

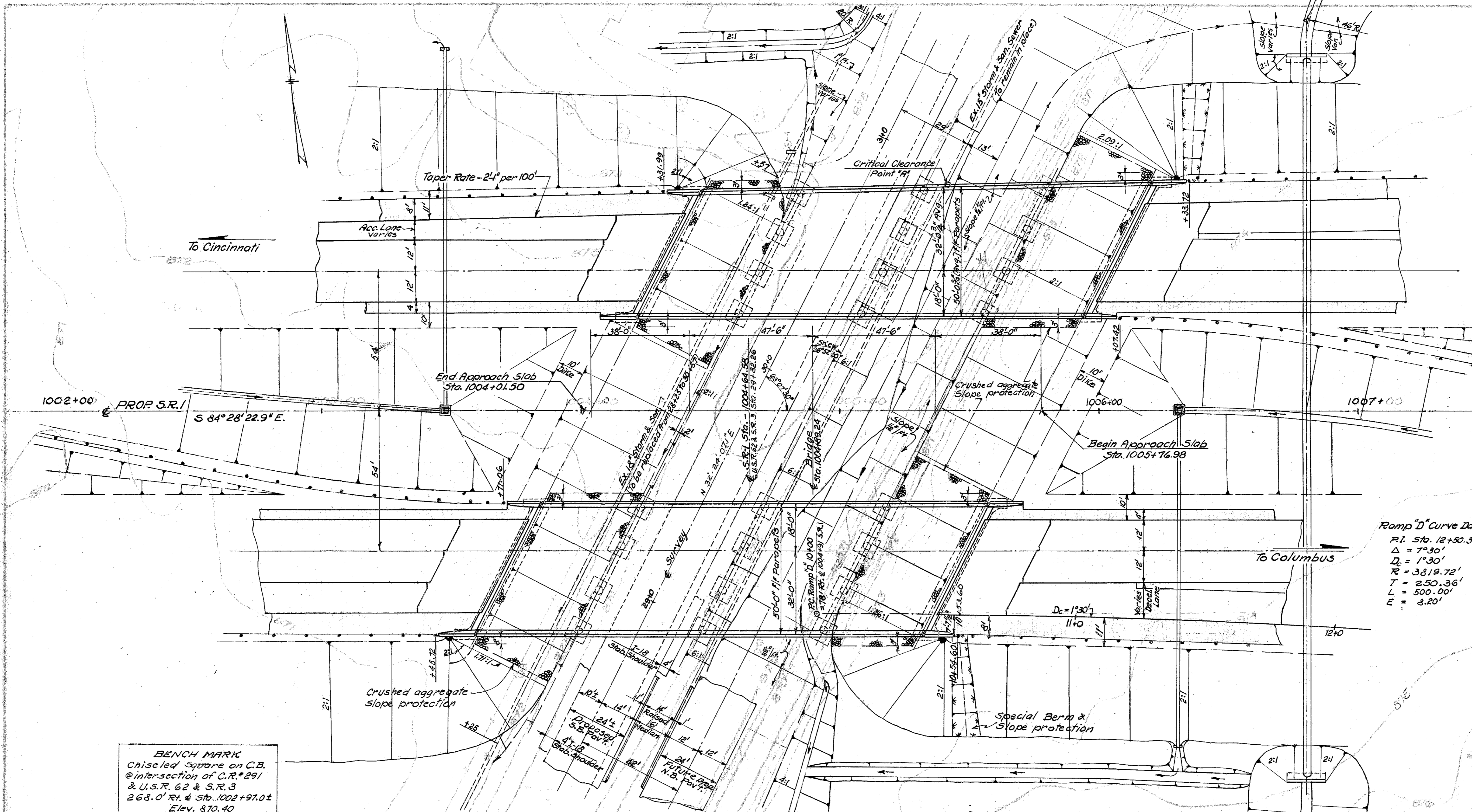
PICKAWAY-FRANKLIN COUNTY
 PIC-1-3.06 FRA-1-0.00

FOUNDATION SOUNDINGS

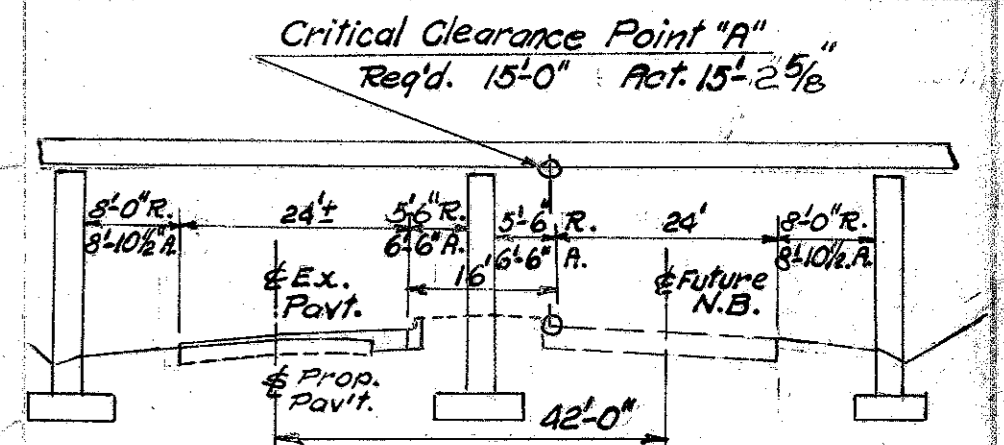
Foundation design and foundation quantities are based on a study of soil-sampling soundings made of the Site. The sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

EMBANKMENT PROCEDURE

The embankment shall be placed and compacted to the finished spill-thru slope and to the level of the subgrade for a distance of 200' back of the abutments, before const. of the Rear & Fwd. Piers and for a minimum period of 60 days prior to beginning construction of the abutments, unless approved settlement hubs indicate settlement has ceased. After settlement has ceased excavation shall be made for the abutments and piers.



Ramp 'D' Curve Data:
 P.I. Sta. 12+50.36
 $\Delta = 7^{\circ}30'$
 $D_c = 1^{\circ}30'$
 $R = 3819.72'$
 $T = 250.36'$
 $L = 500.00'$
 $E = 8.20'$

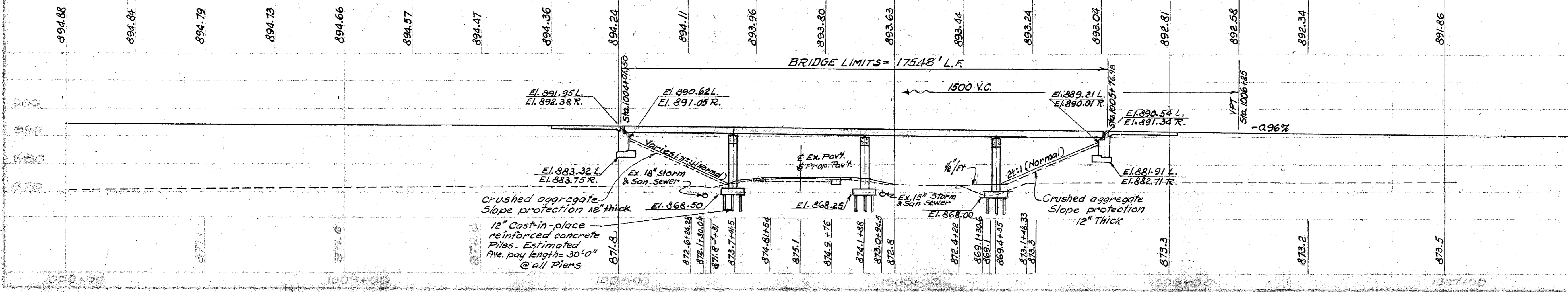


FUTURE CLEARANCE DIAGRAM
 SECTION NORMAL TO U.S.R. 62 & S.R.3

PROPOSED BRIDGE DATA

TYPE: Continuous concrete slab with concrete substructure.
 SPANS: 38'-0" - 47'-6" - 47'-6" - 38'-0"
 ROADWAY: Rt. Bridge 50'-0" Fl Parapets
 Lt. Bridge varies 50'-0" Avg.
 LOAD FREQUENCY: C.F.-2000 (S7) adequate for AASHTO alternate loading.
 SKEW: 26° 52' 30" L.F.
 APPROACH SLABS: 95'-1-54 [25' long] (Special)
 RAILING: Aluminum rail and supports with concrete parapet.
 ALIGNMENT: Tangent.
 WEARING SURFACE: 1" Monolithic concrete.

BENCH MARK
 Chiseled Square on C.B.
 @ intersection of C.R.#291
 & U.S.R. 62 & S.R.3
 268.0' Rt. & Sta. 1002+91.0±
 Elev. 870.40



HARRETT, CARGO, WITHERS AND ASSOCIATE LTD.
 Consulting Engineers
 242-244 S. Paint Street Columbus, OH

SITE PLAN

BRIDGE No. FRA-1-03/0 R & L
 S.R.-1 over U.S.R. 62 & S.R. 3
 S.R.-1 [I.R.-71] FRANKLIN COUNTY
 STA. 1004+01.50 To STA. 1005+76.98

W.C. W.C. L.P. 10/10/62

GENERAL NOTES:

REFERENCE shall be made to Standard Drawings AS-1-54, revised 7-5-62 and AR-1-57, revised 4-2-62.

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.

SURFACE FINISH OF CONCRETE: The requirements of Sec. 5-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

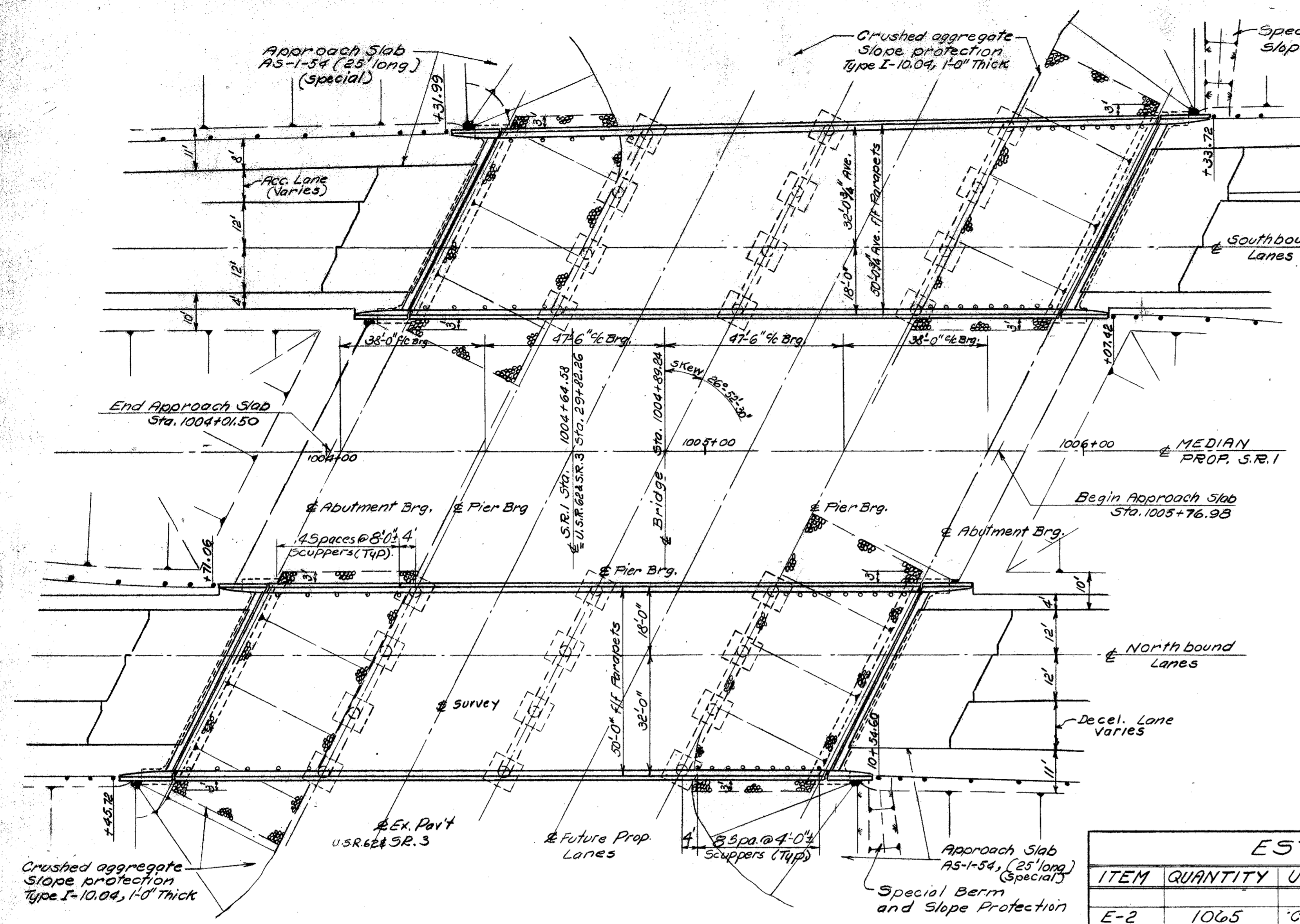
- a. The entire superstructure except the top and bottom surfaces of sidewalks and roadways
- b. The entire surface of piers and abutments except the face of spill-through abutments between the limits of the slab.

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

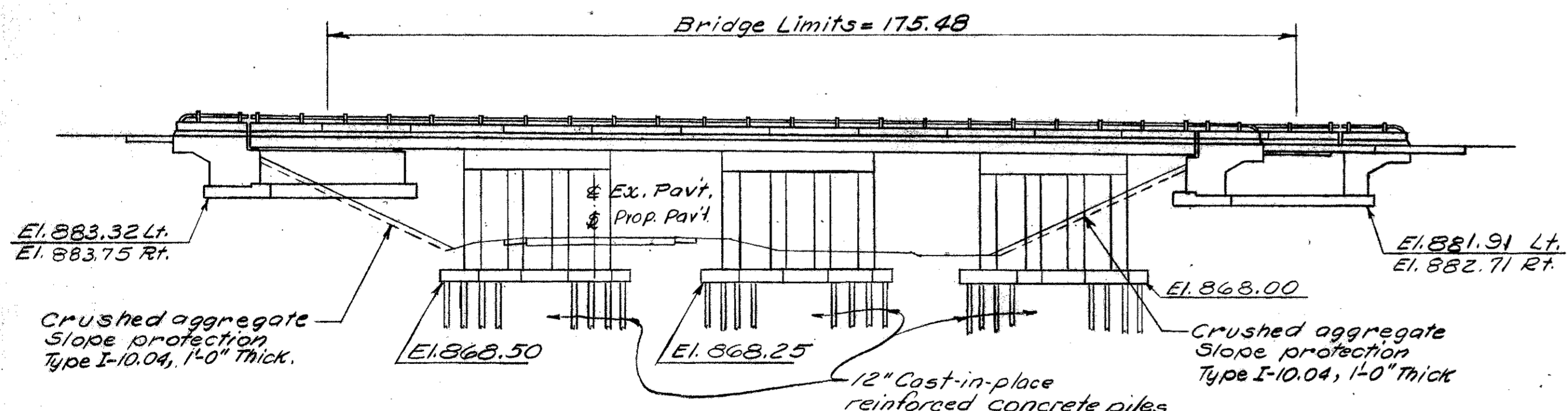
EXCAVATION QUANTITY includes the removal of all material required for construction of the abutments.

PILES shall be driven to a minimum bearing capacity of 40 tons per pile for the piers.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.7 tons per sq. ft.



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES				RIGHT BRIDGE			LEFT BRIDGE						
ITEM	QUANTITY	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GENERAL	AS BUILT	ABUTS	PIERS	SUPER	GENERAL	AS BUILT
E-2	1065	Cu. Yds.	Unclassified Excavation	325	207				325	208			
S-1	1197	Cu. Yds.	Class "C" Concrete, superstructure			598							599
S-1	245	Cu. Yds.	Class "C" Concrete, pier caps and columns		122					123			
S-1	240	Cu. Yds.	Class "E" Concrete, abutments above footings	120					120				
S-1	263	Cu. Yds.	Class "E" Concrete, footings	60	71				61	71			
S-3	29	Lin. Ft.	Water proofing, premolded sealing strip	14					15				
S-4	401,753	Lbs.	Reinforcing Steel	8,298	35,607	157,016			8,304	35,145	157,383		
S-9	209	Sq. Ft.	1/4" Preformed Expansion joint filler	104					105				
S-9	19,000	Lbs.	Structural steel expansion joints				9,500						9,500
S-9	730	Lbs.	1/4" Rolled bronze sliding plates (Sec. M-7.10)	375					375				
S-14	791.92	Lin. Ft.	Railing aluminum rail and supports and concrete parapet	49.29		345.73			49.29		347.61		
S-16	Lump Sum	Lump	First Test Pile * *										
S-18	3240	Lin. Ft.	12" Cast-in-place reinforced concrete piles (No 5 gage)			1620				1620			
S-29	47	Cu. Yds.	Porous Backfill	23					24				
S-29	56	Each	Scuppers, 4" cast or wrought iron pipe			28				28			
I-10	1174	Sq. Yds.	Crushed aggregate slope protection				587					587	
Special	1197	Each	Water-reducing, set-retarding admixture *			598						599	

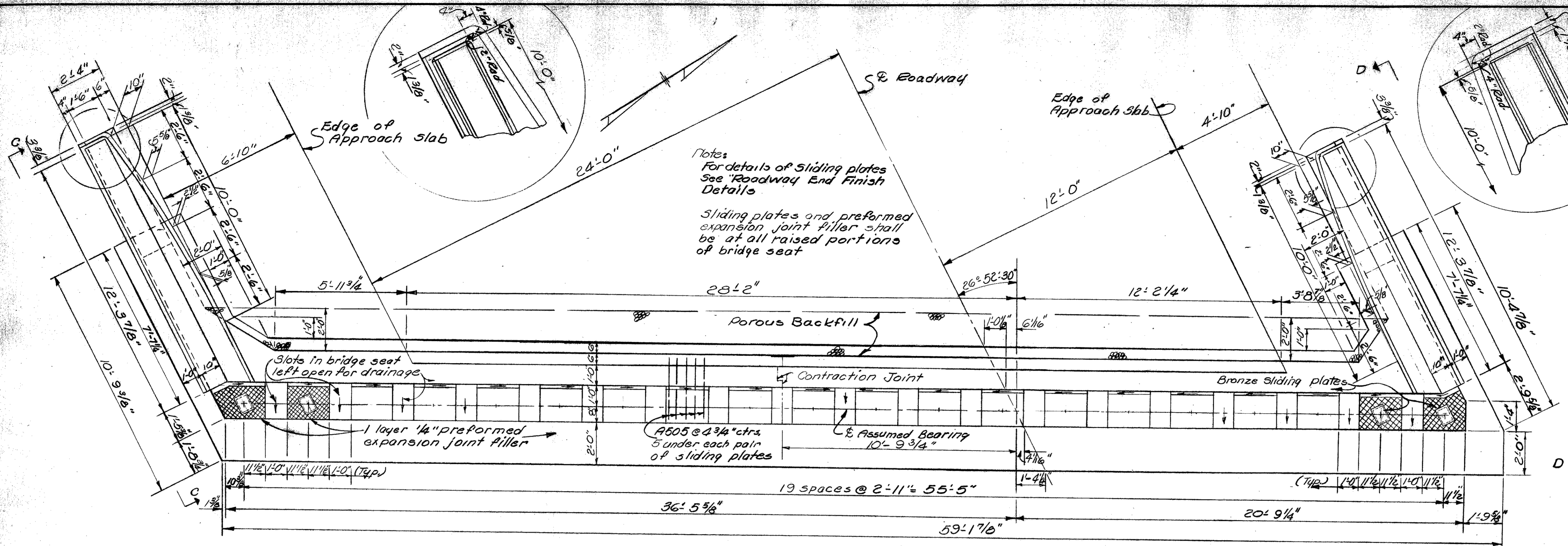
* See proposal note

* * FIRST TEST PILE. Payment will be made for only one first test pile. It may be driven for either the Right or Left Bridge.

