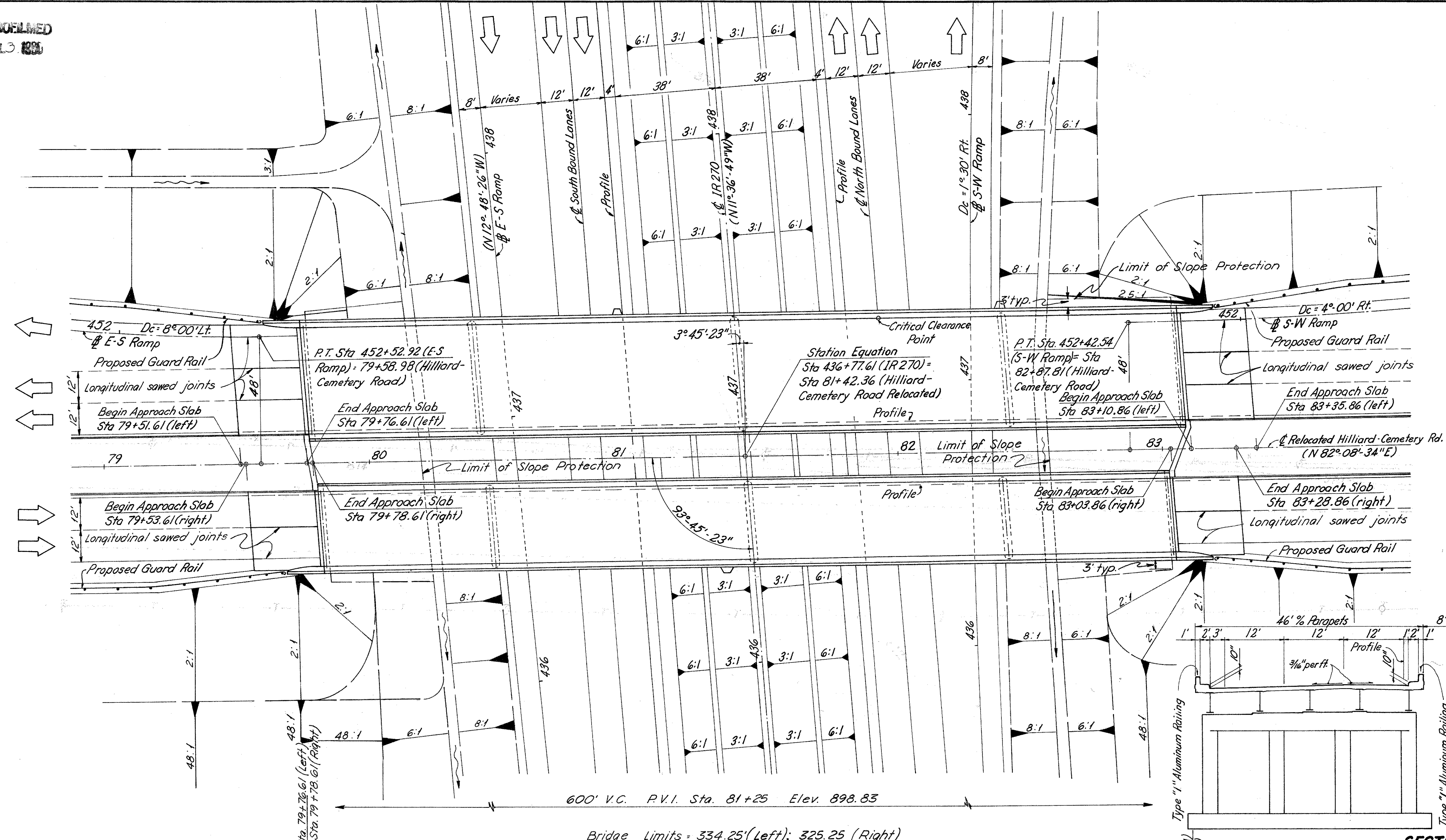
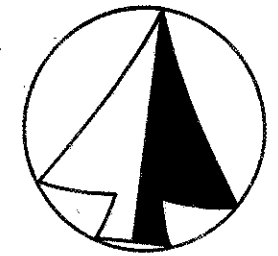


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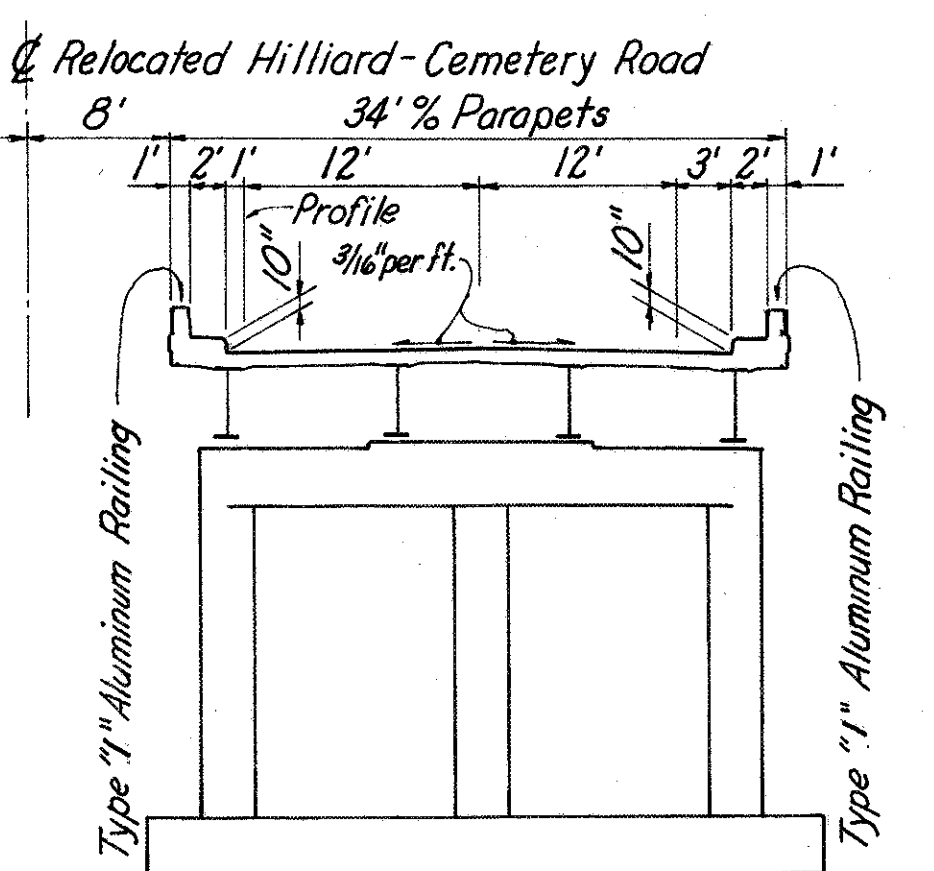
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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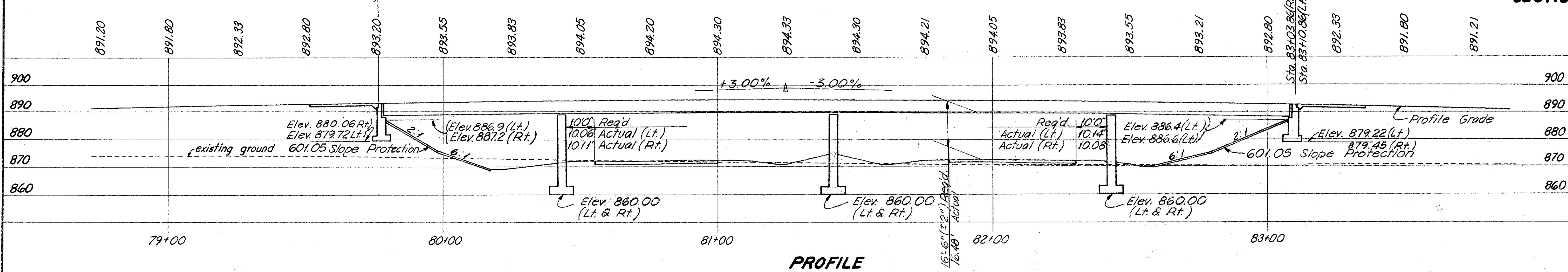
FRANKLIN COUNTY
FRA-270-3.47 N.



PROPOSED STRUCTURE
 TYPE: 4 span continuous built-up plate girder with reinforced concrete deck and substructure.
 SPAN: 64.50-99.00-100.75-65.50, left bridge and 63.75-97.75-96.50-62.75, right bridge.
 LOAD FREQUENCY RATING: CF-2000 (57)
 ROADWAY: 40'-0" & 28'-0" w/ 2'-0" safety curbs
 SKEW: 3°-45'-23" R.F.
 WEARING SURFACE: 1" monolithic
 ALIGNMENT: tangent
 APPROACH SLABS: special (25' long)
 SUPERELEVATION: none



SECTION
 Longitudinal Sawed Joints in the Approach Slabs shall conform to details shown on Standard Construction Drawing BP-3 rev.6-65.



1985 ADT = 59,402 (IR270)
 1985 ADT = 30,534 (Hilliard-Cemetery Rd.)
 BURGESS & NIPLE - CONSULTING ENGINEERS
 COLUMBUS 12, OHIO
SITE PLAN
 BR. NO. FRA-270-0393NL & R
 IR 270 UNDER
 HILLIARD CEMETERY ROAD
 SCALE: 1" = 20'
 FRANKLIN COUNTY
 STA. 436+77.61
 DESIGNED: WBR DRAWN: WBR TRACED: WBR CHECKED: KED REVIEWED DATE: WBR 4-15-65

Br. No. Fra-270-0393 L&R ESTIMATED QUANTITIES (Both Bridges)							
ITEM NO	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GEN'L.
503	Lump	Sum	Cofferdams, cribs & sheeting.				Lump
503	1843	Cu.Yd.	Unclassified Excavation		560	1283	
511	886	Cu.Yd.	Class "C" Concrete, Superstructure.	886			
511	206	Cu.Yd.	Class "C" Concrete, Piers above footings			206	
511	252	Cu.Yd.	Class "E" Concrete, Abutment Walls		252		
511	353	Cu.Yd.	Class "E" Concrete, Footings.		104	249	
512	16	Sq.Yd.	Type "B" Waterproofing, 36" wide		16		
509	334,418	lb.	Reinforcing Steel.	242,604	17,436	74,378	
513	748,000	lb.	Structural Steel.	748,000			
514	748,000	lb.	Field painting of Structural Steel.	748,000			
516	83	Sq.Ft.	1" thick preformed expansion joint filler		83		
517	1365.51	lin.ft.	Railing Type "1"	1307.84	57.67		
518	96	Cu.Yd.	Porous Backfill		96		
518	147.00	lin.ft.	6" perforated helical C.M.P. 707.06 including specials		147.00		
518	160.	lin.ft.	6" helical C.M.P. 707.06 non-perforated		160.		
518	26	each	Scuppers, including supports.	26			
601	1100	Sq.Yd.	Crushed Aggregate Slope Protection.				1100
808	884	each	Water-reducing, set retarding admixture.	884			
625	2	⊕ each	Luminaire Type III - 400 W				2
625	2	⊕ each	Mercury Vapor Lamp - 400 W (H-33-1CD)				2
625	2	⊕ each	30'-0" Standard with 10'-0" bracket (Design 11A15B30) circular shaft				2
625	720	lin.ft.	Conduit 2" Rigid Galvanized Steel				720
625	764	lin.ft.	Circuit Cable No. 2-1/2-Direct Burial 600 Volt				764
625	758	lin.ft.	Circuit Cable No. 4-1/2-Direct Burial 600 Volt				758
625	200	lin.ft.	Pole and Bracket Cable - 1/2 No. 12				200
625	4	⊕ each	Cable Connector Kit Type I				4
625	2	⊕ each	Cable Connector Kit Type II				2
625	2	⊕ each	Cable Connector Kit Type III				2
625	2	each	Bridge Structure Grounding System				2
625	3	set	Light Pole Anchor Bolts for Structures, set of 4				3

⊕ The cost of these items, mounted on bridge, shall be borne 100% by the State.

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DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

REFERENCE: Reference shall be made to Standard Drawings:
SD-1-63 dated 11-12-63, sht. 2, 3 & 4.
AS-1-54 revised 7-5-62
BR-1-65 dated 2-1-65 (Sheet 1)
BP-3 revised 6-1-65
and to Supplemental Specifications 808 dated 7-14-65, 811 dated 3-29-65.

DESIGN DATA:
Design Loading - C.F. 2000 (57)
Concrete Class "C" - basic unit stress 1,333 psi
Concrete Class "E" - basic unit stress 1,133 psi
Structural Steel - ASTM A36 - basic unit stress 20,000 psi. (ASTM A7 and A373 steel not permitted.)
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 psi except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 psi.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

FOUNDATION BEARING PRESSURE:
Abutment footings are designed for a maximum bearing pressure of 1.7 tons per square foot and pier footings are designed for a maximum bearing pressure of 2.0 tons per square foot.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to minimum.

ERECTION PROCEDURE: The Contractor shall submit to the Director for approval, 3 prints showing his proposed erection procedure for the plate girders.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the sub-grade for a distance of 200 feet back of the abutments. After a 30 day waiting period excavation shall be made for the abutments.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

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FRANKLIN COUNTY
FRA-270-3.47 N.

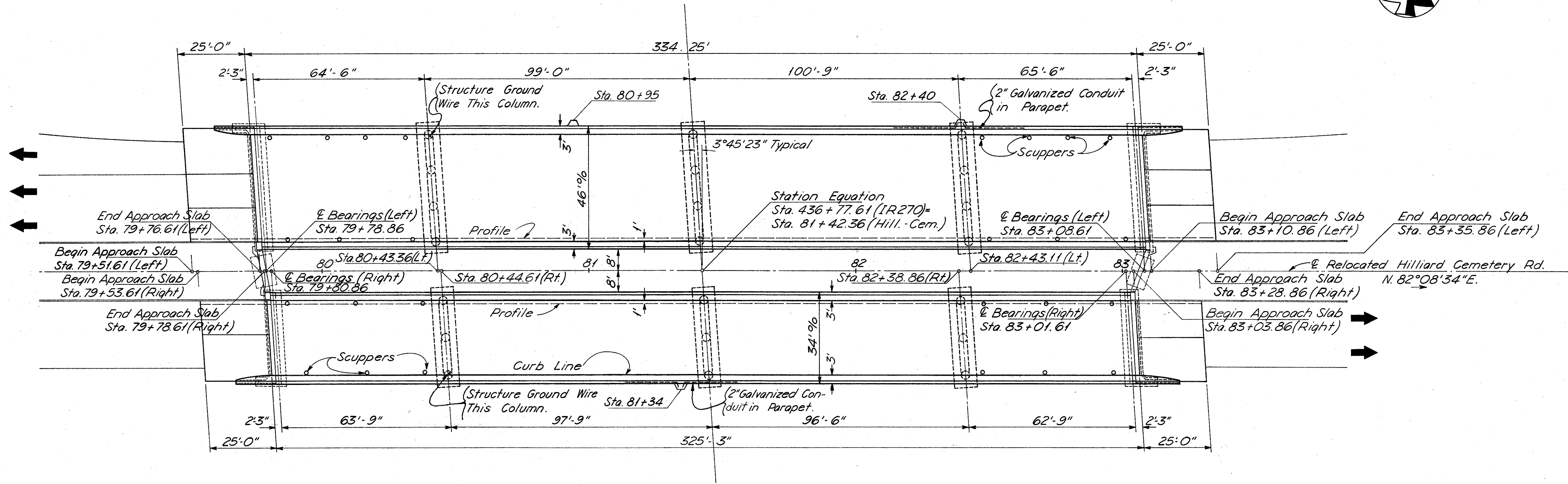
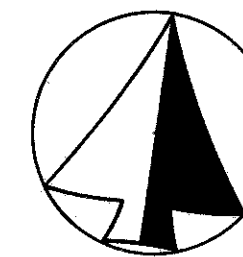
BURGESS & NIPLE CONSULTING ENGINEERS COLUMBUS 12, OHIO					
GENERAL NOTES & ESTIMATED QUANTITIES BR. NO. FRA-270-0393 L & R IR 270 UNDER HILLIARD CEMETERY ROAD FRANKLIN COUNTY STA. 436+77.61					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
W&R	D.W.	D.W.	DWT	W&R 4-15-65	8-16-65

MICROFILMED
JUL 3 1980

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

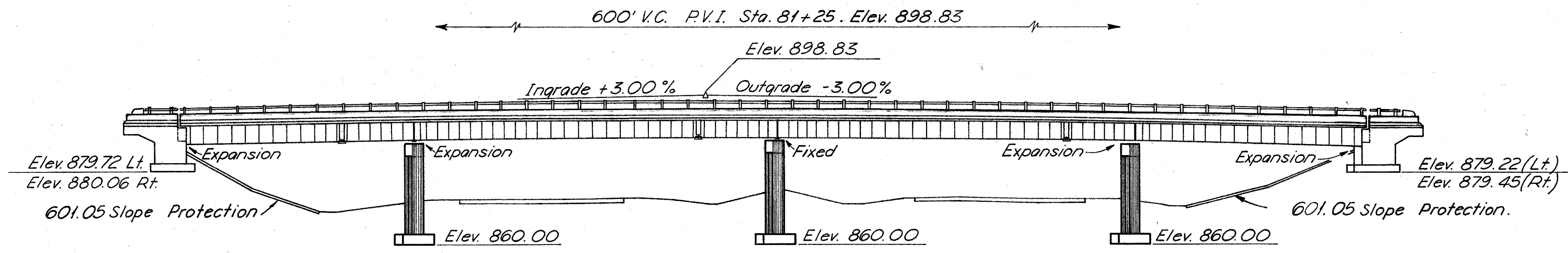
238
301

FRANKLIN COUNTY
FRA-270-3.47 N.



- GENERAL PLAN -

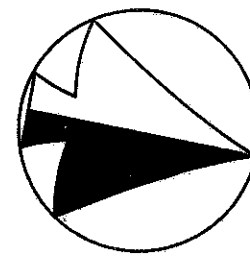
NOTE: For Approach Slab Details see sheet 237
For Railing & Parapet Details see sheet 251
For Light Pole Support, Conduit Details & Grounding See Sheet 130



- GENERAL ELEVATION -
(Right Bridge Shown)

BURGESS & NIPLE		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
GENERAL PLAN BR. NO. FRA. 270 - 0393 L & R IR 270 UNDER HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436+77.61	
DESIGNED	DRAWN	TRACED	CHECKED
W&R	DW	DW	DWT
REVIEWED DATE	REVISION		
W&R 4-15-63			

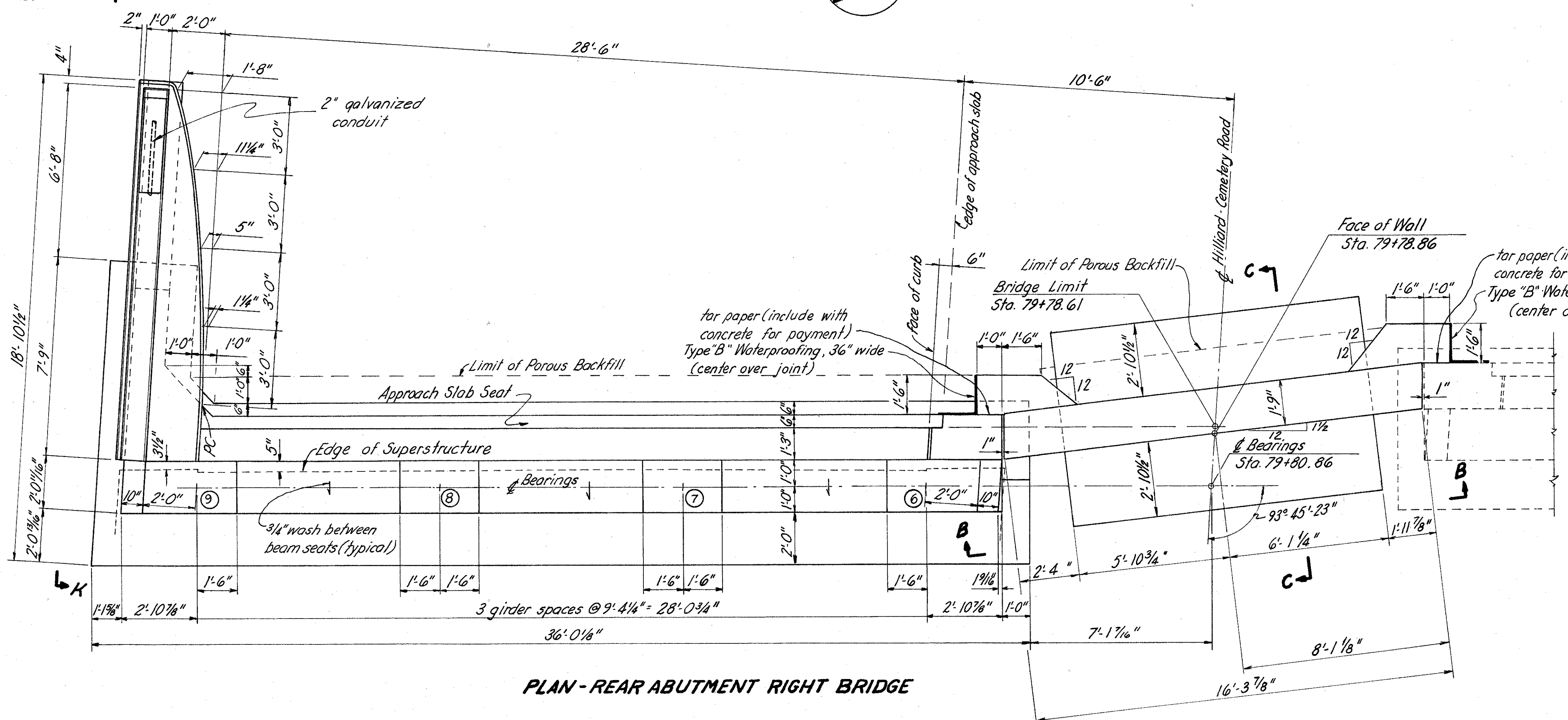
MICROFILMED
JUL 3 1981



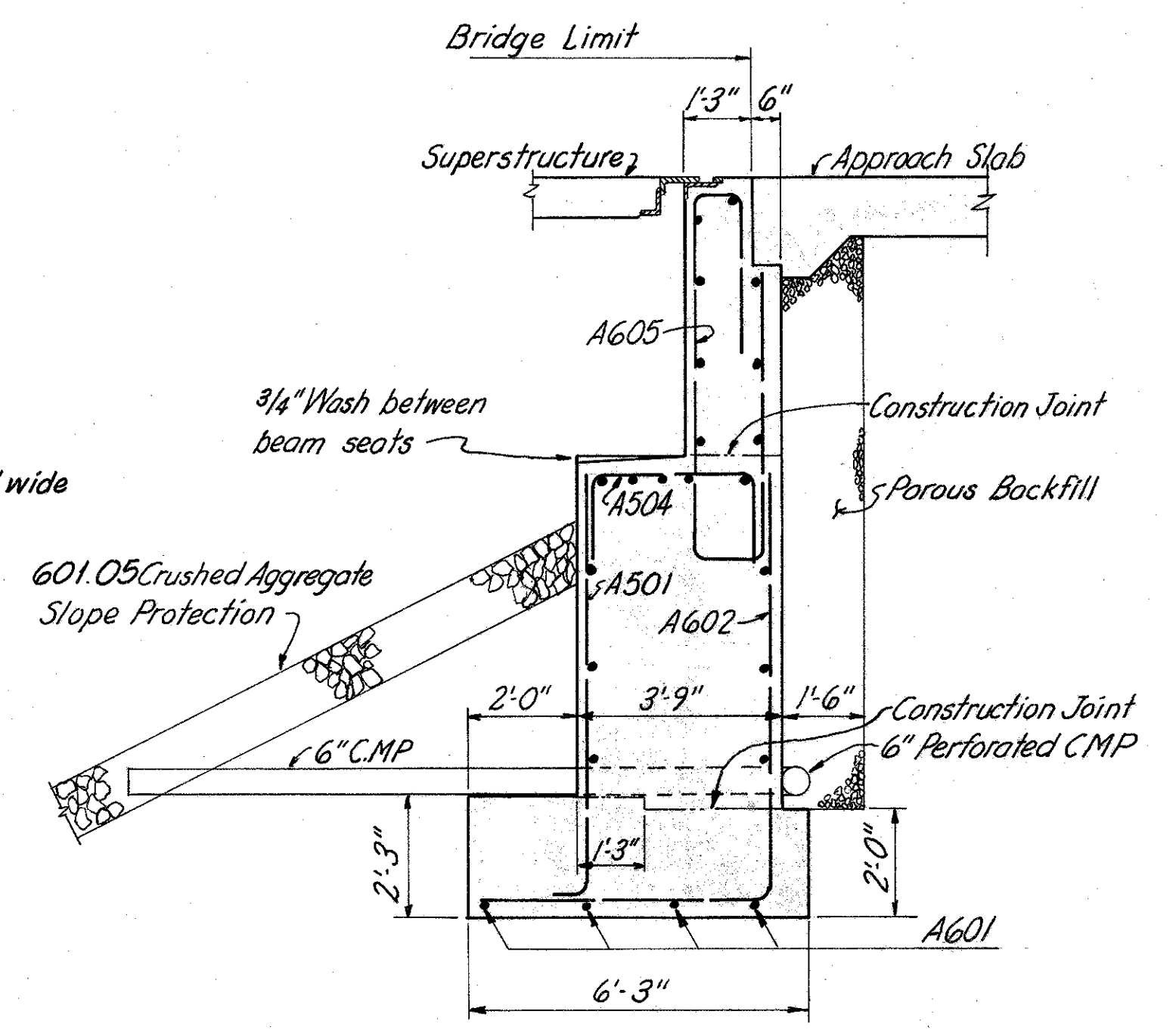
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2	OHIO		

