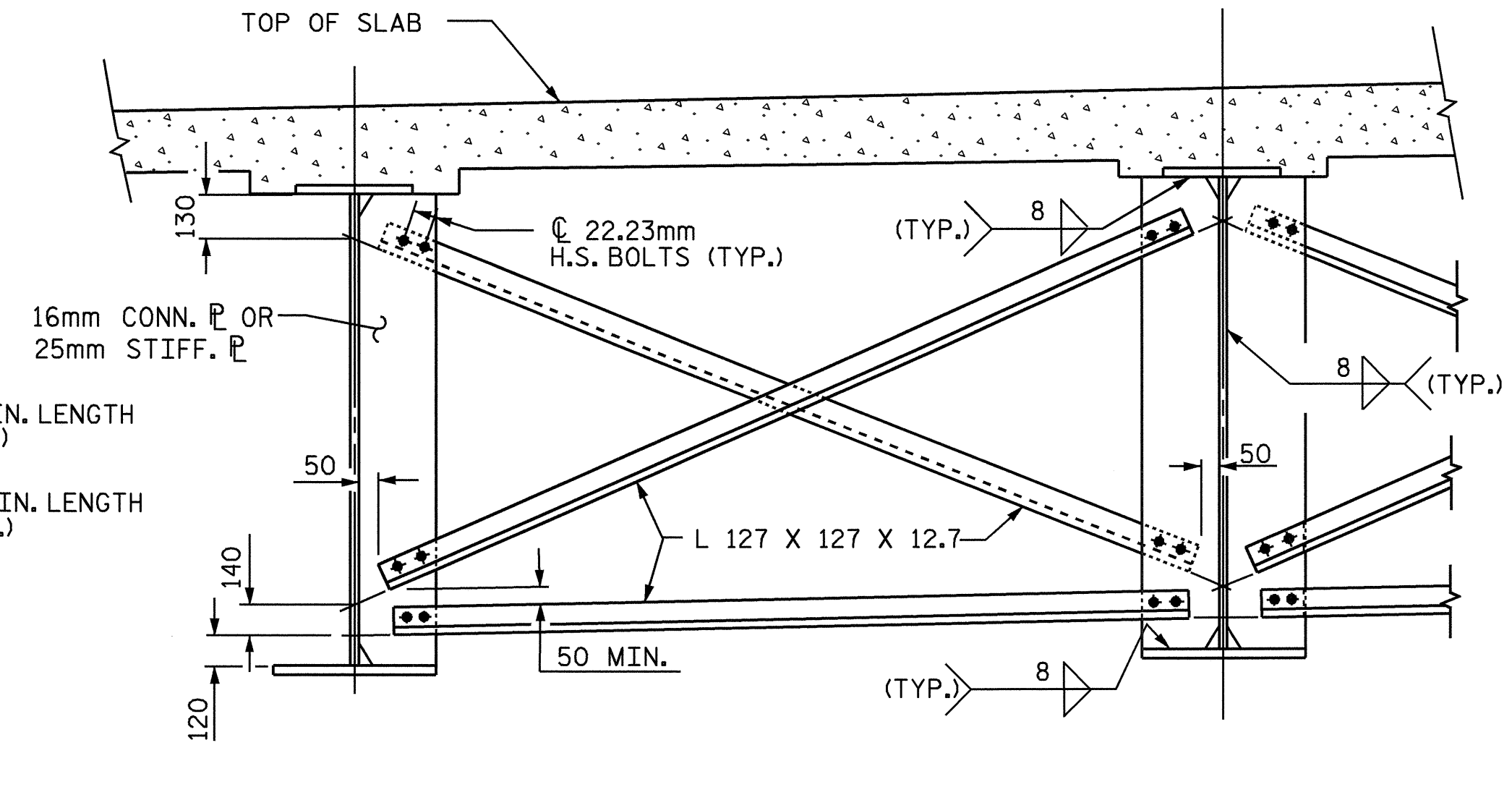
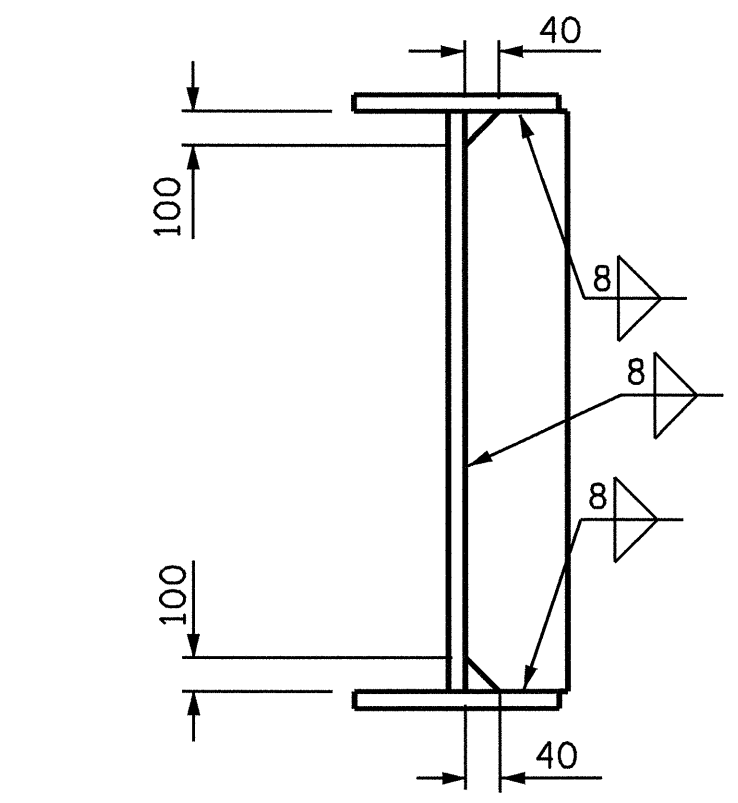


