

FED. DIST. NO.	STATE	N.R.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	269-D	1931		

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES
OVER
BLACK RIVER AND RELIEF OPENINGS
RANDOLPH COUNTY

ROUTE 67 SEC. 20
JOB NO 10123

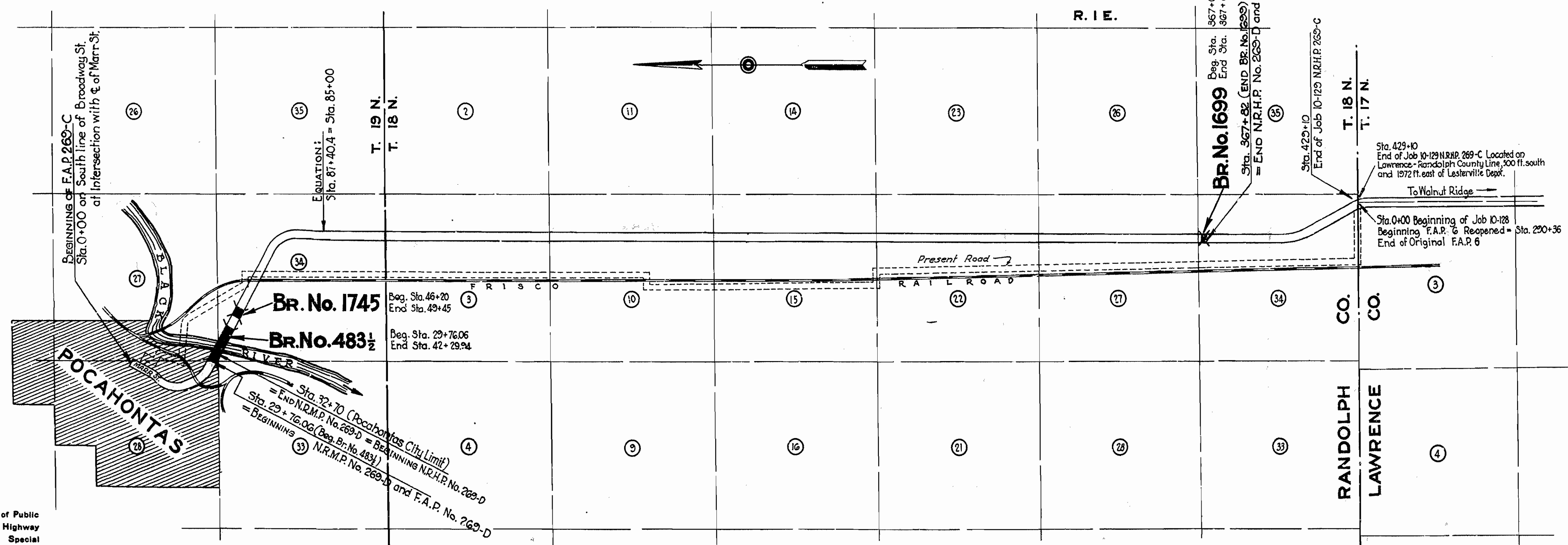
NATIONAL RECOVERY HIGHWAY PROJECT NO. 269-D
NATIONAL RECOVERY MUNICIPAL PROJECT NO. 269-D
F.A.P. NO. 269-D

INDEX OF SHEETS

Sheet No.	Drwg. No.	Title Sheet
1	3302	Title Sheet
2	3303	General Layout Br. No. 483 1/2
3	3304	Layout Of Steel Spans Br. No. 483 1/2
4	3305	Layout Of Br. No. 1745
5	2329	Details Of Std. 36" R.C.D. Girder, 24' Cl. Rdy., 5 Pile Bents.
6	2385	" Of Concrete Handrail
7	3306	" Of Piers Nos. 1 & 5 Br. No. 483 1/2
8	3307	" Of " " 2 & 4 Br. No. 483 1/2
9	3308	" Of Pier No. 3 (Pivot) Br. No. 483 1/2
10	3309	" Of Std. 130" Cj Steel Span, 24' Cl. Rdy.
11	3310	Design Data 230' Swing Span
12	3311	Details Of 230' " " "
13	3312	" Of 230' " " "
14	3313	" Of 230' " " "
15	3314	" Of 230' " " "
16	3315	" Of 230' " " "
17	3316	" Of Machinery 230' Swing Span
18	3317	" Of 230' " " "
19	3154	Layout Of Br. No. 1669
20	2339	Details Of Std. 20' Slab & 36" R.C.D. Girder, 24' Cl. Rdy. on Pile Bents
21	1885	" Of Emb. Construction at Br. ends
22		" Of Bronze Project Marker Plates and Bronze State Bridge Name Plates

QUANTITIES

Item No.	Item	Quantity	Unit
12	Common Excavation	8000	Cu. Yds.
13	Dry Excavation for Structures	634	Cu. Yds.
13	Wet Excavation for Structures	1753	Cu. Yds.
13	Solid Rock Excavation for Structures	119	Cu. Yds.
91	Class 'A' Concrete for Bridges	1280.50	Cu. Yds.
91	Class 'S' Concrete for Bridges	1691.15	Cu. Yds.
91	Seal Concrete for Bridges	142.36	Cu. Yds.
92	Reinforcing Steel for Bridges	553966	Lbs.
93	Concrete Piling	6335	Lin. Ft.
93	Loading Test Piles	1	Each
94	Concrete Railing for Bridges	2342	Lin. Ft.
95	Rip Rap	455	Cu. Yds.
96	Structural Steel	758662	Lbs.
97	Treated Bridge Timber	35,160	M.F.B.M.
98	Untreated Timber Piling	1596	Lin. Ft.
S.P.	Machinery	40000	Lbs.
S.P.	Sand Fill in Pivot Pier	146	Cu. Yds.
S.P.	Asphalt Plank Wearing Surface	608	Sq. Yds.
S.P.	Bronze Expansion Plates	8923	Lbs.
S.P.	Removal of Obstructions		Lump Sum
S.P.	Removal of Old Structure		Lump Sum
S.P.	Bronze Project Marker Plates	8	Each
S.P.	Bronze State Bridge Name Plates	6	Each



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

Revision	Date	Approved
A	Revised MAR. 1st, 1931	Approved June 13, 1931
L	Revised FEB. 10, 1933	
M	MAR. 1, 1931	Approved June 13, 1931
N	Revised SEPT. 1st, 1932	
O	Revised SEPT. 1st, 1932	
P	Revised Nov. 1st, 1932	

SPECIAL PROVISIONS

Item	No. of Sheets	Date
Requirements of Draw Span	19	Sept. 7, 1932
Asphalt Plank Wearing Surface	1	Oct. 24, 1932
Bronze Expansion Plates	1	Sept. 7, 1932
Removal of Obstructions	2	Sept. 7, 1932
Engineer's Field Office	1	Sept. 7, 1932
Removal of Old Structure	2	Aug. 2, 1933
Labor	11	Aug. 2, 1933
Arkansas Materials and Labor	1	
Bronze Project Marker Plates & Bronze State Bridge Name Plates	1	Aug. 10, 1933

LAYOUT
Scale: 1 in. = 2000 ft.

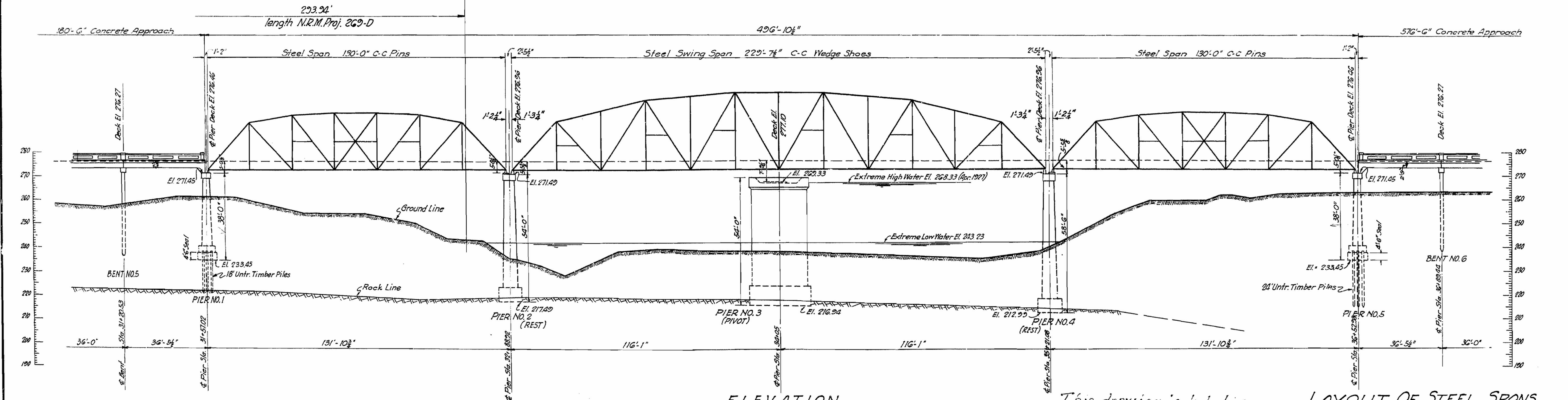
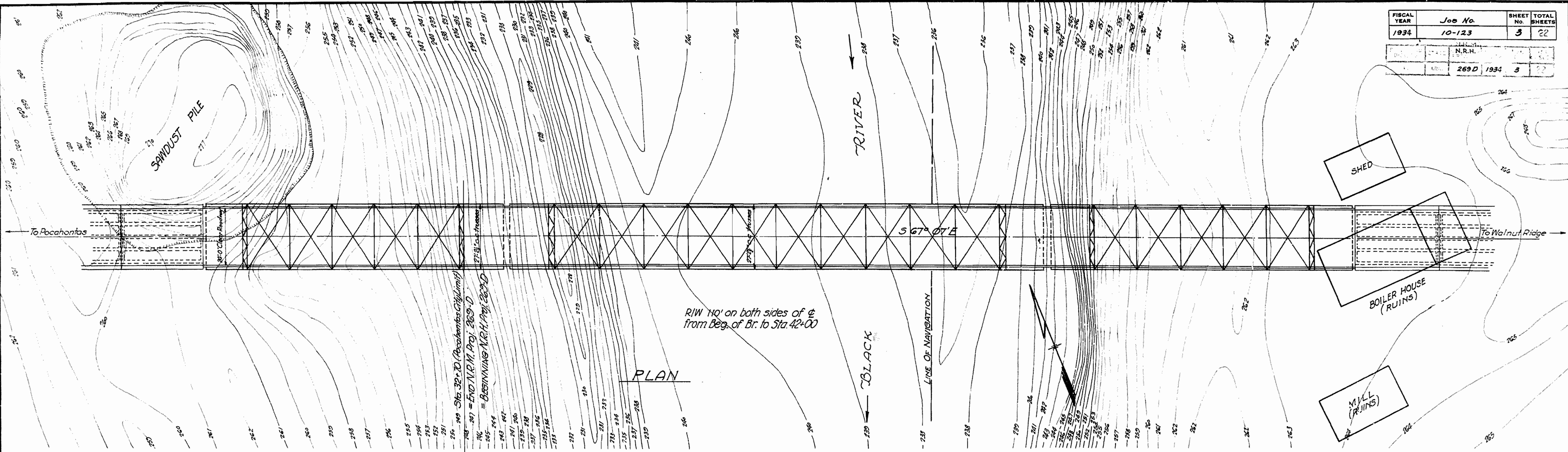
LENGTH OF PROJECT	=	1654.87	FT. OR	0.313	Mi.
LENGTH OF BRIDGES	=	1654.87	FT.		
LENGTH OF EMBANKMENT	=	0			
LENGTH OF JOB	=	1654.87	FT.		
N.R.M. Project	=	293.94	FT. OR	0.055	Mi.
N.R.H. Project	=	1360.93	FT. OR	0.256	Mi.
F.A.P.	=	1654.87	FT. OR	0.313	Mi.

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

W.B. Barner
BRIDGE ENGINEER

BRIDGES NO. 483 1/2-1745 & 1699 DRAWING NO. 3302

FISCAL YEAR	Job No.	SHEET	TOTAL SHEETS
1934	10-123	3	22
N.R.H.			
269 D		1934	3



This drawing included in Job 10525 for general information only.

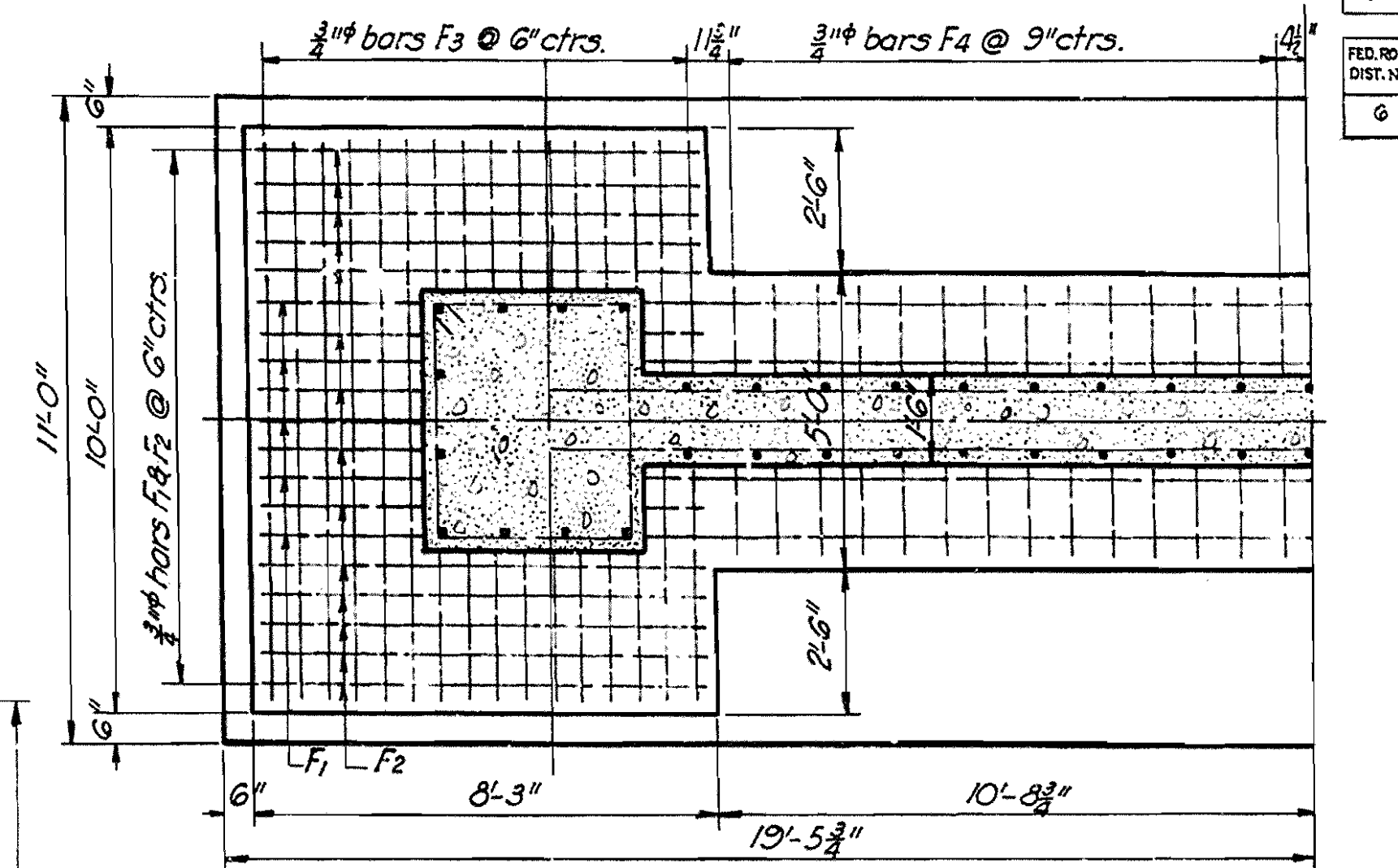
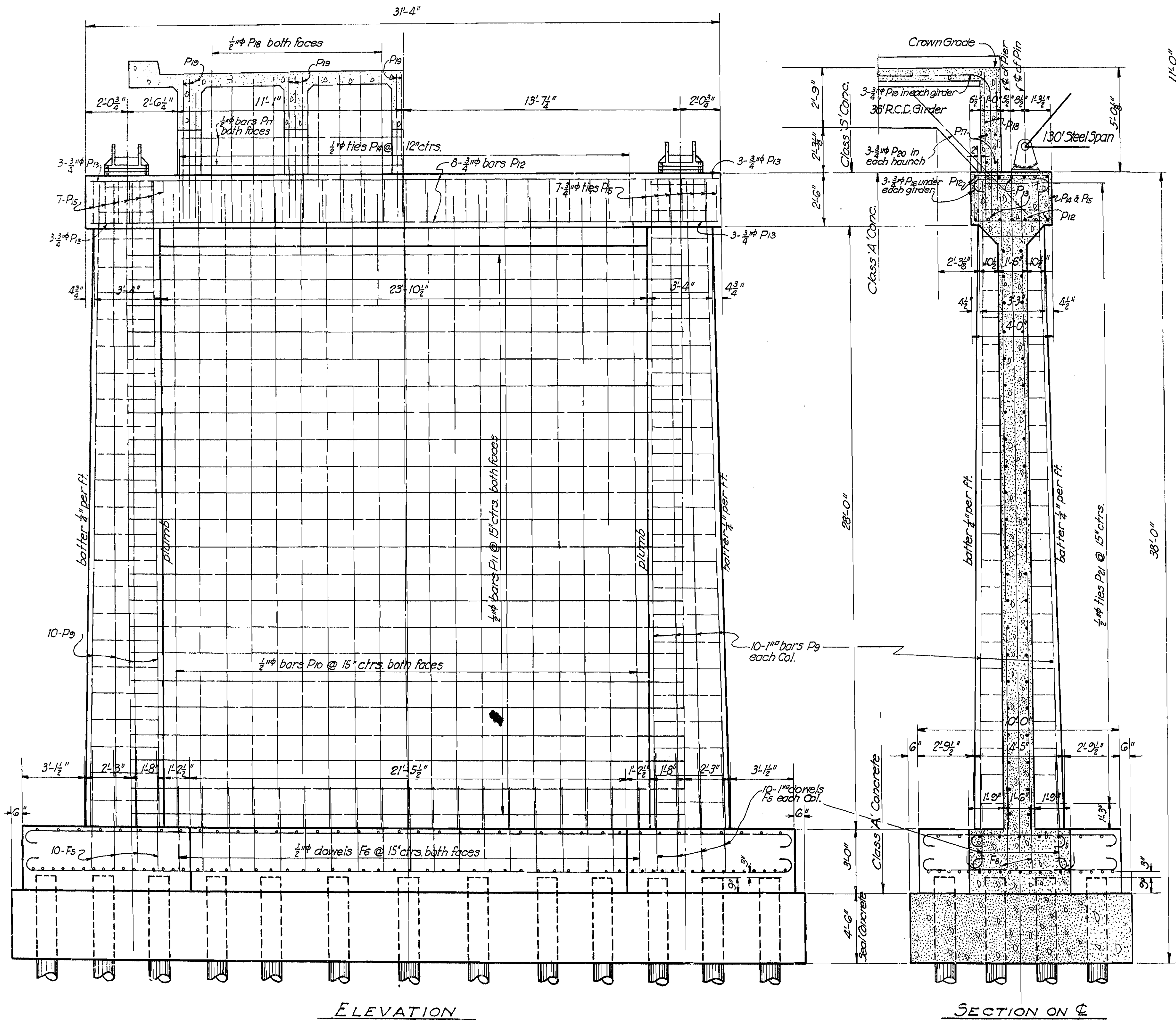
LAYOUT OF STEEL SPANS
BLACK RIVER BRIDGE
AT
POCAHONTAS, ARKANSAS
RANDOLPH COUNTY
ROUTE 67 SEC. 20

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: EAW Date: 9-8-31
Traced By: EAW Date: 10-22-31
Checked By: Date:
BRIDGE NO. 483 1/2 DRAWING NO. 3304

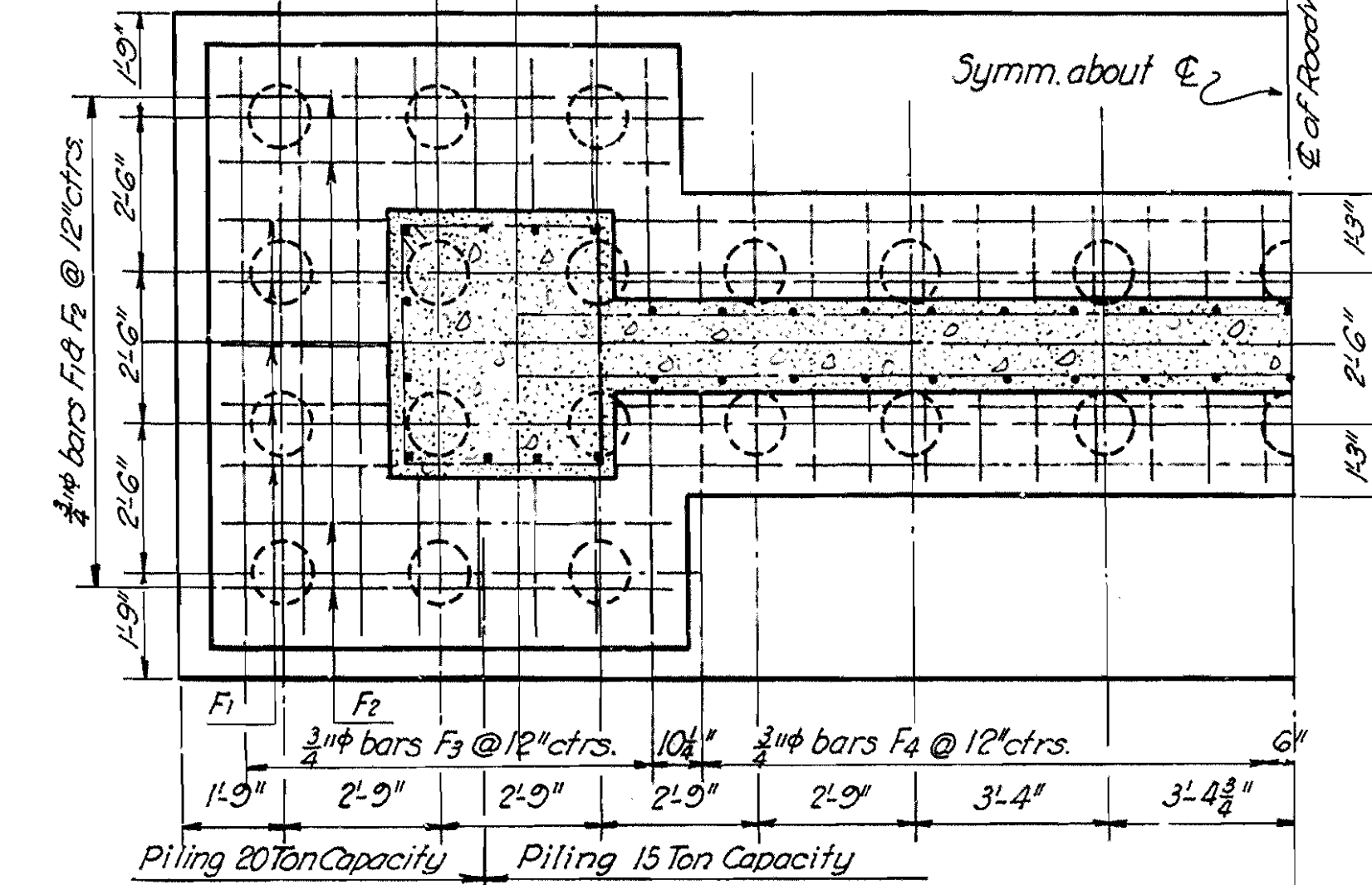
M.B. Sawyer
BRIDGE ENGINEER

Scale: 1 in. = 20 ft.

