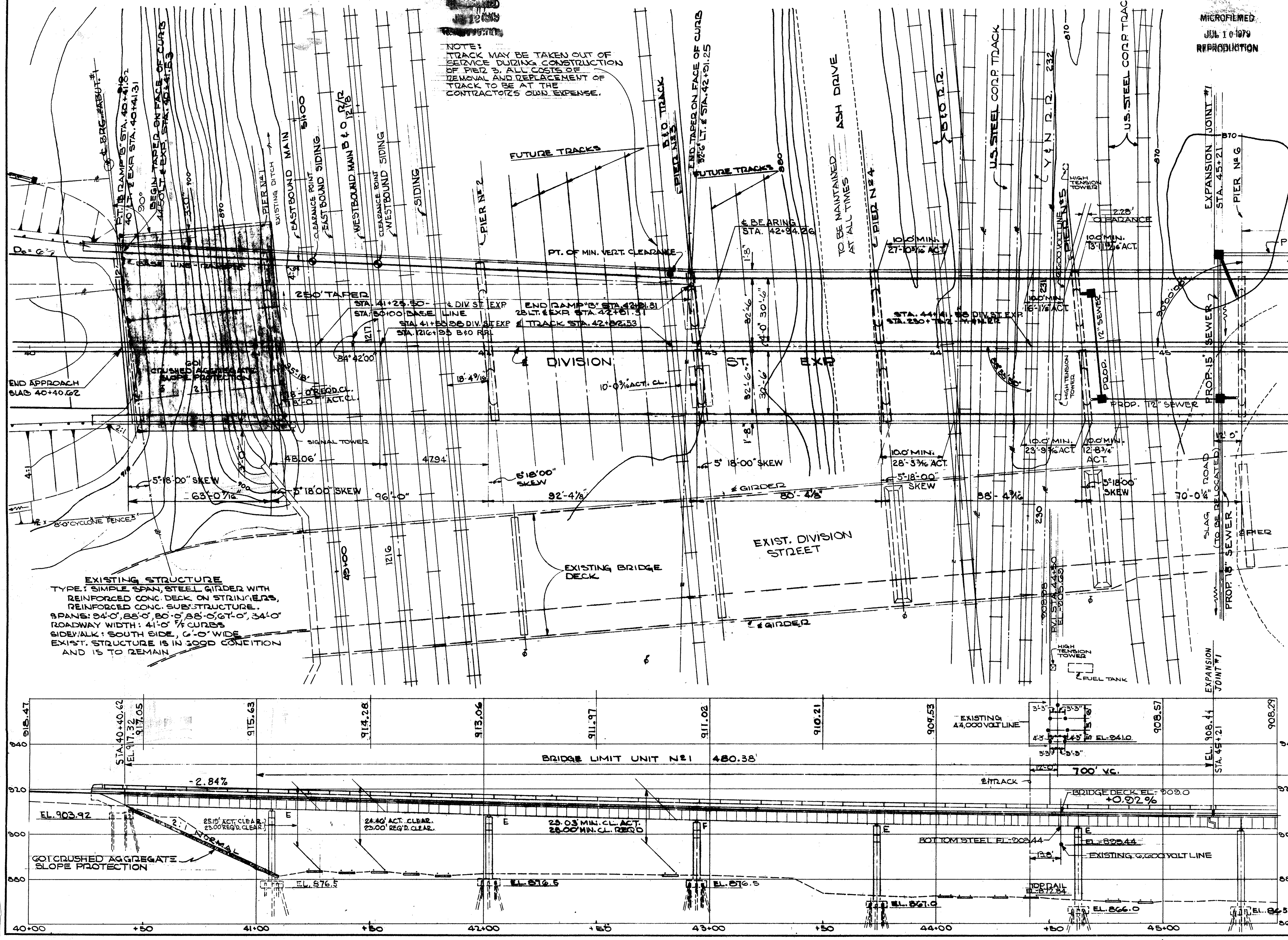
NOTE: TRACK MAY BE TAKEN OUT OF SERVICE DURING CONSTRUCTION OF PIER 3. ALL COSTS OF REMOVAL AND REPLACEMENT OF TRACK TO BE AT THE CONTRACTOR'S OWN EXPENSE.



AVERAGE ESTIMATED PAY LENGTH FOR PILES

ABUTMENT #1	25'
PIER #1	25'
PIER #2	25'
PIER #3	25'
PIER #4	20'
PIER #5	20'

EXISTING STRUCTURE

TYPE: SIMPLE SPAN, STEEL GIRDER WITH REINFORCED CONC. DECK ON STRINGERS, REINFORCED CONC. SUBSTRUCTURE.
SPANS: 94'-0", 88'-0", 80'-0", 88'-0", 67'-0", 34'-0"
ROADWAY WIDTH: 41'-0" F/F CURBS
SIDEWALK: SOUTH SIDE, 6'-0" WIDE
EXIST. STRUCTURE IS IN GOOD CONDITION AND IS TO REMAIN

PROPOSED STRUCTURE - UNIT Nº 1

TYPE - CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SKEW - 5°18'00" R.F.
SPANS - UNIT #1: 63'-0 7/16", 96'-0", 92'-4 1/8", 80'-4 1/8", 88'-4 9/16", 70'-0 1/4"
ROADWAY - VARIABLE - SEE PLANS 65'-0" F/F CURBS INCLUDING 4'-0" MEDIAN
LOAD FREQUENCY - C F 2000

WEARING SURFACE - 1" MONOLITHIC
APPROACH SLAB - 25' LONG (AS-1-67)
ALIGNMENT - TANGENT
SUPERELEVATION - NONE
TRAFFIC COUNT: 14,500 ADT 1980
SLOPE PROTECTION - ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SITE PLAN

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER
YOUNGSTOWN — MAHONING COUNTY

UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.K.D.	D.S.		W.K.D.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

138
232

RECEIVED
JUN 18 1959
DESIGN SECTION

LOADING YARD

GREASE HOUSE

GANTRY RAIL

LOADING TRACK

SHEET PILING

GANTRY CRANE

BRIDGE UNIT Nº 1

BRIDGE UNIT Nº 2

BRIDGE UNIT Nº 3

95'-0"

115'-0"

115'-0"

85'-0"

EXPANSION JOINT Nº 1 STA. 45+21

EXPANSION JOINT Nº 2 STA. 49+31

℄ PIER Nº 6

℄ PIER #7

℄ PIER #8

℄ PIER #9

℄ PIER #10

12'

PROP. 12" SEWER

PROP. 15" SEWER

PROP. 12" SEWER

SLAG DRIVE (TO BE RELOCATED)

DIVISION ST. EXP.

WEIGH HOUSE

SCALE

EXIST 12" SEWER

PROP. 12" SEWER

EXIST 2" WATER LINE

SLAG DRIVE

MAHONING RIVER

EXIST. DIVISION STREET

BRIDGE LIMIT UNIT Nº 2 410.00'

7.00' V.C.

± 0.92%

40.0' ± MIN. CL. ACT.
25.0' MIN. CL. REQ'D

EXISTING PROFILE

EL. 865.0

EL. 863.0

EL. 858.0

EL. 857.0

EL. 856.0

908.57 908.29 908.14 908.13 908.26 908.52 908.91 909.37 909.83 910.29 910.75 911.21

45+00 +50 46+00 +50 47+00 +50 48+00 49+00 +50 50+00 +50

870 880 890 900 910 920

860 850 840

SECTION B-B

SECTION A-A

PROPOSED STRUCTURE UNIT Nº 2

TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE.
SKEW: NONE
SPANS: UNIT Nº 2 85'x115'x115'x85'
LOAD FREQUENCY - CF 2000
ROADWAY - 65'-¾ CURBS INC. 4' MEDIAN
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
SUPERELEVATION: NONE

ESTIMATED PILE LENGTH
PIER #6 - 30' PIER #8 - 25'
PIER #7 - 30' PIER #9 - 20'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

SITE PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.K.D.	D.S.		W.K.D.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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BRIDGE UNIT #2

EXPANSION JOINT STA. 49+31

℄ PIER #10

12'

180'-6"

℄ PIER #11

MAHONING RIVER

236'-0"

℄ PIER #12

180'-6"

12'

BRIDGE UNIT #4

℄ PIER #13

EXPANSION JOINT STA. 55+52

PILE

90°-00'-00"

SEWER

PROP. 12" EXIST 12" SEWER

68'-4"

1'-0"

6"

65'-0"

1'-0"

6"

CANAL CLEARANCE = 198' MIN.

DIVISION ST. EXP.

60°-00'-00"

CURVE Nº 1

PROP. 12" SEWER

PROP. 12" SEWER

EXIST 12" SEWER

1'-20'-58"

1'-8"

40'-0"

30'-6"

32'-6"

30'-6"

32'-6"

1'-8"

50 51 52 53 54 55

C

C

HIGH WATER EL. 841.45

EXISTING GROUND

FUTURE CANAL POOL

SECTION C-C

EXPANSION JOINT Nº 2 STA. 49+31

DRAINAGE DATA

NO HIGH WATER PROFILES ARE AVAILABLE FOR THIS AREA. A HIGH WATER MARK WAS ESTABLISHED AT EL. 841.45 DURING THE 1937 FLOOD AT 400' UPSTREAM FROM THE BRIDGE ST BRIDGE WHICH IS THE CLOSEST AVAILABLE GAGE UPSTREAM OR DOWN-STREAM OF THE PROPOSED CENTERLINE. SINCE 1937, SEVERAL FLOOD CONTROL STRUCTURES HAVE BEEN CONSTRUCTED UP STREAM FROM THIS LOCATION. A LOCK ON THE PROPOSED CANAL IS TO BE LOCATED APPROXIMATELY 2200' UPSTREAM. THE CANAL POOL IS TENTATIVELY SET AT EL. 825.0

ESTIMATED PILE LENGTH
PIER #10 = 20'
PIER #12 = 21'

T.S. STA. 54+05.67

℄ CURVE DATA Nº 1

Δ = 2°31'42" RT.	Δ = 15°31'45"
D = 5°30'00"	L_c = 517.02'
R = 1043.66'	T_c = 260.41'
L_s = 200.00'	E_c = 17.67'
T_s = 143.25'	E_s = 35.05'
P = 3°00'00"	

P.I. STA. 58+69.12

PILE

BRIDGE LIMITS UNIT Nº3 621.0'

500' V.C.

PVI STA. 54+75 EL. 915.12

910.29 910.75 911.21 911.67 912.13 912.59 913.03 913.35 913.52 913.54 913.42 913.16 912.75

+0.92% -1.98%

910 890 870 850 830

E F E E

37.8'± FUTURE RR. TRACKS

EL 856.0

56.1' ± MIN. CL. 72.5' AT FUTURE CANAL POOL

52.8' ± MIN. CL. ACT. 23.0' MIN. CL. REQ'D

HIGH WATER EL 841.45

NORMAL FLOW 836.57

EXISTING PROFILE

EL. 844.0

FUTURE CANAL POOL EL. 825.0

BOTTOM OF CANAL EL. 807 ±

EL. 804.0

EL. 804.0

+50 50+00 +50 51+00 +50 52+00 +50 53+00 +50 54+00 +50 55+00 +50

PROPOSED STRUCTURE - UNIT Nº 3

TYPE - CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SKEW - SEE PLANS
SPANS - 180'-6", 236'-0", 180'-6"
ROADWAY - 65'-0" ℅ CURBS INCLUDING 4'-0" MEDIAN
LOAD FREQUENCY - CF 2000
WEARING SURFACE - 1" MONOLITHIC
APPROACH SLABS - NONE
ALIGNMENT - (GIRDER ON TANGENT) (DECK ON TANGENT & SPIRAL)
SUPERELEVATION - VARIABLE

EXISTING BRIDGE 210'± DOWNSTREAM

TYPE = SIMPLE SPAN, STEEL TRUSS
SPAN = ONE SPAN - 186.6'
℅ ABUTMENTS
ROADWAY WIDTH -

STRUCTURE IS IN GOOD CONDITION AND WILL REMAIN

PLAN-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

SITE PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

UNIT Nº3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-I59 (I)	

MAH.-711-0.17

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SITE PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-68	

℄ CURVE DATA Nº 1

Δ = 2°31'45" RT.
D = 5°00'00"
R = 1005.86'
Δc = 15°31'45"
Tc = 260.41'
Lc = 517.62'
Ec = 17.67'
θs = 3°00'00"
Ls = 200'
Ts = 465.25'
Es = 35.00'

NOTE: CONTRACTOR SHALL EXPOSE 30" Y.S.℄T. WATER LINE BEFORE BEGINING WORK ON PIERS #15 & #16

ESTIMATED PILE LENGTH

PIER #14 = 22'
PIER #17 = 14'

PROPOSED STRUCTURE - UNIT #4

TYPE - CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE
SKEW - RADIAL
SPANS - UNIT #4 116'-0" ; 136'-0" ; 108'-0" ; 90'-0"

ROADWAY - 65'-0" ½ CURBS INCLUDING 4'-0" MEDIAN
LOAD FREQUENCY - CF 2000
APPROACH SLABS - NONE
ALIGNMENT - 3°00 CURVE RIGHT
SUPERELEVATION - .048 / FT. MAX.
WEARING SURFACE: 1" MONOLITHIC CONCRETE

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

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RECEIVED
JUN 12 1969
HIGHWAY INFORMATION

PIER #17 DRY
EXPANSION JOINT STA. 60+02
PIER #18
PIER #19
ASPHALT
ASPHALT ROAD
PROP. 24" SEWER
PROP. 18" SEWER
PROP. 12" SEWER
SHEET METAL GARAGE
1½ STY BRICK BLDG.
℄ DIVISION ST.
EXP.
YOUNGSTOWN SHEET & TUBE STEEL CO. TRACKS
SLAG PARKING AREA
EXIST. RWY.
REMOVE THIS EMBANKMENT
20" H.P. GAS
12" SEWER
PROP. 12" SEWER
60% CRUSHED AGGREGATE SLOPE PROTECTION
BEGIN APPROACH SLAB STA. 62+82.35
STA. 63+64.08 ℄ BEARING EXISTING ARCH
EXIST. ABUTMENT
ARCH
5'-0" MEDIAN
22'-0"
2'-6"
6'-0" SIDEWALK TO BE CLOSED TO PUBLIC
USE EXISTING EMBANKMENT AND SLOPES IN THIS AREA
ABANDONED 12" WATER MAIN
EXISTING 12" WATER MAIN
EXIST. STA. 63+28.45
EXIST. EASEMENT
C.S. STA. 61+23.45
20.11 ACT. 15.0' MIN.
20.47 ACT. 15.0' MIN.
22.85 ACT. 15.0' MIN.
NOTE: TAPER MEDIAN AT A UNIFORM RATE FROM 4'-0" AT STA. 62+82.35 TO 5'-0" AT STA. 63+28.45

℄ CURVE DATA Nº 1

$\Delta = 21° 31' 43"$ RT.
$D_c = 3° 00' 00"$ RT.
$R_c = 1909.86'$
$L_s = 200'$
$T_s = 463.25'$
$E_s = 35.09'$
$\theta_s = 3° 00' 00"$
$\Delta_c = 15° 31' 43"$
$L_c = 517.62'$
$T_c = 260.41'$
$E_c = 17.67'$
P.I. STA. 58+69.12

PROPOSED STRUCTURE-UNIT #5

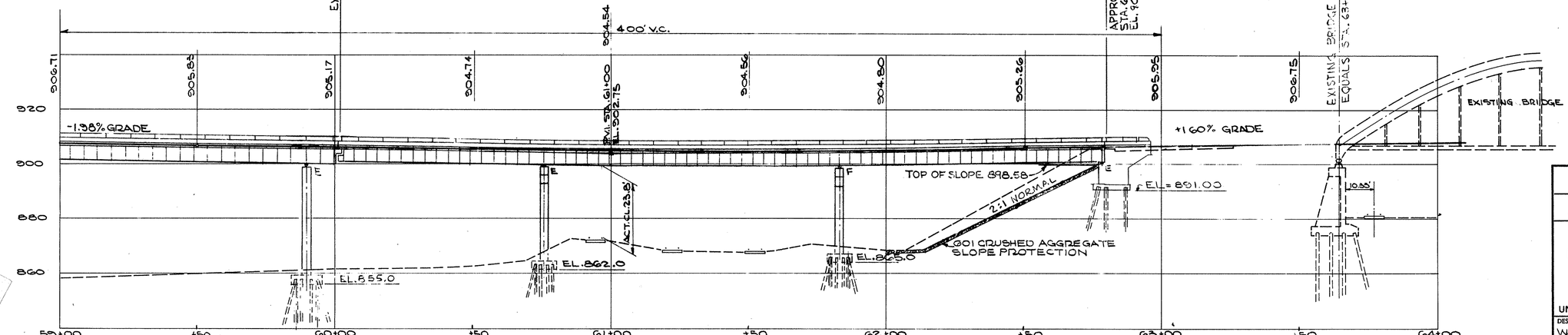
TYPE - CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE
SKEW - NONE
SPANS - UNIT #5 85'-0", 110'-0", 85'-0", ℄ BRGS.
ROADWAY - 65' F/F — CURBS (INCL. 4'-0" MEDIAN)
LOAD FREQUENCY - CF 2000

WEARING SURFACE - 1" MONOLITHIC
APPROACH SLAB - SPECIAL
ALIGNMENT - 3°00' CURVE RIGHT
SUPERELEVATION - TRANSITION .045'/FT. TO NONE

BRIDGE LIMIT UNIT Nº5 280.35'

ESTIMATED PILE LENGTH

PIER #18 - 26'
PIER #19 - 23'
ABUT. #2 - 45'



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SITE PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-68	

MISCELLANEOUS
JUN 12 1969
CERTIFICATION

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150 (1)	

MAH.-711-0.17

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GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-67	REVISED	1-11-68
BR-1-65	REVISED	11-24-65
SD-1-65	DATED	11-8-65
GR-2A	REVISED	1-1-67

AND TO SUPPLEMENTAL SPECIFICATIONS:

808	DATED	1-1-69
811	DATED	1-1-69
825	DATED	1-1-69
927	DATED	1-1-69

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURE" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9-1-37, TOGETHER WITH CURRENT REVISIONS THEREOF.

DESIGN DATA:

DESIGN LOADING - CF 2000

CONCRETE CLASS C - BASIC UNIT STRESS 1,333 P.S.I. (SUPERSTRUCTURE & PIER)
CONCRETE CLASS C - BASIC UNIT STRESS 1,133 P.S.I. (ABUTMENT & FOOTINGS)

STRUCTURAL STEEL - ASTM A36 - BASIC UNIT STRESS 20,000 P.S.I. AND
ASTM A441 - BASIC UNIT STRESS 23,000 P.S.I.

REINFORCING STEEL - ASTM A615, A616, A617, DEFORMED, INTERMEDIATE OR HARD GRADE. BASIC UNIT STRESS 20,000 P.S.I. EXCEPT, SPIRAL REINFORCEMENT SHALL BE PLAIN, A306 OR A499 WITH BASIC UNIT STRESS OF 18,000 P.S.I.

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 FIVE SETS OF PRINTS FOR EACH RAILROAD COMPANY FOR APPROVAL.

ALIGNING RAILROAD TRACKS: AFTER THE CONTRACTOR HAS COMPLETED ALL EXCAVATION AND BACKFILL ADJACENT TO THE RAILROAD TRACKS IN COMPLIANCE WITH SEC. 503.04 AND 503.09 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SUBJECT TO THE SUPERVISION OF THE RAILROAD COMPANY, NOTHING IN SEC. 503.04, 503.09, 108.04 OF THE SPECIFICATIONS SHALL BE CONSTRUED TO HOLD THE CONTRACTOR LIABLE FOR ALIGNING AND RESURFACING THE RAILROAD TRACKS.

RAILROAD AERIAL LINES WILL BE RELOCATED BY THE RAILROAD. THE CONTRACTOR SHALL USE ALL PRECAUTIONS NECESSARY TO SEE THAT THE LINES ARE NOT DISTURBED DURING THE CONSTRUCTION STAGE AND SHALL COOPERATE WITH THE RAILROAD IN THE RELOCATION OF THESE LINES. THE COST OF THE RELOCATION SHALL BE INCLUDED IN THE RAILROAD FORCE ACCOUNT WORK.

FOUNDATION BEARING PRESSURE: FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF:

PIER 11 & 12	9 T.S.F.
PIER 15	9 T.S.F.
PIER 16	9 T.S.F.

ALL REMAINING PIERS AND ABUTMENTS ARE SUPPORTED ON PILES.

PILES SHALL BE DRIVEN TO FIRM CONTACT WITH ROCK. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN SEC. 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING.

FOR ABUTMENT NO. 1 PILES
52 TONS PER PILE USING A 7000 FT. LB. HAMMER
40 TONS PER PILE USING AN 11000 FT. LB. HAMMER
40 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
40 TONS DESIGN LOAD

FOR ABUTMENT NO. 2 PILES
48 TONS PER PILE USING AN 11000 FT. LB. HAMMER
48 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
48 TONS DESIGN LOAD

FOR PIERS NO. 1, 2, 3, 8
62 TONS PER PILE USING AN 11000 FT. LB. HAMMER
50 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
50 TONS DESIGN LOAD

FOR PIERS NO. 4, 5, 9, 13, 17
70 TONS PER PILE USING AN 11000 FT. LB. HAMMER
52 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
50 TONS DESIGN LOAD

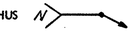
FOR PIERS NO. 6 & 7
56 TONS PER PILE USING AN 11000 FT. LB. HAMMER
50 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
50 TONS DESIGN LOAD

FOR PIER NO. 10
45 TONS PER PILE USING AN 11000 FT. LB. HAMMER
45 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
45 TONS DESIGN LOAD

FOR PIER NO. 14
67 TONS PER PILE USING AN 11000 FT. LB. HAMMER
50 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
50 TONS DESIGN LOAD

FOR PIERS NO. 18 & 19
45 TONS PER PILE USING AN 11000 FT. LB. HAMMER
45 TONS PER PILE USING A 15000 FT. LB. OR GREATER HAMMER
45 TONS DESIGN LOAD

THE FOLLOWING FOOTINGS ARE IN ROCK: PIER 11, PIER 12, PIER 15, AND PIER 16. THEY SHALL EXTEND A MINIMUM OF 3" INTO UNDISTURBED ROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

WELDS ON SECONDARY STRESS CARRYING MEMBERS ARE SHOWN THUS 

FIELD WELDED ATTACHMENTS: NO ATTACHMENTS SHALL BE MADE BY WELDING TO THE TOP FLANGES OF THE BEAMS OR GIRDERS WITHIN A DISTANCE OF 0.10 OF THE SPAN LENGTH ON EITHER SIDE OF THE INTERIOR SUPPORTS. WELDING FOR ATTACHMENTS TO THE TOP FLANGES AT OTHER PARTS OF THE SPANS SHALL BE KEPT AT LEAST 2" FROM EDGE OF FLANGE.

MACHINE FINISH: THE CONCRETE BRIDGE DECK SHALL BE FINISHED BY THE USE OF A FINISHING MACHINE.

THE CONTRACTOR SHALL FURNISH TO THE DIRECTOR, FOR APPROVAL, 3 PRINTS SHOWING THIS PROPOSED ERECTION PROCEDURE FOR THE PLATE GIRDERS.

THE CONCRETE DECK SLAB SHALL BE POURED IN THE FOLLOWING SEQUENCE:

FIRST	UNIT 1
SECOND	UNIT 2
THIRD	UNIT 5
FOURTH	UNIT 4
FIFTH	UNIT 3

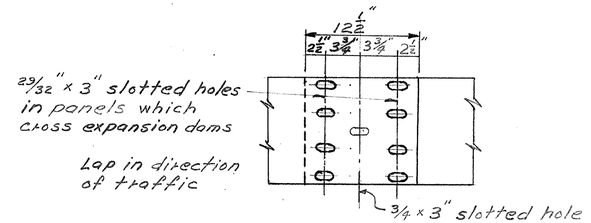
EACH DECK SEGMENT SHALL BE POURED CONTINUOUSLY FROM EXPANSION JOINT TO EXPANSION JOINT.

EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS.

CONSTRUCTION CLEARANCE OF 20' VERTICALLY ABOVE THE TOP OF THE RAILROAD RAILS AND 8' HORIZONTALLY FROM THE CENTER OF TRACKS SHALL BE MAINTAINED AT ALL TIMES.

GUARD RAIL EXPANSION JOINTS: EXPAND THE SLOTTED 3" HOLES SHOWN ON THE RAIL SPLICE DETAIL ON STANDARD DRAWING GR-2A to 3/4" x 6-1/2" FOR ALL END POST CONNECTIONS OF THE MEDIAN GUARD RAIL ADJACENT TO THE EXPANSION JOINTS AT THE ABUTMENTS AS WELL AS EACH UNIT. PAYMENT TO BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 517, RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS). SEE DETAIL OF RAIL SPLICE SHEET 143, and this sheet.

PAINTING OF STRUCTURAL STEEL SHALL CONFORM TO ITEM 514 EXCEPT THAT THE FINAL TWO COATS OF FINISH PAINT SHALL CONFORM TO ITEM 708.05 INSTEAD OF 708.12. COLOR OF FINAL TWO COATS TO BE APPROVED BY THE STATE OF OHIO AND THE CITY OF YOUNGSTOWN.



DETAIL OF SPICE IN MEDIAN GUARD RAIL ADJACENT TO EXPANSION JOINTS

ESTIMATED QUANTITIES

D.M. 10-7-67
R.A.H. 6-21-68

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUCT.	ABUT'S	PIERS	GEN.		
503	4,414	CU. YD.	UNCLASSIFIED EXCAVATION		497	3,917			
503	LUMP	SUM	COFFERDAMS, CRIBS, SHEETING				LUMP		
1,524	~~1,398~~	CU. YD.	ROCK EXCAVATION			~~1,398~~		+126	1,524
505	LUMP	SUM	FIRST TEST PILE				LUMP		
506	LUMP	SUM	FIRST PILE TEST LOAD				LUMP		
2,498,096	506	1	EACH	SUBSEQUENT PILE TEST LOAD				1	
2,965,796	507	19,037	LIN. FT.	PILES - STEEL 12 BP 53	1,382,282	1,212	18,425		
2,467,157	509	2409,938	LBS.	REINFORCING STEEL	419,330	21,150	1026,414	1023,350	
	511	4,791	CU. YD.	CLASS "C" CONCRETE - SUPERSTRUCTURE	4,791	20,289	20,270	1045,494	
	511	3,934	CU. YD.	CLASS "C" CONCRETE - PIERS ABOVE FTNG.			3,934		
	511	219	CU. YD.	CLASS "C" CONCRETE - ABUT. ABOVE FTNG.		219			
	511	1,427	CU. YD.	CLASS "C" CONCRETE - FOOTINGS		125	1,302		
	513	~~5,873,930~~	LBS.	STRUCTURAL STEEL	5,866,754		107,175		+21,739	5995668
	514	~~5,873,930~~	LBS.	*Field Painting of Structural Steel*	5,866,754		107,175		+21,739	5995668
	517	2,250	LIN. FT.	RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS)	2241.73					
	517	4,553.41	LIN. FT.	RAILING-TYPE-1	4,481.09	72.32				

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUCT.	ABUT'S	PIERS	GEN.		
518	75	CU. YD.	POROUS BACKFILL		75				
518	130	LIN. FT.	6" PERFORATED, HELICAL CMP, INCLUDING SPECIALS, 707.01		130				
518	132	LIN. FT.	6" NON PERFORATED HELICAL CMP, 707.01		132				
518	119	EACH	SCUPPERS, INCLUDING SUPPORTS, TYPE-2	119					
518	2414	LIN. FT.	8" STD. PIPE HORIZONTAL CONDUCTORS, WROUGHT IRON, ALLOY STEEL (707.11) OR HOT DIPPED GALVANIZED STEEL, INCLUDING SPECIAL.	2414					
518	488	LIN. FT.	8" STD. PIPE DOWNSPOUT, WROUGHT IRON, ALLOY STEEL (707.11) OR HOT DIPPED GALVANIZED STEEL, INCLUDING SPECIALS.			488			
601	1,363	SQ. YD.	CRUSHED AGGREGATE SLOPE PROTECTION				1,363		
625			SEE SHEET 83 FOR LIGHTING SUMMARY						
808	4,791	UNITS	WATER-REDUCING, SET-RETARDING ADMIXTURE	4,791					
825	18,710	SQ. YD.	CONCRETE SURFACE TREATMENT	18,666	44				

Revised 1-26-70

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEN. NOTES & EST. QUANTITIES

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.A.H.	J.D.P.		D.M.	WKD	6-22-68	5-26-69 7-11-69

Revised As-Built

MICROFILMED
JUN 12 1969

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150(1)	

MAH.-711-0.17

143
232

3" ¾"x6½" SLOTTED HOLE (8½"-5" / 6½"-3")

WASHER DETAIL
USE AT POST BOLT HEAD.

℄ END POST
RAIL
SEE STD. DWG. GR-2A
⅝" BOLT
℄ RAIL
RECTANGULAR WASHER
LAP IN DIRECTION OF TRAFFIC

MEDIAN RAIL SPLICE

3"
¾" Ø HOLE

WASHER DETAIL
USE AT POST BOLT NUT

BEGIN TAPER OF FACE OF CURB
44.5' LT. OF ℄ STA. 40+41.53

℄ STA. 41+10.00

LIGHT STANDARD
SEE SHT.

P.T. ℄ RAMP "B"
STA 40+41.02 40' LT.
℄ EXP STA. 40+41.31

B.&O. R.R.

STA. 42+03.00
BASE LINE RAMP "B"

END TAPER ON FACE OF CURB
32.5' LT. ℄ STA. 42+91.25

℄ STA. 43+52.00

STA. 44+03.00

B.&O. RR.
U.S. STEEL R.R.
Y&N. R.R.
U.S. STEEL RR.

EXPANSION JOINT
STA. 45+21

D_c=6°

VARIES

END APPROACH
SLAB STA. 40+40.62

STA. 40+12.00
STA. 40+28.00
STA. 41+05.92
STA. 40+40.00
BEG. IN GUARD RAIL
℄ RAIL SPLICE
STA. 40+42.86
STA. 40+84.00

STA. 42+28.00
STA. 42+53.00
STA. 42+01.92
STA. 42+78.00
STA. 42+84.00
STA. 42+59.00
STA. 42+09.00
STA. 42+34.00

STA. 43+03.00
STA. 43+29.00
STA. 42+94.26
STA. 43+54.00
STA. 43+74.60
STA. 43+09.00
STA. 43+60.00
STA. 43+35.00

STA. 43+78.00
STA. 44+28.00
STA. 43+84.00
STA. 44+53.00
STA. 44+59.00
STA. 44+09.00
STA. 44+34.00

STA. 44+62.98
STA. 45+15.00
℄ RAIL SPLICE
STA. 44+88.00

STA. 45+33.00

90°00'00"

℄ DIVISION STREET EXP.

601 CRUSHED AGGREGATE
SLOPE PROTECTION

℄ BRG. ABUT. Nº 1
5°18'00" SKEW

℄ PIER Nº 1
5°18'00" SKEW

℄ PIER Nº 2
5°18'00" SKEW

℄ PIER Nº 3
5°18'00" SKEW

℄ PIER Nº 4
5°18'00" SKEW

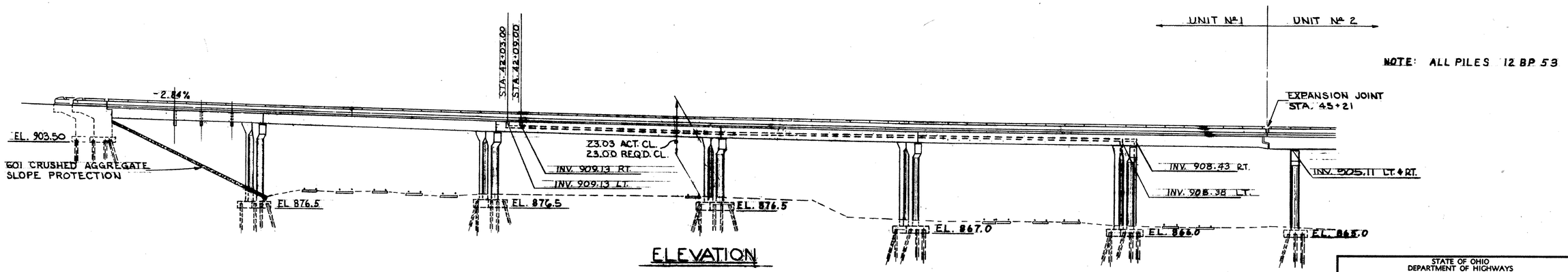
℄ PIER Nº 5
5°18'00" SKEW

℄ PIER Nº 6

63'-0 7/16" | 96'-0" | 92'-4⅛" | 80'-4⅛" | 88'-4 9/16" | 70'-0¼"

76 GUARD RAIL PANELS @ 6'-3" = 475'-0"
75 POSTS @ 6'-3" c/c ✱ 2 END POSTS @ 6'-3"

PLAN



ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION

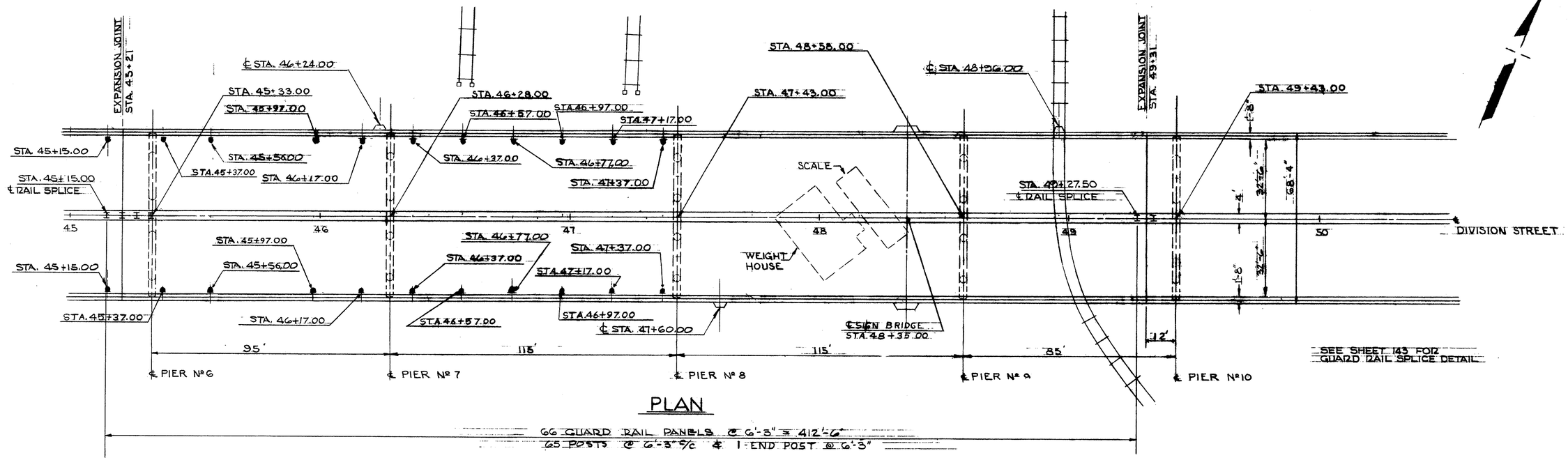
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.M	W.P		R.H	W.K.D	6-22-68	3-25-69

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-[illegible](1)	

MAH.-711-0.17

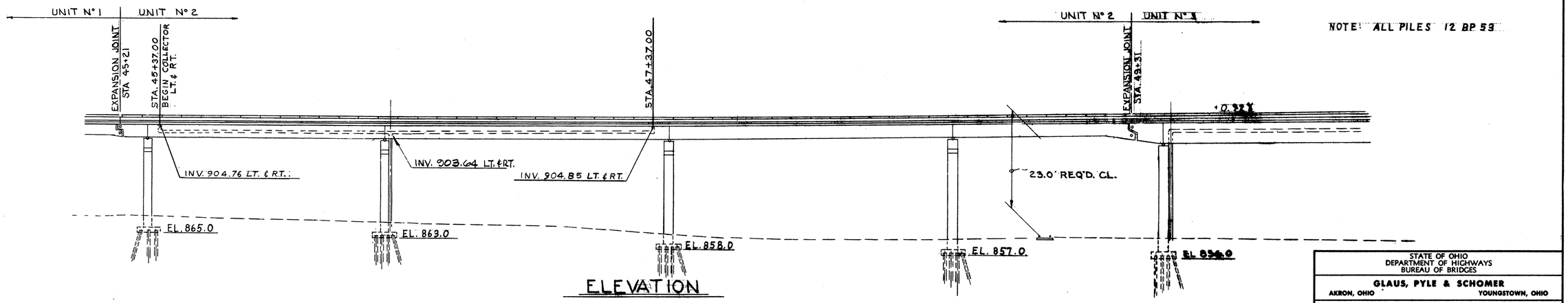
144
232



SEE SHEET 143 FOR
QUAD RAIL SPLICE DETAIL

PLAN

66 GUARD RAIL PANELS @ 6'-3" = 412'-6"
65 POSTS @ 6'-3" C/C & 1 END POST @ 6'-3"



ELEVATION

NOTE: ALL PILES 12 BP 53

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO · YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-66	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150 (1)	

MAH.-711-0.17

145
232

SEE SHEET 143 FOR GUARD RAIL SPLICE DETAIL

EXPANSION JOINT STA. 49+31

STA. 49+54.00

STA. 49+95.00

STA. 50+33.00

STA. 50+74.00

STA. 51+15.00

℄ STA. 51+68.00

STA. 51+85.00

STA. 51+51.00

STA. 52+26.00

STA. 52+65.00

CANAL CLEARANCE 198'

90°00'00"

49+27.50 ℄ RAIL SPLICE

50 51 52 DIVISION ST. EXP. 53 54 55

STA. 49+43.00

STA. 49+95.00

STA. 50+33.00

STA. 50+74.00

STA. 51+23.50

STA. 51+15.00

STA. 51+51.00

STA. 52+26.00

STA. 52+65.00

STA. 49+54.00

℄ STA. 50+32.00

STA. 51+85.00

30°00'00"

℄ PIER Nº 10

180'-6"

℄ PIER Nº 11

236'-0"

4'-0"

32'-6"

1'-8"

TS STA. 54+05.87

STA. 53+06.00

STA. 53+46.50

STA. 53+59.50

STA. 53+46.50

STA. 53+06.00

℄ STA. 53+04.00

℄ PIER Nº 12

30°00'00"

180'-6"

℄ STA. 54+40.00

STA. 53+87.00

STA. 54+26.00

STA. 54+67.00

STA. 53+87.00

STA. 54+26.00

STA. 54+67.00

EXPANSION JOINT STA. 55+52.02

STA. 55+40.01

STA. 55+07.00

STA. 55+48.00

STA. 55+07.00

STA. 55+48.00

STA. 55+58.75 ℄ RAIL SPLICE

℄ PIER Nº 13

101 GUARD RAIL PANELS @ 6'-3" = 631'-3"
100 POSTS @ 6'-3" c/c & 1 END POST @ 6'-3"

UNIT 2 UNIT 3 UNIT 3 UNIT 4

PLAN

EXPANSION JOINT STA. 49+31

STA. 50+74.00 LT & RT.

STA. 53+87.00 LT & RT.

EXPANSION JOINT STA. 55+52.02

+0.92%

-1.98%

INV. 903.00 - RT.
INV. 903.50 - LT.

INV. 906.00 - RT.
INV. 906.50 - LT.

INV. 907.25 - LT.
INV. 906.00 - RT.

52± ACT. CL.
23.0' REQ'D. CL.

INV. 902.75 - LT.
INV. 901.50 - RT.

EL 856.0

HIGH WATER EL 841.45

NORMAL EL. 836.5

FUTURE CANAL POOL EL. 825.0

BOTTOM OF CANAL EL. 807±

EL. 804.0

EL. 804.0

EL. 844.0

ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

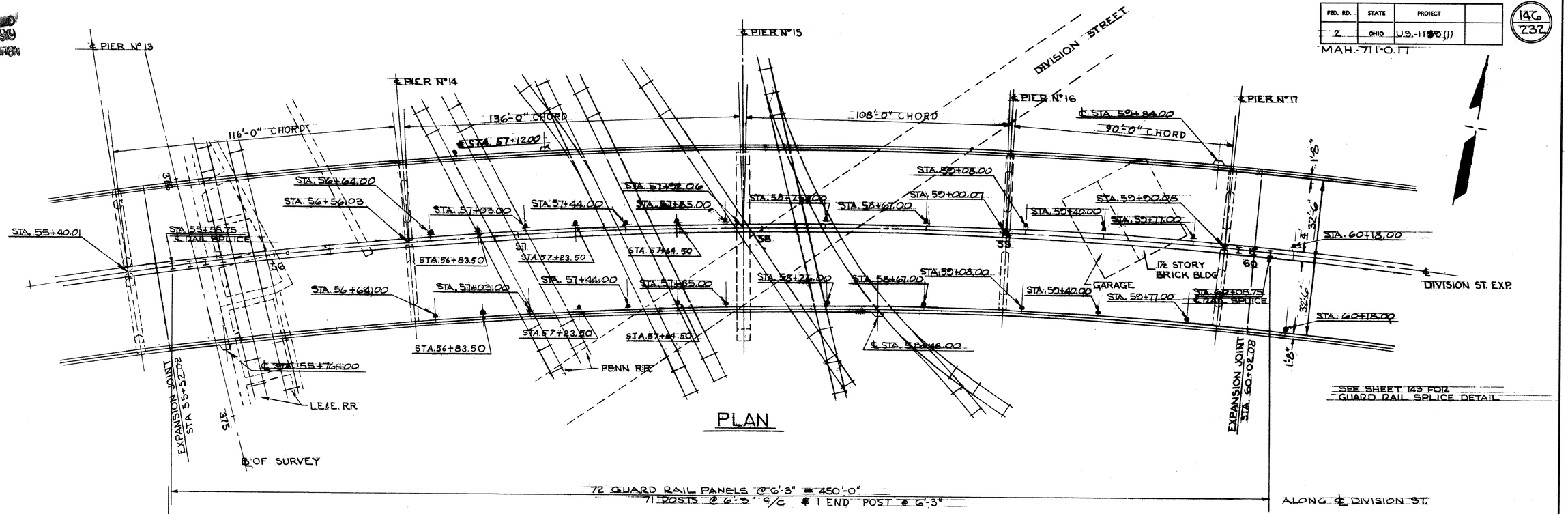
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-68	

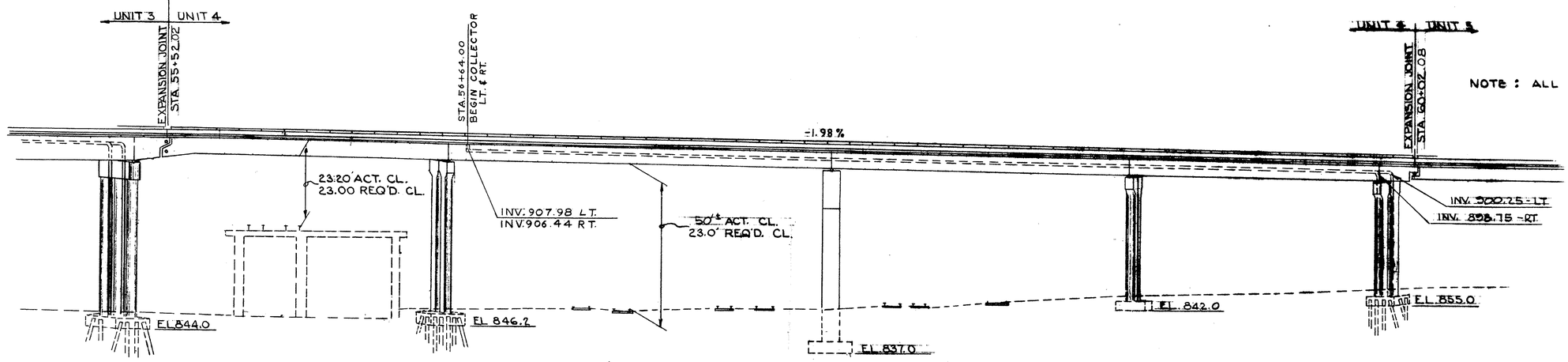
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11[illegible](1)	

MAH.-711-0.11

146
232



PLAN



NOTE : ALL PILES 12BP53

ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION

BRIDGE N° MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

UNIT N° 4

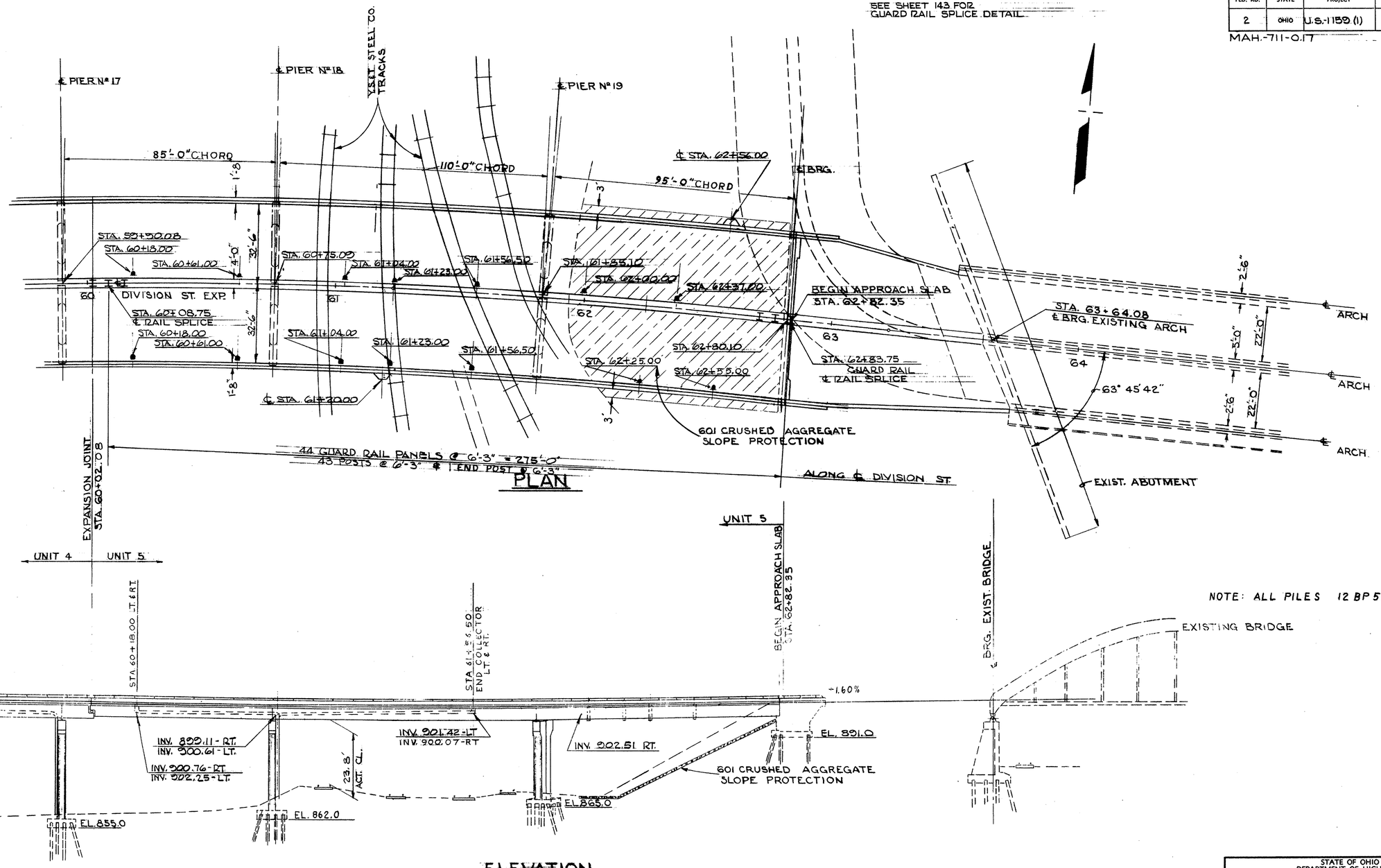
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WKD	DS		WKD	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159.(1)	

MAH.-711-0.17

147
232

SEE SHEET 143 FOR GUARD RAIL SPLICE DETAIL



PLAN

ELEVATION

NOTE: ALL PILES 12 BP 53

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

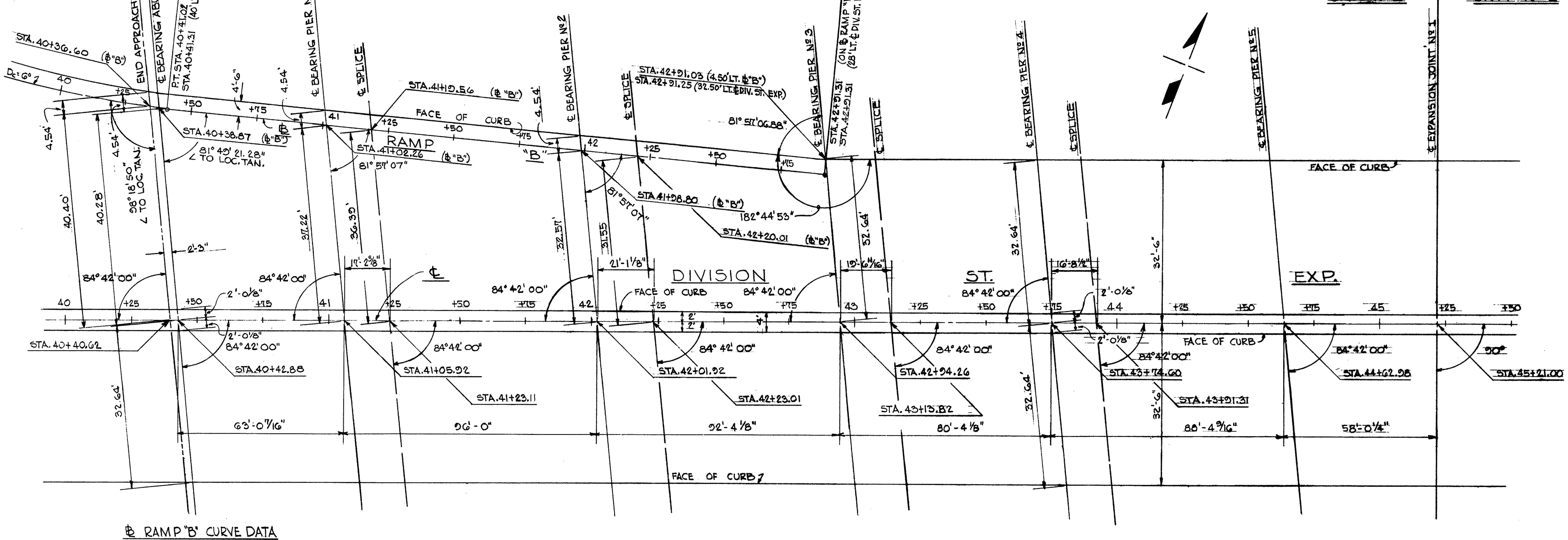
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.M.	W.P.		R.H.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT		
2	OHIO	U.S.-1159 (1)		148/232

MAH.-711-0.17



℄ RAMP "B" CURVE DATA

P.C. STA. 38+74.39
P.I. STA. 39+57.92
P.T. STA. 40+41.02

Δ = 9° 59' 52"	L = 166.63'
Dc = 6°	CH = 166.42'
R = 954.93'	E = 3.65'
T = 83.53'	M = 3.63'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEOMETRIC PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

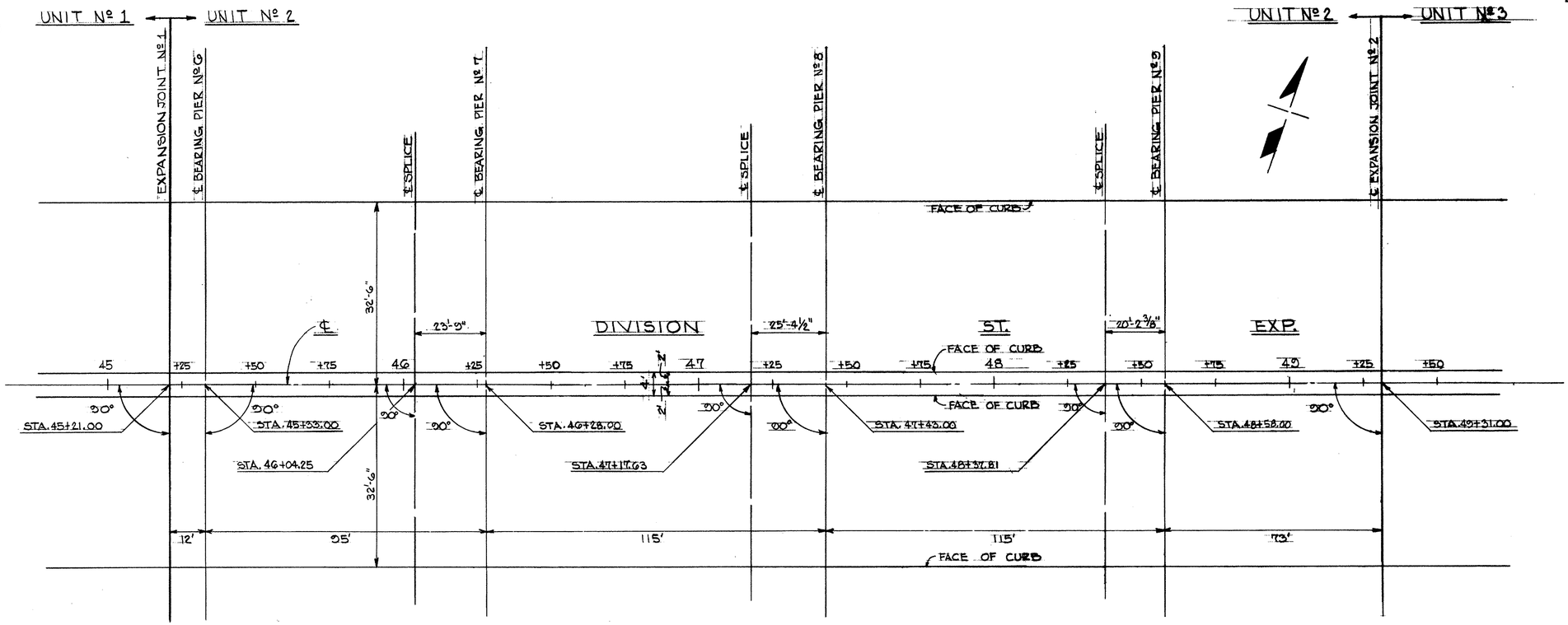
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.W.S.	R.W.S.		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
Z	OHIO	US-1 BR (1)	

149
232

MAH.-711-0.17



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEOMETRIC PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEOMETRIC PLAN

BRIDGE Nº MAH – 711 – 0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

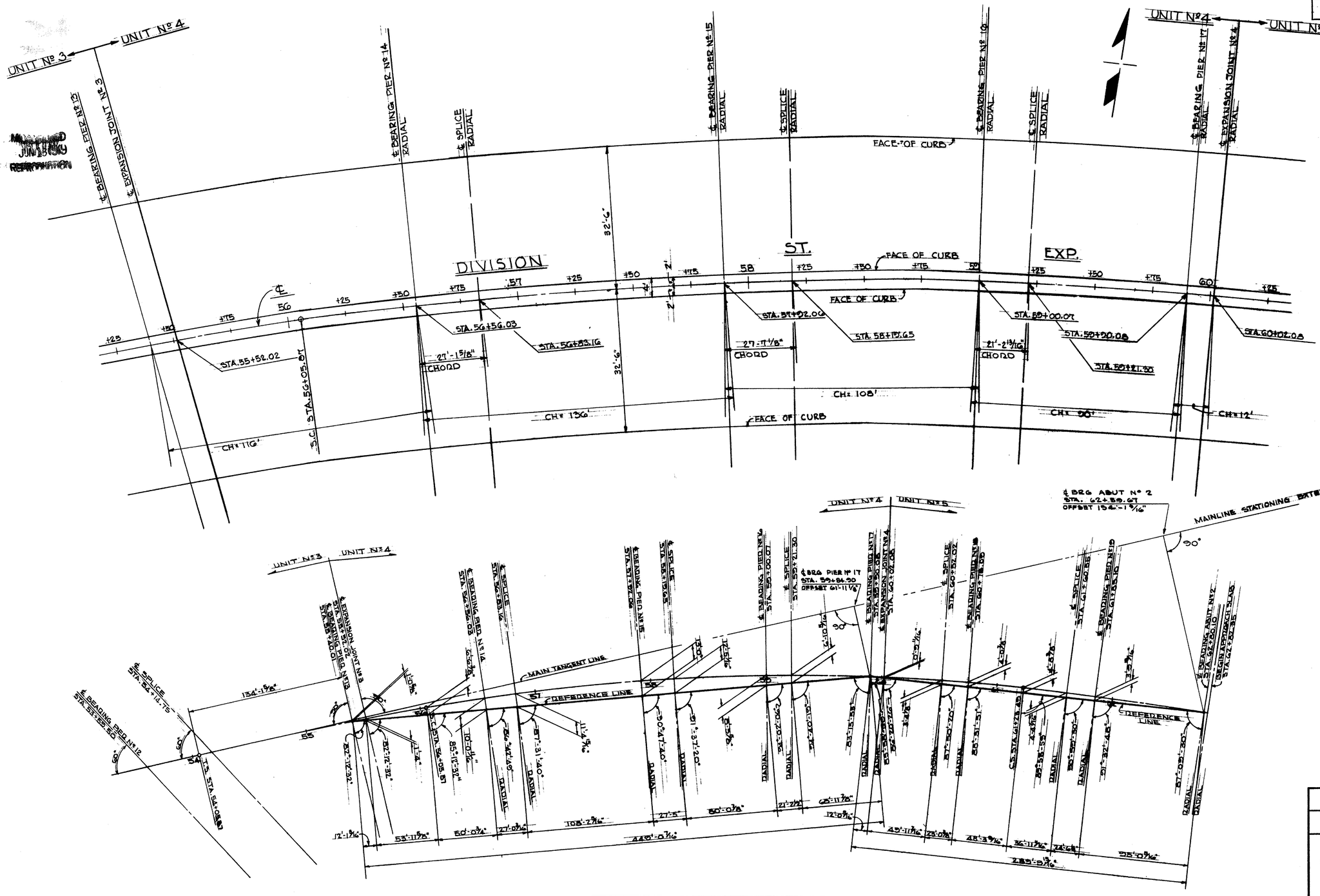
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1169 (1)	

MAH.-711-0.17

151
232



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEOMETRIC PLAN

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

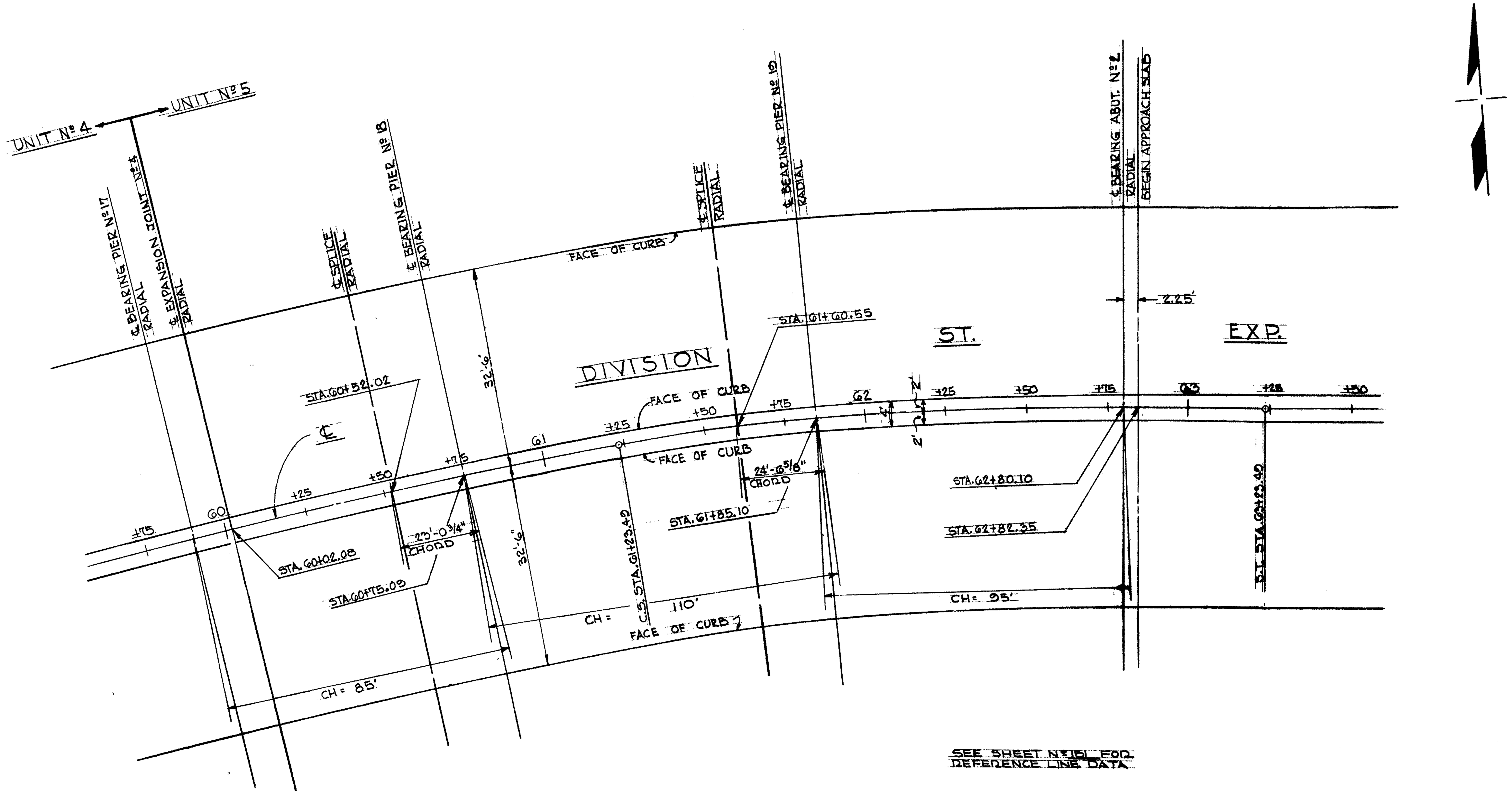
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS	RWS		P.K.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1188 (1)	

MAH-711-0.17

152
232

MICROFILMED JUN 1969



℄ CURVE DATA

P.I. STA. 58+69.12

Δ = 21° 31' 43"	θs = 3°
Dc = 3°	Ts = 469.25'
R = 1,909.86'	Es = 35.10'
Ls = 200'	Xc = 199.95'
Δc = 15° 31' 43"	Yc = 3.49'
Tc = 260.41'	L.T. = 133.35'
Lc = 517.62'	S.T. = 66.68'
CHc = 516.04'	L.C. = 199.98'
Ec = 17.67'	P = 0.87'
Mc = 17.51'	K = 99.99'

SEE SHEET Nº 151 FOR REFERENCE LINE DATA

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GEOMETRIC PLAN

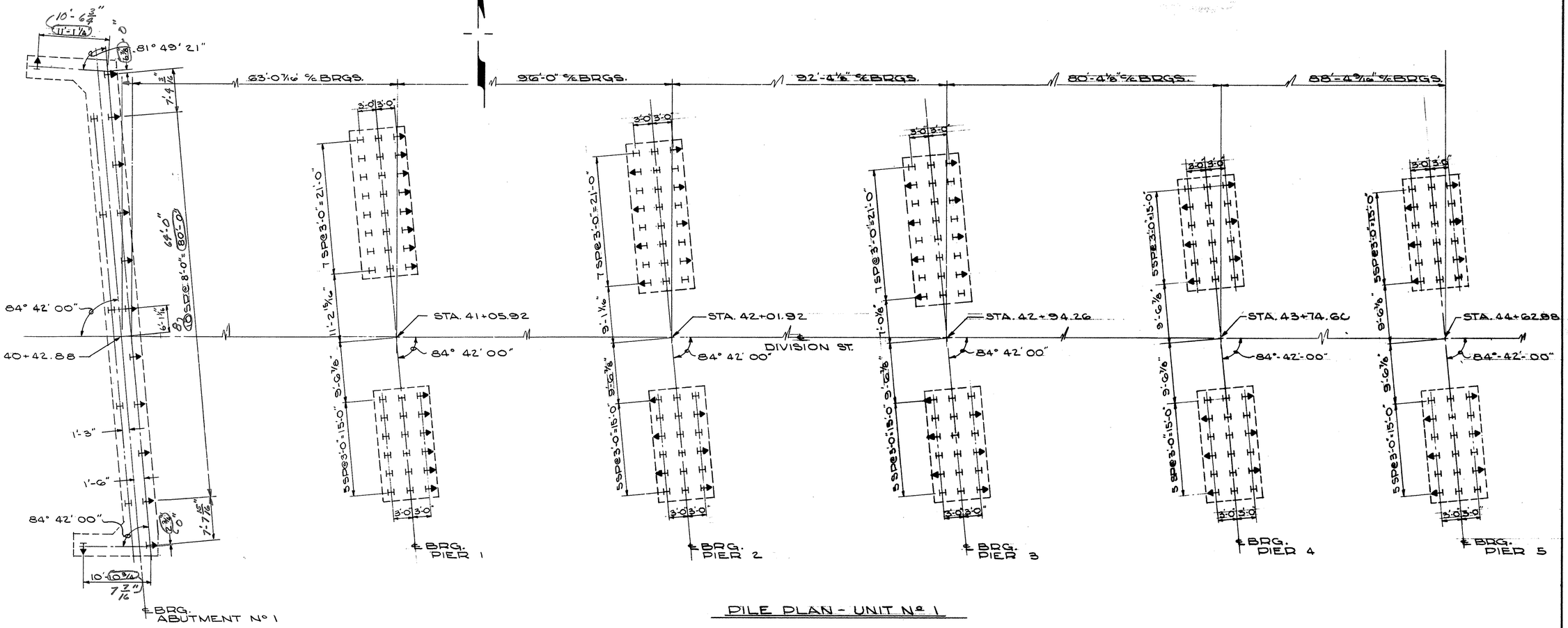
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS	RWS		P.K	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

