

FISCAL YEAR	Fed-Aid Project	SHEET NO.	TOTAL SHEETS
	102(3)	1	29

Job No. 6231

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

PLAN OF PROPOSED BRIDGES
CONWAY - GREENBRIER ROAD

FAULKNER COUNTY

ROUTE 65 SEC. 9

JOB NO 6231

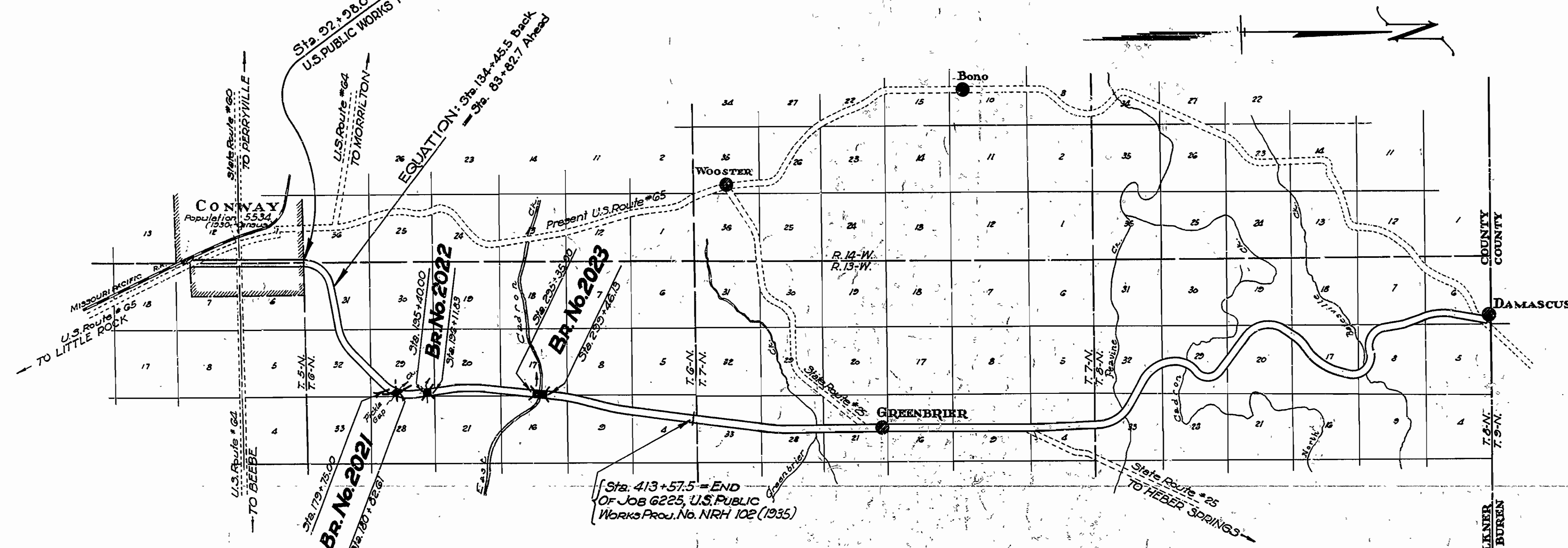
FEDERAL AID PROJECT NO. 102 (3)

QUANTITIES

Item No.	Item	Quantity	Unit
103	Dry Excavation for Structures	740	Cu.Yds.
103	Wet Excavation for Structures	1615	Cu.Yds.
103	Solid Rock Excavation for Structures	308	Cu.Yds.
SP & 802	Class 'A' Concrete for Bridges	1212.50	Cu.Yds.
SP & 802	Class 'S' Concrete for Bridges	622.00	Cu.Yds.
SP & 802	'Seal' Concrete for Bridges	24.85	Cu.Yds.
803	Reinforcing Steel	296,780	Lbs.
805	Concrete Railing	1,236	Lin.Ft.
807	Structural Steel in Truss Spans	208,740	Lbs.
810	Untreated Timber Piling	3,300	Lin.Ft.
SP852-1	Metal Bearing and Roadway Exp. Devices	25,146	Lbs.
SP950-2	State Bridge Name Plates (Type 'A')	6	Each
SP	Removal of Existing Bridge	Lump Sum	

INDEX OF SHEETS

Sheet No.	Drawing No.	Title
1.	4668	Title Sheet.
2.	4669	Summary Sheet.
3.	4670	Layout Br.No. 2021.
4.	4671	Details of Abutment No.1, Br.No.2021.
5.	4671-A	Details of Abutment No.1, Br.No.2021.
6.	4672	Details of Abutment No.2, Br.No.2021.
7.	4672-A	Details of Abutment No.2, Br.No.2021.
8.	4673	Details of Piers Br.No.2021.
9.	4674	Details of Superstructure Br.No.2021.
10.	4675	Layout of Br.No. 2022.
11.	4676	Details of Abutments Br.No. 2022.
12.	4677	Details of Pier Br.No. 2022.
13.	4678	Details of Standard 35' R.C.D. Girder Span (Superstr. Br.No.2022).
14.	4678	Layout of Br.No. 2023.
15.	4679	Details of Bents 1, 2, & 3 Br.No. 2023.
16.	4680	Details of Piers 1 & 4 Br.No. 2023.
17.	4681	Details of Pier 2 Br.No. 2023.
18.	4682	Details of Pier 3 Br.No. 2023.
19.	4683	Details of Bents 4, 5, & 6 Br.No. 2023.
20.	4683-A	Details of Bents 4, 5, & 6 Br.No. 2023.
21.	4684	Details of Standard 20' R.C.D. Gir. Span (Superstr. Br.No. 2023).
22.	4685	Details of Standard 40' R.C.D. Gir. Span (Superstr. Br.No. 2023).
23.	4686	Details of Standard 70'-110'-70' Continuous Deck Truss Span (Superstr. Br.No. 2023).
24.	4686-A	Details of Standard 70'-110'-70' Continuous Deck Truss Span (Superstr. Br.No. 2023).
25.	4686-B	Details of Standard 70'-110'-70' Continuous Deck Truss Span (Superstr. Br.No. 2023).
26.	4686-C	Details of Standard 70'-110'-70' Continuous Deck Truss Span (Superstr. Br.No. 2023).
27.	4684	Details of Handrail on Truss Spans (Br.No. 2023).
28.	4687	Details of Bridge Name plates.
29.	4691	Standard Basis for Computing Excavation for Structures.



Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted June 30th, 1936 together with Special Provisions as listed.

SPECIAL PROVISIONS

No.	Item	No. of Sheets	Date
1	Required Special Provisions	12	Sheets 1-9 & 12 approved 4-12-37
2	Wages of Labor (10-24-33)	1	Sheets 10-11 Rev. approved 7-9-37
3	Employment Centers for Labor	1	
4	Partial Payments	1	
5	Unemployment Compensation or Insurance	1	
6	Special Freight Rates	1	
7	Design Specifications for Bridges	3	9-11-36
8	Metal Bearing and Roadway Expansion Devices	1	
9	Project Marker Posts and State Bridge Name Plates	1	9-9-36
10	Engineers' Field Office	1	
11	Removal of Existing Bridge	1	6-1-37
12	Machine Mixing	1	
13	Coordination of Work Job 6231 & 6225	2	10-3-38

LAYOUT

Scale: 1 inch = 5000 feet

LENGTH OF PROJECT = _____ FT. = _____ MI.
 LENGTH OF BRIDGES = 590.57 FT. = 0.111 MI.
 LENGTH OF JOB = 590.57 FT. = 0.111 MI.

NOTE: JOB 6231 CONSISTS OF THREE BRIDGE STRUCTURES, LIMITS AS SHOWN ABOVE.

APPROVED: _____
 CHAIRMAN, State Highway Commission
 APPROVED: _____
 STATE HIGHWAY ENGINEER
 RECOMMENDED FOR APPROVAL: _____
 DISTRICT ENGINEER, U.S. Bureau of Public Roads
 RECOMMENDED FOR APPROVAL: _____
 CHIEF ENGINEER, U.S. Bureau of Public Roads
 APPROVED: _____
 DIRECTOR, U.S. Bureau of Public Roads

N. B. ...
BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	102(3)		2	29
STATE JOB NO.		6231			

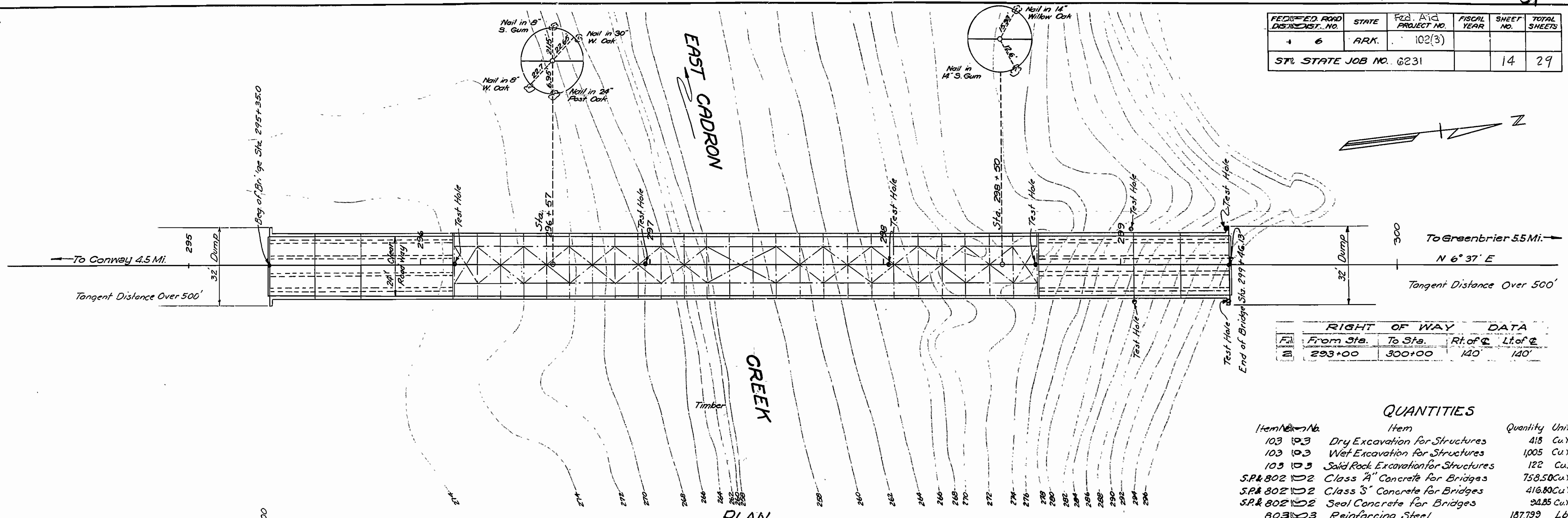
SCHEDULE OF BRIDGE QUANTITIES (CODE NO. 922 & 950)

