

FED. ROAD DIST. NO.	STATE	F.A.P. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	SN FAP 187A(2)	1942	1	9
STATE JOB NO. 4271			1942	1	9

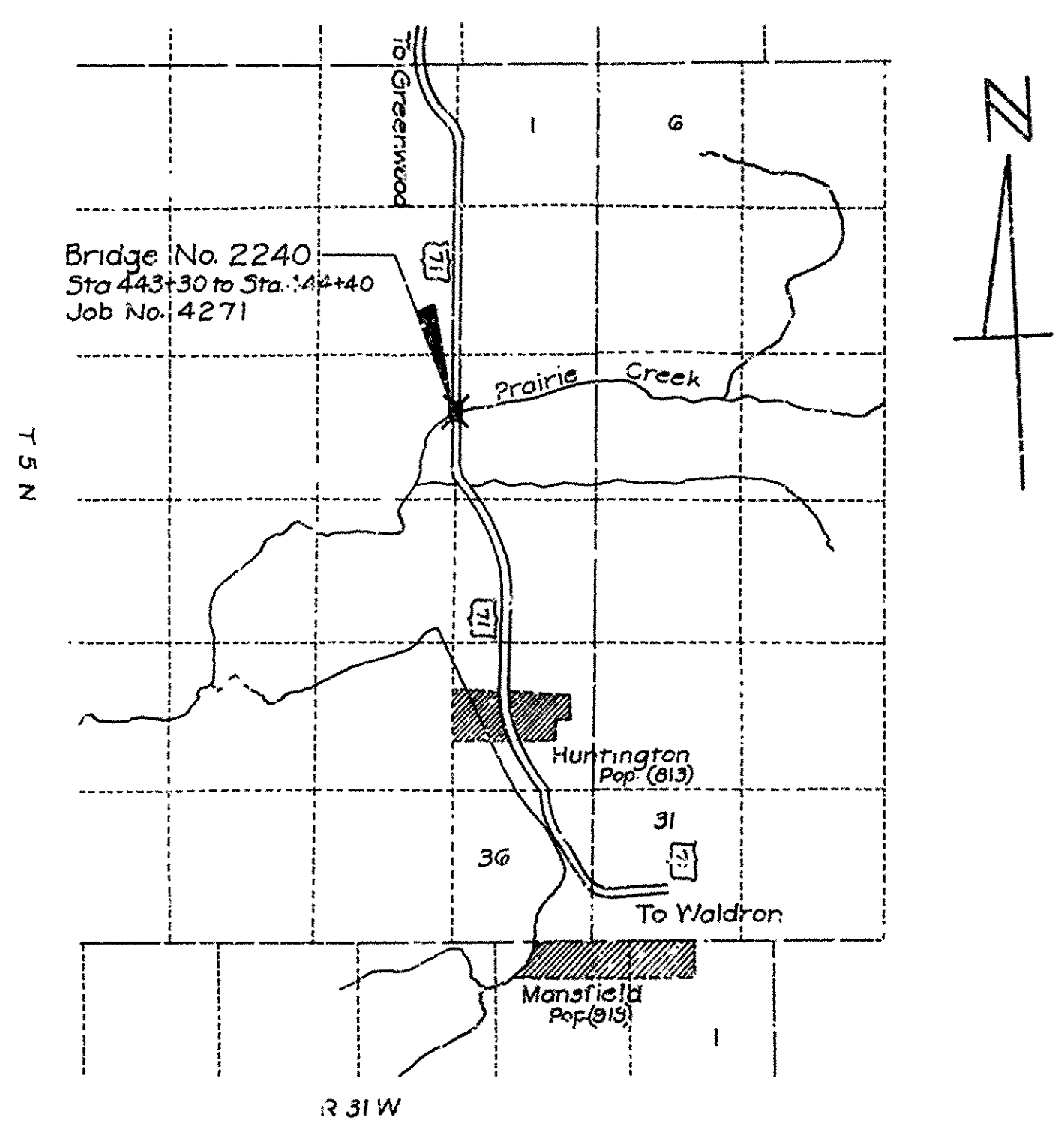
STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

QUANTITIES

INDEX OF SHEETS

Sheet No.	Drawing No.	Description
1	G352	Title Sheet
2	G353	Schedule of Quantities
3	G354	Roadway Approach Details
4	G355	Layout of Bridge over Prairie Creek
5	G356	Details of Abutments
6	G357	Details of Piers
7	G358	Details of R.C.D. Girder Spans
8	186B	Embankment Construction at Bridge Ends and Backfill for Structures
9	189i	Basis for Computing Excavation for Structures

PLAN OF PROPOSED BRIDGE
OVER PRAIRIE CREEK
GREENWOOD-MANSFIELD ROAD
SEBASTIAN COUNTY
ROUTE 71 SEC. 13
JOB No 4271
FEDERAL AID PROJECT NO. SN FAP 187-A(2)



SPECIFICATIONS

Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction adopted March 1st, 1940.

PAMPHLETS

- Division I
- Division II Part 1
- Division II Part 7
- Division II Part 8a
- Division II Part 8b
- Division III
- Division IV

SPECIAL PROVISIONS

No.	Item	No. of Sheets
	Required Special Provisions (4-5-42)	1A
	Equipment and Priority (3-12-42)	1
	Wages of Labor	1
2-1	Revision of Article 2.11 (Appn 2-8-41)	2
4-1	Revision of Article 4.3	1
6-3	Employment Centers for Labor	1
8-5	Portion Payments	1
9-6	Common Carrier Rates	1
701-7	Revision of Section 7.21 (Rev. 6-28-40)	1
701-16	Revision of Section 7.01 (Rev. 3-10-42)	2
732-7	Curing of Concrete	1
756-1	Physical Characteristics of Aggregates	4
757-2	Central Mixing Plant	1
803-1	Revision of Article 803.21	1
807-3	Revision of Article 807	1
850-1	Engineer's Field Office	1
853-1	Machine Mixing	1
	Removal and Disposal of Concrete Pavement, Salvaging and Replacing Reinforcing Steel for Bridge Approach Slabs	1
	Relocating and Removing Existing Bridge and Maintaining Traffic	2

LAYOUT

Scale: 1"=250'

LENGTH OF PROJECT=	162'-0" OR 0.029 MILES
LENGTH OF BRIDGES=	110'-0" OR 0.020 MILES
LENGTH OF EMBANKMENT=	52'-0" OR 0.009 MILES
LENGTH OF JOBS=	162'-0" OR 0.031 MILES

RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED
COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED
CHAIRMAN - STATE HIGHWAY COMMISSION

APPROVED
STATE HIGHWAY ENGINEER

McKee

BRIDGES No. 2240

DRAWING No. 1862

FED. ROAD DIST. NO.	STATE	F.A.P. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	5-454P 18742	1942	2	9
STATE JOB NO. 4271			1942	2	9