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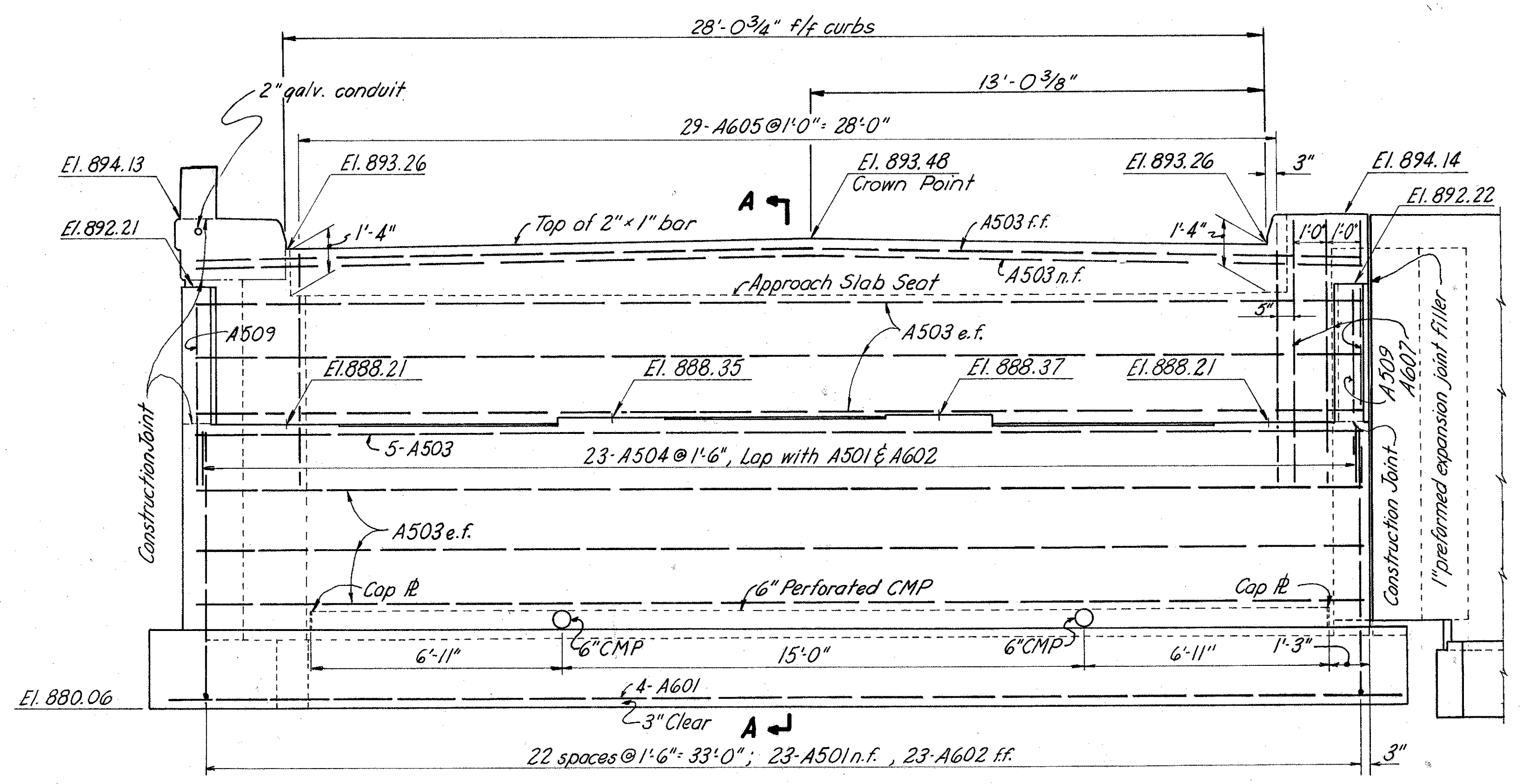
FRANKLIN COUNTY
FRA-270-3.47 N.



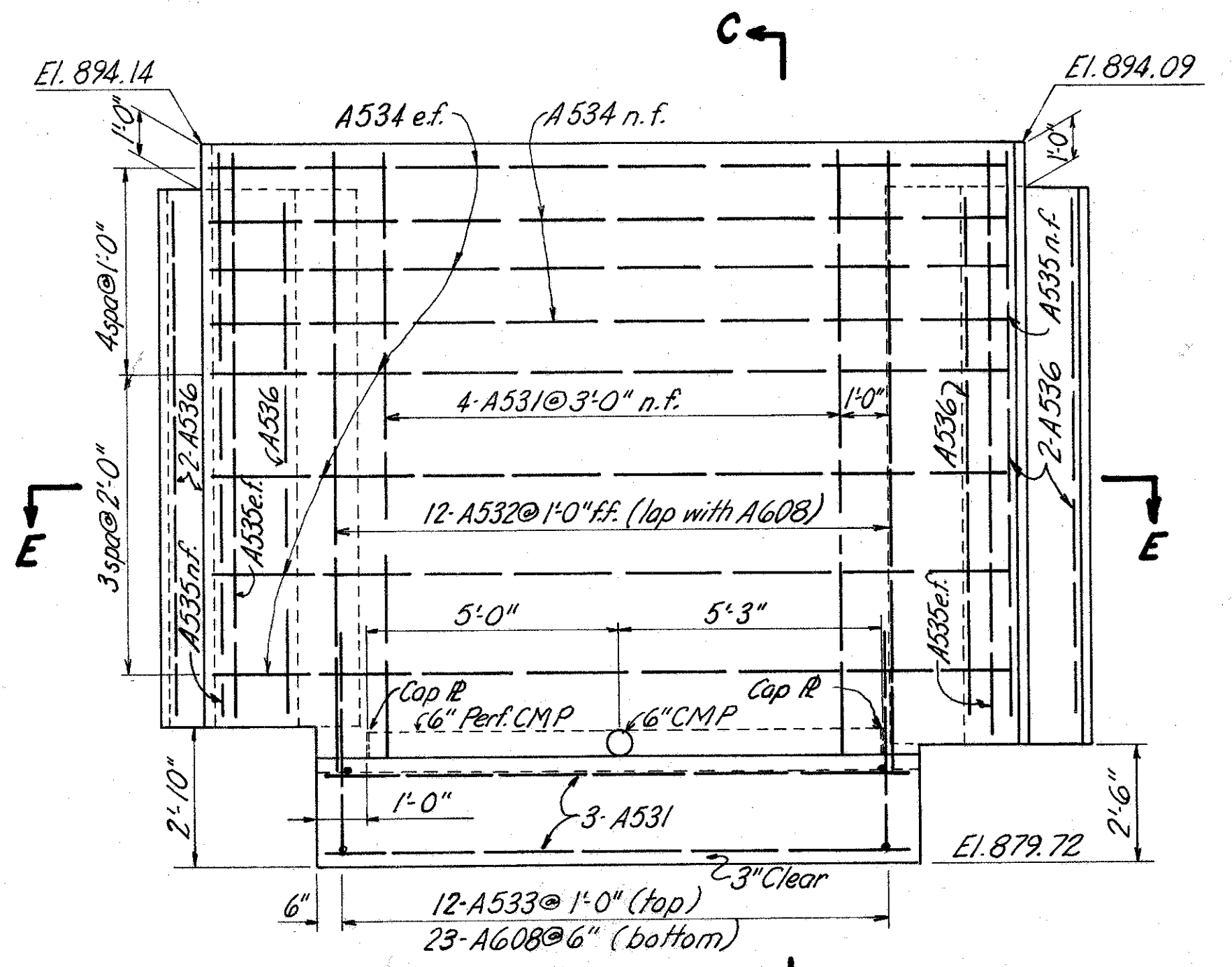
PLAN - REAR ABUTMENT RIGHT BRIDGE



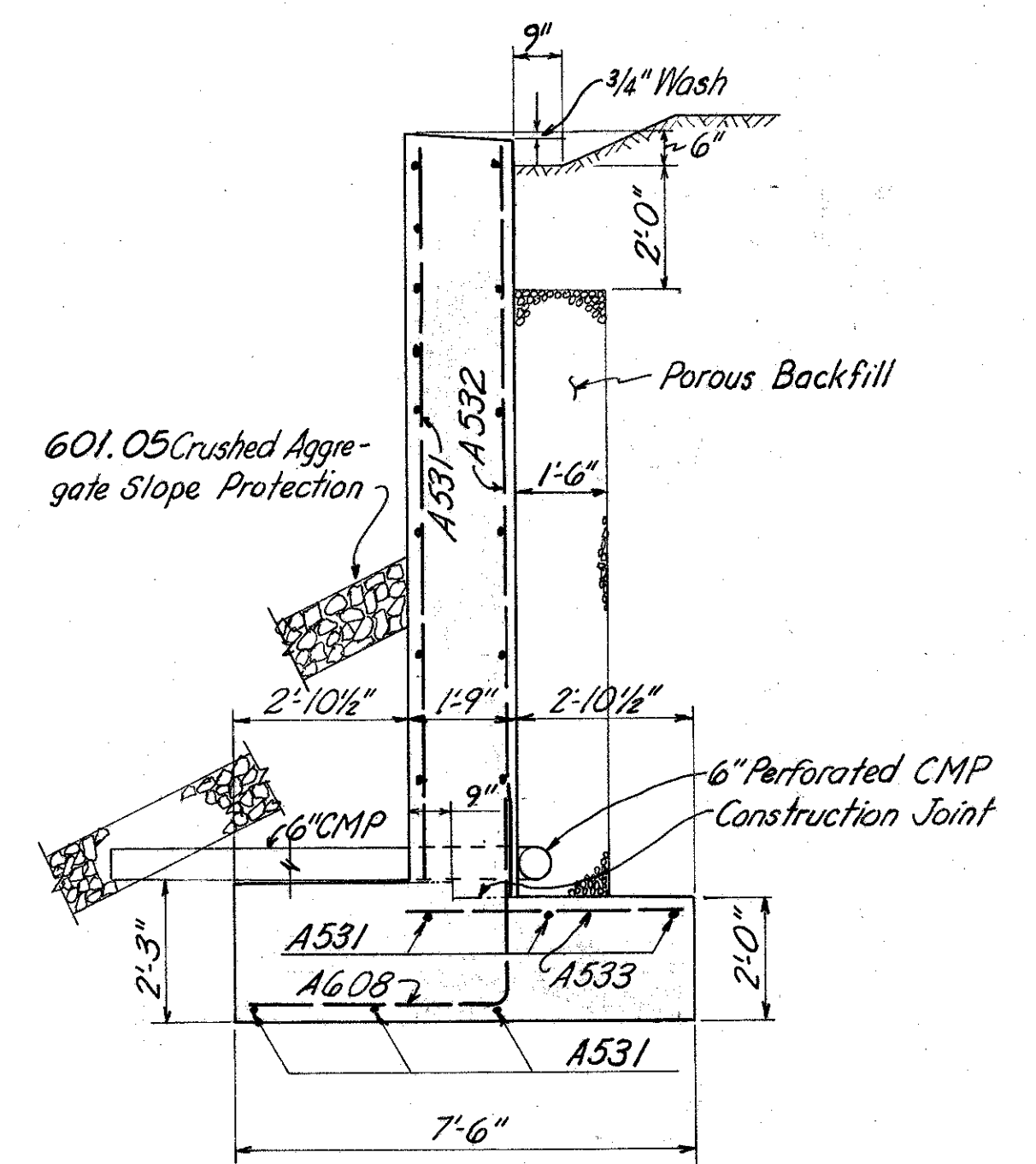
SECTION - A



ELEVATION



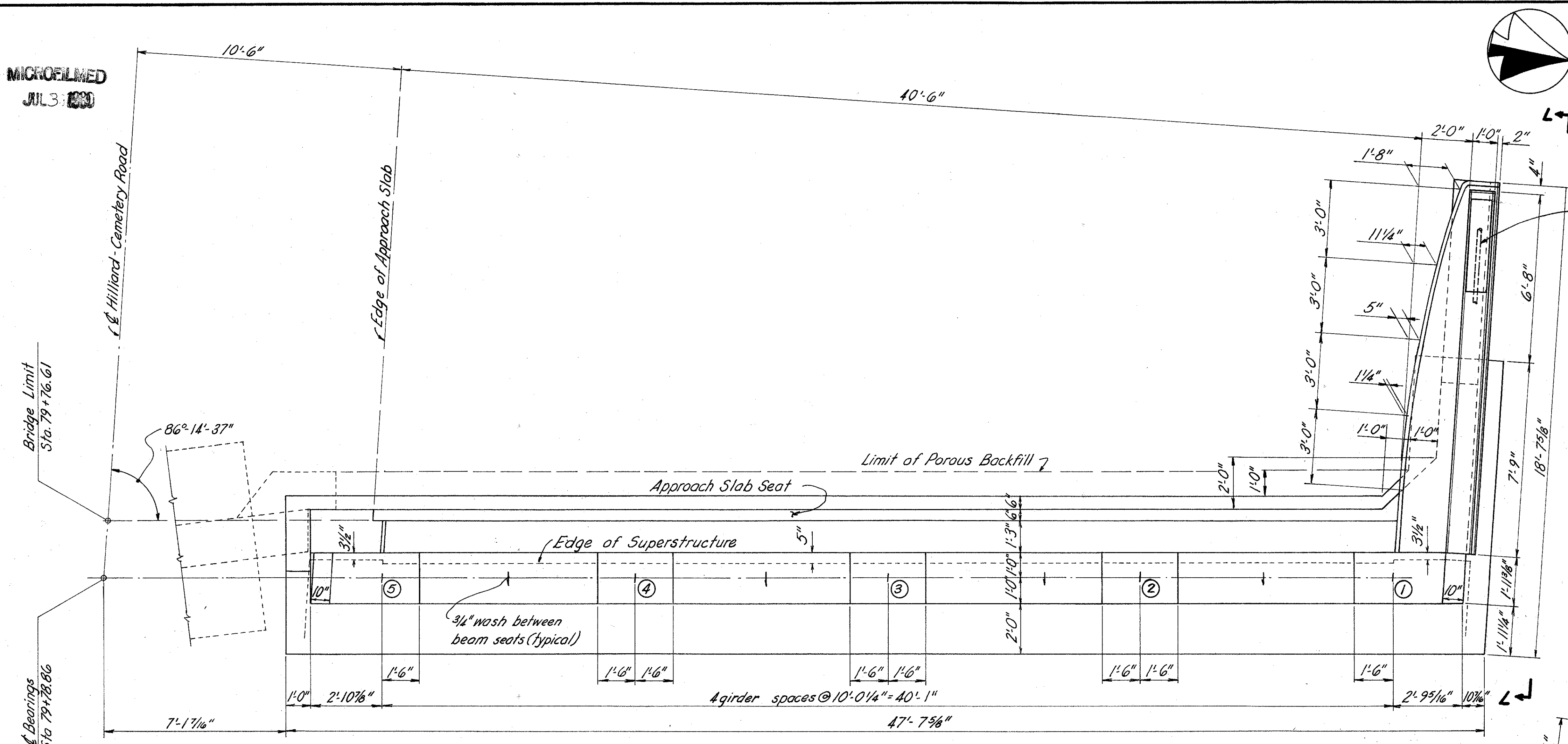
VIEW - B



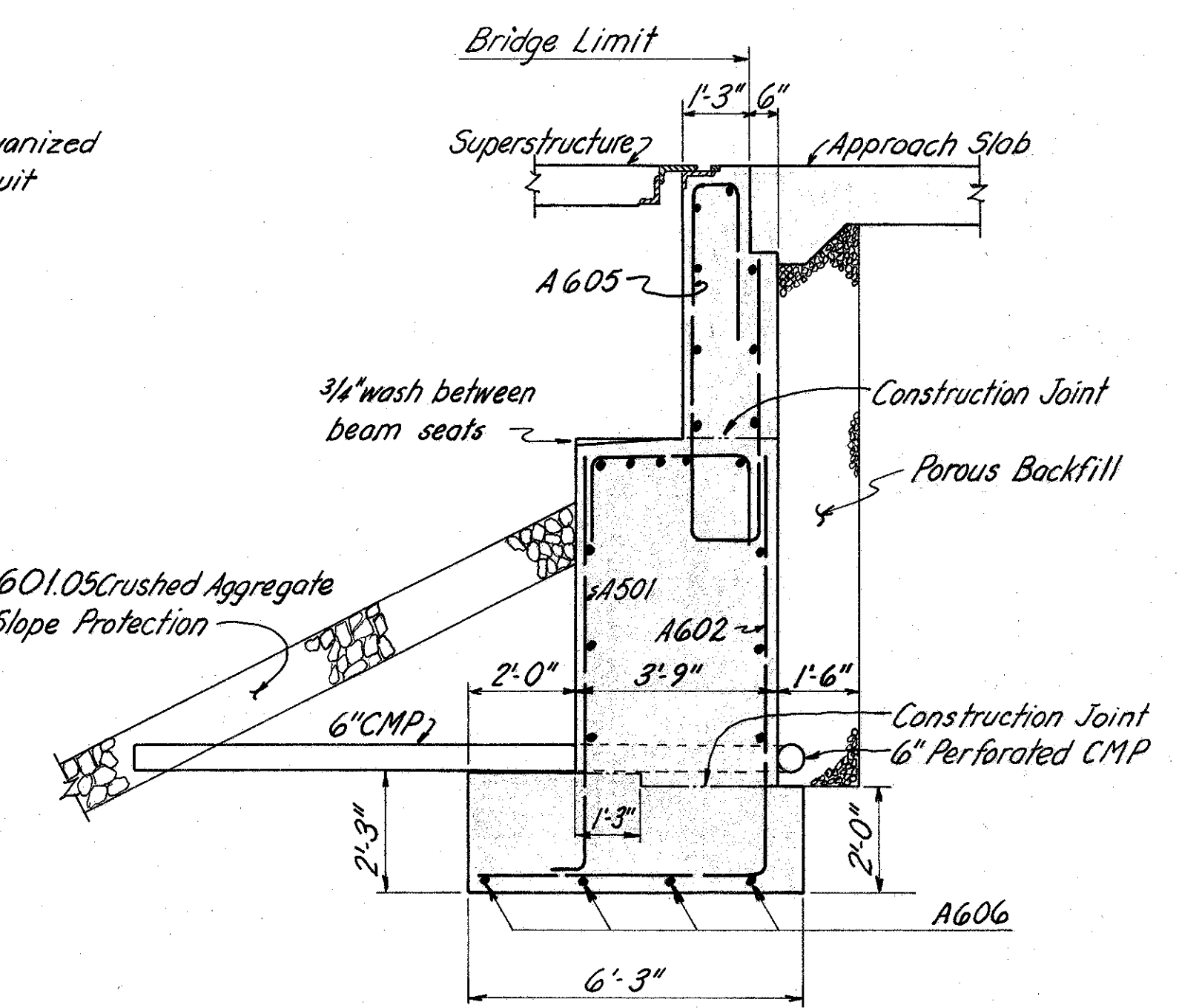
SECTION - C

BURGESS & NIPLÉ		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
RIGHT REAR ABUTMENT BR. NO. FRA-270-0393 L & R IR 270 UNDER HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436+77.61	
DESIGNED WOR	DRAWN WOR	TRACED KED	CHECKED DWT
REVIEWED DATE WOR 4-15-65		REVISED	

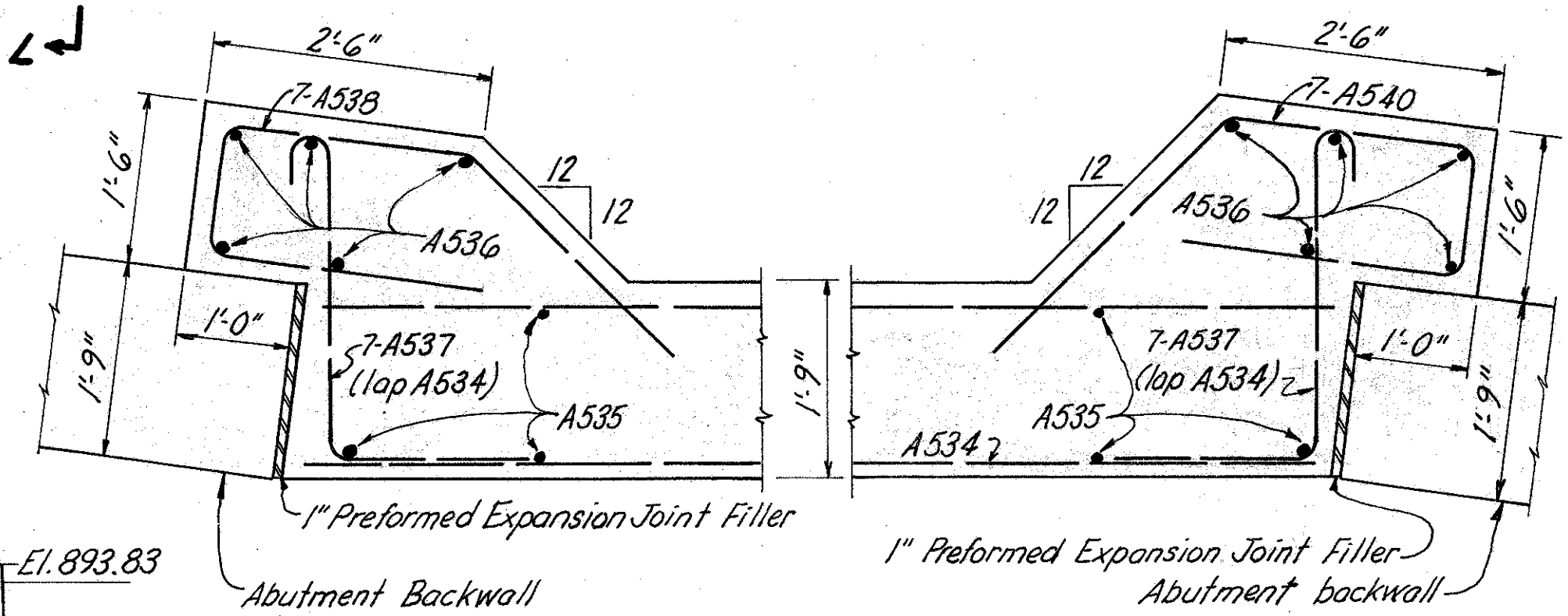
MICROFILMED
JUL 3 1980



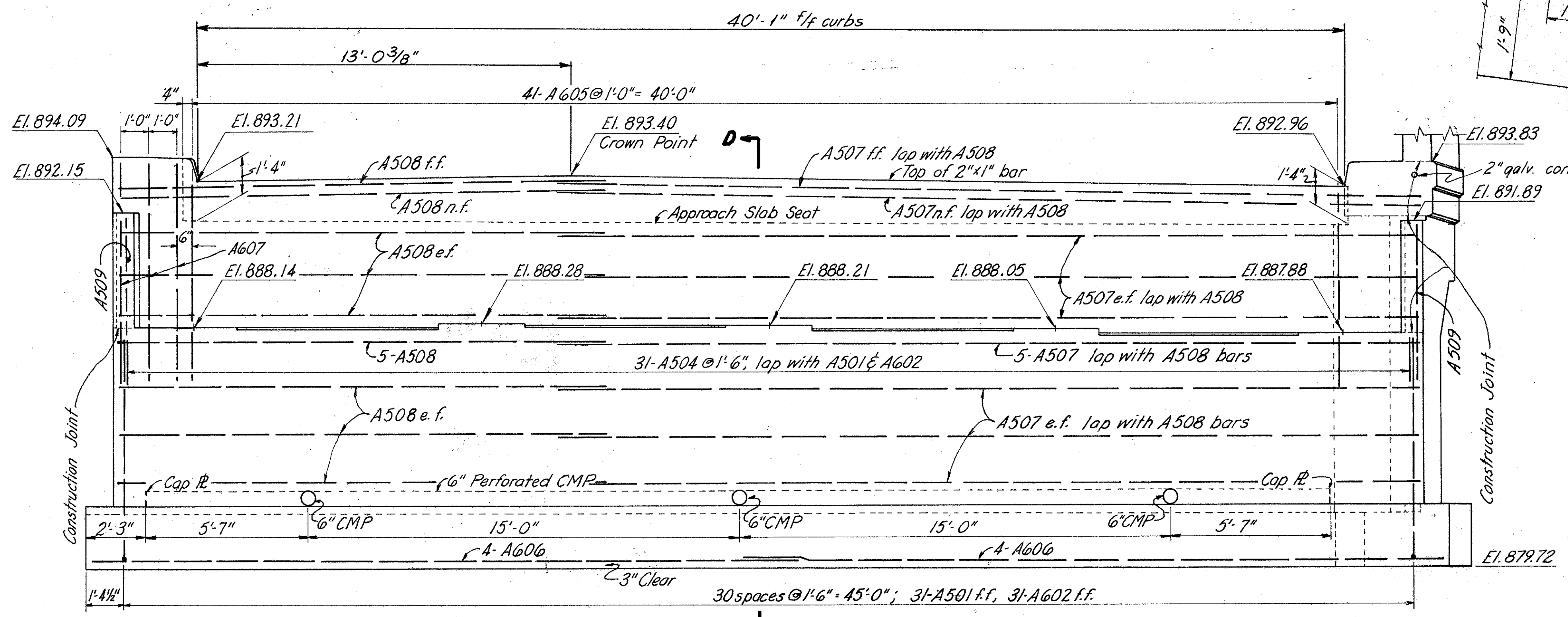
PLAN - REAR ABUTMENT LEFT BRIDGE



SECTION - D



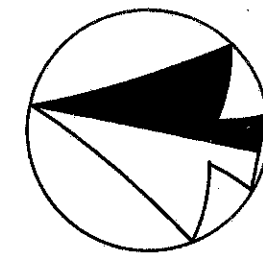
SECTION - E



ELEVATION

BURGESS & NIPLÉ		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
LEFT REAR ABUTMENT BR. NO. FRA-270-0393 L & R IR 270 UNDER HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436 + 77.61	
DESIGNED WGR	DRAWN WGR	TRACED	CHECKED DWT
		REVIEWED DATE 12/8 R 4-15-65	REVISED

