

FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.		1935	1	8

State Job No. 5200

STATE OF ARKANSAS  
STATE HIGHWAY COMMISSION

INDEX OF SHEETS

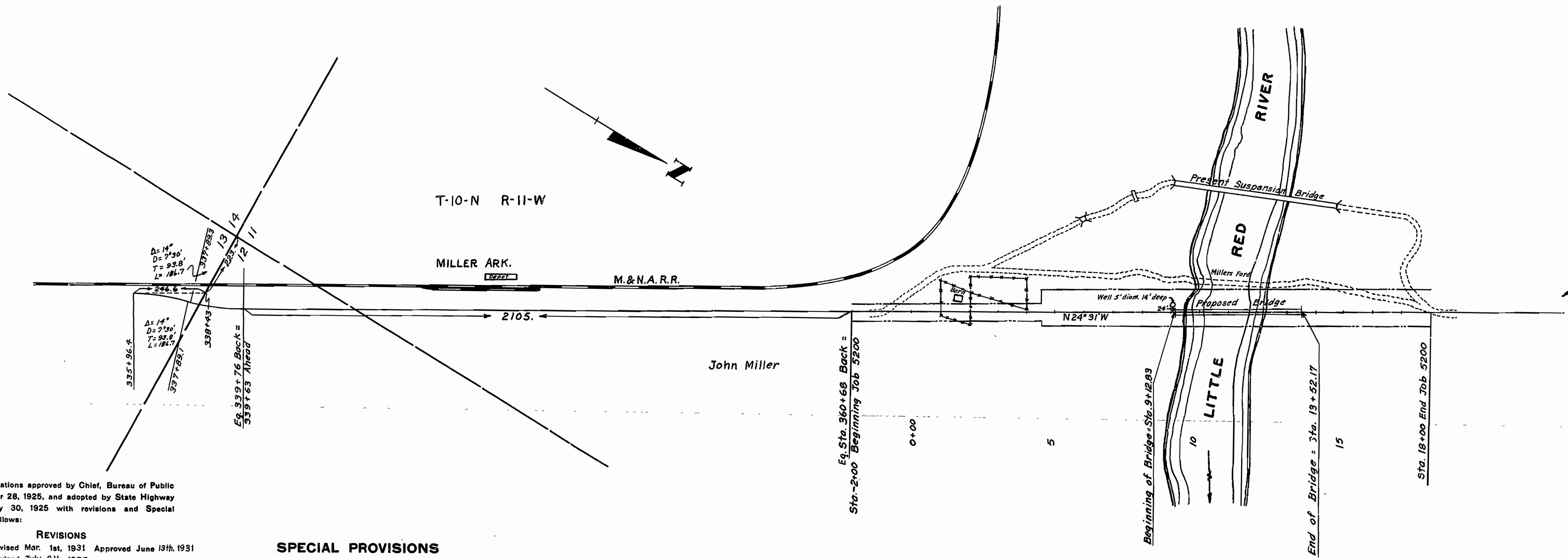
SHEET No.	DRWG. No.	DESCRIPTION
1	4058	Title Sheet
2	4059	Layout of Bridge Over Little Red River.
3	2001	Details of Standard 15'-0" Timber Span.
4	4060	Details of 392'-0" Suspended Span, Timber Alternate.
5	4061	Details of 392'-0" Suspended Span, Structural Steel Alternate.
6	4062	Details of Tower and Floor Beam & Stringer Connections.
7	4063	Details of Cast Steel Saddles, Hanger Castings & Connections, and Bents No. 1&2.
8	4064	Details of Piers & Anchorages.

**PLAN OF PROPOSED BRIDGE**  
**OVER LITTLE RED RIVER**  
**AT MILLER, ARK.**  
**CLEBOURNE COUNTY**  
**ROUTE 16 SEC. 11**  
**JOB No 5200**

QUANTITIES

ALTERNATE "A" & "B"

ITEM NO.	ITEM	QUANTITY	UNIT
13	Dry Excavation for Structures	420	Cu.Yds.
13	Wet Excavation for Structures	130	Cu.Yds.
13	Solid Rock Excavation for Structures	40	Cu.Yds.
91	Class "A" Concrete for Bridges	216	Cu.Yds.
92	Reinforcing Steel for Bridges	30200	Lbs.
98	Untreated Timber Piling	772	Lin. Ft.
SP	2 1/2" Galvanized Steel Bridge Cable	2326	Lin. Ft.
ALTERNATE "A"			
SP&96	Structural Steel	18900	Lbs.
97	Untreated Bridge Timber	35.500	M.Ft.BM.
97	Treated Bridge Timber	19.800	M.Ft.BM.
SP&96	Cast Steel, Hangers, & Misl. Hardware	27300	Lbs.
ALTERNATE "B"			
SP&96	Structural Steel	86050	Lbs.
97	Untreated Bridge Timber	42.500	M.Ft.BM.
SP&96	Cast Steel, Hangers, & Misl. Hardware	19500	Lbs.



Specifications approved by Chief, Bureau of Public Roads, September 28, 1925, and adopted by State Highway Commission May 30, 1925 with revisions and Special Provisions as follows:

REVISIONS

Pamphlet	Revised	Date	Approved
A	Revised	Mar. 1st, 1931	Approved June 13th, 1931
L	Revised	July 8th, 1935	
M	"	Mar. 1st, 1931	Approved June 13th, 1931
N	Revised	Oct. 1st, 1933	
O	Revised	Oct. 1st, 1933	
P	Revised	Oct. 1st, 1933	

SPECIAL PROVISIONS

Item	No. of Sheets
Labor Provisions	1
Beginning and Prosecution of Work.	1
Extra and Force Account Work.	1
2 1/2" Galvanized Steel Bridge Cable	2
Structural Steel	1
Cast Steel, Hangers and Misl. Hardware	1

LAYOUT  
Scale: 1" = 200'

LENGTH OF PROJECT	=	439'-4"	=	.083 Miles
LENGTH OF BRIDGE	=	439'-4"	=	.083 Miles
LENGTH OF EMBANKMENT	=	00'-0"	=	.00 Miles
LENGTH OF JOB	=	439'-4"	=	.083 Miles

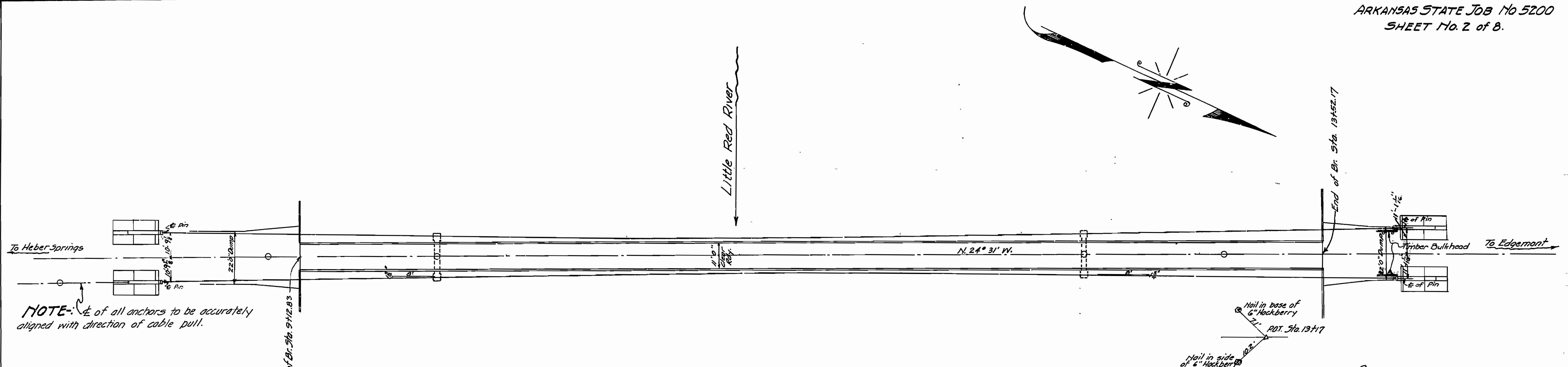
BRIDGE CONTRACT INCLUDES BRIDGE ONLY.