FISCAL YEAR	JOB NO.	SHEET NO.	TOTAL SHEETS
1934	10-123	7	22
FED. ROAD DIST. NO.	STATE	N. R. H. PROJ. NO.	FISCAL YEAR
6	ARK.	268-D	1934
SHEET NO.	TOTAL SHEETS		
7	22		



HALF PLAN OF FOOTING SHOWING STEEL IN BOTTOM



HALF PLAN OF FOOTING SHOWING STEEL IN TOP & PILE SPACING

LIST OF BENT BARS

Mark	Size	Length	A	B	Diagram
F1	3/4"	39'-0"	37'-6"	6"	
F2	3/4"	9'-3"	7'-9"	6"	
F3	3/4"	11'-0"	9'-6"	6"	
F4	3/4"	6'-0"	4'-6"	6"	
P16	3/4"	5'-0"	3'-6"	6"	
F5	1"	6'-6"	5'-6"	8"	
P14	1/2"	12'-3"	3'-7 1/2"	2'-1 1/2"	
P15	3/4"	12'-3"	3'-7 1/2"	2'-1 1/2"	
P21	1/2"	13'-3" Av.	Var by 3/8"	Var by 3/8"	
P19	3/4"	12'-10"	6'-6"	6'-6"	

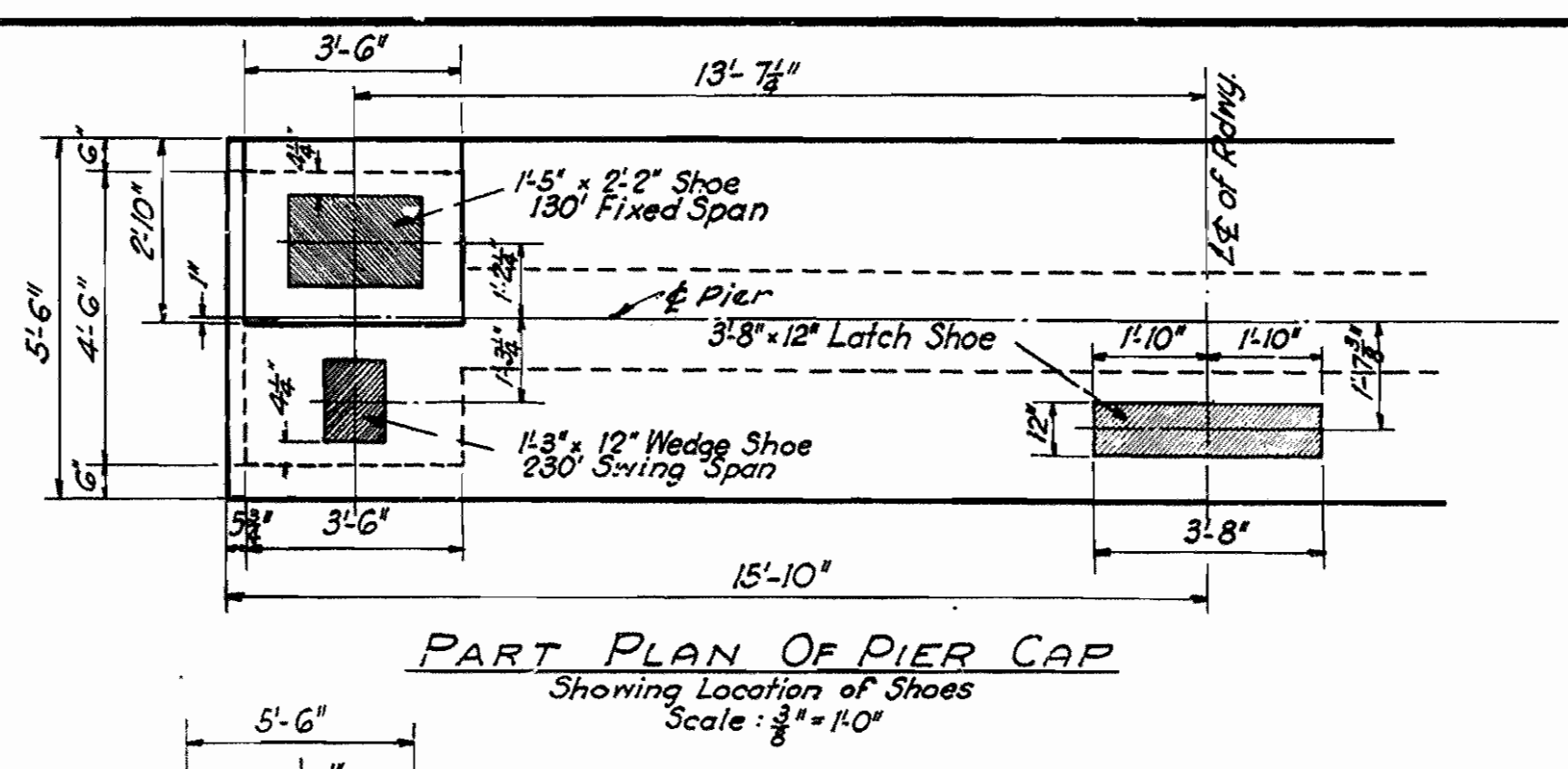
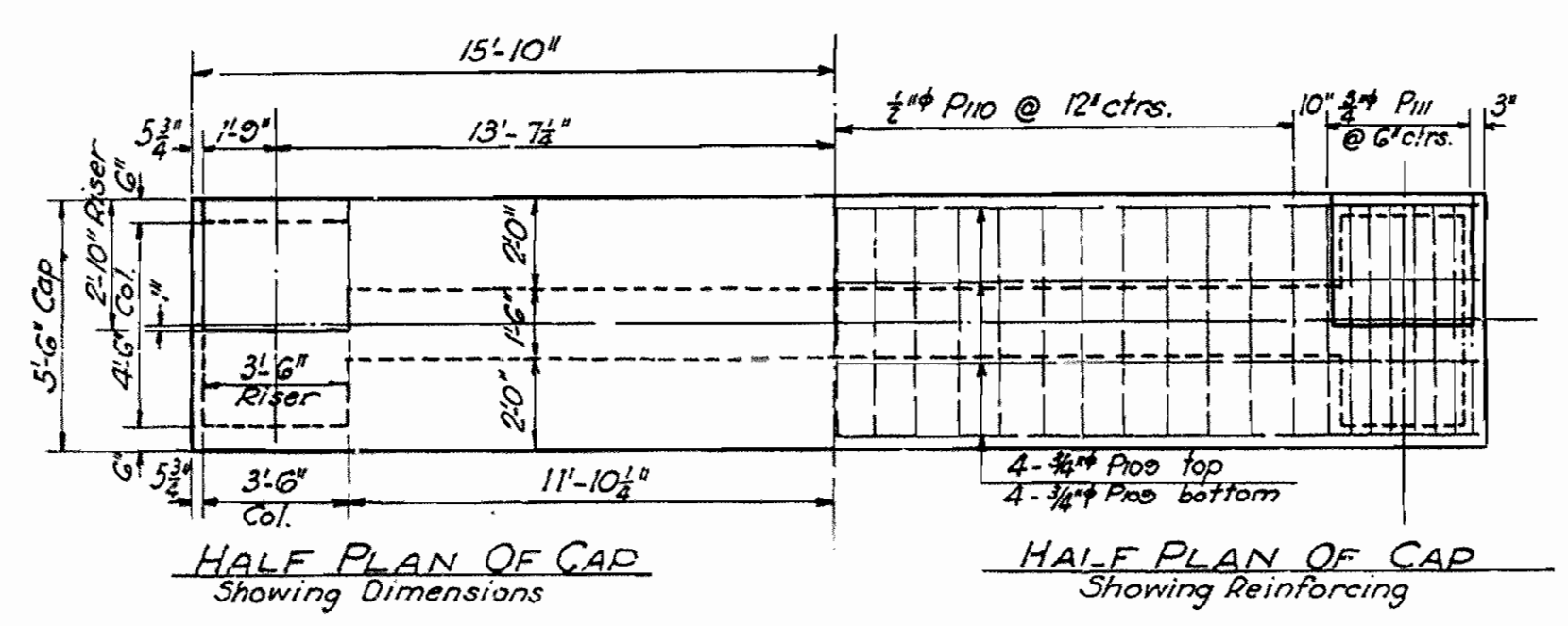
Bars in Pier 1 or 5
F1 to F5 incl.
P9 to P21 incl.

DETAILS OF
PIERS NO. 1 AND 5
BLACK RIVER BRIDGE
AT POCAHONTAS, ARKANSAS
RANDOLPH COUNTY
ROUTE 67 SEC. 20
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Scale: 3/8" in = 1 ft.
DRAWING NO. 3306

N.B. Lawler
BRIDGE ENGINEER

Drawn By: Law Date: 7-28-33
Traced By: Date: 7-23-33
Checked By: Date:

FISCAL YEAR	Job No.	SHEET No.	TOTAL SHEETS
1934	10-123	8	22
(N.R.H.)			
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.
2690	ARK.	1934	8

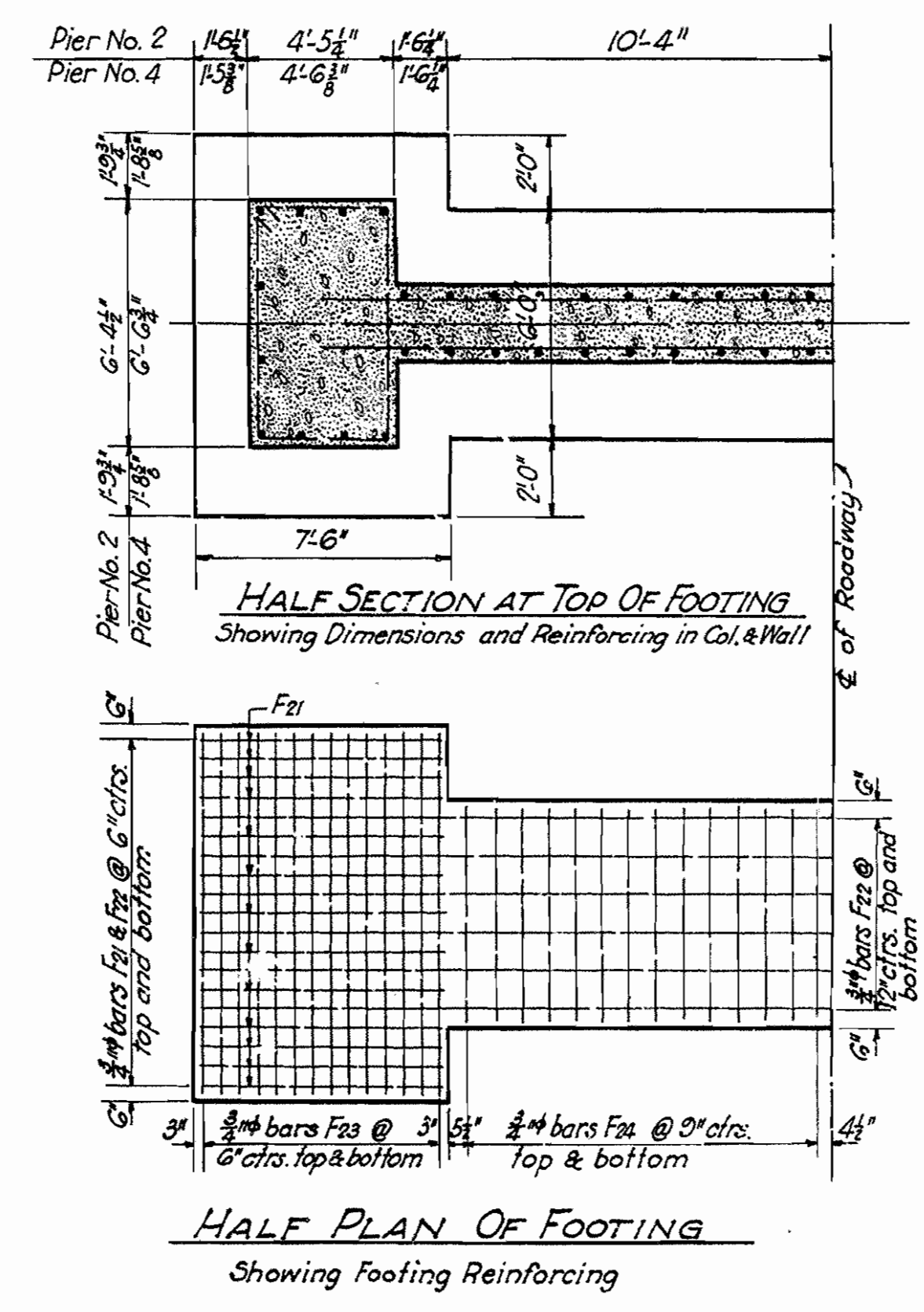
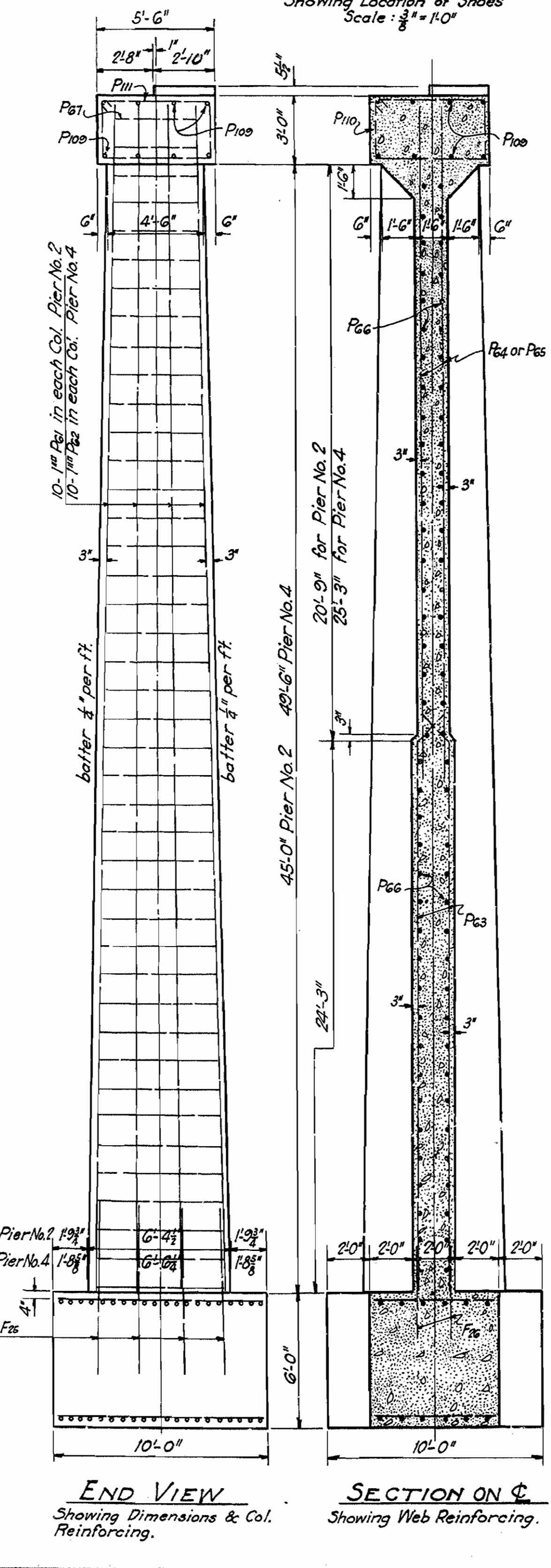
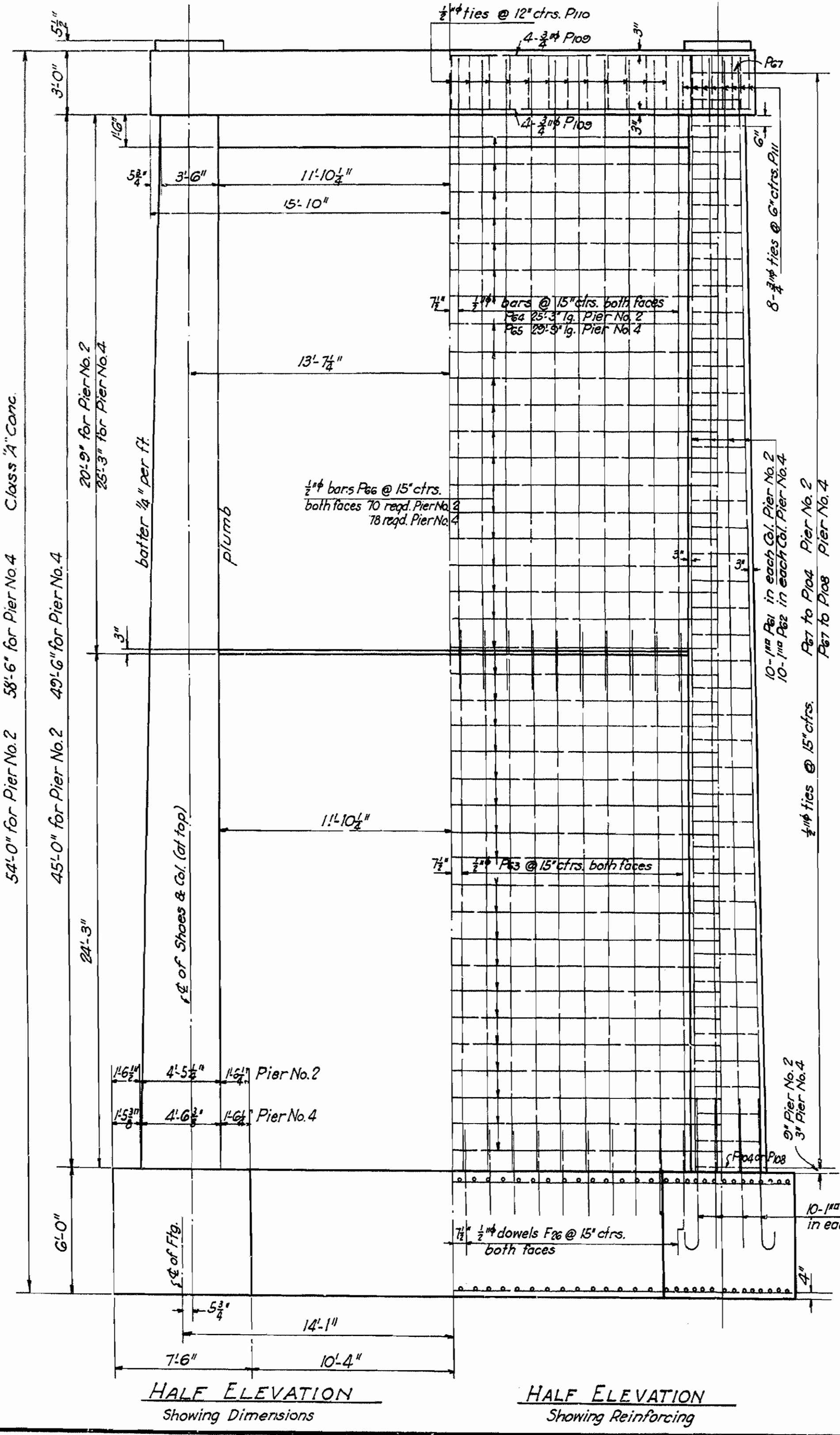


LIST OF BENT BARS PIERS 2&4

Location	Mark	Number	Size	Length	Diagram
Footing Piers 2&4	F25	20 each Pier	1"	8'-0"	
Lower Web Piers 2&4	P63	40 each Pier	1/2"	25'-10"	
Cap Piers 2&4	P110	23 each Pier	1/2"	16'-3"	a b c
Cap Piers 2&4	P111	16 each Pier	3/4"	16'-7"	a b c
Columns Pier 2	P67-P103	76	1/2"	17'-10" Av.	Varies by 1/8" to 5/16" Varies by 1/8" to 1/4"
Columns Pier 4	P67-P103	84	1/2"	18'-2" Av.	Varies by 1/8" to 5/16" Varies by 1/8" to 1/4"

BARS IN PIER NO. 2
F25 to F25 incl. P67-P63-P63 to P63 incl. - P103 to P111 incl.

BARS IN PIER NO. 4
F25 to F25 incl. P67-P63-P63 to P111 incl.



REVISED July 26, 1933
Increase Col. Size

DETAILS OF
REST PIERS (Nos. 2 & 4)
BLACK RIVER BRIDGE
AT POCAHONTAS, ARKANSAS
RANDOLPH COUNTY
ROUTE 67 SEC. 20

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: E.A.W. Date: 10-12-31
Traced By: E.A.W. Date: 10-30-31
Checked By: _____ Date: _____

Scale: 1/2" = 1' and as noted

BRIDGE NO. 483 1/2 DRAWING NO. 3307

M. B. Lawrence
BRIDGE ENGINEER

FISCAL YEAR	Job No.	SHEET	TOTAL SHEETS
1934	10-123	9	10
		(N. R. H.)	
		269D/1931	

LIST OF BENT BARS

Location	Mark Number	Size	Length	Diagram	
Footing	F16	22	12'-0"	a b 11'-0" 8'	
	F17	146	6'-0"		a
	F7	44	1"	27'-11"	b 25'-0" 8'
	F8	8	1"	26'-11"	
	F9	8	1"	24'-11"	a b 22'-0" 8'
	F10	8	1"	22'-11"	
	F11	8	1"	20'-11"	a b 18'-0" 8'
	F12	8	1"	18'-11"	
	F13	8	1"	16'-11"	a b 14'-0" 8'
	F14	8	1"	14'-11"	
	F15	8	1"	12'-11"	a b 10'-0" 8'
	Wall	P20	66	24'-0"	23'-3" 6'
	Strut	P31	24	25'-3"	
	Cylinder	P22	61	47'-2"	41'-4" 4-7/8"
		P22	99	27'-2"	
Cylinder	P25	102	24'-0"	16'-3"	
Coping	P28	15	29'-3"	12'-0"	
Octagonal Col.	P27	33	20'-0"	a b 16'-6" 5'-6" 2'-3"	
Octagonal Col.	P28	64	16'-6"		
Strut	P30	28	10'-6"	3'-7" 1'-4"	
Wedge Support	P20	16	20'-0"	45° 5'-2" 2'-6" 6'-0" 4'-5"	

BARS IN PIVOT PIER
F7 to F17 incl.
P22 to P20 incl.

