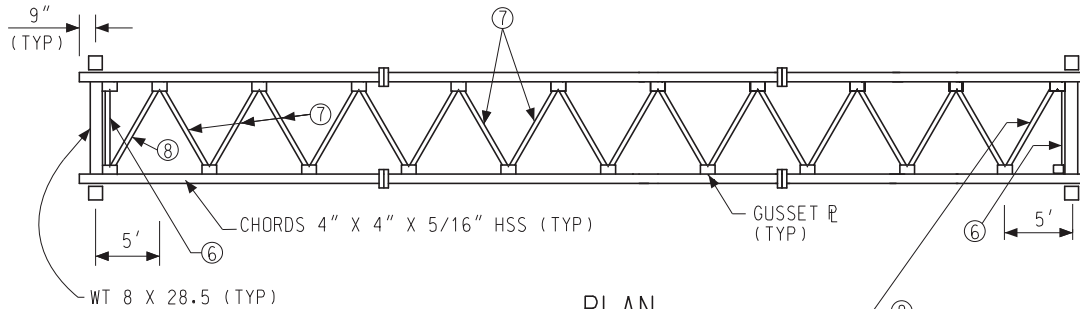
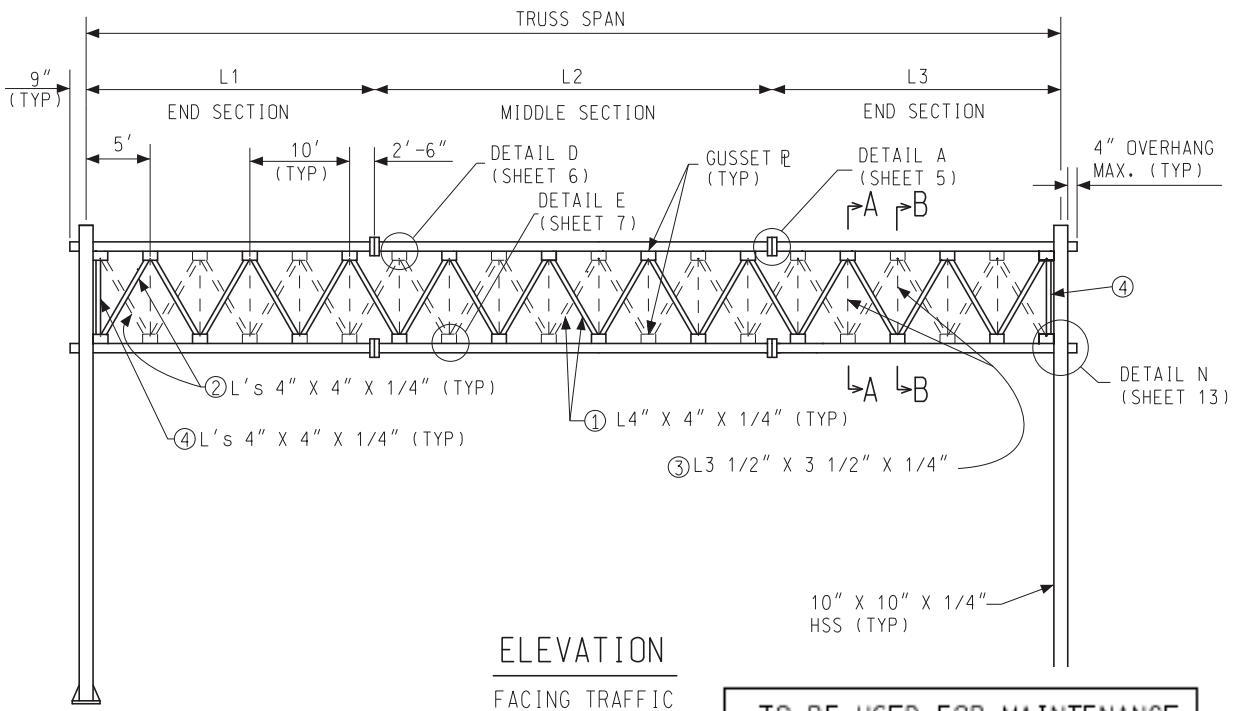


PLAN  
TOP WIND BRACING LOOKING DOWN



PLAN  
BOTTOM WIND BRACING LOOKING DOWN



ELEVATION  
FACING TRAFFIC

TO BE USED FOR MAINTENANCE  
PURPOSES ONLY



PREPARED  
BY  
DESIGN DIVISION

DRAWN BY: DHD

CHECKED BY: AJU

DEPARTMENT DIRECTOR  
Kirk T. Stuedle

APPROVED BY: Kimberly Avery  
DIRECTOR, BUREAU OF FIELD SERVICES

Bradley C. Wiefelich  
Bradley C. Wiefelich May 9 2018 7:46 AM

APPROVED BY: Bradley C. Wiefelich  
DIRECTOR, BUREAU OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

STEEL TRUSS TYPE C  
(50 FT - 70 FT)

05/24/18  
F.H.W.A. APPROVAL

12/17/13  
PLAN DATE

SIGN-540-B

SHEET  
1 OF 14

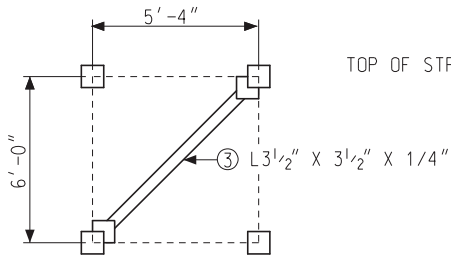
TRUSS DATA						
TRUSS SPAN (FT)	L1 (FT)	L2 (FT)	L3 (FT)	CAMBER (IN)	BOX TRUSS	ESTIMATED WEIGHT (LBS/FT)
50	17.5	15	17.5	5/8	6'-0" x 5'-4"	143
55	17.5	20	17.5	3/4	6'-0" x 5'-4"	143
60	22.5	15	22.5	7/8	6'-0" x 5'-4"	143
65	22.5	20	22.5	1	6'-0" x 5'-4"	143
70	22.5	25	22.5	1	6'-0" x 5'-4"	143

THE CAMBER GIVEN IN THE ABOVE TABLE IS THE ORDINATE AT THE CENTER OF THE ASSEMBLED TRUSS PRIOR TO DEAD LOAD DEFLECTION. ALLOWABLE CAMBER TOLERANCE FOR TRUSS IS  $\pm 25\%$

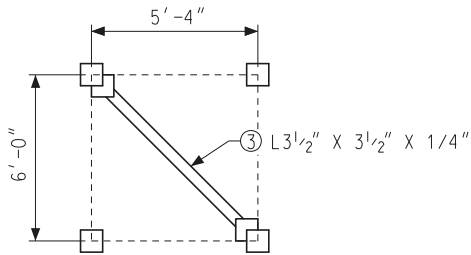
NOTES:

1. THE DESIGN OF THIS STRUCTURE IS BASED ON THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, CURRENT EDITION.
2. WELDING MUST BE IN CONFORMANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1:2010, STRUCTURAL WELDING CODE-STEEL (AS MODIFIED BY THE CURRENT 12SP-707A - STRUCTURAL STEEL AND ALUMINUM CONSTRUCTION), HEREAFTER CALLED AWS D1.1.
3. MAXIMUM SIGN AREA IS 500 SQUARE FEET FOR NO MORE THAN THREE SIGNS. MAXIMUM 6 FOOT PROJECTION ABOVE THE TOP CHORD.
4. HOT-DIP GALVANIZE (HDG) ALL TRUSS COMPONENTS PER ASTM A123 PRIOR TO BOLTED ASSEMBLY. HDG ALL FASTENER COMPONENTS PER ASTM A153. BLAST CLEAN BASE PLATES, STIFFENERS, AND ALL WELDMENTS PRIOR TO GALVANIZING.
5. PROVIDE 13/16"  $\emptyset$  HOLES FOR 3/4"  $\emptyset$  HIGH STRENGTH (HS) BOLTS FOR ALL CONNECTIONS UNLESS OTHERWISE STATED. PROVIDE HIGH STRENGTH BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SUBSECTION 906.07 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
6. TIGHTEN ALL HIGH STRENGTH BOLTS BY THE TURN OF NUT METHOD PER SUBSECTION 707.03.D OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
7. DO NOT LIFT THE TRUSS BY THE WEB MEMBERS.
8. THE CAMBERING MUST BE PROVIDED IN THE FABRICATION SO THAT THE FLANGES ARE CORRECTLY SLOPED TO ASSURE OBTAINING FULL CONTACT IN THE RELAXED ASSEMBLED POSITION PRIOR TO SNUGGING UP THE FLANGE BOLTS. THE FLANGE BOLTS MUST NOT BE TIGHTENED IN AN ATTEMPT TO CLOSE ANY FLANGE MISALIGNMENT.
9. THE TRUSS SECTION LENGTHS TABULATED MAY BE INCREASED IN 5 FOOT INCREMENTS TO REDUCE THE NUMBER OF FIELD SPLICES.
10. THE MAXIMUM SECTION LENGTH MUST NOT EXCEED 40 FEET. ANY DEVIATION FROM THE DETAILS SHOWN ON THESE STANDARDS WILL REQUIRE APPROVED SHOP DRAWINGS BEFORE FABRICATION.
11. ALL WELDS MUST BE 100 PERCENT VISUAL TEST (VT) INSPECTED BY AN AWS CERTIFIED WELDING INSPECTOR (CWI). ALL FILLET WELDS (EXCEPT END CAP AND COLUN CAP WELDS) MUST BE 25 PERCENT MAGNETIC PARTICLE TEST (MT) INSPECTED BY A TECHNICIAN QUALIFIED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF NONDESTRUCTIVE TESTING (ASNT) LEVEL II. ALL COMPLETE JOINT PENETRATION (CJP) WELDS MUST BE 100 PERCENT ULTRASONIC TEST (UT) INSPECTED BY A TECHNICIAN QUALIFIED IN ACCORDANCE WITH ASNT LEVEL II.
12. SEE CURRENT MDOT SIGN SUPPORT TYPICAL PLAN SIGN-600-SERIES FOR SIGN FOUNDATION.
13. SEE CURRENT MDOT SIGN SUPPORT TYPICAL PLAN SIGN-700-SERIES FOR SIGN CONNECTION.
14. BASE PLATE (R) WARPAGE MUST NOT EXCEED 1/16 INCH PER FOOT.
15. HSS DENOTES HOLLOW STRUCTURAL SHAPE.

