

1	2	3	4	5	6	7	8	9

ARKANSAS STATE HIGHWAY COMMISSION

DWIGHT H. BLACKWOOD

CHAIRMAN

JUSTIN MATTHEWS J. LAN WILLIAMS

J. S. PARKS SAM J. WILSON

COMMISSIONERS

HIGHWAY BRIDGE OVER WHITE RIVER

NEAR

AUGUSTA, ARKANSAS

(WOODRUFF COUNTY)

C. S. CHRISTIAN
HIGHWAY ENGINEER

JOB NO. 1115

IRA G. HEDRICK, INC.

N. B. GARVER
BRIDGE ENGINEER

U.S.R. 64 S-12

CONSULTING ENGINEERS
HOT SPRINGS, ARKANSAS

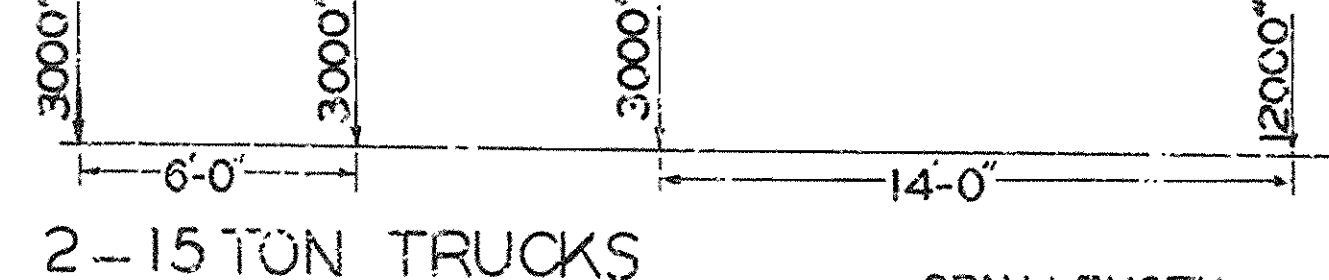
REVISED

CONCRETE APPROACHES

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WHEEL CONCENTRATIONS, CLASS A LOADING



2-15 TON TRUCKS

EQUIVALENT UNIFORM LIVE LOADS

SPAN LENGTH	LOAD
0' TO 50'	150# PER SQ. FT.
50' TO 100'	130 " " " "
100' TO 200'	80 " " " "
200' AND OVER	64 " " " "

IMPACT

25% — CONCRETE
100 — STEEL
L+300

GENERAL NOTES

All hooks on reinforcing bars to have a radius of 4d and a return of 12d where d = diameter of round bar, or side of square bar. Lengths of hooked bars are given to starting point of hook, thus: $\overline{\hspace{1cm}}$. All bends such as on girder bars must have a radius of not less than 12d.
Centers of bars in floor slab to be not less than 1/2" from face of concrete. Centers of bars to be 4" from face of concrete on piers, and 3" on girders and columns unless otherwise noted.
Chamfers to be 2" throughout unless otherwise noted.

CONSTANTS

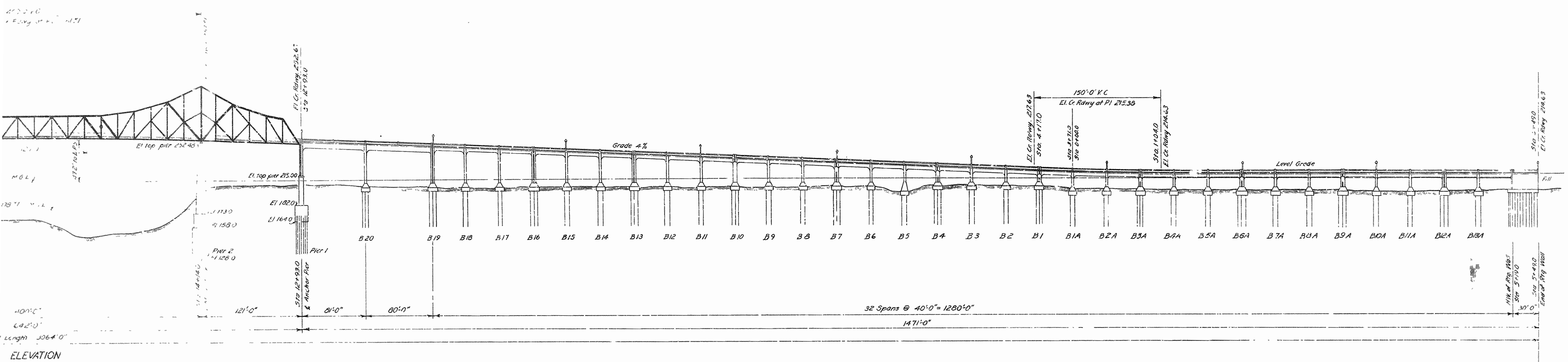
	CONCRETE 1-2 MIX	STEEL
FLOOR SLABS, CROSS GIRDERS, GIRDERS, ETC.	975# PER SQ. IN.	
BEAMS CONTINUOUS OVER SUPPORTS: AT CENTER OF BEAMS	975 " " "	
OVER SUPPORTS	1125 " " "	
BOND FOR STEEL IN CONCRETE	150 " " "	
COLUMNS IN DIRECT COMPRESSION	900 $\frac{22.5 L}{D}$ " " "	
NOTE: FOR 1-2-4 CONCRETE DECREASE ABOVE STRESSES 33 1/3 %		
TENSION, NET SECTION		16000# PER SQ. IN.
COMP. IN COLS. & OTHER COMP. MEMBERS, FIXED ENDS	900 $\frac{22.5 L}{D}$ " " "	
MODULUS OF ELASTICITY, STEEL		30000000 " " "
CONCRETE 1-2-4	2000000 " " "	
1-1-2	3000000 " " "	
VARIATION IN TEMPERATURE	±50°	
COEFFICIENT OF EXPANSION	.0000055	.0000067

404

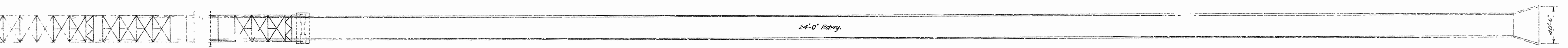
404

T.A.	1323	3
ARK		
	11.5	

AUGUSTA



ELEVATION



PLAN

Note
 El. tops of caps Bents 1A-13A inclusive 200.50
 El. tops of caps Bents 1-25 inclusive 205.69
 El. tops of caps Bents 26-40 inclusive 203.69
 El. top of base Reg. Wall Augusta side 157.50
 El. top of base Reg. Wall Bala Creek side 159.09
 Sta 0+00 = Sta 3+71.0 on original survey

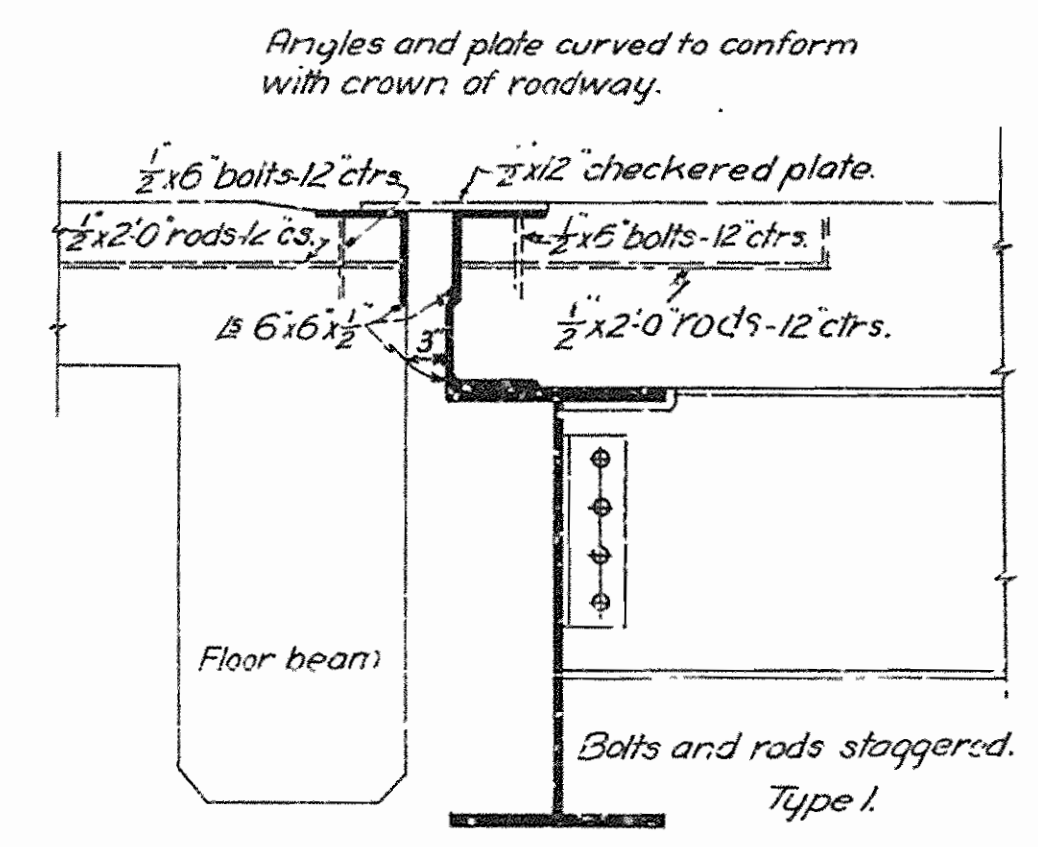
ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
 NEAR
 AUGUSTA, ARKANSAS
 Revised
GENERAL PLAN & PROFILE
 REVISED

MADE BY H.K.S. IRRA G. HEDRICK, INC.
 TRACED BY H.K.S. CONSULTING ENGINEERS
 CHECKED BY H.K.S. HOT SPRINGS, ARKANSAS
 DATE July 29, 1929 SCALE 1"=50'-0" SHEET NO 3

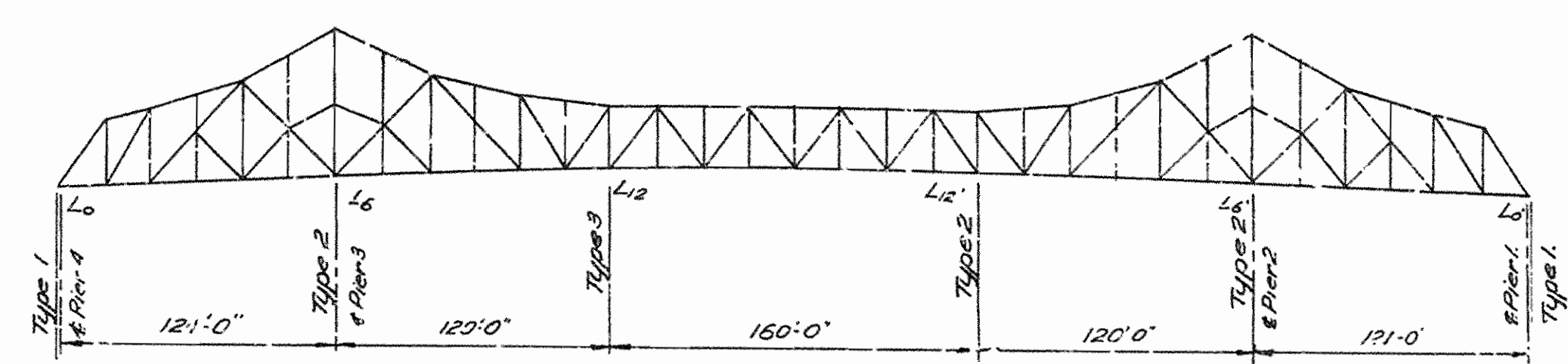
Revised, Oct 24, 1929

Br. No. G13 Draw. No. 4964

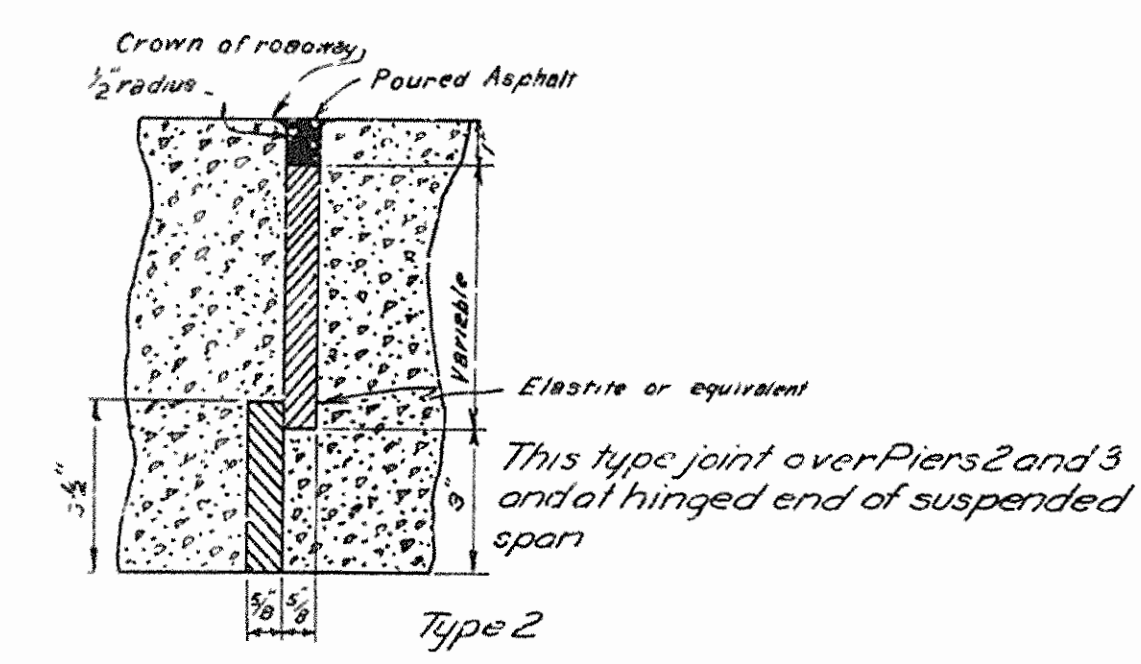
NO.	REV.	DATE	BY	CHECKED
6	ARA	1929	7	8
NO.	115			



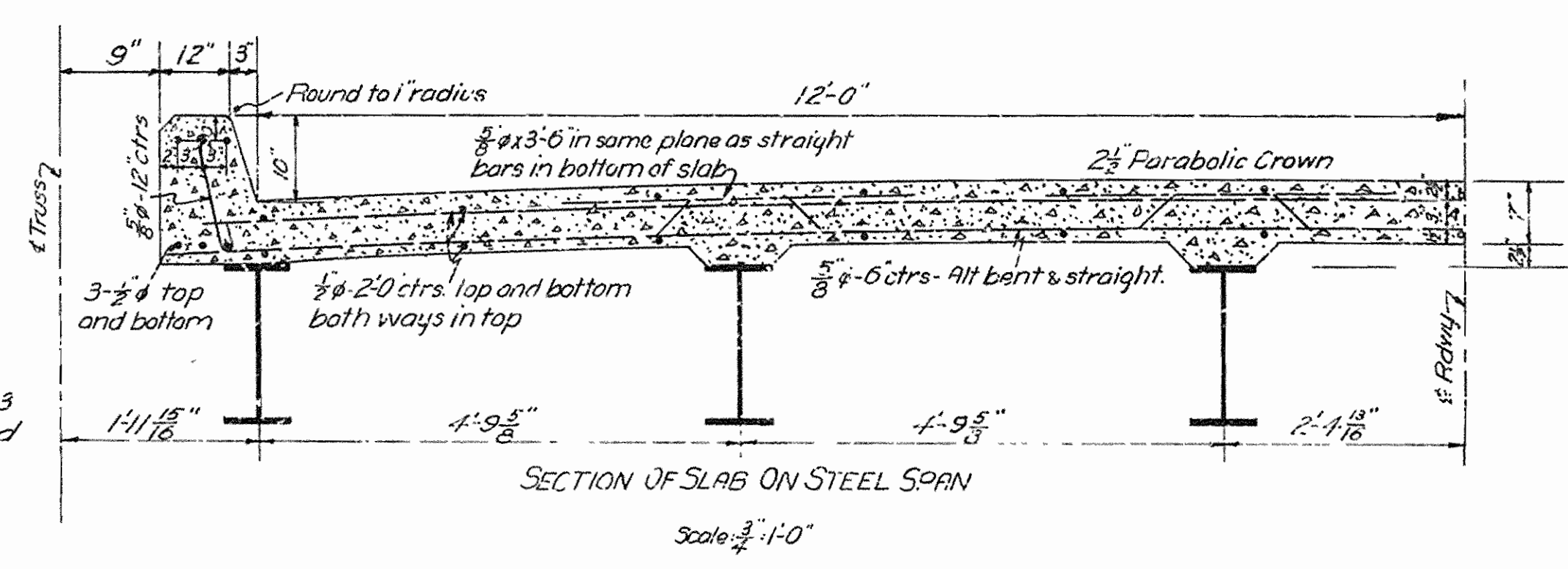
EXPANSION JOINT AT END OF STEEL SPAN
Scale 1/4"=1'-0"



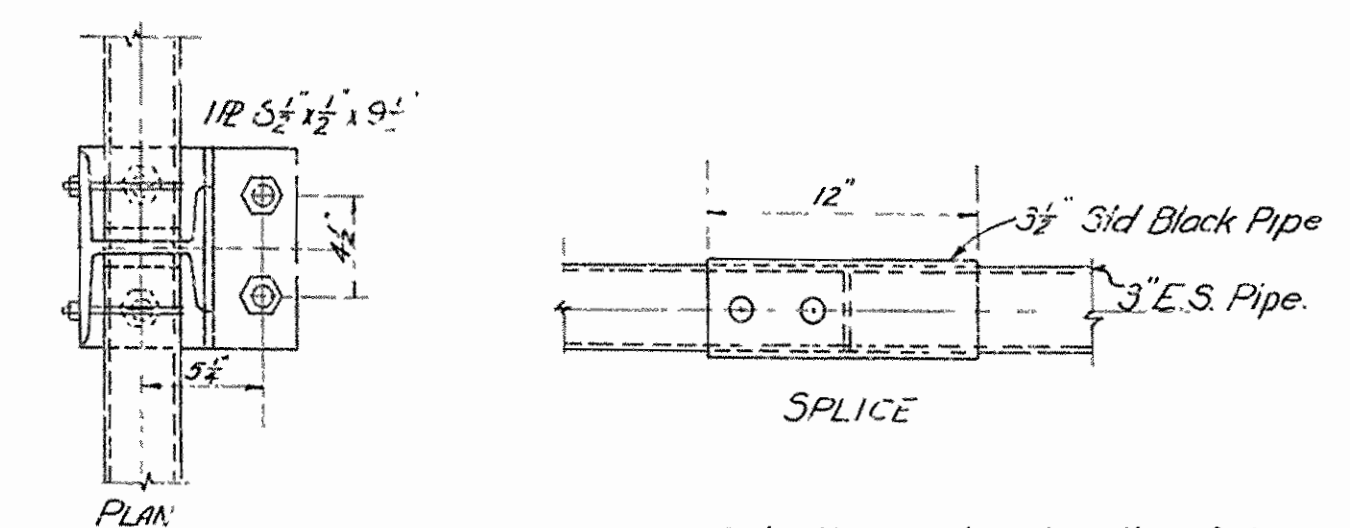
LOCATION OF SLAB EXPANSION JOINTS ON MAIN RIVER BRIDGE.



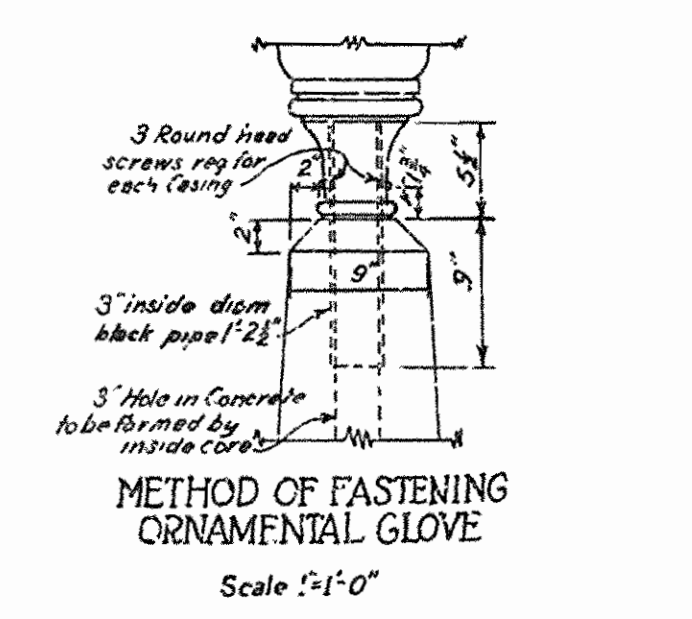
DETAIL OF EXPANSION JOINT IN SLAB AND CURB
SCALE 3/4"=1'-0"



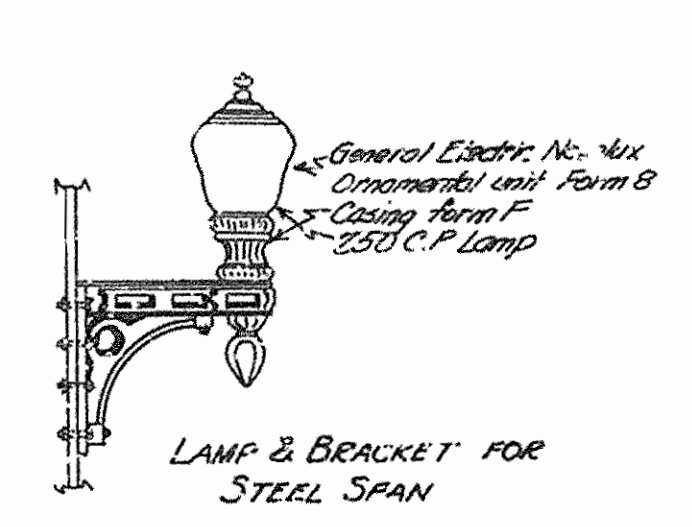
SECTION OF SLAB ON STEEL SPAN
Scale 3/4"=1'-0"



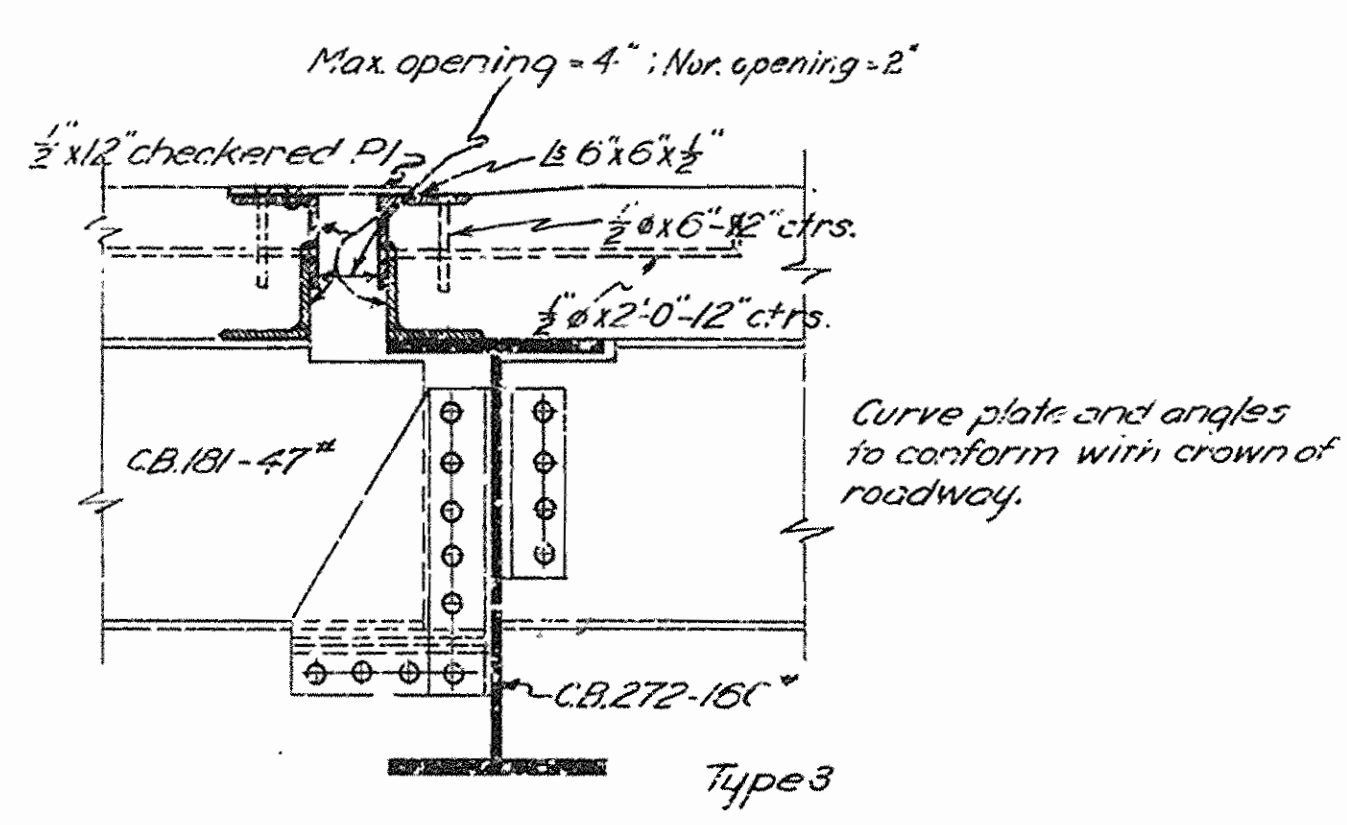
Note: Use random lengths of pipe, with plain ends. Keep splices clear of all vertical posts. Cap pipe at open ends.



