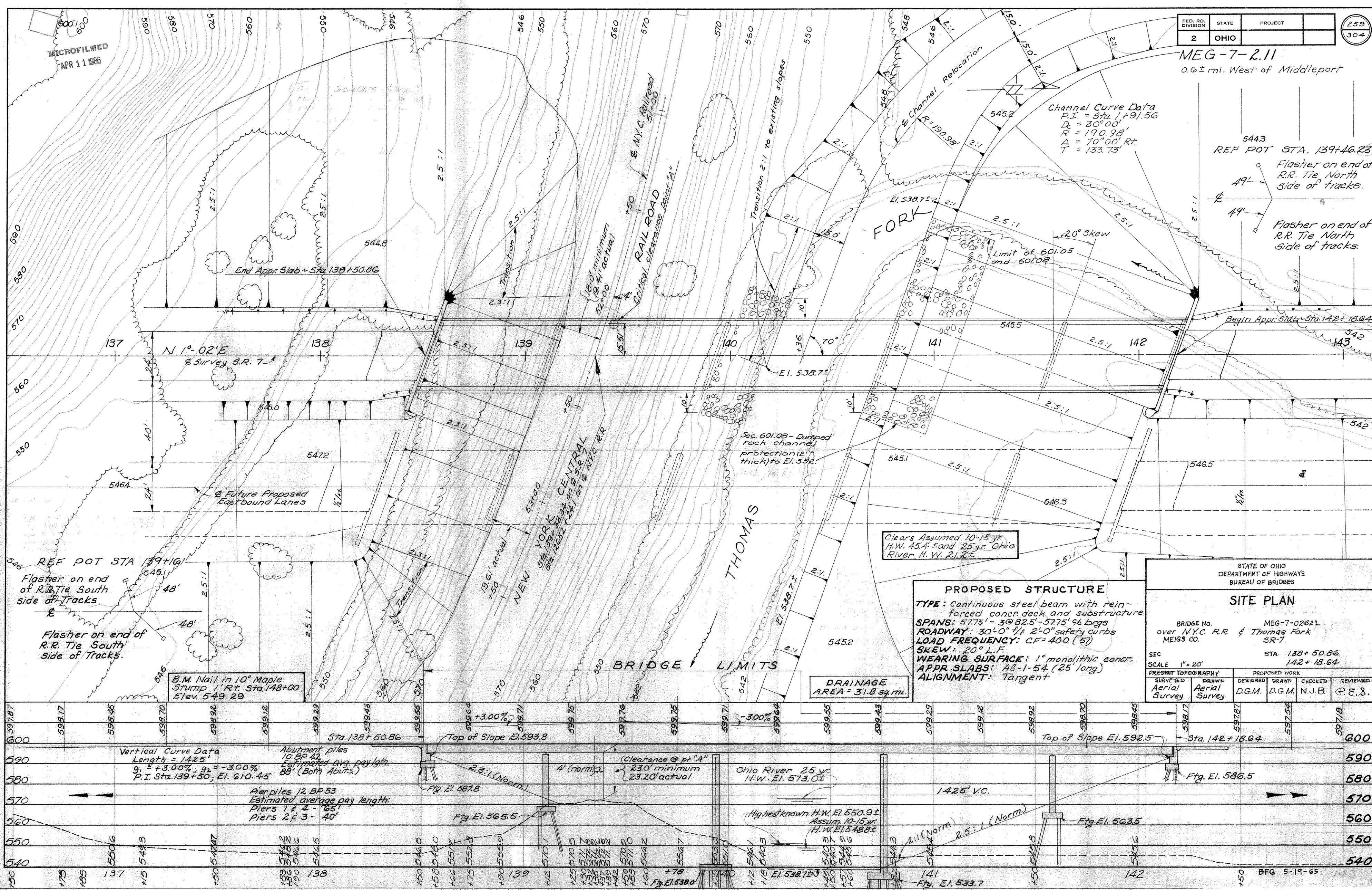
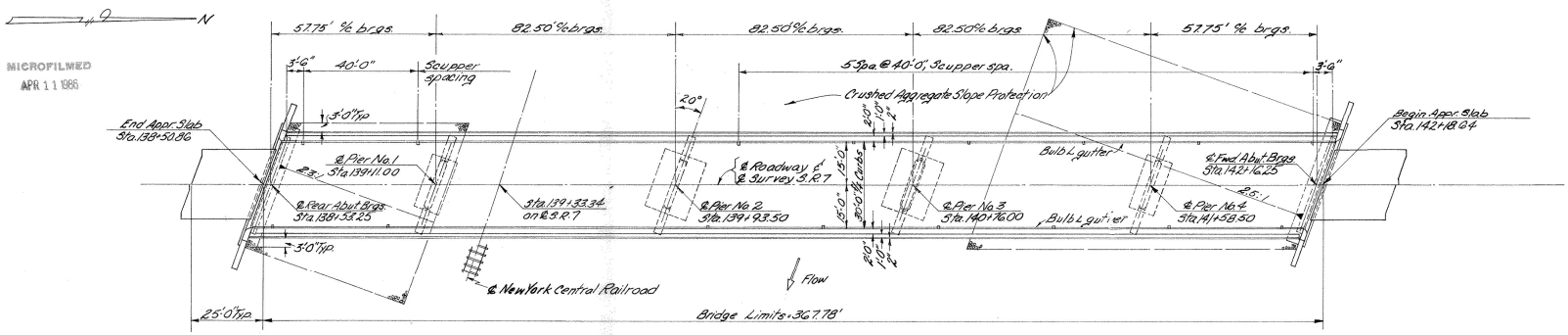