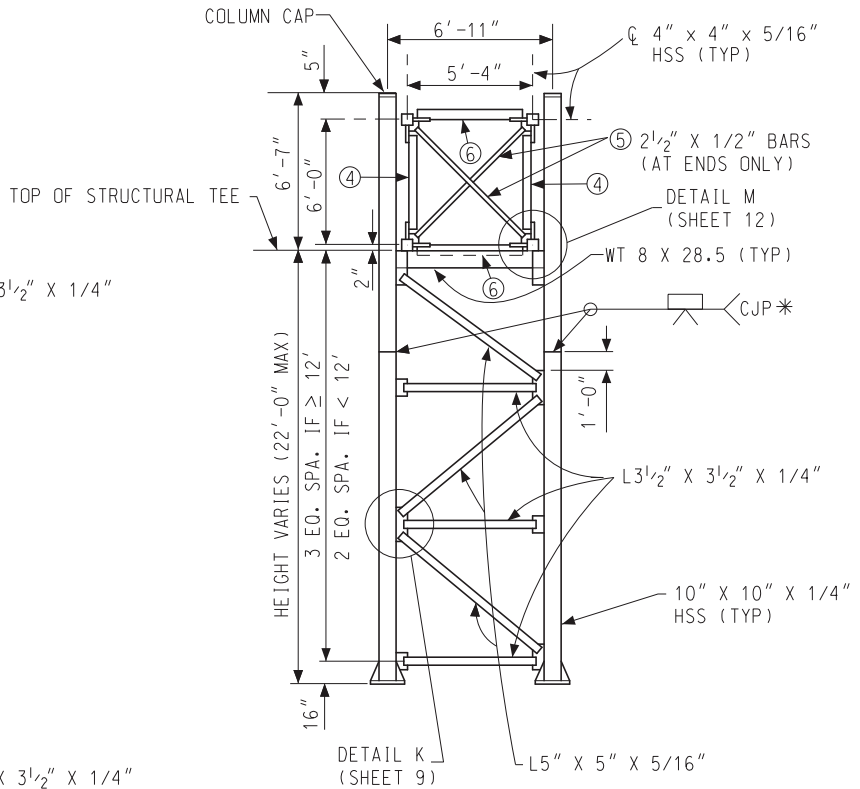
NOT TO SCALE



SECTION A-A

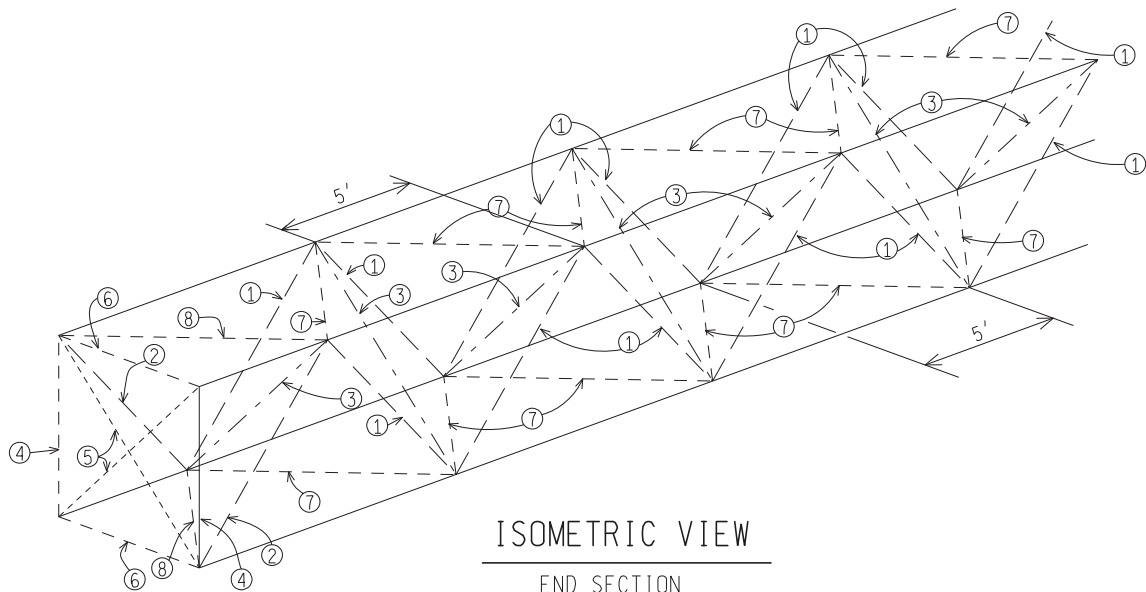


SECTION B-B



END ELEVATION

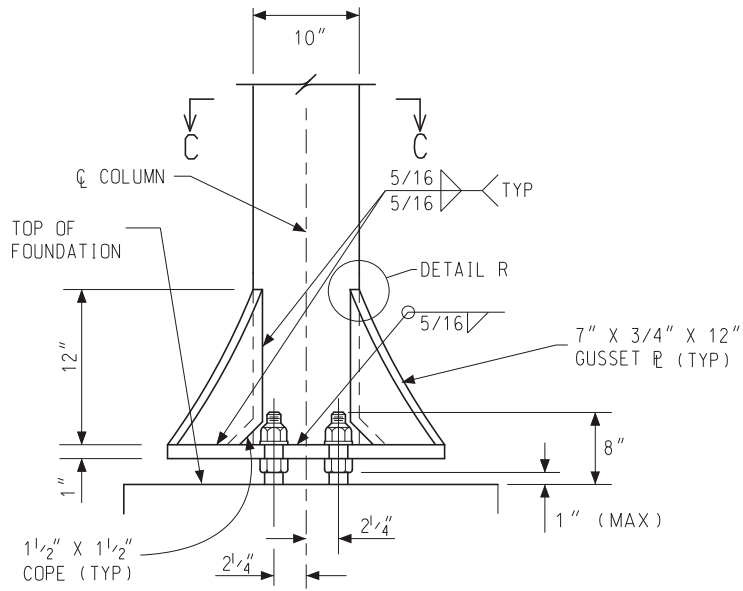
\*OPTIONAL SPLICE



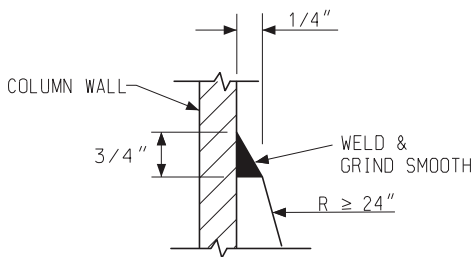
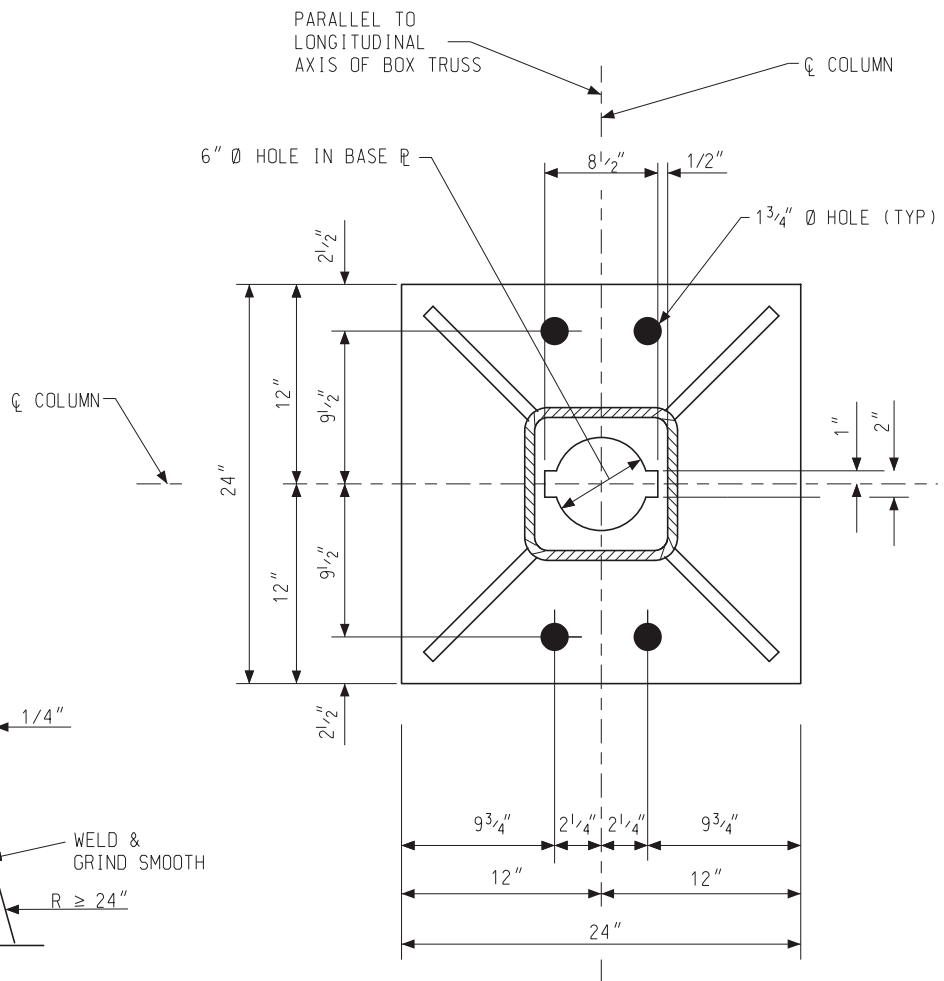
ISOMETRIC VIEW