153
232



PILE PLAN - UNIT Nº 1

NOTES:

ALL PILES 12 BP 53

INDICATES DIRECTION OF 1:4 BATTER ON PILES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PILE PLAN

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

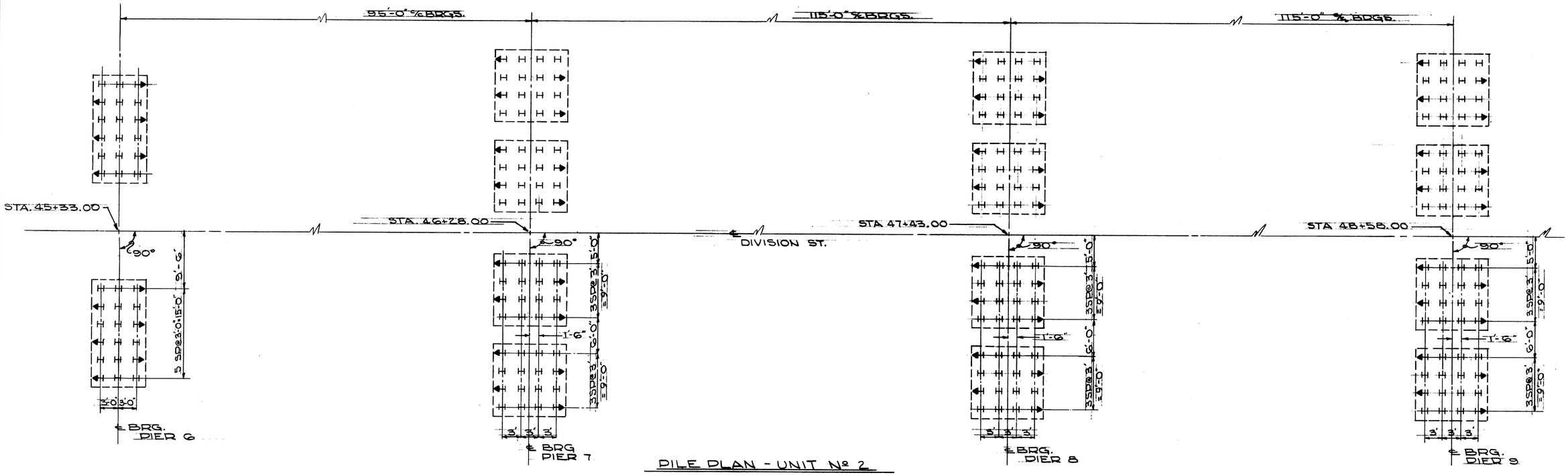
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WLD	6-22-68	7-11-68

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159(1)	

MAH.-711-0.17

154
232



PILE PLAN - UNIT Nº 2

NOTE:
ALL PILES 12 BP 53
PILE SPACING SYMMETRICAL
ABOUT ℄ DIVISION ST.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PILE PLAN

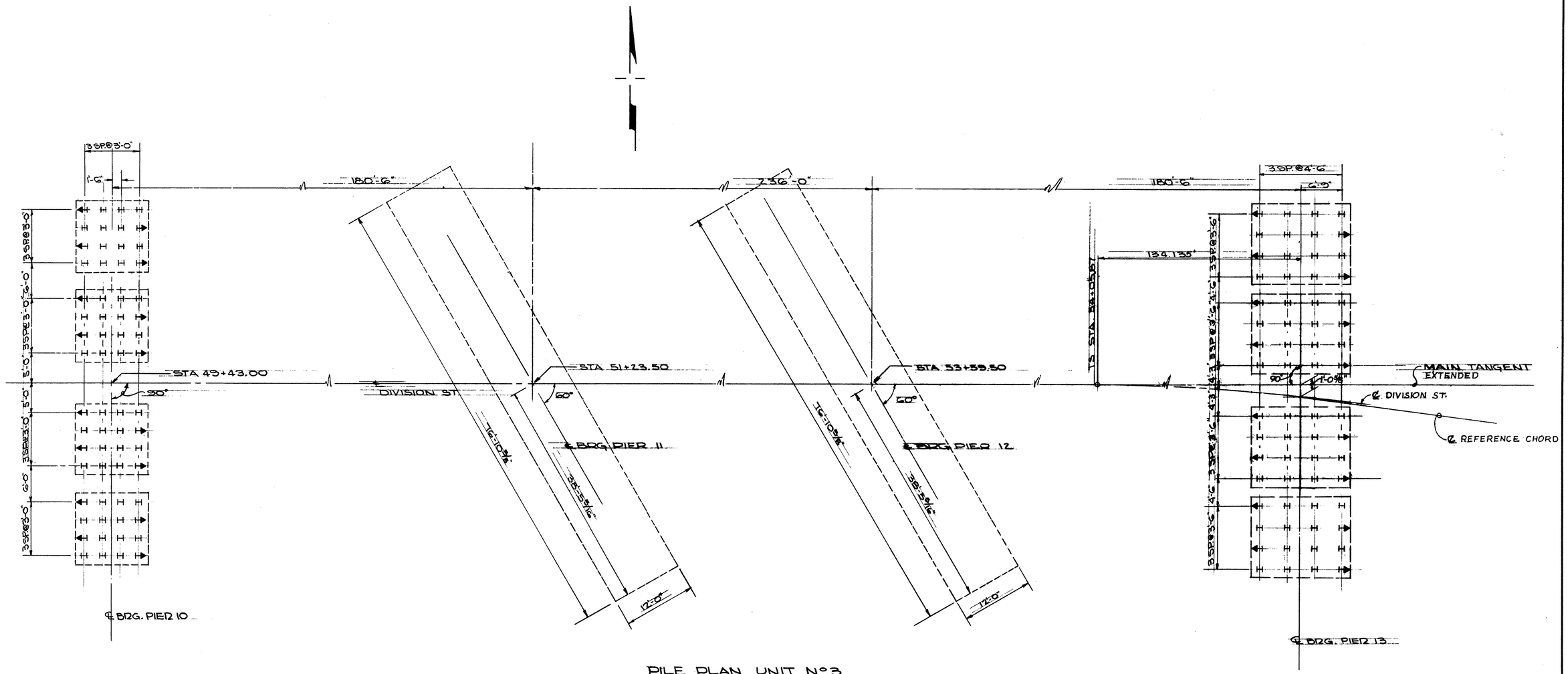
BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11[illegible] (1)	

MAH-711-0.17

155
232



PILE PLAN UNIT N°3

ALL PILES 12BP53

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PILE PLAN

BRIDGE N° MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

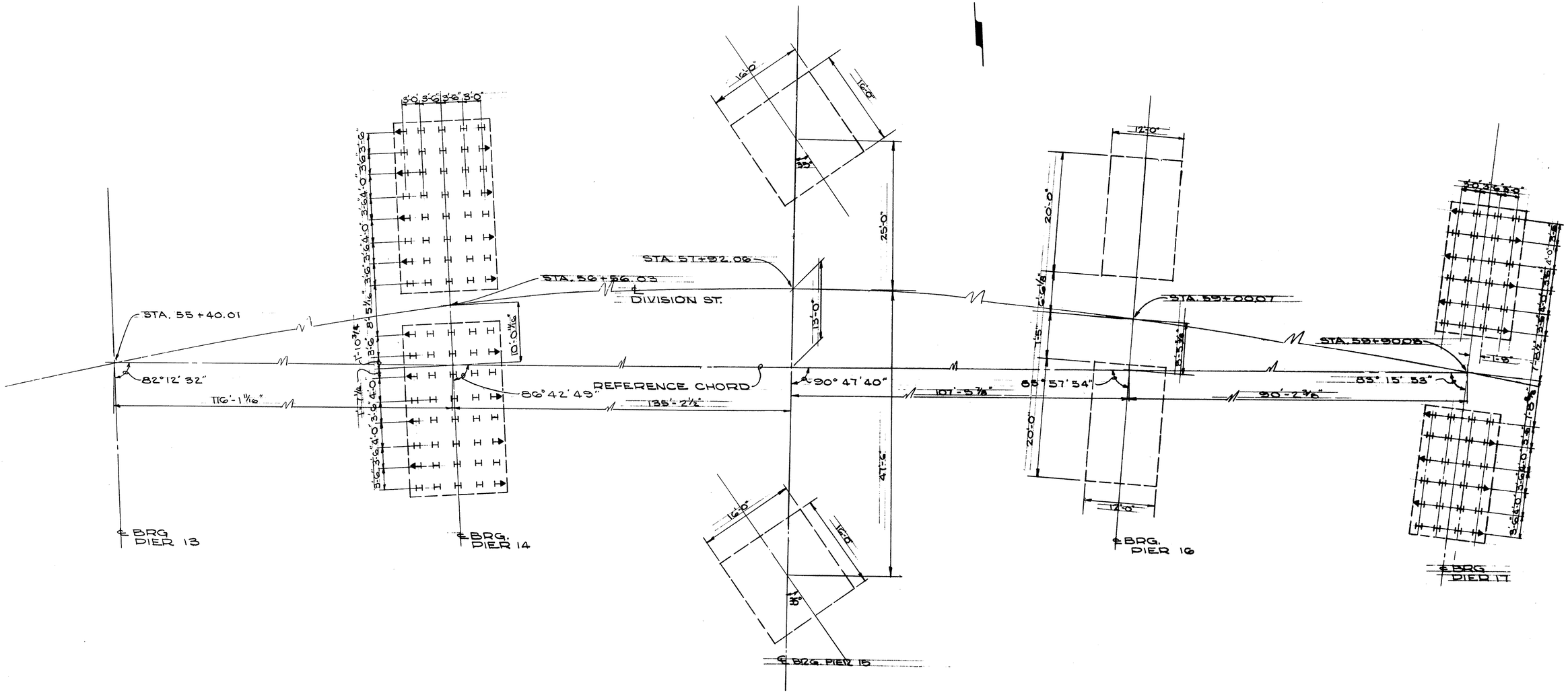
UNIT N° 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	US-1158 (1)	

156
232

MAH-711-0.17



PILE PLAN-UNIT N°4

SEE SHEET 151 FOR REFERENCE CHORD

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PILE PLAN

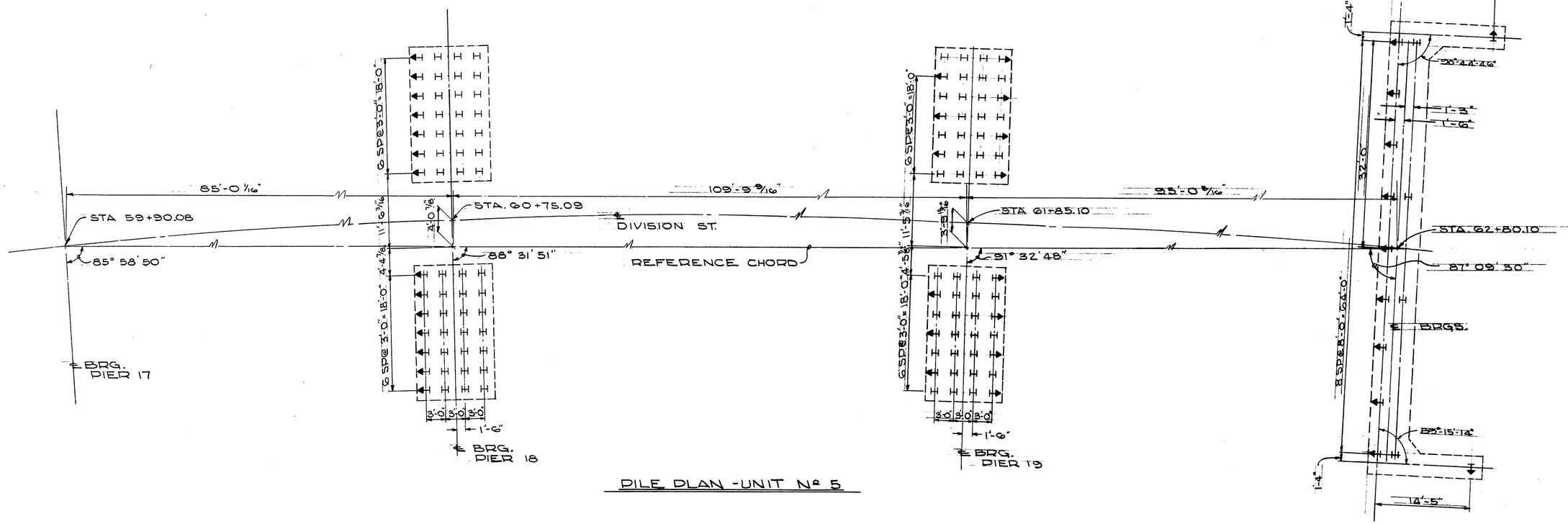
BRIDGE N° MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT N°4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC	—	JMA	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH-711-0.17

157
232



PILE PLAN - UNIT Nº 5

NOTE:
ALL PILES 12 BP 53
H INDICATES DIRECTION OF 1:4 BATTER ON PILES
SEE SHEET 131 FOR REFERENCE CHORD

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PILE PLAN

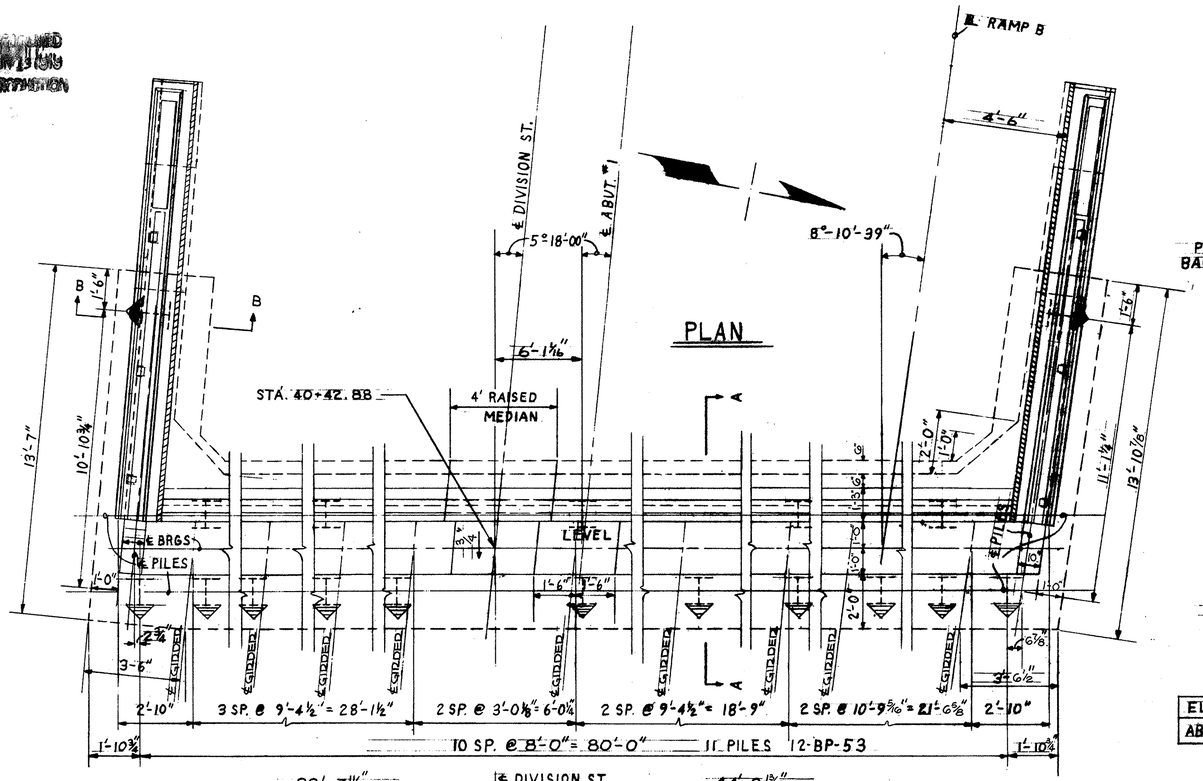
BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

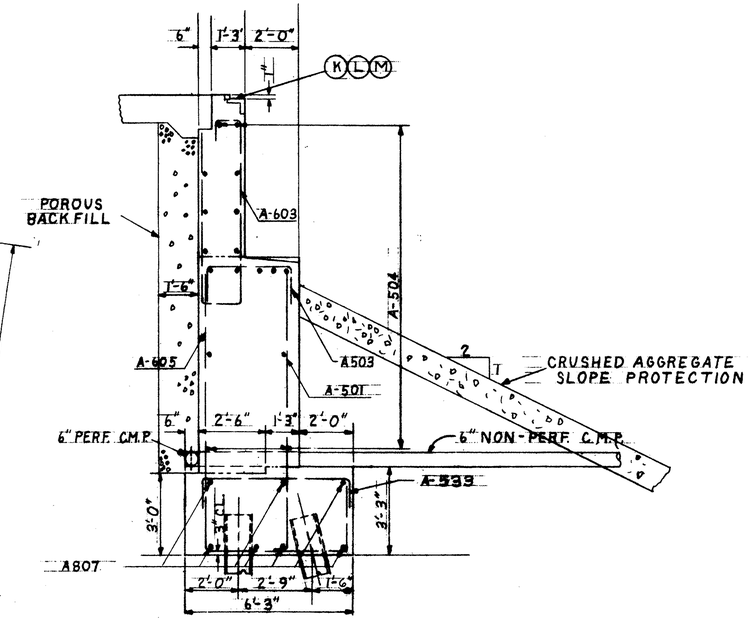
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11150 (1)	

MAH.-711-0.17

158
232

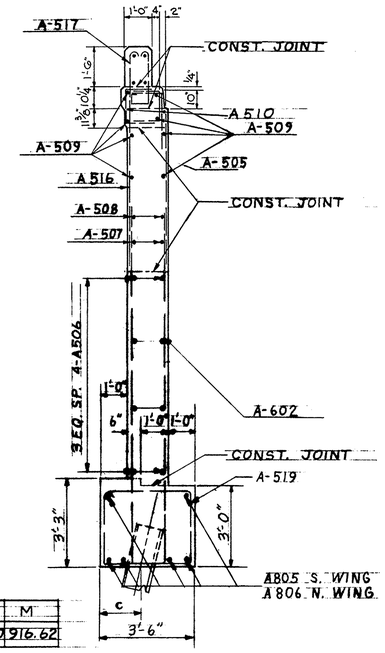


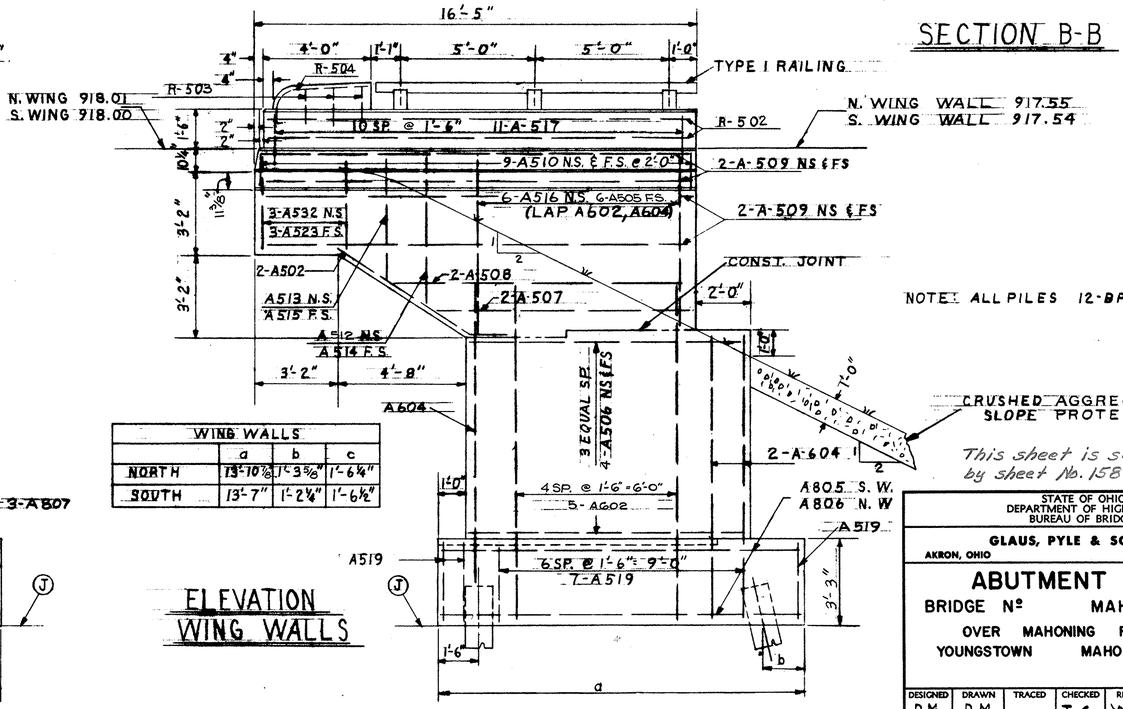
ELEVATION ABUT. Nº 1



SECTION A-A

ELEV.	A	B	C	D	E	F	G	H	I	J	K	L	M
ABUT #1	910.90	910.98	911.15	911.41	911.42	911.21	911.09	910.82	910.90	903.92	916.61	917.20	916.62





SECTION B-B

NOTE: ALL PILES 12-BP-53

WING WALLS	a	b	c
NORTH	13'-10⅞"	1'-3⅝"	1'-6¼"
SOUTH	13'-7"	1'-2¼"	1'-6½"

ELEVATION WING WALLS

This sheet is superseded by sheet No. 158-A. 7-11-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

ABUTMENT Nº 1

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

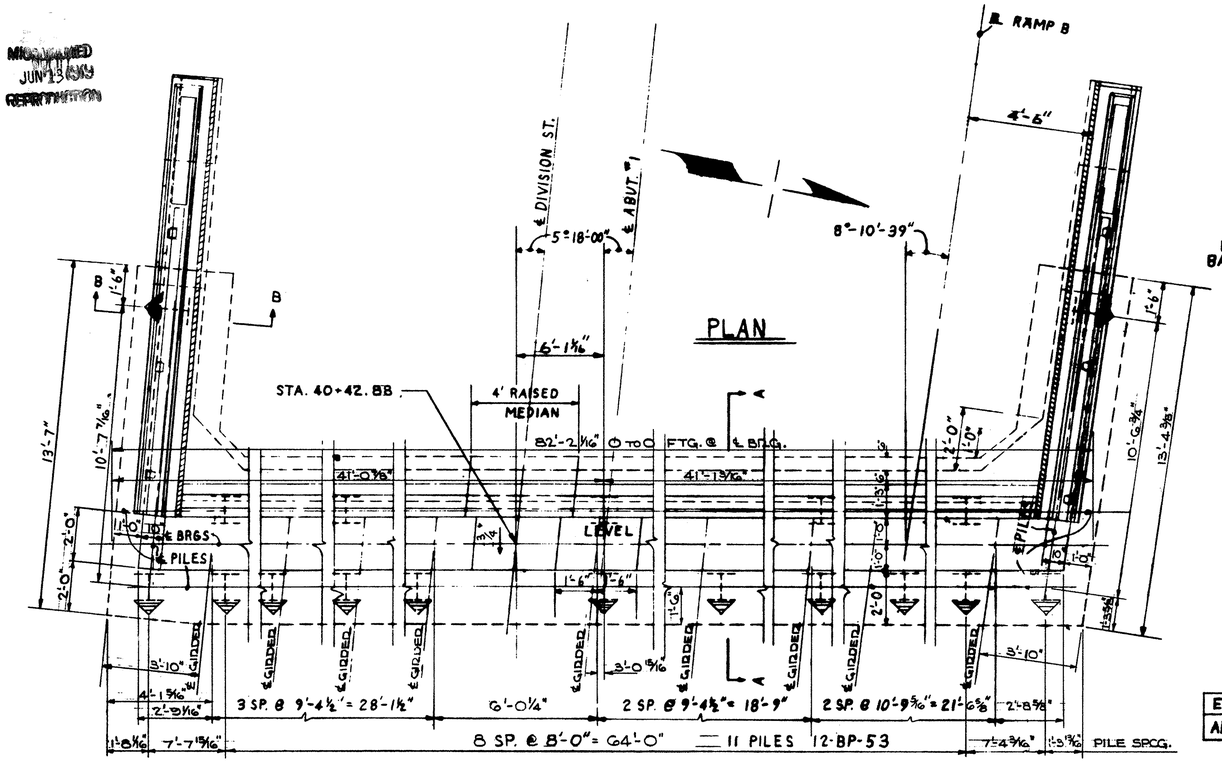
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.M.	D.M.		J.C	WKD	6-22-68	

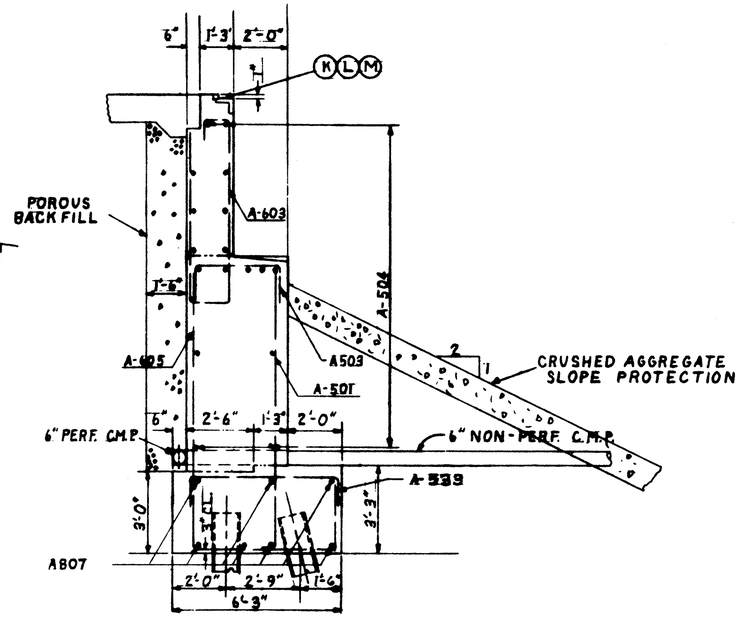
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11(5)0 (1)	

MAH.-711-0.17

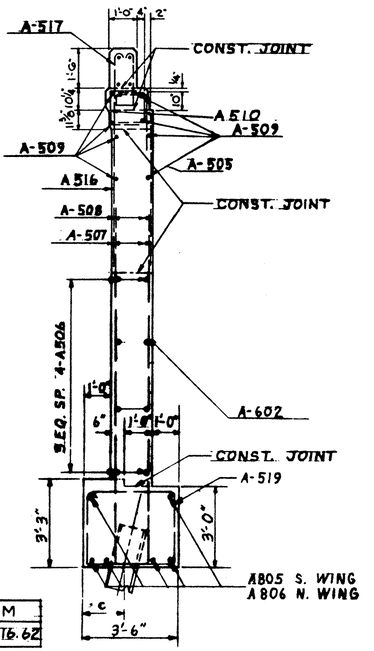
158-A
232

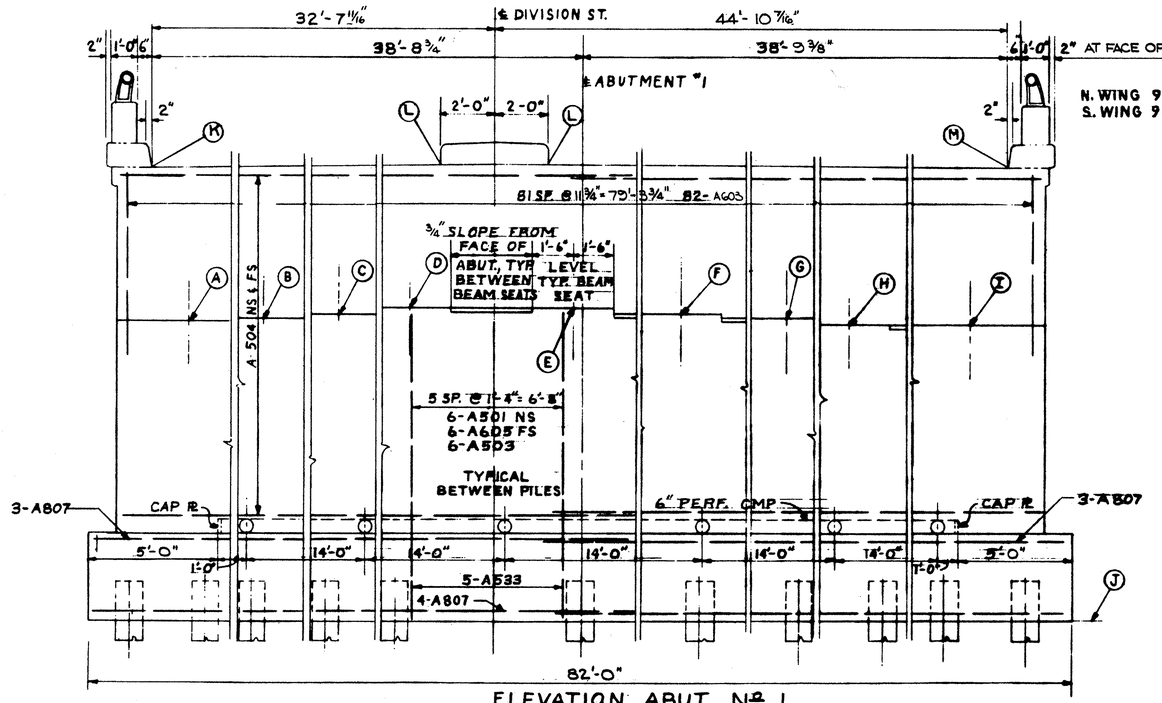
MISCELLANEOUS
JUN 13 1969
REFERENCE

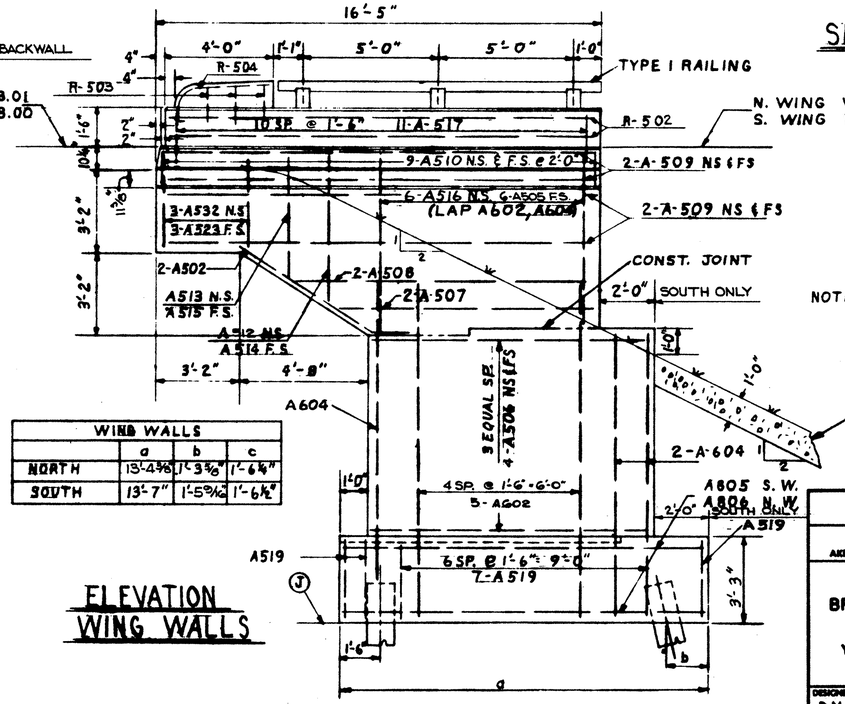




ELEV.	A	B	C	D	E	F	G	H	I	J	K	L	M
ABUT "1	910.90	910.98	911.15	911.41	911.42	911.21	911.09	910.82	910.90	903.92	916.61	917.20	916.62







WIND WALLS	a	b	c
NORTH	13'-4 5/8"	1'-3 5/8"	1'-6 1/2"
SOUTH	13'-7"	1'-5 9/16"	1'-6 1/2"

ELEVATION WING WALLS

This sheet supersedes sheet No. 158 7-11-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

ABUTMENT Nº 1

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

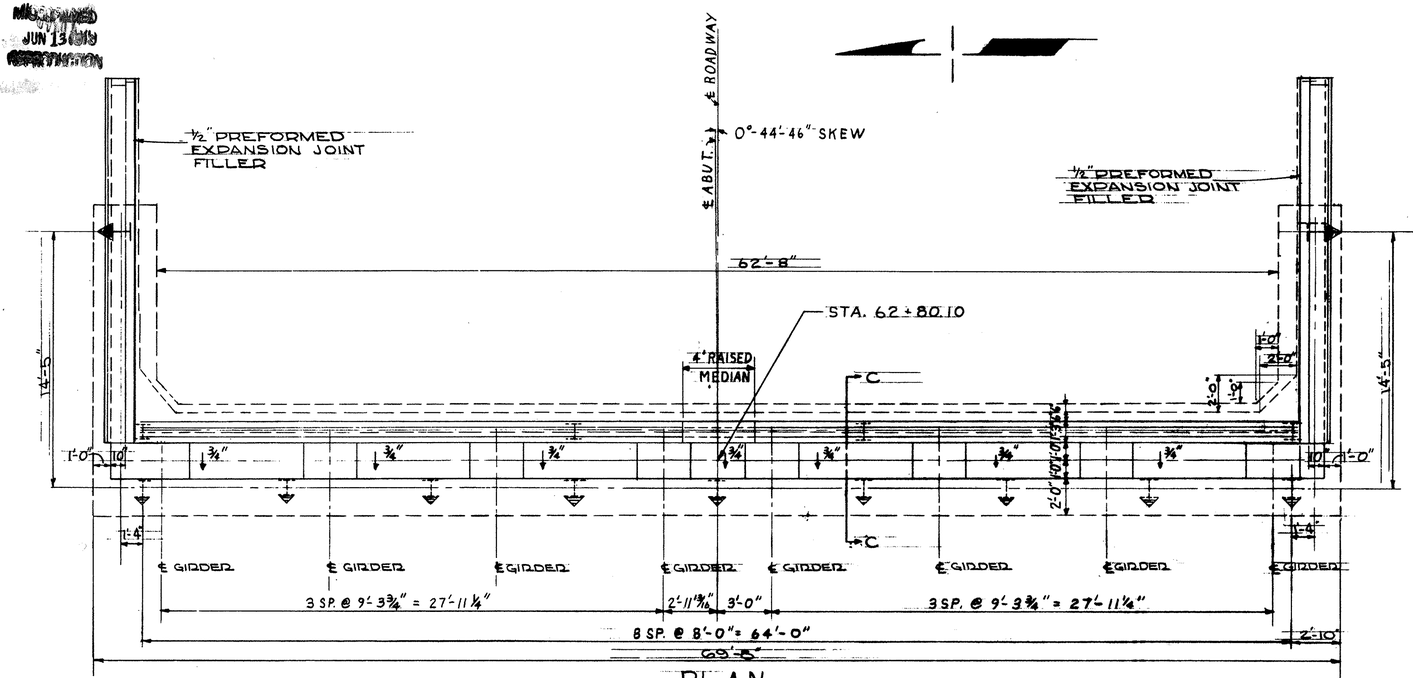
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.M.	D.M.		J.C.	W.K.D.	6-22-68	

MISCELLANEOUS
JUN 13 1969
CONSTRUCTION

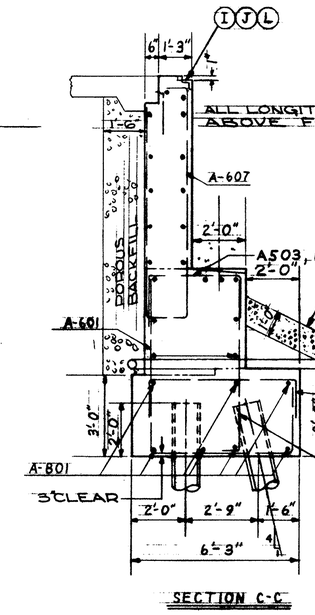
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11B0 (1)	

MAH.-711-0.17

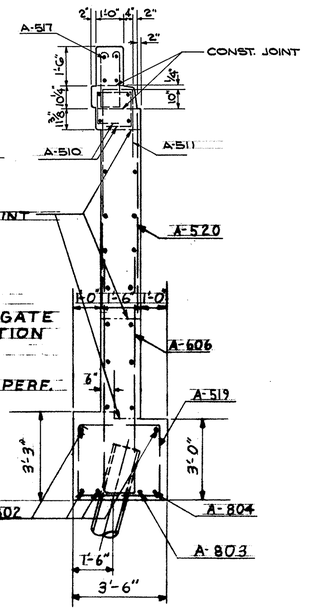
159
232



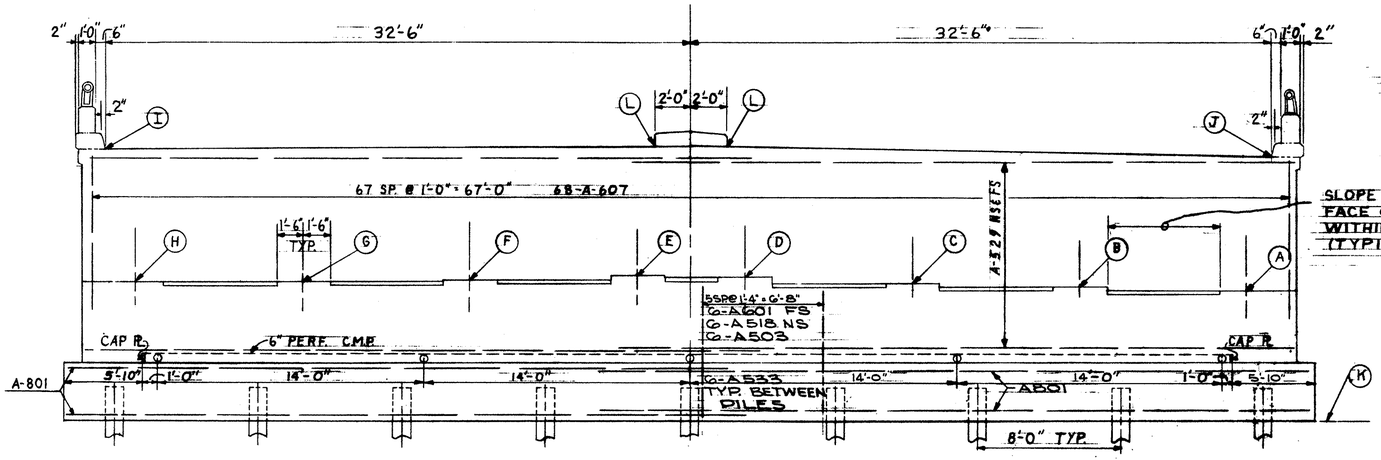
PLAN



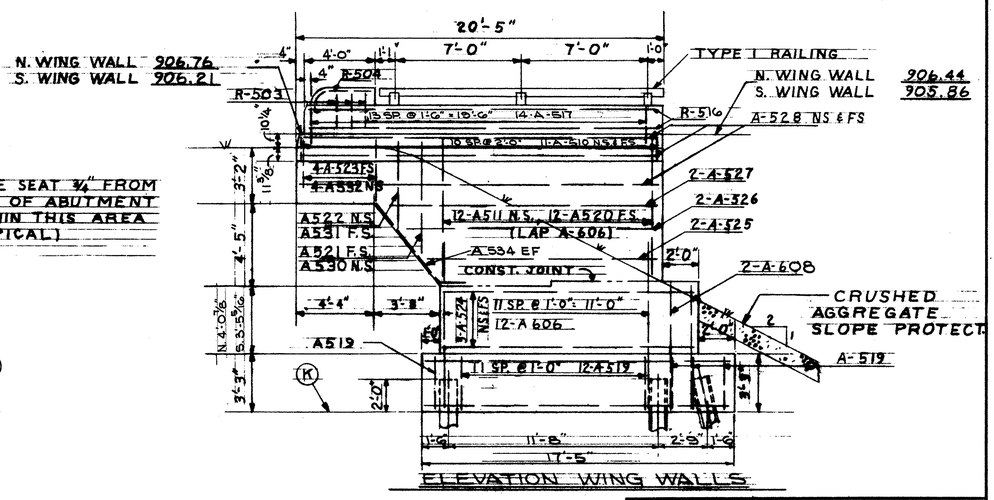
SECTION C-C



SECTION D-D



ELEVATION ABUT. Nº 2



ELEVATION WING WALLS

NOTE:
ADJUSTABLE TYPE ELBOWS MEETING SPECIFICATIONS REQUIREMENTS FOR GAGE AND COATING ARE ACCEPTABLE FOR MAKING BENDS IN PERFORATED CORRUGATED METAL PIPE. ELBOWS AND THE STEM OF TEES NEED NOT BE PERFORATED.

ELEVATION TABLE

	A	B	C	D	E	F	G	H	I	J	K	L
ABUT. Nº 2	897.99	898.19	898.40	898.73	898.75	898.58	898.57	898.54	905.52	904.96	891.00	905.52

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

ABUTMENT Nº 2

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.M.	D.M.		J.C.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11 [illegible] (1)	

MAH-711-0.17

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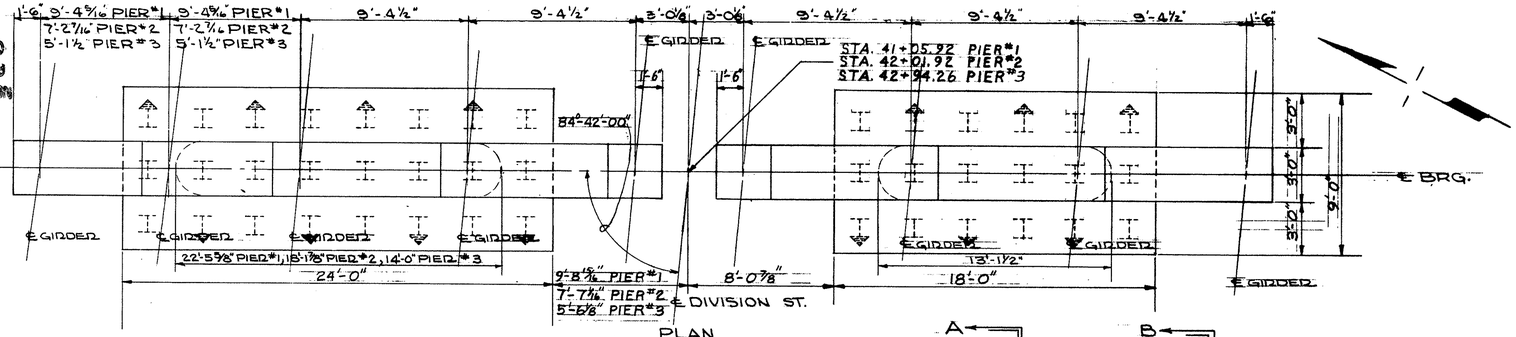
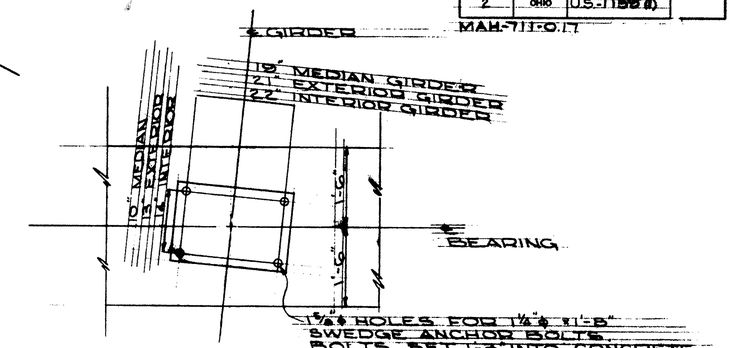
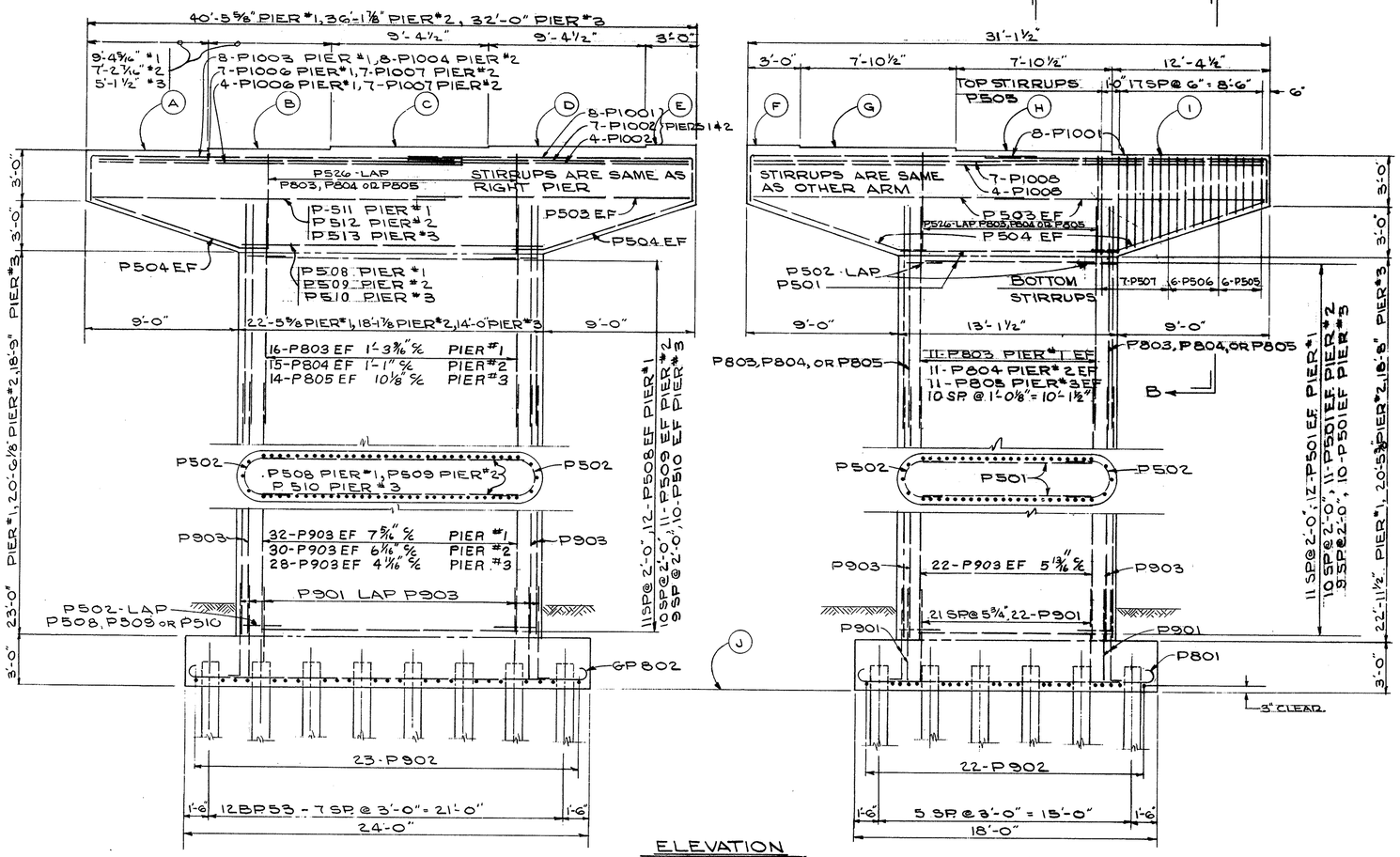
232



PLAN

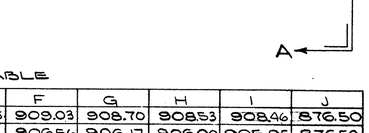


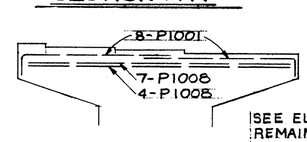
ANCHOR BOLT LAYOUT FOR PIER 3



ELEVATION

ELEVATION



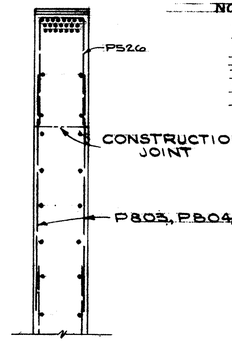


ELEVATION ~ PIER #3

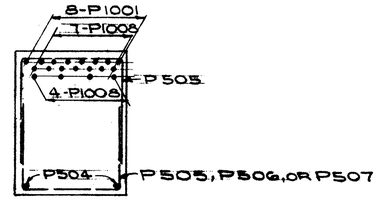
SEE ELEVATION FOR REMAINDER OF REINFORCING IN PIER #3

PIER ELEVATION TABLE

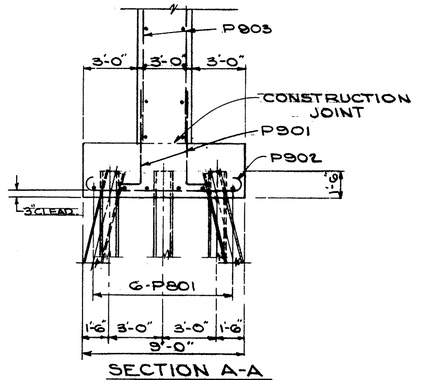
	A	B	C	D	E	F	G	H	I	J
PIER 1	908.50	908.52	908.64	908.76	909.05	909.03	908.70	908.53	908.46	876.50
PIER 2	906.01	906.08	906.09	906.22	906.58	906.56	906.17	906.00	905.95	876.50
PIER 3	904.25	904.84	904.31	904.44	904.82	904.81	904.39	904.23	904.16	876.50



NOTE:
ALL PILES TO BE 12 BP 53, PILES SHOWN FOR PIERS #2 & 3, SEE PILE PLAN FOR PIER #1
SPECIAL CARE SHALL BE TAKEN IN PLACING THE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT OF PIER 3 SO AS TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES



SECTION B-B



SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

PIERS 1, 2, & 3

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1158 (1)	

MAH.-711-0.17

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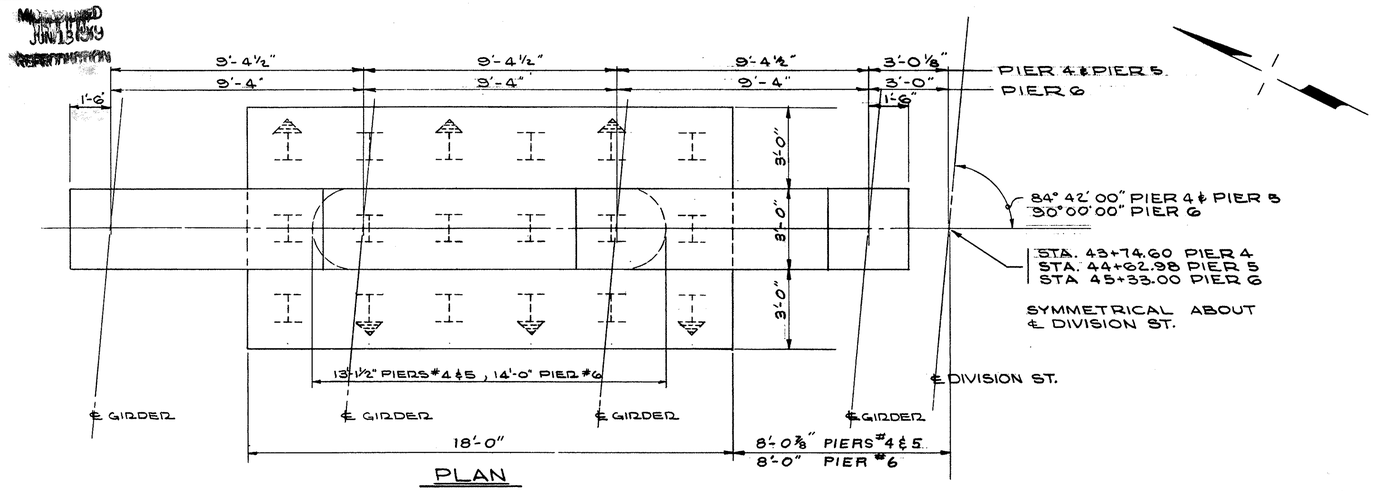
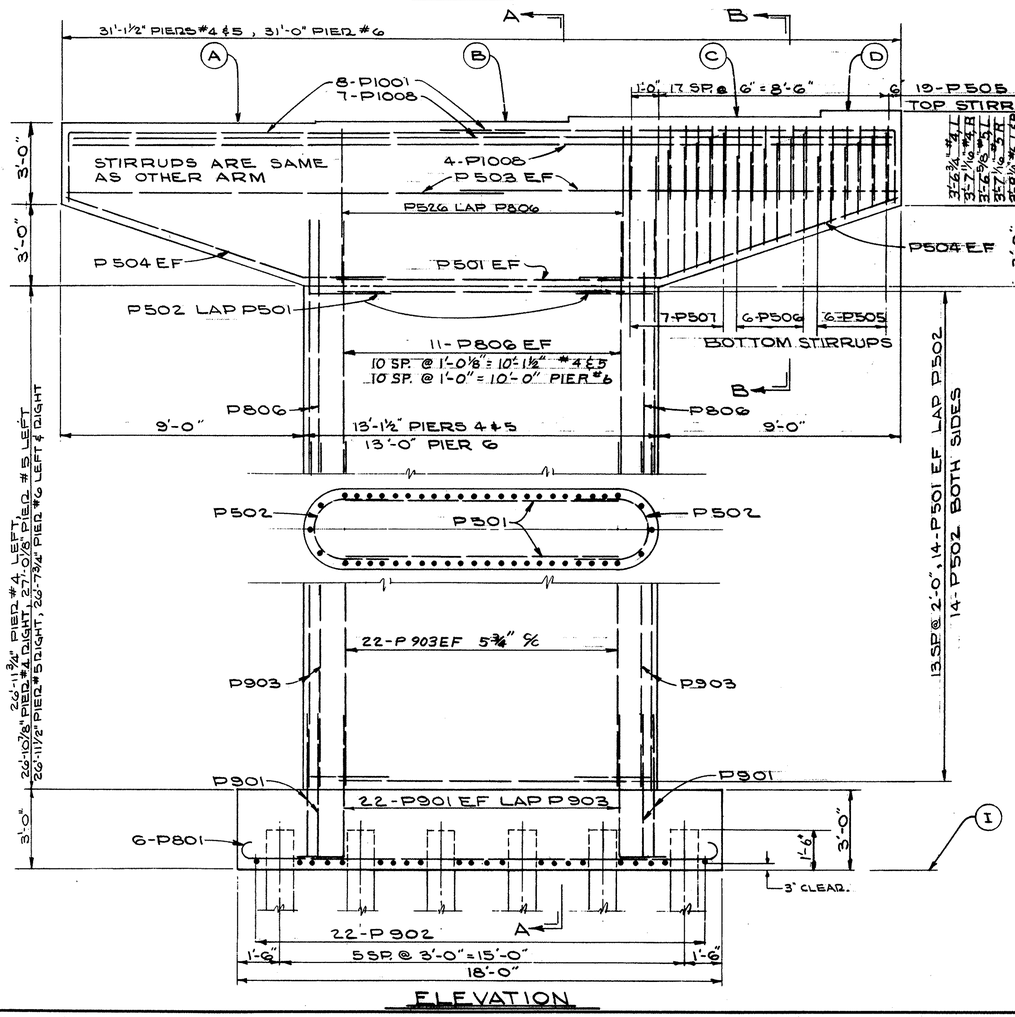
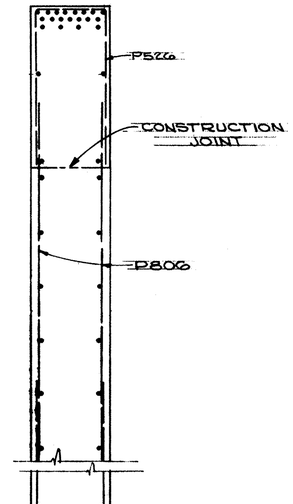
232

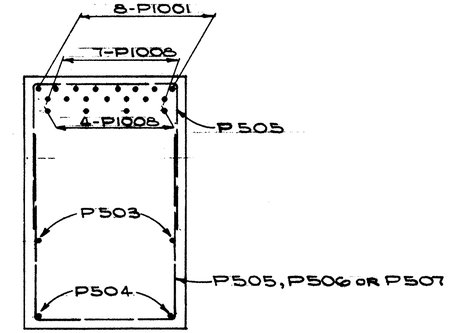


PLAN

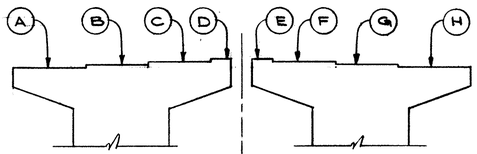


ELEVATION

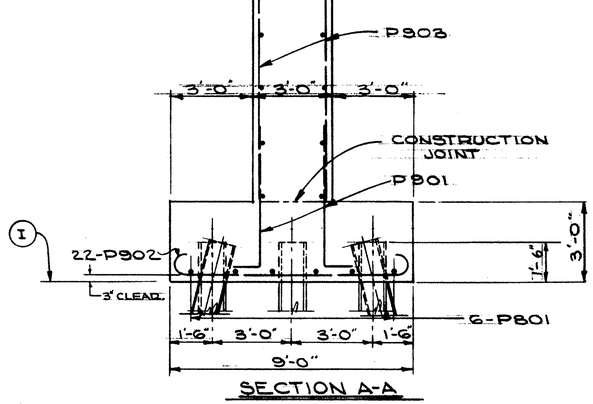




SECTION B-B



LOCATION OF ELEVATIONS



SECTION A-A

NOTE: ALL PILES TO BE 12BP53

PIER ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 4	902.98	903.03	903.16	903.54	903.54	903.13	902.97	902.90	867.00
PIER 5	902.01	902.09	902.23	902.56	902.55	902.21	902.05	901.96	866.00
PIER 6	900.64	900.66	900.81	901.07	901.07	900.81	900.66	900.64	865.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIERS 4, 5, & 6

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKS	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11(1)	

MAH.-711-0.17

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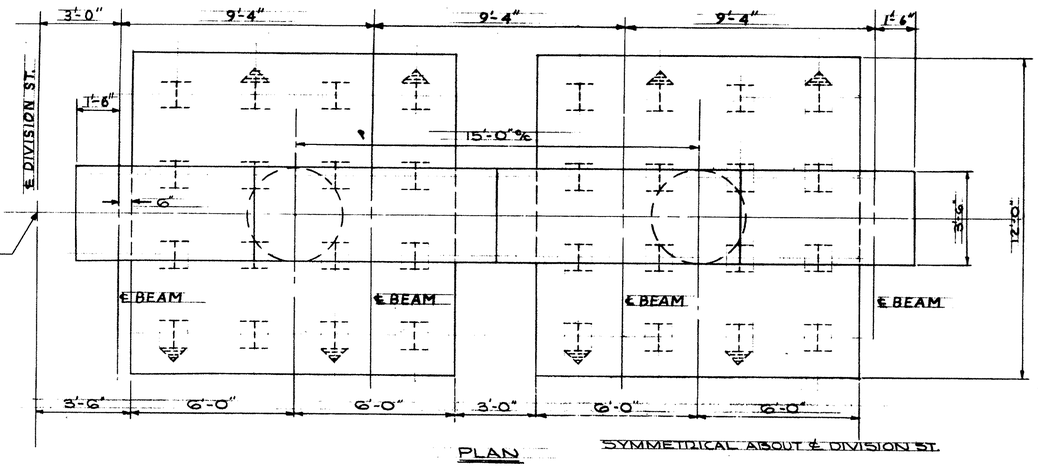
232

STA. 46+28.00 PIER 7
STA. 47+43.00 PIER 8
STA. 48+58.00 PIER 9

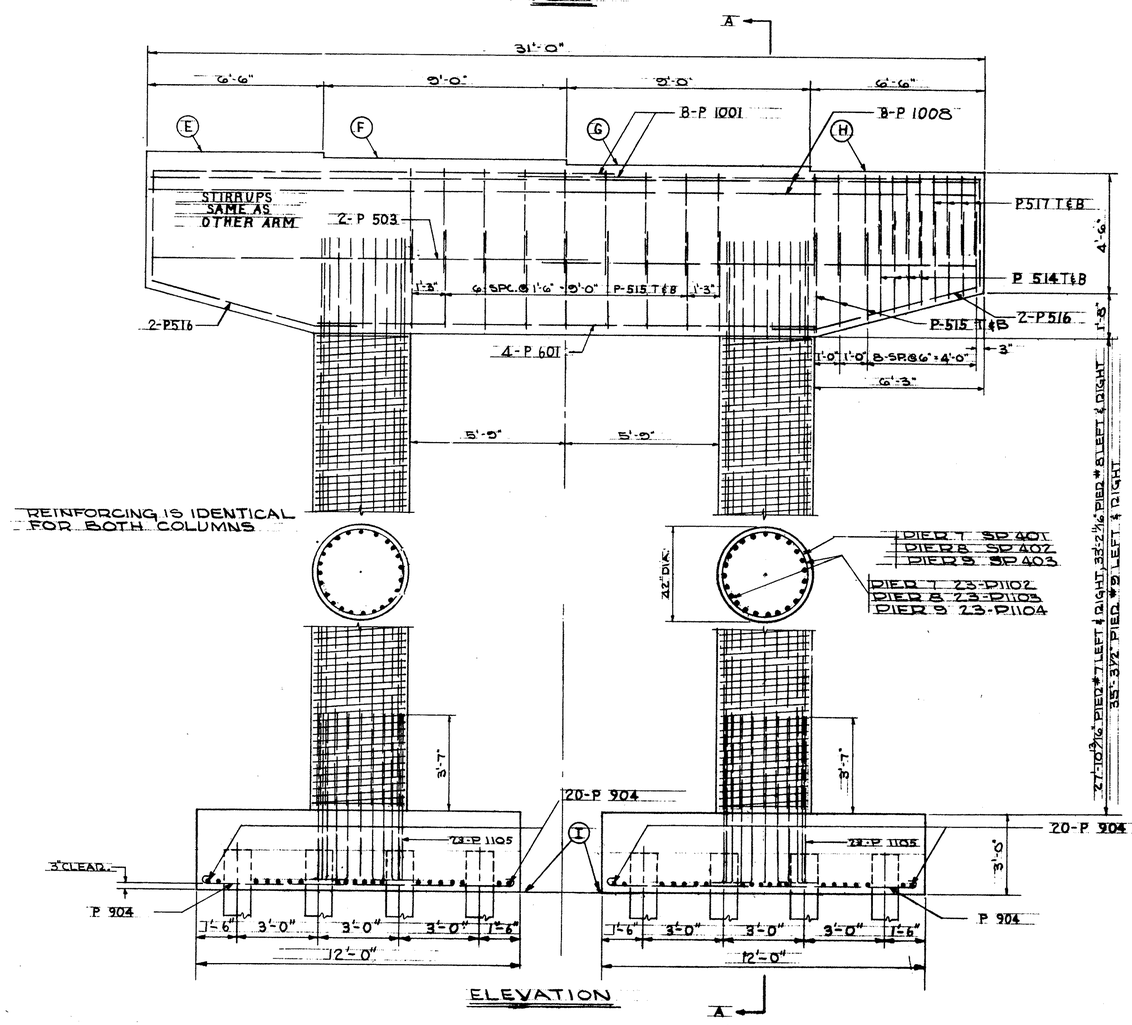


PLAN

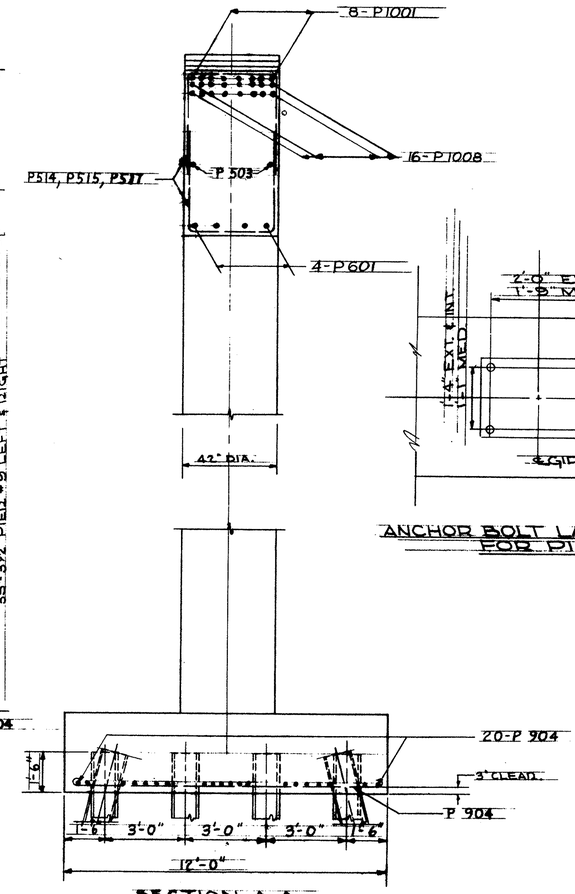
SYMMETRICAL ABOUT ℄ DIVISION ST.