FED. RD. DIVISION 2
STATE OHIO
PROJECT
259
304
MEG-7-2.11
0.6± mi. West of Middleport
MICROFILMED APR 11 1986
Channel Curve Data
P.I. = Sta. 1+91.56
Dc = 30°00'
R = 190.98'
Δ = 70°00' Rt.
T = 133.73'
REF POT STA. 139+46.23
Flasher on end of R.R. Tie North side of tracks.
Flasher on end of R.R. Tie North side of tracks.
℄ Channel Relocation
R = 190.98'
Transition 2:1 to existing slopes
℄ N.Y.C. Railroad 51+00
RAILROAD
Critical clearance point "A"
18' minimum
19.4' actual
52+00
FORK
20° Skew
Limit of 601.05 and 601.08
El. 538.7±
End Appr. Slab ~ Sta. 138+50.86
Begin Appr. Slab ~ Sta. 142+18.64
N 1°-02'E
℄ Survey S.R. 7
Sec. 601.08 - Dumped rock channel protection (2' thick) to El. 552.
℄ Future Proposed Eastbound Lanes
NEW YORK CENTRAL
Sta. 139+33.34 on ℄ S.R. 7
Sta. 12652+24.1 on ℄ N.Y.C. R.R.
19.61 actual
THOMAS
Clears Assumed 10-15 yr. H.W. 45.4'± and 25 yr. Ohio River H.W. 21.2'±
REF POT STA 139+16
Flasher on end of R.R. Tie South side of Tracks
Flasher on end of R.R. Tie South side of Tracks.
BRIDGE LIMITS
B.M. Nail in 10" Maple Stump 1' Rt. Sta. 148+00 Elev. 549.29
DRAINAGE AREA = 31.8 sq. mi.
PROPOSED STRUCTURE
TYPE: Continuous steel beam with reinforced concr. deck and substructure
SPANS: 57.75' - 3@82.5' - 57.75' c/c brgs
ROADWAY: 30'-0" f/f 2'-0" safety curbs
LOAD FREQUENCY: CF = 400 (57)
SKEW: 20° L.F.
WEARING SURFACE: 1" monolithic concr.
APPR. SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
SITE PLAN
BRIDGE NO. MEG-7-0262L
over N.Y.C. R.R. & Thomas Fork
MEIGS CO. SR-7
SEC
STA. 138+50.86
142+18.64
SCALE 1" = 20'
PRESENT TOPOGRAPHY
SURVEYED Aerial Survey
DRAWN Aerial Survey
PROPOSED WORK
DESIGNED D.G.M.
DRAWN D.G.M.
CHECKED N.J.B.
REVIEWED P.E.S.
+3.00%
-3.00%
Sta. 138+50.86
Top of Slope El. 593.8
Top of Slope El. 592.5
Sta. 142+18.64
Vertical Curve Data
Length = 1425'
g1 = +3.00%; g2 = -3.00%
P.I. Sta. 139+50; El. 610.45
Abutment piles
10 BP 42
Estimated avg. pay lgth.
88' (Both Abuts.)
2.3:1 (Norm.)
Ftg. El. 587.8
4' (norm.)
Clearance @ pt "A"
23.0' minimum
23.20' actual
Ohio River 25 yr. H.W. El. 573.0±
1425' V.C.
Pier piles 12 BP 53
Estimated average pay length:
Piers 1 & 4 - 65'
Piers 2 & 3 - 40'
Ftg. El. 565.5
Highest known H.W. El. 550.9±
Assum. 10-15 yr. H.W. El. 548.8±
2:1 (Norm.)
2.5:1 (Norm.)
Ftg. El. 563.5
Ftg. El. 586.5
Ftg. El. 538.0
El. 538.7±
Ftg. El. 533.7
BFG 5-19-65

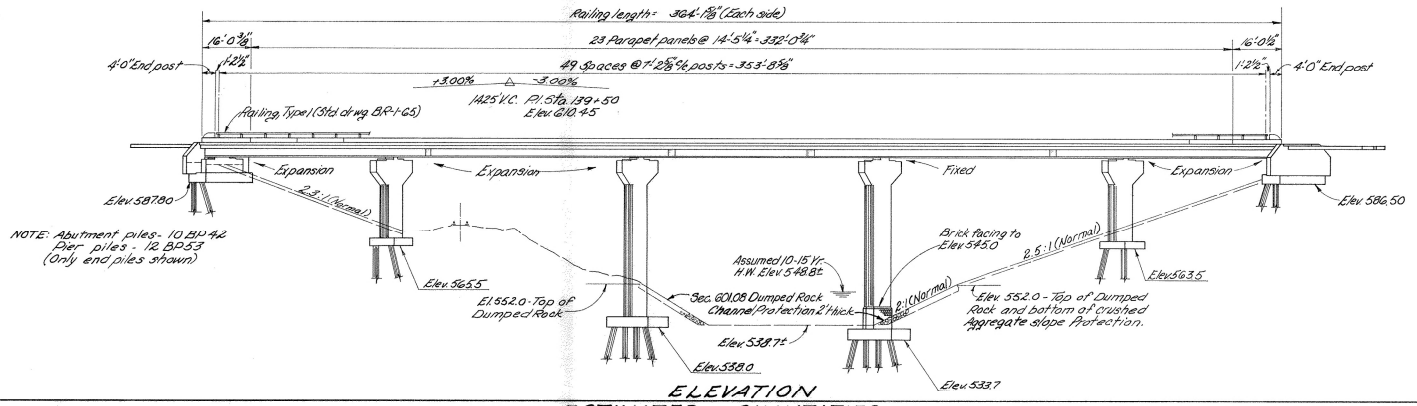
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

