

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
RIC-30-5.79 & ASD-30-0.00
RICHLAND COUNTY
MADISON & MIFFLIN TOWNSHIPS
ASHLAND COUNTY
MIFFLIN TOWNSHIP

LIMITED ACCESS
This improvement has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02, Revised Code of Ohio, and is especially designed for through traffic.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F-1072 (1)	214

RICHLAND & ASHLAND CO.
RIC-30-5.79
ASD-30-0.00

F-1072(1)

CONVENTIONAL SIGNS

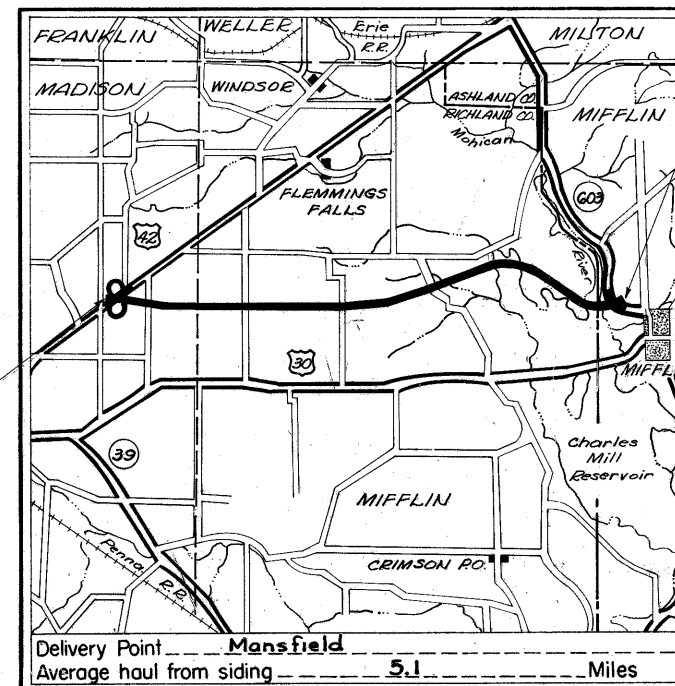
State Line	
County Line	
Township Line	
Section Line	
Center Line	
Corporation Line	
Fence Line	
Guard Rail (existing)	
Guard Rail (proposed)	
Steam Railroad	
Power Poles	
Telephone Poles	
Trees or Stumps (existing)	
Trees or Stumps (to be removed)	

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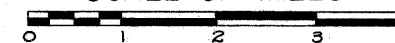
LINE DATA

Begin Project Sta. 425+10	
End Project Sta. 701+83.04	
Gross Length of Project	= 27,673.04 Lin. Ft.
Add for Station Equation (676+08.96 back = 670+00 ahead)	= 608.96 Lin. Ft.
Net Length of Project	= 28,282.00 Lin. Ft.
	or 5.356 Miles
Begin Work Sta. 425+10	
End Work Sta. 702+30	
Gross Length of Work	= 27,720.00 Lin. Ft.
Add for Station Equation	= 608.96 Lin. Ft.
Add for Laver Road	= 627.00 Lin. Ft.
Net Length of Work	= 28,955.96 Lin. Ft.
	or 5.484 Miles



LOCATION MAP

SCALE OF MILES



Portion to be improved
State Roads
Other Roads

SCALE

Plan _____ 1" = 50'
Profile: Horizontal _____ 1" = 50'
Profile: Vertical _____ 1" = 10'

The standard specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved E. H. Schum
Date 10/25/56 Division Deputy Director

Approved John P. ...
Date 11/10/56 Deputy Director of Planning & Programming

Approved W. C. ...
Date 11/14/56 Engineer of Bridges

Approved B. D. ...
Date 11/14/56 Engineer of Location & Design

Approved W. F. ...
Date 11/15/56 Deputy Director of Design & Construction

Approved V. F. ...
Date 11/20/56 First Assistant Director

Approved S. D. ...
Date 11/20/56 Director of Highways

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER

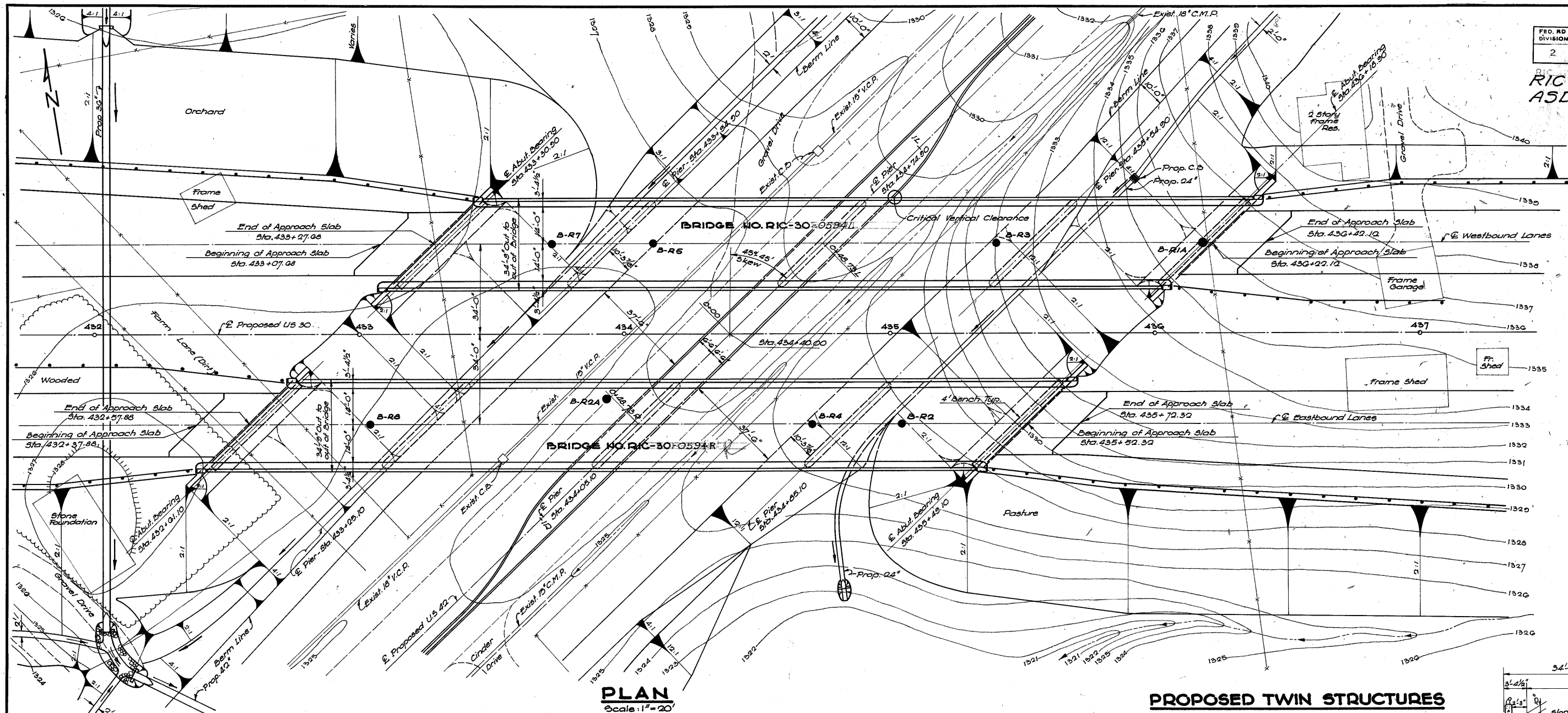
DATE

File No. 256-R
Date of Letting _____ 19____
Contract No. _____

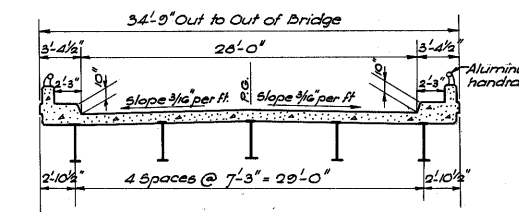
Supplemental Prints of Standard Construction Drawings							
OS-2	7-1-55	L-3-A	4-1-50	I-8 C.B. 1-2-A & B	5-1-52	I-15 N# 2	12-1-54
DR-1	1-3-55	B-T-71 R	3-2-53	I-8 C.B. 2-2-A & B	8-1-56	I-15 N# 2-A	7-2-56
RI-1	1-3-55	L.J. N# 1	7-1-55	I-8 C.B. 2-3 & 2-4	5-1-52	I-21-23	8-1-56
R.P. N# 1	7-2-56	T.J.	5-1-56	I-8 C.B. N# 6	5-1-52	6-7-07	6-1-56
T-35	1-2-56	S-27 P.C. 3	2-20-45	I-8 C.B. N# 7	5-1-52	B-T-50-70-71 N# 1	10-1-47
L-1	4-1-50	S-27 P.C. 4	1-4-54	I-12	7-1-54	SP-53	7-21-53
L-2	4-1-50	I-1,2,3,4 & 5	2-20-45	I-14 G	1-2-52	AS-1-54	12-1-54
L-3	4-1-50	I-8 I. N# 2	12-1-54	I-15 N# 1	8-1-55	RB-1-55	3-1-55

Supplemental Specifications	
5	6-8-55
18	Rev. 9-7-55
L-209.12	7-17-54
M-110.27	9-9-52
M-109.23	Rev 4-20-56
S-114	8-30-55

RIC-30-579
ASD-30-0.00



PLAN
Scale: 1" = 20'



SECTION THRU ROADWAY
Scale: 1/2" = 1'-0"

PROPOSED TWIN STRUCTURES

TYPE: Continuous rolled beam with reinforced concrete deck and substructure
SPANS: 64'-0", 80'-0", 80'-0", 64'-0"
SKREW: 45°-45' L.F.
WEARING SURFACE: 1" Monolithic concrete.
SAFETY CURBS: 2 @ 2'-0"
ROADWAY: 26'-0" Curb to curb.
APPROACH SLABS: 20'-0" Long.
LOADING: Standard Lane Loading as per State of Ohio Design Specifications for Highway Structures, Oct. 1, 1951 with revisions dated 7-15-52, 4-1-54, & 2-1-55.
CF = 2000
VERTICAL CLEARANCE: 15'-0" Minimum required.
ALIGNMENT: Tangent.

NOTES

● Symbol denotes drill hole.
 See Sheet No. 174 for test boring data.
 Foundation design and foundation quantities are based on a study of test borings and soil samplings made at the site. This sounding information may be inspected in the Office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

PROTECTION OF TRAFFIC

The Contractor shall safeguard the traveling public on U.S. Route No. 42 by providing platforms, nets or other suitable protection above the traveled lanes.

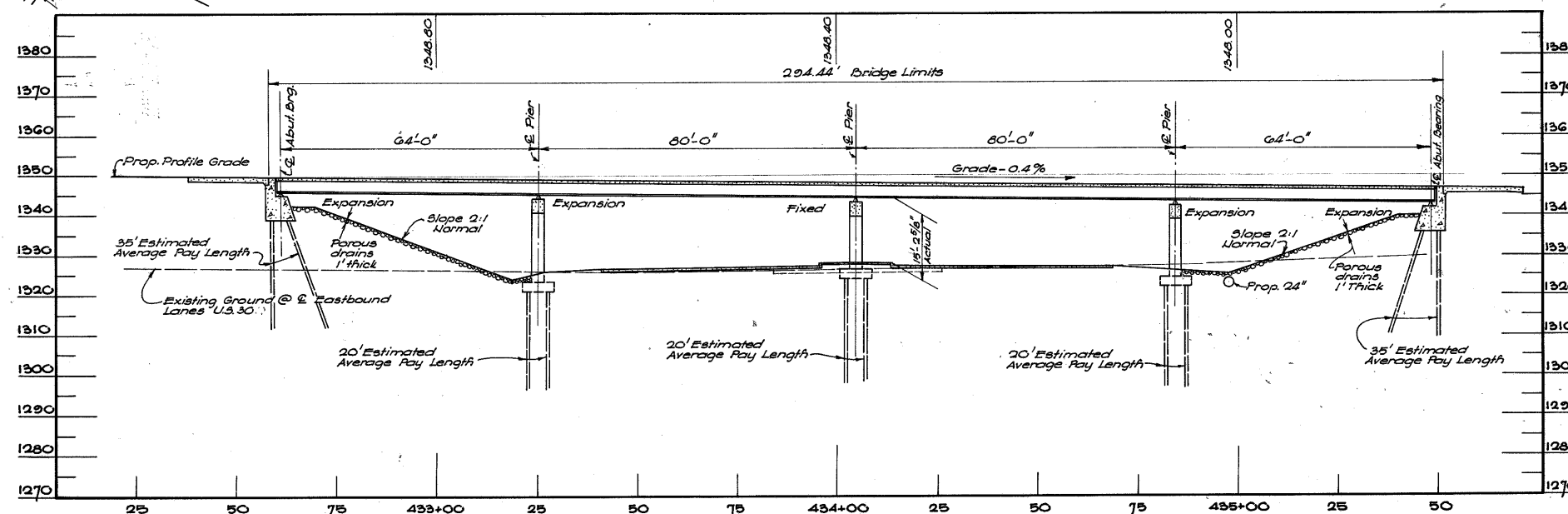
VOGT, IVERS, SEAMAN & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI, OHIO

SITE PLAN

BRIDGES NO. RIC-30-0594L & R
U.S. 30 OVER U.S. 42

RICHLAND COUNTY STA. 432+57.88 TO STA. 436+22.12
Scale: As shown

PRESENT TOPOGRAPHY		PROPOSED WORK			REVISIONS
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	
J.O.W.	J.P.F.	J.P.F.	J.P.F.	R.J.L.	

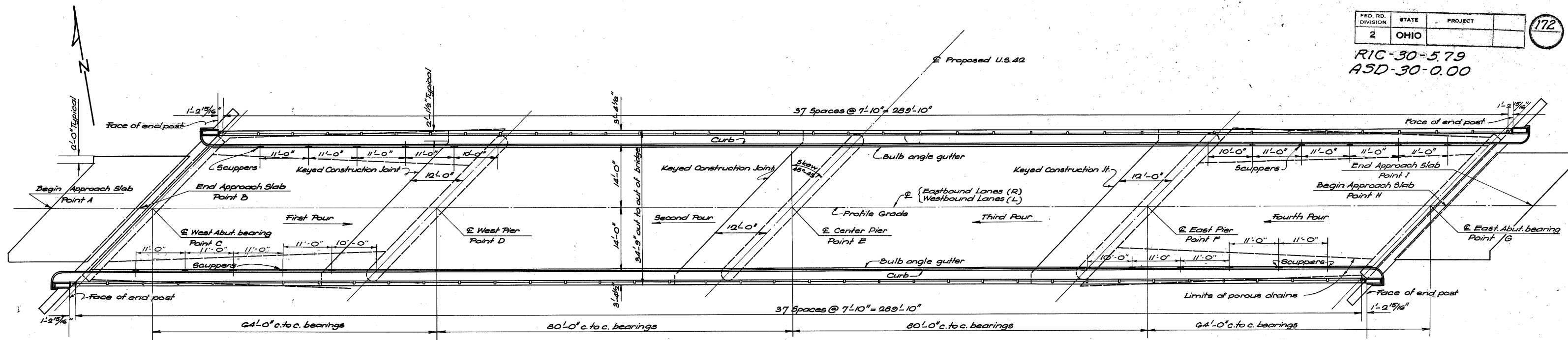


PROFILE ON CENTERLINE - EASTBOUND LANES

Scale: 1" = 20'

All piles 12" x 12" cast-in-place reinforced concrete.

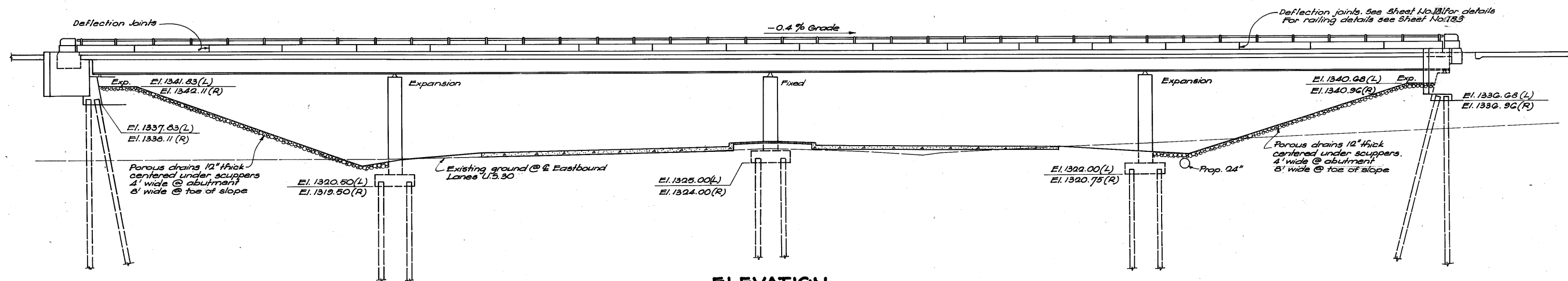
RIC-30-5.79
ASD-30-0.00



GENERAL PLAN

Scale: 3/32"=1'-0"

For bridge drainage details and scupper details see Sheet No. 132
Scupper spacing to be measured along curb side of bulb angle gutter.



