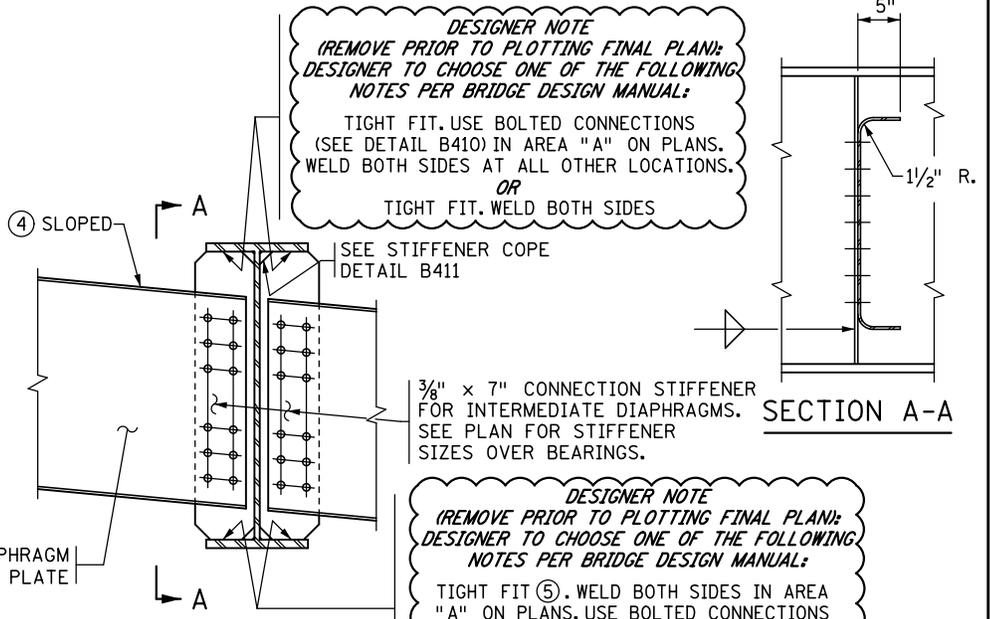


OUTSIDE STIFFENER TO BE USED ONLY AT BEARINGS
FASCIA BEAM
 AT PIER AND INTERMEDIATE DIAPHRAGMS

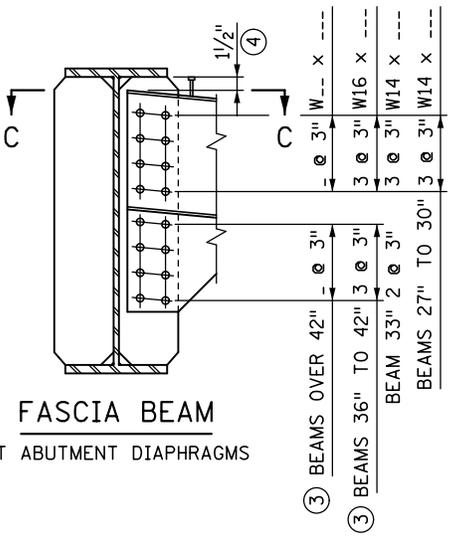
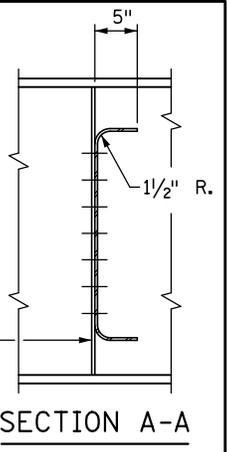


INTERIOR BEAM
 AT PIER AND INTERMEDIATE DIAPHRAGMS

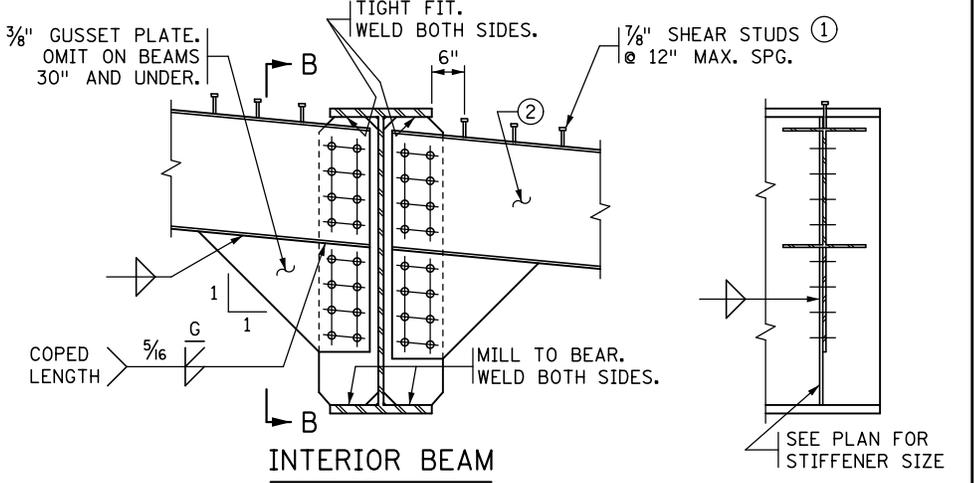
DESIGNER NOTE
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);
 DESIGNER TO CHOOSE ONE OF THE FOLLOWING NOTES PER BRIDGE DESIGN MANUAL:
 TIGHT FIT. USE BOLTED CONNECTIONS (SEE DETAIL B410) IN AREA "A" ON PLANS. WELD BOTH SIDES AT ALL OTHER LOCATIONS.
 OR
 TIGHT FIT. WELD BOTH SIDES

