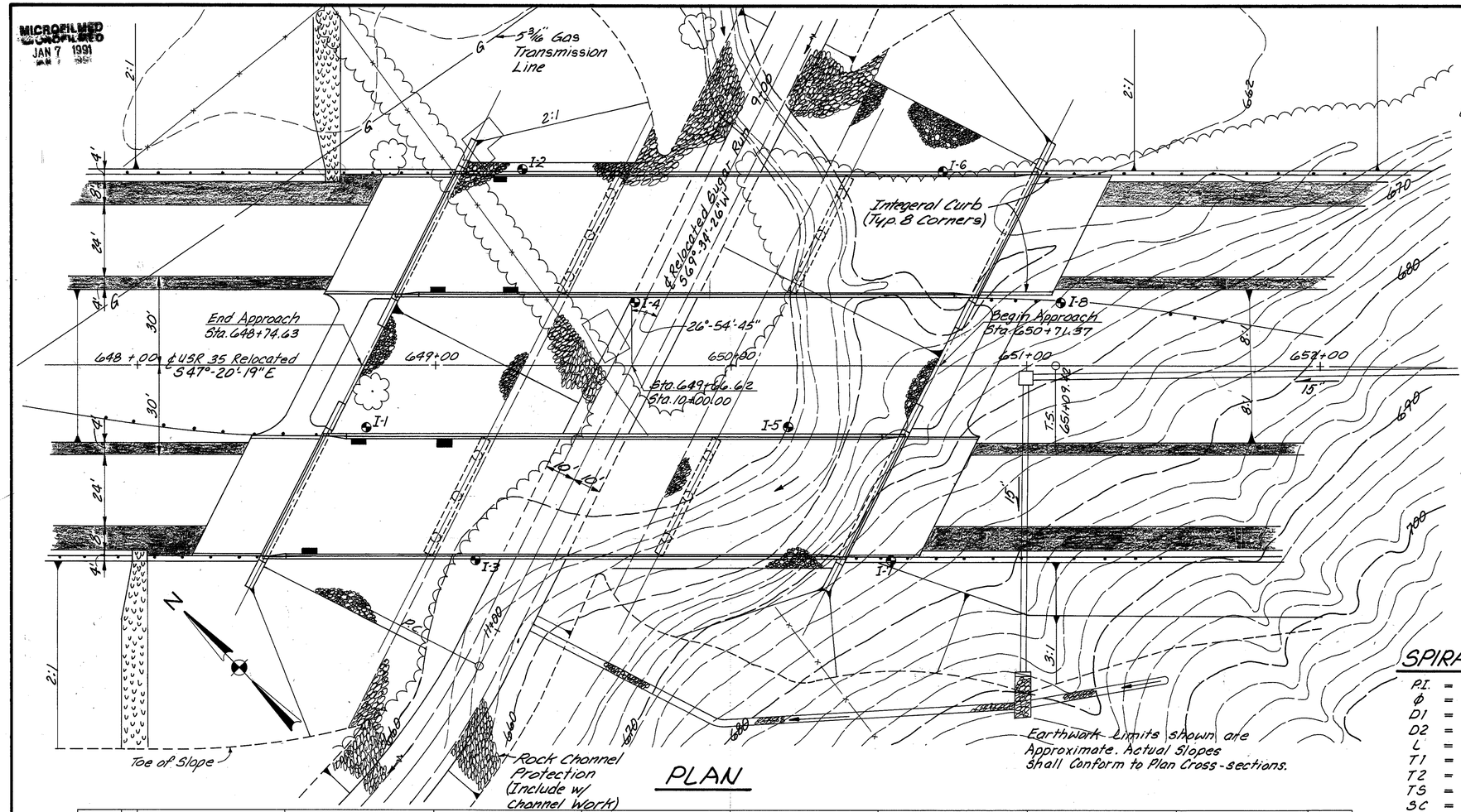
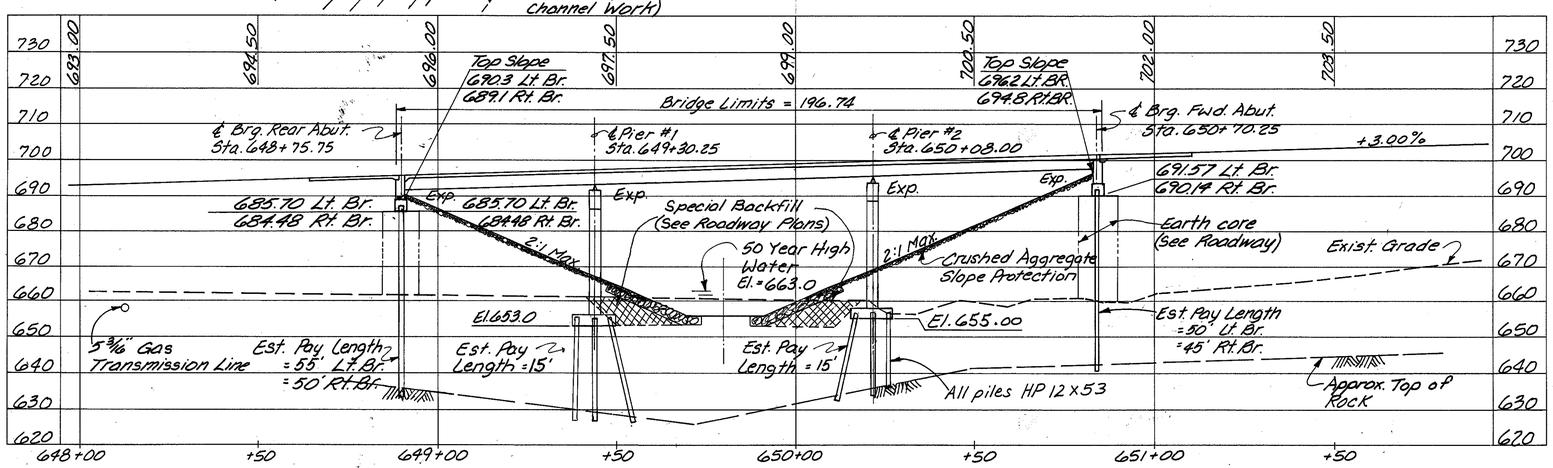
JAC-35-11.46

OHIO
FHWA REGION 5

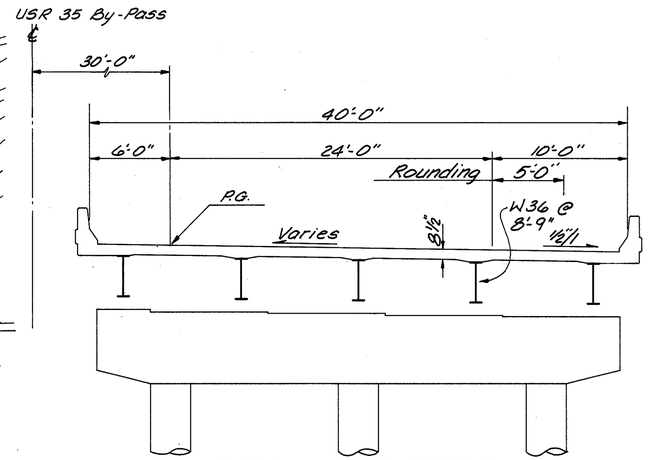
386
442



PLAN



SECTION ALONG PROFILE LINE OF LEFT BRIDGE



TYPICAL HALF SECTION

Right Bridge Shown
(See 10/12 for Left Bridge)

SPIRAL DATA

P.I.	=	653+76.65
ϕ	=	7°-00'-00"
D1	=	0°-00'-00"
D2	=	3°-30'-00"
L	=	400.00'
T1	=	266.88
T2	=	133.52
T.S.	=	651+09.42
S.C.	=	655+09.42
S/E	=	0.06%

TRAFFIC DATA

Average Daily Traffic
Year 2006 = 6,090
26% Trucks = 1,600

DRAINAGE DATA

Drainage Area	= 2,321 AC.
Q50	= 1,270
Velocity (Avg.)	= 5.6 FPS
Depth of Flow	= 6.8'
Q25	= 1,017 CFS
Q100	= 1,558 CFS

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Composite Concrete Deck.

SPANS: 54'-6", 77'-9" & 62'-3"

ROADWAY: 2@40'-0" F/F Concrete Parapets.

LOADING: HS20-44 (Case II) and Alternate Military Loading.

SKEW: 26°-54'-45"

ALIGNMENT: Tangent

WEARING SURFACE: Monolithic Concrete.

APPROACH SLAB: AS-1-81 (25' Long)

1/12

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SITE PLAN

BRIDGE NO. JAC-35-1231 4/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WBS	JEB	—	JET	WBS	4/14/96	

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE						RIGHT BRIDGE					
				ABUT'S	PIERS	SUPER	GENERAL			ABUT'S	PIERS	SUPER	GENERAL		
503	1,132	Cu.Yds.	Unclassified Excavation	130	436					130	436				
503	L.S.	Lump Sum	Cofferdams, Cribs, and Sheeting		L.S.						L.S.				
505	L.S.	Lump Sum	Pile Driving Equipment Mobilization				L.S.						L.S.		
507	3,060	Lin.Ft.	Steel Piles, HP 12x53.0s per Plan	945	630					855	630				
507	120	Each	Steel Points, as per Plan	18	42					18	42				
509	91,939	Lbs.	Reinforcing Steel, Grade 60	8,956	37,263					8,959	36,761				
511	598	Cu.Yds.	Class S Concrete, Superstructure, See Proposal Note			299						299			
511	250	Cu.Yds.	Class C Concrete, Piers above Footings		126						124				
511	88	Cu.Yds.	Class C Concrete, Abutments above Footings	45						43					
511	322	Cu.Yds.	Class C Concrete, Footings	45	116					45	116				
513	312,106	Lbs.	Structural Steel, A588 (AISC Category I)			156,053						156,053			
513	4,560	Each	Welded Stud Shear Connectors			2,280						2,280			
516	248	Lin.Ft.	PVC Waterstop, as Per Plan	124						124					
516	166	Sq.Ft.	1" Preformed Expansion Joint Filler	83						83					
516	248	Sq.Ft.	1/2" Preformed Expansion Joint Filler	124						124					
516	20	Each	Elastomeric Bearings (17"x17"x 3/4" Elastomeric Pad with 18"x18"x2" Steel Load Plate)		10						10				
518	102	Cu.Yds.	Porous Backfill	51						51					
518	274	Lin.Ft.	6" Perforated Helical Corrugated Steel Pipe, 707.01	137						137					
518	160	Lin.Ft.	6" Non-Perforated, Helical Corrugated Steel Pipe, including Specials, 707.01	80						80					
518	6	Each	Scuppers, including Supports			3						3			
601	2,316	Sq.Yds.	Crushed Aggregate Slope Protection				1,158						1,158		
829	134,778	Lbs.	Epoxy Coated Reinforcing Steel, Grade 60				67,389						67,389		
Special	1920	Sq.Yds.	Sealing of Concrete Surfaces (Epoxy), See Proposal Note	45	401	519				45	391	519			

PILES: SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS ATTAINED BY PENETRATING SOFT BEDROCK WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH, OR REFUSAL SHALL BE CONSIDERED AS ATTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

PILE DESIGN LOADS: THE DESIGN LOAD FOR THE ABUTMENT PILES IS 70 TONS PER PILE WHICH INCLUDES AN ALLOWANCE OF 40 TONS PER PILE FOR DOWNDRAG AND THE DESIGN LOAD FOR THE PIER PILES IS 61 TONS PER PILE.

