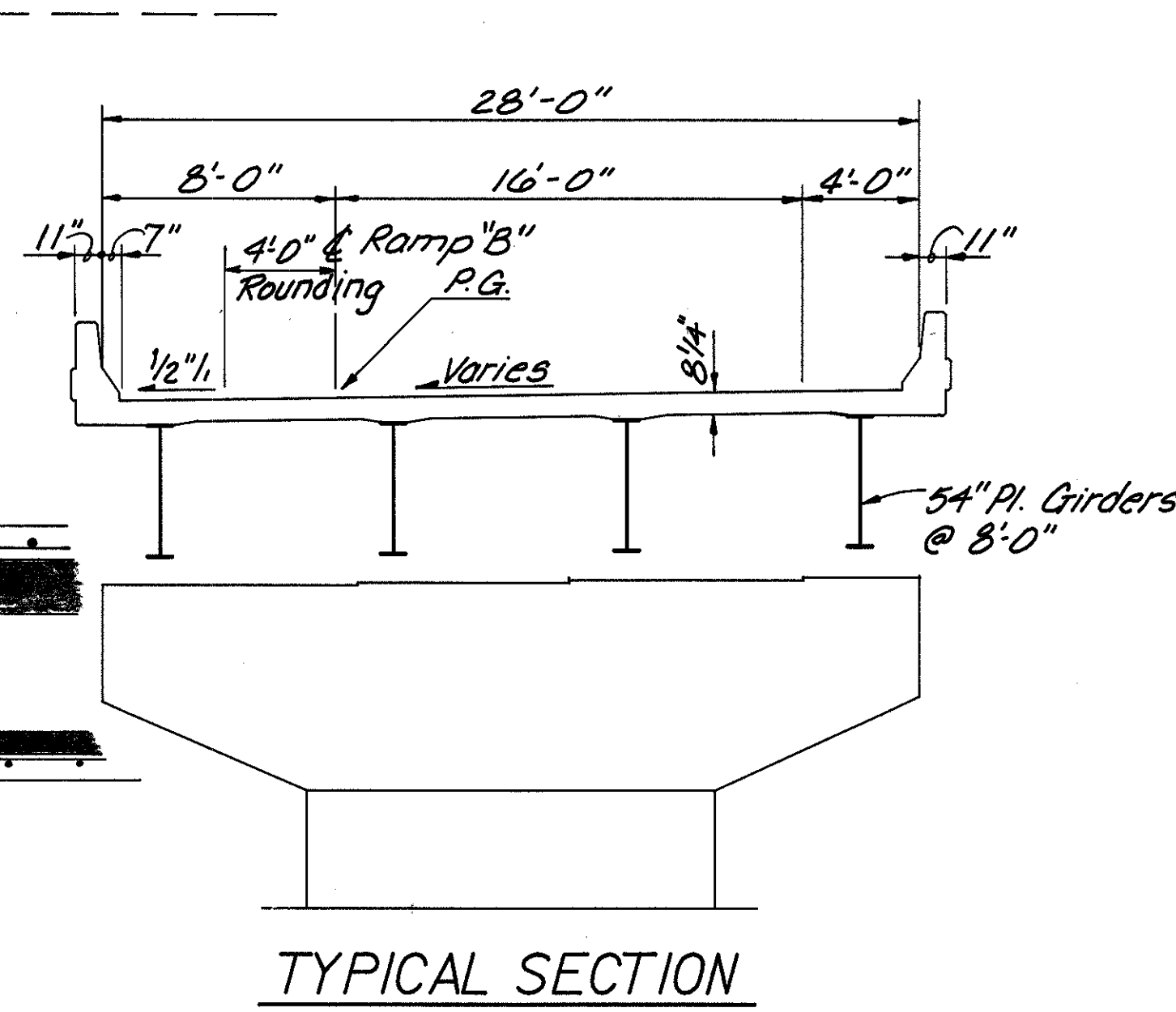
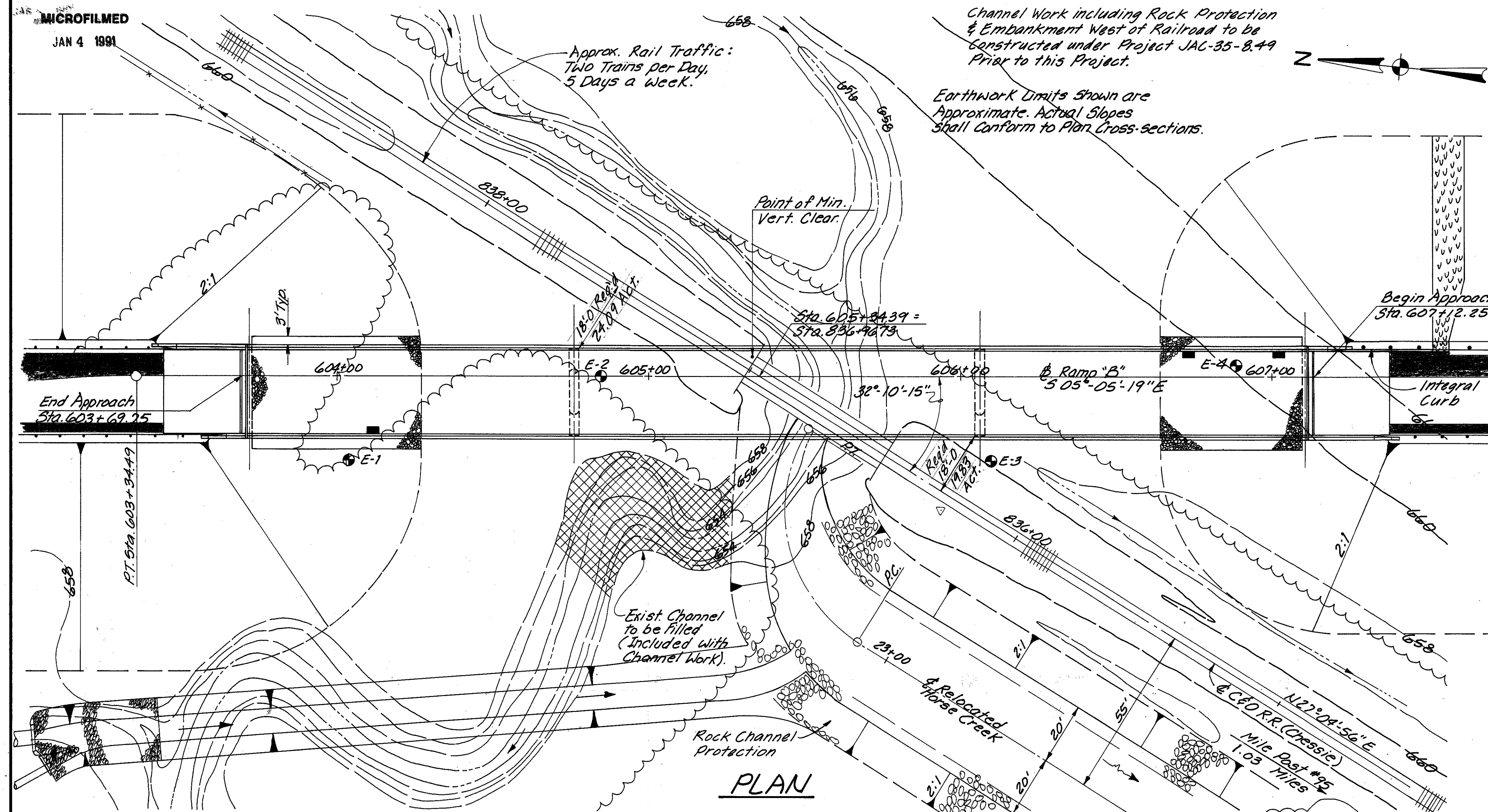
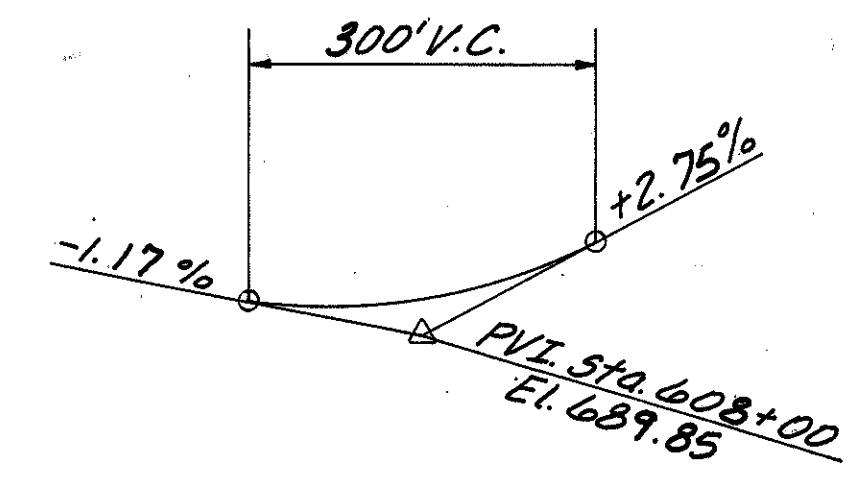




DRAINAGE DATA

Drainage Area =	5.15 Sq. Mi.
Q50 =	1,520 CFS
Velocity (Avg.) =	5.8 FPS
Depth of Flow =	5.2 Ft.
Q25 =	1,225 CFS
Q100 =	1,845 CFS



TRAFFIC DATA

Average Daily Traffic	Year 2006 = 810
13.5% Trucks =	110

PROPOSED STRUCTURE

TYPE: Continuous Steel Plate Girder with Composite Concrete Deck.

SPANS: 104'-0", 130'-0" & 104'-0"

ROADWAY: 28'-0" F/F Concrete Parapets.

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

SKEW: 0°-00'-00"

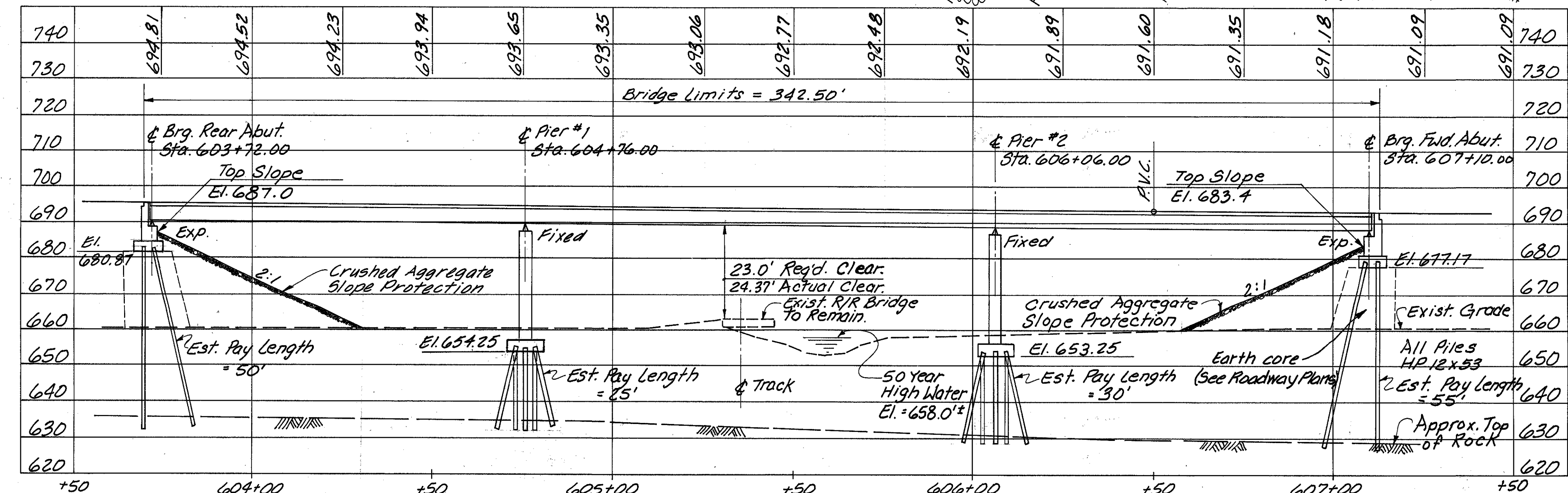
ALIGNMENT: Tangent

WEARING SURFACE: Monolithic Concrete.

APPROACH SLAB: A6-1-81 (25' Long)

CURVE DATA RAMP "B"

P.I.	=	602 + 43.75
Δ	=	33°-40'-13"
D	=	18°-00'-00"
R	=	318.31
L	=	187.06
T	=	96.32
E	=	14.25
P.C.	=	601 + 47.43
P.T.	=	603 + 34.49
S/E	=	0.0611



SECTION ALONG B

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SITE PLAN

BRIDGE NO. JAC-35-1147

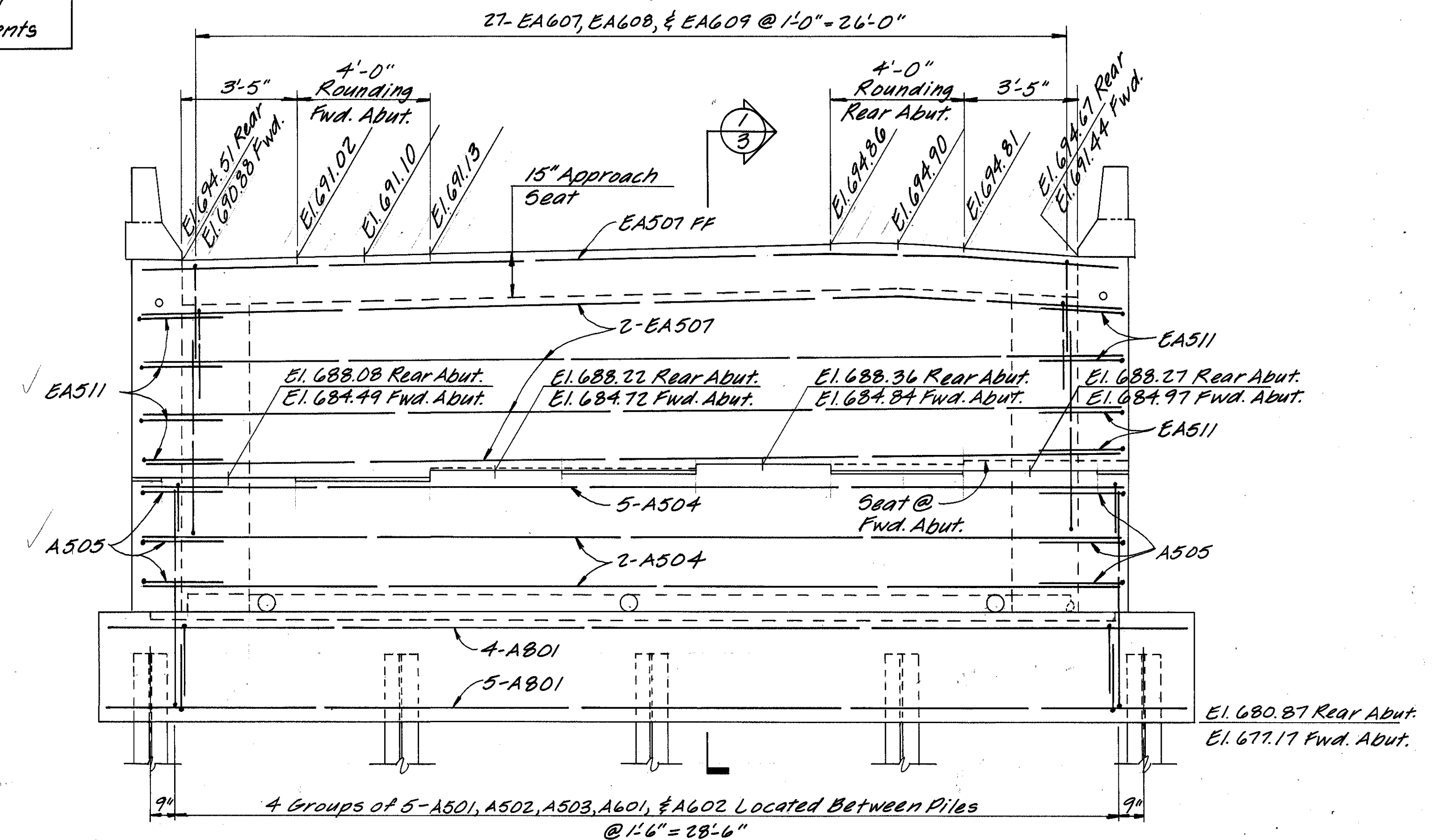
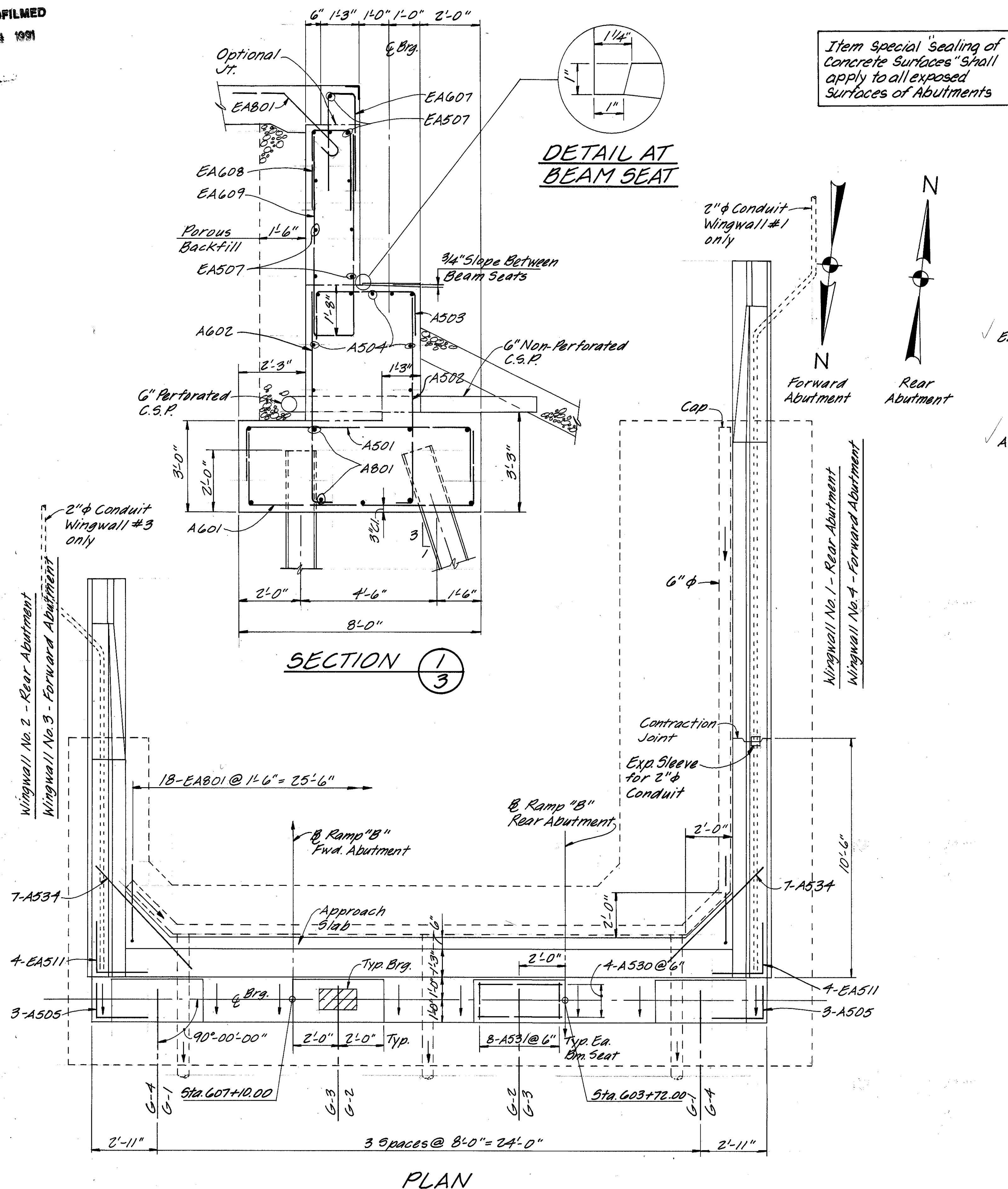
RAMP "B" OVER C&O R.R. & HORSE CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WBS	JEB	-	-	WBS	4/8/86	-

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT'S	PIERS	SUPER	GENERAL
503	515	Cu.Yds.	Unclassified Excavation	411	104		
505	L.S.	Lump Sum	Pile Driving Equipment Mobilization				L.S.
507	2770	Lin. Ft.	Steel Piles, HP12x53	1890	880		
507	68	Each	Steel Points	36	32		
509	37,817	Lbs.	Reinforcing Steel, Grade 60	13,196	24,621		
511	369	Cu.Yds.	Class S Concrete, Superstructure, See Proposal Note.			369	
511	112	Cu.Yds.	Class C Concrete, Pier above Footings		112		
511	116	Cu.Yds.	Class C Concrete, Abutments above Footing	116			
511	164	Cu.Yds.	Class C Concrete Footings	58	106		
513	263,809	Lbs.	Structural Steel A588 (AISC Category III)			263,809	
513	2,208	Each	Welded Stud Shear Connectors			2,208	
516	22	Lin. Ft.	PVC Waterstop, as per Plan	22			
516	59	Lin. Ft.	Structural Expansion Joint, including 3" strip steel			59	
518	58	Cu.Yds.	Porous Backfill	58			
518	96	Lin. Ft.	6" Perforated Helical Corrugated Steel Pipe, including Specials 707.01	96			
518	50	Lin. Ft.	6" Non-Perforated Helical Corrugated Steel Pipe, including Specials 707.01	50			
518	3	Each	Scupper, including Supports, as per Plan			3	
601	443	Sq.Yds.	Crushed Aggregate Slope Protection				443
625			See Sheet 292 for Lighting Summary.				
824	83,199	Lbs.	Epoxy Coated Reinforcing Steel, Grade 60	5,322		77,877	
Special	1,316	Sq.Yds.	Sealing of Concrete Surfaces (Epoxy), See Proposal Note	148	424	774	

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.