QUANTITIES FOR BRIDGE No. 2240

CODE No. 950

ITEM No.	ITEM	UNIT	ABUTMENT No. 1	PIER No. 1	PIER No. 2	ABUTMENT No. 2	THREE 36" ORC DECK GIRDER SPANS	TOTALS	UNIT
103	DRY EXCAVATION FOR STRUCTURES	Cu. Yd.	236	0	0	301	—	537	Cu. Yd.
103	WET EXCAVATION FOR STRUCTURES	Cu. Yd.	69	23	14	29	—	129	Cu. Yd.
103	SOLID ROCK EXCAVATION FOR STRUCTURES	Cu. Yd.	52	17	20	36	—	125	Cu. Yd.
SP&802	CLASS D CONCRETE FOR BRIDGES	Cu. Yd.	163.6	46.3	49.5	163.6	—	423.4	Cu. Yd.
SP&802	CLASS S CONCRETE FOR BRIDGES	Cu. Yd.	—	—	—	—	148.5	148.5	Cu. Yd.
SP&803	REINFORCING STEEL	LB.	880	510	510	880	35,730	38,510	LB.
805	CONCRETE RAILING	LIN. FT.	9	—	—	9	216	234	LIN. FT.
SP&807	METAL BEARING AND ROADWAY EXPANSION DEVICES	LB.	215	—	—	215	4760	5190	LB.
S.P.	RELOCATING AND REMOVING EXISTING BRIDGE AND MAINTAINING TRAFFIC	LUMP SUM						COMPLETE	LUMP SUM

SUMMARY OF QUANTITIES

ITEM No.	ITEM	QUANTITY	UNIT
102	Unclassified Excavation	180	Cu. Yd.
103	Dry Excavation for Structures	537	Cu. Yd.
103	Wet Excavation for Structures	129	Cu. Yd.
103	Solid Rock Excavation for Structures	125	Cu. Yd.
SP&701	Portland Cement Concrete Pavement	95	Sq. Yd.
SP&802	Class D Concrete for Bridges	423.4	Cu. Yd.
SP&802	Class S Concrete for Bridges	148.5	Cu. Yd.
SP&803	Reinforcing Steel	38,510	LB.
805	Concrete Railing	234	LIN. FT.
SP&807	Metal Bearing and Roadway Expansion Devices	5,190	LB.
S.P.	Relocating and Removing Existing Bridge and Maintaining Traffic Complete		Lump Sum
S.P.	Removal and Disposal of Concrete Pavement	47.4	Sq. Yd.
S.P.	Salvaging and Replacing Reinforcing Steel for Bridge Approach Slabs	2	Each

SCHEDULE OF QUANTITIES
BRIDGE OVER PRAIRIE CREEK
GREENWOOD-MANSFIELD ROAD
SEBASTIAN COUNTY
ROUTE 71 SEC. 13

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn By: M.C.H. Date: 5-1-42
Traced By: M.W.H. Date: 5-2-42
Checked By: _____ Date: _____
Scale: 1 in. = 1 ft.
BRIDGE NO. 2240 DRAWING NO. 6353

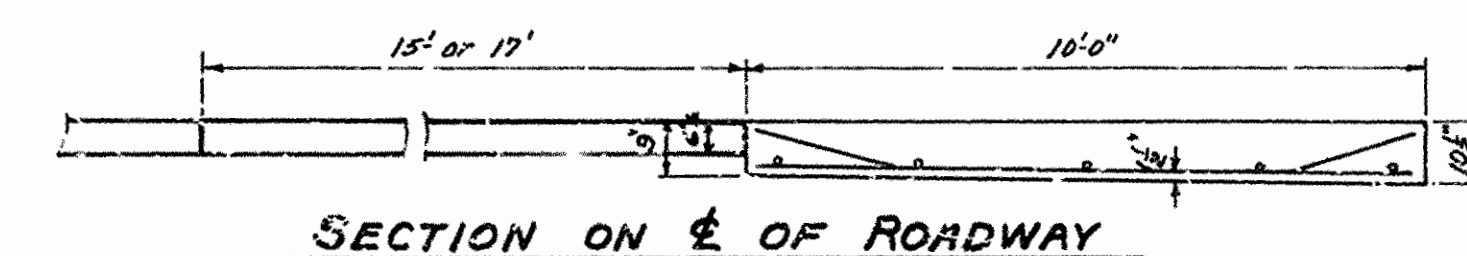
REVISIONS: - Quantities revised for
mass concrete substructure and
new roadway expansion devices. 7-12-42

M.C.H.
PRINCIPAL HIGHWAY ENGINEER (BRIDGE)



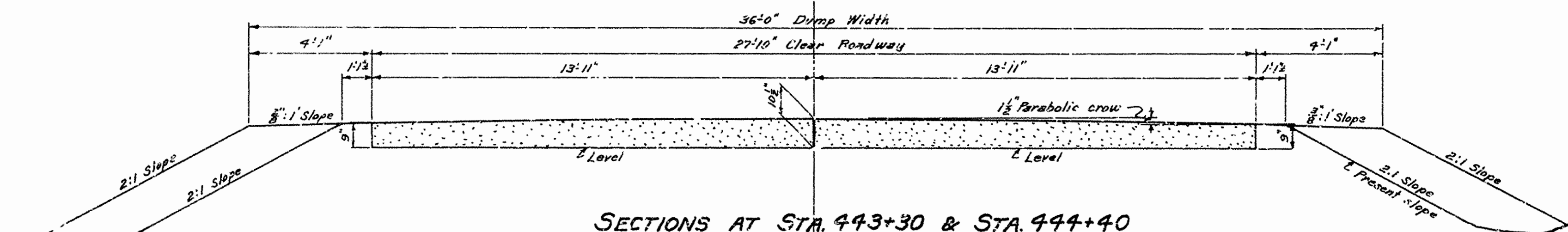
S.P. & 701		PORTLAND CEMENT CONCRETE PAVEMENT			Sq. Yd.
		18'0" WIDTH OF PAVEMENT			
STATION	TO	NORMAL	WIDENING	BRIDGE APPROACH POOL	TOTAL
443+05	443+30	—	24.8	—	24.8
443+20	443+30	20.0	—	1.7	21.7
444+00	444+50	24.0	—	1.7	25.7
444+40	444+67	—	26.8	—	26.8
TOTALS		40.0	51.6	3.4	95.0 Sq. Yds.