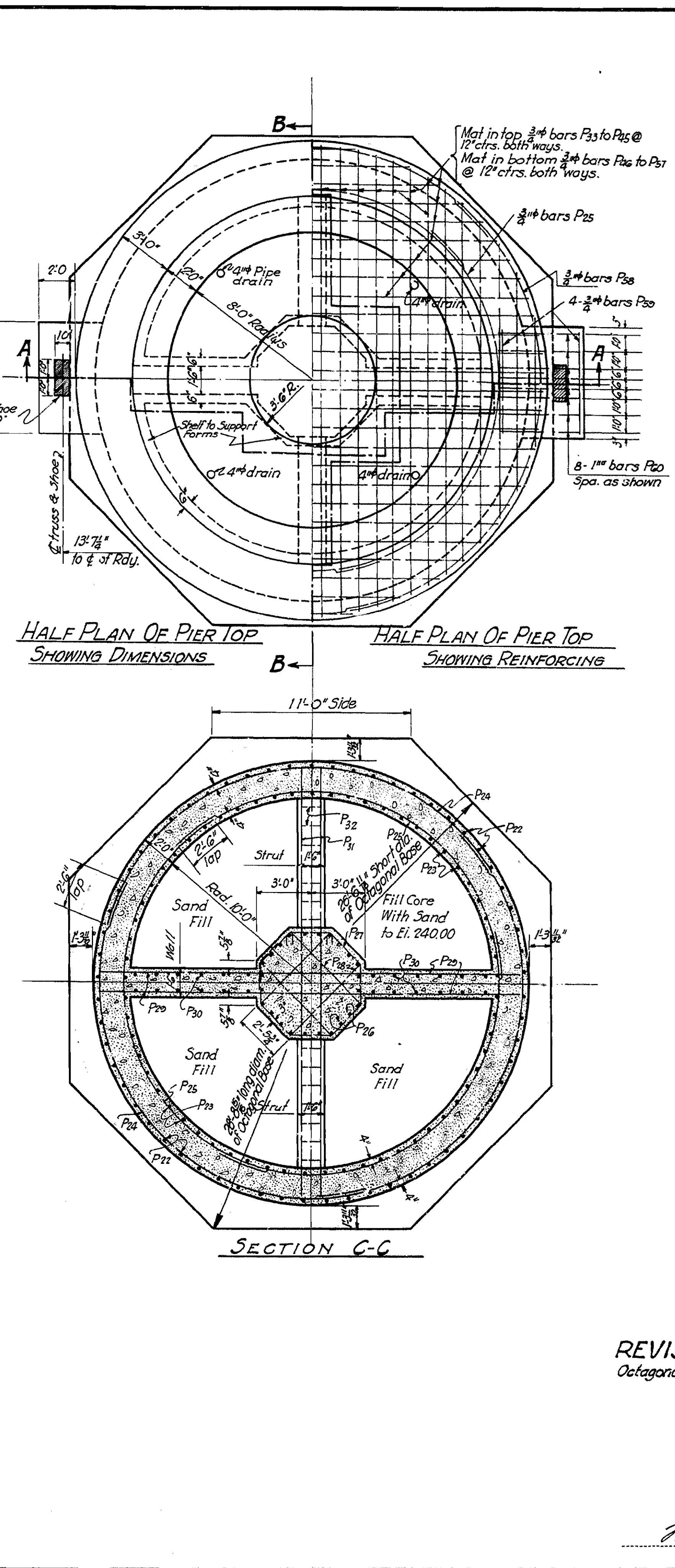
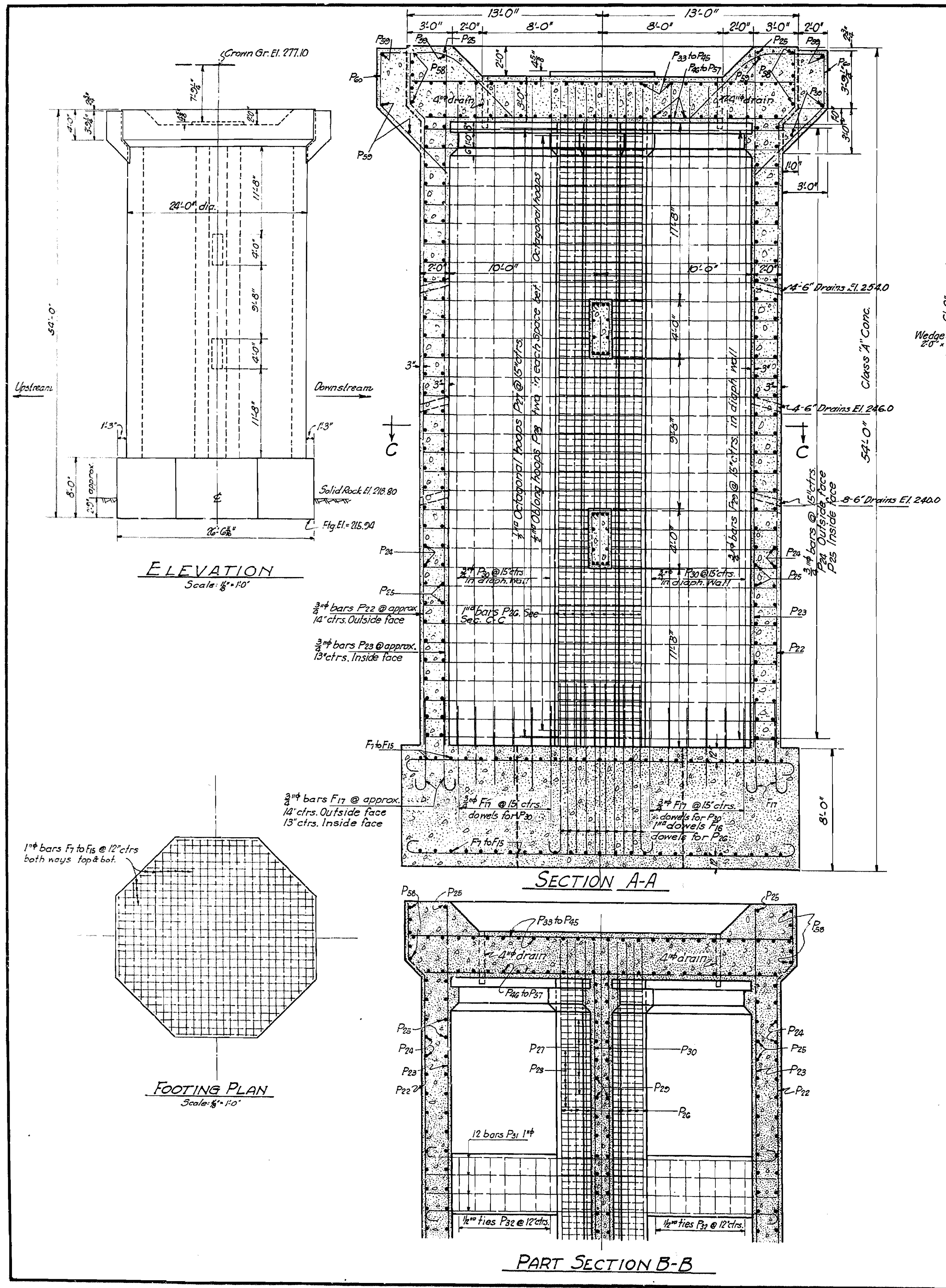
DETAILS OF
PIVOT PIER (NO. 3)
BLACK RIVER BRIDGE
AT POCAHONTAS, ARKANSAS
RANDOLPH COUNTY
ROUTE 67 SEC. 20

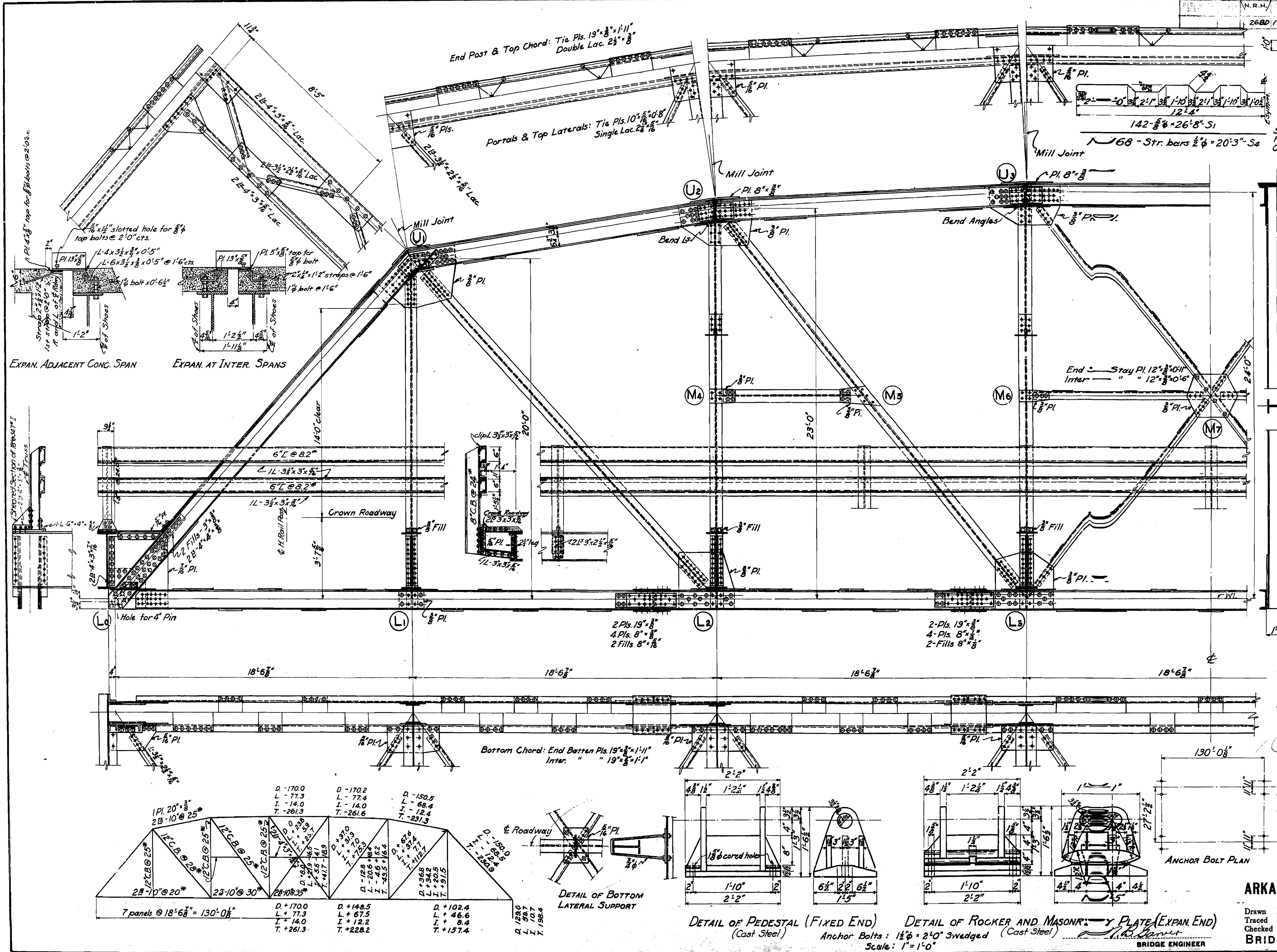
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: EAW Date: 10-14-31
Traced By: EAW Date: 10-26-31
Checked By: _____ Date: _____
Scale: 1/4 in. = 1 ft. and as noted

REVISED
Octagonal Base July 27-1933

N. B. Sawyer
BRIDGE ENGINEER

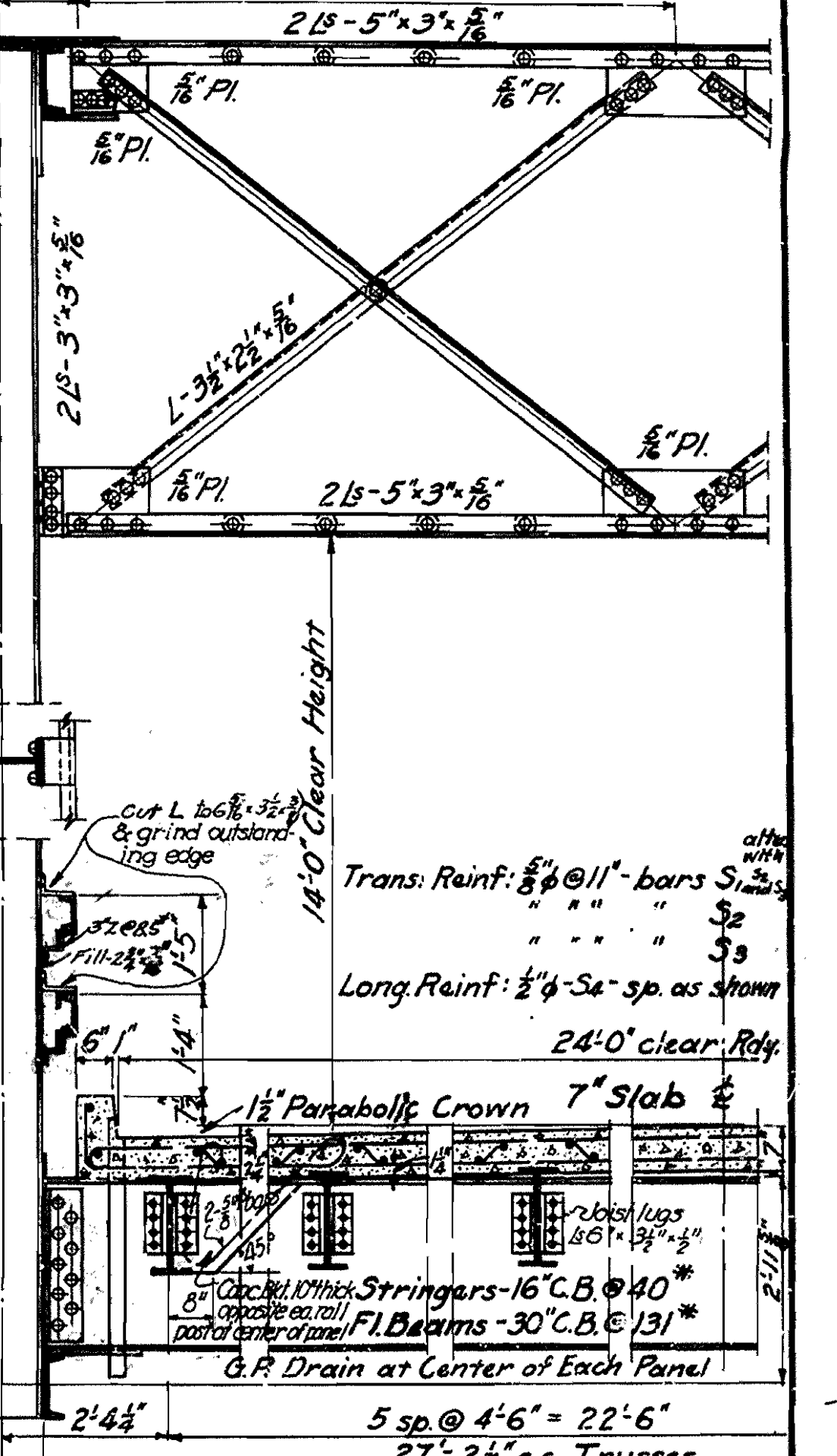
BRIDGE NO. 483 1/2 DRAWING NO. 3308





ESTIMATED QUANTITIES

Structural Steel	171,477 lbs. (incl. Exp. Devices have not been incl.)
Reinforcing Steel	14,000
Class "S" Concrete	750 cu. yds.



GENERAL NOTES

Rivets 3/4". Open holes 1/4".

All holes in truss connections to be sub-punched 1/8" and reamed to size while truss is assembled, this applies to field as well as shop rivets.

Floor beam connections to be sub-punched 1/8" and reamed to a metal template. All field connections shall be riveted.

Shop Paint: After being completely assembled and shop work finished, all pieces shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint: Apply two coats of different colors as specified by the engineer.

Floor Slab: Concrete to be Class "S". One inch has been added for wear.

All floor beams to be milled to exact length after riveting framing angles.

Shapes of equal or greater strength may be substituted for shapes shown, but payment will be made in accordance with sizes shown on this plan.

This drawing shows general features only of design.

Shop drawings shall be made in compliance with specifications, submitted and approved before fabrication is begun.

Specifications: Ark. Standard Road and Bridge Specifications, adopted May 30, 1925 and Revised.

Shoes and expansion devices to be paid for at the unit price bid for Structural Steel.

SPECIAL PLAN

130'-0 3/8" THRU TRUSS SPAN
 24' CLEAR ROADWAY

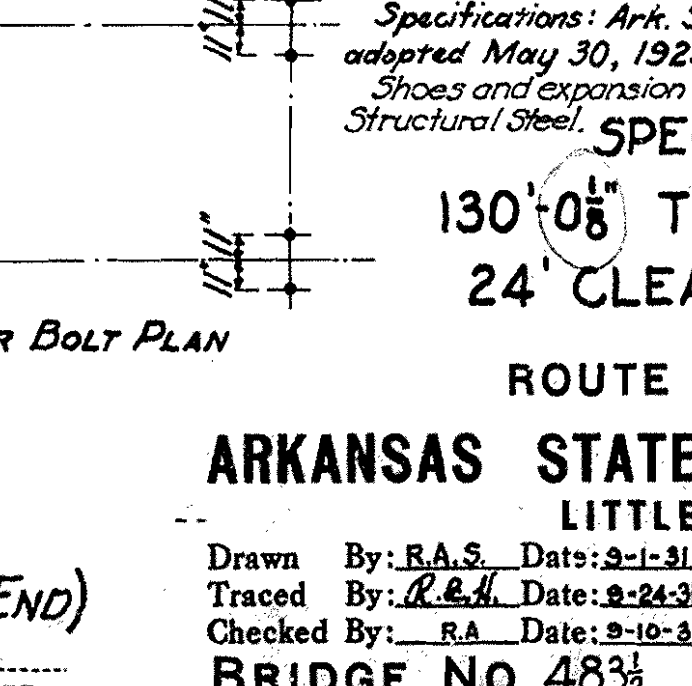
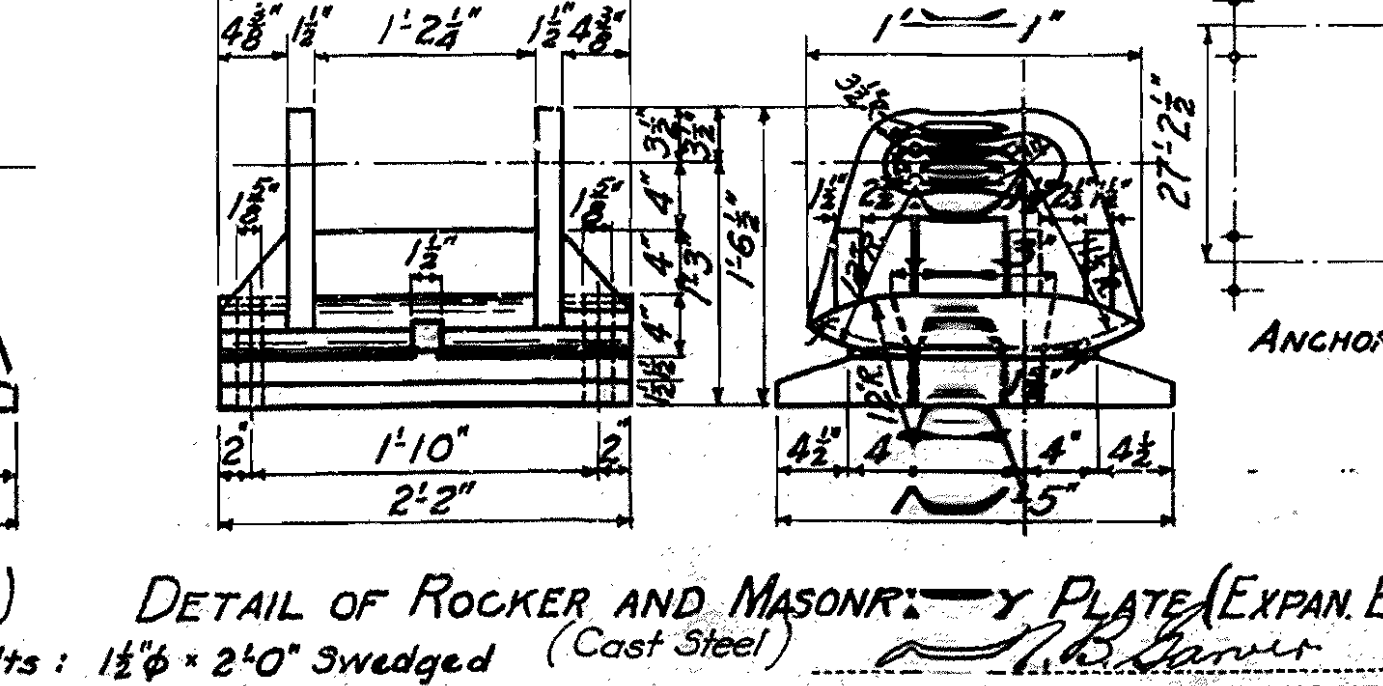
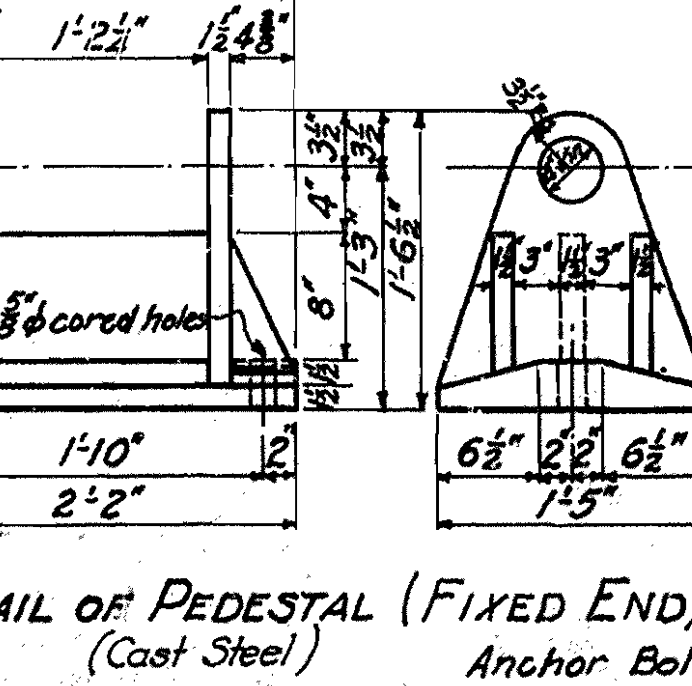
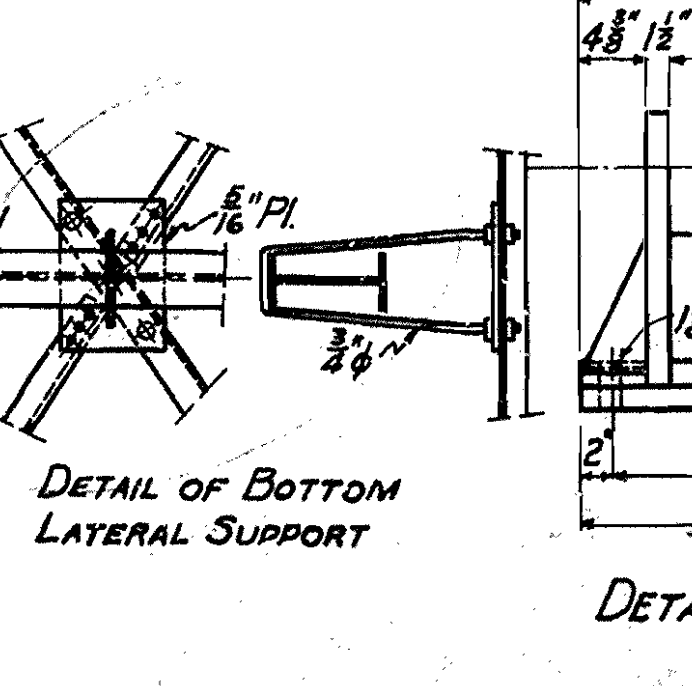
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: R.A.S. Date: 9-1-31
 Traced By: R.A.S. Date: 9-24-31
 Checked By: R.A. Date: 9-10-31