ITEM	Item No.103	Item No.103	Item No.103	S.P. & Item No.802	S.P. & Item No.802	S.P. & Item No.802	Item No.803	Item No.805	Item No.807	Item No.810	SP 852-1	SP 950-2	S.P.
	Dry Excavation For Structures Cu.Yds.	Wet Excavation For Structures Cu.Yds.	Solid Rock Exc. For Structures Cu.Yds.	Class 'A' Concrete for Bridges Cu.Yds.	Class 'S' Concrete for Bridges Cu.Yds.	Seal Concrete for Bridges Cu.Yds.	Reinforcing Steel Lbs.	Concrete Railing Lin. Ft.	Structural Steel in Truss Spans Lbs.	Untreated Timber Piling Lin. Ft.	Metal Bearing and Roadway Exp. Devices Lbs.	State Bridge Name Plates Type 'A' Each	Removal of Existing Bridge Lump Sum
BR. NO. 2021													
Abutment No.1	62	96	44	86.92			10,336	132				1	
Pier No.1		35	14	36.43			3,277						
Pier No.2		40	10	36.43			3,277						
Abutment No.2	31	131	19	87.65			10,424	139				1	
Span No.1					41.50		12,466	689			3,016		
Span No.2					41.50		12,466	695			2,382		
Span No.3					41.50		12,466	705			3,049		
TOTALS	93	302	87	247.43	124.50		64,712	248.0			8,447	2	Complete
BR. NO. 2022													
Abutment No.1	121	132	43.5	87.95			9,596	8.0				1	
Pier		44	12	30.67			3,003						
Abutment No.2	108	132	43.5	87.95			9,596	8.0				1	
Spans No. 1 & No. 2					80.70		22,074	140.0			5,030		
TOTALS	229	308	99	206.57	80.70		44,269	156.0			5,030	2	
BR. NO. 2023													
Bent No.1	39	68		52.63			10,610			396		1	
Bent No.2	39	68		56.60			12,139			396			
Bent No.3	39	68		53.75			11,191			396			
Pier No.1	51	93		84.37		29.38	6,339			864			
Pier No.2		253		28.24		65.47	7,220			1,248			
Pier No.3		350	50	156.47			10,041						
Pier No.4	52	105	27	125.87			7,885						
Bent No.4	87		9	49.30			12,244						
Bent No.5	61		14	45.41			12,230						
Bent No.6	50		22	35.86			9,409					1	
Span No. 1 & No.9					55.24		9,152	90.0					
Span No. 2 & No.8					51.32		9,142	80.0			830		
Span No. 3 & No.7					100.00		27,940	160.0			4,126		
Span No.4, No.5, & No.6					210.24		42,257	502.0	208,740		6,713		
TOTALS	418	1005	122	758.50	416.80	94.85	187,799	832.0	208,740	3,300	11,669	2	
GRAND TOTALS	740	1615	308	1,212.50	622.00	94.85	296,780	1,236.0	208,740	3,300	25,146	6	Complete

SUMMARY SHEET
CONWAY-GREENBRIER BRIDGES
FAULKNER COUNTY
ROUTE 65 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
 Drawn By: L.P.C. Date: 3-21-37
 Traced By: E.A.V. Date: 4-1-37
 Checked By: _____ Date: _____
 Scale: _____ in. = _____ ft.
BRIDGE NO. 2021-2022-2023 DRAWING NO. 4669

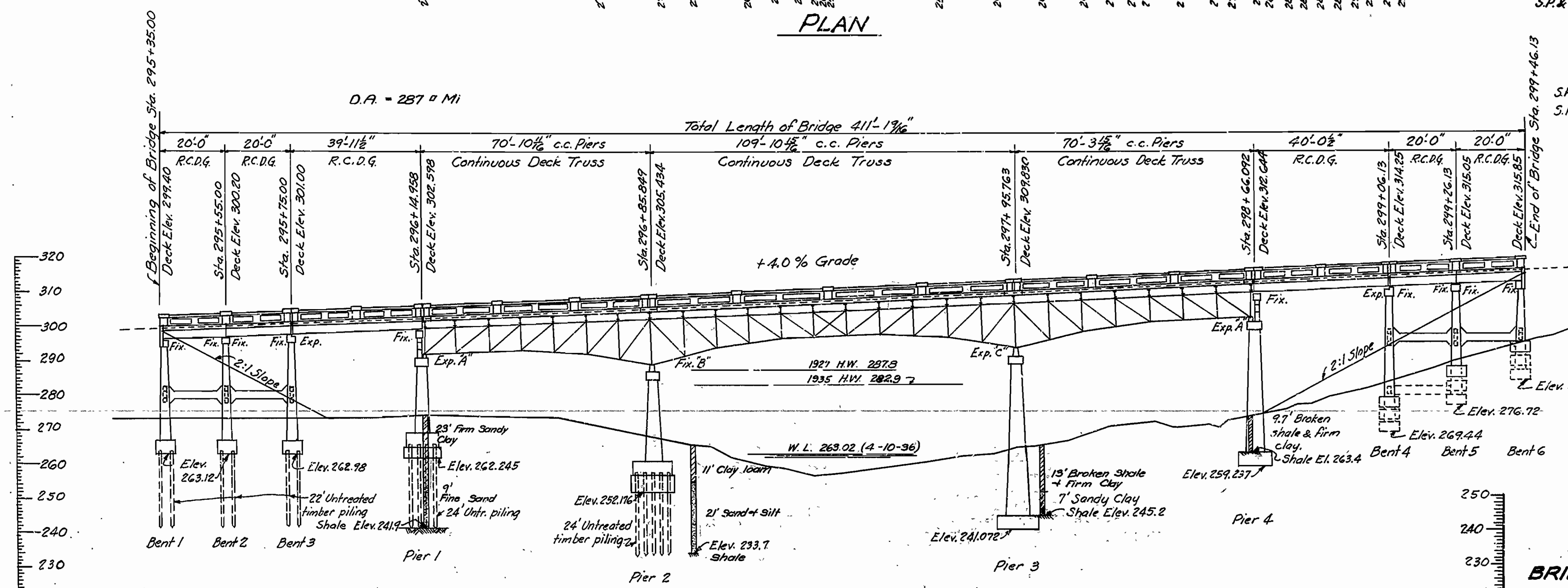
N.B. Larus
 BRIDGE ENGINEER

FEDERATED ROAD DISTRICT NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEEF NO.	TOTAL SHEETS
6	ARK.	102(3)			
ST. STATE JOB NO. 6231				14	29



RIGHT OF WAY DATA			
From Sta.	To Sta.	Rt. of C.	Lt. of C.
293+00	300+00	140	140

Item No.	Item	Quantity	Unit
103 103	Dry Excavation for Structures	418	Cu Yds
103 103	Wet Excavation for Structures	1005	Cu Yds
103 103	Solid Rock Excavation for Structures	122	Cu Yds
S.P. 802 102	Class "A" Concrete for Bridges	758.50	Cu Yds
S.P. 802 102	Class "S" Concrete for Bridges	416.80	Cu Yds
S.P. 802 102	Seal Concrete for Bridges	22.85	Cu Yds
803 103	Reinforcing Steel	187,799	Lbs.
805 105	Concrete Railing	832	Lin. Ft.
807 107	Structural Steel in Truss Spans	208,740	Lbs.
810 110	Untreated Timber Piling	3,300	Lin. Ft.
S.P. 852 152-1	Metal Bearing and Roadway Exp. Devices	11,669	Lbs.
S.P. 950 150-23	State Bridge Name Plates (Type "A")	2	Each



B.M. Elev. 273.33 Nail in root of 36" Water Oak
150' Left Sta. 296+50

B.M. Elev. 273.19 Nail in root of 18" W. Oak
200' Left Sta. 298+70

GENERAL NOTES

Lengths of piling shown are for estimating purposes only. Actual lengths to be determined in the field. Volume occupied by embedded pile heads not to be included in pay quantities for concrete.

For Details of Bents 1-2-3 see Drwg. No. 4679

" Piers 1 & 4	" 4680
" Piers 2 & 3	" 4681 & 4682
" Bents 4-5-6	" 4683 & 4683-A
" Std. 20' R.C.D.G.	" 2322
" Std. 40' R.C.D.G.	" 2318
" Truss Spans	" 2160, 2160-A, 2160-B, & 2160-C

**LAYOUT OF
BRIDGE OVER EAST CADRON CREEK
ON CONWAY-DAMASCUS ROAD
FAULKNER COUNTY
ROUTE 65 SEC. 9**

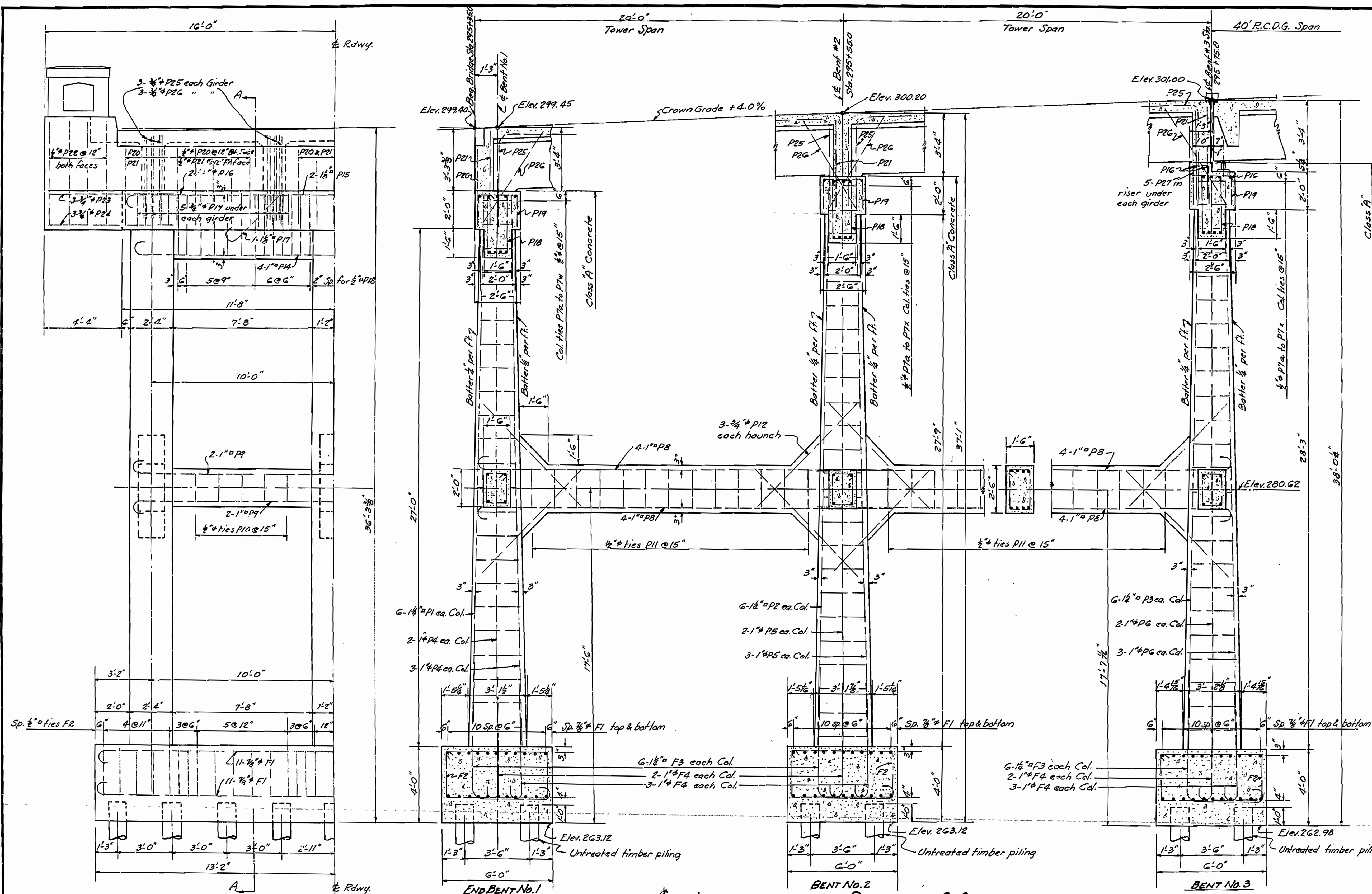
**ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.**

