

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES
ON
MORRILLTON-BLACKVILLE ROAD
CONWAY COUNTY

ROUTE 64 SEC. 7
JOB No 8161
FEDERAL AID PROJECT NO. E-141-C

FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	E-141-C	1931	1	11

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
1931	8161	1	11

INDEX OF SHEETS

Sheet No.	Drwg No.	Title
1	3105	Title Sheet
2	3106	Layout of Br. No. 1670
3	3107	Details of Substructure, Br. No. 1670
4	2301	Details of 40'-0" R.C.D. Girder Span
5	2416	Details of 90'-0" Low Truss Span
6	2417	Details of 90'-0" Low Truss Span, 1 Panel Skew, Left.
7	3108	Layout of Bridge No. 1671
8	3109	Details of Abutments, Br. No. 1671
9	3110	Details of Piers and Bent, Br. No. 1671
10	2279	Details of Std 50'-0" R.C.D. Girder Span.
11	2419	Details of 110'-0" Low Truss Span.

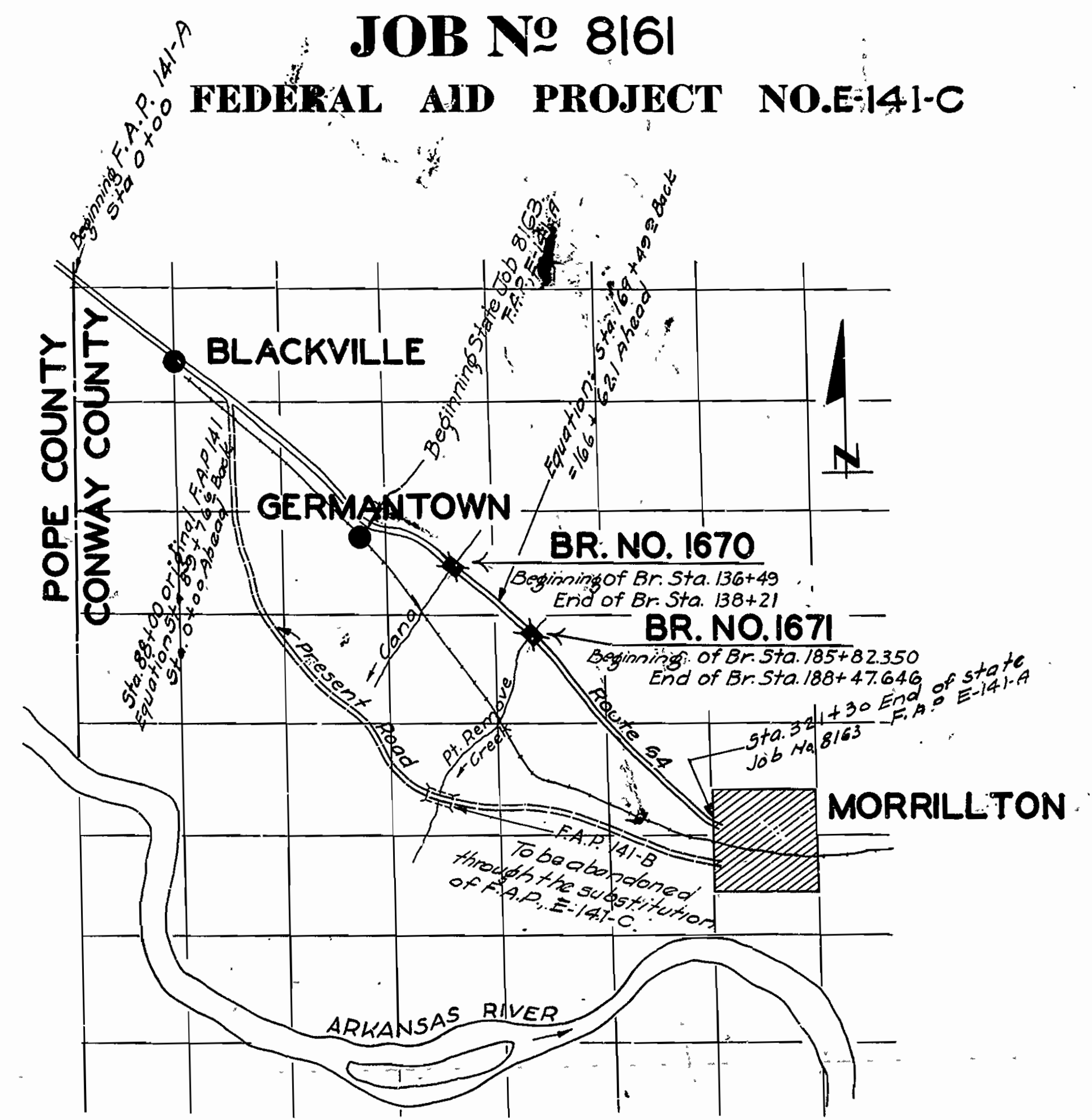
QUANTITIES

Item	Quantities	Lump Sum
S.P. Removal of Existing Structure		
*S.P. & Item No. 12 Earth Excavation	2,290 Cu.Yds	2,290 Cu.Yds
" " 13 Dry Excavation for Structures	1,230 Cu.Yds	1,230 Cu.Yds
" " 13 Wet Excavation for Structures	860 Cu.Yds	860 Cu.Yds
" " 52 Untreated Timber Piling	4,144 Lin.Ft	4,144 Lin.Ft
" " 54 Class "A" Concrete	61,749 Cu.Yds	61,749 Cu.Yds
" " 54 Class "S" Concrete	396.70 Cu.Yds	396.70 Cu.Yds
S.P. & " " 54 Seal Concrete	115.14 Cu.Yds	115.14 Cu.Yds
" " 55 Reinforcing Steel	166,099 Lbs	166,099 Lbs
S.P. & " " 56 Structural Steel (Trusses)	186,099 Lbs	186,099 Lbs
S.P. & " " 69 Rip Rap (1 ft. thick)	212 Cu.Yds	212 Cu.Yds
" " 74 Concrete Railing for Structures	490 Lin.Ft.	490 Lin.Ft.

* indicates item is non-participating in Federal Aid - Federal Aid Markers of approved design are to be furnished to Contractor by State and are to be placed at beginning and end of bridges.
State Furnished Cement

Item	Quantities & Units	Barrels per Unit	Approx. Total Barrels Req'd.
Class "A" Concrete	61,749 Cu.Yds.	1.50	926
Class "S" Concrete	396.70 " "	1.75	694
Seal Concrete	115.14 " "	1.50	173
Concrete Railing	490 Lin.Ft.	0.065	32
Totals for Project			1,825

Note: The proposed bridges were provided for in the project agreement for F.A.P. 141-C, executed by the acting secretary on July 30, 1931.



LAYOUT
Scale: 1"=1 Mile

LENGTH OF PROJECT	=	437'-3 1/2" = 0.082 Mi.
LENGTH OF BRIDGES	=	437'-3 1/2" = 0.082
LENGTH OF EMBANKMENT	=	102'-8 1/2"
LENGTH OF JOB	=	540'-0"

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 A	Revised Sept. 1st, 1928	Approved June 1st, 1929
" B	Revised Nov. 1st, 1929	
" C	Revised July 1st, 1930	
" D	Revised July 1st, 1928	Approved Nov. 24th, 1928
" E	Revised Jan. 1st, 1930	
" F	Revised Aug. 1st, 1929	
" G	Revised June 1st, 1929	
" H	Revised Jan. 1st, 1930	
" I	Revised Mar. 1, 1930	
" J	Revised Jan. 1st, 1929	Approved June 1st, 1929
" K	Revised May 30th, 1925	
" L	Revised Jan. 1st, 1929	Approved June 1st, 1929

SPECIAL PROVISIONS

Item	No. of Sheets
Pamphlet I	51
Bridge Timber	12
Earth Excavation	3
Concrete Aggregate	2
Rip Rap	1
Field Engineers Office	1
Aluminum Paint	1
Seal Concrete	2
Section 8.2	1
Structural Steel	1
State Furnished Cement	3
All Material except Cement	1
Removal of Existing Structure	1
Labor	10
Partial payments	1

Approved Nov. 1, 1932
Approved Nov. 1, 1932

N.B. Lawler
BRIDGE ENGINEER

BRIDGES NO. 1670 & 1671

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

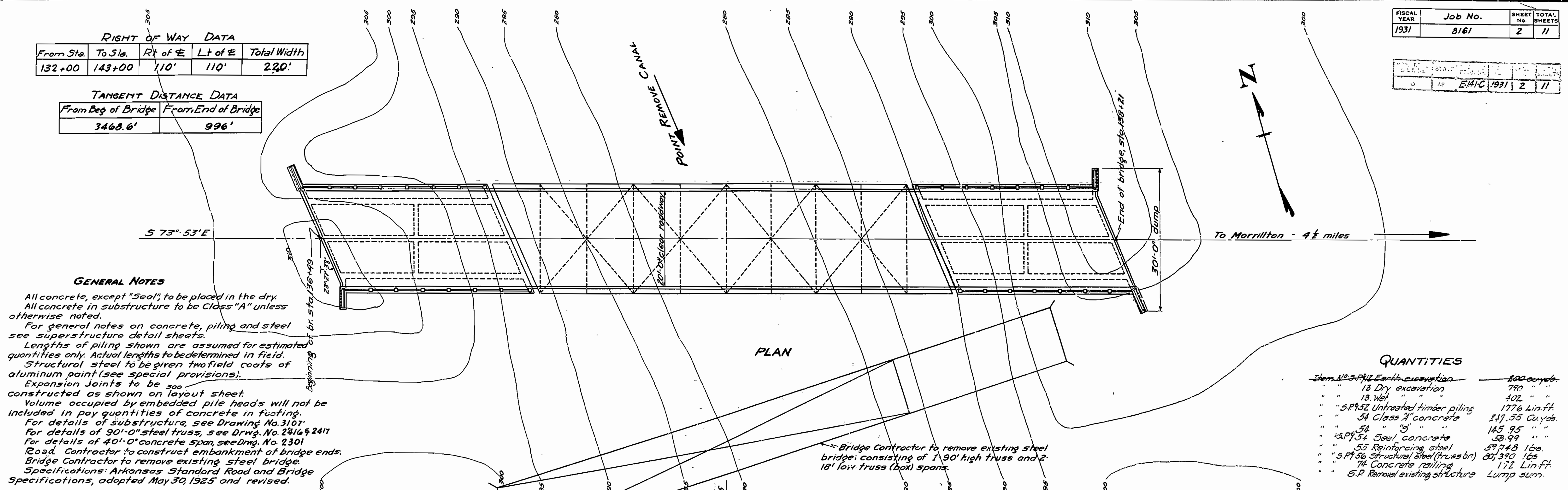
DRAWING NO. 3105

RIGHT OF WAY DATA				
From Sta.	To Sta.	Rt of C	Lt of C	Total Width
132+00	143+00	110'	110'	220'

TANGENT DISTANCE DATA	
From Beg of Bridge	From End of Bridge
3468.6'	996'

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1931	8161	2	11

DATE	BY	REVISION
1931	E.A.C.	2

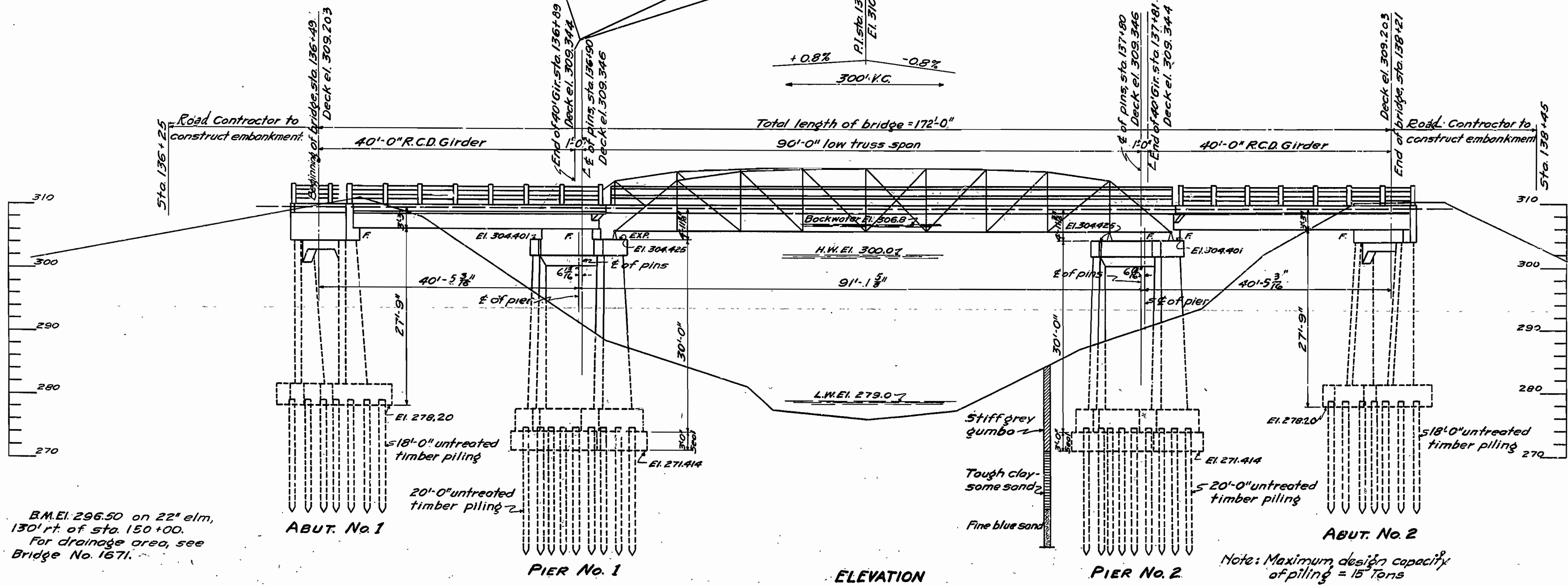


GENERAL NOTES

All concrete, except "Seal" to be placed in the dry.
 All concrete in substructure to be Class "A" unless otherwise noted.
 For general notes on concrete, piling and steel see superstructure detail sheets.
 Lengths of piling shown are assumed for estimated quantities only. Actual lengths to be determined in field.
 Structural steel to be given two field coats of aluminum paint (see special provisions).
 Expansion Joints to be 300 constructed as shown on layout sheet.
 Volume occupied by embedded pile heads will not be included in pay quantities of concrete in footing.
 For details of substructure, see Drawing No. 3107.
 For details of 90'-0" steel truss, see Drng. No. 2416 & 2417.
 For details of 40'-0" concrete span, see Drng. No. 2301.
 Road Contractor to construct embankment at bridge ends.
 Bridge Contractor to remove existing steel bridge.
 Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925 and revised.

