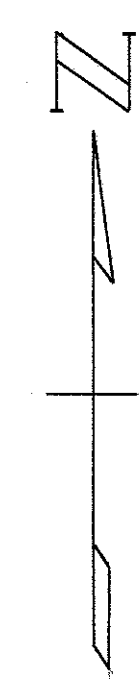
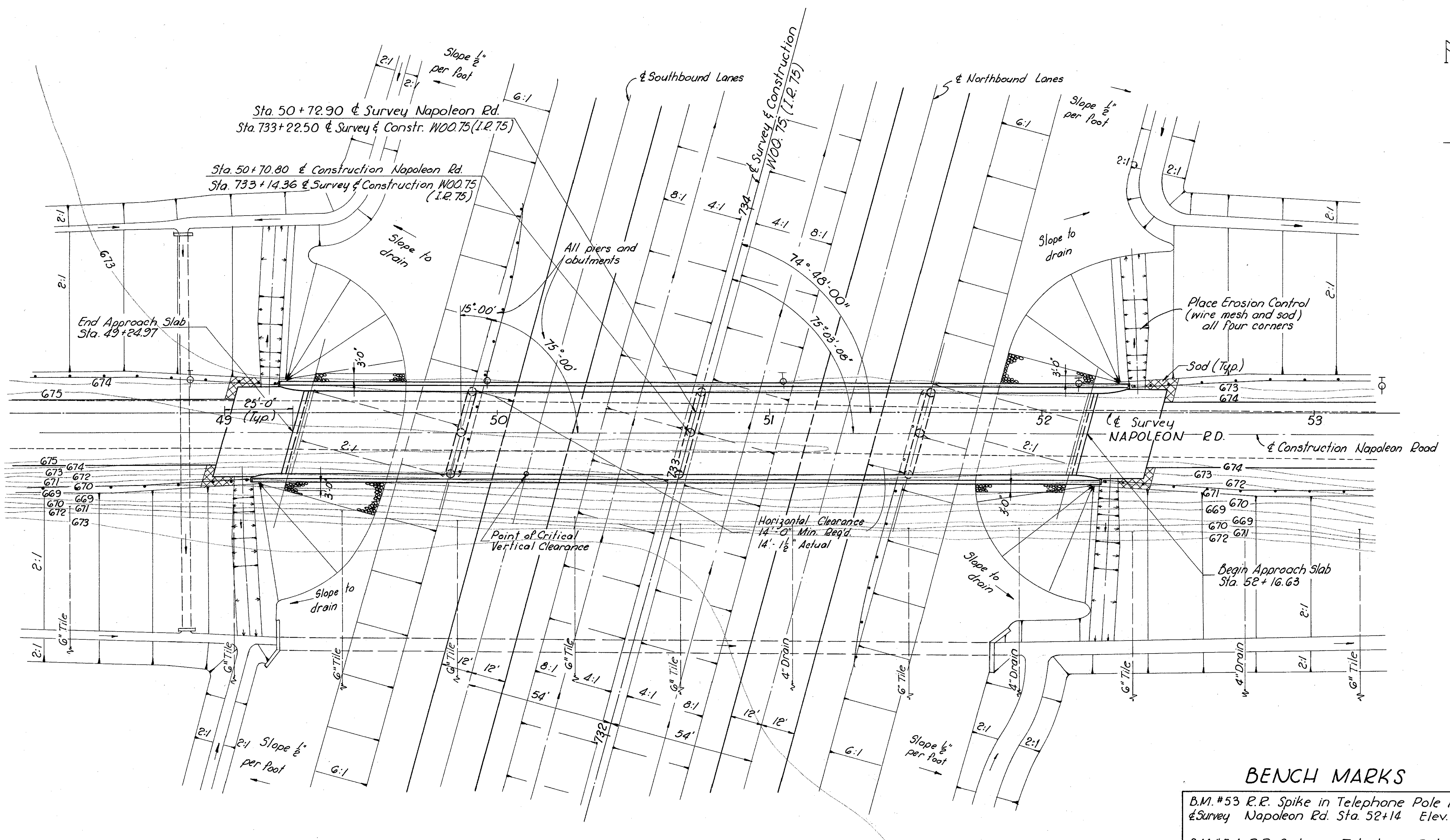


WOO. 75-9.90
18 Miles Southeast of Bowling Green



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OCT 15 1986

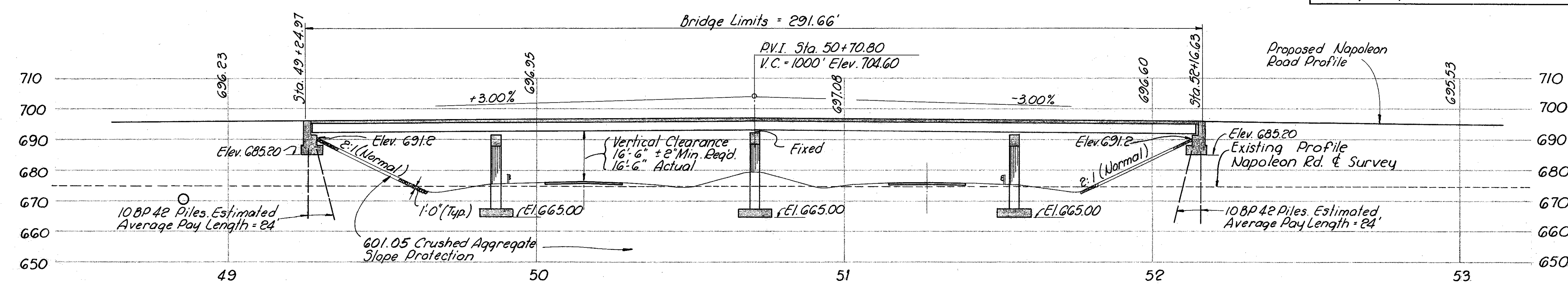
1962 ADT - 840
1975 Design Year ADT - 1390
Foundation investigation information is included with these plans.

BENCH MARKS

B.M. #53 R.R. Spike in Telephone Pole 10' Lt. of & Survey Napoleon Rd. Sta. 52+14 Elev. 674.74
B.M. #54 R.R. Spike in Telephone Pole 6' Lt. of & Survey Napoleon Rd. Sta. 58+67 Elev. 673.78

PROPOSED STRUCTURE

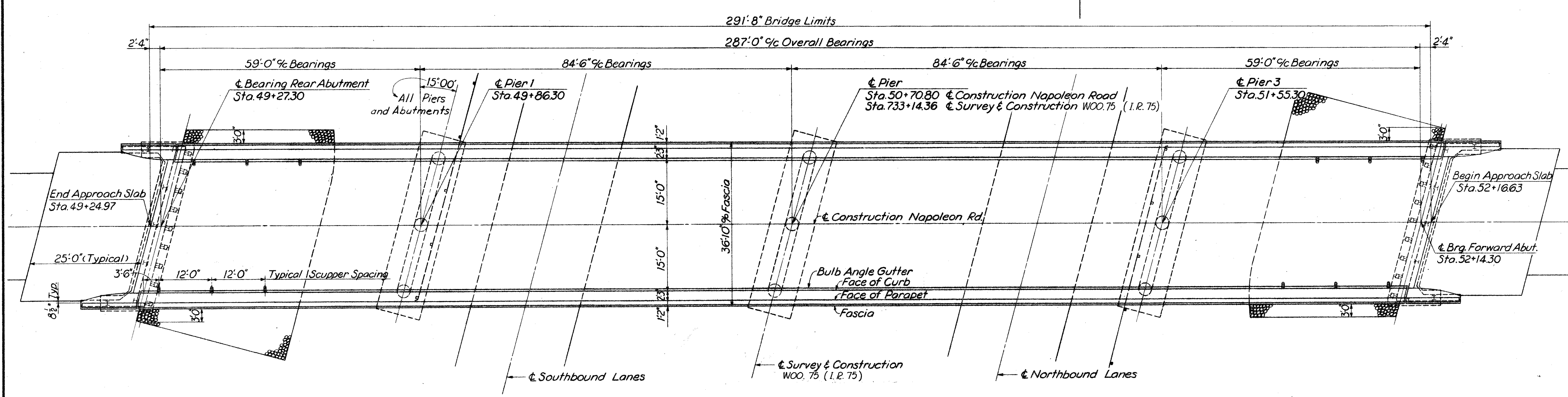
Type: Continuous steel beam with reinforced concrete deck. Reinforced concrete pier bents & slab abutments.
Spans: 59'-0", 84'-6", 84'-6", 59'-0" % Brgs.
Roadway: 30'-0" f/p. 2'-3" Safety Curbs.
Load Frequency: CF 130 (57)
Skew: 15°-00' Left Forward
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: A3-1-54 (25' Long) Special Alignment: Tangent



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TOLEDO OHIO

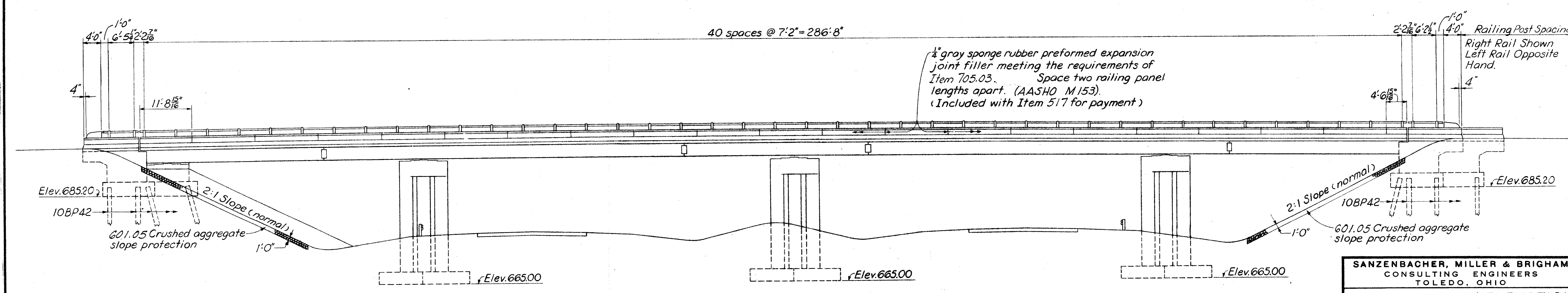
SITE PLAN
BRIDGE NO. WOO.75-1383
UNDER NAPOLEON RD.
WOOD COUNTY STA. 49+24.97 to STA. 52+16.63
SCALE 1" = 20'

SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
S-M-B	T.W.D.	OMB	OMB	EEH	JHY 3/20/64 TWD 12/23/63



GENERAL PLAN

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OCT 15 1986



ELEVATION

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

GENERAL PLAN & ELEVATION
BRIDGE NO. WOO.75-1383
UNDER NAPOLEON RD.
WOOD CO. STA. 49+24.97
To STA. 52+16.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JHY	JHY		EEH	TWD	1.25.65	

REINFORCING STEEL LIST (BRIDGE WOO. 75-1383)

MARK	NO.	LENGTH	WEIGHT	SHAPE	BENDING DIAGRAMS	MARK	NO.	LENGTH	WEIGHT	SHAPE	
ABUTMENTS											
R 901	12	9'6"	388	B		SUPERSTRUCTURE					
R 902	12	7'3"	296	B		S 701	346	37'5"	26462	S	
R 801	14	39'0"	1458	S		S 601	346	37'5"	19445	S	
R 802	16	11'6"	491	S		S 602	567	33'9"	28743	S	
R 803	12	11'8"	374	S		S 603	72	33'6"	3623	S	
R 804	4	11'3"	120	S		S 501	772	2'4"	1879	B	
R 701	20	12'2"	497	B		S 502	386	4'0"	1610	B	
R 702	6	10'7"	130	B		S 503	404	5'7"	2353	B	
R 703	2	8'9"	36	B		*TR 503	8	11'5"		S	
R 704	4	14'2"	116	B		*TR 504	152	14'0"		S	
R 705	6	10'5"	128	B		*TR 505	8	4'3"		S	
R 706	2	9'0"	37	B		ABUTMENT					
R 707	4	13'9"	112	B		TR 506	12	f		B	
R 601	52	14'2"	1106	B		TR 507	8	f		B	
R 602	32	14'4"	689	B		PIERS					
R 603	32	14'2"	681	B		F 1101	75	44'4"	17666	B	
R 604	8	14'7"	175	B		F 1102	174	7'2"	6625	B	
R 501	52	7'0"	380	B		F 901	126	12'2"	5212	B	
R 502	52	8'4"	452	B		F 601	126	11'0"	2082	B	
R 503	32	36'3"	1210	S		P 1101	174	24'3"	22418	S	
R 504	92	6'4"	608	B	P 1001	6	36'10"	951	B		
R 505	56	6'11"	404	B	P 1002	6	39'6"	1020	B		
R 506	20	11'4"	236	S	P 1003	12	15'6"	800	S		
R 507	8	4'0"	33	S	P 1004	9	33'3"	1288	S		
R 508	20	3'6"	73	S	P 1005	6	32'9"	846	S		
R 509	16	6'9"	113	S	P 1006	6	31'0"	800	S		
R 510	12	8'8"	108	S	P 801	12	8'8"	278	B		
R 511	4	9'0"	38	S	P 501	108	7'3"	817	B		
R 512	8	14'2"	118	S	P 502	6	31'0"	194	S		
R 513	12	3'3"	41	S	REPLACEMENT BARS						
R 514	8	12'2"	102	S	RE 1101	3	7'7"	121	S		
R 515	4	12'10"	54	S	RE 1102	1	7'3"	31	S		
R 516	36	1'6"	56	B	RE 901	1	6'10"	23	S		
R 517	16	3'4"	56	B	RE 801	1	6'6"	17	S		
R 518	20	6'0"	125	B	RE 701	2	6'3"	26	S		
R 519	36	6'11"	260	B	RE 601	3	5'11"	27	S		
R 520	8	5'2"	43	B	RE 501	1	5'7"	6	S		
R 521	4	11'9"	49	S	RE 401	1	5'3"	4	B		
R 522	8	11'11"	99	S	SPIRAL REINFORCING LIST						
R 523	4	2'0"	8	S	SP 401	6	2'8"	21'4"	4 1/2	60	232 B
*TR 501	8	12'1"		S	SP 402	3	2'8"	21'3 1/2"	4 1/2	60	116 B
*TR 502	8	11'0"		S	GENERAL NOTES						