APPROVED  
CHIEF ENGINEER - U. S. BUREAU OF PUBLIC ROADS  
APPROVED  
DISTRICT ENGINEER - U. S. BUREAU OF PUBLIC ROADS  
APPROVED  
CHIEF - U. S. BUREAU OF PUBLIC ROADS  
APPROVED  
CHAIRMAN - STATE HIGHWAY COMMISSION  
APPROVED  
STATE HIGHWAY ENGINEER

*M.B. Hancock*  
BRIDGE ENGINEER

BRIDGES No. 1952

DRAWING No. 4058



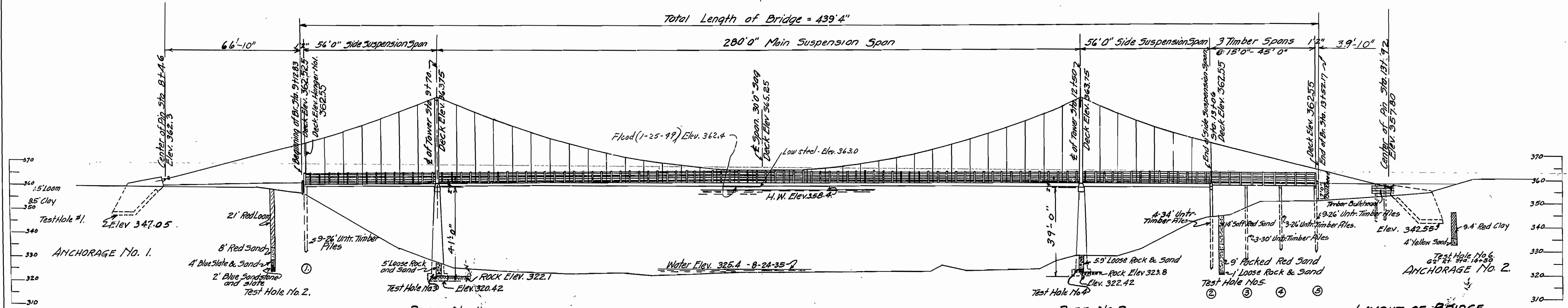
### PLAN

### GENERAL NOTES

Anchors to be back-filled with natural soil dugged into place before cables are attached. Rock excavation to be made to neat lines or concrete footings. Care shall be exercised to avoid shattering of rock faces, by excessive blasting. Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. For Details See Drawg Nos 2001, 4061, 4062, 4063, 4064. Specifications Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.

#### QUANTITIES

Alternate "A & B"		
Item No 13	Dry Excavation for Structures	420 Cu.Yds.
" "	Wet Excavation for Structures	130 Cu.Yds.
" "	Solid Rock Excavation for Structures	40 Cu.Yds.
" "	Class "A" Concrete for Bridges	216 Cu.Yds.
" "	Reinforcing Steel for Bridges	30200 Lbs.
" "	Untreated Timber Piling	772 Lin.Ft.
" "	S.P. 2 1/8" Galvanized Steel Bridge Cable	2326 Lin.Ft.
Alternate "A"		
Item No. 5P&96	Structural Steel	18900 Lbs.
" "	Untreated Bridge Timber	36,500 M.F.B.M.
" "	Treated Bridge Timber	19,580 M.F.B.M.
" "	S.P.&96 Cast Steel, Hangers & Misc. Hardware	27,300 Lbs.
Alternate "B"		
Item No 5P&96	Structural Steel	86,050 Lbs.
" "	Untreated Bridge Timber	42,500 M.F.B.M.
" "	S.P.&96 Cast Steel, Hangers & Misc. Hardware	19,500 Lbs.



### ELEVATION

LAYOUT OF BRIDGE  
OVER LITTLE RED RIVER  
AT MILLER  
CLEBURNE CO.  
R. 16. S. 11.

B.M. Elev. 369.59  
Nail in base of Gate Post  
12 ft left of Sta. 1+00.

