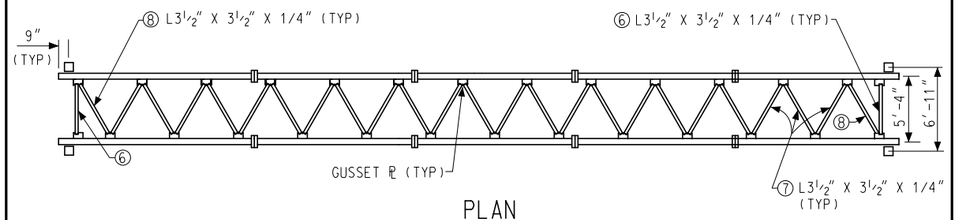
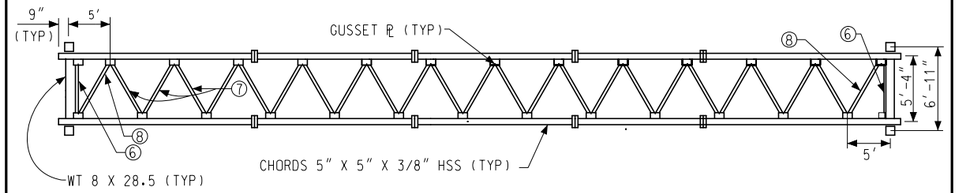


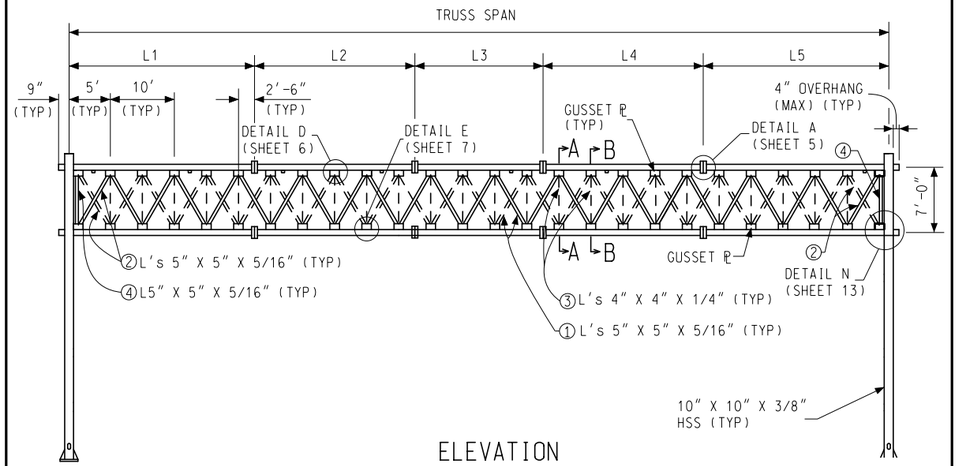
PLAN

TOP WIND BRACING LOOKING DOWN



PLAN

BOTTOM WIND BRACING LOOKING DOWN



ELEVATION

FACING TRAFFIC

TO BE USED FOR MAINTENANCE PURPOSES ONLY

MDOT Michigan Department of Transportation PREPARED BY DESIGN DIVISION DRAWN BY: ____ CHECKED BY: ____	DEPARTMENT DIRECTOR Kirk T. Steudle APPROVED BY: ____ DIRECTOR, BUREAU OF FIELD SERVICES APPROVED BY: ____ DIRECTOR, BUREAU OF DEVELOPMENT	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR STEEL TRUSS TYPE C (75 FT - 100 FT)		
		(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B / SHEET 1 OF 14

TRUSS DATA								
TRUSS SPAN (FT)	L1 (FT)	L2 (FT)	L3 (FT)	L4 (FT)	L5 (FT)	CAMBER (IN)	BOX TRUSS	ESTIMATED WEIGHT (LBS/FT)
75	12.5	15	20	15	12.5	1	7'-0" x 5'-4"	200
80	17.5	15	15	15	17.5	1 1/8	7'-0" x 5'-4"	200
85	17.5	15	20	15	17.5	1 1/4	7'-0" x 5'-4"	200
90	22.5	15	15	15	22.5	1 3/8	7'-0" x 5'-4"	200
95	17.5	20	20	20	17.5	1 1/2	7'-0" x 5'-4"	200
100	22.5	20	20	20	22.5	1 3/4	7'-0" x 5'-4"	200

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 ±25%

NOTES:

1. THE DESIGN OF THIS STRUCTURE IS BASED ON THE AASHTO STANDARD SPECIFICATONS 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" Ø HOLES FOR 3/4" Ø 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 (PL) WARPAGE MUST NOT EXCEED 1/16 INCH PER FOOT.
15. HSS DENOTES HOLLOW STRUCTURAL SHAPE.