Drawn By: *L.P.C.* Date: 2-2-37
Traced By: *L.P.C.* Date: 2-2-37
Checked By: *L.P.C.* Date: _____
Scale: 1" = 20' ft.

BRIDGE NO. 2023 DRAWING NO. 4678
CODE NO. 922

L.P.C.
BRIDGE ENGINEER

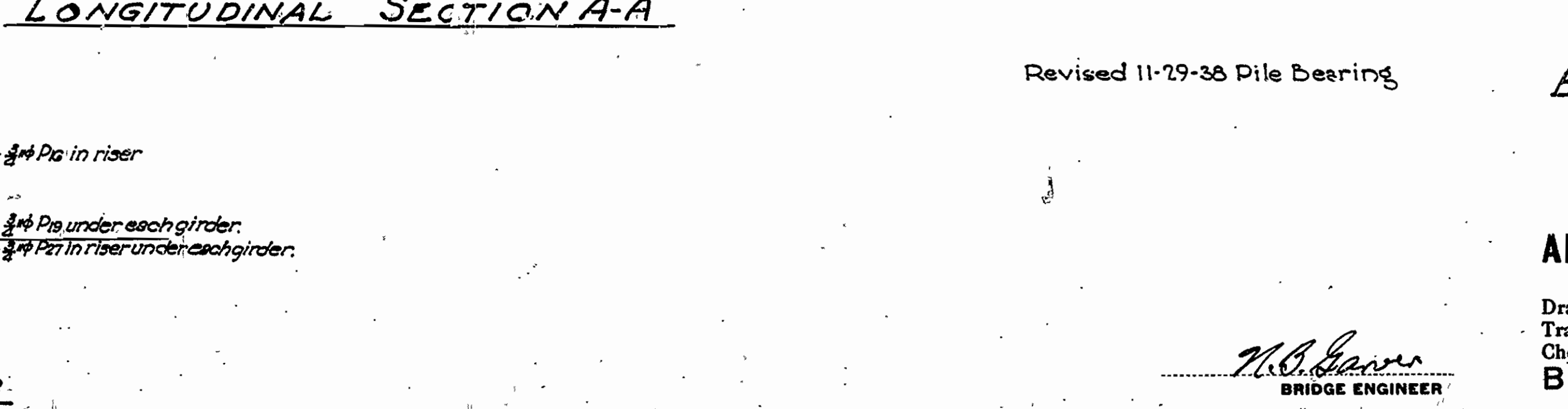
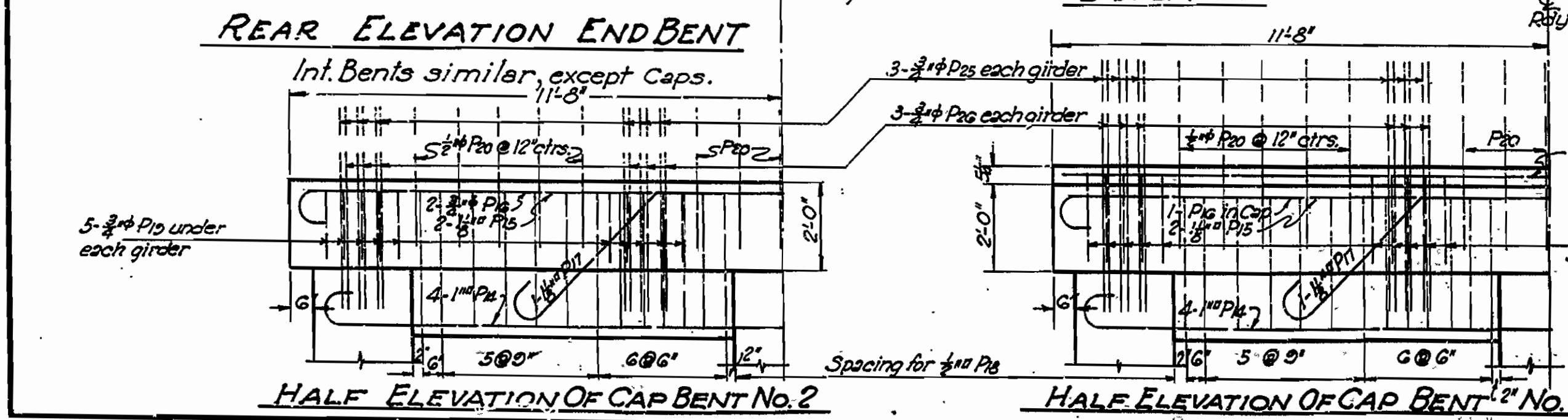
FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	102(3)		15	29
STATE JOB NO. 6231					



LIST OF BENT BARS

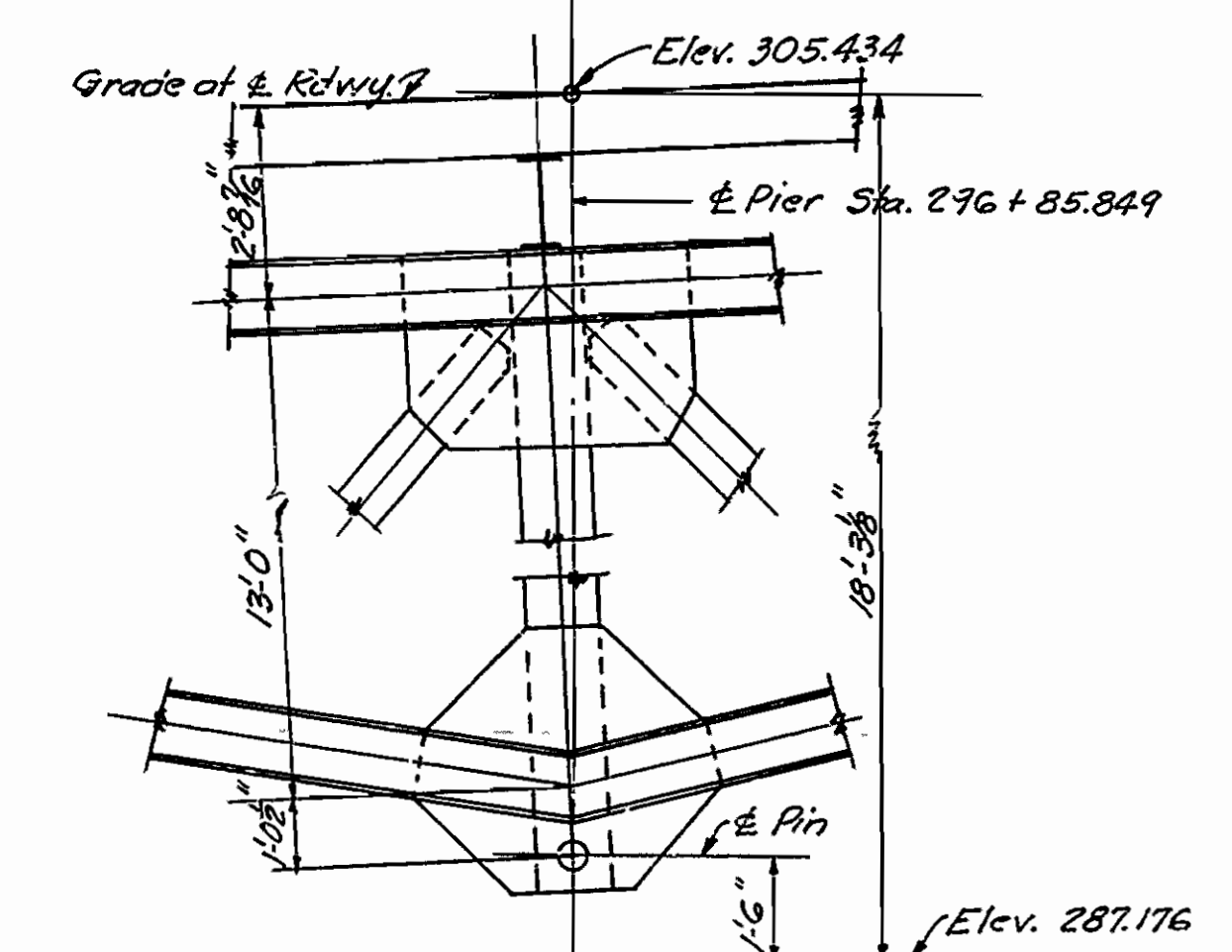
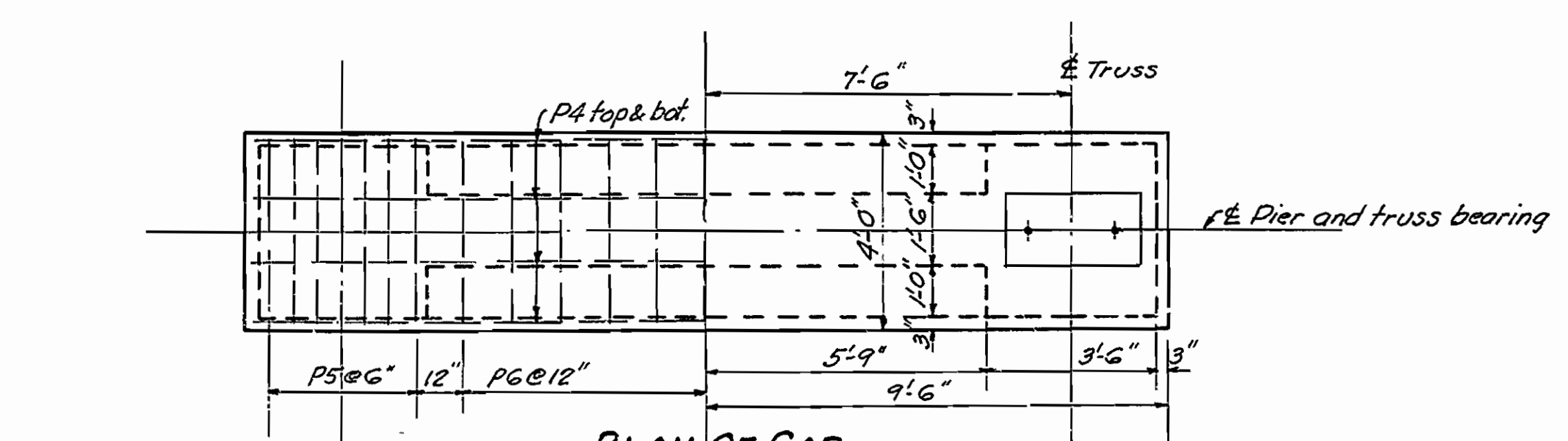
Mark	Size	Length	A	B	Diagram
F1	7/8"	27'-10"	25'-10"	8"	[Diagram showing bent bar F1 layout]
P9	1"	23'-10"	21'-0"	8"	
P14	1"	23'-10"	21'-0"	8"	
P15	1 1/8"	24'-10"	22'-10"	8"	
F2	1/2"	16'-7"	5'-6"	2'-5"	[Diagram showing bent bar F2 layout]
P10	1/2"	9'-0"	7'-6"	1'-11"	
P11	1/2"	6'-3"	1'-7 1/2"	1'-1 1/2"	
P12	1/2"	7'-3"	2'-1 1/2"	1'-1 1/2"	
F3	1 1/2"	11'-9"			[Diagram showing bent bar F3 layout]
F4	1"	7'-0"	6'-0"	8"	
P8	1"	23'-6"	22'-6"	8"	[Diagram showing bent bar P8 layout]
P17	1 1/8"	15'-6"	6'-0"	3'-9"	
P19	3/4"	5'-2"	2'-1 1/2"	1'-6 1/2"	[Diagram showing bent bar P19 layout]
P25	3/4"	8'-11"	4'-6"	4'-10"	
P27	3/4"	4'-9"	1'-0"	1'-1 1/2"	

