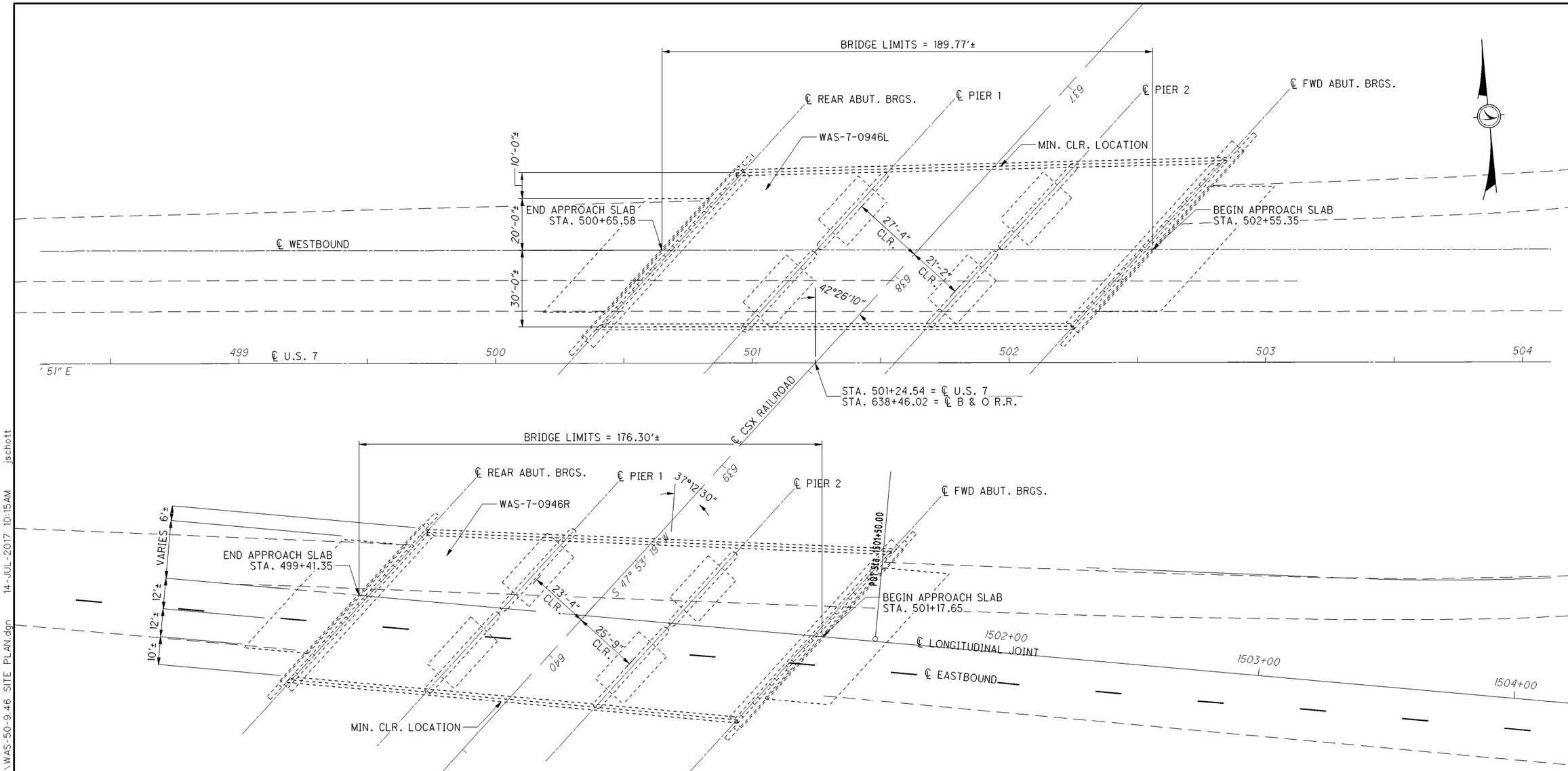

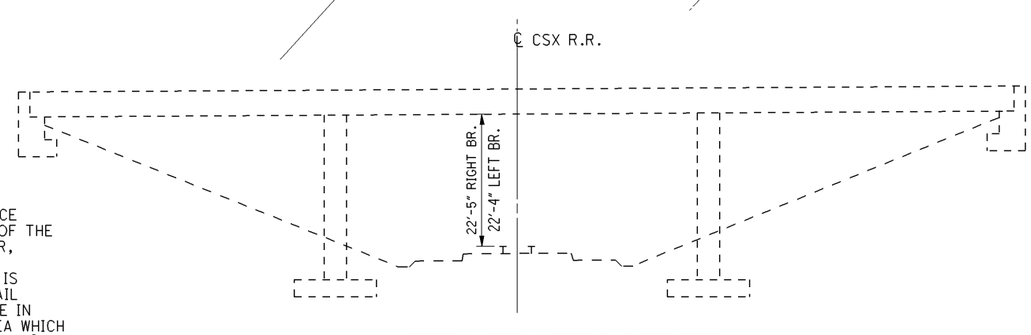

MINIMUM ACTUAL VERTICAL CLEARANCES

NOT TO SCALE

NOTE:
- STANDARD HORIZONTAL CLEARANCE IS MEASURED FROM CENTERLINE OF THE TRACK TO THE FACE OF THE PIER, PERPENDICULAR TO THE TRACK.
- STANDARD VERTICAL CLEARANCE IS MEASURED FROM TOP OF HIGH RAIL TO LOWEST POINT ON STRUCTURE IN THE HORIZONTAL CLEARANCE AREA WHICH EXTENDS 6'-0" EITHER SIDE OF THE ℄ TRACK.
- DURING THE PERFORMANCE OF THE WORK, TEMPORARY CONSTRUCTION CLEARANCES OF 22'-0" VERTICALLY ABOVE THE TOP OF RAIL AND 13'-0" HORIZONTALLY FROM THE CENTERLINE OF A TRACK SHALL BE MAINTAINED TO ANY FORM WORK, FALSE WORK OR OTHER TEMPORARY CONSTRUCTION.

EXISTING STRUCTURE

WAS-7-0946L	WAS-7-0946R
TYPE: STEEL BEAM - CONTINOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE SPAN: 56'-6", 70'-8", 56'-6: c/c BEARINGS ROADAWAY: 40'-0" f/f PARAPETS PLUS TAPER SKEW: 42°26'10" LEFT FORWARD LOADING: CF 2000 (57) WEARING SURFACE: 1" MONOLITHIC CONCRETE APPROACH SLABS: AS-1-54 (25' LONG) ALIGNMENT: TANGENT	TYPE: STEEL BEAM - CONTINOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE SPAN: 52'-6", 65'-8", 52'-6: c/c BEARINGS ROADAWAY: 40'-0" f/f PARAPETS PLUS TAPER SKEW: 37°12'30" LEFT FORWARD LOADING: CF 2000 (57) WEARING SURFACE: 1" MONOLITHIC CONCRETE APPROACH SLABS: AS-1-54 (25' LONG) ALIGNMENT: TANGENT

DESIGN AGENCY
PLANNING AND ENGINEERING DEPT.
DISTRICT 10
MARIETTA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
JMS	JMS	WAB	4-17
CHECKED	REVISED	STRUCTURE FILE NUMBER 8401400 L 8401500 R	

SITE PLAN

Bridge No. Was-7-0946 L & R
Over CSX Railroad

WAS-7-9.76 L&R AND VARIOUS
PID No. 84164

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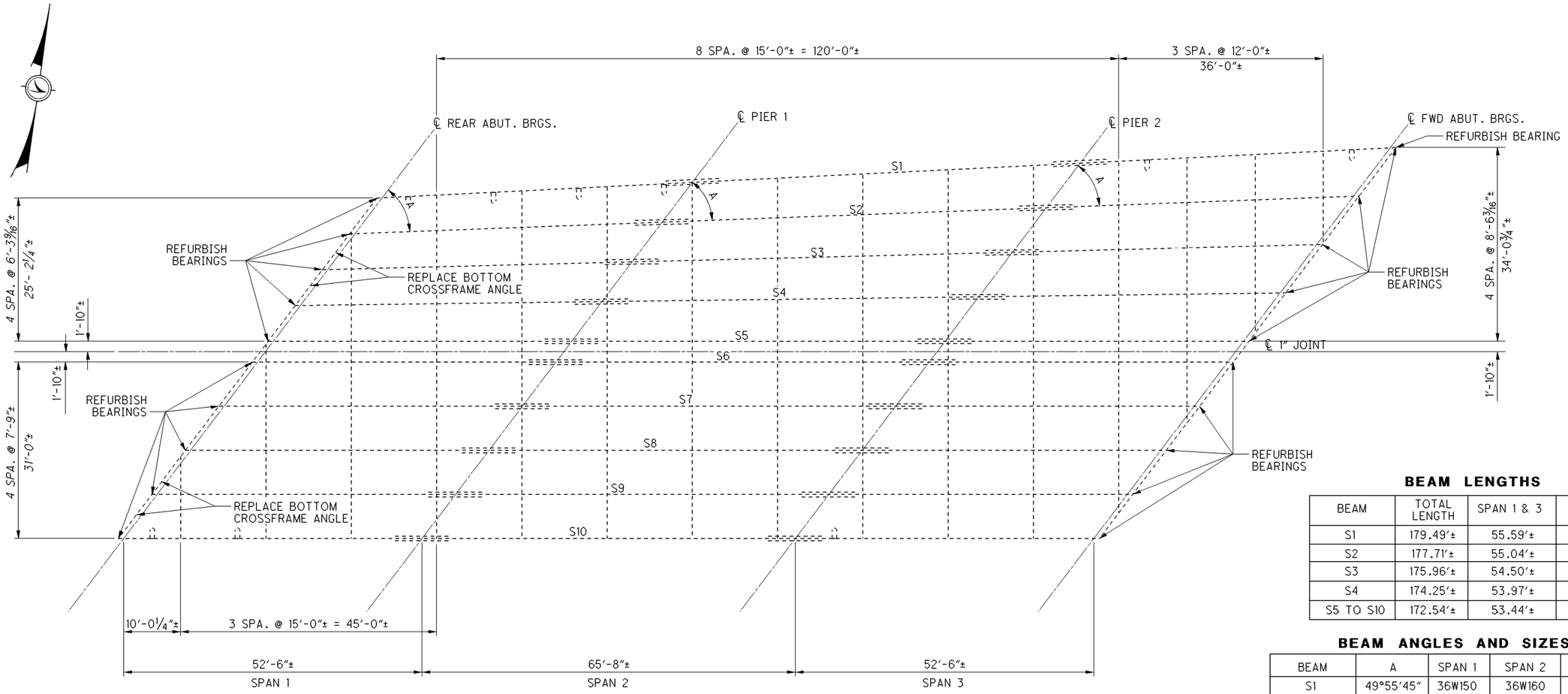


