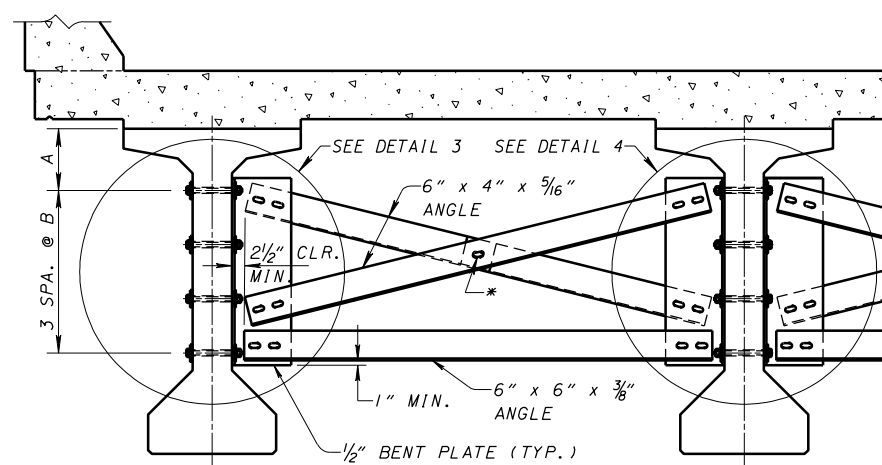
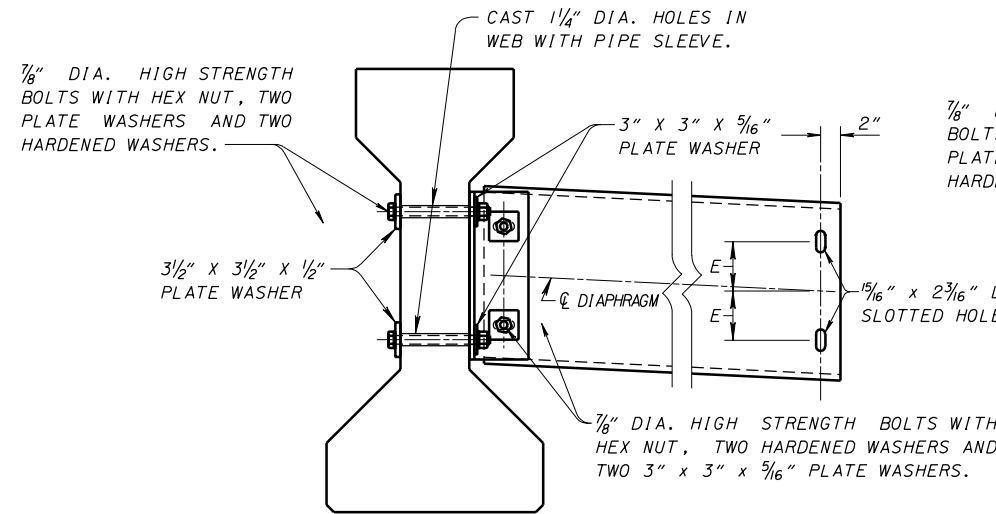


**INTERMEDIATE DIAPHRAGM**  
(AASHTO TYPES 2, 3 AND 4)



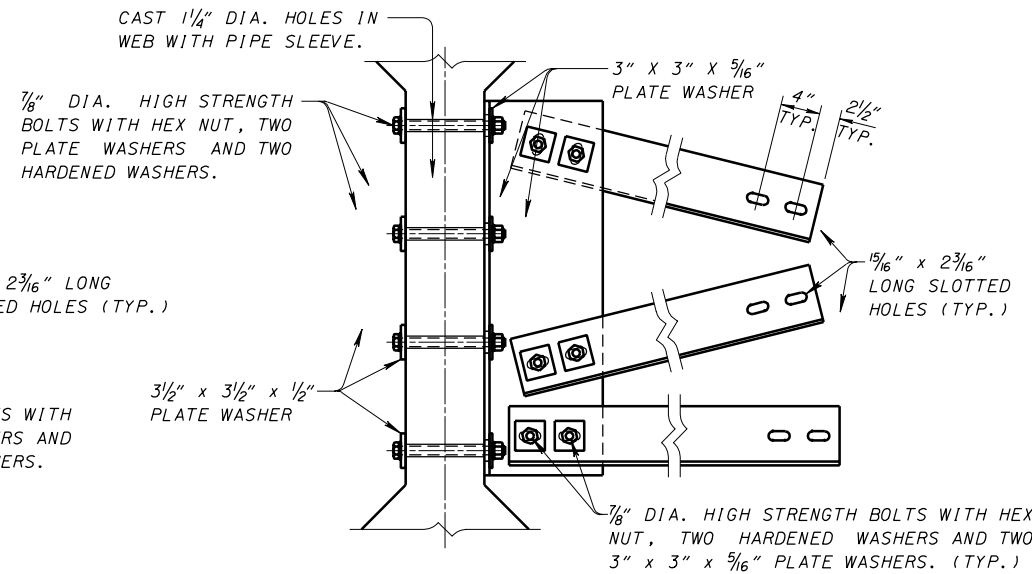
**INTERMEDIATE DIAPHRAGM**  
(MODIFIED AASHTO TYPE 4 BEAMS)

