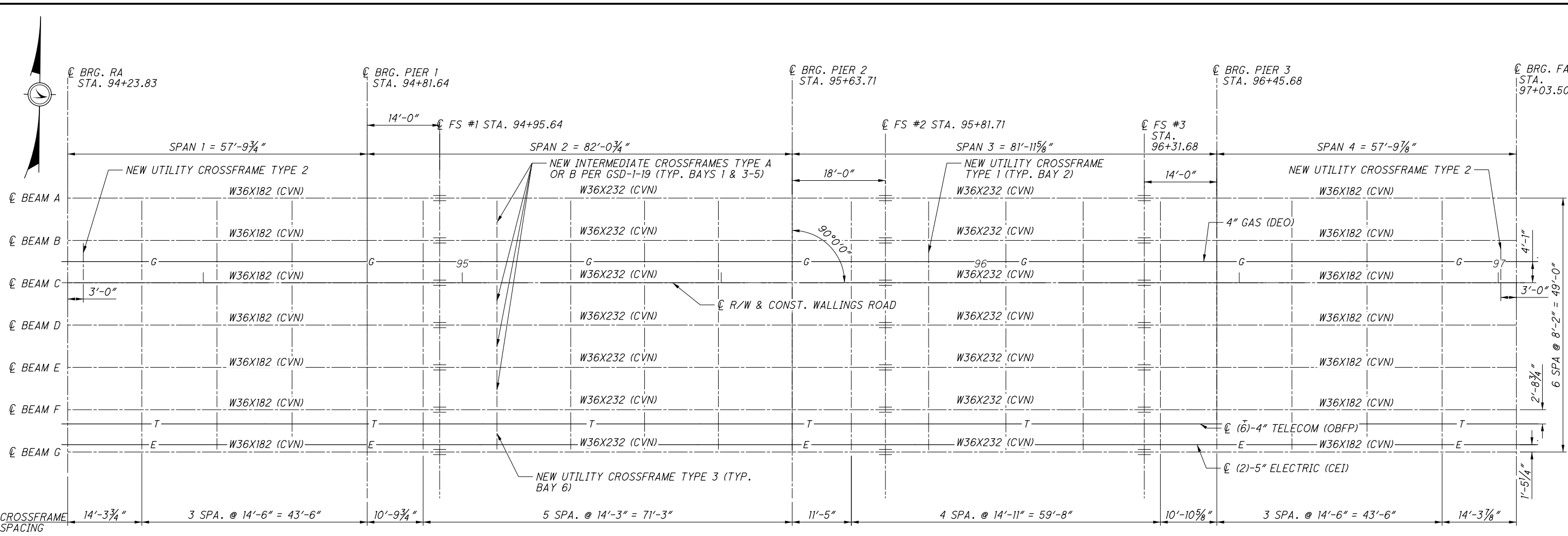
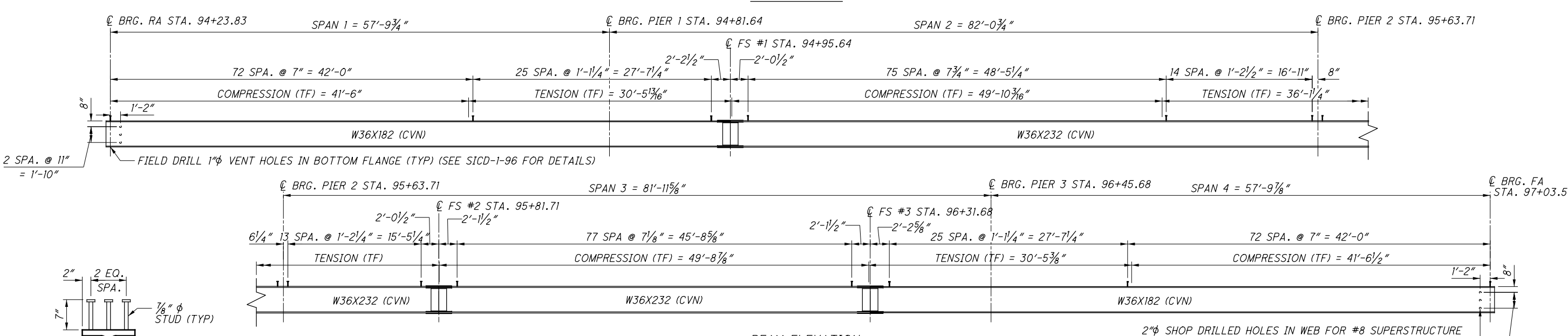