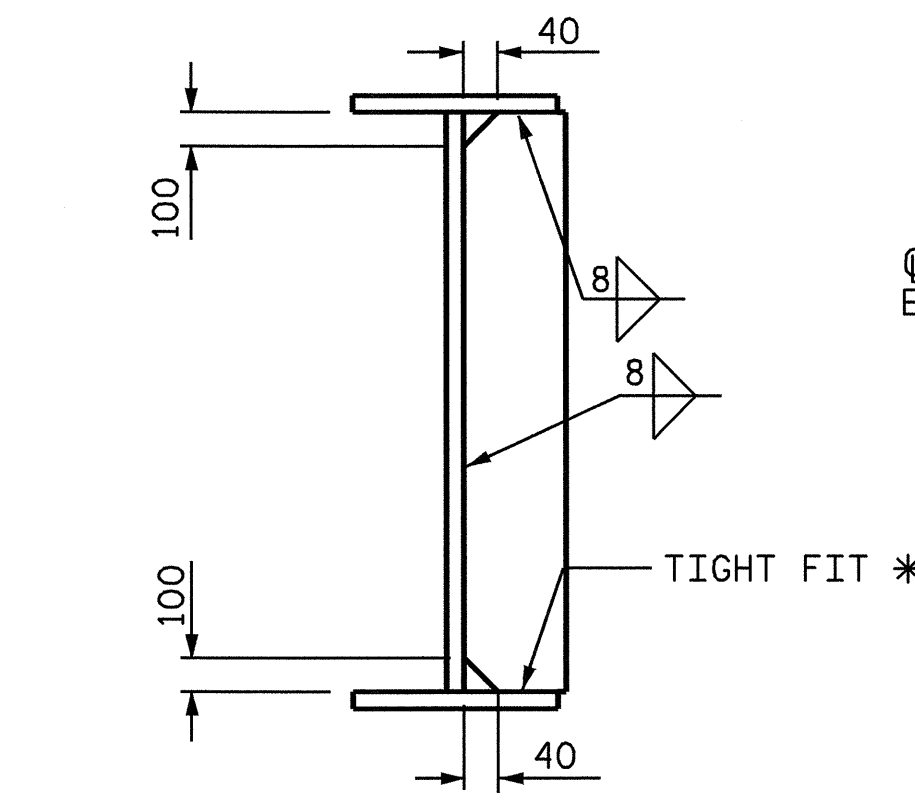
TYPICAL END BENT DIAPHRAGM (D1)



