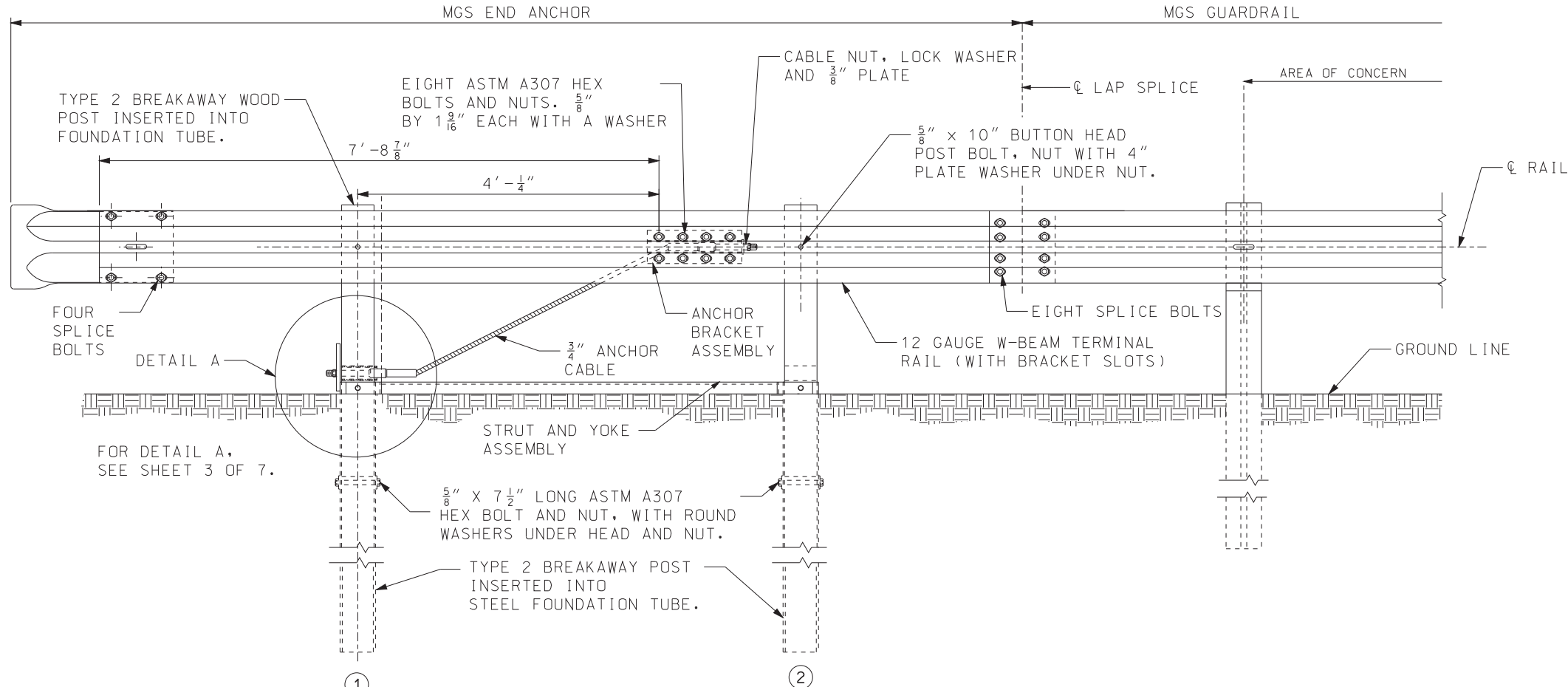


PLAN VIEW



ELEVATION VIEW

GENERAL NOTES:

END ANCHOR DETAILS SHOWN SHALL BE USED ONLY ON DOWNSTREAM ENDS OF GUARDRAIL WHEN AN END ANCHOR IS REQUIRED.

THE DETAILS SHOWN ARE FOR AN END ANCHORAGE SYSTEM FOR GUARDRAIL.

CABLE ASSEMBLY AND ANCHOR PLATE SHALL HAVE A MINIMUM BREAKING STRENGTH OF 20 TONS.

