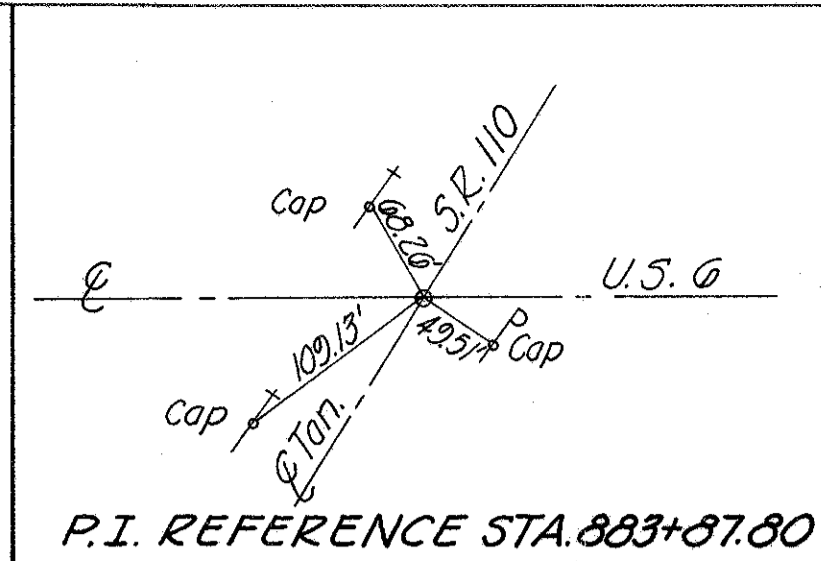


MICROFILMED
APR 17 1986

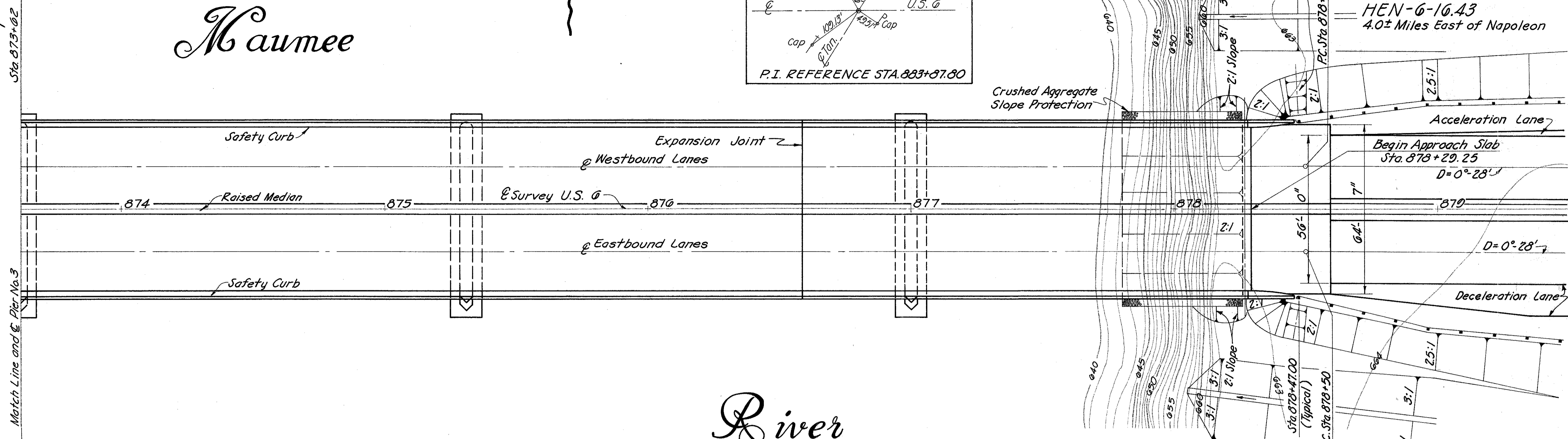
Maumee



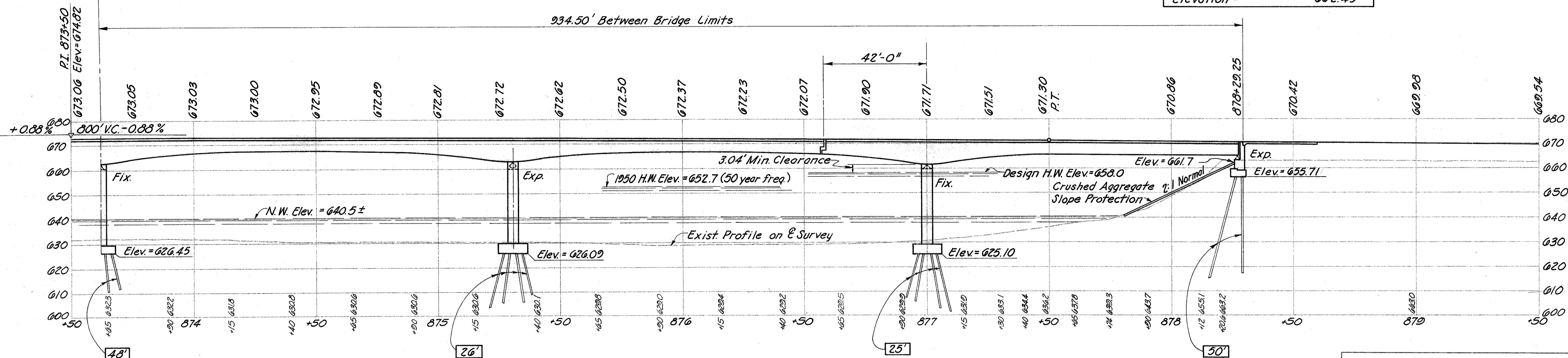
FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

181
231

HENRY COUNTY
HEN-6-16.43
4.0± Miles East of Napoleon



BENCH MARK NO. 73
R.R. Spike in South side of 12" Elm
Sta. 878+15, 4 feet Rt. of E Survey
Elevation = 662.49



All piles 12BP53, estimated average paylengths as indicated by
PROFILE ON CENTERLINE OF SURVEY

T. C. BIEBESHEIMER ENGINEERING COMPANY
CIVIL ENGINEERS AND SURVEYORS TOLEDO, OHIO

SITE PLAN
Bridge No. HEN-6-1679
U.S. 6 over the Maumee River

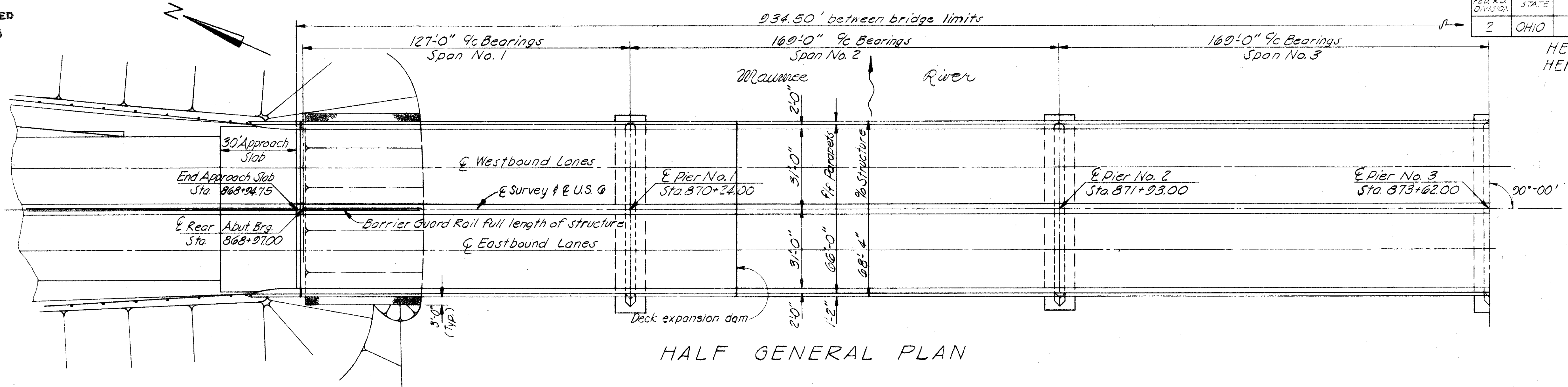
Henry County
Sta. 873+62.00 to Sta. 878+29.25

DESIGNED	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	R.V.R. R.W.F.	J.C.O.	J.M.	12-15-65	

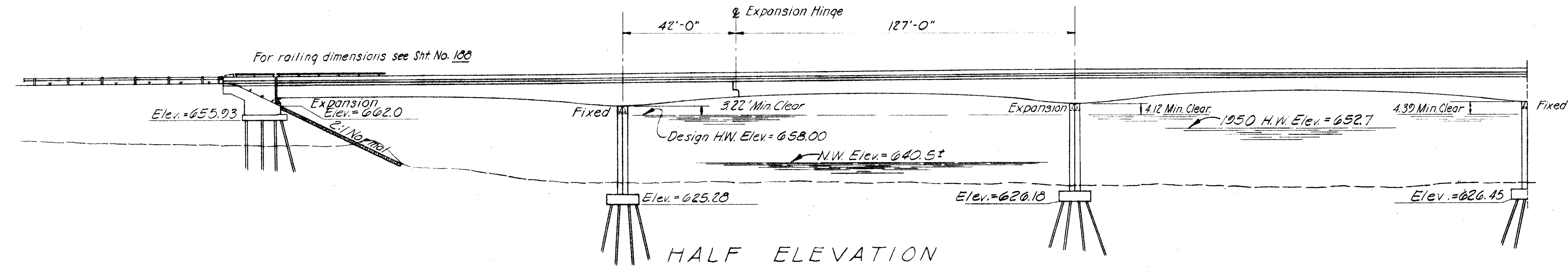
MICROFILMED
APR 17 1986

FED. RD. DIVISION	STATE	PROJECT	182 231
2	OHIO		

HENRY COUNTY
HEN-6-16.43



HALF GENERAL PLAN



HALF ELEVATION

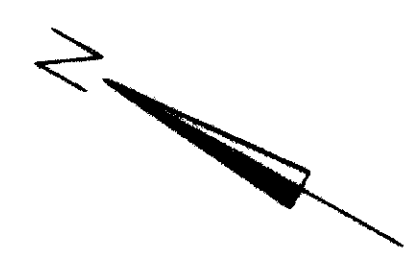
ESTIMATED QUANTITIES						
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPRST. GENERAL
503	1,642	Cu.Yd.	Unclassified Excavation	372	1,270	
503	Lump	Sum	Cofferdams, Cribs and Sheetings			Lump
505	Lump	Sum	First Test Pile			Lump
507	14,852	Lin.Ft.	Steel piles 12 BP53	2,940	11,912	
509	626,053	Lbs.	Reinforcing Steel	22,285	78,269	525,499
511	2,096	Cu.Yd.	Class "C" concrete, Superstructure			2,096
511	1,723	Cu.Yd.	Class "C" concrete, Piers above footings		1,723	
511	667	Cu.Yd.	Class "E" concrete, pier footings		667	
511	299	Cu.Yd.	Class "E" concrete, abutments	299		
512	22	Lin.Ft.	Premolded sealing strip	22		
513	3,353,000	Lbs.	Structural steel			3,353,000
514	3,353,000	Lbs.	Field painting of structural steel			3,353,000
517	1,942.0	Lin.Ft.	Railing, Type 1	78.67		1,863.33
517	934.5	Lin.Ft.	Double faced, deep beam rail with steel posts & bolts			934.50
518	112	Each	Scuppers, including supports			112
518	74	Cu.Yd.	Porous backfill	74		
518	122	Lin.Ft.	6" perforated, helical C.M.P. including specials, 707.06	122		
518	96	Lin.Ft.	6" non-perforated helical C.M.P. 707.06	96		
601	789	Sq.Yd.	Crushed aggregate slope protection			789
808	2,096	Each	Water-reducing, set-retarding admixture			2,096
825	7,732	Sq.Yd.	Concrete surface treatment	76		7,656
828	232	Lin.Ft.	Joint Sealer			232
506	Lump	Sum	First pile test load			Lump
506	1	Each	Subsequent pile test load			1

T.C. BIEBESHEIMER ENGINEERING CO.
CIVIL ENGINEERS AND SURVEYORS
1100 JACKSON STREET TOLEDO, OHIO

GENERAL PLAN & ELEVATION
ESTIMATED QUANTITIES
Bridge No. Hen-6-1679
U.S.G. over Maumee River
Sta. 868+94.75
to Sta. 873+62.00
Henry County

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	R.V.R.	J.C.O.	J.M.	12-15-65		

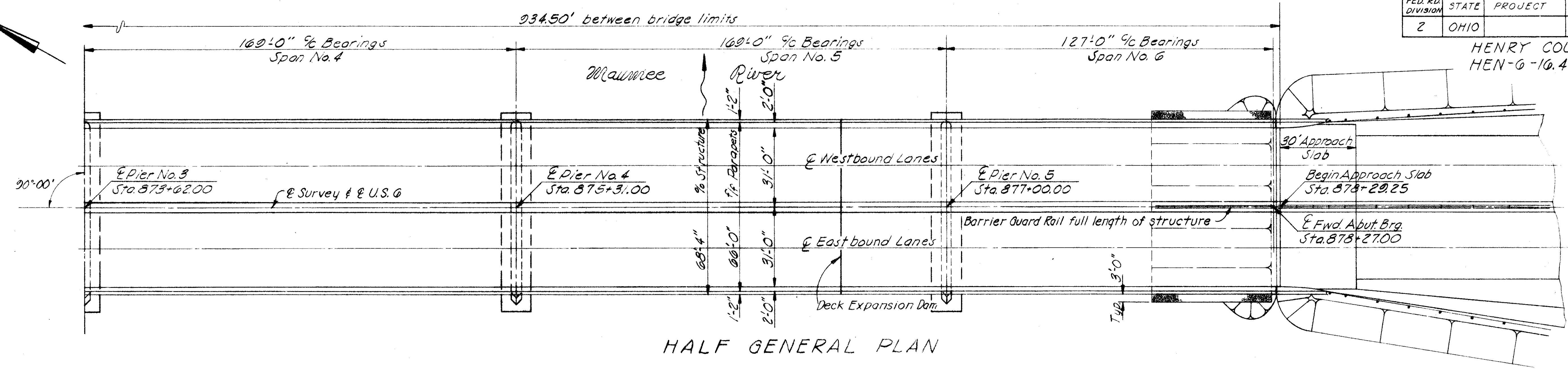
MICROFILMED
APR 17 1986



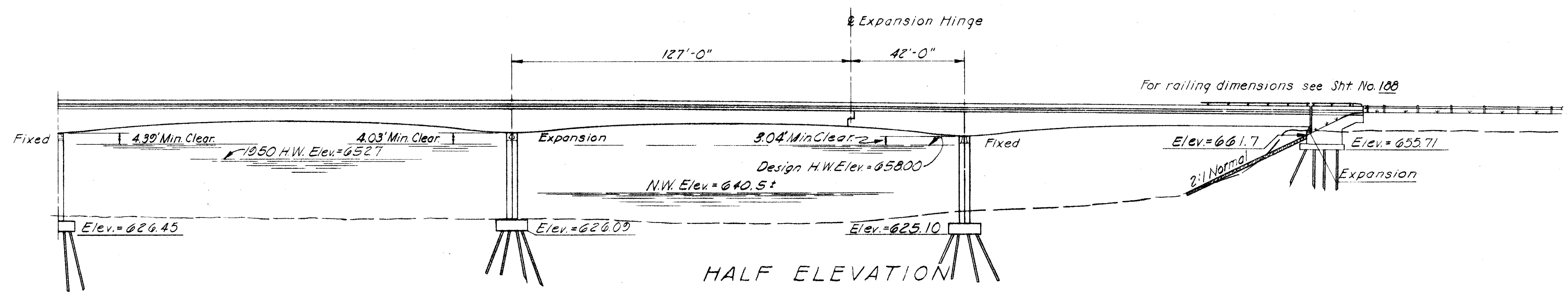
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

103
231

HENRY COUNTY
HEN-6-16.43



HALF GENERAL PLAN



HALF ELEVATION

GENERAL NOTES

REFERENCE shall be made to standard drawings BR-1-65, sheet 1, revised 11-24-65; RB-1-65 revised 2-2-59, SD-1-65, sheets 1, 2 & 3, dated 11-8-65; and to supplemental specifications 808, dated 7-14-65; 811 dated 3-29-65; 825, dated 4-22-65; 828, dated 7-21-65.

