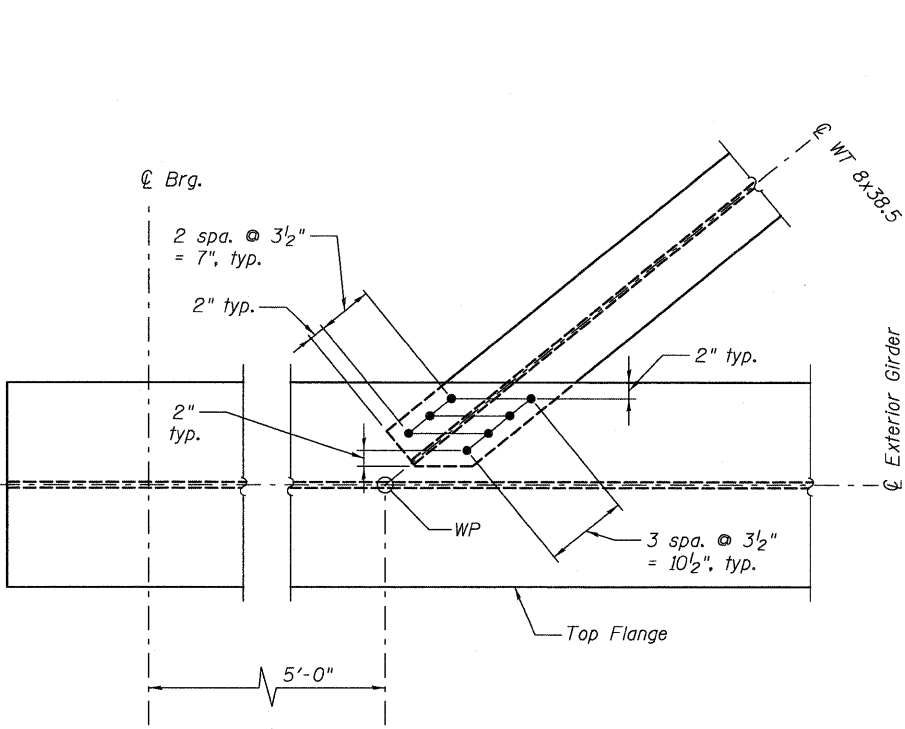
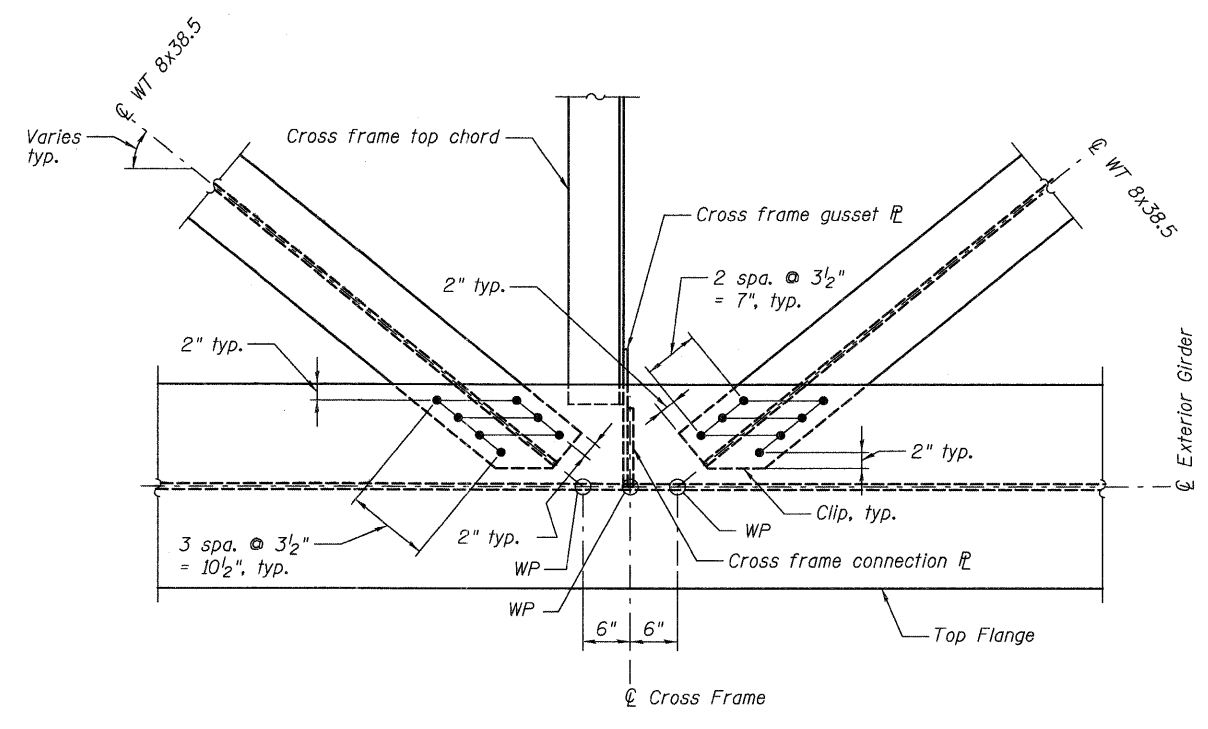