MICROFILMED
JUL 3 1980

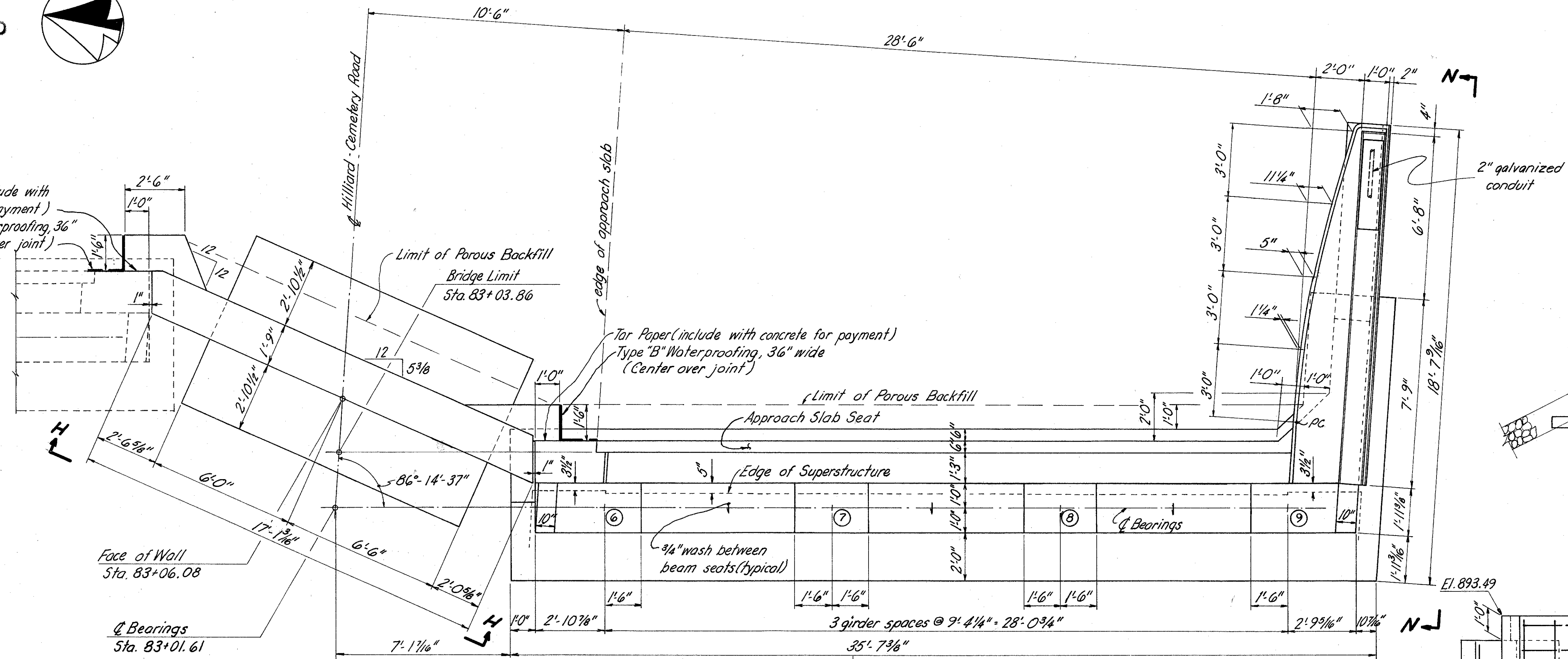


FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

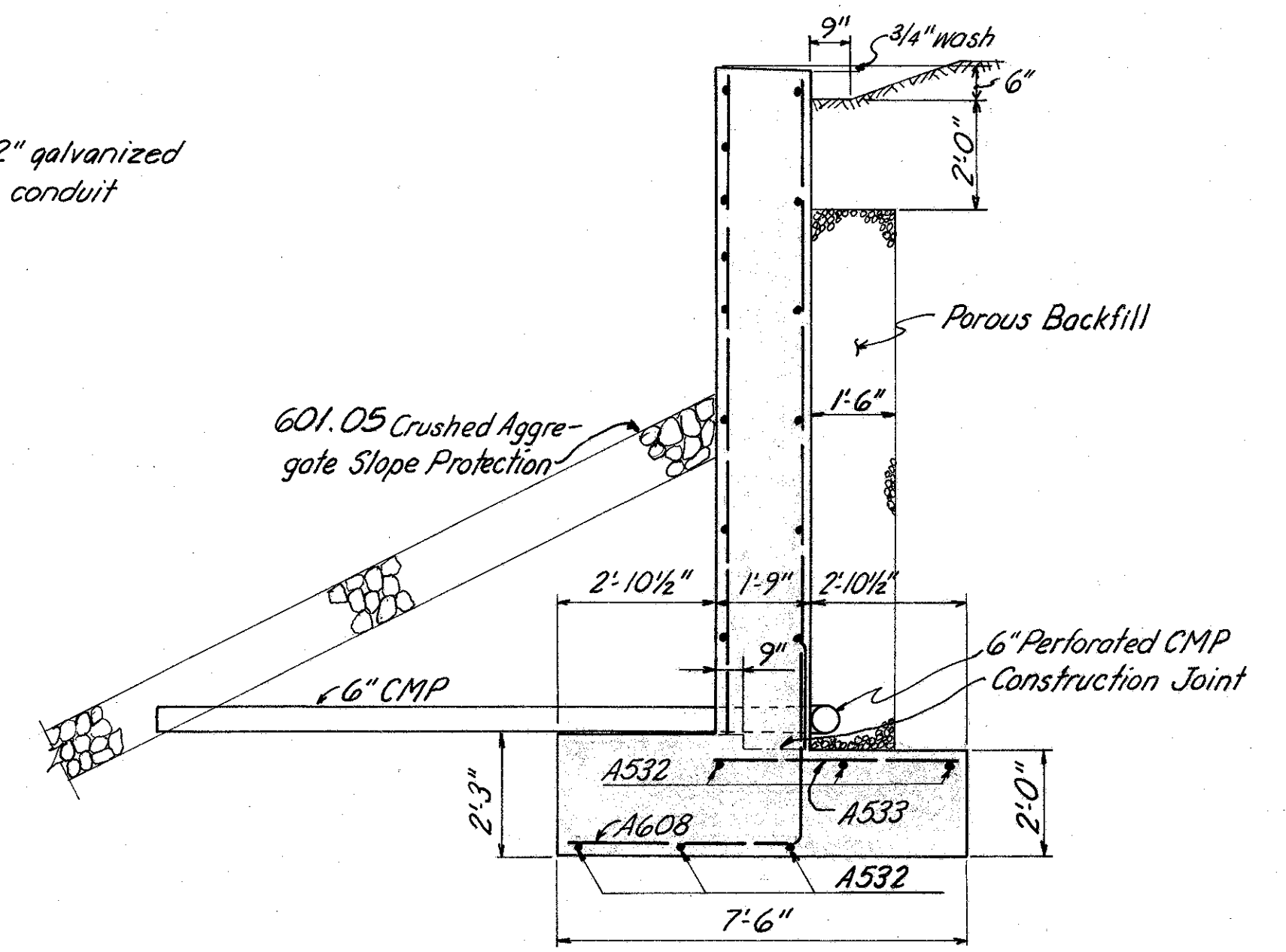
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FRANKLIN COUNTY
FRA-270-3.47N.

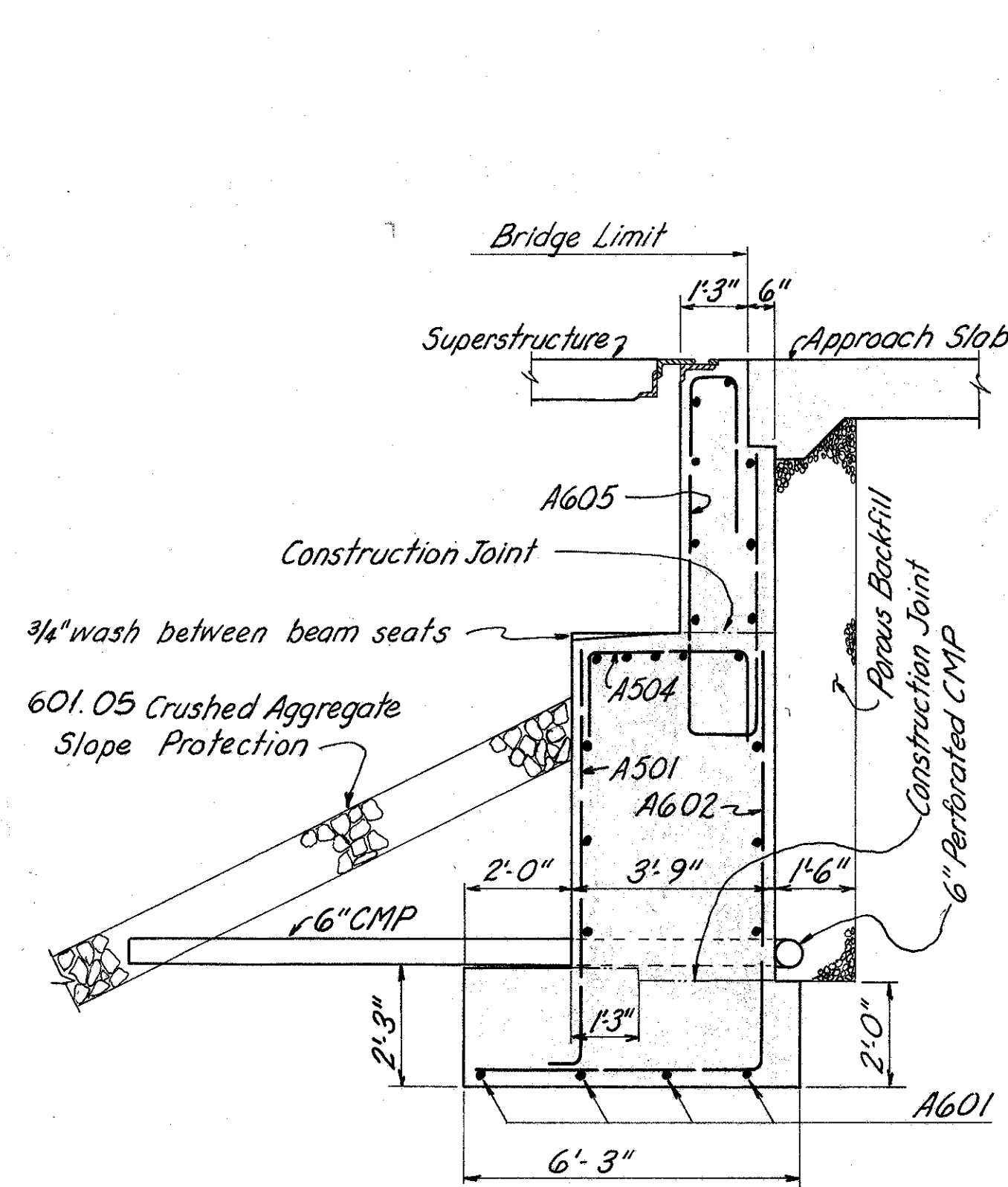
Tar paper (include with concrete for payment)
Type "B" Waterproofing, 36" wide (center over joint)



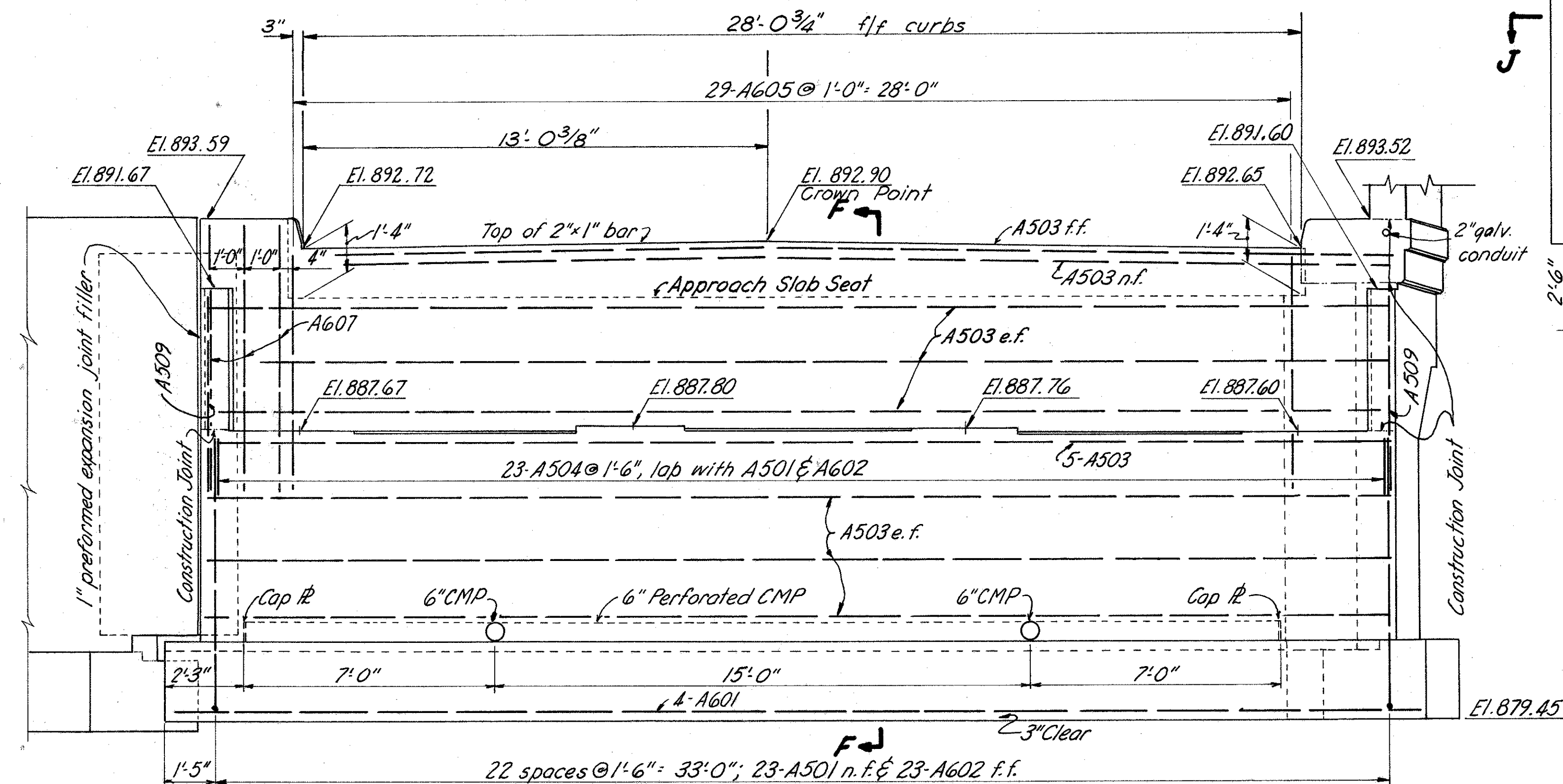
PLAN-FORWARD ABUTMENT RIGHT BRIDGE



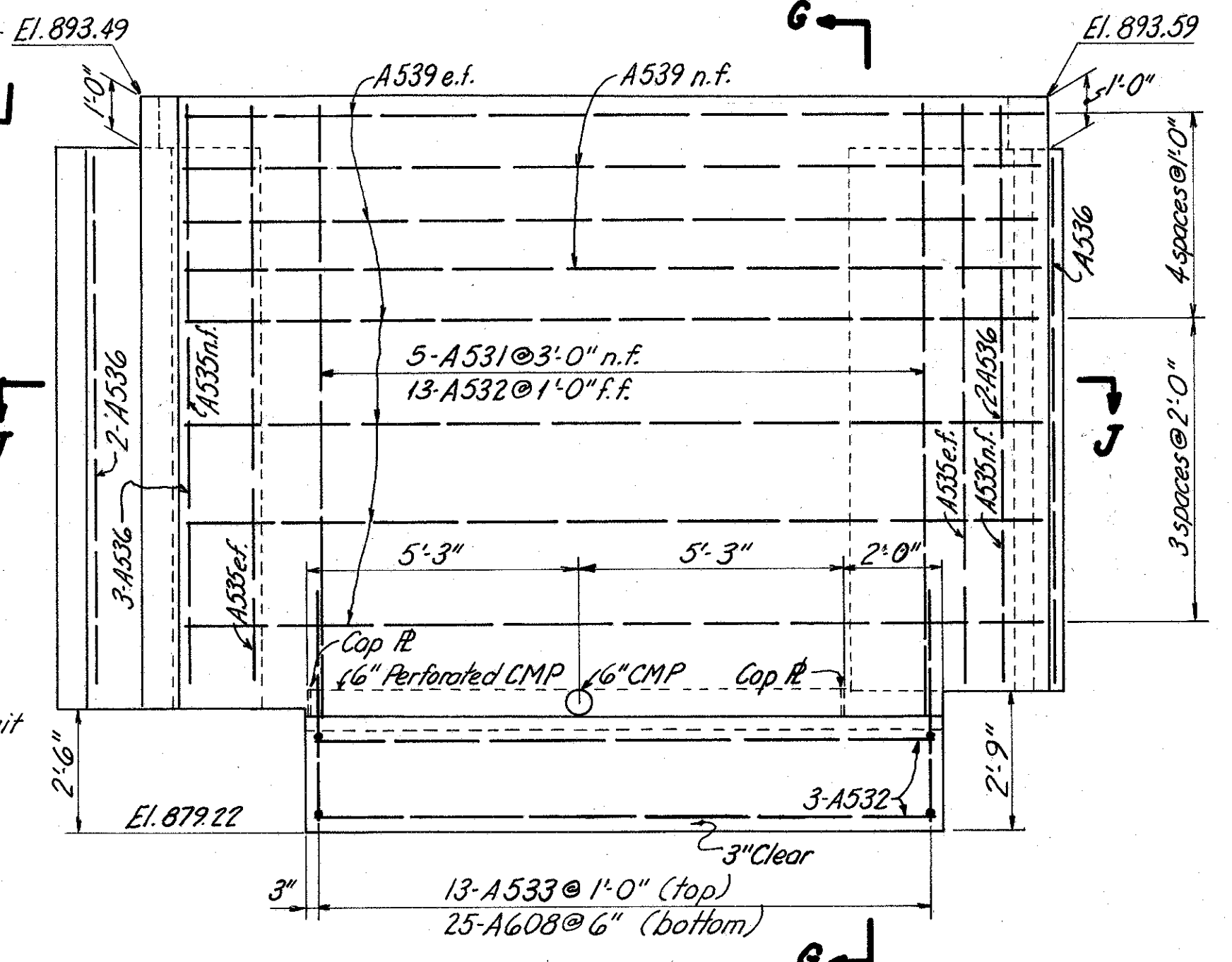
SECTION-G



SECTION-F



ELEVATION



VIEW-H

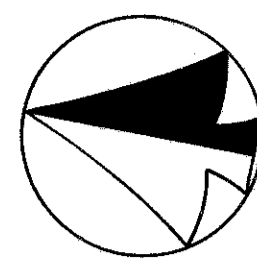
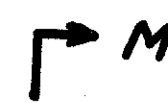
BURGESS & NIPL CONSULTING ENGINEERS
COLUMBUS 12, OHIO

RIGHT FORWARD ABUTMENT
BR. NO. FRA-270-0393 L & R
1 R 270 UNDER
HILLIARD CEMETERY ROAD

FRANKLIN COUNTY STA. 436+77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIEWED
WR	WR		KED DWT	WR 4-15-65	

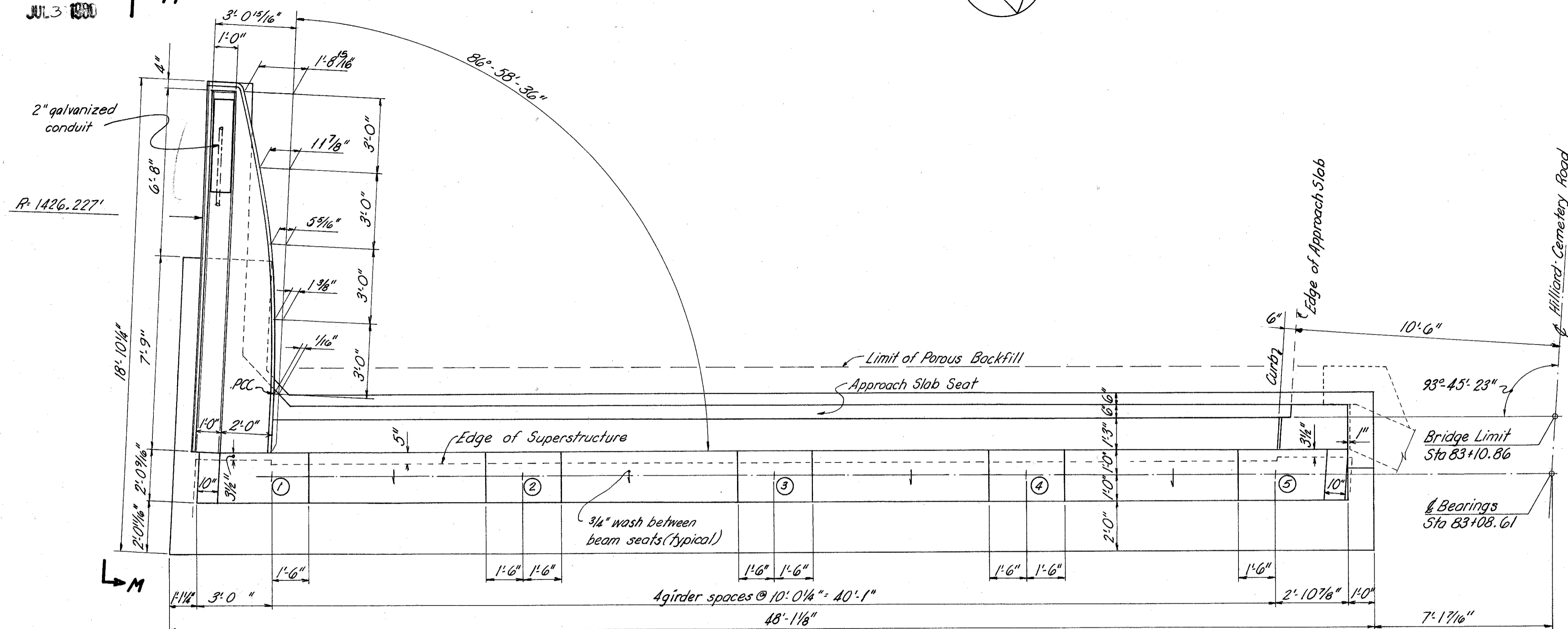
MICROFILMED
JUL 3 1980



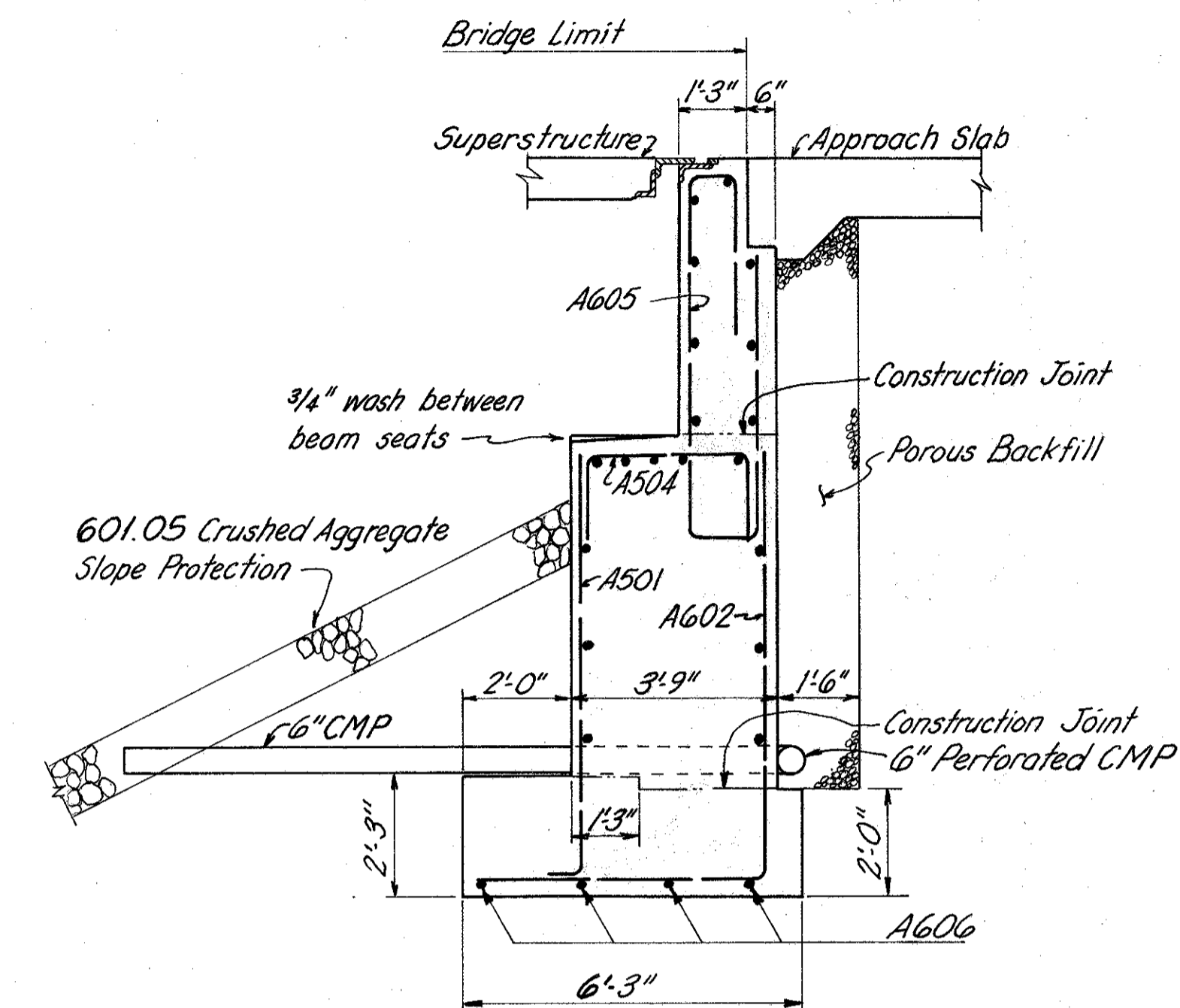
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