ELEVATION

Scale: 3/32"=1'-0"

STATIONING-BRIDGES NOS. RIC-30-0594 L & R									
	POINT A	POINT B	POINT C	POINT D	POINT E	POINT F	POINT G	POINT H	POINT I
BRIDGE NO. RIC-30-0594 L	STA. 433+07.68	STA. 433+27.68	STA. 433+30.90	STA. 433+34.90	STA. 434+74.90	STA. 435+54.90	STA. 436+18.90	STA. 436+22.12	STA. 436+42.12
BRIDGE NO. RIC-30-0594 R	STA. 432+37.88	STA. 432+57.88	STA. 432+61.10	STA. 433+25.10	STA. 434+05.10	STA. 434+85.10	STA. 435+49.10	STA. 435+52.32	STA. 435+72.32

PAVEMENT ELEVATIONS			
STATION	PROFILE GRADE	NORMAL EDGE OF PAVT 12" L & R OF E OF BRIDGE	GUTTER LINE 14" L & R OF E OF BRIDGE
432+25	1349.10	1348.91	
+50	1349.00	1348.81	1348.78
+75	1348.90	1348.71	1348.68
433+00	1348.80	1348.61	1348.58
+25	1348.70	1348.51	1348.48
+50	1348.60		1348.38
+75	1348.50		1348.28
434+00	1348.40		1348.18
+25	1348.30		1348.08
+50	1348.20		1347.98
+75	1348.10		1347.88
435+00	1348.00		1347.78
+25	1347.90		1347.68
+50	1347.80	1347.61	1347.58
+75	1347.70	1347.51	1347.48
436+00	1347.60	1347.41	1347.38
+25	1347.50	1347.31	1347.28
+50	1347.40	1347.21	
+75	1347.30	1347.11	

See Sheet No. 133 for GENERAL NOTES & ESTIMATED QUANTITIES

NOTE:
Designations used are as follow:
(L) = Bridge No. RIC-30-0594 L
(R) = Bridge No. RIC-30-0594 R

VOGT, IVERS, SEAMAN & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI, OHIO

GENERAL PLAN & ELEVATION

BRIDGES NOS. RIC-30-0594 L & R
U.S. 30 OVER U.S. 42

RICHLAND COUNTY STA. 432+57.88 TO STA. 436+22.12

Scale: As shown
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
J.P.F. V.J.E. J.H.K. J.P.F. W.J.I. 10-30-56

RIC-30-5.79
ASD-30-0.00

ESTIMATED QUANTITIES																
ITEM	TOTAL	UNIT	DESCRIPTION	BRIDGE NO. RIC-30-0594L						BRIDGE NO. RIC-30-0594R						
				WEST ABUT.	EAST ABUT.	WEST PIER	CENTER PIER	EAST PIER	SUPER-STRUCTURE	GENERAL	WEST ABUT.	EAST ABUT.	WEST PIER	CENTER PIER	EAST PIER	SUPER-STRUCTURE
E-2		Lump Sum	Cofferdams, cribs & sheeting													
E-2	715	Cu.Yds.	Unclassified Excavation	64	64	86	54	94			64	64	88	47	90	
S-1	588	Cu.Yds.	Class "C" Concrete - Superstructure						294							294
S-1	213	Cu.Yds.	Class "C" Concrete - Pier Caps & Columns			37	32	35					39	33	37	
S-1	6	Cu.Yds.	Class "C" Concrete - Abutments	1.5	1.5						1.5	1.5				
S-1	156	Cu.Yds.	Class "E" Concrete - Pier Footings			26	26	26					26	26	26	
S-1	320	Cu.Yds.	Class "E" Concrete - Abutments	80	80						80	80				
S-4	304,676	Lbs.	Reinforcing Steel	5,881	5,878	12,936	12,794	12,334	101,757	300	5,881	5,878	13,293	13,225	12,762	101,757
S-7	678,392	Lbs.	Structural Steel						339,196							339,196
S-8	678,392	Lbs.	Field painting of Structural Steel						339,196							339,196
S-14	1,168	Lin.Ft.	Railing (aluminum rail & supports & concrete parapet)						584							584
S-16	1	Lump Sum	First test pile							1						
S-17	1	Lump Sum	First pile test load							1						
S-17	1	Each	Subsequent pile test load							1						
S-18	4,560	Lin. Ft.	12" ϕ Reinforced concrete piles, cast-in-place.	420	420	480	480	480			420	420	480	480	480	
S-29	61	Cu.Yds.	Porous backfill							30						31
S-29	117	Cu.Yds.	Porous drains on embankment slopes							59						58

NOTE: Materials in approach slabs are not included in the above estimated quantities.

GENERAL NOTES

BRIDGE RAILING: Reference shall be made to Suppl. Spec. No. S-114 Aluminum for Bridge Railing dated Aug. 30, 1955.

DECK PLACING PROCEDURE: Deck shall be placed in sections, between transverse construction joints, in the numerical order and in the direction indicated on the drawing.

PILES: Piles shall be driven to a minimum bearing capacity of 35 tons for the abutments and piers. The length of penetration of every pile shall be at least 80 per cent of the estimated average pay length of the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director.

EXCAVATION: Roadway embankments at abutments shall be placed and compacted to the height of the earth bench. Excavation shall then be made for the abutment.

SURFACE FINISH OF CONCRETE: Curb faces, fascias of deck and exposed surfaces of piers, abutments and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

PAINT: Both shop and field, shall be applied by brushing. Spray application will not be permitted.

GRAVEL: Gravel if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

WELDING: Welding of structural steel shall be Class "A" except as otherwise shown.

WELDED STEEL: The steel for the 36 WF 94 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-74(a) of the Construction and Material Specifications) or to A-373.

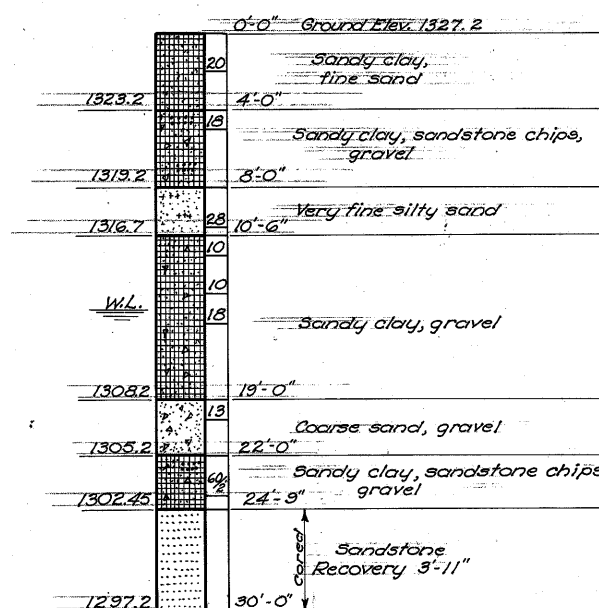
ADDITIONAL NOTES: See Plans and Specifications.

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ENGINEERS ARCHITECTS
CINCINNATI, OHIO

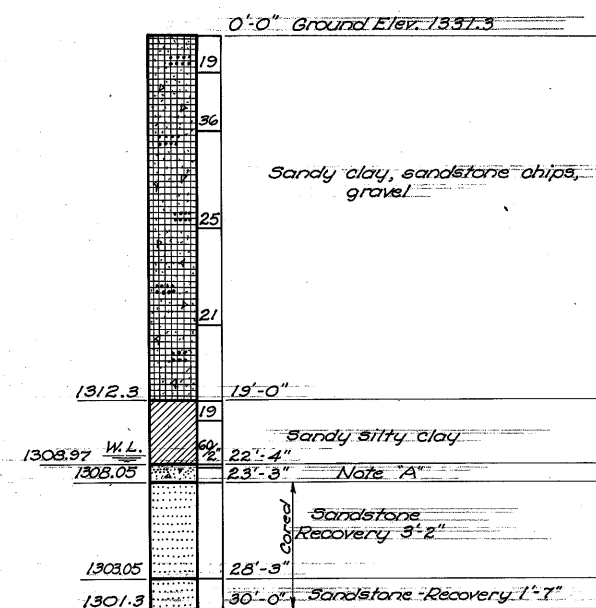
**GENERAL NOTES &
ESTIMATED QUANTITIES**
BRIDGES NOS. RIC-30-0594 L & R
U.S. 30 OVER U.S. 42
RICHLAND COUNTY STA. 432+57.88 TO
STA. 436+22.12
Scale: None

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.F.	V.J.E.	H.A.H.	J.P.F.	W.J.L.	10-30-56	

