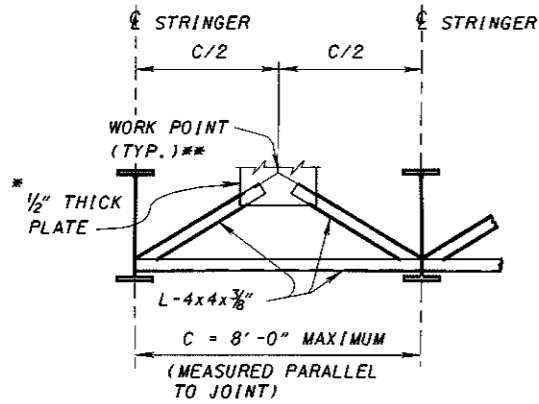


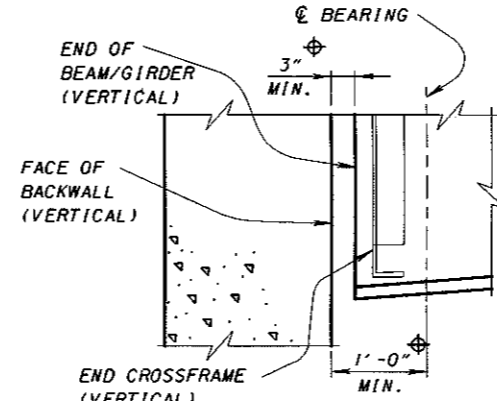
NOTE: THE WELDING SYMBOLS SHOWN ABOVE ARE TYPICAL FOR ALL SIMILAR LOCATIONS OF THIS END CROSSFRAME. THE WELDED ATTACHMENT DETAILS AND TYPICAL DIMENSIONS SHOWN ARE TYPICAL FOR THE CROSSFRAMES DETAILED BELOW.



END CROSSFRAME DETAILS

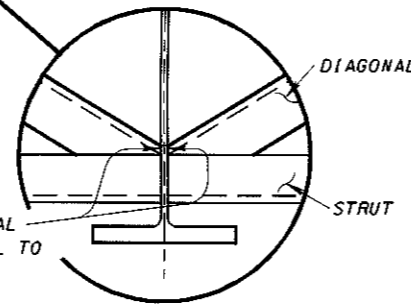
* - THE 1/2" THICK PLATE IS PART OF THE EXPANSION JOINT SYSTEM. SEE THE APPROPRIATE EXPANSION JOINT STANDARD BRIDGE DRAWING FOR DETAILS INCLUDING MATERIAL AND COATING REQUIREMENTS.

** - THE WORK LINE SHALL BE THE INSIDE FACE OF THE PROTRUDING ANGLE LEG EXTENDED AS SHOWN.

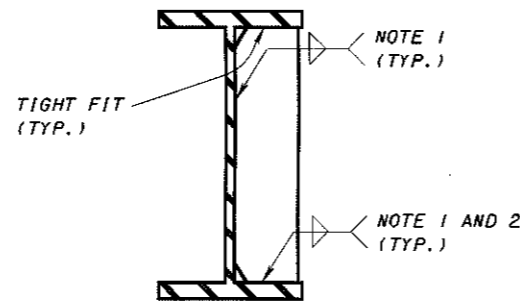


ELEVATION OF BEAM/GIRDER

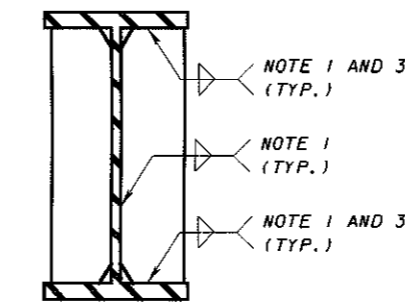
DESIGNER TO ESTABLISH DIMENSION REQUIRED, MEASURED NORMAL TO BACKWALL. DIMENSION AS ABOVE UNLESS CONTRACT CRITERIA/PLANS SHOW OTHERWISE.