*M. B. ...*  
ENGINEER

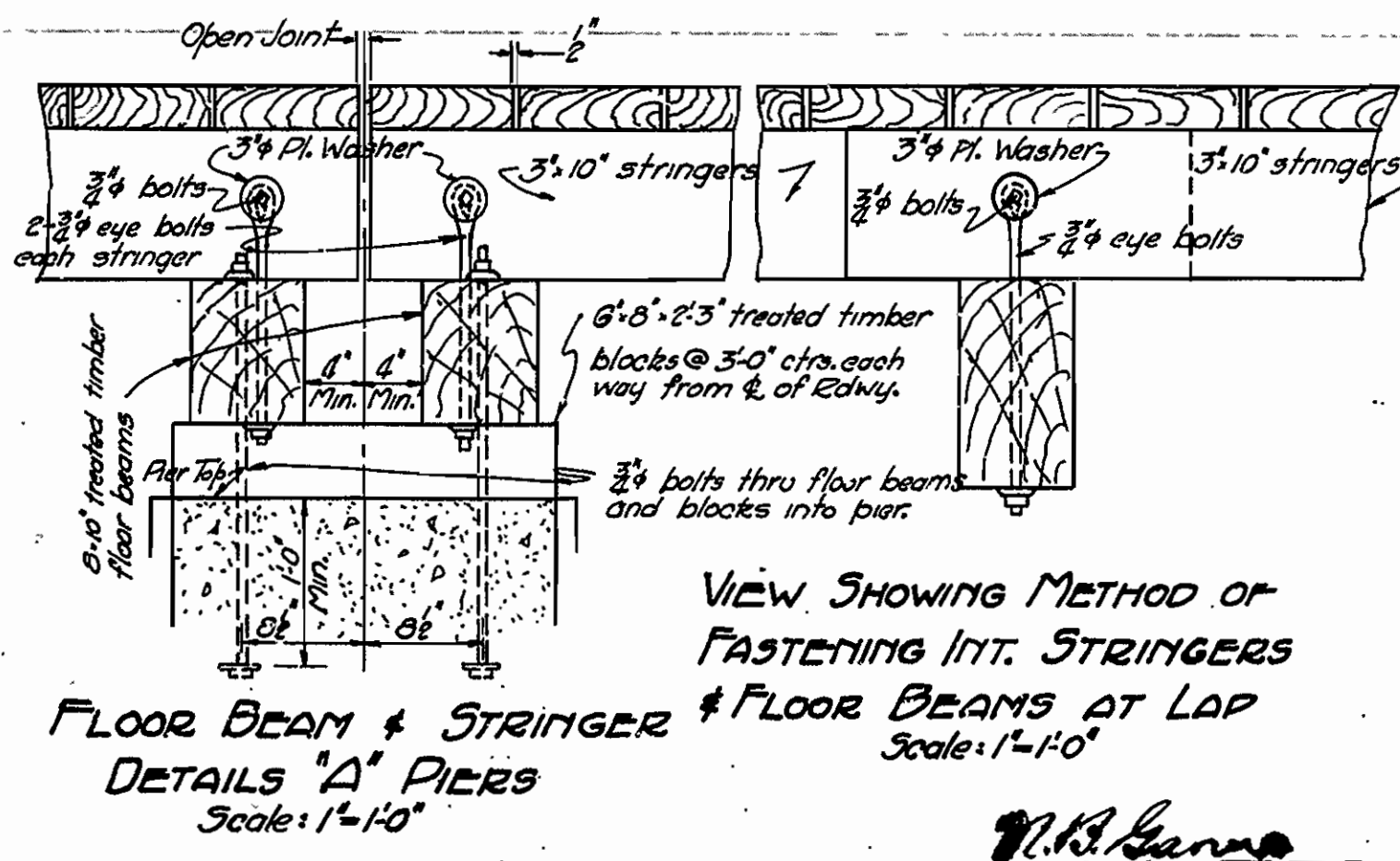
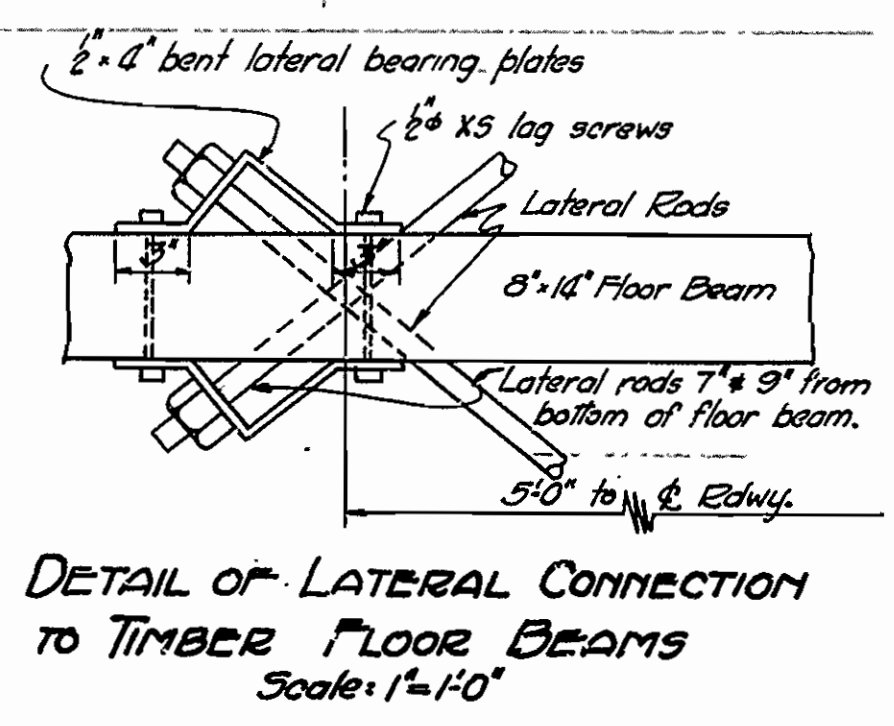
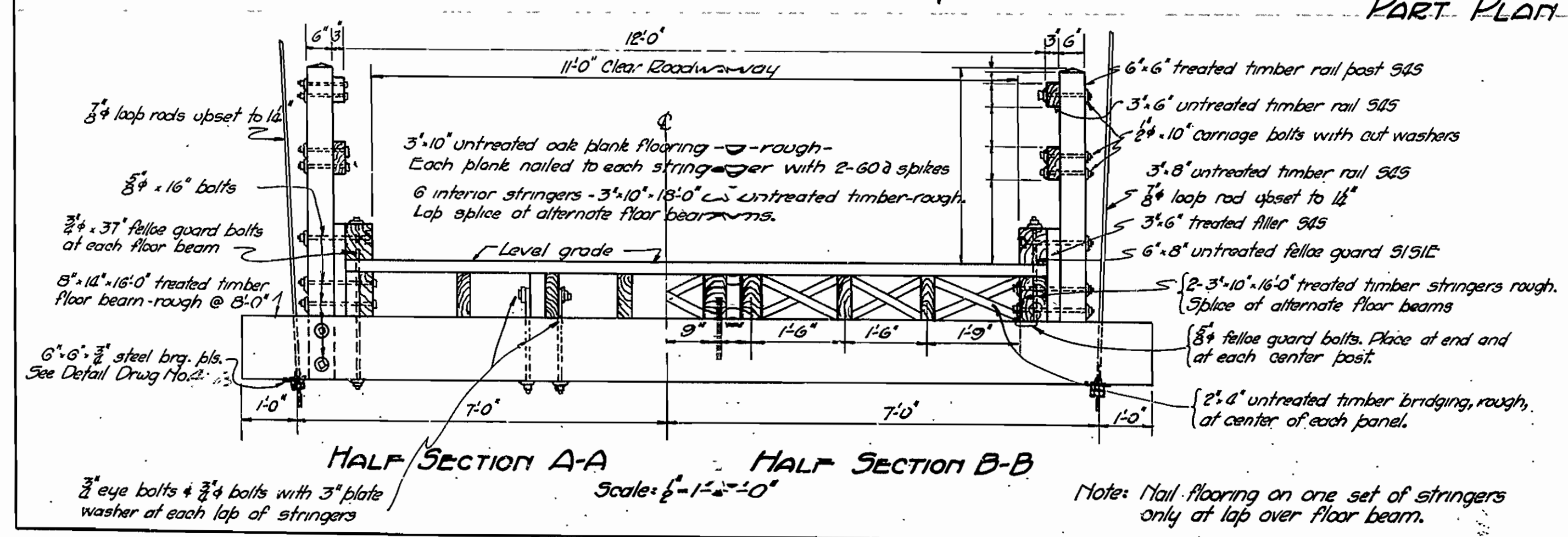
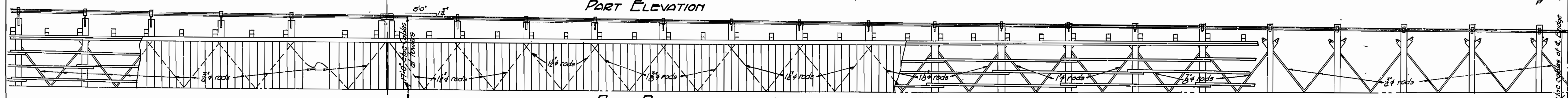
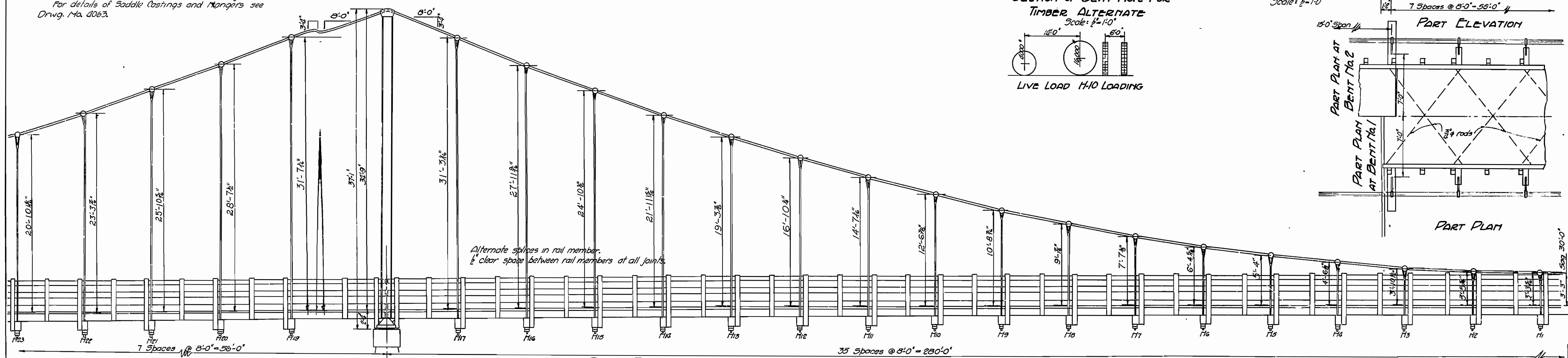
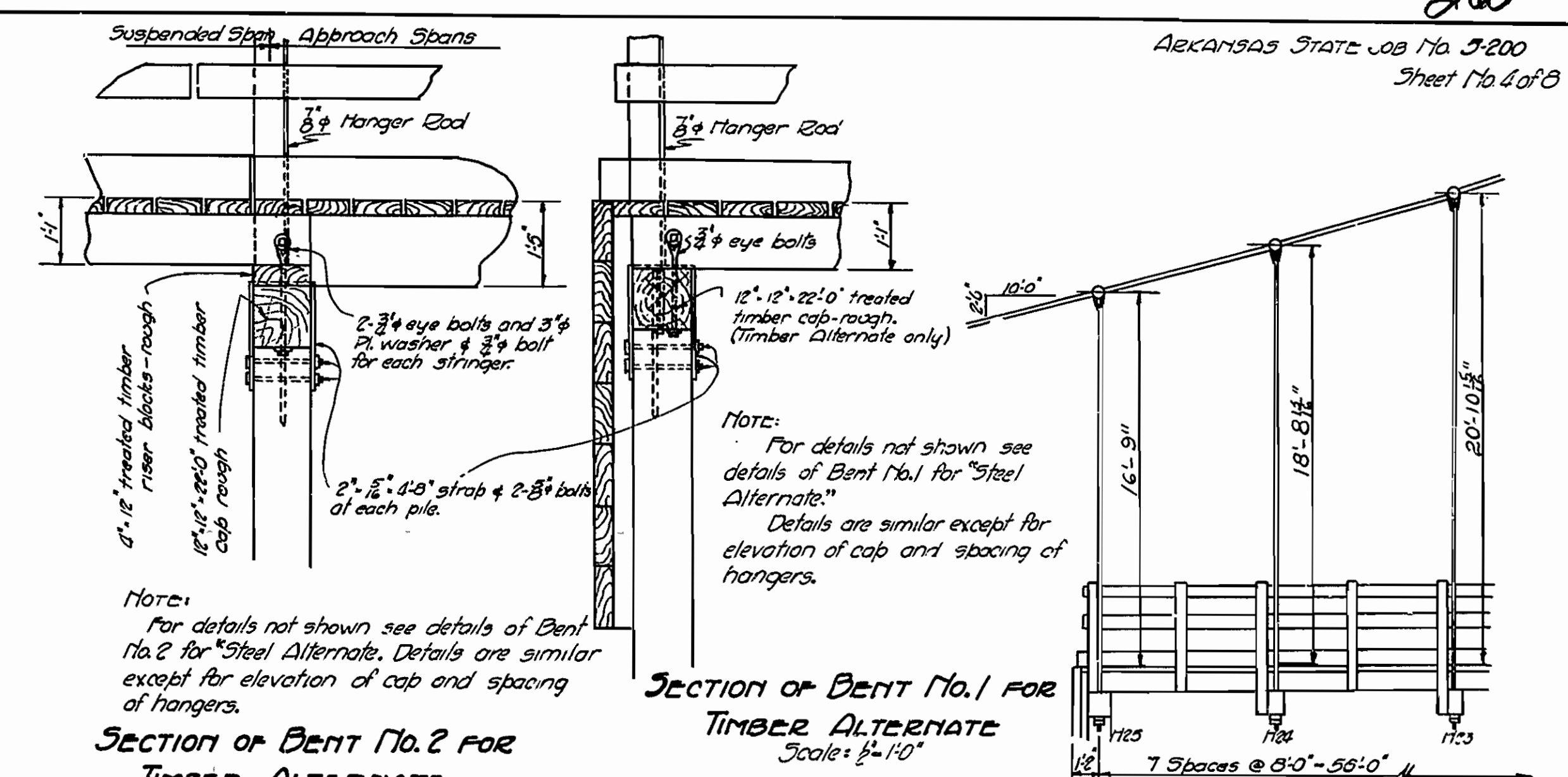
ARKANSAS STATE HIGHWAY COMM.  
LITTLE ROCK, ARK.  
Drawn By J.E.B. Date 6-14-35  
Traced By L.A.M. Date 9-16-35  
BRIDGE No 1952 DRWG No. 4059

**TREATED TIMBER NOTES:**  
 All treated timber to be Southern Yellow Pine.  
 All treated timber to be framed and bored before treatment.  
 The preservative used for treatment of timber shall be grade 1 of creosote oil for structural timbers.  
 All treated timber shall be treated with a ten (10) pound treatment of creosote oil by the empty cell process.  
 For notes not given here see notes headed "Untreated Timber Notes" on Drwg. No. 4061.  
 Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30<sup>th</sup>, 1925 and revised.