* Included with Item 517 for payment

† For details of bars TR 506 and TR 507 See Standard Drawing BR-1-65 where these are designated R 503 and R 504 respectively

ESTIMATED QUANTITIES (BRIDGE WOO. 75-1383)

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS		PIERS			SUPER	GENERAL	Revised As-Built
				REAR	FORWARD	1	2	3			
503	Lump	Sum	Cofferdams, cribs and sheeting							Lump	
503	803	Cu.Yds.	Unclassified excavation	112	112	193	193	193		5-28-65 7.05	
511	302	Cu.Yds.	Class "C" concrete, superstructure						302		
511	90	Cu.Yds.	Class "C" concrete, pier caps and columns			30	30	30			
511	138	Cu.Yds.	Class "E" concrete, abutments	69	69						
511	129	Cu.Yds.	Class "E" concrete, pier footings			43	43	43			
509	160,358	Lbs.	Reinforcing steel	5750	5750	21,496	21,496	21,496	84,115	255	
513	283,000	Lbs.	Structural steel						283,000		
514	283,000	Lbs.	Field painting of structural steel						283,000		
517	627	Lin.Ft.	Railing (Type 1 aluminum rail and supports and concrete parapet)							627	
505	Lump	Sum	First test pile							Lump	
507	760	Lin.Ft.	Steel piles, 10 BP 4E	380	380						
825	1480	Sq.Yd.	Concrete surface treatment							1480	
518	28	Cu.Yds.	Porous backfill	14	14						
518	12	Each	Scuppers, including supports						12		
518	64	Lin.Ft.	G perforated helical C.M.P. 707.06 including specials	32	32						
518	48	Lin.Ft.	G helical C.M.P. 707.06 non-perforated	24	24						
601	410	Sq.Yds.	Crushed aggregate, slope protection							410	
808	302	Units	Water-reducing set-retarding admixture						302		

DESIGN LOADING - CF 130 (57)
 CONCRETE CLASS C Basic unit stress 1333 p.s.i.
 CONCRETE CLASS E Basic unit stress 1133 p.s.i.
 STRUCTURAL STEEL - ASTM A36 - Basic unit stress = 20,000 p.s.i.

REINFORCING STEEL - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. except spiral reinforcement may be plain, structural grade with basic unit stress of 18,000 p.s.i.
 HIGH STRENGTH STEEL BOLTS - AASHTO M-164 (ASTM A-325), Basic unit stress - Bearing = 40,000 p.s.i., Shear = 13,500 p.s.i.

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 R 501 is a No. 5 size bar and a P 1001 is a No. 10 size.

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 No. of Turns shown is the length divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars may be plain, but shall in other respects conform to Item 509 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.

REFERENCE shall be made to Standard Drawings AS-1-54 "Reinforced Concrete Approach Slabs" revised 8-10-65, F38-1-62 "Fixed and Sliding Bearings," revised 1-15-63, BR-1-65 "Bridge Railing, Type 1 with Concrete Parapets," revised 11-24-65, SD-1-63 "Superstructure Details" (Sheets 2, 3, 4 of 4) dated 11-12-63, SD-2-64 "Bolted Beam Splice Details" dated 11-25-64 and to Supplemental specifications 305 "Water-reducing Set-retarding Admixtures" dated 2-7-66, 811 "Examination of Welds Parts I and II" dated 3-29-65 and 825 dated 4-22-65.
 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.

GENERAL NOTES

PROCEDURE: The embankments 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 the excavation shall be made for the abutments and the piles driven.

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

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

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of the concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse reinforcing steel and are located near the center of any span.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 25 tons per sq. ft.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop. Class "B" welds are shown thus:

HIGH STRENGTH BOLTS: In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 per cent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner. Bolt lengths determined by the use of Table No. 1 in the Construction Specifications shall be adjusted to the next 1/4" length increment.

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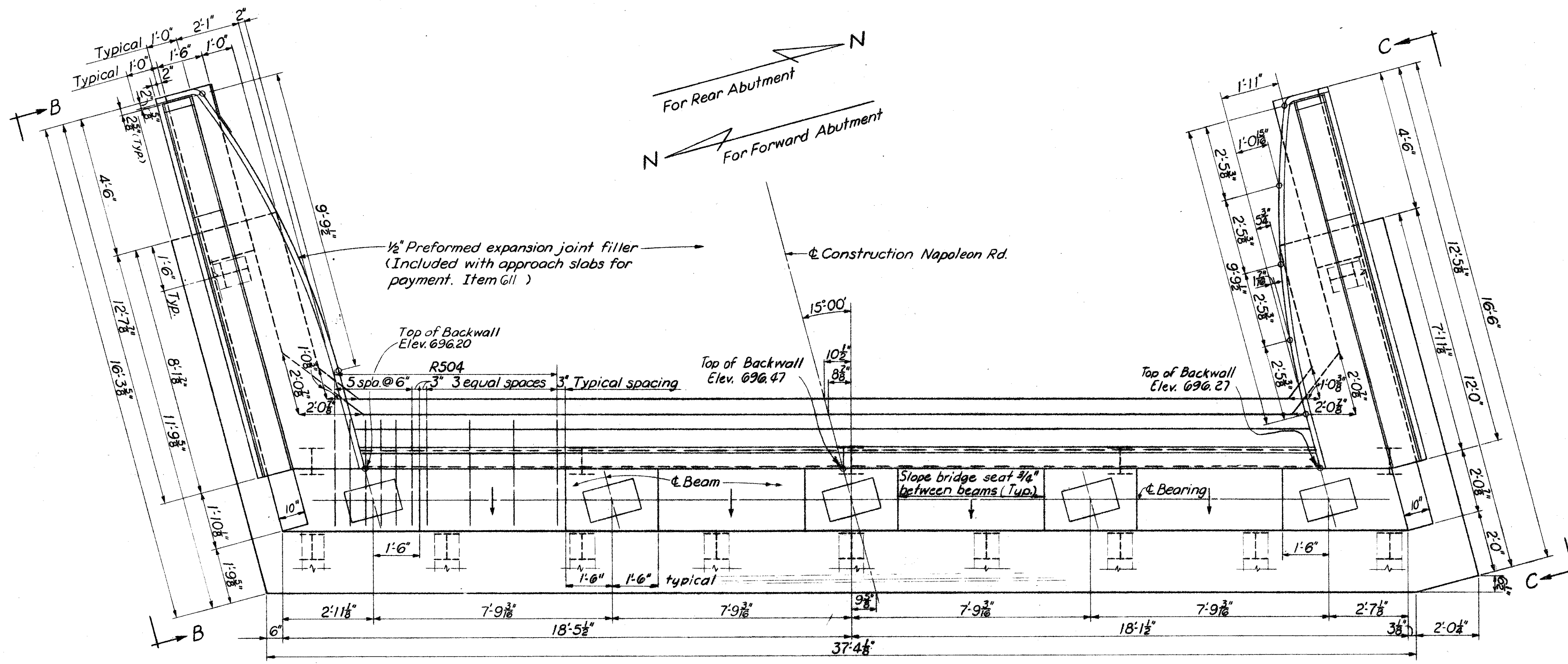
SAENZBACHER MILLER & BRIGHAM
 CONSULTING ENGINEERS
 TOLEDO OHIO

GENERAL NOTES REINFORCING
 STEEL & ESTIMATED QUANTITIES
 BRIDGE No. WOO. 75-1383
 UNDER NAPOLEON ROAD

WOOD CO. STA. 49+24.97
 STA. 52+16.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV.
T.W.D.	B.B.	B.B.	T.W.D.	B.J.H.	4-22-65	
J.T.B.	J.H.Y.	J.T.B.	J.H.Y.			

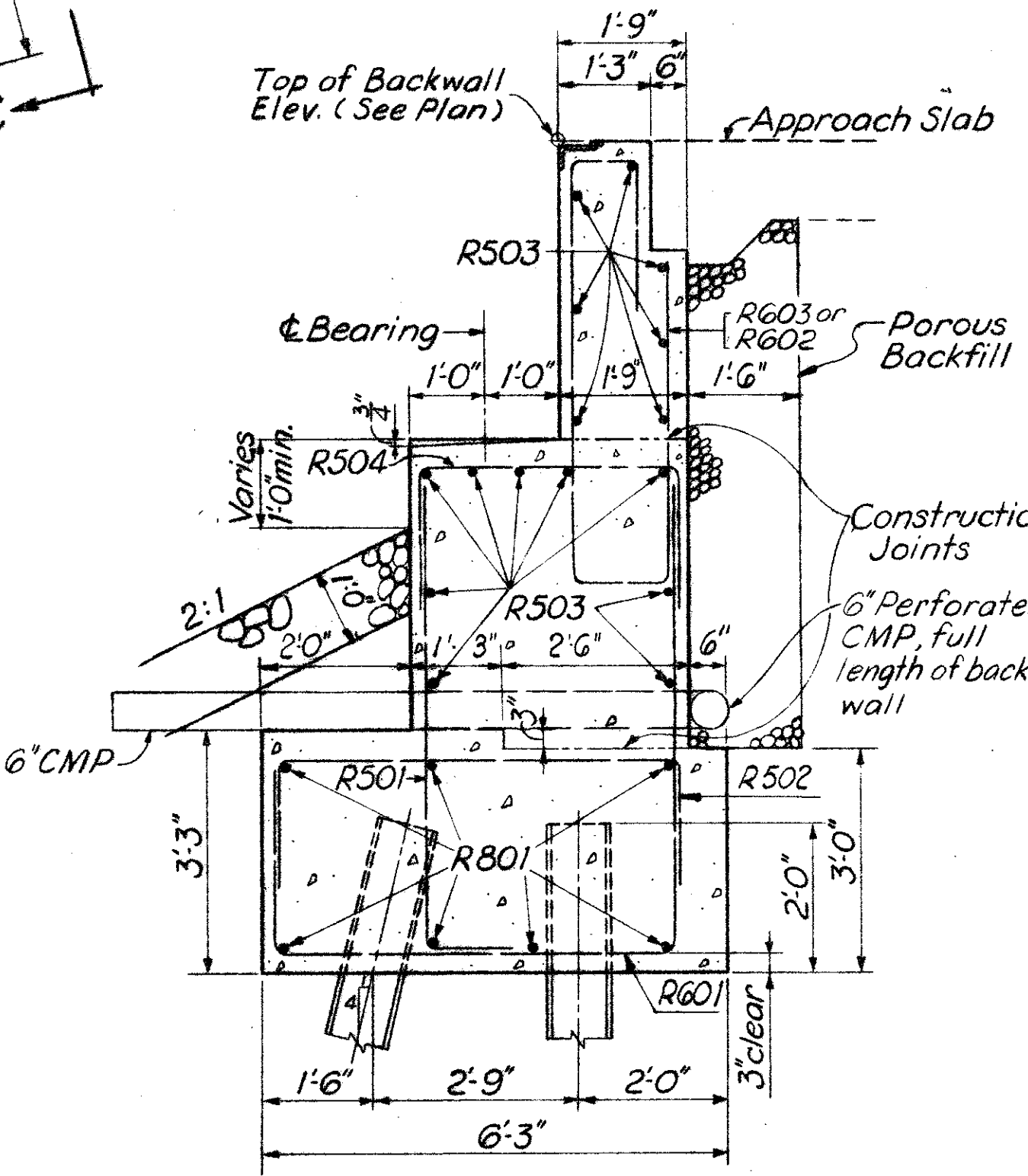
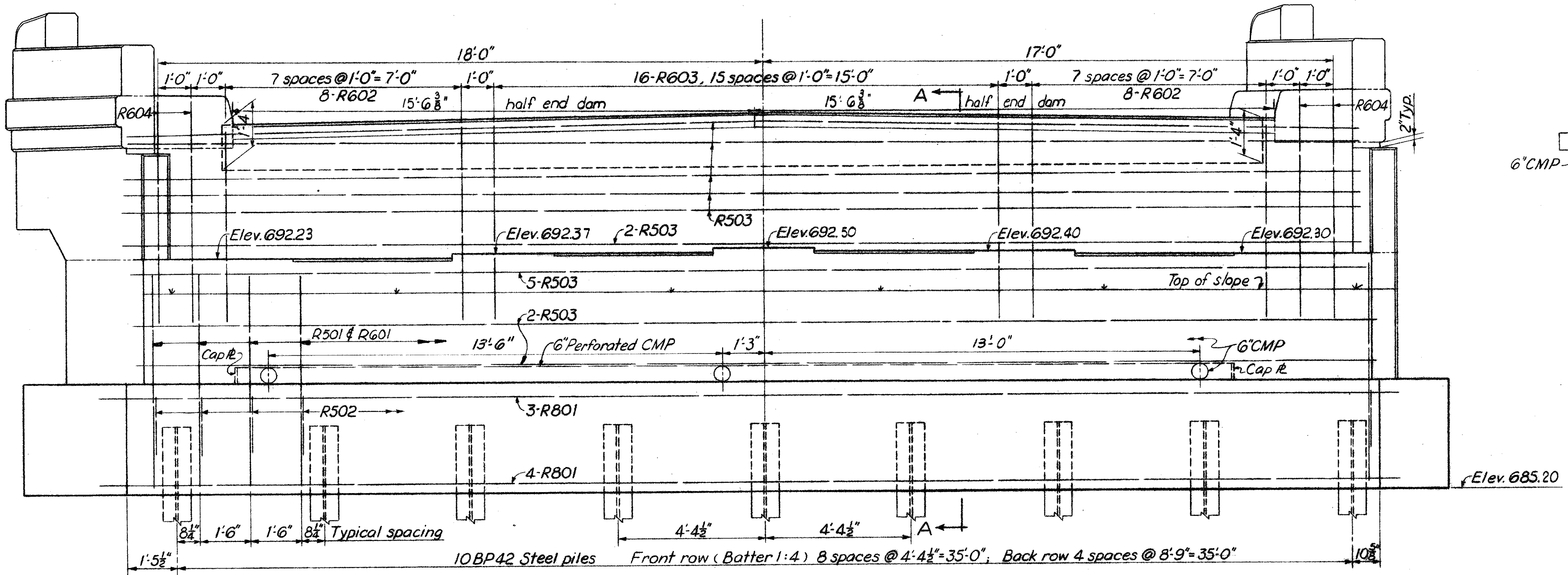
Revised As-Built:



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

Work this sheet with Sheet No. 304

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OCT 15 1986



SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

ABUTMENTS
BRIDGE NO. WOO. 75-1383
UNDER NAPOLEON ROAD
WOOD CO. STA. 49+24.97
To STA. 52+16.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JHY	JHY E.E.H.		E.E.H.	TWD	1-25-65	

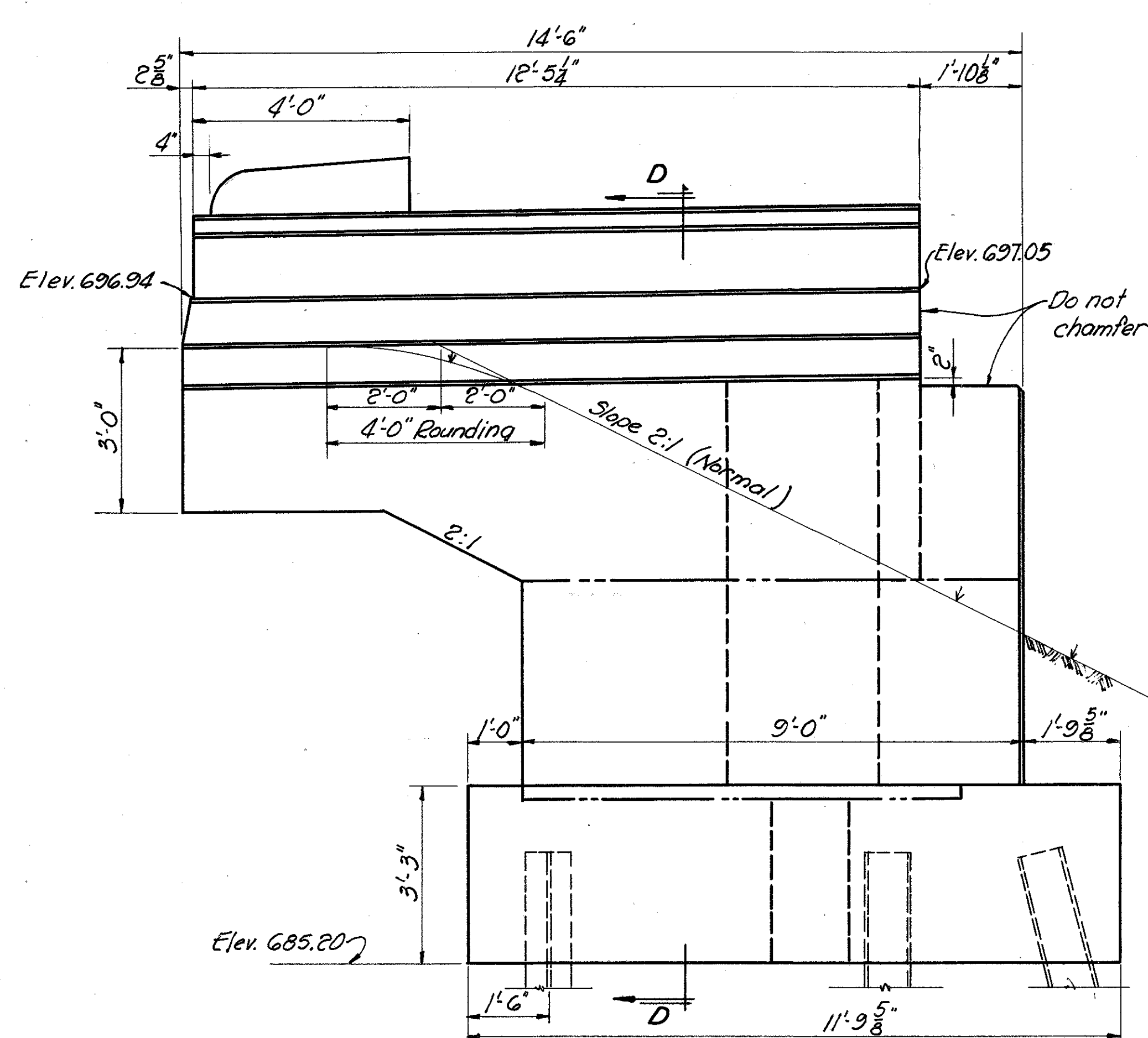
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

304
355

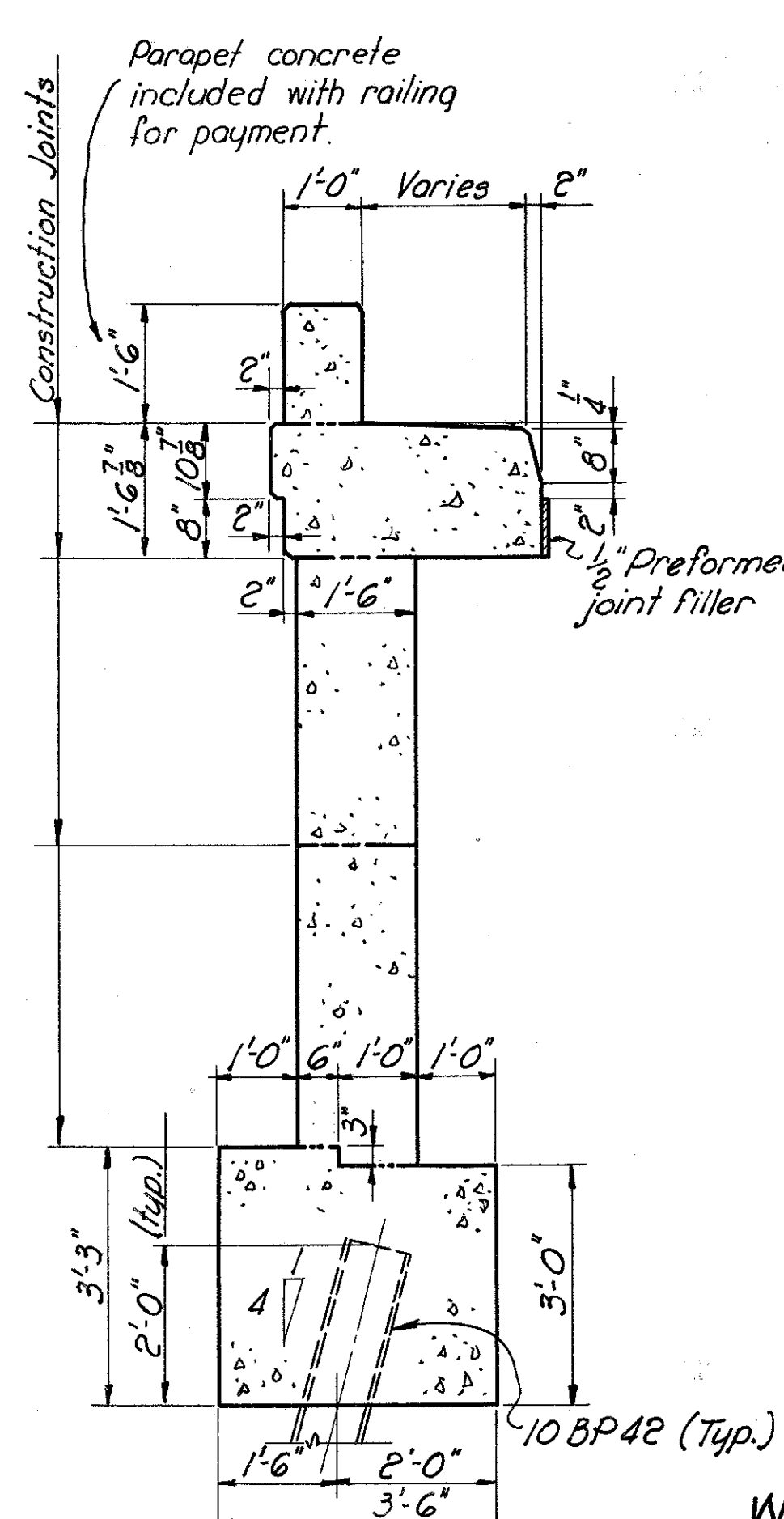
WOO. 75-990

MICROFIL
OCT 15 1986

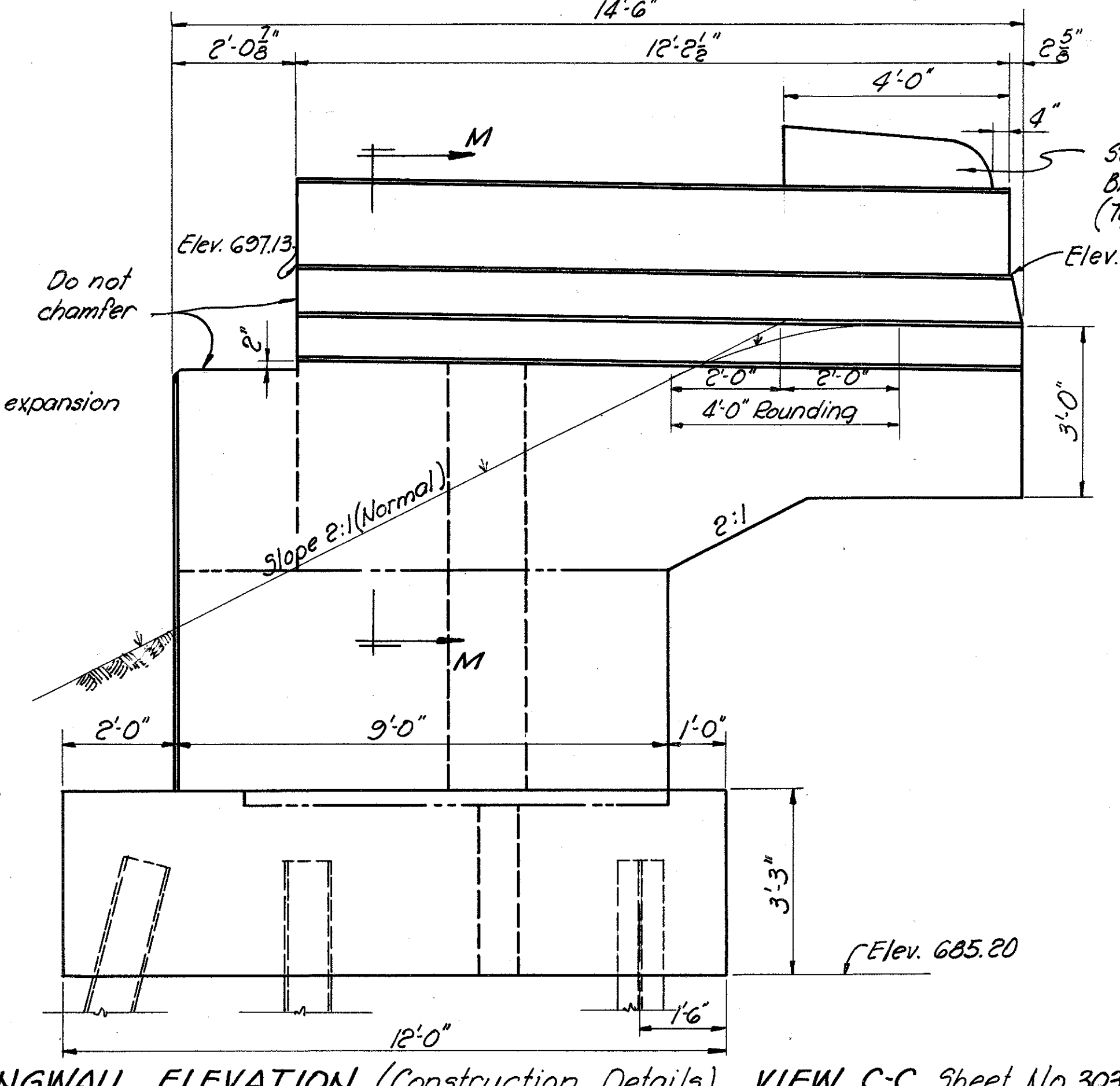
See Standard Drawing
BR-1-65 for Details.
(Typical)



