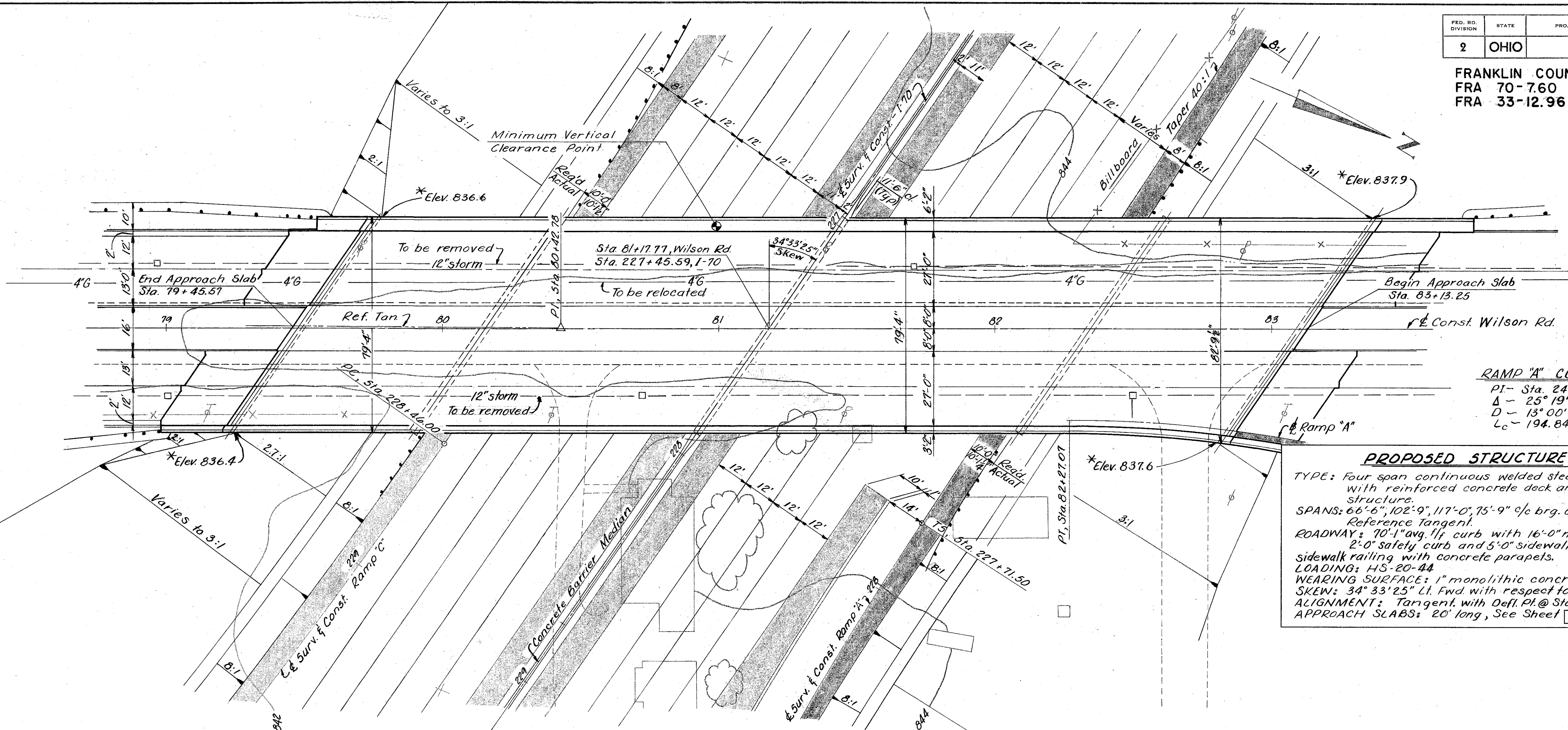


FRANKLIN COUNTY
FRA 70-7.60
FRA 33-12.96



RAMP "A" CURVE DATA
 PI - Sta. 240+81.72
 Δ - 25° 19' 43"
 D - 13° 00'
 Lc - 194.84'

PROPOSED STRUCTURE
 TYPE: Four span continuous welded steel girder with reinforced concrete deck and sub-structure.
 SPANS: 66'-6", 102'-9", 117'-0", 75'-9" c/c brg. along Reference Tangent.
 ROADWAY: 70'-1" avg. lf curb with 16'-0" median 2'-0" safety curb and 5'-0" sidewalk. Bridge sidewalk railing with concrete parapets.
 LOADING: HS-20-44
 WEARING SURFACE: 1" monolithic concrete.
 SKEW: 34° 33' 25" Lt. Fwd with respect to Ref. Tan.
 ALIGNMENT: Tangent with Defl. Pt. @ Sta. 80+42.78
 APPROACH SLABS: 20' long, See Sheet 3/17

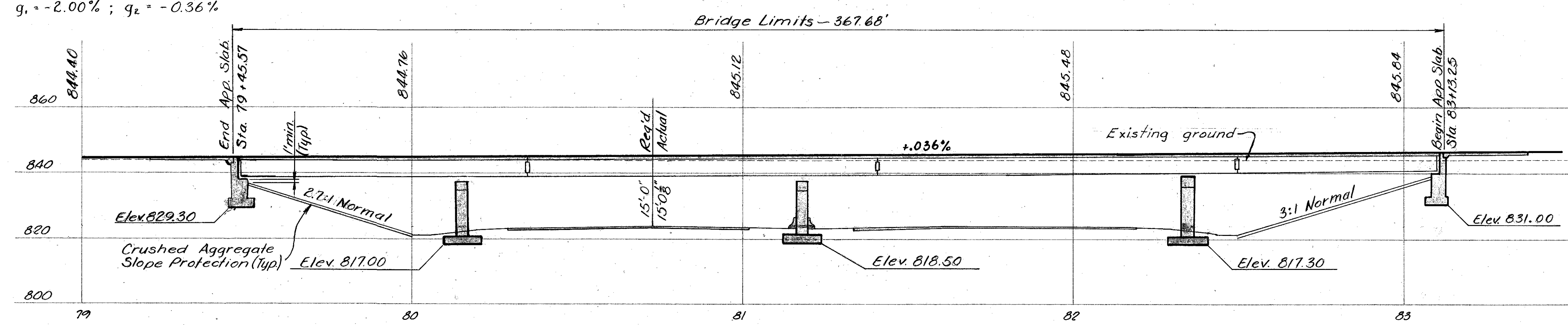
I-70 Vertical Curve Data
 PVI = 224+75.00
 VC = 400'
 Elev = 824.45
 Corr = 0.82'
 P.G. = 825.27
 g₁ = -2.00%; g₂ = -0.36%

Wilson Rd. Alignment
 PI - Sta. 80+42.78
 Δ - 0° 10' 51" Rt.

PLAN

Reference Tangent is the extension of the Forward Tangent from Sta. 80+42.78 back. Elevations marked with an asterisk are at pl of slope at face of abutment.

Earthwork limits shown are schematic. Actual slopes shall conform to plan cross sections.



PROFILE along WILSON ROAD

1986 ADT = 27,760

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						1/17
SITE PLAN						
BRIDGE No. FRA-70-0794						
I-70 UNDER WILSON ROAD						
FRANKLIN COUNTY						Sta. 81+17.77
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
fwd	fwd	g	J.E.V.	J.E.V.	9/5/68	

FRANKLIN COUNTY
FRA-70-7.60
FRA-33-12.96

REFERENCES:

Standard Drawings:

End Dam, End Crossframe & Scuppers	SD-1-69, Sheets 1, 2 & 3 dated 6-12-69
Railing Details, Sidewalk	BR-2-67, Revised 9-17-69
Rocker & Bolster Details	RB-1-55, Revised 2-2-59
Approach Slab Details	AS-1-67, Revised 6-12-69
Highway Lighting	HL-4, Dated 1-1-66

Supplemental Specifications:

Chemical admixtures for concrete, Type A, B or D	808, Dated 11-14-69
Examination of Welds	811, Dated 1-1-69
Concrete Curing and Protective Membrane	836, Dated 6-17-69

Common Details:

Lighting	Sheet 418
Expansion Joints	Sheet 418

DESIGN SPECIFICATIONS: This structure conforms to the "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1965, including the Ohio "Supplement" to these specifications.

DESIGN DATA:

Design Loading - HS 20-44

Concrete Class C - unit stress 1200 p.s.i. for superstructure
unit stress 1333 p.s.i. for substructure

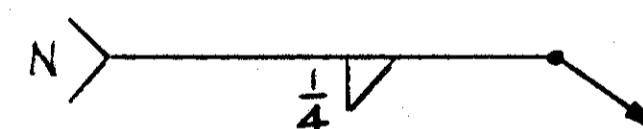
Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A615, A616 or A617.
Unit stress 20,000 p.s.i. Spiral reinforcement shall be plain bars
ASTM A306 or A499

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.0 tons per square foot and abutment and wingwall footings for 3.0 tons per square foot.

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

WELDS on non-stress carrying members are shown thus:



STAINLESS STEEL FASTENERS shall be properly passivated to remove surface impurities and shall be furnished with a lustrous finish.

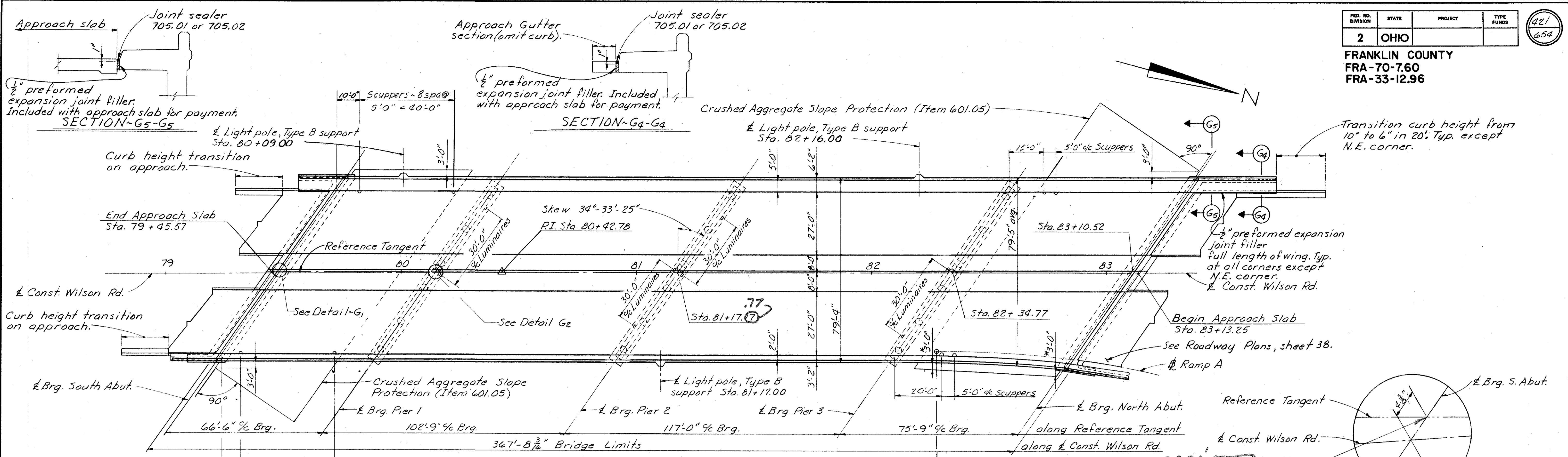
ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GENERAL		
503	1223	C.Y.	UNCLASSIFIED EXCAVATION	750	473				
509	389377	LB	REINFORCING STEEL	29916	96900	262368			
511	993	C.Y.	CLASS C CONCRETE, SUPERSTRUCTURE			993			
511	194	C.Y.	CLASS C CONCRETE, PIERS ABOVE FOOTINGS		194				
511	332	C.Y.	CLASS C CONCRETE, ABUTMENTS ABOVE FOOTINGS	332					
511	348	C.Y.	CLASS C CONCRETE, FOOTINGS	130	218				
512	28	L.F.	PREMOLDED SEALING STRIP	28					
513	847300	LB	STRUCTURAL STEEL			847300			
514	847300	LB	FIELD PAINTING OF STRUCTURAL STEEL			847300			
516	73	S.F.	1 INCH PREFORMED EXPANSION JOINT FILLER	73					
517	825.97	L.F.	BRIDGE SIDEWALK RAILING	100.25		725.72			
518	156	C.Y.	POROUS BACKFILL	156					
518	261	L.F.	6 INCH PERFORATED, HELICAL CMP, INCLUDING SPECIALS, 707.01	261					
518	217	L.F.	6 INCH NON-PERFORATED, HELICAL CMP, 707.01	217					
518	22	EA	SCUPPERS INCLUDING SUPPORTS			22			
601	1351	S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION				1351		
625			SEE SHEET 309 FOR LIGHTING SUMMARY						
808	993	UNIT	Chemical admixtures for concrete, Type A, B or D			993			

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						2/77
GENERAL NOTES AND ESTIMATED QUANTITIES BRIDGE N° FRA-70-0794 I-70 under WILSON ROAD FRANKLIN COUNTY STA. 81+17.77						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PHB			HT	JEV	9/5/68	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