EMBANKMENT: SEE PROJECT GENERAL NOTES FOR EMBANKMENT CONSTRUCTION AND INSTRUMENTATION.

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PILE POINTS: STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED PILING. THE STEEL POINTS SHALL BE FURNISHED BY THE ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BOULEVARD, CLIFTON, NEW JERSEY 07014; INTERNATIONAL CONSTRUCTION EQUIPMENT, INC. 301 WAREHOUSE DRIVE MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS INC., P.O. BOX 688, FRANKLIN LAKE, NEW JERSEY 07417; VERSA STEEL INC., 3601 N.W. YEON AVENUE, P.O. BOX 10559, PORTLAND, OREGON 97210 OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO THE DIRECTOR.

JAC-35-11.46

OHIO FHWA REGION 5

387 442

GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS:
AS-1-81 DATED 11/27/81 SHEETS 1, 2, & 3
BR-1 DATED 5/29/79
SD-1-69 DATED 6/12/69 SHEETS 3 & 4
ICD-1-82 DATED 8/1/84 SHEETS 1, 2, 3, 4, & 5
GR-1 DATED 1/11/85
GR-3 DATED 1/21/85
MC-7 DATED 10/15/76
AND TO SUPPLEMENTAL SPECIFICATION:
836 DATED 11/12/85
824 DATED 10/8/82

DESIGN SPECIFICATIONS: THIS STRUCTURE COMFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1983, INCLUDING THE 1984, INTERIM SPECIFICATIONS AND THE OHIO SUPPLEMENT TO THESE SPECIFICATIONS.

DESIGN LOADING: HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING.

CONCRETE: CLASS S - COMPRESSIVE STRENGTH 4500 PSI
CLASS C - COMPRESSIVE STRENGTH 4000 PSI

REINFORCING STEEL: ASTM A615, A616 or A617--GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615.

STRUCTURAL STEEL: ASTM A588 - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MAT.

MONOLITHIC WEARING SURFACE: IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

ABUTMENT PILING: ABUTMENT PILING BENDING STRESS MAY APPROACH, REACH OR EXCEED YIELD STRESS.

PILE DRIVING CONSTRAINTS: PRIOR TO DRIVING PILES AT THIS STRUCTURE, THE SPILL-THRU SLOPE EMBANKMENTS SHALL BE CONSTRUCTED UP TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. AFTER THE EMBANKMENT IS COMPLETED WITHIN THE ABOVE REQUIRED LIMITS, THE EXCAVATION FOR THE PIER FOOTING CAN BE MADE AND PIER PILES CAN BE DRIVEN. THE EXCAVATION FOR THE ABUTMENT FOOTING AND THE INSTALLATION OF THE ABUTMENT PILES SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT, IS COMPLETED AND THE EMBANKMENT HAS EXPERIENCED A WAITING PERIOD OF 60 DAYS. THE DIRECTOR MAY SHORTEN THE WAITING PERIOD IF THE CONTRACTOR'S FIELD MEASUREMENTS INDICATE THAT 90 PERCENT CONSOLIDATION HAS BEEN ATTAINED.

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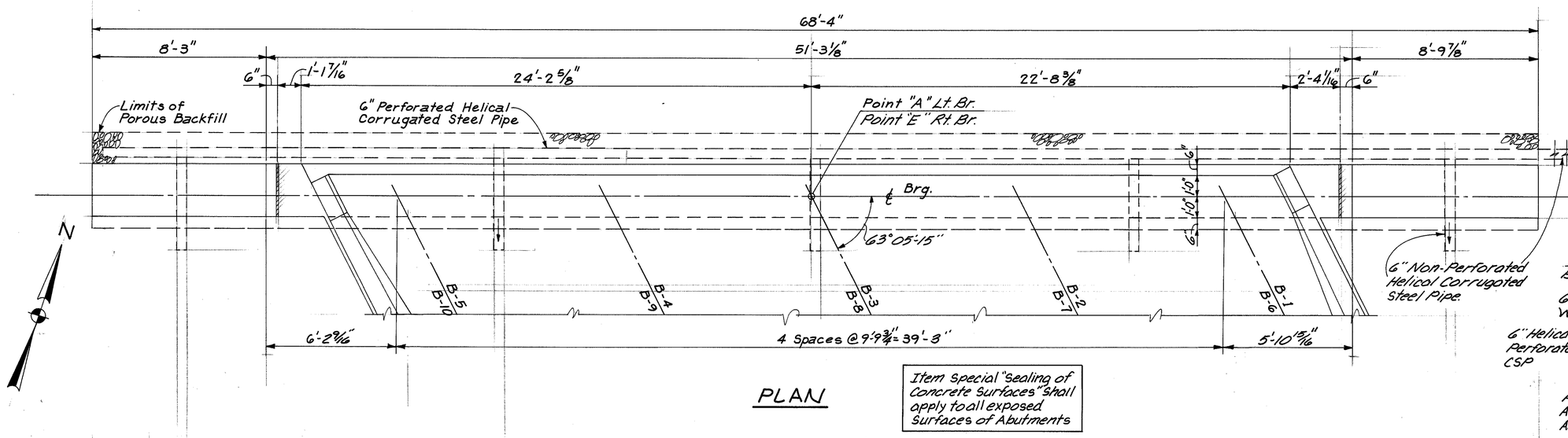
2/12

ESTIMATED QUANTITIES & GENERAL NOTES

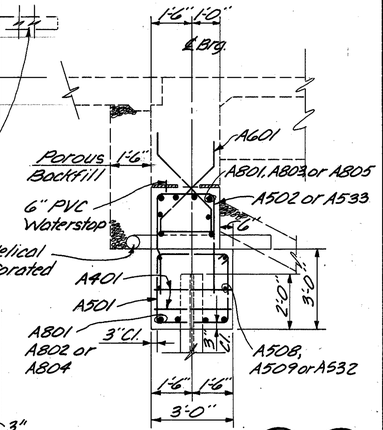
BRIDGE NO. JAC-35-1231 L/R OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JET	KJO	-	WBS			

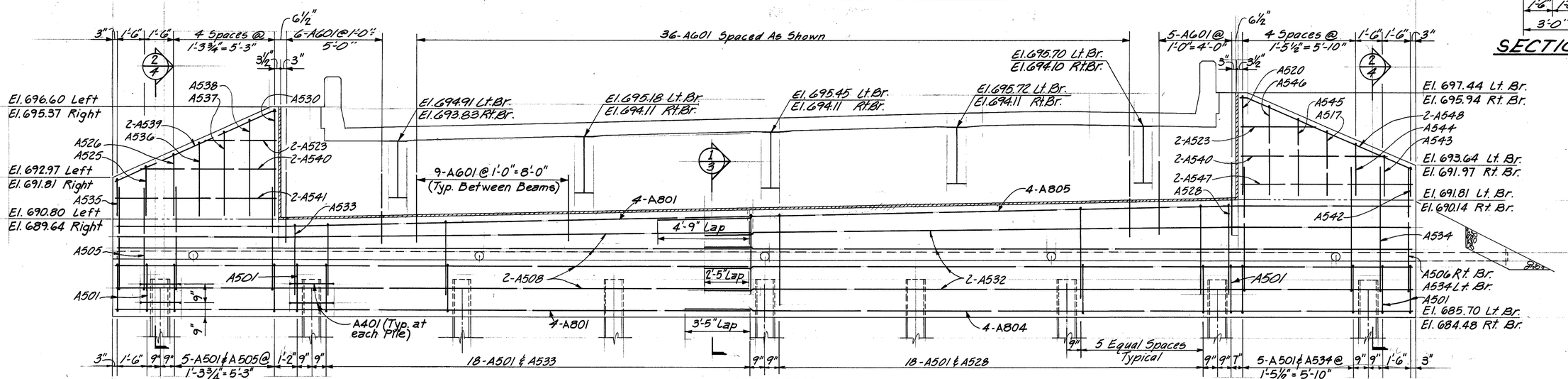


PLAN

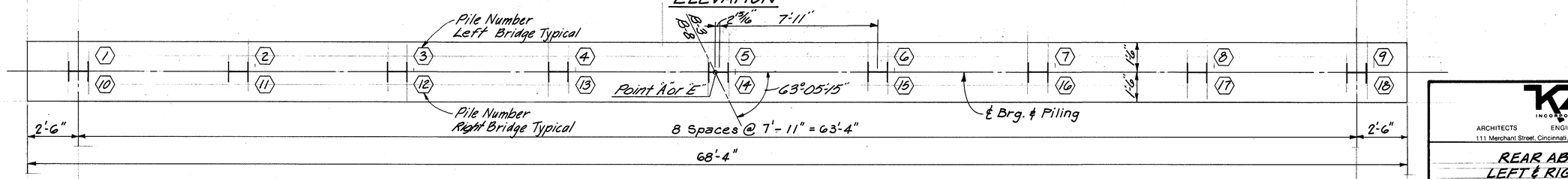
Item Special "Sealing of Concrete Surfaces" Shall apply to all exposed Surfaces of Abutments