**UNTREATED TIMBER NOTES:**  
 Same as shown on Drwg. No. 4061.

**CABLE NOTES:**  
 Same as shown on Drwg. No. 4061.

**GENERAL NOTES:**  
 For details of towers see Drwg. No. 4062. Towers are the same for both alternates.  
 For structural steel notes see Drwg. No. 4062.  
 For cast steel notes see Drwg. No. 4063.  
 Lateral rods and details are to be paid for at the unit price bid for "Cast Steel Hangers and Miscellaneous Hardware."  
 For details of Piers and Anchors see Drwg. No. 4064.  
 For details of Saddle Castings and Mangers see Drwg. No. 4063.



**TIMBER ALTERNATE**  
**DETAILS OF**  
**392'-0" SUSPENSION SPAN**  
**11'-0" CLEAR ROADWAY**  
**FOR BRIDGE OVER LITTLE RED RIVER**  
**AT MILLER - ARK.**  
**CLEBOURNE COUNTY**  
**ROUTE 16 SEC. 11**  
**ARKANSAS STATE HIGHWAY COMMISSION**  
**LITTLE ROCK - ARK.**

Drawn by W.C.H. Date 9-14-35  
 Traced by J.P. " 9-16-35  
 Checked by \_\_\_\_\_  
 Bridge Engineer

Scale: 1/8"=1'-0" except as noted  
 BRIDGE No. 1952  
 DRWG. No. 4060

### CABLE NOTES.

The cable to be used shall be 2 1/8 (two and one eighth) diameter galvanized steel bridge cable, composed of 7 strands of plow steel, or of strand arrangement approved by the Engineer.

Each cable shall have a breaking strength of at least 370,000 pounds.

Each cable shall be pre-stressed to 52,500 pounds and cut to such a length at the factory that when full dead load is applied to it in place, it will hang in a curve as shown by the plans. While the cable is so stressed the center point of the tower bearings and the hanger points shall be marked with suitable paint.

The end cable sockets which transmit the cable tension to the anchors shall be completely fastened to the cables at the factory. The connection and the end cable sockets shall be designed to transmit the ultimate cable strength of 370,000 pounds. Payment for these sockets will be made at the unit price bid for "Cast Steel, Hangers, and Misc. Hardware."

The cable shall be paid for at the unit price per linear foot bid for "Galvanized Steel Bridge Cable."

This drawing shows general features of design only. Shop drawings shall be made in compliance with specifications, and be approved before fabrication is begun.

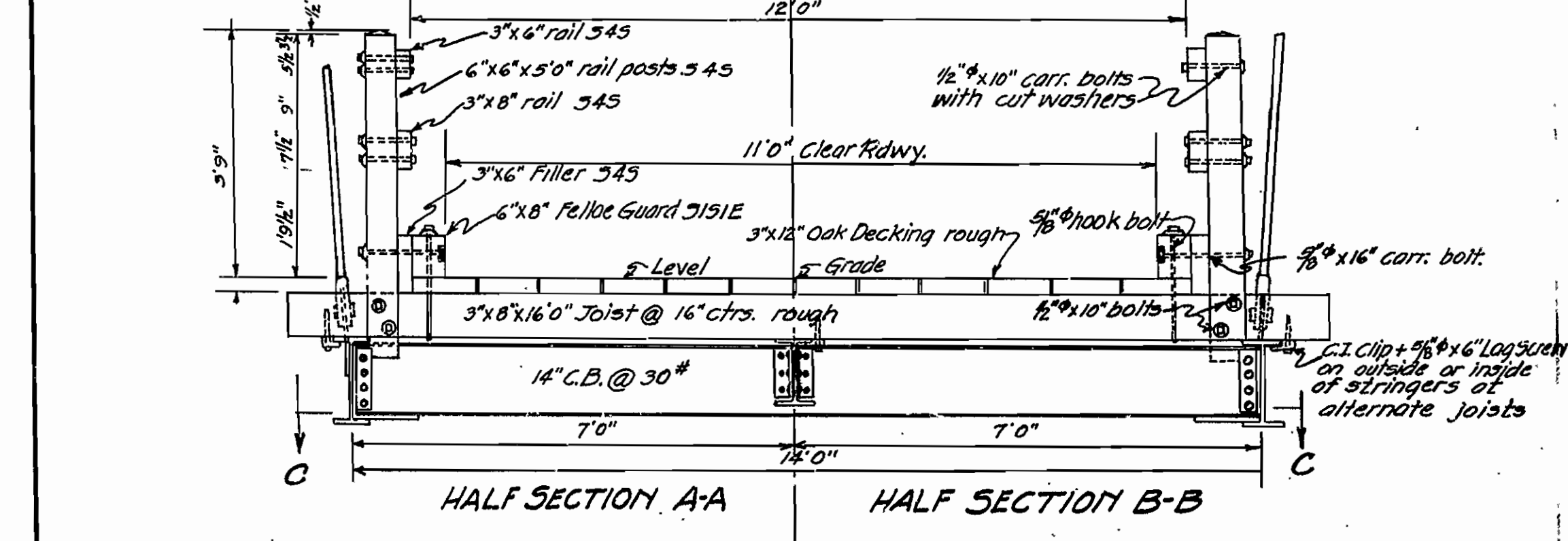
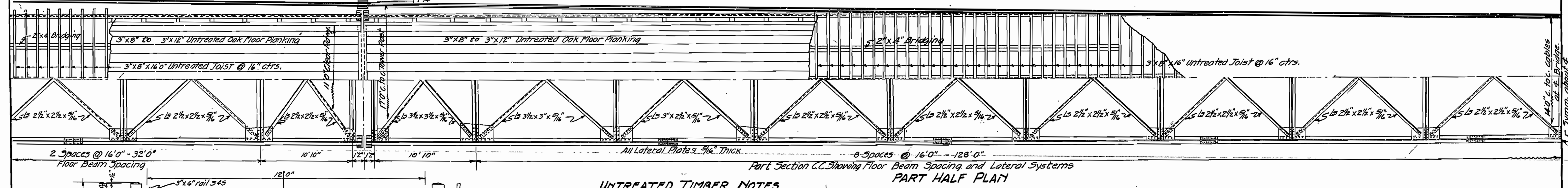
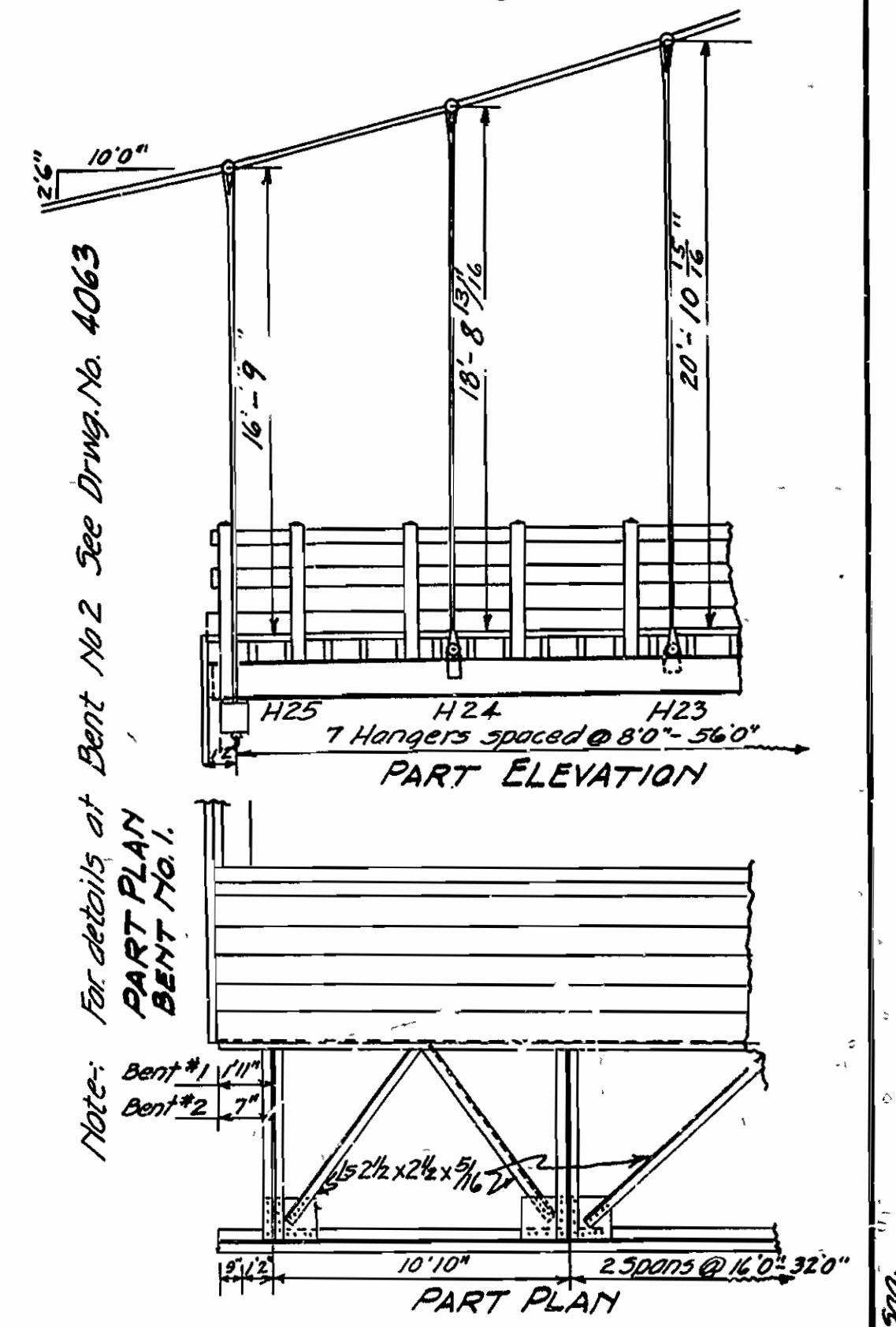
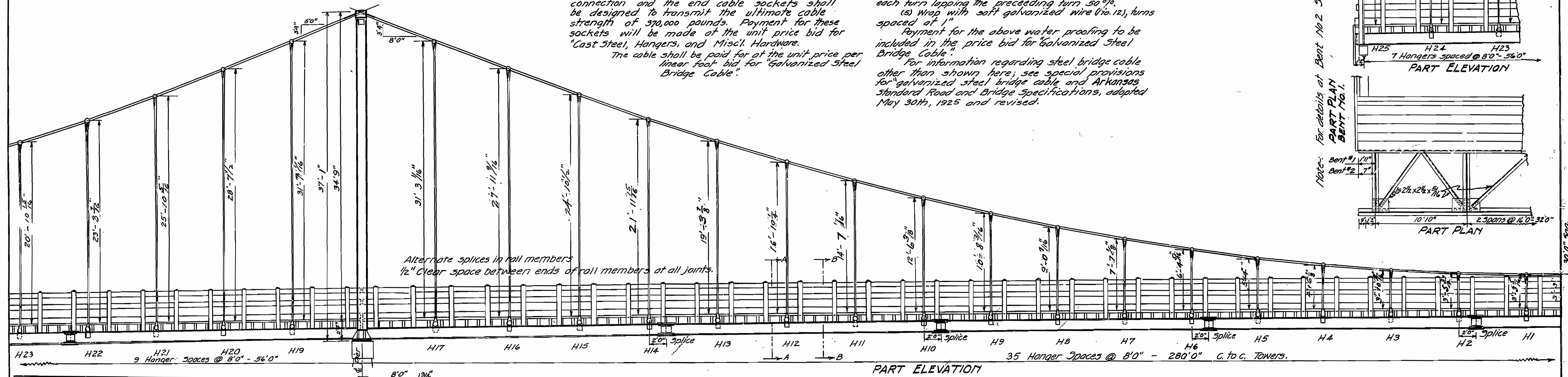
Shop drawings showing distances, measured along the cable, between towers and between hangers shall be furnished by the contractor and be approved before the cables are pre-stressed, cut, and socketed.