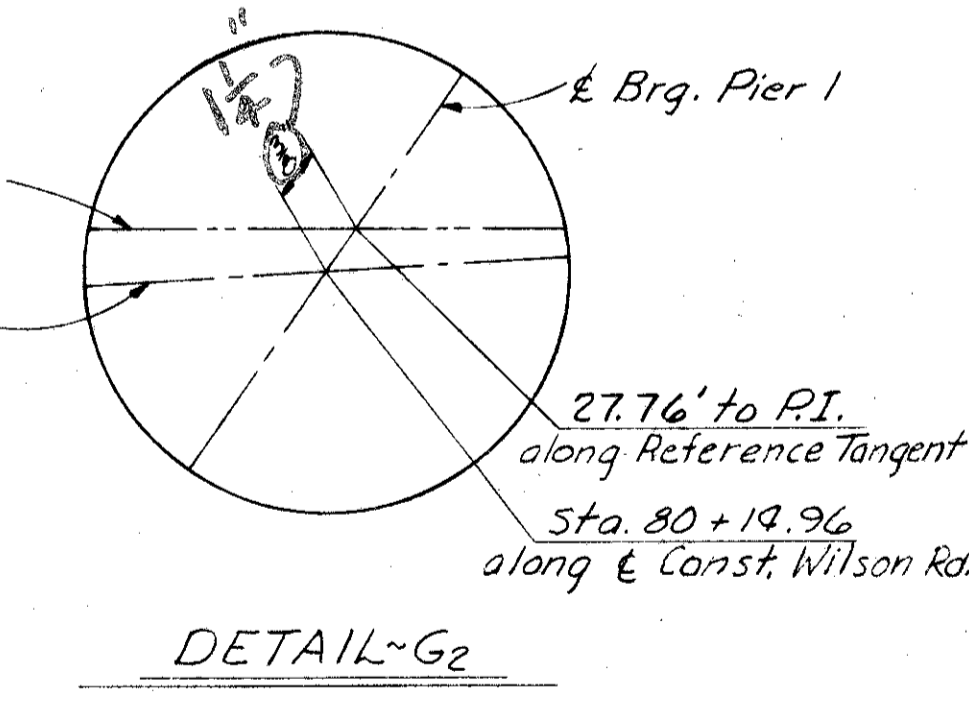
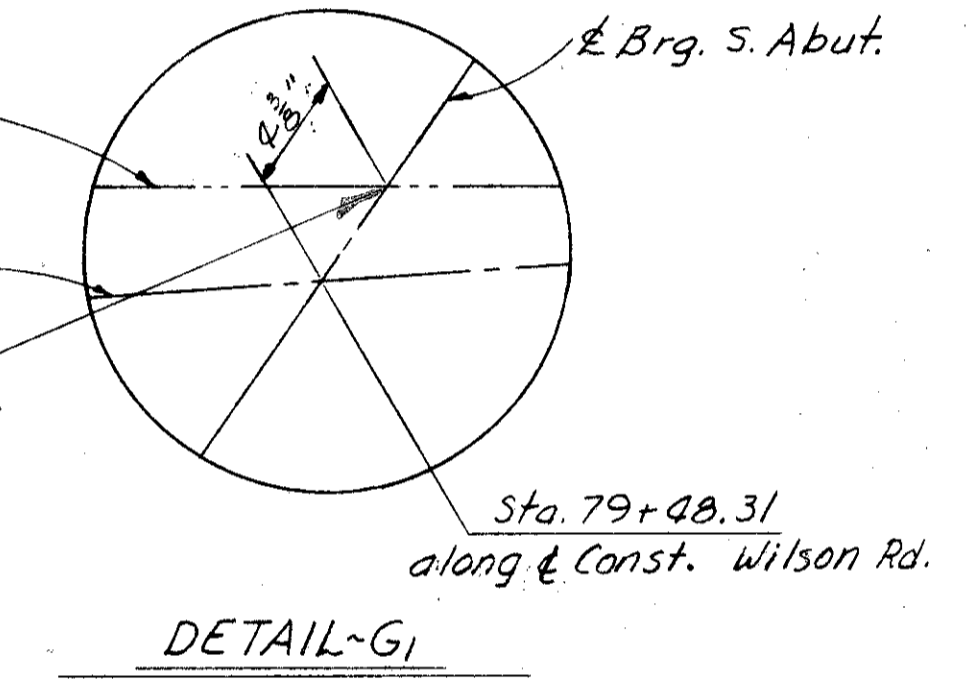
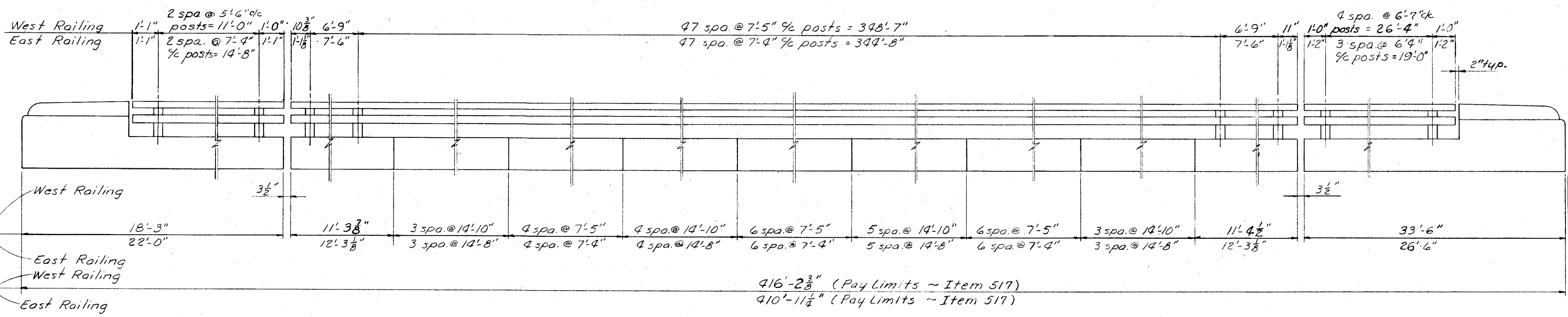
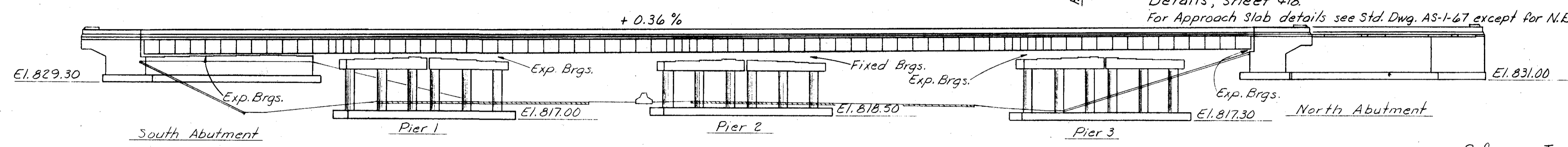
FRANKLIN COUNTY
 FRA-70-7.60
 FRA-33-12.96

421
 654



NOTES

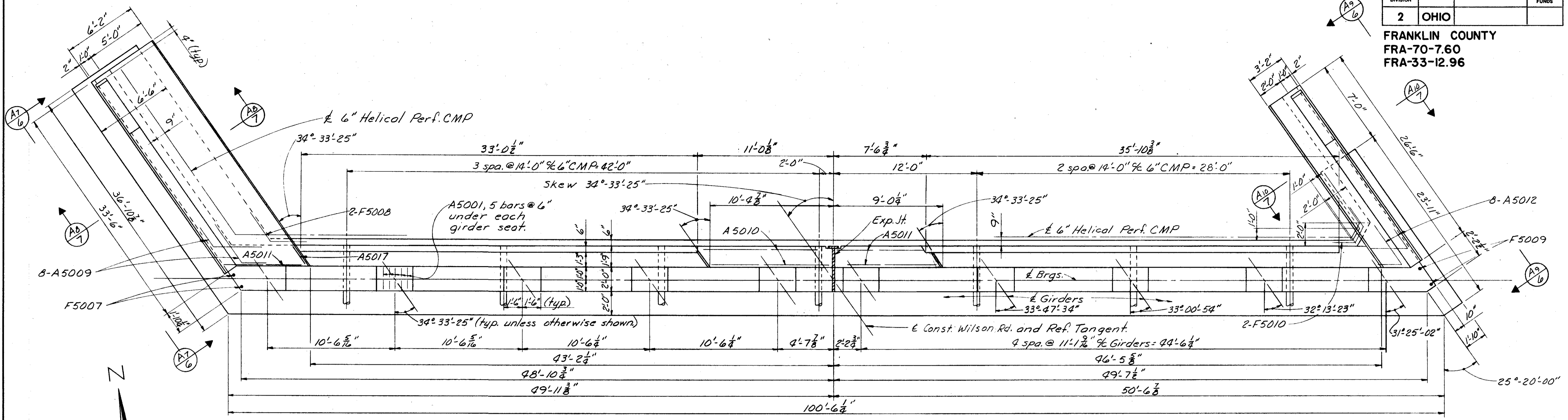
* Dimension normal to parapet.
 For light pole reinforcing see Common Details, sheet 418.
 For Approach Slab details see Std. Dwg. AS-1-67 except for N.E. Approach Slab.



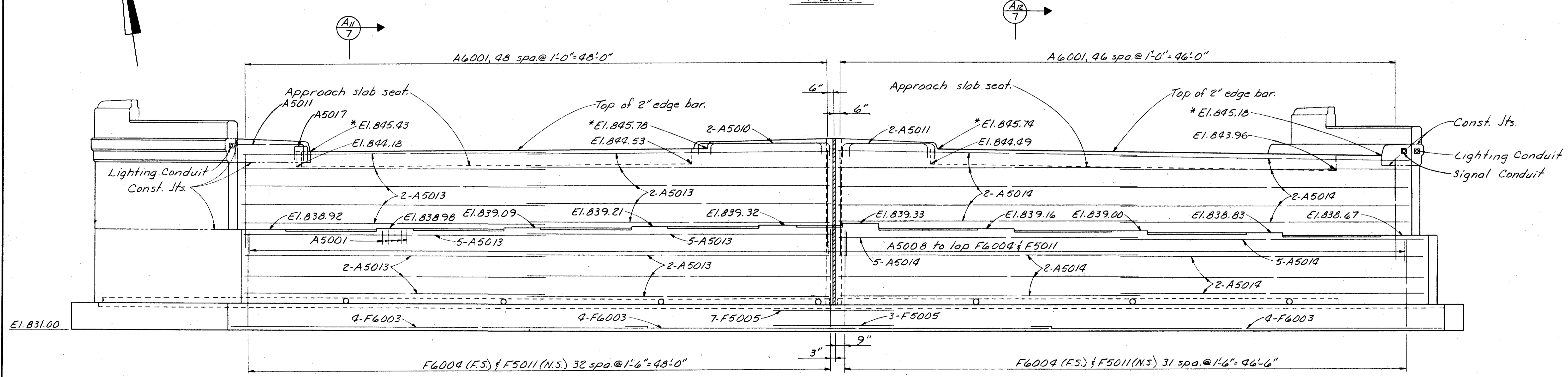
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							3/17
GENERAL PLAN and ELEVATION							
BRIDGE N ^o FRA-70-0794							
I-70 under WILSON ROAD							
FRANKLIN COUNTY STA. 81+17.77							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
VB	DW		PHB	J.E.V.	9/5/68	12-28-70	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	423 654
2	OHIO			

FRANKLIN COUNTY
FRA-70-7.60
FRA-33-12.96



PLAN



ELEVATION

NOTES

Reinforcing steel location:
F.S. indicates far side.
N.S. indicates near side.
For additional notes see sheet 6/17

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							5/17
NORTH ABUTMENT DETAILS							
BRIDGE N ^o FRA-70-0794							
I-70 under WILSON ROAD							
FRANKLIN COUNTY STA. 81+17.77							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
VB	DW		PHB	J.E.V.	9/5/68		

PED. NO. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO		

FRANKLIN COUNTY
 FRA-70-760
 FRA-33-12.96

NOTES

*Elevations marked with an asterisk are at top of 2" edge bar at face of curb.

Reinforcing steel location:
 F.S. indicates far side.
 N.S. indicates near side.

Porous backfill shall be placed between the inside faces of the wingwalls and shall extend upward to the approach slab, curb or stabilized shoulder. Excavation therefore in excess of that required for construction of the abutments shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

For expansion joint details see Common Details, Sheet 418

Concrete end posts and parapets are included with Item 517 for payment.

ADJUSTABLE TYPE ELBOWS meeting specification requirements for gage and coating are acceptable for making bends in perforated C.M.P. Elbows and the stem of tees need not be perforated.

6" Helical Perf. CMP shall have all ends capped and shall not extend across expansion joint.

6" Helical Non-perforated CMP shall extend into crushed aggregate.

For details of lighting conduit in abutment wingwall see Standard Construction Drawing HL-4.

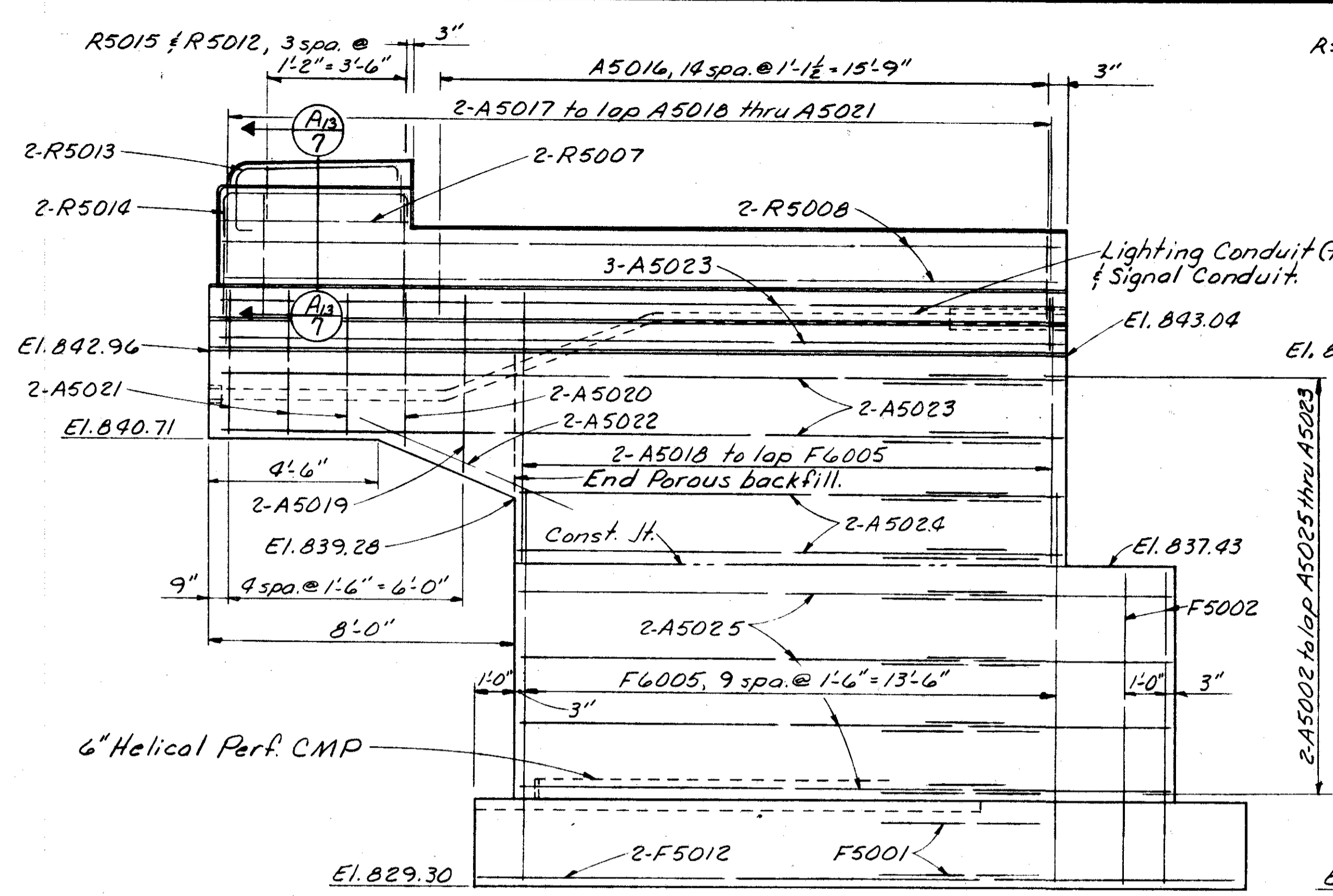
Abutment sidewalks shall be placed on compacted fill.