SEE STIFFENER COPE DETAIL B411
 3/8" x 7" CONNECTION STIFFENER FOR INTERMEDIATE DIAPHRAGMS. SEE PLAN FOR STIFFENER SIZES OVER BEARINGS.

DESIGNER NOTE
 (REMOVE PRIOR TO PLOTTING FINAL PLAN);
 DESIGNER TO CHOOSE ONE OF THE FOLLOWING NOTES PER BRIDGE DESIGN MANUAL:
 TIGHT FIT (5). WELD BOTH SIDES IN AREA "A" ON PLANS. USE BOLTED CONNECTIONS (SEE DETAIL B410) AT ALL OTHER LOCATIONS.
 OR
 TIGHT FIT (5). WELD BOTH SIDES



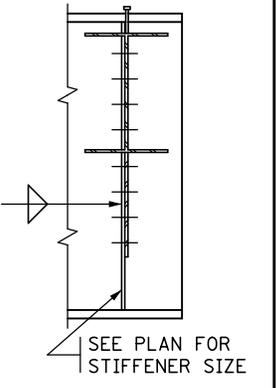
FASCIA BEAM
 AT ABUTMENT DIAPHRAGMS



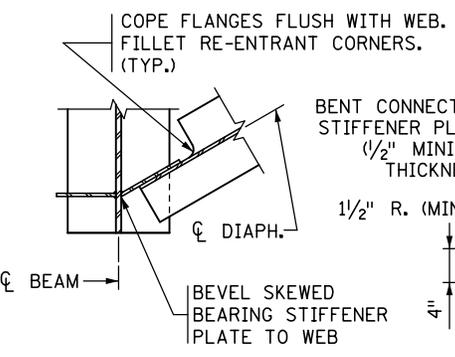
INTERIOR BEAM
 AT ABUTMENT DIAPHRAGMS

TIGHT FIT. WELD BOTH SIDES.
 3/8" GUSSET PLATE. OMIT ON BEAMS 30" AND UNDER.
 7/8" SHEAR STUDS (1) @ 12" MAX. SPG.

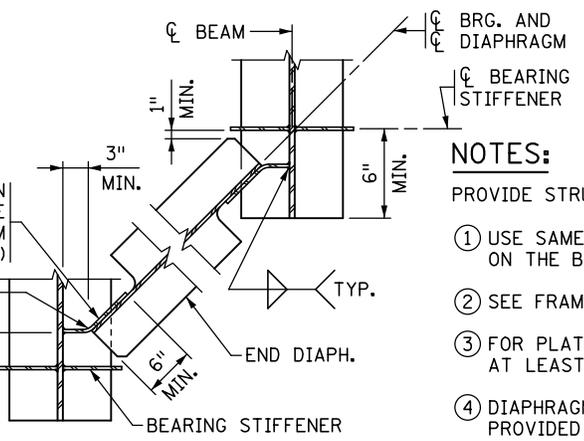
MILL TO BEAR. WELD BOTH SIDES.



SECTION B-B
 SEE PLAN FOR STIFFENER SIZE



SECTION C-C
 SKEWS TO 30° MAX.



SECTION C-C
 SKEWS OVER 30° TO 60°

- NOTES:**
- PROVIDE STRUCTURAL STEEL PER SPEC. 3309.
 - (1) USE SAME SHEAR STUD HEIGHT AS USED ON THE BEAMS.
 - (2) SEE FRAMING PLAN FOR SIZE OF DIAPHRAGM.
 - (3) FOR PLATE GIRDERS, PROVIDE END DIAPHRAGMS AT LEAST 1/2 THE BEAM HEIGHT.
 - (4) DIAPHRAGMS MAY BE PLACED LEVEL, PROVIDED MINIMUM CLEARANCES ARE MET.
 - (5) MILL TO BEAR FOR BEARING STIFFENERS.

APPROVED: MARCH 26, 2009

Ramirez
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION

BOLTED DIAPHRAGMS
 (FOR STEEL BEAMS)

REVISED
 01-05-2017

DETAIL NO.

B402