SECTION 1/3 1/4



ELEVATION



PILE PLAN

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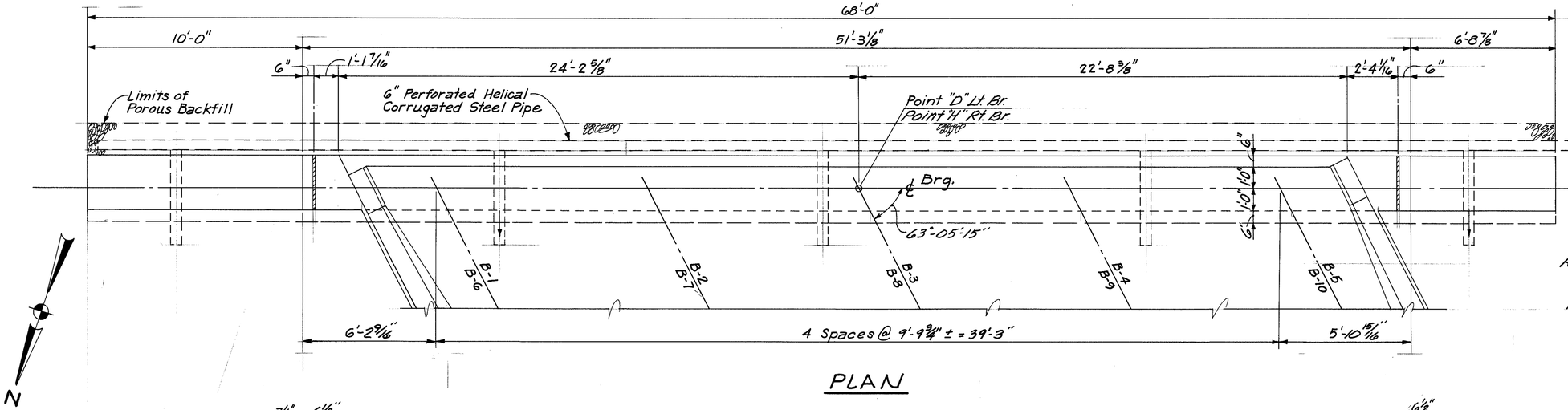
3/12

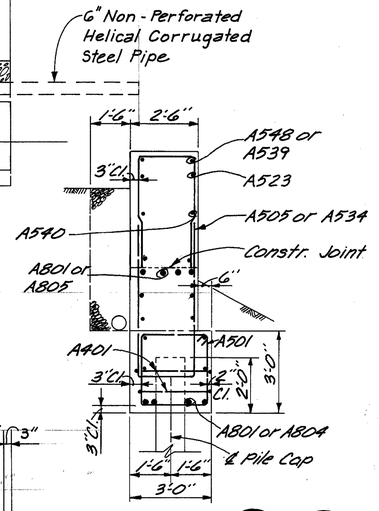
REAR ABUTMENT
LEFT & RIGHT BRIDGE

BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

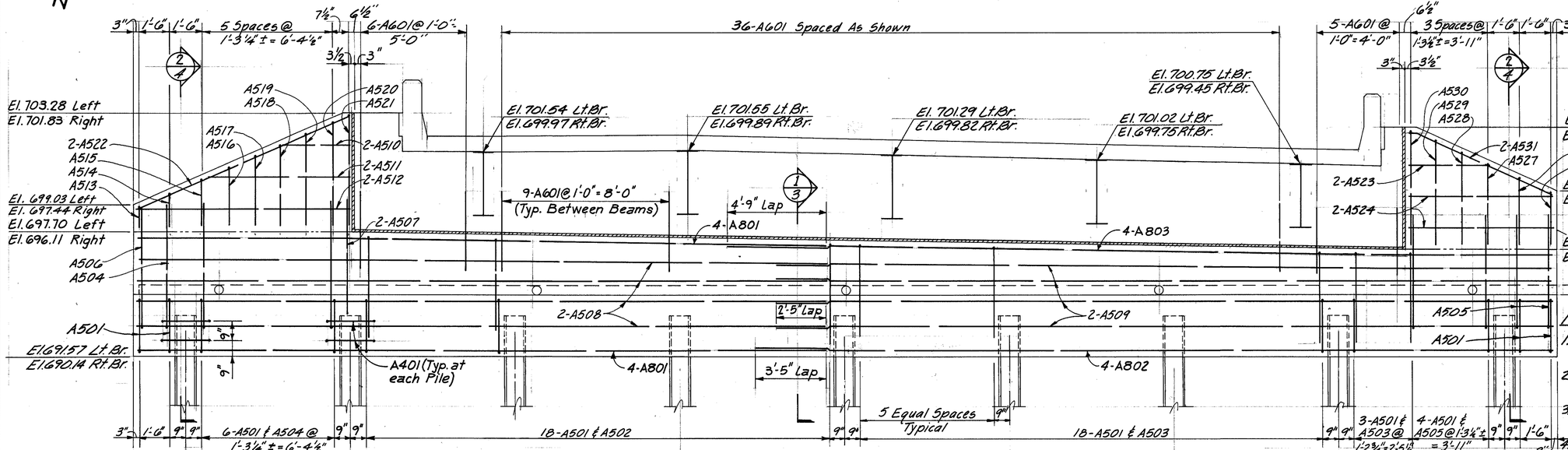
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	—	JET	WBS	4/10/86	



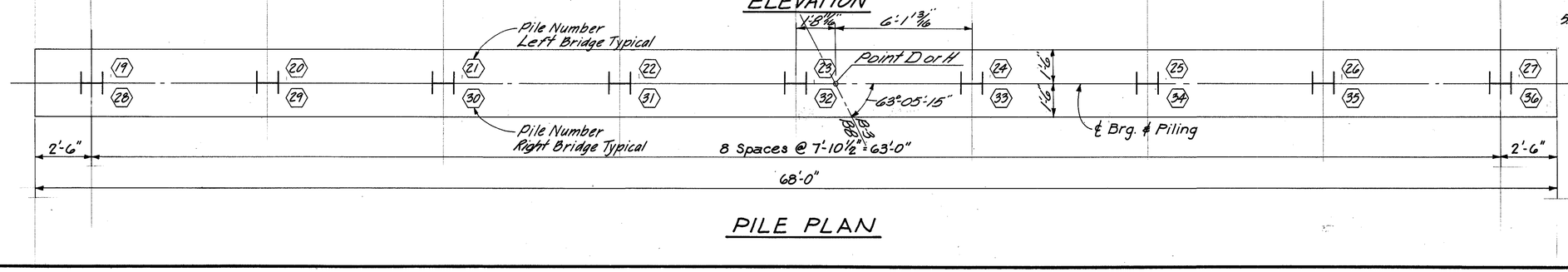
PLAN



SECTION (2/3) (2/4)



ELEVATION



PILE PLAN

NOTES:

1. See Sheet 2/12 for General Notes, & Quantities.
2. See Sheets 11/12 & 12/12 for Reinforcings Steel Details.
3. For Location of Layout Points "A" "D" "E" & "H", See Layout Diagram on Sheet 8/12
4. See Std. Drwg. ICD-1-82 for additional details.
5. Porous Backfill shall extend upward to the plane of the subgrade & laterally to the surface of the embankment Slopes.

4/12

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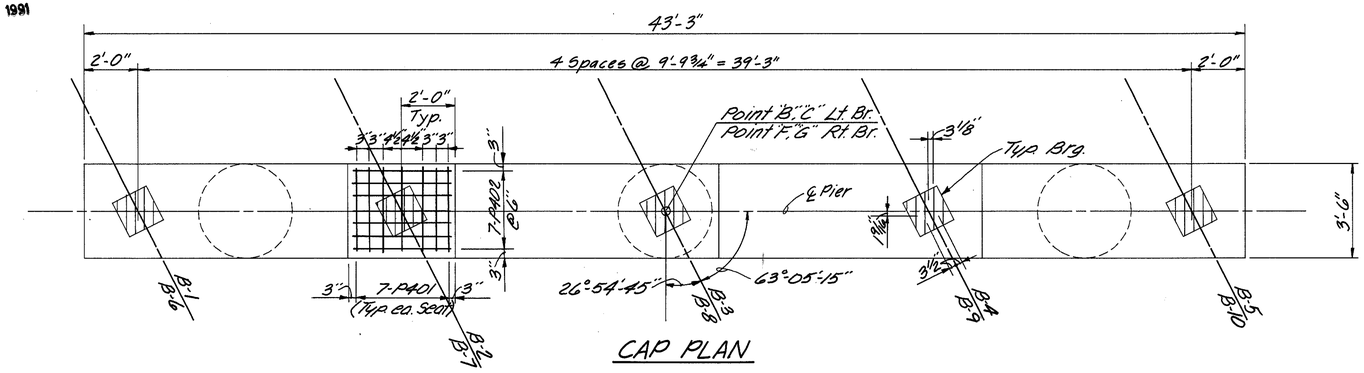
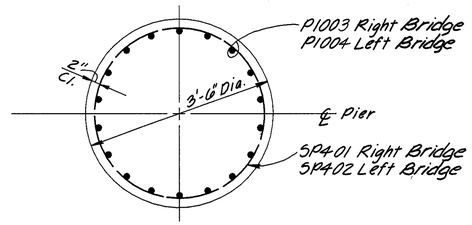
FORWARD ABUTMENT
LEFT & RIGHT BRIDGE
BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	–	JET	WBS	9/10/86	