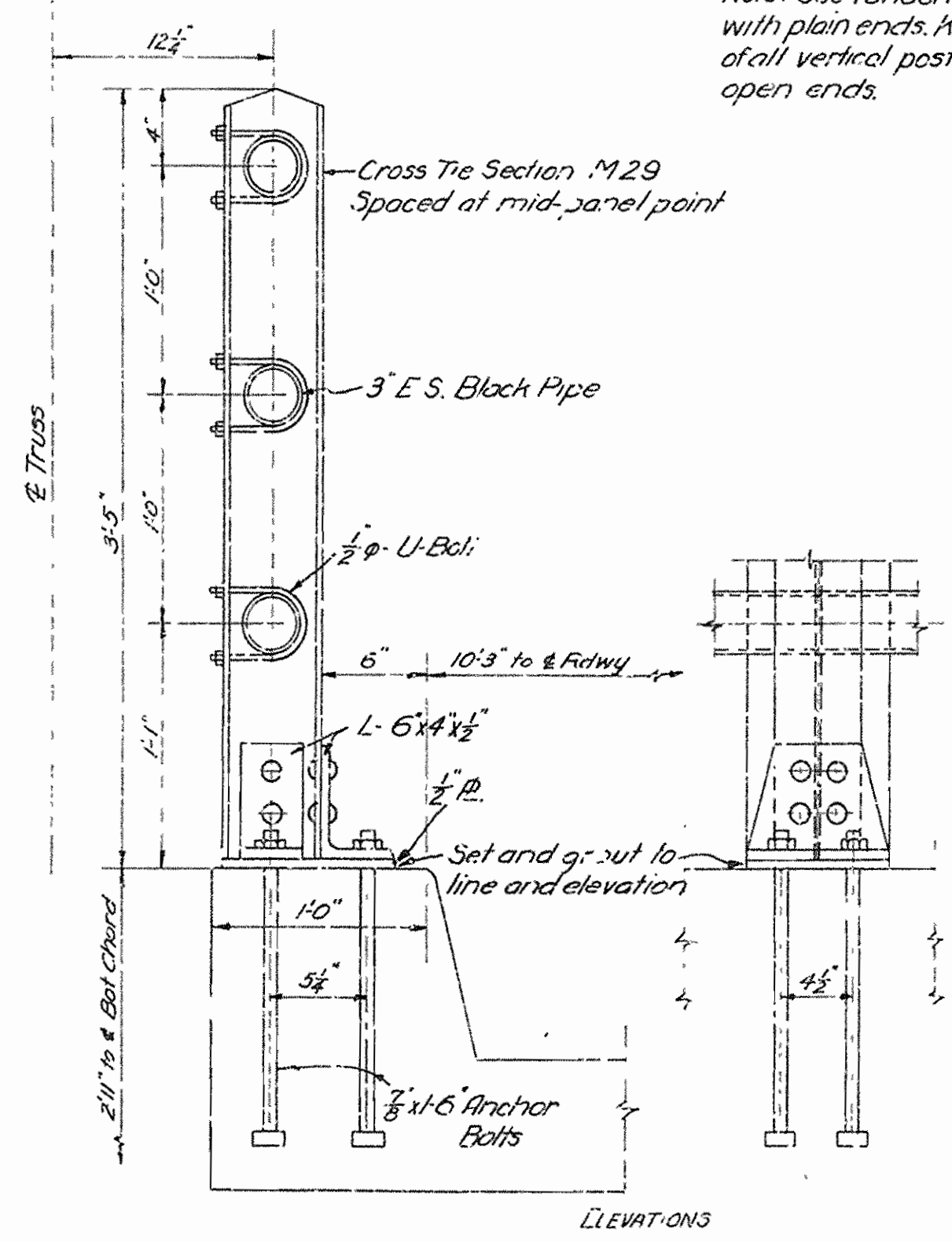
METHOOD OF FASTENING ORNAMENTAL GLOVE
Scale 1/2"=1'-0"



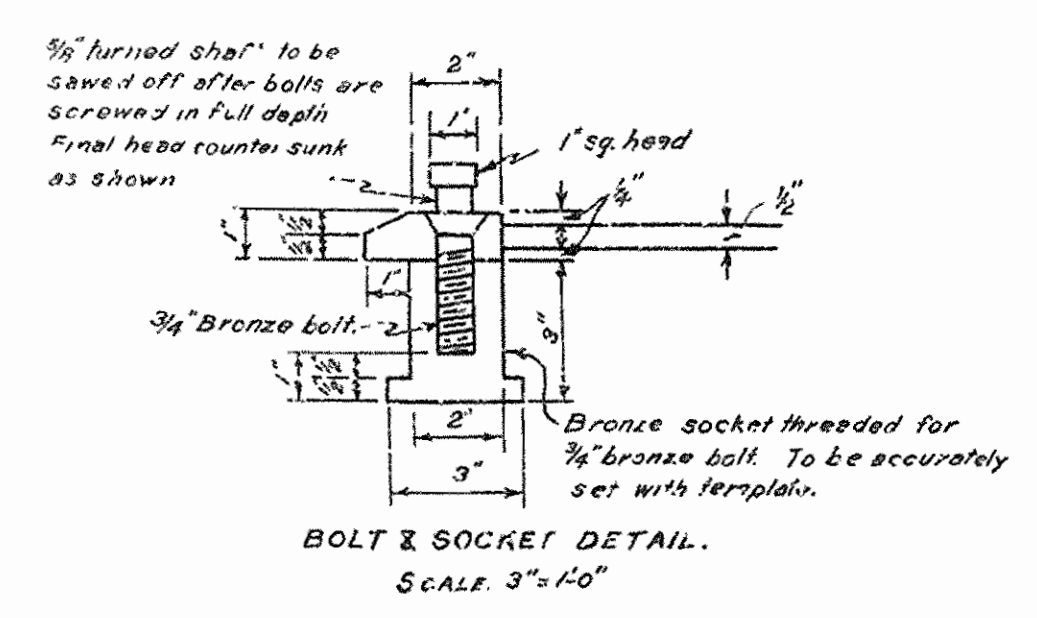
LAMP & BRACKET FOR STEEL SPAN



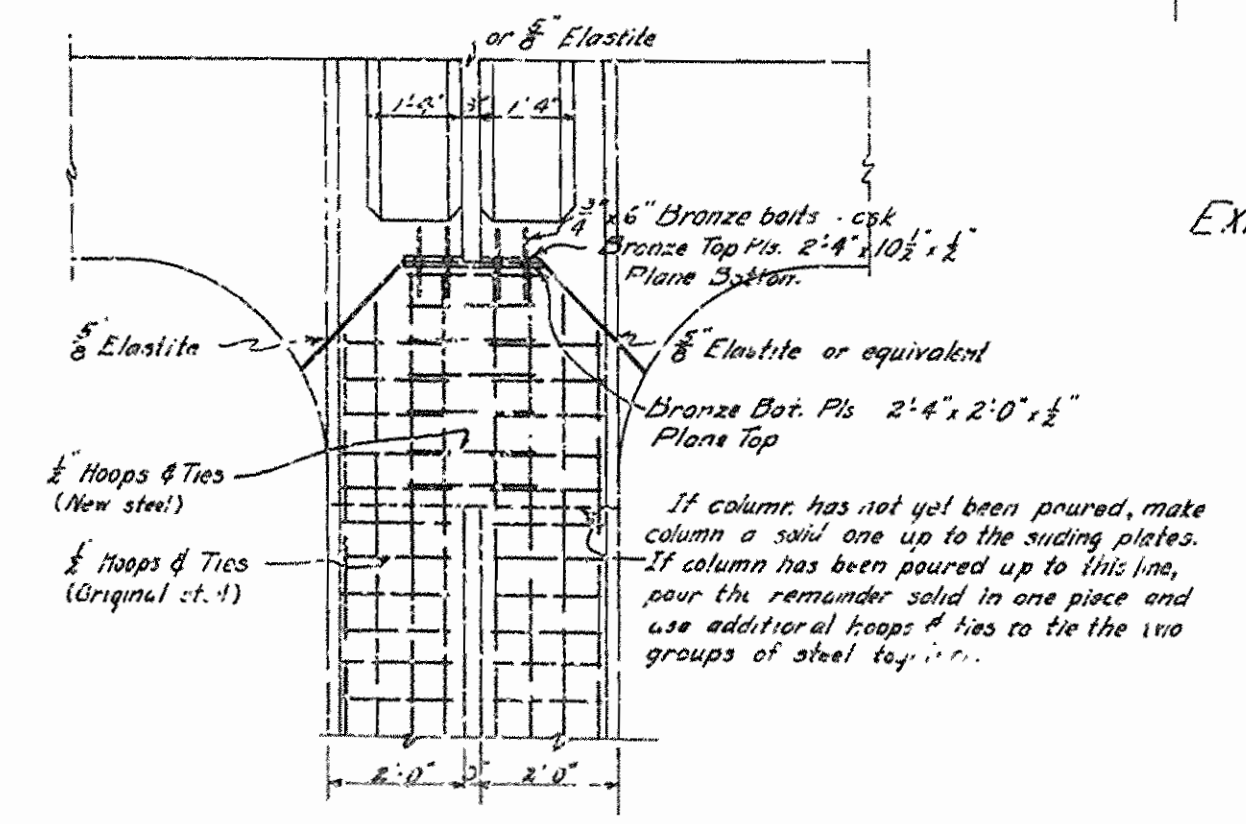
EXPANSION JOINT AT ROCKER END OF SUSPENDED SPAN
Scale 1/4"=1'-0"



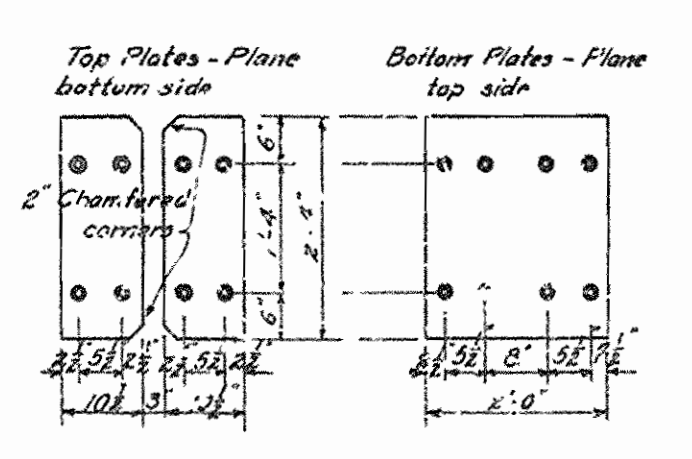
INTERMEDIATE HANDRAIL POST MAIN RIVER BRIDGES AT AUGUSTA AND NEWPORT



BOLT & SOCKET DETAIL
Scale 3/4"=1'-0"



EXPANSION COLUMN AT BENT 9A, 6A, 3A, 1, 4, 7, 10, 31 & 34



BRONZE EXPANSION PLATES AT BENTS 9A, 6A, 3A, 1, 4, 7, 3, 7, 10, 31 & 34

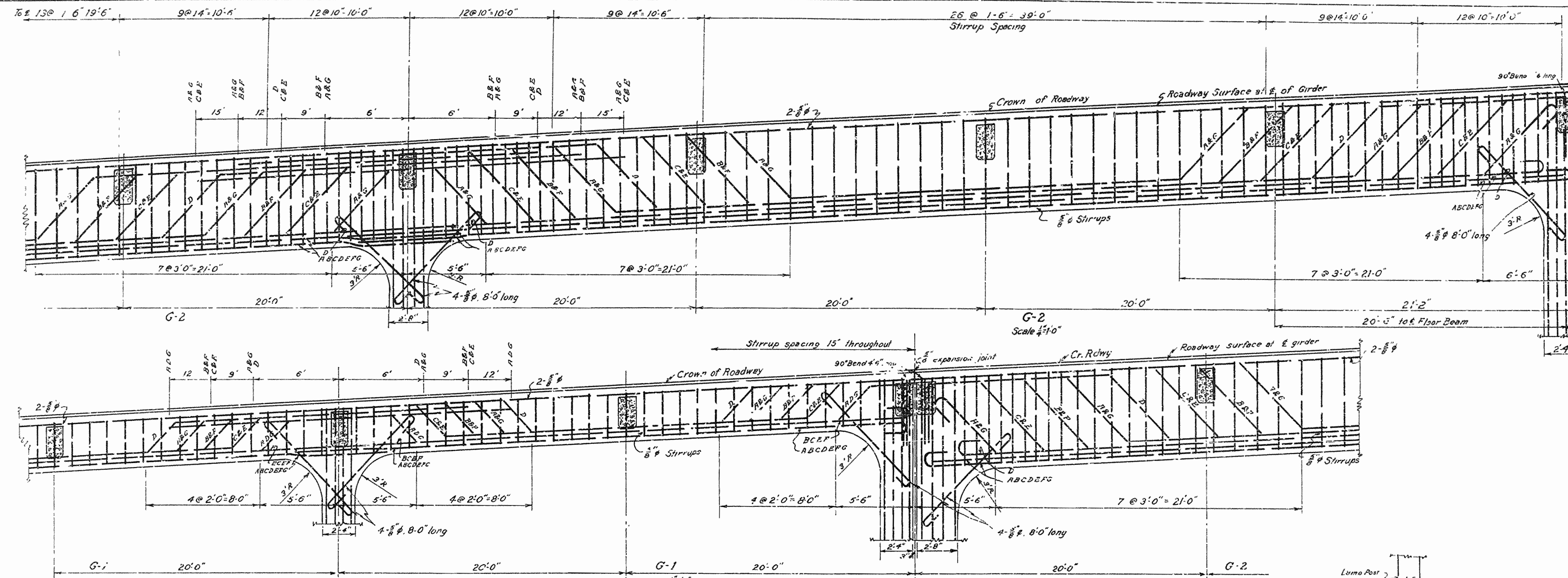
ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
NEAR AUGUSTA ARKANSAS
REVISED
MISCELLANEOUS DETAILS

MADE BY: W.C.V.
TRACED BY: W.C.V.
CHECKED BY:
DATE: July 29, 1929
SCALE: As shown
SHEET NO. 7

IR. G. HEDRICK, INC.
CONSULTING ENGINEERS
HOT SP. 163, ARKANSAS

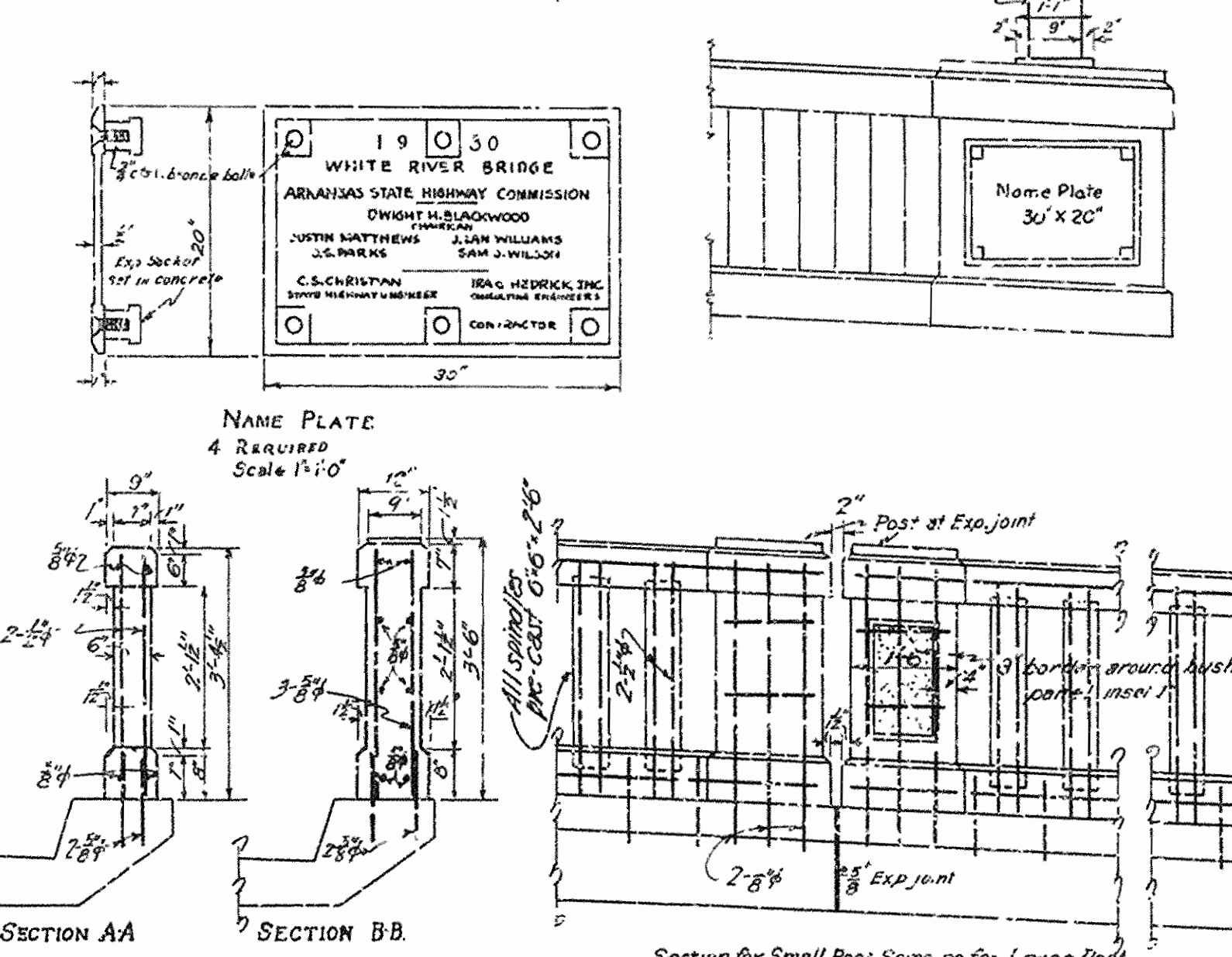
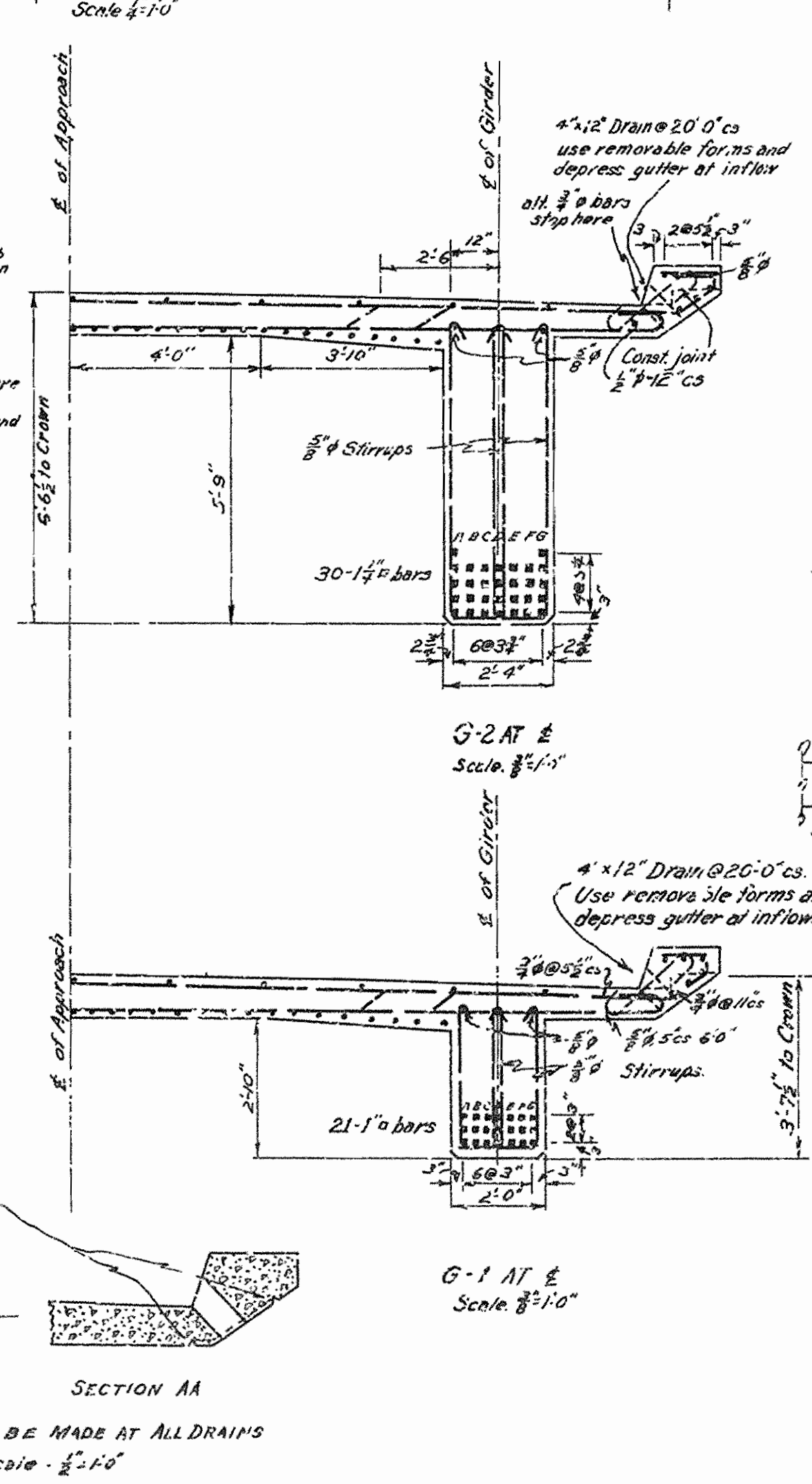
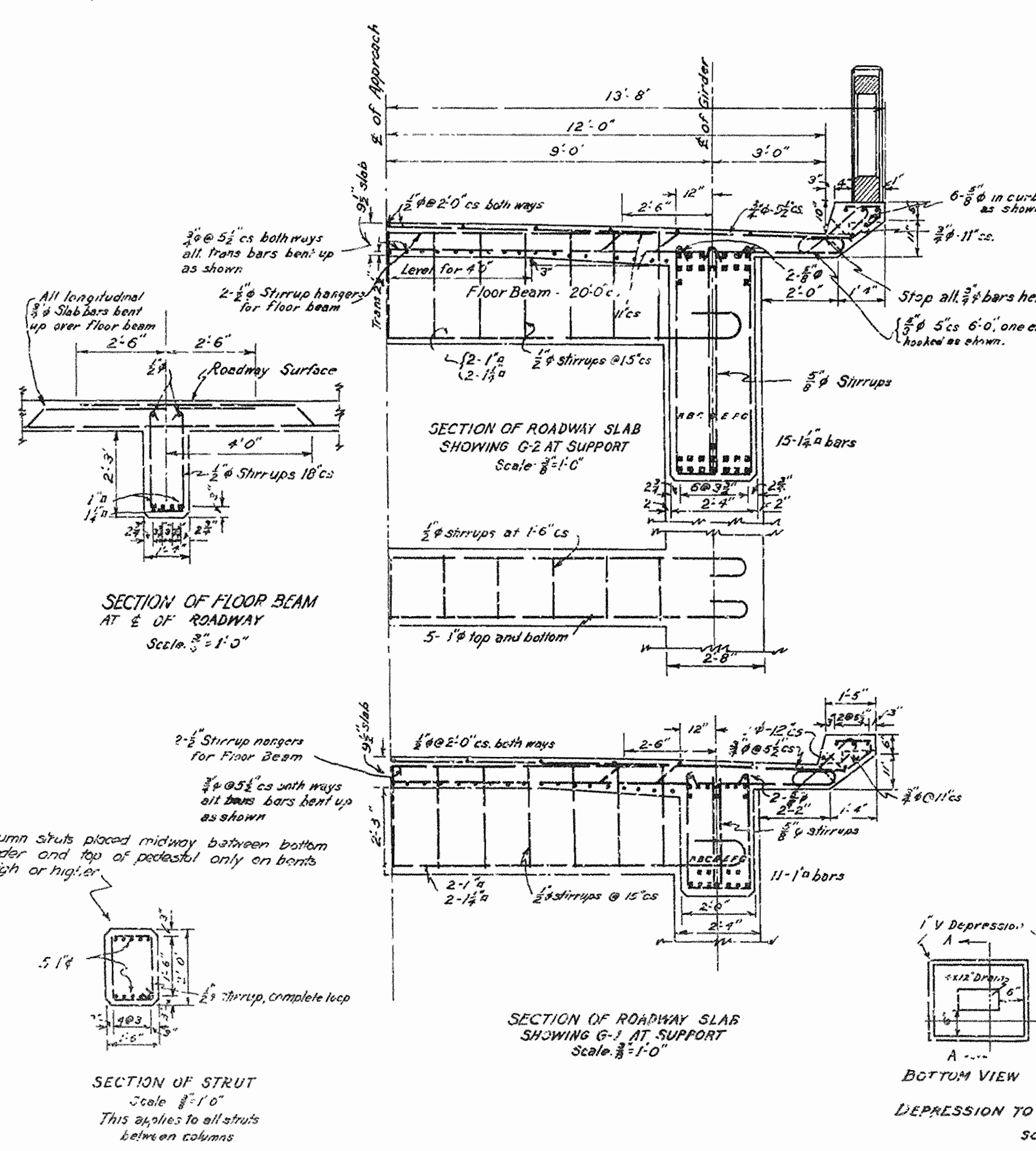
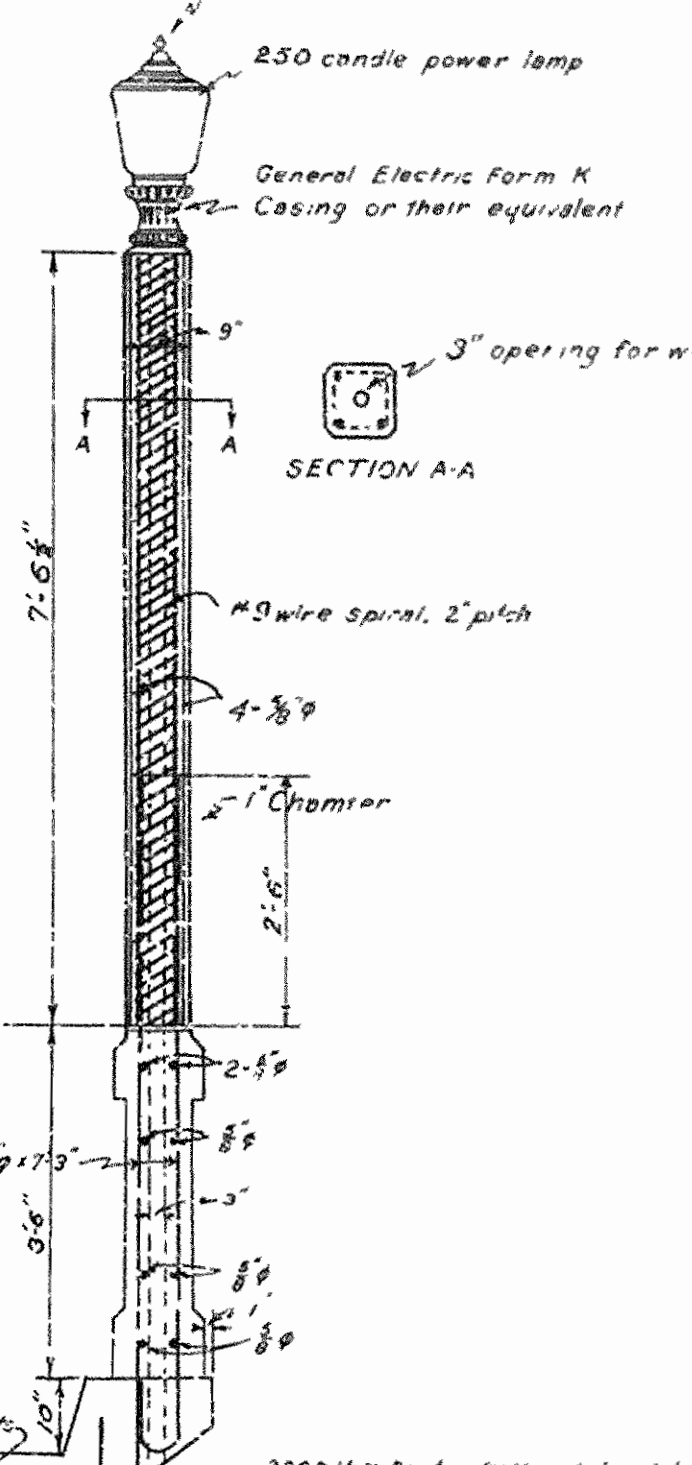
Revised, Oct 26, 1929
Revised, July 29, 1929.

