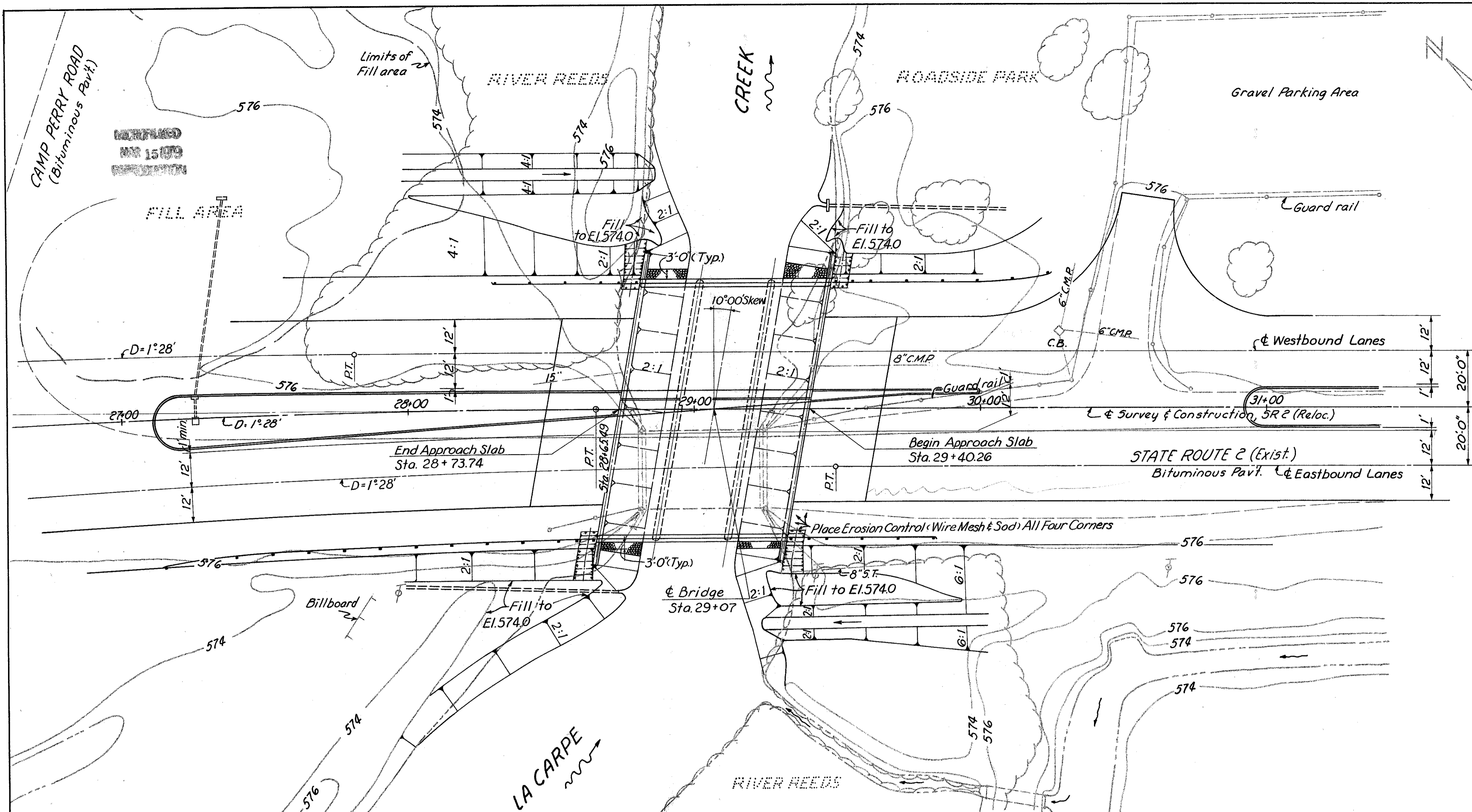


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1042(10)	

75
133

OTT. 2-16.48
4.1 Miles Northwest of Port Clinton



EXISTING BRIDGE DATA

S.R. 2 (Existing) over La Carpe Creek . OTT. 2-1662
 Type - Single Span. Rolled steel beams, wood
 Floor covered with asphalt, concrete abuts.
 Span - 40'
 Skew - None
 Roadway - 24.5' f/f 6"x6" wheel guards
 Condition - Poor
 Clear Opening - 210 Sq. Ft.

S.R. 358 over La Carpe Creek . OTT. 358-0079 0.2 Miles upstream
 Type - Single Span Wood floor on rolled steel
 beams, Concrete abuts.
 Span - 40'
 Skew - None
 Roadway - 24.3' f/f curbs
 Condition - Fair
 Clear Opening - 242 Sq. Ft.

FOUNDATION SOUNDINGS

Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

PROPOSED STRUCTURES

Type: Continuous Reinforced Concrete Slab
 Capped Pile Abutments and Piers.
 Spans: 20'-0", 25'-0", 20'-0" % Bearings
 Roadway: 88'-10 3/4" f/f Parapets with variable width raised median
 Load Frequency: CF400(57)
 Skew: 10°-00' L.F.
 Wearing Surface: 1" Monolithic concrete
 Approach Slabs: A5-1-54(25'-0" Long)
 Alignment: Tangent

DRAINAGE AREA = 10 Square Miles
 Net Waterway Opening below 1953 High Water = 334 Square Feet

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 CONSULTING ENGINEERS
 TOLEDO, OHIO

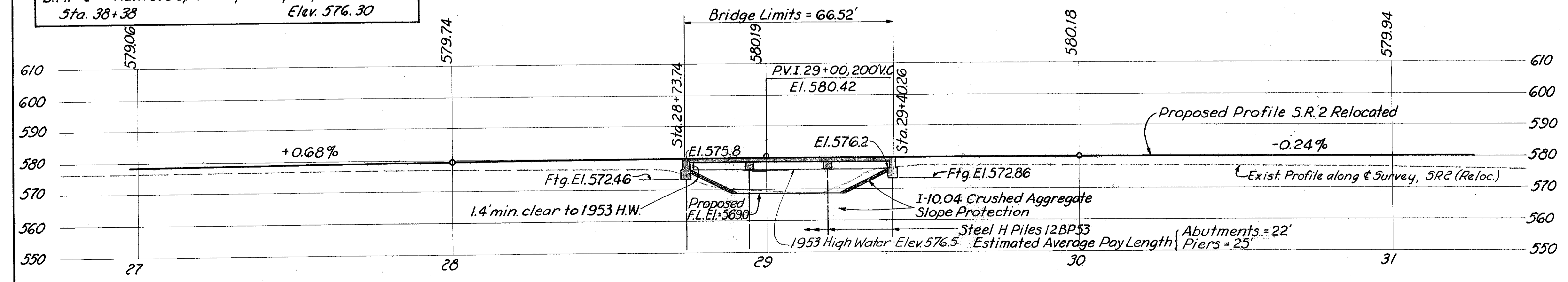
SITE PLAN
 BRIDGE NO. OTT. 2-1664
 OVER LA CARPE CREEK

OTTAWA COUNTY STA. 28+73.74 To
 Scale: 1"=20' STA. 29+40.26

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S.M.B.	W.D.P.-TFH	T.W.D.	T.W.D.	B.J.H.	FCM 2/16/48

BENCH MARKS

B.M. #1 ~*~* cut in South corner of concrete slab, 43' lt. of Sta. 29+84 Elev. 575.70
 B.M. #2 ~ Railroad spike in power pole, 50' Rt. of Sta. 38+38 Elev. 576.30