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
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245-249 S. Paint Street Chillicothe, Ohio

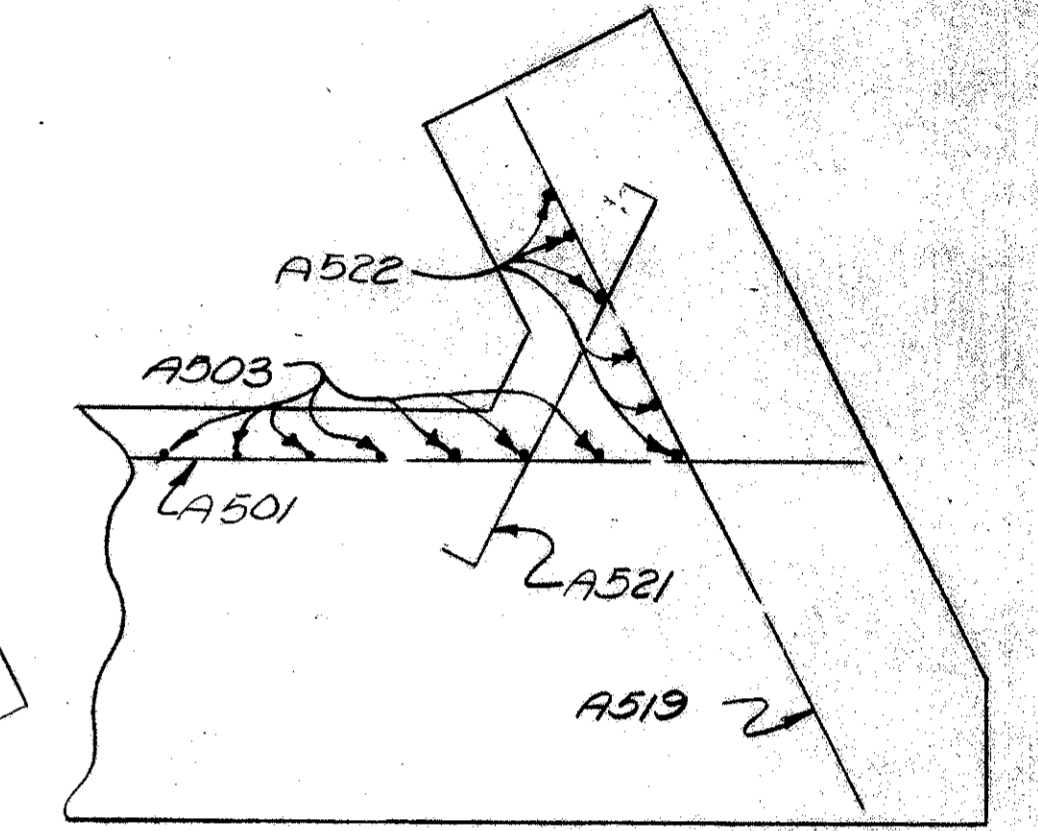
**GENERAL PLAN and ELEVATION
EST. QUANTITIES and GEN. NOTES**
BRIDGE No. FRA-1-0310 R. & L.
S. R. 1 over U.S. R. 62 & S. R. 3
S. R. 1 (I. R. 71) FRANKLIN COUNTY
STA. 1004+01.50 TO STA. 1005+76.98
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
W.I.C.	L.P.		R.M.S. D.J.P.	W.K.	10/10/62	

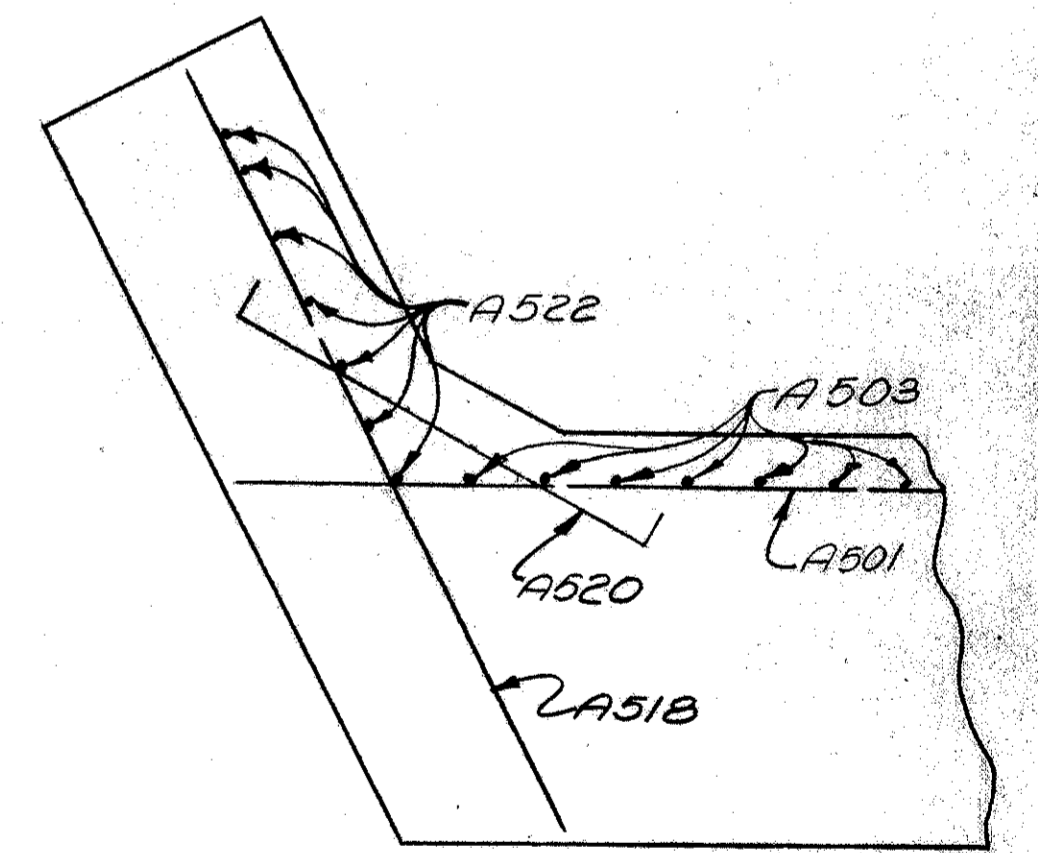
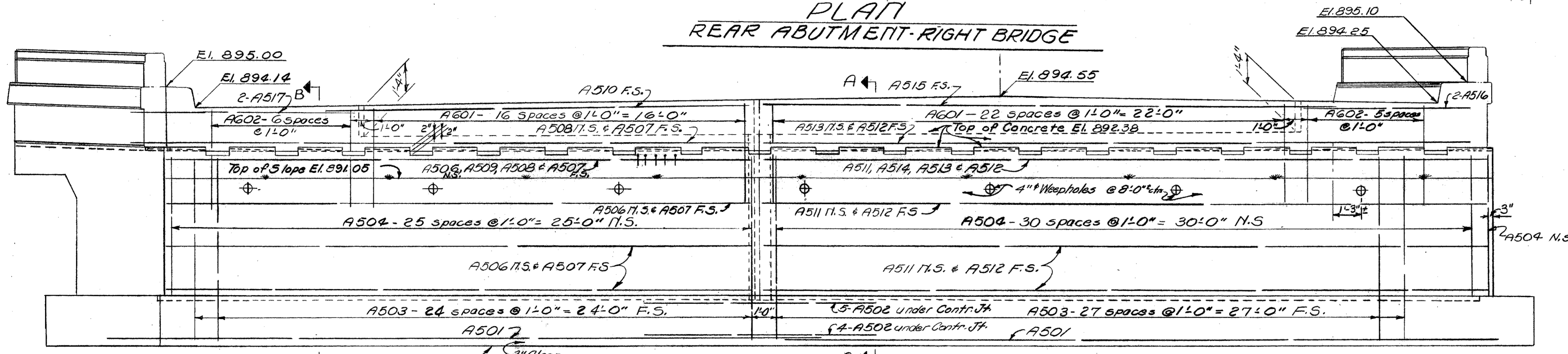


Notes:
For details of Sliding plates
See 'Roadway End Finish
Details'

Sliding plates and preformed
expansion joint filler shall
be at all raised portions
of bridge seat

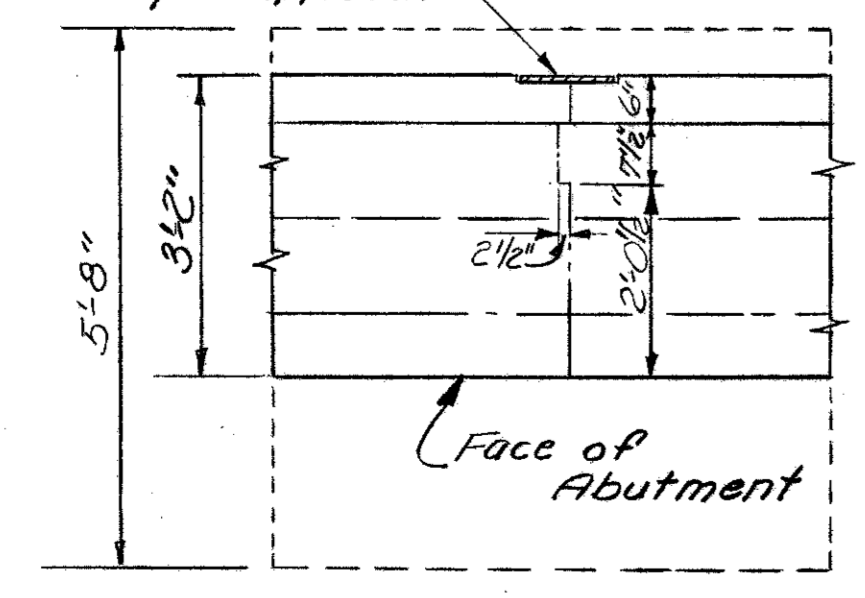


PART FOOTING PLAN



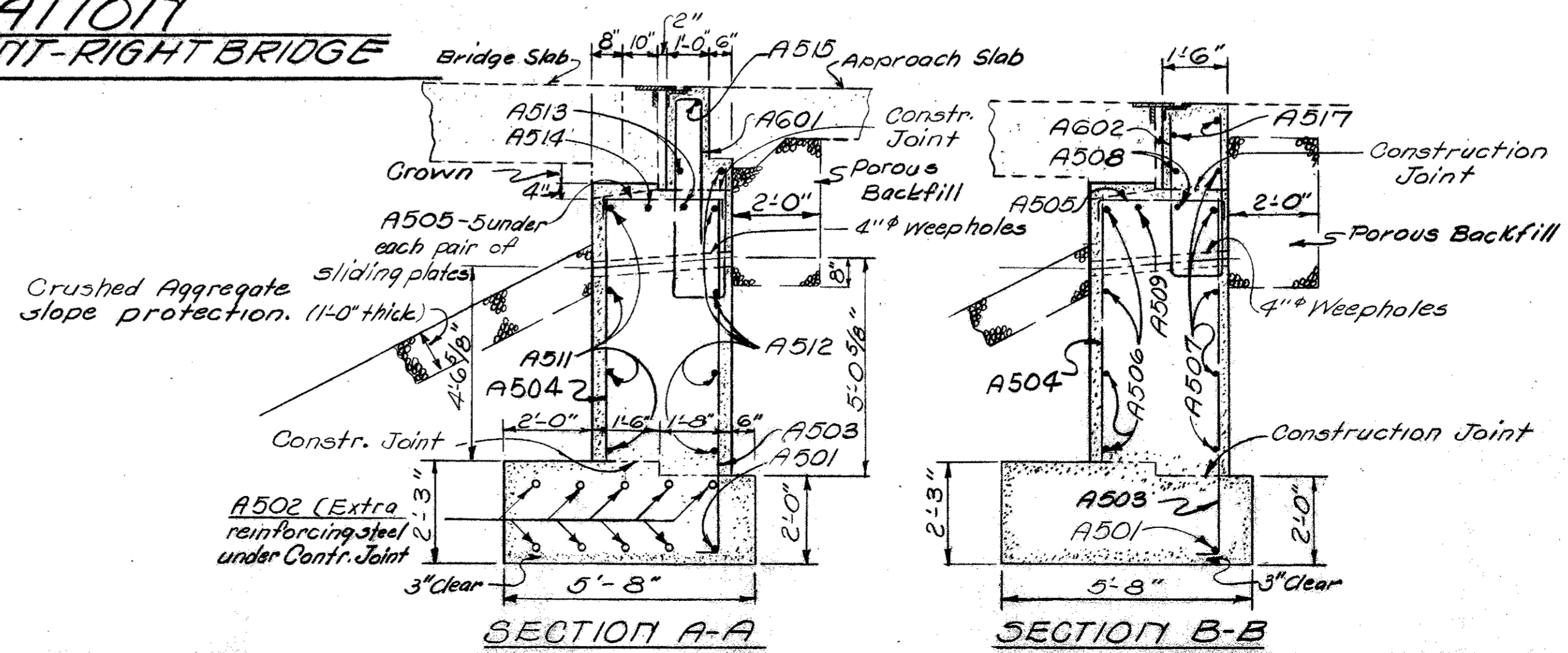
PART FOOTING PLAN

12" x 1/2" preformed sealing strip
in 13" x 3/4" recess extending
from top of footing to approach
slab seat.
(Item 5-3)



CONTRACTION JOINT
DETAIL

LEGEND
N.S. indicates Near Side
F.S. indicates Far Side



For "Notes" and Views C-C and
D-D see abutment details.

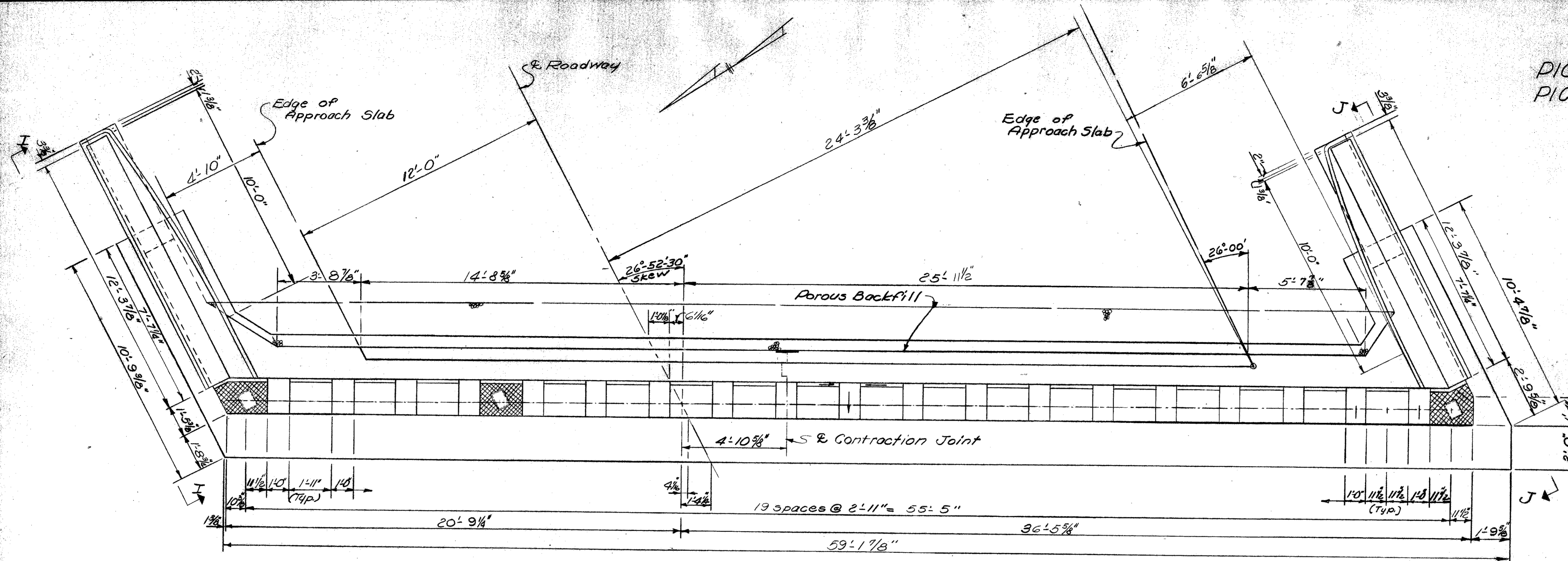
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

**REAR ABUTMENT DETAILS
RIGHT BRIDGE**
BRIDGE NO. FRA-1-0310 P. & L.
S.R.1 OVER USR. 62 #5 R.3
S.R.1 (R.71) FRANKLIN COUNTY
STATION 100+01.50 TO STATION 100+10.00
SCALE DATE

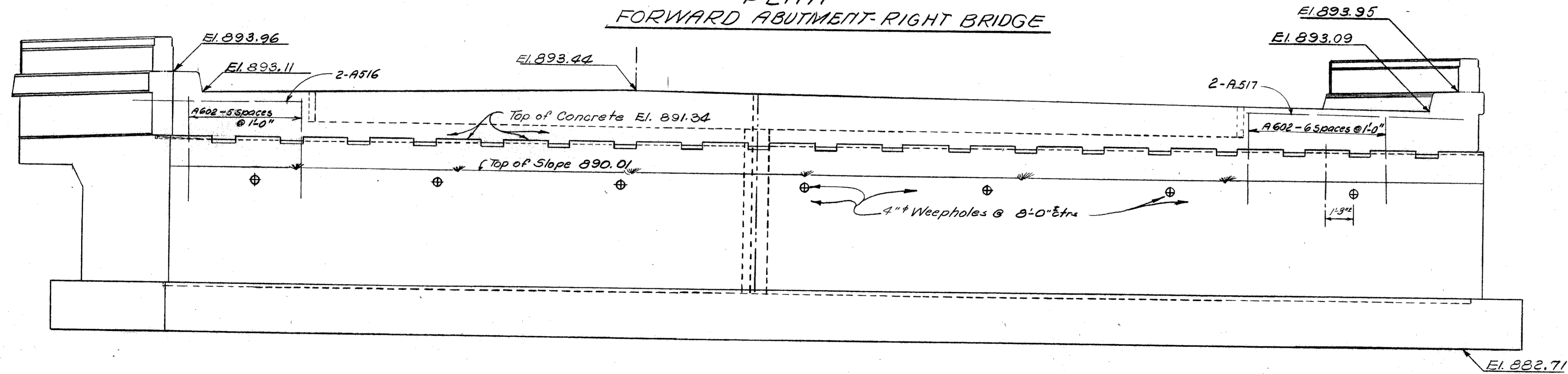
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BER	RJM		R.M.S.	NK	10/10/60	

DICKAWAY-FRANKLIN COUNTY
 PIC-1-3.06 FRA-1-0.00

ENGINEERED
 JAN 21 1967



PLAN
 FORWARD ABUTMENT-RIGHT BRIDGE



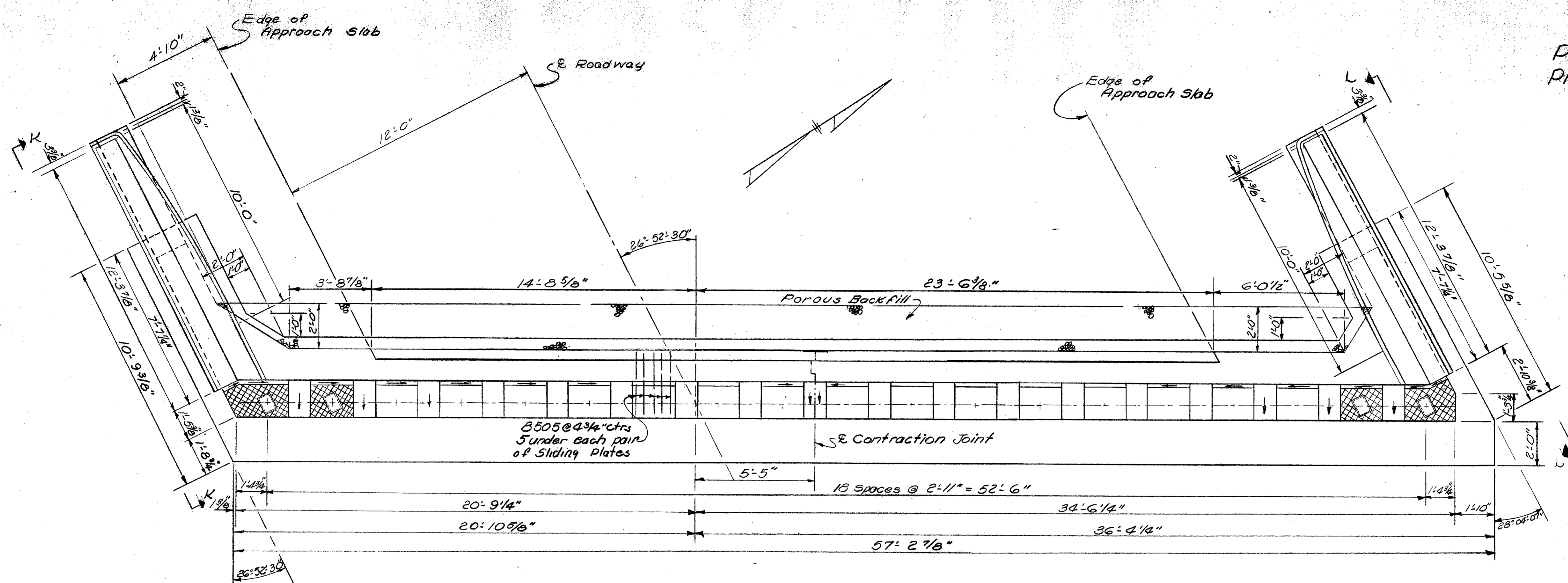
ELEVATION
 FORWARD ABUTMENT-RIGHT BRIDGE

Reinforcing steel, details and dimensions not shown are identical to Rear Abutment Right Bridge
 For View I-I & J-J See abutment details.

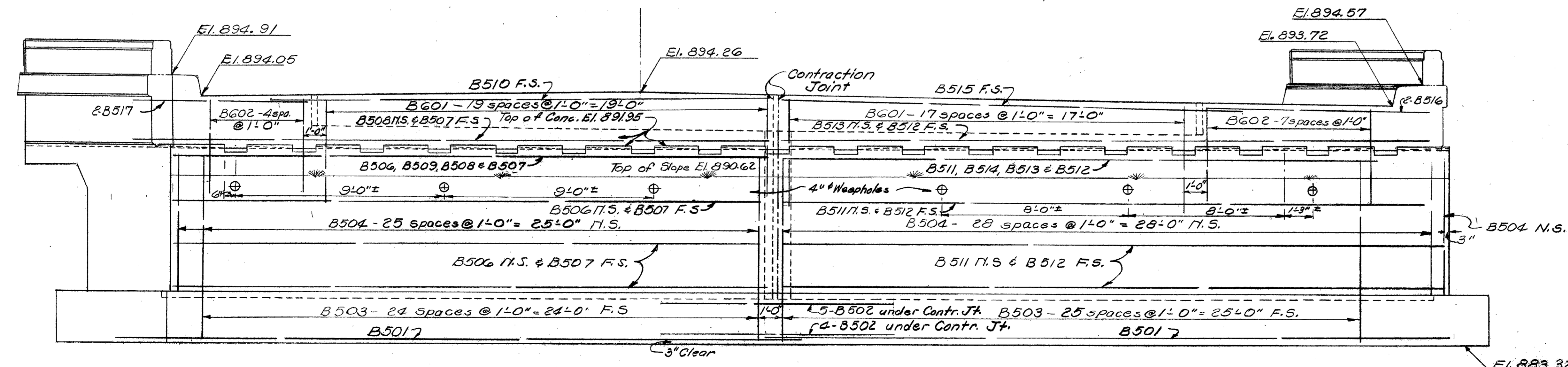
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD. Consulting Engineers 245-249 S. Paint Street Chillicothe, Ohio					
FORWARD ABUTMENT DETAILS RIGHT BRIDGE					
BRIDGE NO FRA-1-0310 R + L. S.R.1 OVER U.S. R.62 1962					
S.R.1 (R.71) FRANKLIN COUNTY STATION 1004+01.50 TO STATION 1006+25.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
EER	RJM		H.D.D.	RMS.	10/10/62

PICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-0.00

MICROFILMED
JAN 11 1987



PLAN
REAR ABUTMENT-LEFT BRIDGE



ELEVATION
REAR ABUTMENT-LEFT BRIDGE

Note:
For Details not shown
see Rear Abutment,
Right Bridge.
For View K-K and View L-L
see abutment details.