DR. No. 613
Dwg. No. 496B



Steel Span
Expansion Joint here
Details See Sheet No. 10

G.E. Form B
Novelus Ornamental
Unit or their equivalent



*6 Triple braided weatherproof
copper wire
Steel pins at sockets except at lamp post
No. 11 Pierce Long
Shank Forged
Steel Pin with
1" Spring Top

Large posts over each single center
of long spans at about 40'cs

NOTE: All spindles 5/8"x20" precast

**ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
NEAR
AUGUSTA, ARKANSAS**

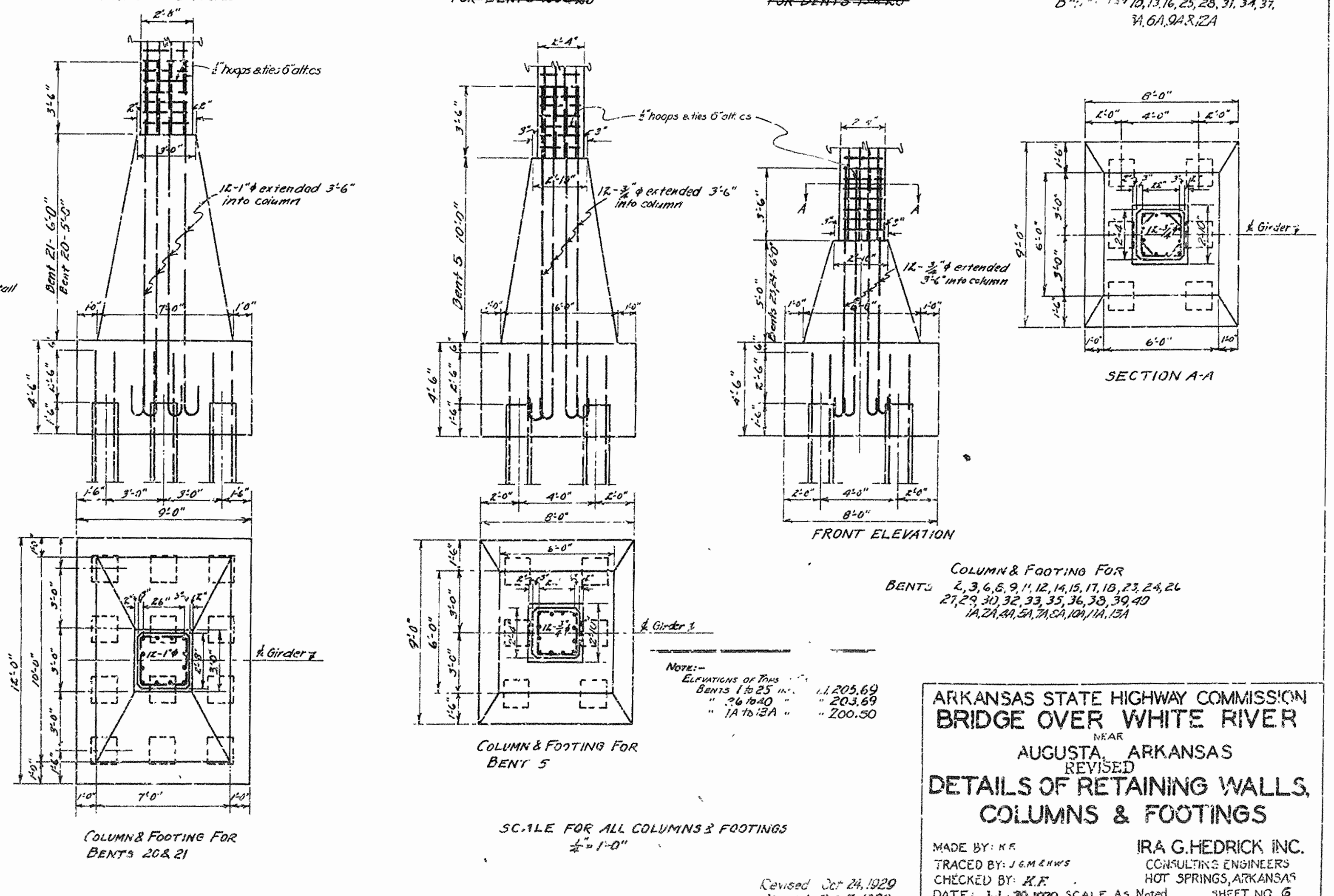
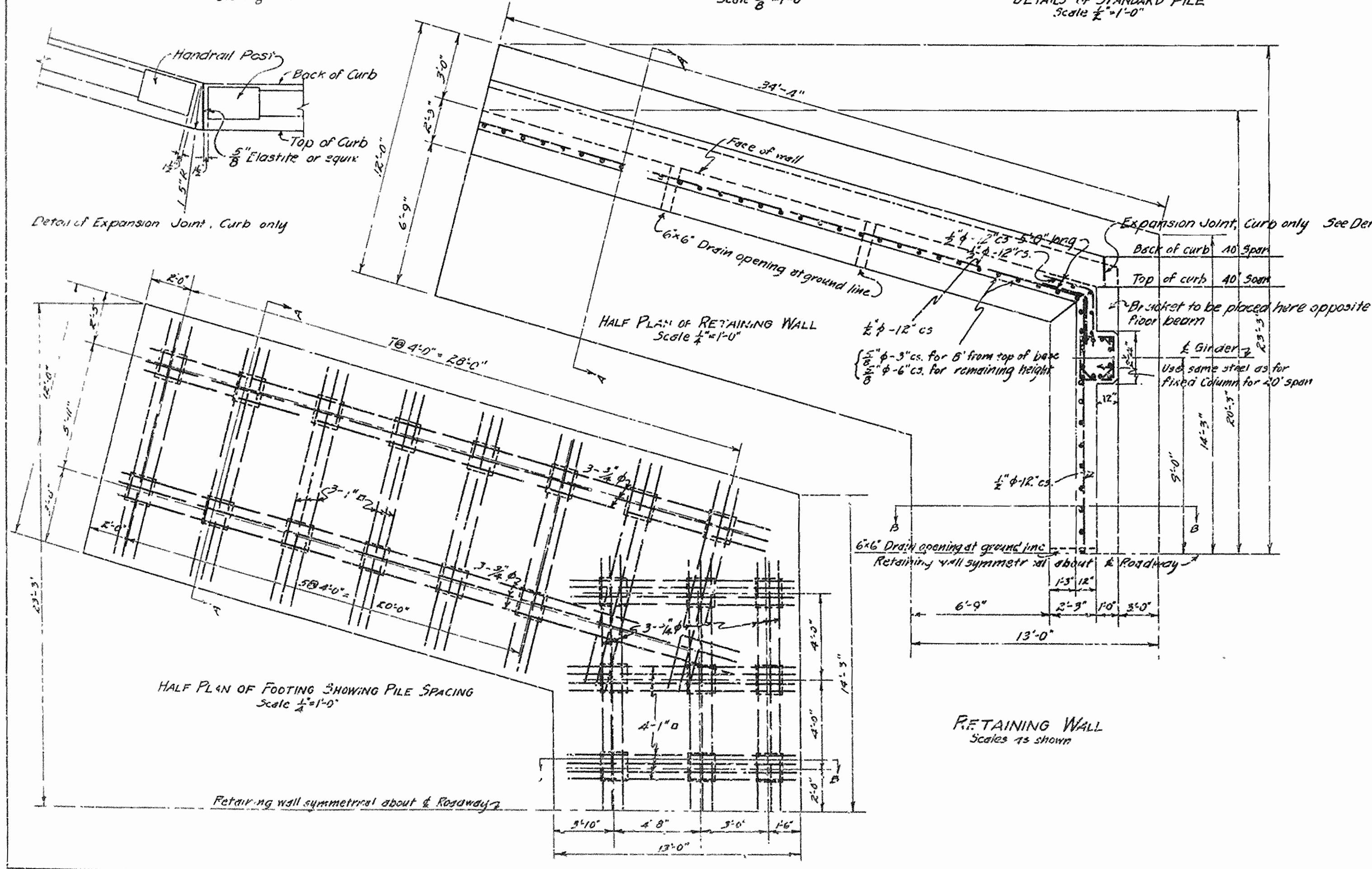
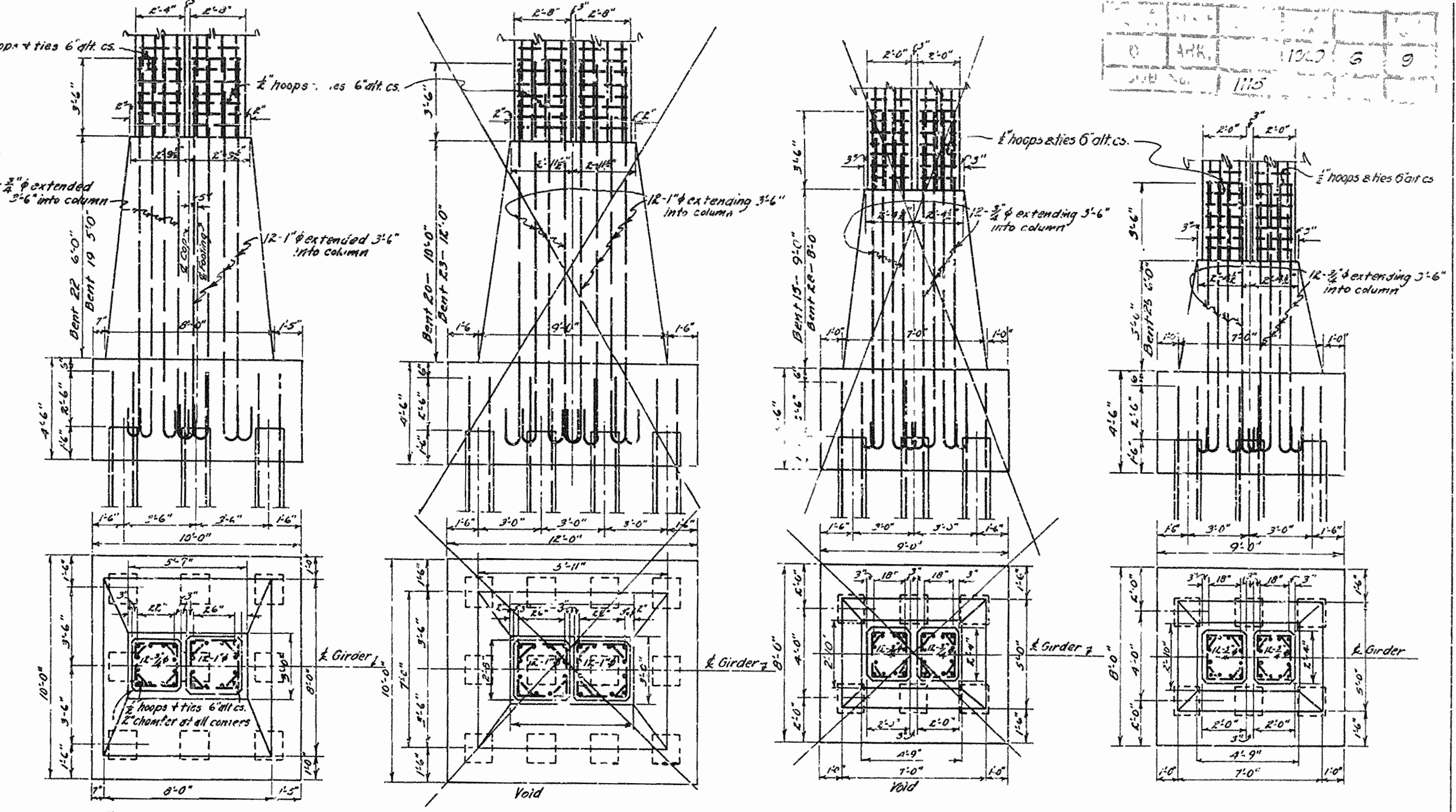
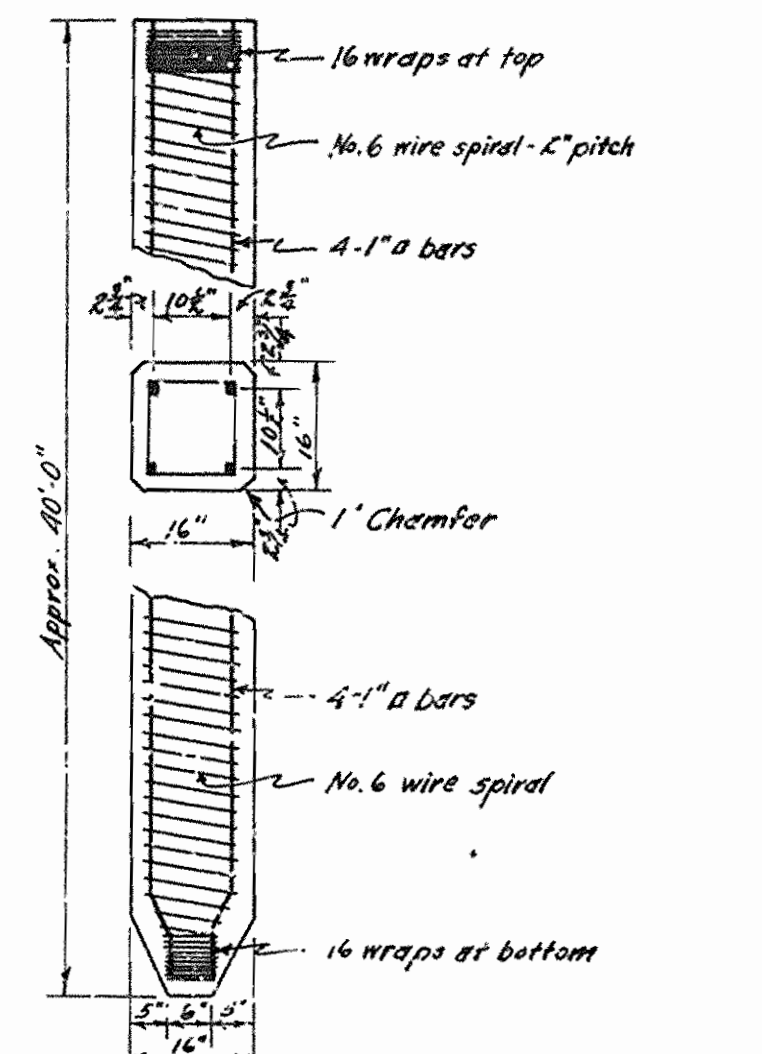
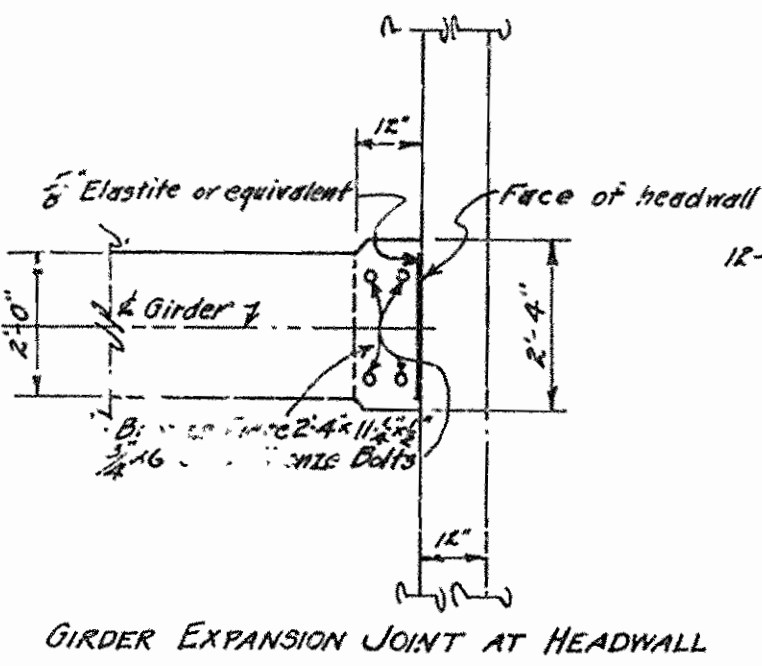
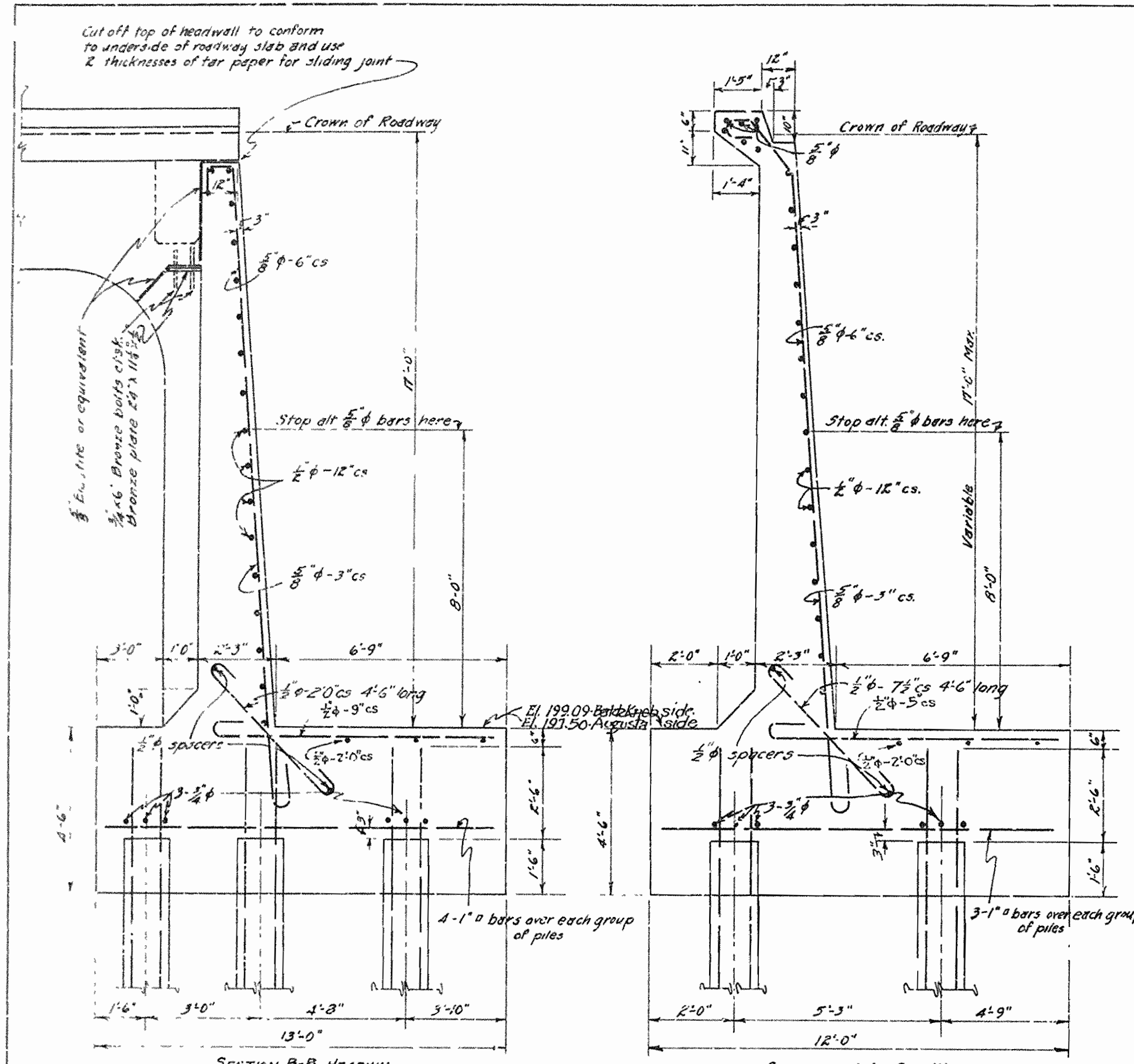
REVISED
**DETAILS OF CONCRETE GIRDERS,
LAMP POSTS, HANDRAILS, & NAME PLATES.**

Revised, Oct 24, 1929
Revised Oct 7, 1929
Revised Aug 22, 1929
Revised July 29, 1929

MADE BY K.R.
TRACED BY W.G.M.
CHECKED BY K.K.
DATE July 22, 1929

IRA G. HEDRICK, INC.
CONSULTING ENGINEERS
HOT SPRINGS, ARKANSAS
SHEET NO. 5

DATE	1929	6	9
NO.	1115		



Notes:-
Elevations of Piles
Bents 1, 10, 25 in. 11, 205.69
" 24, 30 " " 203.69
" 1A to 13A " " 200.50

COLUMN & FOOTING FOR BENTS 2, 3, 6, 8, 9, 11, 12, 14, 15, 17, 18, 23, 24, 26, 27, 29, 30, 32, 33, 35, 36, 38, 39, 40, 1A, 2A, 4A, 5A, 7A, 8A, 10A, 11A, 13A

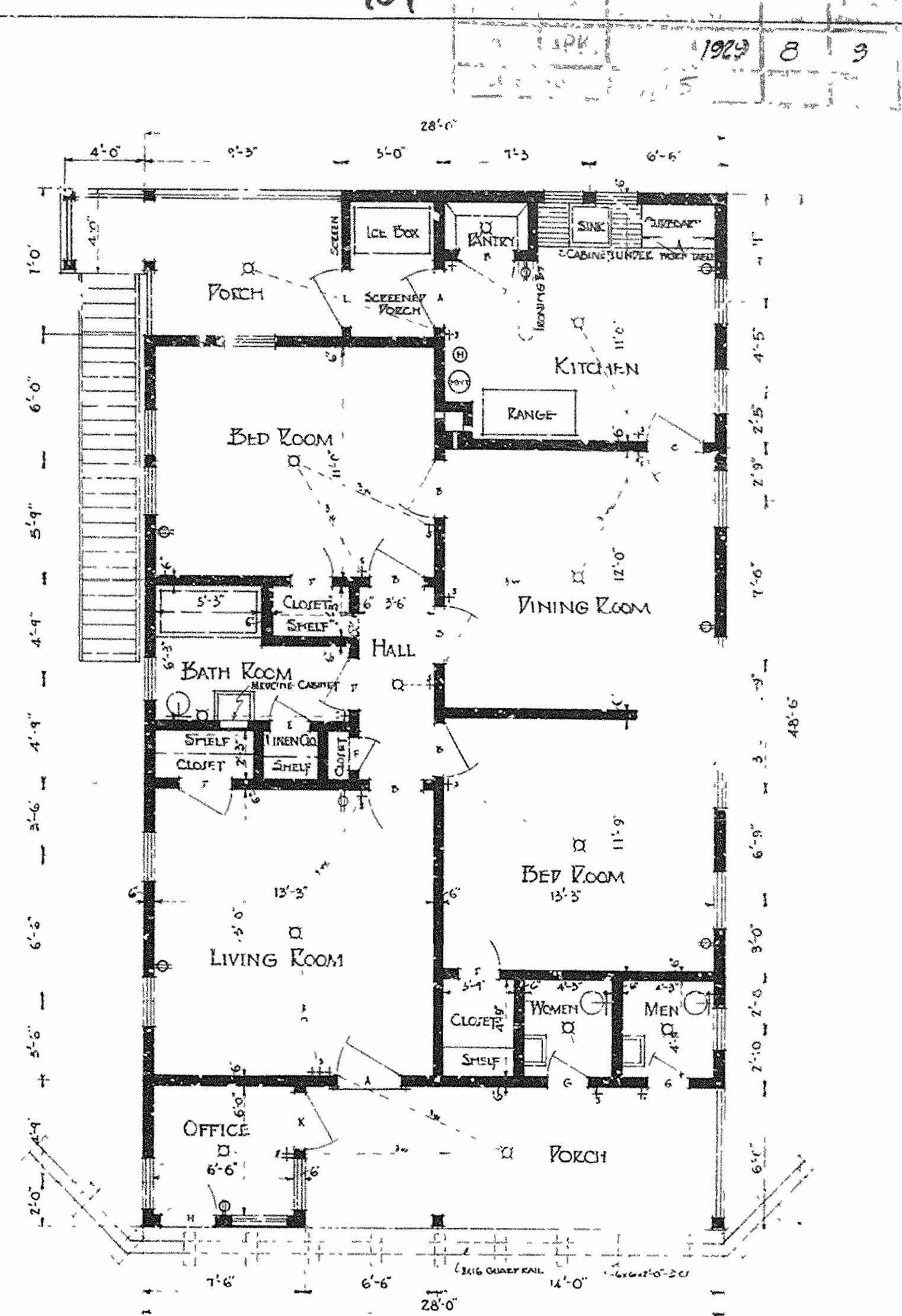
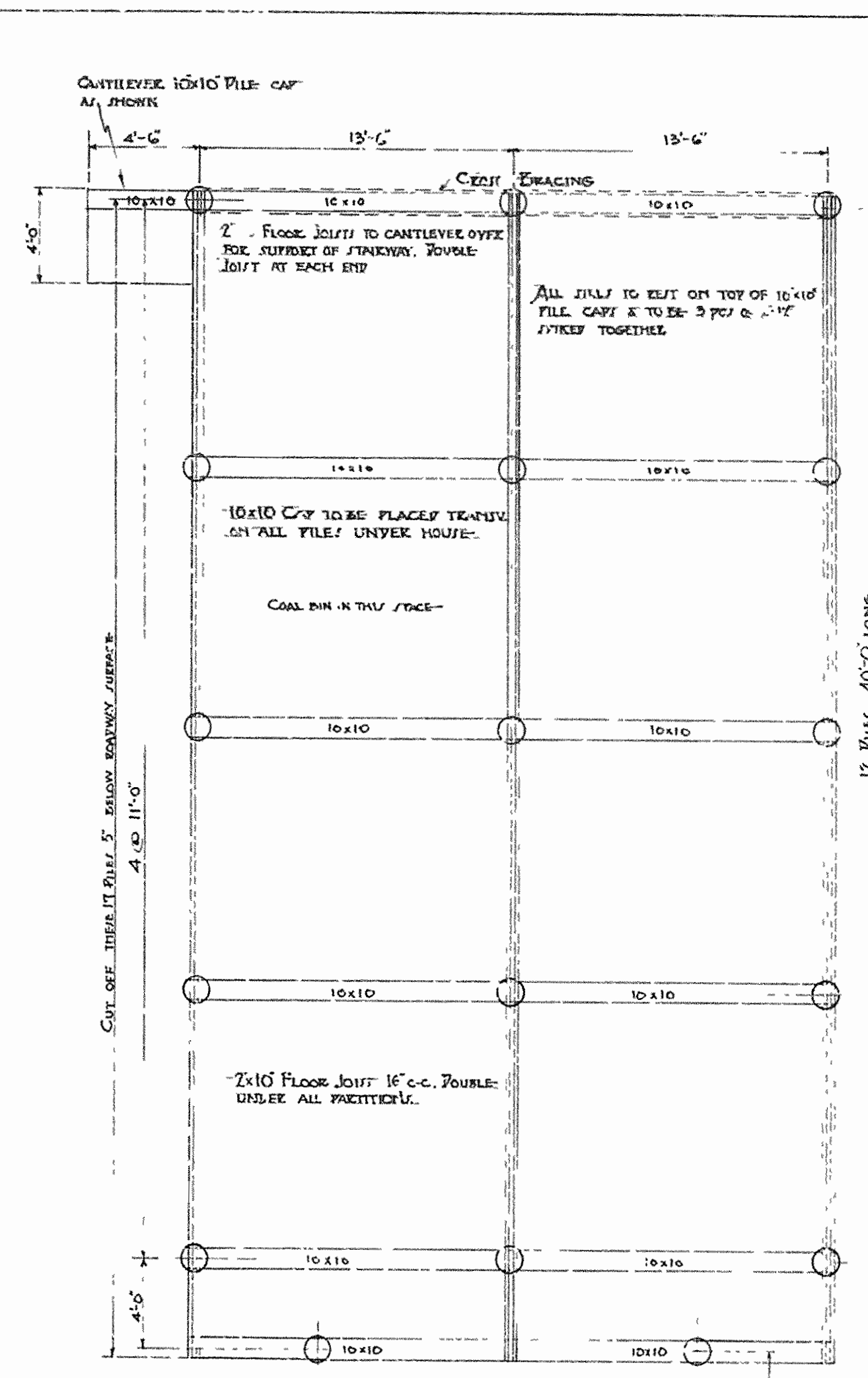
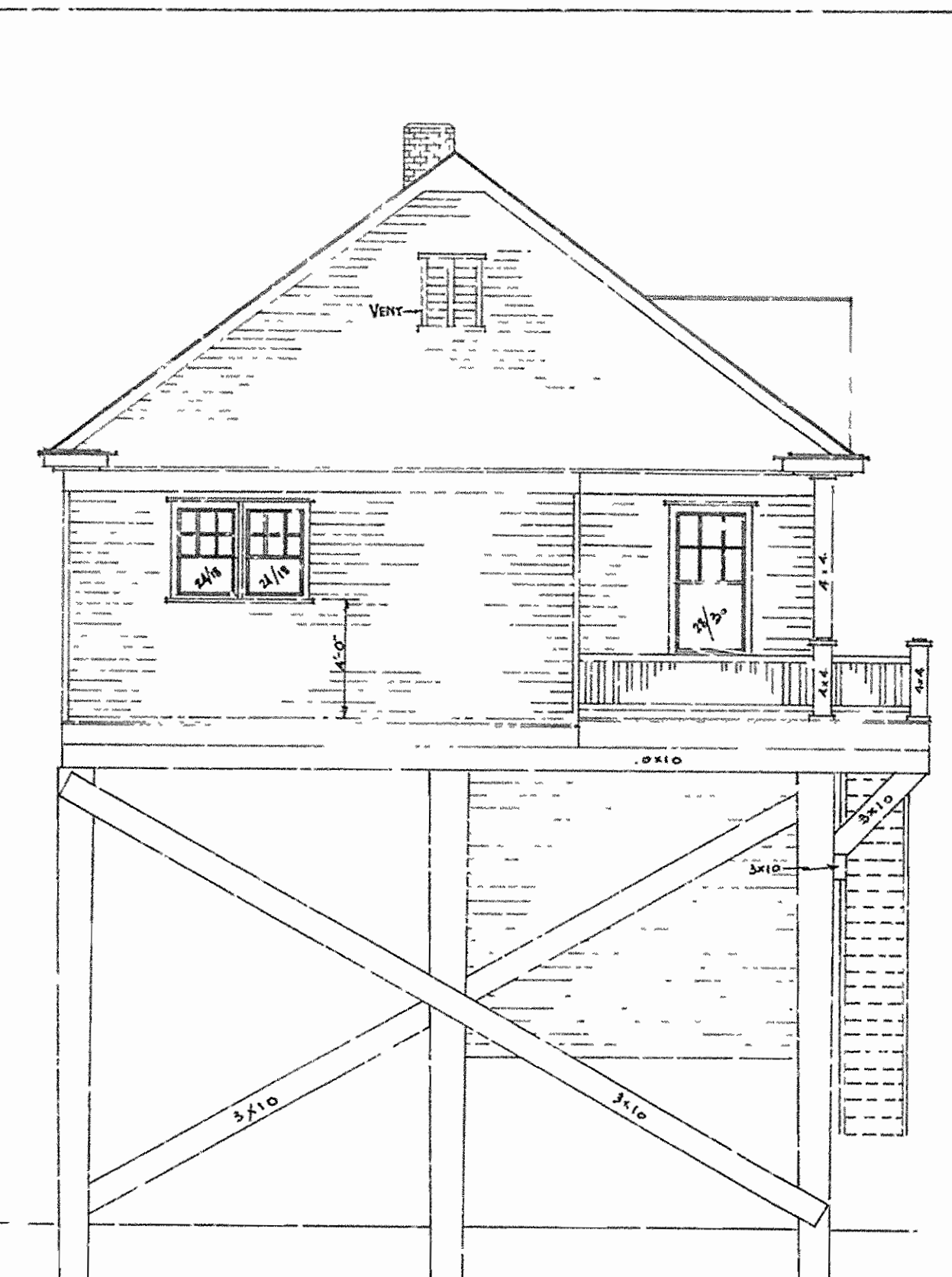
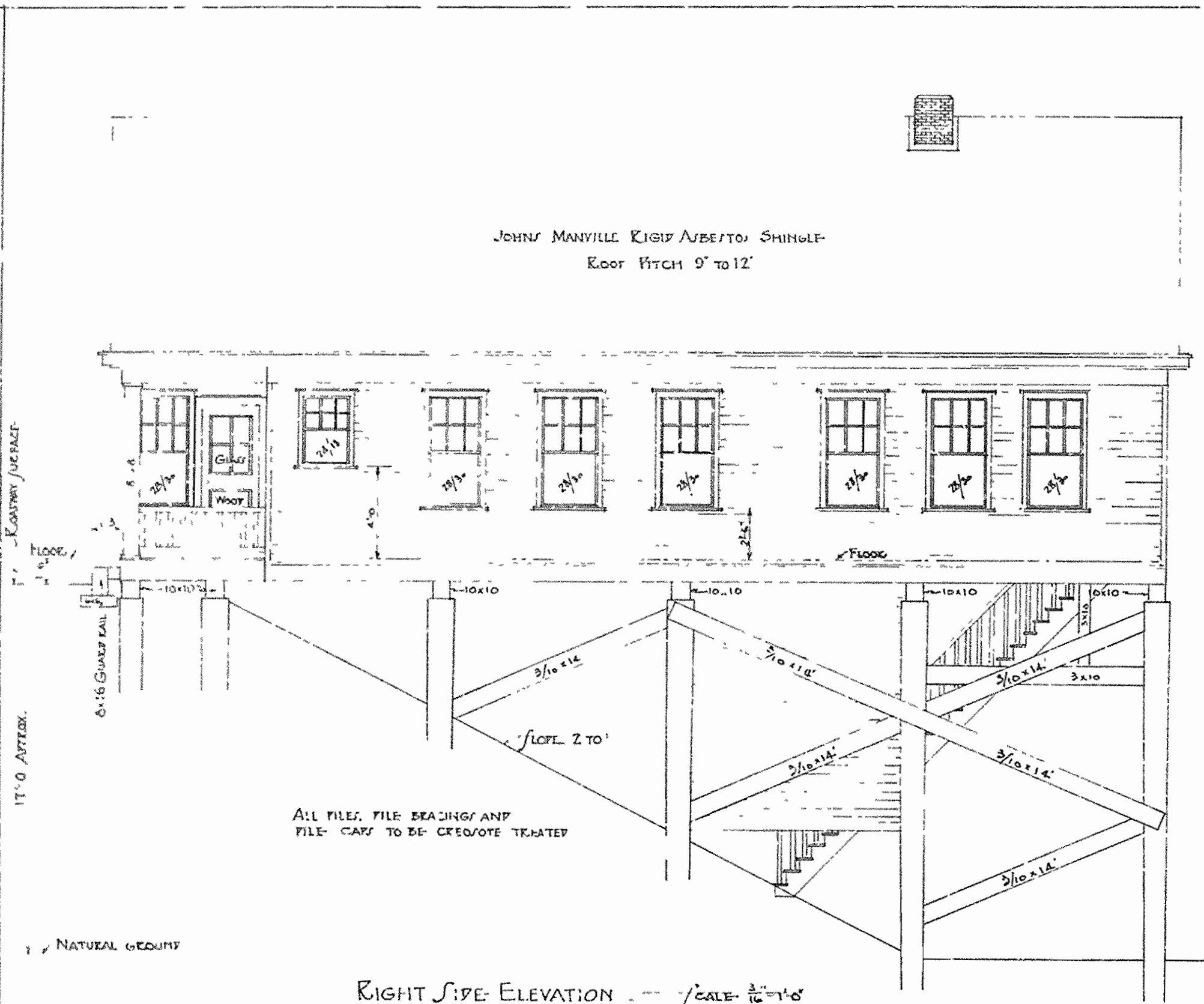
ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
NEAR AUGUSTA, ARKANSAS
REVISED
DETAILS OF RETAINING WALLS,
COLUMNS & FOOTINGS