CONSTRUCTION CLEARANCE: OF 15'0" HORIZONTALLY IN EACH DIRECTION FROM THE CENTER OF THE C & O TRACK AND 23'0" VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE RAIL SHALL BE MAINTAINED AT ALL TIMES.

ELEVATION

LEGEND

FF = Far Face
NF = Near Face
EF = Each Face
El. = Elevation
Abut. = Abutment
Fwd. = Forward

NOTES:

1. See Sheet 2/12 for Estimated Quantities & General Notes.
2. See Sheets 11/12 & 12/12 for Reinforcing Steel Details.
3. Porous Backfill, 1.5ft. thick, Shall Extend up to the Plane of the Subgrade & Laterally to the Ends of the Wingwalls.
4. In addition to the provisions of 511.08, backwall conc. above the optional construction joint of the approach slab seat shall not be placed until after the deck conc. in the span adjacent to the abutment has been placed.
5. See Std. Dwg. HL-5 for additional lighting Conduit Details.
6. See Std. Dwg. GR-3 for Conc. Insert Anchor Assembly Required to Attach Guardrail to ends of Wingwalls.



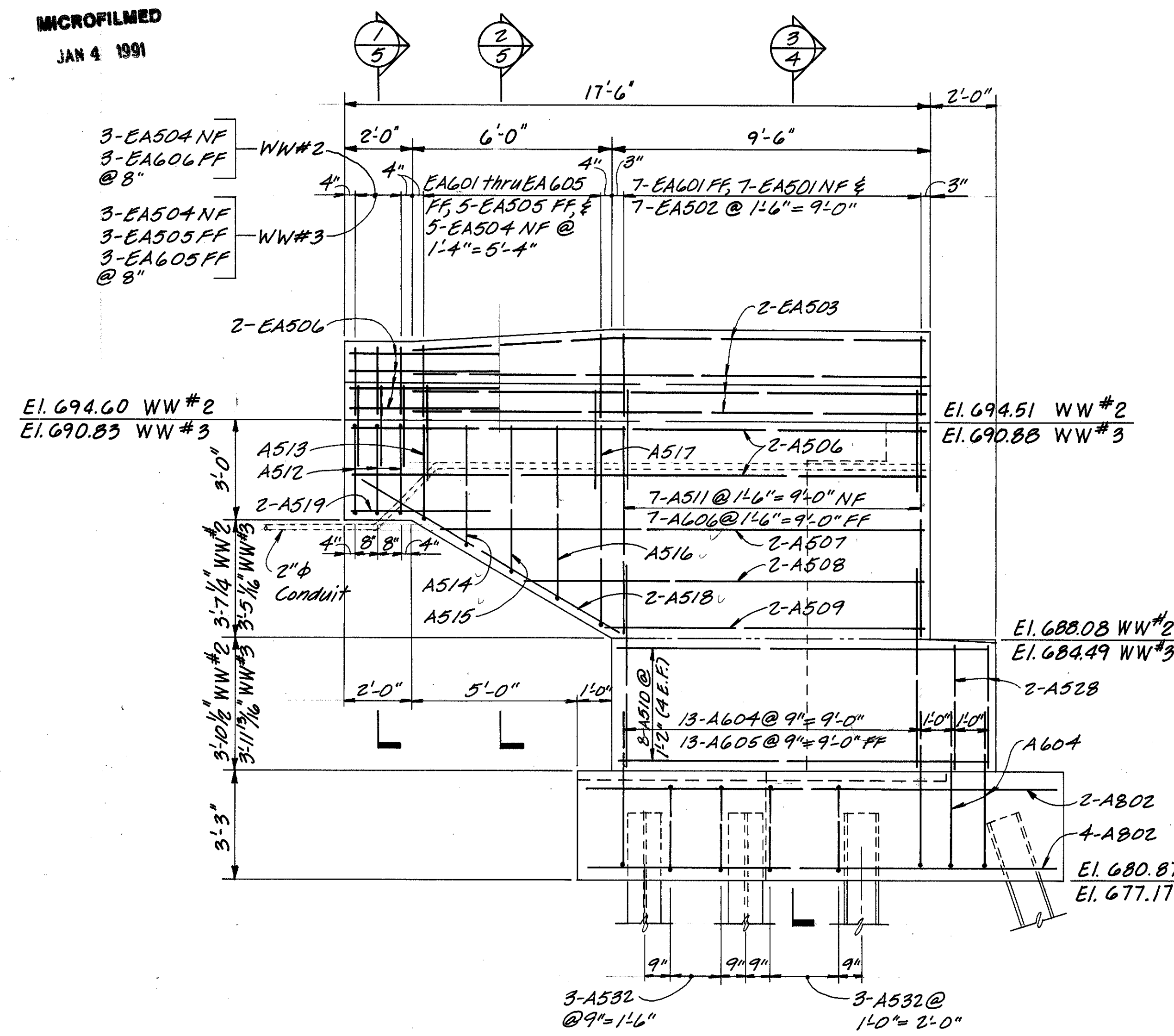
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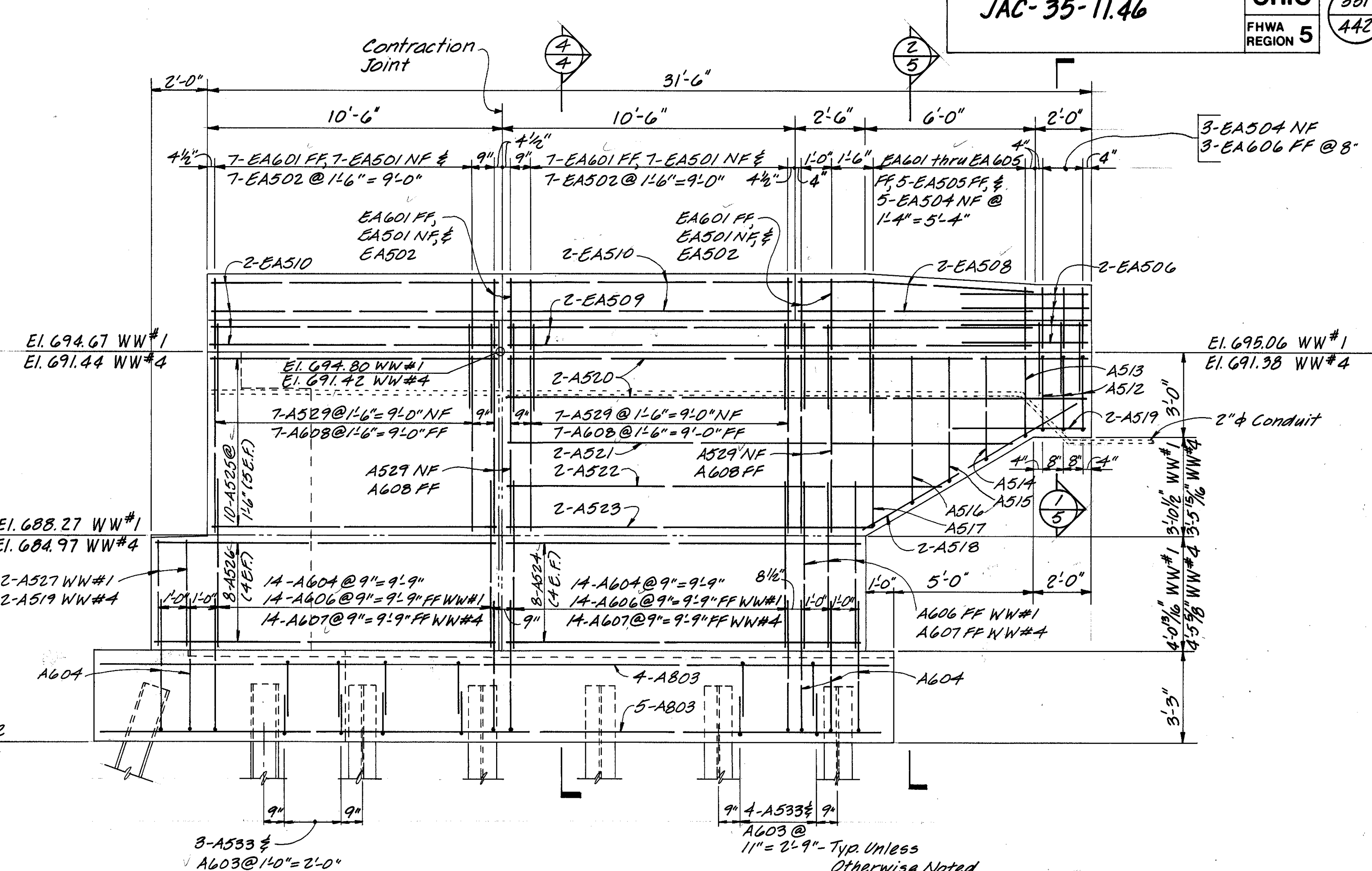
ABUTMENTS

BRIDGE NO. JAC-35-1147
RAMP "B" OVER C&O R.R. & HORSE CREEK

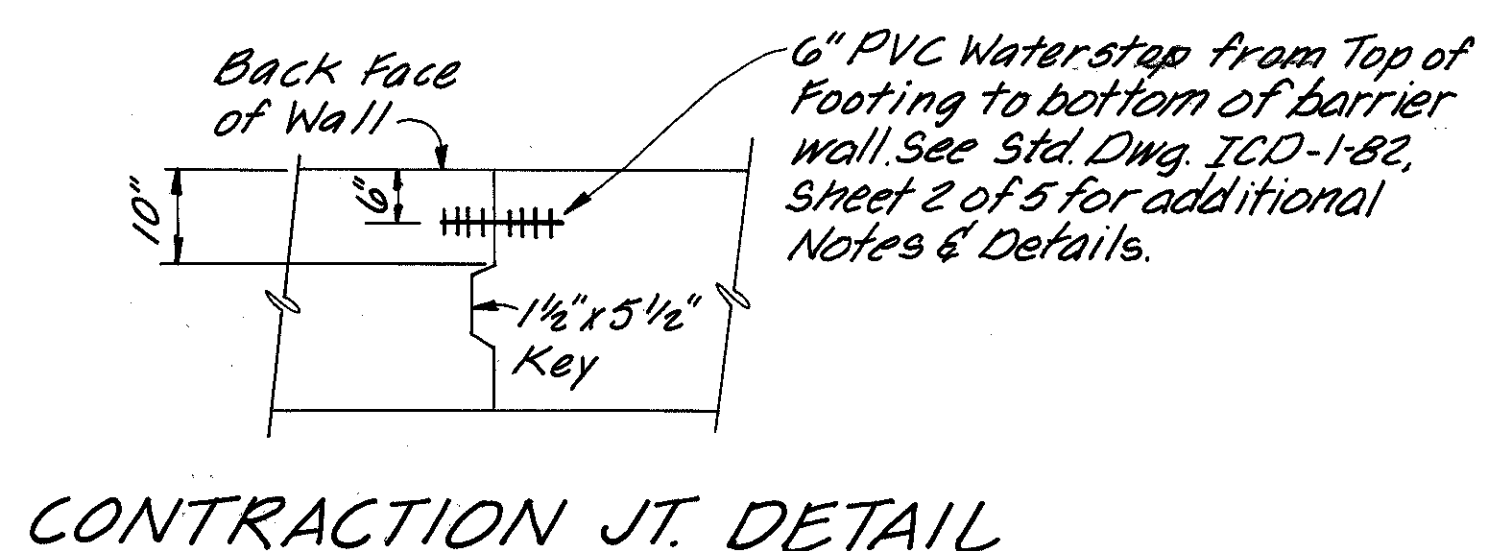
DESIGNED GTW	DRAWN LEP	TRACED —	CHECKED JET	REVIEWED DATE WBS 4/8/86	REVISED
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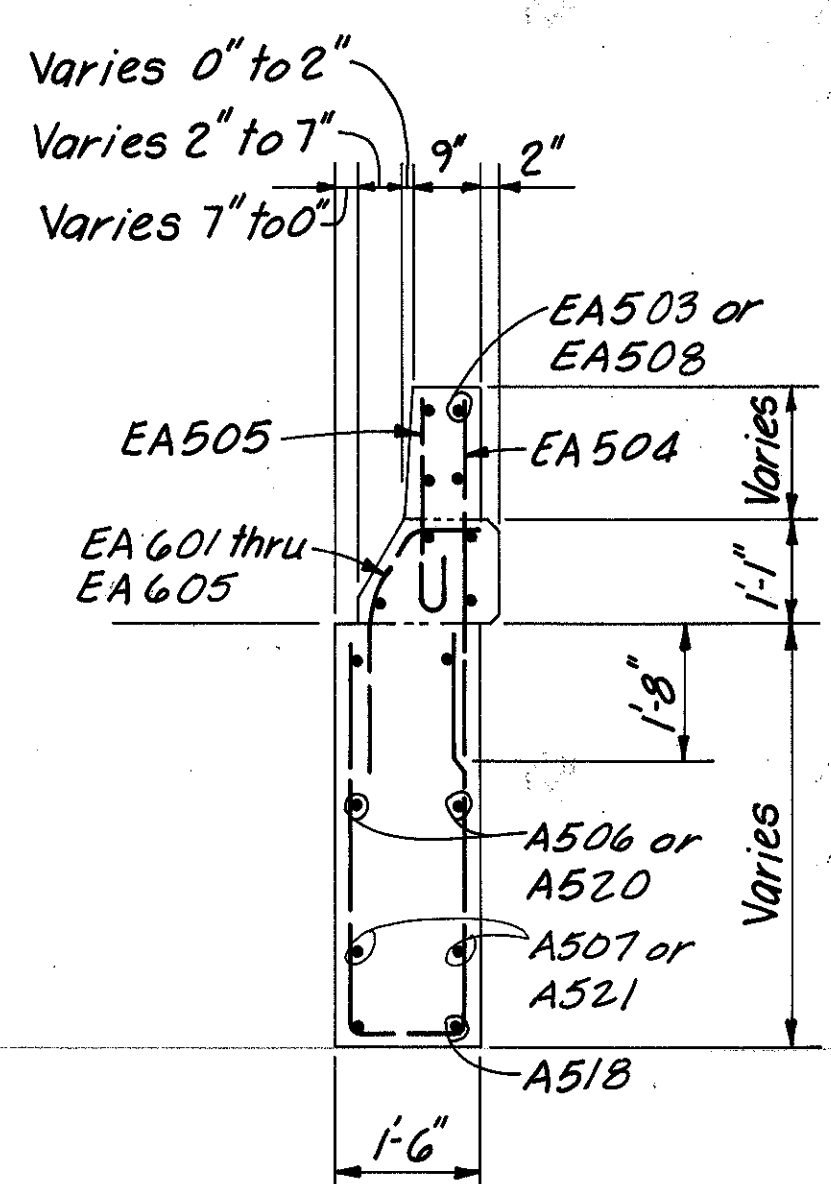
WINGWALL ELEVATION NO. 2 & NO. 3