LEGEND:
N.S. Denotes Near Side
F.S. " " Far Side

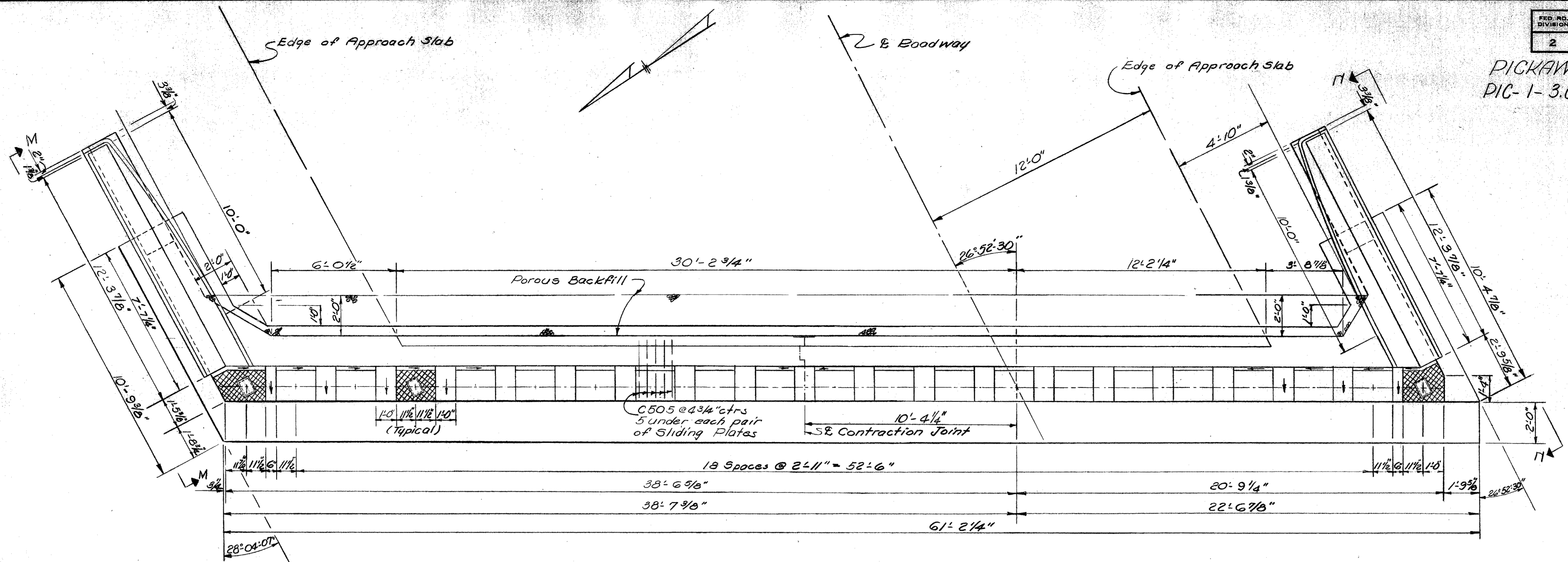
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REAR ABUTMENT DETAILS
LEFT BRIDGE
BRIDGE NO FRA-1-0310R&L
S.R. 1 OVER U.S. 262 & 583
S.R. 1 (I.R. 71) FRANKLIN COUNTY
STATION 1004+01.50 TO STATION 1005+76.90
SCALE DATE

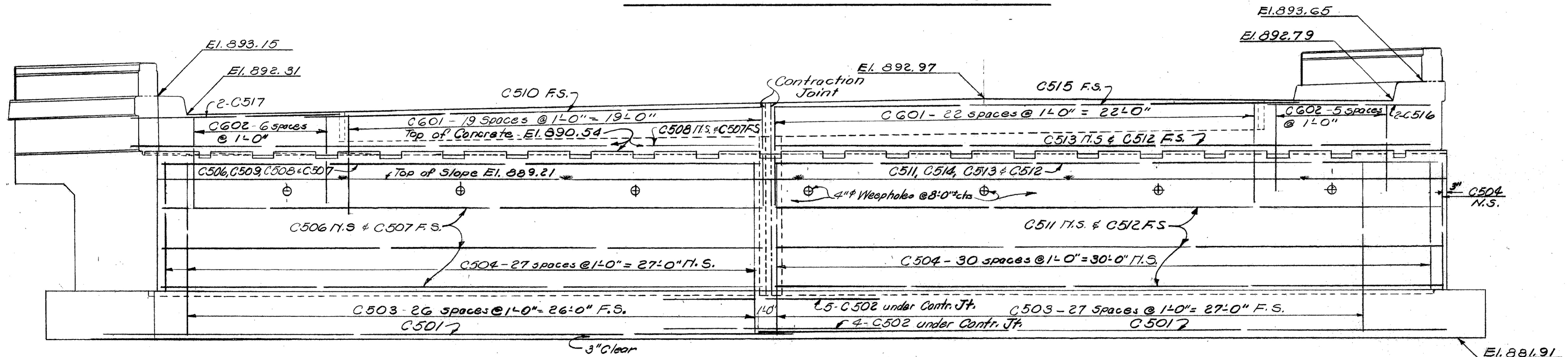
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EER	RUM		R.M.S.	NK	10/10/62	

FED. RD. DIVISION	STATE	PROJECT	434
2	OHIO		470

PICKAWAY-FRANKLIN COUNTY
 PIC-1-3.06 FRA-1-0.00



PLAN
 FORWARD ABUTMENT-LEFT BRIDGE



ELEVATION
 FORWARD ABUTMENT-LEFT BRIDGE

Note:
 For Details not shown
 see Rear Abutment,
 Right Bridge.
 For View M-M & View N-N
 see abutment details.

LEGEND:
 N.S. Denotes Near Side
 F.S. " " Far Side

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
 Consulting Engineers
 245-249 S. Paint Street Chillicothe, Ohio

**FORWARD ABUTMENT DETAILS
 LEFT BRIDGE**
 BRIDGE NO FRA-1-0310 R&L
 S.R.1 OVER USR62 & SR3
 S.R.1 (I.R.71) FRANKLIN COUNTY
 STATION 1004+01.50 TO STATION 1005+76.50

SCALE DATE

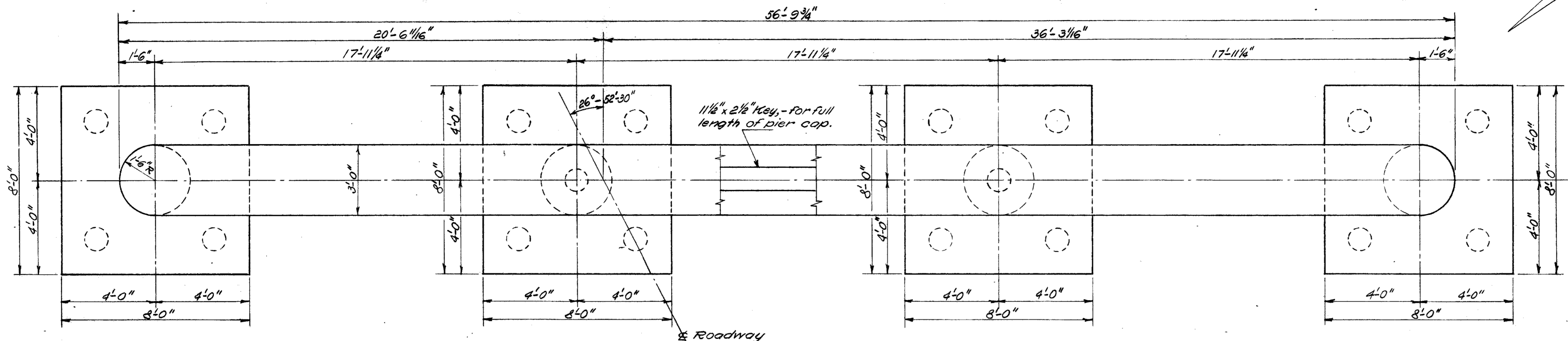
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
EER	PJM		R.M.S.	ML	10/10/62

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

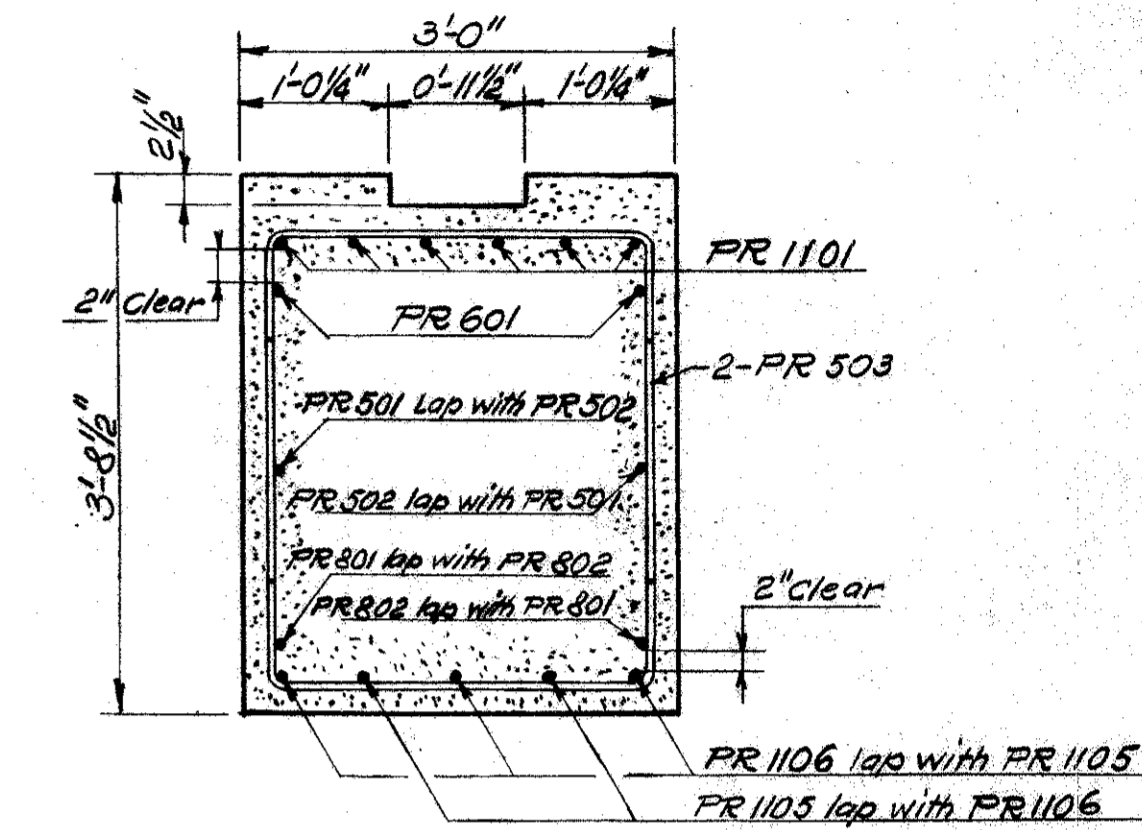
436
470

PICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-0.00

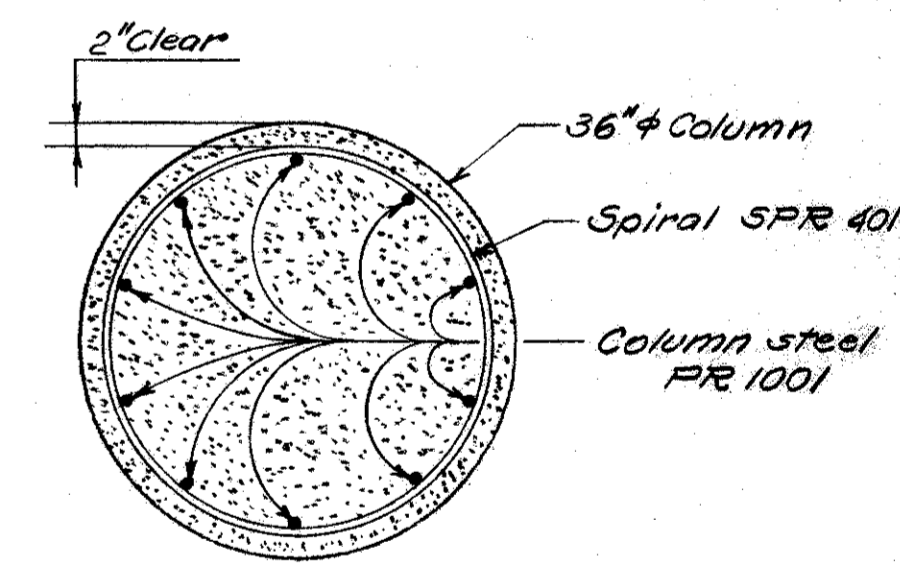
MICROFILMED
JAN 21 1967



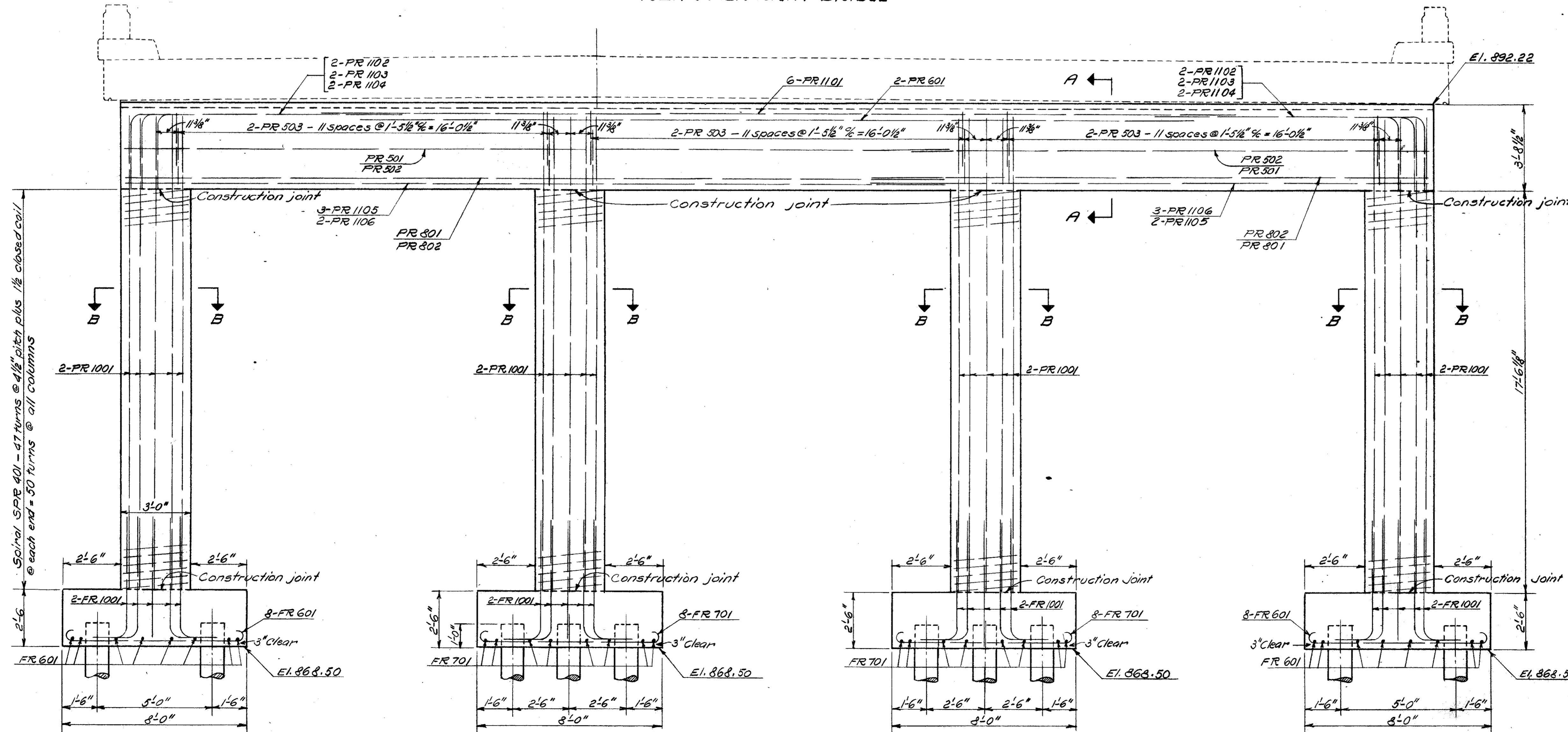
PLAN
REAR PIER-RIGHT BRIDGE



SECTION A-A



SECTION B-B



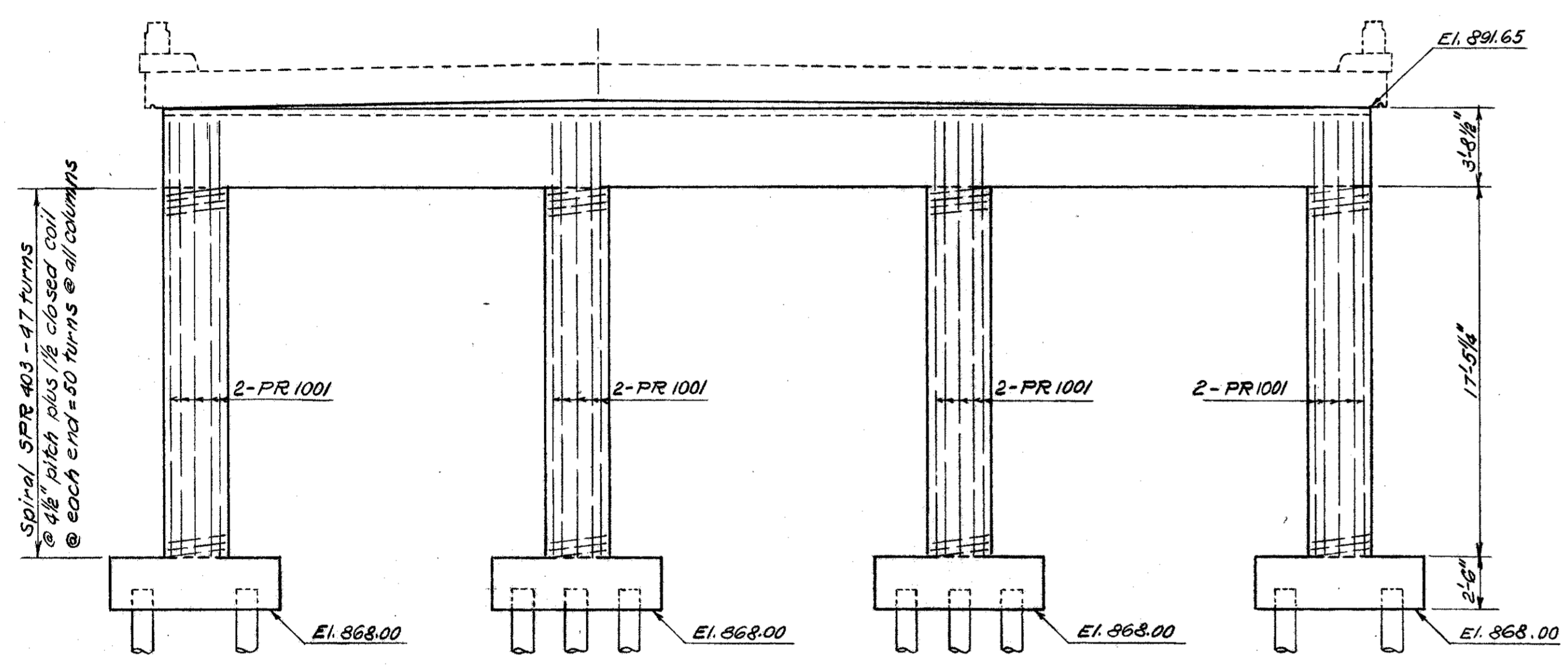
ELEVATION
REAR PIER-RIGHT BRIDGE

NOTES: PILES shall be 12" cast-in-place reinforced concrete piles, casing wall thickness shall be No. 5 gauge.
CONCRETE shall be Class "E" for footings & Class "C" for columns and pier cap.