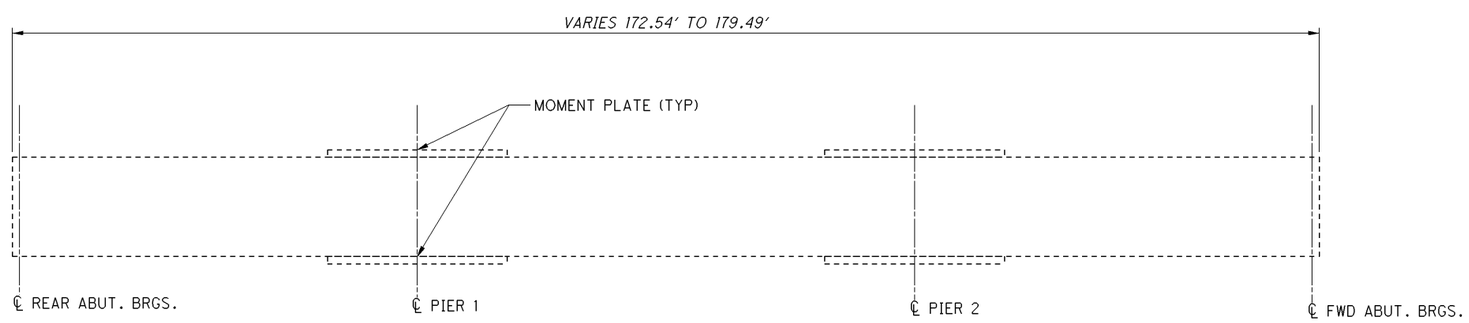
FRAMING PLAN

BEAM LENGTHS

BEAM	TOTAL LENGTH	SPAN 1 & 3	SPAN 2
S1	179.49'±	55.59'±	68.31'±
S2	177.71'±	55.04'±	67.63'±
S3	175.96'±	54.50'±	66.96'±
S4	174.25'±	53.97'±	66.31'±
S5 TO S10	172.54'±	53.44'±	65.66'±

BEAM ANGLES AND SIZES

BEAM	A	SPAN 1	SPAN 2	SPAN 3
S1	49°55'45"	36W150	36W160	36W170
S2	50°37'25"	36W150	36W160	36W170
S3	51°19'55"	36W150	36W160	36W170
S4	52°03'16"	36W150	36W160	36W170
S5 TO S10	52°47'30"	36W160	36W160	36W160



BEAM ELEVATION

DESIGN AGENCY
PLANNING AND ENGINEERING DEPT.
DISTRICT 10
MARIETTA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
JMS	JMS	WAB	4-17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		8401500	

FRAMING PLAN
Bridge No. Was-7-0946R
Over CSX Railroad

WAS-7-9.76 L&R
AND VARIOUS
PID No. 94164

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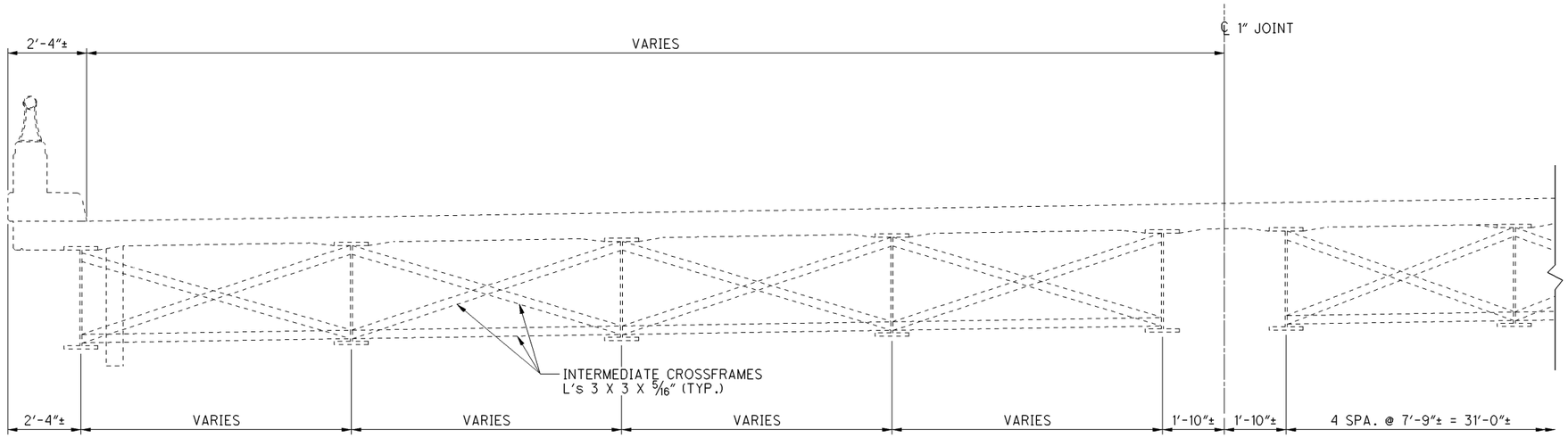
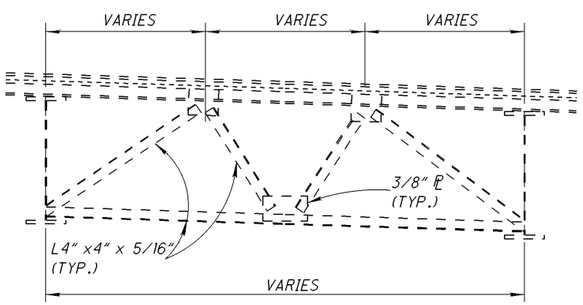
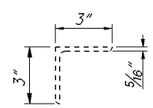


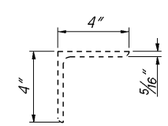
HALF TRANSVERSE



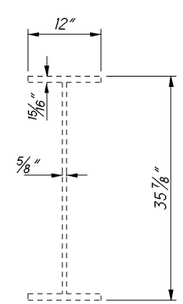
END CROSSFRAMES



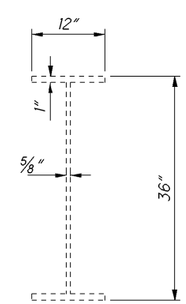
L 3" X 3" X 5/16"



L 4" X 4" X 5/16"



W36X150



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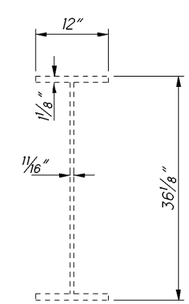

W36X170

WAS-7-9.46 R								
ESTIMATED QUANTITIES (PARTICIPATION 01/NHS/BR)					SFN 8401500			
ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GNRL
513	10200	233	LBS	STRUCTURAL STEEL MEMBER, LEVEL UF			233	
514	00050	19009	SQ. FT.	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			19009	
514	00056	19009	SQ. FT.	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			19009	
514	00060	19009	SQ. FT.	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			19009	
514	00066	19009	SQ. FT.	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			19009	
514	00504	30	MN HR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			30	
514	10000	18	EACH	FINAL INSPECTION REPAIR			18	
516	45305	20	EACH	REFUBISH BEARING DEVICE, AS PER PLAN			20	
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP

CALCULATIONS

W36X150
((1 X 55.59') + (1 X 55.04') + (1 X 54.50') + (1 X 53.97')) X 8.718' = 1,910.11 SQ. FT.

W36X160
((6 X 53.44') + (1 X 68.31') + (1 X 67.63') + (1 X 66.96') + (1 X 66.31') + (6 X 65.66') + (6 X 53.44')) X 8.729'
= 11,386.54 SQ. FT.

W36X170
((1 X 55.59') + (1 X 55.04') + (1 X 54.50') + (1 X 53.97')) X 8.718 = 1,910.11 SQ. FT.

CROSSFRAMES
15,207 SQ. FT. X 25% = 3,802 SQ. FT.

TOTAL = 19,009 SQ. FT.

ITEM 513 - STRUCTURAL STEEL, LEVEL UF

A709 GRADE 50

28.5' X (2.40 SQ. IN./144) = 0.475 CU. FT.
0.475 CU. FT. X 490 LBS/CU. FT. = 233 LBS

DESIGN AGENCY
PLANNING AND ENGINEERING DEPT.
DISTRICT 10
MARIETTA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
JMS	JMS	WAB	4-17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		8401500	

TRANSVERSE SECTION
WAS-7-0946R
Over CSX Railroad

WAS-7-9.76 L&R
AND VARIOUS
PID No. 84164

5/5

16/19

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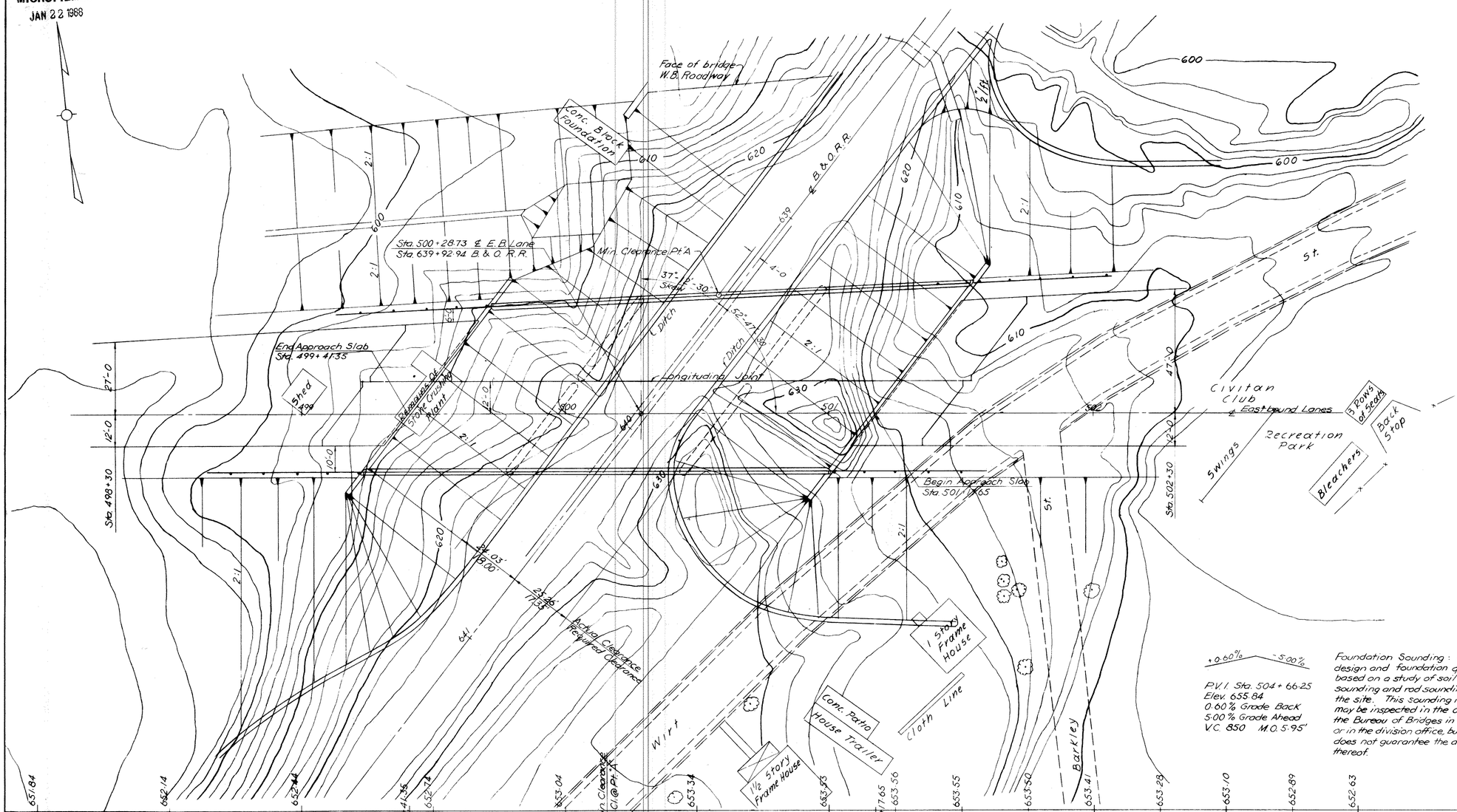
MICROFILMED
JAN 22 1988