650
304

MEG-7-2.11



PLAN



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts	Piers	Super.	Genl.	As Built		Item	Total	Unit	Description	Abuts	Piers	Super.	Genl.	As Built	
503	Lump	Sum	Coffer dams, cribs and sheeting				Lump			518	30	Cu. Yds.	Porous Backfill	30					
503	629	Cu. Yd.	Unclassified excavation	203	426					518	70	Lin. Ft.	6" Helical C.M.P., Sec. 707.06, perforated, incl. specials	70					
										518	53	Lin. Ft.	6" Helical C.M.P., Sec. 707.06, non perforated	53					
										518	16	Each	Scuppers, including supports			16			
511	418	Cu. Yd.	Class "C" concrete, superstructure			418													
511	335	Cu. Yd.	Class "C" concrete, piers above footings		335					601	1135	Sq. Yd.	Crushed aggregate slope protection				1135		
511	84	Cu. Yd.	Class "E" concrete, abutments above footings	84															
511	179	Cu. Yd.	Class "E" concrete, footings	65	114														
509	149,123	Lb.	Reinforcing steel	8,839	30,837	109,447				808	418	Each	Water-reducing, set-retarding admixture			418			
513	402,000	Lb.	Structural steel			402,000													
514	402,000	Lb.	Field painting of structural steel			402,000													
517	728.27	Lin. Ft.	Railing, type I			728.27													
505	Lump	Sum	First test pile		Lump														
507	3,800	Lin. Ft.	Steel piles, 12 BP 53		3800														
507	1,940	Lin. Ft.	Steel piles, 10 BP 42	1,940															

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN, ELEVATION ESTIMATED QUANTITIES

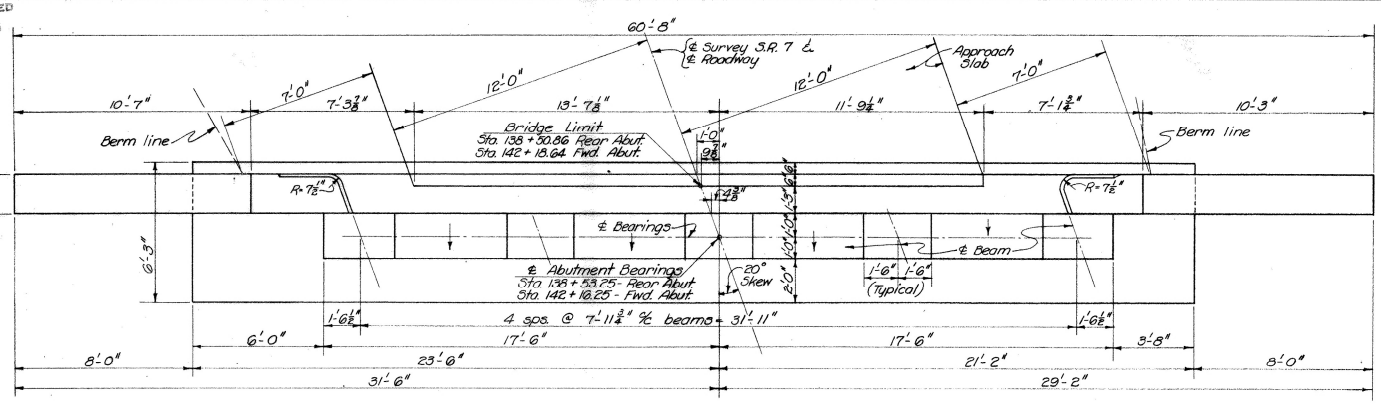
BRIDGE NO. MEG-7-02G2.L
OVER N.Y.C.R.R. THOMAS FORK
Sta. 138+50.86
142+18.64
MEIGS COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	JFS		FNE	BFG	5-19-65	

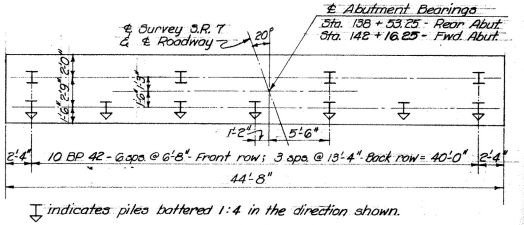
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