Scale: 1/2 in. = 10 ft. except as noted

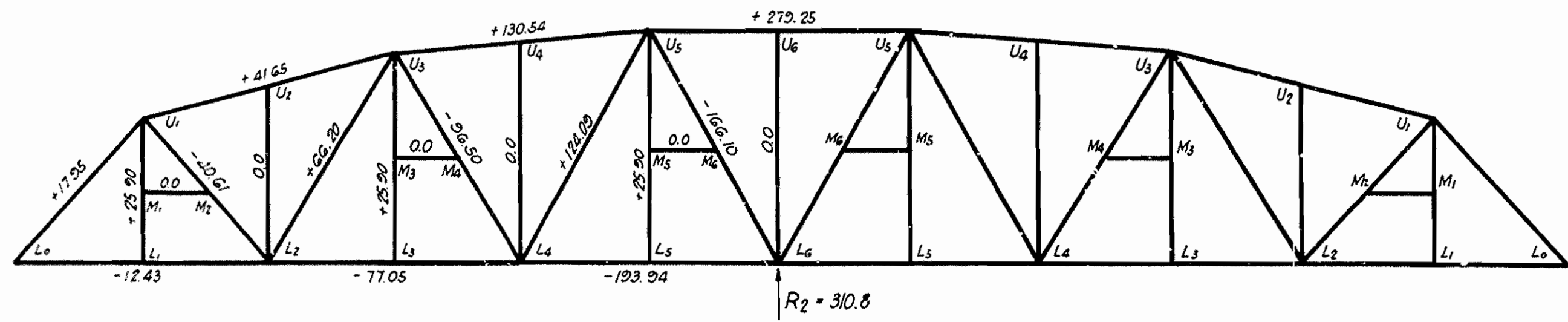
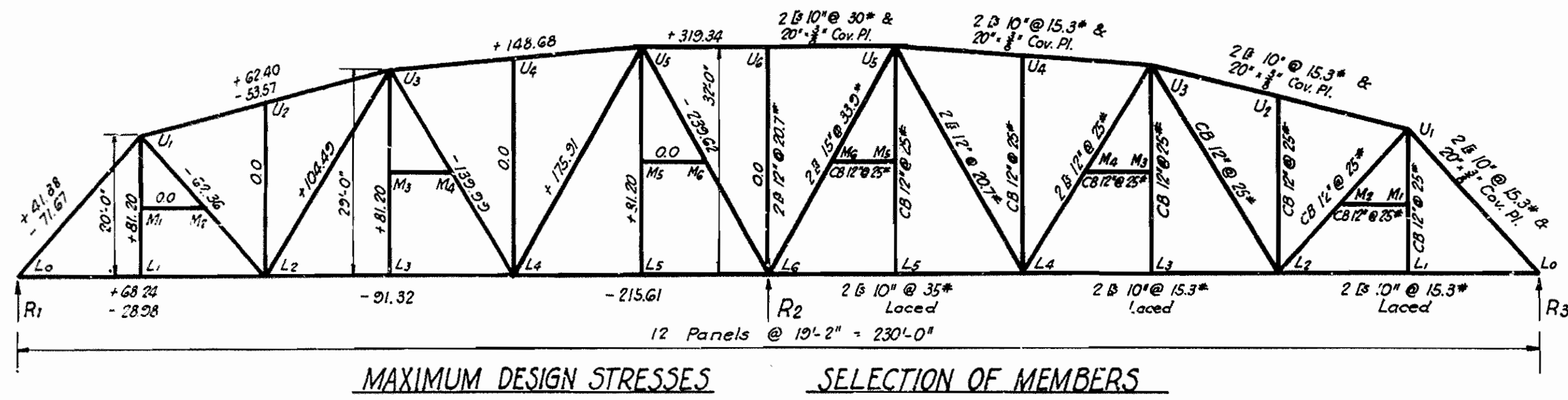
BRIDGE NO. 483 1/2 **DRAWING NO. 3302**

D. -170.0 L. -77.3 I. -14.0 T. -261.3	D. -170.2 L. -77.4 I. -14.0 T. -261.6	D. -150.5 L. -68.4 I. -12.4 T. -231.3
D. +170.0 L. +77.3 I. +14.0 T. +261.3	D. +148.5 L. +67.5 I. +12.2 T. +228.2	D. +102.4 L. +46.6 I. +8.4 T. +157.4

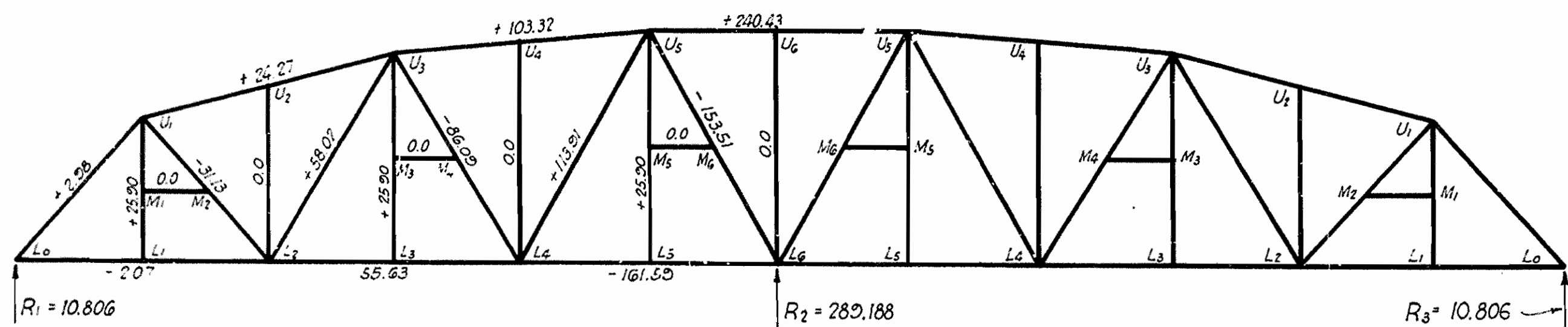


CAMBER IN SWING SPAN

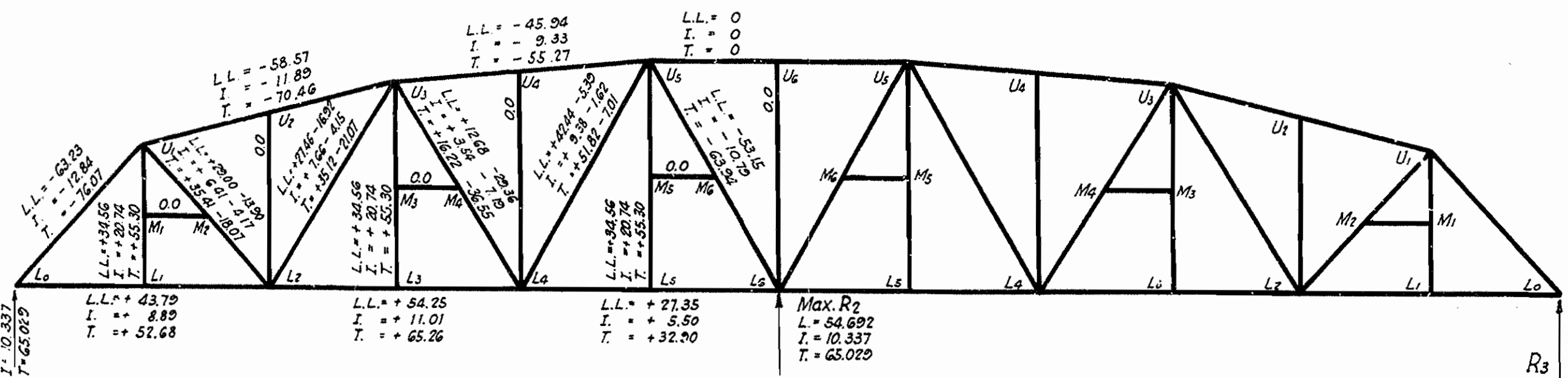
With the span swinging free and total dead load applied, the points, L₀, shall be 3/8" below normal, that is, the end wedges shall lift the ends of the span 3/8" to bring them to grade. This condition will be satisfied by arranging the shop camber so that points, L₀, will be 1/8" above normal. Camber shall be introduced into the truss by lengthening or shortening the diagonals only.



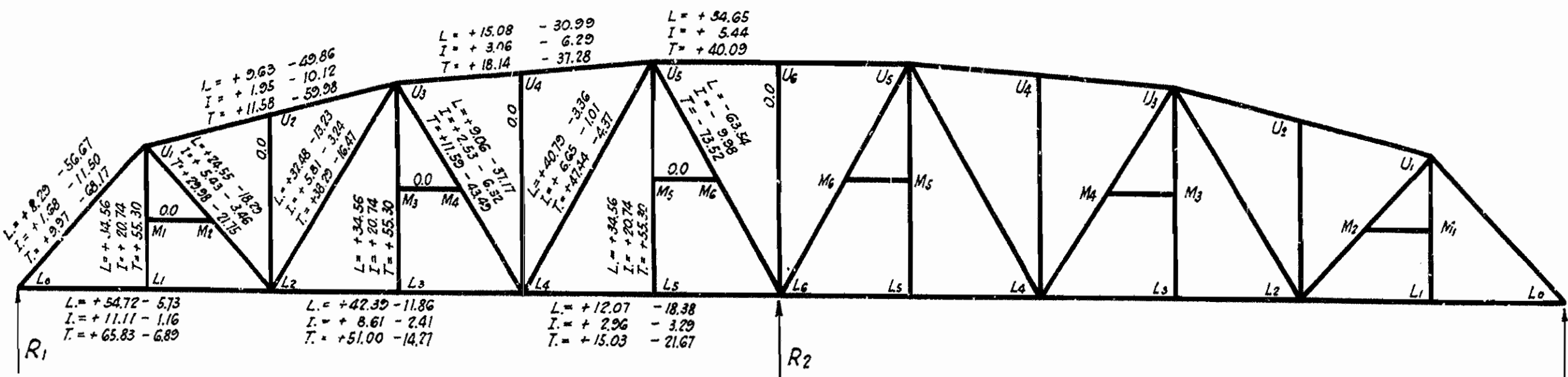
CASE I DEAD LOAD - SPAN OPEN



CASE II DEAD LOAD - PARTIAL END REACTIONS



CASE III LIVE LOAD SIMPLE SPAN



CASE IV LIVE LOAD CONTINUOUS SPAN

TABULATION OF UNIT STRESSES CASE IV

Table with 15 columns: Member, 15 member stress values, Unit Uniform Live Load Tensile Stress, Unit Concentrated Live Load Tensile Stress, Tension Impact Coefficient, Unit Uniform Live Load Compression, Unit Concentrated Live Load Compression, and Compression Impact Coefficient. Rows include members like R1, R2, R3, L0U1, U1U2, etc.

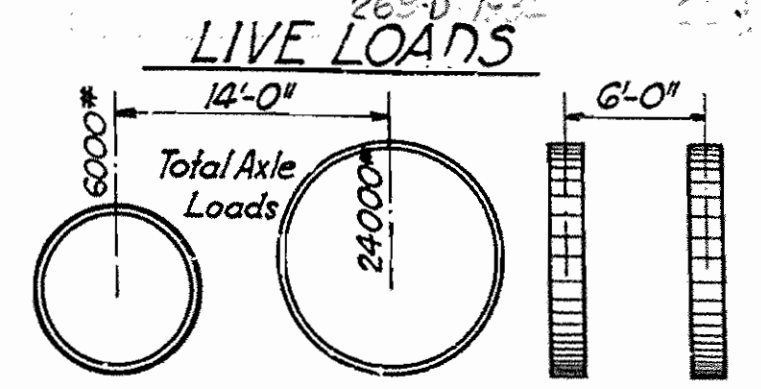
SUMMARY OF STRESSES

Table with 15 columns: Member, Case I + Case II, Case III, Case IV, Case V, Case VI, Case VII, Case VIII, Case IX, Case X, Case XI, Case XII, Case XIII, Case XIV, Case XV, Stress B+, Stress B-, Stress C+, Stress C-, Stress D+, Stress D-, Max. +, Max. -. Rows include members like L0U1, U1U2, U2U3, etc.

TABLE OF COMPUTATIONS FOR END POINT DEFLECTION

Table with 10 columns: Member, Length L, Area A, Stress P, PL + A, U = 1/2 at L0, PUL + A, PL + EA, Stress P, PL + A, PUL + A, PL + EA. Rows include members like L0U1, U1U2, U2U3, etc.

Small table with columns: FISCAL YEAR, SHEET NO., TOTAL SHEETS. Values: 1933, 10-123, 11-22.



2 trucks as shown or Uniform load of 450 lbs. per lineal foot of traffic lane with Concentrated load of 21000 lbs. per lane. NOTE: Each traffic lane is 9'-0" wide.

STRESSES IN SWING SPANS

The stresses in trusses of Swing bridges continuous on three supports shall be calculated for the bridge in following positions: Condition 1 - Bridge open, or closed with ends just touching. Condition 2 - Bridge closed with ends lifted.

Computation of stresses shall be divided into the following cases: Case I - Condition 1, dead load. Case II - Condition 2, dead load, ends lifted to give positive reaction equal to the maximum negative reaction of the live load and impact plus not less than 50% of their sum. Case III - Condition 1, live load on one arm as a simple span. Case IV - Condition 2, live load on Bridge as a continuous girder. The following combinations of these cases shall be used in determining the maximum design stresses: Stress A - Case I alone. Stress B - Case I with Case III. Stress C - Case I with Case IV. Stress D - Case II with Case IV. In computing the live load stresses, the live load shall be considered as applied, either continuously or in detached parts, in such a manner as to produce the maximum stresses. Impact and reversal of stress to be computed in the manner shown in the General Specifications.

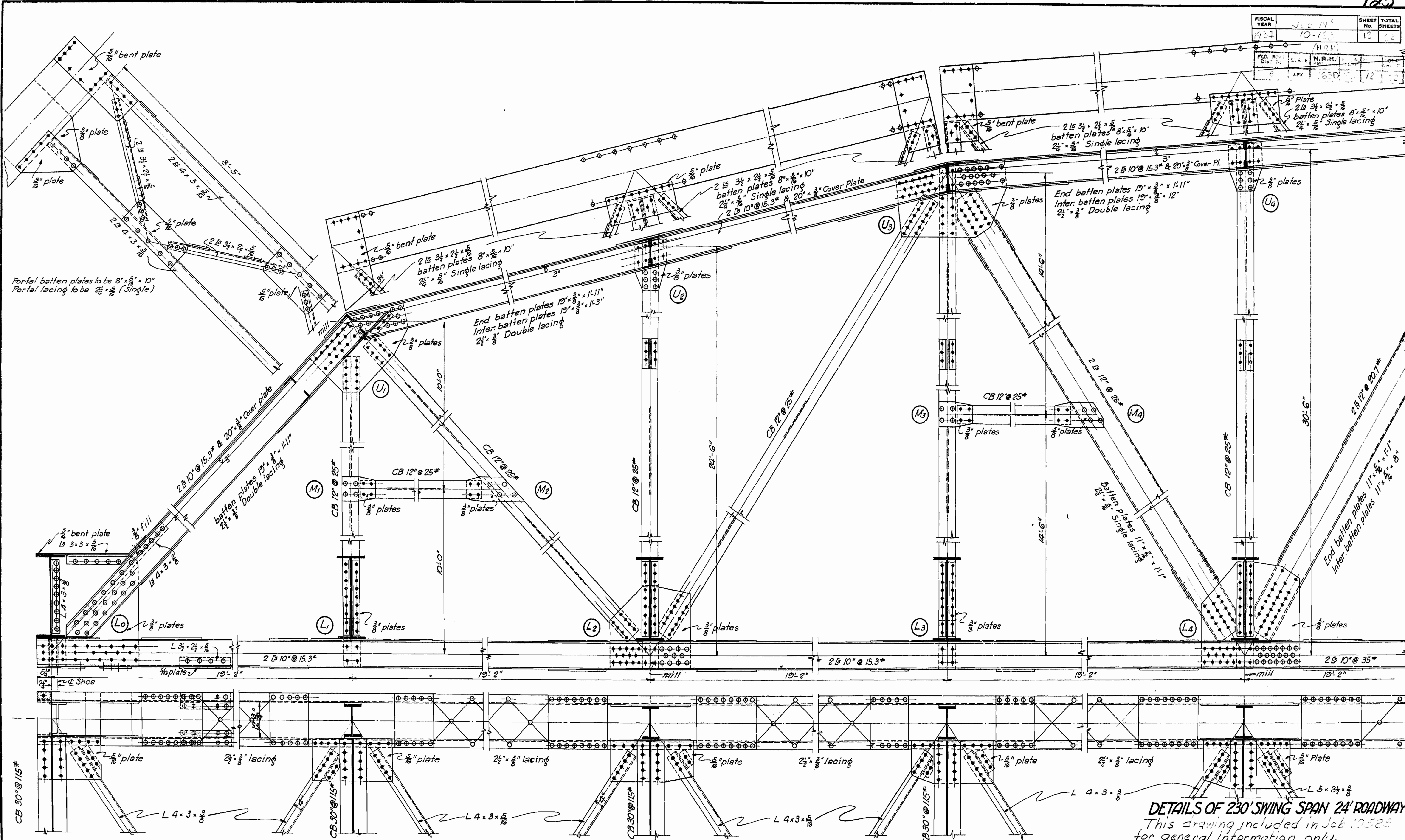
This drawing included in Job 11456 for general information only.

DESIGN DATA 230' SWING SPAN

ROUTE SEC. ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK. Drawn By: Noe Date: 8-5-31 Traced By: E.A.W. Date: 11-12-31 Checked By: Date: BRIDGE NO. DRAWING NO. 3310

BRIDGE ENGINEER

FISCAL YEAR	1933	SHEET NO.	12	TOTAL SHEETS	12
N.R.M.					
N.R.H. 12					
APR 12 1933					



DETAILS OF 230' SWING SPAN 24' ROADWAY
 This drawing included in Job 10525
 for general information only.

