

SCHEDULE OF BRIDGE QUANTITIES JOB 11641

BR. NO.	CODE NO.	UNIT OF BRIDGE	ITEM NO.	801	SP# 802	803	SP# 804	812	SP 805-7	
			ITEM	COMMON EXCAVATION FOR STRUCTURES	CLASS S CONCRETE	REINFORCING STEEL	PRECAST CONCRETE PILING (16" Octagonal)	BRIDGE NAME PLATES (TYPE C)	STEEL OR ALUMINUM PLATE GUARD BRIDGE RAILING	
			UNIT	CU. YD.	CU. YD.	LB.	LIN. FT.	PLATE	LIN. FT.	
3069	X 020	BENTS 1 & 5		70	14.78	2170	300			
		BENTS 2 & 4			12.90	1942	245			
		BENT 3			6.45	944	140			
		SPANS 1 & 4			76.63	12160		1	99.5	
		SPANS 2 & 3			76.26	12100			100.0	
		TOTALS		70	187.02	29320	685	1	199.5	
3070	X 020	BENTS 1 & 6		70	14.78	2170	300			
		BENTS 2, 3 & 5			19.35	2913	365			
		BENT 4			6.45	944	120			
		SPANS 1 & 5			76.63	12158		1	99.5	
		SPANS 2, 3 & 4			114.42	18150			150.0	
		TOTALS		70	231.63	36335	785	1	249.5	
3071	X 020	BENTS 1 & 4		70	14.78	2170	300			
		BENTS 2 & 3			12.90	1942	245			
		SPANS 1 & 3			76.63	12163		1	99.5	
		SPAN 2			38.14	6050			50.0	
		TOTALS		70	142.45	22325	545	1	149.5	
TOTALS JOB 11641				210	561.10	87980	2015	3	598.5	

Revised 20 May 60 E.M.
 Revised Concrete & Ref Steel 5-19-61 L.K.

SCHEDULE OF BRIDGE QUANTITIES TURNER-NORTH RELOCATION

PHILLIPS COUNTY

ROUTE 1 SEC. 7

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

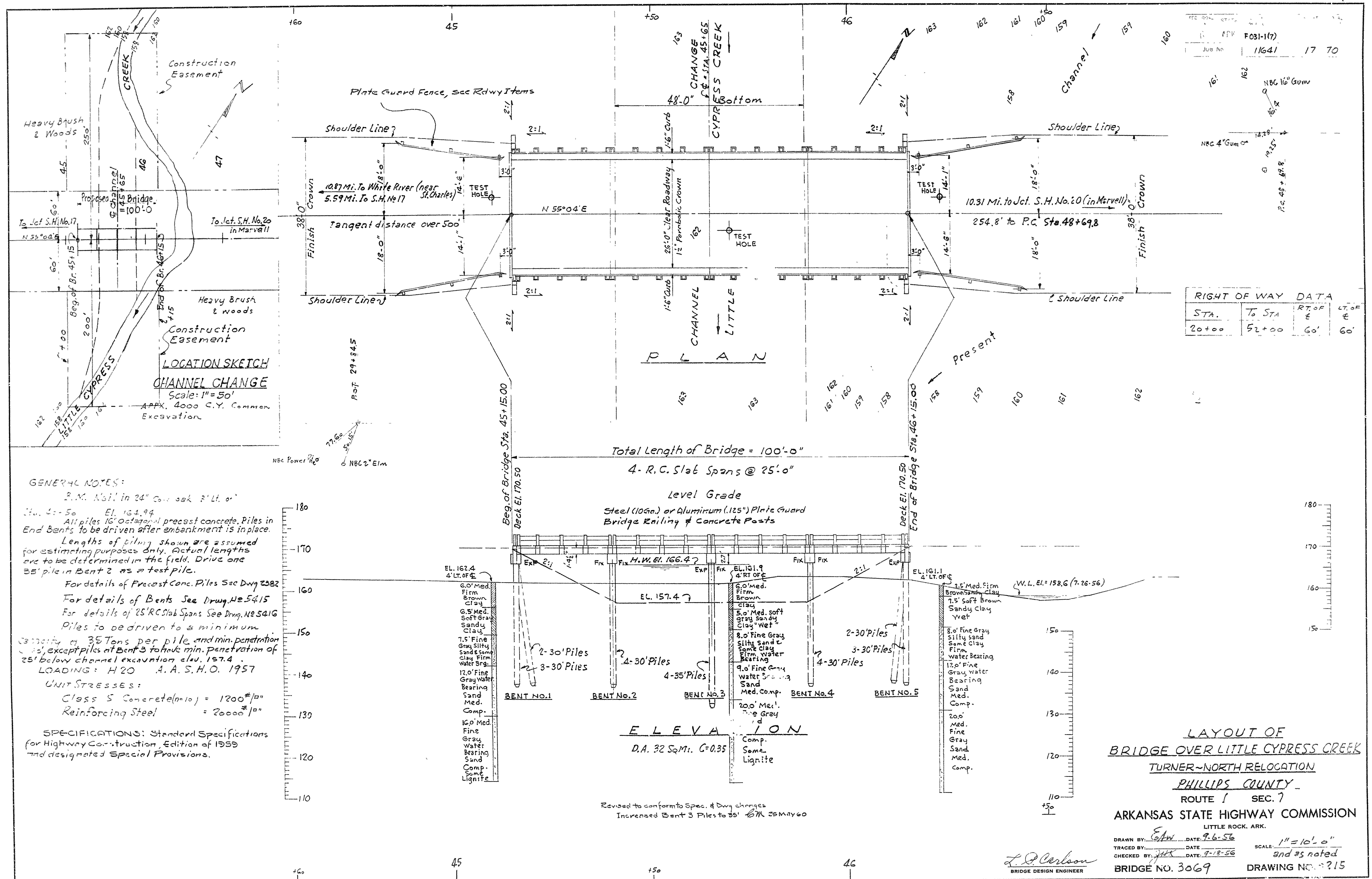
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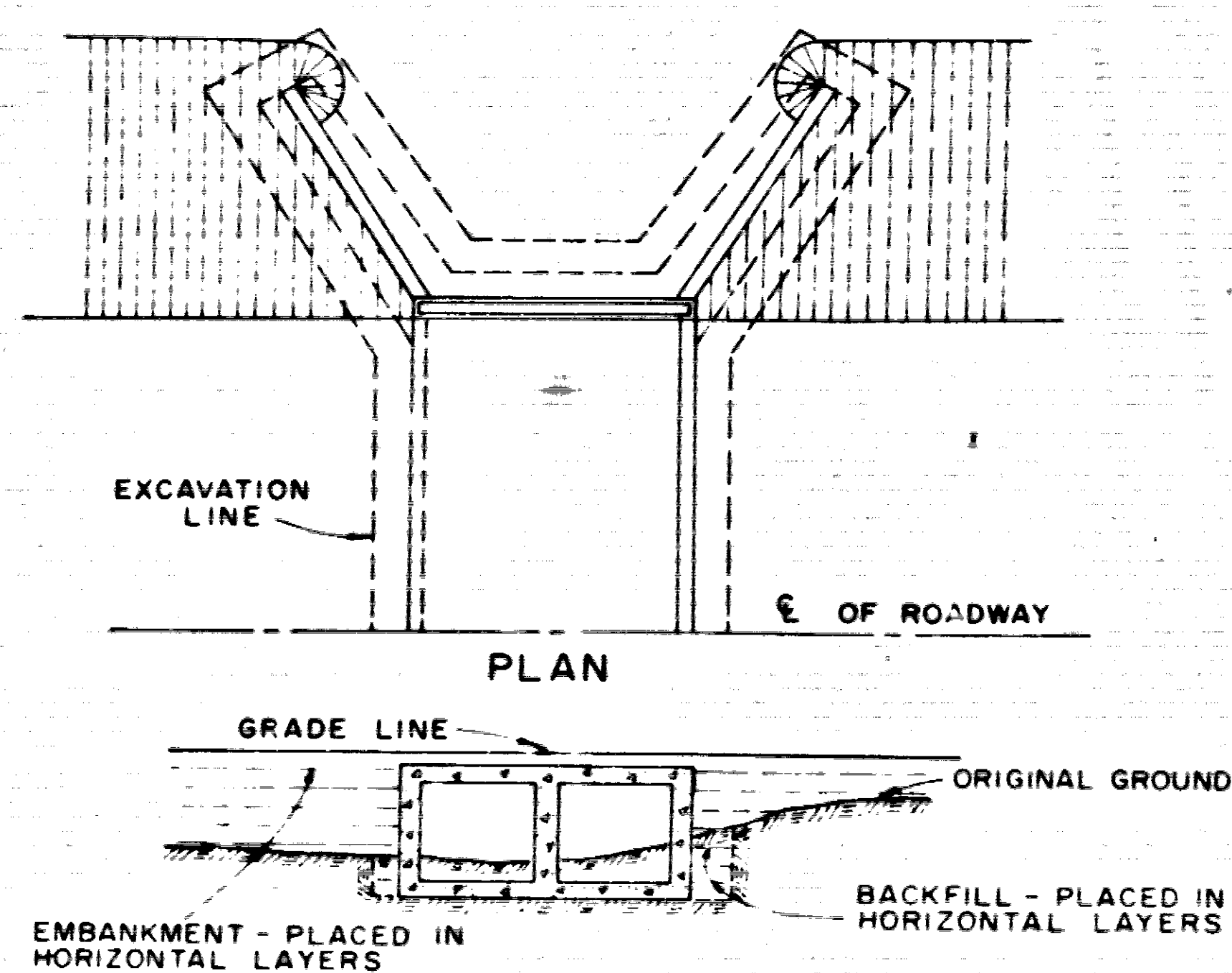
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CHECKED BY: DATE: 9-18-56

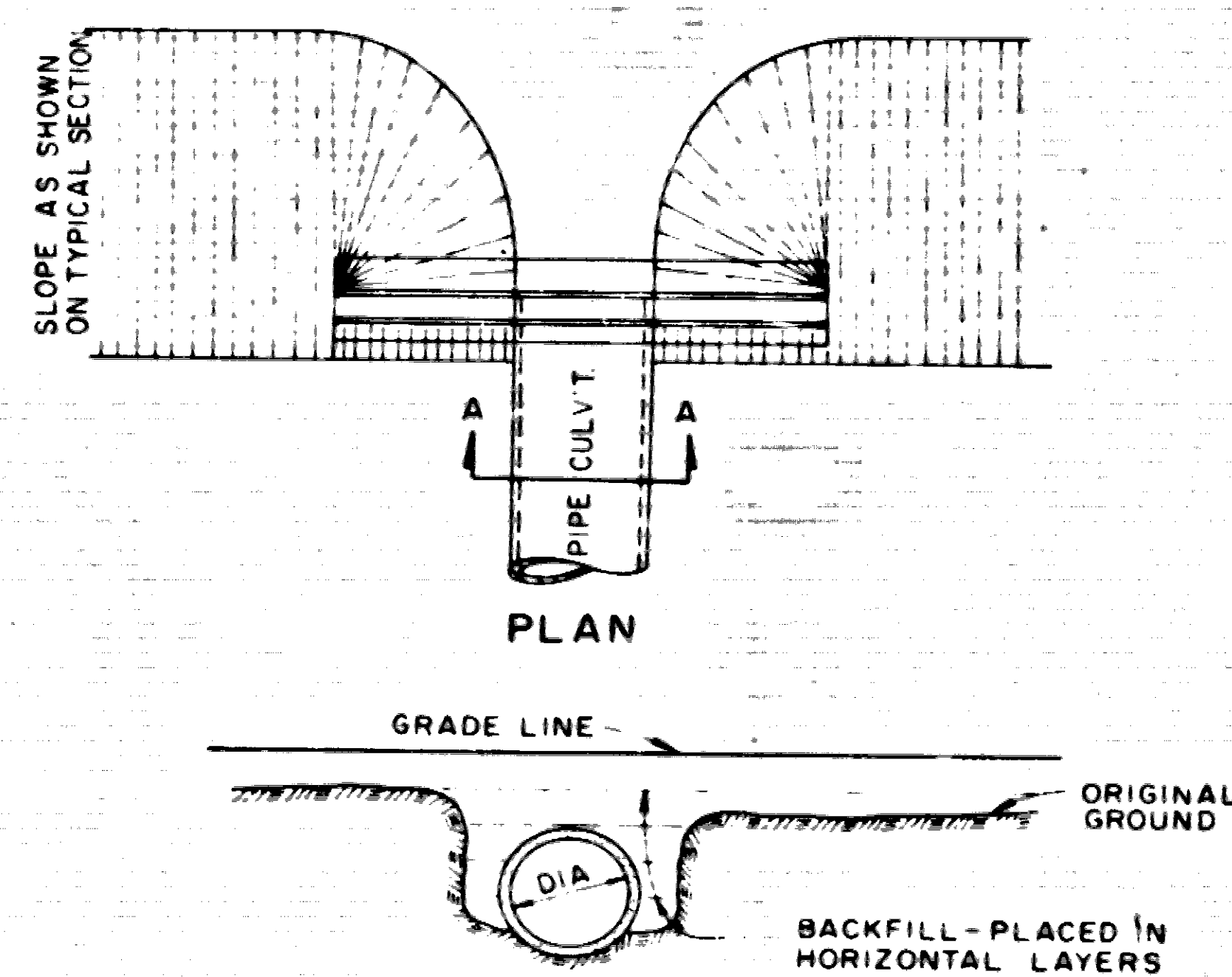
BRIDGE NO. 3069-3071 INCL DRAWING NO. 9214