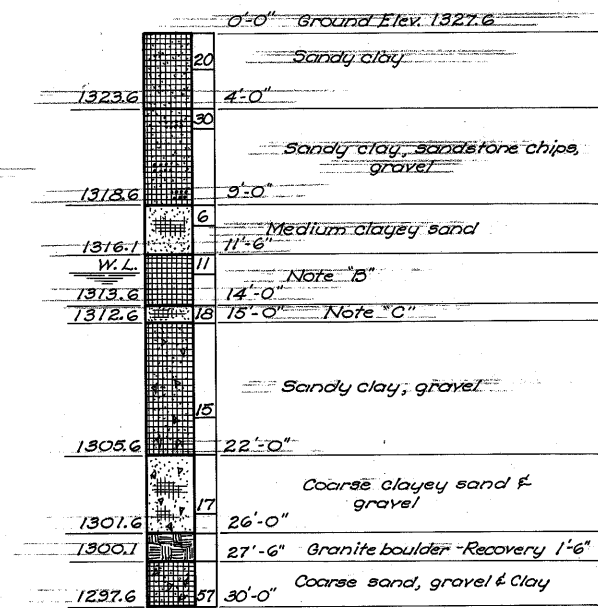
RIC-30-5.79
ASD-30-0.00



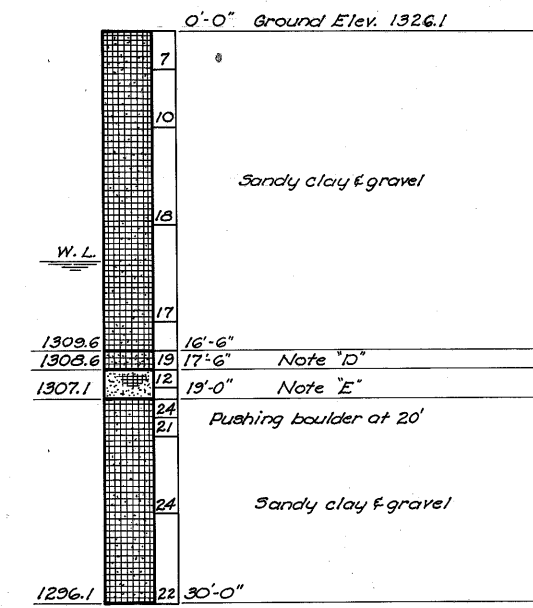
BORING R2



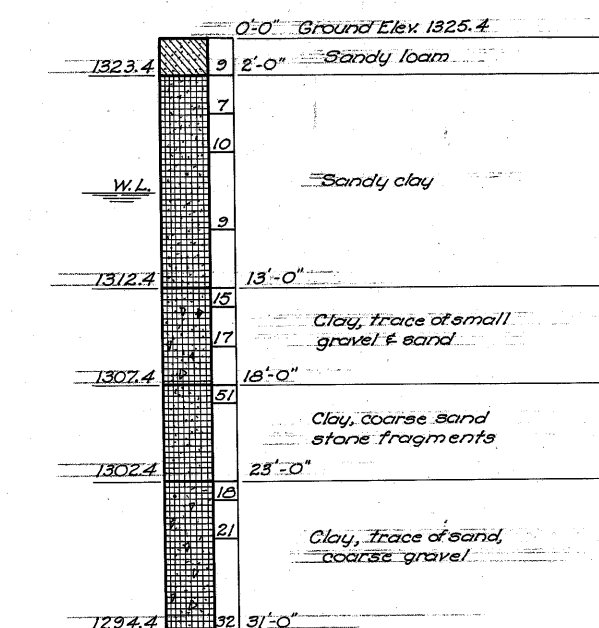
BORING R3



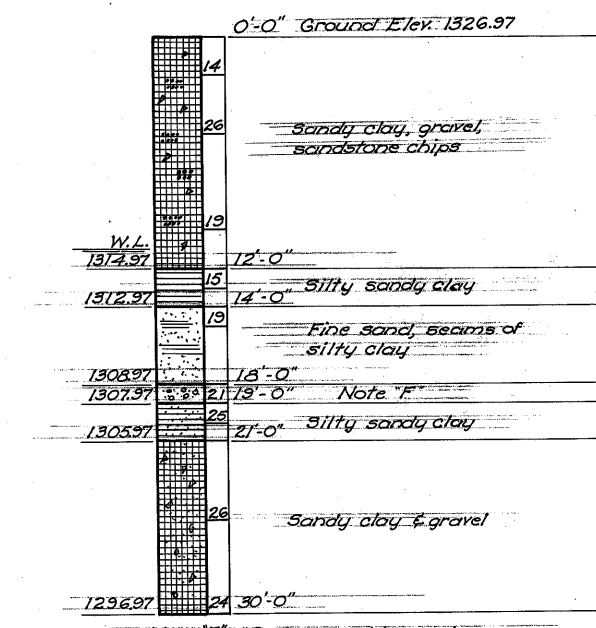
BORING R4



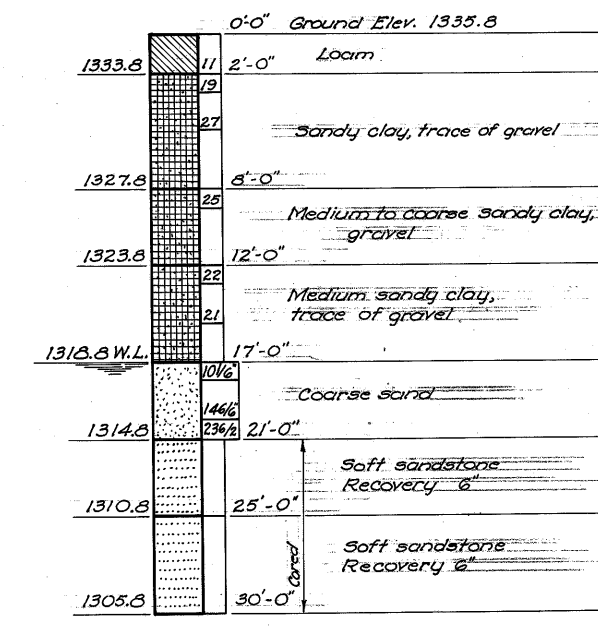
BORING R5



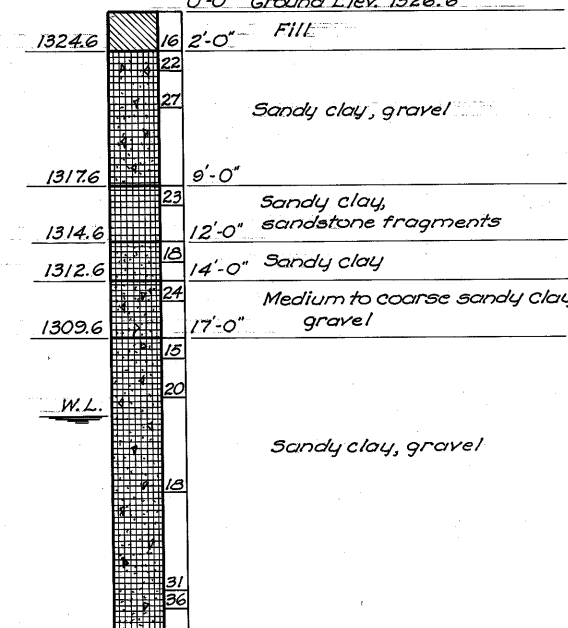
BORING R7



BORING R8



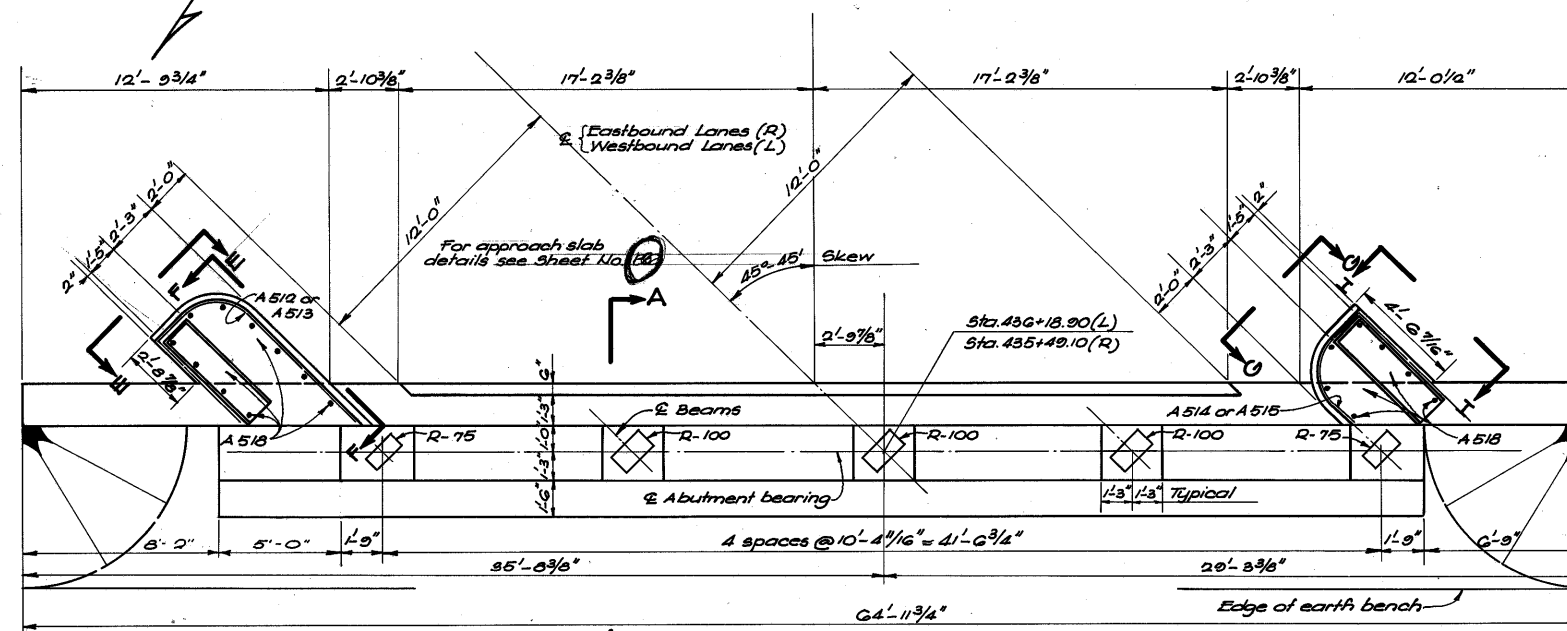
BORING R1A



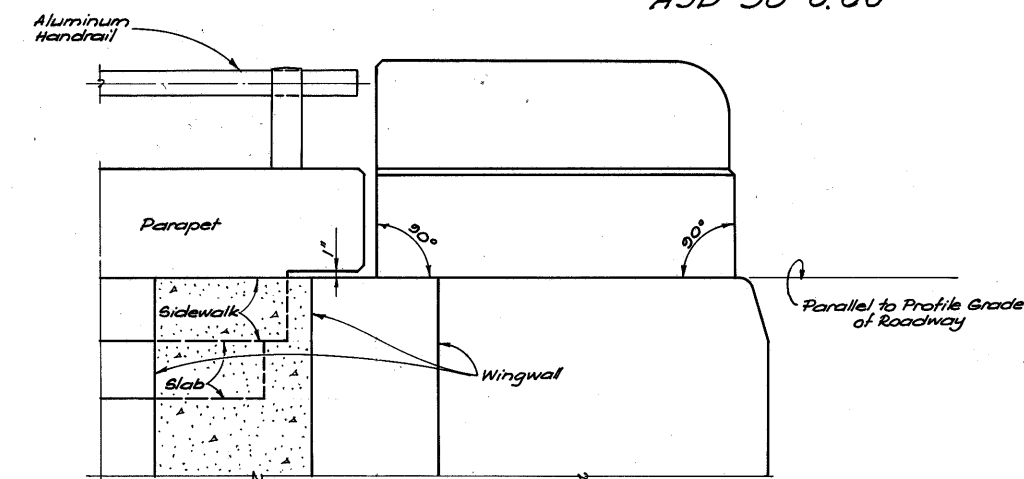
BORING R2A

NOTES:
W.L. = Water level in bore hole one hour after completion.
Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140 lb. weight falling 30 inches.
Borings taken between July 1955 and January 1956.
See Sheet No. 171 for location of borings.

RIC-30-5.79
ASD-30-0.00

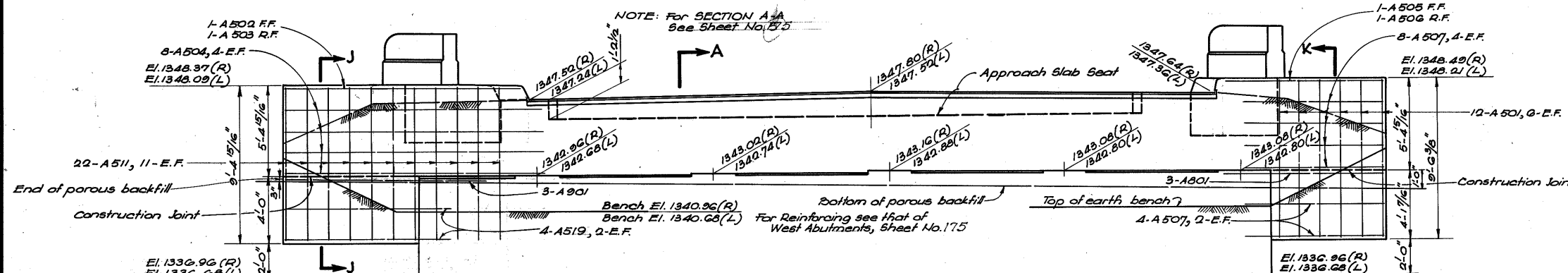


PLAN
Scale: 1/4"=1'-0"

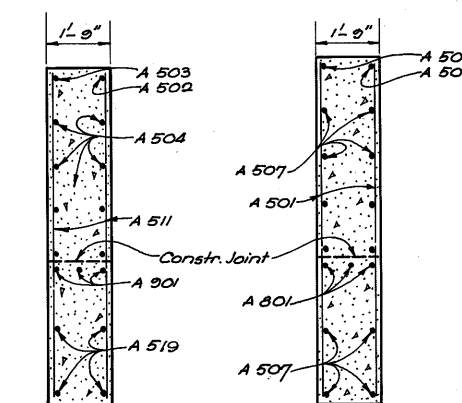


VIEW D-D
Scale: 3/4"=1'-0"

For location of View D-D
See Sheet No. 175

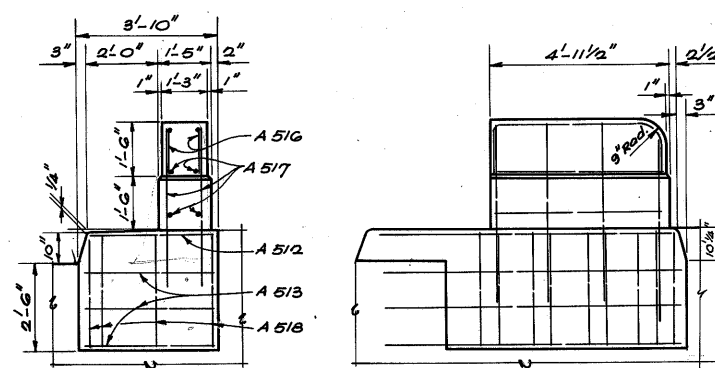


ELEVATION
Scale: 1/4"=1'-0"

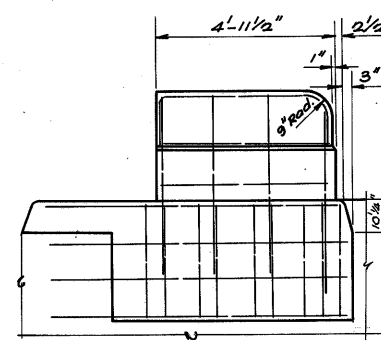


SECTIONS J-J K-K
Scale: 3/8"=1'-0"

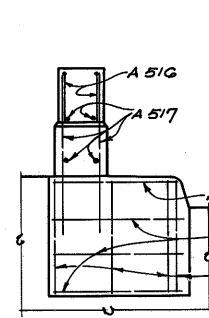
NOTE:
1. Designation used are follows:
F.F. = Front Face
R.F. = Rear Face
E.F. = Each Face
(L) = Bridge No. RIC-30-0594 L
(R) = Bridge No. RIC-30-0594 R
2. Main reinforcing shall have 2" cover unless otherwise indicated.
3. Bottom of porous backfill as shown is for East Abutment, Bridge No. RIC-30-0594 R. East Abutment, Bridge No. RIC-30-0594 L. Slope bottom of porous backfill in opposite direction.



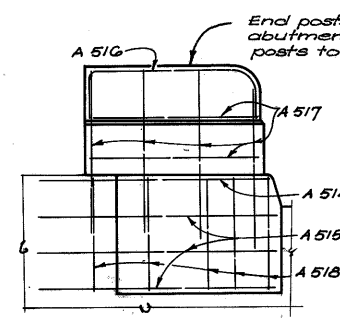
VIEW E-E
Scale: 3/8"=1'-0"



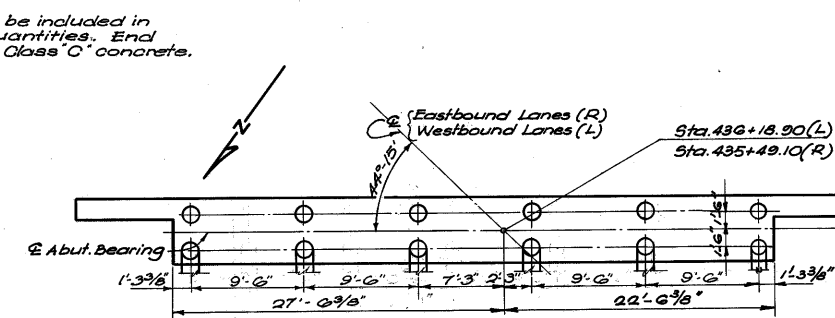
VIEW F-F
Scale: 3/8"=1'-0"



VIEW G-G
Scale: 3/8"=1'-0"



VIEW H-H
Scale: 3/8"=1'-0"



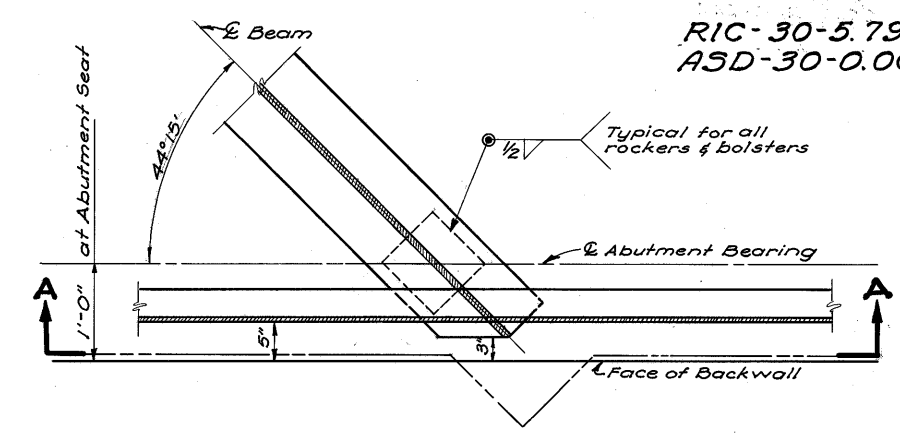
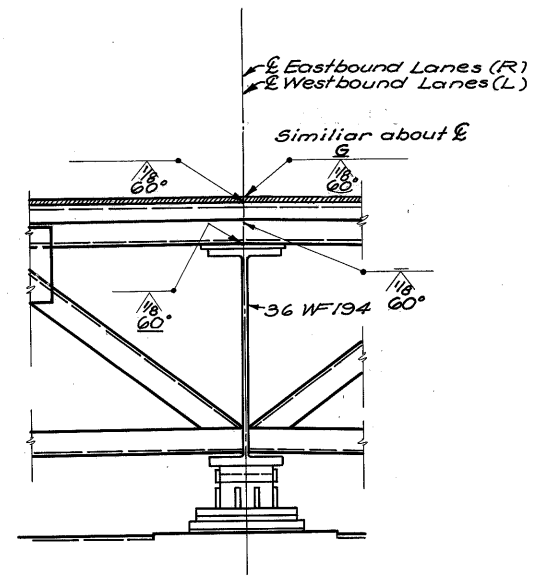
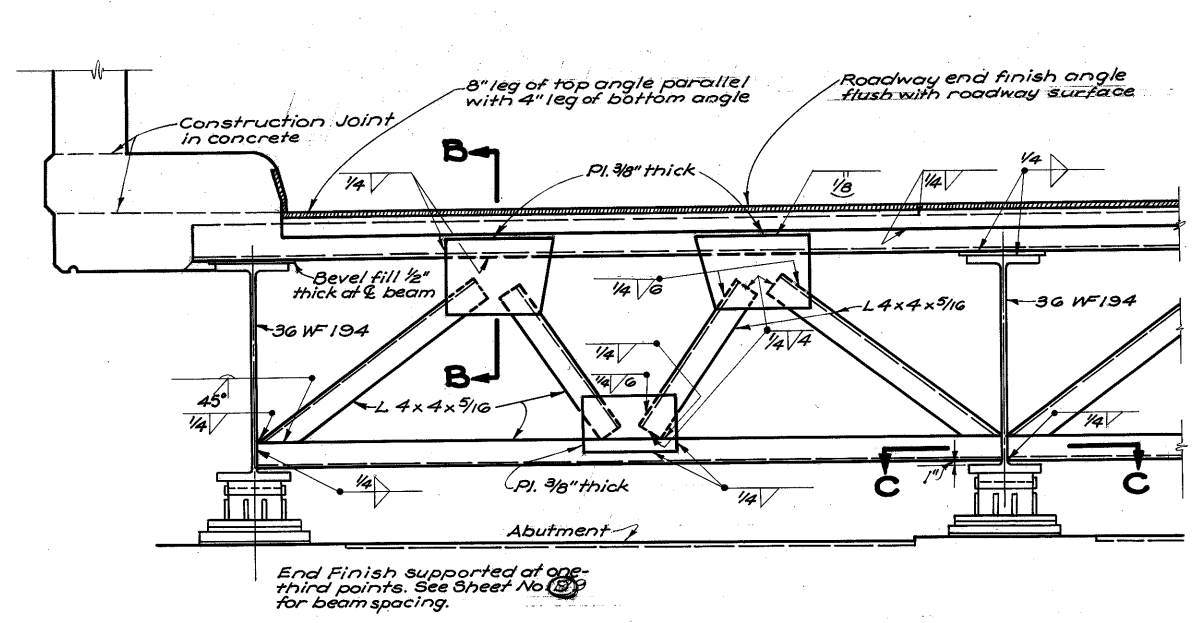
PILING LAYOUT
Scale: 1/8"=1'-0"

VOGT, IVERS, SEAMAN & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI, OHIO

EAST ABUTMENTS
BRIDGES NOS. RIC-30-0594 L & R
U.S. 30 OVER U.S. 42
RICHLAND COUNTY STA. 432+57.88 TO
STA. 436+22.12
Scale: As shown