END SECTION

NOT TO SCALE



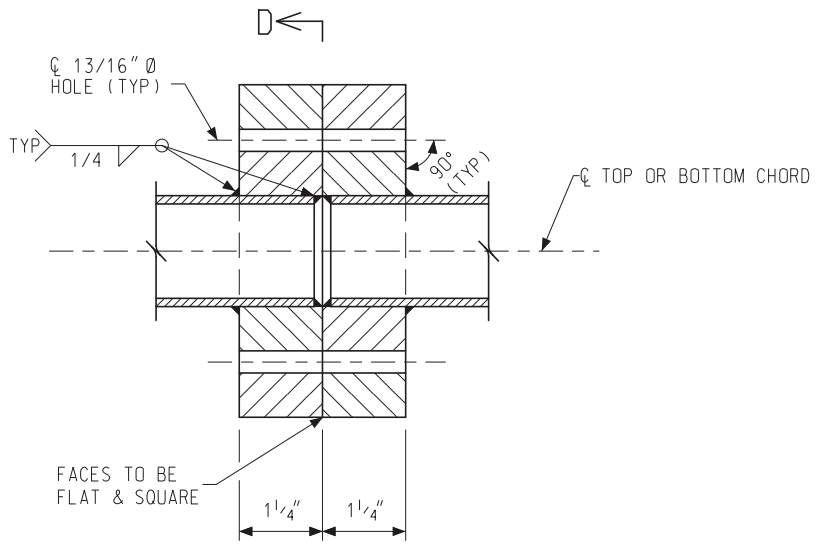
DETAIL OF BASE LEVELING NUTS



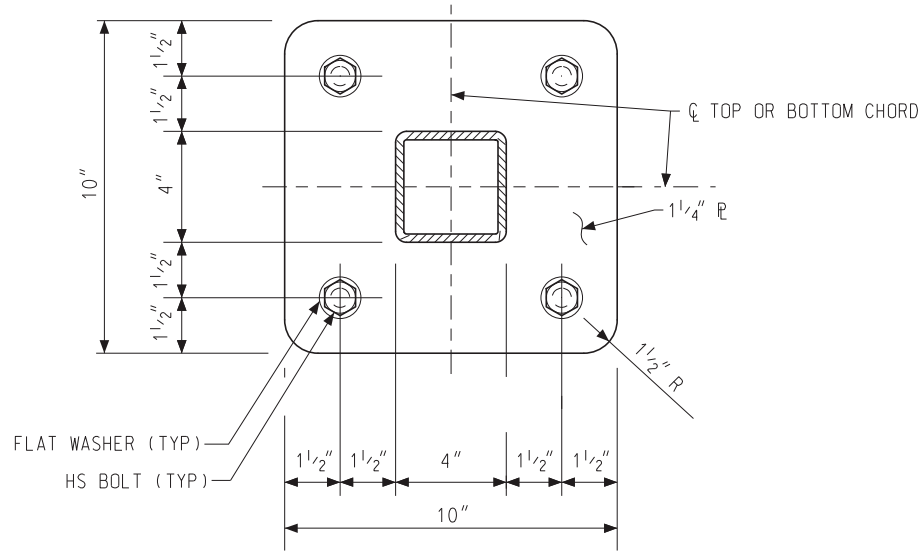
DETAIL R

SECTION C-C

NOT TO SCALE

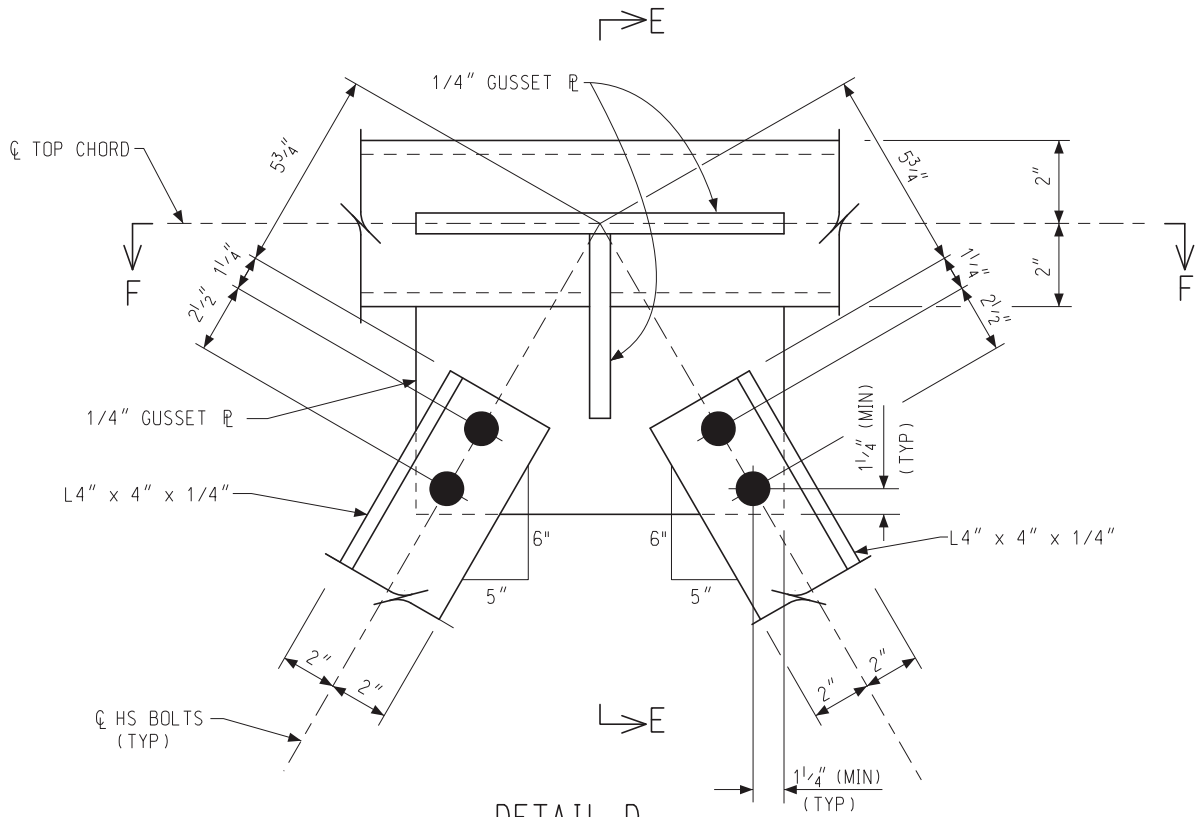


D  
 DETAIL A



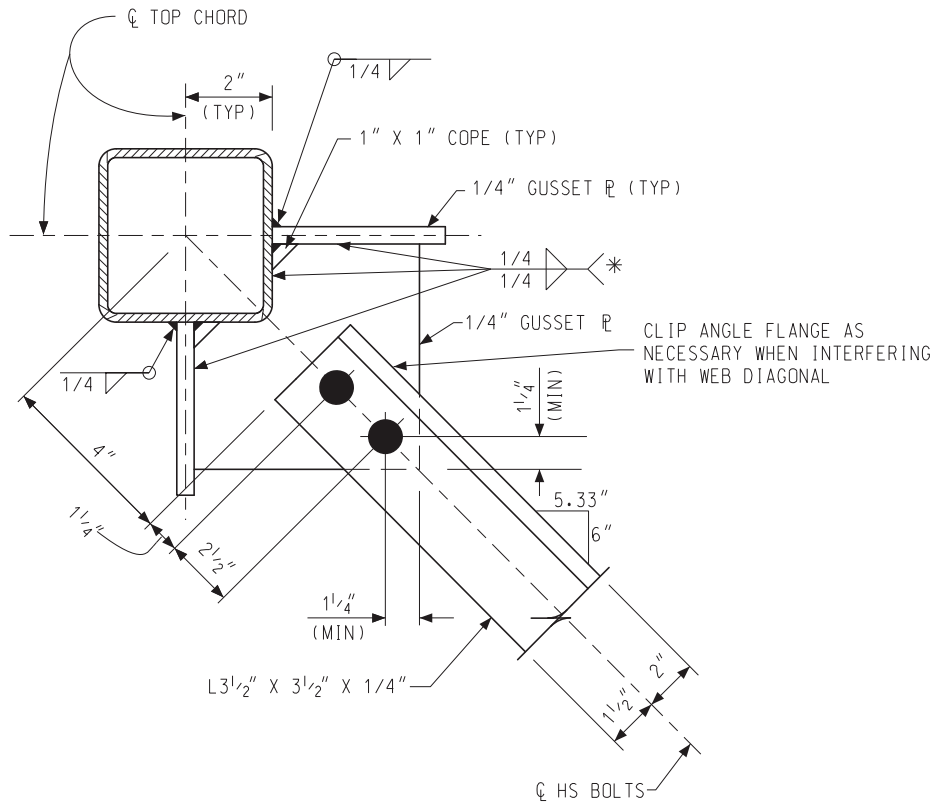
SECTION D-D  
 TOP AND BOTTOM CHORD CONNECTION DETAILS