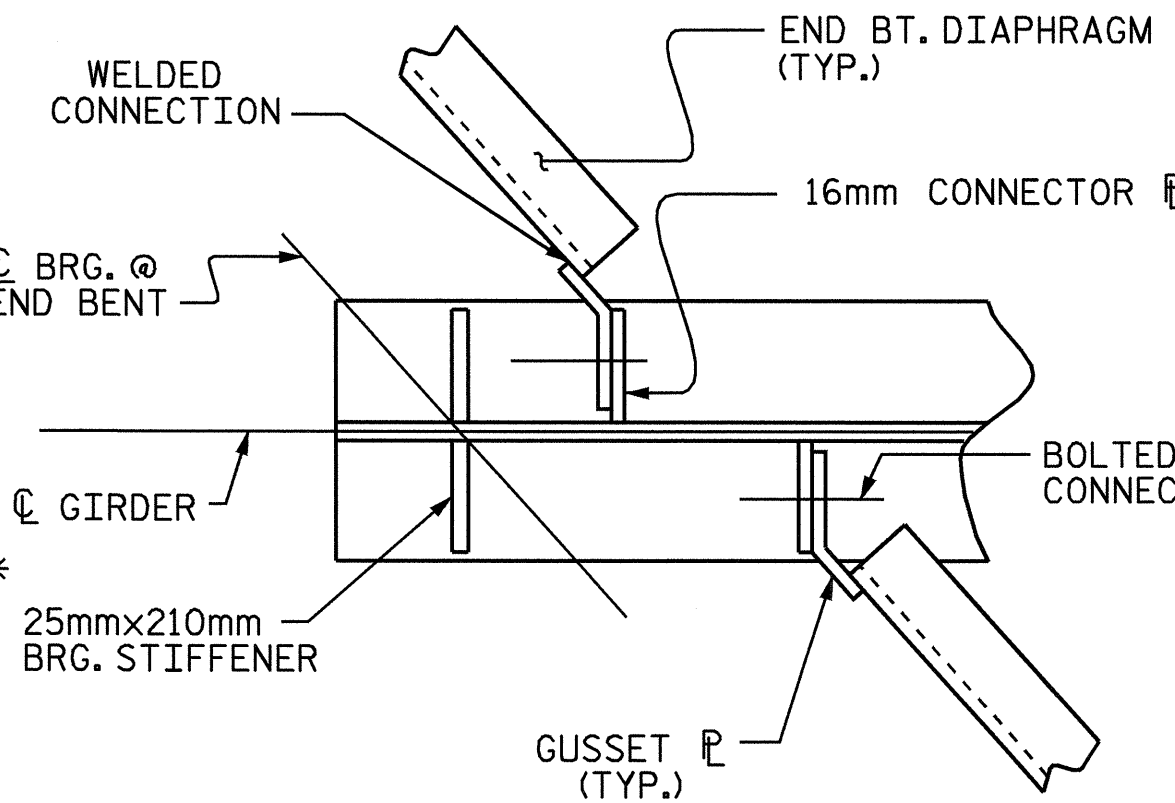
TYPICAL INTERMEDIATE DIAPHRAGM (D2)