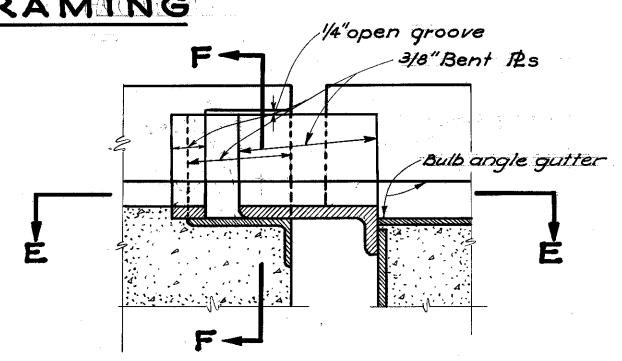
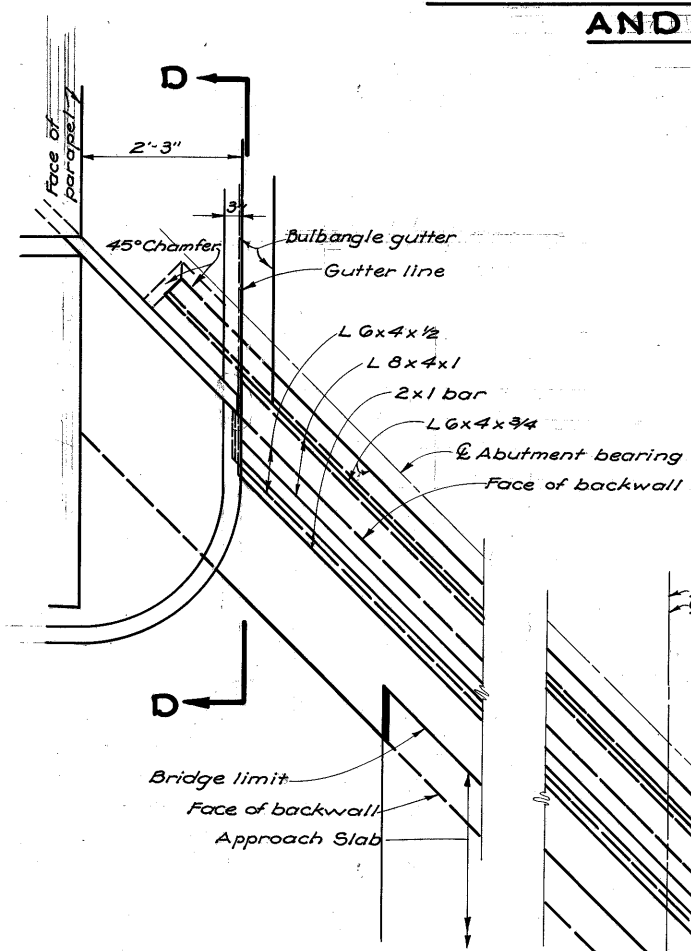
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.P.F.	J.H.K.	J.H.K.	J.P.F.	W.J.I. 10-30-50	

RIC-30-5.79
ASD-30-0.00

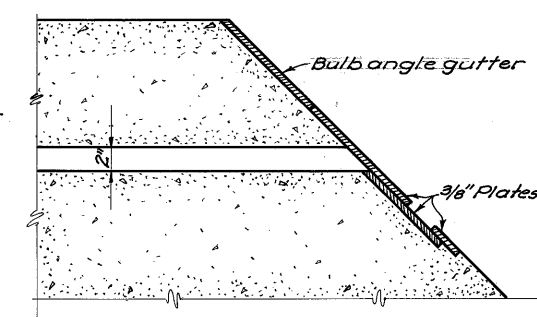


SECTION CC
SCALE: 1" = 1'-0"

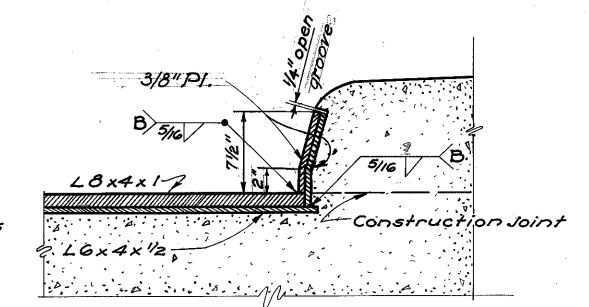
SECTION A-A
SHOWING END BRIDGING, END FRAMING
AND END FINISH DETAIL
SCALE: 3/4" = 1'-0"



SECTION DD



SECTION E-E
CURB PLATE DETAILS
SCALE: 1 1/2" = 1'-0"



SECTION F-F

(L) = Bridge No. RIC-30-0594 L
(R) = Bridge No. RIC-30-0594 R

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of backwall concrete.

Provide a joint in the edge bar and in the angle on the center line of the roadway. Additional joints may be provided in them at a minimum spacing of 6'-0". (Joints shall not be welded.)

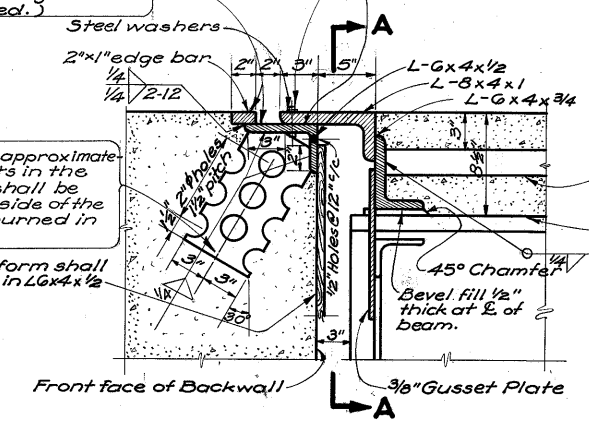
5/8"x2" bolts at not more than 2'-0" o.c. with nuts tack-welded to under side of lower angle. 1" holes in upper angle. Center 5/8" bolts in 1" holes. Apply flake graphite between washers and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has been reasonably set, preferably within two hours. Fill holes with bituminous material.

6"x1/2"x12" plates spaced at approximately 15" o.c., except near joints in the angle, where the plates shall be placed within 6" of each side of the joint. The holes may be burned in the plate.

Top of backwall form shall be below 1/2" holes in L 6 x 4 x 1/2

Anchor bars 2"x1/2"x1'-0" @ 12" o.c. placed parallel with longitudinal reinforcing steel.

Omit shop coat on all portions of end finish. 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 the two field coats.

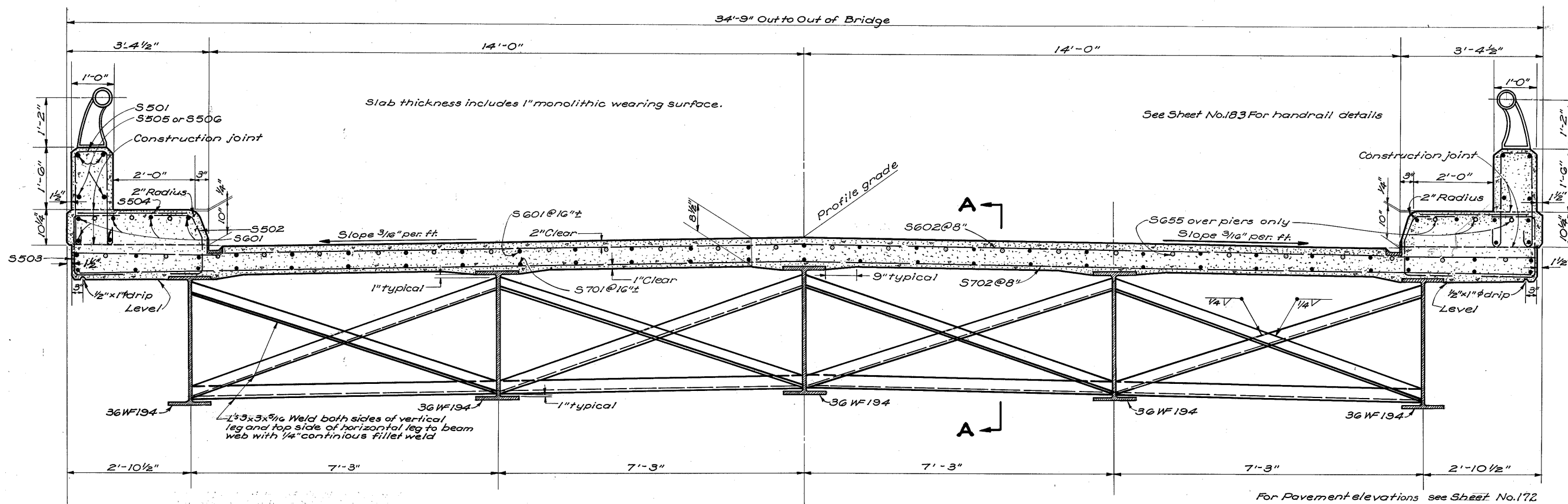


SECTION B-B
SCALE: 1 1/2" = 1'-0"

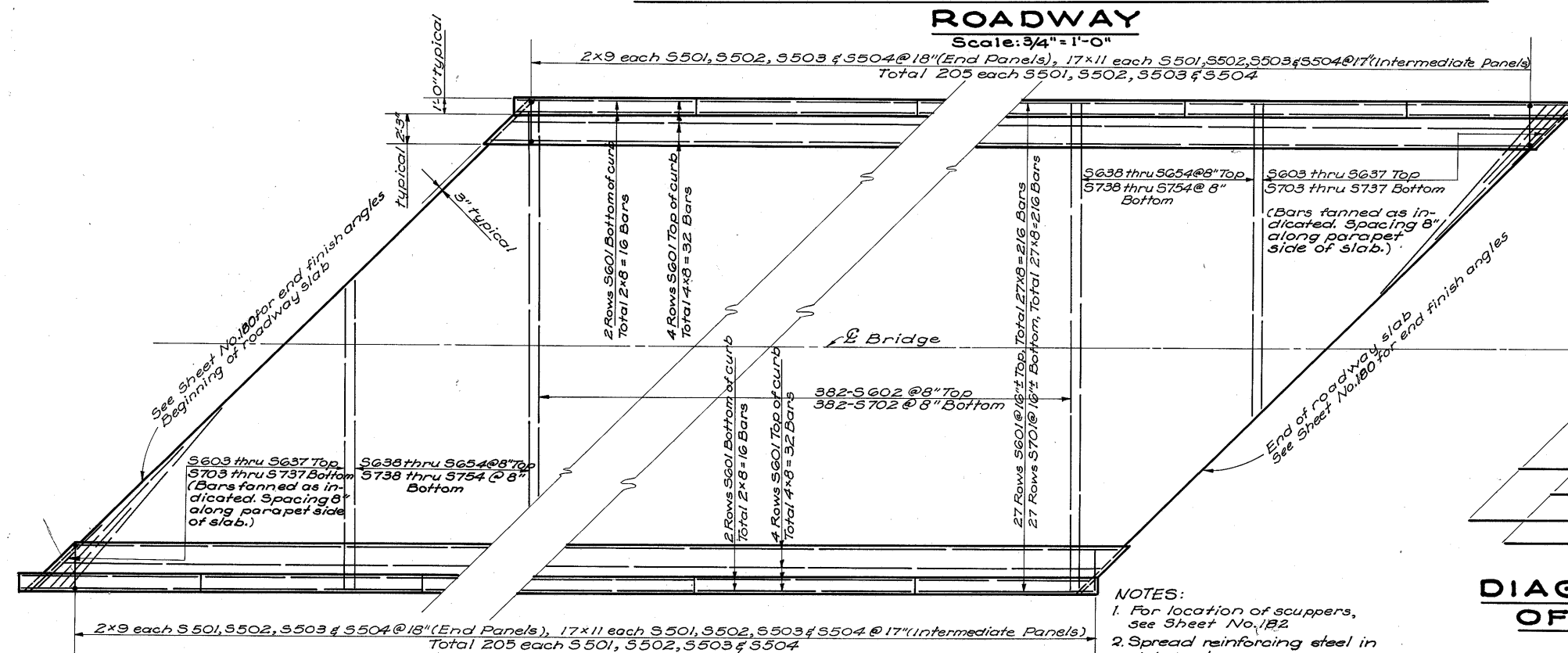
PARTIAL PLAN OF END FINISH, WEST ABUTMENTS SHOWN - EAST ABUTMENTS SIMILAR
SCALE: 3/4" = 1'-0"

VOGT, IVERS, SEAMAN & ASSOC. ENGINEERS ARCHITECTS CINCINNATI, OHIO				
SUPERSTRUCTURE				
END FINISH & END BRIDGING				
BRIDGES NOS. RIC-30-0594 L & R				
U.S. 30 OVER U.S. 42				
RICHLAND COUNTY		STA. 432+57.68 TO STA. 436+22.12		
Scale: As shown				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
J.P.F.	V.J.E.	E.B.H.	J.P.F.	W.J.L. 10-30-56
REVISED				

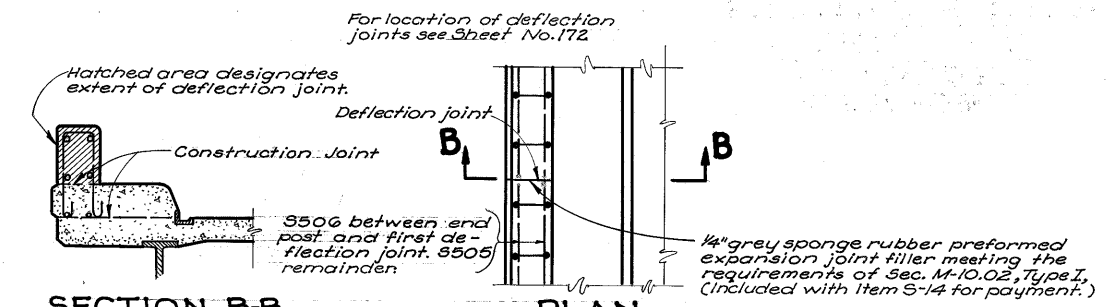
RIC-30-5.79
ASD-30-0.00



TYPICAL TRANSVERSE SECTION THRU ROADWAY
Scale: 3/4" = 1'-0"



PLAN SHOWING REINFORCING FOR ROADWAY SLAB
Scale: 3/16" = 1'-0"



SECTION B-B PARAPET DEFLECTION JOINT DETAIL
Scale: 3/16" = 1'-0"

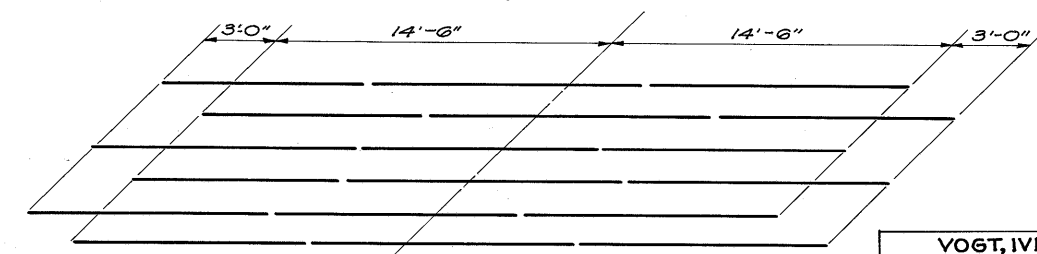


DIAGRAM SHOWING STAGGER OF S655 BARS OVER PIERS

VOGT, IVERS SEAMAN & ASSOC.
ENGINEERS CINCINNATI, OHIO ARCHITECTS

SUPERSTRUCTURE ROADWAY SLAB

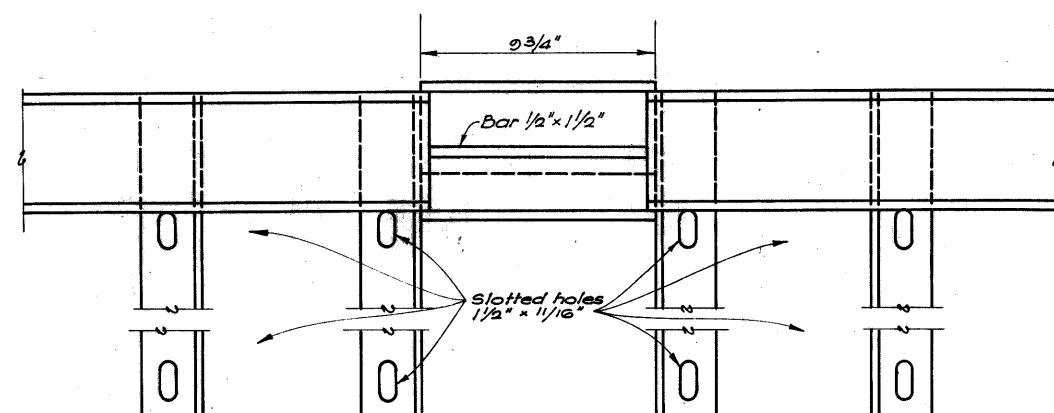
BRIDGES NOS. RIC-30-0594 & R U.S. 30 OVER U.S. 42