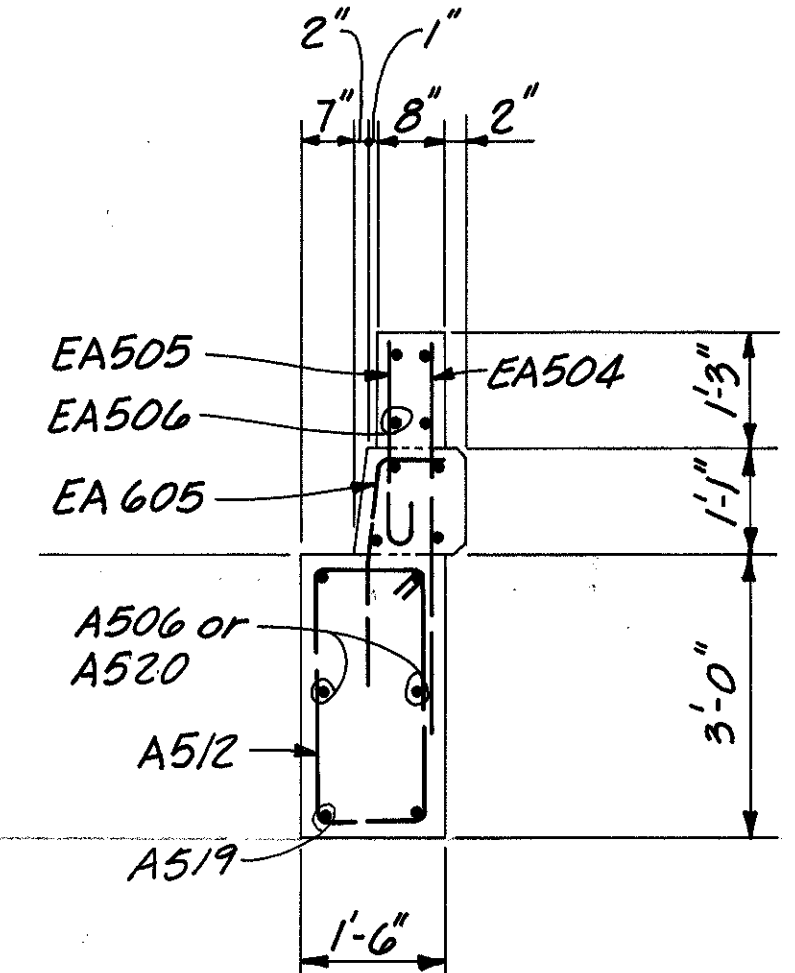
WINGWALL ELEVATION NO. 1 & NO. 4



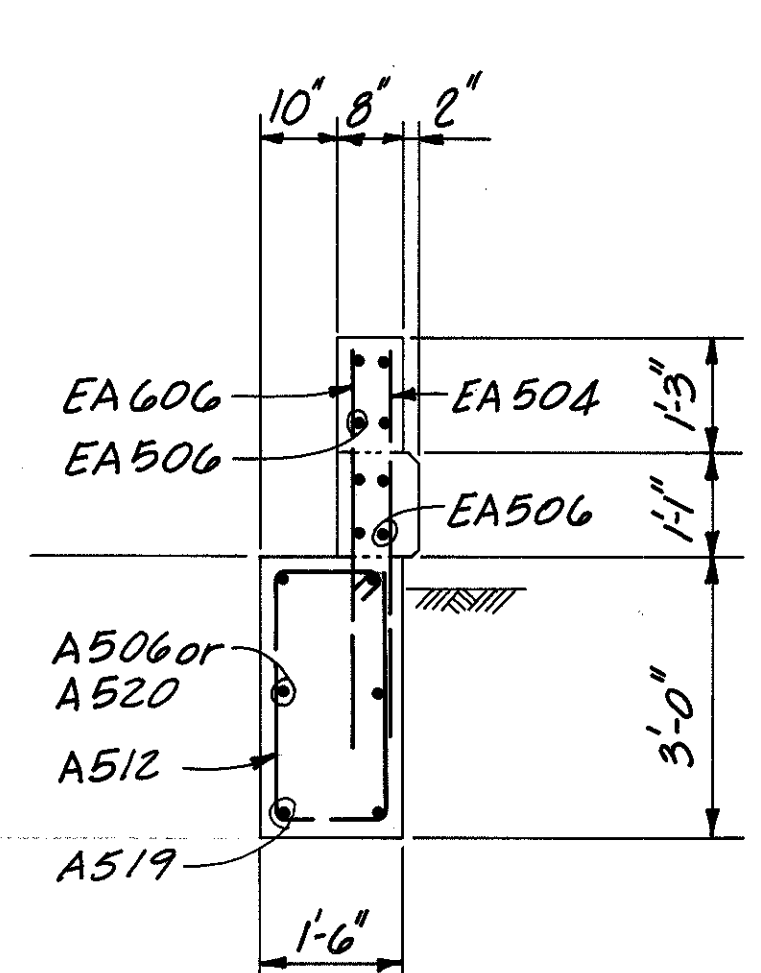
CONTRACTION JT. DETAIL

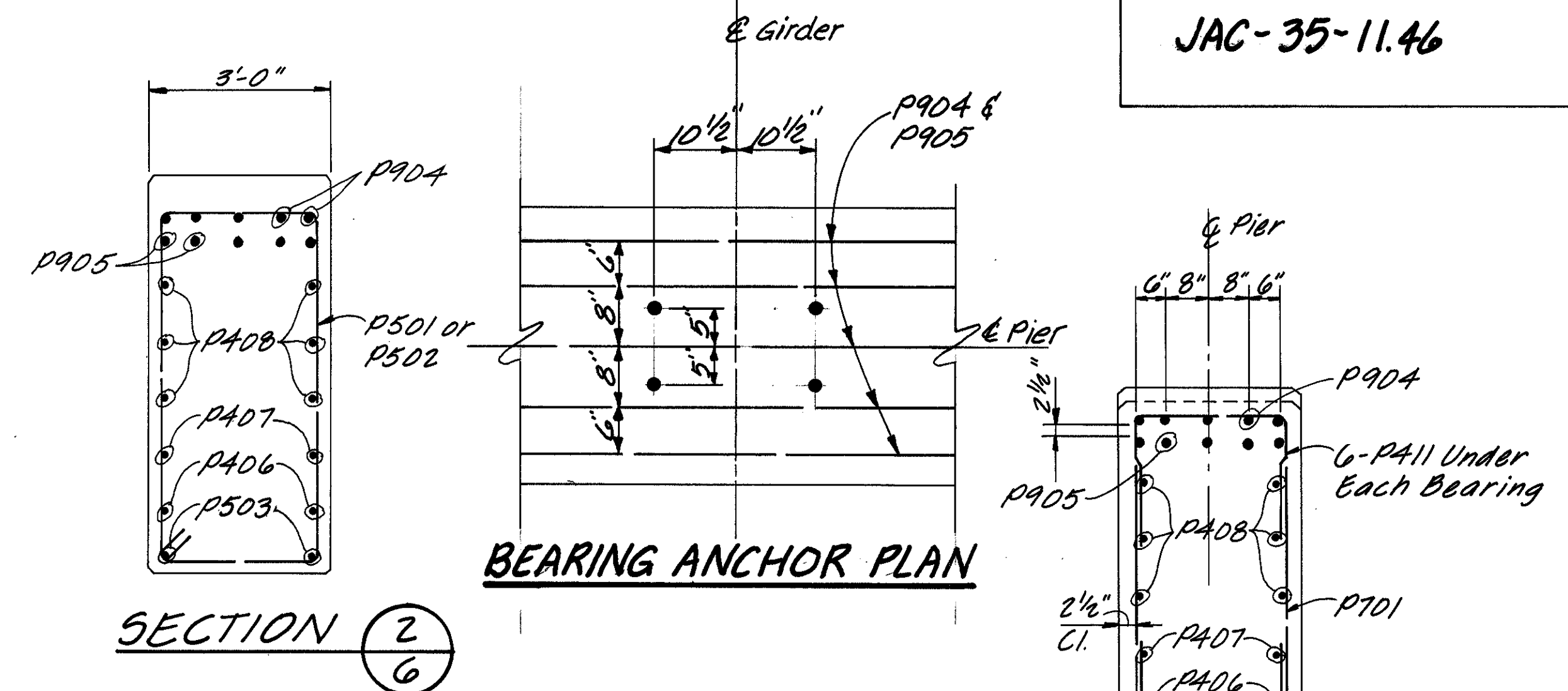


SECTION 2
5

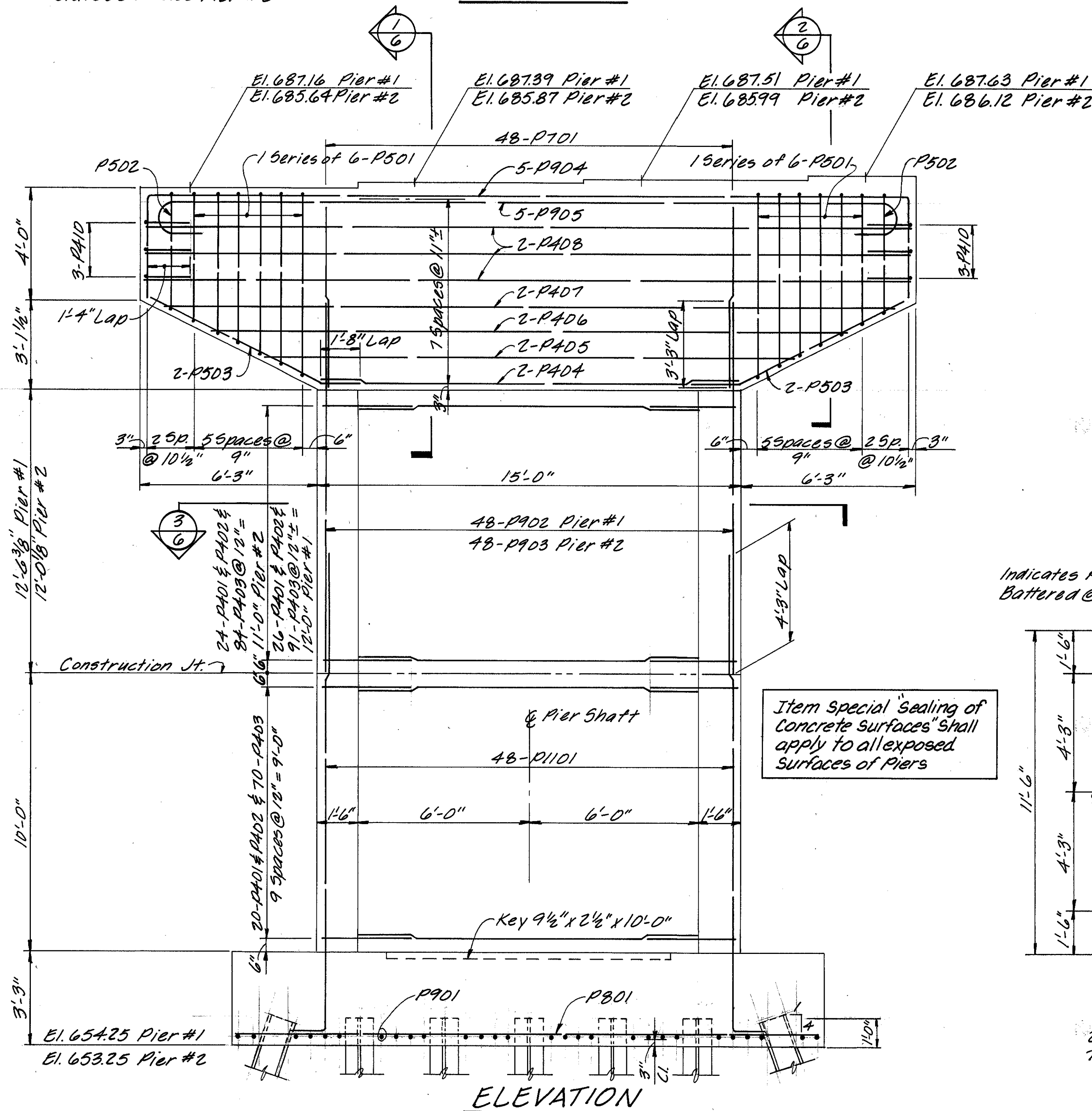


SECTION 1
Wingwall No. 3
5

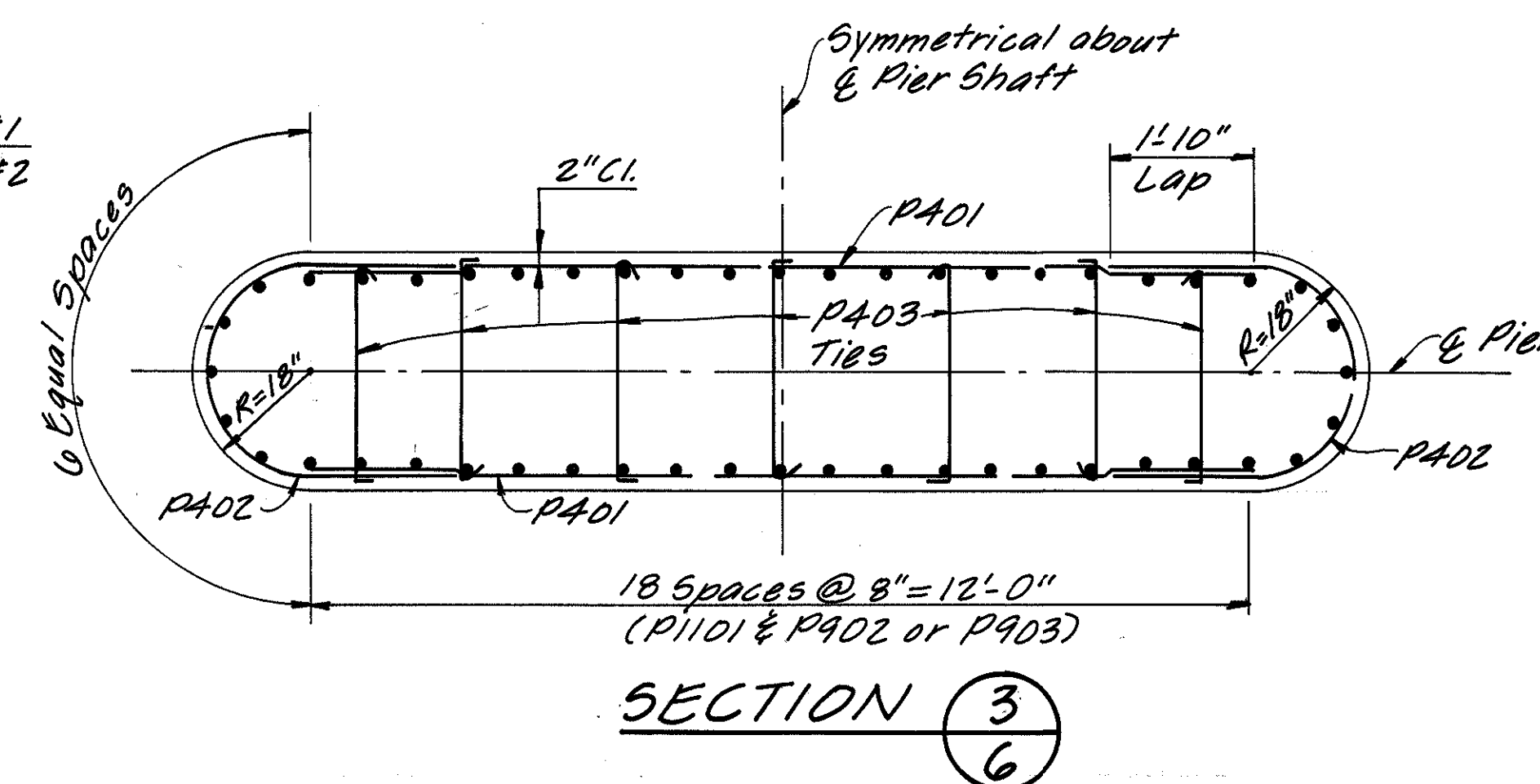




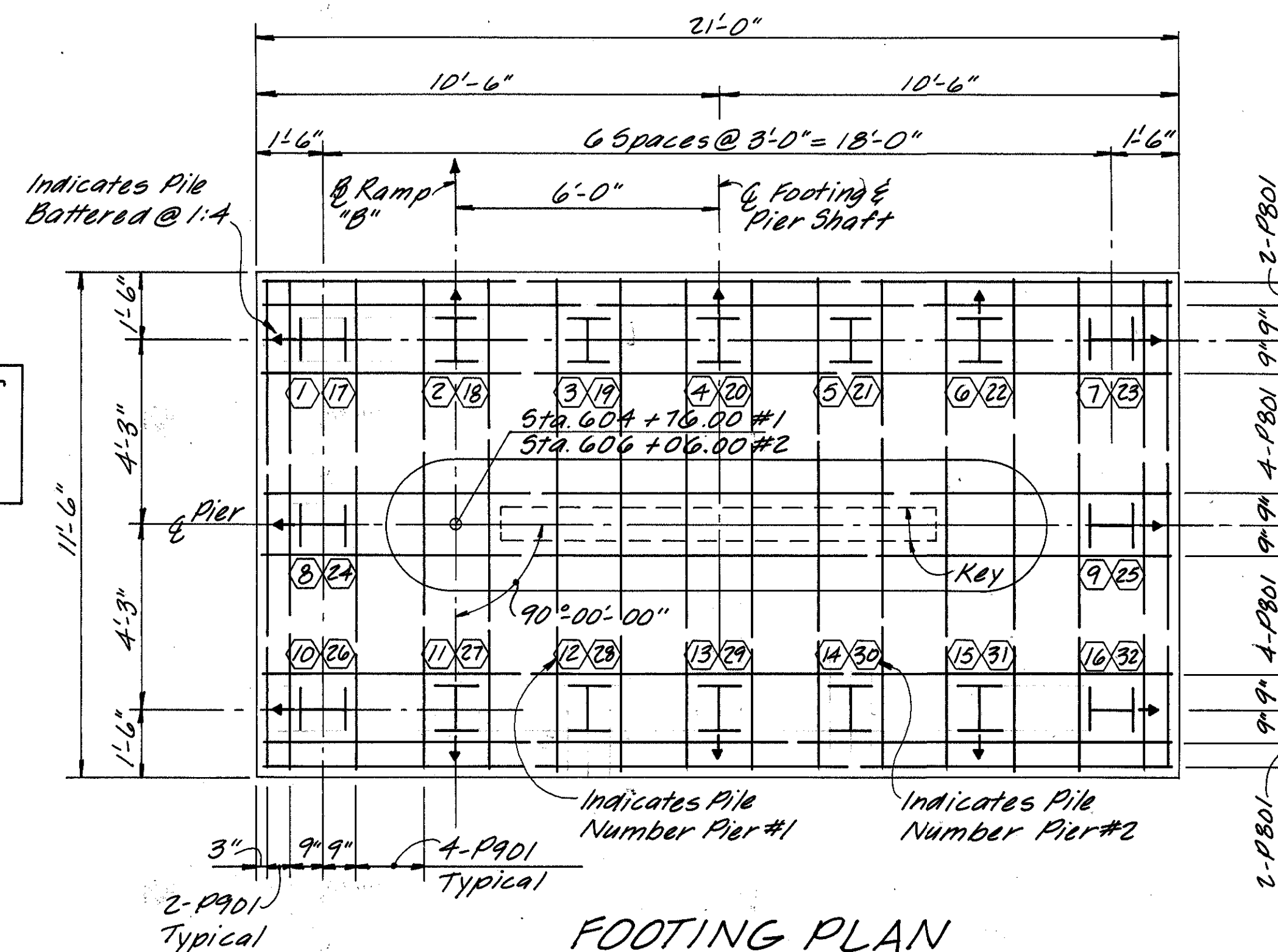
CAP PLAN



SECTION (26)



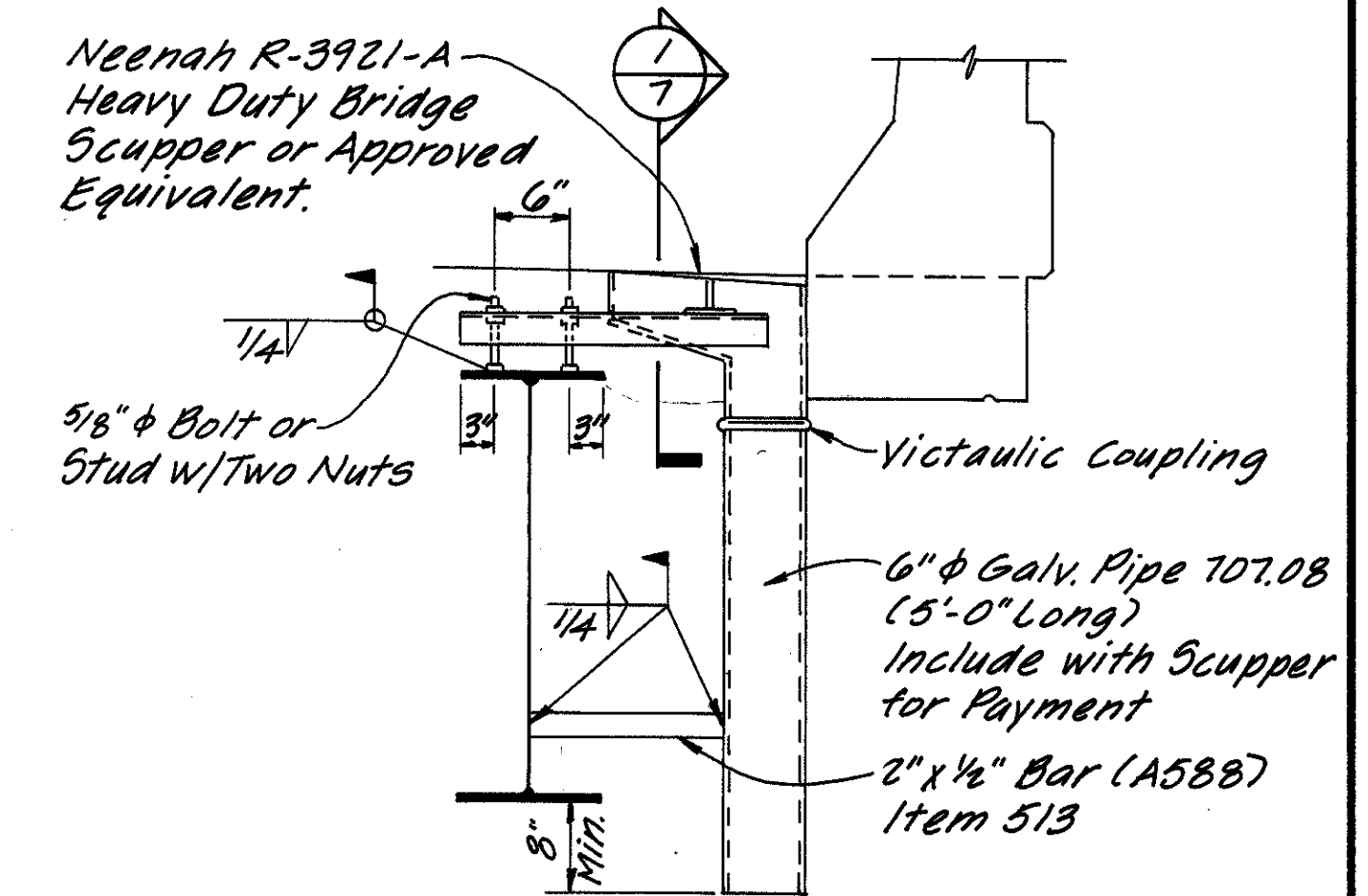
SECTION (3
6)



FOOTING PLAN

NOTES:

1. See Sheet 2/12 for General Notes & Quantities.
2. See Sheets 11/12 & 12/12 for Reinforcing Steel Details.
3. For Pier Bearing Details, See Std. Dwg. FB-1-82 (F-300).
4. 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.
5. At the Option of the Contractor, Bearing Anchors (or Formed Holes) Located & Supported by Templates, May be Cast in Place.