Cables, cable sockets, and exposed steel at anchor ends shall be water proofed and protected, to a vertical height of 4'-0" above the roadway elevation in the following manner:

- (1) Swab on thick coat of hot tar, thoroughly filling all voids.
- (2) Wrap with burlap soaked in hot tar, each turn lapping over the preceding turn 50%.
- (3) Swab with hot tar.
- (4) Wrap with heavy canvass soaked in hot tar, each turn lapping the preceding turn 50%.
- (5) Wrap with soft galvanized wire (No. 12), turns spaced at 1"

Payment for the above water proofing to be included in the price bid for Galvanized Steel Bridge Cable.

For information regarding steel bridge cable other than shown here; see special provisions for galvanized steel bridge cable and Arkansas Standard Road and Bridge Specifications, adopted May 30th, 1925 and revised.



### UNTREATED TIMBER NOTES

All timber to be Southern Yellow Pine, except the floor planking which shall be White Oak, or its species.

Oak flooring to be rough. Thickness of floor plank shall be maximum 3 1/8" and minimum 2 3/8". Decking shall be fastened to each joist with 2-60d spikes. Measurement for payment of flooring shall be made at (3) ft. b.m. per sq. ft. of actual floor area in place. (That portion of decking under felloe guard shall be considered in floor area.)

Malleable or cast iron washers to be used under all bolt heads and nuts bearing on wood, except as noted.

All bolts and hardware connecting timber to timber to be painted with red lead prior to construction, and all exposed portions of such bolts or hardware to be painted with black asphaltic paint after construction is completed.

Hardware, except nails, fastening timber to timber or to structural steel shall be paid for at unit price bid for "Steel Castings, Hangers, and, Misc. Hardware."

### GENERAL NOTES

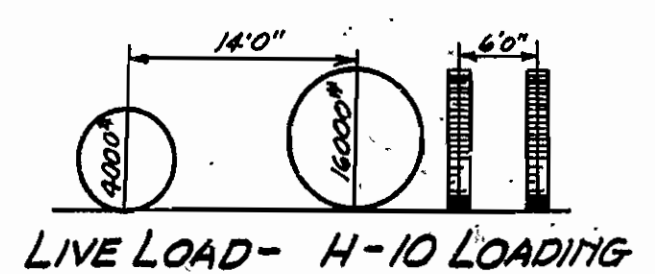
For structural steel notes see Drwg. No. 4062

