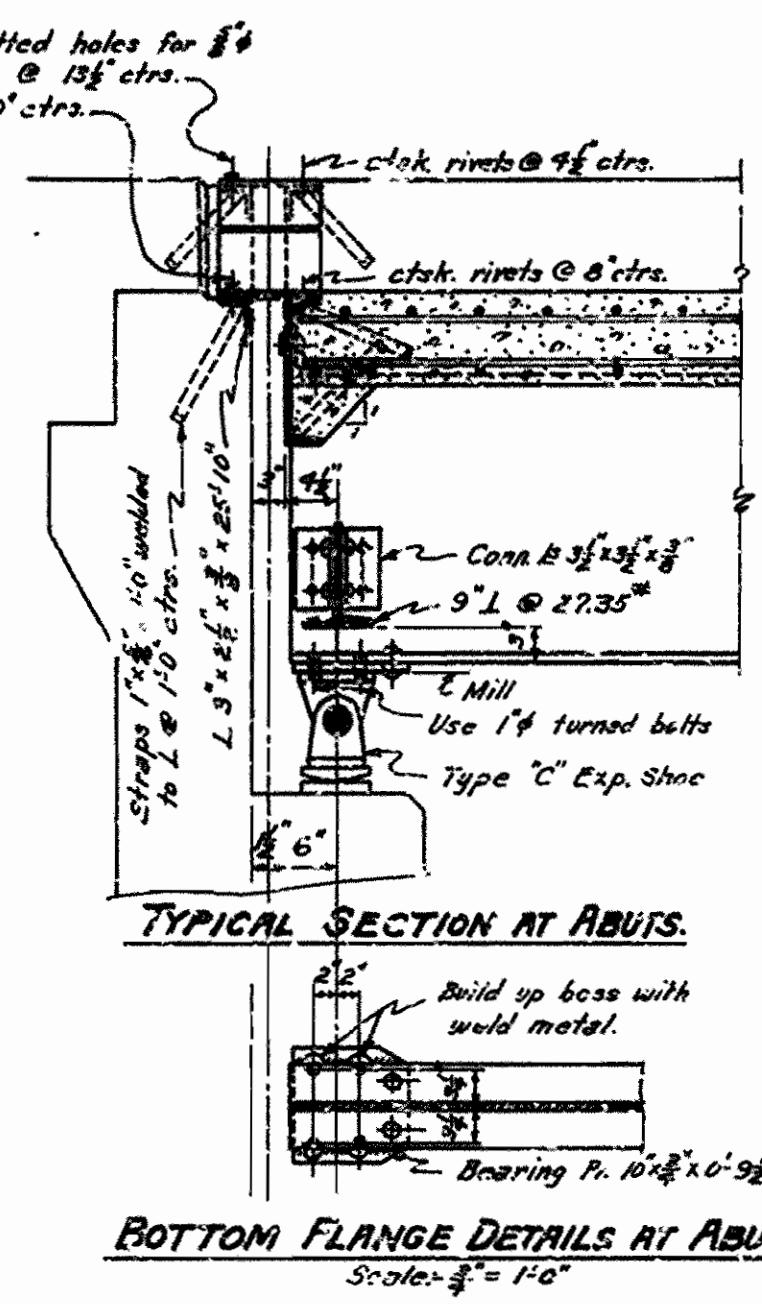
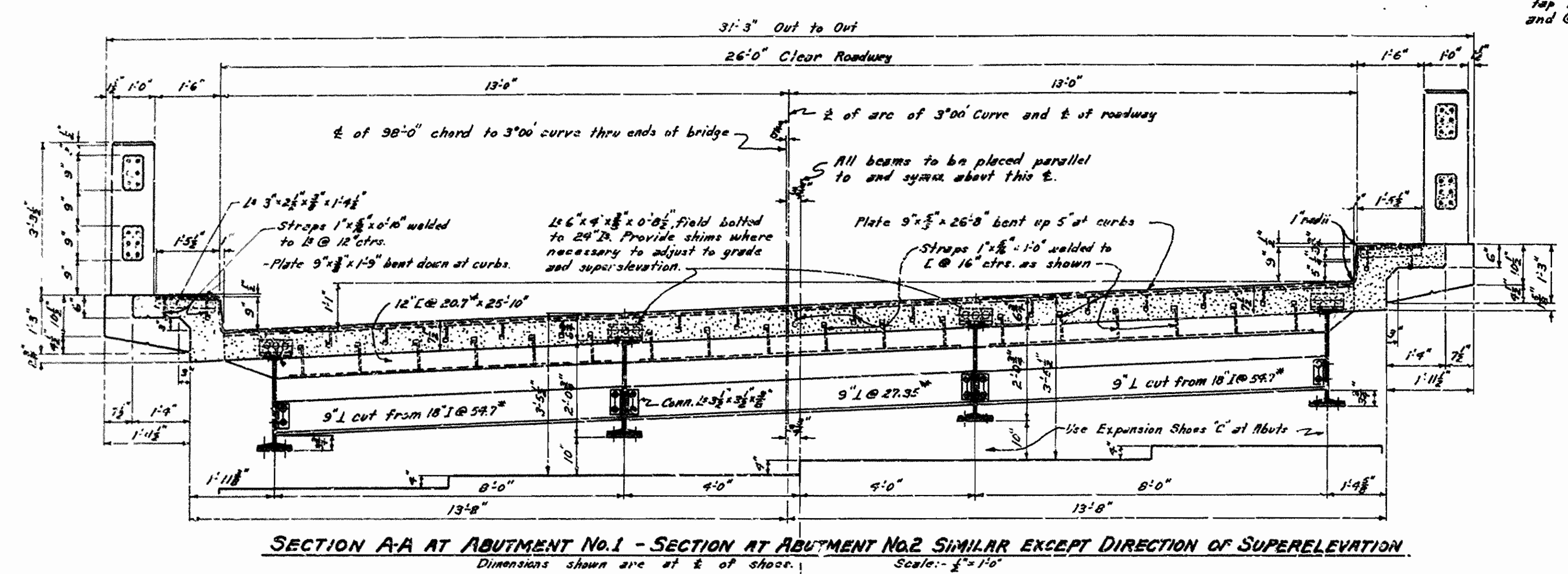
**UNIT STRESSES**