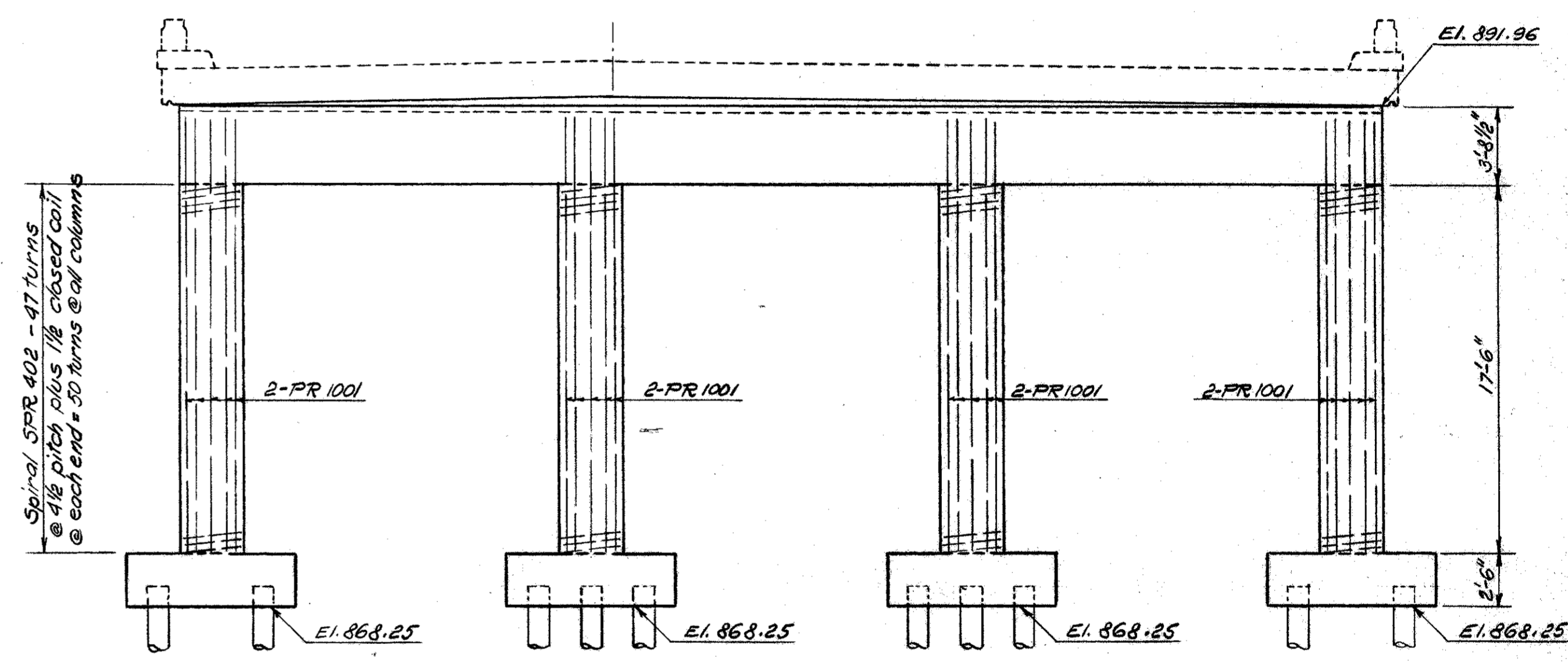
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD. Consulting Engineers 245-249 S. Paint Street Chillicothe, Ohio						
PIER DETAILS-RIGHT BRIDGE						
BRIDGE NO. FRA-1-0310 R. & L. S. R. 1 over USR 62 & S. R. 3 S. R. 1 (I.R.-71) FRANKLIN COUNTY STA. 1004+01.50 TO STA. 1005+76.30						
SCALE	DATE	DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
		R.M.S.	R.M.S.	L.P.	D.J.P.	W.W.
						10/16/67

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		437 470

PICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-000



ELEVATION
FORWARD PIER - RIGHT BRIDGE



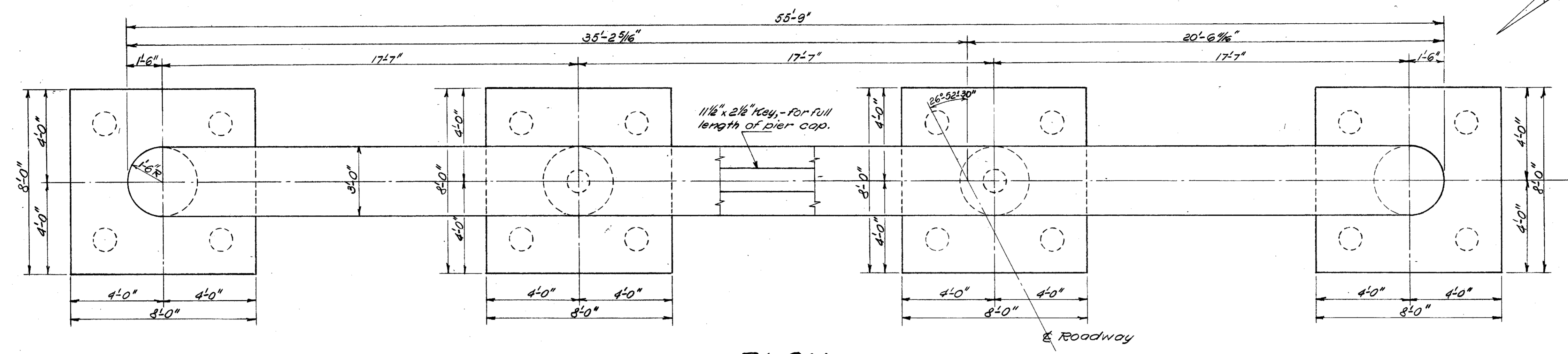
ELEVATION
CENTER PIER - RIGHT BRIDGE

NOTE: Dimensions, Details, Reinforcing steel, Piles and Notes not shown are similar to REAR PIER - RIGHT BRIDGE.

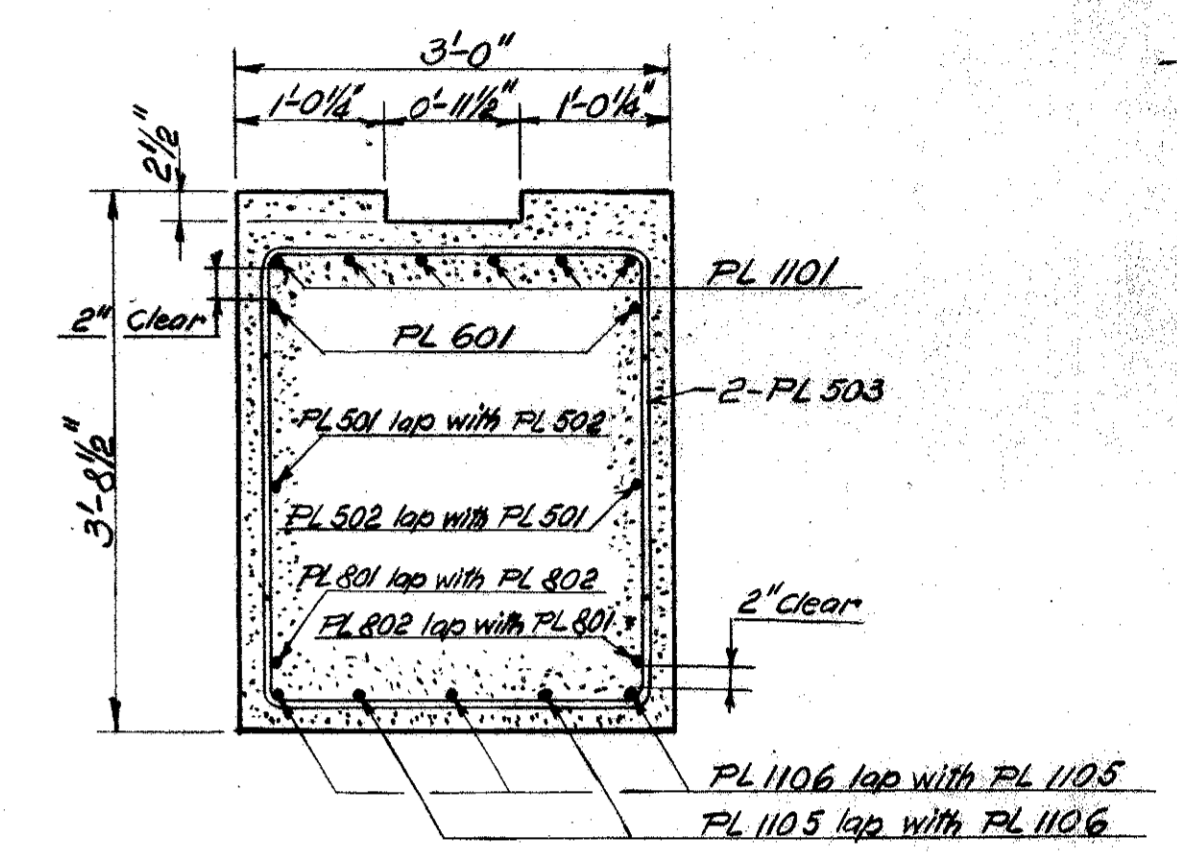
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS - RIGHT BRIDGE
BRIDGE No. FRA-1-0310 R.&L.
S.R.1 over U.S.R.62 & SR 3
S.R.1 [I.R.-71] FRANKLIN COUNTY
STA. 1004+01.50 To STA. 1005+76.98

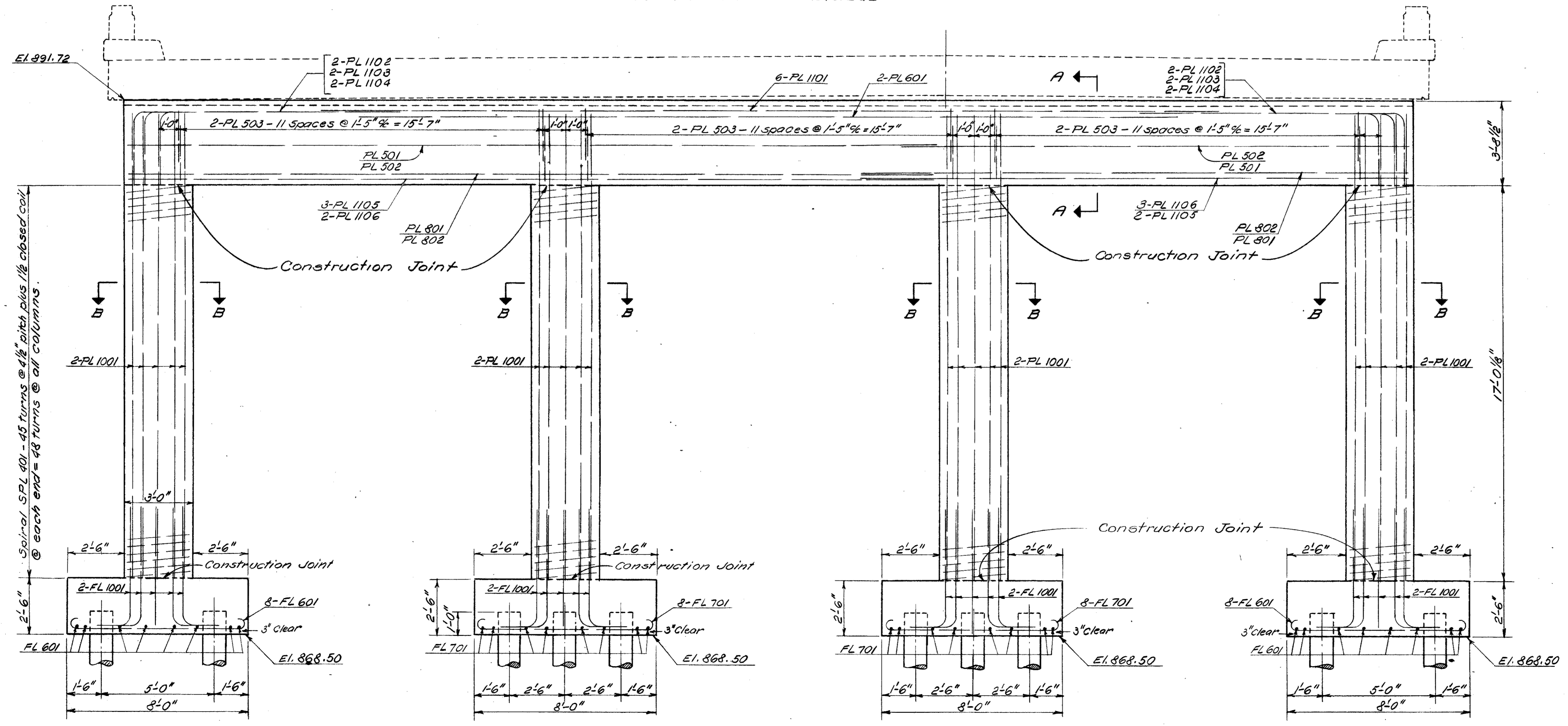
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	R.M.S.	L.P.	D.J.P.	Y.K.	10/10/62	



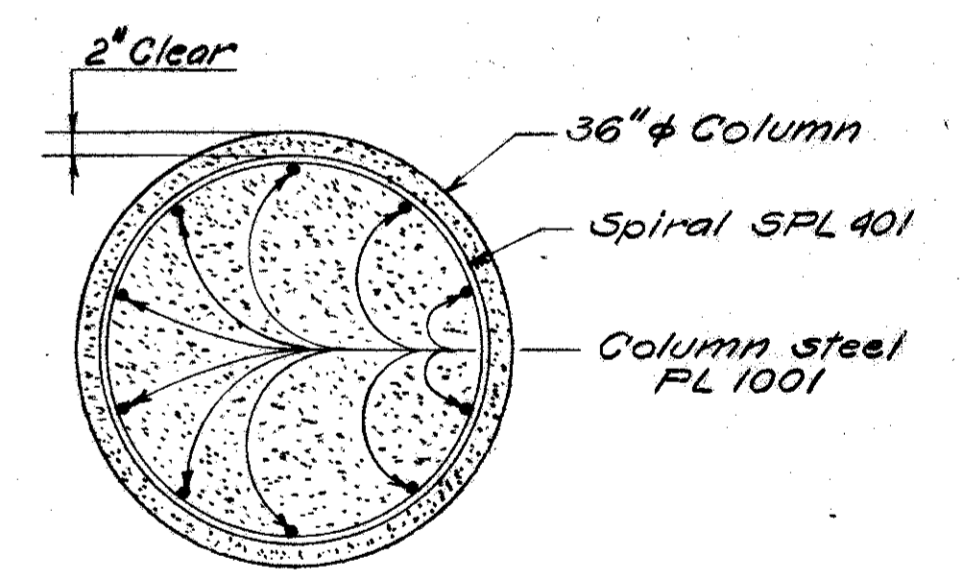
PLAN
REAR PIER- LEFT BRIDGE



SECTION A-A



ELEVATION
REAR PIER- LEFT BRIDGE



SECTION B-B

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
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245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS-LEFT BRIDGE
BRIDGE No. FRA-1-0310 R. & L.
S. R. 1 over U.S.R. 62 & 39.3
S.R. 1 (I.R.-71) FRANKLIN COUNTY
STA. 1004+01.50 TO STA. 1005+76.98

NOTES: FILES shall be 12" Cast-in-place reinforced concrete piles, casing wall thickness shall be No. 5 gauge.
CONCRETE shall be Class "E" for footing & Class "C" for columns and pier cap.

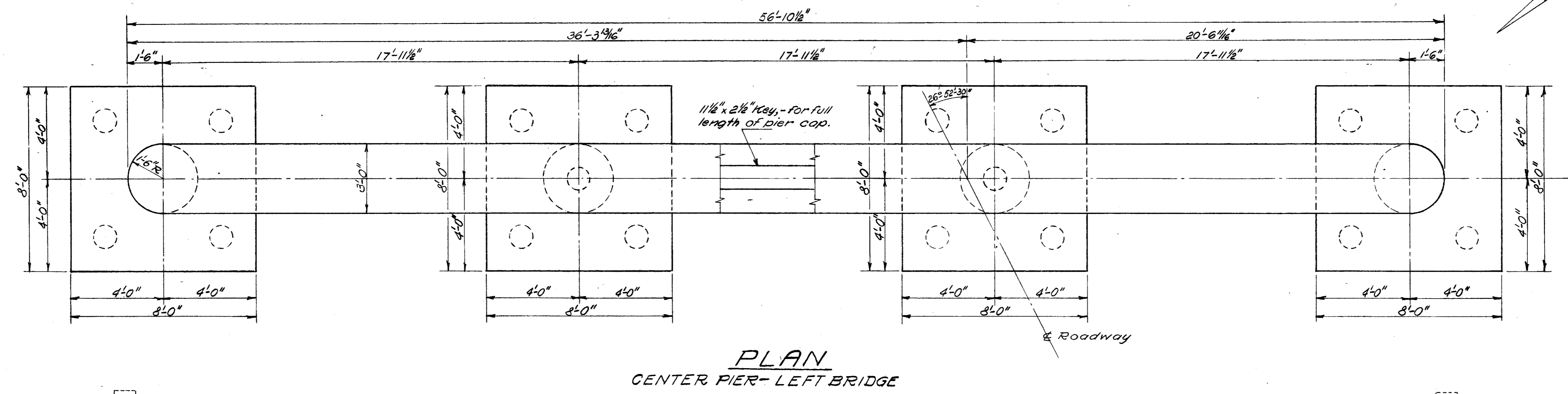
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.S.	R.M.S.	L.P.	D.J.P.	W.K.	10/10/62	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

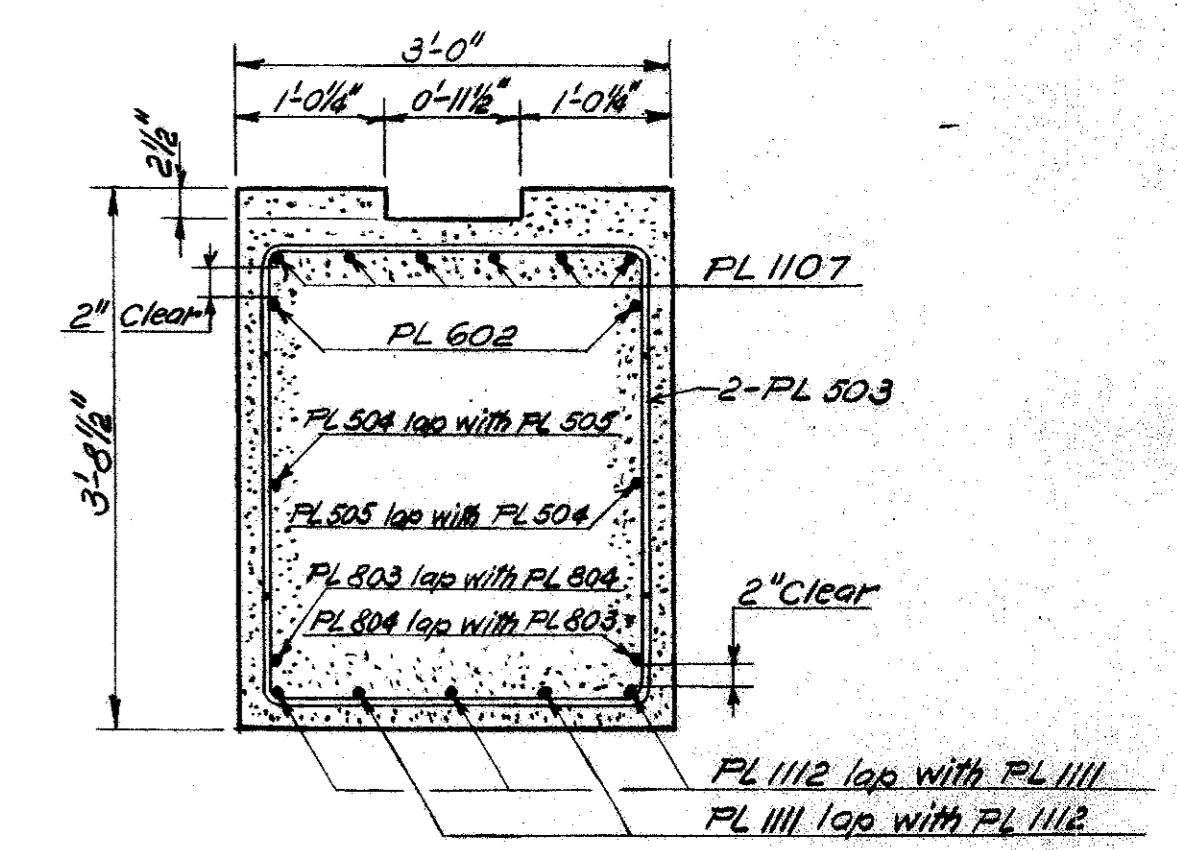
459
470

PICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-0.00

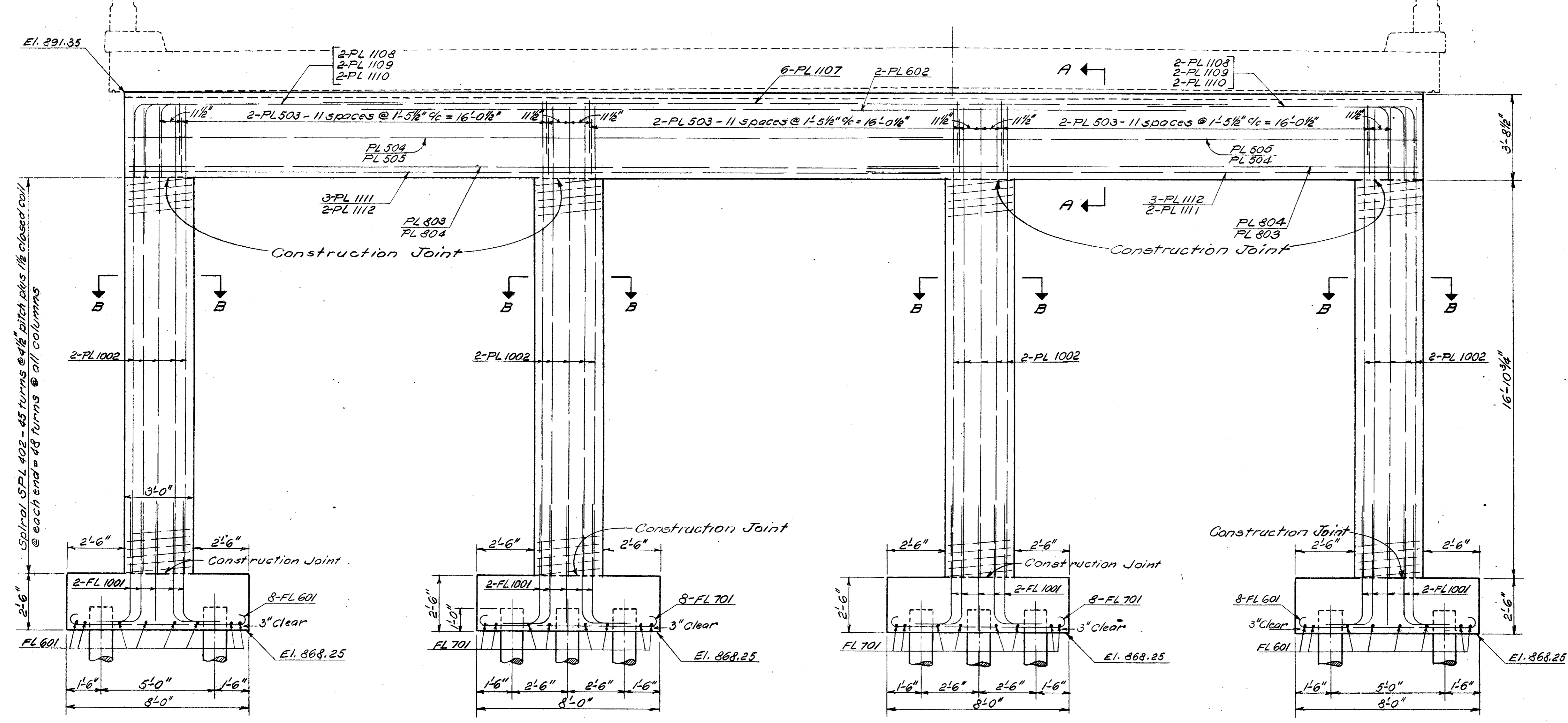
NO. 3001-4-3-52
PICKAWAY COUNTY
JAN 17 1957



