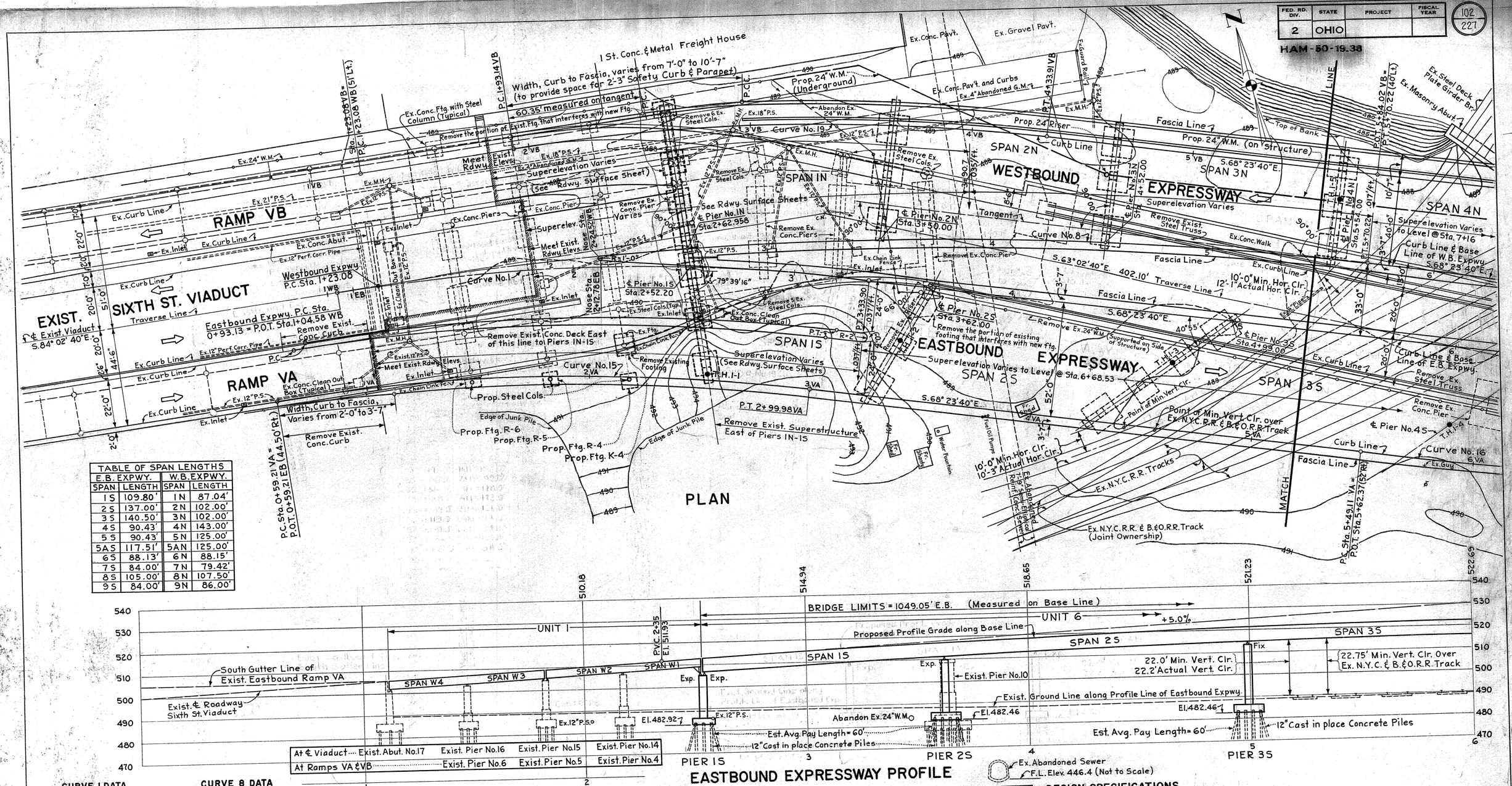

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

102
227

HAM-50-19.38

TABLE OF SPAN LENGTHS			
E.B. EXPWY.		**W.B. EXPWY.**	
SPAN	**LENGTH**	**SPAN**	**LENGTH**
1S	109.80'	1N	87.04'
2S	137.00'	2N	102.00'
3S	140.50'	3N	102.00'
4S	90.43'	4N	143.00'
5S	90.43'	5N	125.00'
5AS	117.51'	5AN	125.00'
6S	88.13'	6N	88.15'
7S	84.00'	7N	79.42'
8S	105.00'	8N	107.50'
9S	84.00'	9N	86.00'

EASTBOUND EXPRESSWAY PROFILE

CURVE 1 DATA
P.I. Sta. 2+14.27
Δ = 15°-39'-00"
D = 6°-30' 00"
R = 881.47'
L = 240.77'
T = 121.14'

CURVE 8 DATA
P.I. Sta. 3+48.05
Δ = 15°-39'-00"
D = 3°-30'-00"
R = 1637.02'
L = 447.14'
T = 224.97'

CURVE 15 DATA
P.I. Sta. 1+80.35VA
Δ = 15°-39'-00"
D = 6°-30'-00"
R = 881.47'
L = 240.77'
T = 121.14'

CURVE 19 DATA
P.I. Sta. 3+14.28VB
Δ = 15°-39'-00"
D = 6°-30'-00"
R = 881.47'
L = 240.77'
T = 121.14'

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JAN 15 1985

EXISTING STRUCTURE

Type: Ramps - Continuous steel beams and cross-frames with concrete deck and steel columns with concrete pedestals.
Main Structure - Varies; Continuous and simple steel beams, continuous plate girders, and through truss supporting concrete deck. Substructure is concrete.
Span: Lengths vary.
Roadway: Ramps = 22'-0"; Main Structure = 40'-0"
Skew: Varies
Condition: Good

PROPOSED STRUCTURE

Type: Span 1N is a simple girder span, Spans 2N thru 9N and Spans 1S thru 9S are continuous girders.
Reinforced Concrete deck and substructure.
Span: Lengths vary; see tabulation this sheet.
Roadway: Varies, 40'-0" Min. f/f curbs with 2'-3" safety curbs and a 6'-0" Sidewalk (N. Side of W.B. Expwy.)
Skew: Varies, see plan.
Load Frequency: CF = 2000 (57) Adequate for AASHO alternate loading.
Wearing Surface: 1" Monolithic Concrete.
Approach Slabs: AS-1-54 (25'-0" long)
Alignment: Varies, see plan.
Superelevation: Varies, see plan.

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 revisions thereof dated 2-21-58.

GENERAL NOTES

Span lengths are measured along Base Lines.
For Profile of W.B. Expwy. see Sheet No. 105
● Symbol denotes drill hole.
For test boring data, see Sheet No. 115 & 116
For Bench Marks see Sheet No. 27

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN
BRIDGE No. HAM-50-1938 R&L
SHEET 1 OF 4
H&E BRIDGE No. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.DeC. M.K.K.		H.A.Z. 2-6-62	H.A.Z. 4-23-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR	
2	OHIO			103 / 227

HAM-50-19.38

MILL CREEK
Ex. Steel Deck Plate Girder Br.
Oklahoma Track
Ex. N.Y.C.R.R. & B.&O.R.R. Track (Joint Owners)
Ex. Mas. Abut.
Ex. Conc. Retain. Wall
P.O.T. 5+84.02 VB=
P.T. 5+70.22 (40' Lt.)
Ex. N.Y.C. R.R. Tracks
Ex. R.R. Stone & Reinf. Conc. Arch Bridge Footings
66' Arch
40' Arch
Ex. Masonry and Reinf. Conc. Two Arch R.R. Bridge
Ex. 4500 Volt Overhead Power Line
Ex. Asphalt Pavement
Ex. Stone Abut.
Provide Openings in Exist. Flood Wall for passage of Plate Girders.
Ex. Flood Gate
Prop. 24" W.M. (on Structure)
Fascia Line
Curb Line
SPAN 3N
SPAN 4N
SPAN 5N
SPAN 5AN
SPAN 6N
SPAN 7N
WESTBOUND
EXPRESSWAY
Superelevation Varies
Superel. Varies to 0.049'/ft. @ Sta. 11+36.72
℄ Pier No. 4N Sta. 5+54.00
℄ Pier No. 5N Sta. 6+97.00
℄ Pier No. 5AN Sta. 8+22.00
℄ Pier No. 6N Sta. 9+47.00
℄ Pier No. 7N Sta. 10+35.15
℄ Pier No. 8N
Remove a portion of an existing stone Abutment in this area that interferes with new Footing
Remove a portion of Exist. Ftg. that interferes with new Ftg.
Remove a portion of Exist. Ftg. that interferes with New Footing
10'-0" Min. Hor. Clr.
10'-5" Actual Hor. Clr.
12'-1" Actual Hor. Clr.
10'-0" Actual Hor. Clr.
Curve No. 8
Curve No. 9
Curve No. 10
Curve No. 2
Curve No. 3
Curve No. 4
Curve No. 16
Traverse Line S. 63° 02' 40" E.
S. 68° 23' 40" E.
S. 71° 02' 40" E. 356.01'
S. 70° 25' 44" E.
Ex. Steel Sheet Piling
℄ Pier No. 5AS Sta. 8+20.36
Tan. @ ℄ Pier (Typ.)
Curb Line & Base Line of E.B. Expwy.
Curb Line & Base Line of W.B. Expwy.
Remove Ex. Conc. Piers
SPAN 3S
SPAN 4S
SPAN 5S
SPAN 5AS
SPAN 6S
SPAN 7S
EASTBOUND
EXPRESSWAY
℄ Pier No. 3S
℄ Pier No. 4S Sta. 6+39.50
℄ Pier No. 5S Sta. 7+29.93
℄ Pier 6S Sta. 9+37.87
℄ Pier No. 7S Sta. 10+26.00
Pier No. 8S
Remove Ex. Steel Truss
Remove Exist. Steel Truss
W.M. (Supported on Side of Structure)
Superelevation Varies from 0.037'/ft. @ Sta. 3+33.82
Remove Ex. Conc. Pier
Remove Exist. Superstructure between Ex. Abut. and Piers 1N-1S
T.H. 1-4, T.H. 1-5, T.H. 1-6, T.H. 1-7, T.H. 1-8, T.H. 1-9
End of Ramp VA Sta. 10+01.46 VA= P.O.C. 10+13.09 (40' Rt.)
Close Ex. Flood Gate Opening with Flood Wall
Ex. Conc. Pier
Ex. Mas. & Conc. Abut.
Ex. B. & O. R.R. Track
Remove a portion of an existing Stone Wall that interferes with new Footing
Remove a portion of Exist. footing that interferes with New Footing
Ex. Steel Deck Plate Girder Bridge
Exist. Steel Sheet Piling to remain except where excavation for Prop. Footings interferes
Remove a portion of Ex. Ftg. that interferes with New footing.
P.C. Sta. 5+49.11 VA= P.O.T. 5+62.37 (52' Rt.)
P.T. 6+50.83 VA
MATCH LINE

PLAN

UNIT 6
UNIT 7
UNIT 8
22.0' Min. Vertical Clearance
22.2' Actual Vertical Clearance
P.V.I. 6+35 El. 531.93 800' V.C.
P.V.T. 10+35 El. 515.93
+5.0%
-4.0%
BRIDGE LIMITS = 1049.05' (Measured on Base Line)
Prop. Profile Grade along Base Line
SPAN 3S
SPAN 4S
SPAN 5S
SPAN 5AS
SPAN 6S
SPAN 7S
Proposed Flood Wall with openings for plate girders
Prop. Bench El. 496.8
22.75' Min Vert. Clr. over Ex. N.Y.C. & B.&O.R.R. Track
Ex. Pier No. 7
Ex. Pier No. 6
Exist. Pier No. 5
Exist. Ground Line along Profile Line of Eastbound Expwy.
Max. High Water El. 509.3 (1937)
Exist. Pier No. 4
Exist. Pier No. 3
Exist. Pier No. 2
Exist. Abut. No. 1
El. 462.50 S. Footing
El. 461.65 N. Footing
12 BP 53
Est. Avg. Pay Length = 75'
Area under structure to be surfaced with 6" I-18
El. 482.46
12" Cast-in-place Conc. Piles
Est. Avg. Pay Length = 60'
El. 482.24
Est. Avg. Pay Length = 65'
El. 469.80
Est. Avg. Pay Length = 70'
Future Pool Stage El. 455.0±
Exist. Pool El. 441.1
El. 429.45
Est. Avg. Pay Length of New Piles = 37'
El. 423.94
Est. Avg. Pay Length of New Piles = 28'
PIER 3S
PIER 4S
PIER 5S
PIER 5AS
PIER 6S
PIER 7S

EASTBOUND EXPRESSWAY PROFILE

NOTE: For Existing Structure data see Sheet 102
For Design Specifications and Proposed Structure data see Sheet 102
Span Lengths are measured along Base Lines. For Table of Span Lengths see Sheet 102
For Profile of W.B. Expwy. see Sheet 105
● Symbol denotes drill hole. See Sheet 115 & 116 for test boring data.
For Bench Mark see Sheet 27

CURVE 9 DATA	CURVE 10 DATA	CURVE 2 DATA	CURVE 3 DATA	CURVE 16 DATA
P.I. Sta. 9+11.57	P.I. Sta. 10+61.68	P.I. Sta. 8+86.78	P.I. Sta. 10+36.72	P.I. Sta. 5+99.98 VA
Δ = 0° 45' 00"	Δ = 3° 45' 00"	Δ = 0° 45' 00"	Δ = 3° 45' 00"	Δ = 2° 02' 04"
D = 0° 29' 59.7"	D = 2° 29' 52.2"	D = 0° 30' 00.3"	D = 2° 30' 07.9"	D = 2° 00' 00"
R = 11,461.16'	R = 2293.83'	R = 11,457.16'	R = 2289.83'	R = 2864.79'
L = 150.03'	L = 150.13'	L = 149.97'	L = 149.87'	L = 101.72'
T = 75.01'	T = 75.09'	T = 74.99'	T = 74.96'	T = 50.87'

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SITE PLAN
BRIDGE No. HAM-50-1938 R&L
SHEET 2 OF 4

H&E BRIDGE No. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.DeC. M.K.K.		H.A.G. 2-5-62	H.A.G. 4-23-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

104
227

HAM-50-19.38

PLAN

EASTBOUND EXPRESSWAY PROFILE

CURVE 11 DATA	CURVE 12 DATA	CURVE 13 DATA	CURVE 4 DATA	CURVE 5 DATA	CURVE 6 DATA
P.I.Sta.12+19.17	P.I.Sta. 13+18.42	P.I. Sta. 13+93.08	P.I.Sta. 12+04.06	P.I.Sta. 13+11.30	P.I.Sta. 13+86.69
Δ = 4° 56' 19"	Δ = 0° 50' 40.2"	Δ = 2° 54' 19.8"	Δ = 5° 32' 50"	Δ = 0° 44' 54.3"	Δ = 3° 00' 05.7"
D = 2° 59' 48.7"	D = 2° 29' 52.2"	D = 2° 30'	D = 3° 00' 11.3"	D = 2° 30' 07.9"	D = 2° 30'
R = 1911.86'	R = 2293.83'	R = 2291.83'	R = 1907.86'	R = 2289.83'	R = 2291.83'
L = 164.79'	L = 33.81'	L = 116.22'	L = 184.71'	L = 29.91'	L = 120.06'
T = 82.45'	T = 16.91'	T = 58.12'	T = 92.43'	T = 14.96'	T = 60.05'

NOTE:
For Boring Notes see Sheet 102
For Bench Marks see Sheet 27
℄ Brg. of Abutment is Radial to Eastbound Expressway and Piers 8N thru 9N and 7S thru 9S are parallel to Abutment.
For Curve 2, 3, 9, and 10 Data see Sheet 103
For Design Specifications, Proposed Structure Data, and Table of Span Lengths see Sheet 102
For Profile of Westbound Expressway see Sheet 105

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CINCINNATI, OHIO

SITE PLAN
BRIDGE No. HAM-50-1938 R&L
SHEET 3 OF 4

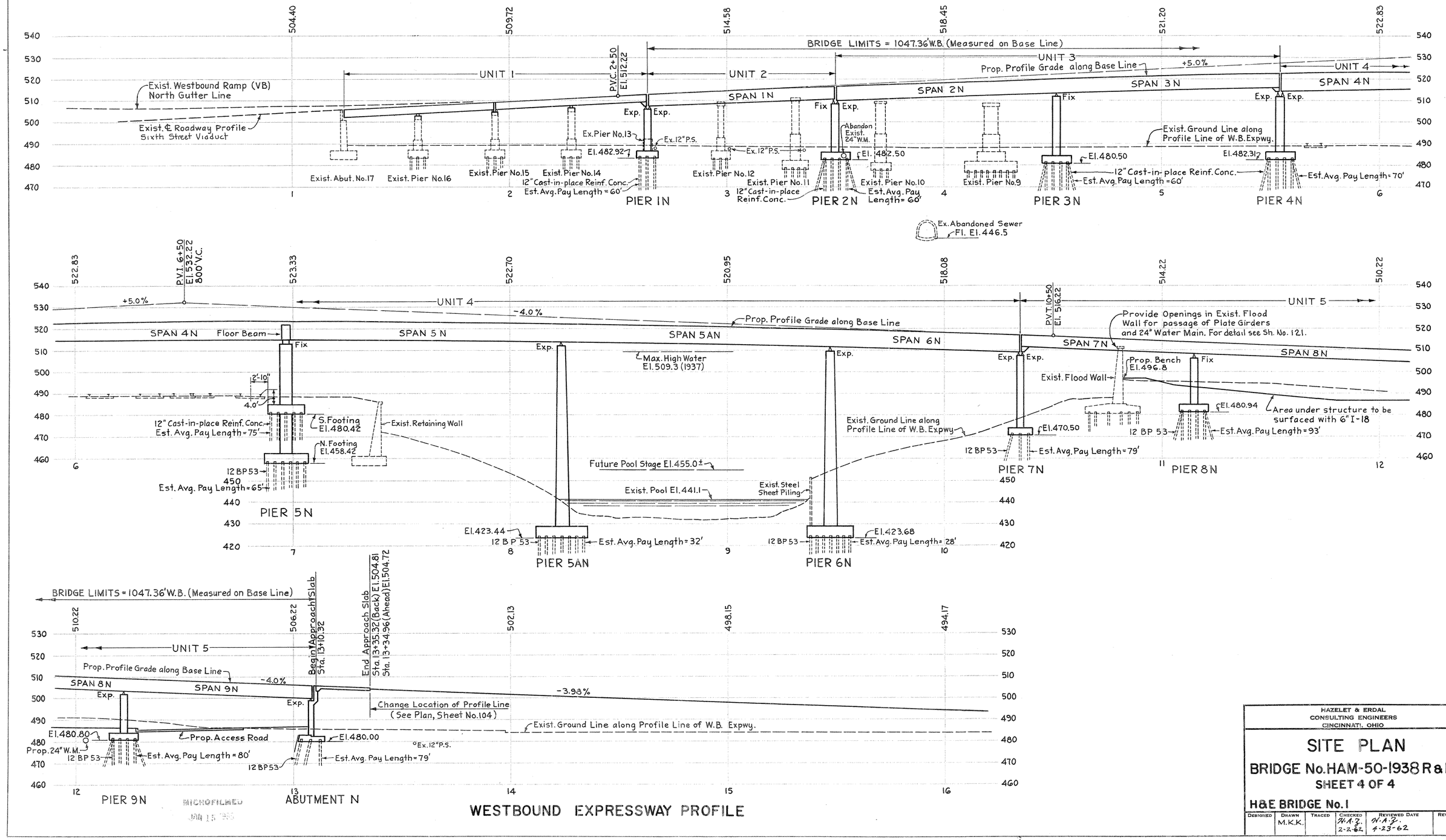
H&E BRIDGE No. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.DeC. W.W.C.		W.A.S. 2-2-62	W.A.S. 4-23-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

105
227

HAM-50-19.38



WESTBOUND EXPRESSWAY PROFILE

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CINCINNATI, OHIO

SITE PLAN

BRIDGE No. HAM-50-1938 R & L

SHEET 4 OF 4

H&E BRIDGE No. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.K.K.		M.A.Z. 2-2-62	M.A.Z. 4-23-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

106 / 227

HAM-50-19.38

ESTIMATED QUANTITES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCTURE	ABUT-MENT	PIERS	FLOOD WALL DETAIL	GENERAL	TOTAL U	TOTAL U G
E-2	Lump	Sum	Cofferdams, Cribs & Sheeting		Lump	Lump			Lump	Lump
E-2	1016	Sq. Ft.	Steel Sheet Piling, Left in place		1016					1016
E-2	7850	Cu. Yds.	Unclassified Excavation		430	7420			5173	2677
S-1	4366	Cu. Yds.	Class "C" Concrete, Superstructure	4366					1436.1	2929.9
S-1	2224	Cu.Yds.	Class "C" Concrete, Pier Caps and Columns			2224			1390.7	833.3
S-1	409	Cu. Yds.	Class "E" Concrete, Abutment Walls		274.9		134.1		134.1	274.9
S-1	2174	Cu. Yds.	Class "E" Concrete, Footings		175.7	1832	166.3		1284.5	889.5
S-3	43	Lin. Ft.	Waterproofing, Premolded Sealing Strip		43					43
S-3	43	Lin.Ft.	Rubber Water Stop As per Plan				43		43	
S-3	16	Sq. Yds.	Type "B" Waterproofing		16					16
S-4	1,907,056	Lbs.	Reinforcing Steel	1162,043	367 64	676,131	32,118		832,589	1,074,467
S-7	5,240,000	Lbs.	Structural Steel	5240000					1,730,000	3,510,000
S-8	5,240,000	Lbs.	Field Painting of Structural Steel, as per Plan	5240000					1,730,000	3,510,000
S-9	325	Sq.Ft.	1" Preformed Expansion Joint Filler (M-10.02, type I)		108		217		217	108
S-14	4438	Lin.Ft.	Railing Type "C" (Aluminum Rail and Supports, Concrete Parapet & End Posts)	4385	53				1931	2507
S-14	144	Lin. Ft.	Railing (Concrete with Concrete Posts), As Per Plan	144						144
S-15	Lump	Sum	Temporary Run-around Bridge, As Per Plan					Lump		Lump
S-16	Lump	Sum	First Test Pile (Steel or Concrete)		Lump	Lump			Lump	Lump
S-17	Lump	Sum	First Pile Test Load		Lump	Lump			Lump	Lump
S-17	1	Each	Subsequent Pile Test Load			1			(45%)	(55%)
S-18	30175	Lin.Ft.	Steel Piles, 12 BP 53		7031	23144			16,644	13,531
S-18	25160	Lin.Ft.	12" Cast-In-Place Reinforced Concrete Piles			25160			2730	22430
S-22	Lump	Sum	Removal of Portions of Existing Structure					Lump	Lump	Lump
S-22	100	Cu. Yds.	Removal of Portions of Existing Structure			100			10	90
S-23	106	Lin. Ft.	Dowel Holes			25	81		81	25
S-25	1	Each	15 KVA Constant-Voltage Transformer for Overhead Mounting							1
S-25	14	Each	400 Watt Mercury Vapor Luminaire, IES Type II or III Distribution						5	9
S-25	2	Each	Flush Mount Island Light							2
S-25	1	Each	Lighting Circuit Controller 30 Amp.							1
S-25	2	Each	Photoelectric Control for Lighting Circuit							2
S-25	Lump	Sum	Electrical Grounding System for Bridge						Lump	Lump
S-25	1240	Lin. Ft.	1c#6 Primary Cable, Plain						600	640
S-25	1240	Lin.Ft.	1c#6 Primary Cable, Indentifiable						600	640
S-25	2790	Lin.Ft.	1c#6 Secondary Cable, Plain						855	1935
S-25	7460	Lin.Ft.	1c#6 Secondary Cable, Indentifiable						2025	5435
S-25	685	Lin.Ft.	2c#12 Secondary Cable						325	360
S-25	16	Each	15 Amp. Fuse Block						6	10
S-25	5	Each	Lamp Standard Type A (Structure) with 15' Bracket Arm						2	3
S-25	8	Each	Lamp Standard Type A (Structure) with 10' Bracket Arm						4	4
S-25	1	Each	Lamp Standard Type A (Structure) Modified with 15' Bracket Arm							1
S-25	10	Each	Handhole Frame and Cover 8"x8"						3	7
S-25	17	Each	Handhole Frame and Cover 10"x18"						7	10
S-25	3120	Lin. Ft.	3" Asbestos Cement Conduit (Structure), Type I						1310	1810
S-25	537	Lin. Ft.	2" Electric Metallic Conduit with Accessories						8	529
S-25	1	Each	Sign Circuit Switch (At Transformer)							1
S-25	2	Each	Sign Circuit Control Assembly - 30 Amp.						2	
S-25	1	Each	Sign Circuit Control Assembly - 60 Amp.							1
Special	Lump	Sum	Modification of Existing Lighting Circuit							Lump
S-29	185	Cu. Yds.	Porous Backfill		185					185
S-29	Lump	Sum	Drain Inlets, Including Supports and Horizontal Collector System	Lump					Lump	Lump
S-29	730	Lin. Ft.	8" Standard Pipe Downspout, Wrought Iron or Galvanized Steel, Including Specials			730			360	370
S-29	35	Lin. Ft.	8" Bituminous Coated Helical Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials)		35					35
S-29	60	Lin. Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials)		60					60
S-29	130	Lin Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials and Sand)		130					130
S-29	16	Lin Ft.	12" Reinforced Concrete Sewer Pipe [Sec. M-6.6(a)]		16					16
I-129	3	Each	Overhead Sign Support, Type A						2	1
Special	Lump	Sum	Temporary Support of Bridge During Construction of Piers No. 1N & 1S & Ftg. K-4					Lump		Lump
Special	4366	Each	Water-reducing, Set-retarding Admixture ⊗	4366					1436.1	2929.9
Special	Lump	Sum	Modification To Existing Flood Wall				Lump		Lump	

* "See General Lighting & Signing Summary, Sheets Nos. 22 & 23, For Detail Description, Unit and Quantity

⊗ See Proposal Note

MICROFILMED JAN 15 '963

PIER NO.	UNCLASS. EXCAV. CU. YDS	CONCRETE CAPS & COLUMNS CU. YDS.	CONCRETE FOOTINGS CU. YDS.	PILING LIN. FT. CONC.	PILING LIN. FT. STEEL
1N	99	69.0	40.2	1860	
1S	129	56.0	32.5	1620	
2N	147	73.7	57.5	2100	
2S	179	72.3	63.6	2460	
3N	220	74.0	69.5	2760	
3S	207	105.0	80.9	3120	
4N	128	69.6	51.6	2170	
4S	210	108.6	80.7	3250	
5N	665	96.8	127.3	2250	2340
5S	181	92.3	57.4	2730	
5AN	606	243.2	151.2		2048
5AS	1244	274.3	308.7		1998
6N	1019	238.3	140.0		2240
6S	1378	285.9	281.1		1428
7N	202	81.2	42.8		2054
7S	243	68.7	49.5		1500
8N	202	62.5	52.5		2976
8S	98	44.3	35.0		2400
9N	128	56.6	52.5		2240
9S	82	46.7	35.0		1920
Pedestals	53	4.0	22.5	840	
☆		1.0			
Total	7420	2224	1832	25160	23144

☆ Re-Constructed existing Piers No. 14 & 15

GENERAL NOTES

12" CAST-IN-PLACE CONCRETE PILES: shall be driven to a minimun bearing capacity of 40 tons per pile.

STEEL PILES: shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock and shale. If the length of penetration is approximately equal to the depth of rock and shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Section S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.

60 tons per pile for Piers 5AN, 5AS, 6N & 6S using a 11,000 ft. lb. hammer, or 50 tons per pile using a 15,000 ft. lb. hammer.

65 tons per pile for Piers 5N (North Column only) 7N, 7S, 8N, 8S, 9N, 9S & Abut. using a 11,000 ft. lb. hammer, or 55 tons per pile using a 15,000 ft. lb. hammer.

If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be determined by interpolation. The design is as follows:

40 tons per pile for Piers 5AN, 5AS, 6N & 6S

45 tons per pile for Piers 5N (North Column Only) 7N, 7S, 8N, 8S, 9N, 9S & Abut..

PILE TEST LOAD: shall be according to Item S-17 except that the maximun load required shall be three times the design load.

FIRST PILE TEST LOAD: shall be applied if and where directed by the Engineer.

SHEET LEAD: shall conform to the requirements of ASTM Designation B 29 without restriction to the Common Desilverized type.

CONSTRUCTION CLEARANCE: of 21'-0" vertically above the top of the railroad rails and 8'-0" for New York Central R.R.) & 10'-0" (for the NYC and B & O R.R.-Oklahoma track) horizontally from the center of tracks shall be maintained at all times.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

FIELD PAINTING: Field painting shall be in accordance with Section S-8.05 except the second and third coats shall be a gray tinted paint made on a white base conforming to Section M-9.6. The third field coat shall be tinted to match the paint on the existing structural steel.

GENERAL NOTES (CONTINUED)

PAINTING EXISTING STEEL: Where existing paint is damaged by the contractor in the reconstruction of the existing structure, it shall be repainted in accordance with provisions of Section S-8.06. Such work shall be incidental to Item S-8 "Field Painting of Structural Steel."

REMOVAL OF PORTIONS OF EXISTING STRUCTURE: When no longer needed to maintain traffic, as indicated on sheet No. 107, the portion of the existing structure which is not being retained shall be removed in accordance with the provision of Section S-24. Cost of all removals, including the retaining walls, as shown on Sheet No. 104, adjacent to Sixth Street between Station 10+50 and Station 14+30 shall be included in the contract lump sum price bid for Item S-22 "Removal of Portions of Existing Structure".

The removal of portions of existing buried structures for which no plans are available and which cannot accurately be determined, including removal of stone masonry at the south footing of Pier No. 5N and the center footing of Pier No. 5S, shall be paid for at the contract unit price bid per cubic yard for Item S-22 "Removal of Portions of Existing Structure."

TEMPORARY SUPPORT OF BRIDGE DURING CONSTRUCTION OF PIERS NO. 1N & 1S: The contractor shall provide a temporary support (as shown on Sheet No. 112, for the existing bridge during the construction of Piers 1N & 1S. Cost of all labor, material and equipment necessary for constructing, maintaining and subsequently removing the temporary support shall be included in the contract lump sum price bid for Item Special "Temporary Support of Bridge During Construction of Piers No. 1N & 1S." Also included in this pay item shall be a temporary support of the existing Steel Bent No. K-4 while a new footing and pedestal (shown on Sheet No. 122) is being constructed.

TEMPORARY STRUCTURES FOR MAINTAINING TRAFFIC: This includes furnishing, installing, and subsequently removing structures for:

(1) Providing temporary walk and stairways for pedestrian traffic on the north side of the existing truss span, as shown on Sheet No. 107 so that Span 4N can be constructed.

(2) Providing temporary stairs at Pier No. 4-N, as shown on Sheet No. 107 so that the pedestrian traffic can be rerouted over the new structure from Pier No. 4N to Abutment N.

(3) Providing necessary ramps, crossovers, brackets, railing, curbs and barricades (as shown on Sheet Nos. 108 to 111) to maintain highway traffic during the various stages of construction of the structure.

All work shall be in accordance with the applicable provisions of Section S-15. Cost of the necessary labor, material and equipment shall be included in the contract lump sum price bid for Item S-15 "Temporary Run-Around Bridges, As Per Plan".

MODIFICATION TO EXISTING FLOOD WALL: Cost of all labor, material and equipment necessary for notching of Existing Flood Walls, as shown on Sheet No. 121 shall be included in the contract lump sum price bid for Item Special "Modification to Existing Flood Wall."

Plans of existing structure are available for inspection by prospective bidders at the City Hall, Cincinnati, Ohio.

PLANS FOR EXISTING BRIDGE

The existing bridge structure consists of two parts, (1) the Sixth Street Viaduct (center roadway only at the west end) from Abutment No. 17 at Sta 1+20 to Abutment No. 1 at Sta 10+50, together with retaining walls extending to Sta 14+30, and (2) the Sixth Street Viaduct Extension which applies to Ramp VA and VB. Plans for both the Sixth Street Viaduct and the Sixth Street Viaduct Extension are available for inspection by prospective bidders at the City Hall, Cincinnati, Ohio.

FOR ADDITIONAL NOTES: see Shs. Nos. 141 & 196

REV. 5-21-62

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CONSULTING ENGINEERS
CINCINNATI, OHIO

ESTIMATE OF QUANTITIES & GENERAL NOTES

BRIDGE NO. HAM-50-1938 R&L.

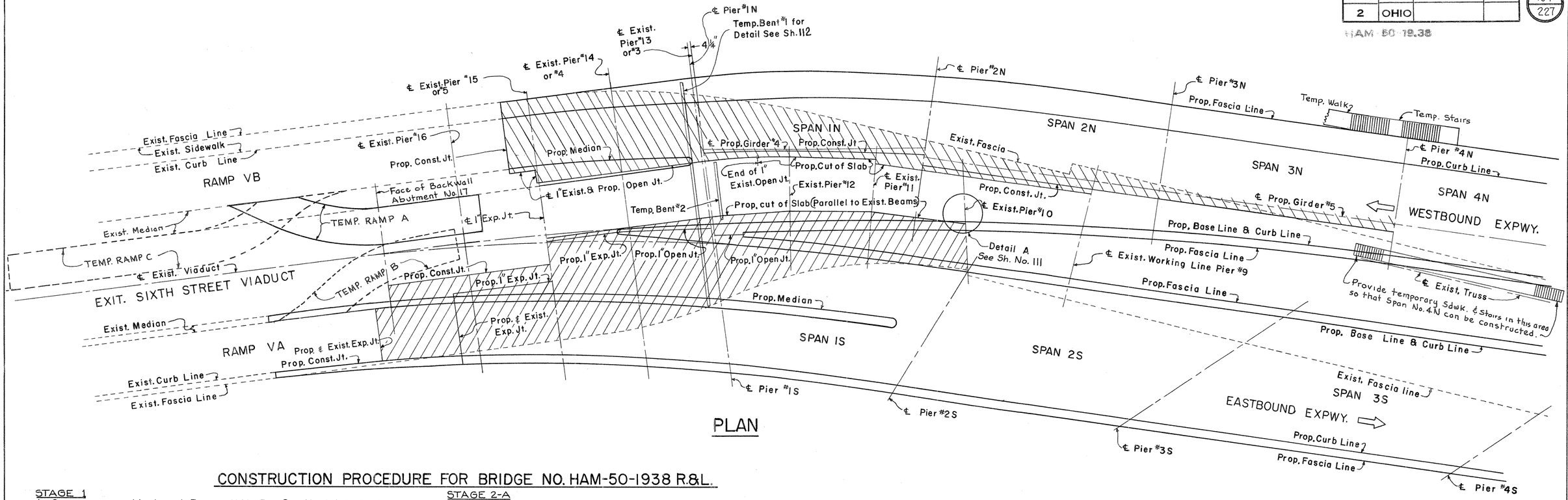
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M. 1-2-62	J.T.C. 4/18/62	J.H.O. 4/25/62	M.J. 4-25-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

107
227

HAM-50-19.38



PLAN

CONSTRUCTION PROCEDURE FOR BRIDGE NO. HAM-50-1938 R.&L.

STAGE 1

1 Construct entire Westbound Expressway from Pier No. 4N to Abutment N omitting north roadway safety curb in Span 4N. The Contractor shall provide a temporary sidewalk on the north side of the existing truss span (shown on plan), when required, in order to construct Span 4N.

2 After Westbound Expressway has been constructed provide temporary stairs at Pier No. 4N (shown on plan) and then re-route pedestrian traffic over new work.

3 Construct Temp. Ramp A (shown on plan) for westbound traffic on the Sixth Street Viaduct to Ramp VB west of existing Abutment No. 17, then re-route Ramp VB traffic over temporary ramp. Temporary ramp to provide for one 16'-0" wide traffic lane. (For Traffic Plan, see Sheet No. 108)

4 Remove a portion of existing bridge shown ▨ on this sheet (only parts necessary for new construction). Construct Temporary Bent #1 to support structural steel in order that Piers 1N & 1S can be constructed as indicated below.

5 Construct Piers 1N, 2N & 3N in accordance with sequence for construction of 24" water main (shown on this sheet). Place Girders 1 thru 4 in Span 1N and Girders 1 thru 5 in Spans 2N & 3N, as indicated by water main construction. Construct temporary support (Span 1N) between Girder 4 and adjacent existing beams (as shown on Sheet No. 110) in order to support a wood deck that is to be constructed later (shown by Sect. G-G, B-B and E-E Sheets No. 110 & 111). Next pour Spans 1N, 2N, 3N and spans West of Pier 1N including north parapet, omitting safety curb and roadway nose where applicable, then construct temporary wood deck using bituminous paving material where necessary for smooth transition. Next place 10"x10" timber along north parapet and temporary railing along south edge of pavement (as indicated by Sect. A-A & B-B Sheet No. 110).

STAGE 2-A

6 Remove Temp. Ramp A from Ramp VB, and build Temp. Ramp B for Ramp VA traffic, and Temp. Ramp C for westbound traffic to the Sixth Street Viaduct roadway (shown on plan). Re-route all traffic over partially completed Westbound Expressway. (For Traffic Plan, see Sheet No. 109)

7 Remove existing superstructure and substructure (except a portion of existing Pier No. 10 that remains in order to support existing structural steel as indicated on Detail A Sh. No. 111) completely from existing pier No. 10 eastwardly. Remove superstructure shown ▨ on remaining part so that Eastbound Expressway can be completely built. The removal and construction of Pier No. 1S requires Temporary Bent #2 to be built in order to support the remaining existing structural steel.

8 Construct entire Eastbound Expressway, omitting proposed median.

STAGE 2-B

9 Re-route all Eastbound traffic onto Eastbound Expressway Bridge and remove Temporary Ramps B and C. Ramp VB traffic will continue to use Westbound Expressway Bridge. Westbound traffic to the Sixth Street Viaduct roadway will use Eastbound Expressway Bridge. (For Traffic Plan, see Sheet No. 109)

10 Remove remaining portions of existing bridge and complete proposed Bridge.

CONSTRUCTION SEQUENCE FOR INSTALLATION OF 24" WATER MAIN

1 Construct Pier No. 4N & all substructure Eastwardly for the Westbound Expressway.

2 Erect structural steel for Span 4N & Spans Eastwardly for the Westbound Expressway.

3 Place 24" Water Main with Dresser Coupling installed, making bolts finger tight.

4 Pour superstructure for Span 4N & Spans Eastwardly.

5 Construct Pier No. 3N and erect Girders 1 to 5 for Span No. 3N.

6 Erect crossframes and Water Main support between Girders 3 & 4 for Span No. 3N.

7 Place 24" Water Main in Span No. 3N.

8 Complete 24" Water Main joints, connect ends to main, place in service, and abandon existing 24" Water Main.

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CONSULTING ENGINEERS
CINCINNATI, OHIO

CONSTRUCTION PROCEDURE

BRIDGE NO. HAM-50-1938 R.&L.

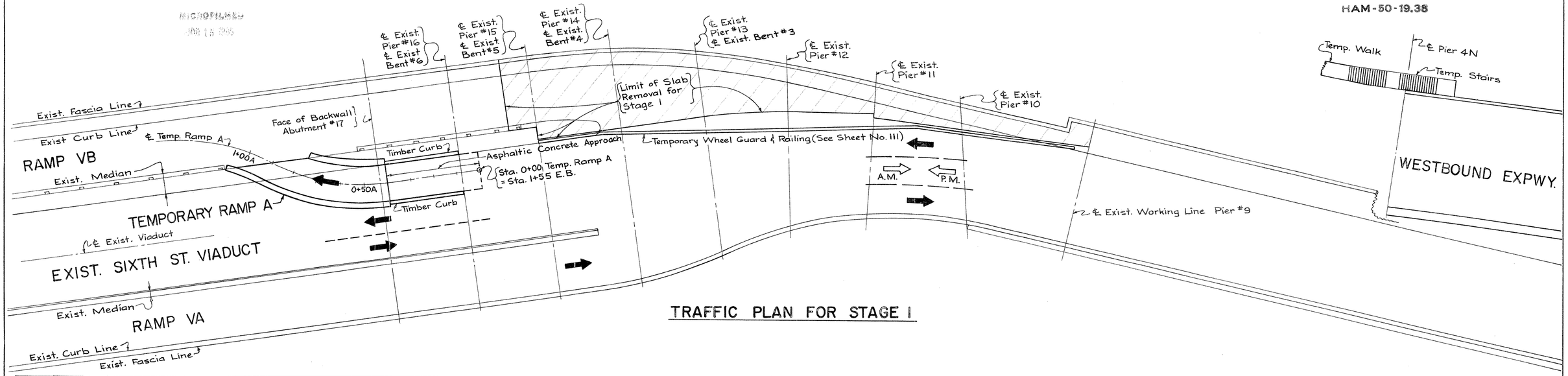
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.T.C.	J.T.C. 4/5/62	JHO 4/16/62	W.A.J. 4-24-62	

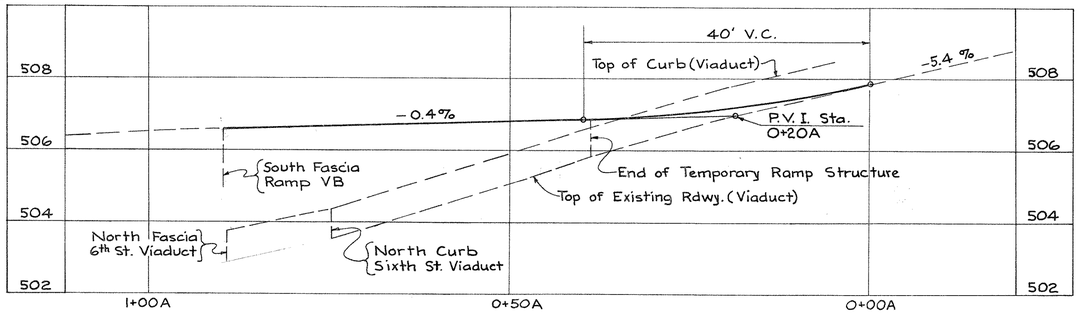
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

108
227

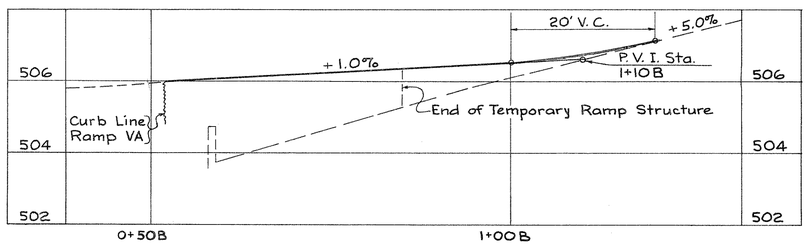
HAM-50-19.38



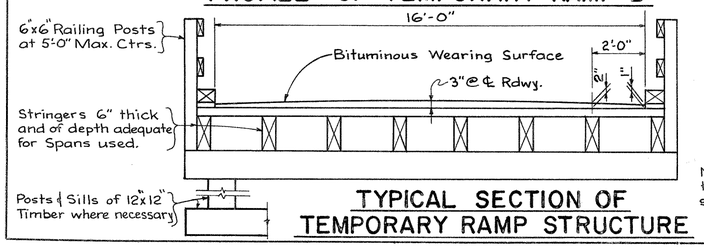
TRAFFIC PLAN FOR STAGE I



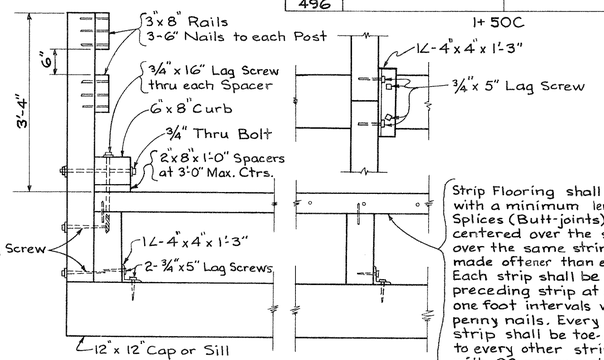
PROFILE OF TEMPORARY RAMP A



PROFILE OF TEMPORARY RAMP B



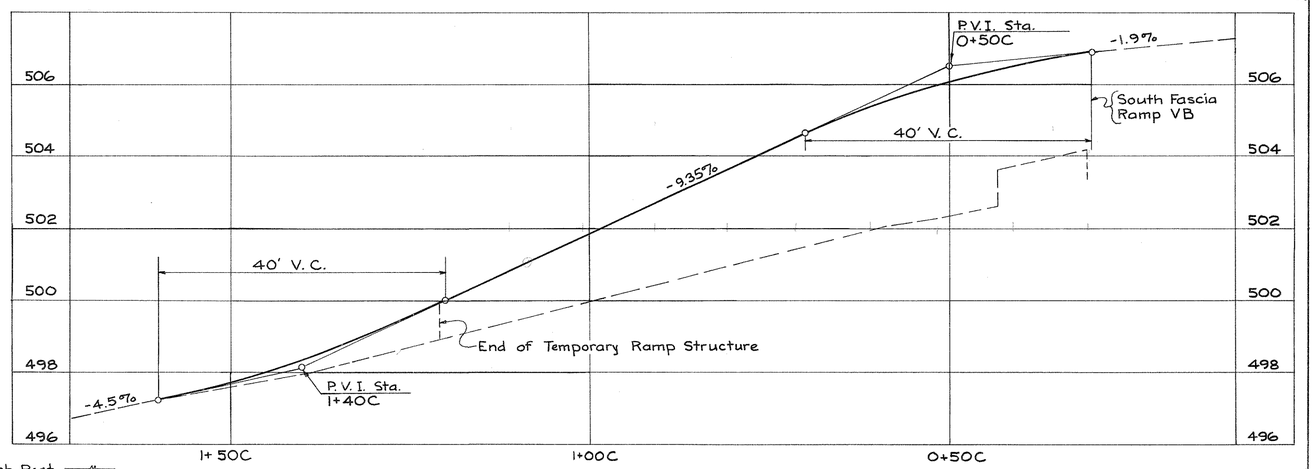
TYPICAL SECTION OF TEMPORARY RAMP STRUCTURE



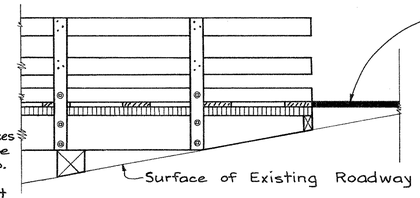
Note: Sills of Temporary Structures to be anchored to existing roadway surface to prevent downward creep

DETAIL OF DECK

Strip Flooring shall be 2"x4" S1S1E with a minimum length of 6 ft. Splices (Butt-joints) shall be centered over the stringers. Splices over the same stringer shall not be made oftener than every third strip. Each strip shall be nailed to the preceding strip at each end and at one foot intervals with 20 penny nails. Every other strip shall be toe-nailed to every other stringer with 20 penny nails



PROFILE OF TEMPORARY RAMP C



ELEVATION AT END OF TEMPORARY RAMP STRUCTURE

Approaches to Temporary Ramp Structures to consist of T-35 1¼" Asphaltic Concrete Surface Course Type "C" (70-85), and B-35 Variable Thickness Asphaltic Concrete Leveling Course (70-85) laid in 3" maximum layers, with T-30 Bituminous Tack Coat @ 0.10 Gal. per Sq. Yd. Approaches are included for payment in Item S-15, "Temporary Run-around Bridges, As Per Plan."

Work this Sheet with Sheet No. 109

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CINCINNATI, OHIO

MAINTENANCE OF TRAFFIC

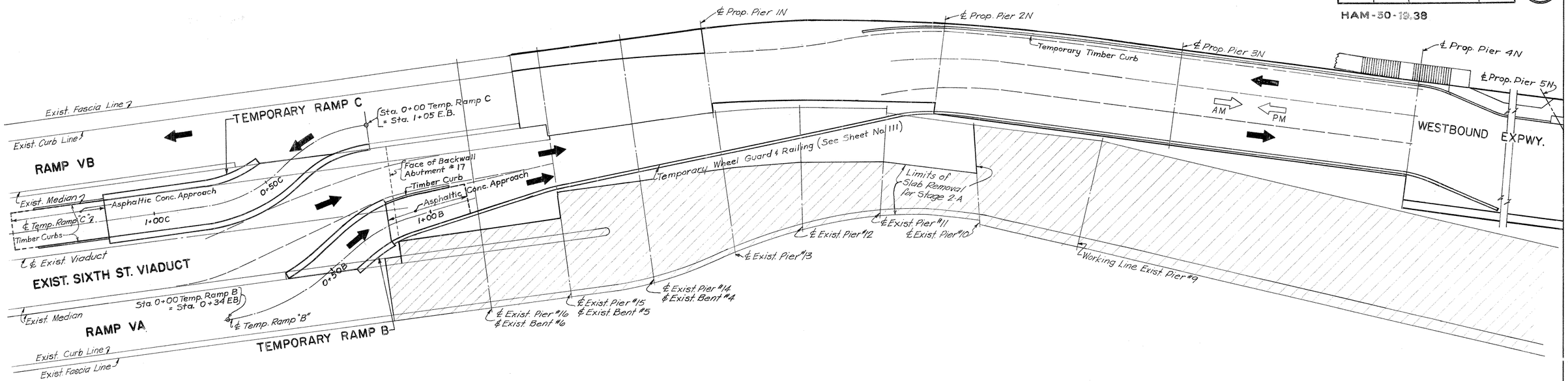
BRIDGE NO. HAM.-50-1938 R&L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M. 4-23-62	R.E.M. 4-23-62	J.H.O 4/24/62	M.J.G. 4-24-62	

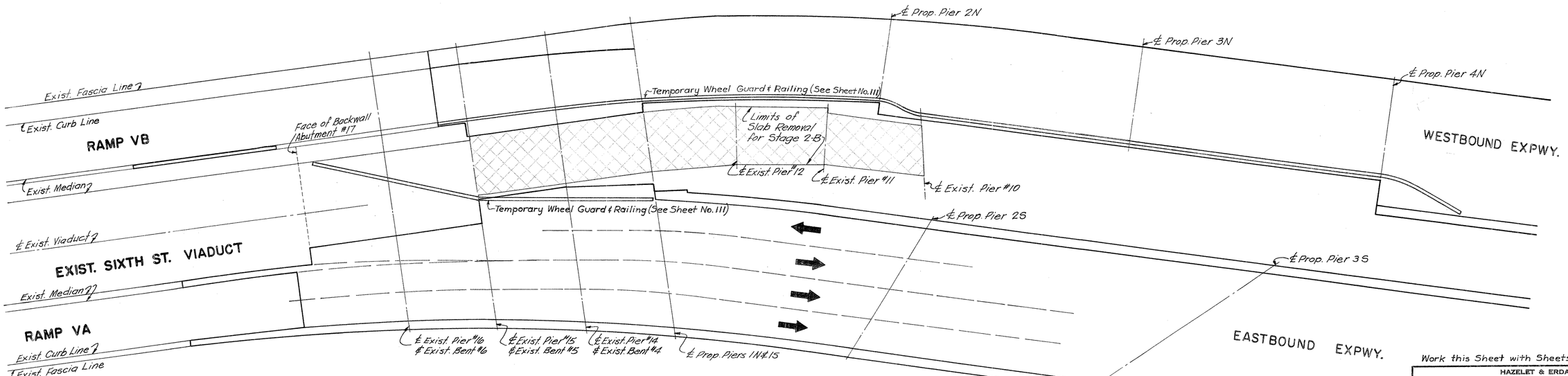
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

109
227

HAM-50-19.38



TRAFFIC PLAN FOR STAGE 2-A



TRAFFIC PLAN FOR STAGE 2-B

GENERAL NOTES

Lumber shall be either yellow pine, Douglas fir or oak 1900 f. stress grade for stringers and 1450 f. stress grade for all other parts.

Hardware need not be plated or galvanized.

Cast iron ogee or malleable ribbed washers shall be used under the heads of lag screws and at both ends of bolts bearing on timber.

The Wearing Surface shall consist of one course of T-35 Asphaltic Concrete Surface Course, Type "C", on a T-30 Bituminous Tack Coat.

Painting is not required

Work this Sheet with Sheets 108, 110, & 111

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MAINTENANCE OF TRAFFIC

BRIDGE NO. HAM.-50-1938 R & L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	B.O.G. 4-20-62	B.O.G. 4-20-62	J.H.O. 4/24/62	A.F.E. 4-24-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

110
227

HAM-50-19.38

N

A

B

Fascia line (Proposed W.B. Expwy.)

Curb line of Run Around

Curb and Base Line V.B.

℄ Prop. Girder (Typ.)

Temporary Timber Curb

2'-2"

Temporary Barricade

SPAN IN

SPAN 2N

SPAN 3N

36'-0"(Min)

For detail of Wheel Guard & Railing see Sheet # 111

Temporary Barricade

Hook Bolts @ 15"-0" ctrs. (Typ)

10WF29-Space to match exist. stiffeners (Typ)

℄ Const. Jt.

℄ Girder 4

23'-3"

10WF29

G

E

F

Curb Line of Run Around

℄ Girder #5

3'-6"

Const. Jt.

10WF29 (Typ)

Exist. 1" Open Jt.

For continuation See Sheet No. 109

Cut exist. slab 2'-3" from new const. joint.

2'-3"

See Detail A Sh# 111

S1

Cut Line for Exist. Slab (See Sect. A-A)

4'-0"

A

Westbound Expwy.

Proposed curb & base line

FBO

4+00

℄ Exist. & Prop. 1" Open Jt.

3-00

℄ Prop. Pier 3N

℄ Prop. Pier 4N

4¼"

Exist. ℄ Pier #9

PLAN

2+00

Exist ℄ Bent #4 & ℄ Pier #14

Exist ℄ Bent #3 & Pier #13

℄ Prop. Pier #1N

Exist ℄ Pier #12

Exist ℄ Pier #11

℄ Prop. Pier 2N

Exist ℄ Pier #10

Note: For Sections E-E & F-F & G-G see Sheet # 111

Temporary Barricade

Fascia of W. B. Expwy.

Future Safety Curb & Parapet

Proposed Curb Line & Base Line VB

23'-3"

Const. Joint

Extend #6 & #7 bars 2'-3" from Const. Jt.

Fill to prop. grade with T-35 Asphaltic Concrete Surface Course

Cut exist. slab & steel 2'-3" from new const. joint.

2"x8"

Old structure

Exist. Sixth St. Expwy -W. B. -(New structure)

10WF29

Exist. 30WF190

Exist. 30WF116

12"x12" Wood Beams

Cut beam in field for proper length

Temporary Bracket See Sections E-E & F-F

① ② ③ ④

SECTION B-B

2" 1'-2"10"

10"x10" Temp. Timber Curb

36'-0"(Min) Temporary Run Around

Future curb & parapet

See detail on Sheet # 111

1'-2"

8" 6"

Const. Joint.

Temporary Railing

Remove Exist. slab, sidewalk and bracket.

① ② ③ ④ ⑤

3'-6" 2'-3" (Min)

SECTION A-A

Existing slab that is to be removed to be removed with care so as not to damage remaining slab.

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TEMPORARY RUN-AROUND

BRIDGE NO. HAM-50-1938 R.&L.

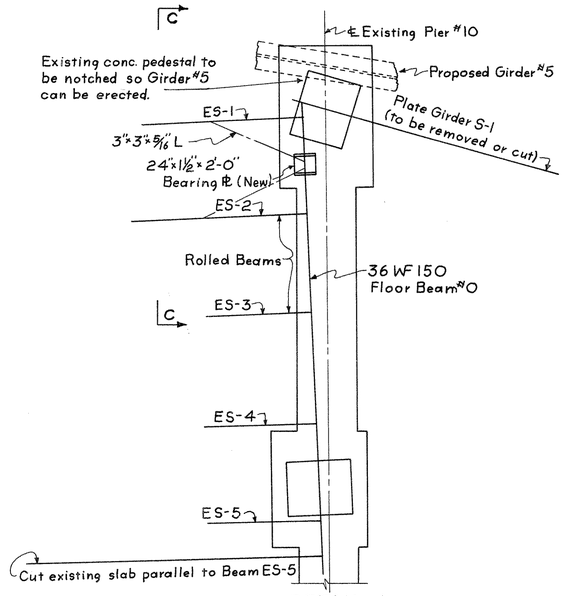
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	D.R.S. 8-28-61	J.T.C. 3/30/62	W.W.G. 1-22-62	H.A.Z., 4-20-62	

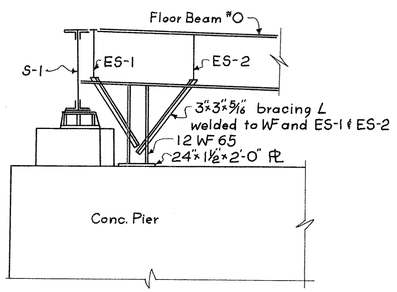
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

111
227

HAM-50-19.38

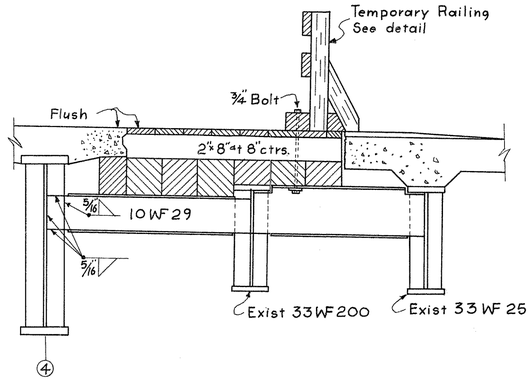


DETAIL A



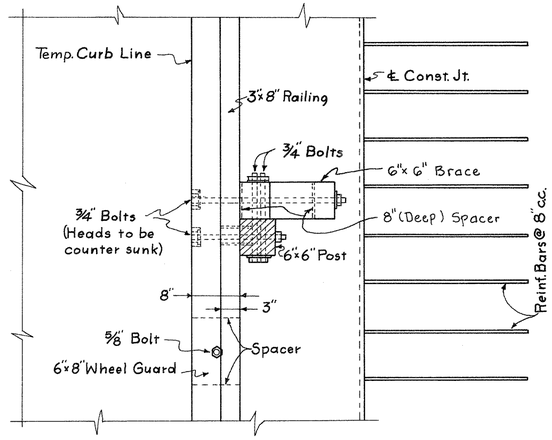
SECTION C-C

Note: Cost of all labor, material and equipment necessary for construction, maintaining and subsequently removing temporary support of existing floor beam #0 shall be included in the Item, S-15 "Temporary Run-Around Bridges, As Per Plan."

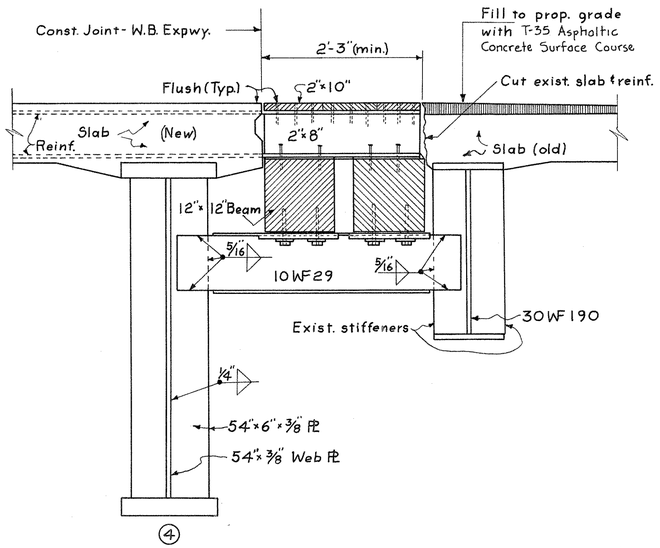


SECTION G-G

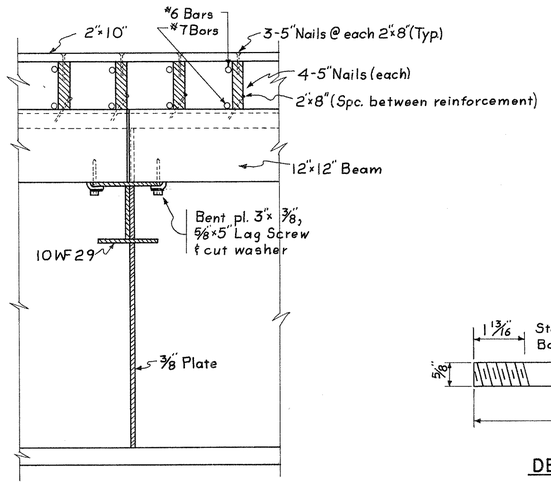
(For Details not shown see Sect.'s E-E & F-F)



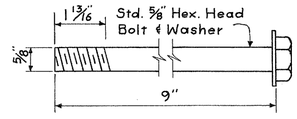
PLAN OF TEMPORARY RAILING



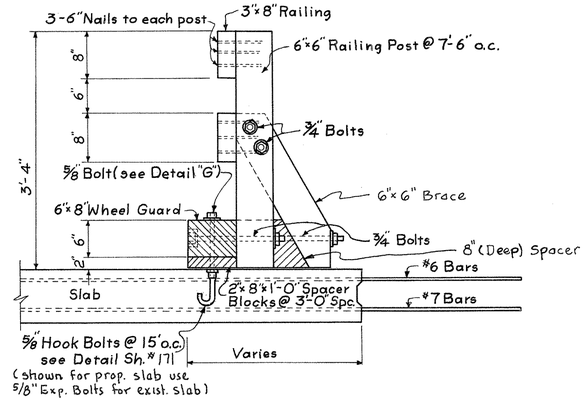
SECTION E-E



SECTION F-F



DETAIL G



SECTION THRU TEMPORARY RAILING

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CINCINNATI, OHIO

TEMPORARY RUN-AROUND
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	D.R.S. 8-28-61	J.T.C. 4/2/62	W.W.C. 1-2-62	N.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

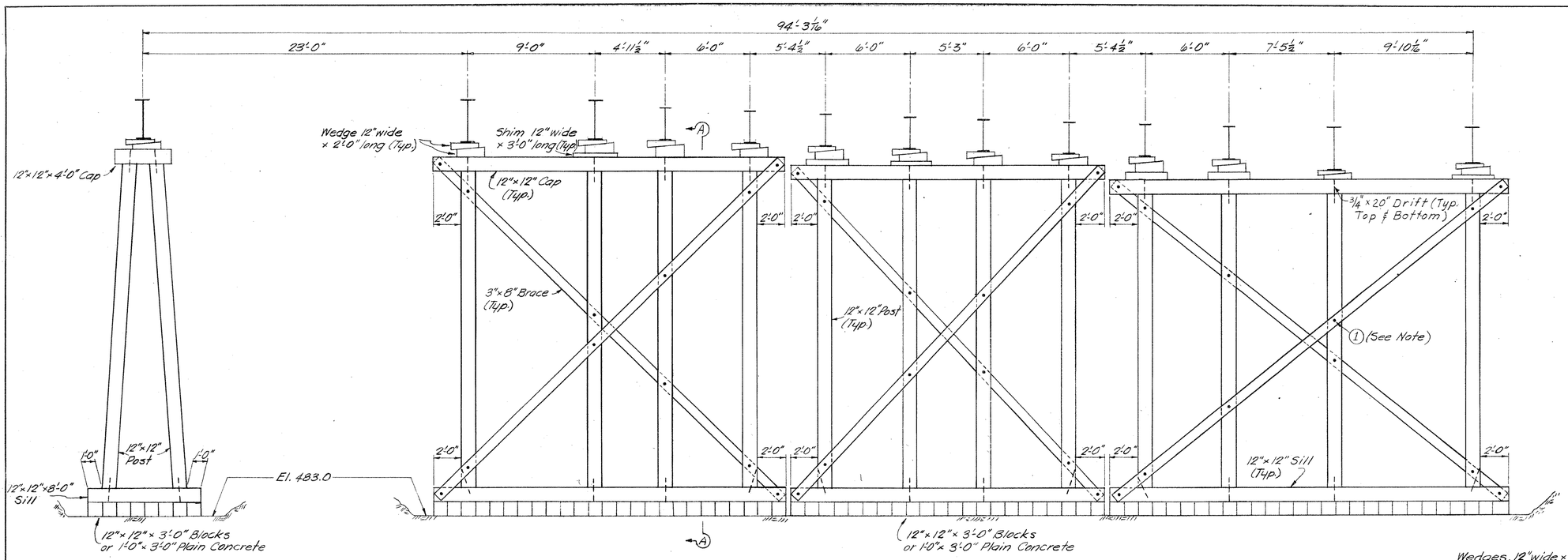
112
227

HAM-50-19.38

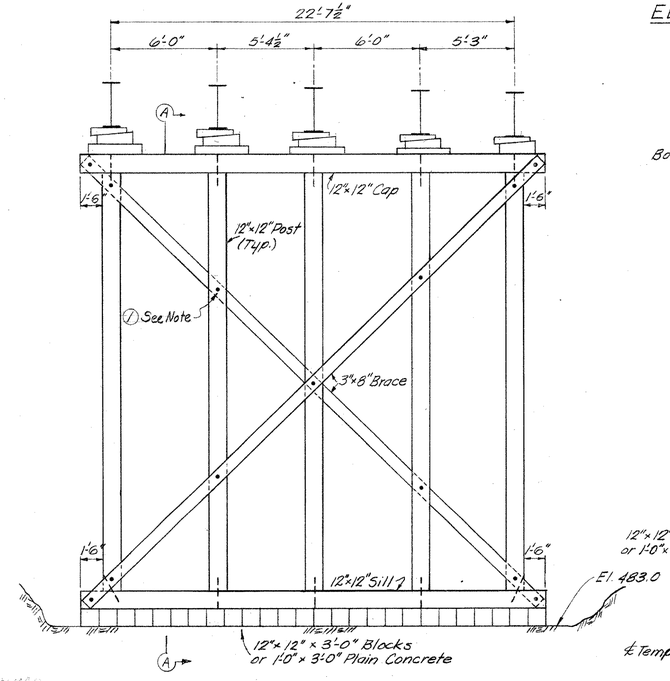
NOTES:

Cost of all labor, material, and equipment necessary for constructing, maintaining, and, subsequently, removing Temporary Bents Nos. 1 & 2, shall be included in the Lump Sum Price bid for the Item, Special, "Temporary Support of Bridge during Construction of Piers Nos. IN & 1S."

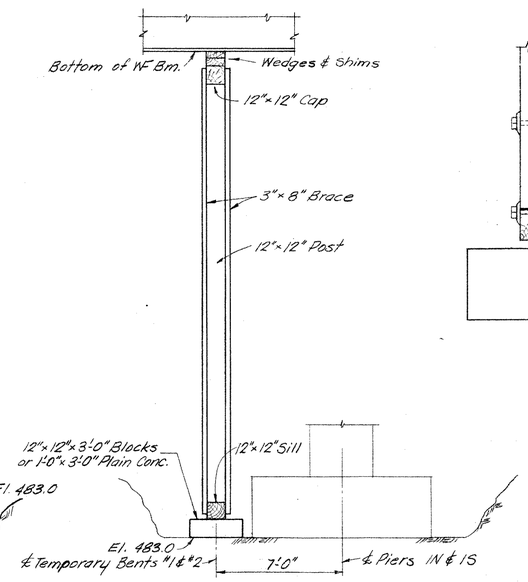
Temporary Bents Nos. 1 & 2, shall be constructed in accordance with provisions of Sec. S-13.



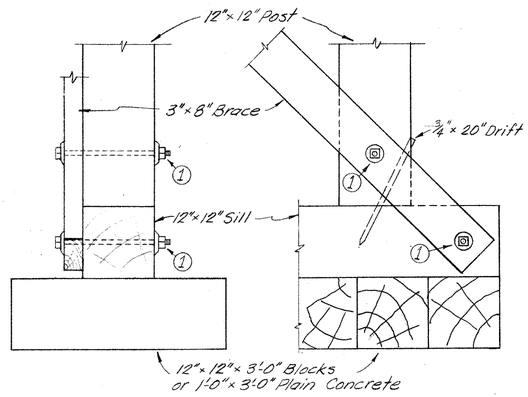
ELEVATION OF TEMPORARY BENT NO. 1
(Looking East)



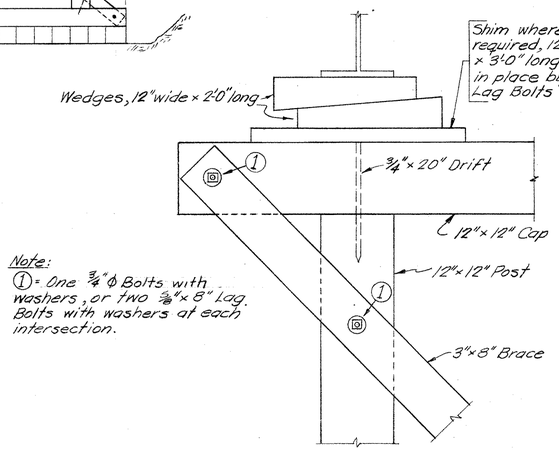
ELEVATION OF TEMPORARY BENT NO. 2
(Looking East)



SECTION A-A



TYPICAL DETAILS AT SILL



Note:
(1) - One 3/4" ϕ Bolts with washers, or two 7/8"x8" Lag Bolts with washers at each intersection.

TYPICAL DETAIL AT CAP

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CINCINNATI, OHIO

TEMPORARY BENTS AT PIERS IN & 1S

BRIDGE NO. HAM-50-1938 R.&L.

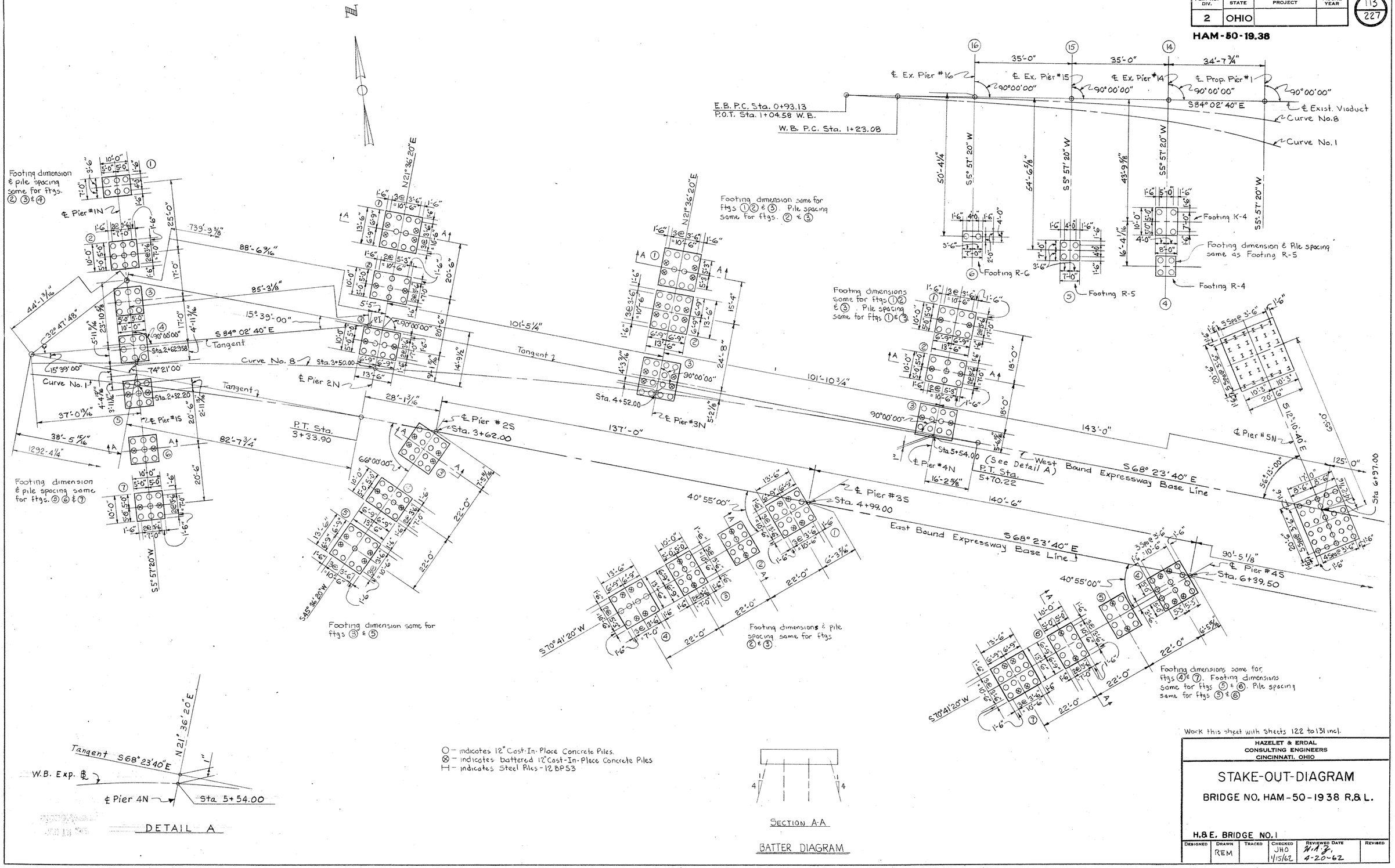
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
Easley 2-2-62	B.O.G. 2-3-62		JHO 2/10/62	W.A.J. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

113
227

HAM-50-19.38



Work this sheet with Sheets 122 to 131 incl.

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CINCINNATI, OHIO

STAKE-OUT-DIAGRAM

BRIDGE NO. HAM-50-1938 R.& L.

H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	REM		JHO 1/15/62	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-50-19.38


N
Footing dimensions & pile spacings same in footings ① & ②.
Footing dimensions & pile spacings same for footings ①, ② & ③.
Footing dimensions same for ftg.'s ③ & ④.
Footing Dimensions & Pile Spacings are Typical for Both Footings in Pier #8S
Footing Dimensions & Pile Spacings are Typical for all Footings of Piers 8S & 9S
* This dimension subject to revision upon location of existing piles in field.
*See Note A. (Sh. No. 34)
P.C. Sta. 8+36.56
P.C.C. Sta. 9+86.30
P.C.C. Sta. 11+36.72
P.C.C. Sta. 11+11.63
P.C. Sta. 8+11.79
P.C.C. Sta. 9+61.76
Curve No. 9
Curve No. 10
Curve No. 11
Curve No. 2
Curve No. 3
Curve No. 4
Curve No. 5
Curve No. 12
S 73° 43' 30" E
Long Chord
S 68°-23'-40" E
℄ Pier 5AN
℄ Pier 6N
℄ Pier #7N
℄ Pier #8N
℄ Pier #9N
℄ Pier 5S
Sta. 7+29.93
℄ Pier 5AS
Sta. 8+20.36 (See Detail A)
Sta. 9+37.87
℄ Pier 6S
℄ Pier 7S
Sta. 10+26.00
℄ Pier #8S
Sta. 11+10.00
℄ Pier #9S
Sta. 12+15.00
Sta. 8+22.00
Sta. 9+47.00
Sta. 10+35.15
Sta. 11+14.57
Sta. 12+22.07
P.C.C. Sta. 13+01.51
Ref. Pt. N Sta. 13+08.067
P.C.C. Sta. 12+96.34
Ref. Pt. S Sta. 12+99.00
79° 53' 10" (Typ. for Piers 7S, 8S, 9S & Abut.)
85°-13'-00" (Typ. for Piers 8N, 9N & Abt.)
Traverse Point AZ
N4873.8722 W4000.8745 See Align. Plan Dwg # AT5
S 71° 06' 50" E
S 82° 56' 30" E
S 68° 23' 40" E
S 18° 53' 10" W
87° 16' 50"
202'-3"
210'-3 5/8"
521'-8 7/16"
1292'-4 1/4"
DETAIL "A"
℄ Pier 5AS (Sta. 8+20.36)
P.C. Sta. 8+11.79
0.0044'
47° 16'-10"
8'-6 15/16"
SECTION B-B
SECTION C-C
SECTION D-D
Sheet Piling
BATTER DIAGRAM
Dimensions along ℄ Brg.
14 Spaces @ 3'-8 7/8" = 51'-11"
12 Spaces @ 3'-9" = 45'-0"
H Indicates steel piles (12 BP 53).
⊕ Indicates battered steel piles.
⊗ Indicates existing steel piles.

Work this sheet with Sheets 117 to 119 & 132 to 140 incl.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STAKE-OUT-DIAGRAM

BRIDGE NO. HAM-50-1938 R.& L.

H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M.		JHO 1/22/62	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

116
227

HAM-50-19.38

ELEV. 461.0

4 6 11 7 5 7 6 16 30 35 31 43 38 33 48 59 39 49 145 100% Rec.

12.5'-Fill-Sandy clay, brick, & cinders.

15.5'-Gray & brown silt & clay, & little sand.

13.0'-Brown sandy gravel, & trace of silt.

4.0'-Gray sandy silt, & trace of gravel.

2.0'-Brown gravelly sand, & little silt.

7.0'-Brown fine sand, little silt & gravel.

9.5'-Brown sandy gravel, & trace of silt.

1.5'-Brown silty clay (weathered shale)

5.0'-Gray, firm, calcareous shale & hard fossiliferous limestone.

ELEV. 394.0
DEPTH-67'

ELEV. 479.8

5 30 11 8 5 2 4 10 5 4 4 4 4 5 6 3 7 9 48 16 50 17 17 52 48 55% Rec.

17.5'-Fill-Cinders & silty clay.

31.5'-Gray silt & clay, some fine sand lenses.

26.0'-Brown & black sandy gravel with trace of silt.

5.0'-Brown gravelly sand, trace of silt.

5.0'-Brown & gray silt & clay, some rock fragments, little sand.

5.0'-Gray soft shale with layers of hard fossiliferous limestone

ELEV. 389.8
DEPTH-90.0'

ELEV. 486.5

60 9 7 3 13 20 9 10 5 8 11 11 9 9 11 7 14 10 16 32 29 36 69

0.2'-Blacktop.

7.3'-Fill-Cinders & clay

2.5'-Gray & Brown sandy silt, trace of gravel.

35.0'-Brown & gray silt & clay, trace of fine sand.

1.5'-Brown sand with little clay & silt seams, trace of gravel.

8.5'-Brown sandy gravel with little silt.

5.0'-Gray silt & clay with little fine sand lenses.

13.0'-Gray & brown sandy gravel, trace of silt.

6.0'-Brown gravelly sand, trace of silt & clay.

ELEV. 407.5
DEPTH-79.0'

Boring stopped @ 79'
See Log of Boring report for explanation

ELEV. 495.3

9 14 12 9 27 15 2 2 2 2 2 4 2 4 9 9 6 3 11 27 33 34 55 33 59 61 31 22 13G 70% Rec.

31.5'-Fill-Clay, silt, & cinders.

4.5'-Brown silt & clay, little gravel, trace of sand & organic matter.

9.0'-Motted brown & gray clay & silt, trace of fine sand.

13.5'-Brown & gray clay & silt with some fine sand seams.

42.5'-Brown sand & gravel, little silt.

3.0'-Brown & gray clay & silt, trace of sand & gravel.

5.0'-Layered hard gray fossiliferous limestone & firm shale

ELEV. 386.3
DEPTH-109.0'

ELEV. 486.6

8 16 5 4 3 4 4 5 6 7 8 7 7 7 7 15 9 12 56 11 26 34 58 37 138 40% Rec.

7.0'-Fill-silty clay & cinders.

8.0'-Gray & Brown silt & clay, trace of gravel & organic matter, little sand.

21.0'-Brown & gray clay & silt, trace of fine sand.

4.5'-Brown & gray silt & clay with organic matter, trace of gravel & little sand.

4.5'-Gray silt & clay, some sand.

9.0'-Gray sandy silt with brown fine sand seams.

24.0'-Brown sandy gravel, trace of silt.

3.0'-Brown gravelly sand, trace of silt.

2.5'-Brown silt & clay, little sand, trace of gravel.

5.0'-Layered soft gray shale & hard fossiliferous limestone

ELEV. 398.1
DEPTH-88.5'

ELEV. 485.4

8 7 5 5 4 4 7 6 6 7 6 13 18 11 11 7 22 30 44 39 50 79 100% Rec.

10.0'-Fill-Cinders, brick, & clay.

2.5'-Brown & gray sandy clay with organic matter & trace of gravel.

37.5'-Brown & gray silt & clay, trace of fine sand.

27.0'-Brown sandy gravel, little silt.

3.5'-Brown fine to coarse sand, little gravel, trace of silt.

5.0'-Firm gray shale.

ELEV. 399.9
DEPTH-85.5'

ELEV. 485.1

6 4 7 10 6 4 7 7 9 6 4 5 4 4 5 7 7 8 11 52 106 59 36 37 35 150 80% Rec.

14.0'-Fill-Sand, gravel, clay, & cinders.

40.0'-Brown & gray silt & clay, trace of fine sand.

1.5'-Gray silt & clay, some coarse gravel & trace of sand.

3.5'-Gray silty clay.

8.0'-Brown gravelly sand, little silt.

2.5'-Brown sandy gravel, little silt.

3.0'-Gray silty sand, some gravel.

3.5'-Brown & gray sandy gravel, trace of silt.

4.0'-Brown gravelly sand, trace of silt.

1.0'-Brown silt & clay, little gravel & rock fragments.

5.0'-Firm gray shale with some interbedded hard gray fossiliferous limestone

ELEV. 399.1
DEPTH-86.0'

ELEV. 375

BORING NO. I-8 | BORING NO. I-9 | BORING NO. I-10 | BORING NO. I-11 | BORING NO. I-12 | BORING NO. I-13 | BORING NO. I-14

NOTE:
FIGURES AT LEFT OF BORINGS INDICATE NUMBER OF HAMMER BLOWS PER FOOT OF PENETRATION OF 2" SPLIT SPOON SAMPLER WITH 140 LB. HAMMER AND 30" FALL.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

LOG OF BORINGS
BRIDGE No. HAM-50-1938

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M.	A.B.	W.W.C. 10-9-61	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

115
227

HAM-50-19.38

BORING NO. 1-1

ELEV. 494.5

15	
16	
13	23.0'-Fill-Cinders, Brick, Sandy Silt & Clay
4	
3	
5	
21	
5	
10	
10	8.0'-Brown & gray clay & silt, trace of fine sand
11	
12	
3	
4	14.0'-Brown & gray silt, some clay, little fine sand
9	
34	4.0'-Brown sandy gravel, little silt
77	6.0'-Brown fine to coarse sand, trace of silt & gravel
80	
46	15.0'-Brown sandy gravel, trace of silt
82	
11	5.0'-Gray fine sand, trace of coarse sand & silt
56	5.0'-Brown silty sand & gravel, with clay seams
36	
78	10.0'-Gray & brown fine to coarse sand, little silt
43	
16	8.0'-Brown & gray silty sand, some gravel
21	
80	7.0'-Gray sandy silt, some gravel with silt seams
200	3.0'-Brown sandy gravel, limestone fragments, little silt
70% Rec.	2.0'-Gray silt & clay, little gravel, trace of sand
	5.0'-Layered gray soft to firm shale and hard fossiliferous limestone

ELEV. 379.5
DEPTH-115.0'

BORING NO. 1-2

ELEV. 489.2

28	
35	10.0'-Fill-Sandy Clay, Brick Fragments & Cinders
30	
15	
8	
9	13.0'-Brown and gray sandy silt
7	
6	
6	5.0'-Brown silt, little fine sand
8	
7	3.0'-Brown sandy silt
8	5.0'-Gray silt & clay, little fine sand
4	4.0'-Gray & brown sandy silt, trace of gravel with clay seams
7	2.5'-Brown sandy gravel, trace of silt
42	5.5'-Brown gravelly sand, little silt
78	7.0'-Brown sandy gravel, trace of silt
69	5.0'-Brown & gray gravelly sand, little silt with clay seams
58	5.0'-Gray fine & coarse sand, little gravel & silt
31	
57	15.0-Gray sandy silt, little gravel with clay seams
38	
49	5'0'-Gray fine sand, trace of coarse sand & silt
66	3.0'-Brown fine & coarse sand & gravel, little silt
123	5.0'-Brown sandy gravel, trace of silt
59	6.0'-Brown fine sand, some gravel, little coarse sand & silt
97	1.0'-Brown & gray sandy silt, trace of gravel
48	3.0'-Gray silt & clay, trace of sand & gravel
124	5.0'-Layered gray soft to firm shale & hard fossiliferous limestone
60% Rec.	

ELEV. 381.2
DEPTH-108.0'

BORING NO. 1-3

ELEV. 489.2

35	
29	8.0'-Fill-Brick, Cinders, Clay.
19	
52	3.0'-Gray & black silty sand and gravel, trace of organic matter.
14	
9	15.0'-Brown sandy silt.
6	
9	
7	
6	2.0'-Brown silt, little fine sand.
10	2.0'-Brown sandy silt, with fine sand seams.
13	
11	10.0'-Gray silt & clay, little fine sand & silt seams.
14	
58	5.0'-Brown sandy gravel, little silt.
25	
55	1.0'-Gray cobble stone.
33	
32	
47	19.0'-Brown sandy gravel, little silt.
33	
53	3.0'-Gray sandy silt with clay & silt seams.
39	
73	
58	22.0'-Gray fine & coarse sand, little silt, trace of gravel.
40	
145	
165	8.0'-Brown & Gray sandy gravel, little silt.
165	1.0'-Gray silt & clay, trace of sand, gravel, limestone fragments.
63% Rec.	5.0'-Layered gray soft to firm shale & hard fossiliferous limestone

ELEV. 385.2
DEPTH-104.0'

BORING NO. 1-4

ELEV. 489.7

9	
33	10.0'-Fill-Cinders, gravel, brick & sandy clay.
10	
8	
9	7.5'-Brown & gray clay, trace of fine sand.
12	
5	
5	
7	
6	22.5'-Mottled brown & gray sandy silt.
5	
6	
3	
27	19.0'-Brown gravelly sand, little silt.
32	
50	
68	6.0'-Brown sandy gravel, trace of silt.
26	
34	8.0'-Brown coarse to fine sand, some silt, & trace of gravel.
39	
34	5.0'-Brown silty sand, some gravel, with clay seams.
38	
FS	
39	12.0'-Brown fine sand.
60	8.0'-Brown sand & gravel, with some cobbles, & little silt.
220	0.2'-Brown & gray silty clay, little sand & little gravel.
89%	5.0'-Layered gray, hard, fossiliferous limestone and firm calcareous shale.
45%	

ELEV. 386.5
DEPTH-103.2'

BORING NO. 1-5

ELEV. 438.8

38	
16	11.0'-Fill-Cinders, Brick, & Clay.
9	
6	
6	5.0'-Brown & gray silt & clay, little sand, trace of gravel.
11	
10	10.0'-Brown & gray silt & clay, trace of fine sand.
11	
12	
11	2.0'-Brown sandy silt with fine sand seams.
6	
6	12.0'-Brown & gray silt & clay with little fine sand lenses.
6	
8	
5	
11	
78	24.0'-Brown & gray sandy gravel, trace of silt.
59	
48	
48	5.0'-Gray sandy silt with sand seams, little gravel.
48	
59	10.0'-Gray fine sand, trace of gravel, little silt.
56	3.0'-Gray silty sand, some gravel, silt & clay seams.
69	
72	14.0'-Brown & gray fine to coarse sand, some gravel, little silt seams.
206	
70% Rec.	5.0'-Layered soft to firm gray shale & hard gray fossiliferous limestone

ELEV. 387.8
DEPTH-101.0'

BORING NO. 1-6

ELEV. 476.3

18	5.0'-Fill-Black & brown silty clay, brick, & broken limestone.
14	
10	
9	
7	19.0'-Dark brown silty clay, & little fine sand.
8	
8	
12	
10	
12	
6	4.0'-Dark brown silt, & some fine sand.
17	5.5'-Brown sandy silt, & some fine sand.
16	10.5'-Brown & gray gravelly sand, & little silt.
30	
25	6.0'-Gray sand, little gravel with coal.
43	4.0'-Gray & brown sandy gravel, & trace of silt.
32	10.0'-Gray silt, & little fine sand.
30	
35	10.5'-Gray & brown sand, some silt, & trace of gravel.
40	
122	9.3'-Gray & brown sandy gravel, & little silt.
37	
100% Rec.	5.0'-Gray firm calcareous shale & hard fossiliferous limestone.

ELEV. 387.5
DEPTH-88.8'

BORING NO. 1-7

ELEV. 464.5

10	7.0'-Fill-Brown sandy clay, cinders & broken concrete.
18	
14	5.0'-Gray & brown silt & clay, some sand, & trace of gravel.
8	
11	6.0'-Gray sandy silt, & some fine sand.
9	11.0'-Brown & gray silt & clay, & some fine sand.
8	
22	4.0'-Gray silty sand & gravel.
25	
26	14.0'-Brown & gray sandy gravel, & little silt.
48	
45	
38	
27	FS 4.0'-Gray fine sand.
48	
33	7.0'-Gray coarse & fine sand, little silt & gravel.
39	
33	8.0'-Brown gravelly sand, & little silt.
179	2.0'-Brown & gray clayey sand & gravel with shale & rock fragments.
25% Rec.	5.0'-Gray soft friable clay shale & fossiliferous limestone.

ELEV. 391.5
DEPTH-73'

ELEV. 375

NOTE:
FIGURES AT LEFT OF BORINGS INDICATE NUMBER OF HAMMER BLOWS PER FOOT OF PENETRATION OF 2" SPLIT SPOON SAMPLER WITH 140 LB. HAMMER AND 30" FALL.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

LOG OF BORINGS
BRIDGE No. HAM-50-1938

H&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M.	A.B.	W.W.C. 10-9-61	W.A.S. 4-20-62	

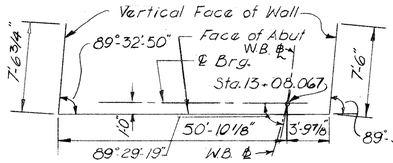
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

117
227

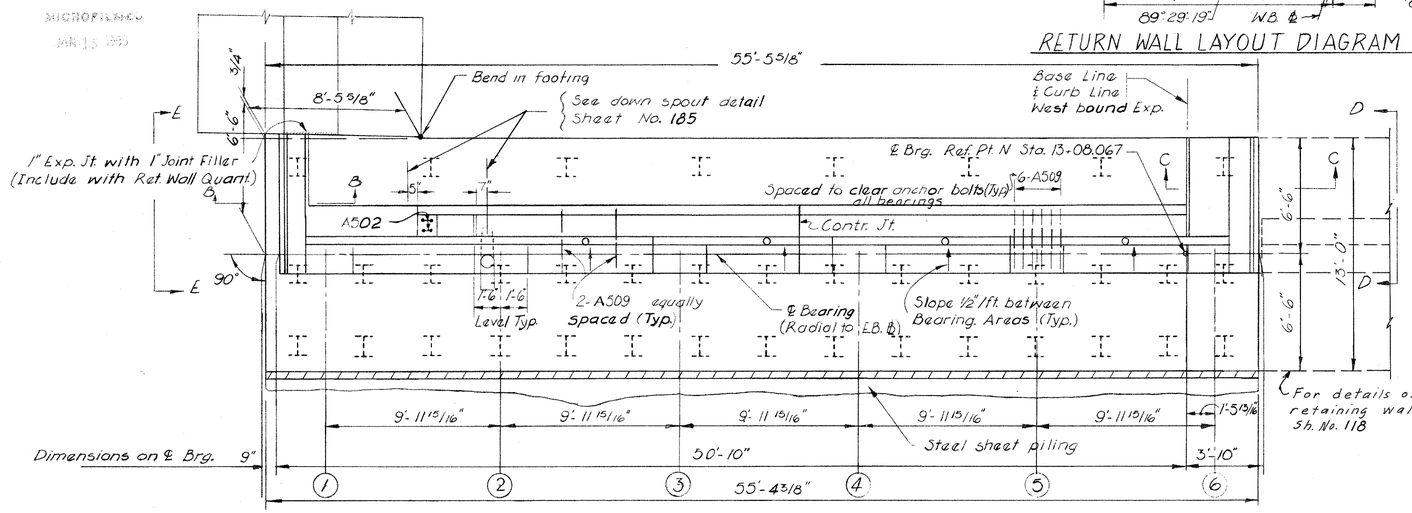
HAM-50-19.38

Note:
Special care shall be taken in placing steel in the abutment seat so that it will not interfere with the bearing plate anchor bolts.