L.P. Carlson
 BRIDGE DESIGN ENGINEER

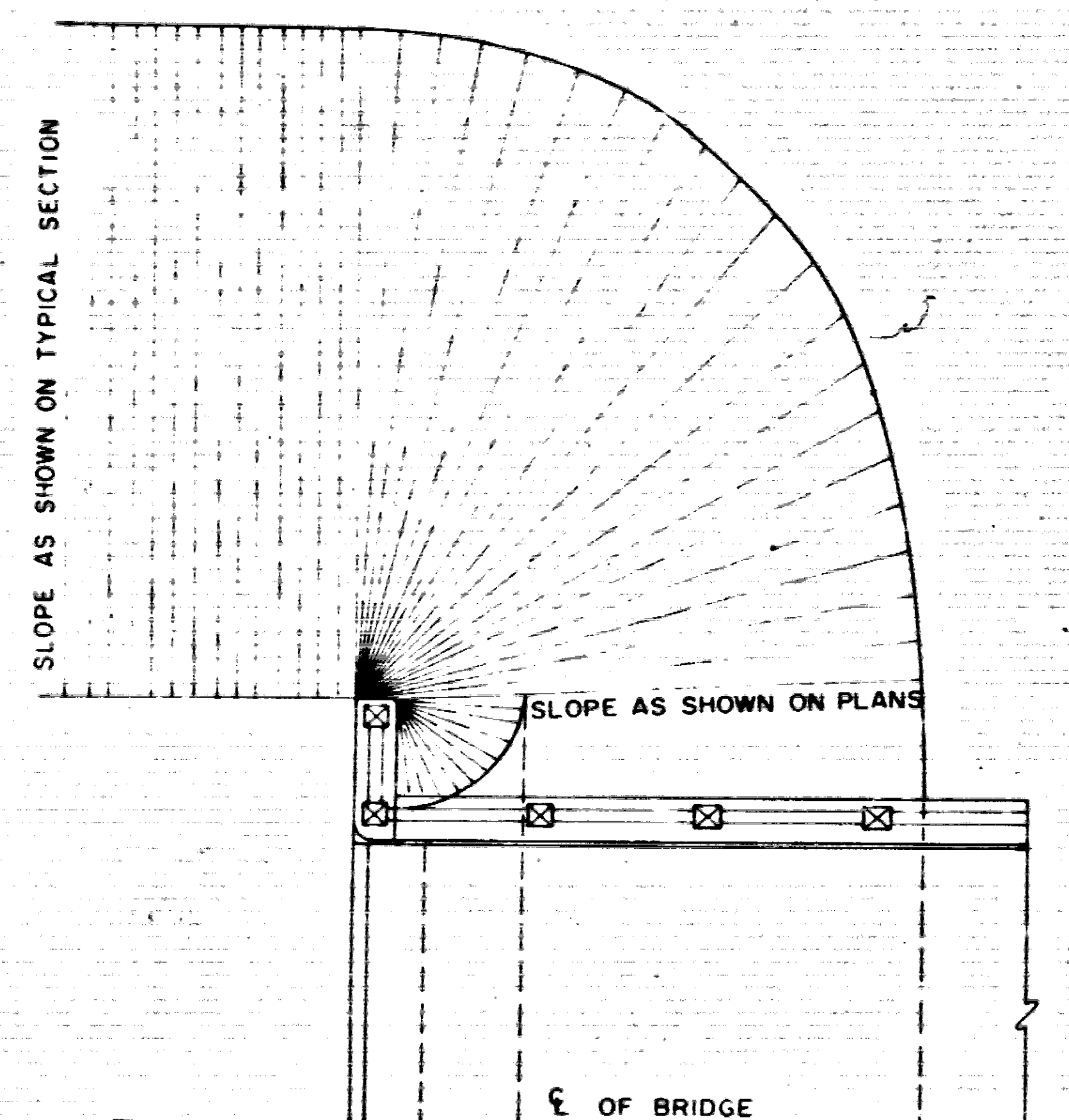




LONGITUDINAL SECTION
BOX CULVERT

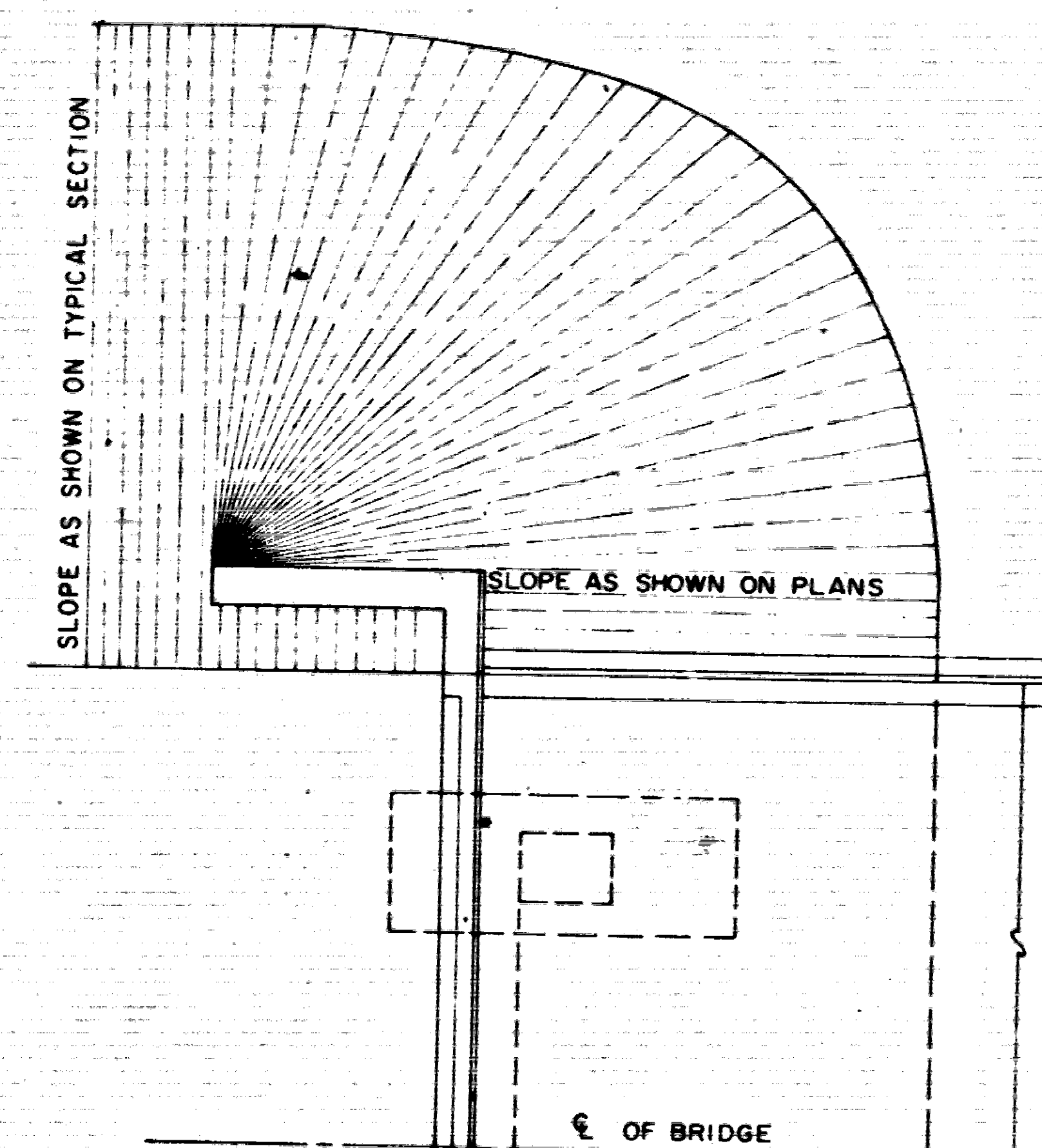


SECTION A-A
PIPE CULVERT



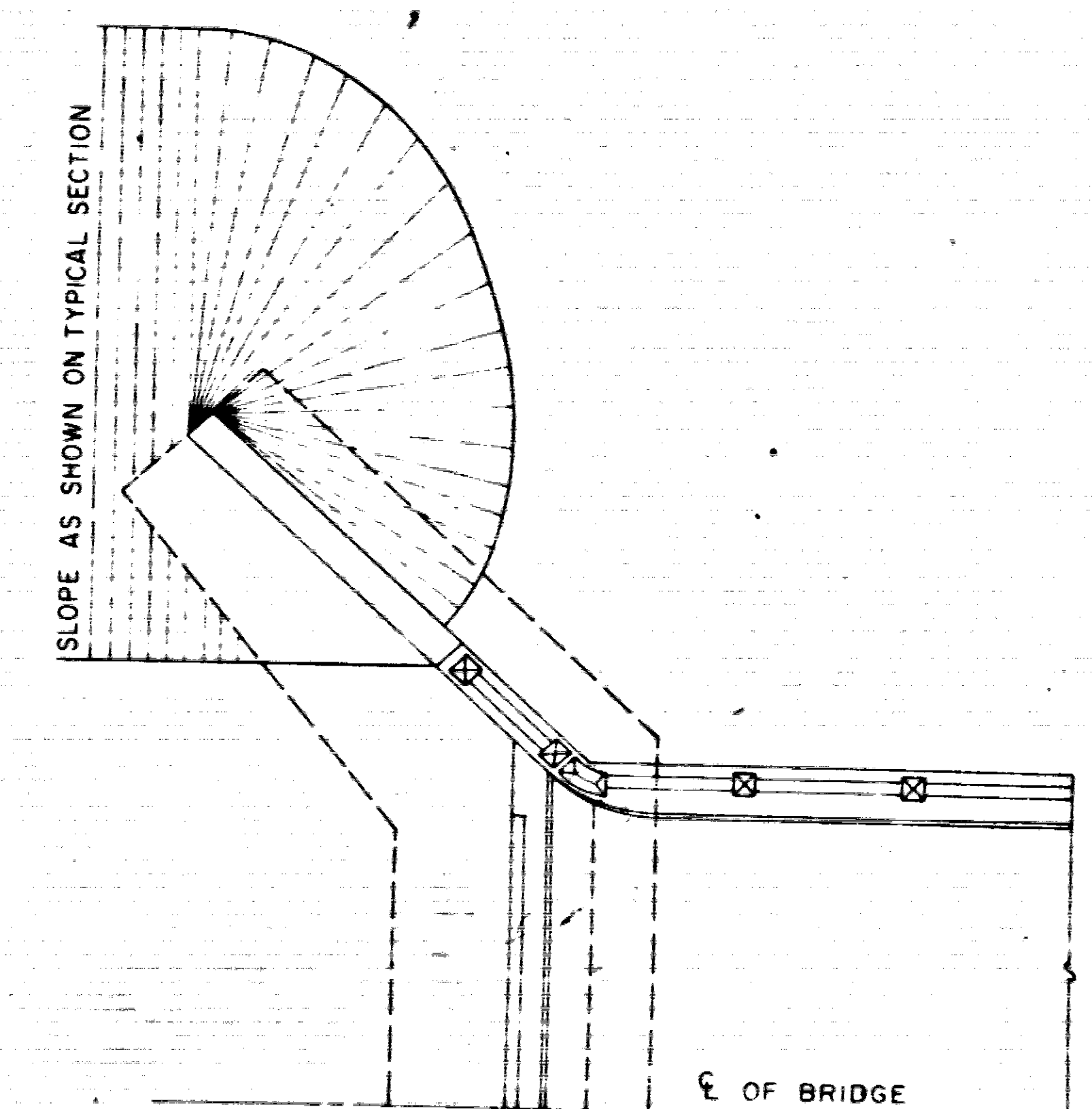
OPEN END ABUTMENT

CONSTRUCTION OF THE BRIDGE END EMBANKMENT
THE BRIDGE END EMBANKMENT SHALL BE DEFINED AS NOT LESS THAN 20 FEET OF EMBANKMENT ADJACENT TO THE END OF THE BRIDGE TOGETHER WITH THE SIDE SLOPES AND SLOPES UNDER THE BRIDGE END AND AROUND THE END OF WINGWALLS.
REFER TO SUB-SECTIONS 202.08 AND 202.09 OF THE SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.



SEMI-STUB ABUTMENT AND
TURN BACK WING PILE BENT

BACKFILLING EXCAVATION
IN SO FAR AS PRACTICABLE, ABUTMENT EXCAVATIONS SHALL BE CUT TO THE SIZE SHOWN ON THE PLANS WITH ALLOWANCE OF 3 FEET ON ALL SIDES.
OVERSIZED AND FLARED CUTS TO AVOID THE USE OF SHEETING SHALL NOT BE PERMITTED.
BACKFILL AROUND THE WALL OR COLUMNS SHALL BE COMPACTED IN ACCORDANCE WITH SUB-SECTION 801.08 OF THE SPECIFICATIONS.

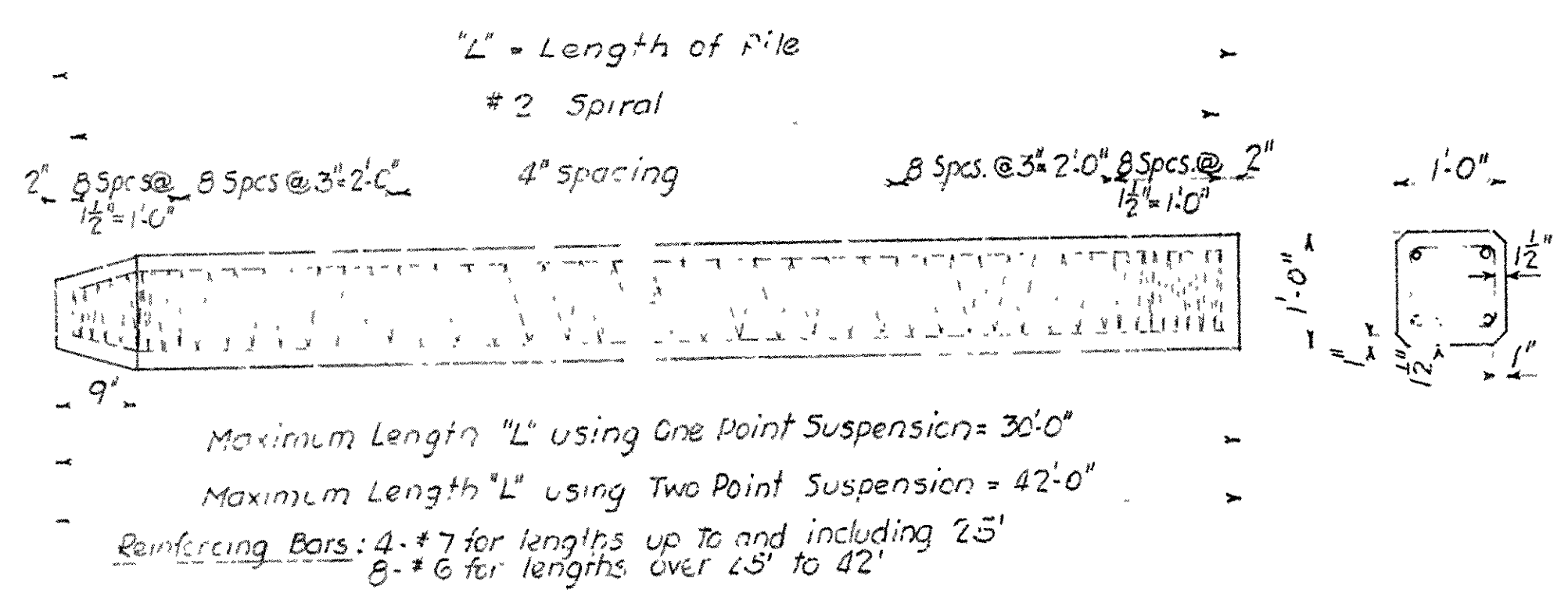


WINGWALL ABUTMENT

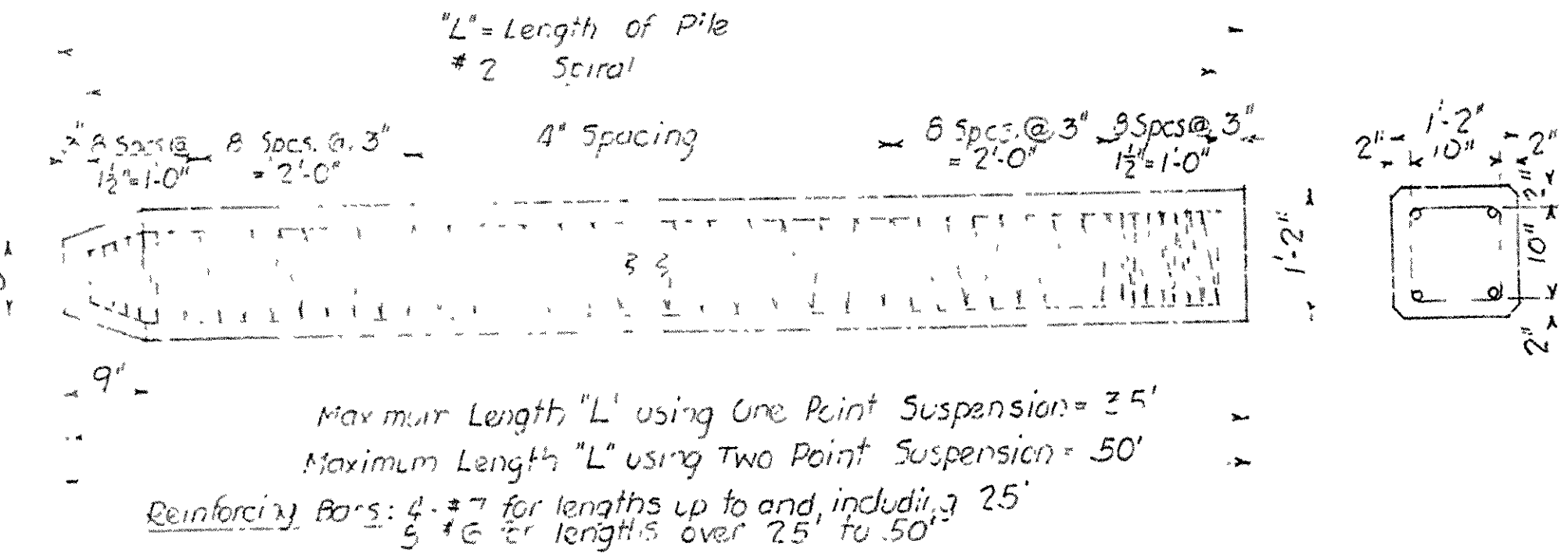
GENERAL NOTE
BACKFILL AND EMBANKMENT ADJACENT TO STRUCTURES TO BE CONSTRUCTED IN 4 INCH HORIZONTAL LAYERS (LOOSE MEASURE) AND COMPACTED TO THE SATISFACTION OF THE ENGINEER BY USE OF MECHANICAL EQUIPMENT.