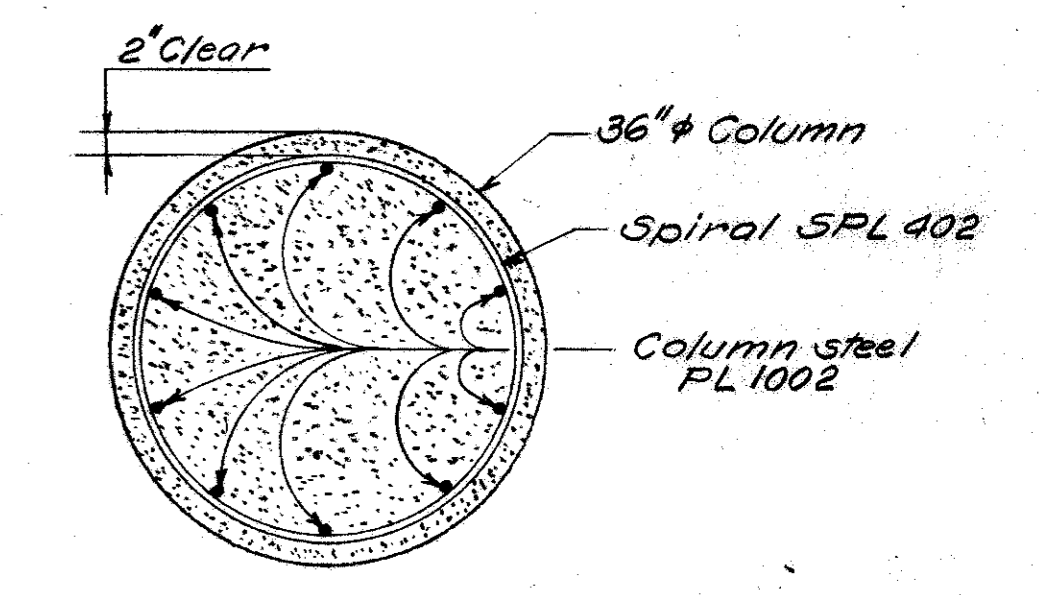
PLAN
CENTER PIER- LEFT BRIDGE



SECTION A-A



ELEVATION
CENTER PIER- LEFT BRIDGE



SECTION B-B

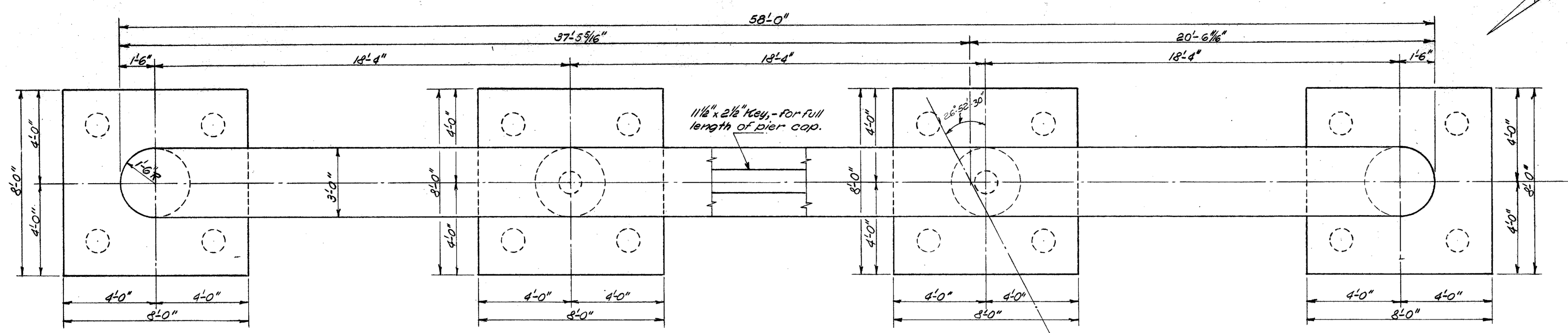
Spiral S.P.L. 402 - 45 turns @ 4 1/2\"/>

NOTES: FILES shall be 12\"/>

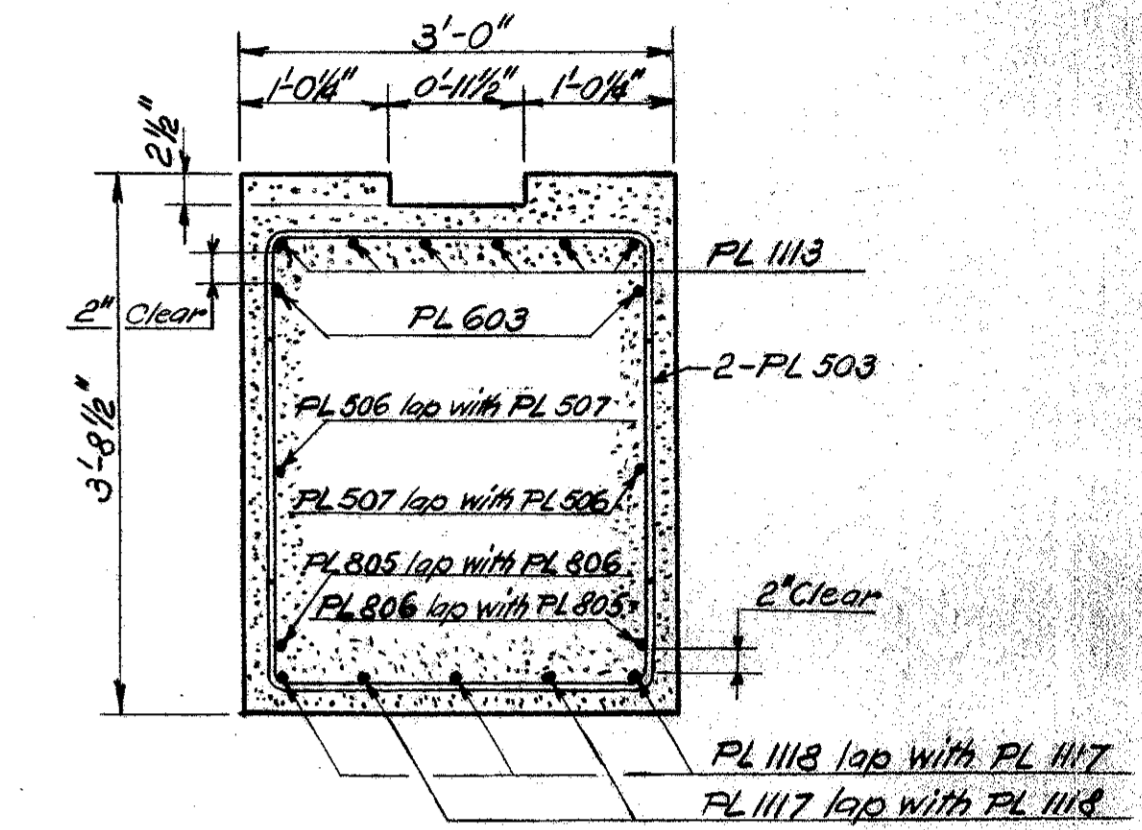
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

PIER DETAILS-LEFT BRIDGE
BRIDGE NO. FRA-1-0310 R. & L.
S. R. 1 over U.S.R. 62 & S.R. 3
S. R. 1 [I.R.-71] FRANKLIN COUNTY
STA. 1004+01.50 TO STA. 1005+76.98

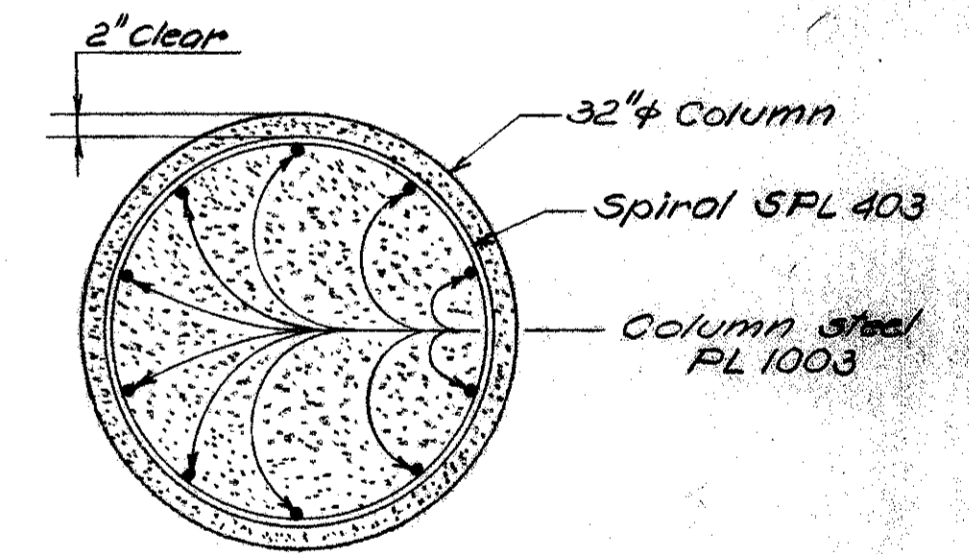
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
R.M.S.	R.M.S.	L.F.	D.J.A.	R.L.	10/10/62	



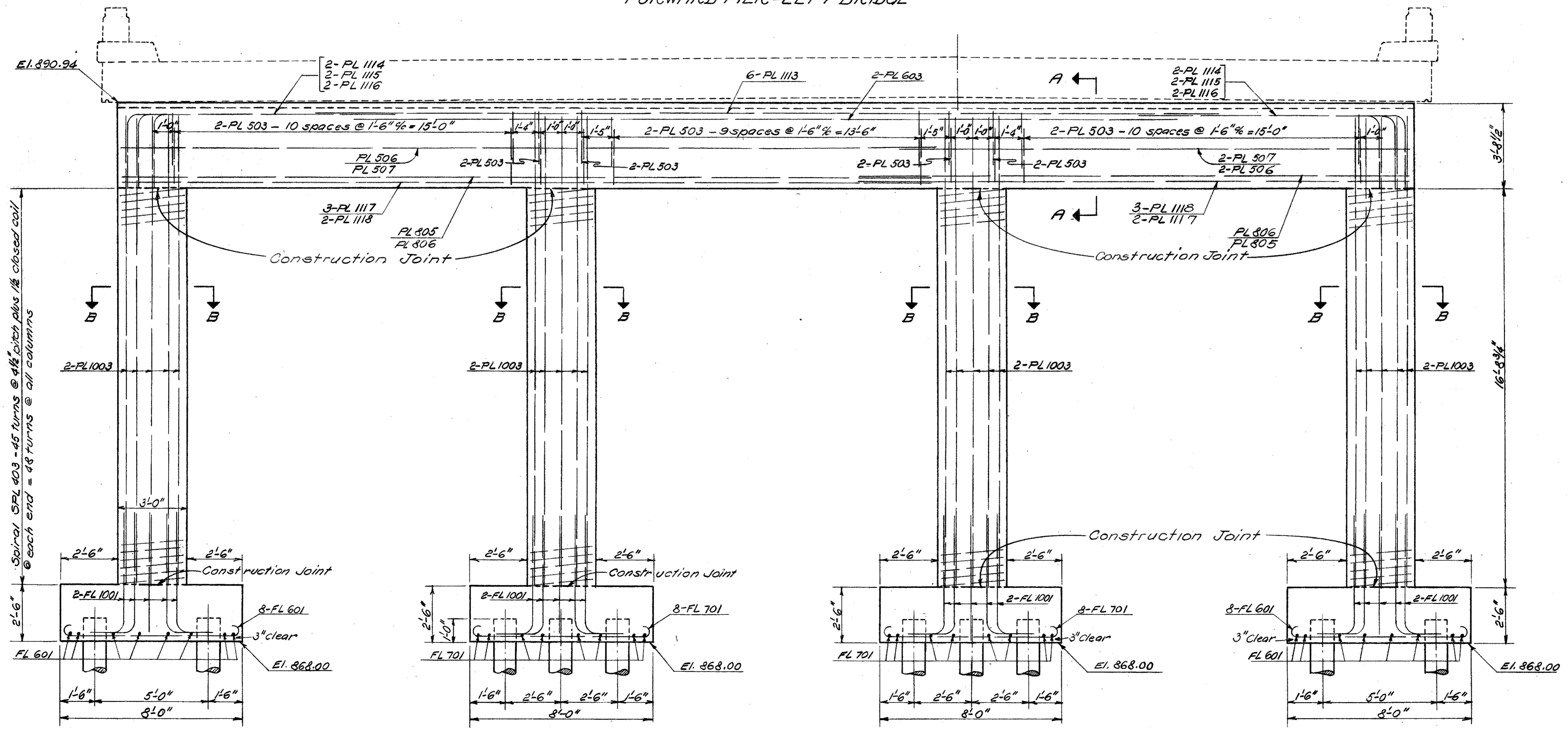
PLAN
FORWARD PIER-LEFT BRIDGE



SECTION A-A



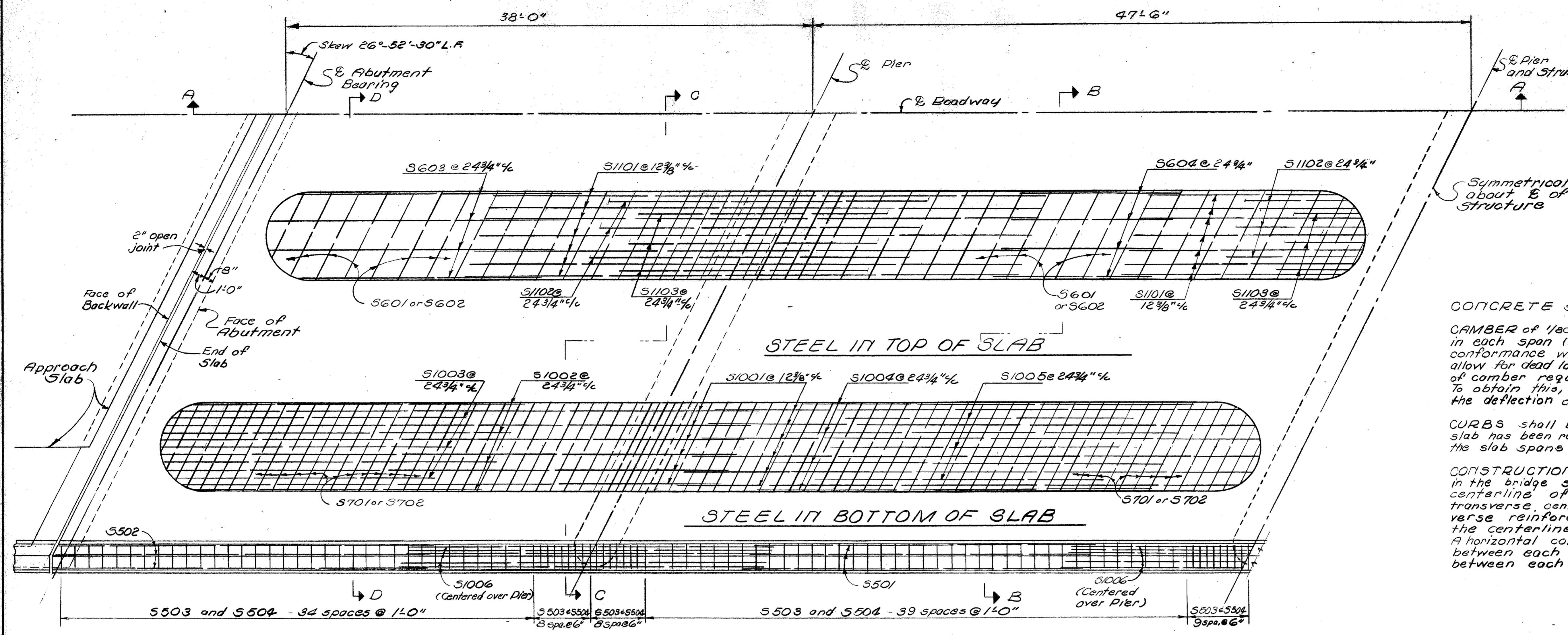
SECTION B-B



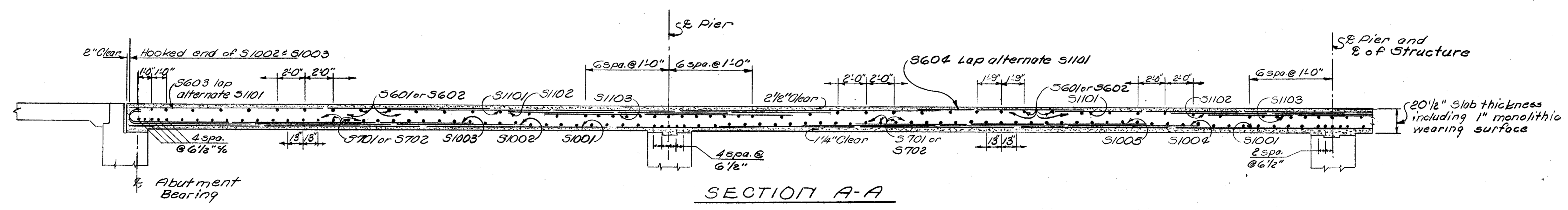
ELEVATION
FORWARD PIER-LEFT BRIDGE

NOTES: PILES shall be 12" cast-in-place reinforced concrete piles, casing wall thickness shall be No. 5 gauge.
CONCRETE shall be Class "E" for footing & Class "G" for columns and pier cap.

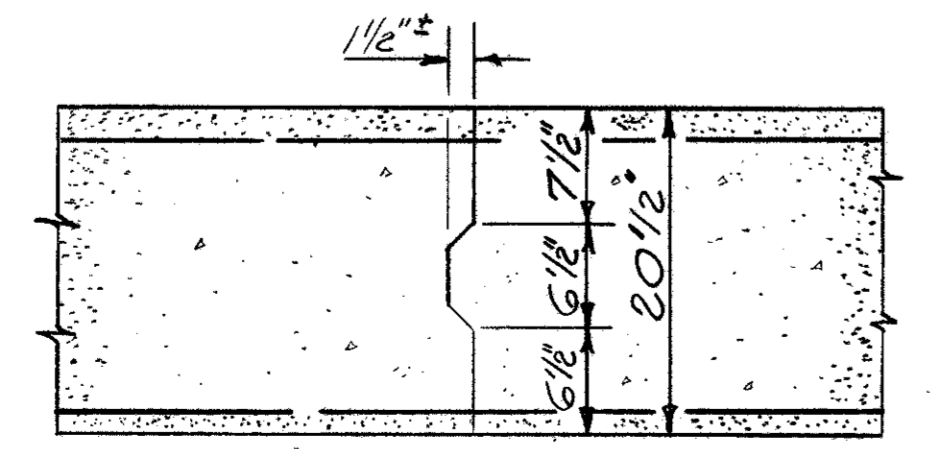
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD. Consulting Engineers 245-249 S. Paint Street Chillicothe, Ohio					
PIER DETAILS-LEFT BRIDGE					
BRIDGE No. FRA-1-0310 R & L.					
S.R.1 OVER U.S.R. 62 AND S.R. 3					
S.R.1 [I.R.-7] FRANKLIN COUNTY					
STA. 1004+01.50 TO STA. 1005+76.98					
SCALE	DATE	DESIGNED	DRAWN	TRACED	CHECKED
		R.M.S.	R.M.S.	L.P.	D.J.P.
					REVIEWED
					DATE
					10/10/4



PART PLAN



SECTION A-A



CONSTRUCTION JOINT DETAIL

~NOTES~

CONCRETE shall be Class "C"

CAMBER of 1/800 of the span shall be provided in each span (in addition to any required for conformance with the profile of the highway) to allow for dead load deflection. This is the amount of camber required before falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

CURBS shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full dead load deflection.

CONSTRUCTION JOINTS: One construction joint in the bridge slab may be placed on the transverse centerline of an interior span or 1'-0"± off the transverse centerline if necessary to miss transverse reinforcing bars. One longitudinal joint on the centerline of roadway, will be permitted. A horizontal construction joint shall be placed between each curb and the top of the slab and between each curb and bottom of parapet wall.