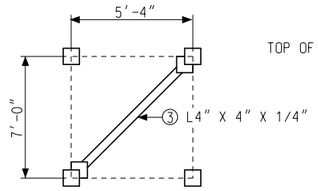
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B / SHEET 2 OF 14

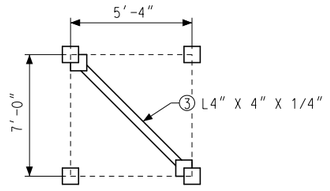
AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

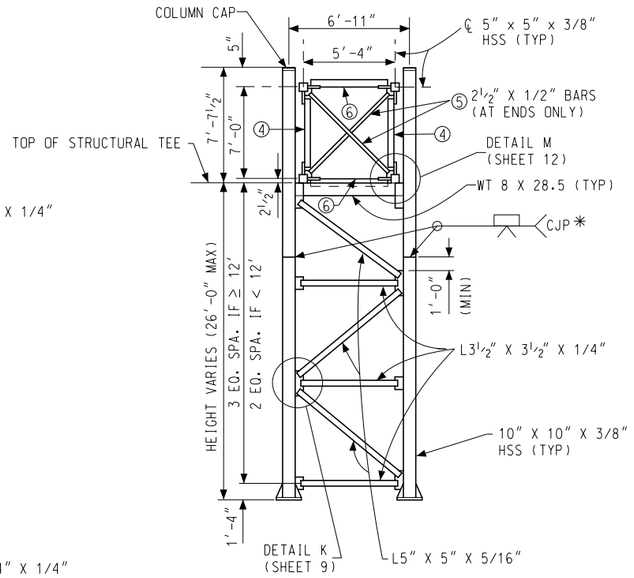
	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				