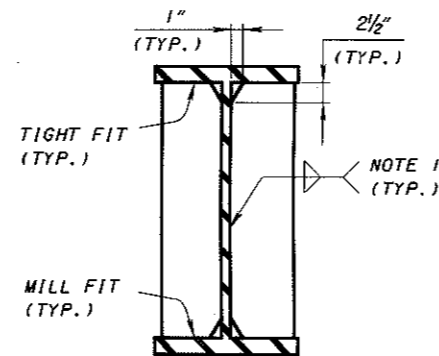
BEVEL HORIZONTAL LEG OF DIAGONAL TO INTERSECT BEAM WEB AS SHOWN



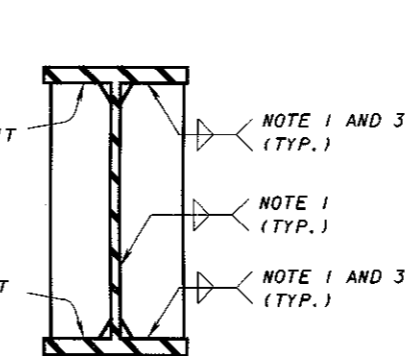
INTERMEDIATE STIFFENER



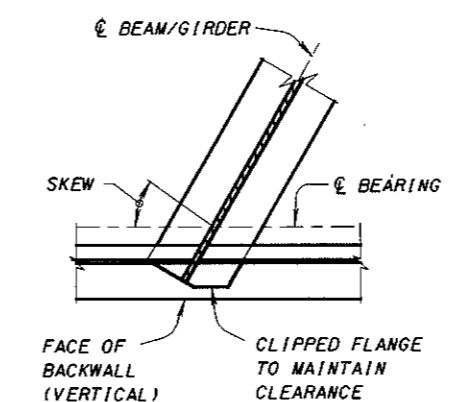
INTERMEDIATE STIFFENER WITH CROSSFRAMES



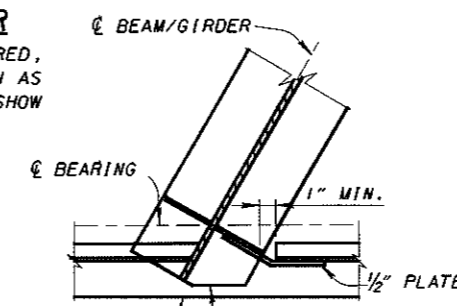
BEARING STIFFENER



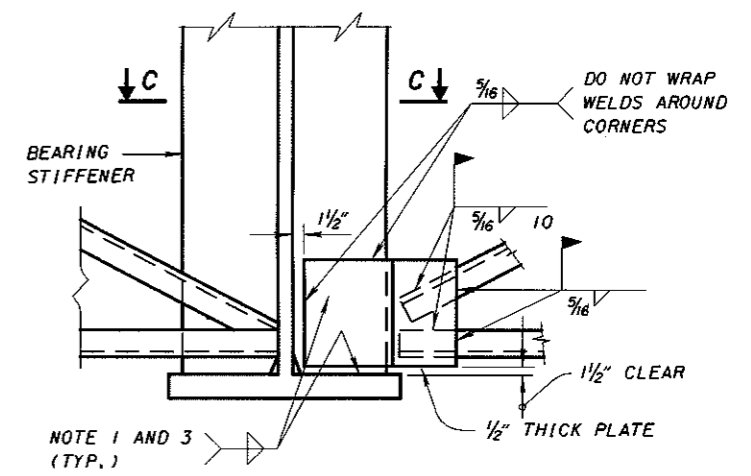
BEARING STIFFENER WITH CROSSFRAMES



SECTION B-B



SECTION C-C



BEAM/GIRDER END

END CROSSFRAME FOR SKEWED BRIDGES WHERE BEARING STIFFENERS INTERFERE WITH END CROSSFRAMES.

END CROSSFRAME NOTES:

MATERIAL: ALL END CROSSFRAME MATERIAL SHALL BE A709 GRADE 50 EXCEPT WHEN THE SUPERSTRUCTURE MAIN STEEL IS A709 GRADE 50W, THEN THE END CROSSFRAME MATERIAL SHALL ALSO BE A709 GRADE 50W.

BEAM/GIRDER ENDS: FOR STRUCTURES ON GRADE, THE BEAM/GIRDER ENDS SHALL BE FABRICATED TO BE VERTICAL AFTER ERECTION. A THREE (3) INCH MINIMUM CLEARANCE AT 60° F SHALL BE MAINTAINED BETWEEN THE VERTICAL ENDS OF THE BEAMS/GIRDERS AND THE VERTICAL FACE OF THE BACKWALL UNLESS THE CONTRACT CRITERIA/PLANS SHOW OTHERWISE.

WORK POINTS: WORK POINTS SHALL BE COORDINATED BETWEEN EXPANSION JOINT AND STRUCTURAL STEEL SUPPLIERS TO ASSURE FIT UP AT ALL DESIGN LOCATIONS.

STIFFENER NOTES:

- NOTES FOR STIFFENER DETAILS:**
- UNLESS THE CONTRACT CRITERIA/PLANS REQUIRES LARGER WELDS, PROVIDE A 1/4" WELD WHEN THE THICKER PLATE IS 3/4" OR LESS AND 5/16" WELD WHEN THE THICKER PLATE IS GREATER THAN 3/4".
 - PER CMS 513 & SS863, INTERMEDIATE STIFFENERS, WHICH ARE NOT USED IN PAIRS, REQUIRE FILLET WELDS TO THE COMPRESSION FLANGE ONLY.
 - PER CMS 513 & SS863, STIFFENERS TO WHICH CROSSFRAMES CONNECT REQUIRE FILLET WELDS TO BOTH FLANGES.

BEARING STIFFENER: BEARING STIFFENER SHALL BE VERTICAL AFTER ERECTION.

WELDS: STIFFENER TO BEAM/GIRDER WELDS SHALL BE TERMINATED AS GIVEN BELOW:

- STIFFENER TO FLANGE WELDS: 1/4" ± 1/8" FROM EACH EDGE OF THE STIFFENER.
- STIFFENER TO WEB WELDS: 1/2" ± 1/4" FROM EACH END OF THE STIFFENER.

MILL FIT: THE BEARING ENDS OF THE BEARING STIFFENER SHALL BE FLUSH AND SQUARE WITH THE WEB AND SHALL HAVE AT LEAST 75 PERCENT OF THIS AREA IN CONTACT WITH THE INNER SURFACE OF THE FLANGE.

TIGHT FIT: A TIGHT FIT IS DEFINED AS ONE IN WHICH THE STIFFENER AND FLANGE ARE IN PHYSICAL CONTACT OVER SOME PORTION OF THE END OF THE STIFFENER AND HAVING NO GAP IN EXCESS OF 1/16 INCH.