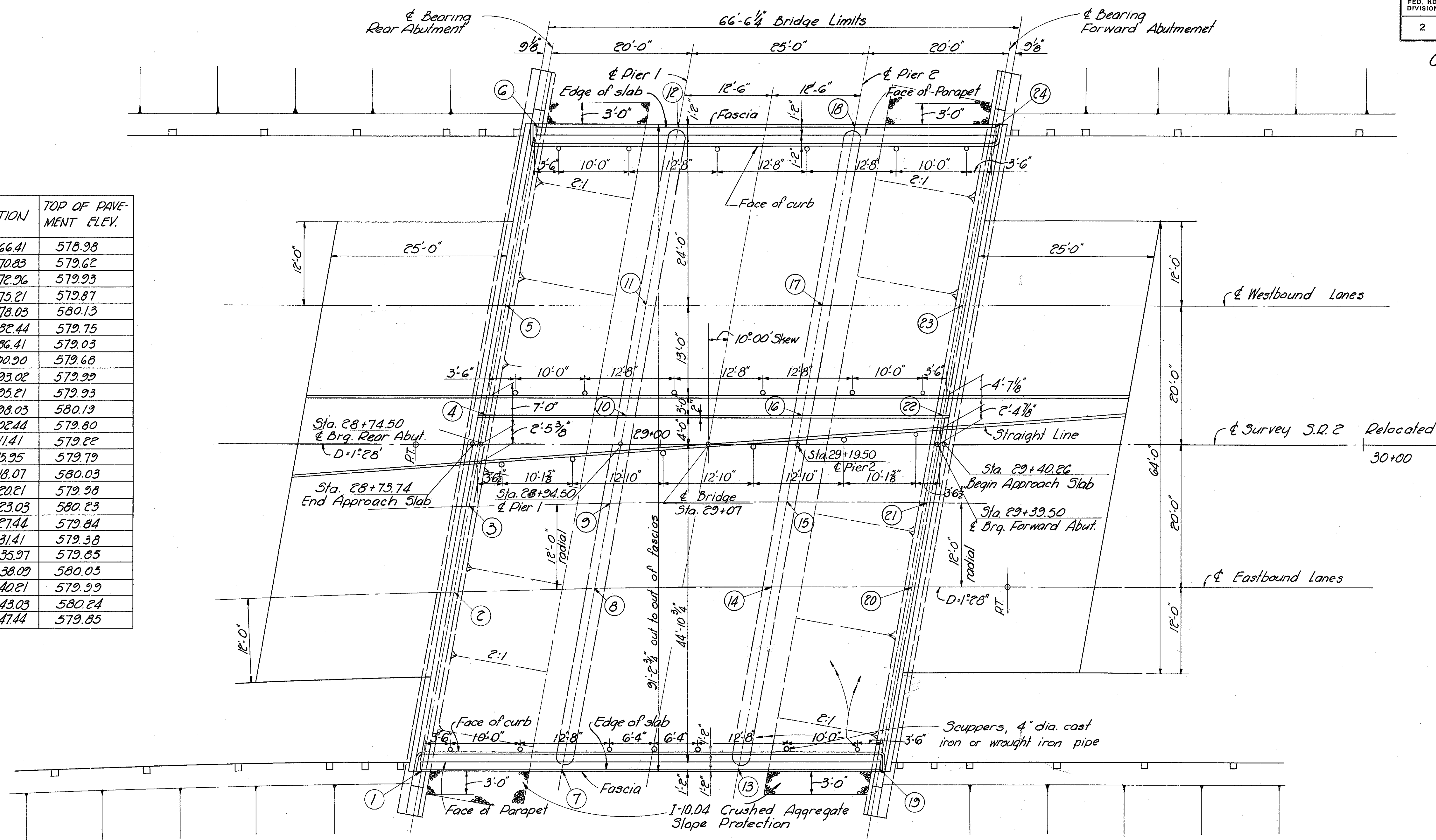
REVISED
MAY 15 1973

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
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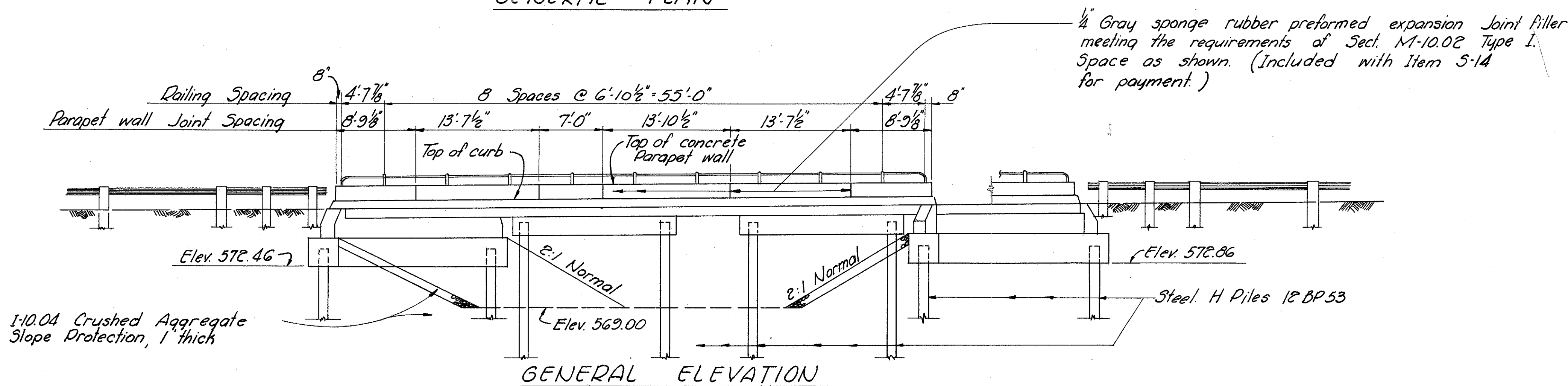
76
133

OTT. 2-16.48

LOCATION	STATION	TOP OF PAVEMENT ELEV.
1	28+66.41	578.98
2	28+70.83	579.62
3	28+72.96	579.93
4	28+75.21	579.87
5	28+78.03	580.13
6	28+82.44	579.75
7	28+86.41	579.03
8	28+90.90	579.68
9	28+93.02	579.99
10	28+95.21	579.93
11	28+98.03	580.19
12	29+02.44	579.80
13	29+11.41	579.22
14	29+15.95	579.79
15	29+18.07	580.03
16	29+20.21	579.98
17	29+23.03	580.23
18	29+27.44	579.84
19	29+31.41	579.38
20	29+35.97	579.65
21	29+38.09	580.05
22	29+40.21	579.99
23	29+43.03	580.24
24	29+47.44	579.85



GENERAL PLAN



GENERAL ELEVATION

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

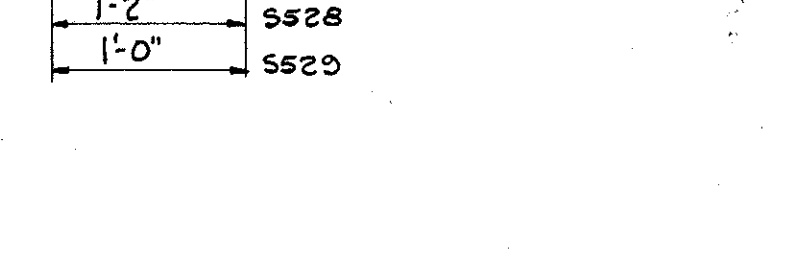
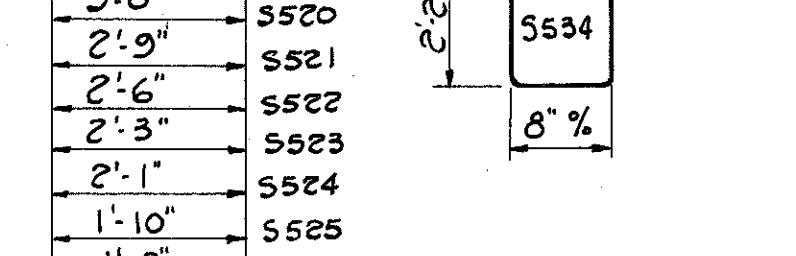
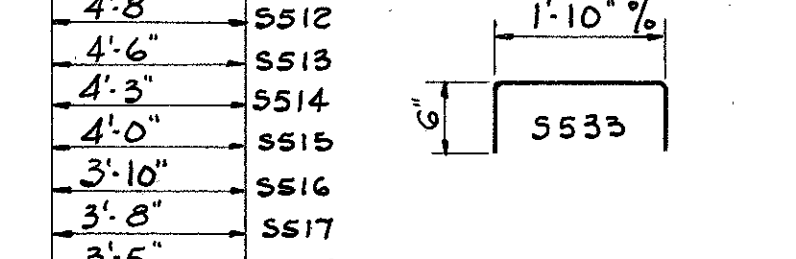
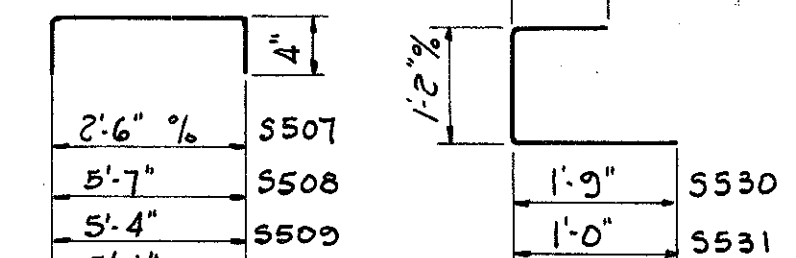
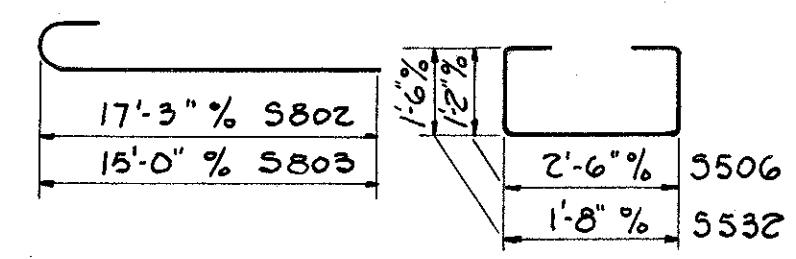
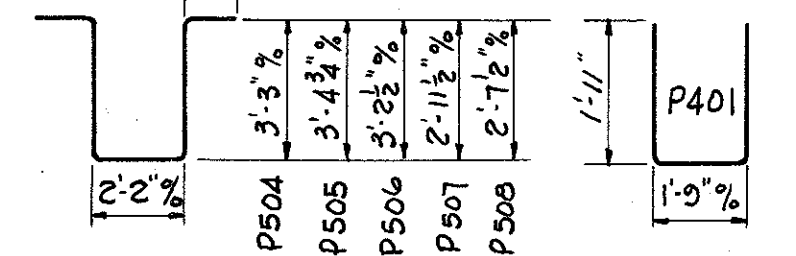
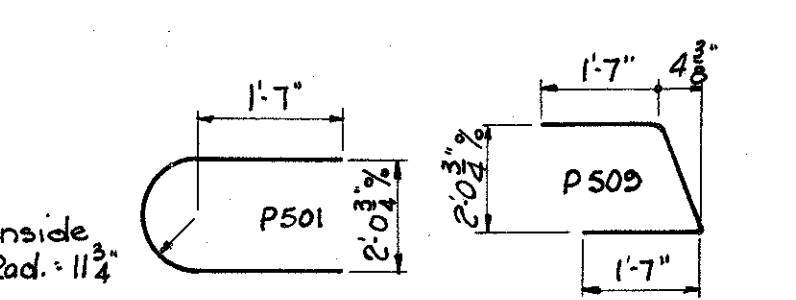
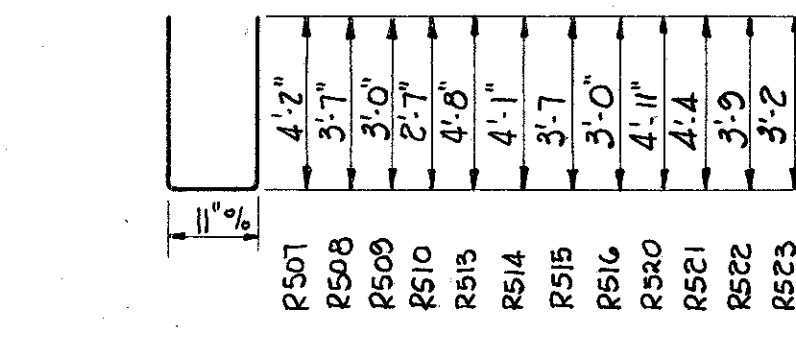
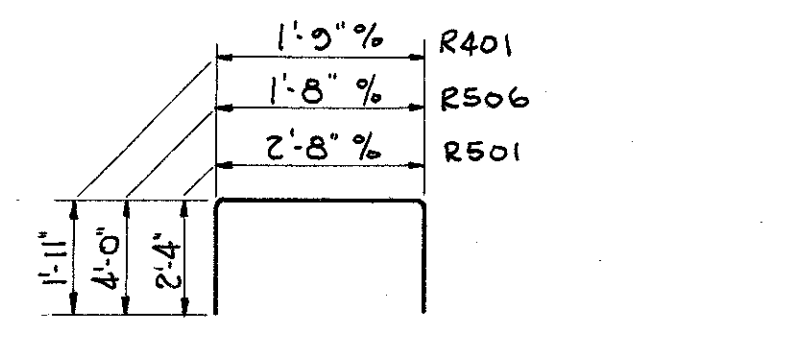
GENERAL PLAN & ELEVATION
BRIDGE No. OTT. 2-1664
OVER LA CARPE CREEK
OTTAWA COUNTY STA. 28+73.74 TO
STA. 29+40.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VGP	VGP	BB	JHY	B.J.H.	2-12-63	