SECTION A-A

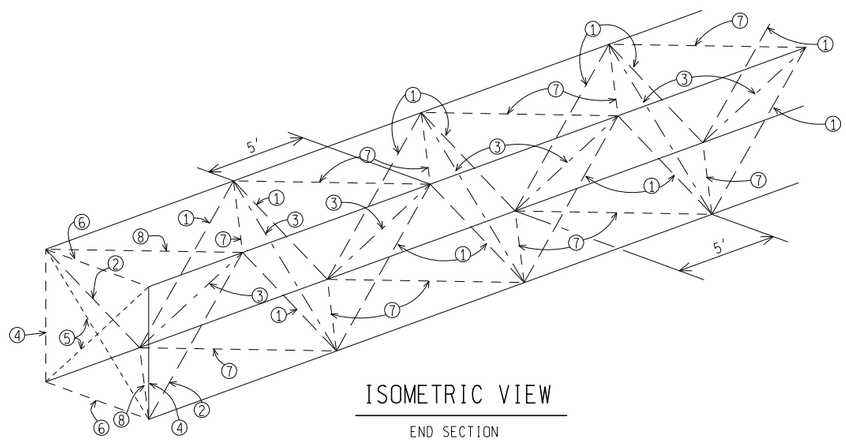


SECTION B-B



END ELEVATION

✳OPTIONAL SPLICE

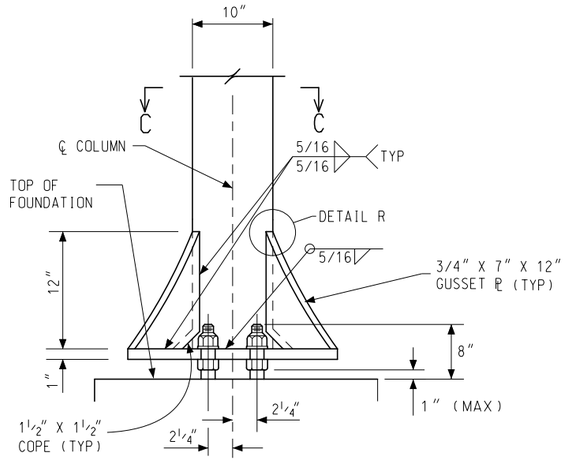


ISOMETRIC VIEW

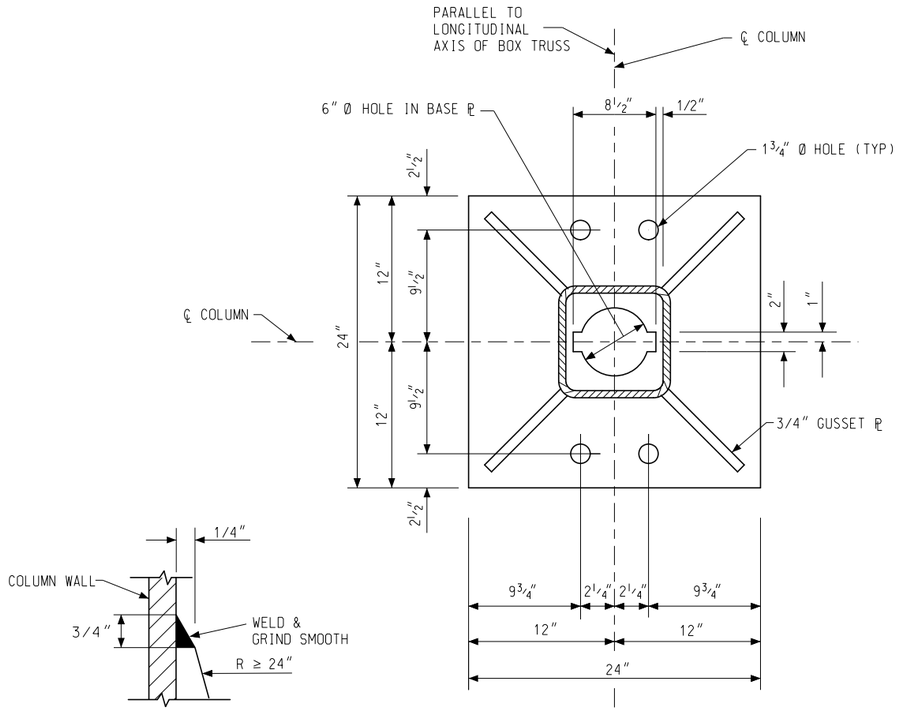
END SECTION

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 3 OF 14



COLUMN ELEVATION



DETAIL R

SECTION C-C

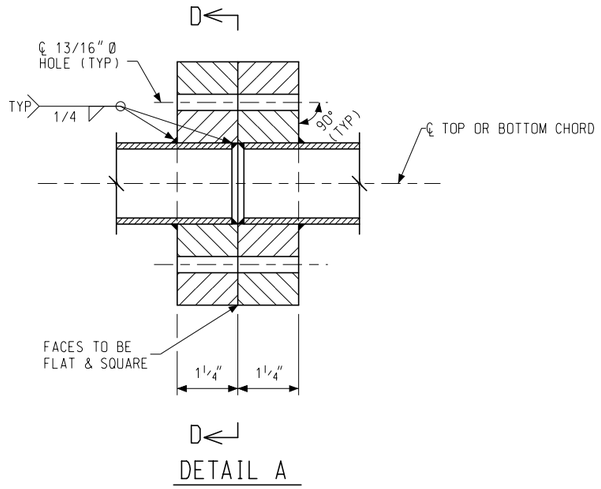
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 4 OF 14

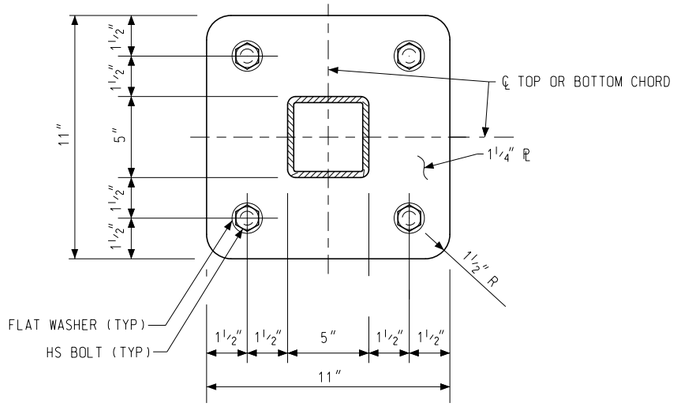
AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				