NOTES:- For details of 20' tower spans see Drwg. 2322
 " 40' R.C.D.G. spans " 2318
 For additional notes " 4582
 Concrete to be poured in the dry. All exposed corners to have 3/4" chamfer unless otherwise shown.
 Dimensions relating to reinforcing steel are to centers of bars.
 Reinforcing steel to be deformed bars of structural or intermediate grade. Shop lists and bending diagrams must be submitted by Contractor and be approved before fabrication is begun.
 Maximum bearing 15 tons per pile



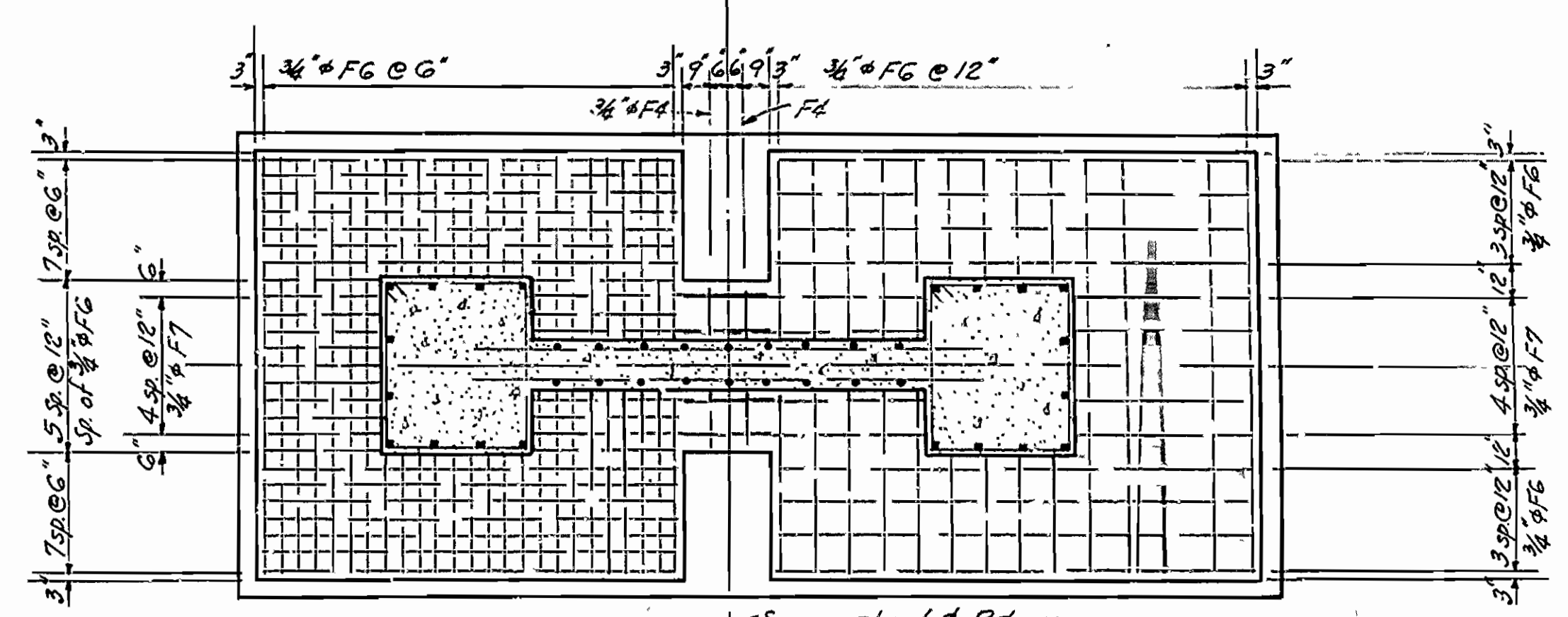
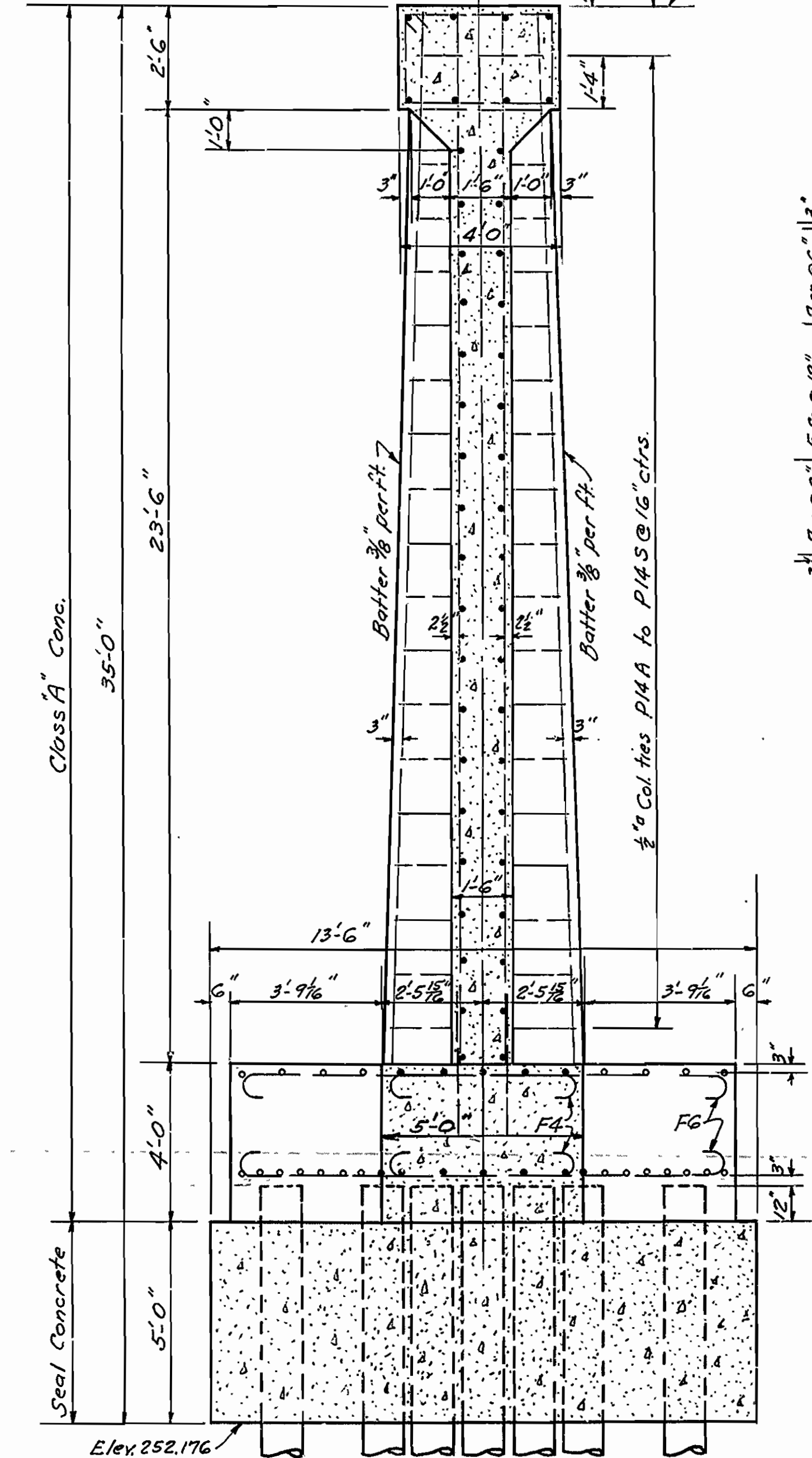
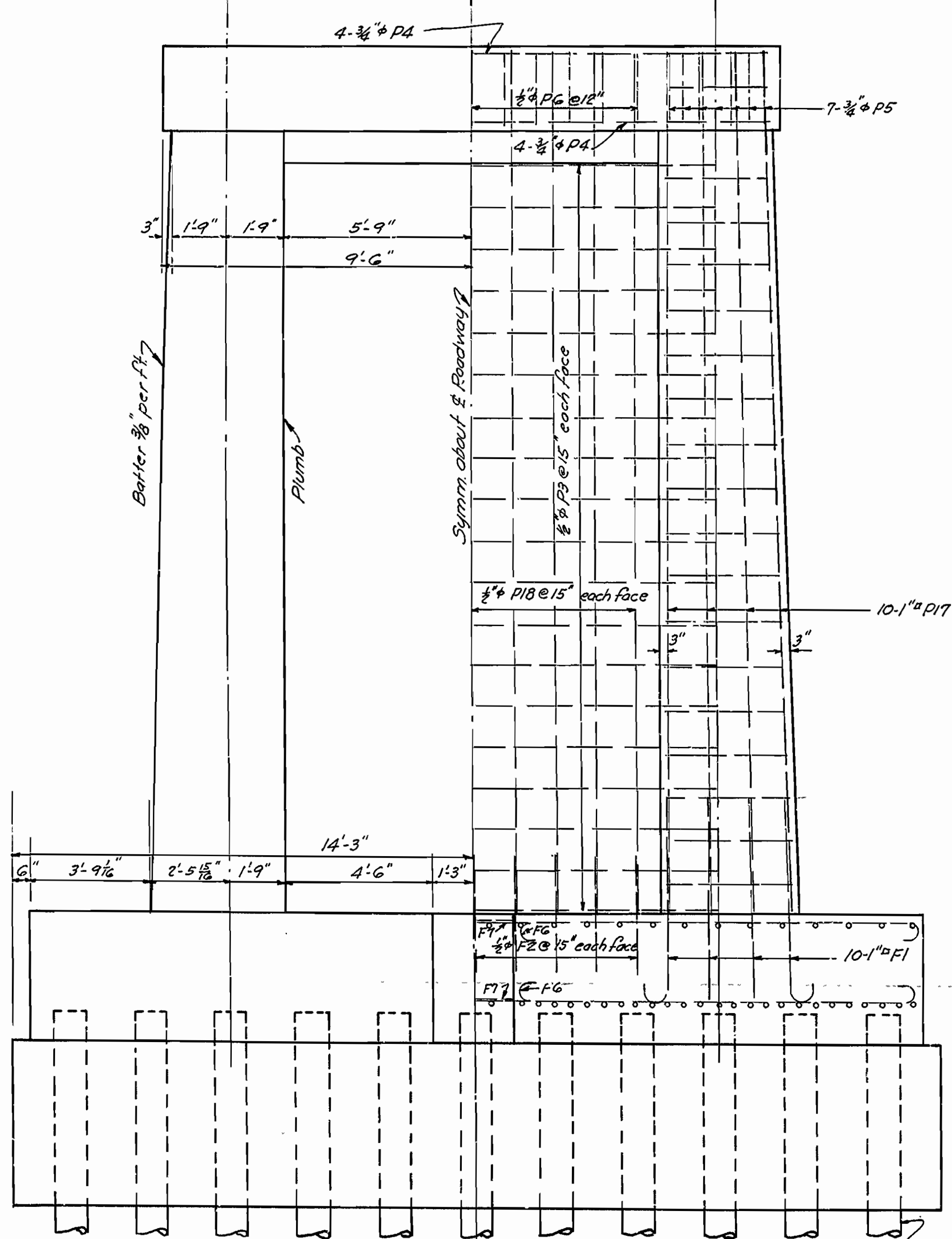
DETAILS OF BENTS 1-2-3
 BRIDGE OVER EAST CADRON CREEK
 CONWAY - DAMASCUS ROAD
 FAULKNER COUNTY
 ROUTE 65 SEC. 9
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: E.A.W. Date: 1-7-37
 Traced By: L.P.C. Date: 2-11-37
 Checked By: Date:
 BRIDGE NO. 2023 DRAWING NO. 4679
 Scale: 3/8" = 1' n.
 Revised 11-29-38 Pile Bearing
 M.B. Gann
 BRIDGE ENGINEER

FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	102(3)		17	29
STATE JOB NO. 6231					29



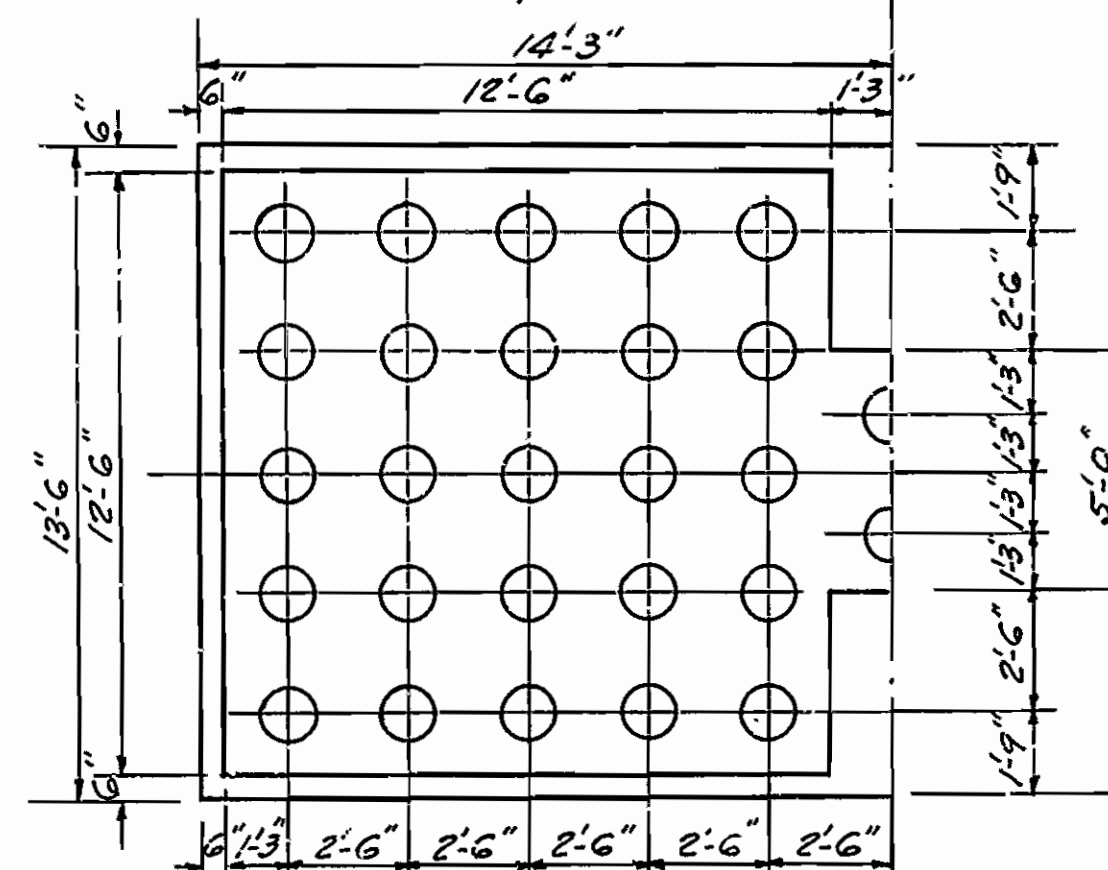
BENT BARS

Mark	Size	Lgth.	A	B	Bending Diagrams
F7	3/8"	15'-6"	14'-9"	6"	
F1	1"	7'-3"	6'-3"	8"	
F4	3/8"	6'-0"	4'-6"	6"	
F6	3/8"	13'-6"	12'-0"	6"	
P5	3/8"	12'-3"	3'-7"	2'-1 1/2"	
P6	3/8"	12'-3"	3'-7"	2'-1 1/2"	
P14A to P14S	2"	Ave. Lgth. 15'-3"	3'-0"	3'-11"	



HALF PLAN-BOTTOM REINF. Scale: 1/4" = 1'-0"

HALF FOOTING PLAN-TOP REIN. STEEL Scale: 1/4" = 1'-0"



HALF PLAN SHOWING PILING Scale: 1/4" = 1'-0"

For General Notes See Drawg. No. 4682

Revised 11-29-38 Pile loading

Maximum bearing 15 Tons per Pile

Depth of seal based on 22' head.

**DETAILS OF PIER NO. 2
BRIDGE OVER EAST GADRON CREEK
CONWAY - DAMASCUS ROAD
FAULKNER COUNTY
ROUTE 65 SEC. 9**

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: L.R.C. Date: 1-19-37
Traced By: L.R.C. Date: 2-5-37
Checked By: Date:
Scale: 3/8" = 1' ft. Except as noted