\* - 15/16" x 2 3/16" LONG SLOTTED HOLE IN EACH ANGLE AND 1/2" FILL PLATE



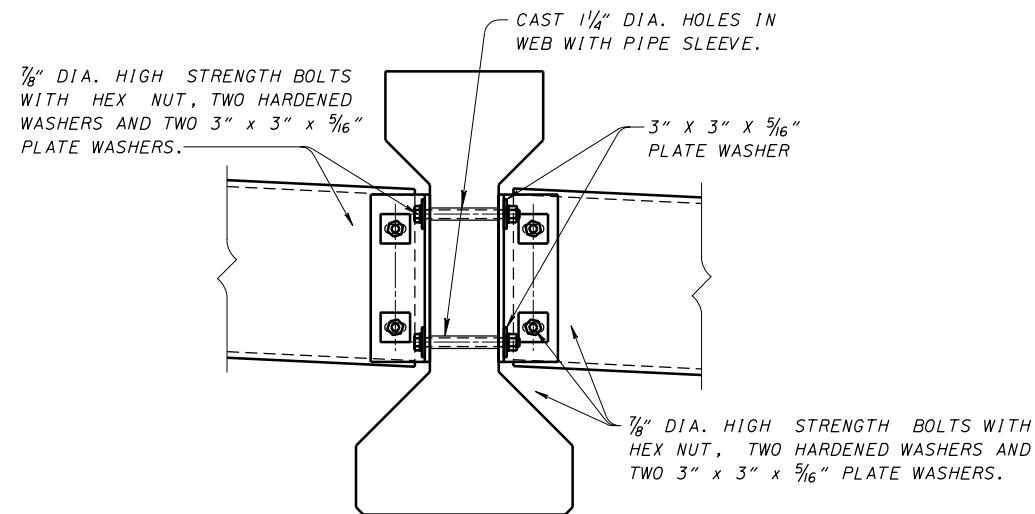
**DETAIL 1**

DETAIL 1 SHALL BE USED AT THE FASCIA BEAM AND ALL INTERIOR BEAMS WHEN THE SKEW ANGLE EXCEEDS 10°.



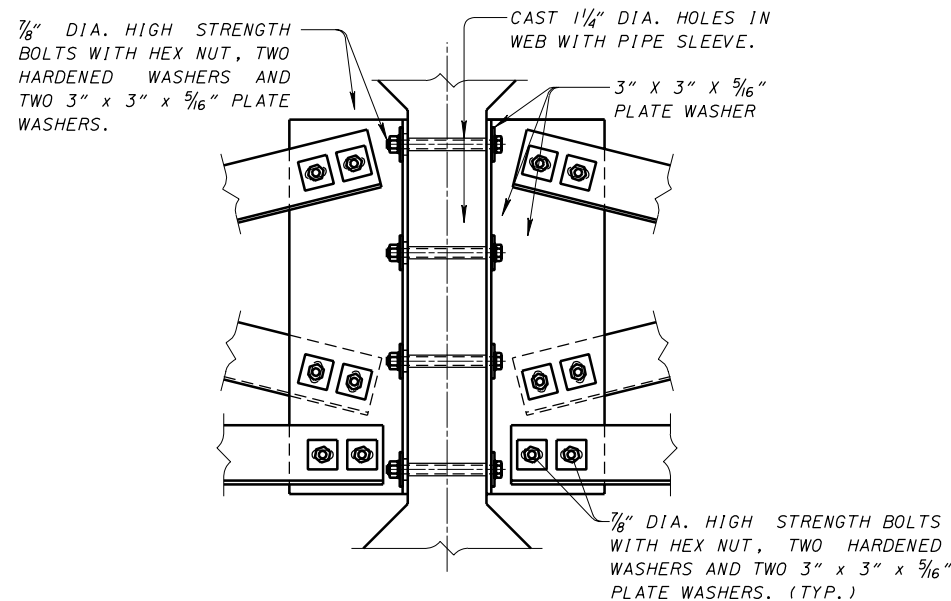
**DETAIL 3**

DETAIL 3 SHALL BE USED AT THE FASCIA BEAM AND ALL INTERIOR BEAMS WHEN THE SKEW ANGLE EXCEEDS 10°.