DETAIL A

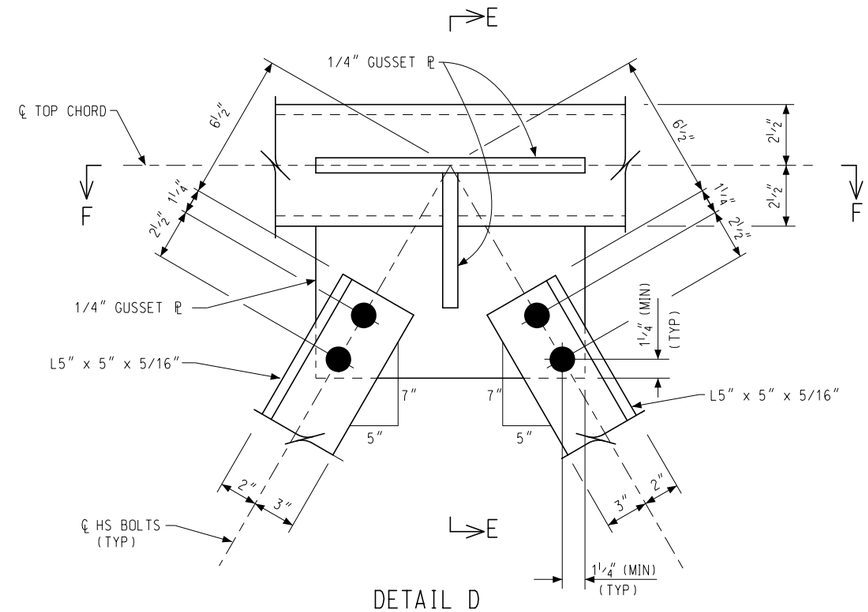


SECTION D-D

TOP AND BOTTOM CHORD CONNECTION DETAILS

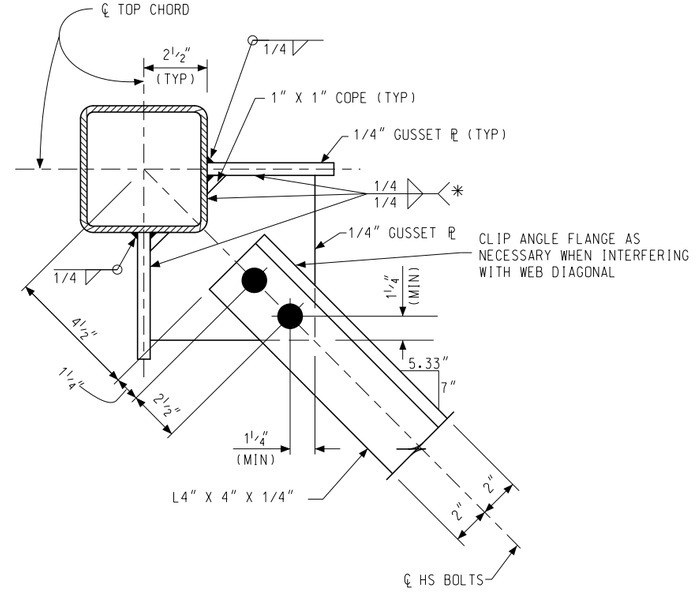
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 5 OF 14



DETAIL D

TOP CHORD TO DIAGONAL CONNECTION DETAIL



SECTION E-E

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

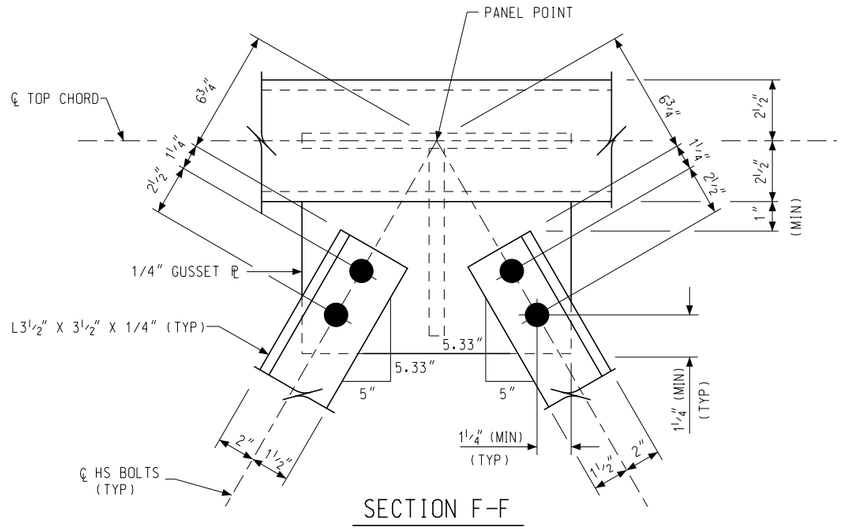
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 6 OF 14

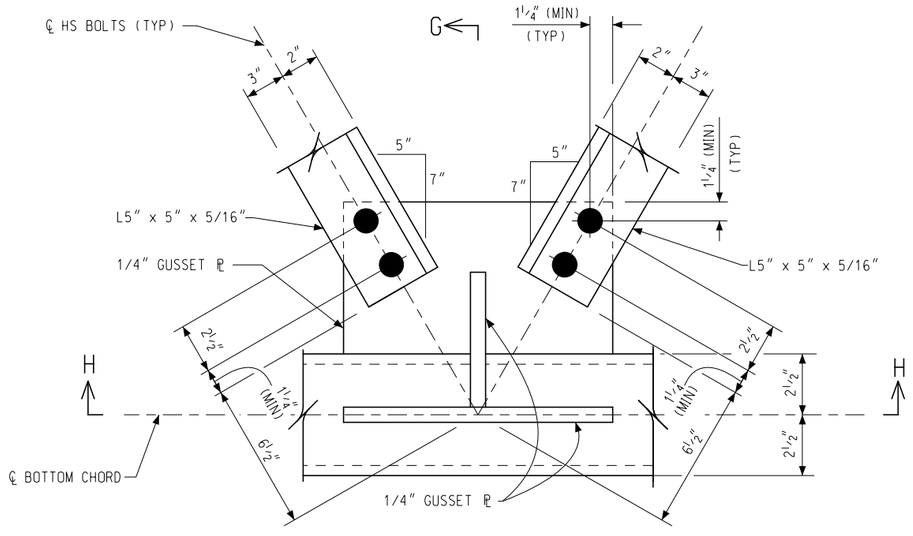
AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				