QUANTITIES

Item No. 3.016 Earth excavation	200 cu yds.
" " 13 Dry excavation	780 "
" " 13 Wet "	402 "
" " S.P. 52 Untreated timber piling	1776 Lin. Ft.
" " 54 Glass "A" concrete	247.55 Cu yds.
" " 54 " " "	145.95 "
" " S.P. 54 Seal concrete	58.99 "
" " 55 Reinforcing steel	57748 lbs.
" " S.P. 56 Structural steel (truss br)	801390 lbs.
" " 74 Concrete railing	172 Lin. Ft.
" " S.P. Remove existing structure	Lump sum.



B.M. El. 296.50 on 22' elm, 130' ft. of sta. 150+00. For drainage area, see Bridge No. 1671.

REVISED E.A.W. - Mar. 7, 1932
 Turnouts.

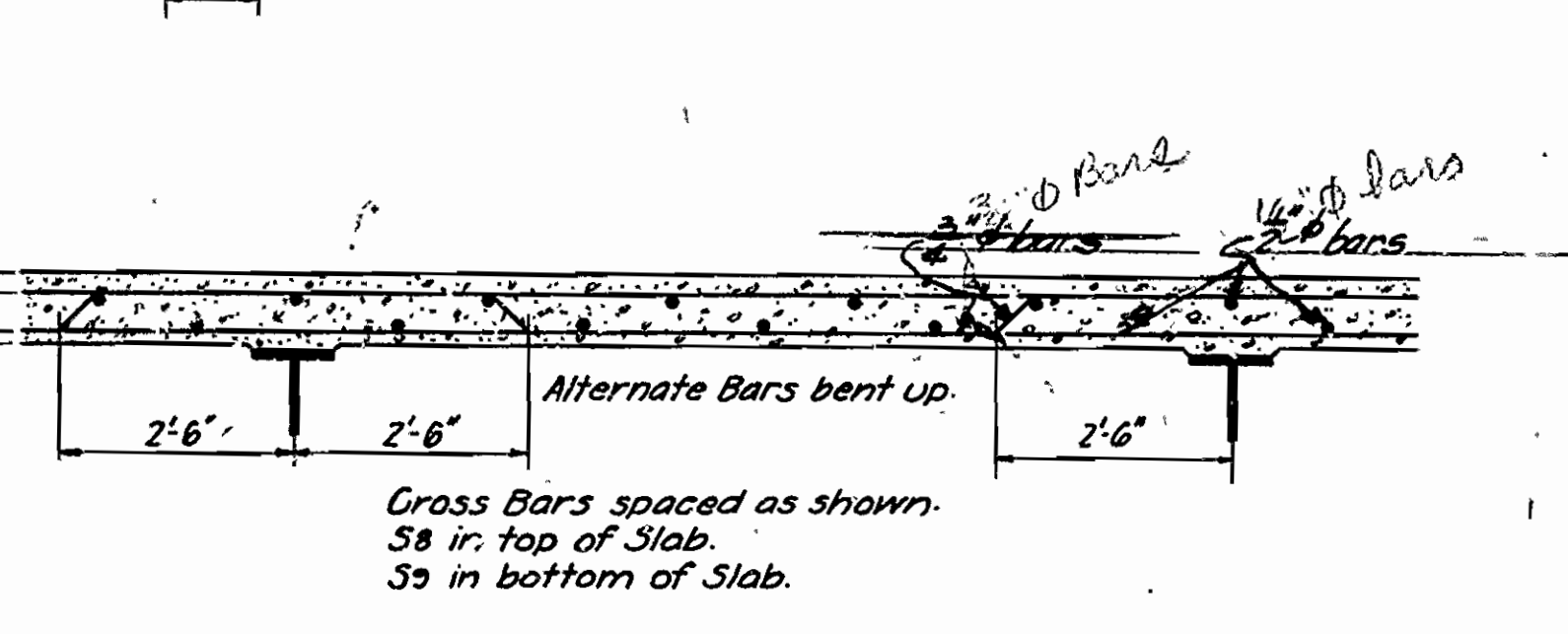
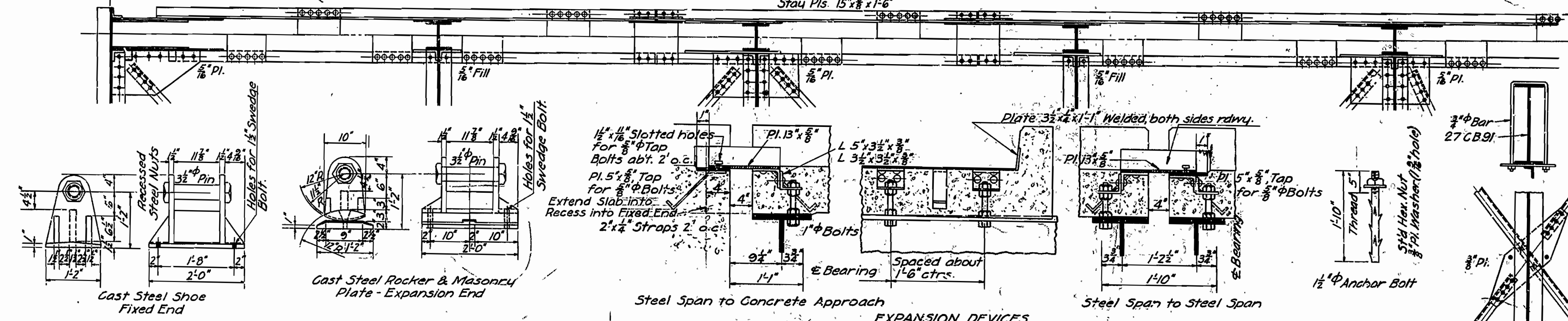
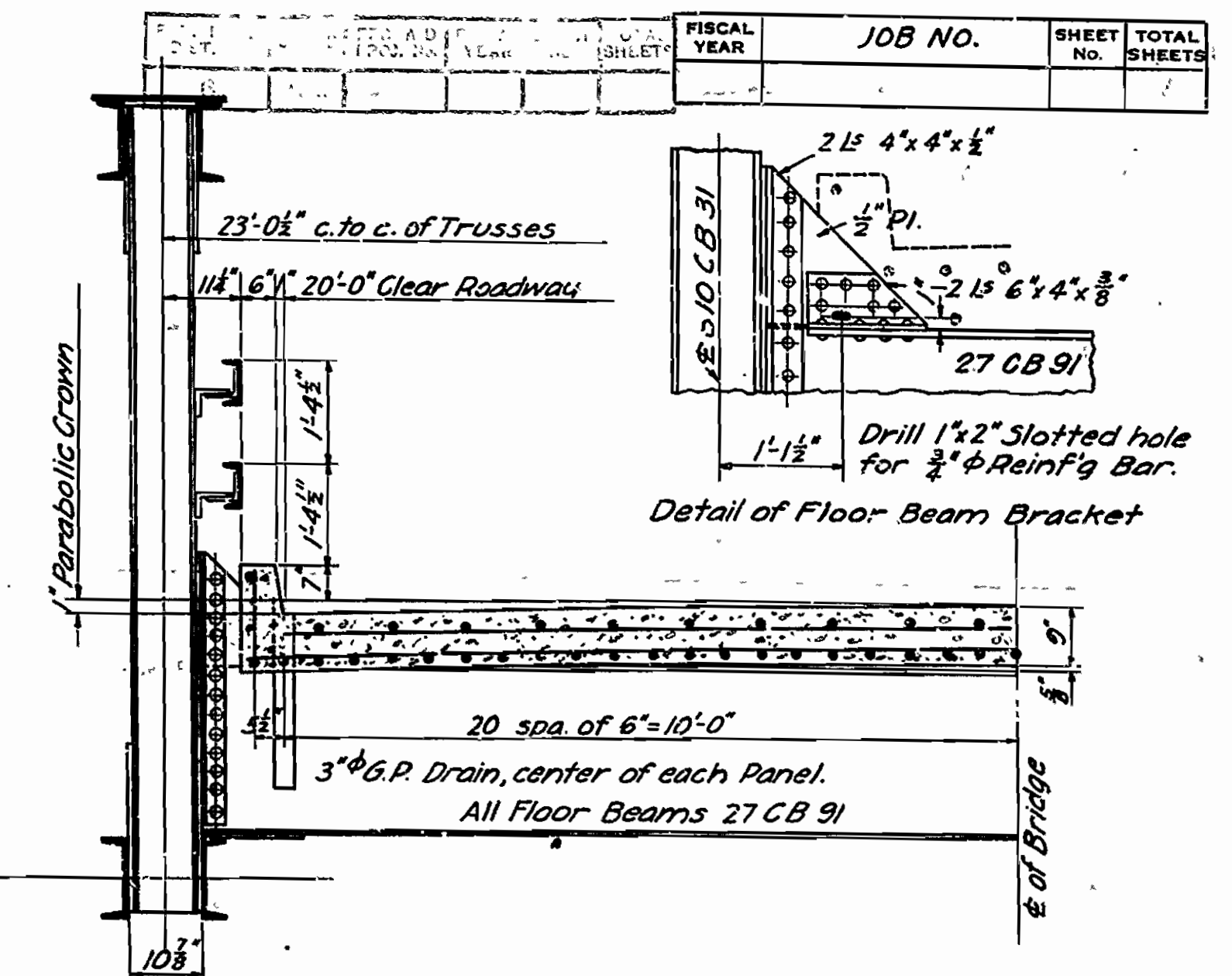
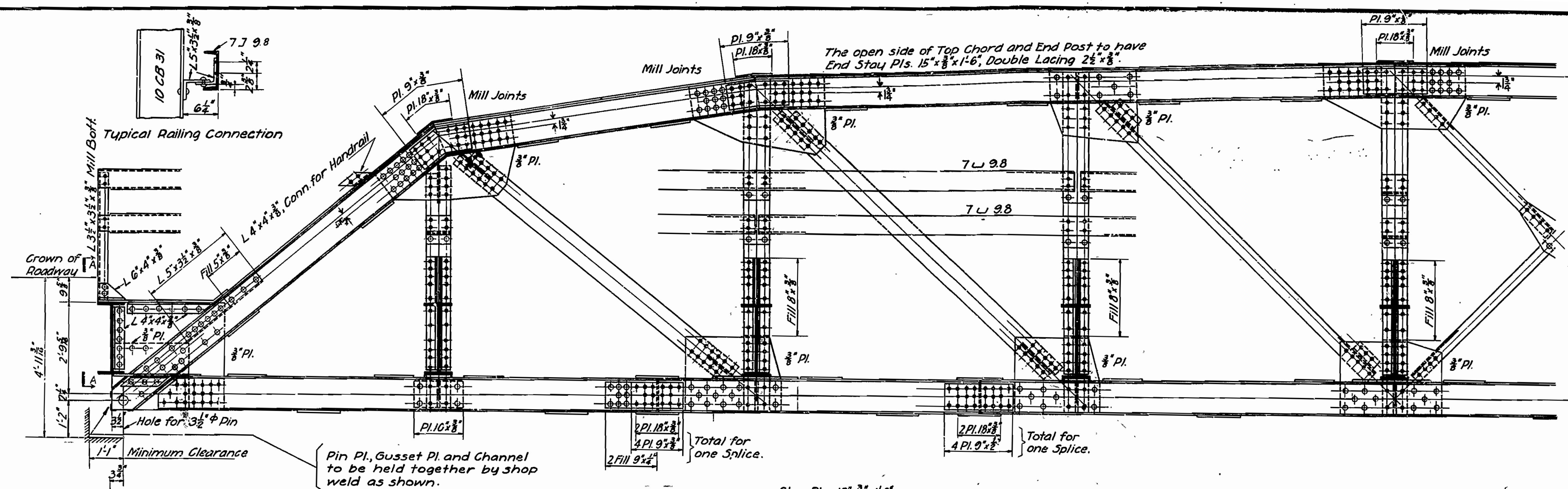
**LAYOUT
 BRIDGE OVER POINT REMOVE CANAL
 MORRILLTON-BLACKVILLE ROAD
 CONWAY CO.**