For cast steel notes see Drwg. No. 4063

For Details of Piers and Anchors see Drwg. No. 4064

For Details of saddle Castings and Hangers see Drwg. No. 4063

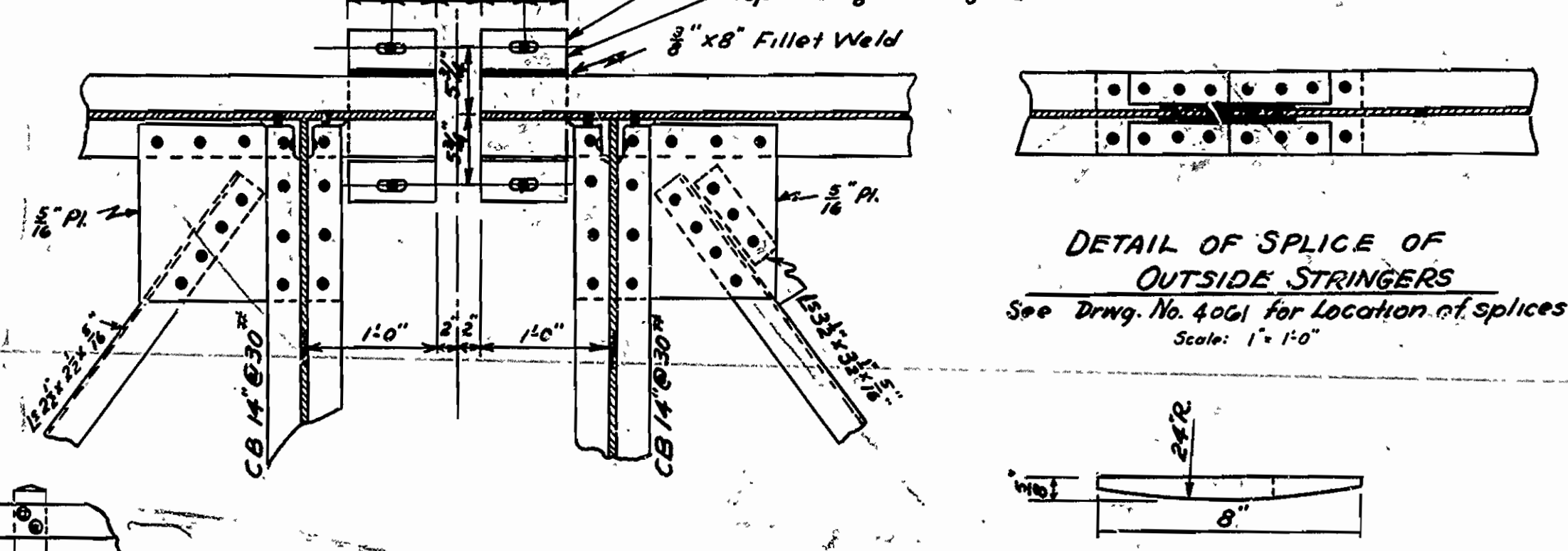
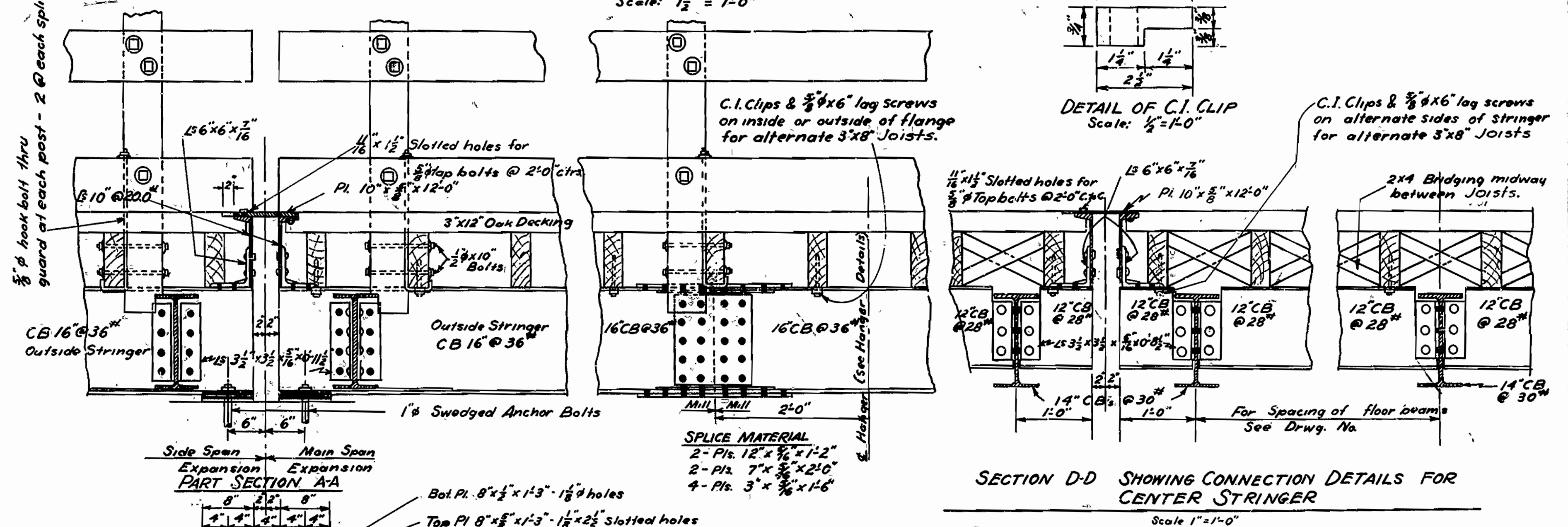
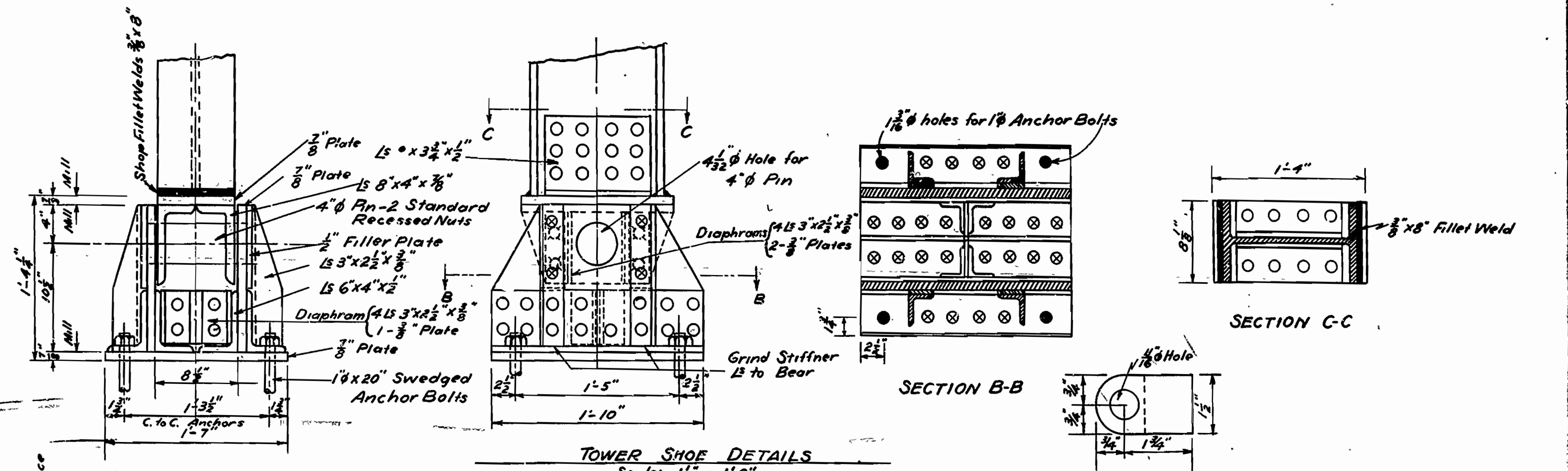
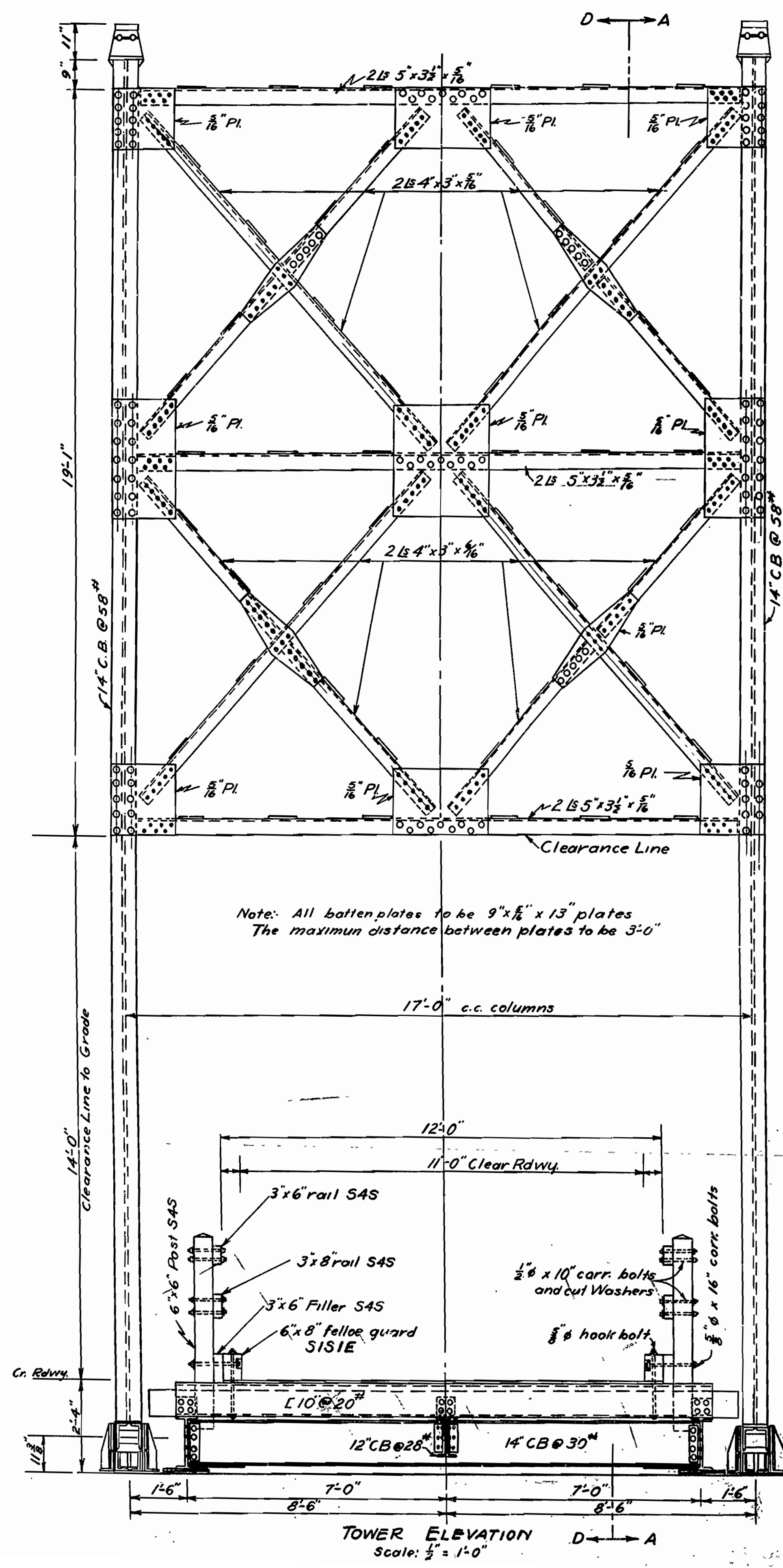
For Details of Tower and Floor beam & Stringer Connections see Drwg. No. 4062.