MADE BY: K.F.
TRACED BY: J.G.M.H.S.
CHECKED BY: K.F.
DATE: July 28, 1929 SCALE As Noted SHEET NO 6

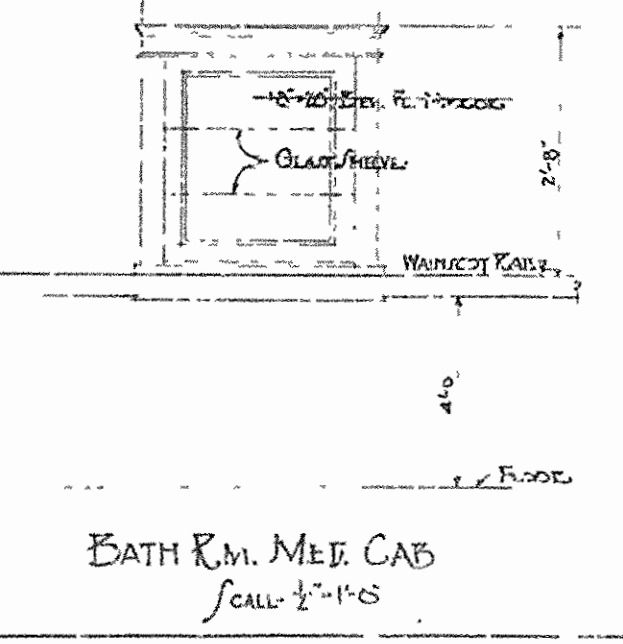
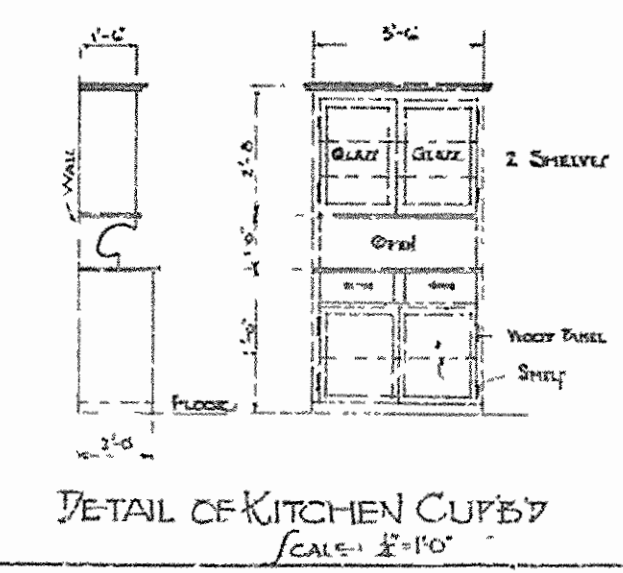
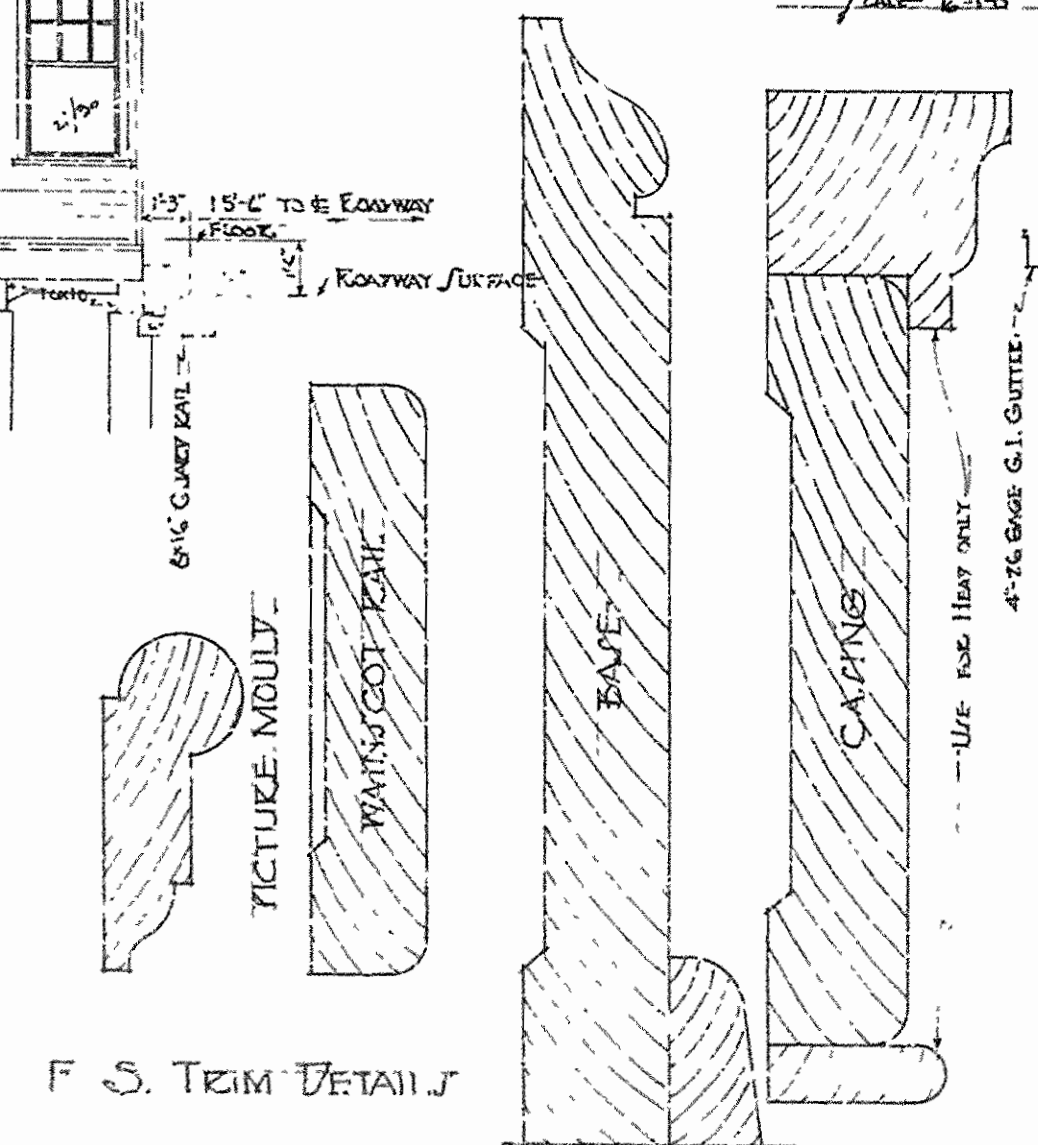
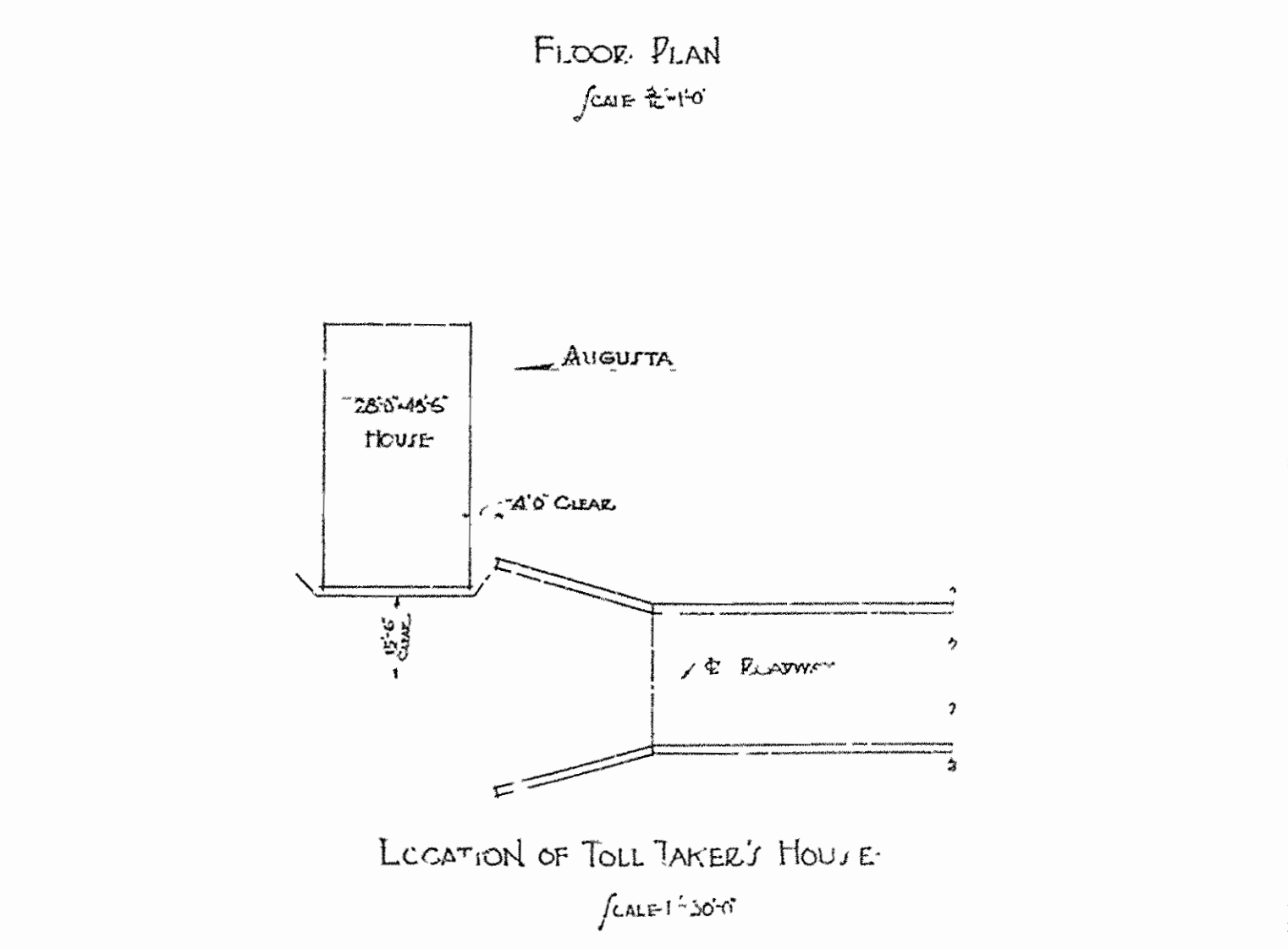
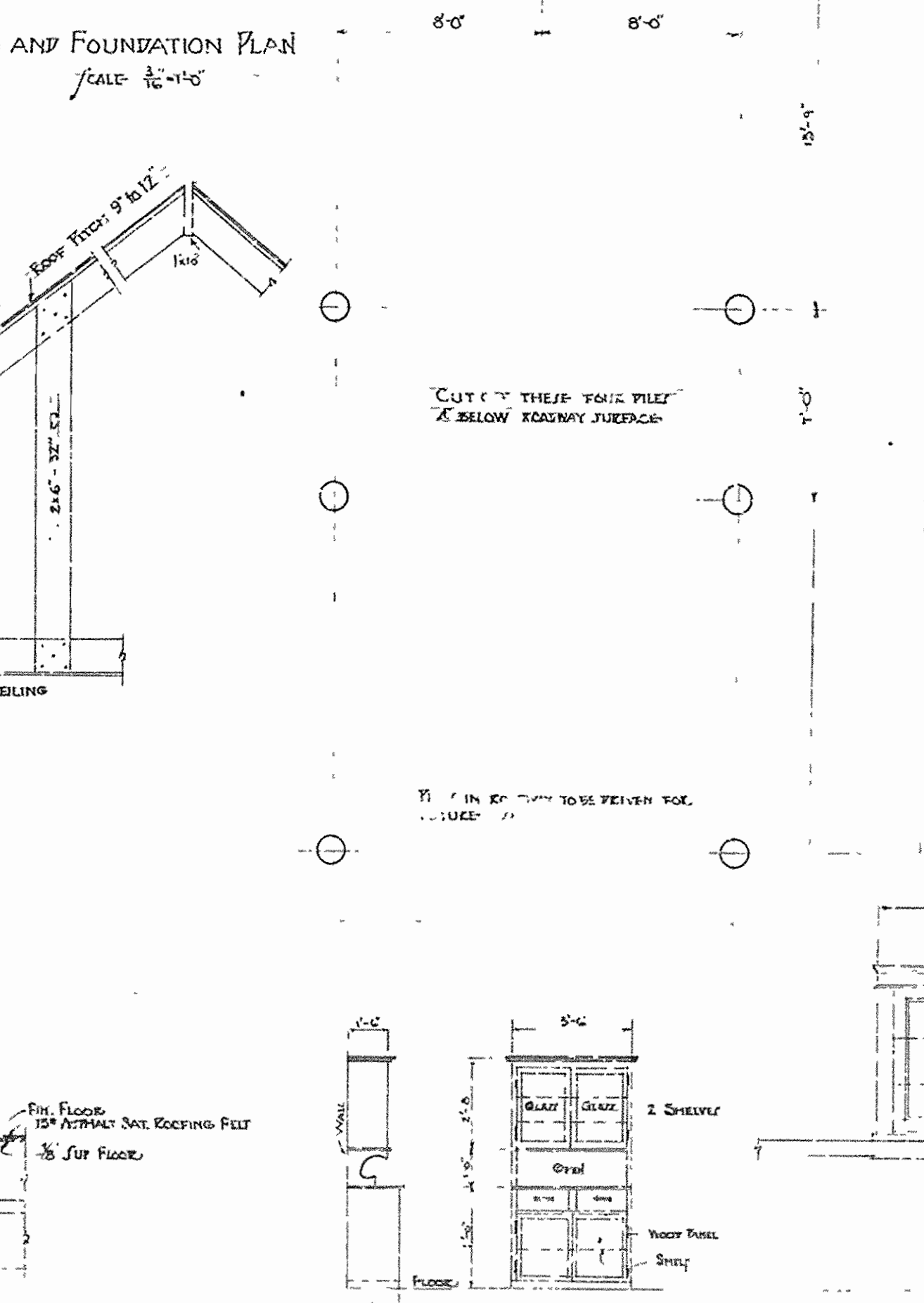
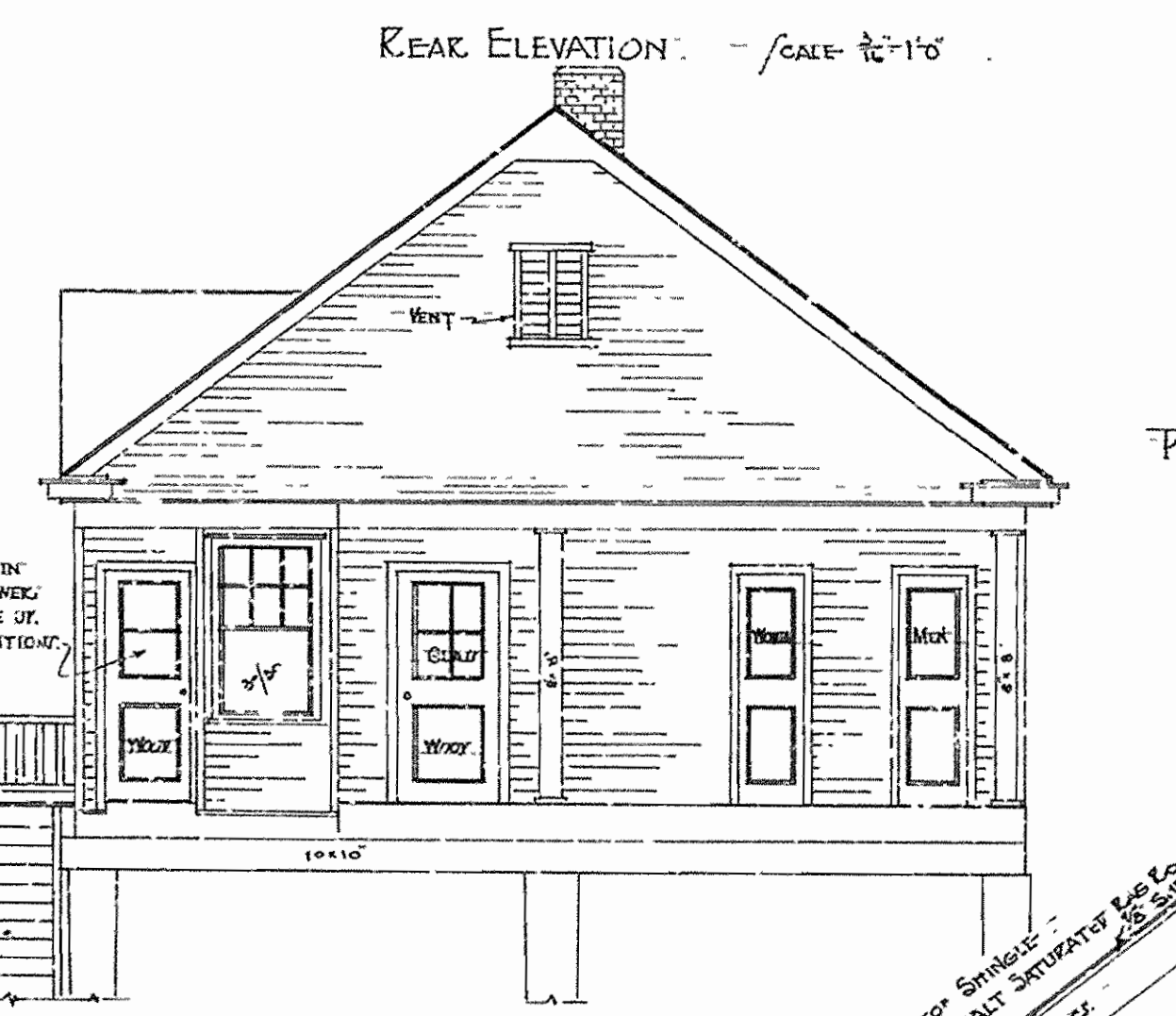
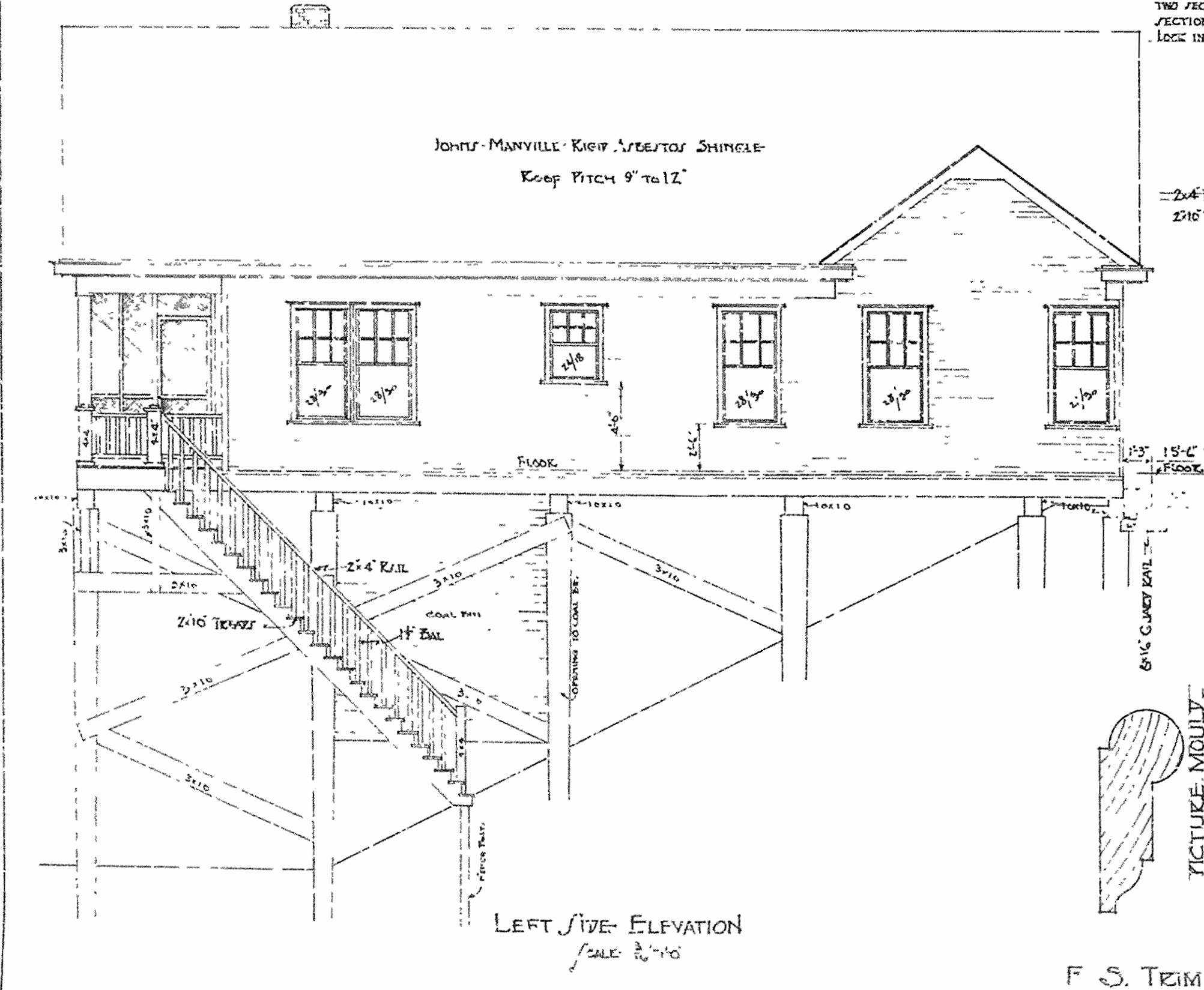
IRA G. HEDRICK INC.
CONSULTING ENGINEERS
HOT SPRINGS, ARKANSAS

Revised Oct 28, 1929
Revised Oct 7, 1929

Dr. No. 613 Drawg. No. 4967



WOOD SCHEDULE			
MARK	SIZE	DESCRIPTION	WOOD
A	3'-0" x 7'-0" x 1 1/2"	GLASS PNL / RTK	CYP
B	2'-8" x 7'-0" x 1 1/2"	5 WOOD PNL.	FILE
C	2'-8" x 7'-0" x 1 1/2"	5 WOOD PNL. EXC.	FILE
D	2'-6" x 7'-0" x 1 1/2"	3 WOOD PNL.	FILE
E	2'-8" x 7'-0" x 1 1/2"	2 WOOD PNL.	FILE
F	1'-6" x 7'-0" x 1 1/2"	2 WOOD PNL.	FILE
G	2'-8" x 7'-0" x 1 1/2"	2 WOOD PNL.	CYP
H	2'-8" x 7'-0" x 1 1/2"	SLIPING PL. GUM / PK.	CYP
K	2'-8" x 7'-0" x 1 1/2"	7 WOOD PNL.	CYP
L	3'-0" x 7'-0" x 1 1/2"	SCREEN WOOD	CYP



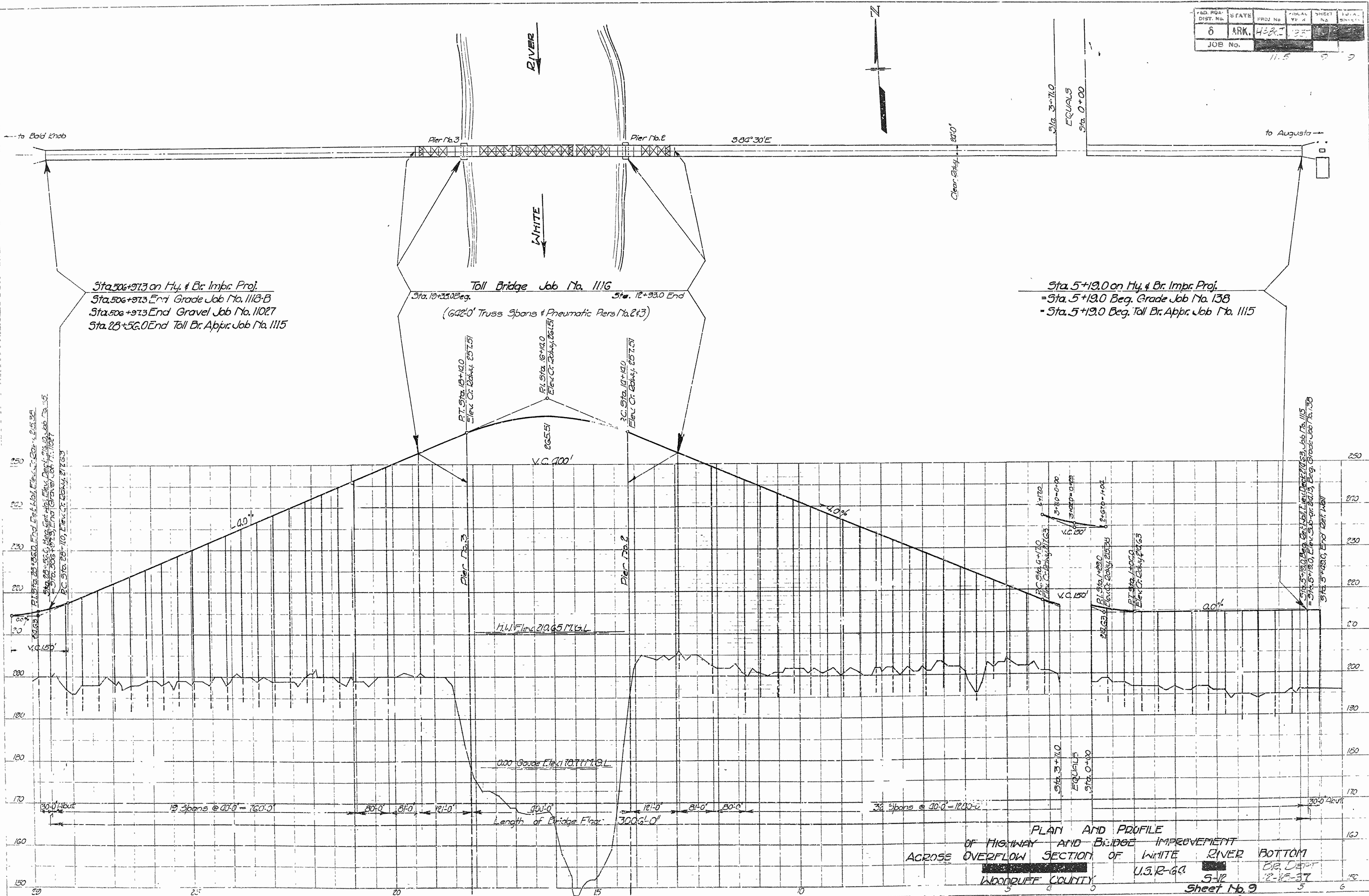
ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
NEAR
ANGUSTA, ARKANSAS
TOLL TAKER'S RESIDENCE

MADE BY: C.S.
TRACED BY: F.S.
CHECKED BY: F.S.