NOT TO SCALE



**DETAIL D**

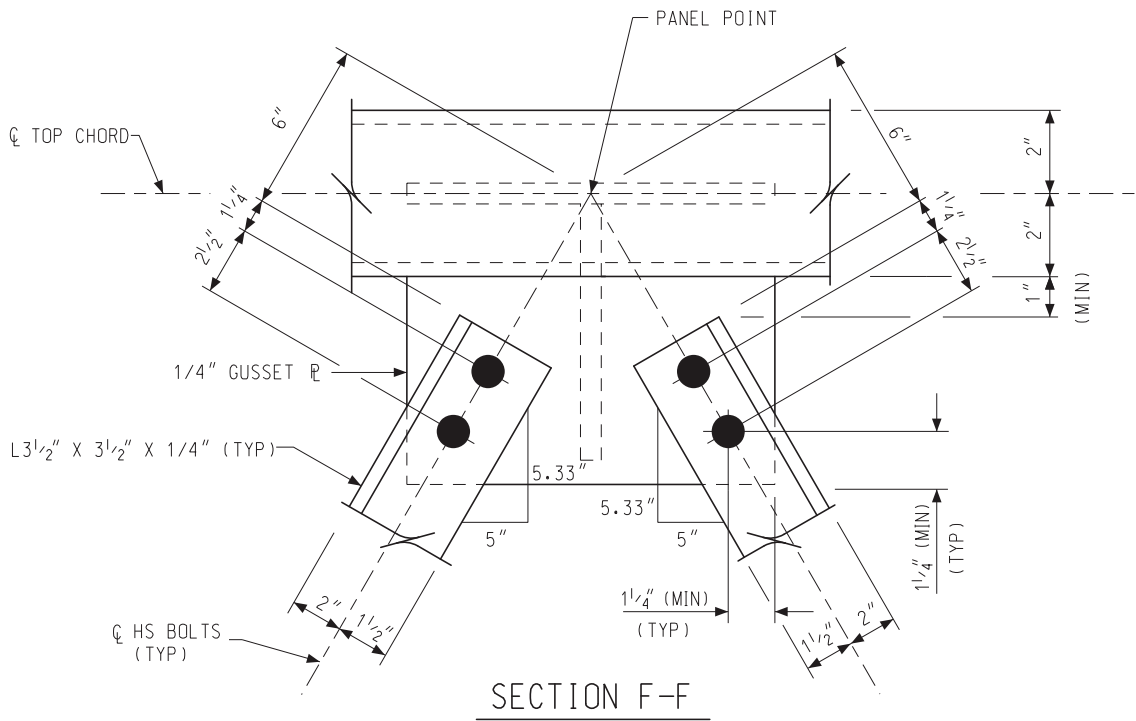
TOP CHORD TO DIAGONAL CONNECTION DETAIL



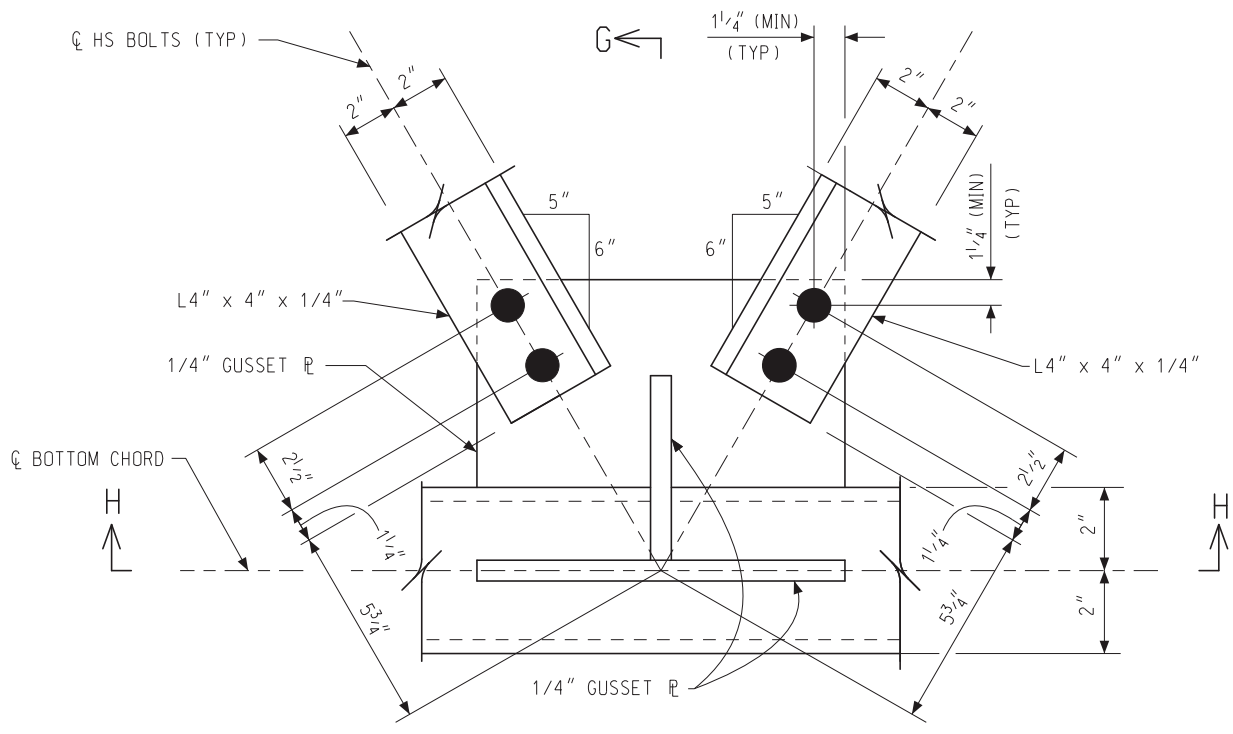
**SECTION E-E**

\* WRAP WELD AROUND ENDS AND STOP 1/4" SHORT OF CLIP.