SECTION F-F

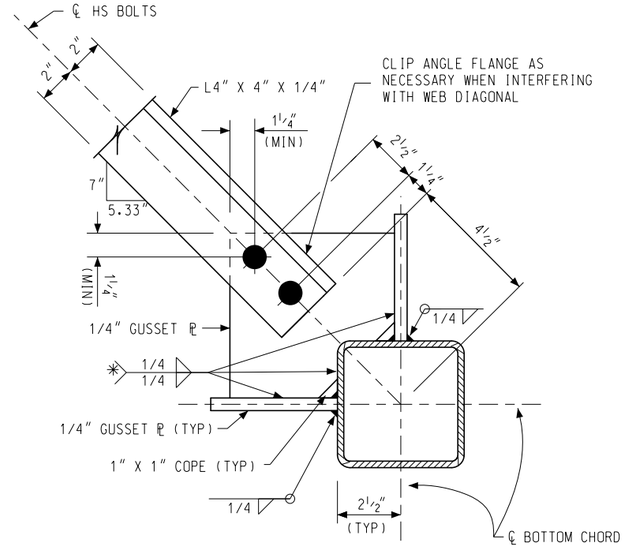


DETAIL E

BOTTOM CHORD TO DIAGONAL CONNECTION DETAIL

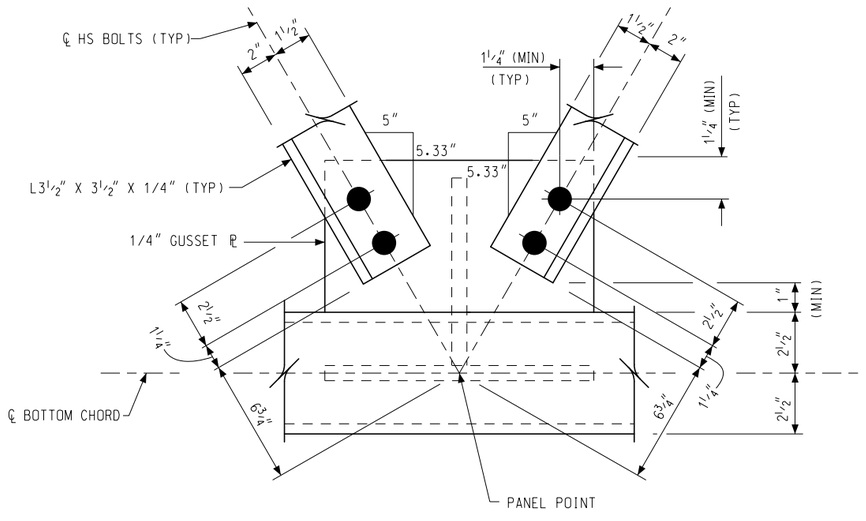
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 7 OF 14



SECTION G-G

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



SECTION H-H

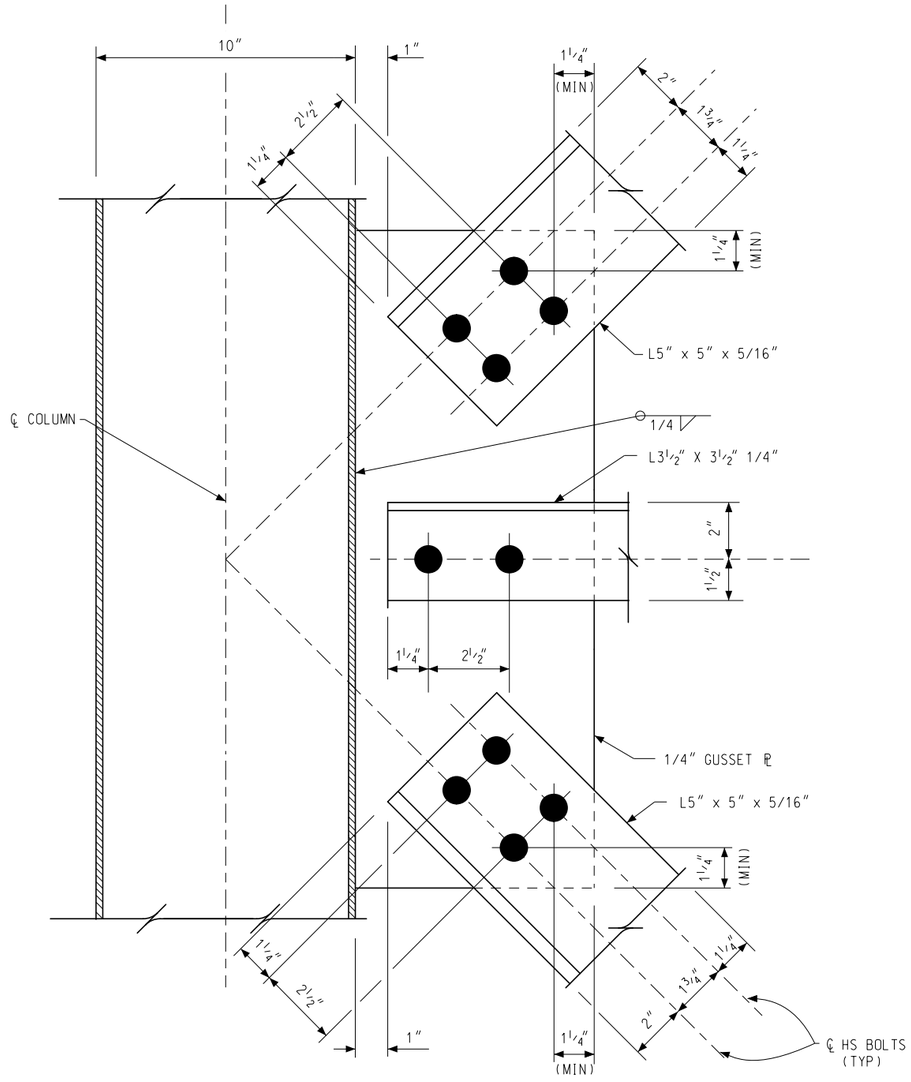
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 8 OF 14

AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

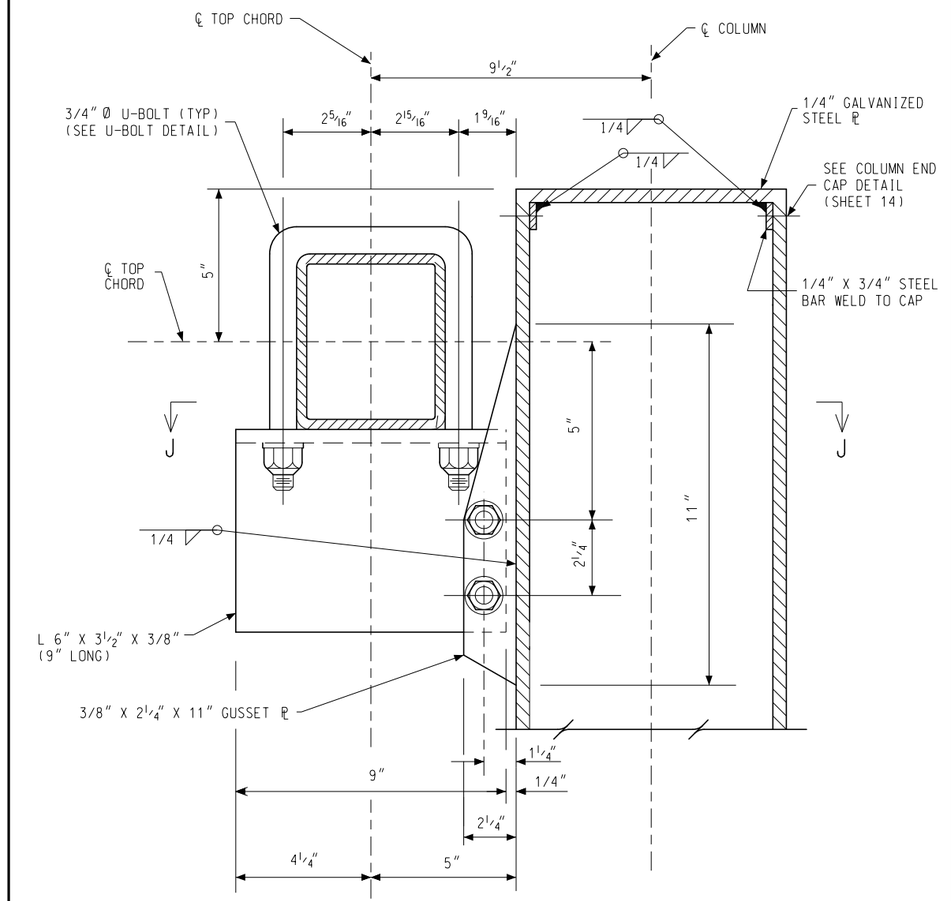
	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				



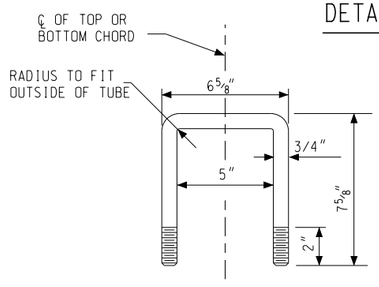
DETAIL K

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 9 OF 14



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)

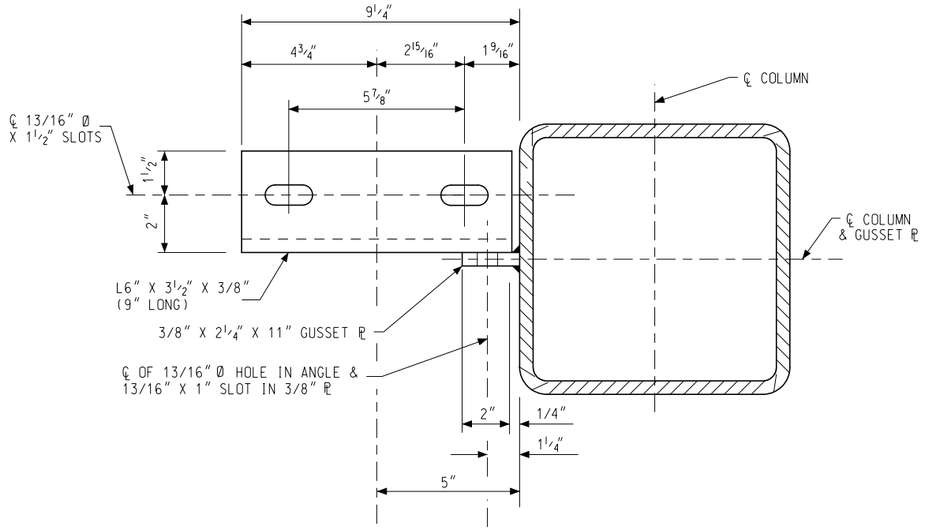
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 10 OF 14