Class "S" Concrete (7-10)	1000 $\frac{1}{2}$ "
Reinforcing Steel	18,000 $\frac{1}{2}$ "
Structural Steel (New)	18,000 $\frac{1}{2}$ "
Structural Steel (Old)	16,000 $\frac{1}{2}$ "

*N.B. Lerner*  
 PRINCIPAL HIGHWAY ENGINEER (BRIDGE)



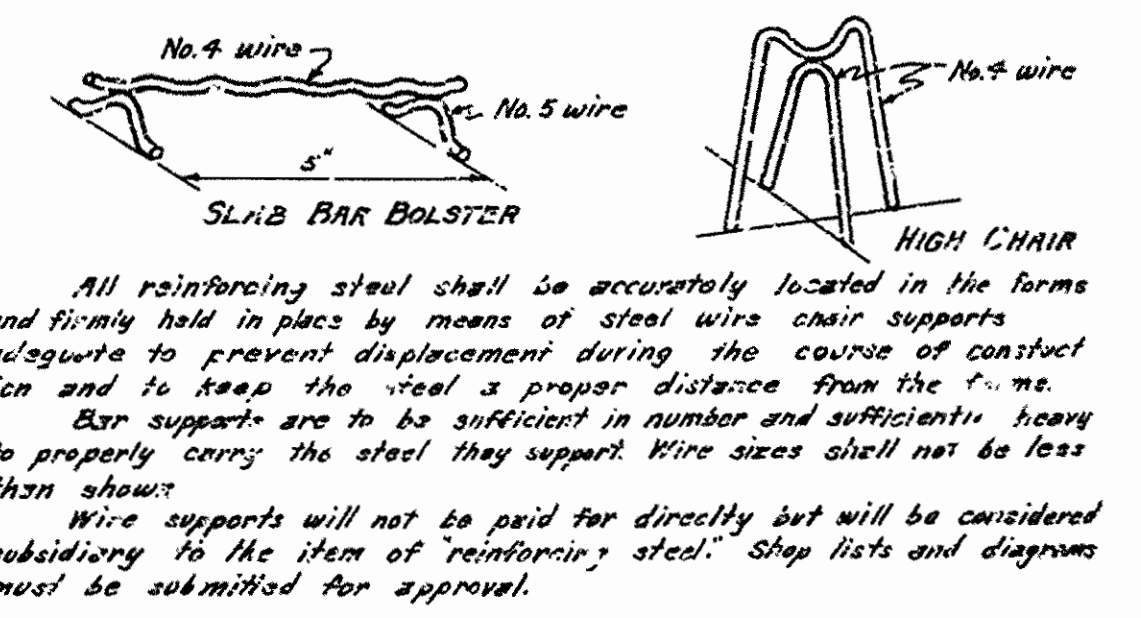
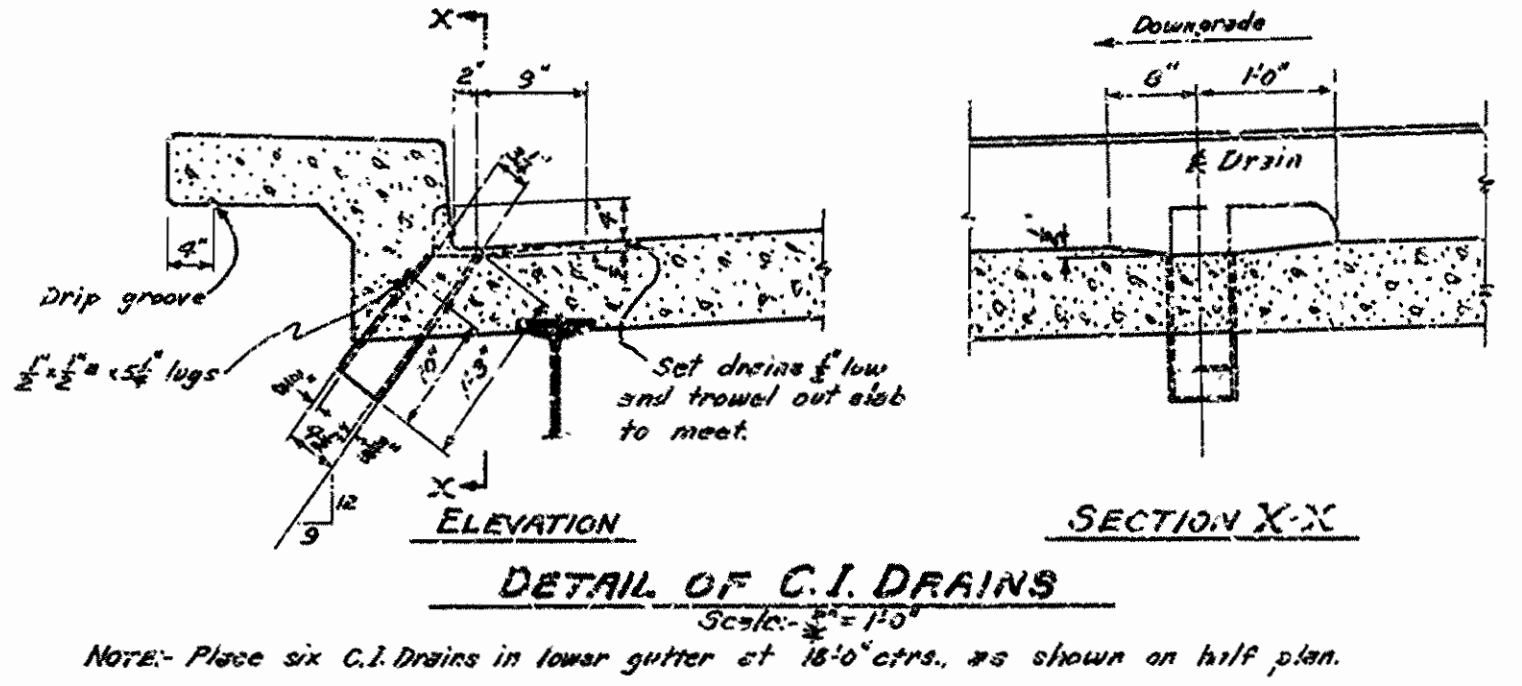
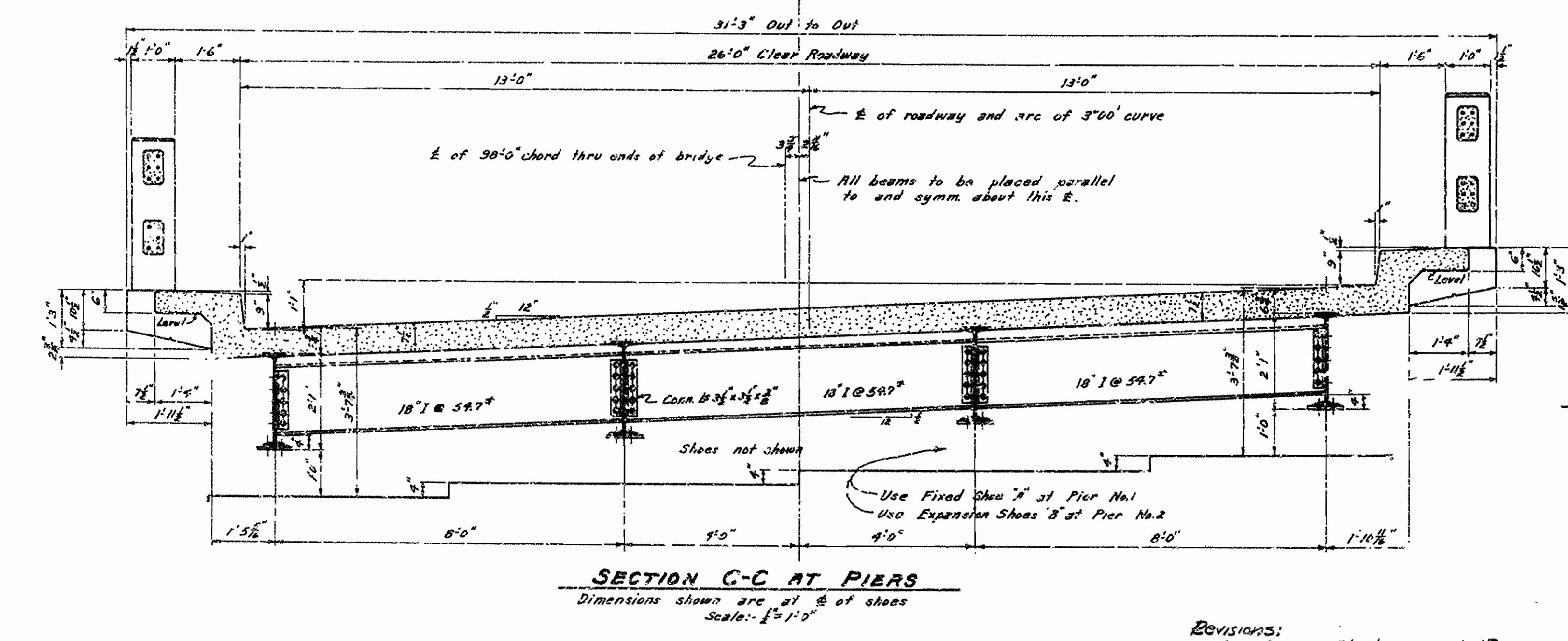
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	S-313 (D)	1946	29	32
STATE JOB NO. 4295			1946	29	32