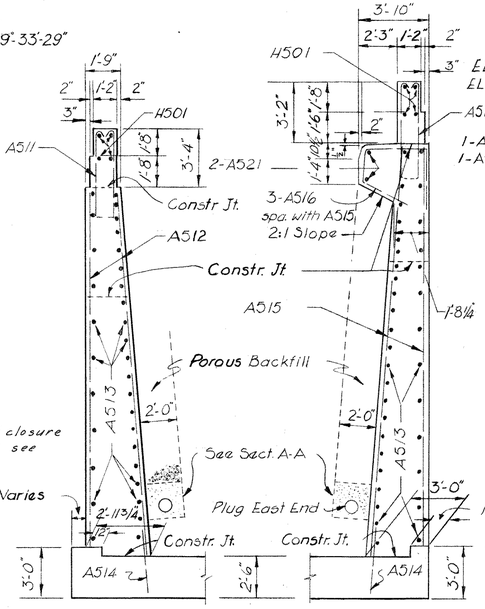
Retaining wall No. 1
See Sheet No. 93 for details



RETURN WALL LAYOUT DIAGRAM

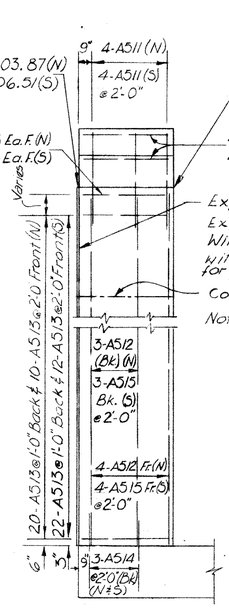


PLAN

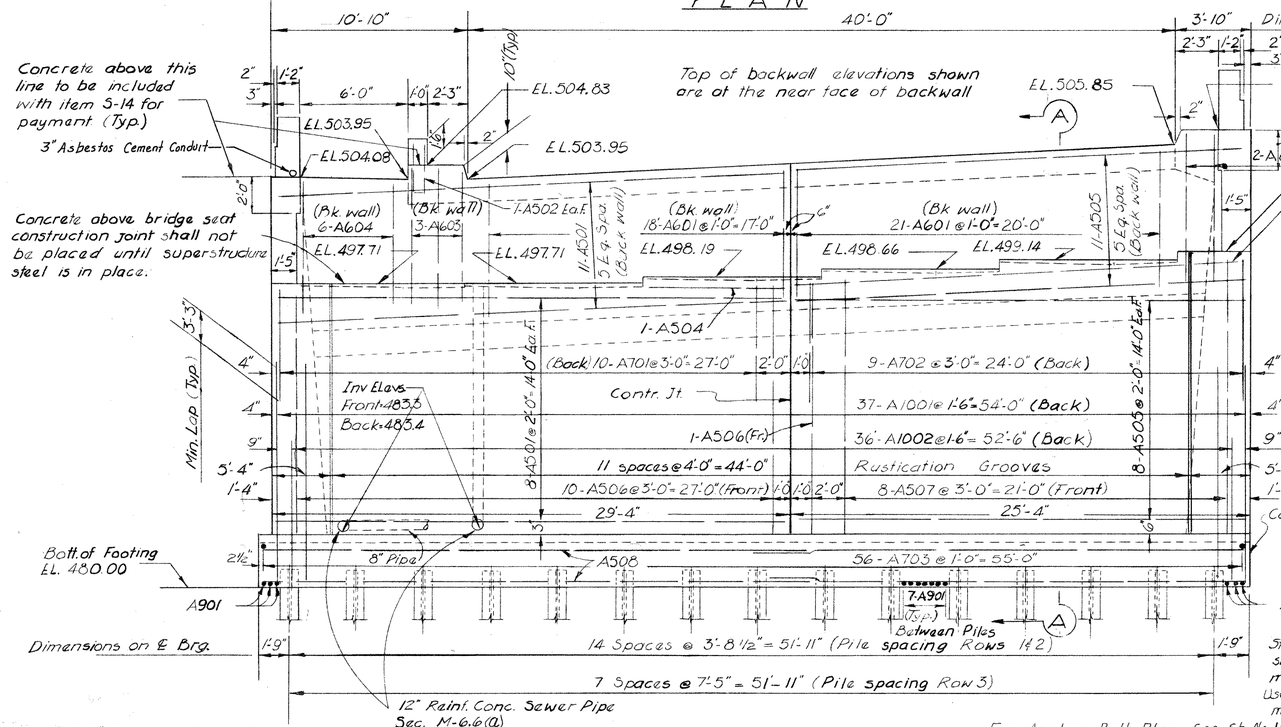


SECTION B-B

SECTION C-C



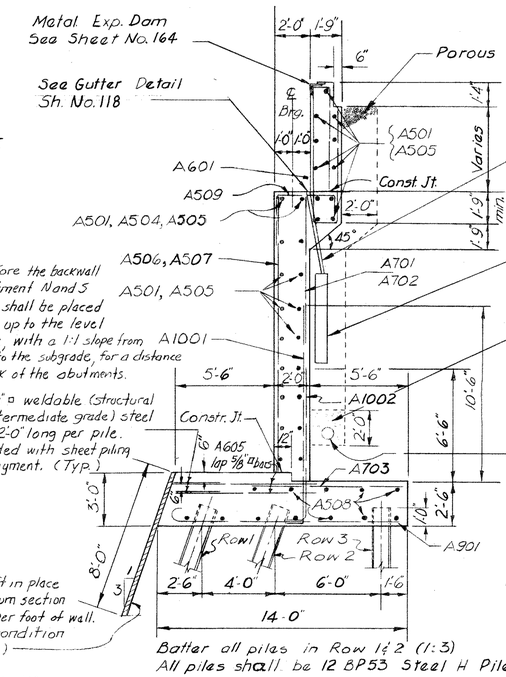
ELEVATION E-E
D-D similar, opposite hand except as noted.



ELEVATION

Provide 3" clearance to reinforcing steel in the footing, and 2" clearance to reinforcing steel in wall, (minimum).

For Anchor Bolt Plan See Sh. No. 118
For details of expansion & contraction Joints See Sh. No. 118
For details of rustication grooves see Sh. No. 118
For roadway and curb and finish details see Sh. No. 164



SECTION A-A

Steel sheet piling left in place shall have a minimum section modulus of 7 in.³ per foot of wall. Used piling in good condition may be used. (Typ.)

Batter all piles in Row 1 & 2 (1:3)
All piles shall be 12 BP53 Steel H Piles.

3" W.I. pipe 5'-0" long. Located midway between bearing areas as shown on plan. Include with abutment concrete for payment.

6'-0" length of 8" Bituminous Coated Helical Perforated Corrugated Metal Pipe. [Sec. M-6.4 (h-c)]. Provide cap with 3 1/2" ⌀ hole. (Item 5-29).

Sand meeting requirements of Sec. M-2.1. Payment included in price bid for 8" pipe.

8" ⌀ Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)].

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ABUTMENT N

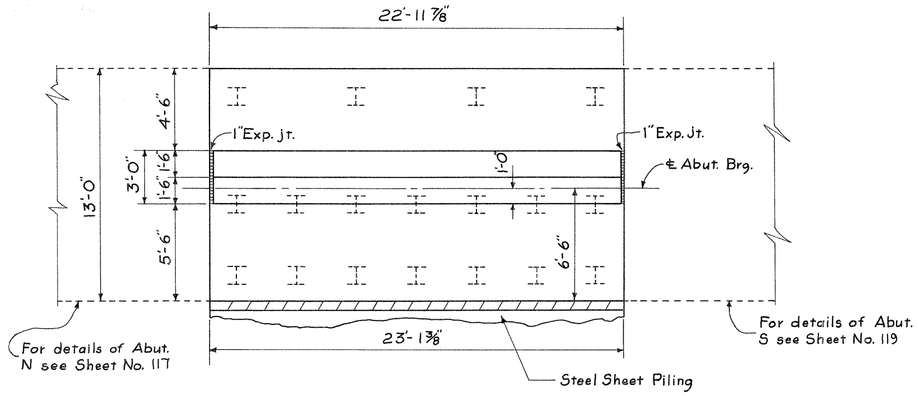
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

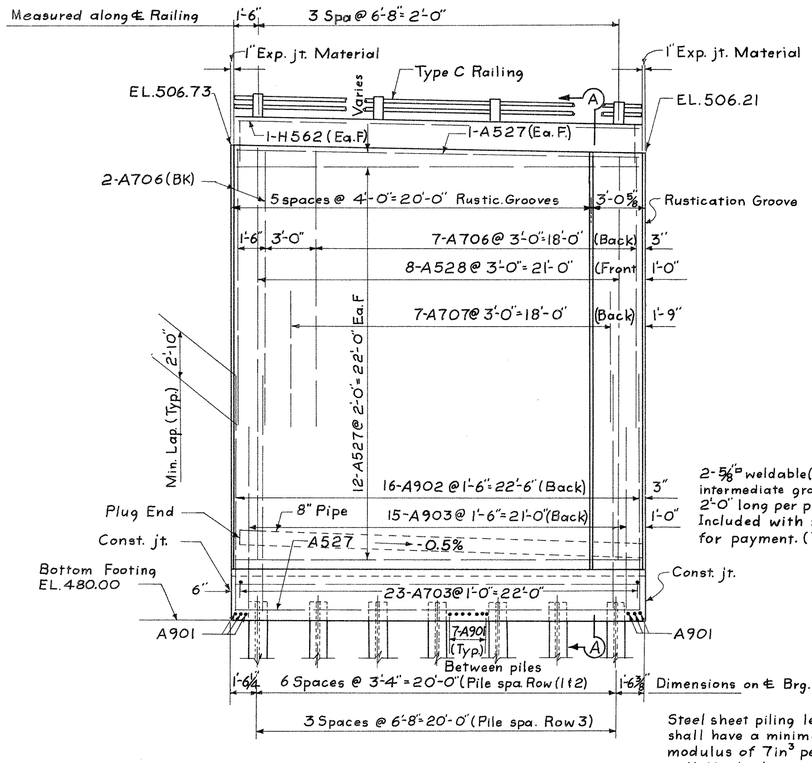
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.Y. 6-13-61	M.Y. 6-30-61		W.H.W.C. 8-21-61	W.H.J. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-50-19.38

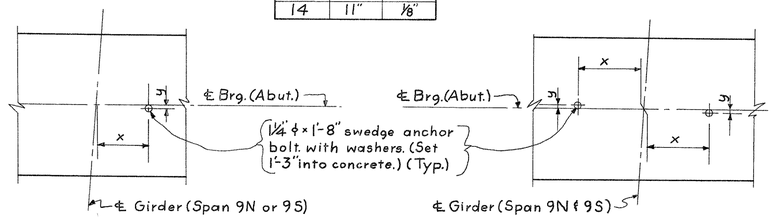


PLAN



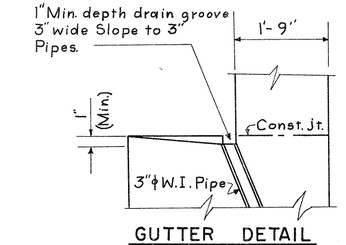
ELEVATION

GIRDER	x	y
1	11½"	3/8"
2-5	11½"	3/8"
6	11½"	3/8"
9	11"	1/8"
10-13	11"	1/8"
14	11"	1/8"

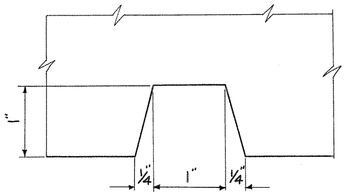


ANCHOR BOLT PLAN
(Girders 1, 6, 9, & 14)
(Rotate 180° for Girders 6 & 14)

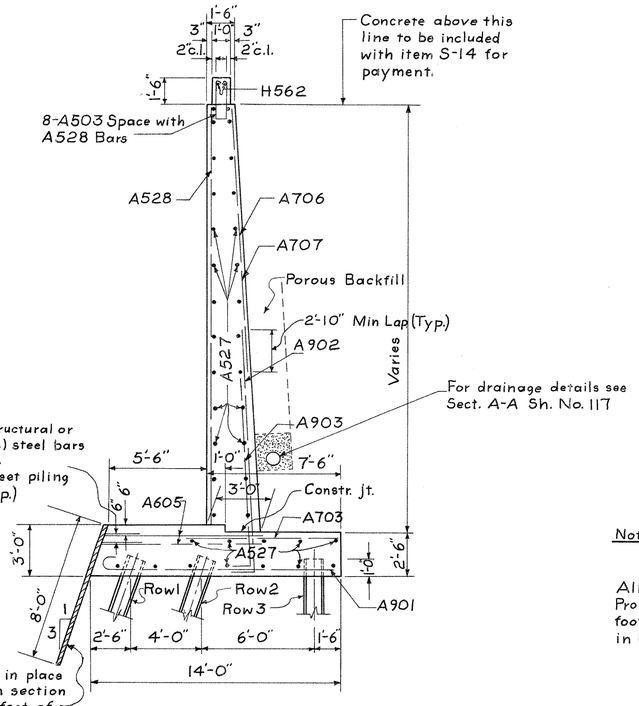
ANCHOR BOLT PLAN
(Girders 2-5, & 10-13)



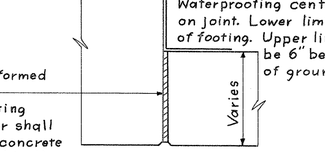
GUTTER DETAIL



DETAIL OF RUSTICATION GROOVES

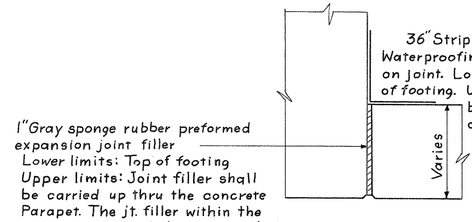


SECTION A-A



Lower limit of sealing strip: Top of footing.
Upper limit of sealing strip: Underside of approach slab.

CONTRACTION JOINT DETAIL



EXPANSION JOINT DETAIL

Notes:

All piles shall be 12 BP 53 Steel H Piles
Provide 3" clearance to reinforcing steel in the footing, and 2" clearance to reinforcing steel in wall. (minimum).

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

WALL BETWEEN ABUTMENT N & S

BRIDGE NO. HAM-50-1938 R.& L.

H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.Y. 6/15/61	M.Y. 7-10-61	J.T.C 4/6/62	W.W.C. 8-15-61	M.Y. 4-25-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR	SHEET NO.
2	OHIO			119 / 227

HAM-50-19.38

Retaining wall No. 2
See Sheet No. 95 for details
Tang. to East Bound Exp. Base Line & Curb Line at Ref. Pt. S
1" Exp. Jt. with 1" Joint Filler (Include with Ret. Wall Quant.)
48'-6 1/2"
9'-5 3/4"
Bend in Ftg.
℄ Brg. Ref. Pt. S Sta. 12+99.00
See down spout detail Sh. No. 185
6-A509 Spaced to clear anchor bolts (Typ.) all bearings
Contr. Jt.
Slope 1/2"/ft. between Bearing Areas (Typ.)
2-A509 equally spaced (Typ.)
Level (Typ.)
℄ Bearing (Radial to E.B. ℄)
For details of closure retaining wall See Sh. No. 118
8'-6 11/16"
43'-11 3/8"
Steel sheet piling
48'-6 1/4"
9" Dimensions on ℄ Brg.
PLAN
SECTION B-B
C-C similar, Opposite Hand
A511
H501
2-A521 (N&S)
A525
A526
3-A516 (N&S) spaced with A525 & A526
2:1 slope
Porous Backfill
See Sect. A-A
Constr. Jt.
A514
ELEVATION E-E
D-D similar, Opposite Hand Except as noted.
EL. 505.99 (N)
EL. 507.92 (S)
EL. 506.29 (N)
EL. 508.23 (S)
4-A511@2'-0"(N)
4-A511@2'-0"(S)
2-H501 Ea. F. (S)
2-H501 Ea. F. (N)
1-A513 Ea. F. (N)
1-A513 Ea. F. (S)
Constr. Jts.
22-A513@1'-0" (Back) & 11-A513@2'-0" (Front)(N)
24-A513@1'-0" (Back) & 12-A513@2'-0" (Front)(S)
4-A526 Front(S)
4-A525 Front(N)
3-A525 Back(N)
3-A526 Back(S)
3-A514@2'-0" (Back)
Exp. Jt. See Sh. 118 for details
Exp. Jt. material (South Wingwall only) is included with Ret. wall quantities for payment.
12" Reinf. Conc. Sewer Pipe Sec. M-6.6(a). EL. E-E only
Notes:
(Fr.) denotes Front.
(Bk.) denotes Back.
(N) denotes North Wingwall.
(S) denotes South Wingwall.
Ea. F. denotes Each Face.
Vertical Face of Wall
Face of Abut.
89°-55'-52"
Sta. 12+99.00
℄ Brg
E.B. ℄
43'-11 1/4"
89°-24'-15"
Tan. to E.B. ℄
RETURN WALL LAYOUT DIAGRAM

Concrete above this line to be included with Item S-14 for payment (Typ.)
40'-1 1/2"
EL. 508.15
Dimensions along near face of backwall
EL. 506.21
EL. 505.32
Top of backwall elevations shown are at the near face of backwall.
EL. 507.28
2" Rad. (Typ.)
3" Asbestos Cement Conduit
2-A602 (Back Wall)
EL. 501.14
1-A517 Ea. F.
2-A602 (Bk. Wall)
Concrete above bridge seat construction joint shall not be placed until superstructure steel is in place.
20-A601 @ 1'-0" = 19'-0" (Back Wall)
EL. 499.19
EL. 499.56
EL. 499.97
EL. 500.38
EL. 500.80
1-A704 & 1-A705 (Back)
8-A704 @ 3'-0" = 21'-0" (Back)
8-A705 @ 3'-0" = 21'-0" (Back)
32-A1001 @ 1'-6" = 46'-6" (Back)
8-A523 @ 3'-0" = 21'-0" (Front)
8-A524 @ 3'-0" = 21'-0" (Front)
15-A1002 @ 1'-6" = 21'-0" (Back)
10 spaces @ 4'-0" = 40'-0"
A1001 (Back)
Rustication Grooves
12" Reinf. Conc. Sewer Pipe Sec. M-6.6(a)
Const. Jt.
8" Pipe
Contr. Jt.
23'-9 1/4"
Bottom Footing EL 480.00
49-A703 @ 1'-0" = 48'-0"
A901
A518
7-A901 (Typ.) Between Piles
Dimensions on ℄ Brg.
12 Spaces @ 3'-9" = 45'-0" (Pile spacing Rows 1 & 2)
6 Spaces @ 7'-6" = 45'-0" (Pile spacing Row 3)
Invert Elevs. Front - 483.3 Back - 483.4
ELEVATION
Metal Exp. Dam See Sheet No. 165
See Gutter Detail Sheet No. 118
Porous Backfill
A601
A509
A517
Constr. Jt.
A523, A524
A704, A705
A1001
A1002
A605
A703
A518
Row 1
Row 2
Row 3
A901
2-5/8" ϕ weldable (Structural or intermediate grade) steel bars 2'-0" long per pile. Included with sheet piling for payment. (Typ.)
3" W.I. pipe 5'-0" long. Located midway between bearing areas as shown on plan. Include with abutment concrete for payment.
6'-0" Length of 8" Bituminous Coated Helical Perforated Corrugated Metal Pipe. [Sec. M-6.4(h-c)]. Provide cap with 3 1/2" ϕ hole. (Item S-29)
Sand meeting requirements of Sec. M-2.1. Payment included in price bid for 8" Pipe.
8" ϕ Bituminous Coated Helical Perforated Corrugated Metal Pipe. [Sec. M-6.4(h-c)].
14'-0"
Steel Sheet piling left in place shall have a minimum section modulus of 7 in³ per foot of wall. Used piling in good condition may be used. (Typ.)
Batter all piles in Rows 1 & 2 (1:3)
All piles shall be 12 BP53 Steel H Piles
SECTION A-A

Notes:

Provide 3" clearance to reinforcing steel in the footing, and 2" clearance to reinforcing steel in wall. (minimum).
For details of expansion & contraction Joints See Sheet No. 118
For Anchor Bolt Plan details See Sh. No. 118

For procedure on placing embankment See Sh. No. 117
For details of rustication grooves See Sh. No. 118
For roadway and curb and finish details See Sh. No. 165
Special care shall be taken in placing steel in the abutment seat so that it will not interfere with the bearing plates anchor bolts.

Remove a portion of existing retaining wall & footing that interferes with the abutment footing and driving of piles. Removal to be included with Item S-22, Lump Sum for payment.

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CINCINNATI, OHIO

ABUTMENT S

BRIDGE NO. HAM-50-1938 R.&L.

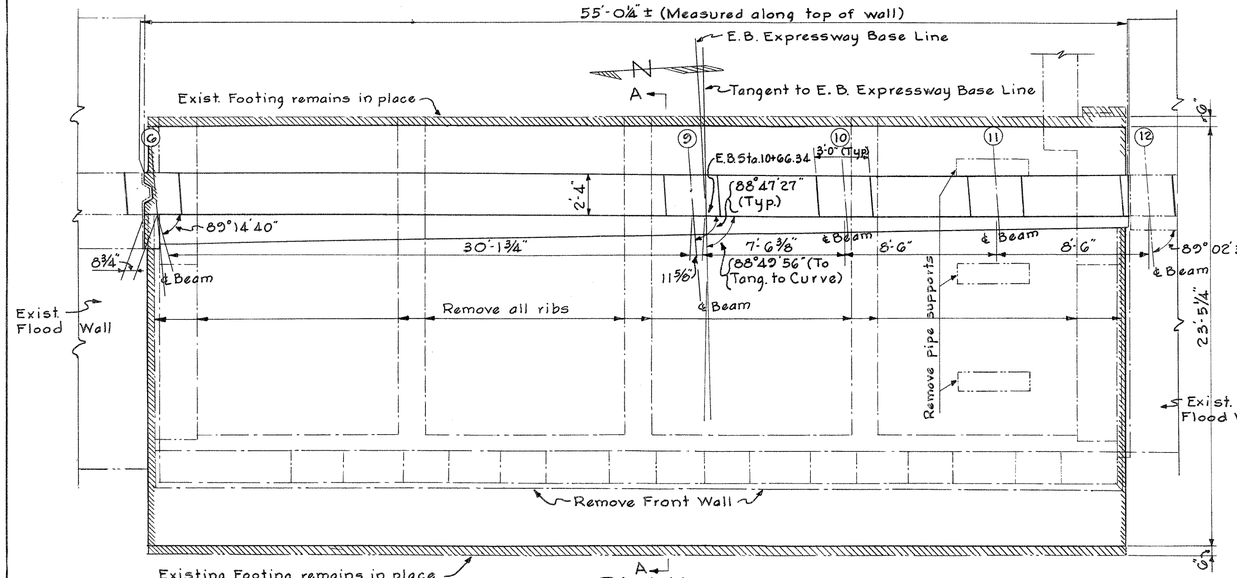
H.& E. BRIDGE NO. 1

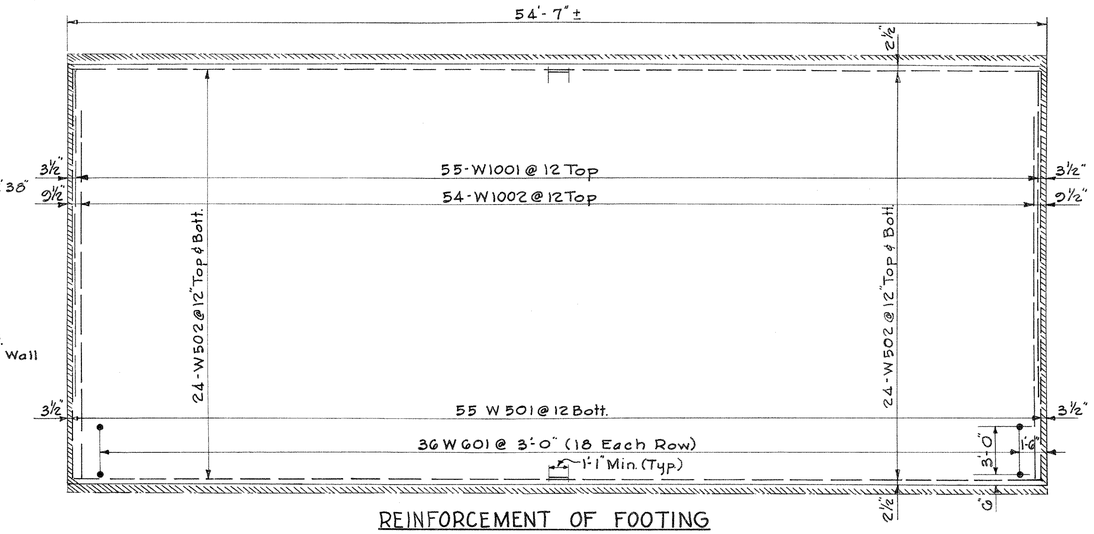
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.Y. 6-13-61	M.Y. 7-7-61		W.W.C. 8-21-61	H.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

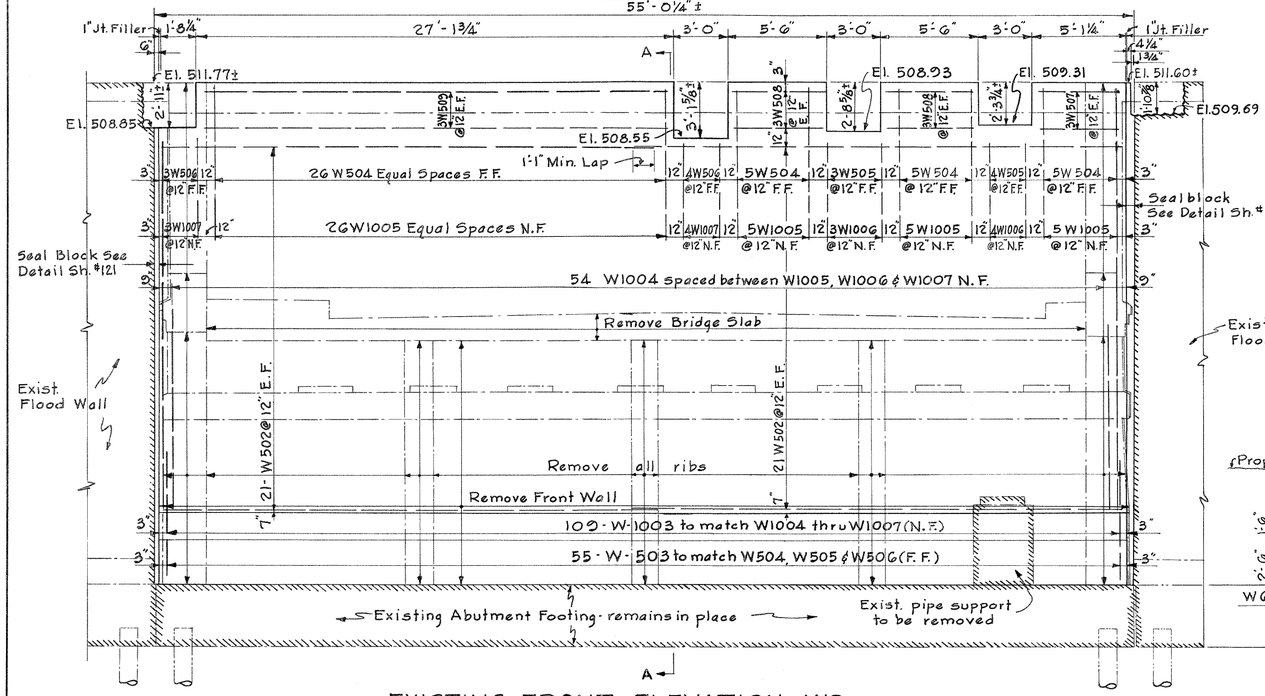
126
227

HA - 50-19.38





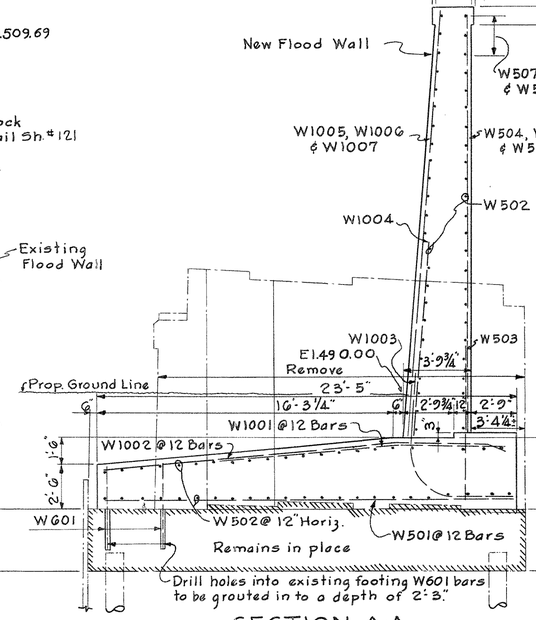
REINFORCEMENT OF FOOTING



EXISTING FRONT ELEVATION AND REINFORCEMENT OF WALL

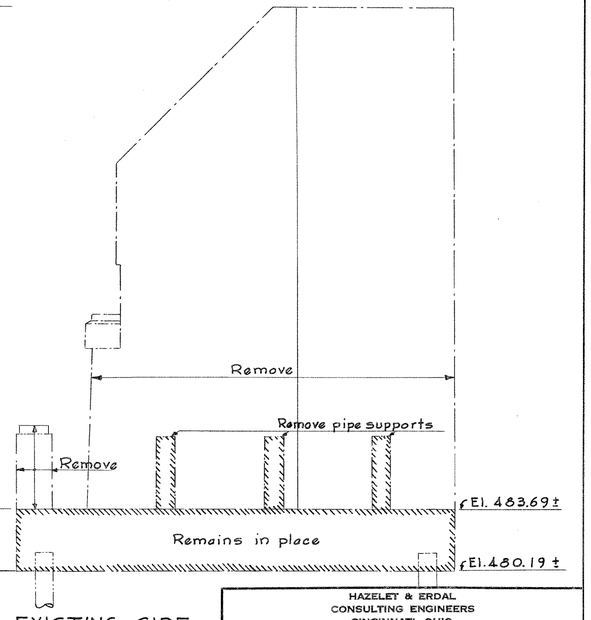
Note:
N.F. Denotes Near Face
F.F. Denotes Far Face
E.F. Denotes Each Face

Removal of a portion of existing structure as indicated on this sheet to be included in the Item S-22, Lump Sum for payment.



SECTION A-A

Holes are to be drilled into the existing concrete and the proposed reinforcing bars W601 set therein in accordance with provision of Section S-23. Payment to be included in Item S-23 "Dowel Holes".



EXISTING SIDE ELEVATION

Work this sheet with Sh. # 121

HAZELET & ERDAL
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CINCINNATI, OHIO

FLOOD WALL DETAILS UNDER SPANS 7N & 7S

BRIDGE NO. HAM-50-1938 R.&L.

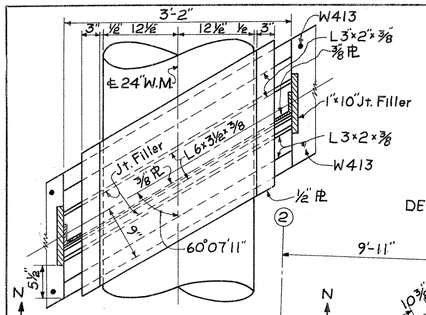
H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.P.S. 9-15-61	M.P.S. 11-1-61	L.J.W. 3-20-62	G.J.T. 11-1-61	W.A.S. 4-20-62	

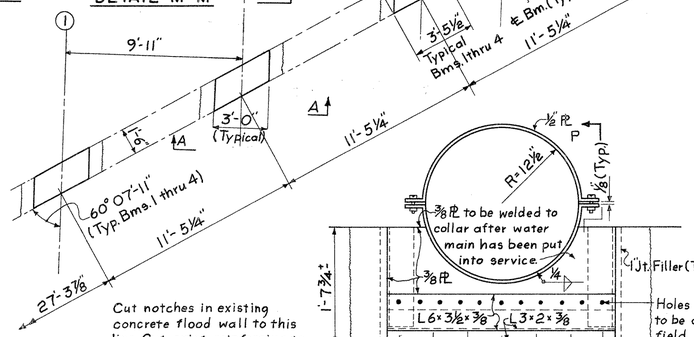
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

121
227

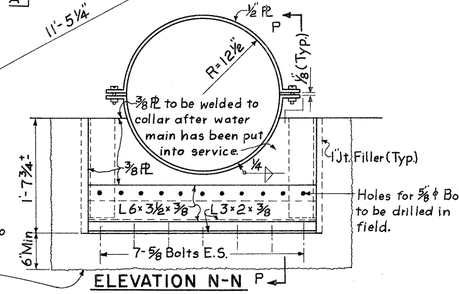
HAM-50-19.38



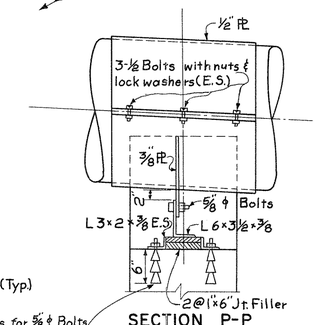
DETAIL M-M



Cut notches in existing concrete flood wall to this line. Cut exist. reinforcing to within 2" of prop. face of concrete.

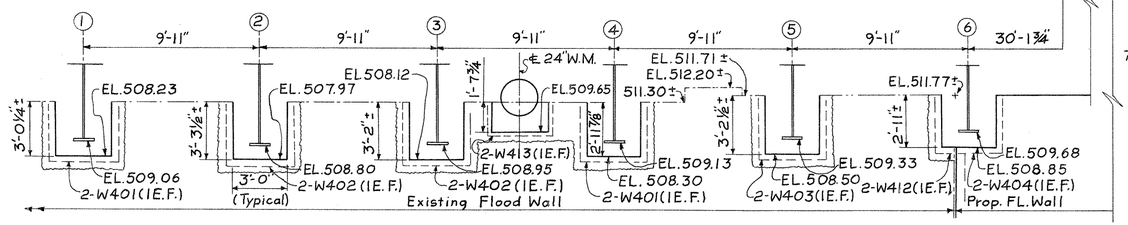


ELEVATION N-N

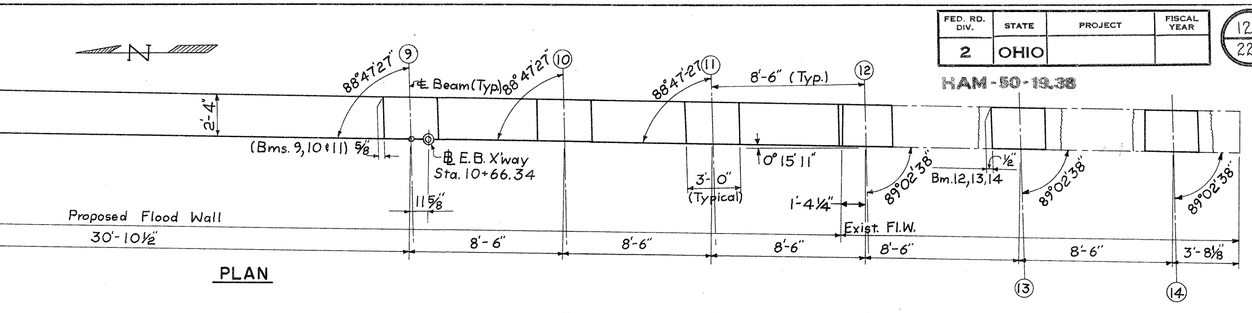


SECTION P-P

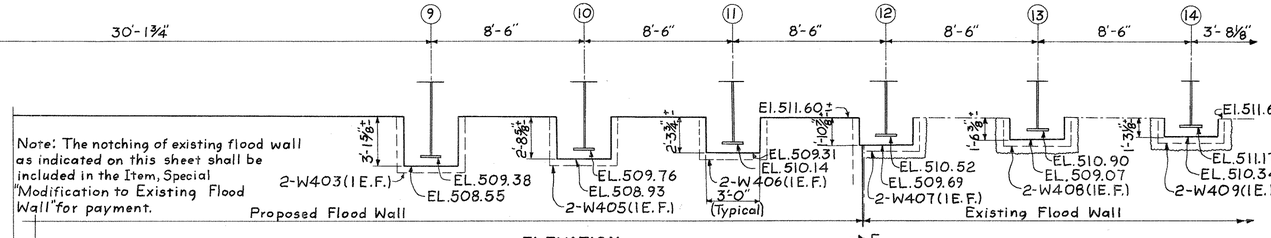
5/8"x7" Exp. Bolts with nuts & lock washers (Galv.) to be located by Field Measurement Include with Item S-7 for payment.



ELEVATION
(@ 90° to ℄ Beam)

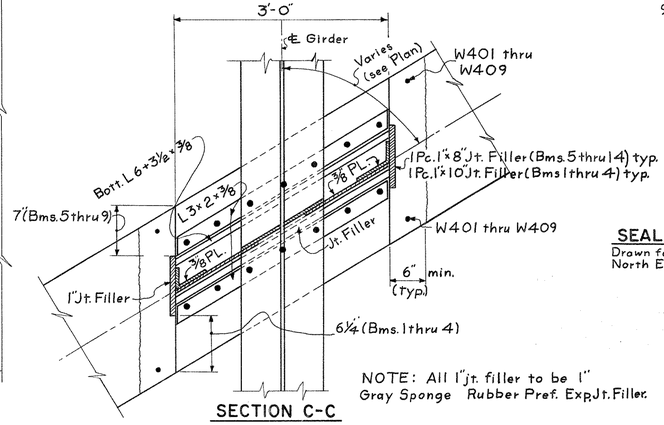


PLAN



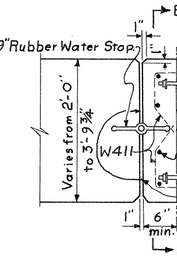
Note: The notching of existing flood wall as indicated on this sheet shall be included in the Item, Special "Modification to Existing Flood Wall" for payment.

ELEVATION



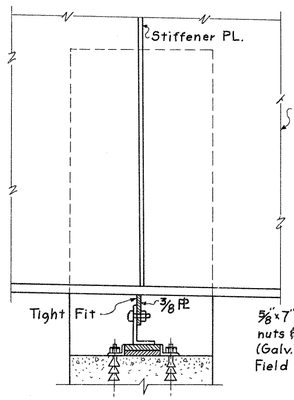
NOTE: All 1" jt. filler to be 1" Gray Sponge Rubber Pref. Exp. Jt. Filler.

SECTION C-C

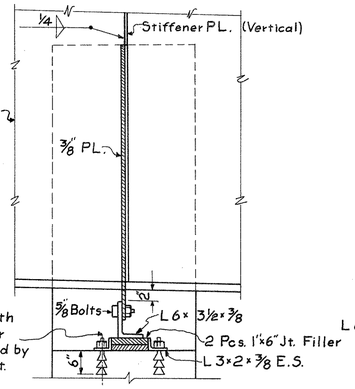


SEAL BLOCK & EXPANSION JOINT DETAIL

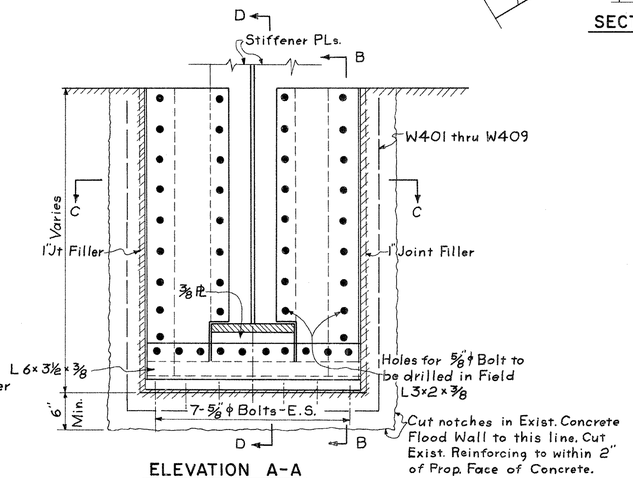
Drawn for South End of proposed Wall
North End of proposed Wall. (Opposite Hand)



SECTION D-D
(For data not shown - see Sect. B-B)

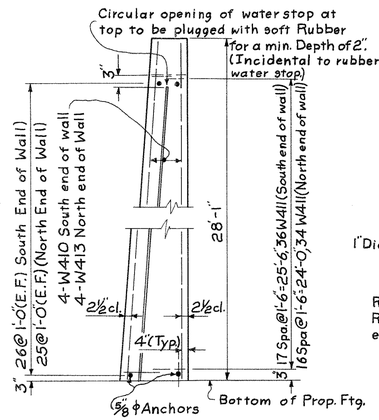


SECTION B-B

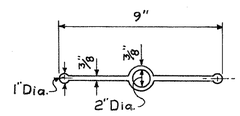


ELEVATION A-A

Cut notches in Exist. Concrete Flood Wall to this line. Cut Exist. Reinforcing to within 2" of Prop. Face of Concrete.



SECTION E-E



Rubber Water Stop

Rubber water stop (Gates Rubber Company or approved equal)

GENERAL NOTES

CONCRETE All concrete shall be Class "E" Concrete.

RUBBER WATER STOP Water stop shall be installed so as to form a continuous water tight diaphragm in each joint. Adequate provision shall be made to support and completely protect the water stop during progress of the work. The contractor shall replace or repair, at his expense any water stops damaged before final acceptance of the work.

Rubber water stops left exposed for 30 days or longer shall be protected by wooden coverings, secured firmly in place. The coverings shall be light proof and waterproof.

1" PREFORMED EXPANSION JOINT FILLER

1" Gray Sponge Rubber Preformed Expansion Joint filler shall meet the requirements of Section M-10.02, Type 1.

E.S. Denotes Each Side.

E.F. Denotes Each Face.

All structural steel shown on this sheet to be included in Item S-7 "Structural Steel" for payment.

Note: Work this sheet with sheet No. 120

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CONSULTING ENGINEERS
CINCINNATI, OHIO

FLOOD WALL CLOSURE DETAILS

UNDER SPANS 7N & 7S
BRIDGE NO. HAM-50-1938 R.&L.

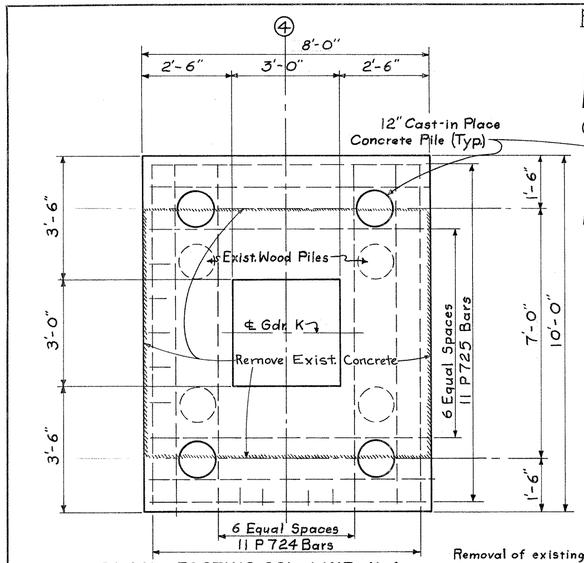
H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.P.S. 10-13-61	M.P.B. 11-2-61	J.T.C. 4/16/62	G.J.T. 4-19-62	4-25-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

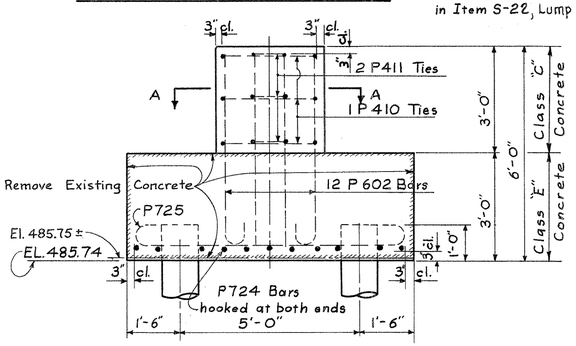
122
227

HAM-50-19.38

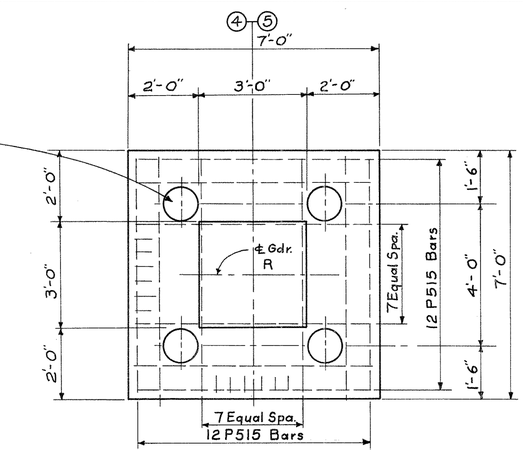


PLAN – FOOTING COL. LINE K-4

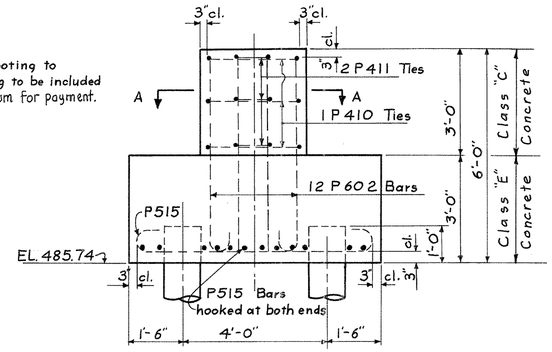
Removal of existing footing to Construct new footing to be included in Item S-22, Lump Sum for payment.



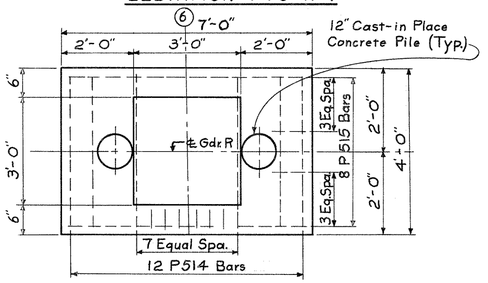
ELEVATION – FTG K-4



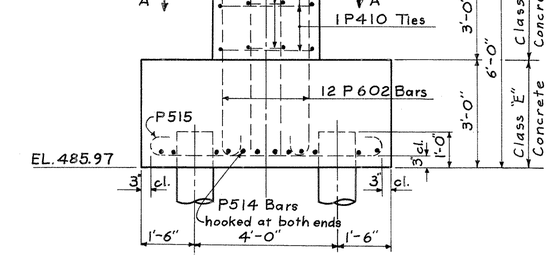
PLAN – FOOTING COL. LINES R-4 AND R-5



ELEVATION – FTG R-4 AND R-5

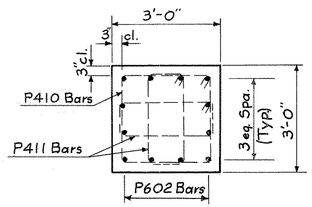


PLAN – FOOTING COL. LINE R-6

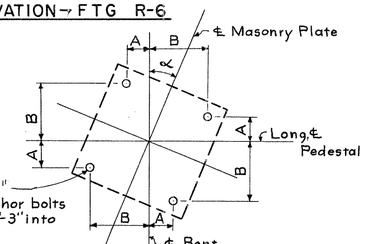


ELEVATION – FTG R-6

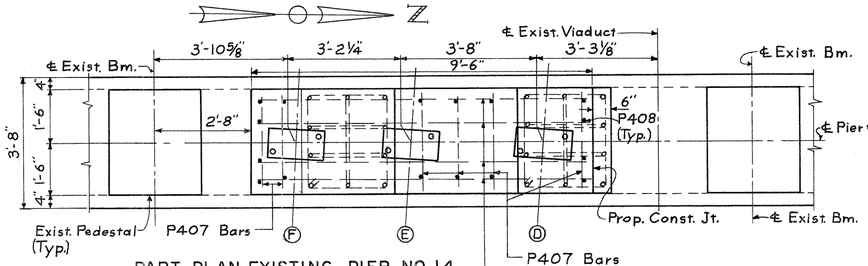
Pedestal	∝	A	B
K-4	0°-00"	7½"	7½"
R-4	9°-04'-17"	6¼"	8 9/16"
R-5	7°-57'-20"	6 3/8"	8 7/16"
R-6	6°-50'-22"	6 9/16"	8 5/16"



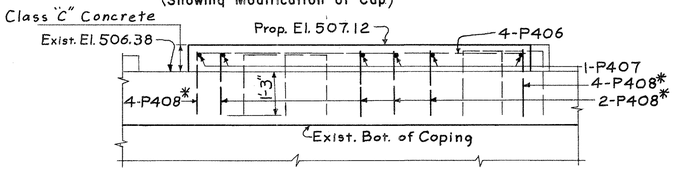
SECTION A-A



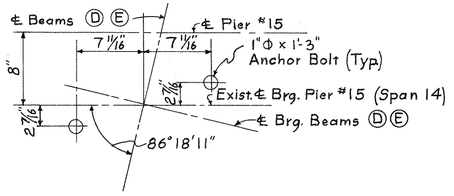
ANCHOR BOLT DETAIL
AT K-4, R-4, R-5 & R6

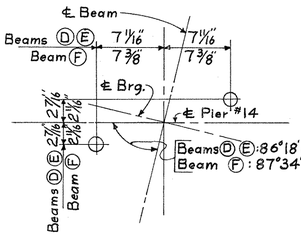


PART PLAN EXISTING PIER NO. 14
(Showing Modification of Cap)

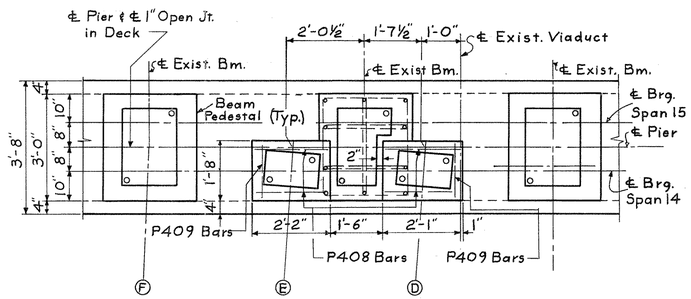


PART ELEVATION EXISTING PIER NO. 14

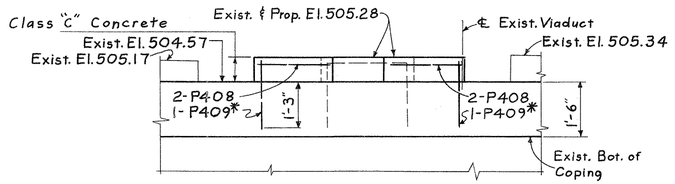




ANCHOR BOLT LOCATION DETAIL



PART PLAN EXISTING PIER NO. 15
(Showing Modification of Cap)



PART ELEVATION EXISTING PIER NO. 15

NOTE:

Parts of existing pedestals lying within the limits of proposed pedestal are to be removed to the elevation of the top of coping, leaving the existing reinforcing steel exposed. The steel is to be cleaned and utilized to reinforce proposed pedestal.

Holes are to be drilled into the existing concrete and the proposed reinforcing bars marked with an asterisk (*) set therein, in accordance with provision of Section S-23. Payment to be included in Item S-23, "Dowel Holes."

Removal of existing conc. at Piers #14 & #15 to be included in Item S-22, Lump Sum for payment.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

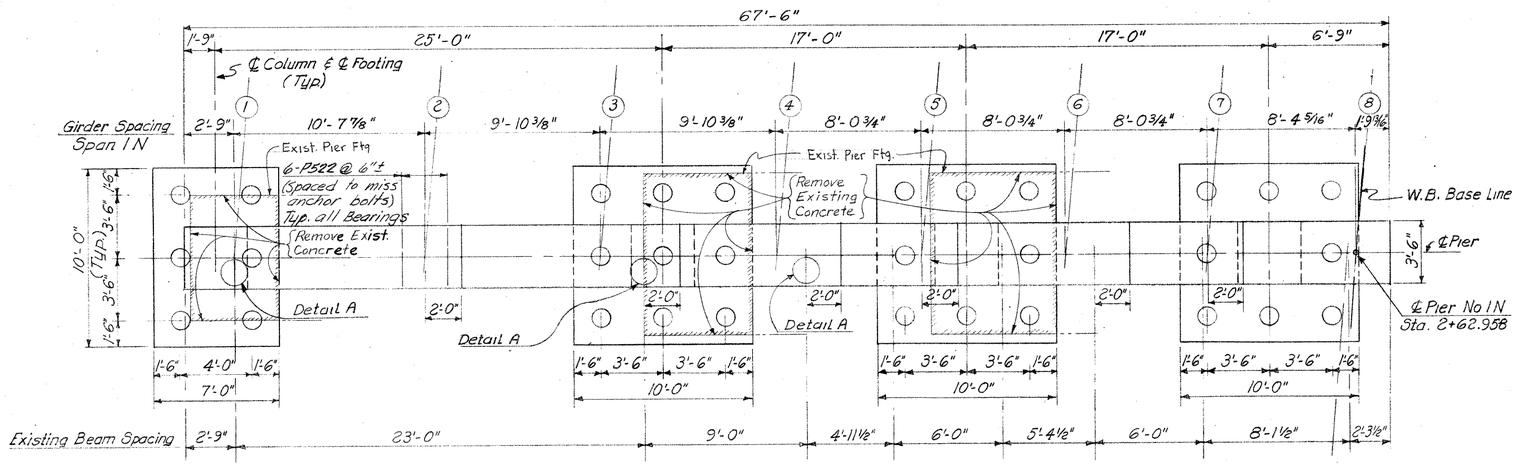
H.& E. BRIDGE NO. 1

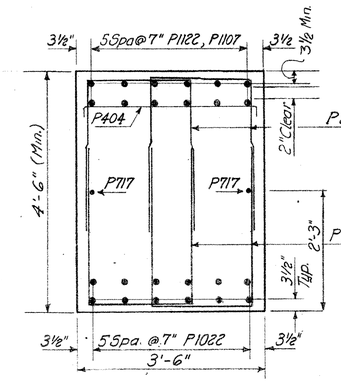
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.P.S B.O.G.	M.P.S. B.O.G	J.T.C. 3-15-62	D.W.L.	H.A.E. 4-20-62.	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

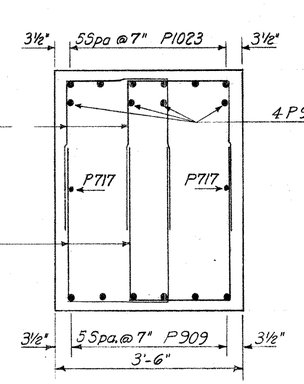
123
227

HAM-50-19.38





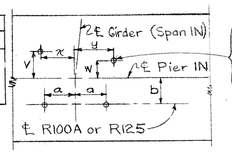
SECTION A-A



SECTION B-B

Rocker No.	Location a	Location b
R100A	10½"	8½"
R125	11"	1'-0¾"

Girder No.	Location w	Location x	Location y	Location v	
1	6¾"	11¼"	1'-1¼"	8"	
2 thru 8	6¾"	11¼"	1'-1¼"	8"	
	6¾"	11½"	1'-1"	8"	



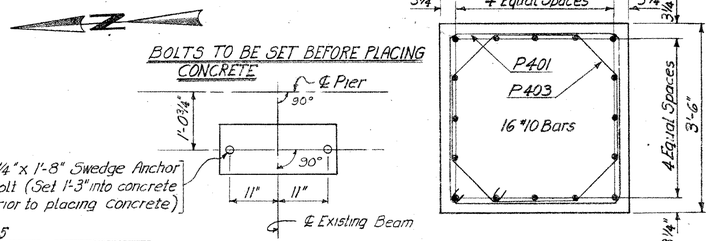
1¼"ϕ x 1'-8" swedge anchor bolts with washers. (Set 1'-3" into concrete) (Typ)

NOTE:
See Detail A for method of setting anchor bolts for Rocker R125

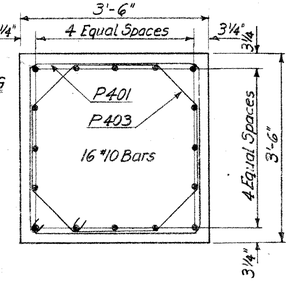
Anchor Bolt Plan

PLAN

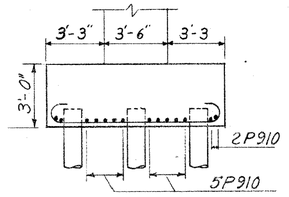
(All Piles are 12" Cast-in-Place Concrete)



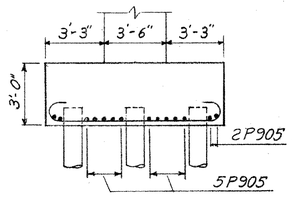
DETAIL A
(At three locations only)



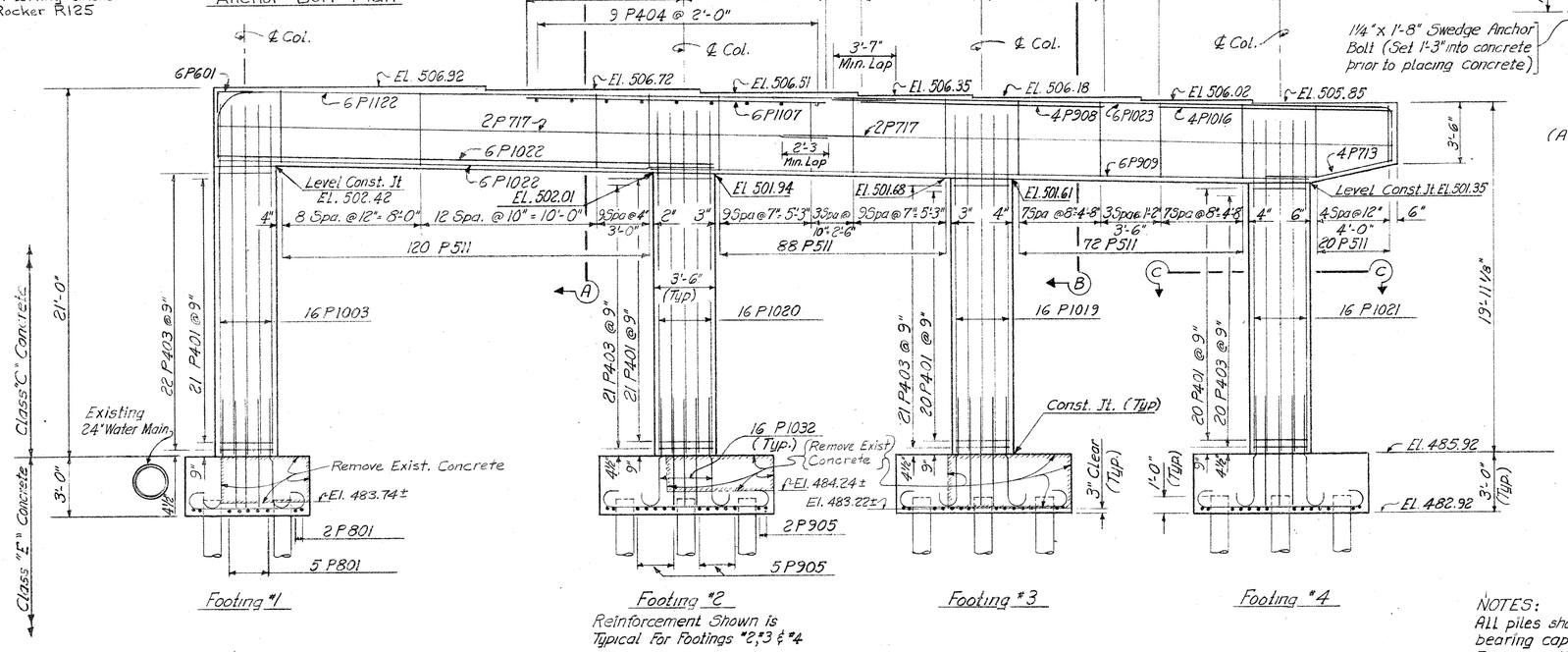
SECTION C-C



NORTH ELEVATION
FOOTING 1



NORTH ELEVATION
FOOTING 2, 3 & 4



Footing #1

Footing #2
Reinforcement Shown is Typical For Footings #2, #3 & #4

Footing #3

Footing #4

ELEVATION

Note: Remove a portion of existing pier columns and footings that interferes with the new footing and driving of piles. Removal to be included with Item S-22, Lump Sum for payment.

GENERAL NOTES
1.) Special care shall be taken in placing steel in the pier cap so that it will not interfere with the masonry plate anchor bolts.
2.) Provide 3" clearance to reinforcing steel in footing, and 2" clearance to reinforcing steel in cap and column
3.) E.F., N.F. & F.F. denotes each face, near face, and far face.

NOTES:
All piles shall be driven to a minimum bearing capacity of 40 Tons per Pile
For connection of downspouts to pier see Sh. No. 186
Special care shall be taken in protection of the 24" Water Main during construction of the proposed Footing #1. The Contractor shall notify The Cincinnati Water Works prior to starting work on the pier

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 1N

BRIDGE NO. HAM-50-1938 R&L.

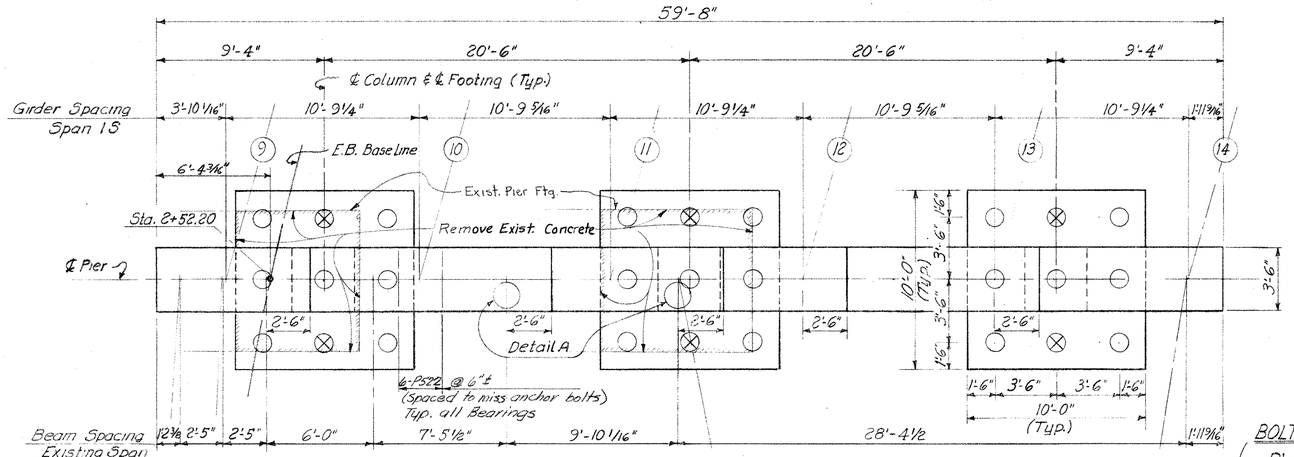
H&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
M.K.K. 11-29-61	D.E. 12-11-61		J.H.O. 12/22/61	#1 12-4-62 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

124
227

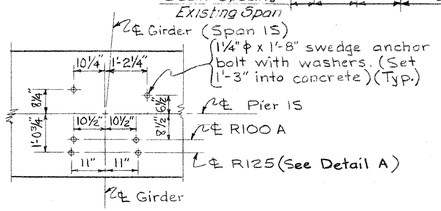
HAM-50-19.38



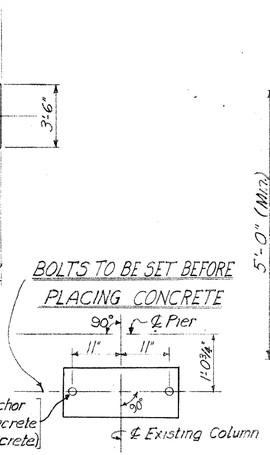
PLAN

All Piles are 12" Cast-in-Place Concrete

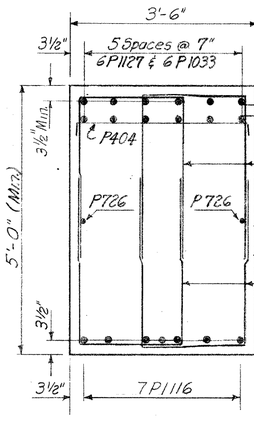
⊗ Indicates Battered Pile



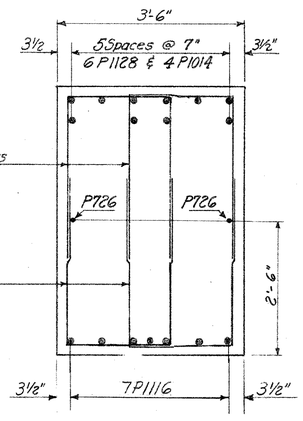
Anchor Bolt Plan



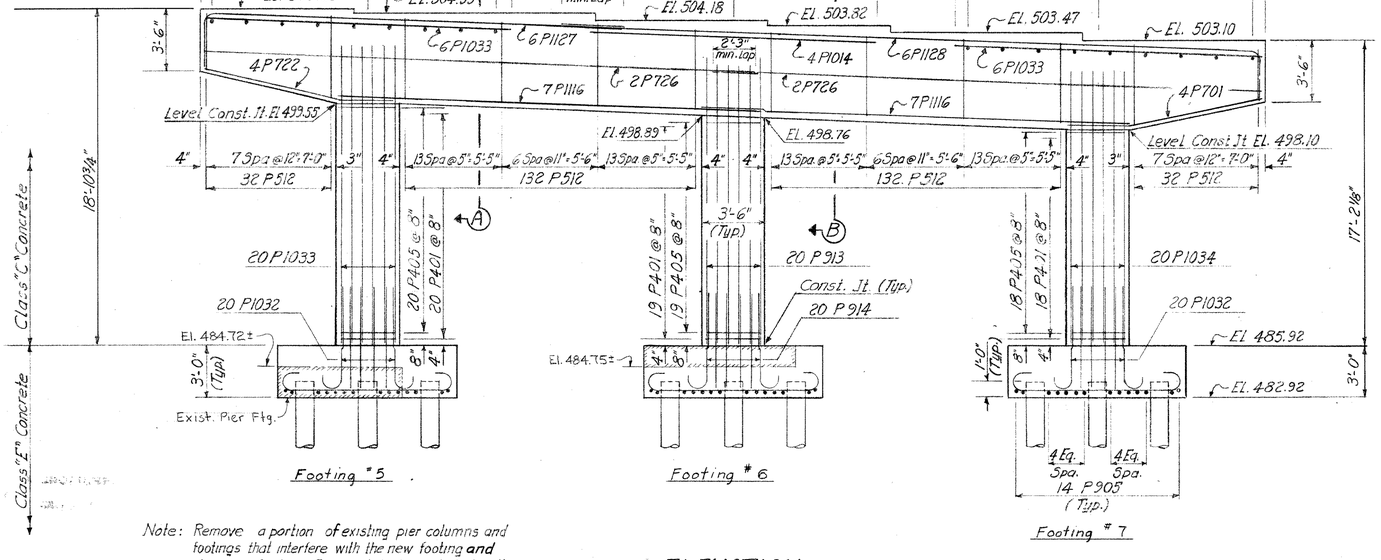
DETAIL A
(At two locations only)



SECTION A-A



SECTION B-B



Footing #5

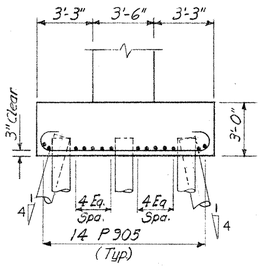
Footing #6

Footing #7

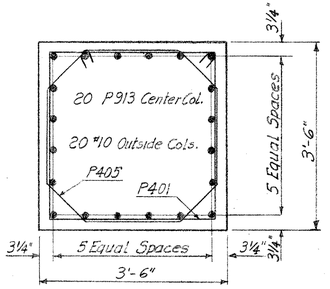
ELEVATION

Note: Remove a portion of existing pier columns and footings that interfere with the new footing **and** driving of piles. Removal to be included with Item S-22, Lump Sum for payment.

Note: Dimensions and reinforcement are typical For all Footings



NORTH ELEVATION OF FOOTINGS



COLUMN SECTION

Notes: All piles shall be driven to a minimum bearing capacity of 40 Tons per Pile.
For general notes see Sheet No. 123
For connection of downspouts to pier see Sheet No. 186.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 15

BRIDGE NO. HAM-50-1938 R.&L.

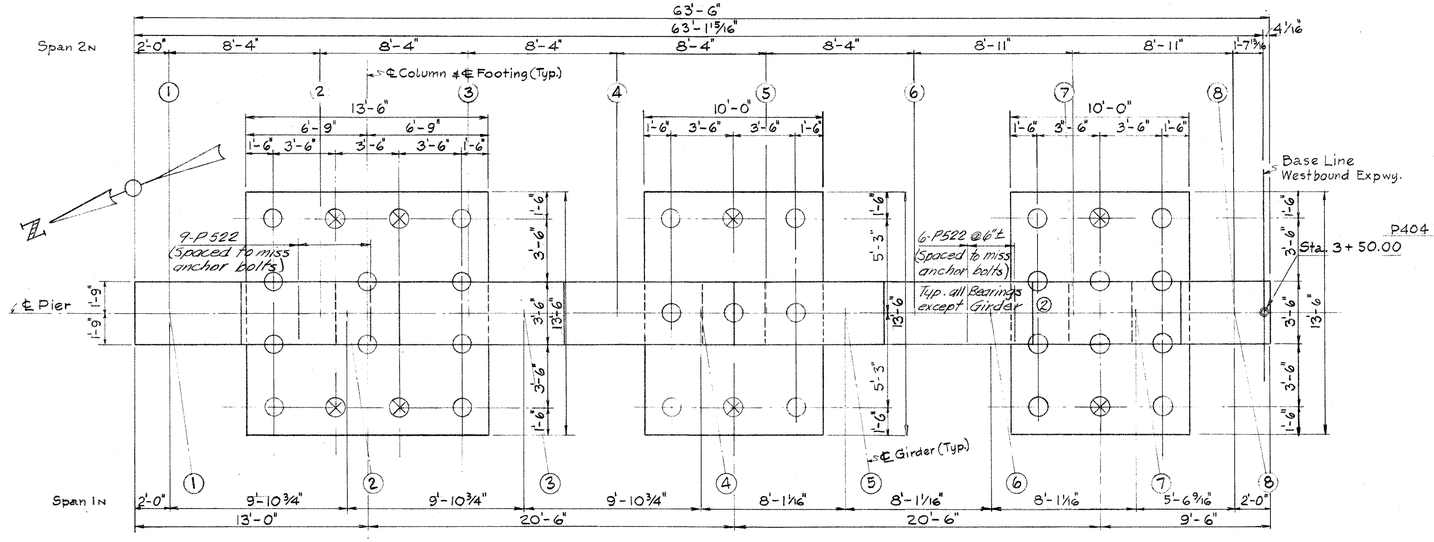
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K 12-8-61	O.E. 12-16-61		JHO 12/22/61	W.H.Z. 4-20-62	

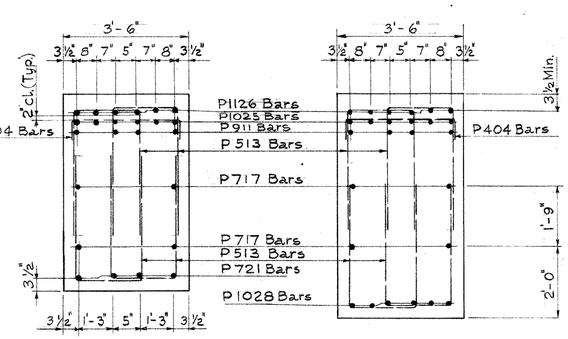
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

125
227

HAM-50-19.38

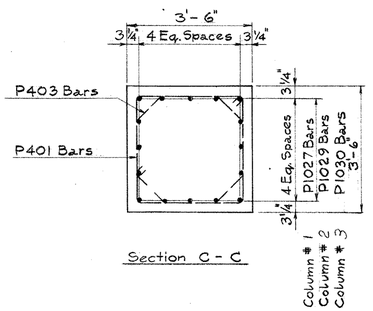


PLAN

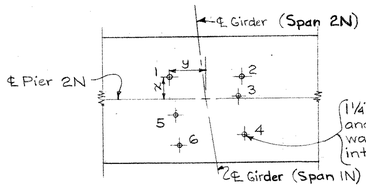


Section A-A

Section B-B

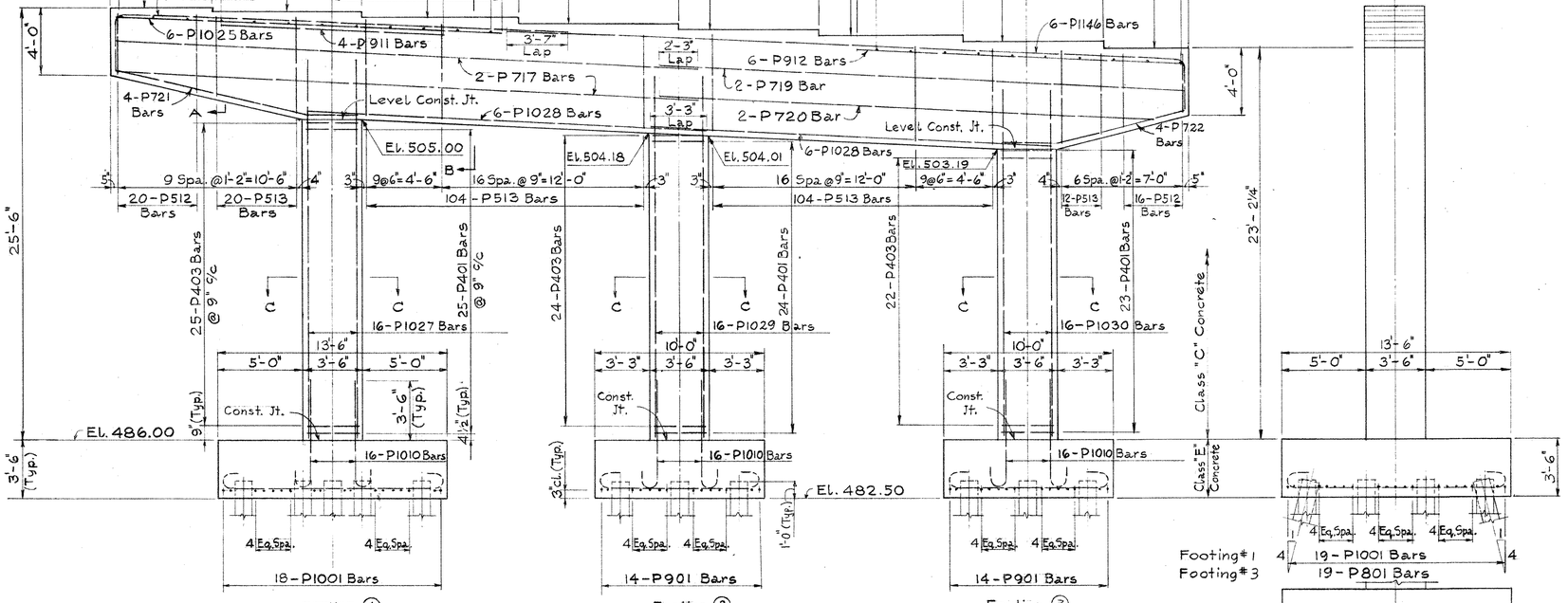


Section C-C



Anchor Bolt Plan

Bolt No.		Girders 1-6		Girder 7		Girder 8	
Span 1N	Span 2N	Location x	Location y	Location x	Location y	Location x	Location y
4	3	1'-4"	1'-1¼"	1'-4"	1'-1¼"	1'-4"	1'-1½"
5		11¾"	1'-1½"	11¾"	1'-1¼"	11¾"	1'-1½"
6		5"	10½"	5"	10½"	5"	10¼"
		1'-3"	9"	1'-3"	9"	1'-3"	8¾"
	1	7½"	11½"	7½"	1'-0"	7½"	1'-0¼"
	2	7½"	11½"	7½"	11"	7½"	10¾"



ELEVATION

END ELEVATIONS

NOTES:

1. All piles shall be 12" Cast-In-Place Reinforced Concrete Piles.
2. All piles shall be driven to a minimum bearing capacity of 40 tons per pile.
3. For General Notes see sheet No. 123
4. For connection of downspouts to pier see sheet No 186
5. For installation of electrical ground wires in pier see sheet No. 86

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2N

BRIDGE NO. HAM-50-1938 R&L.

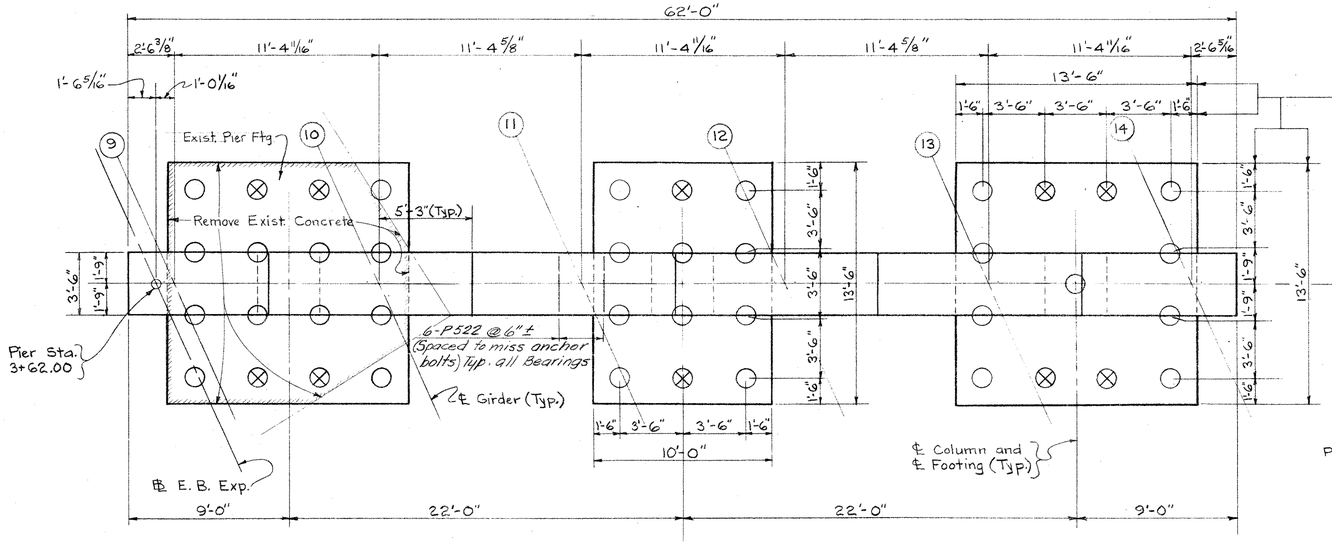
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K. 12-2-61	M.P.S. 12-14-61		JHO 12/27/61	M.F.E. 4-20-62	

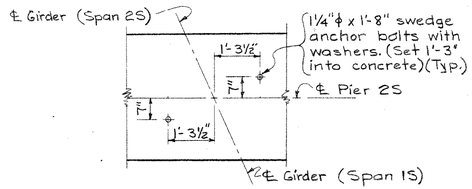
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

126
227

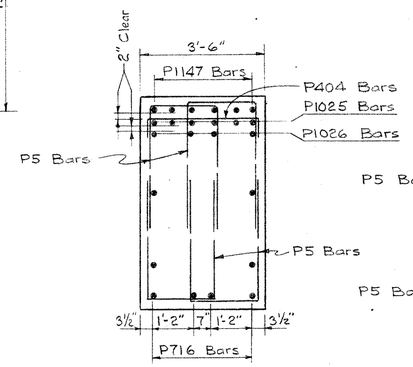
HAM-50-19.38



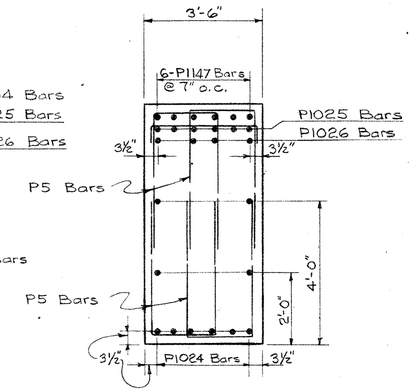
PLAN



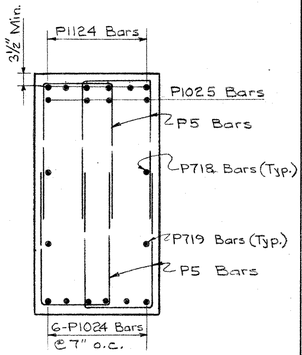
Anchor Bolt Plan



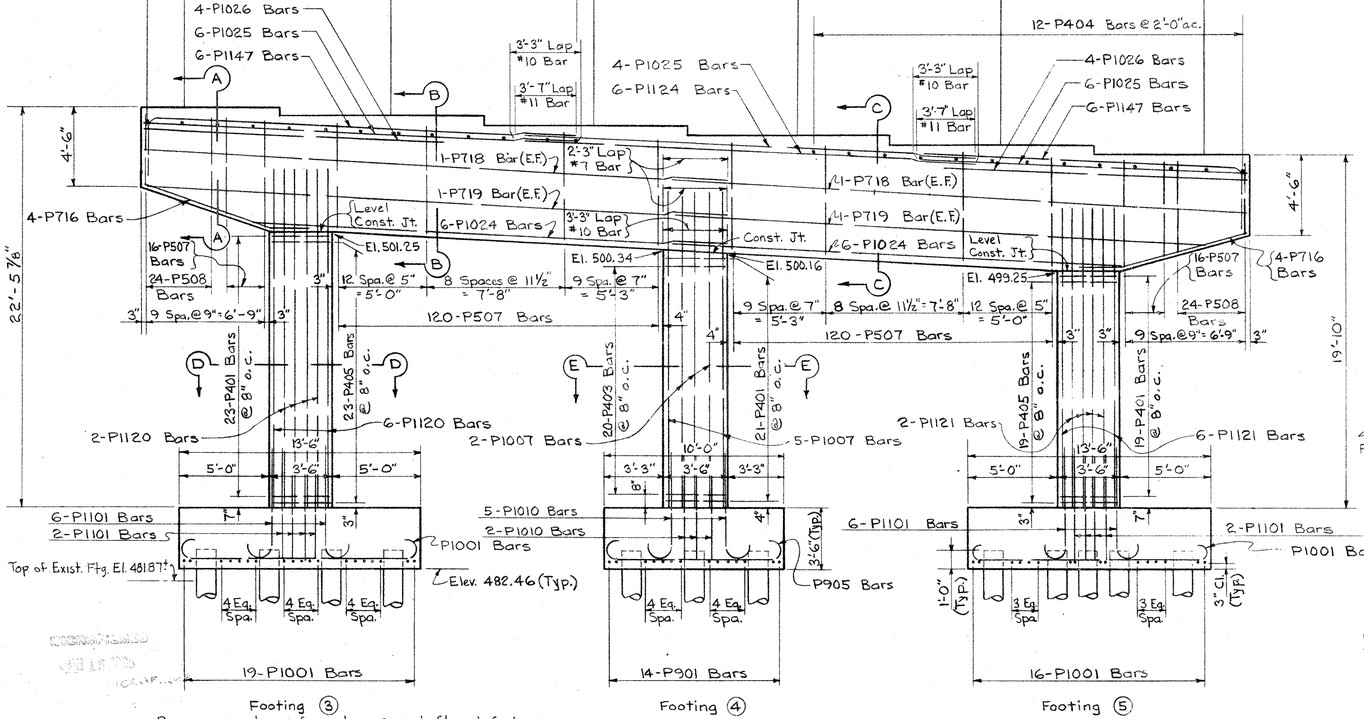
SECTION A-A



SECTION B-B

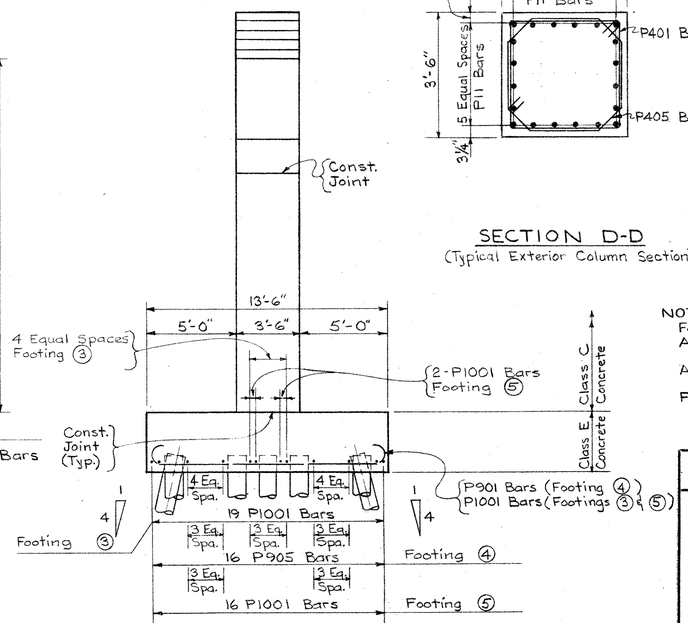


SECTION C-C

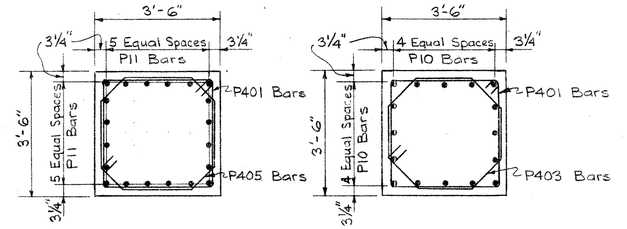


ELEVATION

Remove a portion of existing pier shaft and footing that interferes with the footing and driving of piles for Ftg. # 3. Removal to be included with Item 5-22, Lump Sum for payment.



END ELEVATION



SECTION D-D
(Typical Exterior Column Section)

SECTION E-E
(Typical Interior Column Section)

NOTES
For General Notes, See Sh. # 123
All Piles shall be 12" Cast In Place Concrete Piles
All Piles shall be driven to a minimum bearing capacity of 40 Tons per pile
For connection of downspouts to pier see Sh. # 186

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2S

BRIDGE NO. HAM-50-1938 R.&L.

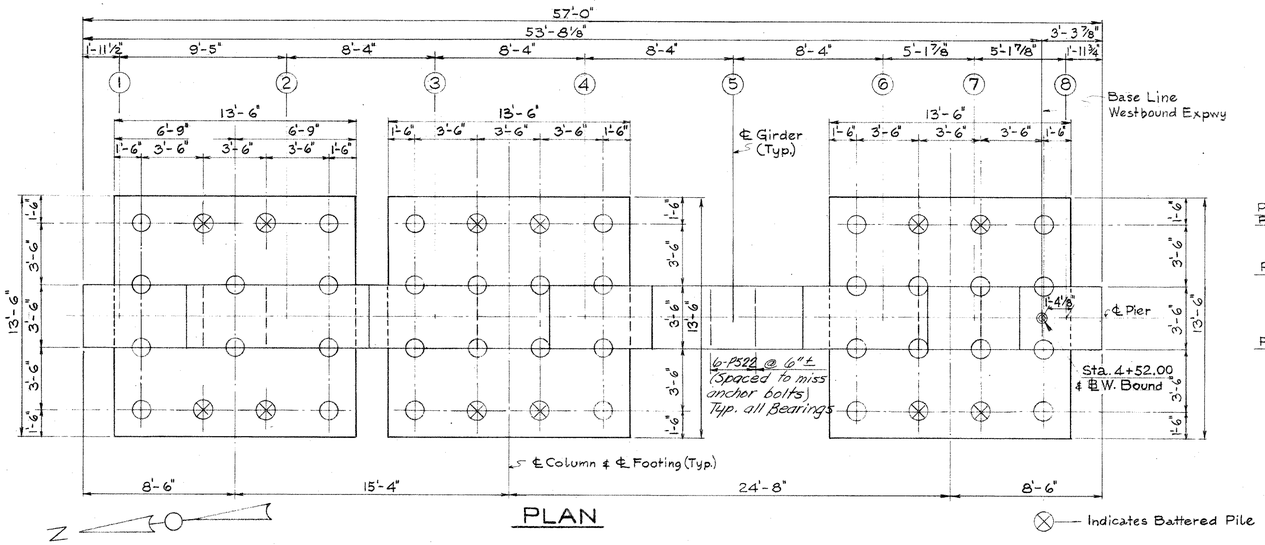
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-22-61	R.E.M. 12-11-61		J.H.O. 12/15/61	W.A.E. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

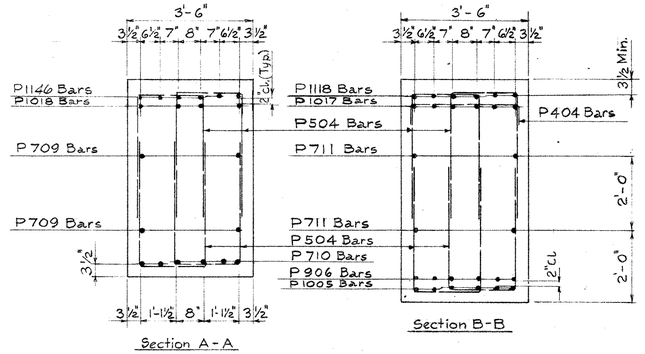
127
227

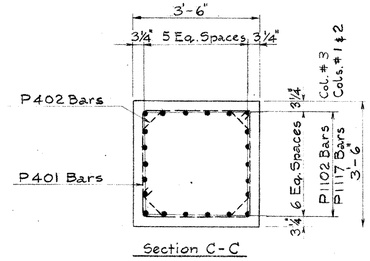
HAM-50-19,38

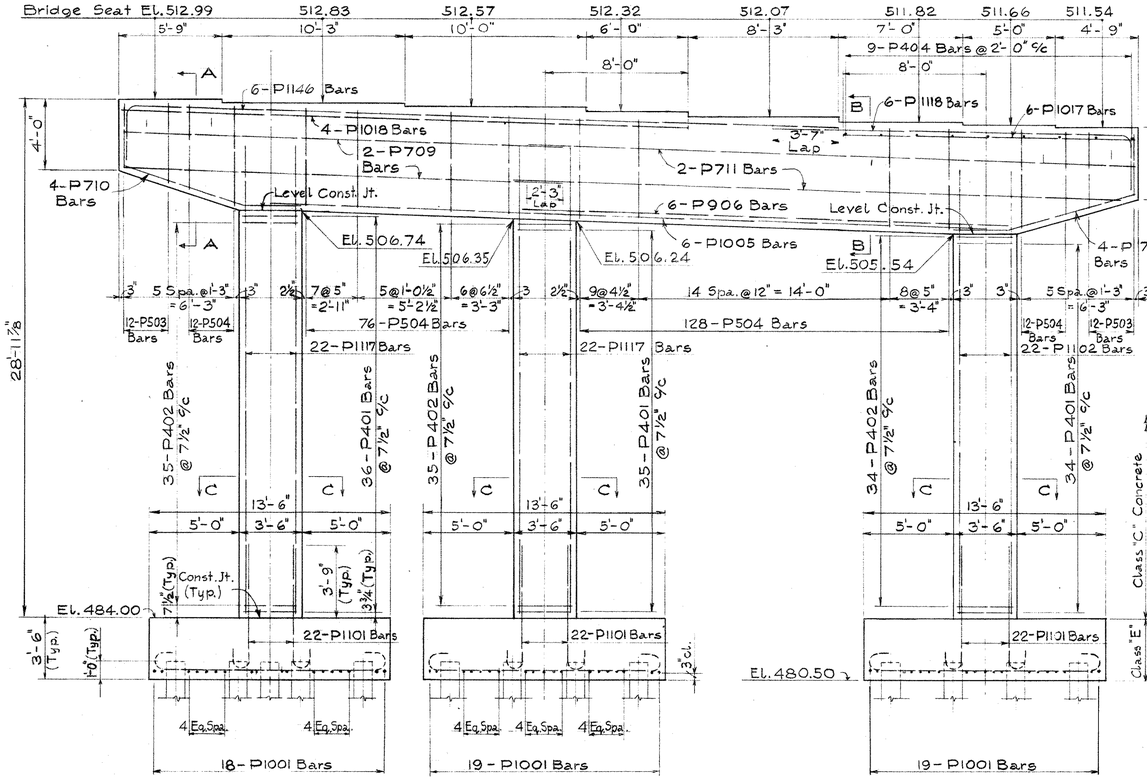


PLAN

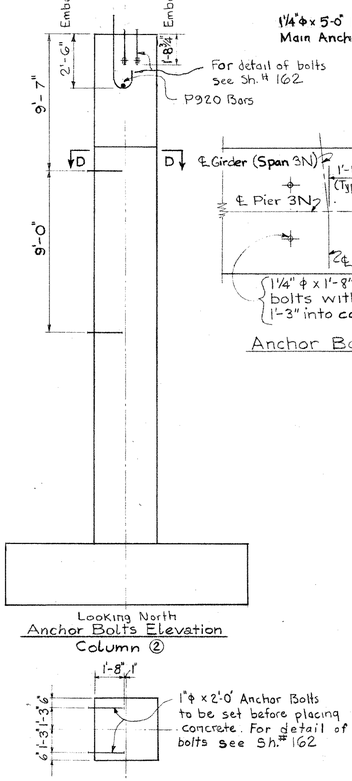
⊗ Indicates Battered Pile



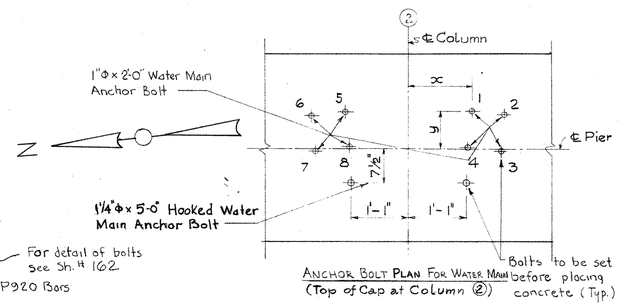




ELEVATION



END ELEVATION



ANCHOR BOLT PLAN FOR WATER MAIN (Top of Cap at Column ②)

Bolt No.	Location x	Location y
1	1'-1½"	8⅜"
2	1'-8⁹⁄₁₆"	7⁷⁄₁₆"
3	1'-8⅛"	3⅜"
4	1'-0⅜"	3⅜"
5	1'-1½"	8⅜"
6	1'-8⁹⁄₁₆"	7⁷⁄₁₆"
7	1'-8⅛"	3⅜"
8	1'-0⅜"	3⅜"

Anchor Bolt Plan

Looking North
Anchor Bolts Elevation
Column ②

Section D-D

NOTES:

1. All piles shall be 12" Cast-In-Place Reinforced Concrete Piles.
2. All piles shall be driven to a minimum bearing capacity of 40 tons per pile.
3. For connection of downspouts to pier see sheet No. 186
4. For installation of electrical ground wires in pier see sheet No. 86
5. For General Notes see sheet No. 123
6. For connection of 24" Water Main to Pier see sheet. No. 162

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 3N

BRIDGE NO. HAM-50-19 38 R.& L.

