

**Bench Marks**  
 I-270 Sta. 207+65 280' Rt.  
 Conc. man. buried 0.5' & located  
 107' E. utility pole # 131A22  
 Elev. 881.396  
 I-270 Sta. 212+60 150' Rt.  
 R.R. spike W. side 30" elm  
 Elev. 885.224

See General Notes Sheet No. 23  
 for Temporary Road.

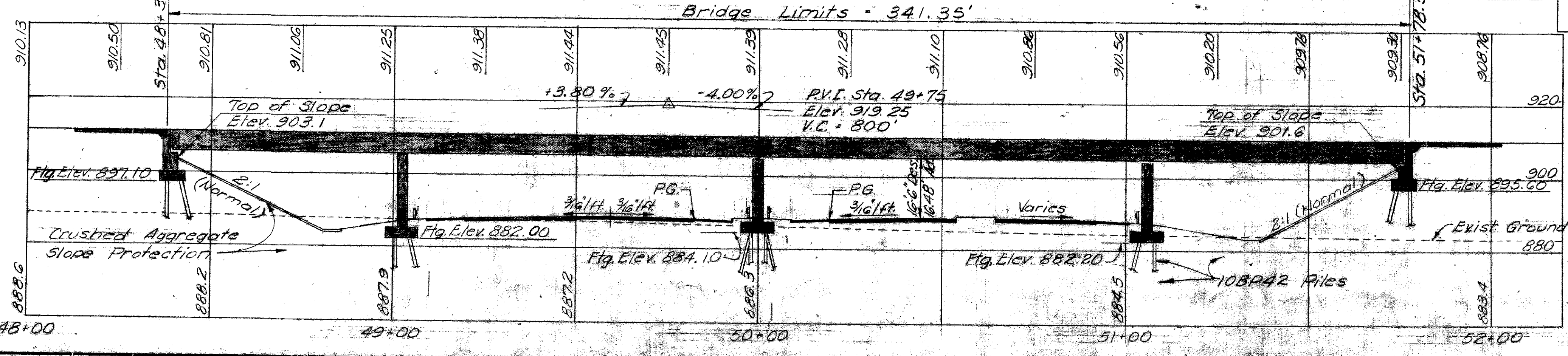
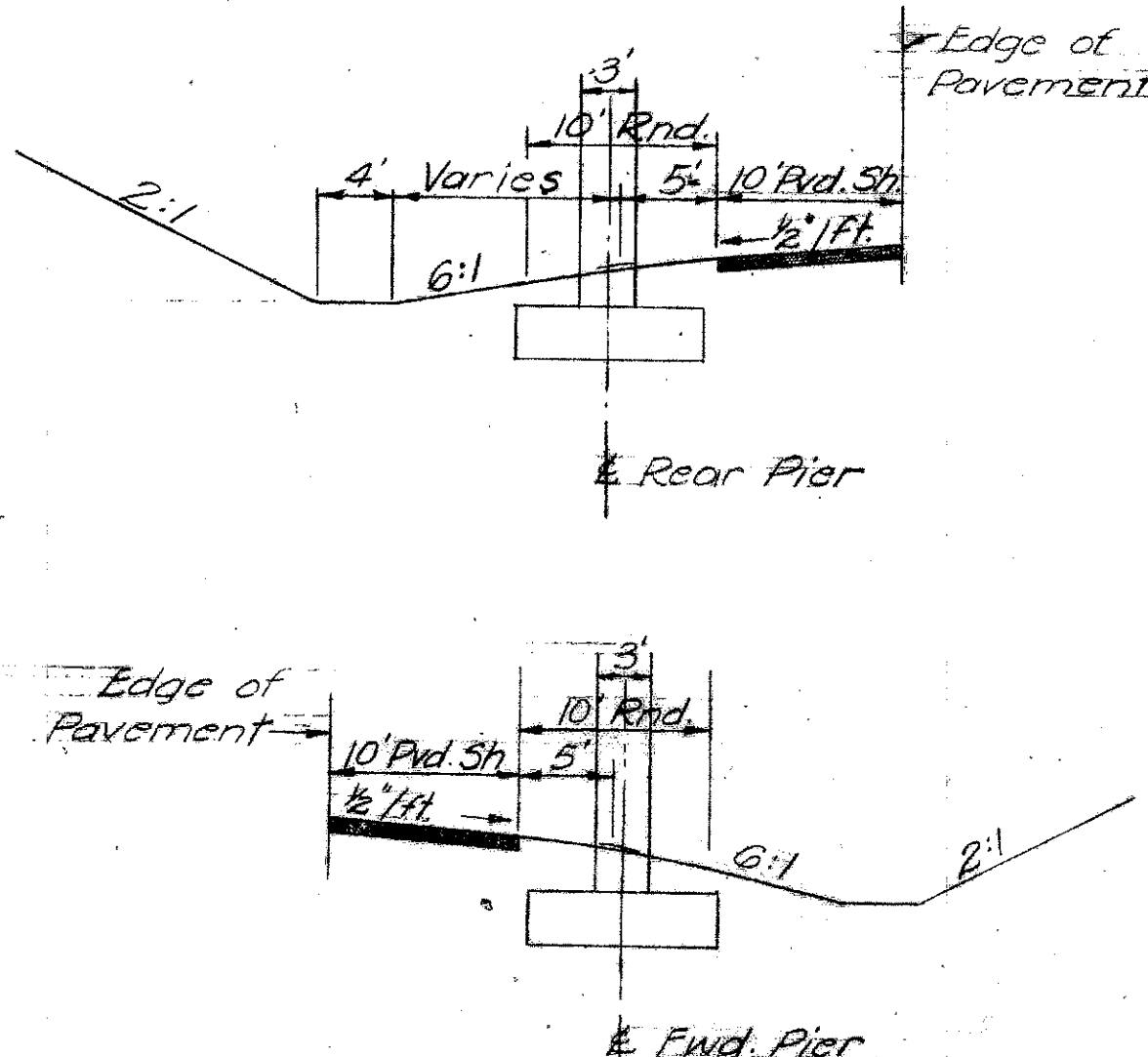
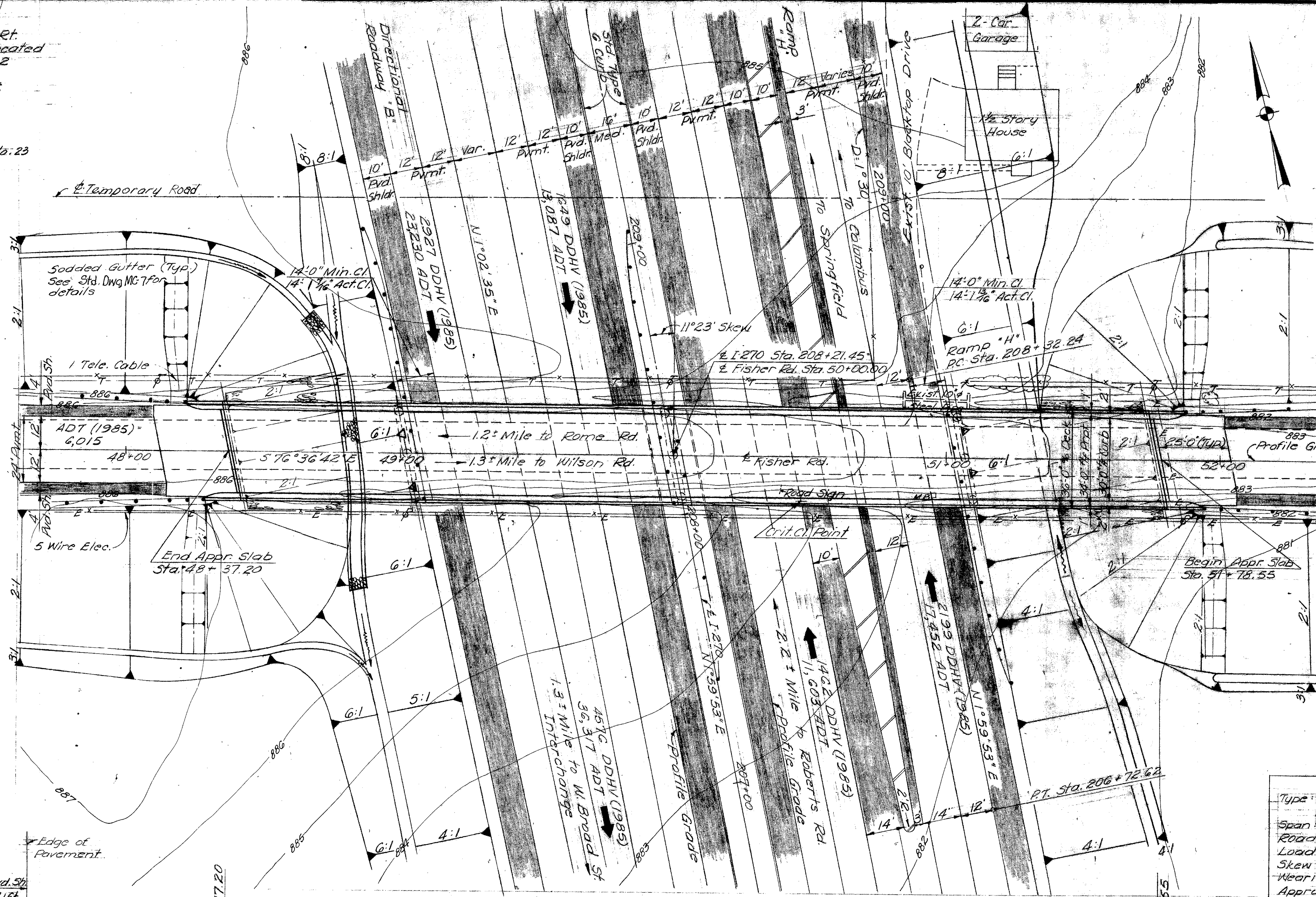
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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

FRANKLIN COUNTY FRA-270-0.000 S/N

**CURVE DATA - RAMP "H"**  
 I = 9°20'08.3"  
 D = 1°30'  
 T = 311.879'  
 M = 622.376'  
 R = 3812.719'  
 E = 12.71'

**NOTE:** For Approach Slab  
 Details see Sh. No. 386.



**PROPOSED STRUCTURE**  
 Type: 4 span continuous steel girder with  
 reinf. concrete deck & substructure.  
 Span: 63'-3", 37'-3", 106'-9", 63'-9" brgs.  
 Roadway = 30'-0" w/ 2'-0" safety curbs  
 Load Frequency: (CF-400) (37)  
 Skew: 11°23' Rt. Fwd.  
 Wearing Surfaces: 1" mono. conc.  
 Approach Slab: AS-1-54 (25' long)  
 Alignment: Tangent

Estimated Average Pile Length  
 for 10BP42 Piles  
 Abutments = 40'  
 Piers = 25'

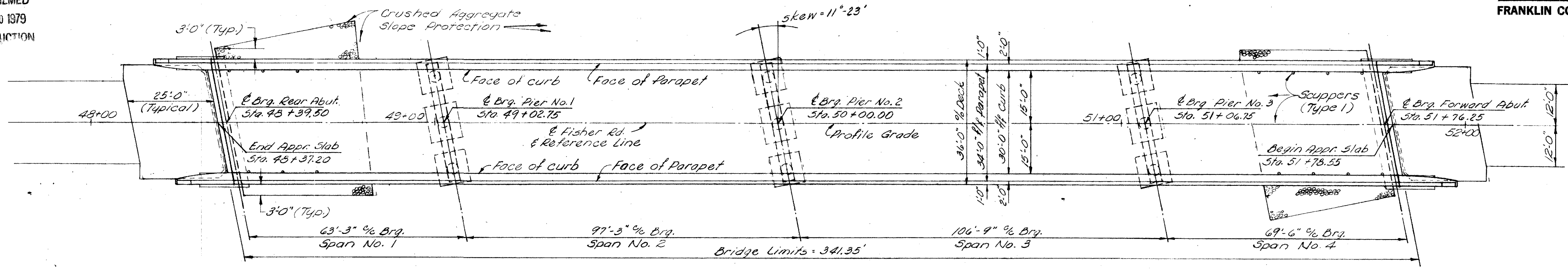
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**SITE PLAN**  
 BRIDGE No. FRA-270-0039'S  
 UNDER FISHER RD.  
 FRANKLIN COUNTY COLUMBUS OUTERBELT  
 STA. 208+21.45

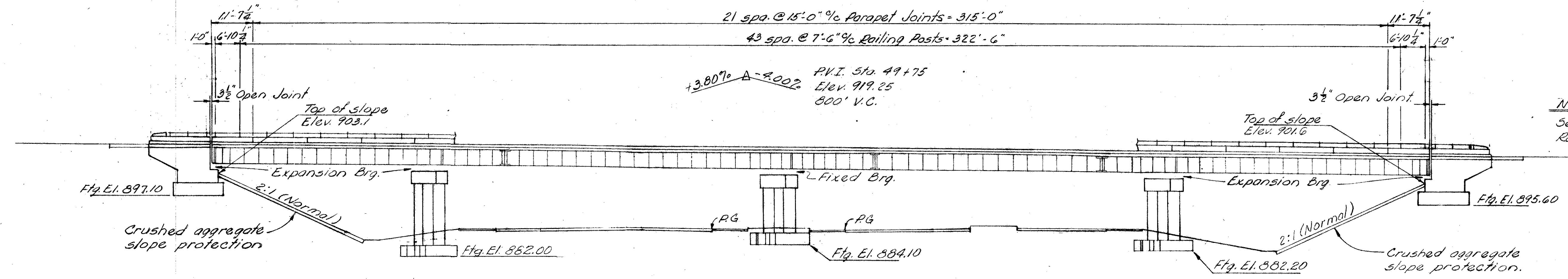
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.L.A.	V.N.		D.C.H.	D.C.N.	4/20/79	

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REPRODUCTION

359  
504



**PLAN**



**ELEVATION**

(10 BP42 Piles not shown)

**NOTE:**  
See Sheet No. 391 for Wingwall Railing Dimensions.

Normal Participation - Rural

**ESTIMATED QUANTITIES**

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPERS	GENERAL
503	363	Cu.Yds	Unclassified excavation	245	118		
505	Lump	Sum	First test pile				Lump
507	2840	Lin.Ft.	Steel piles, 10BP42	1040	1800		
509	145,415	Lbs.	Reinforcing steel	12,464	25,192	107,759	
511	413	Cu.Yds	Class C concrete, superstructure			413	
511	76	Cu.Yds	Class C concrete, piers above footing		76		
511	171	Cu.Yds	Class E concrete, abutments	171			
511	81	Cu.Yds	Class E concrete, pier footings		81		
513	349,400	Lbs.	Structural steel			349,400	
832	349,400	Lbs.	Field painting of structural steel			349,400	
517	743.25	Lin.Ft.	Railing (Type 1)	65.67		677.58	
518	58	Lin.Ft.	6" perforated, helical C.M.P., including specials, 707.06	58			
518	51	Lin.Ft.	6" non-perforated, helical C.M.P., 707.06	51			
518	14	Each	Scuppers including supports			14	
518	31	Cu.Yds	Porous backfill	31			
601	451	Sq.Yds	Crushed aggregate slope protection	451			
808	413	Units	Water-reducing, set retarding admixture			413	
825	1582	Sq.Yds	Concrete surface treatment				1582
828	61	Lin.Ft.	Joint sealer			61	