NOT TO SCALE



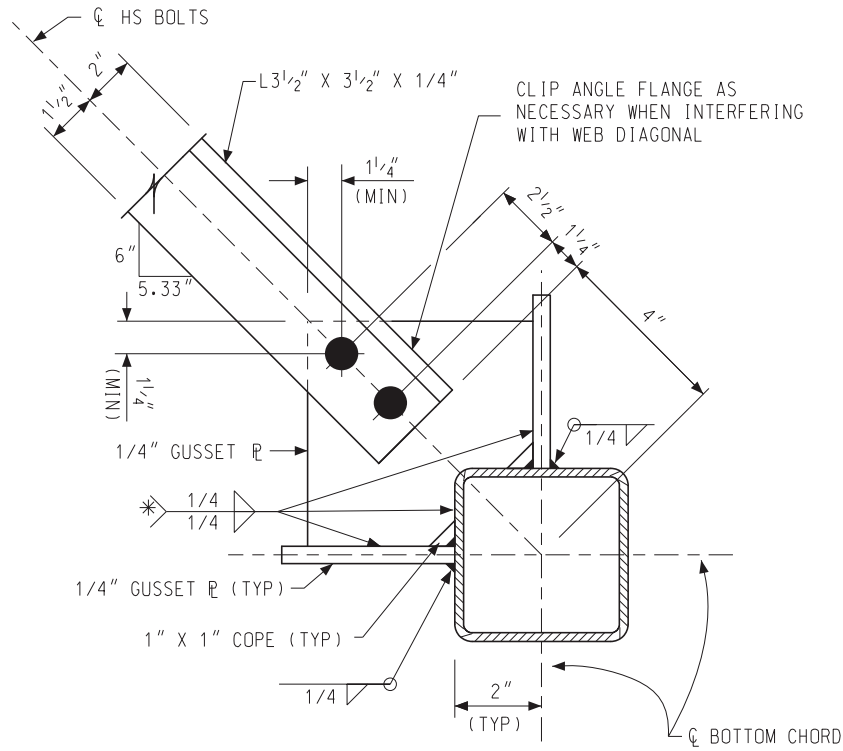
SECTION F-F



DETAIL E

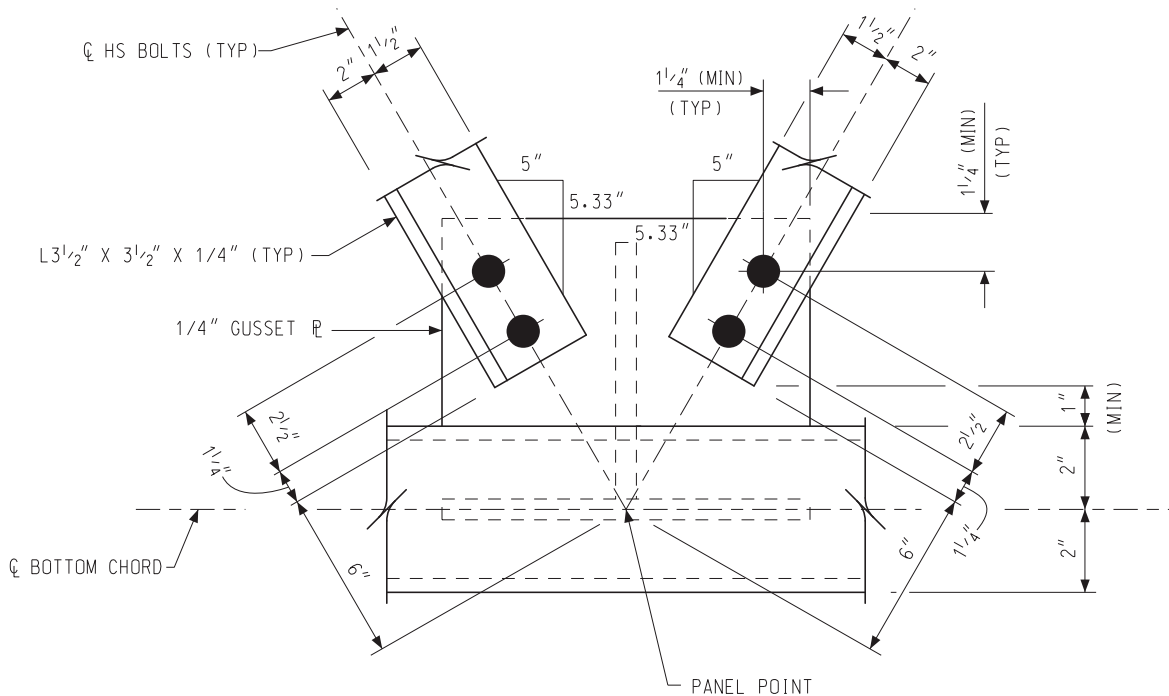
BOTTOM CHORD TO DIAGONAL CONNECTION DETAIL

NOT TO SCALE



SECTION G-G

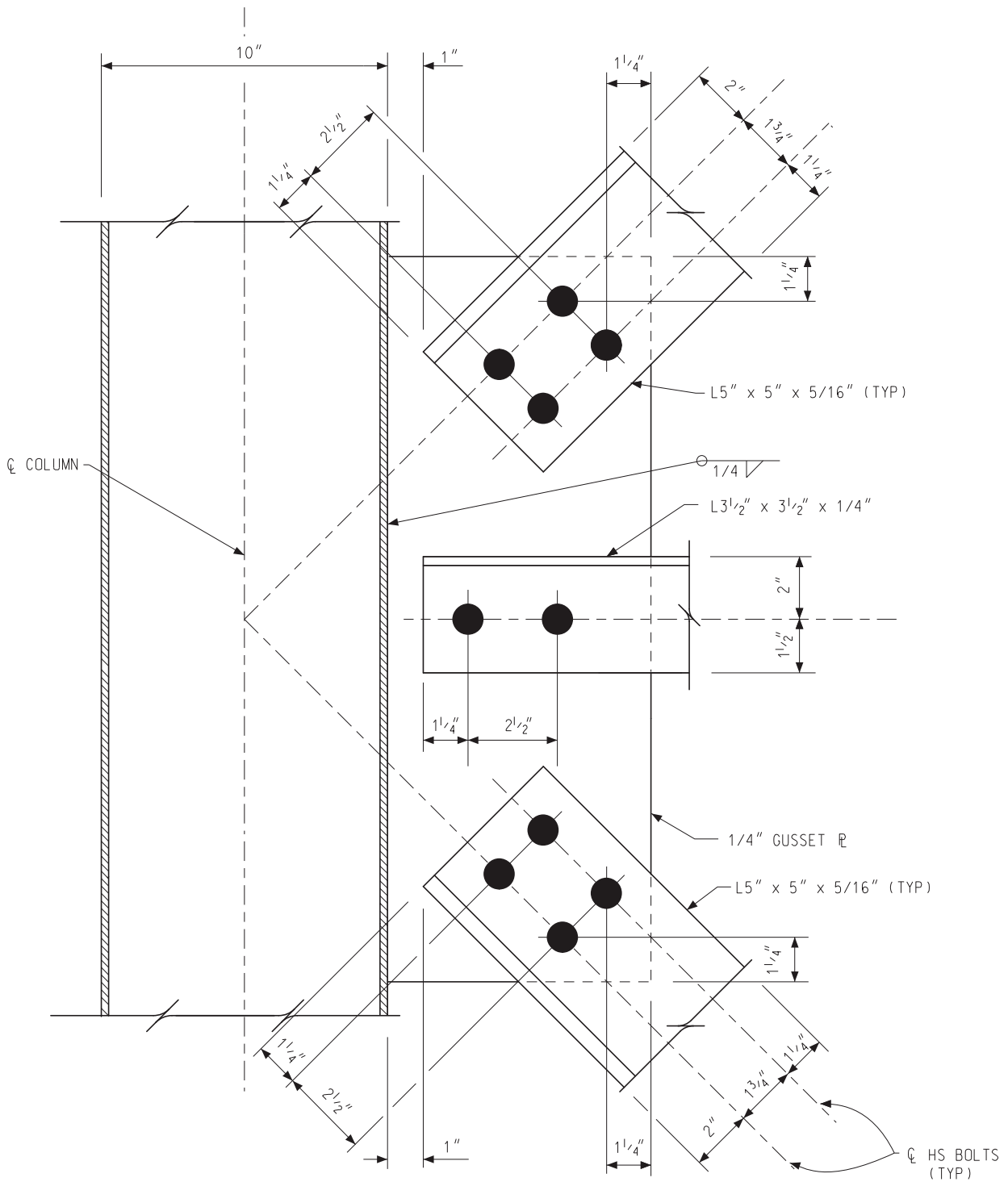
\* WRAP WELD AROUND ENDS AND STOP 1/4" SHORT OF CLIP.