ROUTE 64 SEC. 7
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: H.F.B. Date: 3-5-31
 Traced By: H.W.H. Date: 3-7-31
 Checked By: E.O.G. Date: 4-10-31
BRIDGE NO. 1670 DRAWING NO. 3106

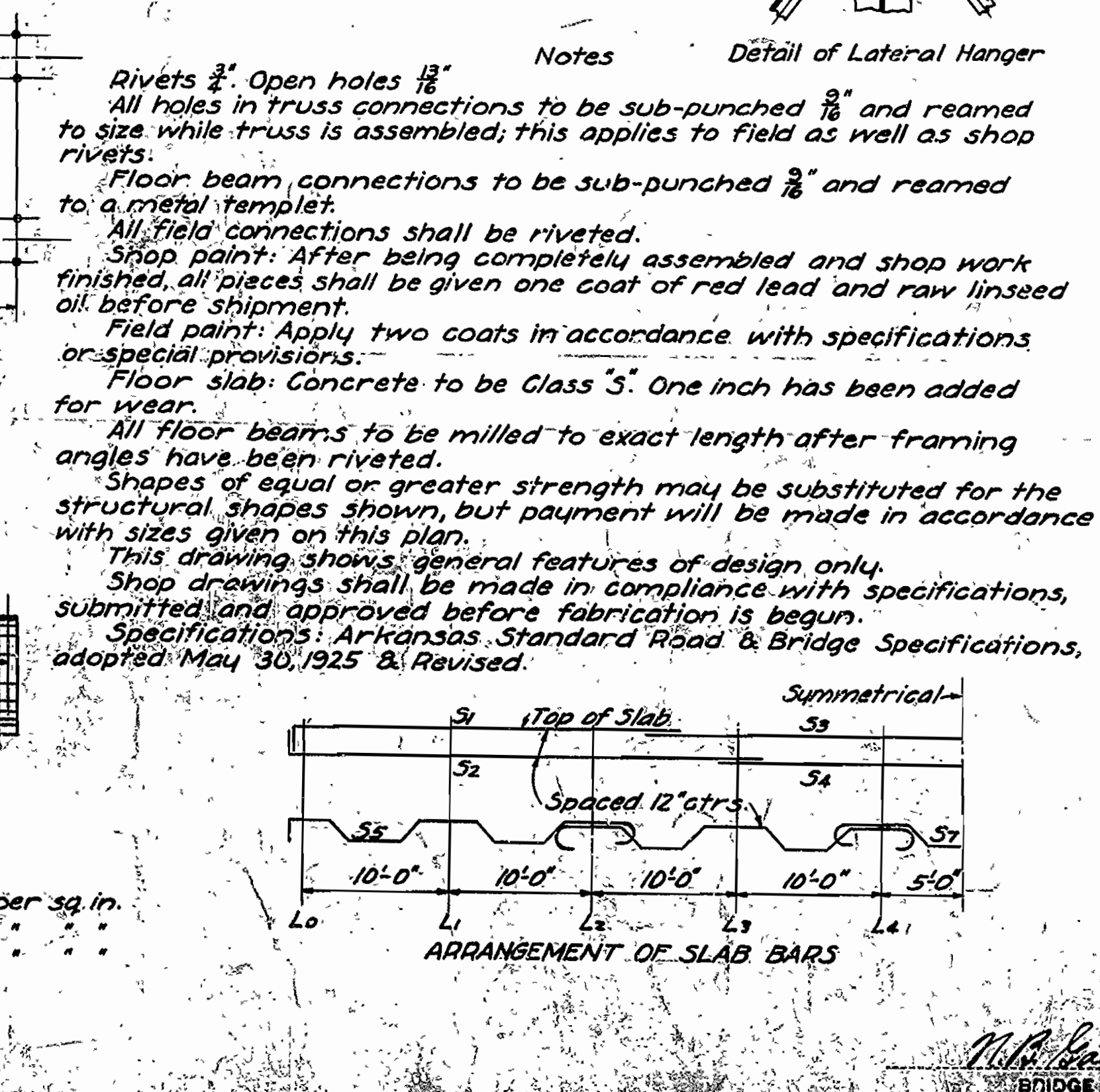
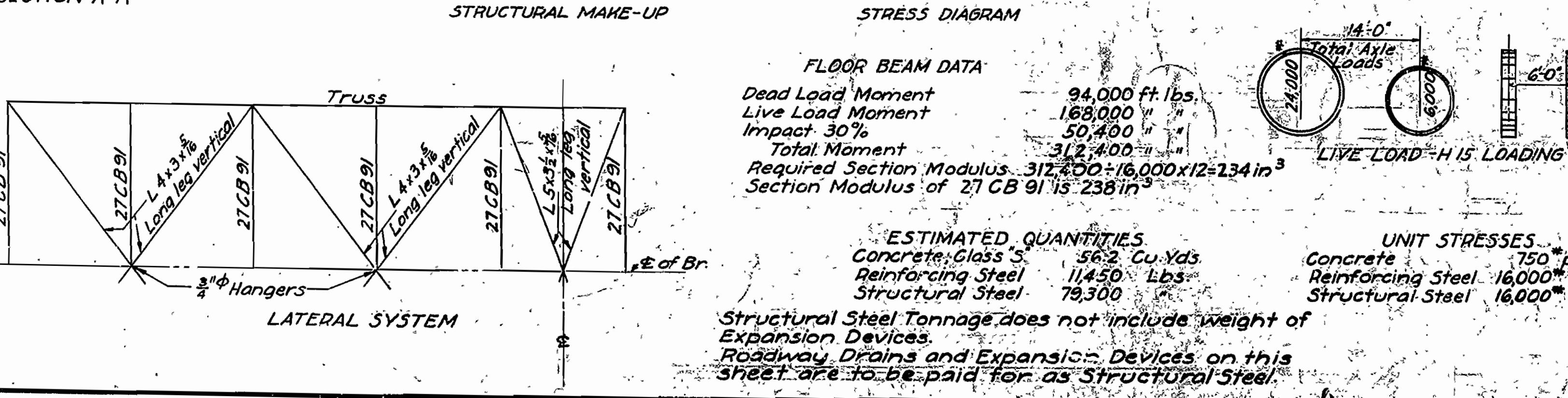
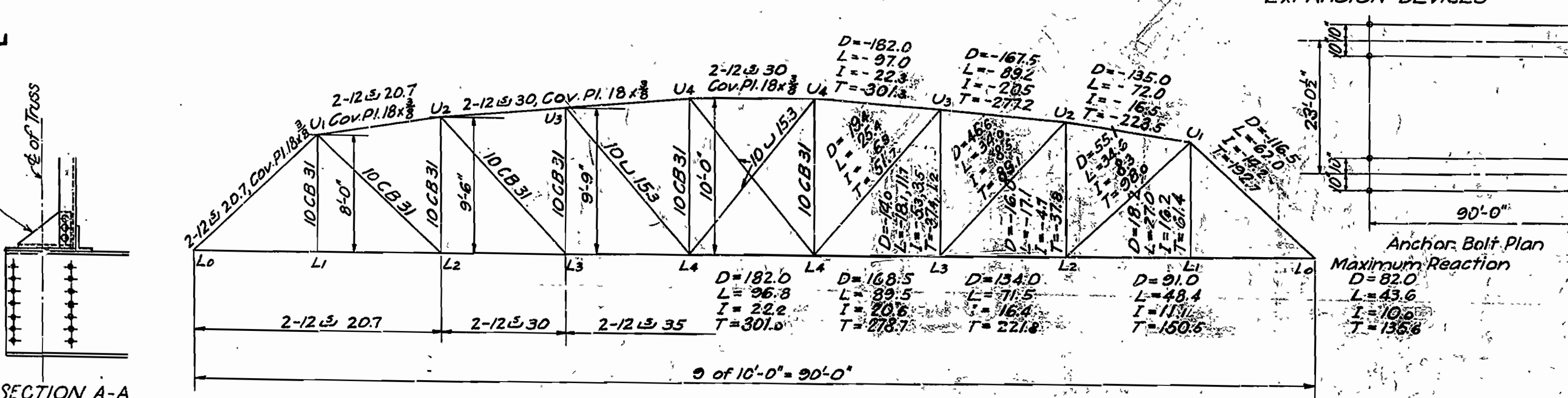
N.B. Garner
 BRIDGE ENGINEER

Note: Maximum design capacity of piling = 15 Tons



SLAB REINFORCING (ONE SPAN)

Mark	No.	Size	Length	Bending
S1	44	3/4"	27'-0"	26'-7"
S2	44	3/4"	32'-0"	31'-7"
S3	22	3/4"	42'-0"	Straight
S4	22	3/4"	32'-0"	Straight
S5	42	3/4"	24'-9"	2'-8" 5'-0" 4'-2" 5'-0" 4'-1"
S6	42	3/4"	26'-4"	4'-1" 5'-0" 4'-1" 5'-0" 4'-1"
S7	21	3/4"	16'-0"	4'-1" 5'-0" 4'-1"
S8	46	1/2"	20'-9"	Straight
S9	47	1/2"	23'-5"	20'-11"