For girder layout see framing plan sheet 12/17

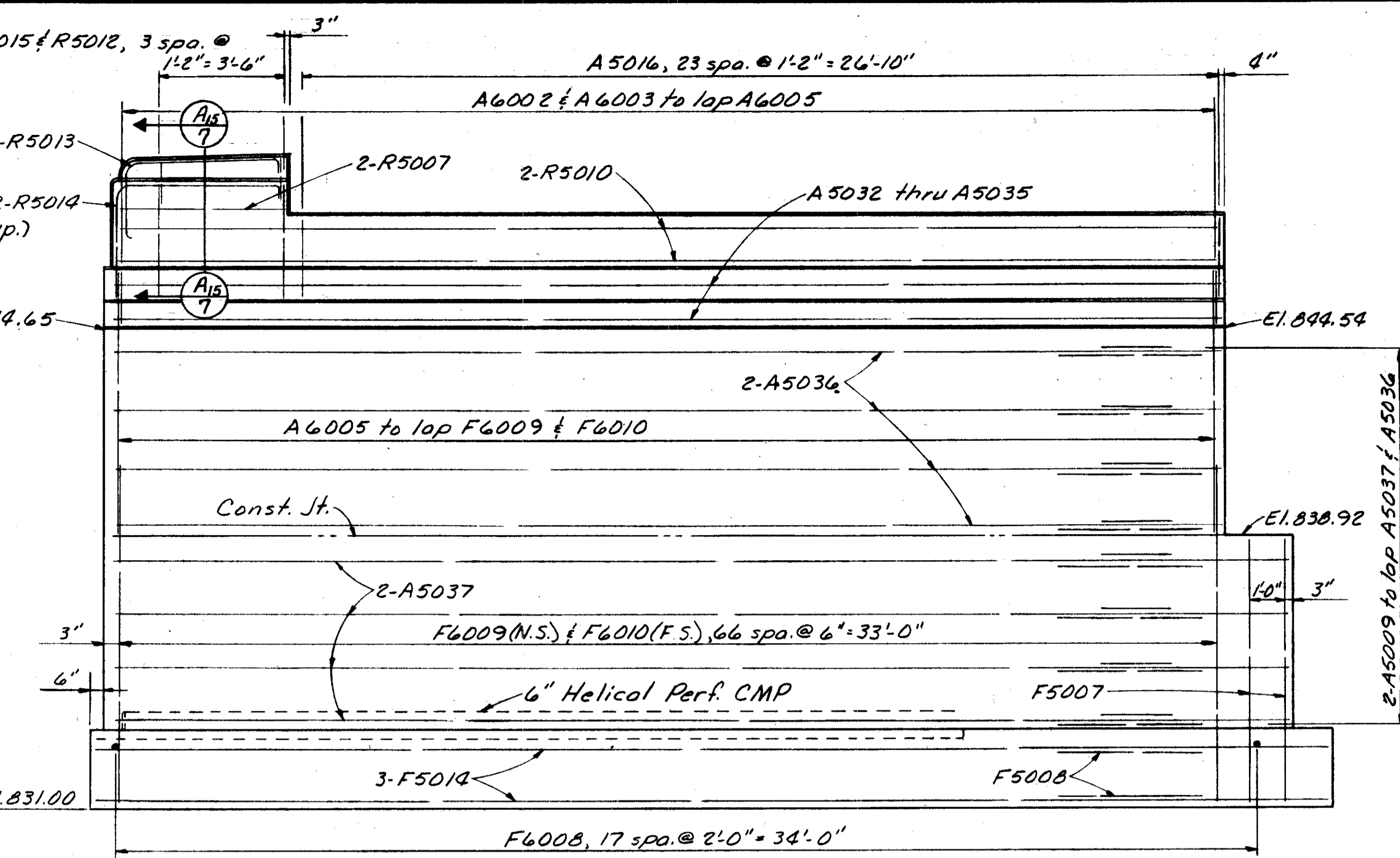
For additional notes and details see sheets 9, 5, 7, 17

All reinforcing steel in footing shall have 3" min. clearance.

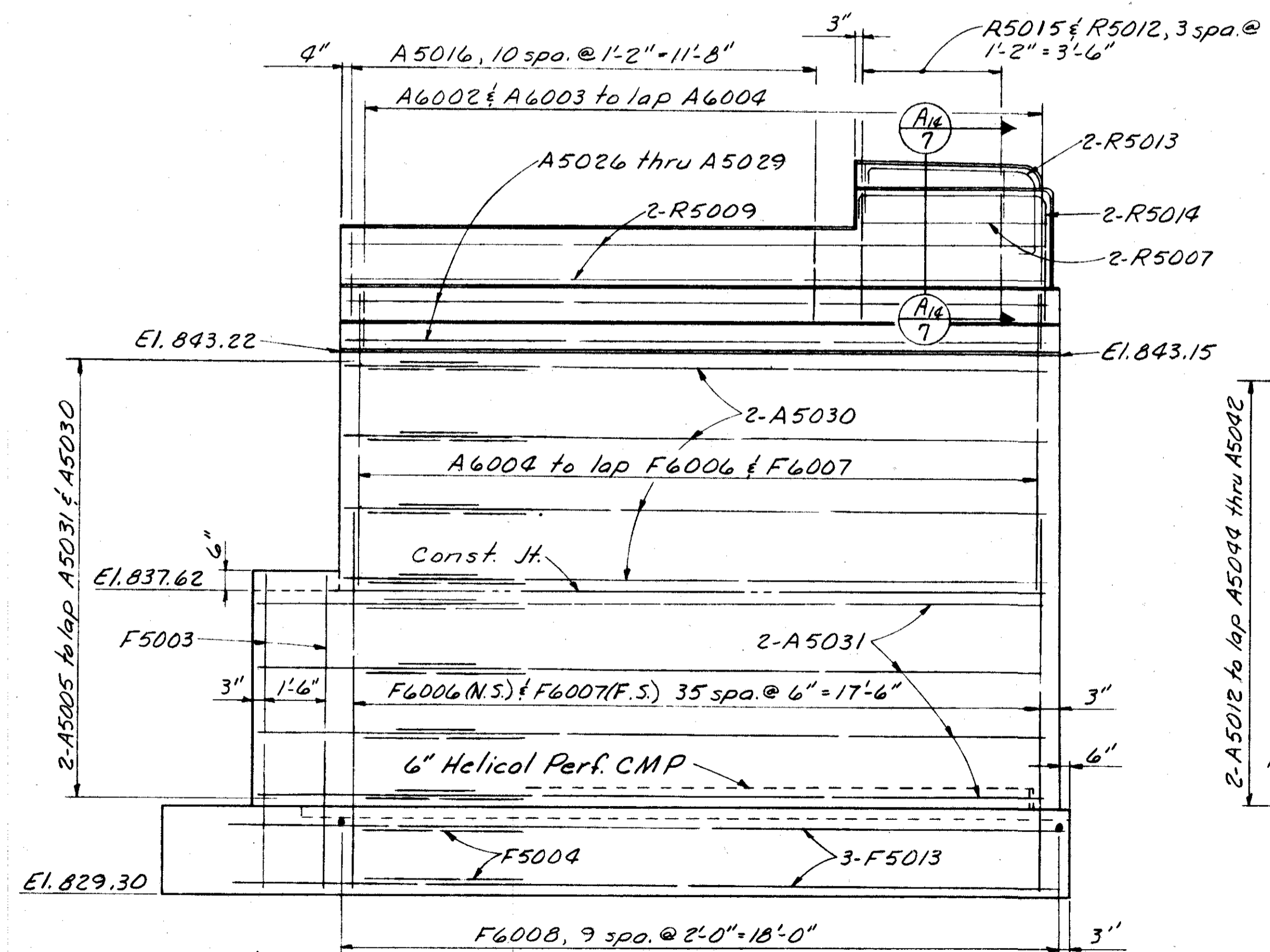
For underpass lighting details see sheet 329.



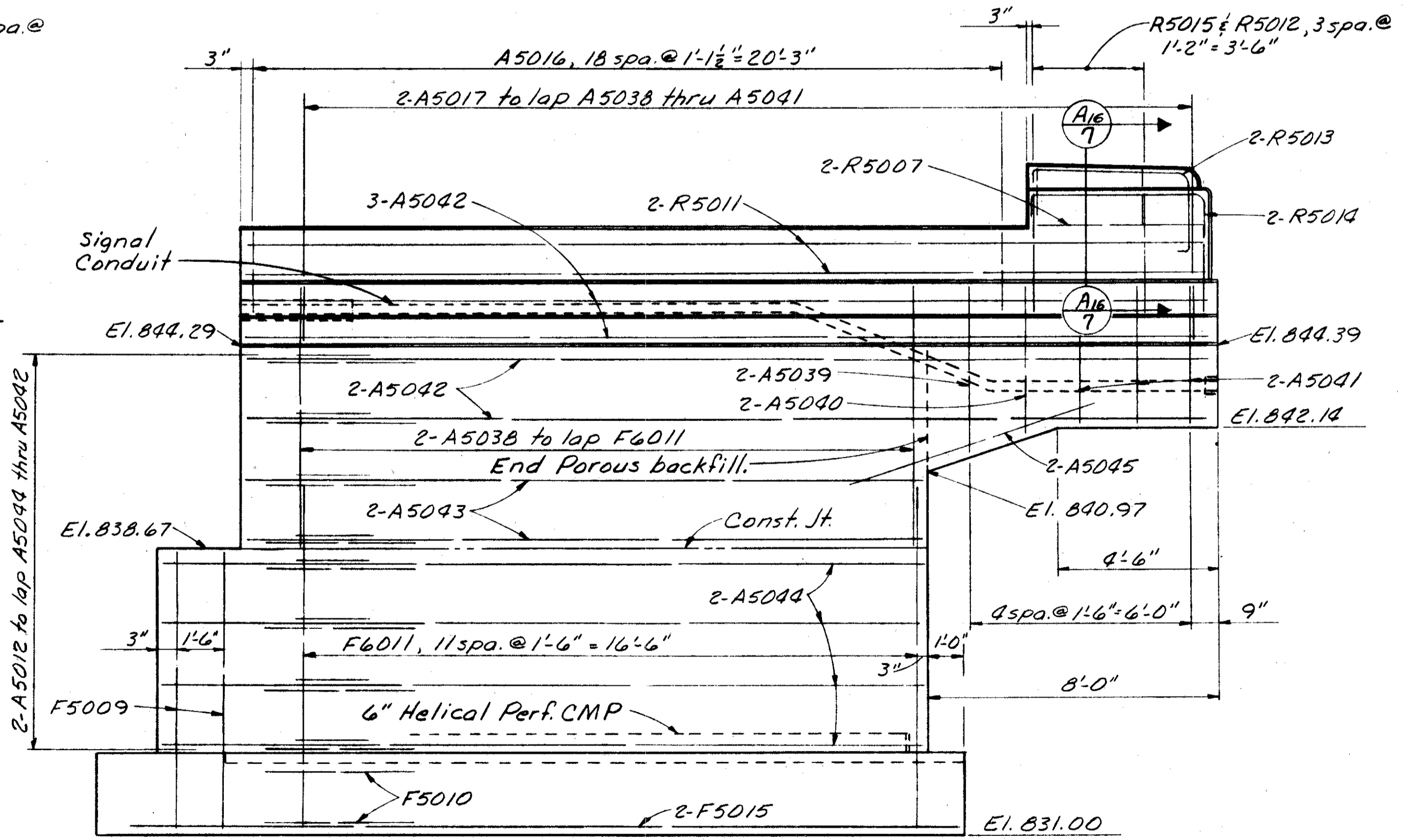
VIEW-A1-A1
 See sheet 4/17



VIEW-A7-A7
 See sheet 5/17



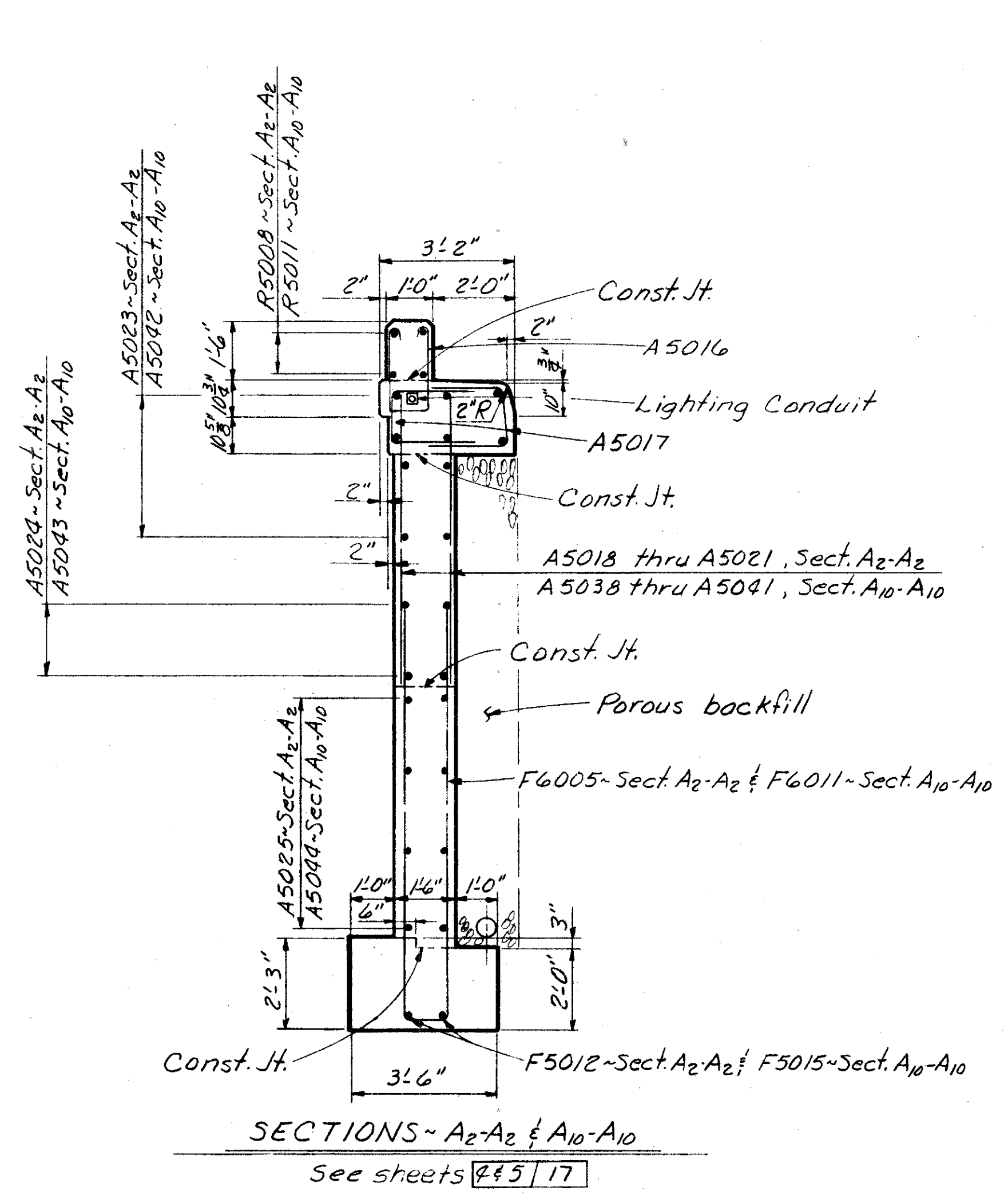
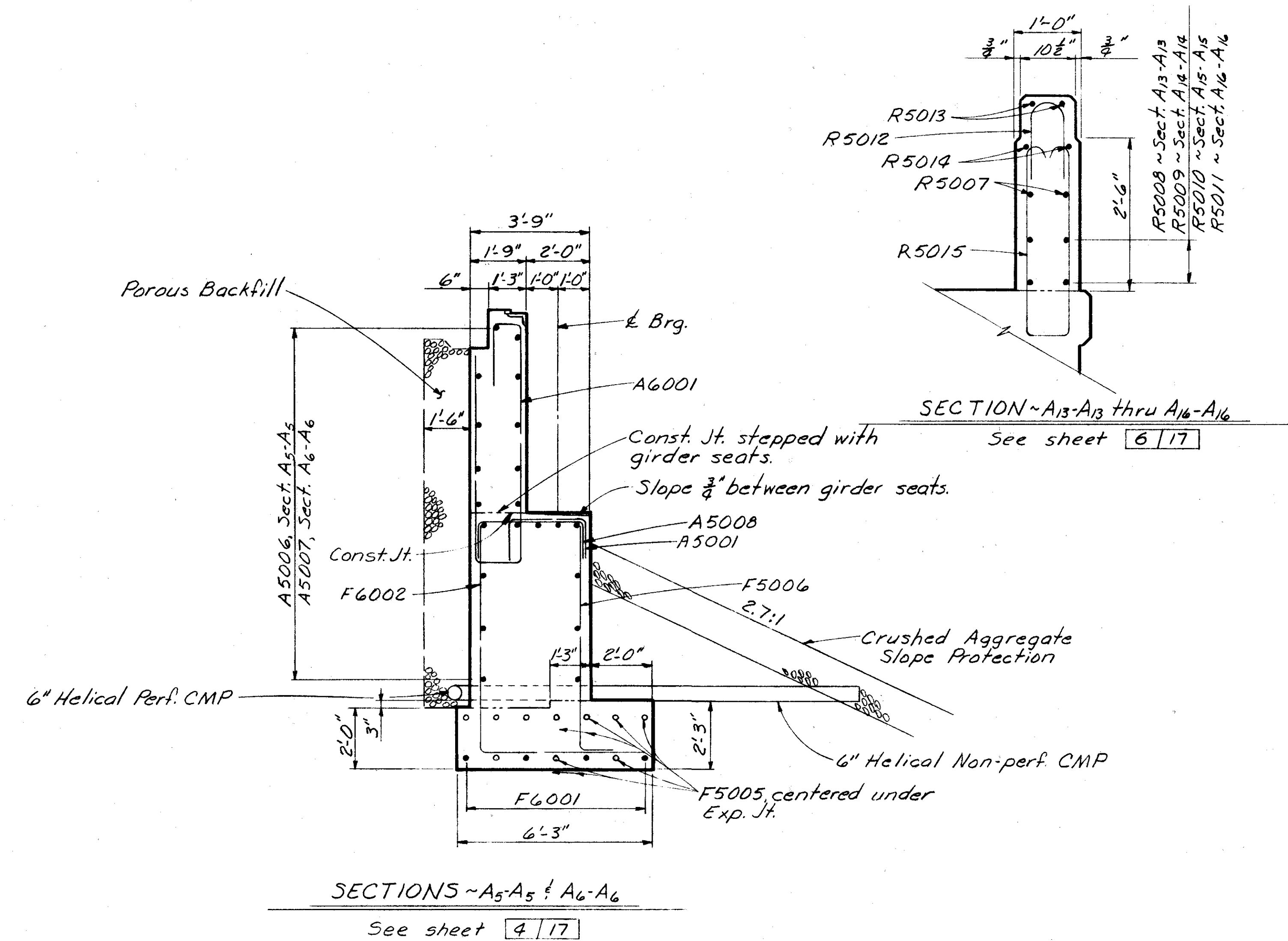
VIEW-A3-A3
 See sheet 4/17