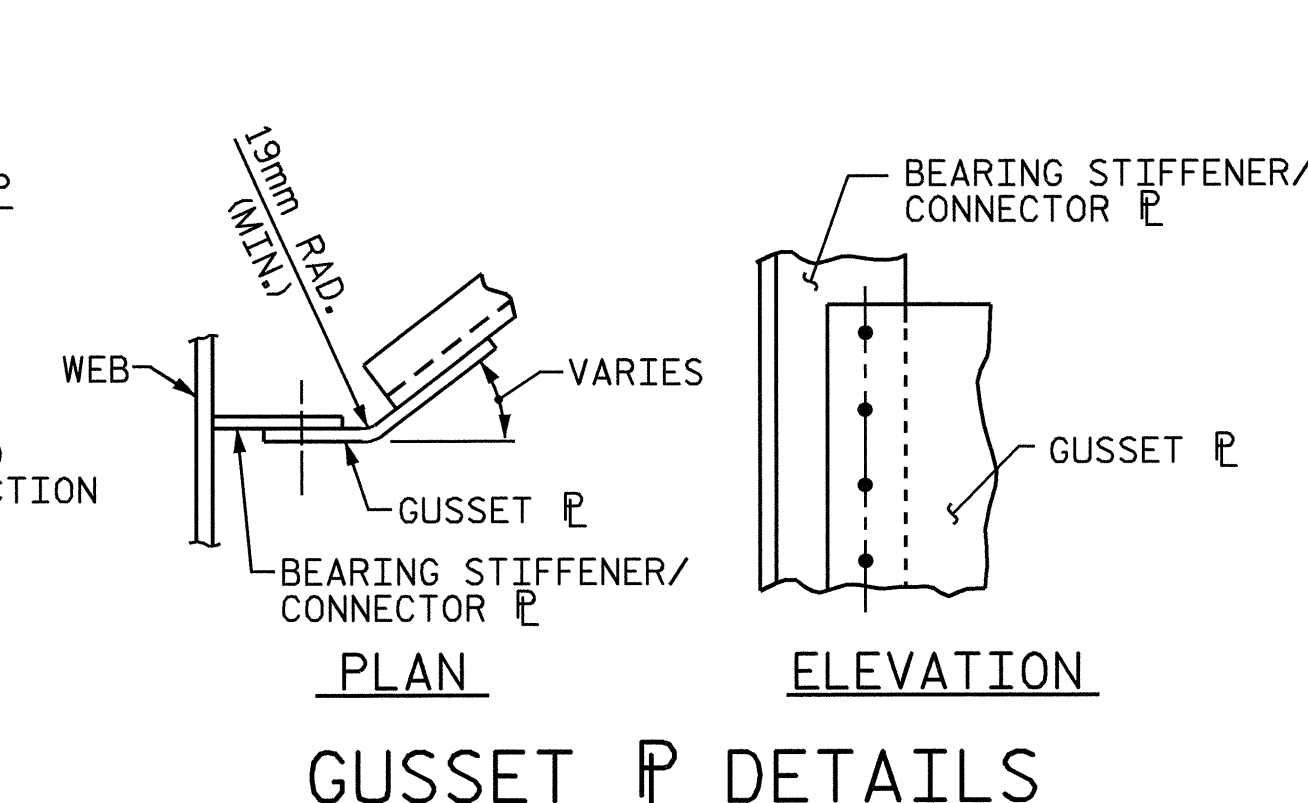
CONNECTOR PLATE



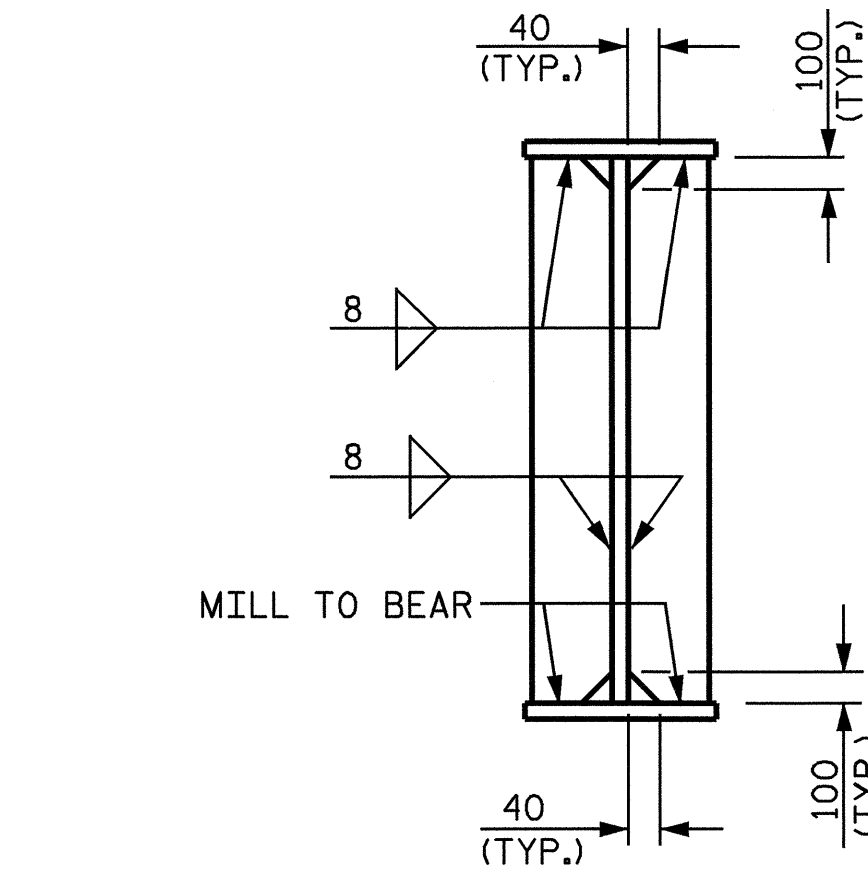
INTERMEDIATE STIFFENER



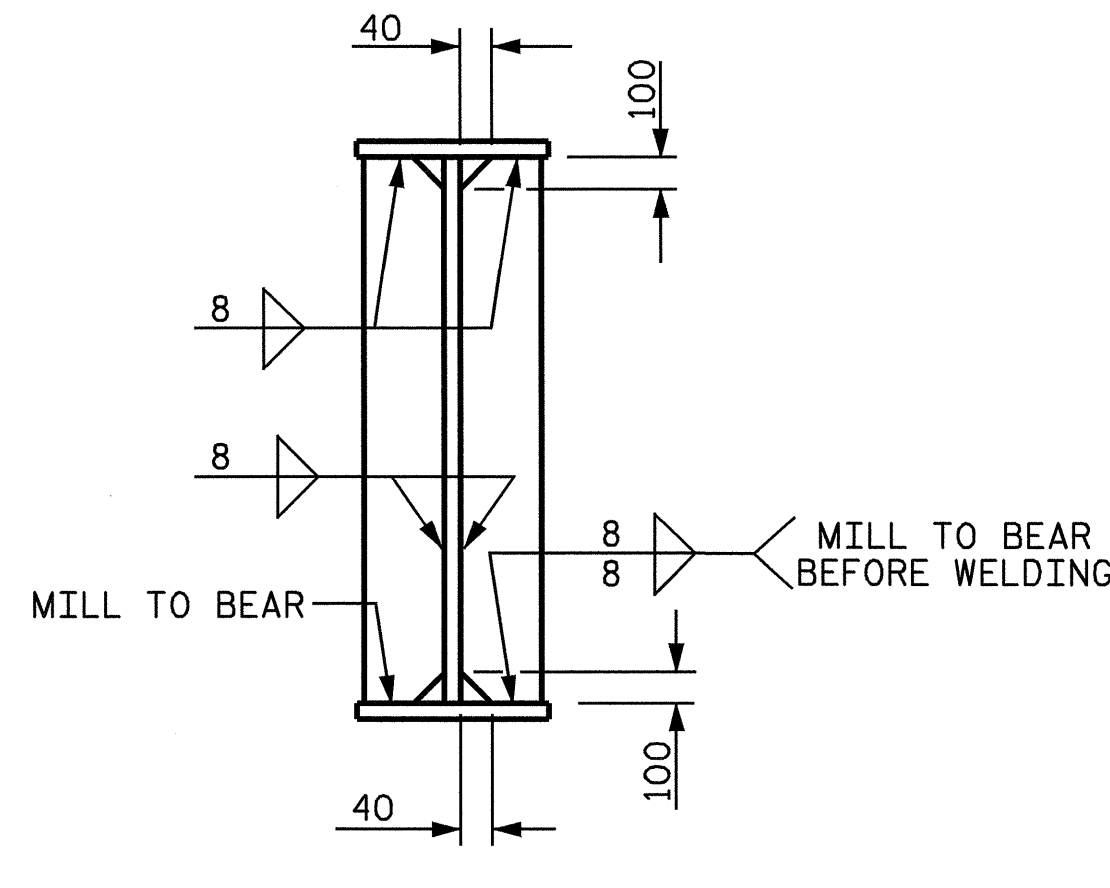
CONNECTOR PLATE DETAIL



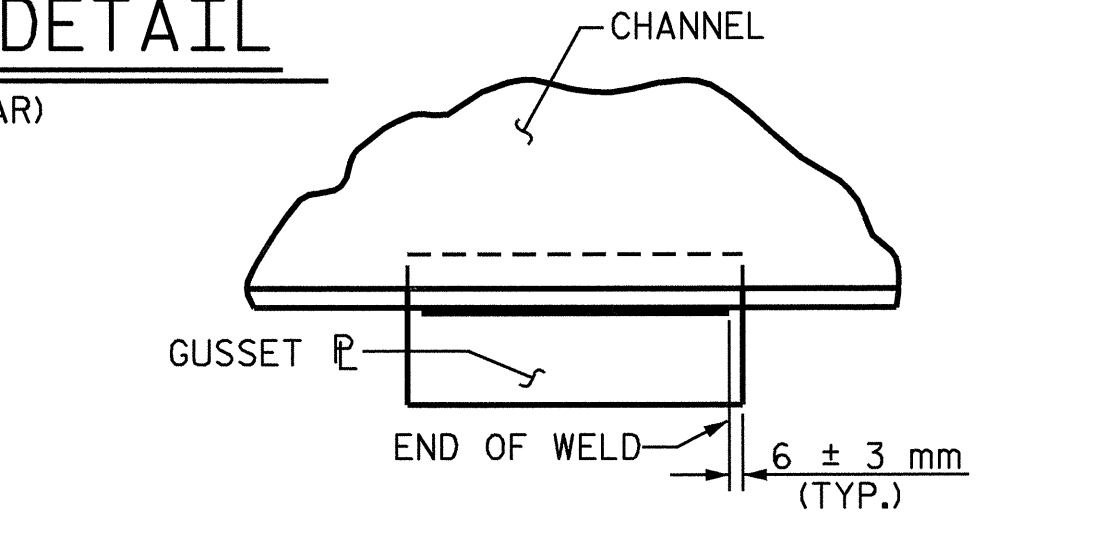
GUSSET PLATE DETAILS



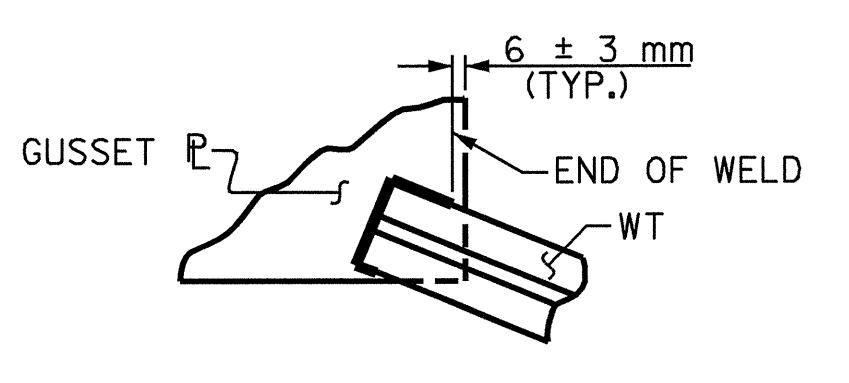
BEARING STIFFENER



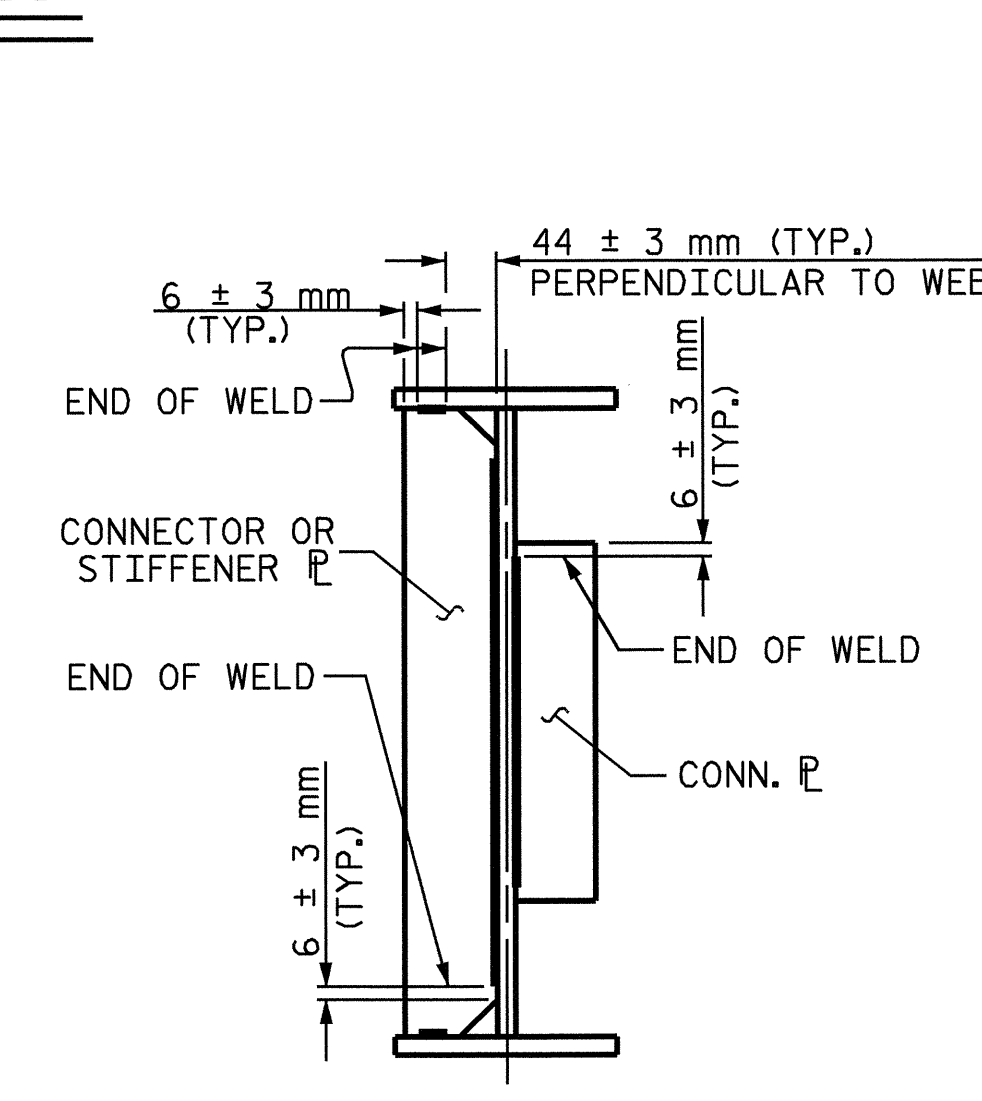
BEARING STIFFENER / CONNECTOR PLATE



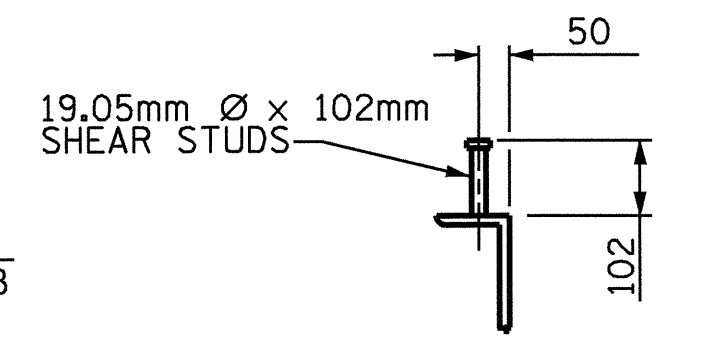
TYPICAL GUSSET PLATE CONNECTION



TYPICAL "TEE" TO GUSSET PLATE CONNECTION



TYPICAL STIFFENER OR CONNECTOR PLATE CONNECTIONS



SHEAR STUD DETAILS

PROJECT NO. R-0977A