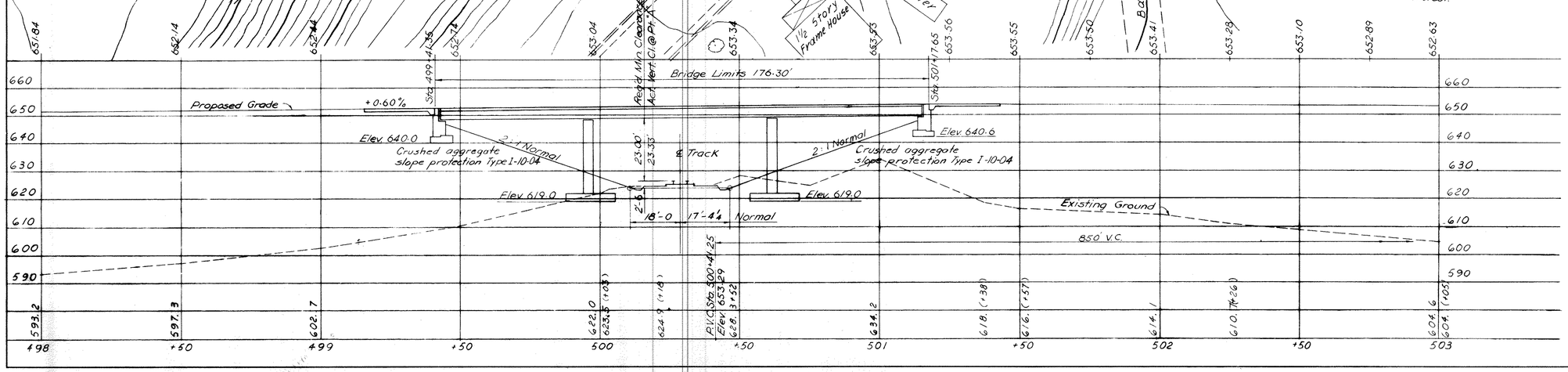
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

578

WAS-50-4.33
WAS-7-11.39



Foundation Sounding: Foundation design and foundation quantities are based on a study of soil sampling sounding and rod sounding made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the division office, but the State does not guarantee the accuracy thereof.



PROPOSED STRUCTURE

Type: Continuous steel beam with reinforced concrete deck and substructure
Spans: 52'-6, 65'-8, 52'-6 c/c bearings
Roadway: 40'-0 f/f parapets plus taper
Load Frequency: CF 2000 (57)
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 Modified (25'-0 long)
Alignment: Tangent
Skew: 37°-12'-30" LF
Traffic:

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

SITE PLAN

BRIDGE NO. WAS-50-0946 R
OVER B&O RR

SCALE 1"=20' STA. 499+41.35
WASHINGTON CO. STA. 501+17.65

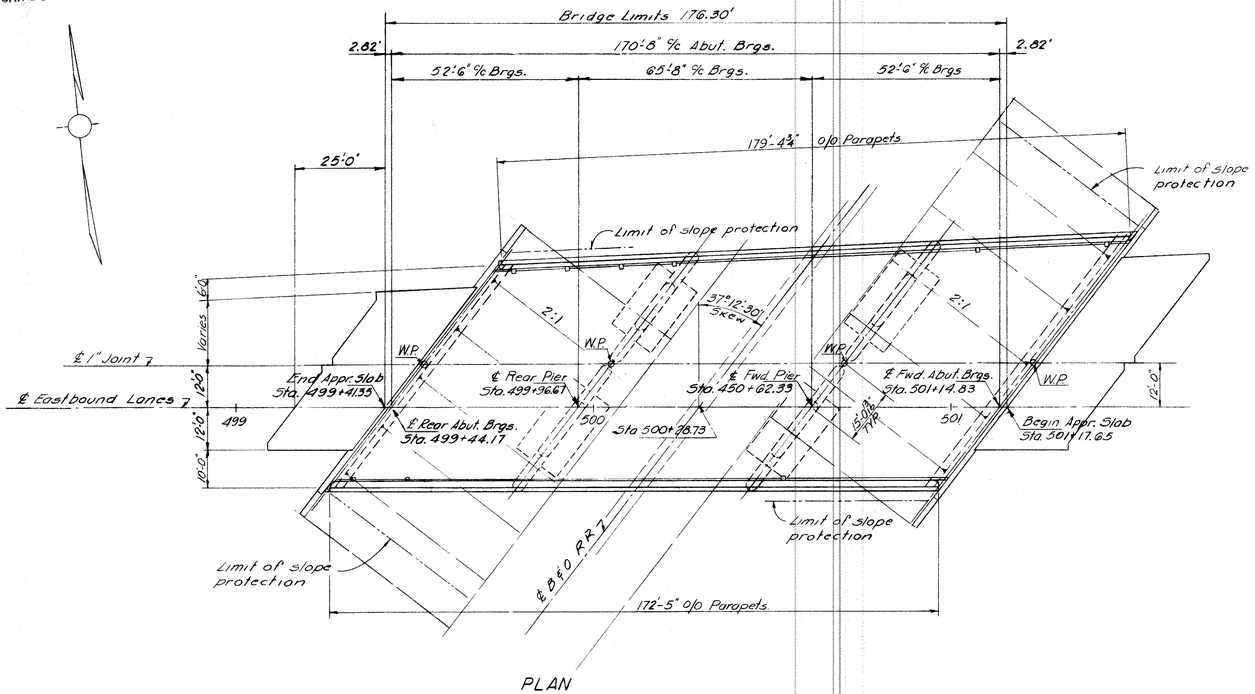
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.L.	L.C.T.	L.C.T.	J.C.L.	RBY	10-2-62	

MICROFILMED
JAN 22 1988

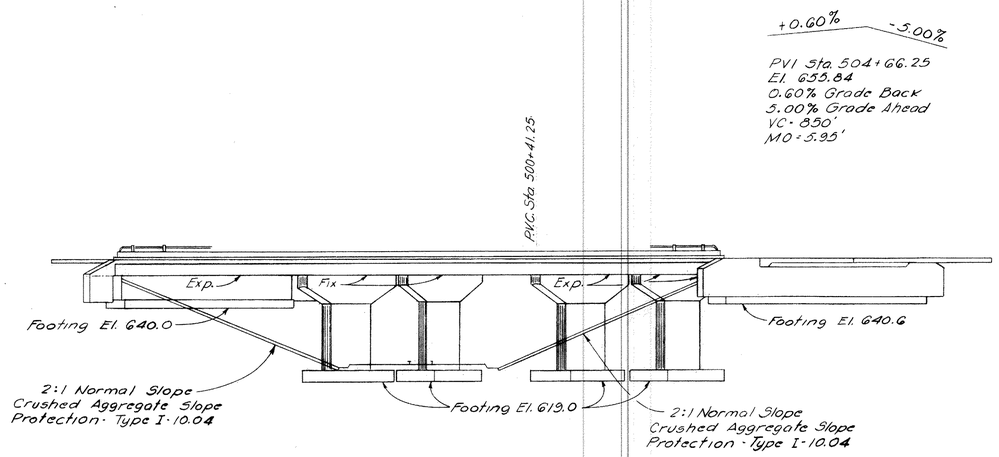
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

579

WAS-50-4.33
WAS-7-11.39



PLAN



ELEVATION

GENERAL NOTES

REFERENCE: Reference shall be made to Standard Drawings AR-1-57 revised 4-2-62 (Type A), CSB-2-56 Sheet Nos. 2 and 3 revised 2-2-59, RB-1-55 revised 2-2-59 and Supplemental Specification S-407 adopted 4-19-62

DESIGN SPECIFICATIONS: This Structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments and piers.

PROCEDURE: The embankment shall be placed and compacted in accordance with the instructions shown on sheet number 17, up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments. The existing railroad trestle shall be removed and new embankment completed in accordance with the instructions shown on sheet number 18. Excavation for the abutments and piers may not be made for a period of 60 days after the completion of the embankments.

FOUNDATION BEARING PRESSURE: Abutments and piers are designed for a maximum bearing pressure of 2.5 tons per square foot.

WELDING of structural steel shall be Class 'A' except as otherwise shown. Welds shown as field welds may, at the option of the contractor, be made in the shop.

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

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

MACHINE FINISH: The portion of concrete bridge deck to the right of the longitudinal joint shall be finished by the use of a finishing machine. That portion of concrete bridge deck to the left of the longitudinal joint may, at the option of the contractor, be finished by the use of a finishing machine.