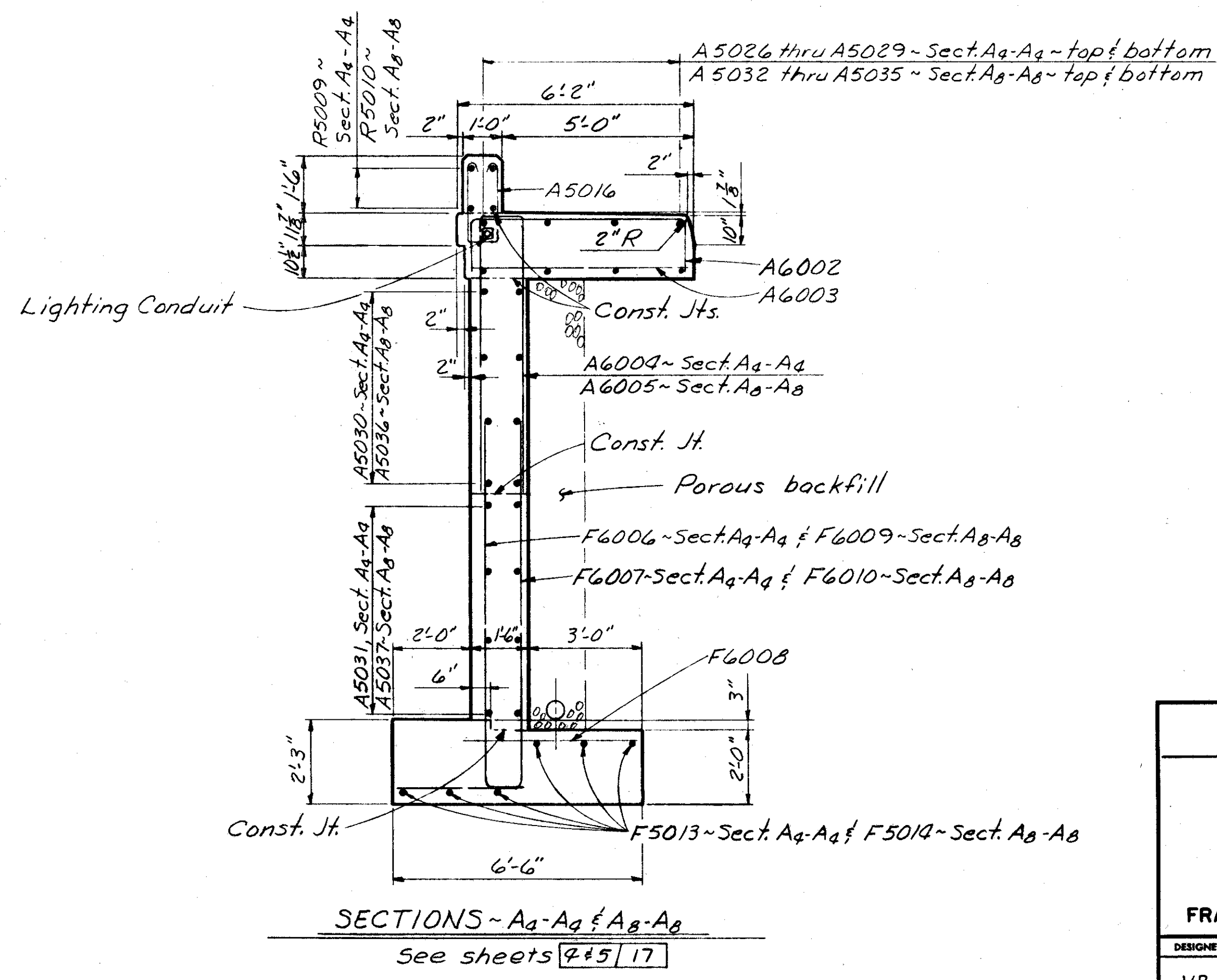
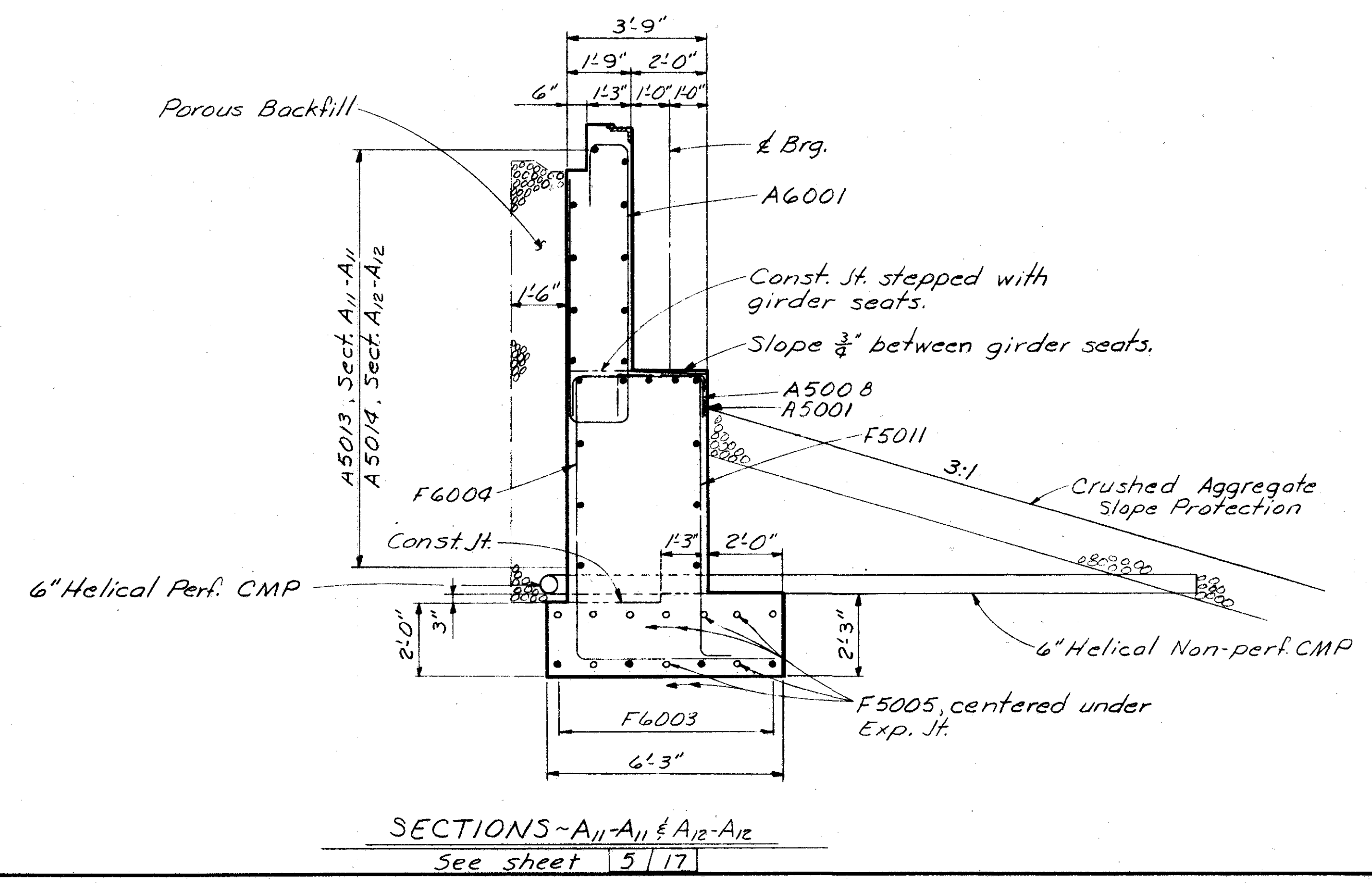
VIEW-A9-A9
 See sheet 5/17

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
6/17						
ABUTMENT DETAILS						
BRIDGE N ^o FRA-70-0794						
I-70 under WILSON ROAD						
FRANKLIN COUNTY STA. 81+17.77						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/8/68	

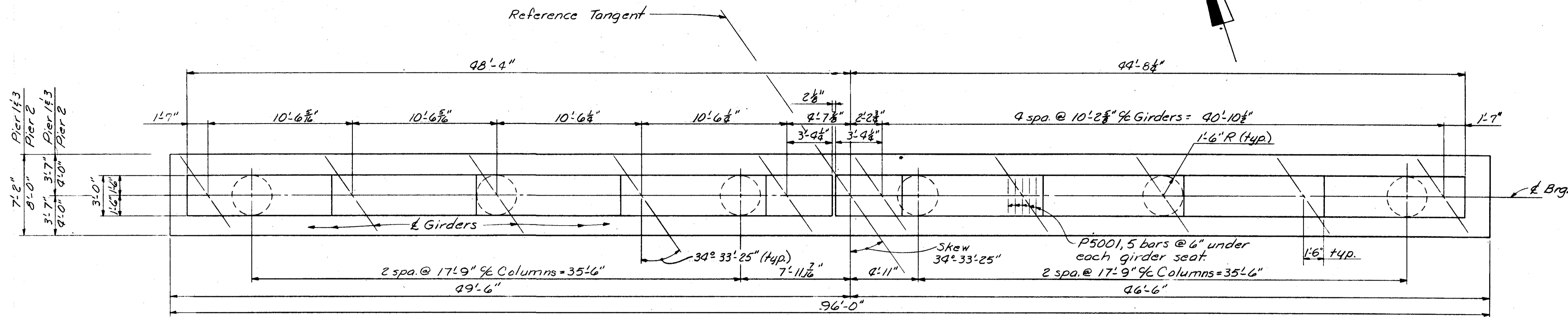
FRANKLIN COUNTY
FRA-70-7.60
FRA-33-12.96



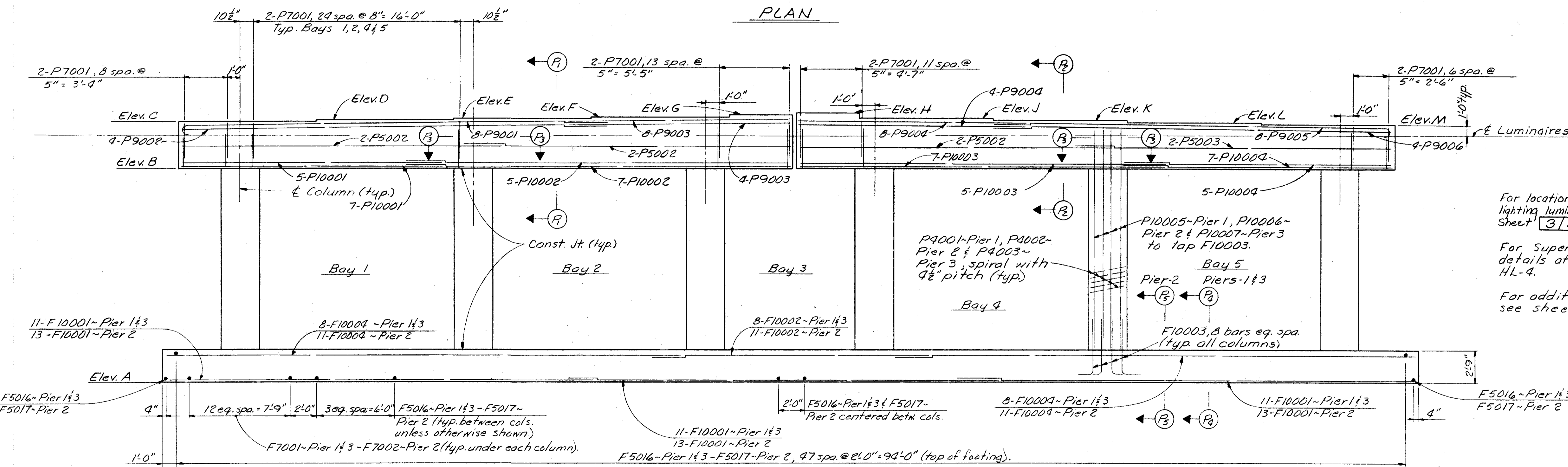
NOTES
For additional notes and details see sheets 4, 5 & 6/17