SECTION H-H

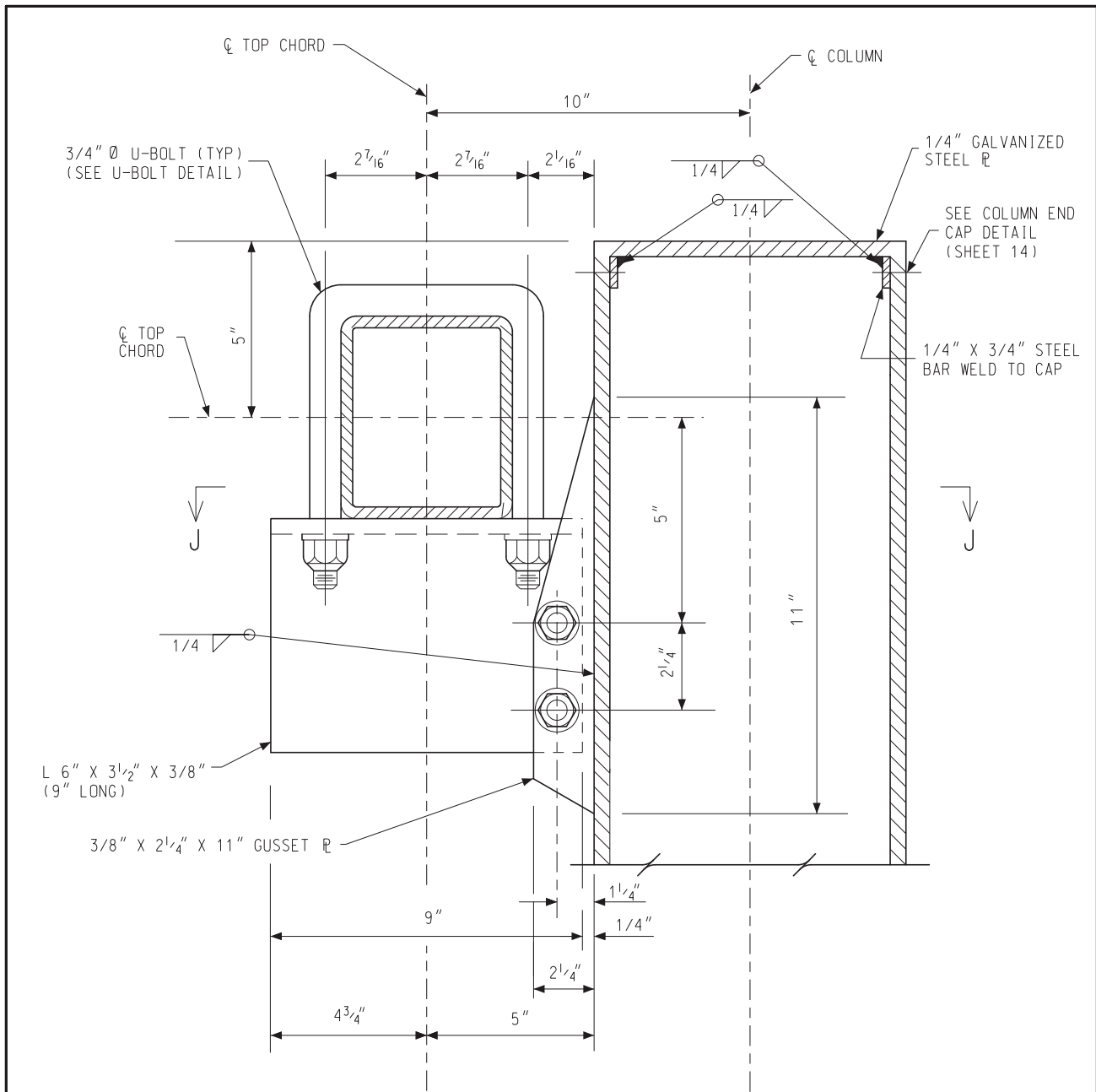
NOT TO SCALE



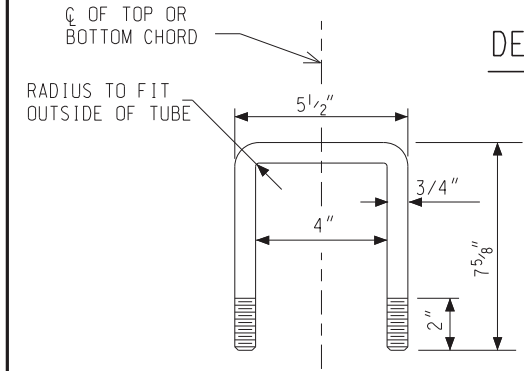


DETAIL K

NOT TO SCALE



DETAIL OF UPPER CLAMP

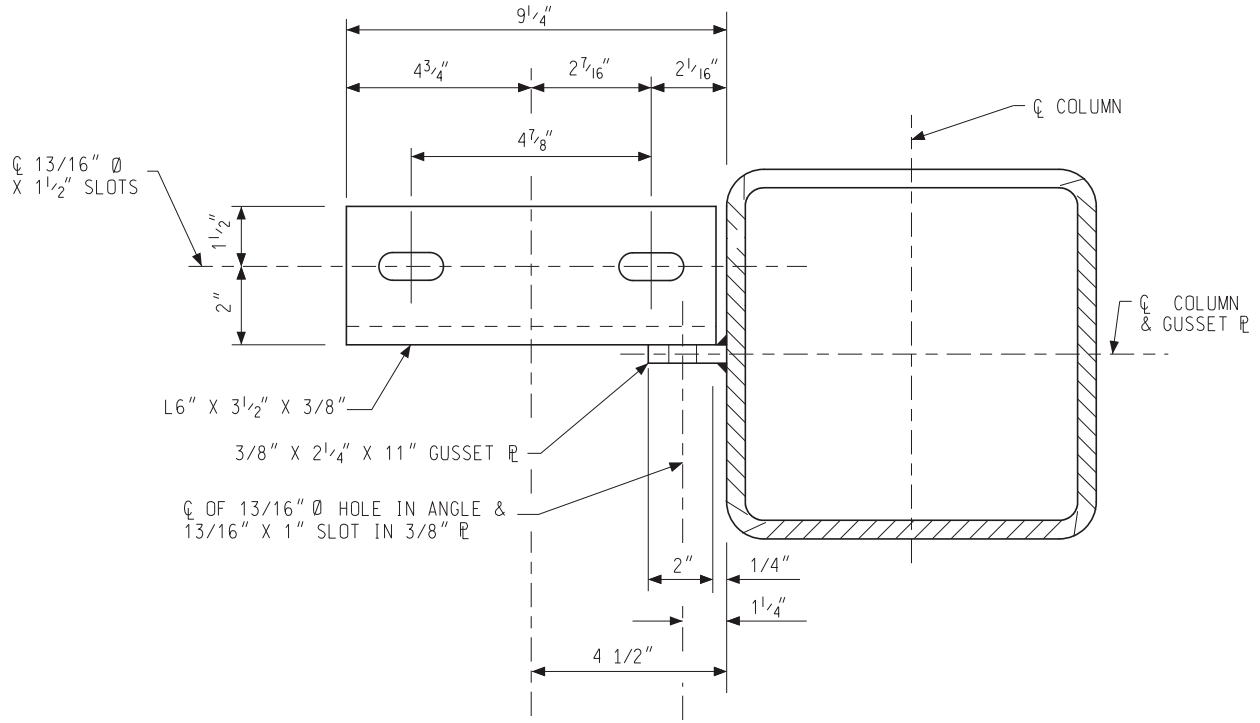


U-BOLT DETAIL

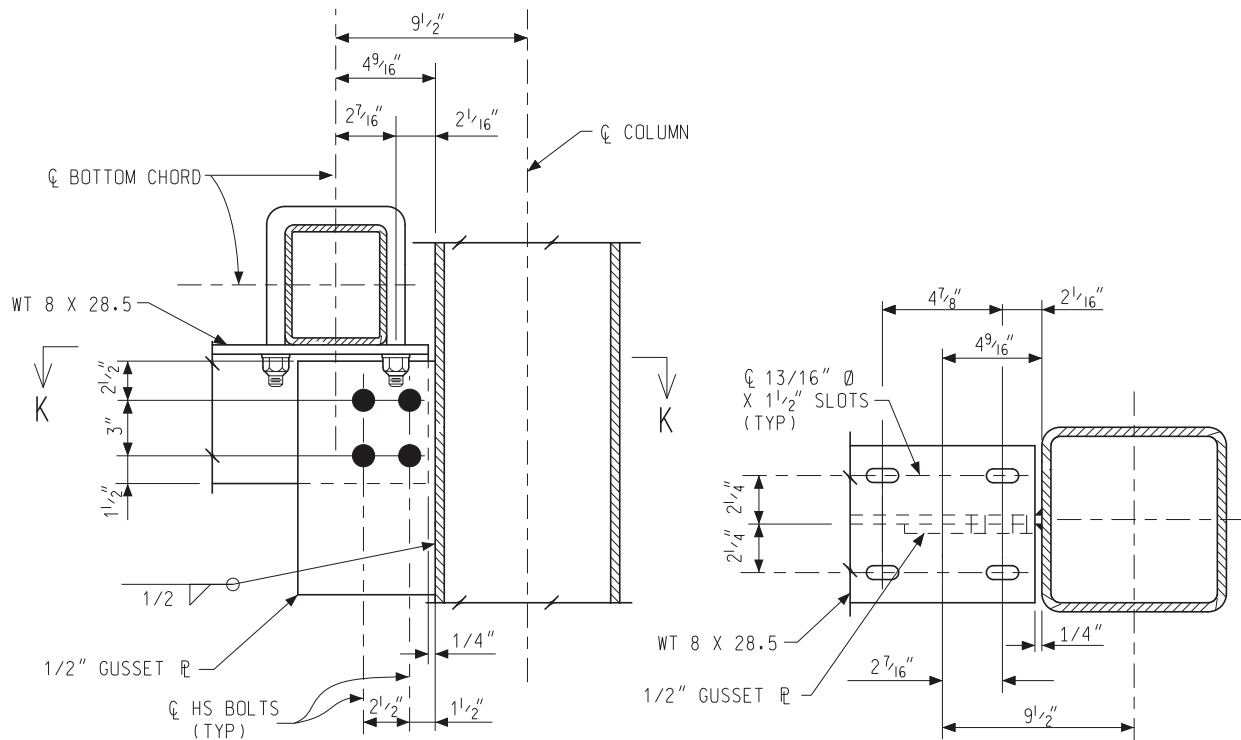
(12 REQUIRED)

3/4" Ø STAINLESS STEEL BOLT WITH FLAT 3/16" THICK WASHER AND 3/4" Ø NYLON INSERT LOCKNUT (TYP)

NOT TO SCALE