261
340

MEG-7-2.11

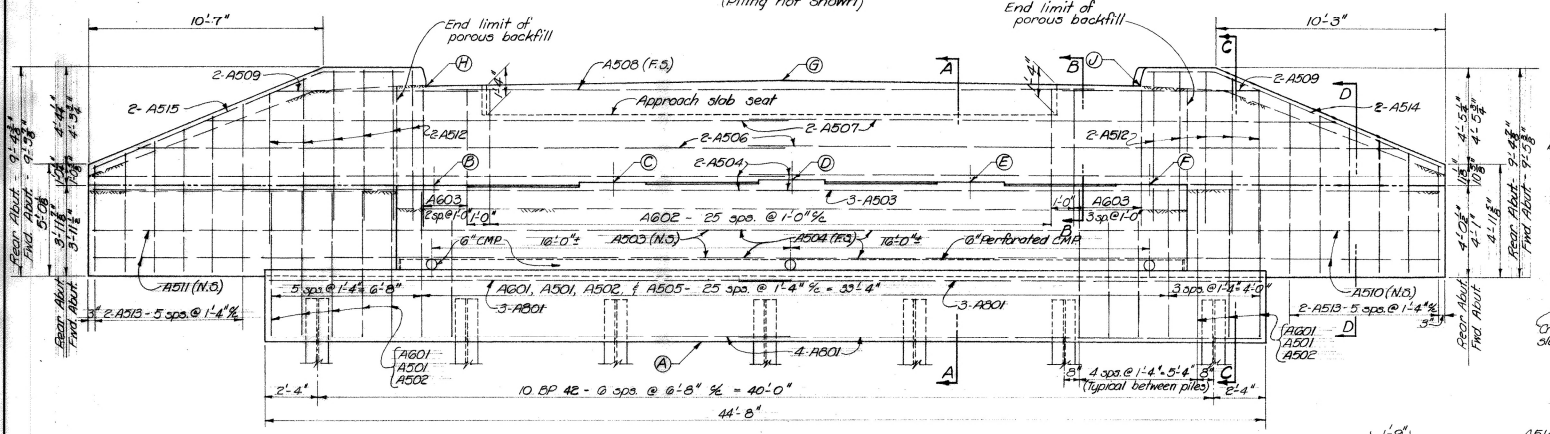


PLAN
(Piling not shown)



I indicates piles battered 1:4 in the direction shown.

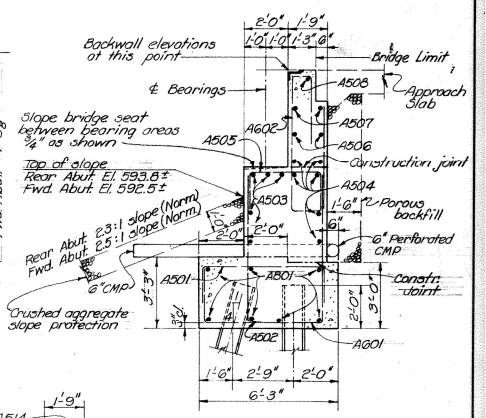
PILING PLAN



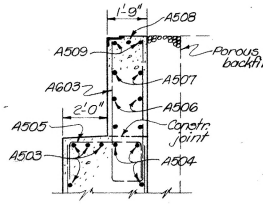
NOTE: N.S. denotes Near Side
F.S. denotes Far Side

ELEVATION

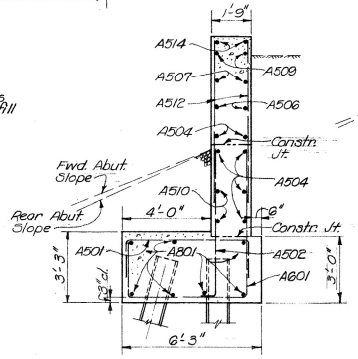
ELEVATIONS								
	A	B	C	D	E	F	G	H	J
Rear Abutment	587.80	594.79	594.92	595.05	594.94	594.84	599.56	599.31	599.35
Forward Abutment	586.50	593.46	593.61	593.76	593.67	593.58	598.26	597.96	598.09



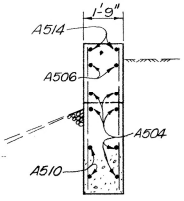
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

3

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS

BRIDGE NO. MEG-7-0262 L
OVER N.Y.C. R.R. AND THOMAS FORK
MEIGS COUNTY STA. 138+50.86
142+18.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		TWR	BFG	5-19-65	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

252
804

MEG-7-2.11

ELEVATIONS						
	A	B	C	D	E	F
Pier No. 1	565.50	594.49	594.60	594.71	594.59	594.47
Pier No. 4	563.50	593.55	593.69	593.83	593.74	593.64

PLAN

ELEVATION

SECTION A-A

SECTION B-B

SECTION C-C

Batter all piles on interior span side of Pier #4

Batter all piles on interior span side of Pier #1.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

DETAILS OF PIER NO. 1 & PIER NO. 4

BRIDGE NO. MEG-7-0862L
OVER N.Y.C. R.R. AND THOMAS FORK
MEIGS COUNTY STA. 138 + 50.86
142 + 18.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		FHR	BFG	5-19-65	

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

263
304

MEG-7-2.11

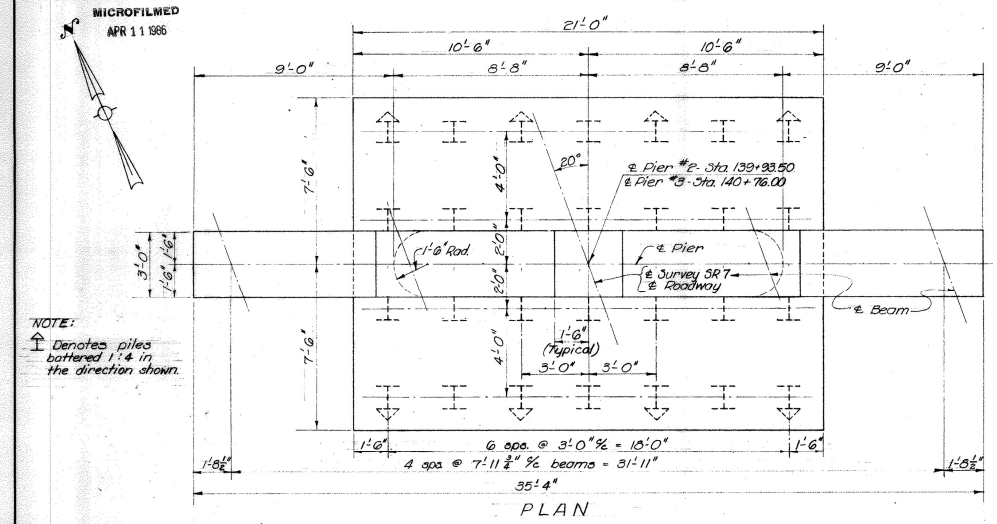
NOTES FOR PIER NO. 3
CARE shall be taken in placing reinforcing steel in the cap so it won't interfere with the drilling of anchor bolt holes.