OTT. 2-16.48

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Description	Mark	No.	Length	Weight	Shape	
ABUTMENTS						SUPERSTRUCTURE CONT.					
R1001	16	22'-6"	1549	S		S801	282	23'-9"	17,882	S	
R1002	16	26'-10"	1847	S		S802	84	18'-4"	4112	B	
R801	16	26'-1"	1114	S		S803	84	16'-1"	3607	B	
R802	16	29'-6"	1260	S		S804	42	17'-8"	1981	S	
R501	344	7'-1"	2541	B		S805	42	13'-10"	1548	S	
R502	16	25'-7"	427	S		S806	6	24'-1"	386	S	
R503	16	29'-1"	485	S		S701	40	13'-8"	1111	S	
R504	8	21'-8"	181	S		S702	2	9'-6"	39	S	
R505	8	26'-0"	217	S		S601	82	12'-4"	1519	S	
R506	124	3'-5"	1218	B		S602	41	11'-6"	708	S	
R507	6	9'-0"	56	B	S603	123	41'-2"	7605	S		
R508	2	7'-10"	16	B	S604	123	38'-0"	7020	S		
R509	2	6'-8"	14	B	S605	123	13'-0"	2402	S		
R510	4	5'-10"	24	B	S501	29	15'-4"	464	S		
R511	8	7'-10"	65	S	S502	14	14'-6"	212	S		
R512	4	3'-8"	15	S	S503	1	15'-0"	16	S		
R513	3	10'-0"	31	B	S504	1	17'-0"	18	S		
R514	1	8'-10"	9	B	S505	1	10'-0"	10	S		
R515	1	7'-10"	8	B	S506	82	5'-7"	478	B		
R516	1	6'-8"	7	B	S507	82	3'-1"	264	B		
R517	8	3'-5"	79	S	S508	3	6'-0"	19	B		
R518	2	5'-0"	10	S	S509	3	5'-9"	18	B		
R519	2	3'-0"	6	S	S510	3	5'-6"	17	B		
R520	3	10'-6"	33	B	S511	3	5'-4"	17	B		
R521	1	9'-4"	10	B	S512	3	5'-1"	16	B		
R522	1	8'-2"	9	B	S513	3	4'-11"	15	B		
R523	1	7'-0"	7	B	S514	6	4'-8"	29	B		
R524	2	4'-4"	9	S	S515	6	4'-5"	28	B		
R525	2	2'-4"	5	S	S516	4	4'-3"	18	B		
R401	136	5'-4"	484	B	S517	3	4'-1"	13	B		
PIERS						S518	3	3'-10"	12	B	
P1001	8	26'-11"	927	S	S519	3	3'-7"	11	B		
P1002	8	17'-9"	611	S	S520	3	3'-5"	11	B		
P1003	8	14'-1"	485	S	S521	3	3'-2"	10	B		
P1004	8	39'-6"	1360	S	S522	6	2'-11"	18	B		
P901	8	17'-11"	487	S	S523	6	2'-8"	17	B		
P902	8	24'-10"	675	S	S524	5	2'-6"	13	B		
P903	8	25'-2"	685	S	S525	3	2'-3"	7	B		
P904	8	26'-7"	723	S	S526	3	2'-1"	7	B		
P501	8	6'-4"	53	B	S527	3	1'-10"	6	B		
P502	8	20'-9"	173	S	S528	3	1'-7"	5	B		
P503	8	25'-2"	210	S	S529	4	1'-5"	6	B		
P504	18	3'-5"	177	B	S530	132	3'-2"	436	B		
P505	42	3'-9"	427	B	S531	32	2'-5"	81	B		
P506	42	3'-4"	409	B	S532	164	5'-5"	926	B		
P507	20	8'-10"	184	B	S533	164	2'-7"	442	B		
P508	22	8'-2"	187	B	S534	100	5'-7"	582	B		
P509	8	5'-0"	42	B	S535*	16	8'-5"	-	S		
P401	136	5'-4"	484	B	S536*	16	13'-3"	-	S		
SUPERSTRUCTURE						S537*	8	6'-8"	-	S	
S901	160	18'-10"	10,245	S	S538*	8	13'-6"	-	S		
S902	78	3'-4"	2475	S	REPLACEMENT BARS						
S903	78	8'-2"	2166	S	RE 1001	1	7'-3"	31	S		
REINFORCING STEEL LIST (continued)						RE 901	1	6'-10"	23	S	
					RE 801	2	6'-6"	35	S		
					RE 701	1	6'-3"	13	S		
					RE 601	1	5'-11"	9	S		
					RE 501	1	5'-7"	6	S		
					RE 401	1	5'-3"	4	S		



ESTIMATED QUANTITIES BRIDGE OTT. 2-1664

Item	Total	Unit	Description	Abutments		Piers		Super-structure	General
				Rear	Fwd'd	1	2		
E-2	165	Cu.Yd.	Unclassified excavation	83	82	~	~		
S-1	305	Cu.Yd.	Class "C" concrete, superstructure and pier caps					305	
S-1	114	Cu.Yd.	Class "E" concrete, abutments	58	56				
S-3	13	Lin.Ft.	Waterproofing, premolded sealing strip	7	6				
S-4	89,204	Lbs.	Reinforcing steel	5869	5867	4149	4150	69048	121
S-9	6	Sq.Ft.	1/2" preformed expansion joint filler	3	3				
S-9	39	Sq.Ft.	1" preformed expansion joint filler	15	15			9	
S-14	131	Lin.Ft.	Railing (Type A) Aluminum rail & supports, concrete parapet					131	
S-16	Lump	Sum	First test pile						Lump
S-18	1620	Lin.Ft.	Steel piles, 12 BP 53	380	380	430	430		
S-24	Lump	Sum	Removal of existing structure						Lump
S-29	35	Cu.Yd.	Porous backfill	18	17				
S-29	25	Each	Scuppers, 4" cast or w.i. pipe					25	
I-10	348	Sq.Yd.	Crushed aggregate slope protection						348
S-101	305	Each	Water-reducing, set-retarding admixture					305	

GENERAL NOTES

Reference shall be made to standard drawings AS-1-54, "REINFORCED CONCRETE APPROACH SLABS," revised 7-5-62; AR-1-57, "ALUMINUM RAILING WITH CONCRETE PARAPET," REVISED 4-2-62, and to Supplemental Specification 5-101, Water-reducing, Set-retarding admixtures for concrete, dated 7-16-62.

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.

Procedure: The embankment shall be placed and compacted up to the finished spill-thru slope after which excavation shall be made for the abutments and the piles driven.

Excavation quantity includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutments.

Machine finish: at the contractor's option, the concrete deck may be finished by the use of a finishing machine.

Camber of 1/800 of the span shall be provided in each span to allow for deadload 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 and parapets shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full deadload deflection.

Piles shall be driven to a minimum bearing capacity of 25 tons per pile for the abutments and 30 tons per pile for the piers.

Removal of existing structure: When no longer needed to maintain traffic the existing structure shall be removed.

Existing structure shall remain in service until north portion of new structure is constructed and open to traffic see "TRAFFIC MAINTENANCES" in roadway general notes.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, a P501 is a No. 5 size bar, and a P1001 is a No. 10 size.

* Included with Item S-14 for payment.