<u>S.P. SALVAGING AND REPLACING REINFORCING STEEL FOR</u>		
<u>BRIDGE APPROACH SLABS</u>		<u>EACH</u>
At Beginning of Bridge	1	
At End of Bridge	1	
Total	2	Each

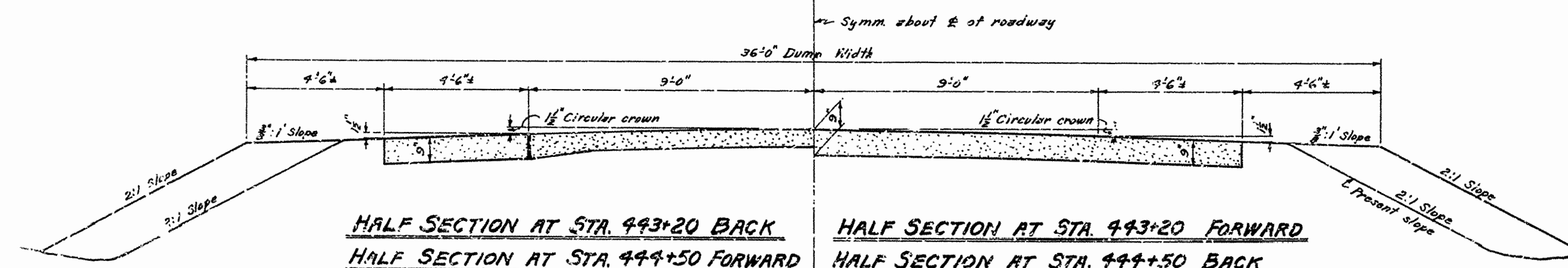


NOTE:- Additional concrete in approach slabs to be paid for on an equivalent square yard basis, one approach slab being equal to 17 sq.yds. additional. Reinforcing bars are to be salvaged and be reused in the new approach slab; see Special Provision

<u>SUMMARY OF ROADWAY QUANTITIES</u>			
ITEM No.	ITEM	QUANTITY	UNIT
102	Unclassified Excavation	180	Cu.Yd.
S.P.&701	Portland Cement Concrete Pavement	95	Sq.Yd.
S.P.	Removal and Disposal of Concrete Pavement	47.4	Sq.Yd.
S.P.	Salvaging and Replacing Reinforcing Steel for Bridge Approach Slabs	2	Each