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.

DESIGN LOADING: CF-2,000 (57)

BASIC UNIT STRESSES:
 CONCRETE CLASS C _____ 1,333 psi
 CONCRETE CLASS E _____ 1,133 psi
 STRUCTURAL STEEL, ASTM A-36 _____ 20,000 psi

REINFORCING STEEL, ASTM A-15, A-16, A-160
 Deformed, Intermediate or Hard Grade _____ 20,000 psi
 Except spiral reinforcement may be plain Structural Grade. _____ 18,000 psi

ERECTION PROCEDURE: Before any of the girder sections are erected, three sets of prints showing the proposed erection procedure shall be submitted to the Director for approval.

EMBANKMENT PROCEDURE: The embankment at the rear abutment shall be constructed as per note on Sht. No. 15 (General Notes, Roadway; "Embankment construction, Station 864+25 to 869+00")

EXCAVATION QUANTITY at the Rear Abutment includes the removal of fill material required for construction of the abutments.

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

PILES shall be driven with a hammer energy rating of not less than 15,000 ft. lbs. per blow at the rear abutment and piers No. 1 thru No. 4 and of not less than 11,000 ft. lbs. per blow at the forward abutment and pier No. 5 to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the rear abutment and piers No. 1 thru No. 4 piles:
 70 tons per pile using a 15,000 ft. lb. or greater hammer.

For the pier No. 5 and forward abutment piles:
 55 tons per pile using an 11,000 ft. lb. hammer
 50 tons per pile using a 15,000 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 50 tons per pile for all piles except for pier No. 4 in which case the design load is 40 tons per pile.

MACHINE FINISH: The concrete bridge decks shall be finished by the use of a finishing machine.

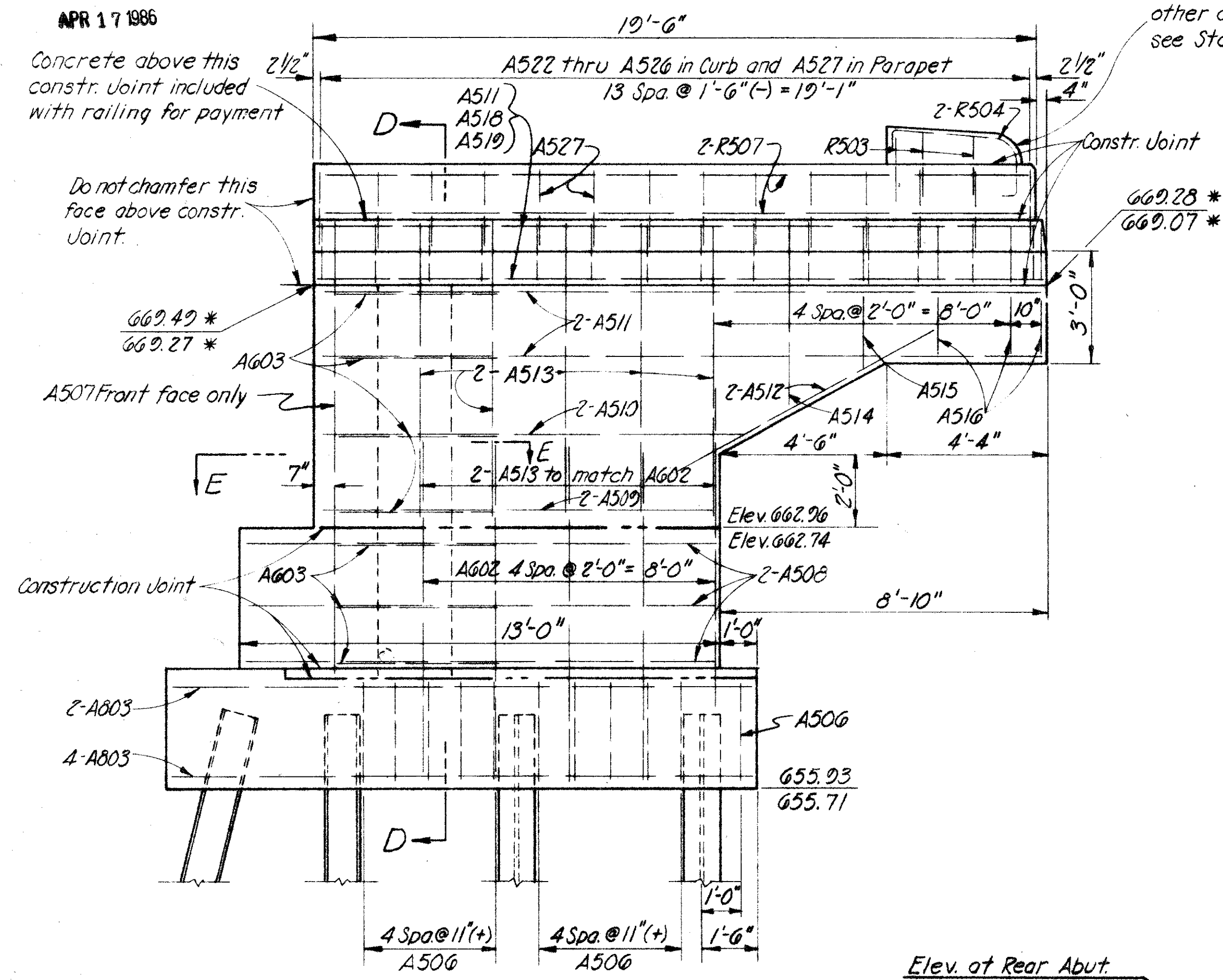
T.C. BIEBESHEIMER ENGINEERING CO.
 CIVIL ENGINEERS AND SURVEYORS
 1100 JACKSON STREET TOLEDO, OHIO

GENERAL PLAN & ELEVATION
 GENERAL NOTES
 Bridge No. Hen-6-1679
 U.S.G. over Maumee River
 Sta. 873+6200
 Henry County to Sta. 878+29.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	R.M.F.		J.C.O.	J.M.	12-15-65	

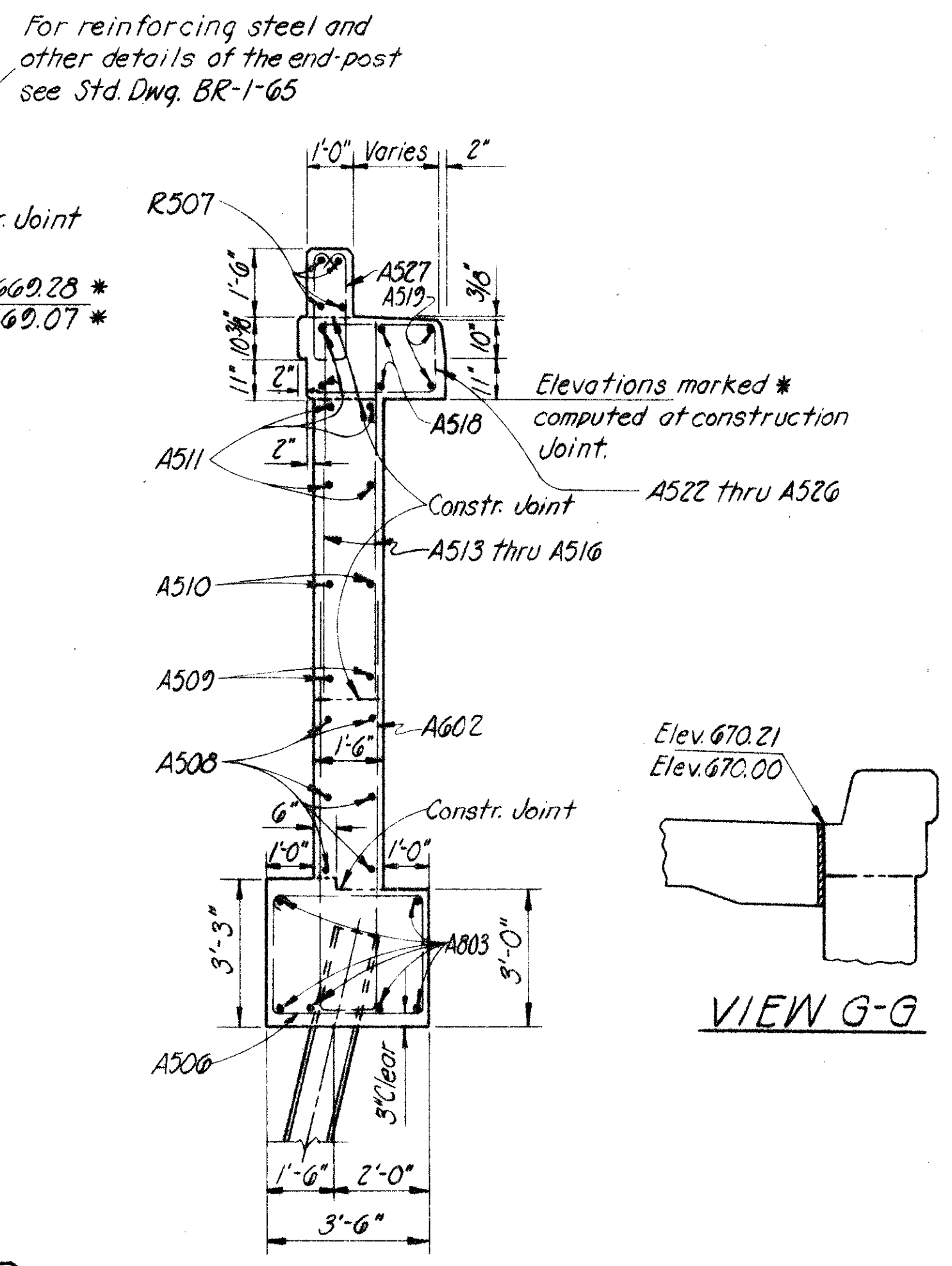
MICROFILMED
APR 17 1966

HENRY COUNTY
HEN-6-16.43

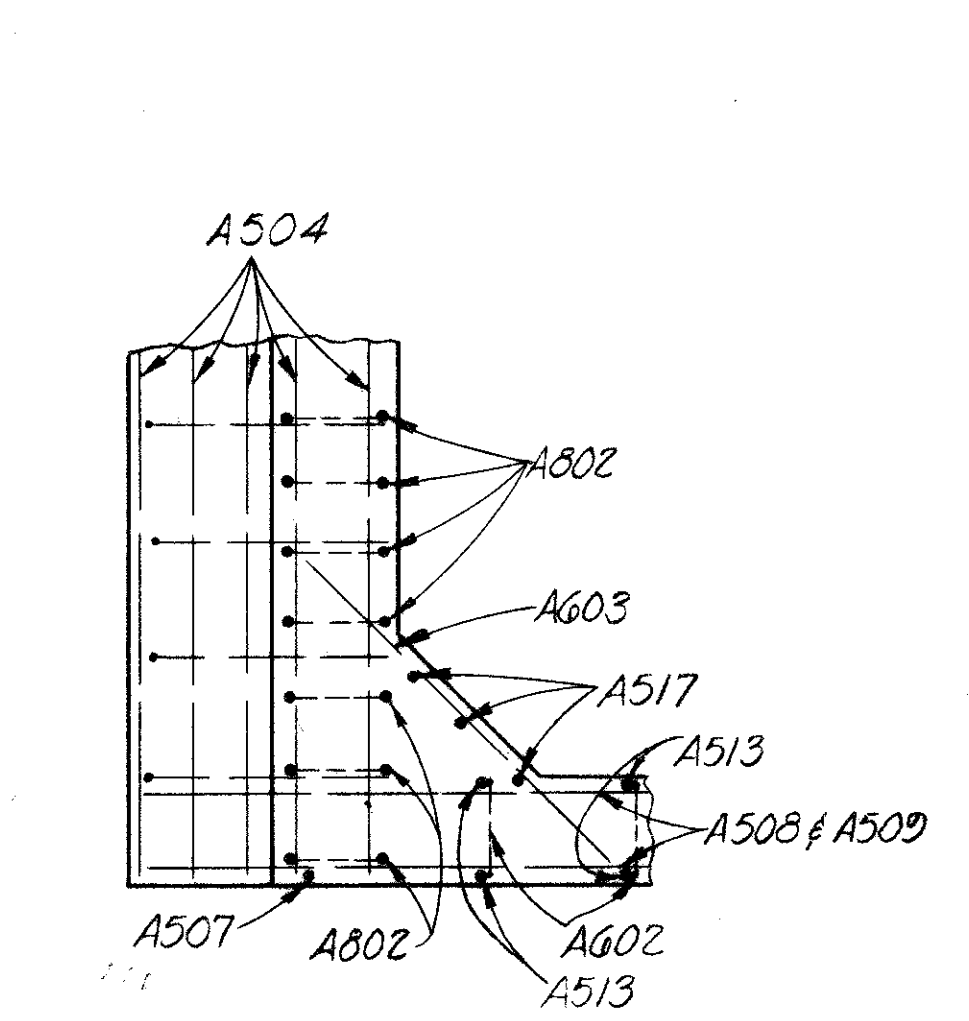


WINGWALL ELEVATION C-C

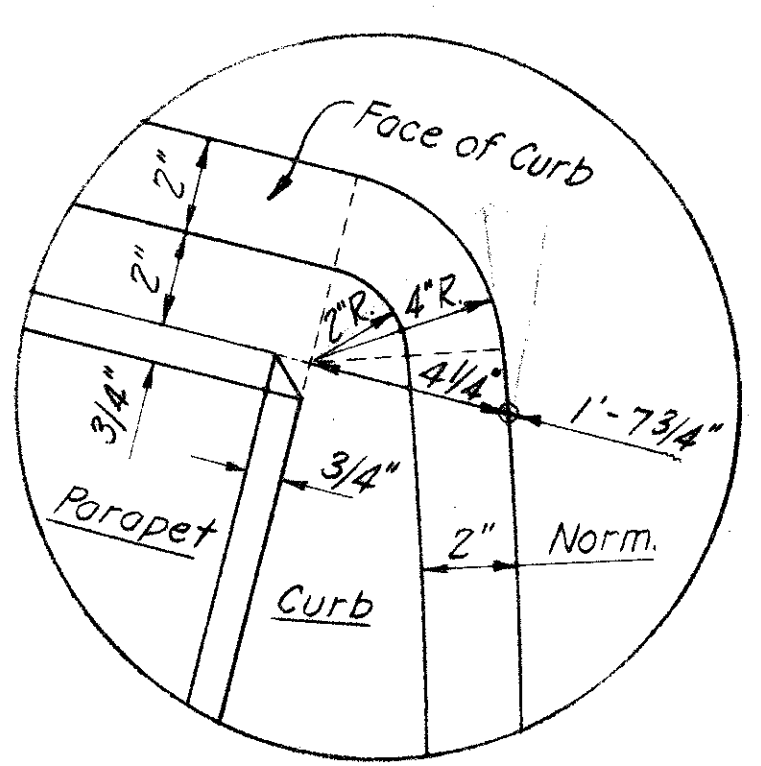
Note: Aluminum railing not shown. For details of the railing and the parapet end post see Std. Dwg. BR-1-65, Sht. No. 1 and Superstructure Details, Sht. No. 188