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CONSULTING ENGINEERS
TOLEDO, OHIO

GENERAL NOTES, REINFORCING STEEL & ESTIMATED QUANTITIES
BRIDGE NO. OTT. 2-1664
OVER LA CARPE CREEK
STA. 28+73.74 to STA. 29+40.26

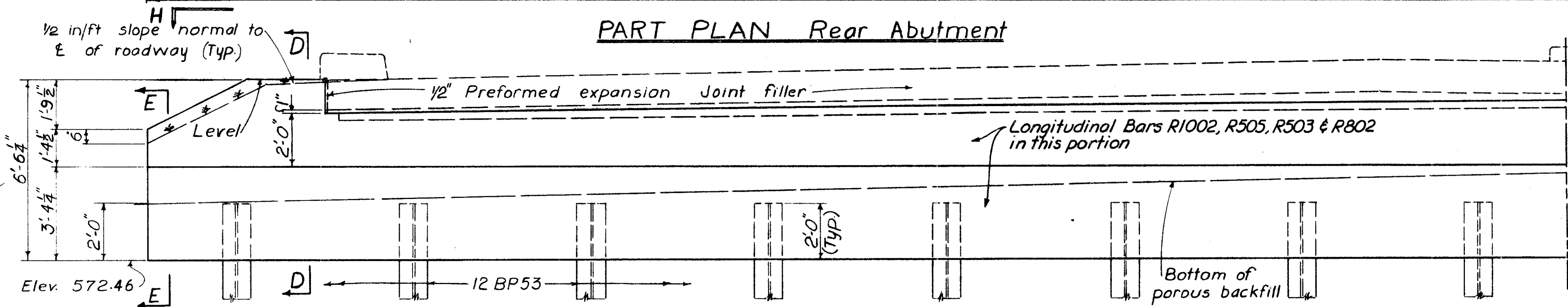
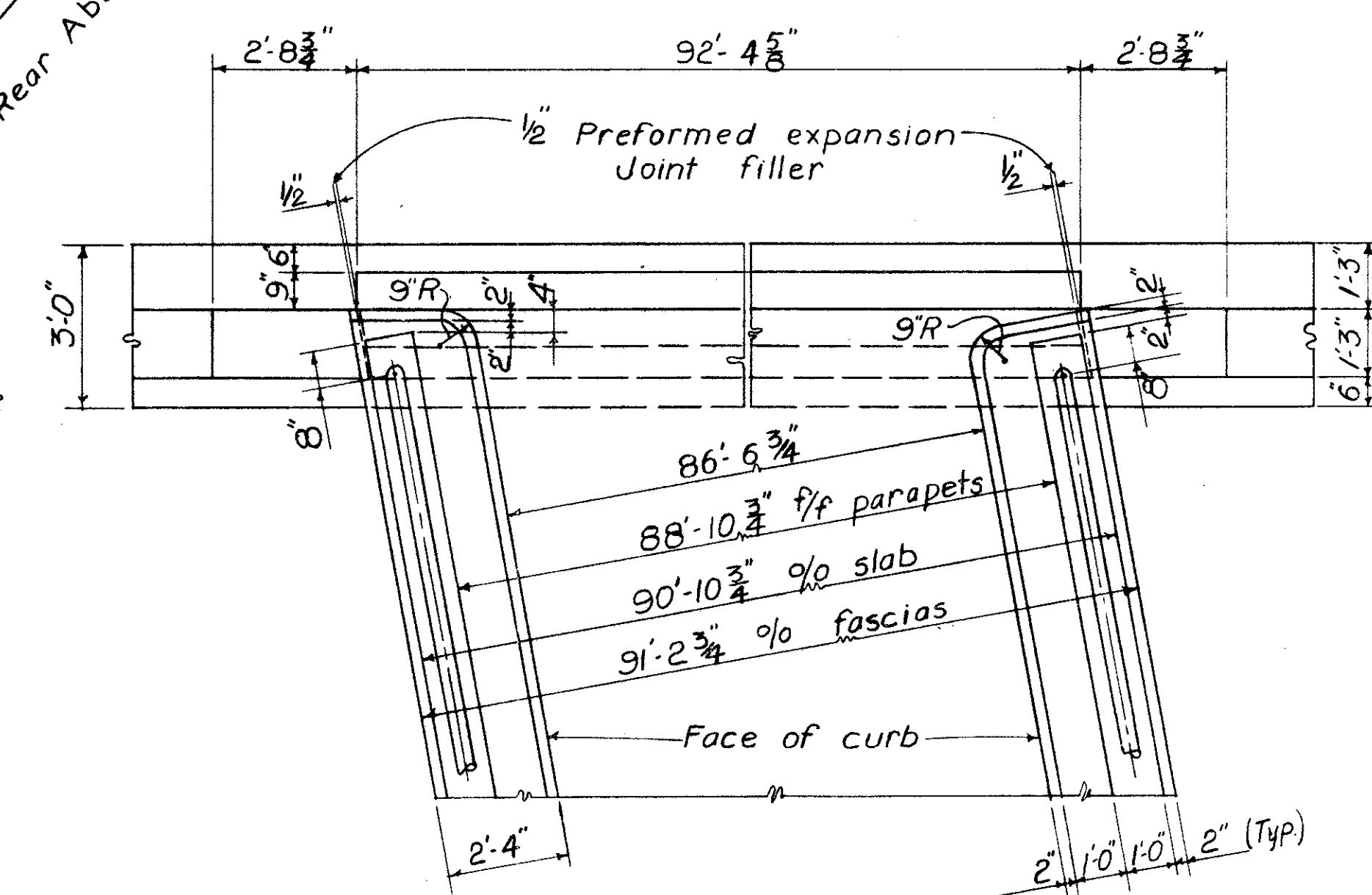
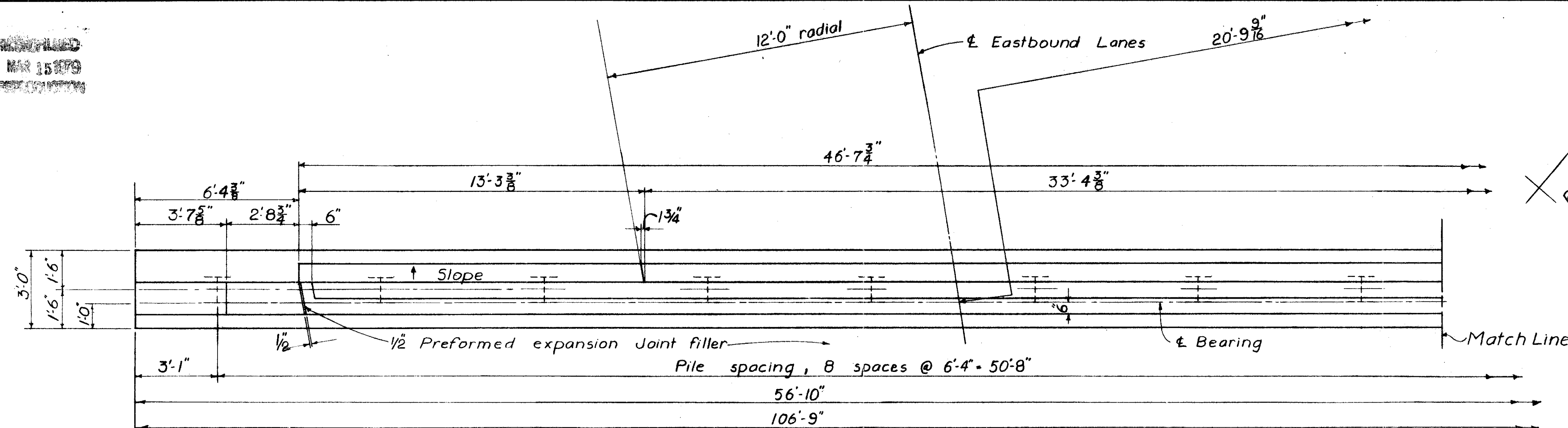
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VGP	VGP	BB	JHY	BJH	2-12-63	
TWD			AJB			

REPLIED
MAR 15 1979
ENGINEERING

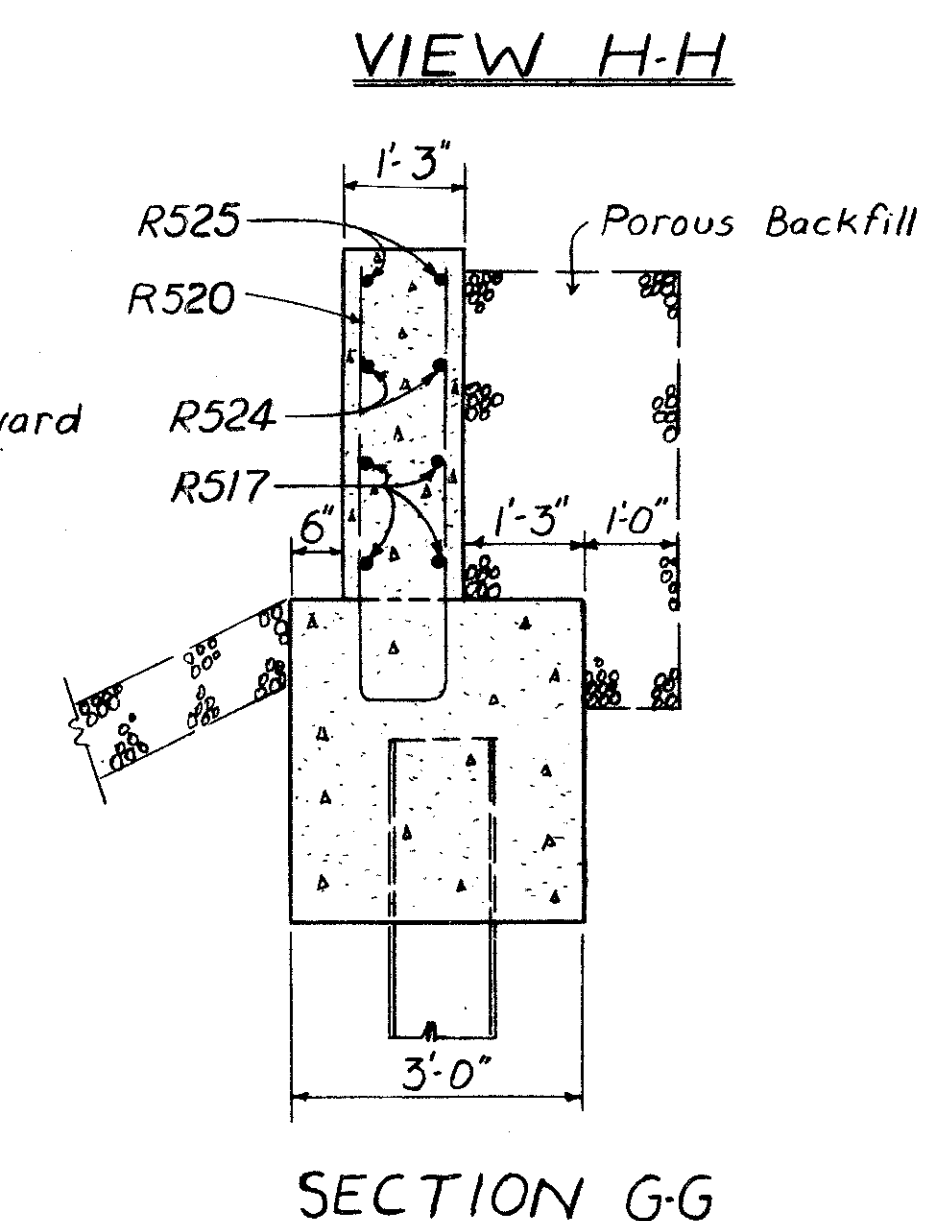
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	FI042(10)	