RICHLAND COUNTY STA: 436+57.88 TO STA: 436+22.12

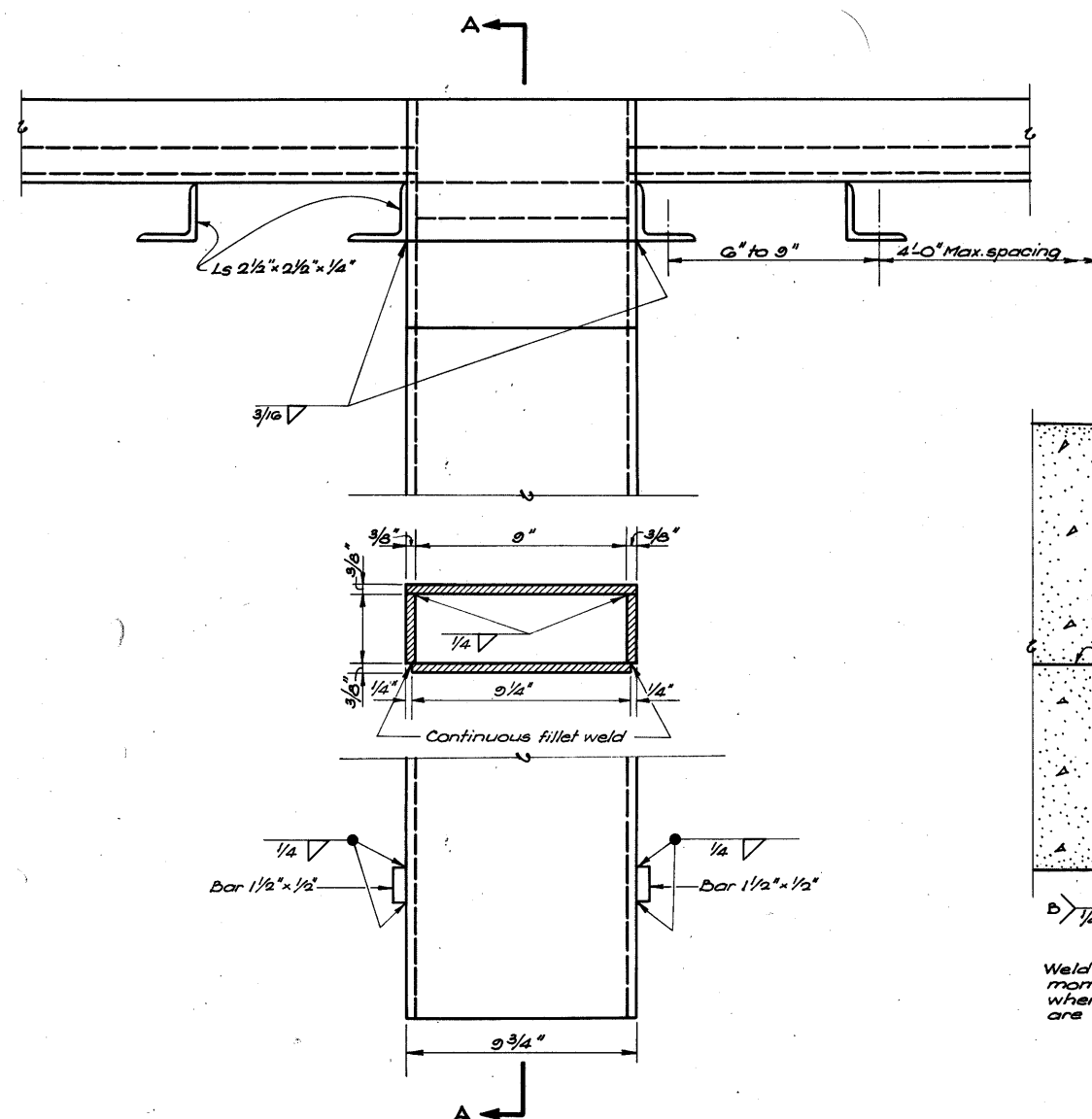
Scale: As shown

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.F.	V.J.E.	E.B.H.	J.P.F.	W.J.I.	10-30-56	

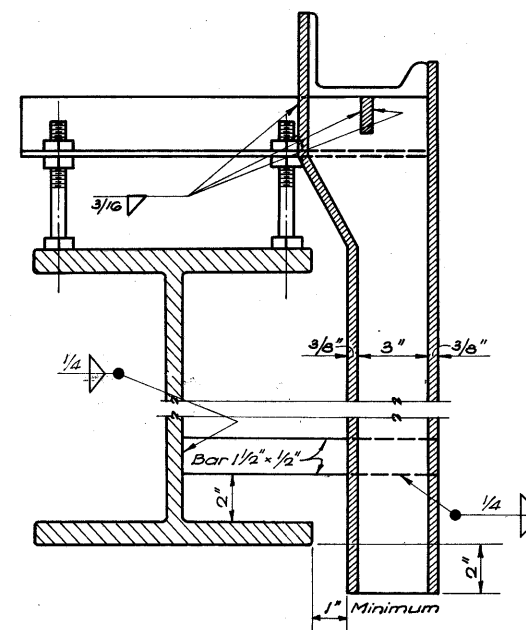
RIC-30-5.79
ASD-30-0.00



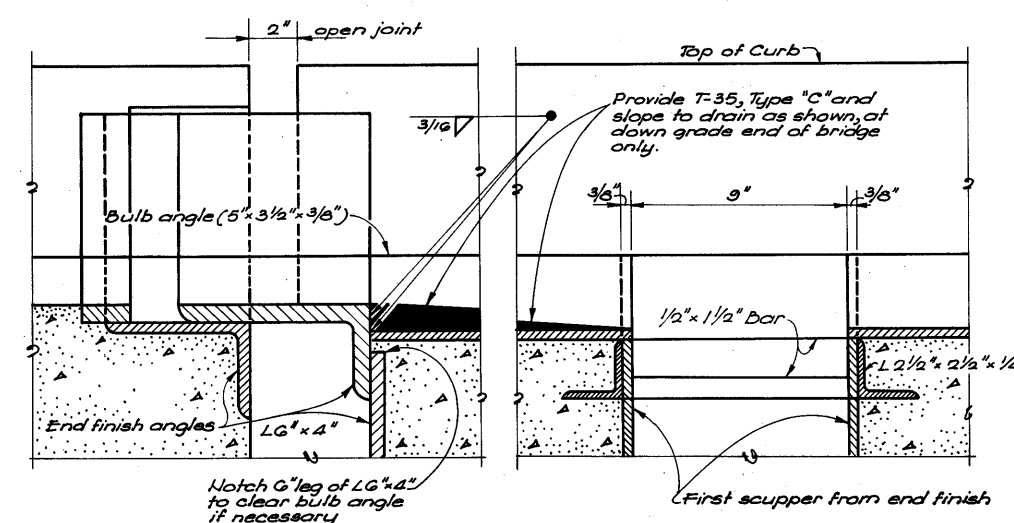
PART PLAN



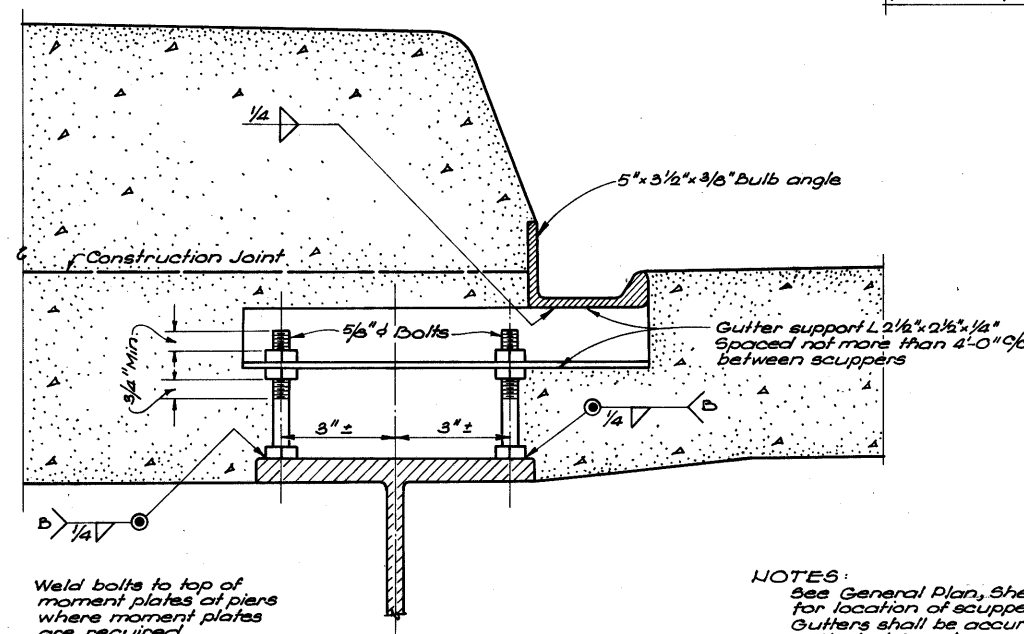
ELEVATION



SECTION A-A



GUTTER DETAILS AT END FINISH



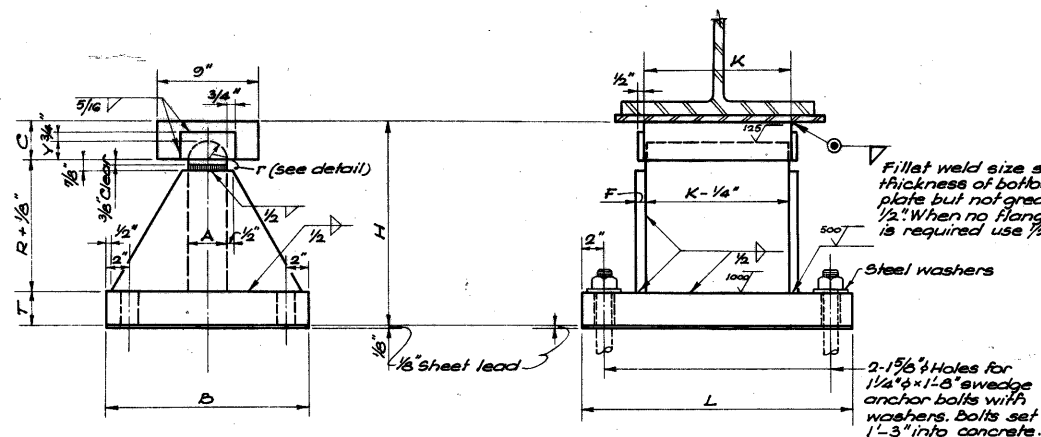
GUTTER SUPPORT

NOTES:
See General Plan, Sheet No. 172 for location of scuppers.
Gutters shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed.

Bulb angles, scuppers, gutter supports and asphalt concrete used for fill in gutter to be included under item 5-7, Structural Steel.

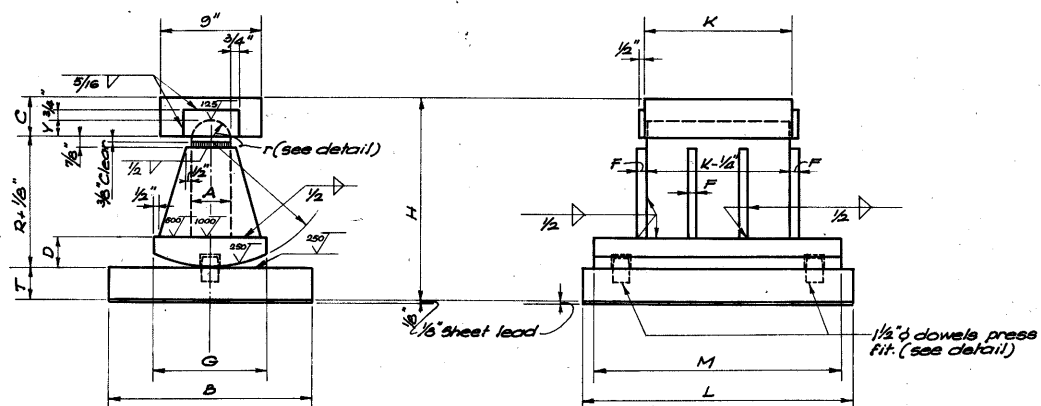
VOGT, IVERS, SEAMAN & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI, OHIO				
SUPERSTRUCTURE SCUPPER & GUTTER DETAILS				
BRIDGES NOS. RIC-30-0594 L & R U.S. 30 OVER U.S. 42				
RICHLAND COUNTY		STA: 432+57.66 TO STA: 436+22.12		
Scale: 3" = 1'-0"				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
R.L.S.	R.L.S.	J.H.K.	R.S.V.	W.J.I. 10-30-56

RIC-30-5.79
ASD-30-0.00



STRUCTURAL STEEL BOLSTER

See table below for additional dimensions



STRUCTURAL STEEL ROCKER

See table below for additional dimensions

ROCKERS & BOLSTERS

SCHEDULE OF ROCKERS & BOLSTERS		DIMENSIONS (INCHES)														WEIGHT EACH (LB)	MAXIMUM LOAD (LB)
BOLSTER NO.	ROCKER NO.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	R-75	2 1/2	8	2 1/2	13 1/4	1/2	7	9 3/4	9	10	10	5 1/2	1 1/2	13 1/4		205	75,000
B-100	R-100	2 1/2	10	2 1/2	2	1/2	7 1/2	10 3/4	9	10	17	6 1/2	1 1/2	13 1/4	225	250	100,000
B-125	R-125	3	11	3	2	1/2	8	12 1/2	10 1/2	20	16	7 1/2	1 1/2	17 1/4	295	315	125,000
B-150	R-150	3	12	3	2 1/4	1/2	8 1/2	13 3/4	11 1/2	22	19	8 1/2	1 3/4	17 1/4	360	400	150,000
B-175	R-175	3	14	3 1/2	2 1/2	1/2	9	15 1/2	12	23	20	9 1/2	2	17 1/4	455	505	175,000
B-200	R-200	3	16	3 1/2	2 3/4	5/8	9	16 3/4	12	24	21	10 1/2	2 1/4	17 1/4	540	605	200,000
B-225	R-225	3	17	3 1/2	2 3/4	5/8	9	16 3/4	13	25	22	11	2 1/4	17 1/4	590	665	225,000
B-250	R-250	3 1/2	18	3 1/2	2 3/4	3/4	10	17 3/4	13	26	23	11 1/2	2 1/2	17 1/4	695	775	250,000
B-275	R-275	3 1/2	19	3 1/2	3 1/4	3/4	12	18 3/4	14	27	24	12	2 3/4	17 1/4	800	945	275,000
B-300	R-300	3 1/2	20	3 1/2	3 1/4	3/4	12	18 3/4	14	28	25	12 1/2	3	17 1/4	895	1050	300,000

Weights given are for one rocker or bolster complete (including sheet lead, anchor bolts and washers).

4" O.D. x 3/16" wall aluminum tube. Railing is generally continuous. Where necessary, railing tube shall be joined as shown.

Drill and tap for 1/2" aluminum set screws.

Fillet weld size same as thickness of bottom flange plate but not greater than 1/2". When no flange plate is required use 1/2" weld.

Steel washers

2-15/16" Holes for 1/4" x 1-1/8" wedge anchor bolts with washers. Bolts set 1'-3" into concrete.

TOP BEARING DETAIL

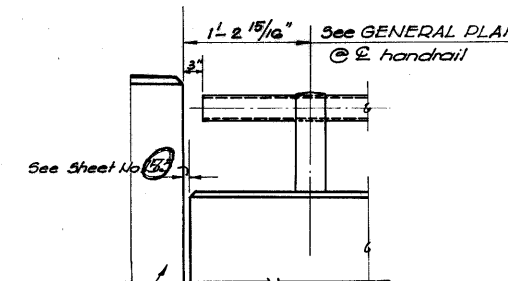
r_1 (Web) = $\frac{A}{2} + \frac{1}{16}$ "
 r_2 (Top Flange) = $\frac{A}{2} + \frac{3}{16}$ "

1/16" shims (if required)

ALUMINUM RAILING

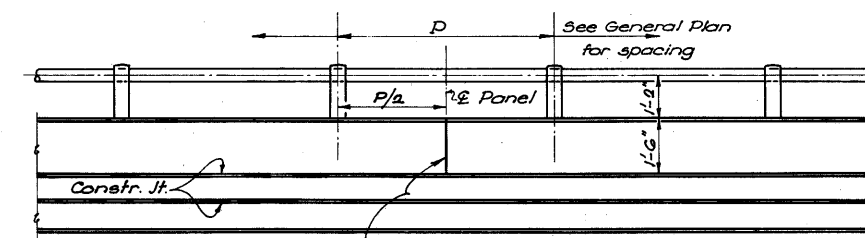
TYPE B

Scale: 3" = 1'-0"



DETAIL AT END POST

Scale: 3/4" = 1'-0"



TREATMENT OF PARAPET AND FASCIA

Scale: 3/8" = 1'-0"

ANCHOR BARS shall be 3/4" aluminum bars threaded and fitted with aluminum nuts at both ends, and embedded 1'-0" into concrete. Care shall be exercised in placing the anchor bars to insure correct horizontal alignment of the railing.