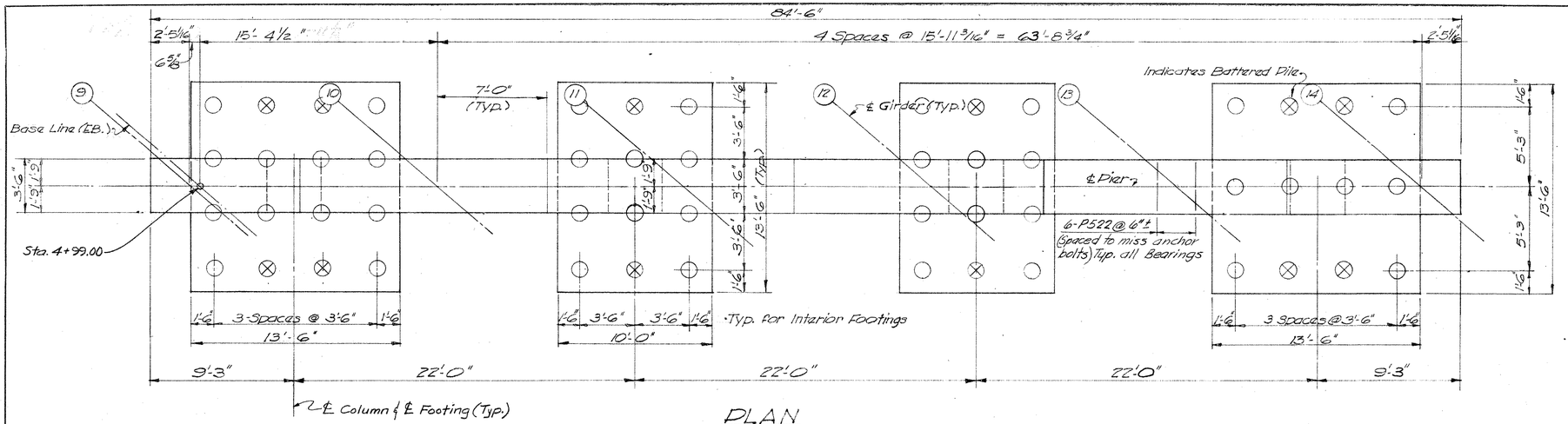
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-22-61	M.P.S. 12-7-61		JHO 1/9/62	W.H.T. 4-28-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

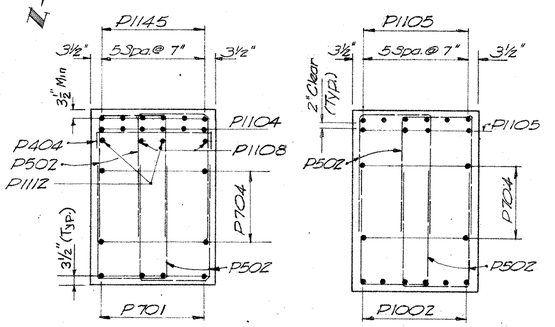
128
227

HAM-50-19.38

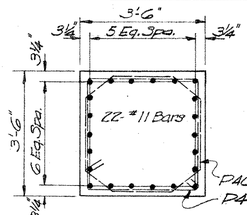


PLAN

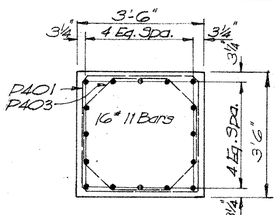
(All Piles are 12" Cast in Place Concrete)



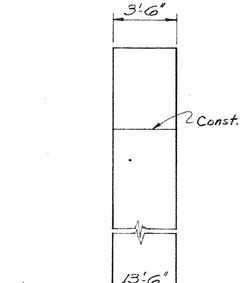
SECTION A-A



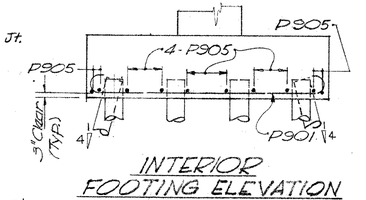
SECTION B-B



SECTION C-C



SECTION D-D



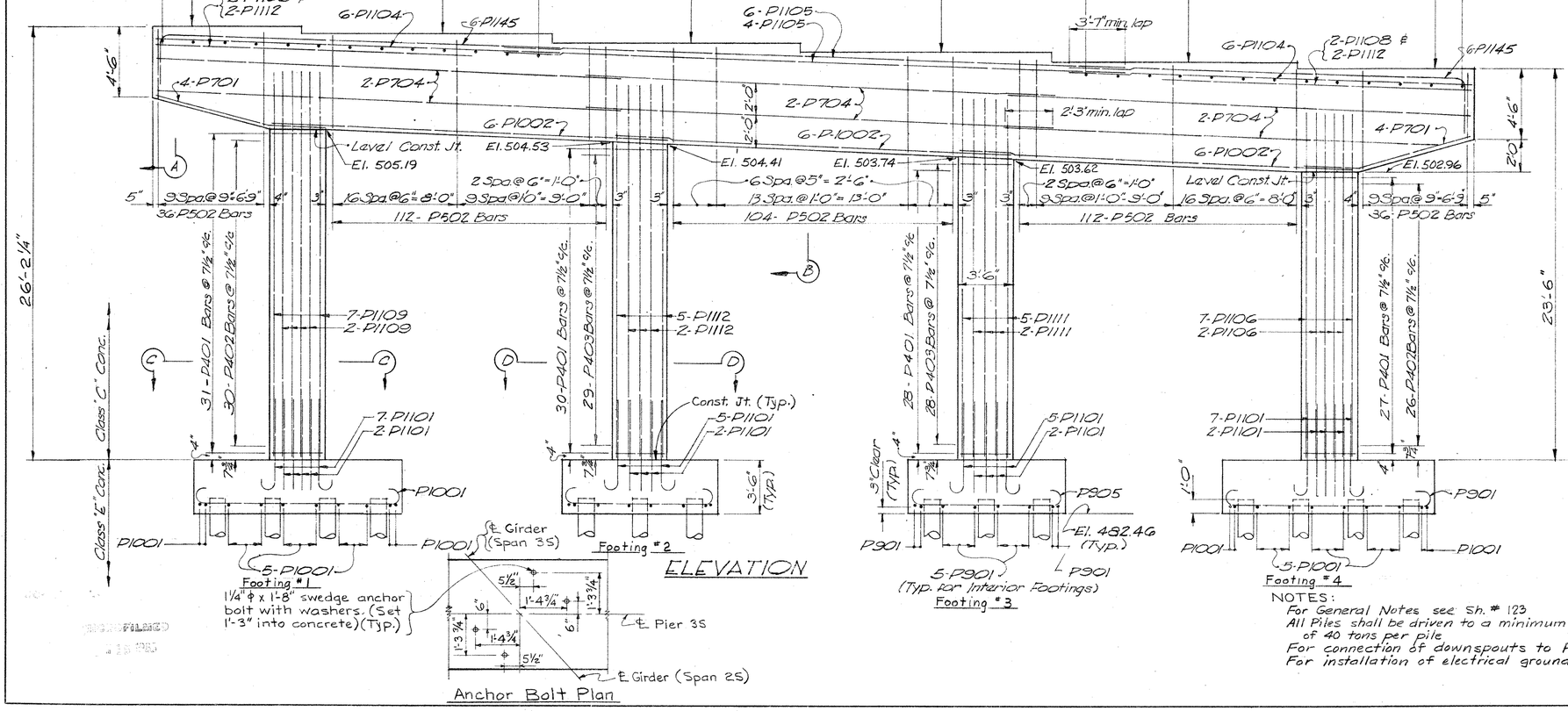
INTERIOR FOOTING ELEVATION

WEST END ELEVATION

EAST END FOOTING ELEVATION

Bridge Seat Elevations

Pier # 3S 512.15 | 511.69 | 511.18 | 510.65 | 510.09 | 509.46



Anchor Bolt Plan

NOTES:
For General Notes see Sh. # 123
All Piles shall be driven to a minimum bearing capacity of 40 tons per pile
For connection of downspouts to Pier see Sh. # 186
For installation of electrical ground wires in Pier see Sh # 86

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 3S

BRIDGE NO. HAM-50-1938 R.& L.

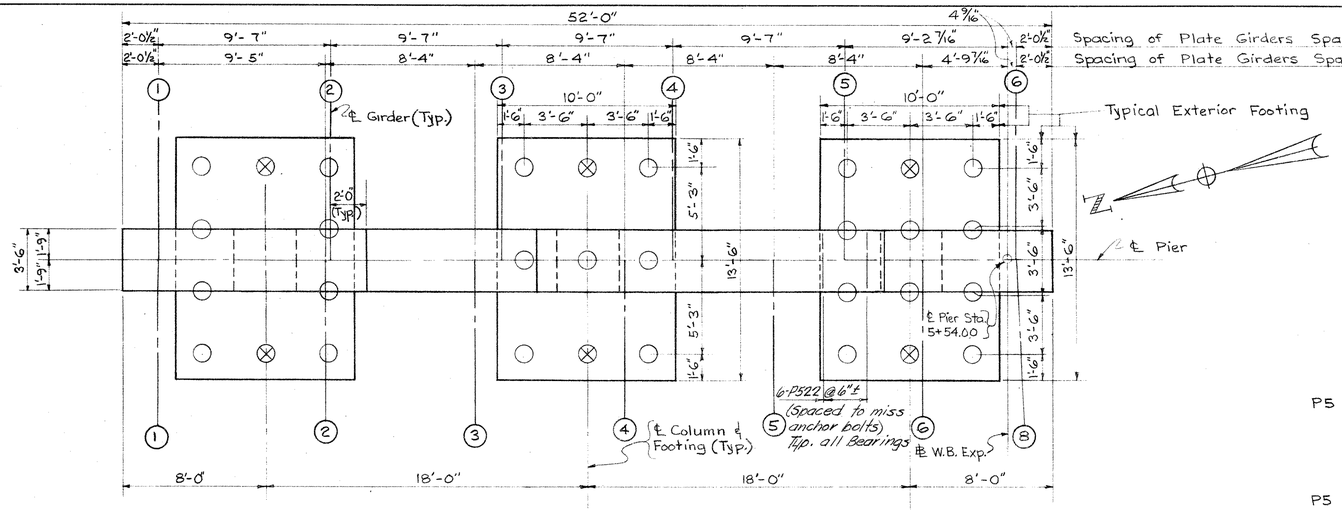
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-20-61	JJM 11-27-61		JHO 12/13/61	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

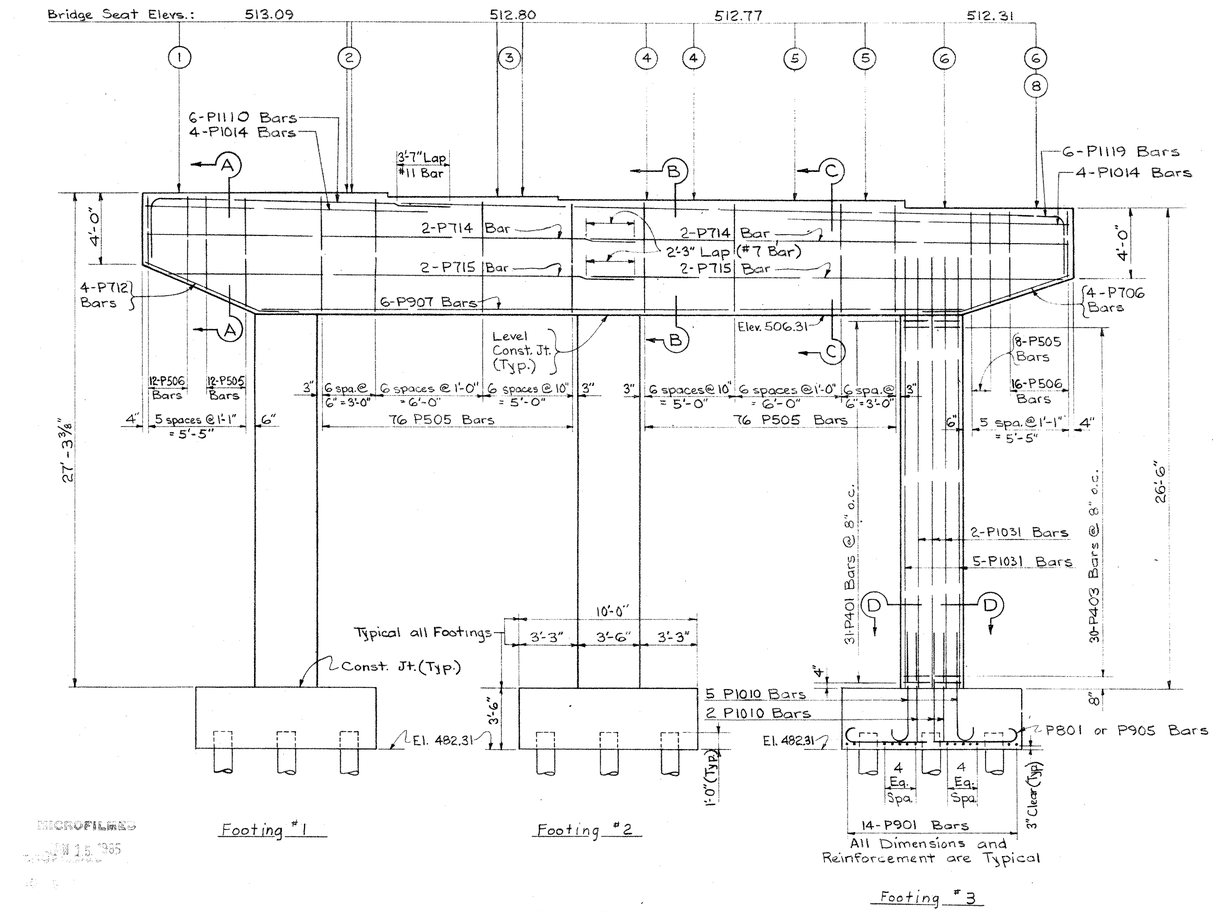
129
227

HAM-50-19.38

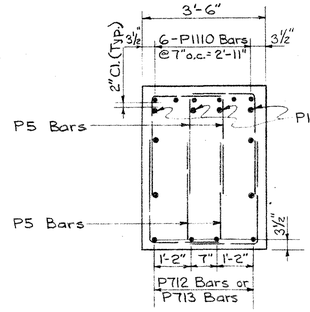


PLAN

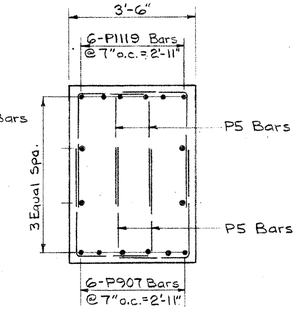
⊗ - Indicates Battered Pile



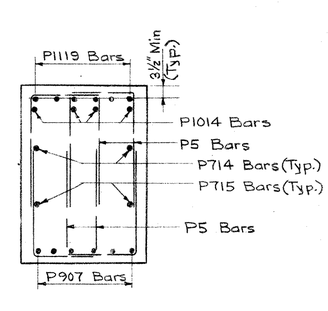
ELEVATION



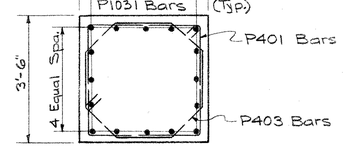
SECTION A-A



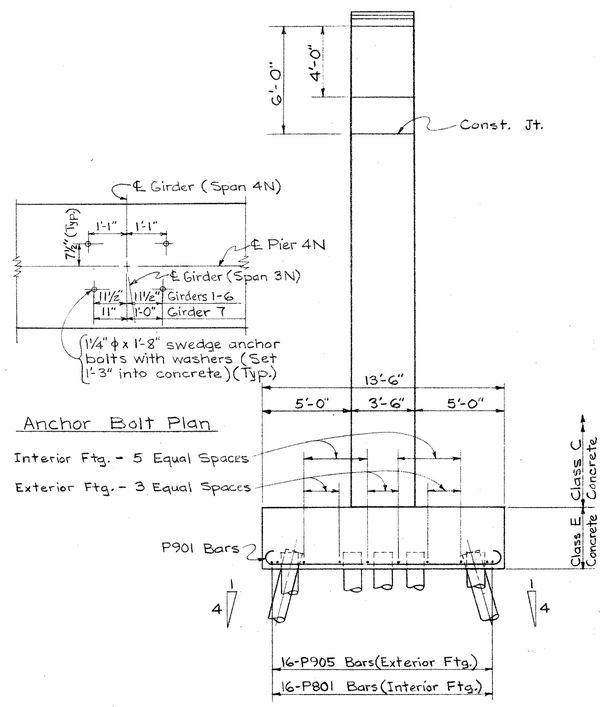
SECTION B-B



SECTION C-C



SECTION D-D
(Typical Column Section)



Anchor Bolt Plan

Interior Ftg. - 5 Equal Spaces

Exterior Ftg. - 3 Equal Spaces

SOUTH END ELEVATION

NOTES

For General Notes, See Sh. # 123

All Piles shall be 12" Cast In Place Concrete Piles

For connection of downspouts to pier see Sh. # 186

All Piles shall be driven to a minimum bearing capacity of 40 tons per pile.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 4N

BRIDGE NO. HAM-50-1938 R.&L.

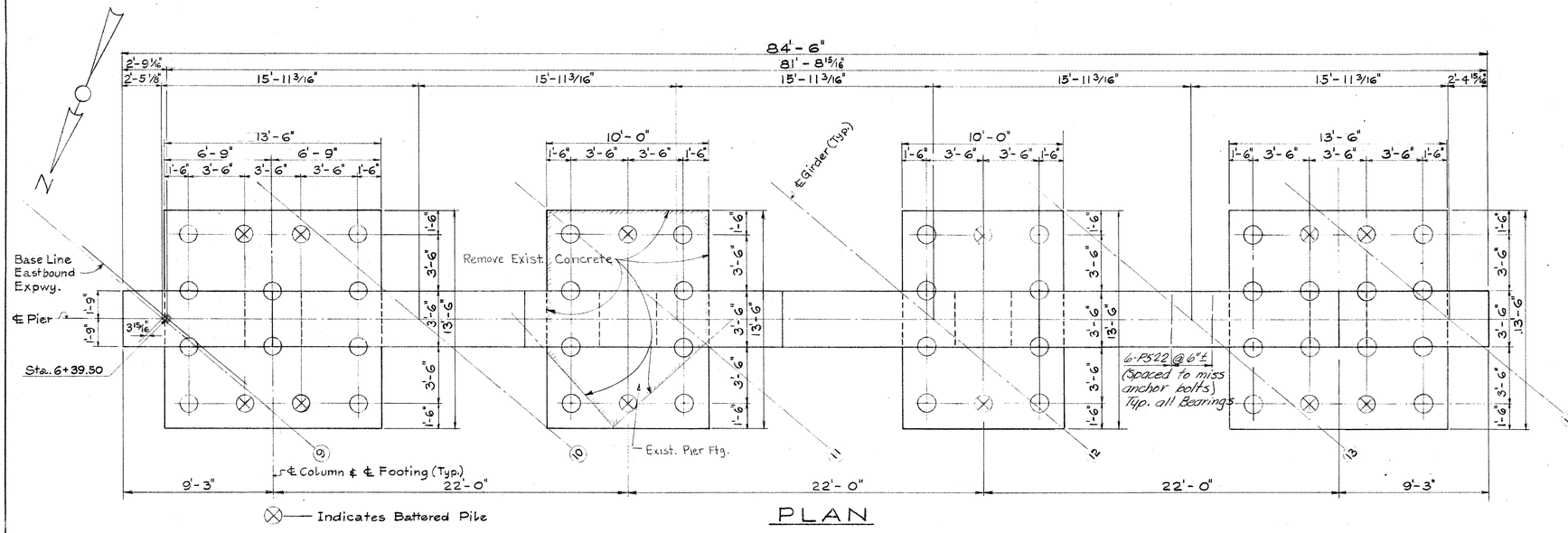
H&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-22-61	R.E.M. 12-7-61		J.H.O. 12/13/61	W.A.J. 4-20-62	

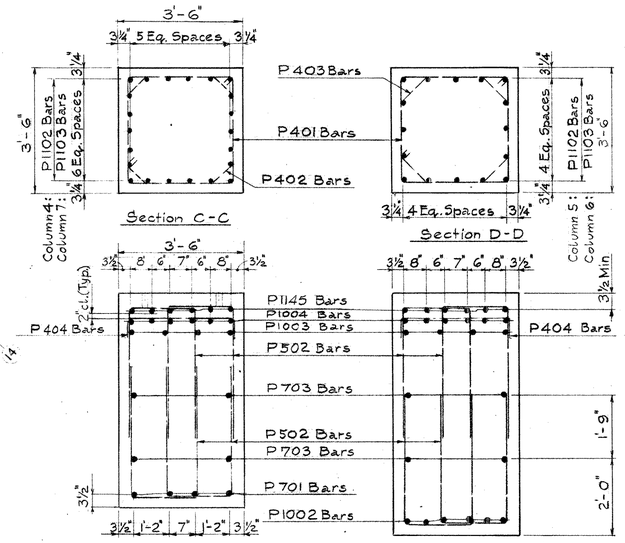
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

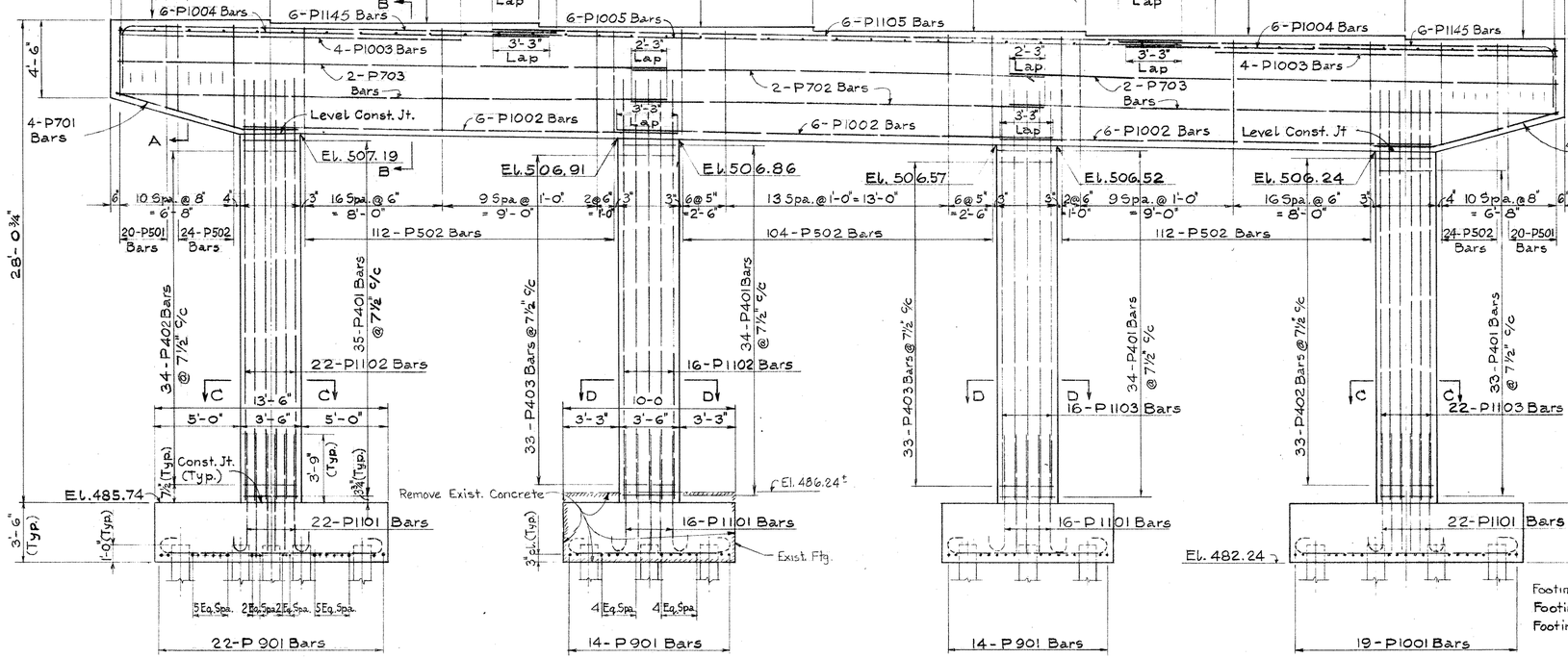
130
227

HAM-50-19.38



PLAN





Footing ④ Footing ⑤ Footing ⑥ Footing ⑦

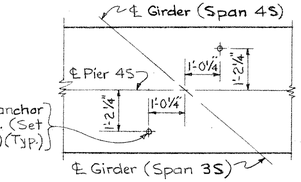
ELEVATION

END ELEVATION

Remove a portion of existing pier footing and shaft that interferes with the footing and driving of piles for footing No. 5. Removal to be included with Item 5-22, Lump Sum for payment.

NOTES:

1. All piles shall be 12" Cast-In-Place Reinforced Concrete Piles.
2. All piles shall be driven to a minimum bearing capacity of 40 tons per pile.
3. For General Notes see sheet No. 123.
4. For connection of downspout to pier see sheet No. 186.



Anchor Bolt Plan

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 4S

BRIDGE NO. HAM-50-1938 R.&L.

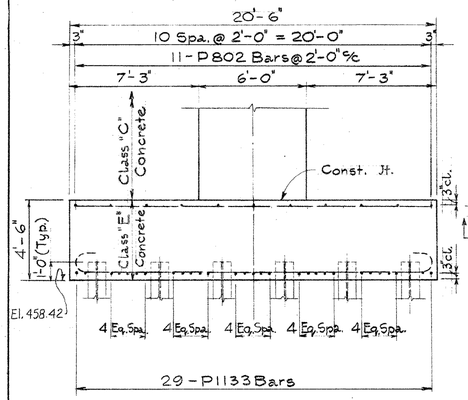
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-12-61	M.P.S. 11-21-61		JHO 12/11/61	W.A.Z. 4-20-62	

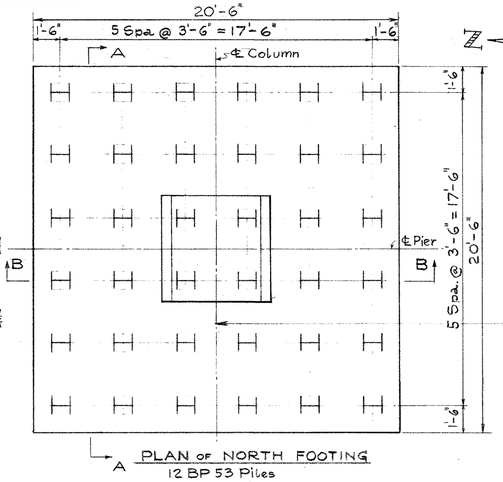
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

131
227

HAM-50-19.38

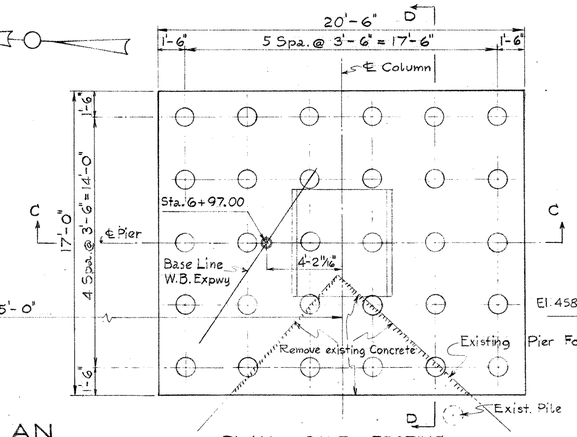


Section A-A

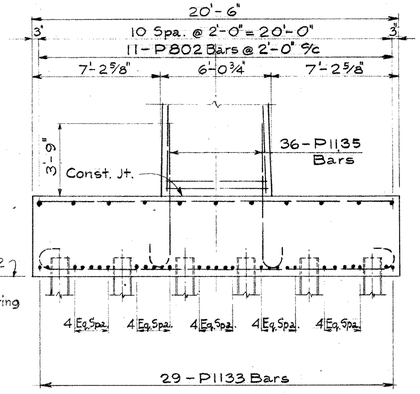


PLAN OF NORTH FOOTING
12 BP 53 Piles

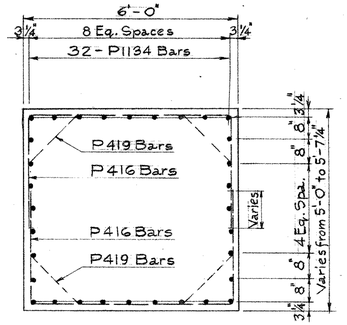
PLAN



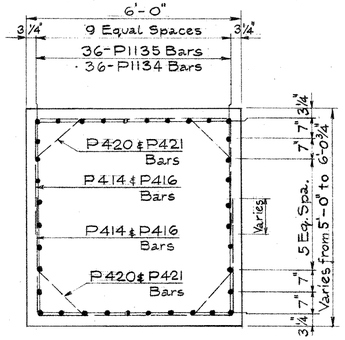
PLAN OF SOUTH FOOTING
12" Cast-in-Place Reinforced Concrete Piles



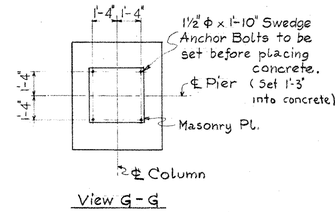
Section B-B



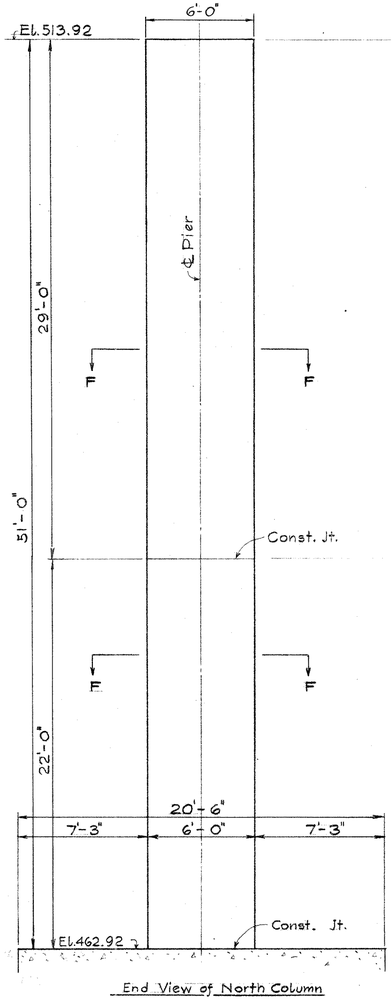
Section E-E



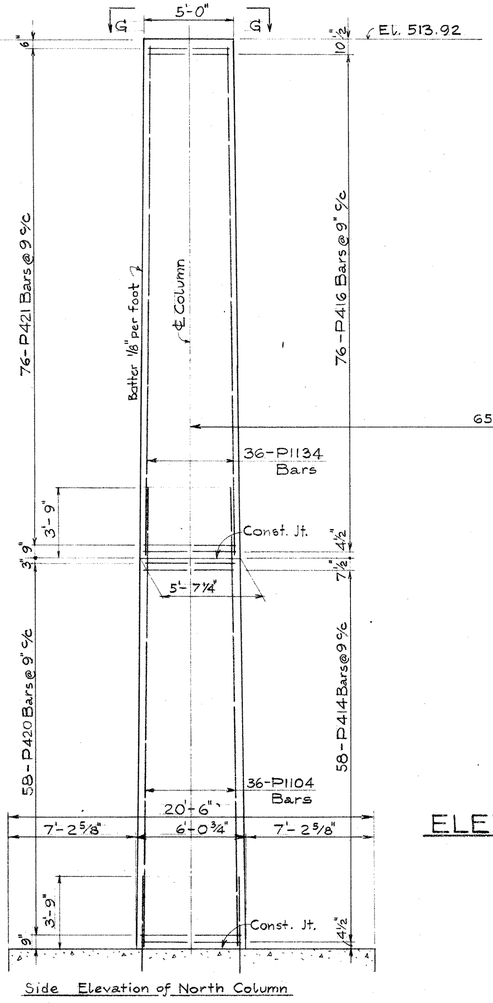
Section F-F



View G-G

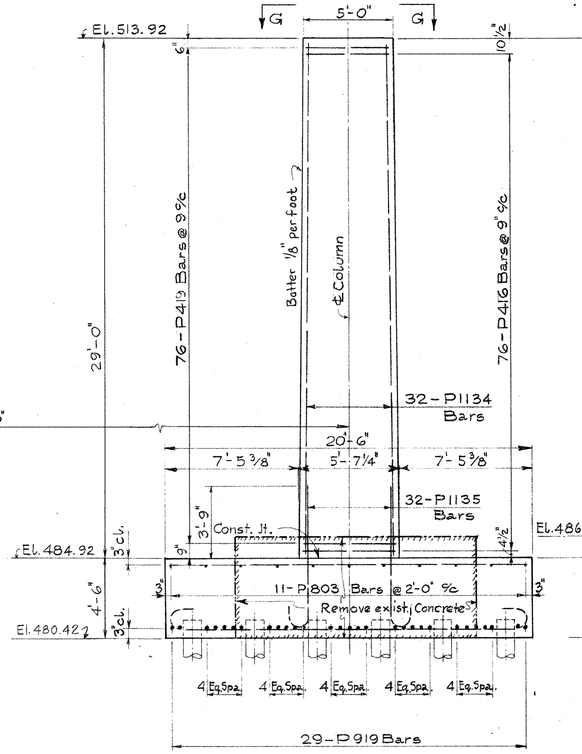


End View of North Column

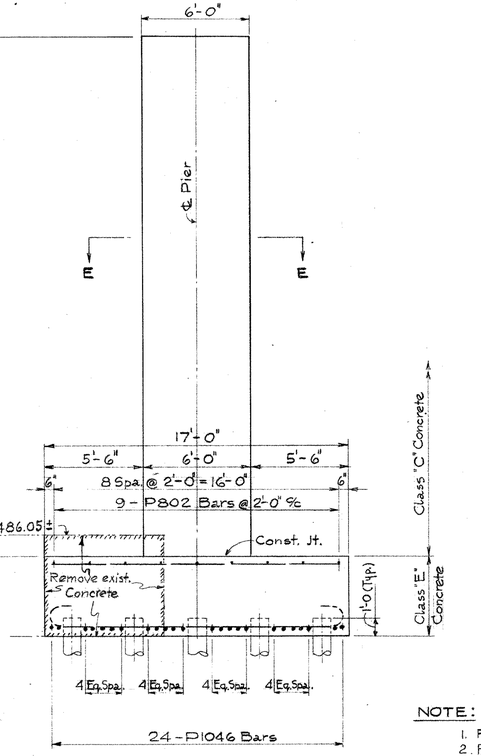


Side Elevation of North Column

ELEVATION



Side Elevation of South Column
(Section C-C)



End View of South Column
(Section D-D)

NOTE:

In addition to the above indicated existing pier footing there is an existing stone abutment in this area, a portion of which will have to be removed so that the piles can be driven and the proposed south footing be constructed. Removal of stone abutment to be included in Item S-22, Cu Yds for payment. Removal of exist. pier ftg. to be included in Item S-22, Lump Sum for payment. All 12" Cast-In-Place Reinforced Concrete Piles shall be driven to a minimum bearing capacity of 40 Tons per pile.

NOTE:

1. For General Notes see sheet No. 123
2. For installation of electrical ground wires in Column see Sheet No. 86

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO 5N

BRIDGE NO. HAM-50-1938 R.&L.

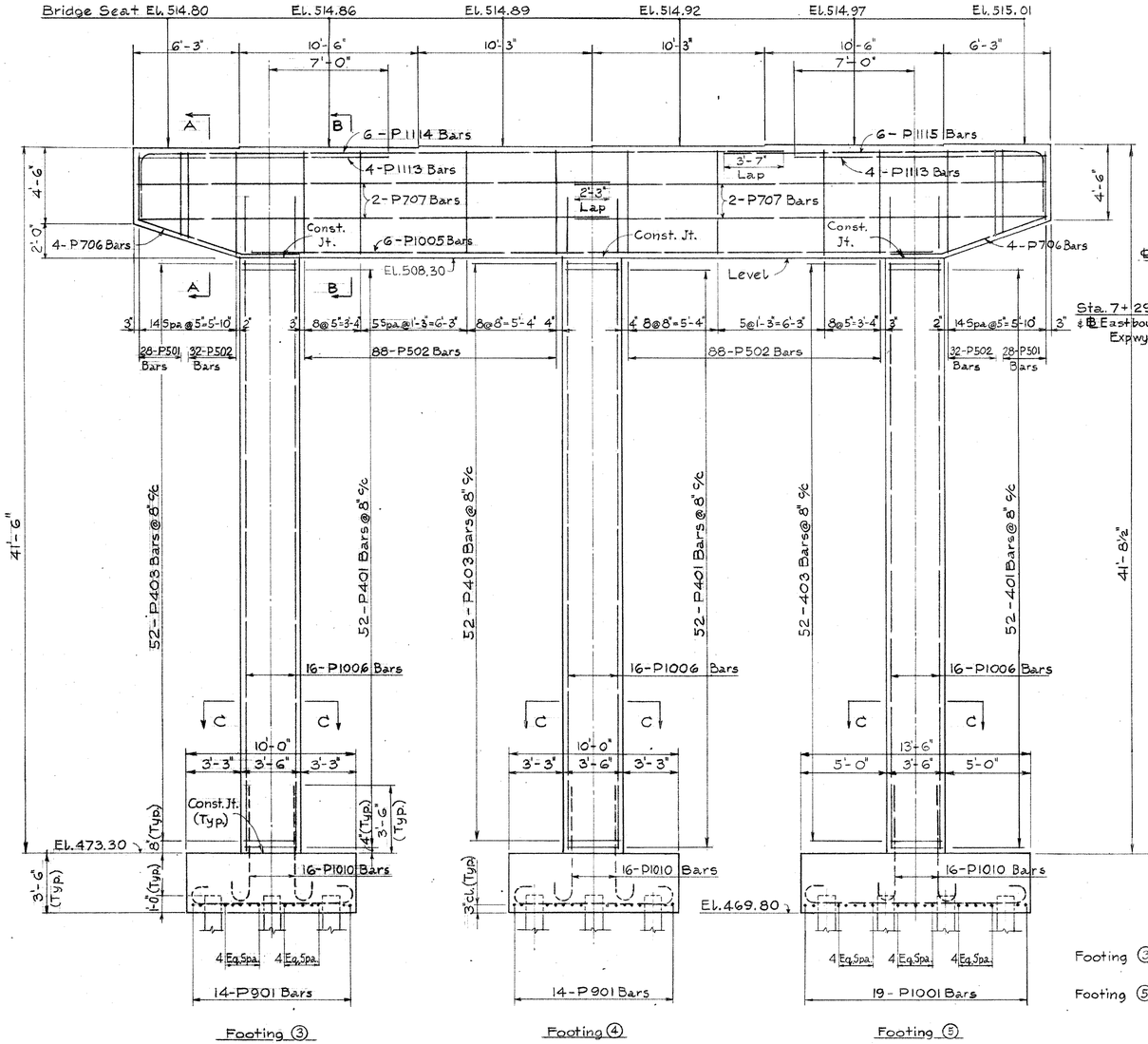
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K. 12-13-61	M.P.S. 1-6-62		JHD 1/9/62	W.A.F. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

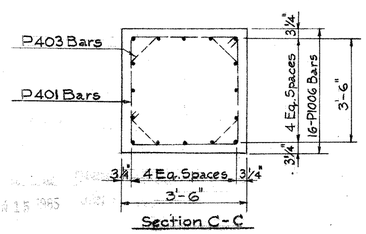
132
227

HAM-50-19.38

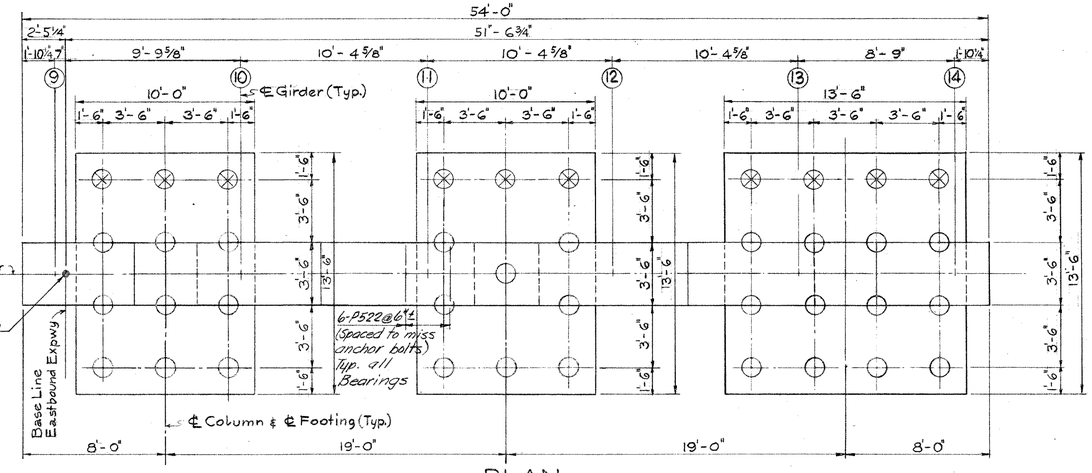


ELEVATION

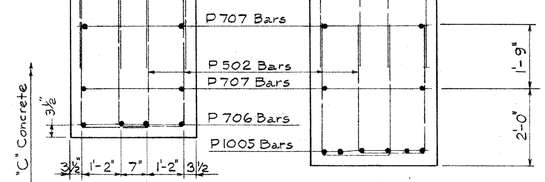
Remove a portion of existing stone wall that interferes with the footing and driving of piles for footing No. 4. Removal to be included with Item S-22, Cu. Yds. for payment.



Section C-C



PLAN



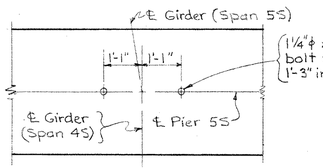
Section A-A

Section B-B

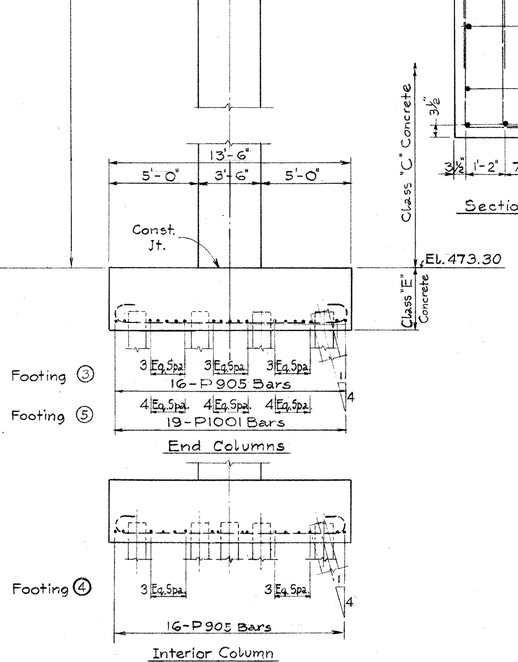
⊗ — Indicates Battered Pile

NOTES:

1. All piles shall be 12" Cast-In-Place Reinforced Concrete Piles.
2. All piles shall be driven to a minimum bearing capacity of 40 tons per pile.
3. For General Notes see sheet #123
4. For connection of downspout to pier see sheet # 186



Anchor Bolt Plan



END ELEVATIONS

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 5S

BRIDGE NO. HAM-50-1938 R&L.

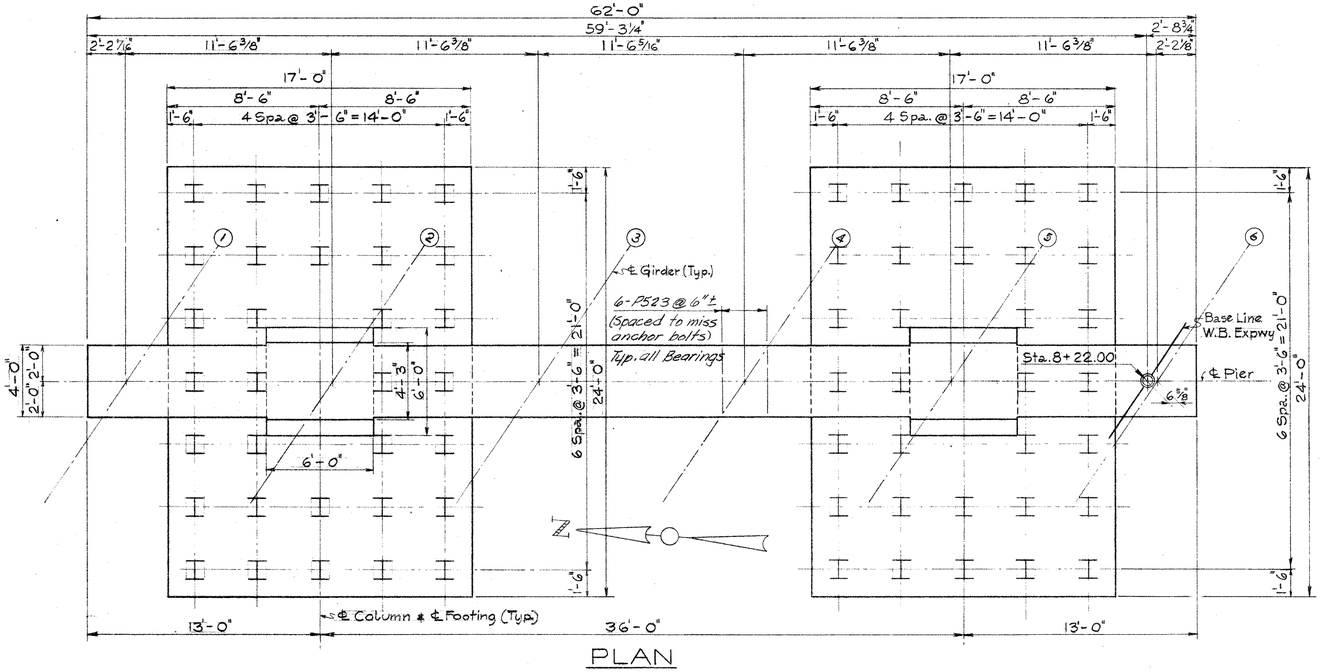
H&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K. 11-17-61	M.P.S. 11-28-61		J.H.O. 12/11/61	W.H.J. 4-25-62	

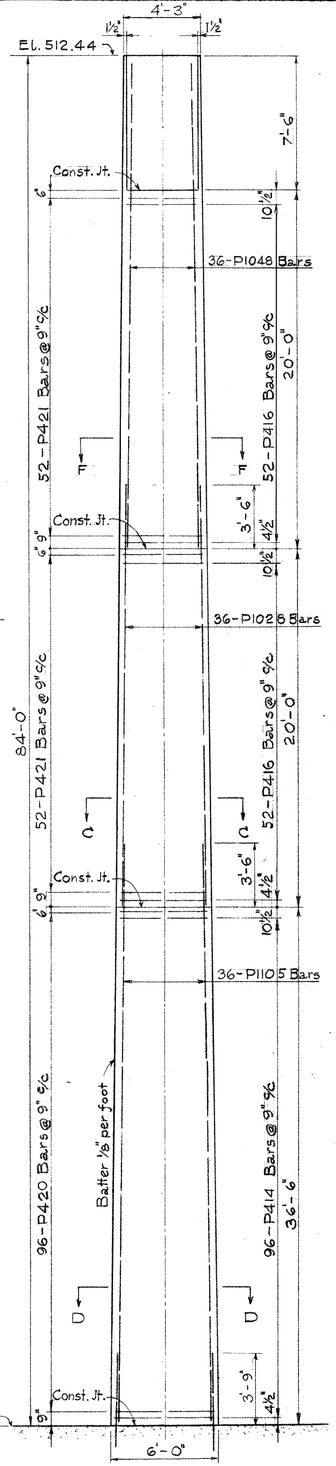
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

133
227

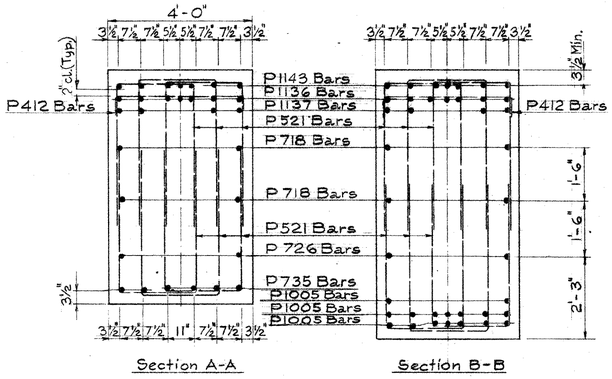
HAM-50-19.38



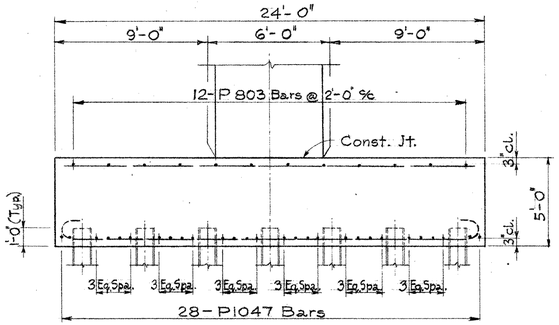
PLAN



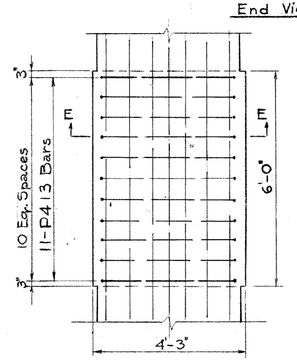
Typical Column



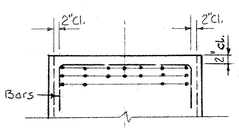
Section A-A Section B-B



End View - Footing #1 & #2



Top of Column (Typ.)

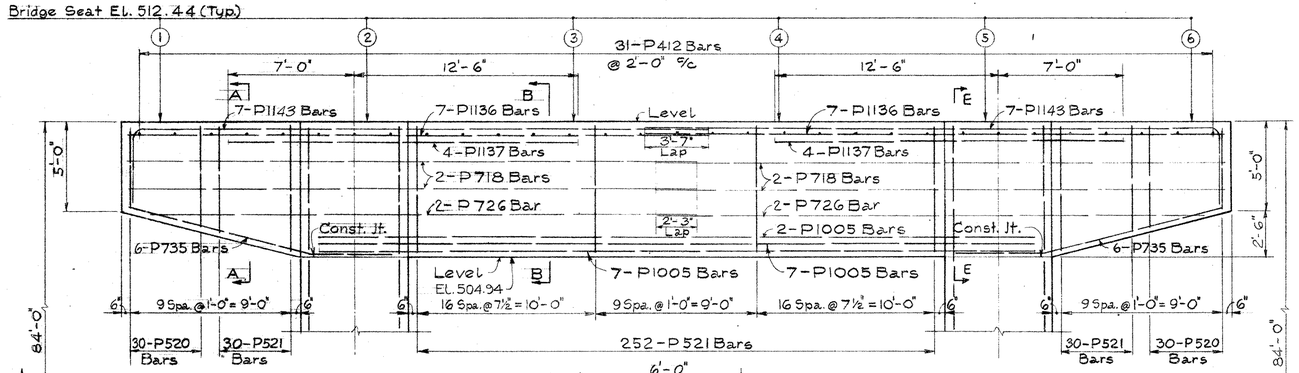


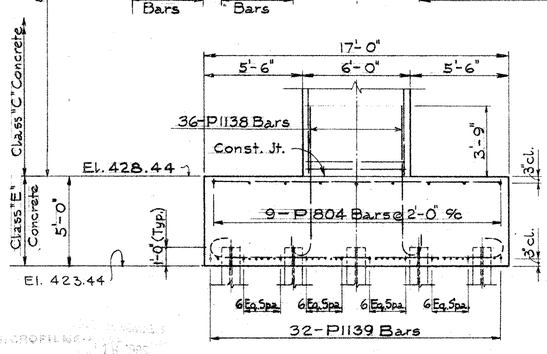
Section E-E

NOTES:

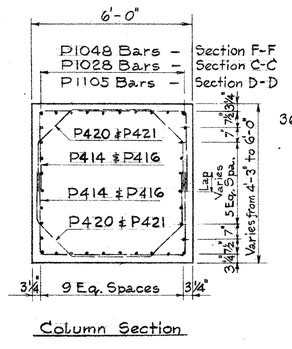
1. For General Notes see sheet No 123
2. All piles shall be 12 BP 53 Steel H Piles.
3. For connection of downspouts to pier see sheet No. 186
4. For Anchor Bolt Plan see sheet # 135

Bridge Seat El. 512.44 (Typ)

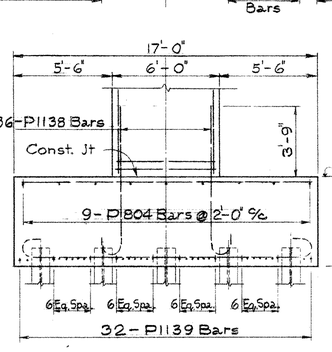




Footing ①



Column Section



Footing ②

ELEVATION

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 5AN

BRIDGE NO. HAM-50-19 38 R & L.

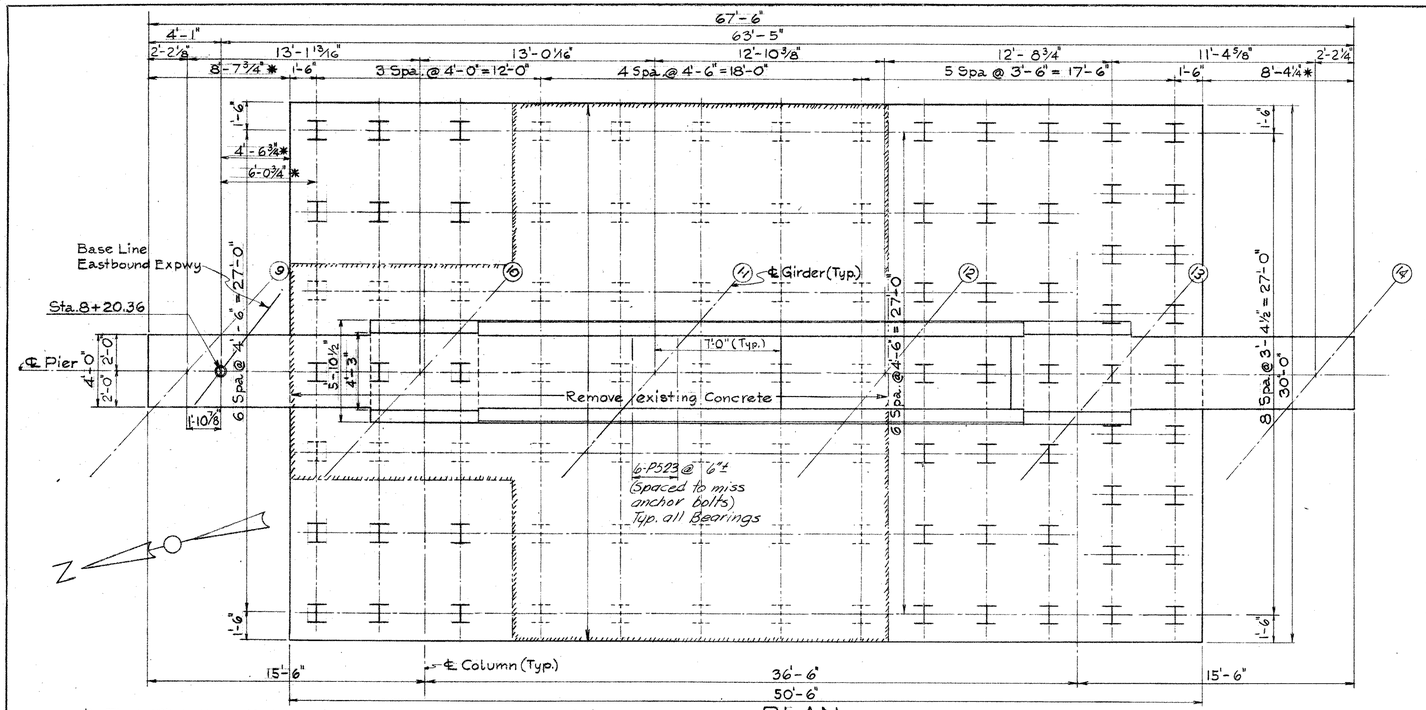
H & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-30-61	M.P.S. 11-16-62		J.H.O. 11/20/62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

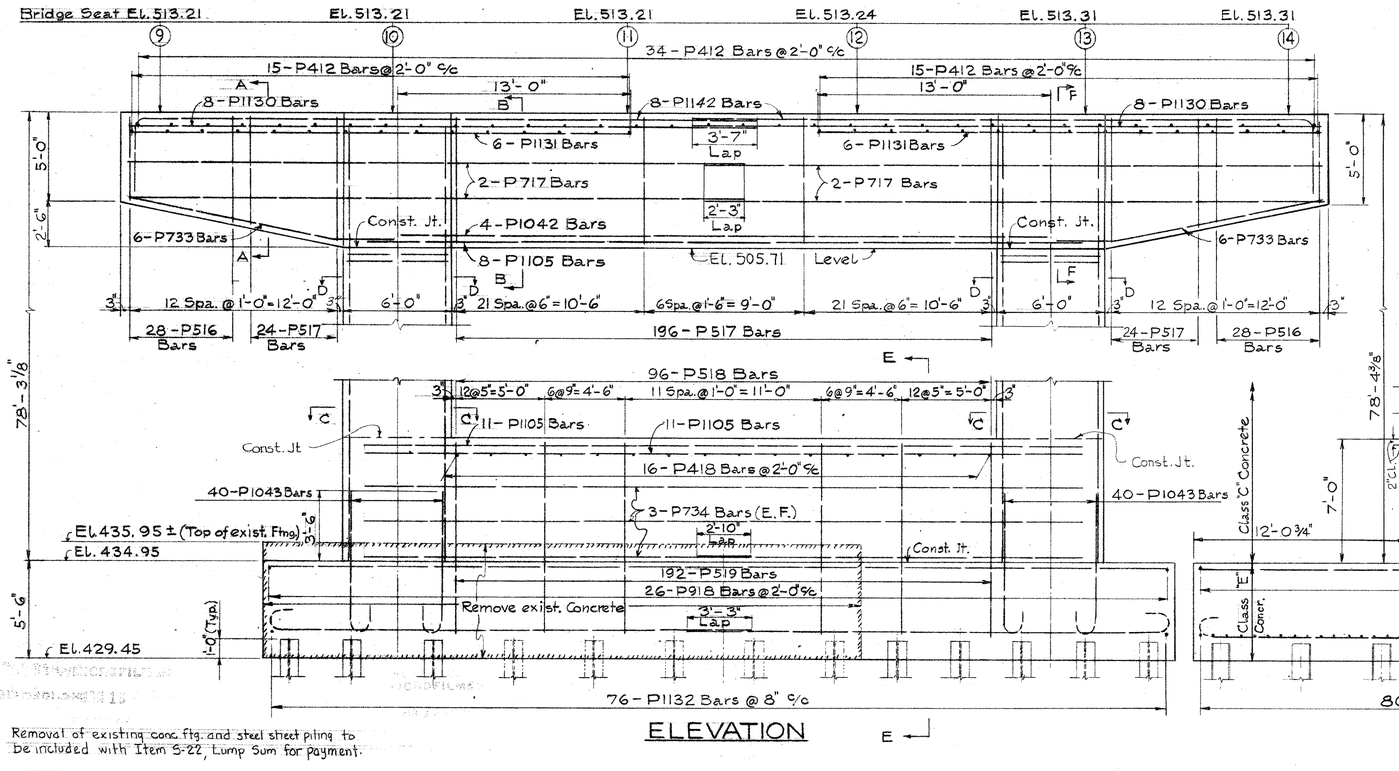
134
227

HAM-50-19.38



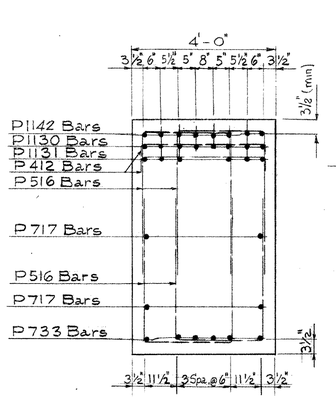
✳ These dimensions subject to revision upon location of existing piles in field.

PLAN

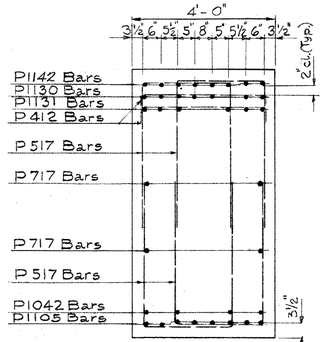


ELEVATION

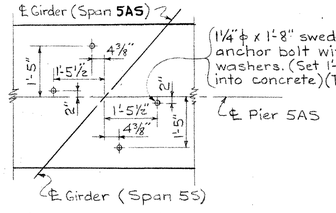
Removal of existing conc. ftg. and steel sheet piling to be included with Item S-22, Lump Sum for payment.



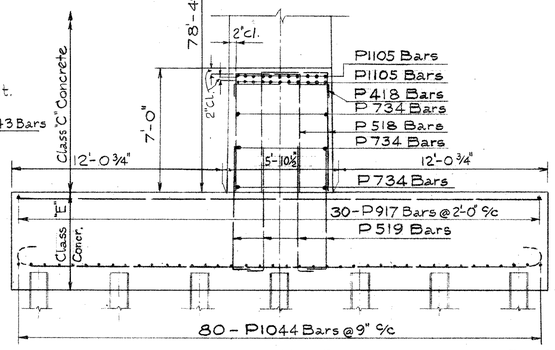
Section A-A



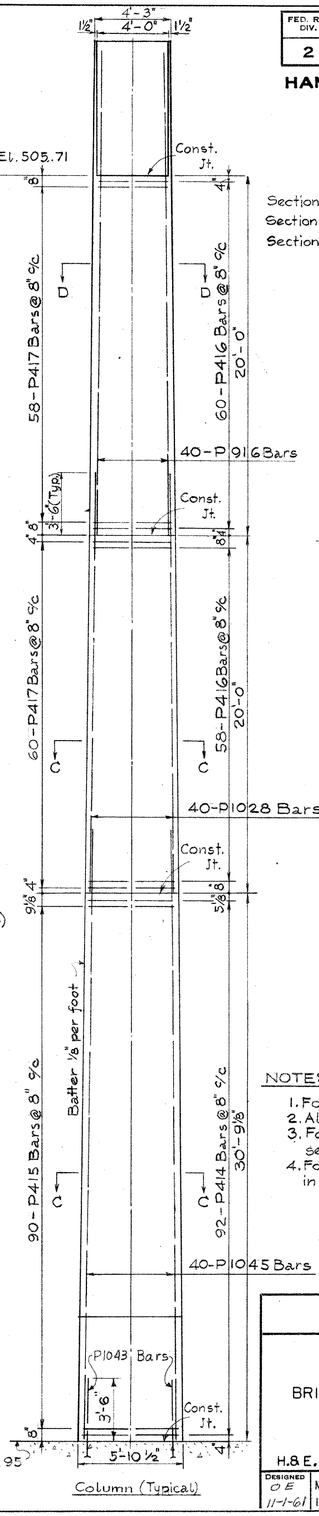
Section B-B



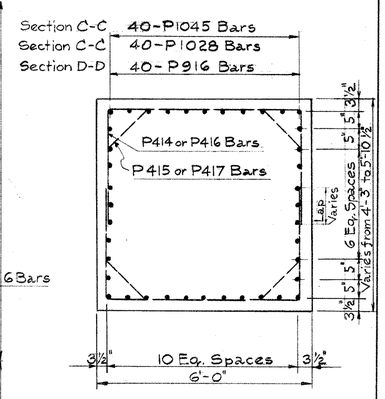
Anchor Bolt Plan

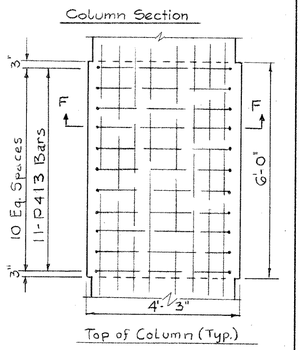


Section E-E



Column (Typical)





NOTES:

1. For General Notes see sheet No 123
2. All piles shall be 12 BP 53 Steel H Piles.
3. For connection of downspouts to pier see sheet No. 186
4. For installation of electrical ground wires in pier see sheet No. 86

I Indicates Proposed Pile

I Indicates Existing 10BP57 Piles

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 5AS

BRIDGE NO. HAM-50-19.38 R.&L.

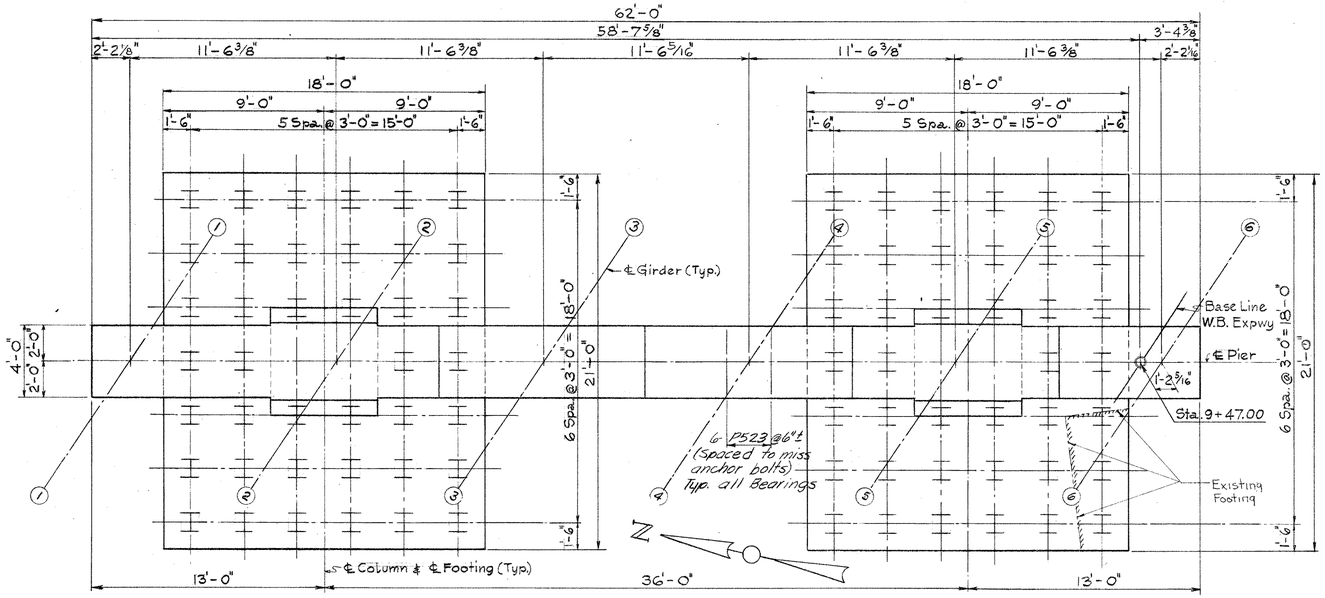
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CE 11-1-61	M.P.S. 1-3-62		JHO 1/9/62	W.A.Z. 4-20-62	

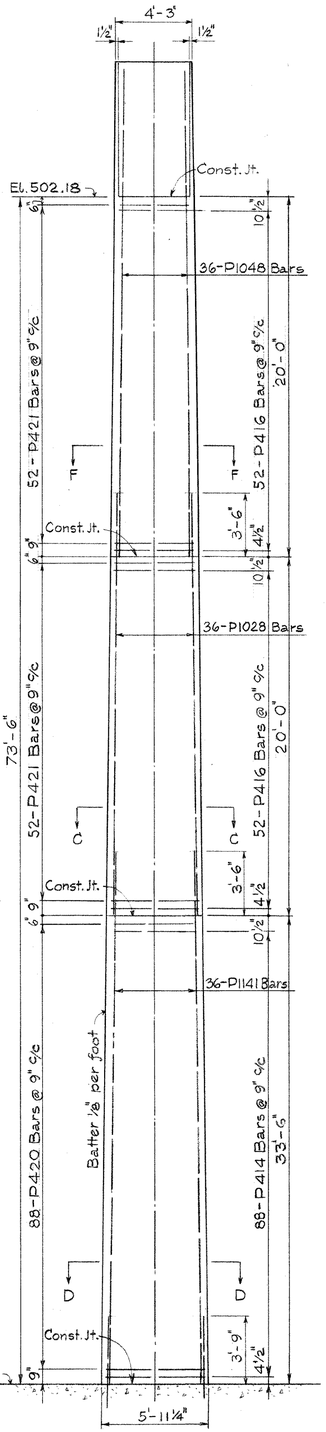
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

135
227

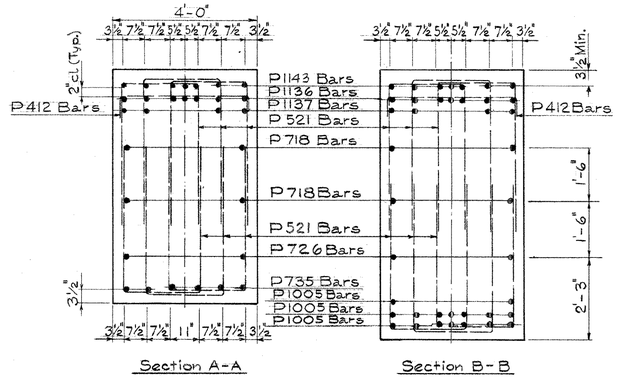
HAM-50-19.38



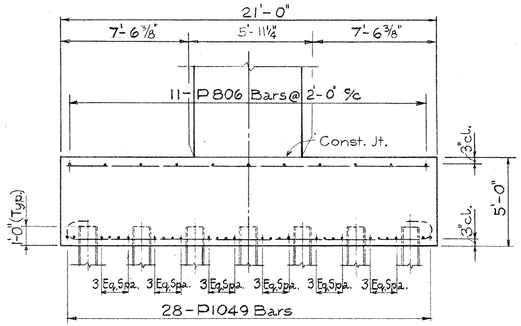
PLAN



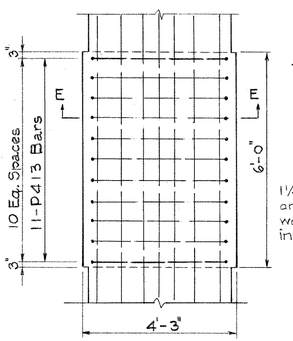
Typical Column



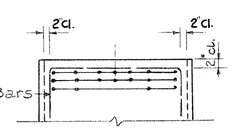
Section A-A Section B-B



End View - Footing #1 & #2



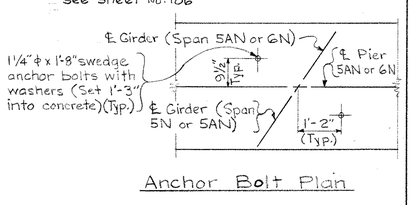
Top of Column (Typ.)



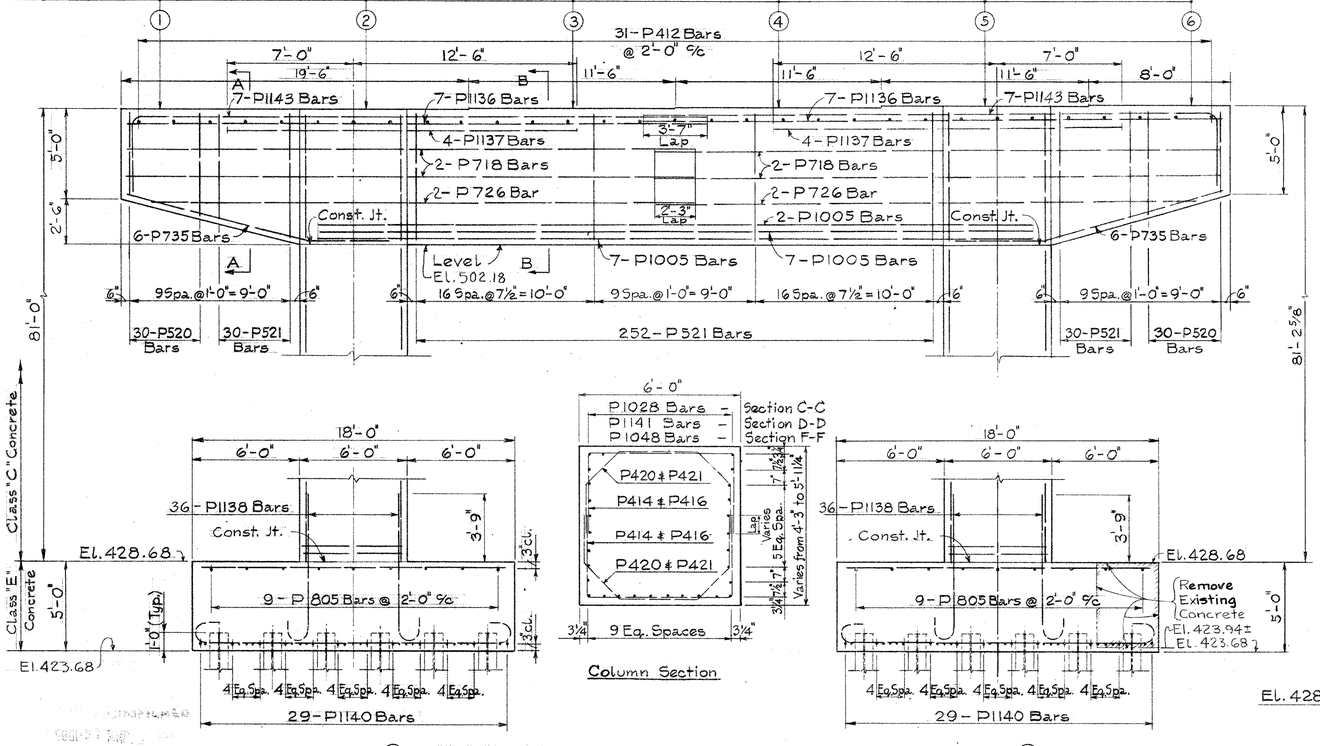
Section E-E

NOTES:

1. For General Notes see sheet No. 123
2. All piles shall be 12 BP 53 Steel H Piles.
3. For connection of downspouts to pier see sheet No. 186



Anchor Bolt Plan



ELEVATION

Footing (1)

Column Section

Footing (2)

Remove a portion of existing pier footing and steel sheet piling that interferes with footing No. 2. Removal to be included with Item S-22, Lump Sum for payment.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 6N

BRIDGE NO. HAM-50-1938 R & L.

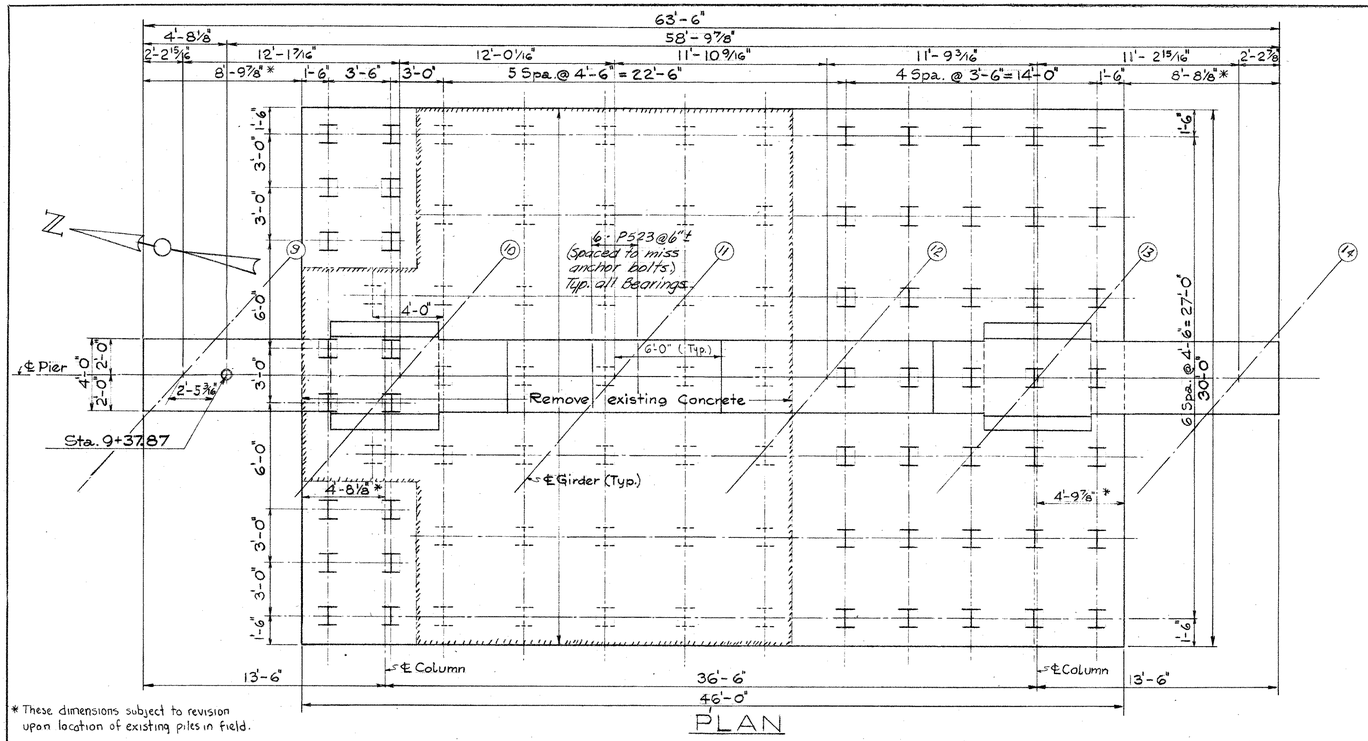
H & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 12-2-61	M.P.S. 11-20-62		JHO 11/20/62	W.A.J. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

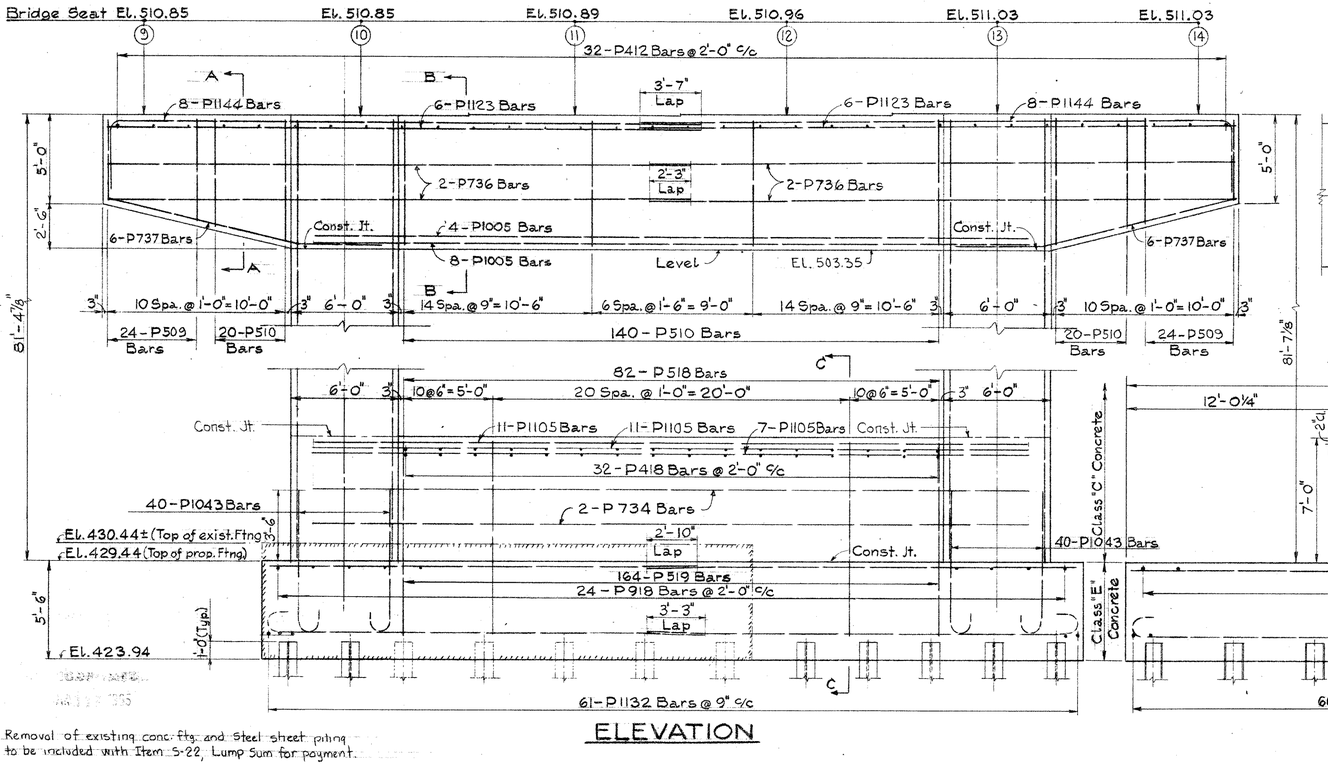
136
227

HAM-50-19.38



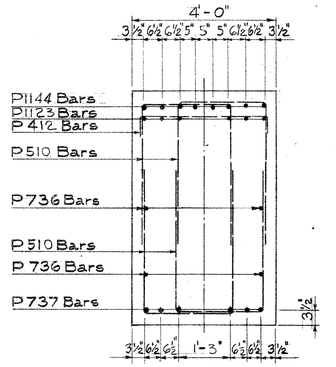
* These dimensions subject to revision upon location of existing piles in field.

PLAN

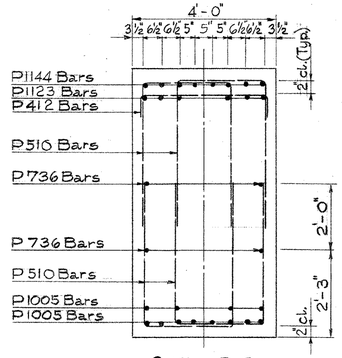


ELEVATION

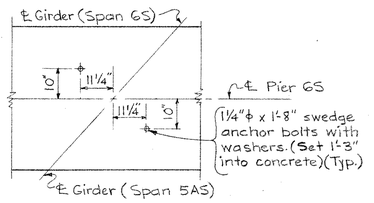
Removal of existing conc. ftg. and steel sheet piling to be included with Item S-22, Lump Sum for payment.



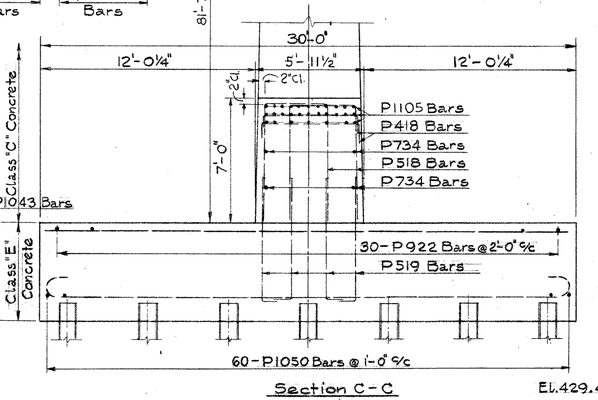
Section A-A



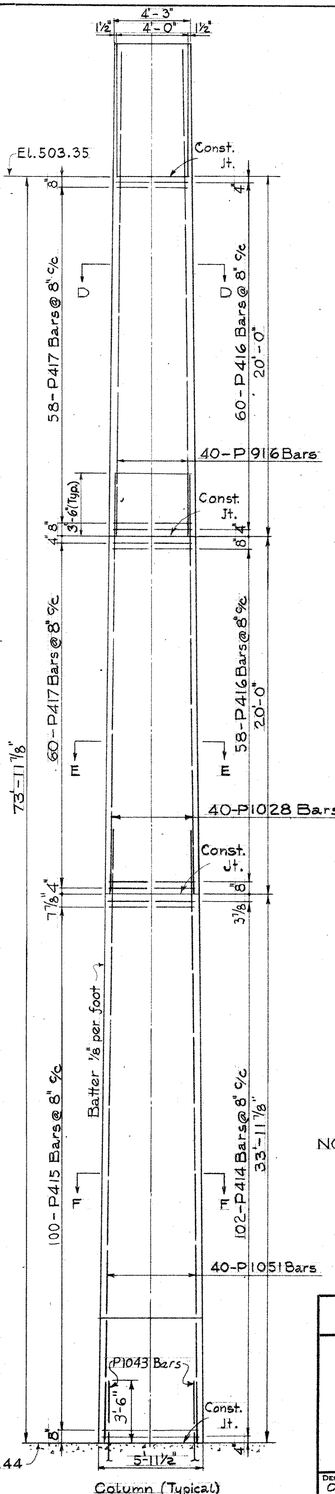
Section B-B



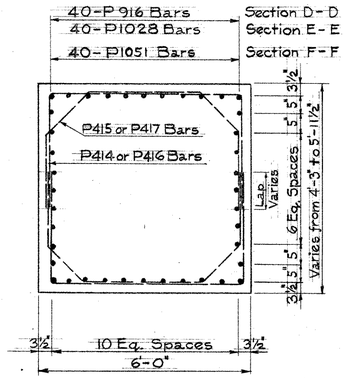
Anchor Bolt Plan



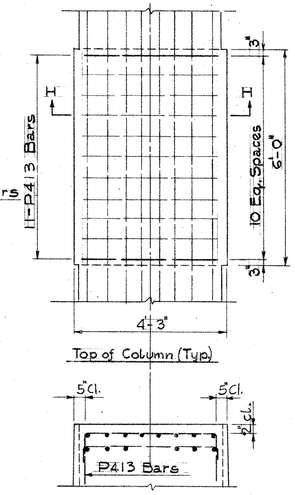
Section C-C



Column (Typical)



Column Section



NOTES:

1. For General Notes see sheet No. 123
2. All piles shall be 12 BP 53 Steel H Piles
3. For connection of downspouts to pier see sheet No. 186

I Indicates Proposed Pile

I Indicates Existing 10BP57 Pile

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO 6S

BRIDGE NO. HAM-50-1938 R.& L.