10-2-72 REVISED & REDRAWN
DATE REVISION

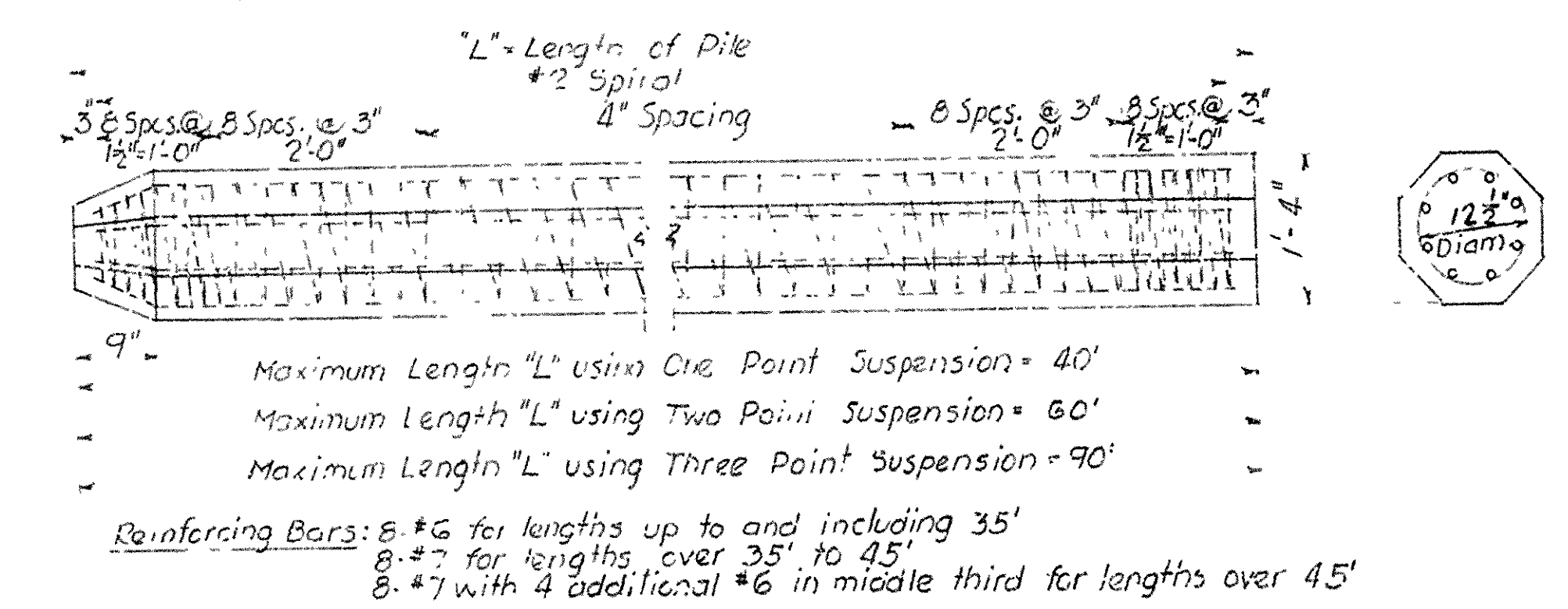
ARKANSAS STATE HIGHWAY COMMISSION
EMBANKMENT CONSTRUCTION AT
BRIDGE ENDS AND
BACKFILL FOR STRUCTURES
STANDARD DRAWING
1888A



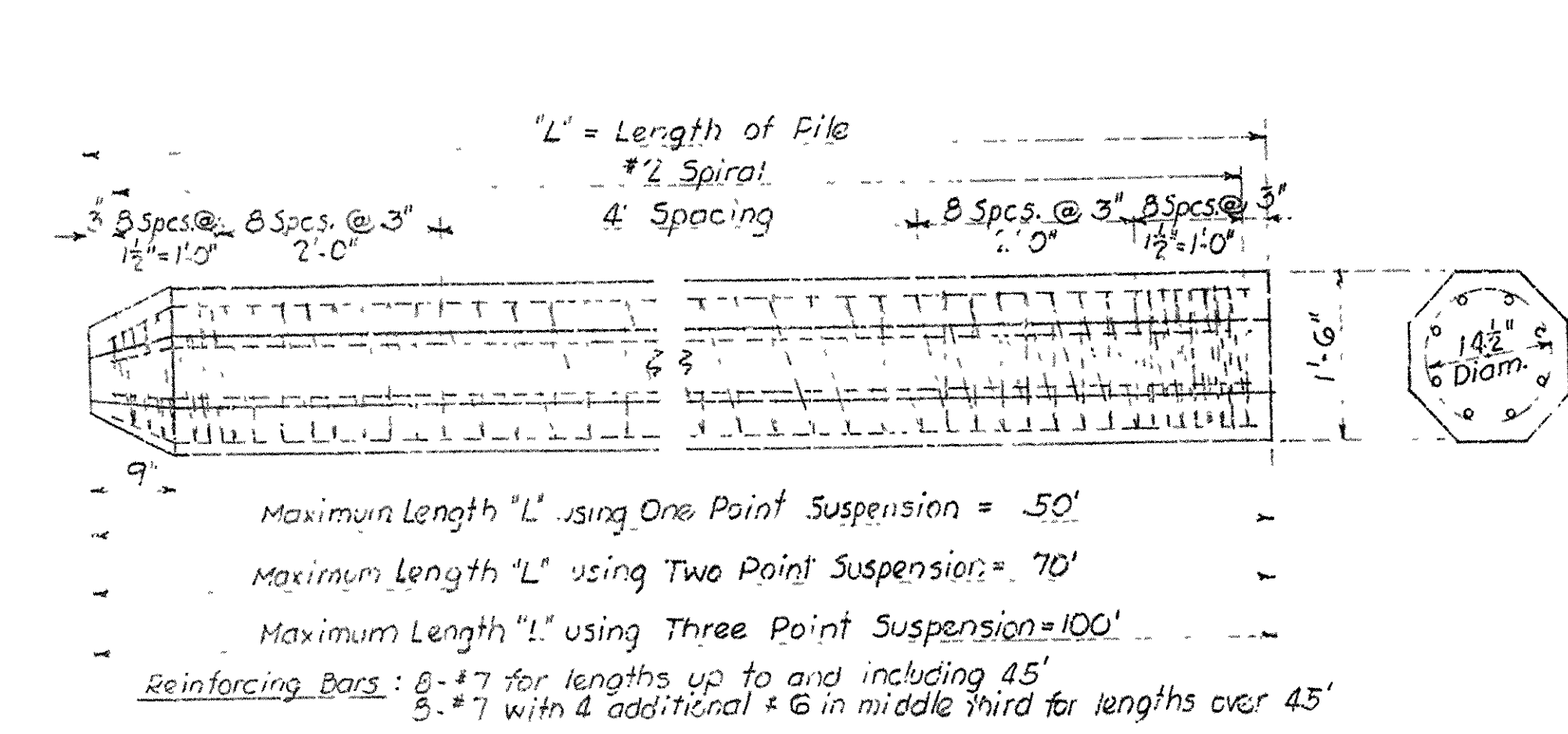
DETAILS OF 12" SQUARE PILE



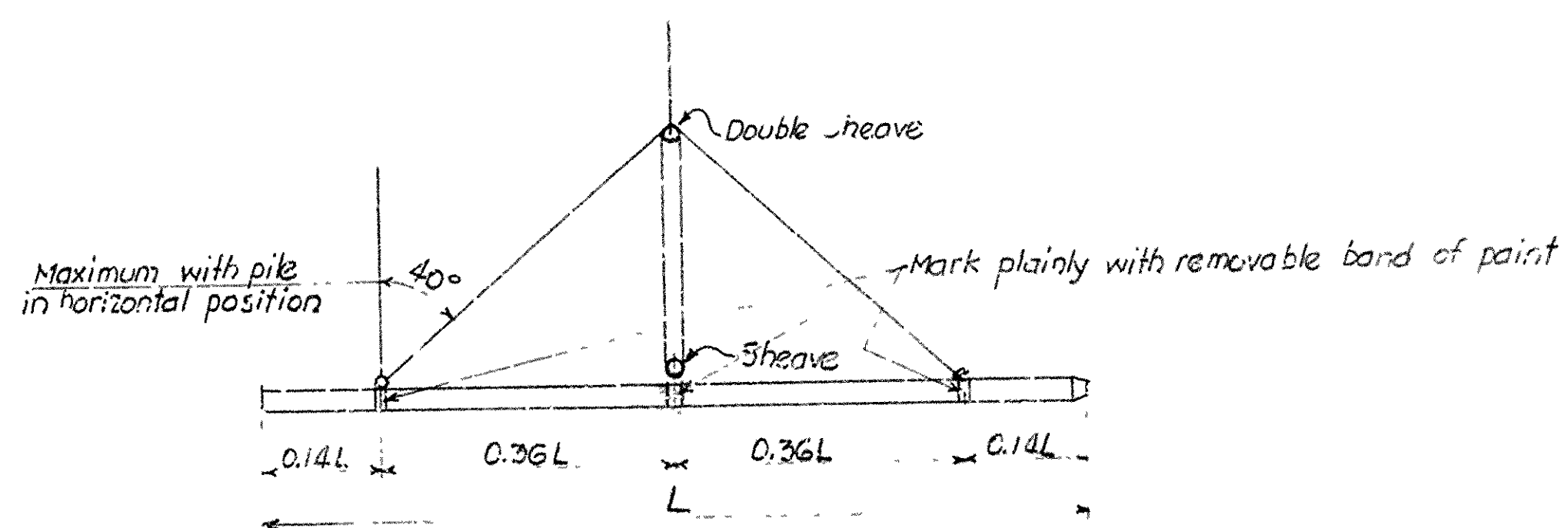
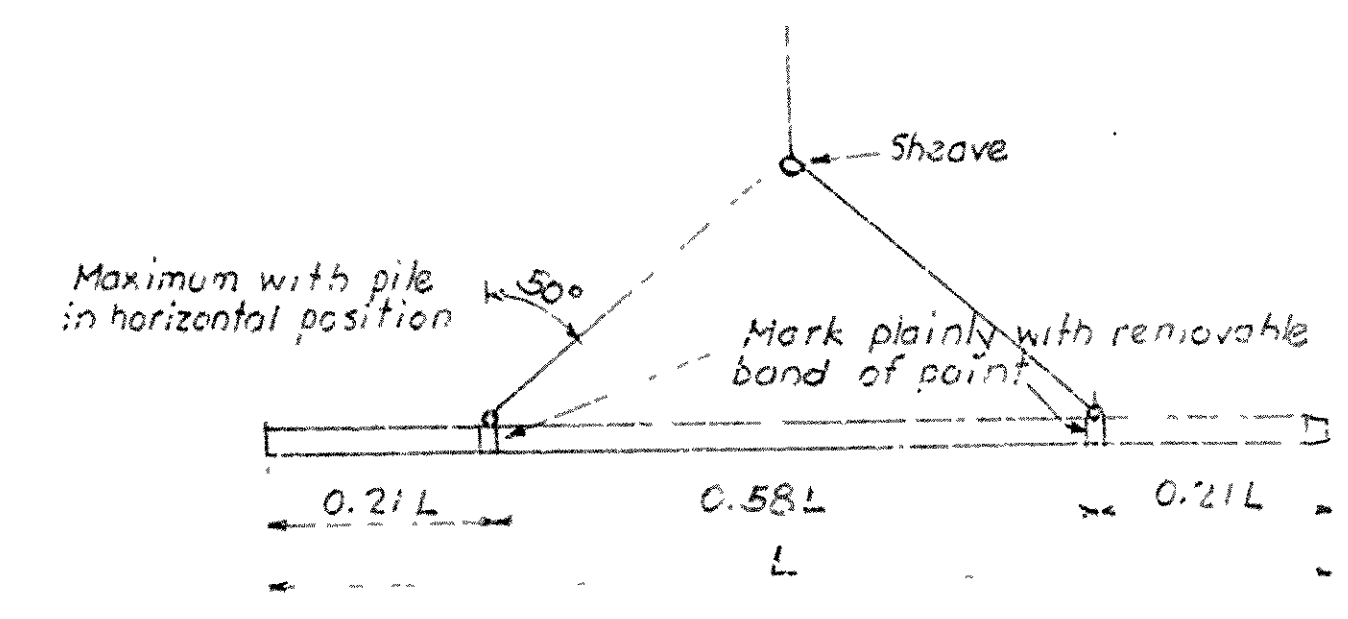
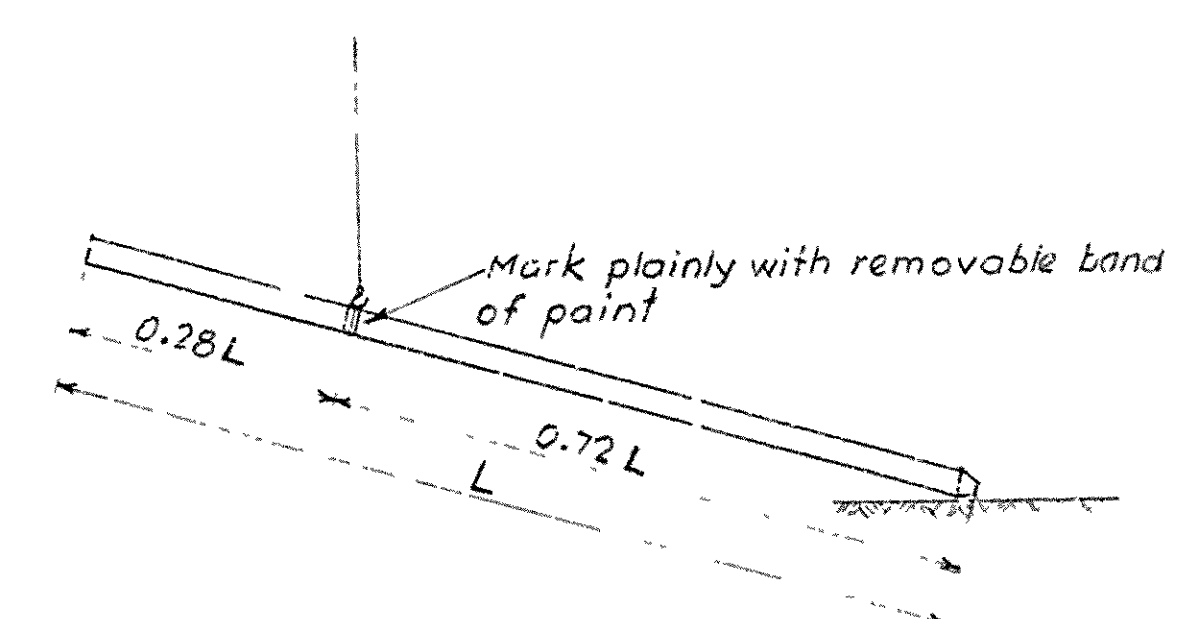
DETAILS OF 14" SQUARE PILE



DETAILS OF 16" OCTAGONAL PILE



DETAILS OF 18" OCTAGONAL PILE



GENERAL NOTES

All concrete to be Class "S"
Longitudinal reinforcing steel shall be determined bars of intermediate grade, unless otherwise modified by Special Provisions. Spiral shall be formed from plain round billet steel reinforcing bars.
SPECIFICATION 5: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959.