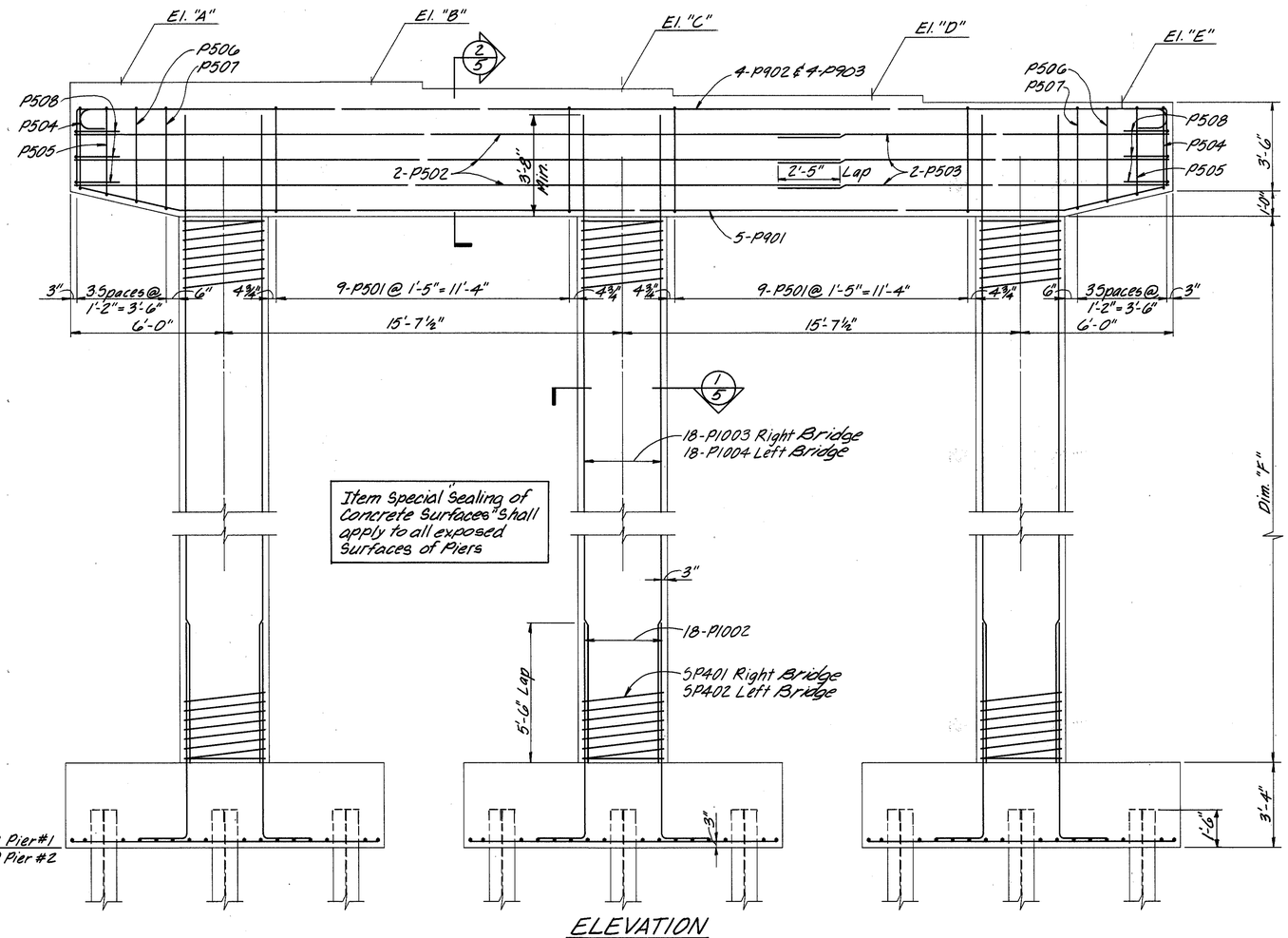
26581



CAP PLAN



SECTION 1/5



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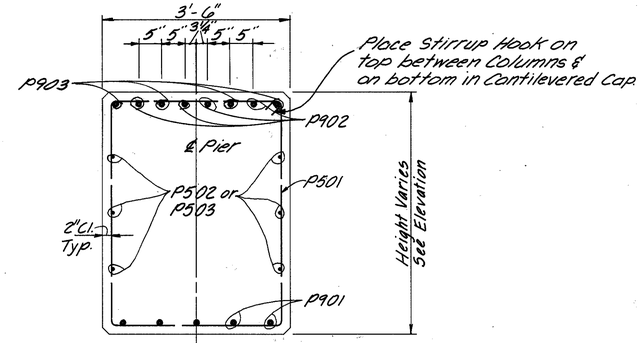

SECTION 2/5

NOTES:

1. See Sheet 2/12 for General Notes & Quantities.
2. See Sheets 11/12 & 12/12 for Reinf. Steel Details.
3. See Sheet 7/12 for Bearing Details.
4. For Location of Layout Points "B" "C" "F" & "G", See Layout Diagram on Sheet 8/12.
5. Reinforcing Steel in the vicinity of the Bridge Seat shall be accurately placed to avoid interference with the drilling of Bearing Anchor Holes or the pre-setting of Bearing Anchors.
6. At the option of the Contractor, Bearing Anchors (or formed holes), located & supported by templates, may be cast in place.

	Pier #1		Pier #2	
	Left	Right	Left	Right
Elev. "A"	694.12	692.52	696.45	694.86
Elev. "B"	694.13	692.52	696.47	694.84
Elev. "C"	693.87	692.53	696.20	694.82
Elev. "D"	693.60	692.53	695.93	694.81
Elev. "E"	693.33	692.25	695.66	694.53
Dim. "F"	32'-6"	31'-5 11/16"	32'-9 5/16"	31'-8 3/8"

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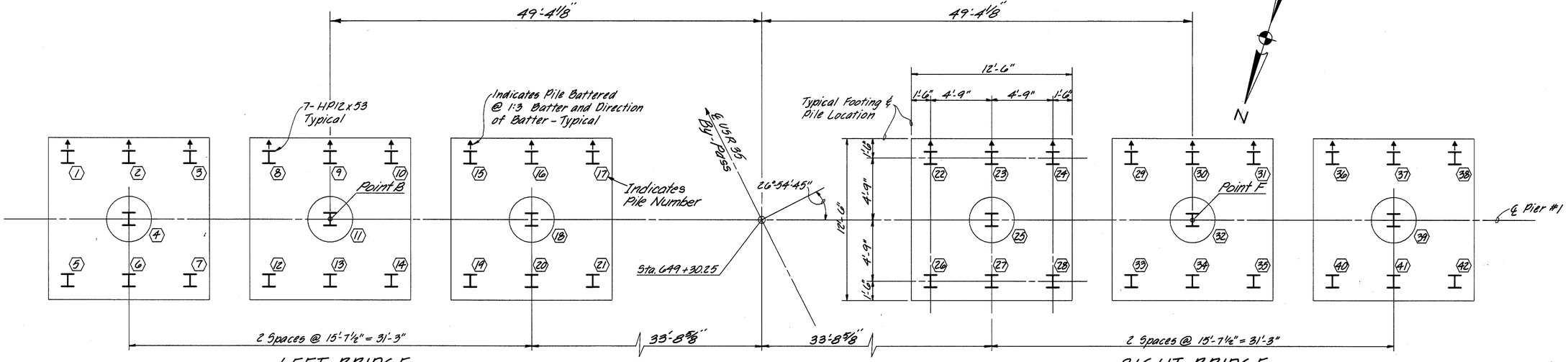
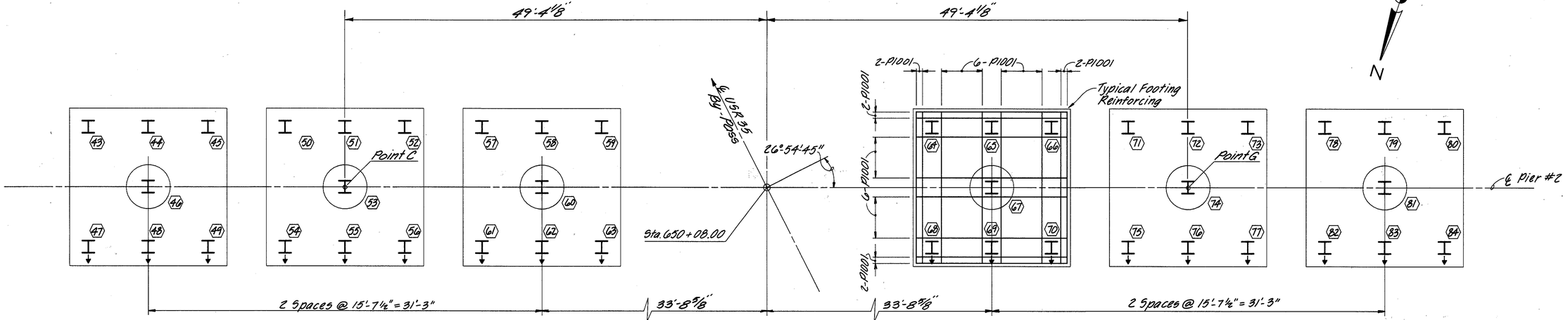
5/12

PIERS
LEFT & RIGHT BRIDGE
BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MP	LEP	—	JET	WBS 4/10/86		



FOOTING PLAN - PIER #1



FOOTING PLAN - PIER #2

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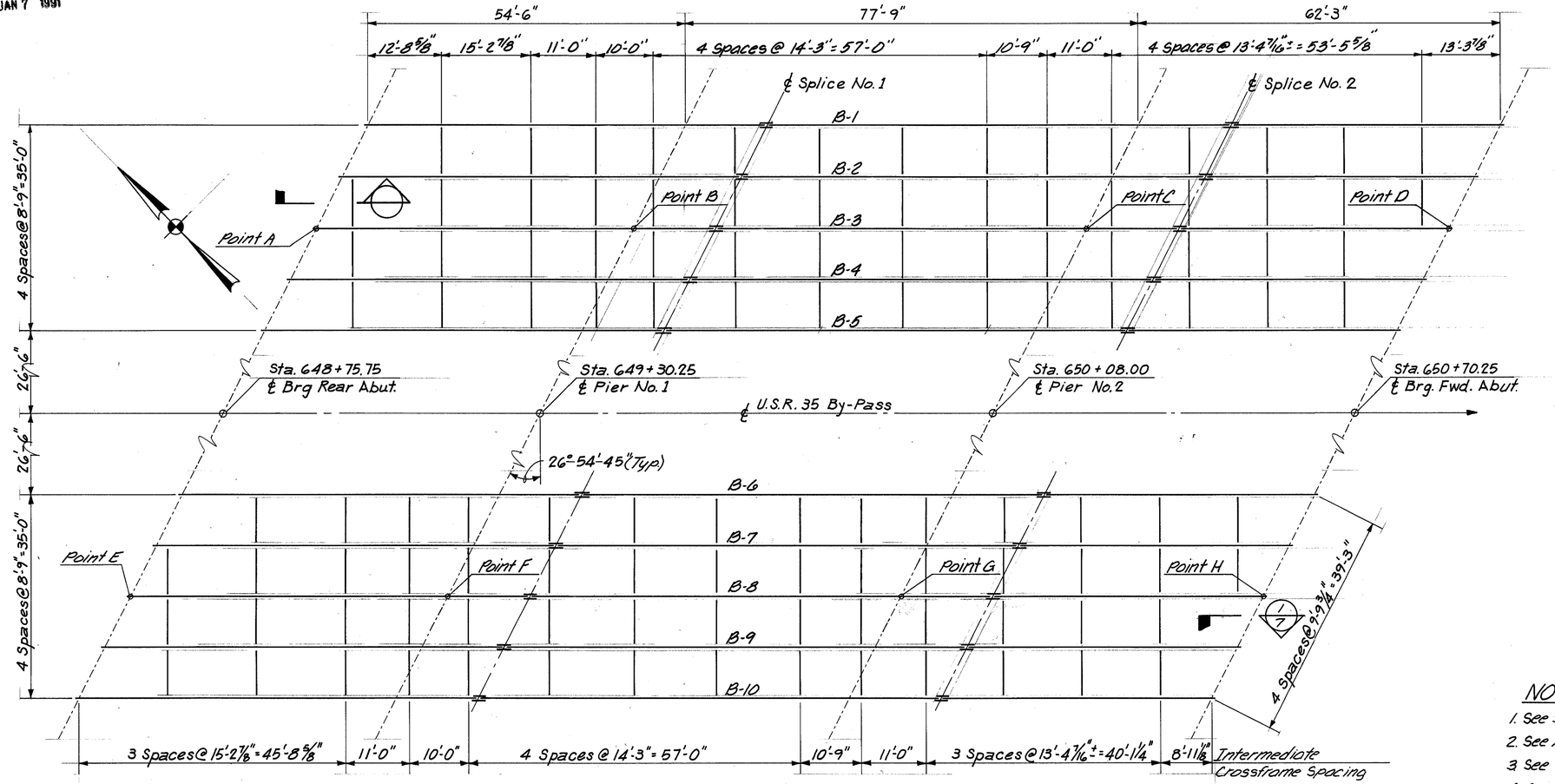
PIER FOOTINGS