**GENERAL NOTES**

For additional notes see "General Notes", Sheet No. 387

**PILES** shall be driven to a minimum bearing capacity of 35 tons per pile.

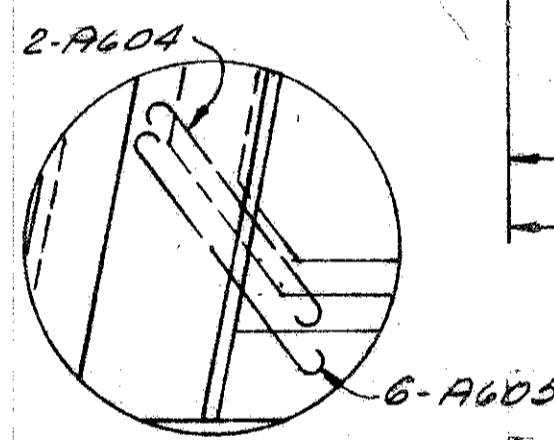
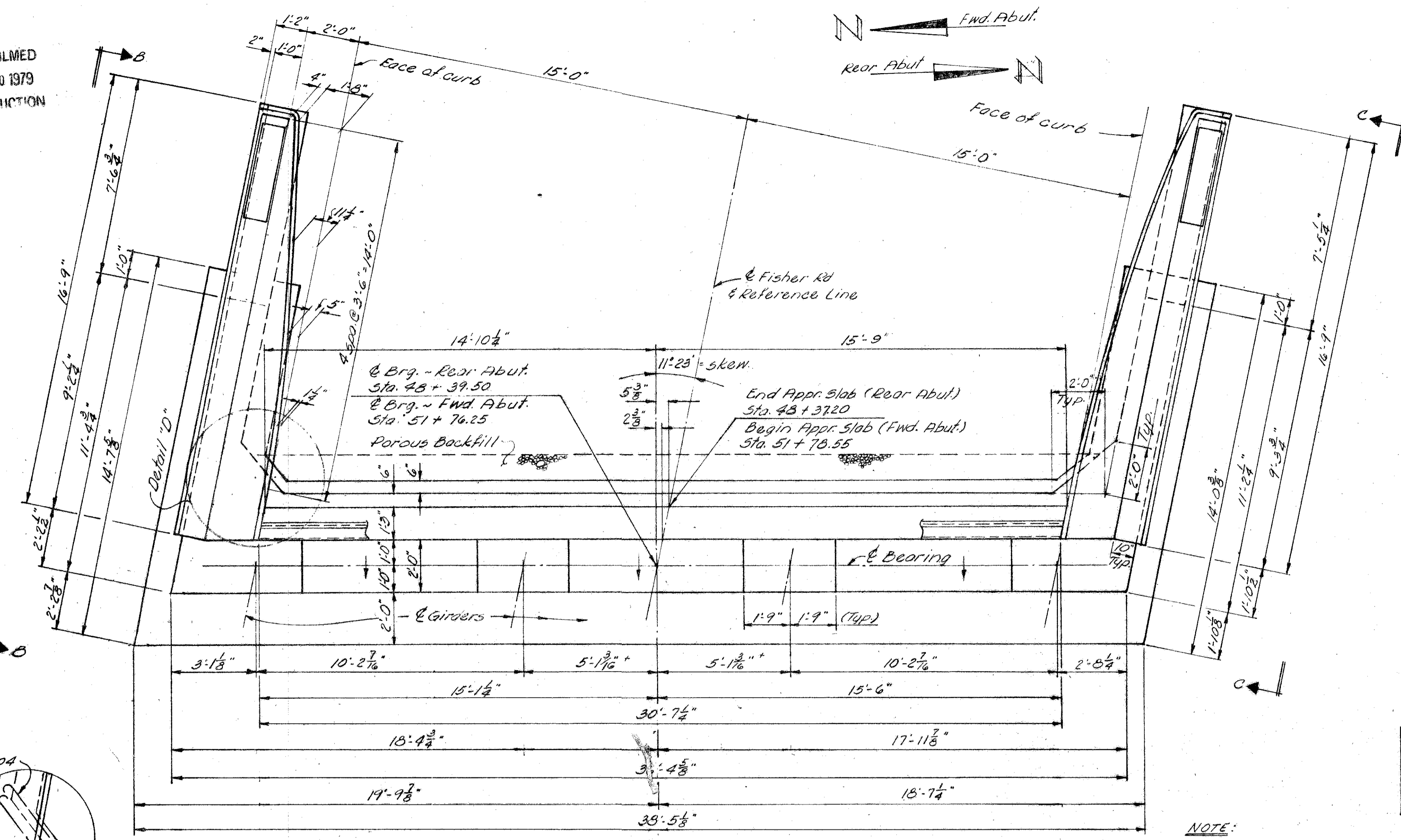
**EXCAVATION QUANTITY** includes the removal of fill material required for the construction of the abutments.

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**GENERAL PLAN & ELEVATION  
EST. QUANTITIES & GEN. NOTES**  
BRIDGE NO. FRA-270-00395  
UNDER FISHER RD  
FRANKLIN COUNTY COLUMBUS OUTERBELT  
STA. 208 + 21.45

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VLA	BOB		TRO	BOB	4-5-66	

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**NOTES**

**PROCEDURE:** The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which time the abutment excavation may be made and piles driven.

**POROUS BACKFILL:** Porous backfill 1'-6" thick shall extend upward to the underside of the approach slab and outward the full length of the backwall.

FED. RD. DIVISION	STATE	PROJECT	390 504
2	OHIO		

FRANKLIN COUNTY FRA-270-0.000 S/N

**NOTE:** See "Abutment Details", Sheet #391 for View B-B and View C-C.

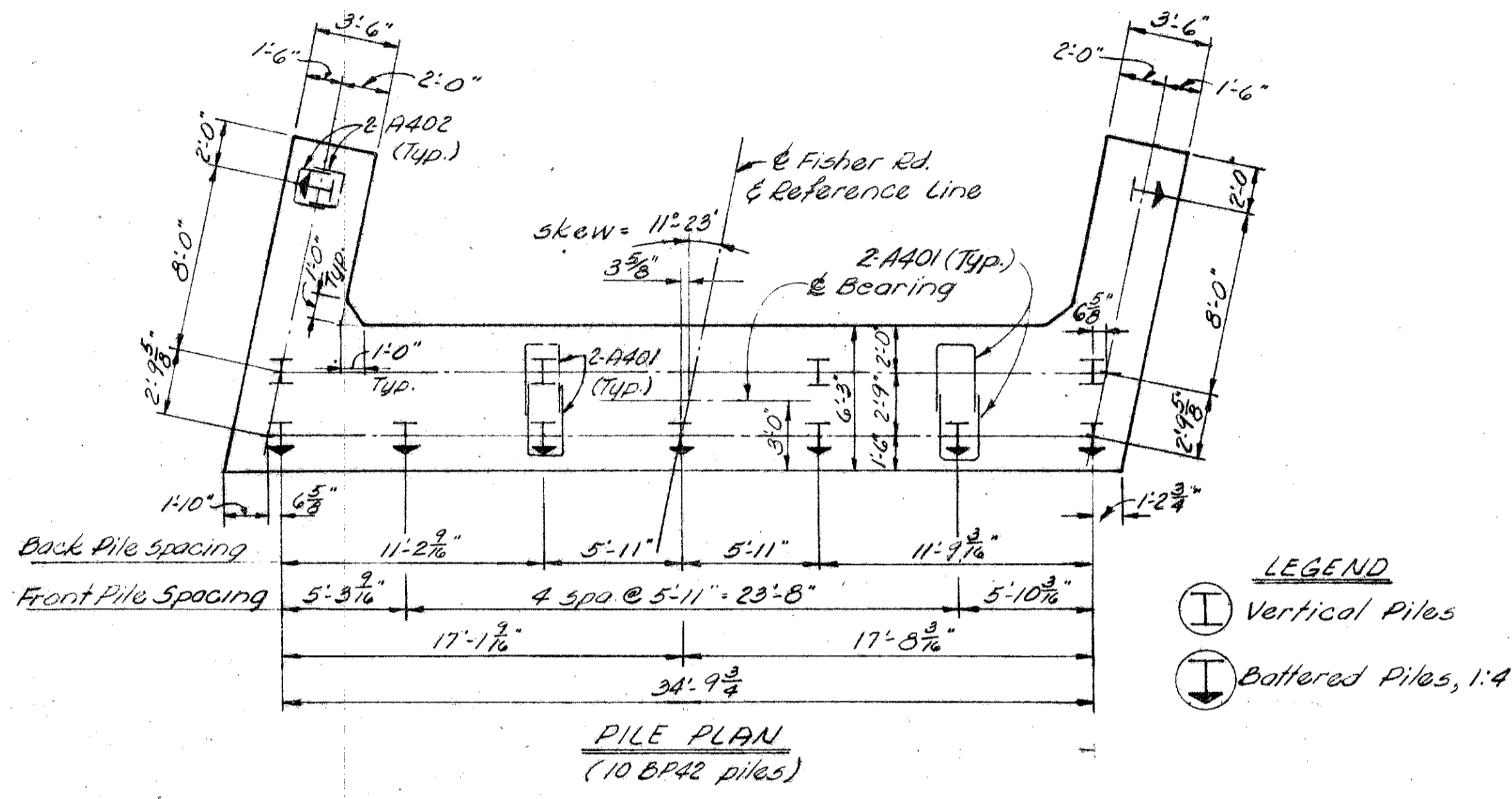
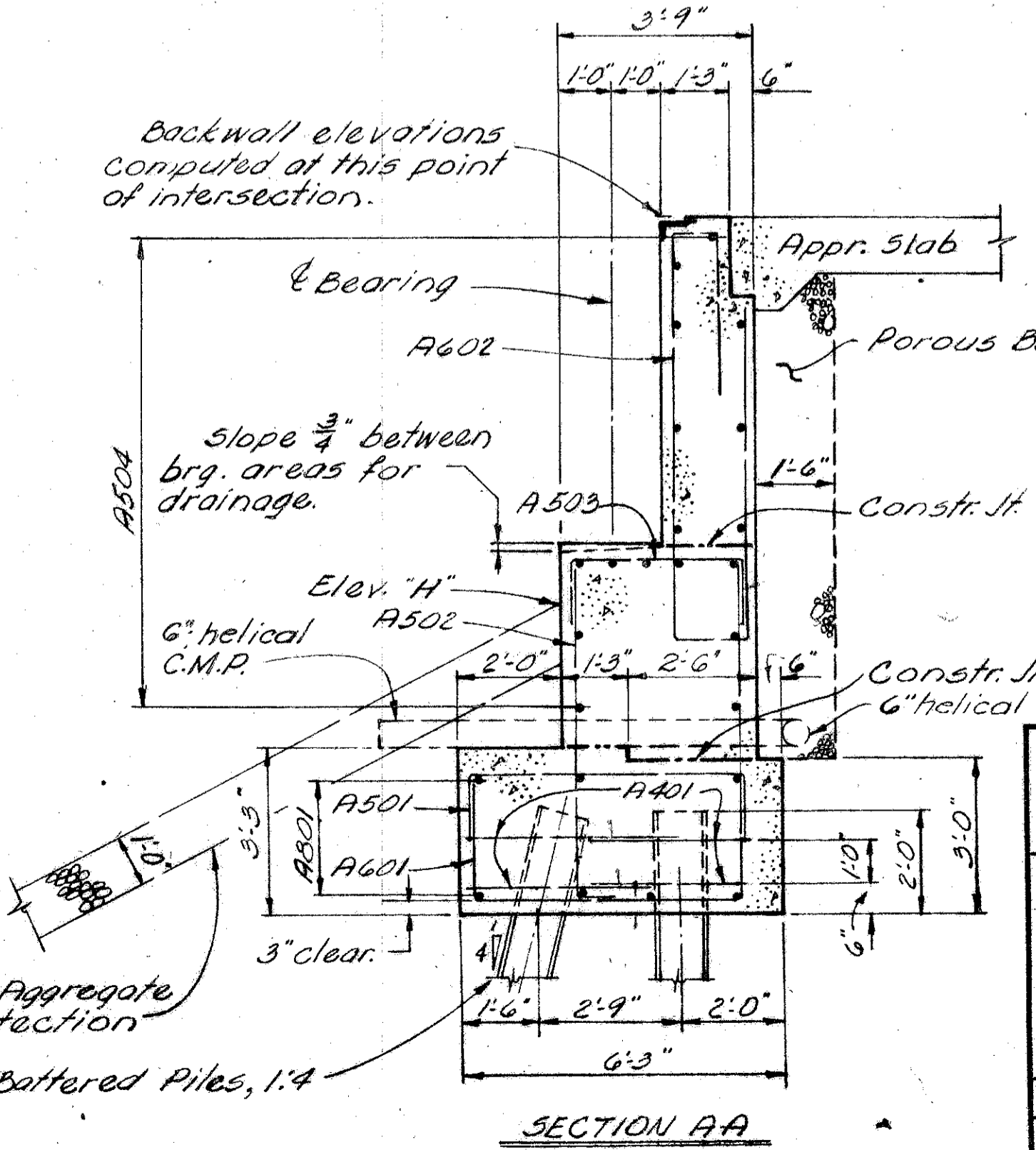
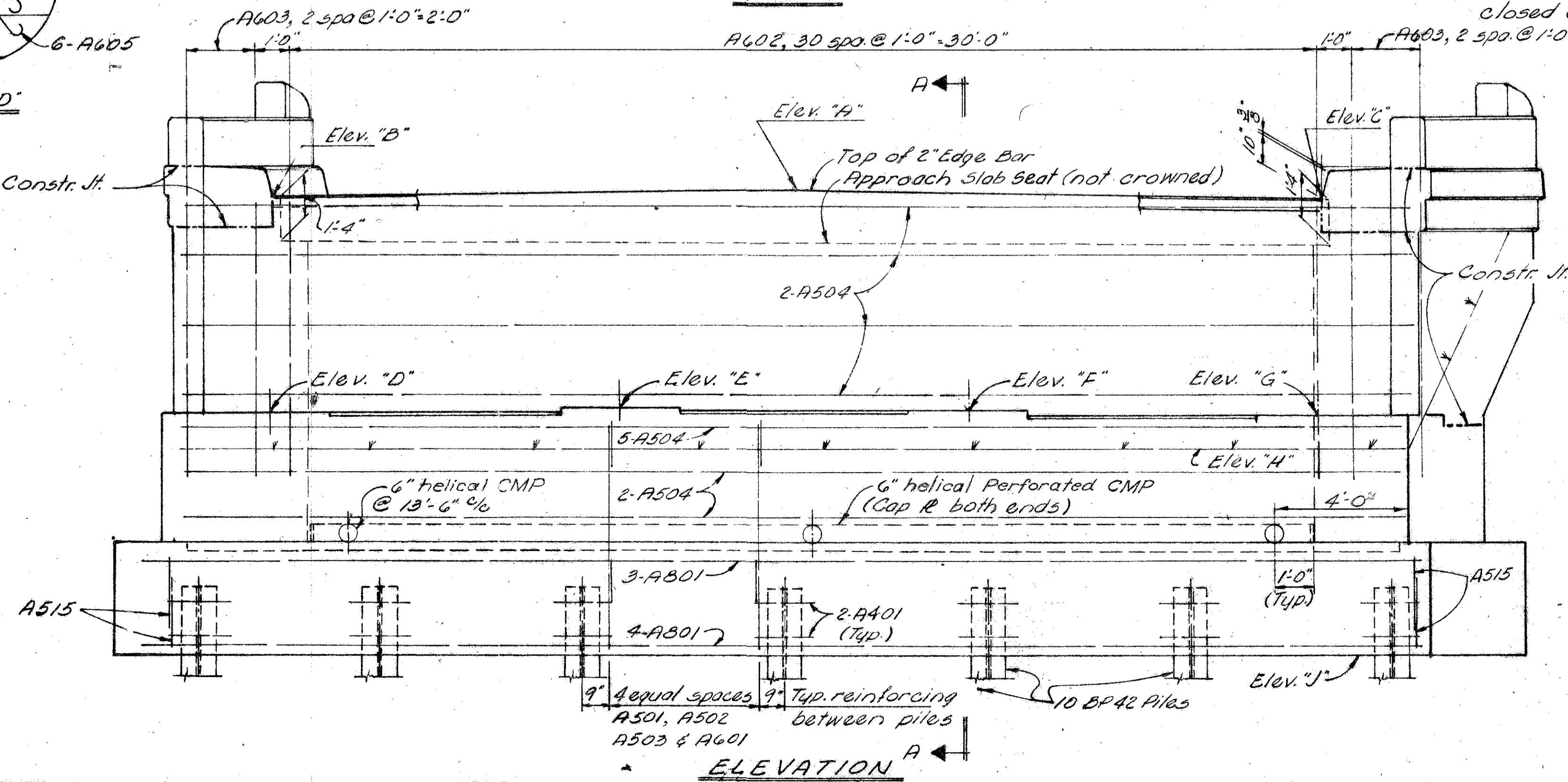