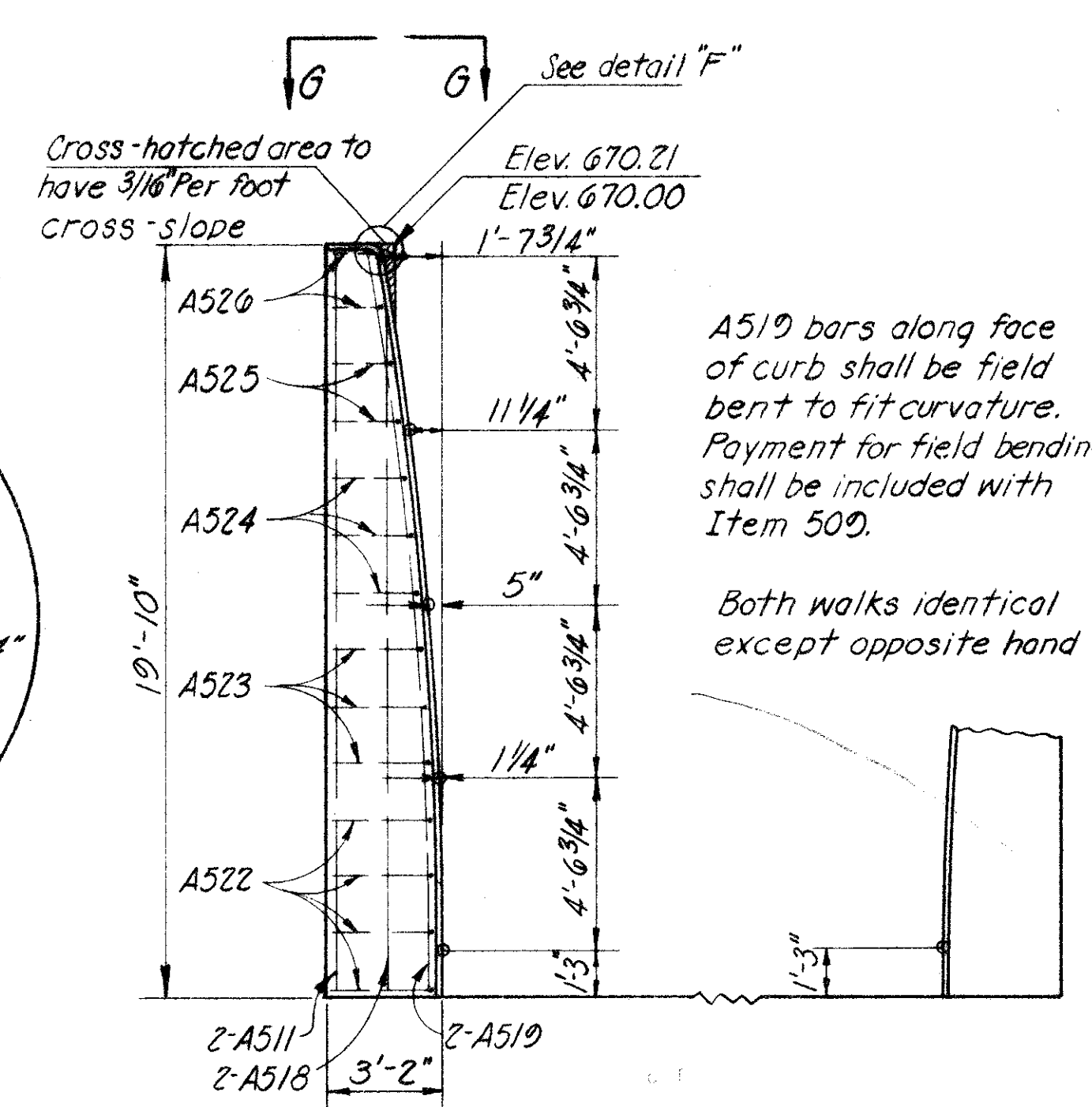
SECTION D-D



SECTION E-E



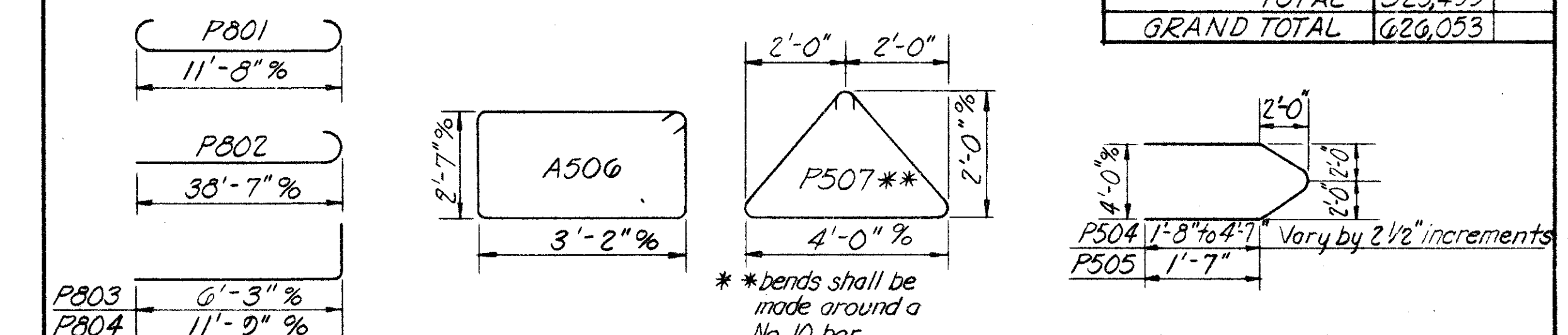
DETAIL F-F



SIDEWALK PLAN
(Parapet not shown)

REINFORCING STEEL LIST

MARK NO.	LENGTH	WEIGHT	SHP.	BENDING DIAGRAMS	MARK NO.	LENGTH	WEIGHT	SHP.		
ABUTMENTS					PIERS					
A801	28	35'-11"	2,685		S	P901	85	5'-0"	1,445	S
A802	136	22'-0"	8,261		B	P801	310	13'-10"	11,450	B
A803	24	15'-8"	1,004		S	P802	80	39'-8"	8,473	B
A601	84	13'-11"	1,756		B	P803	485	7'-2"	2,281	B
A602	20	18'-10"	567		B	P804	240	12'-8"	8,117	B
A603	28	6'-6"	274		S	P805	235	16'-0"	10,039	S
A501	84	8'-10"	774		B	P601	250	22'-0"	8,261	S
A502	84	7'-1"	621		B	P602	235	16'-0"	5,648	S
A503	84	6'-4"	555		B	P603	10	31'-0"	466	S
A504	68	33'-6"	2,376	S	P604	10	32'-6"	488	S	
A505	4	30'-8"	128	S	P605	5	33'-0"	248	S	
A506	44	11'-11"	547	B	P606	10	32'-5"	487	S	
A507	4	12'-2"	51	S	P607	10	33'-6"	503	S	
A508	24	12'-8"	317	S	P608	5	34'-6"	259	S	
A509	8	10'-8"	89	S	P501	150	31'-0"	4,850	S	
A510	8	11'-8"	97	S	P502	80	9'-4"	779	B	
A511	24	19'-6"	488	S	P503	150	32'-6"	5,085	S	
A512	8	8'-4"	70	S	P504	Series 70	8'-9"	913	B	
A513	40	8'-0"	334	S	of 15	14'-7"				
A514	8	5'-0"	42	S	P505	5	8'-7"	448	B	
A515	8	4'-0"	33	S	P506	110	7'-1"	813	B	
A516	24	3'-6"	88	S	P507	20	10'-4"	216	B	
A517	12	10'-5"	130	S	TOTAL			78,269		
A518	8	18'-0"	150	S	SUPERSTRUCTURE					
A519	8	19'-6"	163	S	S701	1,354	34'-4"	95,020	S	
A520	8	5'-10"	49	B	S702	1,354	32'-8"	90,408	S	
A521	4	4'-3"	18	B	S601	1,354	34'-4"	69,824	S	
A522	16	6'-2"	103	B	S602	1,354	32'-8"	66,435	S	
A523	12	5'-8"	71	B	S603	220	36'-0"	11,896	S	
A524	12	4'-10"	60	B	S604	1,120	35'-2"	59,159	S	
A525	8	4'-0"	33	B	S605	2,128	33'-0"	105,476	S	
A526	8	3'-0"	25	B	S501	2,496	2'-8"	6,942	B	
A527	56	5'-7"	326	B	S502	1,248	3'-7"	4,664	B	
R503	12	4'-3"	*	B	S503	1,248	5'-7"	7,268	B	
R504	8	5'-4"	*	B	S504	1,248	2'-7"	3,363	B	
R507	16	19'-2"	*	S	S505	624	3'-1"	2,007	B	
TOTAL				22,285	S506	624	3'-1"	2,007	B	
REPLACEMENT BARS					S507	624	1'-7"	1,030	B	
RE900	1	6'-10"		S	R501	520	13'-0"	*	S	
RE800	3	6'-6"		S	R502	48	10'-7"	*	S	
RE700	10	6'-2"		S	TOTAL			525,499		
RE600	17	5'-11"		S	GRAND TOTAL			626,053		
RE500	3	5'-7"		S						



BAR SIZE
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, A700 is a No. 7 size bar and A1014 is a No. 10 size.

* Included with railing for payment

*bends shall be made around a No. 10 bar.

Vary by 2 1/2" increments

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1100 JACKSON STREET TOLEDO, OHIO

WINGWALL DETAILS & REINFORCING STEEL LIST

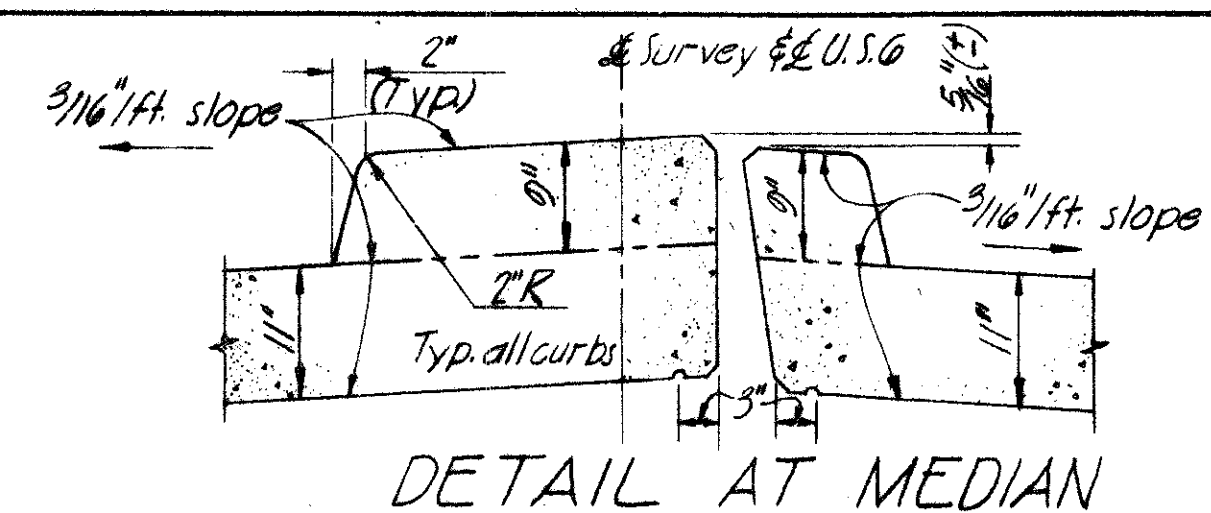
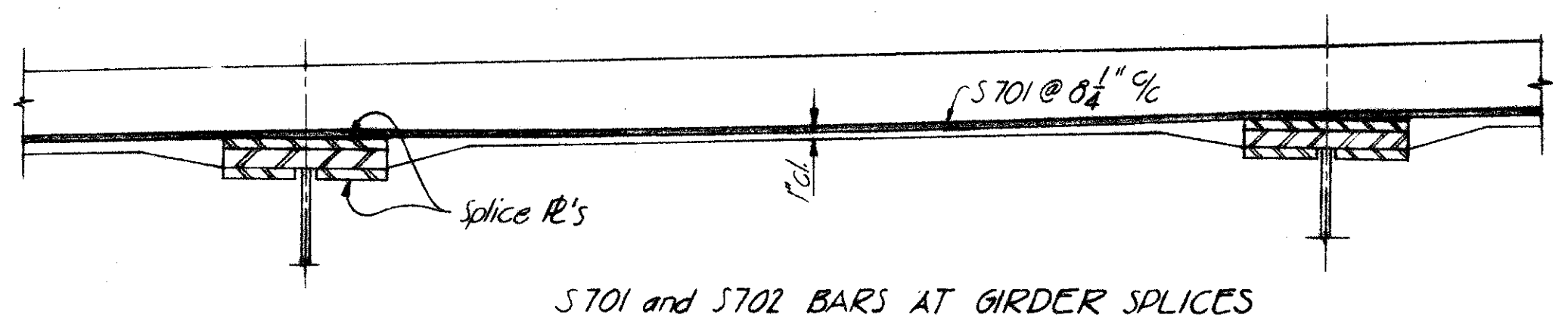
Bridge No. Hen-6-1679
U.S. 6 over Maumee River
Henry County

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
J.M. RNF J.C.O. J.M. 12-15-65

Revised As-Built 4-18-70

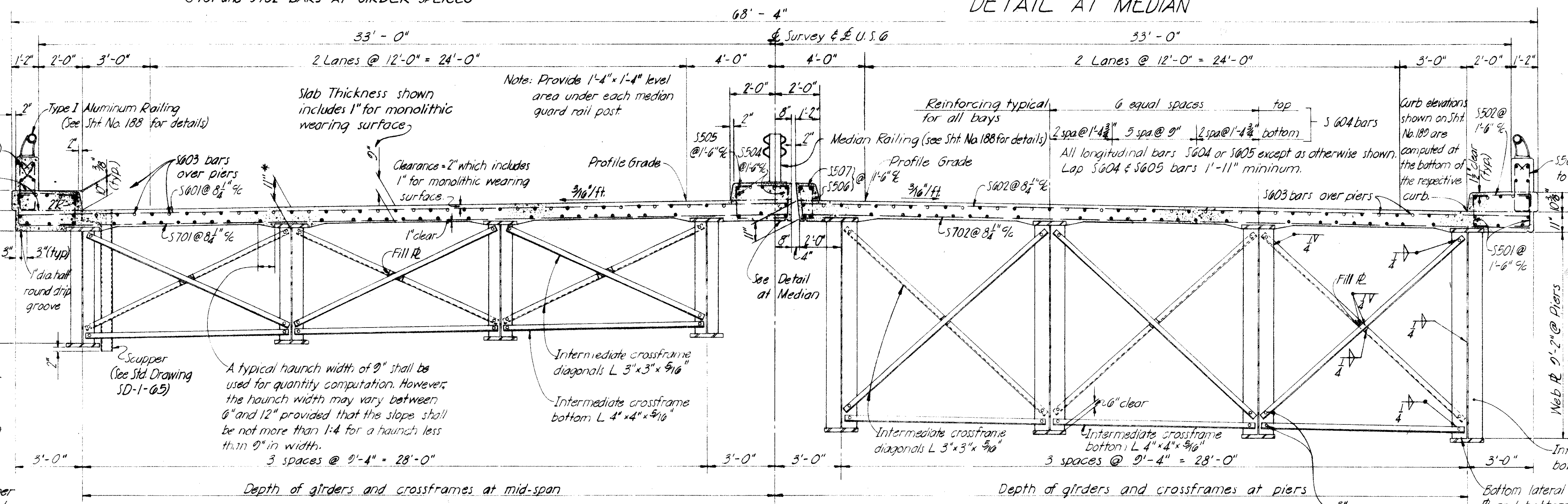
HENRY COUNTY
HEN-6-16.43

S701 & S702 bars at splices shall be placed to miss splice bolts. Bend bars to obtain 1" clearance in center of girder space.