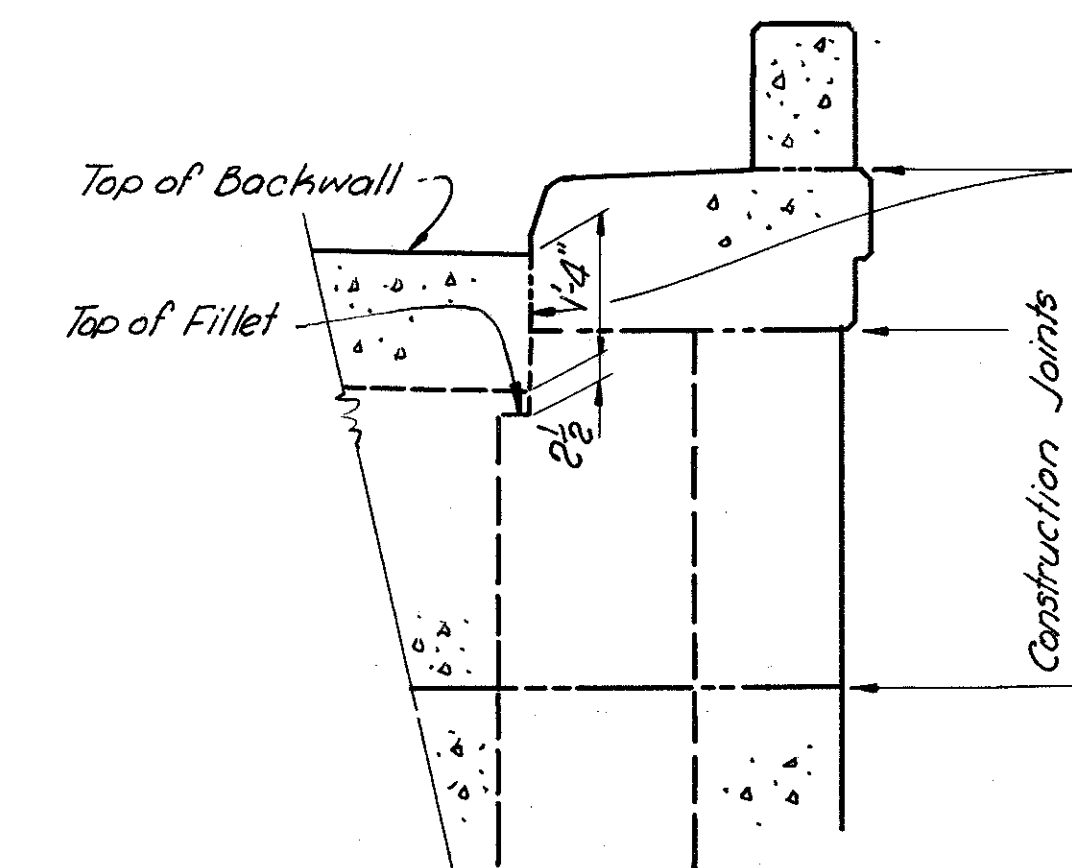
WINGWALL ELEVATION (Construction Details) VIEW B-B, Sheet No. 303