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

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

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

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

WELDED STUD SHEAR CONNECTORS (4"x¾") shall be placed in pairs at 12 inch centers for the full length of the beams and conform to Supplemental Specification No. S-407, adopted April 19, 1962

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

GENERAL PLAN

BRIDGE NO. WAS-50-0946 R
OVER B&O R R

STA. 499+41.35
STA. 501+17.65

WASHINGTON CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.L.	H.G.	H.G.	J.M.	RBY	10-2-62	

MICROFILMED
JAN 22 1988

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

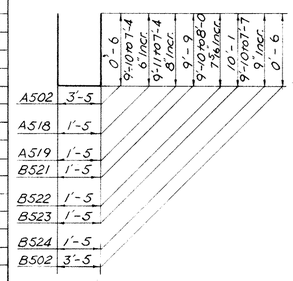
580

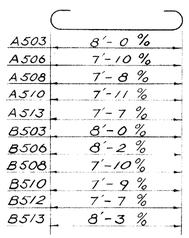
WAS-50-4.33
WAS-7-11.39

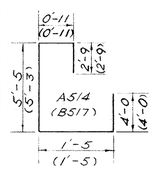
REINFORCING STEEL LIST

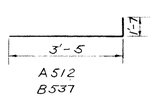
Mark	No.	Length	Weight	Shp
Rear Abutment				
A501	15	28'-8	449	S
A502	73	4'-5	336	B
A503	15	9'-2	143	B
A504	15	6'-3	98	S
A505	77	5'-11	475	S
A506	12	9'-0	113	B
A507	12	6'-1	76	S
A508	18	8'-10	166	B
A509	15	5'-11	93	S
A510	3	9'-1	28	B
A511	3	6'-2	19	S
A512	8	4'-10	40	B
A513	5	8'-9	46	B
A514	39	14'-0	570	B
A515	14	14'-1	206	B
A516	4	10'-1	42	S
A517	7	12'-5	91	B
A518	1 Series of 6	20'-10 to 15'-10	115	B
A519	1 Series of 5	21'-0 to 15'-10	96	B
A520	12	21'-6	269	S
A521	12	18'-9	235	S
A522	10	28'-3	295	S
A523	10	14'-7	152	S
A524	10	22'-6	235	S
A525	7	9'-0	66	S
A526	8	28'-0	234	S
A527	1	6'-3	7	S
A528	1 Series of 4	28'-7 to 22'-1	106	S
A529	1 Series of 3	28'-7 to 24'-3	83	S
A530	1	17'-3	18	S
A531	2	7'-0	15	S
A532	8	27'-4	228	S
A533	1 Series of 4	12'-3 to 17'-6	62	S
A534	1 Series of 3	14'-0 to 17'-6	49	S
A535	1	12'-3	13	S
Forward Abutment				
B501	20	24'-9	516	S
B502	82	4'-5	378	B
B503	15	9'-2	143	B
B504	15	6'-2	97	S
B505	71	5'-11	438	S
B506	9	9'-4	88	B
B507	9	6'-4	60	B

Bending Diagram



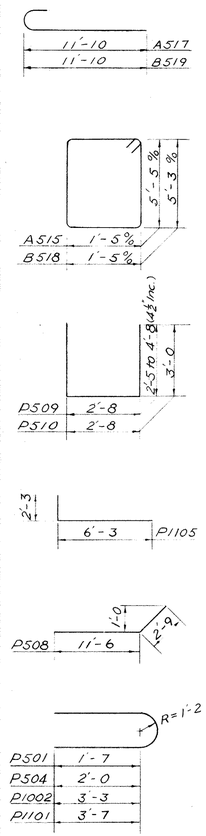






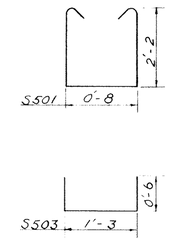
Mark	No.	Length	Weight	Shp
B508	7	9'-0	66	B
B509	7	6'-0	44	S
B510	7	8'-11	63	B
B511	12	23'-9	297	S
B512	8	8'-9	73	B
B513	16	9'-5	157	B
B514	8	5'-9	48	S
B515	16	6'-5	107	S
B516	12	22'-4	208	S
B517	47	13-10	678	B
B518	15	13'-9	215	B
B519	5	12'-5	65	B
B520	2	10'-1	21	S
B521	2	20'-8	43	B
B522	1 Series of 4	20'-10 to 17'-2	79	B
B523	1	21'-4	22	B
B524	1 Series of 4	20'-10 to 16'-4	77	B
B525	10	29'-9	310	S
B526	10	26'-0	271	S
B527	10	13'-4	139	S
B528	10	8'-7	90	S
B529	16	30'-0	501	S
B530	1	13'-8	14	S
B531	1	12'-6	13	S
B532	1 Series of 4	29'-6 to 24'-9	113	S
B533	1 Series of 3	29'-6 to 26'-4	87	S
B534	1	16'-9	17	S
B535	1 Series of 4	22'-3 to 17'-0	78	S
B536	1 Series of 3	22'-3 to 18'-9	64	S
B537	8	4'-10	40	S
B538	2	5'-0	10	S
B539	2	6'-0	13	S
Piers				
P501	80	7'-1	591	B
P502	20	11'-0	230	S
P503	8	3'-2	26	S
P504	16	7'-7	127	B
P505	4	19'-3	80	S
P506	2	27'-6	57	S
P507	2	14'-0	29	S
P508	16	14'-5	241	B
P509	4 Series of 44	2'-5 to 4'-8	650	B
P510	45	8'-5	395	B

Bending Diagram



Mark	No.	Length	Weight	Shp
P511	6	32'-0	200	S
P512	6	18'-0	113	S
P513	12	20'-6	257	S
P514	40	15'-0	626	S
P515	20	15'-4	320	S
P601	24	21'-8	781	S
P602	49	24'-8	1815	S
P603	24	25'-8	925	S
P701	44	14'-2	1274	S
P702	152	13'-8	4246	S
P801	84	26'-3	5887	S
P802	84	15'-0	3364	S
P901	22	15'-0	1122	S
P902	22	26'-0	1945	S
P1001	20	22'-7	1944	S
P1002	6	10'-1	260	B
P1003	10	22'-10	983	S
P1101	2	10'-9	114	B
P1102	20	20'-8	2196	S
P1103	20	22'-7	2400	S
P1104	10	22'-10	1213	S
P1105	212	8'-2	9199	B
Superstructure				
S501	255	5'-7	1485	B
S502	241	1'-9	440	S
S503	482	2'-3	1131	B
S601	441	26'-4	17442	S
S602	497	27'-6	20529	S
S603	112	26'-0	4374	S
S604	1 Series of 225	28'-9 to 36'-3	10983	S
S605	1 Series of 24	27'-11 to 8'-0	647	S
S606	38	15'-0	856	S
S607	2	19'-3	58	S
S608	1 Series of 32	35'-6 to 11'-6	1130	S
S609	2	25'-0	75	S
S610	219	34'-8	11403	S
S611	1 Series of 26	34'-3 to 12'-6	913	S
S612	4	23'-0	138	S
S613	15	17'-0	383	S

Bending Diagram



Mark	No.	Length	Weight	Shp
S614	1 Series of 29	34'-3 to 10'-0	964	S
S701	1 Series of 225	28'-9 to 36'-3	14,947	S
S702	1 Series of 24	27'-11 to 8'-0	881	S
S703	38	15'-0	1,165	S
S704	2	19'-6	80	S
S705	1 Series of 32	35'-6 to 11'-6	1,537	S
S706	2	25'-0	102	S
S707	219	34'-8	15,518	S
S708	1 Series of 26	34'-3 to 12'-6	1,242	S
S709	4	23'-0	188	S
S710	15	17'-0	521	S
S711	1 Series of 29	34'-3 to 10'-0	1,311	S
S801	491	4'-3	5572	S
Replacement Bars				
RE501	1	5'-7		S
RE601	4	5'-11		S
RE701	3	6'-3		S
RE801	1	6'-6		S
RE901	1	6'-10		S
RE1001	1	7'-3		S
RE1101	1	7'-7		S
Railing				
R501	8	9'-9	*	
R502	48	17'-3	*	
R503	8	9'-3	*	
R504	44	16'-9	*	

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A701 is a No. 7 size bar and A1101 is a No. 11 size.

* Included with railing for payment

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstructure	Rear Abutment	Rear Pier	Forward Pier	Forward Abut.	General
E-2		Lump Sum	Cofferdams, Cribs and Sheeting						Lump Sum
E-2	976	Cu. Yds	Unclassified Excavation		194	248	300	234	
I-10	1,195	Sq. Yds.	Crushed aggregate slope protection (Type I-10.04)		565			630	
S-1	153	Cu. Yds.	Class "E" Concrete - Pier footings			74	79		
S-1	351	Cu. Yds.	Class "C" Concrete - Superstructure	351					
S-1	261	Cu. Yds.	Class "E" Concrete - Piers above footings			123	138		
S-1	306	Cu. Yds.	Class "E" Concrete - Abutments		143			163	
S-3	164	Lin. ft.	Waterproofing, Premolded Sealing Strip, as per plan	145	9			10	
S-4	170,828	Lbs.	Reinforcing Steel	116,015	5269	21,434	22,367	5,743	
S-7	343,908	Lbs.	Structural Steel	343,908					
S-8	343,908	Lbs.	Field painting of Structural Steel	343,908					
S-9	62	Sq. ft.	1" Preformed Expansion Joint Filler		31			31	
S-14	351.81	Lin. ft.	Railing (aluminum rail, supports and concrete parapet)	351.81					
S-29	9	Each	Scuppers	9					
S-29	70	Cu. Yds.	Porous backfill		34			36	
S-407	3526*	Each	Welded Stud Shear Connectors	3526					
Special	351	Each	Water-reducing, Set-retarding admixture †	351					
			† See Proposal Note * No Fed. Participation						

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

REINFORCING STEEL LIST
ESTIMATED QUANTITIES
BRIDGE NO. WAS-50-0946 R
OVER B&O RR
STA. 499+41.35
WASHINGTON CO. STA. 501+17.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.L.	L.C.T.	L.C.T.	C.P.T.	RBY	10-2-62	1-14-63 R.E.C.