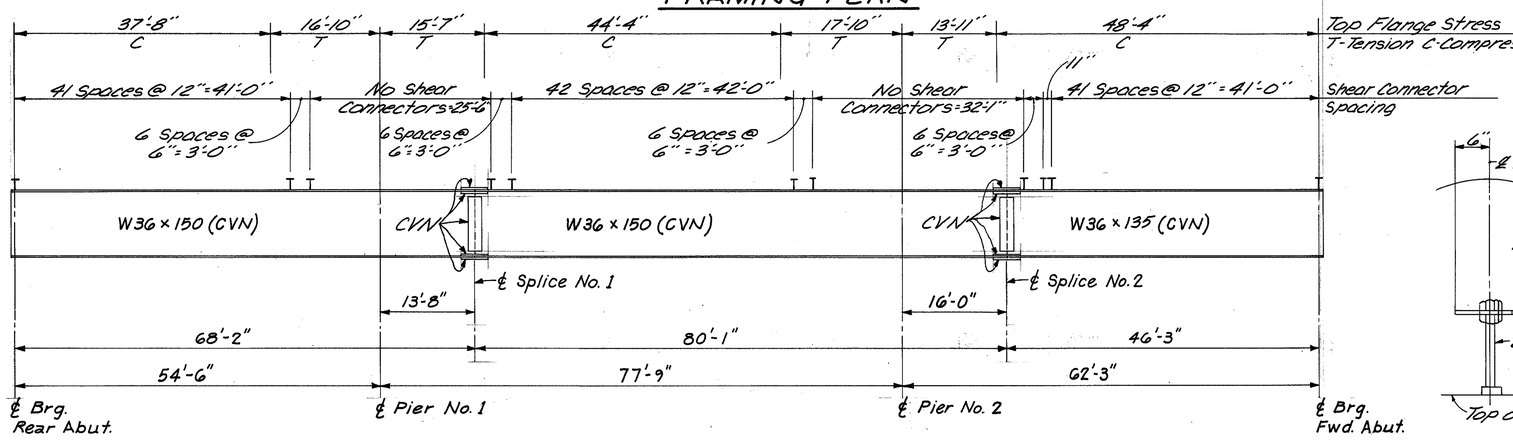
BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MP	LEP	—	JET	WBS	4/10/86	

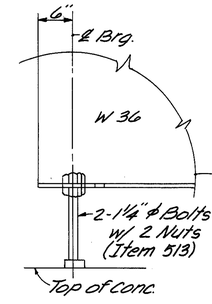
70581



FRAMING PLAN

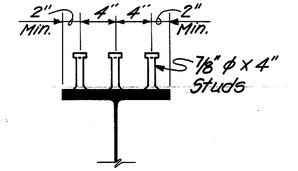


BEAM ELEVATION

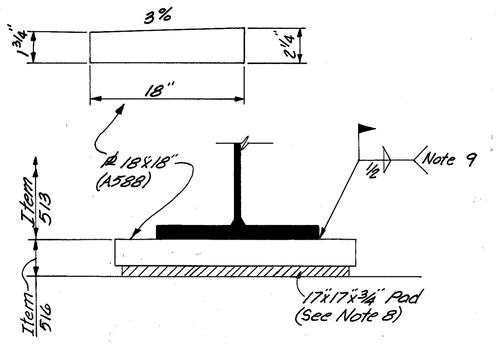


See Std. Drwg. ICD-1-82 Sheet 5 of 5 for Holes in End of Beams.

SECTION 1/7



SHEAR CONNECTOR DETAIL



BEARING DETAIL

NOTES:

1. See Sheet 2/12 for General Notes & Quantities.
2. See next Sheet for additional Details.
3. See Sheet 9/12 for Intermediate Crossframes.
4. See Std. Drwg. SD-1-69 for additional Splice, Scupper, & Crossframe.
5. When a Shape or Plate is Designated (CVN) the Material Shall Meet Specified Minimum Notch Toughness Requirements as specified in 711.01 of CMS.
6. High Strength Bolts shall be 1" Diameter A325.
7. A588 Steel is to be Left Unpainted. See CMS 513.221 for Cleaning Requirements.
8. Elastomeric Bearing shall be per 711.23 Grade 50. Shop Bond Bearing Pad to Load Plate using Vulcanizing Process.
9. Pyrometric sticks or other Temperature Monitoring Devices shall be used to limit Steel Surface Temperature to Less than 300°F during Welding. Quenching to Accelerate cooling is not permitted.
10. All Splice Material to be A588 Steel.

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7/12

FRAMING PLAN

BRIDGE NO. JAC-35-1231 4/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WBS	MHW	—	JET	WBS	4/11/86	

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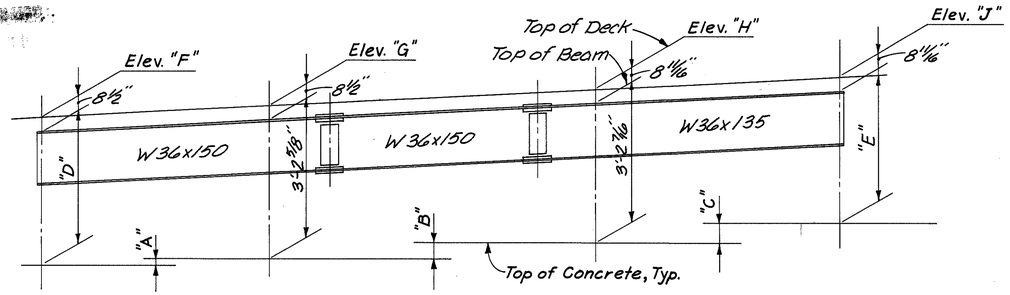
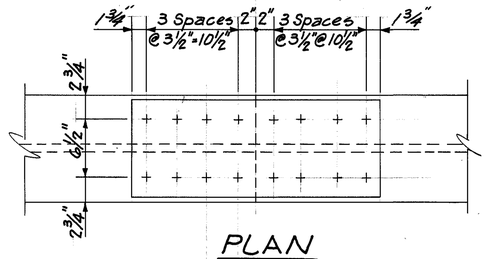
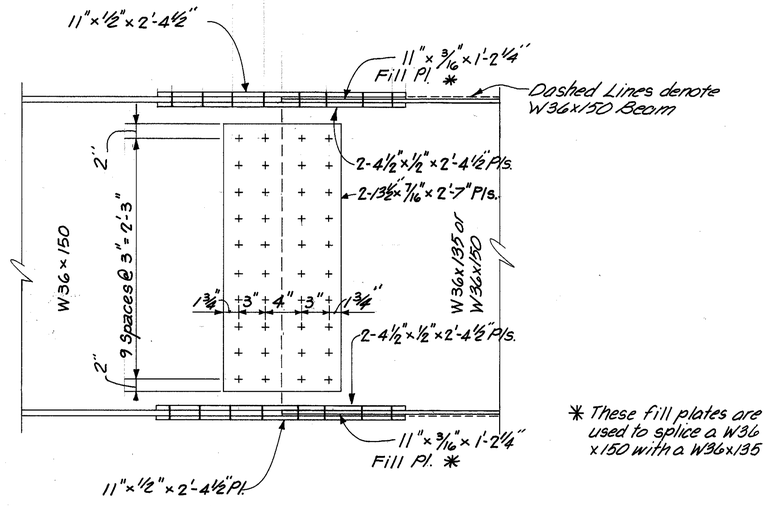


ELEVATION LAYOUT

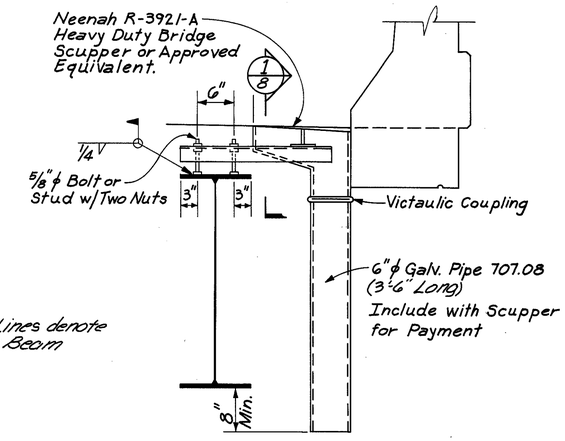
	BEAM	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	EL. "F"	EL. "G"	EL. "H"	EL. "J"
Lt. Bridge	B-1	2'-4 15/16"	2'-3 15/16"	1'-1 9/16"	4'-0"	3'-11 3/8"	696.41	698.05	700.38	702.25
	B-2	2'-7 1/16"	2'-4 1/16"	0'-10 15/16"	4'-2 9/16"	4'-1 3/8"	696.43	698.06	700.40	702.26
	B-3	2'-6 5/8"	2'-3 15/16"	0'-11 7/8"	4'-1 9/16"	4'-1 1/16"	696.16	697.80	700.13	702.00
	B-4	2'-5 3/4"	2'-3 15/16"	1'-0 3/4"	4'-0 3/4"	4'-0 3/16"	695.89	697.53	699.86	701.73
	B-5	2'-4 15/16"	2'-3 15/16"	1'-1 9/16"	4'-0"	3'-11 3/8"	695.62	697.26	699.59	701.46
Rt. Bridge	B-6	2'-5 3/16"	2'-4 1/16"	1'-1 15/16"	4'-0"	3'-11 3/8"	694.81	696.45	698.79	700.68
	B-7	2'-5 7/8"	2'-3 15/16"	1'-0 1/2"	4'-1"	3'-11 5/16"	694.82	696.45	698.77	700.60
	B-8	2'-6 3/4"	2'-3 1/2"	0'-11 3/16"	4'-1 1/16"	4'-0 1/16"	694.82	696.46	698.75	700.53
	B-9	2'-7 1/16"	2'-3 3/8"	0'-9 3/4"	4'-2 9/16"	4'-1 3/8"	694.82	696.46	698.74	700.46
	B-10	2'-4 15/16"	2'-3 3/8"	0'-11 1/2"	4'-0"	3'-11 3/8"	694.54	696.18	698.46	700.16