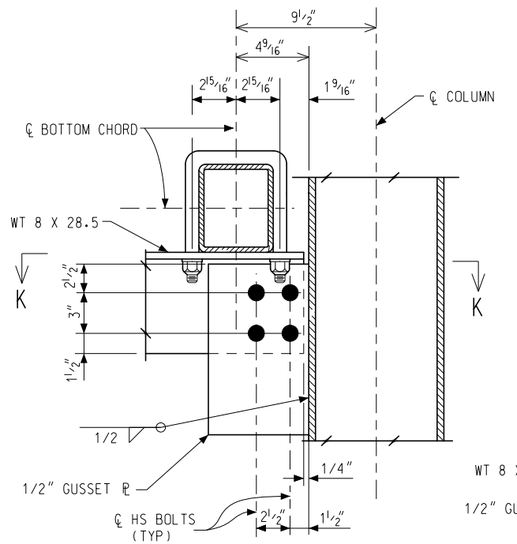
AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				

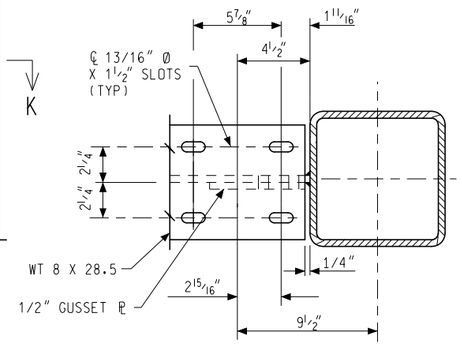


SECTION J-J



SEAT DETAIL

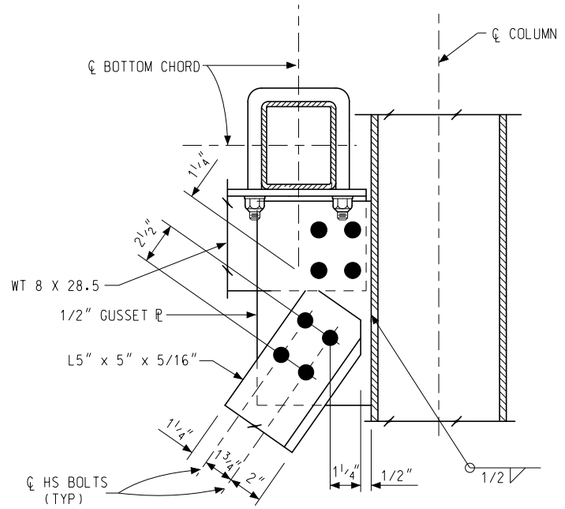
DIMENSIONS FOR DIAGONAL ANGLE NOT SHOWN FOR CLARITY



SECTION K-K

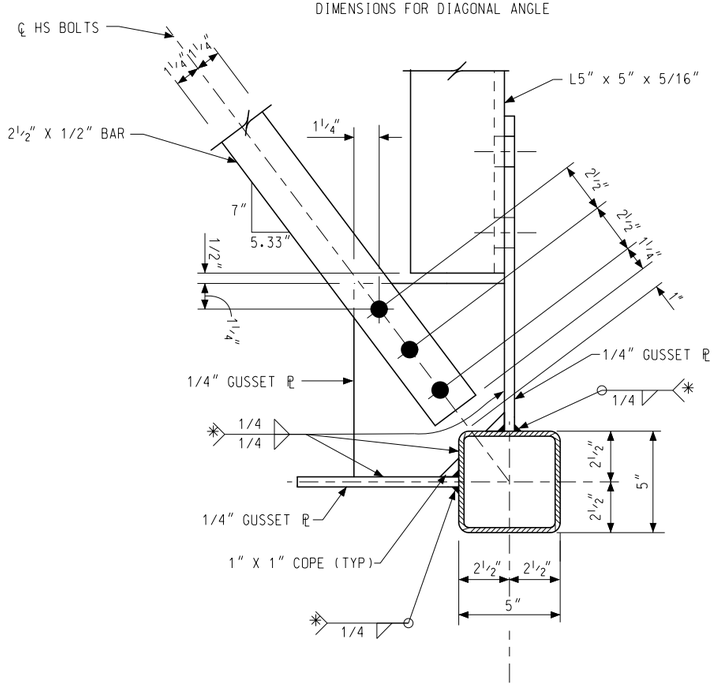
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 11 OF 14