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Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

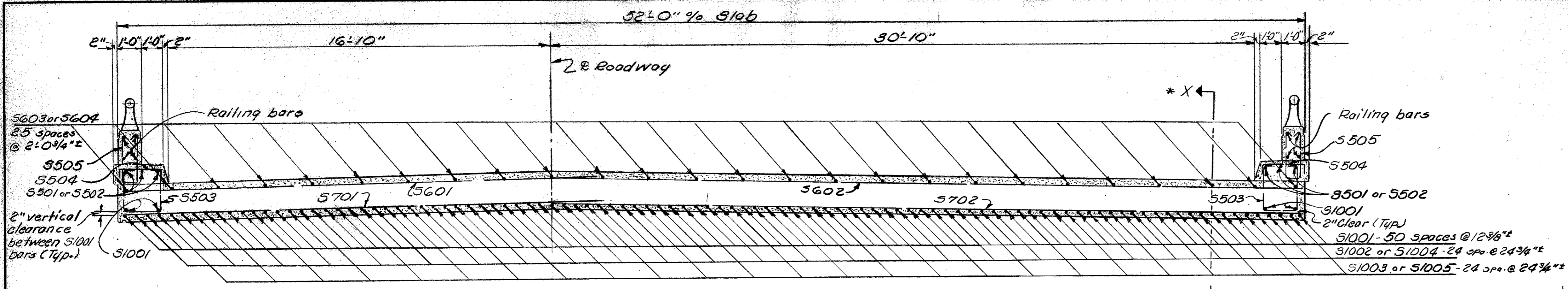
SLAB REINFORCING DETAILS
RIGHT BRIDGE
BRIDGE NO. FRA-1-0310 R+L
S.R.1 OVER U.S.R. 62 AND S.R. 3
S.R.1 (I.R.71) FRANKLIN COUNTY
STATION 1004+01.50 TO STATION 1005+76.98
SCALE DATE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EER	PJM		KDD	WV	10/19/62	

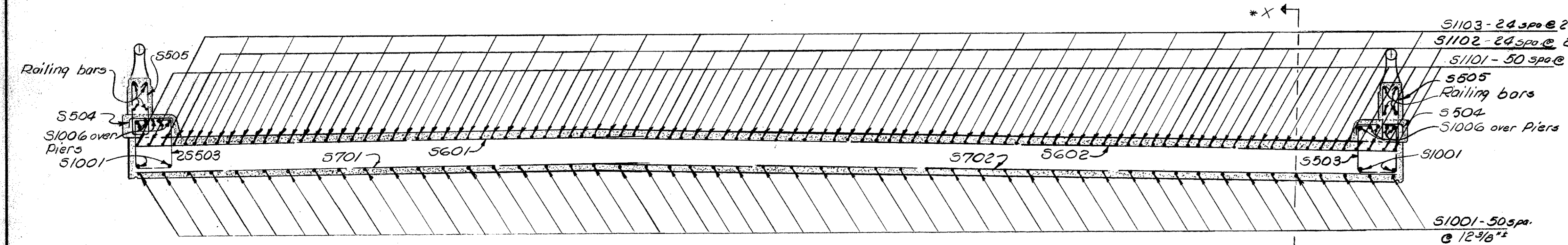
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

442
470

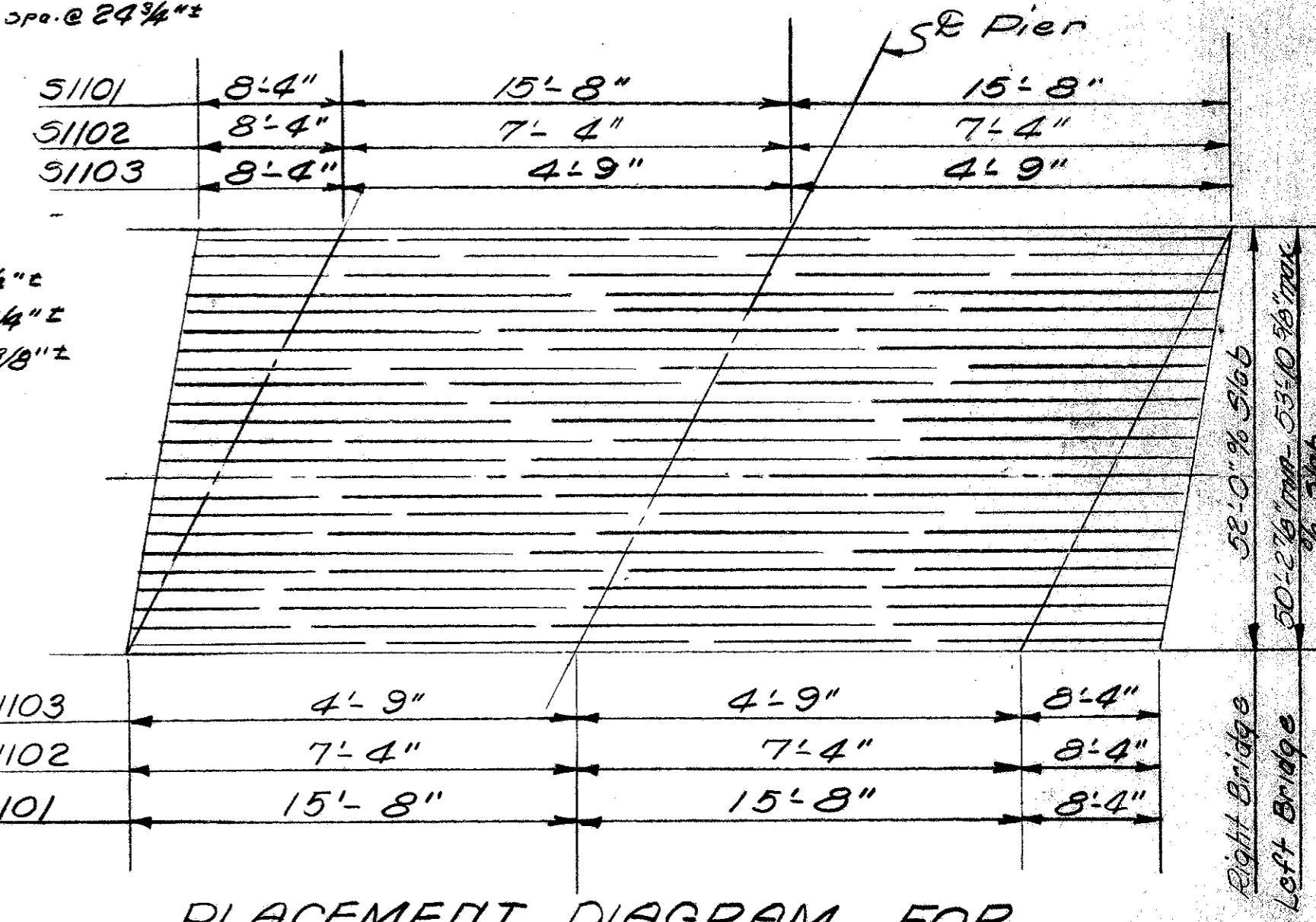
DICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-0.00



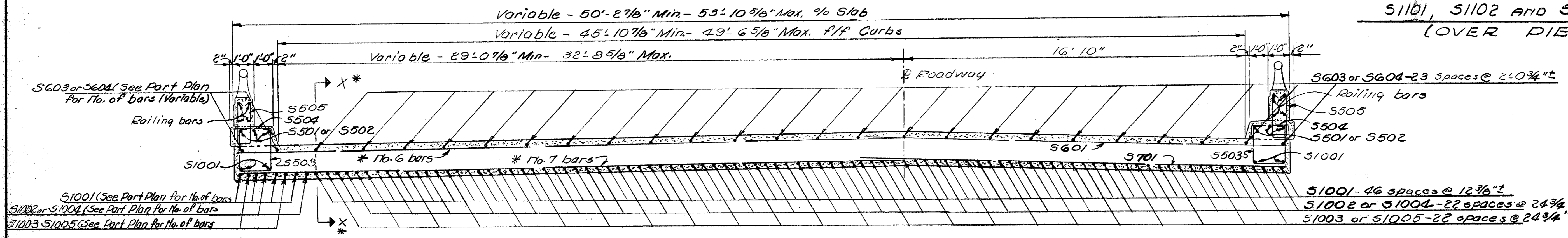
SECTION B-B AND D-D
RIGHT BRIDGE



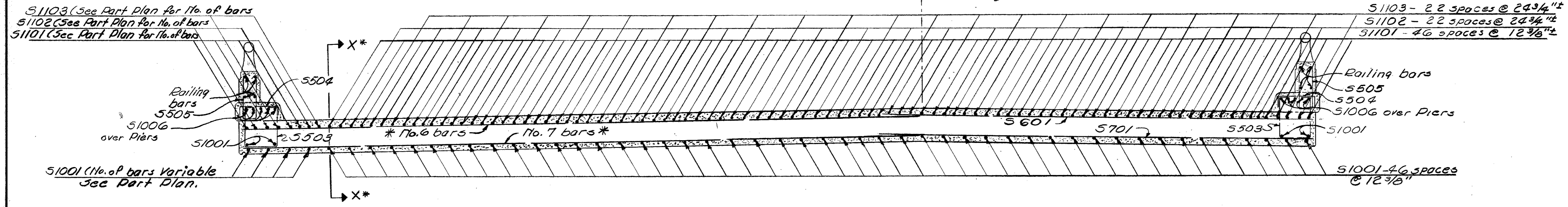
SECTION C-C
RIGHT BRIDGE



PLACEMENT DIAGRAM FOR
S1101, S1102 AND S1103 BARS
(OVER PIERS)



SECTION E-E AND G-G
LEFT BRIDGE



SECTION F-F
LEFT BRIDGE

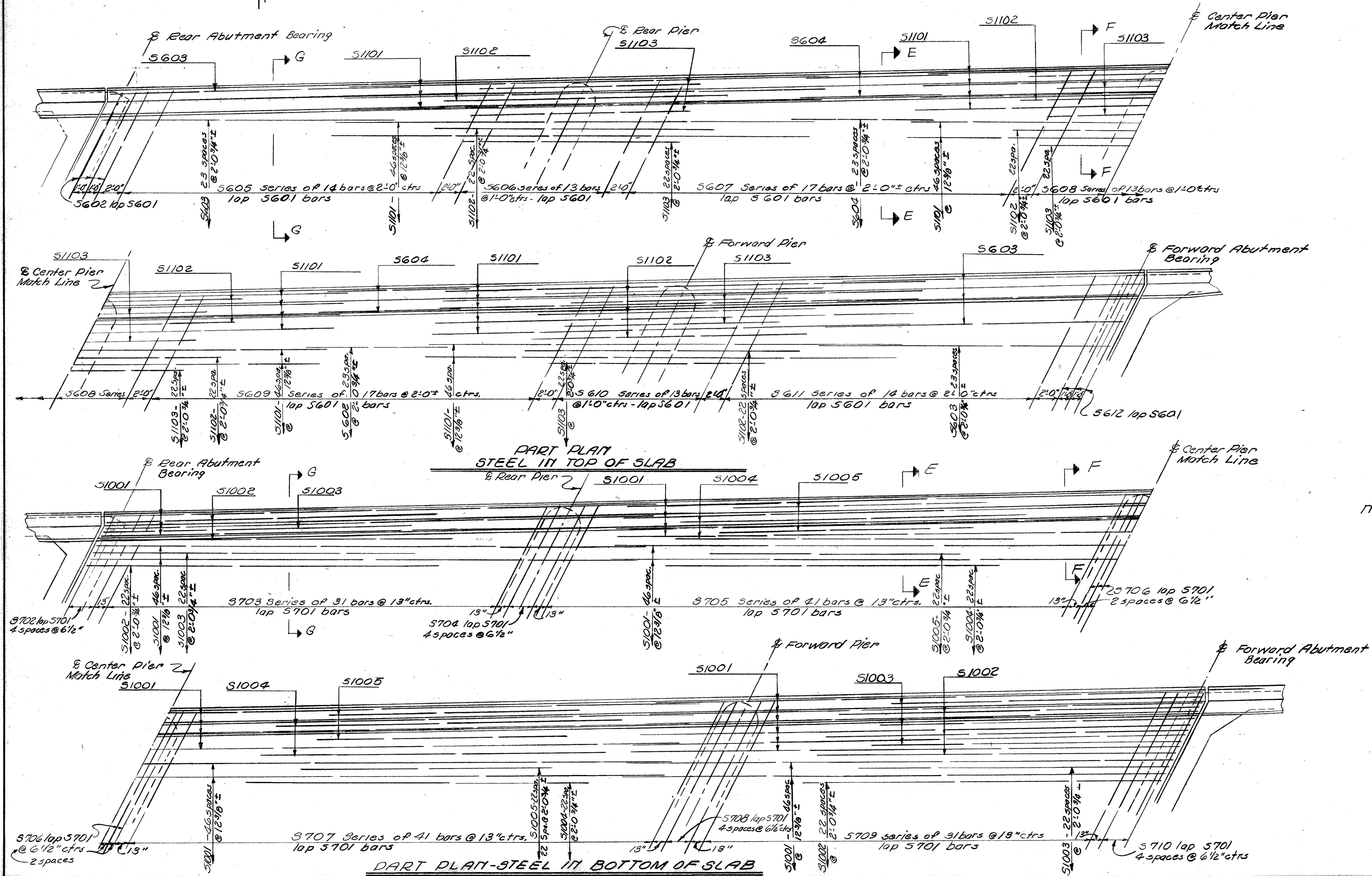
* Note: Reinforcing steel in Left Bridge to the right of Section X-X is identical with the reinforcing steel in the Right Bridge to the left of Section X-X with the following exceptions:
 (1) S602 bars in the Right Bridge are replaced by S602, S612 and Series S604 thru S611 in the Left Bridge.
 (2) S702 bars in the Right Bridge are replaced by S702, S704, S706, S708, S710 and Series S703, S705, S707 and S709 in the Left Bridge.

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD. Consulting Engineers 245-249 S. Paint Street Chillicothe, Ohio					
SLAB REINFORCING DETAILS					
BRIDGE NO. FRA-1-0310 R & L S.R.1 OVER U.S.R.G.2 AND S.R.3 S.R.1 (I.R.71) FRANKLIN COUNTY STATION 1004+01.50 TO STATION 1005+76.90 SCALE DATE					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
E.E.R.	P.J.M.		K.D.D.	W.C.	10/10/41

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

443
470

PICKAWAY-FRANKLIN COUNTY
PIC-1-3.06 FRA-1-0.00

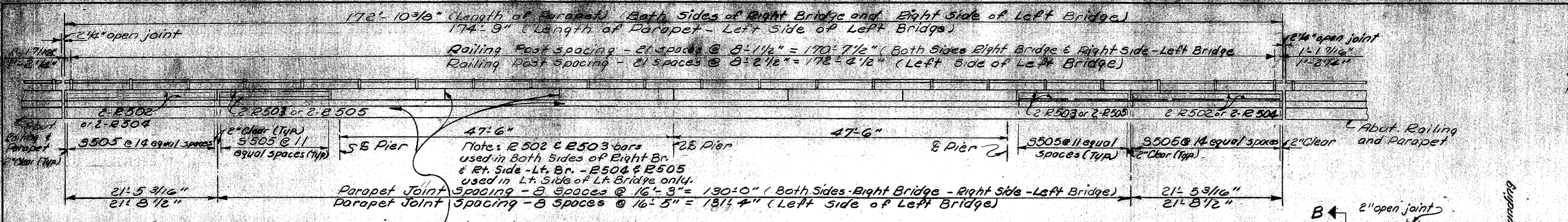


Note:
For Sections F-F and G-G
see previous sheet

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD. Consulting Engineers 245-249 S. Paint Street Chillicothe, Ohio					
SLAB REINFORCING DETAILS					
LEFT BRIDGE					
BRIDGE NO. FRA-1-0310 B&L					
S.R.1 OVER U.S.R. 62 AND S.R. 3					
S.R.1 (I.P. 71) FRANKLIN COUNTY					
STATION 1004+01.50 TO STATION 1005+76.98					
SCALE	DATE	DESIGNED	DRAWN	TRACED	CHECKED
		FER	P.J.M.	K.M.	M.K.
	10/10/62				

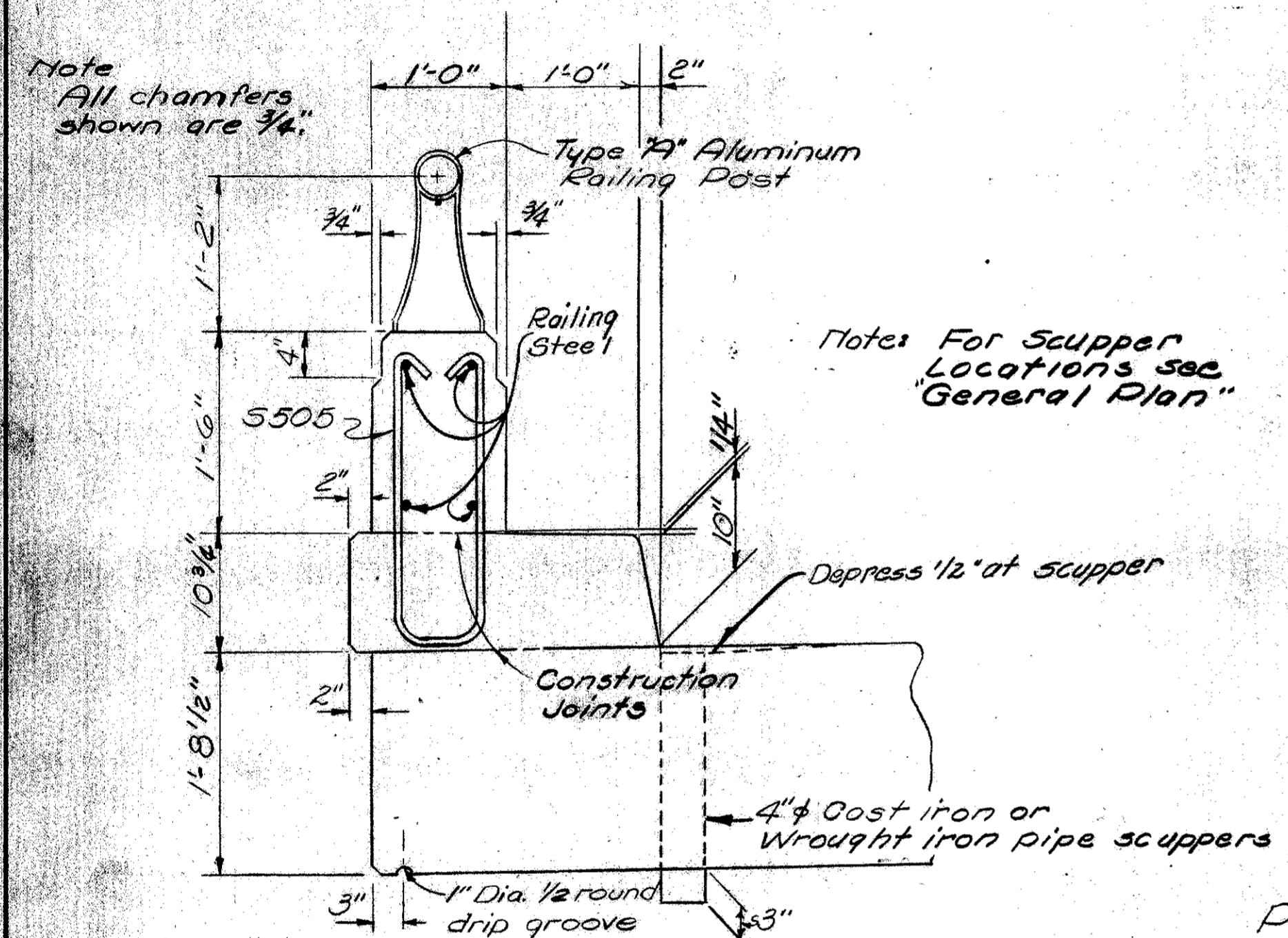
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

PICKAWAY - FRANKLIN COUNTY
PIC-1-3.06 FRA-1-000



ELEVATION RAILING AND PARAPET

1/4" gray sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type 1. Space as shown above. (Include with Item 5-14 for payment.)

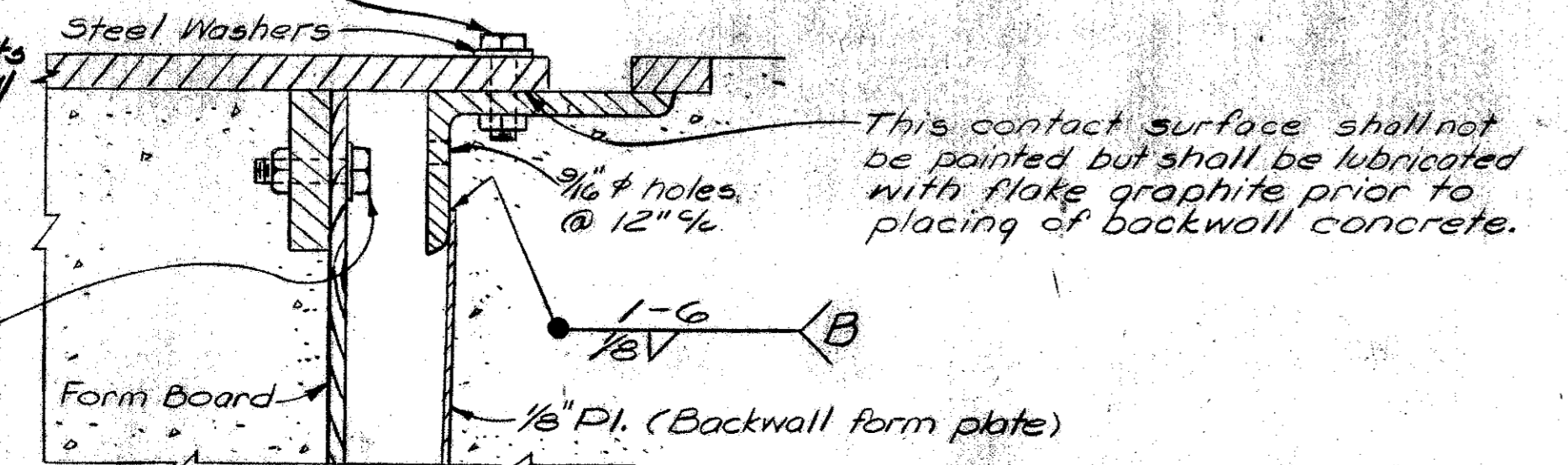


PART SECTION TREATMENT OF PARAPET AND FASCIA

A welded butt-joint in the end dam along the centerline of roadway will be required for that portion of the end dam attached to the superstructure. The portion attached to the backwall shall be placed in segments not less than 6'-0" in length, with one of the joints at the apex of the crown, and another at the centerline of the contraction joint in the abutment backwall. (These joints shall be closely butted but shall not be welded.)