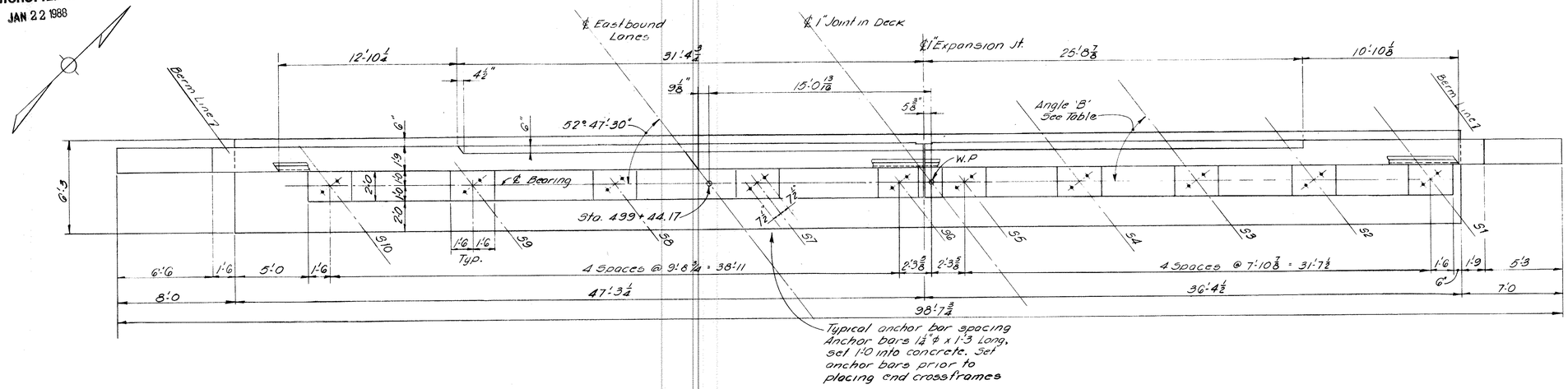
NO. P8163 K.&E.CO.

MICROFILMED
JAN 22 1988

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

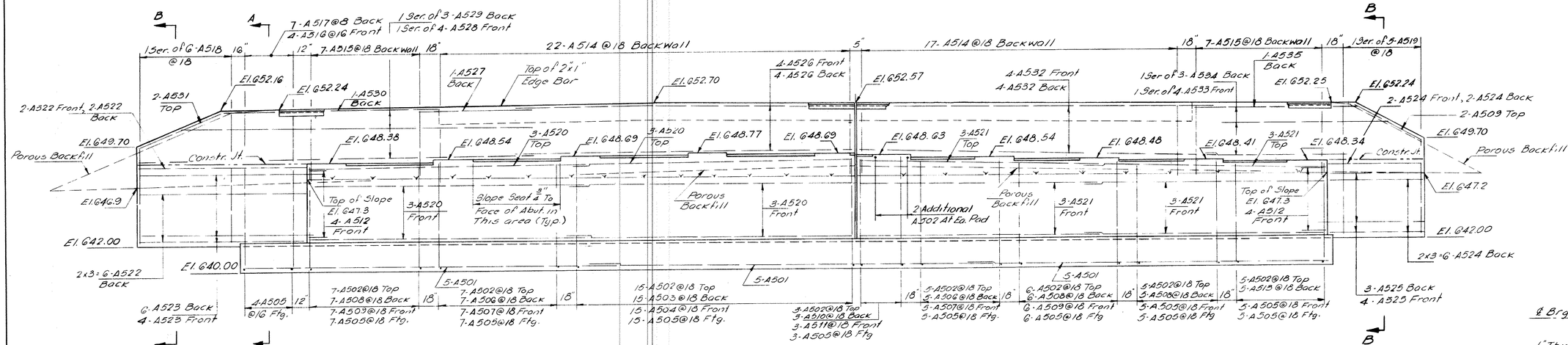
581

WAS-50-4.33
WAS-7-11.39

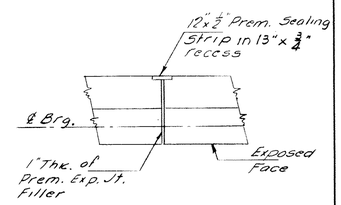


PLAN

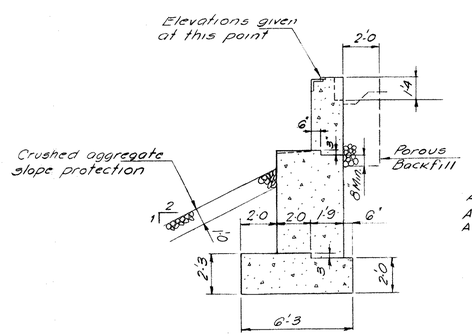
Beam	Angle 'B'
S1	49° 55' 45"
S2	50° 37' 25"
S3	51° 19' 55"
S4	52° 03' 16"
S5 TO S10	52° 47' 30"



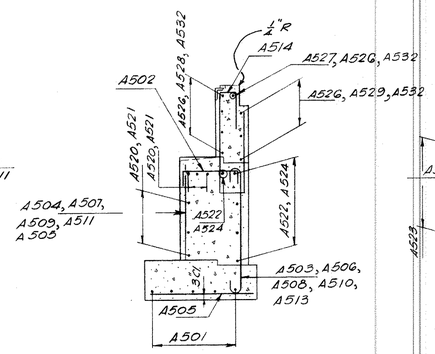
ELEVATION



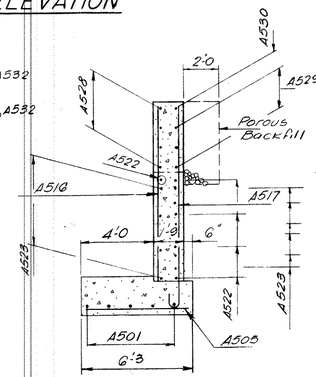
1" EXP. JOINT DETAIL



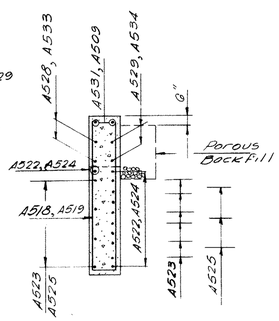
ABUTMENT SECTION MASONRY



ABUTMENT SECTION REINFORCING



SECTION A-A



SECTION B-B

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcement steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bar holes.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for the construction of the abutment shall be considered as paid for in the bid price per cu. yd. for porous backfill.

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

REAR ABUTMENT

BRIDGE NO. WAS-50-0946 R
OVER B O RR

STA. 499+41.35
STA. 501+17.65

WASHINGTON CO.

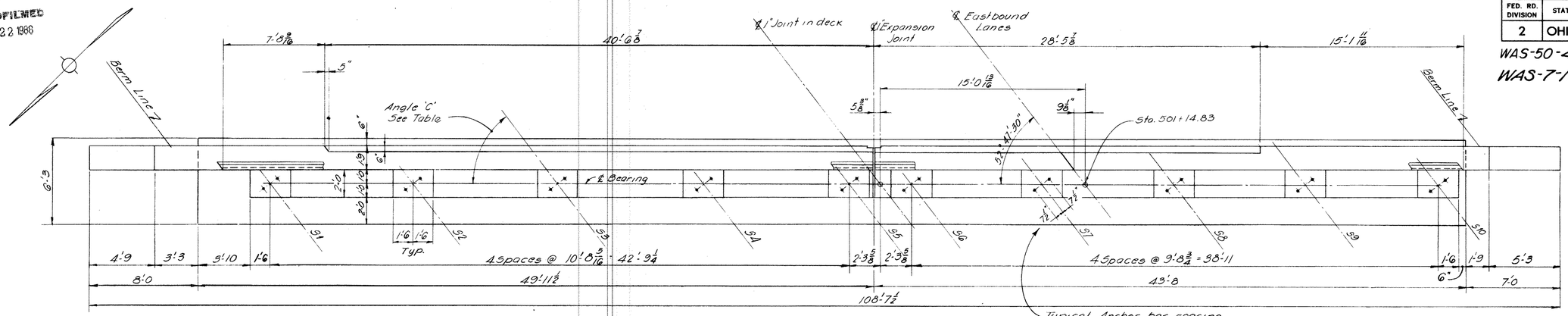
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.H.W.	H.G.	H.G.	C.H.W.	FBY	10-2-62	

MICROFILMED
JAN 22 1988

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

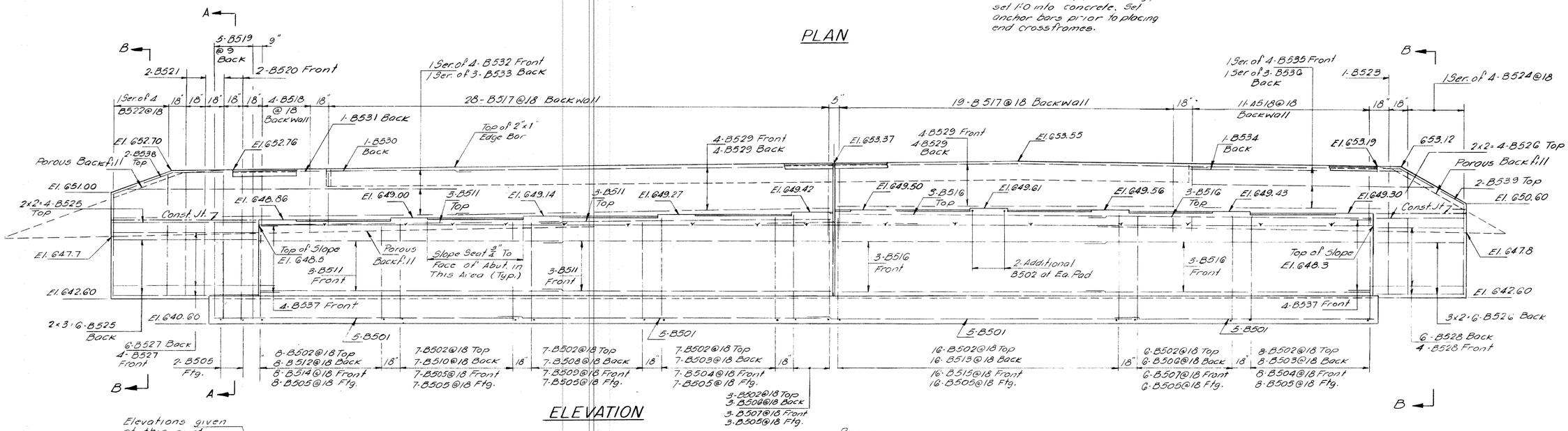
582

WAS-50-4.33
WAS-7-11.39

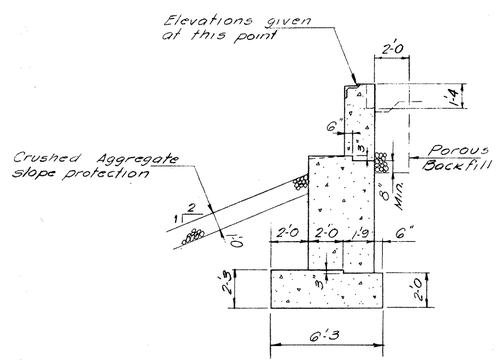


PLAN

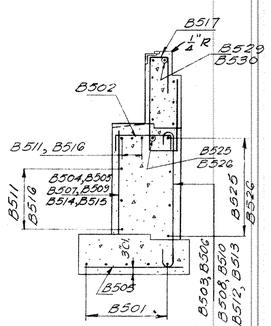
Beam	Angle 'C'
S1	49°-55'-45"
S2	50°-37'-25"
S3	51°-19'-55"
S4	52°-03'-16"
S5 To S10	52°-47'-30"



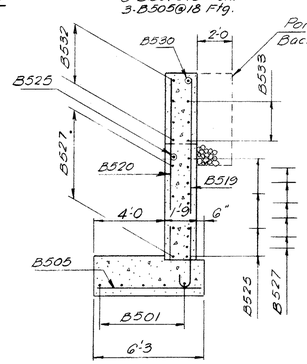
ELEVATION



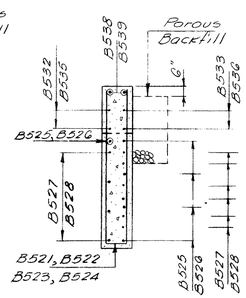
ABUTMENT SECTION
MASONRY



ABUTMENT SECTION
REINFORCING



SECTION A-A



SECTION B-B

For NOTES see Sht No. 581
For Expansion Jt. Detail see Sht No. 581

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

FORWARD ABUTMENT
BRIDGE NO. WAS-50-0946 R
OVER B&O RR
STA. 499+41.35
STA. 501+17.65
WASHINGTON CO.