STANDARD PLAN
90' LOW TRUSS SPAN
20' CLEAR ROADWAY
ROUTE 36

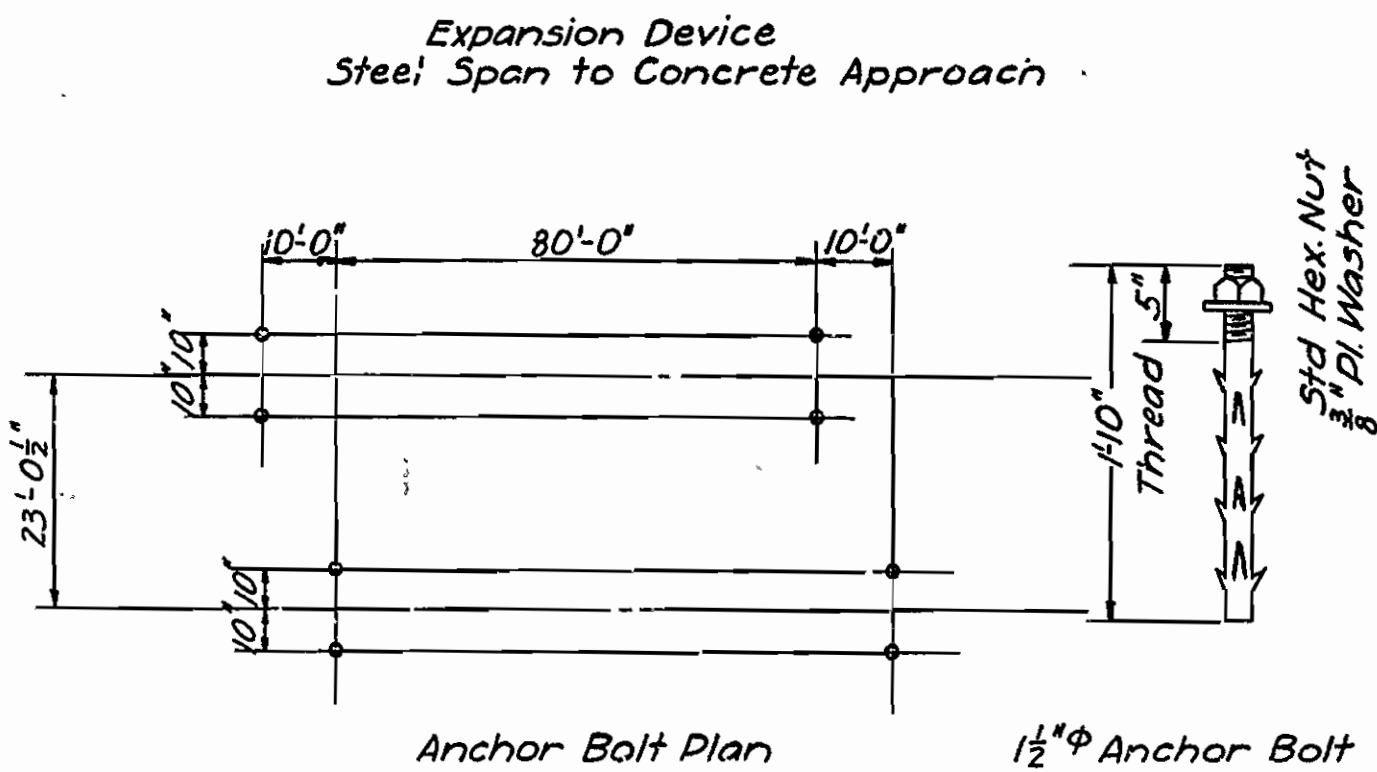
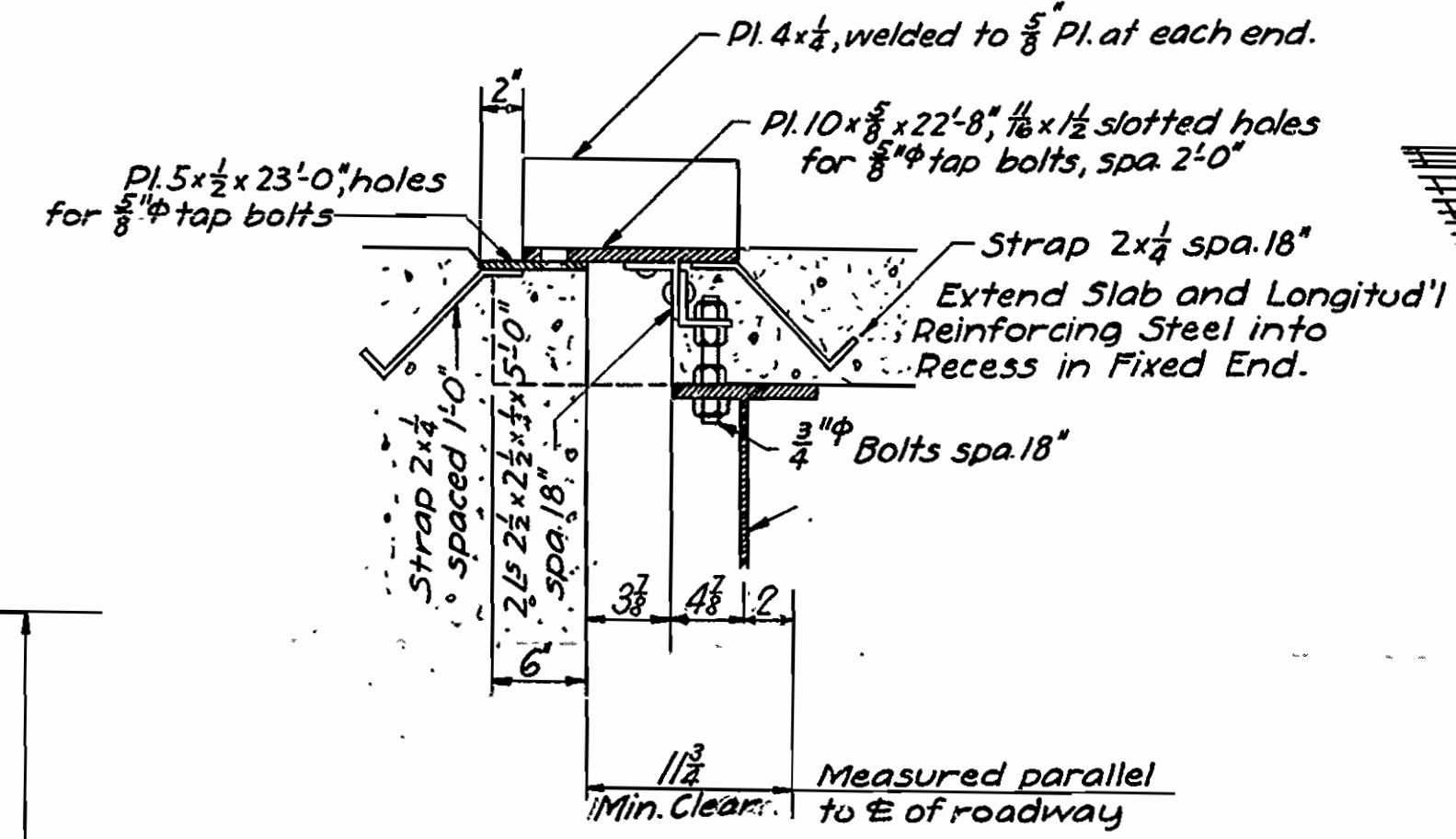
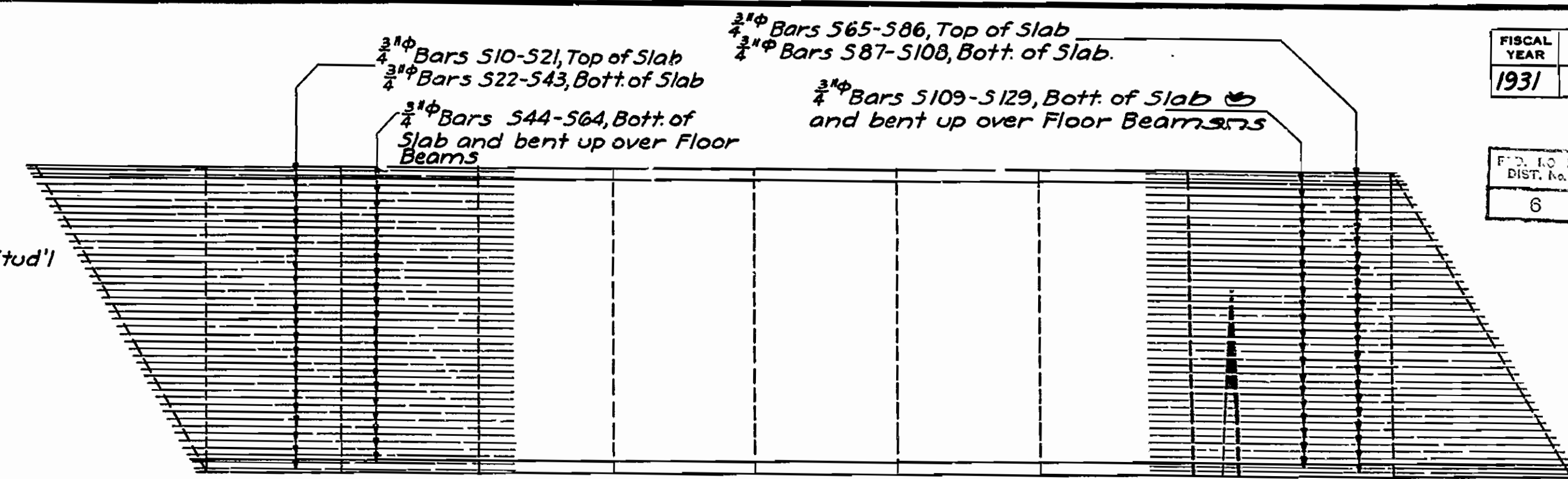
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: _____ Date: 5-1-30
 Traced By: _____ Date: 5-4-30
 Checked By: _____ Date: _____

BRIDGE No. _____ DRAWING No. 2416

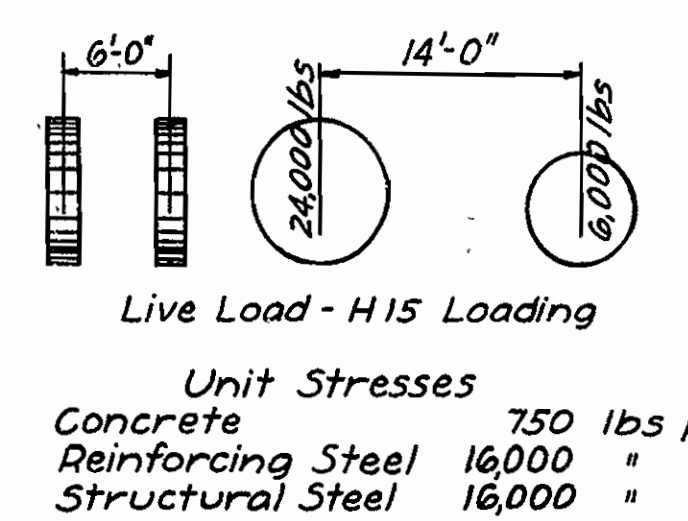
FISCAL YEAR	JOB NO.	SHEET No.	TOTAL SHEETS
1931	8161	6	11

F.D. DIST. No.	STATE	FED. AID PROJ. No.	YEAR	SHEET No.	TOTAL SHEETS
6	ARK.	141-C	1931	6	11

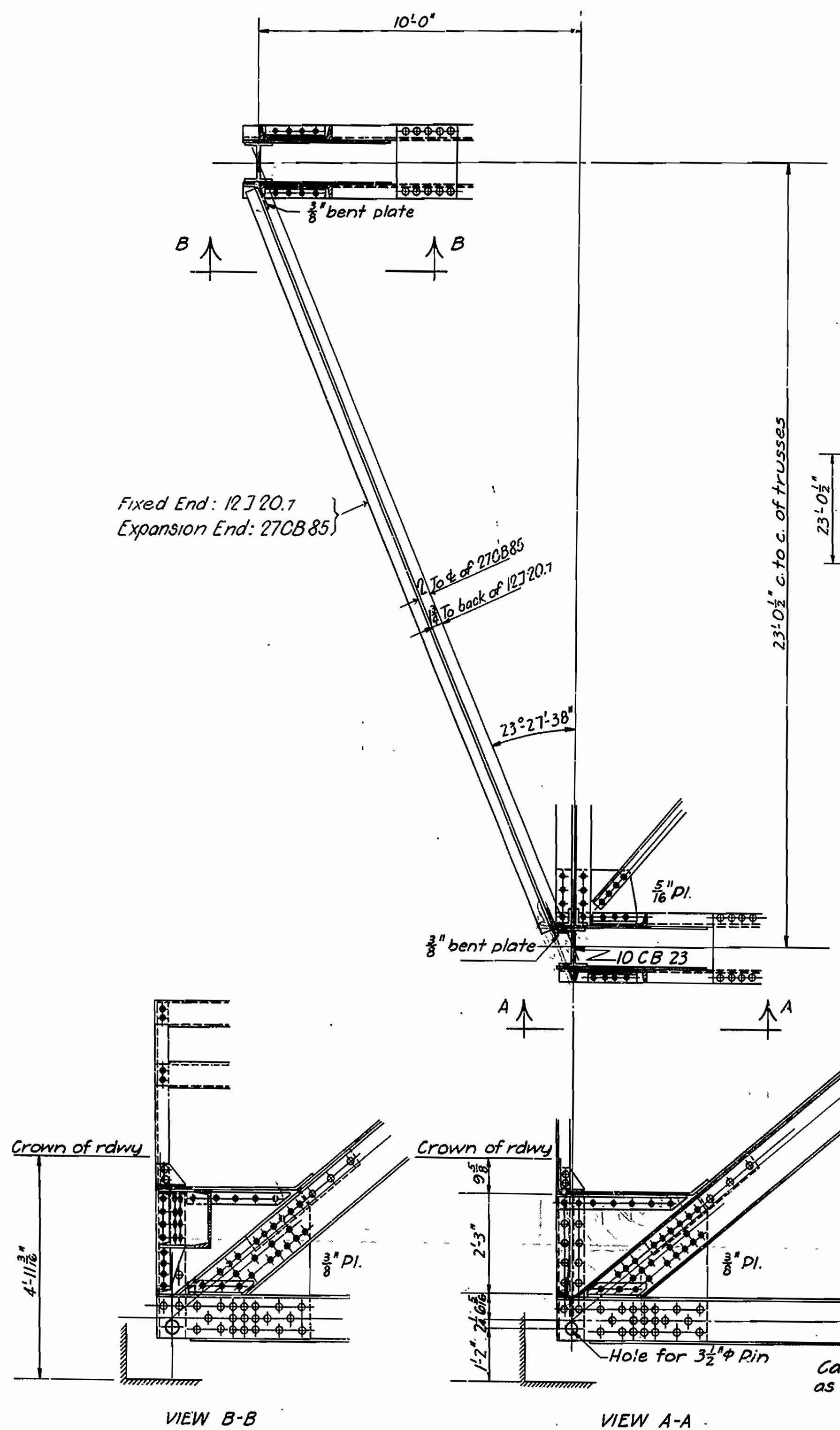
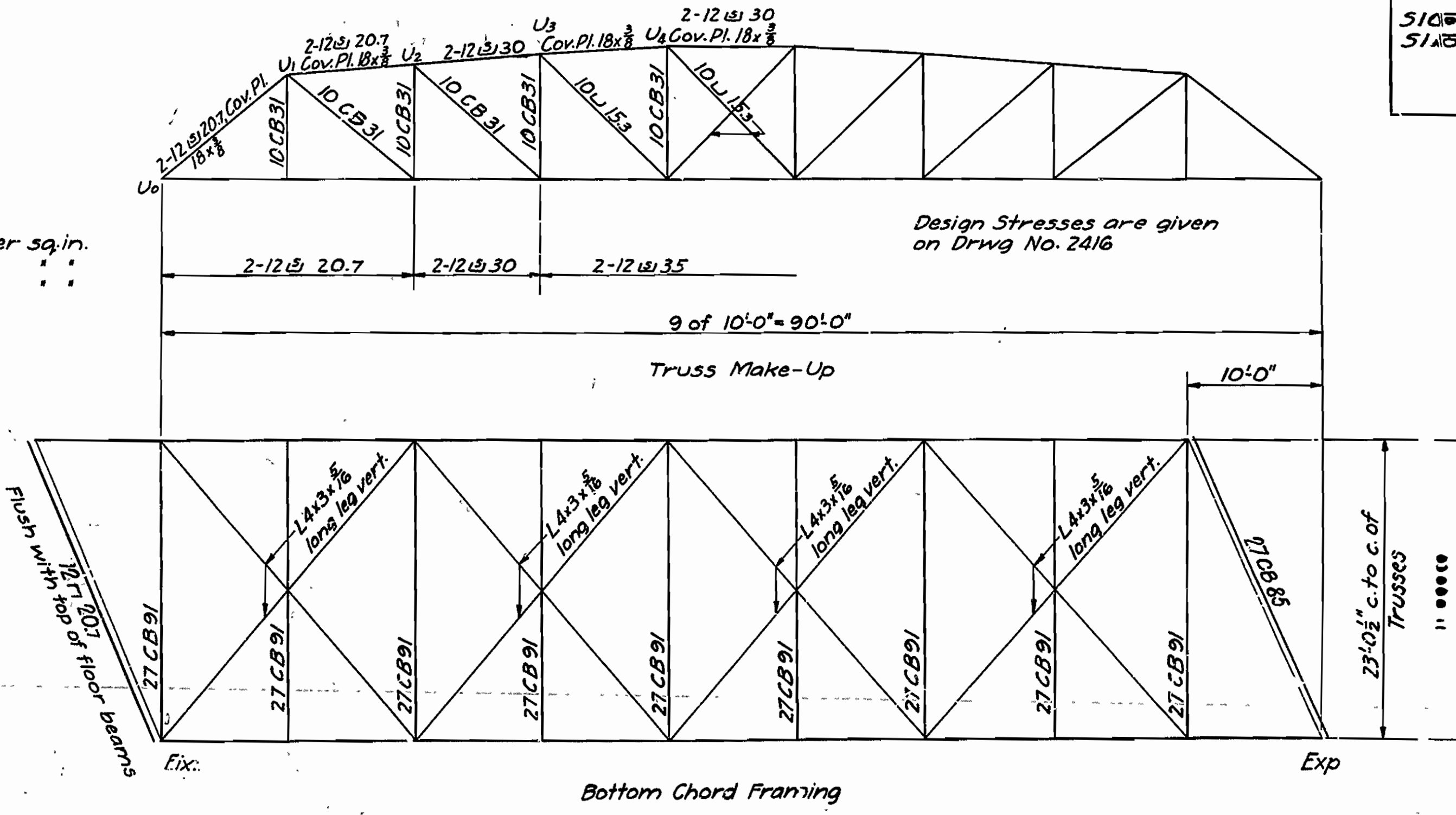