TABLE OF ELEVATIONS

LOCATION	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"
Rear Abutment	910.68	910.48	910.41	904.17	904.30	904.28	904.10	903.10	897.10
Forward Abutment	909.25	909.08	908.96	902.78	902.89	902.85	902.65	901.60	895.60

**NOTE:** Place A603 bars with closed end down.



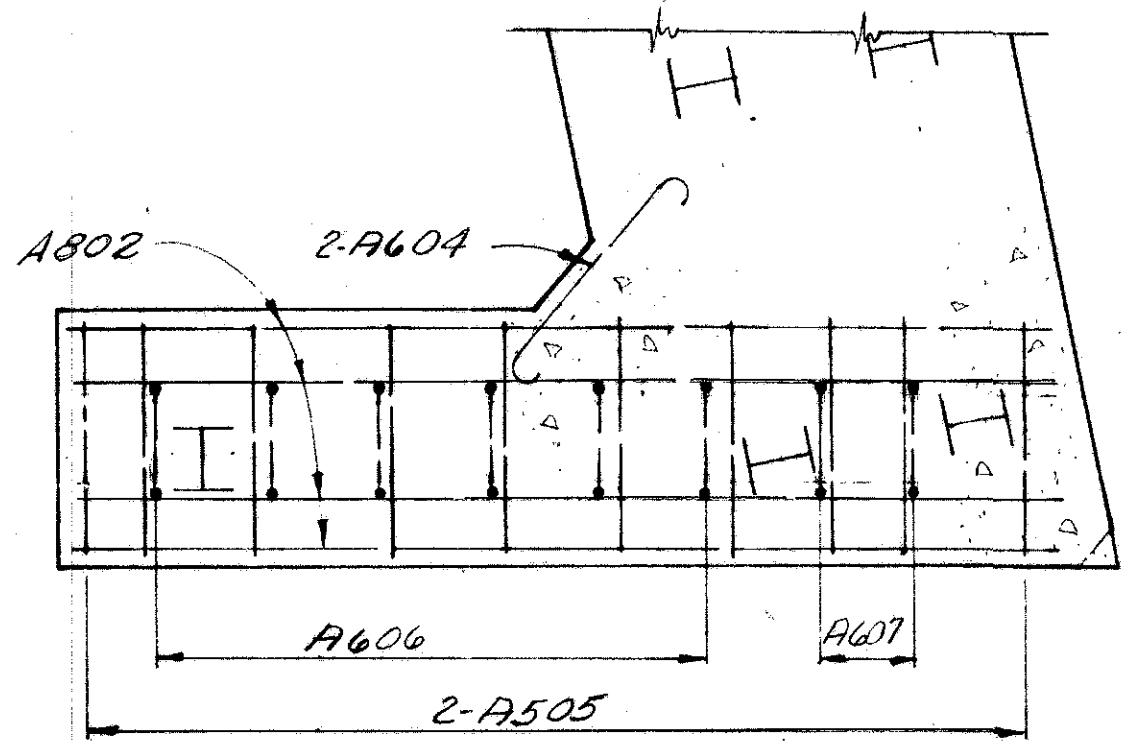
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**ABUTMENT DETAILS**  
BRIDGE NO. FRA-270-0099S  
UNDER FISHER ROAD

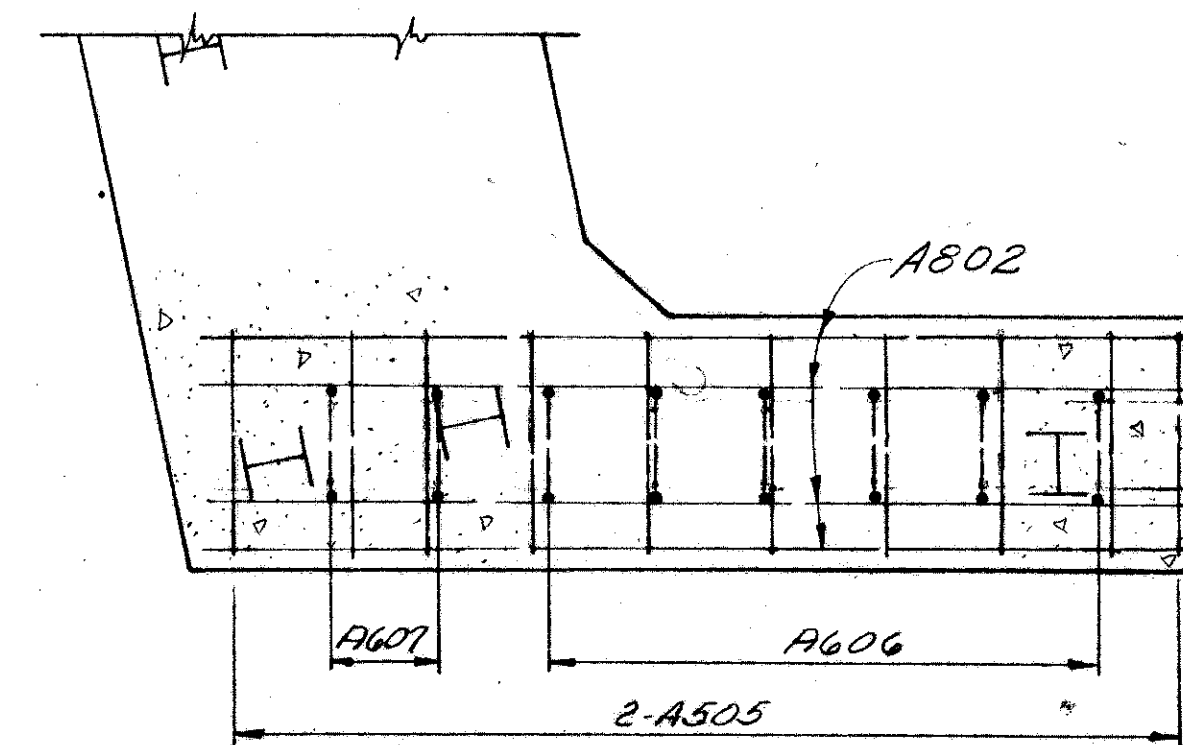
FRANKLIN COUNTY COLUMBUS OUTERBELT  
STA. 208 + 21.45

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
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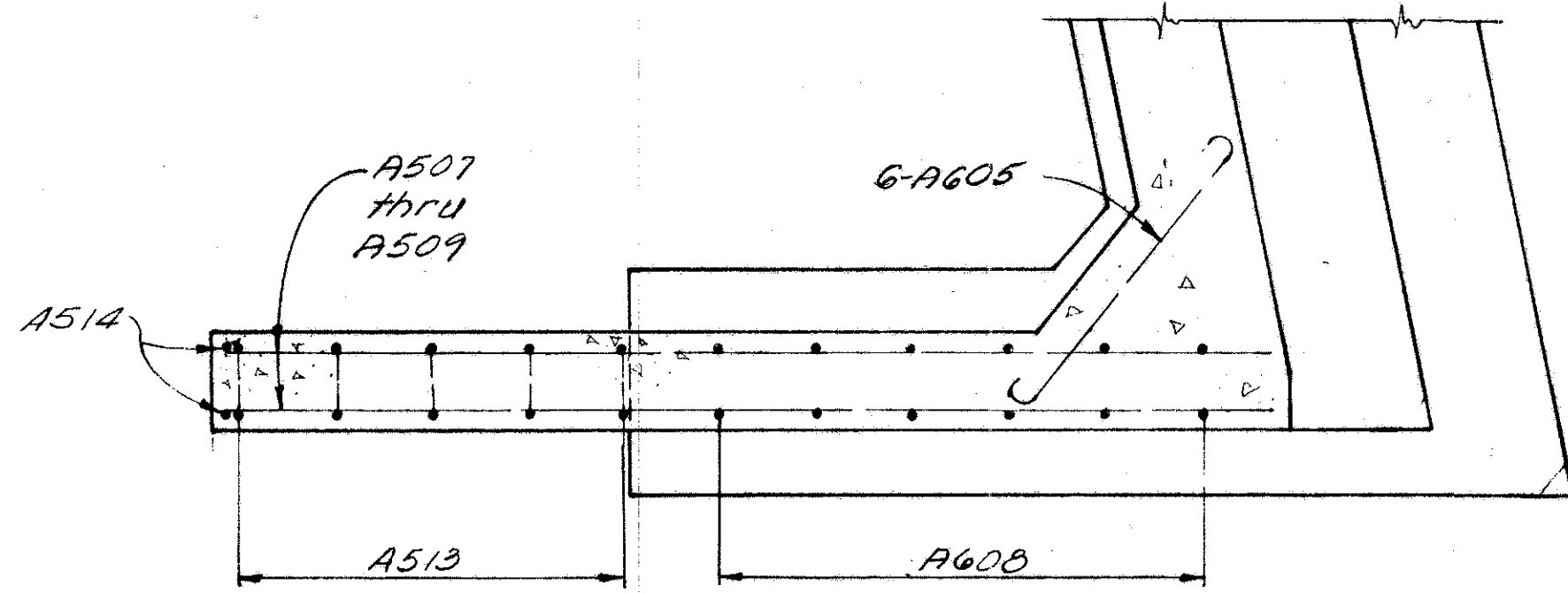
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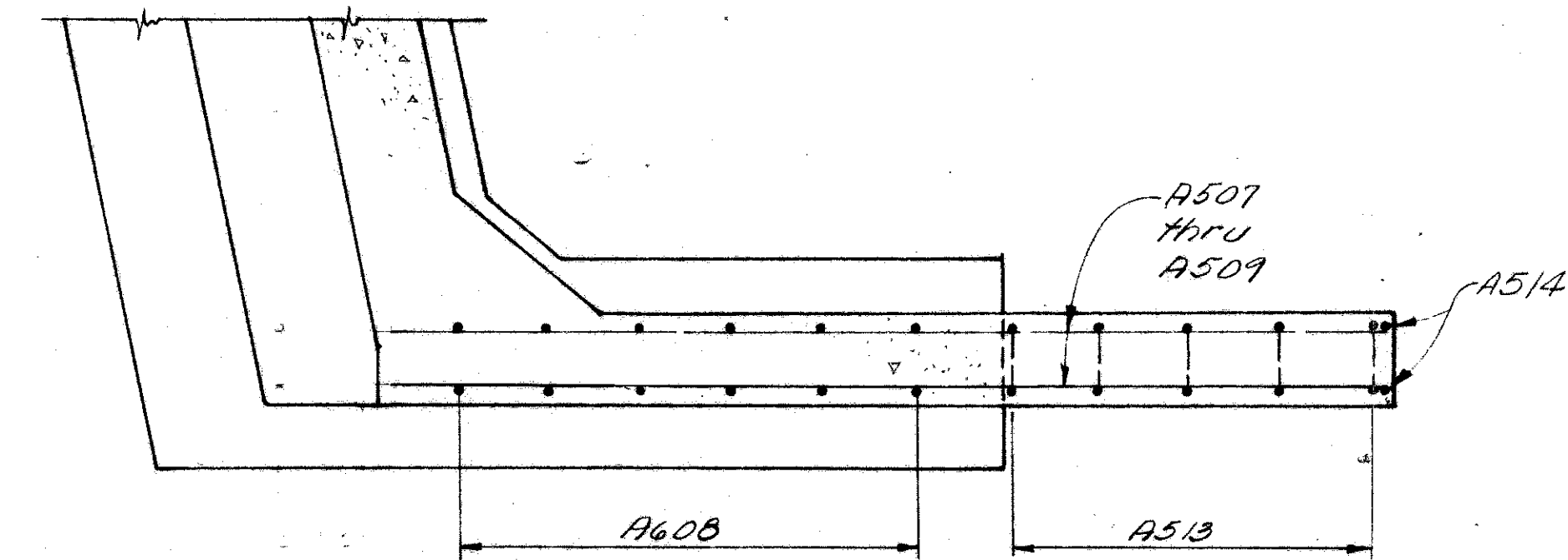
SECTION G-G