STRUCTURAL STEEL ALTERNATE  
DETAILS OF  
392'0" SUSPENSION SPAN  
11'0" CLEAR RDWY.  
FOR BRIDGE OVER LITTLE RED RIVER  
CLEBOURNE COUNTY  
ROUTE 16 SEC. 11

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

Drawn By: W.C.H. Date 9-11-35 Scale 3/16" = 1'0" Except  
Traced By: L.A.M.R. Date 9-35 as noted  
Checked By: Date  
DRWG. NO. 4061



**STRUCTURAL STEEL NOTES:**  
 3/4" rivets, 13/16" open holes. All connections shall be riveted unless otherwise noted.  
 All holes in tower connections to be sub-punched 9/16" and reamed 13/16" while towers are assembled. This applies to shop as well as field holes.  
 Stringer splice connections to be sub-punched 9/16" and reamed to 13/16" thru a metal template.  
 Shapes of equal or greater strength may be substituted for structural shapes shown; payment, however, will be paid on weight of shapes shown, or actually used, whichever is the lesser.  
 Shop paint: All structural steel and steel castings shall be given one coat of red lead and raw linseed oil before shipment.  
 Field paint: First coat, white lead tinted with lamp black; second coat, aluminum paint.

**DETAILS OF TOWER AND DETAILS OF FLOOR BEAM & STRINGER CONNECTIONS FOR BRIDGE OVER LITTLE RED RIVER AT MILLER**  
 CLEBOURNE CO  
 ROUTE 16  
 ARKANSAS STATE HIGHWAY COMMISSION  
 LITTLE ROCK, ARKANSAS

Drawn by: W.C.H. Date: 9-9-35  
 Traced by: B.W.D. Date: 9-14-35  
 Checked by: Date: \_\_\_\_\_

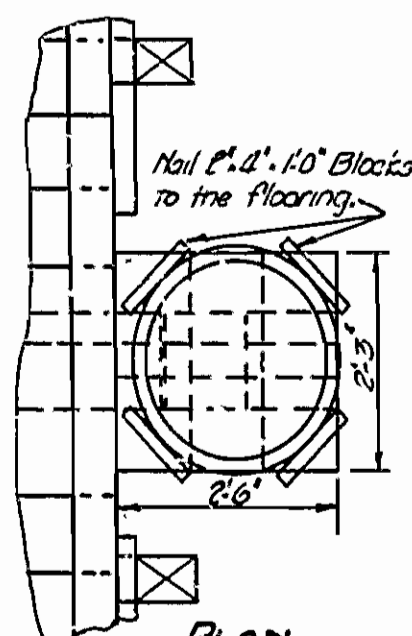
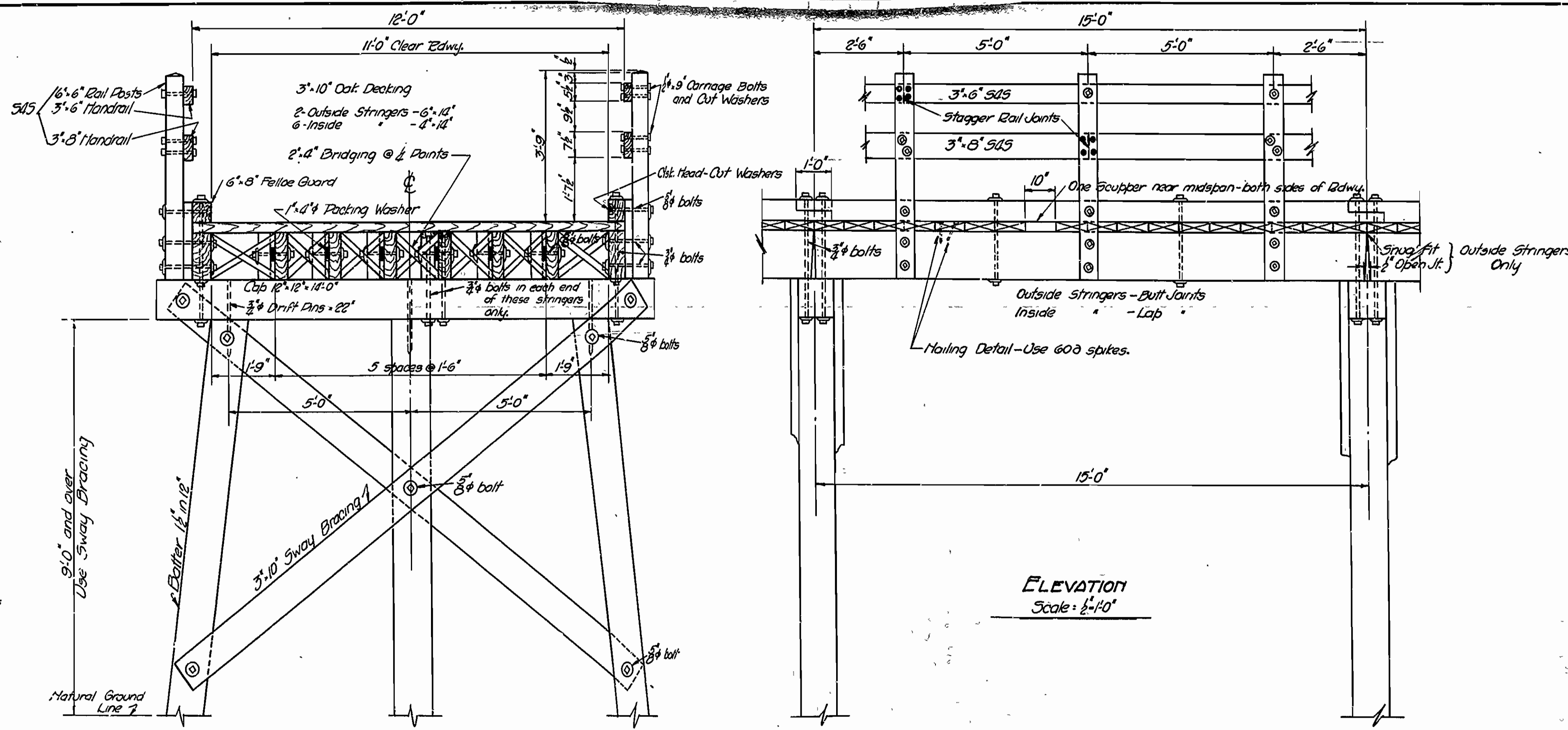
Scale: As shown  
 BRIDGE NO. 1952  
 DRAWING NO. 4062

**STRUCTURAL STEEL NOTES (continued)**  
 Parts included in Item No. 96, "Structural steel," shall be as follows: towers; tower bracing, tower shoes, steel floor beams and stringers, bearing plates, swaged anchor bolts, lateral bracing, and expansion devices.  
 This drawing shows general features of design only. Shop drawings shall be made in compliance with specifications, and be approved before fabrication is begun.  
 Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925, and revised.



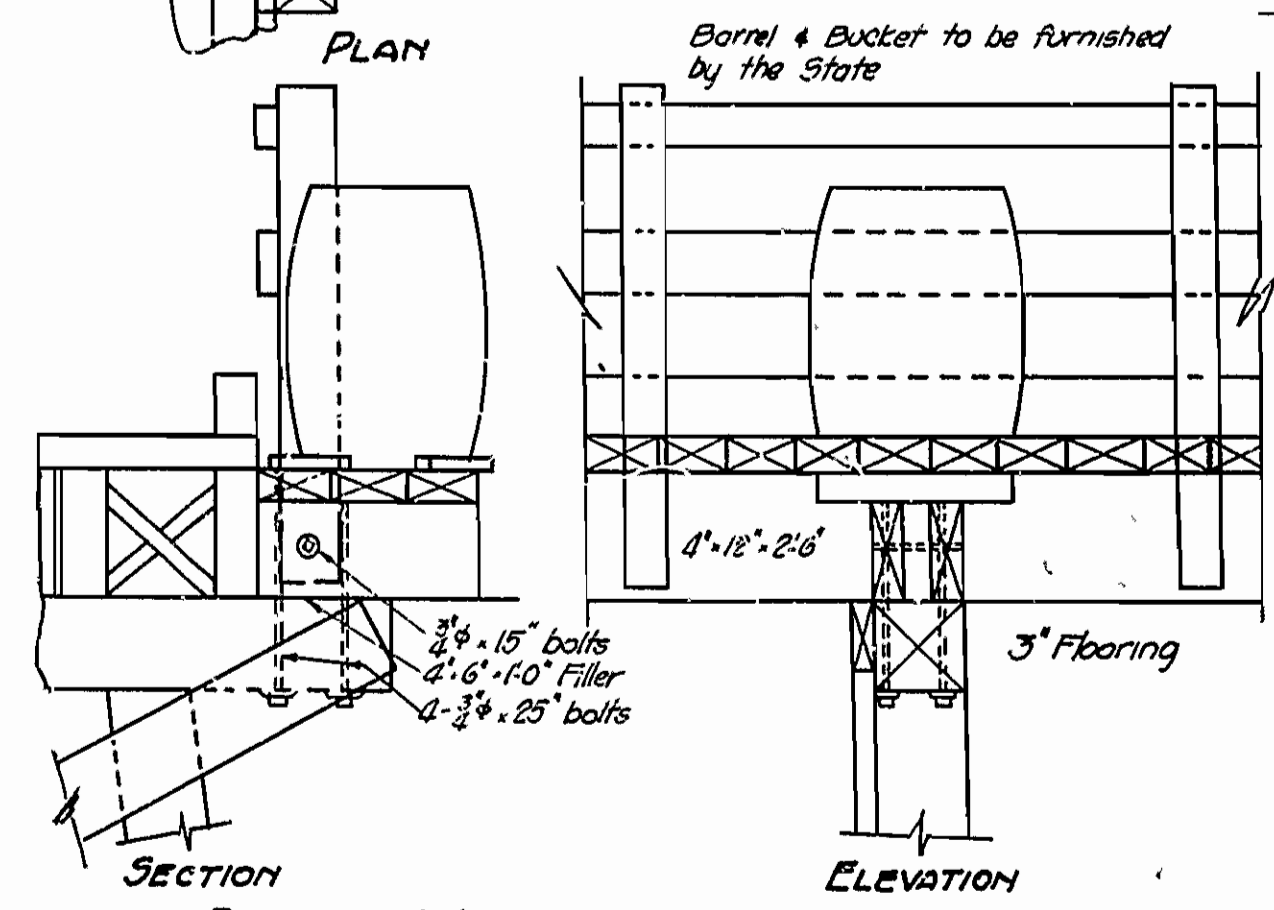


FED. RD. DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1935	3	8
Arkansas State Job No. 5200				