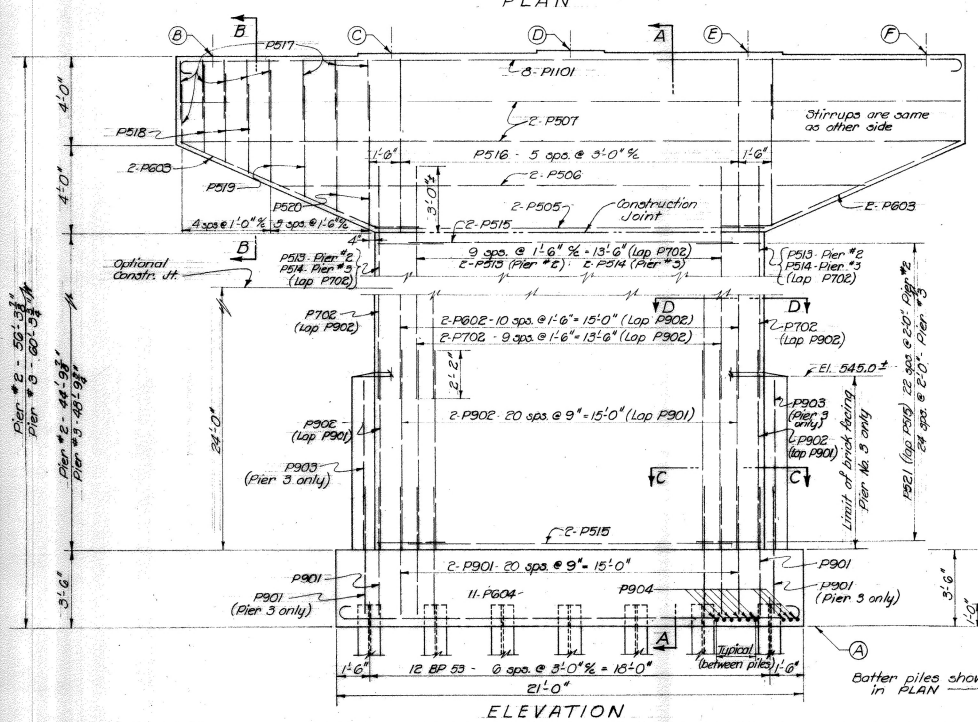
FACING BRICKS shall be clay and burned. They shall meet the Specifications of Section 704.01. The mortar used shall be acid and caustic resistant, Alkor Lehigh Cement, Aluminate Cement or approved equal. Top of brick to be sealed with mortar and sloped to drain.

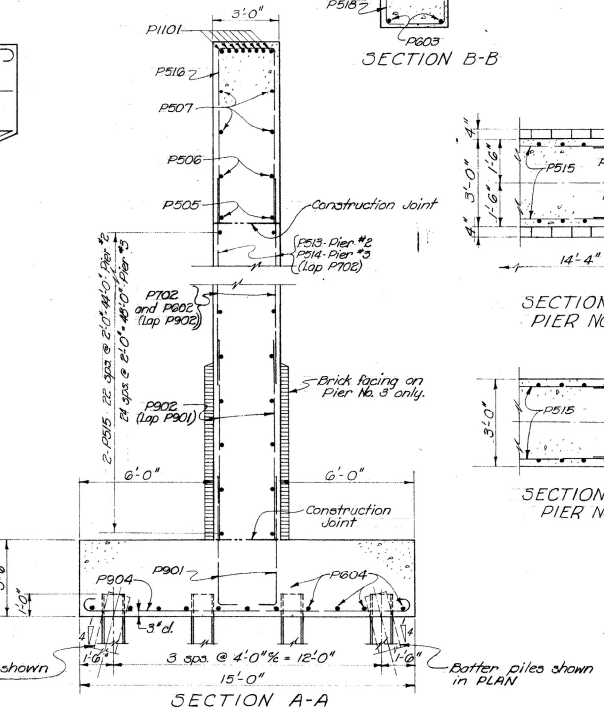
BRICK TIES: Dovetail anchor slots 2" wide at the base, and 3/16" thick dovetail anchors shall be used to fasten the brick facing to the piers. The anchor slot forms shall be felt filled and placed vertical on 18" centers. They shall be fastened with nails to the inside of the forms. The anchors shall be placed every fourth course of brick. These anchors and anchor slots shall be included in the bid price for brick facing for payment. They shall be of the type manufactured by Hohman & Barnard Inc. or by Dayton Sure-Grip & Store Co. or approved equal. The Contractor shall furnish plans showing location of Dovetail Anchor Slots and Dovetail Anchors to the Engineer for approval prior to pouring the pier stem.

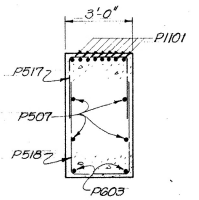
NOTE:
Denotes piles battered 1:4 in the direction shown.