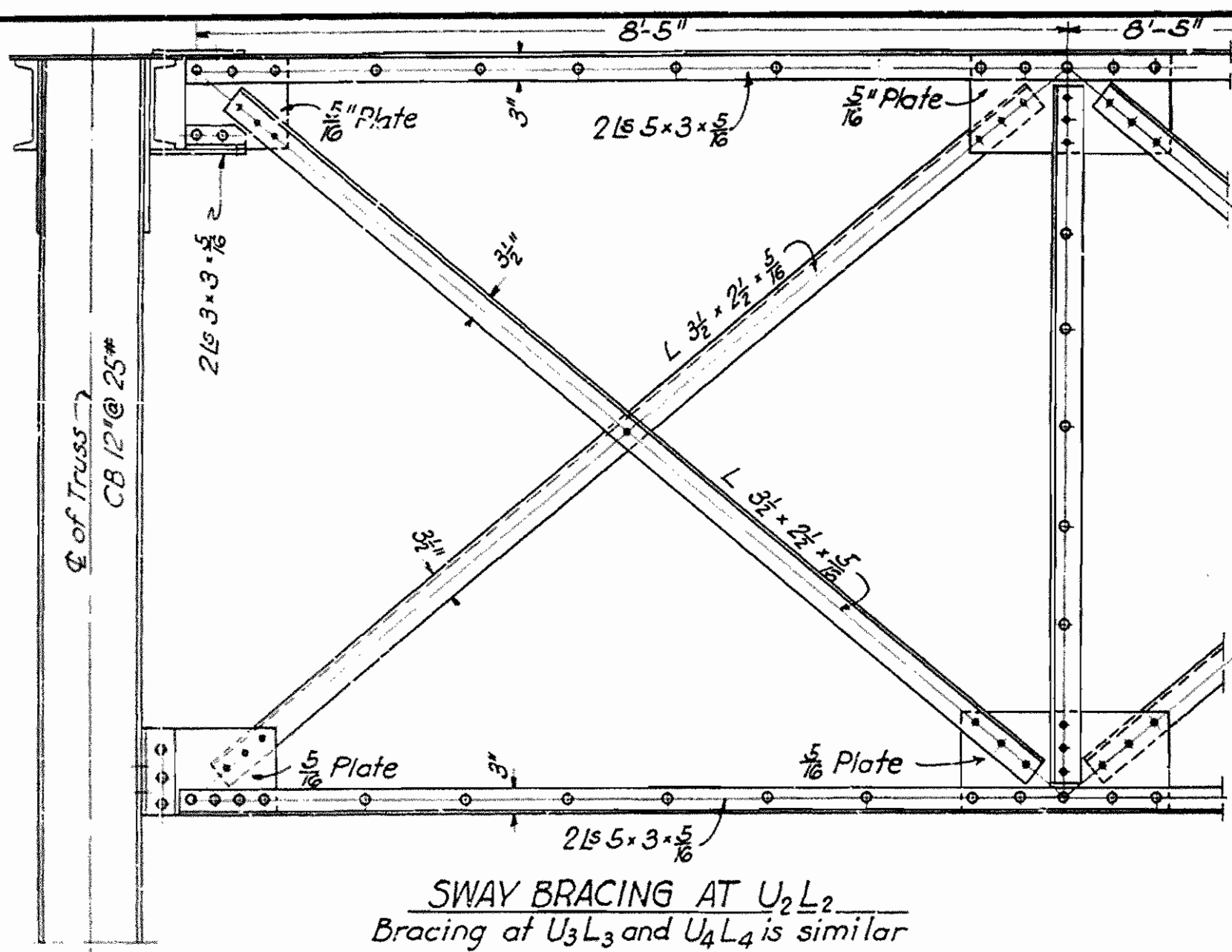
REVISED 7-26-33

ROUTE SEC
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: *NOE* Date: 7-22-31
 Traced By: *E.R.W.* Date: 3-19-31
 Checked By: _____ Date: _____
 BRIDGE NO. _____ DRAWING NO. 3311

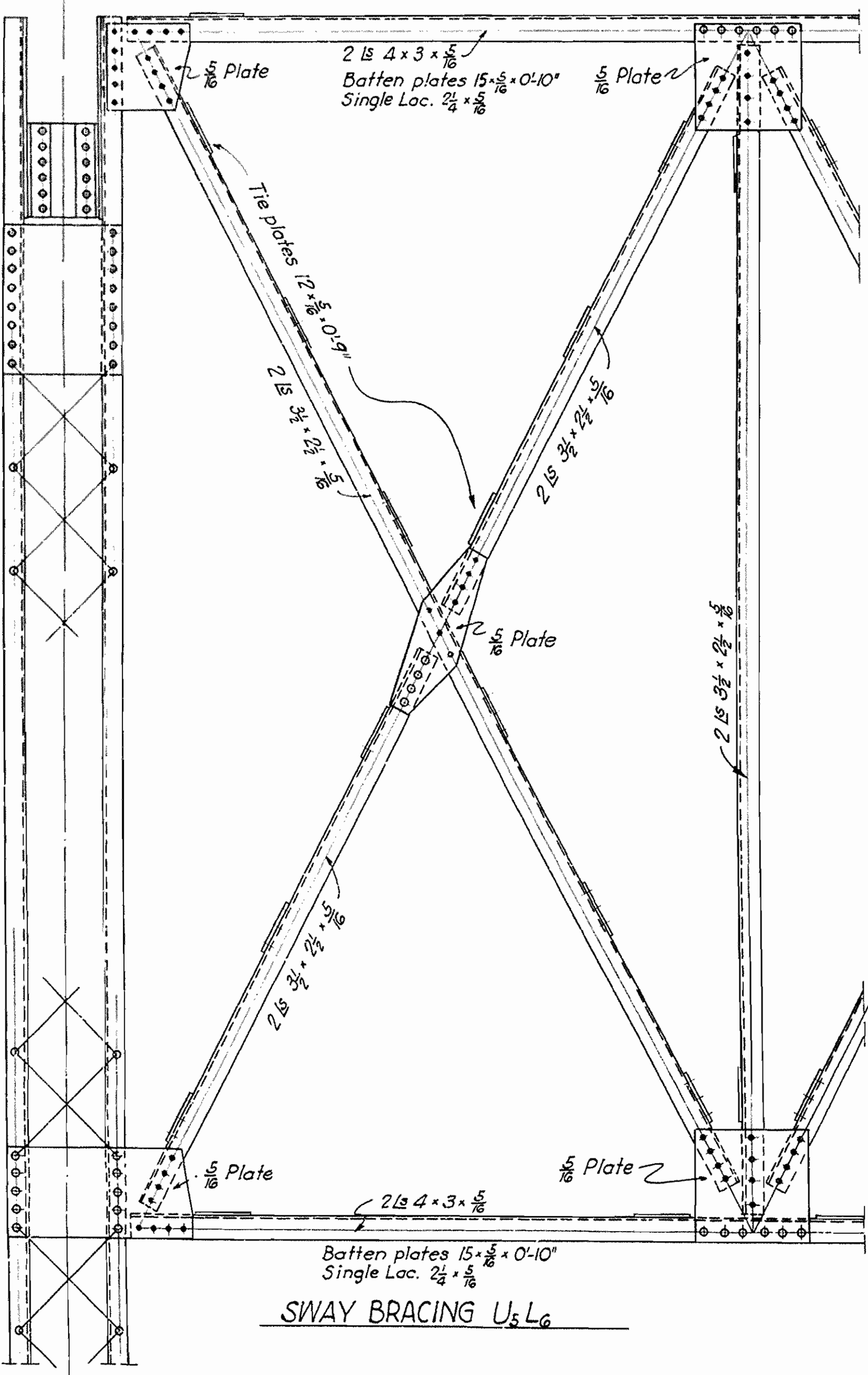
N.B. JAMES
 BRIDGE ENGINEER

Scale: $\frac{3}{4}'' = 1'$

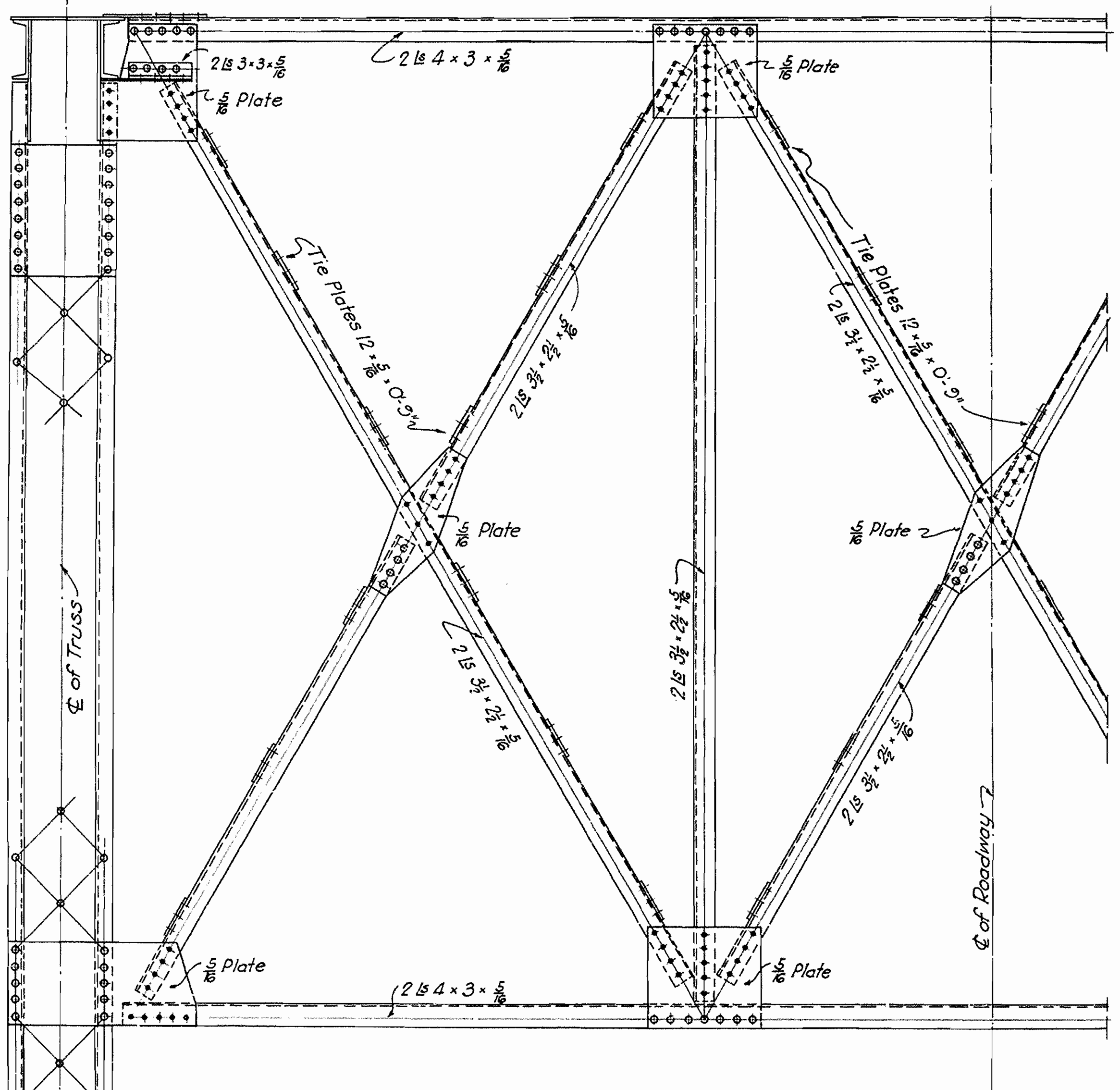
FISCAL YEAR	SHEET No.	TOTAL SHEETS



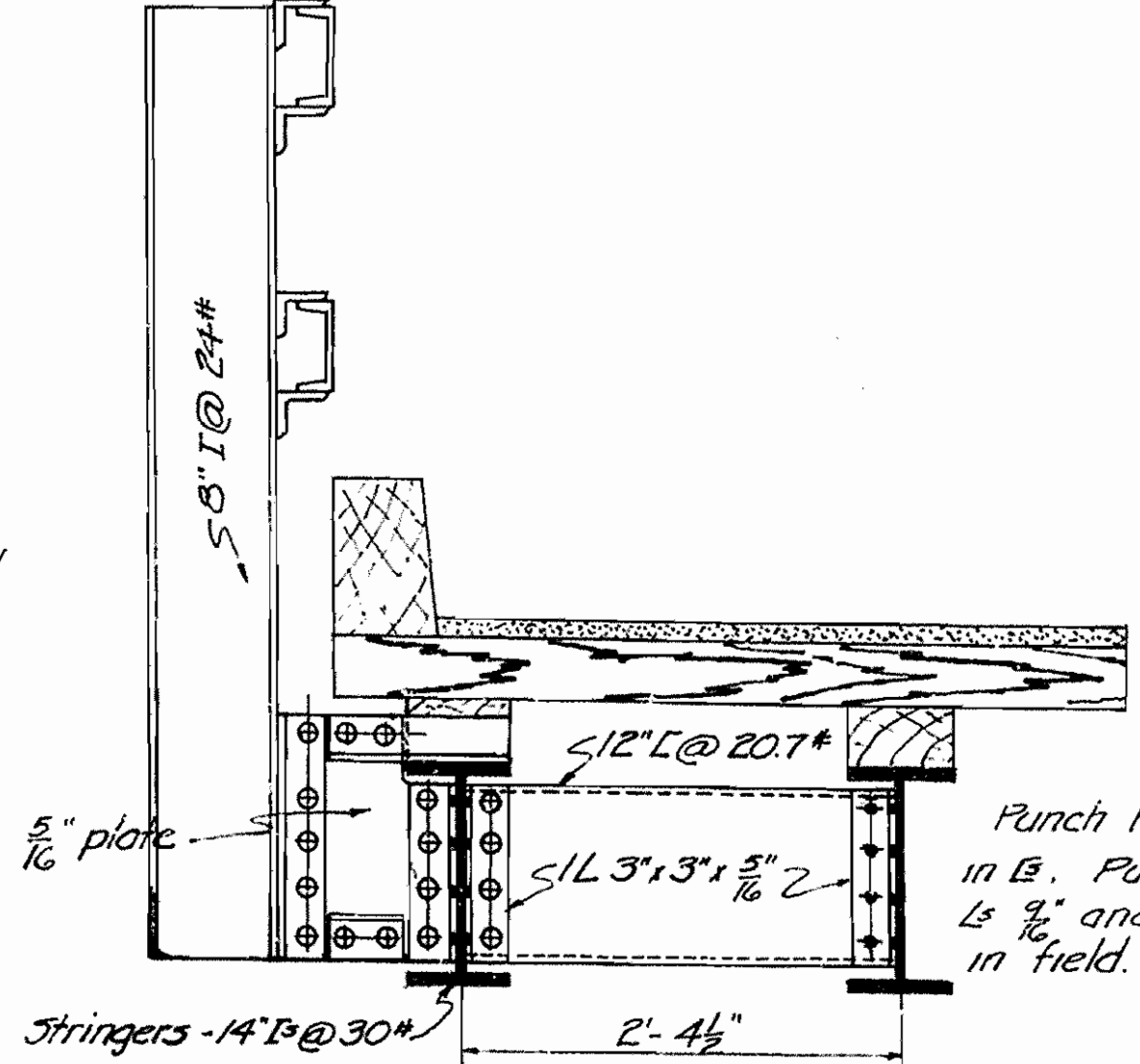
SWAY BRACING AT U₂ L₂
Bracing at U₃ L₃ and U₄ L₄ is similar



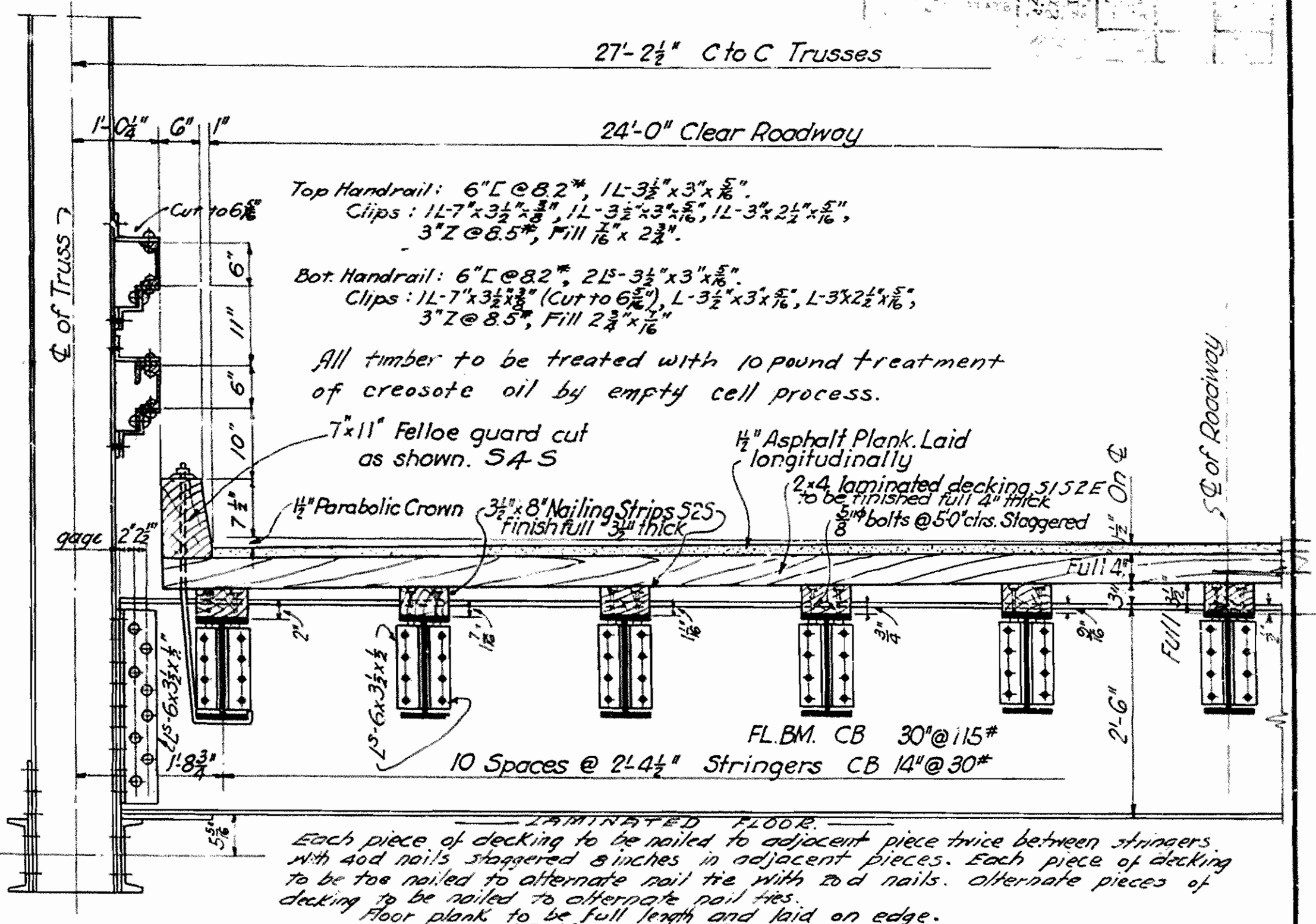
SWAY BRACING U₅ L₆



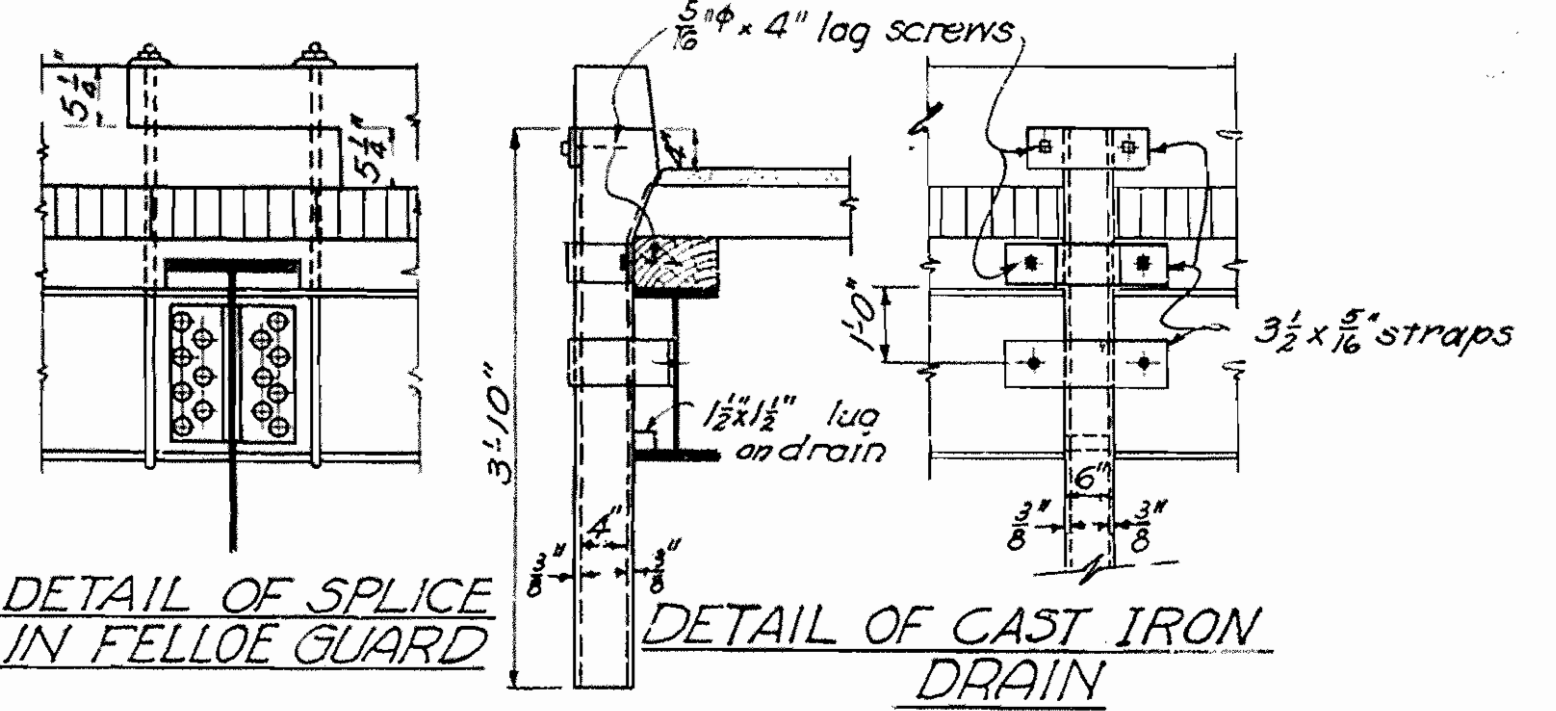
SWAY BRACING AT U₆ L₆



12\"/>



TYPICAL CROSS SECTION



DETAIL OF SPLICE IN FELLOE GUARD
DETAIL OF CAST IRON DRAIN

GENERAL NOTES

3/8" ϕ rivets, 1/8" holes. All holes in truss connections to be sub-punched 7/8" and reamed to size while truss is assembled; this applies to field as well as shop rivets.
 Floor beam and stringer connections to be sub-punched and reamed to size through a metal template.
 All field connections shall be riveted.
 All floor beams and stringers to be milled to exact length after framing angles have been riveted.
 Shapes of equal or greater strength may be substituted for structural shapes shown; payment, however, will be made in accordance with sizes given on this plan.
 Shop Paint: After being completely assembled and shop work finished, all pieces shall be given one coat of red lead and raw linseed oil.
 Field Paint: Apply two coats of different colors as specified by the Engineer.
 This drawing shows general features of design only.
 Shop drawings shall be made in compliance with specifications, and shall be submitted and approved before fabrication is begun.
 Specifications: Arkansas Standard Road and Bridge Specifications, adopted May 30, 1925, and revised.