79
133

OTT. 2-1648

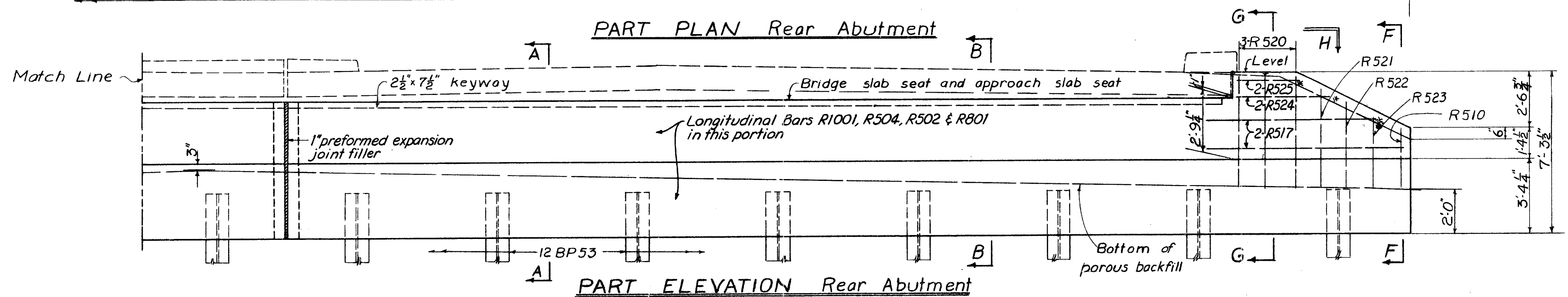
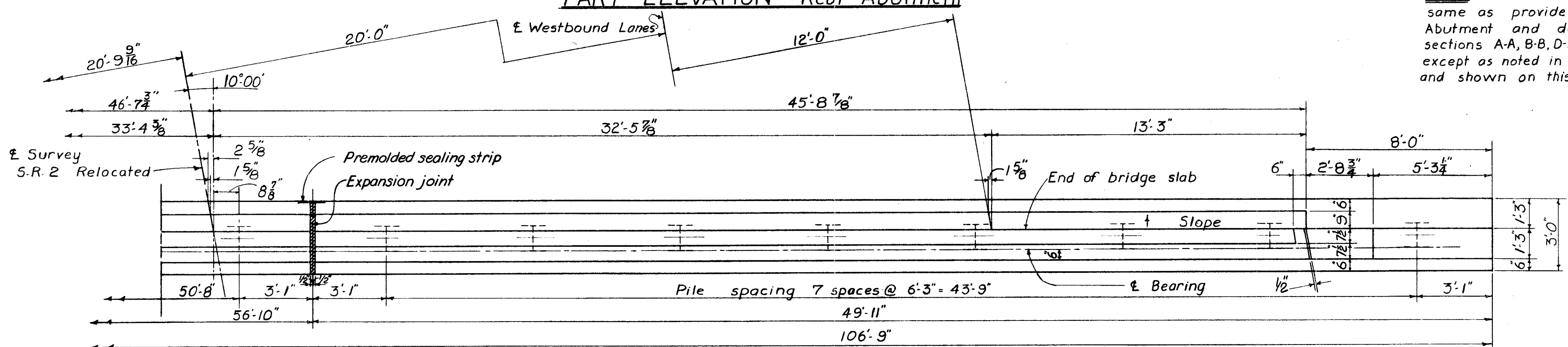


NOTE: Reinforcing bars are same as provided for Forward Abutment and detailed in sections A-A, B-B, D-D, E-E, F-F, except as noted in section G-G and shown on this sheet.



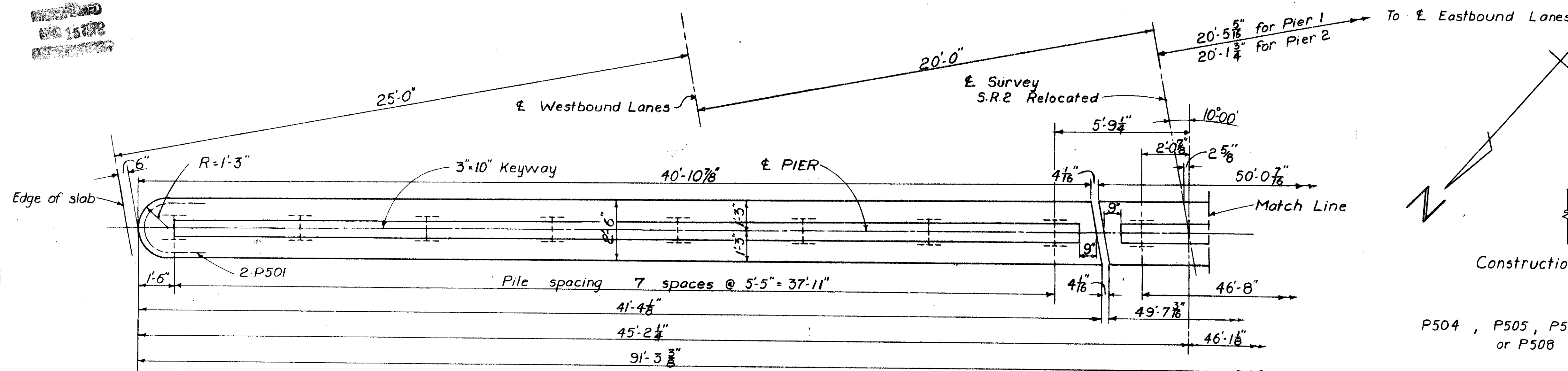
Note: POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

Work this sheet with sheets 78 and 81

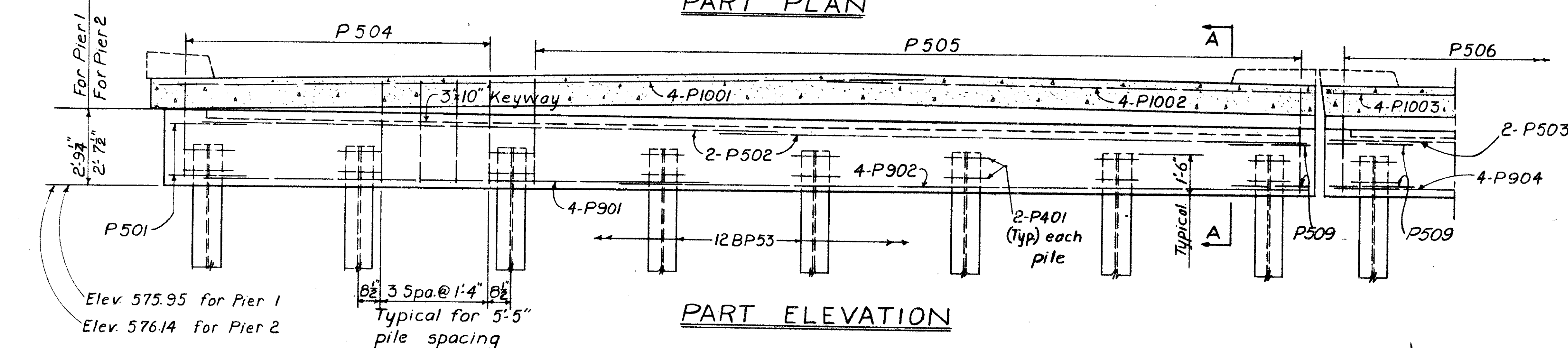


SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO					
ABUTMENTS (2) BRIDGE No. OTT. 2-1664 OVER LA CARPE CREEK OTTAWA COUNTY STA. 28+73.74 to STA. 29+40.26					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
YGP	YGP		JHY	BJH	2-12-63