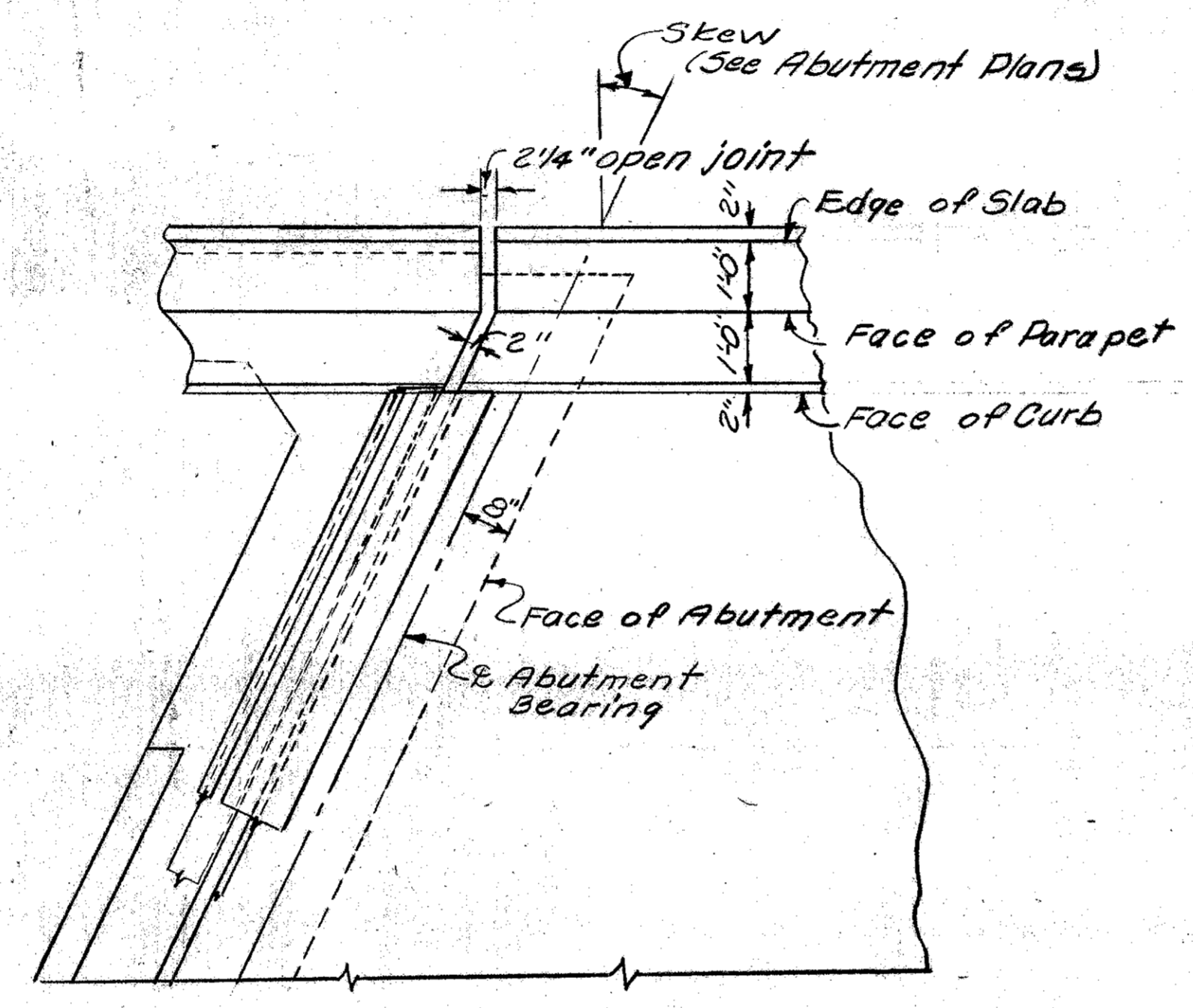
3/8" x 2 1/2" bolts @ 1'-6" o.c. with nuts welded to the bar, temporary support for end finish during placing of slab concrete. Remove bolts with forms.

3/8" x 2" bolts at not more than 2'-0" o.c. with nuts tack-welded to under side of angle. 1 1/4" holes in plate. Center 3/8" bolts in 1 1/4" holes. Apply flake graphite between washer and plate. Turn bolt tight and release one half turn. Remove bolts as soon as concrete has reasonably set, preferably within two hours, to avoid effect of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

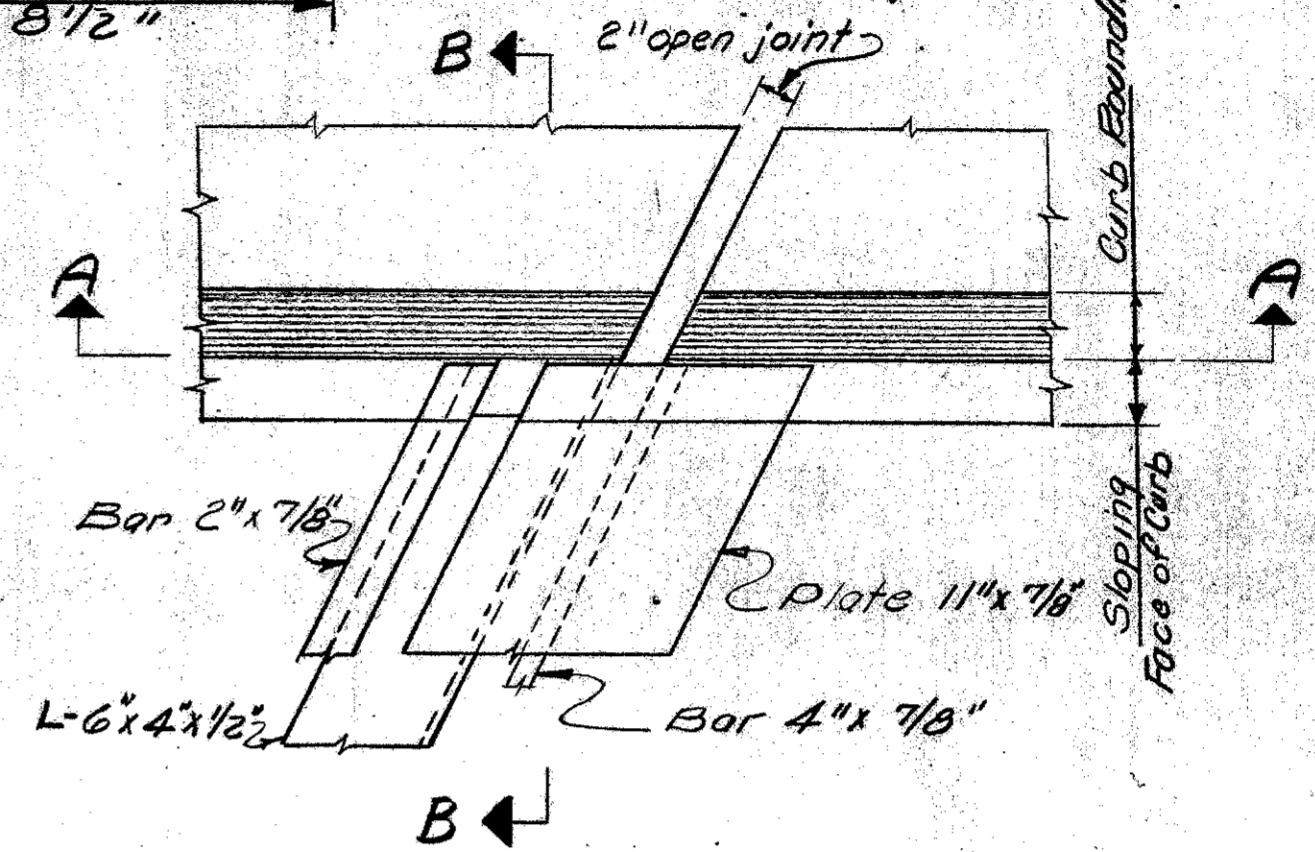


END FINISH DETAILS

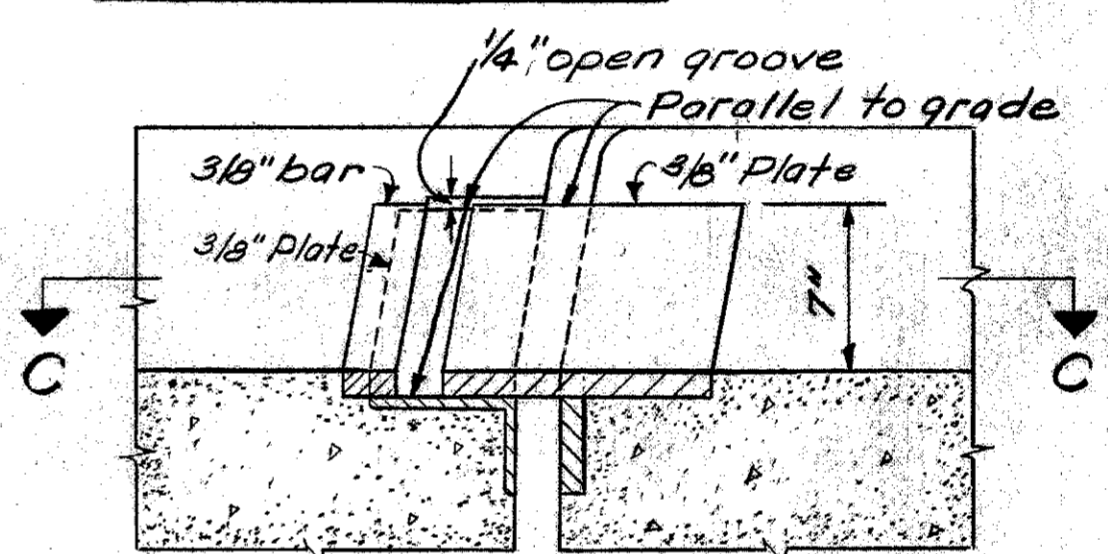
Omit shop coat on all portions of end dam. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as two field coats.



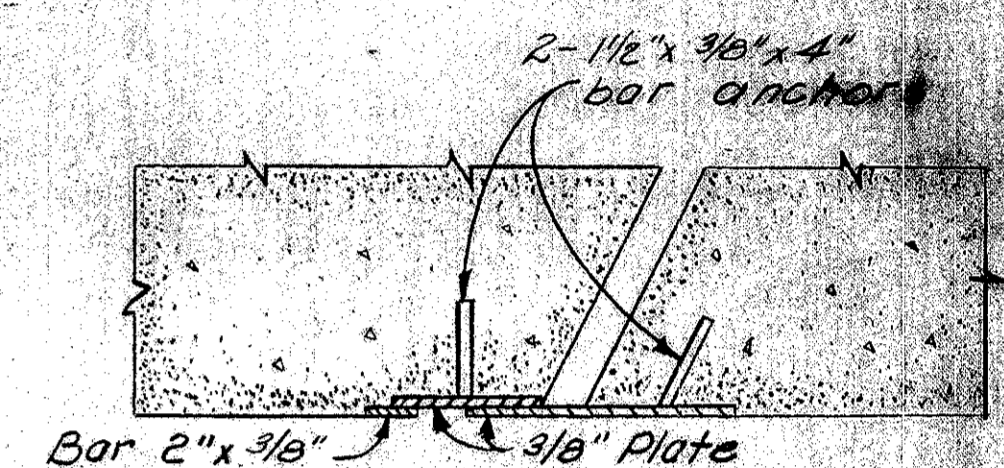
PART PLAN AT ABUTMENT



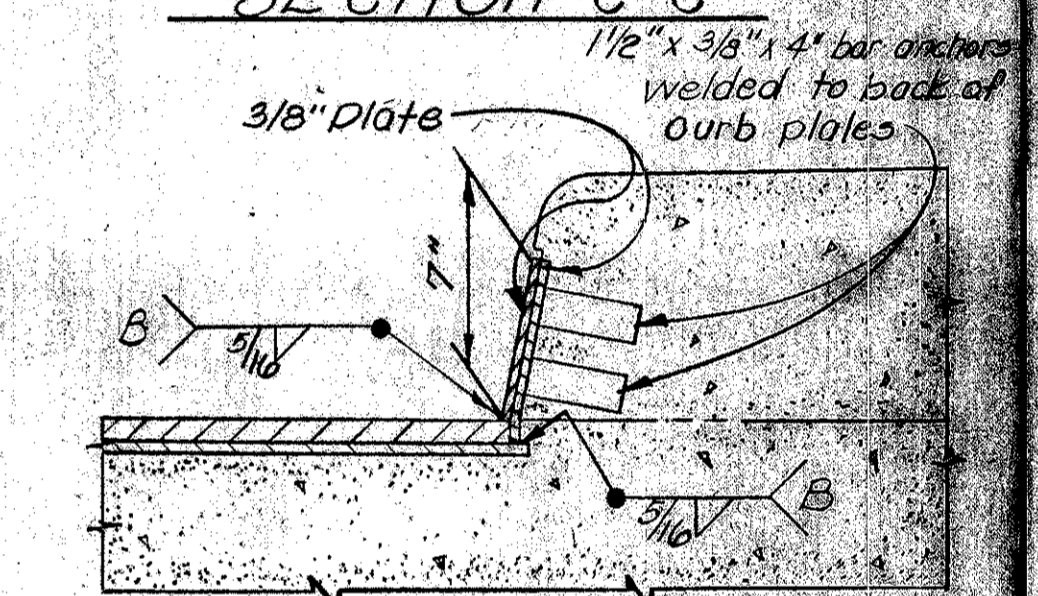
PART PLAN



SECTION A-A

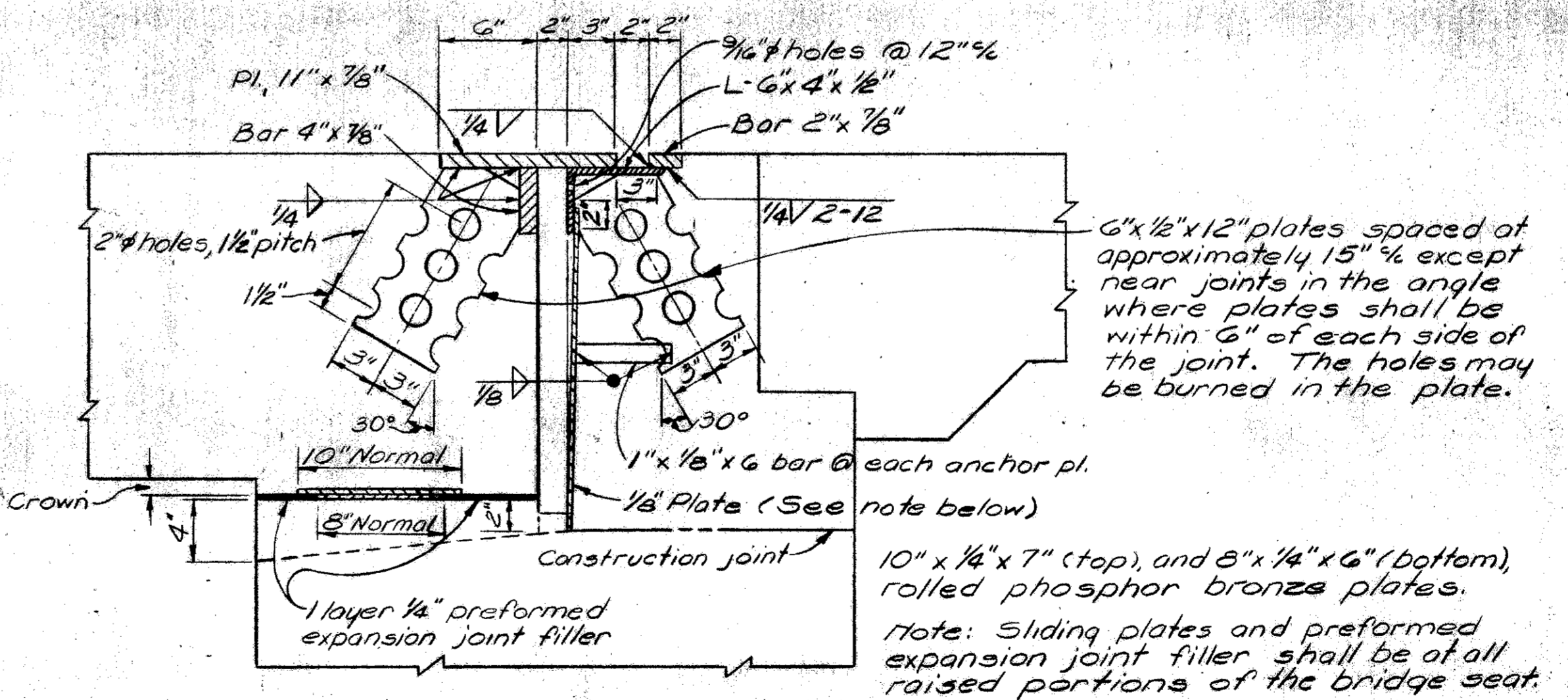


SECTION B-B



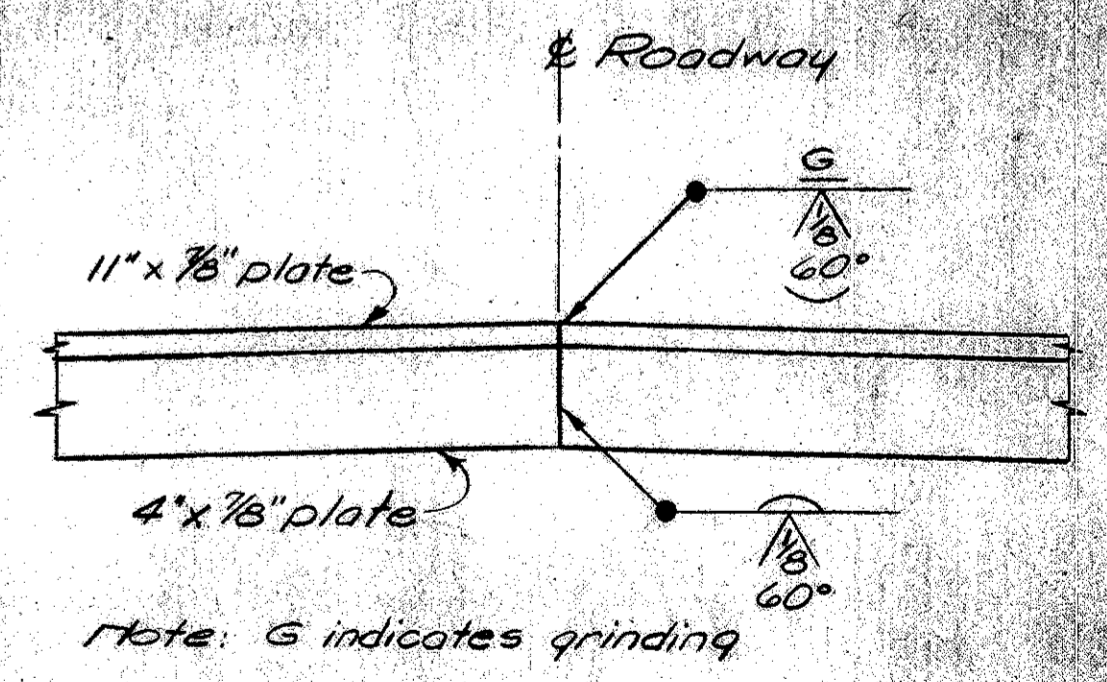
SECTION C-C

CURB PLATE DETAILS



NOTE: 1/8" Backwall form plate shall be provided in lengths not to exceed 6'-0", joints between lengths shall be tightly butted and no joints shall be placed opposite drainage slots in bridge seat; plates shall be notched to fit around anchor plates.