See also Nos. 16, 32, Roadway Drains - R. E. H., Stringer and Floor Beam Conn. 13 - R. E. H. 12-2-32. E.I. Beam Conn. deck & Batten Pls. E.A.W. 7-28-33 Floor drain thickness 7-28-33 Outside stringer stiffener detail by Nov 12-29-33

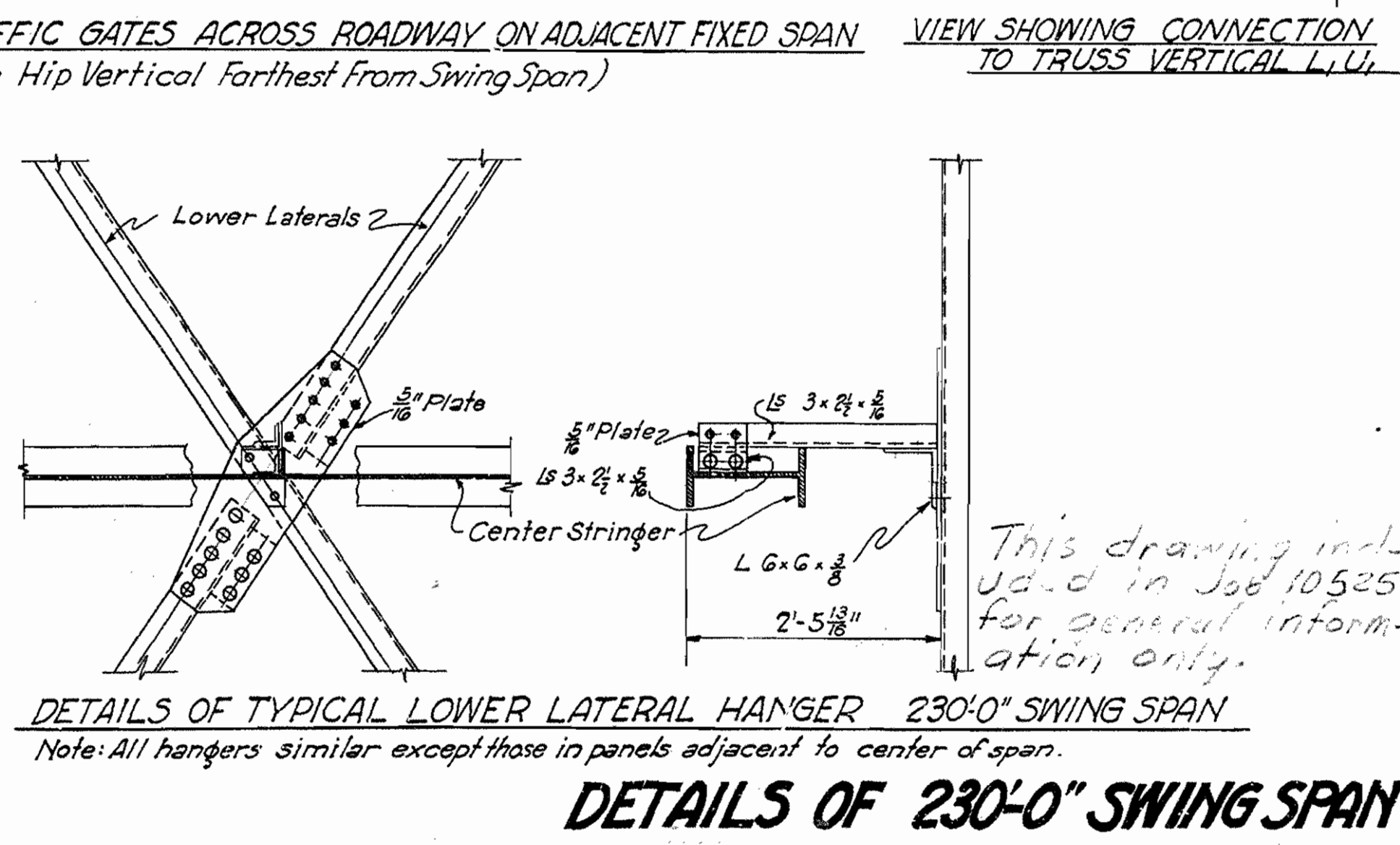
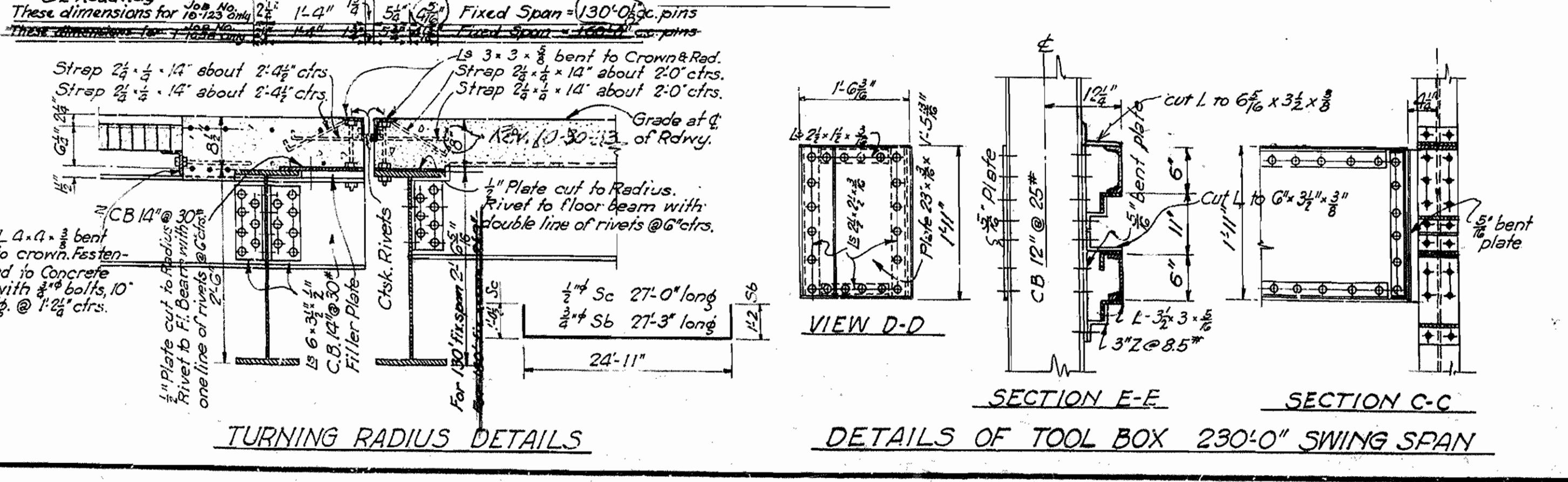
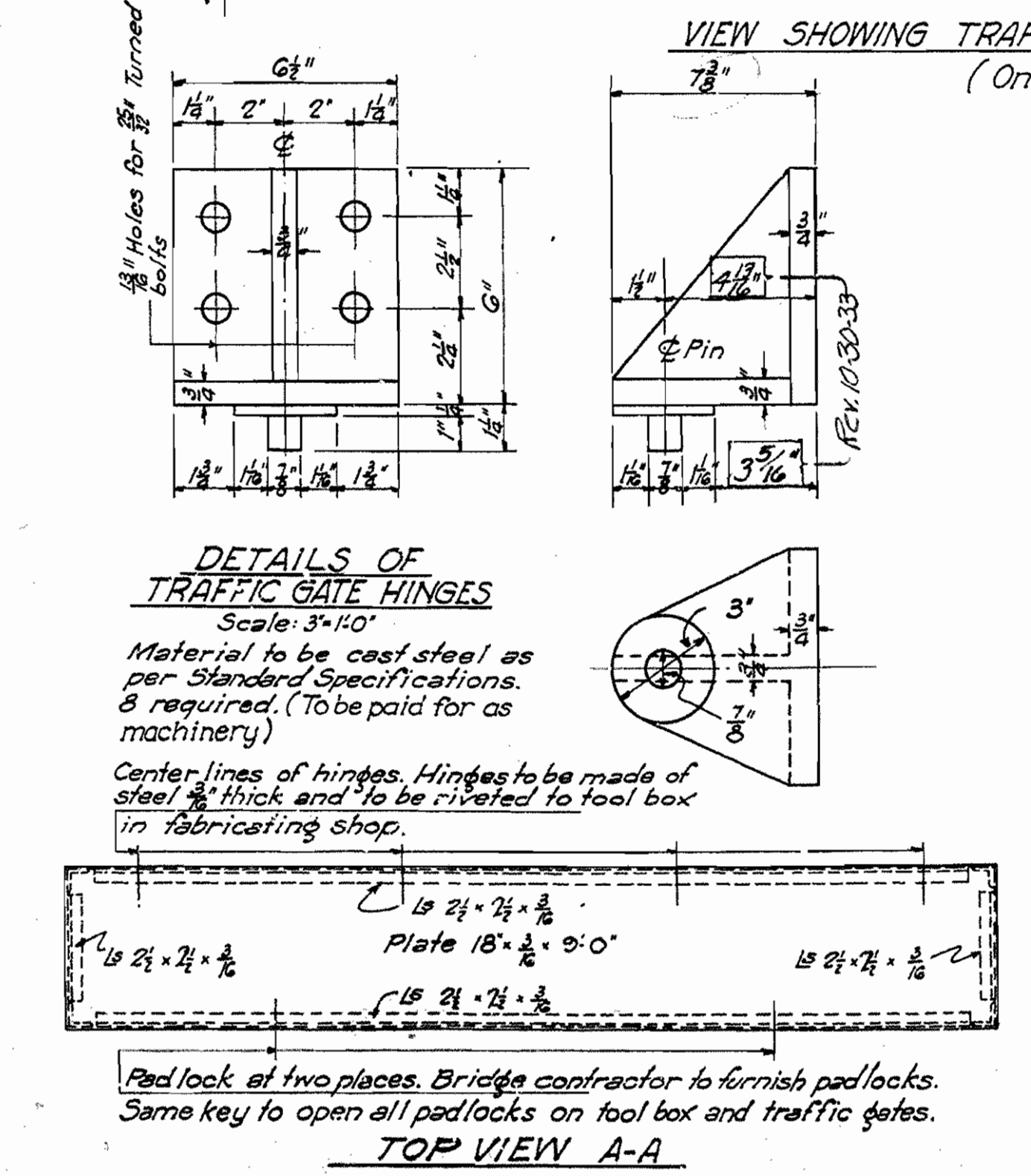
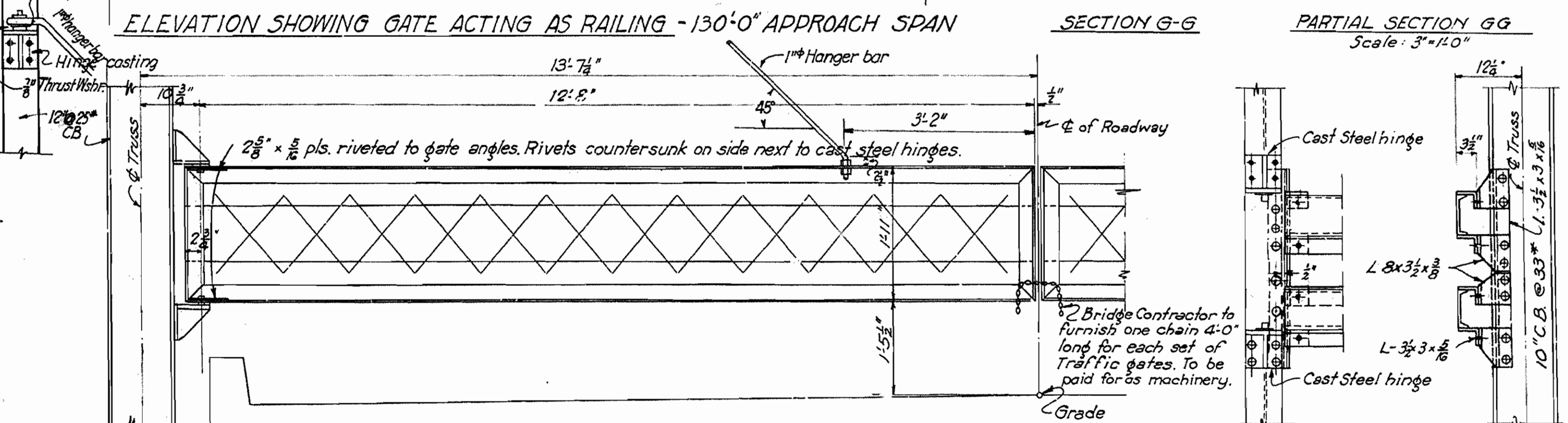
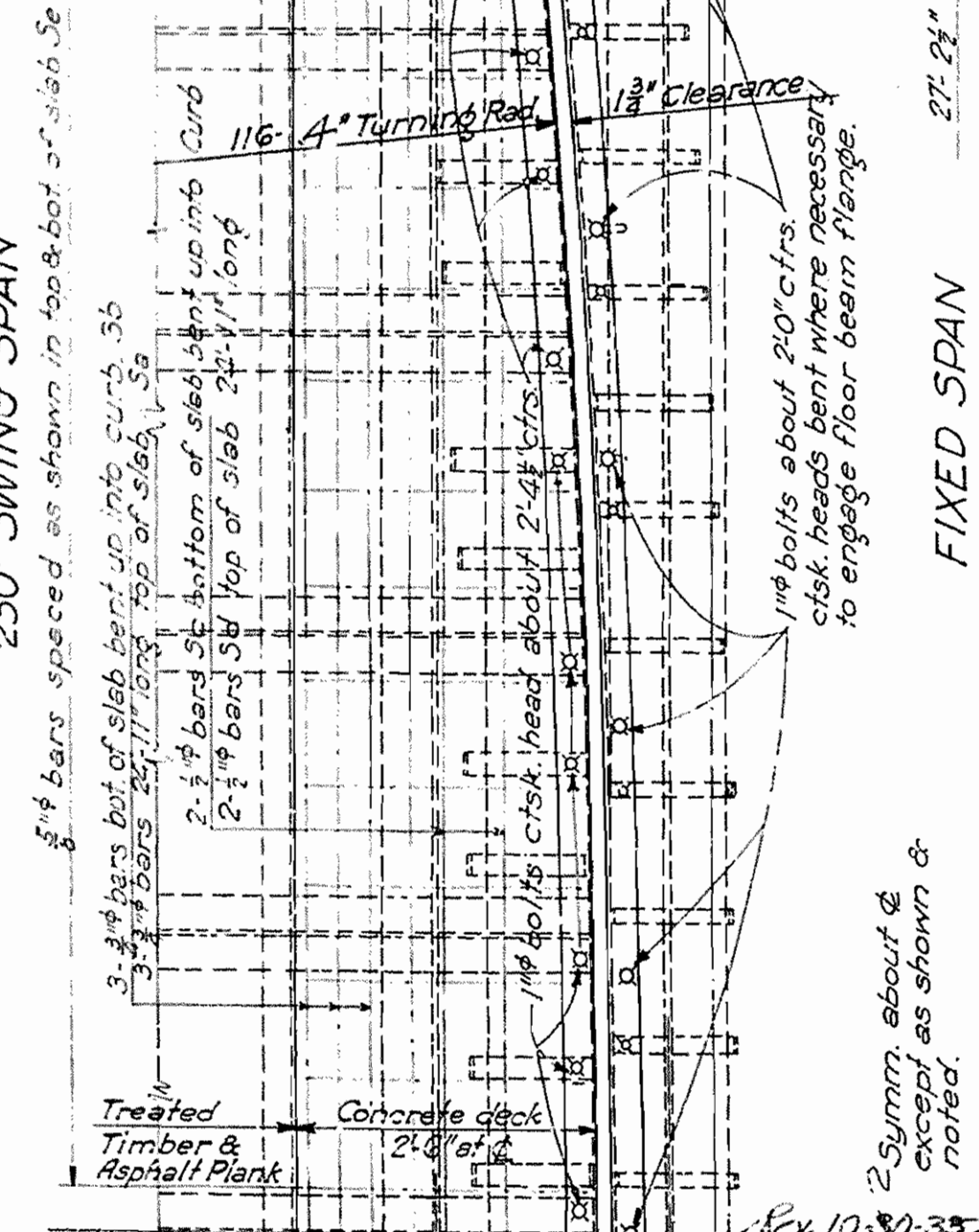
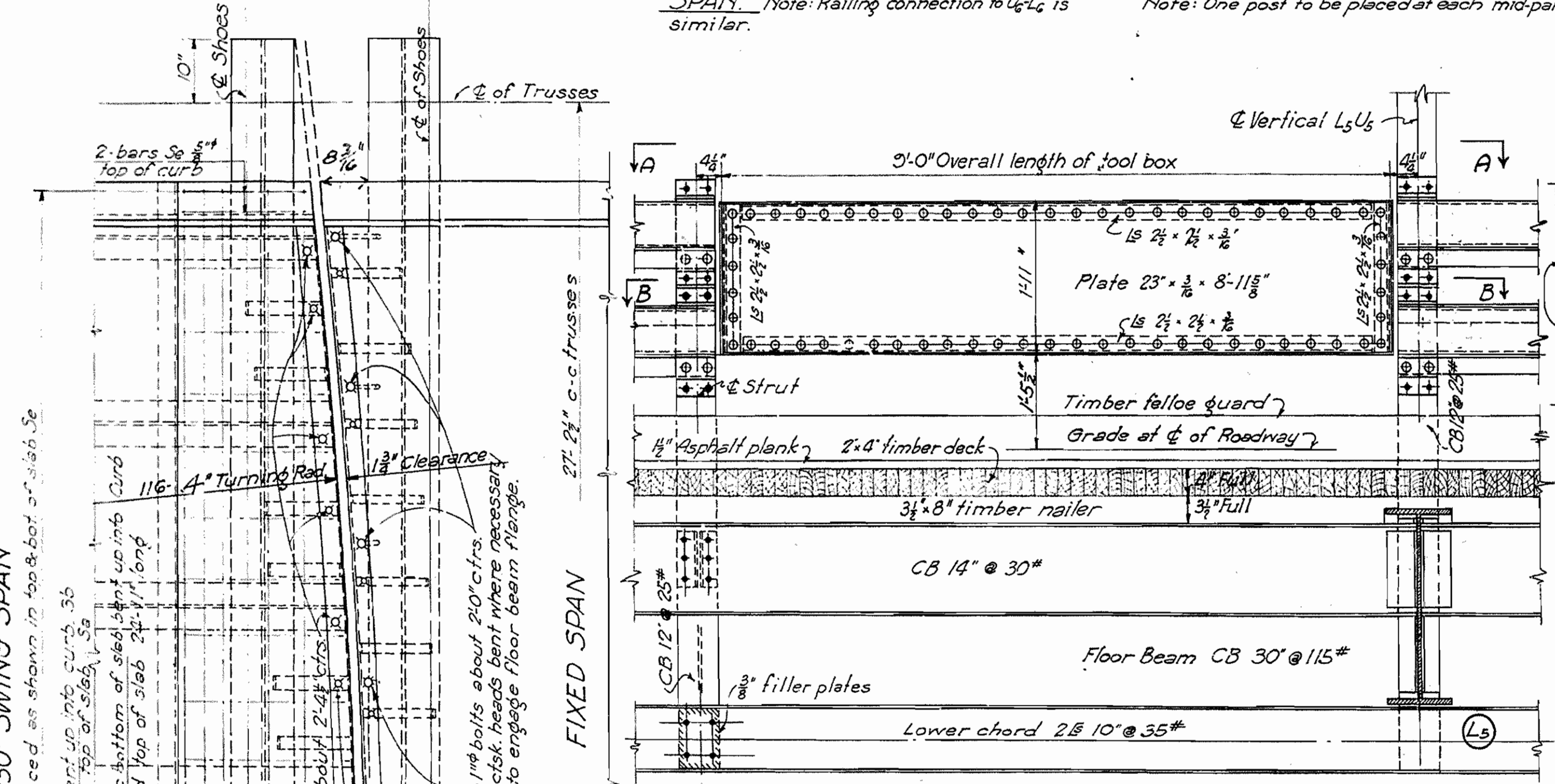
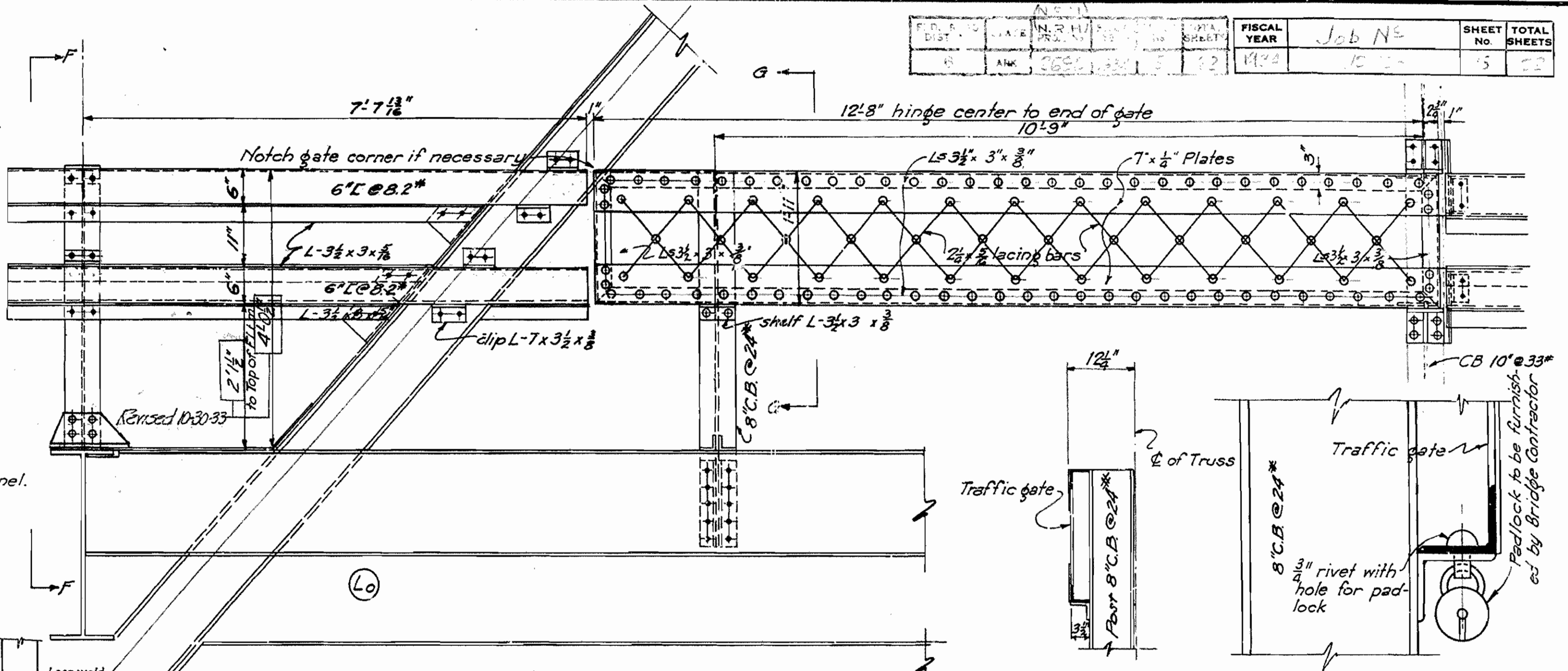
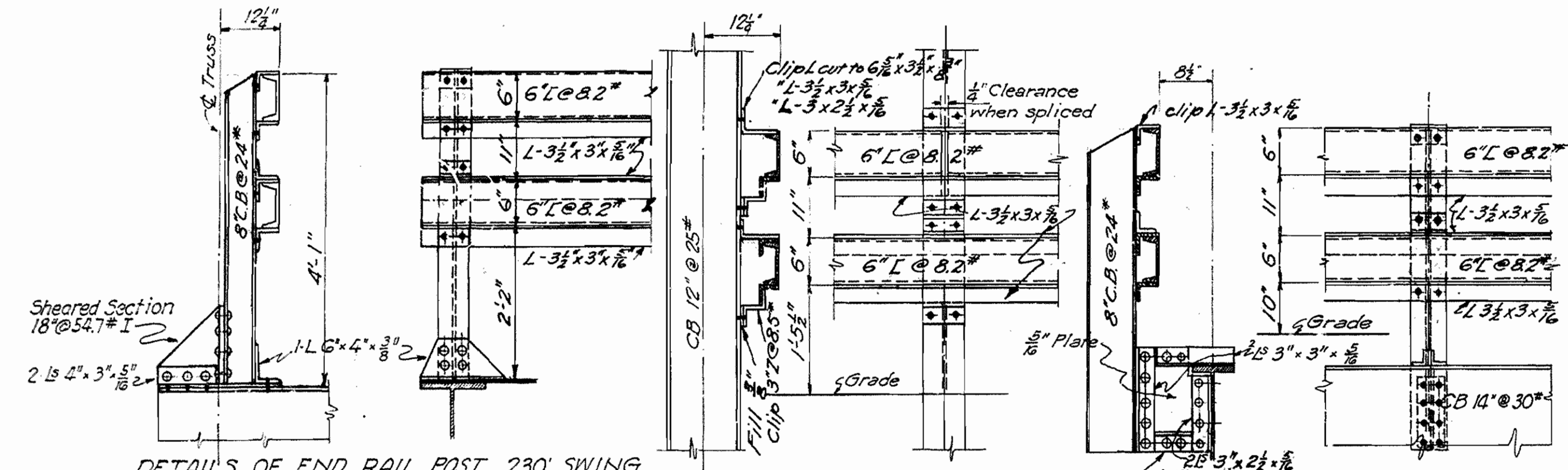
This drawing includes in the cost for general information only.