SECTION K-K

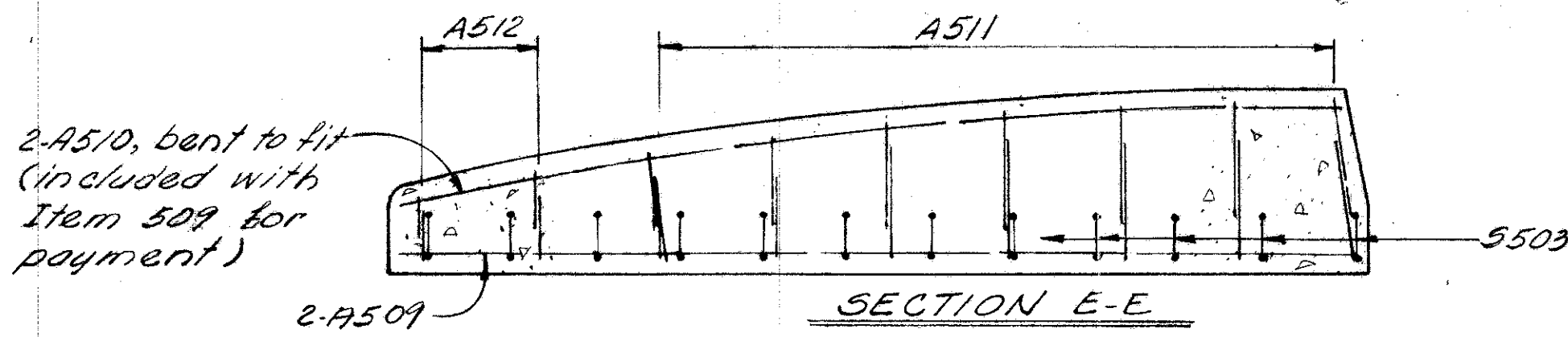


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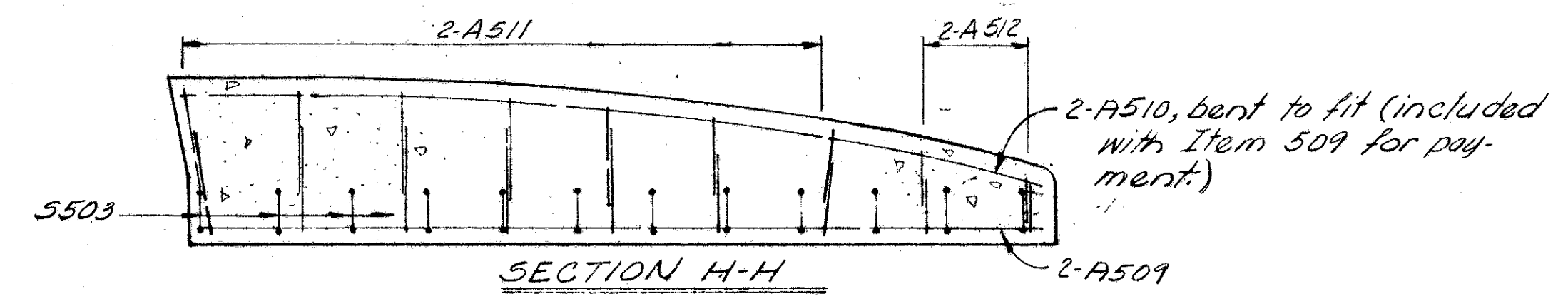


SECTION J-J

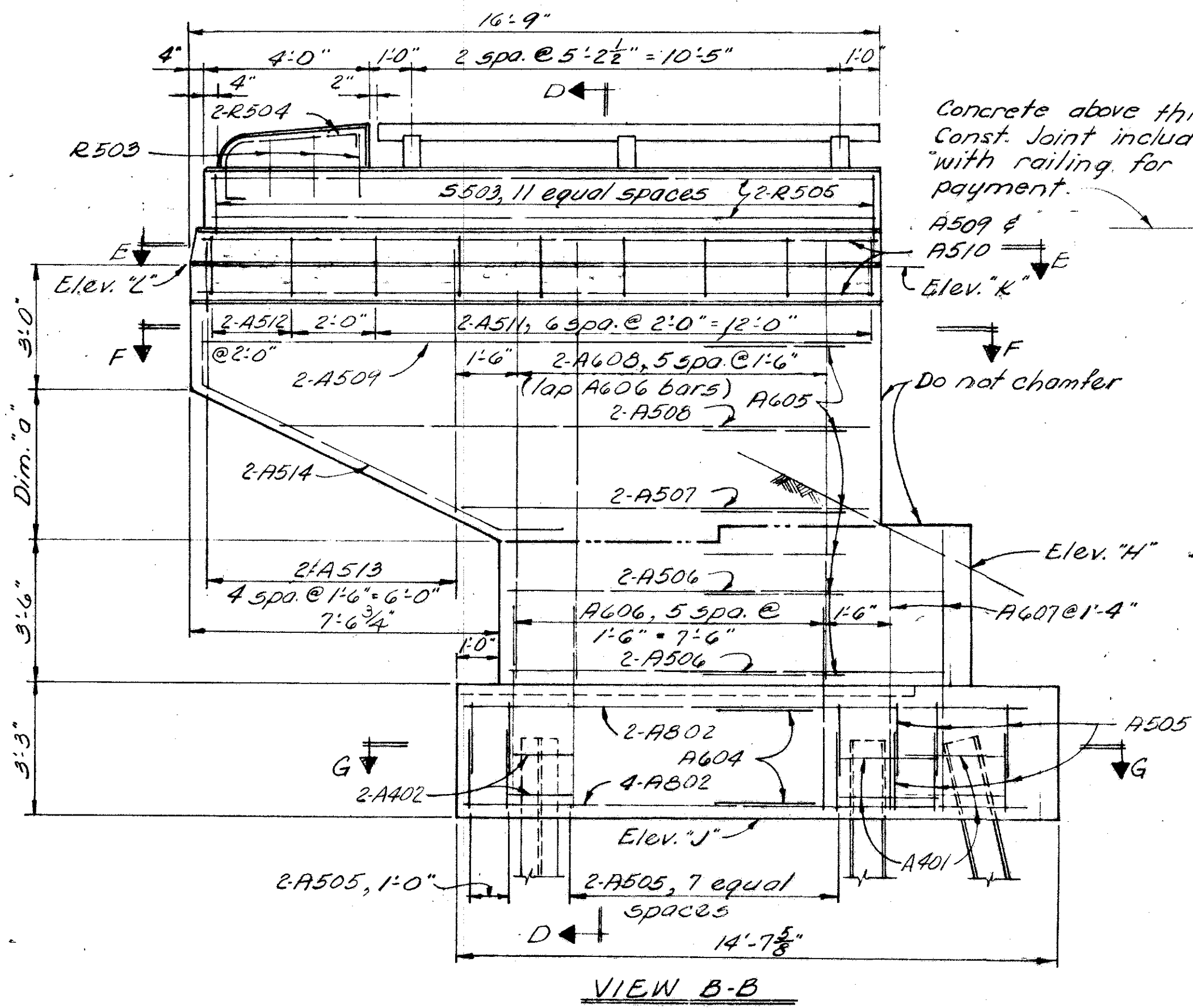
LOCATION	FWD. ABUT.	REAR ABUT.
Elev. "H"	901.60	903.10
Elev. "J"	895.60	897.10
Elev. "K"	909.08	910.48
Elev. "L"	908.70	910.24
Elev. "M"	908.96	910.41
Elev. "N"	908.55	910.14
Dim. "a"	3'-4 1/4"	3'-4 5/8"
Dim. "b"	3'-2 3/4"	3'-3 1/2"



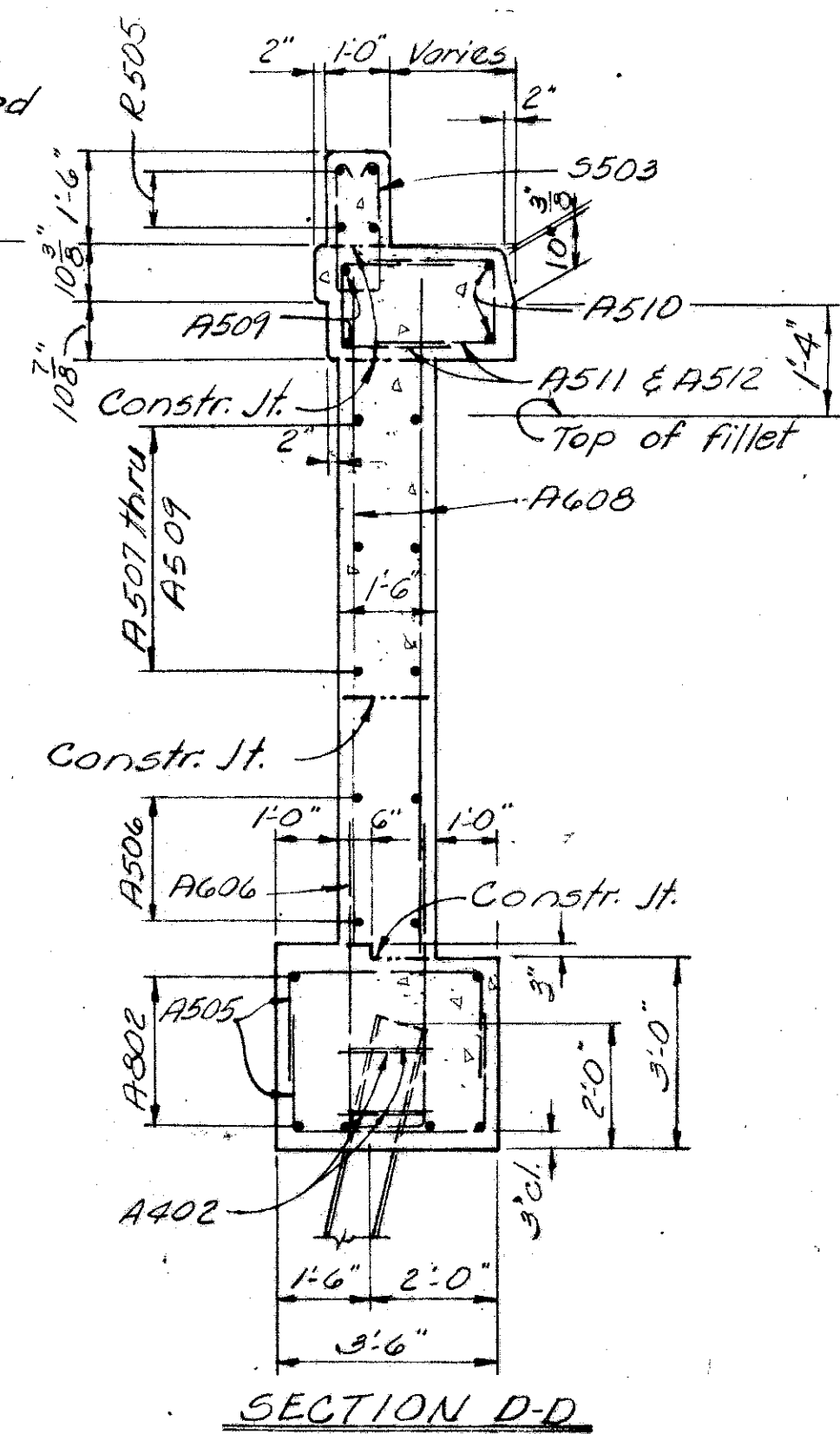
SECTION E-E



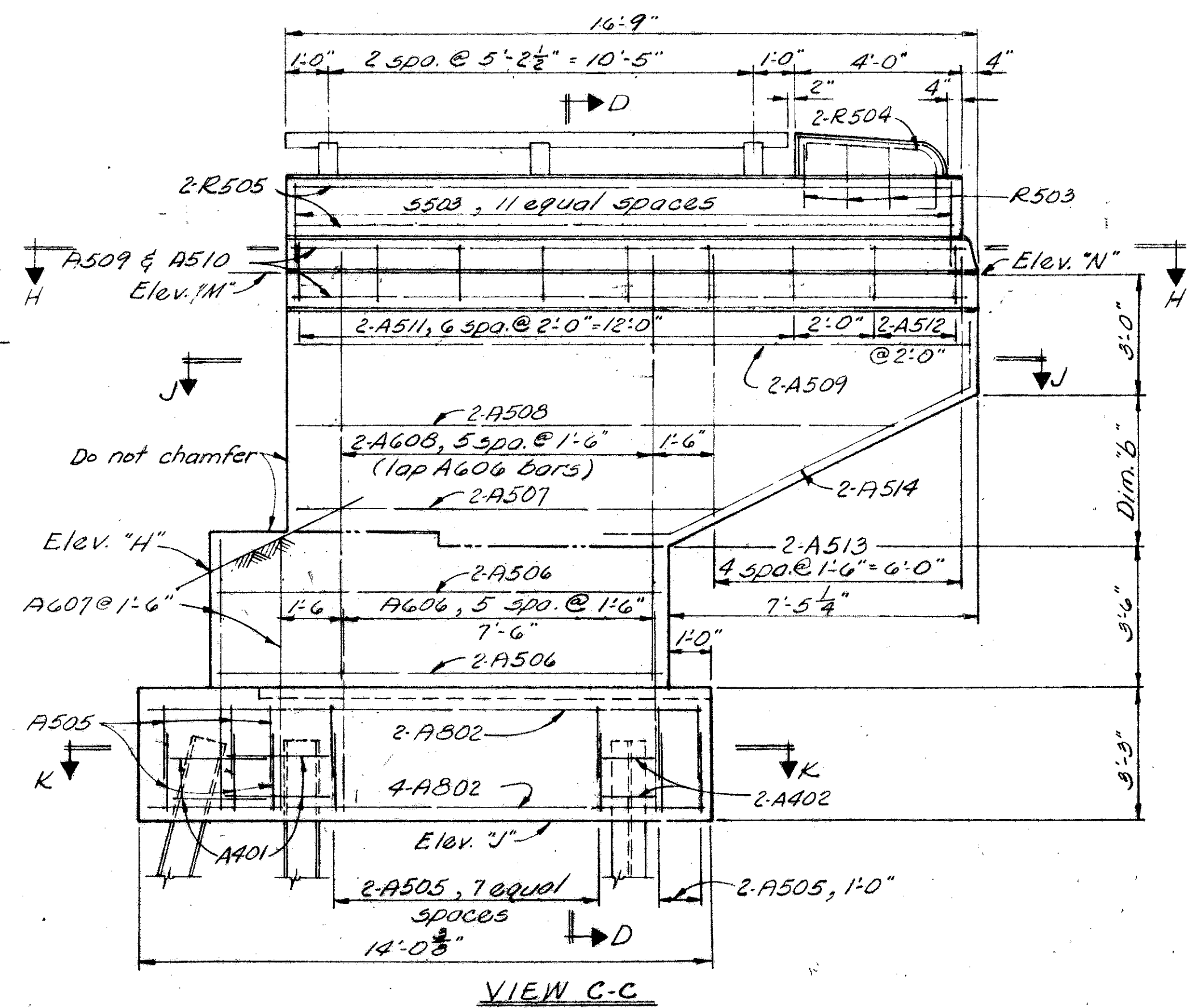
SECTION H-H



VIEW B-B



SECTION D-D



VIEW C-C

DESIGNED						DRAWN						TRACED						CHECKED						REVIEWED						DATE						REVISED					
VLA						BBB						TRO						8/27						4-5-66																	

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**WINGWALL DETAILS**  
BRIDGE NO. FRA-270-0039-5  
UNDER FISHER RD.