BAR LIST

MARK	SIZE	NO. REQ'D	LENGTH	A	BENDING DIAGRAM
S <sub>1</sub>	1 1/2"	70	29'-0"		[Bending Diagram for S1, S2]
S <sub>2</sub>	1 1/2"	70	29'-5"		
S <sub>3</sub>	1 1/2"	71	28'-10 1/2"		[Bending Diagram for S3, S4]
S <sub>4</sub>	1 1/2"	99	19'-0"		
S <sub>5</sub>	1 1/2"	256	5'-6"		[Bending Diagram for S5, S6, S7]
S <sub>6</sub>	1 1/2"	38	9'-10"	0'-11"	
S <sub>6A</sub>	1 1/2"	38	9'-6"	0'-7"	
S <sub>7</sub>	1 1/2"	38	9'-5"		
AM <sub>1</sub>	1 1/2"	240	5'-2"		[Bending Diagram for AM1, AM2]
AM <sub>2</sub>	1 1/2"	194	5'-6"		
PO <sub>1</sub>	1 1/2"	152	4'-6"		[Bending Diagram for PO1, PO2]
PO <sub>2</sub>	1 1/2"	190	3'-7"		

NOTE: Dimensions relating to reinforcing steel are to c/c of bars.



SPECIAL NOTE: The structural steel required is now stock piled at the Arkansas State Highway District Shop at Fort Smith, Arkansas. ~~It is the responsibility of the contractor to verify the availability of this stock.~~

Revisions:  
Reinforcing Steel, 6-18-46 MB

fabrication of structural steel has been completed. Work to be done under Job No 4295 includes conditioning and erection of structural steel. See Special Provisions.

W.C.H.  
PRINCIPAL HIGHWAY ENGINEER (BRIDGE)

SHEET NO. 2  
DETAILS OF CONTINUOUS I-BEAM SPANS  
29'-9" - 36'-6" - 29'-9"  
ON 3'-0" CURVE, RIGHT  
26'-0" CLEAR ROADWAY 2 SIDEWALKS @ 1'-6"  
4 GIRDER TYPE  
ROUTE 45 SEC. 1  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
Drawn By: W.C.H. Date: 10-9-41  
Traced By: W.C.H. Date: 10-16-41  
Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
BRIDGE NO. 2224 DRAWING NO. 1254