 CHEROKEE COUNTY
 STATION: 24+60.500 -LC1B-

SHEET 3 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 STRUCTURAL STEEL
 DETAILS

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

Professional Engineer Seal
 T. H. FANG
 1/11/2005

DRAWN BY : T.H. FANG/MAA DATE : 6-04
 CHECKED BY : B.N. BARODAWALA DATE : 8-10-04

II-JAN-2005 15:07
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 lsuttt

STR.#3

NOTES

ALL STRUCTURAL STEEL EXCEPT SPECIFIED FLANGE LOCATIONS SHALL BE AASHTO M270 GRADE 345W STEEL AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-7 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

STRUCTURAL STEEL AT SPECIFIED FLANGE LOCATIONS SHALL BE GRADE HSP 485W STEEL AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-7 OF THE STANDARD SPECIFICATIONS. SEE SPECIAL PROVISIONS FOR HIGH PERFORMANCE STEEL (HPS).

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL, UNLESS OTHERWISE NOTED.

ALL FIELD CONNECTIONS TO BE 22.23mm DIA. HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED.

TENSION ON THE AASHTO M164 BOLTS SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS IN ACCORDANCE WITH ARTICLE 440-10 OF THE STANDARD SPECIFICATIONS.

BEARING STIFFENERS ARE TO BE PLACED NORMAL TO THE WEB OF THE GIRDER AND SHALL BE PLUMB.