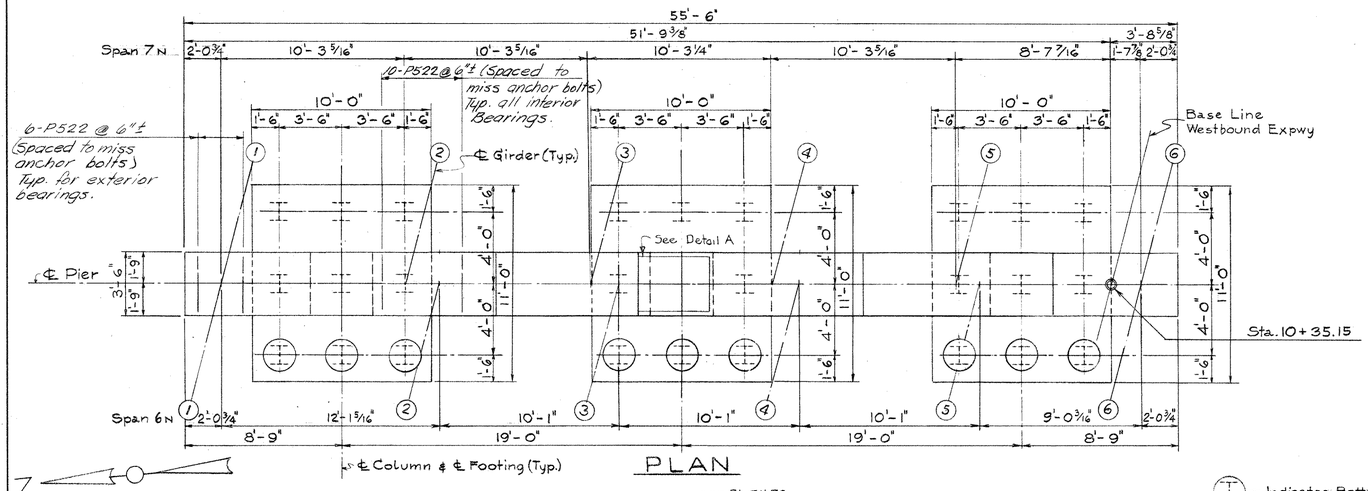
H.& E. BRIDGE NO. 1

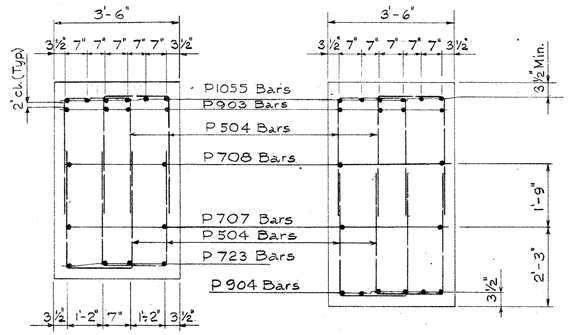
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 12-20-61	MPS		JHO 1/30/62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

137
227

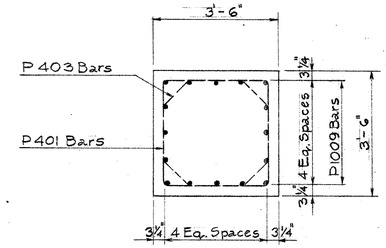
HAM-50-19.38





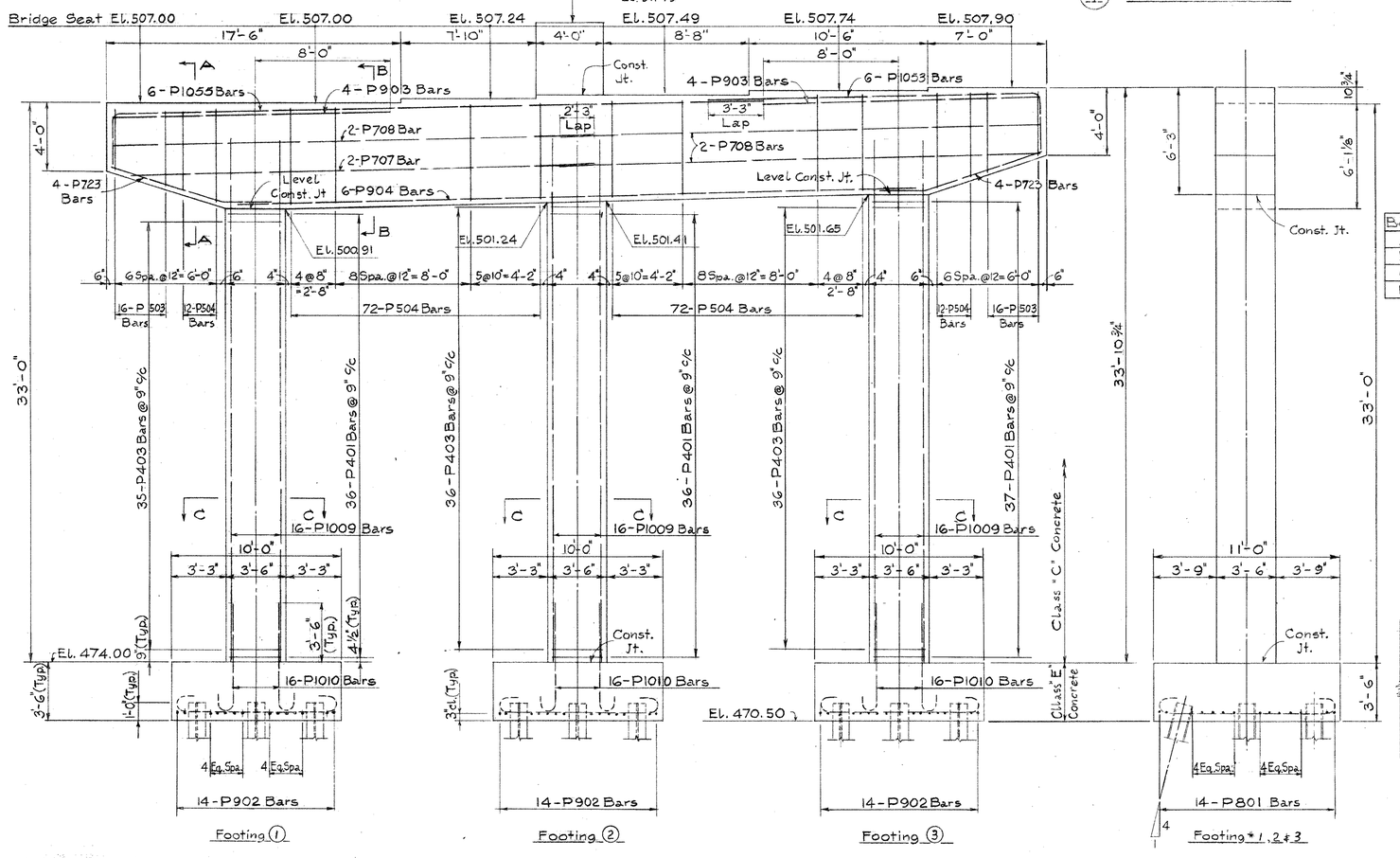
Section A-A

Section B-B

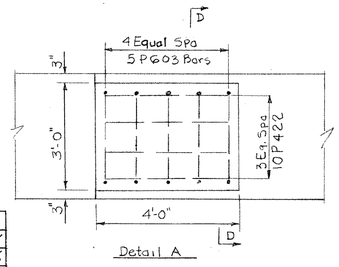


Section C-C

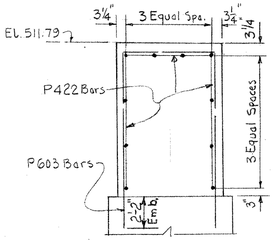
— Indicates Battered Pile



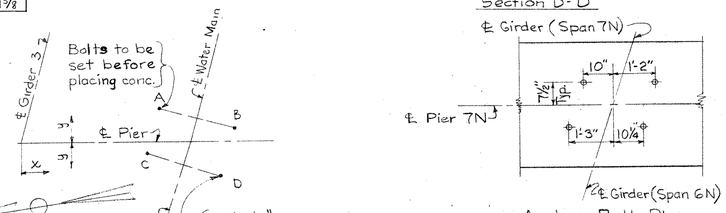
Bolt	x	y
A	3'-10 5/16"	11⅛"
B	5'-11 7/16"	4 5/16
C	3'-5 5/16"	3 5/16
D	5'-6 5/8"	11 5/8"



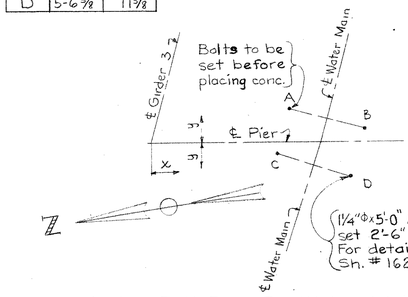
Detail A



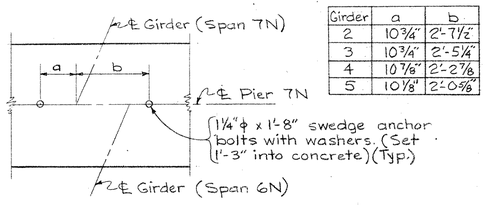
Section D-D



Anchor Bolt Plan (Girders 1 & 6)



Anchor Bolt Plan for Water Main



Anchor Bolt Plan (Girders 2-5)

Girder	a	b
2	10¾"	2'-7½"
3	10¾"	2'-5¼"
4	10⅞"	2'-2⅞"
5	10⅞"	2'-0⅝"

NOTES:

1. For General Notes see sheet No. 123
2. All piles shall be 12 BP 53 Steel H Piles.
3. For connection of downspouts to Pier see sheet No. 186
4. For connection of 24" Water Main to pier see sheet No. 162

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 7N

BRIDGE NO. HAM-50-1938 R&L.

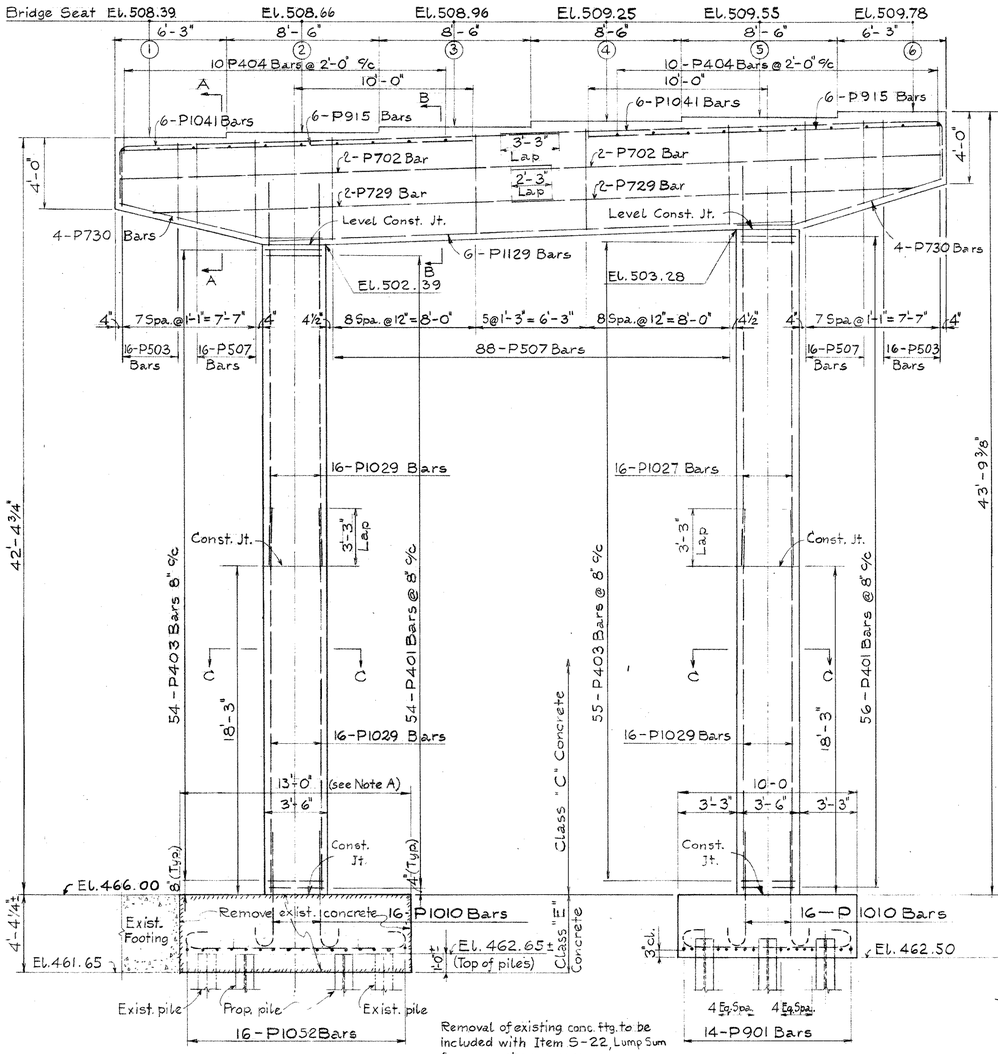
H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.P.S. 11-16-61	M.P.S. 12-1-61		JHO 12/11/61	4/11-3, 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

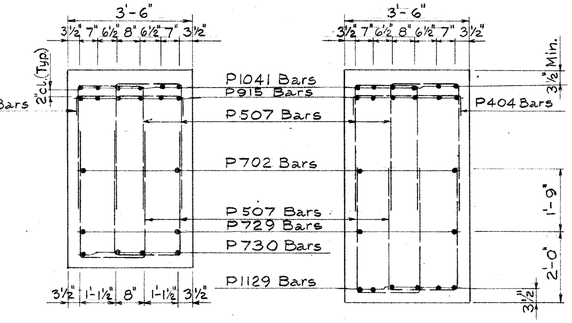
138
227

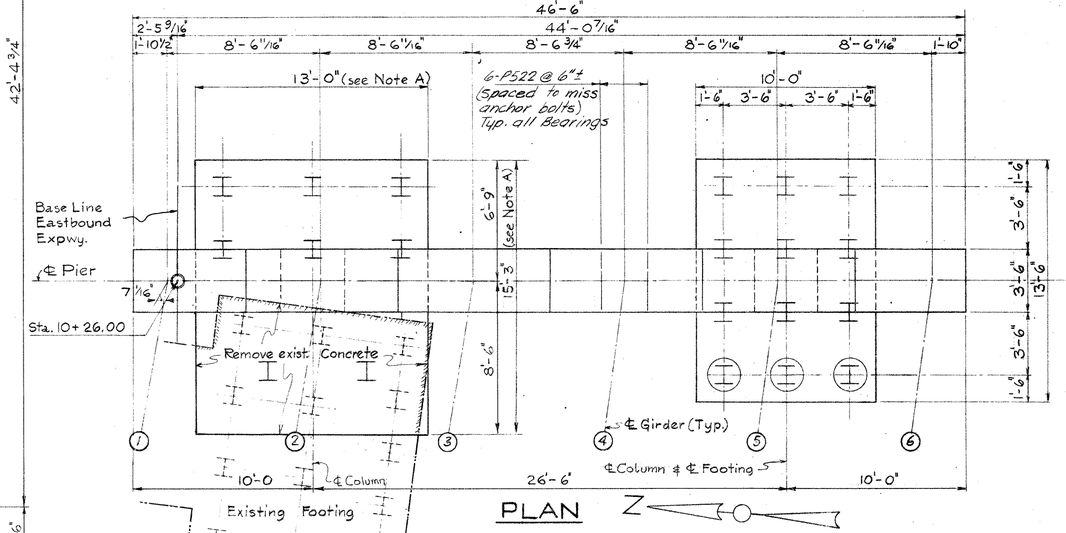
HAM-50-19.38



Removal of existing conc. ftg. to be included with Item S-22, Lump Sum for payment.

ELEVATION





PLAN

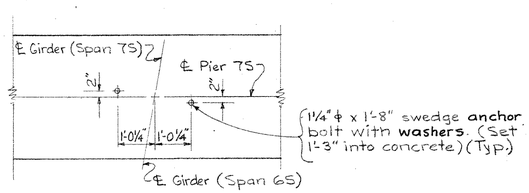
I —Indicates Existing 10 BP 49 or 10 BP 57 Pile

(I) —Indicates Battered Pile

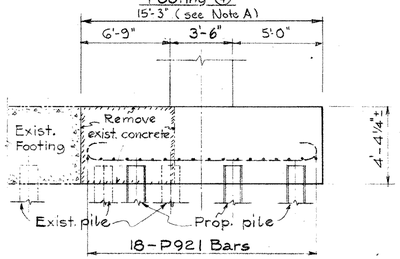
I —Indicates Proposed Pile

NOTE A:
Proposed pile pattern and footing size as shown are subject to revisions after existing footing and proposed footing has been located in the field. Reinforcing bars P1052 and P921 located in footing #4 not to be furnished until final size of footing has been approved by the Project Engineer.

NOTES:
1. For General Notes see sheet No. 123
2. All piles shall be 12 BP 53 Steel H Piles.
3. For connection of downspouts to pier see sheet No. 186 .



Anchor Bolt Plan



End Elevation of Footing #4

Footing (5)

End Elevation of Footing #5

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 7S

BRIDGE NO. HAM-50-1938 R&L.

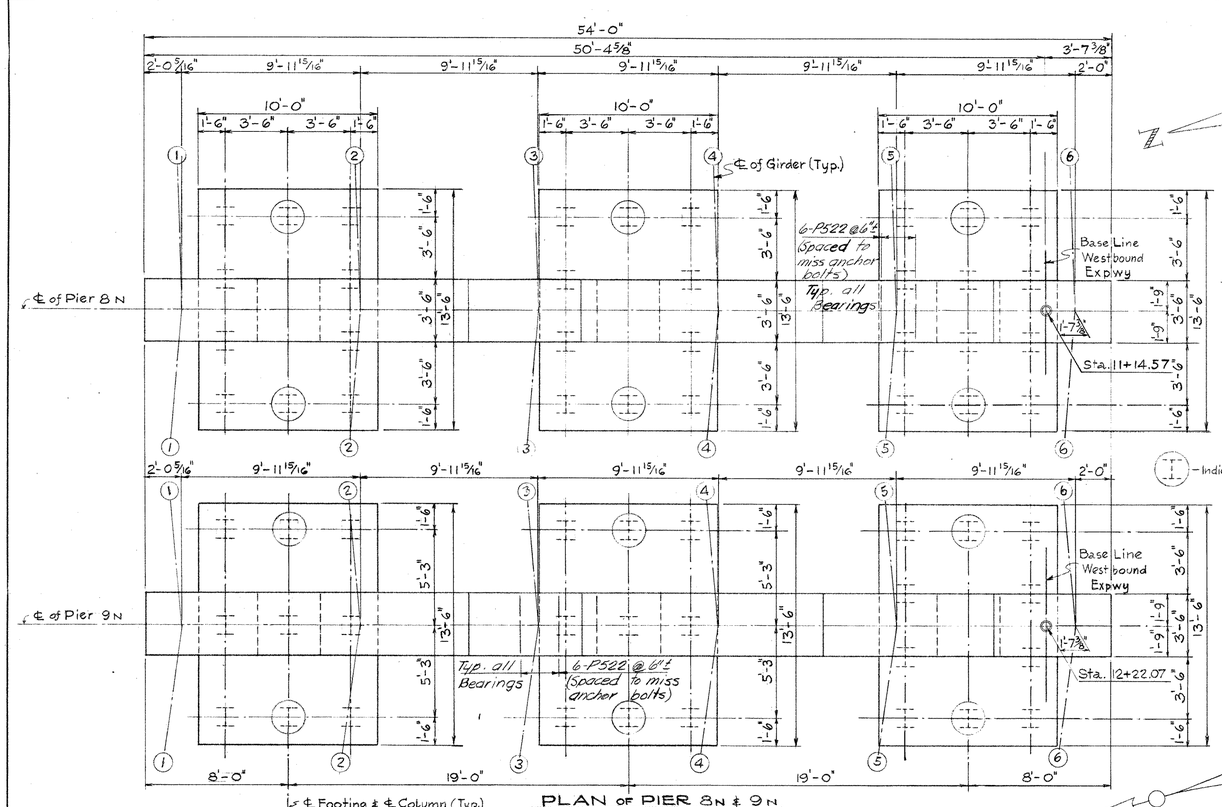
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E 11-24-61	M.P.S. 12-26-61		JHO 1/9/62	W.A.Z. 4-20-62	

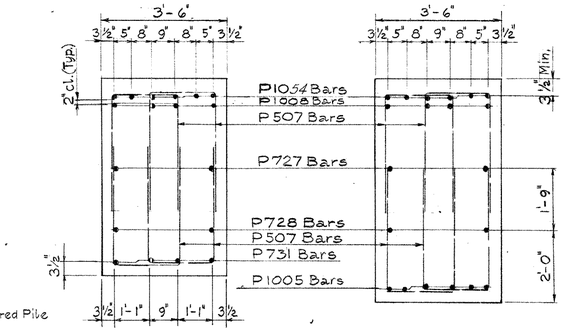
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

139
227

HAM-50-19.38

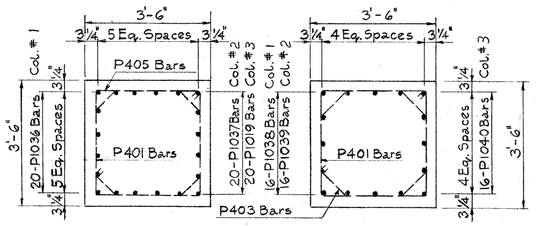


PLAN OF PIER 8N & 9N



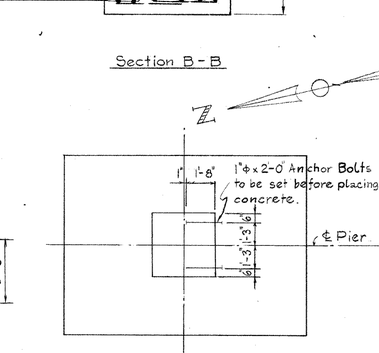
Section A-A

Section B-B



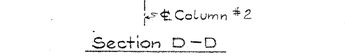
Section C-C
Pier 8 N

Section C-C
Pier 9 N

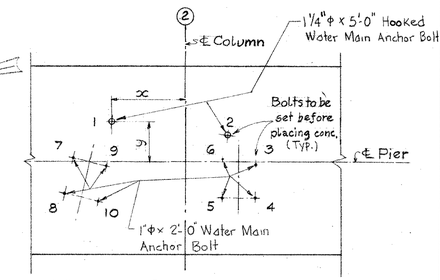


Footing # 1 & # 2 Pier 9 N

END ELEVATION



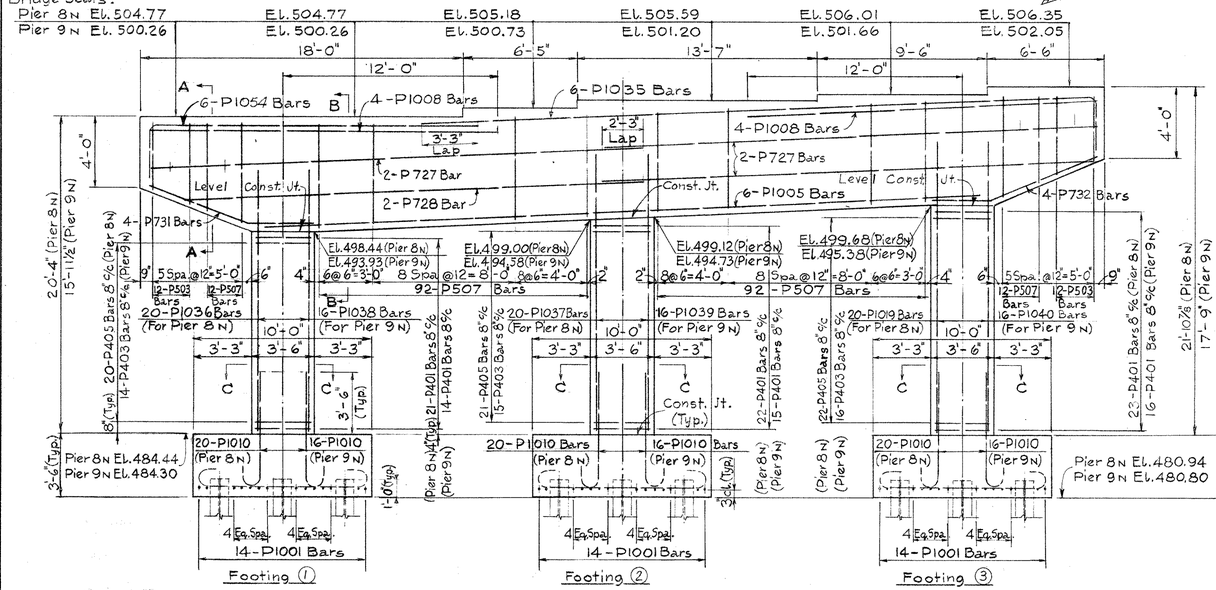
Section D-D



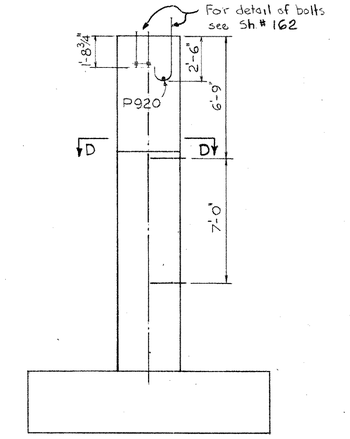
Anchor Bolt Plan For Water Main
Top of Cap at Column (2)
Pier # 8N only

Bolt No.	Size	Location x	Location y
1	1¼"	1'-4 1/2"	9 1/16"
2	"	9 5/16"	5 1/16"
3	1"	1'-3 3/4"	0 1/16"
4	"	1'-3 5/16"	8 1/16"
5	"	8 1/16"	7 3/16"
6	"	8 1/16"	0 1/16"
7	"	2'-1 1/4"	0 7/8"
8	"	2'-3 1/16"	6 5/8"
9	"	1'-5 5/16"	0 7/8"
10	"	1'-7 3/4"	8 5/8"

Bridge Seats:
Pier 8 N El. 504.77
Pier 9 N El. 500.26



ELEVATION OF PIER 8N & 9N



Anchor Bolts Elevation
Column # 2 Pier # 8N only
(Looking North)

Footing # 1, # 2 & # 3 (Pier 8 N) & Footing # 3 (Pier 9 N)

END ELEVATION

NOTES:

1. For General Notes see sheet No. 123
2. All piles shall be 12 BP 53 Steel H Piles
3. For connection of downspouts to piers see sheet No. 186
4. For installation of electrical ground wires in Pier 8 N see sheet No. 86
5. For connection of 24" Water Main to Pier No 8N see sheet. No 162
6. For connection of lighting conduit to North Column Pier No. 9N see Sh. No. 83
7. See sheet # 140 for Anchor Bolt Plan

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIERS NOS. 8N & 9N
BRIDGE NO. HAM-50-1938R & L.

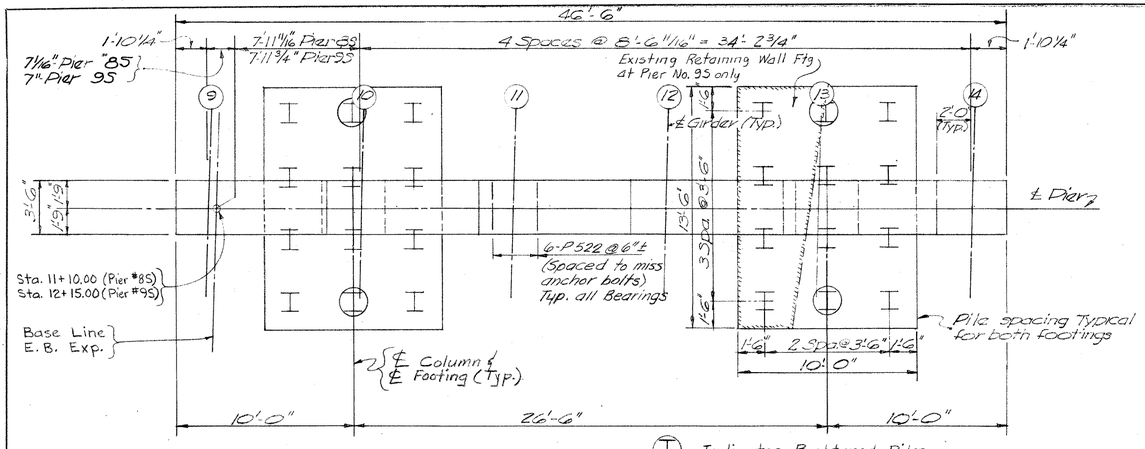
H & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O E 12-1-61	M. P. S. 1-10-62		J.H.O. 1/11/62	R. A. F. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

140
227

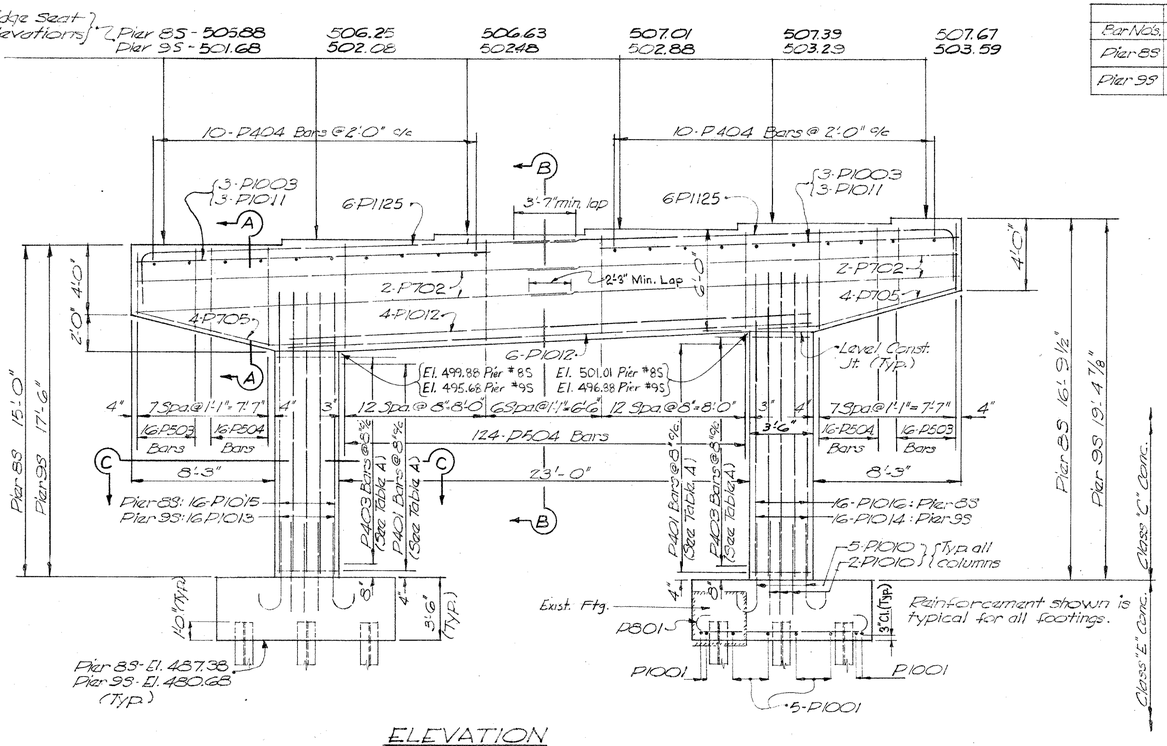
HAM-50-19.38



PLAN

(All piles are 12BP53)

Ⓘ Indicates Battered Piles

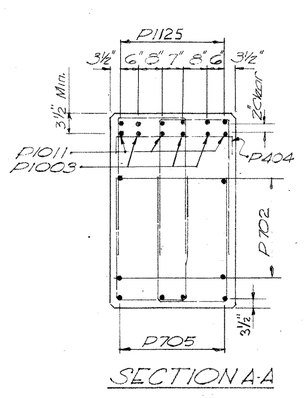


ELEVATION

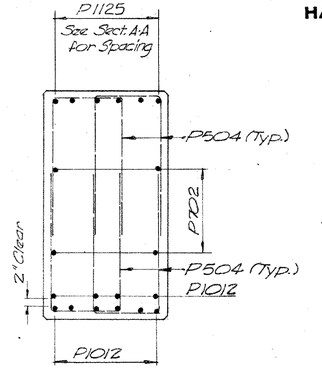
TABLE A

Column tie bar quantities

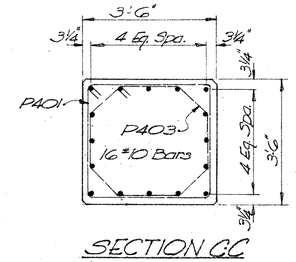
	North Col.		South Col.	
Bar Nos.	401	403	401	403
Pier 8S	13	13	15	15
Pier 9S	17	17	19	19



SECTION A-A

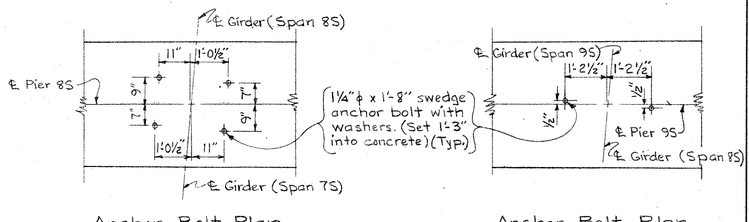


SECTION B-B



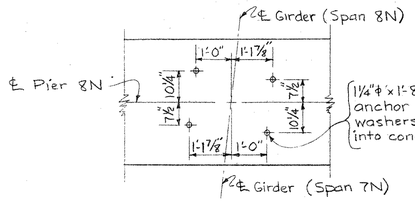
SECTION C-C

(Typ. Column Sect.)



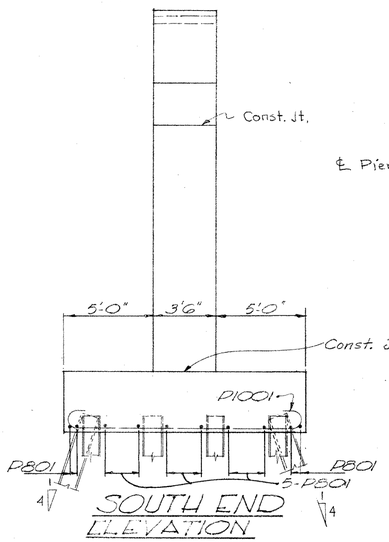
Anchor Bolt Plan (Pier 8S)

Anchor Bolt Plan (Pier 9S)



Anchor Bolt Plan (Pier 8N)

Anchor Bolt Plan (Pier 9N)



SOUTH END ELEVATION

NOTES

For General Notes See Sh. # 123
For connection of downspouts to Pier see Sh. # 186
For installation of electrical ground wires in Pier # 8S see Sh # 86
For connection of lighting conduit to South Column Pier No. 9S see Sh. No. 83

Remove a portion of existing retaining wall and footing that interferes with the pier footing and driving of piles at Pier No. 9S. Removal to be included with Item 5-22, Lump Sum for payment.

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CINCINNATI, OHIO

PIERS NOS. 8S & 9S

BRIDGE NO. HAM-50-1938 R&L.

H.&E. BRIDGE NO. 1

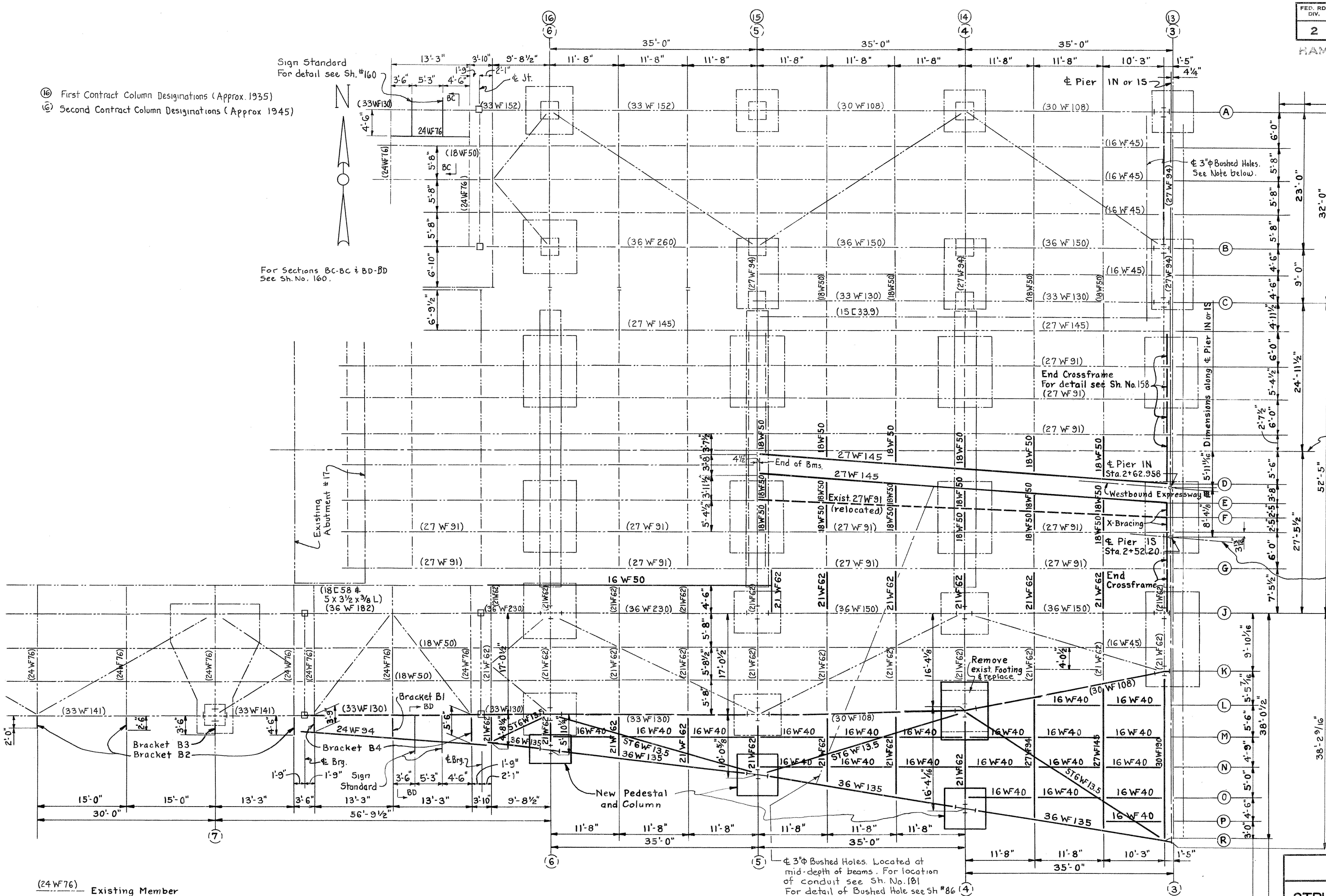
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
O.E. 11-10-61	JIM		JHO 12/13/61	W.H.T. 4-20-62	

JAN 15 1963

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

141
227

HAM-50-10.36



NOTE:
East end of Beam (F) is moved approximately 2'-11½" south from its existing position.

STRUCTURAL STEEL GENERAL NOTES
Existing structural steel that is to be removed and re-used includes 1-two span continuous 27WF91 Beam (Stringer F Spans W1 & W2 as indicated above) and 3-existing column shoes (as shown on Sheet No. 146). Payment for relocating these items is to be included in the unit price bid for Item 5-7.
Alterations to Existing Structural Steel
The cost of alterations to existing structural steel in Spans W1, W2, W3, W4 and W5 as called for on these plans including the relocating and re-use of existing structural steel, will not be paid for separately, but shall be included for payment in the contract unit price bid for Item 5-7 "Structural Steel."
Work this sheet with sheets 142 to 146

(24WF76) Existing Member
18WF50 Proposed Member
27WF91 — Existing Beam Relocated
(33WF130) — Existing Beams, Strengthened in Place

PLAN OF REVISIONS TO EXISTING STRUCTURAL STEEL

Dimensions measured along ℄ Column (1'-5" west of ℄ of existing Bent (3) (13))

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT I
BRIDGE NO. HAM-50-1938 R.&L.

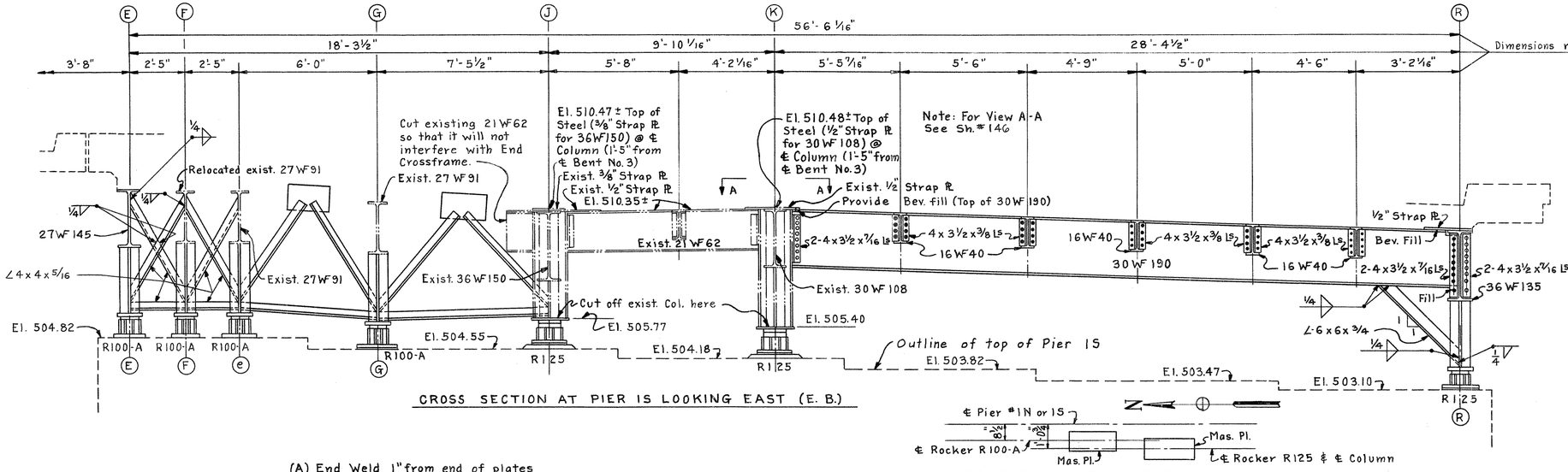
H.&E. BRIDGE NO. 1

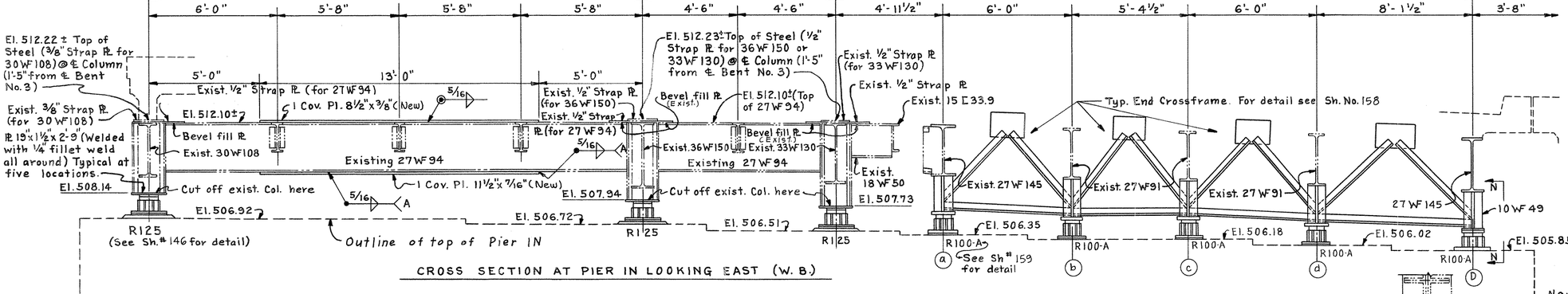
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK CPW	MPS	RJS	JHO 1/31/62	H.A.S. 4-26-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

142
227

HAM-50-19.38





BEAM	A
a	2'-5"
b	2'-5 1/4"
c	2'-3 7/8"
d	2'-4 1/8"
D	2'-4 5/8"
E	3'-5"
F	3'-5"
e	3'-1 3/4"
G	3'-3 3/8"
R	3'-1"

Notes:
Shop connections shall be 7/8" ϕ rivets unless noted otherwise.

Field connections shall be 7/8" ϕ high-strength bolts and nuts with hardened washers according to Department of Highways Construction and Material Specifications.

All items not marked existing shall be new.

Work this sheet with Sheets 141 & 143 to 146

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MPS	RJS	JHO 1/31/62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

143
227

HAM-50-19.38

TOP COV. PL. DETAIL - COL. LINE ⑥

TOP COV. PL. DETAIL - COL. LINE ⑤

TOP COV. PLS. DETAIL - COL. LINE ④

ELEVATION

PLAN VIEW

SECTION W-W

SECTION AF-AF

SECTION X-X

SECTION Y-Y

SECTION Z-Z

SECTION U-U

SECTION AB-AB

CANTILEVER END

TYPICAL COLUMN DETAIL

BOTTOM COV. PL. DETAIL COL. LINE ④

Top Part of Column

Bottom Part of Column

SPAN W3

SPAN W2

SPAN W1

Note:
All items on this sheet are new.

Work this sheet with sheets 141, 142, 144, 145 & 146

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

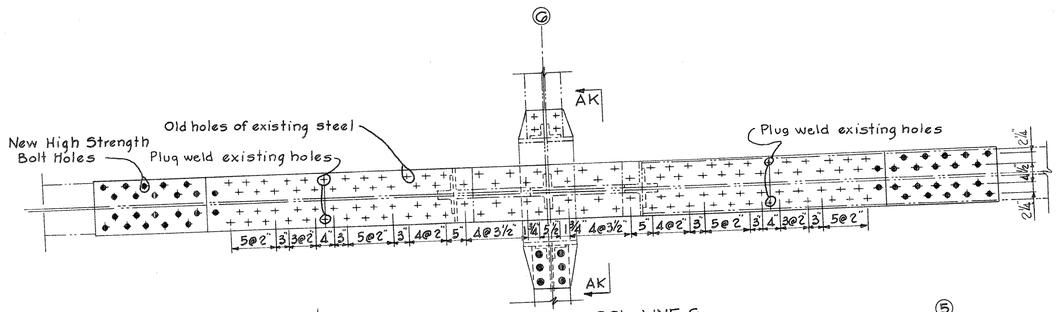
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	MPS	LJW	JHO 1/23/62	4-20-62	

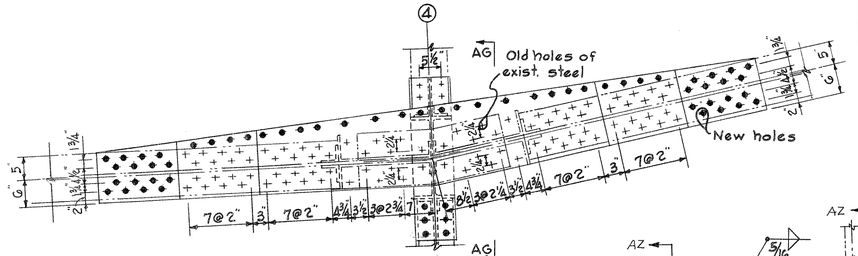
RECEIVED
JAN 25 1965

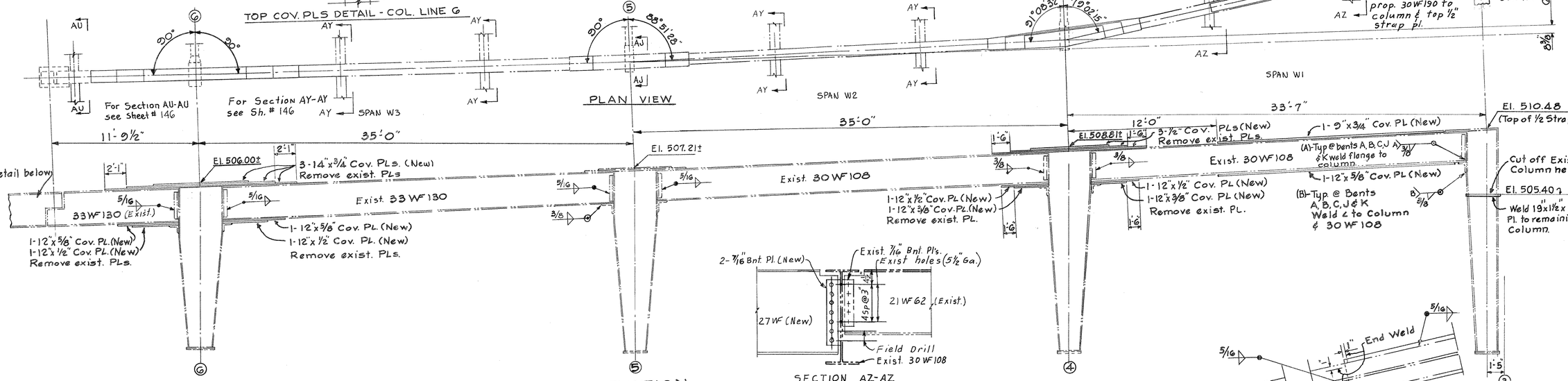
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

144
227

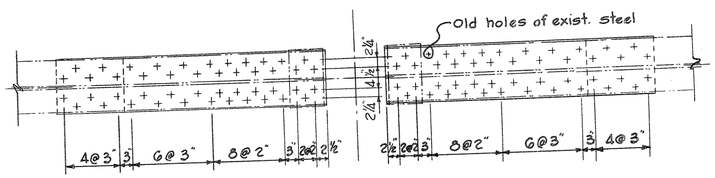
HAM-50-19.38



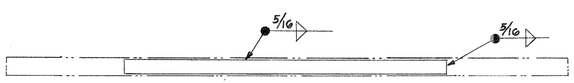




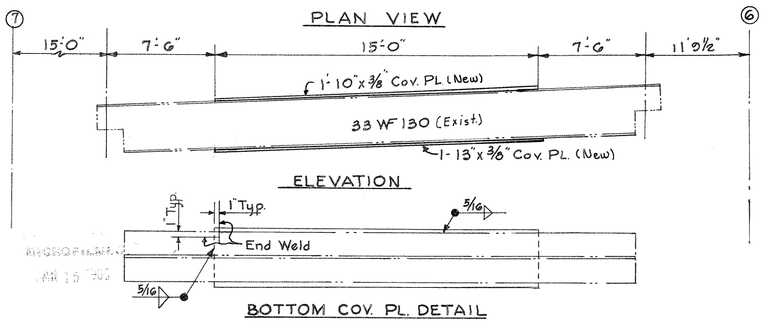
SECTION AZ-AZ



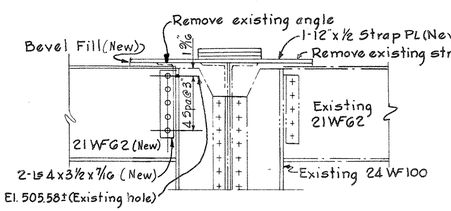
BOTTOM COV. PLS. DETAIL - COL. LINE G



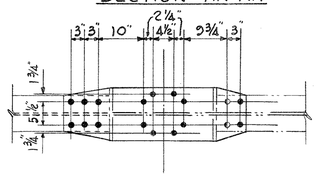
PLAN VIEW



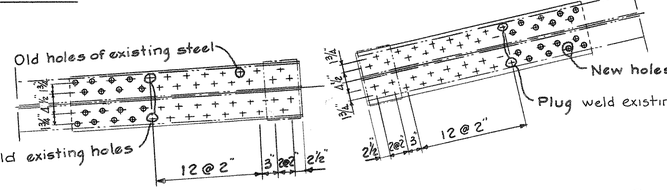
BOTTOM COV. PL. DETAIL



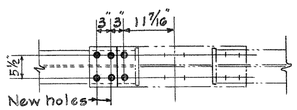
SECTION AK-AK

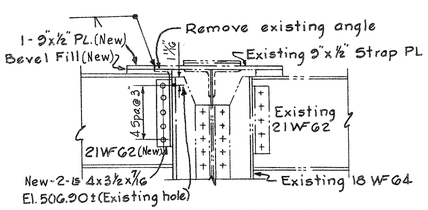


STRAP DETAIL

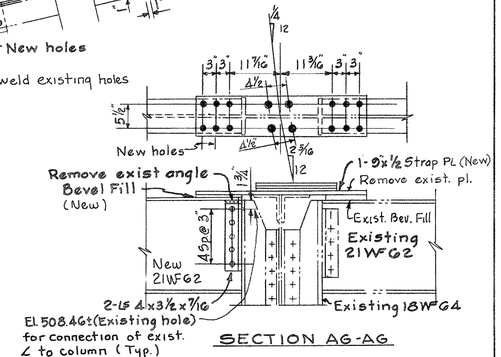


BOTTOM COV. PLS. DETAIL - COL. LINE 4





SECTION AJ-AJ



SECTION AG-AG

Work this sheet with sheets 141 to 143, 145 & 146

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CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

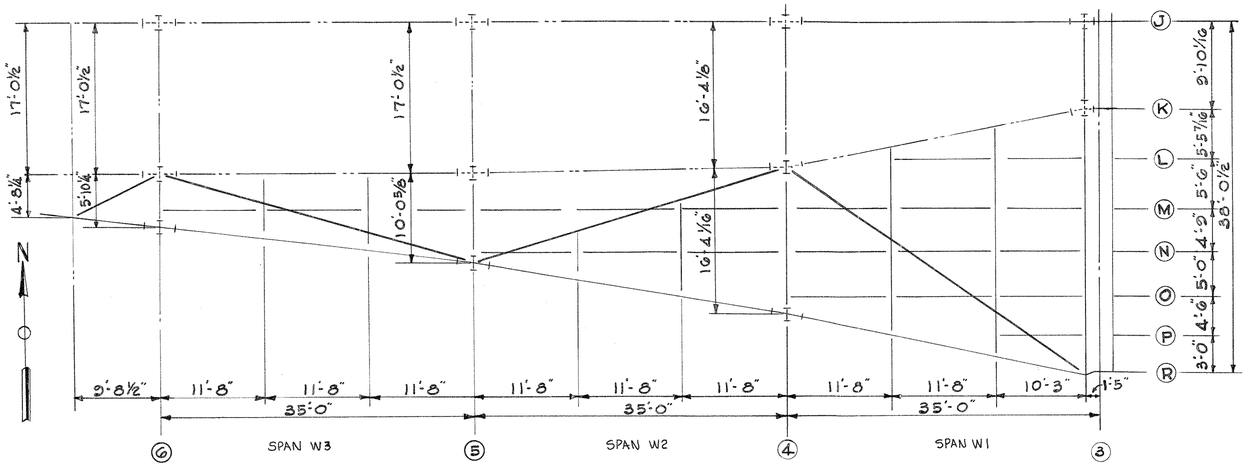
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	MPS	LJW	JHO 1/23/62	4-20-62	

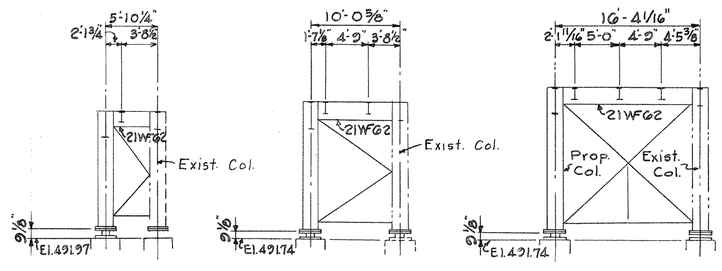
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

145
227

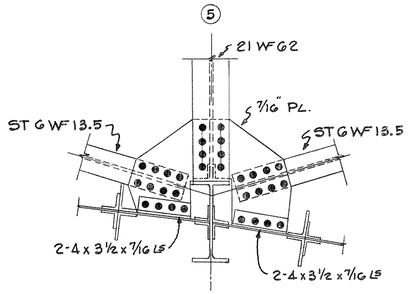
HAM-50-19.38



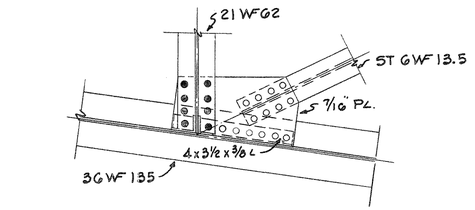
PLAN OF BRACING



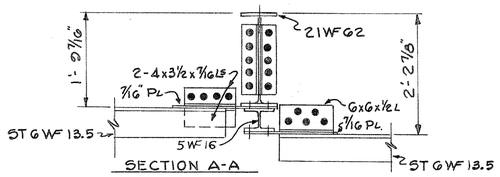
BENT G BENT 5 BENT 4



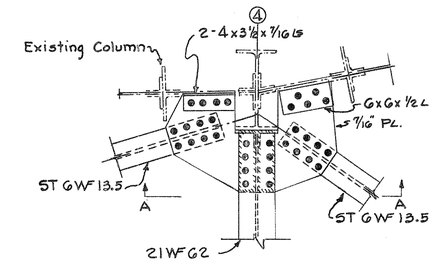
BRACING CONNECTION @ COL. LINE 5



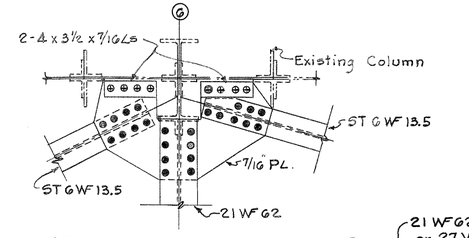
BRACING CONNECTION @ CANTILEVER



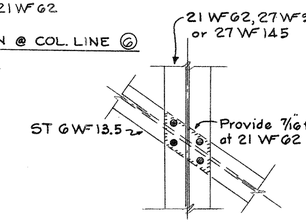
SECTION A-A



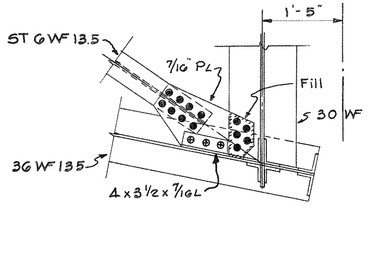
BRACING CONNECTION @ COL. LINE 4



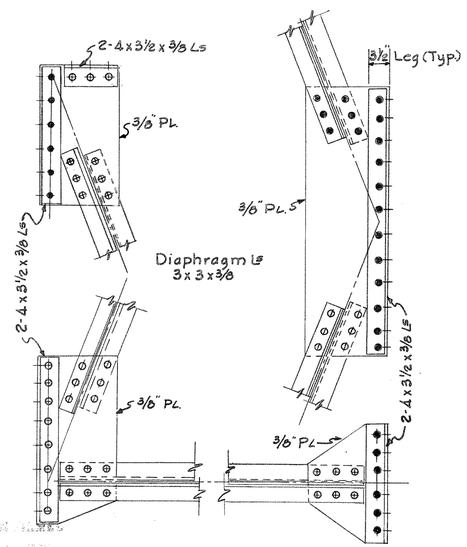
BRACING CONNECTION @ COL. LINE G



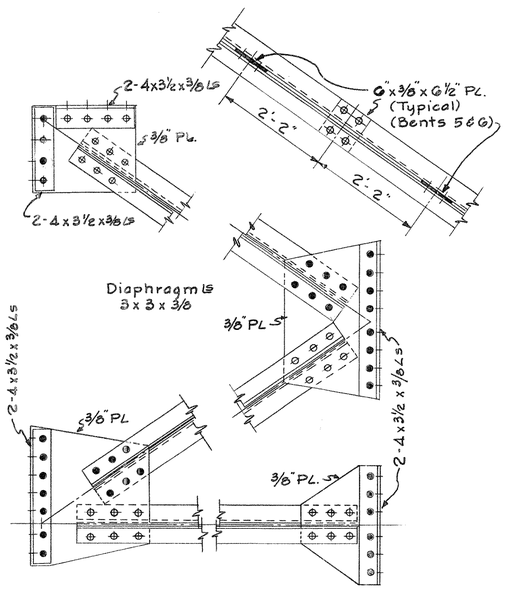
TYPICAL LATERAL CONN. AT FLOOR BEAMS



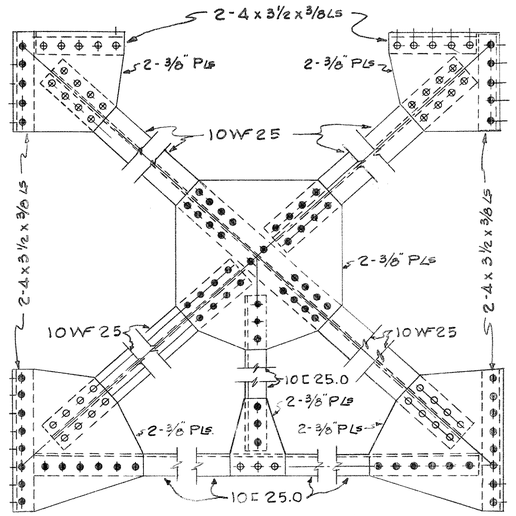
BRACING CONNECTION @ COL. LINE 3



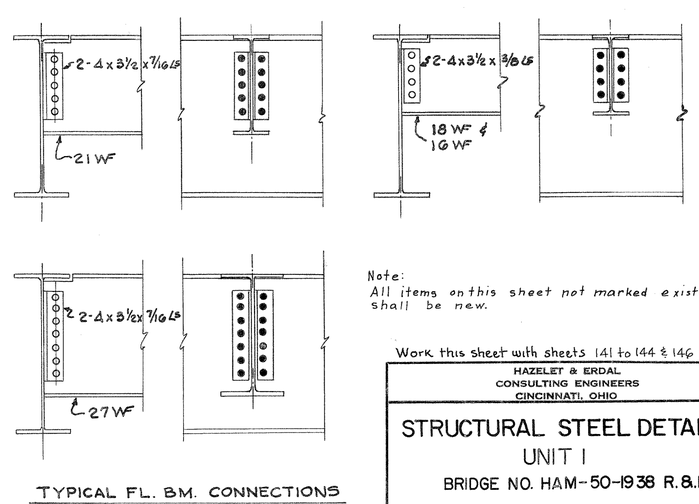
CONNECTIONS OF BENT G



CONNECTIONS OF BENT 5



CONNECTIONS OF BENT 4



TYPICAL FL. BM. CONNECTIONS

Note:
All items on this sheet not marked existing shall be new.

Work this sheet with sheets 141 to 144 & 146

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-19.38 R.&L.

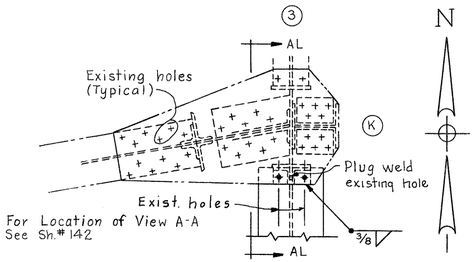
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	M.P.S.	L.J.W.	JHO 1/23/62	4-20-62	

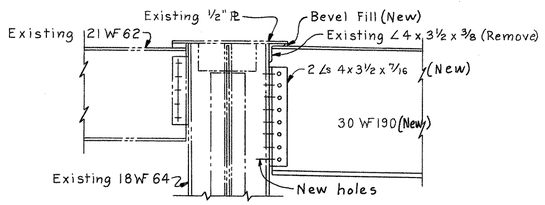
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

146
227

HAM-50-19.38

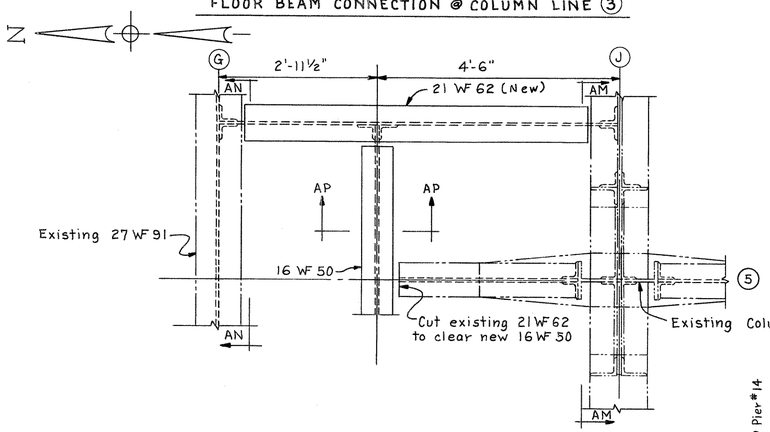


VIEW A-A

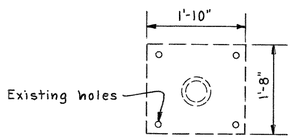


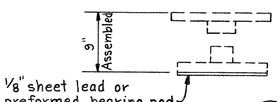
SECTION AL-AL

FLOOR BEAM CONNECTION @ COLUMN LINE ③

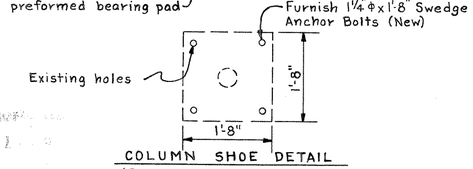


FLOOR BEAM CONNECTION @ COLUMN LINE ⑤

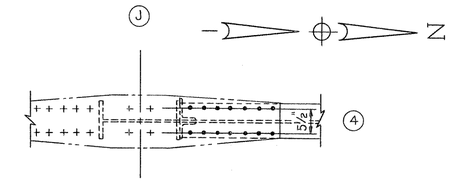


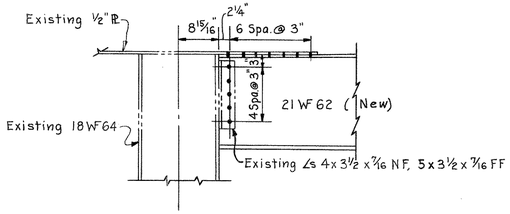


Re-use existing column shoe detail previously located at bent no. 3

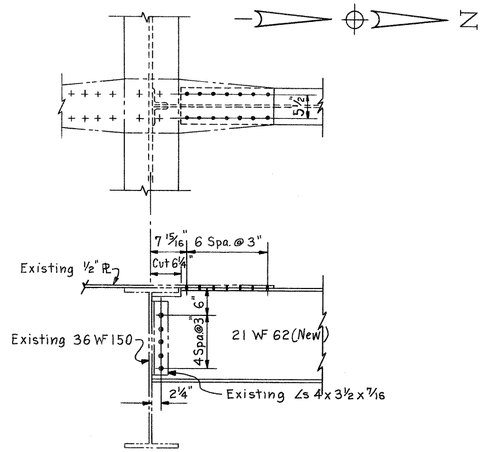


COLUMN SHOE DETAIL
(Req. at bents 4, 5 & 6 - Line R)

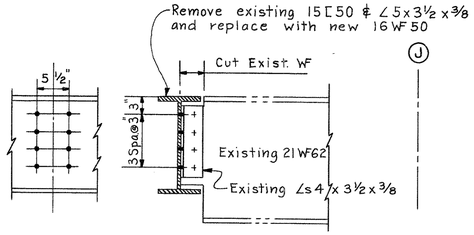




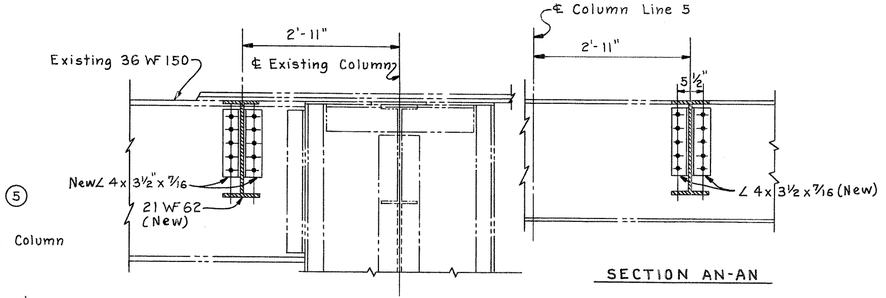
FLOOR BEAM CONN. @ COL. LINE ④ & BM. LINE J



FLOOR BEAM CONN. @ BM. LINE J

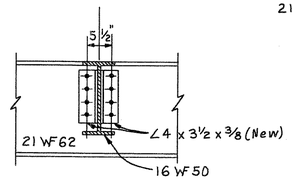


FLOOR BEAM CONN. COLUMN LINE ⑥-⑤

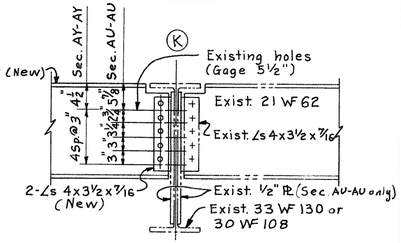


SECTION AM-AM

SECTION AN-AN



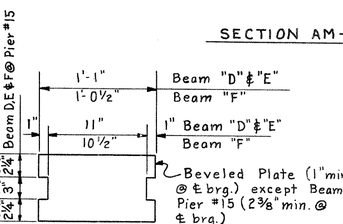
SECTION AP-AP



SECTION AU-AU

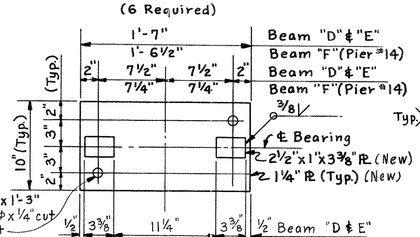
(For location see Sh. No. 144)

SECTION AY-AY identical except as noted



PLAN OF SOLE PLATE

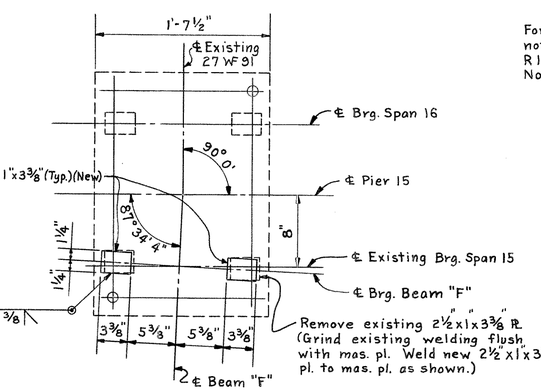
(6 Required)



MASONRY PLATE DETAIL

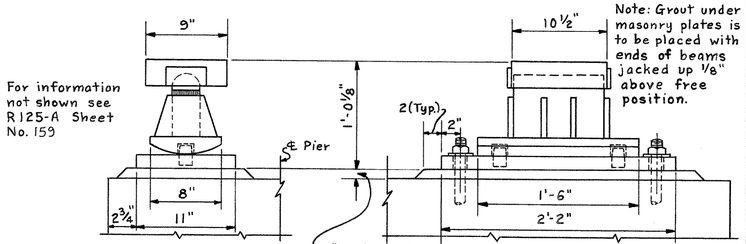
(Pier 14 and 15)

(Provide 1/8" sheet lead or preformed bearing pad)



EXISTING MASONRY PLATE DETAILS

(Pier 15)



Note: Grout under masonry plates is to be placed with ends of beams jacked up 1/8" above free position.

STRUCTURAL STEEL ROCKER R-125

(For Beam "R" Pier 15 use 1/8" sheet lead or preformed bearing pad in place of grout. Anchor bolts shall be poured in place except for Beam "R")

Work this sheet with Sheets Nos 141 to 145

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

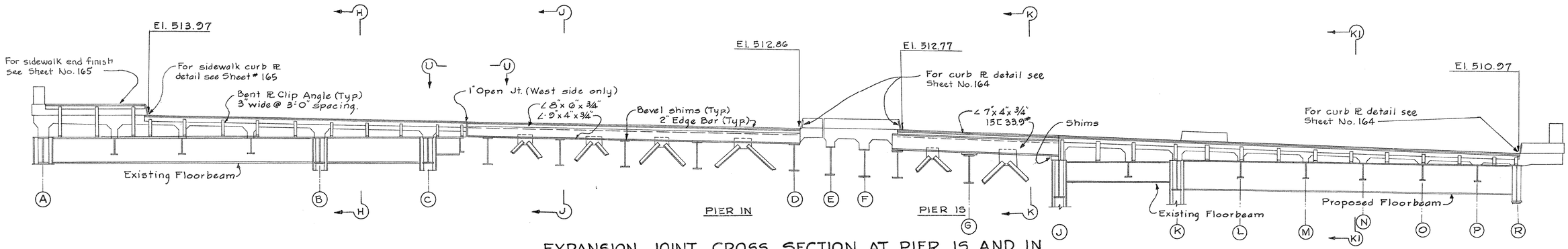
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MPS	RJS	JHO 1/31/62	W.A.J. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

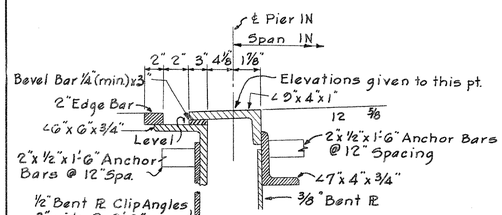
HAM-50-19.38

147
227



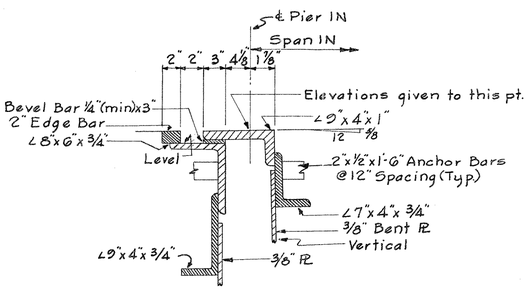
EXPANSION JOINT CROSS SECTION AT PIER 15 AND IN

(Showing West portion of Expansion Dam)

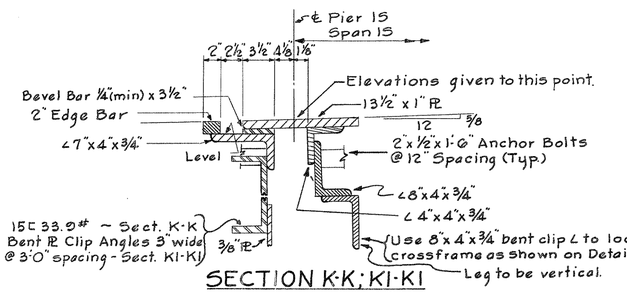


SECTION H-H

For typ. welding of end dam see Sh. No. 164

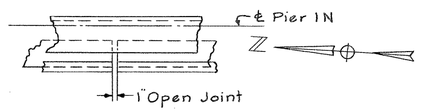


SECTION J-J

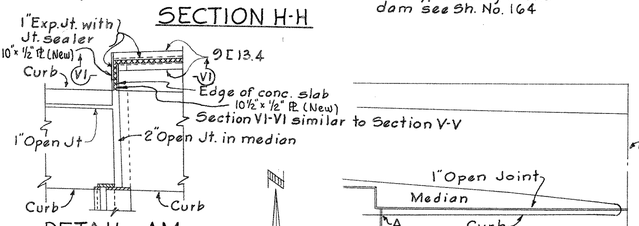


SECTION K-K; KI-KI

Note:
Top of slab between curb lines is a straight line.

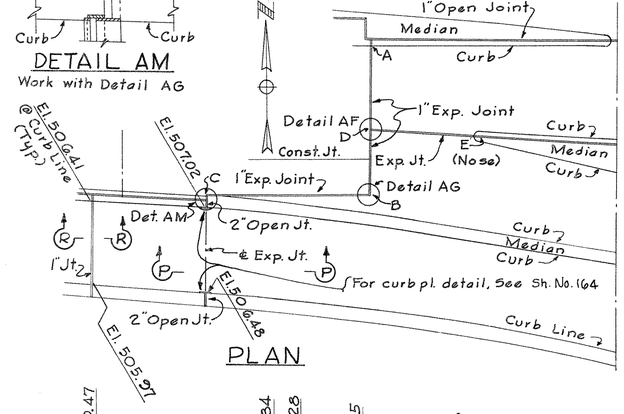


VIEW U-U

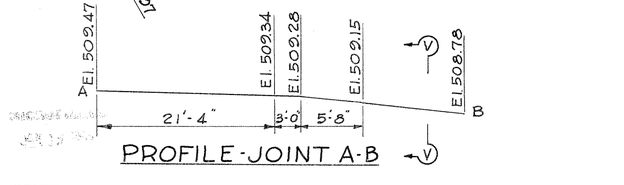


DETAIL AM

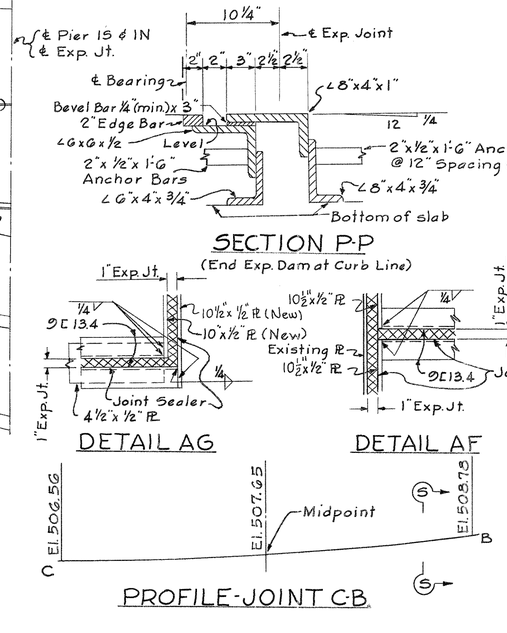
Work with Detail AG



PLAN



PROFILE - JOINT A-B



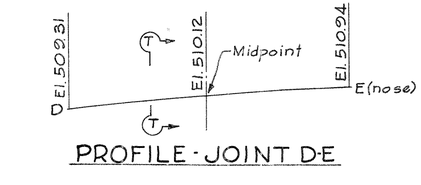
PROFILE - JOINT C-B

SECTION P-P

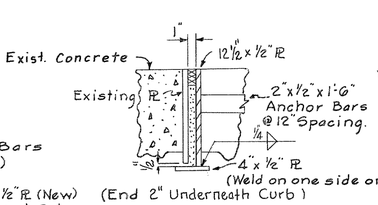
(End Exp. Dam at Curb Line)

DETAIL AG

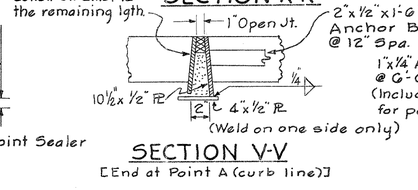
DETAIL AF



PROFILE - JOINT D-E

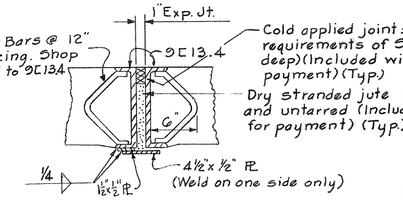


SECTION R-R

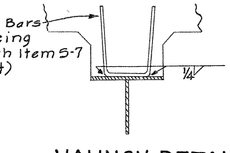


SECTION V-V

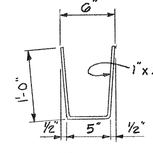
[End at Point A (curb line)]



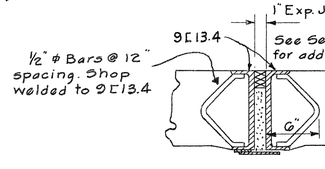
SECTION S-S



HAUNCH DETAIL



ANCHOR DETAIL



SECTION T-T

[End 1'-0" underneath median (at nose)]

Note:
Joints are on a straight line between curb lines unless otherwise indicated.

HAZELET & ERDAL
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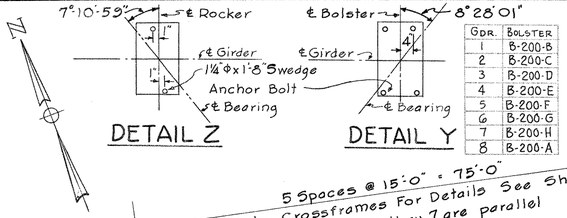
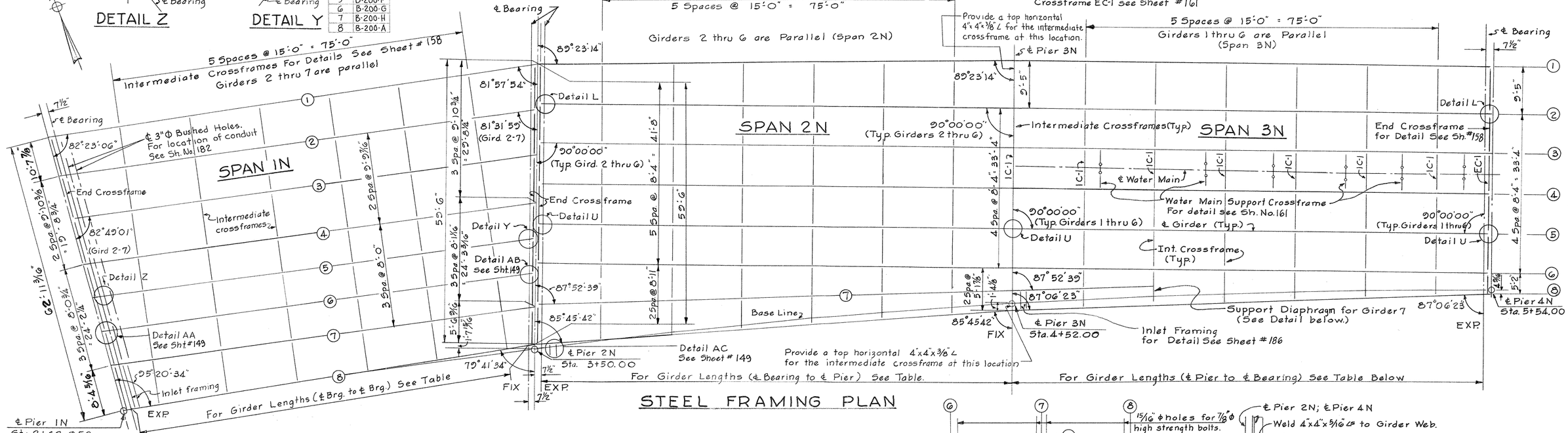
CINCINNATI, OHIO

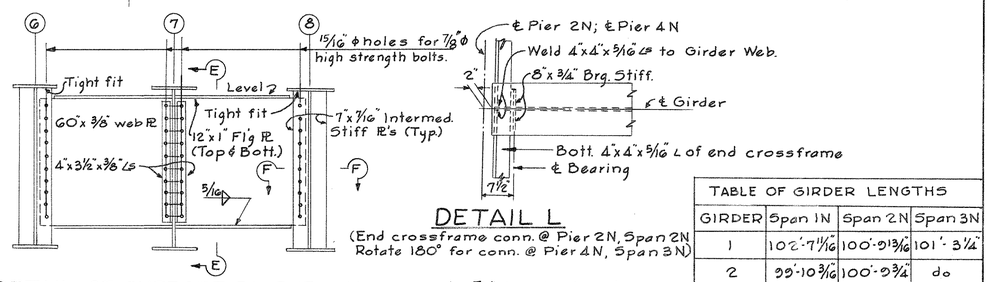
STRUCTURAL STEEL DETAILS
UNIT 1
BRIDGE NO. HAM-50-1938 R.&L.

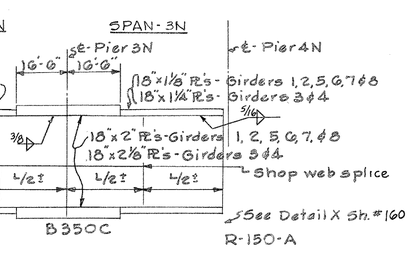
H. & E. BRIDGE NO. 1

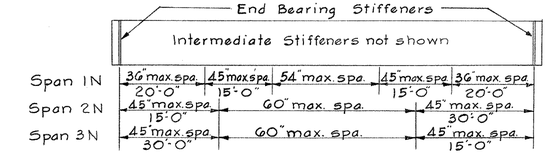
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J I M 12-61	L J W 3-62	J H O 4/3/62	M-1-E 4-20-62	

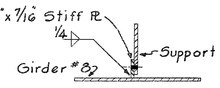


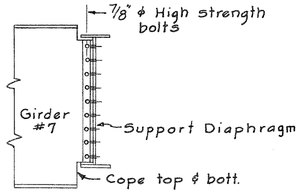


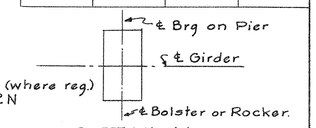












FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-50-19.38

TYPICAL NOTE FOR BRIDGE NO. 1:
Location of anchor bolts on mas. plate to be as shown on Sh. #159 unless noted otherwise.

Piers 2N, 3N, & 4N are parallel

DETAIL Z

GDR.	BOLSTER
1	B-200-B
2	B-200-C
3	B-200-D
4	B-200-E
5	B-200-F
6	B-200-G
7	B-200-H
8	B-200-A

DETAIL Y

STEEL FRAMING PLAN

TABLE OF FLANGE PLATES

Note: For bearing details see sheet #159
All top & bottom PL's are the same size.
All cut-off paints are at the same location for both top and bottom PL's.
Bearing stiffeners in Span 1N are 7"x1" PL's.
" " " " Spans 2N and 3N are 8"x3/4" PL's.
Intermediate stiffeners in Span 1N are 6"x3/8" PL's.
" " " " Spans 2N and 3N are 7"x7/16" PL's.
Web PL's in Span 1N are 54"x3/8" PL's.
Web PL's in Span 2N and Span 3N are 66"x7/16" PL's.
For typical girder elevation see Sheet #158

INTERMEDIATE STIFFENER SPACING

GIRDER SPLICE WELDING PROCEDURE

1. Place girders in Span #3N (including Girder 7 and diaphragm connection to Girders 6 and 8)
2. Place girders in Span #2N, and raise girders in Span 2N @ Pier 2N as follows:
   Raise the ends of Girders 1, 2, 5, 6, 7, and 8 - 2 7/16"
   Raise the ends of Girders 3 and 4 - 2 3/8"
3. Butt-Weld girder flanges and webs at Pier 3N using the following sequence:
   Make two passes at each flange then two on the web;
   repeat using one pass at each location until welds are completed.
4. Lower the girder ends of span 2N to final position.

DETAIL OF SUPPORT DIAPHRAGM FOR GIRDER #7

DETAIL L

(End crossframe conn. @ Pier 2N, Span 2N
Rotate 180° for conn. @ Pier 4N, Span 3N)

SECTION F-F

SECTION E-E

TABLE OF GIRDER LENGTHS			
GIRDER	Span 1N	Span 2N	Span 3N
1	102'-7 11/16"	100'-9 13/16"	101'-3 1/4"
2	99'-10 3/16"	100'-9 3/4"	do
3	97'-1 7/8"	do	do
4	94'-5 5/8"	do	do
5	92'-3 3/16"	do	do
6	90'-0 13/16"	do	do
7	87'-10 7/16"	100'-10 5/8"	
8	86'-0 5/8"	101'-1 1/16"	101'-4 13/16"

DETAIL U

DEFLECTION AND CAMBER

SPAN	1N																							
GIRDER	1			2			3			4			5			6			7			8		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	5/16"	7/16"	5/16"	1/4"	3/8"	1/4"	1/4"	5/16"	1/4"	3/16"	5/16"	3/16"	3/16"	1/4"	3/16"	3/16"	1/4"	3/16"	3/16"	1/4"	3/16"	1/8"	3/16"	1/8"
Deflection due to remaining Dead Load	1"	1 7/16"	1"	15/16"	1 5/16"	15/16"	13/16"	1 3/16"	13/16"	11/16"	7/8"	11/16"	1/2"	3/4"	1/2"	7/16"	5/8"	7/16"	3/8"	9/16"	3/8"	11/16"	15/16"	11/16"
Convexity	4 1/2"	6 1/8"	4 7/8"	2 3/8"	4 13/16"	4 1/8"	2"	4"	3 3/8"	1 13/16"	3 1/4"	2 3/4"	1 7/16"	2 3/4"	2 1/4"	1 3/16"	2 1/8"	1 11/16"	1"	1 1/2"	1 1/4"	11/16"	7/8"	5/8"
Sum of deflection and convexity	5 13/16"	8"	6 3/16"	3 9/16"	6 1/2"	5 5/16"	3 1/16"	5 1/2"	4 7/16"	2 11/16"	4 7/16"	3 5/8"	2 1/8"	3 3/4"	2 15/16"	1 13/16"	3"	2 5/16"	1 9/16"	2 5/16"	1 13/16"	1 1/2"	2"	1 7/16"
Required Camber		8"			5"			4 1/4"			3 3/4"			3"			2 1/2"			2"			2"	

SPAN	2N																							
GIRDER	1			2			3			4			5			6			7			8		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	3/16"	1/16"	1/8"	3/16"	1/16"	1/8"	3/16"	1/16"
Deflection due to remaining Dead Load	7/16"	1/2"	1/4"	7/16"	1/2"	1/4"	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	3/8"	1/2"	1/4"	7/16"	7/16"	3/16"	1/2"	1/2"	1/4"	9/16"	9/16"	5/16"
Convexity	1 1/16"	13/16"	11/16"	13/16"	1 3/16"	13/16"	7/8"	1 1/16"	13/16"	11/16"	1"	3/4"	1/2"	1 1/16"	13/16"	5/16"	1 1/16"	13/16"	3/4"	1 3/16"	7/8"	5/8"	1 5/16"	1 1/16"
Sum of deflection and convexity	1 5/8"	1 7/16"	1"	1 3/8"	1 13/16"	1 1/8"	1 3/8"	1 5/8"	1 1/16"	1 3/16"	1 9/16"	1"	1"	1 11/16"	1 1/8"	7/8"	1 11/16"	1 1/16"	1 3/8"	1 7/8"	1 3/16"	1 5/16"	2 1/16"	1 7/16"
Required Camber		1 1/2"			1 3/4"			1 3/4"			1 3/4"			1 3/4"			1 3/4"			2"			2"	

SPAN	3N																				
GIRDER	1			2			3			4			5			6			8		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"
Deflection due to remaining Dead Load	5/16"	5/8"	1/2"	1/4"	9/16"	7/16"	5/16"	5/8"	1/2"	5/16"	5/8"	1/2"	1/4"	1/2"	7/16"	1/8"	5/16"	1/4"	3/16"	3/8"	1/4"
Convexity	15/16"	1 5/16"	1"	15/16"	1 5/16"	15/16"	1"	1 5/16"	1"	15/16"	1 5/16"	1"	1"	1 5/16"	1"	1"	1 3/8"	1 1/16"	1 5/16"	1 3/4"	1 5/16"
Sum of deflection and convexity	1 5/16"	2 1/16"	1 5/8"	1 1/4"	2"	1 1/2"	1 3/8"	2 1/16"	1 5/8"	1 5/16"	2 1/16"	1 5/8"	1 5/16"	1 15/16"	1 9/16"	1 3/16"	1 13/16"	1 7/16"	1 9/16"	2 1/4"	1 11/16"
Required Camber		2"			2"			2"			2"			2"			2"			2"	

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 2&3
BRIDGE NO. HAM-50-1938 R.&L.

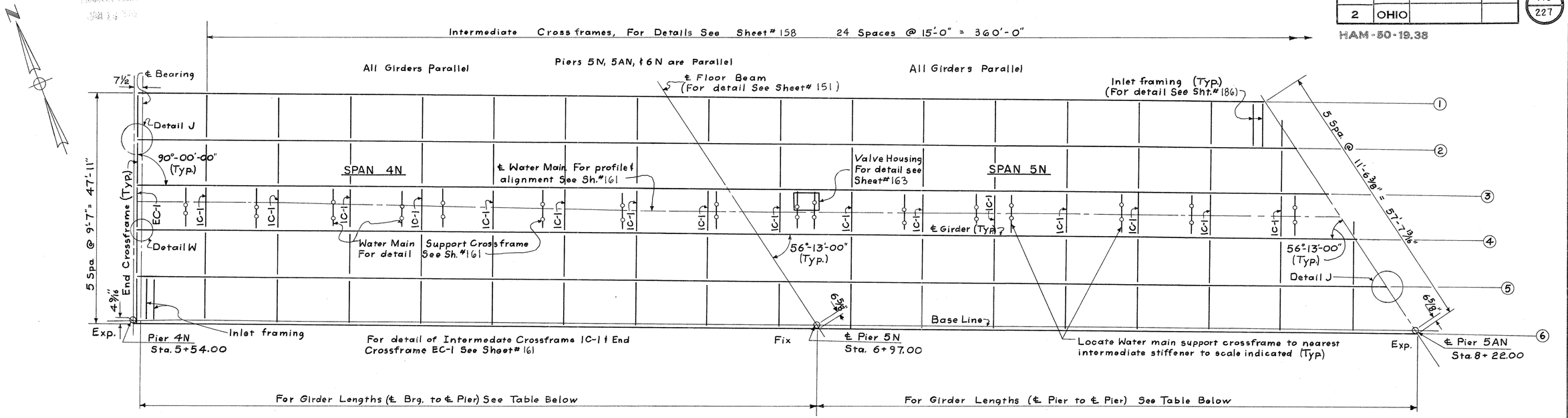
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K.	J.I.M. 7-61	LJW 3-62	J.H.O. 11/22/61	H.A.Z. 4-20-62	

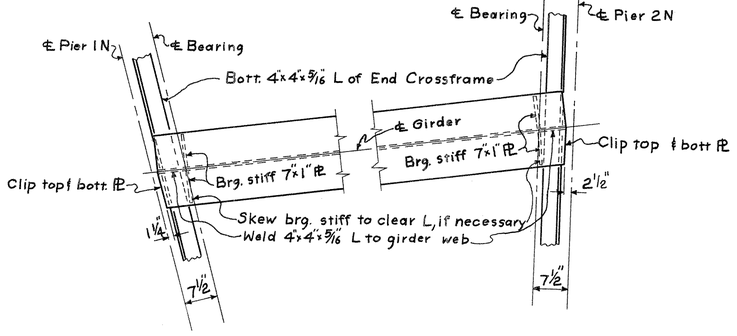
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

145
227

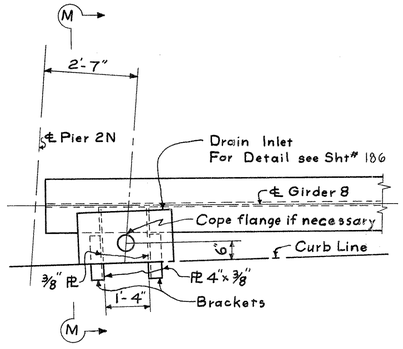
HAM-50-19.38



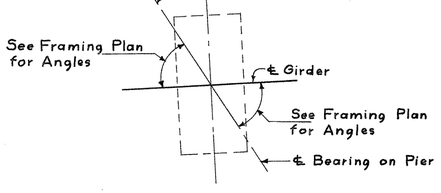
STEEL FRAMING PLAN



DETAIL AA DETAIL AB



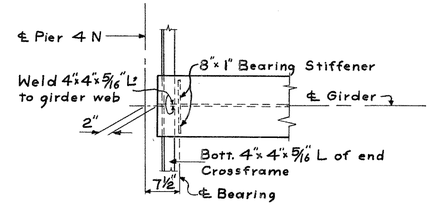
DETAIL AC



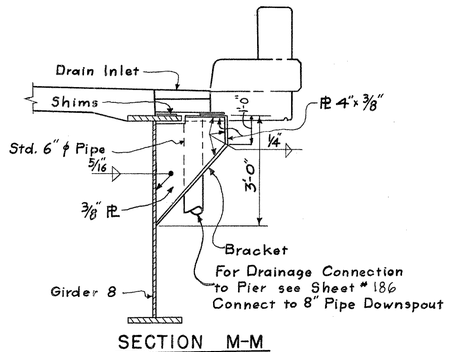
DETAIL J

Note:
Dimensions along ℄ Pier 5N are the same as along ℄ Pier 5AN

TABLE of GIRDER LENGTHS		
GIRDER	SPAN 4N	SPAN 5N
1	110'-7½"	125'-0"
2	117'-0 7/16"	do.
3	123'-5 3/8"	do.
4	129'-10 5/16"	do.
5	136'-3 1/4"	do.
6	142'-8 3/16"	do.