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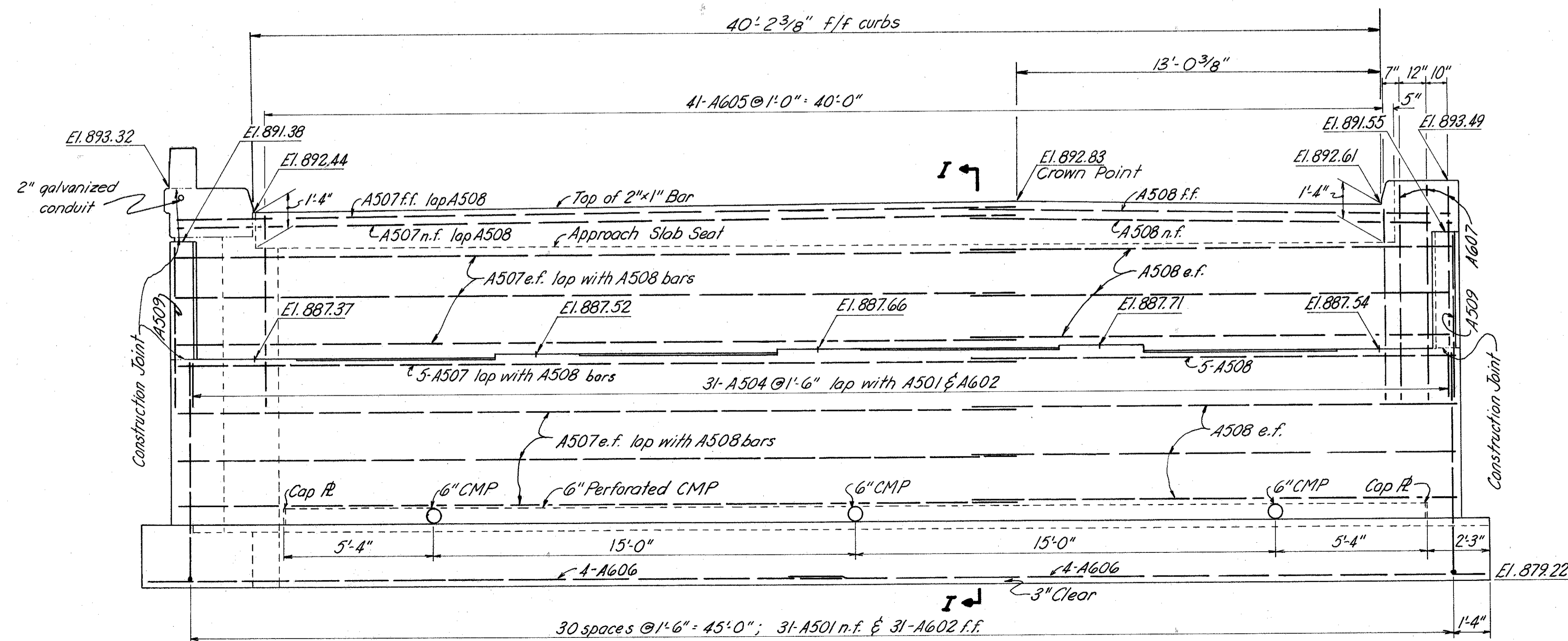
FRANKLIN COUNTY
FRA-270-3.47 N.



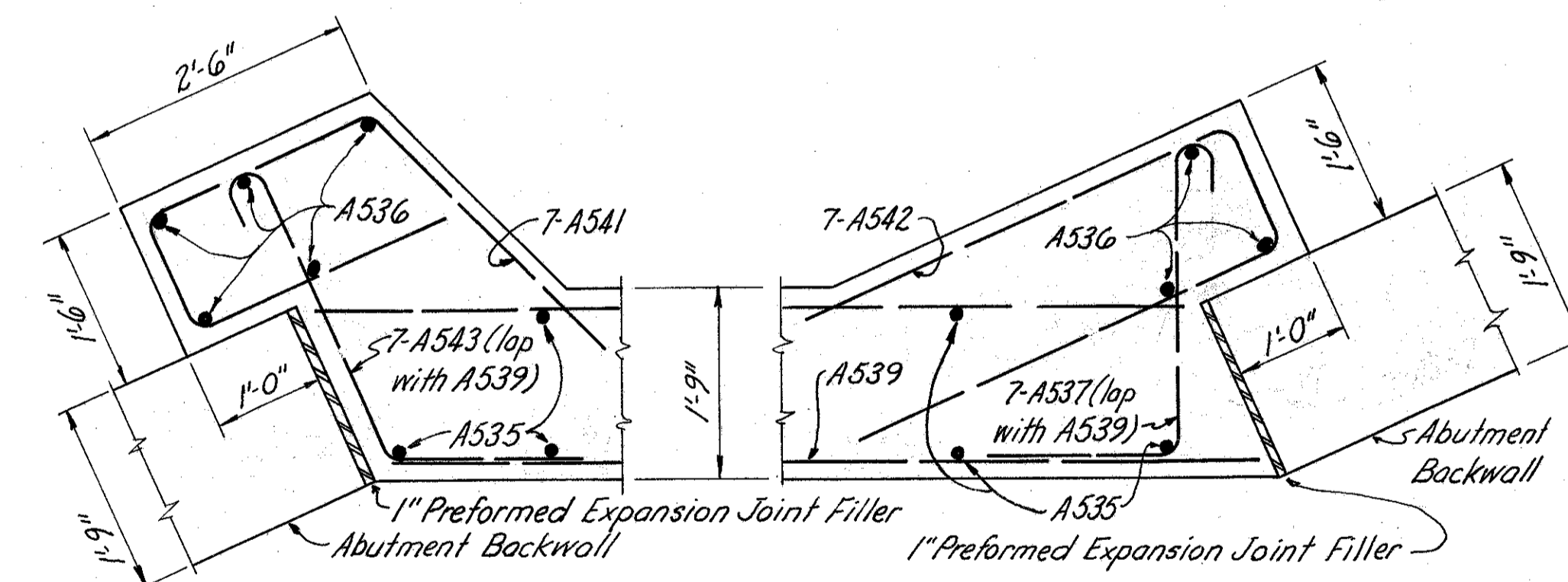
PLAN - FORWARD ABUTMENT LEFT BRIDGE



SECTION - I



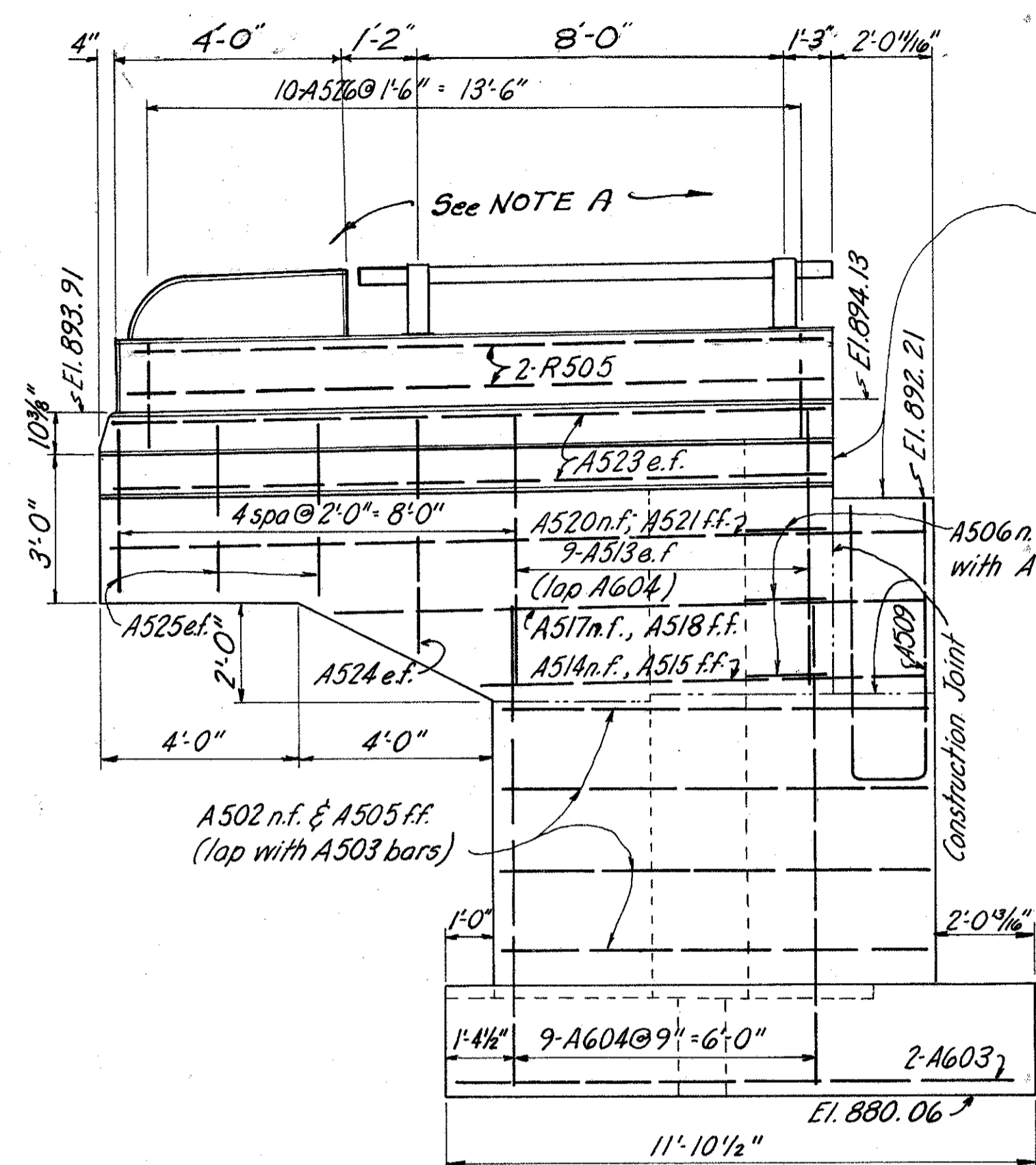
ELEVATION



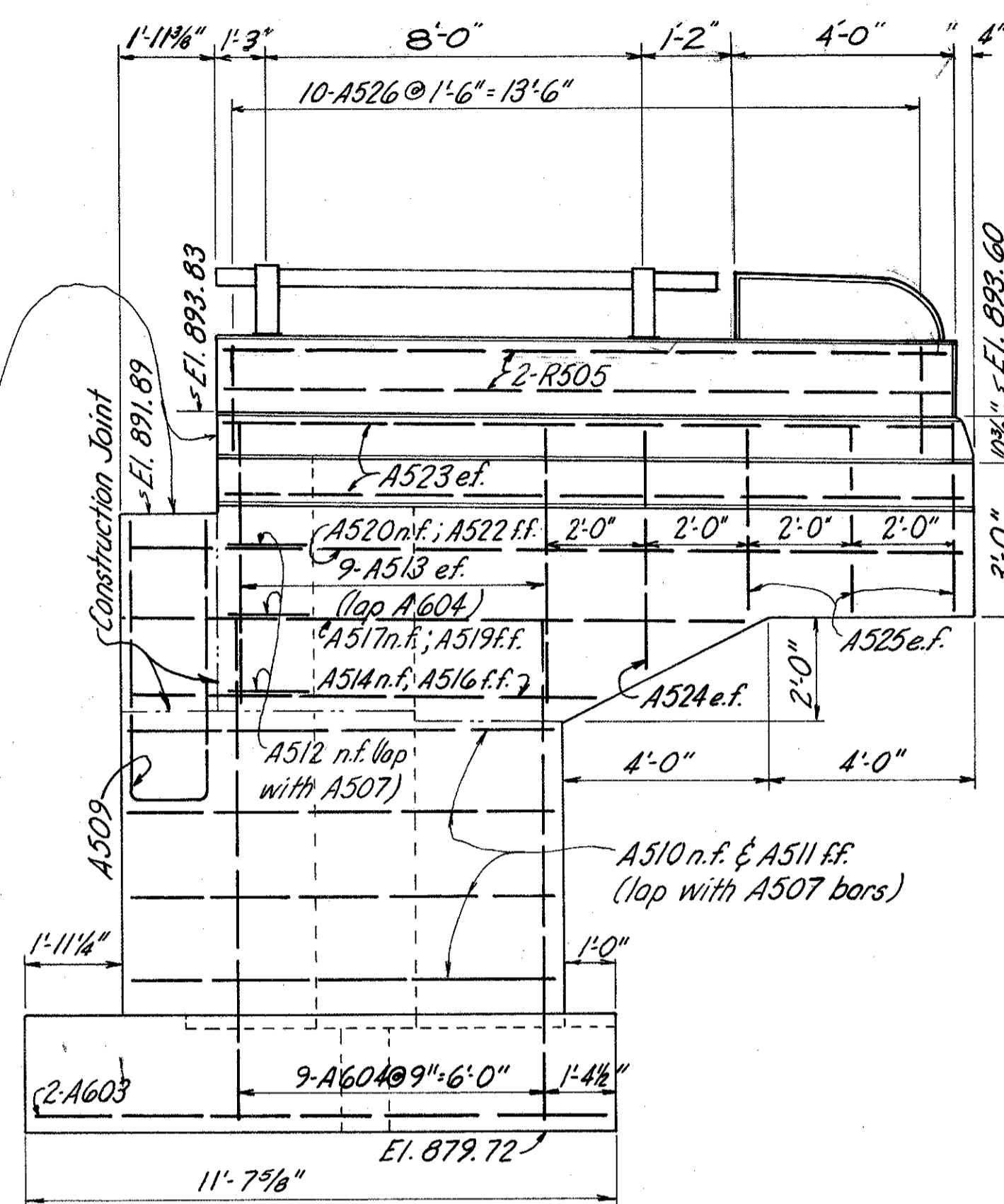
SECTION - J

BURGESS & NIPLE		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
LEFT FORWARD ABUTMENT BR. NO. FRA-270-0393 L&R IR 270 UNDER HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436+77.61	
DESIGNED	DRAWN	TRACED	CHECKED
WR	WR		DWT
			REVIEWED DATE
			WR 4-15-65

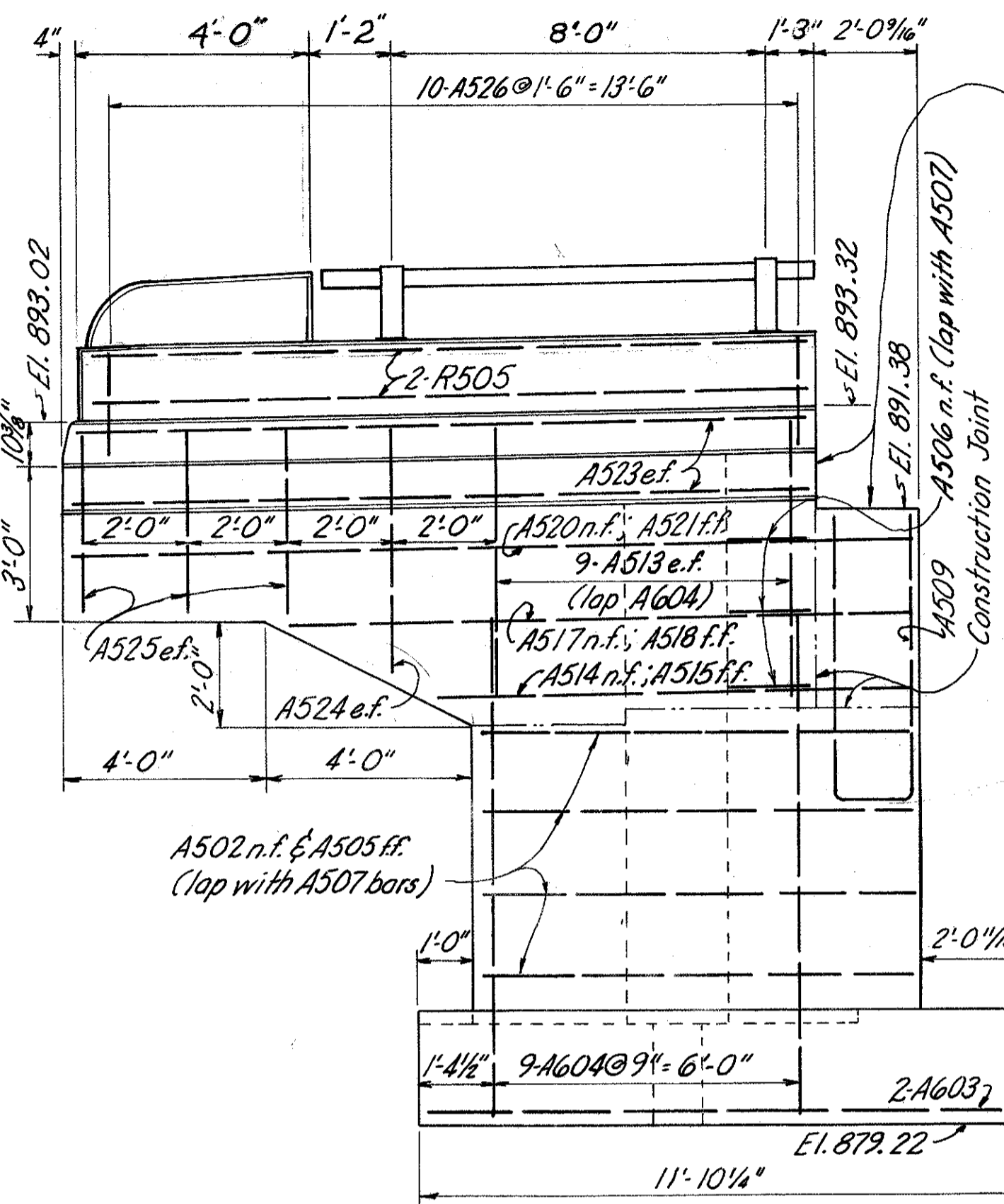
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JUL 3 1980