SECTION DD

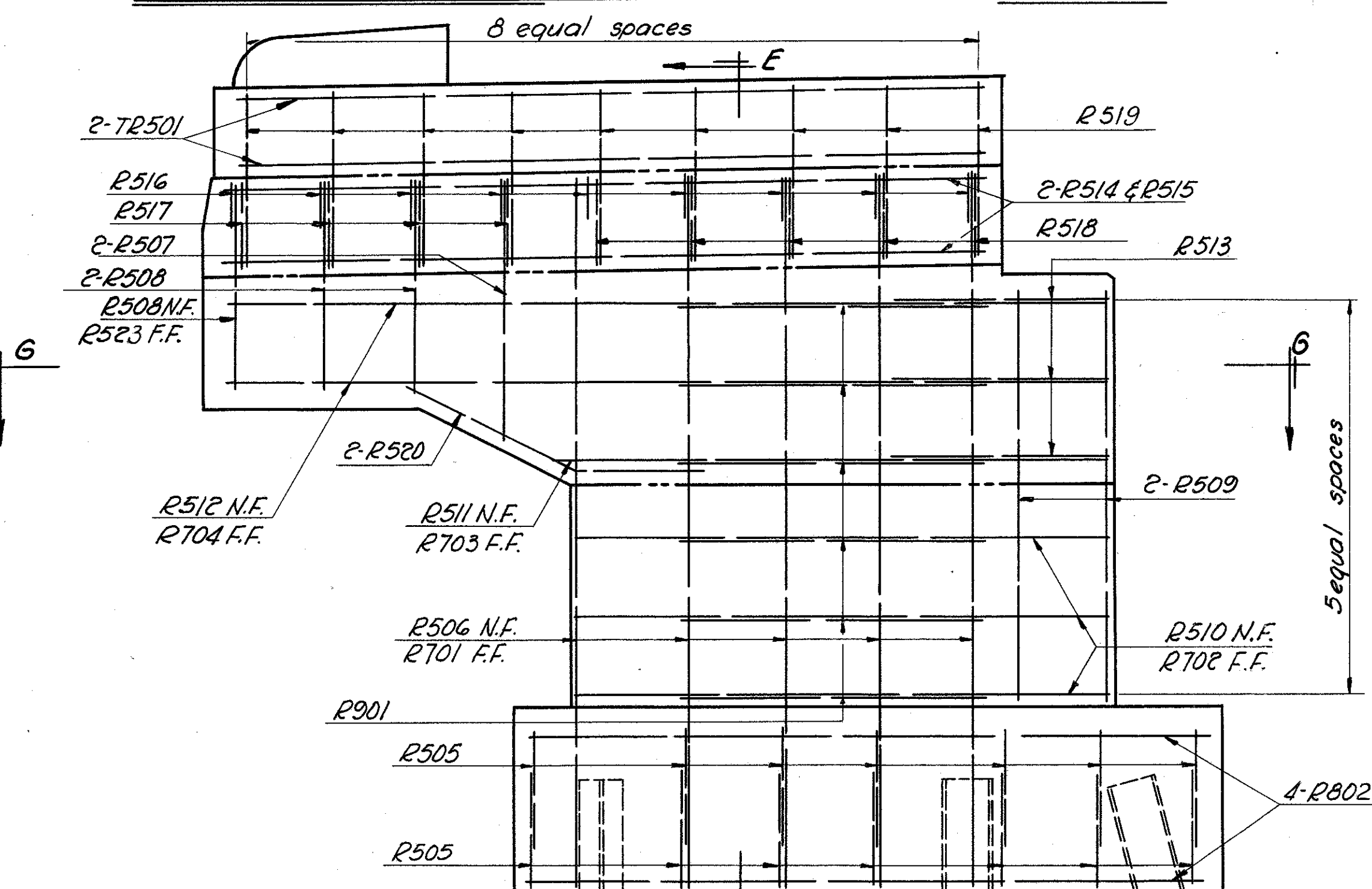


WINGWALL ELEVATION (Construction Details) VIEW C-C, Sheet No. 303

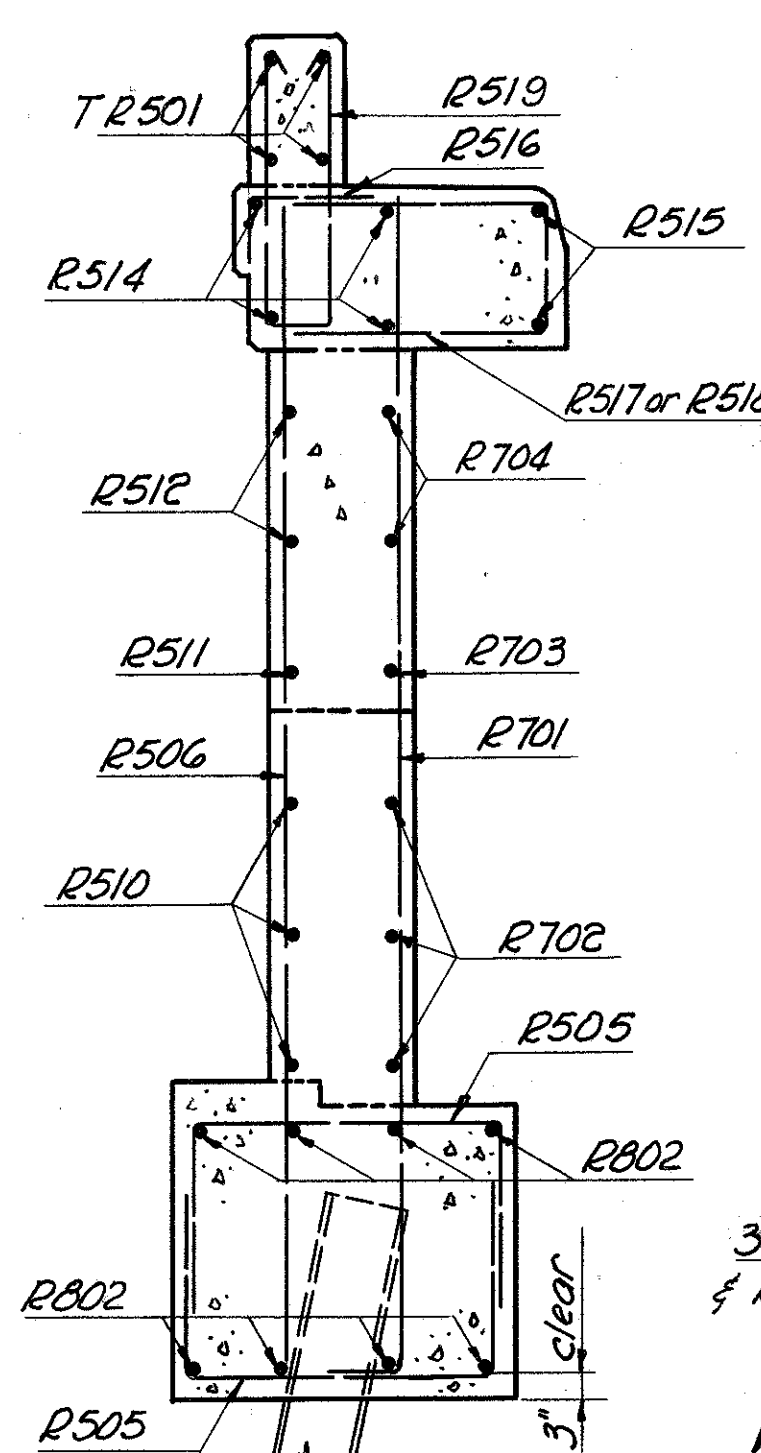


SECTION MM

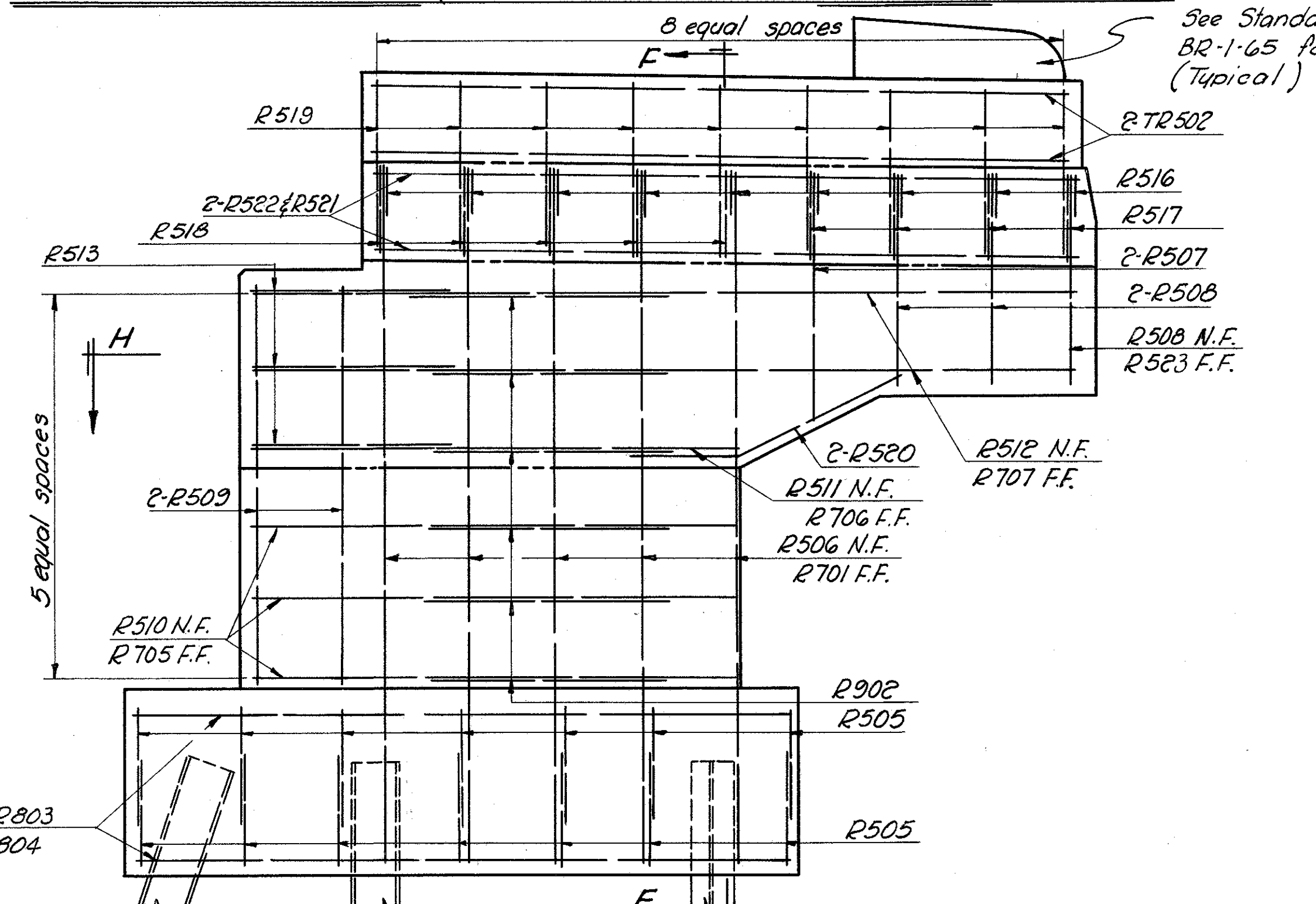
Work this sheet with sheet No. 303
N.F. = Near Face
F.F. = Far Face



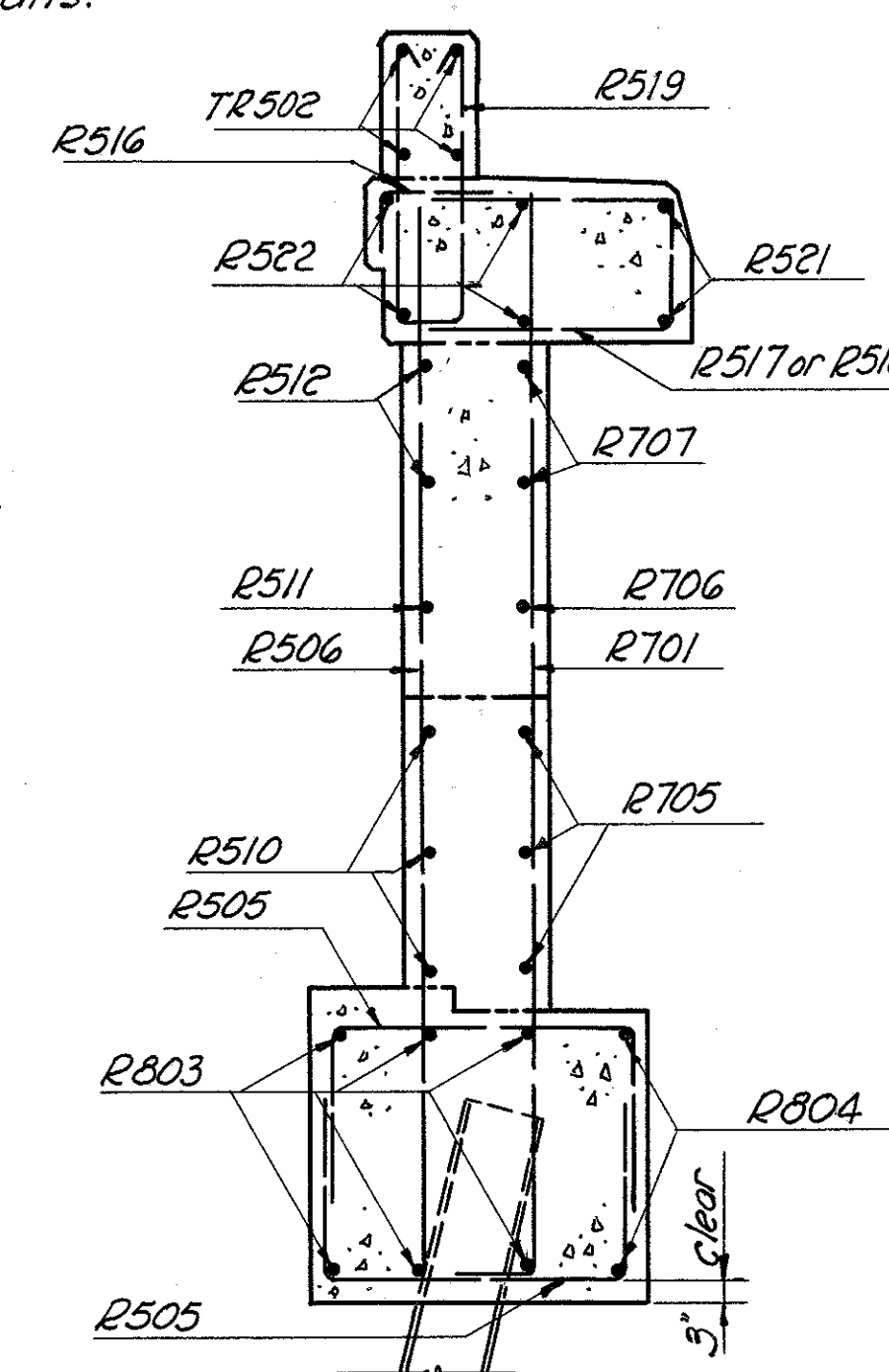
WINGWALL ELEVATION (Reinforcing Details) (Right Rear & Left Forward Wingwalls)



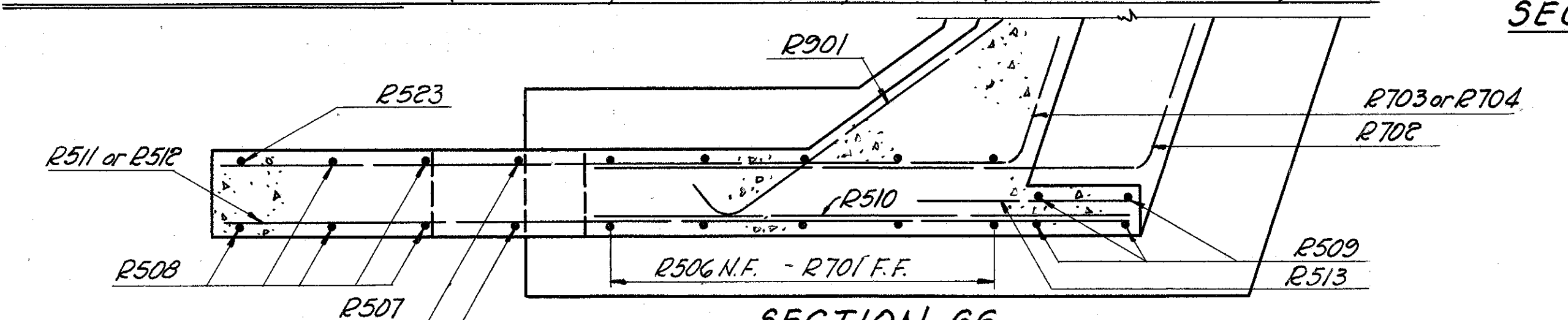
SECTION EE



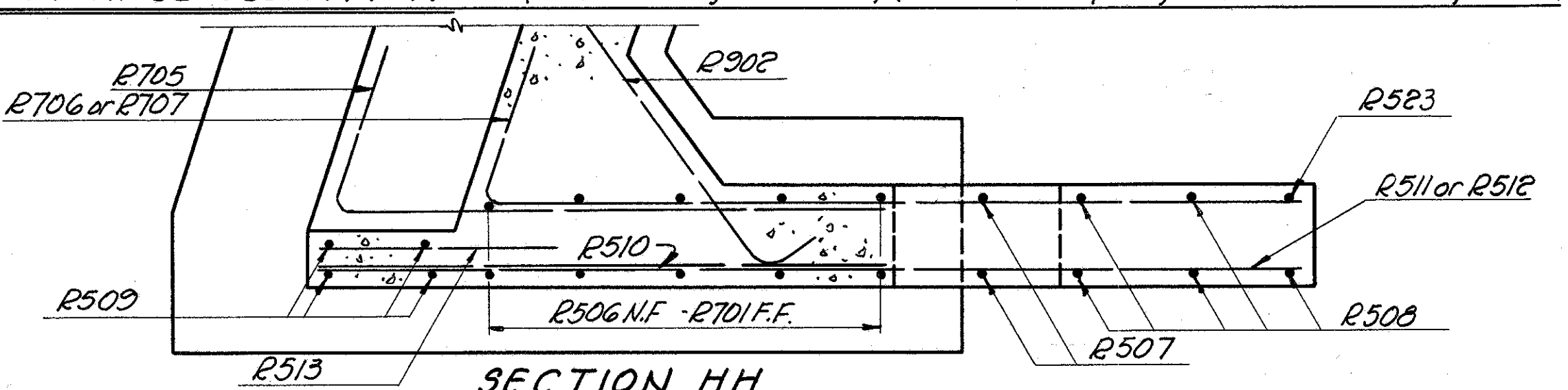
WINGWALL ELEVATION (Reinforcing Details) (Left Rear & Right Forward Wingwalls)



SECTION FF



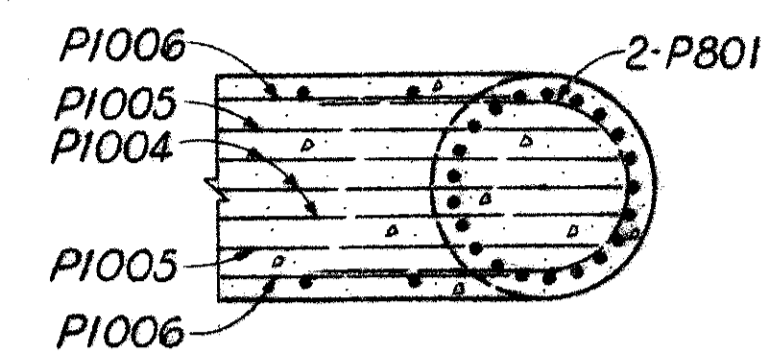
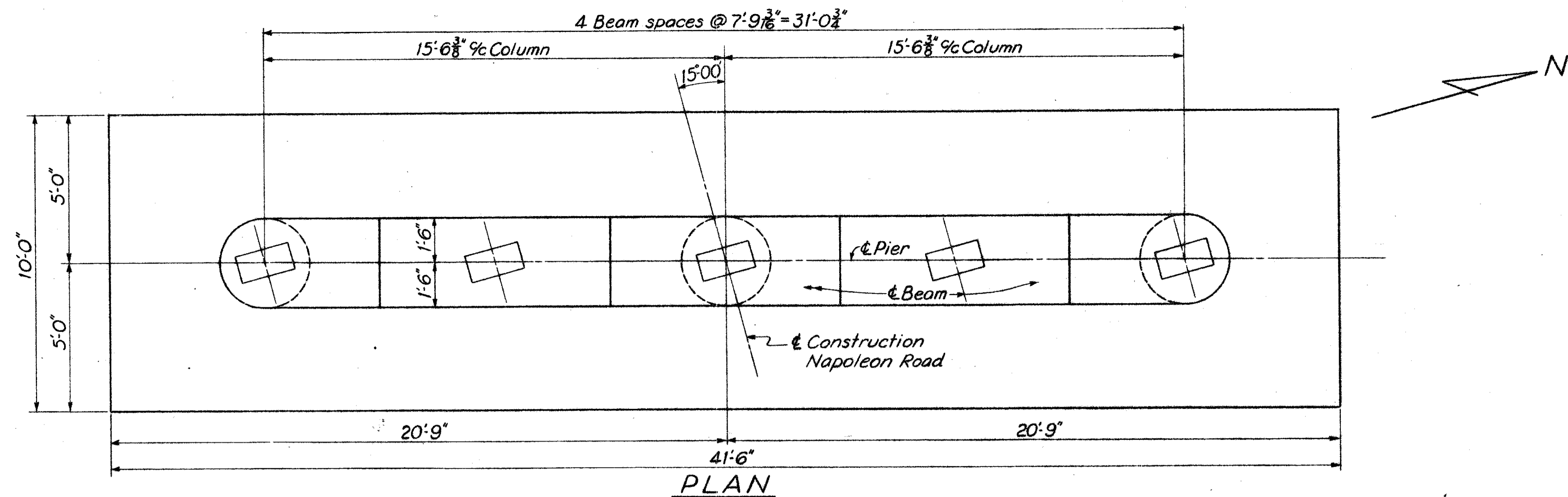
SECTION GG