PIER ELEVATION TABLE

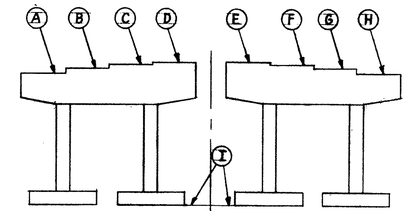
	A	B	C	D	E	F	G	H	I
PIER 7	900.07	900.10	900.25	900.53	900.53	900.25	900.10	900.07	863.00
PIER 8	900.39	900.45	900.59	900.87	900.87	900.59	900.45	900.39	858.00
PIER 9	901.46	901.47	901.61	901.92	901.92	901.61	901.47	901.46	857.00

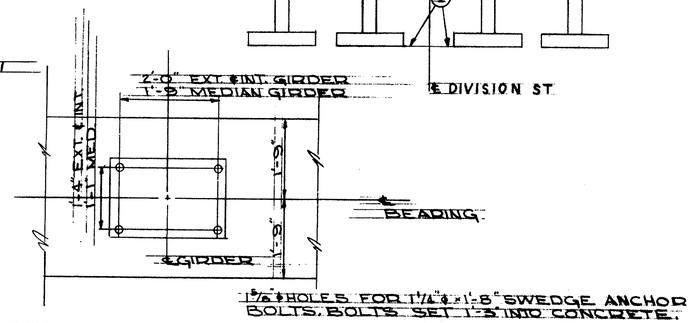


ELEVATION



SECTION A-A





ANCHOR BOLT LAYOUT DIAGRAM FOR PIER 8

NOTE:
ALL PILES TO BE 17 BP 53

SPECIAL CARE SHALL BE TAKEN IN PLACING THE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT OF PIER 8 SO AS TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIERS 7, 8, & 9

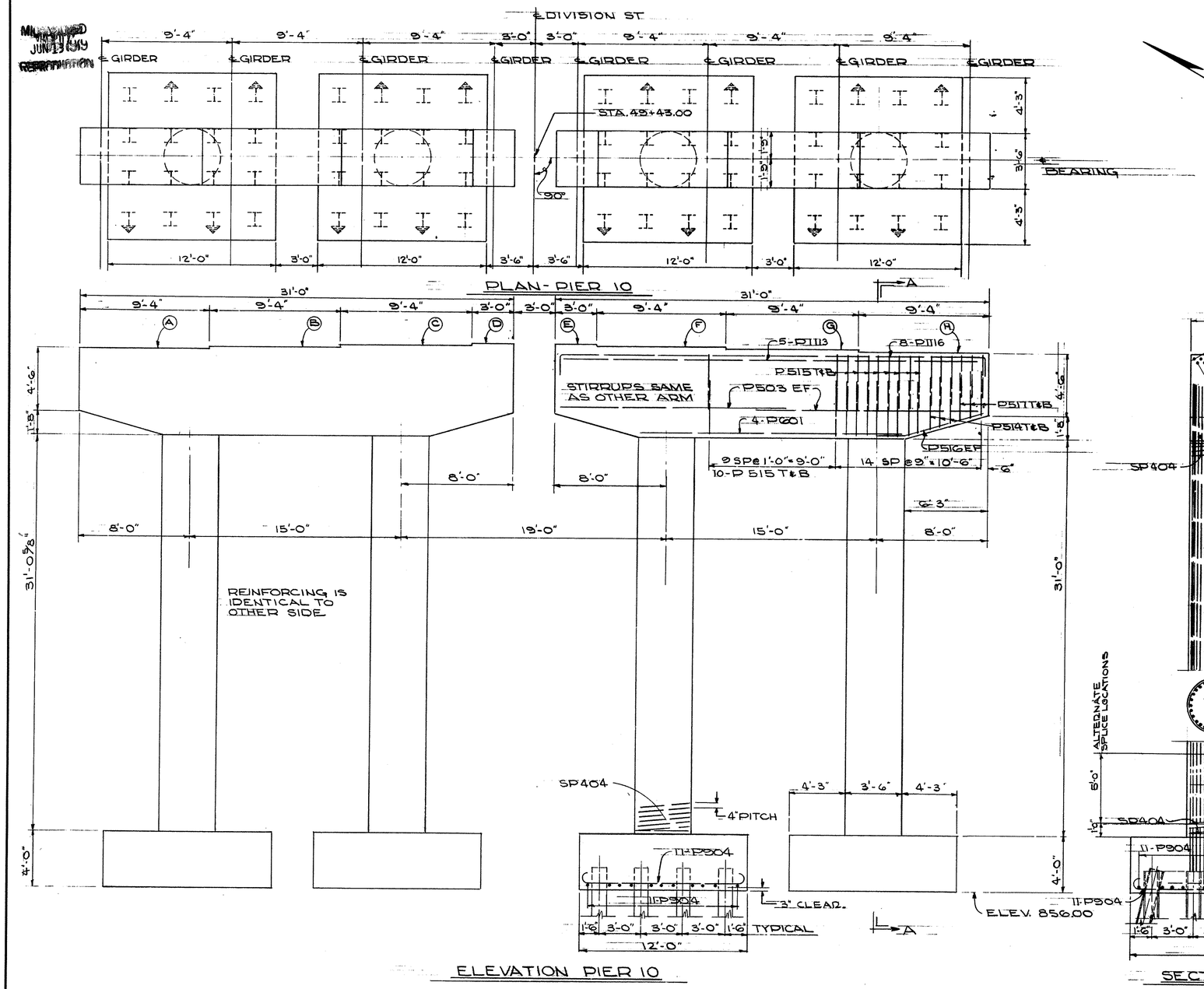
BRIDGE Nº MAH - 711 - 0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JDP		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

163
232



PERMISSION IS GRANTED TO ADD (1) No. 18 BAR TO EACH COLUMN OF PIER 10 TO COMPENSATE FOR DEFICIENY IN YEILD STRENGTH.

PIER ELEVATION TABLE

LOCATION	A	B	C	D	E	F	G	H
PIER 10	897.22	897.31	897.45	897.72	897.72	897.39	897.25	897.16

NOTE:
WELDED SPLICES OF #18 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 10

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

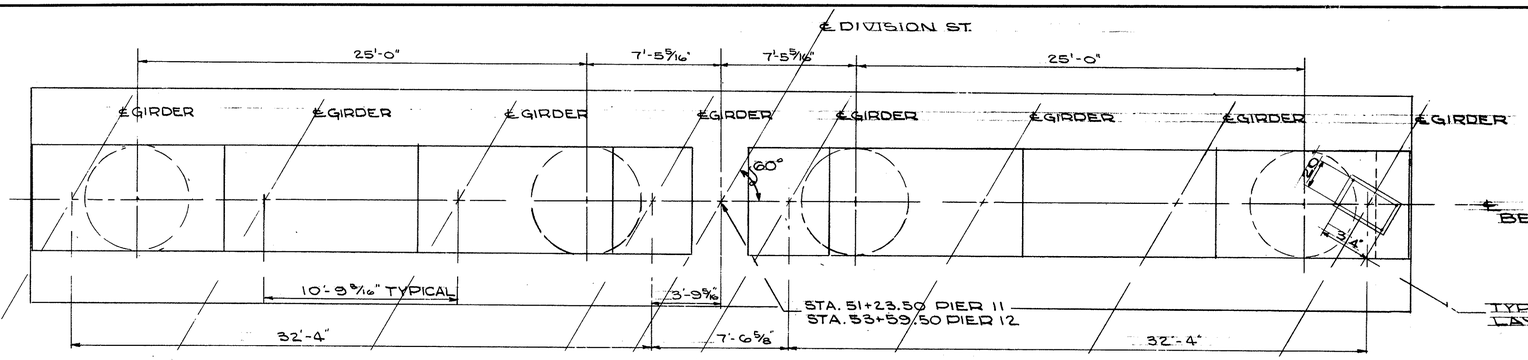
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

Revised As-Built

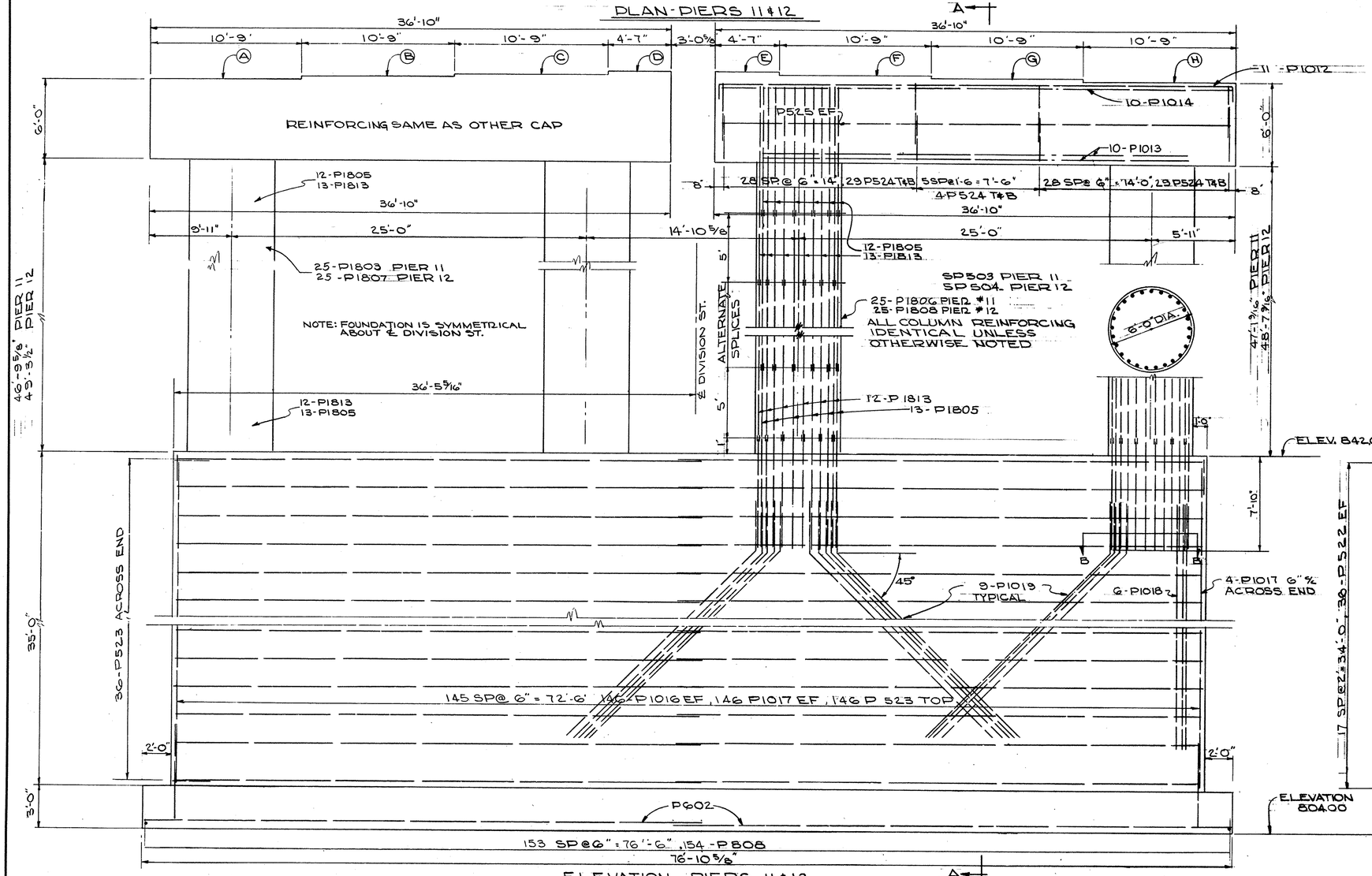
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11SD (I)	

MAH-711-0.17

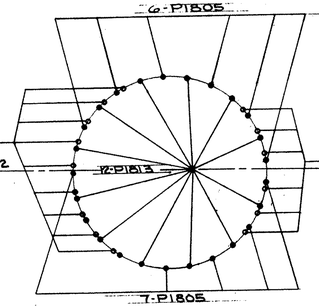
164
232



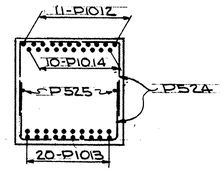
PLAN-PIERS 11 & 12



ELEVATION PIERS 11 & 12

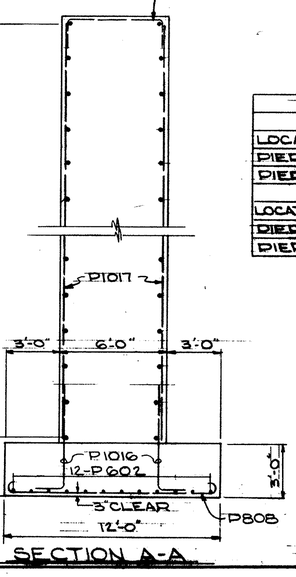


SECTION B-B



NOTE: SPECIAL CARE SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT OF PIER 11 SO AS TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

WELDED SPLICES OF #18 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.



SECTION A-A

PIER ELEVATION TABLE

LOCATION	A	B	C	D
PIER 11	894.80	895.00	895.20	895.39
PIER 12	897.73	897.23	897.15	897.07

LOCATION	E	F	G	H
PIER 11	895.47	895.32	895.22	895.13
PIER 12	897.05	896.91	896.77	896.63

This sheet is superseded by sheet No. 164A. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 11 & 12

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

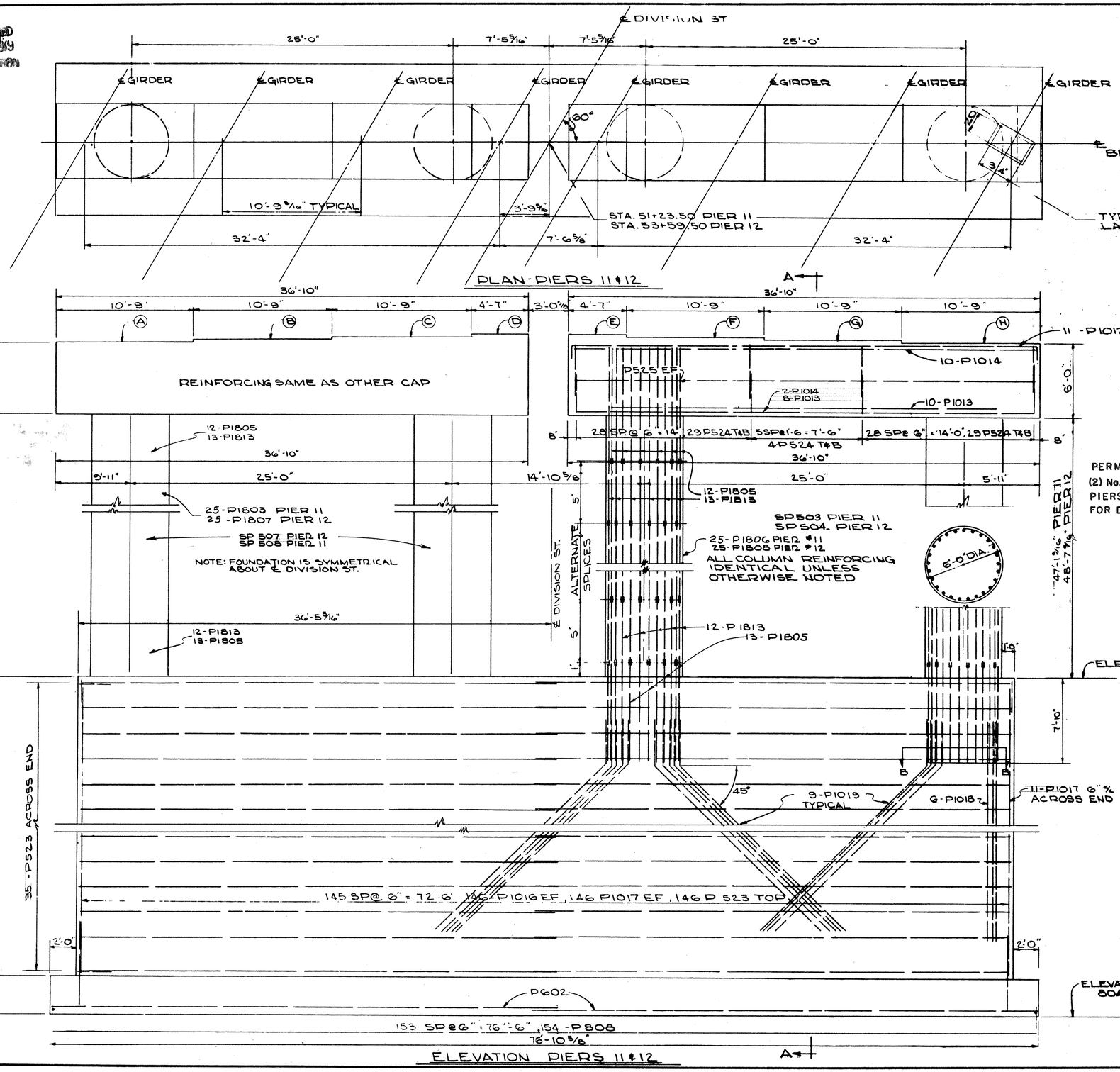
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11SD (1)	

MAH.-711-0.17

169A
232



PIER ELEVATION TABLE				
LOCATION	A	B	C	D
PIER 11	894.80	895.00	895.20	895.39
PIER 12	897.29	897.23	897.15	897.07
LOCATION	E	F	G	H
PIER 11	895.47	895.32	895.22	895.13
PIER 12	897.05	896.91	896.77	896.63

This sheet supersedes sheet No. 164. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 11 & 12

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

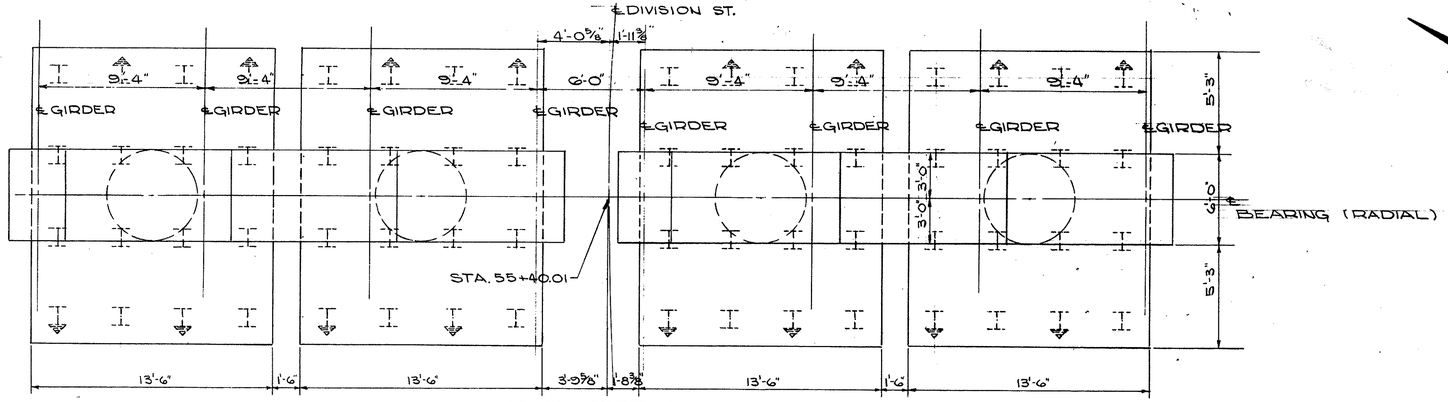
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

AB Revised As-Built

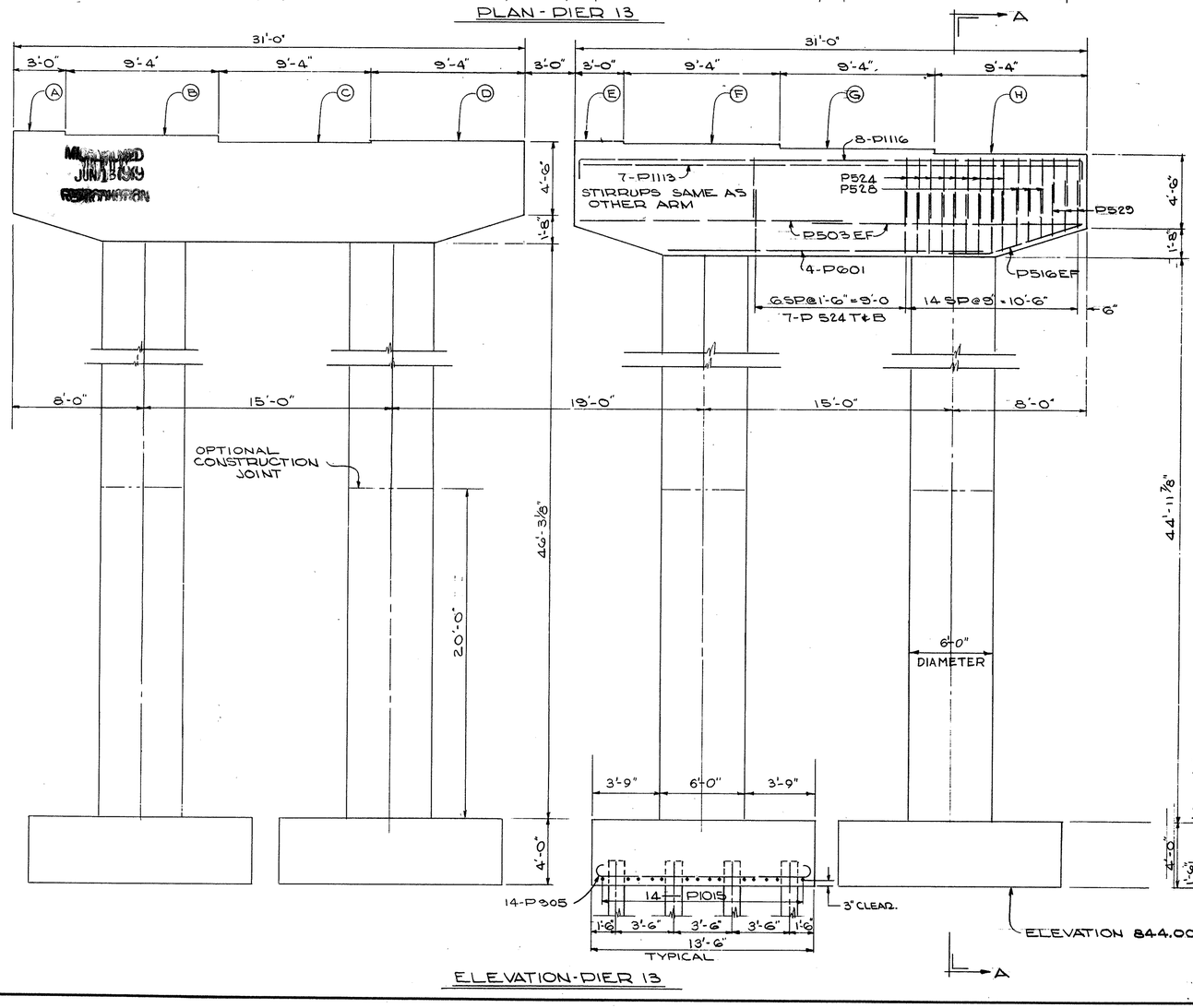
FED. RD.	STATE	PROJECT	
2	OHIO	U.S-11BB (1)	

MAH-711-0.17

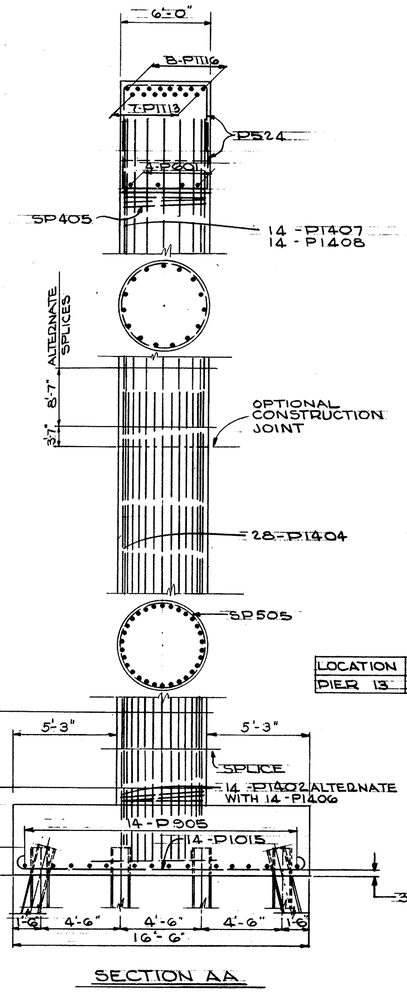
165
232



PLAN - PIER 13



ELEVATION-DIER 13



SECTION AA

NOTE:
WELDED SPLICES OF #14 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.

PIER ELEVATION TABLE

LOCATION	A	B	C	D	E	F	G	H
PIER 13	901.31	900.96	900.61	900.43	900.35	899.81	899.46	899.16

This sheet is superseded by sheet No. 165A 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 13

BRIDGE Nº MAH-711-0116

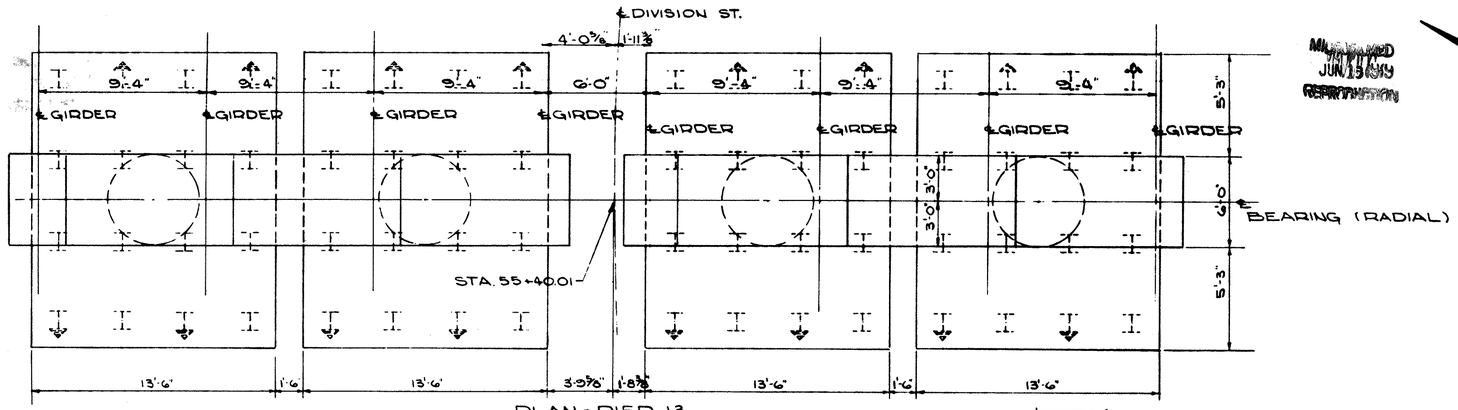
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

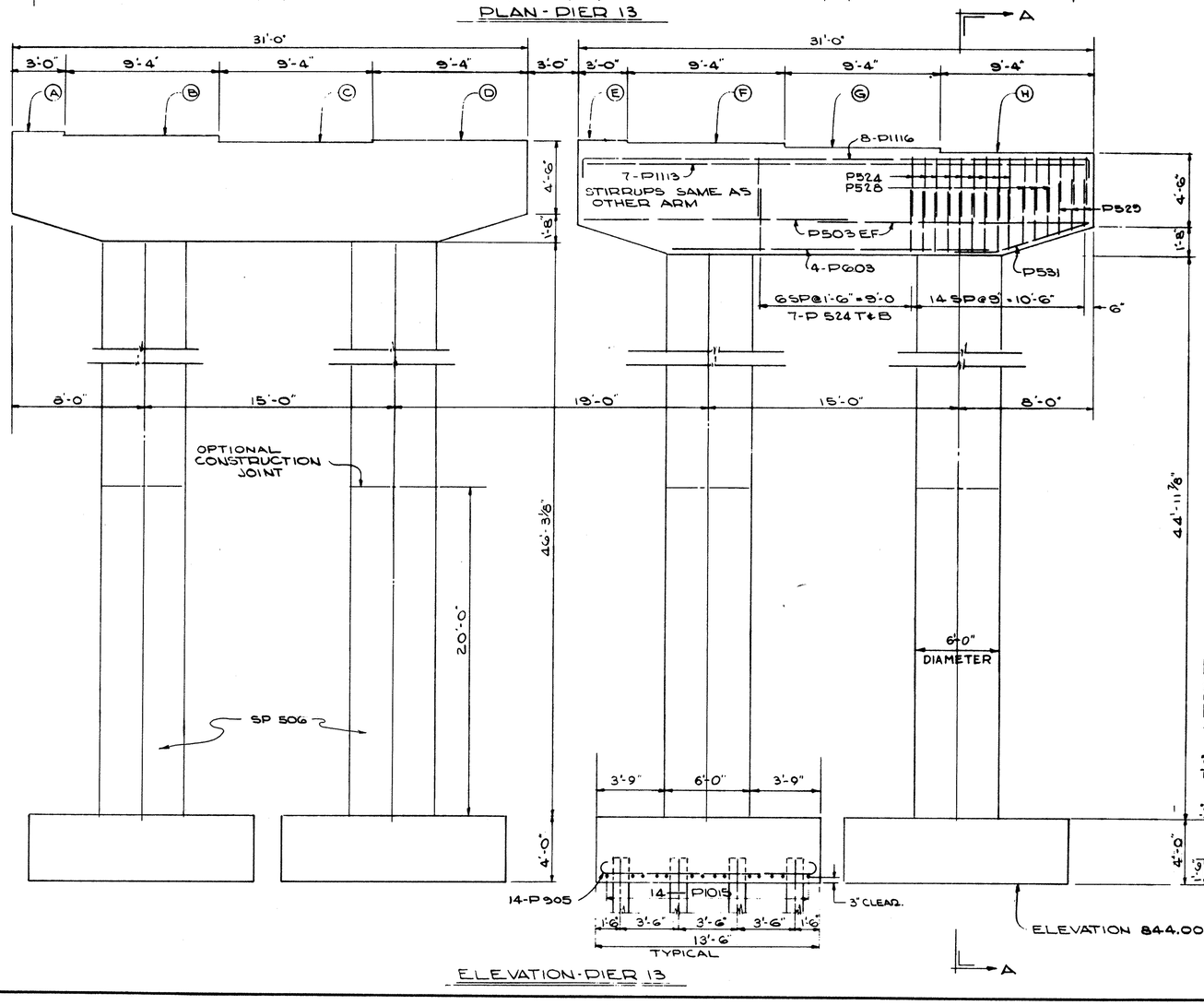
FED. RD.	STATE	PROJECT	
2	OHIO	U.S-1158 (1)	

MAH-711-0.17

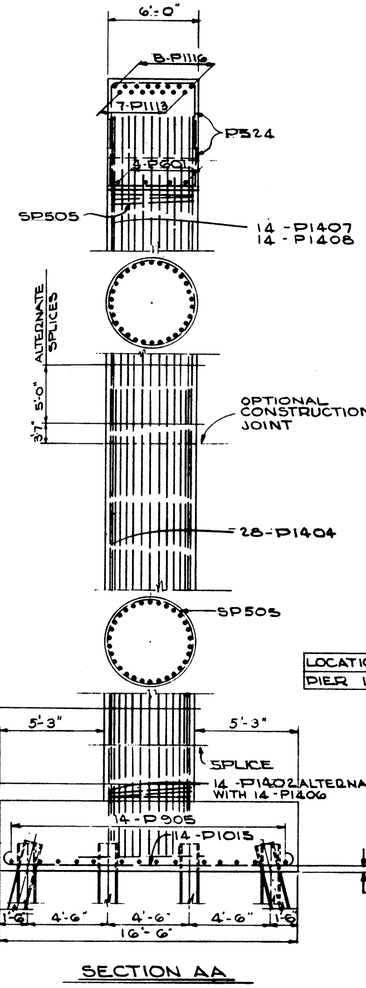
165A
232



PLAN - PIER 13



ELEVATION - PIER 13



SECTION AA

NOTE:
WELDED SPLICES OF #14 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.

PIER ELEVATION TABLE

LOCATION	A	B	C	D	E	F	G	H
PIER 13	901.31	900.96	900.61	900.43	900.35	899.81	899.46	899.16

This sheet supersedes sheet No. 165 9-12-68

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 13

BRIDGE Nº MAH-711-0116

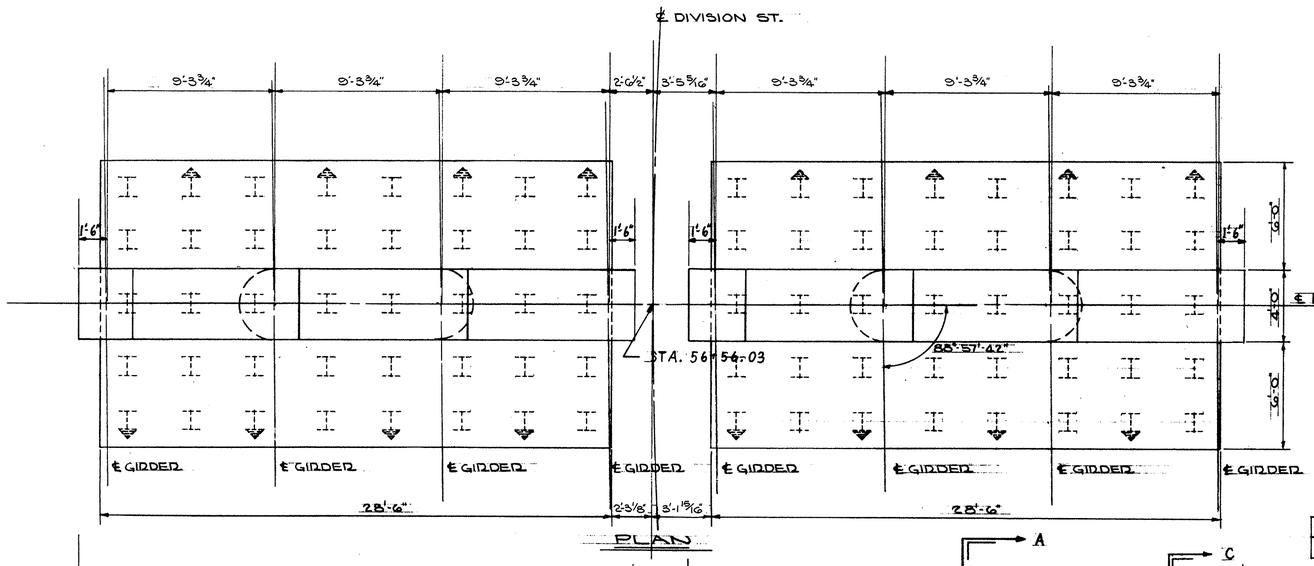
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

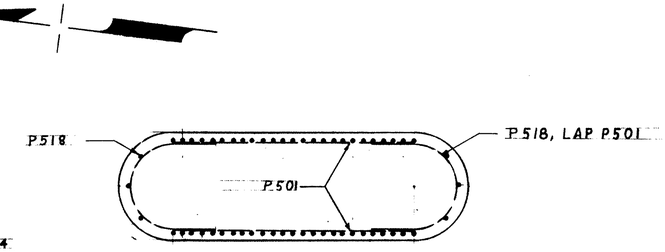
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11 50 (1)	

MAH.-711-0.17

166
232



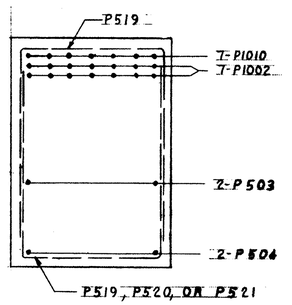


SECTION B-B

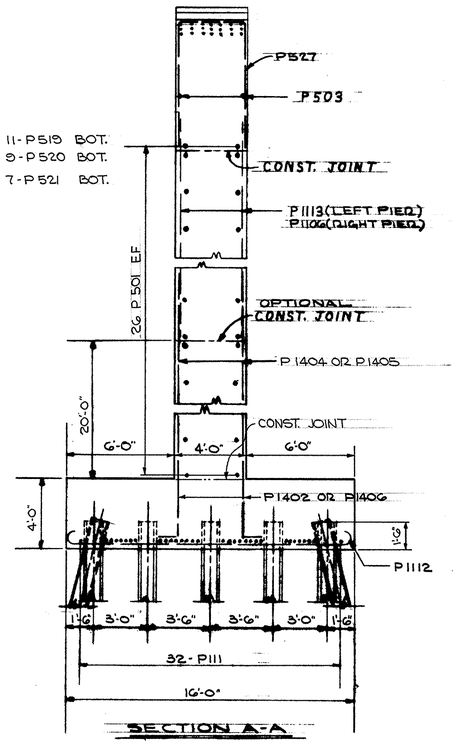
PIER #14 ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 14	904.56	904.10	903.64	903.58	903.48	902.68	902.17	901.73	846.20

NOTE: ALL PILING 12 BP 53



SECTION C-C



This sheet is superseded by sheet No. 166A. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

PIER 14

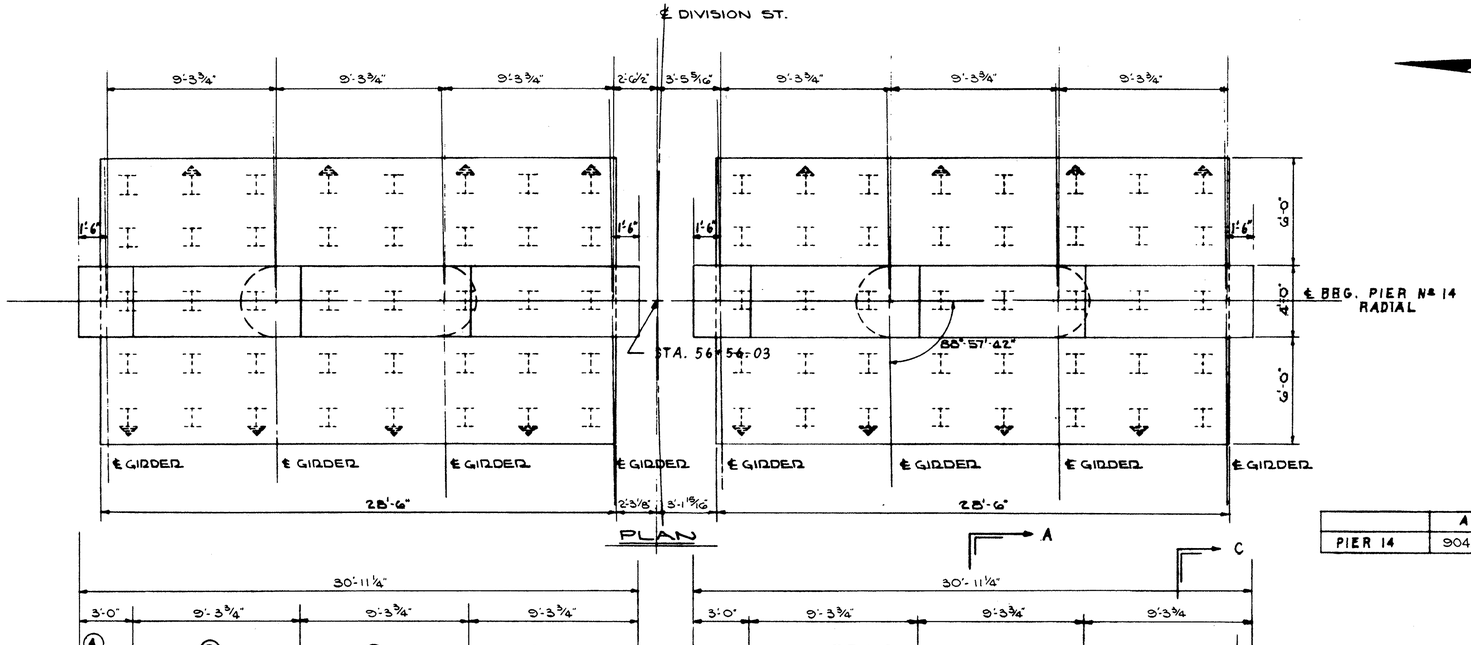
BRIDGE Nº MAH – 711–0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

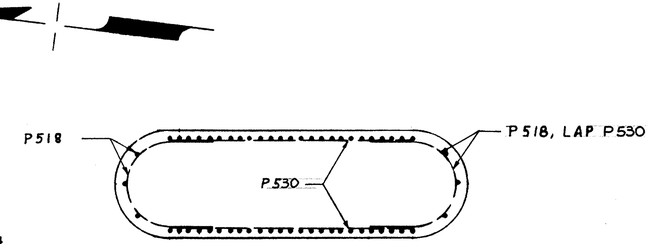
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.C.	B.M.		J.M.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11B0(1)	

MAH.-711-0.17

166A
232

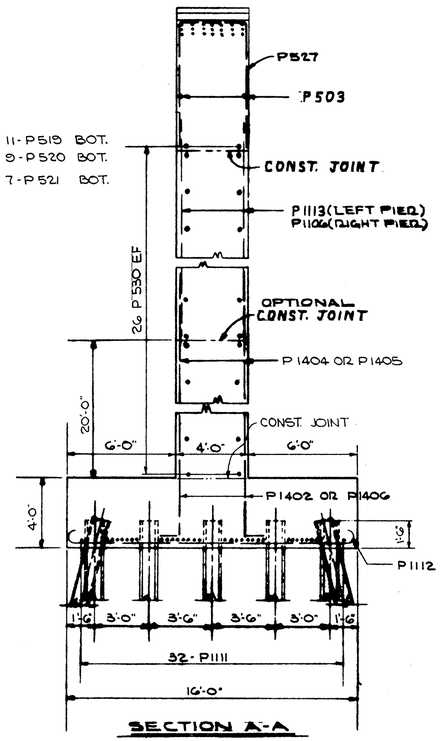




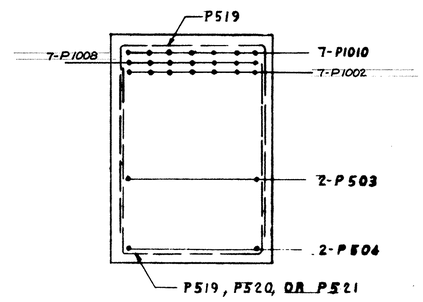
SECTION B-B

PIER #14 ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 14	904.56	904.10	903.64	903.58	903.49	902.63	902.17	901.73	846.20



NOTE: ALL PILING 12 BP 53



SECTION C-C

This sheet supersedes sheet No. 166. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 14

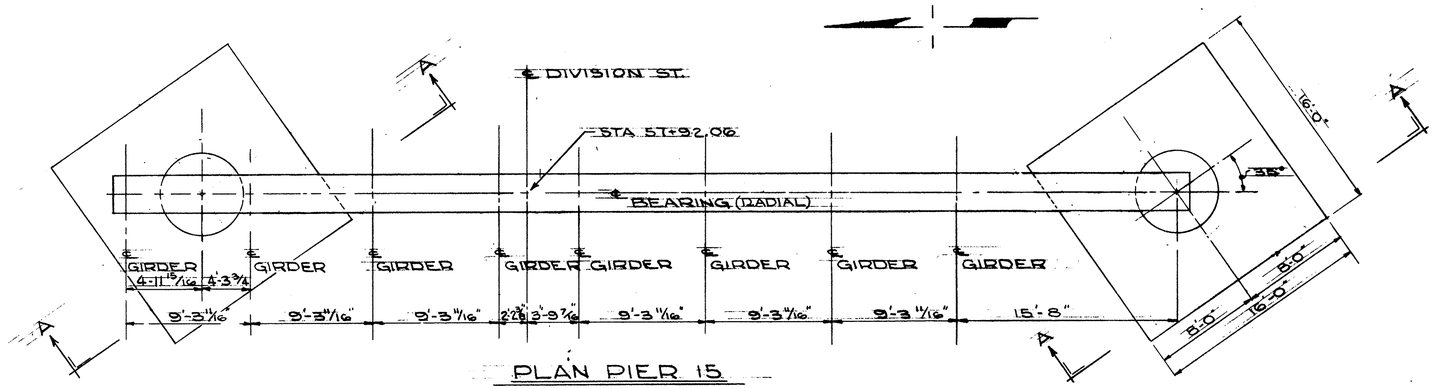
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.C.	D.M.		J.M.	WKD	6-22-68	

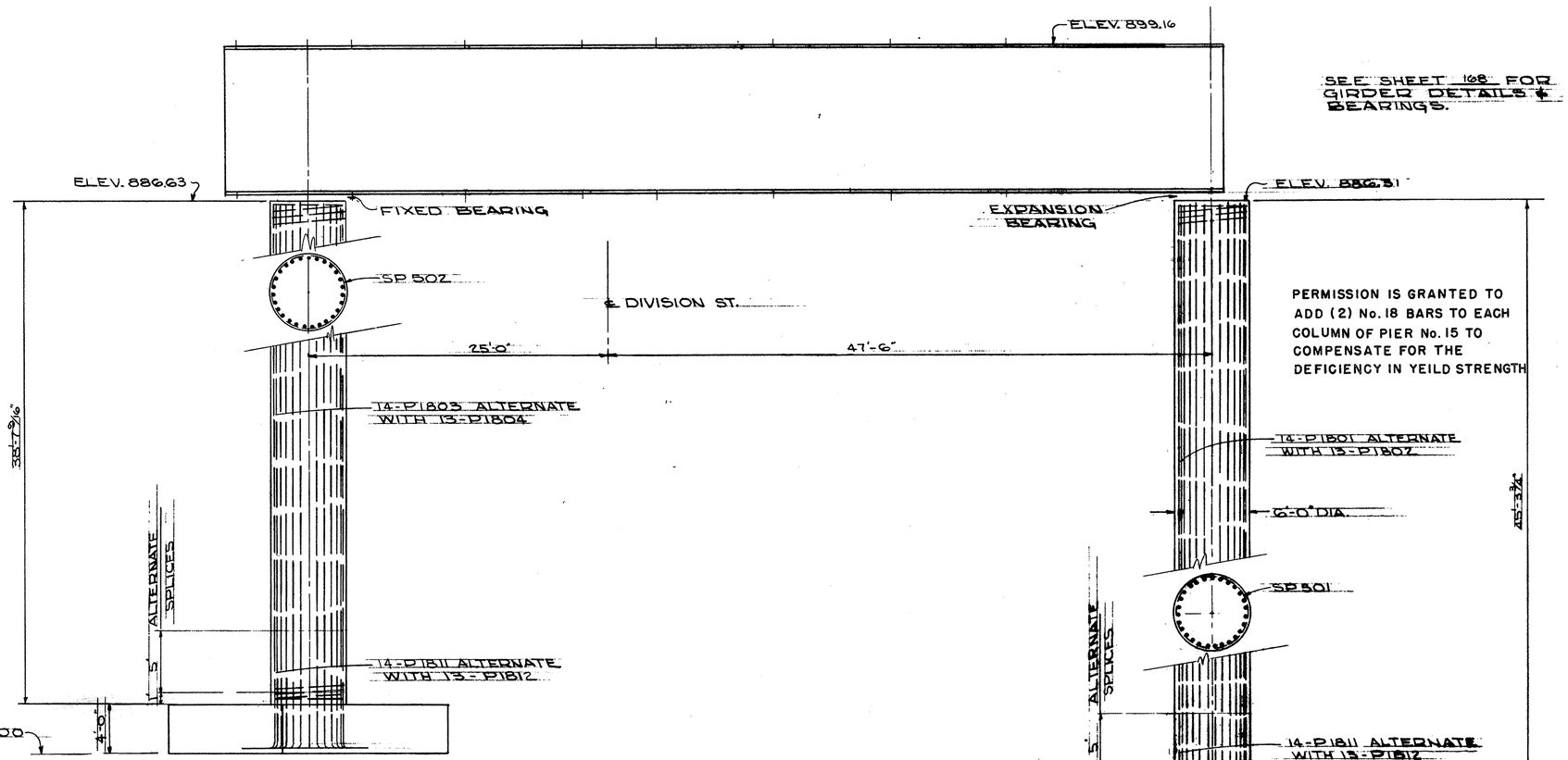
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150 (1)	

MAH.-711-0116

167
232

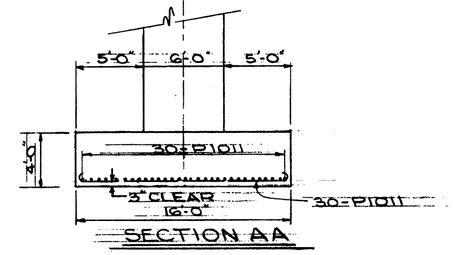


PLAN PIER 15



SEE SHEET 168 FOR GIRDER DETAILS & BEARINGS.

PERMISSION IS GRANTED TO ADD (2) No. 18 BARS TO EACH COLUMN OF PIER No. 15 TO COMPENSATE FOR THE DEFICIENCY IN YEILD STRENGTH



SECTION AA

ELEVATION - PIER 15

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 15

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

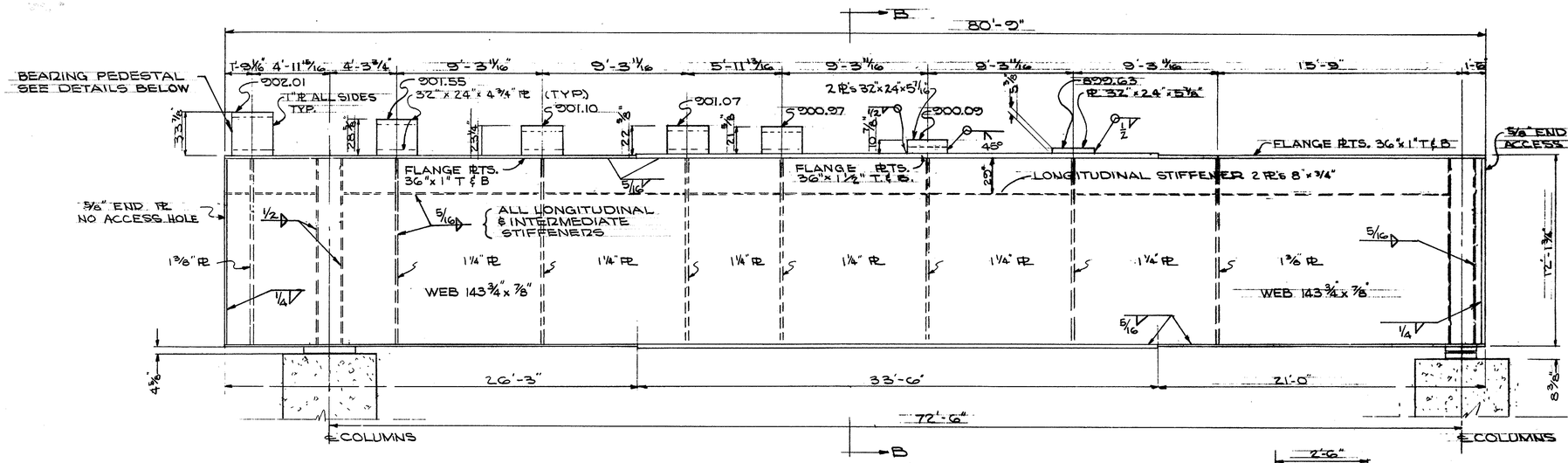
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JHH	WES	6-22-68	

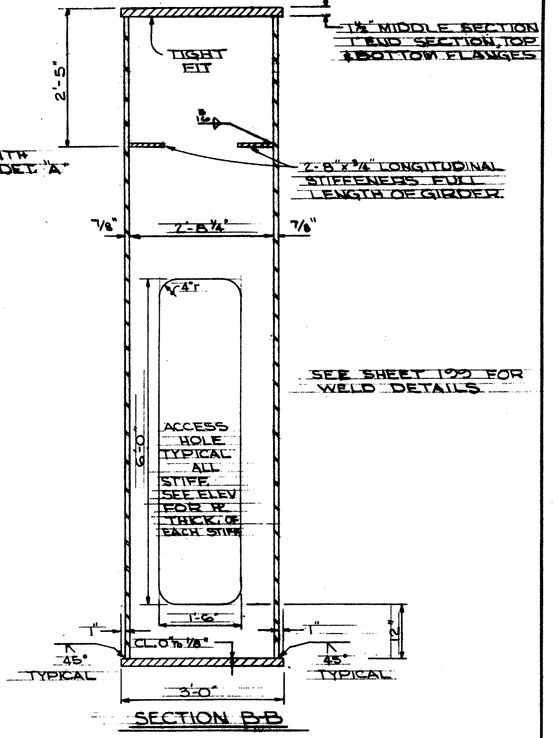
Revised As-Built

FED. RD.	STATE	PROJECT	
Z	OHIO	U.S.-11[illegible]	

MAH-711-0.17

168
232

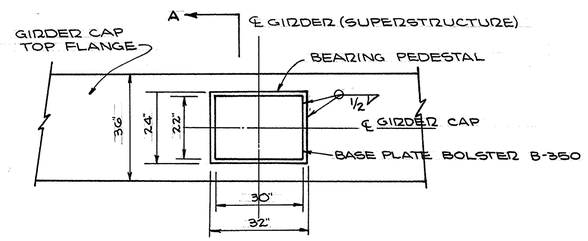




SEE SHEET 199 FOR WELD DETAILS

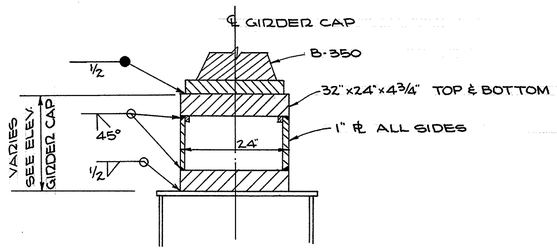
ELEVATION GIRDER CAP

(NO CAMBER REQ.)



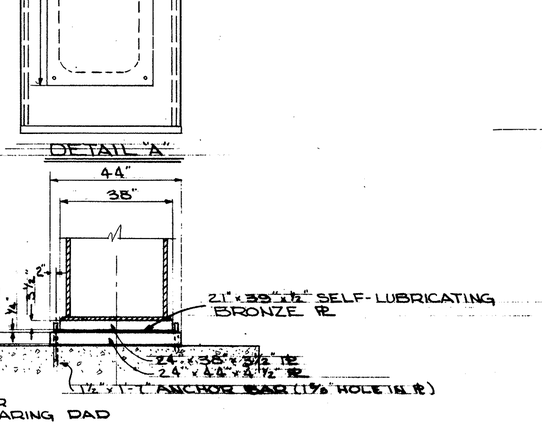
PLAN- BEARING PEDESTAL

SCALE: 1/2"=1'-0"



SECTION A

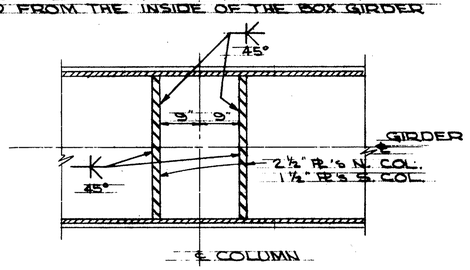
SCALE: 3/4"=1'-0"



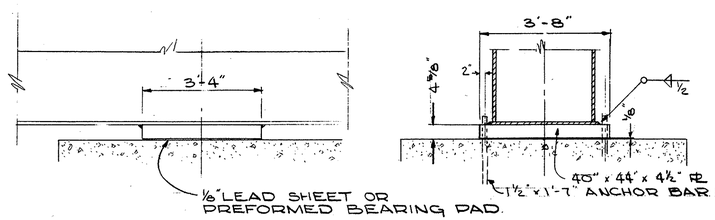
NOTES

THE GIRDER SHALL BE FABRICATED, INTERIOR PAINTED AND SEALED IN THE SHOP.

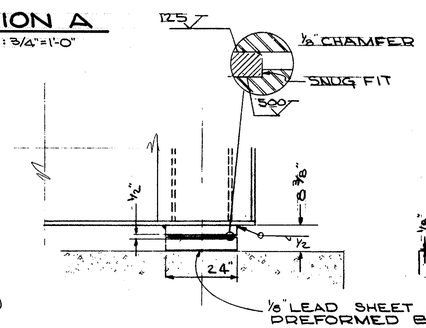
THE THREE FIELD COATS OF PAINT SHALL BE OMITTED FROM THE INSIDE OF THE BOX GIRDER



BEARING STIFFENERS



FIXED BEARING



EXPANSION BEARING

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER CAP DETAILS FOR PIER 15

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WEB	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11B9(1)	

MAH.-711-0.17

169
232

℄ DIVISION ST.

9'-3¾" 9'-3¾" 9'-3¾" 2'-6½" 3'-5⅜" 9'-3¾" 9'-3¾" 9'-3¾"

1'-6" 1'-6" 1'-6" 1'-6"

4'-0" 4'-0" 4'-0"

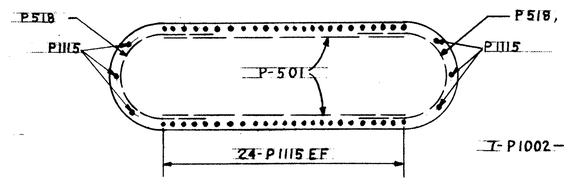
℄ BRG. PIER Nº 16 RADIAL

STA. 59+00.07

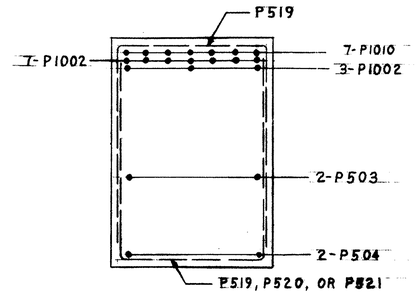
89°-06'-44"

℄ GIRDER ℄ GIRDER 20'-0" ℄ GIRDER 6'-6⅛" ℄ GIRDER ℄ GIRDER 7'-5" ℄ GIRDER 20'-0" ℄ GIRDER ℄ GIRDER

PLAN PIER 16



SECTION B-B



SECTION C-C

NOTE:
WELDED SPLICES OF #14 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.

THE LEFT STEM MAY HAVE TO BE REDESIGNED IF THE 30" ℄ WATER LINE IS NOT IN THE LOCATION SHOWN.

PIER ELEVATION TABLE

-	A	B	C	D	E	F	G	H	I
PIER 16	900.14	899.68	899.23	898.99	898.89	898.22	897.76	897.30	842.00

30'-11¼" 30'-11¼"

3'-0" 9'-3¾" 9'-3¾" 9'-3¾" 3'-0" 9'-3¾" 9'-3¾" 9'-3¾"

A B C D E F G H

A C

7-P1010
7-P1002
3-P1002
6 SP @ 1'-6"
TO P519 TOP
6"

8'-1 13/16"

REINFORCING IS IDENTICAL TO RIGHT SIDE UNLESS NOTED

ADDITIONAL SET OF P501 & P518

4'-0" 3'-0" 8'-7⅛" 4'-0"

STIRRUPS ARE SAME AS OTHER ARM

7-P1008

P519 TOP

12-P527 LAP P1114

P503 EF

P504 EF

P501 EF

P519 BOT.
P520 BOT.
P521 BOT.

9'-0" 12'-11¼" 9'-0"

C C

B B

27-P1115 ALTERNATE WITH 27-P1114

45'-11⅞"
44'-3⅜"

P1401 20-P1401 EF 19-SPC'S @ 6¼"=9'-11¼" P1401

LOCATION OF SPLICES

5'-0"

P1403 EF

13-P1402 EF, ALTERNATE WITH 13-P1406

I I

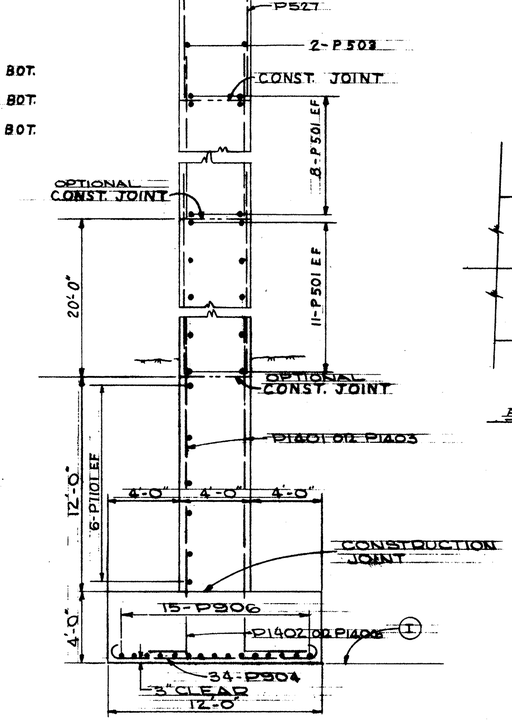
15-P906 15-P906

34-P904 34-P904

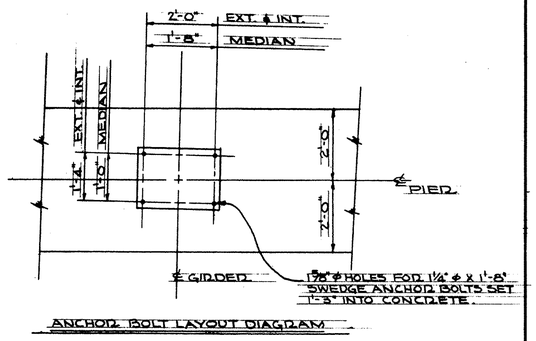
20'-0" 20'-0"

A

ELEVATION-PIER 16



SECTION AA



ANCHOR BOLT LAYOUT DIAGRAM

This sheet is superseded by sheet No. 169A. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

PIER 16

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

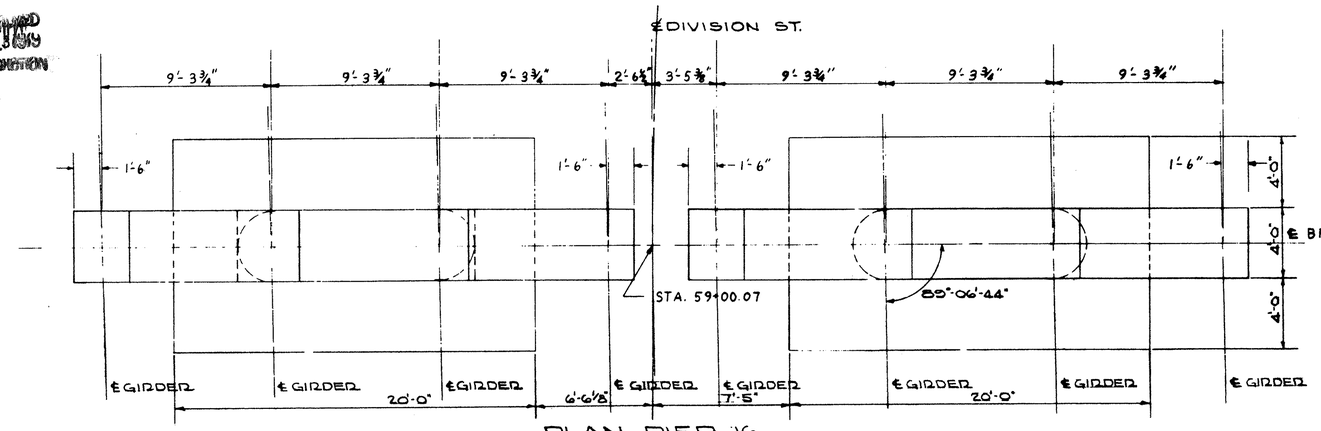
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.C.	D.M.		JM	WKD	6-22-68	

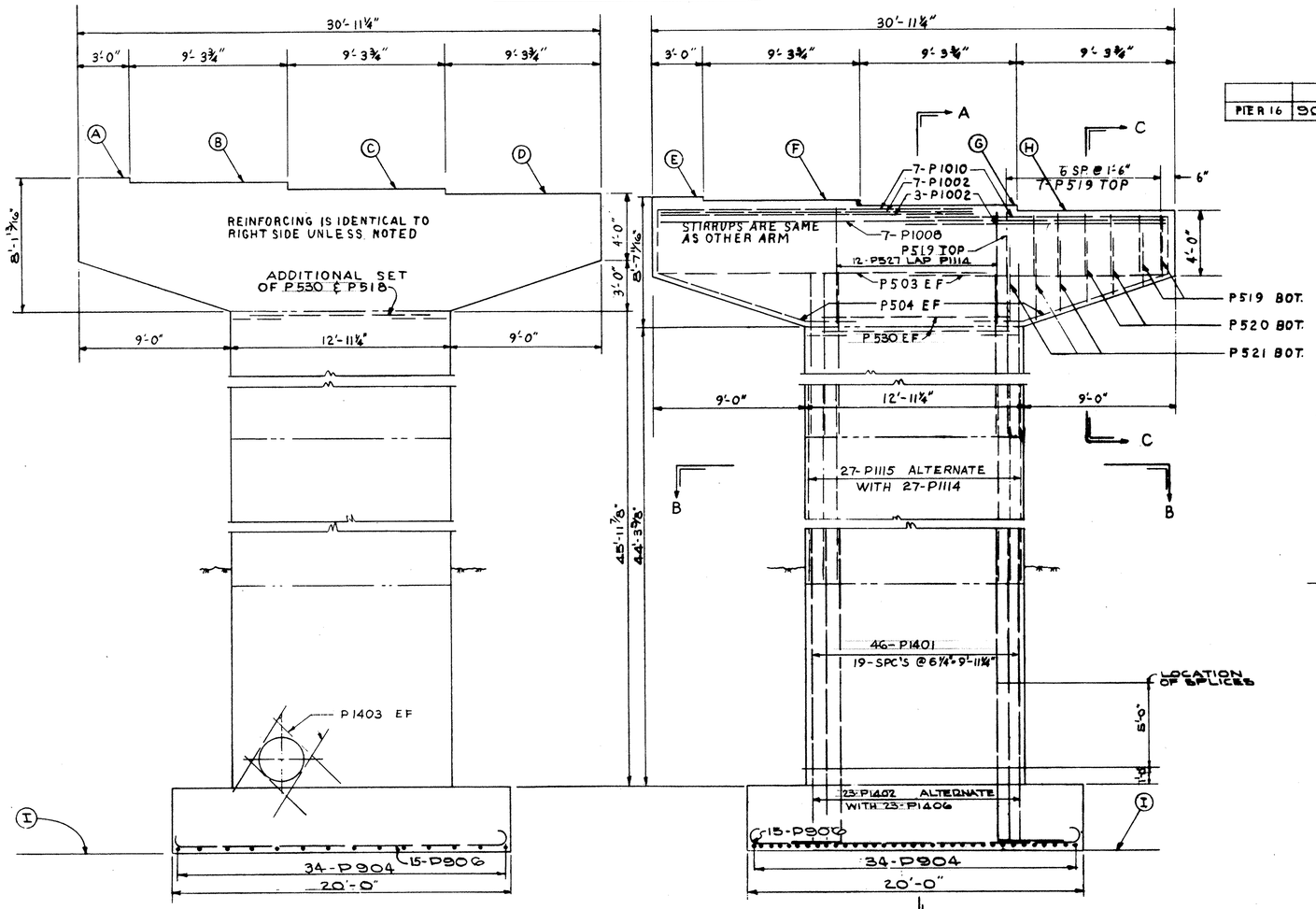
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11-50(1)	

MAH.-711-0.17

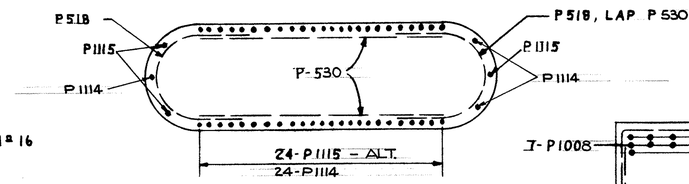
169A
232



PLAN PIER 16



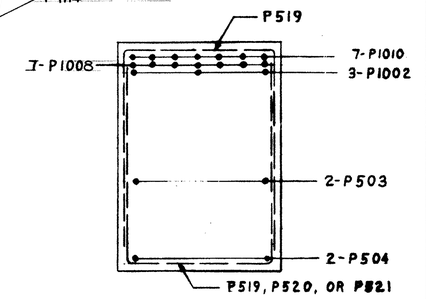
ELEVATION-PIER 16



SECTION B-B

NOTE:
WELDED SPLICES OF #14 BARS SHALL NOT BE USED. AN APPROVED POSITIVE CONNECTION FOR BARS DESIGNED TO DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR SHALL BE PROVIDED.