Mark	Size	Length	A	Bending Diagram
544-554	3/4"	Varies from 26'-2" to 30'-6"	Varies from 4'-0" to 8'-4"	
555-564	3/4"	Varies from 31'-2" to 33'-4"	Varies from 13" to 5'-2"	
5120-5129	3/4"	Varies from 18'-2" to 22'-0"	Varies from 1'-0" to 4'-10"	

Mark	Size	Length	A	Bending Diagram
510-521	3/4"	Varies from 28'-5" to 37'-7"	Varies from 28'-0" to 37'-2"	
522-543	3/4"	Varies from 33'-5" to 42'-7"	Varies from 33'-0" to 42'-2"	
565-586	3/4"	Varies from 17'-7" to 26'-8"	Varies from 17'-2" to 26'-3"	
587-5108	3/4"	Varies from 25'-1" to 36'-2"	Varies from 25'-2" to 31'-2"	
5109-5119	3/4"	Varies from 15'-0" to 19'-4"	Varies from 3'-2" to 7'-6"	



Unit Stresses
 Concrete 750 lbs per sq. in.
 Reinforcing Steel 16,000 " " " "
 Structural Steel 16,000 " " " "



For Details Not Shown and For Notes, see Drwg No. 2416

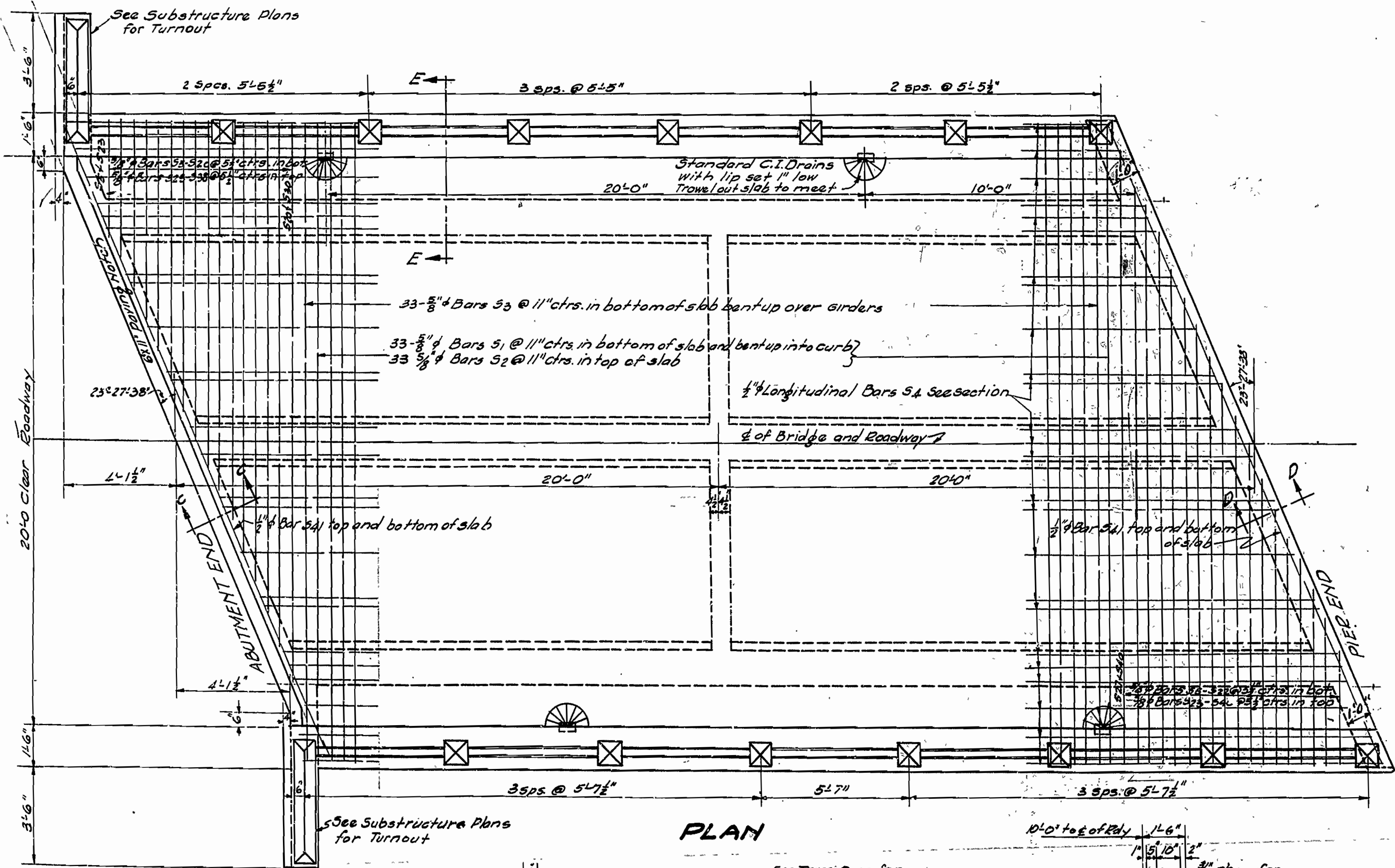
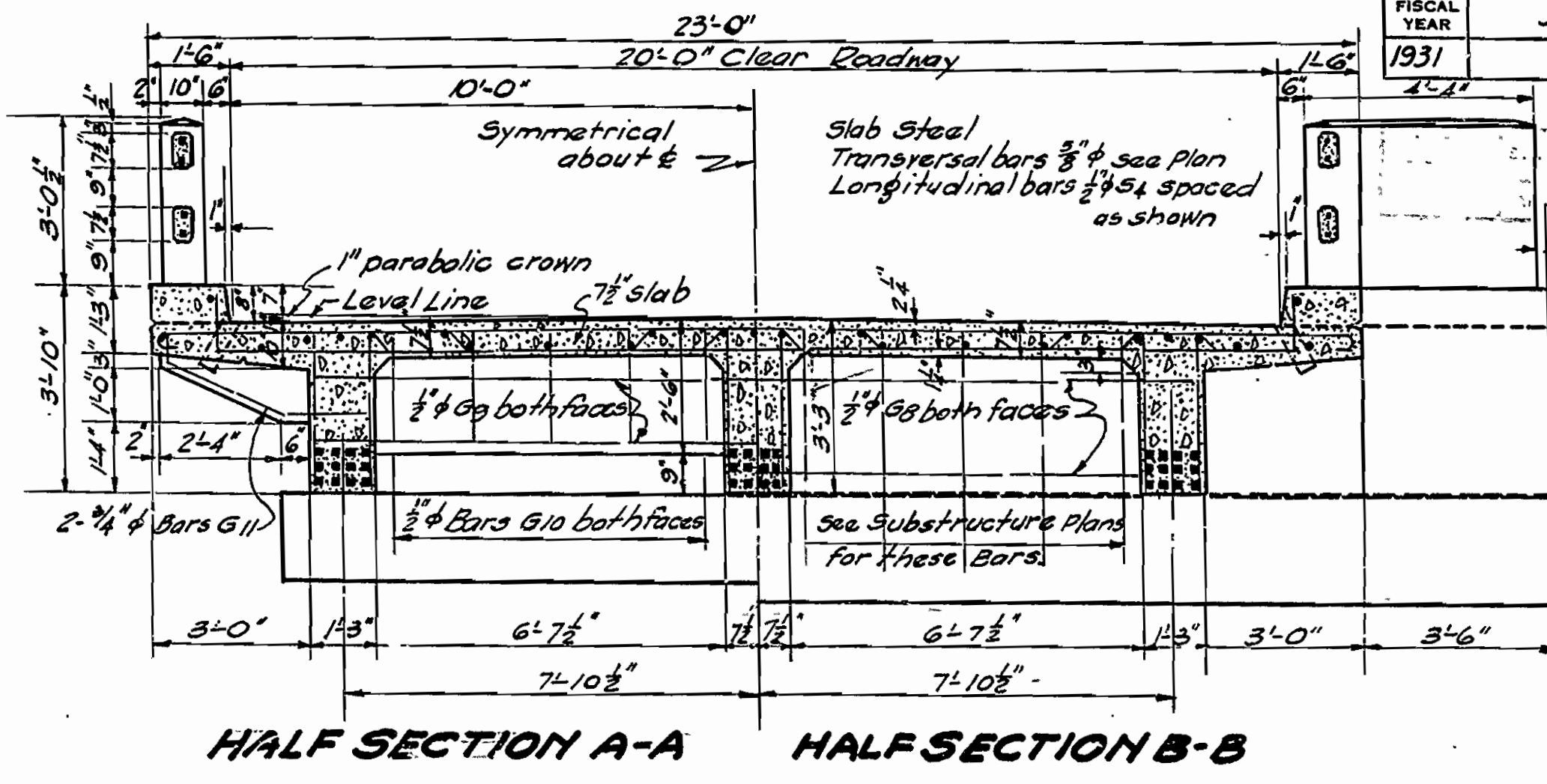
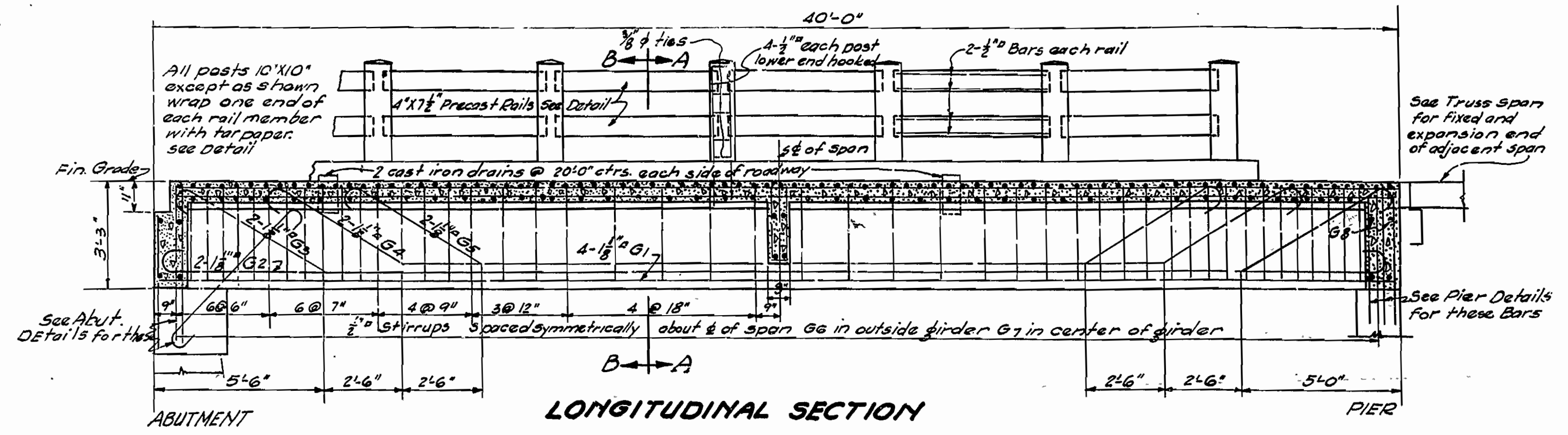
**STANDARD PLAN
 90' LOW TRUSS SPAN
 20' CLEAR ROADWAY
 ONE PANEL SKEW LEFT**