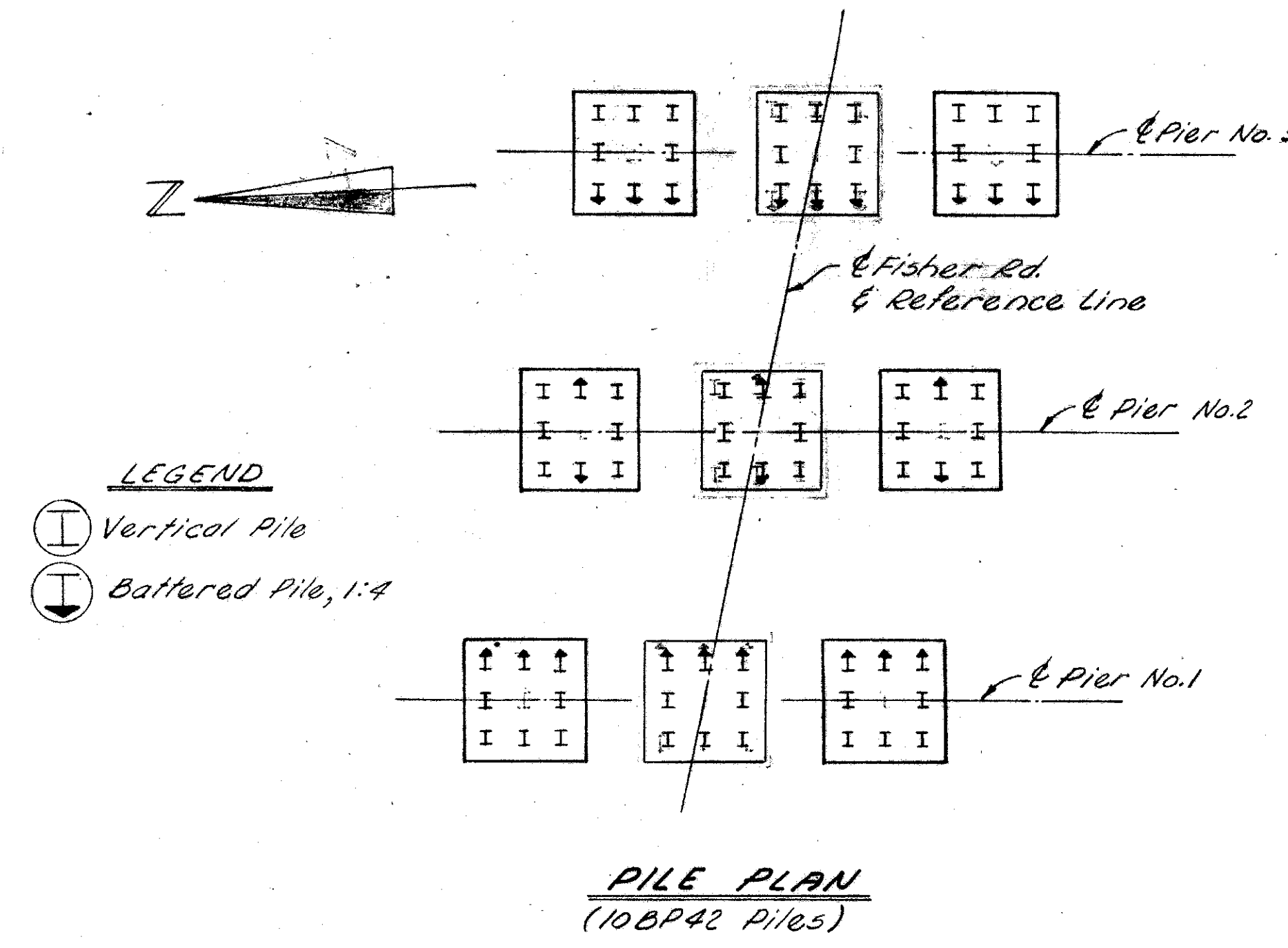
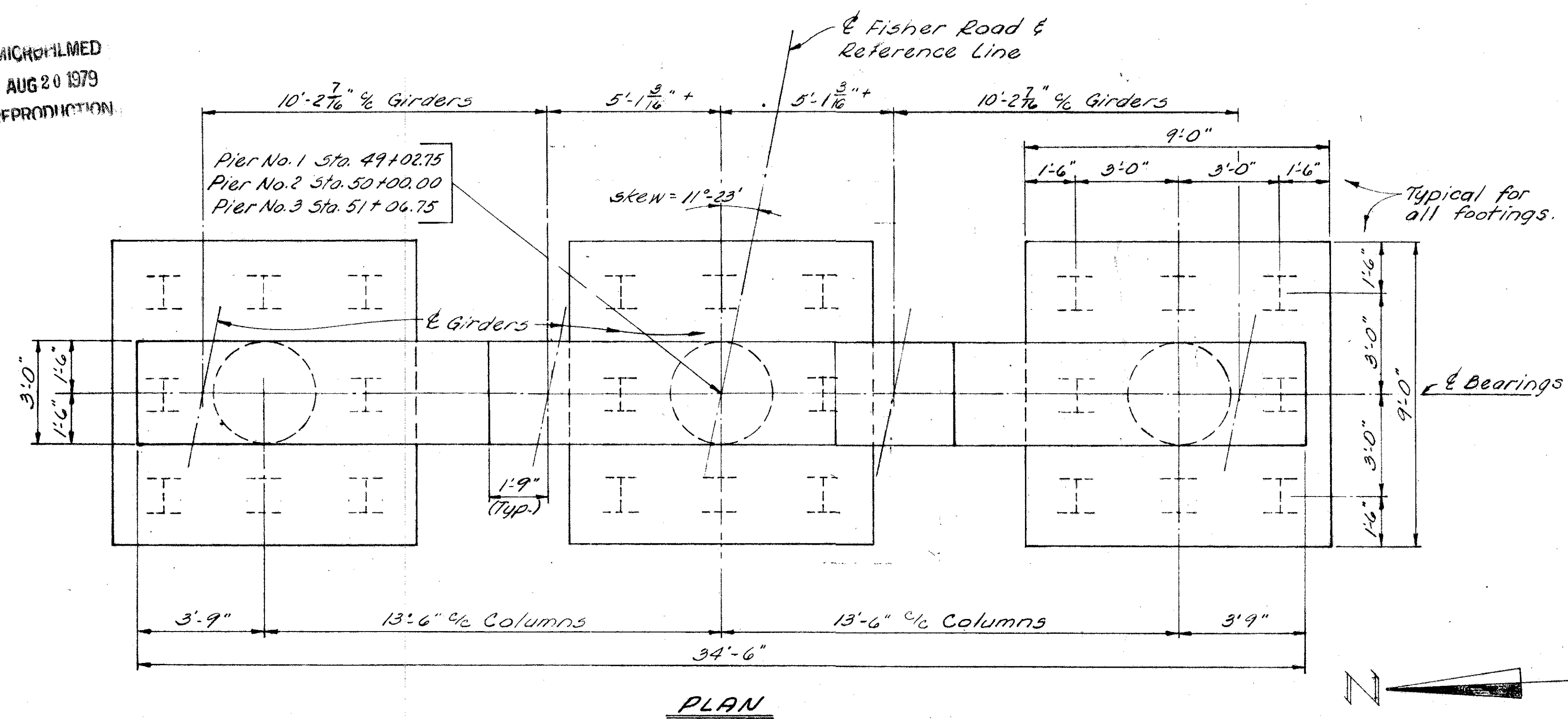
FRANKLIN COUNTY  
COLUMBUS OUTERBELT  
STA. 208+21.45

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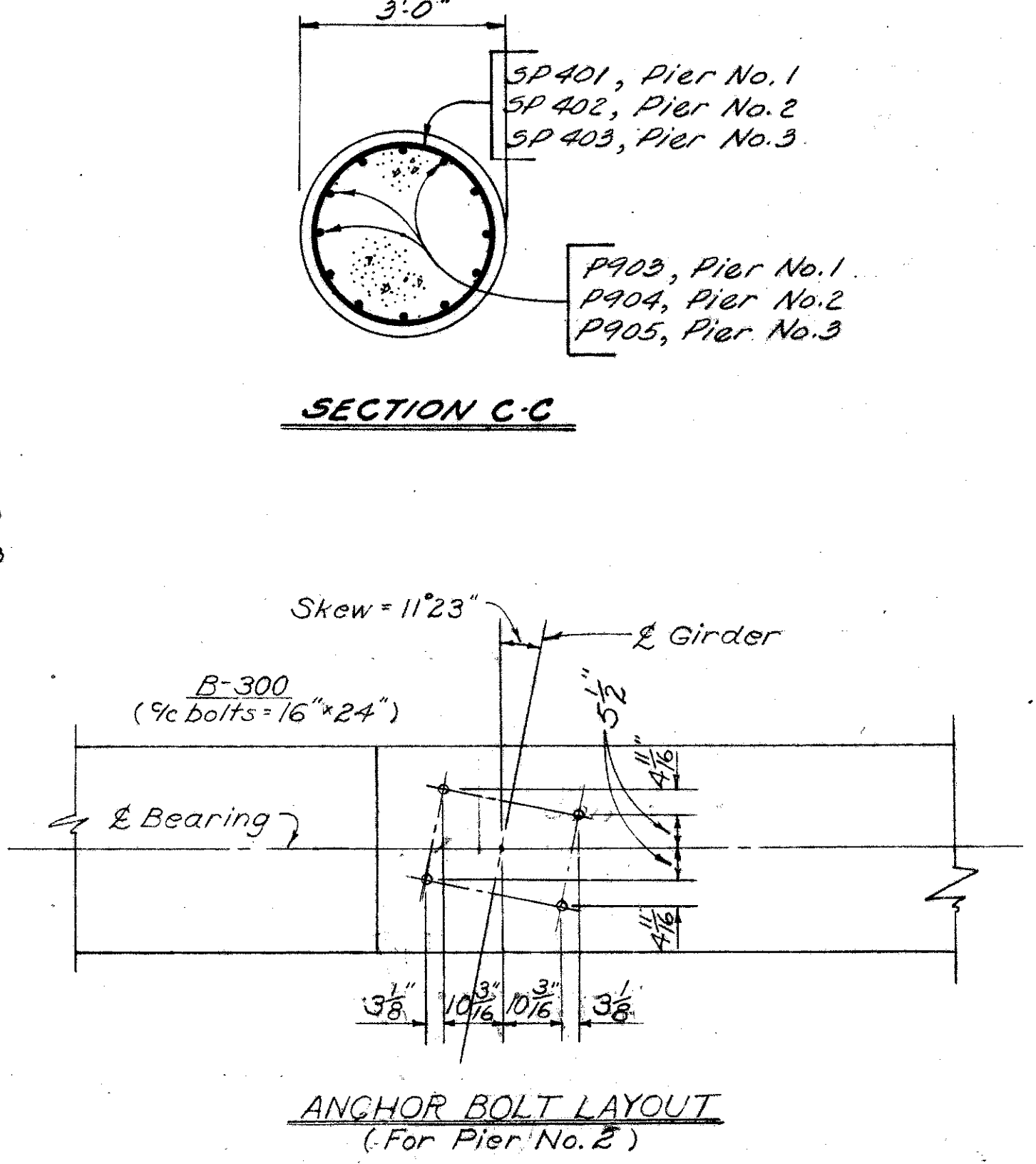
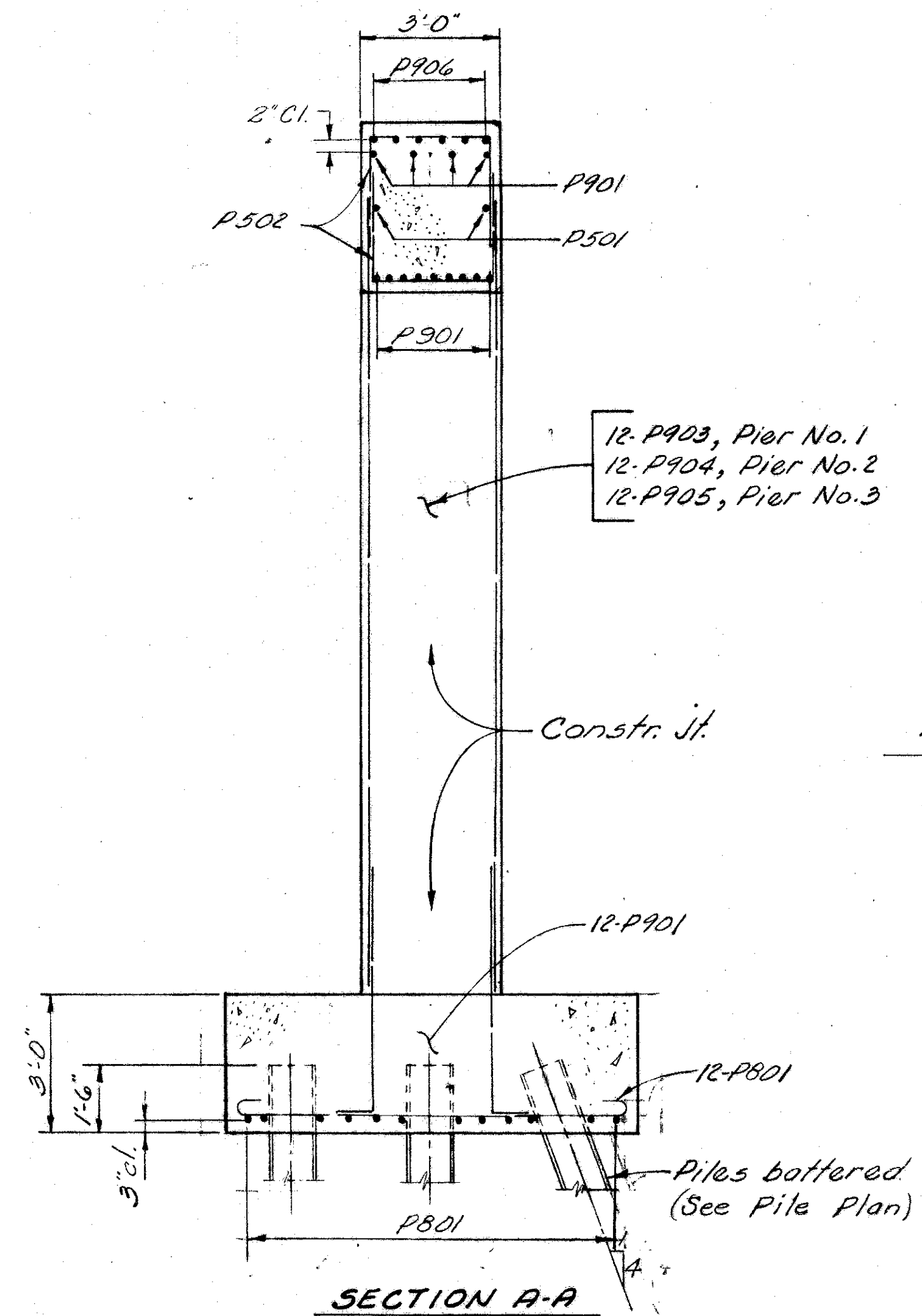
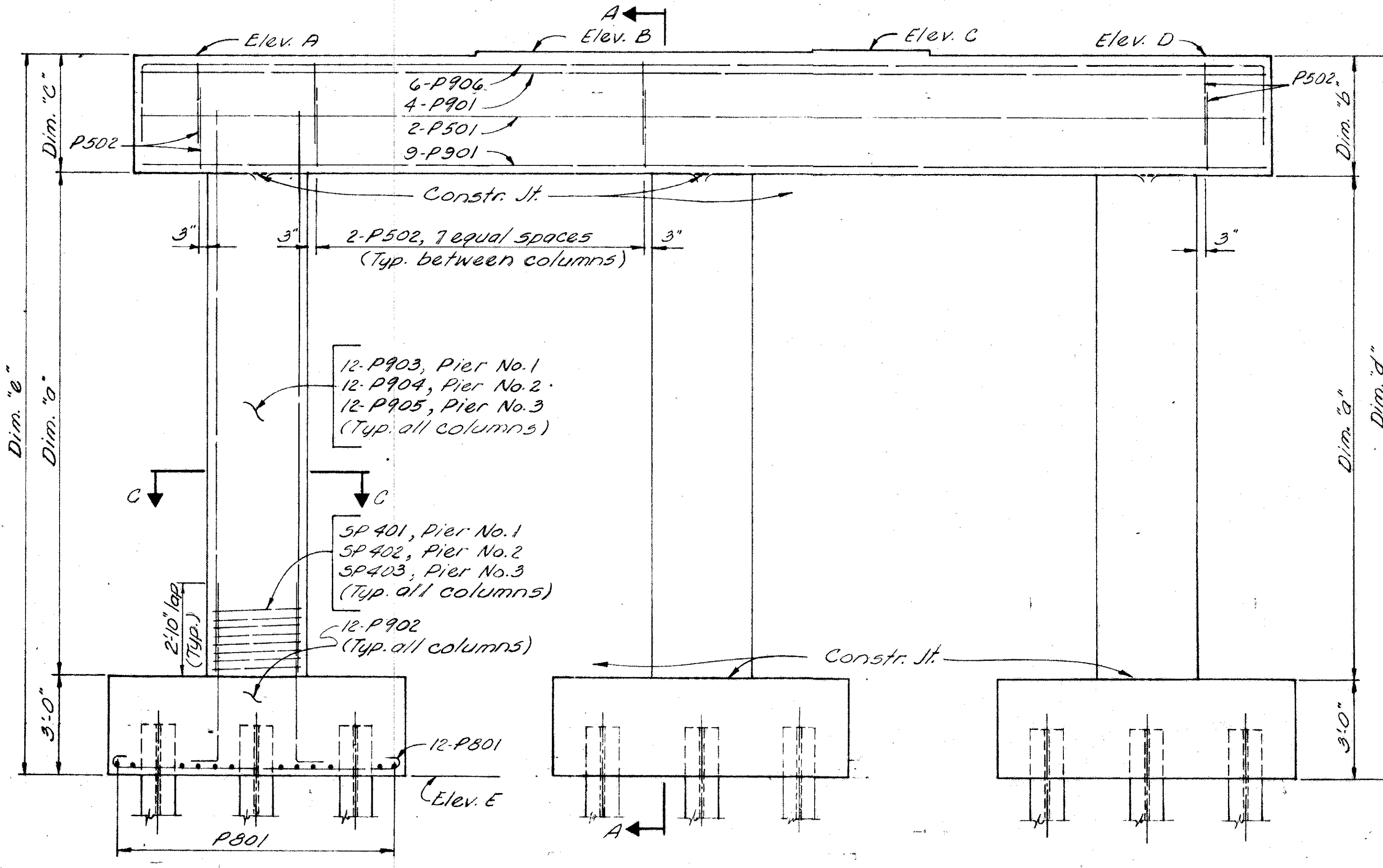
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