DETAILS OF 230' SWING SPAN

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: Noe Date: 8-15-31
 Traced By: E.A.W. Date: 11-23-31
 Checked By: Date: _____
 Scale: 3/4 in. = 1 ft.
 BRIDGE NO. _____ DRAWING NO. 3313

E. A. W.
 BRIDGE ENGINEER

Job No.	10525	SHEET	5	TOTAL SHEETS	5
FISCAL YEAR	1933	DATE	5-15-31	BY	NOE



Revised: Bars 36, 38; Stringer Connection Angles - R. 12, 14, 17, 23; Handrail Conn. & Traffic Gate Hanger; E. A. H. 7-20-33

10-30-33 REVISIONS BY NOE

Pad lock at two places. Bridge contractor to furnish padlocks. Same key to open all padlocks on tool box and traffic gates.

Note: All rivets used in tool box shall be 5/8" rivets. Connections to verticals shall be made with 3/4" rivets.

DETAILS OF 230'-0" SWING SPAN

ROUTE SEC
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

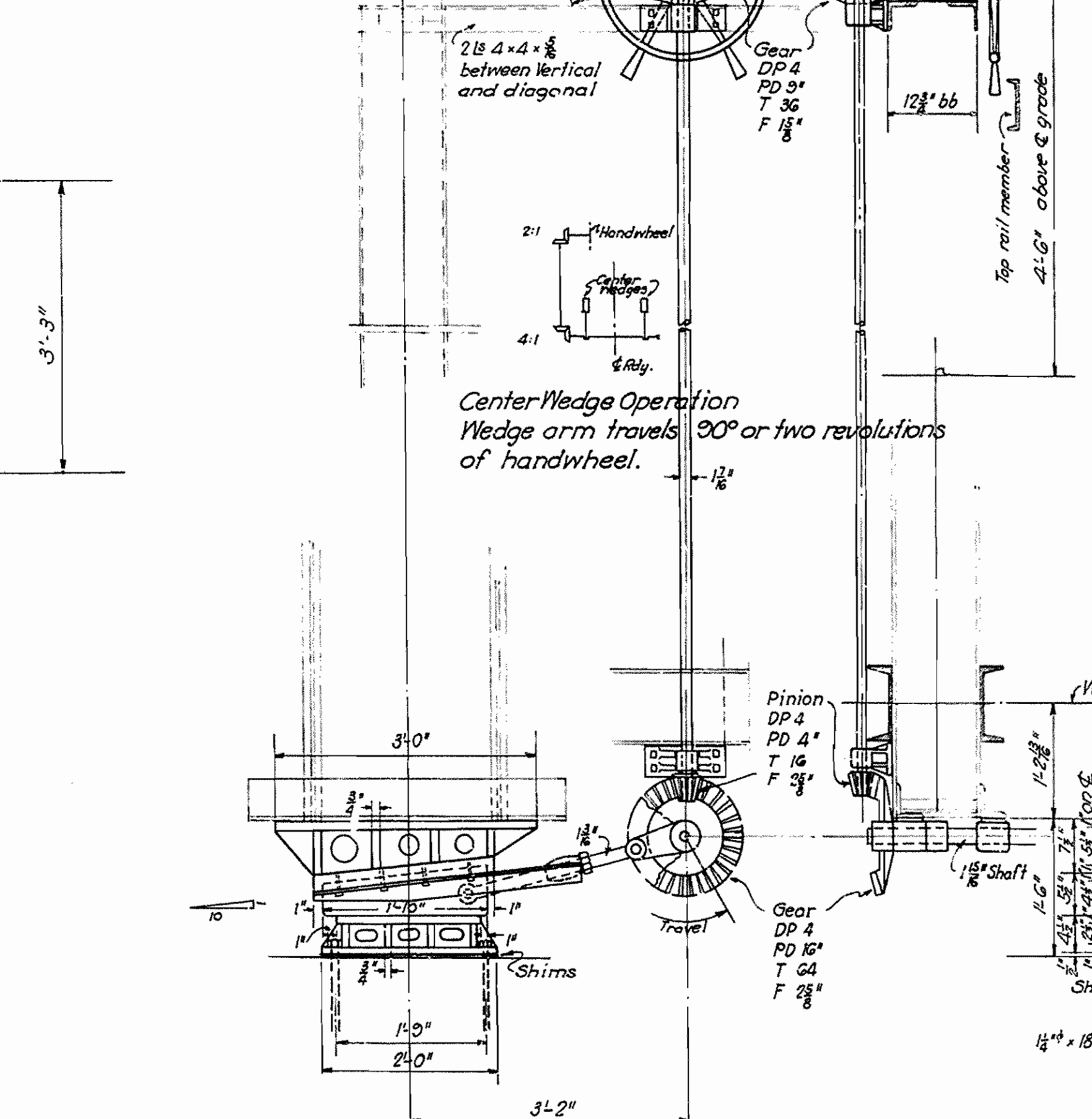
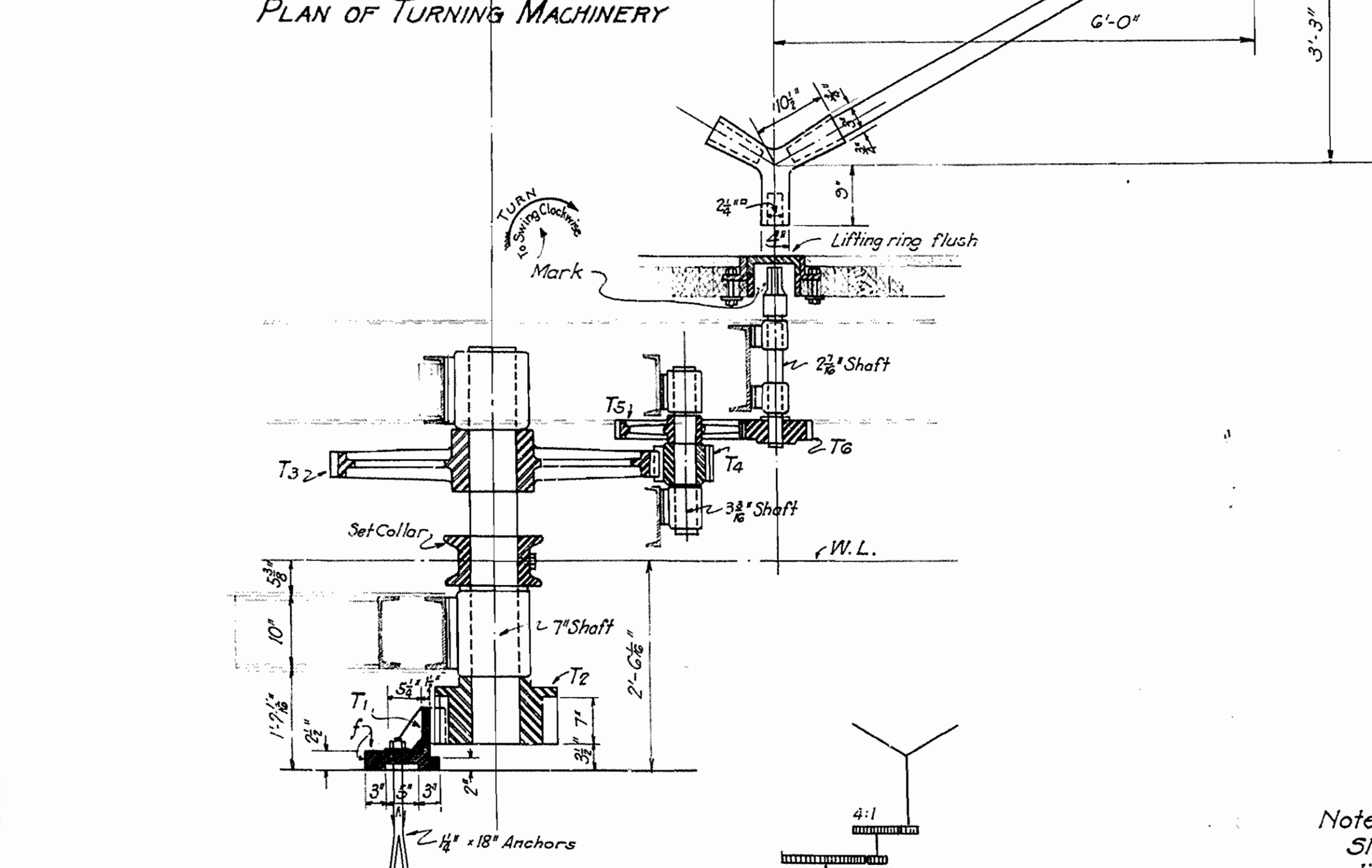
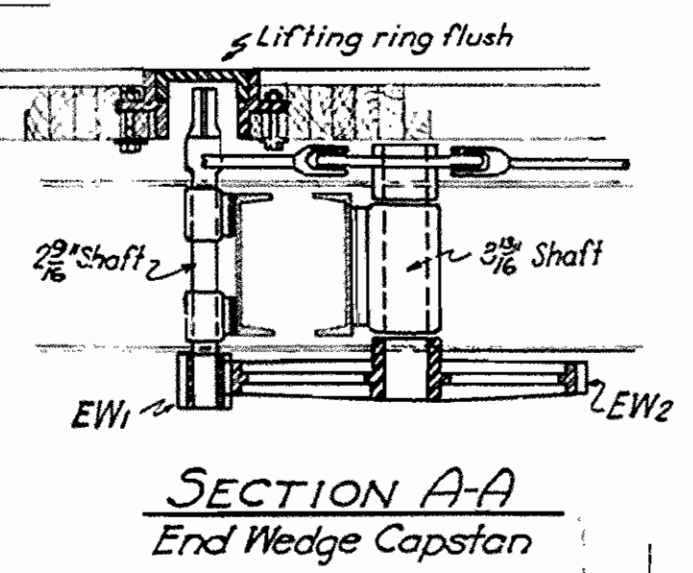
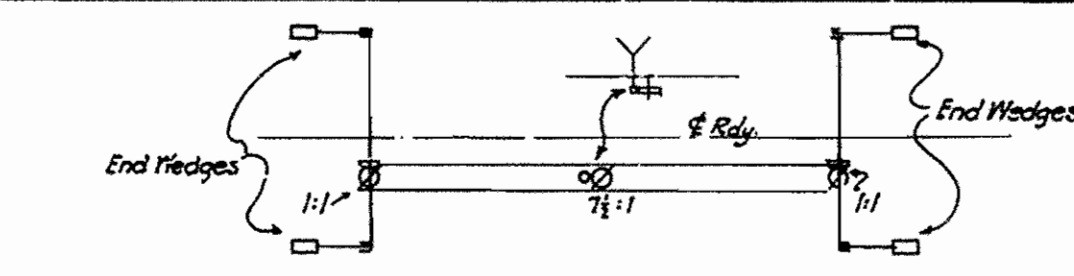
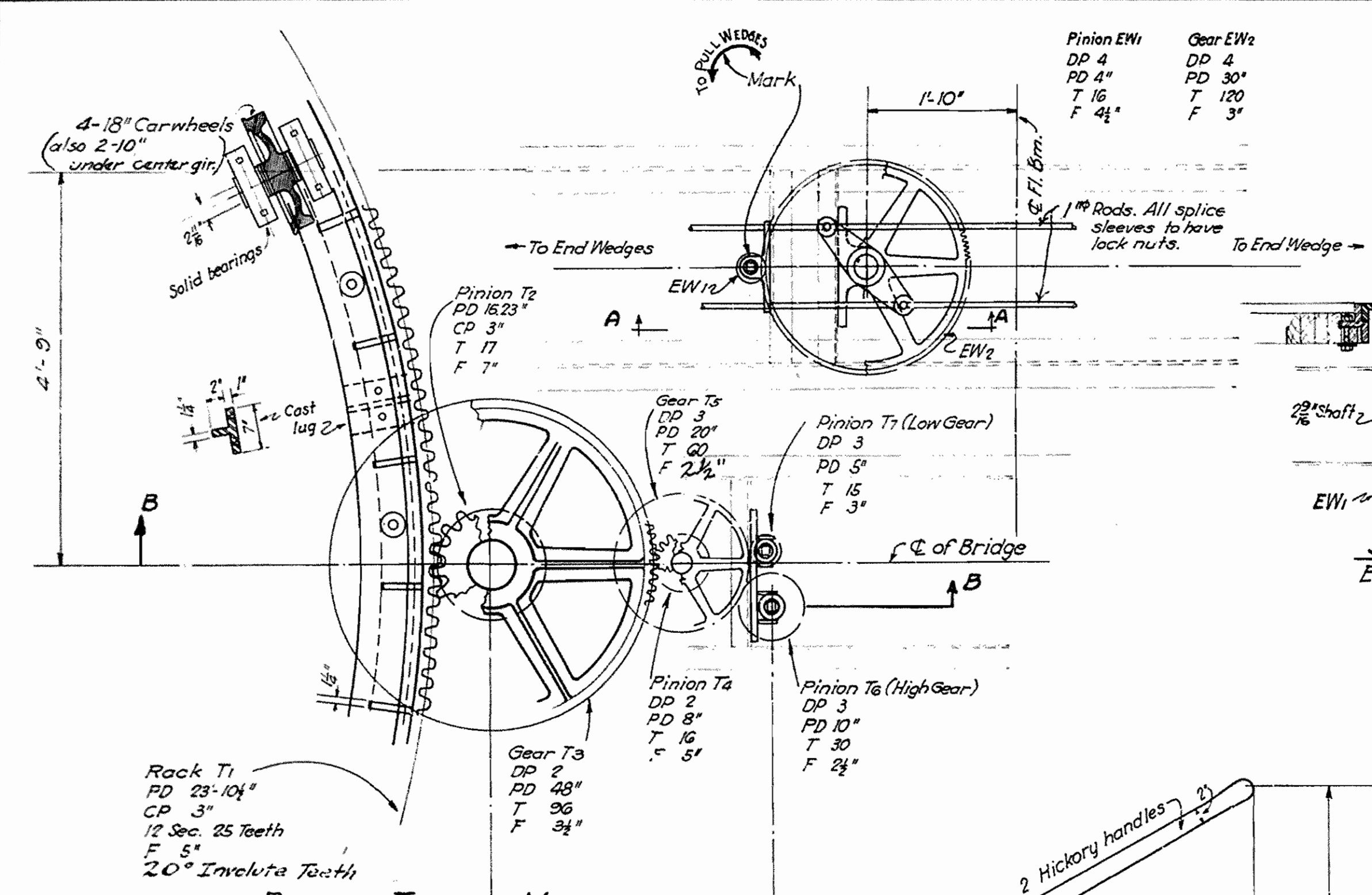
Drawn By: NOE Date: 8-9-31
 Traced By: EAW Date: 5-15-31
 Checked By: Date:

Scale: 1/2" = 1' & as noted.

BRIDGE ENGINEER
BRIDGE NO. 3314
 DRAWING NO. 3314

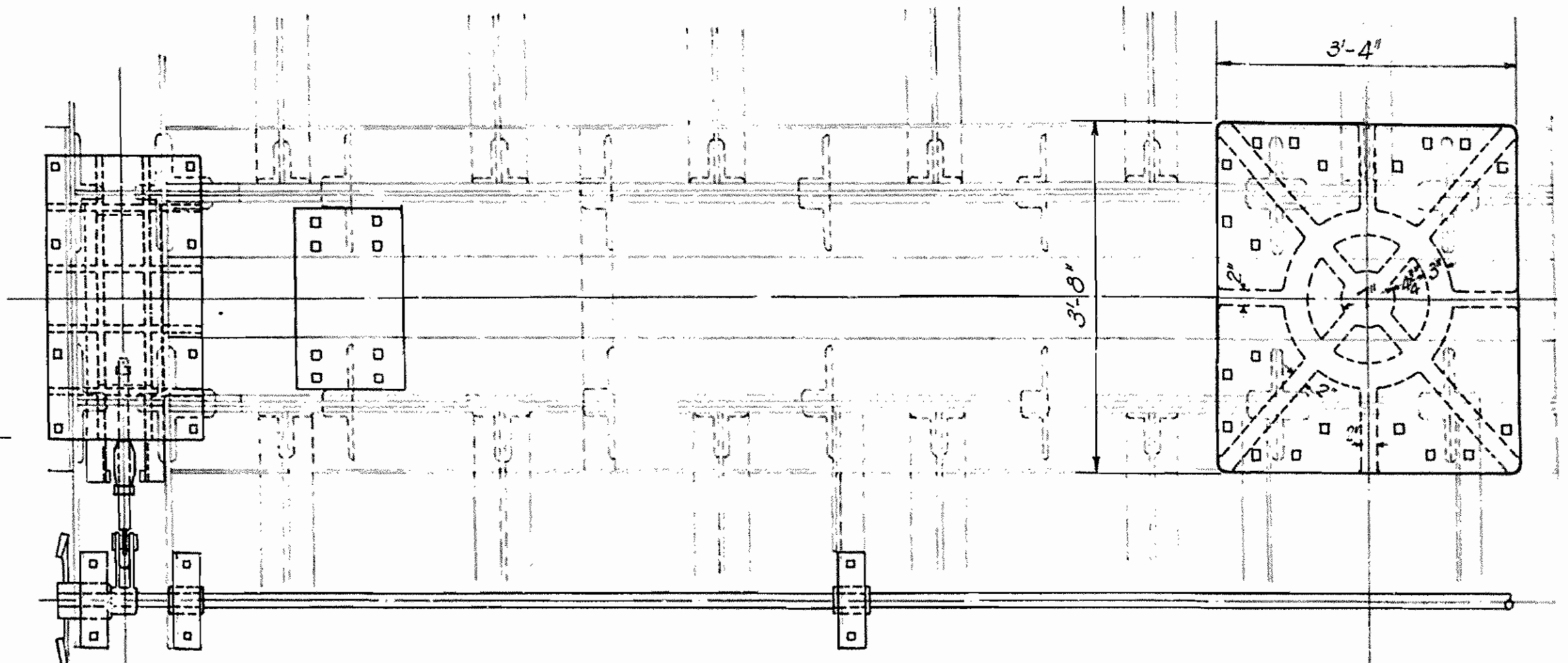
This drawing included in Job 10525 for general information only.

FISCAL YEAR	1933	SHEET	17	TOTAL SHEETS	22
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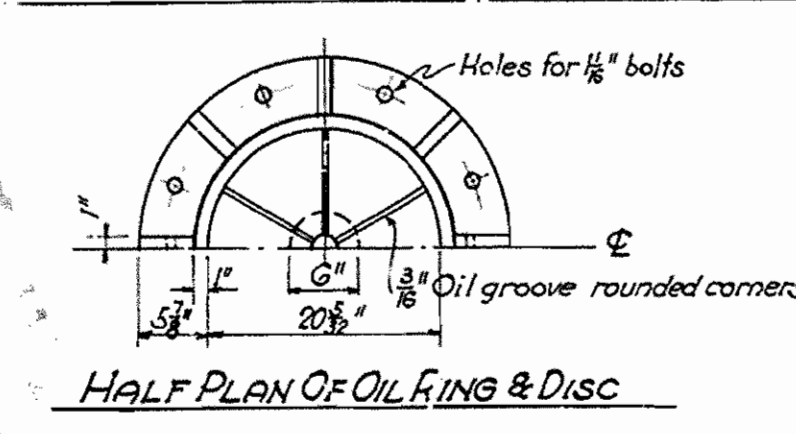
Note: (Center Wedge Machinery)
Sliding faces of wedges to have 1/16 inch of manganese-bronze applied with welding torch then planed to 1/16 inch.
Stops are to be provided to prevent over driving and over pulling.
Hand wheel is to be provided with chain and padlock.

NOTE:
All Turning Machinery to be marked 'T'
End Wedges to be marked 'EW'
Center Wedges to be marked 'CW'
End Latch to be marked 'L'



TOP PLAN OF CENTER BEARING AND WEDGES

ELEVATION OF CENTER BEARING AND WEDGES



MACHINERY DETAILS
230' SWING SPAN

This drawing included in Job 10525 for general information only.

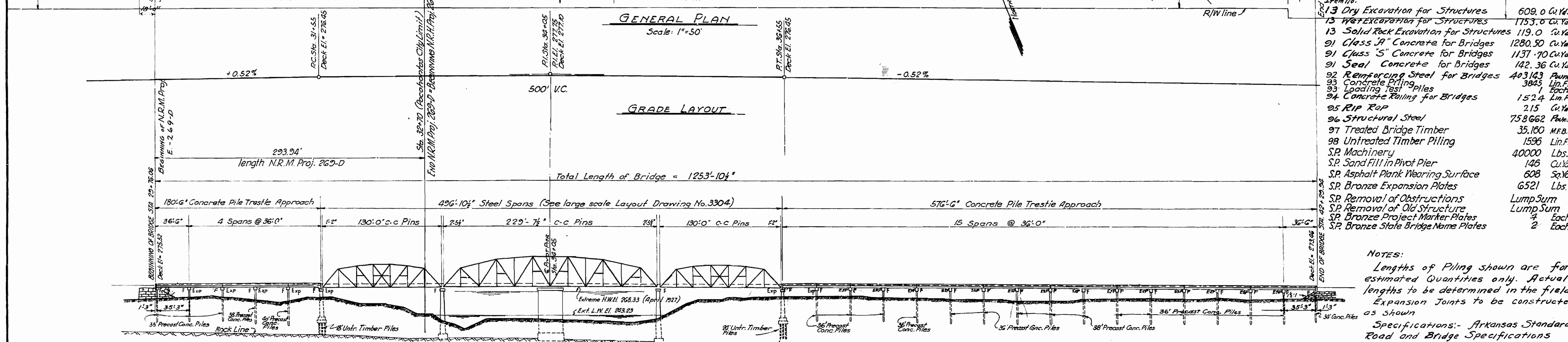
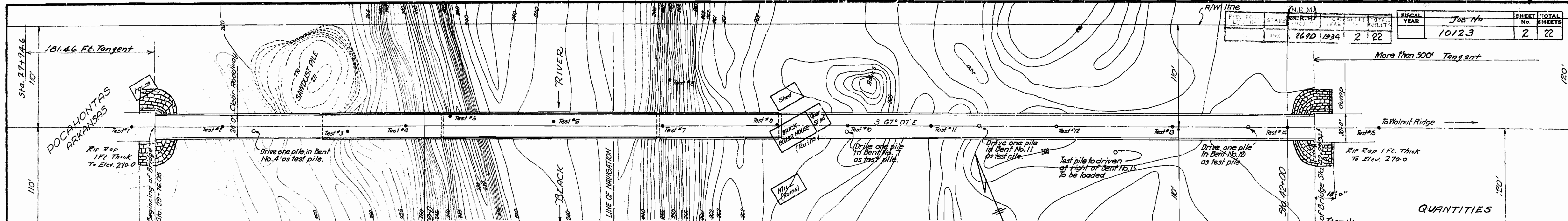
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: R.A. Date: 10-30-31
Traced By: E.A.W. Date: 12-7-31
Checked By: Date: _____
Scale: 3/4" = 1 ft.