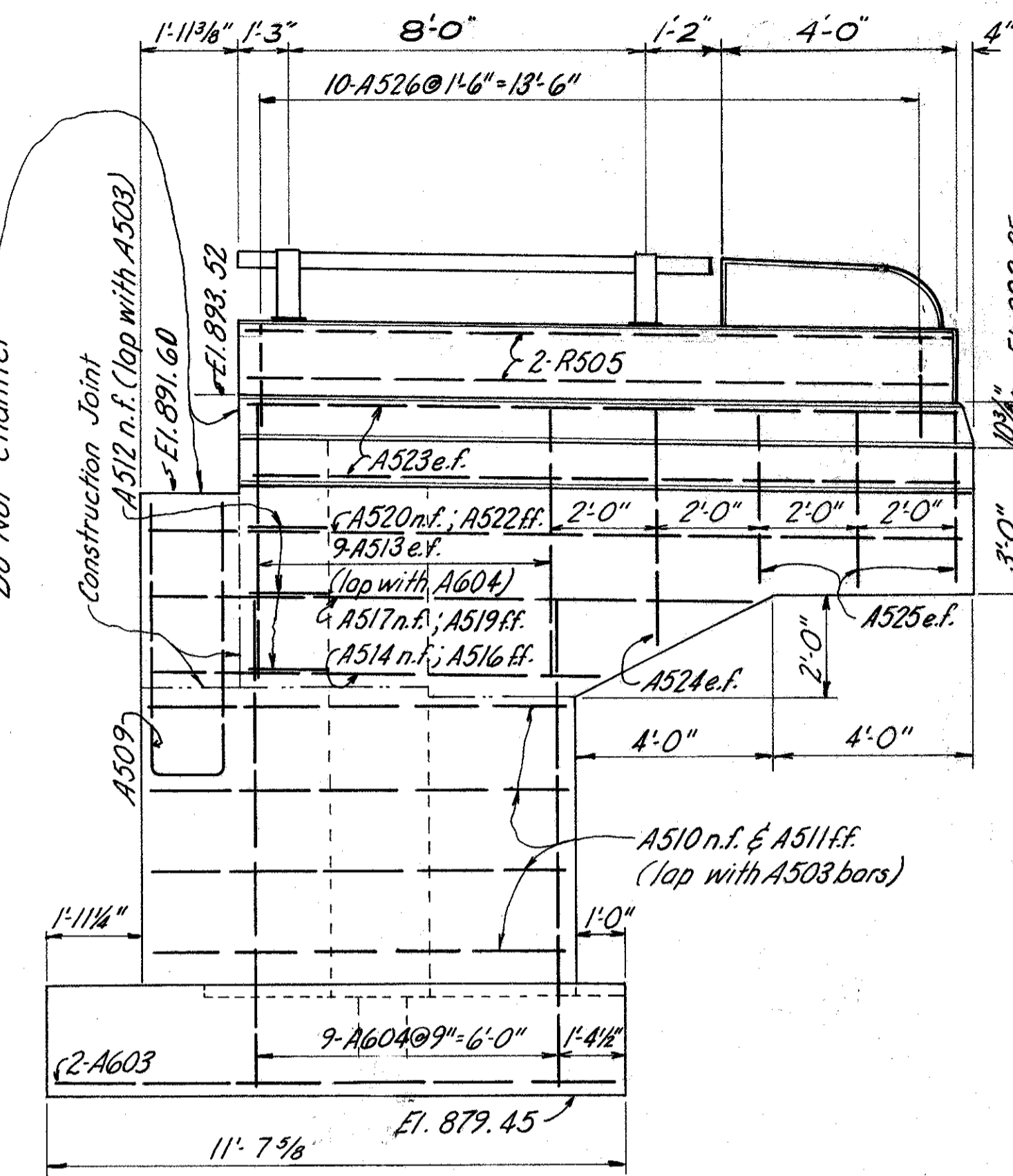
VIEW-K



VIEW-L



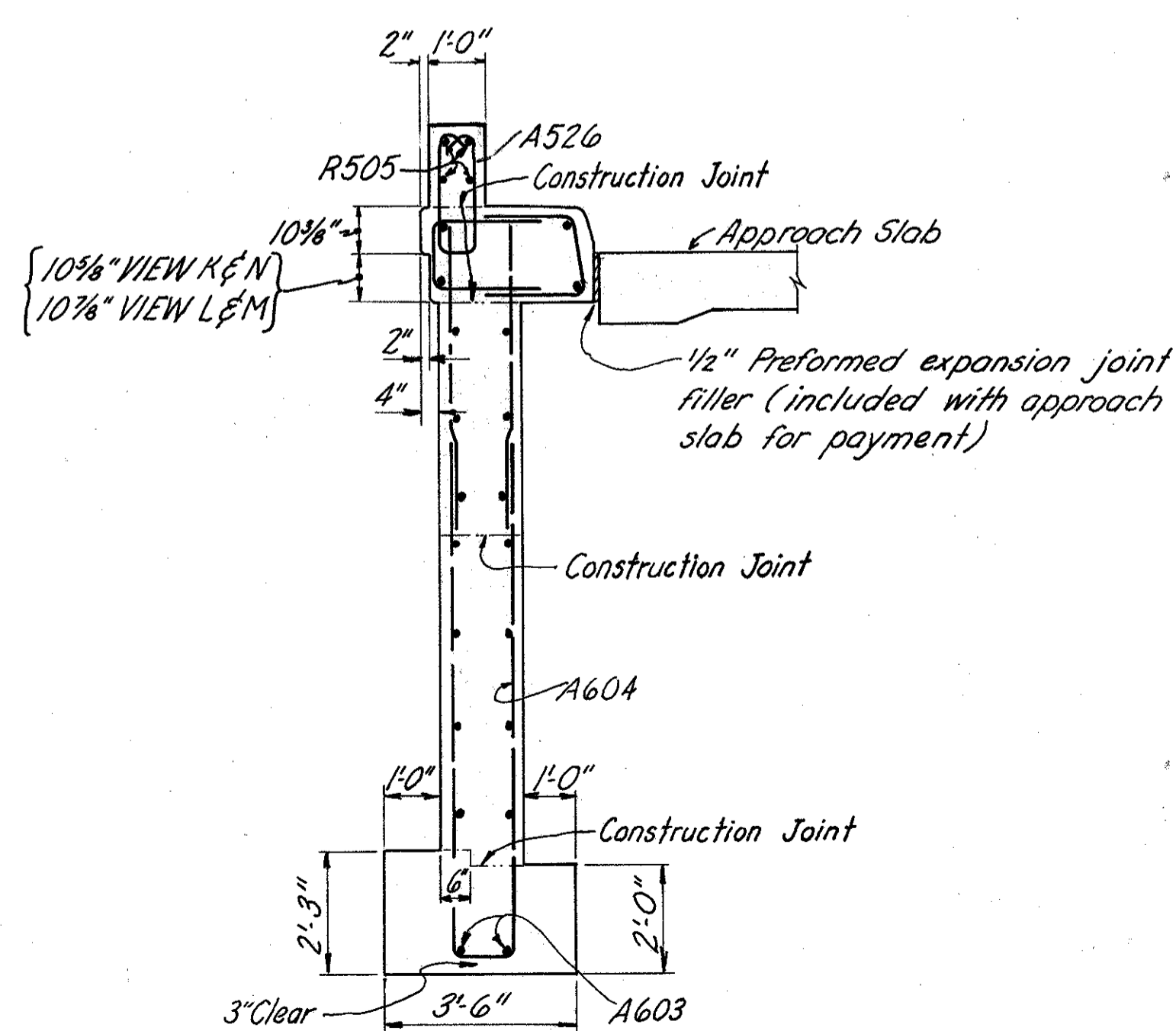
VIEW-M



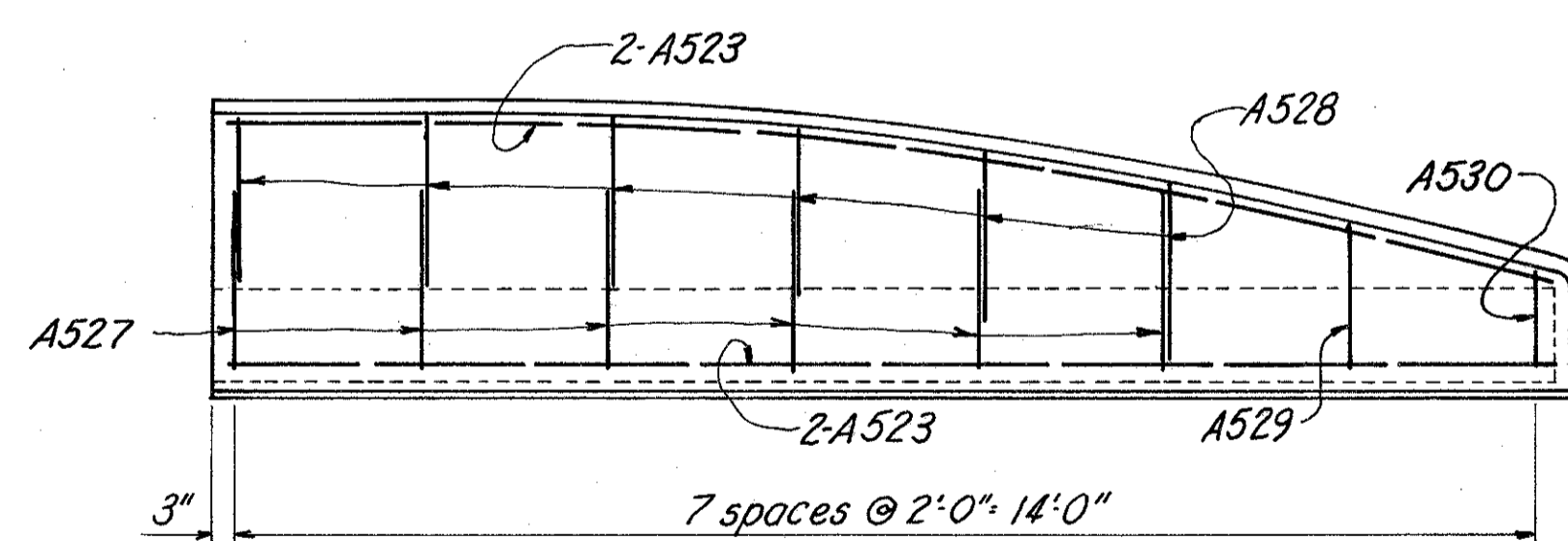
VIEW-N

Note: See detail of wing wall elevation sht. 130 for location of 2" galvanized conduit.
Typical for views K, L, M, N.

NOTE A: for end post reinforcing see BR-1-65

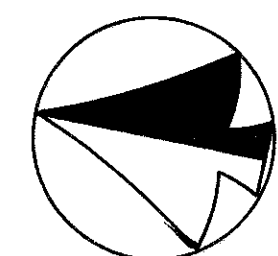


SECTION-O



TYPICAL CURB REINFORCING

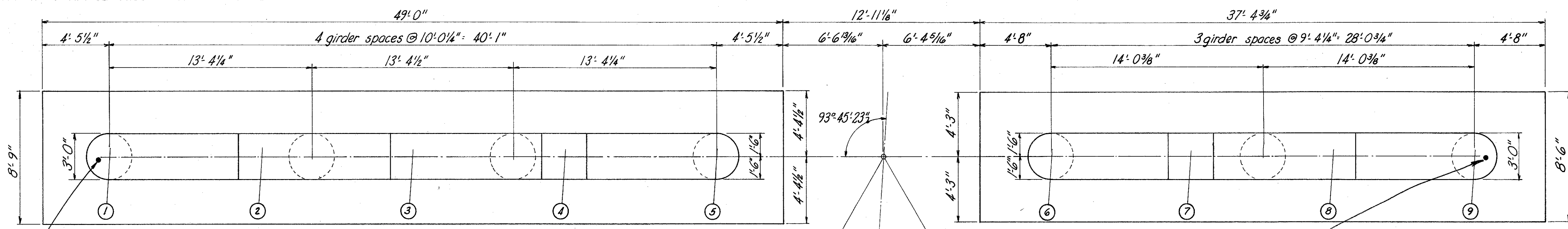
BURGESS & NIPLE CONSULTING ENGINEERS					
COLUMBUS 12, OHIO					
WING WALL DETAILS					
BR. NO. FRA-270-0393 L & R					
IR 270 UNDER					
HILLIARD CEMETERY ROAD					
FRANKLIN COUNTY STA. 436+77.61					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WR	WR		DWT	WR 4-15-65	



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

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FRANKLIN COUNTY
FRA-270-3.47 N.



Typical Pier #1 only
#10 copper grd. wire for structure per note sht. 130

⊕ Bearings (Left Bridge)
Pier-1, Sta 80+43.36
Pier-2, Sta 81+42.36
Pier-3, Sta 82+43.11

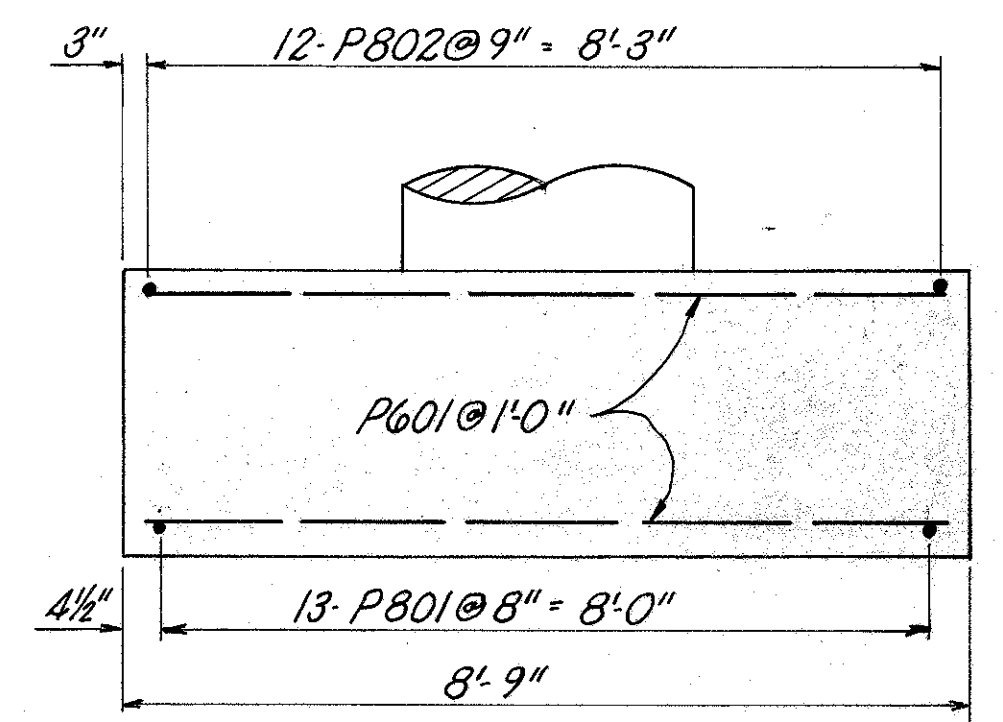
⊕ Bearings (Right Bridge)
Pier-1, Sta 80+44.61
Pier-2, Sta 81+42.36
Pier-3, Sta 82+38.86

⊕ Hilliard-Cemetery Road

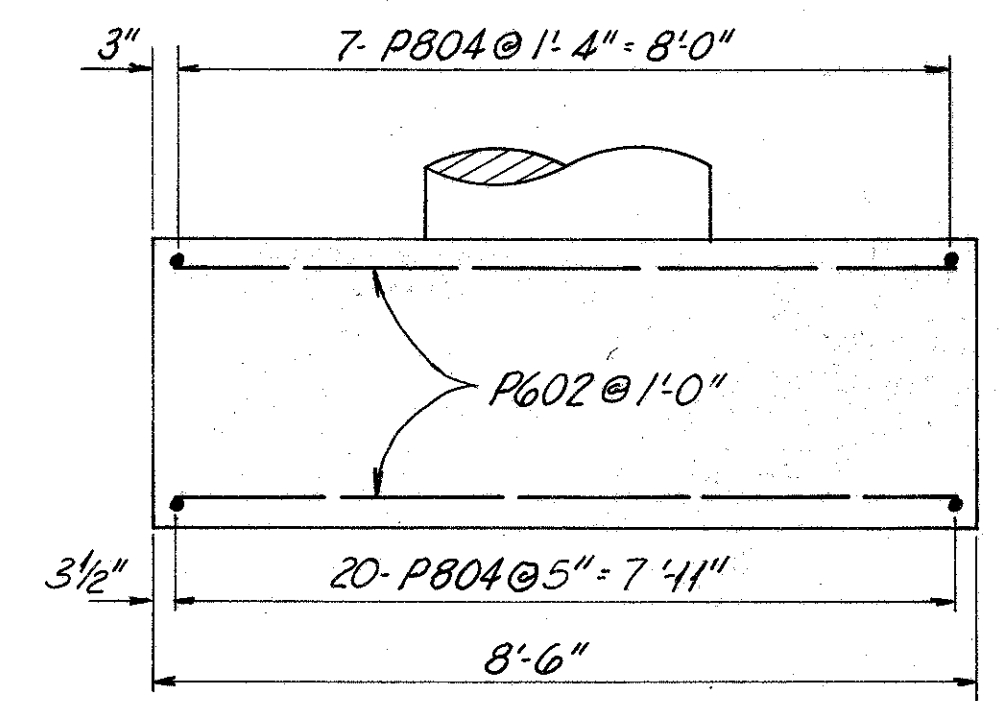
Typical Pier #1 only
#10 copper ground wire for structure per note sht. 130

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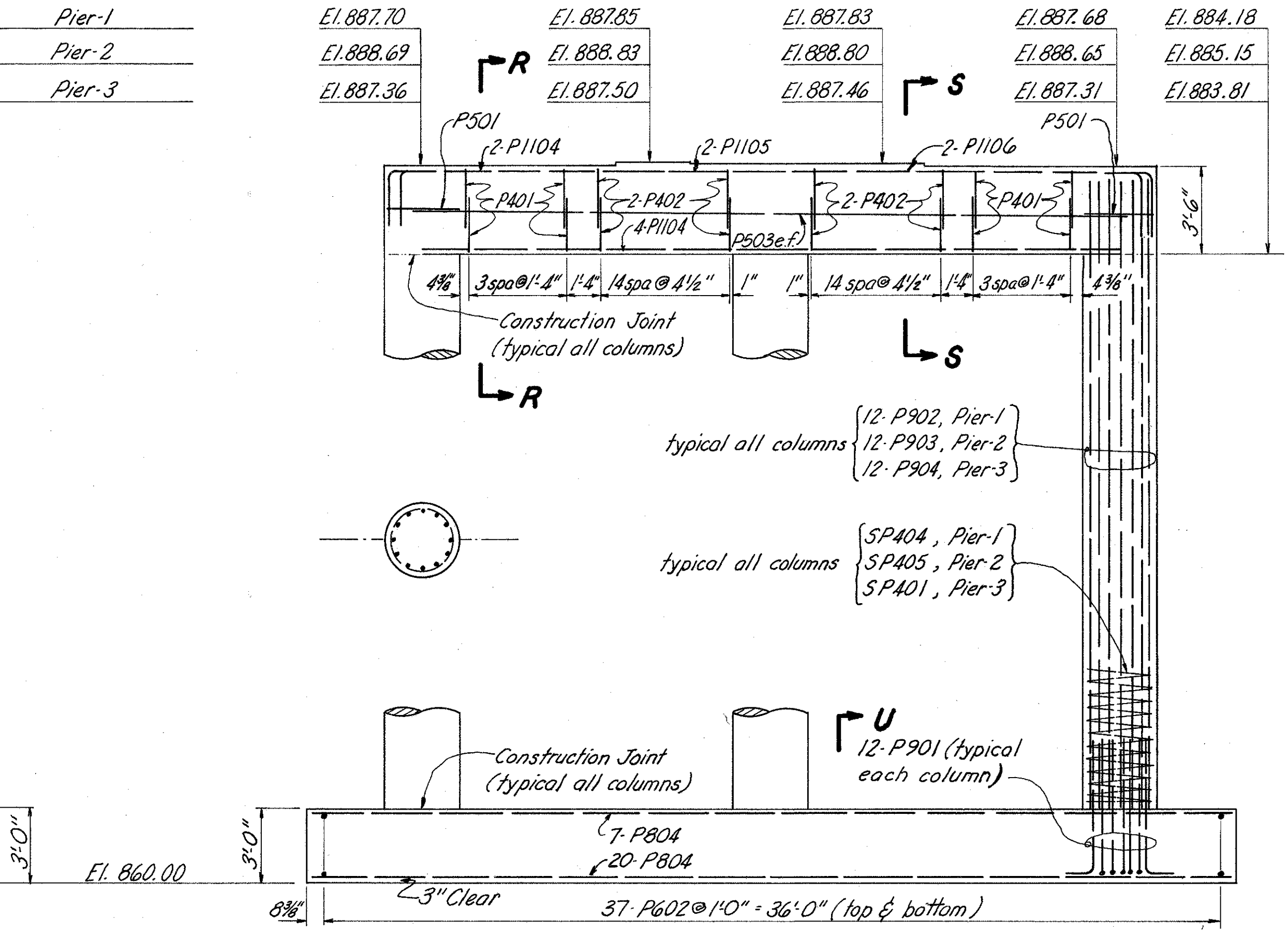
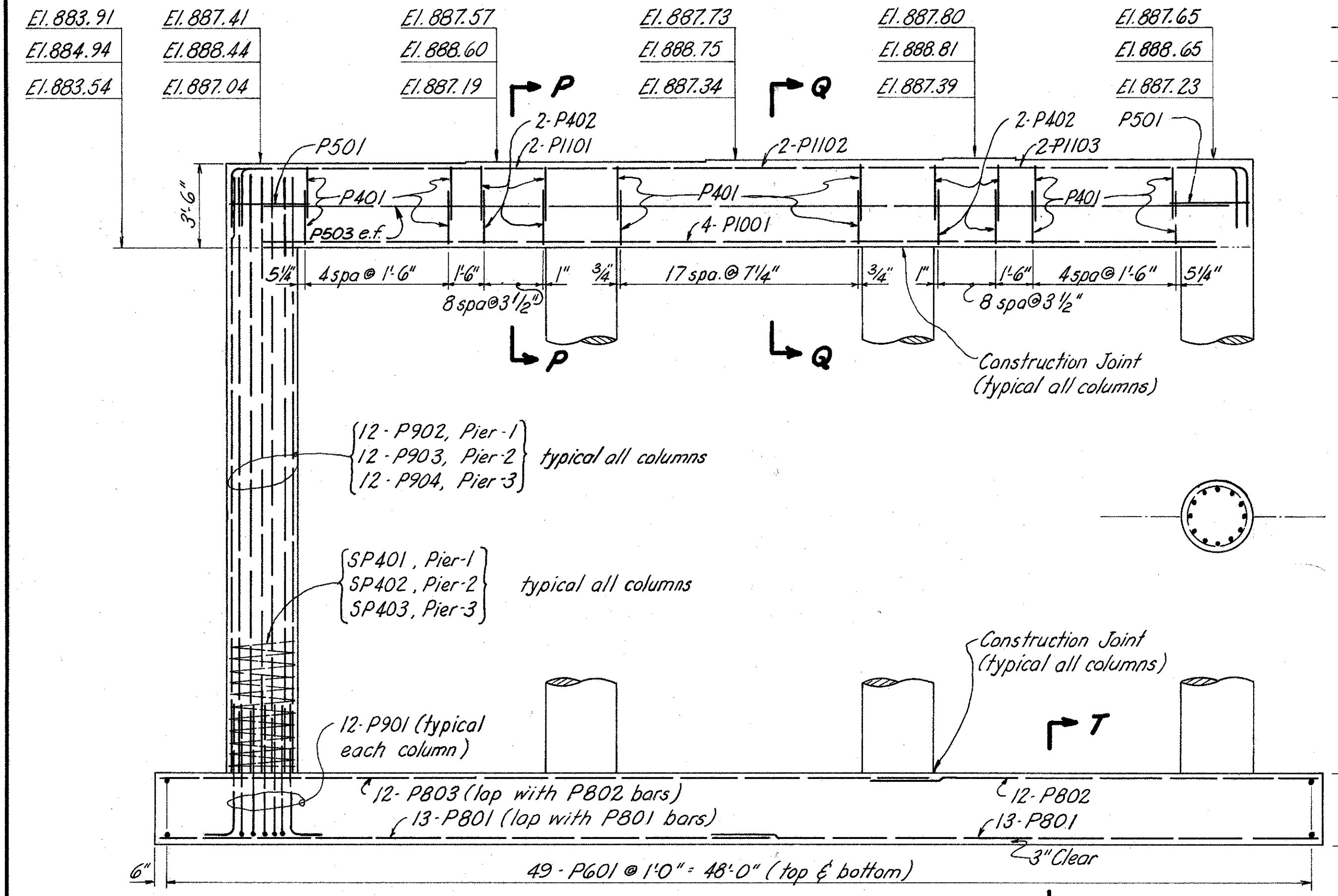
PLAN



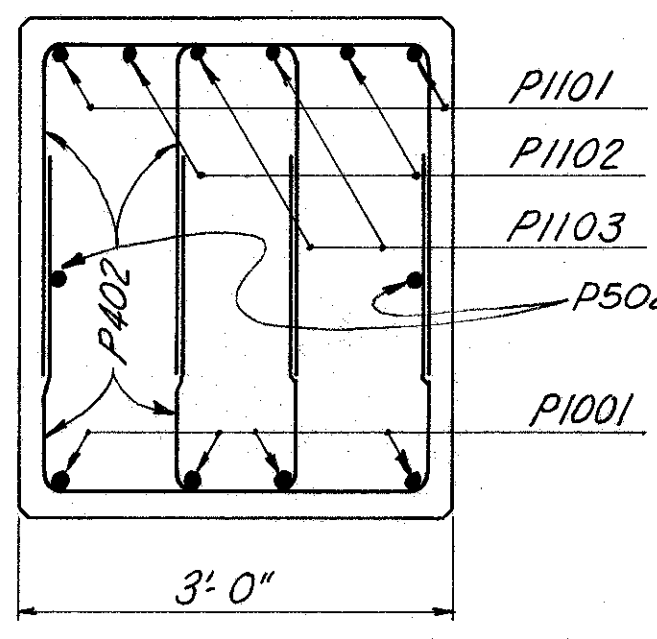
SECTION-T



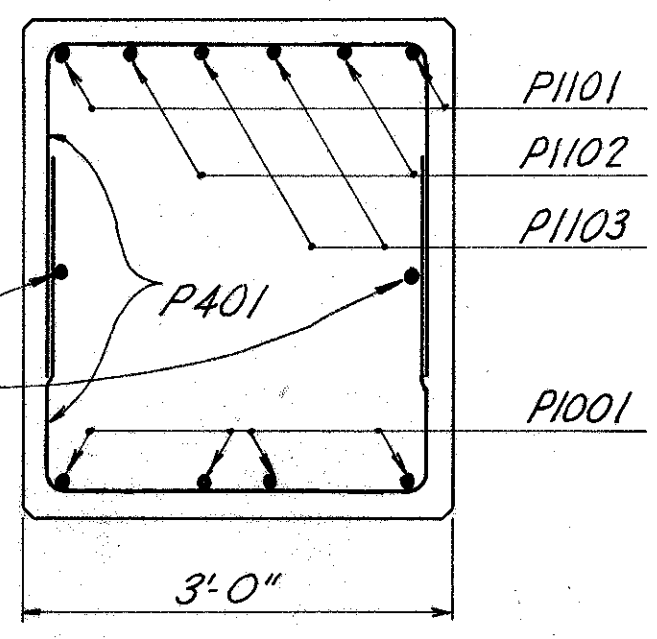
SECTION-U



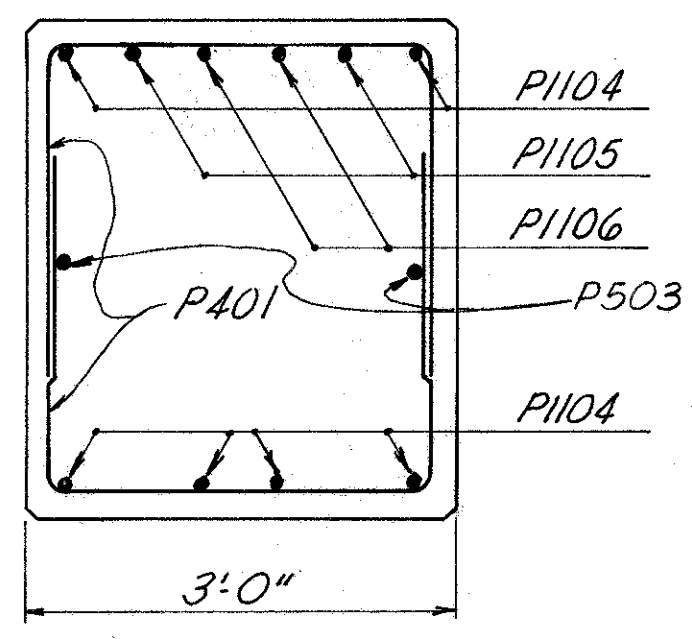
ELEVATION



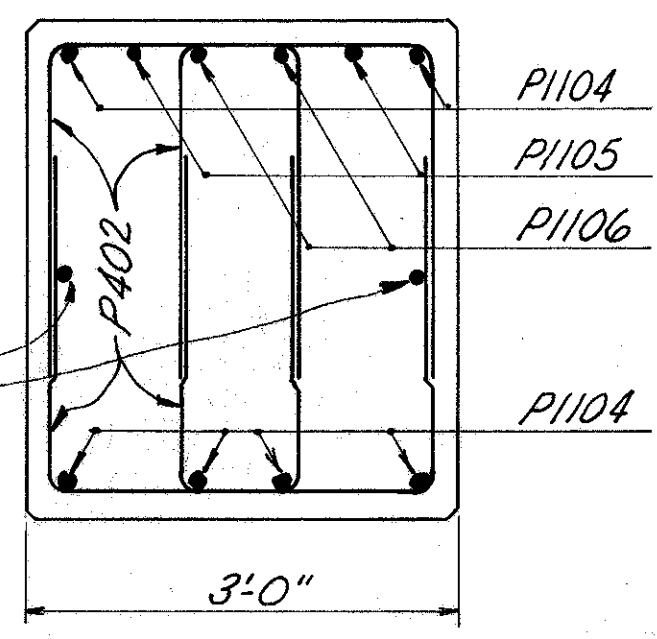
SECTION-P



SECTION-Q



SECTION-R



SECTION-S

BURGESS & NIPLE		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
PIER DETAILS			
BR. NO. FRA-270-0393 L & R			
IR 270 UNDER			
HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436+77.61	
DESIGNED	DRAWN	TRACED	CHECKED
WCR	WCR		OWT
REVIEWED DATE	REVISED		
		WCR 4-15-65	

MICROFILMED
JUL 3 1980

(* These dimensions are affected by curvature at the Northeast corner of bridge beyond Sta. 82+87.81, see detail this sheet.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA-270-3.47 N.