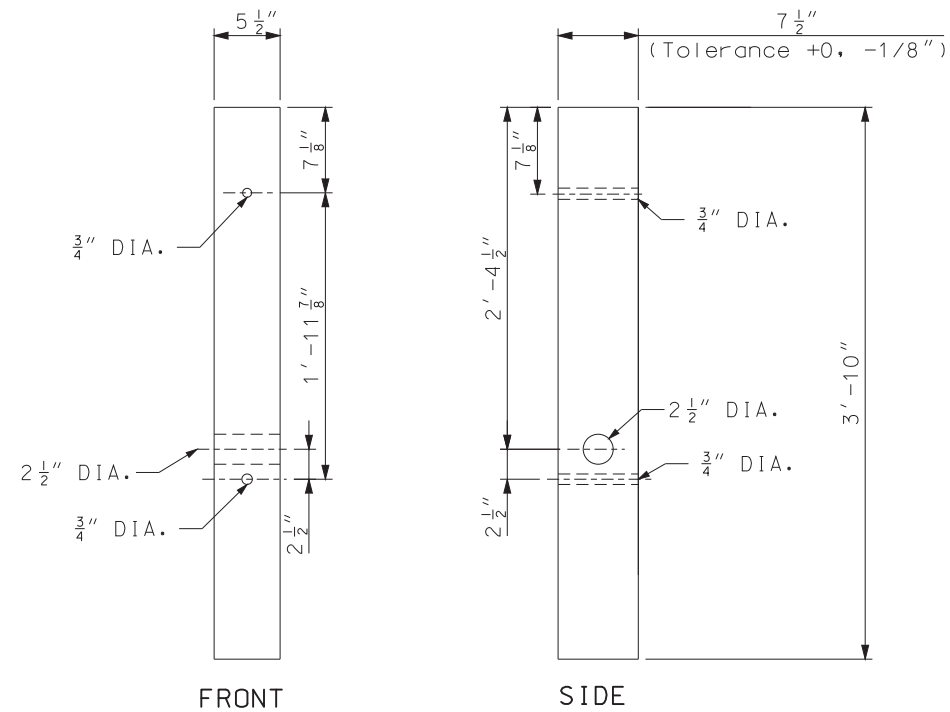
ALL FITTINGS AND HARDWARE REQUIRED SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1040.

WOOD POSTS ① AND ② SHALL BE 5 1/2" X 7 1/2".

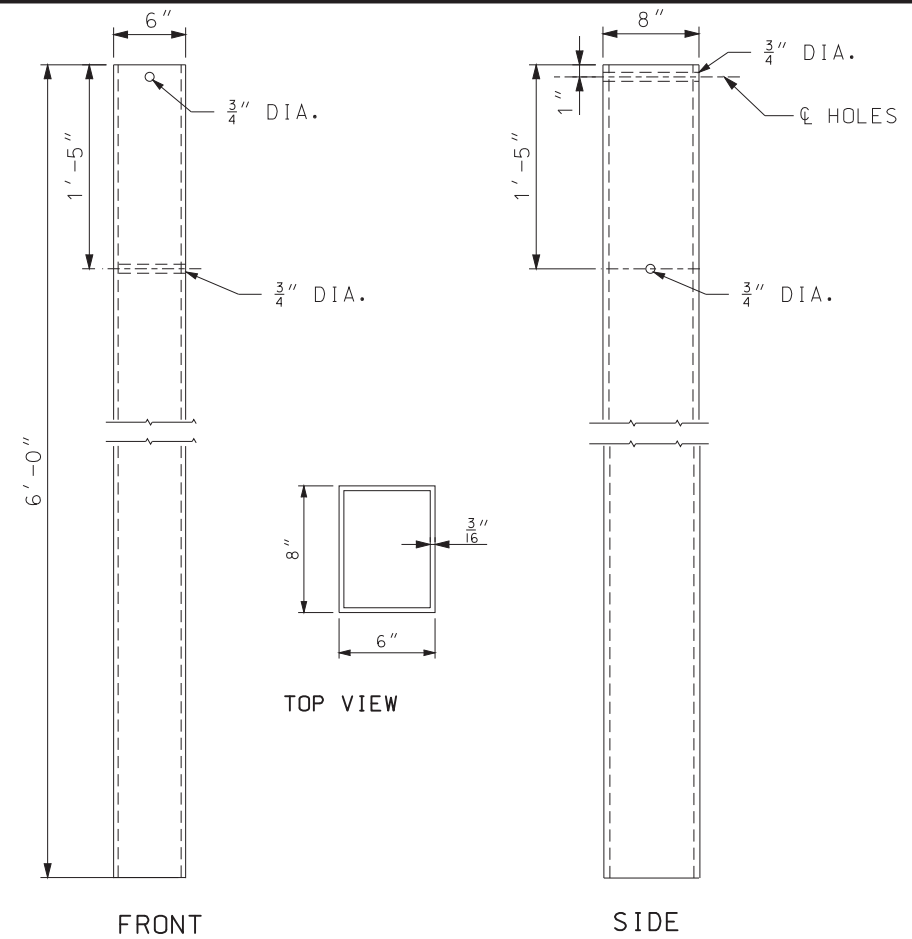
SEE SHEET NO. 2 OF 7 FOR WOOD POST DETAILS.