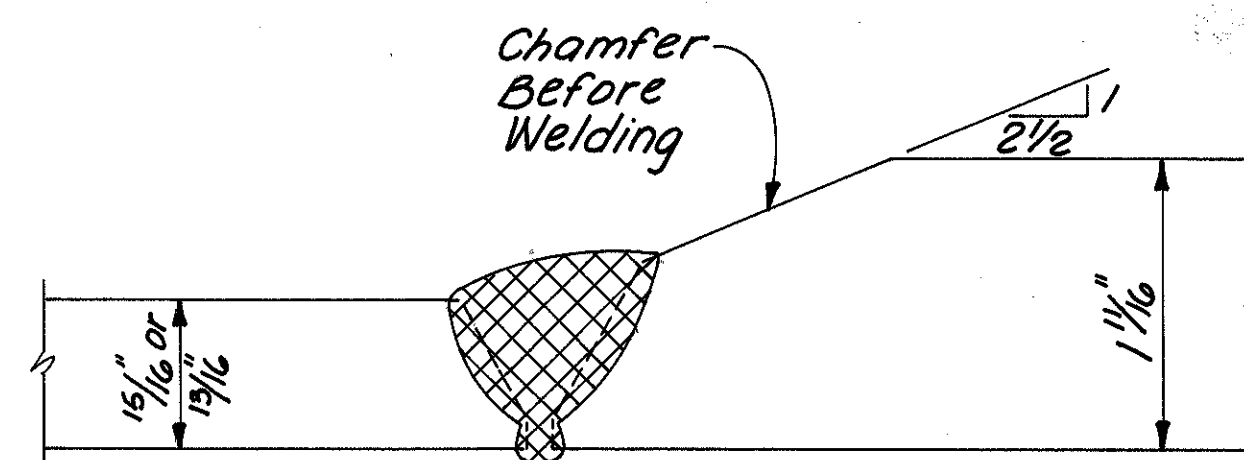


NOTES:

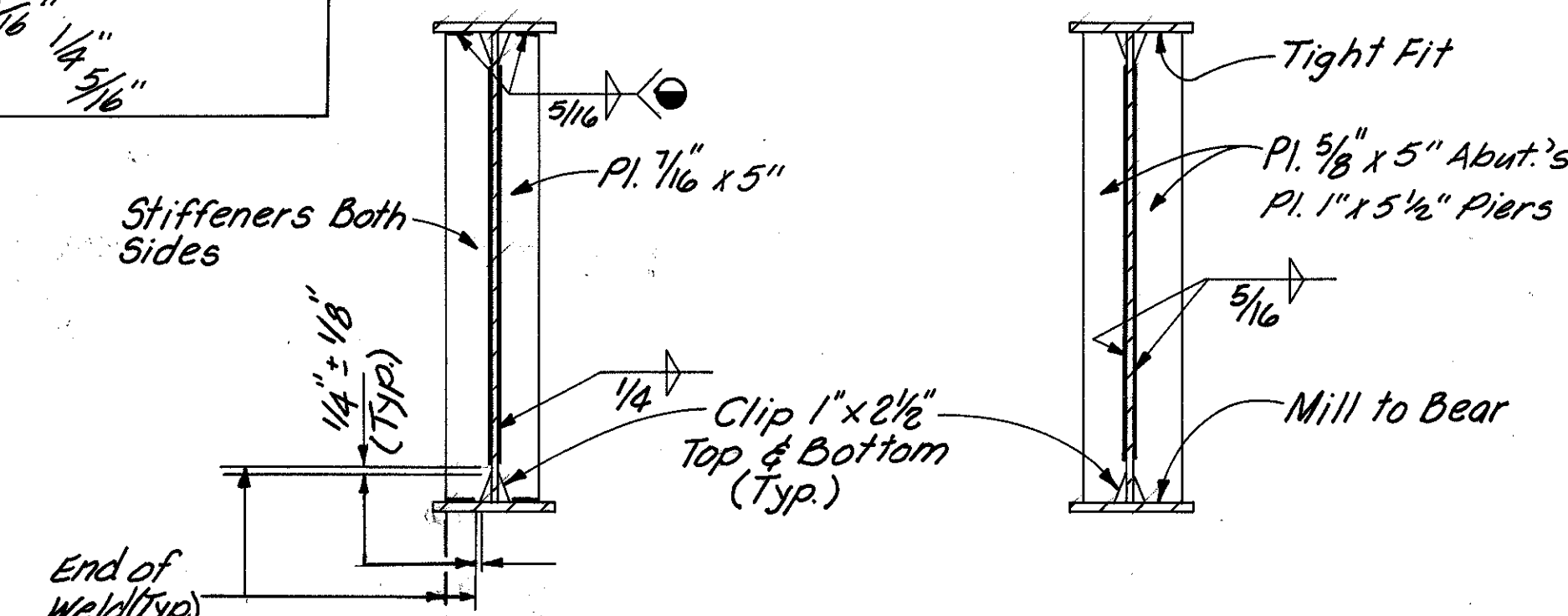
1. See Sheet [2/12] for General Notes & Quantities.
2. See Sheet [8/12] for Additional Details & Notes.
3. See Std. Dwg's. RB-1-55 & FB-1-82 for Bearing Details.
4. All Material to be ASTM-A588 Unless Indicated otherwise.
5. Where a Shape or Plate is Designated (CVN) the Material Shall Meet Specified Minimum Notch Toughness Requirements as Specified in 711.01 of CMS.
6. High Strength Bolts Shall be 1" Dia. A325 Unless otherwise Noted.
7. All Crossframes are CF-1 Frames Unless Indicated otherwise.
8. See Sheet [9/12] for Welded Attachment Note.
9. A588 steel is to be left unpainted. See CMS 513.221 for cleaning requirements.
- *10. Intermediate stiffeners shown are in addition to those required at the CF-1 crossframes.

Material Thickness of Thicker Part Joined	Weld Size C*
to $\frac{1}{8}$ "	$\frac{3}{16}$ "
over $\frac{1}{8}$ " to $\frac{3}{4}$ "	$\frac{1}{4}$ "
over $\frac{3}{4}$ " to $1\frac{1}{2}$ "	$\frac{5}{16}$ "

● Weld to Compression Flange only. Tight fit with Tension Flange, except at crossframe connections. At crossframe connections weld as indicated, to both the tension and compression flanges.



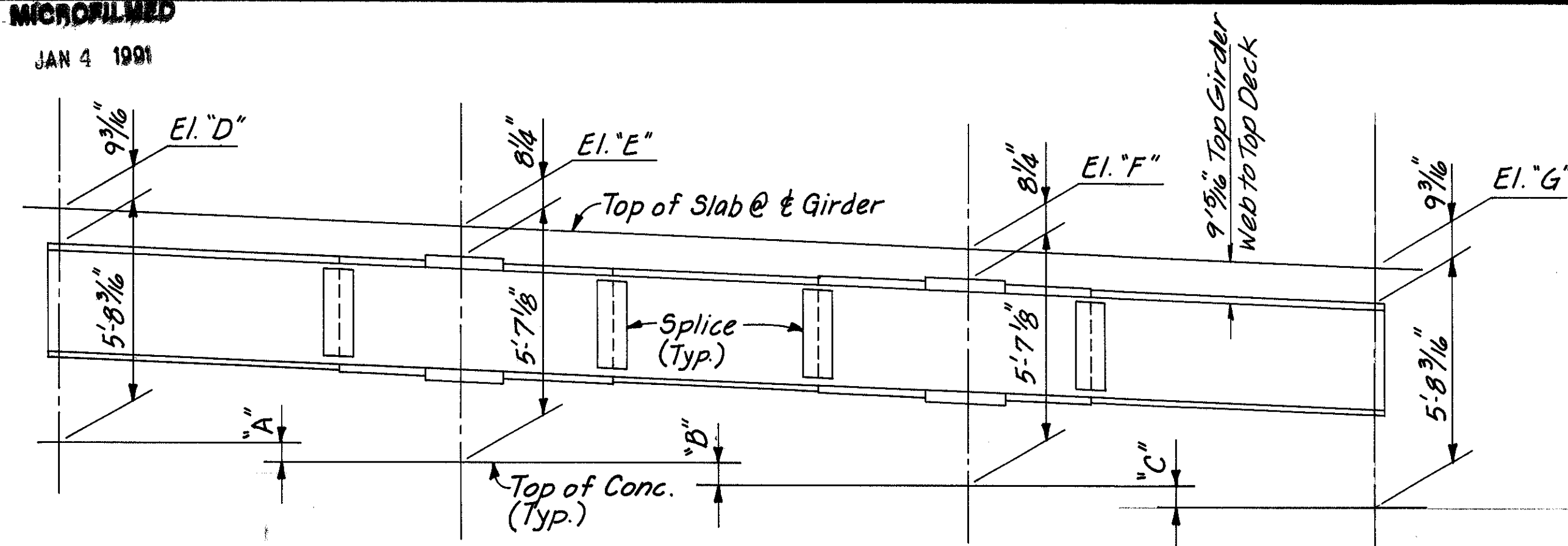
SHOP FLANGE SPLICE



BEARING

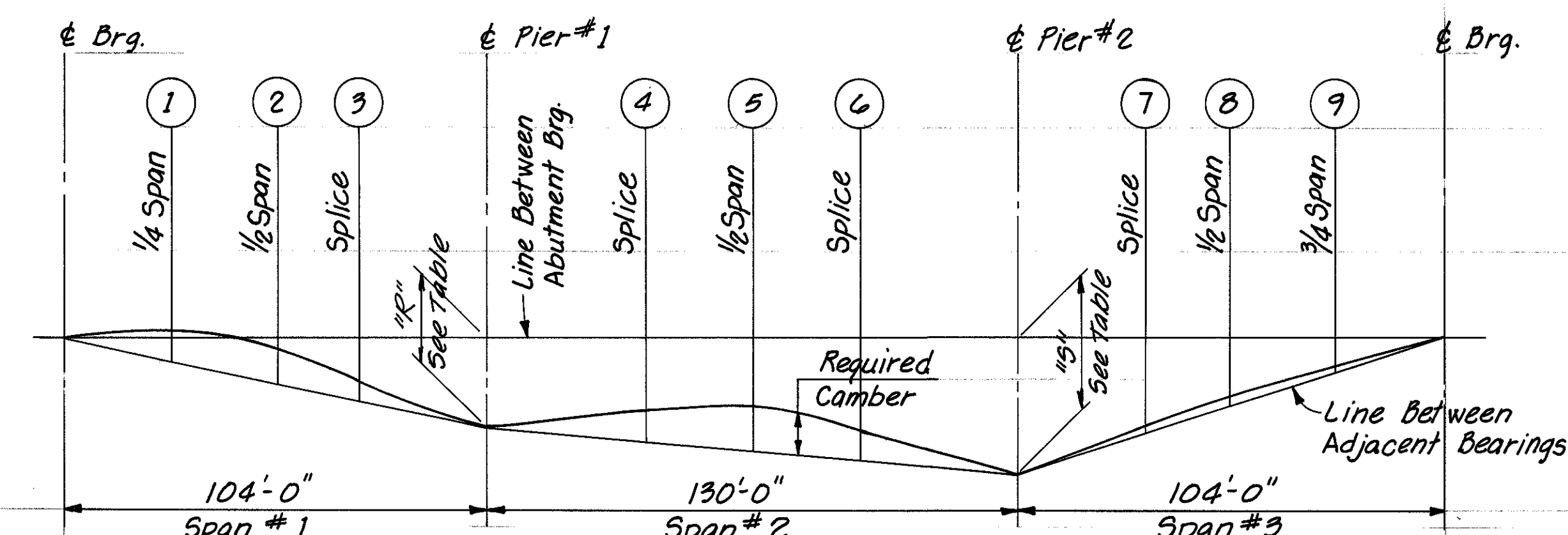
STIFFENER DETAILS

JAN 4 1991



ELEVATION LAYOUT

GIRDER	Dim "A"	Dim "B"	Dim "C"	EL. "D"	EL. "E"	EL. "F"	EL. "G"
G1	1'-1 3/8"	1'-6 1/4"	1'-1 3/4"	694.72	693.44	691.92	690.94
G2	0'-11 1/16"	1'-6 1/4"	1'-1 3/4"	694.81	693.67	692.15	691.17
G3	0'-8 9/16"	1'-6 1/4"	1'-1 3/4"	694.67	693.79	692.27	691.29
G4	0'-5 7/16"	1'-6 1/4"	1'-1 3/4"	694.53	693.91	692.40	691.42



LAYOUT DIAGRAM

JAC-35-11.46

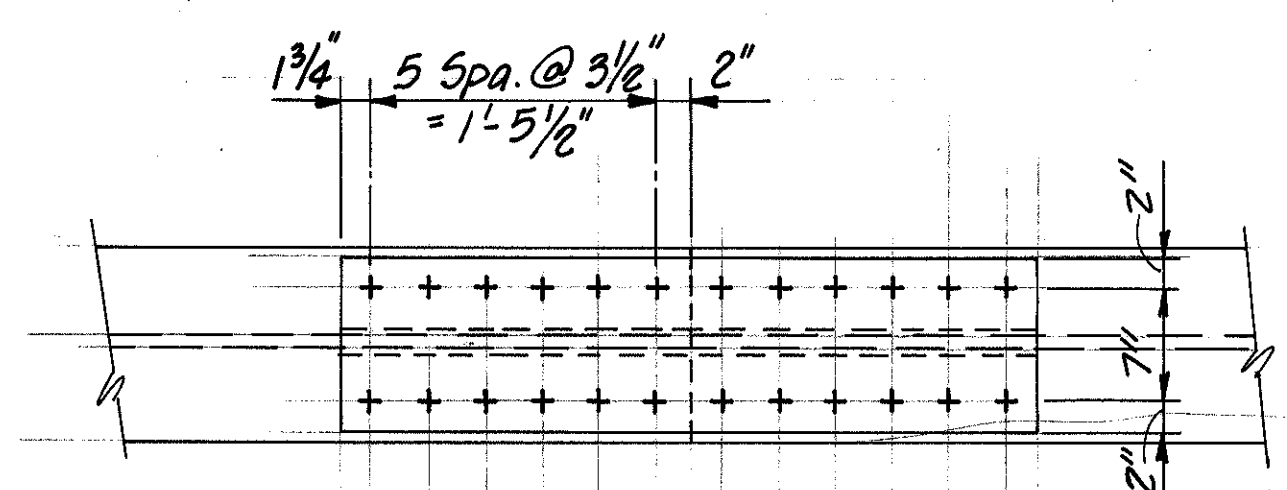
OHIO
FHWA
REGION 5334
442

Girder	"R"	"S"
G-1	0'-1 7/16"	0'-2 3/16"
G-2	0'-0 1/4"	0'-1 1/16"
G-3	-0'-1 3/16"	0'-0 3/4"
G-4	-0'-4 1/16"	-0'-0 1/4"

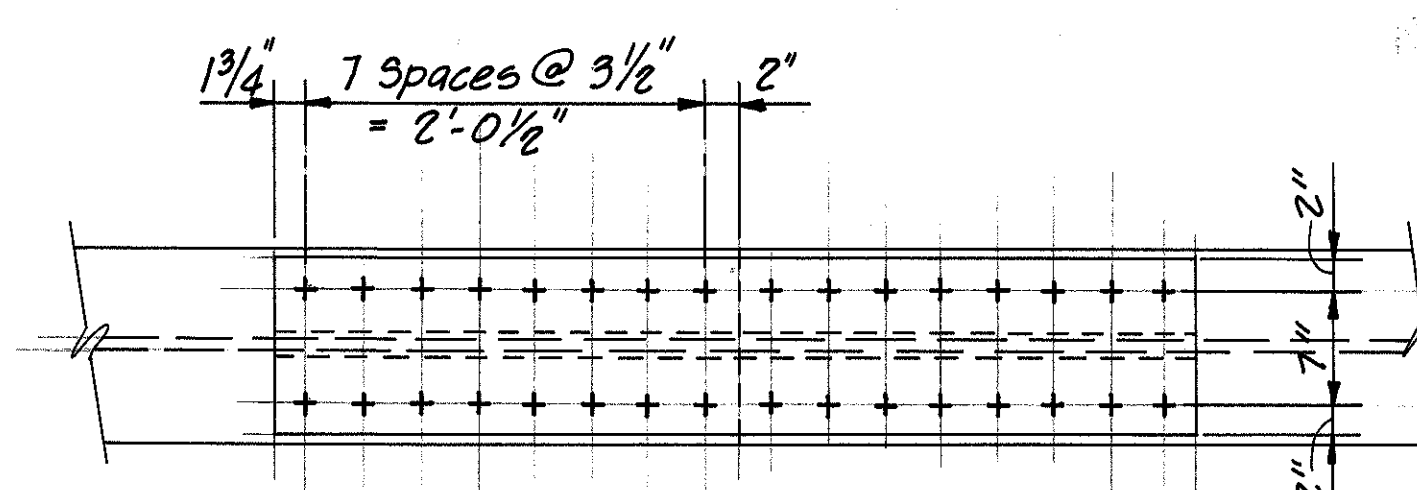
Note: A negative designates that the line between adjacent bearings is above the line between abutment bearings.