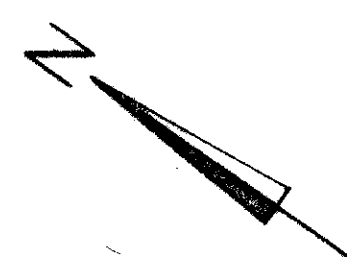


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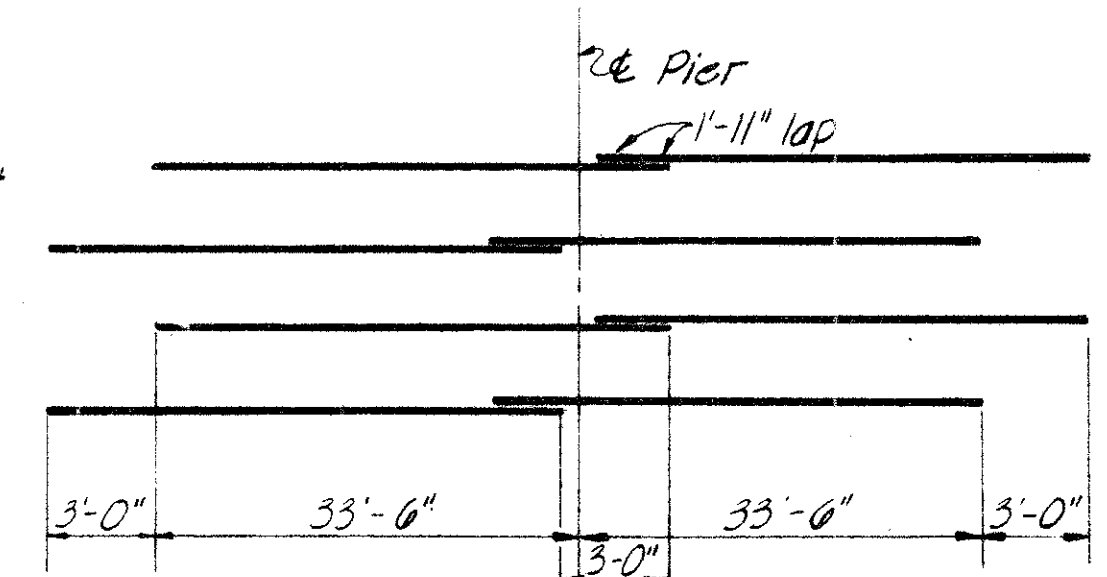
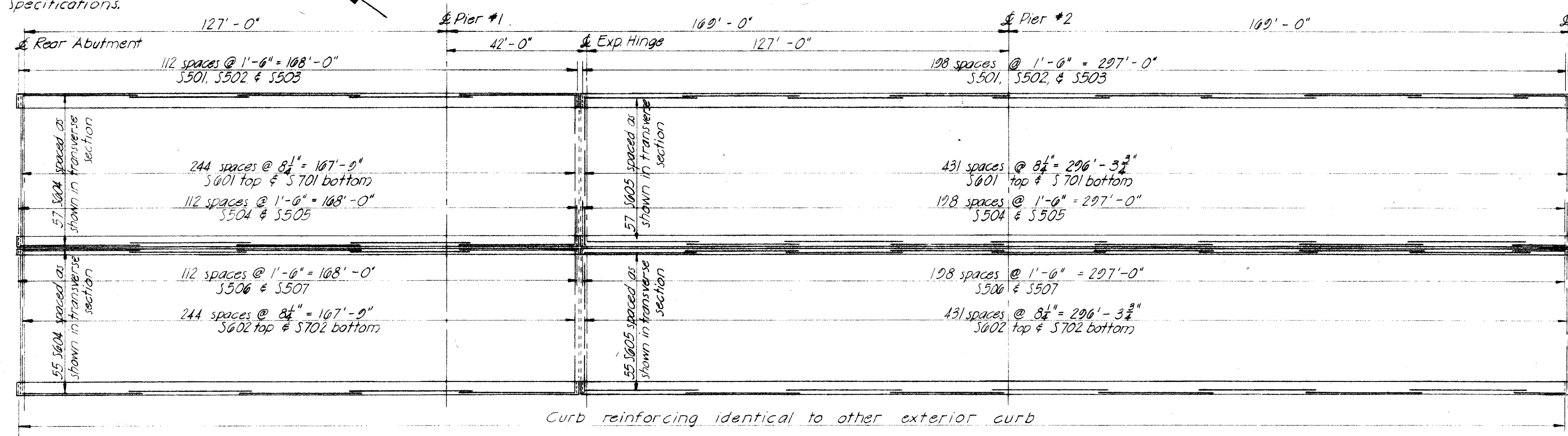
R501 in intermediate parapet panels. (See Sht. No. 188)
R502 in end parapet panels. (Included with railing for payment)



* This is the nominal 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 required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.



TRANSVERSE SECTION
(Bottom laterals not shown)



T.C. BIEBESHEIMER ENGINEERING CO.
CIVIL ENGINEERS AND SURVEYORS
1100 JACKSON STREET TOLEDO, OHIO

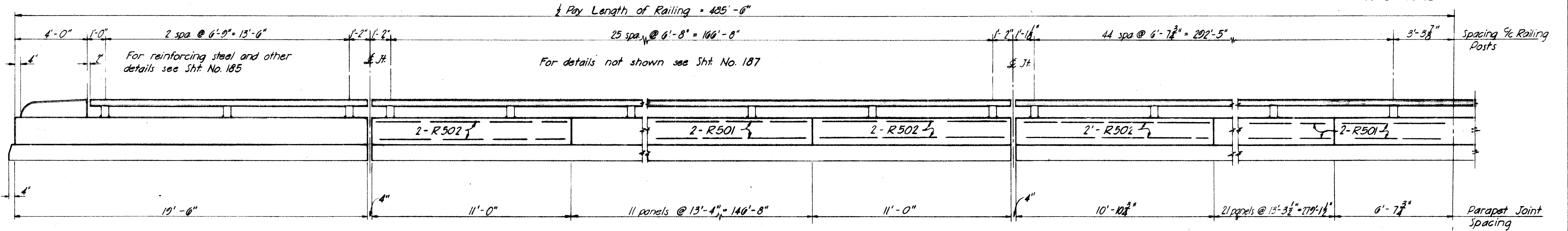
SUPERSTRUCTURE DETAILS
Bridge No. Hen-6-1679
U.S. 6 over Maumee River

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	APD		J.C.O.	J.M.	12-15-65	

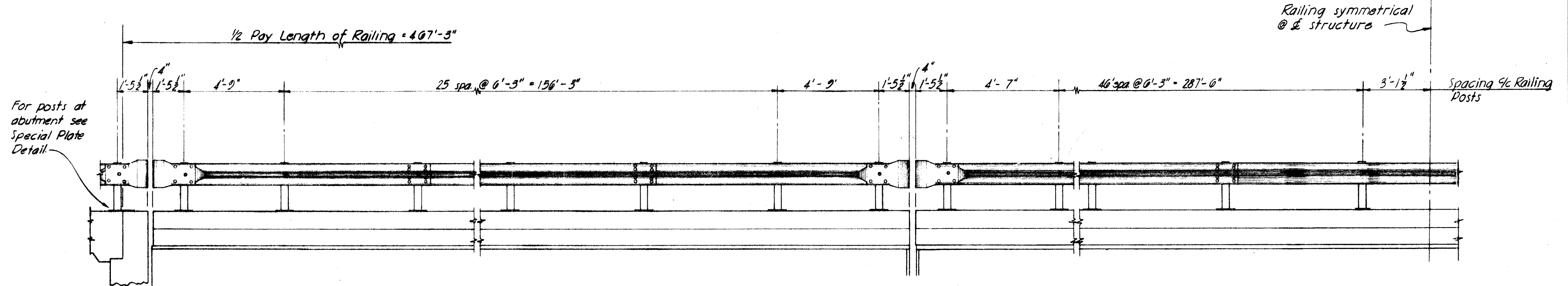
MICROFILMED
APR 17 1986

FED. RD. DIVISION	STATE	PROJECT	188
2	OHIO		231

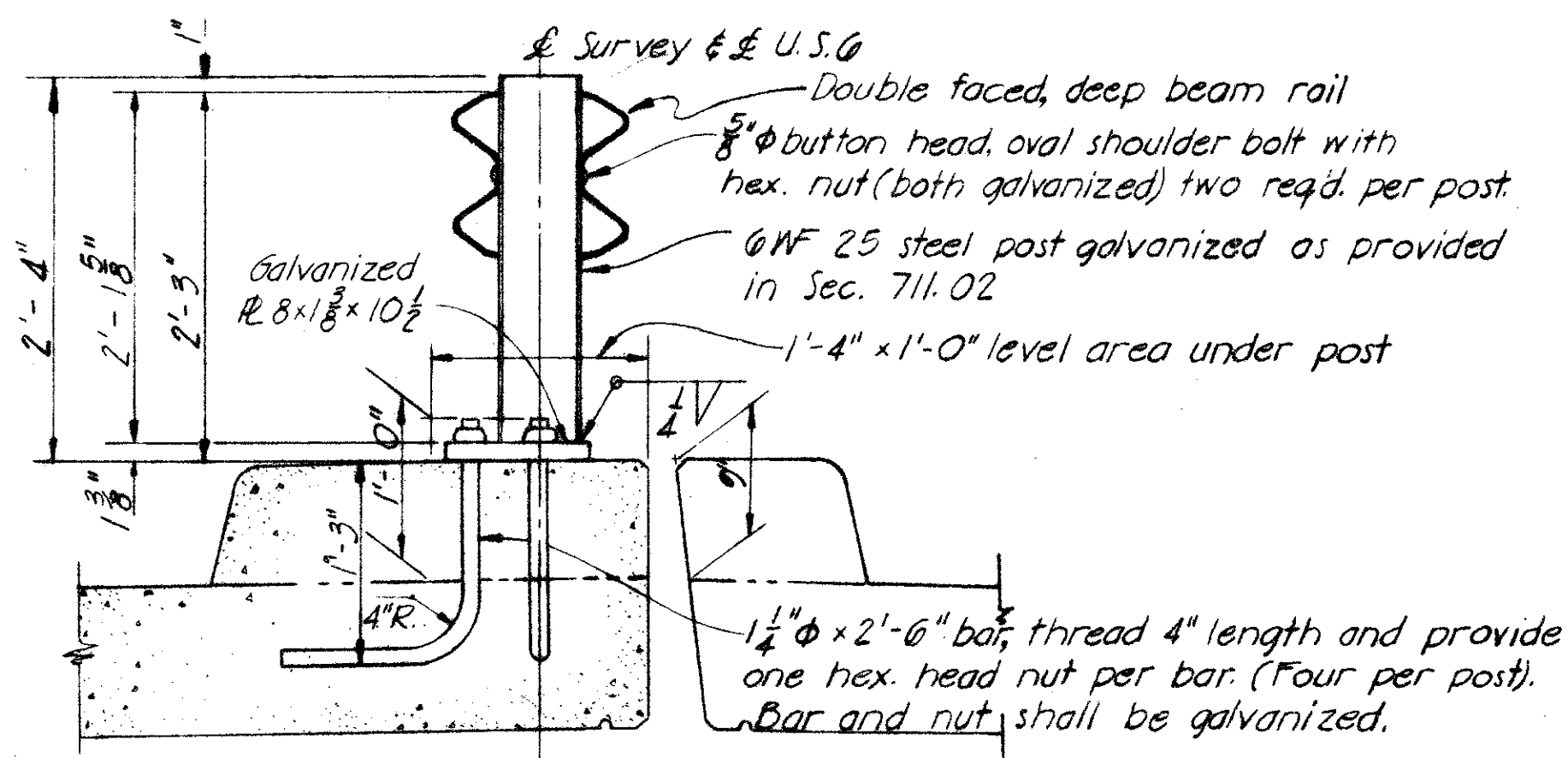
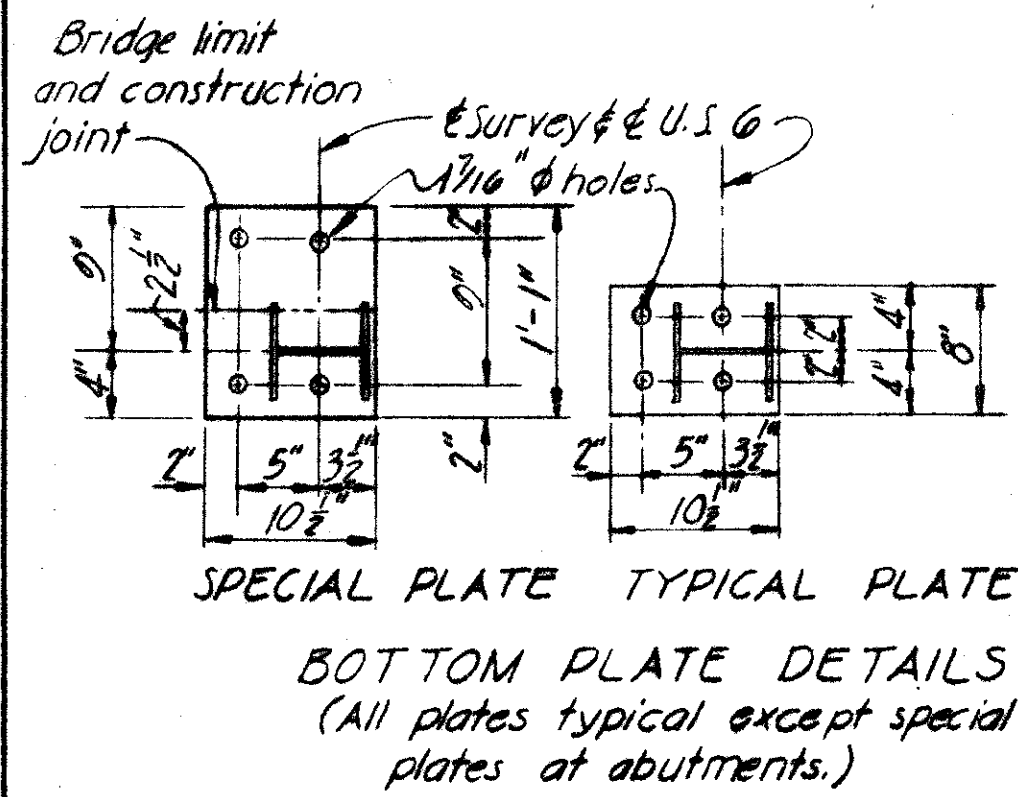
HENRY COUNTY
HEN-6-10.43