BRIDGE NO. _____ DRAWING NO. 331C

REVISED 7-28-33

M.B. Barner
BRIDGE ENGINEER



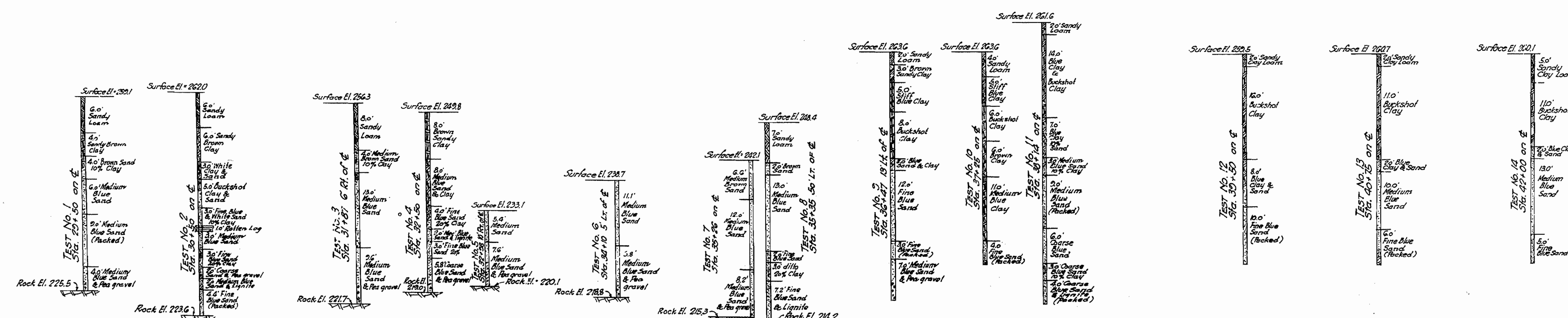
QUANTITIES

13 Dry Excavation for Structures	609.0 Cu Yds.
13 Wet Excavation for Structures	1753.0 Cu Yds.
13 Solid Rock Excavation for Structures	119.0 Cu Yds.
91 Class "A" Concrete for Bridges	1280.50 Cu Yds.
91 Class "S" Concrete for Bridges	1137.70 Cu Yds.
91 Seal Concrete for Bridges	142.36 Cu Yds.
92 Reinforcing Steel for Bridges	403,143 Pounds
93 Concrete Piling	3845 Lin. Ft.
93 Loading Test	1 Each
94 Concrete Piling for Bridges	152.4 Lin. Ft.
95 Rip Rap	215 Cu Yds.
96 Structural Steel	758,662 Pounds
97 Treated Bridge Timber	35,160 MFB.M.
98 Untreated Timber Piling	1596 Lin. Ft.
S.P. Machinery	40000 Lbs.
S.P. Sand Fill in Pivot Pier	146 Cu Yds.
S.P. Asphalt Plank Wearing Surface	608 Sq. Yds.
S.P. Bronze Expansion Plates	6521 Lbs.
S.P. Removal of Obstructions	Lump Sum
S.P. Removal of Old Structure	Lump Sum
S.P. Bronze Project Marker Plates	4 Each
S.P. Bronze State Bridge Name Plates	2 Each

NOTES:
 Lengths of Piling shown are for estimated quantities only. Actual lengths to be determined in the field.
 Expansion Joints to be constructed as shown.
 Specifications: Arkansas Standard Road and Bridge Specifications adopted May 25, 1925 and Revised.

Note:
 In case earth approaches have not been constructed by Road Contractor by the time the bridge is completed Bridge Contractor shall construct earth approaches at bridge ends sufficient to place rip rap and shall receive payment for excavation at unit price bid for Common Excavation on Bridge No. 1745

Minimum Pile Capacity:
 Concrete Piles - 30 Tons.
 Untreated Timber Piles - 15 Tons.
 Maximum Design Load - Concrete Piles - 28 Tons.

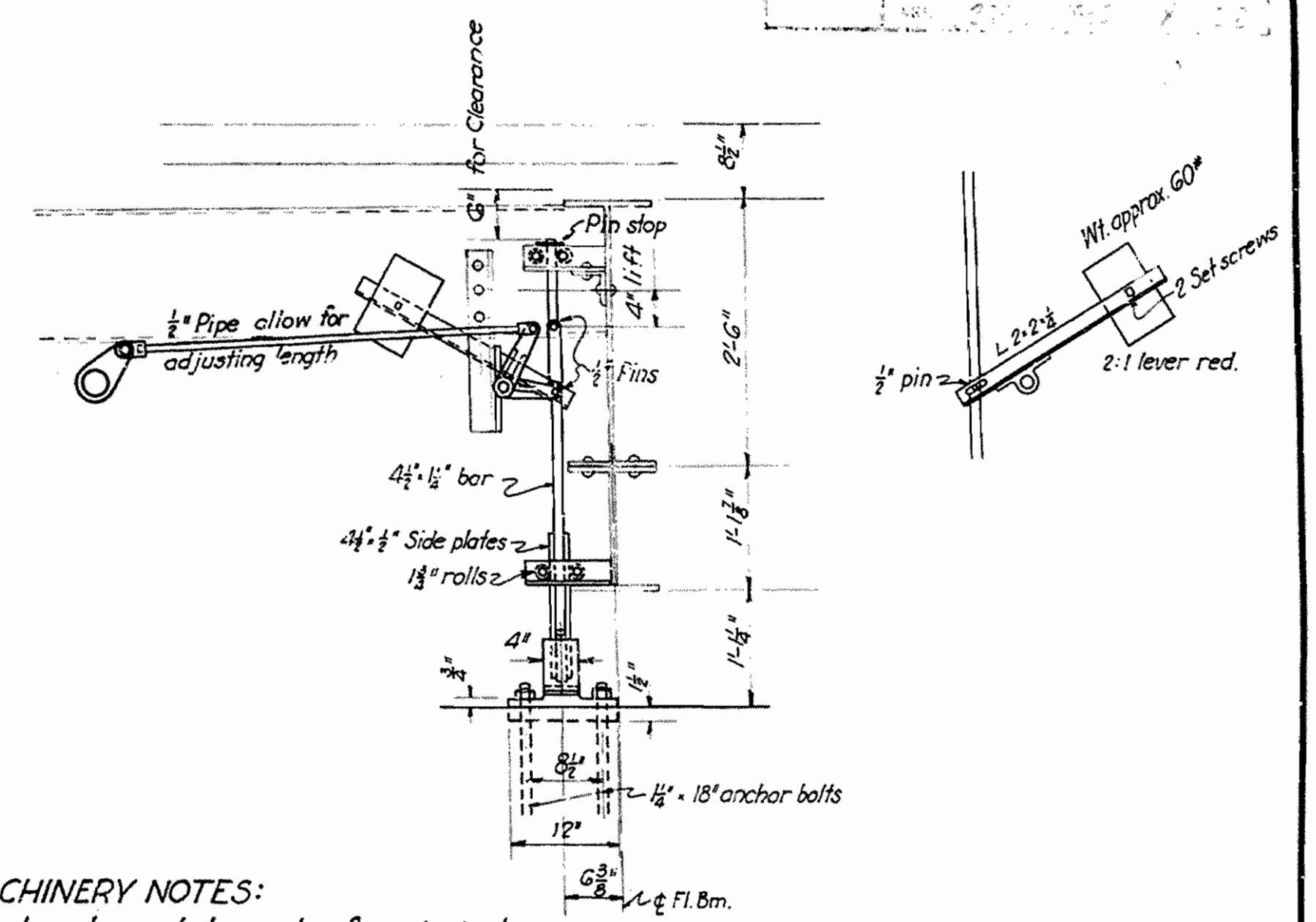
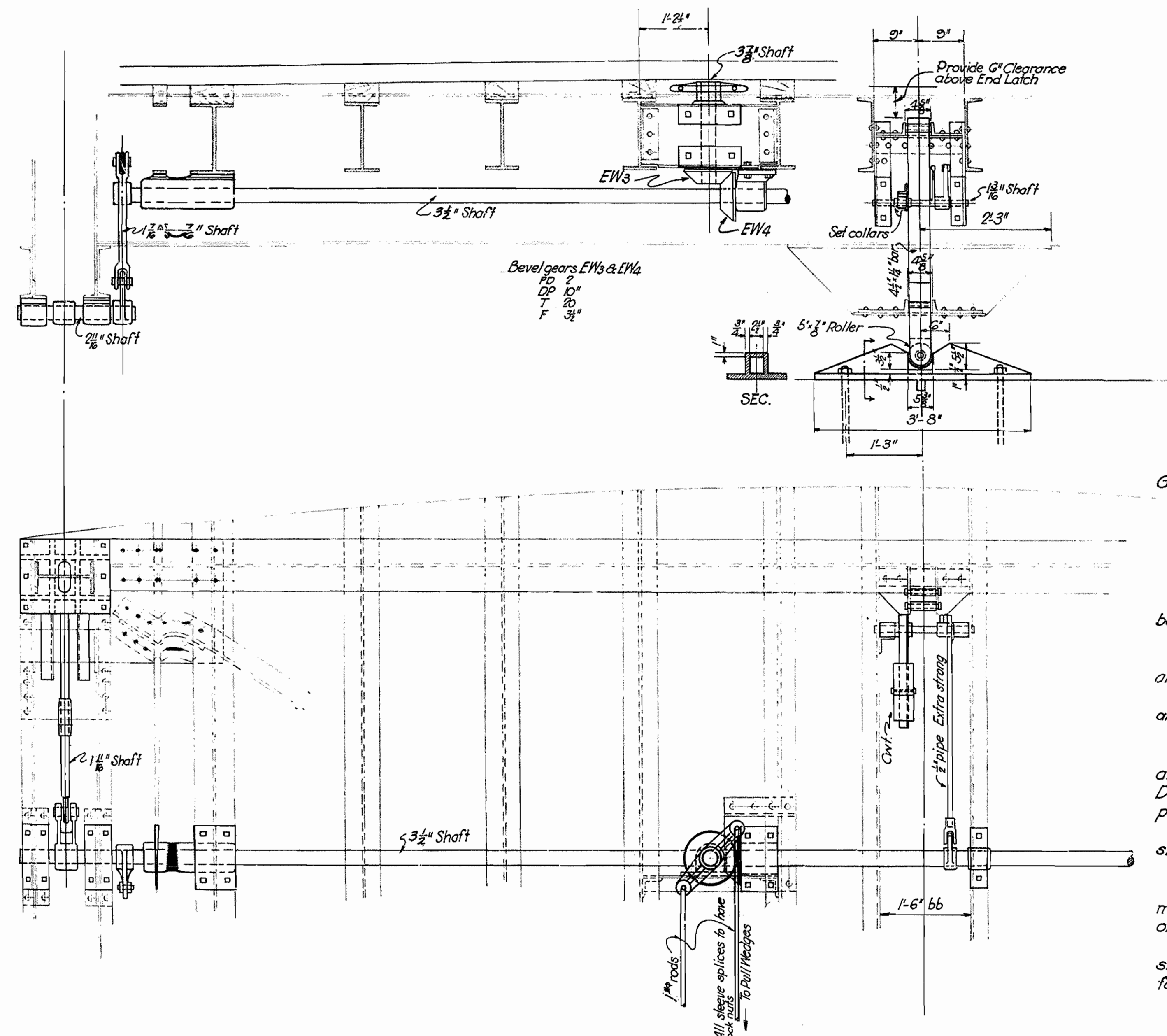
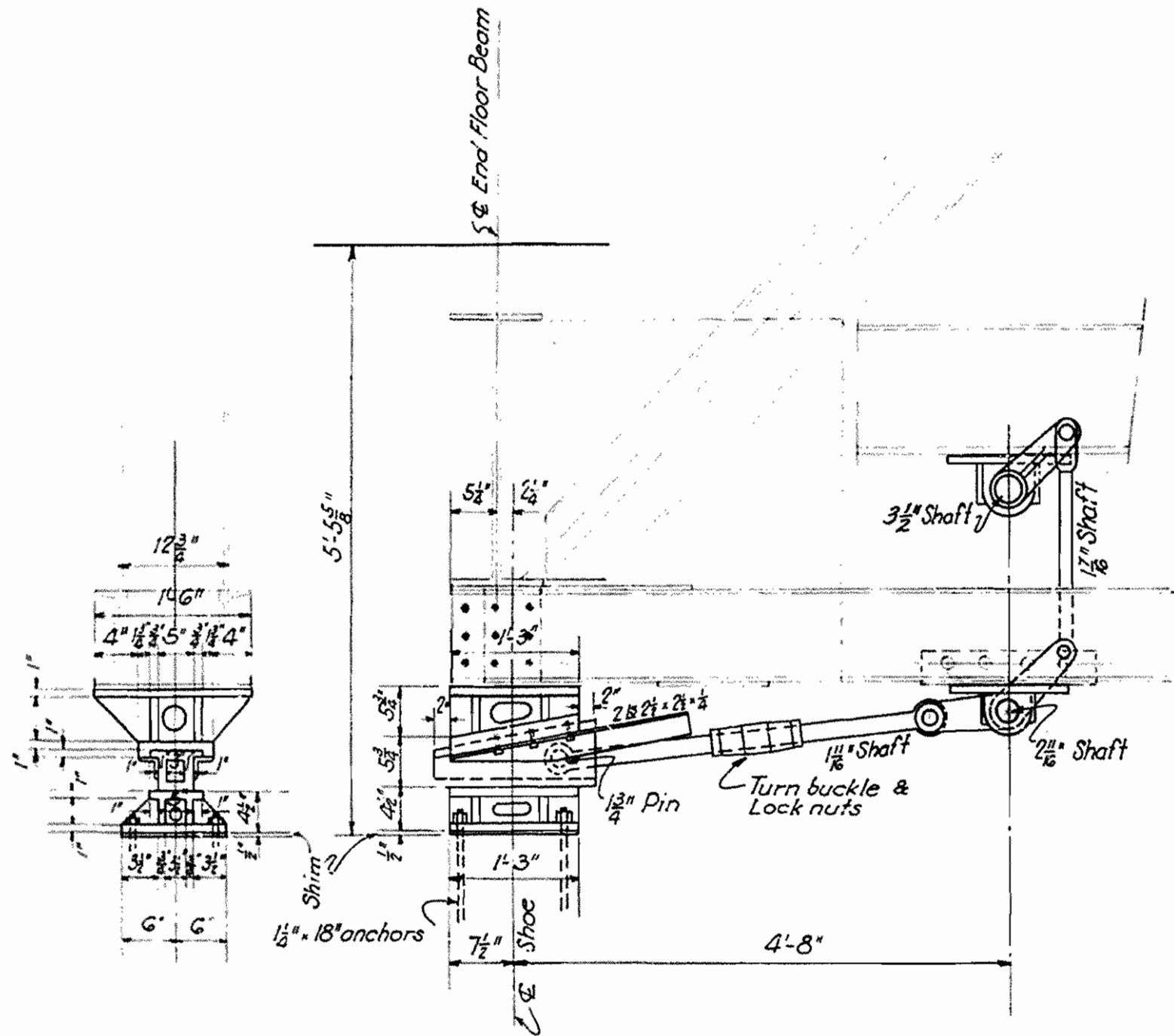


This drawing included in Job 10525 for general information only
GENERAL LAYOUT
BLACK RIVER BRIDGE
 AT
POCAHONTAS, ARKANSAS
RANDOLPH COUNTY
ROUTE 67 SEC. 20

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: *FAN* Date: 2-3-31
 Traced By: *FAN* Date: 2-21-31
 Checked By: _____ Date: _____
BRIDGE NO. 483 1/2 **DRAWING NO. 3303**

M.B. Daver
 BRIDGE ENGINEER

FISCAL YEAR	1923	SHEET No.	8	TOTAL SHEETS	22
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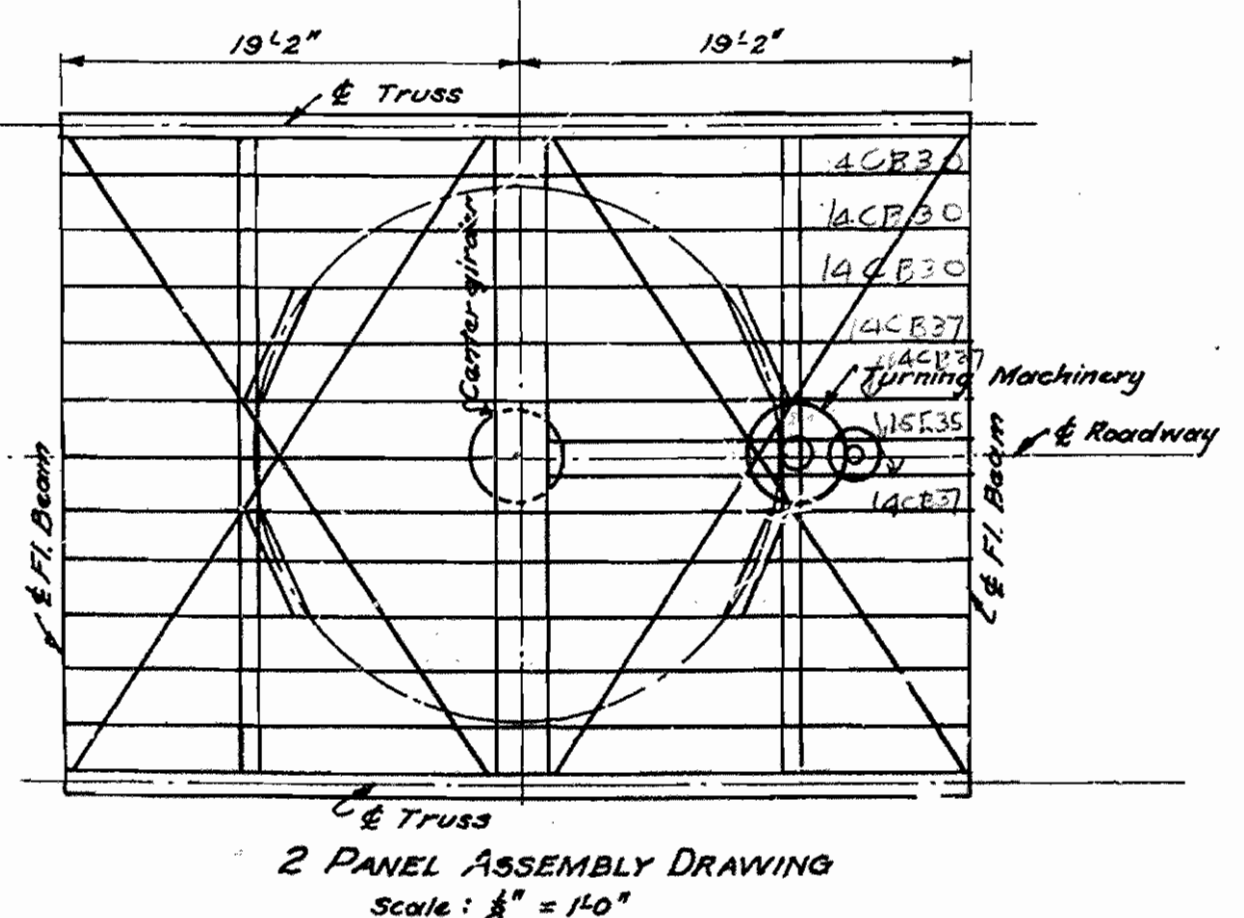


Notes: (End Wedge Machinery)
 Swing span to be erected in such position that ends will be 1/2 inch below closed position with wedges driven, under full dead load and swinging free.
 Sliding faces of wedges to have 1/16 inch of Manganese-Bronze applied with welding torch, then planed to 1/8 inch.
 Stops are to be provided to prevent over-driving and over-pulling.

Notes: (End Latch Machinery)
 The end latch is to be regulated by counterweight so that latch bar will fall into position under all conditions, allowance being made for stiff lubricant in cold weather.
 Latch bar roller is to be 1/2 inch from bottom of well when end wedges are fully driven.

GENERAL MACHINERY NOTES:
 All gears and rack are to be made of cast steel.
 All gear teeth, except rack teeth, are to be machine cut.
 All gears are to be secured to shafts with suitable keys.
 All bevel and mitre gears are to have suitable bronze thrust collars.
 Pitch lines are to be scribed on both sides of all gears and top of rack.
 All bearing boxes are to be babbitted except main pinion and bull wheel bearings which are to have phosphor-bronze linings.
 All bearing boxes to be of split type unless otherwise noted.
 All bearing boxes and the center pivot are to be provided with grease cups and grooves: where not otherwise accessible they shall be connected with oil pipes.
 All shafts under 3" diameter are to be cold rolled steel. All shafts over 3" diameter are to be rolled or forged.
 All castings unless otherwise noted are to be of cast steel.
 All parts of the operating machinery connected to or supported by structural steel are to be assembled completely in shop together with supporting structural steel, see sketch. Drill holes for bearings with gears meshing properly and all other parts in correct position. Match mark where necessary.
 Sub-punching will not be permitted for machinery connections to structural steel supports.
 Machinery is shown in position with bridge closed and wedges driven.
 All material to be allowed as machinery, as noted in Special Provisions, is for or for movable span only, unless otherwise noted, and does not include shoes and bed plates of fixed spans.
 These drawings are general only. Contractor shall check same and submit shop drawings, made in compliance with the specifications, which are to be approved before fabrication begins.
 All turning machinery to be marked with 'T'
 All end wedge machinery to be marked with 'EW'
 All center wedge machinery to be marked with 'CW'
 All end latch machinery to be marked with 'L'
 Power calculated with two men on capstan at 80# each, no friction losses due to bearings or gears, except center pivot and wedge sliding surfaces.

Notes: (2 Panel Assembly Drawing)
 The two center panels of floor system and lower chord members, together with the center girder, lateral system and machinery supports shown, all be completely assembled with the center bearings, castings, balance wheels, rack and track, and turning ring machinery at the structural steel fabrication shop. All necessary drilling and reaming shall be done and the structural steel and machinery parts a match marked. The complete assembly shall be properly adjusted until the two-panel section may be turned 360 degrees in perfect adjustment.



This drawing included in Dec 1922 for general information only.

**MACHINERY DETAILS
 230' SWING SPAN**

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: RA Date: 11-5-31
 Traced By: EAW Date: 12-11-31
 Checked By: _____ Date: _____
 Scale: 3/8" = 1 ft.
BRIDGE NO. DRAWING NO. 3317

N.B. Lanier
 BRIDGE ENGINEER