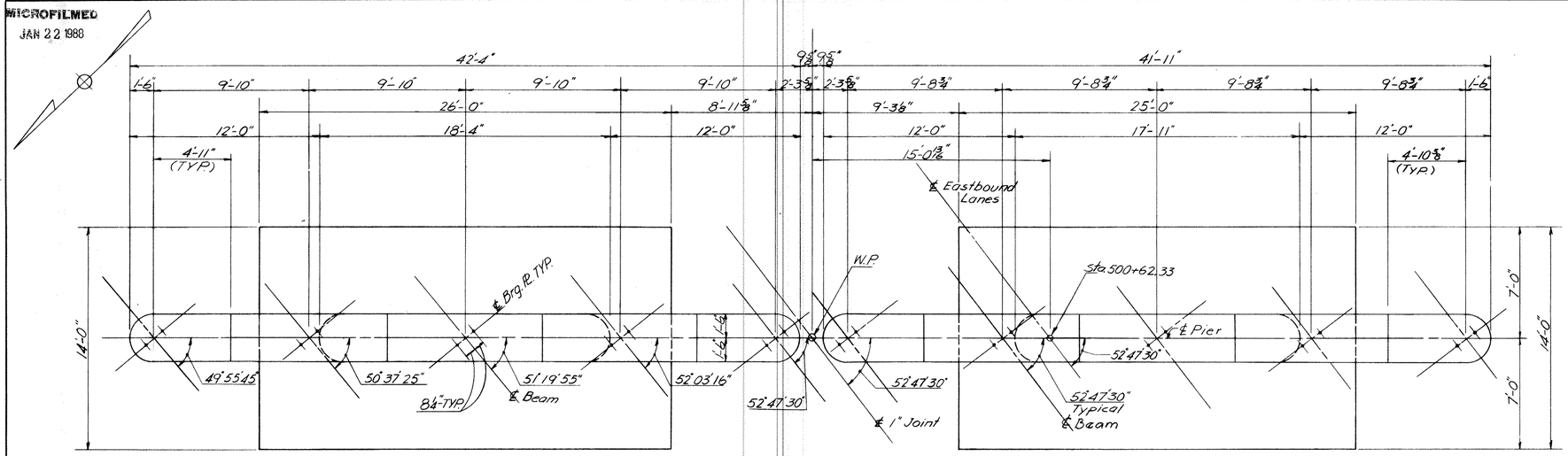
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.H.W.	H.G.	H.G.	C.H.W.	RBY	10-2-62	

MICROFILMED
JAN 22 1988

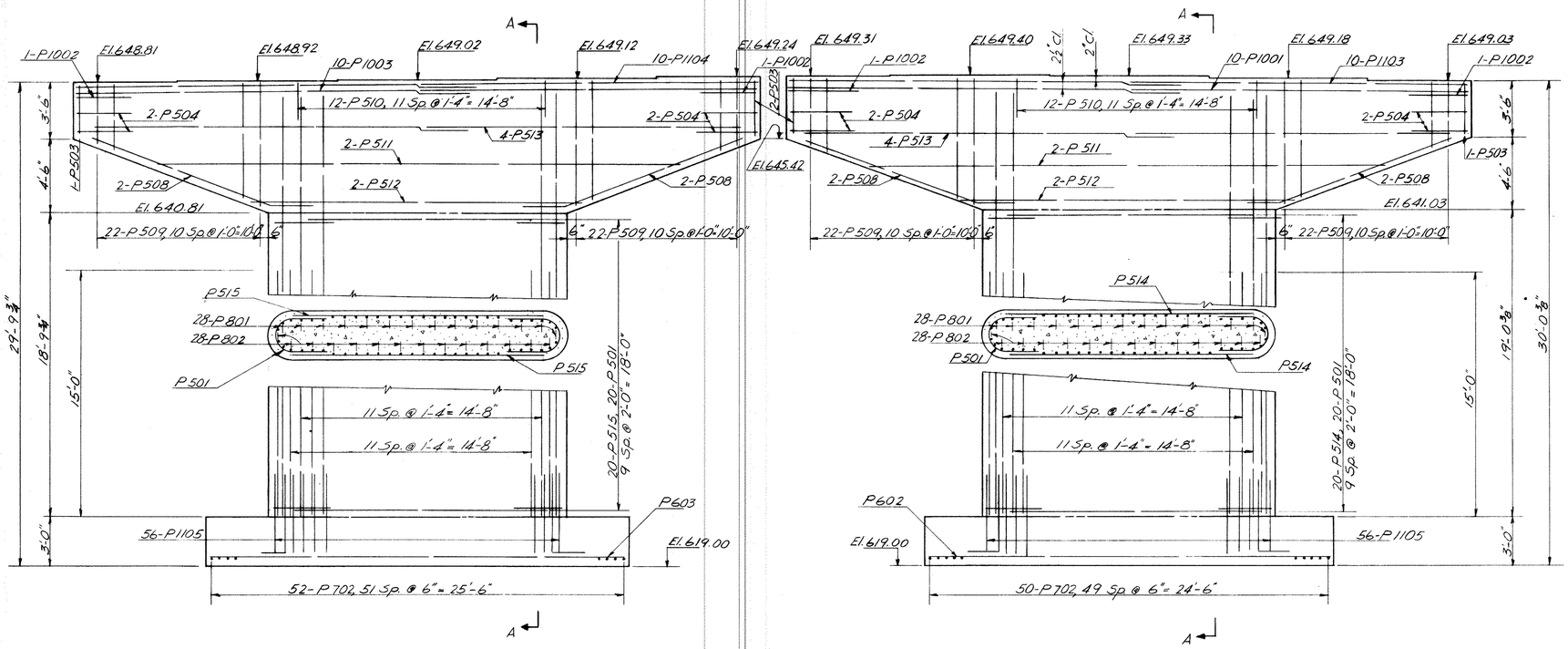
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

583

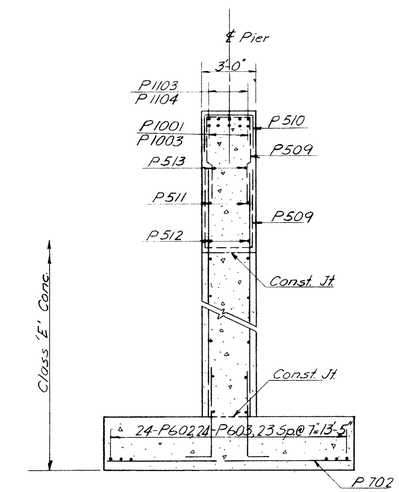
WAS-50-4.33
WAS-7-11.39



PLAN



ELEVATION



SECTION A-A

NOTE:
Reinforcing Steel in the Bridge Seats shall be so placed that it will not interfere with Anchor Bars.

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

FORWARD PIER
BRIDGE NO. WAS-50-0946 R
OVER B&O RR

STA. 499+41.35
STA. 501+17.65

WASHINGTON CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.P.T.	A.B.	A.B.	C.P.T.	RBY	10-2-62	

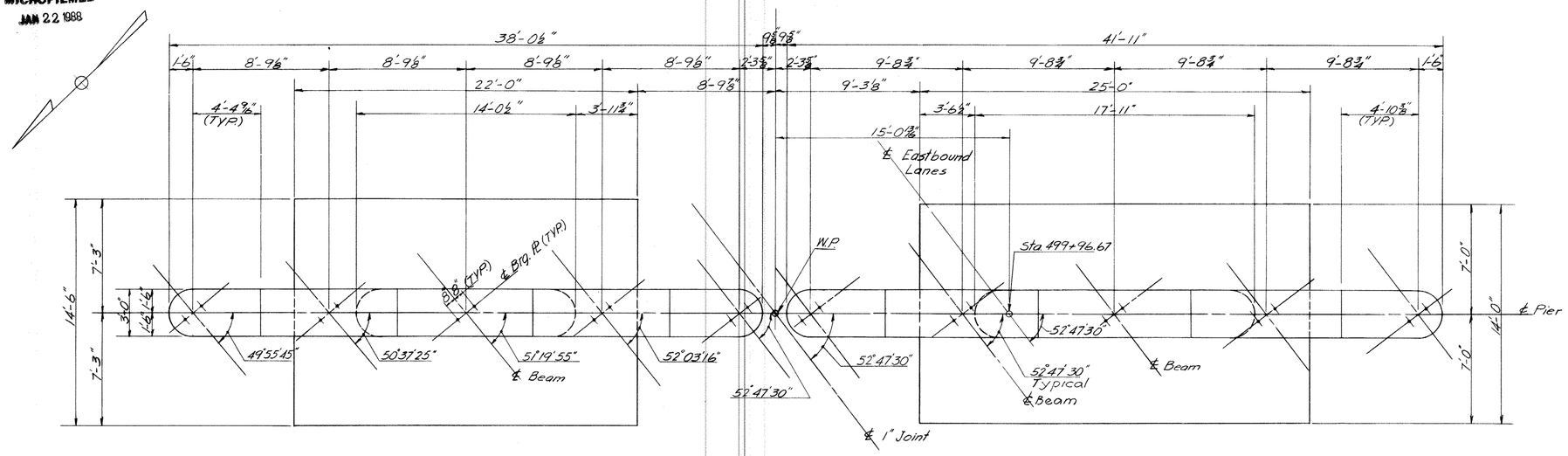
NO. P8163 K & E CO.