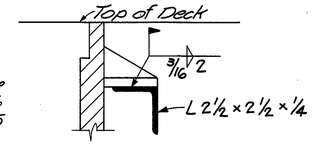
PLAN



* These fill plates are used to splice a W36 x150 with a W36x135

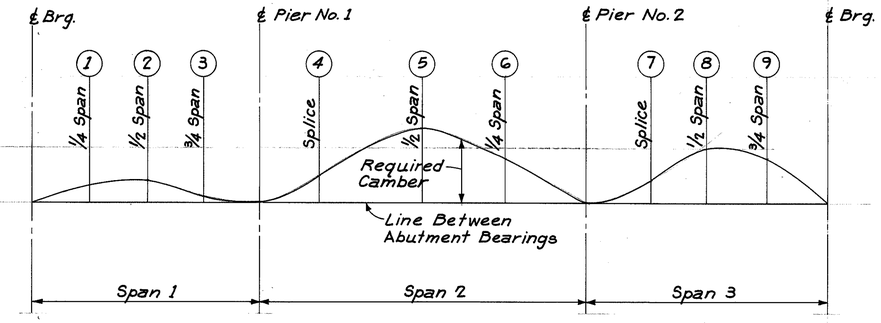


SCUPPER DETAIL



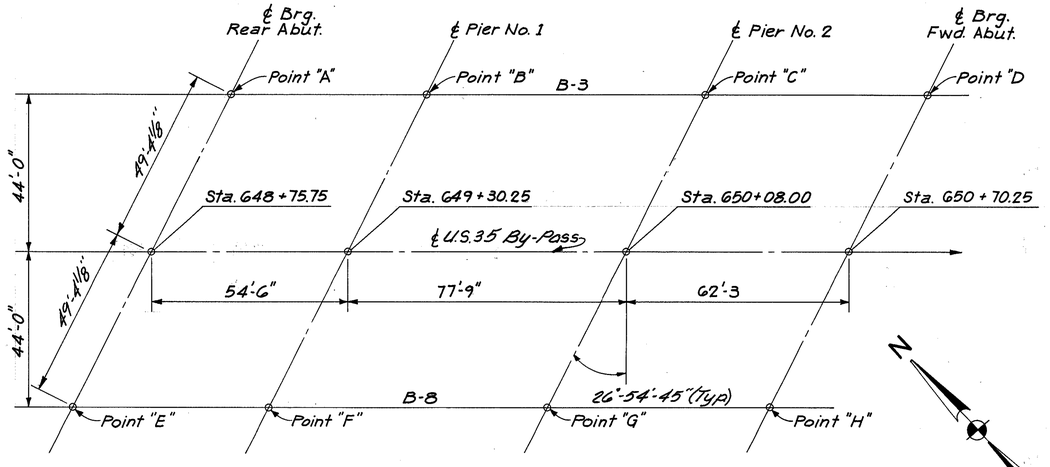
ELEVATION SPLICE DETAIL

SECTION 1/8



LAYOUT DIAGRAM

DEFLECTION & CAMBER TABLE										
Beams B-1 thru B-10	DESCRIPTION	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	D.L. Steel Beam	1/32	1/32	0	1/32	1/8	1/16	1/32	1/16	1/16
	Remaing D.L.	7/32	9/32	5/16	11/32	15/16	9/16	9/32	11/16	9/16
	Total Camber	1/4	5/16	5/16	3/8	1/16	5/8	5/16	3/4	5/8



LAYOUT DIAGRAM

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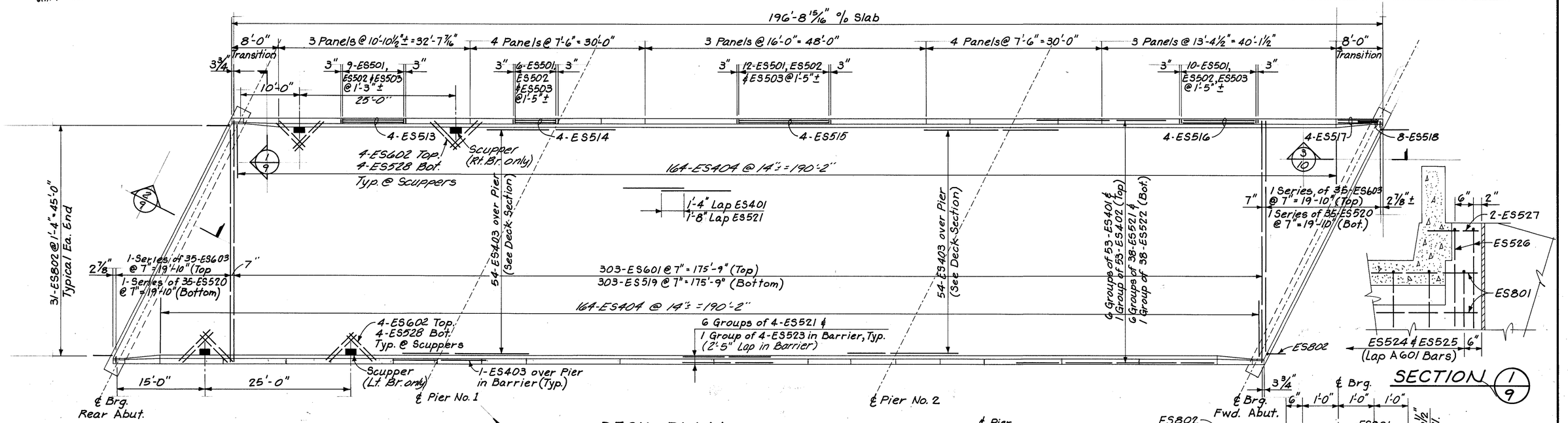
ARCHITECTS ENGINEERS PLANNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

8/12

FRAMING DETAILS & LAYOUT DIAGRAM

BRIDGE NO. JAC-35-1231 4/R
OVER SUGAR RUN

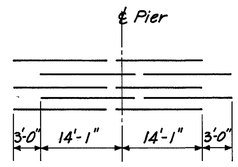
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	—	JET	WBS	4/11/86	



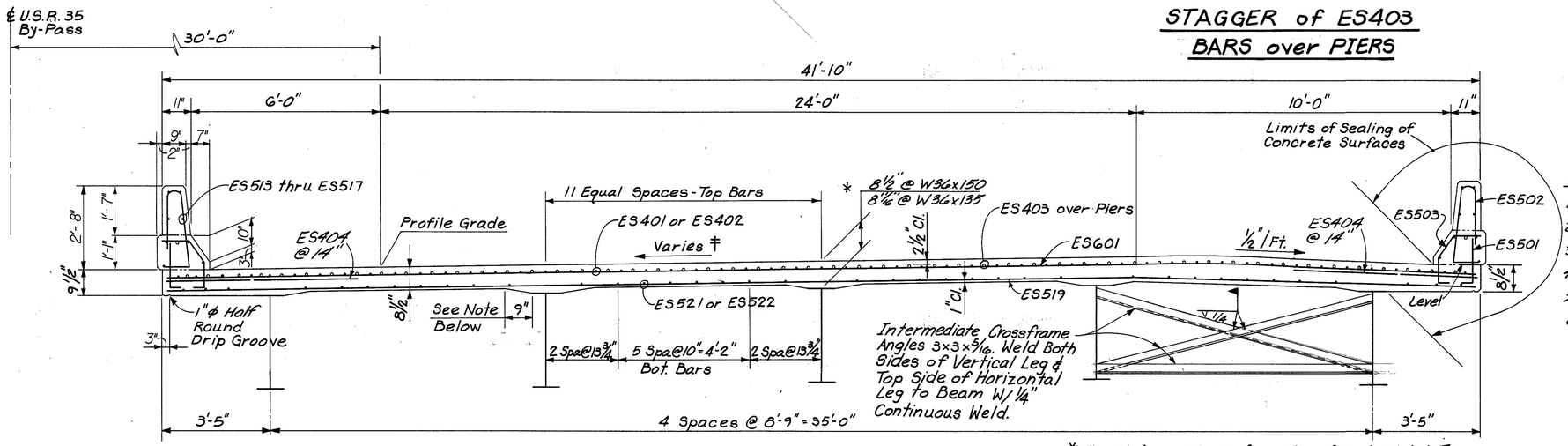
SECTION 1/9

DECK PLAN

‡ Deck Slope
Sta. 648+00 = 3/16" /'
Sta. 649+60 = 3/16" /'
Sta. 651+09.42 = 0" /'



STAGGER of ES403 BARS over PIERS



TRANSVERSE DECK SECTION

(Right Bridge Shown)

A Haunch Width of 9" Shall be used for Computing Quantity of Conc. However, the Haunch Width May Vary Between 6" & 12".

* The Distance Shown from Top of Deck Slab to Top of Steel Beam is the Design Dim. The Quantity of Deck Conc. to be Paid for Shall be Based on this Dim, Even Though Deviation from it May be Necessary Because the Top Flange of the Beam May Not Have the Exact Camber or Conformation Req'd. to Place it Parallel to the Finish Grade.

SECTION 2/9

NOTES:

1. See Sheet 2/12 for General Notes & Quantities.
2. See Sheets 11/12 & 12/12 for Reinforcing Steel Details.
3. See Std. Drwg. BR-1 for Additional Bridge Railing Details.
4. See Sheet 10/12 for Additional Deck Details.
5. See Std. Drwg. ICD-1-82 for Additional Abut. Details.
6. Welded Attachment of Supports for Conc. Deck Finishing Machine may be made to Areas of the Fascia Stringer Flanges Designated "Compression". Attachments Shall not be made to Areas designated "Tension". Fillet Welds to Compression Flanges Shall be not closer than 1" from edge of Flange, be not more than 2" long, & be not smaller than the min. Size required by AASHTO.

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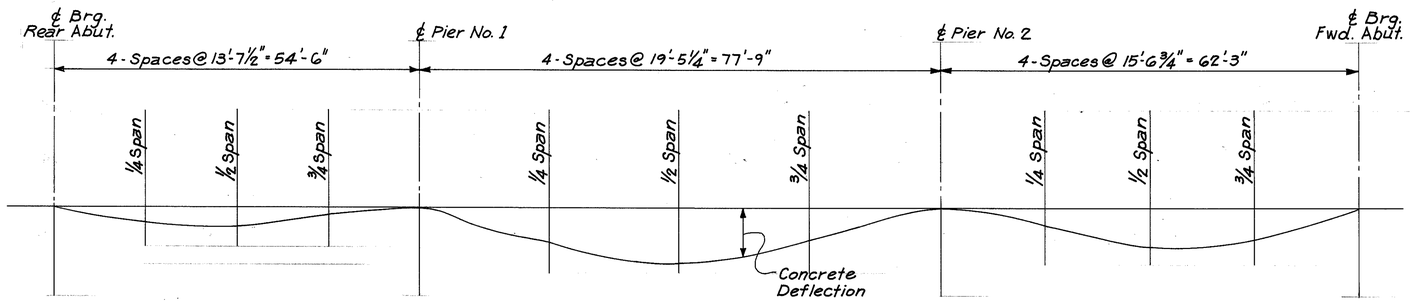
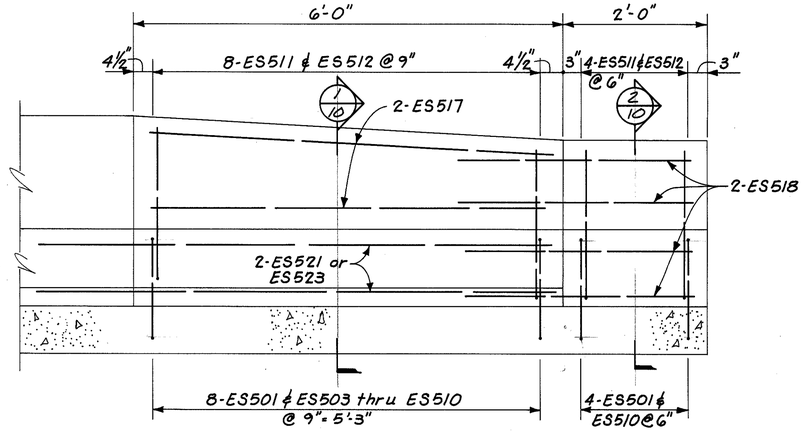
DECK PLAN
BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	—	JET	WBS	4/11/86	