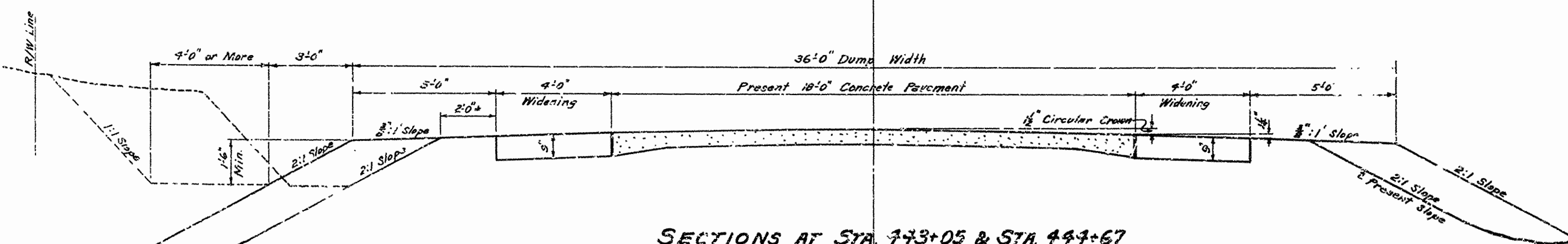


SECTIONS AT STA. 443+30 & STA. 444+40



HALF SECTION AT STA. 443+20 BACK
HALF SECTION AT STA. 444+50 FORWARD

HALF SECTION AT STA. 443+20 FORWARD
HALF SECTION AT STA. 444+50 BACK



SECTIONS AT STA. 773+05 & STA. 447+67

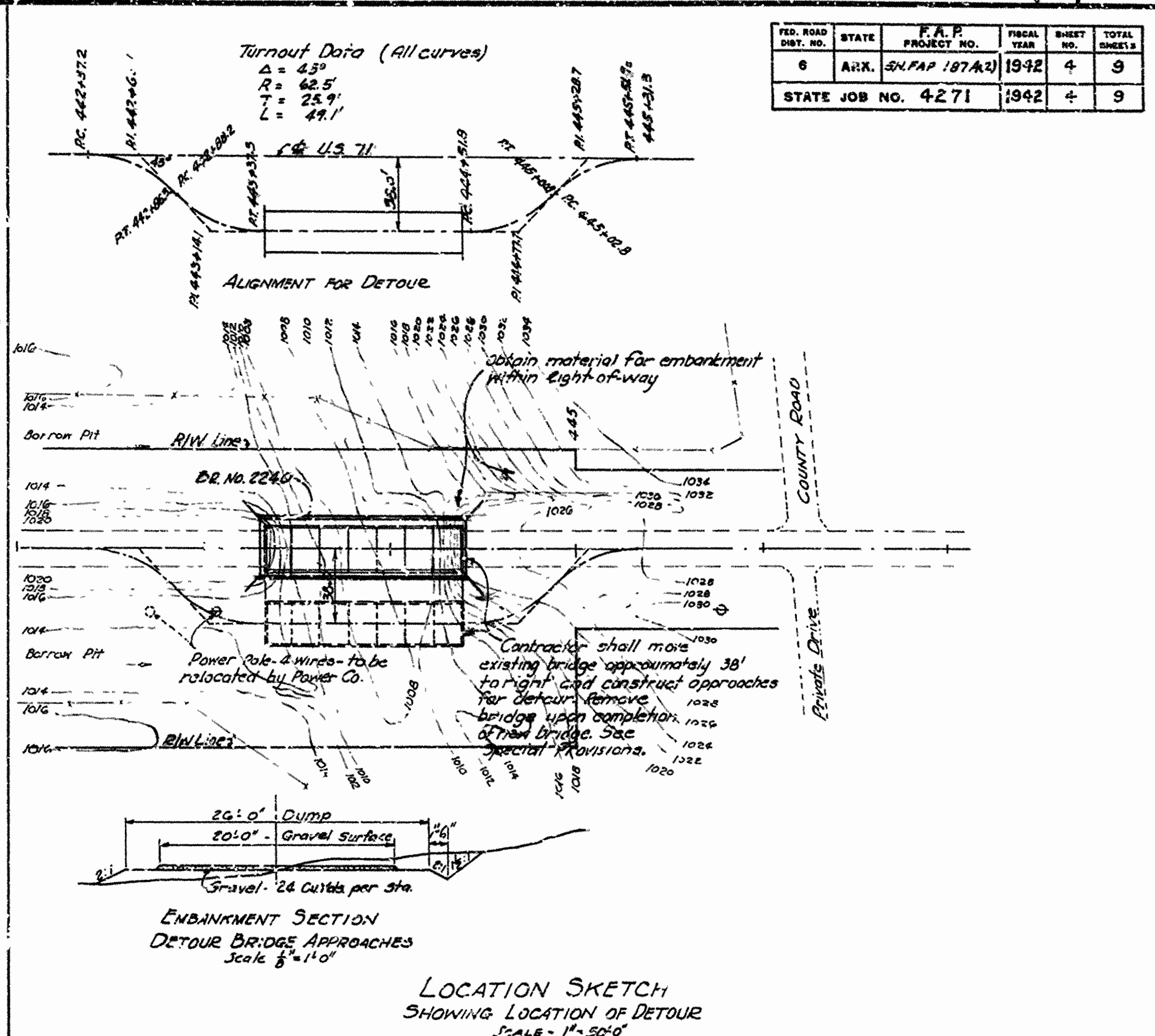
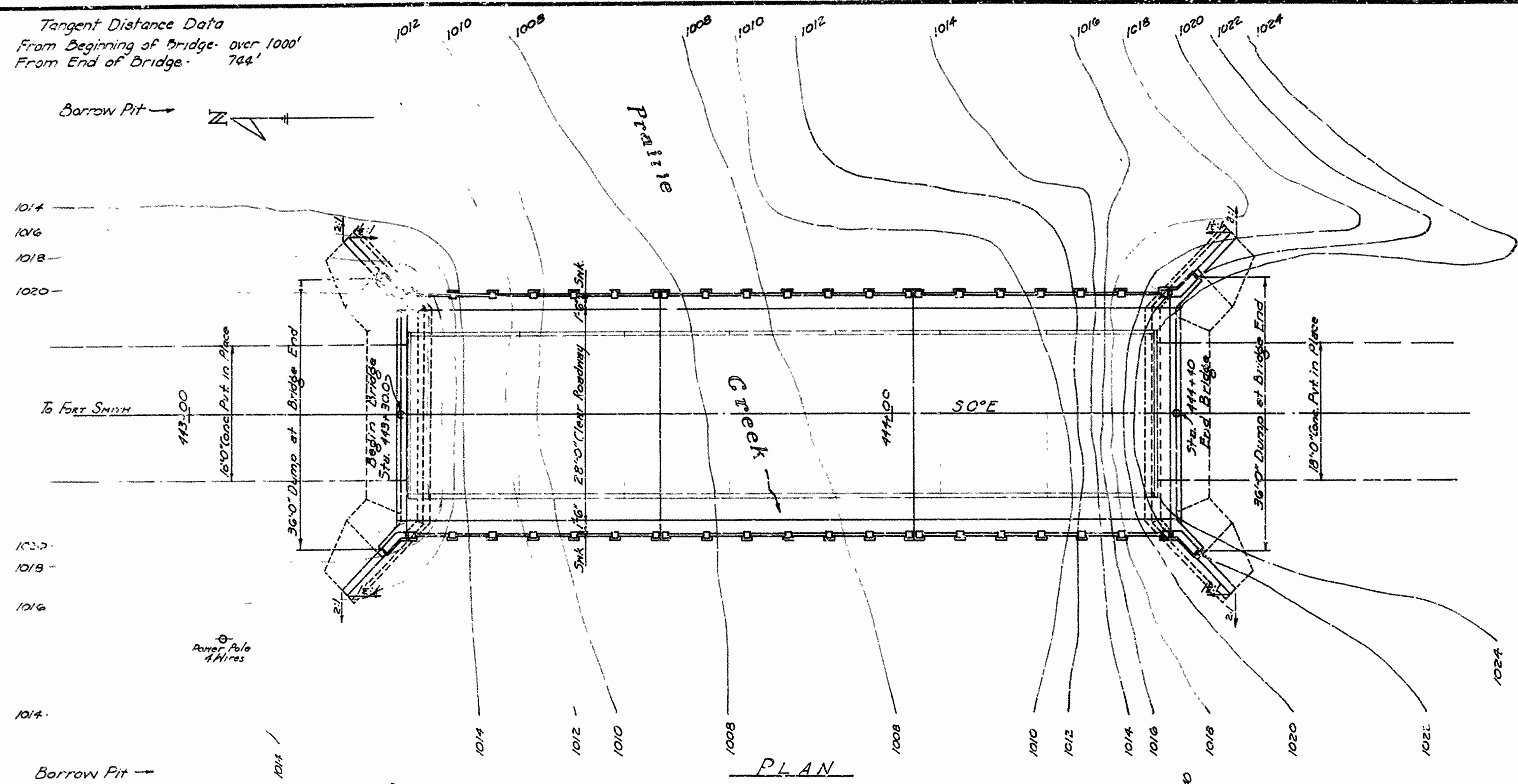
ROADWAY APPROACH DETAILS & QUANTITIES
BRIDGE OVER PRAIRIE CREEK
GREENWOOD-MANSFIELD ROAD
SEBASTIAN COUNTY
ROUTE 71 SEC. 13

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

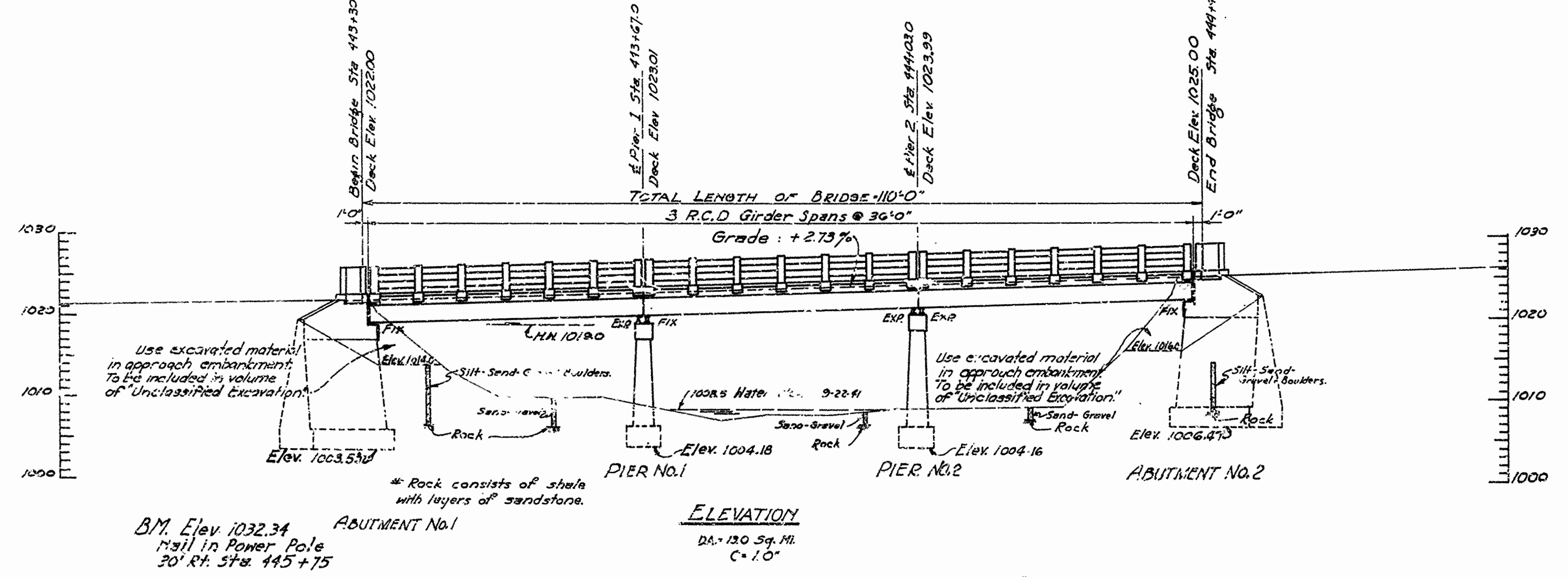
Drawn By: W.C.H. Date: 4-29-42
Traced By: W.C.H. Date: 4-30-42
Checked By: _____ Date: _____