BRIDGE RAILING DETAIL



MEDIAN BARRIER RAILING DETAIL



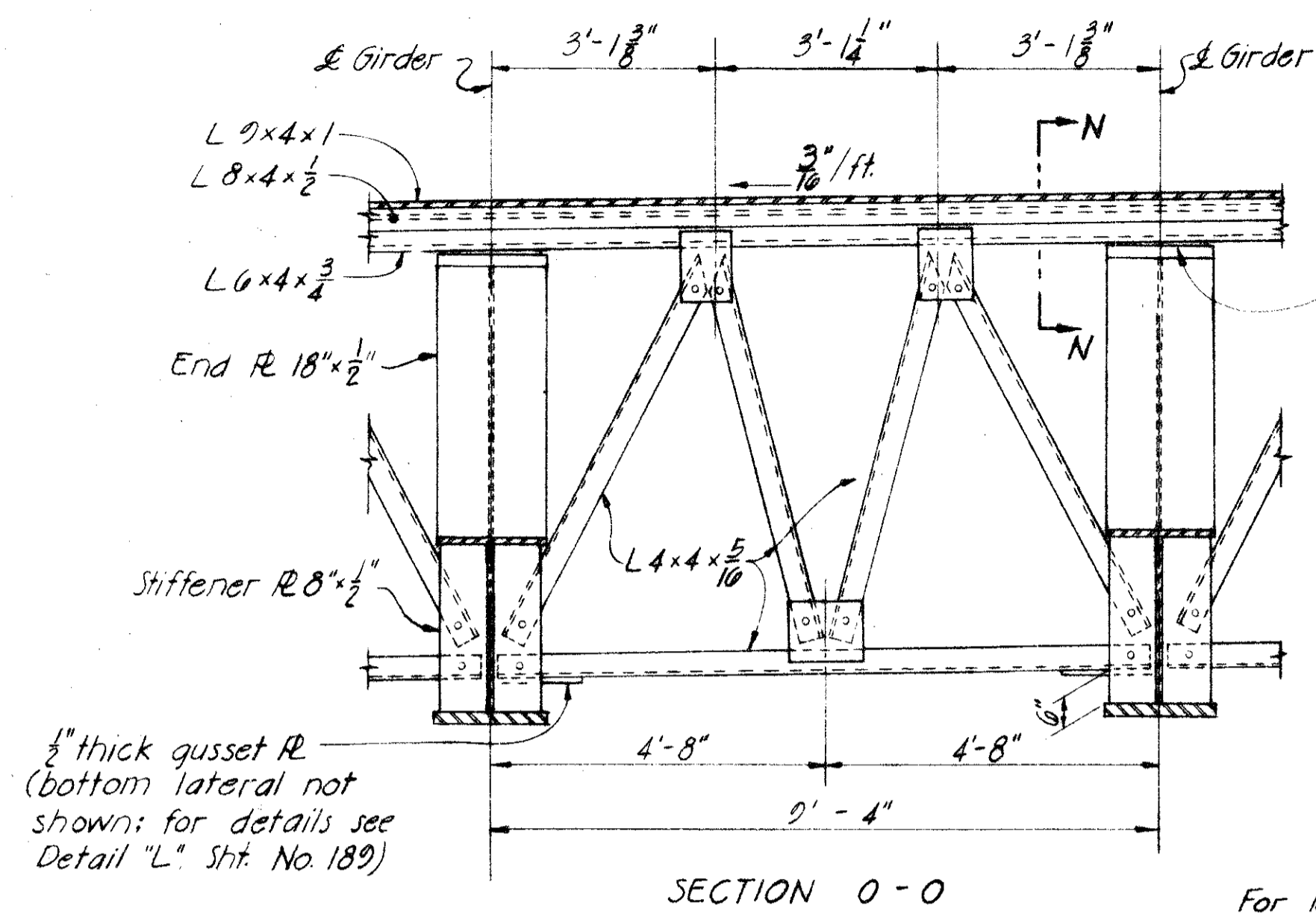
MEDIAN GUARD RAIL POST AND SUPPORT DETAIL

T.C. BIEBESHEIMER ENGINEERING CO.
CIVIL ENGINEERS AND SURVEYORS
1100 JACKSON STREET, TOLEDO, OHIO

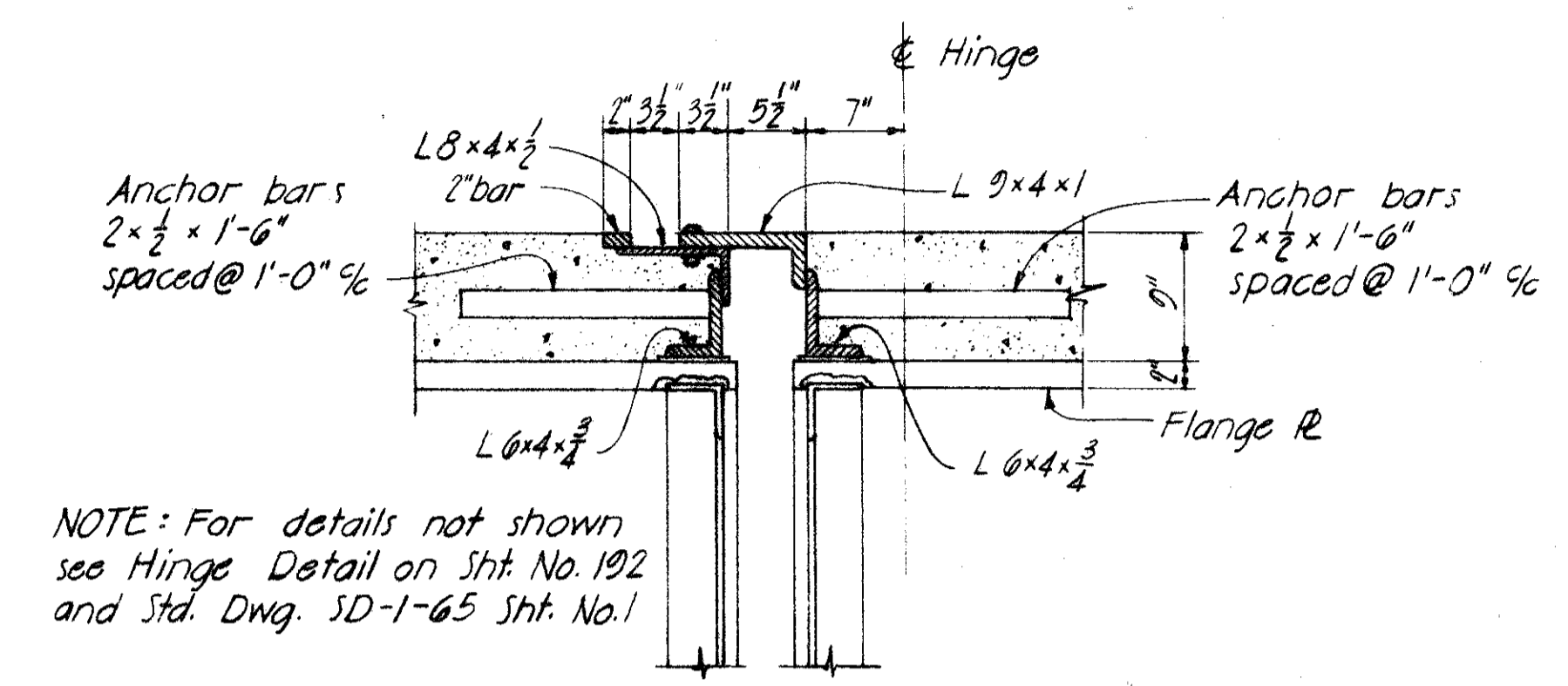
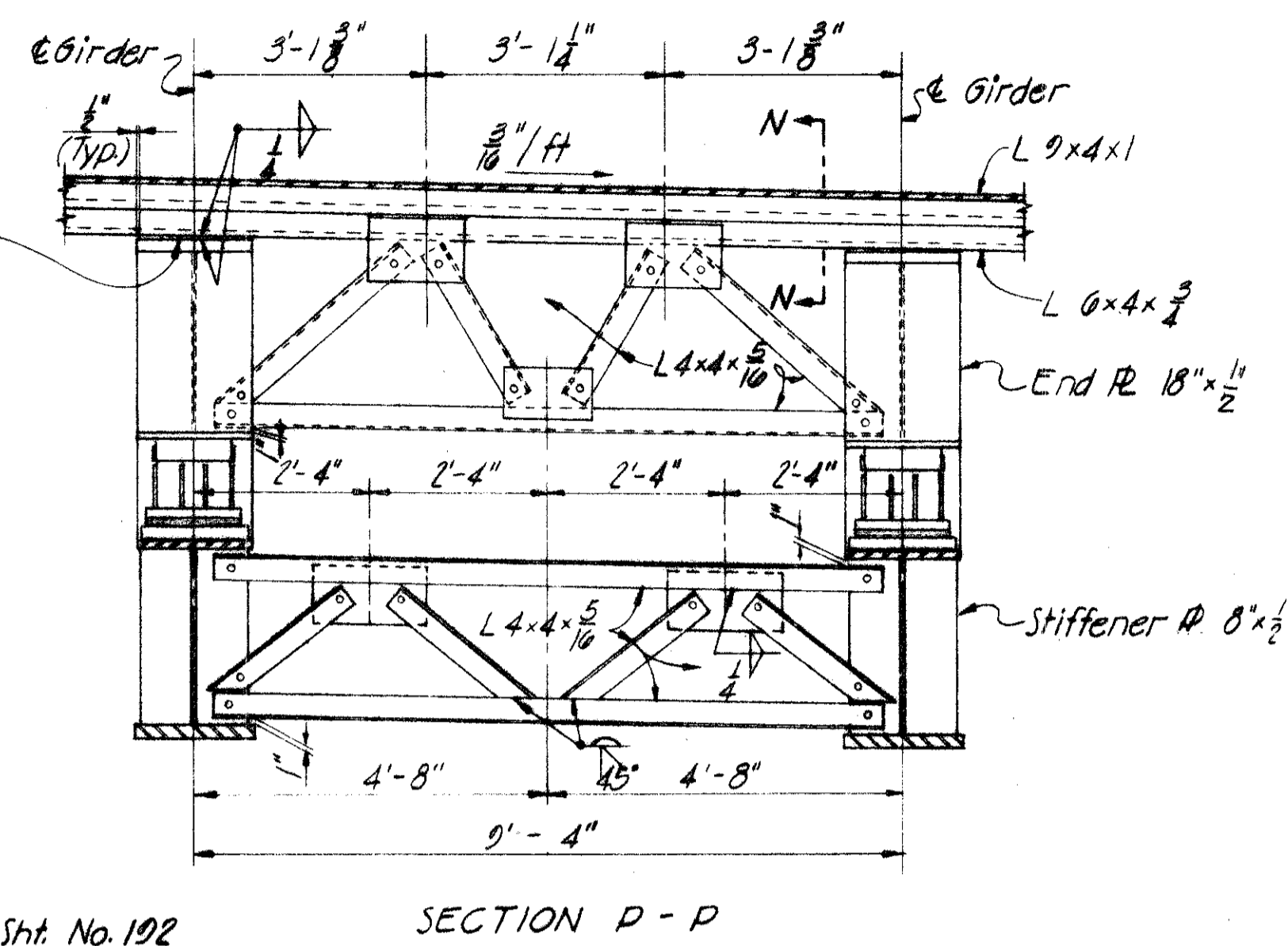
SUPERSTRUCTURE DETAILS
Bridge No. Hen-6-10.79
U.S.G. over Maumee River