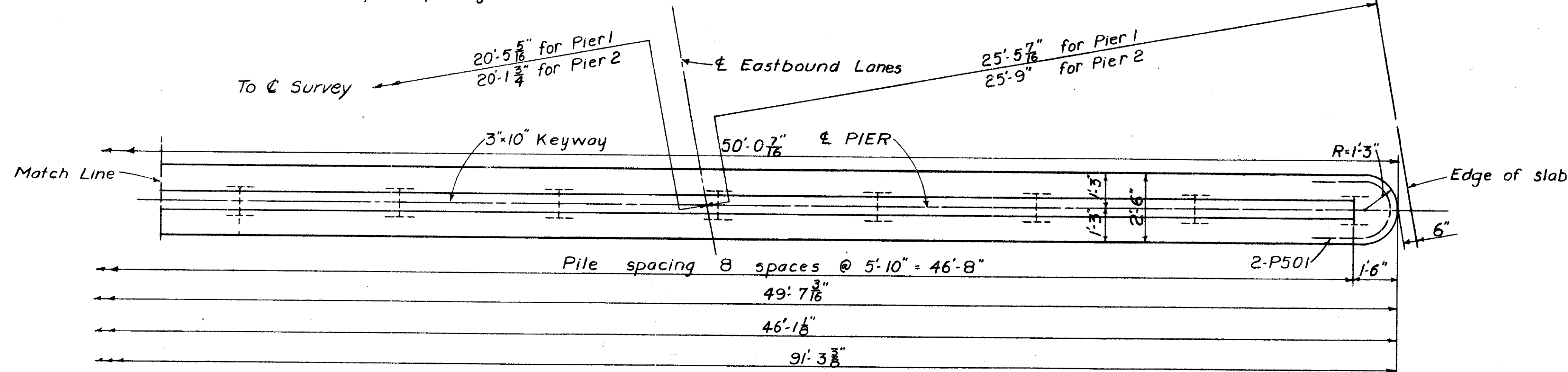
OTT. 2-16.48



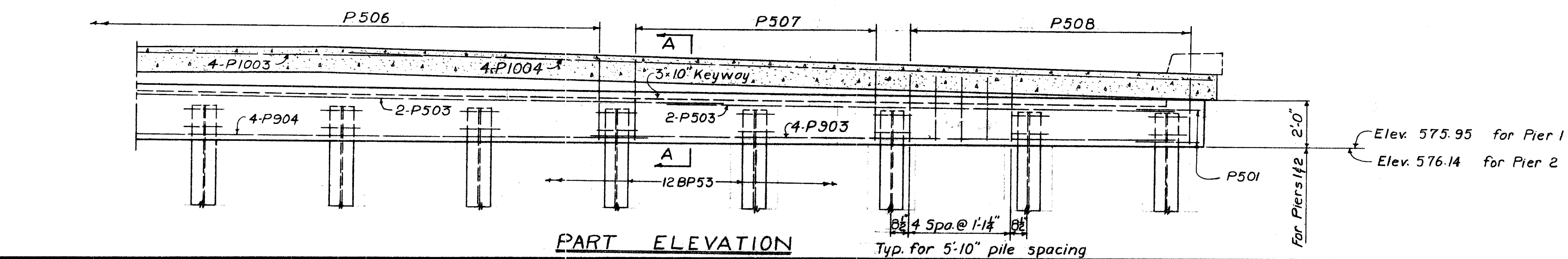
PART PLAN



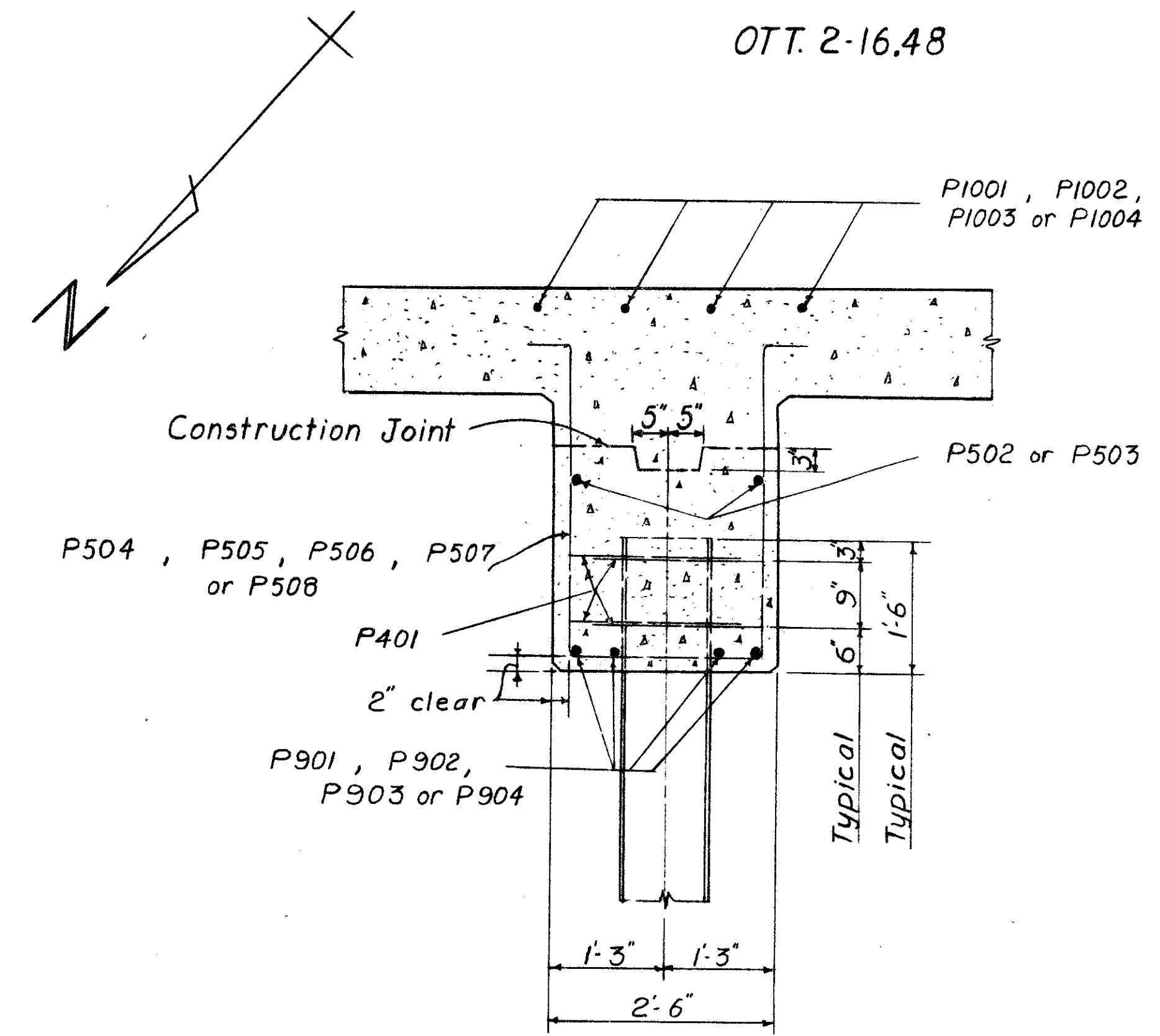
PART ELEVATION



PART PLAN



PART ELEVATION



SECTION A-A

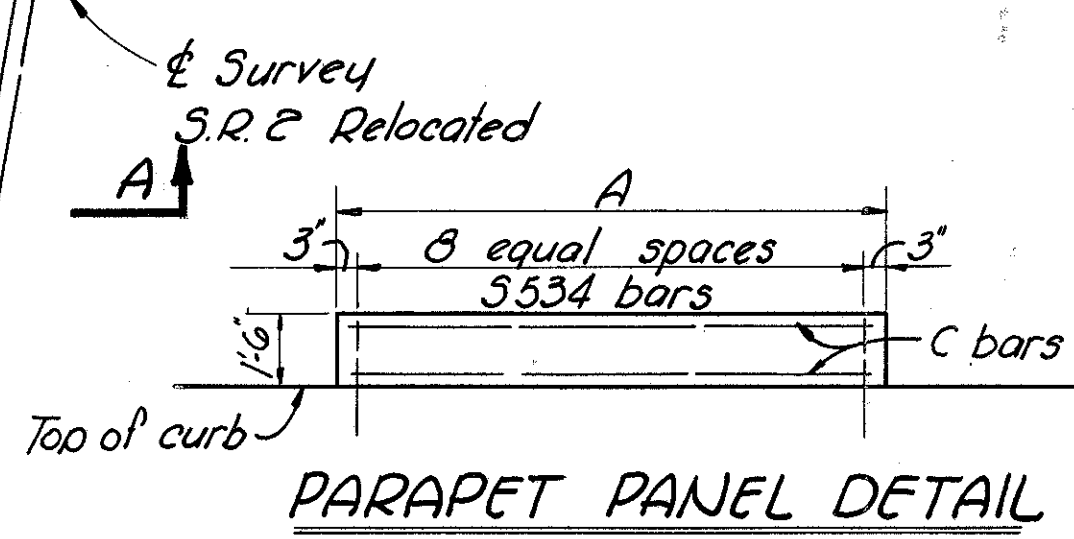
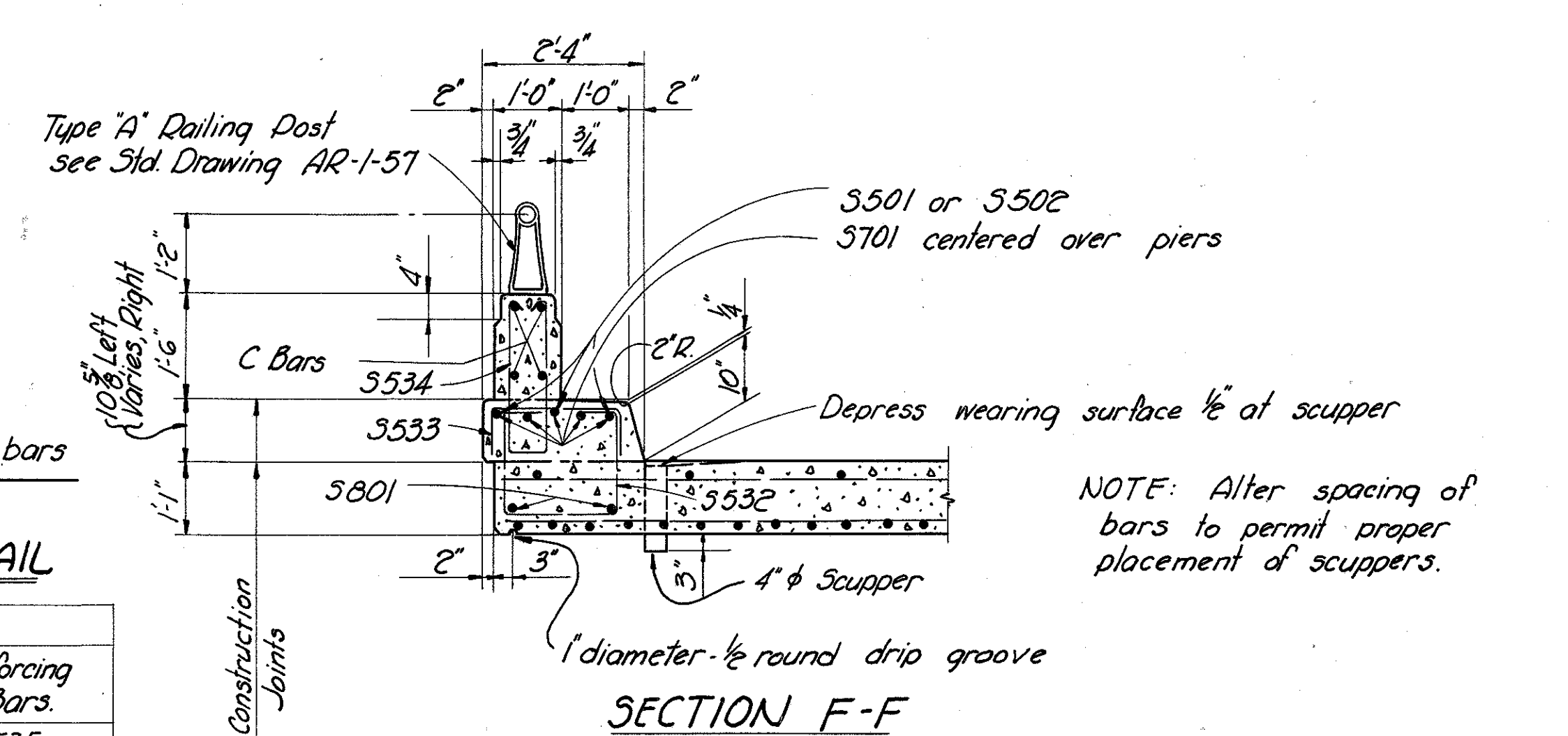
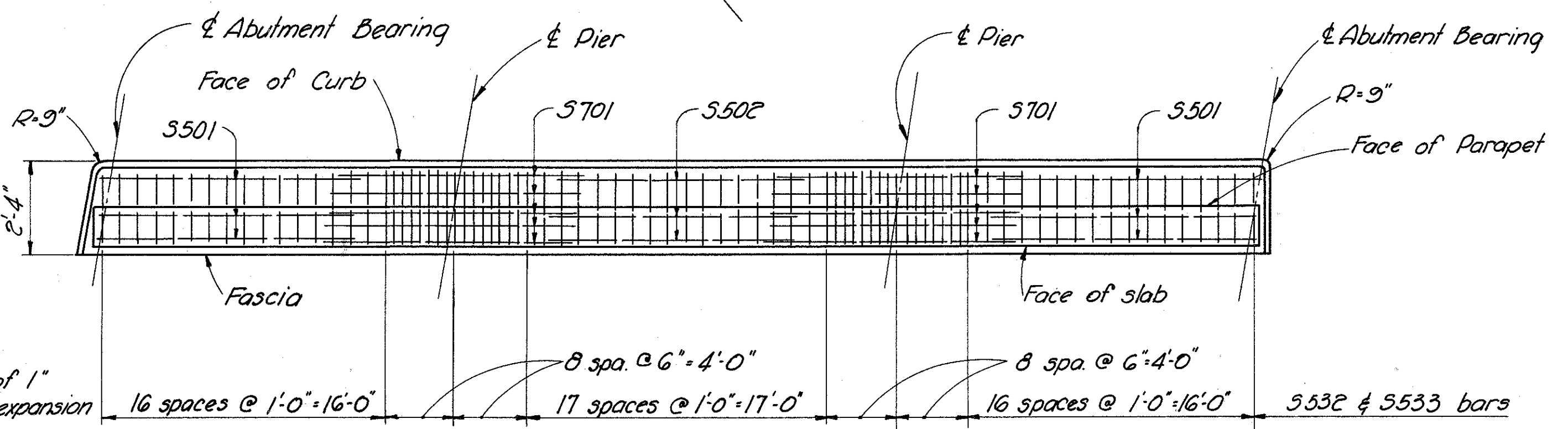
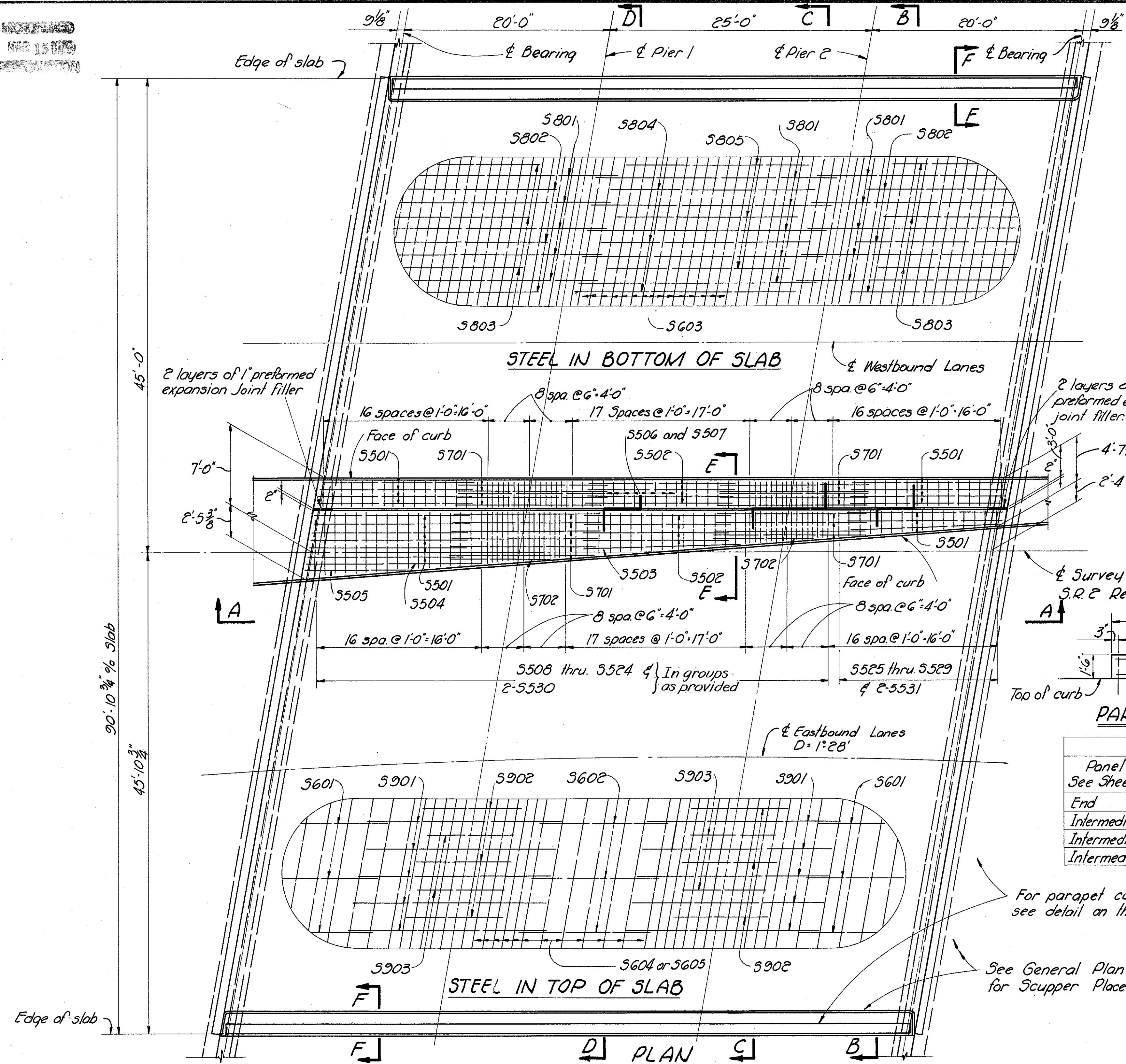
NOTE:
Falsework Support: The pier cap shall not be used to support the falsework for the deck slab.
Pile Painting: The exposed portion of the piles shall be painted in accordance with Item 5-8, applying two coats as per Sections M-9.9, M-9.20 or M-9.21 and two coats as per Section M-9.12. The painting of the piles shall extend to low water elevation.
Payment For Piles, per lin. ft., includes payment for pile painting. The elevation of cut-off as per Section 5-18.13 shall be considered as 1'-6" above the bottom of the concrete cap.

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CONSULTING ENGINEERS
TOLEDO, OHIO