VOGT, IVERS, SEAMAN & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI, OHIO

ROCKER, BOLSTER & RAILING DETAILS
BRIDGES NOS. RIC-30-0594 L & R
U.S. 30 OVER U.S. 42
RICHLAND COUNTY STA. 432+57.68 TO STA. 436+22.12

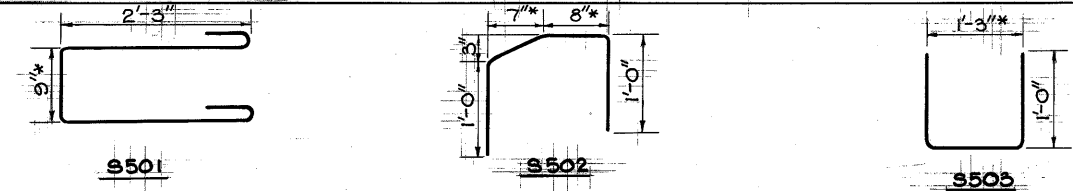
Scale: As shown
DESIGNED DRAYN J.H.K. TRACED J.H.K. CHECKED R.S.V. REVIEWED W.J.I. 10-30-56 DATE REVISED

RIC-30-579
ASD-30-0.00

ROADWAY SLABS

BRIDGE NO. RIC-30-0594 L										BRIDGE NO. RIC-30-0594 R									
MARK	LENGTH	NO.	WEIGHT	NO.	WEIGHT	TOTAL	WEIGHT	SHAPE		MARK	LENGTH	NO.	WEIGHT	NO.	WEIGHT	TOTAL	WEIGHT	SHAPE	
** S501	6'-3"	410	2673	410	2673	820	5346	Bt.		S504	3'-4"	2	100	2	100	4	200	Str.	
S502	3'-2"	410	1354	410	1354	820	2708	Bt.		S505	32'-0"	96	4614	96	4614	92	9228	Str.	
S503	3'-1"	410	1318	410	1318	820	2636	Bt.											
S504	2'-6"	410	1069	410	1069	820	2138	Str.		S701	38'-1"	216	16814	216	16814	432	33628	Str.	
** S505	15'-4"	186	2175	186	2175	272	4850	Str.		S702	34'-2"	382	26677	382	26677	764	53354	Str.	
** S506	12'-5"	146	207	146	207	32	414	Str.		S703	61'-0"	2	25	2	25	4	50		
S601	37'-10"	312	17730	312	17730	624	35460	Str.		S704	13'-0"	2	53	2	53	4	106		
S602	34'-2"	382	19603	382	19603	764	39206			S705	7'-6"	2	30	2	30	4	60		
S603	6'-0"	2	18	2	18	4	36			S706	17'-7"	2	72	2	72	4	144		
S604	13'-0"	2	39	2	39	4	78			S707	10'-5"	2	42	2	42	4	84		
S605	7'-6"	2	23	2	23	4	46			S708	19'-2"	2	79	2	79	4	158		
S606	17'-7"	2	53	2	53	4	106			S709	11'-11"	2	48	2	48	4	96		
S607	10'-5"	2	31	2	31	4	62			S710	19'-9"	2	80	2	80	4	160		
S608	19'-2"	2	58	2	58	4	116			S711	12'-5"	2	51	2	51	4	102		
S609	11'-11"	2	36	2	36	4	72			S712	20'-3"	2	83	2	83	4	166		
S610	19'-9"	2	59	2	59	4	118			S713	12'-10"	2	53	2	53	4	106		
S611	12'-5"	2	38	2	38	4	76			S714	20'-6"	2	84	2	84	4	168		
S612	20'-3"	2	61	2	61	4	122			S715	13'-1"	2	54	2	54	4	108		
S613	12'-10"	2	38	2	38	4	76			S716	20'-7"	2	84	2	84	4	168		
S614	20'-6"	2	62	2	62	4	124			S717	13'-5"	2	55	2	55	4	110		
S615	13'-1"	2	39	2	39	4	78			S718	20'-8"	2	84	2	84	4	168		
S616	20'-7"	2	62	2	62	4	124			S719	13'-10"	2	57	2	57	4	114		
S617	13'-5"	2	41	2	41	4	82			S720	20'-9"	2	85	2	85	4	170		
S618	20'-8"	2	62	2	62	4	124			S721	14'-0"	2	57	2	57	4	114		
S619	13'-10"	2	41	2	41	4	82			S722	20'-10"	2	85	2	85	4	170		
S620	20'-9"	2	62	2	62	4	124			S723	14'-1"	2	57	2	57	4	114		
S621	14'-0"	2	42	2	42	4	84			S724	20'-11"	2	86	2	86	4	172		
S622	20'-10"	2	63	2	63	4	126			S725	14'-2"	2	58	2	58	4	116		
S623	14'-1"	2	42	2	42	4	84			S726	21'-0"	2	86	2	86	4	172		
S624	20'-11"	2	63	2	63	4	126			S727	14'-3"	2	58	2	58	4	116		
S625	14'-2"	2	43	2	43	4	86			S728	21'-1"	2	86	2	86	4	172		
S626	21'-0"	2	63	2	63	4	126			S729	14'-4"	2	59	2	59	4	118		
S627	14'-3"	2	43	2	43	4	86			S730	21'-2"	2	86	2	86	4	172		
S628	21'-1"	2	63	2	63	4	126			S731	14'-6"	2	59	2	59	4	118		
S629	14'-4"	2	43	2	43	4	86			S732	21'-5"	2	88	2	88	4	176		
S630	21'-2"	2	64	2	64	4	128			S733	14'-8"	2	66	2	66	4	132		
S631	14'-6"	2	44	2	44	4	88			S734	21'-7"	2	88	2	88	4	176		
S632	21'-5"	2	64	2	64	4	128			S735	15'-0"	2	61	2	61	4	122		
S633	14'-8"	2	44	2	44	4	88			S736	21'-11"	2	90	2	90	4	180		
S634	21'-7"	2	65	2	65	4	130			S737	22'-4"	2	92	2	92	4	184		
S635	15'-0"	2	45	2	45	4	90			S738	22'-10"	2	93	2	93	4	186		
S636	21'-11"	2	66	2	66	4	132			S739	23'-8"	2	97	2	97	4	194		
S637	22'-4"	2	67	2	67	4	134			S740	24'-3"	2	99	2	99	4	198		
S638	22'-10"	2	69	2	69	4	138			S741	24'-11"	2	102	2	102	4	204		
S639	23'-8"	2	71	2	71	4	142			S742	25'-7"	2	104	2	104	4	208		
S640	24'-3"	2	73	2	73	4	146			S743	26'-3"	2	108	2	108	4	216		
S641	24'-11"	2	75	2	75	4	150			S744	26'-11"	2	110	2	110	4	220		
S642	25'-7"	2	77	2	77	4	154			S745	27'-7"	2	113	2	113	4	226		
S643	26'-3"	2	79	2	79	4	158			S746	28'-2"	2	115	2	115	4	230		
S644	26'-11"	2	81	2	81	4	162			S747	28'-10"	2	118	2	118	4	236		
S645	27'-7"	2	83	2	83	4	166			S748	29'-7"	2	121	2	121	4	242		
S646	28'-2"	2	84	2	84	4	168			S749	30'-2"	2	124	2	124	4	248		
S647	28'-10"	2	86	2	86	4	172			S750	30'-10"	2	126	2	126	4	252		
S648	29'-7"	2	89	2	89	4	178			S751	31'-6"	2	129	2	129	4	258		
S649	30'-2"	2	91	2	91	4	182			S752	32'-2"	2	131	2	131	4	262		
S650	30'-10"	2	93	2	93	4	186			S753	32'-10"	2	134	2	134	4	268		
S651	31'-6"	2	94	2	94	4	188			S754	33'-4"	2	137	2	137	4	274		
S652	32'-2"	2	97	2	97	4	194												
S653	32'-10"	2	98	2	98	4	196	Str.											

BENDING DIAGRAM



ABUTMENTS

		BRIDGE NO. RIC-30-0594 L				BRIDGE NO. RIC-30-0594 R						
		EAST ABUTMENT		WEST ABUTMENT		EAST ABUTMENT		WEST ABUTMENT				
MARK	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	TOTAL	WEIGHT	SHAPE
A401	6'-8"	24	107	24	107	24	107	24	107	96	428	Bt.
A501	9'-1"	12	114	34	322	12	114	34	322	92	872	Str.
A502	13'-6"	1	14	1	14	1	14	1	14	4	56	
A503	12'-2"	1	13	1	13	1	13	1	13	4	52	
A504	14'-9"	8	123	8	123	8	123	8	123	32	492	
A505	9'-6"	1	10	1	10	1	10	1	10	4	40	
A506	10'-10"	1	11	1	11	1	11	1	11	4	44	
A507	8'-4"	12	104	12	104	12	104	12	104	48	416	Str.
A508	5'-6"	25	143	25	143	25	143	25	143	100	572	Bt.
A509	12'-10"	26	348	26	348	26	348	26	348	104	1392	Bt.
A510	10'-4"	26	280	26	280	26	280	26	280	104	1120	Bt.
A511	8'-11"	22	205			22	205			44	410	Str.
A512	14'-11"	1	15	1	15	1	15	1	15	4	60	Bt.
A513	15'-6"	3	48	3	48	3	48	3	48	12	192	
A514	9'-5"	1	10	1	10	1	10	1	10	4	40	
A515	10'-0"	3	31	3	31	3	31	3	31	12	124	
A516	6'-11"	4	29	4	29	4	29	4	29	16	116	Bt.
A517	4'-6"	24	113	24	113	24	113	24	113	96	452	Str.
A518	3'-0"	17	53	17	53	17	53	17	53	68	212	Str.
A519	9'-9"	4	41	4	41	4	41	4	41	16	164	Str.
A601	11'-0"	42	694	42	694	42	694	42	694	168	2776	Bt.
A602	13'-8"	3	62	3	62	3	62	3	62	12	248	Bt.
A603	5'-5"	42	342	42	342	42	342	42	342	168	1368	Str.
A604	6'-3"	3	28	3	28	3	28	3	28	12	112	Str.
A605	44'-9"	6	403	6	403	6	403	6	403	24	1612	Str.
A606	25'-11"	16	623	16	623	16	623	16	623	64	2492	Str.
A801	9'-3"	3	74	3	74	3	74	3	74	12	296	Str.
A802	26'-2"	24	1677	24	1677	24	1677	24	1677	96	6708	Str.
A901	16'-0"	3	163	3	163	3	163	3	163	12	652	Str.

RIC-30-5.79
ASD-30-0.00

PIERS																
			BRIDGE NO. RIC-30-0594 L						BRIDGE NO. RIC-30-0594 R							
			WEST		CENTER		EAST		WEST		CENTER		EAST			
MARK	LENGTH	SHAPE	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	TOTAL	WEIGHT
P 501	42'-7"	Str.	4	178	4	178	4	178	4	178	4	178	4	178	24	1068
P 502	4'-7"	Bt.	30	143	30	143	30	143	30	143	30	143	30	143	180	858
P 503	7'-11"	Bt.	36	297	36	297	36	297	36	297	36	297	36	297	216	1782
P 701	9'-10"	Bt.	104	2090	104	2090	104	2090	104	2090	104	2090	104	2090	624	12,540
P 901	6'-4"	Bt.	24	517	24	517	24	517	24	517	24	517	24	517	144	3,102
P 902	19'-6"	Str.	24	1,591											24	1,591
P 903	17'-5"						24	1421							24	1,421
P 904	20'-10"								24	1700					24	1,700
P 905	19'-0"												24	1550	24	1,550
P 906	14'-8"				24	1,197									24	1,197
P 907	16'-0"	Str.							24	1,306					24	1,306
P1101	7'-5"	Bt.	24	946	32	1,261	24	946	24	946	32	1,261	24	946	160	6,306
P 1102	14'-9"	Str.			32	2,508									32	2,508
P 1103	13'-6"	Bt.	10	717	14	1,004	10	717	10	717	14	1,004	10	717	68	4,876
P 1104	32'-4"	Str.	6	1,031	6	1,031	6	1,031	6	1,031	6	1,031	6	1,031	36	6,186
P 1105	16'-1"	Str.									32	2,734			32	2,734
P 1106	42'-6"	Str.	2	452	2	452	2	452	2	452	2	452	2	452	12	2,712
P 1107	47'-8"	Bt.	2	507	2	507	2	507	2	507	2	507	2	507	12	3,042
P 1108	48'-2"	Bt.	2	512	2	512	2	512	2	512	2	512	2	512	12	3,072
P 1109	19'-8"	Str.	24	2,508											24	2,508
P 1110	17'-6"						24	2,231							24	2,231
P 1111	20'-11"								24	2,667					24	2,667
P 1112	19'-0"	Str.											24	2,423	24	2,423
P 1113	10'-11"	Bt.			4	232				4	232				8	464
P 1114	10'-10"	Bt.	4	230			4	230	4	230			4	230	16	920
															CORE DIA.	
															% SPIRAL	
															PITCH	
															NO. TURNS	
															TOTAL WEIGHT	
SP401	16'-1"	Bt.	4	1217											32"	4 1/2"
SP402	13'-11"						4	1,062							32"	4 1/2"
SP403	17'-4"								4	1,306					32"	4 1/2"
SP404	15'-5"												4	1,169	32"	4 1/2"
SP405	11'-2"				4	865									32"	4 1/2"
SP406	12'-6"	Bt.								4	961				32"	4 1/2"

BENDING DIAGRAM

*2'-9 1/4"

1'-0"

2'-8"

P502

P503

5'-1"

P901

P1101

5'-10"

10'-0"

P1103

*6'-9"

32" out to out Dia.

RE 4 ***

44'-6"

45'-0"

8'-2"

P1107

P1108

P701

4'-9"

4'-0"

*2'-5"

P1113

*2'-1 1/2"

4'-9"

4'-3"

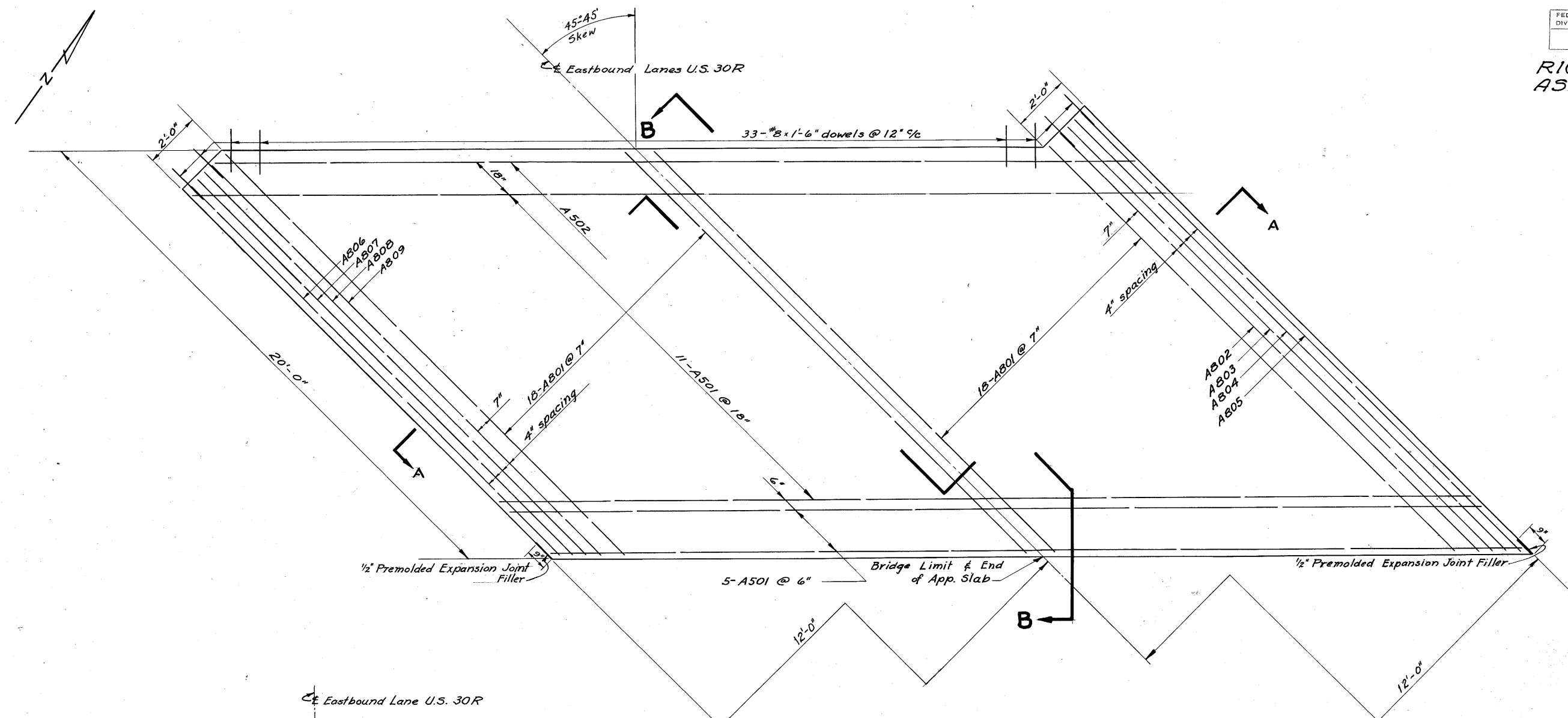
*2'-0"

P1114

*2'-1 1/2"