Henry County

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	APO		J.C.O.	J.M.	12-15-65	

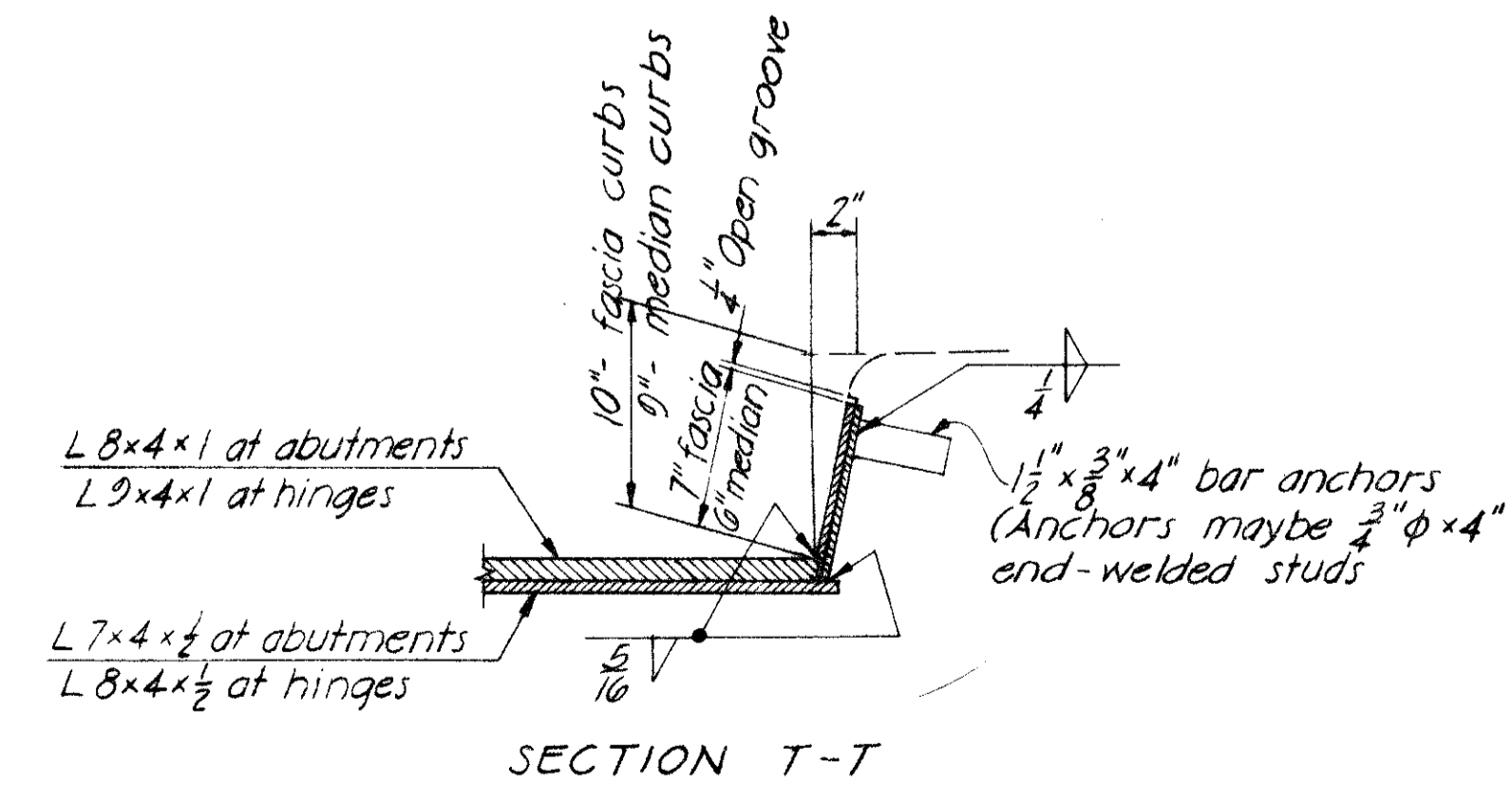
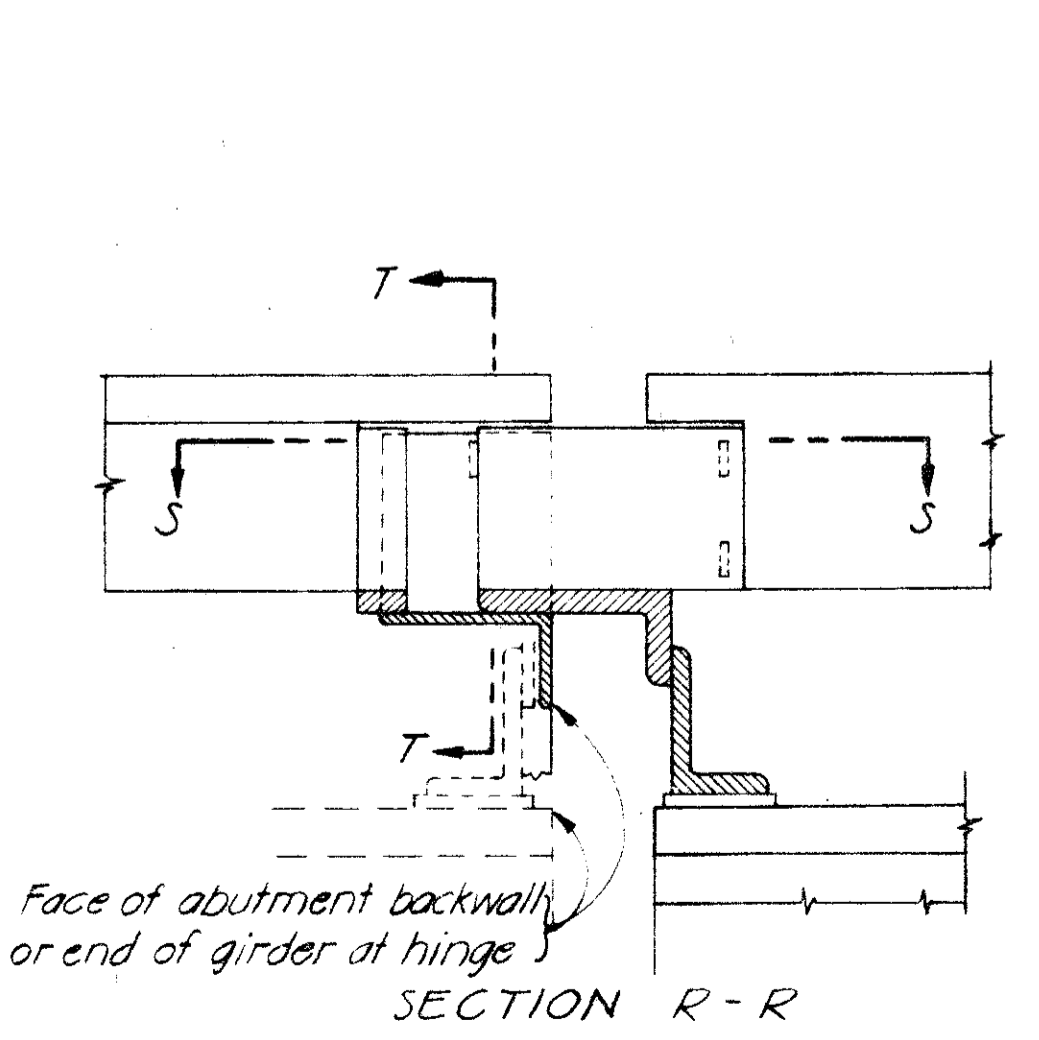
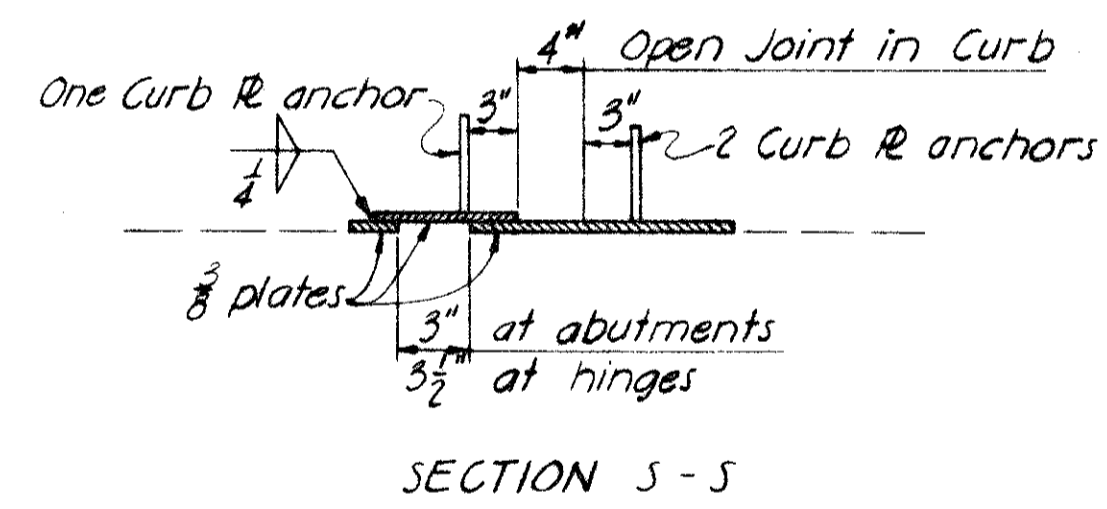
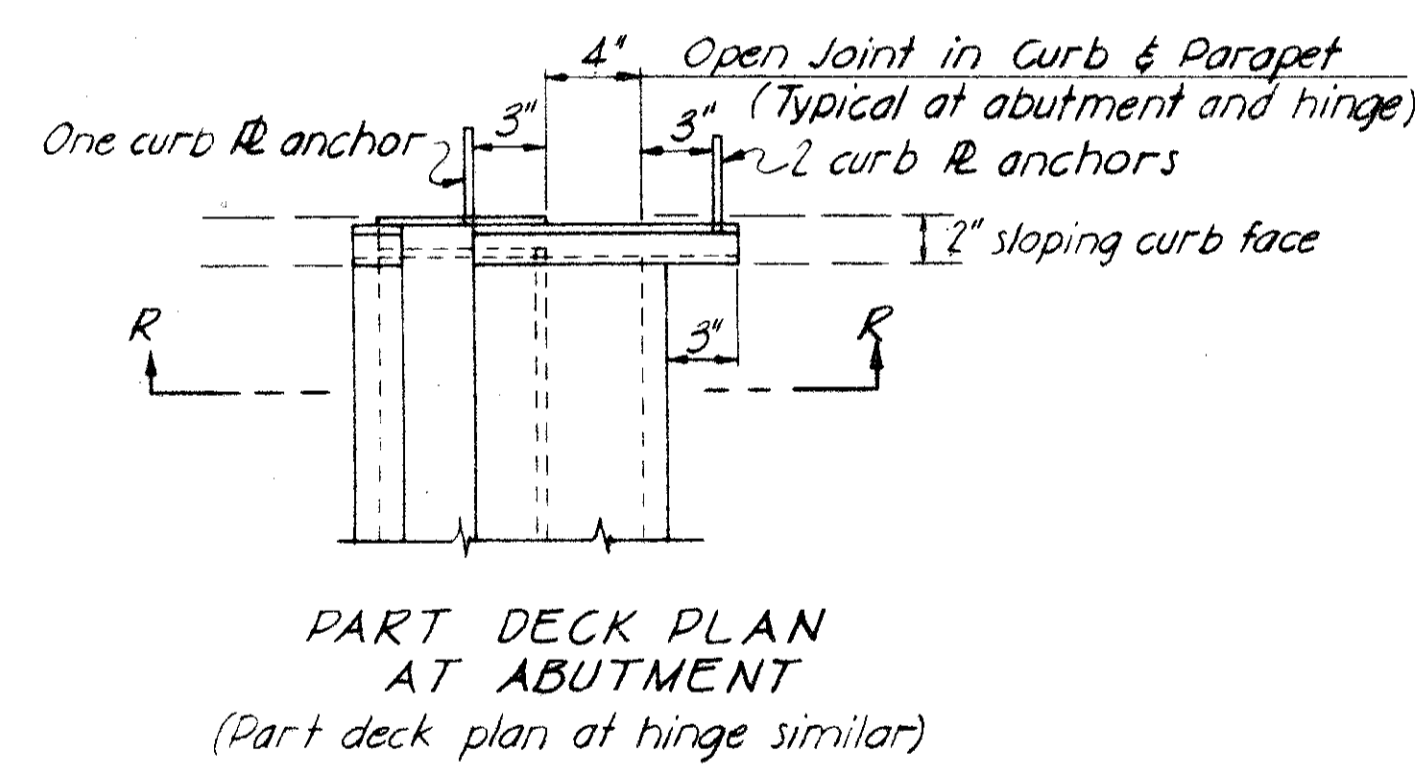


NOTE: Welding and details not indicated are same as for End Crossframe Detail, Sht. No. 189.

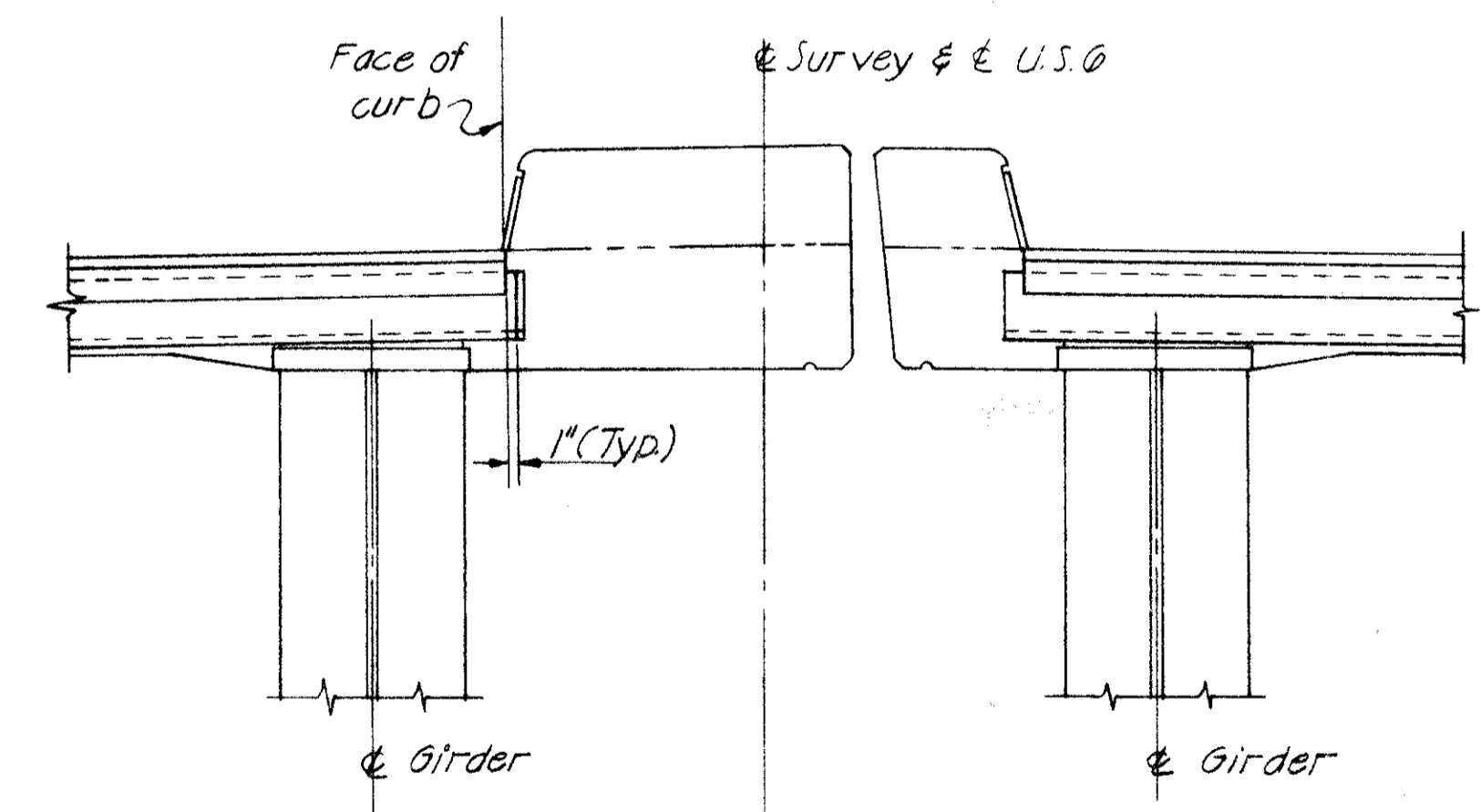


SECTION N-N
SHOWING ROADWAY END DAM
AT EXPANSION HINGE
(END DAM DETAILS AT ABUTMENTS SAME
AS SHOWN IN STANDARD DRAWING SD-1-65)

EXPANSION HINGE CROSSFRAMES



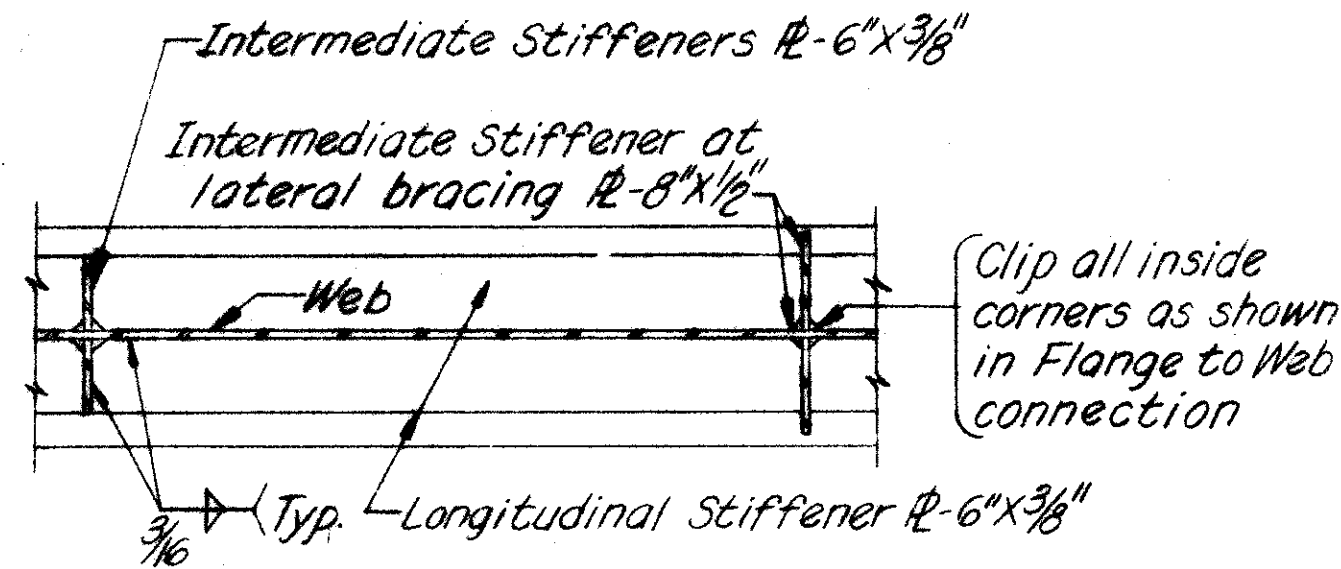
CURB PLATE DETAILS



END DAM DETAILS AT MEDIAN GIRDERS
(END DAM DETAILS AT FASCIA GIRDERS SAME
AS SHOWN IN STANDARD DRAWING SD-1-65.)

T.C. BIEBESHEIMER ENGINEERING CO. CIVIL ENGINEERS AND SURVEYORS 1100 JACKSON STREET TOLEDO, OHIO					
SUPERSTRUCTURE DETAILS					
Bridge No. Hen-0-1079					
U.S.G. over Maumee River					
Henry County					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.M.	A.P.O.	J.C.O.	J.M.	12-15-65	

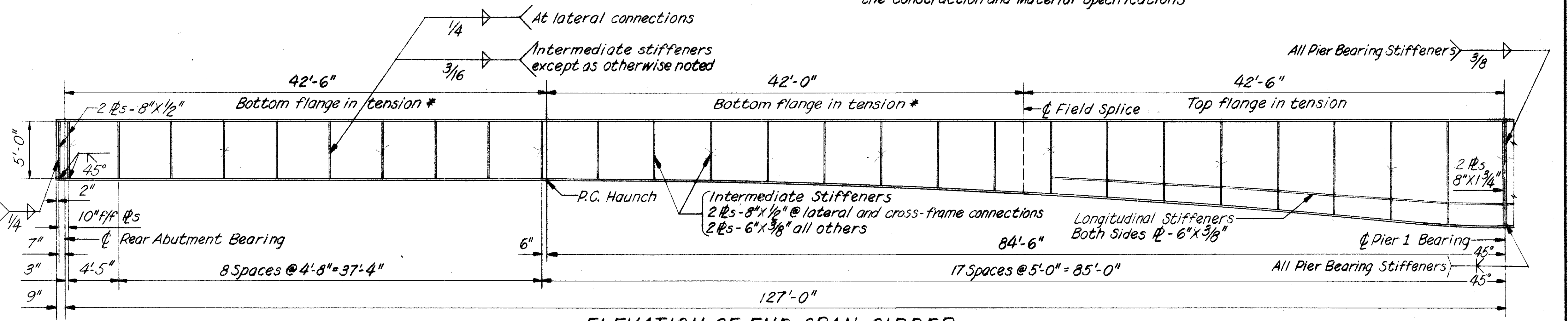
* Reference to the tension flange is made to comply with Sec. 513.15 of the Construction and Material Specifications



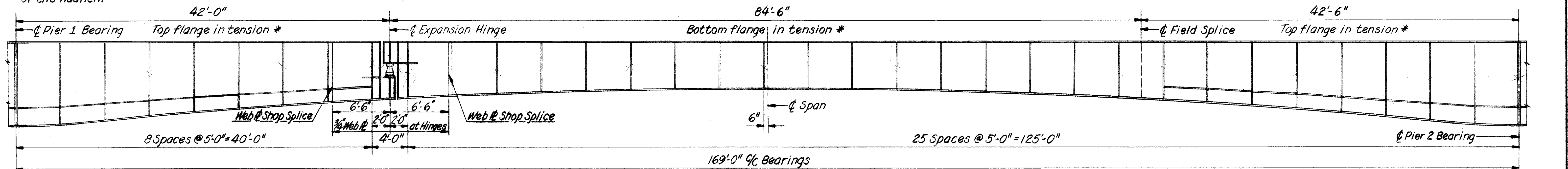
LONGITUDINAL STIFFENER DETAIL

Longitudinal stiffeners shall be placed on both sides of all girders in locations indicated on girder details. Stiffeners shall be placed at $\frac{1}{5}$ the web height, measured from the bottom of the web plate. Longitudinal stiffeners shall follow the curve of the haunch.