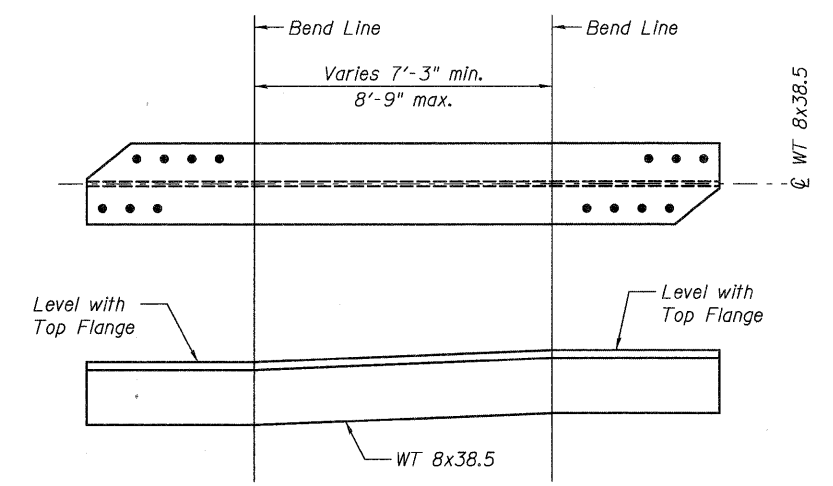
**DETAIL 1**  
TOP LATERAL BRACING CONNECTION AT INTERIOR GIRDER



**DETAIL 2**  
TOP LATERAL BRACING CONNECTION NEAR ABUTMENTS



**DETAIL 3**  
TOP LATERAL BRACING CONNECTION AT EXTERIOR GIRDER



**TOP LATERAL BRACING BEND DETAIL**

**NOTES:**

1. All bolted top lateral bracing connections shall be High Strength AASHTO M164 Type 3, 1"  $\phi$  bolts in 1 1/4"  $\phi$  holes, except in painted areas. In painted areas, top lateral bracing connections shall be High Strength AASHTO M164 Type 1, mechanically galvanized 1"  $\phi$  bolts in 1 1/4"  $\phi$  holes.
2. Class B contact surface, for slip resistance, shall be provided for all lateral bracing connections.
3. All bolts shall be sized to exclude threads from shear planes, see Bolt Detail on sheet 63 of 133.
4. Two hardened washers required for each set of oversized holes.
5. To compensate for cross slope and difference in adjacent girder elevations, bend top lateral bracing member, as shown in detail.

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 jmgus

 HDR ENGINEERING, INC.	USER NAME = jmgus FILE NAME = 0600345-16A91-059-FRD.DGN PLOT SCALE = NONE PLOT DATE = 3/18/2011	DESIGNED - BWC CHECKED - LGP DRAWN - HG CHECKED - BSK	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>STEEL DETAILS - LATERAL BRACING</b> <b>STRUCTURE NO. 060-0345</b> BRIDGE SHEET NO. 59 OF 133 SHEETS	F.A.I. RTE. = 270 SECTION = 60-1B-1	COUNTY = MADISON	TOTAL SHEETS = 712 SHEET NO. = 438	CONTRACT NO. 76A91 ILLINOIS FED. AID PROJECT