RA G. HEDRICK, INC.
CONSULTING ENGINEERS
HOT SPRINGS, ARKANSAS

DATE: MAY 16, 1930. SCALES: AS SHOWN SHEET NO. 8
BR. No. 613 DWS. No. 4963

FED. ROAD DIST. No.	STATE	PROJ. No.	FISCAL Yr.	SHEET No.	TOTAL SHEETS
6	ARK.	438-J	1937		
JOB No.				11.5	9



Sta. 506+97.3 on Hy. & Br. Impr. Proj.
 Sta. 506+97.3 End Grade Job No. 1113-B
 Sta. 506+97.3 End Gravel Job No. 11027
 Sta. 28+56.0 End Toll Br. Appr. Job No. 1115

Toll Bridge Job No. 1116
 Sta. 19+33.0 Beg. Sta. 12+93.0 End
 (6x210' Truss Spans & Pneumatic Piers No. 2+3)

Sta. 5+19.0 on Hy. & Br. Impr. Proj.
 = Sta. 5+19.0 Beg. Grade Job No. 138
 = Sta. 5+19.0 Beg. Toll Br. Appr. Job No. 1115

PLAN AND PROFILE
 OF HIGHWAY AND BRIDGE IMPROVEMENT
 ACROSS OVERFLOW SECTION OF WHITE RIVER BOTTOM
 WOODRUFF COUNTY, U.S.R-66
 SHEET No. 9
 DIV. No. 613 DRAWG. No. 4970

ARKANSAS STATE HIGHWAY COMMISSION

DWIGHT H. BLACKWOOD

CHAIRMAN

JUSTIN MATTHEWS J. LAN WILLIAMS

J. S. PARKS SAM J. WILSON

COMMISSIONERS

HIGHWAY BRIDGE OVER WHITE RIVER

NEAR

AUGUSTA, ARKANSAS

(WOODRUFF COUNTY)

C. S. CHRISTIAN
HIGHWAY ENGINEER

JOB NO. 1116

IRA G. HEDRICK, INC.

N. B. GARVER
BRIDGE ENGINEER

U.S.R.-64 S-12

CONSULTING ENGINEERS

HOT SPRINGS, ARKANSAS

REVISED

MAIN RIVER BRIDGE

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DETAILS CANTILEVER ARMS	6	4973
DETAILS ANCHOR ARMS	7	4974
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WHEEL CONCENTRATIONS CLASS A LOADING



2-15 TON TRUCKS

EQUIVALENT UNIFORM LIVE LOADS	SPAN LENGTH	LOAD
	0' TO 50'	150# PER SQ. FT.
50' TO 100'	130 " " "	
100' TO 200'	80 " " "	
200' AND OVER	64 " " "	

IMPACT	CONCRETE	STEEL
25%	L+300	L+300

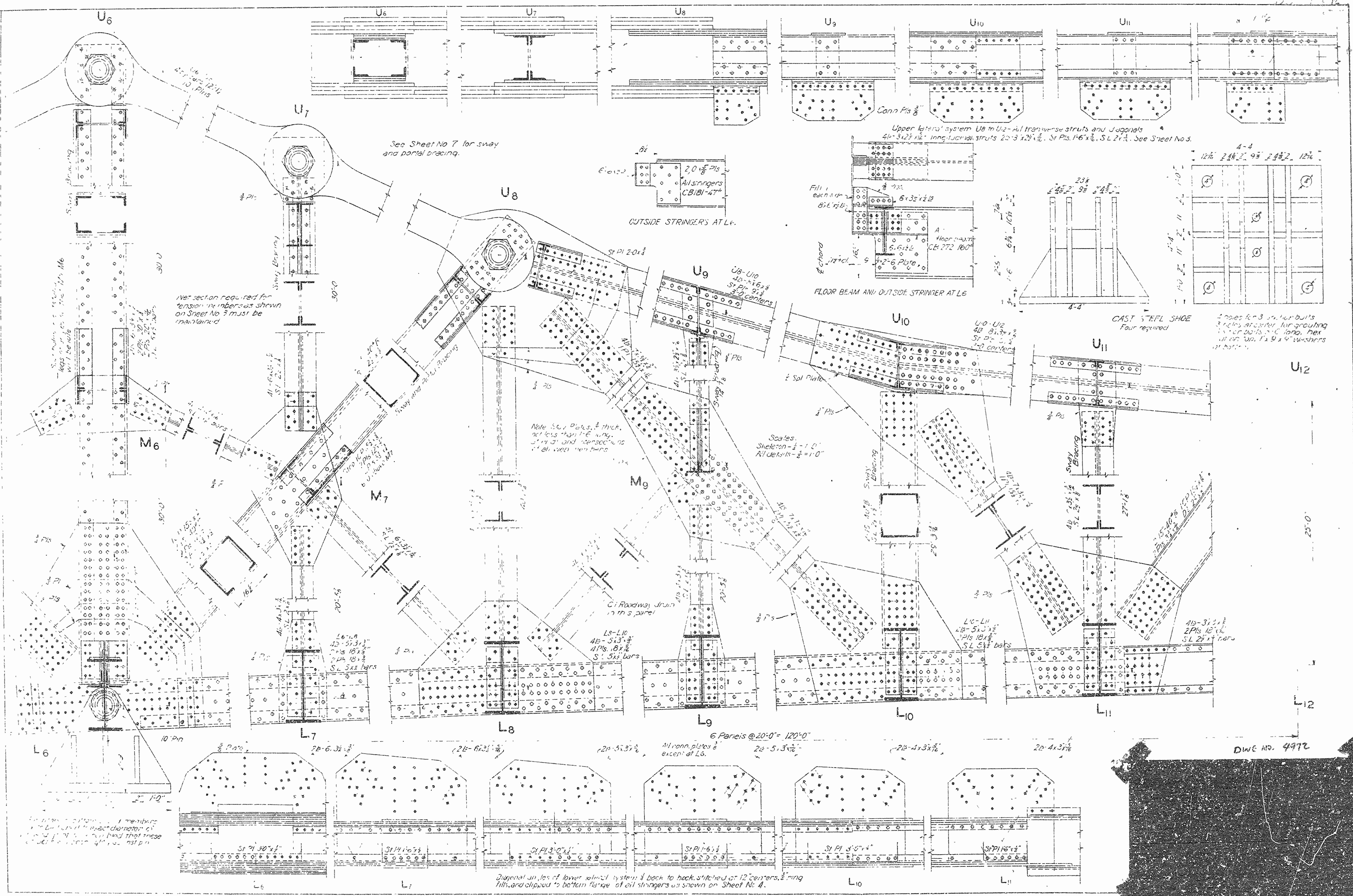
GENERAL NOTES

All hooks on reinforcing bars to have a radius of 4d and a return of 12d where d= diameter of round bar, or side of square bar. Lengths of hooked bars are given to starting point of hook thus: All bends such as on girder bars must have a radius of not less than 12d.

Centers of bars in floor slab to be not less than 1 1/2" from face of concrete. Centers of bars to be 4" from face of concrete on piers, and 3" on girders and columns unless otherwise noted. Chamfers to be 2" throughout unless otherwise noted.

CONSTANTS

	CONCRETE I-1-2 MIX	STEEL
FLOOR SLABS, CROSS GIRDERS, GIRDERS, ETC.	975# PER SQ. IN.	
BEAMS CONTINUOUS OVER SUPPORTS:		
AT CENTER OF BEAMS	975 " " "	
OVER SUPPORTS	1125 " " "	
BOND FOR STEEL IN CONCRETE	150 " " "	
COLUMNS IN DIRECT COMPRESSION	900 - $\frac{22.5 L}{D}$ " " "	
NOTE FOR I-2-4 CONCRETE DECREASE ABOVE STRESSES 33 1/3 %		
TENSION NET SECTION		16000 # PER SQ. IN.
COMP. IN COLS. & OTHER COMP. MEMBERS FIXED ENDS	900 - $\frac{22.5 L}{D}$ " " "	
MODULUS OF ELASTICITY, STEEL		30000000 " " "
CONCRETE I-2-4	2000000 " " "	
I-1-2	3000000 " " "	
VARIATION IN TEMPERATURE	±50°	
COEFFICIENT OF EXPANSION	.0000055	.0000067



See Sheet No 7 for sway and portal bracing.

OUTSIDE STRINGERS AT L6.

FLOOR BEAM AND OUTSIDE STRINGER AT L6

CAST STEEL SHOE
Four required

4 holes for 3/4" dia. bolts
3 holes at center for grouting
1 hole at each end for 1/2" dia. hex
nut and 1/2" x 4" washers
at bottom.

Note: S.W. Plates, 1/2" thick,
unless shown to the
contrary and dimensions
shall govern.

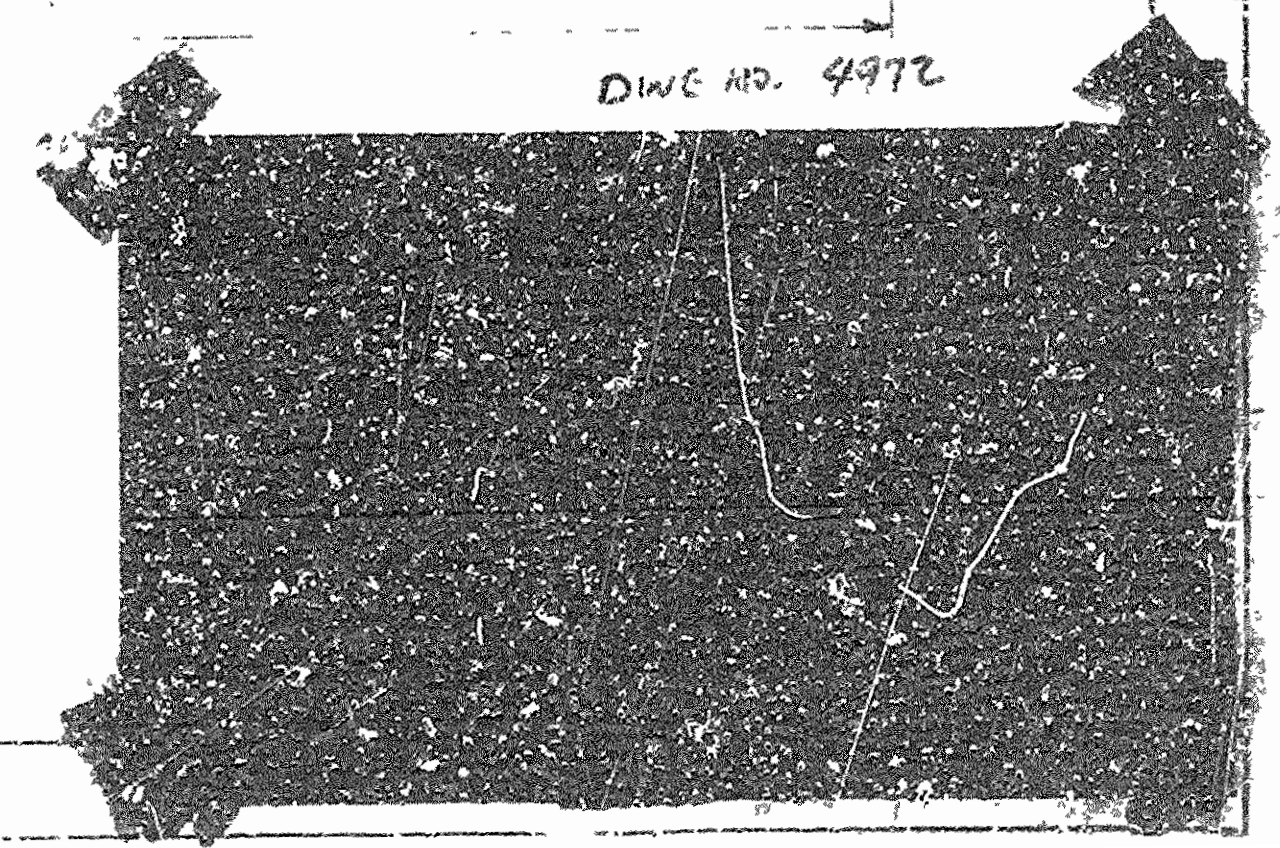
Scale:
Skeleton - 1/4" = 1'-0"
All details - 1/8" = 1'-0"

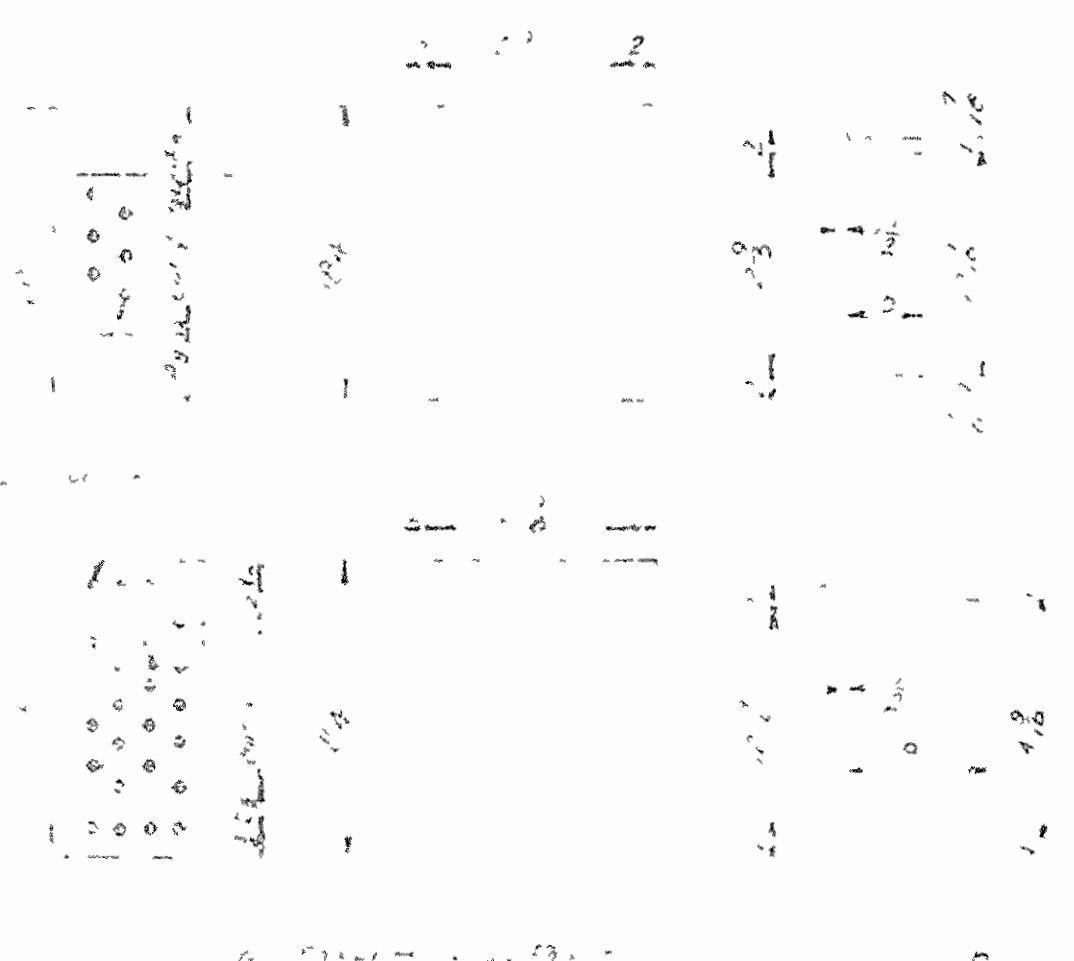
Ci Roadway drain
in this panel

DWG. NO. 4972

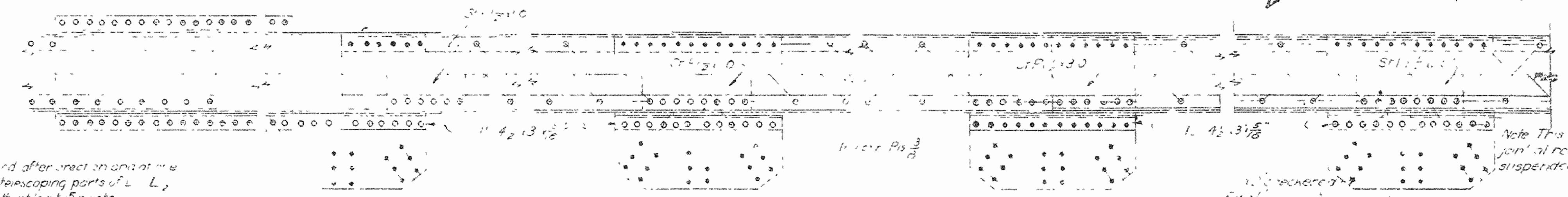
For all members of this system
the minimum diameter of
bolts shall be the same as that of
the member they connect.

Diagonal in line of lower lateral system
back to back, spaced at 12 centers, being
flush and clipped to bottom flange of all stringers as shown on Sheet No. 4.

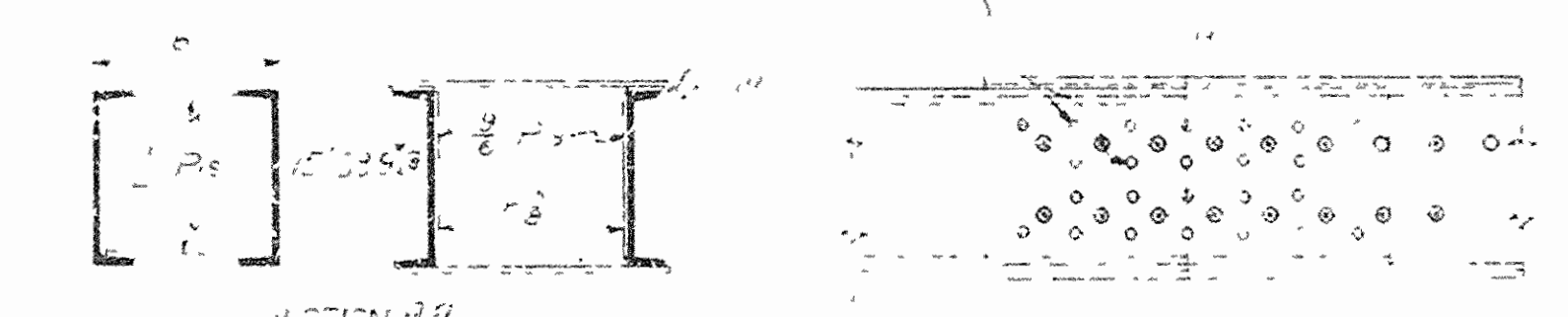




Note: These bolts are removed after erect on one end of suspended spar. Telescoping parts of L₁₂ are mated together with oil-lubricated bolts. In such parts of these members to be mated with asphaltic joint before assembling.

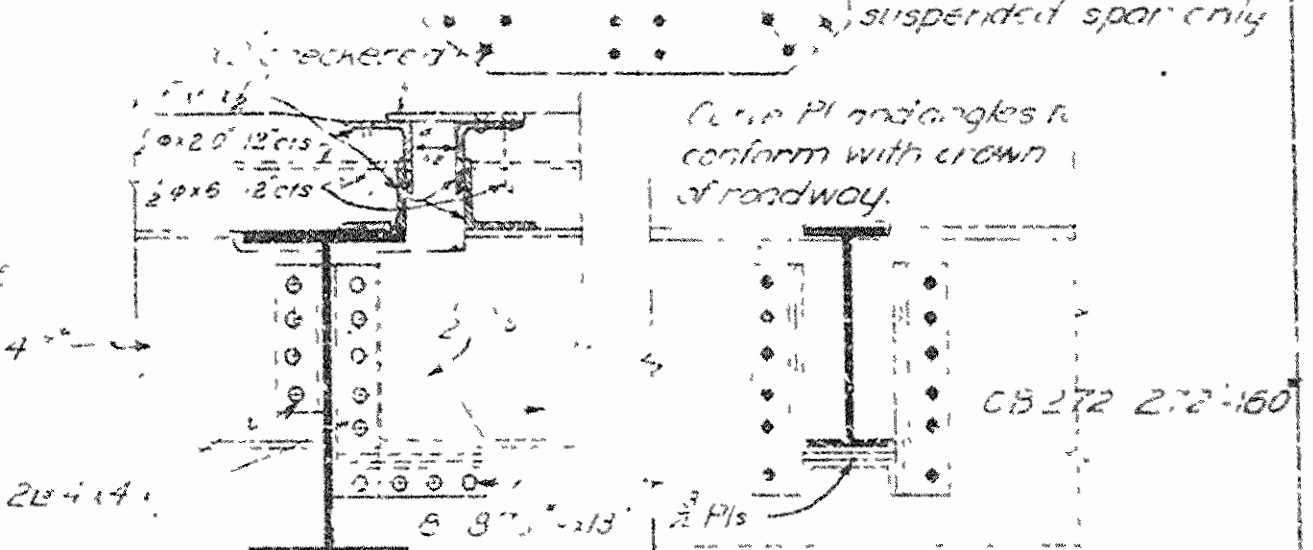


Note: This type sub-roof joint at rocker end of suspended spar only.



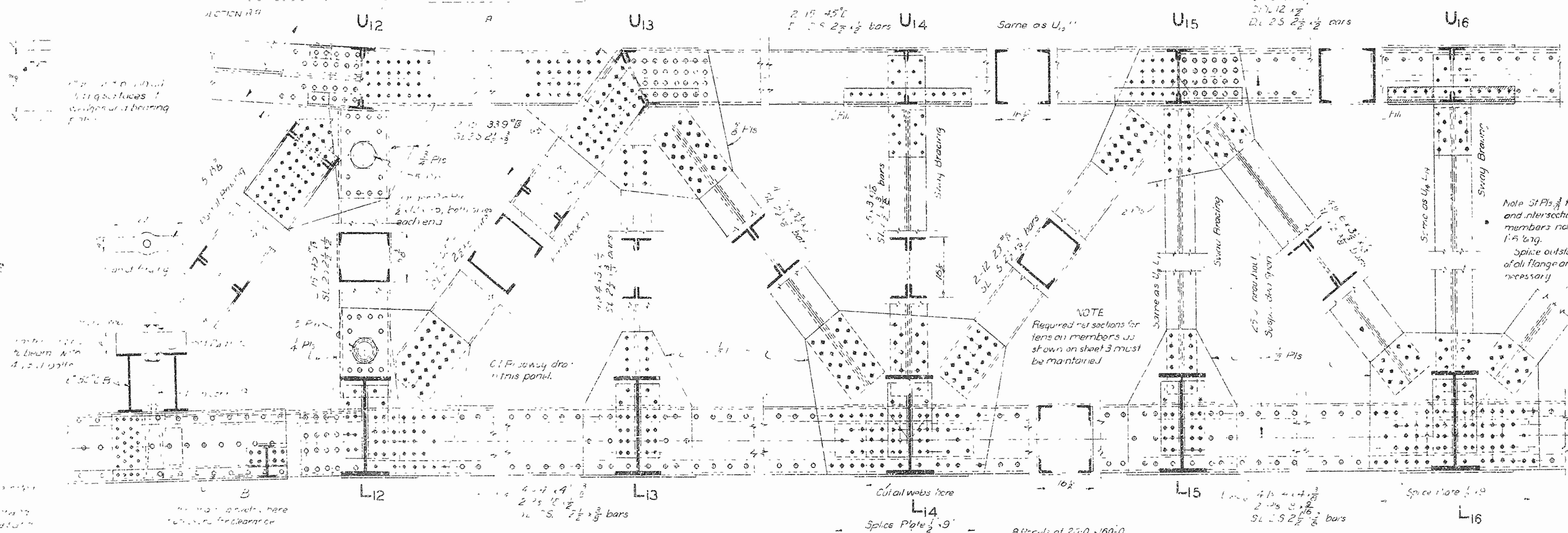
A longitudinal view of a structural member showing reinforcement layout and dimensions.

Diagonal and other reinforcement details showing reinforcement layout and dimensions.



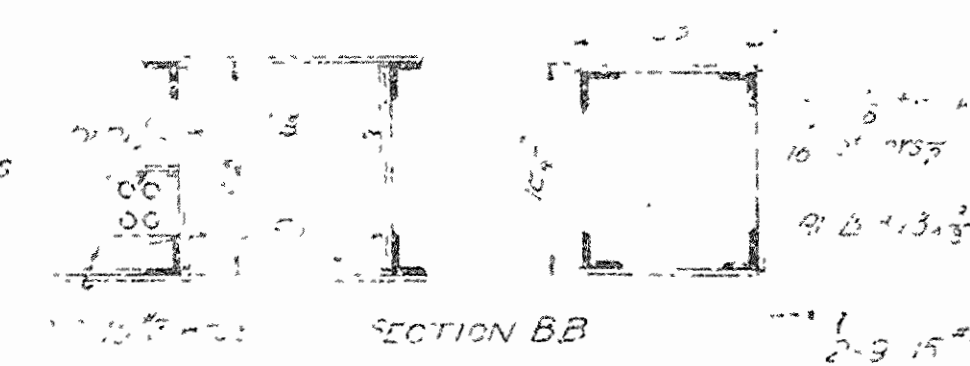
Note: All joints between concrete sub-roof beams to be made in two thicknesses of 1/2 inch.

Note: Forward check for when necessary for clearance of line and paint all slating surfaces.