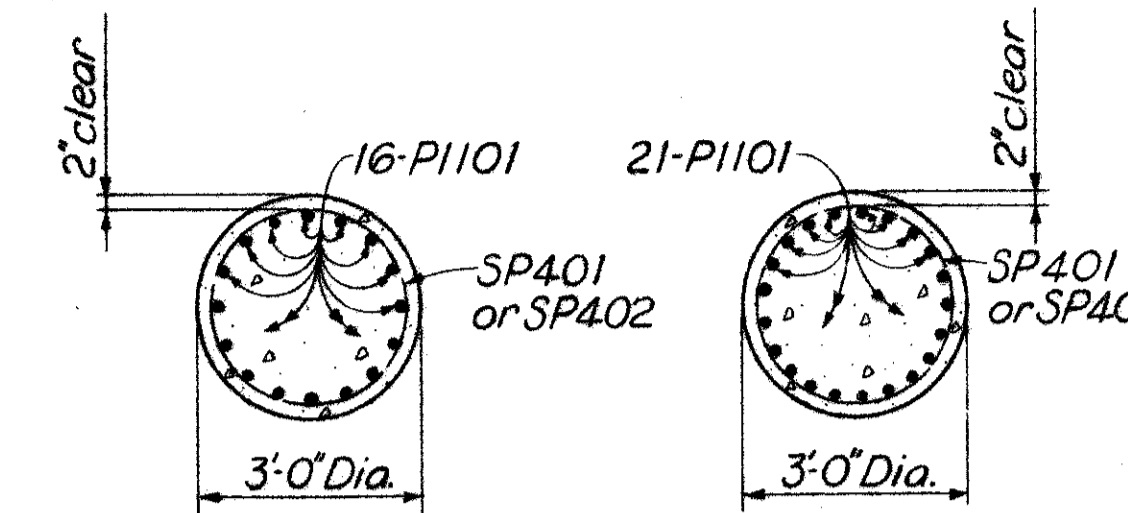
SECTION HH

SANZENBACHER, MILLER & BRIGHAM CONSULTING ENGINEERS TOLEDO, OHIO					
ABUTMENTS BRIDGE No. WOO. 75-1383 UNDER NAPOLEON ROAD WOOD COUNTY STA. 49+24.97 to STA. 52+16.63					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JHY	JHY EEH	BB	TWD	EEH	3-64 TWD 1-25-65

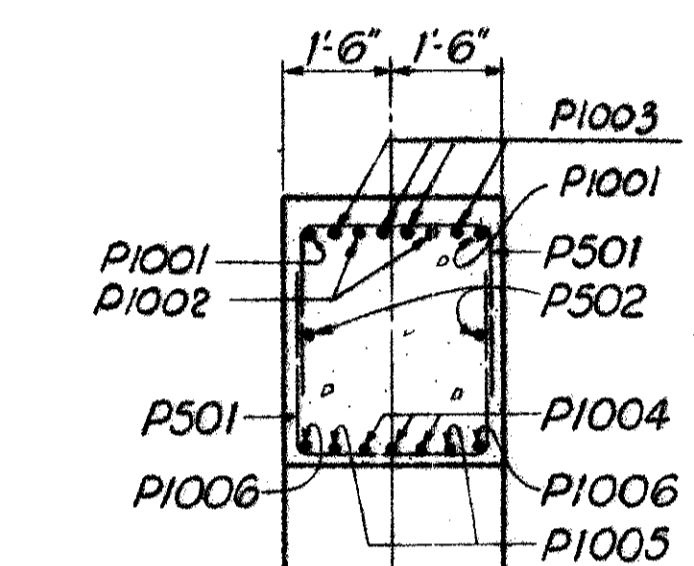
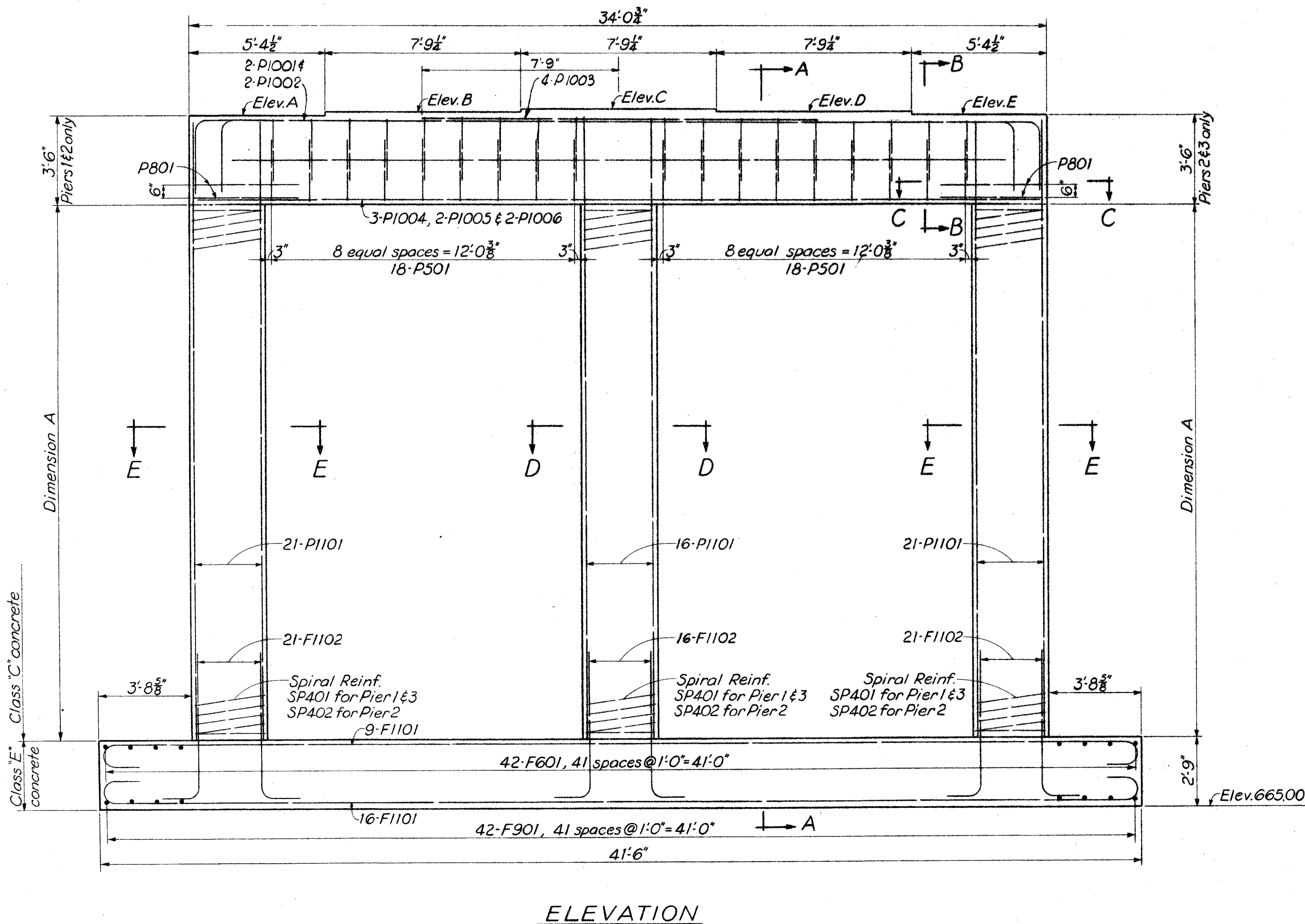
WOO.75-9.90



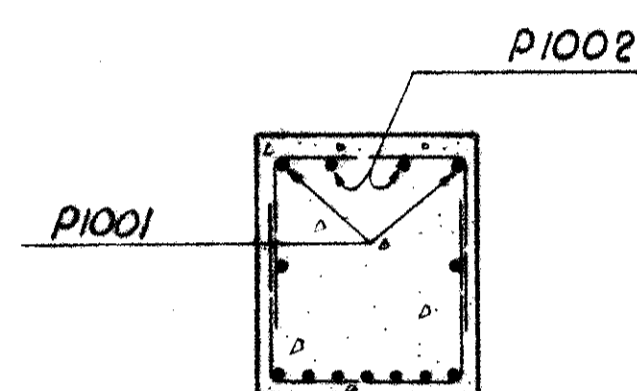
SECTION C-C



SECTION D-D SECTION E-E



SECTION A-A



Unmarked bars are same as shown in Section A-A

SECTION B-B

Pier Number	Elevations					Dimension A
	A	B	C	D	E	
1	692.60	692.73	692.86	692.75	692.64	21'-4 ¹ / ₂ "
2	692.51	692.62	692.74	692.62	692.51	21'-3 ¹ / ₈ "
3	692.64	692.75	692.86	692.73	692.60	21'-4 ¹ / ₂ "

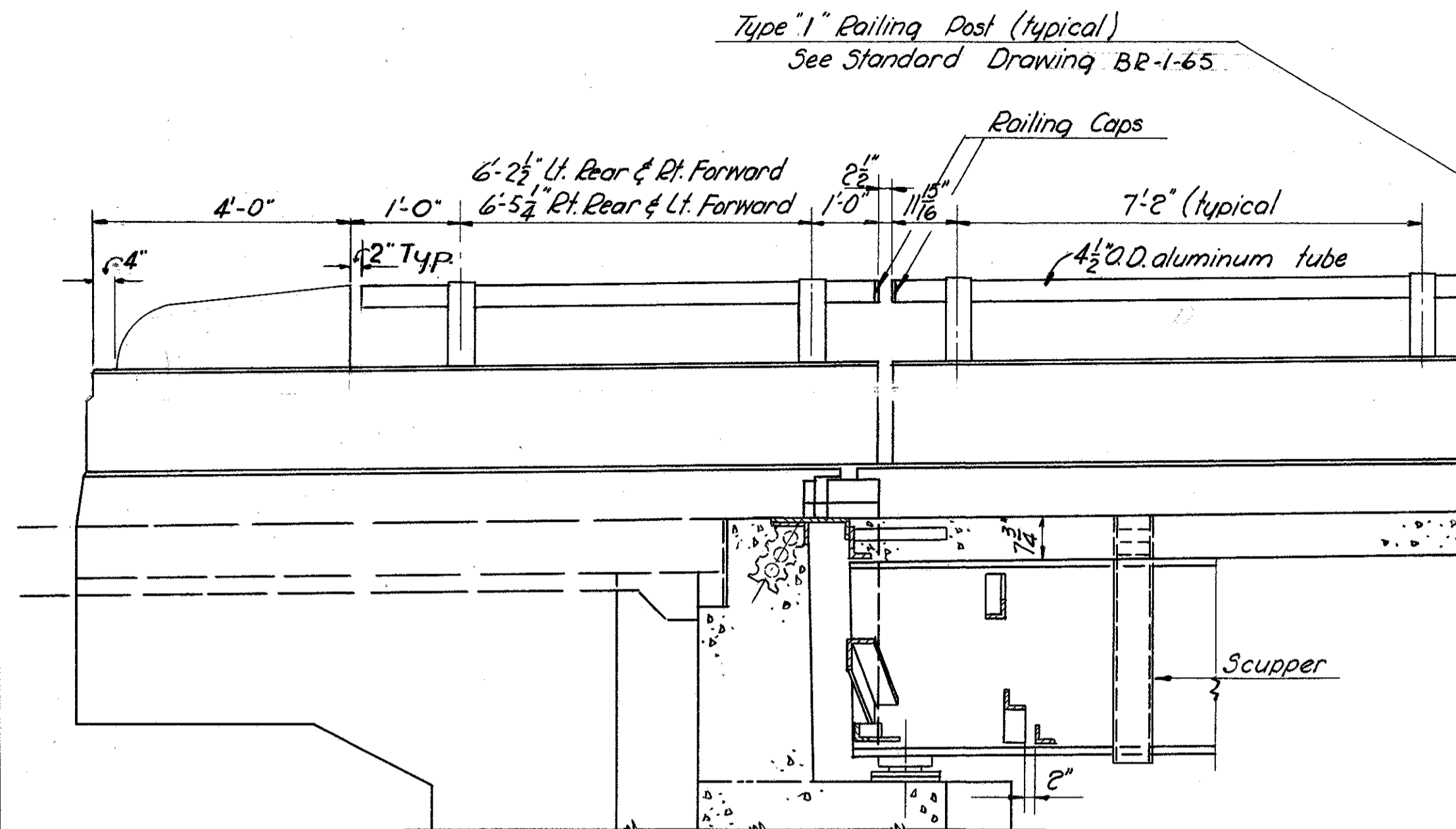
Special care shall be taken in placing reinforcing steel in the vicinity of bridge seat, so as to avoid interference with the drilling of anchor bar holes.