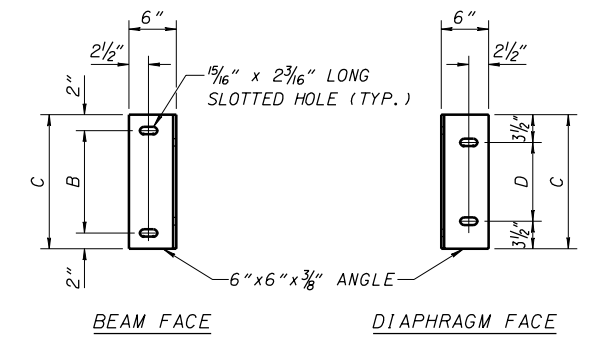
**DETAIL 2**

DETAIL 2 SHALL BE USED AT INTERIOR BEAMS WHEN THE SKEW ANGLE IS 10° OR LESS.

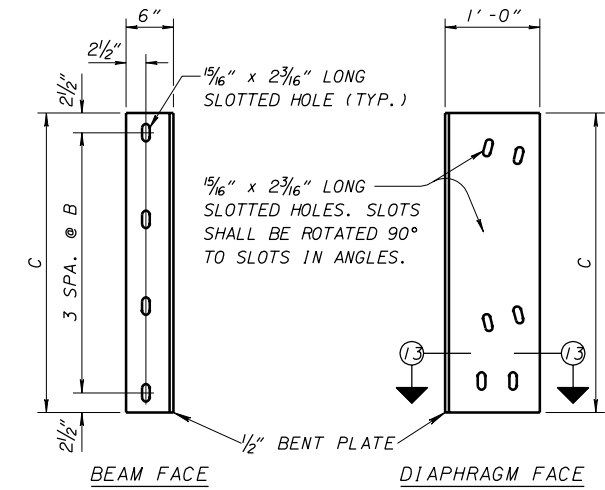


**DETAIL 4**

DETAIL 4 SHALL BE USED AT INTERIOR BEAMS WHEN THE SKEW ANGLE IS 10° OR LESS.



**DIAPHRAGM SUPPORT**  
(FOR 36", 45" & 54" BEAMS)



**DIAPHRAGM SUPPORT**  
(FOR 60", 66" & 72" BEAMS)



**SECTION 13-13**

**DIMENSIONS**

BEAM HEIGHT	A	B	C	D	E
36"	1'-0"	9"	1'-1"	6"	3"
45"	1'-2 1/2"	1'-1"	1'-5"	10"	5"
54"	1'-5"	1'-5"	1'-9"	1'-2"	7"
60"	1'-0 1/2"	9"	2'-8"	-	-
66"	1'-0 1/2"	11"	3'-2"	-	-
72"	1'-0 1/2"	1'-1"	3'-8"	-	-

**NOTES**

ALL STRUCTURAL STEEL, INCLUDING BOLTS, NUTS AND WASHERS, SHALL MEET THE FABRICATION AND ERECTION REQUIREMENTS SPECIFIED IN 513. THE DEPARTMENT WILL CONSIDER THESE COSTS TO BE INCIDENTAL TO ITEM 515, INTERMEDIATE DIAPHRAGMS.

ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 36 OR 50, GALVANIZED ACCORDING TO 711.02.

ALL BOLTS ARE 7/8" DIA. ASTM A325, TYPE 1. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO 711.02.

LOCATE BOLT HOLES IN THE I-BEAM WEBS TO AVOID PRESTRESS PRESTRESSING STRANDS.

DESIGN AGENCY: OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION: 09-07-99

ADMINISTRATOR: Brad Fogwell

REVISIONS: 10-20-00 (LW), 07-19-02 (SAM), 07-18-03 (SAM)

REVIEWED: WTL, PS/D-1-99

STANDARD: PRESTRESSED CONCRETE I-BEAM BRIDGE DETAILS

DATE: 09-07-99