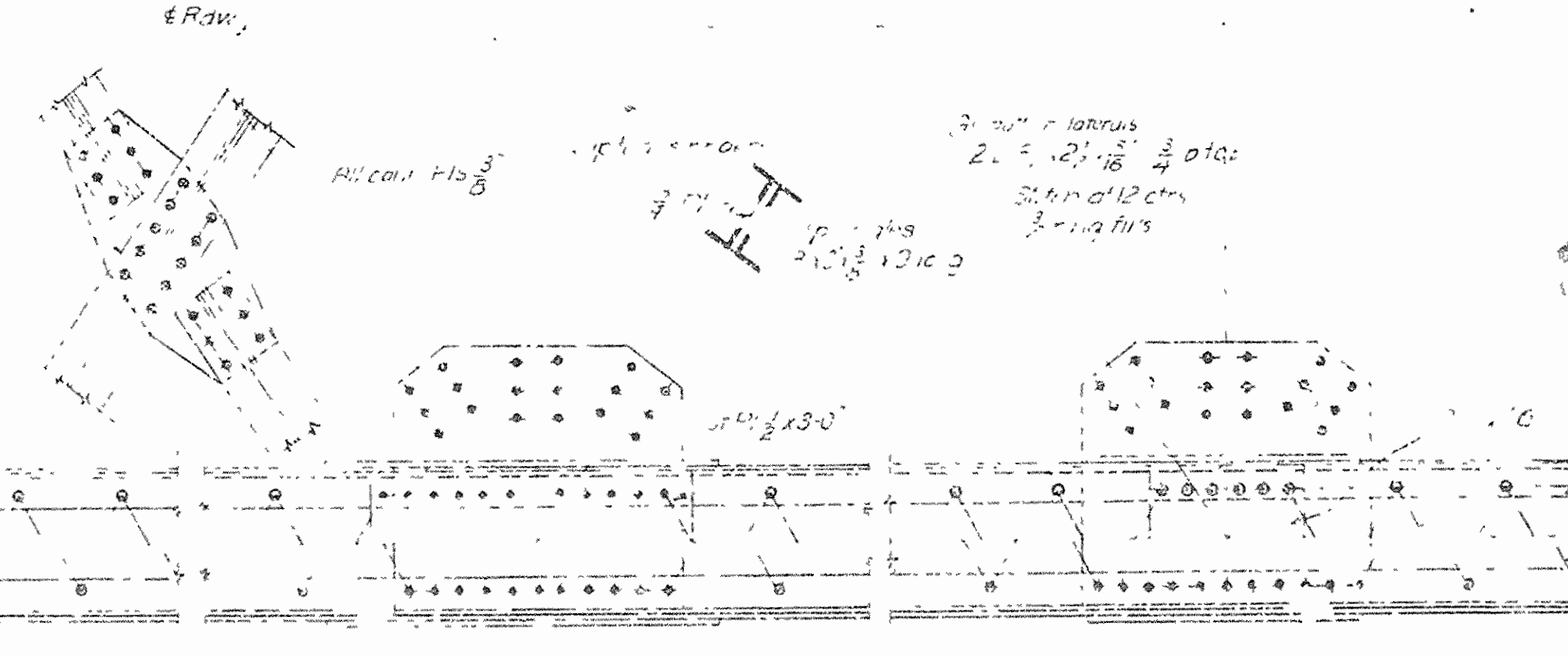


Note: All PIs 3/8" thick at ends and intersections of wood members not less than 1/2" long. Splice outstanding legs of all flange angles where necessary.

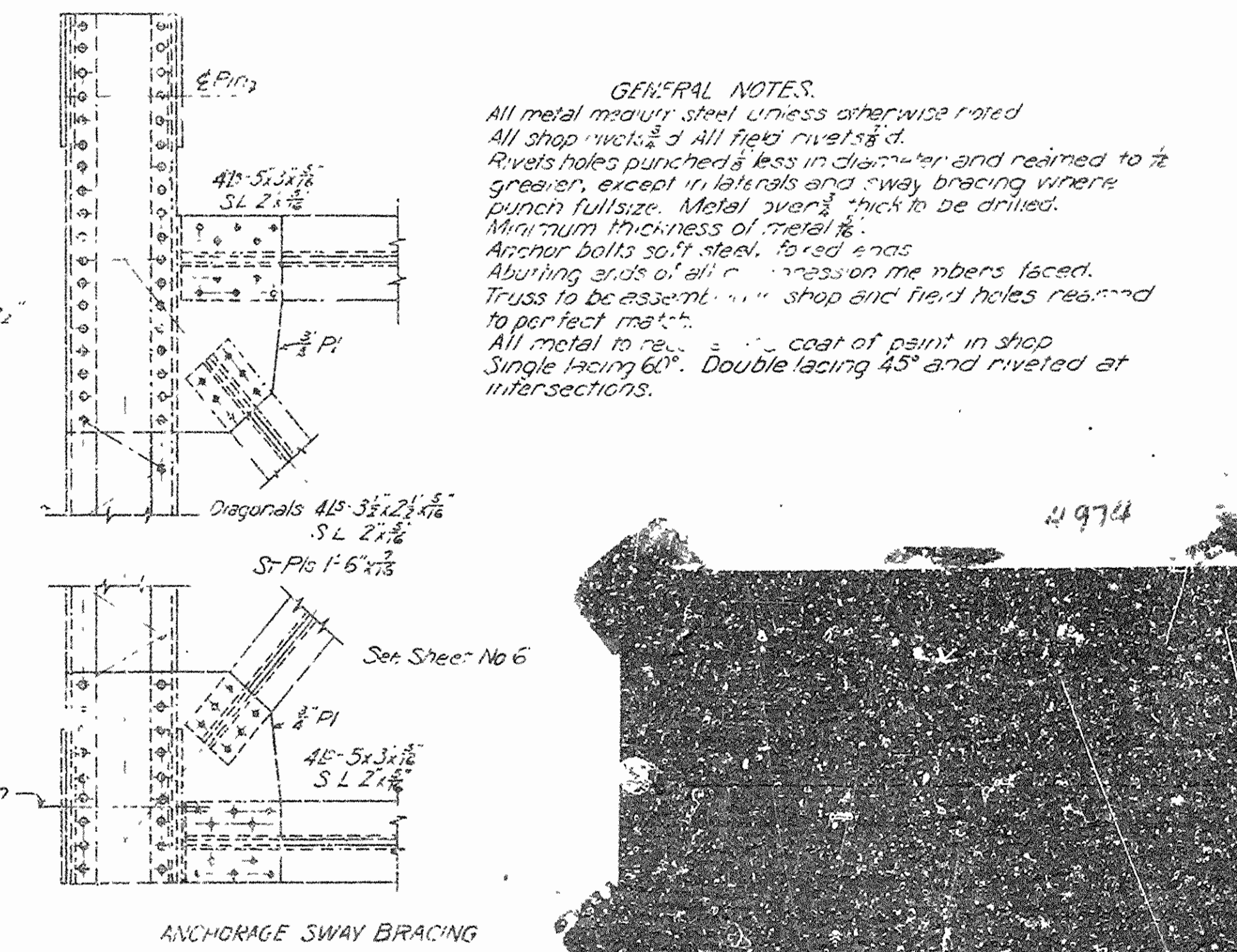
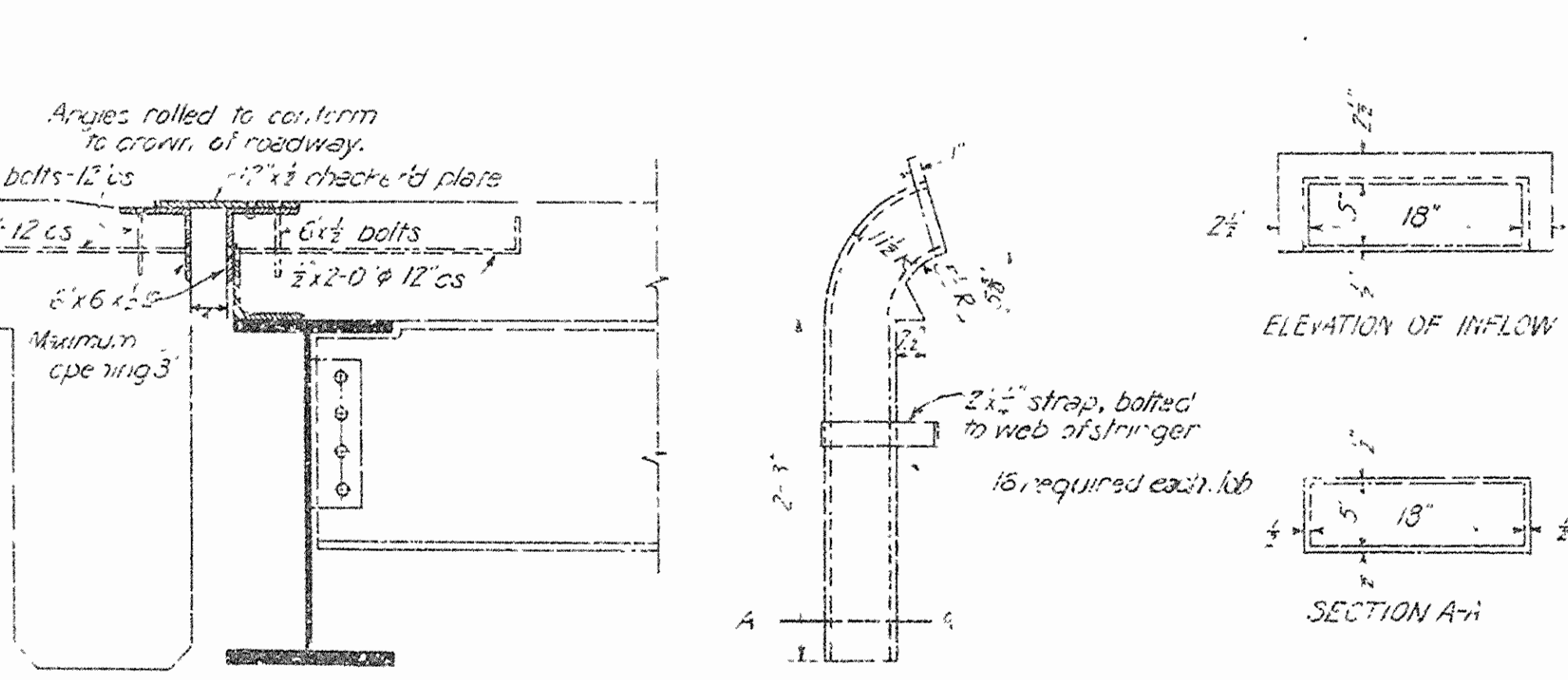
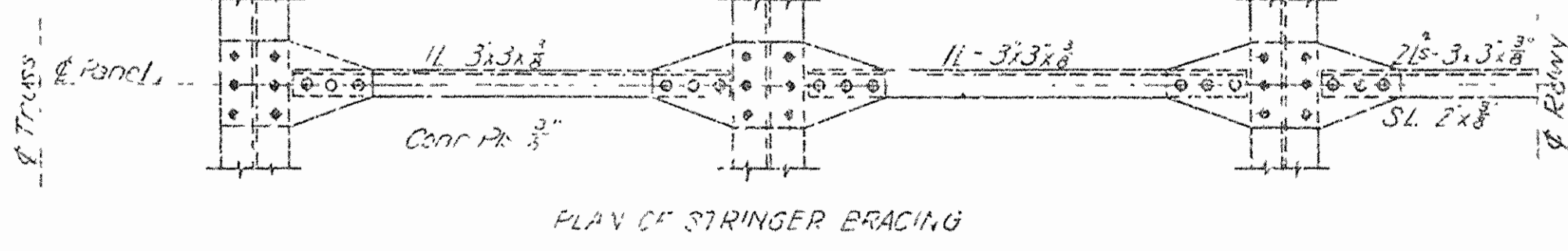
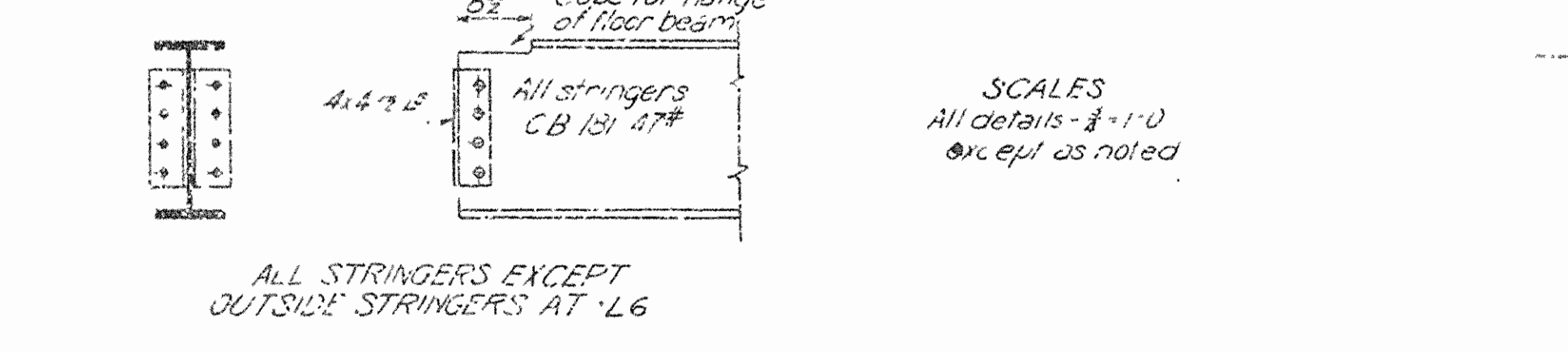
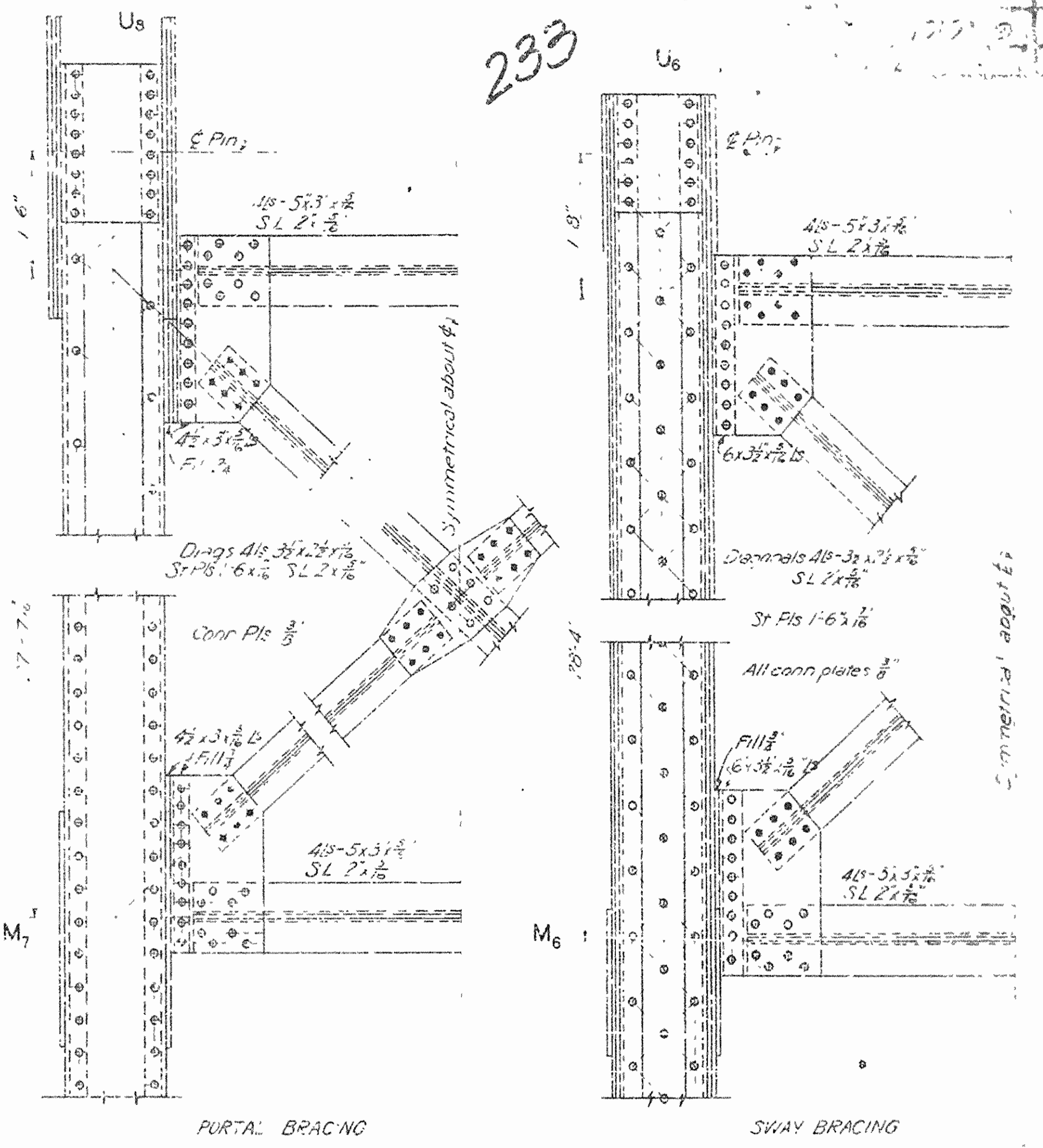
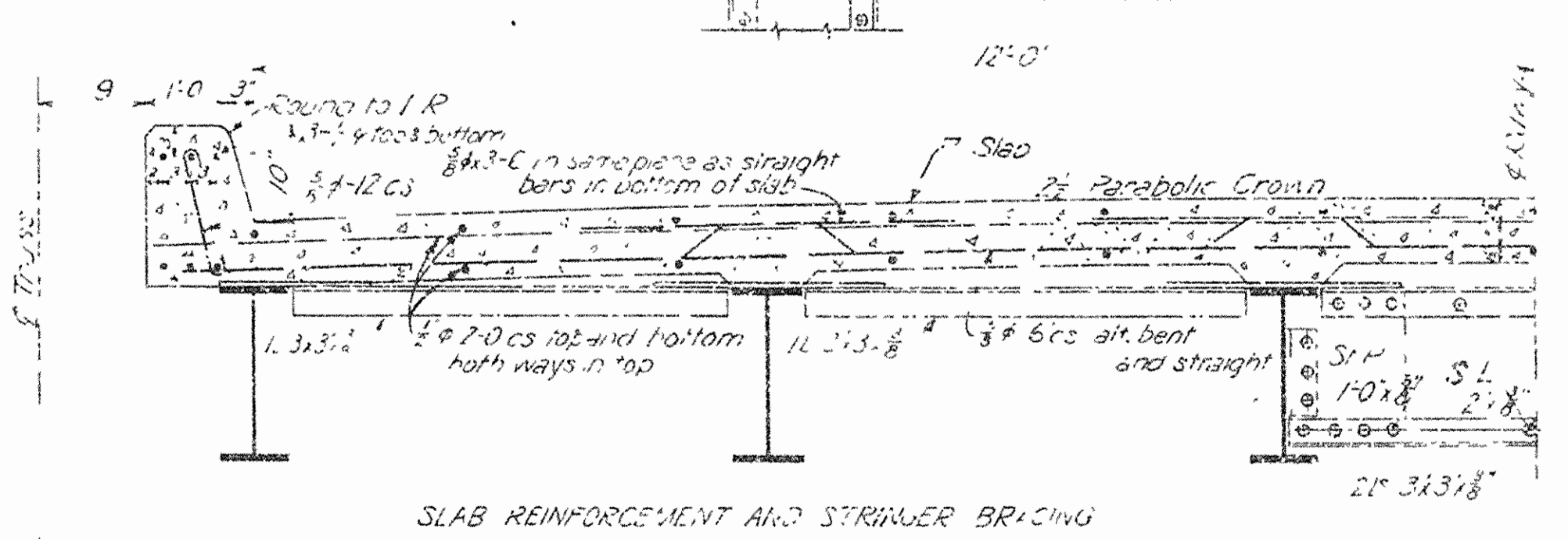
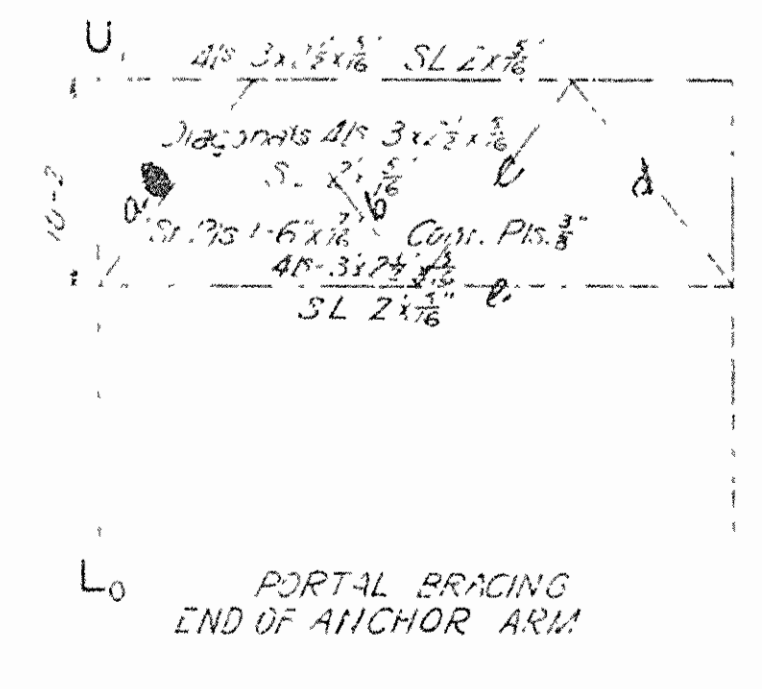
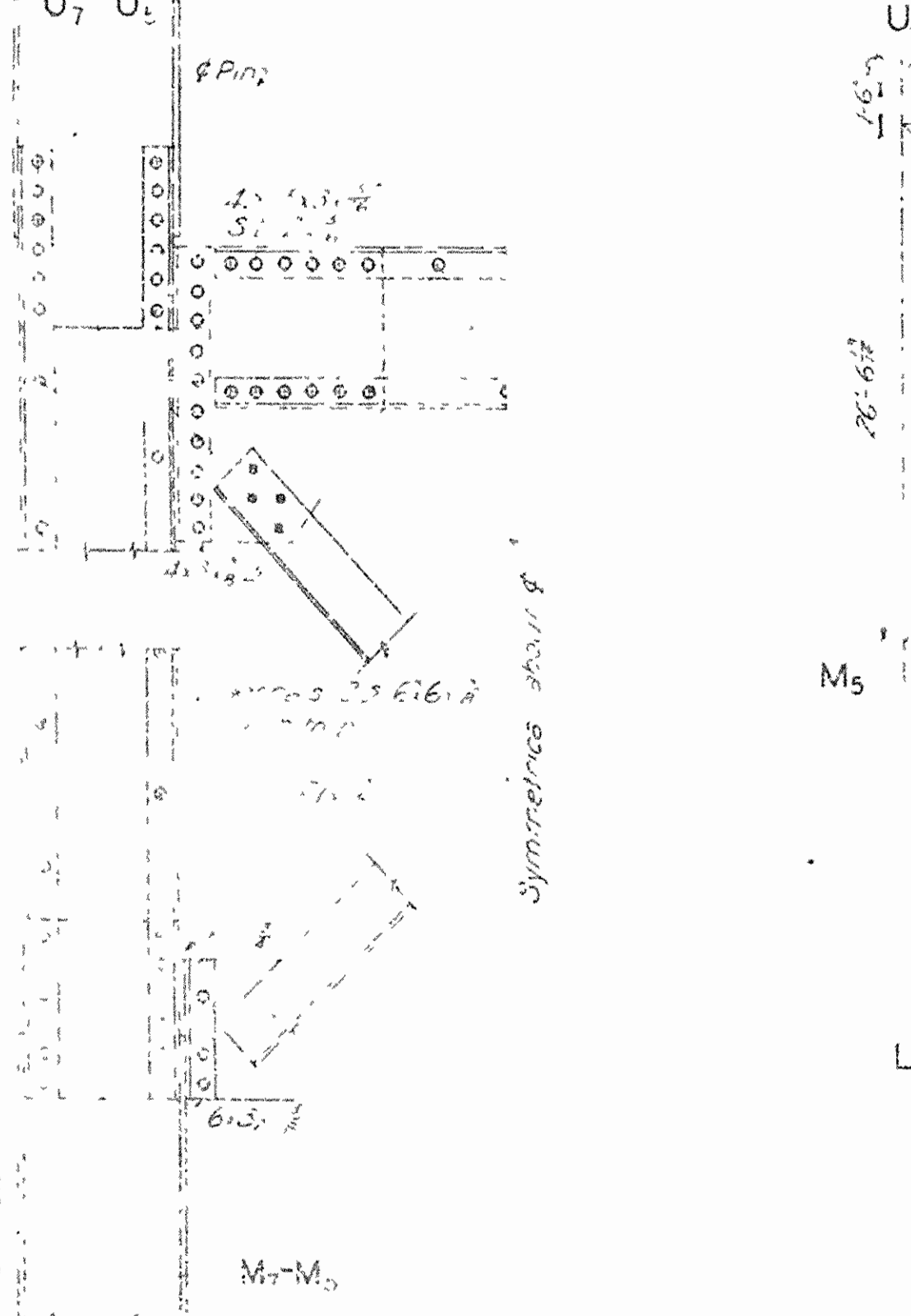
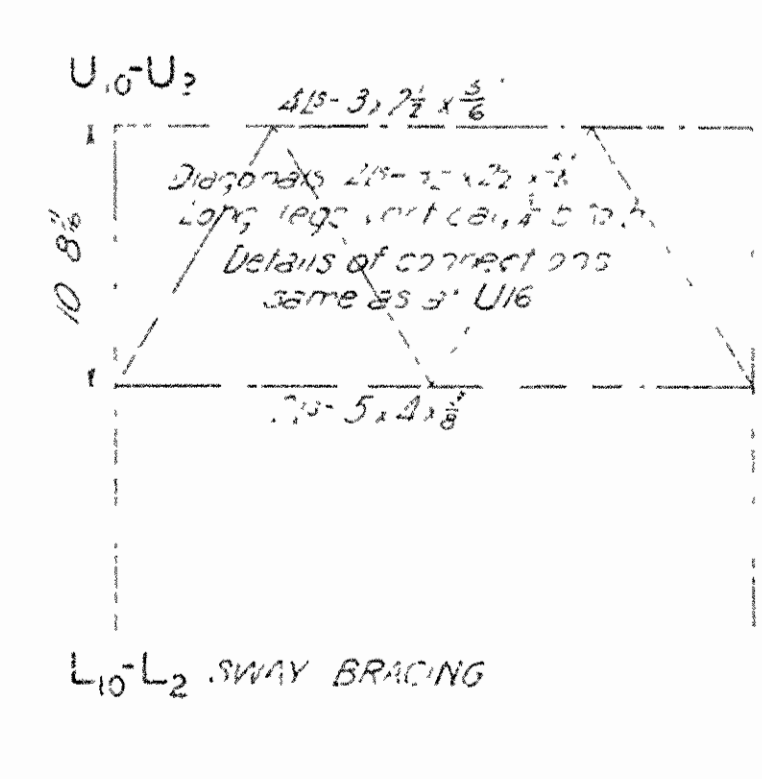
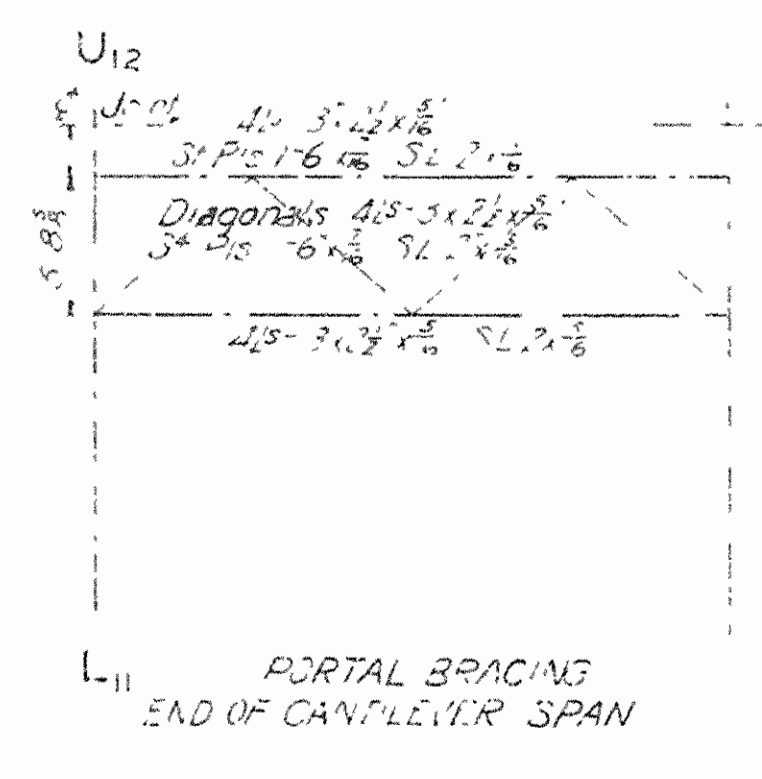
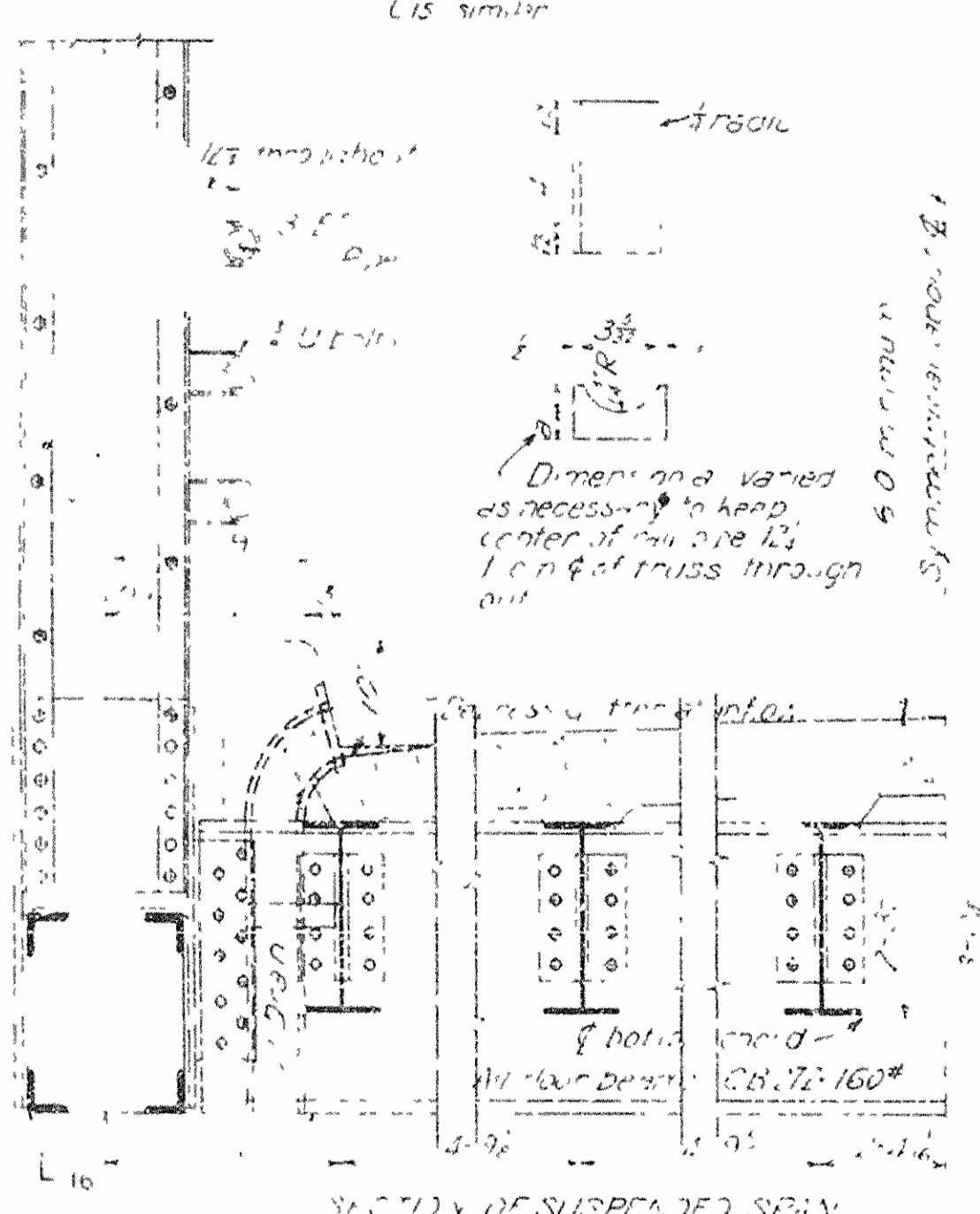
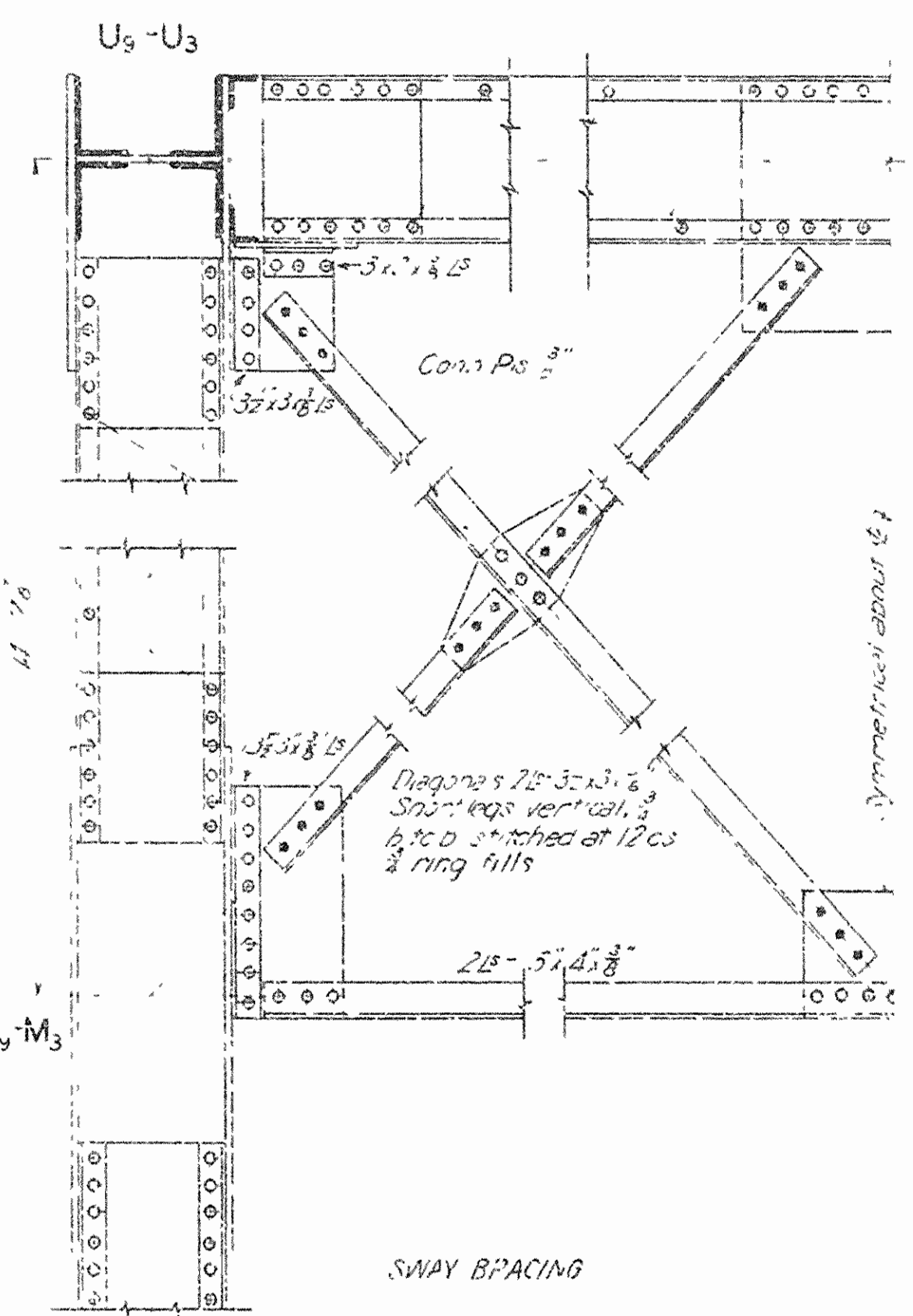
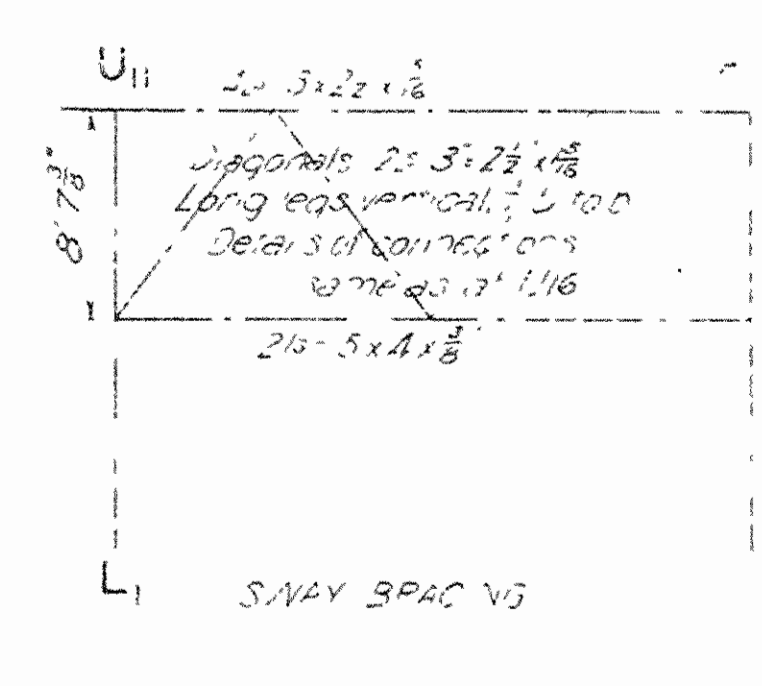
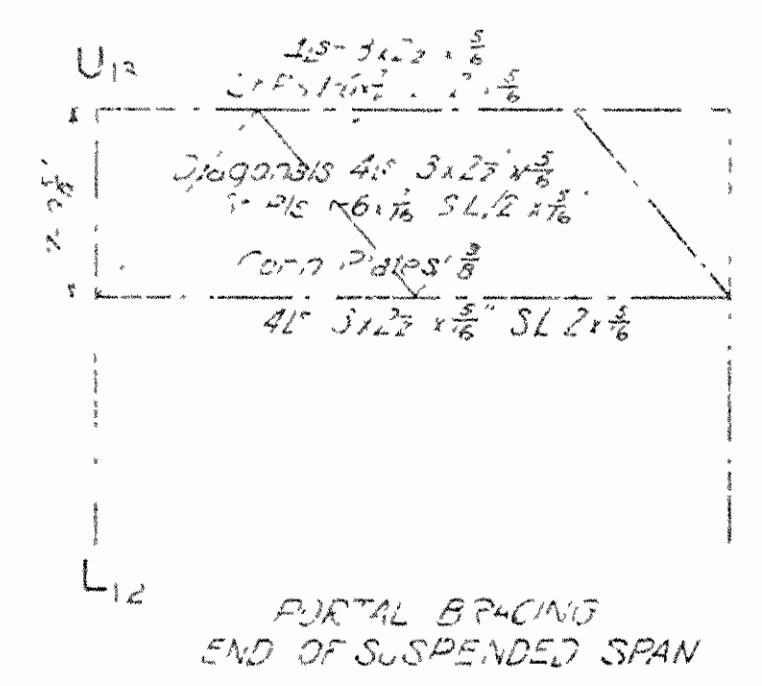
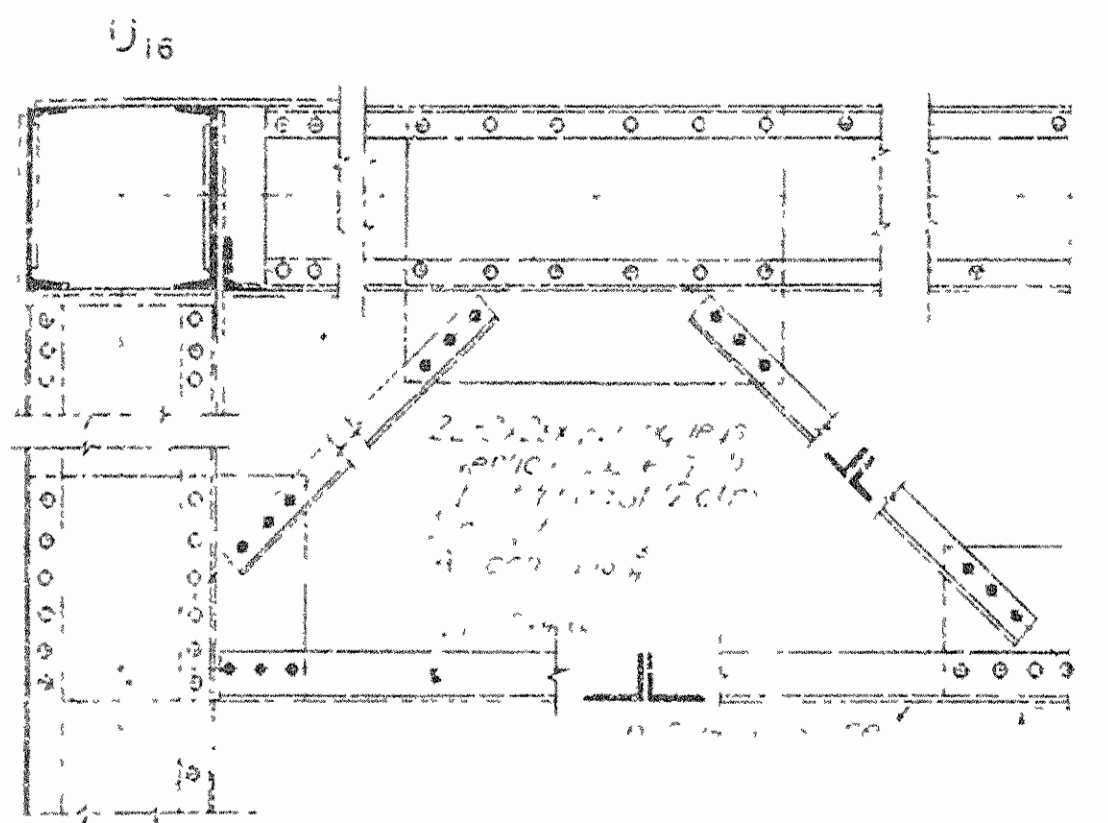
NOTE: Required net sections for tensile members as shown on sheet 3 must be maintained.