DEFLECTION & CAMBER TABLE

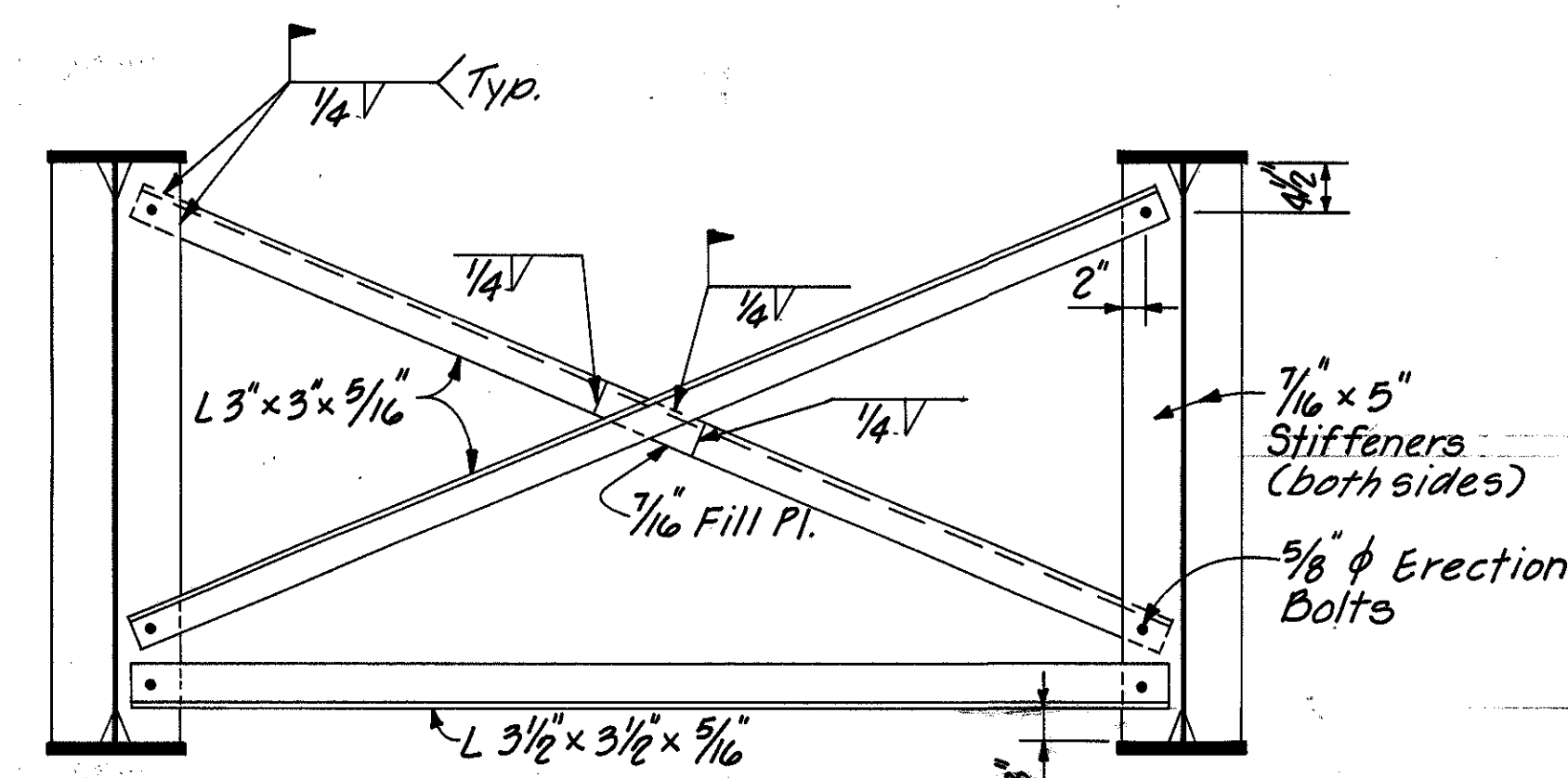
DESCRIPTION	①	②	③	④	⑤	⑥	⑦	⑧	⑨
D.L. Steel Girder	3/16"	1/4"	1/8"	3/16"	9/32"	3/16"	1/8"	1/4"	3/16"
Remaining D.L.	1 5/16"	1 9/16"	7/8"	1 5/16"	1 29/32"	1 5/16"	29/32"	1 17/32"	1 1/32"
Vertical Curve Correction	0	0	0	0	0	0	-27/32"	-1 3/8"	-1 1/32"
Total Camber	1 1/2"	1 13/16"	1"	1 1/2"	2 3/16"	1 1/2"	3/16"	7/16"	5/16"



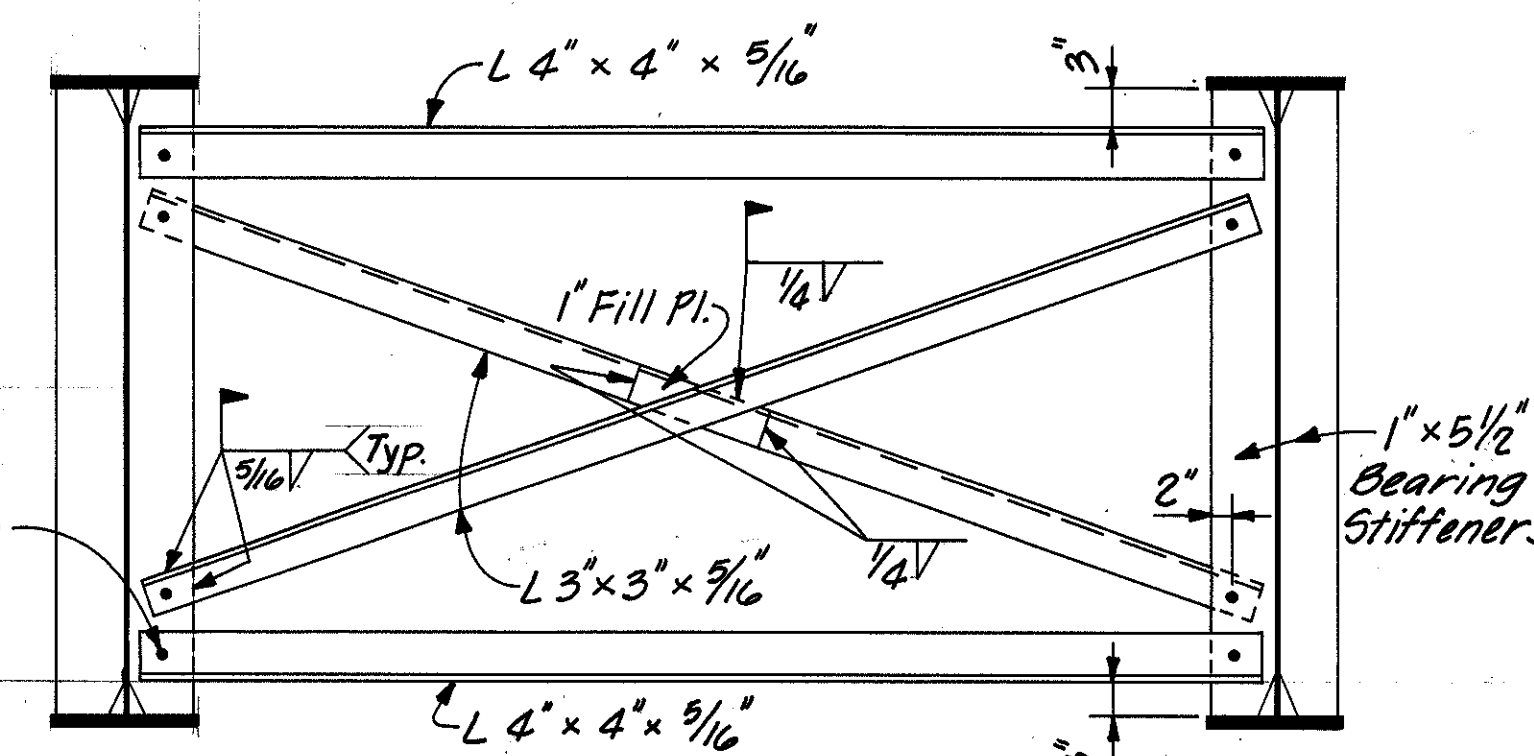
PLAN



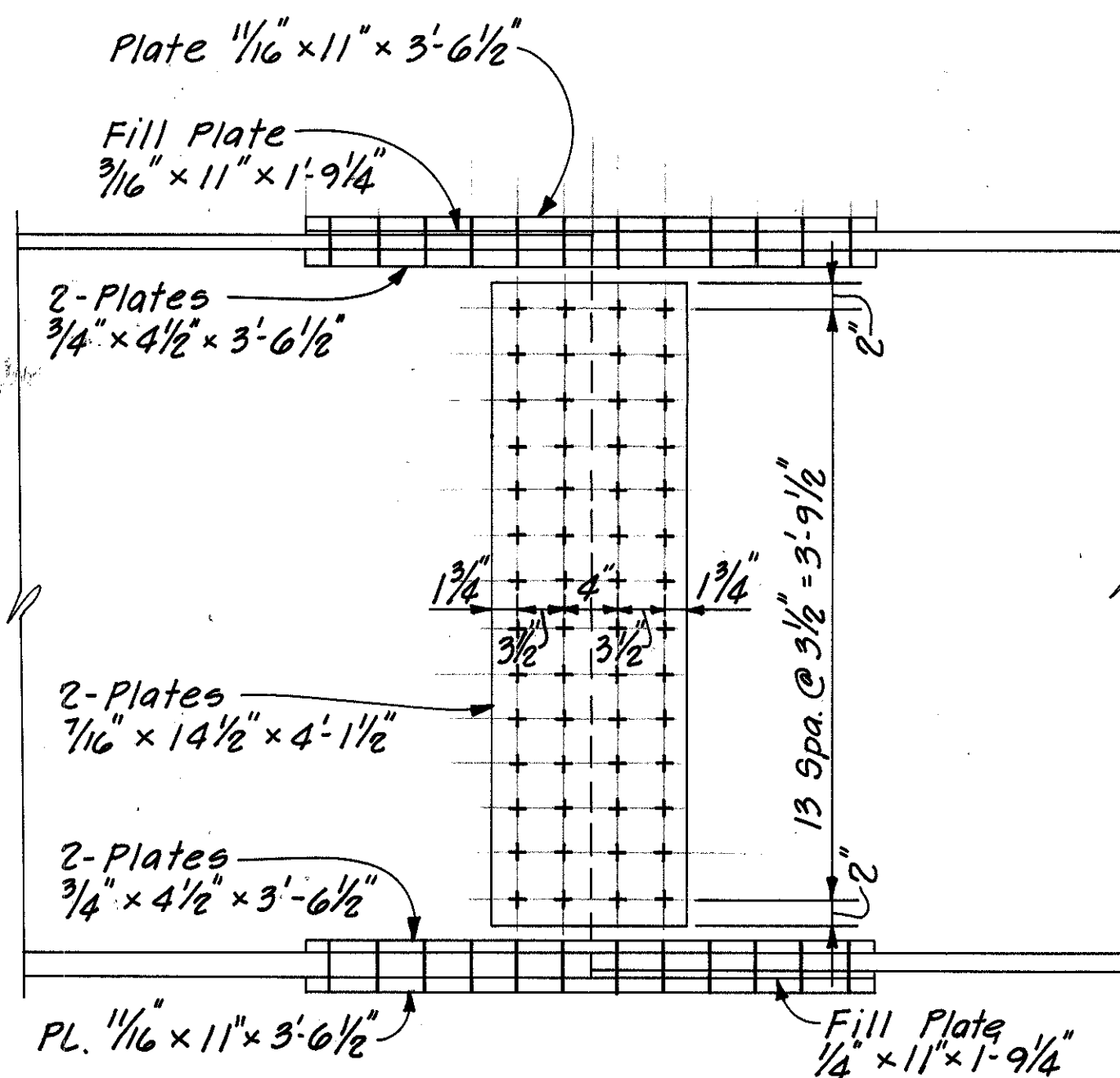
PLAN



CROSSFRAME CF-1

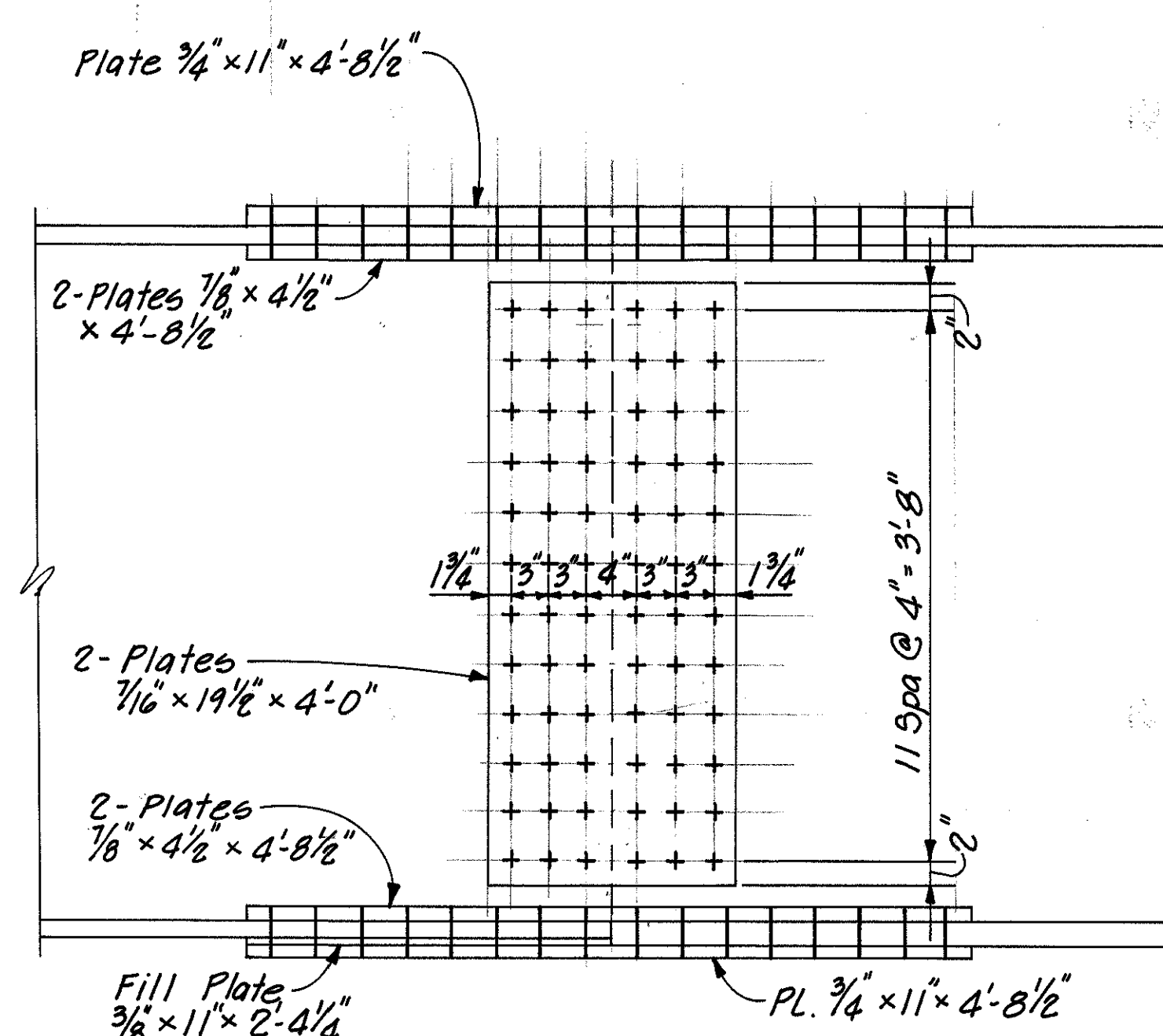


CROSSFRAME CF-2



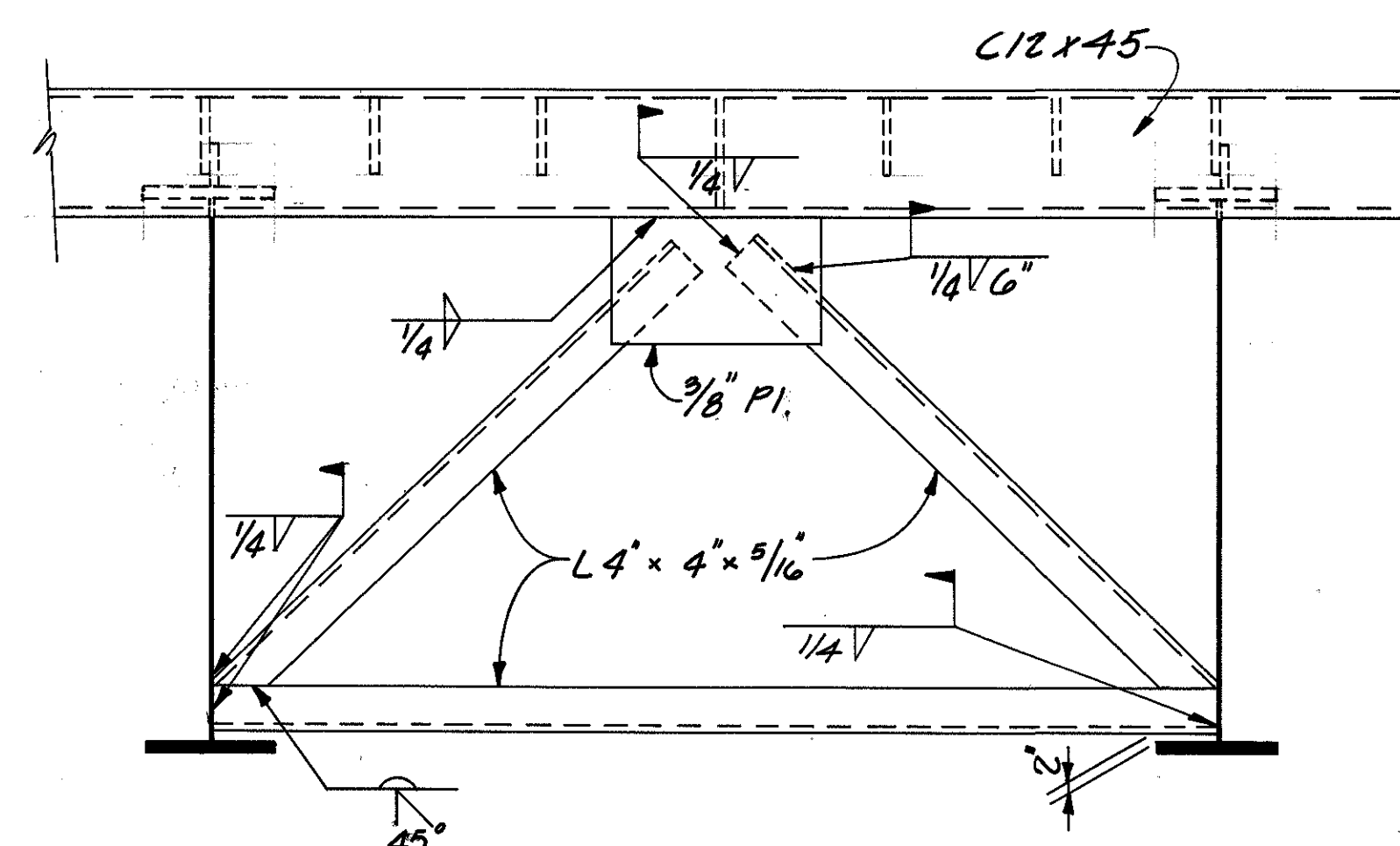
ELEVATION

GIRDER SPLICE DETAIL NO. 1



ELEVATION

GIRDER SPLICE DETAIL NO. 2



CROSSFRAME CF-3

Erection Bolts:

Hole Diameter in the Crossframes & Girder Stiffeners Shall be Respectively 1/16" & 3/16" Larger than the Diameter of the Erection Bolts. Unless Replaced by Permanent High Strength Bolts, Erection Bolts Shall Remain in Place. Lock Washers Shall be Furnished for Other than Fully Torqued High Strength Erection Bolts. Bolts Shall be Furnished as Part of Item 513.

In Lieu of Erection Bolts & at the Option of the Contractor, Alternative Means of Temporary Bracing May be Used Subject to the Approval of the Director (501.06).