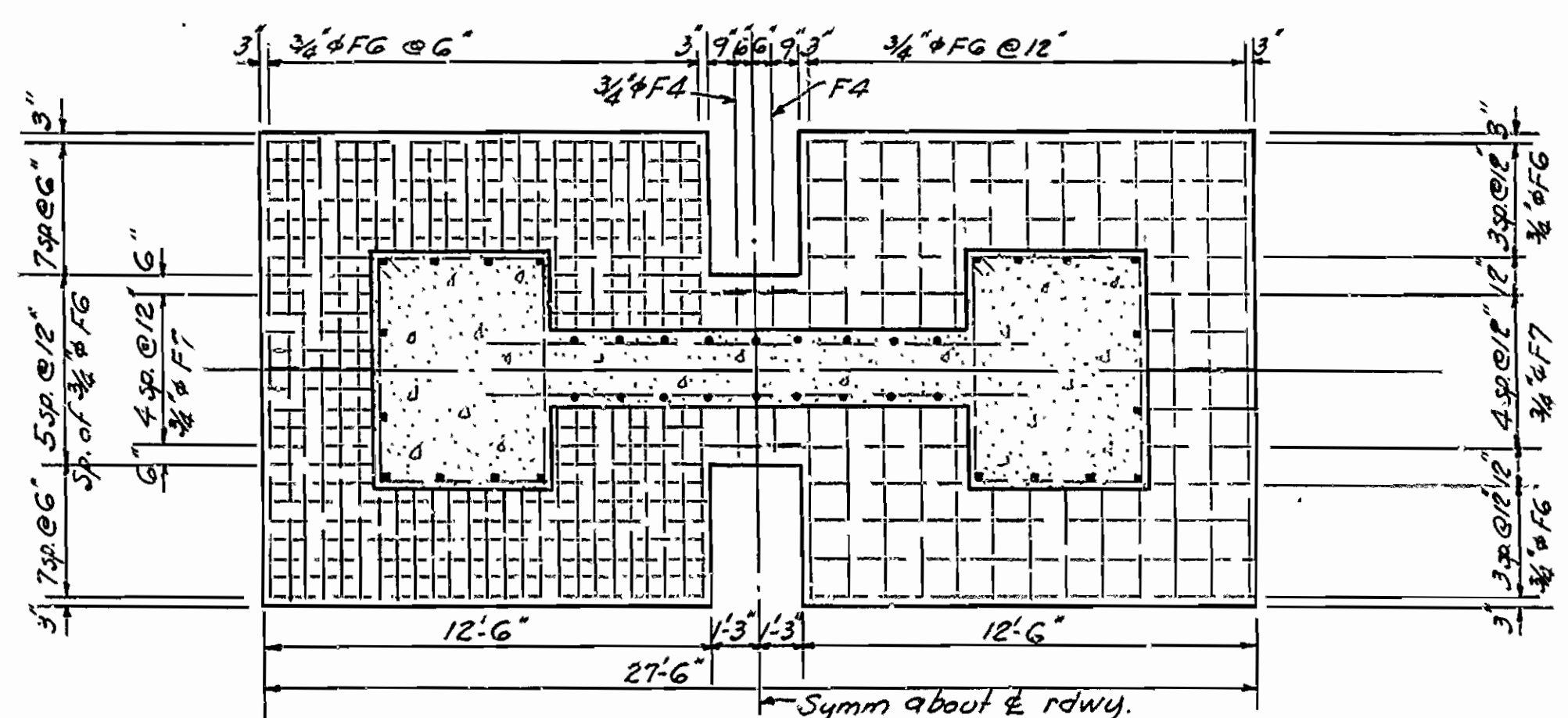
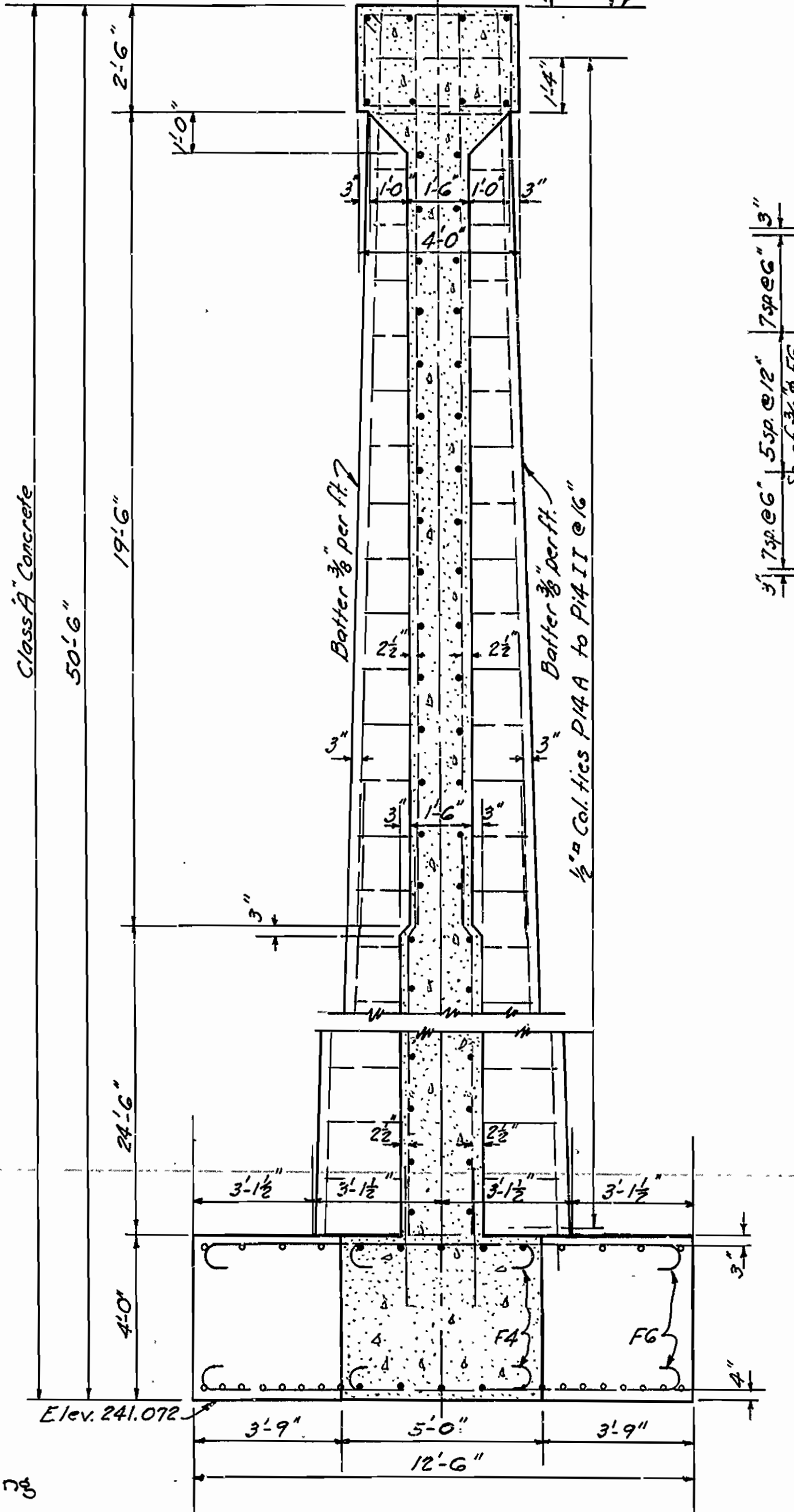
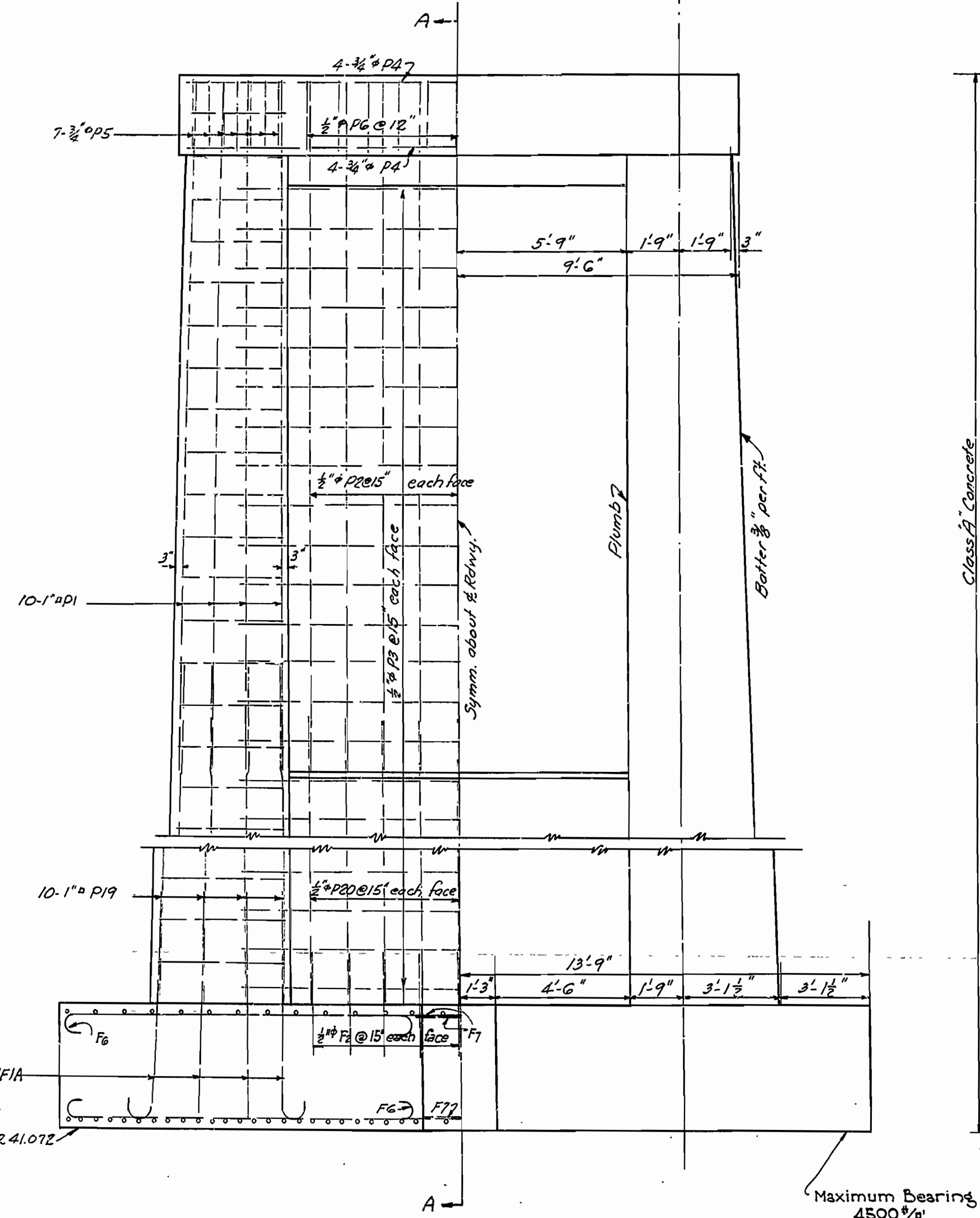
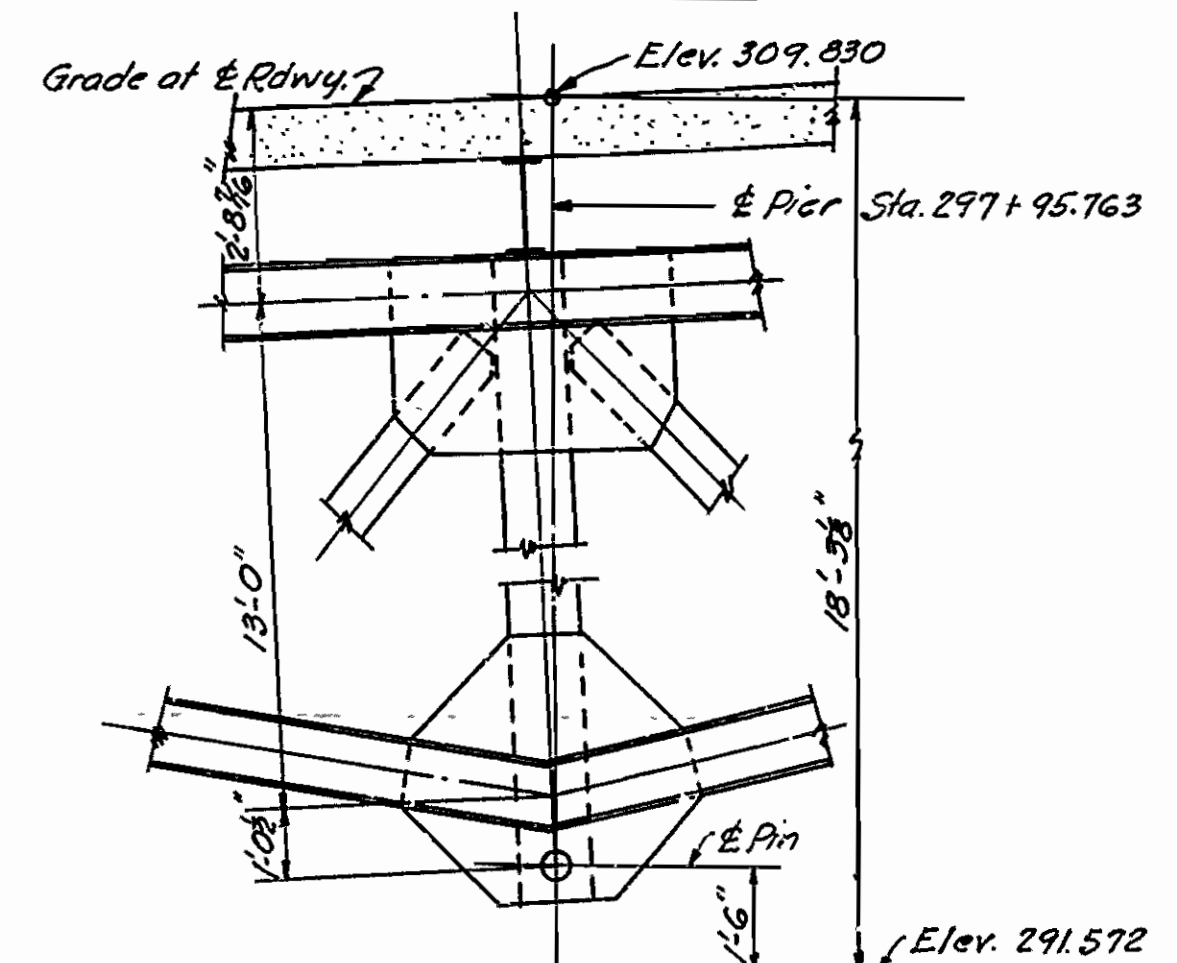
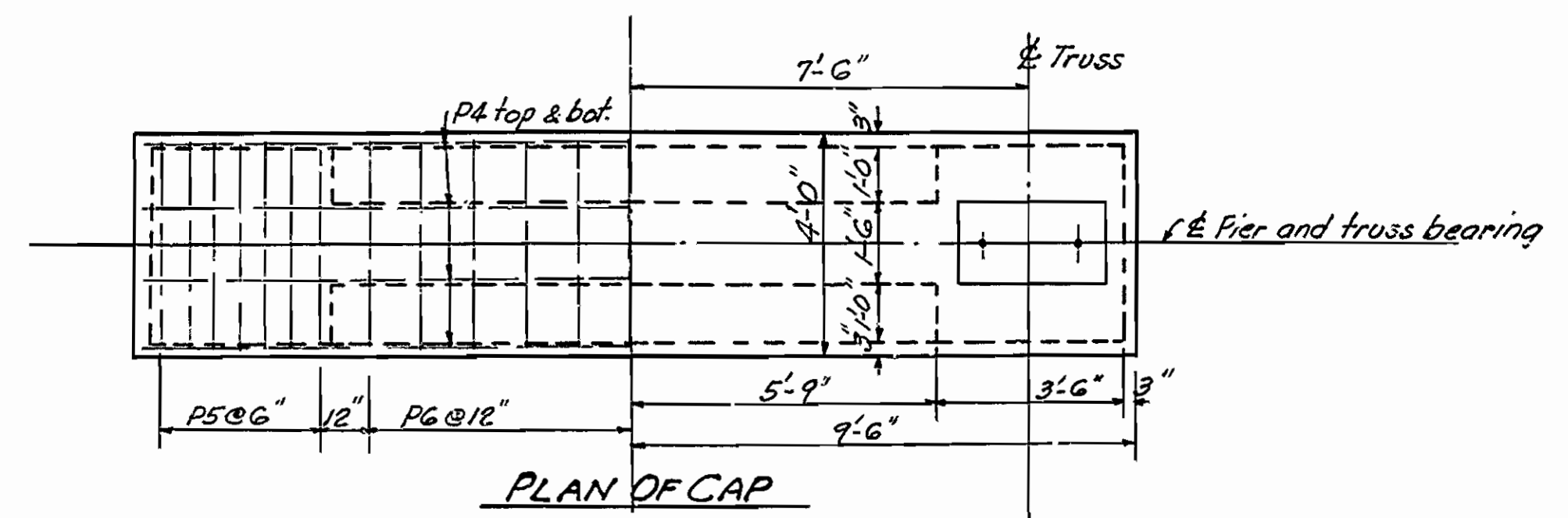
M.D. Lewis
BRIDGE ENGINEER