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
						7/17
ABUTMENT DETAILS						
BRIDGE N° FRA-70-0794						
I-70 under WILSON ROAD						
FRANKLIN COUNTY STA. 81+17.77						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	7/5/68	



PLAN



ELEVATION

For location of underpass lighting luminaires see sheet 3/17
For Superstructure grounding details at Pier #2 see Std. Dwg. HL-4.
For additional details and notes see sheet 9/17

TABLE of ELEVATIONS

Location	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Elev. H	Elev. J	Elev. K	Elev. L	Elev. M
Pier 1	817.00	833.03	837.22	837.20	837.90	837.51	837.62	837.64	837.48	837.33	837.18	837.03
Pier 2	818.50	833.13	837.32	837.38	837.09	837.60	837.72	837.73	837.58	837.43	837.28	837.13
Pier 3	817.30	833.64	837.83	837.89	838.00	838.12	838.23	838.24	838.09	837.93	837.78	837.64

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO 8/17

PIER DETAILS
BRIDGE N° FRA-70-0794
I-70 under WILSON ROAD
FRANKLIN COUNTY STA. 81+17.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/5/68	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

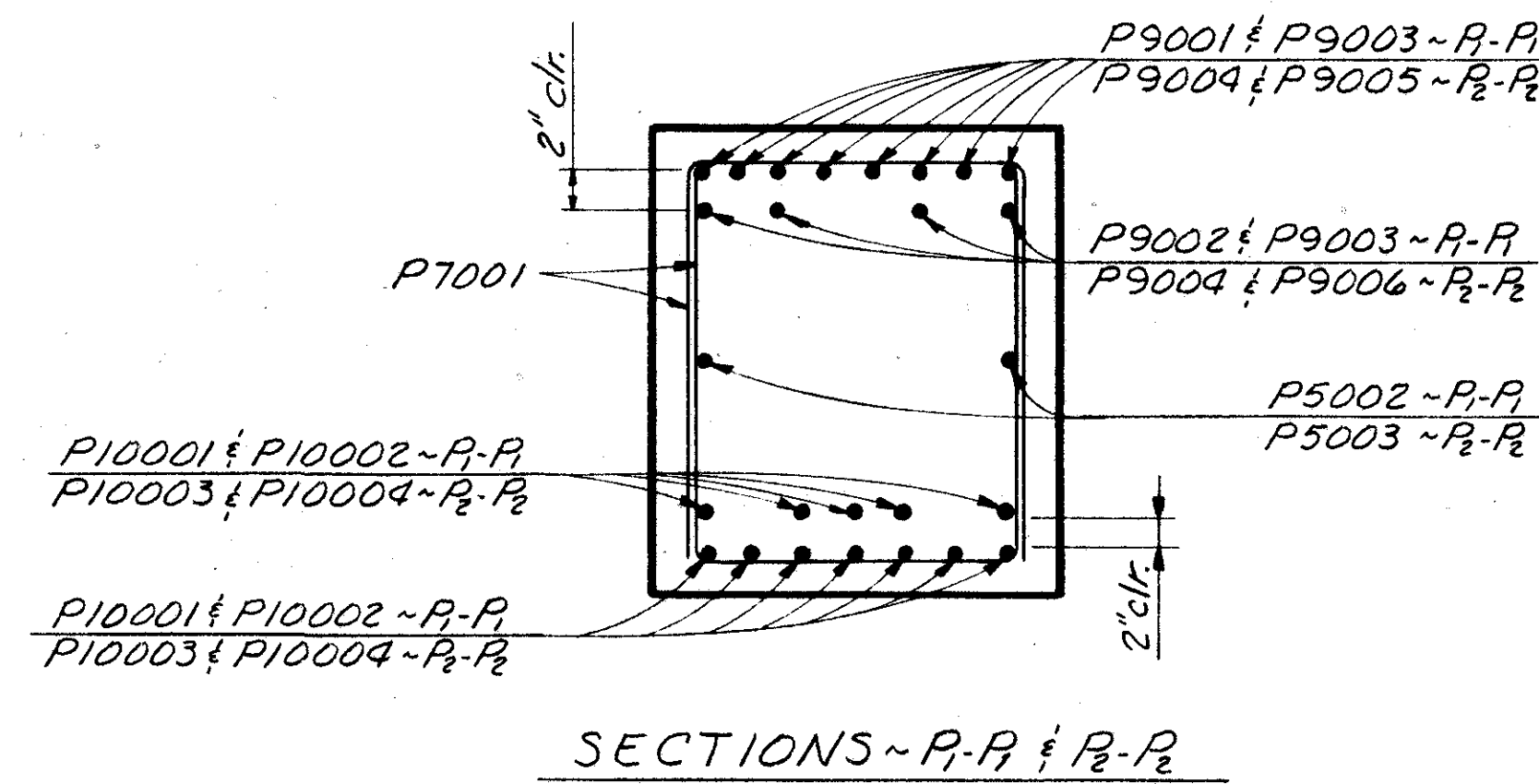
427
654

FRANKLIN COUNTY
FRA-70-7.60
FRA-33-12.96

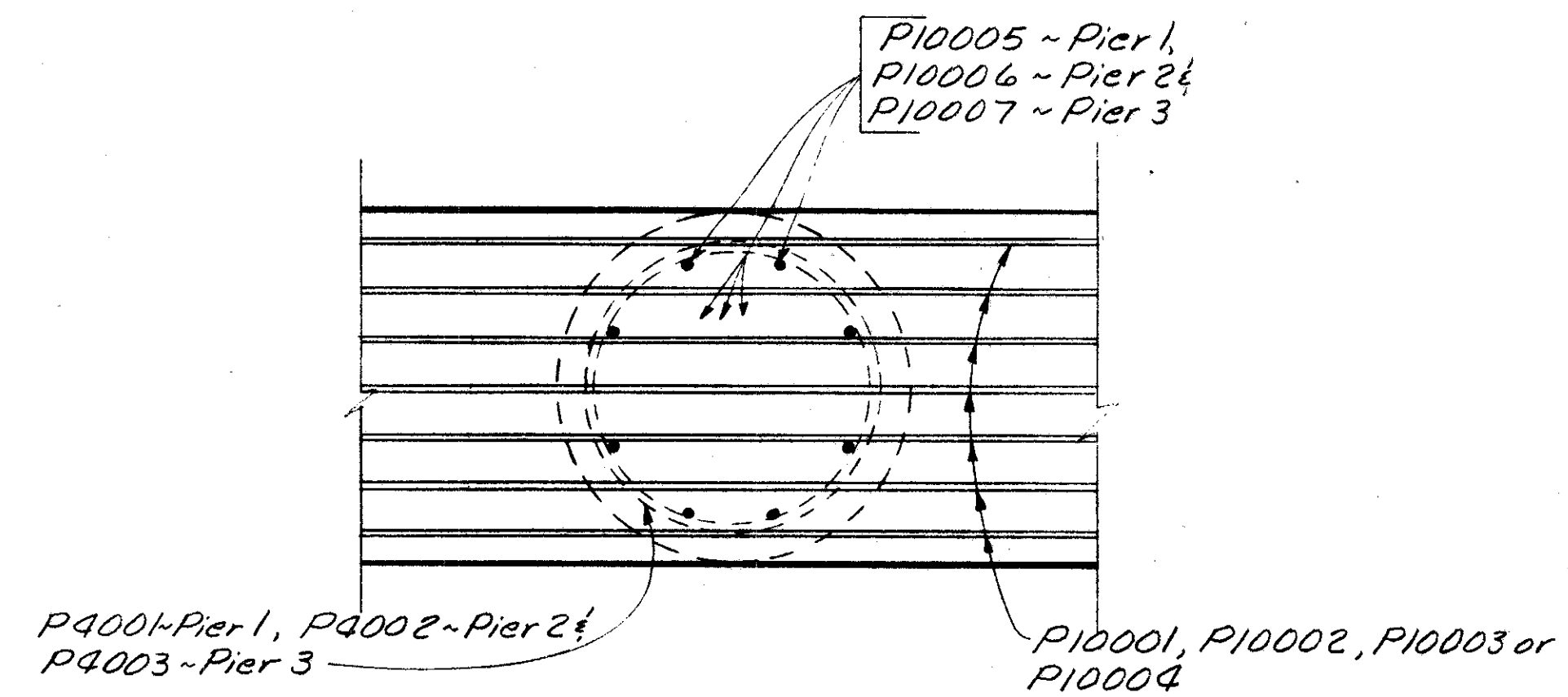
NOTES:

All reinforcing steel in footing shall have 3" min. clearance.

For additional details see sheet 8/17.