DETAIL W



SECTION M-M

DEFLECTION AND CAMBER

SPAN	4N																		5N																	
GIRDER	1			2			3			4			5			6			1			2			3			4			5			6		
LOCATION	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to Weight of Steel.	¼"	5/16"	¼"	5/16"	7/16"	5/16"	3/8"	½"	3/8"	7/16"	5/8"	7/16"	½"	11/16"	½"	5/8"	7/8"	5/8"	3/16"	¼"	1/8"	3/16"	¼"	1/8"	3/16"	¼"	1/8"	3/16"	¼"	1/8"	3/16"	¼"	1/8"	3/16"	¼"	1/8"
Deflection due to Remaining Dead Load	½"	11/16"	5/16"	½"	11/16"	3/8"	¾"	1"	9/16"	7/8"	1 1/8"	11/16"	7/16"	½"	¼"	1 ½"	1 15/16"	1 3/16"	¼"	7/16"	5/16"	1/8"	5/16"	3/16"	¼"	7/16"	¼"	3/16"	3/8"	¼"	3/16"	5/16"	3/16"	-1/16"	1/16"	1/16"
Convexity	1 5/8"	2 1/8"	1 9/16"	1 3/16"	2 3/8"	1 3/4"	2"	2 5/8"	1 15/16"	2 3/16"	2 7/8"	2 1/8"	2 3/8"	3 1/8"	2 3/8"	2 9/16"	3 7/16"	2 9/16"	2"	2 5/8"	2"	2"	2 5/8"	2"	2"	2 5/8"	2"	2"	2 5/8"	2"	2"	2 5/8"	2"	2"	2 5/8"	2"
Sum of Deflection and Convexity	2 3/8"	3 1/8"	2 1/8"	2 5/8"	3 1/2"	2 7/16"	3 1/8"	4 1/8"	2 7/8"	3 1/2"	4 5/8"	3 1/4"	3 5/16"	4 5/16"	3 1/8"	4 1/16"	6 1/4"	4 3/8"	2 7/16"	3 5/16"	2 7/16"	2 5/16"	3 3/16"	2 5/16"	2 7/16"	3 5/16"	2 3/8"	2 3/8"	3 1/4"	2 3/8"	2 3/8"	3 3/16"	2 5/16"	2 1/8"	2 15/16"	2 3/16"
Required Camber		3½"			3½			4½"			4½			4½"			6¼			3¼"			3¼"			3¼"			3¾"			3¼"			3¼"	

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS UNIT 4

BRIDGE NO. HAM-50-1938 R.&L.

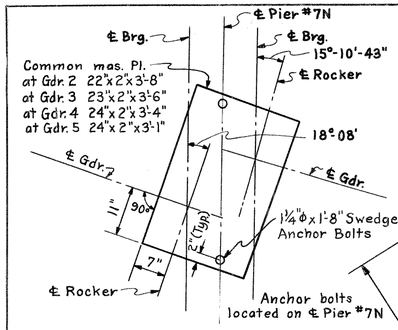
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K.	JIM	J.T.C. 3-12-62	JHO 3/11/62	M.A.S. 4-20-62	

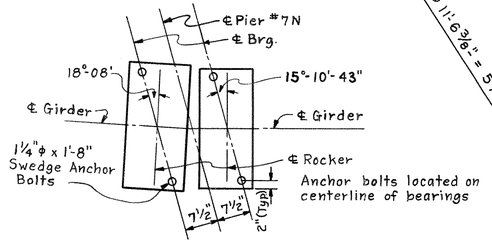
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

150 / 227

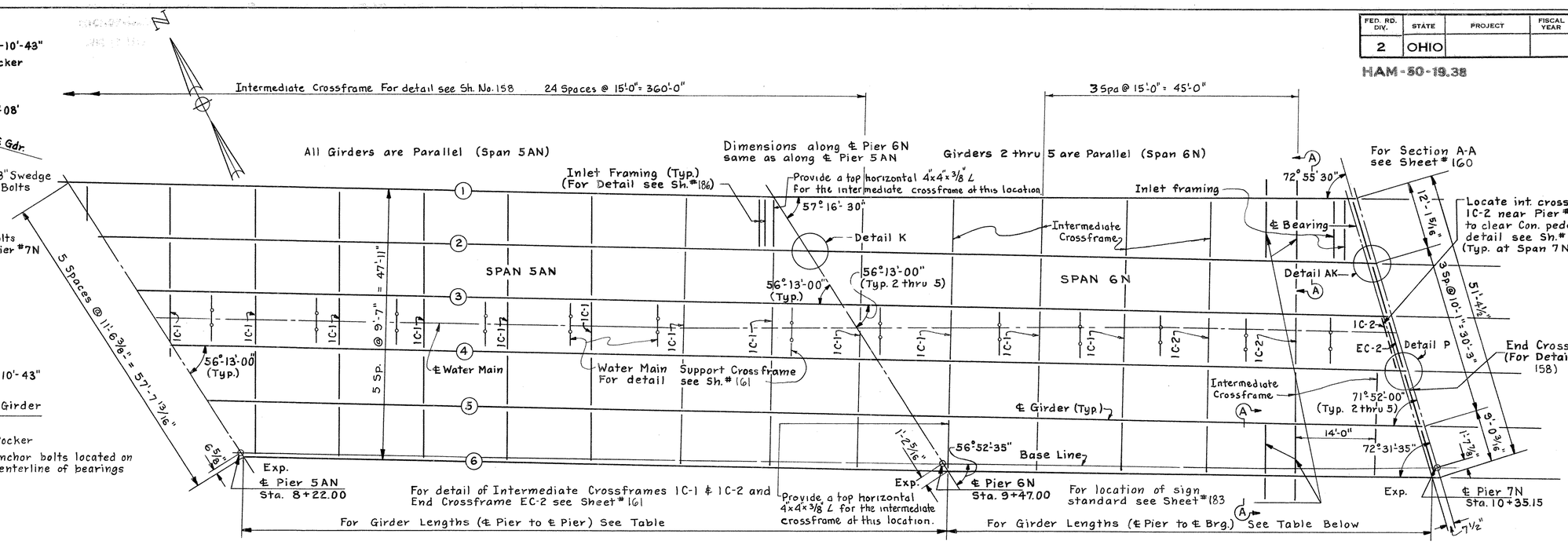
HAM-50-19.38



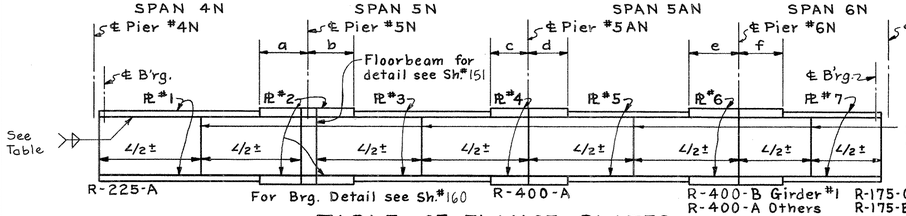
DETAIL AK
(at Gdrs. 2,3,4 & 5)

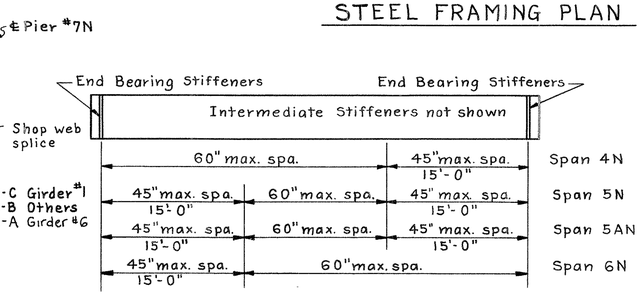


DETAIL AK
(at Gdrs. 1 & 6)

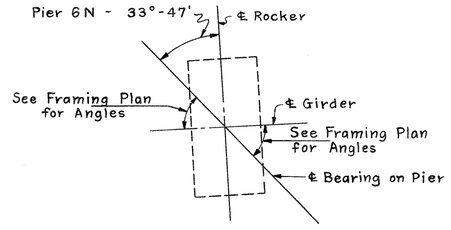


STEEL FRAMING PLAN



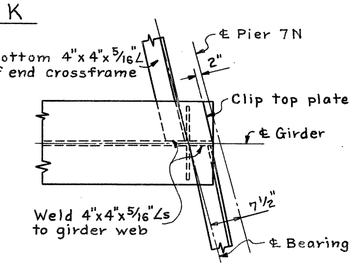


INTERMEDIATE STIFFENER SPACING



DETAIL K

TABLE OF GIRDER LENGTHS		
GIRDER	SPAN 5AN	SPAN 6
1	125'-4¼"	103'- 5"
2	do.	100'- 9"
3	do.	97'-5 3/4"
4	do.	94'-2½"
5	do.	90'-11 3/16"
6	do.	87'-4 1/16"



DETAIL P
End Crossframe connection @ Pier 7N, Span 6N
Rotate thru 180° for connection @ Pier 7N, Span 7N

TABLE OF FLANGE PLATES

Girder	Plate Thickness							Dimension					
	Pt. #1	Pt. #2	Pt. #3	Pt. #4	Pt. #5	Pt. #6	Pt. #7	a	b	c	d	e	f
1	1 5/8"	2"	1"	2"	1"	1 7/8"	1"	12'-6"	20'-0"	18'-6"	18'-6"	18'-6"	20'-6"
2	1 5/8"	2"	1"	2"	1"	1 7/8"	1"	12'-6"	20'-0"	18'-6"	18'-6"	16'-9"	20'-6"
3	2"	2 3/8"	1"	2 1/8"	1 1/8"	2"	1"	10'-0"	21'-3"	19'-0"	17'-6"	15'-3"	18'-3"
4	2¼"	2 3/8"	1"	2 1/8"	1 1/8"	2"	7/8"	8'-6"	22'-6"	19'-0"	17'-6"	14'-0"	22'-6"
5	2¼"	2¼"	1"	1 7/8"	1 1/8"	1¾"	¾"	10'-0"	24'-6"	18'-6"	16'-6"	12'-6"	24'-6"
6	2¼"	2¼"	1"	1 7/8"	1 1/8"	1¾"	¾"	10'-0"	24'-6"	18'-6"	16'-6"	12'-6"	24'-6"

Note: For bearing details see Sheet # 159
All top and bottom flange plates are 18" wide.
All cut-off points are at the same location for both top and bottom plates.
All web Pt's are 80"x ½"
All intermediate stiffeners are 7"x 7/16" Pt's.
Bearing stiffeners at Pier 4N are 8"x 1" Pt's.
Bearing stiffeners at Piers 5AN, 6N and 7N are 8"x ¾" Pt's.
For Typical Girder Elevation see Sheet # 158

WEB TO FLANGE WELD	
Plate Thickness	Fillet Weld Size
¾"	¼"
7/8", 1" & 1 1/8"	5/16"
1 5/8, 1¾, 1 7/8", 2" & 2 1/8"	⅜"
2¼" & 2 3/8"	½"

DEFLECTION AND CAMBER

SPAN	5AN																		6N																	
GIRDER	1			2			3			4			5			6			1			2			3			4			5			6		
LOCATION	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	0	1/16"	1/16"	0	1/16"	1/16"	0	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	0	1/16"	1/16"	0	1/16"	1/16"
Deflection due to remain'g. Dead Load	5/16"	½"	¼"	5/16"	½"	¼"	5/16"	9/16"	5/16"	5/16"	9/16"	5/16"	¼"	½"	5/16"	3/8"	5/8"	7/16"	¼"	9/16"	7/16"	3/16"	7/16"	3/8"	3/16"	3/8"	3/8"	1/8"	5/16"	5/16"	1/8"	¼"	3/16"	1/16"	1/8"	1/8"
Convexity	2"	2 1/16"	2"	2"	2 5/8"	2"	2"	2 5/8"	1 15/16"	1 15/16"	2 5/8"	1 15/16"	1 15/16"	2 5/8"	1 15/16"	2"	2 5/8"	2"	1 7/16"	1 5/16"	1½"	1¼"	1 11/16"	1¼"	1 3/16"	1 9/16"	1 1/8"	1 1/16"	1 7/16"	1"	1"	1¼"	15/16"	15/16"	5/16"	15/16"
Sum of Deflection and Convexity	2 5/16"	3¼"	2 5/16"	2 5/16"	3 3/16"	2 5/16"	2 5/16"	3¼"	2 5/16"	2 5/16"	3¼"	2 5/16"	2¼"	3¼"	2 5/16"	2 7/16"	3 3/8"	2½"	1¾"	2 5/8"	2 1/16"	1½"	2¼"	1¾"	1 7/16"	2 1/16"	1 9/16"	1¼"	1 13/16"	1 3/8"	1 1/8"	1 9/16"	1 3/16"	1"	1½"	1 1/8"
Required Camber		3¼"			3¼"			3¼"			3¼"			3¼"			3¼"			2 3/4"			2¼"			2"			1 3/4"			1½"			1½"	

GIRDER SPLICE WELDING PROCEDURE

1. Place girders in Spans #4N & #5N; connect all girders in Spans #4N & 5N to Floorbeam @ Pier #5N.
2. Raise the ends of girders in Span #5AN @ Pier #6N the amounts shown in Table "B" below.
3. Butt-weld girder flanges and webs @ Pier #5AN using the following sequence:
   Make two passes on each flange followed by two passes on the web: repeat using one pass at each location until the welds are complete.
4. Lower the girders of Span #5AN into final position.
5. Raise the ends of girders in Span # 6N at Pier # 7N the am'ts. shown in Table "B" below.
6. Butt-weld girder flanges and webs @ Pier #6N using the sequence outlined above.
7. Lower the girders of Span #6N into final position.

TABLE B						
Girder	1	2	3	4	5	6
@ Pier #6N	4¼"	4¼"	4 3/16"	4 3/16"	4 3/16"	4 3/16"
@ Pier # 7N	1 15/16"	1 13/16"	1 5/8"	1 9/16"	1½"	1 5/16"

HAZELET & ERDAL
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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 4
BRIDGE NO. HAM-50-1938 R.& L.

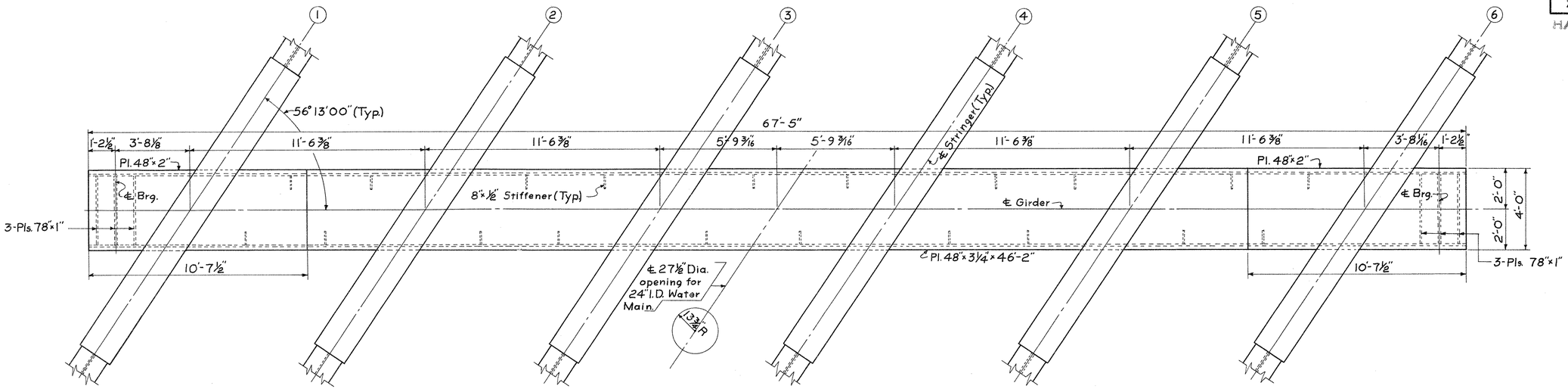
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
M.K.K.	J.I.M.	R.J.S. 3/14/62	J.H.O. 11/22/61	4-1-62 4-2-62	

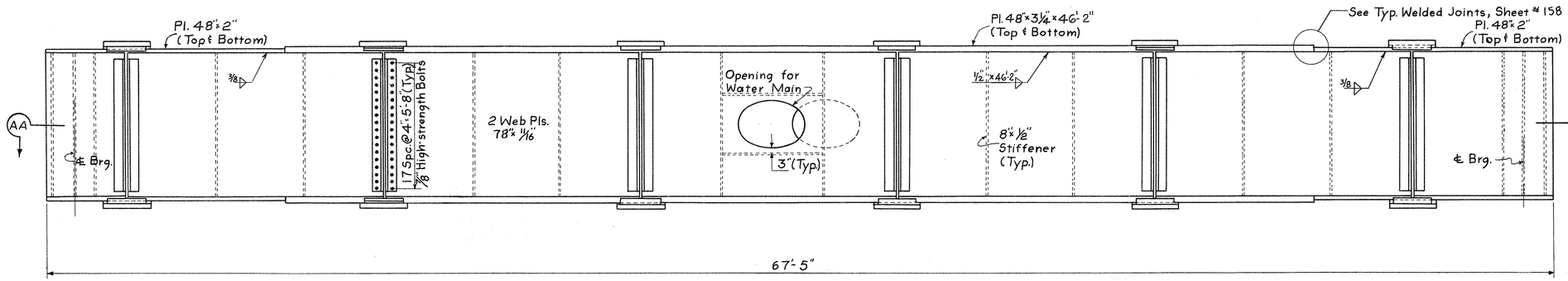
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

151
227

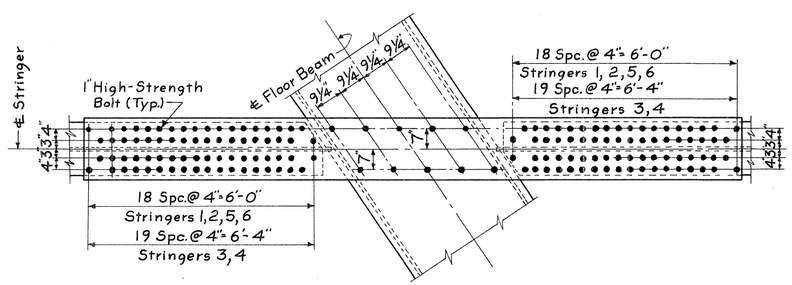
HAM-50-19.38



PLAN



ELEVATION



PLAN OF TIE PLATE

(Showing Bolt Spacing - Typ. Top & Bot. Pls.)

Intermediate Stiffeners (8"x½") Welding Sequence

(1) Use a stiffener that does not fit too tightly (Say D- 1/16")

(2) Push tight against tension flange (No welding)

(3) Weld to web. Use ¼

(4) Weld to compression flonge only. Use 5/16

Work this sheet with Sh.# 152

HAZELET & ERDAL
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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 4
BRIDGE NO. HAM-50-1938 R.&L.

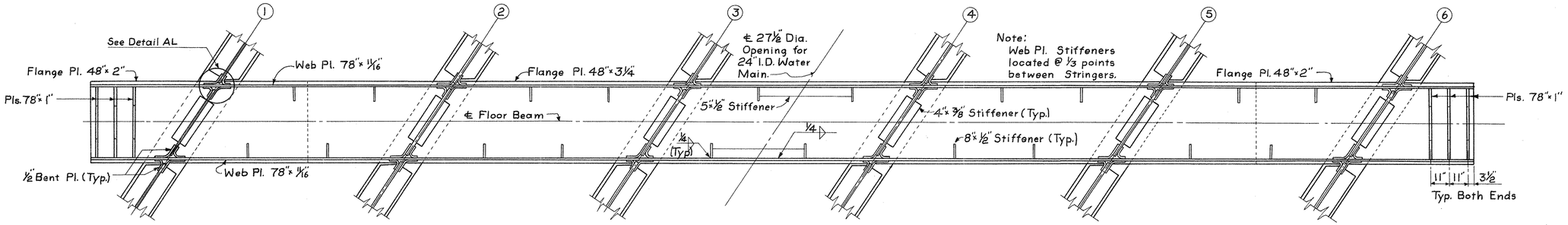
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	B.O.G. 9-21-61	J.T.C. 4/3/62	J.H.O. 4/5/62	H.A.Z. 4-20-62	

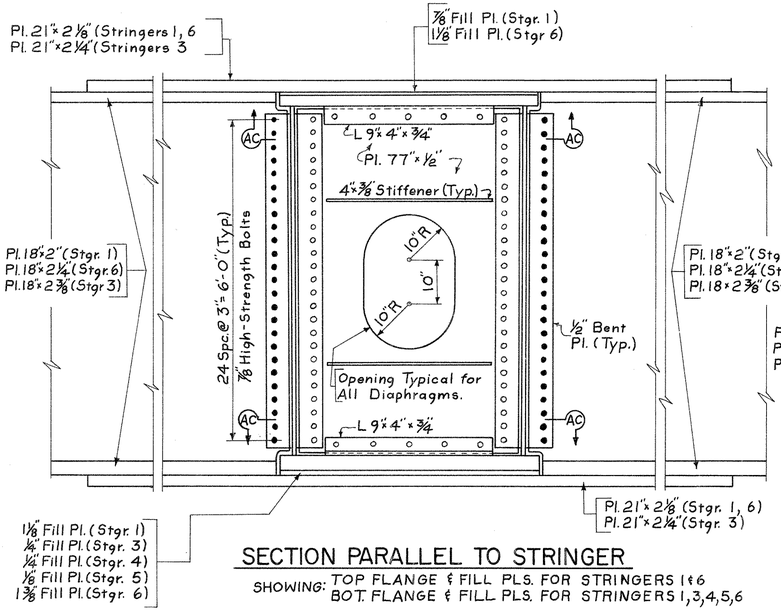
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

152
227

HAM-50-19.38

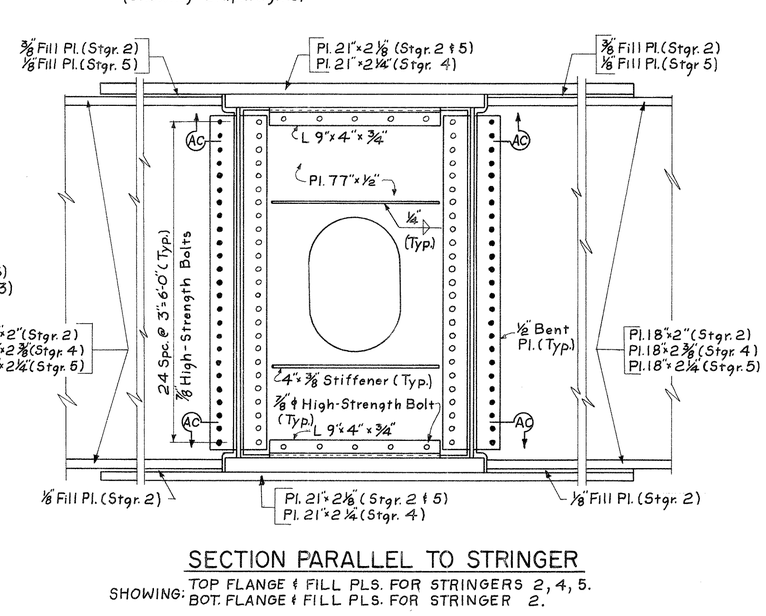


SECTION AA-AA
(Showing Diaphragms)



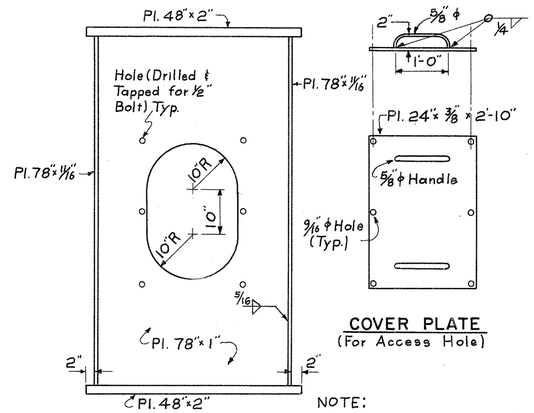
SECTION PARALLEL TO STRINGER

SHOWING: TOP FLANGE & FILL PLS. FOR STRINGERS 1 & 6
BOT. FLANGE & FILL PLS. FOR STRINGERS 1, 3, 4, 5, 6



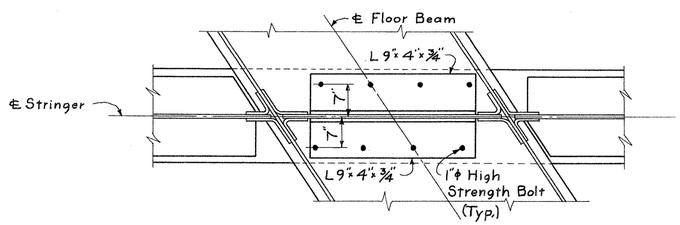
SECTION PARALLEL TO STRINGER

SHOWING: TOP FLANGE & FILL PLS. FOR STRINGERS 2, 4, 5.
BOT. FLANGE & FILL PLS. FOR STRINGER 2.

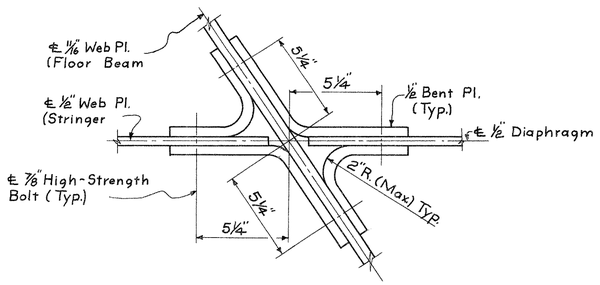


END VIEW
(For Each End of Floor Beam)

NOTE:
Stiffeners to be grooved and fully butt-welded to the bottom flange plate and fitted in close contact without welding at the top flange pl.



SECTION AC-AC



DETAIL AL

Work this sheet with sheet No. 151

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 4
BRIDGE NO. HAM-50-1938 R.&L.

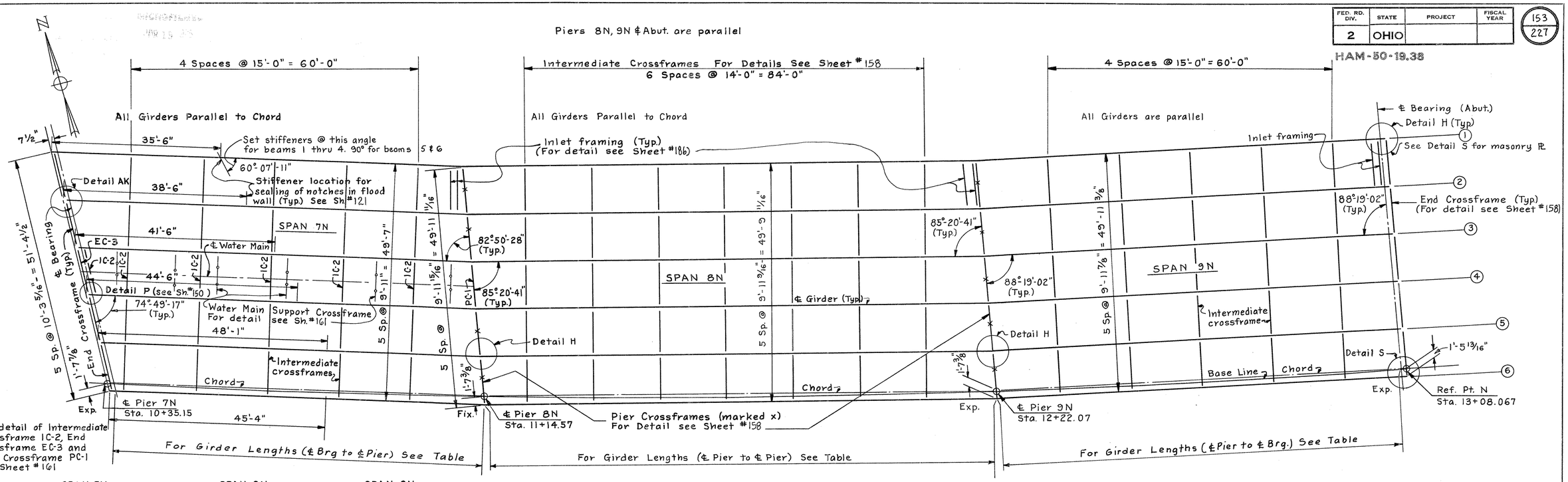
H. & E. BRIDGE NO. 1

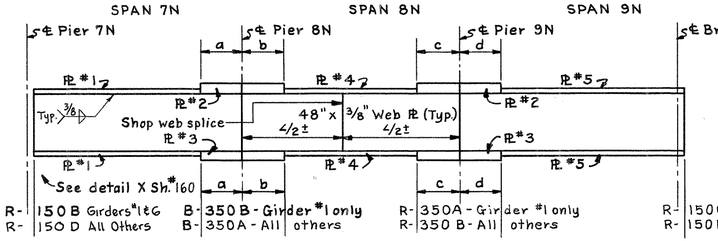
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	B.O.G. 9-2261	J.T.C 4/9/62	JHO 4/12/62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

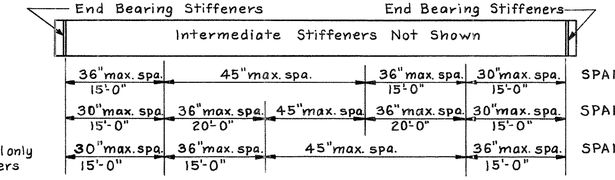
153 / 227

HAM-50-19.38

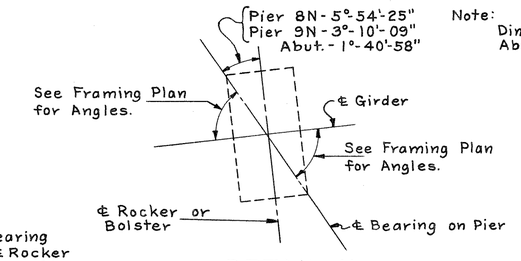




STEEL FRAMING PLAN



INTERMEDIATE STIFFENER SPACING



Note: Dimensions along ℄ Pier 9N and Abut. are same as along ℄ Pier 8N.

TABLE OF GIRDER LENGTHS

GIRDER	SPAN 7N	SPAN 8N	SPAN 9N
1	85'-9⅛"	107'-5 13/16"	85'-11 13/16"
2	84'-3¾"	do.	do.
3	82'-10 7/16"	do.	do.
4	81'-5⅛"	do.	do.
5	79'-11¾"	do.	do.
6	78'-6 7/16"	do.	do.

TABLE OF FLANGE PLATES

Girder	Plate thickness					Dimension			
	PL #1	PL #2	PL #3	PL #4	PL #5	a	b	c	d
1	1 5/8"	3 7/8"	2 7/8"	1 7/8"	1¾"	18'-3"	13'-3"	14'-0"	17'-6"
2	1 5/8"	↑	↑	↑	↑	18'-3"	13'-3"	↑	↑
3	1¾"	↓	↓	↓	↓	16'-3"	13'-6"	↓	↓
4	1¾"					16'-3"	13'-6"		
5	1 5/8"					18'-3"	13'-3"		
6	1 5/8"	3 7/8"	2 7/8"	1 7/8"	1¾"	18'-3"	13'-3"	14'-0"	17'-6"

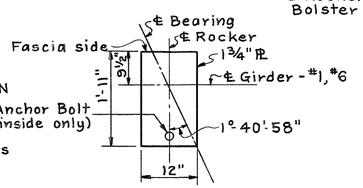
Note:
All flange PL's are 16" wide. For typical girder elevation see Sh. # 158
Bearing stiffeners @ Piers 8N and 9N are 7½"x¾" PL's; Bearing stiffeners @ Pier 7N and Abut. are 7½"x 5/8" PL's.
All Intermediate stiffeners are 6"x 3/8" PL's. For bearing details see Sh. # 159

GIRDER SPLICE WELDING PROCEDURE

1. Place girders in Span #8N.
2. Place girders in Spans #7N and #9N; and raise the ends of girders in Span #7N at Pier #7N, and the ends of girders in Span #9N at the Abutment, the amounts shown in Table "D" below.
3. Butt-weld girder flanges and webs @ Pier #8N and Pier #9N using the following sequence: Make two passes on each flange followed by two passes on the web; Repeat using one pass @ each location until welds are complete.
4. Weld all pier crossframes into place.
5. Lower the girder ends to final position.

TABLE D

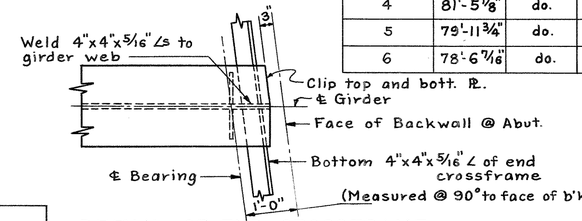
Girder	1	2	3	4	5	6
@ Pier #7N	2 15/16"	3"	2 7/8"	2 13/16"	2¾"	2½"
@ Abutment	2 15/16"	3⅛"	3⅛"	3⅛"	3⅛"	2 5/16"



DETAIL S

(Girders #1 & #6 only)
Rotate 180° for Girder #6

DETAIL H



DETAIL OF END CROSSFRAME CONNECTION AT ABUTMENT

DEFLECTION AND CAMBER

SPAN	7N																		8N																		9N																	
GIRDER	1			2			3			4			5			6			1			2			3			4			5			6			1			2			3			4			5			6		
LOCATION	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to weight of steel	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	0	1/16"	1/8"	1/16"	1/8"	3/16"	1/8"	1/16"	3/16"	1/16"	1/8"	3/16"	1/8"	1/8"	3/16"	1/8"	1/8"	3/16"	1/8"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"
Deflection due to Remaining Dead Load	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	7/16"	7/16"	3/16"	3/8"	7/16"	3/16"	¼"	5/16"	1/16"	3/16"	¼"	1/16"	¼"	7/16"	¼"	5/16"	9/16"	5/16"	5/16"	½"	5/16"	¼"	½"	¼"	5/16"	9/16"	5/16"	3/8"	9/16"	5/16"	3/16"	7/16"	7/16"	3/16"	7/16"	3/8"	3/16"	7/16"	7/16"	3/16"	7/16"	3/8"	3/16"	7/16"	3/8"	3/16"	7/16"	3/8"
Convexity	3/8"	¼"	1/8"	3/16"	1/16"	-1/16"	1/8"	0"	-1/16"	1/16"	-1/16"	-1/16"	0"	-1/16"	-1/16"	1/8"	1/16"	0"	-¾"	-¾"	-3/8"	-1"	-1 1/8"	-1/16"	-13/16"	-15/16"	-9/16"	-5/8"	-¾"	-½"	-7/16"	-9/16"	-3/8"	0"	0"	0"	-1/8"	-¼"	-3/8"	-5/16"	-9/16"	-9/16"	-5/16"	-½"	-7/16"	-¼"	-7/16"	-3/8"	-¼"	-5/16"	-5/16"	0"	0"	0"
Sum of Convexity and Deflection	13/16"	13/16"	3/8"	5/8"	9/16"	3/16"	5/8"	9/16"	3/16"	½"	7/16"	3/16"	5/16"	5/16"	1/16"	3/8"	3/8"	1/16"	-7/16"	-3/16"	-1/16"	-9/16"	-3/8"	-¼"	-7/16"	-¼"	-3/16"	-¼"	-1/16"	-1/8"	0	3/16"	1/16"	½"	¾"	7/16"	1/8"	¼"	1/16"	-1/16"	0	-1/16"	-1/16"	1/16"	1/16"	0	1/8"	1/8"	0	3/16"	1/8"	3/16"	½"	7/16"
Required Camber		0			0			0			0			0			0			0			0			0			0			0			0			0			0			0			0			0		

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 5
BRIDGE NO. HAM-50-1938 R.& L.

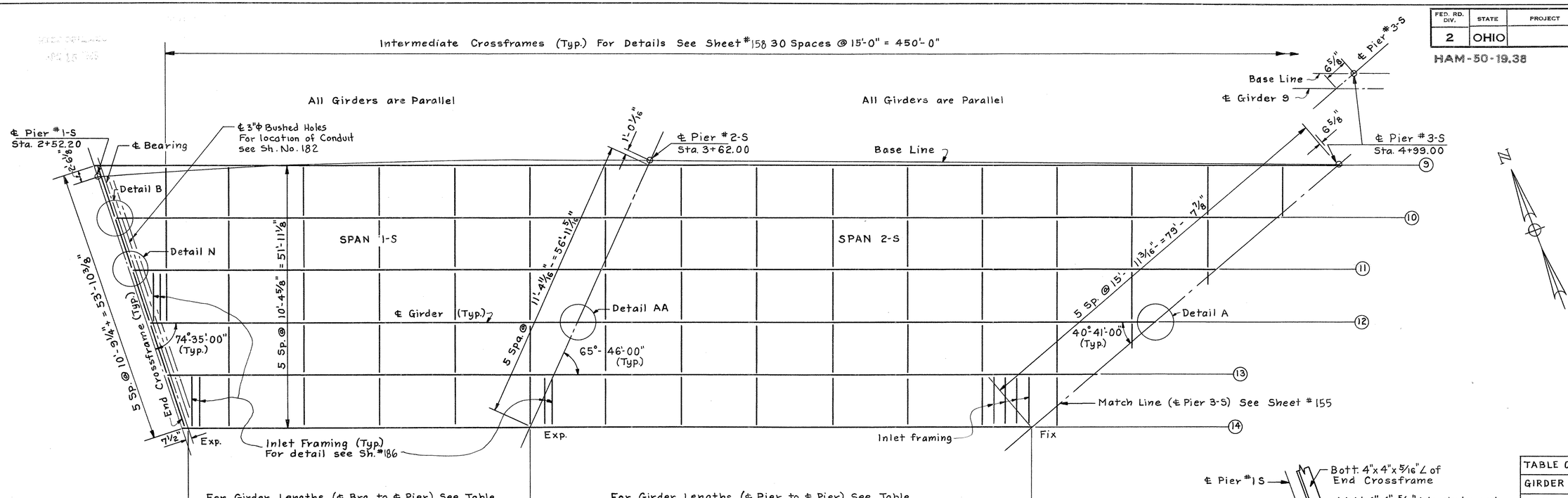
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MPS	J.I.M. 7/61	R.J.S. 3/20/62	J.H.O. 11/17/61	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

154
227

HAM-50-19.38



STEEL FRAMING PLAN

GIRDER SPLICE WELDING PROCEDURE (SPANS 1 THRU 4)

1. Raise the ends of girders in Span #2S @ Pier #2S and the ends of girders in Span #4S @ Pier #5S the amounts shown in Table "A" below.
2. Butt-weld girder flanges and webs @ Pier #3S and Pier #4S using the following sequence:

   Make two passes on each flange then two on the web; repeat using one pass at each location until welds are completed.

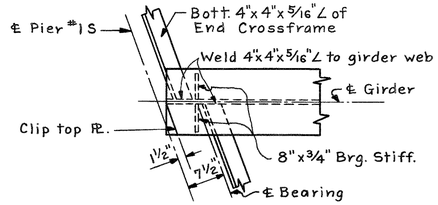
3. Lower the girder ends of Span #2S and Span #4S to final position.
4. Raise the ends of girders in Span #1S @ Pier #1S the amounts shown in Table "A" below.
5. Butt-weld girder flanges and webs @ Pier #2S using the sequence outlined above.
6. Lower the girder ends of Span #2S to final position.

TABLE A

Girder	9	10	11	12	13	14
@ Pier #1S	3 1/16"	2 5/16"	1 3/4"	1 5/16"	15/16"	5/8"
@ Pier #2S	7 9/16"	6 3/16"	5 3/4"	5 3/16"	4 7/16"	3 7/8"
@ Pier #5S	3 1/8"	3 15/16"	4 3/4"	5 13/16"	7 3/16"	8 13/16"

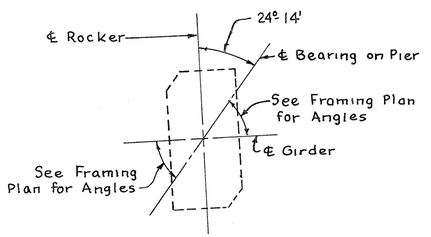
DEFLECTION AND CAMBER

SPAN	SPAN 1-S																		SPAN 2-S															
GIRDER	9			10			11			12			13			14			9			10			11			12			13			14		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/8"	3/16"	1/16"	1/8"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	0	0	1/16"	0	1/8"	3/16"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	0	1/16"	1/16"	0	0	1/16"	0
Deflection due to remaining Dead Load	3/4"	7/8"	7/16"	3/8"	1/2"	1/4"	3/8"	3/8"	3/16"	5/16"	3/8"	1/8"	3/16"	1/4"	1/8"	3/16"	3/16"	1/8"	1/2"	7/8"	1/2"	1/4"	7/16"	3/16"	1/4"	3/8"	1/8"	3/16"	5/16"	1/8"	1/8"	1/4"	1/8"	1/8"	1/8"	1/16"
Convexity	1 5/16"	1 11/16"	1 3/16"	5/8"	1 1/8"	1"	3/8"	7/8"	7/8"	1/4"	5/8"	3/4"	1/8"	1/2"	7/8"	1/4"	5/8"	1"	2 3/8"	3 3/16"	2 3/8"	2 1/8"	2 7/8"	2 1/8"	1 7/8"	2 3/16"	1 7/8"	1 11/16"	2 1/4"	1 11/16"	1 1/2"	1 15/16"	1 1/2"	1 1/4"	1 11/16"	1 1/4"
Sum of deflection and convexity	2 3/16"	2 3/4"	1 11/16"	1 1/8"	1 3/4"	1 5/16"	13/16"	1 3/8"	1 1/8"	5/8"	1 1/16"	15/16"	3/8"	13/16"	1"	7/16"	7/8"	1 1/8"	3"	4 1/4"	2 15/16"	2 7/16"	3 7/16"	2 3/8"	2 3/16"	3"	2 1/16"	1 15/16"	2 5/8"	1 13/16"	1 1/16"	2 1/4"	1 5/8"	1 3/8"	1 7/8"	1 5/16"
Required Camber		2 3/4"			1 3/4"			1 1/4"			1"			1"			1"			4 1/4"			3 1/2"			3"			2 1/2"			2 1/4"			2"	

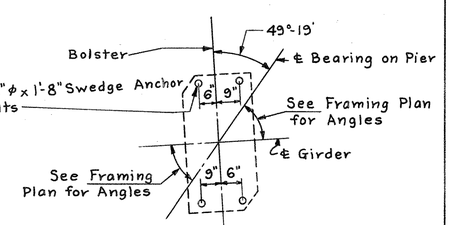


DETAIL N

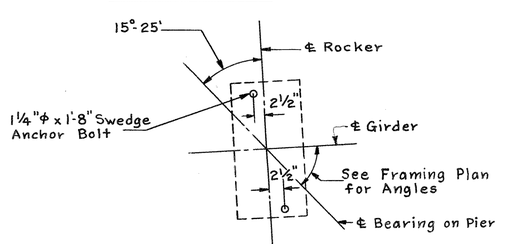
TABLE OF GIRDER LENGTHS		
GIRDER	SPAN 1-S	SPAN 2-S
9	109'-3 5/8"	136'-11 15/16"
10	101'-9 3/16"	129'-7 1/16"
11	94'-2 11/16"	122'-2 3/16"
12	86'-8 1/4"	114'-9 5/16"
13	79'-1 13/16"	107'-4 7/16"
14	71'-7 5/16"	99'-11 3/16"



DETAIL AA



DETAIL A



DETAIL B

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 6
BRIDGE NO. HAM-50-1938 R.&L.

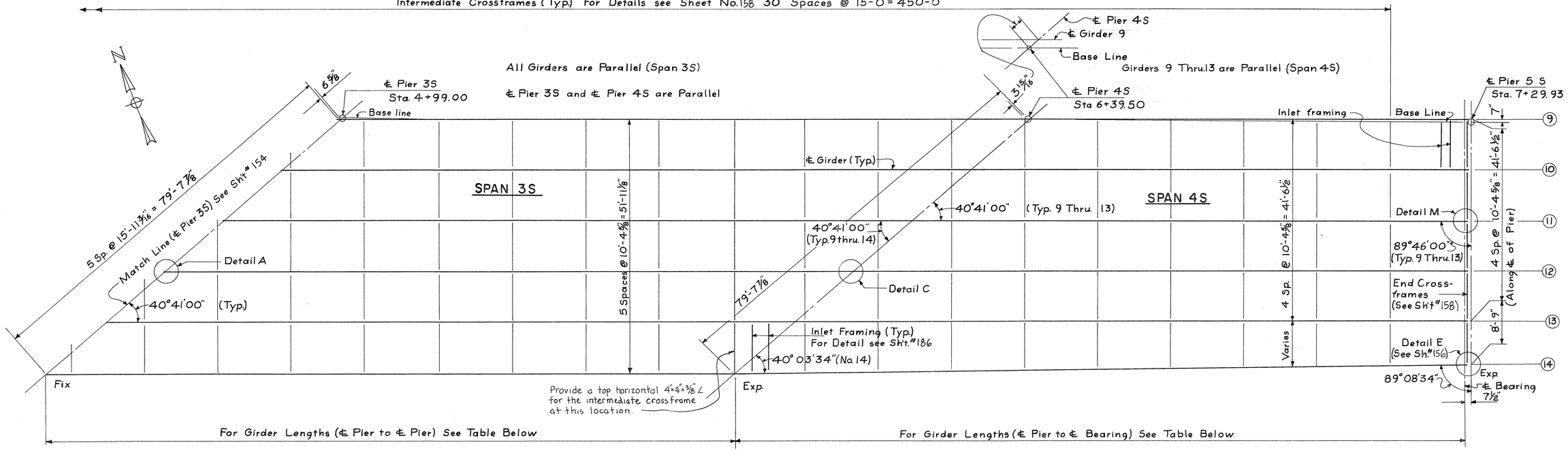
H.&E. BRIDGE NO. 1

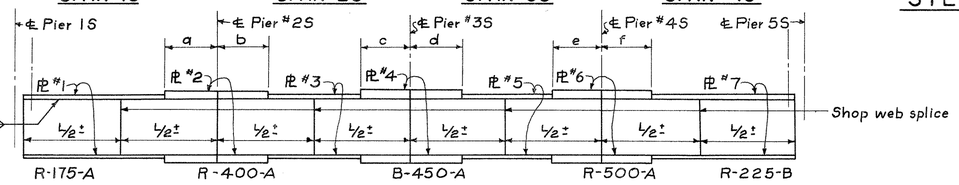
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	J.I.M.	R.J.S. 3/23/62	J.H.O. 11/17/61	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

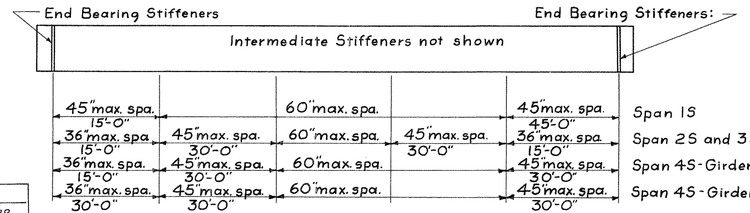
155
227

HAM-50-19.38





STEEL FRAMING PLAN



INTERMEDIATE STIFFENER SPACING

Note:
Dimensions along Pier 4S are same as along Pier 3S.
For bearing detail see sh. No. 159
For typical girder elevation see sh. No. 158
All intermediate stiffeners are 7"x 7/16".
All web Pl's. are 66"x 7/16".
Bearing stiffeners are as follows:
@ Piers 1S & 2S - 8"x ¾" Pl's.
@ Piers 3S, 4S & 5S - 8"x 1" Pl's.

TABLE OF GIRDER LENGTHS		
GIRDER	SPAN 3S	SPAN 4S
9	141'-1 15/16"	89'-6 1/16"
10	do.	101'-7 3/16"
11	do.	113'-7 5/8"
12	do.	125'-8 1/8"
13	do.	137'-8 9/16"
14	do.	149'-9 1/4"

TABLE OF FLANGE PLATES

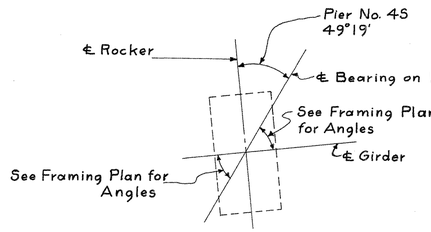
Girder	Plate Thickness							Dimension					
	Pl #1	Pl #2	Pl #3	Pl #4	Pl #5	Pl #6	Pl #7	a	b	c	d	e	f
9	1½"	2½"	1½"	3¼"	2⅛"	3⅛"	1½"	23'-0"	17'-6"	24'-0"	17'-0"	14'-6"	29'-0"
10	1½"	2½"	1½"	3¼"	2⅛"	3⅛"	1½"	23'-0"	17'-6"	24'-0"	17'-0"	14'-6"	29'-0"
11	1⅜"	2½"	1½"	3¼"	2⅛"	3¾"	2"	20'-6"	15'-0"	32'-0"	15'-6"	18'-0"	24'-6"
12	1⅛"	2¼"	1¼"	3"	2"	4"	2½"	20'-0"	14'-6"	28'-6"	14'-6"	23'-0"	20'-6"
13	⅞"	1¾"	1⅛"	2⅝"	1⅞"	4"	2¾"	20'-0"	12'-0"	29'-6"	13'-6"	25'-6"	17'-6"
14	⅞"	1¾"	1⅛"	2⅝"	1⅞"	4"	2¾"	20'-0"	12'-0"	29'-6"	13'-6"	25'-6"	17'-6"

WEB TO FLANGE WELD	
Pl. No.	Fillet Weld Size
1 & 3	5/16"
2, 5 & 7	3/8"
4 & 6	½"

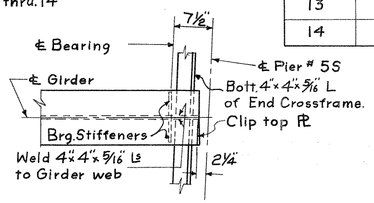
Note:
All flange plates are 18" wide.
Cut-off points of all top and bottom plates are at the same locations.

DEFLECTION AND CAMBER

SPAN	3S																4S																							
GIRDER	9			10			11			12			13			14			9			10			11			12			13			14							
LOCATION	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾	¼	½	¾
Deflection due to Weight of Steel	3/16"	5/16"	3/16"	3/16"	5/16"	3/16"	3/16"	1/4"	3/16"	3/16"	1/4"	1/8"	1/8"	3/16"	1/16"	1/8"	3/16"	1/16"	-1/16"	3/16"	0	0	1/16"	1/16"	1/16"	3/16"	1/8"	3/16"	5/16"	1/4"	1/4"	1/2"	3/8"	3/8"	1/16	9/16"						
Deflection due to remaining Dead Load	5/8"	1 1/8"	3/4"	1/2"	7/8"	1/2"	1/2"	7/8"	1/2"	1/2"	3/4"	3/8"	1/2"	1 1/16"	5/16"	9/16"	1 1/16"	3/16"	-7/16"	7/8"	1/8"	1/8"	5/16"	5/16"	1/4"	1/2"	1/2"	1/2"	1"	1 3/16"	9/16"	1 1/16"	7/8"	1 1/8"	2"	1 5/8"						
Convexity	2 3/16"	3 3/8"	2 9/16"	2 9/16"	3 3/8"	2 9/16"	2 9/16"	3 3/8"	2 9/16"	2 9/16"	3 3/8"	2 9/16"	2 9/16"	3 3/8"	2 9/16"	2 1/2"	3 3/8"	2 1/2"	1"	1 3/8"	1"	1 5/16"	1 3/4"	1 5/16"	1 5/8"	2 3/16"	1 5/8"	2"	2 1/16"	2	2 7/16"	3 1/4"	2 7/16"	2 7/8"	4"	3"						
Sum of Deflection and Convexity	3 3/8"	4 13/16"	3 1/2"	3 1/4"	4 9/16"	3 1/4"	3 1/4"	4 1/2"	3 1/4"	3 1/4"	4 3/8"	3 1/16"	3 3/16"	4 1/4"	2 1/16"	3 3/16"	4 1/4"	2 3/4"	1/2"	2 7/16"	1 1/8"	1 7/16"	2 1/8"	1 1/16"	1 15/16"	2 7/8"	2 1/4"	2 1/16"	4"	3 1/16"	3 1/4"	4 13/16"	3 1/16"	4 3/8"	6 1/16"	5 3/16"						
Required Camber		4 3/4"			4 3/4"			4 3/4"			4 3/4"			4 3/4"			4 3/4"			2 1/2"			2"			3"			4"			4 3/4"			6 3/4"					



DETAIL - C



DETAIL M

(End Crossframe connection at Pier 5S, Span 4S. Rotate 180° for connection at Pier 5S, Span 5S).

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
UNIT 6
BRIDGE NO. HAM-50-1938 R.&L.

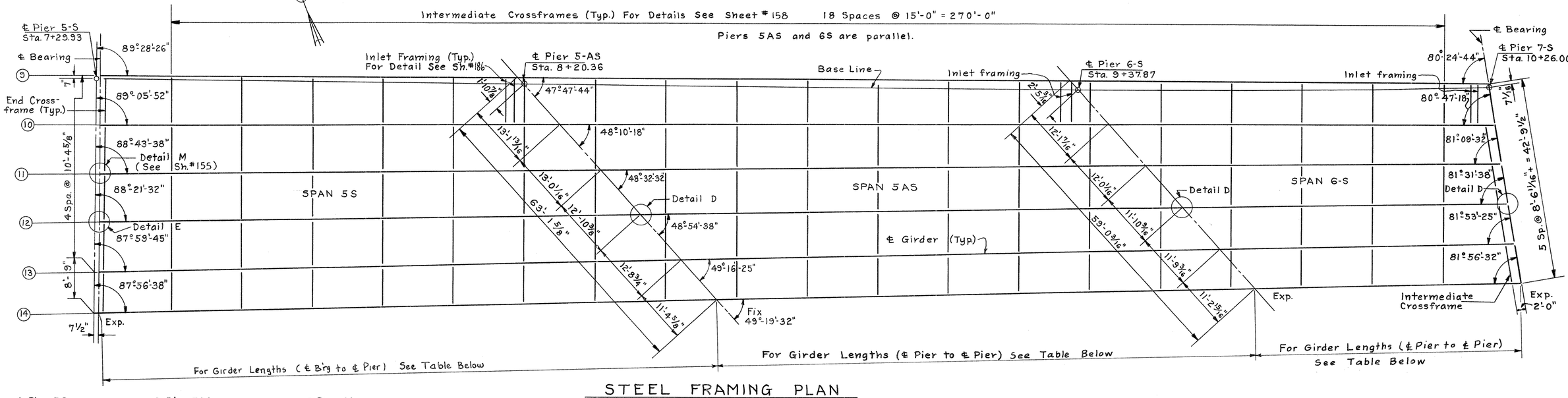
H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	JIM	JTC	JHO 3/30/62	M.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

156
227

HAM-50-19.38



STEEL FRAMING PLAN

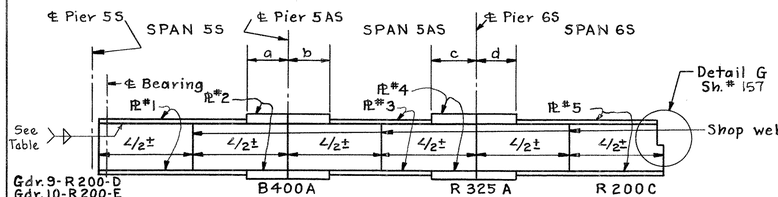
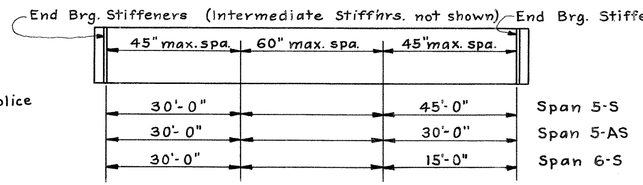


TABLE OF FLANGE PLATES

Girder	Plate Thickness					Dimension			
	℄#1	℄#2	℄#3	℄#4	℄#5	a	b	c	d
9	1 3/8"	2 1/8"	1 1/8"	1 5/8"	3/4"	16'-0"	18'-9"	12'-6"	26'-0"
10	1 3/8"	2 1/8"	1 1/8"	1 5/8"	3/4"	16'-0"	18'-9"	12'-6"	26'-0"
11	1 5/8"	2 3/8"	1 1/8"	1 5/8"	3/4"	14'-6"	20'-9"	10'-9"	24'-0"
12	2"	2 5/8"	1 1/8"	1 3/8"	3/4"	12'-0"	23'-0"	9'-0"	23'-0"
13	2 1/4"	2 5/8"	1"	1 3/8"	3/4"	10'-0"	30'-3"	9'-0"	23'-0"
14	2 1/4"	2 5/8"	1"	1 3/8"	3/4"	10'-0"	30'-3"	9'-0"	23'-0"

WEB TO FLANGE WELD	
Pl. Thickness	Fillet Weld Size
3/4"	1/4"
1", 1 1/8" & 1 3/8"	5/16"
1 5/8", 2", 2 1/8", 2 1/4", 2 3/8" & 2 5/8"	3/8"

Note:
All web plates are 66" x 7/16".
All bottom and top plates are 18" wide.
All cut-off points are the same for both bottom and top plates.
For bearing details see Sh. # 159
All bearing stiffeners are 8" x 3/4" ℄'s.
All intermediate stiffeners are 7 x 7/16" ℄'s.
For typical girder elevation see Sh. # 158

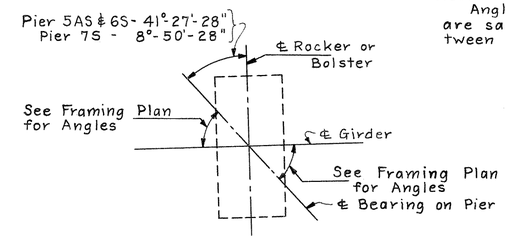


INTERMEDIATE STIFFENER SPACING

GIRDER SPLICE WELDING PROCEDURE

1. Raise the ends of girders in Span #5S @ Pier #5S and Span #6S @ Pier #7S the amts. shown in Table "C".
2. Butt-weld girder flanges and webs @ Pier #5AS and Pier #6S using the following sequence:
   Make two passes on each flange followed by two passes on the web;
   repeat using one pass on each location until weld is complete.
3. Lower girder ends in Span #5S and #6S to final position.

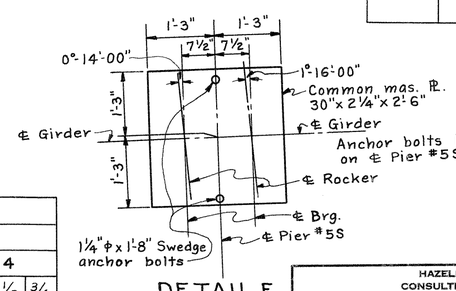
TABLE C						
Girder	9	10	11	12	13	14
@ Pier #5S	2 5/16"	2 13/16"	3 1/4"	3 13/16"	4 1/2"	5 1/4"
@ Pier #7S	2 9/16"	2 3/16"	1 7/8"	1 9/16"	1 3/8"	1 3/16"



DETAIL D

Note:
Angles Between Girders and ℄ Pier 6-S are same as Corresponding Angles Between Girders and ℄ Pier 5AS.

TABLE OF GIRDER LENGTHS			
GIRDER	SPAN 5S	SPAN 5AS	SPAN 6S
9	88'-6 3/16"	117'-1 7/8"	89'-7 13/16"
10	97'-5 3/8"	116'-5 5/8"	82'-11 5/16"
11	106'-3 7/16"	115'-9 9/16"	76'-3 11/16"
12	115'-0 7/16"	115'-1 13/16"	69'-9 1/8"
13	123'-8 7/16"	114'-6 3/16"	63'-3 1/2"
14	131'-5 1/4"	114'-5 1/8"	57'-1 15/16"



DETAIL E

DEFLECTION AND CAMBER

SPAN	5-S																		5-AS																		6-S																	
GIRDER	9			10			11			12			13			14			9			10			11			12			13			14			9			10			11			12			13			14		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel.	1/16"	1/16"	0"	1/8"	1/8"	1/16"	1/8"	3/16"	1/16"	3/16"	1/4"	1/8"	1/4"	5/16"	3/16"	5/16"	7/16"	1/4"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	0"	1/8"	1/16"	0"	1/16"	1/16"	1/16"	1/16"	1/16"	0"	1/16"	1/16"	0"	1/16"	1/16"	0	0	0	0	0	0
Deflection due to remain'g. Dead Load	1/4"	5/16"	1/8"	5/16"	7/16"	3/16"	1/2"	9/16"	5/16"	5/8"	3/4"	7/16"	3/4"	15/16"	1/2"	13/16"	1 1/16"	5/8"	5/16"	1/2"	1/4"	5/16"	9/16"	3/8"	1/4"	1/2"	5/16"	1/8"	3/8"	5/16"	1/8"	3/8"	5/16"	1/16"	3/8"	1/4"	1/8"	7/16"	3/8"	1/8"	3/16"	3/16"	1/16"	3/16"	1/8"	0	1/8"	1/8"	0	1/16"	1/16"
Convexity	1"	1 5/16"	1"	1 1/4"	1 5/8"	1 1/4"	1 1/2"	2"	1 1/2"	1 3/4"	2 5/16"	1 3/4"	2 1/16"	2 3/4"	2 1/16"	2 5/16"	3 1/16"	2 5/16"	1 3/4"	2 5/16"	1 3/4"	1 3/4"	2 5/16"	1 11/16"	1 11/16"	2 1/4"	1 11/16"	1 11/16"	2 1/4"	1 11/16"	1 11/16"	2 1/4"	1 11/16"	1 11/16"	2 1/4"	1 5/8"	1"	1 3/8"	1"	3/4"	1"	3/4"	5/8"	13/16"	5/8"	1/2"	11/16"	1/2"	7/16"	9/16"	7/16"	1/4"	7/16"	3/8"
Sum of Deflection and Convexity	1 5/16"	1 11/16"	1 1/8"	1 11/16"	2 3/16"	1 1/2"	2 1/8"	2 3/4"	1 7/8"	2 3/16"	3 5/16"	2 5/16"	3 1/16"	4"	2 3/4"	3 7/16"	4 9/16"	3 3/16"	2 1/8"	2 15/16"	2 1/16"	2 1/8"	3"	2 1/8"	2"	2 7/8"	2 1/16"	1 7/8"	2 3/4"	2 1/16"	1 13/16"	2 3/4"	2 1/16"	1 3/4"	2 1/16"	1 15/16"	1 3/16"	1 7/8"	1 7/16"	7/8"	1 1/4"	1"	1 1/16"	1"	3/4"	1/2"	1 3/16"	5/8"	7/16"	5/8"	1/2"	1/4"	7/16"	3/8"
Required Camber		1 3/4"			2 1/4"			2 3/4"			3 1/4"			4"			4 1/2"			3"			3"			3"			2 3/4"			2 3/4"			2 3/4"			2"			1 1/4"			1"			1"			1"		

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS UNIT 7

BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MKK	J.I.M. 8/61	R.J.S. 4/3/62	J.H.O. 11/17/61	4-20-62	

Note:
Dimensions along ℄ Piers 8-S & 9-S and ℄ brg. Abut. are same as along Pier 7-S

For Section A-A see Sheet #160

STEEL FRAMING PLAN

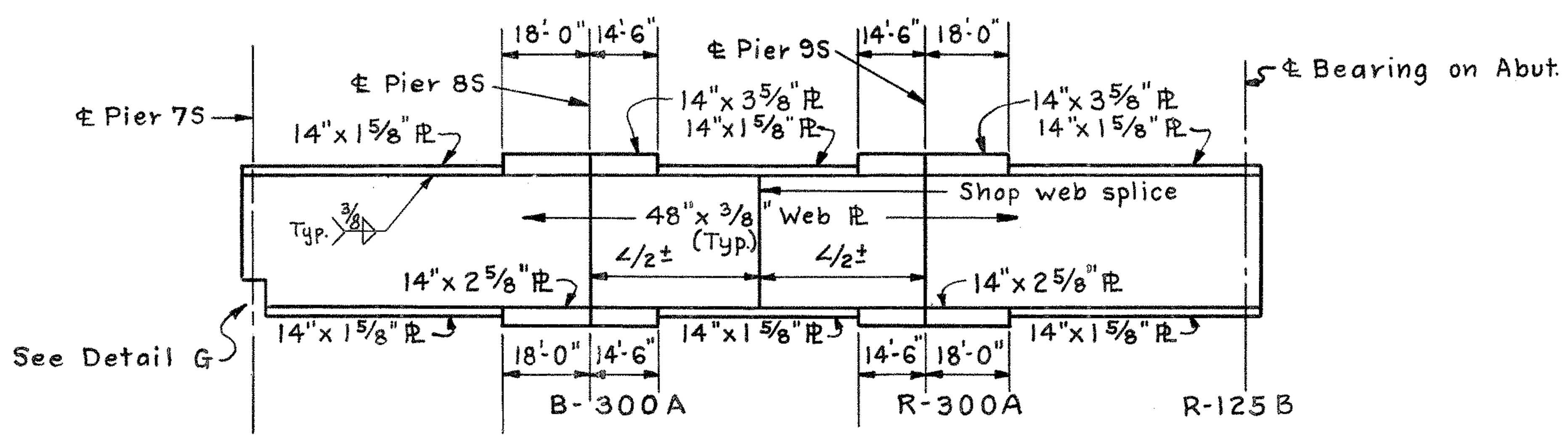
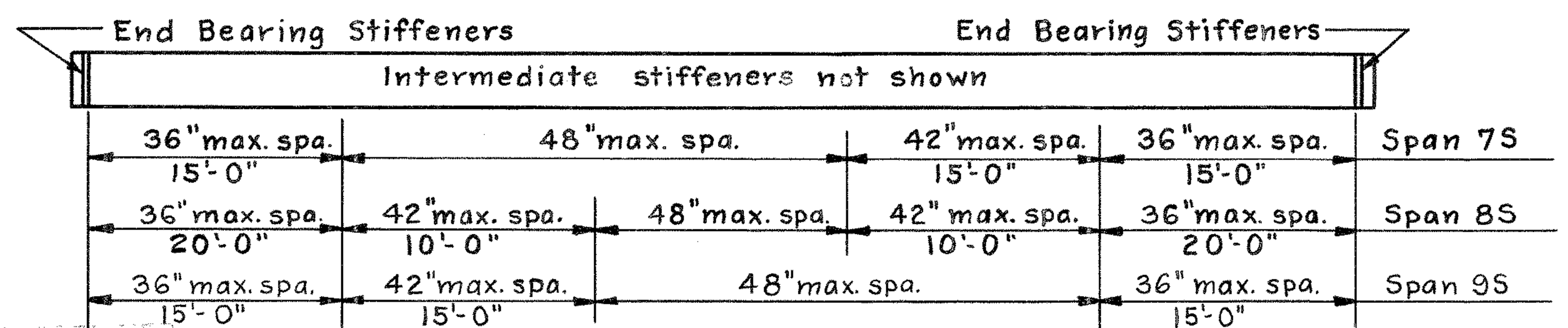


TABLE OF FLANGE PLATES

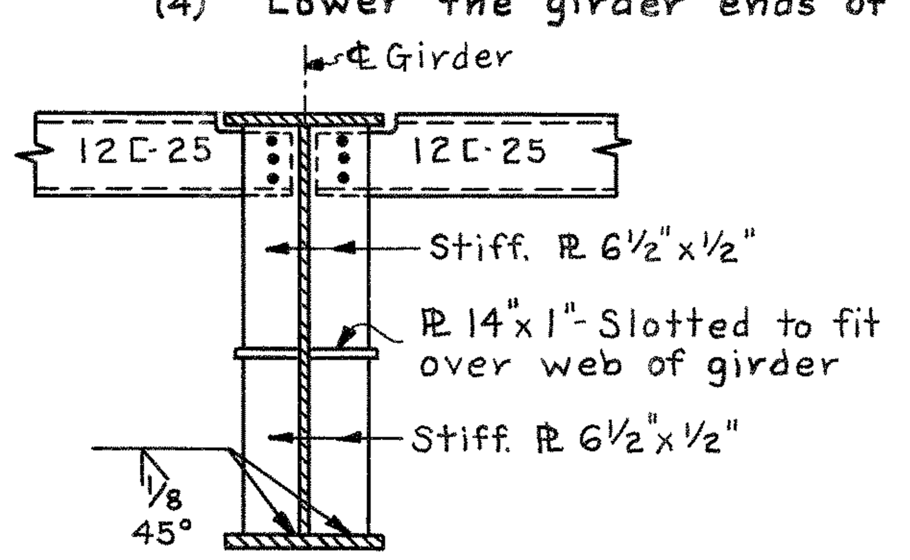
Note:
Bearing stiffeners @ Pier 7S and Abut. are 6 1/2"x1/2" ℞'s.
" " @ Piers 8S and 9S are 6 1/2"x3/4" ℞'s.
All intermediate stiffeners are 5"x3/8" ℞'s.
For bearing details see Sheet #159
For typical girder elevation see Sheet #158

GIRDER SPLICE WELDING PROCEDURE

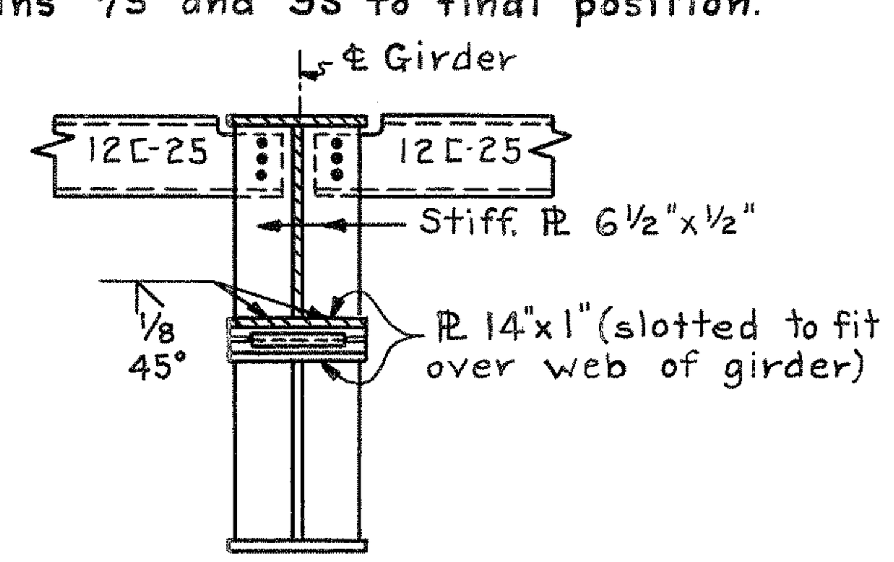
(1) Raise the ends of girders in Span 7S at Pier 7S, and the ends of girders in Span 9S at Abutment 2 3/4".
(2) Butt-weld girder flanges and webs at Piers 8S and 9S using the following sequence:
Make two passes on each flange then two on the web; repeat using one pass at each location until welds are completed.
(3) Weld all pier crossframes at Piers 8S and 9S into place.
(4) Lower the girder ends of spans 7S and 9S to final position.



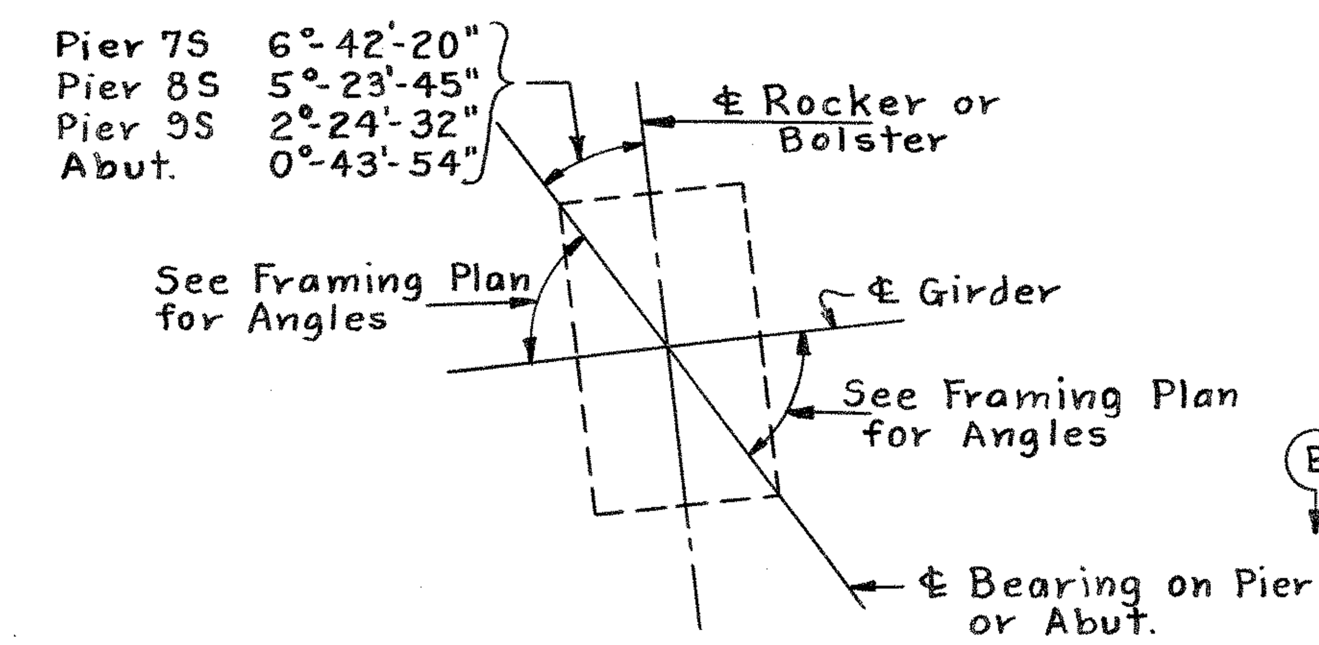
INTERMEDIATE STIFFENER SPACING



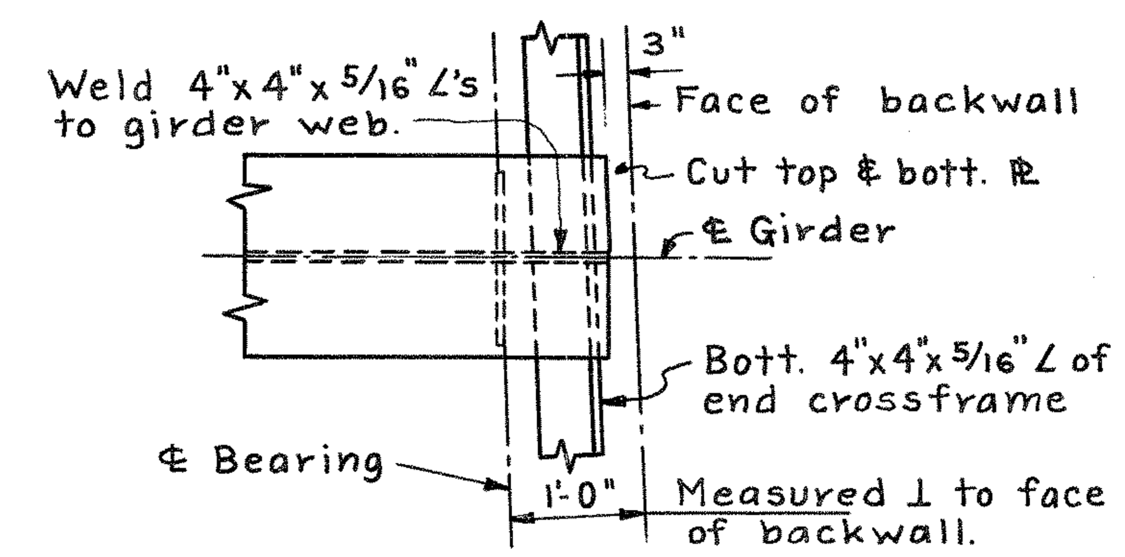
SECTION C-C



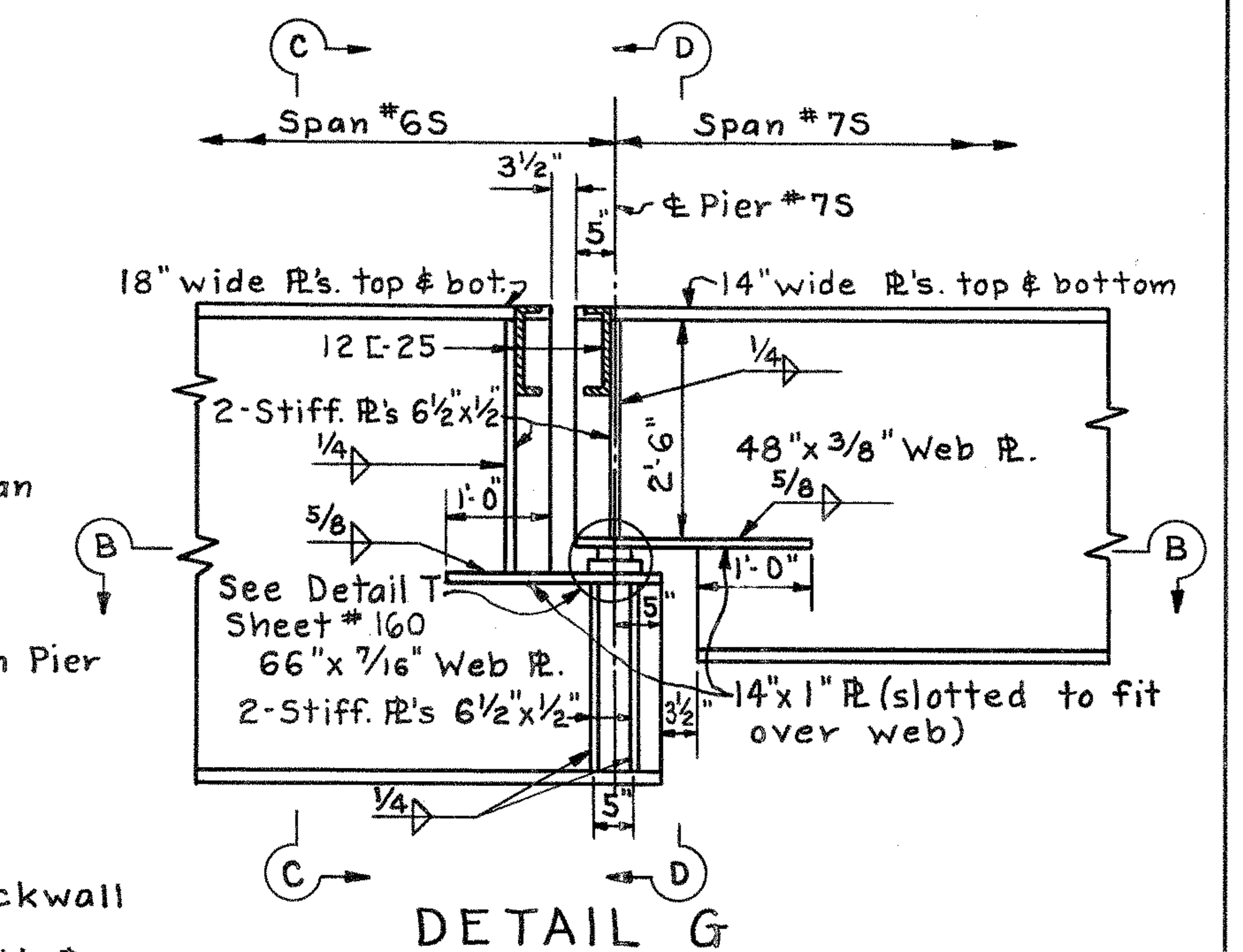
SECTION D-D



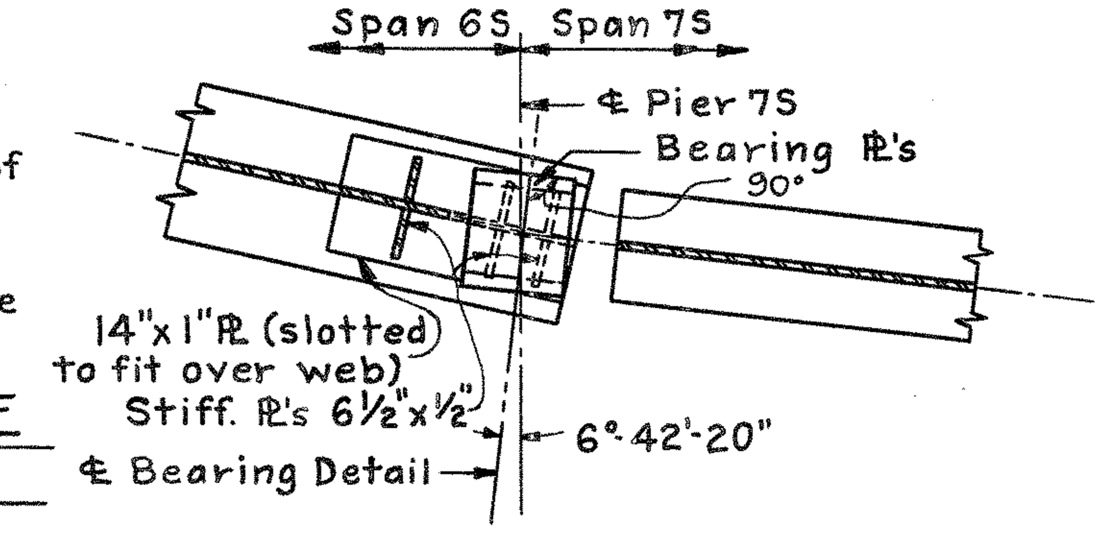
DETAIL F



DETAIL OF END CROSSFRAME CONNECTION AT ABUTMENT



DETAIL G



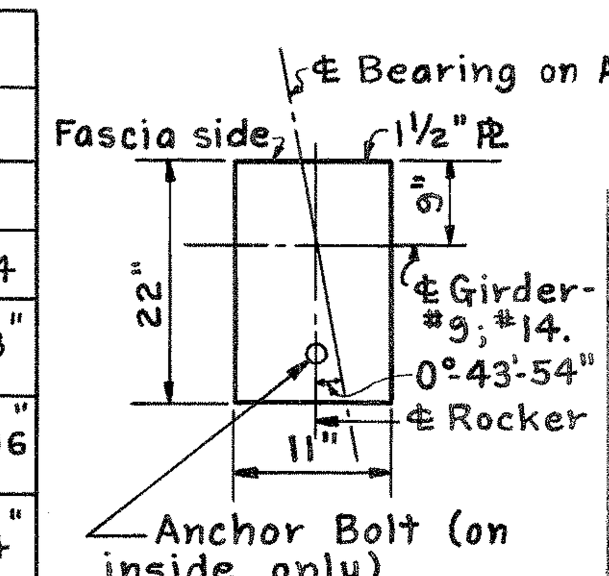
SECTION B-B

DEFLECTION AND CAMBER

SPAN	SPAN 7S																	
GIRDER	9			10			11			12			13			14		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"
Deflection due to remaining Dead Load	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"	3/8"	7/16"	3/16"
Convexity	1/16"	0	0	-1/8"	-1/8"	-1/8"	-1/16"	-1/8"	-1/16"	-1/16"	-1/16"	0	-1/16"	-1/16"	1/16"	1/8"	3/16"	1/4"
Sum of Deflection and Convexity	9/16"	9/16"	1/4"	3/8"	7/16"	1/8"	7/16"	7/16"	3/16"	7/16"	1/2"	1/4"	7/16"	1/2"	5/16"	5/8"	3/4"	1/2"
Required Camber		0			0			0			0			0			0	

SPAN	SPAN 8S																	
GIRDER	9			10			11			12			13			14		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/8"	1/16"
Deflection due to remaining Dead Load	7/16"	11/16"	7/16"	5/16"	9/16"	5/16"	3/8"	5/8"	3/8"	3/8"	5/8"	3/8"	3/8"	5/8"	3/8"	3/8"	5/8"	3/8"
Convexity	0	0	0	-1/4"	-3/8"	-5/16"	-3/16"	-3/8"	-5/16"	-3/16"	-5/16"	-1/4"	-1/8"	-5/16"	-1/4"	3/16"	1/8"	1/16"
Sum of Deflection and Convexity	1/2"	13/16"	1/2"	1/8"	5/16"	1/16"	1/4"	3/8"	1/8"	1/4"	7/16"	3/16"	5/16"	7/16"	3/16"	5/8"	7/8"	1/2"
Required Camber		0			0			0			0			0			0	

SPAN	SPAN 9S																	
GIRDER	9			10			11			12			13			14		
LOCATION	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4	1/4	1/2	3/4
Deflection due to weight of steel	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"	1/16"	1/8"	1/8"
Deflection due to remaining Dead Load	3/16"	1/2"	3/8"	3/16"	3/8"	5/16"	3/16"	7/16"	3/8"	3/16"	7/16"	3/8"	3/16"	7/16"	3/8"	3/16"	3/8"	5/16"
Convexity	0	0	0	-3/16"	-1/4"	-1/8"	-3/16"	-3/16"	-1/16"	-1/8"	-1/8"	0	-1/8"	-1/8"	1/16"	1/8"	3/16"	1/4"
Sum of Deflection and Convexity	1/4"	5/8"	1/2"	1/16"	1/4"	5/16"	1/16"	3/8"	7/16"	1/8"	7/16"	1/2"	1/8"	7/16"	9/16"	3/8"	11/16"	11/16"
Required Camber		0			0			0			0			0			0	



DETAIL R

(Girders 9 & 14 only)
Rotate 180° for Girder #14

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STRUCTURAL STEEL DETAILS UNIT 8

BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

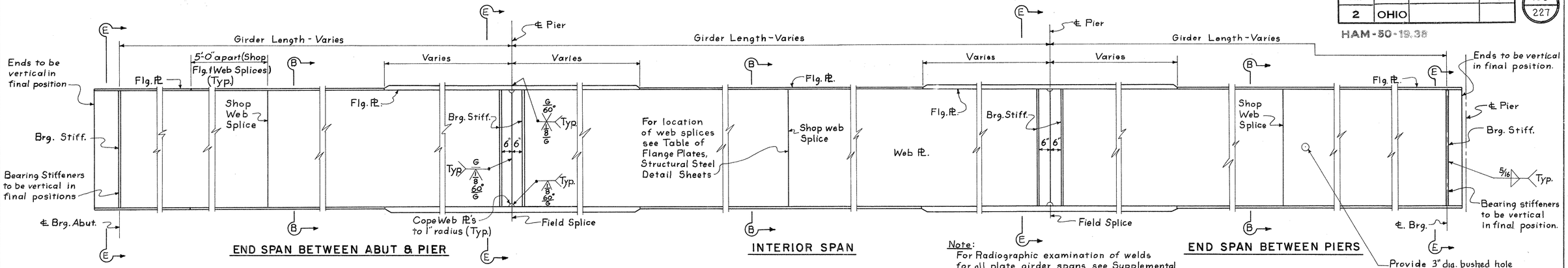
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.L.L.	J.I.M. 7/61	R.J.S. 3/27/62	J.H.O. 11/17/61	M.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

158
227

HAM-50-19.38

TYPICAL PLATE GIRDER ELEVATIONS



END SPAN BETWEEN ABUT & PIER

INTERIOR SPAN

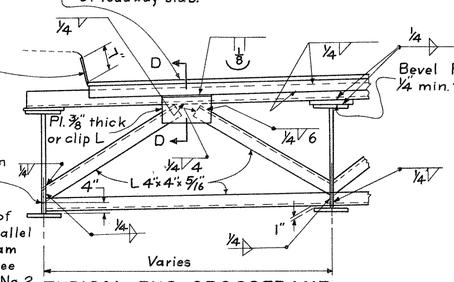
END SPAN BETWEEN PIERS

Bearing stiffeners over piers & abutments shall be grooved and fully butt-welded to the lower flange and fitted in close contact without welding at the upper flange, except as shown at the pier crossframes.

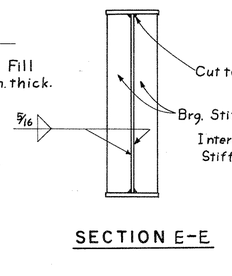
If additional web and flange shop splices are necessary other than those shown on the Table of Flange Plate, Structural Steel Details, their location and details shall be submitted to the Director for approval.

Note:
For Radiographic examination of welds for all plate girder spans see Supplemental Specification No. S-307.

Provide 3" dia. bushed hole (for electric cables) located at mid-depth of web.
For detail see Sheet No. 86
Include with Item S-7 for payment.

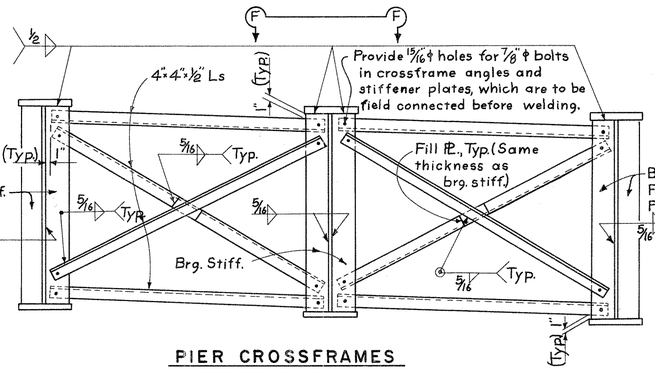


TYPICAL END CROSSFRAME
(Showing safety curb detail)



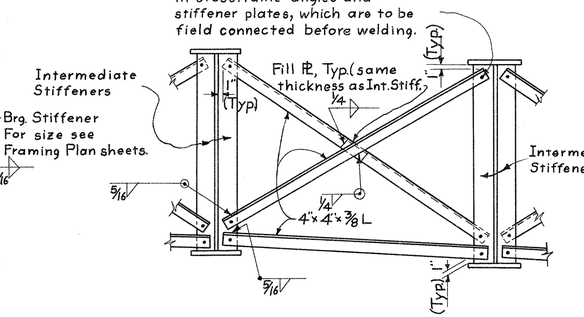
SECTION E-E

SECTION B-B



PIER CROSSFRAMES

Provide 15/16" ℄ holes for 7/8" ℄ bolts in crossframe angles and stiffener plates, which are to be field connected before welding.