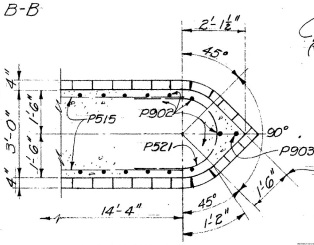
ELEVATIONS						
	A	B	C	D	E	F
Pier No. 2	538.00	594.32	594.45	594.57	594.46	594.34
Pier No. 3	533.70	594.01	594.14	594.27	594.17	594.07

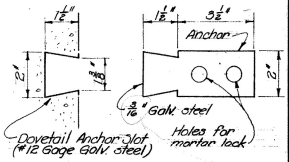


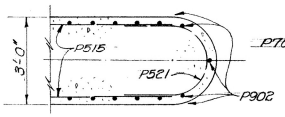


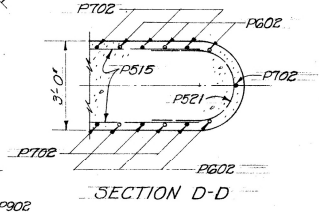












STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

DETAILS OF PIER NO. 2 & PIER NO. 3

BRIDGE NO. MEG-7-0262 L.
OVER N.Y.C. R.R. AND THOMAS FORK
MEIGS COUNTY STA. 138 + 50.86 ℄
14℄ + 18.64

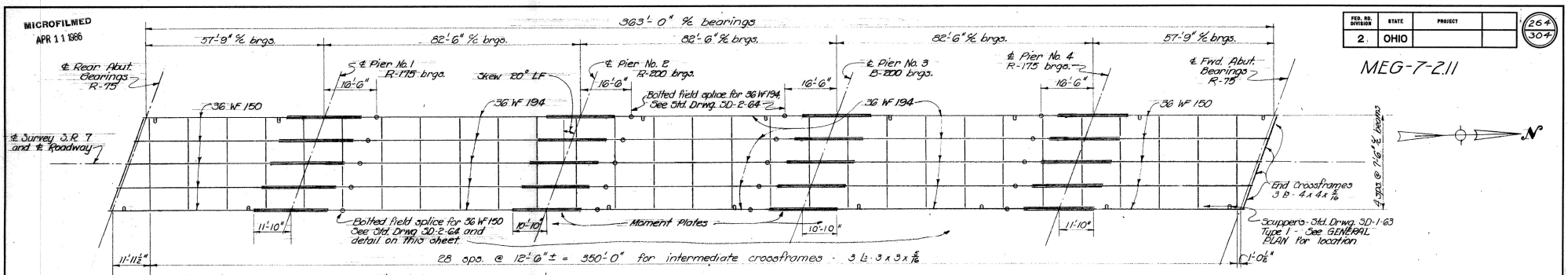
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		F-W-R	BFG	5-19-65	

MICROFILMED
APR 11 1986

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

264
304

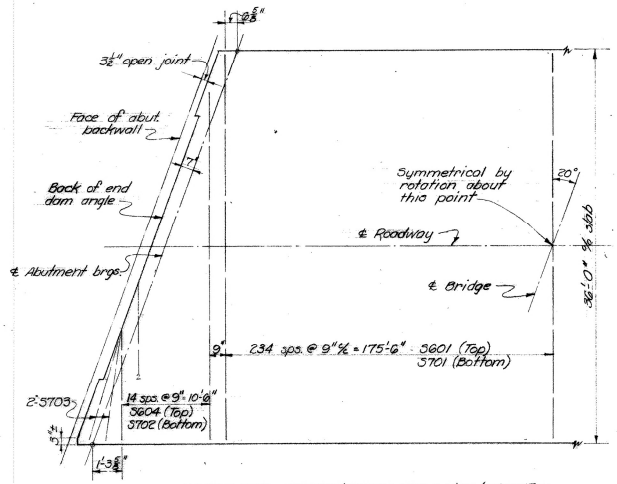
MEG-7-2.11



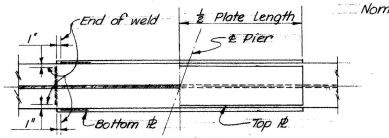
FRAMING PLAN

	Rear Abut. Brgs.	℄ Span 1	Pier No. 1	Splice Pt.	℄ Span 2	Pier No. 2	Splice Pt.	℄ Span 3	Splice Pt.	Pier No. 3	℄ Span 4	Splice Pt.	Pier No. 4	℄ Span 5	Fwd. Abut. Brgs.	OFFSET FROM BASE LINE
	0	.04"	0	.08"	.15"	0	.09"	.10"	.09"	0	.15"	.08"	0	.04"	0	Due to weight of steel
+	0	.23"	0	.26"	.58"	0	.14"	.42"	.14"	0	.58"	.26"	0	.23"	0	Due to remaining dead load
	0	2.44"	4.45"	5.42"	6.60"	7.89"	8.17"	8.32"	8.17"	7.89"	6.60"	5.42"	4.45"	2.44"	0	Due to vertical curve
=	0	2.71"	4.45"	5.76"	7.33"	7.89"	8.34"	8.84"	8.34"	7.89"	7.33"	5.76"	4.45"	2.71"	0	TOTAL OFFSET

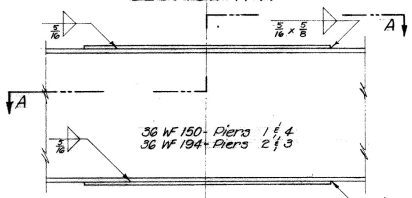
CAMBER DIAGRAM AND BULB ANGLE GUTTER ELEVATIONS