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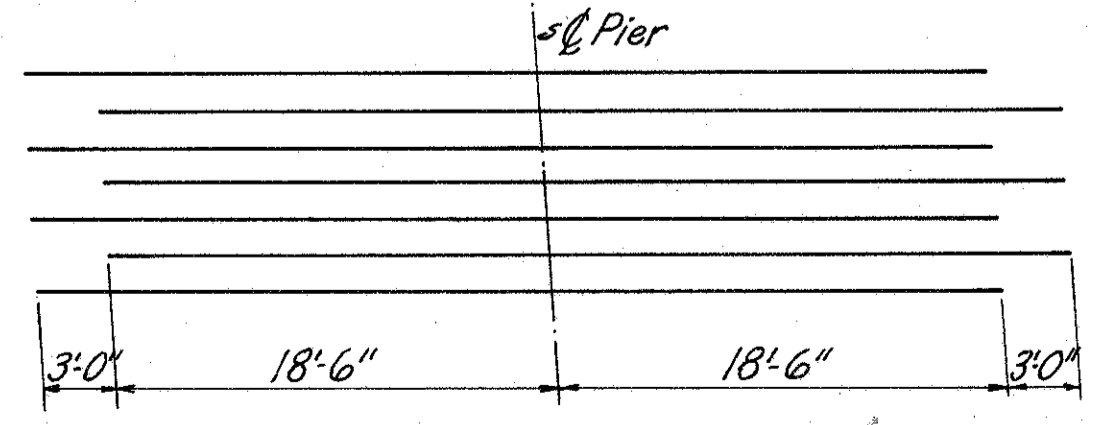
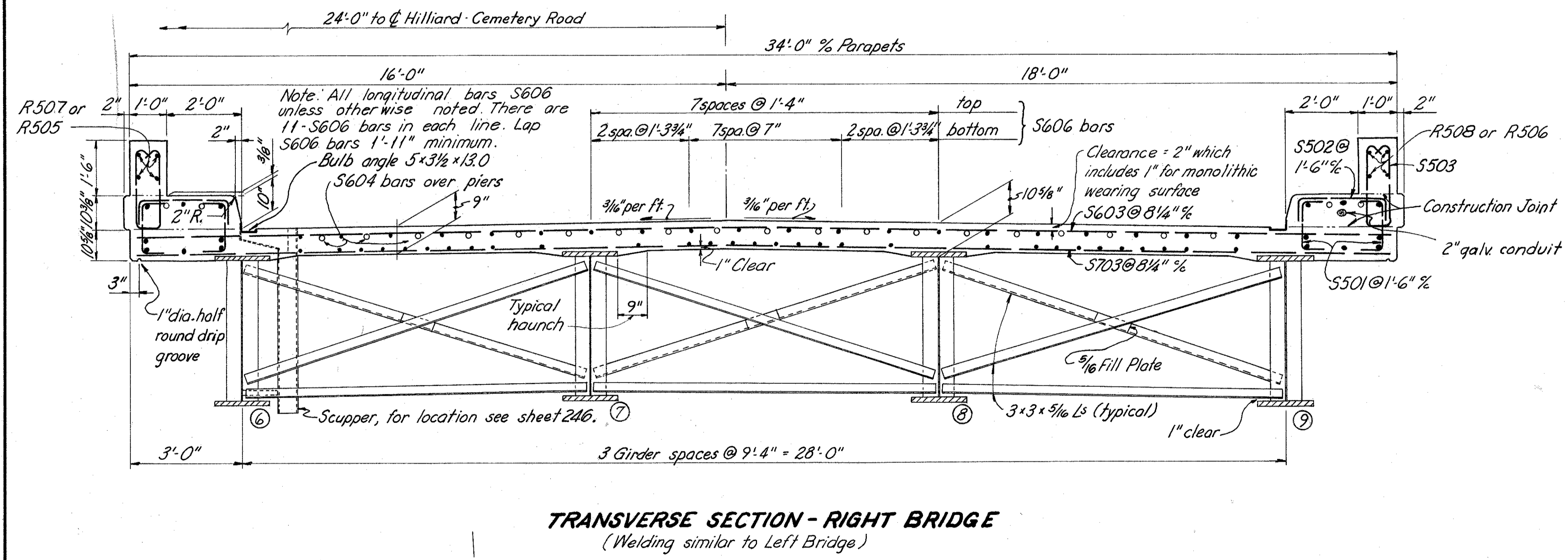
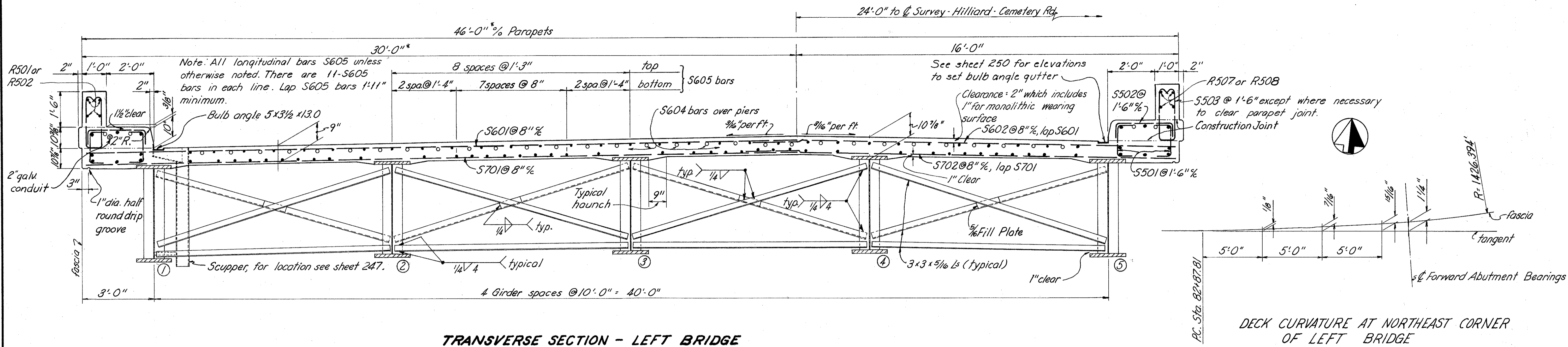


DIAGRAM SHOWING STAGGER OF S604 BARS OVER PIERS

A TYPICAL HAUNCH width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall not be more than 4:1 for a haunch less than 9" in width.

WELDING:
Any welds shown as field welds may, at the option of the Contractor, be made in the shop.

DECK SLAB DEPTH: The dimension from the top of the deck slab to the top of the girder web plate is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation to place it parallel to the finished grade.

DECK PLACING PROCEDURE: In placing the deck concrete, construction joints will be permitted parallel to the transverse reinforcing steel and near the middle of any span. Because of the flow of curing water from the surface of previously placed deck concrete, the sequence of pours shall be upgrade, starting at the lowest point or points in the grade line.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

SLAB THICKNESS shown includes 1" for monolithic wearing surface.

RAILING shall be Type "I" Aluminum Railing with concrete parapet as detailed on Std. Dwg. BR-1-65.

CONCRETE shall be Class "C", $f_c = 1333$ psi.

ADDITIONAL NOTES: For additional notes see sheet 236

FOR DETAILS OF:	SEE:
Girder Splices	Sheet No 248
End Dam & End Frame	Std. Dwg. SD-1-63, sh. 2, and Sheet No 248
Scuppers	Sheet No 249
Curb Plates	Std. Dwg. SD-1-63, sh. 4
Bearings	Std. Dwg. FSB-1-62 & Std. Dwg. RB-1-55
Railing & Parapet	Std. Dwg. BR-1-65 and Sheet No 251
Bulb Angle Gutter	Std. Dwg. SD-1-63, sh. 3 and Sh. No 250

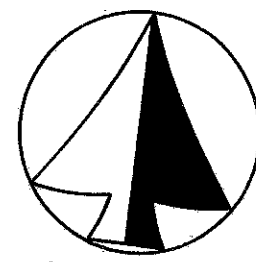
BURGESS & NIPLÉ CONSULTING ENGINEERS
COLUMBUS 12, OHIO

SUPERSTRUCTURE DETAILS
BR. NO. FRA-270-0393 L&R
IR 270 UNDER
HILLIARD CEMETERY ROAD

FRANKLIN COUNTY STA. 436+77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
WJR	WJR		DWT	WJR 4-15-65	

MICROFILMED
JUL 3 1988

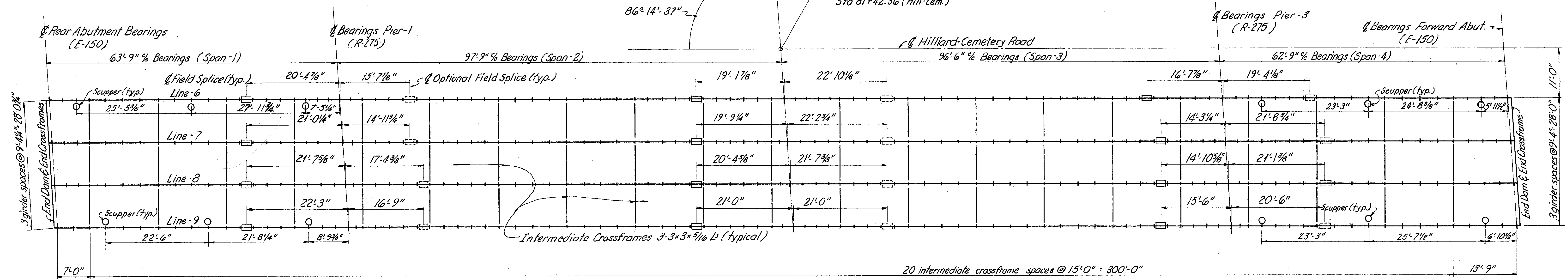


FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

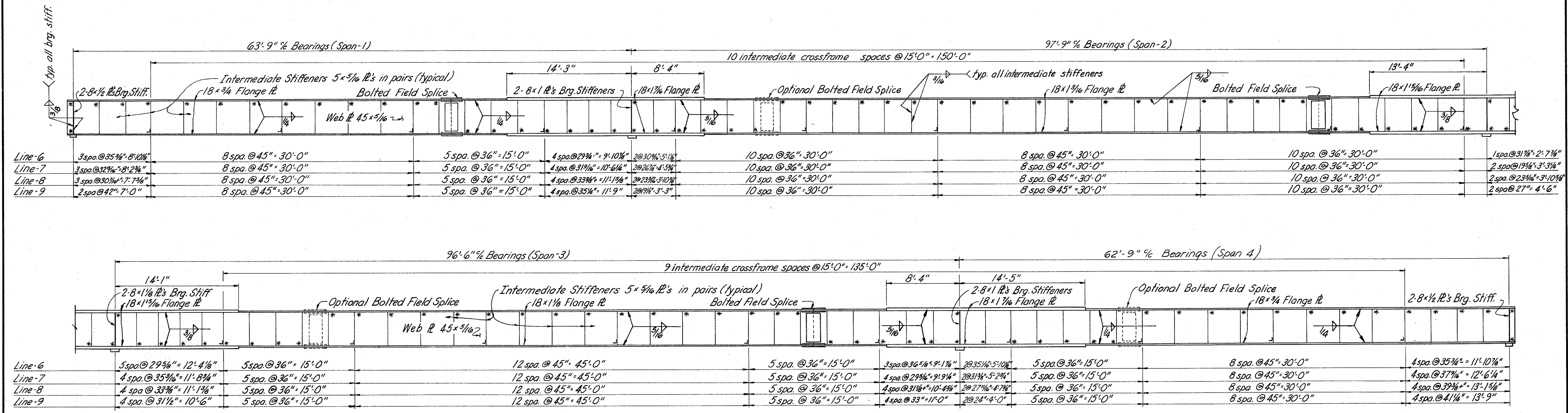
246
301

FRANKLIN COUNTY
FRA-270-3.47 N.

Bearings Pier-2 (F-300)
Station Equation
Sta 436+77.61 (IR270) =
Sta 81+42.36 (Hill. Cem.)



STRUCTURAL STEEL FRAMING PLAN - RIGHT BRIDGE



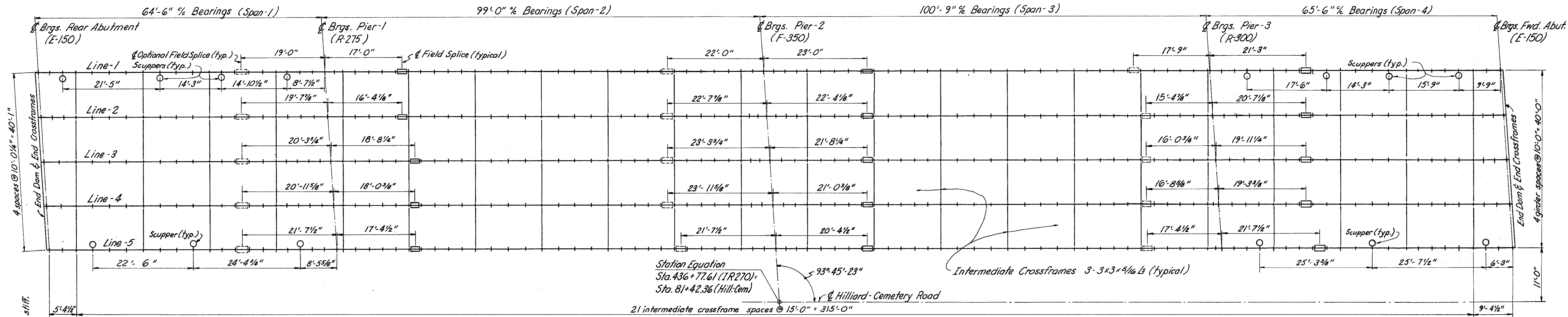
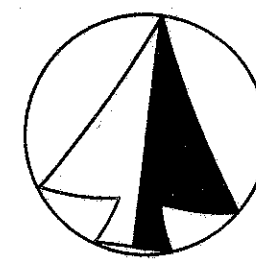
GIRDER ELEVATIONS
(Line-6 Shown)

(*) denotes end of stiffener in close contact with flange.

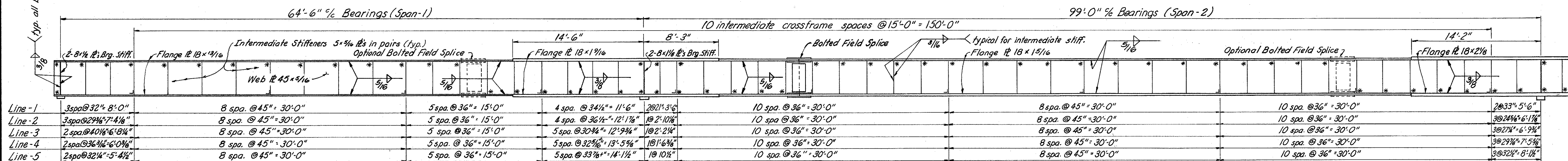
BURGESS & NIPLÉ CONSULTING ENGINEERS
COLUMBUS 12, OHIO

**RIGHT BRIDGE
GIRDER & FRAMING PLAN**
BR. NO. FRA-270-0393 L & R
IR 270 UNDER
HILLIARD CEMETERY ROAD
FRANKLIN COUNTY STA. 436 + 77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WBR	WBR		DWT	WBR	4-15-65	



STRUCTURAL STEEL FRAMING PLAN - LEFT BRIDGE



GIRDER ELEVATIONS
(Line - 1 Shown)

(*) denotes end of stiffener in close contact with flange.

1'-3"	Line-1
1'-10 7/8"	Line-2
2'-6 3/4"	Line-3
2 spa @ 19 1/2" = 3'-2 1/2"	Line-4
2 spa @ 23 1/4" = 3'-10 1/4"	Line-5

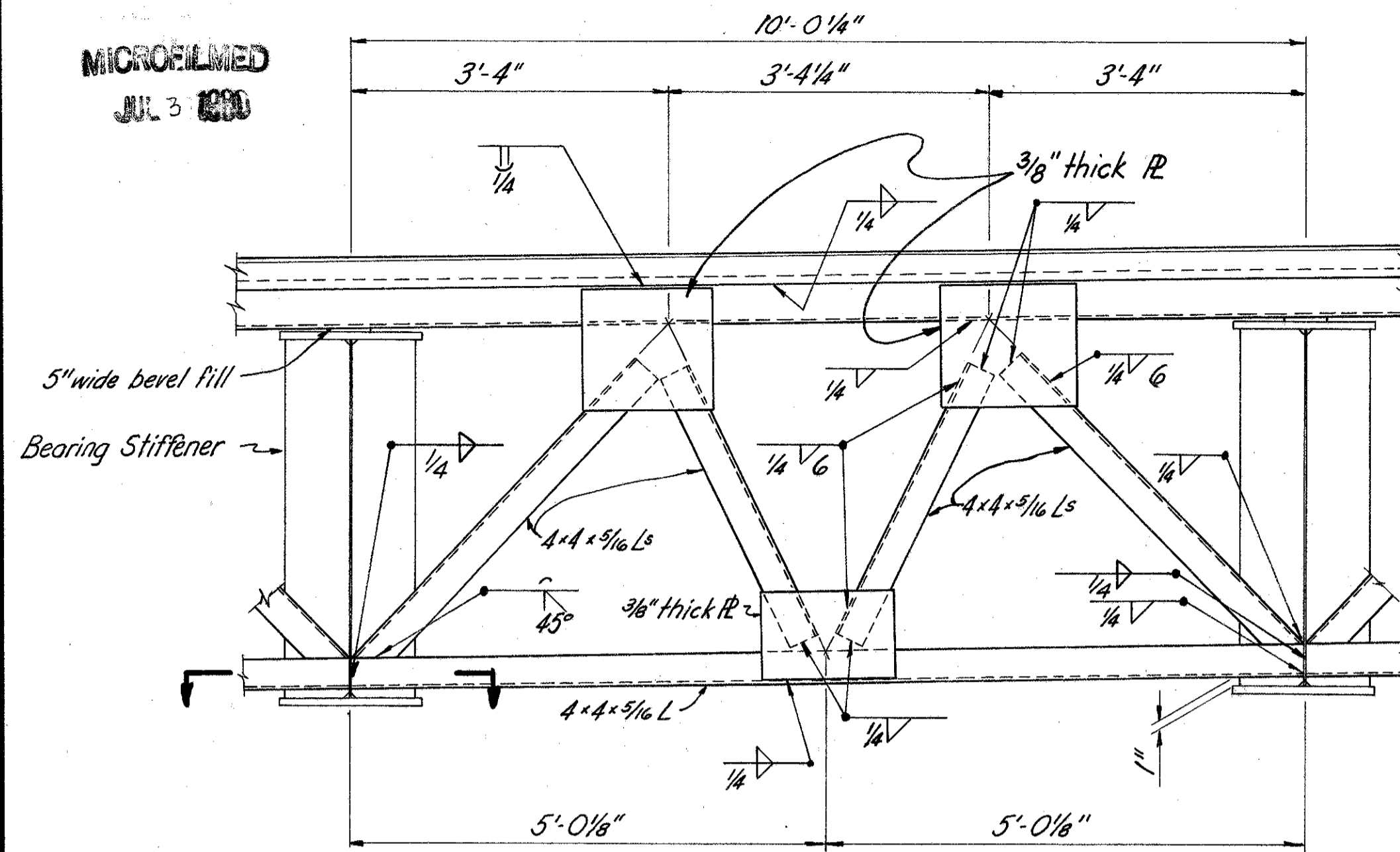
BURGESS & NIPL CONSULTING ENGINEERS
COLUMBUS 12, OHIO

LEFT BRIDGE
GIRDER & FRAMING PLAN
BR. NO. FRA-270-0393 L & R
IR 270 UNDER
HILLIARD CEMETERY ROAD
FRANKLIN COUNTY STA. 436+77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WER	WER		DWT	WER	4-15-65	

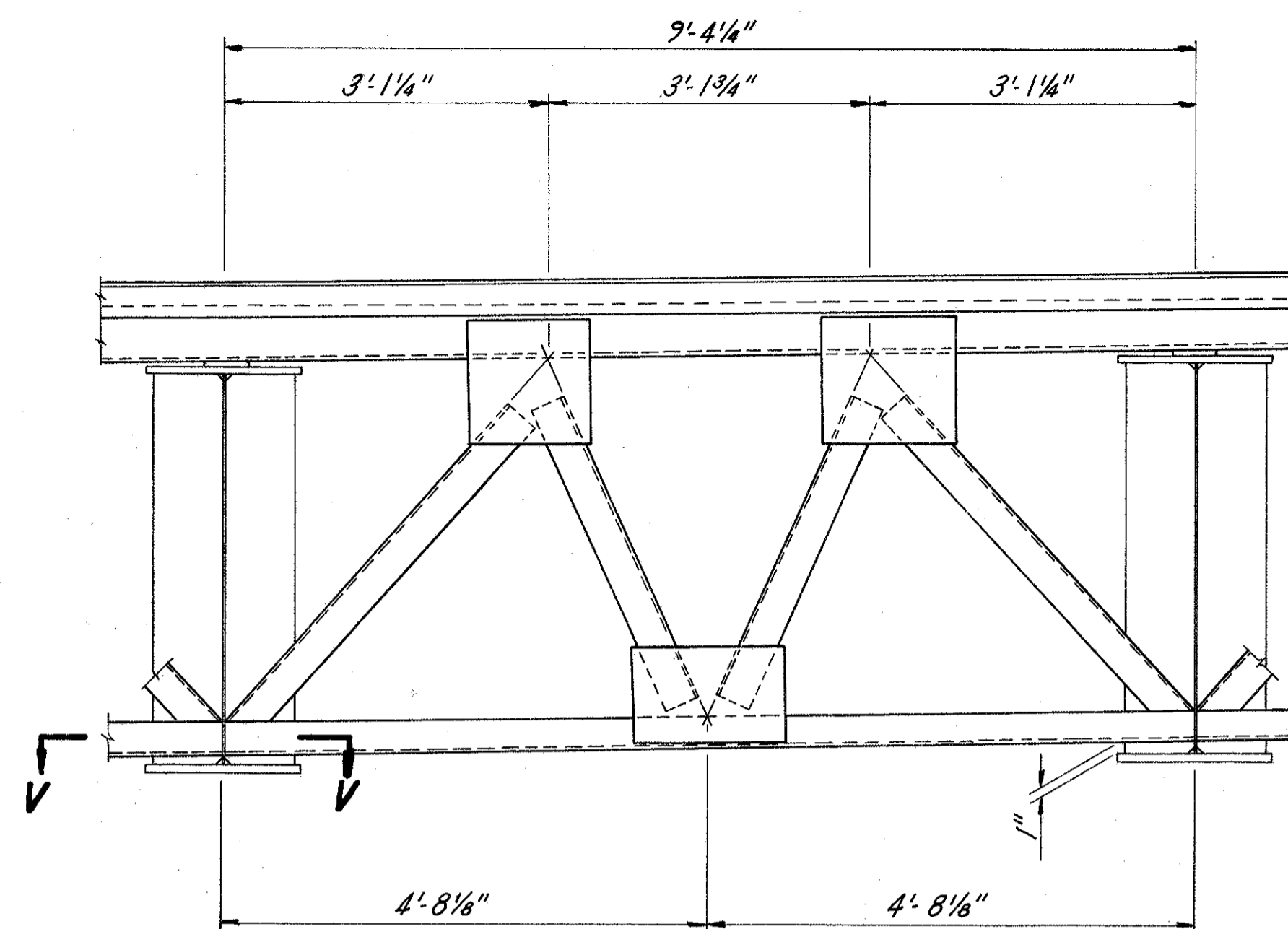
MICROFILMED
JUL 3 1980

FRANKLIN COUNTY
FRA-270-3.47 N.