BRIDGE NO. 2023 DRAWING NO. 4681

FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	102(3)		18	29
STATE JOB NO. 6231					

BENT BARS

Mark	Size	Lgth	A	B	Bending Diagrams
F7	3/4"	15'-6"	14'-9"	6"	
F1	1"	7'-3"	6'-3"	8"	
F1A	1"	6'-3"	7'-3"	8"	
F4	3/4"	6'-0"	4'-6"	6"	
F6	3/4"	13'-6"	12'-0"	6"	
P20	1/2"	26'-4"			
P5	3/4"	12'-3"	5'-7 1/2"	2'-1 1/2"	
P6	1/2"	12'-3"	3'-7 1/2"	2'-1 1/2"	
P14A to P41I	1/2"	Lgth to 17'-3"	3'-0"	3'-1"	



HALF FOOTING PLAN SHOWING BOT. REIN. STEEL
 HALF FOOTING PLAN SHOWING TOP REIN. STEEL
 Scale: 1/4" = 1'-0"

General Notes - Substructure
 All concrete to be Class A unless "Seal Concrete" is called for.
 All exposed corners to have 3/8" chamfer unless otherwise noted.
 Reinforcing steel to be deformed bars of structural or intermediate grade.
 Shop lists and bending diagrams shall be submitted by Contractor and be approved before fabrication is begun.
 All dimensions relating to reinforcing steel are to centers of bars.
 Loading: H15 Highway; Unit Stresses: $f_s = 16,000 \text{ psi}$; $f_c = 650 \text{ psi}$
 Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction adopted June 30, 1936 with Special Provisions for Unit Stresses.
 Construction joints, where permitted, shall be horizontal and shall be provided with keys 3" deep. Key in walls to be continuous and to occupy the middle third of the width. Key in columns to occupy the middle third of each dimension.

Revised 11-19-35 Foundation Pressure

DETAILS OF PIER NO. 3
 BRIDGE OVER EAST GADRON CREEK
 CONWAY - DAMASCUS ROAD
 FAULKNER COUNTY
 ROUTE 65 SEC. 9

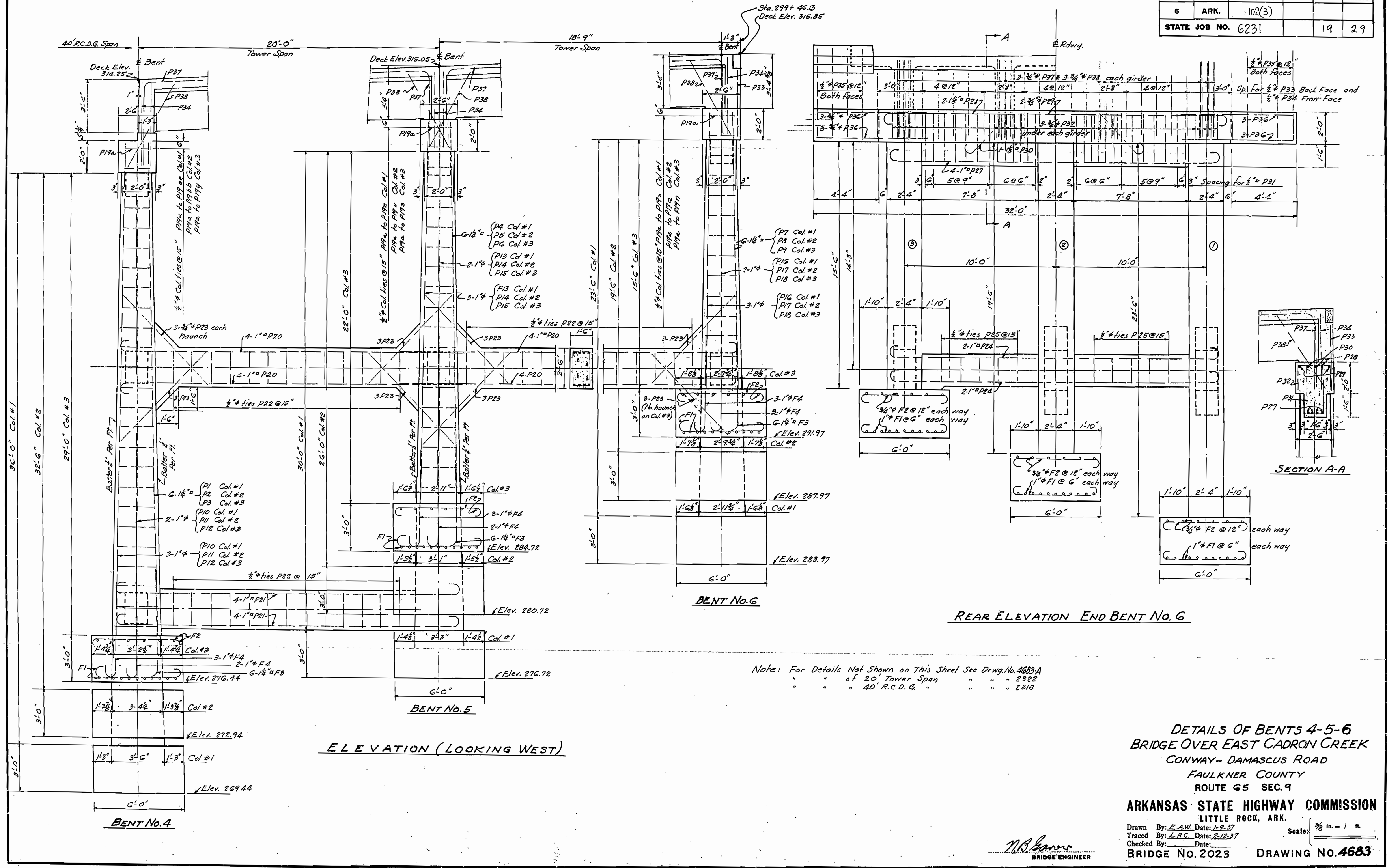
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

Drawn By: L.P.C. Date: 1-19-37
 Traced By: L.P.C. Date: 2-1-37
 Checked By: Date:
 BRIDGE NO. 2023 DRAWING NO. 4682

N.B. Lawrence
 BRIDGE ENGINEER

Scale: 3/8" = 1' ft. Except as noted

FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	102(3)		19	29
STATE JOB NO. 6231					