*** Replacement bar for Spiral

RIC-30-5.79
ASD-30-0.00

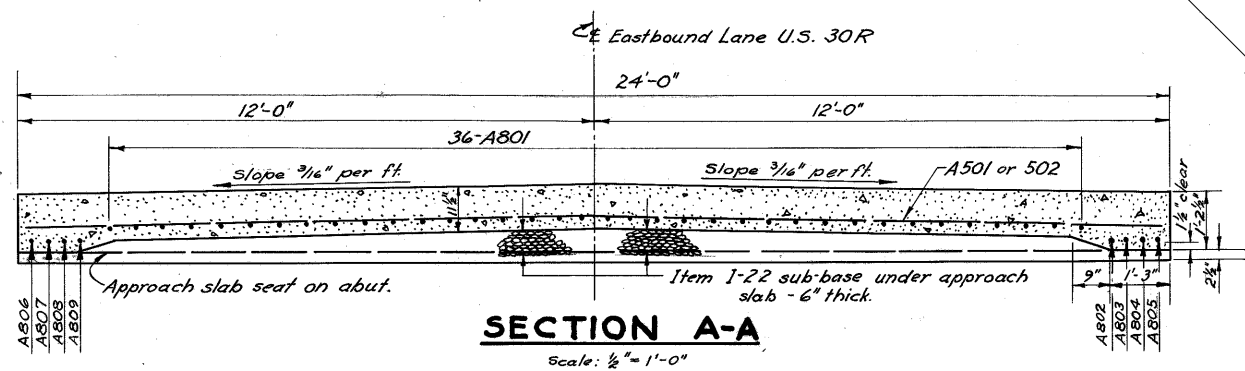


WEST APPROACH SLAB - BRIDGE NO. RIC-30-0594R (AS SHOWN)
OTHER APPROACH SLABS (SIMILAR)

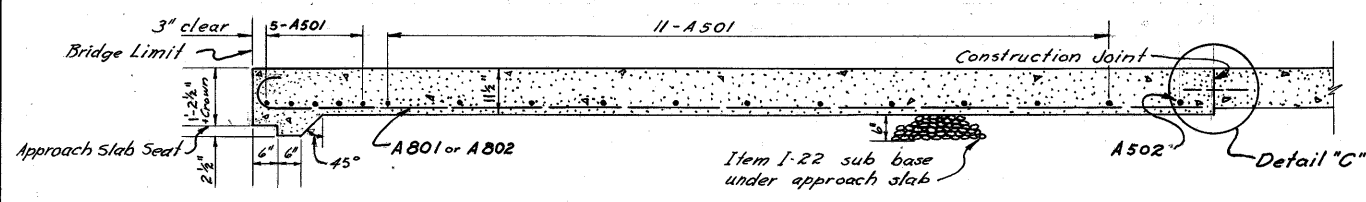
Scale: 1/2" = 1'-0"

For top of pavement elevations, see Sheet No. 172.

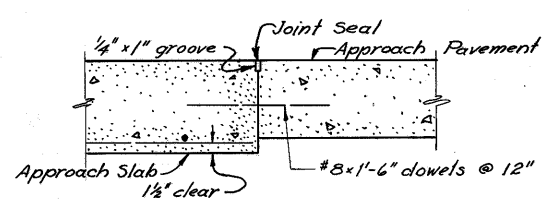
NOTE: Approach Slabs to be Class "C" concrete. The price bid for Item I-7 for the approach slab shall include 1/2" premolded expansion joint filler. For location of expansion joints in the approach pavement adjacent to the bridge see standard drawing T.J. dated 5-1-50. Payment for the construction joints, including dowel bars, is included in the price per sq. yd. bid for the approach pavement.



SECTION A-A
Scale: 1/2" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"

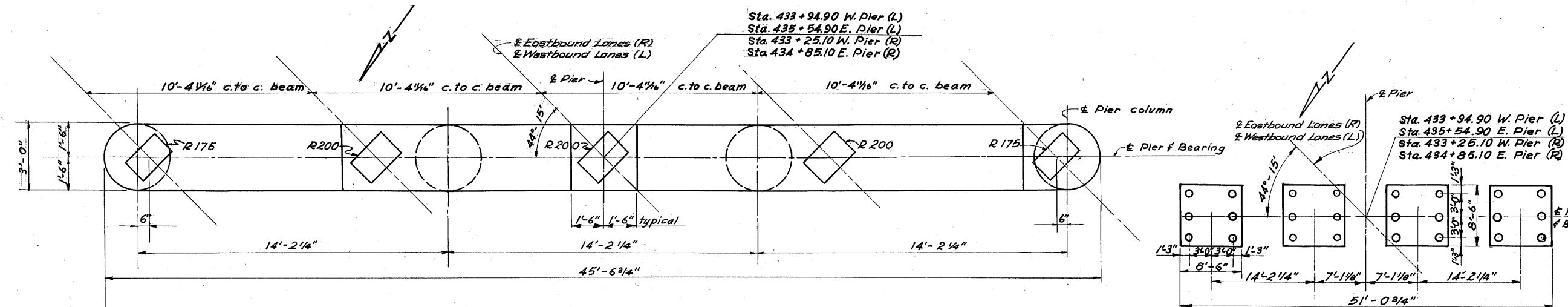


DETAIL C
Scale: 1" = 1'-0"

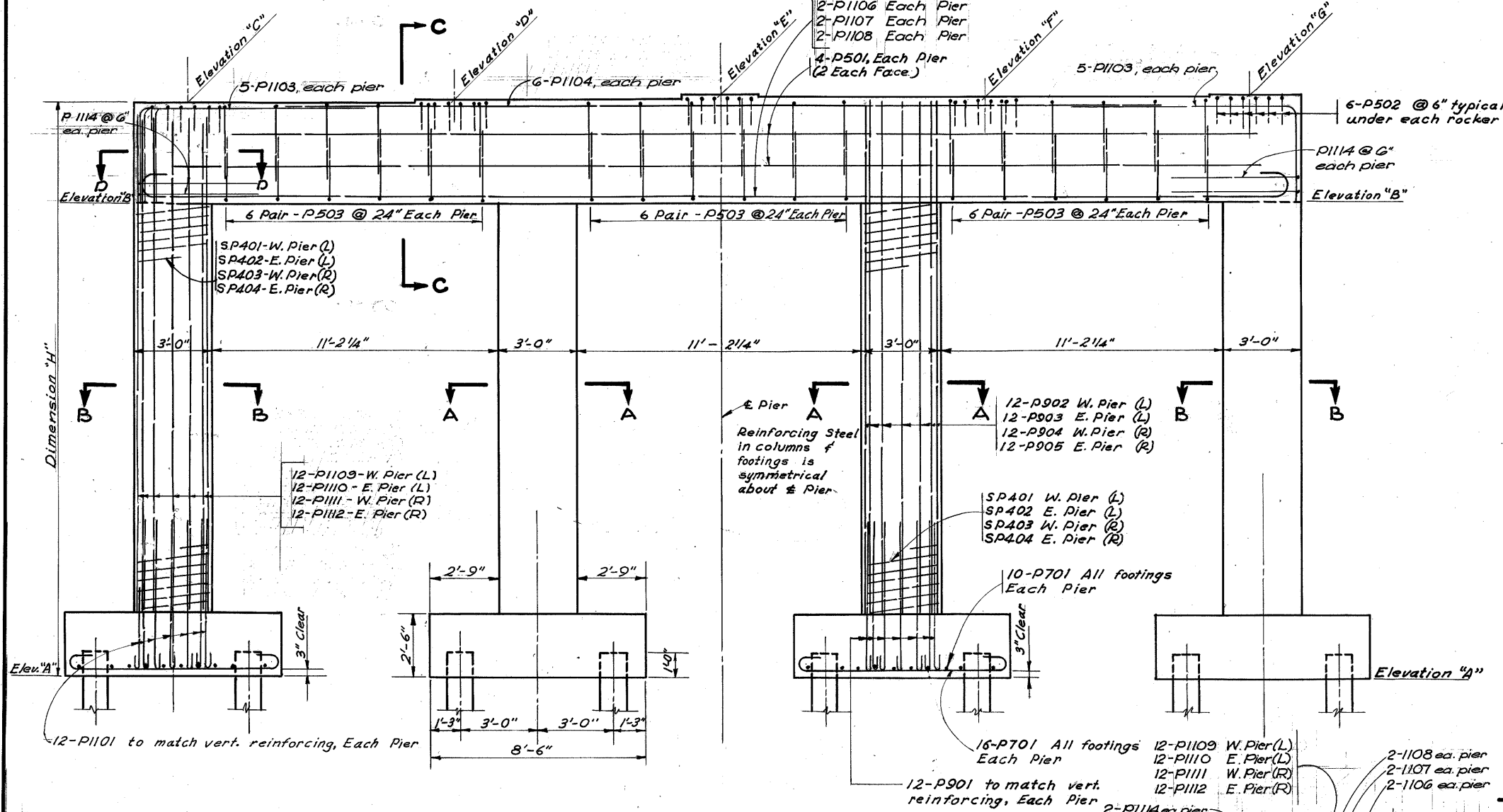
REINFORCING STEEL LIST

MARK	LENGTH	NUMBER	WEIGHT	SHAPE	BENDING DIAGRAM
A801	20'-9"	144	7978	Bt.	
A802	21'-5"	4	229		
A803	21'-9"	4	232		
A804	22'-3"	4	238		
A805	22'-6"	4	240		
A806	19'-0"	4	203		
A807	19'-4"	4	206		
A808	19'-9"	4	210		
A809	20'-1"	4	214	Bt.	
A501	34'-0"	44	1560	St.	
A502	32'-4"	4	156	St.	

RIC-30-5.79
ASD-30-0.00

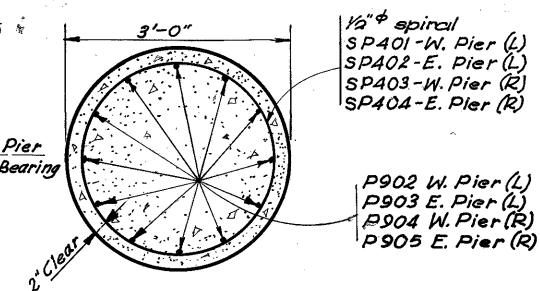


PLAN
Scale 3/8" = 1'-0"

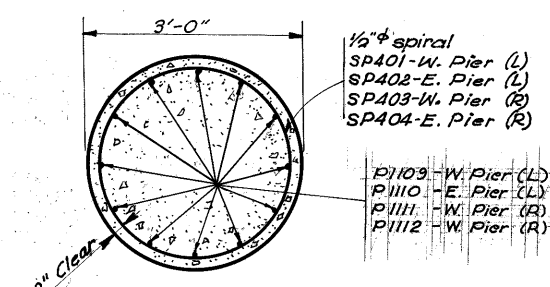


PILING LAYOUT

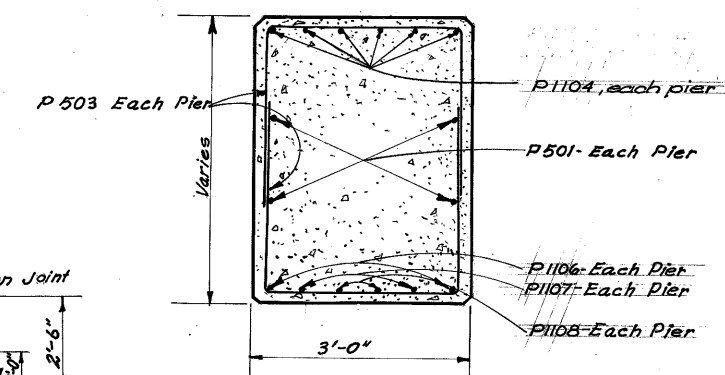
Scale 1/8" = 1'-0"



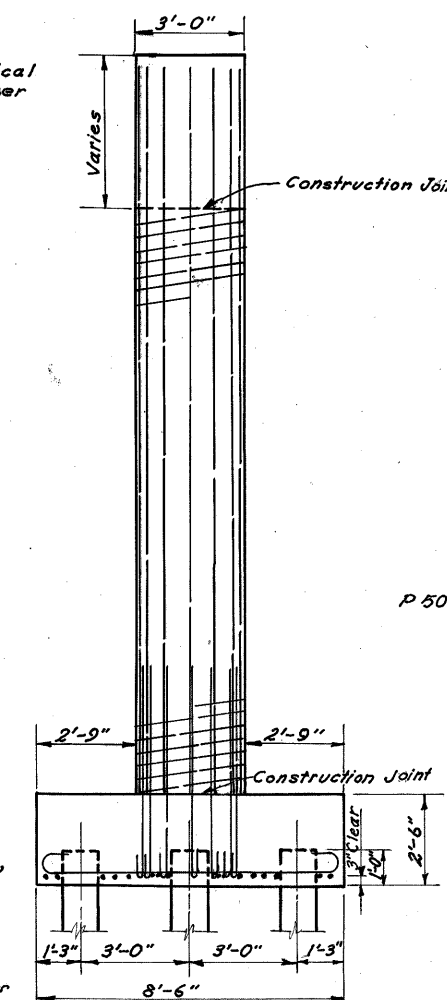
SECTION A-A
Scale $\frac{3}{4}" = 1'-0"$



SECTION B-B
Scale $3/4" = 1'-0"$



SECTION C-C
Scale: 3/4" = 1'-0"

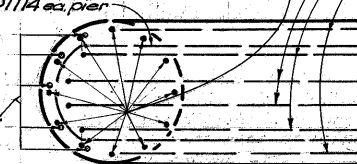


END VIEW
Scale $\frac{3}{8}'' = 1'-0''$

	Elev."A"	Elev."B"	Elev."C"	Elev."D"	Elev."E"	Elev."F"	Elev."G"	Dim."H"
West Pier Pr.No. R/C-30'-05.94'	1320.50	1339.06	1343.06	1343.10	1343.25	1343.16	1343.18	22'-6 3/4"
East Pier Pr.No. R/C-30'-05.94'	1322.00	1338.42	1342.42	1342.46	1342.61	1342.52	1342.54	20'-5"
West Pier Pr.No. R/C-30'-05.94'	1319.50	1339.34	1343.34	1343.38	1343.53	1343.44	1343.46	23'-10 1/4"
East Pier Pr.No. R/C-30'-05.94'	1320.75	1338.70	1342.70	1342.74	1342.89	1342.80	1342.82	21'-11 3/8"

ELEVATION
Scale $3/8" = 1'-0"$

Downward leg of P1103 bars to be tied to the column bars in the periphery of the circle in which the column bars are placed, and on the side indicated in Section D-D



SECTION D-D
Scale 1/2" = 1'-0"

Notes: 1. Cover of main steel to be 2" unless otherwise indicated
2. Place dowels in footing to insure correct spacing of main column steel.
3. Designations used are as follows:

W. Pier (L) = West Pier Bridge	No. RIC - 30 - 0594 L
E. Pier (L) = East Pier Bridge	No. RIC - 30 - 0594 L
W. Pier (R) = West Pier Bridge	No. RIC - 30 - 0594 R
E. Pier (R) = East Pier Bridge	No. RIC - 30 - 0594 R

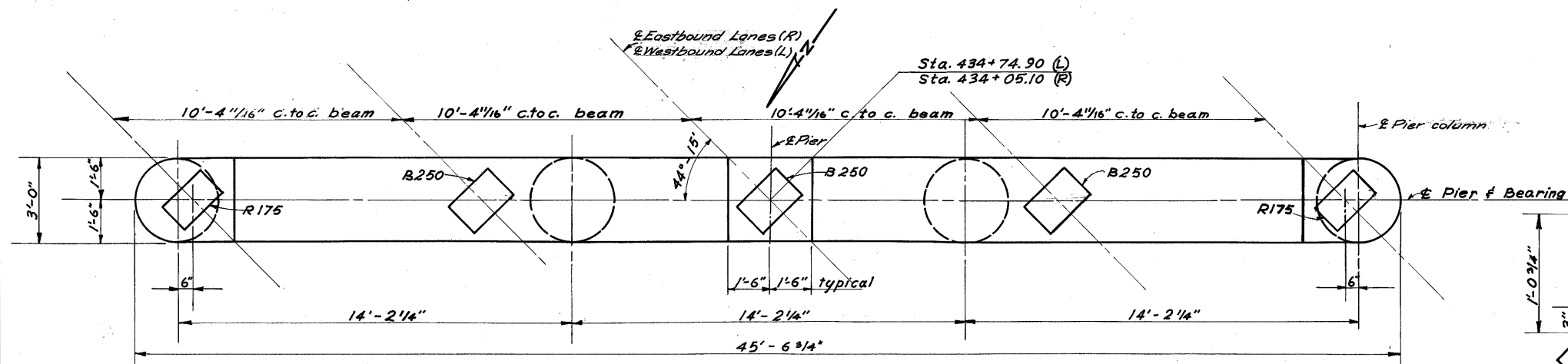
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CINCINNATI, OHIO