MICROFILMED
JAN 22 1988

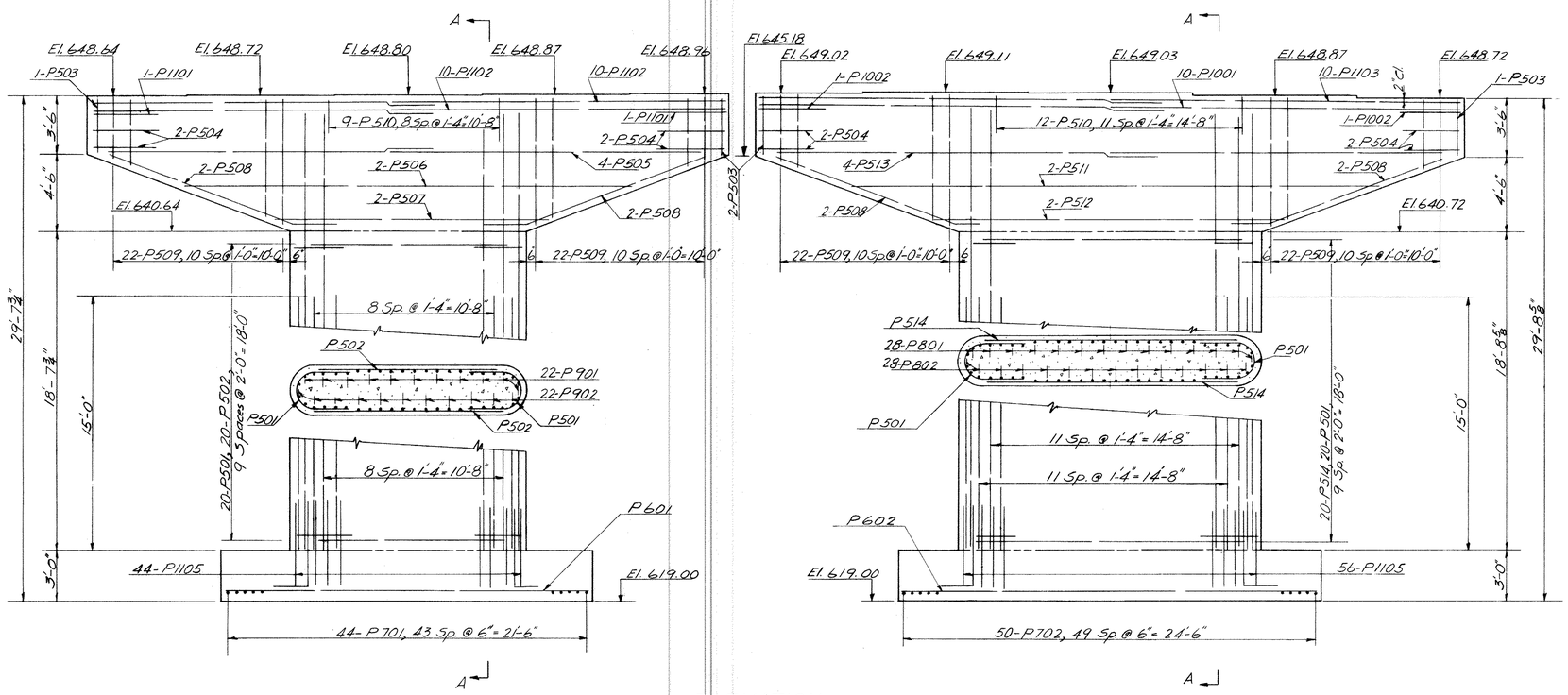
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

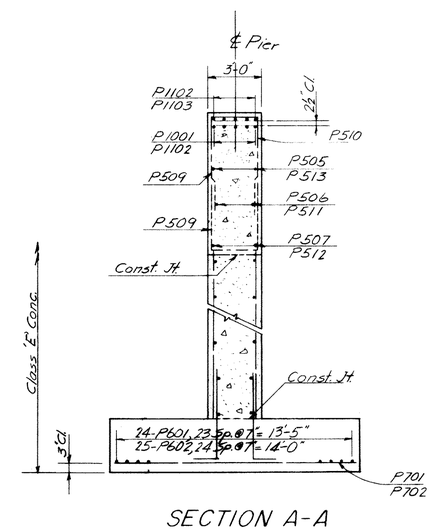
584

WAS-50-4.33
WAS-7-11.39



NOTE:
Reinforcing Steel in Bridge Seats shall be so placed that it will not interfere with Anchor Bars.





YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

REAR PIER
BRIDGE NO. WAS-50-0946 R
OVER B&O RR

WASHINGTON CO.
STA. 499+41.35
STA. 501+17.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.P.T.	A.B.	A.B.	C.P.T.	RBY	10-2-62	

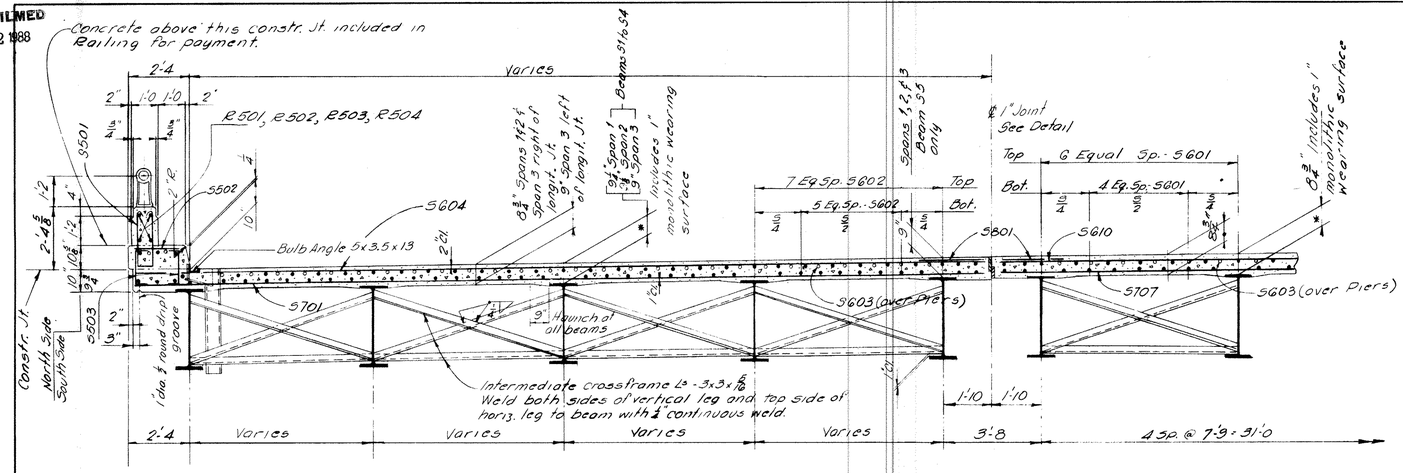
NO. PB193 K&E CO.

MICROFILMED
JAN 22 1988

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

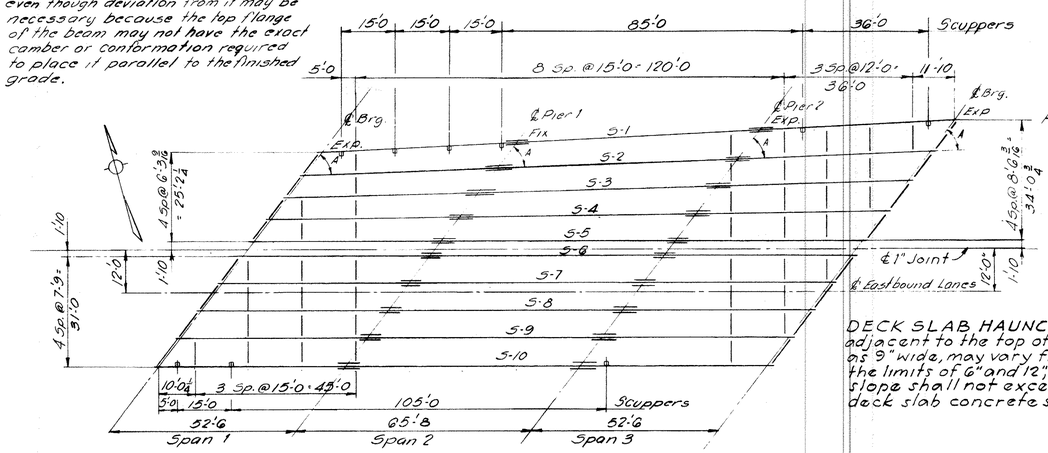
585

WAS-50-4.33
WAS-7-11.39



HALF TRANSVERSE SECTION

* This is a 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.



STEEL FRAMING PLAN

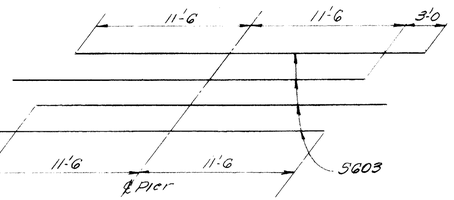
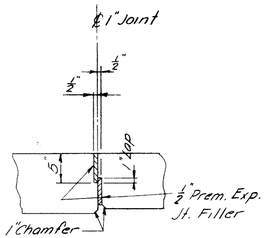
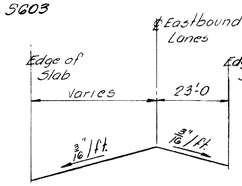


DIAGRAM OF S603 BARS OVER PIERS



1" LONGITUDINAL JOINT DETAIL



BRIDGE ROADWAY CROWN

DEFLECTIONS & CAMBERS

SPAN 1	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Deflection due to weight of steel	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Deflection due to remaining dead load	.24	.20	.20	.19	.13	.16	.21	.21	.21	.20
Convexity required for Vertical Curve	–	–	–	–	–	–	–	–	–	–
Sum of deflection and convexity	.28	.24	.24	.23	.17	.20	.25	.25	.25	.24
Required Camber	0	0	0	0	0	0	0	0	0	0

SPAN 2	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Deflection due to Weight of Steel	.06	.06	.05	.05	.05	.05	.05	.05	.05	.05
Deflection due to remaining dead load	.31	.31	.30	.28	.20	.21	.28	.28	.28	.27
Convexity required for Vertical Curve	.43	.39	.33	.27	.20	.16	.10	.06	.02	–
Sum of deflection and convexity	.80	.76	.68	.60	.45	.42	.43	.39	.35	.32
Required Camber	13/16	3/4	3/4	3/4	3/4	0	0	0	0	0

SPAN 3	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Deflection due to Weight of Steel	.05	.05	.04	.04	.04	.04	.04	.04	.04	.04
Deflection due to remaining dead load	.24	.24	.23	.23	.17	.16	.21	.21	.21	.20
Convexity required for Vertical Curve	.29	.29	.28	.28	.27	.27	.27	.27	.27	.27
Sum of deflection and convexity	.58	.58	.55	.55	.48	.47	.52	.52	.52	.51
Required Camber	0	0	0	0	0	0	0	0	0	0

Dimensions shown in above tabulation are in inches.
Place mill camber up where required camber is 0.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.