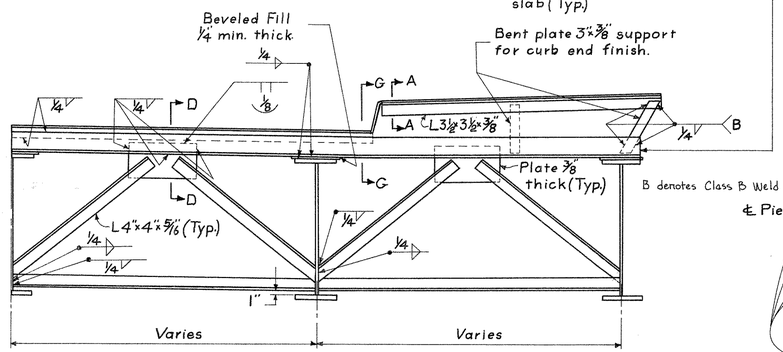


TYPICAL INTERMEDIATE CROSSFRAME

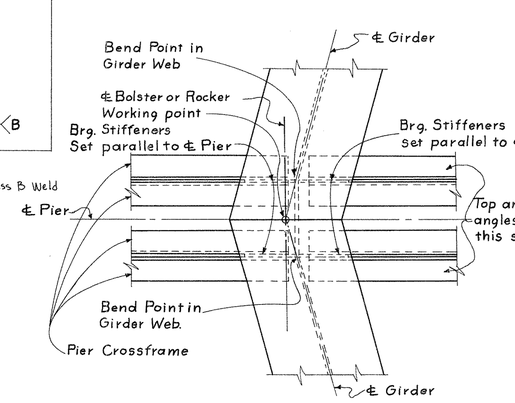
For section D-D see Std. Dwg. CSB-2-56, Sheet No. 2

For section A-A & G-G see Sheet No. 165

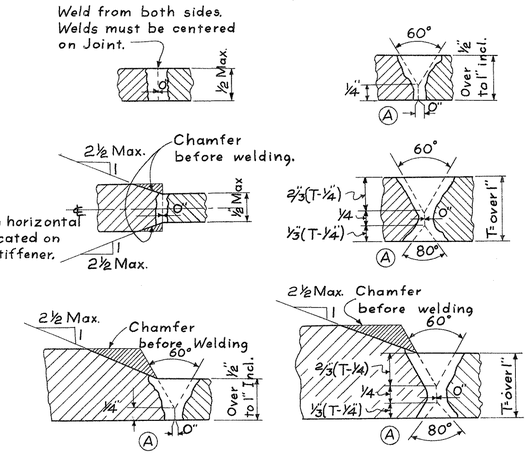
Bottom angles to be shop bent at curb to follow top of slab (level) underneath slab (Typ.)



TYPICAL END CROSSFRAME
(Showing Sidewalk Detail)

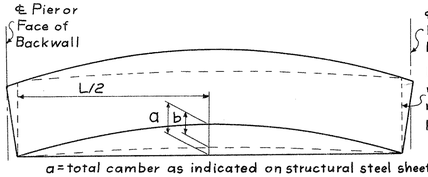


PLAN VIEW F-F OF GIRDER & PIER CROSSFRAME CONNECTION



Note: (A) Weld after placing at least one pass on other side.

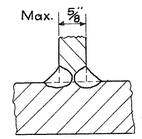
TYPICAL WELDED JOINTS
Automatic Submerged Arc Process



a = total camber as indicated on structural steel sheets.
b = total deflection when bridge is completed.

CAMBER DIAGRAM

Cut web plates to parabolic camber indicated by diagram.



HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE NO HAM-50-1938 R&L.

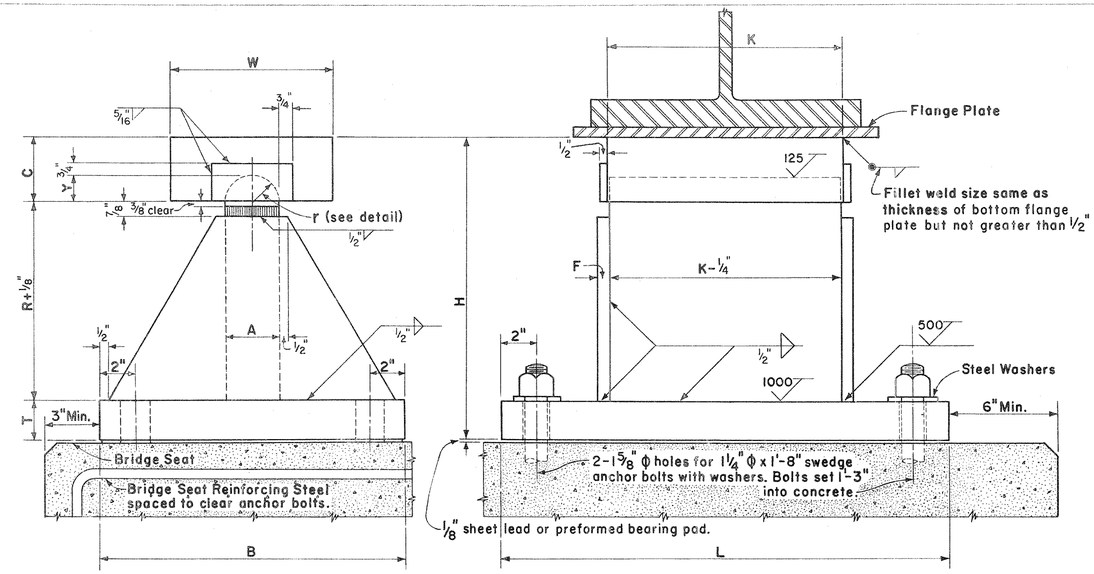
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	N.S.	J.T.C. 3/26/62	JHO 4/14/62	4-20-62	

FED. RD DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

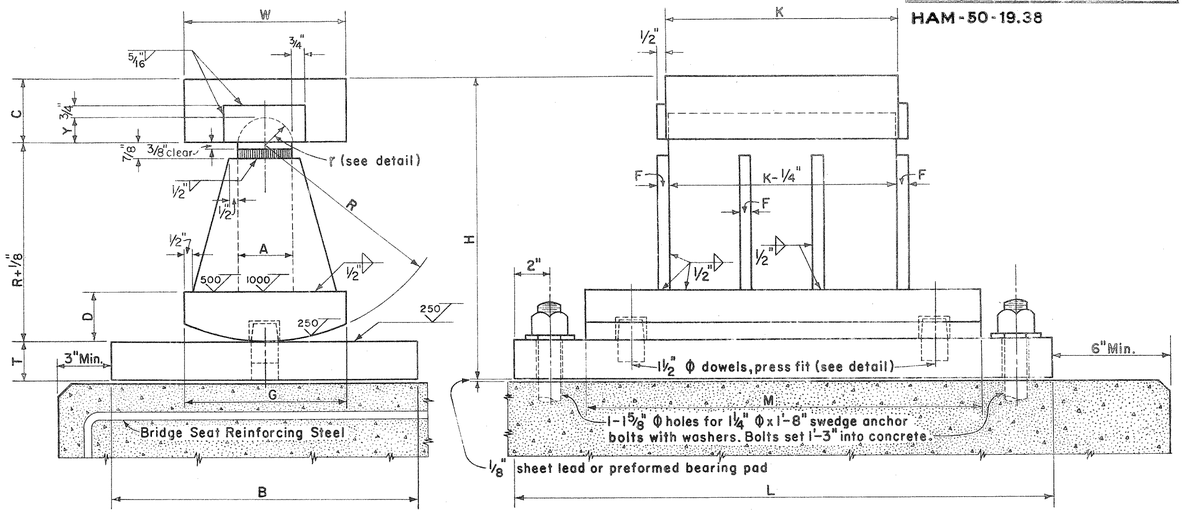
159
227

HAM-50-19.38



STRUCTURAL STEEL BOLSTER

See Table below for additional dimensions.



STRUCTURAL STEEL ROCKER

See Table below for additional dimensions.

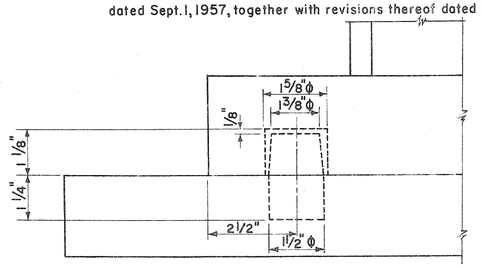
Design Specifications: This drawing conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated Sept. 1, 1957, together with revisions thereof dated Feb. 21, 1958.

No.	A	B	C	D	F	G	H	K	L	M	R	T	W	Y
R100-A	2½	10	2½	2	½	7½	10 5/8	9	25	17	6½	1½	9	1 3/16
R125-A	3	11	3	2	½	8	12 1/8	10 ½	26	18	7½	1½	9	1 7/16
R125-B	3	11	3	2	½	8	12 1/8	12½	26	18	7½	1½	9	1 7/16
R150-A	3	12	3	2¼	½	8½	13 3/8	16½	27	19	8½	1¾	9	1 7/16
R150-B	3	12	3	2¼	½	8½	13 3/8	14½	27	19	8½	1¾	9	1 7/16
R150-C	3	12	3	2¼	½	8½	13 7/8	14½	27	19	9	1¾	9	1 7/16
R150-D	3	X	3	2¼	½	8½	13 3/8	14½	X	19	8½	1¾	9	1 7/16
R175-A	3	14	3½	2½	½	9	15 1/8	16½	28	20	9½	2	9	1 7/16
R175-B	3	X	3½	2½	½	9	15 1/8	16½	X	20	9½	2	9	1 7/16
R175-C	3	14	3½	2½	½	9	16 3/8	16½	28	20	10¾	2	9	1 7/16
R200-A	3	16	3½	2¾	5/8	9	16 3/8	14½	29	21	10½	2¼	9	1 7/16
R200-B	3	*	3½	2¾	5/8	9	18 5/8	16½	*	21	12¾	2¼	9	1 7/16
R200-C	3	16	3½	2¾	5/8	9	16 3/8	16½	29	21	10½	2¼	9	1 7/16
R200-D	3	*	3½	2¾	5/8	9	18 1/8	16½	*	21	12¼	2¼	9	1 7/16
R200-E	3	*	3½	2¾	5/8	9	18¼	16½	*	21	12 3/8	2¼	9	1 7/16
R200-F	3	*	3½	2¾	5/8	9	18½	16½	*	21	12 5/8	2¼	9	1 7/16
B200-A	3	16	3½		5/8		22	14½	26		16 1/8	2¼	9	1 7/16
B200-B	3	16	3½		5/8		22 1/8	14½	26		16¼	2¼	9	1 7/16
B200-C	3	16	3½		5/8		21 5/8	14½	26		15 3/4	2¼	9	1 7/16
B200-D	3	16	3½		5/8		20¼	14½	26		14 3/8	2¼	9	1 7/16

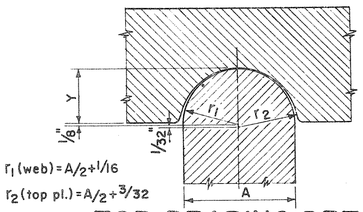
* Common masonry plate, see detail on sheet No. 156
× Common masonry plate, see detail on sheet No. 150

No.	A	B	C	D	F	G	H	K	L	M	R	T	W	Y
B200-E	3	16	3½		5/8		19½	14½	26		13 5/8	2¼	9	1 7/16
B200-F	3	16	3½		5/8		19¾	14½	26		13 7/8	2¼	9	1 7/16
B200-G	3	16	3½		5/8		19 7/8	14½	26		14	2¼	9	1 7/16
B200-H	3	16	3½		5/8		20¼	14½	26		14 3/8	2¼	9	1 7/16
R225-A	3	17	3½	2¾	5/8	9	16 7/8	16½	30	22	11	2¼	9	1 7/16
R225-B	3	*	3½	2¾	5/8	9	16 7/8	16½	*	22	11	2¼	9	1 7/16
R300-A	3½	20	6	3¼	¾	12	21 5/8	15½	33	25	12½	3	16	1 1/16
B300-A	3½	20	6		¾		21 5/8	15½	28		12½	3	16	1 1/16
R325-A	4	21	6	3½	¾	13	22 3/8	16½	34	26	13	3¼	16	1 5/16
R350-A	4	22	6¼	3½	¾	14	23 3/8	14½	35	27	14	3½	16	1 5/16
R350-B	4	22	6¼	3½	¾	14	23 3/8	14½	35	27	13½	3½	16	1 5/16
B350-A	4	22	6¼		¾		23 3/8	14½	30		13½	3½	16	1 5/16
B350-B	4	22	6¼		¾		24 1/8	14½	30		14¼	3½	16	1 5/16
B350-C	4	22	6¼		¾		23 3/8	16½	30		13½	3½	16	1 5/16
R400-A	4½	24	6½	4	7/8	14½	25 1/8	16½	38	30	14½	4	16	2 3/16
R400-B	4½	24	6½	4	7/8	14½	27 5/8	16½	38	30	17	4	16	2 3/16
B400-A	4½	24	6½		7/8		25 1/8	16½	33		14½	4	16	2 3/16
B450-A	4½	25	6¾		1		26 3/8	16½	35		15½	4	16	2 3/16
R500-A	5	27	7	4½	1	16	27 7/8	20½	42	34	16½	4¼	16	2 7/16

Note: Masonry plates have been revised from dimension shown at certain locations. For location of revised masonry plates see structural steel details. Corners of masonry plates shall be clipped where necessary to provide a minimum distance of 3" from plate to edge of concrete.



DOWEL DETAIL



TOP BEARING DETAIL

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ROCKERS AND BOLSTERS

BRIDGE NO HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

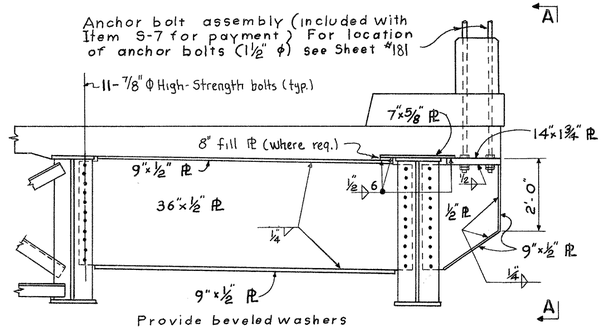
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
		JTC	JHO 3/28/62	H.A.E. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

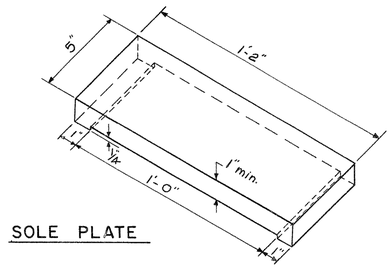
160
227

HAM-50-19.38

BEARING PLATE DETAILS- (@ PIER 7S)

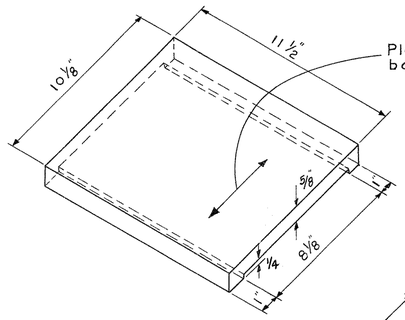


SECTION A-A

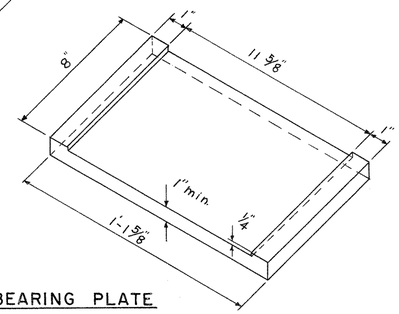


SOLE PLATE

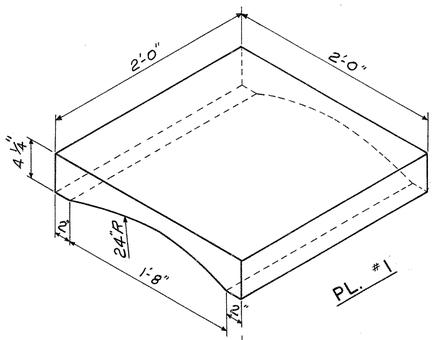
Note:
Bevel top of Sole PL and bottom of Bearing PL to provide a horizontal surface between Sole PL and bronze PL.

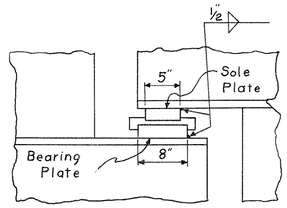


BRONZE PLATE



BEARING PLATE

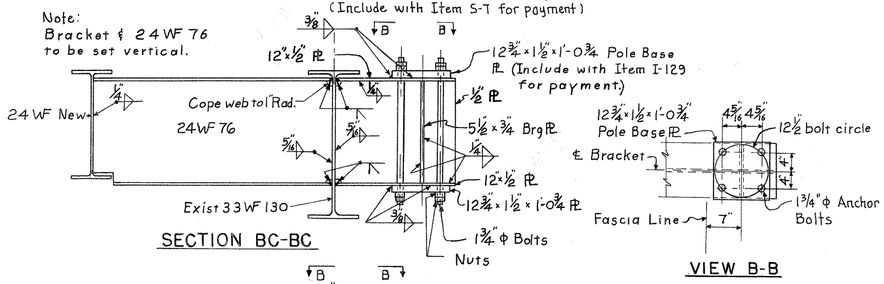


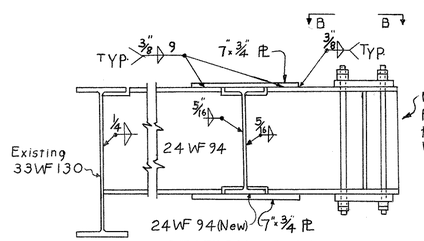


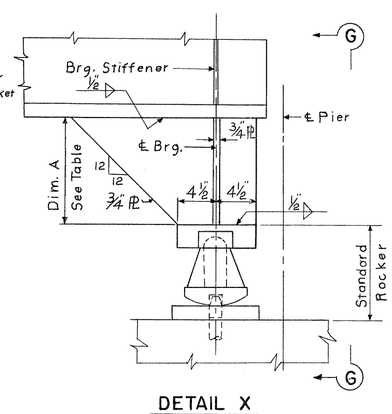
DETAIL T

Note:
Bracket ℄ 24 WF 76 to be set vertical.

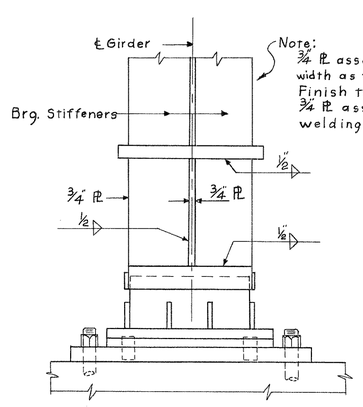
Anchor bolt assemblies.
Anchor bolts for both legs of sign support to be checked with a template before final welding is done.
(Include with Item S-7 for payment)



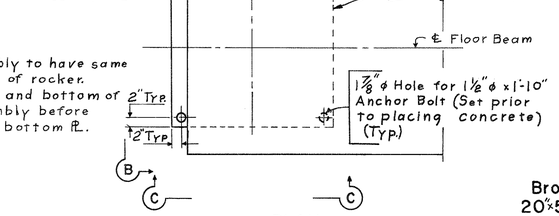




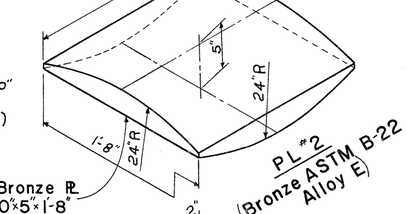
DETAIL X

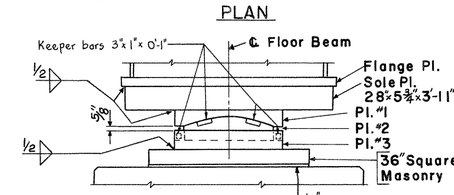


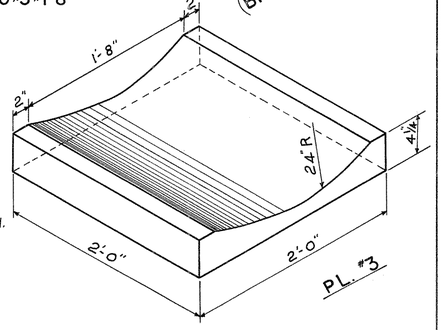
SECTION G-G

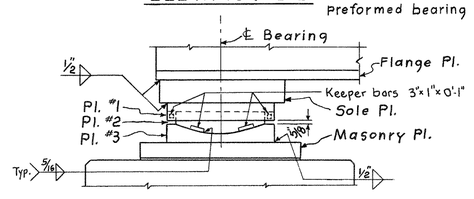


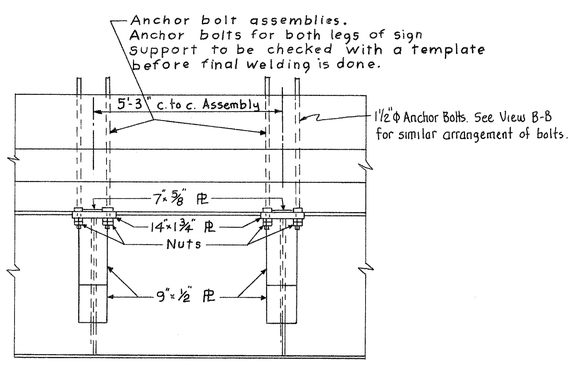
PLAN











DIMENSION A								
Girder	1	2	3	4	5	6	7	8
Pier 4N, Span 3N	2'-4 5/8"	2'-3 1/8"	2'-4 5/8"	2'-3 1/8"	2'-1 3/8"	2'-5"	-	2'-3 7/8"
Pier 7N, Span 7N	2'-7 5/8"	2'-5 5/8"	2'-5 5/8"	2'-5 1/2"	2'-5 5/8"	2'-6 1/8"	-	-

BEARING DETAILS FOR FLOOR BEAM AT PIER NO. 5N

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE NO. HAM-50-1938 R.&L.

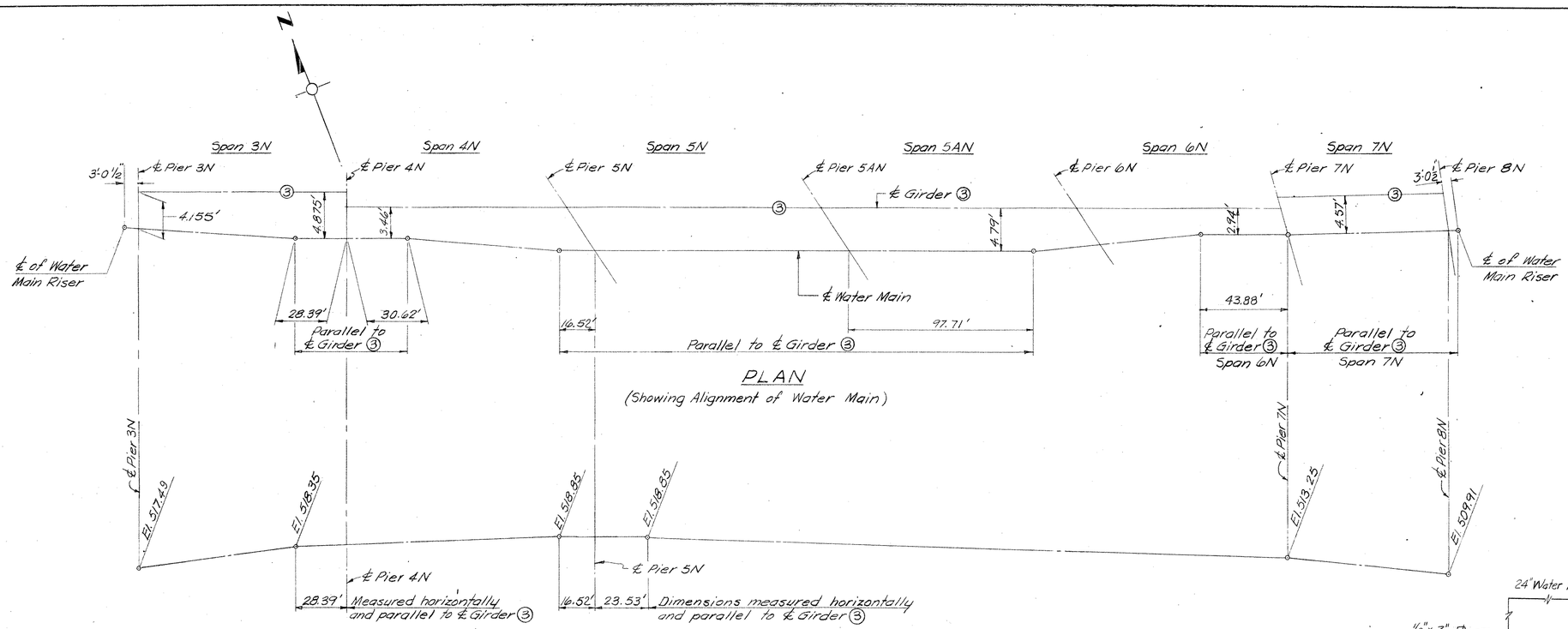
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JIM BOG	J.T.C. 2.2.62	JHO 2/5/62	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

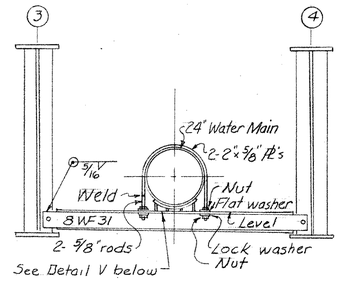
161
227

HAM-50-19.38

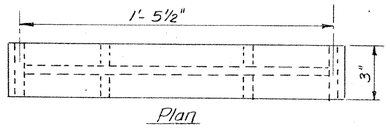


PLAN
(Showing Alignment of Water Main)

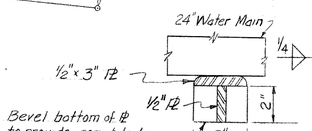
PROFILE
(Showing Grade of ℄ of Water Main)



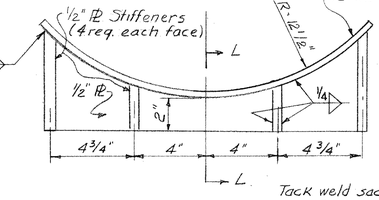
WATER MAIN SUPPORT CROSSFRAME



Plan



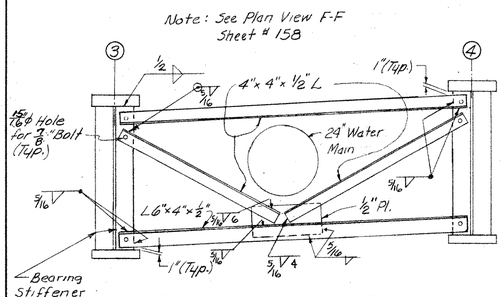
SECTION L-L



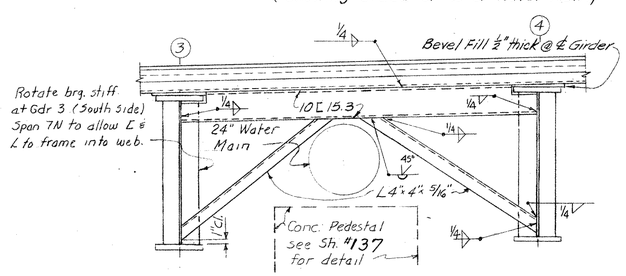
Elevation

Tack weld saddle to crossframe after nuts have been tightened.

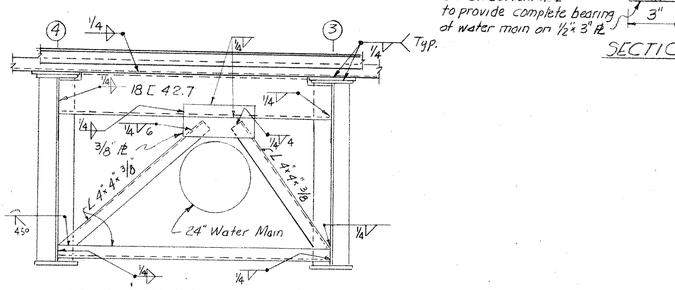
SADDLE DETAIL V



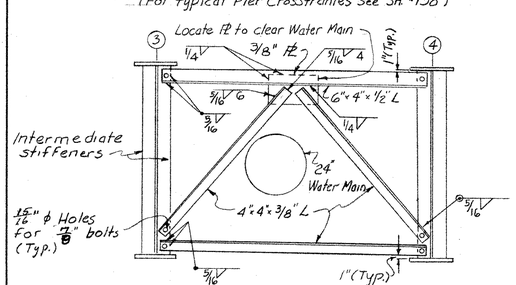
PIER CROSSFRAME~PC-1
REVISED FOR WATER MAIN
(For typical Pier Crossframes see Sh. #158)



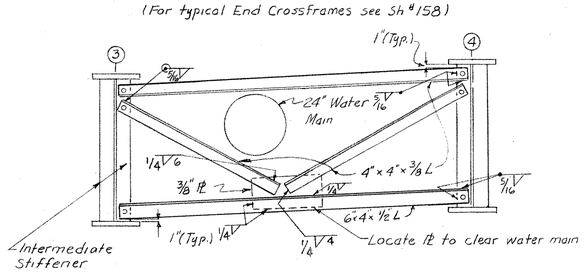
END CROSSFRAME~EC-3
REVISED FOR WATER MAIN
(For typical End Crossframes see Sh #158)



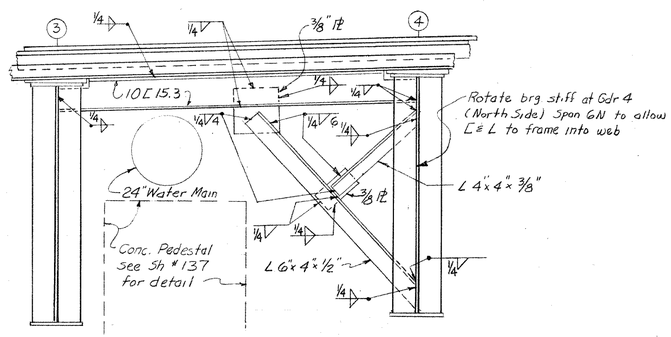
END CROSSFRAME~EC-1
REVISED FOR WATER MAIN



INTERMEDIATE CROSSFRAME~IC-1
REVISED FOR WATER MAIN



INTERMEDIATE CROSSFRAME~IC-2
REVISED FOR WATER MAIN
(For typical Intermediate Crossframes see Sh #158)



END CROSSFRAME~EC-2
REVISED FOR WATER MAIN

Note: Profile shown is based on final elevations of 24" Water Main in operation (after water is in pipe). Dead load deflections shown on structural steel sheets includes weight of pipe and water. Water main support crossframe to be set to provide these final elevations.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS FOR WATER MAIN
BRIDGE NO. HAM-50-1938 R.& L.

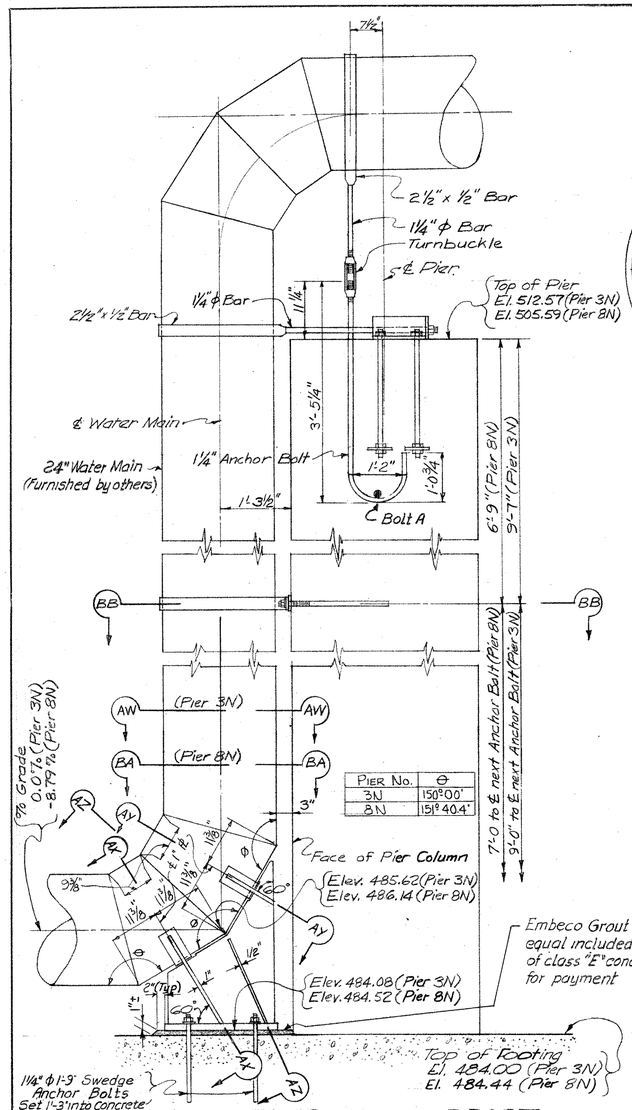
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	B.O.G. 1-15-62		JHO 1/20/62	W. A. B. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

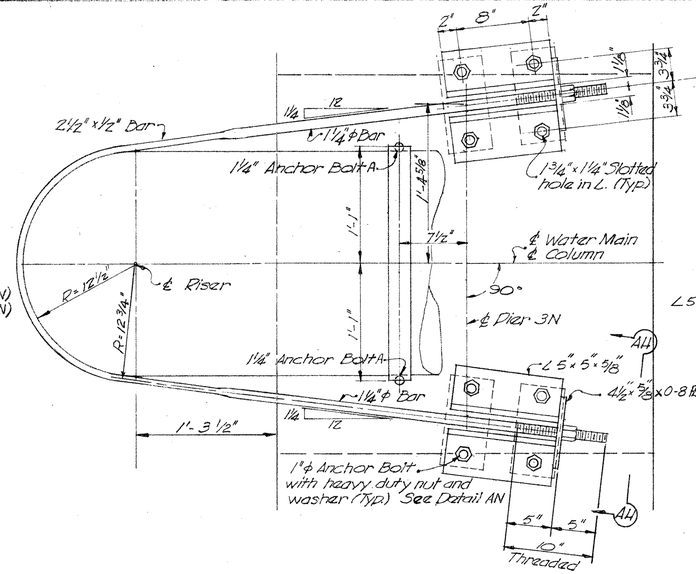
162 / 227

HAM-50-19.38



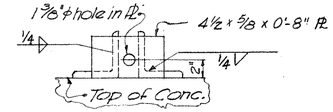
ELEVATION OF WATER MAIN SUPPORT

(Pier No. 3 as shown)
(Pier No. 8 opposite as shown)

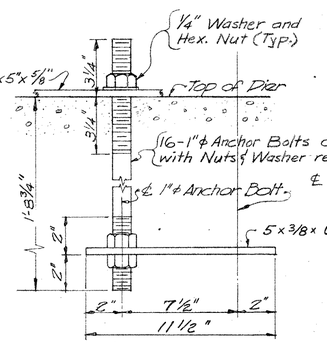


PLAN OF WATER MAIN BRIDLE

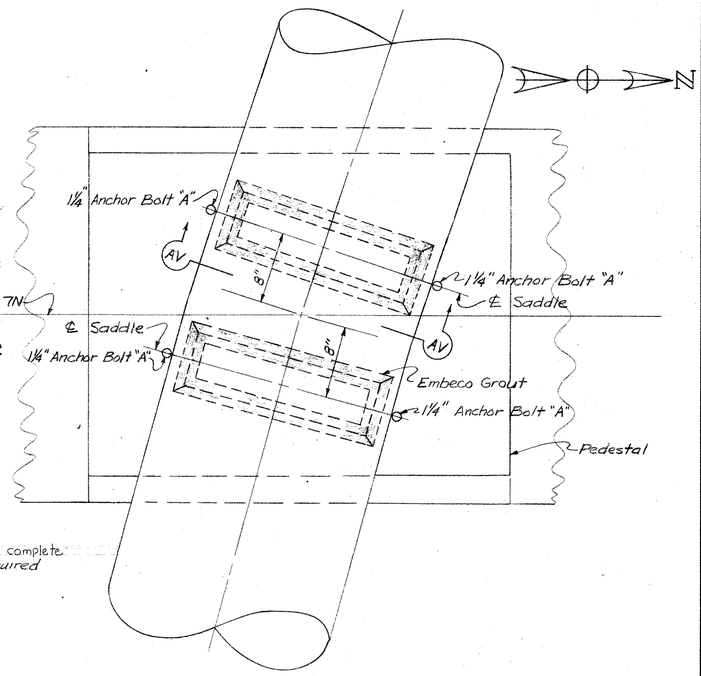
(Pier No. 3N)



VIEW AH

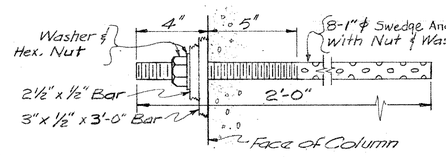


DETAIL AN

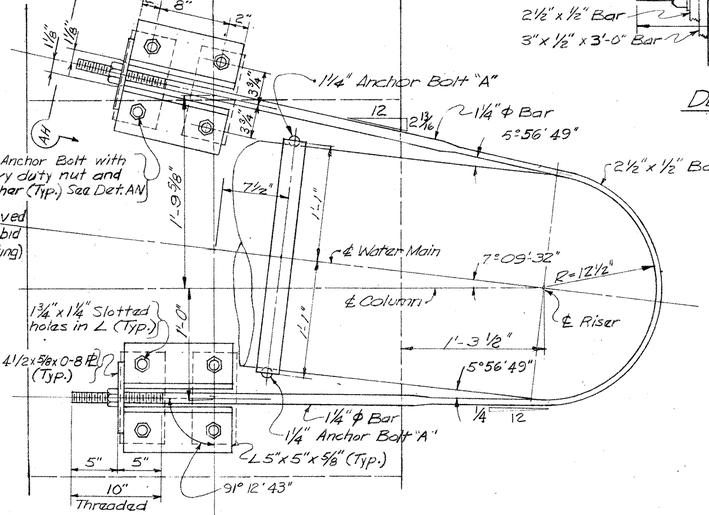


PLAN OF WATER MAIN SUPPORT AND ANCHORAGE

(Pier No. 7N)

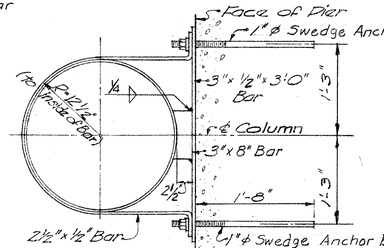


DETAIL AO



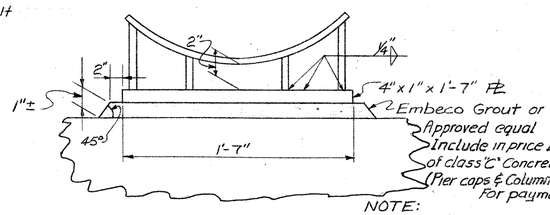
PLAN OF WATER MAIN BRIDLE

(Pier No. 8N)



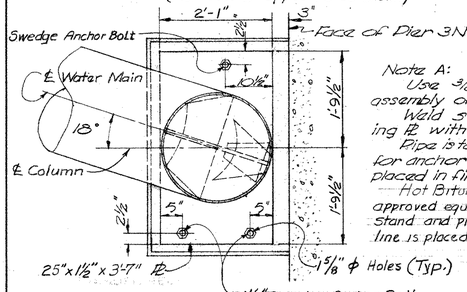
SECTION BB-BB

(Typical Anchor into Column)



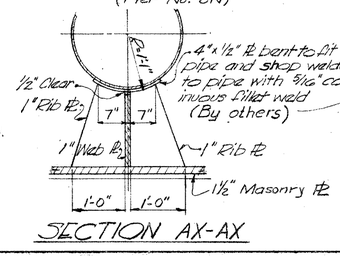
NOTE:
For additional information not shown see Detail "V" Sh. No. 161

SECTION AV-AV

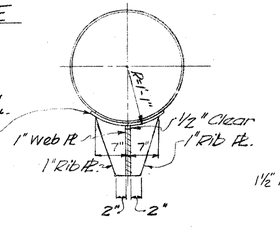


SECTION AW-AW

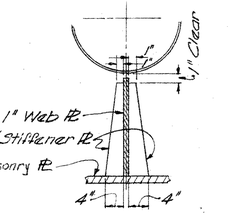
Note A:
Use 3/8" continuous fillet weld for assembly of all parts of stand (Shop).
Weld stand to 4" x ½" pipe reinforcing Pl with field 5/16" continuous fillet weld.
Pipe is to be welded to stand and holes for anchor bolts drilled only after pipe is placed in final alignment.
— Hot Bituminastic Enamel, Koppers 70-B, or approved equal (min ¼" thick) to be applied to stand and pipe after hydraulic tests are made and line is placed in service. (Included in cost of water main).



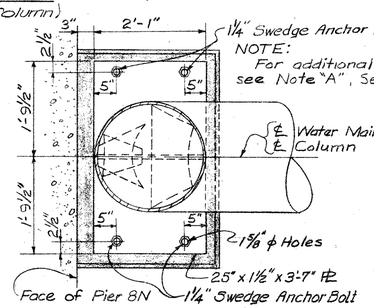
SECTION AX-AX



SECTION AY-AY



SECTION AZ-AZ



NOTE:
For additional information see Note "A", Section AW-AW

SECTION BA-BA

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS FOR WATER MAIN
BRIDGE NO. HAM-50-1938 R.& L.

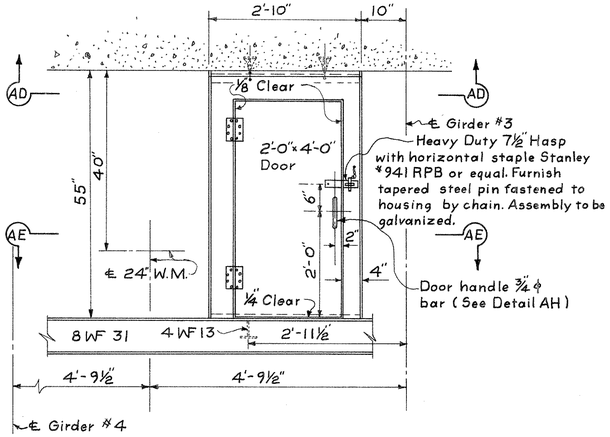
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.I.M. 1-4-62		JHO 1/15/62	W.A.Z. 4-20-62	

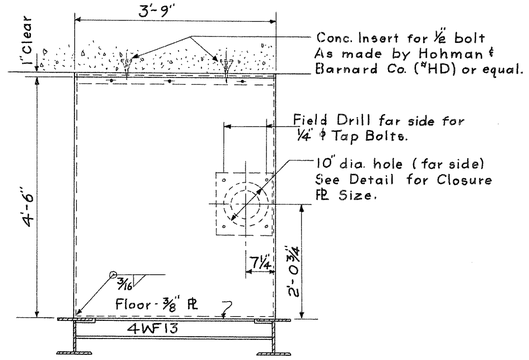
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

163
227

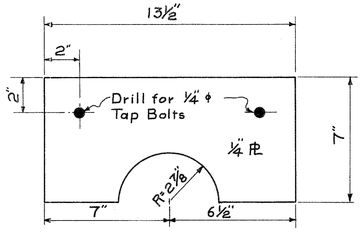
HAM-50-19.38



VALVE HOUSING DETAIL
EAST-END ELEVATION

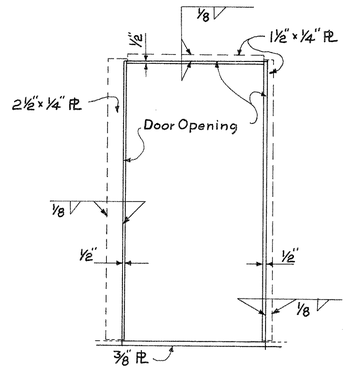


NORTH-END ELEVATION

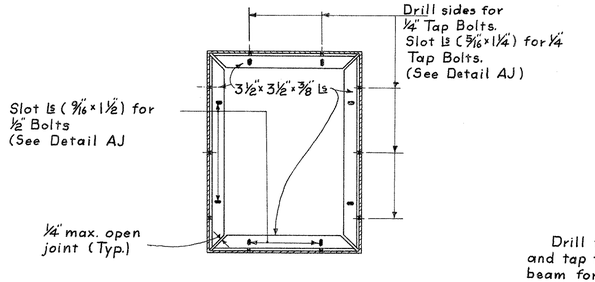


CLOSURE PLATE
(2 Required)

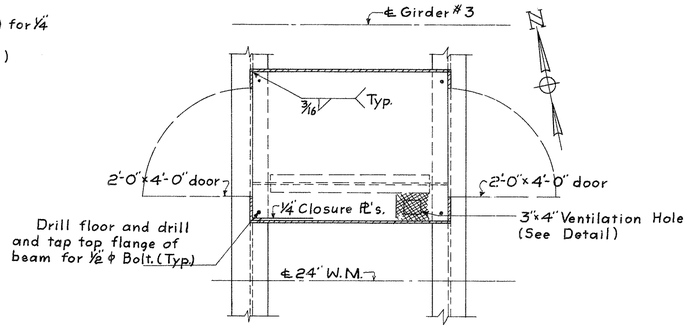
Note:
The door and all walls of the structure are ¼" Pl.
Hinges are 5"x4" Steel (Template) Ball bearing Bonderized, Stanley BB 168P or equal.
Floor to be ⅜" Pl.



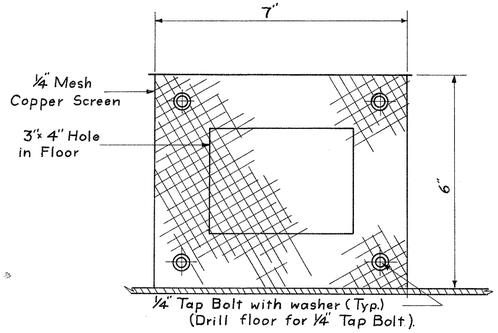
DOOR JAMB DETAIL



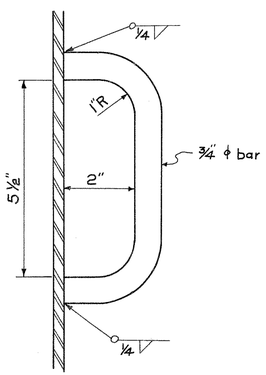
SECTION AD-AD



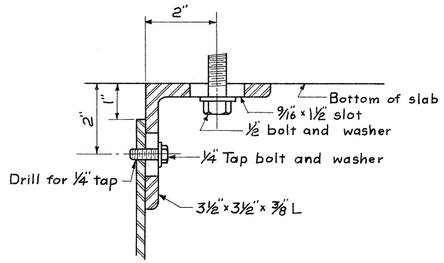
SECTION AE-AE



VENTILATION HOLE



DETAIL AH



DETAIL AJ

NOTE:
Angles to be placed for setting concrete inserts and removed for pouring of slab. After forms are removed angles are to be drawn tight against slab and inside of housing to form complete closure.

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS FOR WATER MAIN
BRIDGE NO. HAM-50-1938 R.B.L.

H.&E. BRIDGE NO. 1

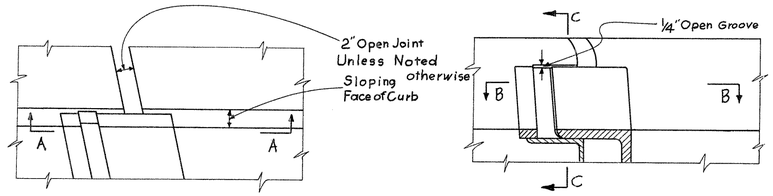
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JIM 9-26-61	J.T.C. 4/10/62	J.C.D. 4-17-62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

164
227

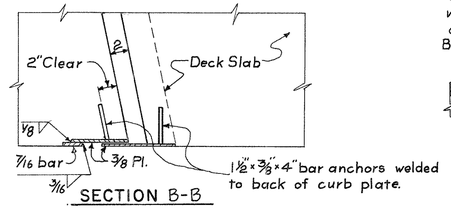
HAM-50-19.38

CURB PLATE DETAILS

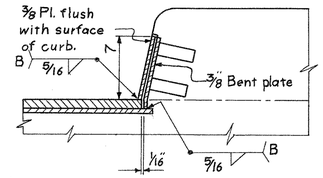


PART PLAN

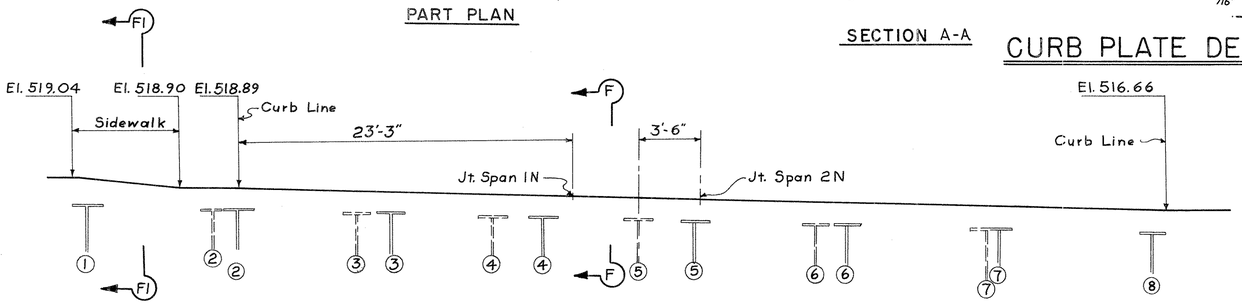
SECTION A-A



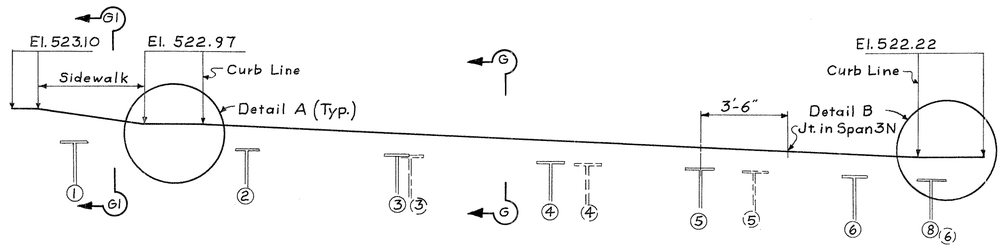
SECTION B-B



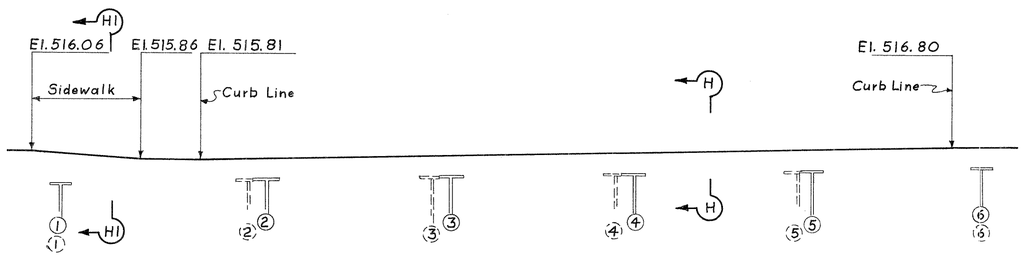
SECTION C-C



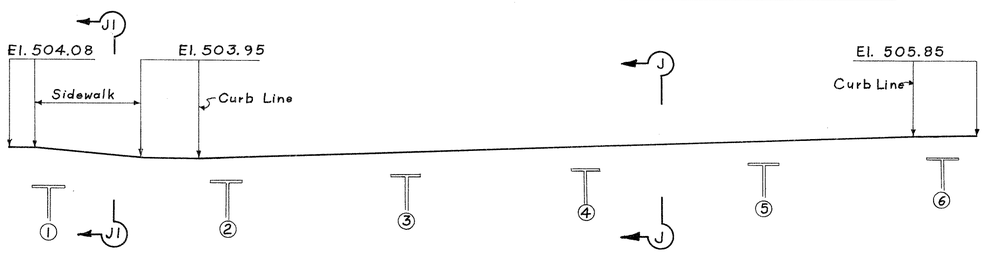
EXPANSION JOINT CROSS SECTION AT PIER NO. 2-N



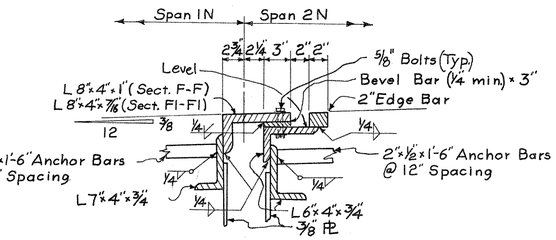
EXPANSION JOINT CROSS SECTION AT PIER NO. 4-N



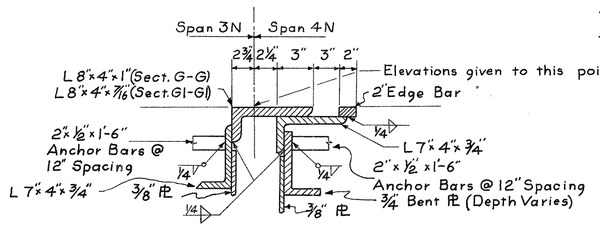
EXPANSION JOINT CROSS SECTION AT PIER NO. 7-N



EXPANSION JOINT CROSS SECTION AT ABUTMENT WESTBOUND

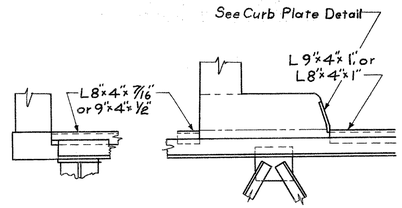


SECTION F-F
SECTION F1-F1

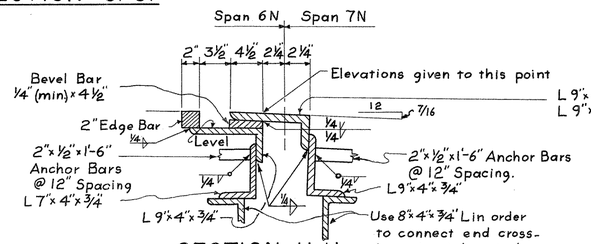


SECTION G-G
SECTION G1-G1

NOTE: End Crossframes to be set vertical; therefore vertical leg of angle or 3/8" Pl. which connect end crossframe to end dam shall be vertical. (Typ.)



DETAIL A

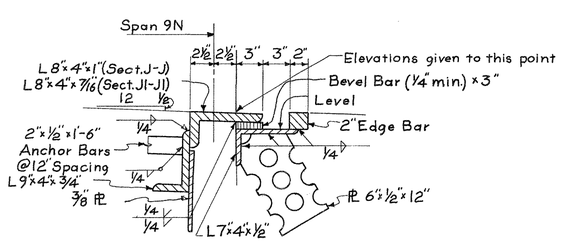


SECTION H-H
SECTION H1-H1

NOTE:
Elevations given only at curb lines means top of slab is a straight line between curb lines.

For Detail B see "Typical End Crossframe" (showing safety curb detail) Sheet# 158

For Detail of welding of joints in expansion dam see Standard Drawing CSB 2-56, Sheet # 2



SECTION J-J
SECTION J1-J1

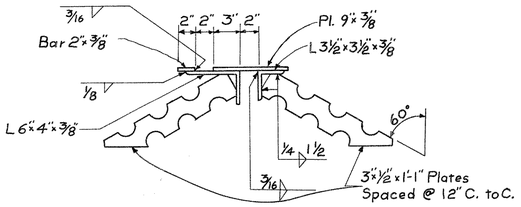
HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
EXPANSION JOINTS
BRIDGE NO. HAM-50-1938 R.B.L.

H.&E. BRIDGE NO. 1

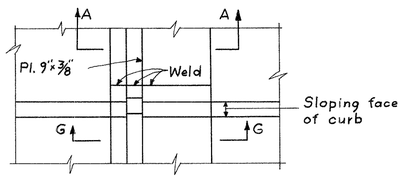
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.I.M.	J.T.C. 3/20/62	JHO 3/22/62	M.A.E. 4-20-62	

End sidewalk end finish 1'-5" from fascia line.

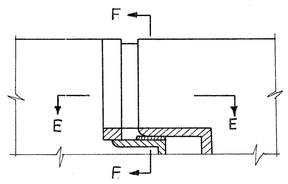


(For details not shown see section D-D Std. Dwg. CSB-2-56, Sheet No. 2)

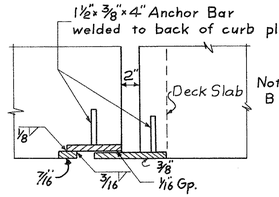
SECTION A-A



PART PLAN

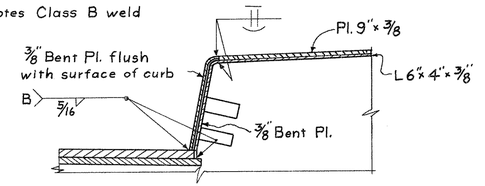


SECTION G-G



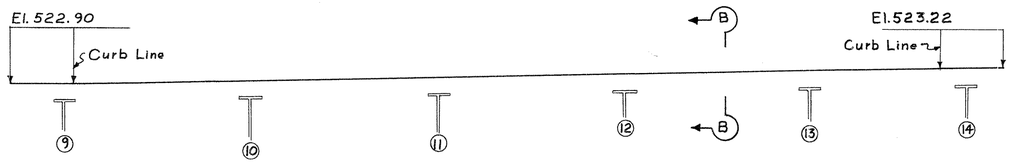
Note:
B denotes Class B weld

SECTION E-E

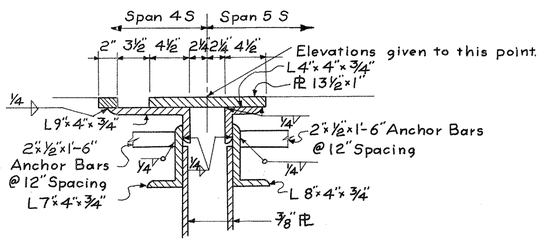


SECTION F-F

SIDEWALK EXPANSION DAM & CURB PLATE DETAILS

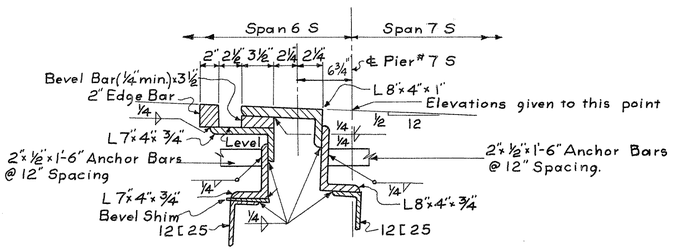


EXPANSION JOINT CROSS SECTION AT PIER NO. 5S

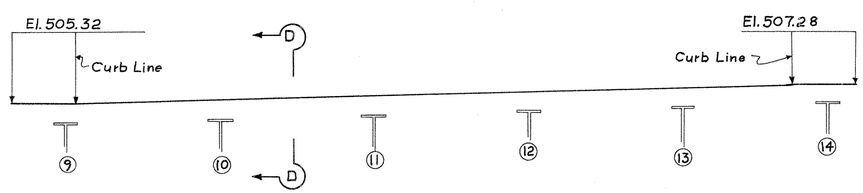


SECTION B-B

EXPANSION JOINT CROSS SECTION AT PIER 7-S

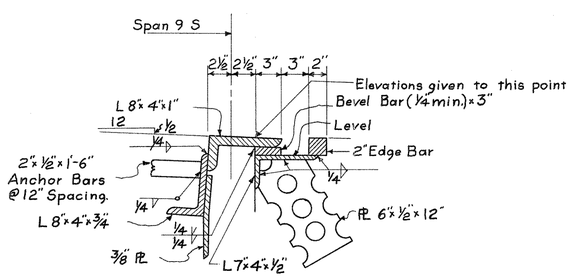


SECTION C-C



EXPANSION JOINT CROSS SECTION AT ABUTMENT

(EASTBOUND)



SECTION D-D

Note:
Roadway expansion joint to be bent in shop to conform to contour of top of slab (Typ)
Elevations given only at curb lines means top of slab is a straight line between curb lines.
Provide an open joint in the 2" Edge Bar and the L 7"x 4"x 1/2" at the contraction joints in the backwall. (Typ. at all abutments.
For Detail B see Typical End Crossframe (showing safety curb detail) Sheet No. 158
For additional information not shown, see Std Drawing No. CSB-2-56, Sheet No. 2 (Typ)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

165
227

HAM-50-19.38

HAZELET & ERDAL
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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
EXPANSION JOINTS
BRIDGE NO. HAM-50-1938 R.B.L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.J.M.	J.T.C. 3/21/62	J.H.O. 3/22/62	M.A.Z. 4-26-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR	
2	OHIO			166 / 227

HAM-50-19.38

Note: Cost of removing existing slab to be included in Item S-22, Lump Sum "Removal of Portions of Existing Structure." for payment.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT I
BRIDGE NO. HAM-50-1938 R.& L.

H.&E. BRIDGE NO. I

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 8-11-61		W.W.C. 10-27-61	N.K.Y. 4-23-62	

HAM-50-19.38

3 Rows of 2 = 6 - S6125 (Top)
3 Rows of 3 = 9 - S6125 (Bot)
A
Note: For details of sidewalk & safety curb transition see Sh. # 168
Sidewalk Drain Inlet
Safety Curb
See Detail Q
2'-6"
℄ Downspout
2 Rows of 101 = 202 - 2 Piece Hook Bolts @ 2'-0" (Curb)
Fascia
Detail M
Detail L
136 - S431 @ 1'-6" Safety Curb
6 Rows of 3 = 18 - S512 (Safety Curb)
Curb Line ℄ Base Line VB
2 Rows of 53 = 106 - S6116 @ 8" (Top)
2 Rows of 53 = 106 - S7021 @ 8" (Bot.)
Curb Line ℄ VB
Face of Slab ℄ Pier 1N
F
23'-3"
3 Rows of 7 = 21 Each - S6126 thru S6132 (Top)
3 Rows of 8 = 24 Each - S6126 thru S6132 (Bot)
Spaced as shown in Section A-A - Slab
Face of Slab for Spans 1N & 2N
2 Rows of 252 = 504 - S6029 @ 8" (Top)
2 Rows of 252 = 504 - S7055 @ 8" (Bot)
108 - S6084 (Top)
108 - S7074 (Bott.)
These bars spaced @ 8" along North fascia and placed radially
29 - S6084 (Top)
29 - S7074 (Bot.)
These bars spaced @ 8" along North fascia and fanned.
20 - S6084 (Top)
20 - S7074 (Bot.)
These bars spaced @ 8" along North fascia line and fanned.
℄ Pier 2N
Note: All transverse slab bars are placed parallel to ℄ Pier 4N in Spans 2N & 3N. All longitudinal bars are placed parallel to the nearest beam.
2 Rows of 49 = 98 - S6027 Staggered (Top) Spaced between S6122 & S6017 Bars (Slab & Curb)
6 Rows of 38 = 228 - S6122 (Top)
6 Rows of 43 = 258 - S6122 (Bot)
Spaced as shown in Section A-A (Slab)
Note: For details K, L, & M see Sh. # 169
SPAN 1N
SPAN 2N
SPAN 3N
℄ Girder (5)
Const. Jt.
Const. Joint
3'-6"
Safety Curb
Curb Line
DETAIL Q
27 Each - S6085 thru S6088 (Top)
27 Each - S7124 thru S7127 (Bott.)
1 - S6076 (Top)
1 - S7048 (Bot.)
15 - Hook Bolts @ 15' ± c. to c. See Sheet No 171 for location.
℄ Girder (5)
Const. Joint
2'-3" Min. Lap #7 Bars.
1'-11" Min. Lap #6 Bars
2 - S6076 @ 8" (Top)
2 - S7048 @ 8" (Bot)
4 - S6115 @ 8" (Top)
4 - S7073 @ 8" (Bot)
12 Each - S6112 thru S6114 &
10 Each - S6101 thru S6111 @ 8" (Top)
12 Each - S7070 thru S7072 &
10 Each - S7059 thru S7069 @ 8" (Bot)
16 - S6037, 16 - S6117, 22 - S6118, 28 - S6119,
16 - S7056, 16 - S7057, 22 - S7058, 28 - S7075,
Const. Jt.
2 - S6123 (Top)
2 - S7077 (Bott.)
6 - S6048 (Top)
6 - S7006 (Bott.)
12 - S6123 (Top)
12 - S7077 (Bott.)
3 Rows of 3 = 9 - S6133 (Top)
3 Rows of 3 = 9 - S6133 (Bot)
4 - S6062 @ 8" (Top)
4 - S7037 @ 8" (Bot)
℄ 8" Downspout
28 - S6120, 38 - S6121 @ 8" (Top)
28 - S7076, 38 - S7110 @ 8" (Bot)
29 - S6038 (Top)
29 - S7081 (Bott.)
℄ 6" Downspout
Drain Inlet
Drain Inlet
Curb & Base Line W.B. Expwy.
136 - S401 @ 1'-6" Safety Curb
℄ Pier No. 3N Sta. 4+52.00
℄ Pier No. 4N Sta. 5+54.00
Detail K
Fascia
℄ 6" Downspout
Drain Inlet
2 Rows of 8 = 16 - S435 (Safety Curb)
51 - S401 @ 1'-6" Safety Curb
Note: See detail below for longitudinal steel between Girders (6) & (8)
4 - S6001 @ 8" (Top)
4 - S7001 @ 8" (Bot)
6 Rows of 3 = 18 - S6017 (Top)
6 Rows of 3 = 18 - S6017 (Bot)
℄ Pier No. 1N Sta. 2+62.958
℄ Pier No. 2N Sta. 3+50.00
6 Rows of 3 = 18 - S512 (Safety Curb)
4 - S6001 @ 8" (Top)
4 - S7001 @ 8" (Bot)
℄ Girder (6)
℄ Pier 3N
℄ Pier 4N
℄ Pier 2N
℄ Pier 3N
3'-0" Equal Spaces 3'-0"
1 - S6009 (Top & Bot)
3 Rows of 3 = 9 - S513 (Safety Curb)
Face of Safety Curb (Span 2N)
℄ Pier 2N
Face of Safety Curb (Span 1N)
℄ Girder (8)
4 - S6001 @ 8" (Top)
4 - S7001 @ 8" (Bot)
PLAN
Parapet Not Shown
6 Rows of 5 = 30 - S6017 (Top)
6 Rows of 5 = 30 - S6017 (Bot)
5 Rows of 4 = 20 - S6017 (Top)
5 Rows of 4 = 20 - S6017 (Bot)
2 Rows of 8 = 16 - S6017 (Top)
2 Rows of 8 = 16 - S6017 (Bot)
STAGGER DIAGRAM
For S6027 Bars (Top.)
Concrete above parapet const. joint to be included in Item 514 for payment (Typ)
Base Line VB
10'-7" from Sta. 2+97.68 VB to Pier 4N
Varies
3'-7"
Measured Perpendicular to W.B. Base Line
23'-3" for Span 1N only
6'-0"
1'-0"
2'-3"
2'-3"
1'-2"
S504
S5 Bars
S502
1/4" /ft.
S431 (Typ)
Span 1N = 9 1/2"
Span 2N, 3N = 8 3/4"
7 eq. spcs. (Typ. between beams)
S6 Bars (Top.)
Const. Jt. (Span 1N)
3'-6"
Const. Joint Span 2N, 3N
Hook Bolt (Span 2N, 3N)
1'-11" Min. Lap #6 Bars (Span 2N, 3N)
1'-11" Min lap #6 Bars (Typ) (Span 1N)
S6 Bars
Base Line W. B. Expwy.
H5 Bars (Typ.)
S502 Bar
Omit two S6027 Bars over Pier 3N where inlet occurs.
Superelevation Varies
1 1/2" Cl. (Typ)
S512 or 513 Bars
1 1/2" Cl. (Typ.)
Const. Jt. Level (Typ)
S6027
1" Dia. halfround drip groove (Typ)
9" Haunch (Typ)
Note: Slab thickness shown includes 1" monolithic wearing surface.
2'-3" Min. Lap #7 Bars (Typ) (Span 1N)
2'-3" Min. Lap #7 Bars (Span 2N, 3N)
S7 Bars
S401
Flush (Typ.)
S6027 Bars
2 - Piece Hook Bolt (Typ) See detail - Sheet # 171
Eq. Spc. L/2 - 1'-0"
S6 Bars (Bot.)
L
Typ. between beams
1 1/2" x 3" Key centered in slab (Typ.)
"t" varies. See slab thickness table, Sh. # 176
* See note on Sh. # 175
(1) (2) (3) (4) (5) (6) (7) (8)
NOTE:
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and maximum of 12. Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" width.
TRANSVERSE SECTION A-A
DRAWN FOR SPAN 1N - NOTED FOR SPANS 2N & 3N
• indicates bar in section
° indicates bar over Pier 3N

NOTE
For end finish details see Sheet No 164
For drainage details see Sheet No. 186
For lighting details see Sheet No. 86
For railing details and spacing of bars in parapet see Sheet No. 183
Field bend or cut longitudinal bars where necessary to miss inlets.
For Section F-F see Sheet No. 166

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNITS 2 & 3
BRIDGE NO. HAM-50-1938 R.& L.

H.& E. BRIDGE NO. 1

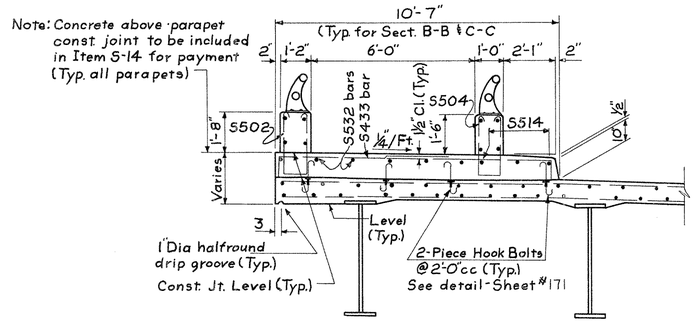
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 7-20-61		W.W.C. 11-3-61	W.A.G. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

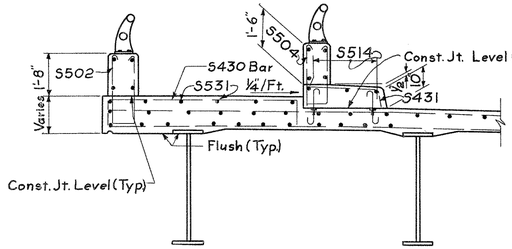
168
227

HAM-50-19.38

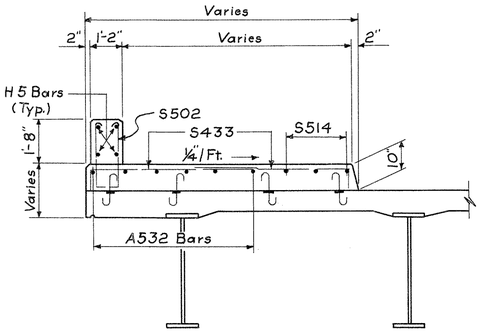
Note: Concrete above parapet const. joint to be included in Item S-14 for payment (Typ. all parapets)



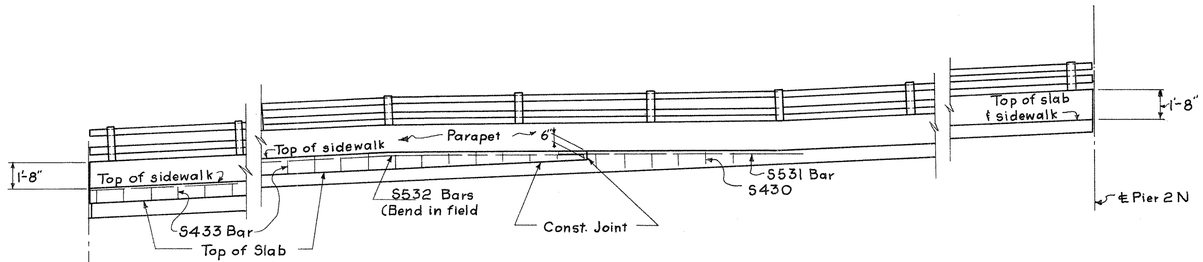
SECTION B-B



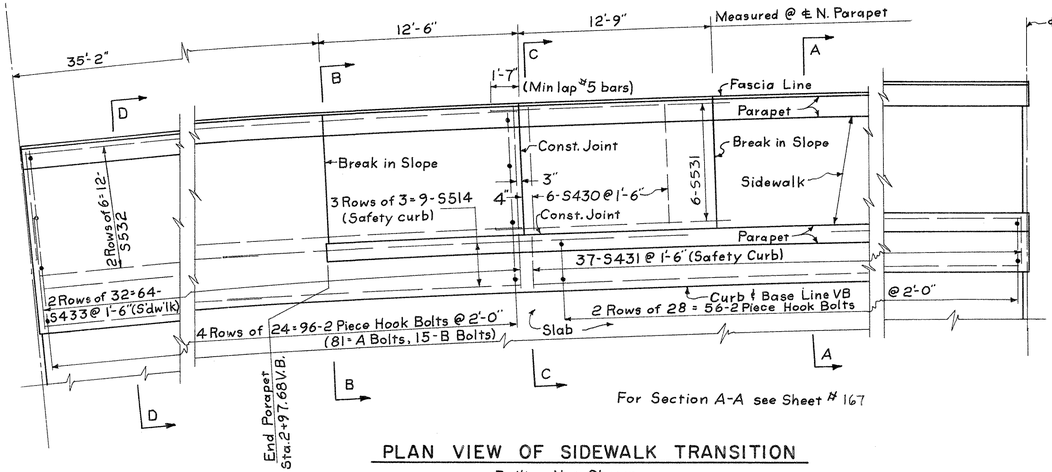
SECTION C-C



SECTION D-D
(Slab Reinf. not shown)



LONGITUDINAL SECTION OF SIDEWALK TRANSITION



PLAN VIEW OF SIDEWALK TRANSITION
Railing Not Shown

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT 2
BRIDGE NO. HAM-50-1938 R.&L.

H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 9-7-61	J.T.C. 4/10/62	W.W.C. 11-6-61	H.A.J. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

163
227

HAM-50-19.38

STAGGER DIAGRAM

DETAIL M

For Details H & J See Sh. # 170

PLAN
(PARAPET NOT SHOWN)

DETAIL K

DETAIL L

TRANSVERSE SECTION A-A
(TYPICAL FOR SPANS 4N-6N INCL.)

Note: All transverse Slab bars are placed parallel to ℄ Pier 4N except as noted. All longitudinal bars are placed parallel to curvature of rdwy.

NOTES:
For End Finish Details see Sheet No. 164
For Drainage Details see Sheet No. 186
For Lighting Details see Sheet No. 86
For Railing Details and spacing of bars in parapet see Sheet No. 183
Field bend or cut longitudinal bars where necessary to miss drain inlets.

• Indicates bars in section
○ Indicates bars over piers

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS UNIT 4
BRIDGE. NO HAM-50-1938 R&L

H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.O.G.	B.O.G. 7-10-61		W.W.C. 10-25-61	W.M.S. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

170
227

HAM-50-19.38

DETAIL H

DETAIL J

DETAIL G

PLAN
Parapet Not Shown

TRANSVERSE SECTION A-A
TYPICAL FOR SPANS 7N-9N INCL.

STAGGER DIAGRAM
FOR S6011 & S6012 Bars (Top)

NOTE
For end finish details see sheet No.164
For drainage details see sheet No.186
For lighting details see sheet No.86
For railing details and spacing of bars in parapet see sheet No.183
Field bend or cut longitudinal bars where necessary to miss inlets.
For Detail A see sheet No. 175

• indicates bar in section
◦ indicates bar over pier

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT 5
BRIDGE NO. HAM-50-1938 R.&L.

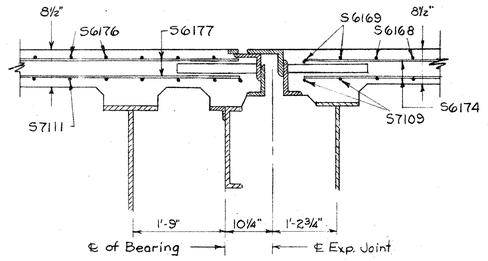
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	DRS 7-6-61		W.W.C. 10-24-61	H.A.B. 4-20-62	

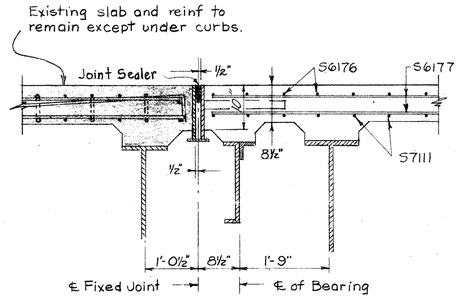
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

171
227

HAM-50-19.38

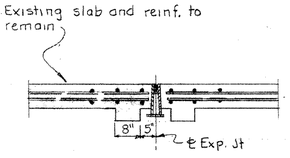


SECTION R-R

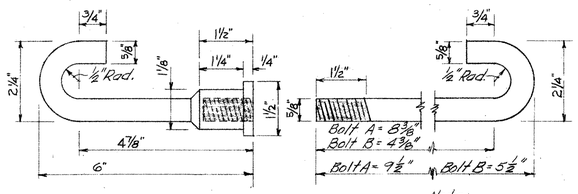


SECTION D-D

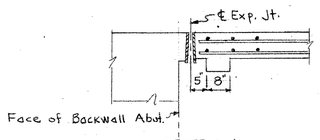
For Location of Sections J-J, L-L, and R-R see Sheet #172



SECTION J-J



Note: All bolts are "A" except where noted on Plans.

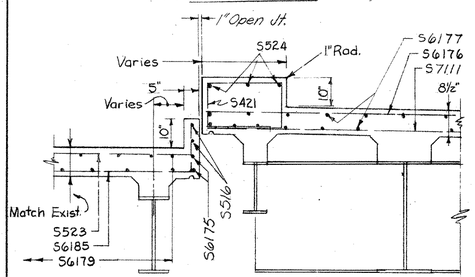


SECTION L-L

Note: The left bolt shall be placed in the deck slab. Contractor shall provide means of protecting the open end of the socket from damage until the Median is poured at that location.

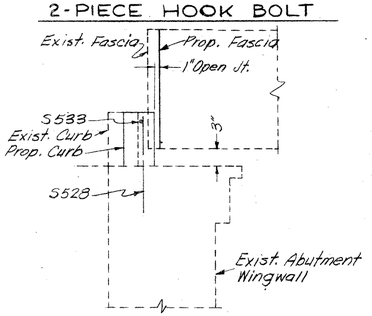
Material for hook bolts shall be steel and shall meet the requirements of Sec. M-71 or M-72 of the Construction and Materials Specifications.

Cost of hook bolts shall be included in items S-1. "Class C Concrete, Superstructure"

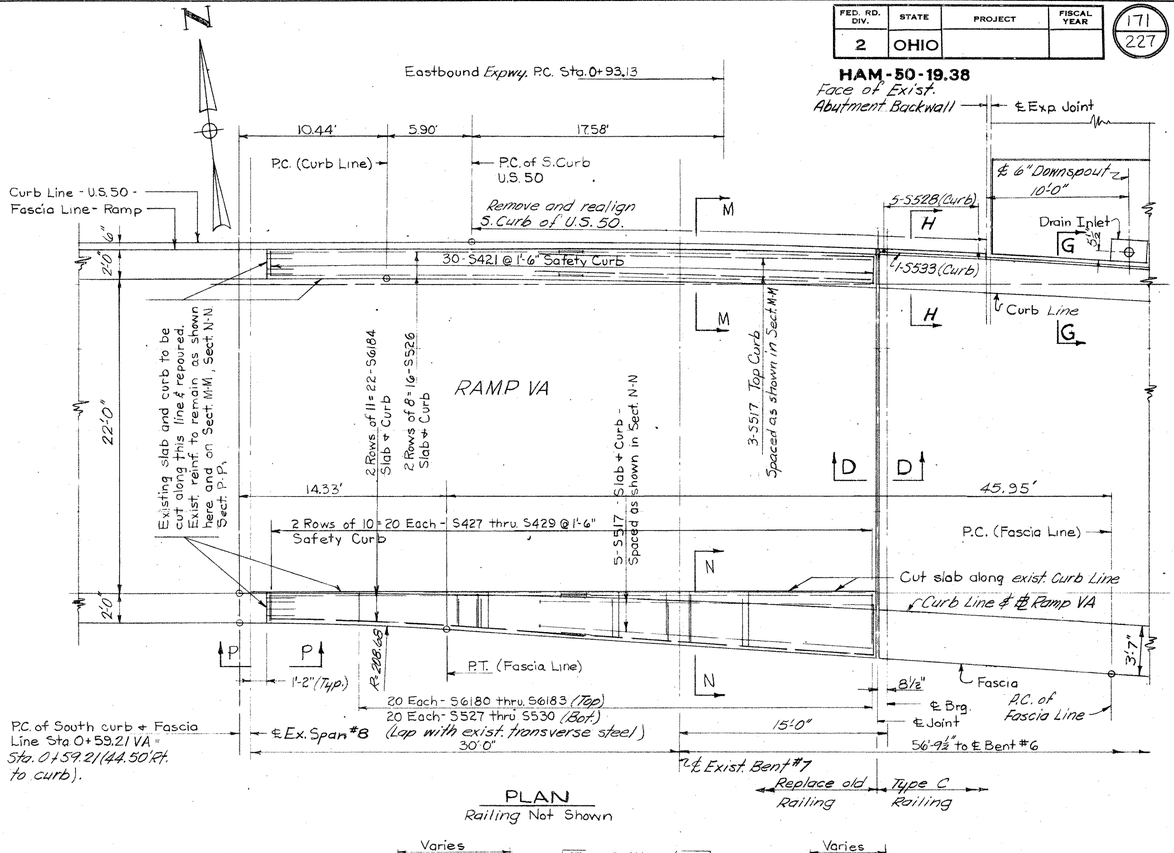


SECTION G-G

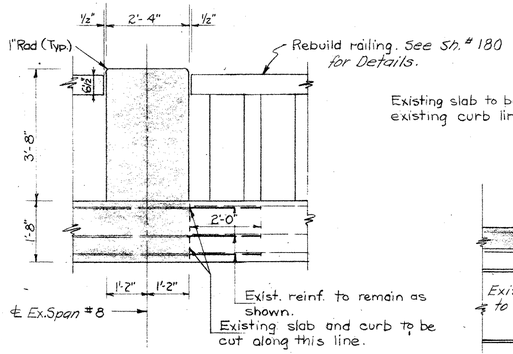
2-PIECE HOOK BOLT



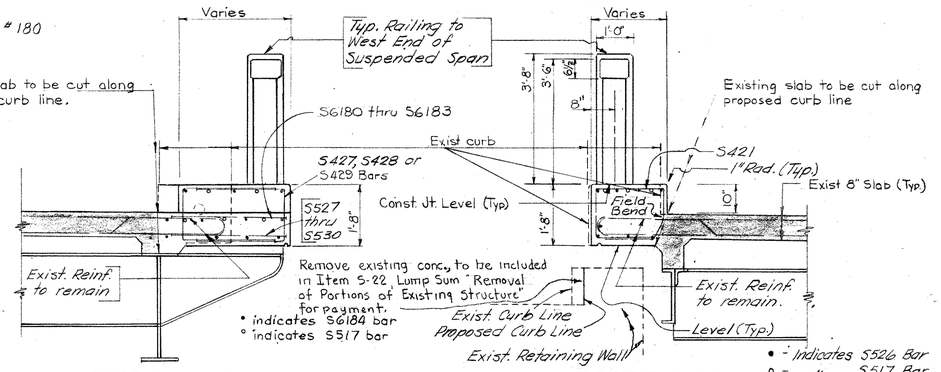
SECTION H-H



PLAN
Railing Not Shown



SECTION P-P



SECTION N-N

SECTION M-M

Note: Cost of removing existing slab and railing to be included in Item S-22 Lump Sum "Removal of Portions of Existing Structure", for payment.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS UNIT I
BRIDGE NO. HAM-50-1938 R&L.

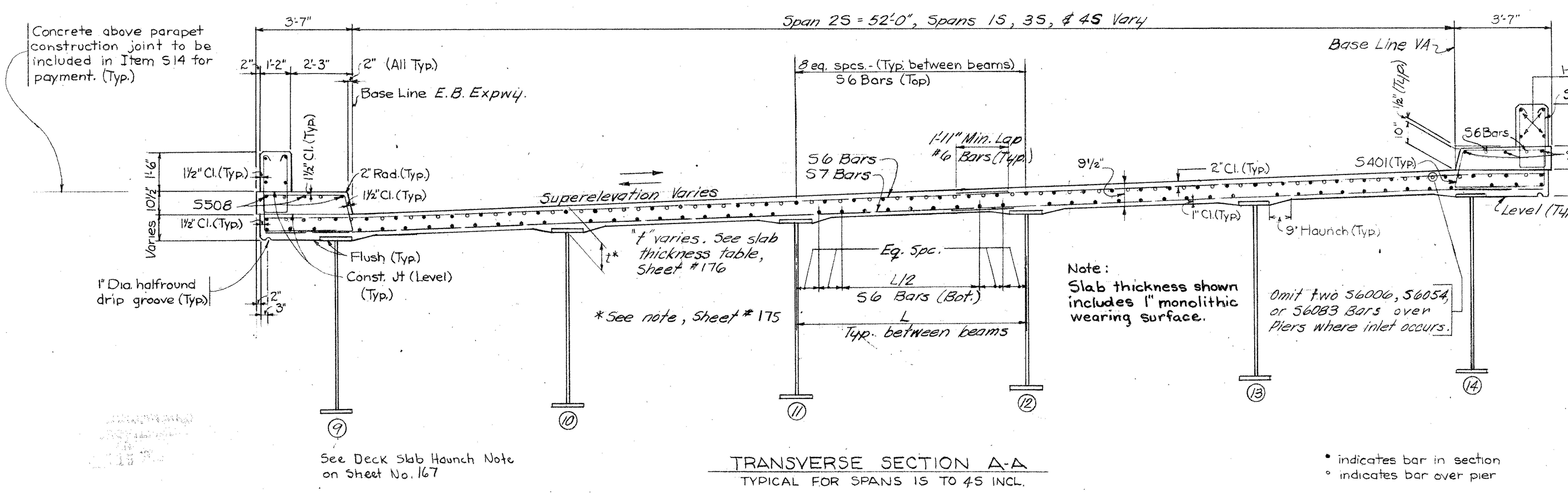
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 8-21-61		W.W.C. 11-1-61	W.A.Z. 4-28-62	


FED. RD. DIV. 2 | STATE OHIO | PROJECT | FISCAL YEAR
172 / 227
HAM-50-19.38
PLAN
Parapet Not Shown
RAMP VA
E.B. 6TH ST. EXPWY.
DETAIL P
SECTION U-U
Note: Slab shall not bear on transverse beams except where sections are shown calling for transverse support.
SECTION T-T
SECTION S-S
STAGGER DIAGRAM FOR S6149 BARS
Note: All transverse bars are placed parallel to ℄ Pier 18. All longitudinal bars are placed parallel to nearest beam.
Note: Slab thickness shown includes 1" monolithic wearing surface
Note: For Sect. D-D, R-R and G-G see Sheet No. 171
• indicates bar in section
∘ indicates bar over Pier #15 ℄ Pier #16.
• indicates bar in section
∘ Indicates bar over Pier #14
Note: Cost of removing existing slab to be included in Item S-22, Lump Sum "Removal of Portions of Existing Structure."
HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO
SUPERSTRUCTURE DETAILS UNIT I
BRIDGE NO. HAM-50-1938 R.&L.
H.&E. BRIDGE NO. 1
DESIGNED D.R.S. | DRAWN D.R.S. 7-17-61 | TRACED | CHECKED W.W.C. 10-25-61 | REVIEWED DATE 4-20-62 | REVISED

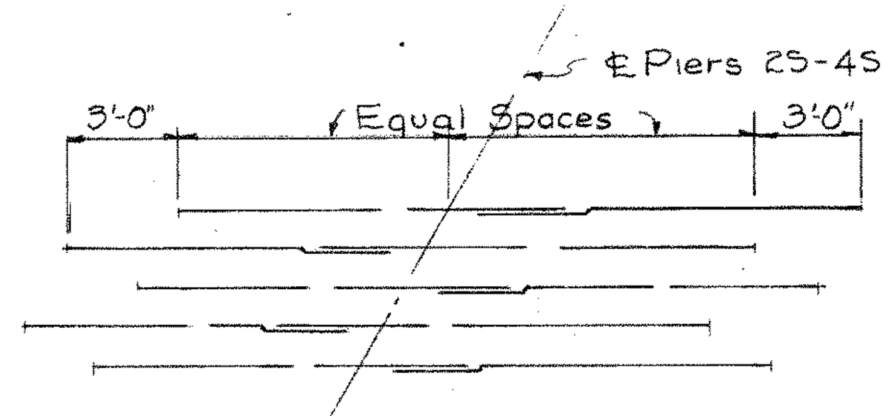
1 Each - S6187 - S6197 @7½"(Top)
1 Each - S7113 - S7123 @7½"(Bot)
1-S6009 (Top & Bot.)
2-Rows of 8 = 16-S435 (Safety Curb)
4-S6075 @7½"(Top)
4-S7051 @7½"(Bot.)
P.T. 3+33.90
2 Rows of 47 = 94-S6006 Staggered (Top)
Spaced as shown in Section A-A - Slab & Curb (Pier 2S)
Fascia
312 - S401 @ 1'-6" (Safety Curb)
16 Rows of 3 = 48 - S508 (Safety Curb)
Curb & Base Line E.B. Expwy.
℄ Pier 2S Sta. 3+62.00
℄ Pier No. 3S Sta. 4+99.00
℄ Pier No. 4S Sta. 6+39.50
℄ Pier 5S Sta. 7+29.93
4-S6001 @7½"(Top)
4-S7001 @7½"(Bot)
Detail F (See Sh. #174)
℄ Pier No. 1S Sta. 2+52.20
743 - S6038 @7½"(Top)
743 - S7004 @7½"(Bot)
2-S6014 @7½"(Top)
2-S7009 @7½"(Bot)
4-S6021 @7½"(Top)
4-S7012 @7½"(Bot)
Nose Sta. = P.T. Sta. 3+33.90 (26' Rt.) = P.O.T. Sta. 3+20.71 VA (26' Lt.)
2-S6039 @7½"(Top)
2-S7004 @7½"(Bot)
SPAN 1S
SPAN 2S
SPAN 3S
SPAN 4S
2 Rows of 47 = 94-S6054 Staggered (Top) Spaced as shown in Section A-A - Slab & Curb (Pier 3S)
2 Rows of 38 = 76 - 2 Piece Hook Bolts @ 2'-0"
See Detail : Sheet No. 171
3 Rows of 3 = 9-S510 (Top Median)
See Sect. S-S, Sheet No. 172 for Median Detail
Median
2 Rows of 51 = 102-S403 @ 1'-6" (Median)
2-S403
Varies
Note: All transverse slab bars are placed parallel to ℄ Pier 5S, except as noted. All longitudinal bars are placed parallel to the nearest beam.
16 Rows of 12 = 192 - S6054 (Top)
16 Rows of 12 = 192 - S6054 (Bot)
16 Rows of 11 = 176 - S6074 (Top)
16 Rows of 13 = 208 - S6074 (Bot)
16 Rows of 11 = 176 - S6060 (Top)
16 Rows of 13 = 208 - S6060 (Bot)
16 Rows of 11 = 176 - S6073 (Top)
16 Rows of 13 = 208 - S6073 (Bot)
1 Each - S6069 - S6072 @7½"(Top)
1 Each - S7044 - S7047 @7½"(Bot)
1 Each - S6061 - S6068 @7½"(Top)
1 Each - S7036 - S7043 @7½"(Bot)
4-S6026 @7½"(Top)
4-S7018 @7½"(Bot)
142-S6082 @7½"(Top)
142-S7054 @7½"(Bot)
2 Rows of 47 = 94-S6083 Staggered (Top) Spaced as shown in Section A-A Slab & Curb (Pier 4S)
6-S6023 @7½"(Top)
6-S7015 @7½"(Bot)
19 Each - S6076 Thru S6081 @7½"(Top)
19 Each - S7048 Thru S7053 @7½"(Bot)
112-S6082 @7½"(Top)
112-S7054 @7½"(Bot)
8-S6026 @7½"(Top)
8-S7018 @7½"(Bot)
232-S6082 @7½"(Top)
232-S7054 @7½"(Bot)
4-S6026 @7½"(Top)
4-S7018 @7½"(Bot)
113 - S6082 @7½"(Top)
113 - S7054 @7½"(Bot)
4-S6029 @7½"(Top)
4-S7021 @7½"(Bot)
2-S6082 @7½"(Top)
2-S7054 @7½"(Bot)
2-S6039 @7½"(Top)
2-S7005 @7½"(Top)
P.T. Sta. 2+99.98 VA
P.T. Sta. 6+50.83 VA
Drain Inlet (Typ)
℄ 8" Downspout (Typ.)
4-S6001 @7½"(Top)
4-S7001 @7½"(Bot)
310 - S401 @ 1'-6" (Safety Curb)
Curb Line
Detail E (See Sh. #174)
16 Rows of 3 = 48 - S506 (Safety Curb)
Spaced as shown in Section A-A
4 Rows of 4 = 16 - S6001 @7½"(Top)
4 Rows of 4 = 16 - S7001 @7½"(Bot.)
1'-11" Min. lap #6 Bars (Typ)
℄ Fascia
1'-7" Min. lap #5 Bars (Typ)
Detail G (See Sh. #170)
N
A
A
F
F

PLAN
Parapet Not Shown



Concrete above parapet construction joint to be included in Item 514 for payment. (Typ.)
3'-7"
Span 2S = 52'-0", Spans 1S, 3S, & 4S Vary
3'-7"
2" (All Typ)
Base Line E.B. Expwy.
8 eq. spcs. - (Typ. between beams)
S6 Bars (Top)
Base Line VA
H5 Bars (Typ.)
S502 (Typ)
S506
S6 Bars
1½" Cl. (Typ)
2" Rad. (Typ)
1½" Cl. (Typ)
S508
Superelevation Varies
S6 Bars
S7 Bars
1'-11" Min. Lap #6 Bars (Typ.)
2" Cl. (Typ)
S401 (Typ)
1" Cl. (Typ)
9" Haunch (Typ)
Level (Typ.)
Flush (Typ)
Const. Jt (Level) (Typ.)
1" Dia. halfround drip groove (Typ)
"t" varies. See slab thickness table, Sheet #176
Eq. Spc.
L/2
S6 Bars (Bot.)
L
Typ. between beams
*See note, Sheet #175
Note: Slab thickness shown includes 1" monolithic wearing surface.
Omit two S6006, S6054, or S6083 Bars over Piers where inlet occurs.
9
10
11
12
13
14
See Deck Slab Haunch Note on Sheet No. 167
• indicates bar in section
° indicates bar over pier

TRANSVERSE SECTION A-A
TYPICAL FOR SPANS 1S TO 4S INCL.