(LEFT BRIDGE)

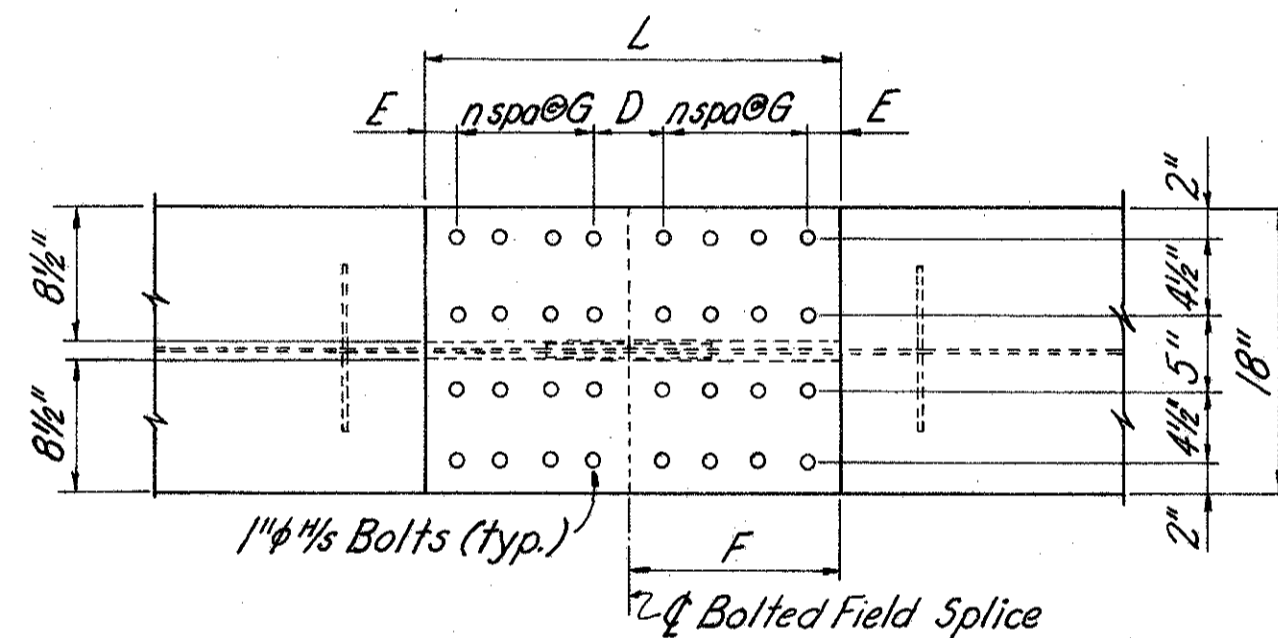
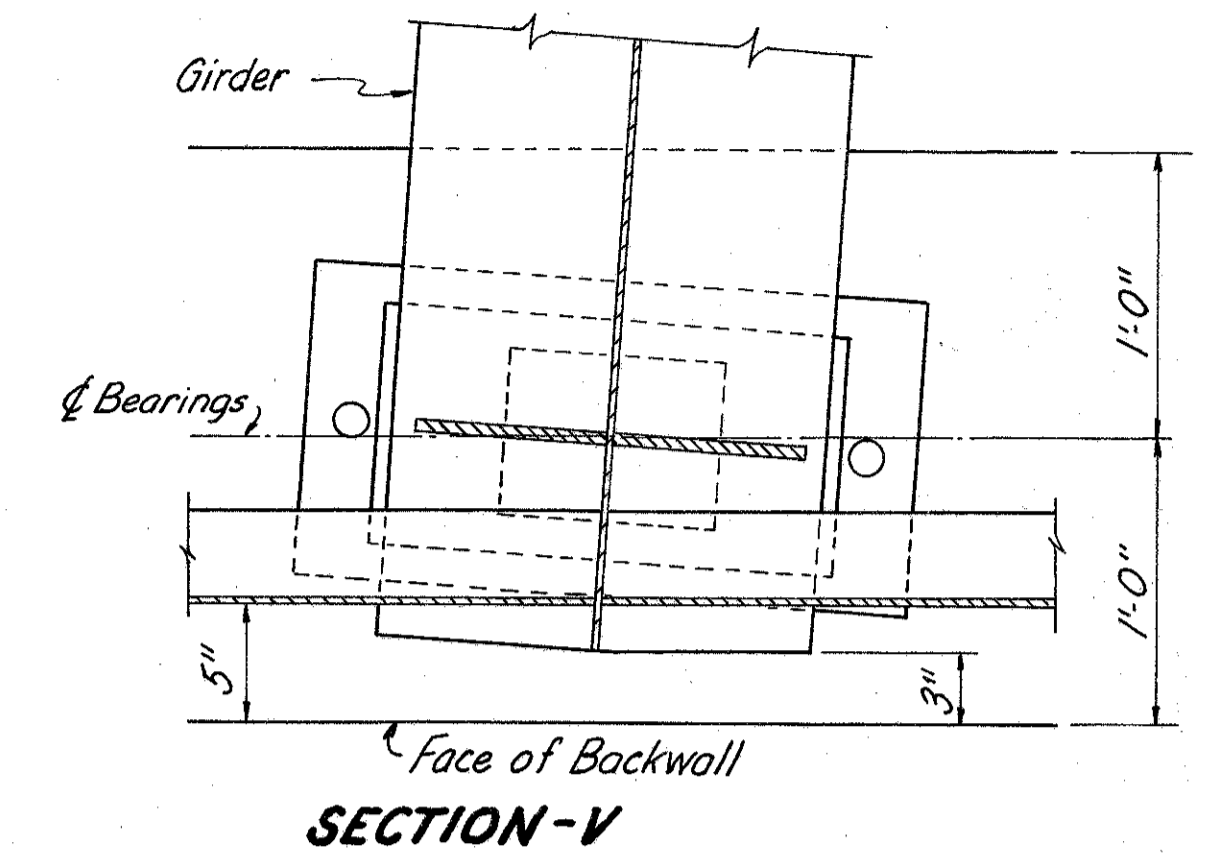
NOTE: For additional details see Std. Drwg. SD-1-63 sh. 2



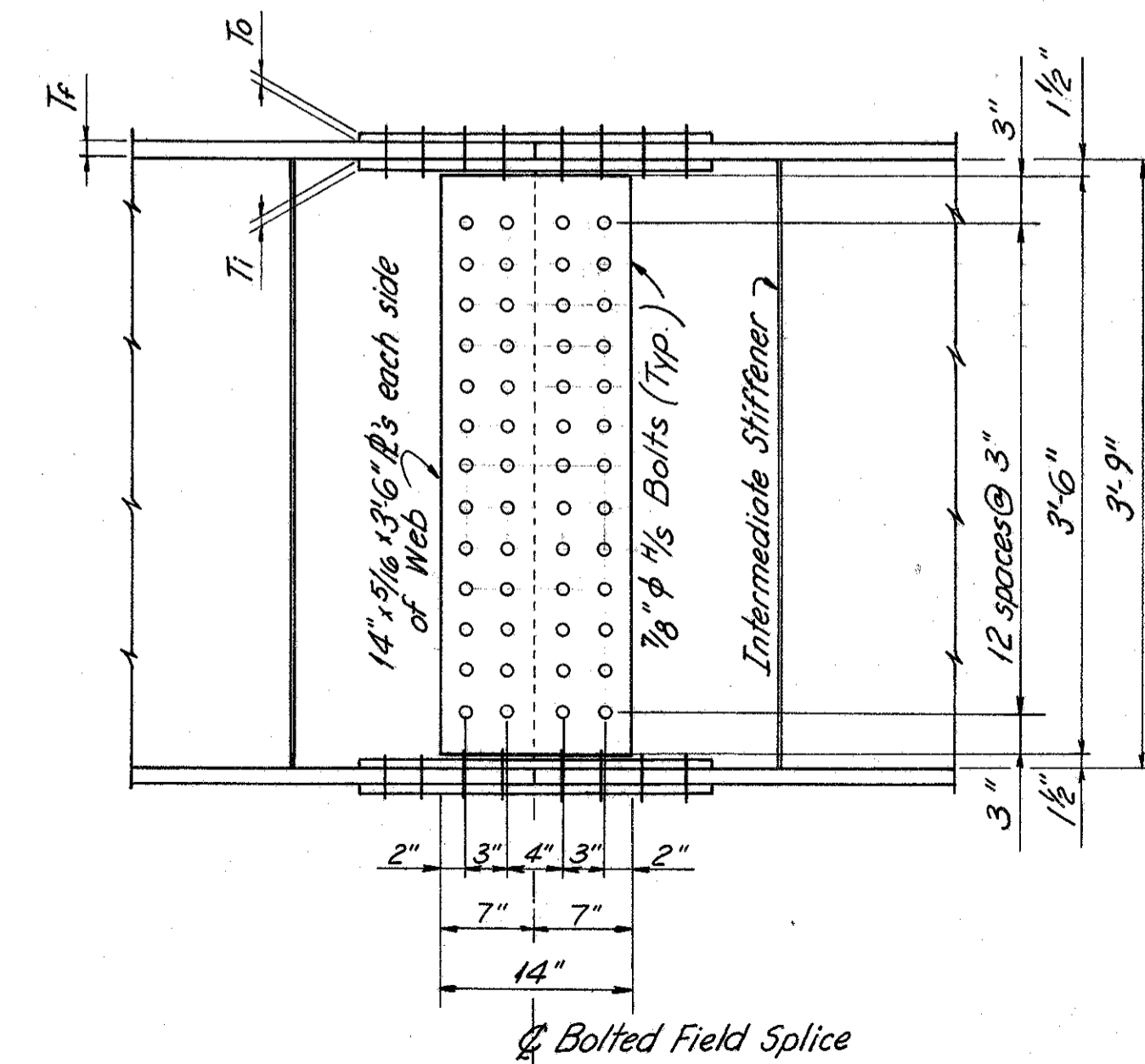
(RIGHT BRIDGE)

Similar to Left Bridge

END FRAME DETAILS

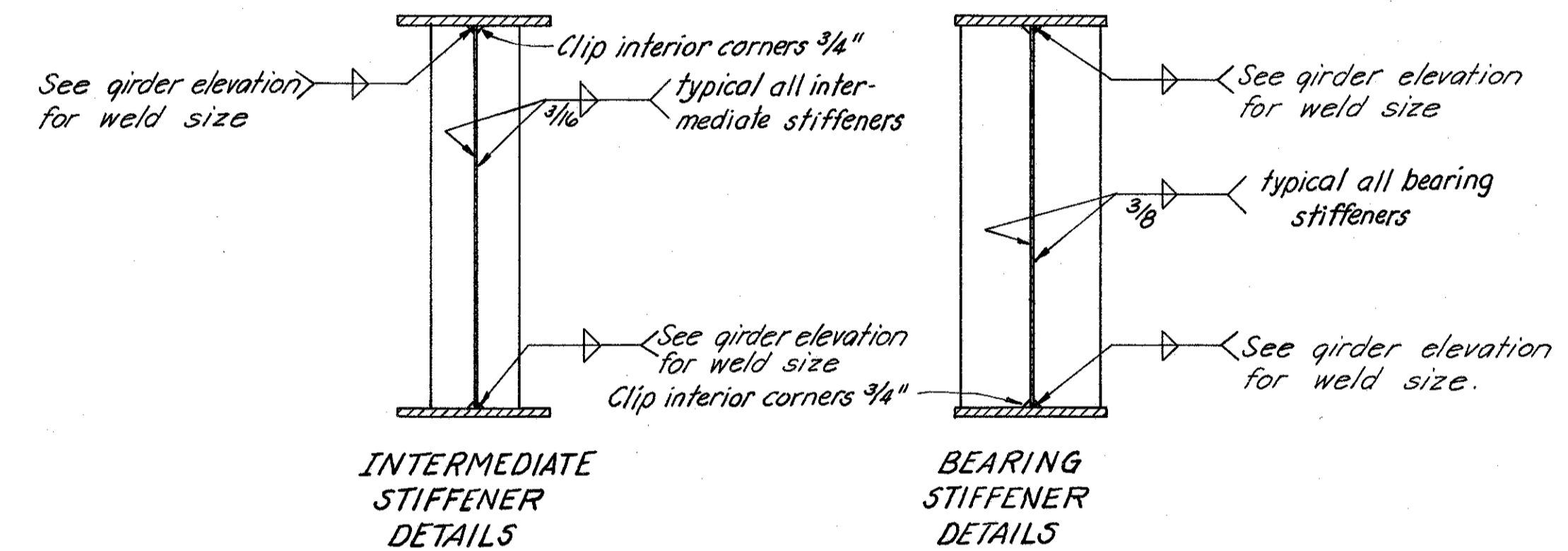


PLAN OF BOLTED FIELD SPLICE



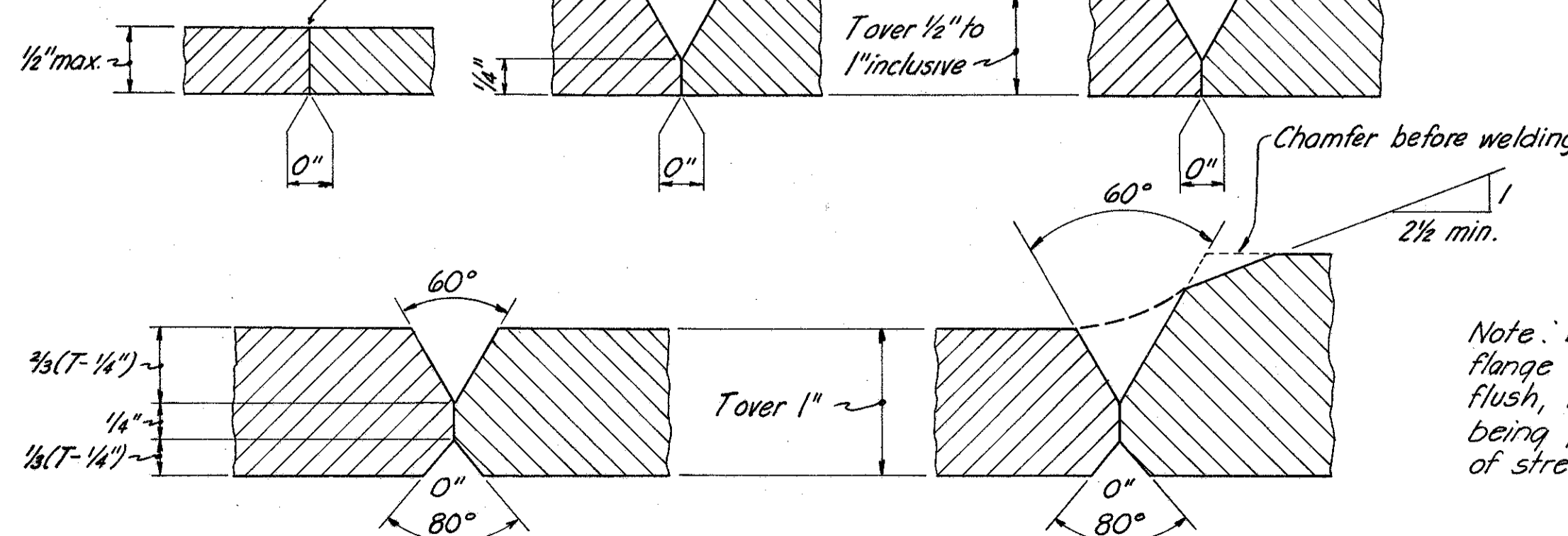
ELEVATION OF BOLTED FIELD SPLICE

BOLTED FIELD SPLICE DIMENSIONS										
Bridge	Spans	T _f	T _t	T _o	L	D	E	n	G	F
Right	1 & 4	9/4"	7/16"	3/8"	2'-1 1/8"	6 5/8"	3 1/4"	2	3"	1'-0 9/16"
Left	1 & 4	1 9/16"	1/2"	7/16"	1'-11 1/8"	5 5/8"	2 3/4"	2	3"	11 9/16"
Right	3	1 1/8"	5/8"	9/16"	2'-2 5/8"	4 3/8"	2 1/8"	3	3"	1'-1 5/16"
Right	2	1 3/16"	1/4"	5/8"	2'-2 1/8"	4 1/8"	2"	3	3"	1'-1 1/16"
Left	2 & 3	1 5/16"	3/4"	1/4"	2'-7 1/8"	3 5/8"	1 3/4"	4	3"	1'-3 9/16"



All of the below full penetration welds shall be back-gouged and welded after welding far side.

Weld from both sides centering welds on joint



JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS

Note: Butt welds on girder flange plates shall be ground flush, the finish grinding being parallel to the direction of stress.

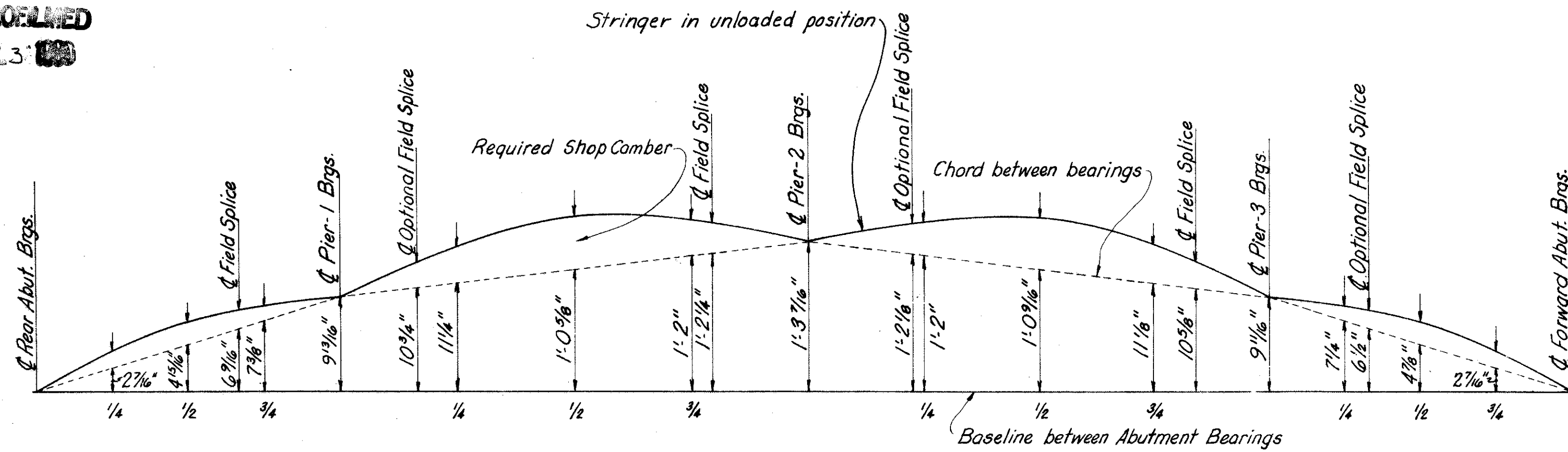
BURGESS & NIPLÉ CONSULTING ENGINEERS
COLUMBUS 12, OHIO

STRUCTURAL STEEL DETAILS
BR. NO. FRA-270-0393 L & R
IR 270 UNDER
HILLIARD CEMETERY ROAD

FRANKLIN COUNTY STA. 436 + 77.61

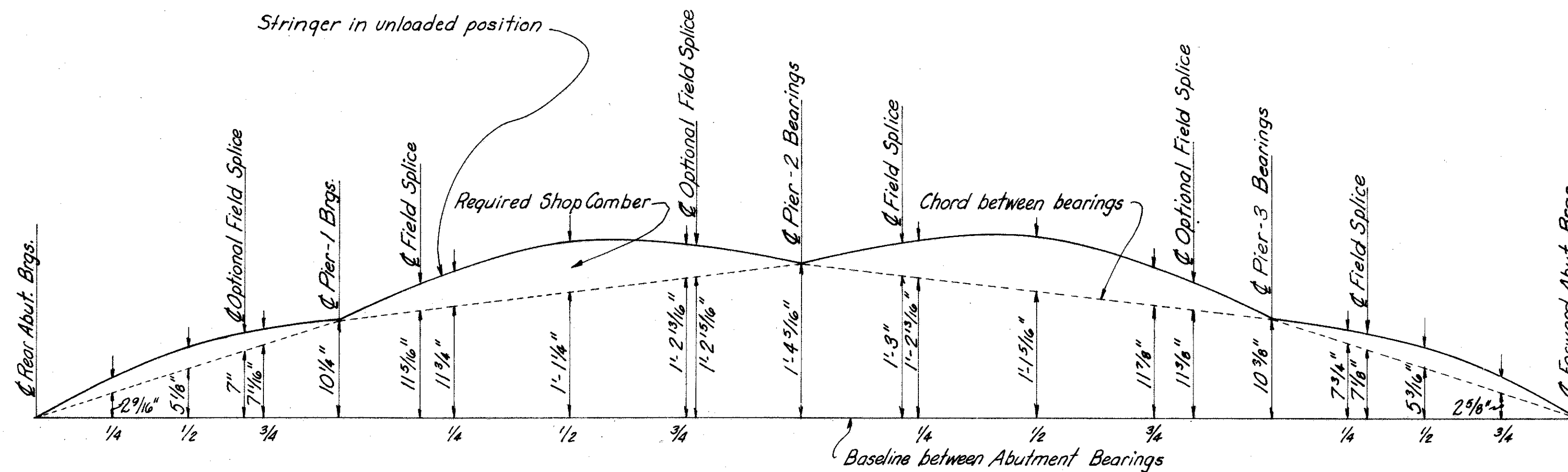
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
W&R	W&R		DWT	W&R 4-15-65	

MICROFILMED
JUL 3 1960



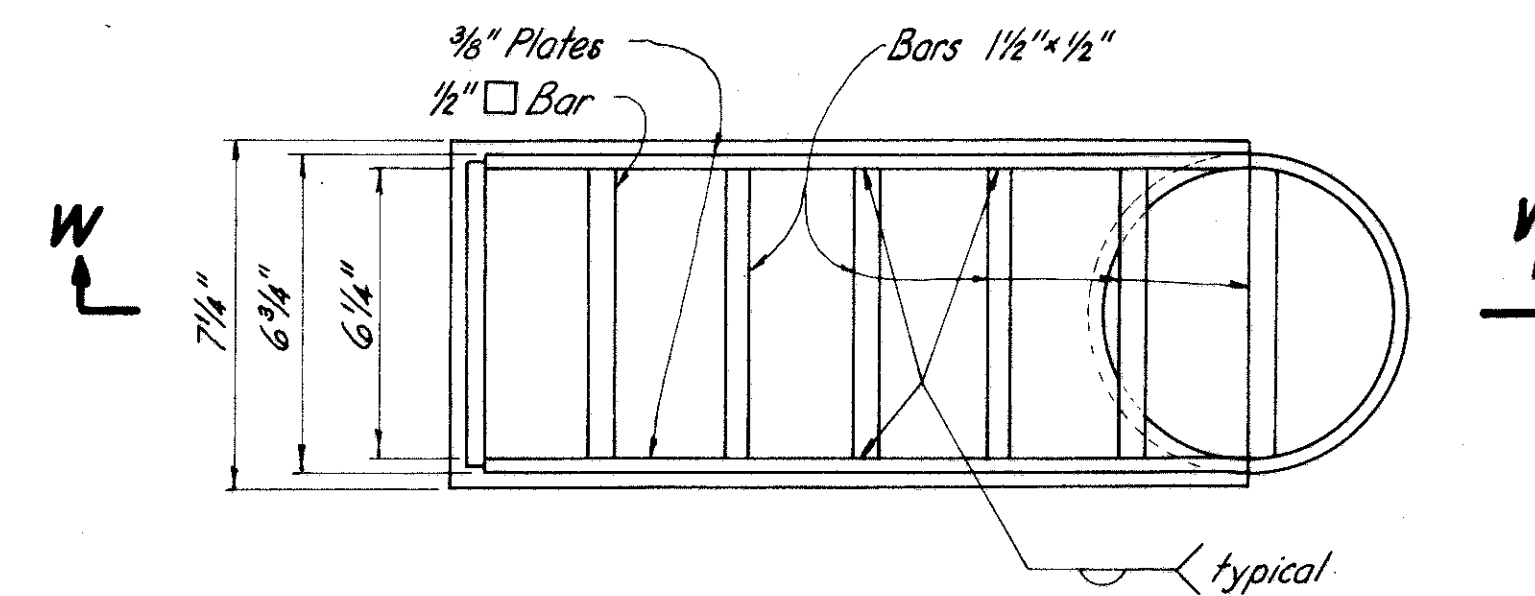
LAYOUT DIAGRAM-RIGHT BRIDGE

	SPAN-1				SPAN-2				SPAN-3				SPAN-4					
	1/4 Point	1/2 Point	Splice Point	3/4 Point	Optional Splice Point	1/4 Point	1/2 Point	3/4 Point	Splice Point	Optional Splice Point	1/4 Point	1/2 Point	3/4 Point	Splice Point	1/4 Point	Optional Splice Point	1/2 Point	3/4 Point
Deflection due to weight of steel (inches)	0.04	0.04	0.02	0.01	0.04	0.07	0.11	0.06	0.04	0.05	0.05	0.12	0.07	0.04	0.01	0.02	0.04	0.04
Deflection due to remaining dead load (inches)	0.19	0.20	0.11	0.06	0.21	0.35	0.57	0.29	0.21	0.23	0.27	0.55	0.34	0.19	0.06	0.10	0.19	0.18
Adjustment required for vertical curve (inches)	0.45	0.61	0.54	0.45	0.78	1.06	1.43	1.06	0.93	0.97	1.03	1.40	1.03	0.73	0.44	0.52	0.59	0.44
Required Shop Camber	1 1/16"	7/8"	1 1/16"	1/2"	1"	1 1/2"	2 1/8"	1 7/16"	1 3/16"	1 1/4"	1 3/8"	2 1/16"	1 7/16"	1 5/16"	1 1/2"	5/8"	1 3/16"	1 1/16"