SHOP SPLICES ARE PERMITTED TO LIMIT THE MAXIMUM REQUIRED FLANGE PIECE LENGTHS TO 18 METERS AND WEB PIECE LENGTHS TO 14 METERS. PERMITTED FLANGE AND WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 4.5 METERS OF MAXIMUM DEAD LOAD DEFLECTION (NOR WITHIN 4.5 METERS OF INTERMEDIATE BEARINGS OF CONTINUOUS UNITS). KEEP 600mm MINIMUM BETWEEN WEB AND FLANGE SHOP SPLICES. KEEP 150mm MINIMUM BETWEEN CONNECTOR PLATE OR TRANSVERSE STIFFENER WELDS AND WEB OR FLANGE SHOP SPLICES.

STUDS ON GIRDERS MAY BE SHIFTED UP TO 25mm IF NECESSARY TO CLEAR FLANGE SPLICE WELD.

ENDS OF GIRDERS SHALL BE PLUMB.

AT THE CONTRACTOR'S OPTION, THE DIAPHRAGM WITH THE WELDED GUSSET PLATES MAY BE USED IN LIEU OF THE DIAPHRAGM WITH BOLTED ANGLES AT NO ADDITIONAL COST TO THE DEPARTMENT.

BEARING STIFFENER MAY REQUIRE COPING IF WIDER THAN BOTTOM FLANGE TO AVOID INTERFERENCE WITH THE ANCHOR BOLT.

THE TOP FLANGE LATERAL BRACING DETAILED IS PROVIDED TO ASSIST IN LIMITING GIRDER DISPLACEMENT DUE TO WIND FORCES DURING ERECTION. IT SHALL BE INSTALLED IMMEDIATELY AFTER ERECTION OF EACH PAIR OF GIRDER SECTIONS AT THE BENTS. THE DEPARTMENT ASSUMES NO LIABILITY IN THE ERECTION OR STABILIZATION OF THE GIRDERS.