EAST & WEST PIERS

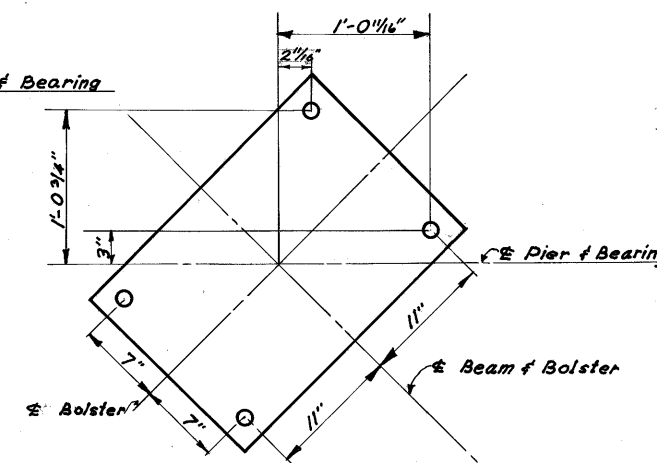
BRIDGES NOS. RIC-3080594 L & R
U.S. 30 OVER U.S. 42
RICHLAND COUNTY STA. 432+57.88 TO
Scale: None STA. 436+22.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISE
J.P.F.	V.J.E.	M.F.T.	J.P.F.	W.J.I. 10-30-56	

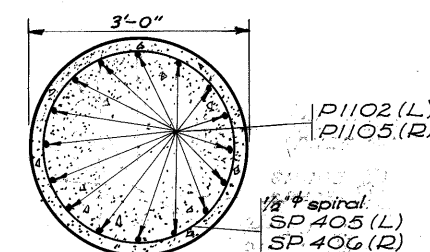
RIC-30-5.79
ASD-30-0.00



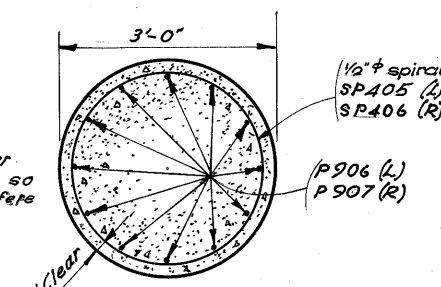
PLAN
Scale: 3/8\"/>



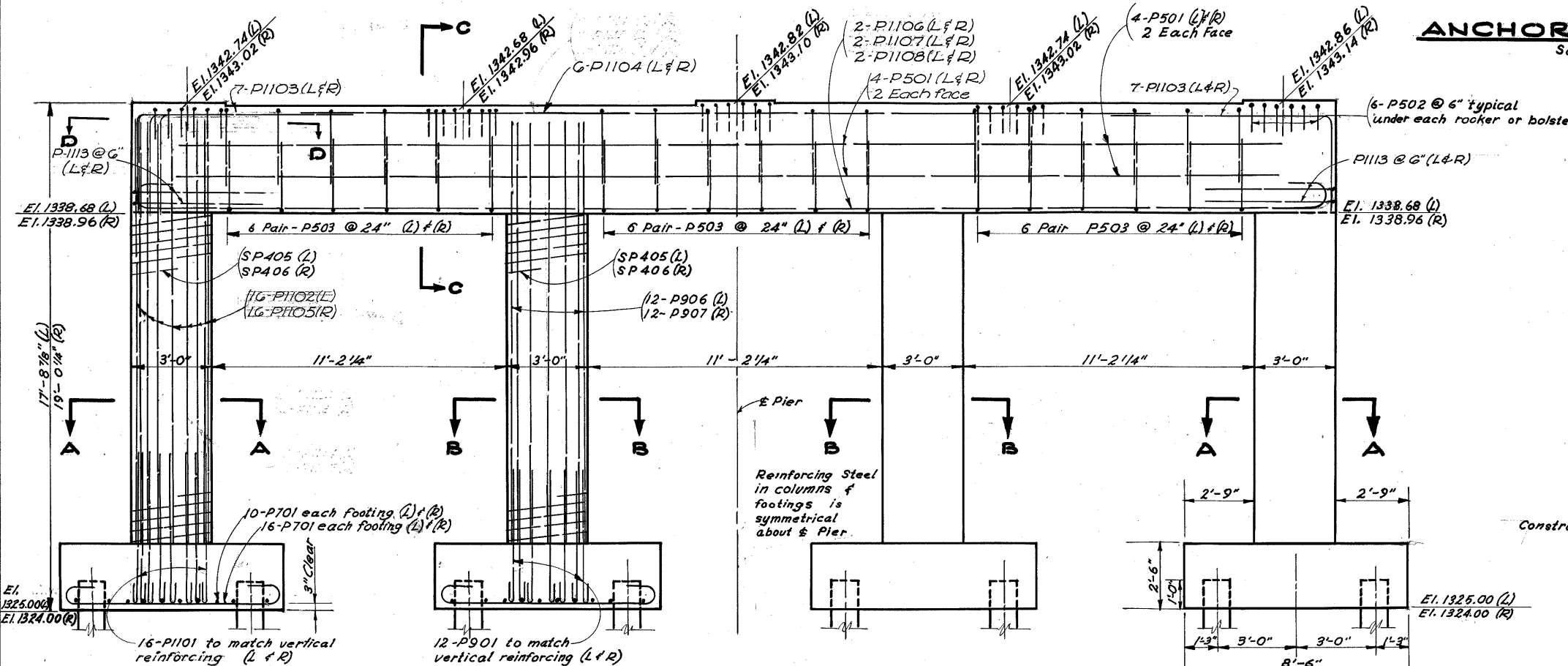
ANCHOR BOLT LAYOUT
Scale: 1 1/2\"/>



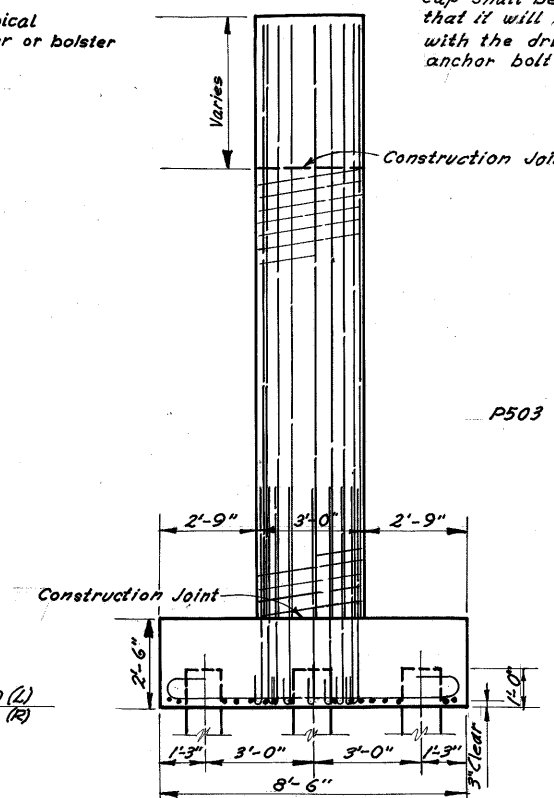
SECTION A-A
Scale: 3/4\"/>



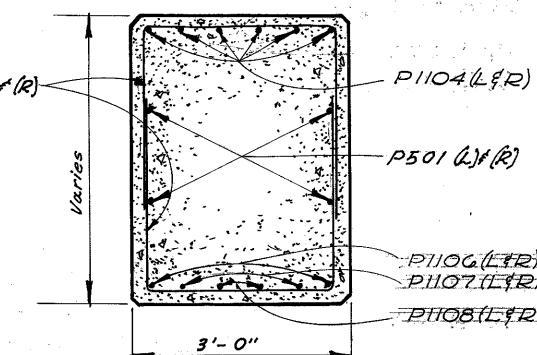
SECTION B-B
Scale: 3/4\"/>



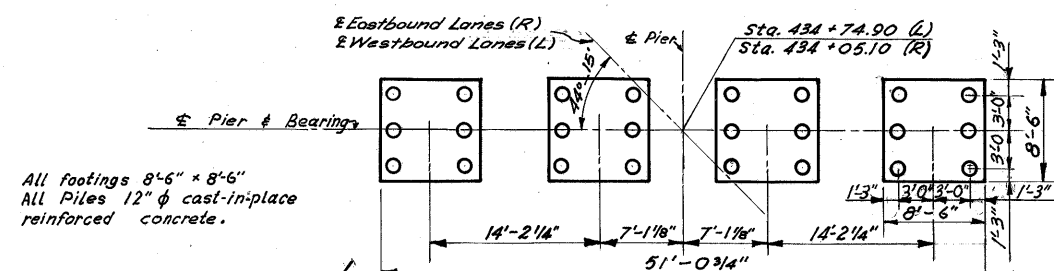
ELEVATION
Scale: 2/8\"/>



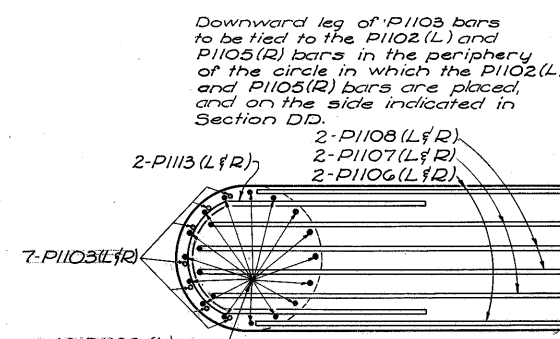
END VIEW
Scale: 3/8\"/>



SECTION C-C
Scale: 3/4\"/>



PILING LAYOUT
Scale: 1/8\"/>



SECTION DD
Scale: 1/2\"/>

- Notes: 1. Cover of main steel to be 2\"/>

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CENTER PIER

BRIDGES NOS. RIC-30-0594 L & R

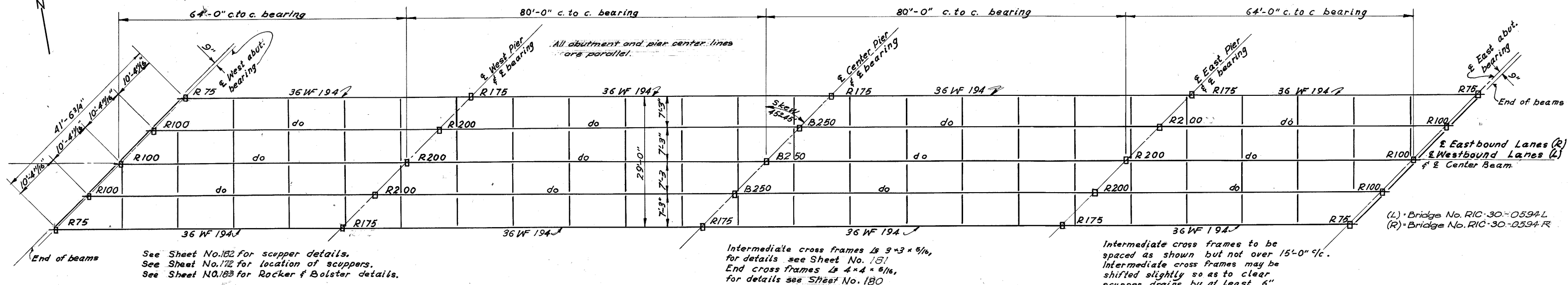
U.S. 30 OVER U.S. 42

RICHLAND COUNTY STA. 432+57.66 TO

Scale As shown STA. 436+22.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.R.F.	W.J.E.	M.F.T.	J.P.F.	W.J.I.	10-30-56	

RIC-30-5.79
ASD-30-0.00

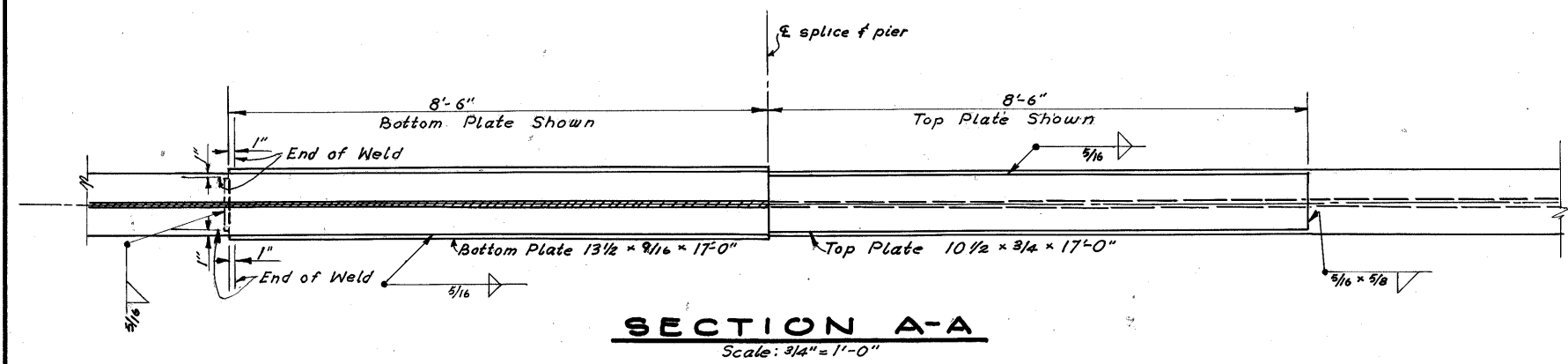


STEEL FRAMING PLAN

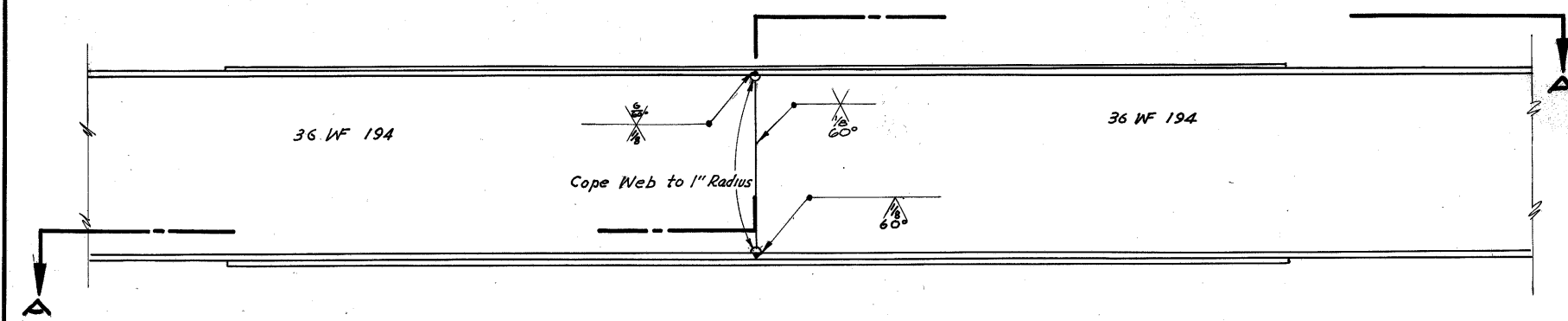
Scale: 3/32" = 1'-0"

LOCATION	EXTERIOR BEAMS		INTERIOR BEAMS	
	END SPANS	MIDDLE SPANS	END SPANS	MIDDLE SPANS
Deflection due to weight of steel	1/16"	1/8"	1/16"	1/8"
Deflection due to remaining dead load	2/16"	1/16"	3/8"	3/8"
Sum of deflection and camber	3/8"	13/16"	7/16"	1/2"
Required Shop camber	0"	1"	0"	0"

NOTE: Where no shop camber is required, the beams shall be so fabricated that any curved beam shall be placed with the convex flange up.



SECTION A-A



BEAM SPLICE DETAIL

BEAM SPLICE WELDING PROCEDURE

1. Raise ends of beams at East Pier 3/4"
2. Butt weld the beam flanges and web at Center Pier using the following sequence: make one pass on each flange, then one on the web, repeat until welds are completed.
3. Weld top and bottom moment plates at Center Pier.
4. Lower beam ends at East Pier.
5. Raise ends of beams 1/2" at both abutments.
6. Butt weld beam flanges and web at East and West Piers using the following sequence: make one pass on each flange, then one on the web, repeat until welds are completed.
7. Weld top and bottom moment plates at East and West Piers.
8. Lower ends of beams at both abutments to final position.

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CINCINNATI, OHIO

**SUPERSTRUCTURE
STEEL FRAMING PLAN &
DETAILS**

BRIDGES NOS. RIC-30-0594 L & R
U.S. 30 OVER U.S. 42
RICHLAND COUNTY STA. 432+57.66 TO
Scale: As shown STA. 436+22.12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.F.	V.J.E.	M.F.T.	J.R.F.	W.J.I.	10-30-56	