FRANKLIN COUNTY FRA-270-0.000 S/N

392  
504



**NOTES**  
SPECIAL CARE: Special core shall be taken in placing reinforcing steel in the bridge seat, so as to avoid interference with the drilling of anchor bolt holes. This applies to Pier No. 2 only.  
CONCRETE: The pier footings shall be Class "E" concrete. All pier concrete above the footings shall be Class "C".



**ELEVATION**  
(Pier No. 1 shown, Piers No. 2 & 3 similar)

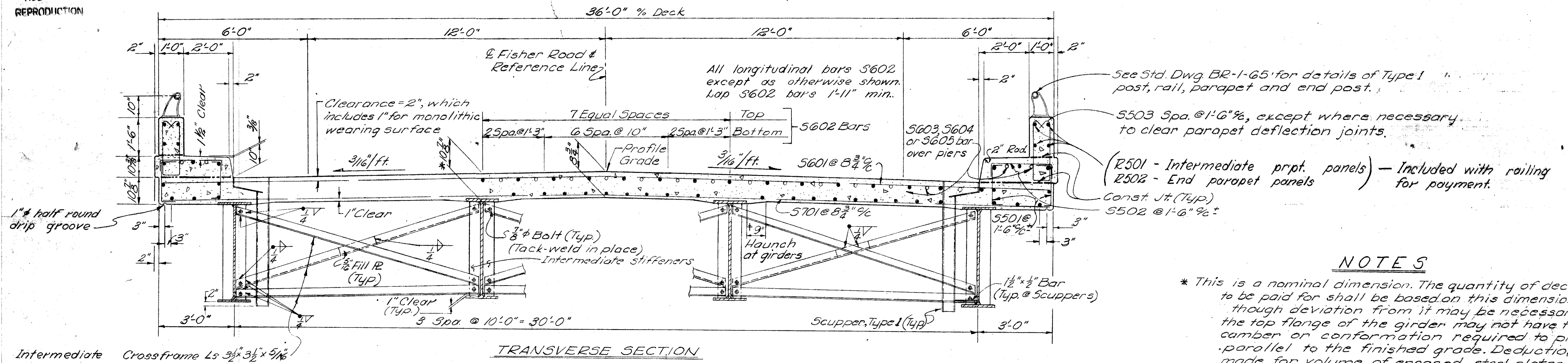
LOCATION	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Dim. "a"	Dim. "b"	Dim. "c"	Dim. "d"	Dim. "e"
Pier No. 1	904.11	904.28	904.30	904.15	882.00	15'-7 3/8"	3'-6 1/2"	3'-6"	22'-1 1/8"	22'-1 1/8"
Pier No. 2	904.16	904.31	904.30	904.14	884.10	13'-6 1/2"	3'-6"	3'-6 1/2"	20'-0 1/2"	20'-0 3/8"
Pier No. 3	903.23	903.42	903.39	903.21	882.20	14'-6 1/8"	3'-6"	3'-7"	21'-0 1/8"	21'-0 1/8"

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**PIER DETAILS**  
BRIDGE NO. FRA-270-00393  
UNDER FISHER RD.  
FRANKLIN COUNTY COLUMBUS OUTERBELT STA. 208+21.45

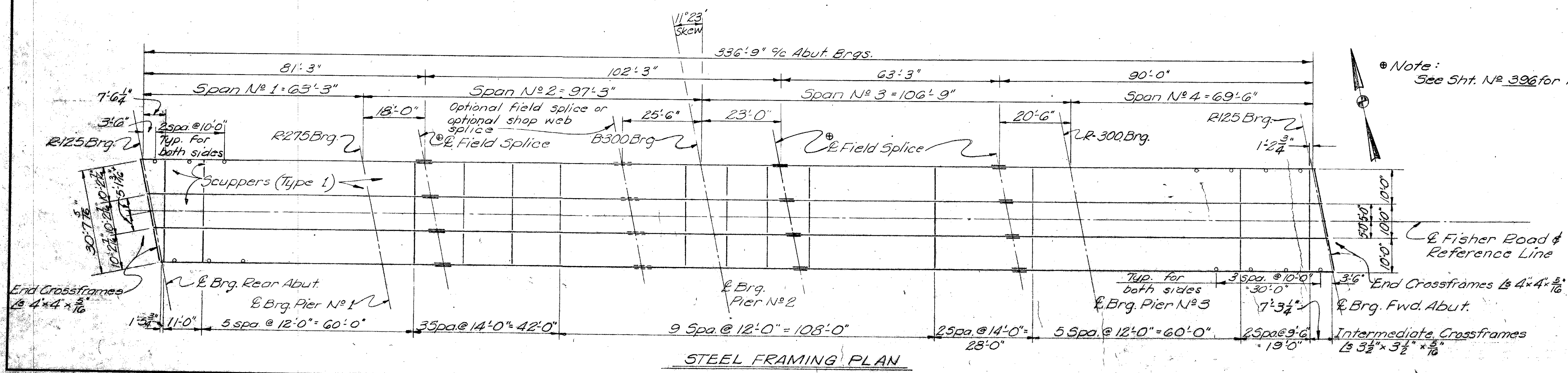
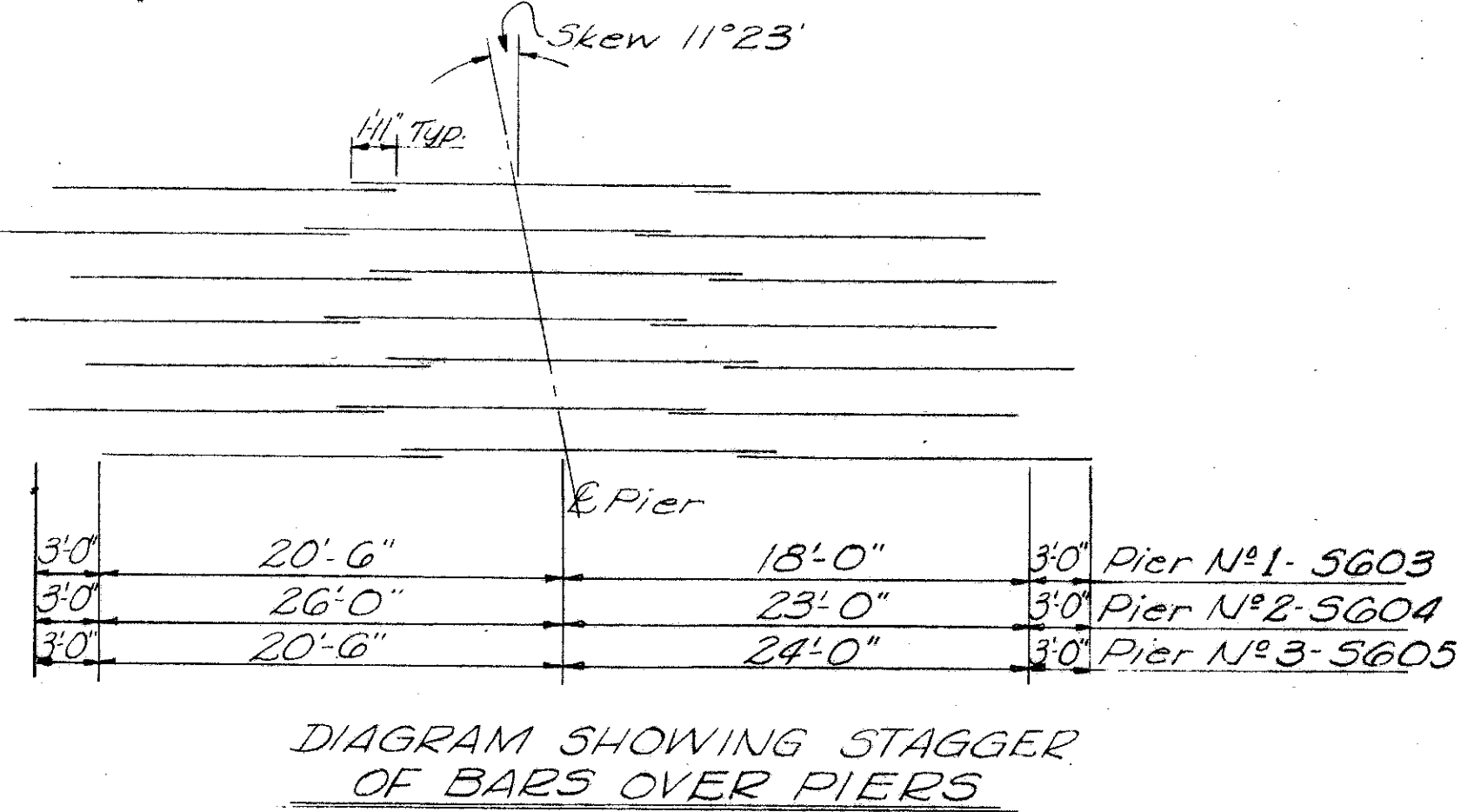
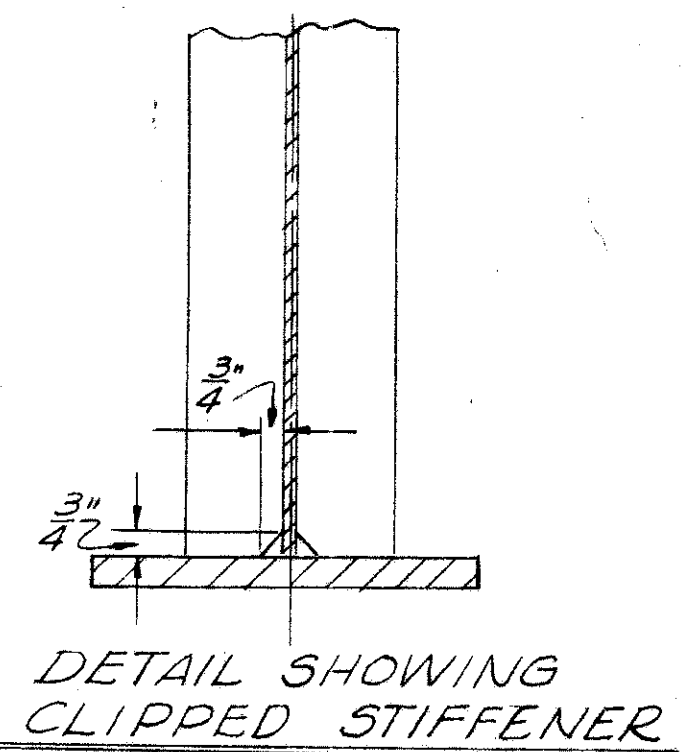
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VLA	BOB		TRO	ACH	9-5-66	

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**NOTES**

- \* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Item 511.19 of the Construction and Material Specifications.
- TRANSVERSE DECK REINFORCING shall be placed parallel to the substructure units.
- + A typical haunch width of 9" shall be used for computing quantity of concrete. However the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.
- See Std. Dwg. 5D-1-65 for additional details of the following:
  1. Scupper Details
  2. Curb Plate Details
  3. End Cross Frame Details, except the Bevel Fill Plates shall be 1 1/2" thick at the E of Girder.
  4. End Dam Details
- See Std. Dwg. RB-1-55 for Rocker and Bolster details, except the top plate shall be made 12" wide instead of 9" wide.



Note:  
See Sht. No 396 for Field Splice Details.

