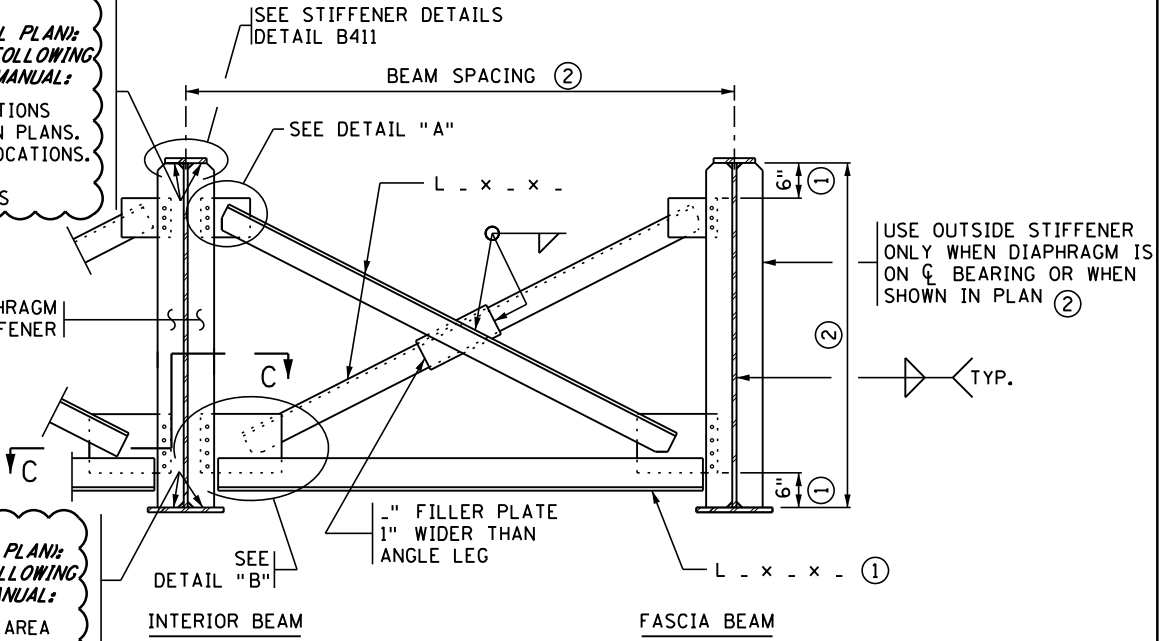
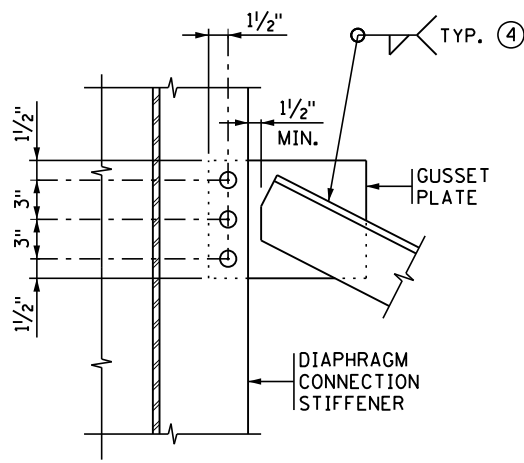