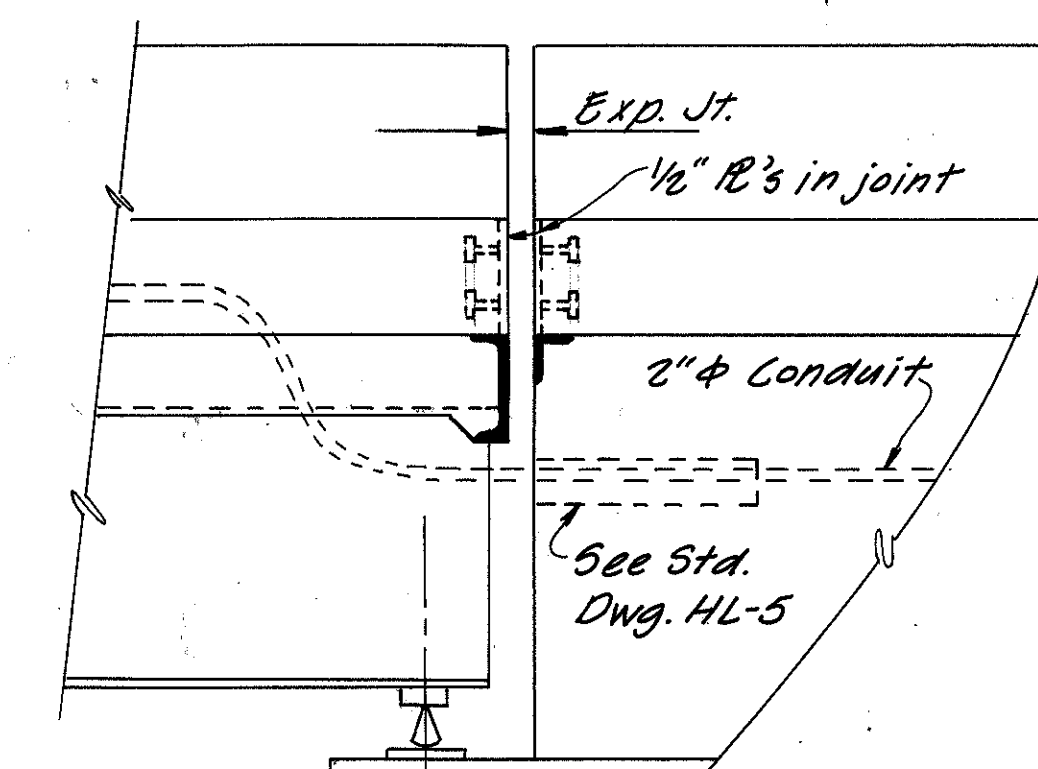
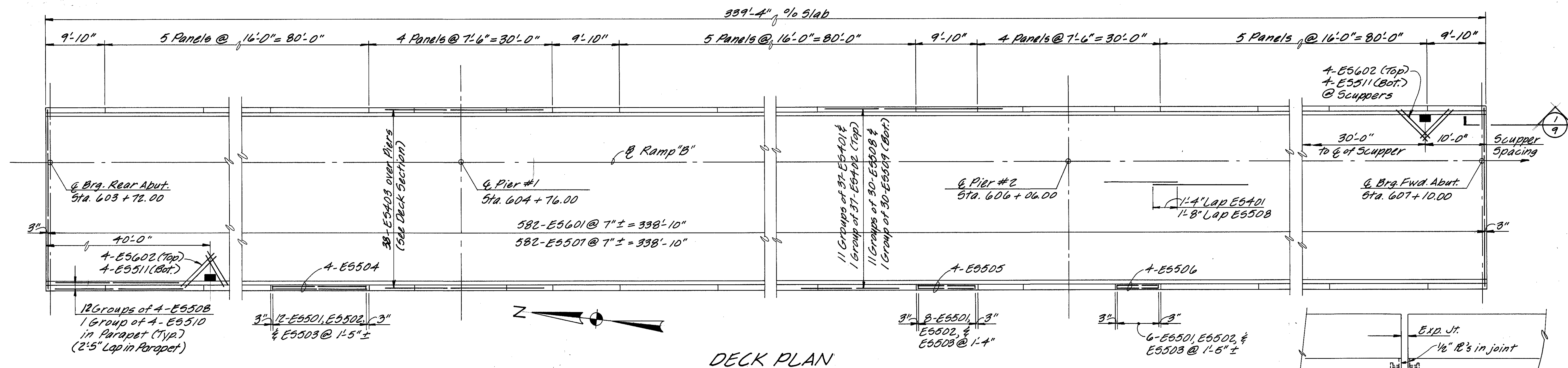
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FRAMING DETAILS

BRIDGE NO. JAC-35-1147
RAMP "B" OVER C&O R.R. & HORSE CREEK

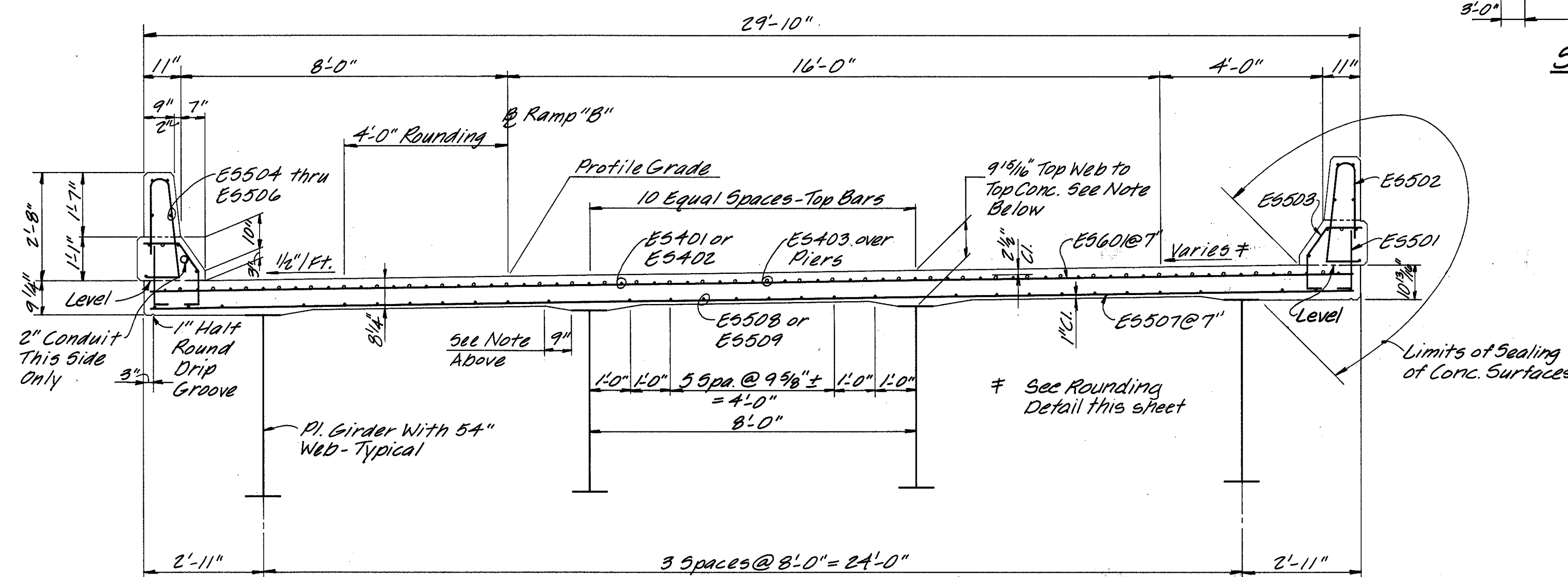
DESIGNED GTW DRAWN MHW TRACED - CHECKED MP REVIEWED WBS DATE 4/10/88 REVISED

8/12



SECTION 1
9

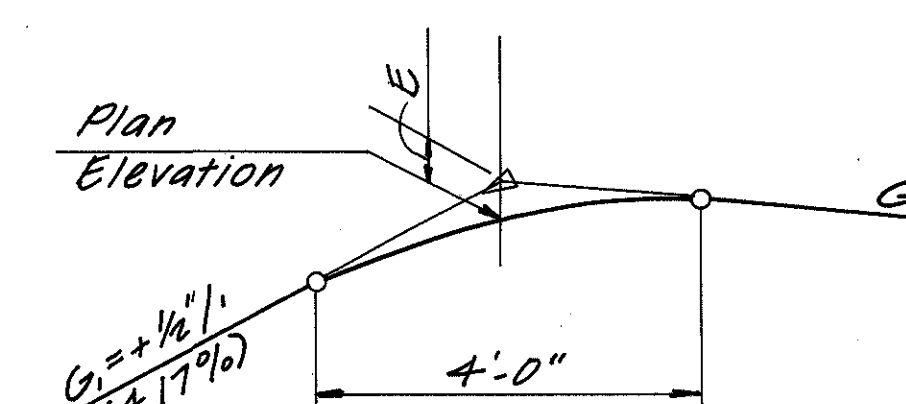
A Haunch Width of 9" Shall be Used for Computing Quantity of Concrete. However, the Haunch Width may Vary Between 6" & 12" (Provided that the Slope Shall be Not More than 1:4 for a Haunch Less than 9" in Width.



TRANSVERSE DECK SECTION

This is the Design Dimension. The Quantity of Deck Concrete to be Paid for Shall be Based Upon 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 Reg'd. to Place it Parallel to the Finished Grade. Deduction Shall be Made for Volume of Encased Steel Plates as per 511.18.

STAGGER OF E5403
BARS OVER PIERS



ROUNDING DETAIL

Station	G_2	E
603+34	-3.00%	7/16"
603+72	-1.75%	3/8"
604+25	0.00%	1/4"
604+75	+1.56%	3/16"
607+10	+1.56%	3/16"

NOTES:

1. See Sheet [2/12] for General Notes & Quantities.
2. See Sheets [11/12] & [12/12] for Reinforcing Steel Details.
3. See Std. Dwg. BR-1 for Bridge Railing Details.
4. See Sheet [10/12] for Additional Details.
5. Welded Attachment of Supports for Concrete 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, and be not Smaller than the Minimum Required by AASHTO.

		9 / 10	
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DECK PLAN

BRIDGE NO. JAC-35-1147

RAMP "B" OVER C & O R.R. & HORSE CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVISION DATE	REVISED
GTW	CLP	—	MP	WBS 4/10/80	

STRIP SEAL NOTES

REFERENCE: REFERENCE SHALL BE MADE TO STANDARD DRAWINGS EXJ-2-81 FOR ADDITIONAL DETAILS INCLUDING WELDING REQUIREMENTS AND TEMPORARY SUPPORT BARS.

MATERIALS: STRUCTURAL STEEL FOR THE STRIP SEAL EXPANSION-CONTRACTION JOINT SHALL CONFORM TO ASTM A588 OR A36 WITH SYSTEM B FIELD PAINT ON EXPOSED STEEL SURFACES. FIELD PAINT SHALL CONSIST OF TWO PRIME COATS AND ONE FINISH COAT.

THE PREFORMED STRIP SEAL SHALL BE EXTRUDED POLYCHOROPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM D2628. DUE TO THE CONFIGURATIONS OF THE STRIP SEAL, THE RECOVERY TESTS ARE NOT APPLICABLE. PHYSICAL PROPERTIES SHALL MEET THE REQUIREMENTS SPECIFIED IN TABLE "C" THIS SHEET.

LUBRICANT-ADHESIVE USED TO INSTALL THE PREFORMED STRIP SEALS SHALL BE A POLYURETHANE AND HYDROCARBON SOLVENT MIXTURE AS SPECIFIED BY THE SEAL MANUFACTURER (UNLESS OTHERWISE APPROVED BY THE DIRECTOR). IT SHALL HAVE SUITABLE CONSISTENCY AT THE TEMPERATURE AT WHICH THE SEALS ARE INSTALLED AND SHALL BE COMPATIBLE WITH THE SEALS AND THE STEEL EXTRUSIONS.

PREPARATIONS FOR INSTALLATION: TO AVOID THE SUBSEQUENT CONTAMINATION OF PREPARED SURFACES, ALL SURFACES OF ELASTOMERIC STRIP SEALS SHALL BE CLEANED WITH METHYL ETHYL KETONE (MEK), TOLUENE (T) OR OTHER APPROVED SOLVENT USING CLEAN DISPOSABLE CLOTHS.

THE BONDING SURFACES OF THE STEEL EXTRUSIONS (THE INTERIOR OF THE ANCHOR GROOVES) SHALL BE PREPARED TO GRADE SA 3, ASTM D2200. PREPARATION SHALL BE ACCOMPLISHED NOT MORE THAN 24 HOURS PRIOR TO ADHESIVE BONDING.

INSTALLATION: IMMEDIATELY PRIOR TO APPLICATION OF LUBRICANT-ADHESIVE, BONDING SURFACES SHALL BE CLEAN, DRY AND WARMER THAN 45°F AND THEY SHALL BE MAINTAINED AT OR ABOVE THIS TEMPERATURE UNTIL THE ADHESIVE HAS CURED. LUBRICANT-ADHESIVE SHALL BE APPLIED LIBERALLY TO BOTH STEEL AND ELASTOMERIC BONDING SURFACES USING A STIFF BRUSH IF NECESSARY TO ACHIEVE A COMPLETE AND RELATIVELY UNIFORM COATING. THEN THE BULBED EDGES OF THE ELASTOMERIC SEAL SHALL BE INSERTED INTO THE ANCHOR GROOVES. AFTER INSTALLATION, EXCESS LUBRICANT-ADHESIVE SHALL BE REMOVED FROM THE EXPOSED SEAL SURFACES.

MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE LINEAR FOOT OF SEALED JOINT SYSTEM, MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINES AND BETWEEN THE OUTER LIMITS OF THE FABRICATED JOINT, FURNISHED AND PLACED, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT IN PLACE, WHICH INCLUDES THE JOINT ARMOR, ANCHORING DEVICES, TEMPORARY SUPPORTS AND END CROSSFRAME GUSSET PLATES. PAYMENT SHALL BE MADE PER LINEAR FEET FOR ITEM 516 "STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS."

CONSTRUCTION PROCEDURE

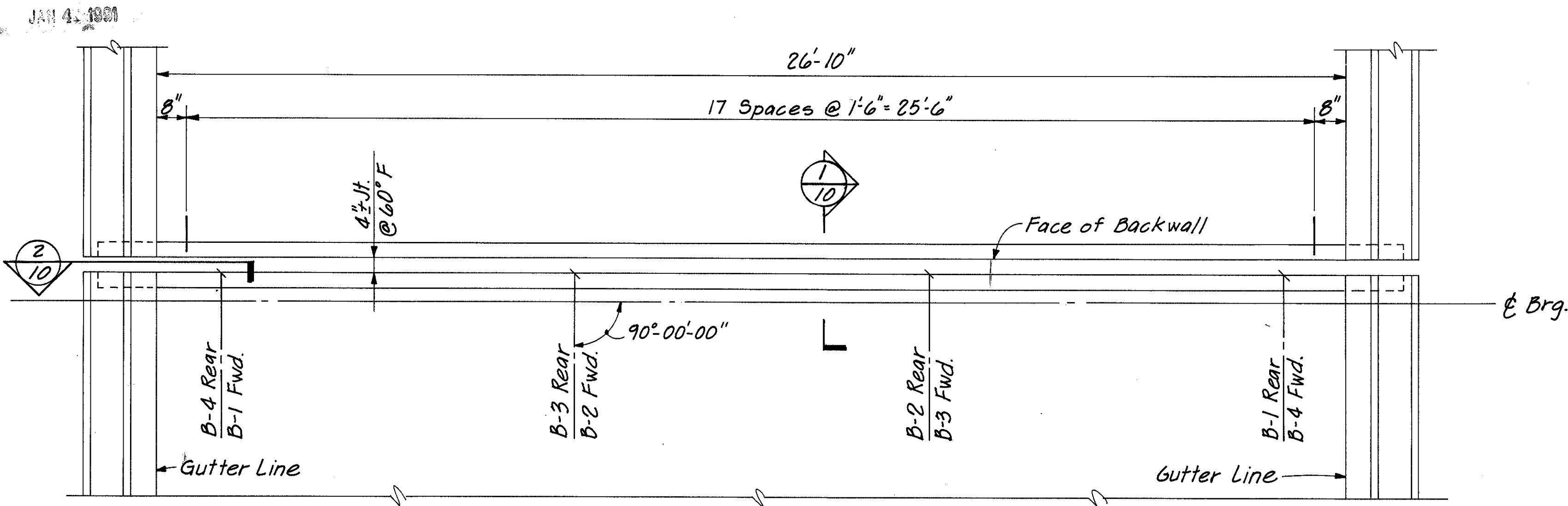
1. ABUTMENT BACKWALL CONCRETE SHALL NOT BE PLACED UNTIL AFTER SUPERSTRUCTURE CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.
2. PLACE BACKWALL CONCRETE DURING STABLE OR RISING AMBIENT TEMPERATURES AND CONCLUDE PLACEMENT AT OR IMMEDIATELY BEFORE THE DAY'S PEAK AMBIENT TEMPERATURE.
3. NOT MORE THAN FOUR HOURS PRIOR TO THE DAY'S PEAK AMBIENT TEMPERATURE, SET ABUTMENT EXPANSION JOINT WIDTH TO DIMENSION "A" WHICH SHALL BE DETERMINED FROM TABLE.
4. LOOSEN TEMPORARY JOINT ARMOR BOLTS AFTER INITIAL SET OF CONCRETE, PREFERABLY NOT LATER THAN TWO HOURS AFTER CONCLUSION OF CONCRETE PLACEMENT.