Prestressing Alternate:-

As an alternate to the reinforcement shown, these piles may be prestressed by the use of steel strands of high tensile cold-drawn uncoated stress-relieved wire strands having an ultimate tensile strength of not less than 250,000 p.s.i. and an elongation at rupture of not less than 3% in 10"; number and size of strands and prestressing load to be as follows:-

File Size	Wire Strands No. Nominal Dia.	* Prestressing Force Per Strand
12" Square	8 3/16"	10150*
14" Square	12 3/16"	10150*
16" Octagonal	12 3/8"	14000*
18" Octagonal	16 3/8"	14000*

* Prestressing force to be not more than 0.7 of the ultimate value of strand.

To permit splicing for buildup, where necessary, of prestressed piles, reinforcing as shown in details shall be provided in butt end of pile for a length of 5' and 6' for No. 6 & No. 7 bars respectively.

Revisions:-
Provisions for prestressing 1-6-58 H.B.
Prestressing strands, forces 4-14-58 H.B.
Number Prestressing Strands 16" Pile 10-31-58 H.B.
General Notes 2-26-60 A.T.

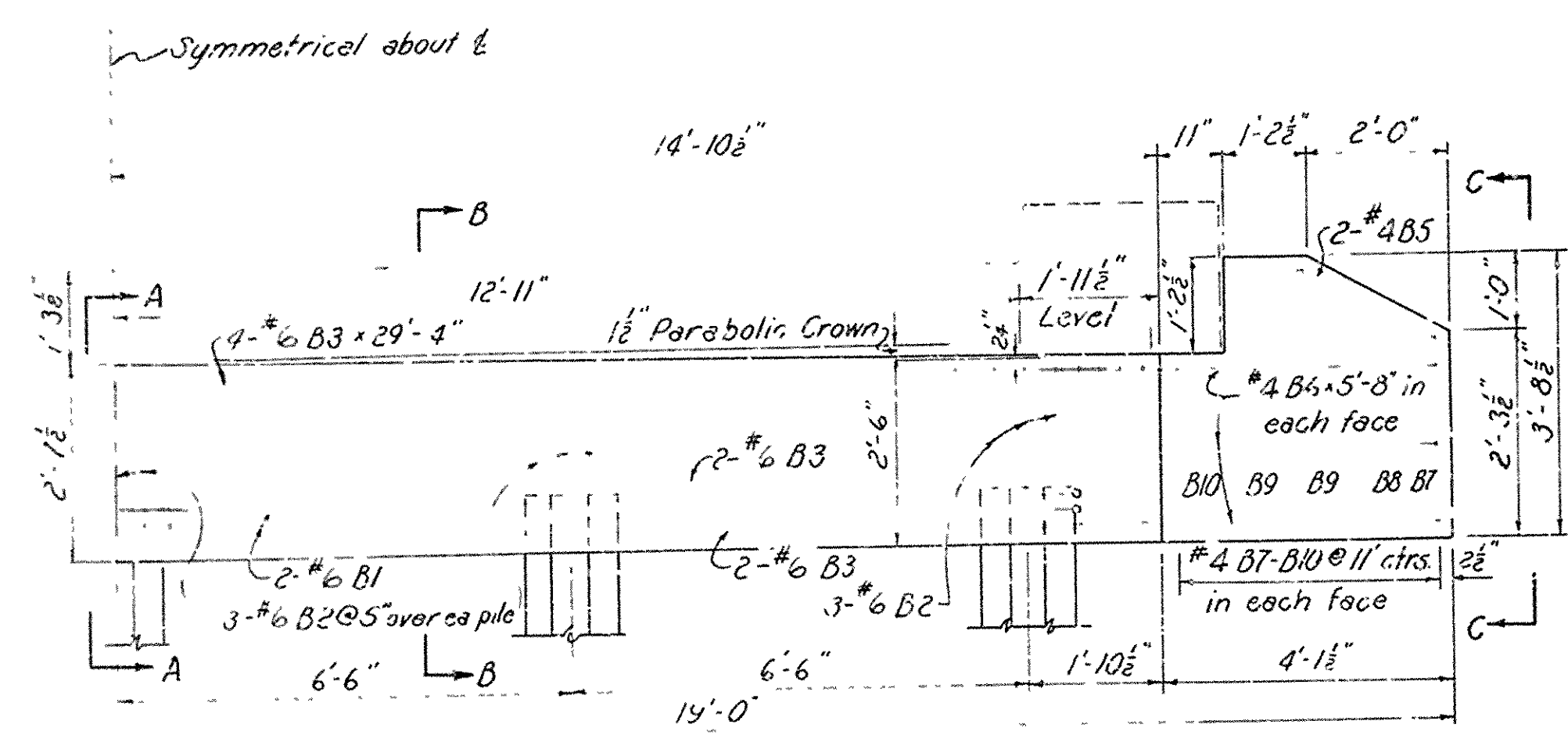
DETAILS OF STANDARD PRECAST CONCRETE PILES

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

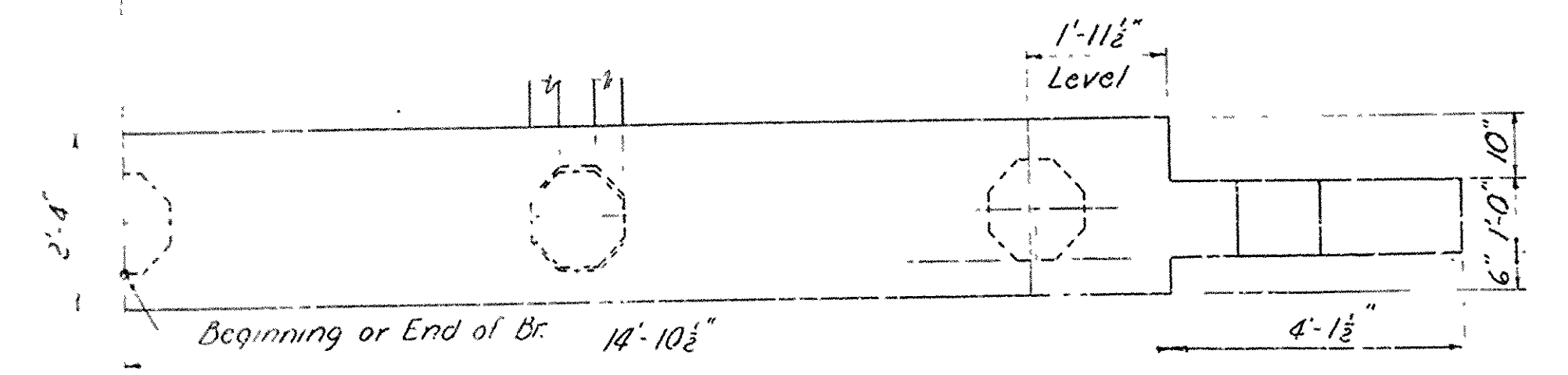
DRAWN BY: L.W.H. DATE: 7-26-56
TRACED BY: J.A. DATE: 4-27-58
CHECKED BY: D.K. DATE: 7-27-56
RETRACTED BY: J.M. DATE: 4-2-58
BRIDGE NO. DRAWING NO. 2382

See Revised 5-22-61

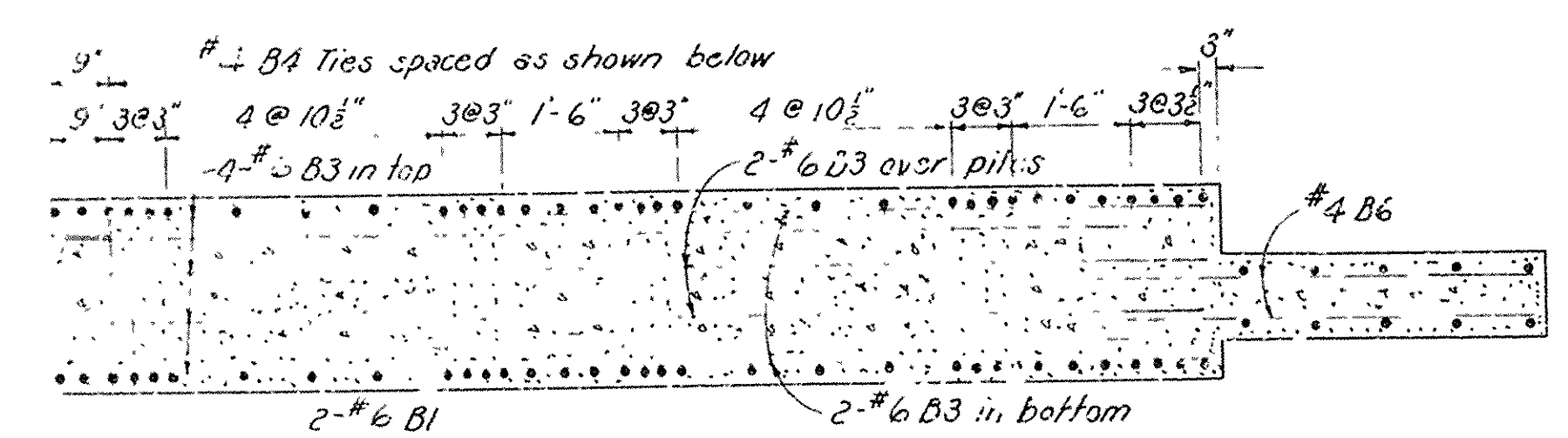
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	PROJECT NO.	SHEET NO.	TOTAL SHEETS
6	ARK.				
STATE JOB NO.					