THE LEFT STEM MAY HAVE TO BE REDESIGNED IF THE 30" ϕ WATER LINE IS NOT IN THE LOCATION SHOWN.

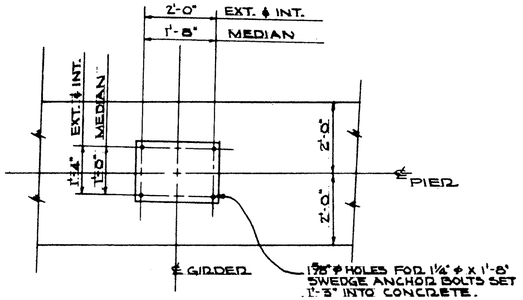


SECTION C-C

PIER ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 16	900.14	898.68	893.23	898.99	898.89	898.22	897.76	897.30	842.00

SECTION AA



ANCHOR BOLT LAYOUT DIAGRAM

This sheet supersedes sheet No. 169. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER 16

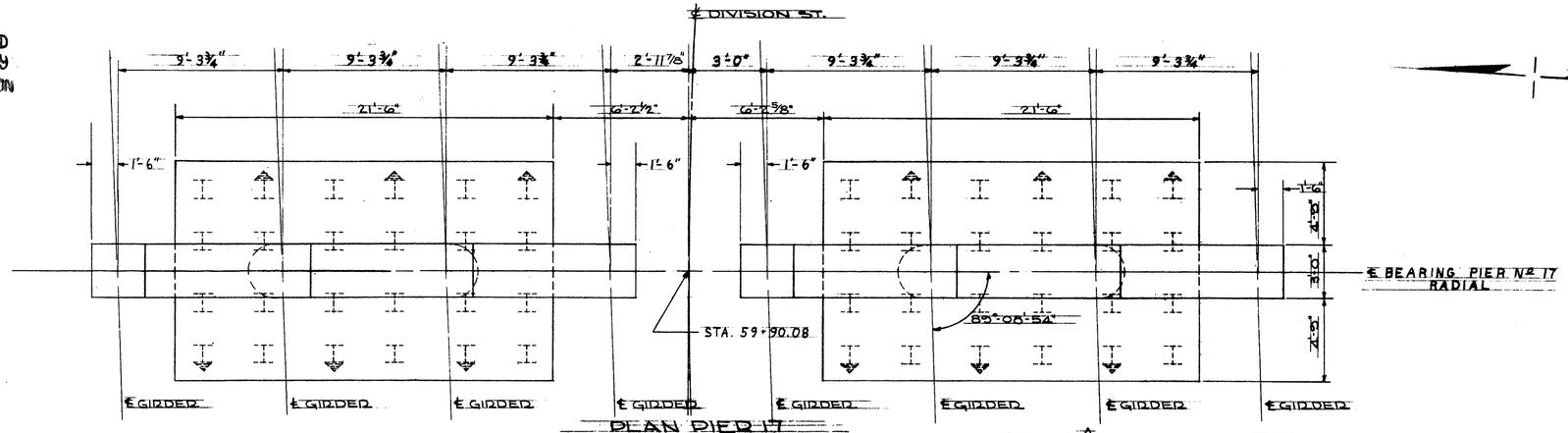
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.C.	D.M.		JM	WKD	6-22-68	

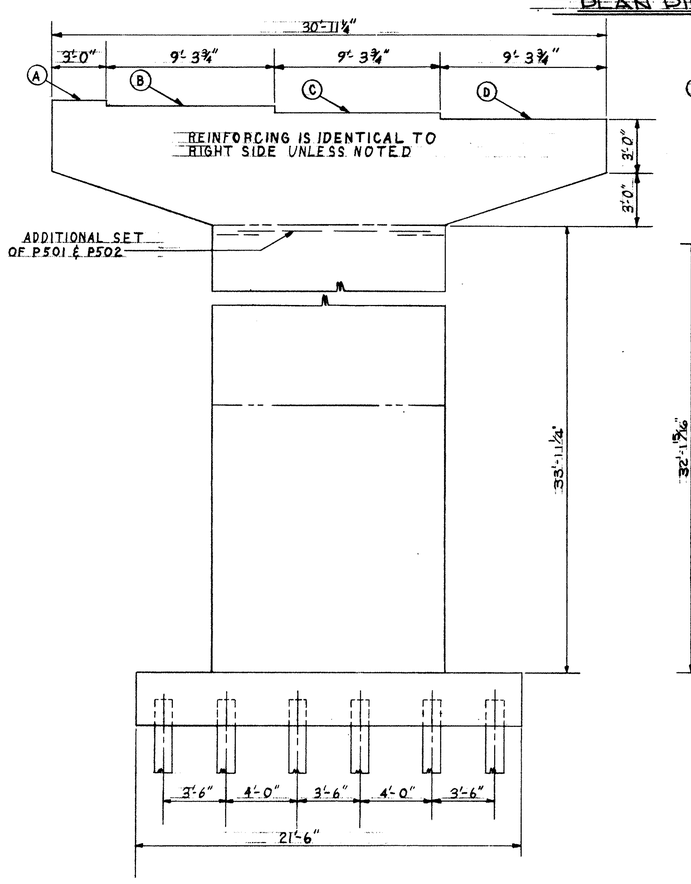
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1 159 (1)	

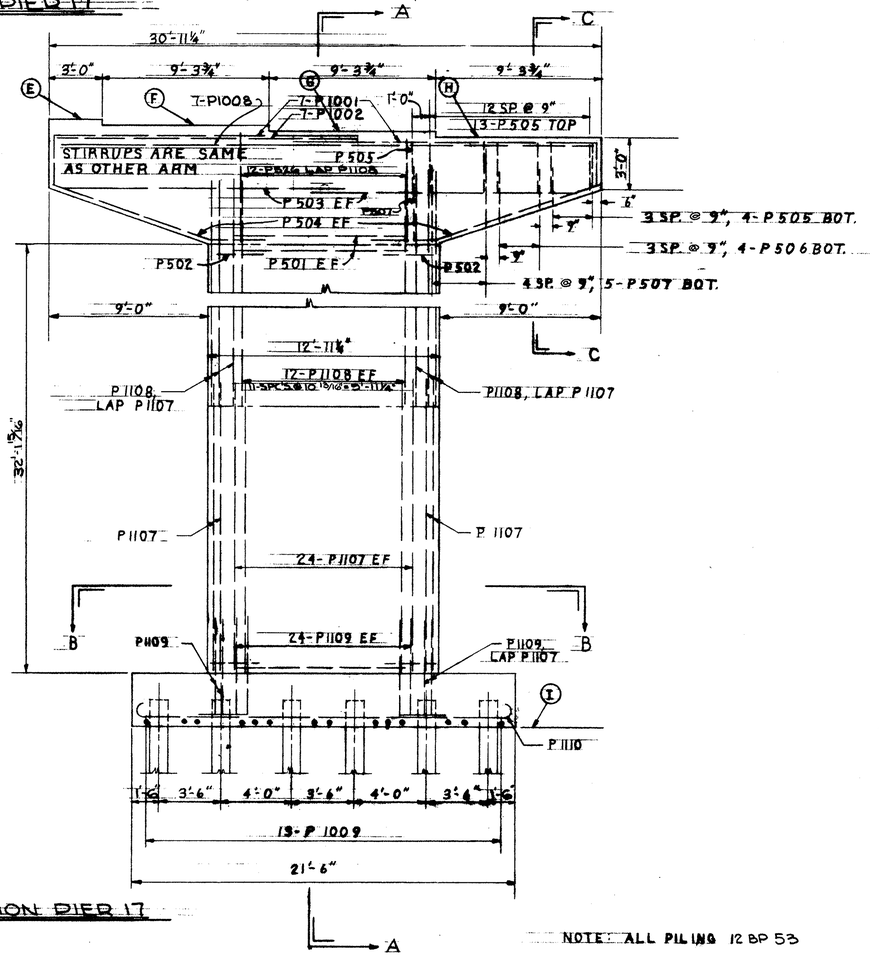
MAH.-711-0.17

170
232



PLAN PIER 17



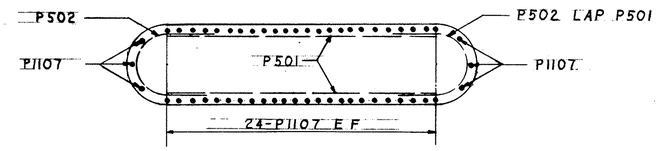


ELEVATION PIER 17

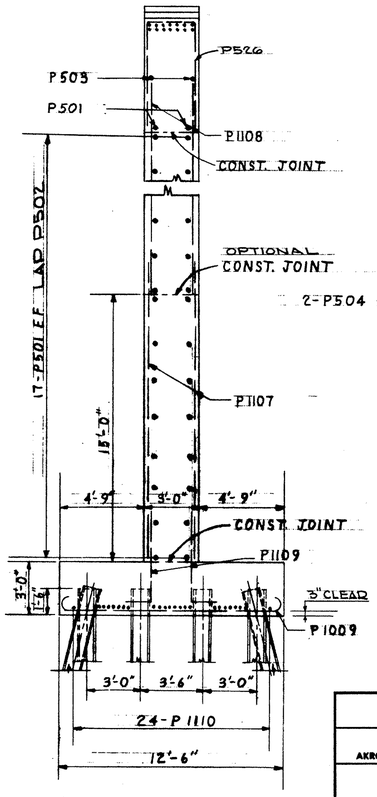
PIER ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 17	898.95	898.60	898.15	897.94	897.85	897.14	896.68	896.12	855.00

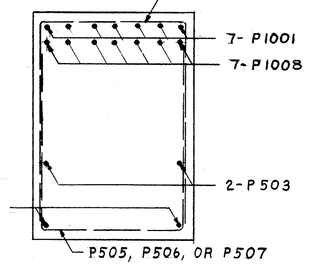
NOTE: ALL PILING 12 BP 53



SECTION B-B



SECTION A-A



SECTION C-C

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

PIER 17

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

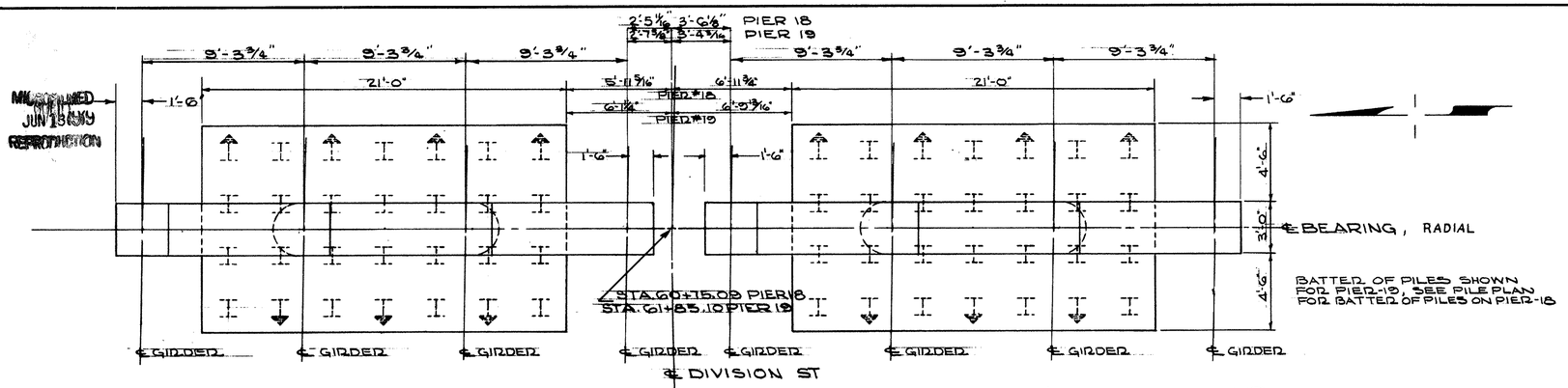
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	DM		JM	WCD	6-22-68	

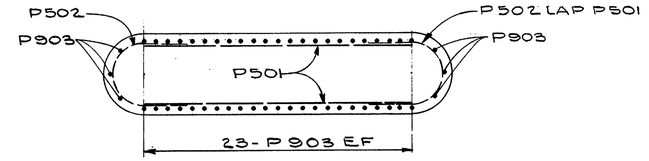
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

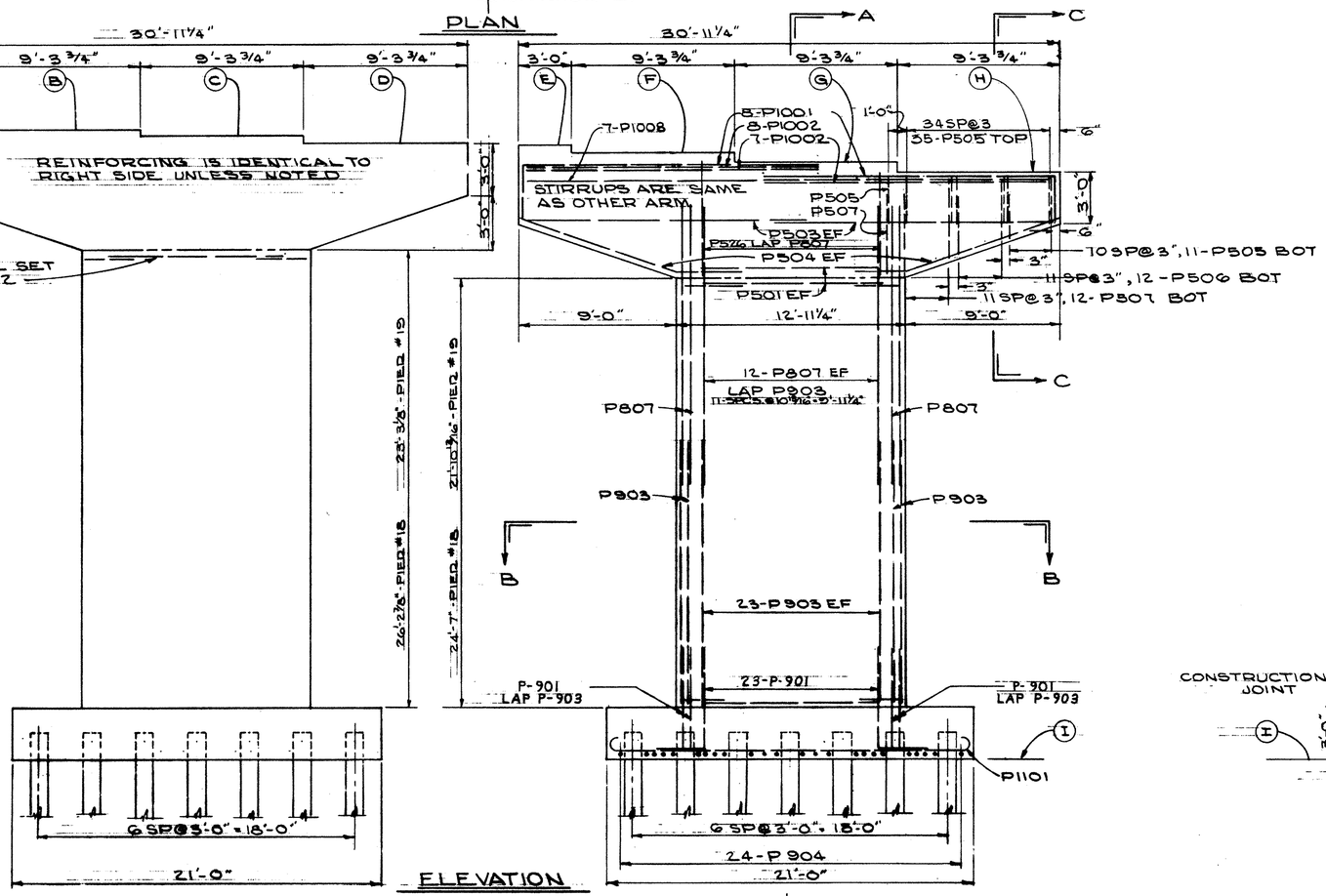
171
232



PLAN



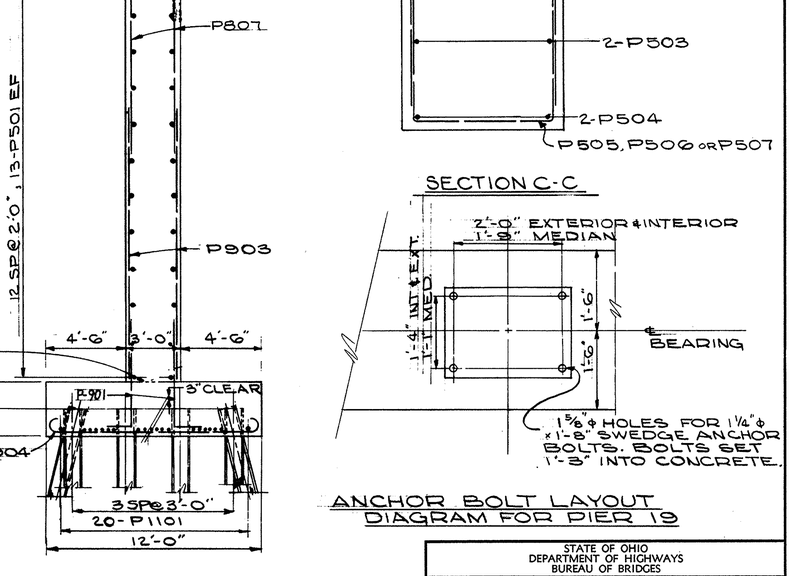
SECTION B-B



ELEVATION

PIER ELEVATION TABLE

	A	B	C	D	E	F	G	H	I
PIER 18	898.19	897.80	897.41	897.24	897.15	896.48	896.02	895.58	862.00
PIER 19	897.53	897.34	897.17	897.26	897.20	896.59	896.23	895.90	862.00



SECTION A-A

NOTE: ALL PILING 12 BP 53

SPECIAL CARE SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT OF PIER 19 SO AS TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

SECTION C-C

ANCHOR BOLT LAYOUT DIAGRAM FOR PIER 19

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

PIERS 18, & 19

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		JM	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH-711-0.17

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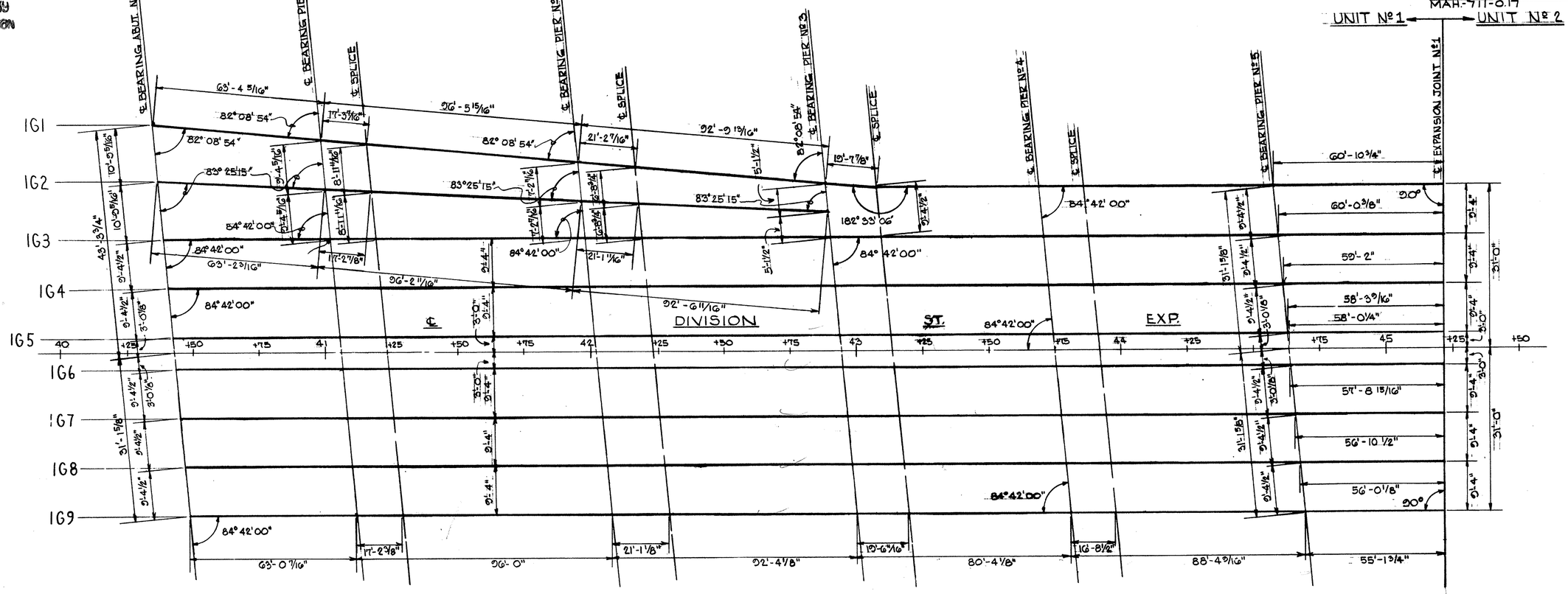


BEARING TABLE						
	LOCATION					
GIRDER	ABUT. 1	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5
IG1, IG9	R-75	R-225	R-250	B-225	R-225	R-200
IG2	R-125	R-250	R-250	B-100		
IG3, IG4, IG7, IG8	R-100	R-250	R-275	B-250	R-250	R-225
IG5, IG6	R-75	R-200	R-200	B-175	R-175	R-175

ROCKER SETTING DATA

+ INDICATES ROCKERS TILTED AWAY FROM PIER #3

TEMPERATURE AT TIME OF SETTING	ABUT Nº 1	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5
100°F	+3/4"	+9/16"	+1/4"	——	+1/4"	+1/2"
80°F	+3/8"	+1/4"	+1/8"	——	+1/8"	+1/4"
60°F	0"	0"	0"	——	0"	0"
30°F	-9/16"	-3/8"	-3/16"	——	-3/16"	-3/8"
-10°F	-1 1/4"	-15/16"	-7/16"	——	-3/8"	-7/8"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

FRAMING PLAN

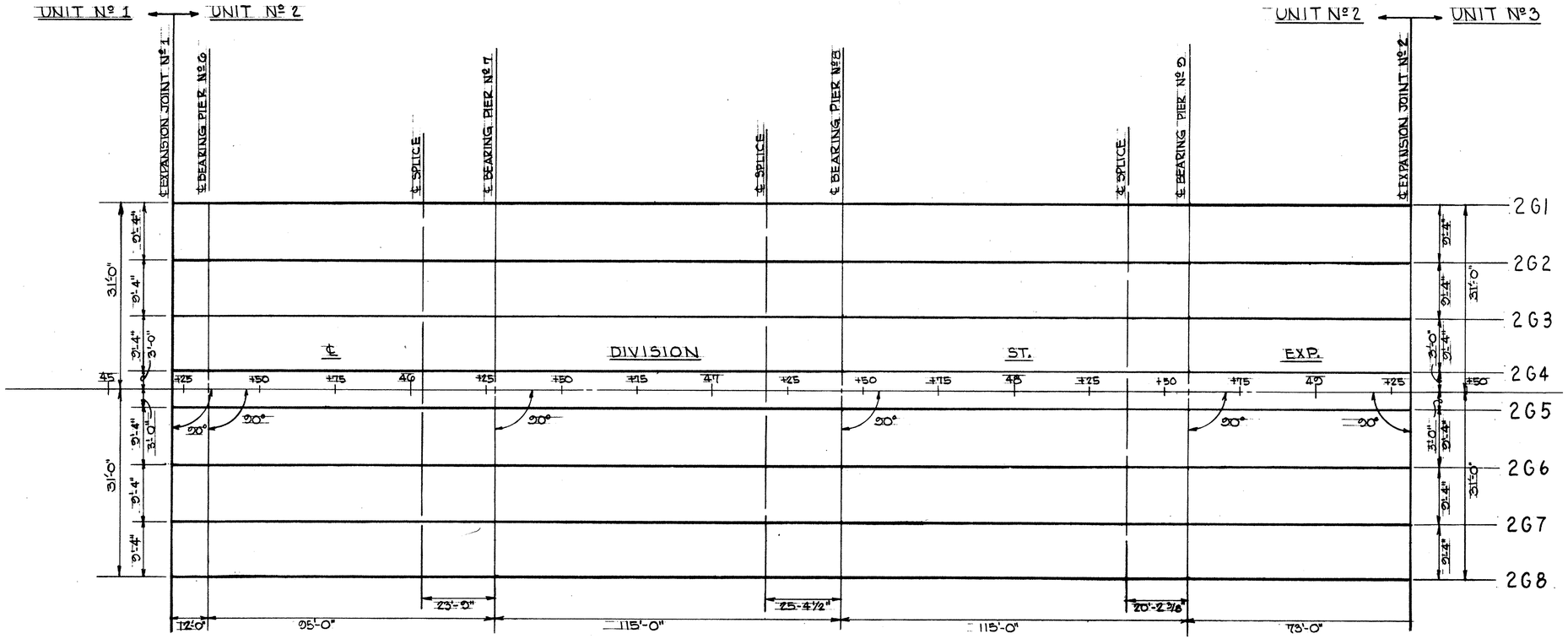
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWS	RWS		F.K.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OIHO	U.S.-1150 (1)	

MAH.-711-0.17

173
232



BEARING TABLE				
	LOCATION			
GIRDER	PIER 6	PIER 7	PIER 8	PIER 9
2G1, 2G8	R-175	R-275	B-275	R-250
2G2, 2G3, 2G6, 2G7	R-200	R-300	B-300	R-300
2G4, 2G5	R-175	R-250	B-275	R-250

ROCKER SETTING DATA
+ INDICATES ROCKER TILTED AWAY FROM PIER # 8

TEMPERATURE AT TIME OF SETTING	PIER 6	PIER 7	PIER 8	PIER 9
100° F	+5/8"	+5/16"	—	+5/16"
80° F	+5/16"	+3/8"	—	+3/8"
60° F	0"	0"	—	0"
30° F	-7/16"	-1/4"	—	-1/4"
-10° F	-1 1/16"	-9/16"	—	-9/16"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

FRAMING PLAN

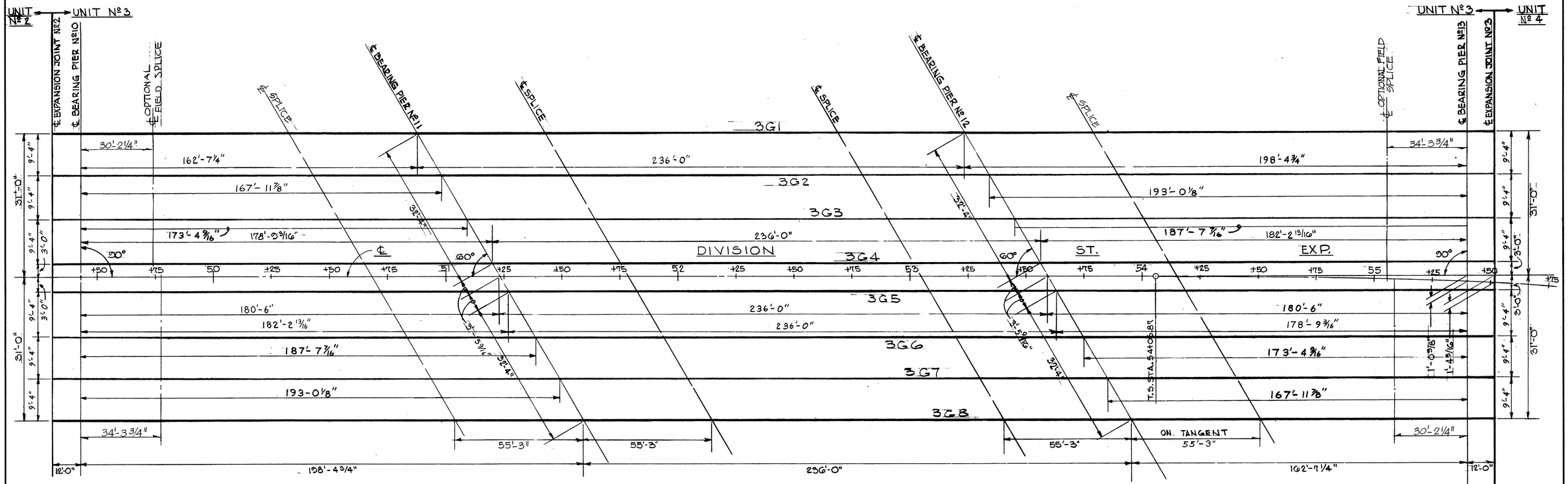
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.I.C.	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150 (1)	

MAH.-711-0.17

174
232



BEARING TABLE				
	LOCATION			
GIRDER	PIER 10	PIER 11	PIER 12	PIER 13
3G1	R-250	B-600	R-600	R-300
3G2	R-275	B-600	R-600	R-300
3G3	R-275	B-600	R-600	R-300
3G4	R-225	B-600	R-600	R-225
3G5	R-225	B-600	R-600	R-225
3G6	R-300	B-600	R-600	R-300
3G7	R-300	B-600	R-600	R-300
3G8	R-275	B-600	R-600	R-275

ROCKER SETTING DATA

+ INDICATES ROCKER TILTED AWAY FROM PIER # 11

TEMPERATURE AT TIME OF SETTING	PIER 10	PIER 11	PIER 12	PIER 13
100°F	+ 1/2"	—	+ 1 1/16"	+ 1 3/16"
80°F	+ 1/4"	—	+ 3/16"	+ 5/16"
60°F	0"	—	0"	0"
30°F	- 3/8"	—	- 1/2"	- 7/8"
-10°F	- 15/16"	—	- 1 3/16"	- 2 1/16"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

FRAMING PLAN

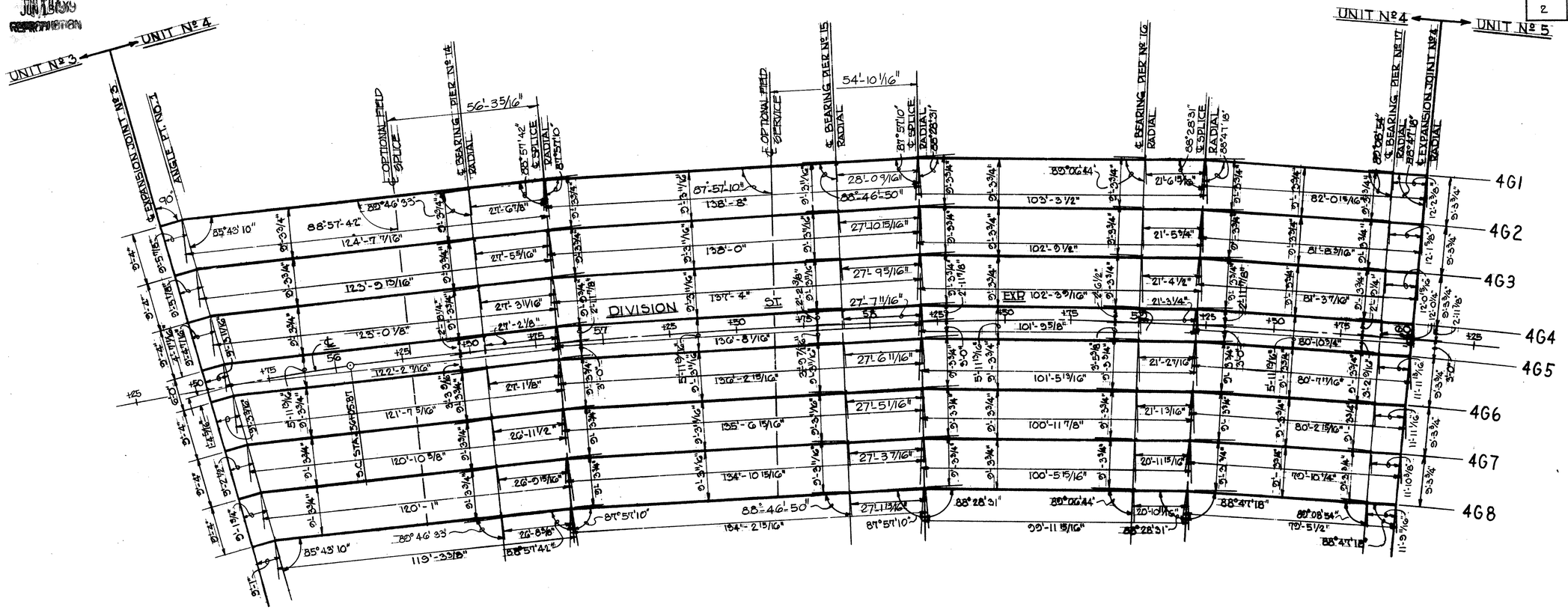
BRIDGE Nº MAH – 711–0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FK	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OIHO	U.S.-1159 (I)	

MAH-711-0.17

175
232



BEARING TABLE				
	LOCATION			
GIRDER	PIER 14	PIER 15	PIER 16	PIER 17
4G1	R-350	B-350	B-300	R-200
4G2, 4G3, 4G6, 4G7	R-350	B-350	B-300	R-175
4G4, 4G5	R-250	B-225	B-200	R-125
4G8	R-350	B-350 SPEC.	B-300	R-200

ROCKER SETTING DATA

+ INDICATES ROCKER TILTED AWAY FROM PIER Nº 15

TEMPERATURE AT TIME OF SETTING	PIER 14	PIER 15	PIER 16	PIER 17
100° F	+3/8"	—	—	+1/4"
80° F	+5/16"	—	—	+1/8"
60° F	0"	—	—	0"
30° F	-5/16"	—	—	-3/16"
-10° F	-1/16"	—	—	-7/16"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

FRAMING PLAN

BRIDGE Nº MAH - 711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
F.K	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OIHO	U.S.-11(5D (1)	

MAH.-711-0.17

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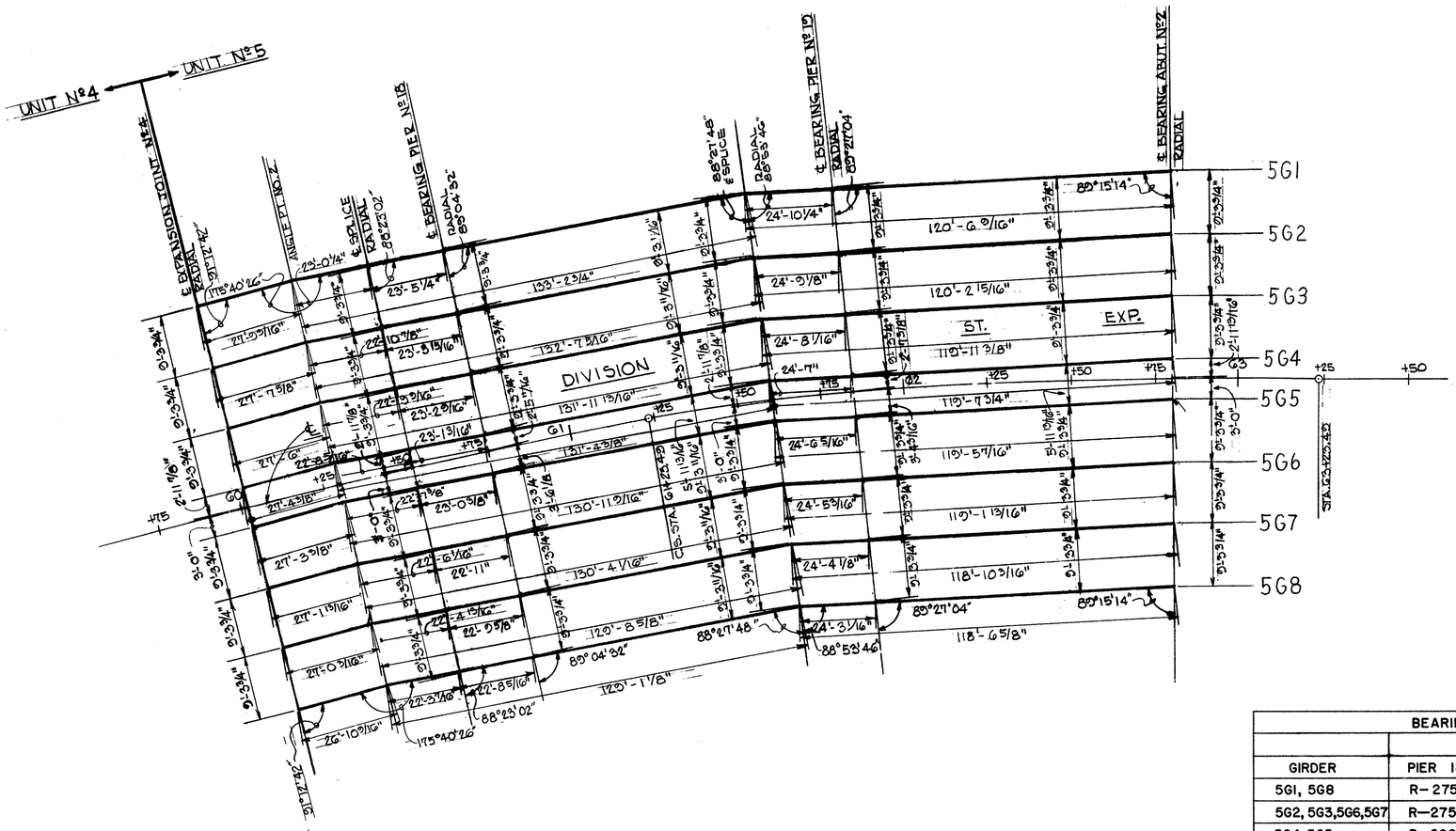
232



BEARING TABLE			
	LOCATION		
GIRDER	PIER 18	PIER 19	ABUT. 2
5G1, 5G8	R-275	B-300	R-125
5G2, 5G3, 5G6, 5G7	R-275	B-300	R-125
5G4, 5G5	R-200	B-225	R-100

ROCKER SETTING DATA

± INDICATES ROCKER TILTED AWAY FROM PIER Nº 19

TEMPERATURE AT TIME OF SETTING	PIER 18	PIER 19	ABUT Nº2		
100°F	+5/16"	—	±1/4"		
80°F	+3/16"	—	±1/8"		
60°F	0"	—	0"		
30°F	-1/4"	—	-3/16"		
-10°F	-5/16"	—	-1/2"		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

FRAMING PLAN

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
F. K.	RWS		RWS	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

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232

UNIT Nº 1

℄ BEARING ABUT. NO. 1 — ℄ BEARING PIER NO. 1 — ℄ SPLICE — ℄ BEARING PIER NO. 2 — ℄ SPLICE — ℄ BEARING PIER NO. 3

63'-4 5/16" | 96'-5 15/16" | 92'-9 13/16"

82° 08' 54" | 83° 25' 15" | 84° 42' 00"

17'-3 7/16" | 21'-2 7/16"

63'-2 3/16" | 92'-2 1/16"

43'-3 3/4"

10'-9 5/16" | 10'-9 5/16" | 9'-4 1/2" | 9'-4 1/2" | 3'-0 1/8" | 9'-4 1/2" | 3'-0" | 9'-4 1/2" | 9'-4 1/2"

9'-4 5/16" | 9'-4 5/16" | 8'-8 1/4" | 8'-8 1/16" | 7'-2 1/4" | 7'-2 1/8" | 6'-8 3/4" | 6'-8 3/4" | 5'-1 1/2" | 5'-1 1/2"

0'-11 3/8"

17'-2 5/8" | 21'-1 1/16"

3 SP @ 9'-4" | 2 SP @ 9'-4" | 3'-0" | 3 SP @ 9'-4"

IG1 | IG2 | IG3 | IG4 | IG5 | IG6 | IG7 | IG8 | IG9

11'-6 1/16" | 12'-0" | 12'-0" | 14'-0" | 11'-9" | 11'-8" | 11'-5 13/16" | 14'-0 3/16" | 12'-0" | 12'-0" | 13'-3" | 12'-4" | 9'-3" | 12'-4" | 13'-11 3/16" | 9'-3 3/4" | 12'-0" | 12'-0" | 11'-3" | 9'-9" | 11'-9"

1'-8 3/4" | 1'-8 3/4" | 1'-8 3/4"

40 | +25 | +50 | +75 | 41 | +25 | +50 | +75 | 42 | +25 | +50 | +75 | 43 ℄ DIVISION STREET EXP

0'-10 3/8" | 0'-10 3/8" | 0'-10 3/8"

NOTE: END CROSS FRAME USE Is 4X4X 5/16

14'-5 7/8"

31'-5 1/8"

MATCH LINE

17'-2 3/8" | 21'-1 1/8"

63'-0 7/16" | 96'-0" | 92'-4 1/8"

21 INTERMEDIATE CROSSFRAMES Is 3X3X 5/16 EACH SIDE

UNIT Nº 1 — UNIT Nº 2

℄ BEARING PIER NO. 3 — ℄ SPLICE — ℄ BEARING PIER NO. 4 — ℄ SPLICE — ℄ BEARING PIER NO. 5 — ℄ EXPANSION JOINT Nº 1

19'-7 7/8" | 60'-10 3/4"

IG1 | IG3 | IG4 | IG5 | IG6 | IG7 | IG8 | IG9

0'-11 3/8"

60'-0 3/8" | 59'-2" | 58'-3 9/16" | 58'-0 1/4" | 57'-8 15/16" | 56'-10 1/2" | 56'-0 1/8"

31'-1 5/8" | 3SP @ 9'-4" | 3'-0 1/8" | 3SP @ 9'-4" | 31'-1 5/8" | 3SP @ 9'-4" | 31'-0"

13'-6" | 12'-7 3/8" | 12'-0" | 12'-0" | 11'-4" | 10'-0" | 8'-10 3/4" | 11'-2" | 11'-0 1/2" | 9'-3" | 12'-0" | 12'-0" | 11'-1 7/16" | 12'-5 1/2" | 9'-4 1/8" | 9'-10 3/8" | 12'-0" | 12'-0" | 12'-0" | 12'-4 1/2"

1'-8 3/4" | 1'-8 3/4" | 1'-8 3/4" | 1'-8 3/4" | 1'-8 3/4" | 1'-9 1/2" | 1'-9 1/2"

43 | +25 | +50 | +75 | 44 | +25 | +75 | 45 | +25 ℄ DIVISION STREET EXP

0'-10 3/8" | 0'-10 3/8" | 0'-10 3/8"

90°

HINGE CROSSFRAME ∠ 4 x 4 x 5/16 (TYPE-1) SEE SHEET 203 FOR DETAIL

MATCH LINE

19'-6 11/16" | 16'-8 1/2"

60'-4 1/8" | 88'-4 9/16" | 55'-1 3/4"

19 INTERMEDIATE CROSSFRAMES Is 3X3X 5/16 EACH SIDE

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

CROSS FRAMES

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.A.H.	D.M.		D.M.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159(1)	

MAH.-711-0.17

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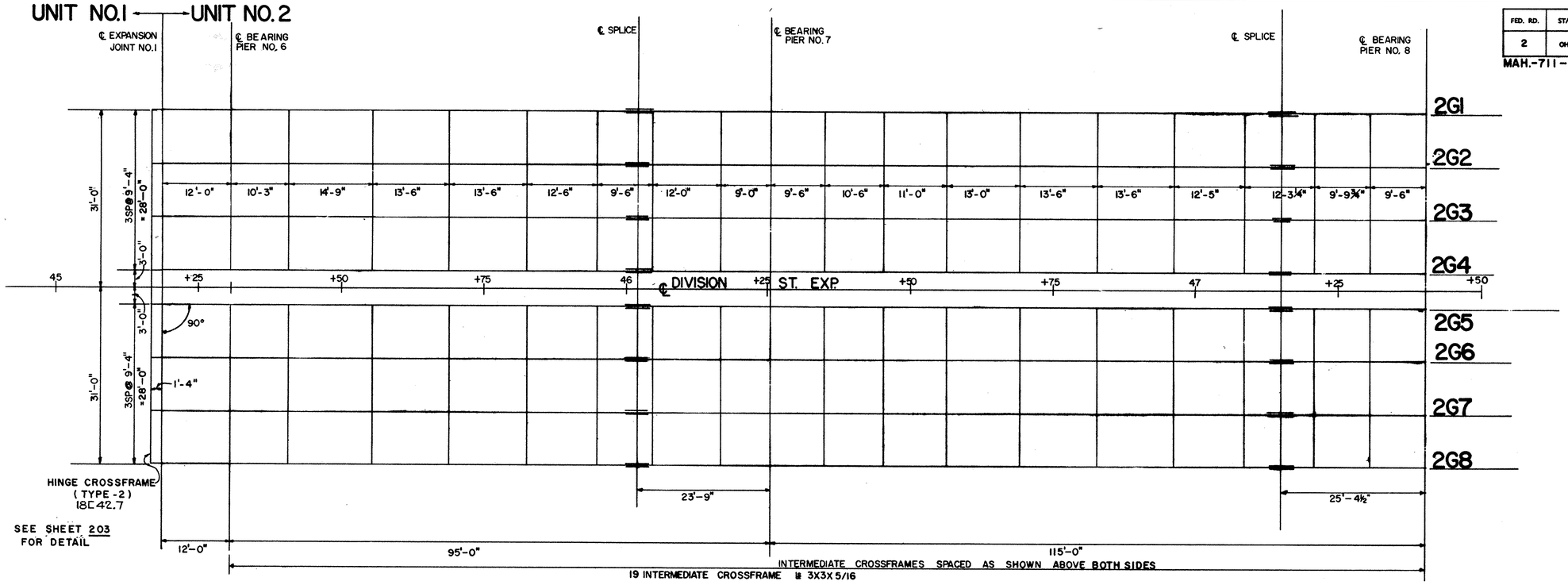
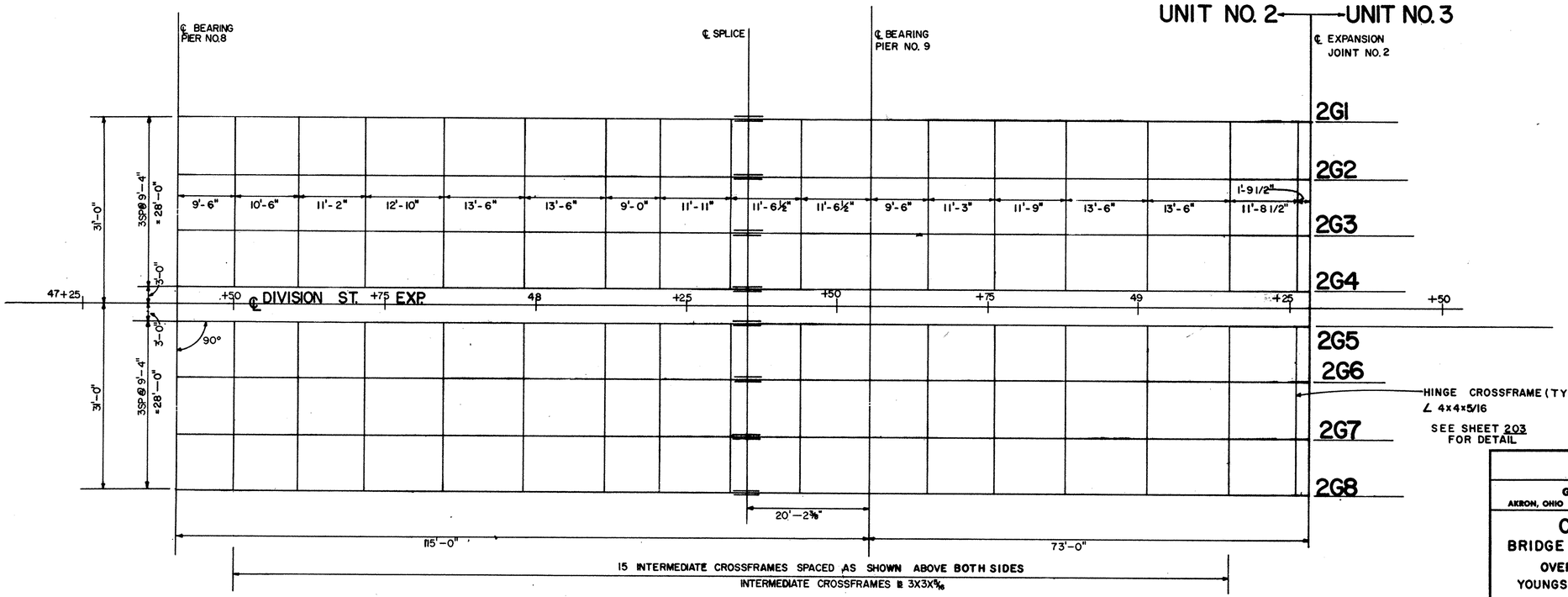


SEE SHEET 186 FOR GIRDER DETAILS



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

CROSS FRAMES

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M	D.M		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1158 (I)	

MAH.-711-0.17

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UNIT Nº 2 ← → UNIT Nº 3

℄ EXPANSION JOINT NO. 2 ℄ BEARING PIER NO. 10

STA. 49+31

30'-2¼"

℄ OPTIONAL FIELD SPLICE

HINGE CROSS FRAME (TYPE 2) 18 L 42.7

7'-9" 7'-9" TYP.

LATERAL BRACING TYPICAL UNIT 3 Ls 6"×6"×5/16

℄ SPLICE

55'-3"

℄ BEARING PIER Nº 11

55'-3"

℄ SPLICE

STA. 52+50 MATCH LINE

22 INTERMEDIATE CROSS FRAMES Ls 5"×5"×5/16"

5'-4¾" 10'-9¼" 10'-9¼" 5'-4¾"

2'-5" 30° 12'-0" 11'-2⅝" 11'-2⅝"

6 SPS. @ 15'-6" = 93'-0"

6'-2" 15'-6" 15'-6" 16'-2" 15'-6" 15'-6" 16'-2" 15'-6" 15'-6" 15'-6" 15'-6" 15'-6"

50+00 +50 +75 51+00 +25 +50 +75 +50 +75 52+00 +25

31'-0" 3 SP. @ 9'-4" 1'-4" 3'-0" 3'-0" 3 SP. @ 9'-4" 31'-0"

60° 22 INTERMEDIATE CROSSFRAMES Ls 5"×5"×5/16"

5'-4¾" 10'-9¼" 10'-9¼" 5'-4¾"

30° 12'-0" 13'-3⅜" 13'-3⅜"

7 SPS. @ 15'-6" = 108'-6"

16'-2" 15'-6" 15'-6" 16'-2" 15'-6" 15'-6" 16'-2" 17'-0" 15'-6" 15'-6" 15'-6"

2'-5" 34'-3¾" ℄ OF OPTIONAL SPLICE

55'-3" 55'-3" 7'-9" 7'-9" TYPICAL

12'-0" 198'-4¾" 108'-7¼"

UNIT Nº 3 ← → UNIT Nº 4

STA. 52+50 MATCH LINE

℄ SPLICE

℄ BEARING PIER Nº 12

OPTIONAL FIELD SPLICE ℄

34'-3¾"

℄ BEARING PIER NO. 13

STA. 55+52

℄ EXPANSION JOINT NO. 3

20 INTERMEDIATE CROSSFRAMES Ls 5"×5"×5/16"

5'-4¾" 10'-9¼" 10'-9¼" 5'-4¾"

2'-5" 30° 12'-0" 1'-4"

15'-6" 15'-6" 17'-0" 16'-2" 15'-6" 16'-6" 16'-2" 15'-6" 15'-6" 16'-2" 60° 7 SPS. @ 15'-6" = 108'-6" 13'-3⅜" 13'-3⅜"

53+00 +75 +25 +50 +75 54+00 +25 +50 +75 55+00 +25 +50

31'-0" 3 SP. @ 9'-4" 1'-4" 3'-0" 3'-0" 3 SP @ 9'-4" 31'-0"

60° 60° 21 INTERMEDIATE CROSSFRAMES Ls 5"×5"×5/16" TYPICAL UNIT B

5'-4¾" 10'-9¼" 10'-9¼" 5'-4¾"

30° 12'-0" 1'-4"

15'-6" 15'-6" 15'-6" 15'-6" 16'-2" 15'-6" 15'-6" 16'-2" 15'-6" 15'-6" 16'-2" 6 SPS. @ 15'-6" = 93'-0" 11'-2⅝" 11'-2⅝"

HINGE CROSSFRAME (TYPE 2) 18 L 42.7

55'-3" 55'-3" 2'-5"

127'-4¾" 162'-7¼" 30'-2¼" 12'-0"

OPTIONAL FIELD SPLICE ℄

NOTE: CROSSFRAME ANGLE NOT SHOWN

2 ∠ 6"×6"×5/16 C.G. OF ∠

5/16"

5/16"×8" 5/16"×8"

30"

45° 45°

SLOPE GUSSET ℄ TO MATCH LATERAL. ALL GUSSET ℄s = 3/8"

PROVIDE 1 = 13/16" ø ERECTION HOLE AT ENDS OF ALL LATERALS

TYPICAL LATERAL CONNECTIONS

SCALE — 3/8" = 1'-0"

LONGITUDINAL STIFF.

CROSSFRAME STRUT @ LATERALS, ALL OTHERS AS SHOWN ON SLAB PLANS.

LATERAL

2" MIN.

½"

BOTTOM FLANGE OF GIRDER

GUSSET ℄ MATCH CROSS-SLOPE

LATERAL CONNECTION ELEVATION DETAIL

(NOT TO SCALE)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

CROSS FRAMES

BRIDGE Nº MAH – 711–0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.H.	W.D.P.		R.H.	W.K.D	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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UNIT Nº 3 → UNIT Nº 4

℄ EXPANSION JOINT NO. 3 RADIAL

ANGLE POINT Nº 1 85°-45'-10"

℄ OPTIONAL SPLICE

℄ BEARING PIER NO. 14 RADIAL

50'-3 5/16"

4@6'-0" = 24'-0"

℄ SPLICE RADIAL

6'-9"

L 6"×6"×5/16" TYPICAL LATERAL BRACING SEE SHEET Nº 179 FOR DETAILS

12@ 7'-6" = 90'-0"

OPTIONAL SPLICE

℄ BEARING PIER Nº 15 RADIAL

9'-2 3/8"

4G1

88°-46'-50"

3" MIN. VERTICAL CLEARANCE

4G2

4G3

4G4

4G5

88°-46'-50"

4G6

4G7

3" MIN. VERTICAL CLEARANCE

4G8

SPECIAL CROSSFRAMES

SPECIAL CROSSFRAME

REFERENCE CHORD

SPECIAL CROSSFRAMES S7

3 SP. @ 9'-4" ℄

4'-4 5/16"

1'-7 7/16"

3 SPC. @ 9'-3 5/16" ℄

3 SPC. @ 9'-3 3/4" ℄

3 SPC. @ 9'-3 7/16"

4'-6 1/2"

1'-9 1/2"

9'-3 7/16"

1'-1 1/8"

HINGE CROSSFRAME L.S. 4"×4"×5/16" (TYPE 1)

9'-1"

119'-3 3/8"

25'-6 7/16"

26'-8 3/8"

107'-1 7/8"

3'-0"

27'-8 1/2"

4 - SPECIAL CROSSFRAMES SOUTH SIDE — 15 - INTERMEDIATE CROSSFRAMES SOUTH SIDE

4 - SPECIAL CROSSFRAMES NORTH SIDE — 15 - INTERMEDIATE CROSSFRAMES NORTH SIDE

UNIT Nº 4 → UNIT Nº 5

℄ BEARING PIER Nº 15 RADIAL

℄ SPLICE RADIAL

℄ BEARING PIER NO. 16 RADIAL

℄ SPLICE RADIAL

℄ BEARING PIER NO. 17 RADIAL

℄ EXPANSION JOINT NO. 4 RADIAL

88°-46'-50"

51°-13'-10"

89°-06'-44"

88°-05'-54"

88°47'-18"

3 SPC. @ 9'-3 3/4" ℄

3 SPC. @ 9'-3 3/4" ℄

3 SP. @ 9'-3 3/4" ℄

12'-0"

15'-0"

11'-3"

12'-5 5/8"

9'-9"

6'-0"

12'-2"

14'-6"

10'-11 3/8"

12'-0 1/4"

1'-4"

2'-11 7/16"

3'-0"

SPECIAL CROSSFRAMES

REFERENCE CHORD

11'-11 13/16"

HINGE CROSS FRAME (TYPE 2) 18 L 42.7

27'-1 13/16"

99'-11 15/16"

20'-10 7/16"

79'-5 1/2"

11'-9 11/16"

4 - SPECIAL CROSSFRAMES EACH SIDE — 14 - INTERMEDIATE CROSSFRAMES EACH SIDE — TYPICAL UNIT 4 L 8 3/4 × 3 1/2 × 5/16

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

CROSS FRAMES

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

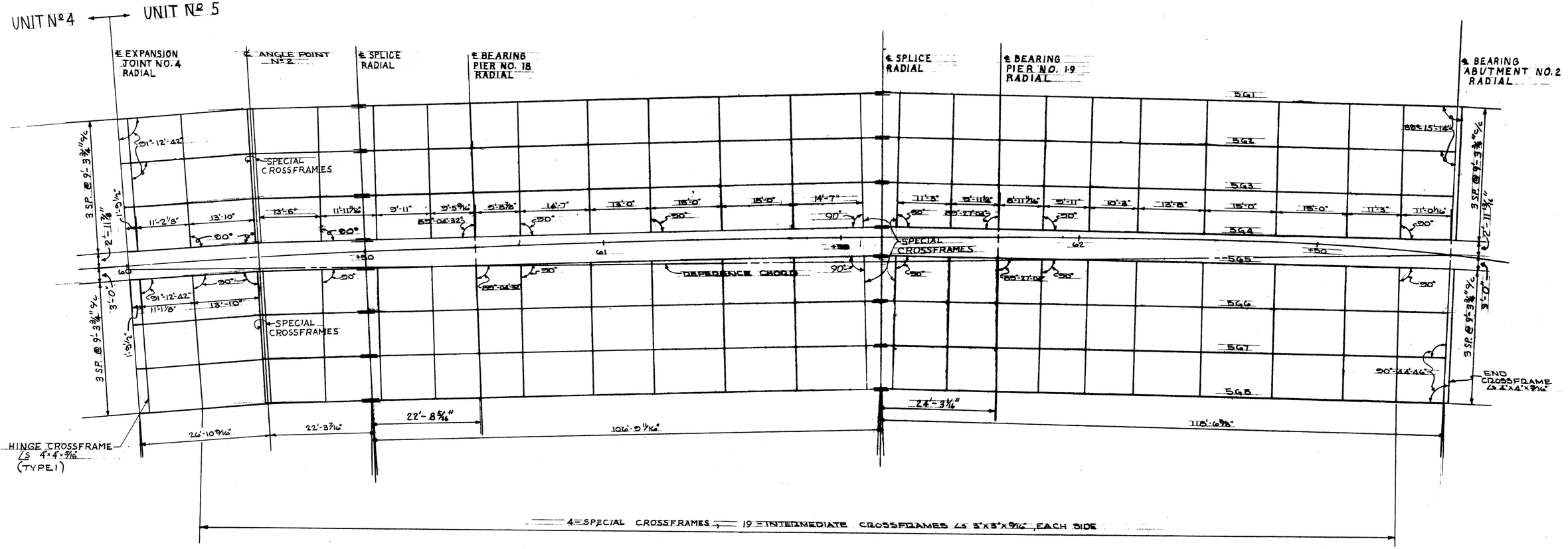
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.H.	J.P.		D.M.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1158 (1)	

MAH.-711-0.17



SEE SHEET Nº 205
FOR SPECIAL CROSSFRAME DETAIL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

CROSS FRAMES

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R H	D.M.		R.W.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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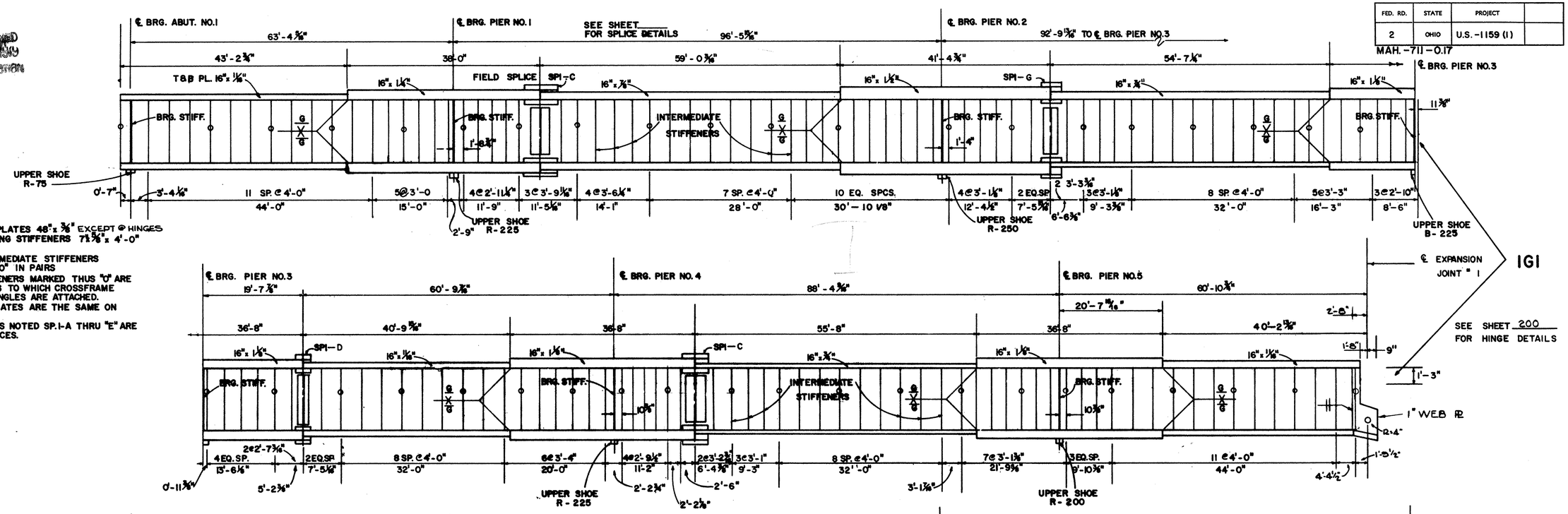

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.A.H.	D.M.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH-711-0.17

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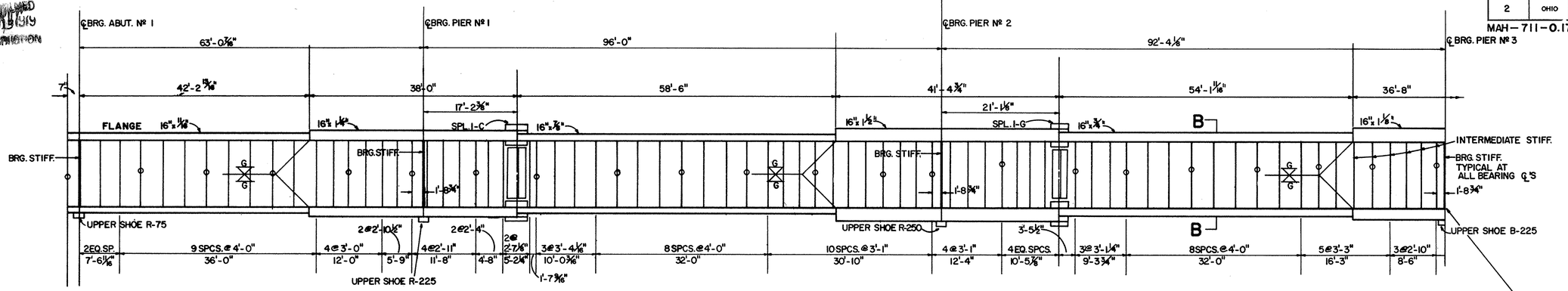

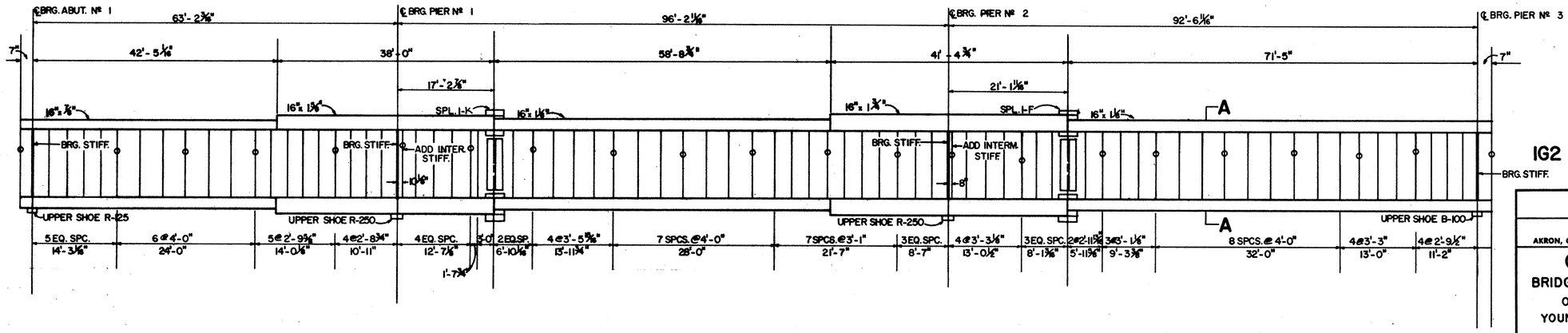

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	D.M.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159(1)	

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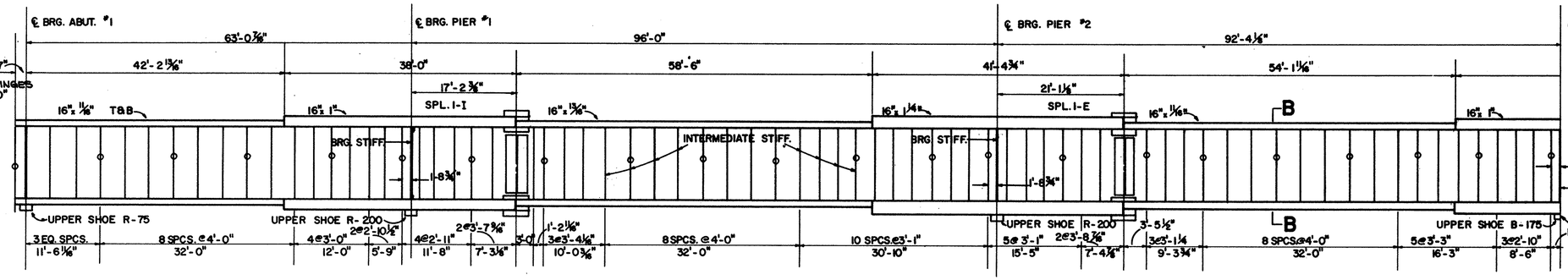
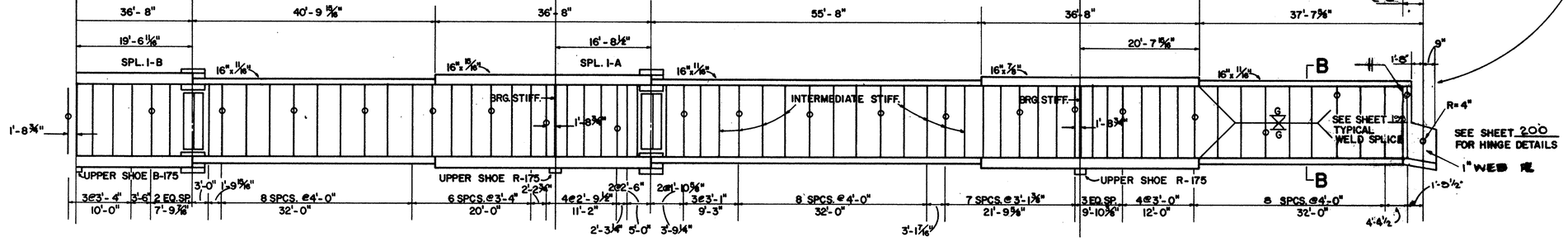
NOTE:
ALL WEB PLATE 48"x 3/8" EXCEPT @ HINGES
ALL BEARING STIFFENERS 7"x 5/8"x 4'-0" IN PAIRS.
ALL INTERMEDIATE STIFFENERS 4"x 5/16" x 4'-0" IN PAIRS
ALL STIFFENERS MARKED THUS "O" ARE STIFFENERS TO WHICH CROSS-FRAME BRIDGING ANGLES ARE ATTACHED.
FLANGE PLATES ARE THE SAME ON TOP & BOTTOM.
ALL SPLICES NOTED SP.I-A THRU "E" ARE FIELD SPLICES.