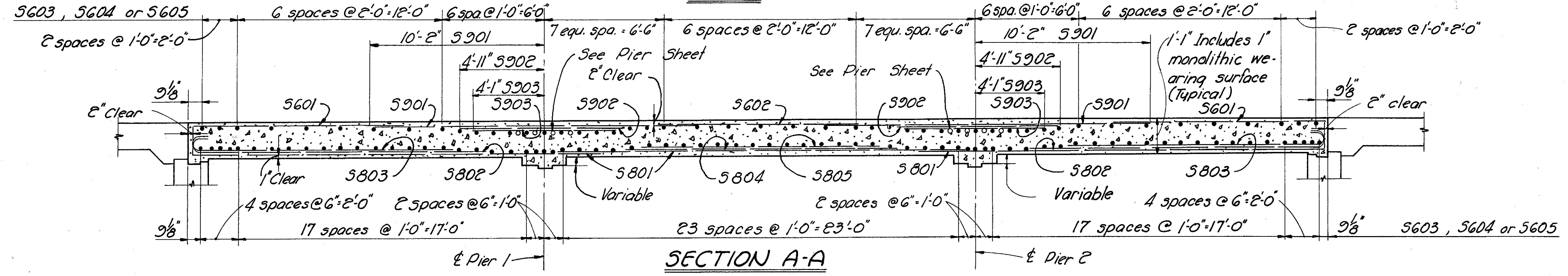
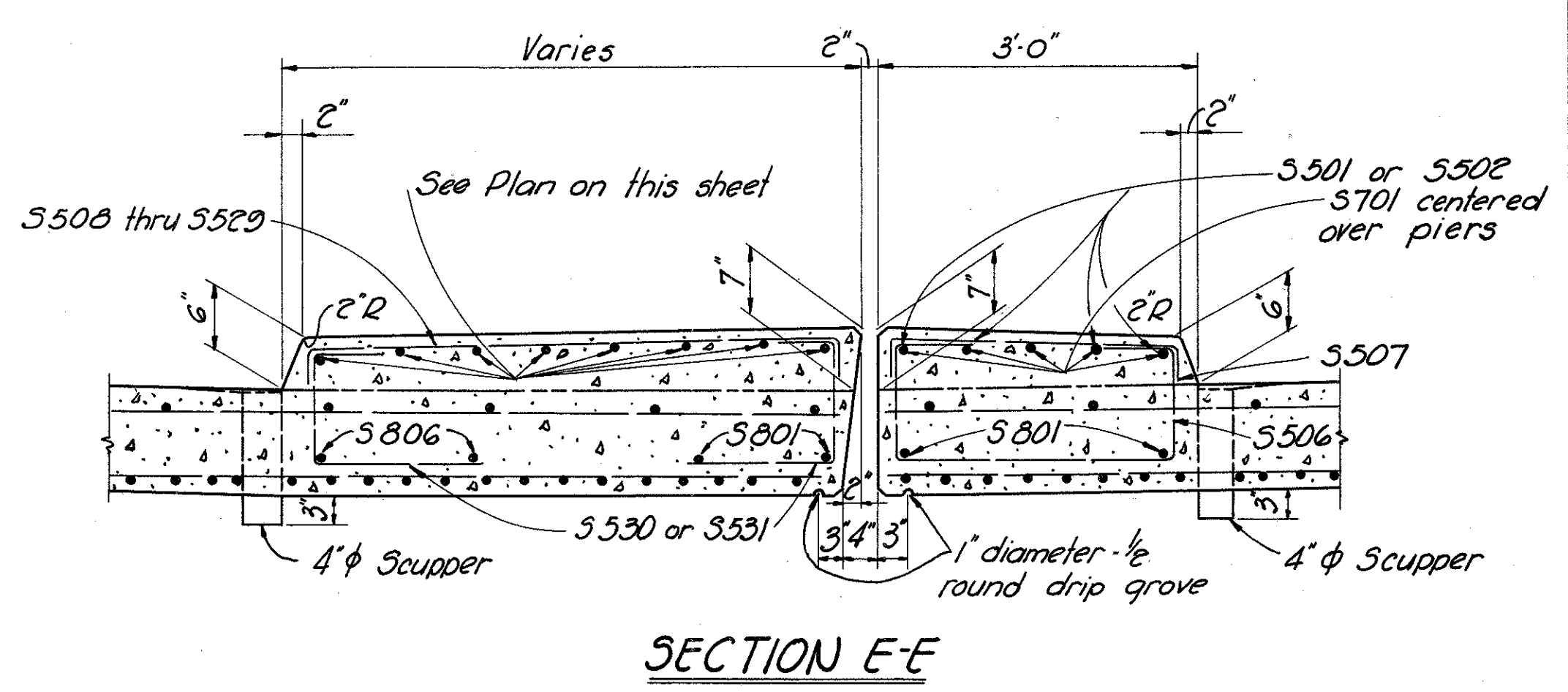
PIERS
BRIDGE No. OTT. 2-1664
OVER LA CARPE CREEK
OTTAWA CO. STA. 28+73.74 To
STA. 29+40.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VGP	VGP		JHY	BJH	2-12-63	

OTT. 2-16.48



PARAPET DETAILS			
Panel	Dimension	No. Spaces	Reinforcing
	A	B	C Bars
End	8'-9 1/8"	6	5535
Intermediate	13'-7 1/2"	9	5536
Intermediate	7'-0"	5	5537
Intermediate	13'-10 1/2"	9	5538



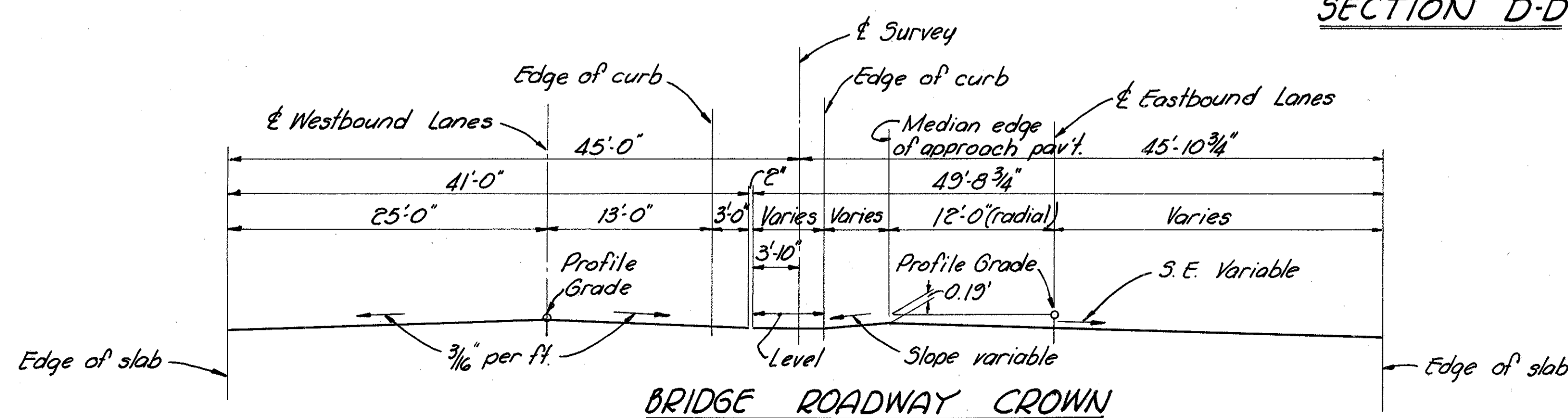
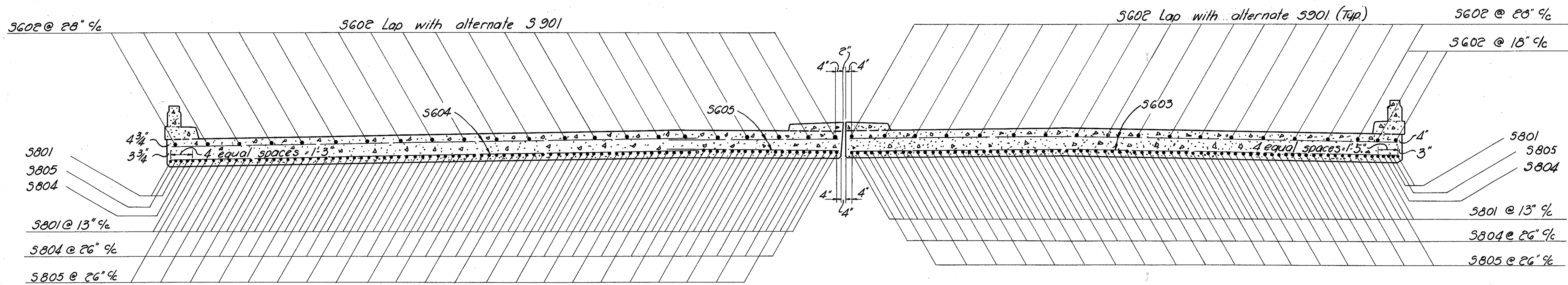
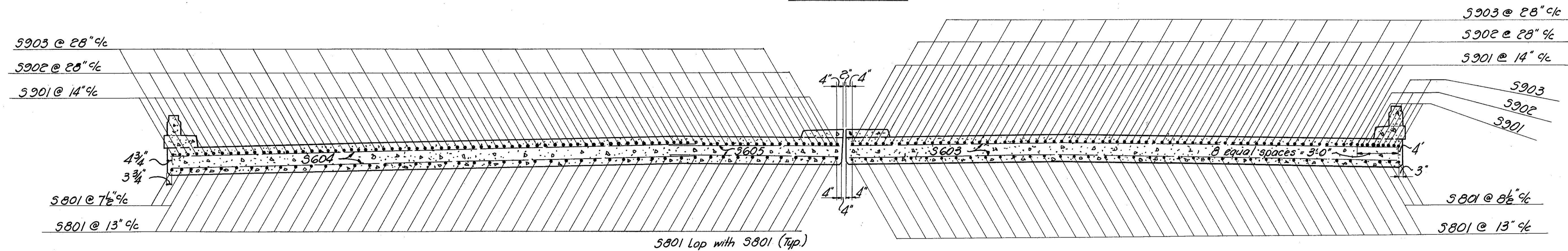
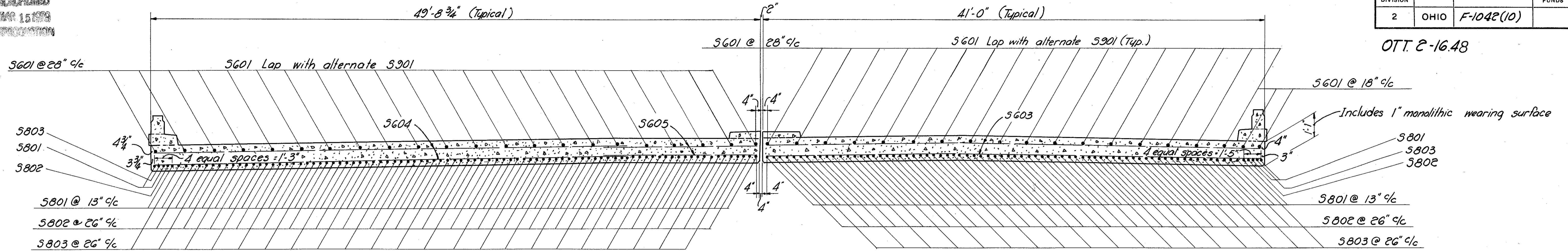
SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS (1)
BRIDGE No. OTT. 2-1664
OVER LA CARPE CREEK
OTTAWA CO. STA. 28+73.74 to
STA. 29+40.26

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V6P	V6P	BB	JHY	BJH	2-12-63	

See sheet 79 for curb details at abutments.

OTT. 2-1648



Note: See sheet no. 76 for elevations of top of slab.

Note: See section AA sheet no. 81 for transverse reinforcing bars spacing.

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO					
SUPERSTRUCTURE DETAILS (2)					
BRIDGE NO. OTT. 2-1664 OVER LA CARPE CREEK OTTAWA CO. STA. 28+73.74 to STA. 29+40.26					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
VGP	VGP	BB	JHY	BJH	2-12-63