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FRAMING PLAN



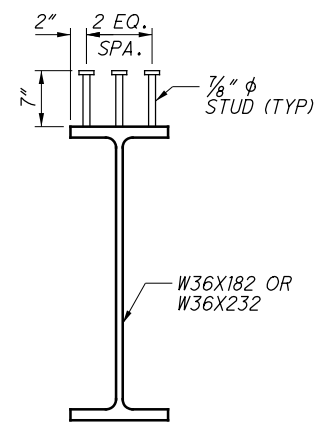
BEAM ELEVATION

- LEGEND:**
- RA - REAR ABUTMENT
  - FA - FORWARD ABUTMENT
  - FS - FIELD SPLICE
  - TF - TOP FLANGE

- UTILITY LEGEND:**
- CEI - CEI FIRST ENERGY
  - DEO - DOMINION ENERGY OHIO
  - OBFP - AT&T OHIO

- NOTES:**
1. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN C&M 711.01.
  2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

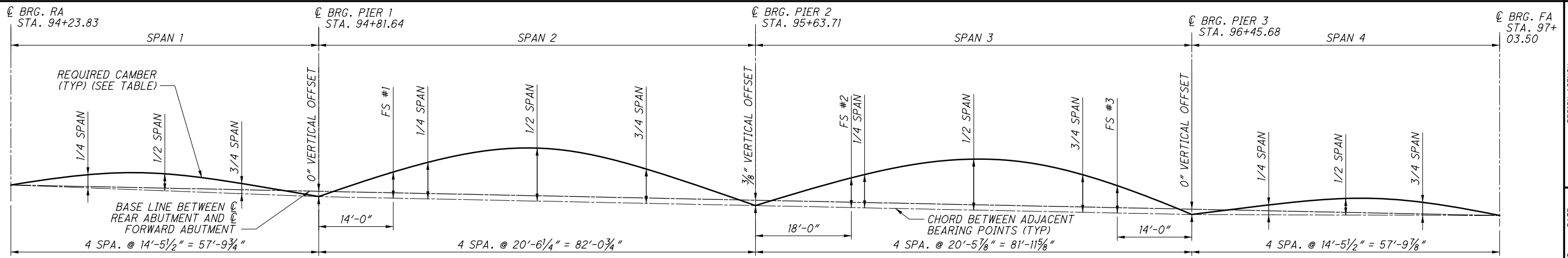
3. A MINIMUM OF 6" CLEAR SHALL BE MAINTAINED BETWEEN THE ENDS OF SPLICE PLATES AND SHEAR STUDS.
4. SHOP DRILLED HOLES IN BEAM WEBS TO BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, FOR PAYMENT.
5. SEE SHEET [35/42] FOR CROSSFRAME DETAILS.
6. WELDED SHEAR STUD CONNECTORS SHALL CONFORM TO AASHTO SECTIONS 10.38.2.3 & 10.38.2.4 AND CMS ITEM 513.



TYPICAL SHEAR CONNECTOR DETAIL

<p><b>FRAMING PLAN</b></p> <p>BRIDGE NO. CUY-77-0479 WALLINGS ROAD OVER I-77</p>	<p>DESIGN AGENCY OSBORN ENGINEERING CLEVELAND, OHIO</p>
<p>DESIGNED EJW</p> <p>CHECKED PJW</p>	<p>REVIEWED SMK</p> <p>DATE 04/01/22</p> <p>STRUCTURE FILE NUMBER 1805915</p>
<p>CUY-77-4.79</p> <p>PID No. 106239</p>	<p>26 / 42</p> <p style="font-size: 24px; border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">225 289</p>

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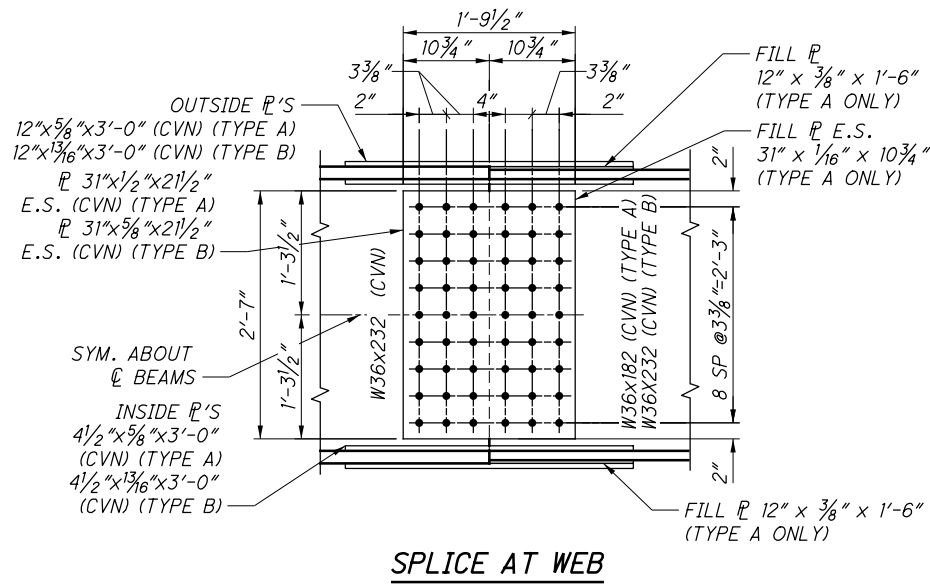