STAGGER DIAGRAM
For S6006, S6054, & S6083

NOTE:
For end finish details see Sheet No. 165
For drainage details see Sheet No. 186
For lighting details see Sheet No. 86
For railing details and spacing of bars in parapet see Sheet No. 182
Field bend or cut longitudinal bars where necessary to miss inlets.
For Section F-F, See Sheet No. 166

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT 6
BRIDGE NO. HAM-50-1938 R.&L.

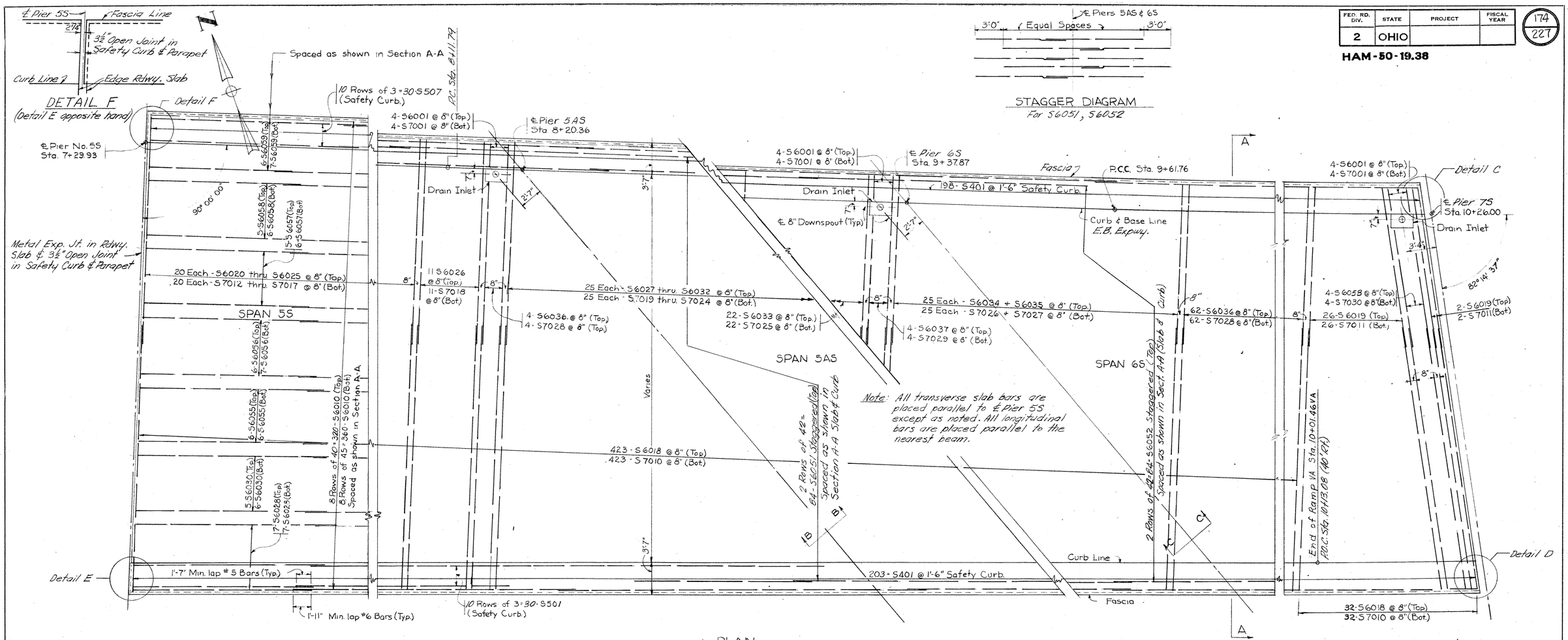
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 7-14-61		W.W.C. 10-25-61	N.A.I.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

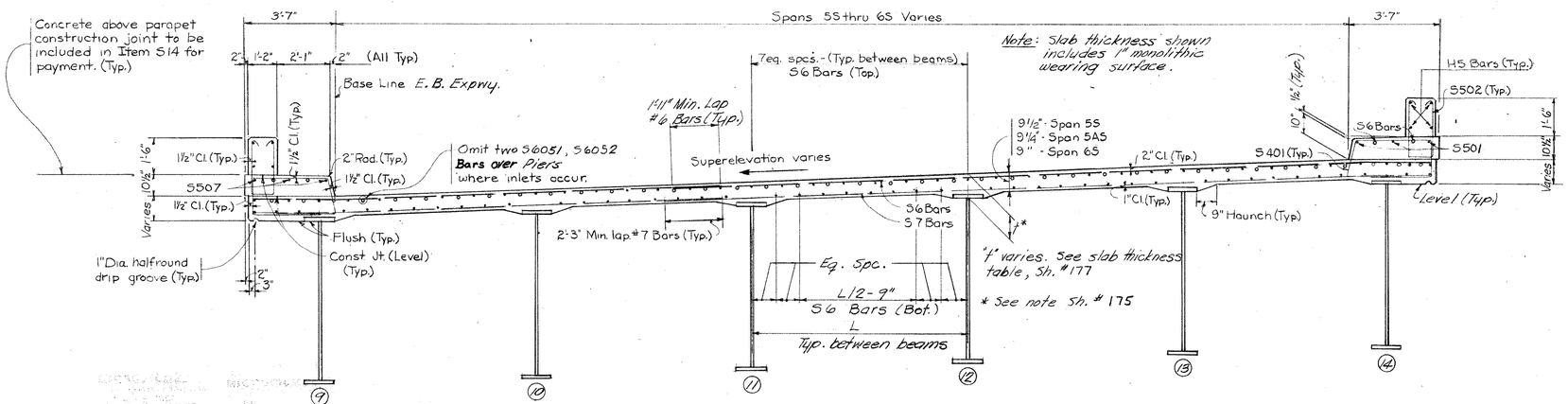
174 / 227

HAM-50-19.38



PLAN
Parapet Not Shown

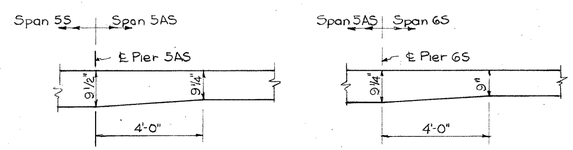
For Details C & D See Sh. # 175



See Deck Slab Haunch Note on Sheet No. 167

TRANSVERSE SECTION A-A
TYPICAL FOR SPANS 5S TO 6S INCL.

* indicates bar in section
° indicates bar over pier



SECTION B-B
(Showing slab thickness transition between Spans)

SECTION C-C

NOTE
For end finish details see Sheet No 165
For drainage details see Sheet No 186
For lighting details see Sheet No 86
For railing details and spacing of bars in parapet see Sheet No 183
Field bend or cut longitudinal bars where necessary to miss inlets

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS UNIT 7
BRIDGE NO. HAM-50-1938 R.& L.

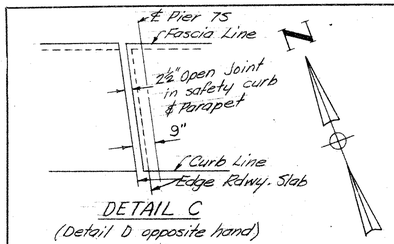
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 7-11-61		W.W.C. 10-25-61	W.H.E. 4-20-62	

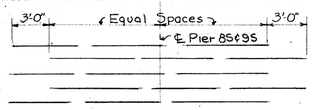
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

175 / 227

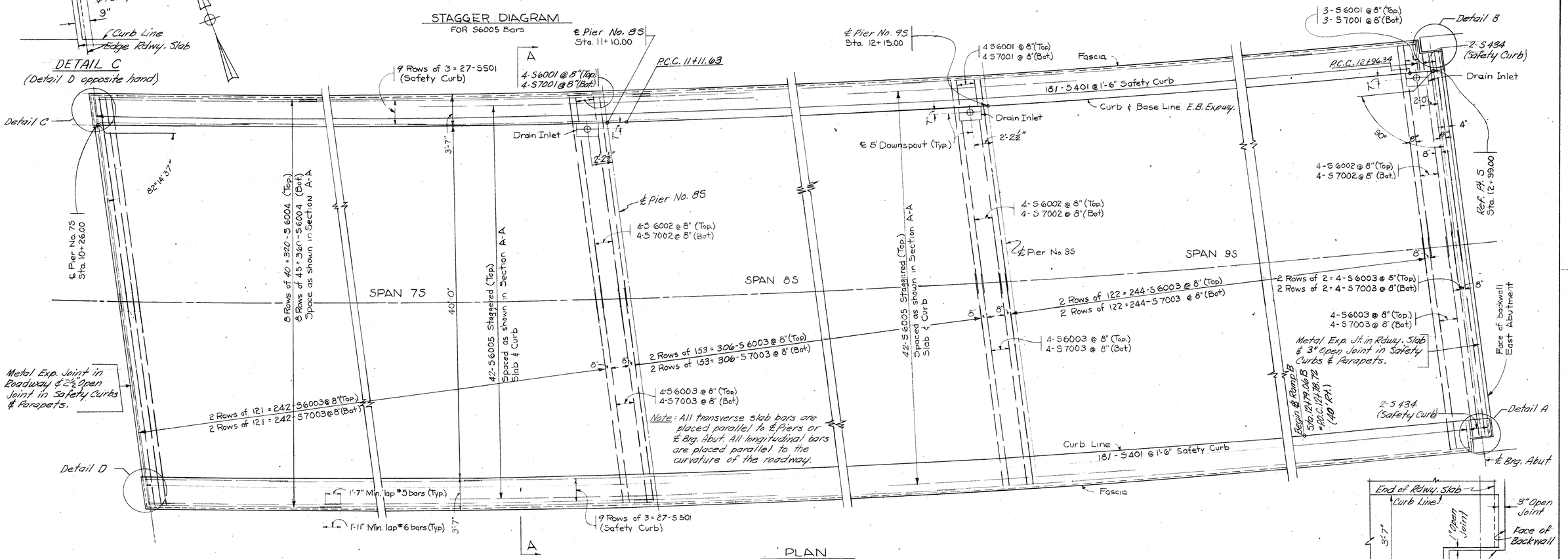
HAM-50-19.38



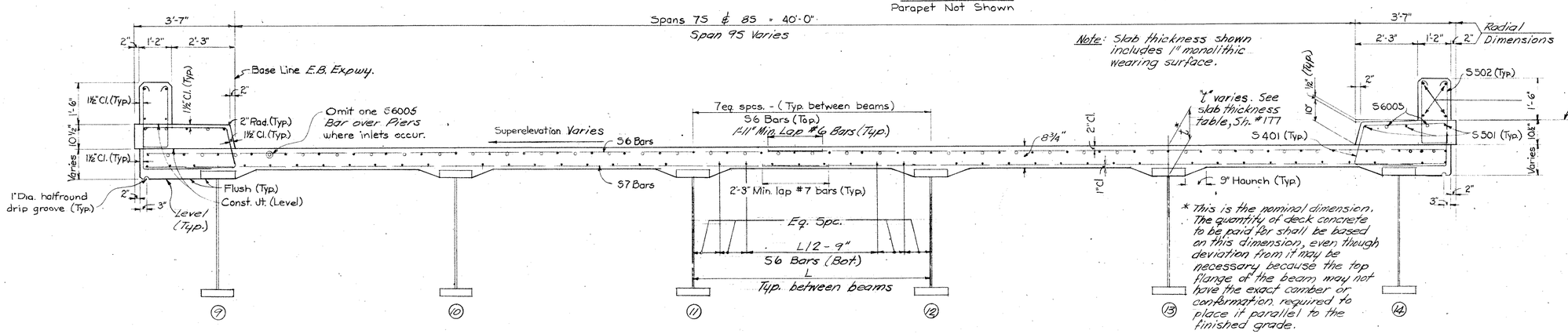
DETAIL C
(Detail D opposite hand)



STAGGER DIAGRAM
FOR S6005 Bars



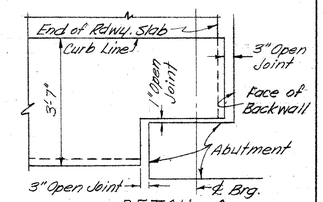
PLAN
Parapet Not Shown



See Deck Slab Haunch Note on Sheet No. 167

* indicates bar in section.
° indicates bar over pier.

TRANSVERSE SECTION A-A
TYPICAL FOR SPANS 75 TO 95 INCL.



DETAIL A
(Detail B opposite hand)

NOTE
For end finish details see sheet No. 165
For drainage details see sheet No. 186
For lighting details see sheet No. 86
For railing details and spacing of bars in parapet see sheet No. 183
Field bend or cut longitudinal bars where necessary to miss inlets.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
UNIT 8
BRIDGE NO. HAM-50-1938 R.&L.

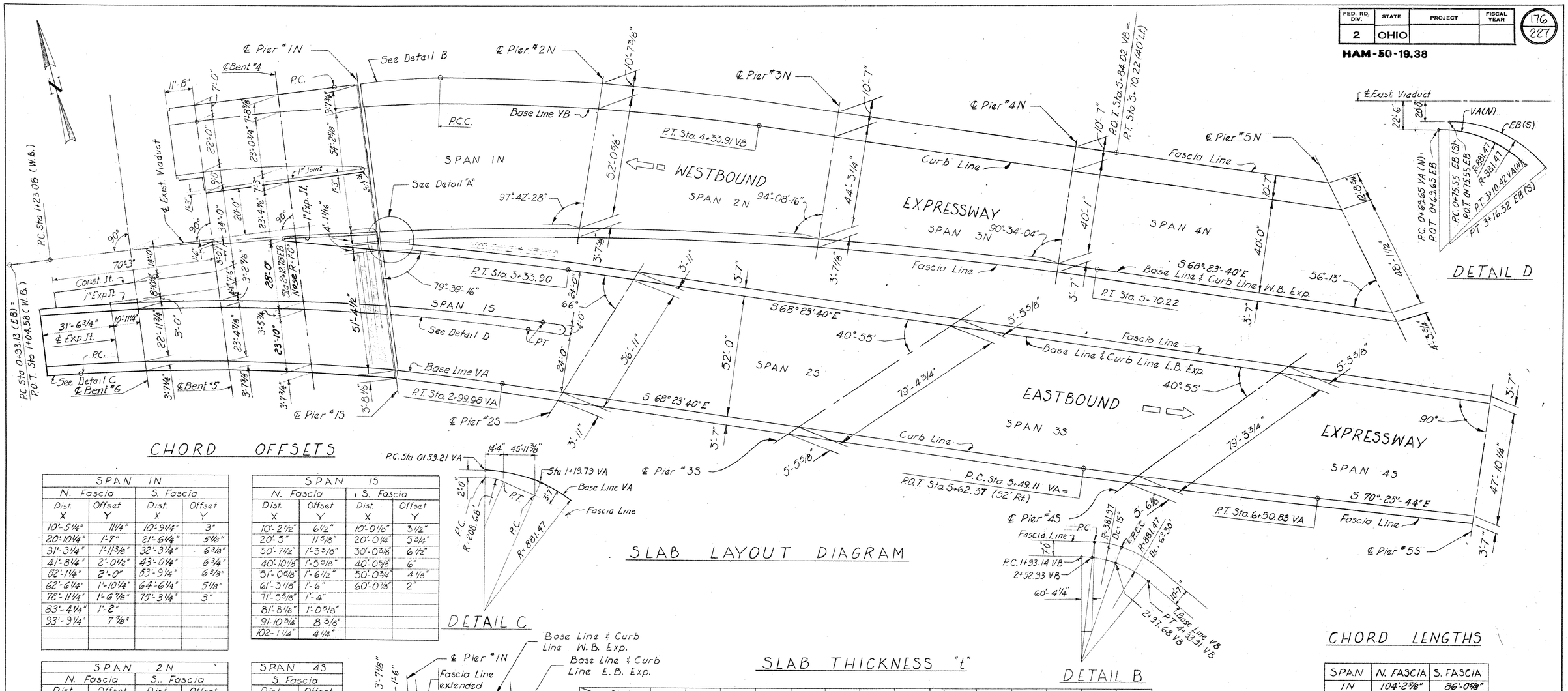
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.R.S.	D.R.S. 7-3-61		W.W.C. 10-24-61	W.L.E. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

176 / 227

HAM-50-19.38



CHORD OFFSETS

SPAN 1N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-5 1/4"	1 1/4"	10'-9 1/4"	3"
20'-10 1/4"	1'-7"	21'-6 1/8"	5 1/8"
31'-3 1/4"	1'-1 3/8"	32'-3 1/4"	6 3/8"
41'-8 1/4"	2'-0 1/2"	43'-0 1/4"	6 3/4"
52'-1 1/4"	2'-0"	53'-9 1/4"	6 3/8"
62'-6 1/4"	1'-10 1/4"	64'-6 1/4"	5 1/8"
72'-11 1/4"	1'-6 7/8"	75'-3 1/4"	3"
83'-4 1/4"	1'-2"		
93'-9 1/4"	7 7/8"		

SPAN 15			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-2 1/2"	6 1/2"	10'-0 1/8"	3 1/2"
20'-5"	11 5/8"	20'-0 1/4"	5 3/4"
30'-7 1/2"	1'-3 3/8"	30'-0 3/8"	6 1/2"
40'-10 1/8"	1'-5 3/8"	40'-0 5/8"	6"
51'-0 5/8"	1'-6 1/2"	50'-0 3/4"	4 1/8"
61'-3 1/8"	1'-6"	60'-0 7/8"	2"
71'-5 5/8"	1'-4"		
81'-8 1/8"	1'-0 5/8"		
91'-10 3/4"	8 3/8"		
102'-1 1/4"	4 1/4"		

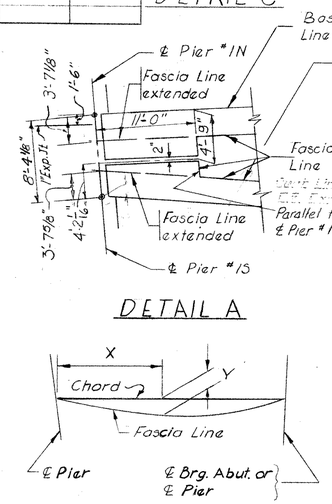
SPAN 2N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-1 3/4"	5 1/2"	10'-2 3/8"	3 1/2"
20'-3 1/2"	9 3/4"	20'-4 3/4"	6 1/8"
30'-5 1/4"	1'-0 1/2"	30'-7 1/8"	8"
40'-7 1/8"	1'-1 7/8"	40'-9 1/2"	9 1/8"
50'-8 7/8"	1'-1 7/8"	50'-11 7/8"	9 1/2"
60'-10 5/8"	1'-0 1/2"	61'-2 1/4"	9 1/8"
71'-0 3/8"	9 3/4"	71'-4 5/8"	8"
81'-2 1/8"	6 1/2"	81'-7 1/8"	6 1/8"
91'-3 7/8"	3 1/4"	91'-9 3/8"	3 1/2"

SPAN 3N	
S. Fascia	
Dist. X	Offset Y
10'-2 3/8"	3 1/2"
20'-4 3/4"	6 1/8"
30'-7 1/8"	8"
40'-9 1/2"	9 1/8"
50'-11 7/8"	9 1/2"
61'-2 1/4"	9 1/8"
71'-4 5/8"	8"
81'-7 1/8"	6 1/8"
91'-9 3/8"	3 1/2"

SPAN 4S	
S. Fascia	
Dist. X	Offset Y
10'-3 1/8"	2 1/2"
20'-7 3/8"	4 1/2"
30'-11"	6 1/8"
41'-2 5/8"	7 3/8"
51'-6 1/4"	8"
61'-10"	8 3/8"
72'-1 5/8"	8 1/8"
82'-5 1/4"	7 1/2"
92'-9"	6 5/8"
103'-0 5/8"	5 1/2"
113'-4 1/4"	4 3/8"
123'-8"	3 1/4"
133'-11 5/8"	2 1/8"
144'-3 1/4"	1 1/8"

SLAB LAYOUT DIAGRAM

DETAIL C



DETAIL A

SLAB THICKNESS "t"

Girder Location		1	2	3	4	5	6	7	8		9	10	11	12	13	14
SPAN 1N	℄ Pier 1	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	SPAN 1S	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
	1/4 Span	11 7/8"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 7/8"	11 7/8"		1'-1"	1'-0 5/8"	1'-0 5/8"	1'-0 5/8"	1'-0 5/8"	1'-0 1/2"
	℄ Span	11 3/4"	11 3/4"	11 3/4"	1'-0 1/8"	1'-0 1/2"	1'-0 1/4"	1'-0 1/8"	11 3/4"		1'-0 3/4"	1'-0 3/4"	1'-0 7/8"	1'-0 1/8"	1'-0 1/2"	1'-0 5/8"
	3/4 Span	1'-0 1/4"	1'-1 1/2"	1'-1 1/8"	1'-0 3/4"	1'-0 5/8"	1'-0 1/4"	1'-0 1/8"	11 3/4"		1'-0 1/2"	1'-0 7/8"	1'-1"	1'-1"	1'-1 1/8"	1'-1 1/4"
	℄ Pier 2	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"	11 3/4"		1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
SPAN 2N	℄ Pier 2	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	SPAN 2S	1'-0 3/4"	1'-0 3/4"	1'-0 1/4"	1'-0 1/4"	1'-0 3/4"	1'-0 3/4"
	1/4 Span	10 7/8"	10 3/8"	10 3/8"	10 1/8"	10"	9 7/8"	10 1/8"	10 1/8"		1'-0 3/4"	1'-0 5/8"	1'-0 7/8"	1'-0 7/8"	1'-0 7/8"	1'-0 5/8"
	℄ Span	10 1/4"	10 3/8"	10 1/4"	10"	10 1/8"	10 1/8"	10 1/8"	10 3/8"		1'-0 3/4"	1'-0 5/8"	1'-0 3/4"	1'-0 7/8"	1'-0 3/4"	1'-0 5/8"
	3/4 Span	10 1/4"	10 1/8"	10"	10"	10 1/8"	10"	10"	10 1/4"		1'-0 5/8"	1'-0 5/8"	1'-0 5/8"	1'-0 1/4"	1'-0 3/8"	1'-0 3/8"
	℄ Pier 3	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 1/4"	1'-0 1/4"	1'-0 3/4"
SPAN 3N	℄ Pier 3	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 1/4"	SPAN 3S	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
	1/4 Span	10 1/8"	10"	10 1/8"	10 1/8"	10 1/8"	10"		10 3/8"		1'-0 3/4"	1'-0 7/8"	1'-0 5/8"	1'-0 5/8"	1'-0 1/2"	1'-0 1/2"
	℄ Span	10 3/8"	10 1/4"	10 3/8"	10 3/8"	10 1/4"	10"		10 1/2"		1'-0 7/8"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"	1'-0 1/4"	1'-0 1/4"
	3/4 Span	10 1/2"	10 3/8"	10 1/2"	10 3/8"	10 1/4"	10 1/4"		10 1/2"		1'-0 7/8"	1'-0 7/8"	1'-0 5/8"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"
	℄ Pier 4	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"	10 1/4"		10 1/4"		1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
SPAN 4N	℄ Pier 4	1'-9"	1'-7 1/2"	1'-8 1/2"	1'-6 3/8"	1'-4 1/4"	1'-7 1/8"			SPAN 4S	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
	1/4 Span	1'-7 3/4"	1'-6 5/8"	1'-7 1/8"	1'-5 3/4"	1'-3 3/4"	1'-6 3/8"				11 1/2"	1'-0 3/4"	1'-0 1/2"	1'-0 1/8"	1'-0 5/8"	1'-0 1/4"
	℄ Span	1'-6 3/8"	1'-5 1/2"	1'-5 3/8"	1'-4 1/2"	1'-2 1/8"	1'-4 1/2"				1'-0 3/8"	1'-0 1/8"	1'-0 5/8"	1'-0 3/4"	1'-0 1/8"	1'-0 3/8"
	3/4 Span	1'-5 1/4"	1'-4 3/8"	1'-4 1/8"	1'-3 1/2"	1'-2 1/4"	1'-2 3/4"				1'-0 1/8"	1'-1"	1'-0 7/8"	1'-1"	1'-1 1/8"	1'-1 1/8"
	℄ Pier 5	1'-4 3/8"	1'-3 1/2"	1'-3"	1'-2 3/8"	1'-1 3/4"	1'-1 1/8"				1'-0 1/4"	1'-0 3/4"	1'-0 3/4"	1'-0 1/4"	1'-0 1/4"	1'-0 3/4"

Note: "t" is measured from top of slab to top of WF beam or from top of slab to bottom of girder flange plate along ℄ of beam or girder as shown in transverse sections. "t" values shall be adjusted as required if actual camber varies from values shown on structural steel sheets or if camber exists where no camber is specified.

CHORD LENGTHS

SPAN	N. FASCIA	S. FASCIA
1N	104'-2 3/8"	86'-0 5/8"
1S	112'-3 3/4"	70'-11 1/8"
2N	101'-5 3/4"	101'-11 7/8"
2S	139'-6 1/2"	97'-7 3/8"
3N	101'-10 3/4"	101'-11 7/8"
3S	140'-6"	140'-6 3/8"
4N	109'-1 7/8"	145'-4 3/4"
4S	86'-3 1/2"	154'-6 7/8"

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. HAM-50-1938 R&L.

H&E. BRIDGE NO.1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.Y. 9-1-61		JNO 12/30/61	W.A.S. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

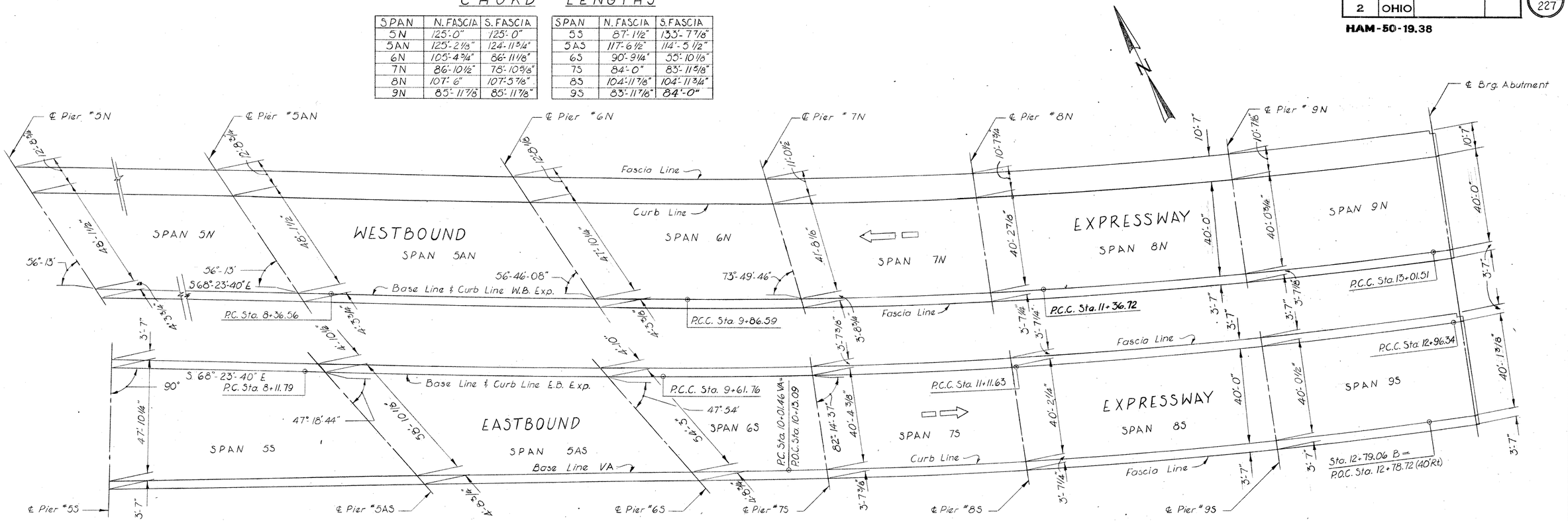
177
227

HAM-50-19.38

CHORD LENGTHS

SPAN	N. FASCIA	S. FASCIA
5N	125'-0"	125'-0"
5AN	125'-2 1/8"	124'-11 3/4"
6N	105'-4 3/4"	86'-11 1/8"
7N	86'-10 1/2"	78'-10 3/8"
8N	107'-6"	107'-5 7/8"
9N	83'-11 7/8"	85'-11 7/8"

SPAN	N. FASCIA	S. FASCIA
5S	87'-1 1/2"	133'-7 7/8"
5AS	117'-6 1/2"	114'-5 1/2"
6S	90'-9 1/4"	55'-10 1/8"
7S	84'-0"	83'-11 5/8"
8S	104'-11 7/8"	104'-11 3/4"
9S	83'-11 7/8"	84'-0"



SLAB LAYOUT DIAGRAM

CHORD OFFSETS

SPAN 5AS			
N. Fascia			
Dist. X	Offset Y		
9'-9 1/2"	0 1/2"		
19'-1 7/8"	1"		
29'-4 5/8"	1 3/8"		
39'-2 1/8"	1 5/8"		
48'-11 3/4"	1 3/4"		
58'-9 1/4"	1 3/4"		
68'-6 3/4"	1 3/4"		
78'-4 3/8"	1 3/8"		
88'-1 7/8"	1 3/8"		
97'-11 3/8"	1"		
107'-9"	0 1/2"		

SPAN 6S			
N. Fascia			
Dist. X	Offset Y		
10'-1"	1 3/8"		
20'-2"	2 5/8"		
30'-3"	3 3/4"		
40'-4 1/8"	4 1/2"		
50'-5 1/8"	4 5/8"		
60'-6 1/8"	4 1/4"		
70'-7 1/8"	3 3/8"		
80'-8 1/8"	2"		

SPAN 8S			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-6"	3 1/8"	10'-6"	3"
21'-0"	5 1/2"	21'-0"	5 3/8"
31'-6"	7 1/4"	31'-5 7/8"	7 1/8"
42'-0"	8 3/8"	41'-11 7/8"	8 1/8"
52'-6"	8 5/8"	52'-5 7/8"	8 1/2"
62'-11 7/8"	8 3/8"	62'-11 7/8"	8 1/8"
73'-5 7/8"	7 1/4"	73'-5 3/4"	7 1/8"
83'-11 7/8"	5 1/2"	83'-11 3/4"	5 3/8"
94'-5 7/8"	3 1/8"	94'-5 3/4"	3"

SPAN 5AN			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
9'-7 1/2"	0 1/4"	10'-5"	0 5/8"
19'-3 1/8"	0 1/2"	20'-10"	1 1/8"
28'-10 5/8"	0 3/4"	31'-3"	1 1/2"
38'-6 1/2"	1"	41'-7 7/8"	1 3/4"
48'-1 3/4"	1 1/8"	52'-0 7/8"	2"
57'-9 3/8"	1 3/8"	62'-5 7/8"	2"
67'-4 7/8"	1 1/2"	72'-10 7/8"	2"
77'-0 3/8"	1 1/2"	83'-3 7/8"	1 3/4"
86'-8"	1 3/8"	93'-8 7/8"	1 1/2"
96'-3 1/2"	1 1/8"	104'-1 7/8"	1 1/8"
105'-11 1/8"	0 7/8"	114'-6 7/8"	0 5/8"
115'-6 5/8"	0 1/2"		

SPAN 7N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
9'-7 7/8"	2"	9'-10 3/8"	1 3/4"
19'-3 5/8"	3 1/2"	19'-8 5/8"	3"
28'-11 1/2"	4 1/2"	29'-7"	3 3/4"
38'-7 3/8"	5"	39'-5 3/8"	4 1/8"
48'-3 1/8"	5"	49'-3 5/8"	3 3/4"
57'-11"	4 1/2"	59'-2"	3"
67'-6 7/8"	3 1/2"	69'-0 3/8"	1 3/4"
77'-2 3/4"	2"		

SPAN 8N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
9'-9 1/4"	2 7/8"	9'-9 1/4"	2 7/8"
19'-6 1/2"	5 1/4"	19'-6 1/2"	5 1/8"
29'-3 1/8"	7 1/8"	29'-3 3/4"	7"
39'-1 1/8"	8 3/8"	39'-1"	8 1/4"
48'-10 3/8"	9"	48'-10 1/4"	8 7/8"
58'-7 5/8"	9"	58'-7 1/2"	8 7/8"
68'-5"	8 1/2"	68'-4 3/4"	8 1/4"
78'-2 1/4"	7 1/4"	78'-2"	7 1/8"
87'-11 1/2"	5 1/2"	87'-11 1/4"	5 3/16"
97'-8 3/4"	3"	97'-8 1/2"	3"

SPAN 7S			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-6"	2"	10'-6"	2"
21'-0"	3 1/2"	20'-11 7/8"	3 3/8"
31'-6"	4 3/8"	31'-5 7/8"	4 1/4"
42'-0"	4 5/8"	41'-11 7/8"	4 1/2"
52'-6"	4 3/8"	52'-5 3/4"	4 1/4"
63'-0"	3 1/2"	62'-11 3/4"	3 3/8"
73'-6"	2"	73'-5 3/4"	2"

SPAN 9S			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
10'-6"	2 3/8"	10'-6"	2 1/4"
21'-0"	4 1/8"	21'-0"	3 3/4"
31'-6"	5 1/4"	31'-6"	4 5/8"
42'-0"	5 1/2"	42'-0"	4 3/4"
52'-6"	5 1/4"	52'-6"	4 1/4"
63'-0"	4 1/8"	63'-0"	3 1/8"
73'-5 7/8"	2 3/8"	73'-6"	1 1/2"

SPAN 6N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
9'-7"	0 3/4"	9'-7 7/8"	1"
19'-2"	1 1/4"	19'-3 7/8"	1 7/8
28'-8 7/8"	1 3/4"	28'-11 3/4"	2 5/8"
38'-5 1/8"	2 1/4"	38'-7 5/8"	3 1/4"
47'-10 7/8"	2 1/2"	48'-3 1/2"	3 5/8"
57'-5 7/8"	2 3/4"	57'-11 3/8"	3 3/8"
67'-0 7/8"	2 7/8"	67'-7 3/8"	2 3/4"
76'-7 3/4"	2 3/4"	77'-3 1/4"	1 5/8"
86'-2 3/4"	2 3/8"		
95'-9 3/4"	1 3/8"		

SLAB THICKNESS "t"

Girder Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14
℄ Pier 5	1'-4 1/2"	1'-3 1/2"	1'-3"	1'-2 3/8"	1'-1 3/4"	1'-1 1/8"			11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"
1/4 Span	1'-4"	1'-2 5/8"	1'-2 3/8"	1'-1 7/8"	1'-1 3/8"	1'-0 3/4"			11 3/8"	11 3/8"	11 3/4"	11 3/4"	11 3/4"	11 3/4"
℄ Span	1'-3 3/8"	1'-1 3/4"	1'-1 5/8"	1'-1 1/4"	1'-1"	1'-0 1/2"			11 3/8"	11 3/8"	11 3/8"	11 1/2"	11 3/8"	11 1/2"
3/4 Span	1'-2 3/4"	1'-1"	1'-0 7/8"	1'-0 3/4"	1'-0 5/8"	1'-0 3/8"			11 1/2"	11 1/2"	11 3/8"	11 1/2"	11 3/8"	11 1/2"
℄ Pier 5A	1'-2 1/8"	1'-0 1/8"	1'-0"	1'-0"	1'-0 1/4"	1'-0 3/8"			11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"
℄ Span	1'-2 1/8"	1'-0 1/8"	1'-0"	1'-0"	1'-0 1/4"	1'-0 3/8"			11 1/2"	11 1/2"	11 3/8"	11 3/8"	11 3/8"	11 1/4"
1/4 Span	1'-1 3/8"	11 3/4"	11 3/4"	11 3/4"	11 7/8"	1'-0 1/8"			11 3/8"	11 1/4"	11 3/8"	11 3/8"	11 1/2"	11 3/8"
℄ Span	1'-0 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 3/4"			11 3/8"	11 3/8"	11 3/8"	11 3/8"	11 5/8"	11 5/8"
3/4 Span	11 3/4"	11 1/8"	11 1/4"	11 1/4"	11 1/4"	11 1/2"			11 1/2"	11 1/2"	11 3/8"	11 5/8"	11 5/8"	11 3/4"
℄ Pier 6	10 1/2"	10 3/8"	10 1/8"	10 1/8"	10 1/8"	10 1/8"			11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"
℄ Pier 6	10 7/8"	10 7/8"	10 7/8"	10 7/8"	10 7/8"	10 7/8"			11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"	11 1/2"
1/4 Span	10 3/4"	10 3/4"	10 5/8"	10 5/8"	11"	10 7/8"			11 1/4"	11 1/2"	11 1/2"	11 1/4"	11 1/4"	11"
℄ Span	10 3/4"	10 7/8"	11"	11"	11"	10 7/8"			11 3/8"	11 1/4"	11 1/2"	11 1/4"	11 1/8"	10 7/8"
3/4 Span	11"	11"	11"	11"	11"	11"			11 1/2"	11 3/8"	11 5/8"	11 3/8"	11 1/4"	11 1/8"
℄ Pier 7	10 1/8"	10 7/8"	10 7/8"	10 7/8	10 7/8"	10 7/8"			11 1/2"	11 1/4"	11 1/2"	11 1/2"	11 1/2"	11 1/2"
℄ Pier 7	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1/4 Span	1'-1 7/8"	1'-1 5/8"	1'-1 5/8"	1'-1 1/2"	1'-1 3/8"	1'-1 3/8"			1'-0 7/8"	1'-0 3/8"	1'-0 1/2"	1'-0 1/2"	1'-0 1/2"	1'-0 5/8"
℄ Span	1'-1 7/8"	1'-1 7/8"	1'-1 5/8"	1'-1 1/2"	1'-1 3/8"	1'-1 3/8"			1'-0 7/8"	1'-0 1/8"	1'-0 1/2"	1'-0 1/2"	1'-0 1/2"	1'-0 3/4"
3/4 Span	1'-1 3/8"	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	1'-1 1/8"	1'-1 1/8"			1'-0 1/2"	1'-0 1/8"	1'-0 1/4"	1'-0 1/4"	1'-0 3/8"	1'-0 1/2"
℄ Pier 8	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
℄ Pier 8	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1/4 Span	1'-0 5/8"	1'-0 1/2"	1'-0 5/8"	1'-0 3/4"	1'-1"	1'-1 1/2"			1'-0 3/4"	1'-0 1/8"	1'-0 1/4"	1'-0 1/2"	1'-0 3/8"	1'-0 5/8"
℄ Span	1'-0 7/8"	1'-0 5/8"	1'-0 3/4"	1'-1"	1'-1 1/4"	1'-1 3/4"			1'-1 1/8"	1'-0 3/8"	1'-0 3/8"	1'-0 1/2"	1'-0 3/8"	1'-0 7/8"
3/4 Span	1'-1"	1'-0 3/4"	1'-0 7/8"	1'-0 7/8"	1'-1 1/8"	1'-1 1/2"			1'-0 3/4"	1'-0 1/8"	1'-0 1/8"	1'-0 1/4"	1'-0 1/4"	1'-0 1/2"
℄ Pier 9	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
℄ Pier 9	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
1/4 Span	1'-1 1/8"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1 1/4"			1'-0 1/2"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"	1'-0 3/8"
℄ Span	1'-1 1/2"	1'-1"	1'-1 1/8"	1'-1 1/8"	1'-1 1/4"	1'-1 1/2"			1'-0 7/8"	1'-0 1/4"	1'-0 1/8"	1'-0 1/2"	1'-0 1/2"	1'-0 3/4"
3/4 Span	1'-1 1/8"	1'-1"	1'-1 1/8"	1'-1 1/8"	1'-1 1/8"	1'-1 1/8"			1'-0 3/4"	1'-0 3/8"	1'-0 1/2"	1'-0 3/4"	1'-0 5/8"	1'-0 3/4"
℄ Abut.	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"	1'-1"			1'-0 1/4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"

CHORD OFFSETS

SPAN 9N			
N. Fascia		S. Fascia	
Dist. X	Offset Y	Dist. X	Offset Y
9'-6 5/8"	2 3/8"	9'-6 5/8"	2 1/4"
19'-1 1/4"	4 1/8"	19'-1 1/4"	4"
28'-8"	5 1/4"	28'-8"	5 1/8"
38'-2 3/8"	5 3/8"	38'-2 5/8"	5 3/4"
47'-9 1/4"	5 7/8"	47'-9 1/4"	5 3/4"
57'-4"	5 1/4"	57'-3 7/8"	5 1/8"
66'-10 5/8"	4 1/8"	66'-10 5/8"	4"
76'-5 1/4"	2 3/8"	76'-5 1/4"	2 1/4"

Note :
For Slab Thickness "t" notes see Sh. No. 176
For sketch illustrating use of chord offsets see sheet No. 176

HAZLETT & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. HAM - 50 - 1938 R & L.

H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MY 9-6-61		JHO 12/13/61	W.A.S. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-50-19.38

N
℄ Bent #3, Pier #13
℄ Pier #1 (New)
℄ Bent #4 ℄ Pier #14
℄ Bent #5 ℄ Pier 15
℄ Bent #6 ℄ Pier #16
P.C. Sta. ℄ Bent 1+93.14 VB
Sta. 2+00 VB
Existing Slab
Proposed Slab
North Curb Line
Base Line Ramp VB
RAMP-VB
Curb Line
Curb Line
Westbound Exp. P.C. Sta. 1+23.08
Const. Joint
1" Open Joint
70.06'
Base Line and Curb Line W.B. Expressway
Base Line ℄ Curb Line E.B. Expressway
E.B. Expressway P.T. Sta. 3+33.90
Sta. 3+50
Sta. 3+75
Sta. 3+87.50
1+00 W.B.
1+00 E.B.
E.B. Exp. P.C. Sta. 0+93.13 = W.B. Exp P.O.T. Sta. 1+04.58
1+25 EB
℄ Exist. Viaduct
Existing Const. Jt.
Existing Slab
Prop. Slab
Exp Joint
Fascia
Curb Line
Curb Line
33.92'
Exist. Slab
Prop. Slab
Exp Joint
RAMP VA
South Curb Line
Base Line Ramp VA
P.C. Sta. 0+59.21 VA = P.O.T. Sta. 0+59.21 E.B. (44.50' Rt.)
1+00 VA
2+00 VA
Ramp Sta. 2+27.51
P.T. Sta. 2+99.98 VA
52'-0"

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ROADWAY SURFACE ELEVATION

BRIDGE NO HAM-50-1938 R.&L.

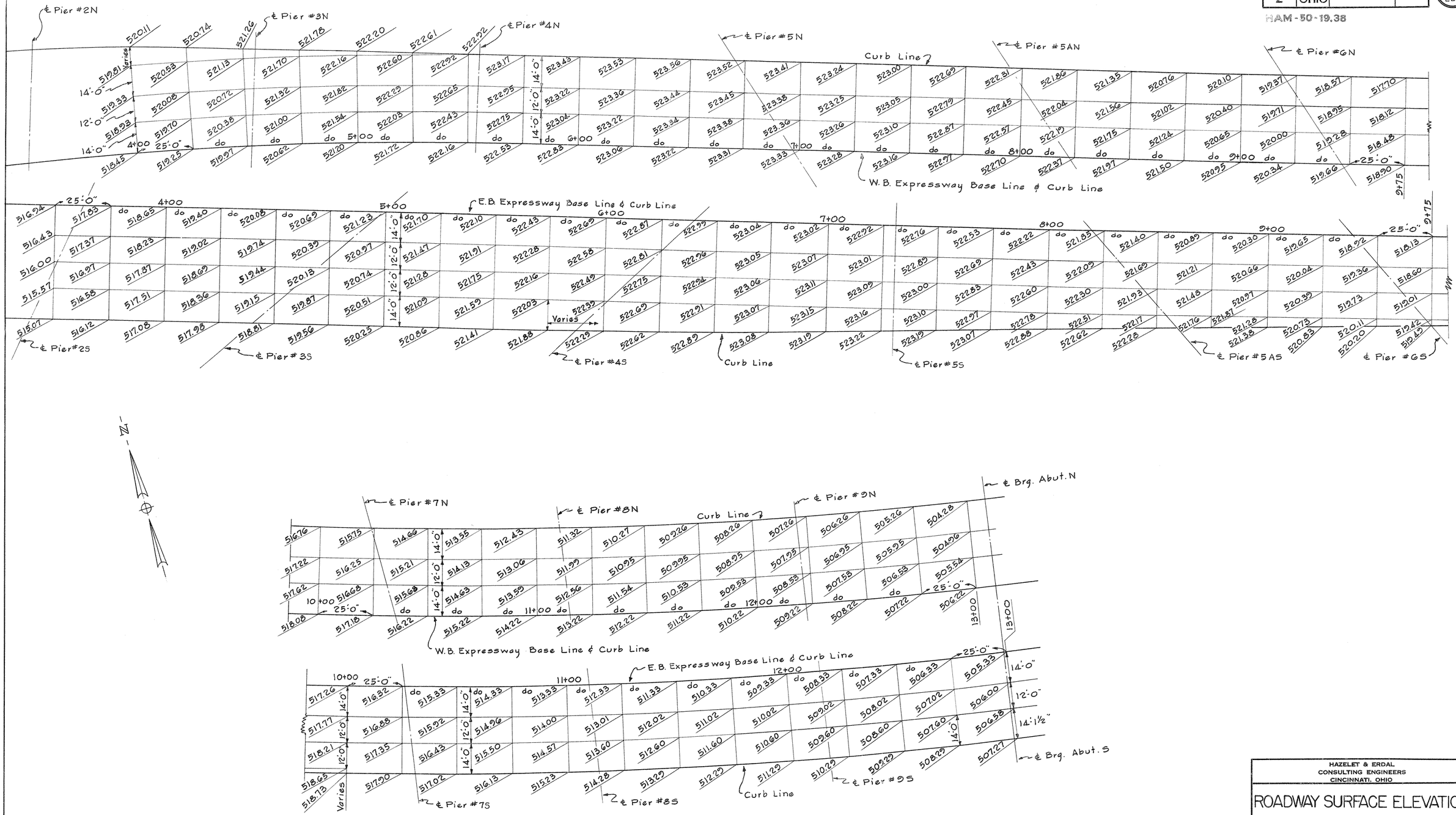
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	D.R.S. 8-7-61	L.J.W. 3-62	W.W.C. 10-30-61	4-26-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

179
227

HAM-50-19.38



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CINCINNATI, OHIO

ROADWAY SURFACE ELEVATION

BRIDGE NO. HAM-50-1938 R.&L.

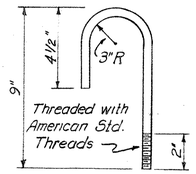
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	R.E.M. 9-11-61	L.J.W. 3-62	W.W.C. 9-29-61	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

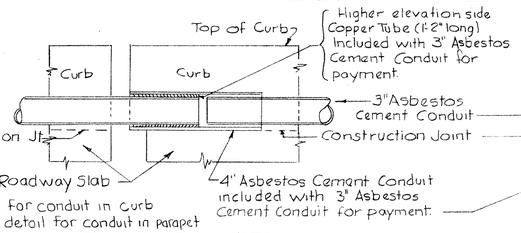
180
227

HAM-50-19.38

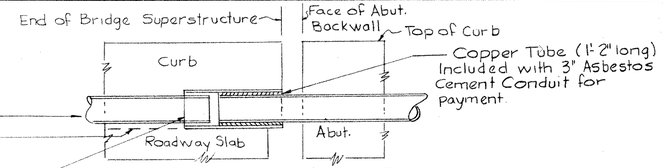


DETAIL OF ½" Φ SMOOTH ROD (5'6 Required)

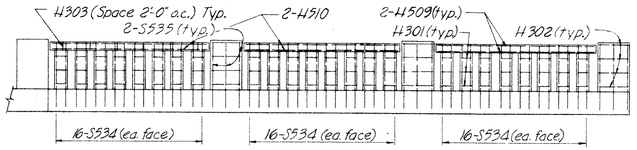
NOTE: Concrete fasteners & threaded rods to be included in item 5-1 "Class "C" Concrete, Superstructure," for payment. Removal of concrete curb & railing to be included in item 5-22, "Lump Sum, for payment. Concrete used in reconstructing curb to be included in Item 5-1, "Class "C" Concrete, Superstructure, for payment.



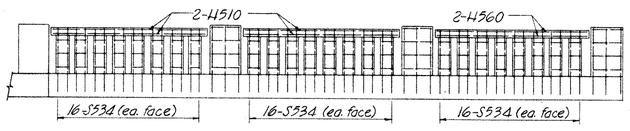
CONDUIT EXPANSION DETAIL FOR SUPERSTRUCTURE



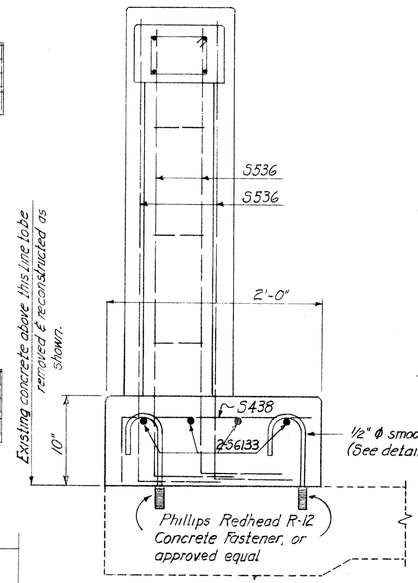
CONDUIT EXPANSION DETAIL AT ABUTMENT



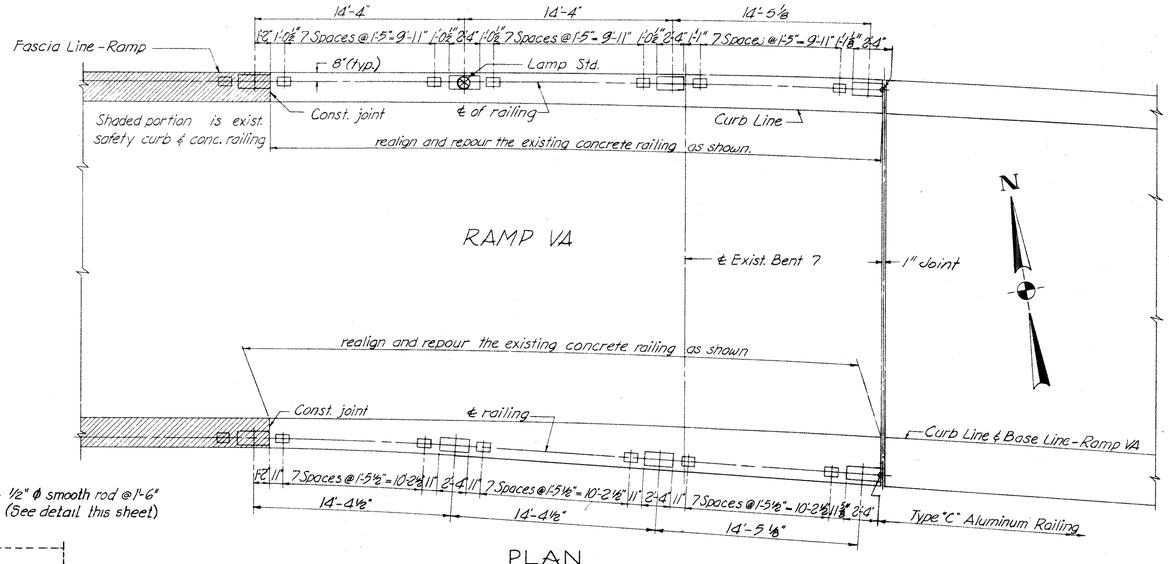
ELEVATION
South Railing, Ramp VA, Looking North



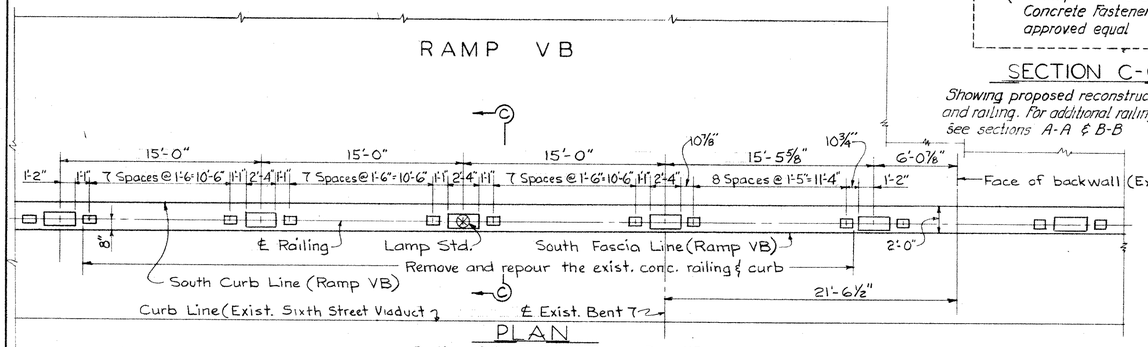
ELEVATION
North Railing, Ramp VA, Looking North



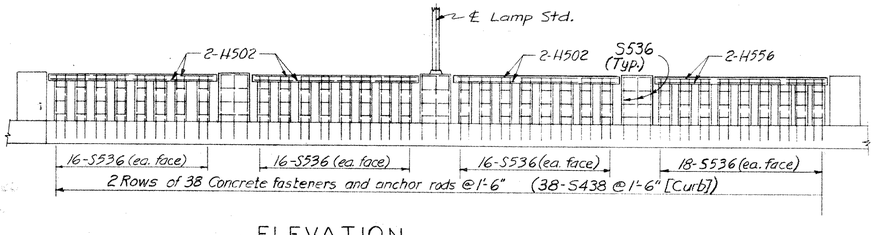
SECTION C-C
Showing proposed reconstruction of Curb and railing. For additional railing details see sections A-A & B-B



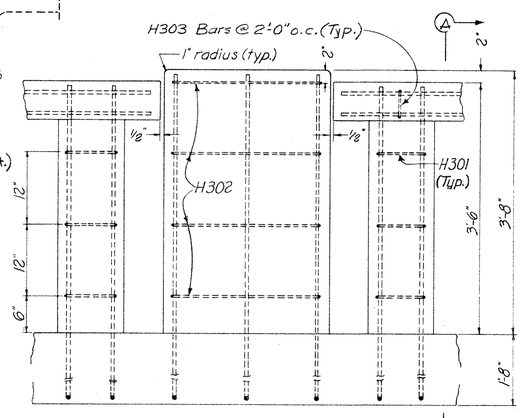
PLAN



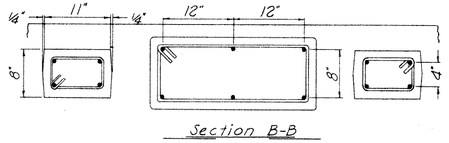
PLAN
Portion of South Curb & Railing, Ramp VB
(Showing curb & railing to be removed to permit construction of temporary ramp, and to be reconstructed following removal of ramp.)



ELEVATION
(South Railing Ramp VB, Looking North)



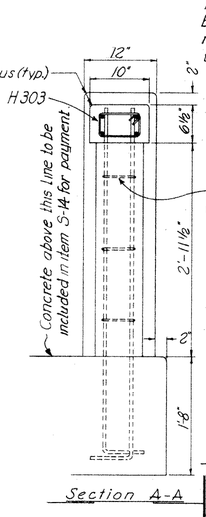
Elevation
(Taken Looking North)



Section B-B

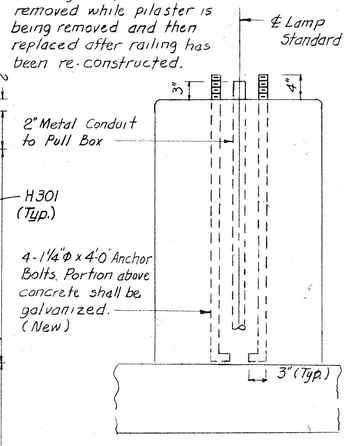
PILASTER DETAIL (TYP)

NOTE:
Railing to be included in item 5.14 (Railing, Concrete with Concrete Posts) for payment.



Section A-A

Existing Lamp Std. to be removed while pilaster is being removed and then replaced after railing has been re-constructed.



PILASTER WITH LAMP STD

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CINCINNATI, OHIO

RAILING & LIGHTING DETAILS

BRIDGE NO. HAM-50-1938 R.& L.

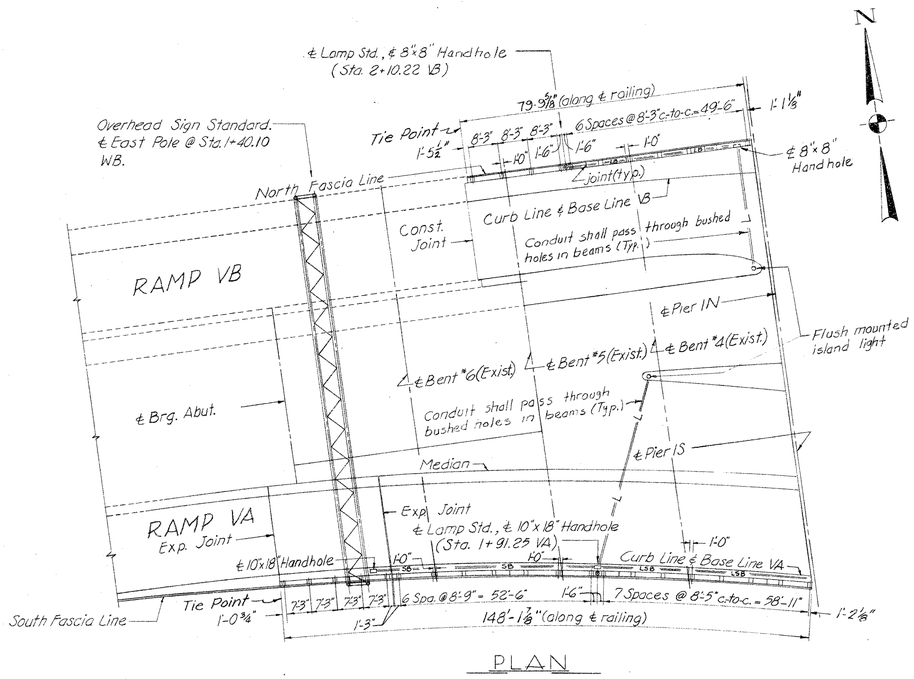
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	E.I. 12-7-61		B.O.G. 2-5-62	W.A.Z. 4-23-62	

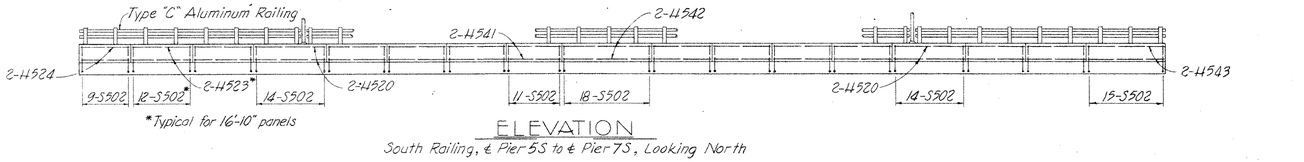
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

181
227

HAM-50-19.38

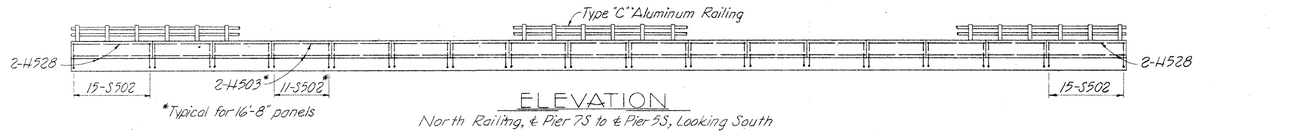


PLAN



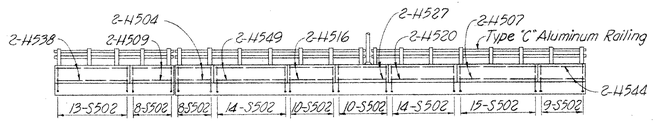
ELEVATION

South Railing, ℄ Pier 5S to ℄ Pier 7S, Looking North



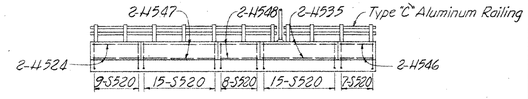
ELEVATION

North Railing, ℄ Pier 7S to ℄ Pier 5S, Looking South



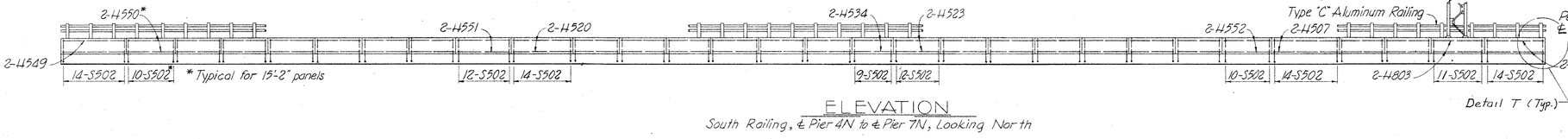
ELEVATION

South Railing, Tie Pt. to ℄ Pier IS on Parapet, Looking North



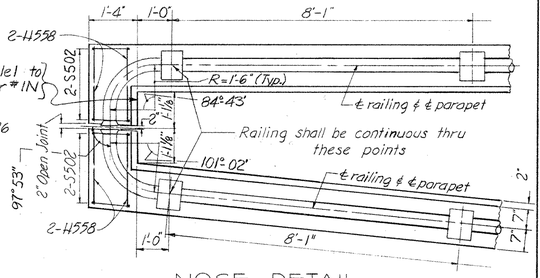
ELEVATION

North Railing, ℄ Pier IN to Tie Pt. on Parapet, Looking South



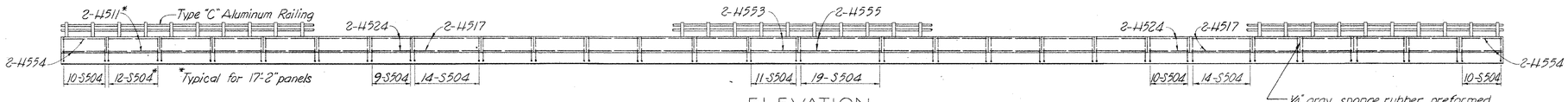
ELEVATION

South Railing, ℄ Pier 4N to ℄ Pier 7N, Looking North



NOSE DETAIL

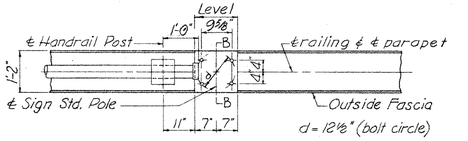
Drill and tap aluminum tube for 1/2" aluminum set screws to match hole in post. Set screws in this location to be 1/2" longer then std. (Typ. for two end posts at nose)



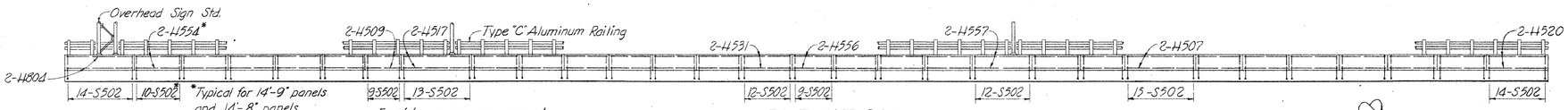
ELEVATION

Intermediate Railing, ℄ Pier 4N to ℄ Pier 7N, Looking North

¼" gray sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type-1. Space as shown. (Included with Item S-14 for payment.)(Typ.)

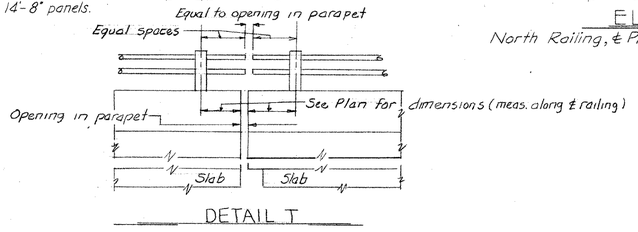


DETAIL A

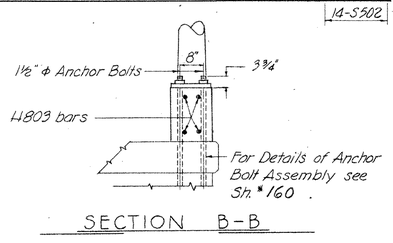


ELEVATION

North Railing, ℄ Pier 7N to ℄ Pier 4N, Looking South



DETAIL T



SECTION B-B

For general notes see Sh. #182.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING & LIGHTING DETAILS

BRIDGE NO. HAM-50-1938 R.& L.

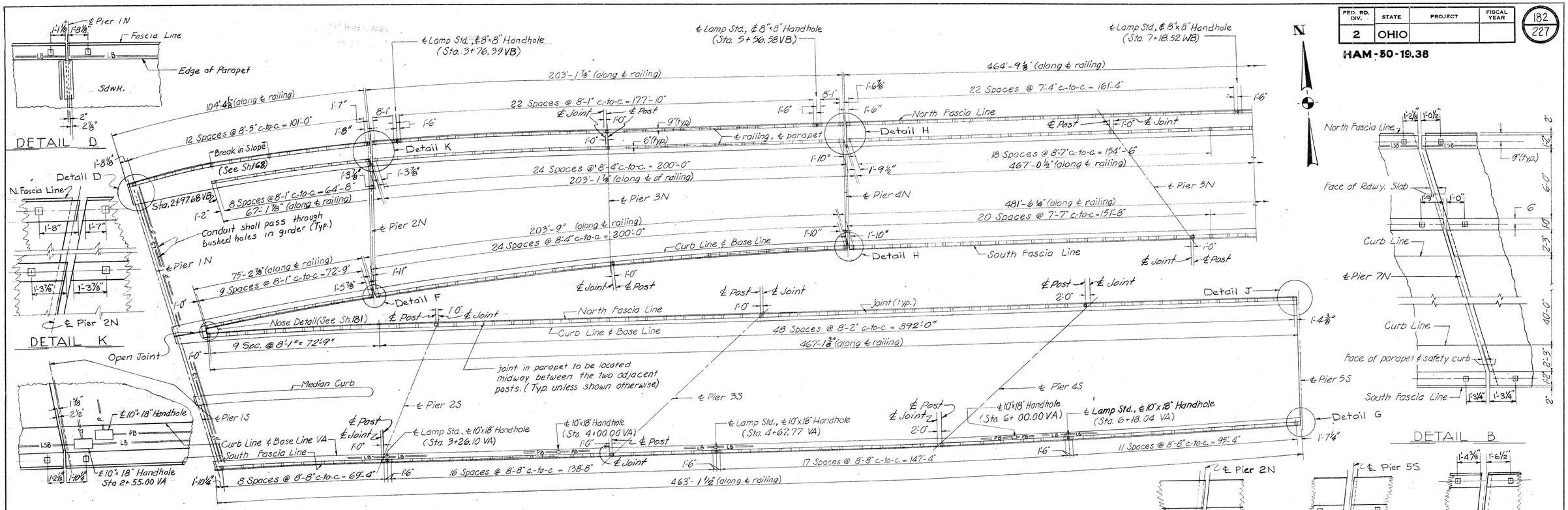
H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	E.I. 11-29-61		B.O.G. 2-5-62	W.J.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

182
227

HAM-50-19.38



NOTES:

The location of reinforcement steel, posts, Lamp Std's and Sign Std's is measured along ℄ parapet.

For typical railing details see Std. Dwg. No. AR-1-57.

For typical lighting details see sh. 86

For conduit expansion details see sh. 180

For miscellaneous details see sh. 183

For legend of Lighting Items see sh. 80

For open joint dimensions and details refer to Superstructure dwg's.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING & LIGHTING DETAILS

BRIDGE NO. HAM-50-1938 R & L.

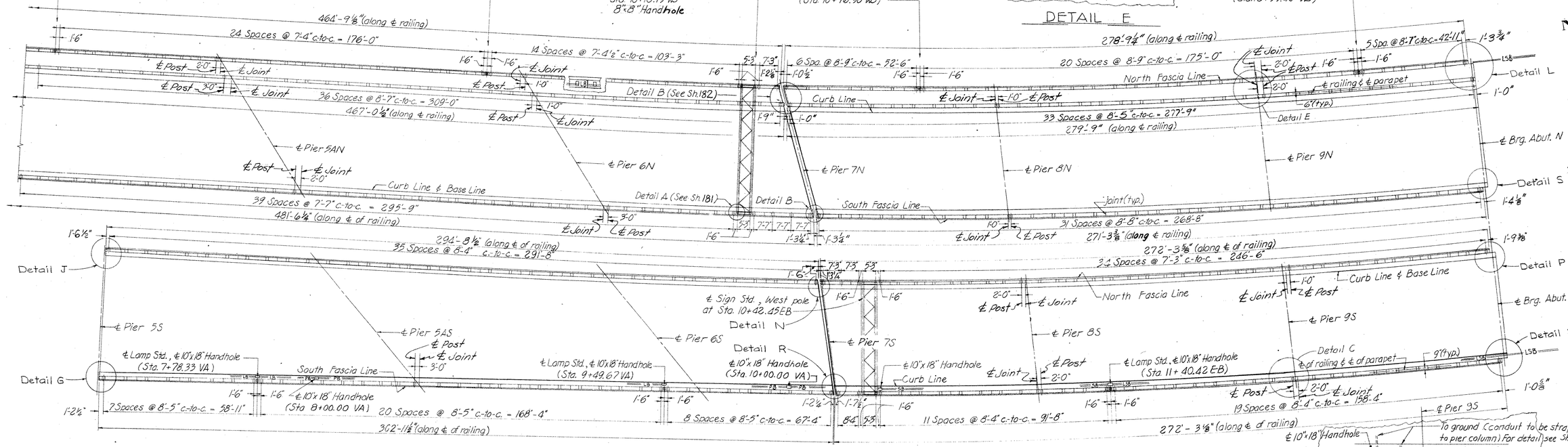
H & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	E.I. 11-21-61		B.O.G. 2-5-62	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

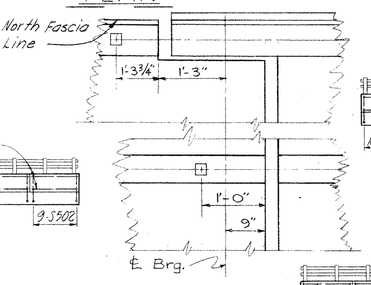
183
227

HAM-50-19.38



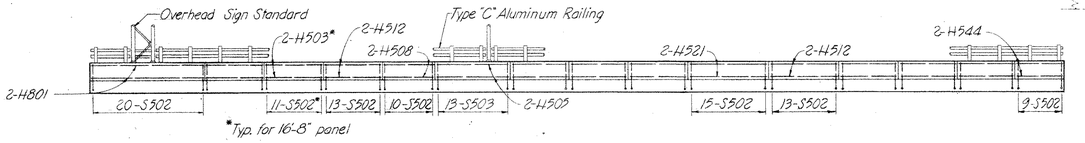
DETAIL E

DETAIL C

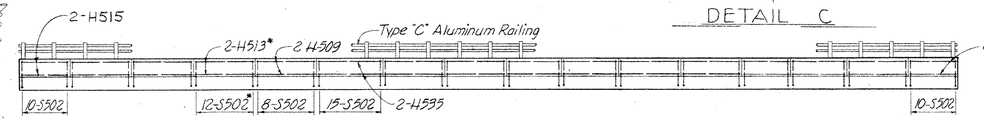


PLAN

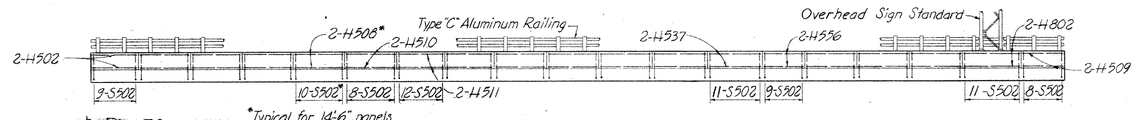
DETAIL L



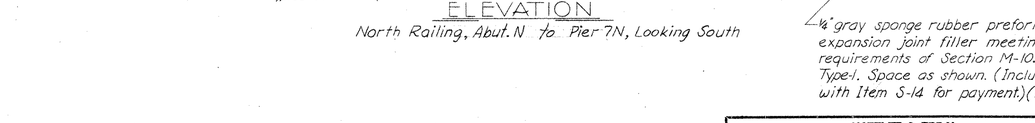
ELEVATION
South Railing, Pier 7S to Abut S, Looking North



ELEVATION
South Railing, Pier 7N to Abut N Looking North

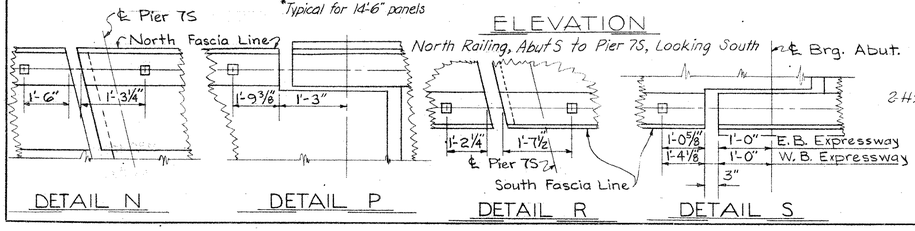


ELEVATION
North Railing, Abut S to Pier 7S, Looking South

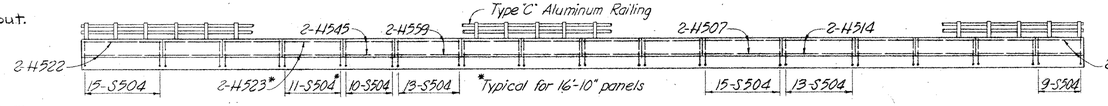


ELEVATION
North Railing, Abut N to Pier 7N, Looking South

¼" gray sponge rubber preformed expansion joint filler meeting the requirements of Section M-10.02, Type-1. Space as shown. (Included with Item S-14 for payment) (Typ.)



DETAIL N DETAIL P DETAIL R DETAIL S



ELEVATION
Intermediate Railing, Abut S to Pier 7N, Looking South

NOTE:
For general notes see Sh. 182.

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CINCINNATI, OHIO

RAILING & LIGHTING DETAILS

BRIDGE NO. HAM-50-1938 R & L.

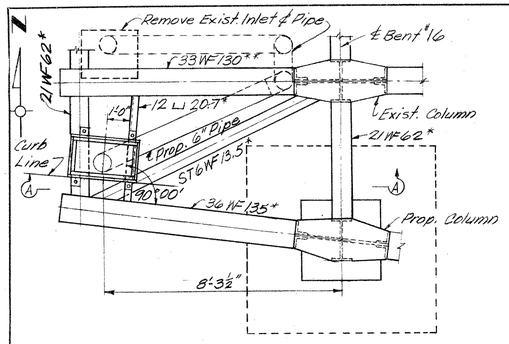
H. & E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	E.I. 11-13-61		B.O.G. 2-5-62	M.H.G. 4-20-62	

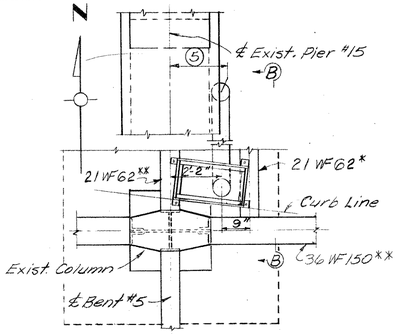
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

184 / 227

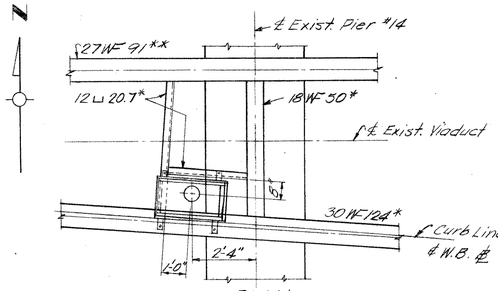
HAM-50-19.38



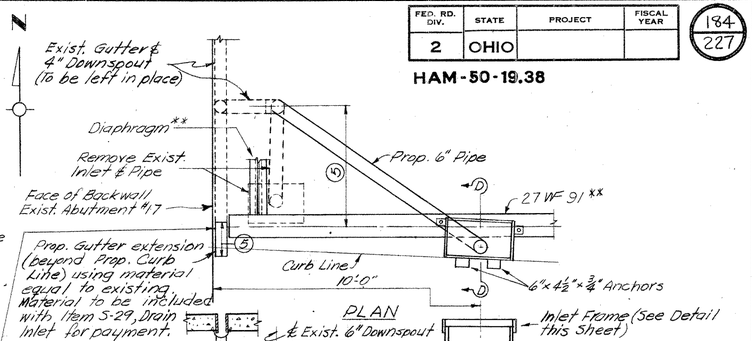
PLAN



PLAN

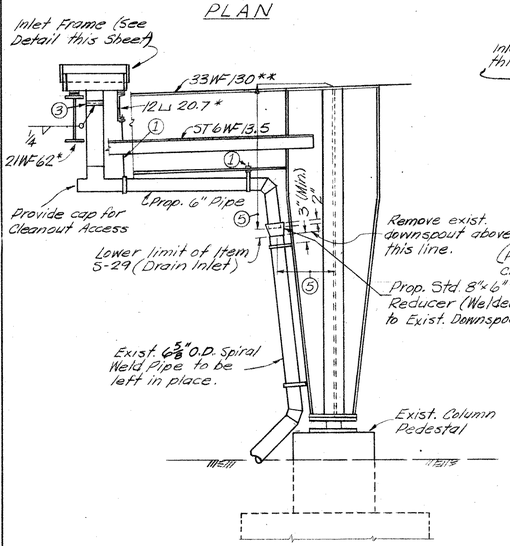


PLAN

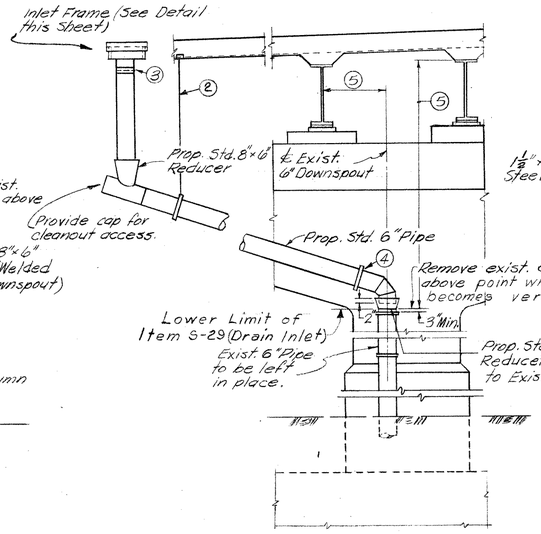


ELEVATION

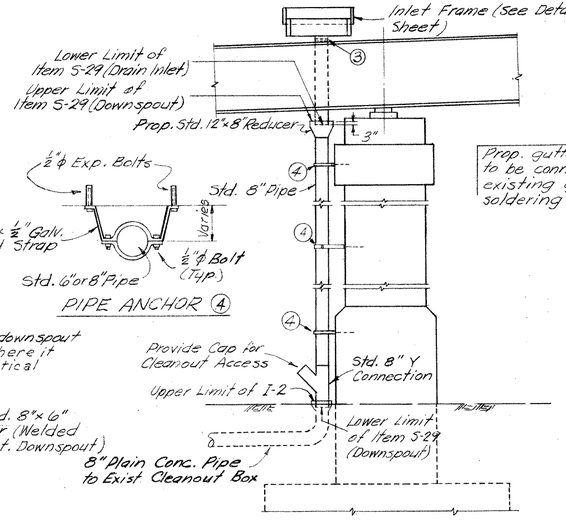
DETAIL OF DRAIN INLET AT EXISTING ABUTMENT NO.17



ELEVATION A-A



ELEVATION B-B

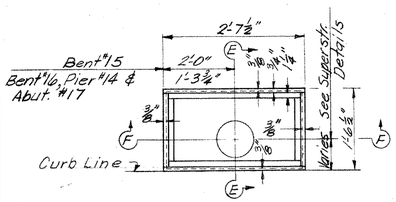


ELEVATION

DETAIL OF DRAIN INLET AT EXISTING PIER NO. 14

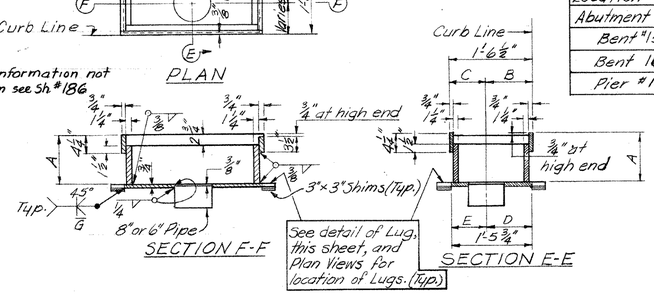
Prop. gutter extension to be connected to existing gutter by soldering.

DETAIL OF DRAIN INLET AT BENT NO.16



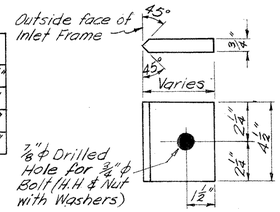
DETAIL OF DRAIN INLET AT BENT NO.15

Location \ Dimension	A	B	C	D	E
Abutment #17	1'-4⅝"	5½"	1'-1"	5⅝"	1'-0⅜"
Bent #15	1'-2½"	7"	11½"	6⅝"	11⅜"
Bent 16	8½"	7"	11½"	6⅝"	11⅜"
Pier #14	1'-3"	1'-0"	6½"	11⅝"	6⅛"

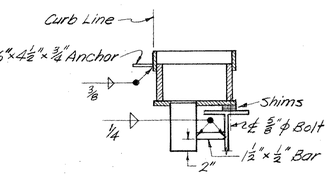


INLET FRAME DETAILS

(For Details of Grating see Sheet #186)



INLET SUPPORT LUG DETAILS



SECTION D-D

NOTES:

1. - Galvanized Pipe Clamp & ½"⌀ Rod Hanger
2. - Galvanized Pipe Clamp & ½"⌀ Rod Hanger with concrete insert.
3. - Welded Collar
4. - Pipe Anchor (see detail this sheet).
5. - Field measure to provide proper fit.

* - Proposed

** - Existing

HAZELET & ERDAL
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CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE NO. HAM-50-1938 R.& L.

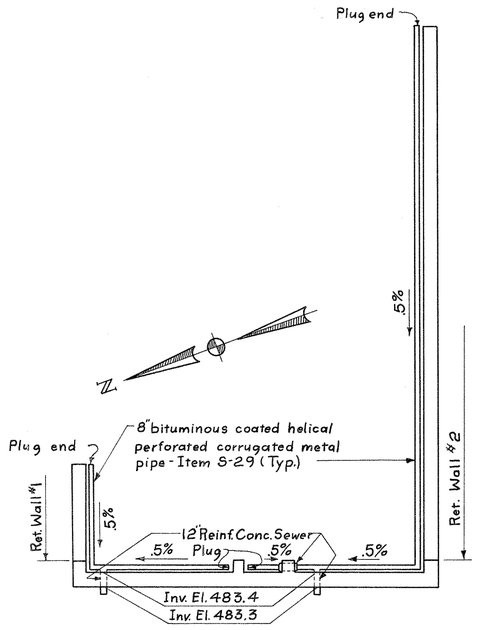
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
B.O.G.	B.O.G. 11-27-61		D.Y.L.	M.A.T. 4-20-62	

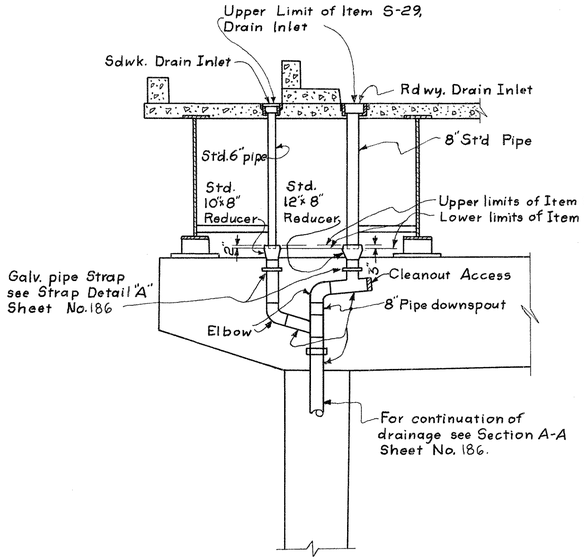
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

185
227

HAM-50-19.38



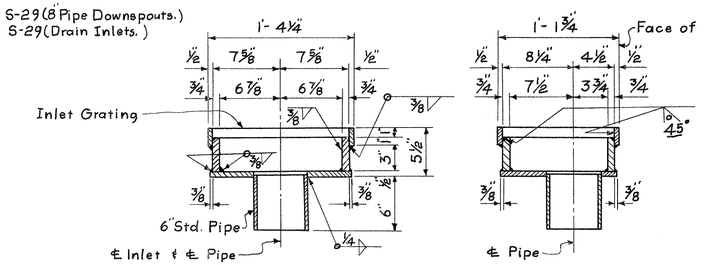
DRAINAGE PLAN AT ABUTMENT



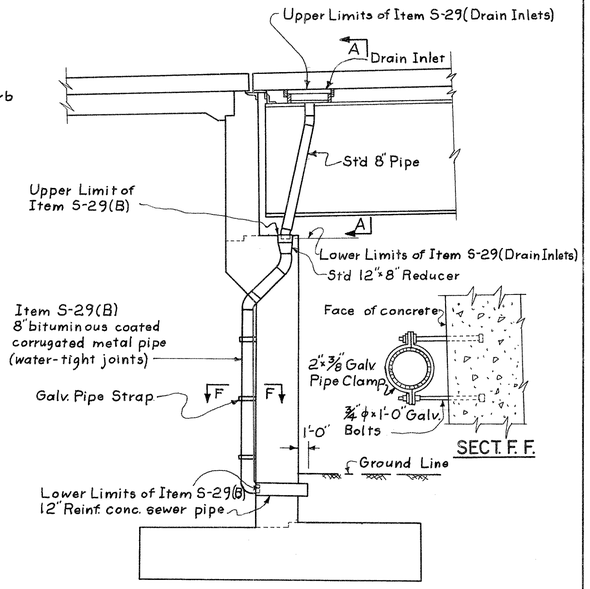
ELEVATION FOR PIER NO. 2N & 7N

Shown for Pier No 7N omit rdwy drain for Pier No. 2N & revise location of cleanout access.

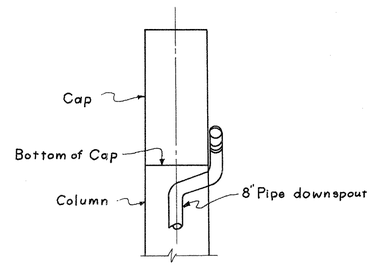
Inlet Grating: Irving Steel "Subway" Grating Type "K" Simplex Riveted "Reticuline or equivalent. Standard panel width = 1'-3" Bearing bars ¾"x⅛" Span = 1'-0½" (Galvanize after fabrication.)



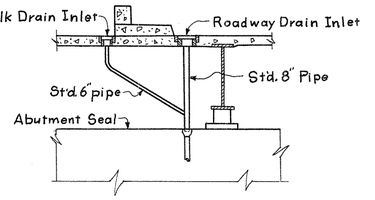
DETAILS OF SIDEWALK DRAIN INLET



TYPICAL DRAINAGE DETAILS AT HIGH ABUTMENTS

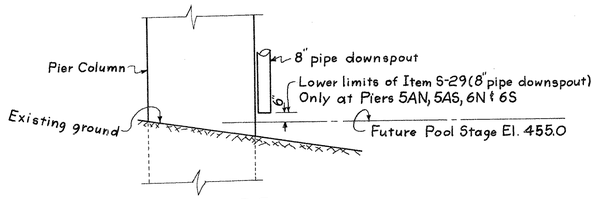


SECTION B-B SHOWN
SECTION C-C OPPOSITE
SECTION D-D SIMILAR



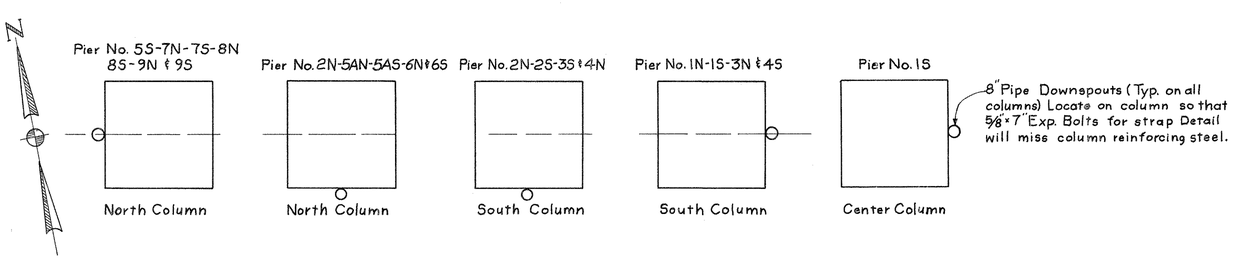
SECTION A-A

(Shown for Westbound Expressway, Omit sdwk drain inlet & std 6" Pipe at E.B. Expwy)

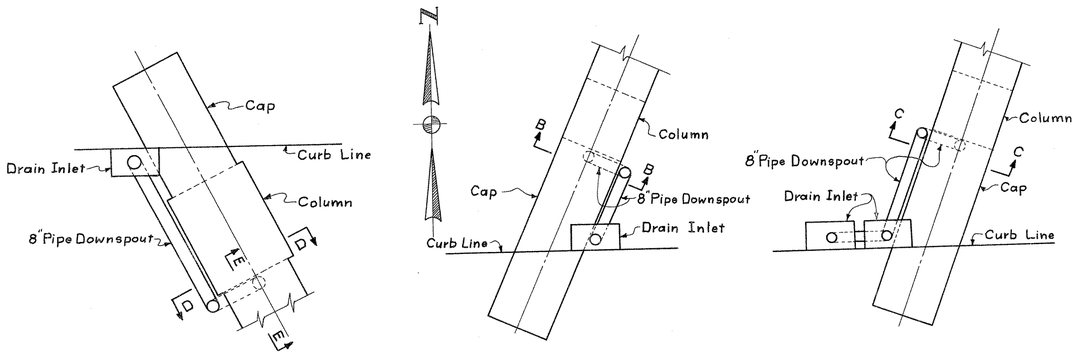


SECTION E-E

At Piers 5AN, 5AS, 6N & 6S only



DETAIL SHOWING LOCATION OF DOWNSPOUTS ON COLUMN - BRIDGE NO 1R & 1L



Pier No. 5AN, 5AS, 6N & 6S — Pier No. 2N, 2S & 4N — Pier No. 3S

PLAN OF DRAINAGE DETAILS

For plan of Drainage Details at other Piers see Sh. No. 186.