SEE SHEET 199
FOR WELD DETAILS



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH.-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	D.M.		RH	WKD	6-22-68	

RECOMMENDED JUN 19 1969 RE-RECOMMENDATION

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

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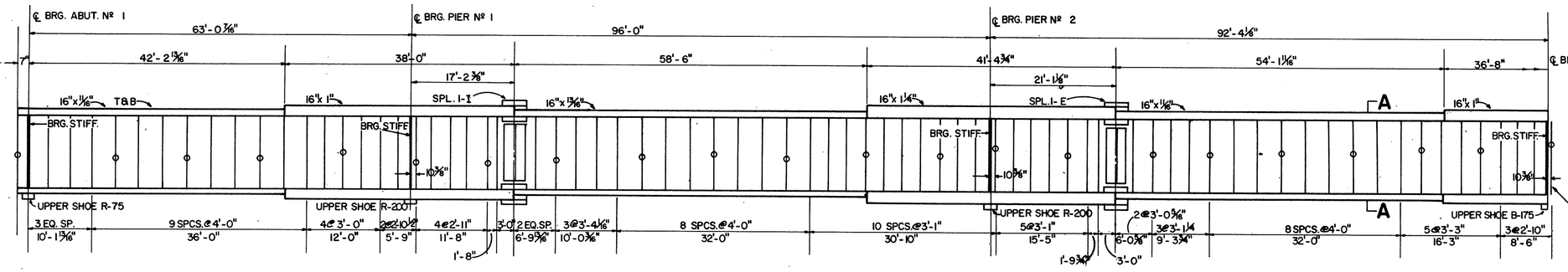
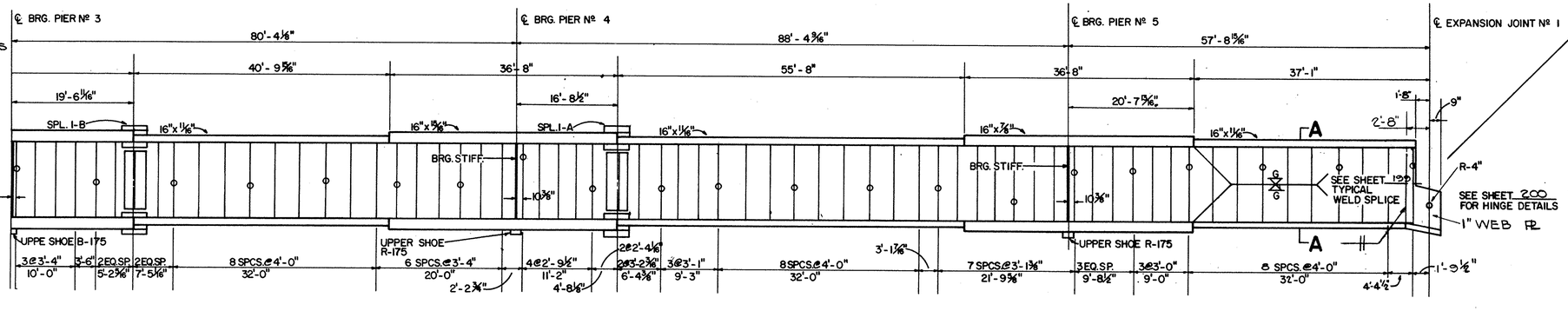
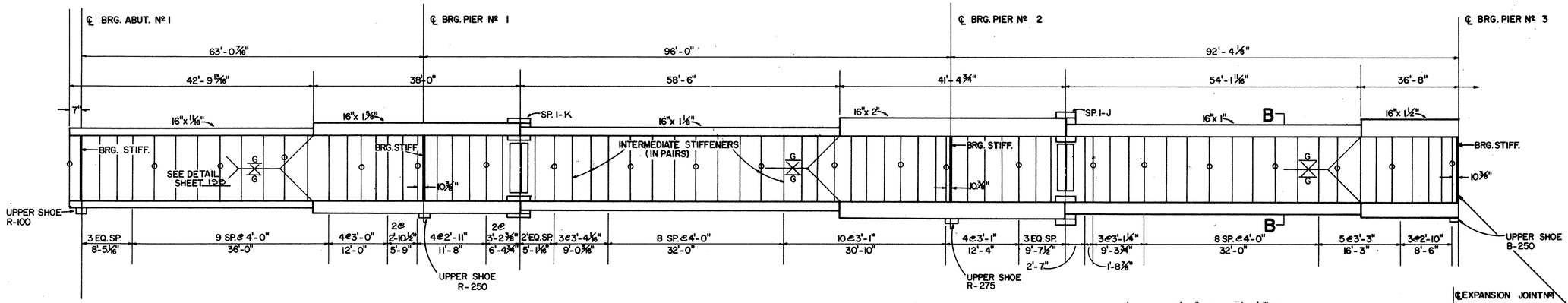


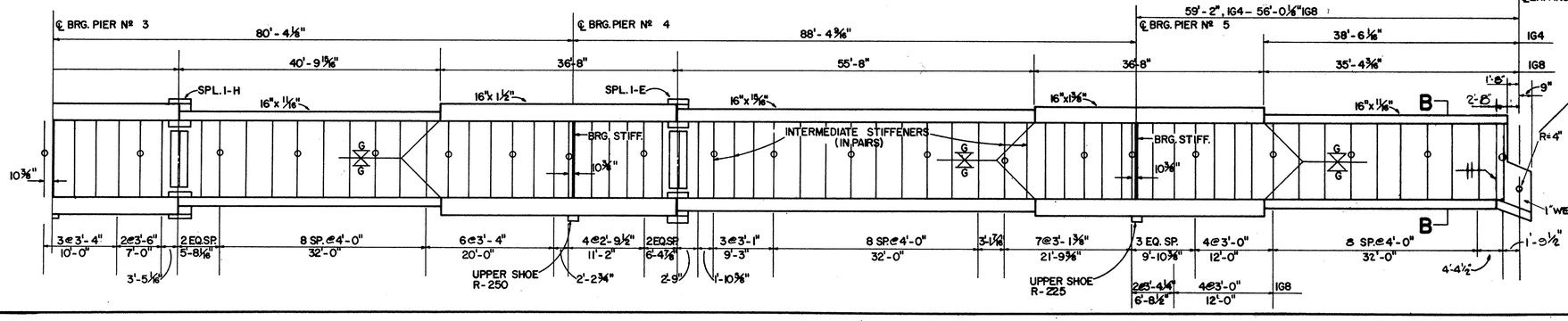
IG6

NOTE:
ALL WEB PLATE 48"x 3/8" EXCEPT @ HINGES
ALL BEARING STIFFENERS 7"x 3/8"x 4'-0" IN PAIRS.
ALL INTERMEDIATE STIFFENERS 4"x 5/16"x 4'-0" IN PAIRS
ALL STIFFENERS MARKED THUS "0" ARE STIFFENERS TO WHICH CROSS-FRAME BRIDGING ANGLES ARE ATTACHED
FLANGE PLATES ARE THE SAME ON TOP & BOTTOM.
ALL SPLICES NOTED SP.I-A THRU "E" ARE FIELD SPLICES.





IG4
IG8



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH.-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	D.M.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

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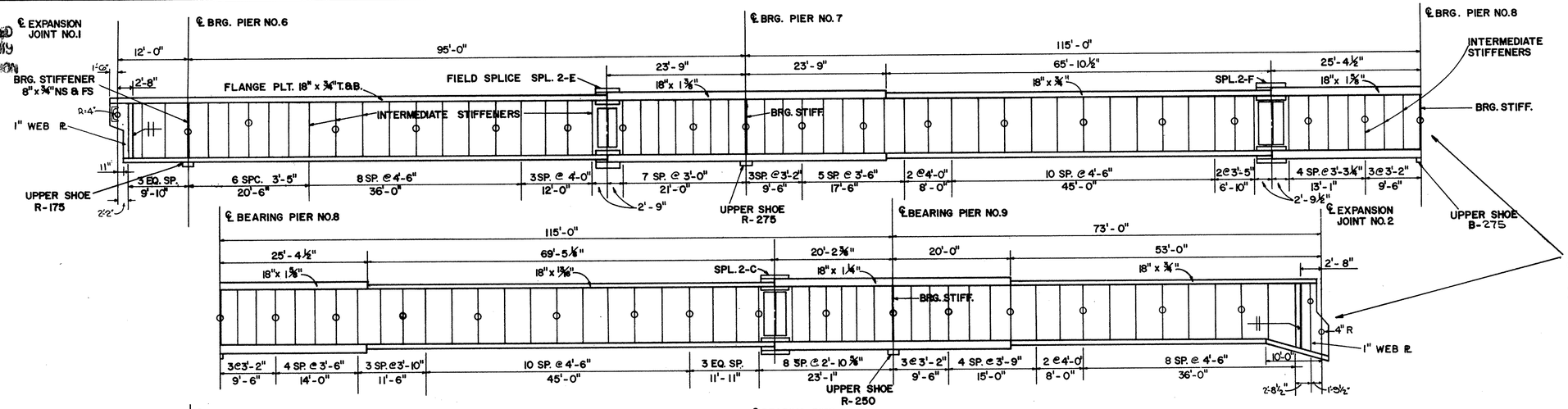
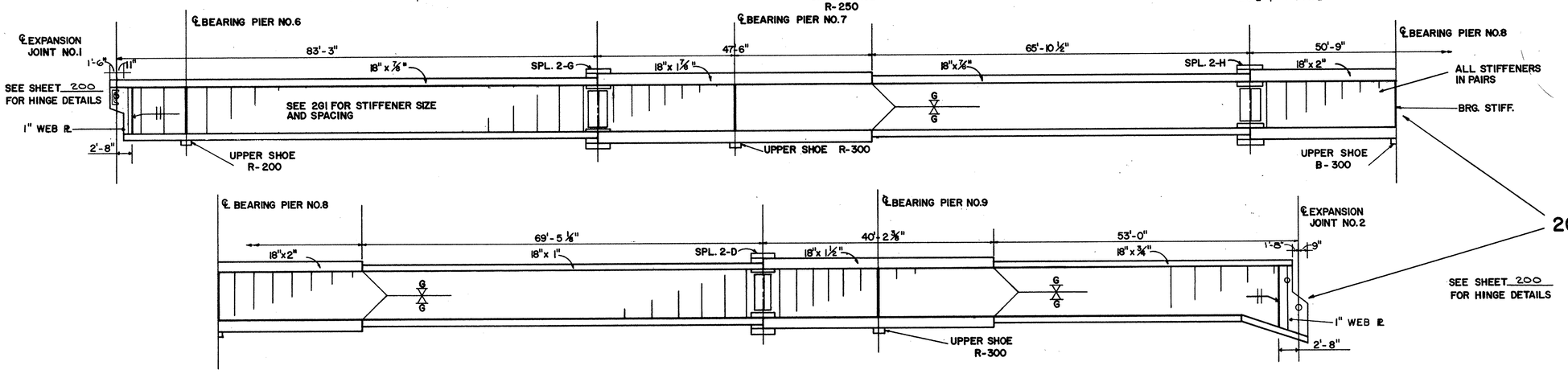
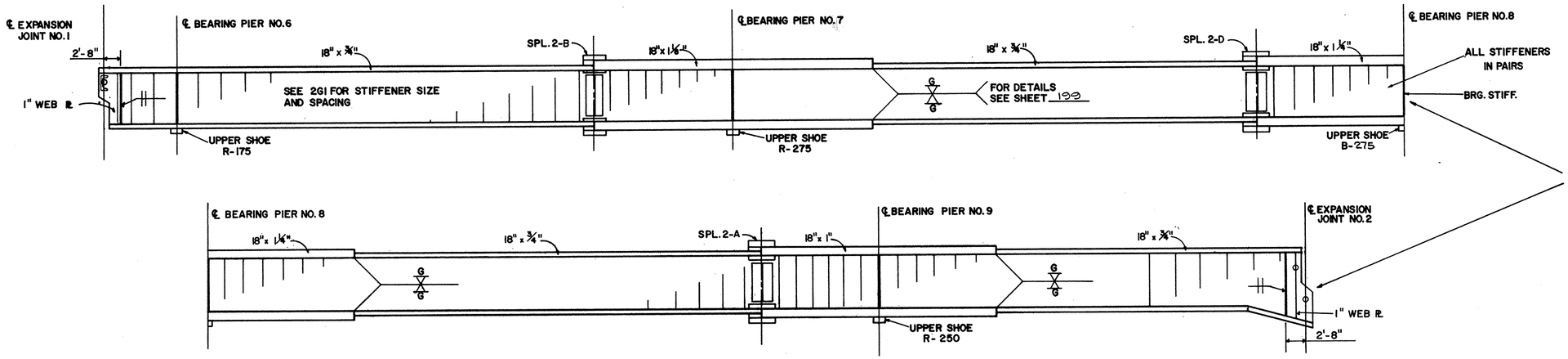


NOTE: ALL WEB PLATES 60"x⅜" , EXCEPT @ HINGE EXCEPT AT EXPANSION JT. №2
ALL INTERMEDIATE STIFFENERS 6"x⅜" x 5'-0" IN PAIRS
ALL BEARING STIFFENERS IN PAIRS 8"x¾" x 5'-0"
ALL SPLICES NOTED SP. 2-A THRU H ARE FIELD SPLICES. SEE SHEET 201 FOR DETAILS.
CROSSFRAMES CONNECT TO ALL STIFFENERS MARKED ℗





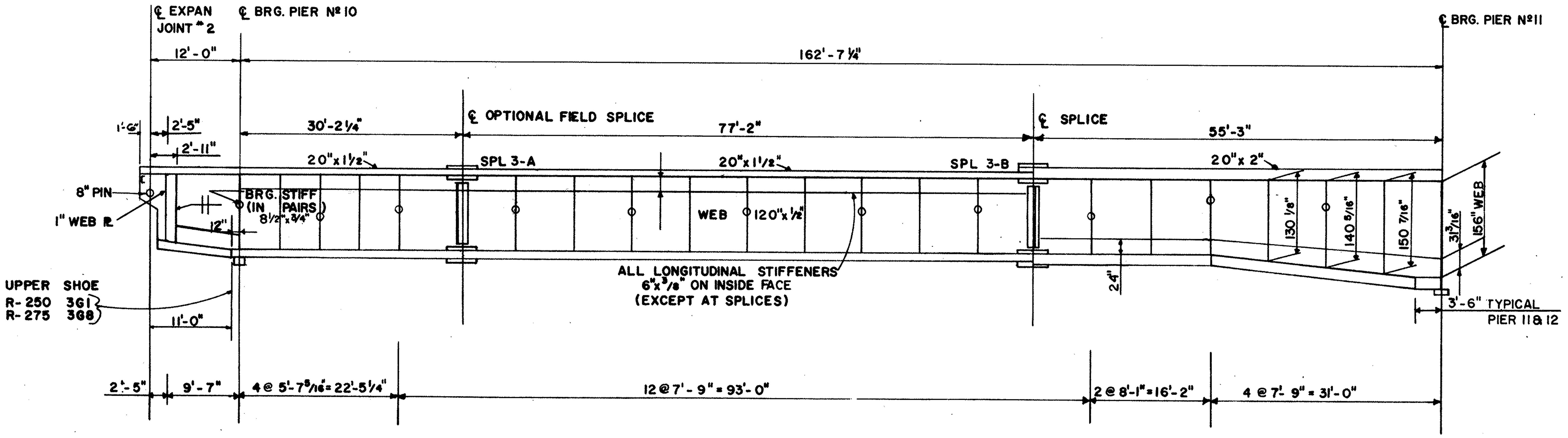
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE № MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT №2

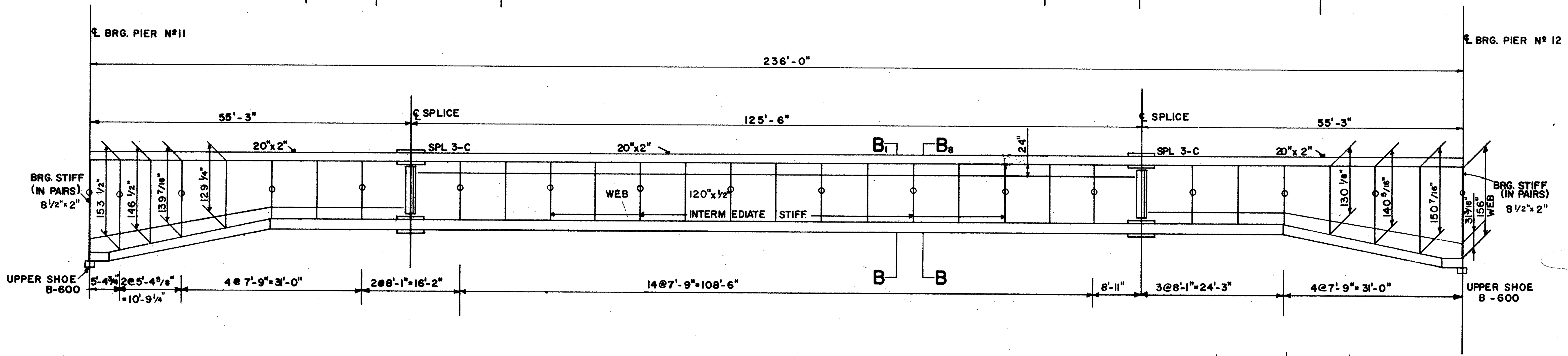
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	D.M.		RH	WKD	6-22-68	



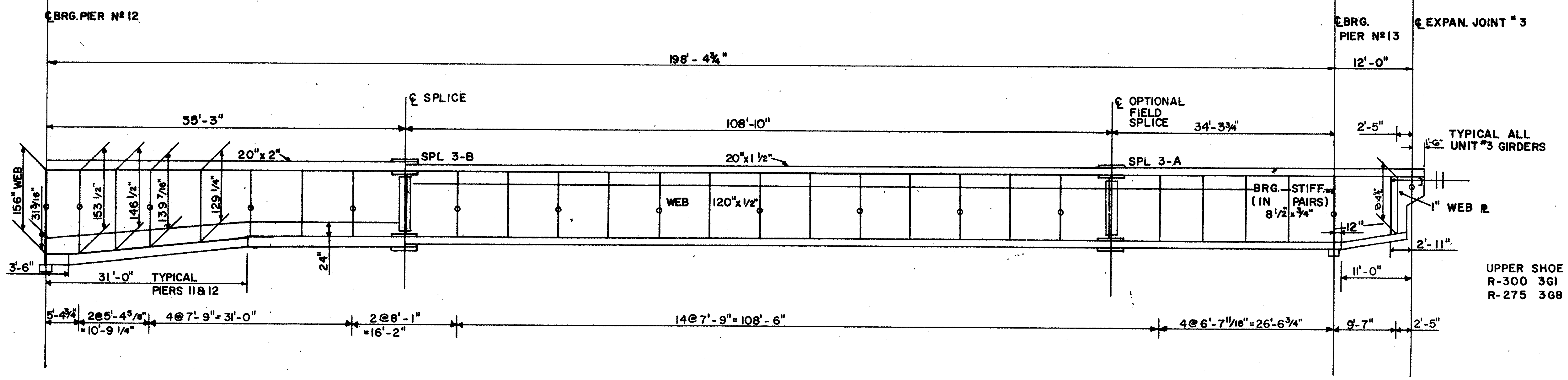
NOTES:
SEE SHEET 201 FOR FIELD SPLICE DETAILS.
SEE SHEET 200 FOR HINGE DETAILS.
SEE SHEET 199 FOR WELD SPLICE DETAILS

GUSSET ℞S FOR LATERAL BRACING NOT SHOWN.
ALL BRACING DETAILS SHEET 179
ALL STIFFENERS MARK "O" HAVE ATTACHING CROSSFRAMES.
SEE SHEET 199 FOR SECTIONS "A-A", "B-B"

ALL FLANGES SAME SIZE TOP AND BOTTOM.
ALL INTERMEDIATE STIFFENERS AT 120" WEB ARE 6"x 3/8" ALL OTHERS 7 1/2"x 1/2".
ALL LONGITUDINAL STIFFENERS 6"x 3/8"



3G1 SHOWN
3G8 OPP. HAND



Note profile per 139/232 on site plans does not show correct spacing of stiffeners

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	B.P.		RH	WKD	6-22-68	

MAY BE MICROFILMED JUN 13 1979 REPRODUCTION

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

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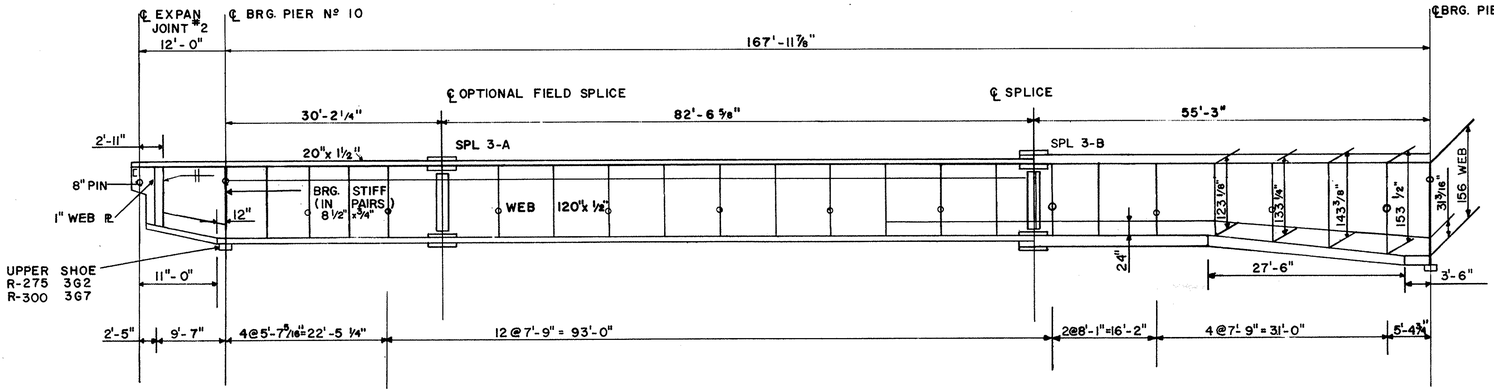
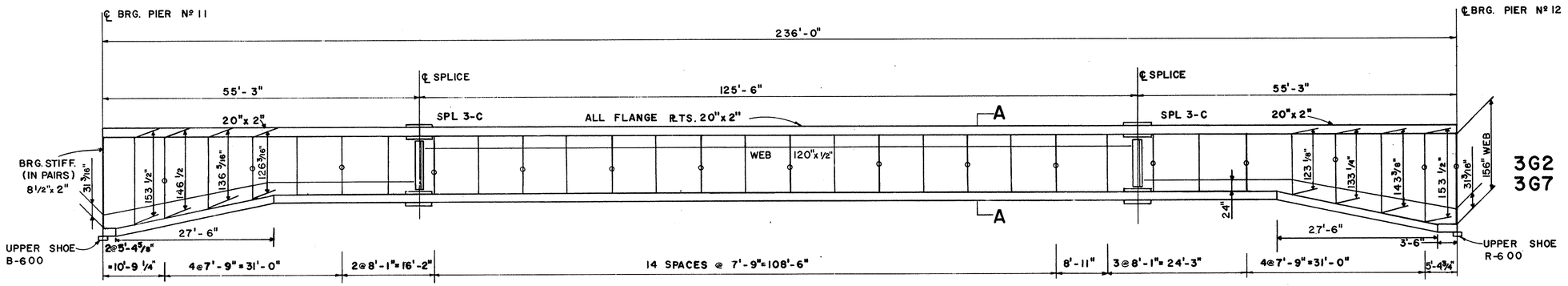
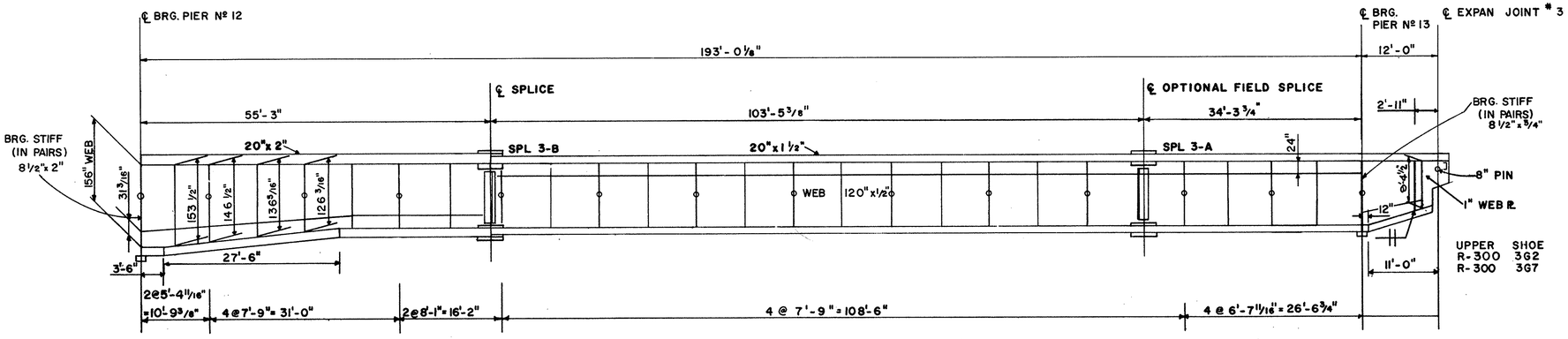


SEE NOTES SHEET 187



3G2 SHOWN
3G7 OPP. HAND



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH – 711– 0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	B.P.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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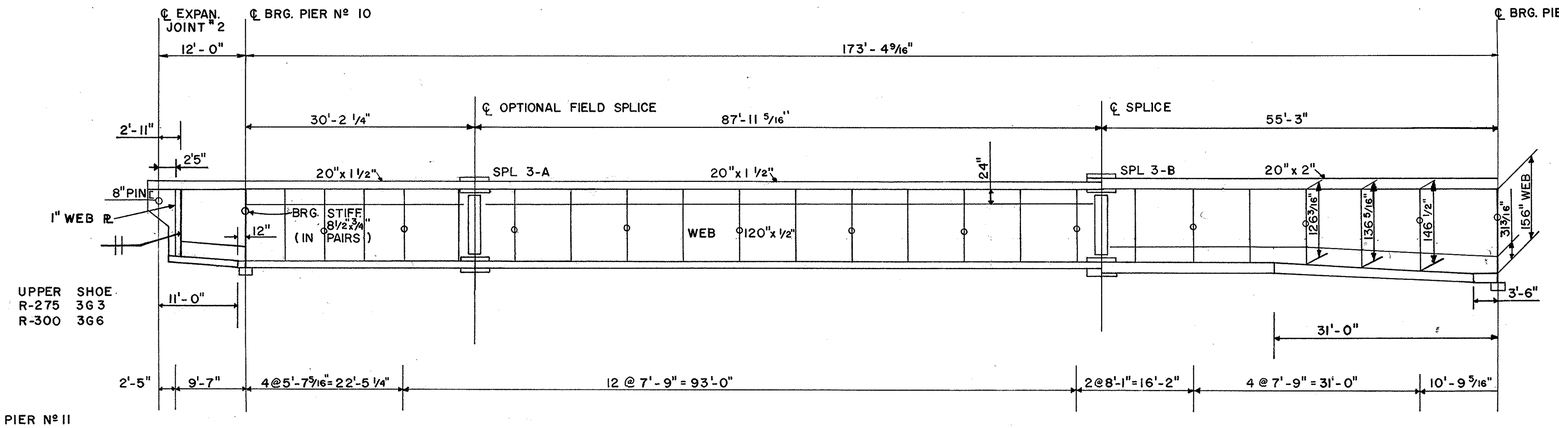
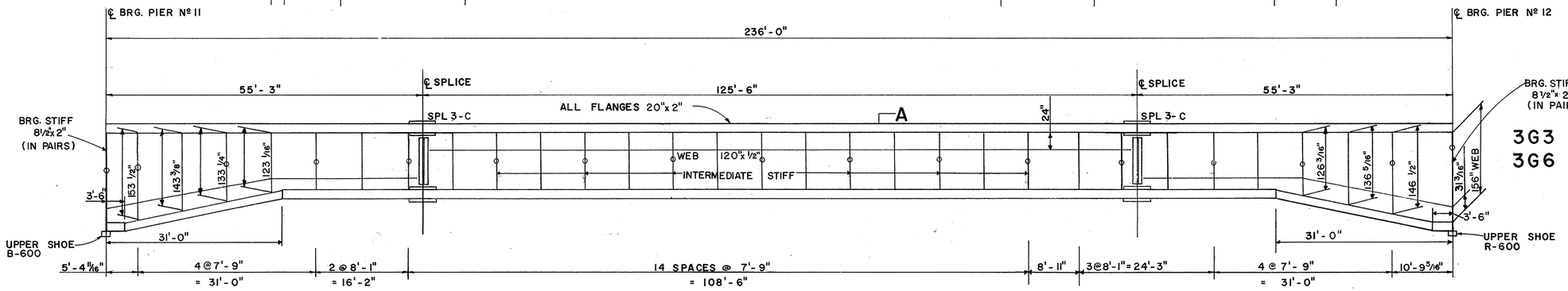
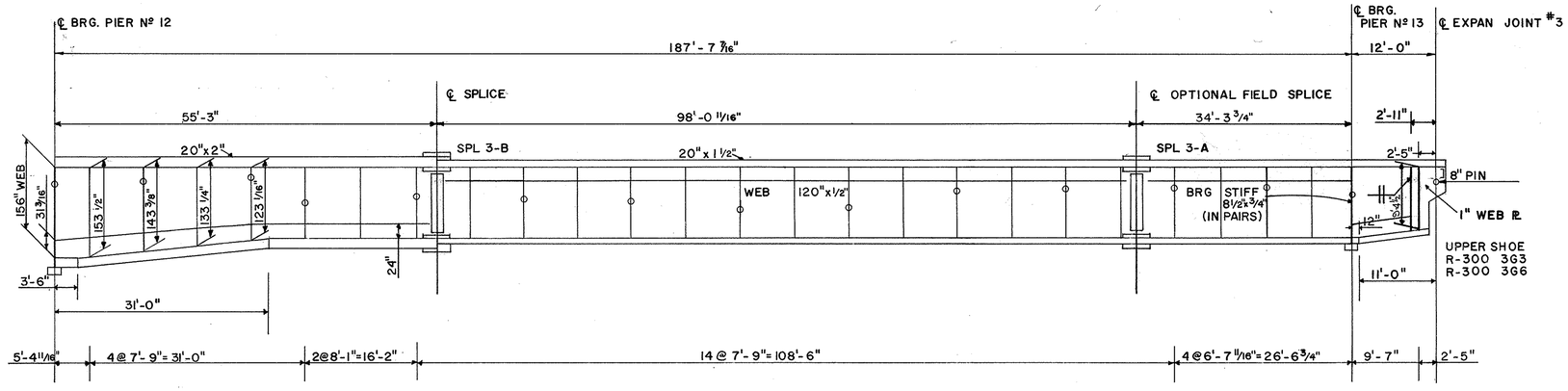


SEE NOTES SHEET 187



3G3 SHOWN
3G6 OPP. HAND



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.H.	B.P.		R.H.	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

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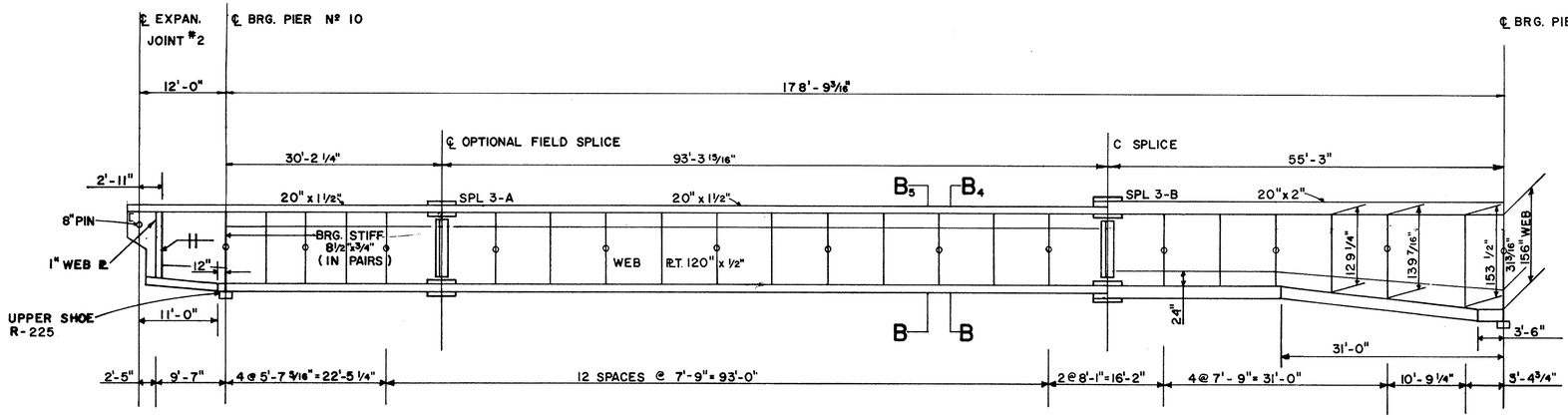
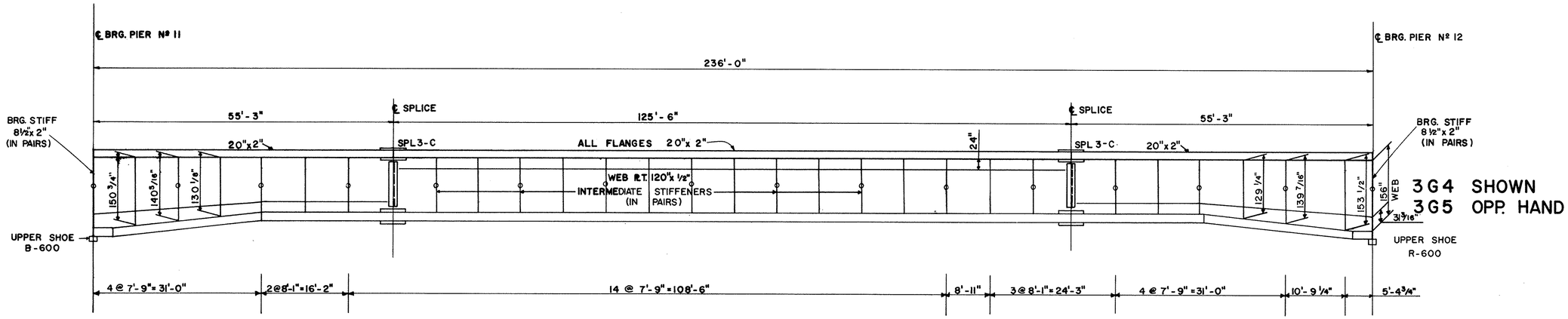
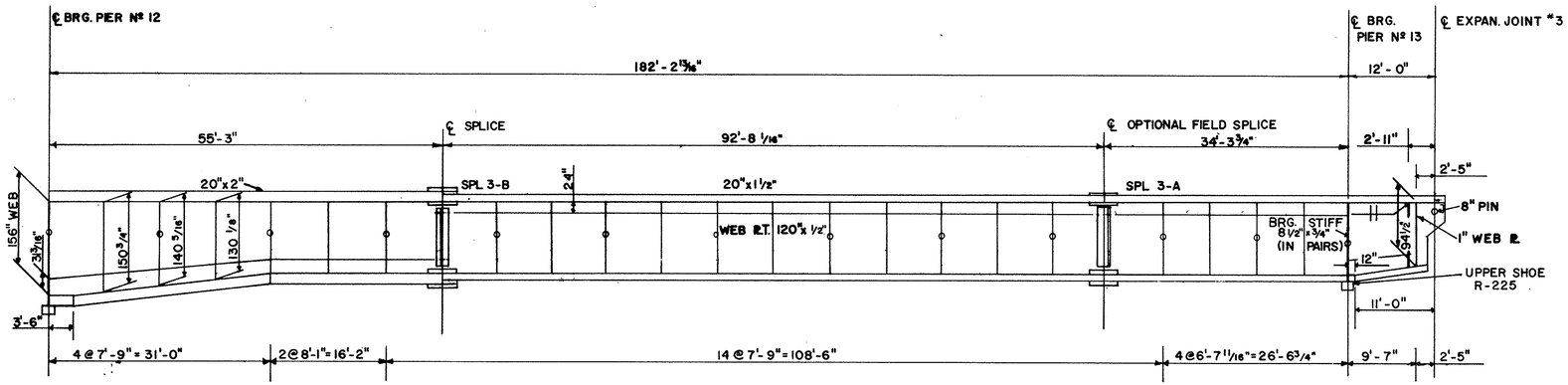


SEE NOTES SHEET 187



3G4 SHOWN
3G5 OPP. HAND



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

GIRDER DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.H	B.P		R.H	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159(1)	

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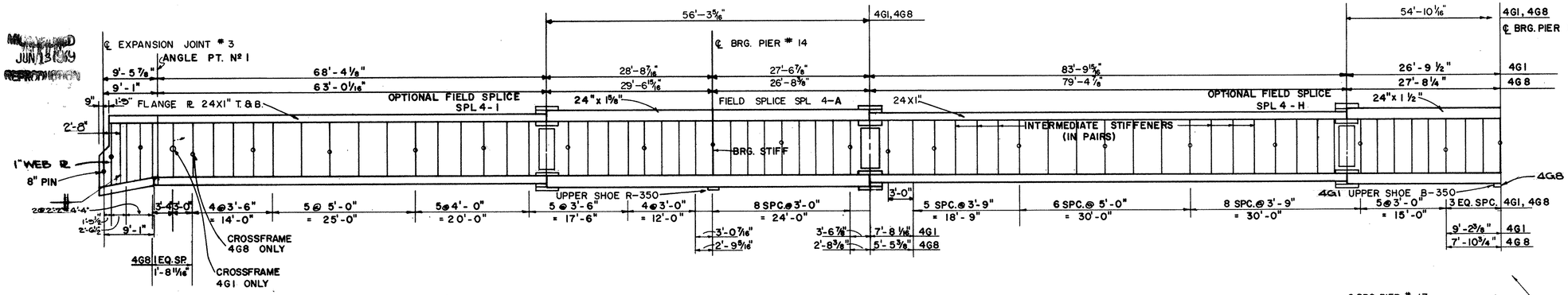
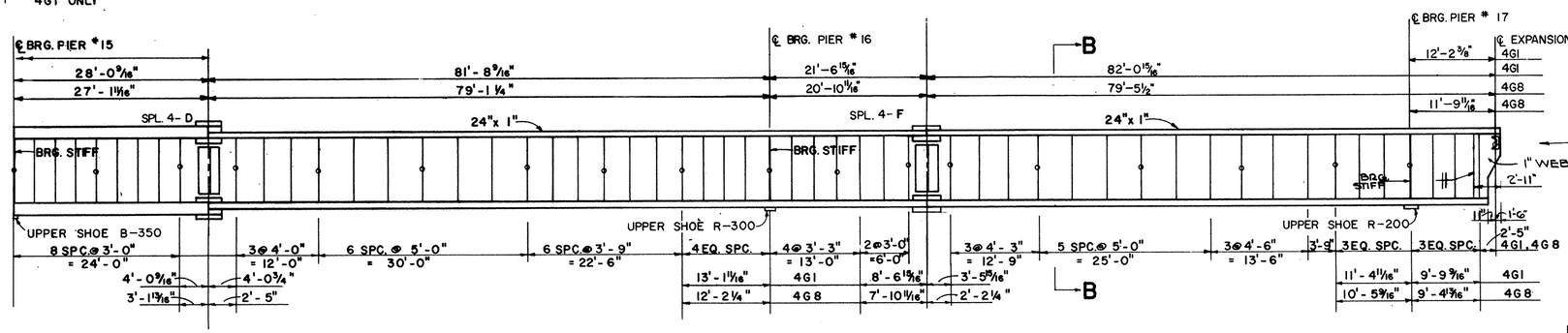
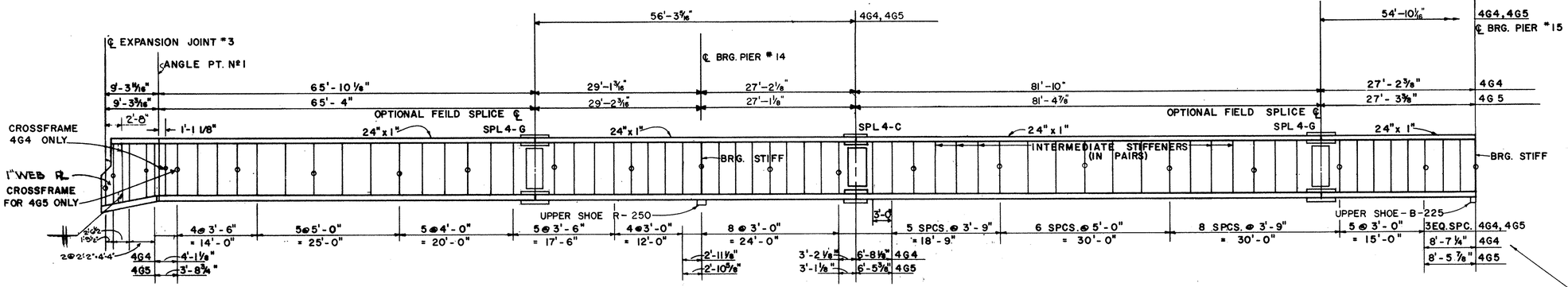


NOTE:
ALL WEB PLATES 64"x 3/8" EXCEPT AT EXP JOINT #3 TO ANGLE POINT Nº1 AND EXP. JOINT #4

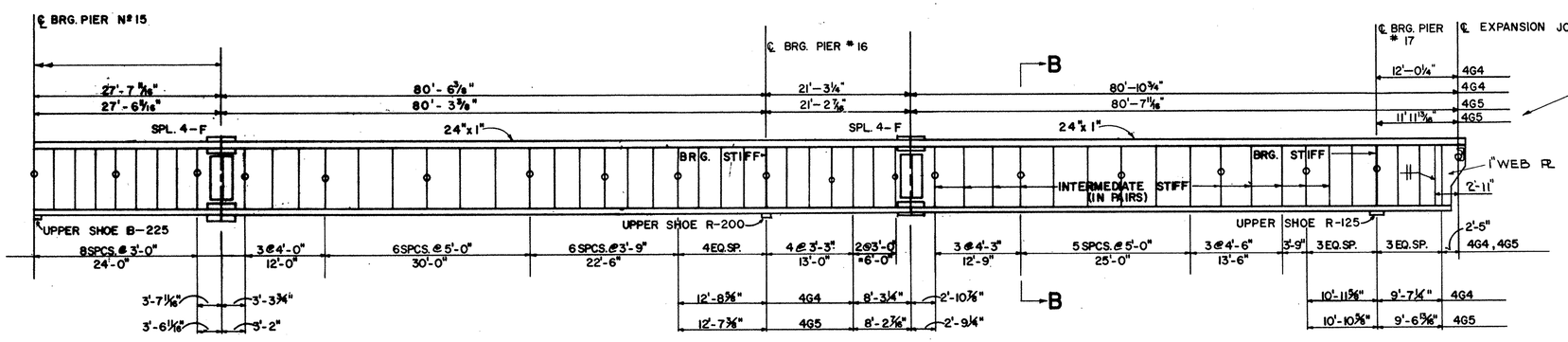
4G1, 4G8



NOTE:
SEE SHEET 199 FOR SECT. B-B
SEE SHEET 192 FOR ADDITIONAL NOTES



4G4, 4G5



4G4, 4G5

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

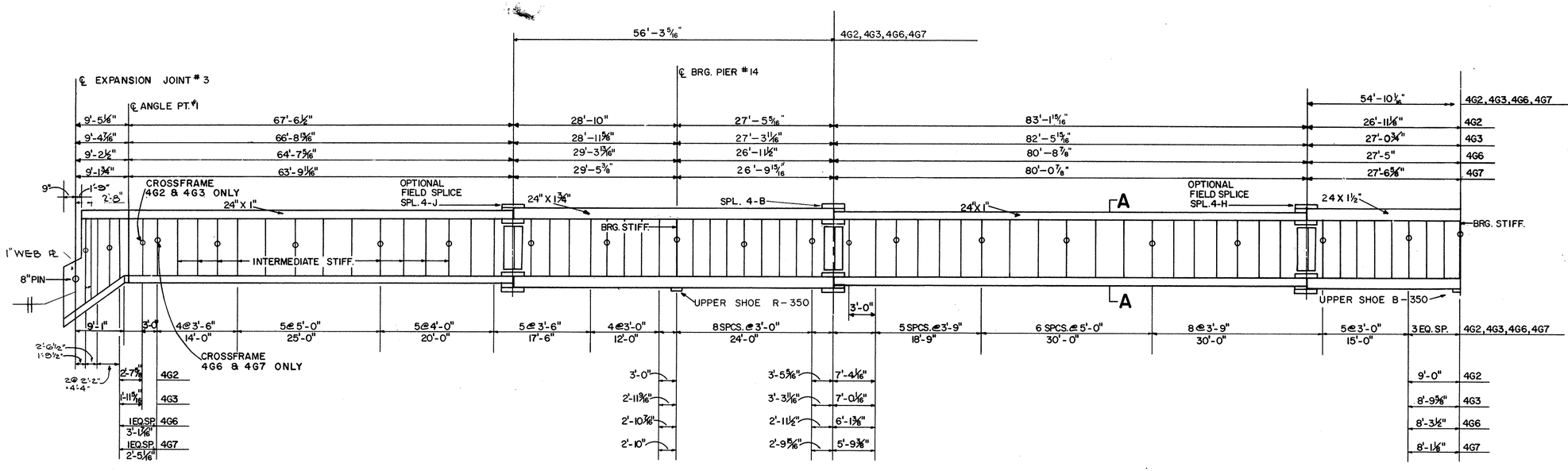
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAH	DM		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

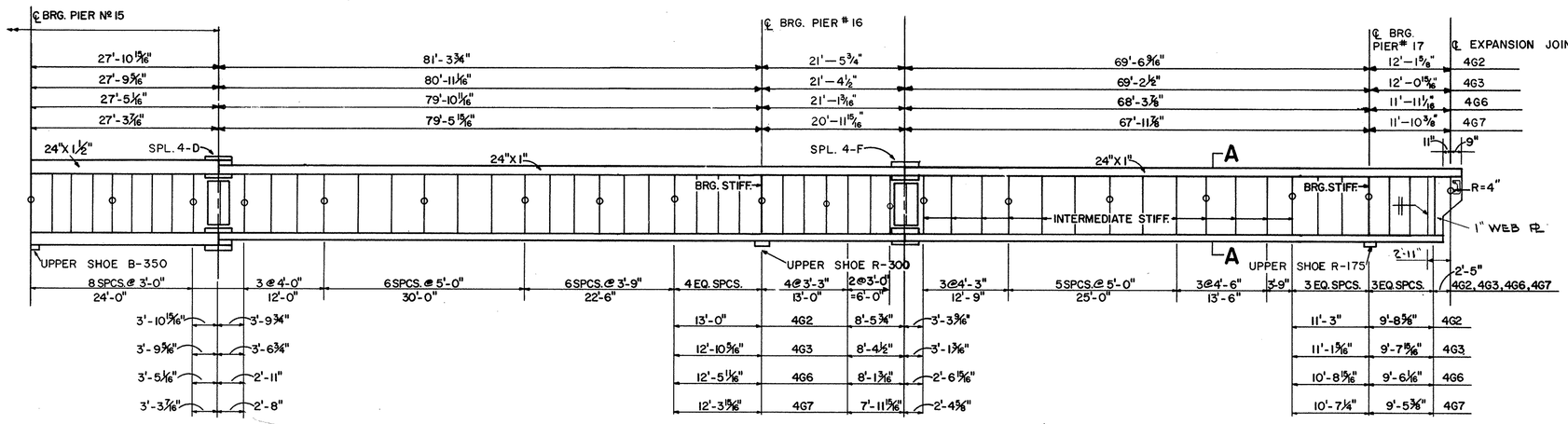
192
232



NOTE:
ALL WEB PLATES 64" x 3/8" EXCEPT AT EXP. JOINT 3. TO ANGLE PT. Nº 1
ALL BEARING STIFFENERS 10"x 1" IN PAIRS.
ALL INTERMEDIATE STIFFENER 6"x 5/16" IN PAIRS.
SEE SHEET 201 FOR FIELD SPLICES DETAILS.
SEE SHEET 200 FOR HINGE DETAILS
SEE SHEET 195 FOR WELD SPLICE DETAILS

GUSSET PLS. FOR LATERAL BRACING NOT SHOWN SEE BRACING DETAILS SHEET 175 .
ALL STIFFENERS MARKED "O" ARE STIFFENERS TO WHICH THE CROSSFRAME BRIDGING ANGLES ARE WELDED. SEE SHEET 195 FOR SECTIONS "A- A".

4G2, 4G3
4G6, 4G7



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

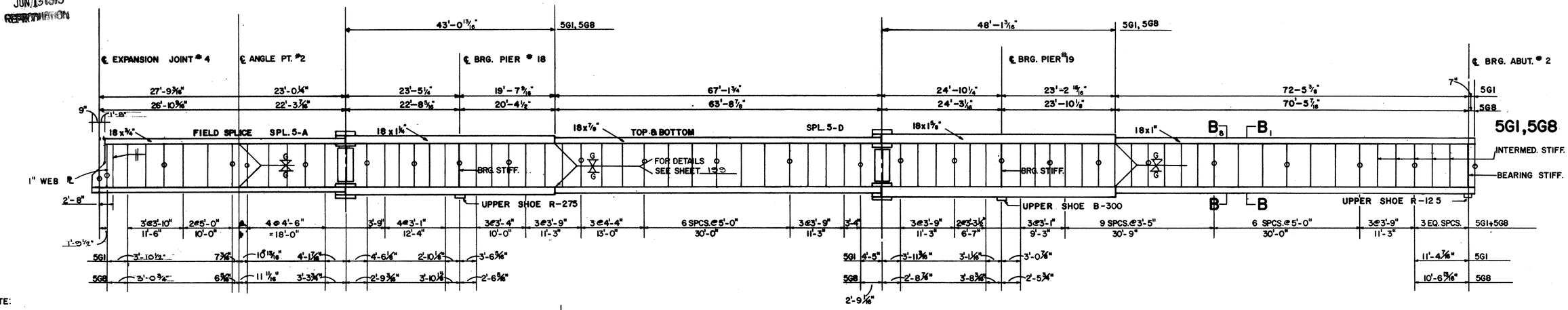
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	T.B.		D.M	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

193
232

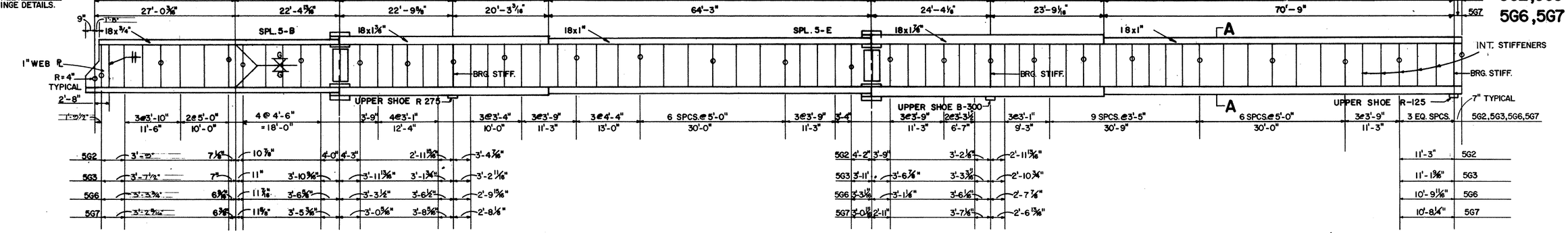
MAH-711-0.17

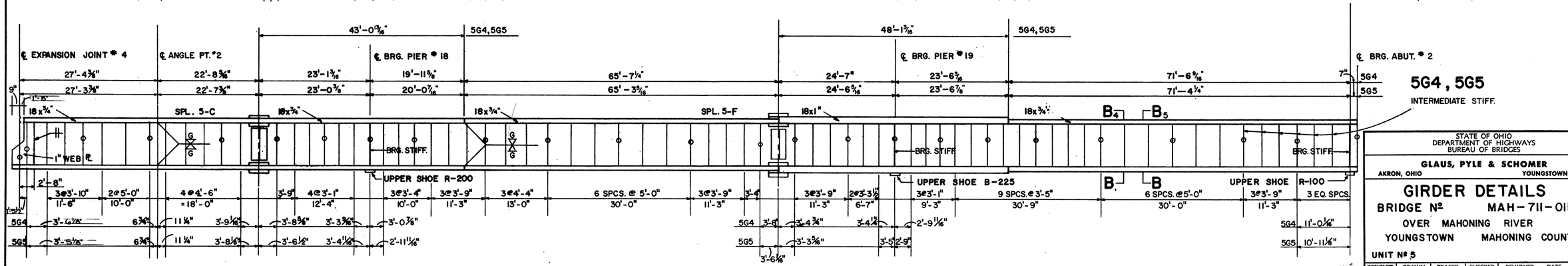


NOTE:

ALL WEB PLATES 60"x 7/16" EXCEPT @ EXPANSION JOINT #4
ALL INTERMEDIATE STIFFENERS 6"x 7/16" x 5'-0" IN PAIRS
ALL BEARING STIFF. IN PAIRS 8"x 3/4" x 5'-0"
ALL SPLICES NOTED SPL. 5-A THRU F ARE FIELD SPLICES. SEE SHEET 201 FOR DETAILS.

CROSS FRAMES CONNECT TO ALL STIFF. MARKED ℄
SEE SHEET 200 FOR HINGE DETAILS.





STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

GIRDER DETAILS

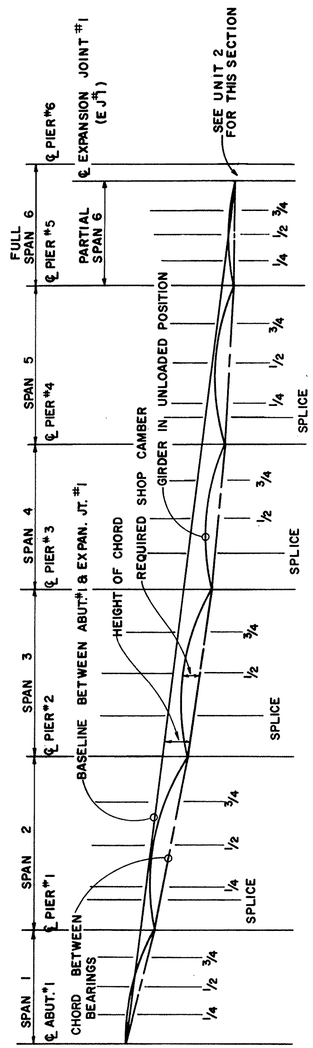
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	D.M		RH	WKD	6-22-68	

DEFLECTION AND CAMBER

	ABUT #1	SPAN 1 1/4	1/2	3/4	PIER #1	SPAN 2 SPLICE	1/4	1/2	3/4	PIER #2	SPAN 3 SPLICE	1/2	3/4	PIER #3	SPAN 4 SPLICE	1/2	3/4	PIER #4	SPAN 5 SPLICE	1/4	1/2	3/4	PIER #5	PARTIAL SPAN 6 1/4	1/2	3/4	E.J. #1
GIRDER 1G1																											
DEFLECTION DUE TO WT. OF STEEL	——	0.027	0.027	0.006		0.043	0.065	0.105	0.054		0.038	0.092	0.059		0.011	0.029	0.011		0.042	0.060	0.100	0.060		0.004	0.023	0.023	
DEFLECTION DUE TO REMAINING DEAD LOAD	——	0.185	0.181	0.041		0.291	0.441	0.707	0.364		0.256	0.620	0.397		0.074	0.194	0.072		0.284	0.402	0.677	0.401		0.030	0.153	0.157	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	——	-0.000	-0.000	-0.001		-0.560	-0.562	-0.562	-0.562		-0.488	-0.693	-0.520		-0.258	-0.437	-0.349		-0.386	-0.472	-0.629	-0.472		-0.224	-0.299	-0.224	
REQUIRED SHOP CAMBER INCHES	——	0.212	0.208	0.046		0.106	-0.055	-0.063	-0.144		-0.195	0.020	-0.063		-0.172	-0.214	-0.266		-0.060	-0.011	0.148	-0.011		-0.190	-0.124	-0.044	
HEIGHT OF CHORD INCHES	——	-1.816	-3.651	-5.447	-7.262	-8.683	-9.245	-11.227	-13.211	-15.193	-15.644	-16.182	-16.676	-17.171	-16.620	-16.044	-15.481	-14.918	-13.577	-13.144	-11.370	-9.595	-7.820	-5.866	-3.911	-1.955	-
GIRDER 1G2																											
DEFLECTION DUE TO WT. OF STEEL	——	0.029	0.031	0.011		0.029	0.045	0.067	0.022		0.083	0.185	0.153														
DEFLECTION DUE TO REMAINING DEAD LOAD		0.158	0.167	0.057		0.155	0.239	0.358	0.116		0.445	0.989	0.821														
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.001	-0.001	-0.002		-0.439	-0.559	-0.746	-0.559		-0.486	-0.690	-0.517														
REQUIRED SHOP CAMBER INCHES		0.186	0.197	0.066		-0.254	-0.276	-0.321	-0.422		0.042	0.483	0.457														
HEIGHT OF CHORD INCHES		-0.743	-1.484	-2.227	-2.969	-3.212	-3.308	-3.647	-3.986	-4.325	-3.337	-2.162	-1.081	-													
GIRDER 1G3																											
DEFLECTION DUE TO WT. OF STEEL		0.029	0.028	0.008		0.034	0.053	0.086	0.044		0.030	0.074	0.047		0.012	0.029	0.011		0.036	0.051	0.087	0.052		0.005	0.023	0.023	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.163	0.162	0.044		0.196	0.300	0.488	0.251		0.172	0.420	0.266		0.065	0.163	0.060		0.202	0.288	0.494	0.293		0.029	0.130	0.133	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.001	-0.002	-0.004		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.218	-0.290	-0.218	
REQUIRED SHOP CAMBER INCHES		0.191	0.188	0.048		-0.207	-0.205	-0.168	-0.262		-0.282	-0.193	-0.202		-0.306	-0.329	-0.319		-0.148	-0.133	-0.048	-0.127		-0.184	-0.138	-0.062	
HEIGHT OF CHORD INCHES		-1.873	-3.748	-5.621	-7.495	-8.965	-9.547	-11.599	-13.652	-15.704	-16.227	-16.850	-17.423	-17.996	-17.393	-16.757	-16.138	-15.518	-14.094	-13.636	-11.752	-9.870	-7.987	-5.990	-3.994	-1.997	-
GIRDER 1G4																											
DEFLECTION DUE TO WT. OF STEEL		0.029	0.029	0.008		0.034	0.053	0.086	0.044		0.030	0.074	0.047		0.011	0.028	0.010		0.036	0.051	0.088	0.053		0.004	0.020	0.021	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.163	0.162	0.044		0.196	0.299	0.488	0.251		0.172	0.421	0.267		0.064	0.161	0.058		0.205	0.292	0.500	0.299		0.021	0.114	0.120	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.002	-0.004	-0.006		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.212	-0.282	-0.212	
REQUIRED SHOP CAMBER INCHES		0.190	0.187	0.046		-0.207	-0.205	-0.169	-0.262		-0.282	-0.192	-0.201		-0.307	-0.331	-0.321		-0.145	-0.129	-0.042	-0.121		-0.187	-0.148	-0.071	
HEIGHT OF CHORD INCHES		-1.877	-3.752	-5.629	-7.506	-8.971	-9.550	-11.594	-13.638	-15.683	-16.199	-16.812	-17.377	-17.942	-17.333	-16.690	-16.063	-15.437	-14.008	-13.547	-11.657	-9.766	-7.876	-5.906	-3.937	-1.969	
GIRDER 1G5																											
DEFLECTION DUE TO WT. OF STEEL		0.027	0.027	0.006		0.048	0.072	0.113	0.059		0.040	0.096	0.062		0.010	0.028	0.009		0.048	0.068	0.114	0.070		0.000	0.015	0.017	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.159	0.158	0.034		0.284	0.426	0.674	0.353		0.237	0.571	0.366		0.062	0.165	0.056		0.288	0.405	0.679	0.417		0.000	0.090	0.101	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.003	-0.005	-0.008		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.205	-0.274	-0.205	
REQUIRED SHOP CAMBER INCHES		0.183	0.180	0.032		-0.105	-0.059	-0.045	-0.145		-0.207	-0.020	-0.087		-0.311	-0.328	-0.325		-0.050	0.001	0.164	0.015		-0.205	-0.169	-0.088	
HEIGHT OF CHORD INCHES		-1.879	-3.758	-5.638	-7.517	-8.976	-9.552	-11.588	-13.624	-15.660	-16.169	-16.775	-17.332	-17.888	-17.272	-16.622	-15.989	-15.356	-13.921	-13.458	-11.560	-9.662	-7.764	-5.822	-3.882	-1.940	-
GIRDER 1G6																											
DEFLECTION DUE TO WT. OF STEEL		0.027	0.027	0.006		0.048	0.072	0.113	0.059		0.040	0.096	0.062		0.010	0.028	0.009		0.049	0.068	0.115	0.071		-0.001	-0.014	0.016	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.159	0.158	0.034		0.284	0.426	0.674	0.353		0.238	0.571	0.367		0.061	0.164	0.055		0.289	0.407	0.683	0.420		-0.005	0.081	0.093	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.003	-0.006	-0.009		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.201	-0.269	-0.201	
REQUIRED SHOP CAMBER INCHES		0.183	0.179	0.030		-0.105	-0.059	0.045	-0.145		-0.207	-0.020	-0.087		-0.312	-0.329	-0.326		-0.048	0.003	0.169	0.019		-0.207	-0.174	-0.093	
HEIGHT OF CHORD INCHES		-1.880	-3.762	-5.642	-7.523	-8.978	-9.554	-11.585	-13.615	-15.646	-15.151	-16.750	-17.302	-17.854	-17.233	-16.579	-15.941	-15.304	-13.865	-13.400	-11.498	-9.595	-7.692	-5.770	-3.846	-1.924	-
GIRDER 1G7																											
DEFLECTION DUE TO WT. OF STEEL		0.029	0.029	0.008		0.034	0.053	0.086	0.044		0.031	0.074	0.047		0.011	0.028	0.010		0.037	0.053	0.091	0.055		0.000	0.014	0.016	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.163	0.162	0.044		0.195	0.299	0.487	0.250		0.173	0.422	0.268		0.062	0.157	0.055		0.210	0.299	0.514	0.312		0.002	0.077	0.089	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.004	-0.008	-0.012		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.195	-0.261	-0.195	
REQUIRED SHOP CAMBER INCHES		0.188	0.182	0.039		-0.207	-0.205	-0.169	-0.262		-0.281	-0.190	-0.200		-0.310	-0.336	-0.326		-0.139	-0.120	-0.025	-0.105		-0.193	-0.170	-0.091	
HEIGHT OF CHORD INCHES		-1.883	-3.767	-5.650	-7.534	-8.982	-9.556	-11.578	-13.601	-15.623	-16.121	-16.711	-17.256	-17.800	-17.172	-16.511	-15.866	-15.222	-13.777	-13.312	-11.401	-9.491	-7.580	-5.686	-3.789	-1.895	-
GIRDER 1G8																											
DEFLECTION DUE TO WT. OF STEEL		0.029	0.029	0.008		0.034	0.053	0.086	0.044		0.031	0.075	0.047		0.011	0.027	0.009		0.037	0.053	0.091	0.056		-0.001	0.011	0.014	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.163	0.162	0.044		0.195	0.299	0.487	0.250		0.173	0.423	0.269		0.062	0.155	0.053		0.212	0.302	0.519	0.317		-0.004	0.064	0.079	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.005	-0.010	-0.015		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.190	-0.253	-0.190	
REQUIRED SHOP CAMBER INCHES		0.187	0.180	0.036		-0.207	-0.205	-0.169	-0.262		-0.280	-0.190	-0.199		-0.311	-0.337	-0.327		-0.137	-0.117	-0.019	-0.099		-0.195	-0.177	-0.097	
HEIGHT OF CHORD INCHES		-1.885	-3.771	-5.657	-7.543	-8.986	-9.557	-11.572	-13.585	-15.600	-16.099	-16.673	-17.209	-17.746	-17.111	-16.442	-15.791	-15.142	-13.690	-13.222	-11.304	-9.386	-7.469	-5.602	-3.734	-1.867	-
GIRDER 1G9																											
DEFLECTION DUE TO WT. OF STEEL		0.027	0.026	0.006		0.042	0.064	0.103	0.053		0.037	0.090	0.058		0.010	0.027	0.009		0.044	0.063	0.107	0.065		-0.004	0.007	0.010	
DEFLECTION DUE TO REMAINING DEAD LOAD		0.181	0.178	0.040		0.285	0.432	0.692	0.386		0.251	0.609	0.391		0.070	0.184	0.062		0.299	0.423	0.718	0.441		-0.025	0.047	0.070	
ADJUSTMENT REQUIRED FOR VERTICAL CURVE		-0.006	-0.012	-0.019		-0.437	-0.557	-0.743	-0.557		-0.484	-0.687	-0.515		-0.383	-0.520	-0.390		-0.386	-0.472	-0.629	-0.472		-0.184	-0.245	-0.184	
REQUIRED SHOP CAMBER INCHES		0.202	0.192	0.027		-0.110	-0.061	0.052	-0.148		-0.196	0.013	-0.066		-0.303	-0.308	-0.319		-0.042	0.014	0.195	0.035		-0.212	-0.191	-0.104	
HEIGHT OF CHORD INCHES		-1.888	-3.776	-5.664	-7.552	-8.989	-9.558	-11.564	-13.571	-15.576	-16.060	-16.633	-17.162	-17.690	-17.050	-16.374	-15.716	-15.058	-13.602	-13.133	-11.207	-9.282	-7.356	-5.518	-3.678	-1.840	-

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	



NOTE:
NEGATIVE VALUES INDICATE DIMENSION IS BELOW BASELINE OR CHORD.