PART PLAN OF TRANSVERSE DECK REINFORCING

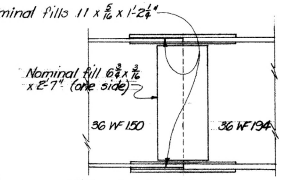


SECTION A-A



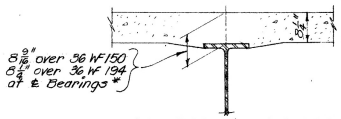
LOCATION	TOP 1/2	BOTTOM 1/2
Piers No. 1 & No. 4	10 1/2 x 3/4 x 23'-8"	13 1/2 x 9/16 x 23'-8"
Piers No. 2 & No. 3	10 1/2 x 7/16 x 21'-8"	13 1/2 x 5/8 x 21'-8"

MOMENT PLATE DETAIL



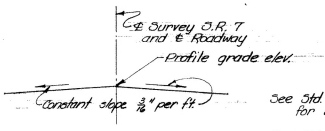
Additional splice details are shown on Std. Drwg. SD-2-64

NOMINAL FILLS FOR BOLTED FIELD SPLICES



SLAB DEPTH OVER BEAMS

TRANSVERSE SECTION OF SUPERSTRUCTURE shall be as shown on Std. Drwg. CSB-4-63, sheet 4, except slab depth over beams and parapet and railing details. Parapet and railing details shall be as shown on BR-1-65 sheet 1.



BRIDGE ROADWAY PROFILE

*The quantity of deck concrete to be paid for shall be based on this dimension, although deviation from it may be necessary because the top flange of the beam may not have the exact camber required to place it parallel to the finished grade.

See Std. Drwg. CSB-4-63, sheets 1 & 4, for deck details.

See Std. Drwg. BR-1-65, sheet 1, for end post, parapet and Type 1 railing details.

See Std. Drwg. RB-1-55 for details of rockers and bolsters.

See Std. Drwg. SD-1-63, sheets 2, 3 & 4, for details of:
- Interior and end crossframes
- End dams
- Gutters and scuppers
- Curb plates

See Std. Drwg. SD-2-64 for bolted field splice details.

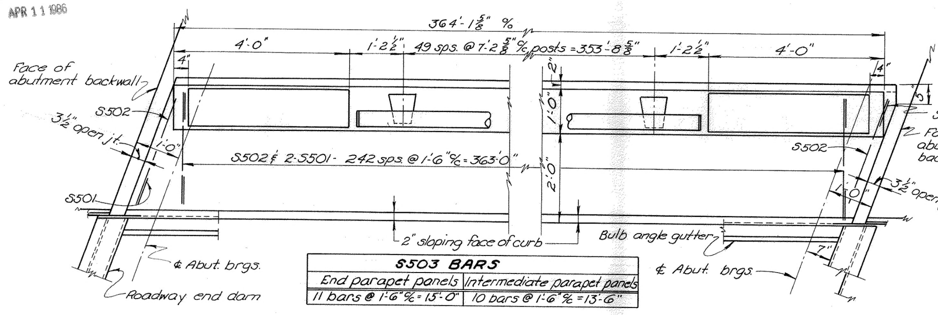
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE NO. MEG-7-0262 L
OVER N.Y.C. R.R. AND THOMAS FORK
MEIGS COUNTY STA 138 + 50.86
142 + 18.04

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA		[illegible]	BFG	5-19-65	

MEG-7-2.11



S503 BARS	
End parapet panels	Intermediate parapet panels
11 bars @ 1'-6" % = 15'-0"	10 bars @ 1'-6" % = 13'-6"

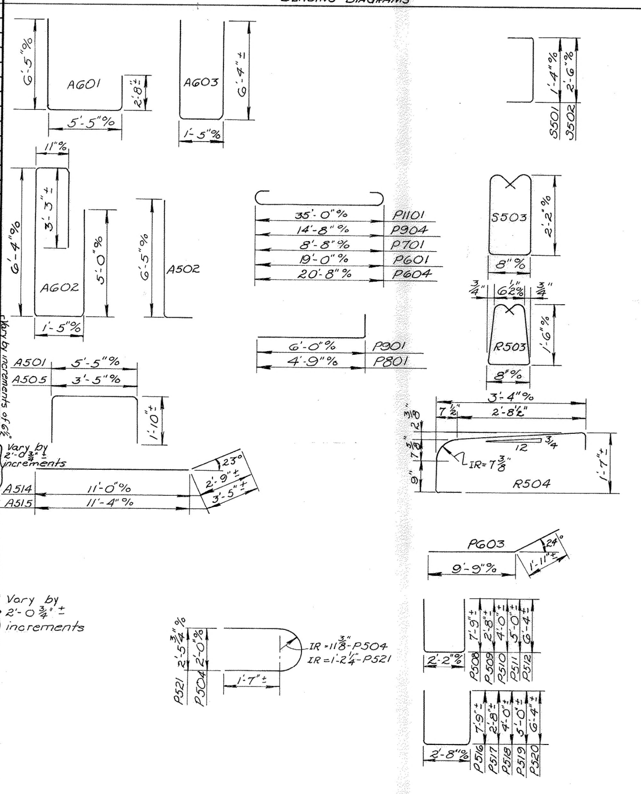
PART PLAN OF SUPERSTRUCTURE AT ABUTMENTS