**CAMBER DIAGRAM**

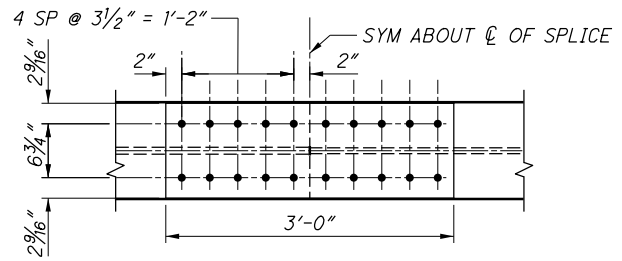
BEAM		DEFLECTION & CAMBER (IN)																				
		SPAN 1					SPAN 2					SPAN 3					SPAN 4					
		REAR ABUT.	0.25	0.50	0.75	PIER 1	FS #1	0.25	0.50	0.75	PIER 2	FS #2	0.25	0.50	0.75	FS #3	PIER 3	0.25	0.50	0.75	FWD. ABUT.	
BEAM A	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	1/4	1/8	0	1/4	3/8	9/16	5/16	0	5/16	5/16	9/16	3/8	1/4	0	1/8	1/4	1/4	1/4	0
	REQUIRED SHOP CAMBER	0	5/16	5/16	1/8	0	5/16	1/2	3/4	7/16	0	3/8	7/16	3/4	1/2	5/16	0	1/8	5/16	5/16	5/16	0
BEAM B	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	5/16	1/8	0	1/4	3/8	5/8	5/16	0	5/16	5/16	5/8	3/8	1/4	0	1/8	5/16	1/4	1/4	0
	REQUIRED SHOP CAMBER	0	5/16	3/8	1/8	0	5/16	1/2	13/16	7/16	0	3/8	7/16	13/16	1/2	5/16	0	1/8	3/8	5/16	5/16	0
BEAM C	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	5/16	1/8	0	1/4	3/8	5/8	5/16	0	5/16	5/16	5/8	3/8	1/4	0	1/8	5/16	1/4	1/4	0
	REQUIRED SHOP CAMBER	0	5/16	3/8	1/8	0	5/16	1/2	13/16	7/16	0	3/8	7/16	13/16	1/2	5/16	0	1/8	3/8	5/16	5/16	0
BEAM D	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO STAGED DECK PLACEMENT *	0	3/16	1/4	1/16	0	3/16	5/16	1/2	1/4	0	3/16	1/4	1/2	5/16	3/16	0	1/16	1/4	3/16	0	
	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	5/16	1/8	0	1/4	3/8	5/8	5/16	0	5/16	5/16	5/8	3/8	1/4	0	1/8	5/16	1/4	1/4	0
BEAM E	REQUIRED SHOP CAMBER	0	5/16	3/8	1/8	0	5/16	1/2	13/16	7/16	0	3/8	7/16	13/16	1/2	5/16	0	1/8	3/8	5/16	5/16	0
	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
	DEFLECTION DUE TO STAGED DECK PLACEMENT *	0	5/16	5/16	1/8	0	1/4	7/16	11/16	3/8	0	5/16	3/8	11/16	7/16	1/4	0	1/8	5/16	5/16	5/16	0
BEAM F	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	5/16	1/8	0	1/4	3/8	5/8	5/16	0	5/16	5/16	5/8	3/8	1/4	0	1/8	5/16	1/4	1/4	0
	REQUIRED SHOP CAMBER	0	5/16	3/8	1/8	0	5/16	1/2	13/16	7/16	0	3/8	7/16	13/16	1/2	5/16	0	1/8	3/8	5/16	5/16	0
	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0
BEAM G	DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/4	1/4	1/8	0	1/4	3/8	9/16	5/16	0	5/16	5/16	9/16	3/8	1/4	0	1/8	1/4	1/4	1/4	0
	REQUIRED SHOP CAMBER	0	5/16	5/16	1/8	0	5/16	1/2	3/4	7/16	0	3/8	7/16	3/4	1/2	5/16	0	1/8	5/16	5/16	5/16	0
	DEFLECTION DUE TO WEIGHT OF STEEL	0	1/16	1/16	0	0	1/16	1/8	3/16	1/8	0	1/16	1/8	3/16	1/8	1/16	0	0	1/16	1/16	1/16	0

\* DEFLECTIONS DUE TO STAGED DECK PLACEMENT ARE TEMPORARY DEFLECTIONS PRIOR TO CONNECTION OF CROSSFRAMES IN BAY D - E AND CONSTRUCTION OF THE CLOSURE POUR. THESE DEFLECTIONS ARE PROVIDED FOR THE STEEL FABRICATORS USE IN DETAILING CROSSFRAMES IN THE CLOSURE POUR BAY AND ARE NOT TO BE INCLUDED IN STEEL BEAM CAMBER CALCULATIONS.