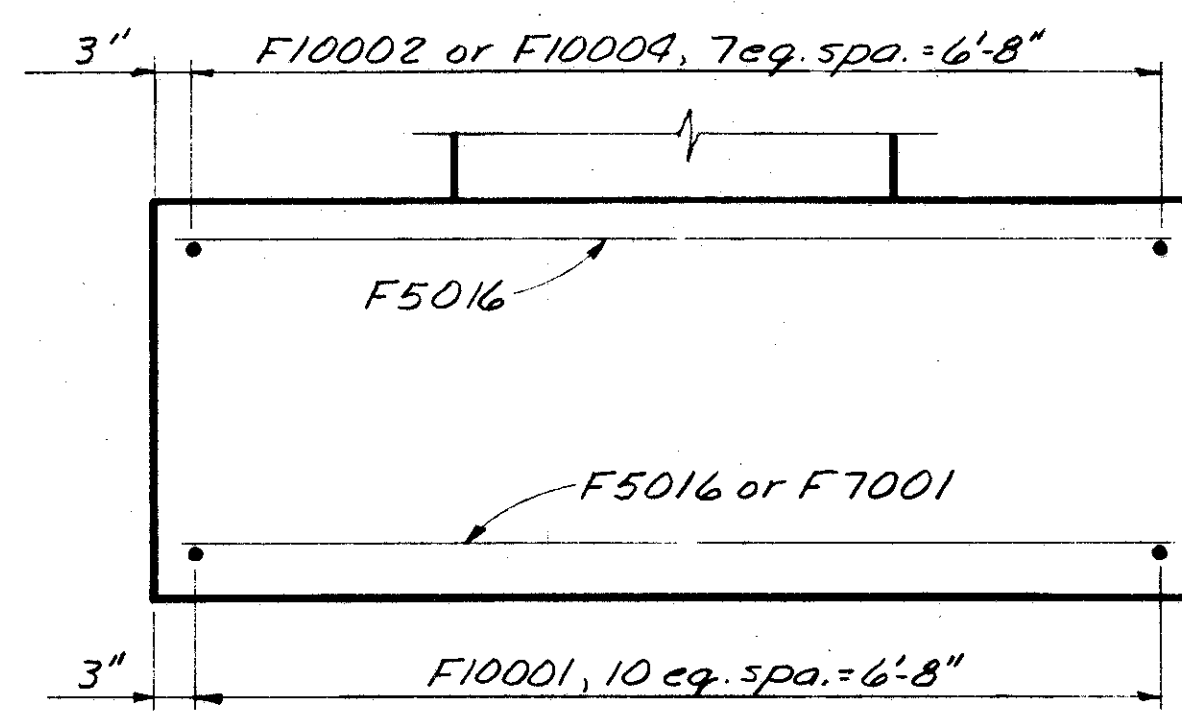


SECTION~P1-P1 & P2-P2

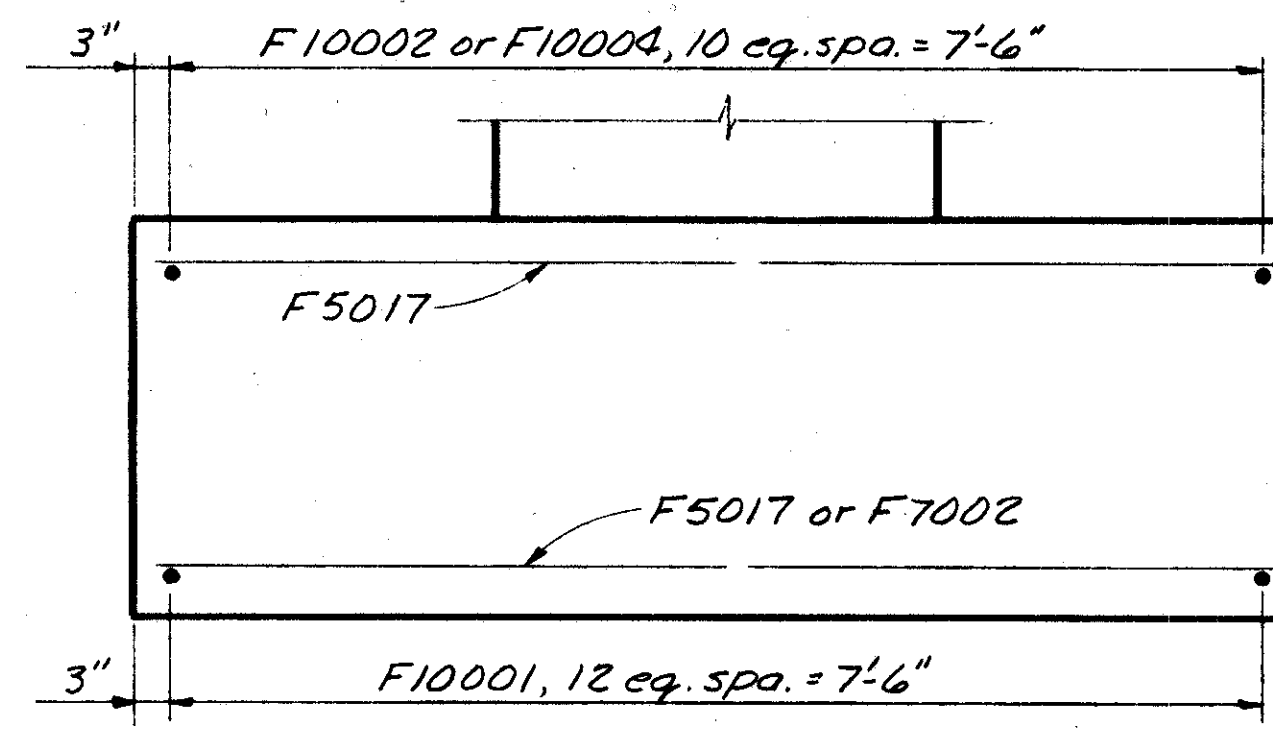


SECTION~P3-P3

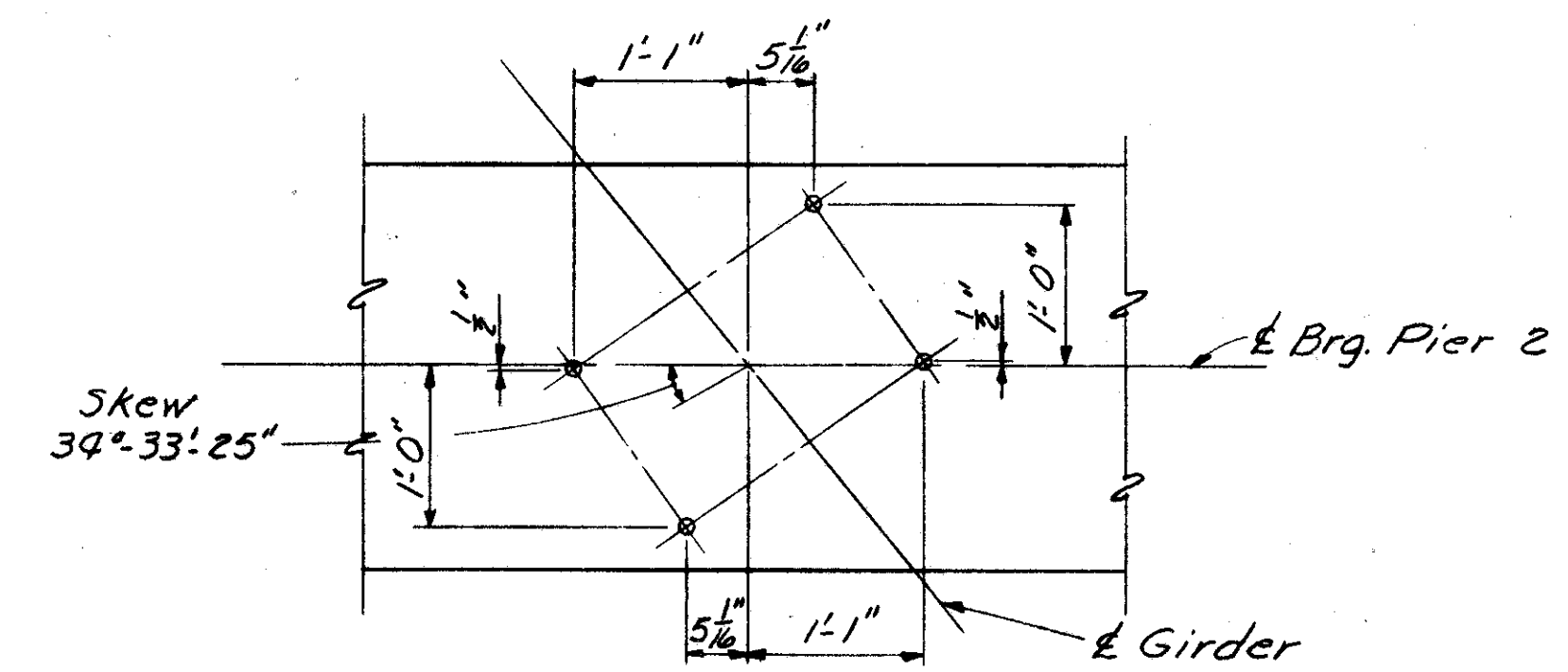
(Only bottom layer of bars shown)



SECTION~P4-P4
PIERS 1 & 3



SECTION~P5-P5
PIER 2



PIER-2 ANCHOR BOLT SETTING DETAIL

NOTE:

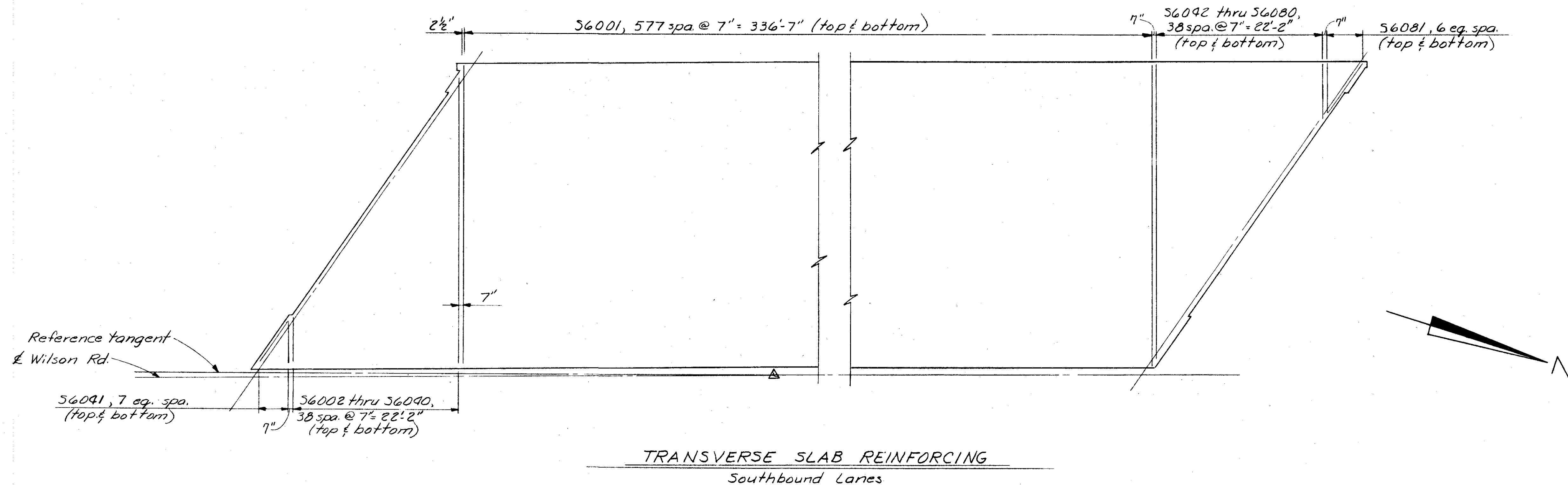
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bolt holes in Pier-2.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
9/17						
PIER DETAILS						
BRIDGE N ^o FRA-70-0794						
I-70 under WILSON ROAD						
FRANKLIN COUNTY STA. 81+17.77						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/5/68	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

429
654

FRANKLIN COUNTY
FRA-70-7.60
FRA-33-12.96

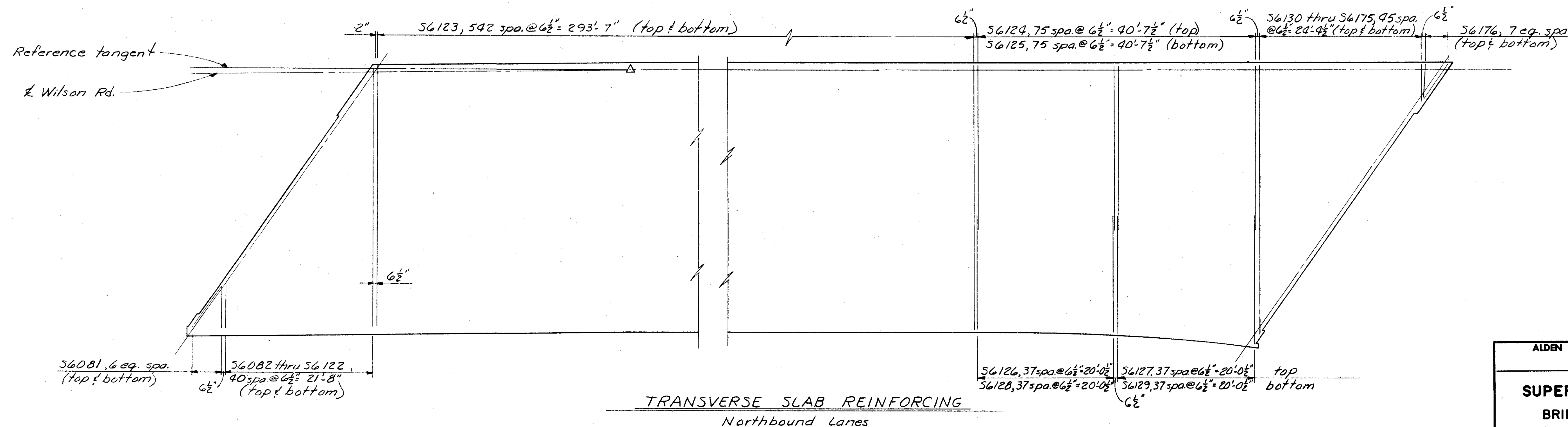


NOTES

Transverse reinforcing steel shall be placed normal to Reference tangent.

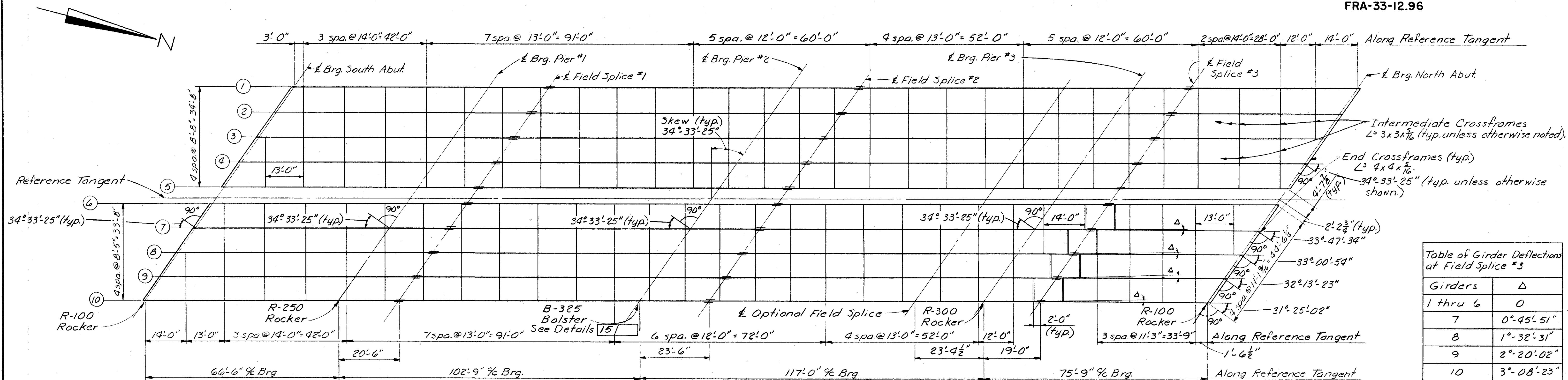
Lap transverse reinforcing steel 1'-11" minimum.

For additional notes and details see sheets 10/17 and 12/17 thru 15/17.



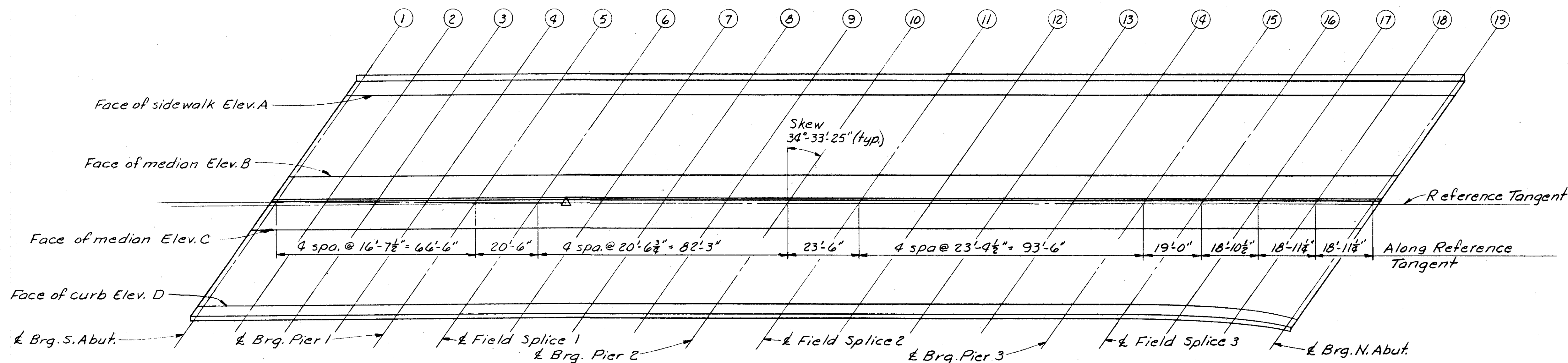
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							11/17
SUPERSTRUCTURE DETAILS							
BRIDGE N ^o FRA-70-0794							
I-70 under WILSON ROAD							
FRANKLIN COUNTY STA. 81+17.77							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
VB	DW		PHB	J.E.V.	3/5/68		

FRANKLIN COUNTY
FRA-70-760
FRA-33-12.96



NOTES

For End Crossframe details see Std. Dwg. SD-1-69.
Transverse ϵ of bearing devices shall be placed normal to Reference Tangent.
Elevations shown at the face of curbs and medians are those which are required before concrete is placed. Proper allowance has been made for dead load deflection caused by weight of concrete.
For additional notes and details see sheets 10/11/17 and 13/17 thru 15/17.