TABLE C (PHYSICAL PROPERTIES OF SEAL ELEMENT)		
PROPERTY	REQUIREMENT	ASTM METHOD
TENSILE STRENGTH, MIN. R.S.L.	2000	D412
ELONGATION AT BREAK, MIN. PERCENT	250	D412
HARDNESS, TYPE A DUROMETER	50 MIN. 65 MAX.	D2240 (MODIFIED)
OVEN AGING, 70 HR. AT 212°F TENSILE STRENGTH, LOSS, MAX. ELONGATION, LOSS, MAX. HARDNESS, TYPE A DUROMETER (POINTS CHANGE)	20 PERCENT 20 PERCENT 0 TO +10	D573
OZONE RESISTANCE 20 PERCENT STRAIN, 300 PPHM, IN AIR AT 104°F (WIPED WITH TOLUENE TO REMOVE SURFACE CONTAMINATION)	NO CRACKS	D1149

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DECK DETAILS & EXPANSION JOINT
BRIDGE NO. JAC-35-11.47
RAMP "B" OVER C&D R.R. & HORSE CREEK

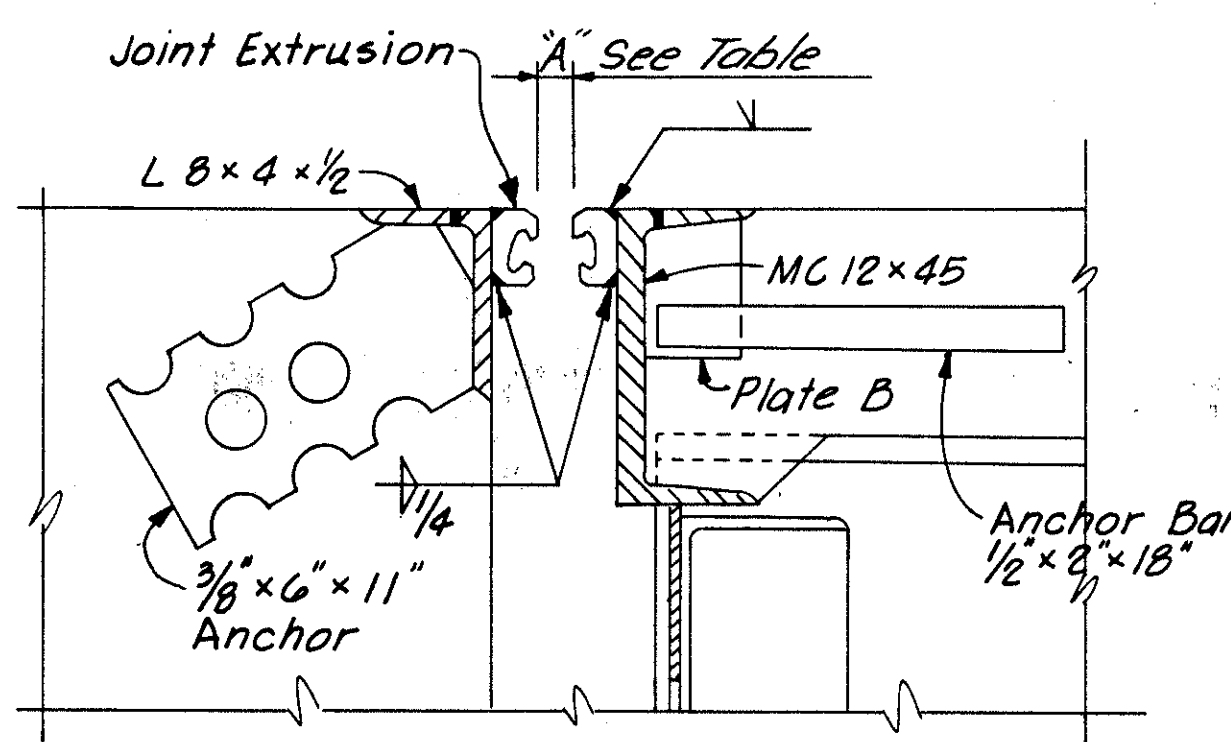
DESIGNED: GTW
DRAWN: MHW
TRACED: —
CHECKED: MP
REVIEWED: WBS
DATE: 4/12/86



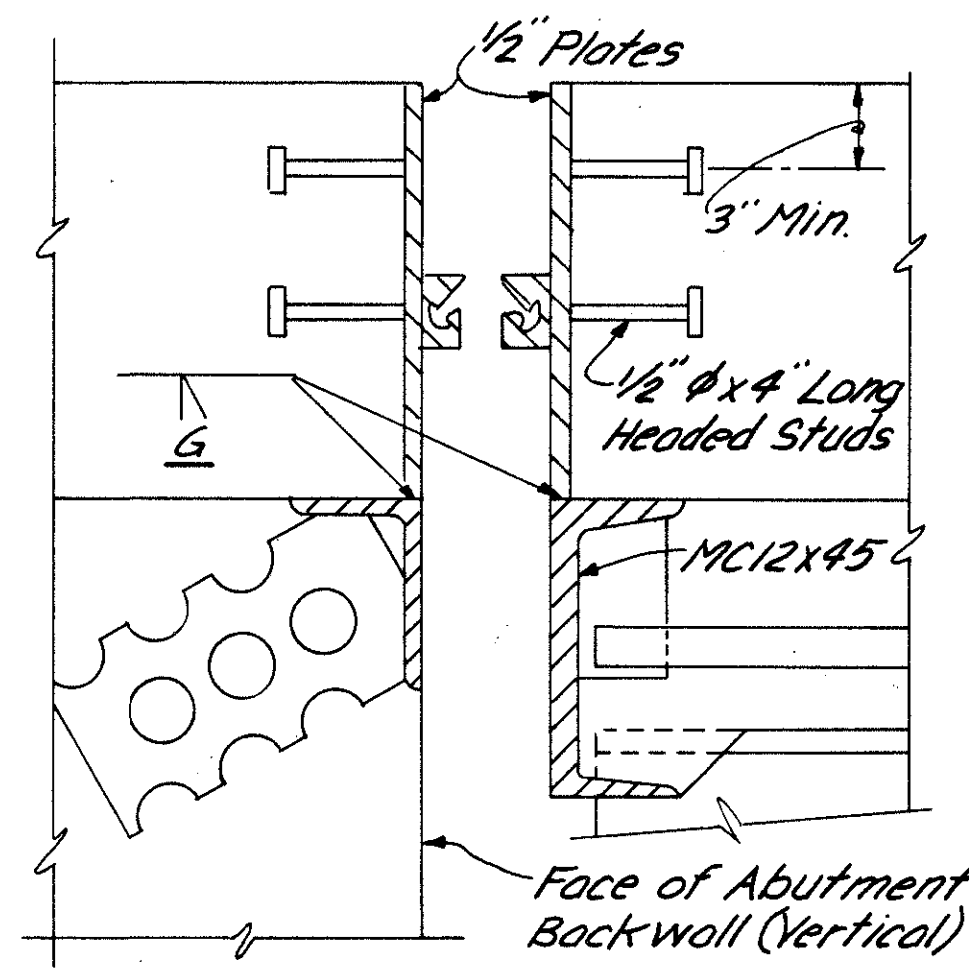
EXPANSION JOINT PLAN AT ABUTMENTS

DIMENSION "A"							
Temperature	30°F	40°F	50°F	60°F	70°F	80°F	90°F
Abutments	2 1/8"	2"	1 7/8"	1 3/4"	1 1/8"	1 1/2"	1 3/8"

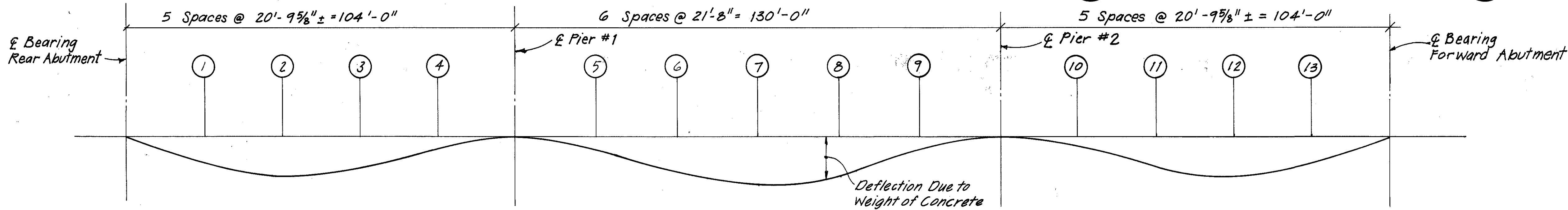
Do not install strip seal when temperature exceeds 80°F.



SECTION 1



SECTION 3



SCREED DIAGRAM AND TABLE

LOCATION	£ Brg.	①	②	③	④	£ Pier	⑤	⑥	⑦	⑧	⑨	£ Pier	⑩	⑪	⑫	⑬	£ Brg.
Station	603+72.00	603+72.80	604+13.60	604+34.40	604+55.20	604+76.00	604+97.67	605+19.33	605+41.00	605+62.67	605+84.33	606+06.00	606+26.80	606+47.60	606+68.40	606+89.20	607+10.00
Profile Grade	694.849	694.606	694.363	694.120	693.877	693.634	693.381	693.128	692.875	692.622	692.369	692.116	691.873	691.630	691.409	691.245	691.136
Left Fascia Elevation (8'-11" Lt.)	694.658	694.401	694.145	693.888	693.632	693.377	693.124	692.871	692.618	692.365	692.112	691.859	691.616	691.373	691.152	690.988	690.879
Cast in Place Concrete Deflection	0	.096	.136	.107	.038	0	.049	.123	.160	.124	.049	0	.038	.107	.136	.095	0
Left Screed Elevation	694.66	694.50	694.28	694.00	693.67	693.38	693.17	692.99	692.78	692.49	692.16	691.86	691.65	691.48	691.29	691.08	690.88
Right Fascia Elevation (20'-11" Rt.)	694.507	694.398	694.289	694.177	694.060	693.937	693.884	693.431	693.178	692.925	692.672	692.419	692.176	691.933	691.712	691.548	691.439
Cast in Place Concrete Deflection	0	.096	.136	.107	.038	0	.049	.123	.160	.124	.049	0	.038	.107	.136	.095	0
Right Screed Elevation	694.51	694.49	694.43	694.28	694.10	693.94	693.73	693.55	693.34	693.05	692.72	692.42	692.21	692.04	691.85	691.64	691.44

Mark	Number	Length	Weight	Shape		
Abutments				Rear	Forward	
EA801	36	5'-1"	488	Bt.	18	18
EA601	54	4'-2"	338	Bt.	27	27
EA602	4	3'-8"	22	Bt.	2	2
EA603	4	3'-8"	22	Bt.	2	2
EA604	4	3'-7"	22	Bt.	2	2
EA605	7	3'-7"	38	Bt.	2	5
EA606	9	4'-3"	57	Str.	6	3
EA607	54	7'-1"	574	Bt.	27	27
EA608	54	9'-1"	736	Bt.	27	27
EA609	54	10'-5"	845	Bt.	27	27
EA501	50	3'-3"	169	Str.	25	25
EA502	50	5'-3"	274	Bt.	25	25
EA503	16	15'-4"	256	Str.	8	8
EA504	32	4'-7"	153	Str.	16	16
EA505	23	2'-8"	64	Bt.	10	13
EA506	32	4'-4"	145	Str.	16	16
EA507	18	29'-6"	554	Str.	9	9
EA508	8	8'-4"	70	Str.	4	4
EA509	8	18'-10"	157	Str.	4	4
EA510	24	10'-2"	255	Str.	12	12
EA511	16	4'-8"	78	Bt.	8	8
AB01	18	32'-4"	1554	Str.	9	9
AB02	12	14'-0"	449	Str.	6	6
AB03	18	28'-0"	1346	Str.	9	9
AG01	40	11'-10"	711	Bt.	20	20
AG02	40	7'-7"	455	Bt.	20	20
AG03	38	12'-4"	704	Bt.	19	19
AG04	96	10'-4"	1490	Bt.	48	48
AG05	26	6'-1"	237	Str.	13	13
AG06	45	6'-2"	417	Str.	38	7
AG07	31	6'-7"	306	Str.		31
AG08	36	6'-3"	338	Str.	18	18
AS01	40	10'-11"	456	Bt.	20	20
AS02	40	7'-5"	310	Bt.	20	20
AS03	40	7'-8"	320	Bt.	20	20
AS04	18	29'-6"	554	Str.	9	9
AS05	12	4'-8"	58	Bt.	6	6
AS06	8	17'-2"	143	Str.	4	4
AS07	4	14'-7"	61	Str.	2	2
AS08	4	12'-0"	50	Str.	2	2
AS09	4	9'-5"	39	Str.	2	2
AS10	16	11'-2"	186	Str.	8	8
AS11	14	10'-3"	150	Str.	7	7
AS12	12	7'-6"	94	Bt.	6	6
AS13	4	6'-9"	28	Bt.	2	2
AS14	4	8'-3"	34	Bt.	2	2
AS15	4	9'-9"	41	Bt.	2	2
AS16	4	11'-3"	47	Bt.	2	2
AS17	4	12'-9"	53	Bt.	2	2
AS18	8	9'-0"	75	Str.	4	4
AS19	10	4'-4"	45	Str.	4	6
AS20	8	20'-8"	172	Str.	4	4
AS21	4	18'-1"	75	Str.	2	2
AS22	4	15'-6"	65	Str.	2	2
AS23	4	12'-11"	54	Str.	2	2

Mark	Number	Length	Weight	Shape		
Abutments				Rear	Forward	
A524	16	12'-8"	212	Str.	8	8
A525	20	10'-2"	212	Str.	10	10
A526	16	12'-2"	203	Str.	8	8
A527	4	3'-11"	16	Str.	4	4
A528	8	3'-8"	31	Str.	4	4
A529	36	10'-4"	388	Str.	18	18
A530	32	3'-6"	117	Str.	16	16
A531	64	1'-6"	100	Str.	32	32
A532	12	11'-5"	143	Bt.	6	6
A533	38	11'-5"	453	Bt.	19	19
A534	28	7'-0"	204	Str.	14	14

Mark	Number	Length	Weight	Shape	No. 1	No. 2
Piers						
P1101	96	18'-10"	9604	Bt.	48	48
P901	56	11'-0"	2094	Str.	28	28
P902	48	15'-10"	2583	Str.	48	
P903	48	15'-4"	2502	Str.		48
P904	10	33'-9"	1148	Bt.	5	5
P905	10	28'-6"	969	Bt.	5	5
P801	24	20'-6"	1314	Str.	12	12
P701	96	6'-4"	1243	Str.	48	48
P501	4 Series of 6	Varies 15'-0" to 18'-10"	425	Bt.	2 Series of 6	2 Series of 6
P502	4	14'-2"	59	Bt.	2	2
P503	8	8'-4"	70	Bt.	4	4
P401	90	12'-0"	721	Str.	46	44
P402	90	7'-10"	471	Bt.	46	44
P403	315	3'-1 1/2"	762	Bt.	161	154
P404	4	15'-0"	40	Str.	2	2
P405	4	18'-8"	50	Str.	2	2
P406	4	22'-4"	60	Str.	2	2
P407	4	26'-0"	69	Str.	2	2
P408	12	27'-0"	216	Str.	6	6
P410	12	5'-10"	47	Bt.	6	6
P411	48	5'-5"	174	Bt.	24	24

Mark	Number	Length	Weight	Shape
Superstructure				
ES601	582	29'-4"	25,639	Str.
ES602	12	10'-0"	180	Str.
ES501	520	2'-5"	1313	Bt.
ES502	520	5'-3"	2847	Bt.
ES503	520	3'-0"	1627	Bt.
ES504	120	15'-6"	1940	Str.
ES505	32	9'-4"	311	Str.
ES506	64	7'-0"	467	Str.
ES507	582	29'-4"	17,806	Str.
ES508	426	30'-0"	13,330	Str.
ES509	30	27'-2"	850	Str.
ES510	8	7'-10"	65	Str.
ES511	12	10'-0"	125	Str.
ES401	407	30'-0"	8156	Str.
ES402	37	23'-6"	581	Str.
ES403	76	52'-0"	2640	Str.

NOTES:

- For Bar Bending Details - See Sheet 12/12.
- Refer to CMS Sections 106.03, 100, 109.01 through 109.05 & 109.08. 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.
- EA and ES Bars are Epoxy Coated Bars.



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

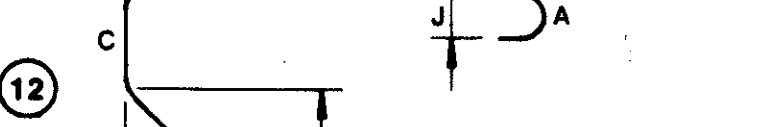
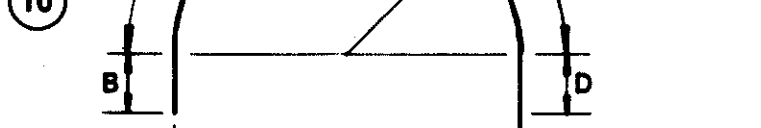
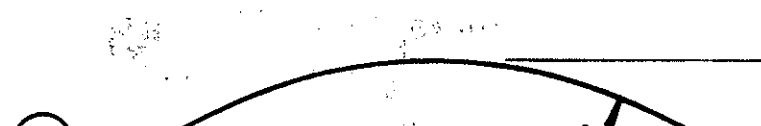
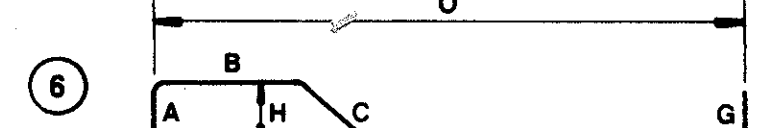
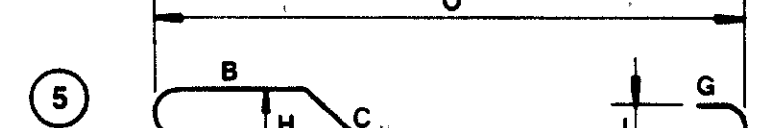
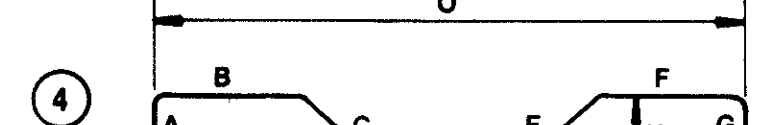
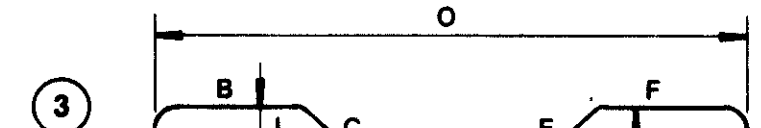
REINFORCING STEEL LIST

BRIDGE NO. JAC-35-1147
RAMP "B" OVER C&O R.R. & HORSE CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CEP	MHW	—	JET	WBS	4/11/88	

Dimensions For Bending

Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
EA801	3	1'-1"	2'-0"	2'-0"	0	0	0	0	1'-5"	0'-8"			3'-5"
EA601	14		0'-9"	0'-10 1/2"	2'-10"	0	0		0'-6"		0'-8 1/2"		3'-1 1/2"
EA602	14		0'-8"	0'-9 7/8"	2'-5"	0	0		0'-5"		0'-8 1/2"		3'-1 1/2"
EA603	14		0'-8"	0'-9 3/8"	2'-5"	0	0		0'-4"		0'-8 1/2"		3'-1 1/2"
EA604	14		0'-7"	0'-9"	2'-5"	0	0		0'-3"		0'-8 1/2"		3'-1 1/2"
EA605	14		0'-7"	0'-8 3/4"	2'-5"	0	0		0'-2"		0'-8 1/2"		3'-1 1/2"
EA607	S10		3'-3"	0'-11"	3'-3"								
EA608	S10		4'-0"	1'-5"	4'-0"								
EA609	S10		4'-8"	1'-5"	4'-8"								
EA502	22												
EA505	18	0'-7"	2'-1"	0						0'-5"			
EA511	2	2'-5"	2'-5"					0					
AG01	2	2'-4"	7'-6"					2'-4"					
AG02	2	1'-0"	6'-9"					0					
AG03	2	2'-4"	8'-0"					2'-4"					
AG04	S10		4'-9"	1'-2"	4'-9"								
AS01	2	1'-10"	7'-6"					1'-10"					
AS02	2	0'-10"	6'-9"					0					
AS03	2	2'-3"	3'-5"					2'-3"					
AS05	2	2'-5"	2'-5"					0					
AS12	T1	0'-5"	1'-0"	2'-6"	1'-0"	2'-6"		0'-5"					
AS13	S10		2'-11"	1'-2"	2'-11"								
AS14	S10		3'-8"	1'-2"	3'-8"								
AS15	S10		4'-5"	1'-2"	4'-5"								
AS16	S10		5'-2"	1'-2"	5'-2"								
AS17	S10		5'-11"	1'-2"	5'-11"								
AS32	T1	0'-5"	3'-0"	2'-6"	3'-0"	2'-6"		0'-5"					
AS33	2	1'-10"	8'-0"					1'-10"					
PI101	2	2'-0"	17'-2"					0					
P904	2	3'-8"	27'-0"					3'-8"					
P905	1	1'-3"	26'-0"					1'-3"		0'-11 1/4"			
P501	T1	0'-5 1/2"	2'-7"	(1)	2'-7"	(1)		0'-5 1/2"					
P502	T1	0'-5 1/2"	2'-7"	4'-3"	2'-7"	4'-3"		0'-5 1/2"					
P503	19		1'-8"	6'-9"					0'-9"		1'-6"		8'-3"
P402	10		1'-10"	4'-2"	1'-10"						1'-4"		2'-8"
P403	S2	0'-4 1/2"	2'-8"	0'-8"	0			0	0'-3"				
P410	S10		1'-8"	2'-8"	1'-8"								
P411	S10		1'-6"	2'-7"	1'-6"								
ES501	2	0'-10 1/2"	1'-8"					0					
ES502	22												
ES503	23	0'-9"											
(1)	Height Varies from 4'-8" to 6'-6 1/2" at 4 1/2" Increments.												