SEE SHEETS 182-185 FOR GIRDER DIMENSIONS.

LAYOUT DIAGRAM

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

LAYOUT DIAGRAMS

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FK	C.P.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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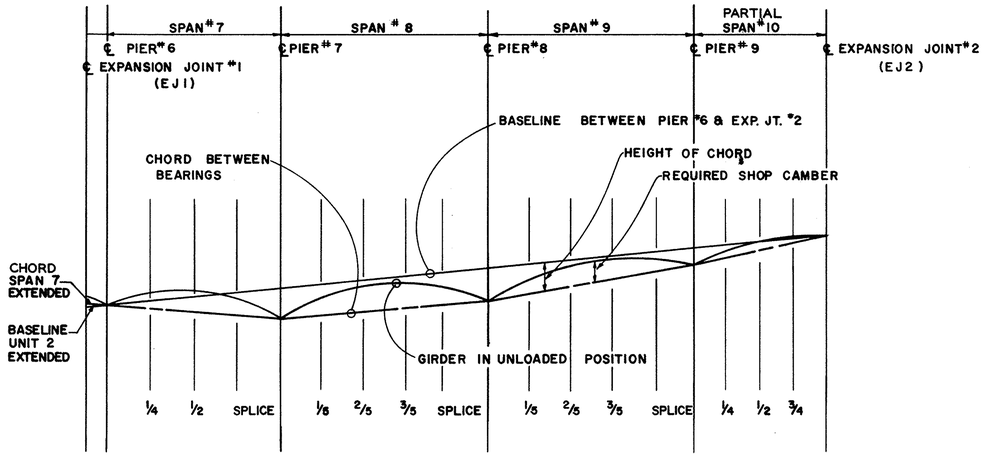
MK APPROVED
JUN 13 1969
REGISTRATION

DEFLECTION AND CAMBER TABLE

		SPAN 7					SPAN 8					SPAN 9					PARTIAL SPAN 10			
	E.J. #1	PIER #6	1/4	1/2	SPLICE	PIER #7	1/5	2/5	3/5	SPLICE	PIER #8	1/5	2/5	3/5	SPLICE	PIER #9	1/4	1/2	3/4	E.J. #2
GIRDER 2G1																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.107	0.126	0.059	-----	0.032	0.084	0.082	0.035	-----	0.055	0.127	0.135	0.058	-----	0.000	0.021	0.024	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.16	-----	0.460	0.577	0.258	-----	0.261	0.607	0.577	0.253	-----	0.317	0.757	0.816	0.353	-----	0.006	0.133	0.149	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.13	-----	0.022	-0.024	-0.228	-----	-0.389	-0.331	-0.364	-0.445	-----	-0.093	0.295	0.532	0.227	-----	0.006	0.154	0.173	-----
GIRDER 2G2																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.102	0.119	0.055	-----	0.027	0.075	0.074	0.031	-----	0.052	0.120	0.128	0.055	-----	0.002	0.024	0.027	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.12	-----	0.355	0.440	0.192	-----	0.185	0.445	0.426	0.184	-----	0.244	0.580	0.622	0.267	-----	0.014	0.125	0.138	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.17	-----	-0.088	-0.168	-0.299	-----	-0.470	-0.502	-0.522	-0.518	-----	-0.169	0.111	0.332	0.138	-----	0.015	0.149	0.165	-----
GIRDER 2G3																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.102	0.119	0.055	-----	0.027	0.075	0.074	0.031	-----	0.052	0.120	0.128	0.055	-----	0.002	0.024	0.027	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.12	-----	0.359	0.444	0.194	-----	0.184	0.444	0.425	0.183	-----	0.244	0.580	0.623	0.267	-----	0.013	0.125	0.138	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.17	-----	-0.084	-0.164	-0.297	-----	-0.472	-0.504	-0.523	-0.519	-----	-0.169	0.111	0.332	0.138	-----	0.015	0.149	0.164	-----
GIRDER 2G4																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.111	0.132	0.062	-----	0.040	0.101	0.098	0.043	-----	0.065	0.149	0.158	0.069	-----	-0.001	0.021	0.024	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.15	-----	0.414	0.520	0.235	-----	0.263	0.590	0.563	0.255	-----	0.324	0.755	0.807	0.354	-----	0.000	0.114	0.128	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.14	-----	-0.021	-0.075	-0.248	-----	-0.328	-0.332	-0.362	-0.435	-----	-0.076	0.315	0.546	0.240	-----	-0.000	0.135	0.152	-----
GIRDER 2G5																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.111	0.132	0.062	-----	0.040	0.101	0.098	0.043	-----	0.065	0.149	0.158	0.069	-----	-0.001	0.021	0.024	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.15	-----	0.417	0.523	0.237	-----	0.262	0.589	0.562	0.254	-----	0.324	0.755	0.807	0.354	-----	0.000	0.114	0.128	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.14	-----	-0.018	-0.072	-0.246	-----	-0.379	-0.333	-0.363	-0.435	-----	-0.076	0.315	0.547	0.240	-----	-0.000	0.135	0.152	-----
GIRDER 2G6																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.102	0.119	0.055	-----	0.027	0.075	0.074	0.031	-----	0.052	0.120	0.128	0.055	-----	0.002	0.024	0.027	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.13	-----	0.370	0.454	0.199	-----	0.180	0.439	0.421	0.181	-----	0.245	0.582	0.624	0.267	-----	0.013	0.125	0.137	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.16	-----	-0.074	-0.153	-0.291	-----	-0.475	-0.509	-0.527	-0.521	-----	-0.168	0.113	0.333	0.138	-----	0.015	0.149	0.164	-----
GIRDER 2G7																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.102	0.119	0.055	-----	0.027	0.075	0.074	0.031	-----	0.052	0.120	0.128	0.055	-----	0.002	0.024	0.027	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.14	-----	0.374	0.458	0.202	-----	0.179	0.437	0.420	0.180	-----	0.246	0.582	0.624	0.268	-----	0.013	0.125	0.137	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.15	-----	-0.070	-0.149	-0.289	-----	-0.477	-0.510	-0.528	-0.522	-----	-0.167	0.113	0.334	0.138	-----	0.015	0.149	0.164	-----
GIRDER 2G8																				
DEFLECTION DUE TO WEIGHT OF STEEL	-0.03	-----	0.107	0.126	0.059	-----	0.032	0.084	0.082	0.035	-----	0.055	0.127	0.135	0.058	-----	0.000	0.021	0.024	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.20	-----	0.494	0.612	0.276	-----	0.250	0.593	0.565	0.247	-----	0.321	0.762	0.819	0.354	-----	0.005	0.132	0.148	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.32	-----	-0.545	-0.727	-0.545	-----	-0.682	-1.023	-1.023	-0.733	-----	-0.465	-0.589	-0.419	-0.184	-----	0.000	0.000	0.000	-----
REQUIRED SHOP CAMBER - INCHES	0.09	-----	0.055	0.011	-0.210	-----	-0.400	-0.346	-0.375	-0.451	-----	-0.090	0.299	0.535	0.228	-----	0.005	0.153	0.172	-----
GIRDER 2G1, 2G2, 2G3, 2G4, 2G5, 2G6, 2G7, 2G8 HEIGHT OF CHORD	1.005	-----	-1.990	-3.978	-5.968	-7.952	-8.327	-8.696	-9.066	-9.397	-9.805	-8.687	-7.568	-6.450	-5.196	-4.214	-3.161	-2.107	-1.054	-----



LAYOUT DIAGRAM

SEE SHEET 186 FOR GIRDER DIMENSIONS.

NOTE:
NEGATIVE VALUES INDICATE DIMENSION IS BELOW BASELINE OR CHORD.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

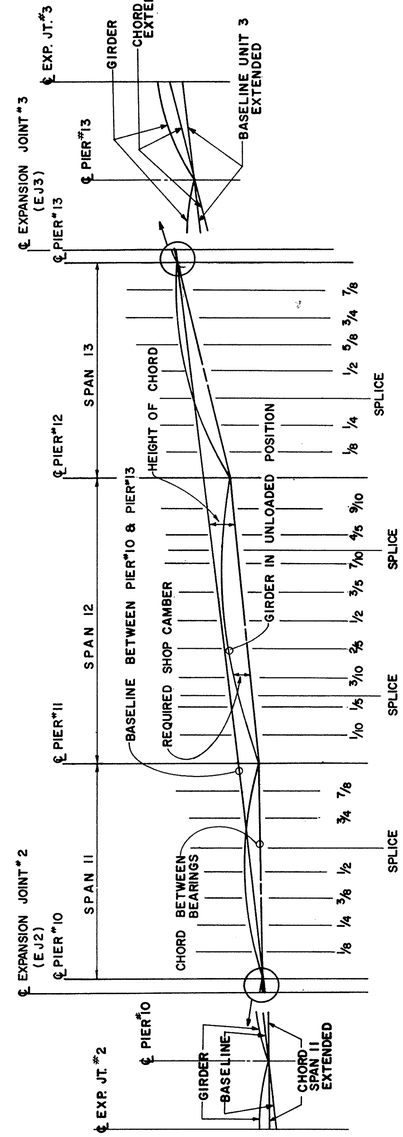
LAYOUT DIAGRAMS

BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FK	HP		D.M.	WKD	6-22-68	

DEFLECTION AND CAMBER TABLE

		SPAN 11								SPAN 12										SPAN 13								
GIRDER 3G1	E.J. #2	PIER #10	1/8	1/4	3/8	1/2	SPLICE	3/4	7/8	PIER #11	1/10	4/5	3/10	2/5	1/2	3/5	7/10	4/5	9/10	PIER #12	1/8	1/4	SPLICE	1/2	5/8	3/4	7/8	PIER #13	E.J. #3
DEFLECTION DUE TO WT. OF STEEL	-0.050		0.081	0.134	0.146	0.114	0.056	-0.008	-0.035		0.127	0.217	0.505	0.633	0.668	0.601	0.449	0.254	0.082		0.039	0.185	0.275	0.507	0.546	0.462	0.266		-0.180
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.140		0.255	0.447	0.519	0.458	0.302	0.101	-0.024		0.250	0.667	1.092	1.381	1.452	1.285	0.925	0.479	0.115		0.208	0.680	0.948	1.581	1.644	1.353	0.756		-0.350
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.465	0.939	1.413	1.887	2.361	2.664	2.579	2.107	1.247		1.068	1.709	1.866	2.471	2.393	1.932	1.121		-0.587
REQUIRED SHOP CAMBER INCHES	-0.190		0.335	0.581	0.665	0.573	0.358	0.093	-0.059		0.841	1.923	3.010	3.901	4.481	4.550	3.954	2.840	1.444		1.316	2.574	3.089	4.559	4.582	3.747	2.143		-1.067
HEIGHT OF CHORD INCHES	-0.308	0.000	0.523	1.045	1.568	2.092	2.594	3.137	3.659	4.182	5.171	6.158	7.147	8.136	9.124	10.112	11.100	12.089	13.078	14.065	12.307	10.549	9.688	7.033	5.274	3.516	1.758	0.000	-0.850
GIRDER 3G2																													
DEFLECTION DUE TO WT. OF STEEL	-0.060		0.100	0.169	0.188	0.155	0.081	0.011	-0.028		0.123	0.312	0.503	0.635	0.675	0.613	0.463	0.268	0.091		0.023	0.145	0.234	0.427	0.466	0.397	0.229		-0.120
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.160		0.290	0.510	0.598	0.540	0.353	0.151	-0.000		0.217	0.600	0.999	1.279	1.359	1.218	0.894	0.481	0.132		0.146	0.517	0.762	1.250	1.308	1.080	0.605		-0.280
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.009		-0.016	-0.031	-0.047	-0.063	-0.080	-0.094	-0.110		0.518	1.036	1.554	2.072	2.584	2.843	2.713	2.197	1.292		1.106	1.806	2.064	2.555	2.425	1.935	1.114		-0.554
REQUIRED SHOP CAMBER INCHES	-0.111		0.374	0.647	0.739	0.632	0.354	0.067	-0.139		0.858	1.948	3.056	3.986	4.618	4.673	4.071	2.945	1.515		1.275	2.468	3.060	4.232	4.199	3.412	1.948		-0.954
HEIGHT OF CHORD INCHES	-0.439	0.000	0.767	1.535	2.302	3.068	3.881	4.603	5.370	6.137	7.044	7.950	8.857	9.763	10.670	11.576	12.484	13.390	14.297	15.204	13.303	11.402	10.339	7.602	5.701	3.800	1.901	0.000	-0.945
GIRDER 3G3																													
DEFLECTION DUE TO WT. OF STEEL	-0.070		0.123	0.209	0.236	0.202	0.108	0.033	-0.020		0.118	0.306	0.498	0.635	0.680	0.622	0.476	0.280	0.100		0.009	0.109	0.195	0.356	0.393	0.338	0.196		-0.100
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.180		0.350	0.618	0.731	0.671	0.434	0.216	0.025		0.201	0.579	0.984	1.276	1.370	1.243	0.928	0.516	0.155		0.104	0.415	0.654	1.056	1.115	0.924	0.517		-0.250
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.009		-0.017	-0.034	-0.051	-0.068	-0.087	-0.102	-0.119		0.565	1.129	1.694	2.259	2.793	3.010	2.839	2.280	1.334		1.146	1.910	2.260	2.610	2.438	1.926	1.102		-0.564
REQUIRED SHOP CAMBER INCHES	-0.141		0.456	0.793	0.916	0.805	0.454	0.147	-0.114		0.884	2.015	3.177	4.170	4.843	4.875	4.242	3.076	1.589		1.259	2.434	3.109	4.023	3.946	3.187	1.815		-0.914
HEIGHT OF CHORD INCHES	-0.546	0.000	1.010	2.022	3.032	4.043	5.207	6.065	7.075	8.087	8.909	9.731	10.553	11.376	12.198	13.020	13.842	14.665	15.487	16.309	14.270	12.232	10.942	8.155	6.116	4.078	2.039	0.000	-1.026
GIRDER 3G4																													
DEFLECTION DUE TO WT. OF STEEL	-0.080		0.148	0.253	0.290	0.254	0.139	0.058	-0.011		0.112	0.297	0.492	0.632	0.682	0.629	0.486	0.291	0.107		-0.004	0.077	0.160	0.292	0.328	0.284	0.166		-0.090
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.200		0.387	0.684	0.815	0.758	0.483	0.269	0.050		0.171	0.516	0.896	1.176	1.277	1.172	0.889	0.508	0.165		0.061	0.298	0.510	0.812	0.865	0.720	0.403		-0.190
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		-0.002	-0.005	-0.007	-0.010	-0.013	-0.015	-0.017		0.613	1.227	1.840	2.454	2.991	3.168	2.958	2.360	1.374		1.190	2.019	2.400	2.636	2.430	1.904	1.084		-0.571
REQUIRED SHOP CAMBER INCHES	-0.280		0.533	0.932	1.097	1.002	0.608	0.312	0.022		0.896	2.040	3.228	4.262	4.951	4.970	4.333	3.159	1.646		1.248	2.394	3.069	3.740	3.623	2.908	1.652		-0.851
HEIGHT OF CHORD INCHES	-0.675	0.000	1.253	2.506	3.758	5.010	6.559	7.516	8.768	10.021	10.757	11.494	12.230	12.966	13.703	14.438	15.175	15.911	16.648	17.384	15.211	13.038	11.494	8.692	6.520	4.346	2.173	0.000	-1.143
GIRDER 3G5																													
DEFLECTION DUE TO WT. OF STEEL	-0.090		0.166	0.284	0.328	0.292	0.160	0.077	-0.004		0.107	0.291	0.486	0.629	0.682	0.632	0.492	0.297	0.112		-0.011	0.058	0.139	0.254	0.290	0.253	0.148		-0.080
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.220		0.432	0.763	0.912	0.854	0.539	0.318	0.070		0.159	0.499	0.881	1.167	1.277	1.180	0.903	0.524	0.177		0.042	0.250	0.454	0.718	0.770	0.643	0.360		-0.170
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.646	1.292	1.938	2.584	3.114	3.266	3.031	2.408	1.398		1.194	2.040	2.418	2.610	2.400	1.882	1.080		-0.681
REQUIRED SHOP CAMBER INCHES	-0.310		0.597	1.048	1.240	1.146	0.699	0.395	0.067		0.912	2.082	3.305	4.380	5.073	5.079	4.426	3.230	1.686		1.225	2.348	3.011	3.583	3.460	2.778	1.588		-0.831
HEIGHT OF CHORD INCHES	-0.690	0.000	1.310	2.621	3.932	5.243	6.932	7.864	9.174	10.486	11.197	11.909	12.622	13.333	14.045	14.756	15.469	16.181	16.892	17.605	15.404	13.204	11.524	8.802	6.602	4.402	2.201	0.000	-1.184
GIRDER 3G6																													
DEFLECTION DUE TO WT. OF STEEL	-0.100		0.196	0.338	0.393	0.356	0.195	0.109	0.009		0.100	0.280	0.476	0.622	0.680	0.635	0.498	0.306	0.118		-0.020	0.033	0.108	0.202	0.236	0.209	0.123		-0.070
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.270		0.547	0.969	1.164	1.101	0.684	0.437	0.114		0.149	0.506	0.919	1.237	1.369	1.278	0.991	0.587	0.207		0.018	0.199	0.408	0.636	0.692	0.582	0.326		-0.160
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.698	1.396	2.094	2.792	3.296	3.412	3.140	2.481	1.434		1.435	2.459	2.763	2.809	2.518	1.937	1.089		-0.600
REQUIRED SHOP CAMBER INCHES	-0.370		0.743	1.307	1.557	1.457	0.879	0.545	0.122		0.946	2.183	3.489	4.652	5.344	5.325	4.629	3.374	1.759		1.432	2.691	3.279	3.646	3.445	2.728	1.538		-0.830
HEIGHT OF CHORD INCHES	-0.740	0.000	1.448	2.896	4.344	5.792	7.771	8.688	10.136	11.584	12.343	13.103	13.861	14.621	15.379	16.139	16.898	17.657	18.416	19.175	16.778	14.381	12.346	9.588	7.190	4.794	2.396	0.000	-1.321
GIRDER 3G7																													
DEFLECTION DUE TO WT. OF STEEL	-0.120		0.229	0.397	0.466	0.427	0.234	0.145	0.023		0.091	0.268	0.463	0.613	0.675	0.635	0.503	0.312	0.123		-0.028	0.011	0.081	0.155	0.188	0.169	0.100		-0.060
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.310		0.637	1.130	1.362	1.298	0.793	0.540	0.156		0.125	0.471	0.884	1.211	1.356	1.280	1.004	0.606	0.222		-0.007	0.135	0.329	0.508	0.563	0.477	0.268		-0.130
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.752	1.504	2.256	2.998	3.468	3.549	3.244	2.550	1.469		1.683	2.739	2.976	2.926	2.582	1.966	1.097		-0.626
REQUIRED SHOP CAMBER INCHES	-0.530		0.866	1.526	1.827	1.725	1.027	0.685	0.179		0.968	2.243	3.604	4.822	5.499	5.465	4.751	3.468	1.814		1.648	2.885	3.386	3.589	3.333	2.612	1.465		-0.816
HEIGHT OF CHORD INCHES	-0.792	0.000	1.592	3.185	4.777	6.370	8.664	9.554	11.147	12.739	13.544	14.350	15.156	15.961	16.766	17.573	18.378	19.183	19.988	20.795	18.196	15.595	13.151	10.397	7.798	5.198	2.599	0.000	-1.481
GIRDER 3G8																													
DEFLECTION DUE TO WT. OF STEEL	-0.130		0.266	0.462	0.546	0.507	0.275	0.185	0.039		0.082	0.254	0.449	0.601	0.668	0.633	0.505	0.317	0.127		-0.035	-0.008	0.056	0.114	0.146	0.134	0.081		-0.050
DEFLECTION DUE TO REMAINING DEAD LOAD	-0.380		0.795	1.412	1.708	1.639	0.984	0.708	0.220		0.107	0.467	0.914	1.276	1.447	1.381	1.096	0.673	0.255		-0.031	0.086	0.277	0.426	0.483	0.413	0.232		-0.120
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.808	1.617	2.425	3.193	3.630	3.679	3.341	2.615	1.501		1.934	2.873	3.054	2.951	2.578	1.950	1.083		-0.640
REQUIRED SHOP CAMBER INCHES	-0.510		1.061	1.874	2.254	2.145	1.259	0.893	0.260		0.997	2.337	3.787	5.070	5.745	5.694	4.942	3.605	1.883		1.869	2.951	3.387	3.491	3.207	2.498	1.396		-0.810
HEIGHT OF CHORD INCHES	-0.844	0.000	1.742	3.486	5.228	6.972	9.604	10.457	12.200	13.943	14.794	15.643	16.494	17.344	18.195	19.044	19.895	20.744	21.595	22.446	19.639	16.834	13.921	11.222	8.417	5.611	2.806	0.000	-1.657



SEE SHEETS 187-190 FOR GIRDER DIMENSIONS.

NOTE: NEGATIVE VALUES INDICATE DIMENSION IS BELOW, BASELINE OR CHORD.

LAYOUT DIAGRAM

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

196 / 232

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

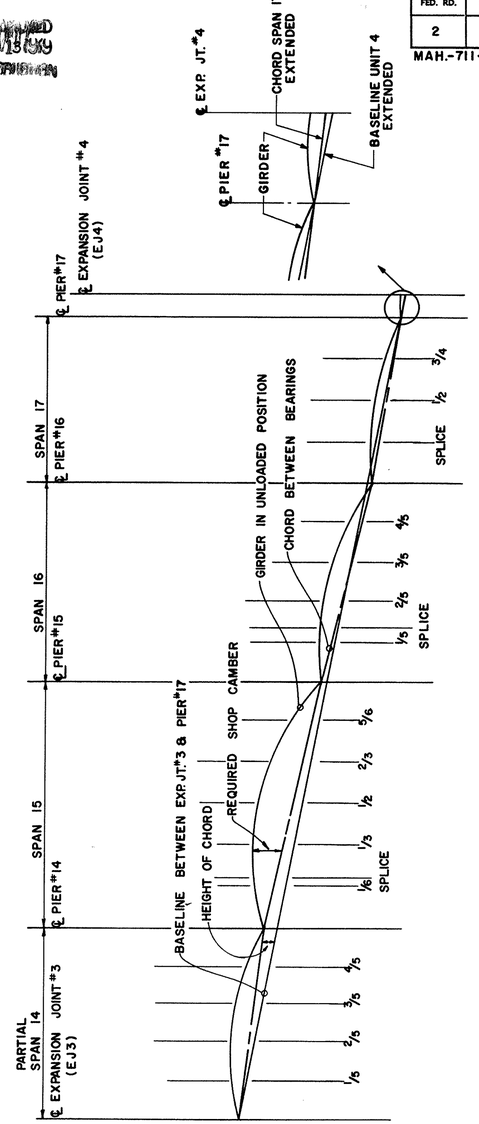
LAYOUT DIAGRAMS

BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FK	CP		RH	WKD	6-22-68	

DEFLECTION AND CAMBER TABLE

	E.J.#3	PARTIAL SPAN 14 Avg.Pt#1	1/5	2/5	3/5	4/5	PIER #14	SPAN 15 1/6	SPLICE	1/3	1/2	2/3	5/6	PIER #15	SPAN 16 1/5	SPLICE	2/5	3/5	4/5	PIER #16	SPAN 17 SPLICE	1/2	3/4	PIER #17	E.J.#4
GIRDER 4G1																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.048	0.098	0.135	0.097	0.028	-----	0.080	0.104	0.198	0.257	0.214	0.098	-----	-0.003	0.006	0.031	0.042	0.016	-----	0.053	0.107	0.085	-----	-0.020
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.214	0.435	0.597	0.434	0.126	-----	0.347	0.449	0.859	1.115	0.924	0.418	-----	0.008	0.052	0.177	0.235	0.110	-----	0.162	0.331	0.242	-----	-0.070
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.810	1.316	2.021	2.017	1.093	-----	0.816	0.954	0.852	0.545	0.202	0.020	-----	0.308	0.420	0.182	-0.025	-0.086	-----	-0.549	-1.100	-0.902	-----	0.450
REQUIRED SHOP CAMBER INCHES	-----	1.073	1.849	2.753	2.548	1.247	-----	1.244	1.507	1.909	1.917	1.340	0.537	-----	0.314	0.479	0.390	0.252	0.040	-----	-0.334	-0.663	-0.574	-----	0.330
HEIGHT OF CHORD INCHES	-----	0.628	1.410	2.820	4.230	5.640	7.050	6.388	6.257	5.724	5.060	4.398	3.734	3.072	2.264	2.040	1.458	0.650	-0.157	-0.964	-0.737	-0.482	-0.241	-----	0.120
GIRDER 4G2																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.046	0.093	0.126	0.090	0.025	-----	0.076	0.098	0.189	0.247	0.206	0.094	-----	-0.002	0.007	0.032	0.042	0.016	-----	0.052	0.104	0.083	-----	-0.020
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.186	0.376	0.514	0.368	0.104	-----	0.302	0.391	0.751	0.981	0.815	0.369	-----	0.012	0.052	0.165	0.216	0.101	-----	0.145	0.296	0.217	-----	-0.060
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.726	1.196	1.684	1.804	0.887	-----	0.816	0.953	0.853	0.546	0.204	0.021	-----	0.307	0.418	0.181	-0.024	-0.085	-----	-0.550	-1.100	-0.901	-----	0.450
REQUIRED SHOP CAMBER INCHES	-----	0.956	1.595	2.284	2.062	1.015	-----	1.194	1.442	1.793	1.774	1.225	0.485	-----	0.317	0.477	0.377	0.233	0.032	-----	-0.354	-0.700	-0.601	-----	0.330
HEIGHT OF CHORD INCHES	-----	0.558	1.252	2.504	3.756	5.009	6.260	5.651	5.531	5.042	4.433	3.823	3.215	2.605	1.849	1.639	1.093	0.336	-0.420	-1.176	-0.899	-0.588	-0.294	-----	0.130
GIRDER 4G3																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.044	0.090	0.122	0.087	0.024	-----	0.075	0.097	0.186	0.243	0.203	0.093	-----	-0.002	0.007	0.031	0.041	0.016	-----	0.051	0.102	0.082	-----	-0.020
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.180	0.365	0.497	0.355	0.099	-----	0.298	0.385	0.739	0.965	0.801	0.363	-----	0.011	0.050	0.161	0.211	0.099	-----	0.142	0.291	0.213	-----	-0.060
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.639	0.937	1.268	1.195	0.682	-----	0.815	0.952	0.853	0.548	0.206	0.023	-----	0.305	0.416	0.180	-0.024	-0.085	-----	-0.551	-1.100	-0.901	-----	0.200
REQUIRED SHOP CAMBER INCHES	-----	0.863	1.391	1.887	1.636	0.805	-----	1.188	1.434	1.778	1.755	1.209	0.478	-----	0.314	0.473	0.372	0.228	0.030	-----	-0.359	-0.708	-0.607	-----	0.120
HEIGHT OF CHORD INCHES	-----	0.488	1.096	2.191	3.287	4.382	5.477	4.921	4.812	4.366	3.810	3.254	2.698	2.142	1.436	1.241	0.731	0.025	-0.680	-1.386	-1.060	-0.694	-0.347	-----	0.170
GIRDER 4G4																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.049	0.101	0.141	0.106	0.031	-----	0.106	0.135	0.246	0.310	0.259	0.122	-----	-0.003	0.007	0.035	0.045	0.018	-----	0.048	0.098	0.079	-----	-0.030
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.184	0.375	0.526	0.396	0.116	-----	0.388	0.496	0.901	1.134	0.943	0.441	-----	0.005	0.049	0.163	0.211	0.101	-----	0.120	0.250	0.183	-----	-0.040
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.554	0.748	0.893	0.789	0.479	-----	0.814	0.951	0.853	0.571	0.342	0.112	-----	0.304	0.414	0.178	-0.084	-0.084	-----	-0.552	-1.100	-0.900	-----	0.300
REQUIRED SHOP CAMBER INCHES	-----	0.787	1.224	1.560	1.292	0.626	-----	1.308	1.582	2.000	2.015	1.544	0.675	-----	0.306	0.470	0.376	0.232	0.035	-----	-0.385	-0.751	-0.638	-----	0.230
HEIGHT OF CHORD INCHES	-----	0.419	0.940	1.880	2.820	3.761	4.700	4.198	4.098	3.695	3.192	2.689	2.186	1.684	1.027	0.846	0.372	-0.283	-0.940	-1.595	-1.219	-0.798	-0.398	-----	0.190
GIRDER 4G5																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.048	0.099	0.138	0.104	0.030	-----	0.105	0.134	0.243	0.307	0.256	0.121	-----	-0.003	0.007	0.034	0.045	0.018	-----	0.048	0.097	0.078	-----	-0.030
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.180	0.368	0.515	0.387	0.113	-----	0.384	0.491	0.891	1.121	0.932	0.436	-----	0.008	0.048	0.160	0.208	0.100	-----	0.118	0.248	0.181	-----	-0.040
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.375	0.757	0.917	0.772	0.471	-----	0.813	0.850	0.853	0.550	0.209	0.025	-----	0.303	0.413	0.178	-0.024	-0.084	-----	-0.553	-1.100	-0.900	-----	0.310
REQUIRED SHOP CAMBER INCHES	-----	0.604	1.224	1.570	1.263	0.613	-----	1.303	1.575	1.988	1.978	1.397	0.581	-----	0.304	0.468	0.373	0.229	0.034	-----	-0.387	-0.756	-0.641	-----	0.240
HEIGHT OF CHORD INCHES	-----	0.416	0.934	1.866	2.800	3.733	4.666	4.165	4.067	3.665	3.164	2.664	2.164	1.663	1.010	0.829	0.356	-0.296	-0.950	-1.604	-1.225	-0.802	-0.401	-----	0.200
GIRDER 4G6																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.041	0.082	0.112	0.079	0.021	-----	0.072	0.093	0.178	0.232	0.193	0.089	-----	-0.002	0.006	0.029	0.039	0.015	-----	0.048	0.097	0.078	-----	-0.030
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.166	0.335	0.455	0.323	0.088	-----	0.287	0.370	0.708	0.922	0.765	0.346	-----	0.009	0.047	0.152	0.199	0.094	-----	0.135	0.276	0.202	-----	-0.050
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.450	0.519	0.438	0.303	0.236	-----	0.812	0.949	0.854	0.551	0.210	0.026	-----	0.301	0.411	0.178	-0.024	-0.084	-----	-0.554	-1.100	-0.900	-----	0.310
REQUIRED SHOP CAMBER INCHES	-----	0.656	0.936	1.005	0.704	0.344	-----	1.172	1.413	1.740	1.705	1.168	0.461	-----	0.309	0.464	0.358	0.214	0.025	-----	-0.371	-0.727	-0.620	-----	0.230
HEIGHT OF CHORD INCHES	-----	0.336	0.754	1.506	2.260	3.012	3.766	3.326	3.240	2.887	2.448	2.010	1.571	1.132	0.536	0.371	-0.060	-0.655	-1.250	-1.846	-1.410	-0.923	-0.462	-----	0.230
GIRDER 4G7																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.039	0.080	0.108	0.076	0.020	-----	0.071	0.092	0.175	0.228	0.190	0.087	-----	-0.002	0.006	0.029	0.038	0.014	-----	0.047	0.095	0.076	-----	-0.030
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.160	0.324	0.440	0.311	0.084	-----	0.283	0.365	0.696	0.906	0.751	0.340	-----	0.009	0.046	0.148	0.195	0.092	-----	0.133	0.271	0.198	-----	-0.050
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.365	0.331	0.065	-0.094	0.037	-----	0.811	0.948	0.854	0.553	0.212	0.027	-----	0.300	0.409	0.177	-0.024	-0.083	-----	-0.555	-1.100	-0.899	-----	0.310
REQUIRED SHOP CAMBER INCHES	-----	0.565	0.735	0.612	0.293	0.141	-----	1.166	1.405	1.725	1.686	1.153	0.454	-----	0.307	0.460	0.353	0.209	0.023	-----	-0.376	-0.734	-0.625	-----	0.230
HEIGHT OF CHORD INCHES	-----	0.869	0.601	1.202	1.802	2.404	3.005	2.617	2.542	2.231	1.843	1.456	1.069	0.682	0.136	-0.017	-0.412	-0.958	-1.504	-2.051	-1.567	-1.025	-0.512	-----	0.250
GIRDER 4G8																									
DEFLECTION DUE TO WT. OF STEEL	-----	0.039	0.079	0.108	0.077	0.020	-----	0.073	0.094	0.177	0.229	0.190	0.087	-----	-0.003	0.005	0.027	0.036	0.014	-----	0.047	0.094	0.075	-----	-0.030
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.174	0.351	0.479	0.342	0.093	-----	0.316	0.407	0.770	0.994	0.822	0.372	-----	0.005	0.043	0.152	0.203	0.095	-----	0.143	0.292	0.213	-----	-0.060
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.280	0.144	-0.309	-0.486	-0.159	-----	0.811	0.947	0.854	0.554	0.214	0.028	-----	0.298	0.407	0.176	-0.024	-0.083	-----	-0.557	-1.100	-0.899	-----	0.310
REQUIRED SHOP CAMBER INCHES	-----	0.493	0.574	0.278	-0.067	-0.046	-----	1.199	1.447	1.801	1.777	1.226	0.488	-----	0.300	0.454	0.354	0.216	0.026	-----	-0.366	-0.714	-0.611	-----	0.220
HEIGHT OF CHORD INCHES	-----	0.202	0.450	0.900	1.350	1.800	2.250	1.914	1.848	1.579	1.243	0.907	0.571	0.236	-0.262	-0.400	-0.760	-1.258	-1.756	-2.254	-1.722	-1.127	-0.563	-----	0.280



NOTE:
NEGATIVE VALUES INDICATE DIMENSION IS BELOW BASELINE OR CHORD.

SEE SHEETS 191-192 FOR GIRDER DIMENSIONS.

LAYOUT DIAGRAM

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

197
232

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

LAYOUT DIAGRAMS

BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FK	C.P		RH	WKD	6-22-68	

DEFLECTION AND CAMBER TABLE

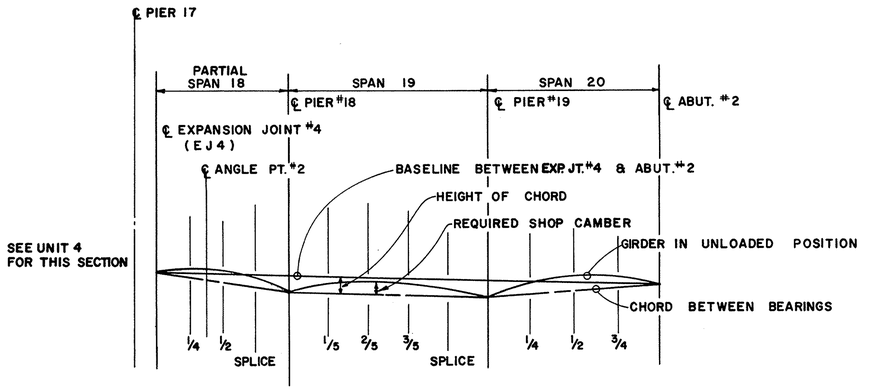
	PARTIAL SPAN 18					SPAN 19					SPAN 20			
	E.J.#4	1/4	1/2	SPLICE		1/5	2/5	3/5	SPLICE	PIER #19	1/4	1/2	3/4	ABUT#2
GIRDER 5G1														
DEFLECTION DUE TO WT. OF STEEL	-----	0.034	0.035	0.017	-----	0.054	0.109	0.100	0.046	-----	0.049	0.111	0.097	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.197	0.202	0.097	-----	0.315	0.630	0.577	0.266	-----	0.285	0.642	0.559	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.489	0.951	0.369	-----	-1.158	-1.614	-1.530	-0.992	-----	-0.930	-1.222	-0.905	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.720	1.187	0.482	-----	-0.789	-0.874	-0.853	-0.680	-----	-0.596	-0.469	-0.250	-----
HEIGHT OF CHORD - INCHES	-----	-1.602	-3.203	-4.384	-6.407	-6.824	-7.243	-7.661	-8.032	-8.497	-6.373	-4.248	-2.124	-----
GIRDER 5G2														
DEFLECTION DUE TO WT. OF STEEL	-----	0.034	0.036	0.018	-----	0.045	0.091	0.082	0.037	-----	0.048	0.108	0.094	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.182	0.189	0.096	-----	0.241	0.484	0.437	0.194	-----	0.254	0.571	0.498	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.269	0.536	0.107	-----	-1.159	-1.615	-1.532	-0.995	-----	-0.930	-1.222	-0.905	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.485	0.761	0.221	-----	-0.873	-1.039	-1.012	-0.764	-----	-0.629	-0.544	-0.313	-----
HEIGHT OF CHORD - INCHES	-----	-1.756	-3.554	-4.805	-7.021	-7.376	-7.730	-8.084	-8.398	-8.792	-6.594	-4.396	-2.198	-----
GIRDER 5G3														
DEFLECTION DUE TO WT. OF STEEL	-----	0.034	0.035	0.018	-----	0.044	0.089	0.081	0.036	-----	0.048	0.107	0.093	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.178	0.186	0.095	-----	0.236	0.474	0.427	0.189	-----	0.254	0.568	0.495	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	0.049	0.121	-0.155	-----	-1.159	-1.616	-1.533	-0.996	-----	-0.930	-1.221	-0.904	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.261	0.342	-0.043	-----	-0.879	-1.052	-1.025	-0.771	-----	-0.629	-0.546	-0.315	-----
HEIGHT OF CHORD - INCHES	-----	-1.908	-3.817	-5.224	-7.634	-7.924	-8.213	-8.502	-8.759	-9.082	-6.811	-4.541	-2.270	-----
GIRDER 5G4														
DEFLECTION DUE TO WT. OF STEEL	-----	0.033	0.034	0.016	-----	0.070	0.134	0.123	0.059	-----	0.064	0.139	0.119	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.170	0.177	0.084	-----	0.362	0.695	0.638	0.306	-----	0.333	0.723	0.618	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	-0.172	-0.294	-0.417	-----	-1.159	-1.616	-1.533	-0.997	-----	-0.929	-1.218	-0.901	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.031	-0.083	-0.316	-----	-0.728	-0.787	-0.772	-0.632	-----	-0.532	-0.357	-0.165	-----
HEIGHT OF CHORD - INCHES	-----	-2.060	-4.122	-5.640	-8.243	-8.467	-8.692	-8.916	-9.114	-9.365	-7.024	-4.682	-2.341	-----
GIRDER 5G5														
DEEEECTION DUE TO WT. OF STEEL	-----	0.032	0.034	0.016	-----	0.069	0.132	0.121	0.058	-----	0.064	0.138	0.118	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.168	0.175	0.083	-----	0.357	0.686	0.630	0.302	-----	0.332	0.720	0.615	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	-0.184	-0.314	-0.412		-1.241	-1.752	-1.601	-0.945	-----	-0.983	-1.287	-0.950	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.016	-0.105	-0.313	-----	-0.815	-0.934	-0.851	-0.586	-----	-0.587	-0.428	-0.216	-----
HEIGHT OF CHORD - INCHES	-----	-2.111	-4.222	-5.777	-8.442	-8.666	-8.890	-9.115	-9.314	-9.564	-7.174	-4.782	-2.392	-----
GIRDER 5G6														
DEFLECTION DUE TO WT. OF STEEL	-----	0.032	0.033	0.017	-----	0.042	0.084	0.076	0.033	-----	0.048	0.106	0.092	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.170	0.177	0.091	-----	0.223	0.448	0.402	0.176	-----	0.252	0.560	0.487	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	-0.186	-0.316	-0.413	-----	-1.487	-2.244	-1.987	-1.162	-----	-0.980	-1.283	-0.946	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.016	-0.805	-0.306	-----	-1.221	-1.712	-1.510	-0.952	-----	-0.680	-0.617	-0.367	-----
HEIGHT OF CHORD - INCHES	-----	-2.315	-4.631	-6.337	-9.262	-9.487	-9.712	-9.937	-10.136	-10.388	-7.791	-5.195	-2.597	-----
GIRDER 5G7														
DEFLECTION DUE TO WT. OF STEEL	-----	0.031	0.033	0.017	-----	0.041	0.083	0.074	0.032	-----	0.048	0.105	0.091	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.167	0.174	0.089	-----	0.218	0.438	0.392	0.171	-----	0.252	0.557	0.484	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	-0.187	-0.318	-0.414	-----	-1.733	-2.737	-2.372	-1.387	-----	-0.977	-1.277	-0.941	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.011	-0.111	-0.308	-----	-1.473	-2.216	-1.906	-1.174	-----	-0.677	-0.615	-0.366	-----
HEIGHT OF CHORD - INCHES	-----	-2.520	-5.039	-6.896	-10.079	-10.304	-10.531	-10.757	-10.956	-11.209	-8.407	-5.605	-2.802	-----
GIRDER 5G8														
DEFLECTION DUE TO WT. OF STEEL	-----	0.030	0.031	0.015	-----	0.047	0.095	0.086	0.039	-----	0.049	0.107	0.093	-----
DEFLECTION DUE TO REMAINING DEAD LOAD	-----	0.174	0.179	0.087	-----	0.275	0.548	0.496	0.225	-----	0.282	0.621	0.536	-----
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	-----	-0.189	-0.320	-0.415	-----	+1.999	-3.229	-2.756	-1.593	-----	-0.972	-1.271	-0.936	-----
REQUIRED SHOP CAMBER - INCHES	-----	0.015	-0.110	-0.314	-----	-1.657	-2.587	-2.174	-1.329	-----	-0.642	-0.542	-0.307	-----
HEIGHT OF CHORD - INCHES	-----	-2.724	-5.447	-7.454	-10.894	-11.120	-11.347	-11.574	-11.773	-12.026	-9.020	-6.013	-3.007	-----

MAY BE FILMED
JUN 19 1969
REPRODUCTION

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

198
232



LAYOUT DIAGRAM

SEE SHEET 193 FOR GIRDER DIMENSIONS.

NOTE:
NEGATIVE VALUES INDICATE DIMENSION IS BELOW BASELINE OR CHORD.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

LAYOUT DIAGRAMS

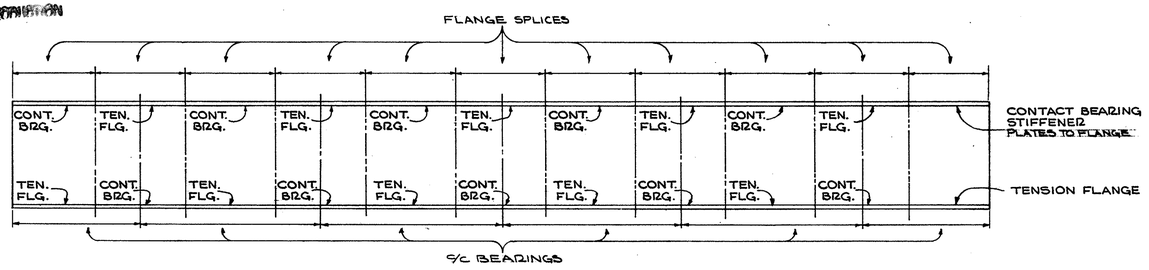
BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
F.K.	C.P.		R.H.	WKD	6-22-68	

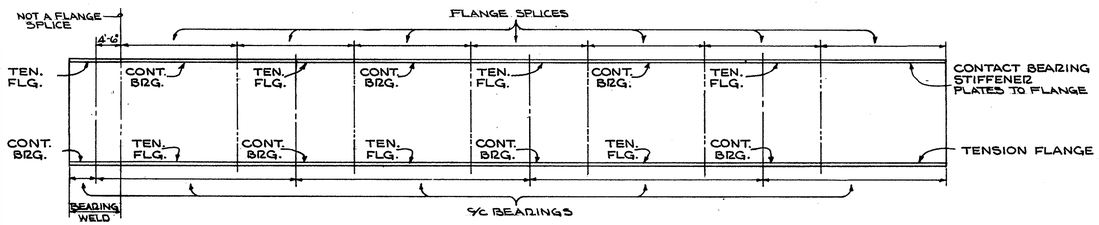
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1150 (1)	

199/232

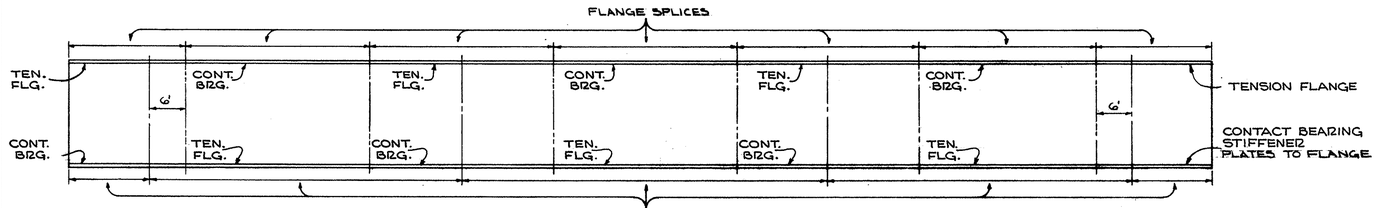
MAH-711-0.17



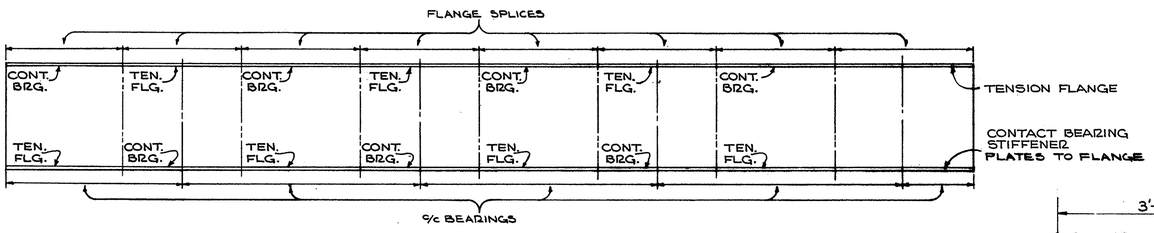
UNIT Nº 1



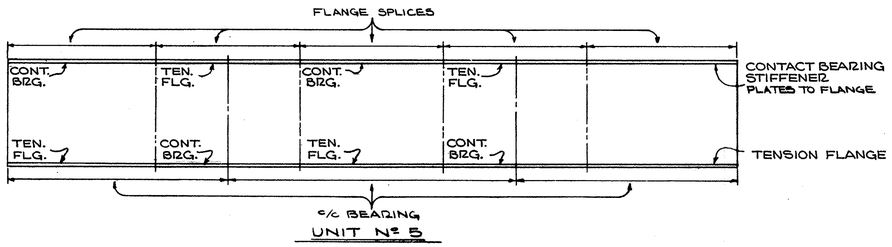
UNIT Nº 2



UNIT Nº 3

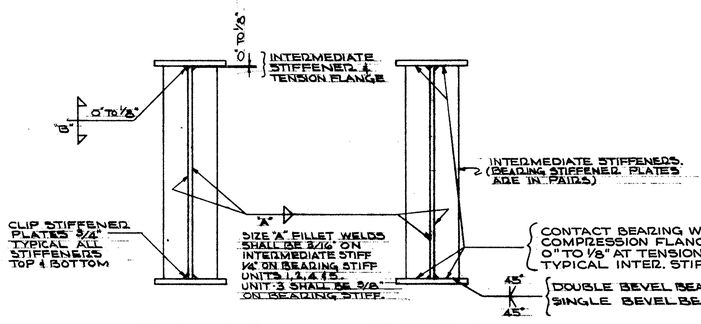


UNIT Nº 4



UNIT Nº 5

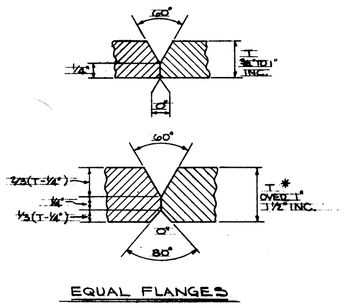
DIAGRAM FOR FIT & WELDING OF INTERMEDIATE STIFFENER PLATES TO GIRDER FLANGES



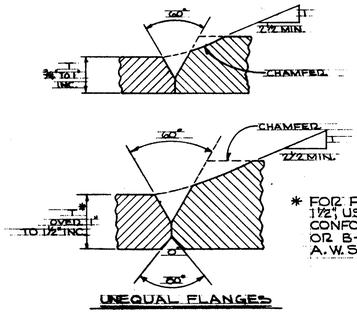
SECTION A-A

SECTION B-B

ALL BEARING STIFFENERS SHALL BE MILLED TO PROVIDE FIRM BEARING CONTACT WITH TOP FLANGE.



EQUAL FLANGES



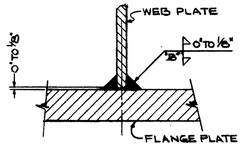
UNEQUAL FLANGES

* FOR PLATE THICKNESS OVER 1 1/2", USE JOINT PREPARATION CONFORMING TO B-U3a-S OR B-U7-S, FIGURE 216 A.W.S. SPECIFICATIONS.

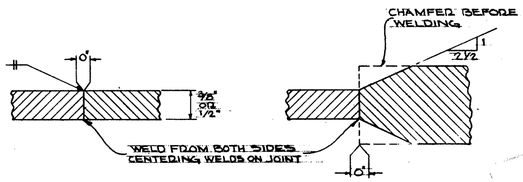
FLANGE SPLICES

ALL FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE. ALL GRINDING SHALL BE PARALLEL TO THE DIRECTION OF STRESS. ALL FLANGE TO FLANGE AND WEB TO WEB SPLICES ARE TO BE GROUND.

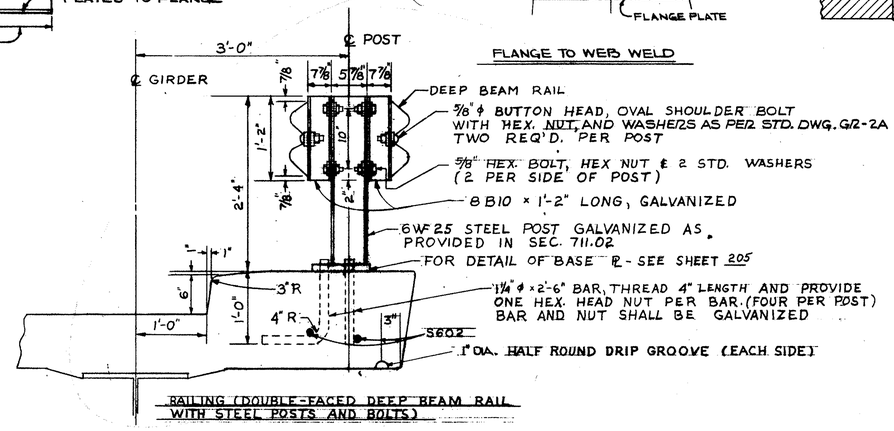
SIZE "B" FILLET WELDS SHALL BE 5/16" FOR 1 1/2" OR LESS FLANGES AND 3/8" FOR THICKER FLANGES



FLANGE TO WEB WELD



WEB SPLICES



RAILING (DOUBLE-FACED DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

WELD DETAILS

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

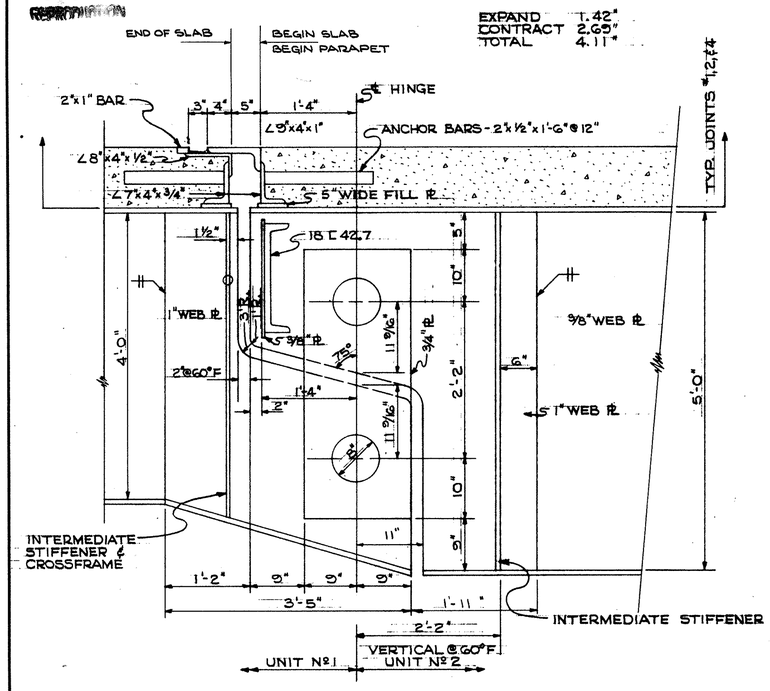
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.A.H.	J.D.P.		RM	WKD	6-22-68	

MISFILED
JUN 13 1969
REPRODUCTION

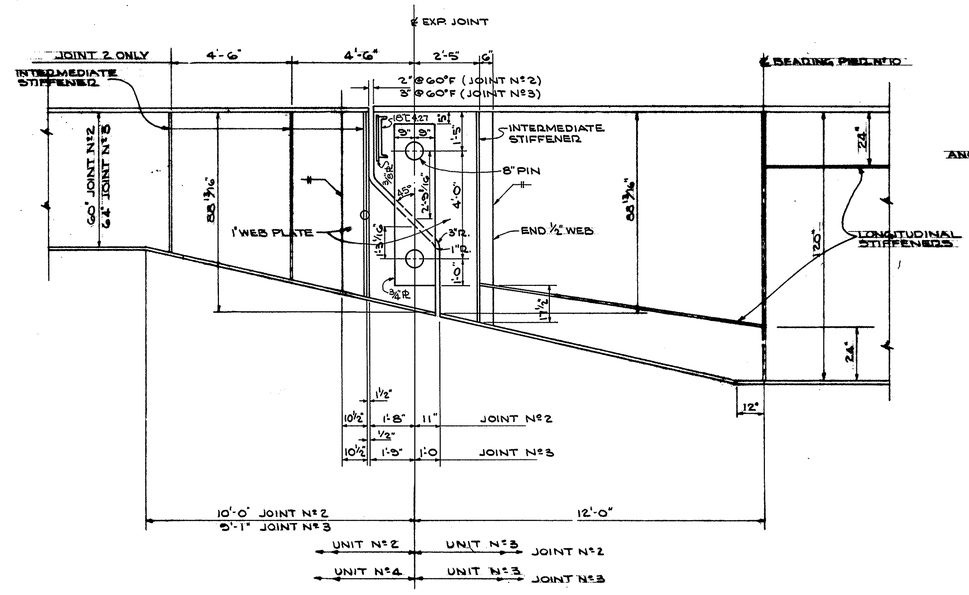
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11B2.11	

200
232

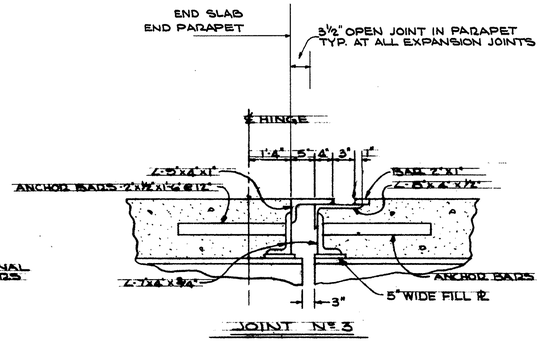
MAH.-711-0.17



DETAILS - EXPANSION JOINT Nº1
SCALE: 1"=1'-0"

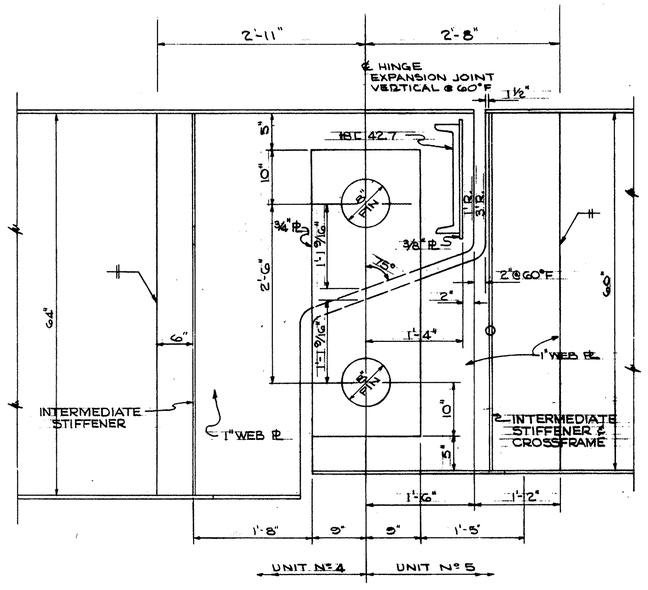


DETAILS - EXPANSION JOINT Nº2
EXPANSION JOINT Nº3 OPPOSITE HAND EXCEPT DIMENSIONS SHOWN
SCALE: 3/8"=1'-0"

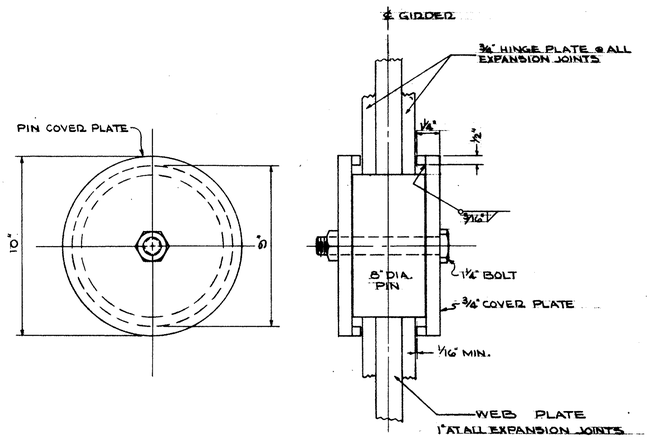


JOINT Nº3

NOTE:
INNER FACE OF HINGE PLATES AND PORTIONS OF GIRDER COVERED BY HINGE PLATES SHALL BE PAINTED 2 COATS FINISH PAINT BEFORE ERECTION.