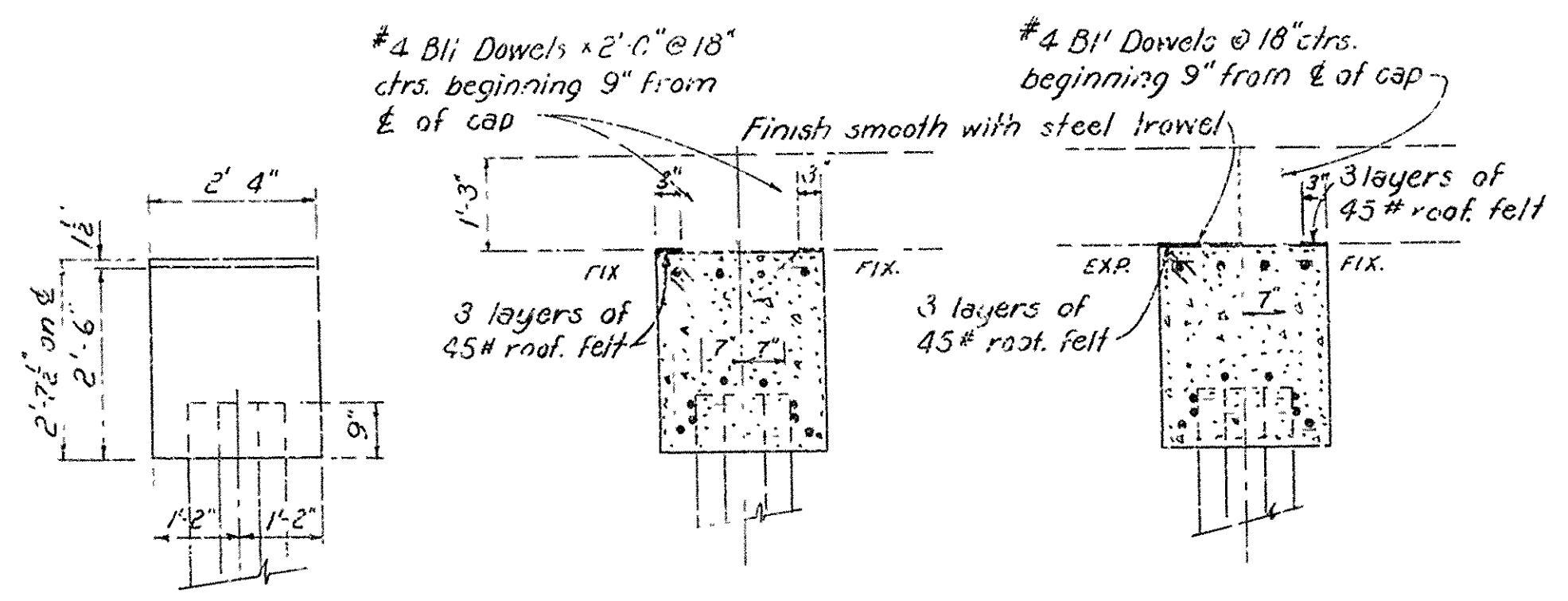
HALF ELEVATION OF END BENT



HALF PLAN OF END BENT



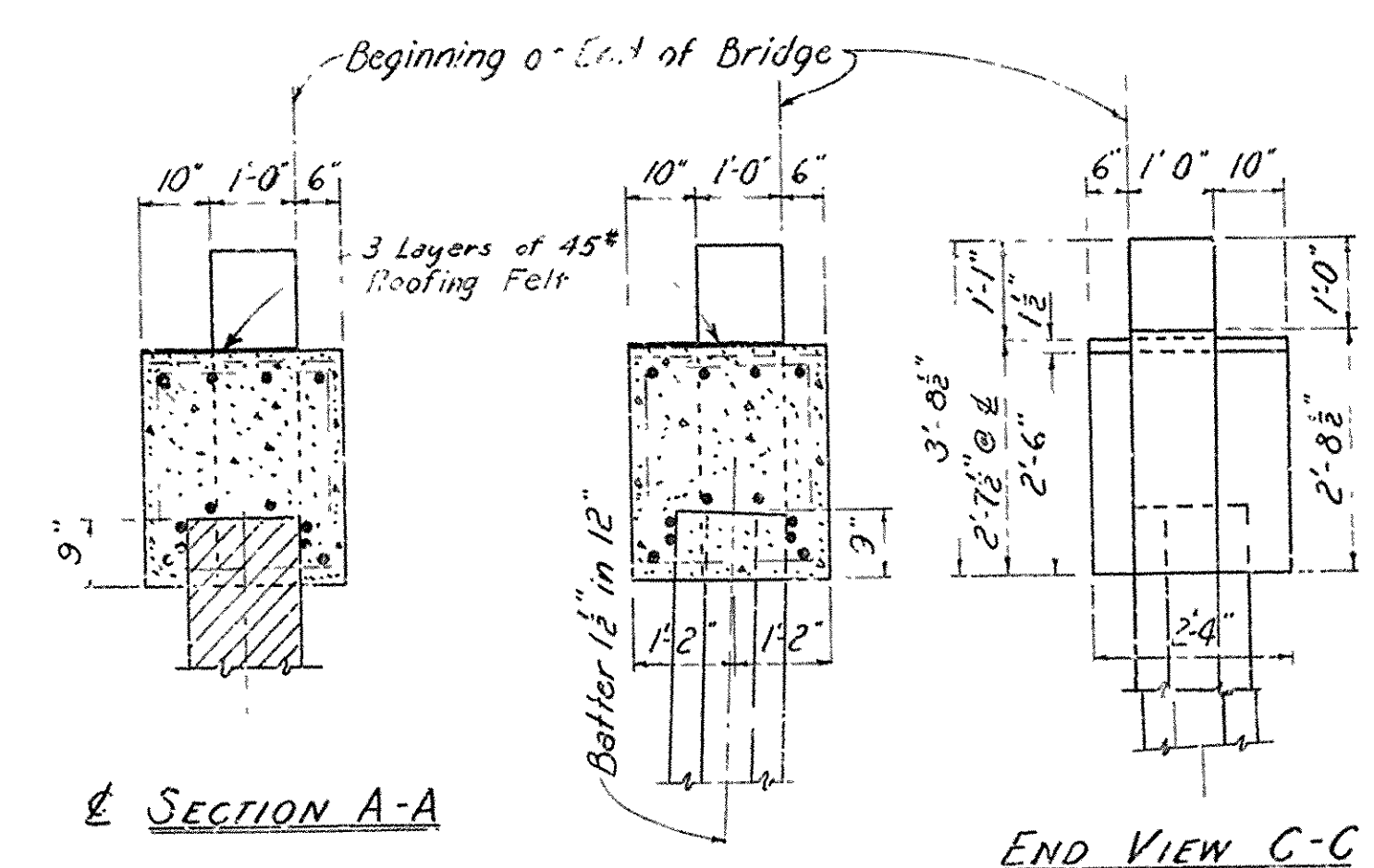
HALF SECTION OF END BENT



END VIEW

SECTIONS ON C OF INTERM. BENTS

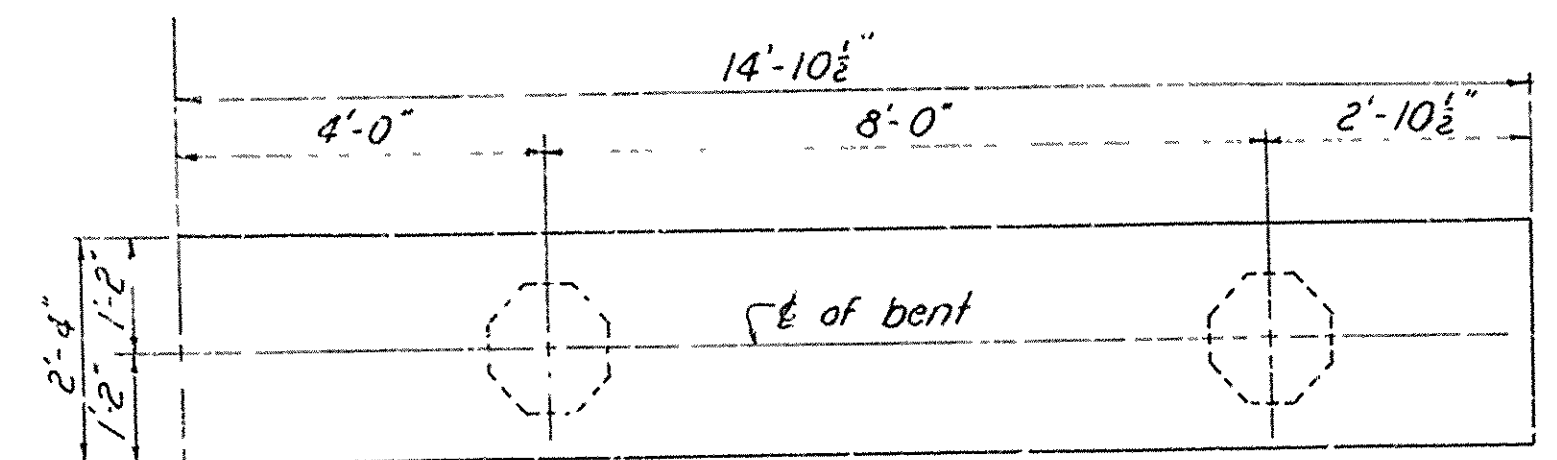
Note: See Layout for location of Expansion and Fixed Ends



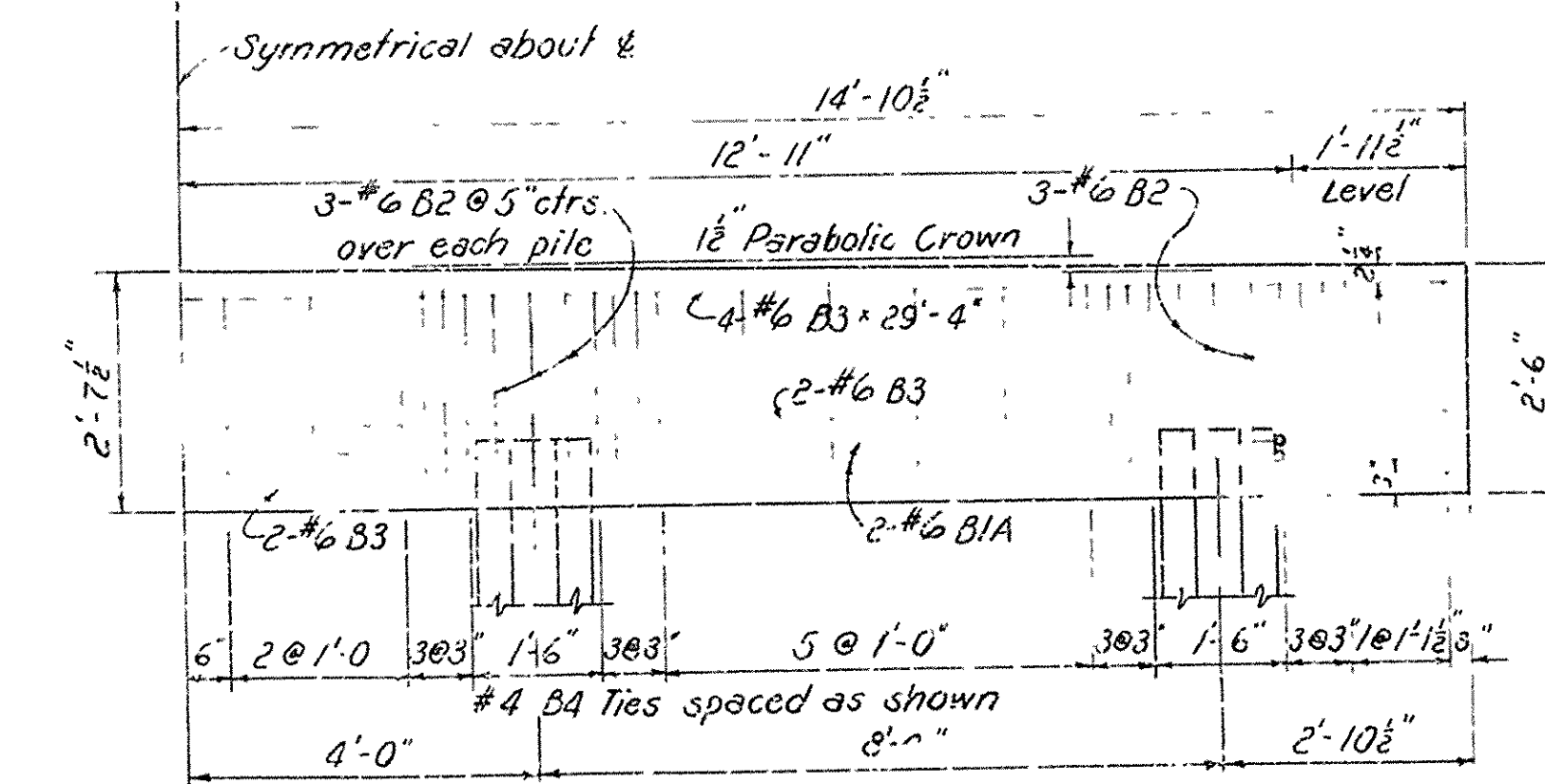
SECTION A-A

END VIEW C-C

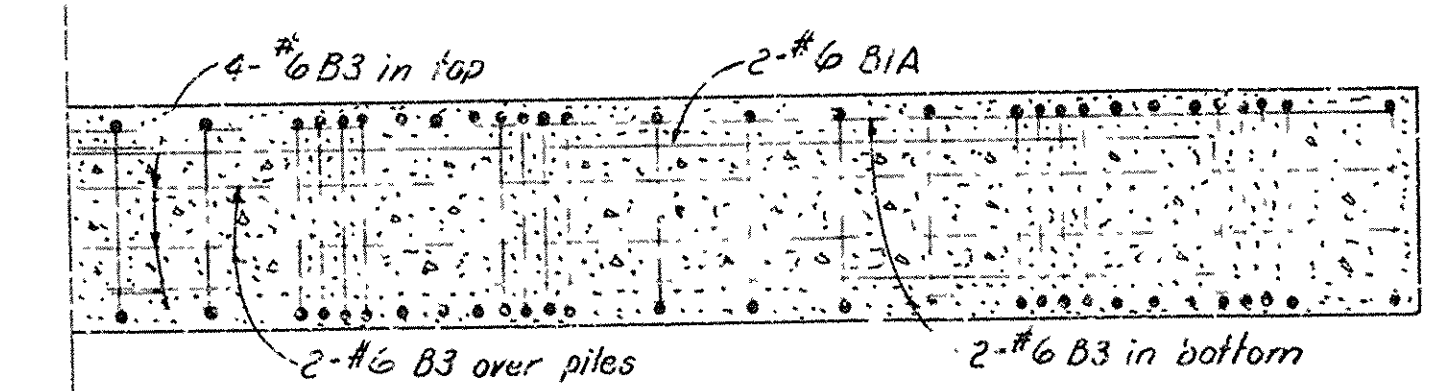
SECTION B-B



HALF PLAN OF INTERMEDIATE BENT



HALF ELEV. OF INTERMEDIATE BENT



HALF SECTION OF INTERMEDIATE BENT

BAR LIST FOR BENTS - EACH					STRAIGHT BARS				
BENT BARS					STRAIGHT BARS				
Mark	Size	No. Req'd	End Bent	Int. Bent	Length	Bending Diagram	Mark	Size	No. Req'd
B1	#6	4			31'-5"		B3	#6	8
B1A	#6		4		29'-5"		B6	#4	12
B2	#6	15	12		6'-4"		B7	#4	4
B4	#4	52	46		8'-11"		B8	#4	4
B5	#4	4			3'-1"		B9	#4	8
							B10	#4	4
							B11	#4	20

Note: Dimensions relating to reinforcing steel are to centers of bars.

* One slab end fixed
x Both slab ends fixed

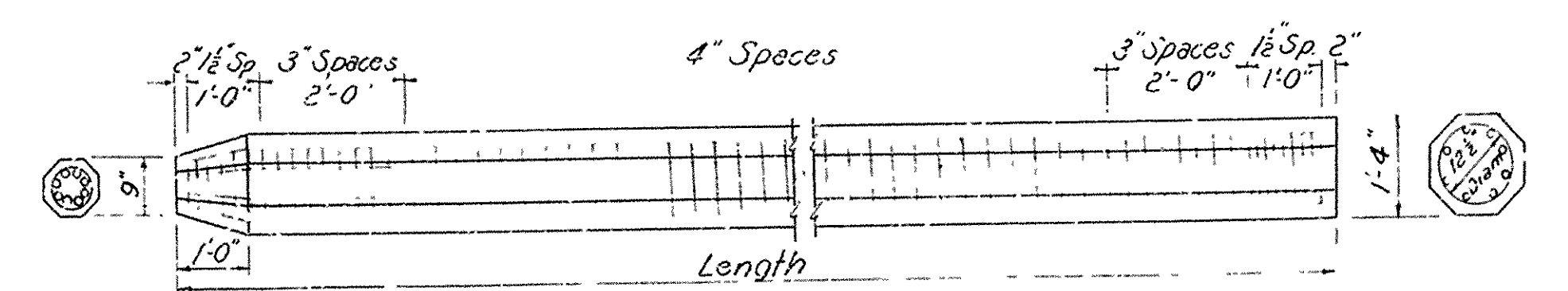
GENERAL NOTES

All concrete to be Class S and shall be poured in the dry. All exposed corners to be chamfered 1/4" unless otherwise noted.
Reinforcing steel to be deformed bars of intermediate grade, unless otherwise modified by Special Provisions. Shop lists and bending diagrams are to be submitted for approval.
All piles are to be driven to a minimum capacity of 30.0 tons each.
Volume occupied by embedded pile heads will not be included in the quantity of concrete in caps.
For Details of Standard 25'-0" R.C. Slab Spans, see Dwg. No. 5416.
Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959.

DESIGN LIVE LOAD: H-20 LOADING A.A.S.H.O. 1957

DESIGN UNIT STRESSES:

Class S Concrete (n=10) 1200 #/sq in.
Reinforcing Steel (Int Grade) 20,000 #/sq in.



Reinforcing Vertical Bars: 8-#6 for lengths up to and including 35'
8-#7 for lengths 35' to 45'
Lengths over 45': 8-#7 and 4-#6 in middle third of pile
Spiral: No. 4 wire for all lengths.

DETAILS OF 16" OCTAGONAL PRECAST CONG PILE

(SEE DWG 2382 FOR LATEST PILE DETAILS)

DETAILS OF
STANDARD R.C. PILE BENTS
FOR 25'-0" R.C. SLAB SPANS
26'-0" CLEAR ROADWAY 1'-6" CURBS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

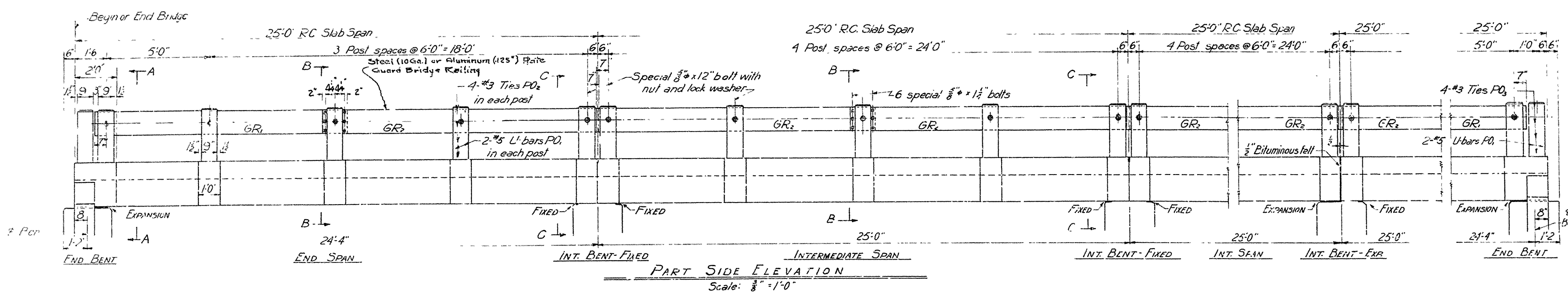
Drawn By: A.J. Date: 10-30-51
Tracer: B.S. Date: 7-27-53
Checked By: J.H. Date: 12-22-53
BRIDGE NO.

Scale: 1/2" = 1'-0"
DRAWING NO. 5415

Revision: Pile Capacity Deleted 1-25-55 H.B.
Revised Spec. Note; Added Pile Note 25 May 60 B.H.
Changed Bar Designations from rounds to bars.