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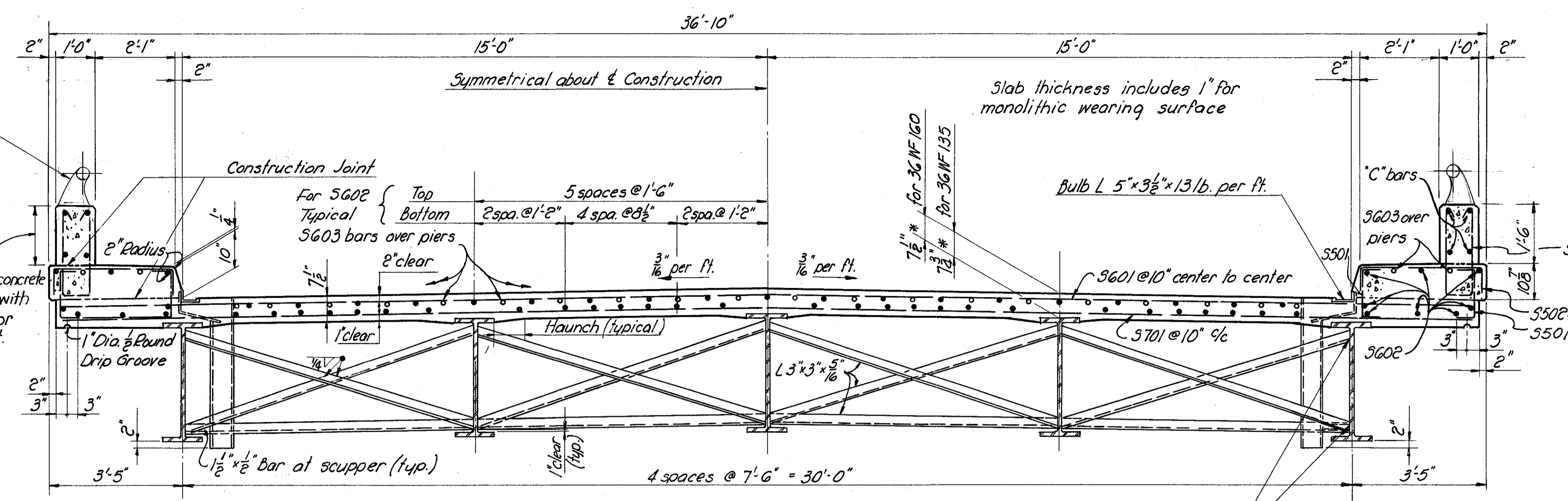
SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

PIERS
BRIDGE NO. WOO.75-1383
UNDER NAPOLEON ROAD
WOOD CO. STA. 49+24.97
To STA. 52+16.63

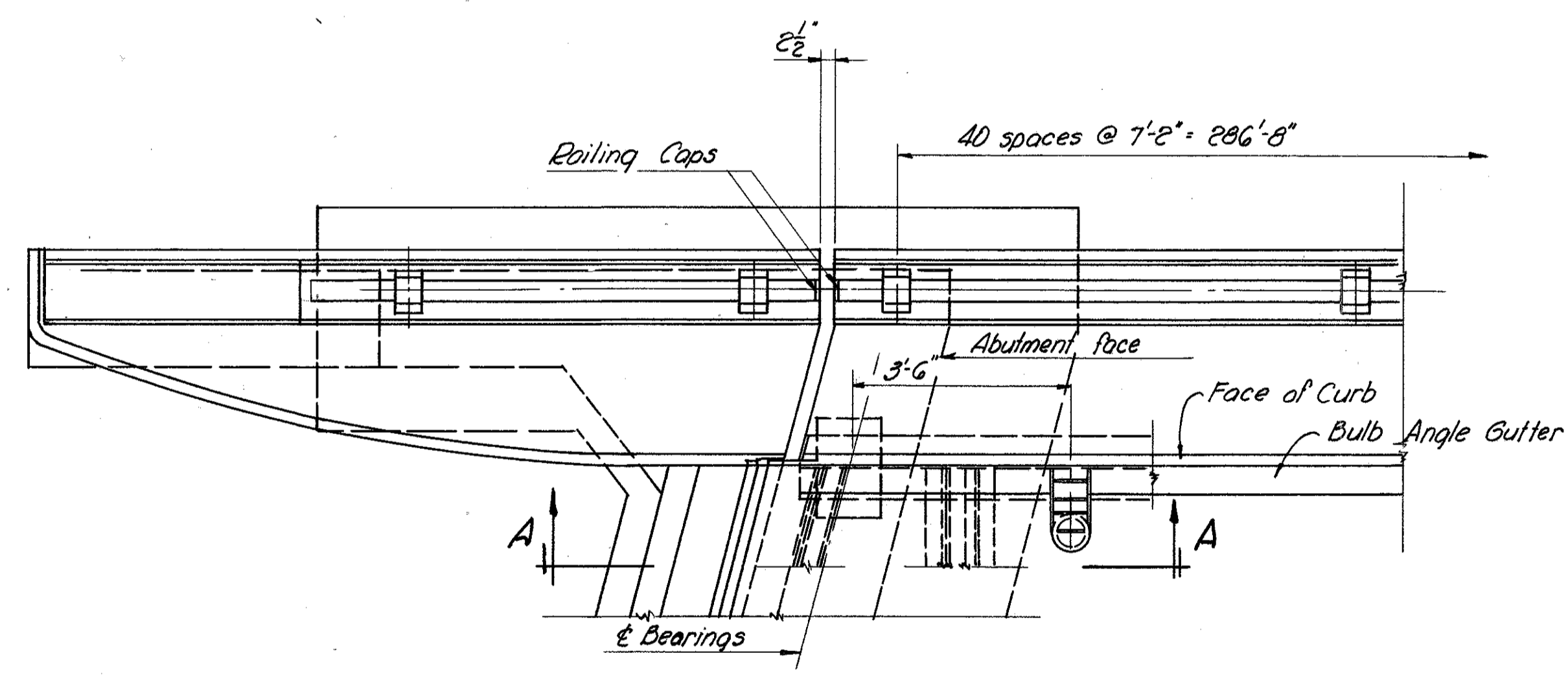
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JHY	JHY		E.E.H.	TWD	1-25-65	



SECTION AA



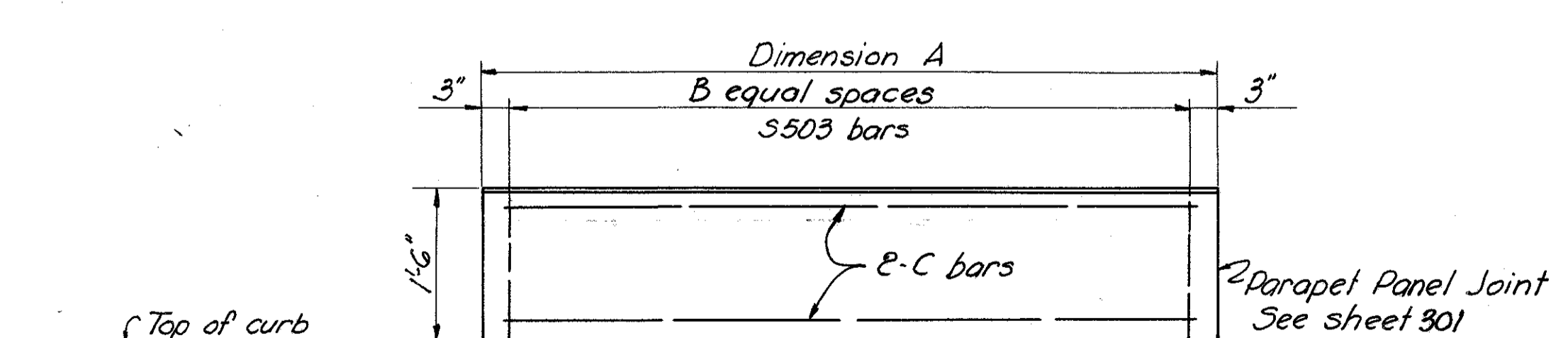
TRANSVERSE SECTION OF DECK



PLAN AT ABUTMENT

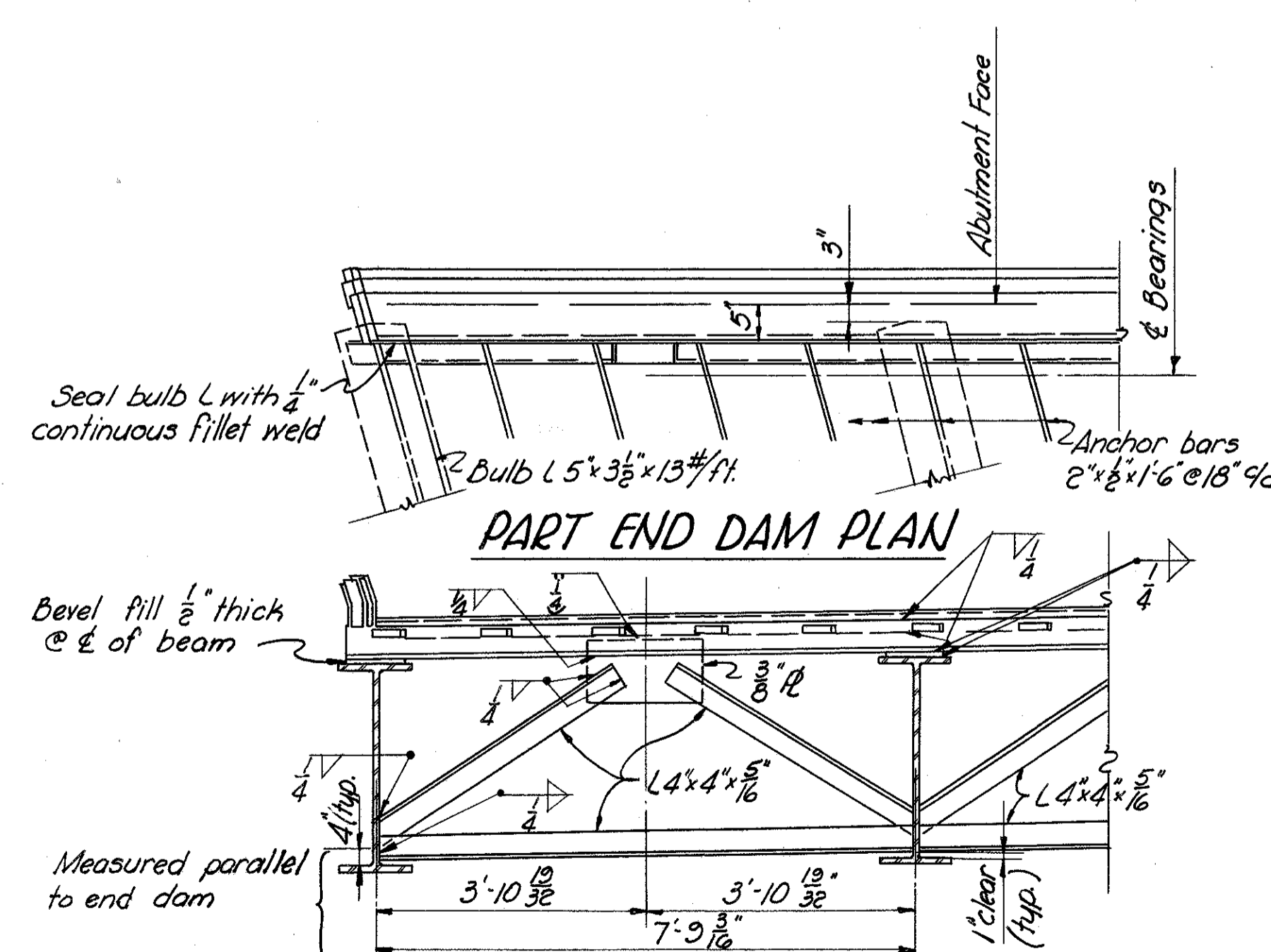
*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though, deviation from it may be necessary, because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. (Deduction shall be made for volume of encased steel plates as per Item 511.19 of the Construction and Material Specifications).

DECK SLAB HAUNCH: 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.