DETAILS - EXPANSION JOINT Nº4
SCALE: 1"=1'-0"



HINGE PIN DETAILS
SCALE: NONE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

HINGE DETAILS

BRIDGE Nº MAH—711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	J.D.R.		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH.-711-0.17

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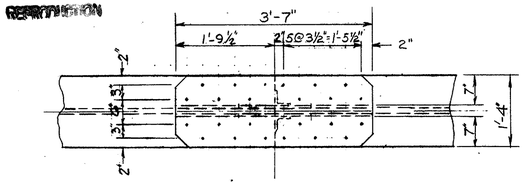
232

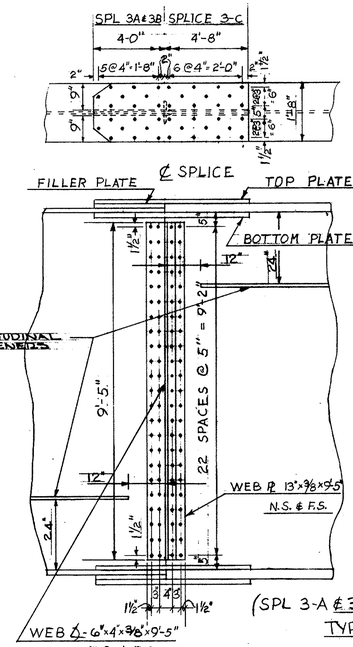


ALL BOLTS TO BE 1" ϕ #A325

TYPICAL UNIT 1 SPLICE DETAILS

SCALE - ¾" = 1'-0"

SPLICE №	TOP PLATE	BOTTOM ℞	FILLER ℞
SPL 1-A	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅛" × 1'-9½"
SPL 1-B	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅜" × 1'-9½"
SPL 1-C	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅜" × 1'-9½"
SPL 1-D	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ¼" × 1'-9½"
SPL 1-E	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅝" × 1'-9½"
SPL 1-F	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅝" × 1'-9½"
SPL 1-G	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ¾" × 1'-9½"
SPL 1-H	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅜" × 1'-9½"
SPL 1-I	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ⅜" × 1'-9½"
SPL 1-J	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × 1" × 1'-9½"
SPL 1-K	16" × ½" × 3'-7"	7" × ½" × 3'-7"	16" × ½" × 1'-9½"



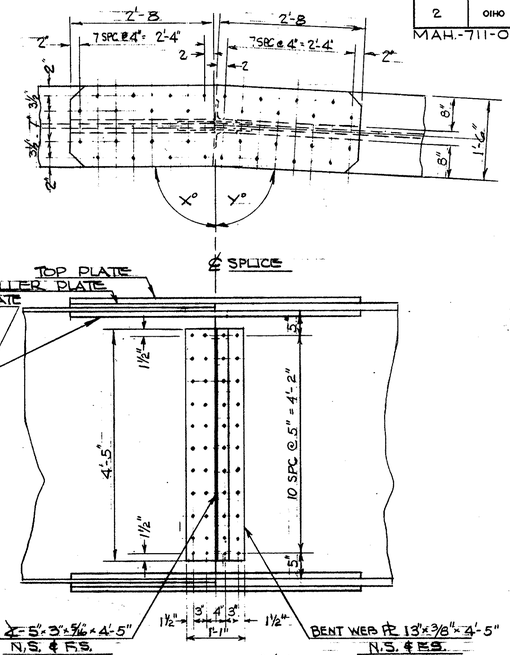
SPLICE №	TOP PLATE	BOTTOM ℞	FILLER ℞
SPL 3-A	20" × ⅝" × 4'-0"	9" × ⅝" × 4'-0"	NONE
SPL 3-B	20" × ⅝" × 4'-0"	9" × ⅝" × 4'-0"	20" × ½" × 2'0"
SPL 3-C	20" × ⅞" × 4'-8"	9" × ⅞" × 4'-8"	NONE

(3-A, 3-B & 3-C) ALL BOLTS TO BE 1" ϕ #A325

(SPL 3-A & 3-C) ND FILLER ℞

TYPICAL UNIT 3 SPLICE DETAILS

SCALE - ½" = 1'-0"

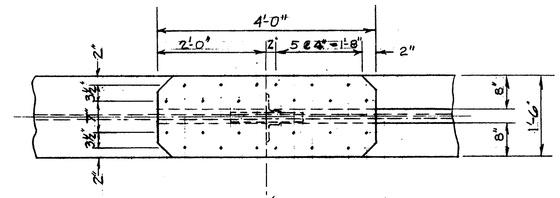


ALL BOLTS TO BE 1" ϕ #A325

TYPICAL UNIT 5 SPLICE DETAILS

SCALE - ¾" = 1'-0"

SPLICE №	TOP PLATE	BOTTOM ℞	FILLER ℞	X°	Y°
SPL 5-A	18" × ½"	8" × ½"	18" × ¼" × 2'-8"	89° 15' 03"	88° 23' 02"
SPL 5-B	18" × ½"	8" × ½"	18" × ⅜" × 2'-8"	89° 15' 03"	88° 23' 02"
SPL 5-C	18" × ½"	8" × ½"	NONE	89° 15' 03"	88° 23' 02"
SPL 5-D	18" × ½"	8" × ½"	18" × ¾" × 2'-8"	88° 27' 48"	88° 53' 46"
SPL 5-E	18" × ½"	8" × ½"	18" × ⅞" × 2'-8"	88° 27' 48"	88° 53' 46"
SPL 5-F	18" × ½"	8" × ½"	18" × 1" × 2'-8"	88° 27' 48"	88° 53' 46"

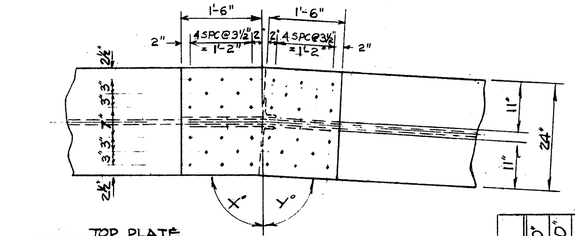


ALL BOLTS TO BE 1" ϕ #A 325

TYPICAL UNIT 2 SPLICE DETAILS

SCALE - ¾" = 1'-0"

SPLICE №	TOP PLATE	BOTTOM ℞	FILLER ℞
SPL 2-A	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ¼" × 2'-0"
SPL 2-B	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ⅜" × 2'-0"
SPL 2-C	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ⅝" × 2'-0"
SPL 2-D	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ½" × 2'-0"
SPL 2-E	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ⅝" × 2'-0"
SPL 2-F	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × ¾" × 2'-0"
SPL 2-G	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × 1" × 2'-0"
SPL 2-H	18" × ½" × 4'-0"	8" × ½" × 4'-0"	18" × 1⅛" × 2'-0"



ALL BOLTS TO BE 1" ϕ #A325

TYPICAL UNIT 4 SPLICE DETAILS

SCALE - ¾" = 1'-0"

SPLICE №	TOP PLATE	BOTTOM ℞	FILLER ℞	X°	Y°
SPL 4-A	24" × ½"	11" × ½"	24" × ⅜" × 1'-6"	88° 35' 33"	87° 57' 10"
SPL 4-B	24" × ½"	11" × ½"	24" × ½" × 1'-6"	88° 35' 33"	87° 57' 10"
SPL 4-C	24" × ½"	11" × ½"	NONE	88° 35' 33"	87° 57' 10"
SPL 4-D	24" × ½"	11" × ½"	24" × ⅝" × 1'-6"	87° 57' 10"	88° 28' 31"
SPL 4-E	24" × ½"	11" × ½"	NONE	87° 57' 10"	88° 28' 31"
SPL 4-F	24" × ½"	11" × ½"	NONE	88° 28' 31"	88° 47' 18"
SPL 4-G	24" × ½"	11" × ½"	NONE	90°	90°
SPL 4-H	24" × ½"	11" × ½"	24" × ½" × 1'-6"	90°	90°
SPL 4-I	24" × ½"	11" × ½"	24" × ⅝" × 1'-6"	90°	90°
SPL 4-J	24" × ½"	11" × ½"	24" × ¾" × 1'-6"	90°	90°

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

FIELD SPLICE DETAILS

BRIDGE № MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	JDP		RH	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159(1)	

MAH.-711-0.17

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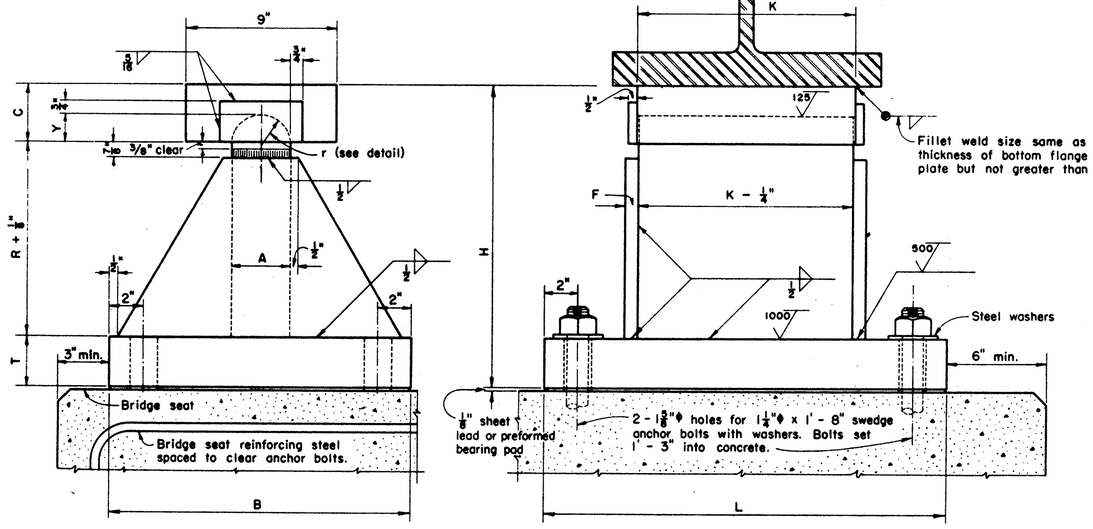
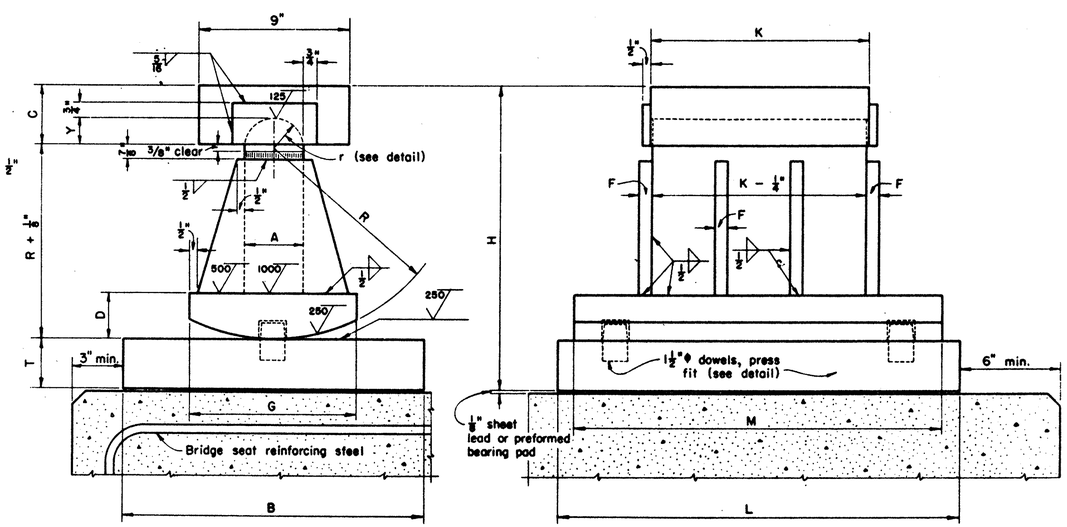
232



STRUCTURAL STEEL BOLSTER

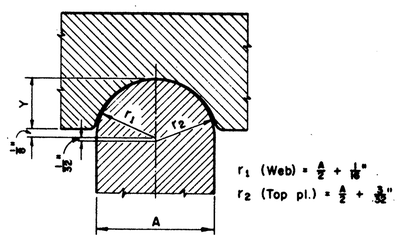
See table below for additional dimensions.



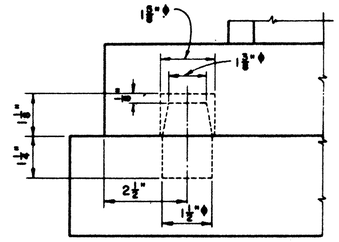
STRUCTURAL STEEL ROCKER

See table below for additional dimensions.

No REQUIRED	No REQUIRED	TYPE ROCKER	TYPE BOLSTER	DIMENSIONS (INCHES) A	B	C	D	F	G	H	K	L	M	R	T	Y	#WEIGHT(lb.) ROCKER	BOLSTER
4		R-75		2½	8	2½	1¾	½	7	9⅝	9	15	16	5½	1¼	1 3/16	205	
6		R-100	B-100	2½	10	2½	2	½	7½	10⅝	10	19	17	6½	¼	1 3/16	250	275
9		R-125		3	11	3	2	½	8	12⅛	10½	20	18	7½	½	1 7/16	385	
12	2	R-175	B-175	3	14	3½	2½	½	9	15⅛	12	23	20	9½	2	1 7/16	505	455
14	2	R-200	B-200	3	16	3½	2¾	5/8	9	16⅜	12	24	21	10½	2¼	1 7/16	605	540
12	6	R-225	B-225	3	17	3½	2¾	5/8	9	16⅞	13	25	22	11	2¼	1 7/16	665	590
21	4	R-250	B-250	3½	18	3½	2¾	¾	10	17⅜	13	26	23	11½	2½	1 1/16	775	695
16.	4	R-275	B-275	3½	19	3½	3¼	¾	12	18⅜	14	27	24	12	2⅝	1 1/16	945	800
15	16	R-300	B-300	3½	20	3½	3¼	¾	12	19⅛	14	28	25	12½	3	1 1/16	1050	855
6	5	R-350	B-350	3½	22	4	3½	¾	14	21⅝	20	30	27	14	3½	1 1/16	1325	1225
	1		B-350 SPECIAL	3½	22	4	3½	¾	14	21 7/16	20	30	27	14	3¾	1 11/16		1230
8	8	R-600	B-600	4	24	4	3-3/4	1-1/4	16	28-1/8	26-1/4	38	34	20	4	1-15/16	2163	1728



TOP BEARING DETAIL



DOWEL DETAIL

USE A441 STRUCTURAL STEEL FOR R-600 AND B-600

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

ROCKER & BOLSTER

BRIDGE Nº MAH—711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

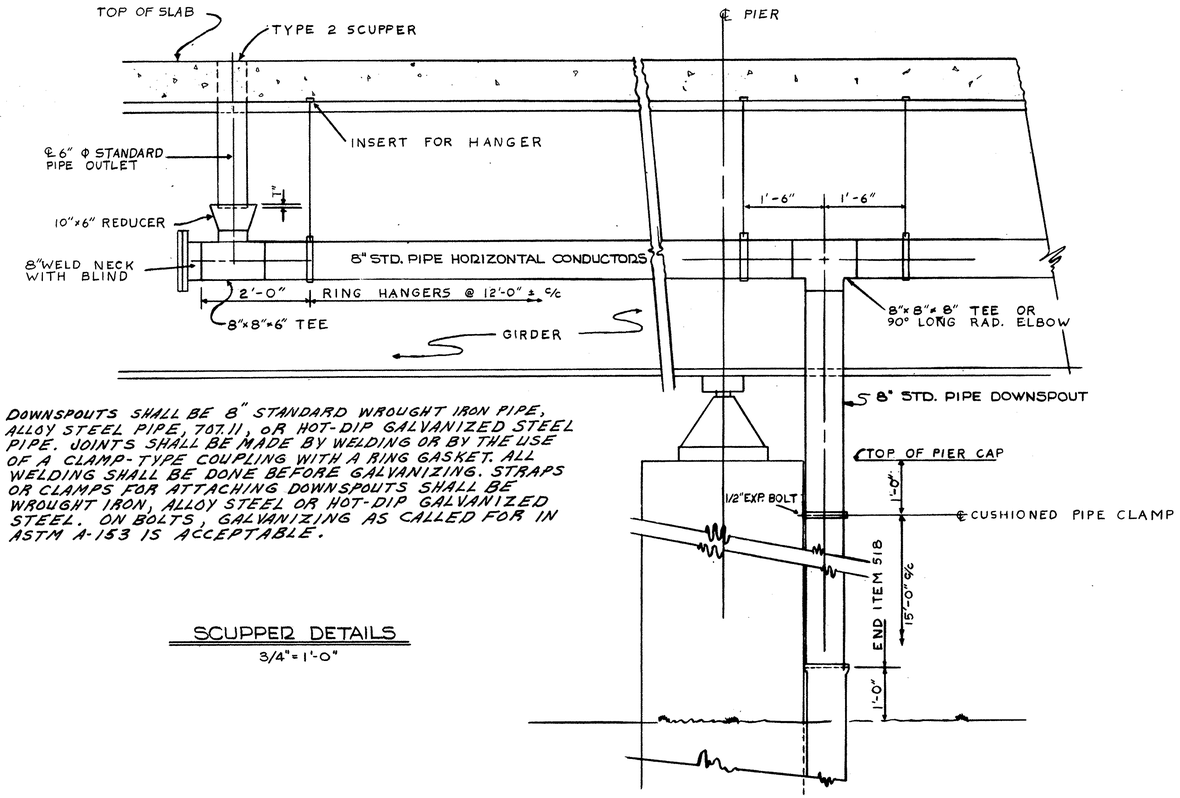
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LT	JP		RH	WKD	6-22-68	

MICROFILMED JUN 13 1969 RECORDATION

FED. RD.	STATE	PROJECT	
2	OHIO	US 1159 (1)	

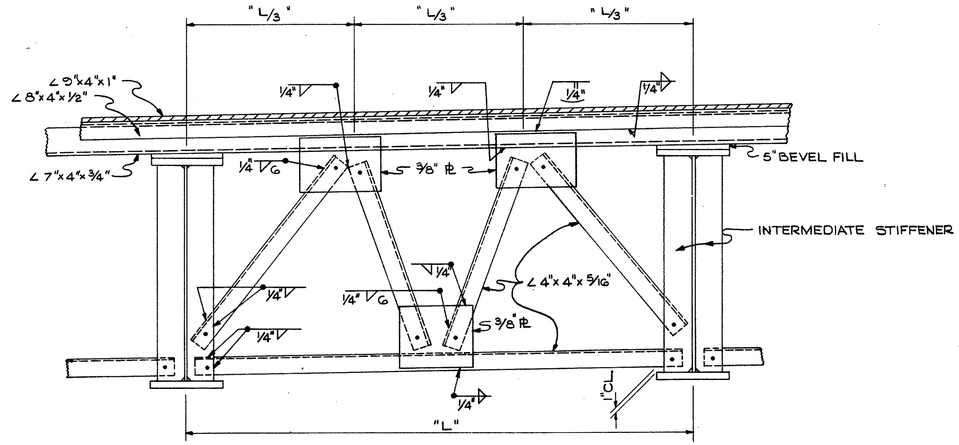
MAH-711-0116

203
232

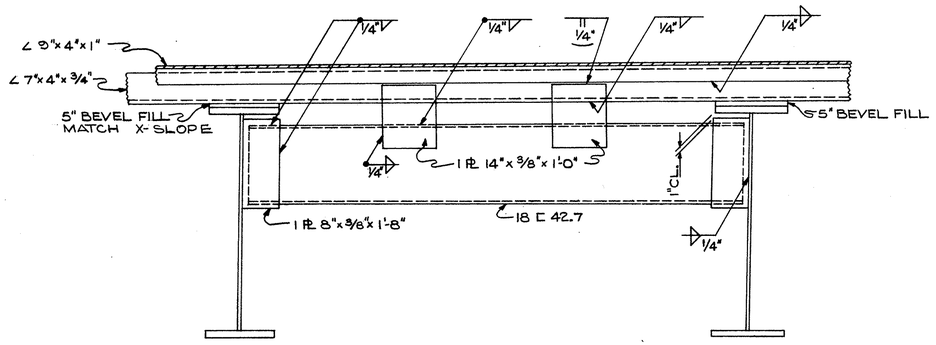


DOWNSPOUTS SHALL BE 8" STANDARD WROUGHT IRON PIPE, ALLOY STEEL PIPE, 707.11, OR HOT-DIP GALVANIZED STEEL PIPE. JOINTS SHALL BE MADE BY WELDING OR BY THE USE OF A CLAMP-TYPE COUPLING WITH A RING GASKET. ALL WELDING SHALL BE DONE BEFORE GALVANIZING. STRAPS OR CLAMPS FOR ATTACHING DOWNSPOUTS SHALL BE WROUGHT IRON, ALLOY STEEL OR HOT-DIP GALVANIZED STEEL. ON BOLTS, GALVANIZING AS CALLED FOR IN ASTM A-153 IS ACCEPTABLE.

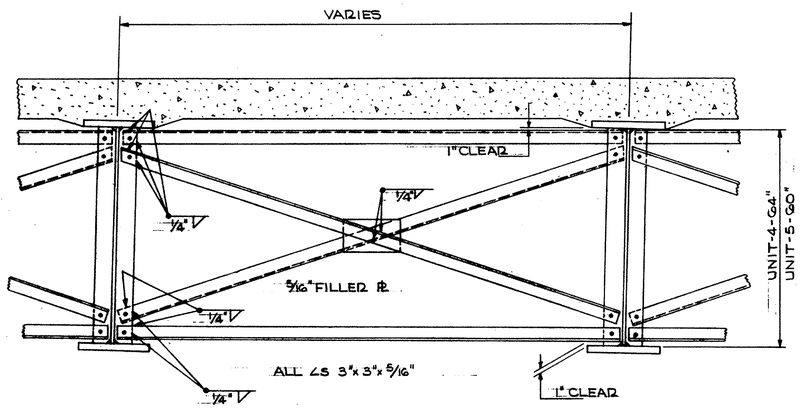
SCUPPER DETAILS
3/4"=1'-0"



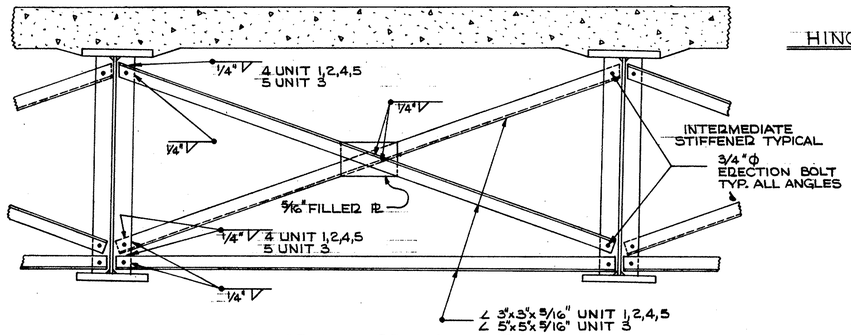
HINGE CROSSFRAME (TYPE-1)
3/4"=1'-0"



HINGE CROSSFRAME (TYPE-2)
3/4"=1'-0"



SPECIAL CROSSFRAME DETAIL
3/4"=1'-0"



INTERMEDIATE CROSSFRAMES
3/4"=1'-0"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

MISC. DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.H.			R.H.	W.K.D.	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (I)	

MAH.-711-0.17

204
232

MARKED FOR MICROFILMING JUN 29 1989 REPRODUCTION

190 - SPC'S. @ 8" = 126'-8"
S605 (TOP) S707 (BOTTOM)

℄ BEARING - ABUT. N° 1

S607 (TOP)

S602 (TOP) EQUALLY SPACED

℄ BEARING - PIER N° 1

190 - SPC'S. @ 8" = 126'-8"
S617 (TOP) S708 (BOTTOM)

S602 (BOTTOM) EQUALLY SPACED

℄ BEARING - PIER N° 2

S602 (TOP)

341 - SPC'S @ 8" = 227'-4"
S601 (TOP)
S701 (BOTTOM)

℄ BEARING - PIER N° 3

℄ EXPANSION JOINT N° 1

S602 (TOP)
S706 (BOTTOM)

S607 (BOTTOM)

S602 (BOTTOM) SEE TRANSVERSE SECTION FOR SPACING

S602 (TOP)
S706 (BOTTOM)

S604 @ 8" (TOP)

S602 (TOP)

S602 (TOP) SEE TRANSVERSE SECTION FOR SPACING

S602 (TOP & BOTTOM) IN RAISED MEDIAN
317 - SPC'S. @ 1'-6" = 475'-6", 318 - S503 & 318 - S504 (MEDIAN)

℄ STRUCTURE

S702 @ 8" (BOTTOM)

BEGIN SLAB UNIT N° 2

S603

S609 (BOTTOM)

1'-11" LAP

S602 (BOTTOM)

TYPICAL OVER PIERS
3'-0" 16'-6" 16'-6" 3'-0"

5"

1'-9"

9"

315 - SPC'S. @ 1'-6" = 472'-6", 316 - S501 & 316 - S502 (SOUTH SIDE)
320 - SPC'S. @ 1'-6" = 480'-0", 321 - S501 & 321 - S502 (NORTH SIDE)

SLAB REINFORCING PLAN

1'-1 3/16" (SOUTH SIDE)
1'-11" (NORTH SIDE)

59 - SPC'S. @ 8'-0" = 472'-0" (SOUTH SIDE)
61 - SPC'S. @ 7'-10" = 477'-10" (NORTH SIDE)

1'-1 3/16" (SOUTH SIDE)
1'-11" (NORTH SIDE)

3 1/2" OPEN JOINT (TYPICAL)

(SOUTH SIDE) 4'-0" 4'-0"
(NORTH SIDE) 3'-7" 3'-7"

R505 (SOUTH SIDE)
R507 (NORTH SIDE)

R506 (SOUTH SIDE)
R508 (NORTH SIDE)

FOR DETAIL OF WINGWALLS SEE DWG. N° 158

9 - S505, 8 - SPC'S. @ 1'-7 1/2" = 12'-10" (SOUTH SIDE)
8 - S505, 8 - SPC'S. @ 1'-8" = 13'-4" (NORTH SIDE)

12 - S505, 11 - SPC'S. @ 1'-8" = 18'-8" (SOUTH SIDE)
11 - S505, 10 - SPC'S. @ 1'-6 7/8" = 15'-4" (NORTH SIDE)

9 - S505, 8 - SPC'S. @ 1'-7 1/2" = 12'-10" (SOUTH SIDE)
9 - S505, 8 - SPC'S. @ 1'-8" = 13'-4" (NORTH SIDE)

13'-1 3/16" (SOUTH SIDE)
13'-8" (NORTH SIDE)

28 - PANELS @ 16'-0" = 448'-0" (SOUTH SIDE)
29 - PANELS @ 15'-8" = 454'-4" (NORTH SIDE)

13'-1 3/16" (SOUTH SIDE)
13'-8" (NORTH SIDE)

ELEVATION - RAILING DETAILS

916.70	916.28	915.84	915.39	914.95	914.34	913.75	913.13	912.55	912.07	911.62	911.16	910.70	910.36	910.04	909.72	909.42	909.16	908.92	908.66	908.41	908.28	908.16	908.05	907.94
														FACE OF CURB										
ABUTMENT N° 1			PIER N° 1		PIER N° 2			PIER N° 3				℄ DIVISION ST. BRIDGE			PIER N° 4				PIER N° 5		EXPANSION JOINT N° 1			
916.69	916.26	915.81	915.35	914.90	914.26	913.68	913.06	912.47	911.98	911.53	911.05	910.60	910.26	909.94	909.63	909.34	909.09	908.86	908.60	908.36	908.24	908.13	908.04	907.94
									FACE OF CURB															

DECK ELEVATIONS

CONCRETE ABOVE THIS POINT TO BE PAID FOR AS PART OF ITEM - 517 (RAILING)

34'-2" (NORMAL) VARIES FROM ℄ ABUT. N° 1 TO ℄ PIER N° 3
30'-8" (NORMAL) VARIES FROM ℄ ABUT. N° 1 TO ℄ PIER N° 3

7 EQUAL SPACES

2 SP. @ 1'-3 1/4" = 2'-6" | 6 - SPC'S. @ 8 1/2" | 2 SP. @ 1'-3 1/4"

(TOP) S602 OR S607
(BOTTOM) S602 OR S607

RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET N° 209 FOR DETAILS

FOR DETAIL OF BASE PL. SEE SHT. N° 205

R507 OR R508
S505
S502
S501

1" DIA. HALF-ROUND DRIP GROOVE

S605 OR S612

S602 OR S607

S707 OR S708

6" STD. PIPE, 1/4" ℄

BAR 8" x 3/8"

8" STD. PIPE, HORIZONTAL CONDUCTOR PLACED BETWEEN CROSSFRAMES, SLOPES FROM CENTER OF SPAN TO PIER FOR DRAINAGE.

INTERMEDIATE CROSSFRAME ANGLES 3" x 3" x 5/16"
SEE SHEET N° 203 FOR DETAILS

SCUPPER

2'-4" (NORMAL) VARIES FROM ℄ ABUT. N° 1 TO 19'-6 7/8" PAST ℄ PIER N° 3
EXTRA BEAM FROM ABUT. N° 1 TO PIER N° 3

3'-0" 2 - SPC'S. @ 9'-4" = 18'-8" 3'-0"

S602 OR S607

S603

S604

S702

S604

S602 OR S607

SYMMETRICAL ABOUT ℄ EXCEPT AS SHOWN

1 1/4" ϕ x 2'-6" BAR

1" CLEAR.

3/16" FILLET WELD

1" CLEAR.

A TYPICAL HAUNCH WIDTH OF 5" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

HALF TRANSVERSE SECTION

*-DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCLOSED STEEL PLATES.

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF CONCRETE.

This sheet is superseded by sheet No. 209A 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

SLAB DETAILS

BRIDGE N° MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT N° 1

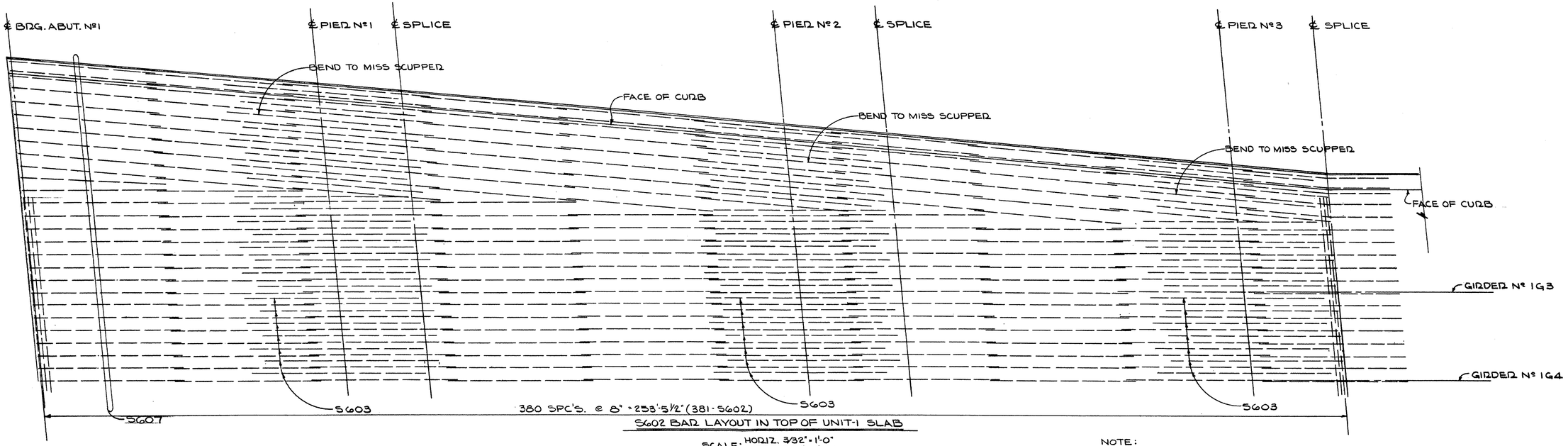
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD	6-22-68	


FED. RD. 2 STATE OHIO PROJECT U.S.-1159 (1)
204A
232
MAH-711-0.17
SLAB REINFORCING PLAN
190-SPC'S. @ 8" = 126'-8"
5605 (TOP) 5707 (BOTTOM)
90-SPC'S. @ 8" = 126'-8"
5617 (TOP) 5708 (BOTTOM)
341-SPC'S @ 8" = 227'-4"
5601 (TOP)
5701 (BOTTOM)
℄ BEARING-ABUT. Nº1
℄ BEARING-PIER Nº1
℄ BEARING-PIER Nº2
℄ BEARING-PIER Nº3
℄ EXPANSION JOINT Nº1
℄ STRUCTURE
BEGIN SLAB UNIT Nº2
5607 (TOP)
5602 (TOP) EQUALLY SPACED
5602 (BOTTOM) EQUALLY SPACED
5602 (TOP)
5602 (TOP) 5706 (BOTTOM)
5607 (BOTTOM)
5602 (BOTTOM) SEE TRANSVERSE SECTION FOR SPACING
5604 @ 8" (TOP)
5602 (TOP)
5602 (TOP) SEE TRANSVERSE SECTION FOR SPACING
5602 (TOP & BOTTOM) IN RAISED MEDIAN
317-SPC'S. @ 1'-6" = 475'-6", 318-5503 & 318-5504 (MEDIAN)
5702 @ 8" (BOTTOM)
5603
5602 (BOTTOM)
1'-11" LAP
TYPICAL OVER PIERS
3'-0" 16'-6" 16'-6" 3'-0"
315-SPC'S. @ 1'-6" = 472'-6", 316-5501 & 316-5502 (SOUTH SIDE)
320-SPC'S. @ 1'-6" = 480'-0", 321-5501 & 321-5502 (NORTH SIDE)
ELEVATION - RAILING DETAILS
1'-1 3/16" (SOUTH SIDE)
1'-11" (NORTH SIDE)
59-SPC'S. @ 8'-0" = 472'-0" (SOUTH SIDE)
61-SPC'S. @ 7'-10" = 477'-10" (NORTH SIDE)
3 1/2" OPEN JOINT (TYPICAL)
FOR DETAIL OF WINGWALLS SEE DWG. Nº 158
28-PANELS @ 16'-0" = 448'-0" (SOUTH SIDE)
29-PANELS @ 15'-8" = 454'-4" (NORTH SIDE)
DECK ELEVATIONS
FACE OF CURB
℄ DIVISION ST. BRIDGE
ABUTMENT Nº1 PIER Nº1 PIER Nº2 PIER Nº3 PIER Nº4 PIER Nº5 EXPANSION JOINT Nº1
NOTE: THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF CONCRETE.
HALF TRANSVERSE SECTION
CONCRETE ABOVE THIS POINT TO BE PAID FOR AS PART OF ITEM-517 (RAILING)
34'-2" (NORMAL) VARIES FROM ℄ ABUT. Nº1 TO ℄ PIER Nº3
30'-8" (NORMAL) VARIES FROM ℄ ABUT. Nº1 TO ℄ PIER Nº3
7-EQUAL SPACES
(TOP) 5602 OR 5607
(BOTTOM) 5602 OR 5607
RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET Nº 120 FOR DETAILS
FOR DETAIL OF BASE R SEE SHT. Nº 205
SYMMETRICAL ABOUT ℄ EXCEPT AS SHOWN
1'-DIA. HALF-ROUND DRIP-GROOVE
8" STD. PIPE HORIZONTAL CONDUCTOR PLACED BETWEEN CROSSFRAMES, SLOPES FROM CENTER OF SPAN TO PIER FOR DRAINAGE.
SCUPPER
9'-4" (NORMAL) VARIES FROM ℄ ABUT. Nº1 TO 19'-6 3/4" PAST ℄ PIER Nº3 EXTRA BEAM FROM ABUT. Nº1 TO PIER Nº3
2-SPC'S. @ 9'-4" = 18'-8"
INTERMEDIATE CROSSFRAME ANGLES 3" x 3" x 5/16" SEE SHEET Nº 203 FOR DETAILS
1 1/4" ϕ x 2'-6" BAR
A TYPICAL HAUNCH WIDTH OF 5" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 5" IN WIDTH.
* DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCLOSED STEEL PLATES.
This sheet supersedes sheet No. 204. 9-12-69
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO
SLAB DETAILS
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1
DESIGNED JP DRAWN J.D.P. TRACED CHECKED JC REVIEWED WKD DATE 6-22-68 REVISED

FED. RD.	STATE	PROJECT	
2	OHIO		

204.B
232

MAH. 711-0.17

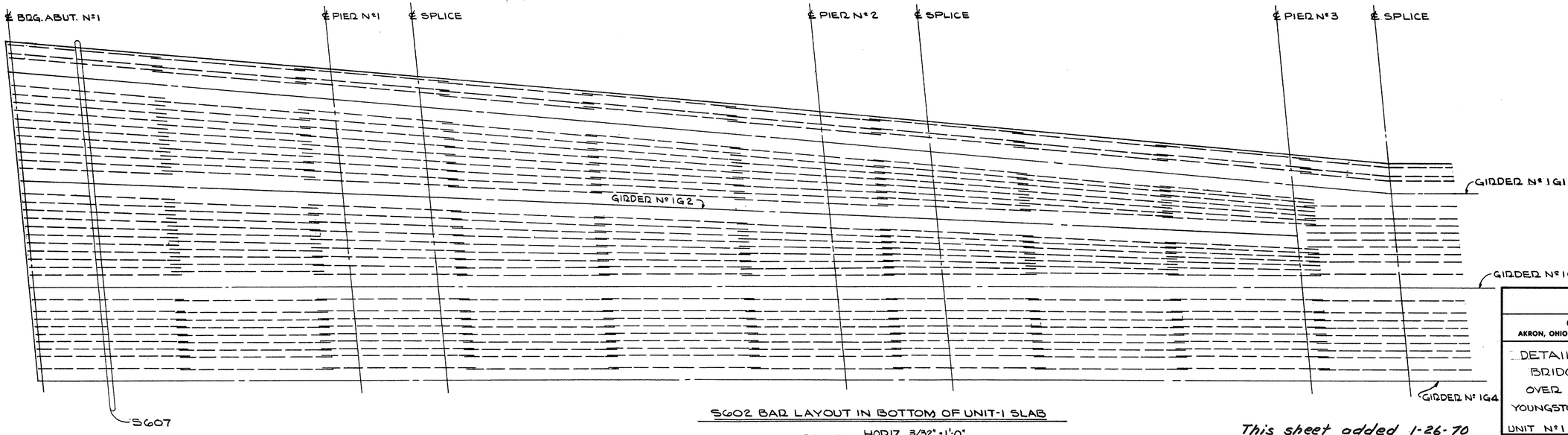


S602 BAR LAYOUT IN TOP OF UNIT-1 SLAB

SCALE: HORIZ. 3/32" = 1'-0"
VERT. 3/16" = 1'-0"

NOTE:
ALL BARS S602
EXCEPT WHERE NOTED.

NOTE:
FOR ADDITIONAL DETAILS
SEE SHEET Nº 204A



S602 BAR LAYOUT IN BOTTOM OF UNIT-1 SLAB

SCALE: HORIZ. 3/32" = 1'-0"
VERT. 3/16" = 1'-0"

This sheet added 1-26-70

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

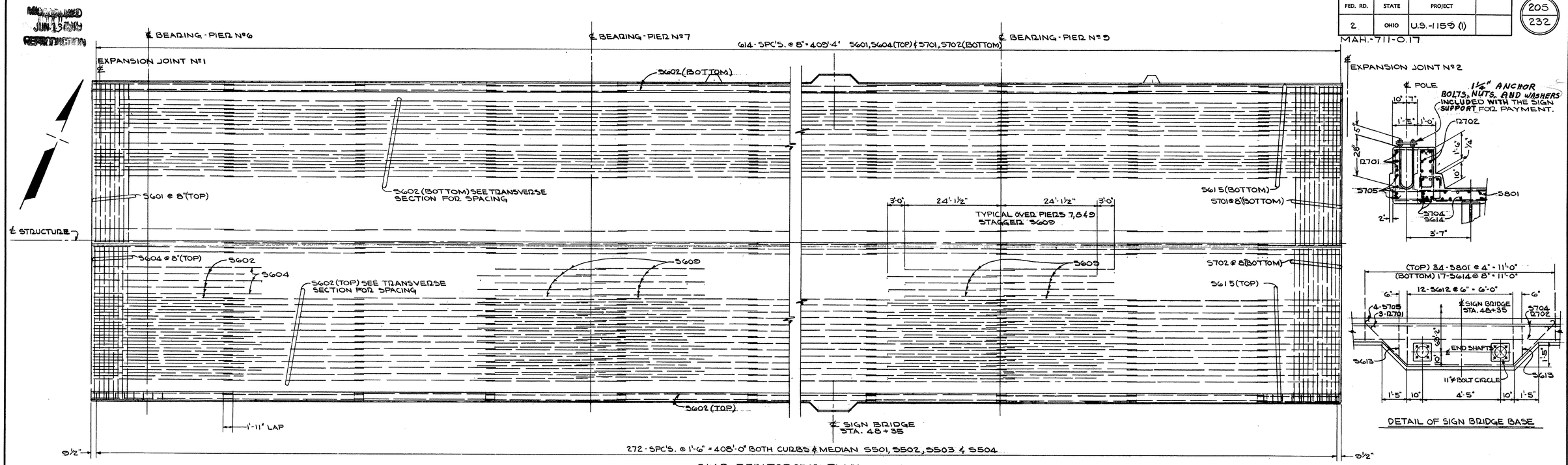
DETAIL - SLAB REINFORCING
BRIDGE Nº MAH. 711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 1

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAH	J.D.P.		J.M	WKD	1-21-70	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1158 (1)	

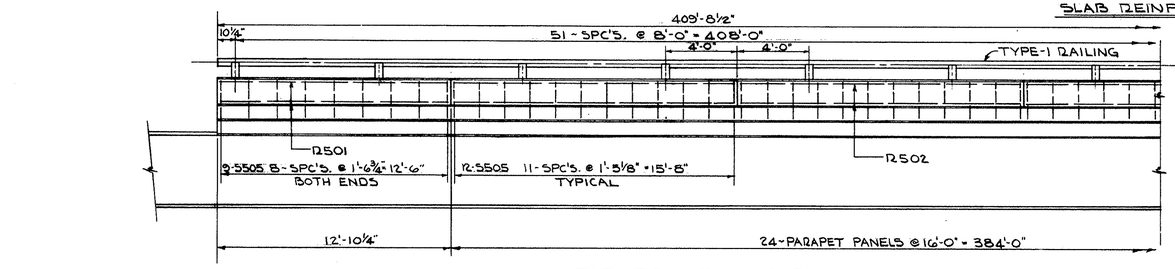
205
232

MAH.-711-0.17

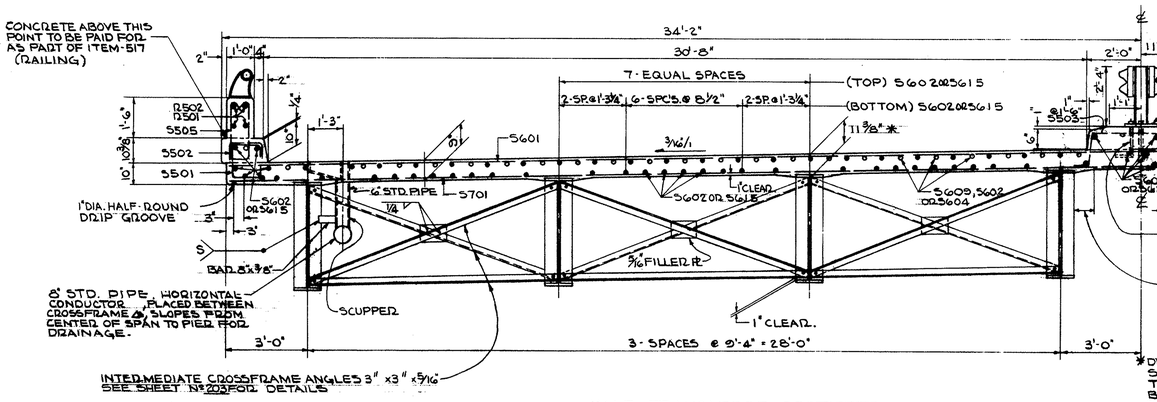


SLAB REINFORCING PLAN

DETAIL OF SIGN BRIDGE BASE



ELEVATION - RAILING DETAILS

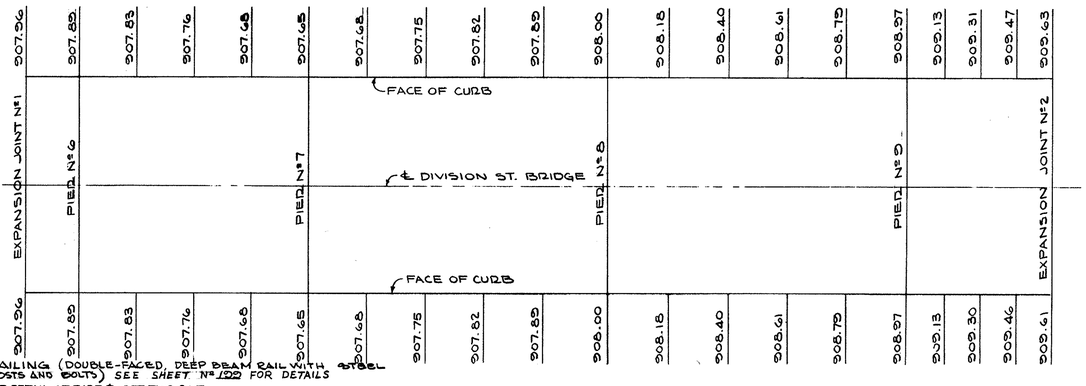


HALF TRANSVERSE SECTION

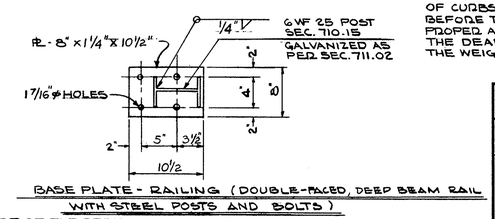
RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET Nº 102 FOR DETAILS FOR DETAIL OF BASE PL. SEE THIS SHT.

A TYPICAL HAUNCH WIDTH OF 2" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 0" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

* DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCLOSED STEEL PLATES.



DECK ELEVATIONS



BASE PLATE - RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS)

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

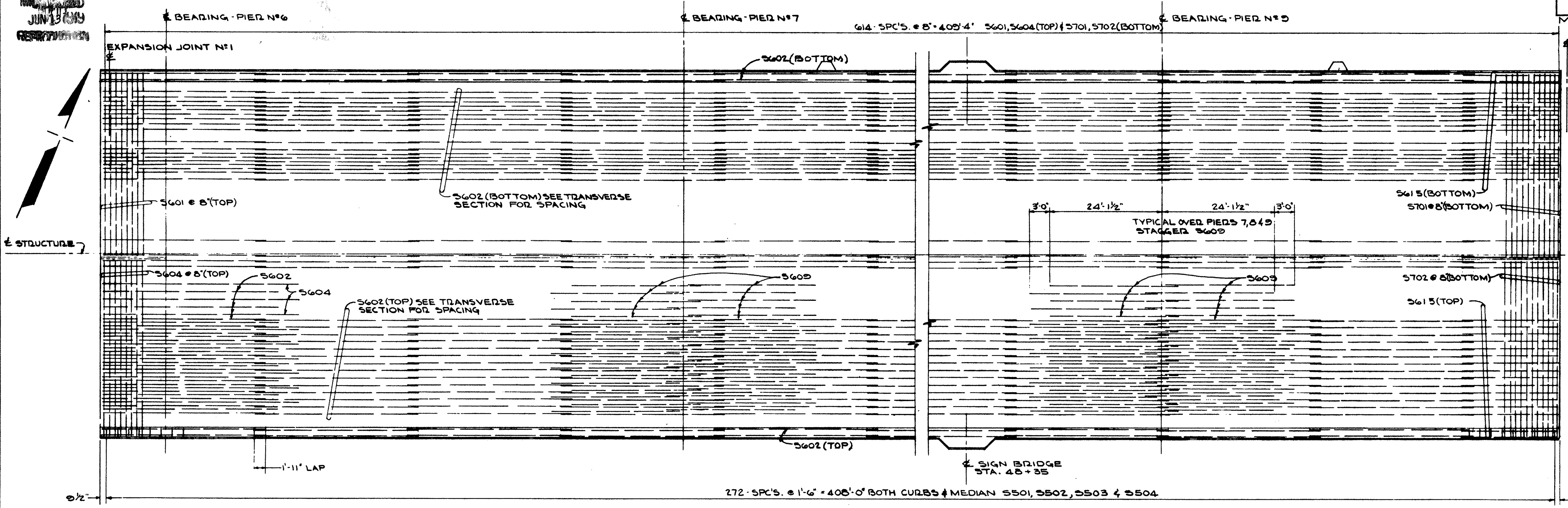
GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SLAB DETAILS

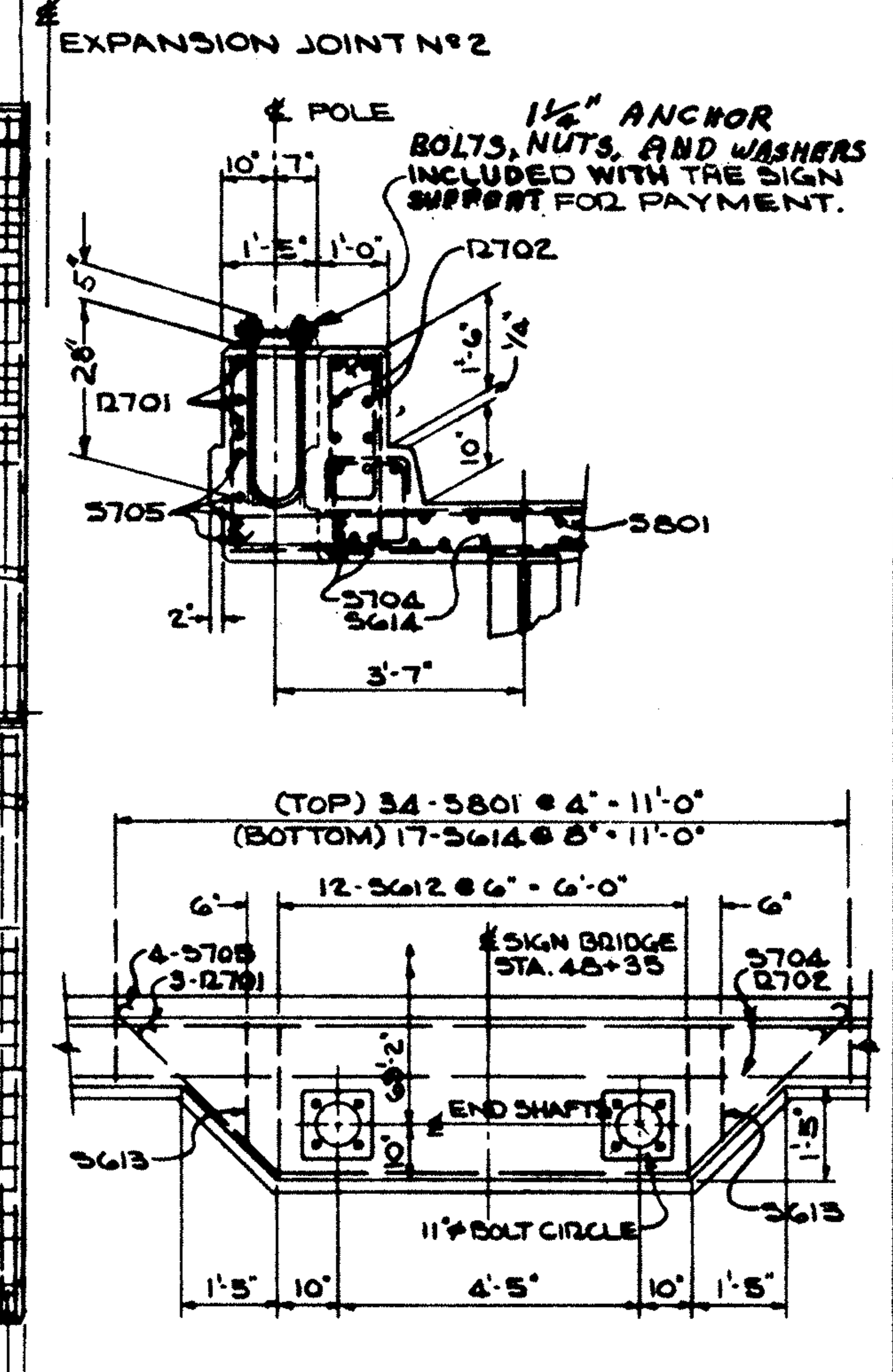
BRIDGE Nº MAH -
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD - G-22-68		

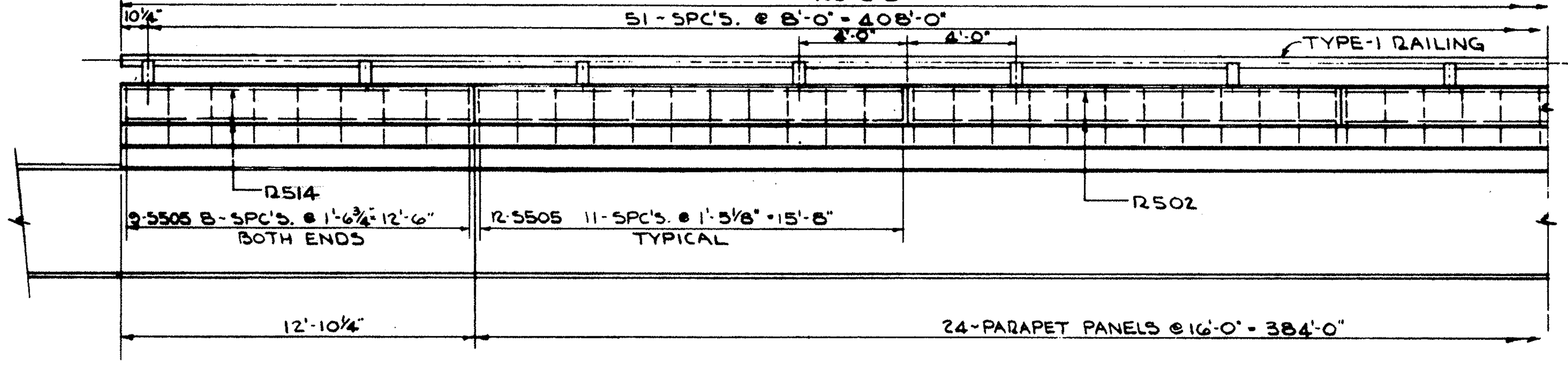
This sheet is superseded by sheet No. 205A. 9-12-69



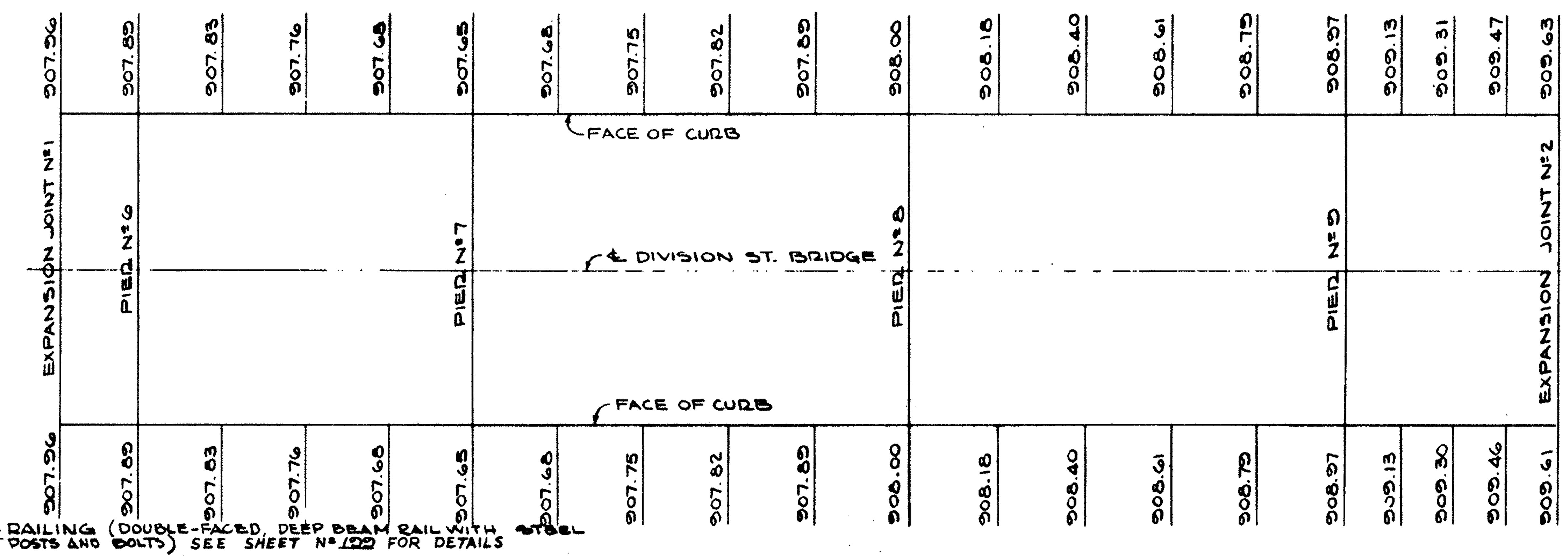
SLAB REINFORCING PLAN



DETAIL OF SIGN BRIDGE BASE

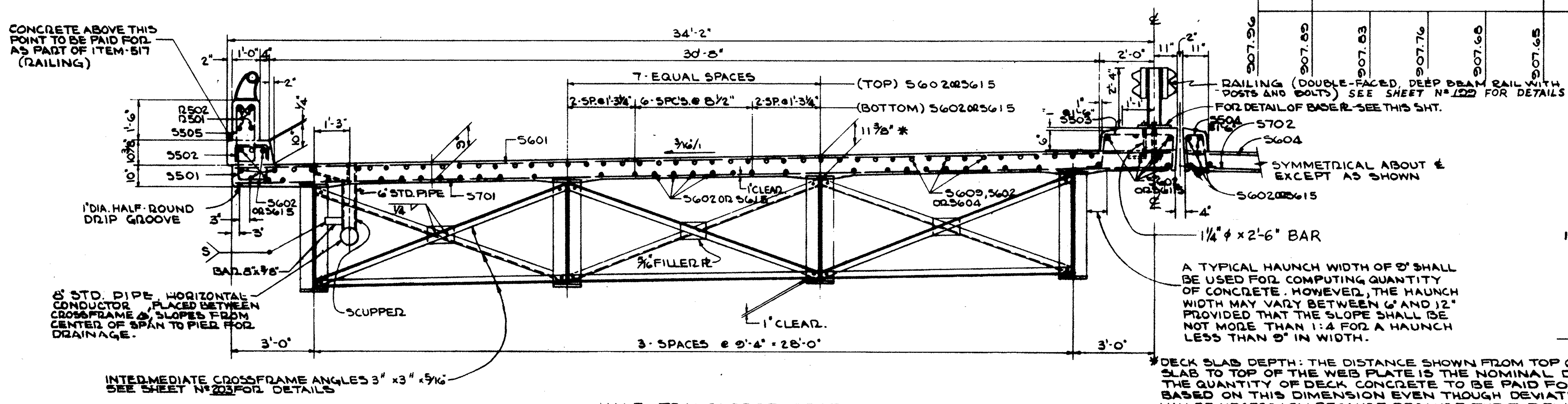


ELEVATION - RAILING DETAILS



DECK ELEVATIONS

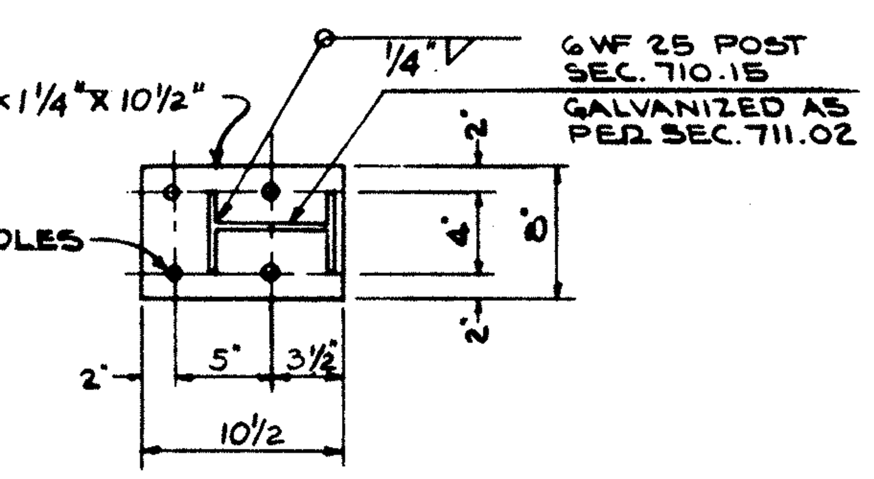
NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.



HALF TRANSVERSE SECTION

A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

*DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCLOSED STEEL PLATES.



BASE PLATE - RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS)

This sheet supersedes sheet No. 205 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SLAB DETAILS

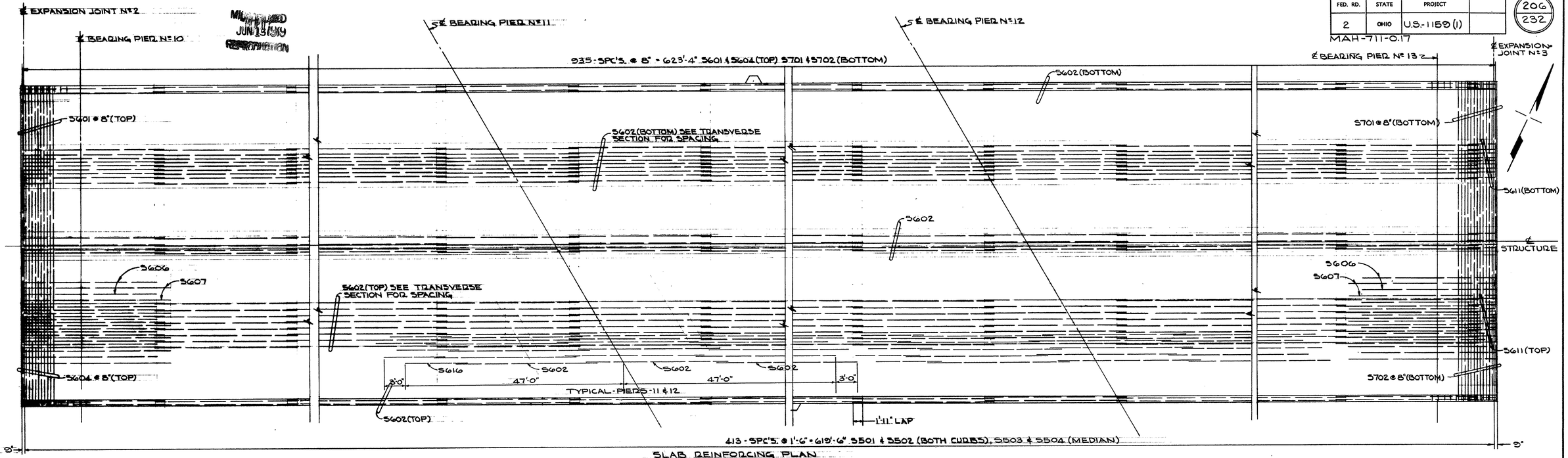
BRIDGE Nº MAH –
OVER MAHONING RIVER
YOUNGSTOWN — MAHONING COUNTY
UNIT Nº 2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD	6-22-68	

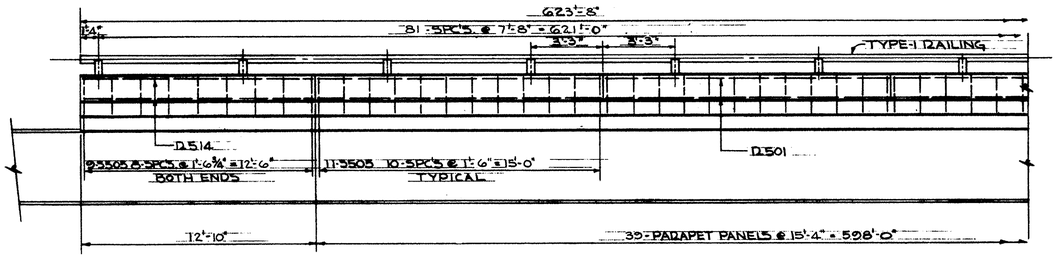
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH-711-0.17

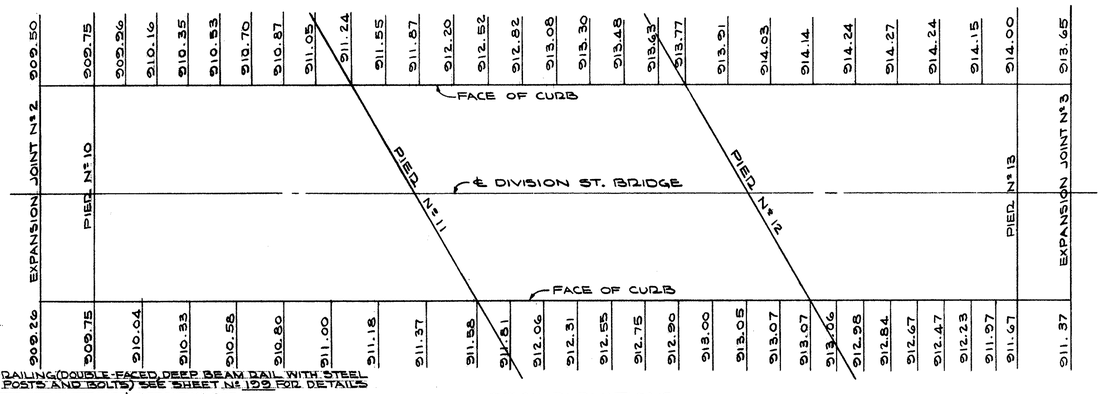
206
232



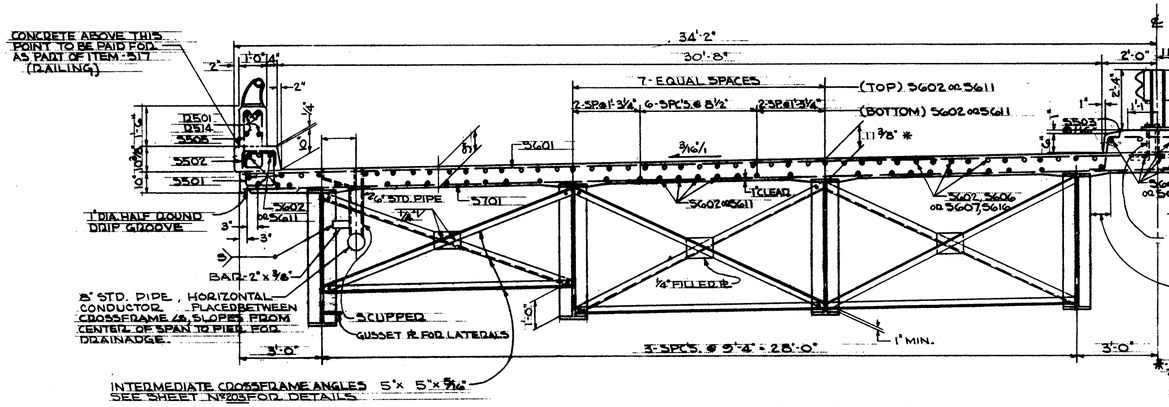
SLAB REINFORCING PLAN



ELEVATION - RAILING DETAILS



DECK ELEVATIONS



HALF TRANSVERSE SECTION

*DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES.