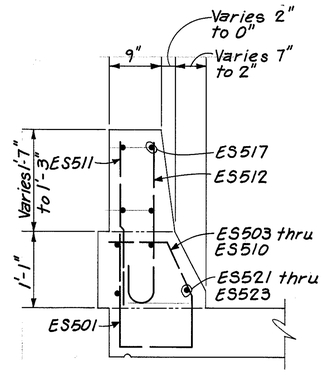


SCREED DIAGRAM AND TABLE

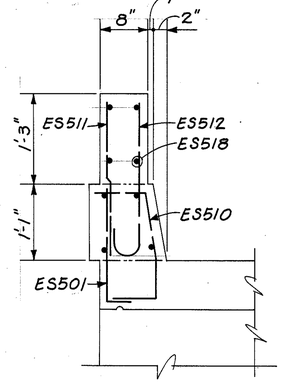
		Location	℄ Brg.	¼	½	¾	℄ Pier	¼	½	¾	℄ Pier	¼	½	¾	℄ Brg.
LEFT BRIDGE	Lt. Gutter	Station	649+07.94	649+21.57	649+35.19	649+48.82	649+62.44	649+81.88	650+01.32	650+20.76	650+40.19	650+55.76	650+71.32	650+86.88	651+02.44
		Profile Grade	696.237	696.646	697.055	697.464	697.872	698.455	699.039	699.622	700.205	700.672	701.139	701.605	702.072
		Gutter Elevation (63'-5" Lt.)	696.363	696.771	697.180	697.589	697.998	698.581	699.164	699.747	700.330	700.797	701.264	701.731	702.198
		Cast-in-Place Conc. Deflection	0	.020	.022	.007	0	.048	.077	.044	0	.024	.054	.045	0
		Screed Elevation	696.36	696.79	697.20	697.60	698.00	698.63	699.24	699.79	700.33	700.82	701.32	701.78	702.20
	Rt. Gutter	Station	648+86.71	649+00.33	649+13.96	649+27.58	649+41.21	649+60.65	649+80.08	649+99.52	650+18.96	650+34.52	650+50.08	650+65.65	650+81.21
		Profile Grade	695.600	696.009	696.418	696.827	697.235	697.818	698.402	698.985	699.568	700.035	700.502	700.968	701.435
		Gutter Elevation (24'-7" Lt.)	695.520	695.928	696.337	696.746	697.155	697.738	698.321	698.904	699.487	699.954	700.421	700.888	701.355
		Cast-in-Place Conc. Deflection	0	.020	.022	.007	0	.048	.077	.044	0	.024	.054	.045	0
		Screed Elevation	695.52	695.95	696.36	696.75	697.16	697.79	698.40	698.95	699.49	699.98	700.48	700.93	701.36
RIGHT BRIDGE	Lt. Gutter	Station	648+64.80	648+78.42	648+92.05	649+05.67	649+19.30	649+38.74	649+58.17	649+77.61	649+97.05	650+12.61	650+28.17	650+43.74	650+59.30
		Profile Grade	694.943	695.352	695.760	696.169	696.578	697.161	697.744	698.327	698.910	699.377	699.844	700.311	700.778
		Gutter Elevation (24'-7" Rt.)	694.862	695.271	695.680	696.088	696.497	697.080	697.663	698.256	698.850	699.325	699.800	700.276	700.751
		Cast-in-Place Conc. Deflection	0	.020	.022	.007	0	.048	.077	.044	0	.024	.054	.045	0
		Screed Elevation	694.86	695.29	695.70	696.10	696.50	697.13	697.74	698.30	698.85	699.35	699.85	700.32	700.75
	Rt. Gutter	Station	648+43.56	648+57.19	648+70.81	648+84.44	648+98.06	649+17.50	649+36.94	649+56.38	649+75.81	649+91.38	650+06.94	650+22.50	650+38.06
		Profile Grade	694.306	694.715	695.123	695.532	695.941	696.524	697.107	697.690	698.273	698.740	699.207	699.674	700.141
		Gutter Elevation (63'-5" Rt.)	694.431	694.840	695.249	695.657	696.066	696.649	697.232	697.816	698.355	698.779	699.203	699.626	700.050
		Cast-in-Place Conc. Deflection	0	.020	.022	.007	0	.048	.077	.044	0	.024	.054	.045	0
		Screed Elevation	694.43	694.86	695.27	695.66	696.07	696.70	697.31	697.86	698.36	698.80	699.26	699.67	700.05



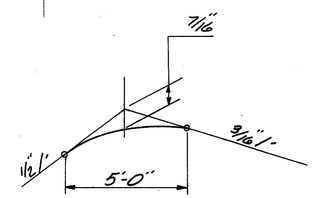
SECTION 3/9



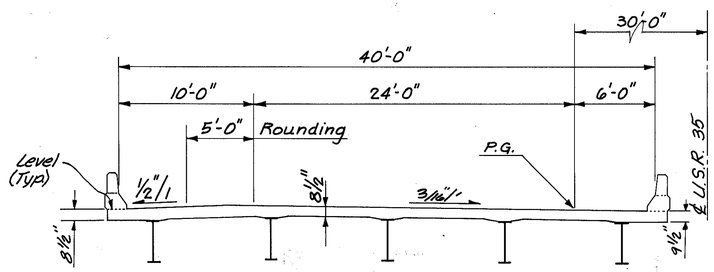
SECTION 1/10



SECTION 2/10



ROUNDING DETAIL



TYPICAL HALF SECTION
(Left Bridge)

NOTES:

1. See Std. Drwg. GR-3 for Concrete Insert Anchor Required to Attach Guardrail to Ends of Bridge Railing.
2. Holes for Bolts Attaching Guardrail to the Terminal Connector at Ends of Parapets shall Slotted 29/32"x3" & all Bolts shall be Tightened as Specified for Expansion Joints as per CMS 606.05 to Allow for Bridge Movement.

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111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

10/12

DECK DETAILS
BRIDGE NO. JAC-35-1231 1/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	MHW	—	JET	WBS	4/11/86	

Mark	Number	Length	Weight	Shape	Left Bridge		Right Bridge	
Abutments					Rear	Forward	Rear	Forward
AB01	32	30'-0"	2,563	Str.	8	8	8	8
AB02	8	41'-1"	877	Str.		4		4
AB03	8	42'-5"	906	Str.		4		4
AB04	8	41'-5"	885	Str.	4		4	
AB05	8	42'-9"	913	Str.	4		4	
A601	188	10'-8"	3,013	Bt.	47	47	47	47
A501	210	10'-10"	2,372	Bt.	52	53	52	53
A502	36	11'-4"	425	Bt.		18		18
A503	42	10'-4"	453	Bt.		21		21
A504	14	14'-8"	214	Bt.		7		7
A505	26	12'-8"	344	Bt.	7	6	7	6
A506	3	13'-8"	43	Bt.		1	1	1
A507	4	5'-10"	24	Str.		2		2
A508	32	30'-0"	1001	Str.	8	8	8	8
A509	16	40'-1"	669	Str.		8		8
A510	4	3'-5"	14	Str.		2		2
A511	4	6'-10"	28	Str.		2		2
A512	4	10'-3"	43	Str.		2		2
A513	2	4'-4"	9	Bt.		1		1
A514	2	5'-8"	12	Bt.		1		1
A515	2	7'-0"	15	Bt.		1		1
A516	2	8'-2"	17	Bt.		1		1
A517	4	9'-4"	38	Bt.	1	1	1	1
A518	2	10'-6"	22	Bt.		1		1
A519	2	11'-8"	24	Bt.		1		1
A520	4	12'-10"	54	Bt.	1	1	1	1
A521	2	13'-6"	28	Bt.		1		1
A522	4	10'-11"	46	Str.		2		2
A523	12	3'-10"	48	Str.	4	2	4	2
A524	8	6'-11"	58	Str.		4		4
A525	4	7'-4"	31	Bt.	1	1	1	1
A526	4	8'-8"	36	Bt.	1	1	1	1
A527	2	10'-0"	21	Bt.		1		1
A528	40	11'-2"	466	Bt.	19	1	19	1
A529	2	12'-4"	26	Bt.		1		1
A530	4	13'-0"	54	Bt.	1	1	1	1
A531	4	7'-3"	30	Bt.		2		2
A532	16	40'-5"	675	Str.	8		8	
A533	38	10"-2"	403	Bt.	19		19	
A534	13	14'-6"	197	Bt.	7		6	
A535	2	6'-0"	13	Bt.	1		1	
A536	2	9'-10"	21	Bt.	1		1	
A537	2	11'-0"	23	Bt.	1		1	
A538	2	12'-2"	26	Bt.	1		1	
A539	4	9'-2"	38	Bt.	2		2	
A540	8	7'-4"	61	Str.	4		4	
A541	4	8'-6"	35	Str.	2		2	
A542	2	5'-4"	11	Bt.	1		1	
A543	2	6'-8"	14	Bt.	1		1	
A544	2	8'-0"	17	Bt.	1		1	
A545	2	10'-8"	22	Bt.	1		1	
A546	2	12'-0"	25	Bt.	1		1	
A547	4	9'-0"	38	Str.	2		2	
A548	4	9'-10"	41	Bt.	2		2	
A401	72	9'-0"	433	Bt.	18	18	18	18