ROADWAY END FINISH



WELDED BUTT JOINT IN SUPERSTRUCTURE END FINISH PLATES AT E OF ROADWAY

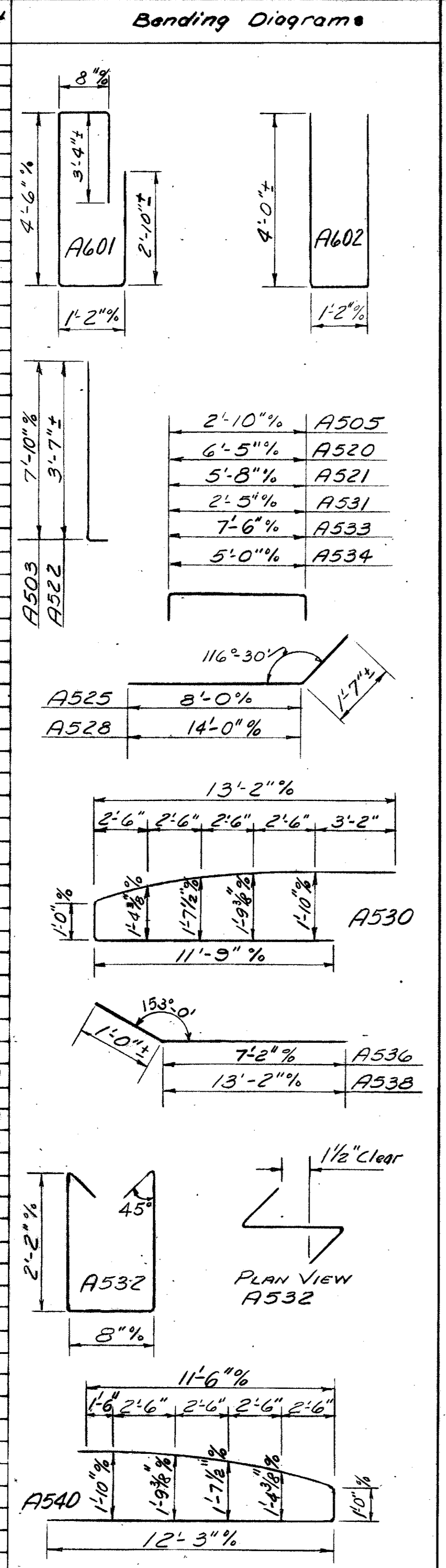
BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

SUPERSTRUCTURE DETAILS
BRIDGE NO. FRA-1-0310 B&L
S.E. 1 OVER U.S.P. 62 & S.B. 3
S.E. 1 (I.B. 7) FRANKLIN COUNTY
STATION 1004+01.50 TO STATION 1005+76.38

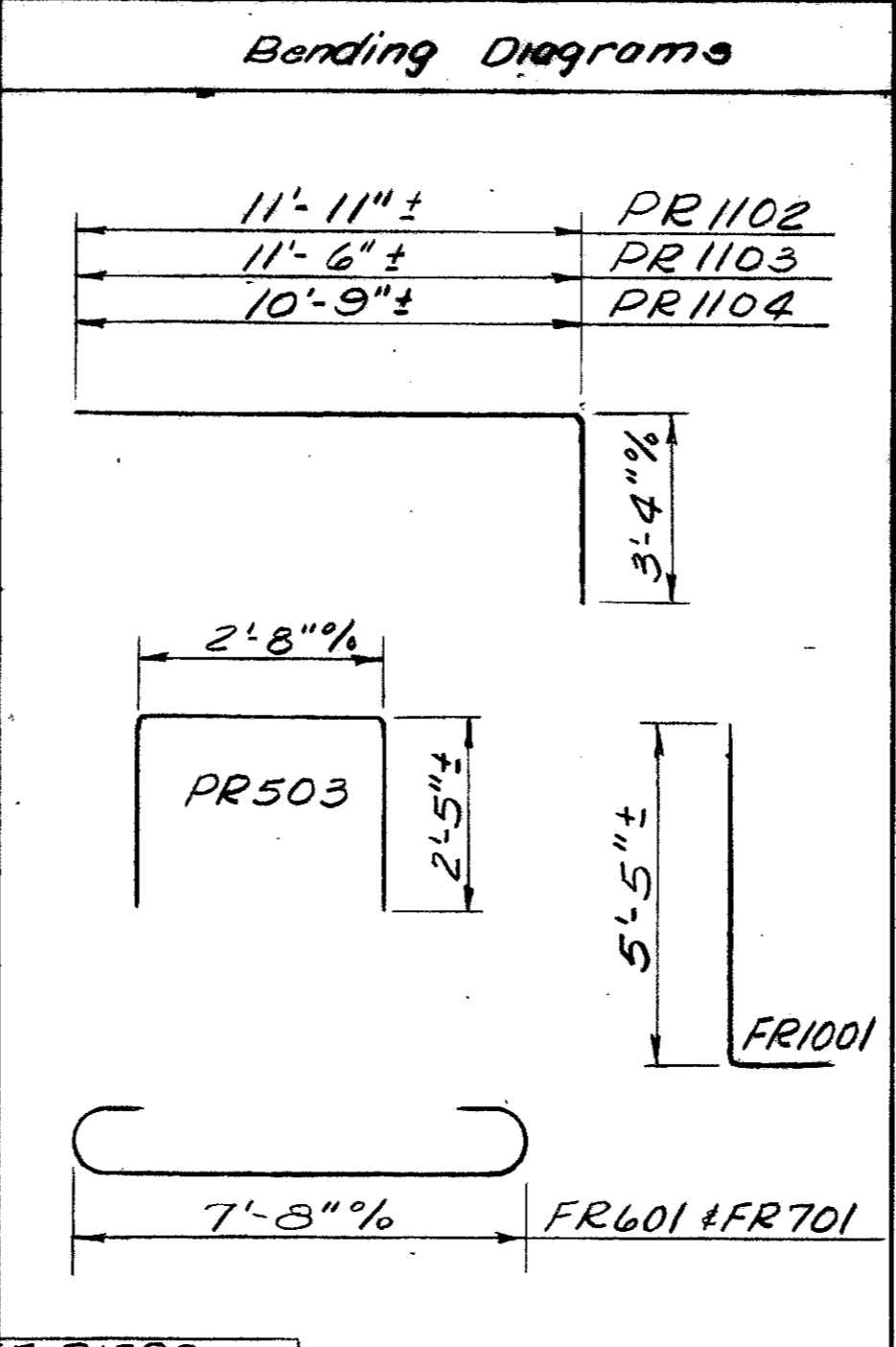
SCALE	DATE
DESIGNED	DRAWN
TRACED	CHECKED
REVIEWED	DATE
EGR	P.J.M.
KDD	7/11/10/10/10/10

REINFORCING STEEL LIST - RIGHT BRIDGE

Bar Number	Number Required	Length	Shape	Weight
ONE ABUTMENT				
A601	40	11'-10"	U	711
A602	13	8'-10"	U	172
A501	2	30'-10"	—	64
A502	9	10'-0"	—	94
A503	53	8'-4"	—	461
A504	58	5'-4"	—	353
A505	100	3'-10"	—	400
A506	4	25'-4"	—	106
A507	5	26'-10"	—	140
A508	2	26'-4"	—	55
A509	1	25'-10"	—	27
A510	1	21'-0"	—	22
A511	4	31'-3"	—	130
A512	5	30'-3"	—	158
A513	2	30'-9"	—	64
A514	1	31'-3"	—	33
A515	1	24'-9"	—	26
A516	2	7'-4"	—	15
A517	2	9'-7"	—	20
A518	1	11'-7"	—	12
A519	1	11'-0"	—	11
A520	1	7'-5"	—	8
A521	1	6'-8"	—	7
A522	14	4'-1"	—	60
A523	30	8'-10"	—	276
A524	2	6'-0"	—	13
A525	3	9'-7"	—	30
A526	5	8'-2"	—	43
A527	1	9'-0"	—	9
A528	1	15'-7"	—	16
A529	1	14'-2"	—	15
A530	3	25'-8"	—	80
A531	18	3'-5"	—	64
A532	18	5'-7"	—	105
A533	7	8'-6"	—	62
A534	7	6'-0"	—	44
A535	5	7'-10"	—	41
A536	3	8'-2"	—	26
A537	1	8'-	—	9
A538	1	14'-2"	—	15
A539	1	14'-0"	—	15
A540	3	24'-6"	—	77
A541	16	3'-7"	—	60
TOTAL ONE ABUT.				4,149
TOTAL TWO ABUT'S.				8,298



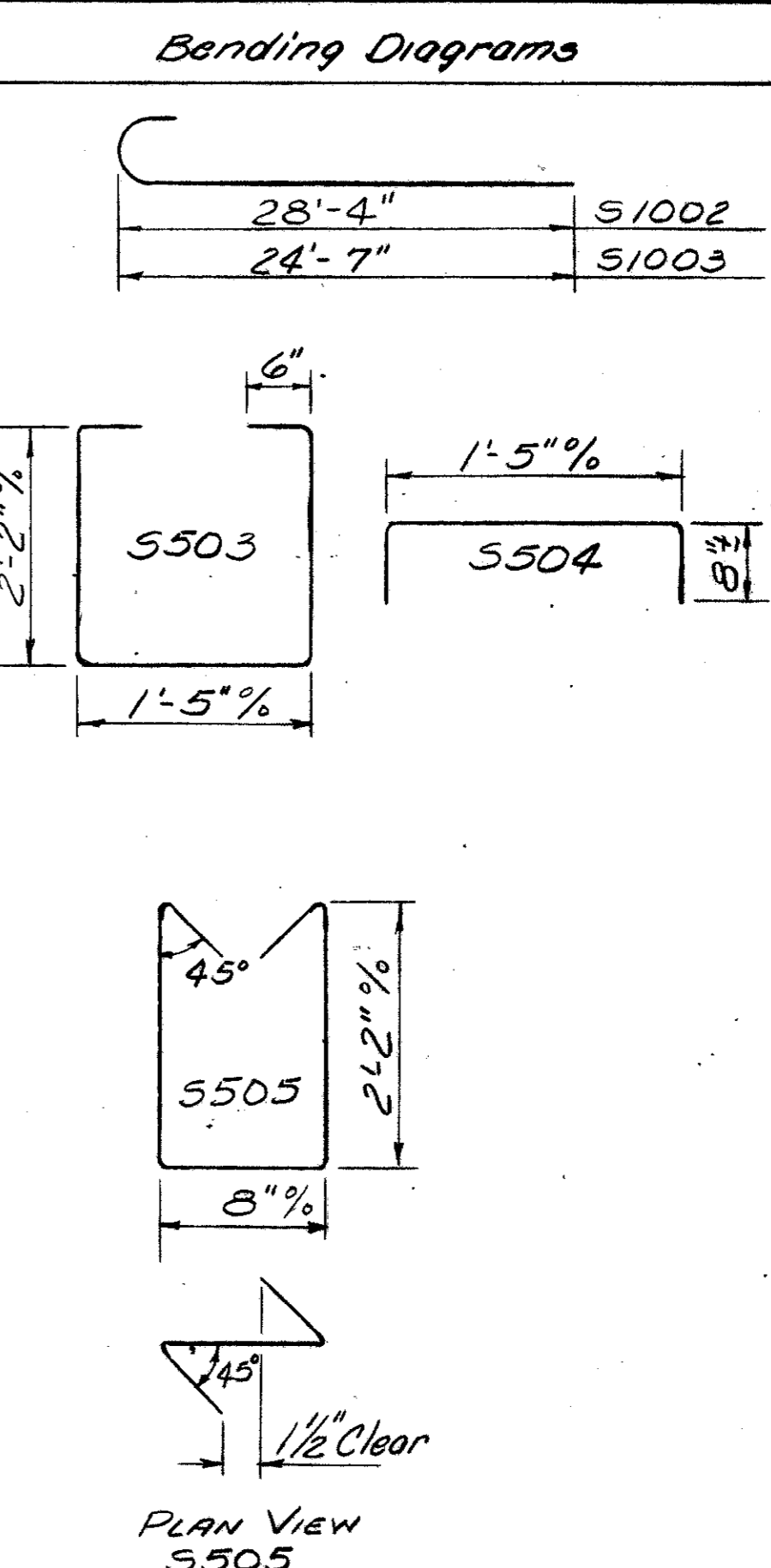
Bar Number	Number Required	Length	Shape	Weight
ONE PIER				
PR1101	6	39'-5"	—	1,257
PR1102	4	14'-11"	—	317
PR1103	4	14'-6"	—	308
PR1104	4	13'-9"	—	292
PR1105	5	35'-9"	—	950
PR1106	5	24'-3"	—	644
PR1001	40	20'-8"	—	3,557
PR801	2	35'-9"	—	191
PR802	2	23'-3"	—	124
PR601	2	35'-11"	—	108
PR501	2	35'-9"	—	75
PR502	2	22'-4"	—	47
PR503	72	7'-3"	—	544
FR1001	40	6'-6"	L	1,119
FR701	32	9'-4"	—	610
FR601	32	9'-0"	—	433
SUB-TOTAL ONE PIER				10,576
SUB-TOTAL THREE PIERS				31,728



Bar No.	No. Req'd.	Core Dia.	Length	Pitch	No. of Turns	Weight
SPIRAL - THREE PIERS						
SPR401	4	32"	17'-6 1/8"	4 1/2"	50	1,293
SPR402	4	32"	17'-6"	4 1/2"	50	1,293
SPR403	4	32"	17'-5 1/4"	4 1/2"	50	1,293
TOTAL SPIRAL						3,879

Bar No.	No. Req'd.	Core Dia.	Length	Pitch	No. of Turns	Weight
TOTAL - THREE PIERS 35,607						

Bar Number	Number Required	Length	Shape	Weight
SUPERSTRUCTURE				
S1101	153	39'-8"	—	32,245
S1102	75	23'-0"	—	9,165
S1103	75	17'-10"	—	7,106
S1001	220	46'-0"	—	43,546
S1002	50	29'-9"	—	6,401
S1003	50	26'-0"	—	5,594
S1004	50	28'-6"	—	6,132
S1005	50	20'-10"	—	4,482
S1006	30	26'-2"	—	3,378
S701	169	23'-6"	—	8,118
S702	169	36'-9"	—	12,698
S601	107	23'-2"	—	3,723
S602	107	36'-9"	—	5,906
S603	52	24'-10"	—	1,940
S604	32	11'-8"	—	911
S501	12	24'-6"	—	307
S502	12	27'-1"	—	339
S503	394	6'-2"	—	2,534
S504	394	2'-6"	—	1,027
S505	252	5'-7"	—	1,467
TOTAL SUPERSTRUCTURE				157,016



Bar Number	Number Required	Length	Shape	Weight
REPLACEMENT STEEL				
TWO STRUCTURES				
RE1101	6	7'-6"	—	
RE1001	9	7'-2"	—	
RE801	1	6'-6"	—	
RE701	3	6'-2"	—	
RE601	2	5'-11"	—	
RE501	2	5'-7"	—	
RE401	1	5'-3"	C	

Bar Number	Number Required	Length	Shape	Weight
RAILING STEEL				
TWO STRUCTURES				
R501	32	11'-11"	—	
R502	24	21'-4"	—	
R503	96	15'-11"	—	
R504	8	21'-4"	—	
R505	32	16'-11"	—	

-NOTES-

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used, indicate the bar size. For example, A501 is a number 5 size bar and P1001 is a number 10 size bar.

RAILING STEEL in the parapet wall is included with Item 5-14 Railing for payment.

SPIRAL REINFORCING BARS:
The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "Number of Turns" shown is the "Length" divided by the pitch plus three turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in all other respects conform to Item 5-4. 1 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.



BARRETT, GARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
245-249 S. Paint Street Chillicothe, Ohio

REINFORCING STEEL LIST
RIGHT BRIDGE
BRIDGE NO. FRA-1-0310 R.E.L
S.R.1 OVER U.S.R. 62 AND S.R.3
S.R.1 (I.R.71) FRANKLIN COUNTY
STATION 1004+01.50 TO STATION 1005+76.98

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
E.E.R.	WDJ		K.D.D. R.M.S.	NW	10/10/62	

REINFORCING STEEL LIST - LEFT BRIDGE

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
REAR ABUTMENT					
B601	38	11'-10"	□	675	
B602	13	8'-10"	□	172	
B501	2	29'-7"	—	62	
B502	9	10'-0"	—	94	
B503	51	8'-4"	—	443	
B504	56	5'-10"	—	341	
B505	95	3'-10"	—	380	
B506	4	25'-8"	—	107	
B507	5	27'-0"	—	141	
B508	2	26'-8"	—	56	
B509	1	26'-4"	—	27	
B510	1	21'-6"	—	22	
B511	4	28'-9"	—	120	
B512	5	27'-9"	—	145	
B513	2	28'-3"	—	59	
B514	1	28'-9"	—	30	
B515	1	19'-10"	—	21	
B516	2	9'-7"	—	20	
B517	2	7'-4"	—	15	
B518	1	11'-7"	—	12	
B519	1	11'-0"	—	11	
B520	1	7'-5"	—	8	
B521	1	6'-8"	—	7	
B522	14	4'-1"	—	60	
B523	30	8'-10"	—	276	
B524	2	6'-0"	—	13	
B525	3	9'-7"	—	30	
B526	5	8'-2"	—	43	
B527	1	9'-0"	—	9	
B528	1	15'-7"	—	16	
B529	1	14'-2"	—	15	
B530	3	25'-8"	—	80	
B531	18	3'-5"	—	64	
B532	18	5'-7"	—	105	
B533	7	8'-6"	—	62	
B534	7	6'-0"	—	44	
B535	5	7'-10"	—	41	
B536	3	8'-2"	—	26	
B537	1	8'-8"	—	9	
B538	1	14'-2"	—	15	
B539	1	14'-0"	—	15	
B540	3	24'-6"	—	77	
B541	16	3'-7"	—	60	
TOTAL REAR ABUTMENT 4,028					
FORWARD ABUTMENT					
C601	43	11'-10"	□	764	
C602	13	8'-10"	□	172	
C501	2	31'-10"	—	66	
C502	9	10'-0"	—	94	
C503	55	8'-4"	—	478	
C504	60	5'-10"	—	365	
C505	105	3'-10"	—	420	
C506	4	27'-10"	—	116	
C507	5	29'-6"	—	154	
C508	2	28'-10"	—	60	
C509	1	28'-2"	—	29	
C510	1	21'-1"	—	22	
C511	4	30'-9"	—	128	
C512	5	29'-9"	—	155	
C513	2	30'-3"	—	63	
C514	1	30'-9"	—	32	
C515	1	24'-1"	—	25	
C516	2	7'-4"	—	15	
C517	2	9'-7"	—	20	
C518	1	11'-7"	—	12	
C519	1	11'-0"	—	11	
C520	1	7'-5"	—	8	
C521	1	6'-8"	—	7	

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams
FORWARD ABUTMENT CONT.					
C522	14	4'-1"	—	60	
C523	30	8'-10"	—	276	
C524	2	6'-0"	—	13	
C525	3	9'-7"	—	30	
C526	5	8'-2"	—	43	
C527	1	9'-0"	—	9	
C528	1	15'-7"	—	16	
C529	1	14'-2"	—	15	
C530	3	25'-8"	—	80	
C531	18	3'-5"	—	64	
C532	18	5'-7"	—	105	
C533	7	8'-6"	—	62	
C534	7	6'-0"	—	44	
C535	5	7'-10"	—	41	
C536	3	8'-2"	—	26	
C537	1	8'-8"	—	9	
C538	1	14'-2"	—	15	
C539	1	14'-0"	—	15	
C540	3	24'-6"	—	77	
C541	16	3'-7"	—	60	
TOTAL FORWARD ABUT. 4,276					
TOTAL TWO ABUT'S. 8,304					
THREE PIERS					
PL1101	6	38'-8"	—	1,233	
PL1102	4	14'-9"	—	313	
PL1103	4	14'-4"	—	305	
PL1104	4	13'-7"	—	289	
PL1105	5	35'-0"	—	930	
PL1106	5	23'-11"	—	635	
PL1107	6	39'-5"	—	1,257	
PL1108	4	14'-11"	—	317	
PL1109	4	14'-6"	—	308	
PL1110	4	13'-9"	—	292	
PL1111	5	35'-9"	—	950	
PL1112	5	24'-4"	—	646	
PL1113	6	40'-2"	—	1,280	
PL1114	4	15'-1"	—	321	
PL1115	4	14'-8"	—	312	
PL1116	4	13'-11"	—	296	
PL1117	5	36'-6"	—	970	
PL1118	5	24'-8"	—	655	
PL1001	40	20'-2"	—	3,471	
PL1002	40	20'-1"	—	3,457	
PL1003	40	19'-11"	—	3,428	
PL801	2	35'-0"	—	187	
PL802	2	22'-11"	—	122	
PL803	2	35'-9"	—	191	
PL804	2	23'-4"	—	125	
PL805	2	36'-6"	—	195	
PL806	2	23'-8"	—	126	
PL601	2	35'-2"	—	106	
PL602	2	35'-11"	—	108	
PL603	2	36'-8"	—	110	
PL501	2	35'-0"	—	73	
PL502	2	22'-0"	—	46	
PL503	216	7'-3"	□	1,633	
PL504	2	35'-9"	—	75	
PL505	2	22'-5"	—	47	
PL506	2	36'-6"	—	76	
PL507	2	22'-9"	—	47	
FL1001	120	6'-6"	L	3,356	
FL701	96	9'-4"	C	1,831	

Bar Number	Number Required	Length	Shape	Weight	Bending Diagrams	
THREE PIERS CONT.						
FL601	96	9'-0"	—	1,298		
FL701	96	9'-4"	C	1,831		
SUB-TOTAL THREE PIERS 31,417						
SPIRAL						
Bar No.	No. Req'd.	Core Dia.	Length	Pitch	No. of Turns	Weight
SPL401	4	32"	17'-0 1/2"	4 1/2"	48	1,244
SPL402	4	32"	16'-10 3/4"	4 1/2"	48	1,243
SPL403	4	32"	16'-8 3/4"	4 1/2"	48	1,241
TOTAL SPIRAL 3,728						
TOTAL THREE PIERS 35,145						
SUPERSTRUCTURE						
S1101	153	39'-8"	—	32,245		
S1102	75	23'-0"	—	9,165		
S1103	75	17'-10"	—	7,106		
S1001	221	46'-0"	—	43,744		
S1002	51	29'-9"	C	6,529		
S1003	50	26'-0"	C	5,594		
S1004	50	28'-6"	—	6,132		
S1005	50	20'-10"	—	4,482		
S1006	30	26'-2"	—	3,378		
S701	169	23'-0"	—	8,118		T.N.C.R.
S702	5	34'-9"	—	355		
S703	Series of 31 bars	34'-10"	—	2,231		5/16"
S704	5	35'-7"	—	364		
S705	Series of 41 bars	35'-8"	—	3,034		5/16"
S706	5	36'-9"	—	376		
S707	Series of 41 bars	36'-10"	—	3,132		5/16"
S708	5	37'-11"	—	388		
S709	Series of 31 bars	38'-0"	—	2,432		5/16"
S710	5	38'-10"	—	397		
S601	107	23'-2"	—	3,723		
S602	3	34'-9"	—	157		
S603	52	24'-10"	—	1,940		
S604	52	11'-8"	—	911		
S605	Series of 14 bars	34'-10"	—	739		5/8"
S606	Series of 13 bars	35'-6"	—	696		5/16"
S607	17 bars	35'-9"	—	925		5/8"
S608	Series of 13 bars	35'-10"	—	718		5/16"
S609	Series of 17 bars	36'-7"	—	954		5/8"
S610	Series of 13 bars	36'-8"	—	741		5/16"
S611	Series of 14 bars	36'-11"	—	809		5/8"
S612	3	38'-10"	—	175		
S501	12	24'-6"	—	307		
S502	12	27'-1"	—	339		
S503	396	6'-2"	□	2,547		
S504	396	2'-6"	□	1,033		
S505	252	5'-7"	□	1,467		
TOTAL SUPERSTRUCTURE 157,383						

Note:
For "Railing Steel" and "Replacement Steel" see Reinforcing Steel List, Right Bridge.

BARRETT, CARGO, WITHERS AND ASSOCIATES, LTD.
Consulting Engineers
248-249 S. Paint Street
Chillicothe, Ohio

REINFORCING STEEL LIST LEFT BRIDGE

BRIDGE NO. FRA-1-0310 R&L
S.R.1 OVER U.S.R. 62 AND S.R.3
S.R.1 (L.R.71) FRANKLIN COUNTY
STATION 1004+01.50 TO STATION 1005+70.00

SCALE _____ DATE _____

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	BY
EER	W.D.U.		K.D.D. R.M.S.	T.W.	10/10/62	