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

This sheet is superseded by sheet No. 206A. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SLAB DETAILS

BRIDGE N° MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT N° 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

MAH-711-0.17

206A / 232

℄ EXPANSION JOINT Nº 2

℄ BEARING PIER Nº 10

℄ BEARING PIER Nº 11

℄ BEARING PIER Nº 12

℄ BEARING PIER Nº 13

℄ EXPANSION JOINT Nº 3

935-3PC'S. @ 8" = 623'-4" 3601 & 3604 (TOP) 3701 & 3702 (BOTTOM)

3601 @ 8" (TOP)

3602 (BOTTOM) SEE TRANSVERSE SECTION FOR SPACING

3602

3602 (BOTTOM)

3606

3607

3602 (TOP) SEE TRANSVERSE SECTION FOR SPACING

3604 @ 8" (TOP)

3616

3602

47'-0"

TYPICAL - PIERS 11 & 12

3'-0"

3602 (TOP)

1'-11" LAP

S.611 BOT.

3701 @ 8" (BOTTOM)

3611 (BOTTOM)

℄ STRUCTURE

3606

3607

3611 (TOP)

3702 @ 8" (BOTTOM)

S.611 TOP

413-3PC'S. @ 1'-6" = 619'-6" 3501 & 3502 (BOTH CURBS), 3503 & 3504 (MEDIAN)

8"

9"

SLAB REINFORCING PLAN

623'-8"

81-5PC'S. @ 7'-8" = 621'-0"

3'-3"

2'-3"

TYPE-1 RAILING

R514

3505 & 5PC'S @ 1'-6⅝" = 12'-6" BOTH ENDS

11-3505 10-5PC'S @ 1'-6" = 15'-0" TYPICAL

R509

12'-10"

39-PARAPET PANELS @ 15'-4" = 598'-0"

ELEVATION - RAILING DETAILS

EXPANSION JOINT Nº 2	909.75	909.96	910.16	910.35	910.53	910.70	910.87	911.05	911.24	911.55	911.87	912.20	912.52	912.82	913.08	913.30	913.48	913.63	913.77	913.91	914.03	914.14	914.24	914.27	914.24	914.15	914.00				913.65
PIER Nº 10												FACE OF CURB																			EXPANSION JOINT Nº 3
										PIER Nº 11									PIER Nº 12										PIER Nº 13		
												℄ DIVISION ST. BRIDGE																			
EXPANSION JOINT Nº 2	909.75	909.96	910.04	910.33	910.58	910.80	911.00	911.18	911.37	911.58	911.81	912.06	912.31	912.55	912.75	912.90	913.00	913.05	913.07	913.07	913.06	912.98	912.84	912.67	912.47	912.23	911.97	911.67			911.37
												FACE OF CURB																			

DECK ELEVATIONS

CONCRETE ABOVE THIS POINT TO BE PAID FOR AS PART OF ITEM 517 (RAILING)

34'-2"

30'-8"

2'-0"

7 EQUAL SPACES

2-5P@1'-3¼" 6-5PC'S @ 8½" 2-5P@1'-3¼"

(TOP) 3602 or 3611

(BOTTOM) 3602 or 3611

RAILING (DOUBLE-FACED DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET Nº 199 FOR DETAILS

FOR DETAIL OF BASE R-SEE SHT. Nº 205

R501

R514

3505

3502

3501

1" DIA HALF ROUND DRIP GROOVE

3602 or 3611

BAR-2" x ⅜"

3601

3602 or 3611

2" STD. PIPE

3701

1" CLEAR

3602, 3606 or 3607, 3616

3503

3504

3702

3604

SYMMETRICAL ABOUT ℄ EXCEPT AS SHOWN

3602 or 3611

1¼" ϕ x 2'-6" BAR

5" STD. PIPE, HORIZONTAL CONDUCTOR PLACED BETWEEN CROSSFRAME 28, SLOPES FROM CENTER OF SPAN TO PIER FOR DRAINAGE.

SCUPPED GUSSET ℄ FOR LATERALS

⅛" FILLER ℄

1" MIN.

3-5PC'S. @ 9'-4" = 28'-0"

3'-0"

3'-0"

INTERMEDIATE CROSSFRAME ANGLES 5"x 5"x ⅝" SEE SHEET Nº 205 FOR DETAILS

HALF TRANSVERSE SECTION

A TYPICAL HAUNCH WIDTH OF 5" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 5" IN WIDTH.

DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES.

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

This sheet supersedes sheet No. 206 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

SLAB DETAILS

BRIDGE Nº MAH-711-0116

OVER MAHONING RIVER

YOUNGSTOWN MAHONING COUNTY

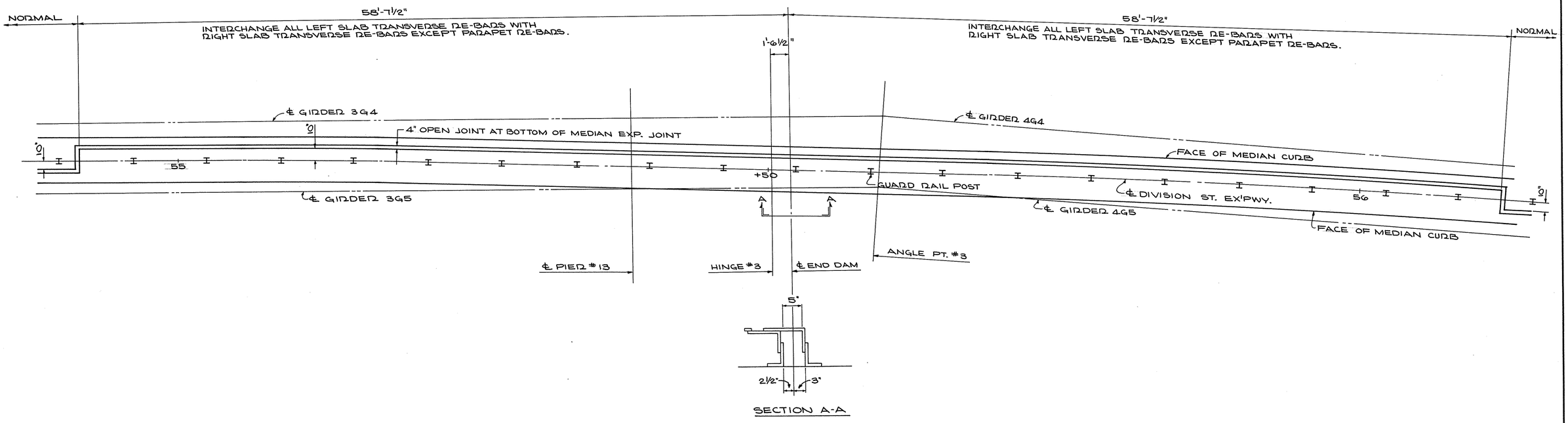
UNIT Nº 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD	6-22-68	

FED. RD.	STATE	PROJECT	
2	OHIO	US 1159 M	

MAH. 711-.017

206B
232



This sheet added 5-24-71

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE, SCHOMER, BURNS & DeHAVEN
AKRON, OHIO — YOUNGSTOWN, OHIO

REVISED MEDIAN EXP. JT.

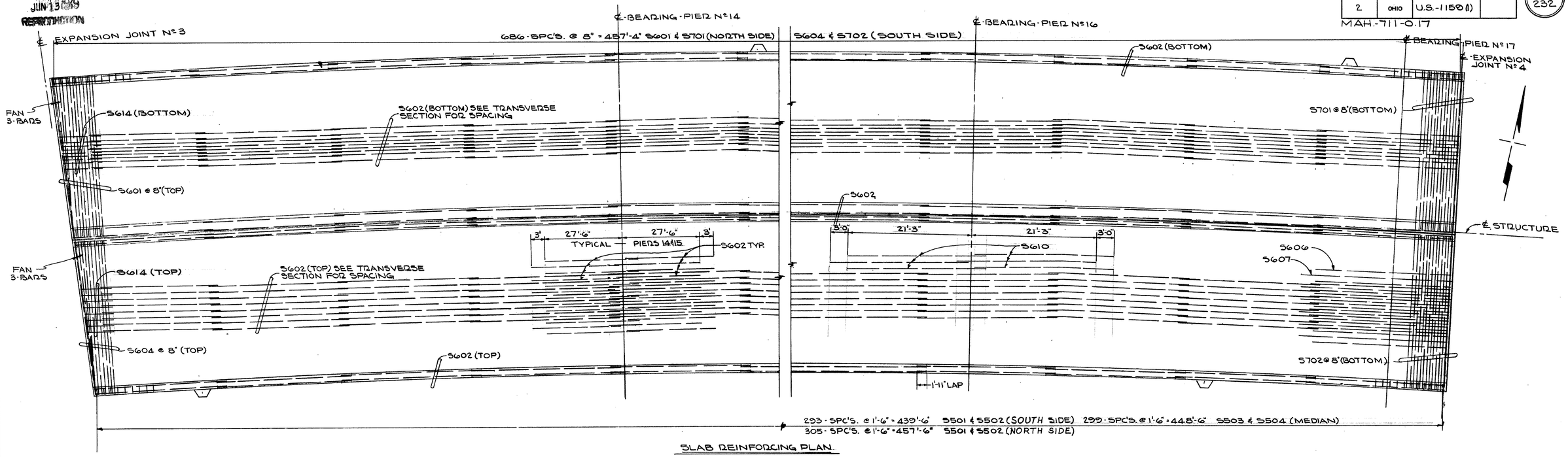
BRIDGE Nº MAH- 711- 0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT 3 & 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

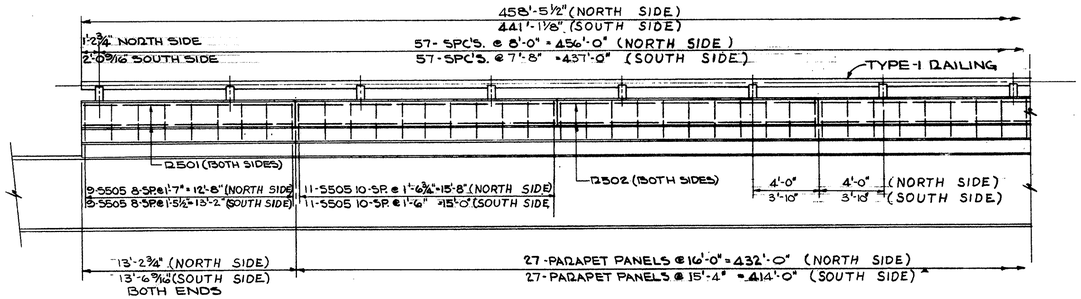
FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-11501(1)	

207
232

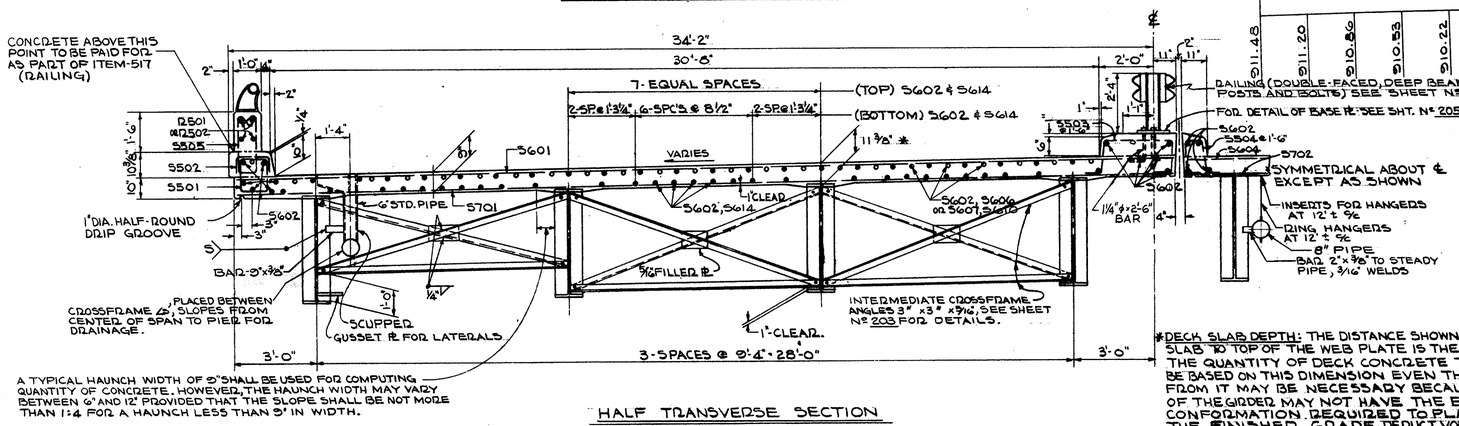
MAH.-711-0.17



SLAB REINFORCING PLAN



ELEVATION - RAILING DETAILS



HALF TRANSVERSE SECTION

RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET Nº 103 FOR DETAILS

FOR DETAIL OF BASE PL. SEE SHT. Nº 205

SYMMETRICAL ABOUT ℄ EXCEPT AS SHOWN

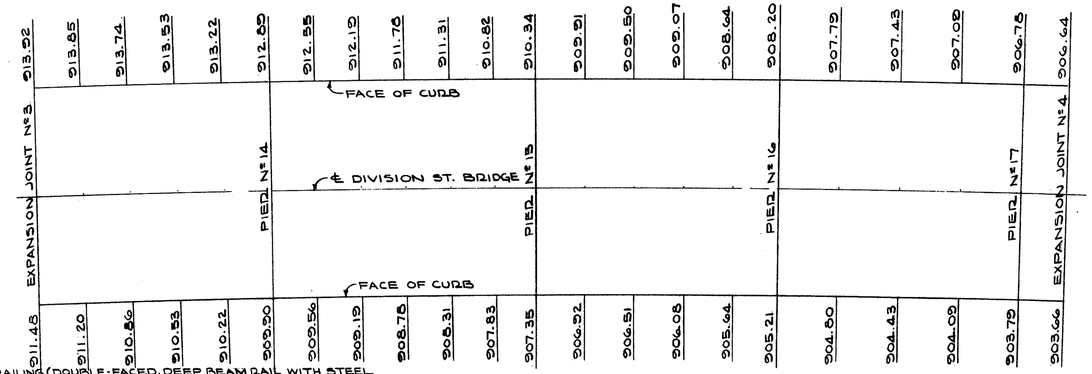
INSERTS FOR HANGERS AT 12' ± 9"

RING HANGERS AT 12' ± 9"

8" PIPE

BAR 2" x ⅜" TO STEADY PIPE, ⅜" WELDS

*DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE; DEDUCT VOLUME OF ENCASED STEEL PLATES.



DECK ELEVATIONS

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

This sheet is superseded by sheet No. 207A. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

SLAB DETAILS

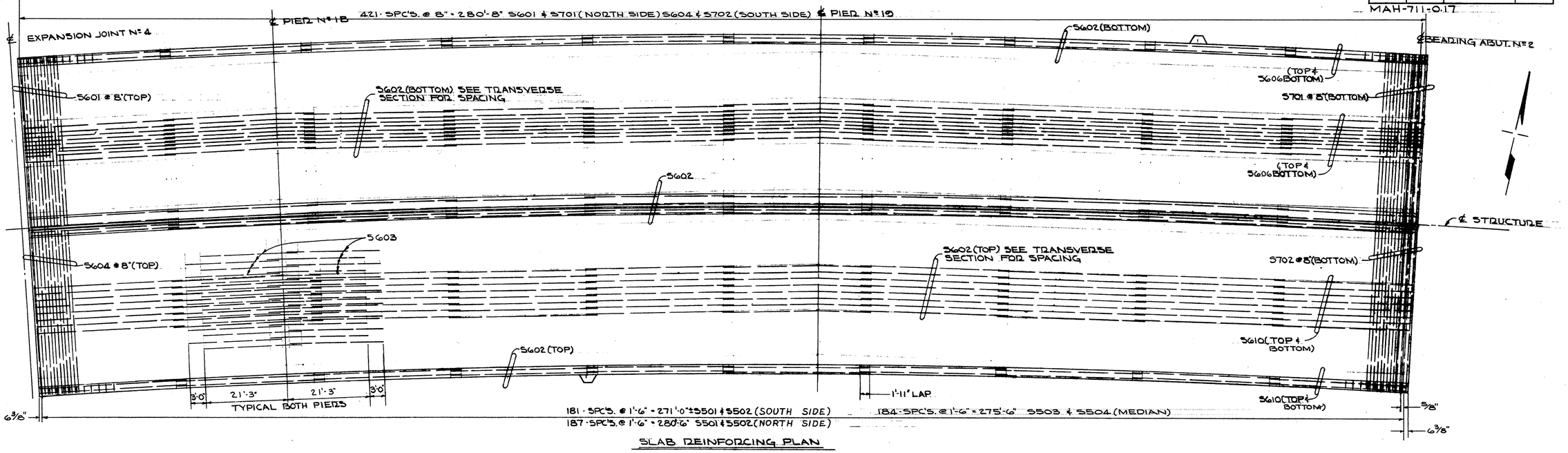
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	J.D.P.		JC	WKD	6-22-68	

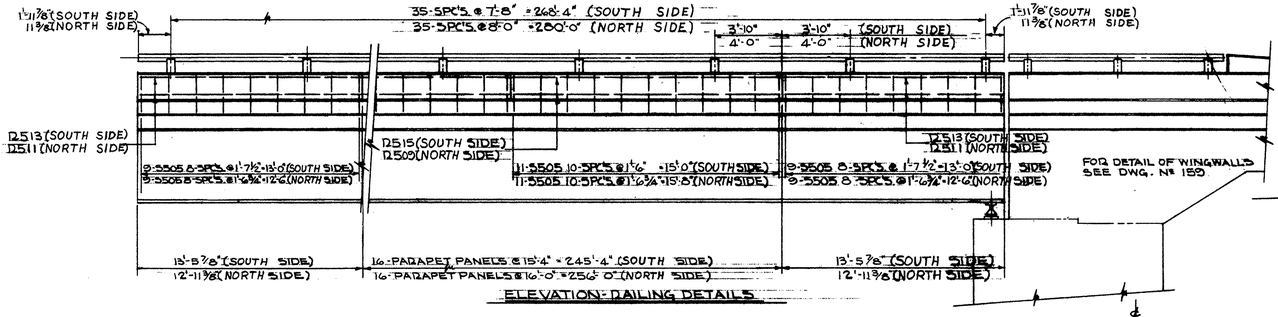
FED. RD. 2
STATE OHIO
PROJECT U.S.-1158(1)
207A
232
MAH-711-0.17
℄ EXPANSION JOINT Nº 3
℄ BEARING PIER Nº 14
℄ BEARING PIER Nº 16
℄ BEARING PIER Nº 17
℄ EXPANSION JOINT Nº 4
686-SPC'S. @ 8" = 457'-4" S601 & S701 (NORTH SIDE)
S604 & S702 (SOUTH SIDE)
S602 (BOTTOM)
FAN 3-BARS
S614 (BOTTOM)
S602 (BOTTOM) SEE TRANSVERSE SECTION FOR SPACING
S701 @ 8" (BOTTOM)
S601 @ 8" (TOP)
S602
℄ STRUCTURE
3' 27'-6" 27'-6" 3'
TYPICAL PIERS 14 & 15
S602 TYP.
3'-0" 21'-3" 21'-3" 3'-0"
S610
S606
S607
S614 (TOP)
S602 (TOP) SEE TRANSVERSE SECTION FOR SPACING
S604 @ 8" (TOP)
S602 (TOP)
S702 @ 8" (BOTTOM)
1'-11" LAP
293-SPC'S. @ 1'-6" = 439'-6" S501 & S502 (SOUTH SIDE) 299-SPC'S. @ 1'-6" = 448'-6" S503 & S504 (MEDIAN)
305-SPC'S. @ 1'-6" = 457'-6" S501 & S502 (NORTH SIDE)
SLAB REINFORCING PLAN
458'-5½" (NORTH SIDE)
441'-1⅛" (SOUTH SIDE)
1'-2¾" NORTH SIDE
2'-0 9/16" SOUTH SIDE
57-SPC'S. @ 8'-0" = 456'-0" (NORTH SIDE)
57-SPC'S. @ 7'-8" = 437'-0" (SOUTH SIDE)
TYPE-1 RAILING
R501 (BOTH ENDS)
R508 (BOTH ENDS)
NORTH
SOUTH
9-S505 8-SP. @ 1'-7" = 12'-8" (NORTH SIDE)
9-S505 8-SP. @ 1'-5½" = 11'-2" (SOUTH SIDE)
11-S505 10-SP. @ 1'-6⅞" = 15'-8" (NORTH SIDE)
11-S505 10-SP. @ 1'-6" = 15'-0" (SOUTH SIDE)
R502 (NORTH)
R505 (SOUTH)
4'-0" 4'-0" (NORTH SIDE)
3'-10" 3'-10" (SOUTH SIDE)
13'-2¾" (NORTH SIDE)
13'-6 9/16" (SOUTH SIDE)
BOTH ENDS
27-PARAPET PANELS @ 16'-0" = 432'-0" (NORTH SIDE)
27-PARAPET PANELS @ 15'-4" = 414'-0" (SOUTH SIDE)
ELEVATION - RAILING DETAILS
913.52 913.85 913.74 913.53 913.22 912.85 912.55 912.13 911.70 911.31 910.82 910.34 909.91 909.50 909.07 908.64 908.20 907.79 907.43 907.08 906.78 906.64
FACE OF CURB
EXPANSION JOINT Nº 3
PIER Nº 14
℄ DIVISION ST. BRIDGE
PIER Nº 15
PIER Nº 16
PIER Nº 17
EXPANSION JOINT Nº 4
FACE OF CURB
911.48 911.20 910.86 910.53 910.22 909.90 909.56 909.19 908.78 908.31 907.83 907.35 906.92 906.51 906.08 905.64 905.21 904.80 904.43 904.09 903.79 903.66
DECK ELEVATIONS
NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.
CONCRETE ABOVE THIS POINT TO BE PAID FOR AS PART OF ITEM 517 (RAILING)
34'-2"
30'-8"
1'-0" 2'-0" 11" 2"
7-EQUAL SPACES
2-SP. @ 1'-3¾" 6-SPC'S @ 8½" 2-SP. @ 1'-3¾"
(TOP) S602 & S614
(BOTTOM) S602 & S614
R501
R502
S505
S502
S501
S601
VARIES
11⅜" *
1" CLEAR.
S602, S614
S602, S606 or S607, S610
S701
6" STD. PIPE
1" DIA. HALF-ROUND DRIP GROOVE
BAR 3" x ⅜"
S602
1¼" ø x 2'-6" BAR
S593
RAILING (DOUBLE-FACED, DEEP BEAM RAIL WITH STEEL POSTS AND BOLTS) SEE SHEET Nº 183 FOR DETAILS
FOR DETAIL OF BASE P. SEE SHT. Nº 205
S602
S504 @ 1'-6"
S604
S702
SYMMETRICAL ABOUT ℄ EXCEPT AS SHOWN
INSERTS FOR HANGERS AT 12' ± 5/8
RING HANGERS AT 12' ± 5/8
8" PIPE
BAR 2" x ⅜" TO STEADY PIPE, 3/16" WELDS
⅜" FILLER P.
CROSSFRAME ∠S, PLACED BETWEEN CENTER OF SPAN TO PIER FOR DRAINAGE.
SLOPES FROM
SCUPPER
GUSSET P. FOR LATERALS
1" CLEAR.
INTERMEDIATE CROSSFRAME ANGLES 3" x 3" x 5/16", SEE SHEET Nº 203 FOR DETAILS.
3'-0" 3-SPACES @ 9'-4" = 28'-0" 3'-0"
A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.
HALF TRANSVERSE SECTION
*DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE, DEDUCT VOLUME OF ENCASED STEEL PLATES.
This sheet supersedes sheet No. 207. 9-12-69
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO
SLAB DETAILS
BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 4
DESIGNED JP
DRAWN J.R.P.
TRACED
CHECKED JC
REVIEWED WKD
DATE 6-22-68
REVISED

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1158 (1)	

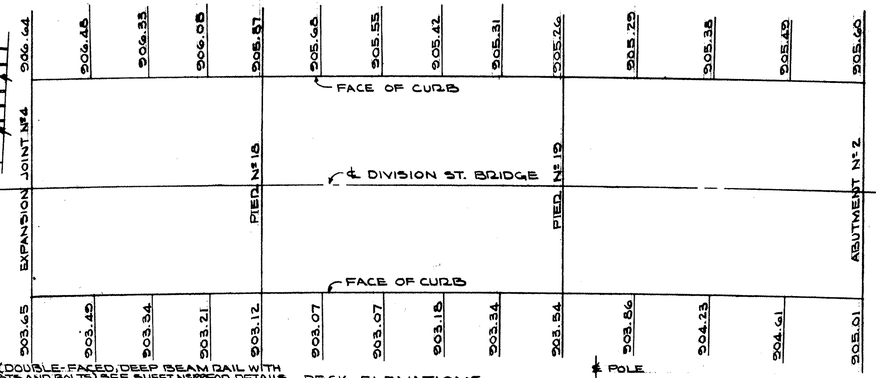
MAH-711-0.17



SLAB REINFORCING PLAN

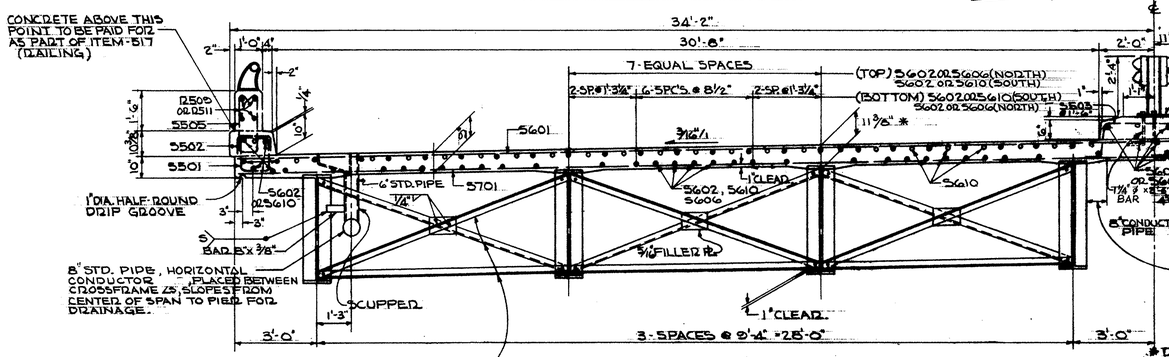


ELEVATION-RAILING DETAILS

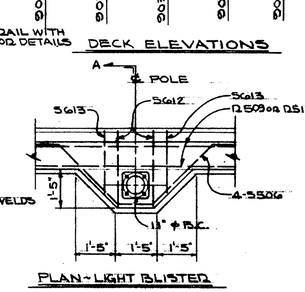


NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

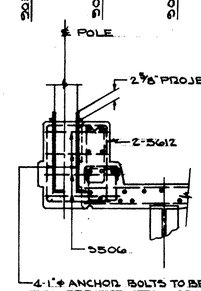
DECK ELEVATIONS



HALF TRANSVERSE SECTION

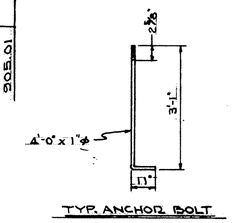


PLAN-LIGHT BLISTER



4-1" ℄ ANCHOR BOLTS TO BE INCLUDED WITH ITEM 625 FOR PAYMENT.

SECTION-A



TYP. ANCHOR BOLT

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SLAB DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

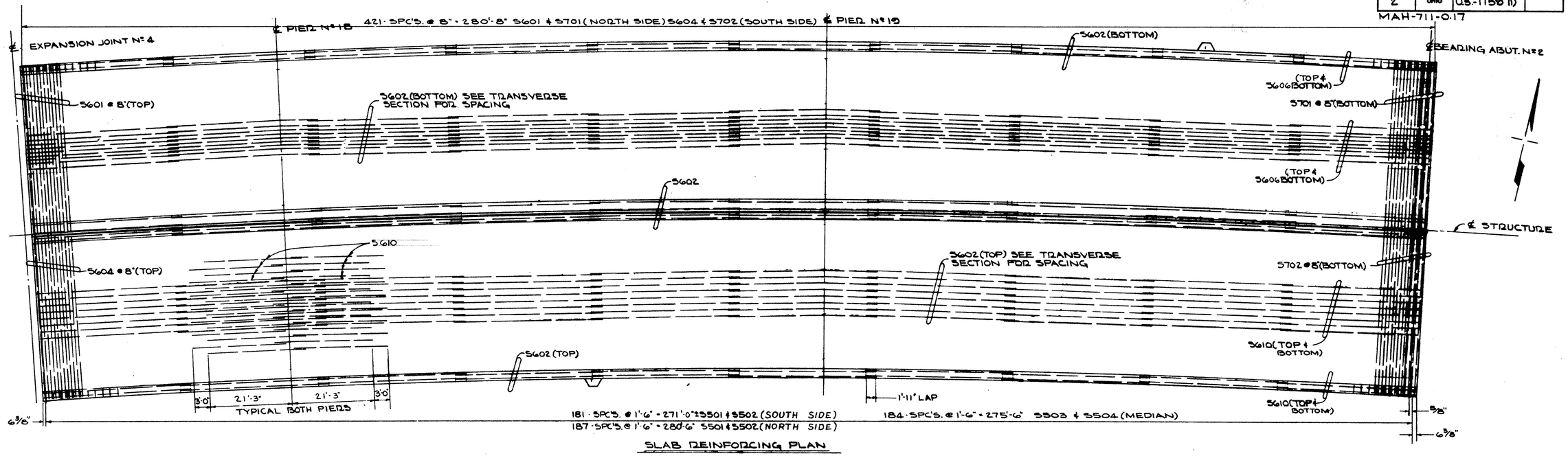
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	J.D.P.		J.C.	WKB	6-22-68	

This sheet is superseded by sheet No. 208A. 9-12-69

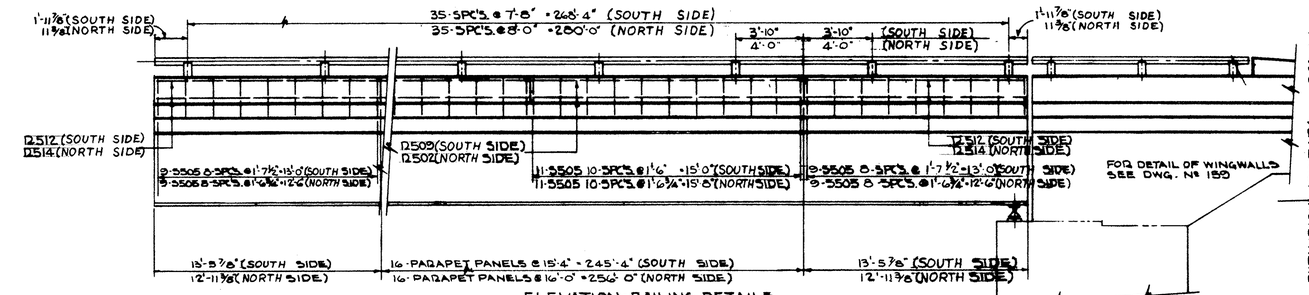
FED. RD.	STATE	PROJECT	
2	OHIO	US-11BB (1)	

MAH-711-0.17

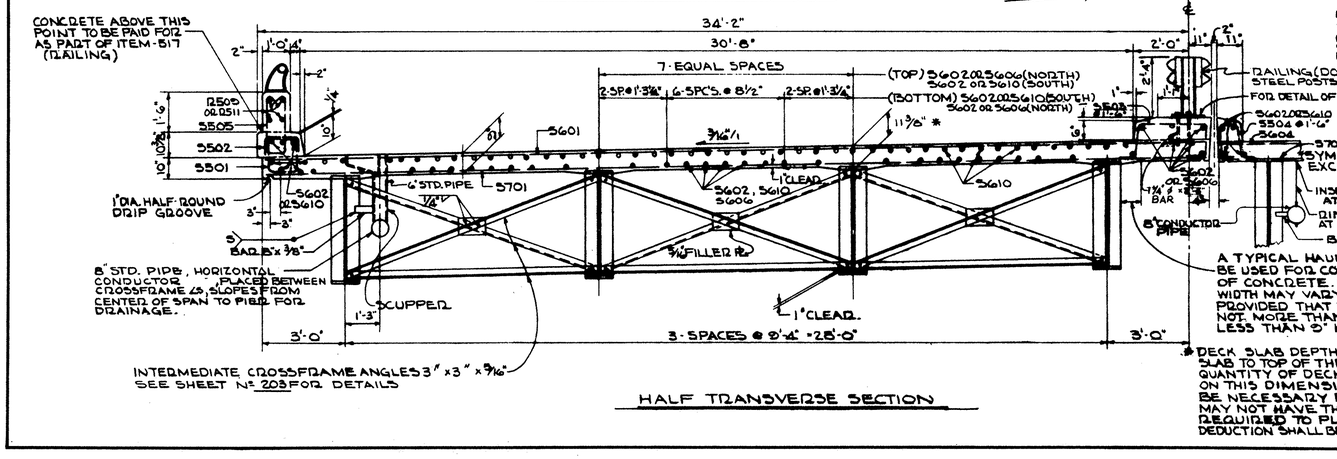
208A
232



SLAB REINFORCING PLAN



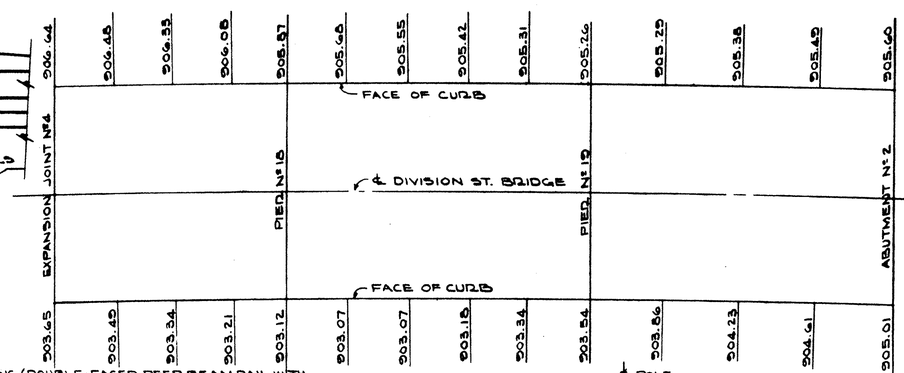
ELEVATION-RAILING DETAILS



HALF TRANSVERSE SECTION

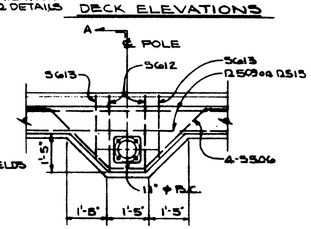
A TYPICAL HAUNCH WIDTH OF 3" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 0" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 3" IN WIDTH.

* DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF THE DECK SLAB TO TOP OF THE WEB PLATE IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES.

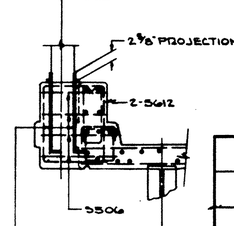


DECK ELEVATIONS

NOTE:
THE ELEVATIONS SHOWN AT THE FACE OF CURBS ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE.

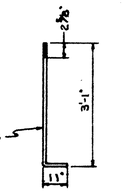


PLAN-LIGHT BLISTER



4-1" ℄ ANCHOR BOLTS TO BE INCLUDED WITH ITEM 628 FOR PAYMENT.

SECTION-A



TYP. ANCHOR BOLT

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

SLAB DETAILS

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY
UNIT Nº 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RH	J.D.P.		J.C.	WKB	6-22-68	

This sheet supersedes sheet No. 208. 9-12-69

FED. RD.	STATE	PROJECT	
2	OHIO	U.S.-1159 (1)	

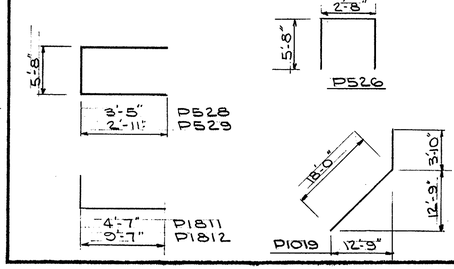
209
232

MAH-711-0.17

SUPERSTRUCTURE

MARK	NUMBER	LENGTH	WEIGHT	SHAPE
S501	2,981	4'-4"	13,463	BT
S502	2,981	2'-0"	6,218	BT
S503	1,490	5'-0"	7,770	BT
S504	1,490	3'-0"	4,662	BT
S505	2,985	5'-7"	17,373	BT
S506	68	9'-11"	704	BT
S601	3,002	34'-2"	154,073	ST
S602	11,534	30'-0"	519,722	ST
S603	241	36'-0"	13,031	ST
S604	3,398	32'-6"	165,873	ST
S605	191	18'-9"	5,379	ST
S606	179	28'-6"	7,662	ST
S607	188	31'-6"	8,895	ST
S608	150	26'-7"	5,988	ST
S610	155	23'-9	5,520	ST
S611	122	5'-10	1,068	ST
S612	58	10'-6"	915	BT
S613	38	9'-9"	556	BT
S614	80	9'-0"	1,203	ST
S615	122	16'-1"	2,947	
S616	84	12'-8"	1,800	
S617	191	11'-10"	3,402	
S701	3,002	34'-2"	209,670	ST
S702	3,374	32'-6"	224,135	ST
S704	4	39'-9"	325	ST
S705	8	13'-6"	221	BT
S706	382	30'-0"	23,424	ST
S707	191	18'-8"	7,320	ST
S708	191	11'-10"	4,630	ST
S801	68	8'-0"	1,634	ST
SUPERSTRUCTURE TOTAL			1,419,592	

RAILING-THESE REINFORCING BARS WILL BE INCLUDED AS PART OF S17 FOR PAYMENT				
MARK	NUMBER	LENGTH		SHAPE
R501	400	12'-8"		ST
R502	412	15'-8"		ST
R503	12	4'-2"		BT
R504	8	5'-4"		BT
R505	8	12'-11"		ST
R506	120	14'-8"		ST
R507	8	13'-4"		ST
R508	128	12'-9"		ST
R509	68	15'-0"		ST
R510	4	16'-0"		ST
R511	8	12'-7"		ST
R512	4	13'-0"		ST
R513	8	11'-6"		ST
R514	16	12'-6"		ST
R515	72	13'-8"		ST
R516	8	18'-9"		ST
R701	6	13'-0"		BT
R702	2	38'-9"		ST



ABUTMENTS

MARK	NUMBER	LENGTH	WEIGHT	SHAPE
A501	53 60	10'-0" 626	553	BT
A502	4	7'-6"	31	BT
A503	10 8	6'-4" 713	680	BT
A504	42 40	6" 39'-3" 1774	1719	ST
A505	12	5'-3"	66	ST
A506	24 16	10'-3" 171	251	ST
A507	4	9'-6"	40	ST
A508	4	11'-3"	47	ST
A509	16	16'-0"	267	ST
A510	80	2'-3"	188	BT
A511	24	9'-9"	244	BT
A512	2	8'-0"	17	BT
A513	2	6'-11"	14	BT
A514	2	4'-8"	10	ST
A515	2	3'-8"	8	ST
A516	12	8'-4"	104	BT
A517	50	5'-8"	296	BT
A518	50	6'-10"	356	BT
A519	5 2	12'-3" 669	732	BT
A520	24	6'-8"	167	ST
A521	2	5'-7"	12	ST
A522	2	4'-3"	9	ST
A523	14	2'-8"	39	ST
A524	12	14'-1"	176	ST
A525	4	13'-0"	54	ST
A526	4	13'-11"	58	ST
A527	4	14'-10"	62	ST
A528	12	20'-1"	251	ST
A529	40	34'-6"	1439	ST
A530	2	8'-9"	18	BT
A531	2	7'-4"	15	BT
A532	19 8	5'-11" 86	49	BT
A533	105	6'-3"	684	BT
A601	50	14'-7"	1095	BT
A602	12 0	24'-2" 343	430	BT
A603	79 82	15'-9" 1240	1869	BT
A604	4	16'-9" 20'-5" 86	120	BT
A605	60 53	17'-6" 1571	1393	BT
A606	24	19'-8"	709	BT
A607	68	18'-8"	1907	BT
A608	8	6'-7"	79	ST
A801	14	35'-2" 1315	1670	ST
A802	8	17'-1"	3 465	ST
A803	2	11'-10" 63	80	ST BT
A804	2	13'-10" 7	94	ST ST
A805	6	13'-3" 212	270	ST
A806	6	13'-6" 216	275	ST
A807	14	41'-3" 1582	1963	ST
ABUTMENTS TOTAL			21,151	
			20,299	

SPIRAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP THE "NO OF TURNS" SHOWN IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NUMBER WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

PIERS

MARK	NUMBER	LENGTH	WEIGHT	SHAPE
P501	650	9'-11"	6,723	ST
P502	478	7'-6"	3,739	BT
P503	122	16'-3"	2,068	ST
P504	88	12'-4"	1,132	BT
P505	1084	7'-10"	8,856	BT
P506	256	9'-10"	2,625	BT
P507	300 284	11'-10" 3515	4,087	BT
P508	26	19'-6"	529	ST
P509	24	15'-2"	380	ST
P510	22	11'-0"	252	ST
P511	2	25'-6"	53	ST
P512	2	21'-2"	44	ST
P513	2	17'-0"	35	ST
P514	120	9'-10"	1,231	BT
P515	284	10'-10"	3,209	BT
P516	40	7'-9"	323	BT
P517	120	8'-10"	1,106	BT
P518	202	8'-0"	1,685	BT
P519	188	10'-10"	2,124	BT
P520	44	12'-10"	589	BT
P521	52	14'-10"	804	BT
P522	288	37'-0"	11,114	ST
P523	436	8'-10" 4015	5,511	BT
P524	588	12'-10"	7,870	BT
P525	8	38'-6"	305	ST
P526	216	13'-10"	3,117	BT
P527	68	16'-10"	1,194	BT
P528	24	12'-4"	309	BT
P529	24	11'-4"	284	BT
P601	40	18'-2"	1091	ST
P602	48	39'-3"	2,830	ST
P801	54	19'-10"	2,860	BT
P802	18	25'-10"	1,242	BT
P803	66	13'-0" 2230	2,222	ST
P804	64	10'-6"	1,794	ST
P805	62	8'-9"	1,448	ST
P806	168	16'-8"	7,476	ST
P807	120	16'-4"	5,233	ST
P808	308	13'-10"	11,376	BT
P901	856	6'-5"	18,676	BT
P902	267	11'-2"	10,137	BT
P903	856	15'-0"	43,656	ST
P904	732	14'-2"	35,259	BT
P905	56	15'-8"	2983	BT
P906	30	22'-2"	2261	BT
P1001	356	19'-6"	29,871	BT
P1002	148	17'-0"	10,826	ST
P1003	8	28'-10"	993	BT
P1004	8	24'-6"	843	BT
P1005	8	19'-4"	666	BT
P1006	11	26'-4"	1,246	ST
P1007	14	22'-4" 1345	1,325	ST
P1008	265	30'-8"	34,969	ST
P1009	26	15'-0"	1678	BT
P1010	56	21'-6"	5,181	BT
P1011	120	18'-6"	9553	BT
P1012	44	38'-8"	7,321	BT
P1013	94	31'-4"	12,674	ST
P1014	40	36'-6"	6,282	ST
P1015	56	19'-0"	4,518	BT
P1016	584	6'-11"	17,380	BT
P1017	600	34'-8"	89,503	ST
P1018	24	32'-0"	3,305	ST
P1019	108	21'-10"	10,146	BT
P1101	80	23'-10"	10,130	BT
P1102	92	31'-7"	15,438	ST
P1103	92	36'-10"	18,002	ST
P1104	92	38'-8"	18,941	ST
P1105	276	7'-4"	10,753	BT

PIERS

MARK	NUMBER	LENGTH	WEIGHT	SHAPE
P1106	50	28'-1"	7,459	ST
P1107	108	18'-7"	10,661	ST
P1108	60	22'-5"	7,147	ST
P1109	108	9'-8"	5,547	BT
P1110	48	24'-4"	6,205	BT
P1111	64	31'-4"	10654	BT
P1112	58	18'-10"	5,803	BT
P1113	50	29'-11"	7,048	ST
P1114	54	37'-7"	10,783	ST
P1115	54	32'-7"	9,348	ST
P1116	32	33'-0"	5,611	BT
P1401	52	15'-7"	6,199	ST
P1402	138	9'-8"	7,042	BT
P1403	8	6'-0"	367	ST
P1404	168	22'-7"	29,024	ST
P1405	56	17'-7"	7,532	ST
P1406	138	11'-8"	12,320	BT
P1407	56	25'-8"	10,997	ST
P1408	56	20'-8"	8,855	ST
P1801	14	44'-2"	8,409	ST
P1802	13	39'-2"	6,925	ST
P1803	64	37'-6"	32,642	ST
P1804	13	32'-6"	5,746	ST
P1805	200	8'-10"	24,018	ST
P1806	50	38'-0"	25,840	ST
P1807	50	39'-11"	27,146	ST
P1808	50	39'-4"	26,744	ST
P1809	44	35'-7"	21,293	ST
P1810	44	30'-7"	18,301	ST
P1811	72	7'-4"	7,180	BT
P1812	70	12'-4"	11,741	BT
P1813	200	13'-10"	37,617	ST
PIERS TOTAL			965,012	969,560

SPIRAL REINFORCING LIST

MARK	NUMBER	CORE DIA.	LENGTH OF SPIRAL	PITCH	NO OF TURNS	WEIGHT
SP401	4	3'-1"	27'-11"	4"	87	2,248
SP402	4	3'-1"	33'-3"	4"	103	2,661
SP403	4	3'-1"	35'-3"	4"	109	2,816
SP404	4	3'-1"	31-0"	4"	96	2,481
SP501	1	5'-7"	45'-4"	3"	184	3,363
SP502	1	5'-7"	38'-7"	3"	157	2,868
SP503	4	5'-7"	47'-1"	3"	191	13,962
SP504	4	5'-7"	48-7"	3"	198	14,473
SP505	4	5'-7"	45'-0"	3"	183	13,377
SPACERS						3,145
SPIRAL REINFORCING TOTAL						61,395
GRAND TOTAL PIERS						1,026,414

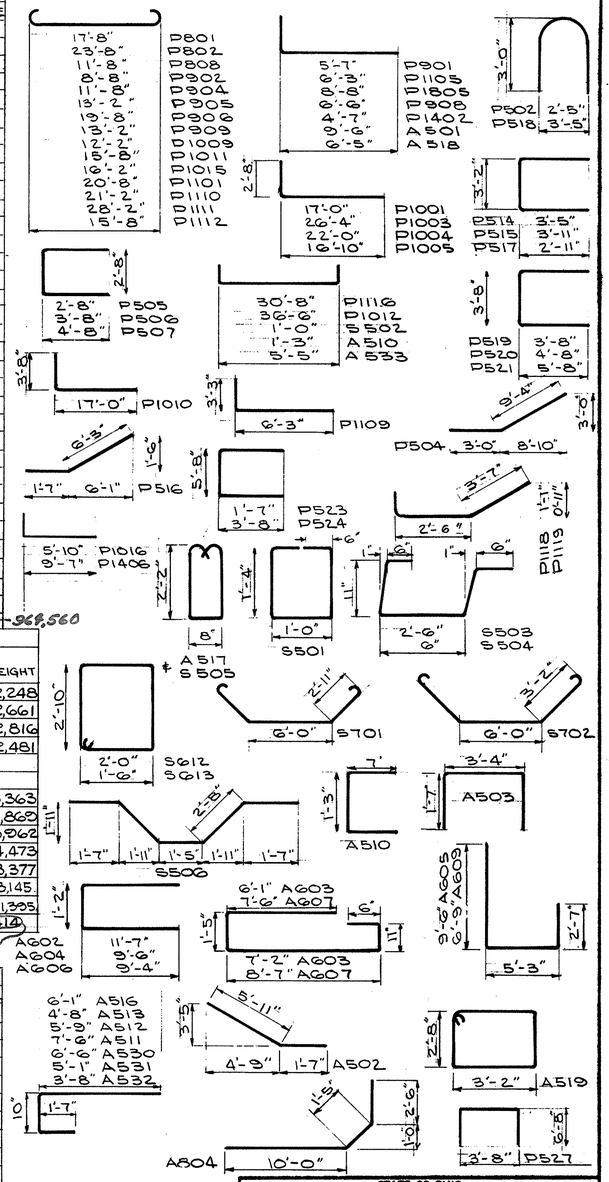
1,025,955

REPLACEMENT BARS

MARK	NUMBER	LENGTH		SHAPE
RE401	2	5'-3"		ST
RE501	9	6'-7"		ST
RE601	43	6'-11"		ST
RE701	24	7'-2"		ST
RE801	3	7'-6"		ST
RE901	9	7'-10"		ST
RE1001	7	8'-3"		ST
RE1101	15	8'-7"		ST
RE1401	6	2'-6"		ST
RE1801	12	2'-6"		ST

NOTE: REPLACEMENT BARS FOR #14 & #18 WILL BE SPLICES USING POSITIVE CONNECTION.

TOTAL REINFORCING	
ABUTMENT TOTAL	21,151
PIERS TOTAL	1,026,414
SUPERSTRUCTURE TOT.	1,419,592
GRAND TOTAL	2,469,157
	2,465,796



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO YOUNGSTOWN, OHIO

REINFORCING SCHEDULE

BRIDGE Nº MAH-711-0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

JWC 5-3-68
RAH 6-21-68

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWC	JWC		RH	WKD	6-22-68	3-25-69 7-11-69

This sheet is superseded by sheet No. 2094. 9-12-69

SUPERSTRUCTURE				
MARK	NUMBER	LENGTH	WEIGHT	SHAPE
S 501	2,981	4'-4"	13,463	BT.
S 502	2,981	2'-0"	6,218	BT.
S 503	1,490	5'-0"	7,770	BT.
S 504	1,490	3'-0"	4,662	BT.
S 505	3,215	5'-7"	18,722	BT.
S 506	68	9'-11"	704	BT.
	(10,492		470,517	
S 601	3,002	34'-6"	155,560	ST.
S 602	11,010	30'-0"	(465,081)	ST.
S 603	(141-288	36'-0"	(7,624)	ST.
S 604	3,398	32'-6"	165,873	ST.
S 605	191	18'-9"	5,379	ST.
S 606	131	28'-6"	5,608	ST.
S 607	(150-166	31'-6"	(7,381)	ST.
S 609	282	26'-7"	11,260	ST.
S 610	344	23'-9"	12,271	ST.
S 611	122	5'-10"	1,068	BT.
S 612	(58-66	10'-6"	(915)	BT.
S 613	38	9'-9"	556	BT.
S 614	(89-62	9'-0"	(1,203)	ST.
S 615	122	10'-1"	2,947	ST.
S 616	34	12'-9"	1,800	ST.
S 617	191	11'-10"	3,402	ST.
S 701	3,002	34'-2"	209,670	ST.
S 702	3,374	32'-6"	224,135	ST.
S 704	4	35'-9"	325	ST.
S 705	8	13'-6"	221	BT.
S 706	382	30'-0"	23,424	ST.
S 707	191	18'-9"	7,320	ST.
S 708	191	11'-10"	4,630	ST.
S 801	68	9'-0"	1,034	ST.
SUPERSTRUCTURE TOTAL			(1,368,826)	

13410 — 7854 — 1041 — 838

(1,382,282)

RAILING - THESE REINFORCING BARS WILL BE INCLUDED AS PART OF 517 FOR PAYMENT				
MARK	NUMBER	LENGTH		SHAPE
R 501	8	12'-8"		ST.
R 502	484	15'-8"		ST.
R 503	12	4'-2"		BT.
R 504	8	5'-4"		BT.
R 505	8	12'-11"		ST.
R 506	116	15'-4"		ST.
R 507	8	13'-4"		ST.
R 508	8	13'-2"		ST.
R 509	484	15'-0"		ST.
R 512	8	13'-0"		ST.
R 514	40	12'-6"		ST.
R 516	8	19'-9"		ST.
R 701	6	13'-0"		BT.
R 702	2	39'-9"		ST.

REPLACEMENT BARS				
MARK	NUMBER	LENGTH		SHAPE
RE 401	2	5'-3"		ST.
RE 501	9	6'-7"		ST.
RE 601	43	6'-11"		ST.
RE 701	24	7'-2"		ST.
RE 801	3	7'-6"		ST.
RE 901	9	7'-10"		ST.
RE 1001	7	8'-3"		ST.
RE 1101	15	8'-7"		ST.
RE 1401	6	2'-6"		ST.
RE 1801	12	2'-6"		ST.

NOTE: REPLACEMENT BARS FOR #14 & #18 WILL BE SPLICES USING POSITIVE CONNECTION.

ABUTMENTS				
MARK	NUMBER	LENGTH	WEIGHT	SHAPE
A 501	60	10'-0"	626	BT.
A 502	4	7'-6"	31	BT.
A 503	108	6'-4"	713	BT.
A 504	42	40'-6"	1,774	ST.
A 505	12	5'-3"	66	ST.
A 506	16	10'-3"	171	ST.
A 507	4	9'-6"	40	ST.
A 508	4	11'-3"	47	ST.
A 509	16	16'-0"	267	ST.
A 510	80	2'-3"	188	BT.
A 511	24	9'-3"	244	BT.
A 512	2	8'-0"	17	BT.
A 513	2	6'-11"	14	BT.
A 514	2	4'-9"	10	ST.
A 515	2	3'-8"	8	ST.
A 516	12	8'-4"	104	BT.
A 517	50	5'-8"	296	BT.
A 518	48	6'-11"	346	BT.
A 519	52	12'-3"	664	BT.
A 520	24	6'-8"	167	ST.
A 521	2	5'-7"	12	ST.
A 522	2	4'-3"	9	ST.
A 523	14	2'-8"	39	ST.
A 524	12	14'-1"	176	ST.
A 525	4	13'-0"	54	ST.
A 526	4	13'-11"	58	ST.
A 527	4	14'-10"	62	ST.
A 528	12	20'-1"	251	ST.
A 529	40	34'-6"	1435	ST.
A 530	2	8'-9"	18	BT.
A 531	2	7'-4"	15	BT.
A 532	14	5'-11"	86	BT.
A 533	108	6'-5"	723	BT.
A 534	4	7'-7"	32	BT.
A 601	48	14'-3"	1027	BT.
A 602	10	24'-2"	363	BT.
A 603	82	15'-8"	1940	BT.
A 604	4	14'-4"	86	BT.
A 605	60	17'-6"	1577	BT.
A 606	24	19'-8"	709	BT.
A 607	68	18'-8"	1907	BT.
A 608	8	6'-7"	79	ST.
A 801	14	35'-11"	1343	ST.
A 802	8	17'-1"	365	ST.
A 803	2	11'-10"	63	BT.
A 804	2	13'-10"	74	ST.
A 805	6	13'-3"	212	ST.
A 806	6	13'-6"	216	ST.
A 807	14	41'-3"	1,542	ST.
ABUTMENT TOTAL			20,270	

PIERS				
MARK	NUMBER	LENGTH	WEIGHT	SHAPE
P 501	442	9'-11"	4,572	ST.
P 502	478	7'-6"	3,739	BT.
P 503	122	16'-3"	2068	ST.
P 504	88	12'-4"	1,132	BT.
P 505	1048	7'-10"	8,562	BT.
P 506	256	9'-10"	2,625	BT.
P 507	236	11'-10"	3,653	BT.
P 508	26	19'-6"	529	ST.
P 509	24	15'-2"	380	ST.
P 510	22	11'-0"	252	ST.
P 511	2	25'-6"	53	ST.
P 512	2	21'-2"	44	ST.
P 513	2	17'-0"	35	ST.
P 514	120	9'-10"	1,231	BT.
P 515	284	10'-10"	3,209	BT.
P 516	32	7'-9"	259	BT.
P 517	120	8'-10"	1,106	BT.
P 518	200	9'-0"	1,877	BT.
P 519	188	10'-10"	2,124	BT.
P 520	44	12'-10"	589	BT.
P 521	40	14'-10"	619	BT.
P 522	280	37'-0"	10,805	ST.
P 523	432	8'-10"	3,980	BT.
P 524	588	12'-10"	7,870	BT.
P 525	8	36'-6"	305	ST.
P 526	216	13'-10"	3,117	BT.
P 527	68	16'-10"	1,194	BT.
P 528	24	12'-4"	309	BT.
P 529	24	11'-4"	284	ST.
P 530	208	8'-11"	1,934	ST.
P 531	8	6'-7"	55	BT.

PIERS				
MARK	NUMBER	LENGTH	WEIGHT	SHAPE
P G01	32	18'-2"	1,934	ST.
P G02	48	39'-3"	2,830	ST.
P G03	8	20'-8"	248	ST.
P 801	54	18'-10"	2,860	BT.
P 802	18	25'-10"	1,242	BT.
P 803	66	18'-0"	2,220	BT.
P 804	64	10'-6"	1,794	BT.
P 805	62	8'-9"	1,448	ST.
P 806	168	16'-8"	7,476	ST.
P 807	120	16'-4"	5,233	ST.
P 808	308	13'-10"	11,376	BT.
P 901	856	6'-5"	18,676	BT.
P 902	267	11'-2"	10,137	BT.
P 903	856	15'-0"	43,656	ST.
P 904	732	14'-2"	35,259	BT.
P 905	56	15'-8"	2,983	BT.
P 906	30	22'-2"	2,261	BT.
P 1001	356	19'-6"	29,871	BT.
P 1002	192	17'-0"	14,045	BT.
P 1003	8	28'-10"	993	BT.
P 1004	8	24'-6"	843	BT.
P 1005	8	19'-4"	666	BT.
P 1006	11	26'-4"	1,246	ST.
P 1007	14	22'-4"	1,345	ST.
P 1008	265	30'-6"	34,779	ST.
P 1009	26	15'-0"	1,678	BT.
P 1010	56	20'-6"	4,940	BT.
P 1011	120	18'-6"	9,553	BT.
P 1012	44	36'-8"	7,321	BT.
P 1013	86	31'-4"	11,595	ST.
P 1014	48	36'-6"	7,539	ST.
P 1015	56	19'-0"	4,578	BT.
P 1016	584	6'-11"	17,380	BT.
P 1017	628	34'-8"	93,679	ST.
P 1018	24	32'-0"	3,305	ST.
P 1019	108	21'-10"	10,146	BT.
P 1101	80	23'-10"	10,130	BT.
P 1102	92	31'-7"	15,438	ST.
P 1103	92	36'-10"	18,002	ST.
P 1104	92	38'-9"	18,941	ST.
P 1105	276	7'-4"	10,753	BT.
P 1106	50	28'-1"	7,459	ST.
P 1107	108	18'-7"	10,661	ST.
P 1108	60	22'-5"	7,147	ST.
P 1109	108	9'-8"	5,547	BT.
P 1110	48	24'-4"	6,205	BT.
P 1111	64	31'-4"	10,654	BT.
P 1112	58	18'-10"	5,803	BT.
P 1113	74	29'-11"	11,762	ST.
P 1114	54	36'-7"	10,496	ST.
P 1115	54	31'-7"	9,061	ST.
P 1116	32	33'-0"	5,611	BT.
P 1401	92	15'-7"	10,968	ST.
P 1402	158	6'-8"	8,058	BT.
P 1403	8	6'-0"	367	ST.
P 1404	168	22'-7"	29,024	ST.
P 1405	56	17'-7"	7,532	ST.
P 1406	158	11'-8"	14,102	BT.
P 1407	56	26'-11"	11,531	ST.
P 1408	56	21'-11"	9,389	ST.
P 1801	14	44'-1"	8,383	ST.
P 1802	13	39'-1"	6,910	ST.
P 1803	64	37'-5"	32,567	ST.
P 1804	13	32'-5"	5,731	ST.
P 1805	200	8'-10"	24,018	ST.
P 1806	50	38'-0"	25,840	ST.
P 1807	50	39'-11"	27,146	ST.
P 1808	50	39'-4"	26,744	ST.
P 1809	44	35'-7"	21,283	ST.
P 1810	44	30'-7"	18,301	ST.
P 1811	72	7'-4"	7,180	BT.
P 1812	70	12'-4"	11,741	BT.
P 1813	200	13'-10"	37,617	ST.
PIERS TOTAL			983,838	

SPIRAL REINFORCING LIST						
MARK	NUMBER	CORE DIA.	LENGTH OF SPIRAL	PITCH	Nº OF TURNS	WEIGHT
SP 401	4	3'-1"	27'-11"	4"	87	2,248
SP 402	4	3'-1"	33'-5"	4"	103	2,661
SP 403	4	3'-1"	35'-8"	4"	109	2,816
SP 404	4	3'-1"	31'-0"	4"	96	2,481
SP 501	1	5'-7"	45'-2"	3"	184	3,363
SP 502	1	5'-7"	38'-5"	3"	157	2,865
SP 503	2	5'-7"	47'-1"	3"	191	6,988
SP 504	2	5'-7"	48'-7"	3"	198	7,244
SP 505	2	5'-7"	45'-0"	3"	183	6,685
SP 506	2	5'-7"	46'-3"	3"	188	6,878
SP 507	2	5'-7"	49'-4"	3"	200	7,317
SP 508	2	5'-7"	46'-9"	3"	190	6,951
SPACERS						3,145
SPIRAL REINFORCING TOTAL					61,656	
GRAND TOTAL PIERS					1,045,494	

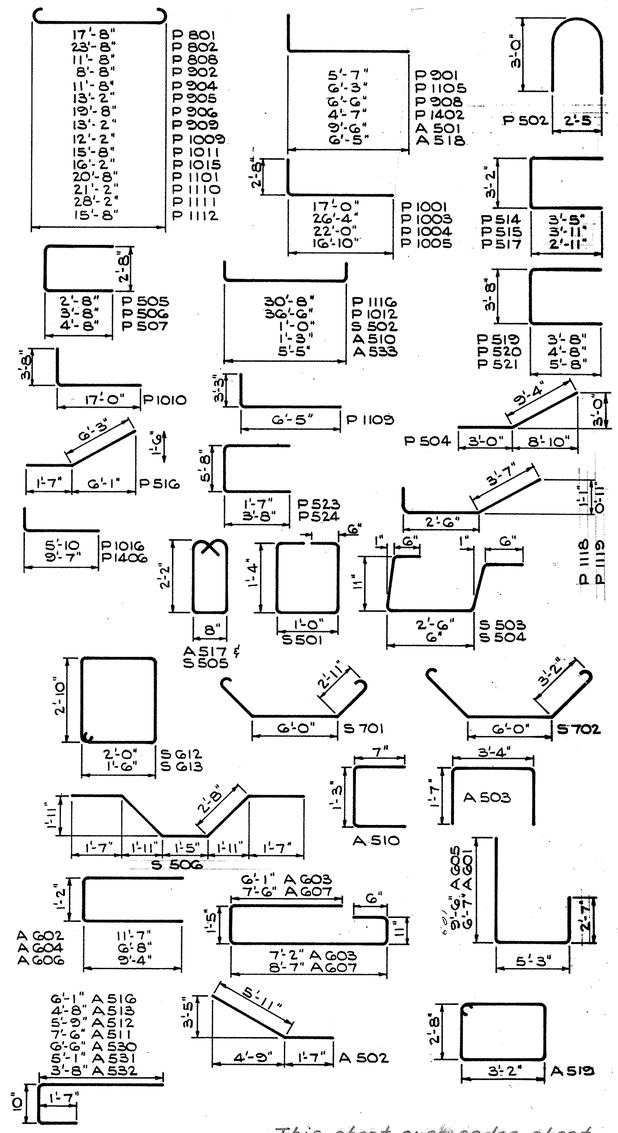
TOTAL REINFORCING	
ABUTMENT TOTAL	20,270
PIERS TOTAL	1,045,494
SUPERSTRUCTURE TOTAL	(1,368,826)
	(1,382,282)
GRAND TOTAL	(2,434,590)
	(2,448,096)

SPIRAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE "NO. OF TURNS" SHOWN IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

FED. RD.	STATE	PROJECT	
2	OHIO	U.S. - 1159 (1)	

2094
232

MAH. - 711 - 0.17



This sheet supersedes sheet No. 209. 9-12-69

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GLAUS, PYLE & SCHOMER
AKRON, OHIO — YOUNGSTOWN, OHIO

REINFORCING SCHEDULE

BRIDGE Nº MAH – 711 – 0116
OVER MAHONING RIVER
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.W.C.	J.W.C.		R.H.	W.K.D.	6-22-68	1-26-70