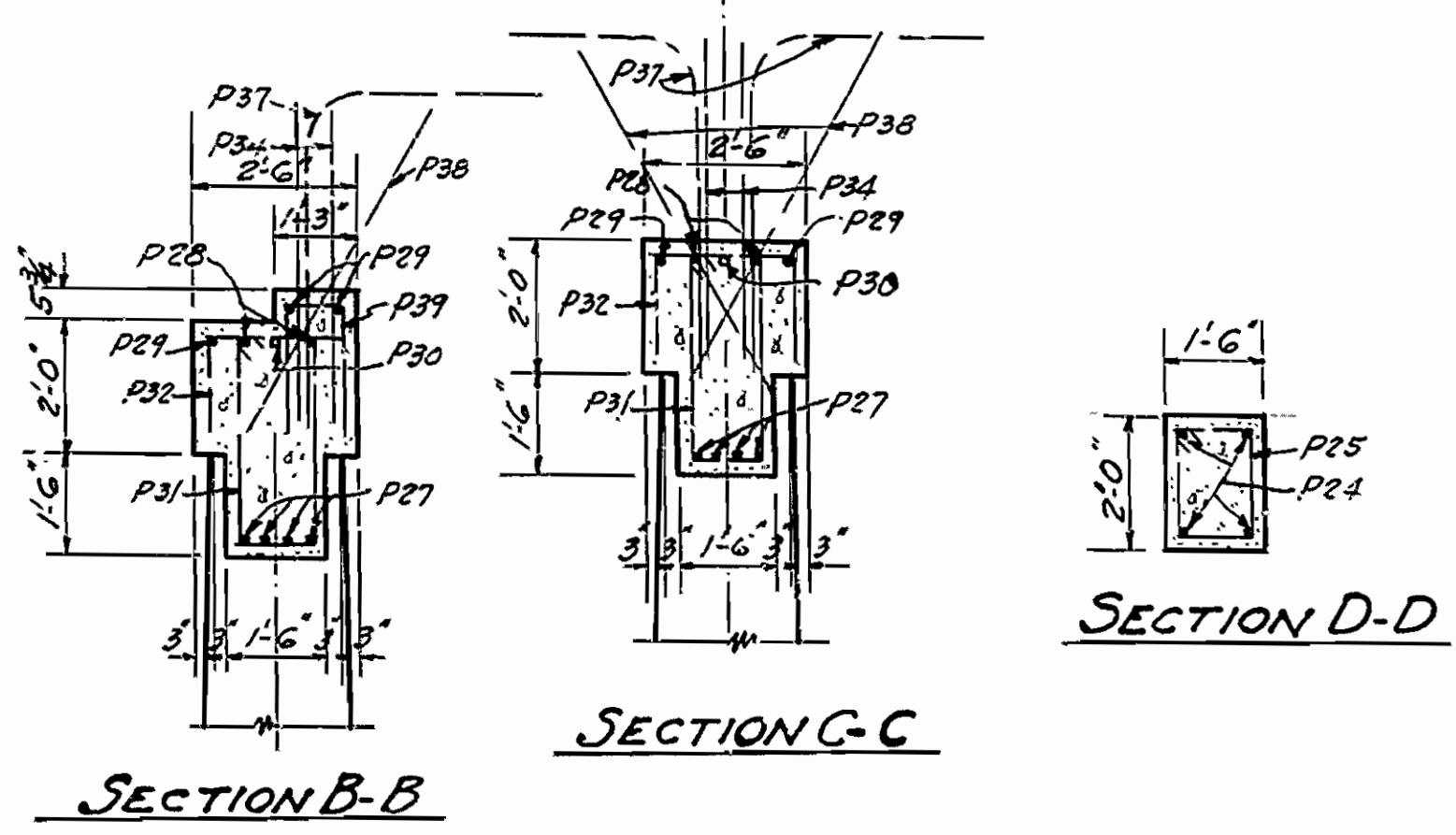
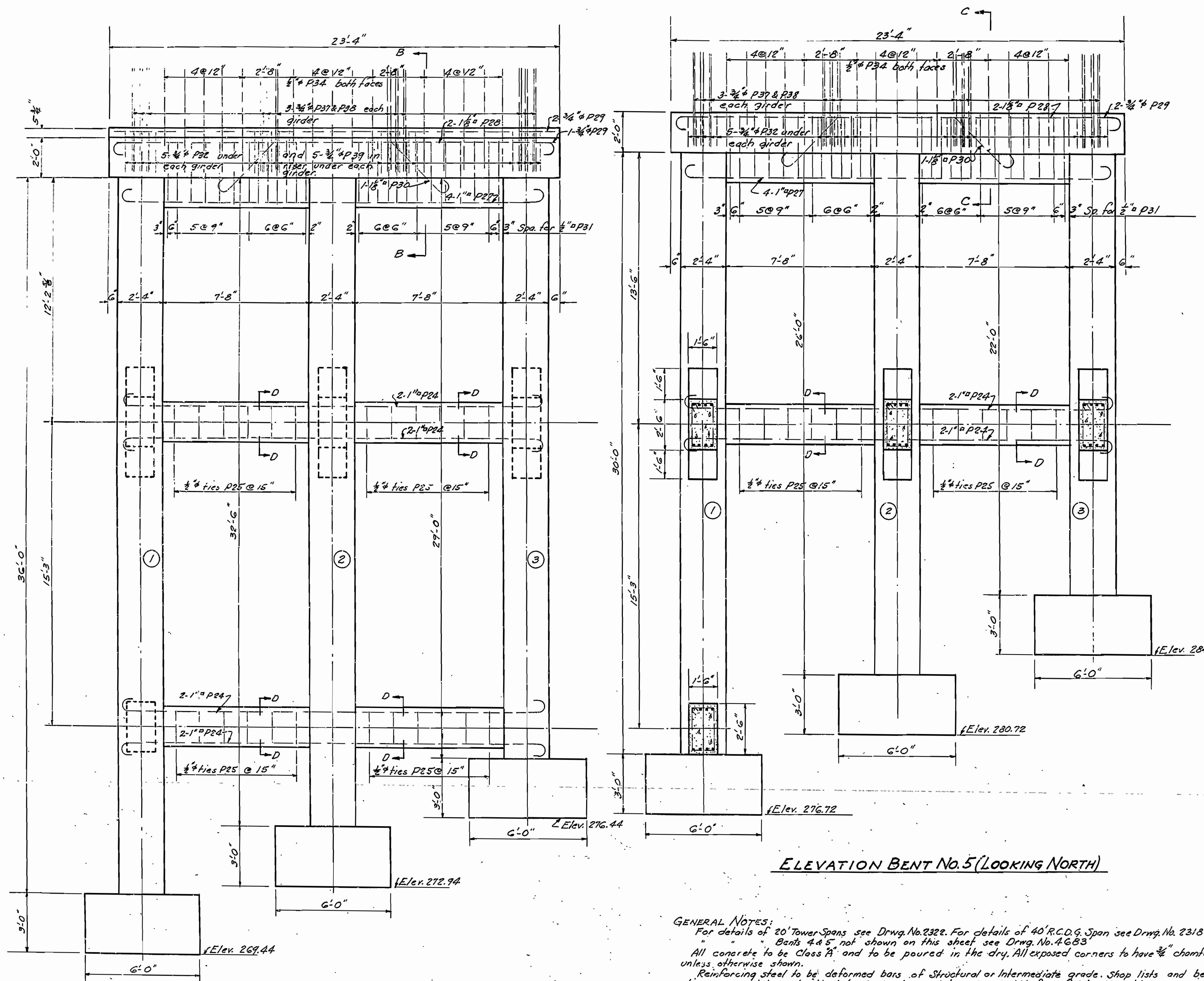


DETAILS OF BENTS 4-5-6
BRIDGE OVER EAST CADRON CREEK
 CONWAY-DAMASCUS ROAD
 FAULKNER COUNTY
 ROUTE 65 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: E.A.W. Date: 1-9-37
 Traced By: L.R.C. Date: 2-12-37
 Checked By: _____ Date: _____
 Scale: 3/8" = 1' = 1"

W.B. Gannon
 BRIDGE ENGINEER

BRIDGE NO. 2023 DRAWING NO. 4683

FED. ROAD DIST. NO.	STATE	Fed. Aid PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	ARK.	102 (3)		20	29
STATE JOB NO. 6231					



LIST OF BENT BARS (BENTS 4-5-6)

Mark	Size	Length	A	B	C	Diagram
F1	1"φ	7'-6"	5'-6"	8"		
F2	3/4"φ	7'-0"	5'-6"	6"		
P21	1"φ	24'-6"	22'-6"	8"		
P24	1"φ	23'-10"	21'-10"	8"		
P27	1"φ	23'-10"	21'-10"	8"		
P28	1 1/8"φ	24'-10"	22'-10"	8"		
P22	3/4"φ	7'-3"	2'-1 1/2"	1'-1 1/2"		
P25	1/2"φ	6'-3"	1'-7 1/2"	1'-1 1/2"		
P31	1/2"φ	9'-3"	3'-1 1/2"	1'-1 1/2"		
F4	1"φ	7'-0"	6'-0"	8"		
P20	1"φ	23'-6"	22'-6"	8"		
P30	1 1/2"φ	15'-6"				
P32	3/4"φ	5'-2"	2'-1 1/2"	1'-6"		
P37	3/4"φ	8'-11"				
F3	1/4"φ	11'-9"	4'-0"	7'-0"	8"	
P39	3/4"φ	4'-9"	10 1/2"	1'-11 1/4"		

ELEVATION BENT No. 4 (LOOKING NORTH)

ELEVATION BENT No. 5 (LOOKING NORTH)

GENERAL NOTES:
 For details of 20' Tower Spans see Drwg. No. 2322. For details of 40' R.C.G. Span see Drwg. No. 2318
 Bents 4 & 5 not shown on this sheet see Drwg. No. 4683
 All concrete to be Class A and to be poured in the dry. All exposed corners to have 3/8" chamfer, unless otherwise shown.
 Reinforcing steel to be deformed bars of Structural or Intermediate grade. Shop lists and bending diagrams must be submitted by Contractor and be approved before fabrication is begun.
 See also general notes on Drwg. No. 4682
 Maximum bearing on footings 5000#/ft

Revised 11-29-38 Foundation Pressure

DETAILS OF BENTS 4-5-6
 BRIDGE OVER EAST CADRON CREEK
 CONWAY-DAMASCUS ROAD
 FAULKNER COUNTY
 ROUTE 65 SEC. 9

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: E.A.W. Date: 1-10-37
 Traced By: L.R.C. Date: 2-15-37
 Checked By: _____ Date: _____
 BRIDGE NO. 2023 DRAWING NO. 4683-A

N.B. Lawrence
 BRIDGE ENGINEER

Scale: 3/8" = 1' ft.