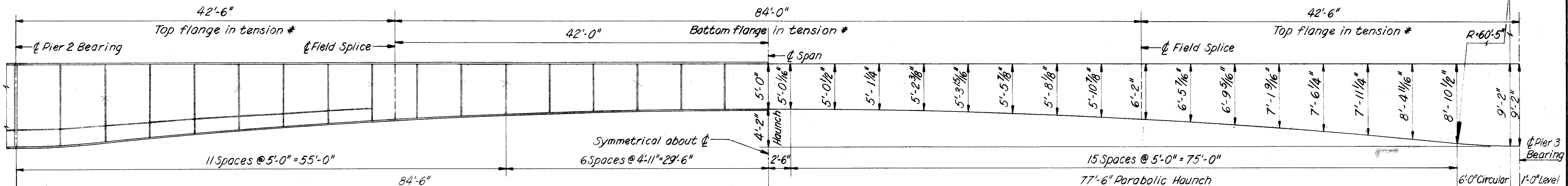
All Abutment Bearing Stiffeners $\frac{1}{4}$ "
(See Detail "L" on Sheet No. 189)



ELEVATION OF END SPAN GIRDER

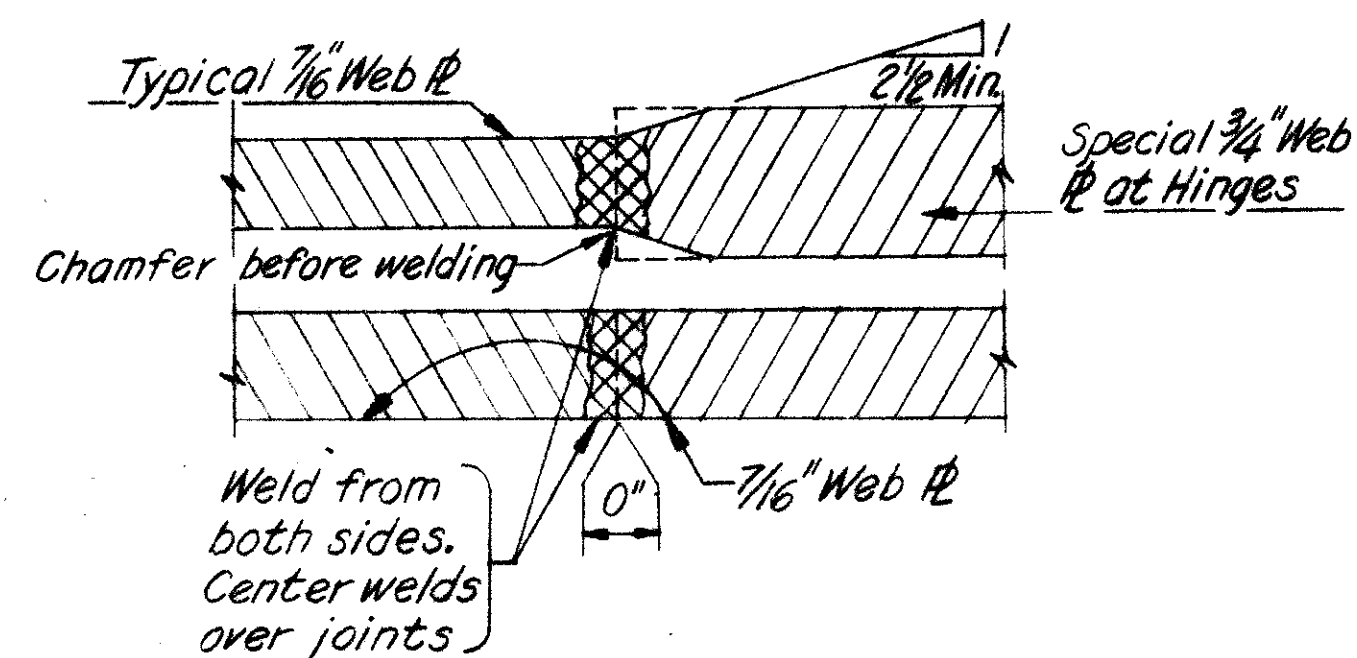


ELEVATION OF FIRST INTERIOR SPAN GIRDER

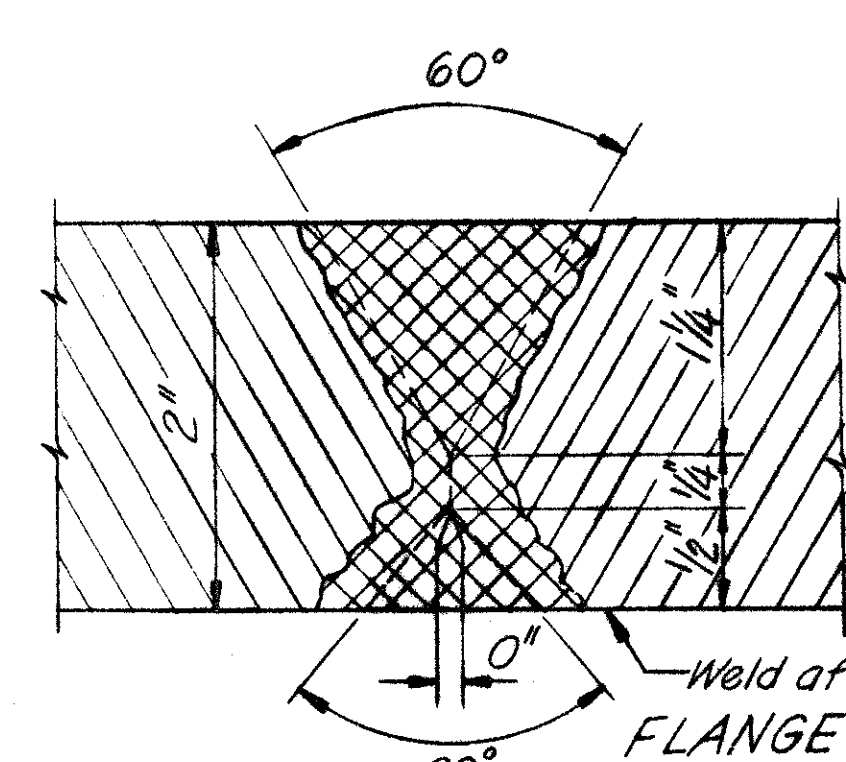


HALF ELEVATION OF SECOND INTERIOR SPAN GIRDER

WEB PLATE TEMPLATE



WEB PLATE SHOP SPLICE

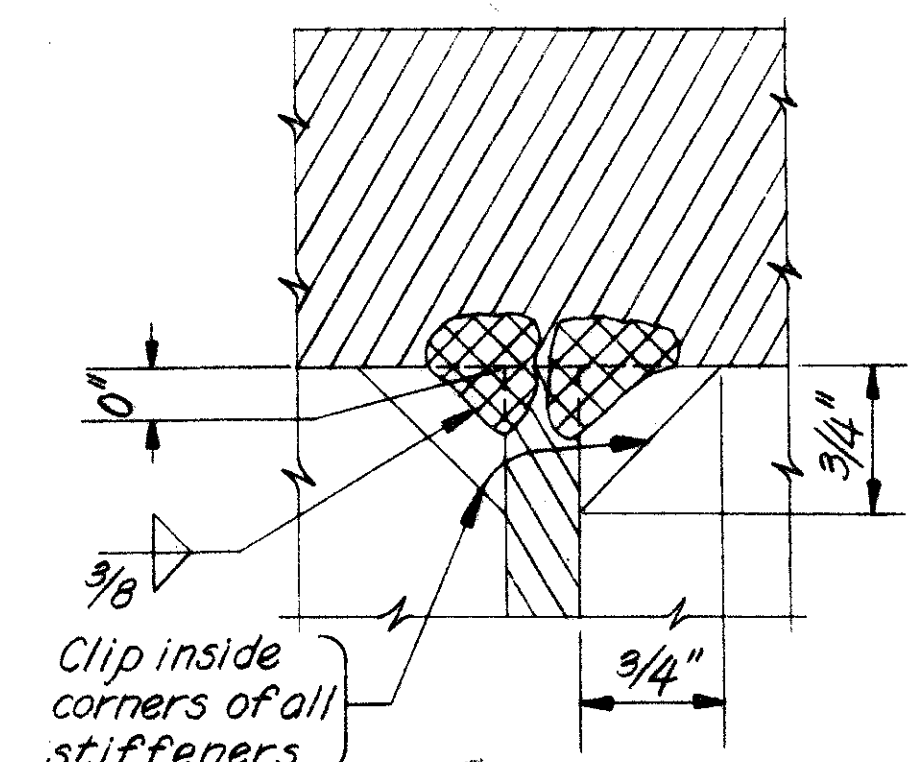


DETAILS OF WELDED JOINTS

ALL FULL PENETRATION WELDS shall be back-gouged and welded after welding far side.

SHOP SPLICES proposed by the fabricator shall be detailed as to their location and submitted to the Director for approval prior to ordering the material.

BUTT WELDS in girder members shall be subject to radiographic examinations as set forth by Supplemental Specification 811.



FLANGE TO WEB CONNECTION

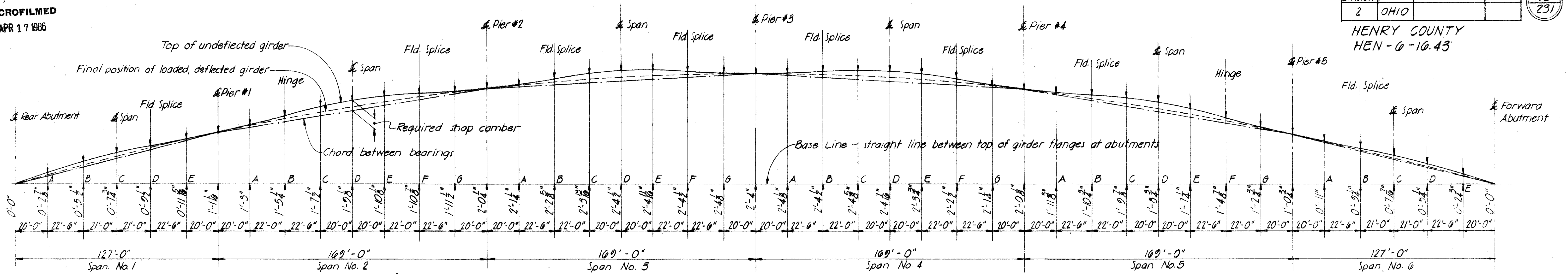
T.C. BIEBESHEIMER ENGINEERING CO.
CIVIL ENGINEERS AND SURVEYORS
1100 JACKSON STREET
TOLEDO, OHIO

GIRDER DETAILS
Bridge No. Hen-6-1679
U.S. 6 over Maumee River

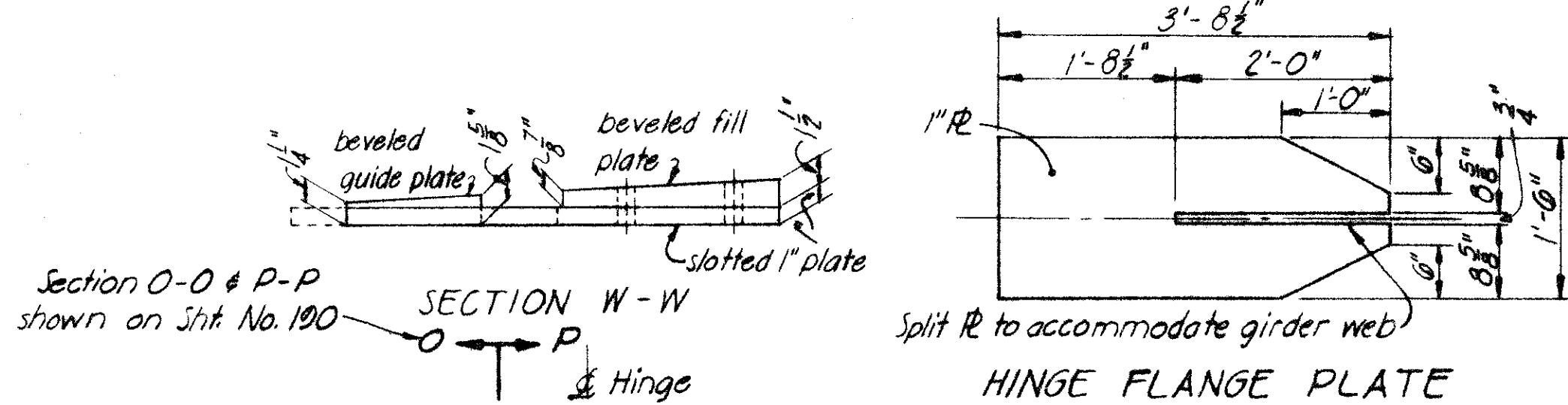
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	B.		JCA	J.M.	12-15-65	