CROSS SECTION OF ROADWAY  
Scale: 1/4"=1'-0"

ELEVATION  
Scale: 1/4"=1'-0"



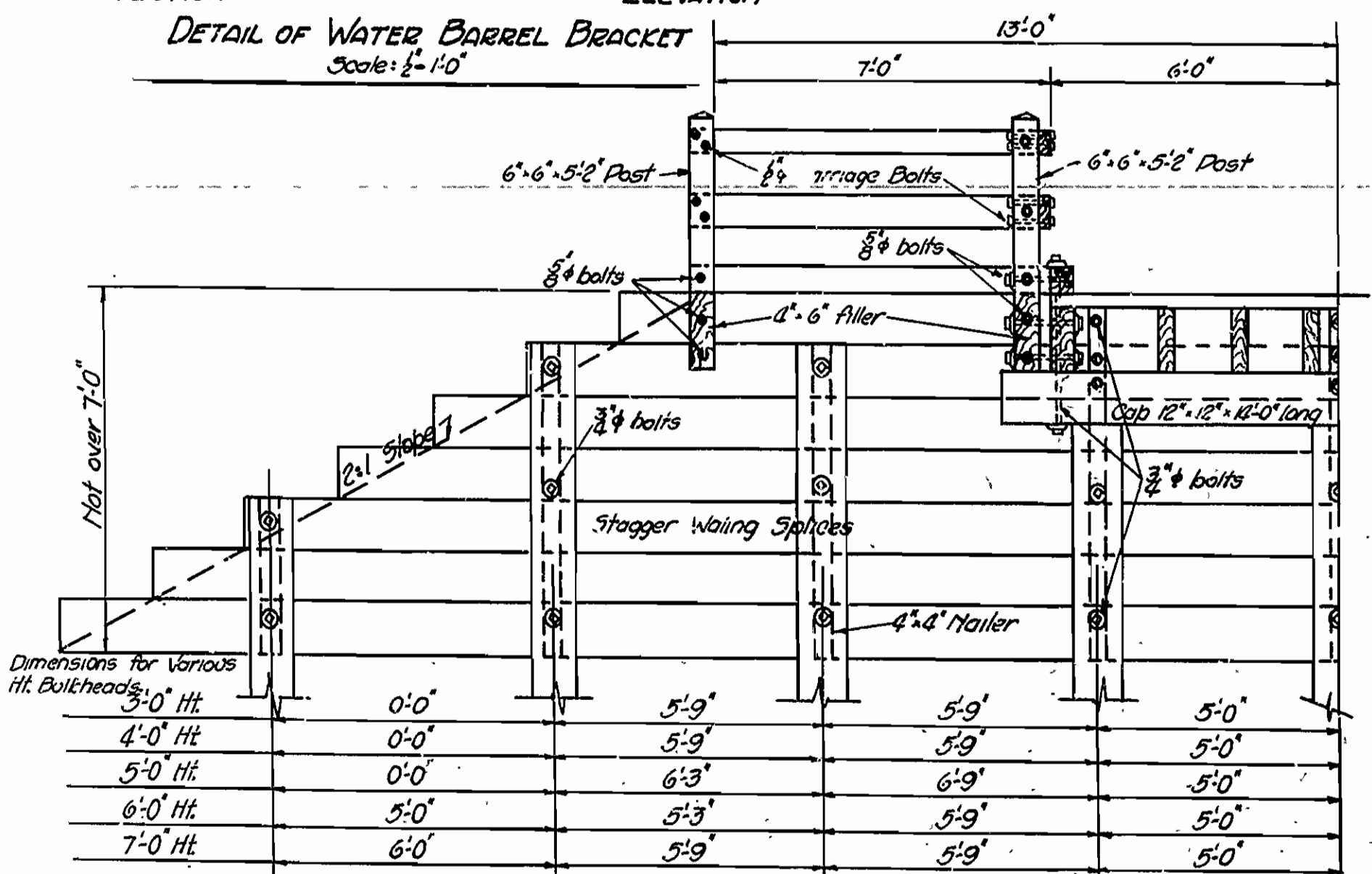
DETAIL OF WATER BARREL BRACKET  
Scale: 1/4"=1'-0"

Notes: For spacing of Handrail Posts on end spans see Layout sheet.

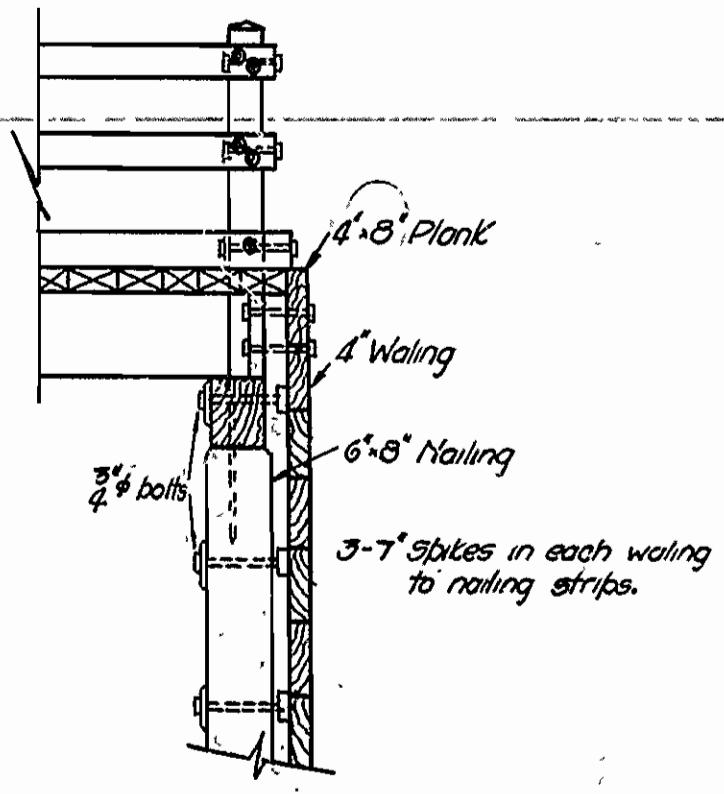
Note: All hardware to be paid for at unit price bid for Cast Steel, Nangers and Miscellaneous Hardware.

GENERAL NOTES:  
Stringers to be spiked to cap with 2-603 in each end of stringers and to be sized at bearing points in the field.  
Oak decking to be rough. Thickness of decking shall be maximum 3" and minimum 2". Decking shall be fastened to each stringer with 2-603 spikes.  
Sway bracing is to be used on all bents 9'-0" and over in height.  
Use malleable or cast iron washers on both ends of machine bolts unless otherwise noted.  
All timber except decking (which is oak) shall be Southern Yellow Pine.  
Specifications: Arkansas Standard Road and Bridge Specifications adopted May 30, 1925 and revised.  
All timber in Timber Spans, except rail posts, to be untreated.  
For Treated Timber notes, See Dwg No. 4060.

Note: All hand rail post in alternate "A" treated timber.  
No treated timber in alternate "B"



ABUTMENT DETAILS  
Scale: 3/8"=1'-0"



Dimensions for Various Ht. Bulkheads	0'-0"	5'-9"	5'-9"	5'-0"
3'-0" Ht.	0'-0"	5'-9"	5'-9"	5'-0"
4'-0" Ht.	0'-0"	5'-9"	5'-9"	5'-0"
5'-0" Ht.	0'-0"	6'-3"	6'-9"	5'-0"
6'-0" Ht.	5'-0"	5'-3"	5'-9"	5'-0"
7'-0" Ht.	6'-0"	5'-9"	5'-9"	5'-0"

DETAILS OF TIMBER SPAN  
15'-0" SPAN  
11'-0" CLEAR ROADWAY  
ROUTE 16 SEC. 11  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK-ARK.  
Drawn by R.E.L. Date: 9-8-35  
Traced by J.D. Date: 9-8-35  
Checked by [Signature] Date: 9-8-35  
Scales: As noted  
Dwg. No. 2001