Ward Goodner
BRIDGE DESIGN ENGINEER

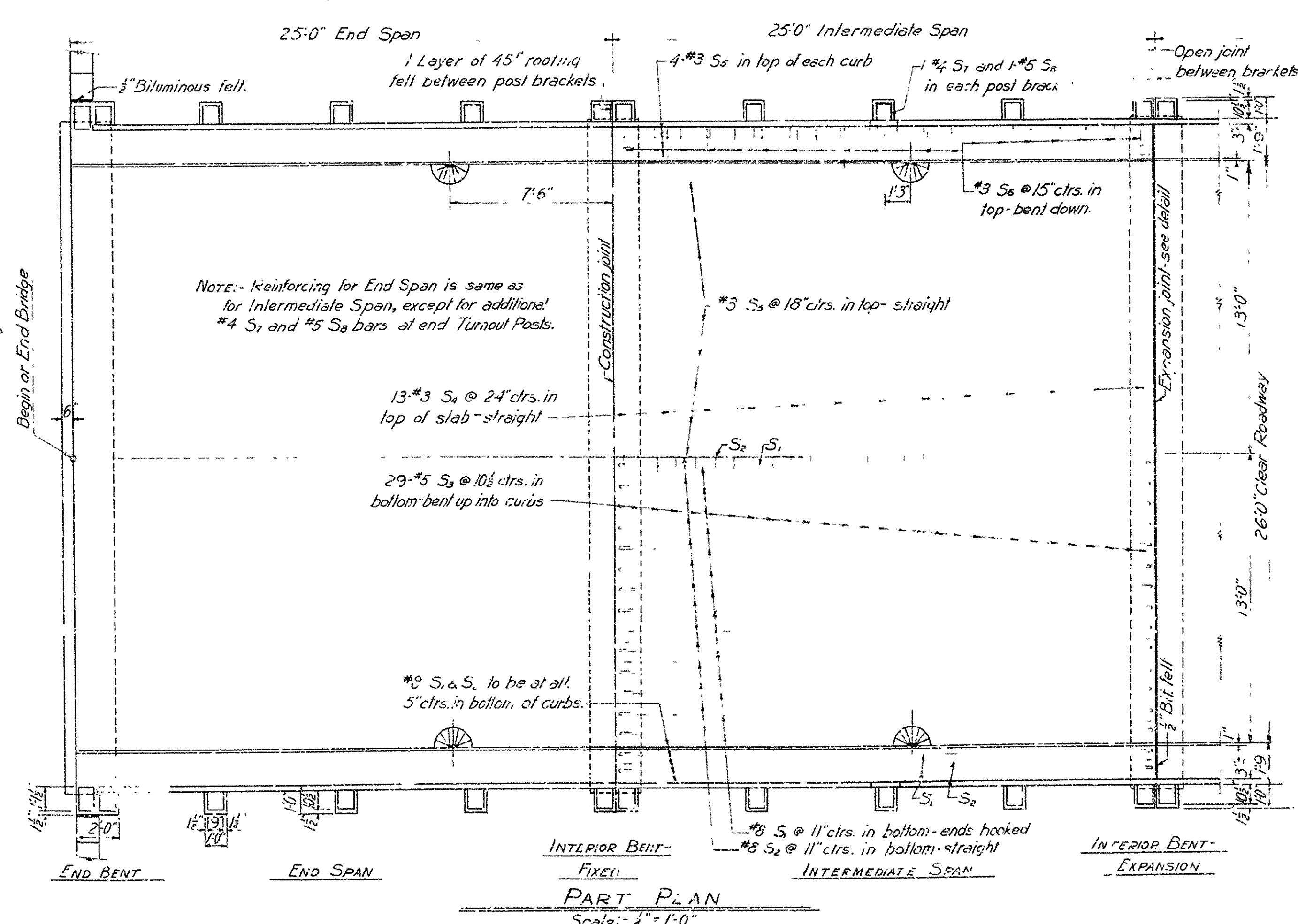
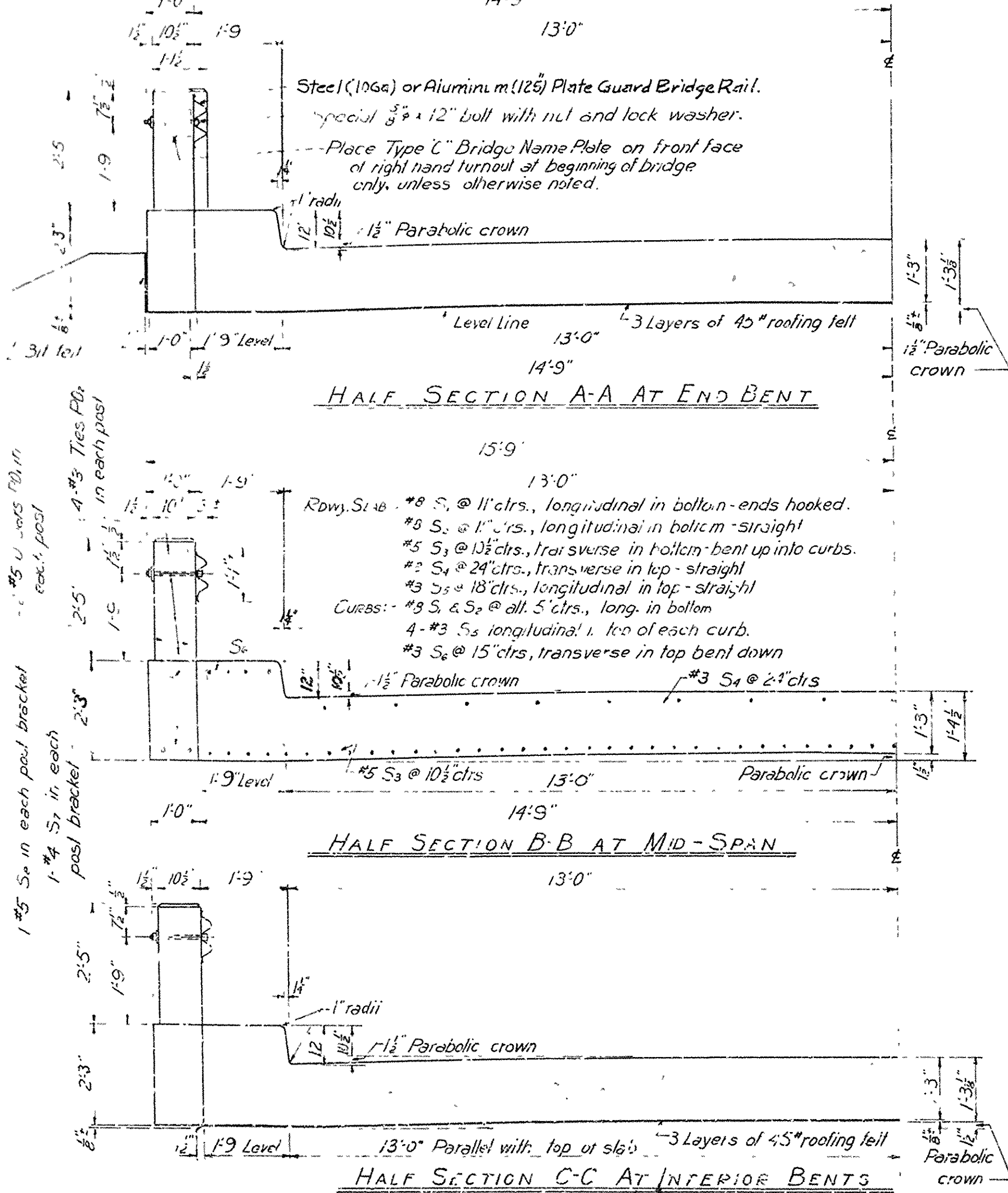
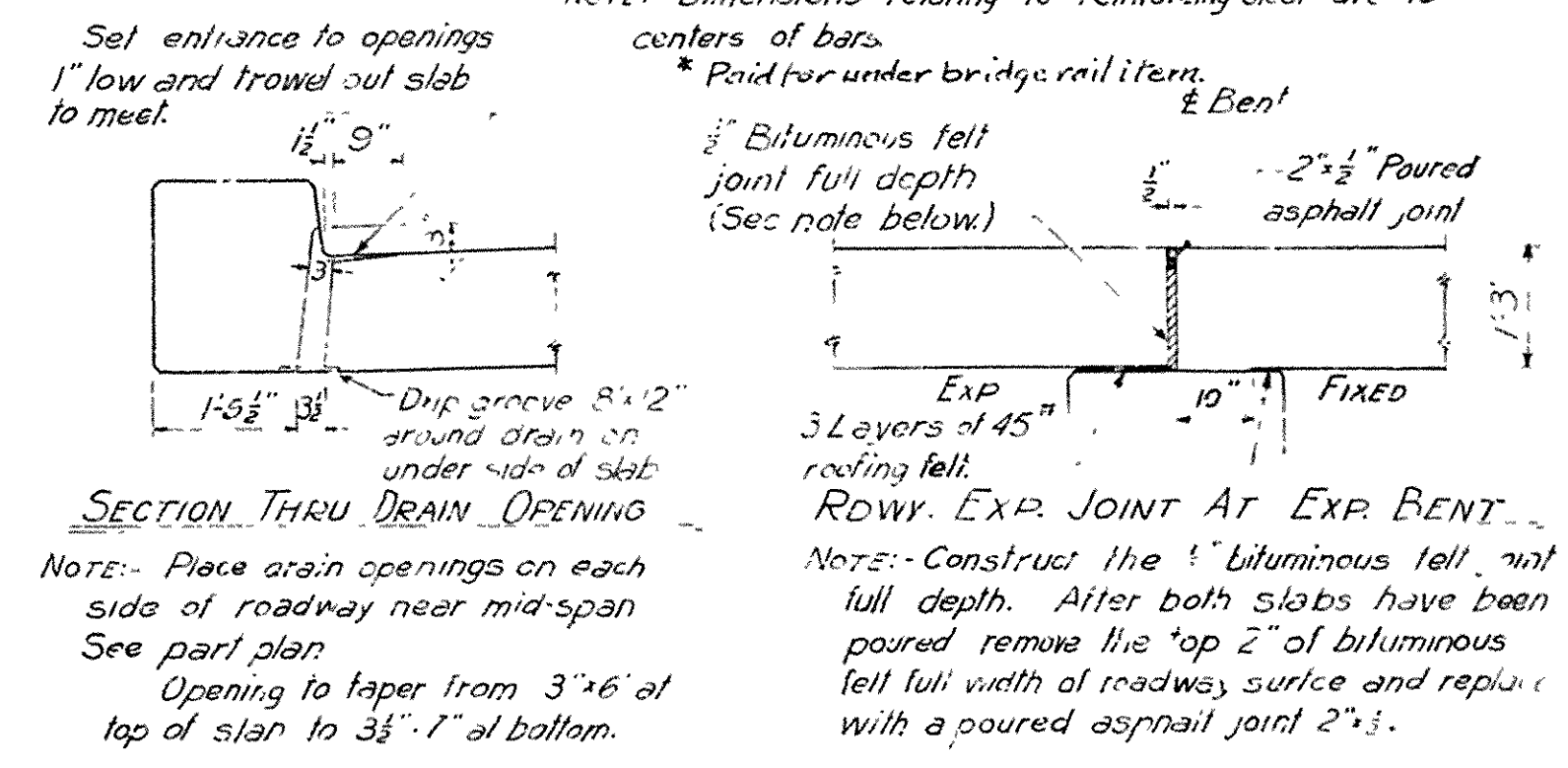
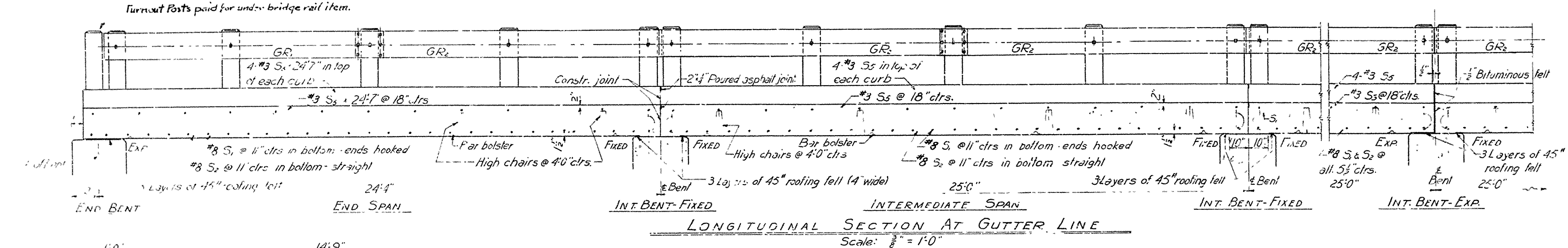
FED ROAD DIST NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.				
STATE JOB NO.					



BAR LIST PER SPAN

MARK	SIZE	No. ROD PER SPAN		LENGTH	BENDING DIAGRAM
		END	INTER		
S ₁	#3	32	32	26'-10"	
S ₂	#8	33	33	24'-1" SLR	
S ₃	#5	29	29	32'-8"	
S ₄	#3	13	13	28'-5" SLR	
S ₅	#3	25	25	24'-7" SLR	
S ₆	#3	42	42	4'-11"	
S ₇	#4	10	10	6'-7"	
S ₈	#4	12	10	11'-0"	
P ₁	#5	24	20	9'-1"	
P ₂	#3	40	40	2'-8"	
P ₃	#3	8	—	3'-3"	

Note: - Dimensions relating to reinforcing steel are to centers of bars.
* Paid for under bridge rail item.



GENERAL NOTES

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

Reinforcing steel to be deformed bars of intermediate grade, unless modified by Special Provisions. Shop lists and bending diagrams must be submitted and approved secured before fabrication is begun.

All reinforcing steel shall be accurately located in the forms and firmly held in place by means of steel wire supports of sufficient size and number to prevent misplacement during the course of construction, and to keep the steel a proper distance from the forms. Wire supports will not be paid for directly, but will be considered subsidiary in the item of "Reinforcing Steel." Shop lists and diagrams must be submitted for approval.

Payment for roofing felt, bituminous felt, and poured asphalt joints to be included in the price bid for Class S Concrete.

The plate guard rail shall be of the type shown or an equivalent rigid type as approved by the Engineer. The plate guard rail, including all concrete posts, shall be paid for at the unit price bid per linear foot for "Steel or Aluminum Plate Guard Bridge Railway".

Shop Paint:- The steel plate guard rail shall be painted in accordance with Section 809 of the Specifications before shipment.

Field Paint:- 1st Coat, red lead lined with lamp black; 2nd Coat Aluminum paint (for steel plate guard only)

This drawing shows general features of design only. Shop drawings shall be made in accordance with the specifications and shall be submitted and approval secured before fabrication is begun.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959.