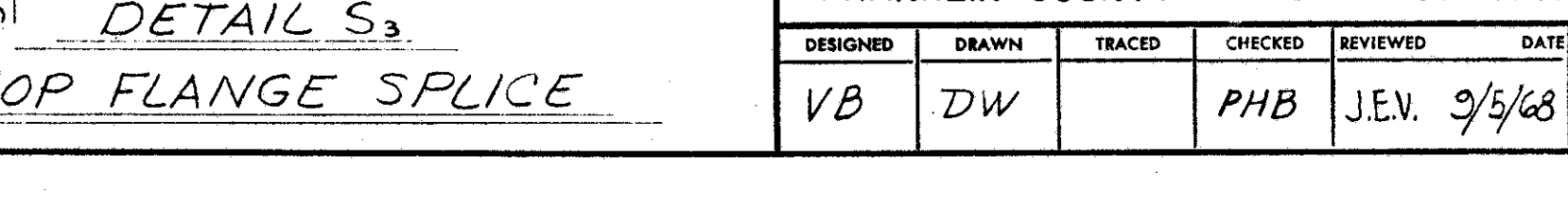
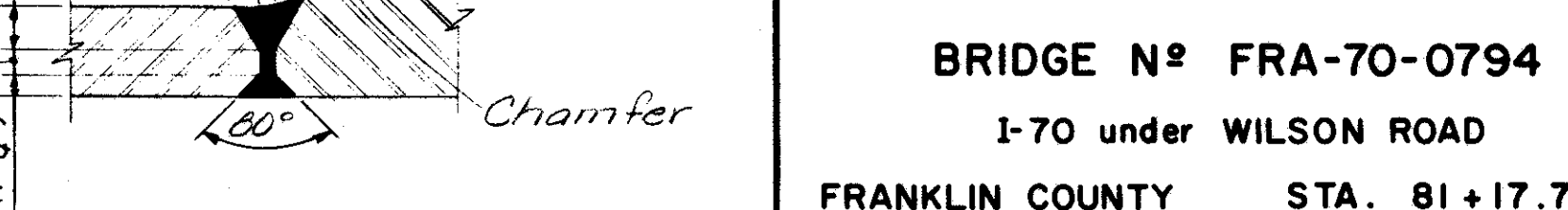
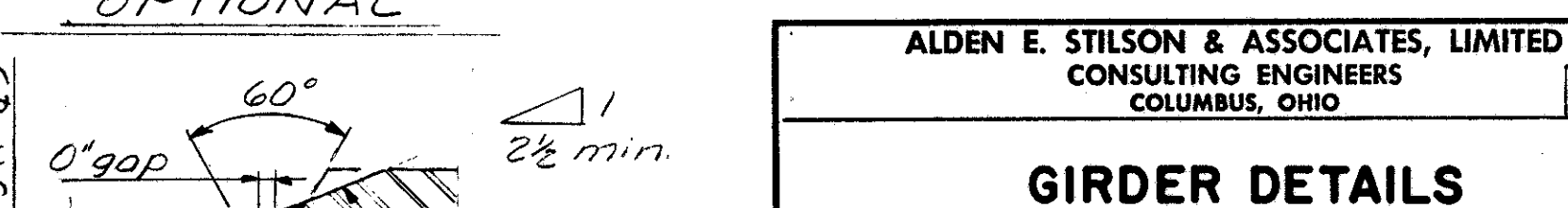
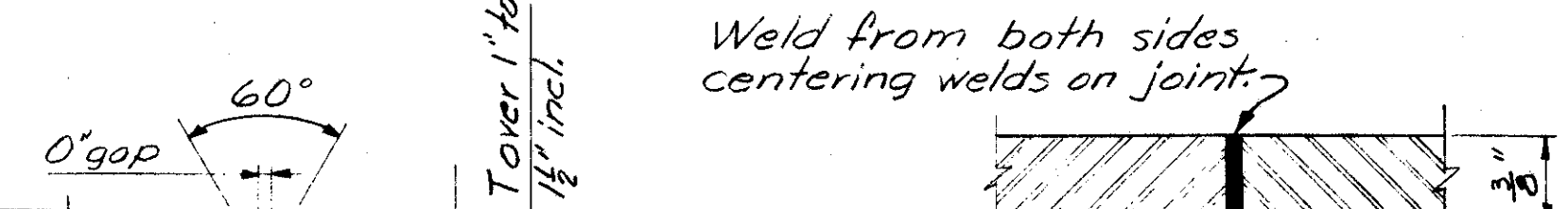
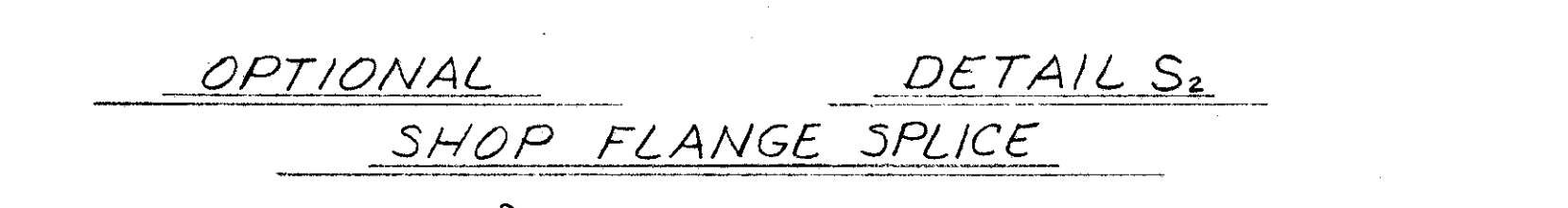
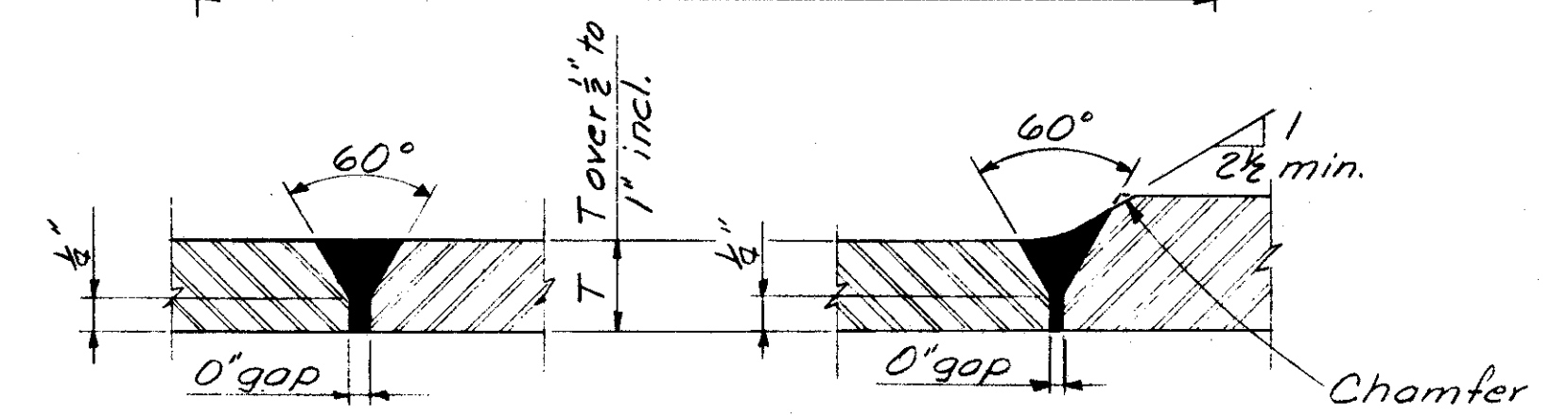
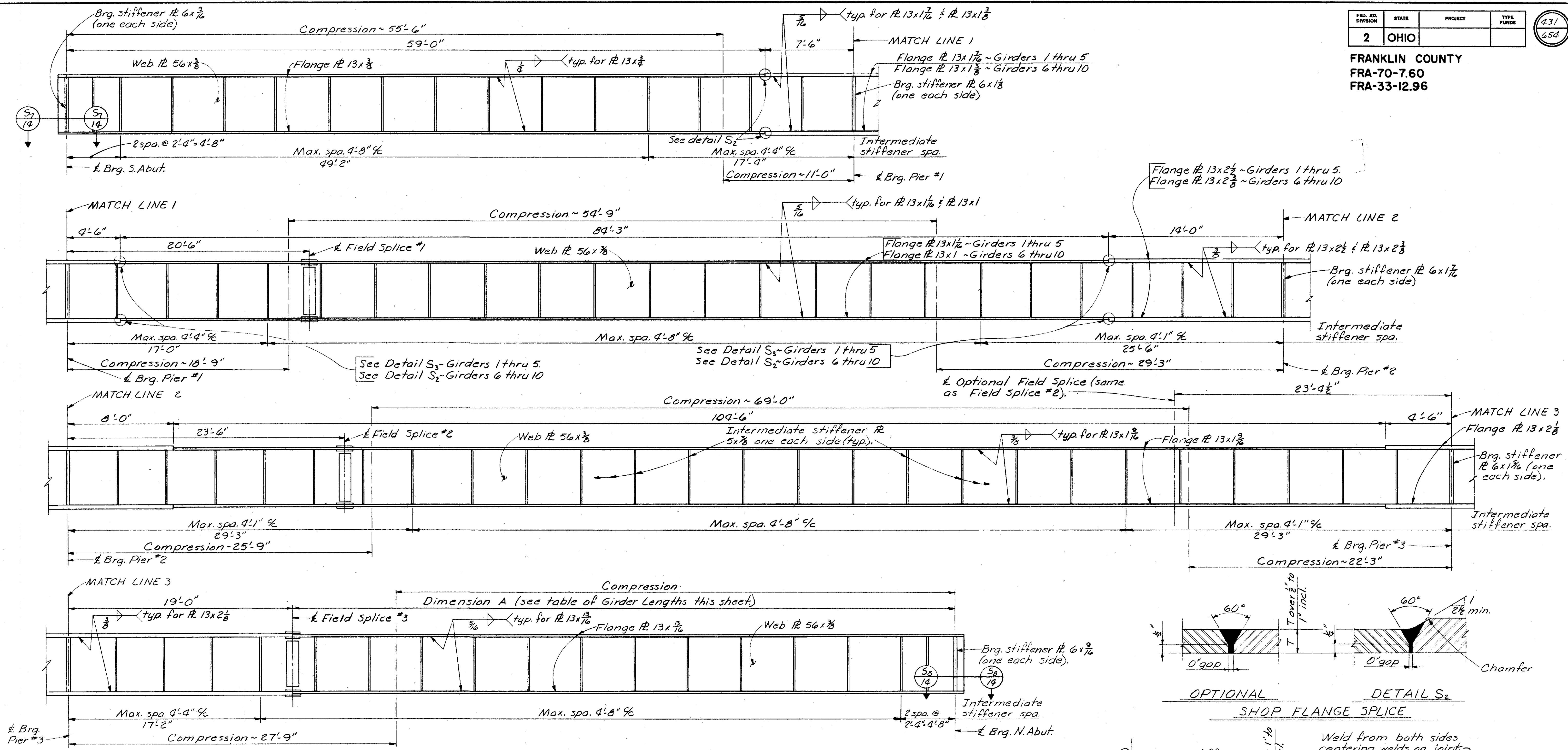


Elevations	Locations																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A	844.11	844.19	844.25	844.30	844.35	844.45	844.55	844.61	844.66	844.72	844.84	844.97	845.06	845.10	845.15	845.21	845.30	845.37	845.42
B	844.47	844.54	844.60	844.65	844.71	844.80	844.90	844.97	845.02	845.08	845.19	845.32	845.41	845.45	845.50	845.57	845.66	845.73	845.77
C	844.43	844.51	844.57	844.61	844.67	844.77	844.86	844.93	844.97	845.04	845.16	845.29	845.37	845.42	845.46	845.53	845.62	845.69	845.73
D	843.94	844.02	844.07	844.12	844.18	844.27	844.37	844.44	844.49	844.55	844.67	844.79	844.88	844.92	844.97	845.04	845.12	845.16	845.18

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO 12/17

SUPERSTRUCTURE DETAILS
BRIDGE N^o FRA-70-0794
I-70 under WILSON ROAD
FRANKLIN COUNTY STA. 81+17.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/5/68	



NOTES

Shop web splices may be made at any of the designated camber points.

Locate intermediate stiffeners to serve as attachments for intermediate crossframes.

For additional notes and details see Sheet 10/17 thru 12/17 and 14/15/17.

All full penetration welds shall be back-gauged and welded after welding for side.

Butt welds for flanges over 1/2" thick shall conform to joint details B-U3a-S or B-U7-S, Figure 216, of the AWS Specifications.

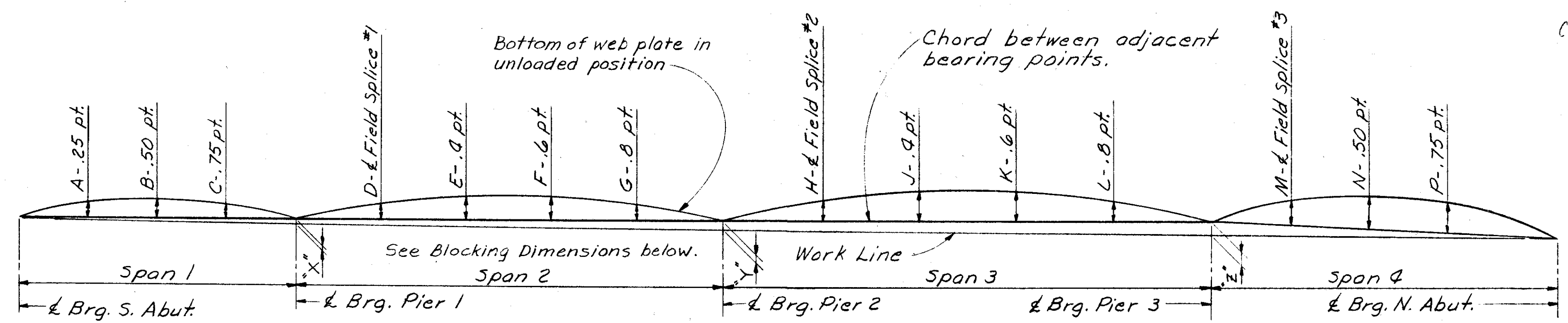
GIRDER ELEVATION

GIRDER LENGTHS	
Girders	Dim. A
1 thru 6	56'-9"
7	56'-2 3/8"
8	55'-8 3/8"
9	55'-3"
10	54'-9 3/8"

ALDEN E. STILSON & ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 COLUMBUS, OHIO 13/17

GIRDER DETAILS
 BRIDGE N° FRA-70-0794
 I-70 under WILSON ROAD
 FRANKLIN COUNTY STA. 81+17.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/5/68	

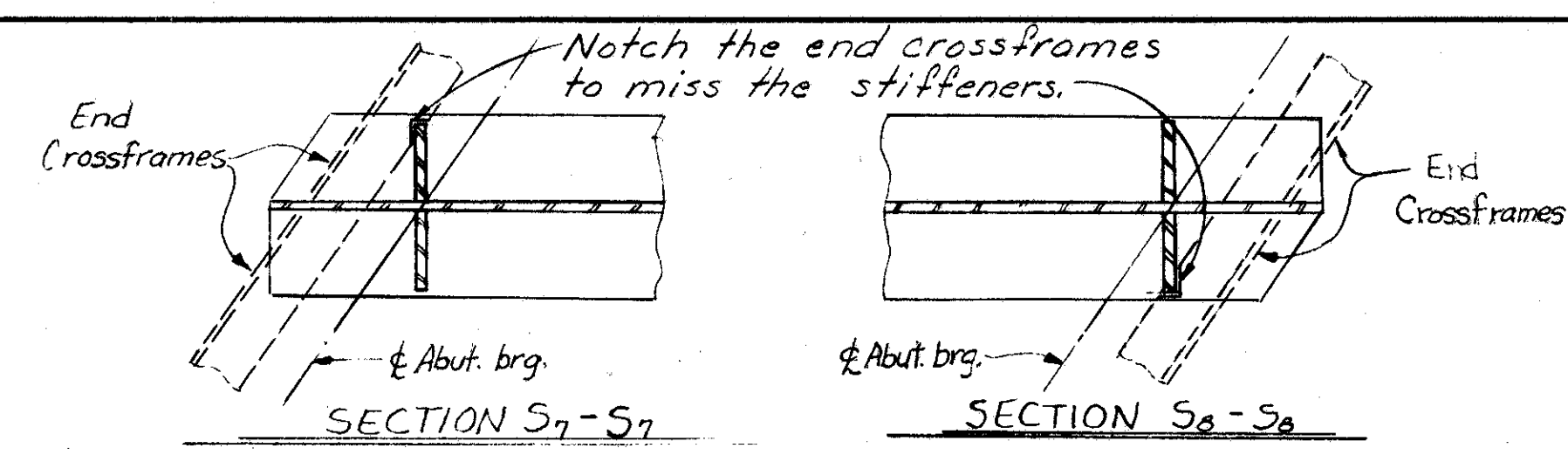


CAMBER and BLOCKING DIAGRAM

DEFLECTION and CAMBER		Span 1		Span 2				Span 3				Span 4			
Girders	Deflection due to	A	B	C	D	E	F	G	H	J	K	L	M	N	P
1 & 5	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	3/16	3/16	1/16	1/8	9/16	7/16	1/8	3/8	7/8	15/16	7/16	0	1/4	1/4
	Required Shop Camber	3/16	3/16	1/16	5/16	5/8	1/2	1/8	7/16	17/16	17/8	1/2	0	1/4	1/4
2, 3 & 4	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	1/4	1/4	1/16	5/16	5/8	1/2	1/8	7/16	1	1	1/2	0	1/4	1/4
	Required Shop Camber	1/4	1/4	1/16	3/8	11/16	9/16	1/8	1/2	17/16	17/8	9/16	0	1/4	1/4
6	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	3/16	3/16	1/16	1/8	9/16	7/16	1/8	3/8	7/8	15/16	7/16	0	1/4	1/4
	Required Shop Camber	3/16	3/16	1/16	5/16	5/8	1/2	1/8	7/16	17/16	17/8	1/2	0	1/4	1/4
7	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	1/4	1/4	1/16	5/16	5/8	1/2	1/8	7/16	15/16	1	1/2	0	1/4	1/4
	Required Shop Camber	1/4	1/4	1/16	3/8	5/8	9/16	1/8	1/2	17/16	17/8	9/16	0	1/4	1/4
8	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	1/4	1/4	1/16	5/16	5/8	1/2	1/8	7/16	15/16	1	1/2	0	1/4	1/4
	Required Shop Camber	1/4	1/4	1/16	3/8	5/8	9/16	1/8	1/2	17/16	17/8	9/16	0	1/4	1/4
9	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	1/4	1/4	1/16	5/16	5/8	1/2	1/8	7/16	15/16	1	1/2	0	1/4	1/4
	Required Shop Camber	1/4	1/4	1/16	3/8	5/8	9/16	1/8	1/2	17/16	17/8	9/16	0	1/4	1/4
10	Weight of steel	0	0	0	1/16	1/16	1/16	0	1/16	3/16	3/16	1/16	0	0	0
	Remaining Dead Load	3/16	3/16	1/16	1/8	9/16	7/16	1/8	3/8	7/8	15/16	7/16	0	1/4	1/4
	Required Shop Camber	3/16	3/16	1/16	5/16	5/8	1/2	1/8	7/16	17/16	17/8	1/2	0	1/4	1/4