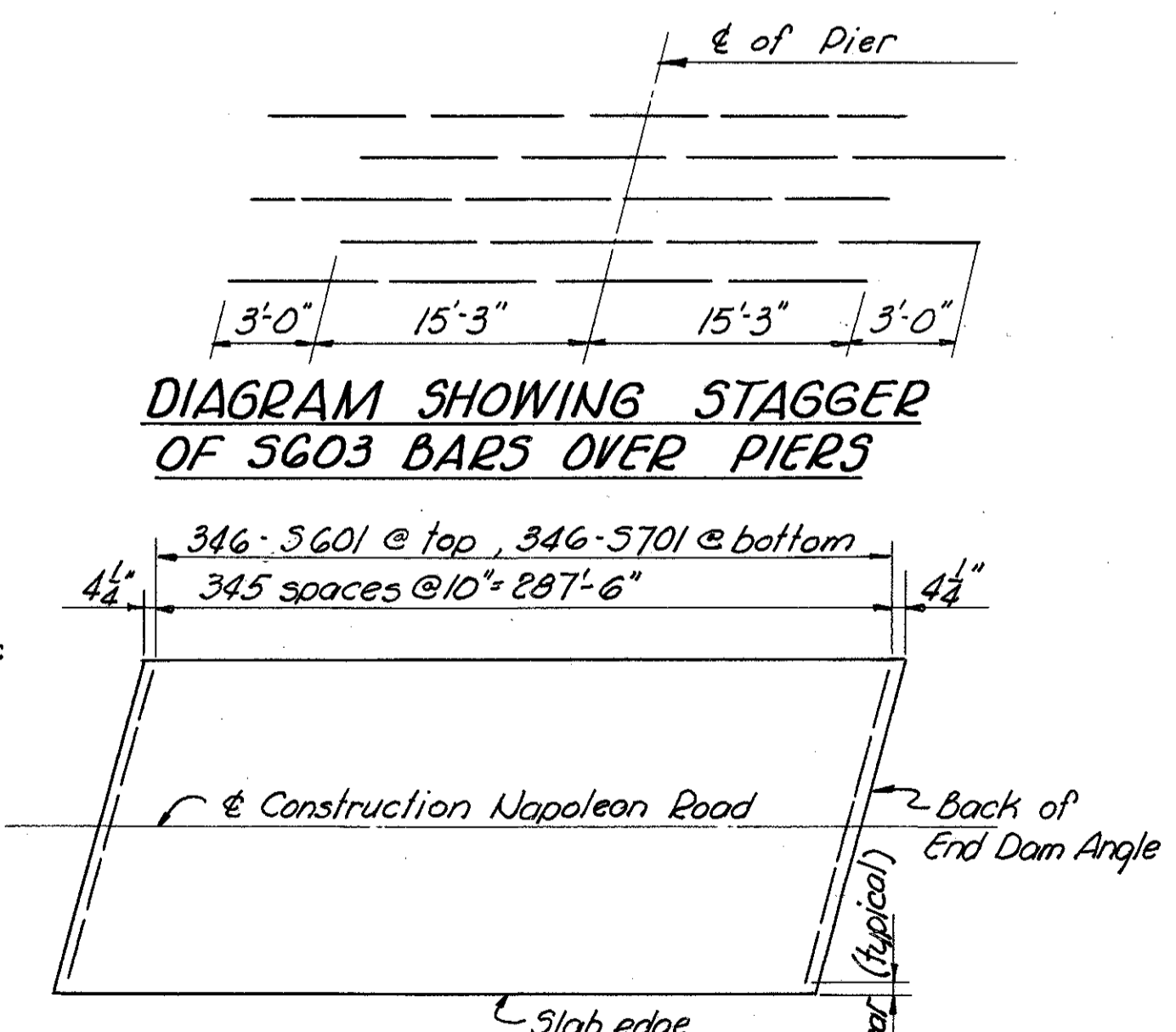


PARAPET DETAILS

	Dimension A	B spaces	C bar
Rear	11'-8 1/2"	7	TR503
Intermediate	14'-4"	9	TR504
Forward	4'-6 1/2"	3	TR505



PART END CROSSFRAME ELEVATION



SLAB TRANSVERSE REINFORCING STEEL

Refer to Standard SD-1-63 sheets 2, 3 & 4 of 4 dated 11-12-63 for the following details:
 1. Roadway End Dam (additional details)
 2. Welded Butt Joint in Superstructure End Dam Angles
 3. Scupper details
 4. Gutter Supports
 5. Curb Plate details
 Refer to Standard Drawing FSBI-62 for Fixed and Sliding Bearings.

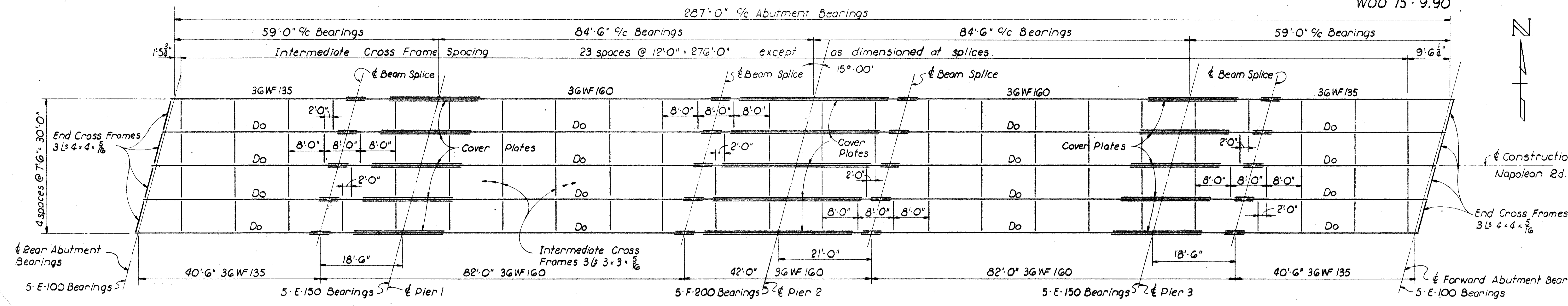
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OCT 15 1986

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CONSULTING ENGINEERS
TOLEDO, OHIO

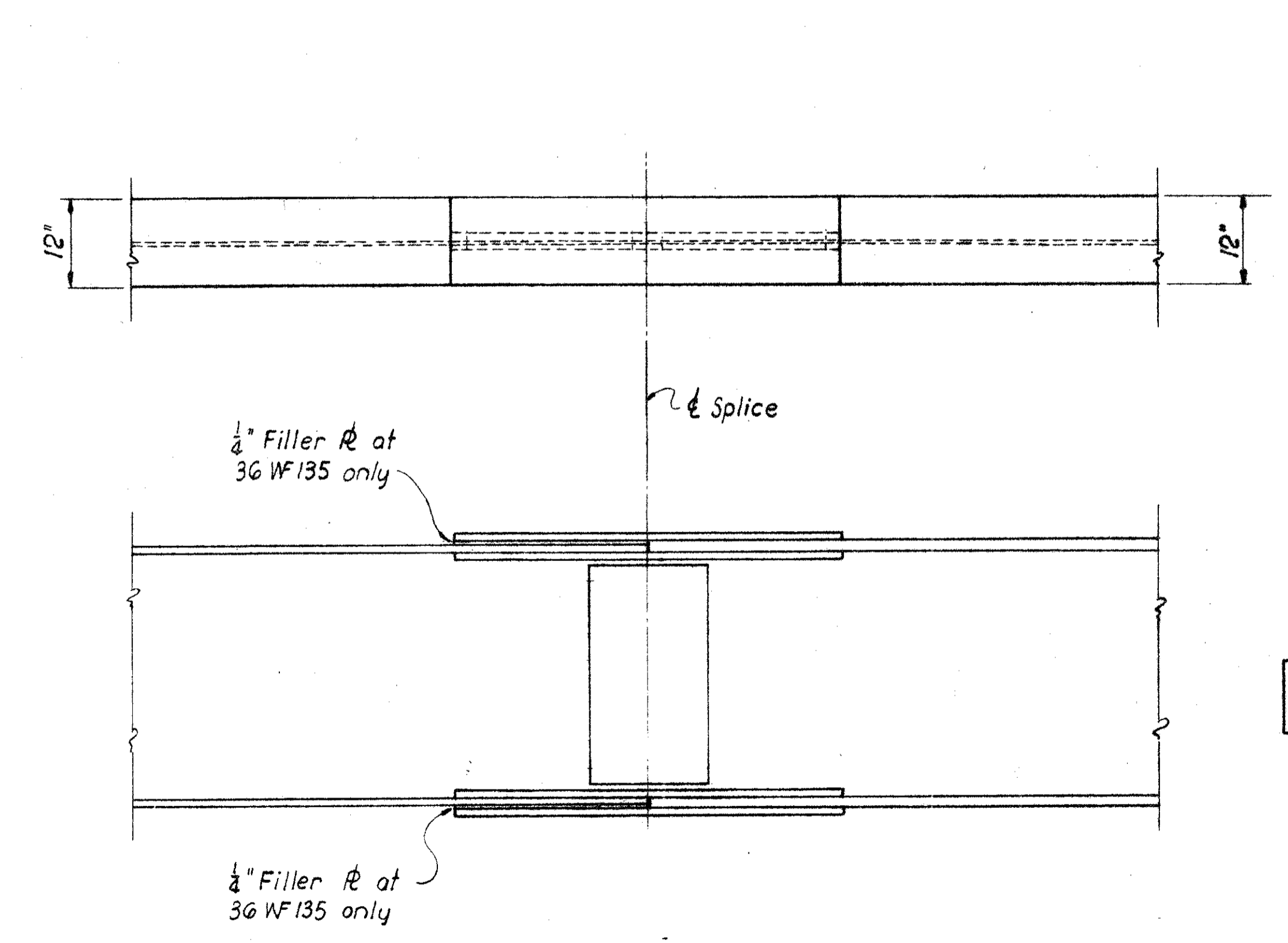
SUPERSTRUCTURE DETAILS
 BRIDGE NO. W00. 75-1383
 UNDER NAPOLEON ROAD
 WOOD COUNTY STA. 49+24.97
 to STA. 52+16.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV
EEH	EEH	B.B.	T.W.D.	JHY	3-20-64	
				TWD	1-25-65	

WOO 75 - 9.90

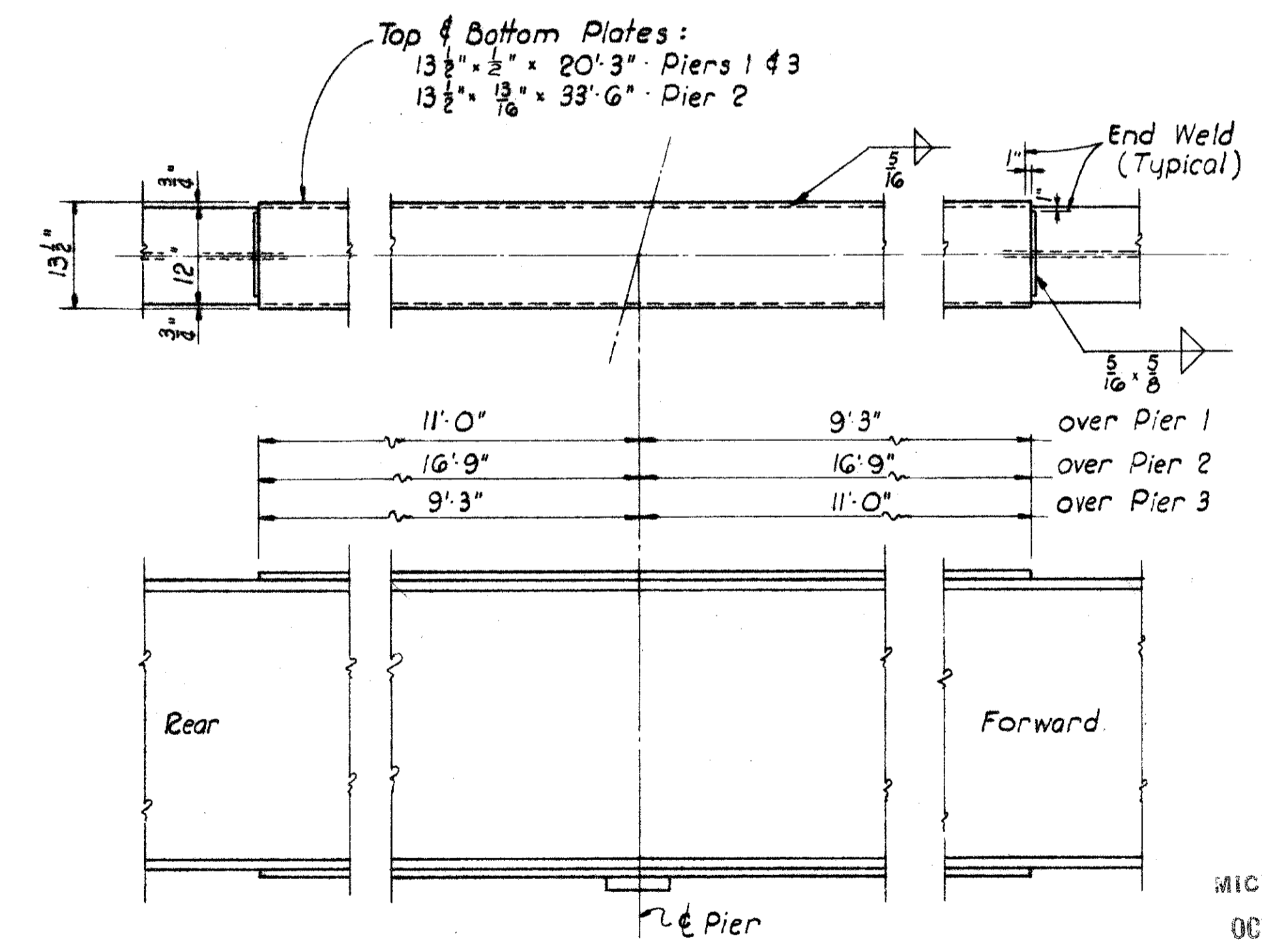


STEEL FRAMING PLAN



BEAM SPLICE DETAILS

See Standard SD-2-64 dated 11-25-64 for additional beam splice details.



COVER PLATE DETAILS

Cambering of beams shall be in accordance with the following table:

Location	59' Spans		84'6" Spans	
	Center	Splice	Center	Splice
Deflection due to weight of steel	1/16"	0	1/8"	1/16"
Deflection due to remaining dead load	1/4"	1/8"	1/2"	1/4"
Camber for Vertical Curve	5/16"	1/4"	5/8"	1/2"
Total Camber	3/8"	3/8"	1 1/4"	13/16"
Required Camber	5/8"	3/8"	1 1/4"	13/16"

SANZENBACHER, MILLER & BRIGHAM
CONSULTING ENGINEERS
TOLEDO, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. WOO 75-1383
UNDER NAPOLEON RD.
WOOD COUNTY STA. 49+24.97 to
STA. 52+16.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV.
TWD	TWD		BJH	J.M.Y.	4-27-65	

MICROFIL.
OCT 15 1986