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: A Date: 3-11-31
 Traced By: J Date: 5-14-31
 Checked By: Date:
 BRIDGE NO. 1670 DRAWING NO. 2417

N. B. Sawyer
 BRIDGE ENGINEER

FISCAL YEAR	Job No.	SHEET No.	TOTAL SHEETS
1931	8161	4	11

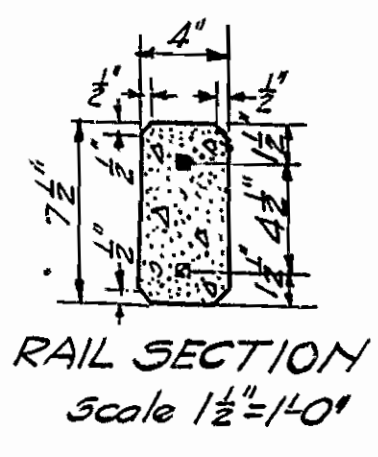
141-C 1931 4 11



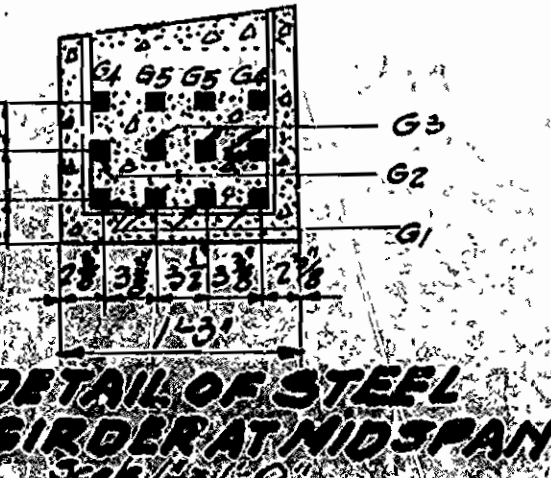
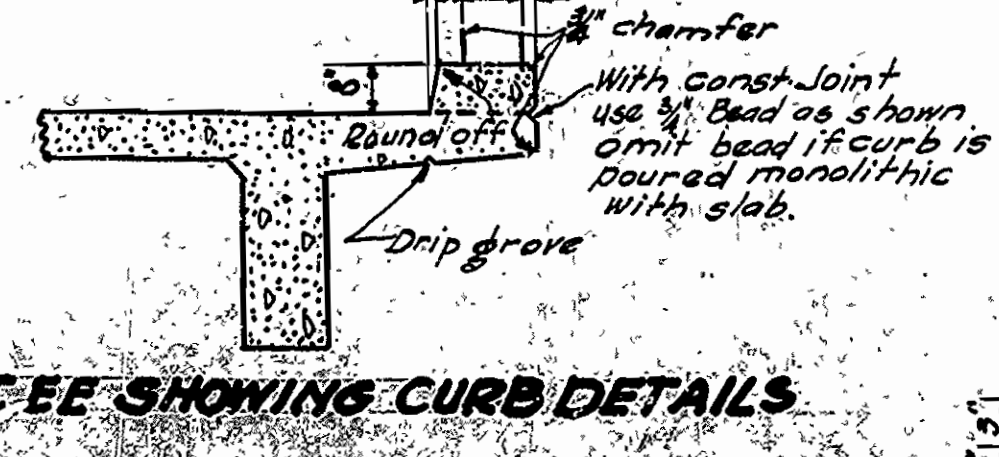
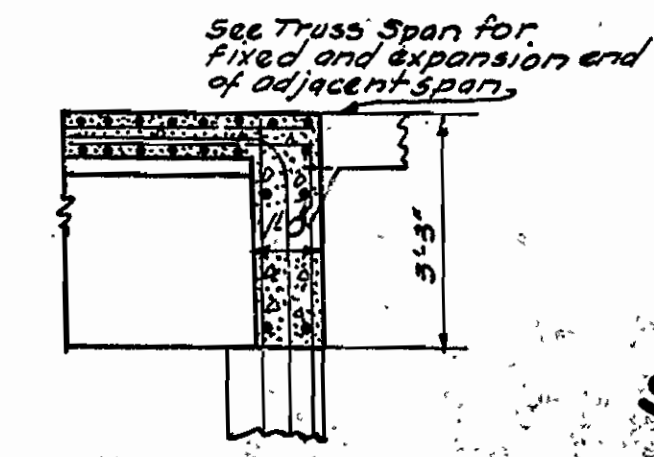
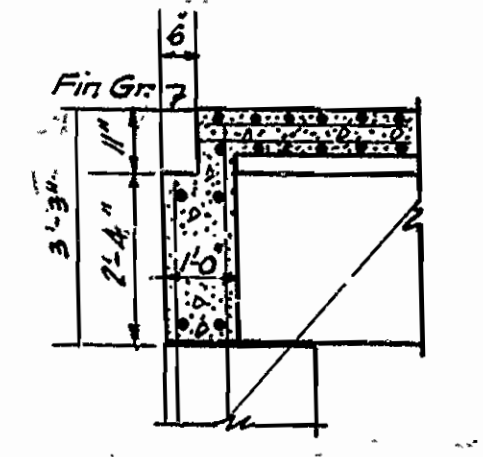
MARK	SIZE	LENGTH	BENDING DIAGRAM
G1	1 1/8"	22'-6"	
G2	1 1/8"	23'-6"	
G3-G4	1 1/8"	Varies	
G5	1 1/8"	24'-0"	
G6-G7	1 1/8"	Varies	
G8	1 1/8"	42'-0"	
G9	1 1/8"	36'-0"	
G10	1 1/8"	31'-0"	
G11	1 1/8"	7'-2"	
G12	1 1/8"	7'-4"	
G13	3/8"	10'-3"	

GENERAL NOTES
 All exposed corners to have 3" chamfer unless otherwise noted.
 Precast concrete handrails to be 1:1:2 mix. Maximum aggregate 3/4".
 All concrete above tops of bent caps, except handrails, to be Class "B".
 Reinforcing steel to be deformed bars of structural or intermediate grade.
 Shop list and bending diagram must be submitted and approved 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 May 30th, 1925 and revised 28.

DETAILS OF
 40'-0" R.C.D. GIRDER SPAN
 ADJACENT TO STEEL TRUSS SPAN
 20'-0" CLEAR RDWY. 3 GIRDER TYPE
 23'-0" - 27'-36" SKEW LEFT
 ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: H.E.B. Date: 3-12-31
 Traced By: H.K.W. Date: 3-12-31
 Checked By: F.O.C. Date: 3-22-31
 BRIDGE No. 1670 DRAWING No. 2301



Wrap tarpaper around end and oversides and edges as shown. One joint to each rail member. Cut off paper flush with face of post after forms are removed.
DETAIL OF EXPANSION JOINT FOR RAIL MEMBERS