SEAT DETAIL

DIMENSIONS FOR DIAGONAL ANGLE



DETAIL M

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

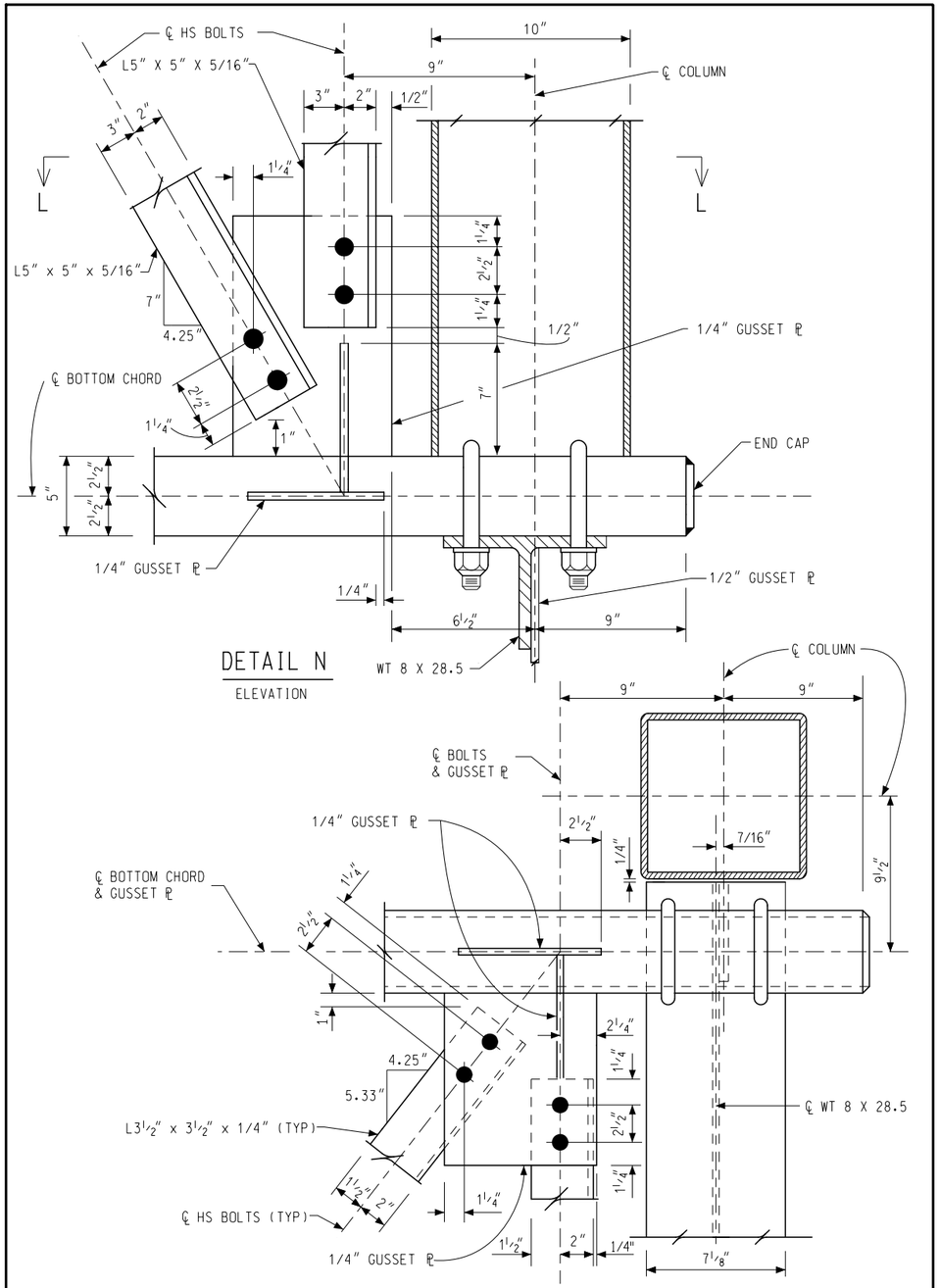
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 12 OF 14

AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				



DETAIL N

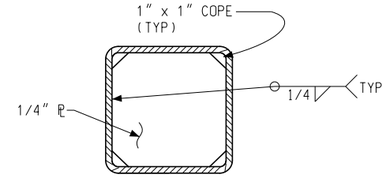
ELEVATION

SECTION L-L

BOTTOM WINDBRACING PLAN

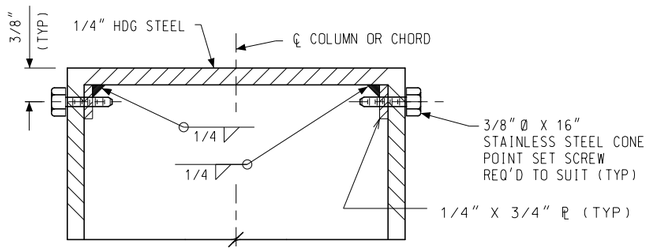
NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 13 OF 14



END CAP DETAIL

SEAL END OF CHORD WITH 1/4" PL (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

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN	(SPECIAL DETAIL) F.H.W.A. APPROVAL	PLAN DATE	SIGN-520-B	SHEET 14 OF 14

AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

MDOT Michigan Department of Transportation

	DATE:	CS:		DRAWING	SHEET
	DESIGN UNIT:	JN:			SECT
FILE:	TSC:				