SECTION J-J



SEAT DETAIL

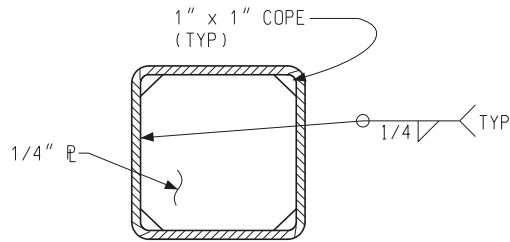
DIAGONAL NOT SHOWN FOR CLARITY

SECTION K-K

NOT TO SCALE

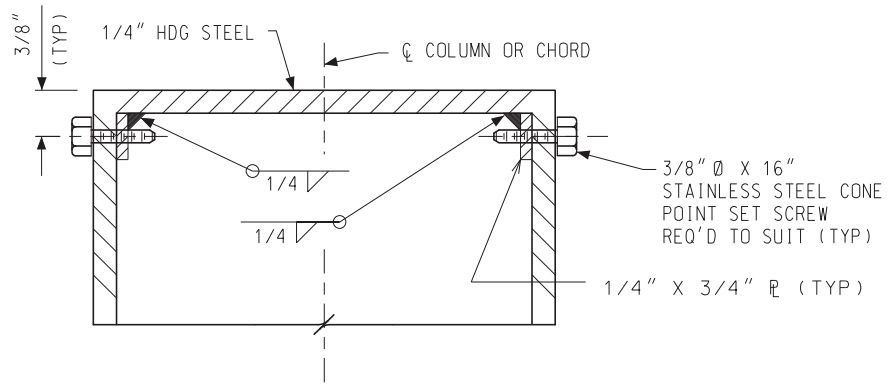






END CAP DETAIL

SEAL END OF CHORD WITH 1/4"  $\nabla$  (WELD BEFORE GALVANIZING) (TYP)  
 OPTIONAL: CAP WITH SET SCREWS MAY BE USED AS END CAP (SEE COLUMN END CAP DETAILS)



COLUMN CAP DETAIL

NOT TO SCALE