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HENRY COUNTY
HEN-6-16.43



VERTICAL OFFSETS FROM TOP OF GIRDER TO BASE LINE



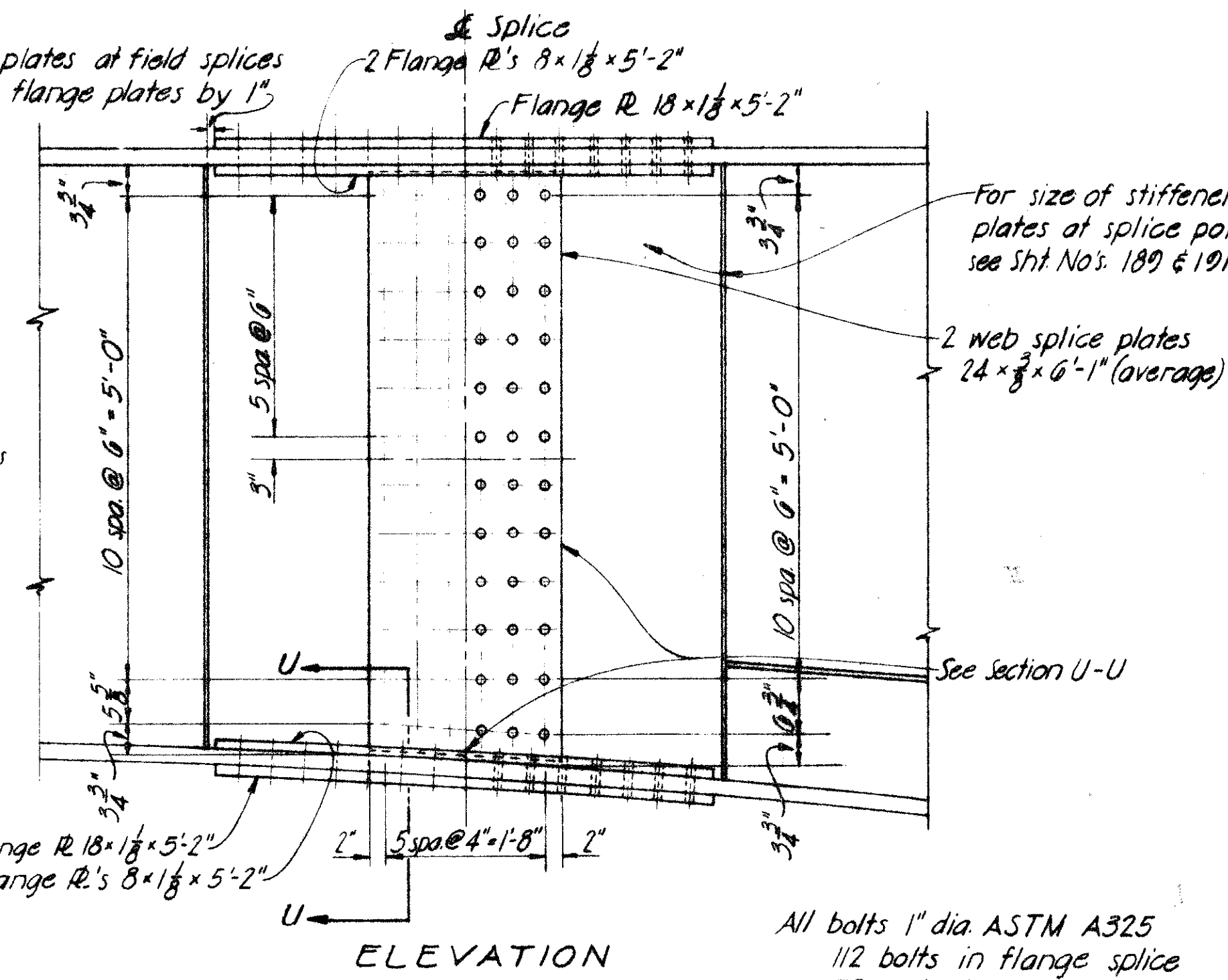
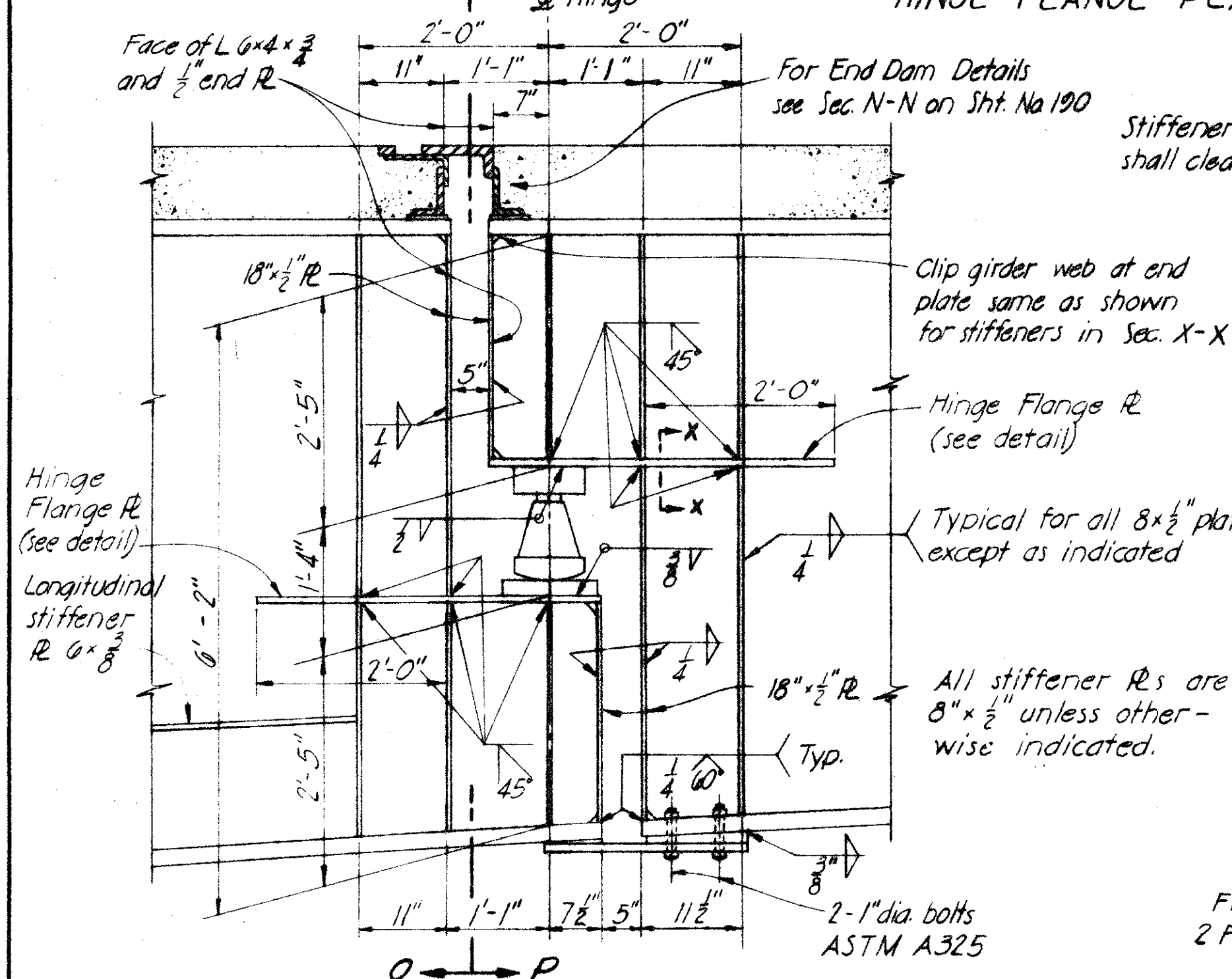
The bolts shall be placed with the heads on the outside face of the exterior girders and on the bottom of girder flanges.

LOCATION	Span No. 1		Span No. 2 & 3			Span No. 4 & 5			Span No. 6			
	B	C	D	B	D	F	B	D	F	B	C	D
Deflection due to weight of steel	1/4"	1/4"	3/10"	1/4"	1/10"	1/4"	1/4"	1/10"	1/4"	3/10"	1/4"	1/4"
Deflection due to remaining dead load	5/8"	5/8"	3/8"	1/2"	1"	1/2"	1"	1"	1/2"	3/8"	5/8"	5/8"
Adjustment required for vertical curve	1/4"	5/10"	5/10"	11/10"	15/10"	11/10"	11/10"	15/10"	11/10"	5/10"	5/10"	1/4"
REQUIRED SHOP CAMBER	1 1/8"	1 3/10"	8/10"	1 1/10"	2 3/8"	1 7/10"	1 7/10"	2 3/8"	1 7/10"	7/8"	1 3/10"	1 1/8"

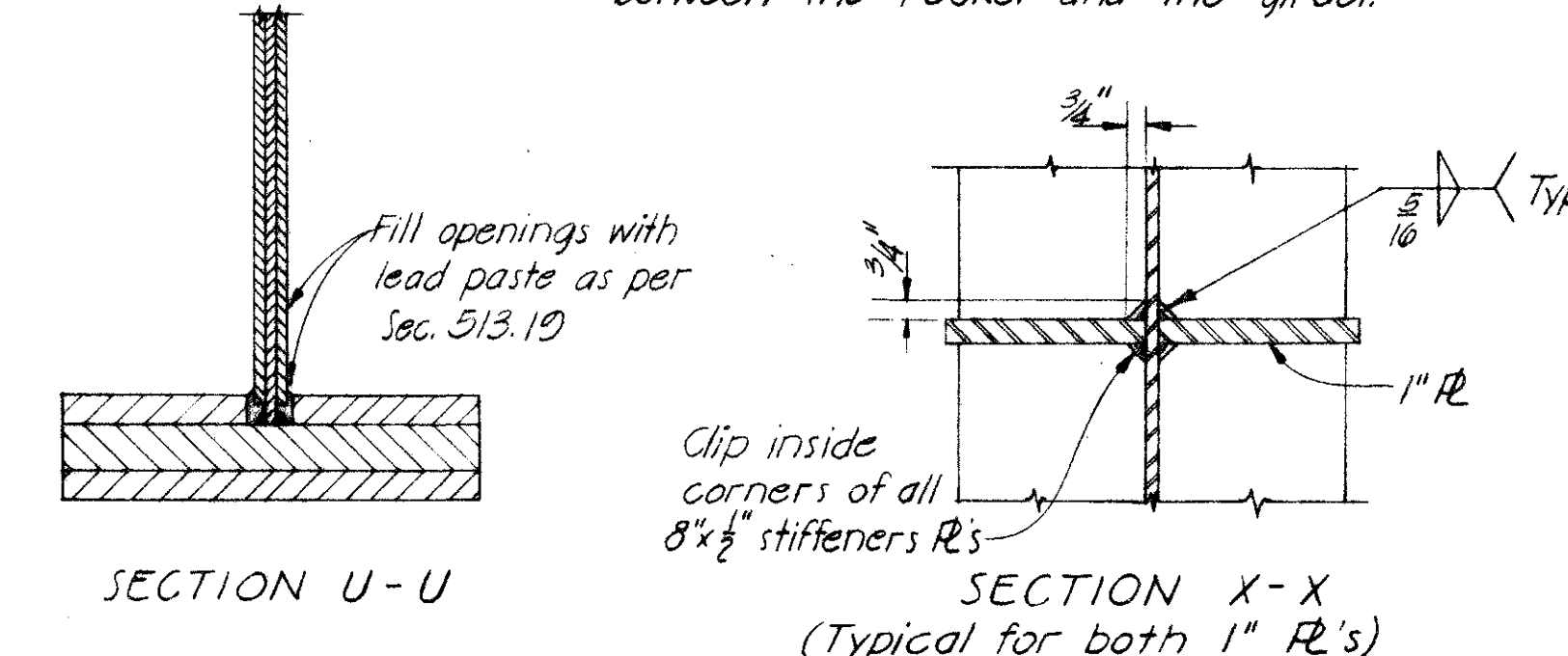
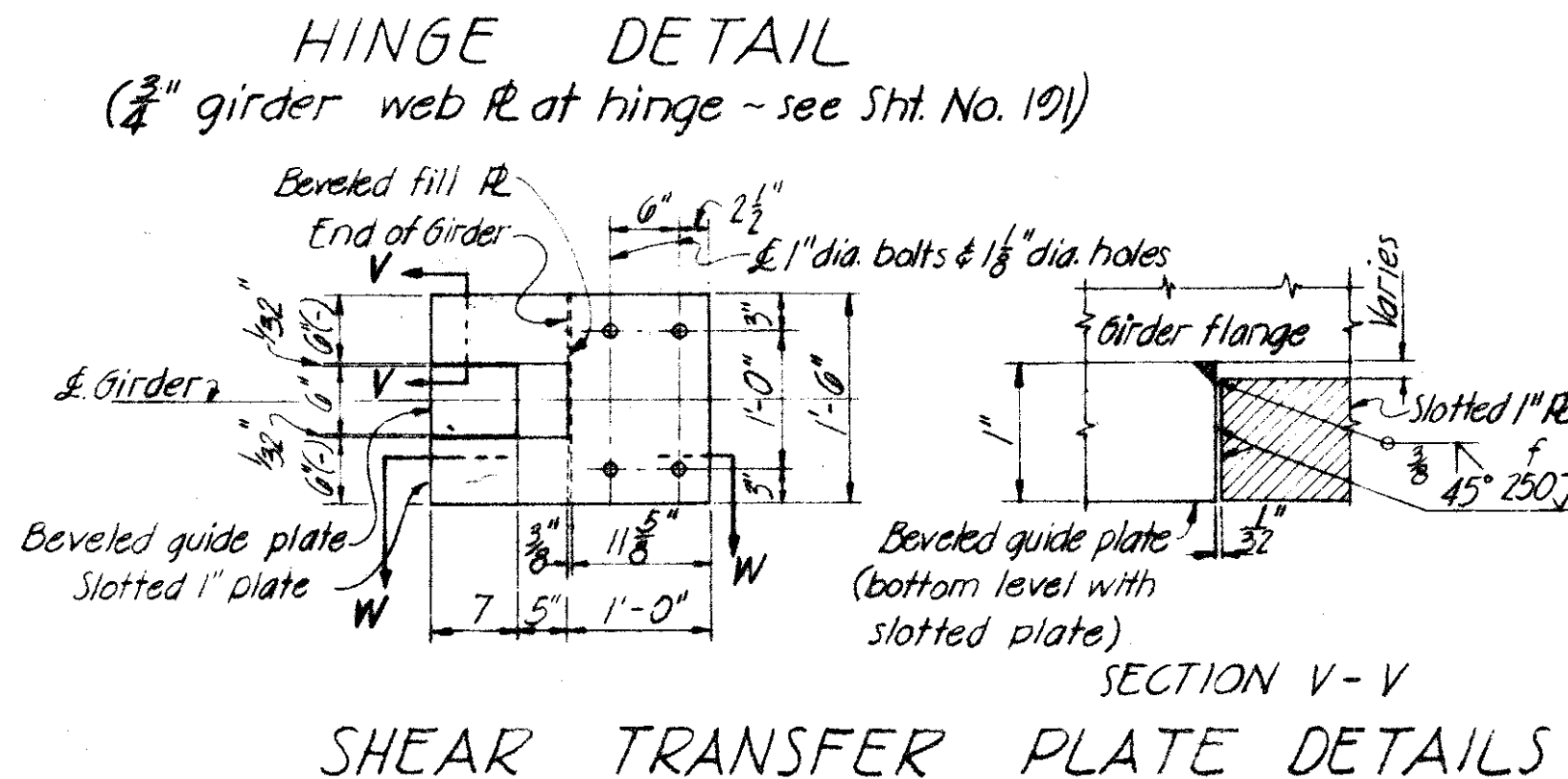
* Splice Pt in Span No. 3 and Span No. 4
Camber reference line is a chord between adjacent substructure bearing points.

BEARING UNIT		DIMENSIONS (inches)													Weight in lbs.	No. Req'd.
LOCATION	TYPE	A	B	C	D	F	G	H	K	L	M	R	T	Y		
Abutments	R-200	3	10	3 1/2	2 3/4	5/8	9	10 3/8	12	24	21	10 1/2	2 1/4	1 7/10	605	16
Exp Hinges	R-200(M)	3	12	3 1/2	2 3/4	5/8	9	16	12	17	15	10 1/2	1 7/8	1 7/10	431	16
Piers #2 & #4	R-450	4	26	4	4	1	15	23 3/8	17	30	27	15	4	1 15/16	1785	16
Piers #1, #3, #5	B-450	4	26	4	—	1	—	23 3/8	17	30	—	—	4	1 15/16	1530	24

R - designates structural steel rocker } for additional details see Standard
B - designates structural steel bolster } Drawing RB-1-55
*(M) - designates modification of R-200 to fit the hinge application.
HINGE ROCKER [R-200(M)] shall have a finish of 6000 at the bearing surfaces between the rocker and the girder.



All bolts 1/2" dia ASTM A325
112 bolts in flange splice
72 bolts in web splice
184 bolts total per splice



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SUPERSTRUCTURE DETAILS
Bridge No. Hen-6-16.79
U.S.G. over Maumee River
Henry County

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.M.	A.P.O.		J.C.O.			