Note: See drawing for details of structural connections and assembly.



Scale: Skeleton 1/4" = 1'-0", Details 1/8" = 1'-0"

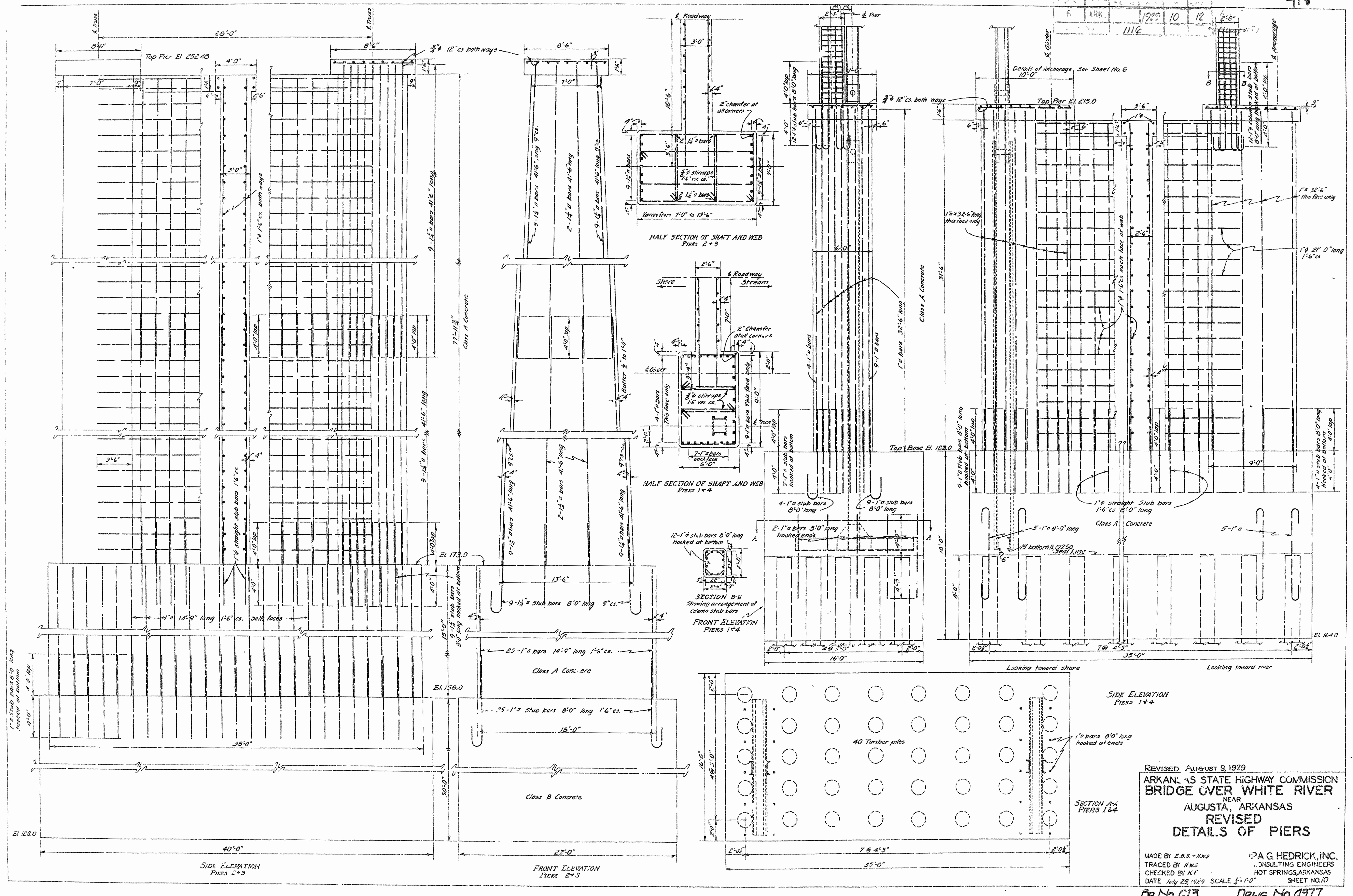


GENERAL NOTES.
 All metal medium steel unless otherwise noted.
 All shop rivets of All field rivets of
 Rivets holes punched 1/8" less in diameter and reamed to fit
 gaskets except in laterals and sway bracing where
 punch full size. Metal over 1/2" thick to be drilled.
 Minimum thickness of metal 1/4".
 Anchor bolts soft steel, forged ends
 Abutting ends of all compression members faced.
 Truss to be assembled in shop and field holes reamed
 to perfect match.
 All metal to receive a coat of paint in shop.
 Single lacing 60°. Double lacing 45° and riveted at
 intersections.

233

4974

ARK. 1929 10 12
1116



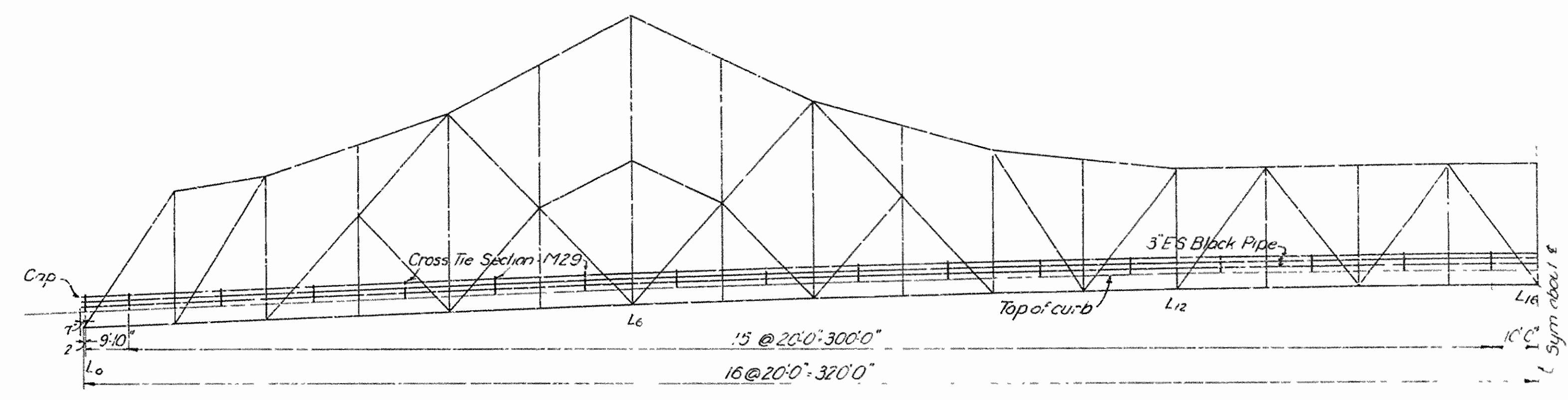
REVISED AUGUST 9, 1929
 ARKANSAS STATE HIGHWAY COMMISSION
 BRIDGE OVER WHITE RIVER
 NEAR
 AUGUSTA, ARKANSAS
 REVISED
 DETAILS OF PIERS

MADE BY E.B.S. & H.W.S.
 TRACED BY H.W.S.
 CHECKED BY K.E.
 DATE July 29, 1929 SCALE 1/2"=1'-0"

P. G. HEDRICK, INC.
 CONSULTING ENGINEERS
 HOT SPRINGS, ARKANSAS
 SHEET NO. 70

Dr. No. 613 DRWG. No. 4977

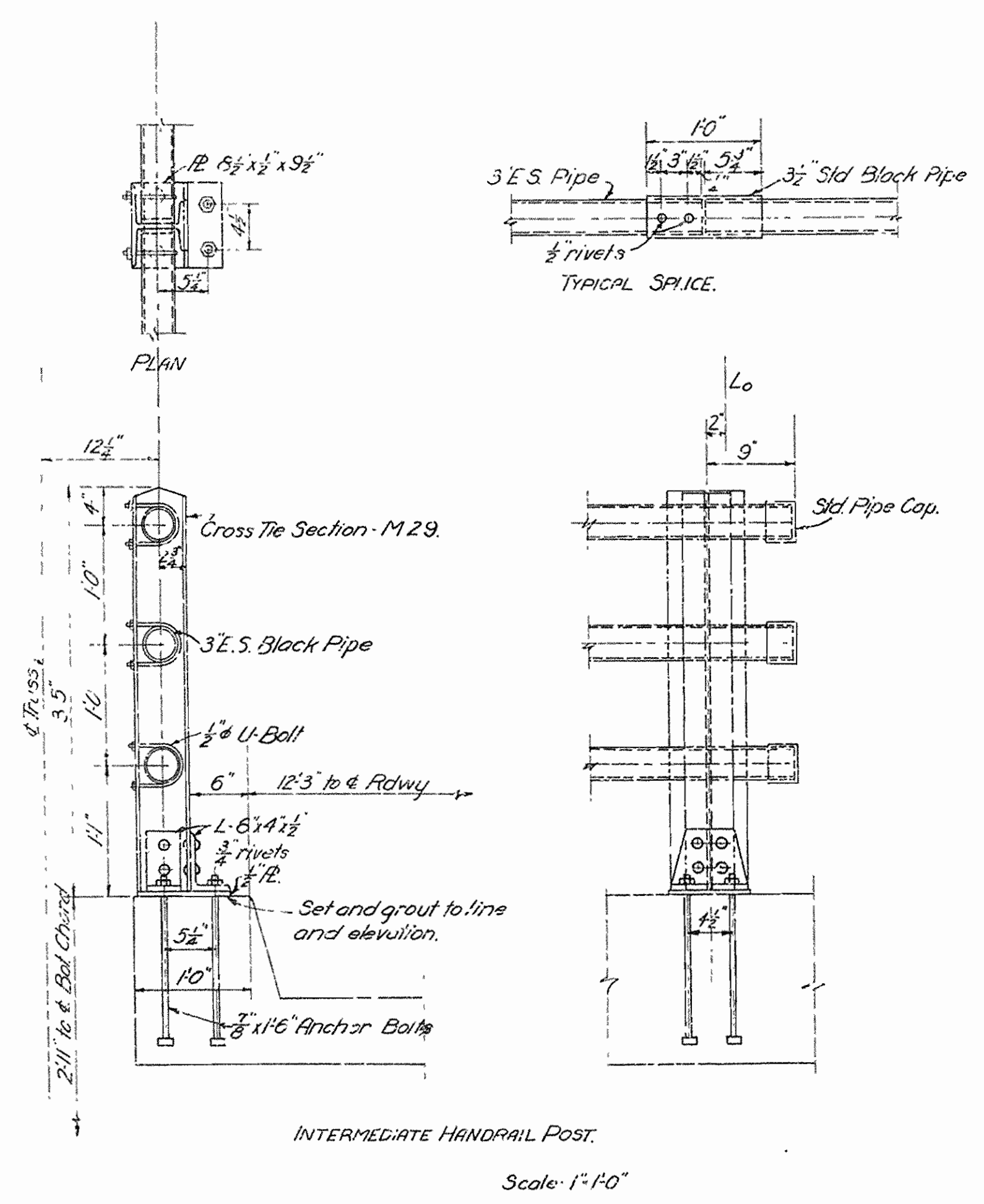
1929	11	12
111		



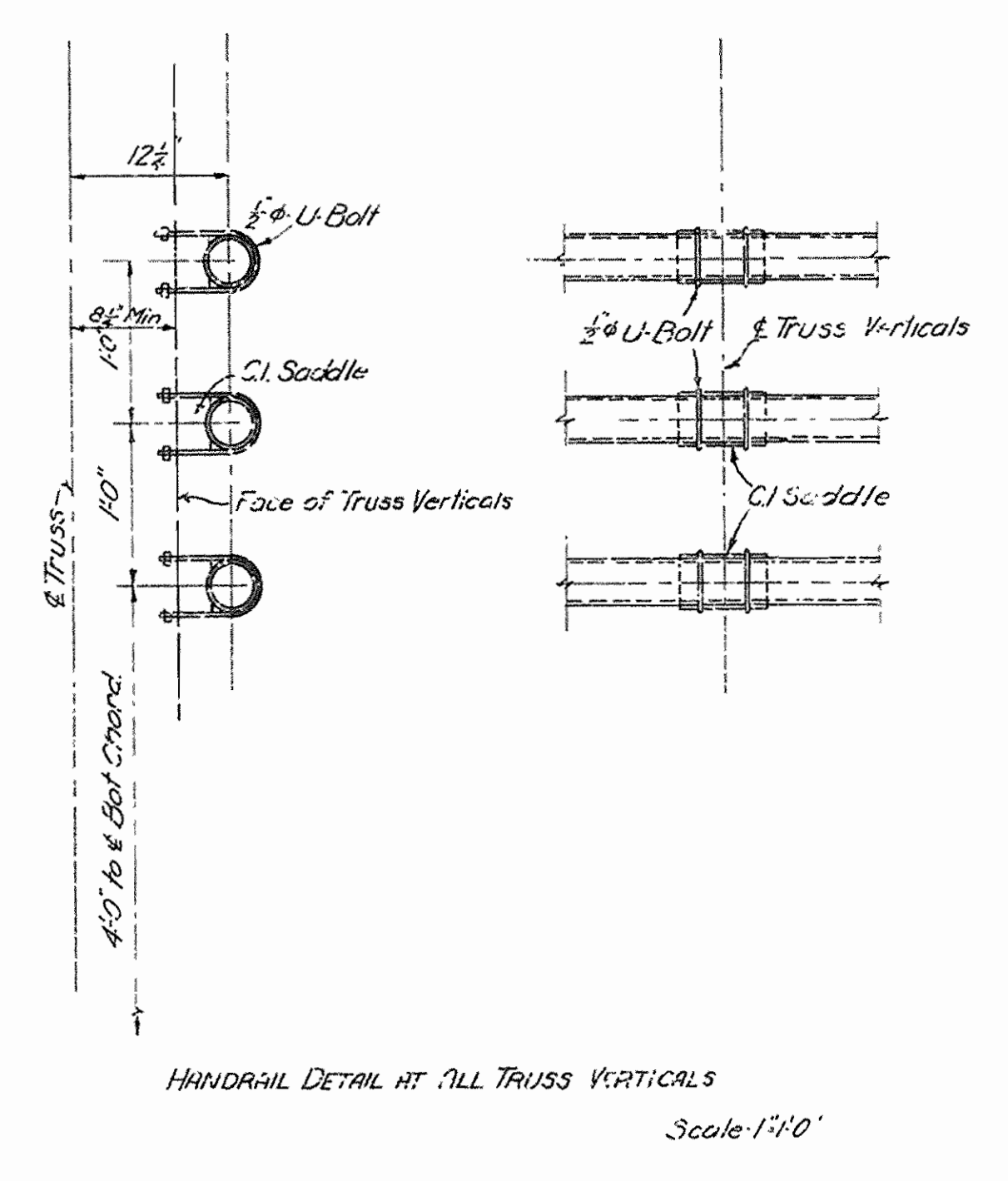
Note: Use random lengths of pipe with plain ends. Keep splices clear of all vertical posts. Cap pipe at end of structure.