Checked By: _____ Date: _____
BRIDGE NO. 2240 DRAWING NO. 6354

H. B. Larver
PRINCIPAL HIGHWAY ENGINEER (BRIDGES)



FED. ROAD DIST. NO.	STATE	F.A.P. PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	5414P 187A2	1942	4	9
STATE JOB NO. 4271			1942	4	9



GENERAL NOTE
All concrete to be poured in the dry. Exposed corners to be chamfered $\frac{3}{8}''$ unless otherwise shown.
In general all construction joints in piers and abutments shall be horizontal and shall be provided with keys not less than 3" high covering the middle third of both dimensions.
Rock excavation to be done to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting.
Specifications: Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction, adopted March 1, 1940.
Contractor shall move existing timber bridge and construct approaches thereto for use as detour bridge; the bridge to be removed upon completion of new bridge and approaches.
Contractor to construct embankment and new approach slabs at bridge ends.

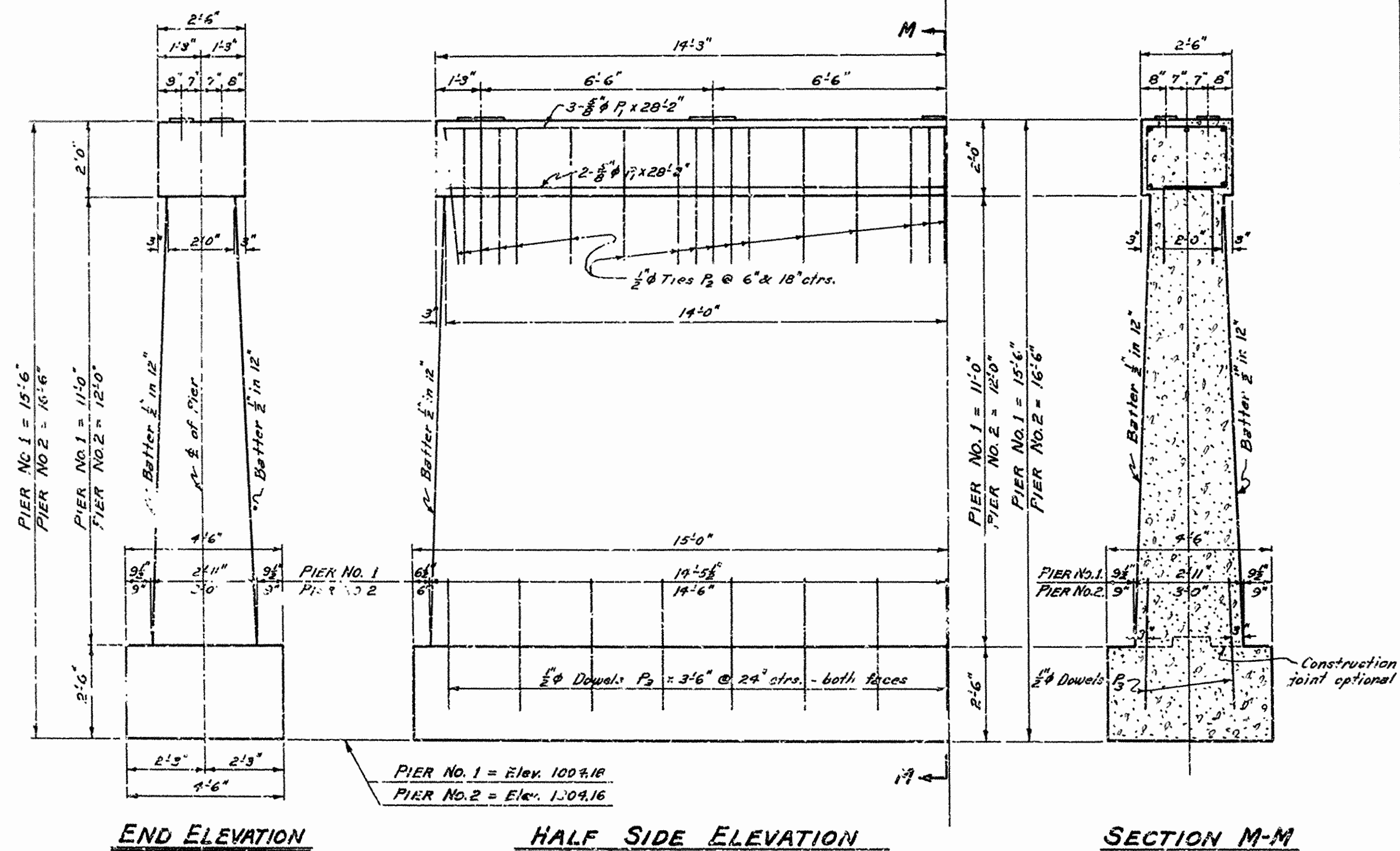
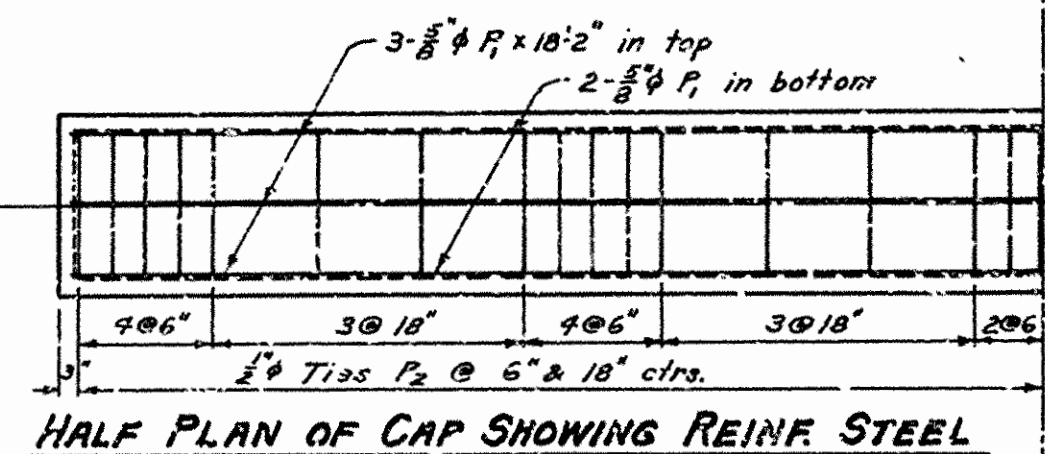
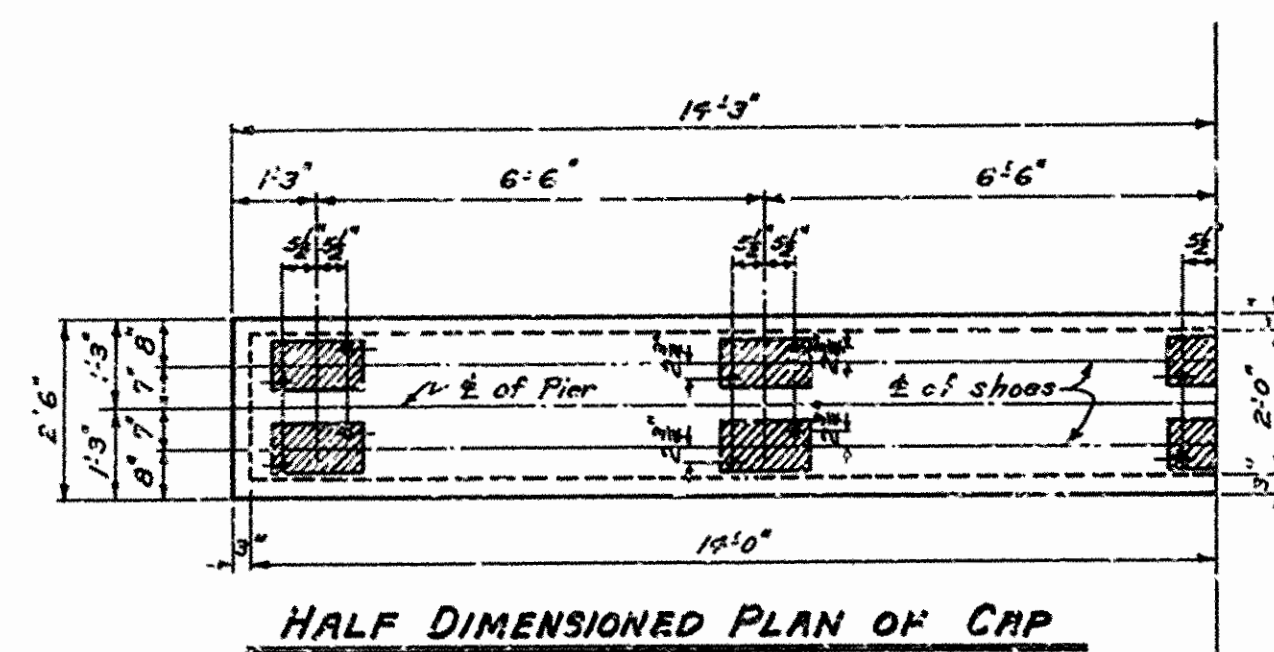
Foundation Pressures
Abutments - 275 tons
Piers - 20 tons