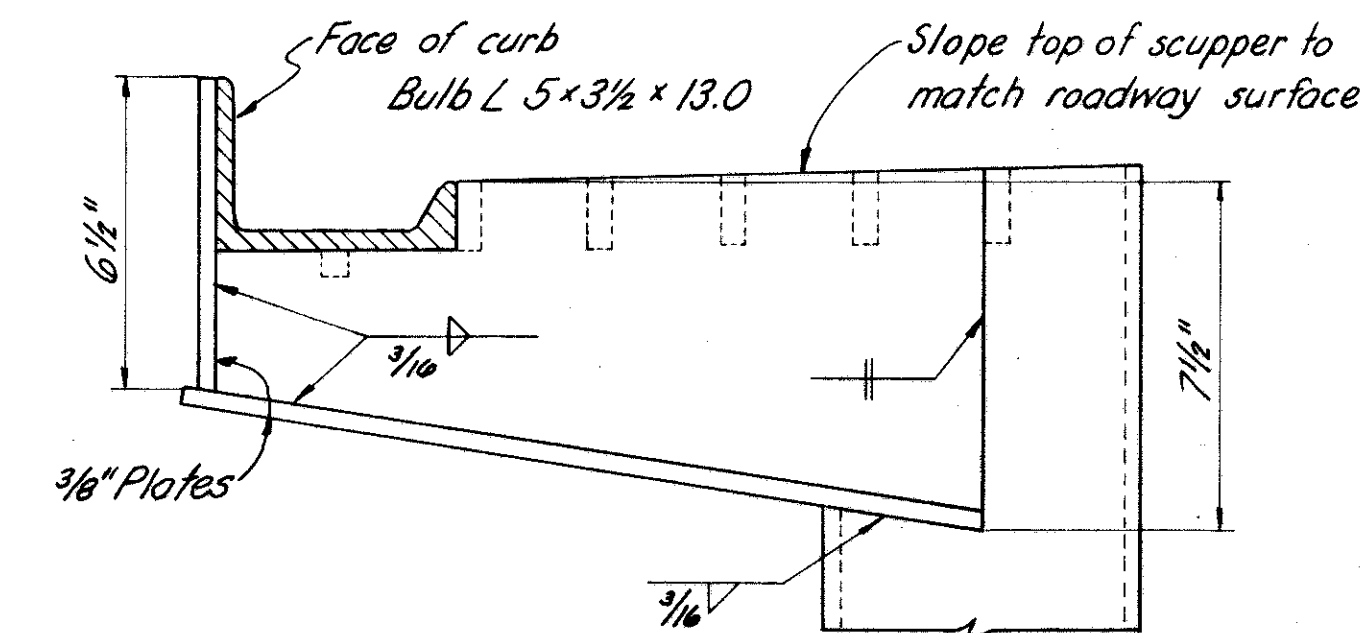


LAYOUT DIAGRAM-LEFT BRIDGE

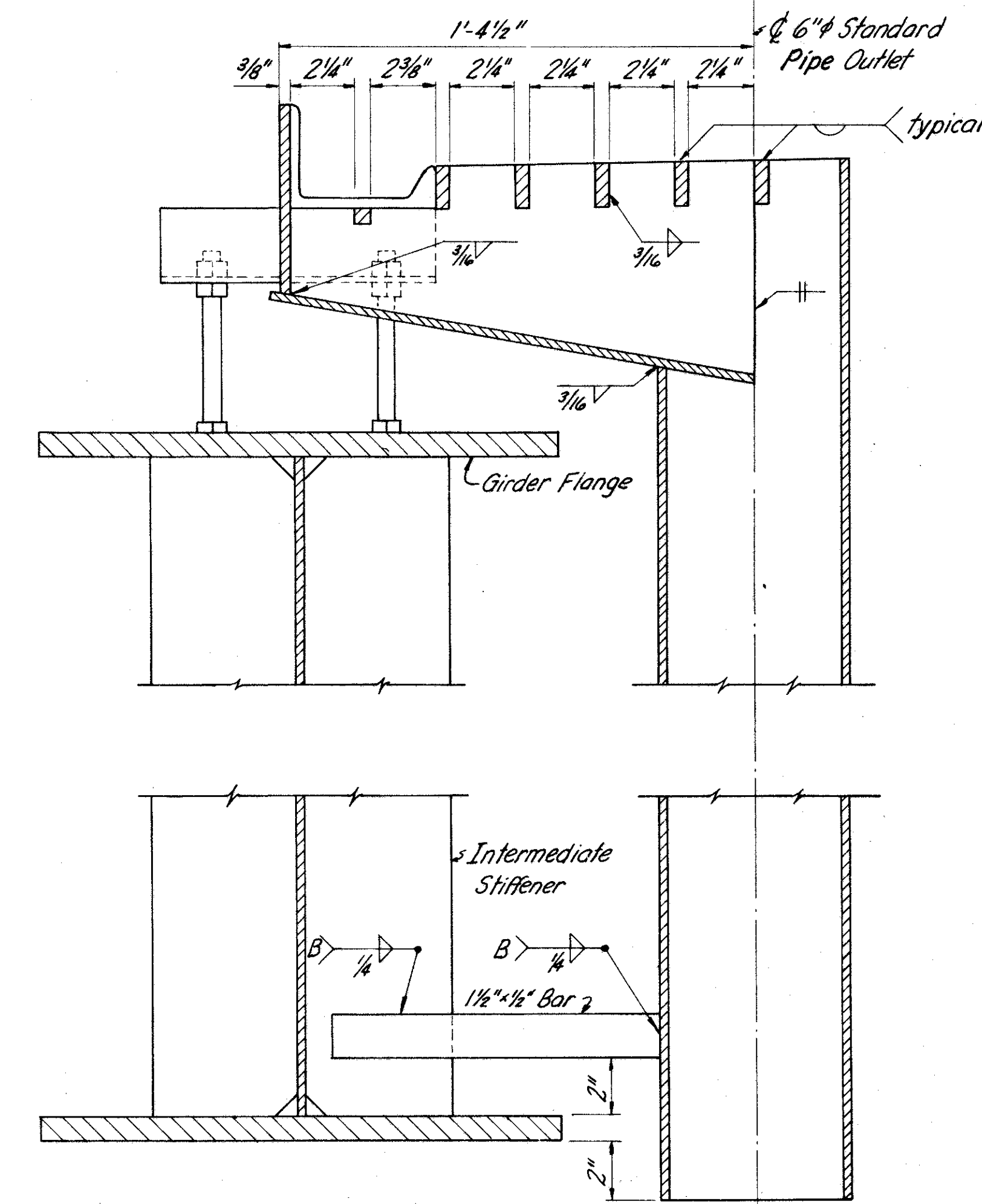
	SPAN-1				SPAN-2				SPAN-3				SPAN-4					
	1/4 Point	1/2 Point	Optional Splice Point	3/4 Point	Splice Point	1/4 Point	1/2 Point	3/4 Point	Optional Splice Point	Splice Point	1/4 Point	1/2 Point	3/4 Point	Optional Splice Point	1/4 Point	Splice Point	1/2 Point	3/4 Point
Deflection due to weight of steel (inches)	0.04	0.04	0.02	0.01	0.04	0.07	0.11	0.05	0.05	0.05	0.06	0.13	0.08	0.05	0.01	0.02	0.04	0.04
Deflection due to remaining dead load (inches)	0.21	0.22	0.11	0.07	0.22	0.35	0.56	0.27	0.23	0.26	0.32	0.64	0.39	0.23	0.05	0.09	0.20	0.20
Adjustment required for vertical curve (inches)	0.46	0.62	0.54	0.46	0.84	1.09	1.47	1.09	1.03	1.02	1.13	1.52	1.13	0.83	0.48	0.55	0.64	0.48
Required Shop Camber	1 1/16"	7/8"	1 1/16"	3/16"	1 1/8"	1 1/2"	2 1/8"	1 7/16"	1 9/16"	1 5/16"	1 1/2"	2 5/16"	1 3/8"	1 1/8"	3/16"	1 1/16"	7/8"	3/4"



SCUPPER PLAN



SCUPPER ELEVATION



SECTION-W

NOTE: For additional details see Std. Drwg. SD-1-63 sh.3

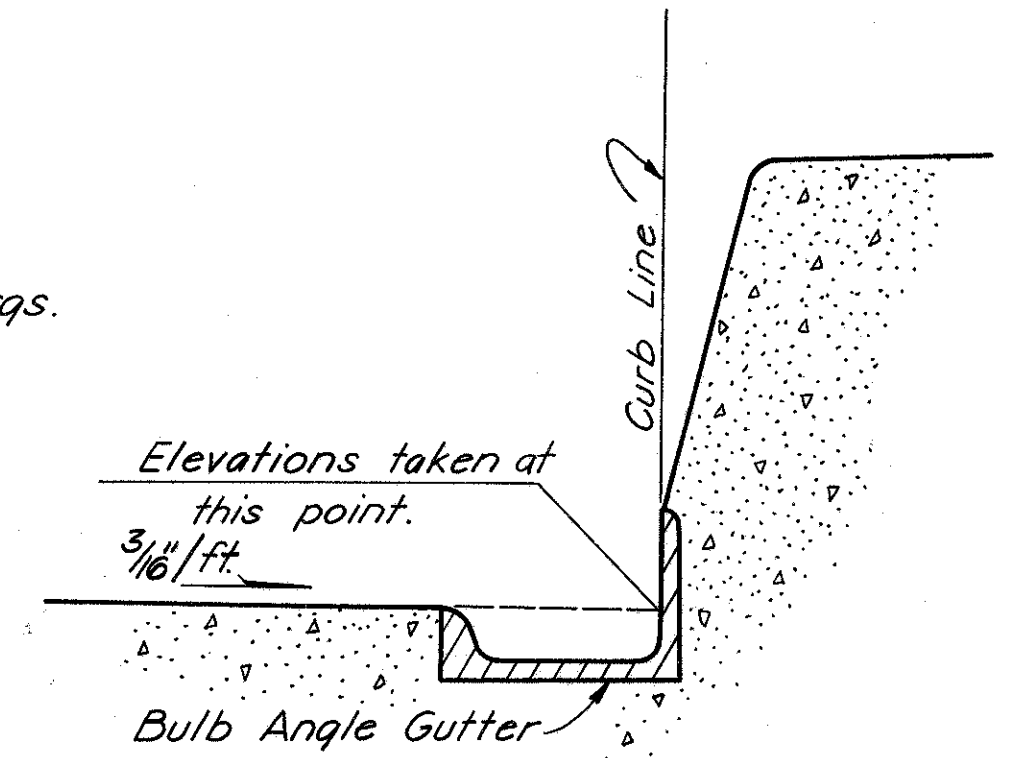
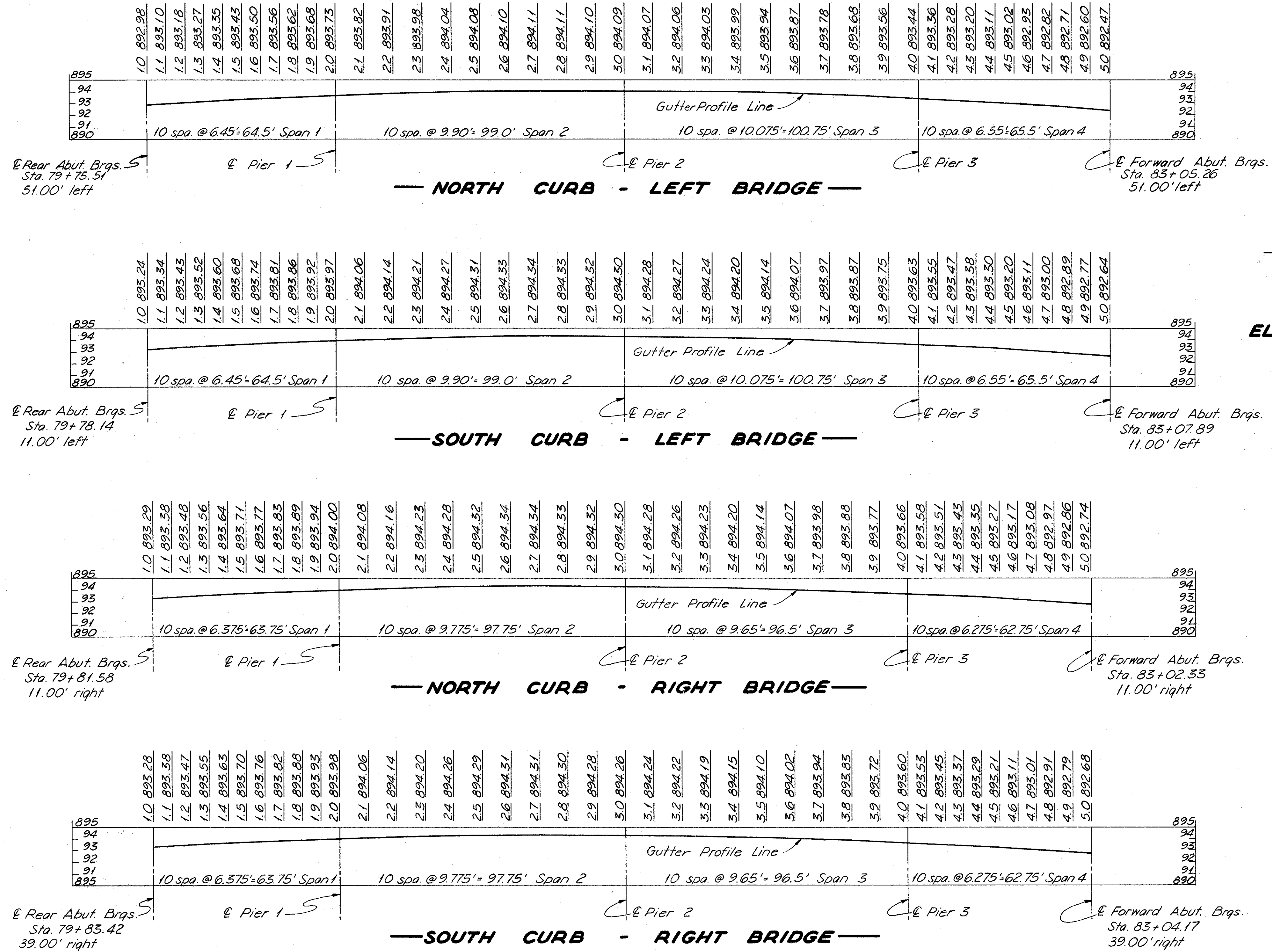
BURGESS & NIPLÉ		CONSULTING ENGINEERS	
COLUMBUS 12, OHIO			
CAMBER DIAGRAM & SCUPPER DETAILS			
BR. NO. FRA-270-0393 L&R			
IR 270 UNDER HILLIARD CEMETERY ROAD			
FRANKLIN COUNTY		STA. 436+77.61	
DESIGNED	DRAWN	TRACED	CHECKED
WER	WER		DWT
			WER 4-15-65

MICROFILMED
JUL 3 1990

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

250
301

FRANKLIN COUNTY
FRA-270-3.47 N.



ELEVATION POINT DETAIL

BURGESS & NIPLE CONSULTING ENGINEERS
COLUMBUS 12, OHIO

BULB ANGLE GUTTER SETTING ELEVATIONS
BR. NO. FRA-270-0393 L & R
IR 270 UNDER HILLIARD CEMETERY ROAD

FRANKLIN COUNTY STA. 436+77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
WER	DW	DW	DWT	WER 4-15-65	

REINFORCING STEEL LIST

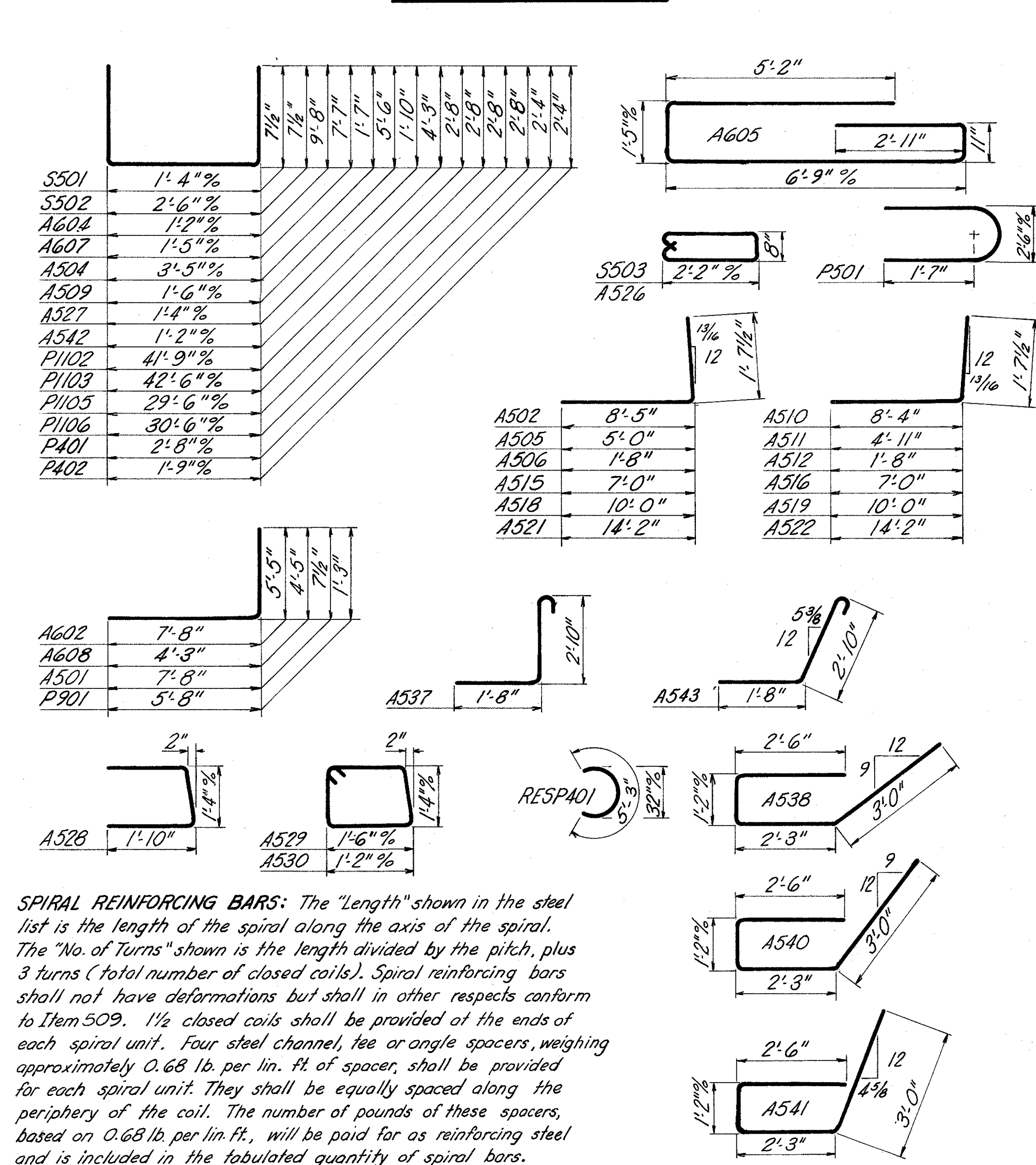
MARK	NO.	LENGTH	WEIGHT	SHAPE	MARK	NO.	LENGTH	WEIGHT	SHAPE	MARK	NO.	LENGTH	WEIGHT	SHAPE	MARK	NO.	LENGTH	WEIGHT	SHAPE	MARK	NO.	LENGTH	WEIGHT	SHAPE	MARK	NO.	SIZE	CORE DIA.	LENGTH	PITCH	TURNS	SPACER	WEIGHT	
SUPERSTRUCTURE					ABUTMENTS					PIERS					SPIRALS																			
S701	496	30'-0"	30,415	S	A601	8	35'-3"	424	S	A519	2	11'-6"	24	B	P601	294	8'-5"	3717	S	SP401	7	1/2"φ	32"	20'-10 1/2"	4 1/2"	59	4	2677						
S702	496	17'-10"	18,080	S	A602	108	12'-11"	2,095	B	A520	4	16'-2"	67	S	P602	222	8'-2"	2723	S	SP402	4	1/2"φ	32"	21'-9"	4 1/2"	61	4	1582						
S703	468	33'-8"	32,205	S	A603	8	11'-3"	135	S	A521	2	15'-8"	33	B	P603	222	8'-2"	2723	S	SP403	4	1/2"φ	32"	20'-3"	4 1/2"	57	4	1478						
S601	496	30'-0"	22,350	S	A604	36	20'-2"	1,090	B	A522	2	15'-8"	33	B	P1101	6	40'-1"	1278	S	SP404	3	1/2"φ	32"	21'-0"	4 1/2"	59	4	1147						
S602	496	17'-8"	13,162	S	A605	140	16'-6"	3,470	B	A523	16	14'-2"	236	S	P1102	6	46'-6"	1482	B	SP405	3	1/2"φ	32"	22'-1 1/2"	4 1/2"	62	4	1206						
S603	468	33'-8"	23,666	S	A606	16	24'-8"	593	S	A524	8	4'-6"	38	S	P1103	6	47'-3"	1506	B															
S604	171	40'-0"	10,274	S	A607	12	16'-3"	293	B	A525	24	3'-6"	88	S	P1104	18	28'-1"	2686	S															
S605	957	31'-10"	45,758	S	A608	48	8'-6"	613	B	A526	40	5'-7"	233	B	P1105	6	34'-3"	1092	B															
S606	726	31'-0"	33,804	S	A609	8	3'-2"	20	B	A527	24	4'-9"	119	B	P1106	6	35'-3"	1124	B															
S501	1744	2'-4"	4,244	B	A501	108	8'-2"	920	B	A528	24	4'-7"	115	B	P501	12	7'-0"	88	B															
S502	872	3'-6"	3,183	B	A502	8	9'-11"	83	B	A529	4	6'-0"	25	B	P502	6	40'-1"	251	S															
S503	916	5'-7"	5,334	B	A503	38	33'-3"	1,318	S	A530	4	5'-4"	22	B	P503	6	28'-0"	175	S															
LIGHT STANDARD					RAILING					REPLACEMENT BARS																								
129 (See Sht. 130)					A504	108	6'-4"	713	B	A531	15	11'-8"	183	S	P801	78	25'-9"	5363	S	RE1101	1	7'-6"		S										
					A505	8	6'-6"	54	B	A532	31	12'-0"	388	S	P802	36	20'-0"	1922	S	RE1001	1	7'-2"		S										
					A506	6	3'-2"	20	B	A533	25	4'-6"	117	S	P803	36	31'-2"	2996	S	RE901	2	6'-10"		S										
					A507	38	30'-0"	1,189	S	A534	14	15'-10"	231	S	P804	81	37'-0"	8002	S	RE801	1	6'-6"		S										
					A508	38	17'-3"	684	S	A535	12	11'-3"	141	S	RESPA01	1	5'-3"		B	RE701	5	6'-2"		S										
					A509	8	12'-3"	102	B	A536	18	10'-3"	192	S	RE601	9	5'-11"		S	RE601	9	5'-11"		S										
					A510	8	9'-10"	82	B	A537	21	5'-0"	110	B	RE501	2	5'-7"		S	RE501	2	5'-7"		S										
					A511	8	6'-5"	54	B	A538	7	8'-8"	63	B	RE401	1	5'-3"		S	P401	2	2'-8"		S										
					A512	6	3'-2"	20	B	A539	14	16'-9"	245	S																				
					A513	72	5'-4"	401	S	A540	7	8'-8"	63	B																				
					A514	4	9'-0"	38	S	A541	7	8'-8"	63	B																				
					A515	2	8'-6"	18	B	A542	7	9'-5"	69	B																				
					A516	2	8'-6"	18	B	A543	7	5'-0"	37	B																				
					A517	4	12'-0"	50	S																									
					A518	2	11'-6"	24	B																									

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	TYPE FUNDS
2	OHIO		

251
301

FRANKLIN COUNTY
FRA - 270-3.47N.

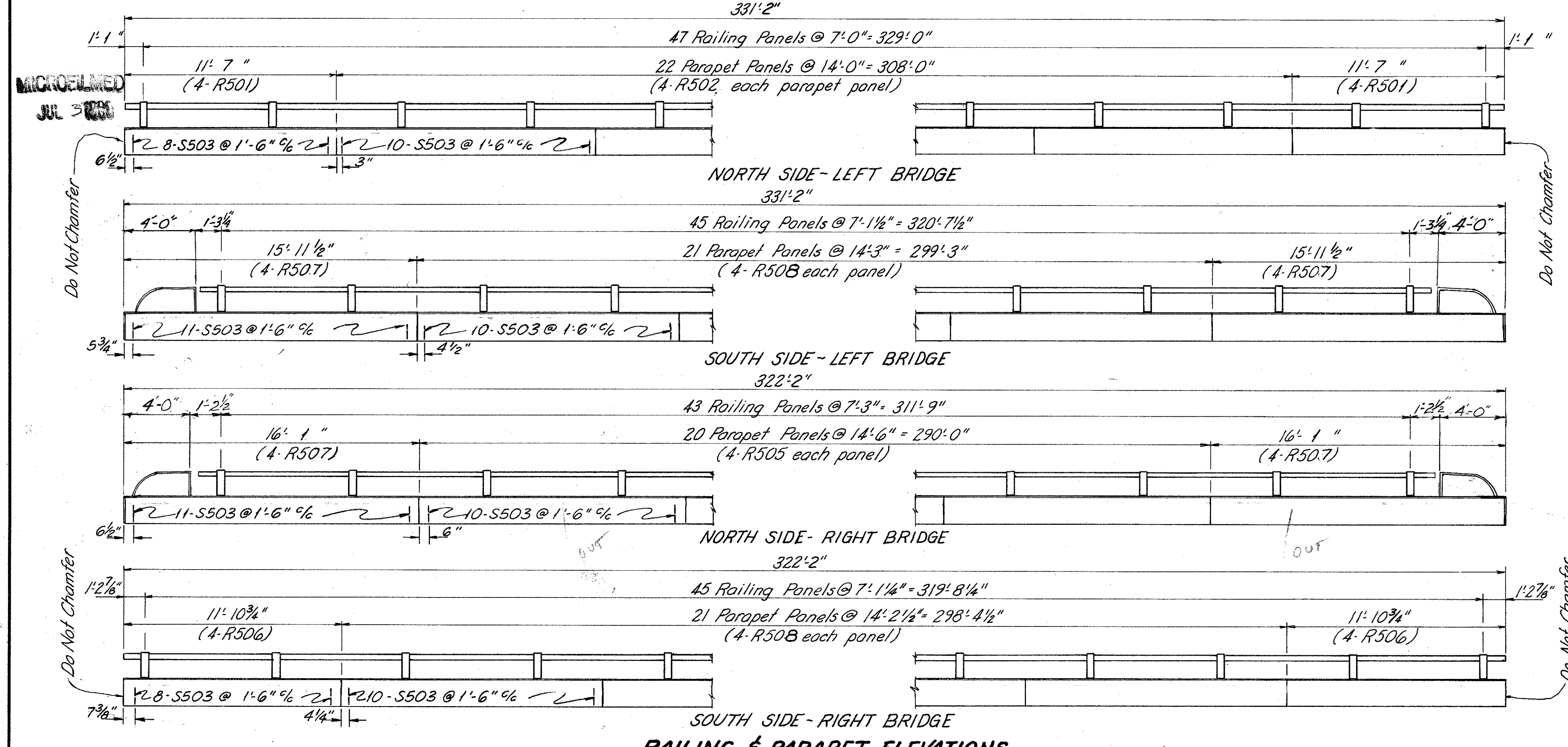
BENDING DIAGRAMS



SPIRAL REINFORCING BARS: The "Length" shown in the steel list is the length of the spiral along the axis of the spiral. The "No. of Turns" shown is the length divided by the pitch, plus 3 turns (total number of closed coils). Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A876 is a No. 8 size bar and P1127 is a No. 11 size bar.

≠ See Standard Drawing BR-1-65



NOTE: For additional details see Standard Drawing BR-1-65

BURGESS & NIPLÉ CONSULTING ENGINEERS
COLUMBUS 12, OHIO

REINFORCING STEEL LIST & RAILING DETAILS
BR. NO. FRA-270-0393 L & R
IR 270 UNDER HILLIARD CEMETERY ROAD
FRANKLIN COUNTY STA. 436+77.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
wbr	wbr		DWT	4-15-65	