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.
Abutments				
A801	28	23'-5"	1751	S
A601	68	14'-2"	1447	B
A602	52	16'-3"	1269	B
A603	14	13'-9"	289	B
A501	68	8'-10"	626	B
A502	68	6'-11"	491	B
A503	10	34'-8"	362	S
A504	24	31'-0"	776	S
A505	52	6'-10"	371	B
A506	8	29'-3"	244	S
A507	8	26'-6"	221	S
A508	2	28'-6"	59	S
A509	8	9'-2"	76	S
A510	4	13'-3"	55	S
A511	4	15'-7"	65	S
A512	44	7'-0"	321	S
	8	4'-7"		
A513	Series of	to	297	S
	6	7'-3 1/2"		
A514	4	13'-9"	57	B
A515	4	14'-9"	62	B
Superstructure				
S701	469	35'-8"	34,191	S
	2	5'-1"		
S702	Series of	to	1,196	S
	15	33'-11"		
S703	8	5'-1"	83	S
S601	469	35'-8"	25,125	S
S602	630	38'-2"	36,116	S
S603	96	33'-0"	4,758	S
	2	5'-1"		
S604	Series of	to	879	S
	15	33'-11"		
S501	976	2'-4"	2375	B
S502	490	3'-6"	1789	B
S503	504	5'-7"	2935	B
R501	184	14'-1"	included with railing for payment	S
R502	16	15'-8"		S
R503	12	4'-2"		B
R504	8	5'-4"		B

A513: Vary by increments of 6 1/2"
S702: Vary by 2'-0 3/4" ± increments
S604: Vary by 2'-0 3/4" ± increments

BENDING DIAGRAMS



Mark	No.	Length	Weight	Shp.	No. Piers 1 & 4	No. Piers 2 & 3
Piers						
P1101	30	38'-2"	6083	B	14	16
P901	90	7'-0"	2142	B	-	90
P902	88	8'-10"	2643	S	-	88
P903	2	7'-6"	51	S	-	2
P904	84	17'-2"	4903	B	-	84
P801	64	5'-8"	968	B	64	-
P802	28	12'-0"	897	S	28	-
P701	82	10'-4"	1732	B	82	-
P702	44	19'-4"	1739	S	-	44
P601	14	20'-4"	428	B	14	-
P602	44	8'-0"	529	S	-	44
P603	16	11'-8"	280	B	8	8
P604	22	22'-0"	727	B	-	22
P501	40	14'-10"	619	S	40	-
P502	18	20'-6"	385	S	18	-
P503	18	21'-6"	404	S	18	-
P504	40	6'-3"	261	B	40	-
P505	8	17'-3"	144	S	4	4
P506	8	25'-8"	214	S	4	4
P507	16	35'-0"	584	S	8	8
P508	16	17'-5"	291	B	16	-
P509	36	7'-3"	272	B	36	-
P510	12	9'-11"	124	B	12	-
P511	8	11'-11"	99	B	8	-
P512	8	14'-7"	122	B	8	-
P513	22	24'-0"	551	S	-	22
P514	22	28'-0"	642	S	-	22
P515	96	14'-4"	1435	S	-	96
P516	12	17'-11"	224	B	-	12
P517	36	7'-9"	291	B	-	36
P518	12	10'-5"	130	B	-	12
P519	8	12'-5"	104	B	-	8
P520	8	15'-1"	126	B	-	8
P521	96	6'-11"	693	B	-	96

REPLACEMENT STEEL

Mark	No.	Length	Weight	Shp.
RE1100	1	7'-6"	—	S
RE900	1	6'-10"	—	S
RE800	1	6'-6"	—	S
RE700	2	6'-2"	—	S
RE600	4	5'-11"	—	S
RE500	1	5'-7"	—	S

REFERENCE shall be made to Standard Drawings SD-1-63, sheets 2, 3 & 4, dated 11-12-63: SD-2-64, dated 11-25-64: CSB-4-63, sheets 1 & 4, dated 12-30-63: *BR-1-65 sheet 1, dated 2-1-65 and RB-1-55, revised 2-2-59 and to Supplemental Specifications 808 dated 7-14-65 and 811 dated 3-29-65

DESIGN LOADING - CF 400 (57)

CONCRETE CLASS C - basic unit stress 1,333 p.s.i.
CONCRETE CLASS E - basic unit stress 1,133 p.s.i.

STRUCTURAL STEEL. ASTM A-36 - 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.

EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments and piers #1 & #4

PILES shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 is not less than the following value for a pile hammer of the indicated energy rating:

65 tons per pile using an 11,000 ft. lb. hammer
55 tons per pile using a 15,00 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 50 tons per pile for Piers #1 & #4; 40 tons for Piers #2 & #3 and 35 tons for the abutments.

PROCEDURE: The embankment for both the left and the future right structures 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. The construction of Pier #1 shall not be started until the rear approach embankment has been completed and the construction of pier 3 & 4 shall not be started until the forward approach embankment has been completed. The construction of the embankments shall be as per roadway plans. The construction of the abutments may begin after the embankments have been completed for a minimum period of 30 days.

MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.

CONSTRUCTION CLEARANCE of 20 ft. vertically above the top of the railroad rails and 8 ft. horizontally from the center of the tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. 503.04 and 503.09 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. 503.04, 503.09 or 108.04 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

* STD. DRWG. BR-1-65: Change the references to the Construction & Material Specifications as follows:

Reference given on Std. Drwg. (1963 Edition)	Reference to 1965 Edition
Sec. M-10.02	Sec. 705.03
Item S-14	Item 517
Item S-4	Item 509
Sec. M-7.4 (d)	Sec. 711.02
Sec. M-7.19	Sec. 711.20

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS, NOTES AND REINFORCING STEEL LIST

BRIDGE NO. MEG-7-0262L
OVER N.Y.C. RR. AND THOMAS FORK

MEIGS COUNTY STA. 138+50.86
142+18.64

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NAA	NAA	P.K.I.	FHR	BFG	5-19-65	