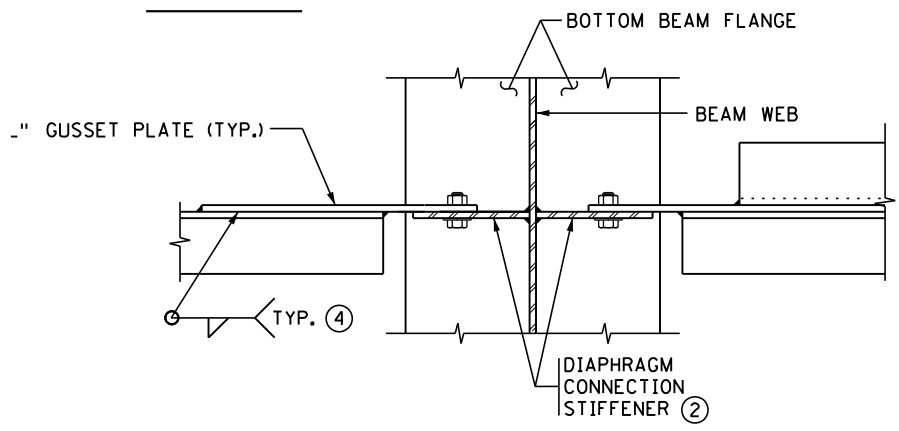
**DESIGNER NOTE**  
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);  
 DESIGNER TO CHOOSE ONE OF THE FOLLOWING  
 NOTES PER MnDOT LRFD DESIGN MANUAL:  
 TIGHT FIT. USE BOLTED CONNECTIONS  
 (SEE DETAIL B410) IN AREA "A" ON PLANS.  
 WELD BOTH SIDES AT ALL OTHER LOCATIONS.  
 OR  
 TIGHT FIT. WELD BOTH SIDES



**DESIGNER NOTE**  
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);  
 DESIGNER TO CHOOSE ONE OF THE FOLLOWING  
 NOTES PER MnDOT LRFD DESIGN MANUAL:  
 TIGHT FIT (3). WELD BOTH SIDES IN AREA  
 "A" ON PLANS. USE BOLTED CONNECTIONS  
 (SEE DETAIL B410) AT ALL OTHER LOCATIONS.  
 OR  
 TIGHT FIT (3). WELD BOTH SIDES



DETAIL "A"

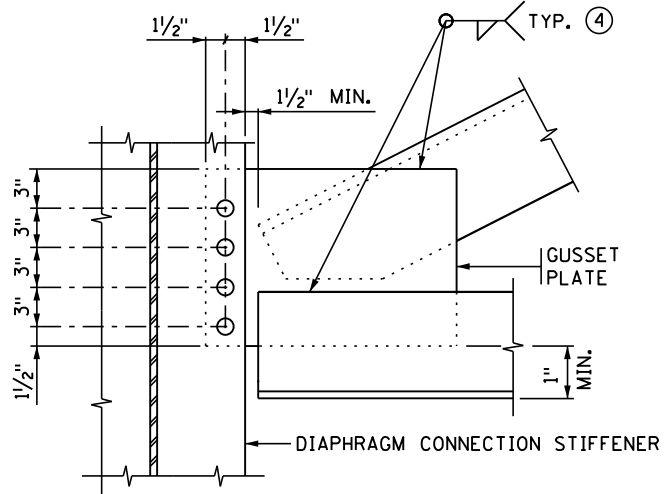


SECTION C-C

**DESIGNER NOTE**  
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);  
 DESIGNER TO SPECIFY GUSSET PLATE THICKNESS,  
 1/2" MINIMUM. FILLER PLATE THICKNESS TO MATCH GUSSET.

**NOTES:**

- PROVIDE STEEL IN ACCORDANCE WITH SPEC. 3309.
- (1) DIAPHRAGMS MAY BE PLACED LEVEL PROVIDED MINIMUM CLEARANCES ARE MET. FOR DIAPHRAGMS LOCATED BENEATH DECK JOINT, ORIENT FLANGES OF CROSS FRAME MEMBERS AWAY FROM THE DECK JOINT.
- (2) SEE BRIDGE FRAMING PLAN AND GIRDER ELEVATIONS FOR ADDITIONAL INFORMATION.
- (3) MILL TO BEAR AT BEARING STIFFENERS.
- (4) MINIMUM TOTAL WELD LENGTH EQUAL TO 4 TIMES NOMINAL ANGLE SIZE.



DETAIL "B"

APPROVED: MARCH 26, 2009  
  
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA  
 DEPARTMENT OF TRANSPORTATION  
**CROSS FRAME INTERMEDIATE DIAPHRAGM**  
 (FOR STRAIGHT STEEL BEAMS)

REVISED  
 11-03-2015  
 06-12-2019

DETAIL NO.  
**B407**