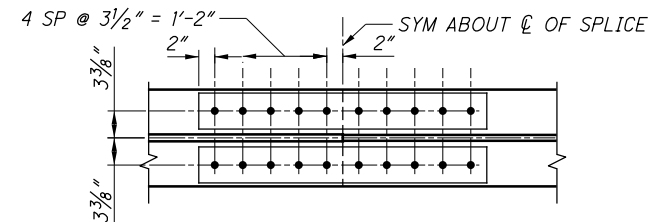
DESIGNED	EIW	CHECKED	PJW
DRAWN	EIW	REVISOR	-
REVIEWED	SMK	STRUCTURE FILE NUMBER	1805915
DATE	04/01/22	DESIGN AGENCY	OSBORN ENGINEERING CLEVELAND, OHIO
BRIDGE NO. CUY-77-0479		DEFLECTION & CAMBER	
WALLINGS ROAD OVER I-77		PID No. 106239	
27/42		226 289	



**SPLICE AT WEB**



**SPLICE AT FLANGE - OUTSIDE**



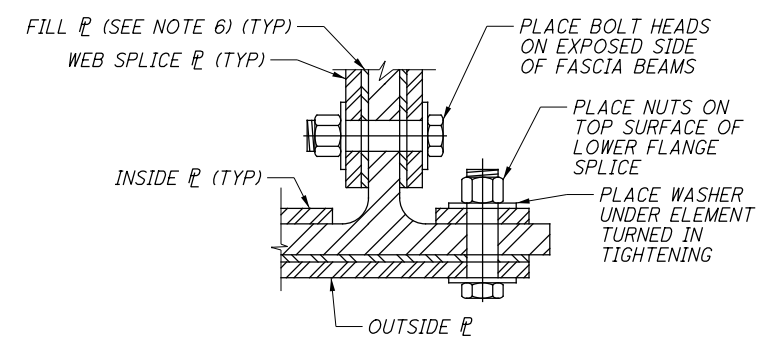
**SPLICE AT FLANGE - INSIDE**

**NOTES**

1. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL BE ASTM A709, GRADE 50.
2. ALL SHAPES AND PLATES OF SPLICES SHALL BE DESIGNATED (CVN) AND SHALL MEET THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. HIGH STRENGTH BOLTS SHALL BE 1/8" DIAMETER A325 UNLESS OTHERWISE NOTED.
4. FABRICATION AND ASSEMBLY: BEAM ENDS AT SPLICES SHALL BE CUT AND FIT AS PER PLAN. THE OPENING BETWEEN BEAM ENDS AFTER ASSEMBLY SHALL NOT EXCEED 1/4".
5. BOLT ALLOWABLE STRESS IS BASED ON AASHTO'S VALUES FOR CLASS A CONTACT SURFACE, STANDARD HOLE TYPE.
6. PROVIDE FILL PLATES IN ACCORDANCE WITH 513.14 WHERE REQUIRED TO COMPENSATE FOR DIFFERENCES IN THICKNESS IN FLANGES AND WEBS OF ABUTTING ELEMENTS.

**LEGEND**

E.S. - EACH SIDE



**PARTIAL BEAM SPLICE SECTION**

**BEAM SPLICE DETAILS (PER SPLICE)**

TYPE	BEAM	FLANGE SPLICE (CVN)			FILL PLATES		WEB SPLICE (CVN)	
		OUTSIDE (2 REQ'D)	INSIDE (4 REQ'D)	FLANGE BOLTS (NO.)	FLANGE (2 REQ'D)	WEB (2 REQ'D)	WEB PLATES (2 REQ'D)	WEB BOLTS (NO.)
A	W36X182 TO W36X232	12" X 5/8" X 3'-0"	4 1/2" X 5/8" X 3'-0"	40	12" X 3/8" X 1'-6"	31" X 1/16" X 10 3/4"	31" X 1/2" X 21 1/2"	54
B	W36X232 TO W36X232	12" X 13/16" X 3'-0"	4 1/2" X 13/16" X 3'-0"	40	-	-	31" X 5/8" X 21 1/2"	54