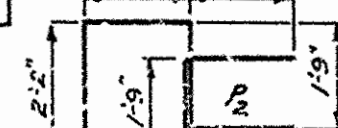
Revised: Changed beam spans to R.C.D. Girder Spans - 4-20-42-11.8
Changed abutments and piers from reinforced concrete to mass concrete. 6-29-42 M.C.H.

LAYOUT
BRIDGE OVER PRAIRIE CREEK
GREENWOOD - MANSFIELD ROAD
SEBASTIAN COUNTY
ROUTE 71 SEC. 13
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: *[Signature]* Date: 12-22-41
Traced By: *[Signature]* Date: 12-21-41
Checked By: *[Signature]* Date: 12-21-41
Scale: 1 in. = 10 ft.
BRIDGE NO. 2240 DRAWING NO. G355

[Signature]
PRINCIPAL HIGHWAY ENGINEER (BRIDGE)

FED. ROAD DIST. NO.	STATE	F.A.P PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
6	ARK.	S.N.R.P. 127 A (2)	1942	6	9
STATE JOB NO. 4271			1942	6	9



BAR LIST FOR PIERS - EACH					
MARK	SIZE	No. REQ'D	LENGTH	BENDING DIAGRAM	
#1	$\frac{5}{8}"$	5	28'-2"	Straight	
#2	$\frac{5}{8}"$	33	13'-0"		
#3	$\frac{1}{2}"$	30	3'-6"		Straight

GENERAL NOTES FOR PIERS

All concrete to be Cui. "B" and "C" shall be poured in the dry. All exposed corners are to be chamfered 3" unless otherwise noted.