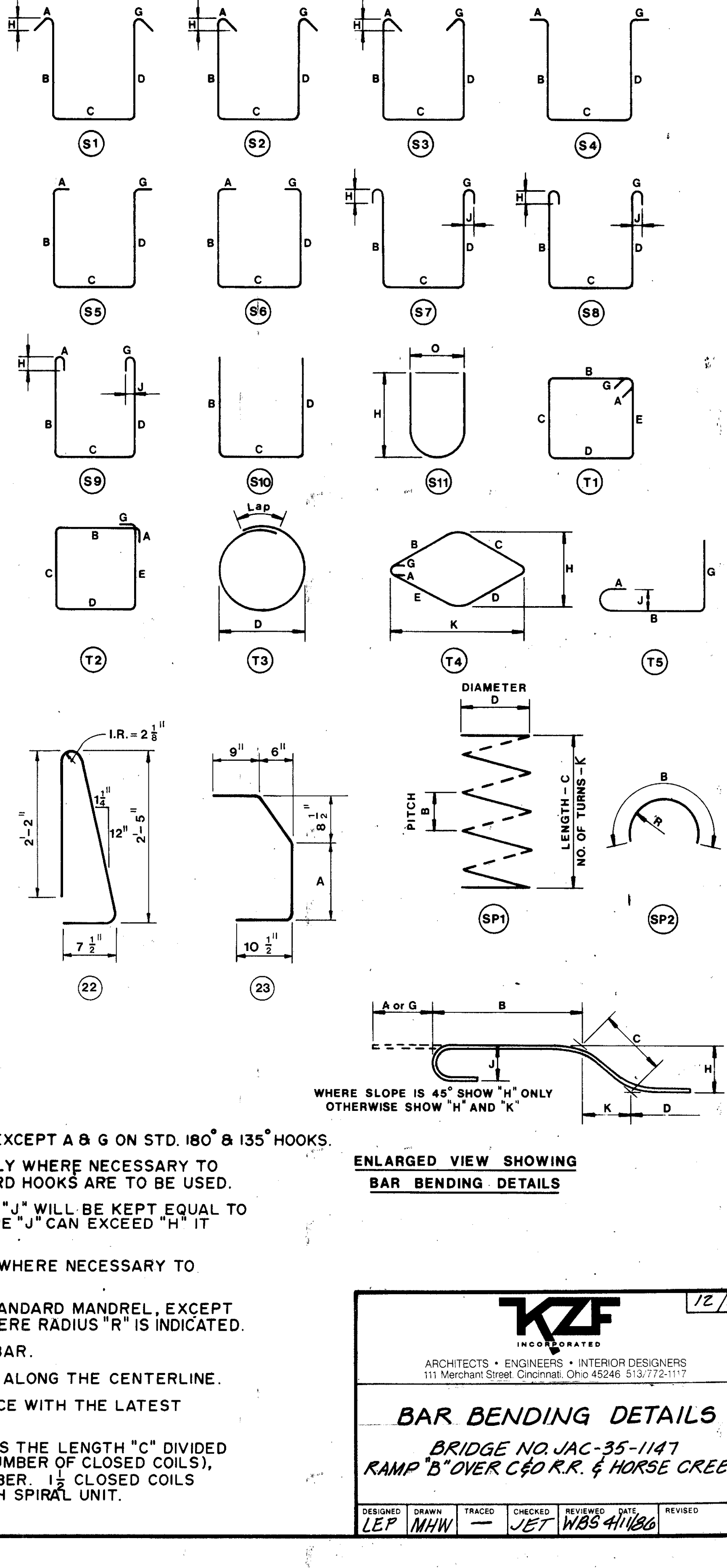
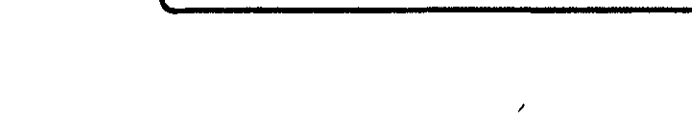
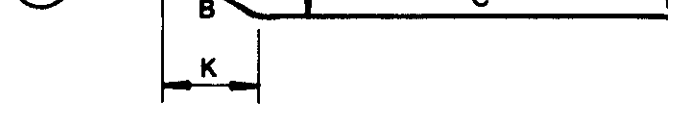
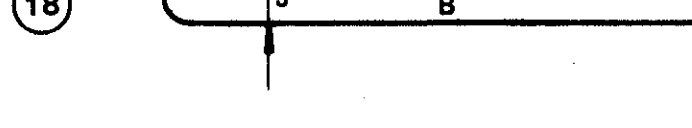
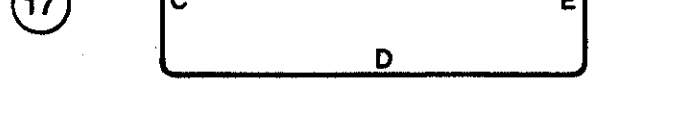
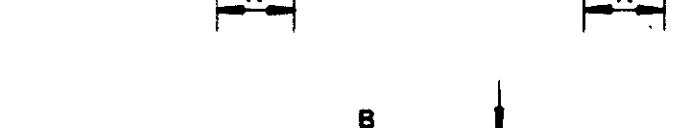
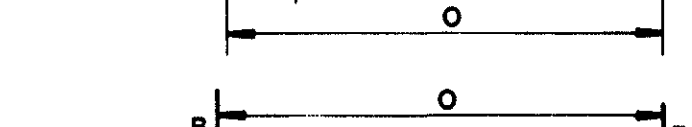
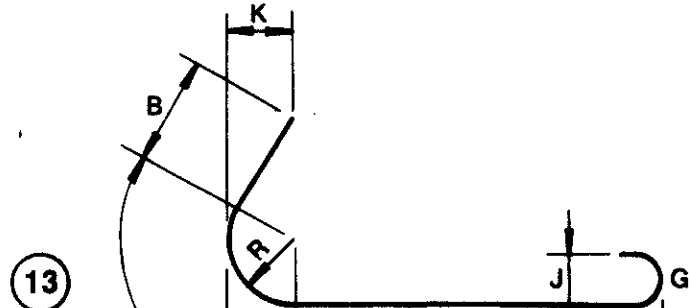


JAC-35-11.46

OHIO
FHWA
REGION 5

338
442

(15) NOT USED



NOTES:

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT A & G ON STD. 180° & 135° HOOKS.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H". WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUP S11, TIES T3, SPIRALS SP1 AND WHERE RADIUS "R" IS INDICATED.
- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE LATEST ACI SPECIFICATIONS.
- 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. 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY OTHERWISE SHOW "H" AND "K"

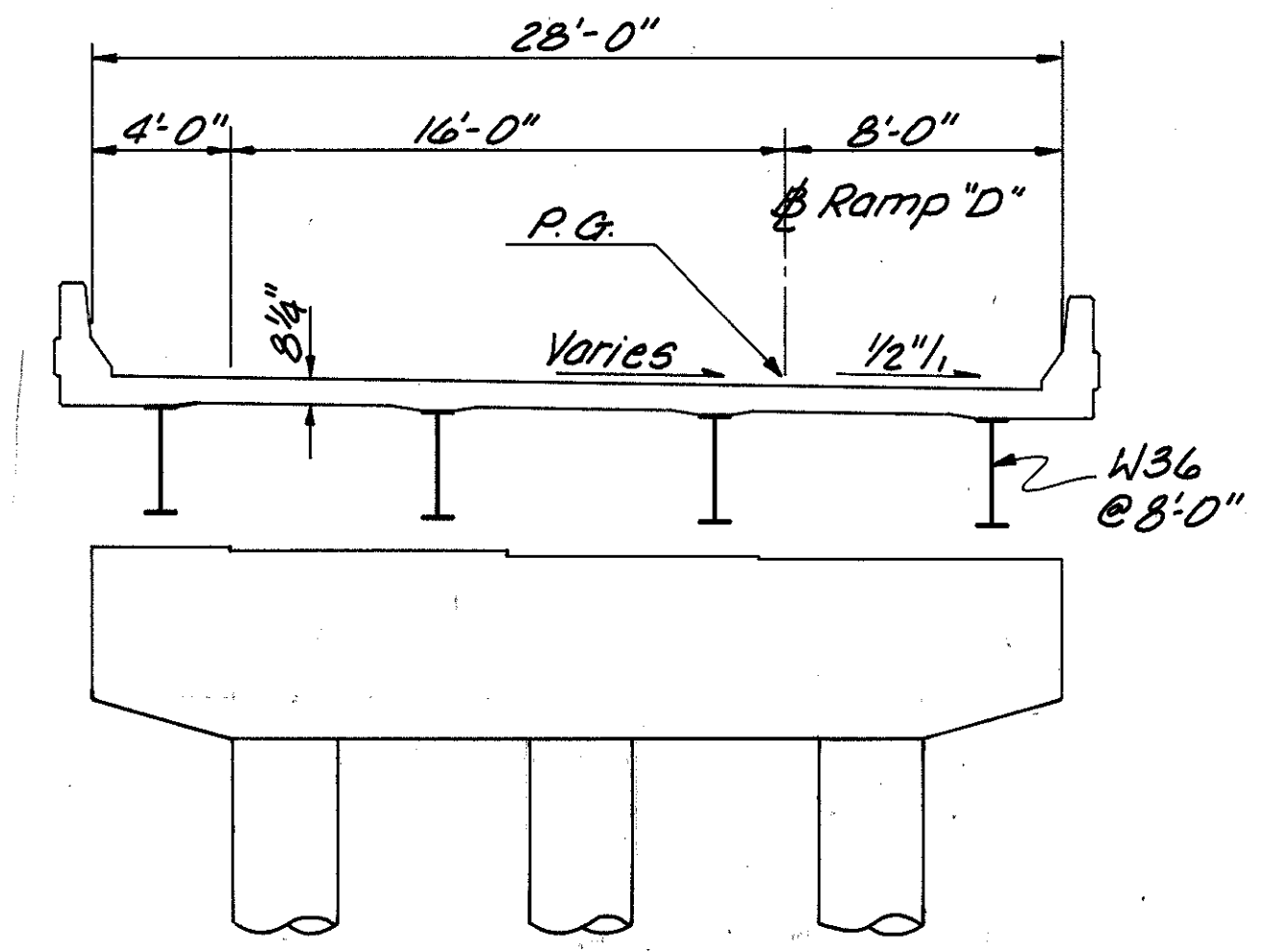
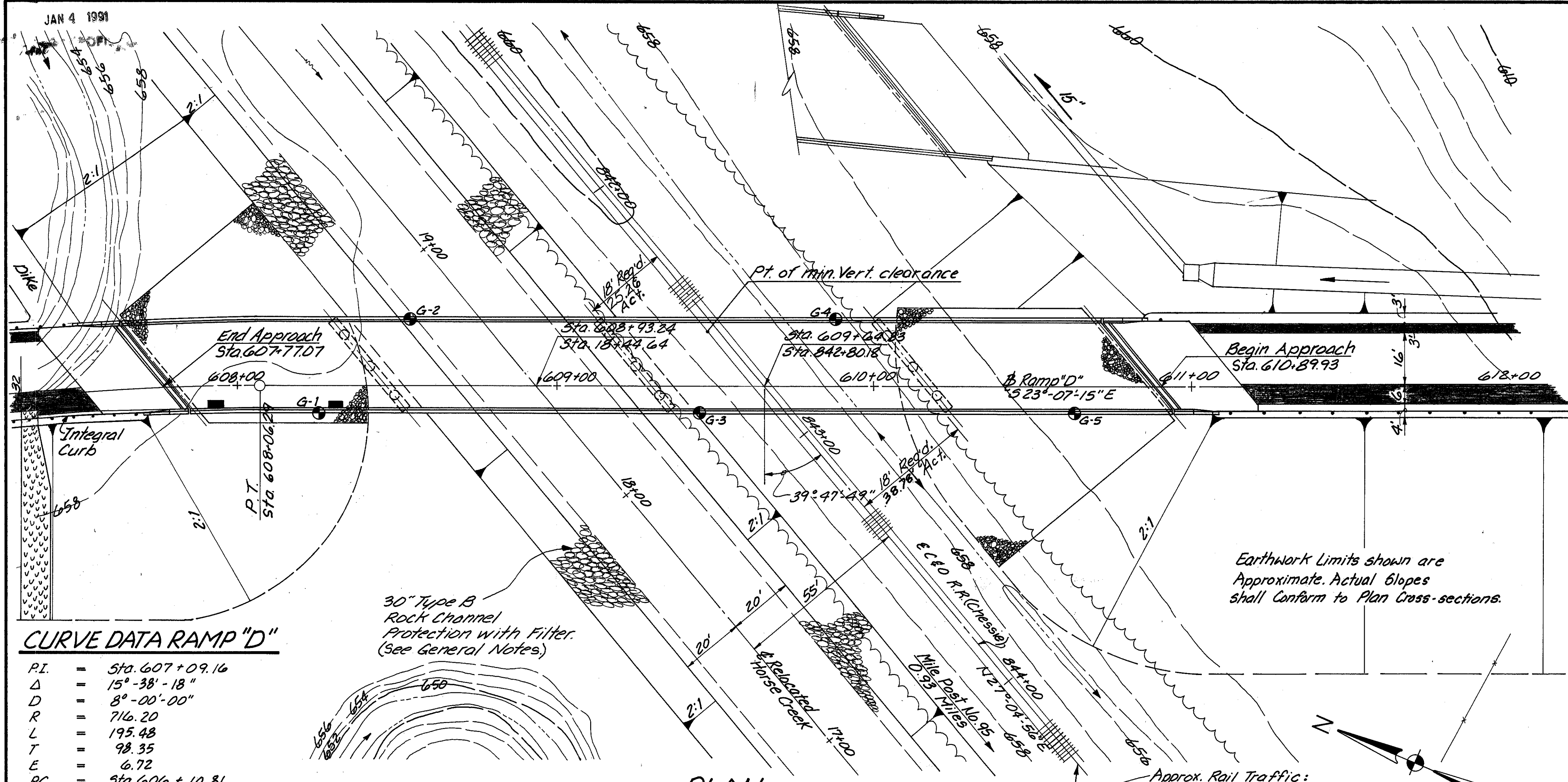
ENLARGED VIEW SHOWING BAR BENDING DETAILS

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

12/12

BAR BENDING DETAILS
BRIDGE NO. JAC-35-11.47
RAMP "B" OVER C&O R.R. & HORSE CREEK

DESIGNED: LEP
DRAWN: MHW
TRACED: JET
CHECKED: WBS
REVIEWED: WBS
DATE: 4/1/86



CURVE DATA RAMP "D"

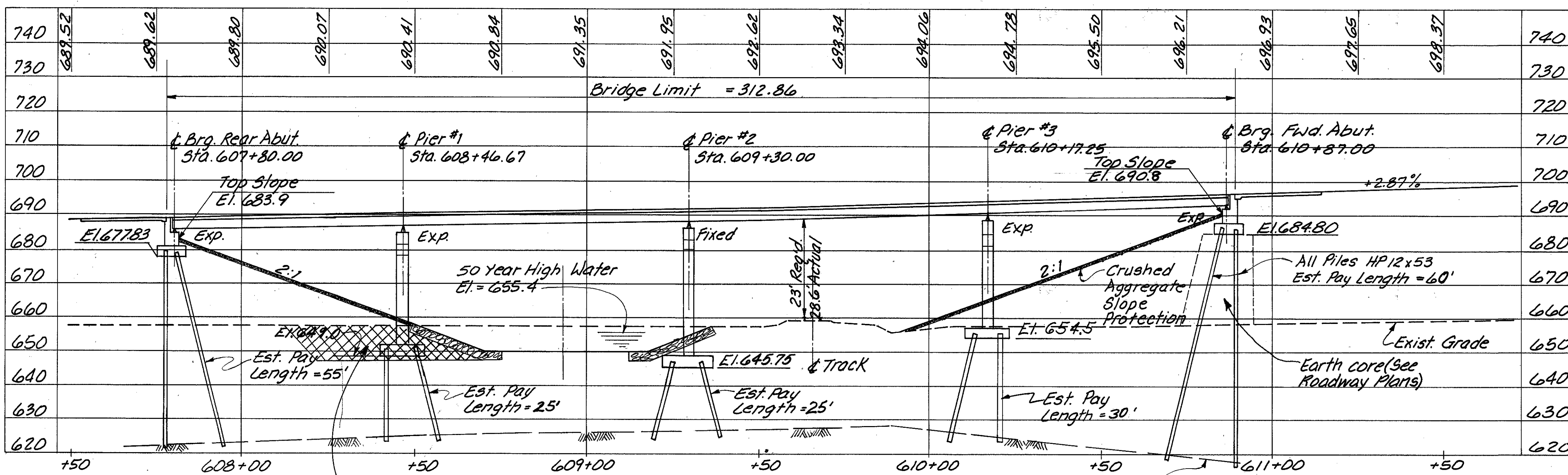
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D	=	8°-00'-00"
R	=	716.20
L	=	195.43
T	=	98.35
E	=	6.72
PC.	=	Sta. 606+10.81
PT.	=	Sta. 608+06.29
S/E	=	0.061%

30" Type B
Rock Channel
Protection with Filter.
(See General Notes)

PLAN

NOTE:

Channel Work, including Rock Protection & Embankment west of Channel to be constructed under Project JAC-35-849 Prior to this Project.



TRAFFIC DATA

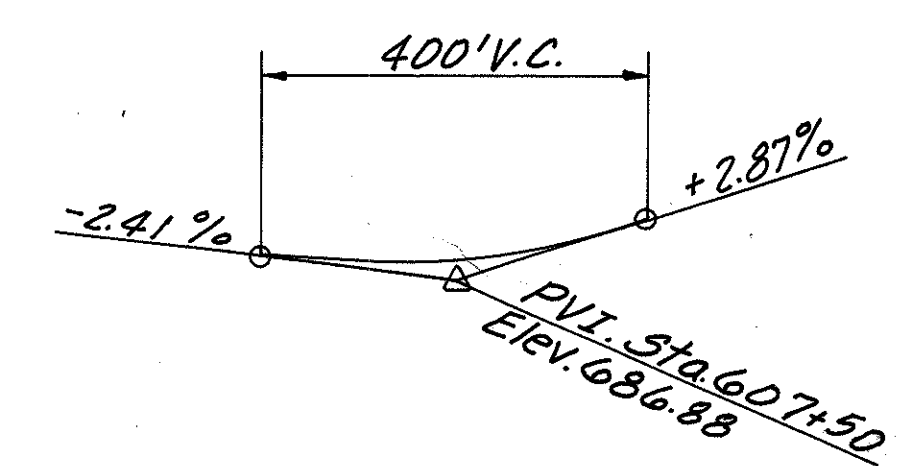
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11% Trucks	= 90

DRAINAGE DATA

Drainage Area	= 5.39 Sq. Mi.
Q50	= 1,591 CFS
Velocity (Avg.)	= 5.8 FPS
Depth of Flow	= 5.4 Ft.
Q25	= 1,282 CFS
Q100	= 1,940 CFS

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with Composite Concrete Deck.
SPANS: 66'-8", 83'-4", 87'-3" & 69'-9"
ROADWAY: 28'-0" F/F Concrete Parapets
LOADING: H320-44 (Case II) and Alternate Military Loading.
SKEW: 39°-47'-49" Right Forward
ALIGNMENT: Tangent
WEARING SURFACE: Monolithic Concrete
APPROACH SLAB: AS-1-81 (25' Long)



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SITE PLAN
BRIDGE NO. JAC-35-1152
RAMP "D" OVER C&O R.R. & HORSE CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
WBS	JEB	-	JET	WBS	5/6/86	