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**SUPERSTRUCTURE DETAILS**  
BRIDGE No FRA-270-00395  
UNDER FISHER ROAD  
FRANKLIN COUNTY COLUMBUS OUTERBELT  
STA. 208+21.45

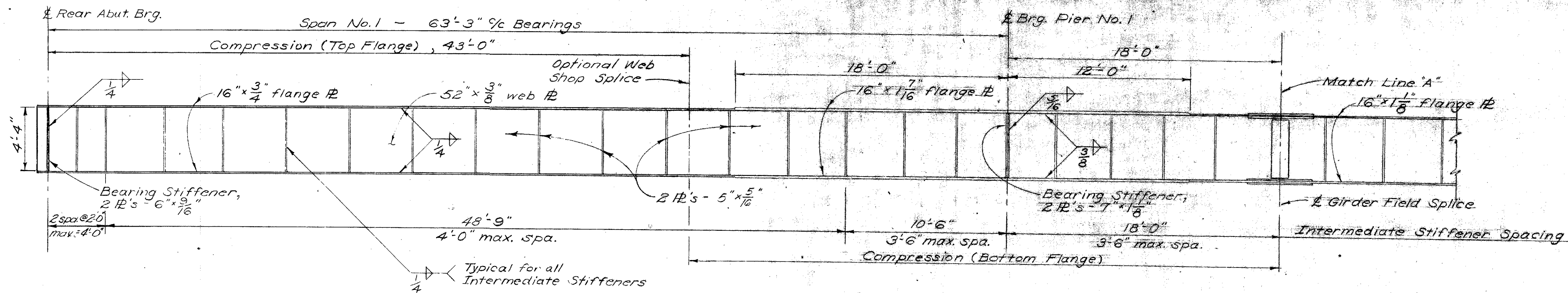
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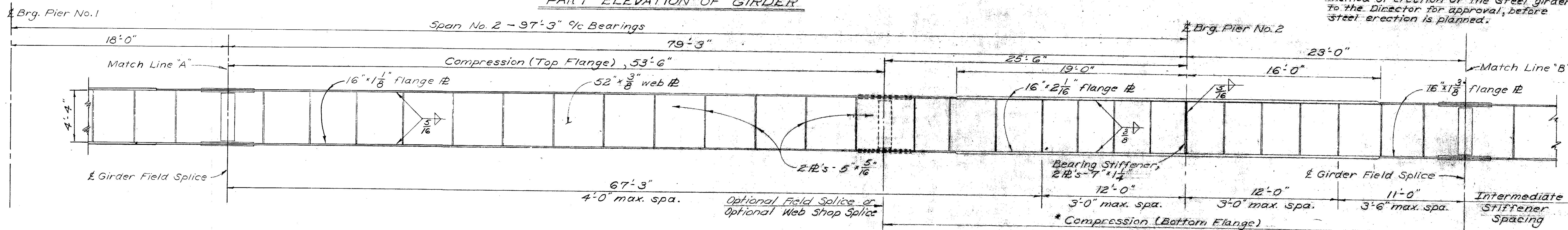
FED. RD. DIVISION	STATE	PROJECT	394 504
2	OHIO		

FRANKLIN COUNTY FRA-270-0.000 3/4

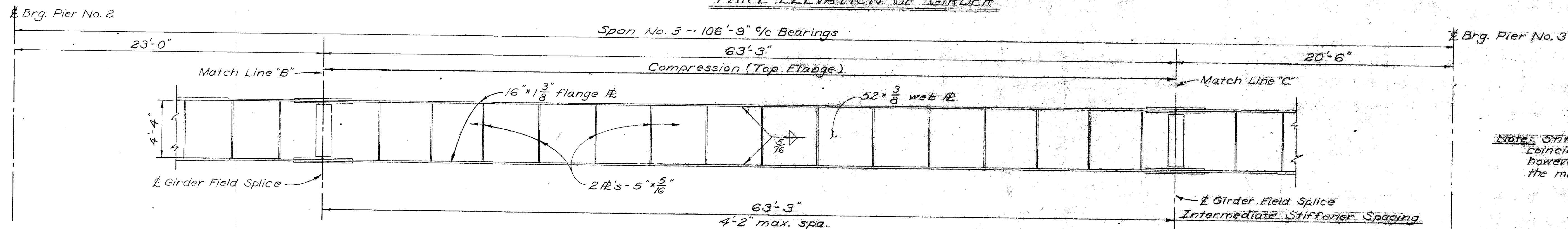


PART ELEVATION OF GIRDER

Erection Procedure: The Contractor shall submit three copies of the proposed method of erection of the steel girders to the Director for approval, before steel erection is planned.



PART ELEVATION OF GIRDER

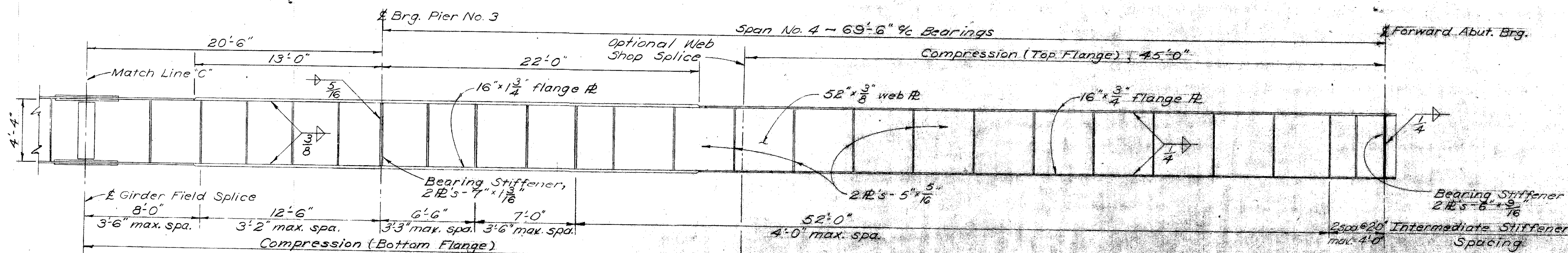


PART ELEVATION OF GIRDER

Note: Stiffeners shall be placed to coincide with the cross frames; however, they shall not exceed the maximum spacings shown.

See "Superstructure Details", Sheet No. 396, for details of welded joints.

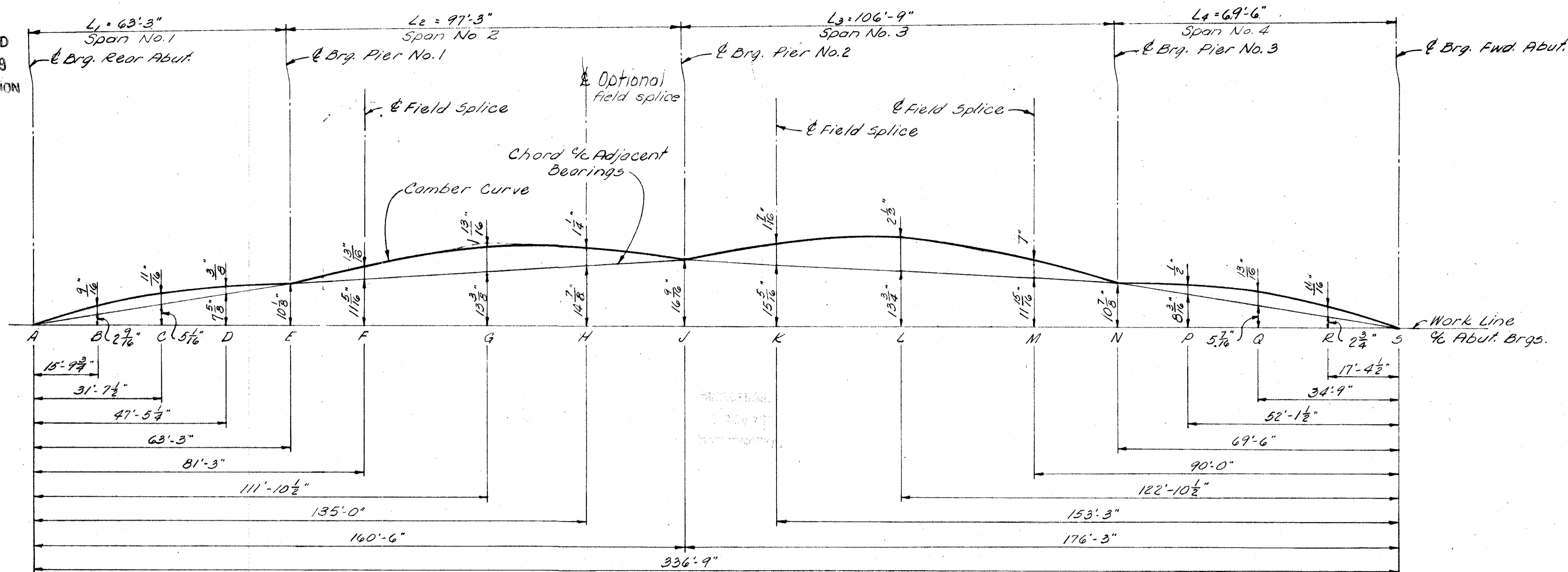
See "Superstructure Details", Sheet No. 396, for girder field splice details.



PART ELEVATION OF GIRDER

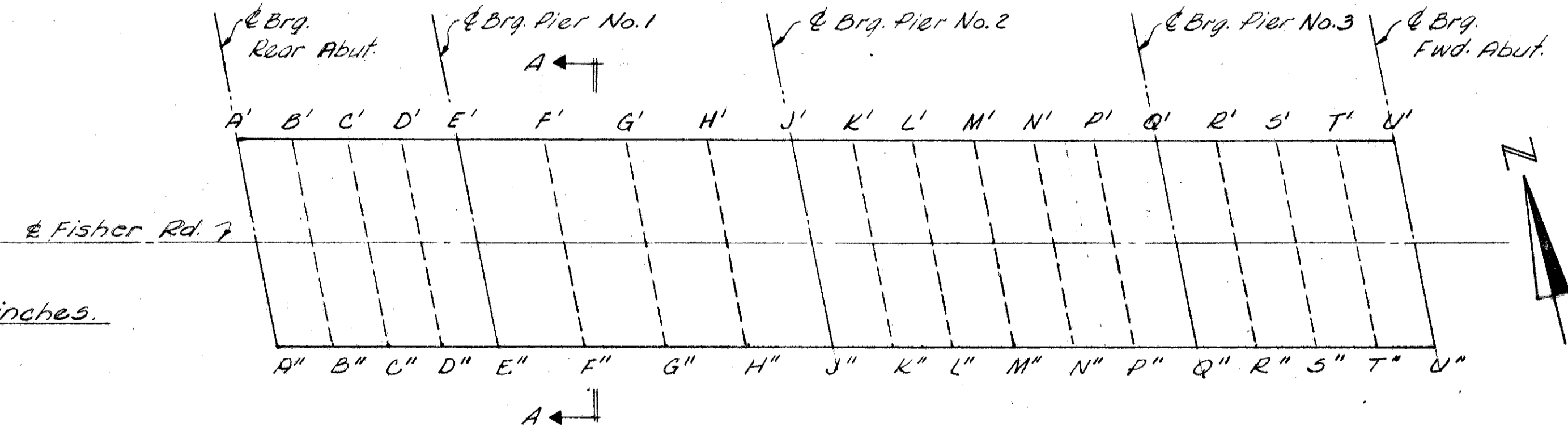
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<b>SUPERSTRUCTURE DETAILS</b>			
BRIDGE No. FRA-270-0039 S			
LINER FISHER RD			
FRANKLIN COUNTY		COLUMBUS OUTERBELT	
STA. 205+21.45			
DESIGNED	DRAWN	TRACED	CHECKED
REVIEWED	DATE	REVISION	
VLA	VLA	VLA	TRO

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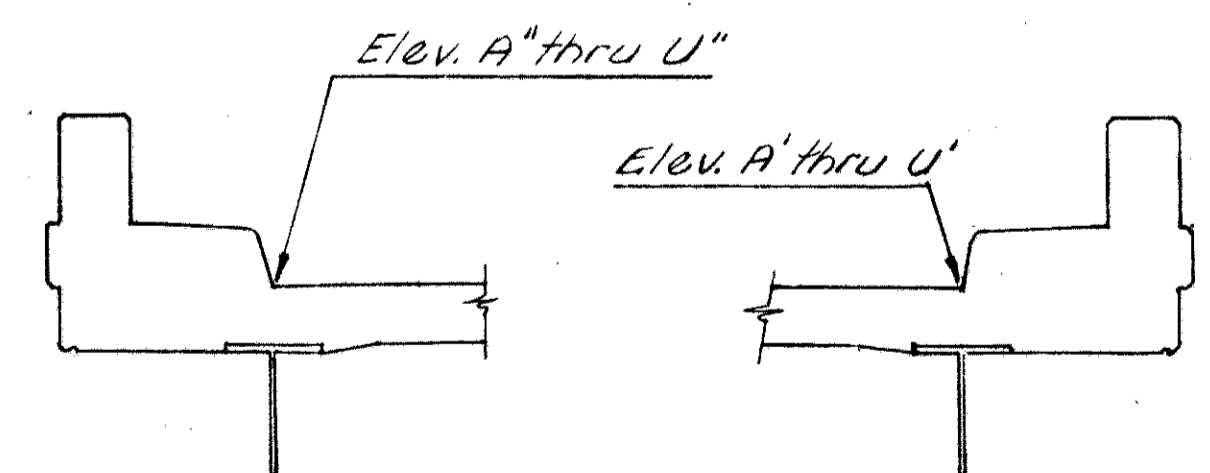
CAMBER CURVE

Location	Span No. 1 - L1			Span No. 2 - L2			Span No. 3 - L3			Span No. 4 - L4		
	1/4 L1 B	1/2 L1 C	3/4 L1 D	1/4 L2 E	1/2 L2 F	3/4 L2 G	1/4 L3 H	1/2 L3 I	3/4 L3 J	1/4 L4 K	1/2 L4 L	3/4 L4 M
Deflection due to weight of steel	0	0	0	0	1/16	0	1/16	1/8	0	0	0	0
Deflection due to remaining dead load	3/8	1/8	0	0	7/16	3/16	1/4	11/16	0	0	1/8	3/16
Adjustment required for vertical curve	7/16	7/16	3/8	13/16	15/16	17/16	13/8	15/16	1	1/2	11/16	1/2
Required shop camber	7/16	7/16	3/8	13/16	17/16	17/16	13/8	2 1/2	1	1/2	11/16	1/16



Dimensions in inches.

DECK ELEVATIONS



SECTION A-A

**\* NOTE**

The construction elevations shown are those required before the concrete deck is placed. Proper allowance has been made for dead load deflection caused by the weight of the concrete.