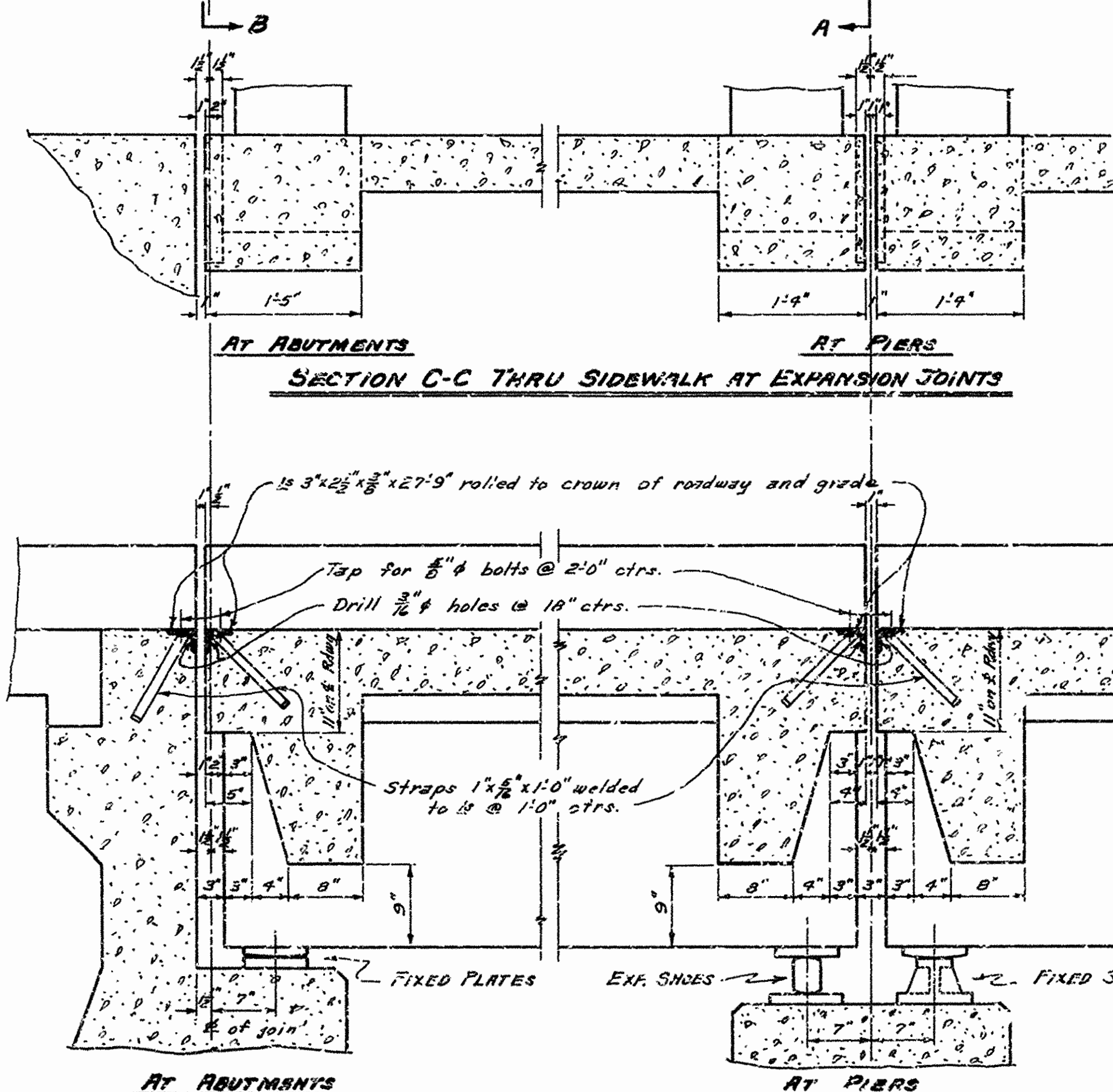
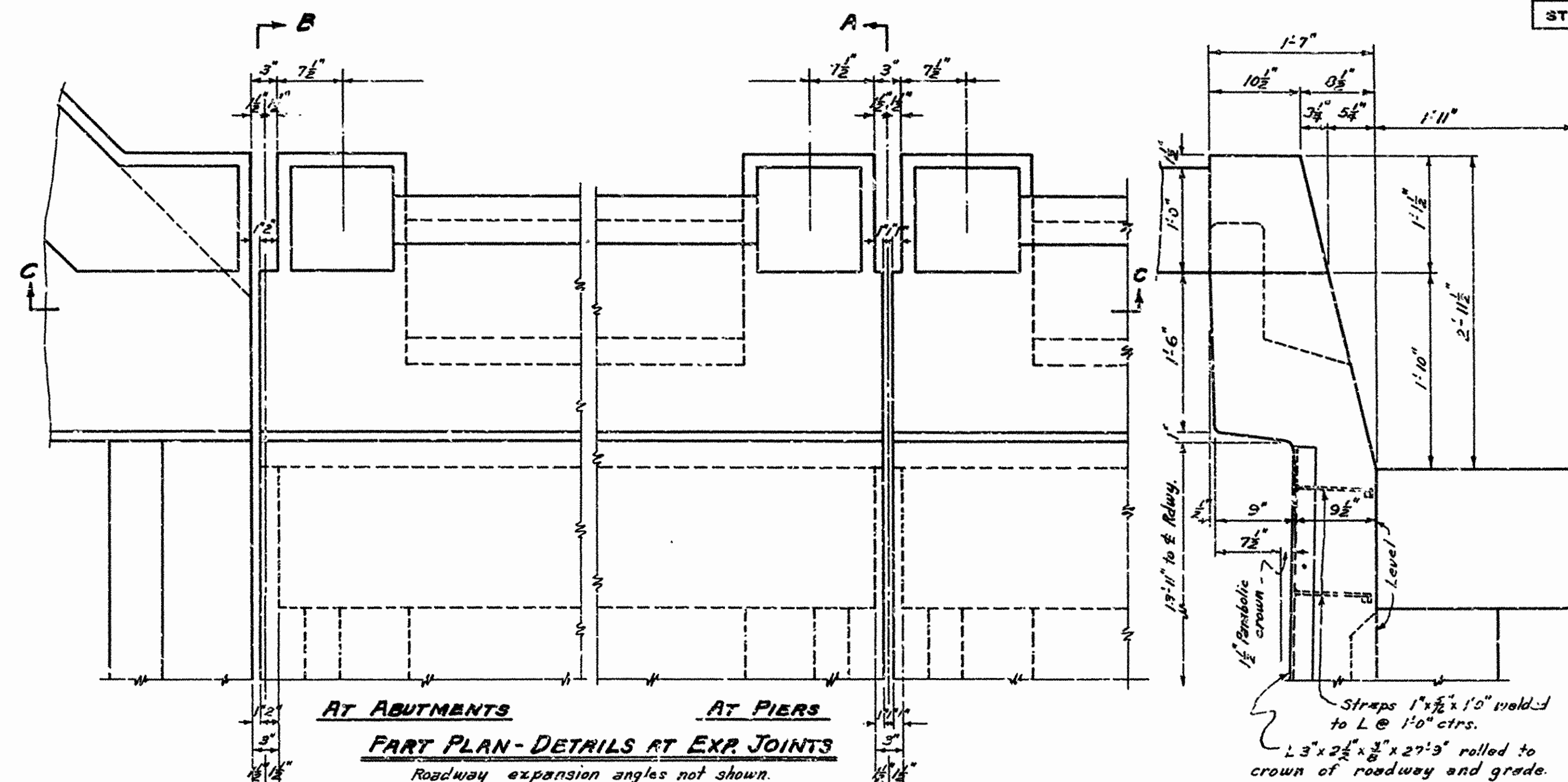
For Layout of Bridge, see Drawing No. 6355

For details of Standard 36" R. C. Deck Girder

Span see Drawing No. 538E

Reinforcing steel to be deformed bars of structural or intermediate grade.