CONTINUOUS BEAM SPLICES: If beams having the same nominal depth differ by more than ⅛", the depth of the smaller depth beam shall be increased by splitting the web longitudinally at a distance of 1½" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/16" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush

BEAM ANGLES & SIZES

Beam	A	Span 1	Span 2	Span 3
S-1	49°55'45"	36WF150	36WF160	36WF170
S-2	50°37'25"	36WF150	36WF160	36WF170
S-3	51°19'55"	36WF150	36WF160	36WF170
S-4	52°03'16"	36WF150	36WF160	36WF170
S-5 to S-10	52°47'30"	36WF160	36WF160	36WF160

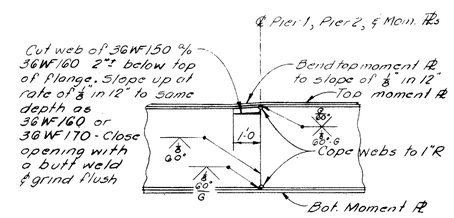
MOMENT PLATES

Beam	Pier 1		Pier 2	
	Top - 10½ x 7/16	Bot. - 13½ x ½	Top - 10½ x 7/16	Bot. 13½ x 9/16
S-1 & S-2	26'-10 Lg.		32'-0 Lg.	
S-3	26'-2 Lg		31'-4 Lg.	
S-4	25'-6 Lg		30'-8 Lg	
S-5 to S-10	25'-6 Lg		25'-6 Lg	

BEAM LENGTHS

Beam	Length - ℄ brg to ℄ brg	Spans 1 & 3 ℄ brg to ℄ Pier	Span 2 ℄ Pier 1 to ℄ Pier 2
S-1	177.613'	54.651'	68.311'
S-2	175.835'	54.104'	67.627'
S-3	174.080'	53.564'	66.952'
S-4	172.355'	53.033'	66.289'
S-5 to S-10	170.667'	52.500'	65.667'

All field splices for beams shall include top and bottom moment plates, as tabulated above. For detail of end cross frames, beam cut-off at backwall, and end dams, see Standard Drawing No. CSB-2-56 Sheet No. 2 revised 2-2-59.
For gutter and scupper details see Standard Drawing No. CSB-2-56 Sheet No. 3 revised 2-2-59.
For aluminum railing posts see Standard Drawing No. AR-1-57 revised 4-2-62
For field splice of beams S-5 to S-10, welding of top & bottom moment plates, and bearing plate and anchor bolt details see Standard Drawing No. CSB-2-56 Sheet No. revised 2-2-59.
BEAM BUTT WELDS in webs of beams may have convex reinforcement in accordance with Sec. S-7.22. Finishing flush by grinding is not required. If differences in depth of beams exceeds ⅛" use field splice similar to that shown for Beams S1 to S4.



FIELD SPLICE BEAMS S-1 TO S-4

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

SUPERSTRUCTURE
BRIDGE NO. WAS-50-0946 R
OVER B&O RR
STA. 499+41.35
WASHINGTON CO. STA. 501+17.65

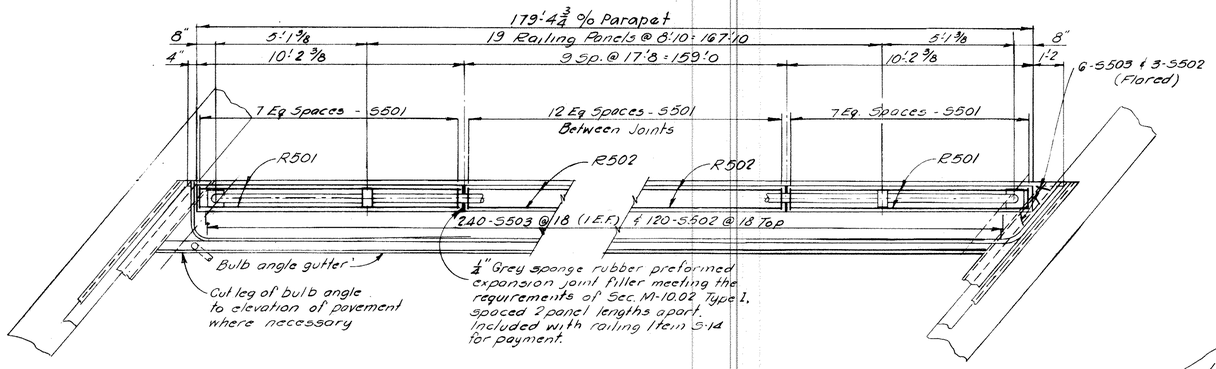
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.H.T.	H.G.	H.G	J.M.	RBY	10-2-62	

MICROFILMED
JAN 22 1998

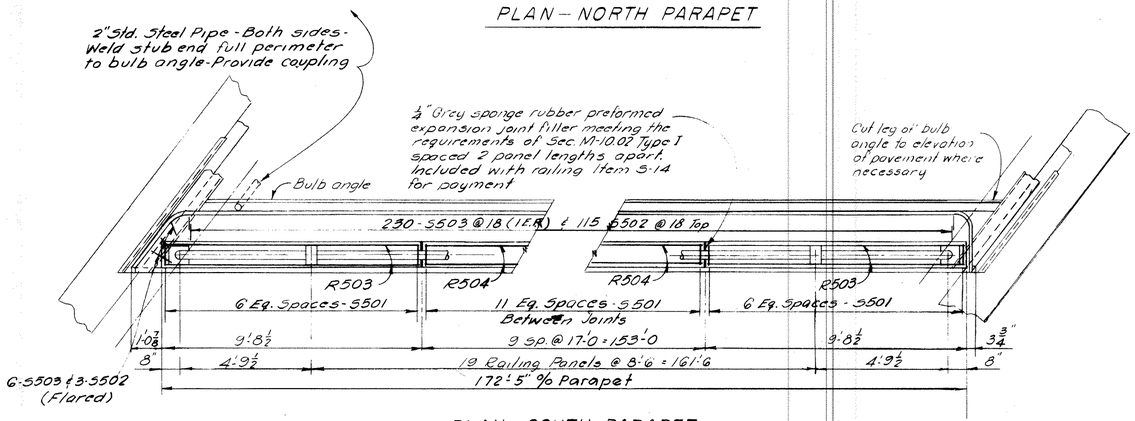
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

586

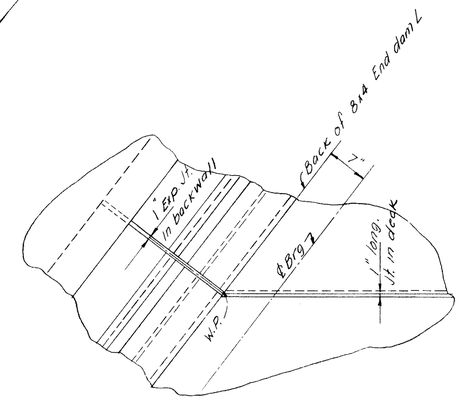
WAS-50-4.33
WAS-7-11.39



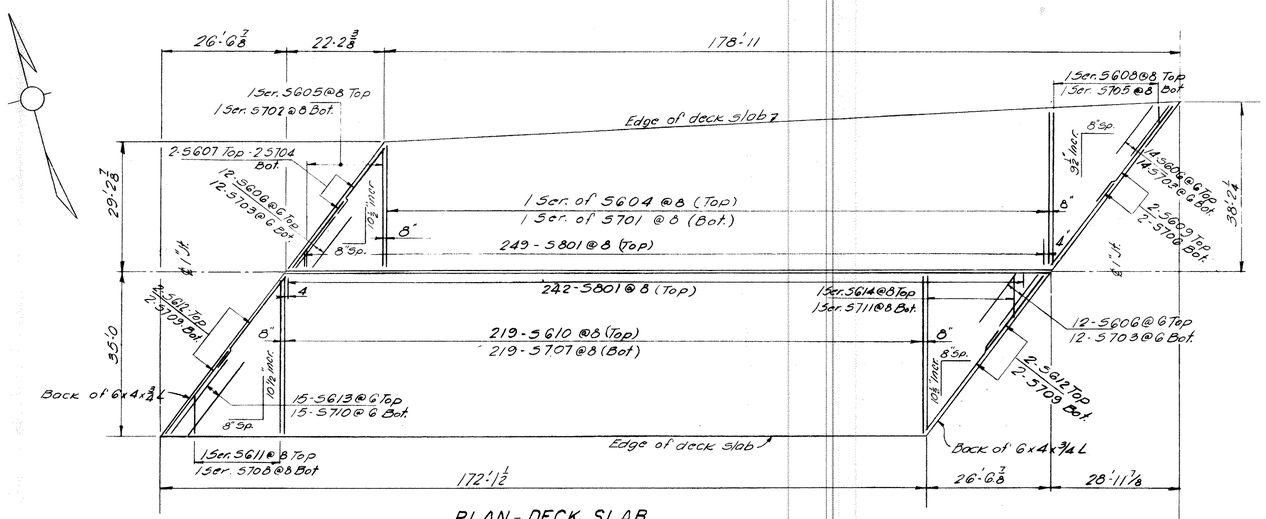
PLAN - NORTH PARAPET



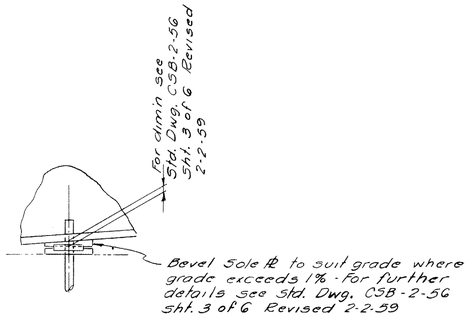
PLAN - SOUTH PARAPET



PART PLAN AT ABUTMENTS



PLAN - DECK SLAB



SOLE PLATE DETAIL

YULE, STICKLEN, JORDAN & McNEE
ENGINEERS
COLUMBUS OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. WAS-50-0946 R
OVER B&O RR

WASHINGTON CO.
STA. 499+41.35
STA. 501+17.65

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.G.	H.G.	H.G.	J.M.	RBY	10-2-62	