Splice	Girder	a	b	c	n
1	1 thru 5	1/2	3/8	17/16	4
	6 thru 10	1/2	3/8	1	4
2	1 thru 5	3/4	13/16	13/16	6
	6 thru 10	3/4	13/16	13/16	6

Girder	"X"	"Y"	"Z"
1 thru 7	0	0	0
8	0	1/8	0
9	0	1/4	1/8
10	0	1/4	3/8



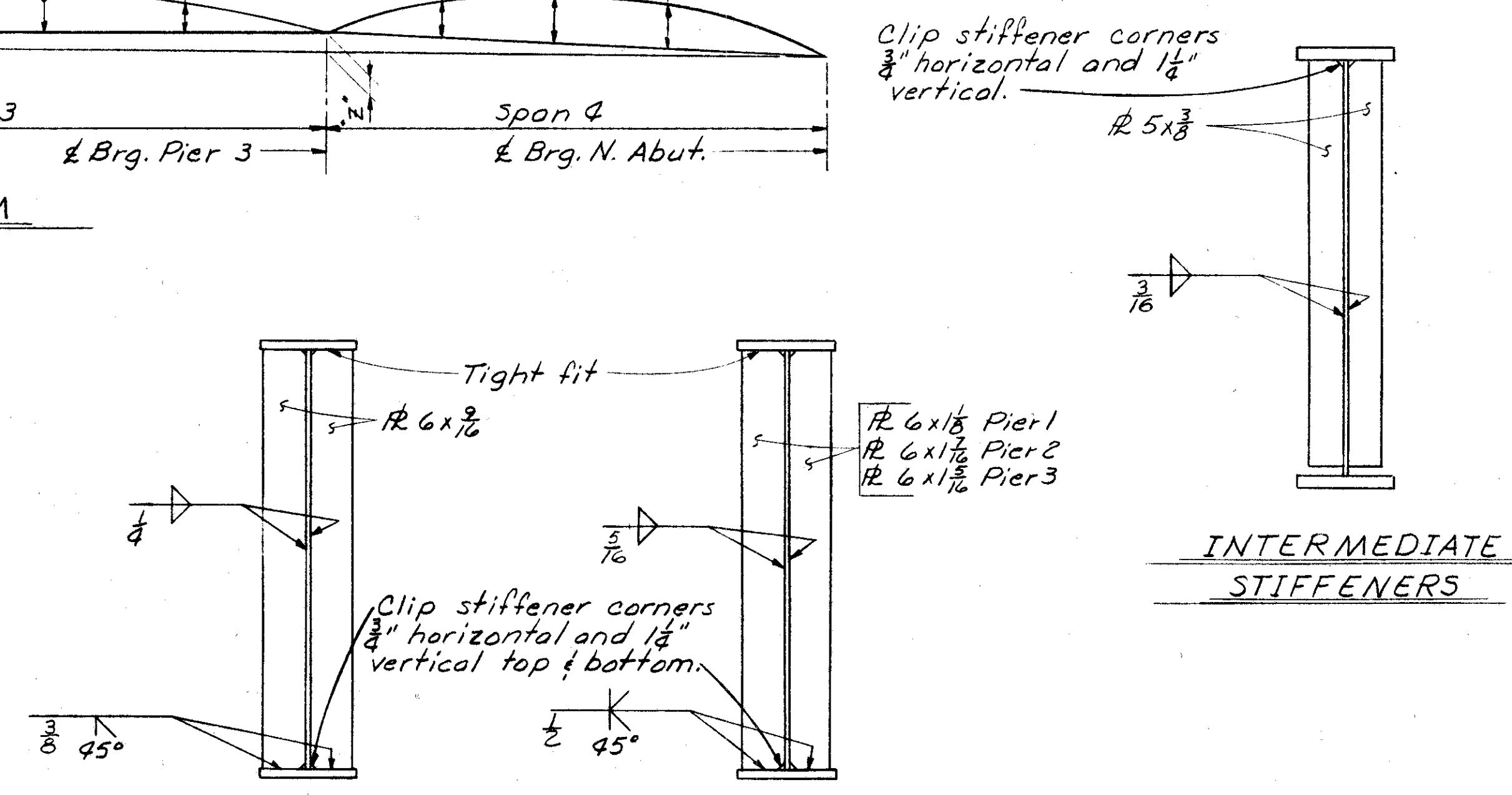
NOTES

Intermediate stiffeners shall have tight fit on compression flange and 1/4" clearance at tension flange. For location of compression flange see Sheet 13/17.
 Intermediate stiffeners shall be spaced to miss field web splice plates by a minimum of 6".

1" high strength bolts in 1 1/4" holes shall be used at field splices. Bolt heads shall be placed on fascia side of girders, and 10 and on the bottom surface of all bottom flanges.

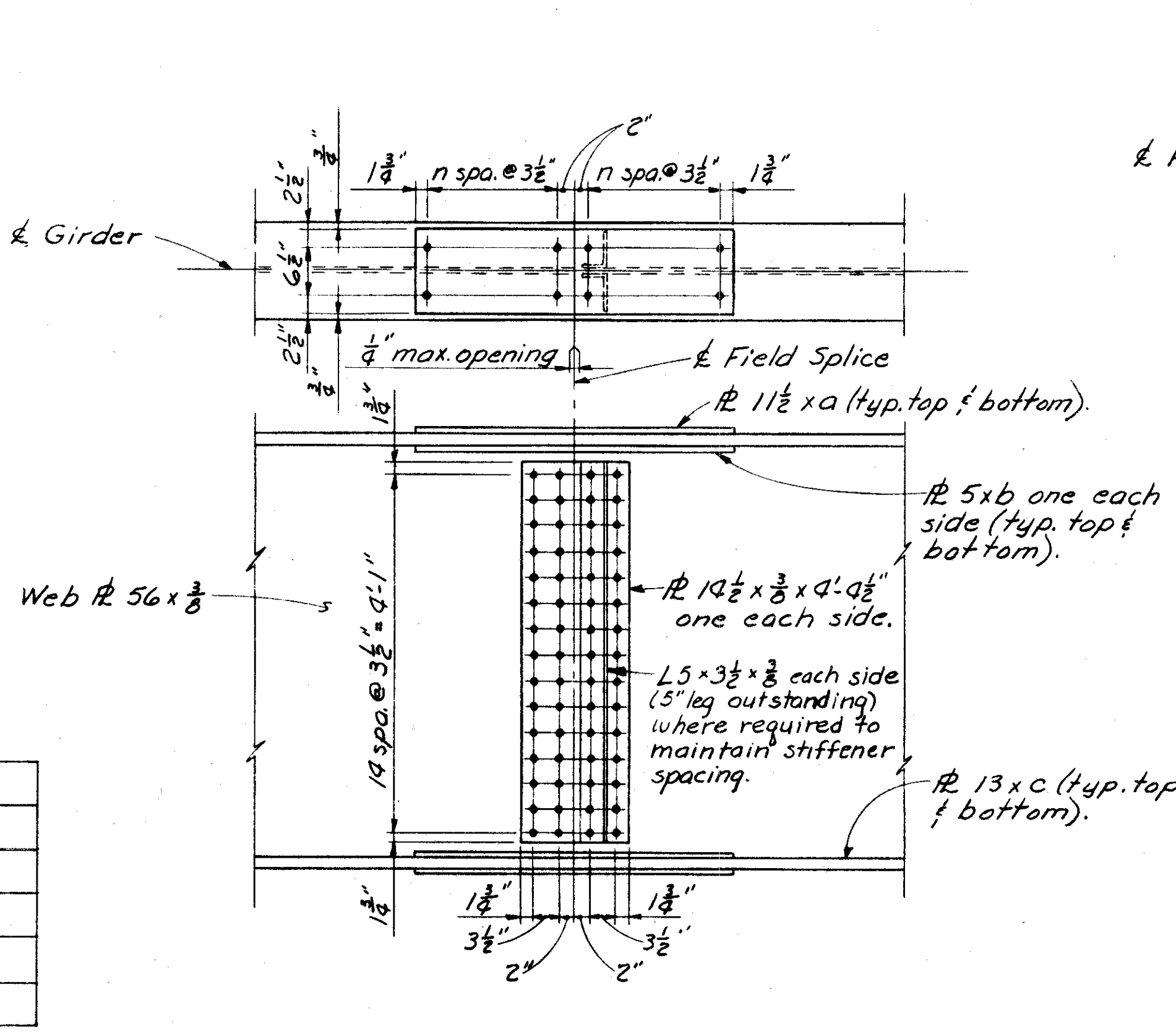
For end dam details see Std. Dwg. SD-1-69.

For additional notes and details see Sheet 10/17 thru 13/17 and 15/17.

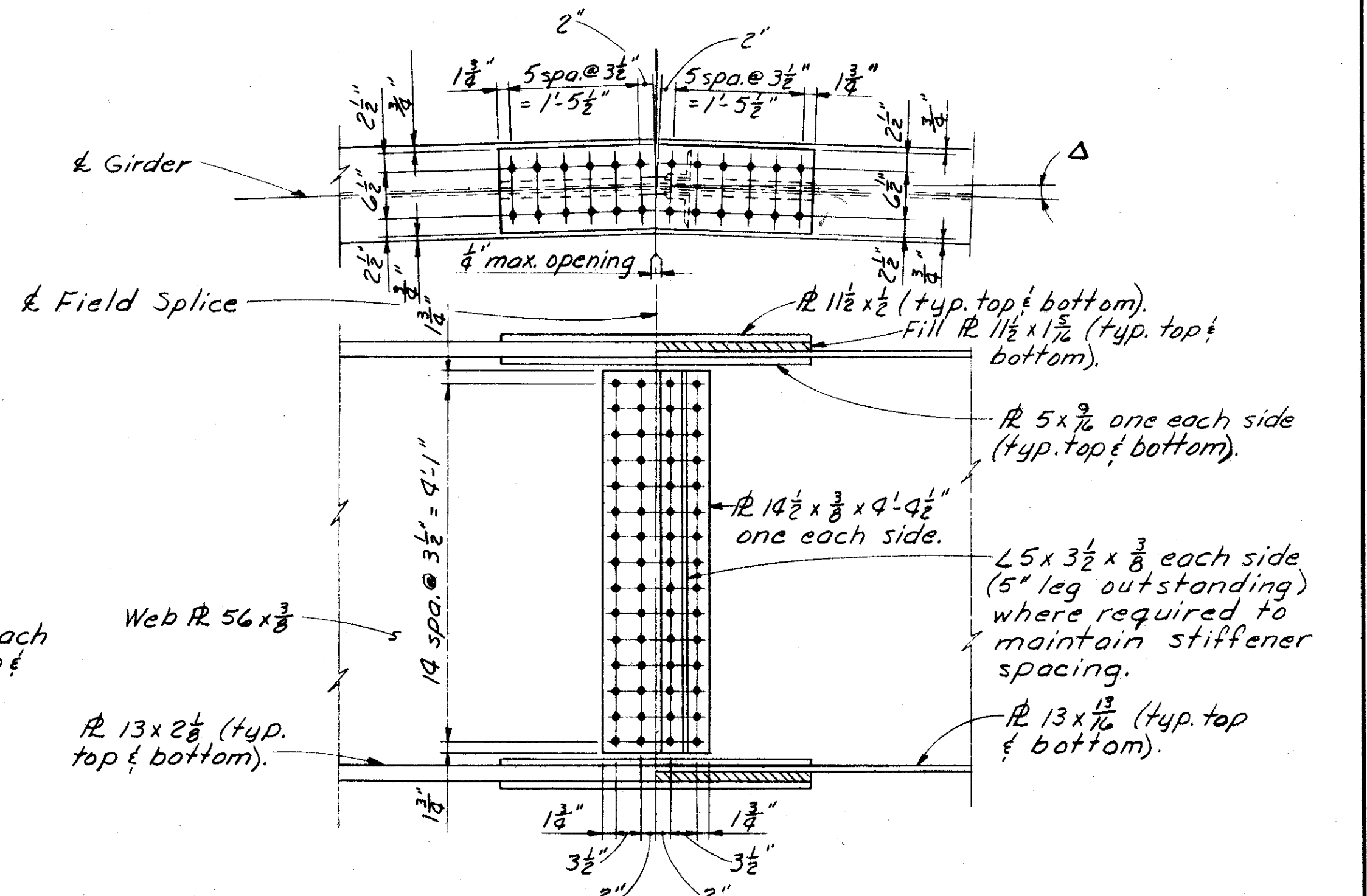


INTERMEDIATE STIFFENERS

ABUTMENTS PIERS BEARING STIFFENERS



SPLICE 1 & 2 DETAILS



SPLICE 3 DETAILS

See sheet 12/17 for Deflection Angle Δ.

14/17

ALDEN E. STILSON & ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE N° FRA-70-0794
 I-70 under WILSON ROAD
 FRANKLIN COUNTY STA. 81+17.77

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VB	DW		PHB	J.E.V.	9/5/68	