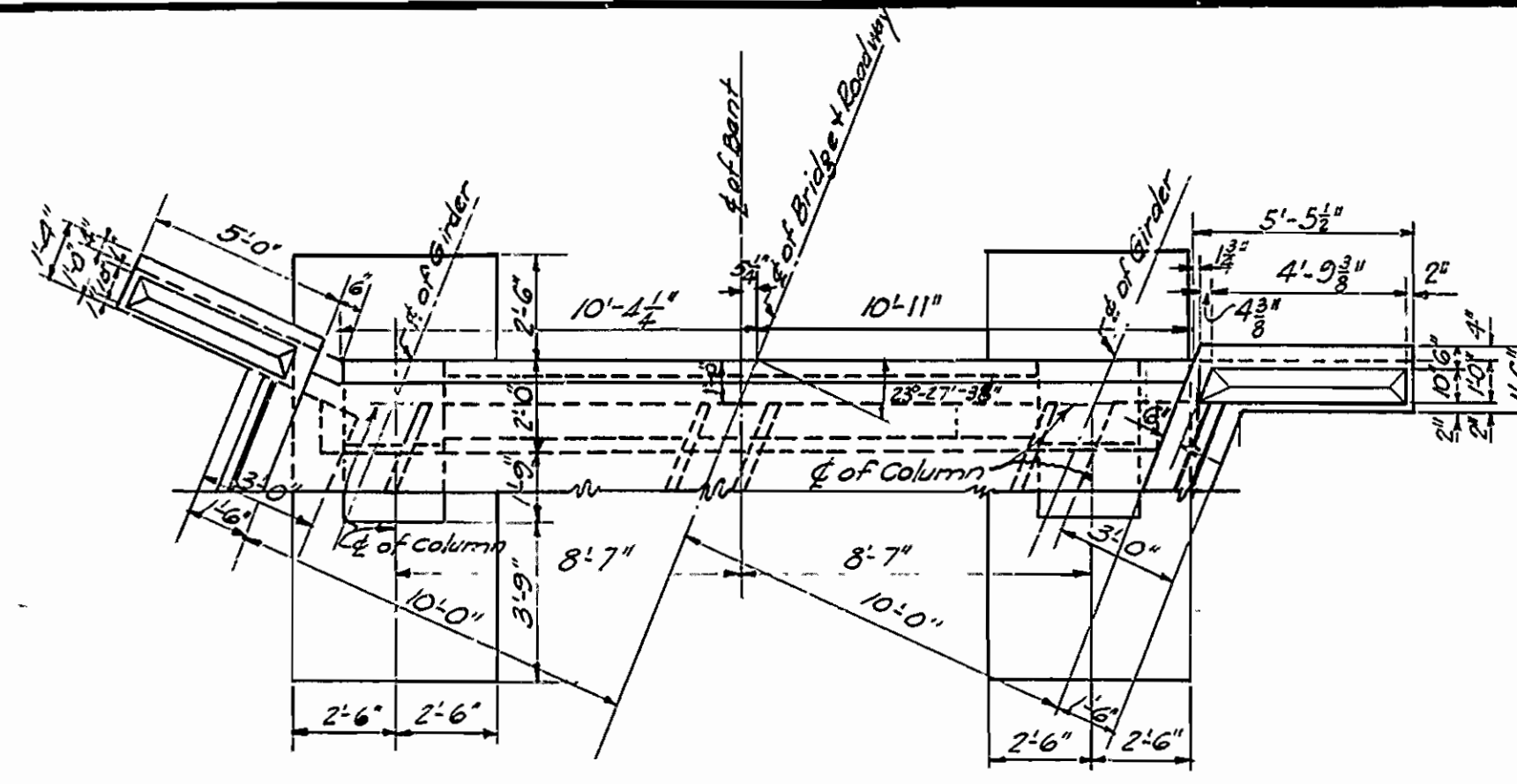
DETAIL OF CAST IRON DRAINS

DESIGNED BY	DATE	REVISED BY	DATE
E.H.C.	1931		

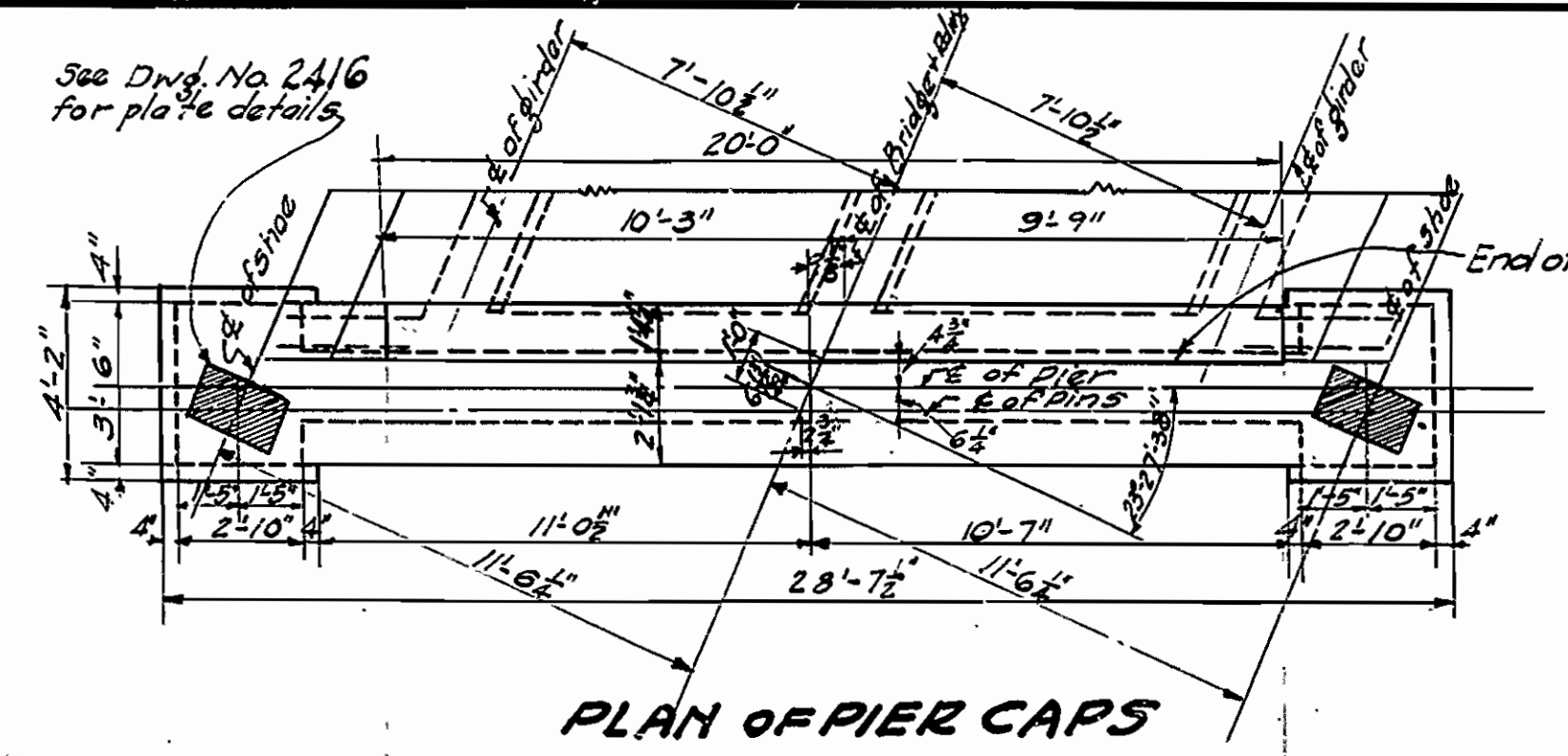
FISCAL YEAR	Job No.	SHEET No.	TOTAL SHEETS
1931	8161	3	11

For Details of 40'-0" R.C.D. Girder, see Drwg. No. 2301
 For Details of 30'-0" Low Truss span, see Drwg. No. 2416 & 2417

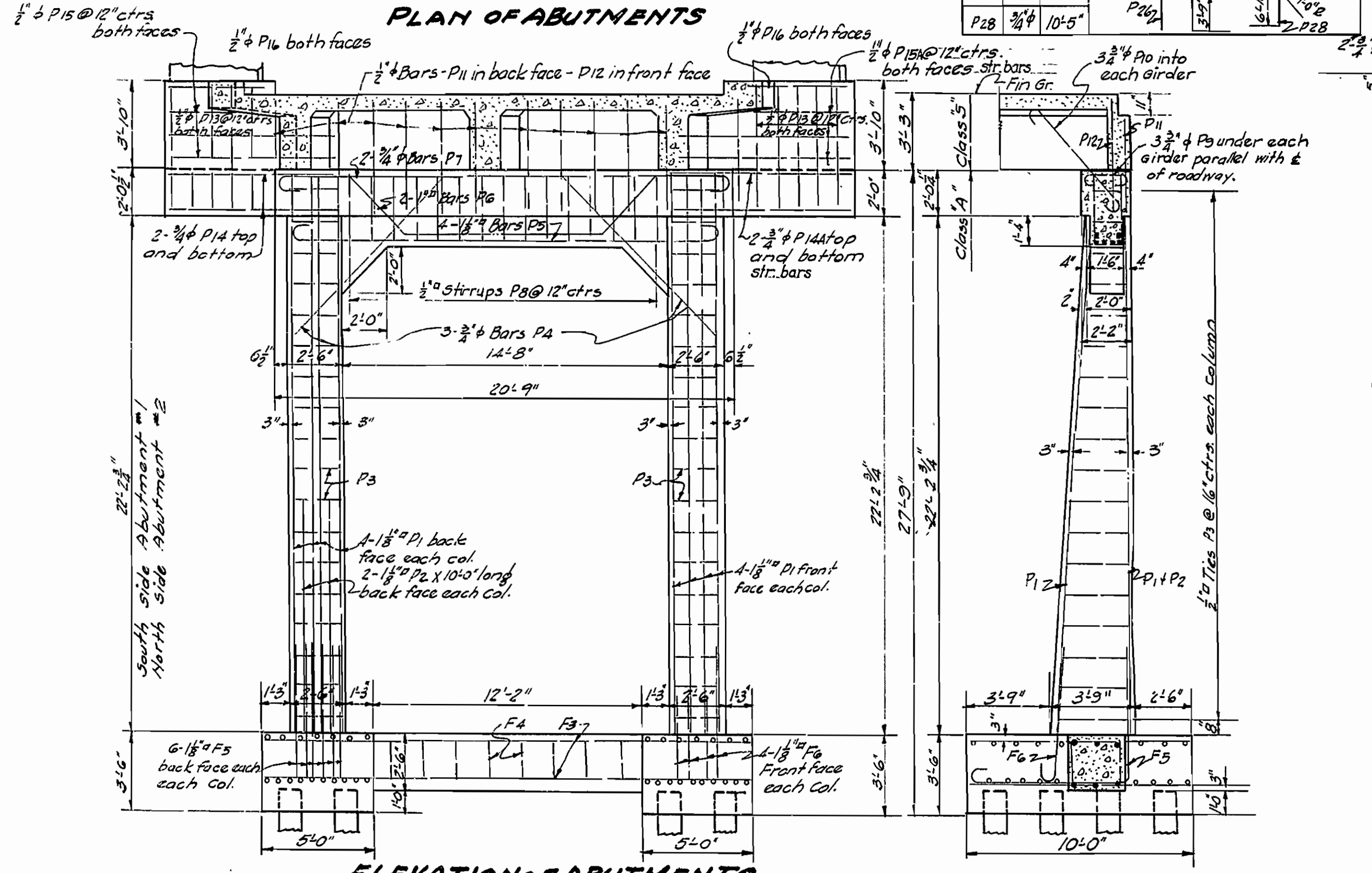
MARK	SIZE	LENGTH	BENDING DIAGRAM	
F5	1 1/2"	13'-9"	[Diagram]	
D6	1 1/4"	24'-6"	[Diagram]	
F6	1 1/2"	7'-0"	[Diagram]	
P8	1 1/2"	21'-2"	[Diagram]	
P9	3/4"	31'-4"	[Diagram]	
P10	3/4"	7'-6"	[Diagram]	
F11	1 1/2"	6'-0"	[Diagram]	
F4	1 1/2"	9'-8"	[Diagram]	
D3	1 1/2"	Varies	[Diagram]	
P18	1 1/2"	Varies	[Diagram]	
P23	3/4"	11'-5"	[Diagram]	
P24	3/4"	12'-9"	[Diagram]	
P14	3/4"	9'-0"	[Diagram]	
P15	3/4"	9'-0"	[Diagram]	
P8	3/4"	7'-8 1/2"	[Diagram]	
P26	3/4"	8'-8"	[Diagram]	
P28	3/4"	10'-5"	[Diagram]	