Mark	Number	Length	Weight	Shape	Left Bridge		Right Bridge	
Piers					No. 1	No. 2	No. 1	No. 2
P1001	384	12'-0"	19,828	Str.	96	96	96	96
P1002	216	9'-11"	9,220	Bt.	54	54	54	54
P1003	108	35'-5"	16,461	Str.			54	54
P1004	108	36'-6"	16,962	Str.	54	54		
P901	20	42'-10"	2,912	Bt.	5	5	5	5
P902	16	48'-4"	2,629	Bt.	4	4	4	4
P903	16	45'-5"	2,471	Bt.	4	4	4	4
P501	72	15'-2"	1,139	Bt.	18	18	18	18
P502	24	30'-0"	751	Str.	6	6	6	6
P503	24	15'-4"	384	Str.	6	6	6	6
P504	8	13'-6"	113	Bt.	2	2	2	2
P505	8	14'-0"	117	Bt.	2	2	2	2
P506	8	14'-6"	121	Bt.	2	2	2	2
P507	8	15'-0"	125	Bt.	2	2	2	2
P508	24	6'-1"	152	Bt.	6	6	6	6
P401	140	3'-2"	296	Str.	35	35	35	35
P402	140	3'-8"	343	Str.	35	35	35	35
SP401	6	31'-5"	4016	Bt			3	3
SP402	6	32'-6"	4151	Bt.	3	3		

Mark	Number	Length	Weight	Shape	Left	Right
Superstructure						
ES801	44	49'-10"	5,854	Str.	22	22
ES802	124	5'-1"	1,682	Bt.	62	62
ES601	606	41'-6"	37,774	Str.	303	303
ES602	24	10'-0"	360	Str.	12	12
ES603	4 series of 35	varies 1'-1" to 40'-3"	4,346	Str.	2 Series of 35	2 Series of 35
ES501	660	2'-5"	1,666	Bt.	330	330
ES502	564	5'-3"	3,088	Bt.	282	282
ES503	572	3'-0"	1,790	Bt.	286	286
ES504	8	2'-11½"	25	Bt.	4	4
ES505	8	2'-10½"	24	Bt.	4	4
ES506	8	2'-9½"	23	Bt.	4	4
ES507	8	2'-9"	23	Bt.	4	4
ES508	8	2'-8"	22	Bt.	4	4
ES509	8	2'-7½"	22	Bt.	4	4
ES510	40	2'-6"	104	Bt.	20	20
ES511	96	2'-0"	200	Str.	48	48
ES512	96	2'-7"	258	Bt.	48	48
ES513	48	10'-6"	526	Str.	24	24
ES514	128	7'-2"	957	Str.	64	64
ES515	48	15'-8"	785	Str.	24	24
ES516	48	13'-0"	651	Str.	24	24
ES517	32	5'-8"	189	Str.	16	16
ES518	64	4'-4"	289	Str.	32	32
ES519	606	41'-6"	26,230	Str.	303	303
ES520	4 series of 35	varies 1'-1 to 40'-3"	3,017	Str.	2 Series of 35	2 Series of 35
ES521	552	30'-0"	17,272	Str.	276	276
ES522	76	26'-4"	2,087	Str.	38	38
ES523	16	26'-9"	446	Str.	8	8
ES524	188	8'-0"	1,569	Bt.	94	94
ES525	188	6'-5"	1,259	Bt.	94	94
ES526	16	11'-11"	199	Bt.	8	8
ES527	16	1'-3"	21	Str.	8	8
ES528	24	10'-0"	250	Str.	12	12
ES401	636	30'-0"	12,745	Str.	318	318
ES402	106	24'-4"	1,864	Str.	53	53
ES403	216	31'-2"	4,497	Str.	108	108
ES404	656	6'-1"	2,664	Str.	328	328

Increment = 1'-1 13/16"

Increment = 1'-1 13/16"

NOTES:

1. For Bar Bending Details - See Sheet 12/12
2. Refer to CMS Sections 106.03, 700, 709.01 through 709.05 & 709.08. Sufficient Additional Reinforcing Steel Shall be Provided for Sampling. Random Samples Shall be Replaced in the Structures by the Additional Steel Spliced in Accordance with 509.08.
3. ES Bars are Epoxy Coated Bars.
4. SP Bars are Spiral Bars. The Weight of these Bars includes 4-1x1x⅛ Spacer Angles.

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111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

REINFORCING STEEL LIST

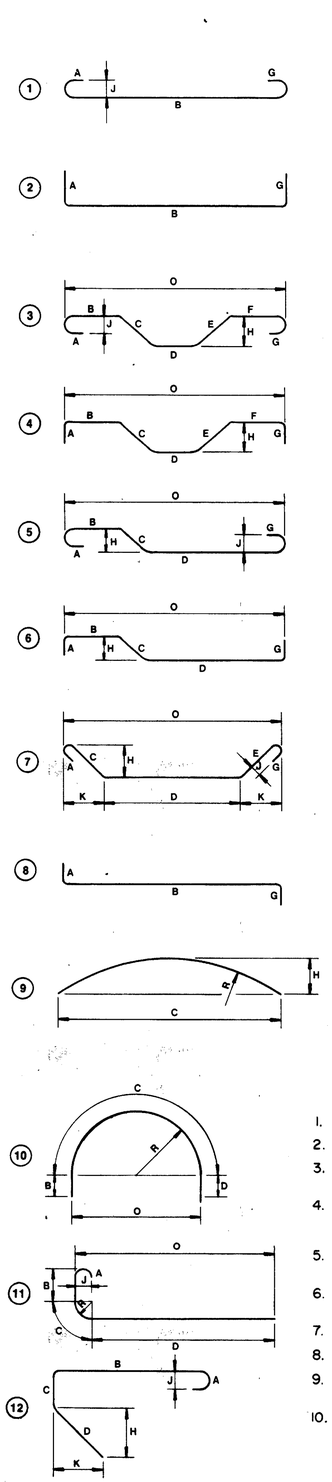
BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	KJO	—	JET	WBS	4/11/86	

JAC-35-11.46 | OHIO | FHWA REGION 5 | 397 / 442

Dimensions For Bending

Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
A601	15												
A501	T1	5½"	2'-7"	2'-7"	2'-7"	2'-7"		5½"					
A502	S10		4'-9"	2'-1"	4'-9"								
A503	S10		4'-3"	2'-1"	4'-3"								
A504	S10		6'-5"	2'-1"	6'-5"								
A505	S10		5'-5"	2'-1"	5'-5"								
A506	S10		5'-11"	2'-1"	5'-11"								
A513	S10		1'-3"	2'-1"	1'-3"								
A514	S10		1'-11"	2'-1"	1'-11"								
A515	S10		2'-7"	2'-1"	2'-7"								
A516	S10		3'-2"	2'-1"	3'-2"								
A517	S10		3'-9"	2'-1"	3'-9"								
A518	S10		4'-4"	2'-1"	4'-4"								
A519	S10		4'-11"	2'-1"	4'-11"								
A520	S10		5'-6"	2'-1"	5'-6"								
A521	S10		5'-10"	2'-1"	5'-10"								
A525	S10		2'-9"	2'-1"	2'-9"								
A526	S10		3'-5	2'-1"	3'-5"								
A527	S10		4'-1"	2'-1"	4'-1"								
A528	S10		4'-8"	2'-1"	4'-8"								
A529	S10		5'-3"	2'-1"	5'-3"								
A530	S10		5'-7"	2'-1"	5'-7"								
A531	19		4"	7'-1"					1½"		3½"		7'-4½"
A533	S10		4'-2"	2'-1"	4'-2"								
A534	S10		6'-4"	2'-1"	6'-4"								
A535	S10		2'-1"	2'-1"	2'-1"								
A536	S10		4'-0"	2'-1"	4'-0"								
A537	S10		4'-7"	2'-1"	4'-7"								
A538	S10		5'-2"	2'-1"	5'-2"								
A539	19		4"	9'-0"					1½"		3½"		9'-3½"
A542	S10		1'-9"	2'-1"	1'-9"								
A543	S10		2'-5"	2'-1"	2'-5"								
A544	S10		3'-1"	2'-1"	3'-1"								
A545	S10		4'-5"	2'-1"	4'-5"								
A546	S10		5'-1"	2'-1"	5'-1"								
A548	19		4"	9'-8"					1½"		3½"		9'-11"
A401	T1	4½"	2'-6¾"	1'-9"	2'-6¾"	1'-9"		4½"					
ES802	3	1'-1"	2'-0"	2'-0"	0"	0"	0"	0"	1'-5"	0'-8"			3'-5"
ES501	2	0'-10½"	1'-8"					0"					
ES502	22												
ES503	23	0'-9"	0'-9"	0'-6"									
ES504	23	0'-9"	0'-9"	0'-5½"									
ES505	23	0'-9"	0'-8½"	0'-5"									
ES506	23	0'-9"	0'-8"	0'-4½"									
ES507	23	0'-9"	0'-8"	0'-4"									
ES508	23	0'-9"	0'-7½"	0'-3½"									
ES509	23	0'-9"	0'-7½"	0'-3"									
ES510	23	0'-9"	0'-7"	0'-2"									
ES512	1	0'-7"	2'-0"					0"		0'-5"			
ES524	S6	1'-0"	3'-2"	2'-2"	2'-0"			0"					
ES525	2	2'-0"	1'-8"					3'-0"					
ES526	2	5'-0"	2'-2"					5'-0"					
P1002	2	1'-10",	8'-5"					0"					
P201	14		0"	4'-2"	34'-9"	4'-2"	0"		1'-0"		4'-1"		42'-11"
P902	2	3'-0"	42'-11"					3'-0"					
P903	1	1'-3"	42'-11"					1'-3"		0'-11¼"			
P501	T1	5½"	3'-2"	4'-2"	3'-2"	4'-2"		5½"					
P504	T1	5½"	3'-2"	3'-4"	3'-2"	3'-4"		5½"					
P505	T1	5½"	3'-2"	3'-7"	3'-2"	3'-7"		5½"					
P506	T1	5½"	3'-2"	3'-10"	3'-2"	3'-10"		5½"					
P507	T1	5½"	3'-2"	4'-1"	3'-2"	4'-1"		5½"					
P508	S10		1'-8"	3'-0"	1'-8"								
SP401	SP1		4½"	31'-5"	3'-2"						87		
SP402	SP1		4½"	32'-6"	3'-2"						90		



NOTES:

1. FIGURES IN CIRCLES SHOW BAR TYPES.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT A & G ON STD. 180° & 135° HOOKS.
3. "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
4. WHERE "J" IS NOT SHOW "J" WILL BE KEPT EQUAL TO OR LESS THAN "H". WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
5. "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
6. ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUP S11, TIES T3, SPIRALS SP1 AND WHERE RADIUS "R" IS INDICATED.
7. RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
8. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
9. HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE LATEST ACI SPECIFICATIONS.
10. FOR BAR TYPE SP1, THE NO. OF TURNS "K" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

ENLARGED VIEW SHOWING BAR BENDING DETAILS

12/12

KZF INCORPORATED
ARCHITECTS • ENGINEERS • INTERIOR DESIGNERS
111 Merchant Street, Cincinnati, Ohio 45246 513/772-1117

BAR BENDING DETAILS

BRIDGE NO. JAC-35-1231 L/R
OVER SUGAR RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GTW	KJO	—	JET	WBS	4/11/86	