ARRANGEMENT OF INTERMEDIATE HANDRAIL POSTS

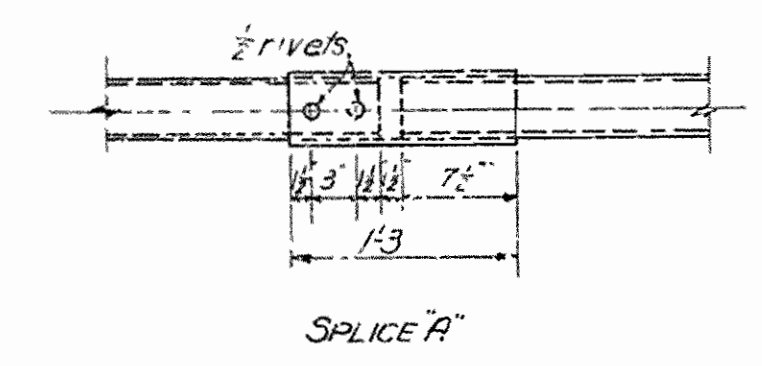
Scale: 1"=20'-0"



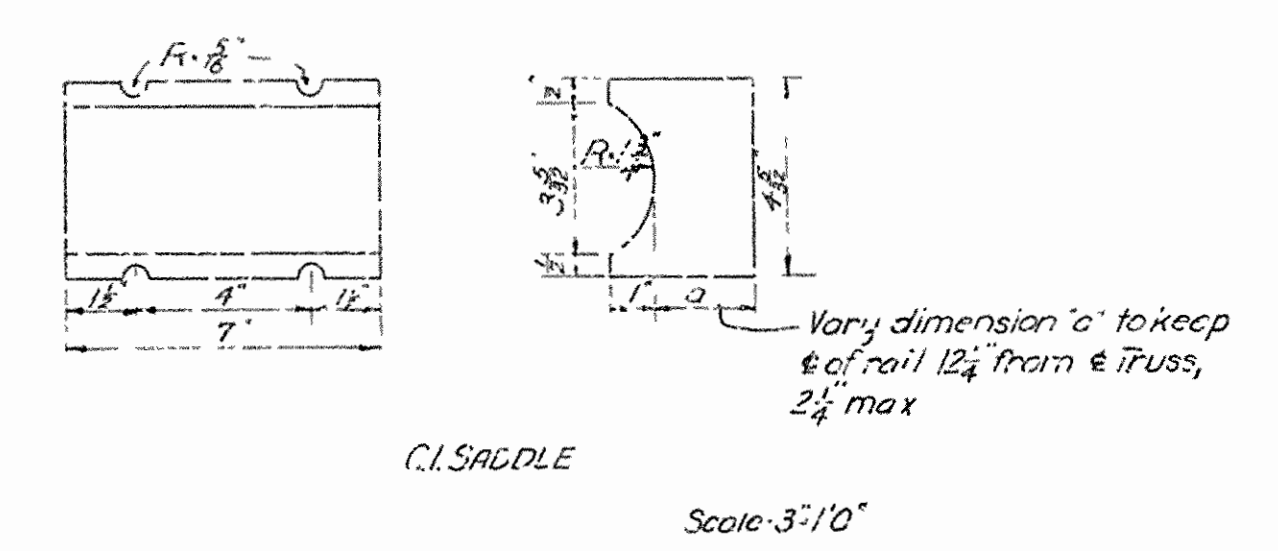
INTERMEDIATE HANDRAIL POST
Scale: 1"=1'-0"



HANDRAIL DETAIL AT ALL TRUSS VERTICALS
Scale: 1"=1'-0"



Note: To be used only in Panel L₁₁-L₁₂ adjoining rocker end of suspended span. Splice all pipe in this panel.



C.I. SADDLE
Scale: 3"=1'-0"

ARKANSAS STATE HIGHWAY COMMISSION
BRIDGES OVER WHITE RIVER
NEAR
AUGUSTA & NEWPORT, ARKANSAS

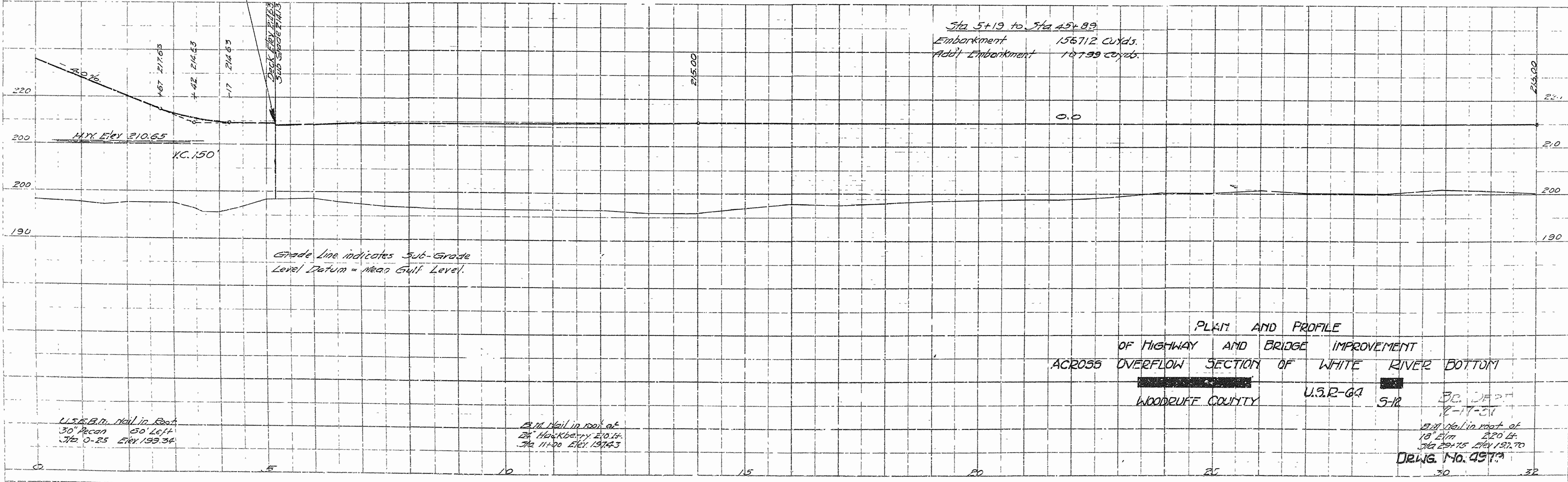
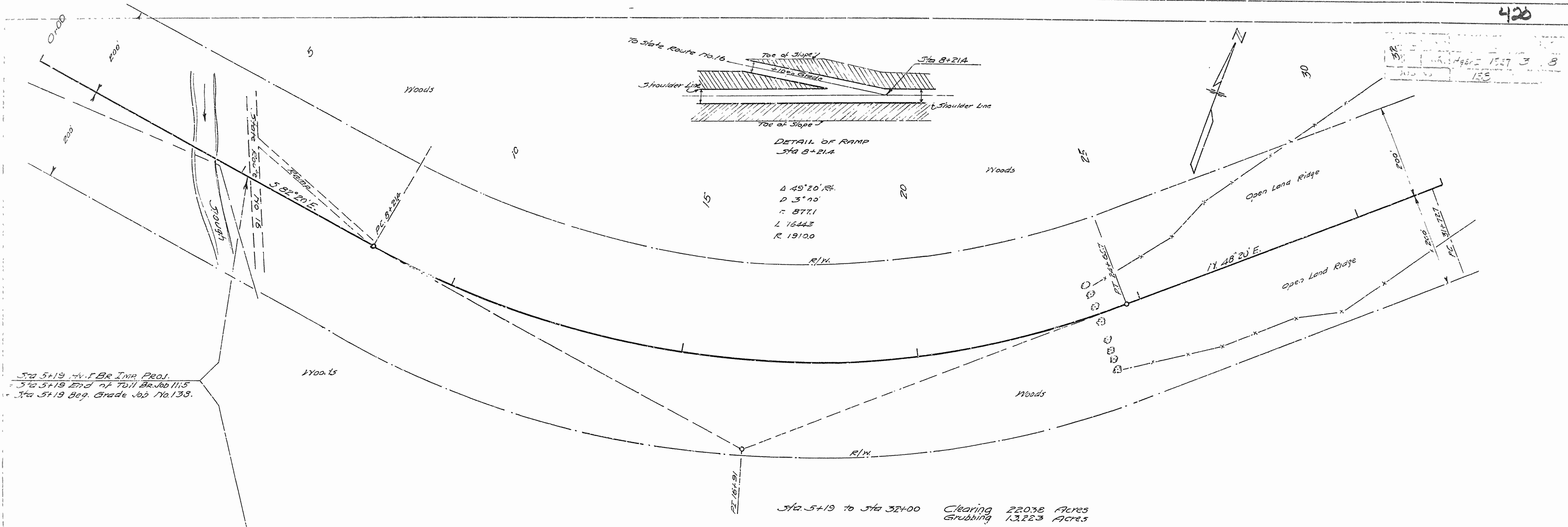
HANDRAIL DETAILS

MADE BY: E.S.
TRACED BY: E.S.
CHECKED BY: K.F.
DATE: Oct 22 1929

IRA G. HEDRICK, INC.,
CONSULTING ENGINEERS,
HOT SPRING, ARKANSAS

DR. No. 611
DRAWG. No. 497B

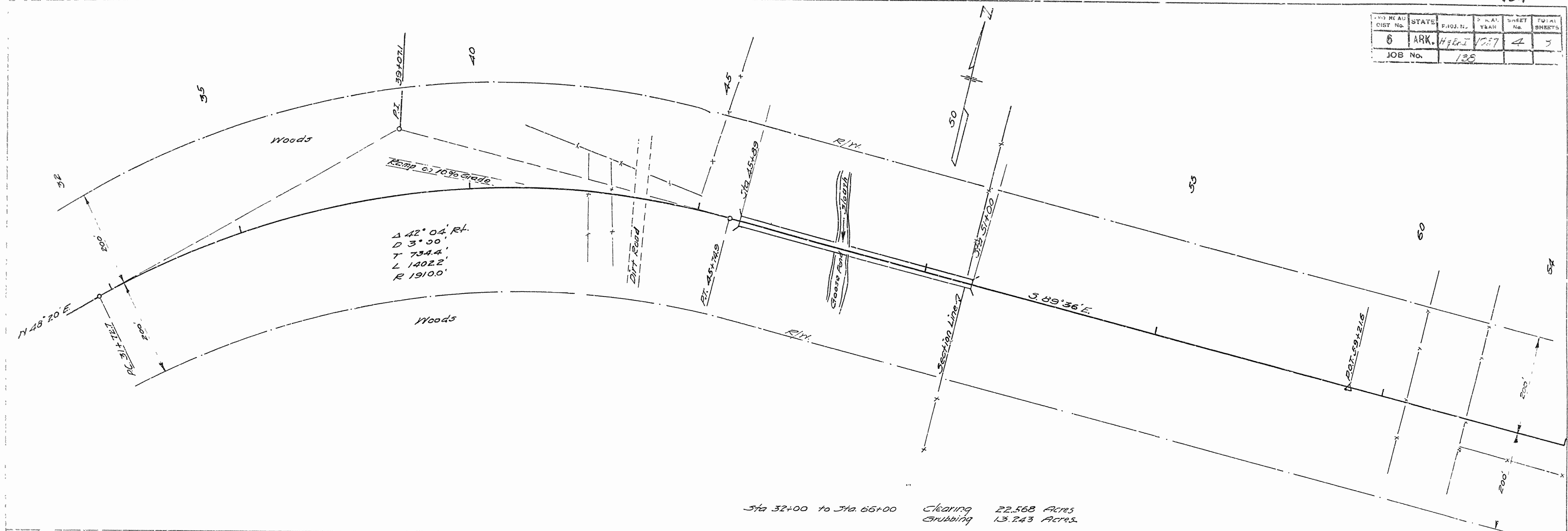
Sheet No. 155
Date: 1937 3 8



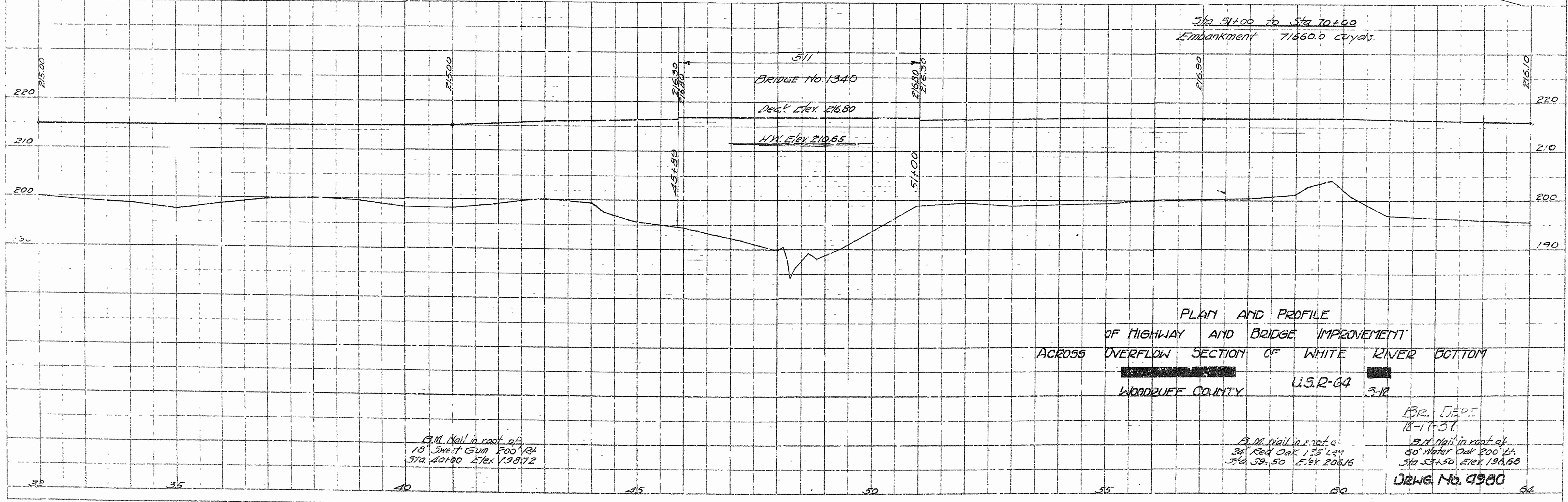
PLAN AND PROFILE
 OF HIGHWAY AND BRIDGE IMPROVEMENT
 ACROSS OVERFLOW SECTION OF WHITE RIVER BOTTOM
 WOODRUFF COUNTY U.S.R-64 5-12

J.C. DEPT
 12-17-37
 P.M. Nail in Root of
 18' Elm ELEV 190.14
 Sta 25+75 ELEV 197.70
 DRWG. No. 4573

DIST. NO.	STATE	PROJ. N.	P. N. A.	SHEET NO.	TOTAL SHEETS
6	ARK.	Hg&J	1957	4	5
JOB NO.		136			



Sta 32+00 to Sta. 66+00 Clearing 22.568 Acres
Grubbing 13.243 Acres



PLAN AND PROFILE
OF HIGHWAY AND BRIDGE IMPROVEMENT
ACROSS OVERFLOW SECTION OF WHITE RIVER BOTTOM
WOODRUFF COUNTY U.S.R-64 3-12

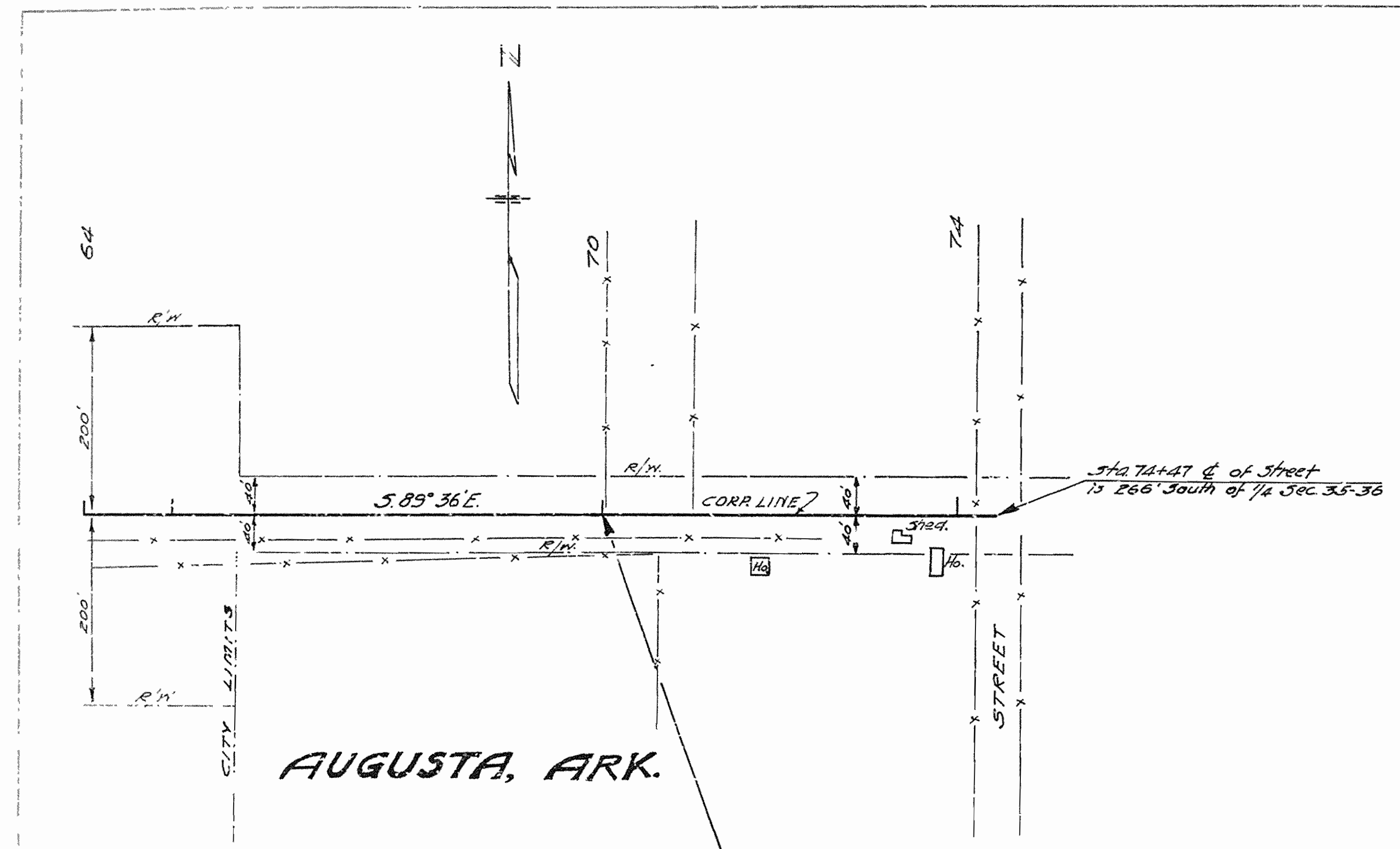
P.M. Nail in root of
18" Sweet Gum 200' R.
Sta. 40+80 Elev. 198.72

P.M. Nail in root of
24" Red Oak 135' L.
Sta. 59+50 Elev. 206.16

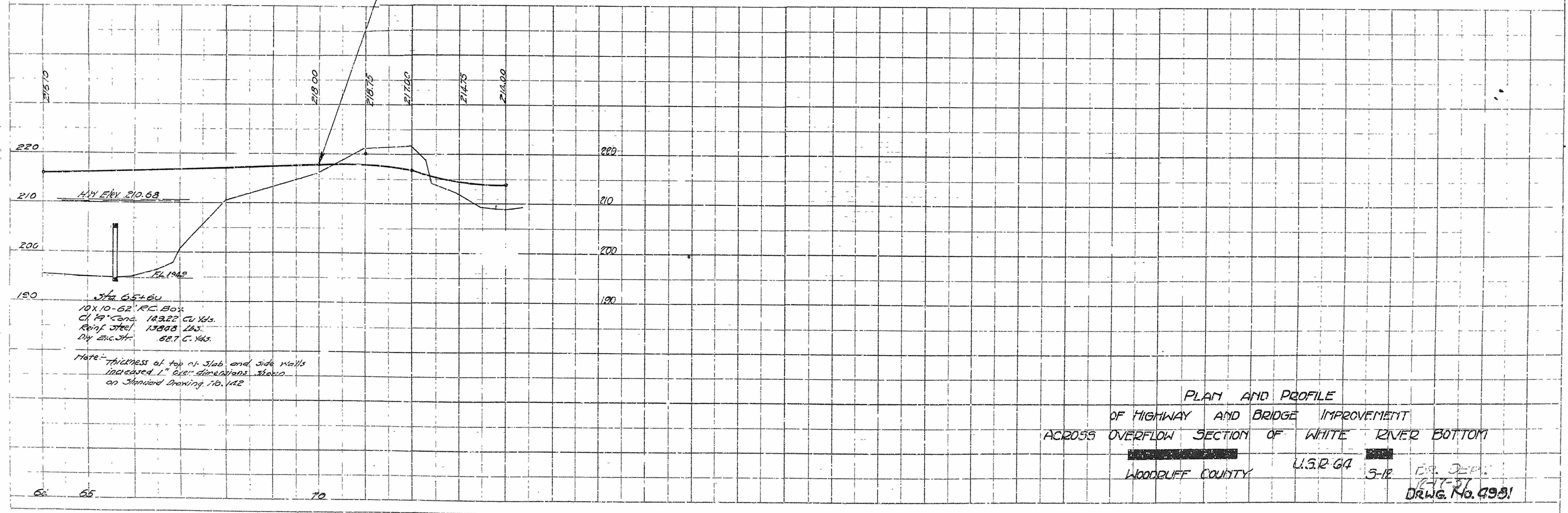
Br. Dept.
18-17-57
P.M. Nail in root of
30" Water Oak 200' L.
Sta. 53+50 Elev. 198.68

DRWG. No. 4980 64

DATE	SCALE	BY	CHKD	DATE	NO.	DATE
8	ARK.	1-25-72	1-27	5	8	
JOB No.		138				



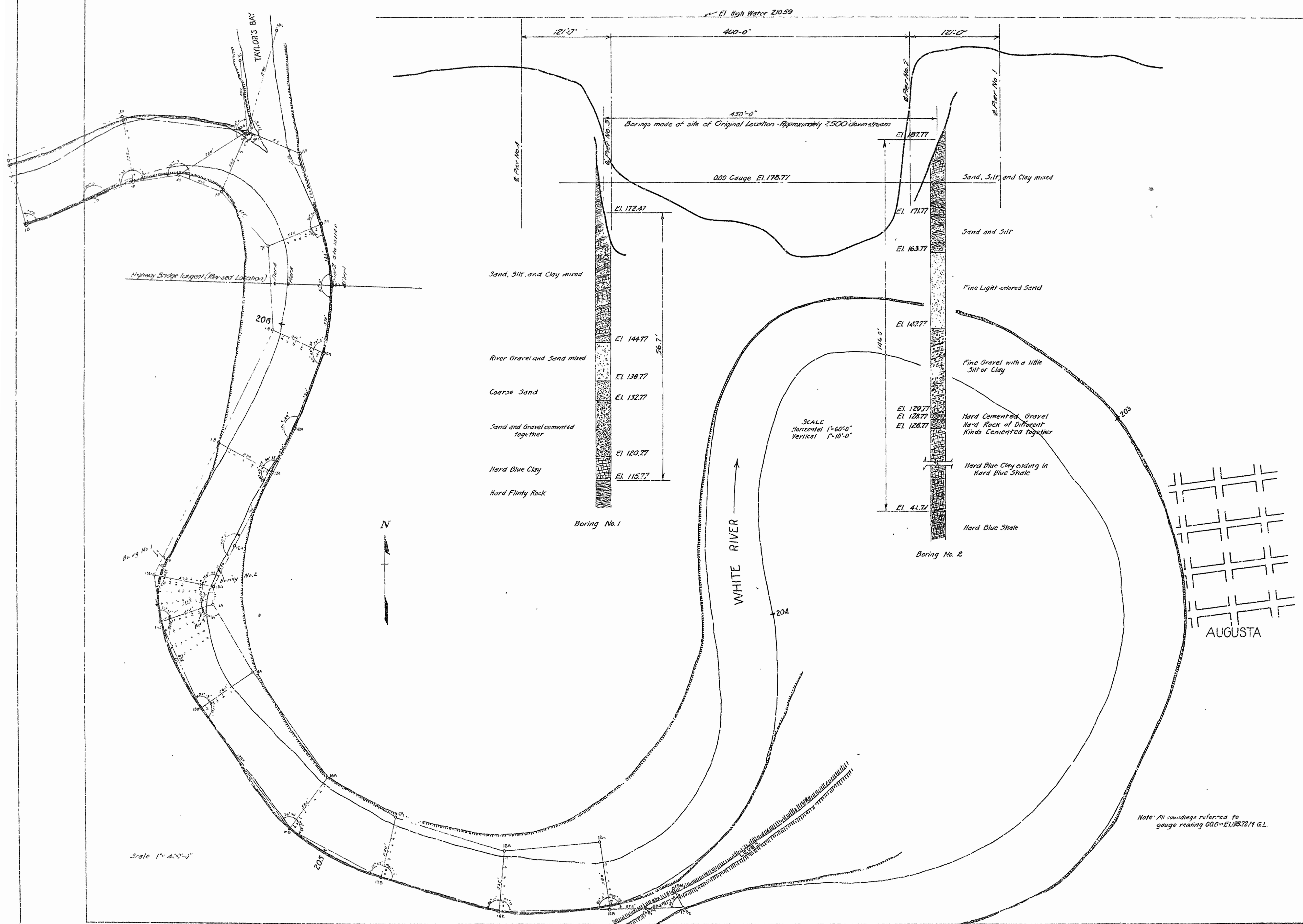
Sta. 70+00 End of Hy & Br. Impr. Project
 = Sta. 70+00 End of Grading Job 170 138



Note: Thickness of top of Slab and side walls increased 1" over dimensions shown on Standard Drawing 110, 142

PLAN AND PROFILE
 OF HIGHWAY AND BRIDGE IMPROVEMENT
 ACROSS OVERFLOW SECTION OF WHITE RIVER BOTTOM
 WOODRUFF COUNTY U.S.R. 64
 3-12 DR. DEP.
 1-7-51
 DRWG. No. 4951

DATE	BY	CHECKED	SCALE	SHEET
JULY 28, 1929	K.F.	K.F.	AS SHOWN	4 OF 9
PROJECT NO. 115				

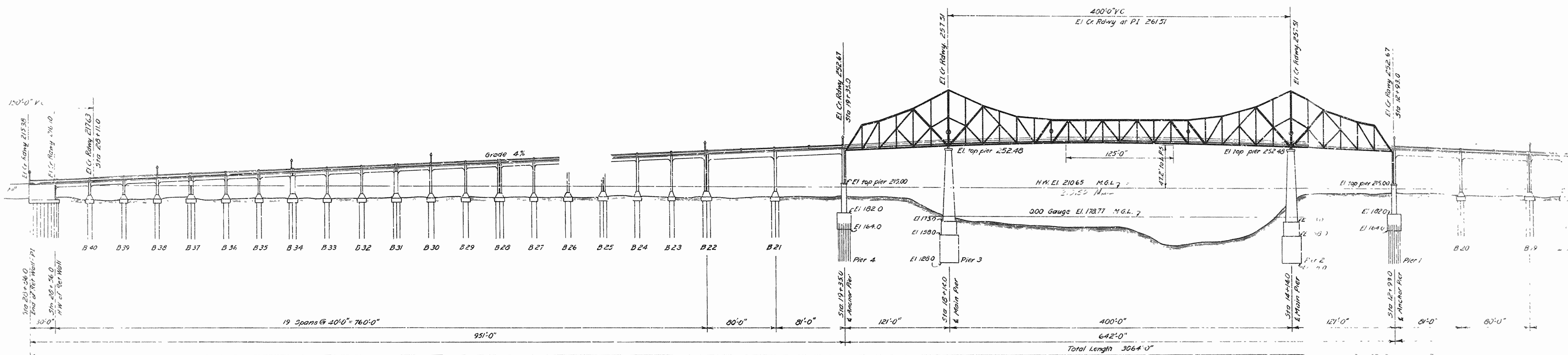


ARKANSAS STATE HIGHWAY COMMISSION
BRIDGE OVER WHITE RIVER
 AT
 AUGUSTA, ARKANSAS
 REVISED
MAP OF BRIDGE SITE
PROFILE OF BORINGS

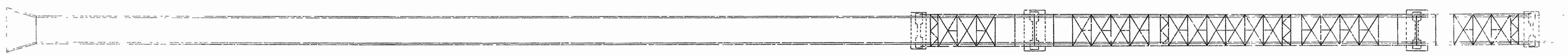
MADE BY H.W.S. & J.G.M.
 TRACED BY J.W.S. & J.G.M.
 CHECKED BY K.F.
 DATE: July 28, 1929
 SCALE: As shown
 SHEET NO. 4

IRA G. HEDRICK, INC.
 CONSULTING ENGINEERS
 HOT SPRINGS, ARKANSAS

BALD KNOC?



ELEVATION



PLAN