DETAILS OF PIERS No. 1 & 2

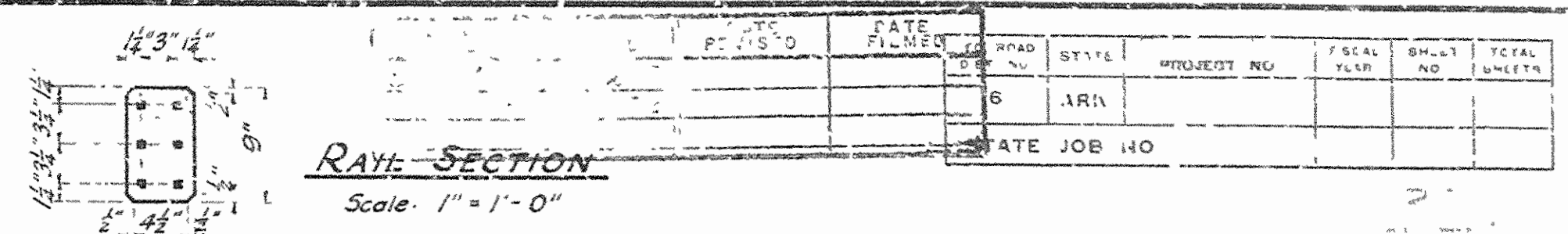


GENERAL NOTES FOR STANDARD 36'-0" R.C.D. GIRDER SPANS

All General Notes shown on Drawing No. 5382 shall apply.
All details for the 36'4" span shall be the same as shown on Drawing No. 5382, except for differences due to change in roadway expansion devices. The differences are shown on this Drawing and shall have precedence over Drawing No. 5382.

**DETAILS OF PIERS NO. 1 & 2
AND
SPECIAL ROADWAY EXPANSION DETAILS
BRIDGE OVER PRAIRIE CREEK
GREENWOOD-MANSFIELD ROAD
SEBASTIAN COUNTY
ROUTE 71 SEC. 13**

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
 Drawn By: W.C.H. Date: 6-25-42
 Traced By: W.C.H. Date: 6-26-42
 Checked By: _____ Date: _____
 Scale: $\frac{\text{in.} = \text{ft.}}{\text{As shown}}$
BRIDGE NO. 2240 **DRAWING NO. 6357**



BAR LIST PER SPAN

Girders and Diaphragms

Mark	Size	Length	No. Req'd	Per Span		A	B	C	D	Bending Diagram
G ₁	1 1/2" φ	34'-6"	32	34'-0"	36'-0"	31'-5"				
G ₁	"	36'-0"		10		33'-5"				
G ₁	"	38'-6"			10	35'-5"				
G ₁	"	33'-3"	10			31'-3"	0'-8"			
G ₁	"	35'-3"		10		33'-3"	0'-8"			
G ₁	1 1/2" φ	37'-2"			10	35'-3"	0'-8"			
G ₁	1" φ	37'-2"	10			26'-6"	2'-6"	2'-1/2"	1'-8"	
G ₁	"	36'-0"		10		28'-6"	2'-9"	2'-3/4"	1'-10"	
G ₁	"	35'-6"			10	30'-6"	3'-0"	2'-0"	2'-0"	
G ₁	"	29'-7"	10			27'-6"	2'-6"	2'-1/4"	1'-8"	
G ₁	"	32'-0"		10		24'-6"	2'-8"	2'-3/4"	1'-10"	
G ₁	"	34'-6"			10	26'-6"	3'-0"	2'-5/8"	2'-0"	
G ₁	"	24'-10"	10			18'-6"	2'-2"	1'-10"	1'-5"	
G ₁	"	27'-4"		10		20'-6"	2'-5"	1'-10"	1'-7"	
G ₁	1" φ	29'-10"			10	22'-6"	2'-5"	1'-10"	1'-9"	
G ₁	3/4" φ	28'-3"	4	4	4	26'-9"	0'-6"			
G ₁	3/4" φ	6'-1"	39		39	2'-4"				
G ₁	"	6'-9"			39	2'-6"				
G ₁	"	6'-0"	78			2'-1/2"				
G ₁	1" φ	6'-4"		78		2'-3/4"				
G ₁	"	6'-8"			78	2'-5/8"				
G ₁	"	5'-10"	78			2'-0/8"				
G ₁	"	6'-2"		78		2'-2/8"				
G ₁	1/2" φ	6'-6"			78	2'-4/8"				
G ₁	1/2" φ	3'-0"	40			1'-3/8"	1'-4"			
G ₁	"	3'-4"		40		1'-5/8"	1'-6"			
G ₁	1/2" φ	3'-8"			40	1'-7/8"	1'-8"			

Roofing, Sills, and Sidelights

S ₁	5/8" φ	29'-9"	32	34	36	3'				
S ₁	5/8" φ	30'-11"	32	34	36	1'				
S ₁	5/8" φ	30'-9"	31	33	35	29'-0"				
S ₁	1/2" φ	16'-6"	96							
S ₁	1/2" φ	17'-6"		96						
S ₁	1 1/4" φ	18'-6"			96					
S ₁	1/2" φ	9'-10"	14	14	14	0'-11"				
S ₁	1/2" φ	9'-6"	14	14	14	0'-7"				
S ₁	1/2" φ	9'-11"	14	14	14					
S ₁	1/2" φ	5'-4"	84	90	94					
S ₁	5/8" φ	29'-9"	32	34	36	3'				

GENERAL NOTES

All concrete to be Class "S". All exposed corners to have $\frac{3}{4}$ " chamfers unless otherwise noted.

Reinforcing steel to be deformed bars of structural or intermediate grade. All dimensions relating to reinforcing steel are to center of bars. Shop lists and bending diagrams must be submitted by the contractor and approval secured before fabrication is begun.

Roadway expansion and bearing devices are to be paid for at the unit price bid for Metal Bearing and Roadway Expansion Devices. Shop drawings of shoes and expansion devices shall be made in compliance with specifications submitted and approved before fabrication is begun. All weld connections to be $\frac{3}{4}$ " fillet welds unless otherwise noted.

Masonry plates shall be finally seated on 3 layers of burip saturated with red lead. This work and material to be included in the price bid for Metal Bearing and Roadway Expansion Devices."

Base of fixa shoe and rockers of expansion shoes to be cast of structural steel. All other parts of shoes or bearing plates to be structural steel.

Paint: All exposed parts of cast and structural steel shall be given one priming coat of red lead and raw linseed oil. 2nd. coat, white lead. Finish coat, white lead tinted with lamp black.

Specifications - Arkansas State Highway Commission Standard Specification for Road and Bridge Construction, adopted March 1, 1940

Design Live Load - H-20 Loading ASHO 1941

Load distribution to Interior Girders:	Dead Load	1080 # to 1150 #/lin ft
	Live Load	130 Wheels 30 % Impact
Load distribution to Outside Girders:	Dead Load	1400 # to 1470 #/lin ft
	Live Load	0.85 Wheels 30 % Impact

Unit Stresses: Class "C" concrete (7-10) 1200 #/sq"

Reinforcing Steel	18000 #/sq"
Structural Steel	18000 #/sq"

DETAILS OF STANDARD
32'-0", 34'-0", 36'-0" R.C. DECK GIRDER SPANS
28'-0" CLEAR ROADWAY, 2 SIDEWALKS @ 1'-6"
5 GIRDER TYPE
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Drawn by: WGH Date: 1-17-41
Traced by: ERB Date: 1-12-42
Checked by: --- Date: ---

Scale: 2" = 1/4 mi.
except as noted

BRIDGE NO. 5382 DRAWING NO. 5382