Location	Span No. 1 - L1				Span No. 2 - L2				Span No. 3 - L3					Span No. 4 - L4					
	1/4 L1 B	1/2 L1 C	3/4 L1 D	1/4 L1 E	1/4 L2 F	1/2 L2 G	3/4 L2 H	1/4 L2 I	1/4 L3 J	1/2 L3 K	3/4 L3 L	1/4 L3 M	1/2 L3 N	3/4 L3 P	1/4 L4 Q	1/2 L4 R	3/4 L4 S	1/4 L4 T	1/4 L4 U
Station	48+36.48	48+52.29	48+68.11	48+83.92	49+99.73	49+24.04	49+48.36	49+72.67	49+96.98	50+18.33	50+34.34	50+50.36	50+66.37	50+82.38	51+03.73	51+21.11	51+38.48	51+55.86	51+73.23
Point	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'	L'	M'	N'	P'	Q'	R'	S'	T'	U'
Constr. Elev.	910.42	910.62	910.78	910.90	911.02	911.17	911.25	911.23	911.17	911.09	911.03	910.93	910.76	910.55	910.28	910.03	909.76	909.46	909.10
Station	48+42.52	48+58.33	48+74.15	48+89.96	49+05.77	49+30.08	49+54.40	49+78.71	50+03.02	50+27.37	50+51.70	50+76.02	50+100.34	50+124.66	50+148.97	50+173.28	50+197.59	50+221.90	50+246.21
Point	A''	B''	C''	D''	E''	F''	G''	H''	J''	K''	L''	M''	N''	P''	Q''	R''	S''	T''	U''
Constr. Elev.	910.49	910.68	910.83	910.95	911.05	911.19	911.26	911.23	911.15	911.06	910.99	910.88	910.70	910.48	910.20	909.94	909.66	909.34	908.98

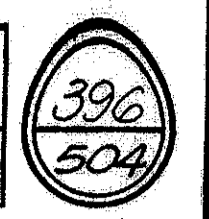
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**SUPERSTRUCTURE DETAILS**  
BRIDGE NO. FRA-270-0039.5  
UNDER FISHER RD

FRANKLIN COUNTY COLUMBUS OUTERBELT  
STA. 208+21.45

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VLA	BAB		TRO	REV	9-6-66	





### REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp	Bending Diagram	Mark	No.	Length	Weight	Shp
<b>ABUTMENT</b>						<b>SUPERSTRUCTURE</b>				
A801	14	38'-1"	1424	S		5701	464	36'-5"	3453.8	S
A802	24	13'-8"	876	S		5801	464	36'-5"	25380	S
AG01	60	14'-3"	1284	B		5802	780	29'-11"	3504.9	S
AG02	62	18'-9"	1746	B		5803	75	15'-2"	1709	S
AG03	12	16'-9"	302	B		5804	75	18'-8"	2103	S
AG04	4	5'-1"	31	B		5805	75	17'-2"	1934	S
AG05	12	6'-4"	114	B						
AG06	24	10'-8"	385	B						
AG07	8	14'-0"	168	B						
AG08	48	11'-0"	793	S						
A501	60	8'-4"	521	E						
A502	60	7'-1"	443	B						
A503	60	6'-4"	396	B						
A504	34	36'-0"	1277	S						
A505	104	7'-1"	768	B						
A506	16	10'-11"	182	S						
A507	8	10'-6"	88	S						
A508	8	14'-8"	122	S						
A509	16	16'-5"	274	S						
A510	8	17'-0"	142	S						
A511	56	5'-6"	321	B						
A512	16	3'-6"	58	B						
	8	3'-6"								
A513	Series of 5	to 6'-6"	209	S	Vary by increments at 8"					
A514	8	10'-10"	90	B						
A515	8	9'-4"	78	B						
A401	56	8'-7"	321	B						
A402	16	4'-9"	51	B						
<b>PIERS</b>						<b>RAILING</b>				
P901	39	34'-2"	4530	S		R501	168	14'-8"		S
P902	108	6'-7"	2417	B		R502	16	11'-3"		S
P903	36	17'-8"	2162	S		R503	12	4'-2"		B
P904	36	15'-7"	1907	S		R504	8	5'-4"		B
P905	36	16'-7"	2030	S		R505	16	16'-1"		S
P906	18	39'-4"	2407	B						
P801	216	10'-10"	6248	B						
P501	6	34'-2"	214	S						
P502	108	7'-5"	835	B						

### NOTES:

**SPIRAL REINFORCING BARS:** The "Length" shown in the steel list for spiral bars is the distance from the top of footing to the bottom of the pier cap to the nearest inch.

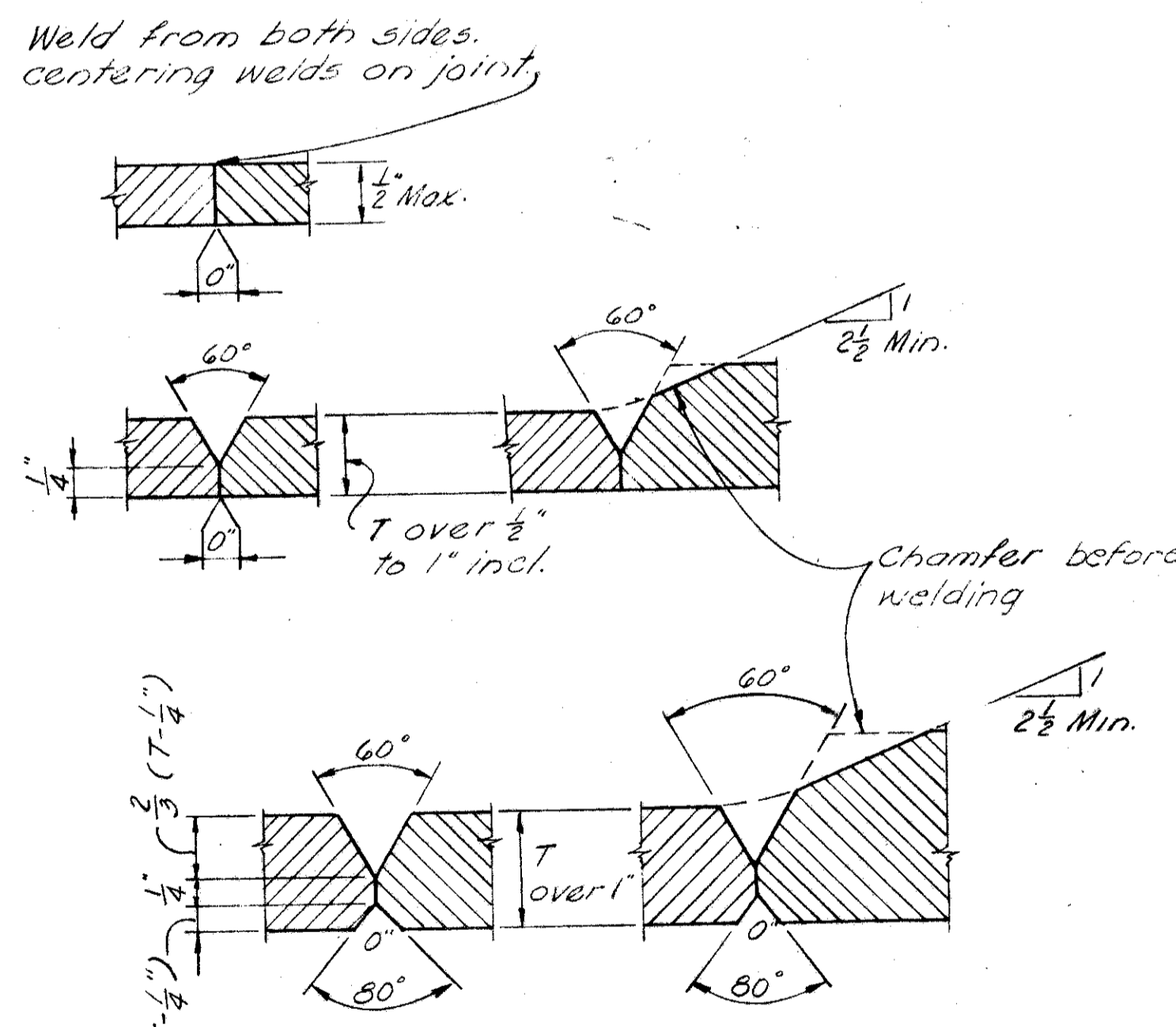
The "No. of Turns" shown is the "Length" divided by the pitch, plus three turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. One and one-half coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

**BAR SIZE** is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used. For example, A700 is a No. 7 size bar and A104 is a No. 10 size.

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SPIRAL BARS						
Mark	No.	Core Dia.	Length	Pitch	No. of Turns	Weight
SP401	3	32"	15'-7"	4 1/2"	45	873
SP402	3	32"	13'-6"	4 1/2"	39	755
SP403	3	32"	14'-6"	4 1/2"	42	814

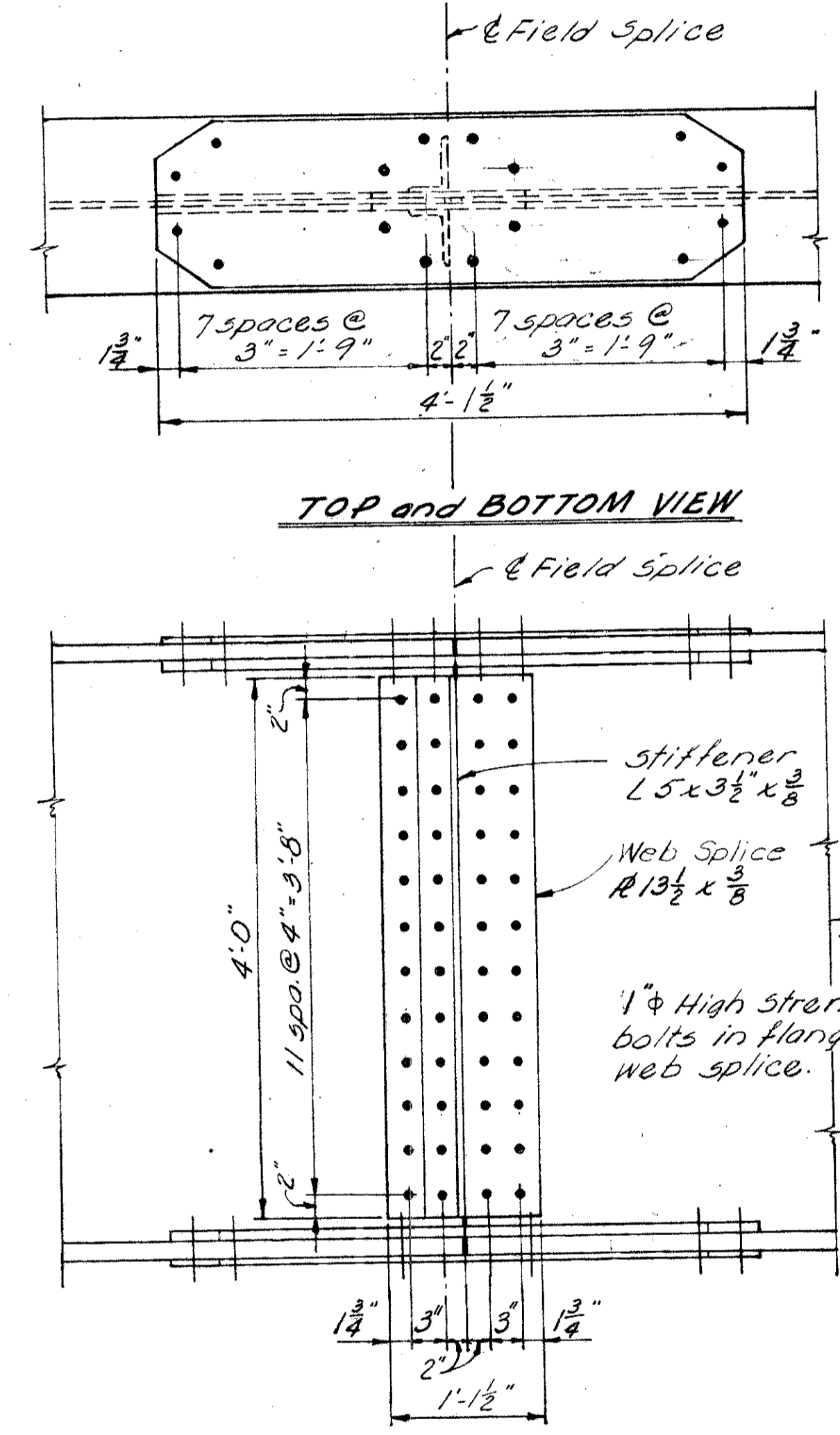


### NOTES:

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

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

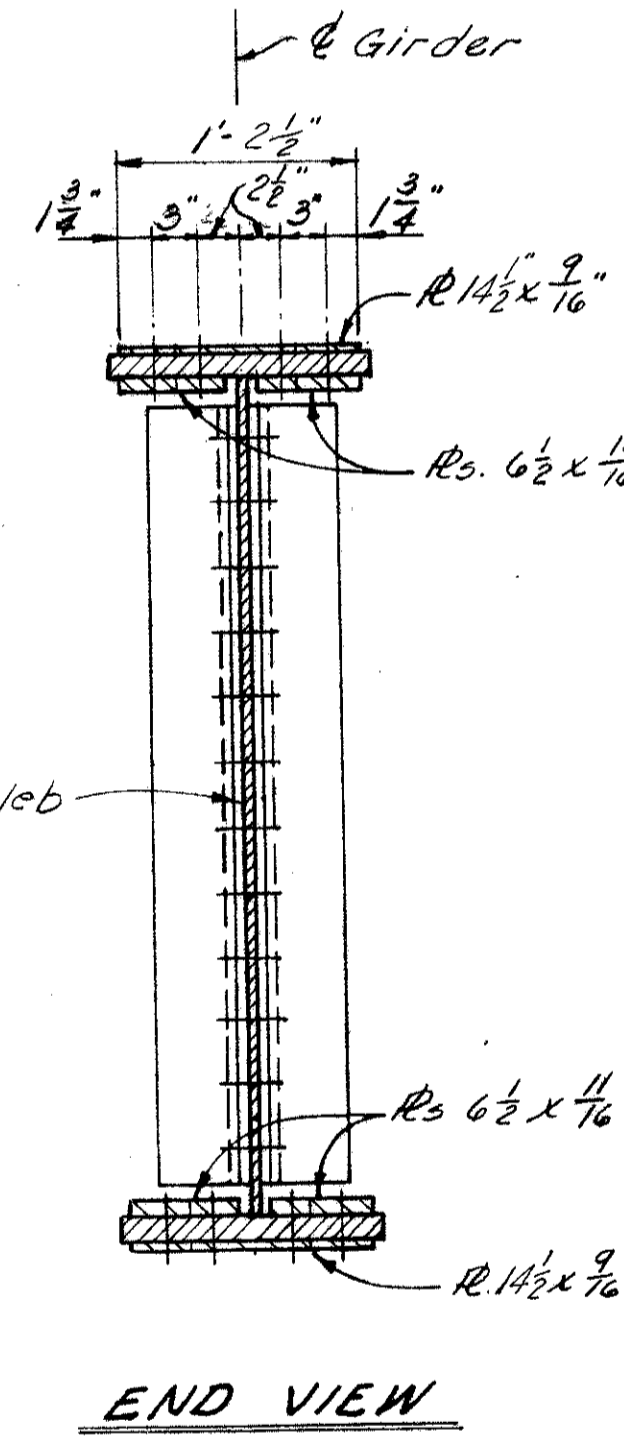
**WELDED JOINTS**  
Automatic Submerged Arc Process



### GIRDER FIELD SPLICE DETAIL

### NOTE:

Place bolt head on exposed side of fascia girders, and place nuts on top surface of lower flange splice.



DE LEUW, CATHAR & BRILL  
CONSULTING ENGINEERS  
NEW YORK, N. Y. • COLUMBUS, OHIO • BUFFALO, N. Y.

**REINFORCING STEEL LIST & SUPERSTRUCTURE DETAILS**  
BRIDGE NO. FRA-270-00395  
UNDER FISHER RD.  
FRANKLIN COUNTY COLUMBUS OUTERBELT STA. 208 + 21.45

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VLA	DAB		TRO	DEX	12-19-67	

7007