DESIGN LIVE LOAD-H-20 LOADING A.A.S.H.O. 1957

Load distribution to slab:- Dead Load = 195 "lb"
Live Load = 2175 "lb/feet/ft with 30 "lb Impact

UNIT STRESSES:- Class 'S' Concrete (n=10) 1200 "lb/in²
Reinforcing Steel (Hot grade) 20,000 "lb/in²

DETAILS IN STANDARD
25'-0" R.C. SLAB SPANS
26'-0" CLEAR ROADWAY 2 WALKS @ 1'-6"
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

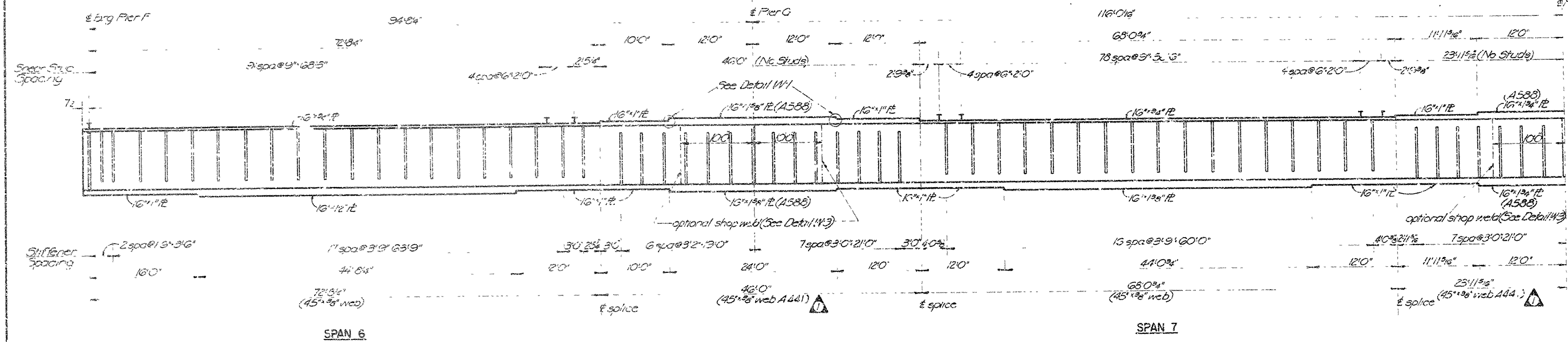
Drawn By: W.C.H. Date: 10-30-51
Traced By: J.E.H. Date: 4-17-52
Checked By: J.H. Date: 11-9-52

Scale: $\left\{ \begin{array}{l} \frac{1}{2} \text{ in.} = 1 \text{ ft.} \\ \text{EXCEPT AS NOTED} \end{array} \right.$

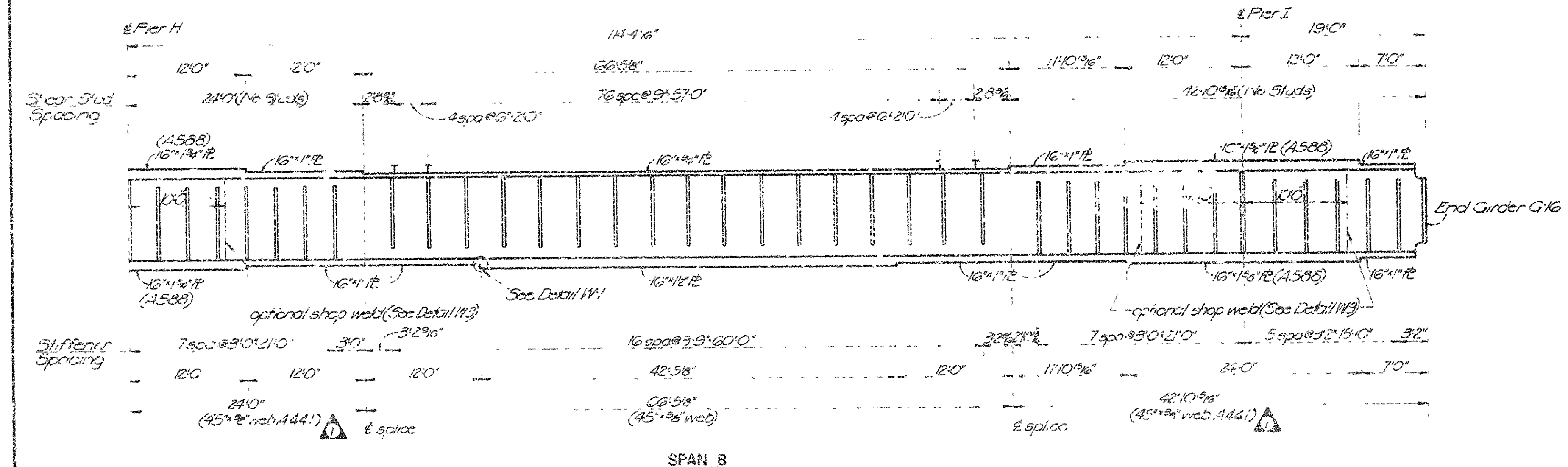
BRIDGE NO. 5416 ORA-RING NO. 5416

Revised Curb Width 1-15-57 E.R.B
Revised Bar Designation 5-14-57 R.H.M.
Revised Rail Notes & Spec. Ref. 25 May 60 C.H.H.
Revised Curb Height 5-13-61 LK

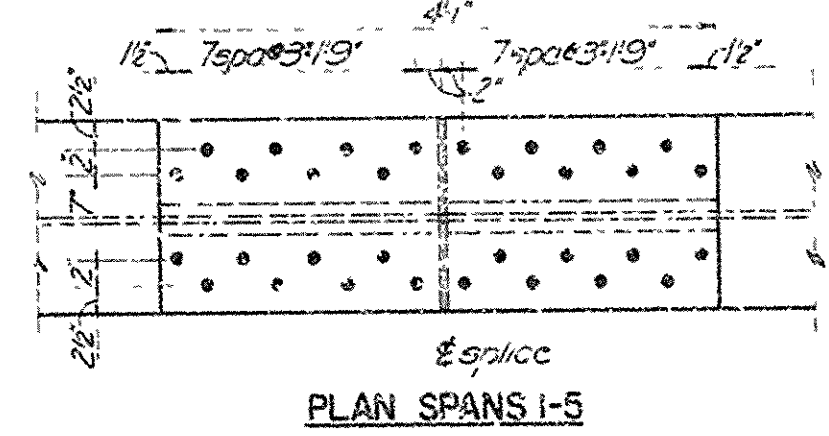
PLAN ROAD	STATE	PROJECT	FISCAL	SHEET	TOTAL
REG. NO.		NO.	YEAR	NO.	SHEETS
2	TENNESSEE	40-1150			
REVISION	0-15-10 H.V.B. Change of web steel Grades and Quantities				
REVISION	Note B.D.M.C. 12-14-70				



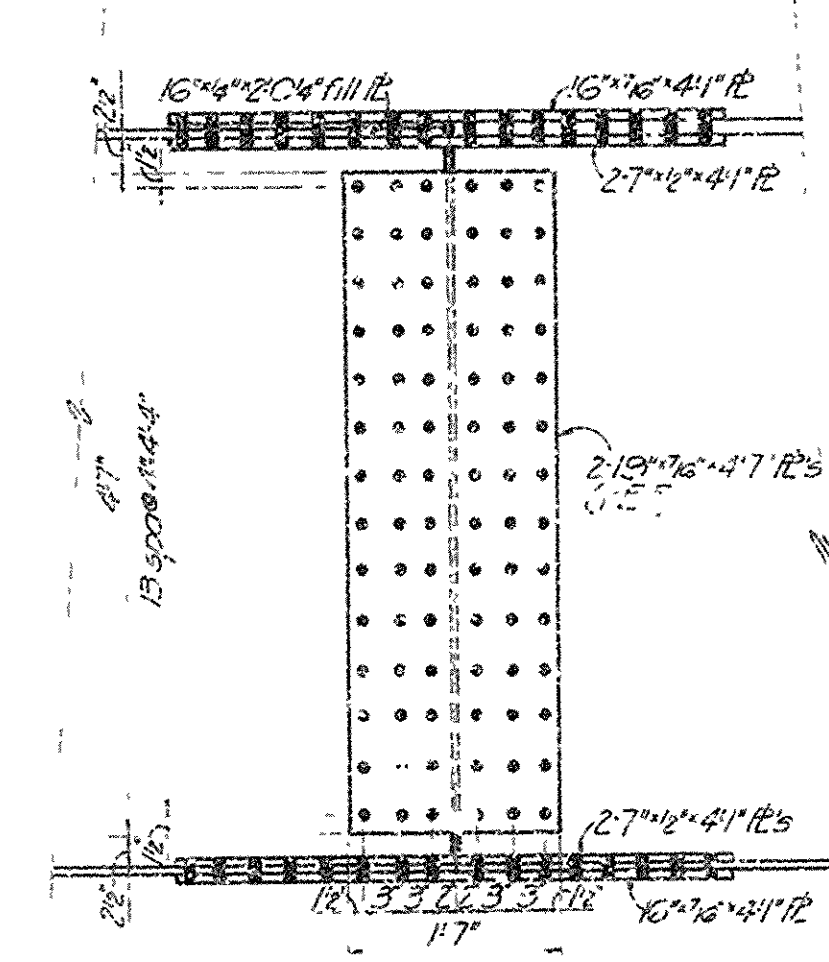
- NOTES:**
1. For Splice Detail spans 6-9 see Bridge Dwg 37
 2. For Dead Load Camber Ordinates see Bridge Dwg 44
 3. All structural steel shall be ASTM A36 except where ASTM A588 or A441 is indicated
 4. Notes on Bridge Dwg 49 apply to this dwg.
 5. For Details W1 & W3 See " " Dwg 35
 6. For Framing Details of partial length girders See Bridge Dwg 41
 7. If the contractor elects to use the optional shop weld, the portion of the web between the optional shop weld and the field splice may be ASTM A36 steel.



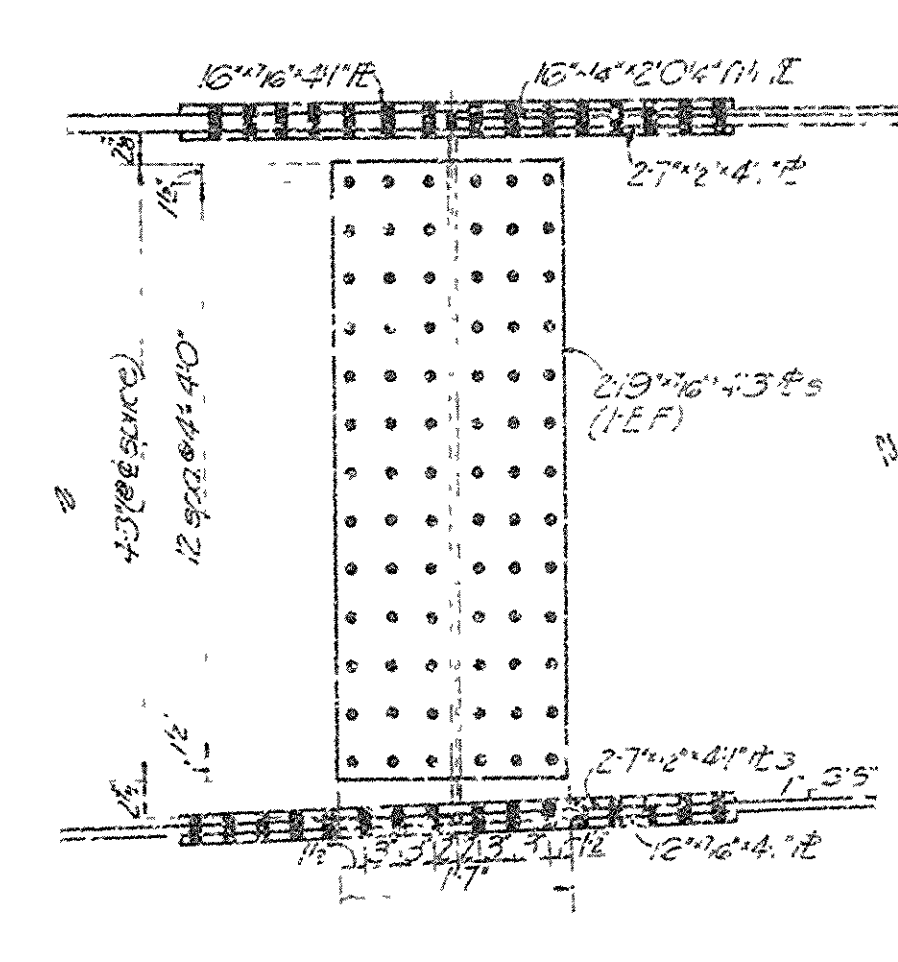
GIRDER G-16 DETAILS



PLAN SPANS 1-5

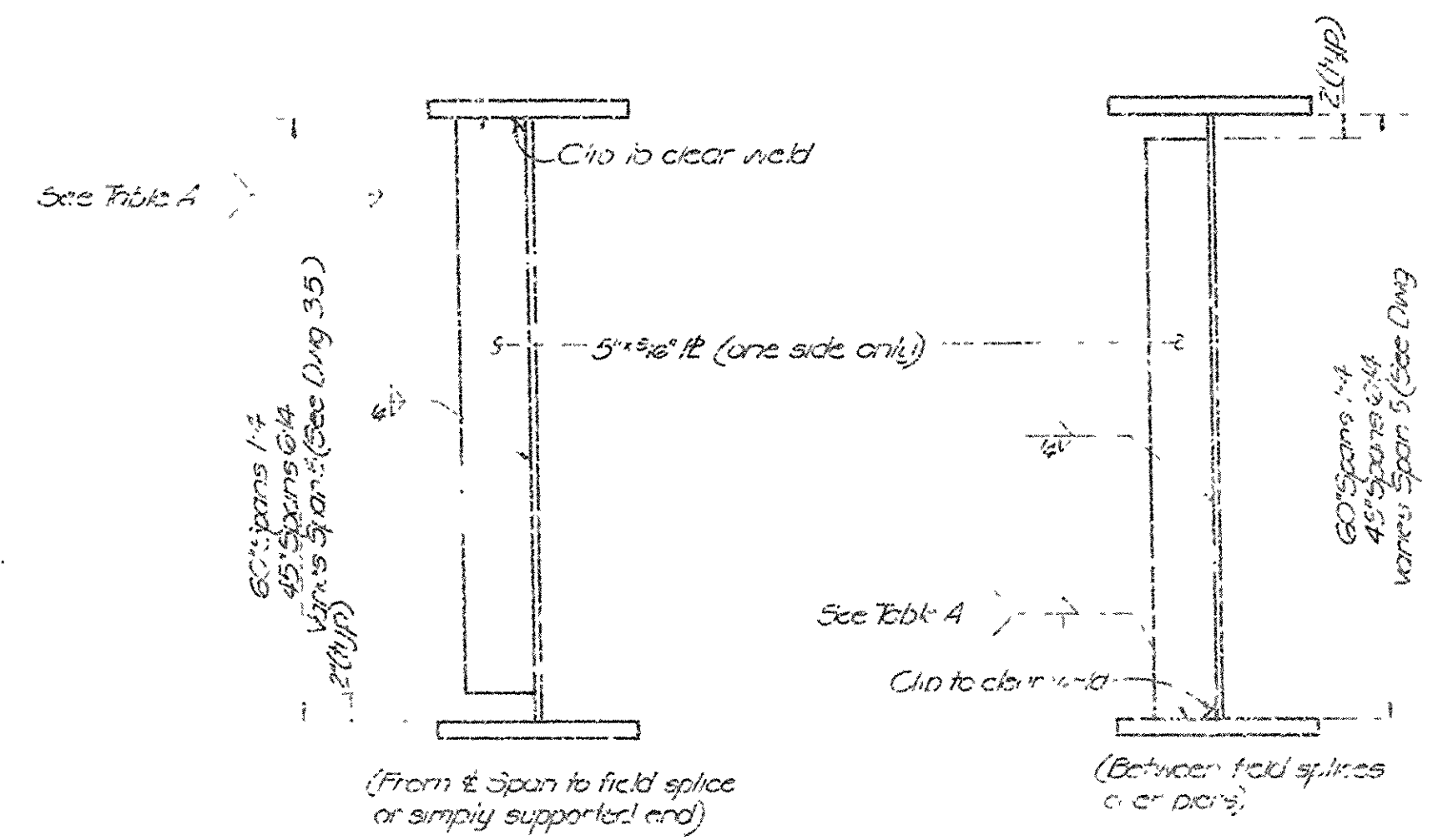


ELEVATION SPANS 1-4



ELEVATION SPAN 5

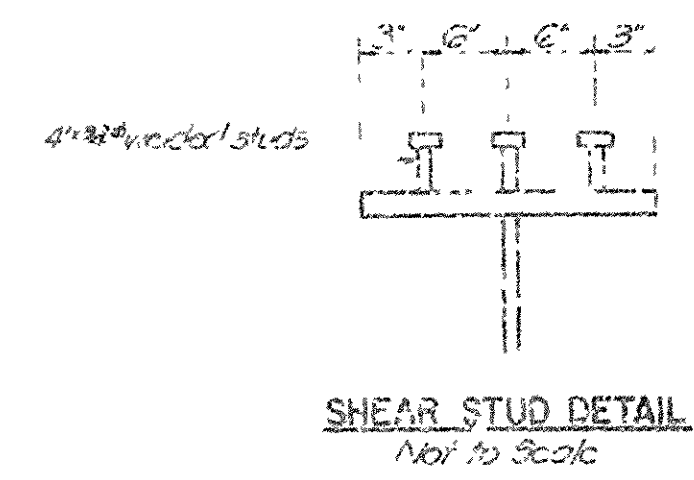
FIELD BOLTED SPLICE DETAILS-SPANS 1-5
Scale: 3/4"=1'-0"



INTERMEDIATE STIFFENER DETAILS
No Scale

TABLE A	
Material Thickness of flange plate (inches)	Maximum Spacing of field stiffeners (inches)
5/8" to 1 1/8"	48"
1 1/8" to 1 3/4"	36"
1 3/4" to 2 1/4"	24"

Note:
Intermediate stiffeners shall be placed on only one side of the web. No intermediate stiffeners shall be placed on the outside of exterior girders. Stiffeners shall be placed as not to interfere with diaphragm connections.