Work this sheet with sheet No. 186

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

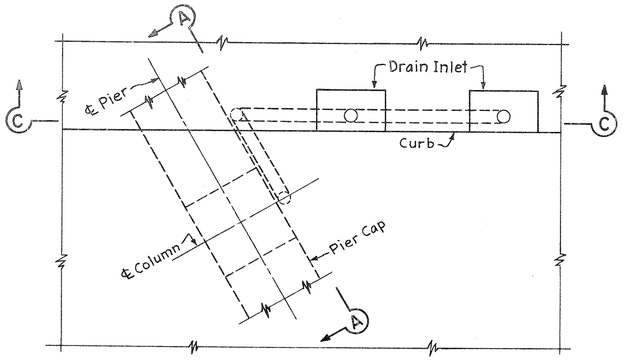
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
		JTC	JHO 4/13/62	4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

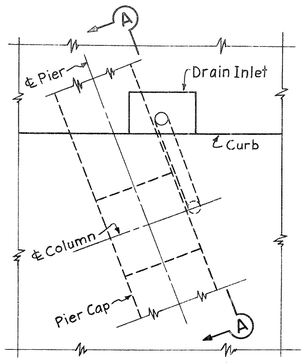
186
227

HAM-50-19.38

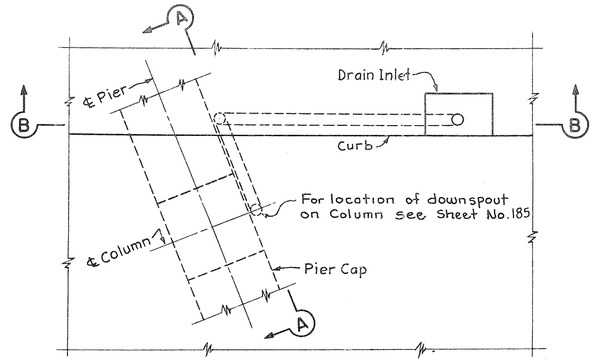
For location of drain inlets, see superstructure details.



PLAN

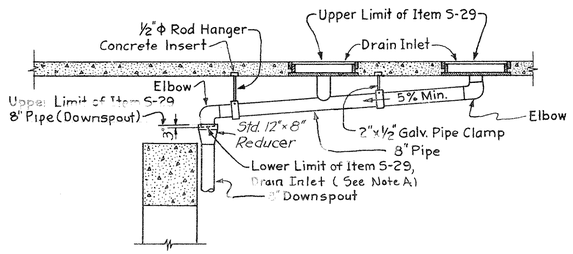


PLAN

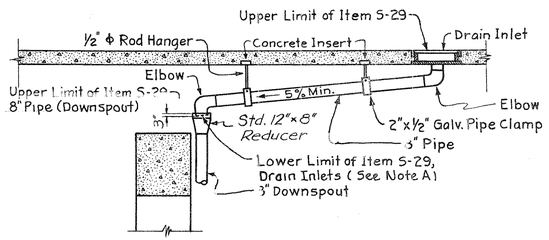


PLAN

Note: Type of Plan to be used depends upon location of inlet with respect to pier.

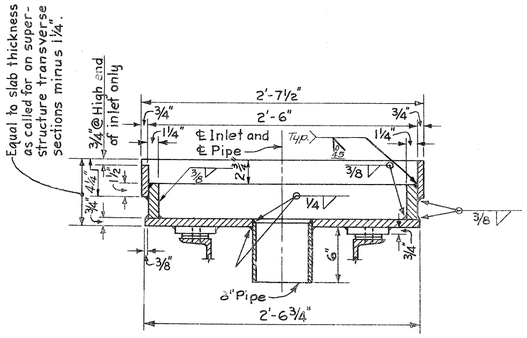


SECTION C-C

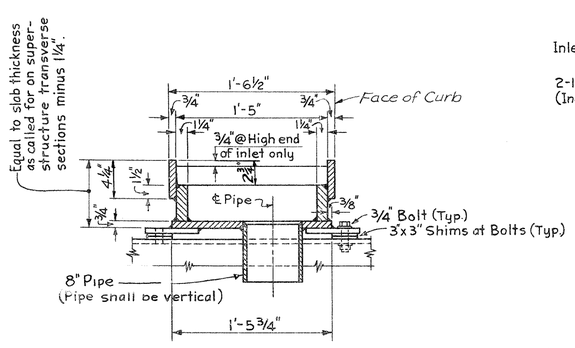


SECTION B-B

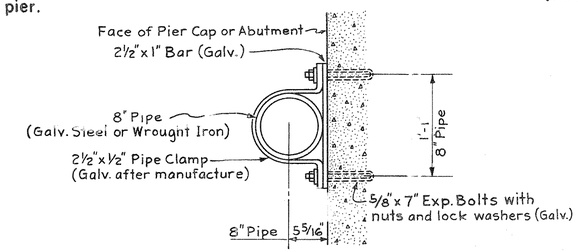
NOTE: Downspouts shall be 8" standard wrought iron pipe or hot-dipped galvanized steel pipe.
Joints shall be made by welding or by the use of a clamp type coupling with a ring gasket.
All welding shall be done before galvanizing.
Straps or clamps for attaching downspouts shall be wrought iron or hot-dipped galvanized steel.
On bolts, galvanizing as called for in SEC M-10.30 will be considered sufficient.



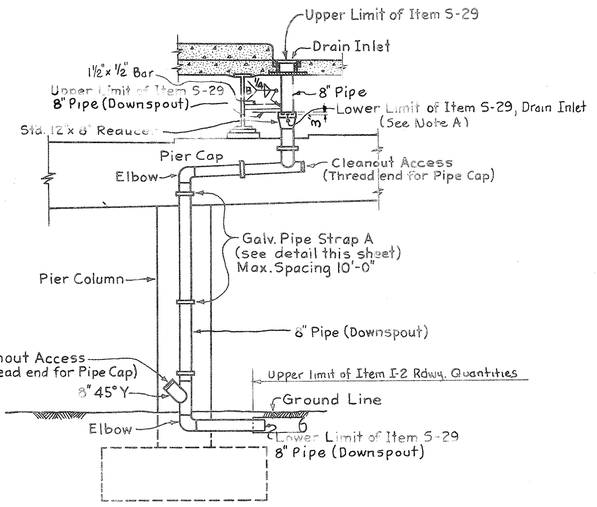
SECTION P-P



SECTION R-R

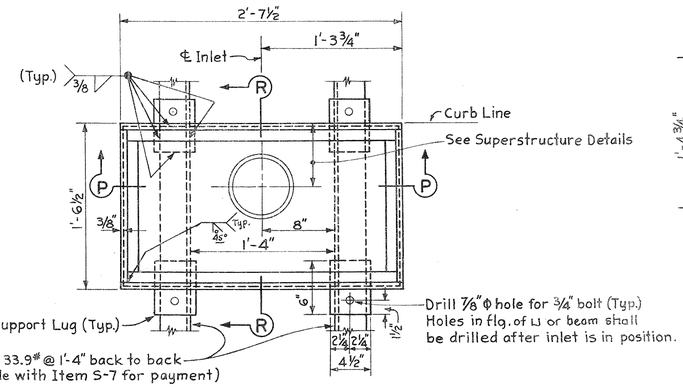


STRAP DETAIL "A"
For mounting on flat surface.

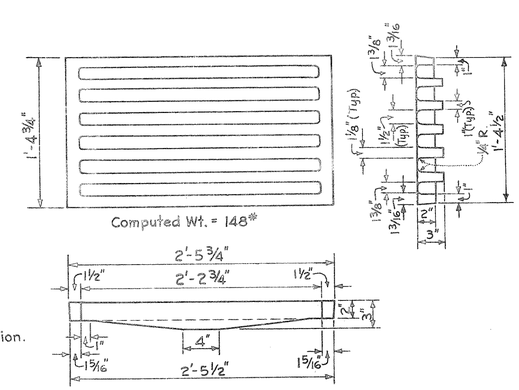


SECTION A-A

NOTE A:
"Drain Inlets including Supports and Horizontal Collector System" shall include inlet grating, inlet frame, lugs, concrete insert, ½" ϕ rod hanger, 2"x½" galvanized pipe clamp, and 8" standard pipe for payment, Item S-29.



INLET FRAME



INLET GRATING
(City of Cincinnati Acc. No. 49012)

NOTES:-
For location of inlets, see superstructure details.
Inlet grating castings shall meet the requirements of Sec. M-7.8 of the Material Specifications of the State of Ohio.
Gratings and Inlets shall be fitted to each other without rattling by grinding grating casting as necessary.

Inlet frame to be welded structural steel plates and standard steel pipe, galvanized after fabrication.

Weld channels to beam with 5/16" continuous fillet weld. Weld to beam webs only.
Space lugs on inlets to permit bolting to supporting channels and beams.
Where drain inlet is located adjacent to beams without cover plates, cope channels so top of channel is flush with top of beams.
Where drain inlet is located adjacent to beams with cover plates, cope channels so that the distance from top of channel to top of slab is equal to the minimum slab thickness as called for on the superstructure transverse sections.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
		M.DeC.	JHO 11/6/61	W.A.Z. 4-20-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

127
227

HAM-50-19.38

ABUTMENT

MARK	SHP.	LGTH.	TOTAL	WGT.
A501	Str.	29'- 0"	27	817
A502	Bent	6'- 3"	2	13
A503	Bent	6'- 5"	8	54
A504	Str.	9'- 6"	2	20
A505	↑	25'- 0"	29	756
A506		14'- 6"	11	166
A507	↓	15'- 6"	8	129
A508	Str.	28'- 3"	24	707
A509	Bent	7'- 5"	92	712
A511	Bent	11'- 0"	16	184
A512	Str.	20'- 6"	7	150
A513	↑	7'- 1"	141	1042
A514		3'-10"	12	48
A515	Str.	23'- 2"	7	169
A516	Bent	9'- 3"	9	87
A517	Str.	23'- 6"	60	1471
A518	Str.	24'- 9"	24	620
A521	Str.	4'-10"	6	30
A523	Str.	16'- 0"	8	134
A524	↑	16'-10"	8	140
A525		22'- 9"	7	166
A526		24'- 9"	7	181
A527	↓	22'- 6"	38	892
A528	Str.	23'- 0"	8	192
A601	Bent	18'- 9"	79	2225
A602	↑	21'- 2"	6	191
A603		19'- 7"	3	88
A604	Bent	19'- 6"	6	176
A605	Str	7'- 6	190	2140
A701	Str.	8'- 4"	10	170
A702	↑	9'- 8"	9	178
A703		8'- 6"	128	2224
A704		10'- 0"	9	184
A705		11'- 2"	9	205
A706		15'- 7	9	287
A707	Str.	7'- 4"	7	105
A901	Bent	14'- 3"	242	11726
A902	Bent	13'- 7"	16	739
A903	Bent	10'- 7"	15	540
A1001	Bent	13'- 6"	69	4008
A1002	Bent	9'- 6"	66	2698
		Total	(Abut.)=	36,764
H501	Str.	7'- 2"	16	
H562	Str.	22'-8"	2	

SUPERSTRUCTURE

MARK	SHP.	LGTH.	TOTAL	WGT.
S401	Bent	9'- 2"	2169	13282
S402	Bent	8'- 8"	429	2484
S403	Bent	3'- 0"	104	208
S404	Str.	6'- 8"	72	321
S405	↑	7'- 0"	32	150
S406		7'- 8"	20	102
S407	↓	8'- 2"	20	109
S408	Str.	8'- 8"	20	116
S409	Bent	4'- 6"	36	108
S410	↑	5'- 0"	16	53
S411		5'- 9"	10	38
S412		7'- 1"	10	47
S413	Bent	8'- 2"	10	54
S414	Str.	28'- 0"	30	561
S415	Str.	3'-10"	10	25
S416	Bent	5'-11"	1	4
S417	Str.	5'- 7"	24	89
S418	Bent	7'- 0"	7	33
S419	↑	4'- 8"	27	84
S420		2'-10"	158	299
S421		7'- 2"	52	249
S422		10'- 0"	7	47
S423		2'- 7"	12	21
S424		4'- 7"	12	37
S425		6'- 1"	12	49
S426	Bent	7'-11"	18	95

SUPERSTRUCTURE

MARK	SHP.	LGTH.	TOTAL	WGT.
S427	Bent	4'- 9"	20	63
S428	↑	5'- 3"	20	70
S429		5'- 9"	20	77
S430		8'- 8"	6	35
S431		4'- 2"	248	690
S432		2'- 1"	45	63
S433		6'- 6"	64	278
S434		6'-10"	6	27
S435		6'- 1"	32	130
S436		2'-10"	4	8
S437		2'- 7"	72	124
S438		2'- 4"	42	66
S449		2'- 1"	4	6
S440		1'-10"	4	5
S441	Bent	1'- 7"	4	4
S442	Bent	4'11"	1	3
S501	Str.	31'-10"	111	3685
S502	Bent	6'- 0"	2921	18279
S503	Str.	32'- 8"	27	920
S504	Bent	5'-10"	690	4198
S505	Bent	4'0"	2	9
S506	Str.	30'- 6"	48	1527
S507	Str.	31'- 1"	78	2529
S508	Str.	31'- 8"	96	3170
S509	Bent	4'10"	2	10
S510	Str.	26'- 9"	9	251
S511	↑	9'- 5"	3	29
S512		35'- 2"	36	1320
S513		30'- 0"	10	313
S514		34'-10"	20	726
S515		27'- 9"	22	637
S516		12'-10"	4	54
S517		23'- 4"	8	195
S518	↓	10'- 7"	1	11
S519	Str.	20'- 3"	4	84
S520	Bent	1'- 4"	54	413
S521	Str.	30'- 4"	24	759
S522	↑	7'- 3"	100	756
S523		4'-10"	104	524
S524		16'- 3"	12	203
S525		20'- 8"	8	172
S526		22'- 2"	17	393
S527		2'- 0"	20	42
S528		2'- 7"	25	67
S529		3'- 2"	20	66
S530		3'- 8"	20	76
S531		16'- 0"	6	100
S532	↓	24'- 9"	12	310
S533	Str.	6'- 6"	1	7
S534	Bent	5'- 3"	192	1051
S535	Bent	5'- 5"	36	203
S536	Bent	4'-9"	150	743
S6001	Str.	3'- 1"	67	310
S6002	↑	19'- 7"	12	353
S6003		24'- 7"	808	29,834
S6004		35'-11"	680	36683
S6005		42'- 0"	84	5299
S6006		28'- 2"	872	36890
S6007		28'-10"	52	2252
S6008		16'- 1"	28	676
S6009		10'- 4"	24	372
S6010		37'- 0"	1275	70854
S6011		41'- 1"	42	2592
S6012		42'-11"	42	2707
S6013		29'- 9"	19	849
S6014		31'- 2"	17	796
S6015		32'- 7"	15	734
S6016		34'- 0"	15	766
S6017		35'- 5"	189	10054
S6018		30'- 0"	455	20502
S6019		19'- 3"	28	810
S6020		26'- 8"	20	801
S6021		26'- 2"	24	943
S6022		25'- 8"	112	4318
S6023		25'- 2"	26	983
S6024		24'- 8"	20	741
S6025		24'- 2"	20	726
S6026		23'- 8"	27	960
S6027	Str.	23'- 6"	123	4341

SUPERSTRUCTURE

MARK	SHP.	LGTH.	TOTAL	WGT.
S6028	Str.	23'- 0"	47	1624
S6029	↑	22'- 6"	533	18012
S6030		22'- 0"	52	1718
S6031		21'- 6"	25	807
S6032		21'- 0"	25	789
S6033		20'- 6"	22	677
S6034		20'- 0"	25	751
S6035		19'- 6"	25	732
S6036		19'- 0"	66	1883
S6037		15'- 4"	4	92
S6038		32'- 0"	2058	98912
S6039		30'- 0"	15	676
S6040		27'- 6"	11	454
S6041		25'- 0"	11	413
S6042		22'- 6"	11	372
S6043		20'- 0"	10	300
S6044		17'- 6"	10	263
S6045		15'- 0"	10	225
S6046		27'-10"	1308	54680
S6047		28'- 5"	54	2305
S6048		29'- 0"	146	6359
S6049		10'- 9"	4	65
S6050		31'- 0"	86	4004
S6051		28'- 3"	84	3564
S6052		25'- 3"	84	3186
S6053		14'- 3"	4	86
S6054		31'- 9"	478	22794
S6055		20-11"	12	377
S6056		19'- 9"	13	385
S6057		18'- 8"	11	308
S6058		17'- 6"	11	289
S5059		16'- 5"	13	321
S6060		31'- 1"	384	17927
S6061		9'- 3"	1	14
S6062		11'- 7"	5	87
S6063		13'-11"	1	21
S6064		16'- 3"	1	24
S6065		18'- 7"	1	28
S6066		20'-11"	1	31
S6067		23'- 3"	1	35
S6068		25'- 7"	1	38
S6069		4'- 0"	1	6
S6070		6'- 4"	1	10
S6071		8'- 8"	1	13
S6072		11'- 0"	1	17
S6073		30'- 9"	384	17735
S6074		31'- 5"	384	18120
S6075		25'- 6"	4	153
S6076		27'- 0"	22	892
S6077		26'- 6"	19	756
S6078		26'- 0"	19	742
S6079		25'- 6"	19	728
S6080		25'- 0"	19	713
S6081		24'- 6"	19	699
S6082		28'- 7"	601	25801
S6083		33'- 2"	94	4683
S6084		35'- 8"	157	8410
S6085		33'- 9"	27	1369
S6086		33'- 3"	27	1348
S6087		32'- 9"	27	1328
S6088	Str.	32'- 3"	27	1308
S6101	Str.	23'- 3"	10	349
S6102	↑	22'- 6"	10	338
S6103		21'-10"	10	328
S6104		21'- 1"	10	317
S6105		20'- 6"	10	308
S6106		19'-10"	10	298
S6107		19'- 3"	10	289
S6108		18'- 8"	10	280
S6109		18'- 0"	10	270
S6110		17'- 6"	10	263
S6111		17'- 0"	10	255
S6112		26'- 2"	12	472
S6113		25'- 2"	12	454
S6114		24'- 3"	12	437
S6115	↓	22'- 0"	4	133
S6116	Str.	21'- 8"	106	3449

SUPERSTRUCTURE

MARK	SHP.	LGTH.	TOTAL	WGT.
S6117	Str.	15'- 6"	16	372
S6118	↑	14'- 9"	22	487
S6119		13'-11"	28	585
S6120		13'- 5"	28	564
S6121		12'-11	38	737
S6122	↓	35'- 4"	486	25792
S6123	Str.	34'- 9"	14	731
S6125	Str.	35'- 9"	15	805
S6126	↑	35'- 5"	45	2394
S6127		34'- 8"	45	2343
S6128		33'-11"	45	2292
S6129		33'- 2"	45	2242
S6130		32'- 5"	45	2191
S6131		31'- 8"	45	2140
S6132		30'-11"	45	2090
S6133		30'- 2"	26	1179
S6134		30'- 4"	106	4829
S6135		23'- 6"	24	847
S6136		24'- 4"	23	841
S6137		24'-10"	15	559
S6138		25'- 9"	15	580
S6139		26'- 8"	15	601
S6140		27'- 7"	15	621
S6141		24'- 8"	15	556
S6142		24'- 5"	132	4841
S6143		30'- 0"	5	225
S6144		28'- 3"	150	6365
S6145	Str.	24'- 8"	33	1223
S614 8	Str.	20'- 0"	24	721
S6149	↑	15'- 0"	171	3853
S6150		27'-10"	10	418
S6151		28'- 1"	20	844
S6152		28'- 6"	20	856
S6153		28'-10"	20	866
S6154		29'- 3"	20	879
S6155		29'- 8"	20	891
S6156		30'- 1"	20	904
S6157		30'- 6"	24	1099
S6158		30'-10"	20	926
S6159		31'- 3"	20	939
S6160		31'- 8"	20	951
S6161		16'- 3"	20	488
S6162		16'- 8"	20	501
S6163		17'- 0"	20	511
S6164		17'- 5"	20	526
S6165		17'-10"	20	536
S6166		18'- 4"	24	661
S6167		29'- 9"	3	134
S6168		24'-4"	4	146
S6169		29'- 5"	10	442
S6170		7'- 3"	104	1132
S6171		35'- 6"	170	9064
S6172		31'- 2"	48	2247
S6173		20'- 9"	8	249
S6174		24'-10"	92	3431
S6175		10'- 0"	6	90
S6176		15'- 1"	94	2130
S6177		16'- 6"	96	2379
S6178		5'- 0"	52	391
S6179		35'- 8"	28	1500
S6180		2'- 0"	20	60
S6181		2'- 7"	20	78
S6182		3'- 2"	20	95
S6183	↓	3'- 8"	22	121
S6184	Str.	22'- 4"	22	738
S6185	Bent.	6'- 1"	52	475
S6187	Str.	5'- 6"	1	8
S6188	↑	7'-10"	1	12
S6189		10'- 2"	1	15
S6190		12'- 6"	1	19
S6191		14'-10"	1	22
S6192		17'- 2"	1	26
S6193		19'- 6"	1	29
S6194	Str.	21'-10"	1	33

SUPERSTRUCTURE

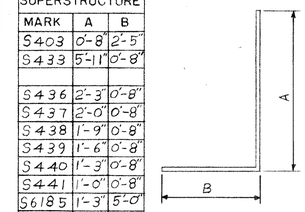
MARK	SHP.	LGTH.	TOTAL	WGT.
S6195	Str.	24'- 2"	1	36
S6196	Str.	26'- 6"	1	40
S6197	Str.	28'-10"	1	43
S7001	Str.	3'- 1"	67	422
S7002	↑	19'- 9"	12	484
S7003		24'- 9"	808	40,876
S7004		32'- 4"	745	49,236
S7005		28'- 4"	780	45,172
S7006		29'- 0"	58	3438
S7007		16'- 3"	12	399
S7008		10'- 4"	20	422
S7009		31'- 6"	2	129
S7010		30'- 4"	455	28,210
S7011		19'- 3"	28	1102
S7012		26'- 8"	24	1308
S7013		26'- 2"	20	1070
S7014		25'- 8"	20	1049
S7015		25'- 2"	26	1337
S7016		24'- 8"	20	1008
S7017		24'- 2"	20	988
S7018		23'- 8"	27	1306
S7019		23'- 6"	33	1585
S7020		23'- 0"	25	1175
S7021		22'- 6"	135	6209
S7022		22'- 0"	41	1844
S7023		21'- 6"	25	1099
S7024		21'- 0"	25	1073
S7025		20'- 6"	22	922
S7026		20'- 0"	25	1022
S7027		19'- 6"	25	996
S7028		19'- 0"	66	2563
S7029		15'- 4"	4	125
S7030		14'- 3"	4	117
S7031		28'- 0"	1308	74,859
S7032		28'- 7"	54	3155
S7033		29'- 2"	56	3339
S7034		10'- 9"	4	88
S7035		25'-10"	8	422
S7036		9'- 3"	1	19
S7037		11'- 7"	5	118
S7038		13'-11"	1	28
S7039		16'- 3'	1	33
S7040		18'- 7"	1	38
S7041		20'-11"	1	43
S7042		23'- 3	1	48
S7043		25'- 7"	1	52
S7044		4'- 0"	1	8
S7045		6'- 4"	1	13
S7046		8'- 8"	1	18
S7047		11'- 0"	1	22
S7048		27'- 0"	22	1214
S7049		26'- 6"	19	1029
S7050		26'- 0"	19	1010
S7051		25'- 6"	23	1199
S7052		25'- 0"	19	971
S7053		24'- 6"	19	951
S7054		28'- 7"	601	35116
S7055		23'- 0"	504	23,694
S7056		16'- 2"	16	529
S7057		15'- 6"	16	507
S7058		14'- 9"	22	663
S7059		23'- 3"	10	475
S7060		22'- 6"	10	460
S7061		21'-10"	10	446
S7062		21'- 1"	10	431
S7063		20'- 6"	10	419
S7064		19'-10"	10	405
S7065		19'- 3"	10	393
S7066		18'- 8"	10	382
S7067		18'- 0"	10	368
S7068		17'- 6"	10	358
S7069		17'- 0"	10	347
S7070		26'- 2"	12	642
S7071		25'- 2"	12	617
S7072	↓	24'- 3"	12	595
S7073	Str.	22'- 0"	4	180

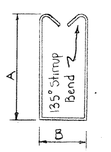
SUPERSTRUCTURE

MARK	SHP.	LGTH.	TOTAL	WGT.
S7074	Str.	36'- 0"	157	11,553
S7075	Str.	13'-11"	28	796
S7076	Str.	13'- 5"	28	768
S7077	Str.	34'- 9"	14	994
S7081	Str.	32'- 0"	29	1897
S7082	↑	30'- 4"	106	6572
S7083		23'- 6"	24	1153
S7084		24'- 4"	23	1144
S7085		24'-10"	15	761
S7086		25'- 9"	15	789
S7087		26'- 8"	15	818
S7088		27'- 7"	15	846
S7089		24'- 8"	15	756
S7090		28'- 0"	10	572
S7091		28'- 3"	20	1155
S7092		28'- 8"	20	1172
S7093		29'- 0"	20	1186
S7094		29'- 5"	20	1203
S7095		29'-10"	20	1220
S7096		30'- 3"	20	1237
S7097		30'- 8"	20	1254
S7098		31'- 0"	20	1267
S7099		31'- 5"	20	1284
S7100		31'-10"	20	1301
S7101		16'- 5"	20	671
S7102		16'-10"	20	688
S7103		17'- 2"	20	702
S7104		17'- 7"	20	719
S7105		18'- 0"	20	736
S7106		18'- 6"	20	756
S7107		29'- 9"	3	182
S7108		24'- 4"	4	199
S7109		29'- 5"	2	120
S7110		12'-11"	38	1003
S7111	Str.	15'- 3"	94	2930
S7113	Str.	5'- 6"	1	11
S7114	↑	7'-10"	1	16
S7115		10'- 2"	1	21
S7116		12'- 6"	1	26
S7117		14'-10"	1	30
S7118		17'- 2"	1	35
S7119		19'- 6"	1	40
S7120		21'-10"	1	45
S7121		24'- 2"	1	49
S7122		26'- 6"	1	54
S7123		28'-10"	1	59
S7124		33'- 9"	27	1863
S7125		33'- 3"	27	1835
S7126		32'- 9"	27	1807
S7127	Str.	32'- 3"	27	1780
		Total (Superstructure)=		1,162,043

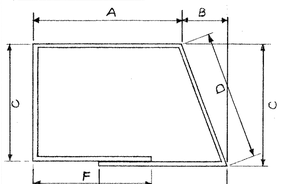
SUPERSTRUCTURE		
MARK	A	B
S403	0'-8"	2'-5"
S433	5'-11"	0'-8"
S436	2'-3"	0'-8"
S437	2'-0"	0'-8"
S438	1'-9"	0'-8"
S439	1'-6"	0'-8"
S440	1'-3"	0'-8"
S441	1'-0"	0'-8"
S6185	1'-3"	5'-0"
S420	0'-8"	2'-3"

SUPERSTRUCTURE		
MARK	A	B
S534	4'-10	0'-6"
S535	5'-0"	0'-6"
S536	4'-1"	9"

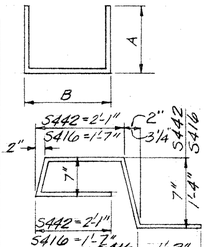




MARK	A	B
A511	4'-3	0'-11"
S502	2'-3	0'-11"
S504	2'-3	0'-3"
S520	2'-11	0'-11"

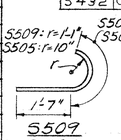


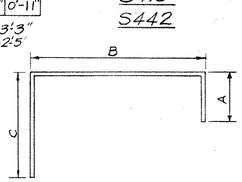
SUPERSTRUCTURE		
MARK	A	B
S427	1'-9"	1'-5"
S428	2'-0"	1'-5"
S429	2'-3"	1'-5"
S430	0'-11"	1'-0"
S431	0'-9"	2'-10"
S435	2'-6"	1'-3"
S423	0'-9"	1'-3"
S424	1'-9"	1'-3"
S425	2'-6"	1'-3"
S426	3'-5"	1'-3"
S432	0'-8"	0'-11"



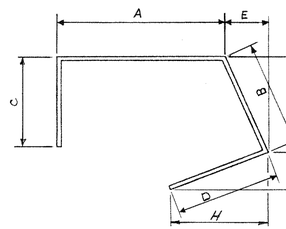
S416
S442

SUPERSTRUCTURE						
MARK	A	B	C	D	E	F
S401	3'-0"	0'-4"	1'-3"	1'-3½	2'-0"	2'-0"
S402	2'-10"	0'-4"	1'-3"	1'-3½	1'-8"	2'-0"
S421	1'-9"	0'-0"	1'-5"	1'-5"	1'-6"	1'-6"
S434	1'-8"	0'-4"	1'-3"	1'-3½	1'-6"	1'-6"
S419	1'-1"	0'-2"	1'-3"	1'-3½	0'-9"	0'-9"
S409	0'-9"	0'-0"	1'-5"	1'-5"	0'-8"	0'-8"
S410	1'-1"	0'-2"	1'-5"	1'-5"	0'-9"	0'-9"
S411	1'-4"	0'-2"	1'-5"	1'-5"	1'-0"	1'-0"
S412	1'-9"	0'-2"	1'-5"	1'-5"	1'-5"	1'-5"
S413	2'-3"	0'-2"	1'-5"	1'-5"	1'-9"	1'-9"
S422	3'-2"	0'-0"	1'-5"	1'-5"	2'-0"	2'-5"
S418	1'-8½	0'-½	1'-4½	1'-4¾	1'-3"	1'-8"

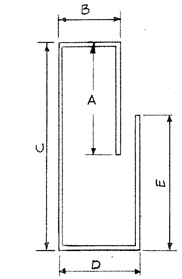




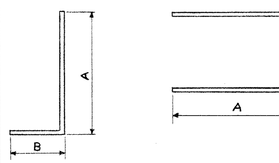
ABUTMENT								
MARK	A	B	C	D	E	F	G	H
A516	3'-4	2'-0"	1'-7"	2'-9"	0'-2"	1'-3"	2'-0"	2'-5⅜"



ABUTMENT			
MARK	A	B	C
A509	1'-7"	3'-5"	2'-9"

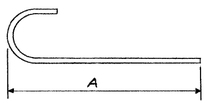


ABUTMENT					
MARK	A	B	C	D	E
A601	3'-0"	0'-11"	7'-8"	1'-5"	6'-4"
A602	3'-0"	1'-5"	8'-6"	1'-5"	7'-5"
A603	3'-0"	0'-11"	8'-6"	1'-5"	6'-4"
A604	3'-0"	1'-5"	7'-8"	1'-5"	6'-7"



ABUTMENT		
MARK	A	B
A903	10'-3	0'-7"
A902	13'-3	0'-7"
A1001	12'-9"	1'-0"
A1002	8'-9"	1'-0"

ABUTMENT		
MARK	A	B
A502	2'-11"	0'-8"
A503	3'-0"	0'-8"



ABUTMENT	
MARK	A
A901	13'-0"

Note:
For Replacement Bars and description of H Bars see Sheet No. 189

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, A501 is a No. 5 size bar and A1001 is a No. 10 size.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM-50-1938 R.& L.

H.& E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.T.C. 12-28-61		B.O.G. 1-5-62	3-1-62 4-23-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

188
227

HAM-50-19.38

HANDRAILS

MARK	SHP.	LGTH.	TOTAL	WGT.
H502	Str.	12'- 4"	16	
H503	↑	16'- 5"	160	
H504		10'- 9"	8	
H505		19'- 5"	4	
H506		23'- 5"	4	
H507		21'- 8"	16	
H508		14'- 3"	56	
H509		11'- 9"	20	
H510		11'- 7"	20	
H511		16'-10"	84	
H512		18'- 7"	8	
H513		17'- 1"	112	
H514		19'- 9"	4	
H515		14'- 1"	16	
H516		13'-10"	12	
H517		20'- 3"	20	
H518		17'- 3"	40	
H519		13'-11"	4	
H520		19'- 7"	32	
H521		22'- 7"	4	
H522		22'- 0"	4	
H523		16'- 7"	104	
H524		13'- 7"	20	
H525		20'- 5"	4	
H526		20'- 1"	12	
H527		14'- 9"	8	
H528		22'- 2"	16	
H529		21'- 2"	16	
H530		18'- 2"	4	
H531		16'- 1"	84	
H532		13'- 0"	12	
H533		19'- 2"	4	
H534		13'- 2"	20	
H535		22'- 5"	8	
H536		24'- 7"	4	
H537		15'-11"	56	
H538		19'- 0"	8	
H539		11'- 0"	4	
H540		13'- 9"	4	
H541		15'- 4"	4	
H542		26'- 2"	4	
H543		22'- 0"	4	
H544		13'- 5"	8	
H545		14'- 4"	4	
H546		10'- 4"	4	
H547		21'- 4"	4	
H548		11'- 2"	4	
H549		20'- 7"	8	
H550		14'-11"	88	
H551		17'- 9"	4	
H552		15'- 9"	4	
H553		15'- 7"	4	
H554		14'- 6"	96	
H555		26'- 9"	4	
H556		12'- 8"	12	
H557		17'- 5"	4	
H558		2'- 0"	8	
H559		18'- 9"	4	
H560	↓	11'-10"	4	
H561	Str.	23'- 2"	4	
H801	Str.	30'- 5"	4	
H802	↑	15'- 3"	4	
H803	↓	15'- 7"	4	
H804	Str.	20'- 4"	4	
H301	Bent	2'- 6"	243	
H302	Bent	6'- 2"	36	
H303	Bent	1'-11"	88	

FLOOD WALL DETAILS

MARK	SHP.	LGTH	TOTAL	WGT.
W401	Bent	9'- 9"	4	26
W402	↑	10'- 1"	4	27
W403		9'- 7"	4	26
W404		5'- 2"	2	7
W405		8'- 9"	2	12
W406		7'-11"	2	11
W407		4'- 6"	2	6
W408	↓	6'- 4"	2	8
W409	Bent	5'-10"	2	8
W410	Str.	23'-11"	4	64
W411	Bent	1'- 1"	70	51
W412	Bent	3'- 5"	2	5
W413	Str.	21'- 0"	4	56
W414	Bent	7'- 2"	2	10
W501	Str.	23'- 1"	55	1324
W502	↑	27'- 8"	180	5194
W503		5'- 7"	55	320
W504		23'-11"	41	1023
W505		21'- 2"	7	155
W506		20'- 9"	7	151
W507		4'- 9"	6	30
W508	↓	5'- 2"	12	65
W509	Str.	26'- 9"	6	167
W601	Str.	4'- 6"	36	243
W1001	Bent	15'- 8"	55	3708
W1002	Bent	22'-11"	54	5325
W1003	Bent	13'- 1"	109	6136
W1004	Str.	10'- 8"	54	2478
W1005	Str.	23'-11"	41	4219
W1006	Str.	21'- 2"	7	638
W1007	Str.	20'- 9"	7	625
		Total		32,118

PIERS

MARK	SHP.	LGTH.	1N	1S	2N	2S	3N	3S	4N	4S	5N	5S	5AN	5AS	6N	6S	7N	7S	8N	8S	9N	9S	±	X	TOTAL	WGT.
P401	Bent	13'- 7"	82	57	72	63	105	116	93	136		156					109	110	66	28	45	36			1274	11,560
P402	↑	12'-0"					104	56		67															227	1820
P403		11'- 6"	84		71	20		57	90	66		156					107	109		28	45	36			869	6676
P404	↓	4'-0"	9	18	22	24	9	26		43								20		20		20			211	564
P405	Bent	11'- 10"		57		42													63						162	1281
P406	Str.	9'- 2"																					4		4	24
P407	Str.	2'- 8"																					6		6	11
P408	Str.	1'-10"																					20		20	24
P409	Bent	4'- 9"																					2		2	6
P410	↑	10'-11"																					12		12	88
P411		7'- 9"																					24		24	124
P412		4'- 6"											31	64	31	32									158	475
P413		16'- 6"											22	22	22	22									88	970
P414		12'- 4"									58		192	184	176	204									814	6706
P415		11'- 3"												180		200									380	2856
P416		11'- 8"									152		208	236	208	236									1040	8105
P417		10'- 7"												236		236									472	3337
P418		6'- 3"												16		32									48	200
P419		10'- 7"									76														76	537
P420	↓	11'- 1"									58		192		176										426	3154
P421	Bent	10'- 9"									76		208		208										492	3533
P422	Str.	3'- 8"															10								10	24
P501	Bent	8'- 9"								40		56													96	876
P502	↑	9'- 9"						400		376		240													1016	10,332
P503		8'- 1"					24										32	32	24	32	24	32			200	1,686
P504		9'- 1"					228										168			156		156			708	6707
P505		9'- 5"							172																172	1689
P506		8'- 3"							28																28	240
P507		10'- 1"				272												120	208		208				808	8497
P508		8'- 7"				48																			48	430
P509		10'- 4"														48									48	517
P510		11'- 2"														180									180	2096
P511		7'- 9"	300																						300	2425
P512		8'- 0"		328	36																				364	3037
P513		9'- 0"			240																				240	2253
P514		4'- 8"																					12		12	58
P515		7'- 8"																					56		56	448
P516		10'- 5"												56											56	608
P517		11'- 3"												244											244	2863
P518		17'- 2"												96		82									178	3187
P519		6'- 6"												192		164									356	2413
P520		9'- 8"											60		60										120	1210
P521		10'-10"											312		312										624	7050
P522	↓	5'- 0"	78	66	81	36	48	36	60	36		36					52	36	36	36	36	36			709	3697
P523	Bent	5'- 6"											36	36	36	36									144	826
P601	Bent	5'-10"	6																						6	37
P602	Bent	6'- 2"																					48		48	309
P603	Bent	14'-10"															5								5	77
P701	Bent	9'- 9"		4				8		8															20	399
P702	Str.	24'- 3"								4								4		8		8			24	1190
P703	Str.	32'- 3"								8															8	527
P704	Str.	29'- 7"						12																	12	726
P705	Bent	10'- 6"																		8		8			16	343
P706	Bent	8'- 7"							4			8													12	211
P707	Str.	28'- 0"										8					2								10	572
P708	Str.	28'- 9"															6								6	353
P709	Str.	24'- 9"					4																		4	202
P710	Bent	9'- 1"					8																		8	149
P711	Str.	34'- 2"					4																		4	279
P712	Bent	8'-10"							4																4	72
P713	Bent	7'- 1"	4																						4	58
P714	Str.	27'- 0"							4																4	221
P715	Str.	26'- 3"							4																4	215
P716	Bent	9'- 9"				8																			8	159
P717	Str.	34'- 8"	4		4									8											16	1134
P718	Str.	32'- 0"				4							8		8										20	1308
P719	Str.	31'- 2"			2	4																			6	382
P720	Str.	29'- 0"			2																				2	119

For Replacement Bars and Description of H Bars see Sheet No. 189
For Bar Bending Diagram see Shs. Nos. 189 & 190
± = Steel Reinforcement for Piers K4, R4, R5 & R6
X = Steel Reinforcement for Re-Construction of Existing Piers 14 & 15.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM-50-1936 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.T.C. 1/31/62	J.T.C. 4/24/62	B.O.G. 2-9-62	W.A.E. 4-25-62	

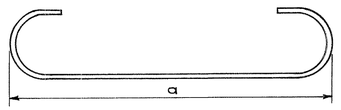
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

189
227

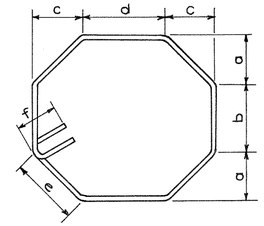
HAM-50-19.38

PIERS

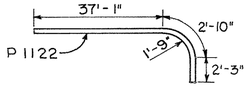
MARK	SHP.	LGTH.	1N	1S	2N	2S	3N	3S	4N	4S	5N	5S	5AN	5AS	6N	6S	7N	7S	8N	8S	9N	9S	±	×	TOTAL	WGT.
P 721	Bent	13'-4"			4																				4	109
P 722	Bent	9'-10"		4	4																				8	161
P 723	Bent	9'-4"															8								8	153
P 724	Bent	11'-2"																					11		11	251
P 725	Bent	9'-2"																					11		11	206
P 726	Str.	30'-9"		4									4		4										12	754
P 727	Str.	28'-1"																	6		6				12	689
P 728	Str.	26'-0"																	2		2				4	213
P 729	Str.	22'-6"																4							4	184
P 730	Bent	10'-7"																8							8	173
P 731	Bent	8'-9"																	8						8	143
P 732	Bent	8'-10"																			8				8	144
P 733	Bent	14'-10"												12											12	364
P 734	Str.	40'-0"												6		4									10	818
P 735	Bent	12'-4"											12		12										24	605
P 736	Str.	32'-9"														8									8	536
P 737	Bent	12'-10"														12									12	315
P 801	Bent	11'-8"	9		35				16	32							42		57	38	55	38			322	10,031
P 802	Str.	20'-0"									31														31	1652
P 803	Str.	16'-6"									11		24												35	1542
P 804	Str.	23'-6"											18												18	1130
P 805	Str.	20'-6"													18										18	985
P 806	Str.	17'-6"													22										22	1028
P 901	Bent	15'-6"			28	14		46	42	72		28						14							244	12,860
P 902	Bent	13'-0"															42								42	1857
P 903	Str.	16'-6"															8								8	449
P 904	Str.	40'-0"															6								6	816
P 905	Bent	12'-0"	84	84		16		32	32			32						16							296	12,078
P 906	Str.	27'-0"					6																		6	551
P 907	Str.	39'-6"							6																6	806
P 908	Str.	14'-0"	4																						4	190
P 909	Str.	37'-2"	6																						6	758
P 910	Bent	9'-0"	14																						14	428
P 911	Str.	13'-0"			4																				4	177
P 912	Str.	19'-4"			6																				6	394
P 913	Str.	15'-9"		20																					20	1071
P 914	Bent	6'-11"		20																					20	470
P 915	Str.	19'-9"																12							12	806
P 916	Str.	27'-0"												80		80									160	14,689
P 917	Str.	26'-5"												30											30	2695
P 918	Str.	29'-6"												26		24									50	5015
P 919	Bent	19'-0"									29														29	1874
P 920	Str.	2'-8"					1																		1	9
P 921	Bent	15'-0"																18							* 18	918
P 922	Str.	24'-3"														30									30	2474
P1001	Bent	15'-10"			37	70	113	57		38		38							42	28	42	28			493	33,588
P1002	Str.	25'-3"						18		18															36	3911
P1003	↕	20'-1"	16							8										6		6			36	3111
P1004	↕	25'-4"								12															12	1308
P1005	↕	40'-0"					6			6		6	16		16	12			6		6				74	12,737
P1006	↕	38'-9"										48													48	8004
P1007	↕	17'-10"				16																			16	1228
P1008	↕	19'-8"																	8		8				16	1354
P1009	Str.	31'-0"															48								48	6403
P1010	Bent	8'-2"			48	16			48			48					48	32	60	32	48	32			412	14,478
P1011	Str.	22'-0"																		6		6			12	1136
P1012	↕	30'-0"																		10		10			20	2582
P1013	↕	14'-9"																				16			16	1016
P1014	↕	16'-0"		4					8													16			28	1928
P1015	↕	12'-3"																		16					16	843
P1016	↕	13'-5"	4																	16					20	1155
P1017	↕	16'-4"					6																		6	422
P1018	↕	31'-8"					4																		4	545
P1019	↕	19'-0"	16																20						36	2943
P1020	↕	19'-4"	16																						16	1331
P1021	↕	18'-8"	16																						16	1285
P1022	Str.	28'-3"	12																						12	1459
P1023	Bent	34'-8"	6																						6	895

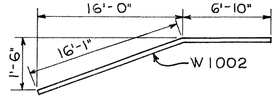


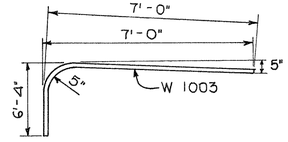
PIERS	
MARK	a
P 514	3'-6"
P 515	6'-6"
P 724	9'-6"
P 725	7'-6"
P 801	9'-6"
P 901	13'-0"
P 902	10'-6"
P 905	9'-6"
P 910	6'-6"
P 919	16'-6"
P 921	12'-6"
P1001	13'-0"
P1046	20'-0"
P1047	16'-6"
P1049	17'-6"
P1052	14'-9"
P1132	29'-6"
P1133	20'-0"
P1139	23'-6"
P1140	20'-6"

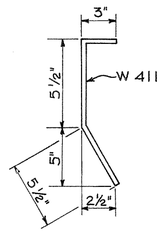


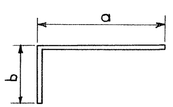
MARK	a	b	c	d	e	f
P 402	6½"	2'-1"	8"	1'-10"	10"	8"
P 403	9¾"	1'-6½"	9¾"	1'-6½"	1'-1½"	8"
P 405	8"	1'-10"	8"	1'-10"	11"	8"











MARK	a	b	MARK	a	b
P 519	6'-1"	6"	P1128	38'-11"	3'-0"
P 601	3'-0"	3'-0"	P1041	24'-9"	3'-0"
P1023	31'-11"	3'-0"	P1142	35'-6"	4'-0"
P1035	38'-4"	3'-0"	P1143	32'-8"	4'-0"
P1053	19'-8"	3'-0"	P1144	33'-5"	4'-0"
P1055	38'-9"	3'-0"	P1145	25'-8"	3'-0"
P1110	17'-0"	3'-0"	P1146	40'-0"	3'-0"
P1114	38'-0"	3'-6"	P1147	23'-0"	3'-0"
P1118	20'-3"	3'-0"	P1054	18'-8"	3'-0"
P1119	38'-4"	3'-0"	P1115	19'-3"	3'-6"
P1125	25'-0"	3'-0"	W 404	2'-11"	2'-3"
P1126	26'-9"	3'-0"	W 407	1'-10"	2'-10"
P1127	24'-1"	3'-0"	W 412	2'-11"	7"

REPLACEMENT BARS			
MARK	LGTH.	SHAPE	NO.
RE 401	5'-3"	Str.	4
RE 501	5'-7"	↑	7
RE 601	5'-11"		35
RE 701	6'-3"		22
RE 801	6'-6"		1
RE 901	6'-10"		4
RE1001	7'-3"	↓	15
RE1101	7'-7"	Str.	11

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Section 5-4.02 need not be furnished and replacement bars will not be required.

REINFORCING BARS mark H 301 thru H 303, H 501 thru H 562 and H 801 thru H 804 are included in Item 5-14 (Railing) for payment.

*See Note "A" Sheet No. 138
For bending diagrams not shown, See Sheet No. 190
#-Steel reinforcement for Pier K4, R4, R5 & R6
X-Steel reinforcement for Reconstruction of Ex. Piers 1 & 15

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST
BRIDGE NO. HAM-50-1938 R.&L.

H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.T.C. 12-28-61	B.S. A-24-62	B.O.G 1-5-62	H.E. 4-25-62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

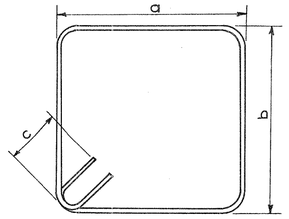
190
227

HAM-50-19.38

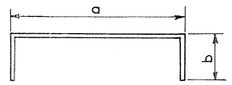
PIERS

MARK	SHP	LGTH.	1N	1S	2N	2S	3N	3S	4N	4S	5N	5S	5AN	5AS	6N	6S	7N	7S	8N	8S	9N	9S	÷	×	TOTAL	WGT.
P1024	Str.	25'-11"				12																			12	1338
P1025	↕	22'-10"			6	16																			22	2162
P1026		16'-10"				8																			8	579
P1027		22'- 3"			16													16							32	3064
P1028		23'- 6"			12								72	80	72	80									316	31,954
P1029		21'- 6"			16													48							64	5921
P1030	↕	20'- 6"			16																				16	1411
P1031	Str.	23'- 9"							48																48	4905
P1032	Bent	7'- 7"	64	40																					104	3394
P1033	Str.	17'- 1"		32																					32	2352
P1034	Str.	15'- 4"		20																					20	1320
P1035	Bent	41'- 1"																	6		6				12	2121
P1036	Str.	17'- 6"																	20						20	1506
P1037	↕	18'- 3"																	20						20	1571
P1038		13'- 0"																			16				16	895
P1039	↕	13'- 9"																			16				16	947
P1040	Str.	14'- 6"																			16				16	998
P1041	Bent	27'- 6"																12							12	1420
P1042	Str.	36'- 6"												4											4	628
P1043	Bent	9'- 5"												80		80									160	6483
P1044	Bent	26'- 1"												80											80	9667
P1045	Str.	34'- 3"												80											80	11,790
P1046	Bent	22'-10"									24														24	2358
P1047	Bent	19'- 4"											56												56	4659
P1048	Str.	27'- 0"											72		72										144	16,730
P1049	Bent	20'- 4"													56										56	4900
P1050	Bent	25'-10"														60									60	6670
P1051	Str.	37'- 6"														80									80	12909
P1052	Bent	17'- 7"																16						✱	16	1211
P1053	↕	22'- 5"															6								6	579
P1054		21'- 5"																	6		6				12	1106
P1055	↕	41'- 6"															6								6	1071
P1101	Bent	8'- 7"				40	66	76		76															258	11,767
P1102	Str.	25'- 0"					22			38															60	7970
P1103	↕	24'- 6"								38															38	4947
P1104		25'-8"						12			36														48	6546
P1105		40'- 0"						10		6			72	30		29									147	31,243
P1106		20'- 6"						22																	22	2396
P1107		17'- 0"	6																						6	542
P1108	↕	20'- 0"						4																	4	425
P1109	Str.	22'- 8"						22																	22	2650
P1110	Bent	19'- 8"							6																6	627
P1111	Str.	21'- 2"						16																	16	1799
P1112	Str.	22'- 0"						20																	20	2338
P1113	Str.	14'-10"										8													8	630
P1114	Bent	41'- 2"										6													6	1312
P1115	Bent	22'- 5"										6													6	715
P1116	Str.	24'- 3"		14																					14	1804
P1117	Str.	26'- 6"					44																		44	6196
P1118	Bent	22'-11"					6																		6	731
P1119	Bent	41'- 0"							6																6	1307
P1120	Str.	19'- 1"				20																			20	2028
P1121	Str.	16'-11"				20																			20	1798
P1122	Bent	42'- 2"	6																						6	1344
P1123	Str.	33'- 5"														12									12	2131
P1124	Str.	23'- 0"				6																			6	733
P1125	Bent	27'- 8"																		12		12			24	3528
P1126	Bent	29'- 5"			6																				6	938
P1127	Bent	26'- 9"		6																					6	853
P1128	Bent	41'- 7"		6																					6	1326
P1129	Str.	29'- 6"																6							6	940
P1130	Str.	35'- 6"												16											16	3016
P1131	Str.	28'- 4"												12											12	1806
P1132	Bent	32'- 8"												76		61									138	23,953
P1133	Bent	23'- 2"									58														58	7140
P1134	Str.	28'- 9"									68														68	10,388
P1135	Bent	9'- 7"									68														68	3463
P1136	Str.	32'- 8"											14		14										28	4861
P1137	Str.	19'- 6"											8		8										16	1658
P1138	Bent	10'- 1"											72		72										144	7715
P1139	Bent	26'- 8"											64												64	9068
P1140	Bent	23'- 8"													58										58	7294
P1141	Str.	37'- 3"													72										72	14,251
P1142	Bent	39'- 2"												16											16	3329
P1143	↕	36'- 4"											14		14										28	5406
P1144		37'- 1"														16									16	3152
P1145	↕	28'- 4"						12		12															24	3613
P1146	↕	42'- 8"			6		6																		12	2720
P1147	Bent	25'- 8"				12																			12	1636

Total (Piers) = 676131 ✱

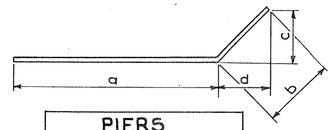


RAILING				PIERS			
MARK	a	b	c	MARK	a	b	c
H 301	8"	5"	4"	P 401	3'-2"	3'-2"	8"
H 302	2'-1"	9"	5"	P 410	2'-6"	2'-6"	8"
H 303	7"	3½"	3"	P 411	2'-6"	11"	8"

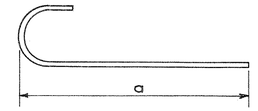


MARK	a	b
W 401	4'-0"	3'-0"
W 402	4'-0"	3'-2"
W 403	3'-6"	3'-2"
W 405	3'-6"	2'-9"
W 406	3'-6"	2'-4"
W 408	3'-6"	1'-6"
W 409	3'-6"	1'-3"
W 414	4'-1"	1'-8"
P 404	3'-2"	6"
P 409	1'-4"	1'-10"
P 412	3'-8"	6"
P 413	3'-8"	6'-6"
P 414	5'-8"	3'-5"
P 416	5'-8"	3'-1"
P 418	5'-5"	6"
P 501	2'-0"	3'-6"
P 502	2'-0"	4'-0"
P 503	2'-0"	3'-2"
P 504	2'-0"	3'-8"
P 505	2'-0"	3'-10"
P 506	2'-0"	3'-3"
P 507	2'-0"	4'-2"
P 508	2'-0"	3'-5"
P 509	2'-7"	4'-0"
P 510	2'-7"	4'-5"
P 511	2'-0"	3'-0"
P 512	1'-11"	3'-2"
P 513	1'-11"	3'-8"
P 516	2'-8"	4'-0"
P 517	2'-8"	4'-5"
P 518	3'-10"	6'-9"
P 520	2'-5"	3'-9"
P 521	2'-5"	4'-4"
P 522	3'-2"	1'-0"
P 523	3'-8"	1'-0"
P 603	2'-8"	6'-3"

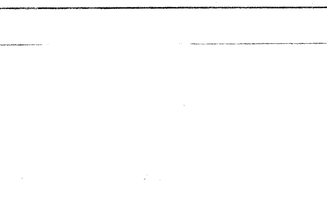
✱ See Note A Sh. No. 138



PIERS				
MARK	a	b	c	d
P 701	7'-6"	2'-3"	7"	2'-2"
P 705	8'-3"	2'-3"	6¼"	2'-2¼"
P 706	6'-4"	2'-3"	8¼"	2'-1¾"
P 710	6'-10"	2'-3"	7¾"	2'-2"
P 712	6'-7"	2'-3"	11"	2'-0¾"
P 713	4'-10"	2'-3"	5½"	2'-2½"
P 716	7'-6"	2'-3"	8¾"	2'-1½"
P 721	11'-1"	2'-3"	6¼"	2'-2¼"
P 722	7'-7"	2'-3"	6¼"	2'-2¼"
P 723	7'-1"	2'-3"	7"	2'-2"
P 730	8'-4"	2'-3"	7¾"	2'-2"
P 731	6'-6"	2'-3"	10"	2'-1"
P 732	6'-7"	2'-3"	10"	2'-1"
P 733	12'-7"	2'-3"	5½"	2'-2½"
P 735	10'-1"	2'-3"	7"	2'-2"
P 737	10'-7"	2'-3"	5½"	2'-2½"



PIERS	
MARK	a
P 602	5'-6"
P 914	5'-8"
P1010	6'-9"
P1032	6'-2"
P1043	8'-0"
P1044	26'-8"
P1050	24'-5"
P1101	7'-0"
P1135	8'-0"
P1138	8'-6"



PIERS					
MARK	a	b	c	d	e
P 415	3'-4"	1'-1½"	10½"	2'-7"	1'-5½"
P 417	3'-4"	1'-1½"	10½"	2'-3"	1'-5½"
P 419	2'-11"	1'-4½"	1'-4½"	1'-1"	2'-0"
P 420	3'-3"	1'-2½"	1'-2½"	2'-3"	1'-9"
P 421	3'-3"	1'-2½"	1'-2½"	2'-1"	1'-9"

Total weight of Reinforcing Steel = 1,907.056 ✱

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM-50-1936 R.&L.

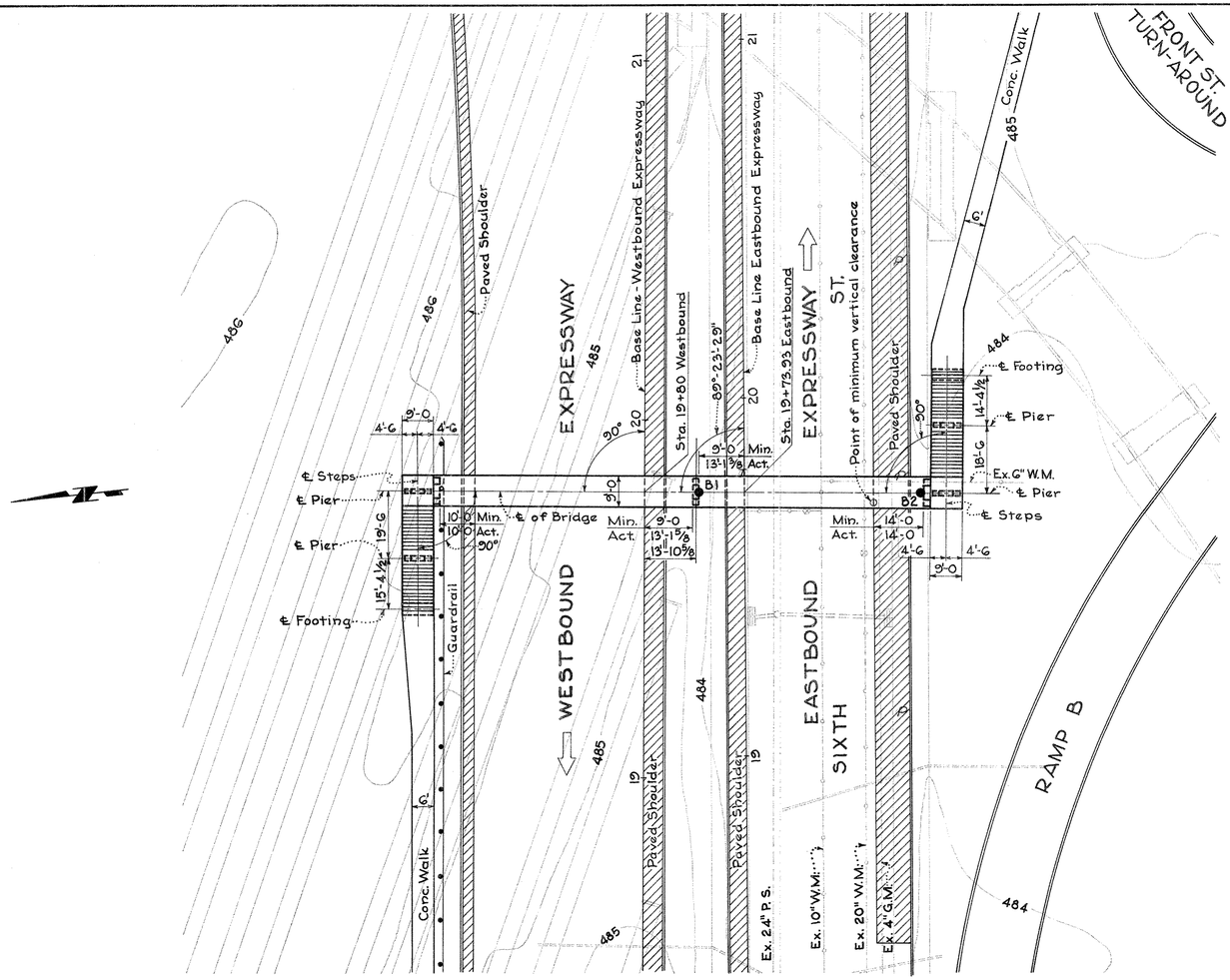
H.&E. BRIDGE NO. 1

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE
	JTC 1/31/62	B.S. 4-24-62	B.O.G 2-9-62	M.B. 4-25-62

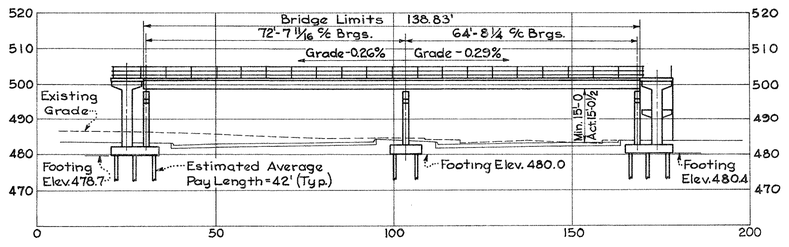
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-50-19.38

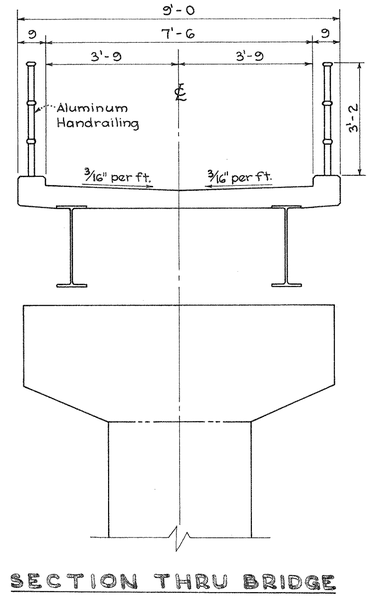
191
227



PLAN



PROFILE
Along ℄



SECTION THRU BRIDGE

PROPOSED STRUCTURE

TYPE: Two span continuous rolled beam with concrete deck and substructure.
SPANS: 72.64' and 64.69' ℄ brgs.
WIDTH: 7'-6 clear between curbs.
LOADING: 85 lb./sq.ft. (uniform).
SKEW: As shown on plan.

NOTE:
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 revisions thereof dated 2-21-58.

Piles shall be 12BP53 driven with a hammer of not less than 11000 ft. lbs. per blow to firm contact with rock and shale. Firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 (Construction and Material Specifications) is not less than the following value for a pile hammer of the indicated energy rating:
60 tons per pile using a 11000 ft. lb. hammer
50 tons per pile using a 15000 ft. lb. 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 40 tons per pile.

For General Notes see Sheet No. 196

For logs of soil borings, see Sheet No. 195

● Symbol denotes Test Hole.

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

SITE PLAN
BRIDGE NO. HAM-50-1971
PEDESTRIAN BRIDGE OVER 6TH ST. EXPRESSWAY

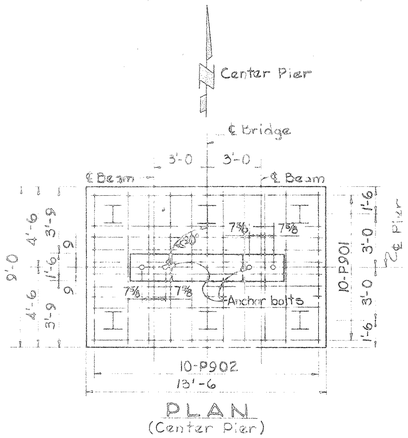
CINCY BRIDGE NO. 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.G.M.	R.G.M.	J.D.A.	J.R.S.	W.W.	4/19/62	

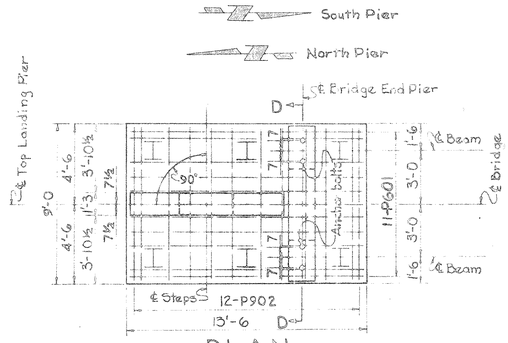
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

192
227

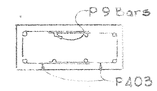
HAM-50-19.38



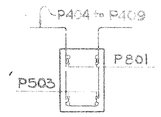
PLAN
(Center Pier)



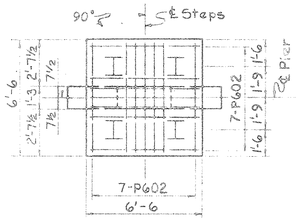
PLAN
(Bridge End Pier And
Top Landing Pier)



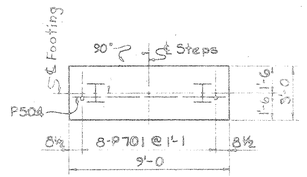
SECTION E-E
SECTION J-J is similar
to Section E-E.



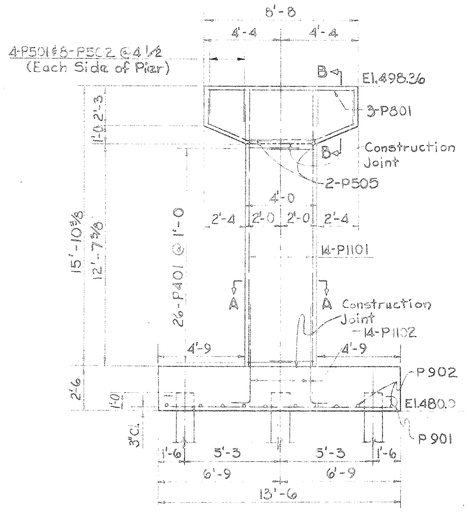
SECTION F-F
SECTION K-K is similar
to Section F-F.



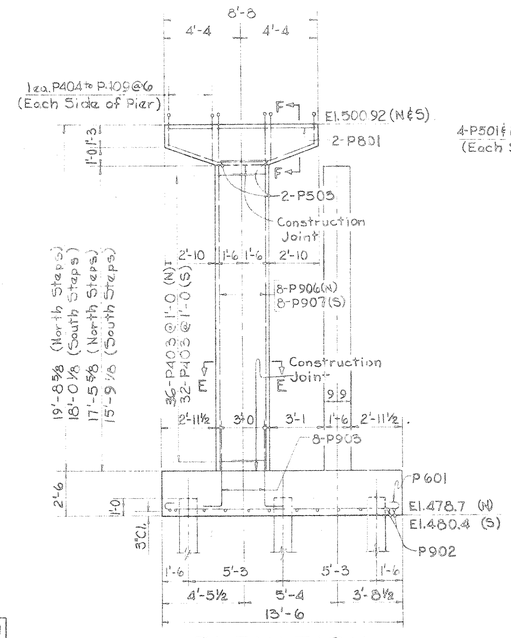
PLAN
(Pier At ℄ Landing)



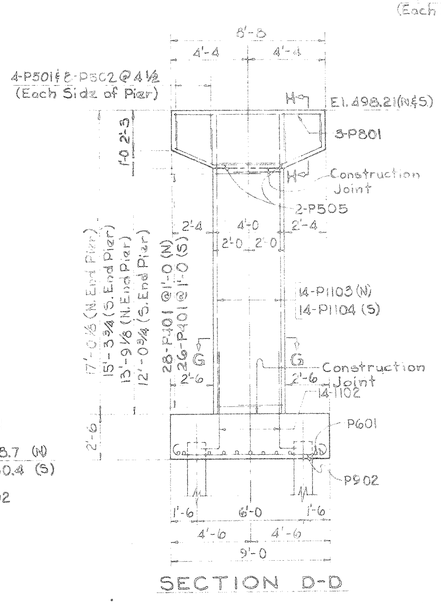
PLAN
(Bottom Step Footing)



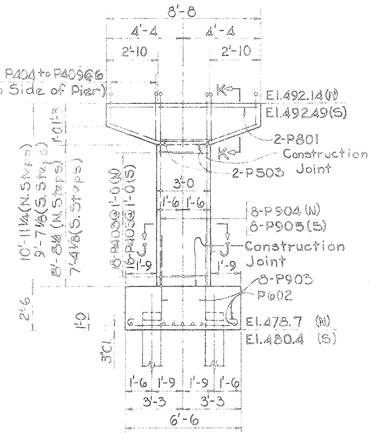
ELEVATION



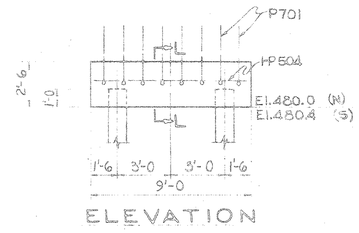
ELEVATION



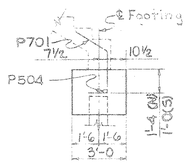
SECTION D-D



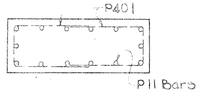
ELEVATION



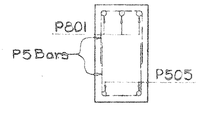
ELEVATION



SECTION L-L



SECTION A-A
SECTION G-G is similar
to Section A-A.



SECTION B-B
SECTION H-H is similar
to Section B-B.

Note: (N) denotes the north end of the bridge. (S) denotes the south end of the bridge.

All piles shall be 12 BP 53.

Special care shall be taken in placing reinforcing steel in the pier cap so it will not interfere with the bearing plate anchor bolts.

For location of piers, see Sheet No. 191

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PIER DETAILS
BRIDGE NO. HAM-50-1971
PEDESTRIAN BRIDGE
OVER
6TH ST. EXPRESSWAY

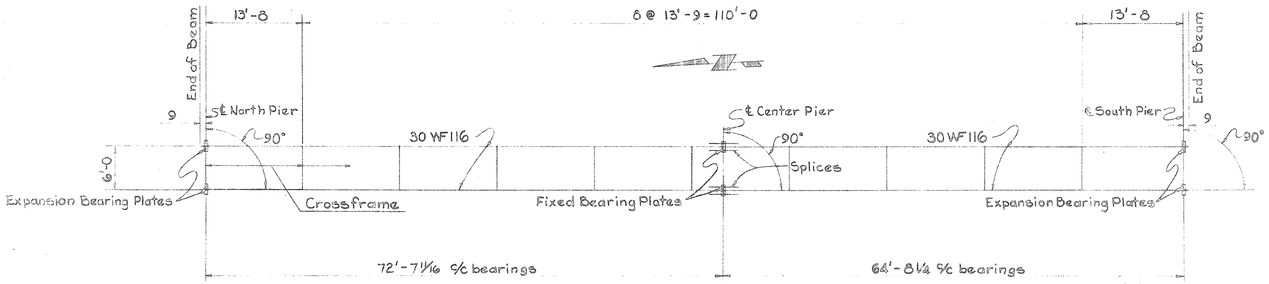
CINCY BRIDGE NO. 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RGM	RGM		J.R.S.	W.W.	4/19/62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

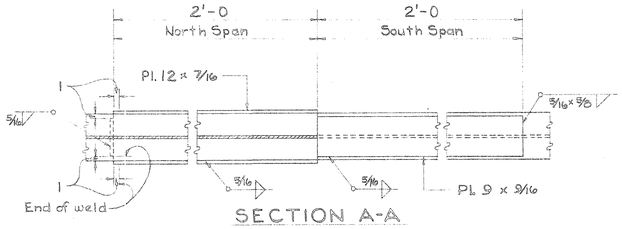
HAM-50-19.38

193
227

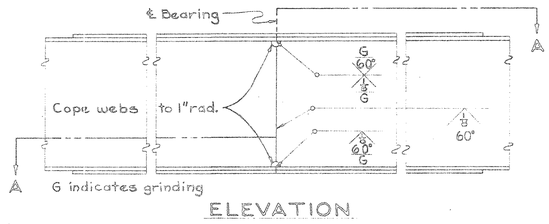


FRAMING PLAN

DEFLECTION & CAMBER OF BEAMS		
LOCATION	BEAMS	
	North Span	South Span
Deflection due to weight of steel.	1/4"	1/8"
Deflection due to remaining dead load.	3/8"	3/16"
Sum of Deflection	1"	7/16"
Required Camber	1"	0



SECTION A-A



ELEVATION

BEAM SPLICE DETAILS

BEAM SPLICE WELDING PROCEDURE

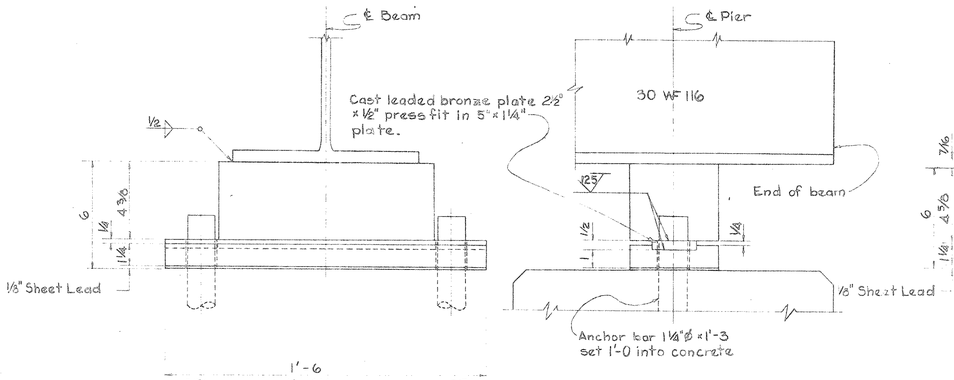
1. Raise the end of the beams at the south pier 2 1/2".
2. Butt-weld beam flanges and webs at the center pier, using the following sequence: make two passes on each flange, then two passes on the web; repeat using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at the center pier.
4. Lower the beam ends to final position.

NOTE:

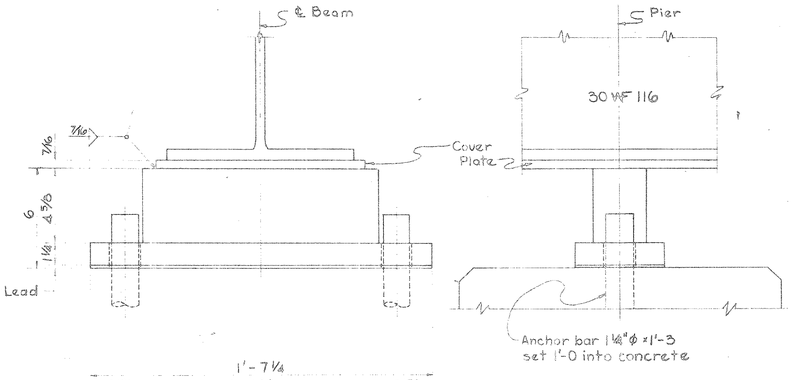
SHOP PAINTING STEEL.

The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

For details of crossframes, see Sheet No. 196



EXPANSION BEARING PLATES



FIXED BEARING PLATES

RECEIVED
JAN 15 '75

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

STEEL FRAMING PLAN & BEARING PLATE DETAILS

BRIDGE NO. HAM-50-1971

PEDESTRIAN BRIDGE OVER 6TH ST. EXPRESSWAY

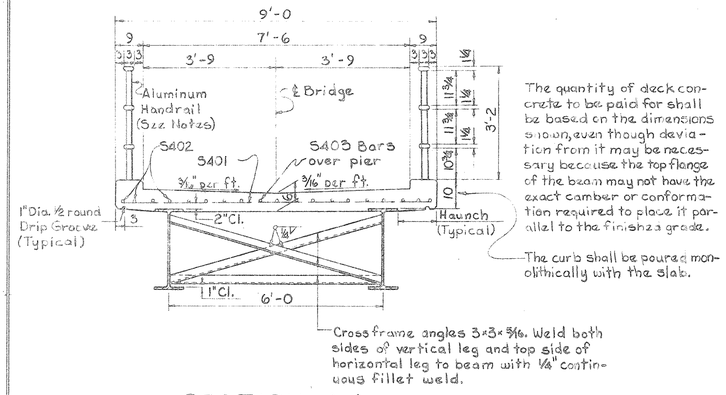
CINCY BRIDGE NO. 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RGM	RGM		J.R.S.	W.W.	4/15/62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

194
227

HAM-50-19.38

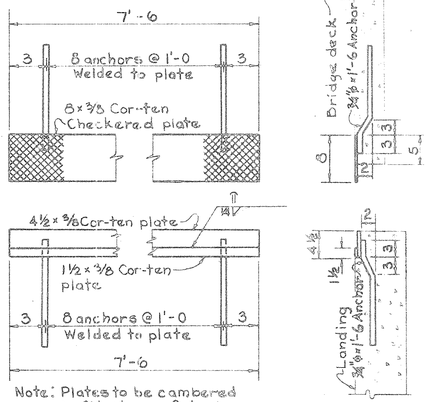


The quantity of deck concrete to be paid for shall be based on the dimensions shown, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

The curb shall be poured monolithically with the slab.

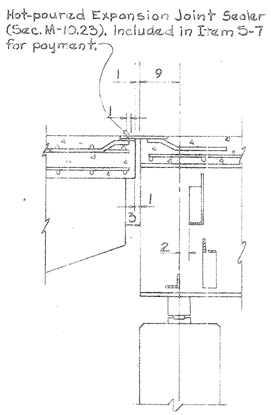
Cross frame angles 3×3×5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/8" continuous fillet weld.

SECTION A-A

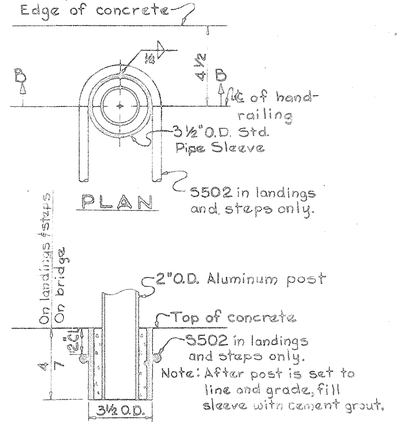


Note: Plates to be cambered to fit slope of deck.

DETAILS OF DECK JOINT PLATES



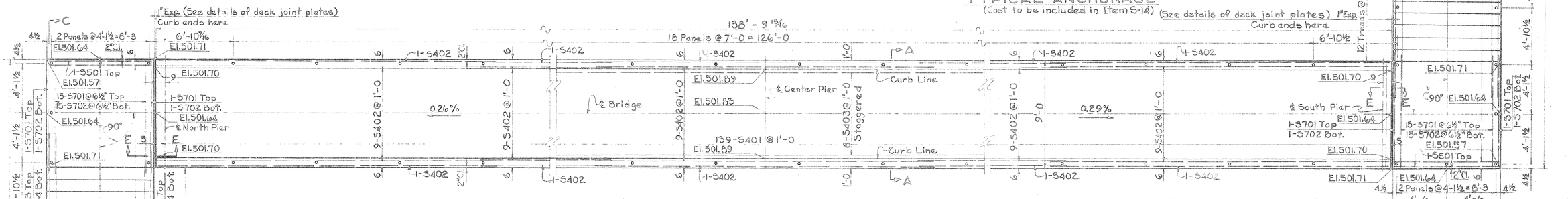
SECTION E-E



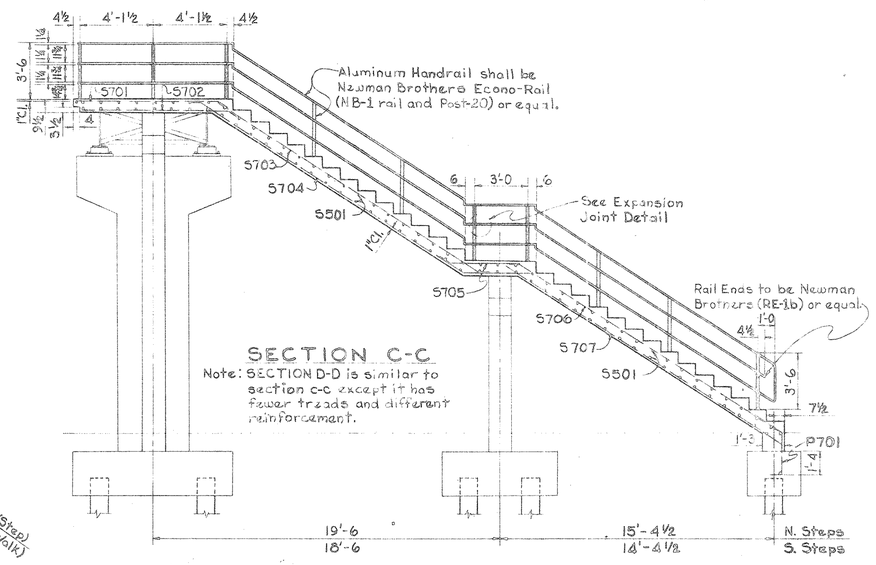
SECTION B-B

TYPICAL ANCHORAGE

(Cost to be included in Item S-14) (See details of deck joint plates) 1"Exp. Curb ends here

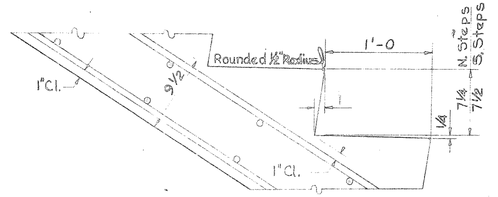


PLAN



SECTION C-C

Note: SECTION D-D is similar to section c-c except it has fewer treads and different reinforcement.



TYPICAL STEP DETAIL

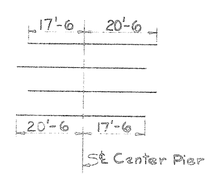
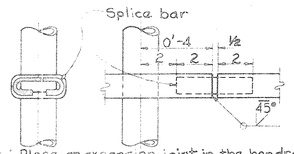


DIAGRAM SHOWING STAGGER OF S403 BARS OVER PIER



Note: Place an expansion joint in the handrail panel which crosses the deck expansion joint and in every fifth panel on the bridge and in the panel on each of the two 4' step landings.

TYPICAL EXPANSION JOINT DETAIL

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DECK SLAB, RAILING, & STEP DETAILS BRIDGE NO. HAM-50-1971

PEDESTRIAN BRIDGE OVER 6TH ST. EXPRESSWAY
CINCY BRIDGE NO. 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RGM	RGM		J.R.S.	W.W.	4/19/62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

195
227

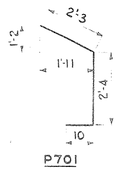
HAM-50-19.38

REINFORCING STEEL LIST

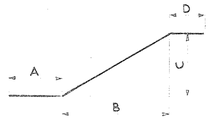
MARK	NO.	LENGTH	WEIGHT	SHAPE
SUPERSTRUCTURE & STEPS				
S401	130	6'-8	805	Str.
S402	55	28'-9	1,056	Str.
S403	8	38'-0	203	Str.
S501	180	8'-8	1,627	Str.
S502	40	3'-10	—	Bt.
S701	34	10'-1	701	Bt.
S702	34	8'-11	620	Bt.
S703	17	18'-2	631	Bt.
S704	17	22'-2	770	Bt.
S705	34	4'-6	313	Bt.
S706	17	10'-11	622	Bt.
S707	17	18'-7	646	Str.
S708	17	16'-10	585	Bt.
S709	17	21'-0	730	Bt.
S710	17	18'-8	649	Bt.
S711	17	17'-6	608	Str.
TOTAL WEIGHT 10,636#				
PIERS & FOOTINGS				
P401	80	6'-2	330	Bt.
P402	—	—	—	—
P403	102	4'-11	335	Bt.
P404	8	5'-1	27	Bt.
P405	8	5'-5	29	Bt.
P406	8	5'-9	31	Bt.
P407	8	6'-1	33	Bt.
P408	8	6'-5	34	Bt.
P409	8	6'-9	36	Bt.
P501	24	5'-0	125	Bt.
P502	48	5'-8	284	Bt.
P503	16	5'-2	86	Bt.
P504	2	8'-8	18	Str.
P505	12	5'-2	65	Bt.
P601	22	14'-6	479	Bt.
P602	28	7'-6	315	Bt.
P701	16	5'-5	177	Bt.
P801	17	8'-6	378	Str.
P901	10	15'-8	533	Bt.
P902	34	11'-2	1,291	Bt.
P903	32	6'-0	653	Bt.
P904	8	12'-6	340	Bt.
P905	8	11'-2	304	Bt.
P906	8	21'-3	575	Bt.
P907	8	19'-7	533	Bt.
P1101	14	15'-8	1,165	Str.
P1102	42	6'-10	1,525	Bt.
P1103	14	16'-10	1,252	Str.
P1104	14	15'-1	1,122	Str.
TOTAL WEIGHT 12,078#				

REPLACEMENT BARS

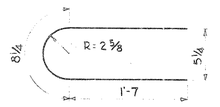
RE401	1	5'-3		Str.
RE501	1	5'-7		Str.
RE601	1	5'-11		Str.
RE701	1	6'-3		Str.
RE801	1	6'-6		Str.
RE901	1	6'-10		Str.
RE1101	1	7'-7		Str.



P701

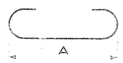


MARK	A	B	C	D
S704	3'-10	15'-0	9'-5	0'-7
S709	3'-10	13'-11	9'-0	0'-7

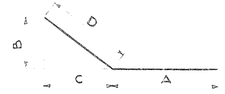


S502

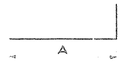
MARK	A	B
P401	1'-2	2'-6
P403	0'-11	2'-0
P501	1'-2	1'-11
P502	1'-2	2'-3



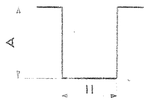
MARK	A
P601	13'-2
P602	6'-2
P901	13'-2
P902	8'-8



MARK	A	B	C	D
P503	2'-2	1'-0	2'-10	3'-0
P505	2'-8	1'-0	2'-4	2'-6
S701	7'-10	1'-3	1'-11	2'-3
S702	8'-6	0'-4	0'-6	0'-7
S703	17'-7	0'-4	0'-6	0'-7
S705	3'-11	0'-4	0'-6	0'-7
S706	17'-8	1'-3	1'-11	2'-3
S708	16'-3	0'-4	0'-6	0'-7
S710	16'-5	1'-3	1'-11	2'-3



MARK	A
P903	5'-0
P904	11'-6
P905	10'-2
P906	20'-3
P907	18'-7
P1102	5'-8



MARK	A
P404	1'-8
P405	1'-10
P406	2'-0
P407	2'-2
P408	2'-4
P409	2'-6

NOTE: S bars listed without weights shall be included with Item S-14 for payment.

If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

Bar size is indicated in the bar mark. The first digit indicates the bar size number except when the first digit is one (1). In this case the first two digits indicate the bar size number.

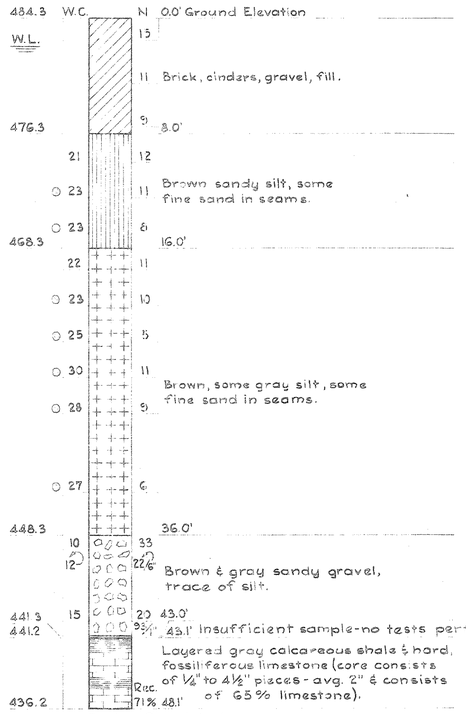
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	TOTAL	UNIT
E-2	Unclassified Excavation	92	Cu.Yds
S-1	Class "C" concrete, superstructure and steps	58.5	Cu.Yds.
S-1	Class "C" concrete, pier caps and columns	22.7	Cu.Yds.
S-1	Class "E" concrete, footings	46.6	Cu.Yds.
S-4	Reinforcing Steel	22714	Lbs.
S-7	Structural Steel	34805	Lbs.
S-8	Field painting of structural steel	34805	Lbs.
S-14	*Aluminum handrail, as per plan*	452	Lin. Ft.
S-16	First test pile	Lump Sum	Lump Sum
S-18	12BP53 Steel H Piles	1200	Lin. Ft.
Special	Water reducing, set-retarding admixture	56.5	Cu. Yds.

NOTE - For Common General Notes see Sheet No. 196

BORING B-1

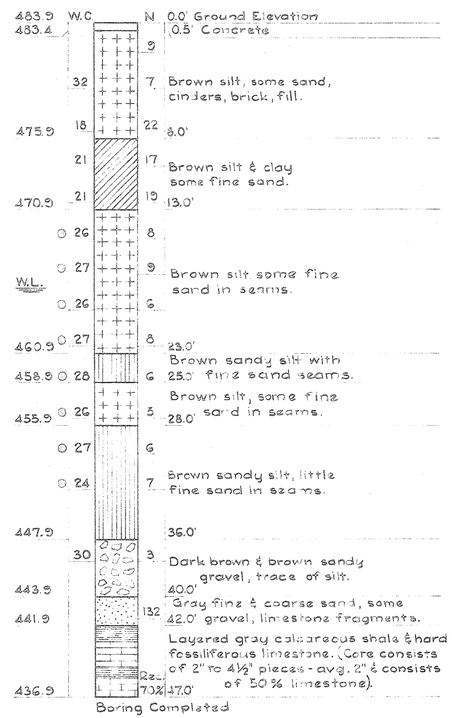
CITY TRAVERSE LINE Sta. 27+20, 9' R.



Boring Completed

BORING B-2

CITY TRAVERSE LINE Sta 27+19, 54' L.



Boring Completed

NOTE: W.L. = Water level reading ~ immediate.

W.C. = Column of figures indicates moisture content of sample in per cent of dry weight.

⊙ = Moisture content equal to or greater than liquid limit minus 3%.

N = Column of figures indicates number of blows required to drive 2" O.D. Split Spoon the last 12" of a sample run using 140 lb. weight falling 30 inches.

PANM Core Barrel was used for the last 5 ft. of each boring.

Description of material is based on laboratory test data and visual examination. Representative samples only were tested.

Modifying descriptions in per cent of dry weight: trace 1-10%; little 10-20%; some 20-35%; and 35-50%.

Borings taken between April 24, 1961 and April 26, 1961.

For location of borings see Sheet No. 191

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CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

REINFORCING STEEL LIST
ESTIMATED QUANTITIES
LOG OF BORINGS
BRIDGE NO. HAM-50-1971
PEDESTRIAN BRIDGE OVER GTH ST. EXPRESSWAY
CINCY BRIDGE NO. 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.G.M.	J.D.A.		J.R.S.	W.W.	4/19/62	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

196
227

HAM-50-19.38

REFERENCE shall be made to standard Drawings AR-1-57 "Revised 4-2-60", CSB-2-56, Sheet 2 "Revised 2-2-59," Supplemental Specification No. I-129 "Revised 4-5-61", Supplemental Specification No. S-307 dated 8-23-60 and Supplemental Specification No. S-207.10 dated 4-25-61.

PILES: Since the structures of this project are to be constructed in a metropolitan area where there are numerous areas in which buildings have been dismantled and the existing basements filled with boulders, gravel, bricks and other random debris, the Contractor shall use augering, spudding or whatever means are necessary to permit the piles to be driven without damaging them whenever the above conditions are encountered.

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.

POROUS BACKFILL (where called for in the plans) shall be 2 ft. thick and shall extend up to the underside of the approach slab or sidewalk unless otherwise noted.

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

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of the soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.

UTILITY LINES: All labor and expense involved in relocating (installing) the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

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. Eight sets of prints will be required for each railroad involved.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and re-surfacing the railroad tracks.

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

LIGHTING AND SIGNING: For special notes for Lighting and Signing see Sheet No. 11, 80 thru 89.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

GENERAL NOTES

DESIGNED	DRAWN	TRACED	CHECKED	QUANTITIES	APPROVED
		JTC	JHO 3/21/62	M.A.Z. 4-20-62	