PLAN OF ABUTMENTS

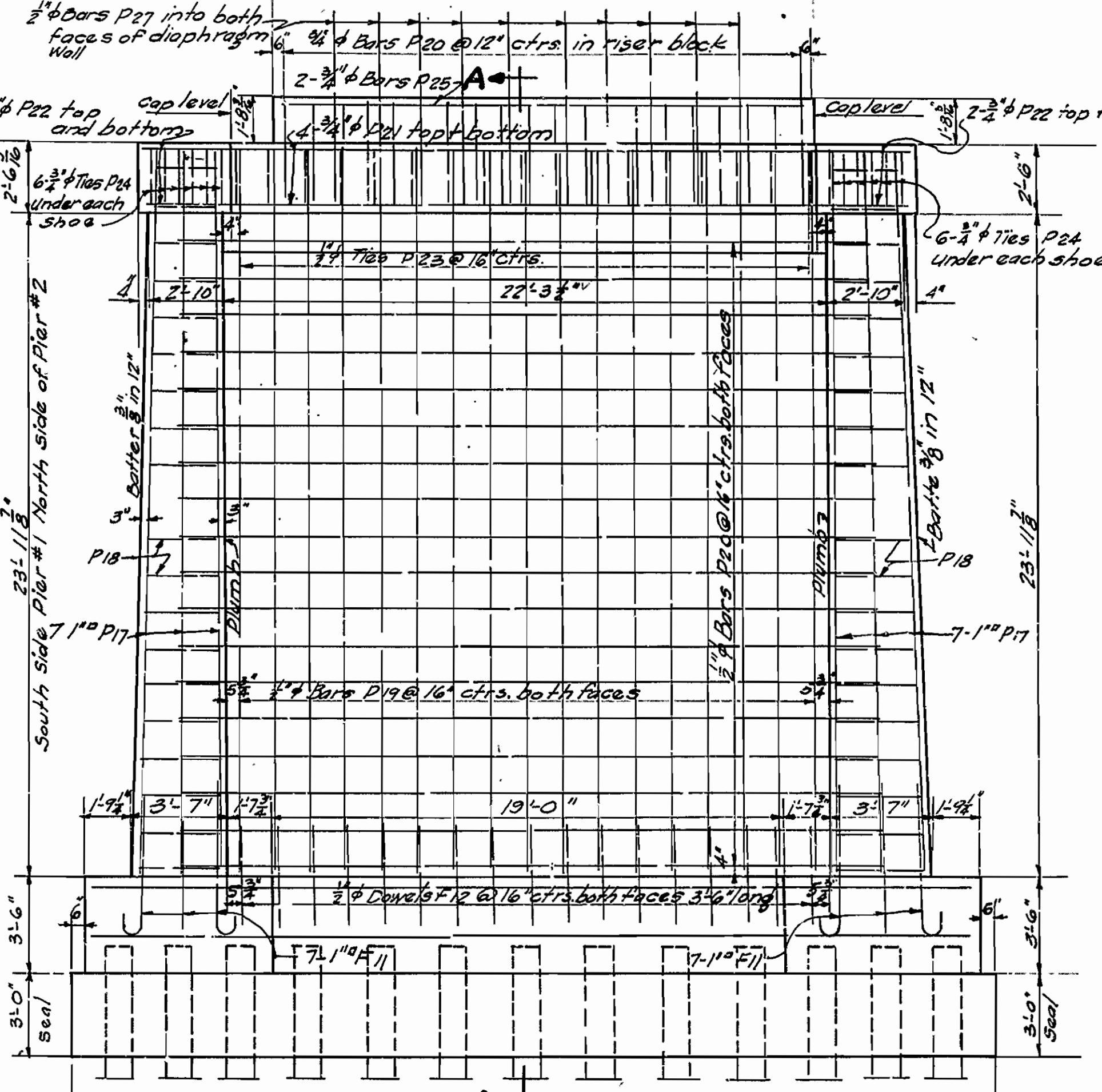


PLAN OF PIER CAPS

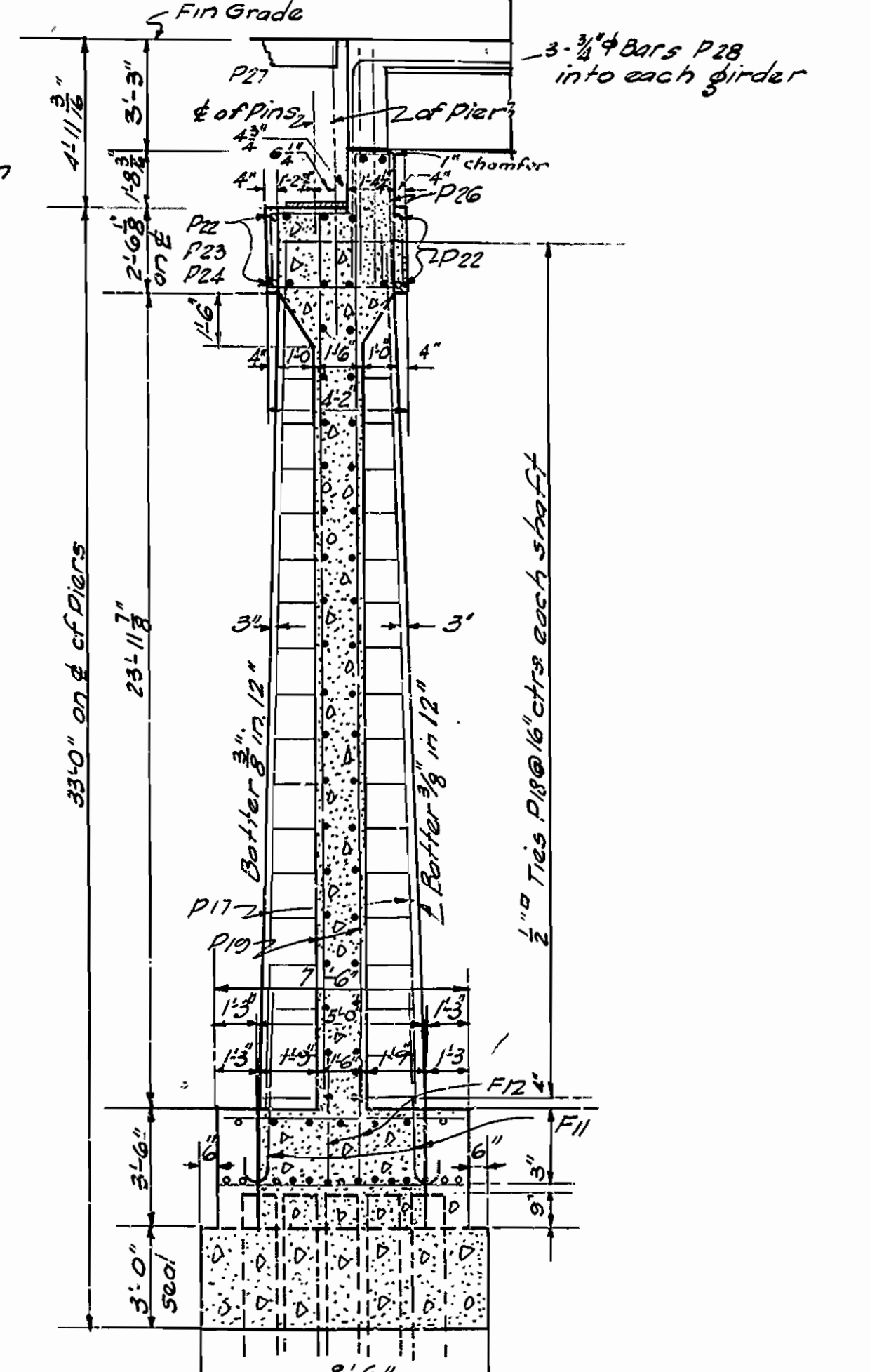


ELEVATION OF ABUTMENTS

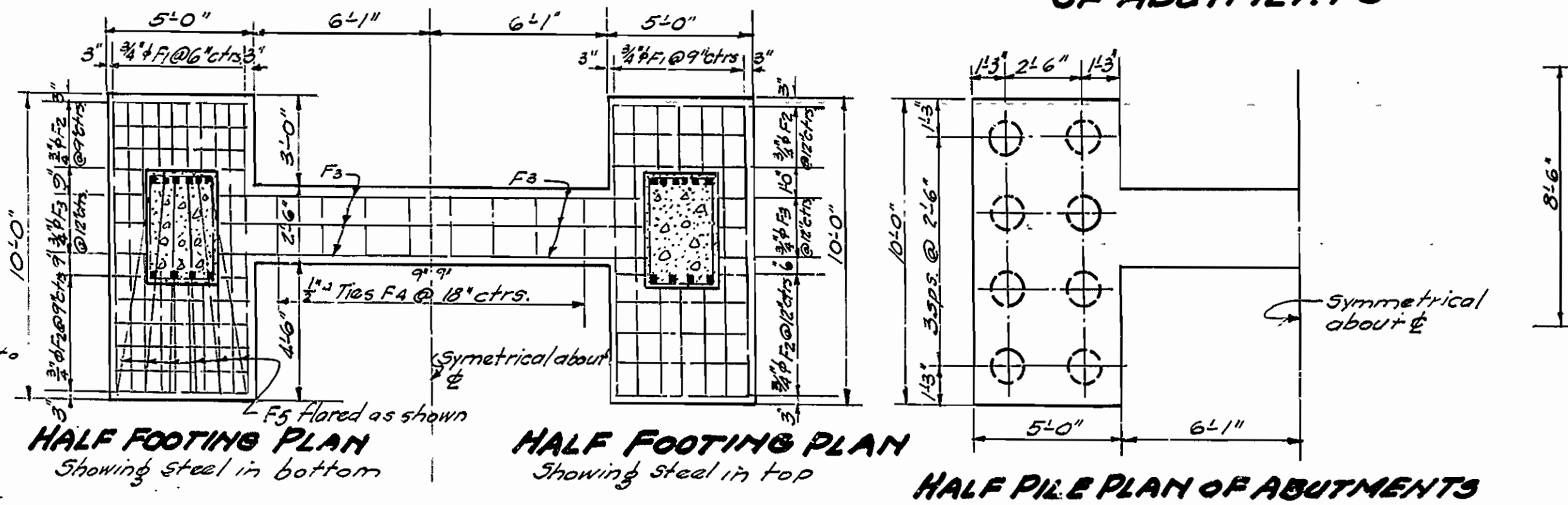
SECTION ONE OF ABUTMENTS



ELEVATION OF PIERS



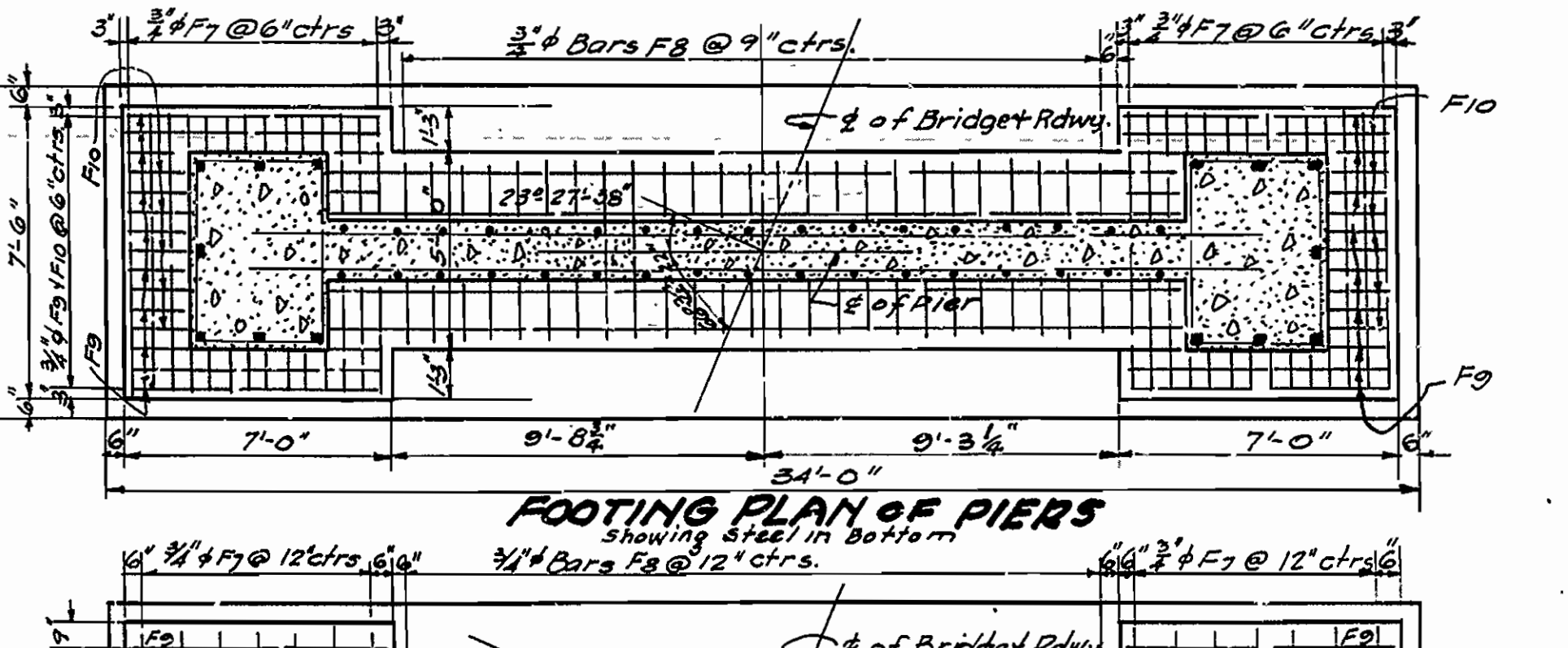
SECTION A-A OF PIERS



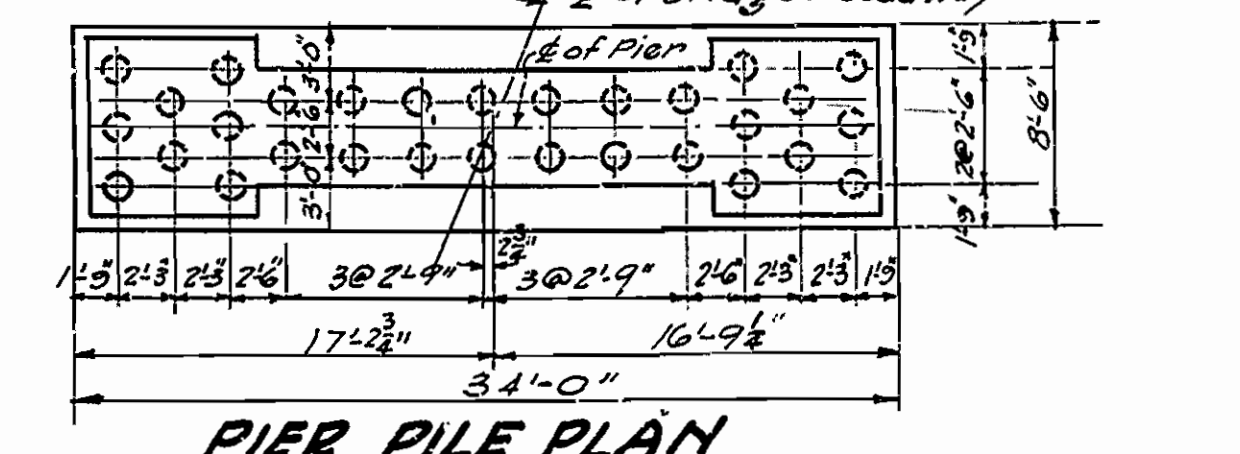
HALF FOOTING PLAN

HALF FOOTING PLAN

HALF PILE PLAN OF ABUTMENTS



FOOTING PLAN OF PIERS



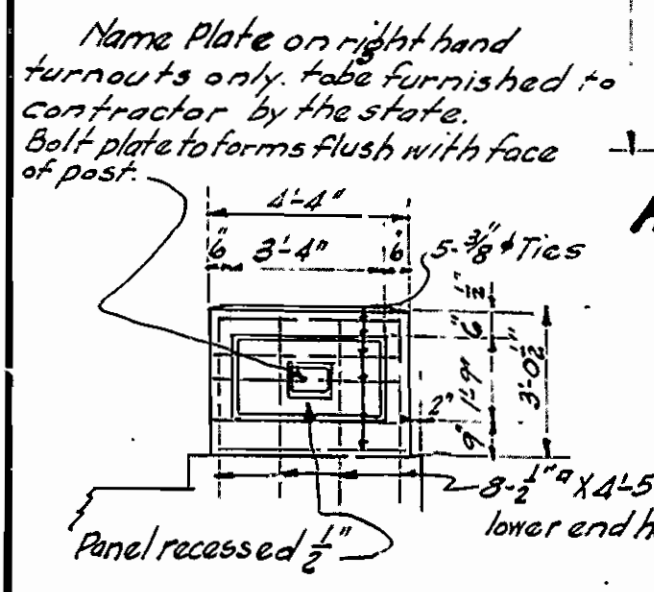
PIER PILE PLAN

DETAILS OF SUBSTRUCTURE FOR BRIDGE OVER POINT REMOVE CANAL MORRILTON BLACKVILLE ROAD CONWAY COUNTY

REVISED E.A.W. 3-8-32
 Handrail Turnout

ROUTE 64 SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: H.A. Date: 2-2-31
 Traced By: A.K.W. Date: 5-11-31
 Checked By: E.O.G. Date: 4-22-30
 Scale: 1/4" = 1'-0"
 DRAWING NO. 3107



ELEV. OF HANDRAIL TURNOUT