SHEAR STUD DETAIL
Not to Scale

ESTIMATED QUANTITIES-STRUCTURAL STEEL			
Item	Material	Unit	Quantity
Diaphragm Stiffeners	A-36	lbs	2,627,649
Stiffeners	A-588	lbs	259,329
4" x 1/2" Strength Bolts	A-307	lbs	15,220
Shear Connectors	108	lbs	23,278
Bolts Field Splices	A-307/A-325	lbs	193,061
Bearings	A-36	lbs	15,316
Swaged Anchor Bolts	A-307	lbs	5,327
Girders	A-441	lbs	370,066
Total			3,781,265

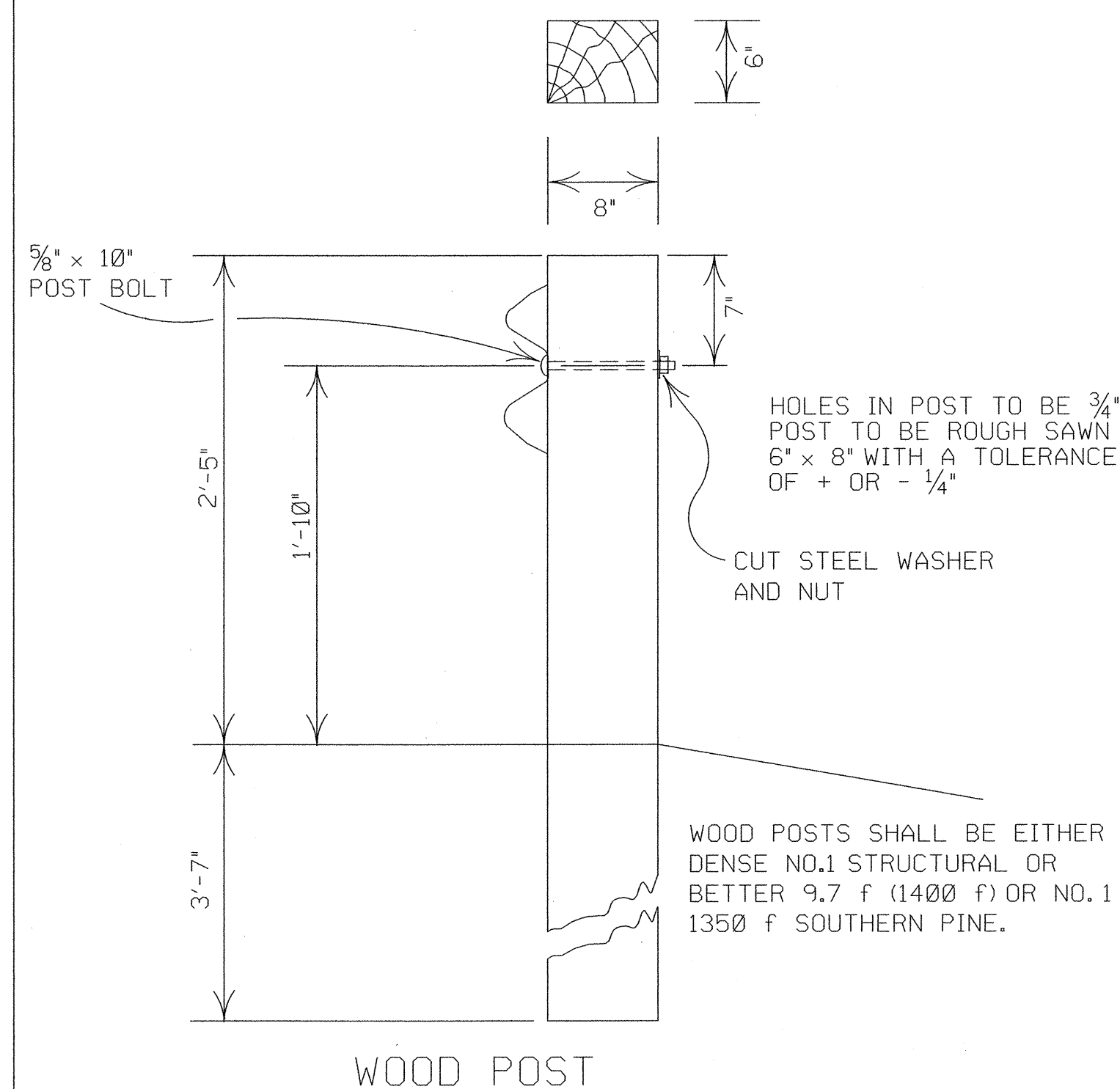
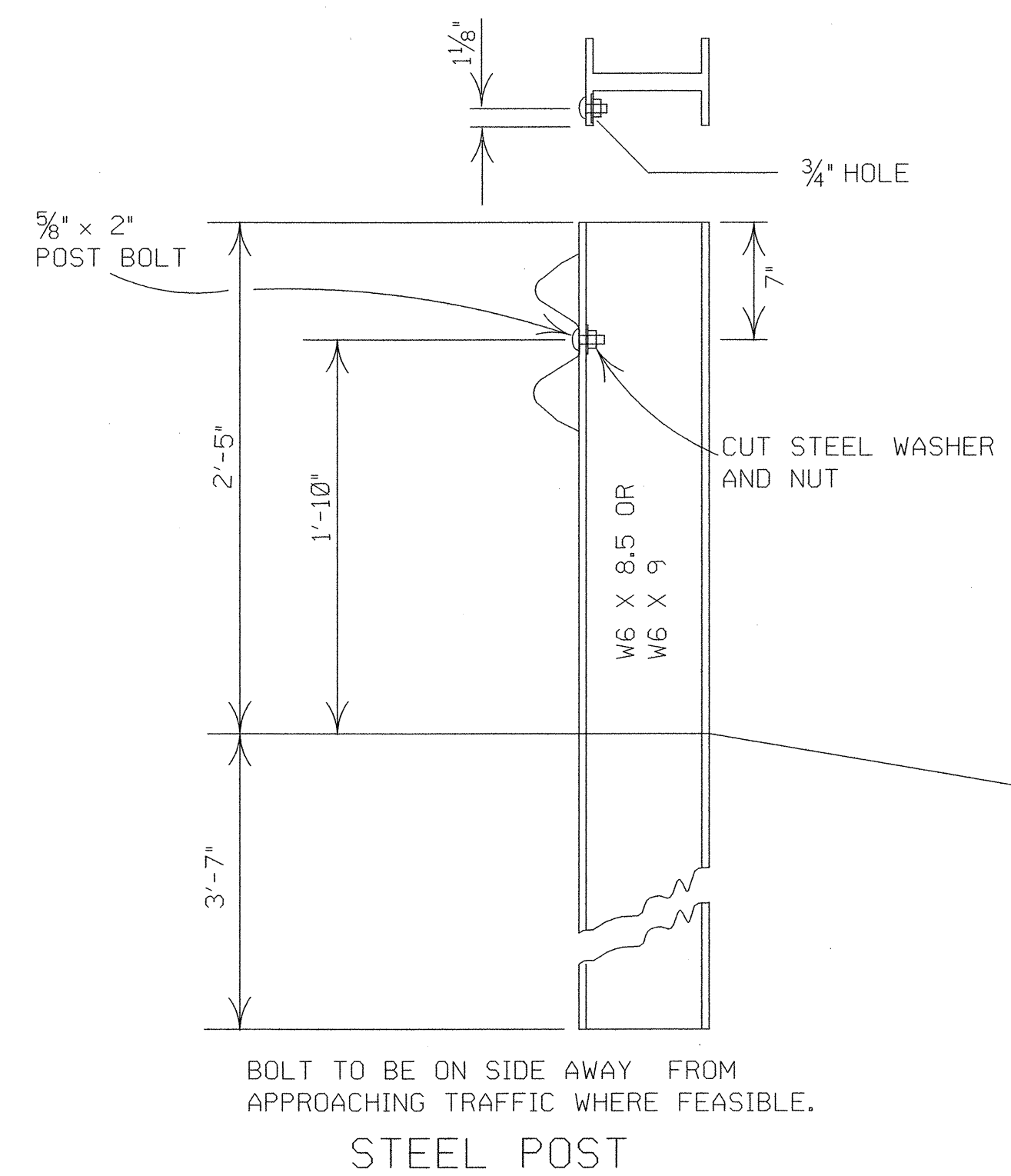
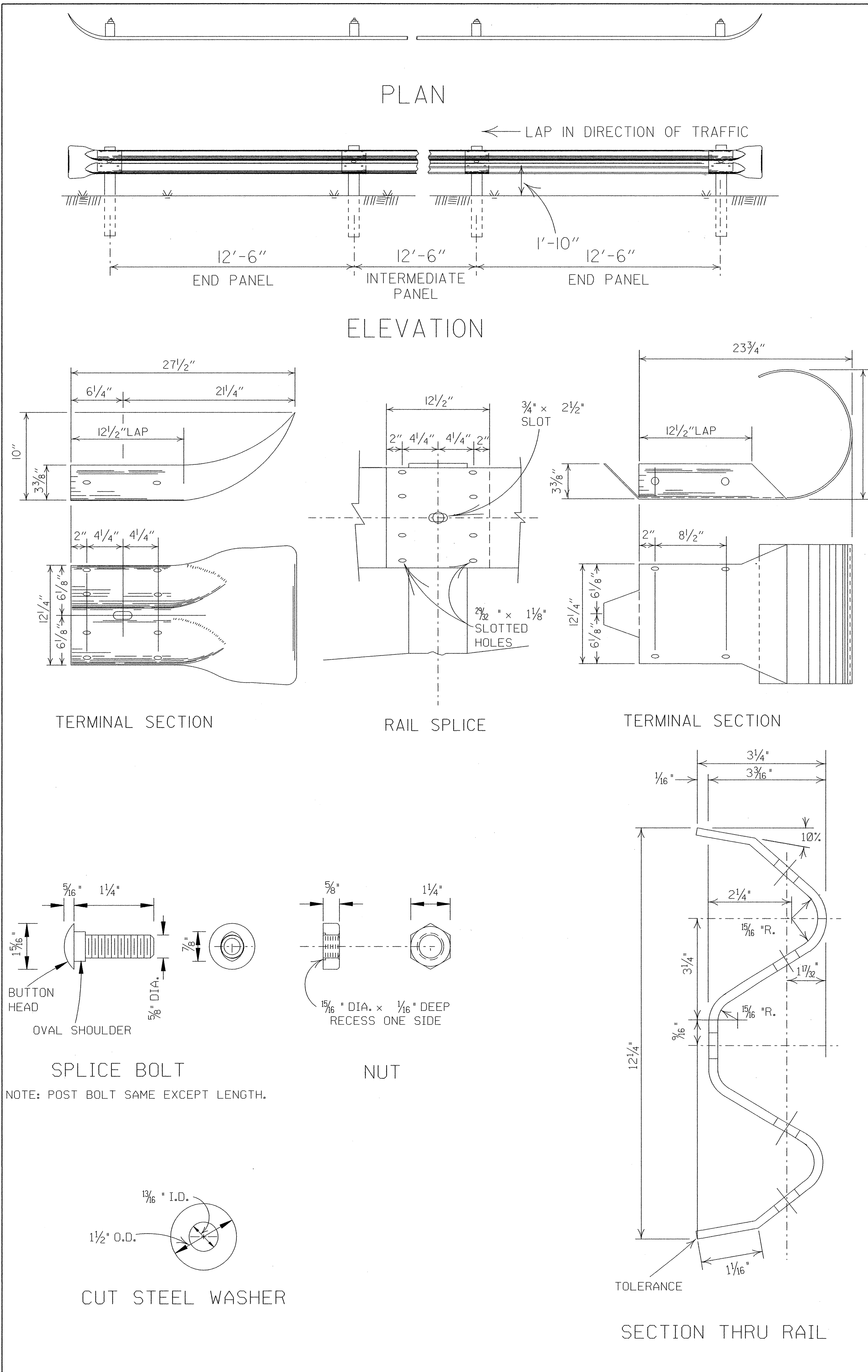
BRIDGE NO. 2A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
INTERSTATE HIGHWAY SYSTEM
MEMPHIS AND SHELBY COUNTY

KAPLAN BROTHERS AND ASSOCIATES
KEMPER, TENNESSEE

40 OVER FRONT MAIN 2nd & 3rd
GIRDER DETAILS-SPANS 6-9

DATE: 12-14-70
DESIGNED BY: JAM
CHECKED BY: CHB
IN CHARGE: CHB



DETAILS OF POST CONNECTIONS

7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
8-22-02	REVISED DIMENSION ON STEEL POST	
11-16-01	REVISED STEEL AND WOOD POST	
8-12-98	REMOVED CONCRETE POST	
10-18-96	CHANGED WOOD POST NOTE	10-18-96
6-2-94	ADDED ALTERNATE STEEL POST SIZE	
8-5-93	REVISED STEEL POSTS SIZE	8-5-93
8-15-91	DELETE STEEL PLATE WASHER & ADDED TYPE C TO TITLE	8-15-91
10-30-87	REMOVED DET. PLCMNT. ON HWY.	555-11-20-87
1-4-83	GRADE FOR WOOD POSTS	679-1-4-83
10-1-77	HARDENED WASHER	922-10-1-72
10-2-72	REVISED & REDRAWN	521-10-2-72
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS
(TYPE C)
STREET / ROAD BARRICADE OR
TEMPORARY INSTALLATION

STANDARD DRAWING GR-7