		<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b>	
		105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<b>MIDWEST GUARDRAIL SYSTEM (MGS)</b> <b>TERMINAL ANCHOR ENDS</b>	
DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017		606.80C	SHEET NO. 1 OF 7

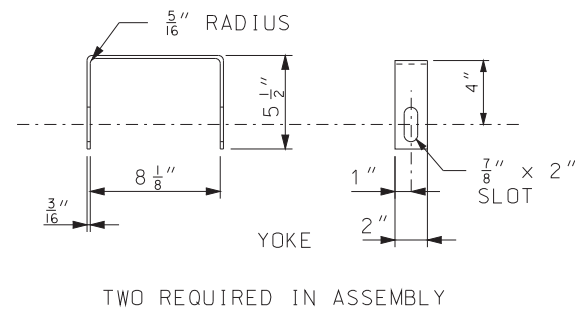
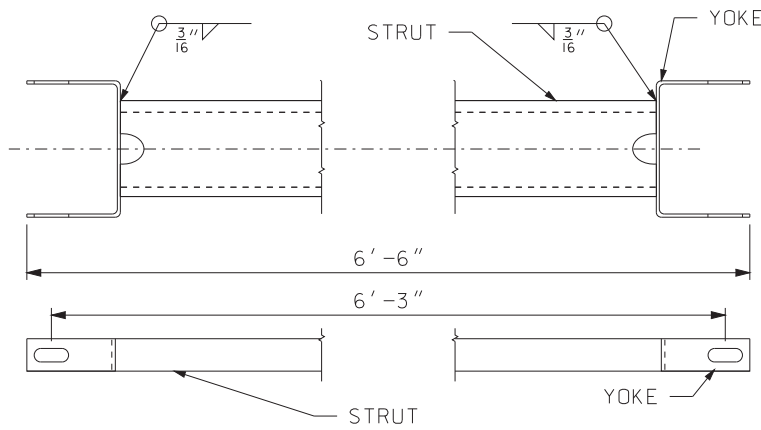
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



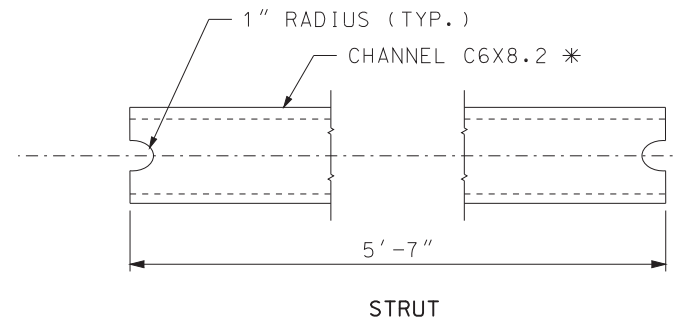
TYPE 2 BREAKAWAY  
WOOD POST



STEEL GROUND  
FOUNDATION TUBE



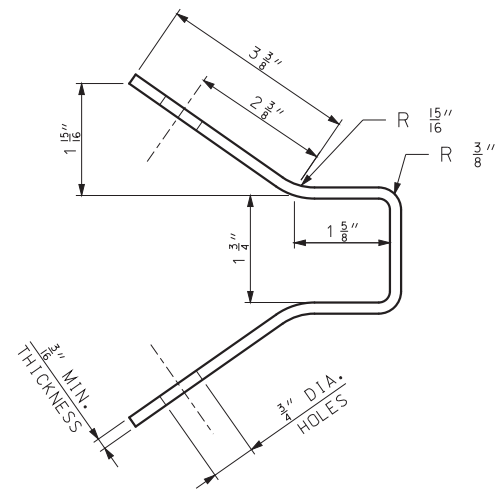
STRUT AND YOKE ASSEMBLY



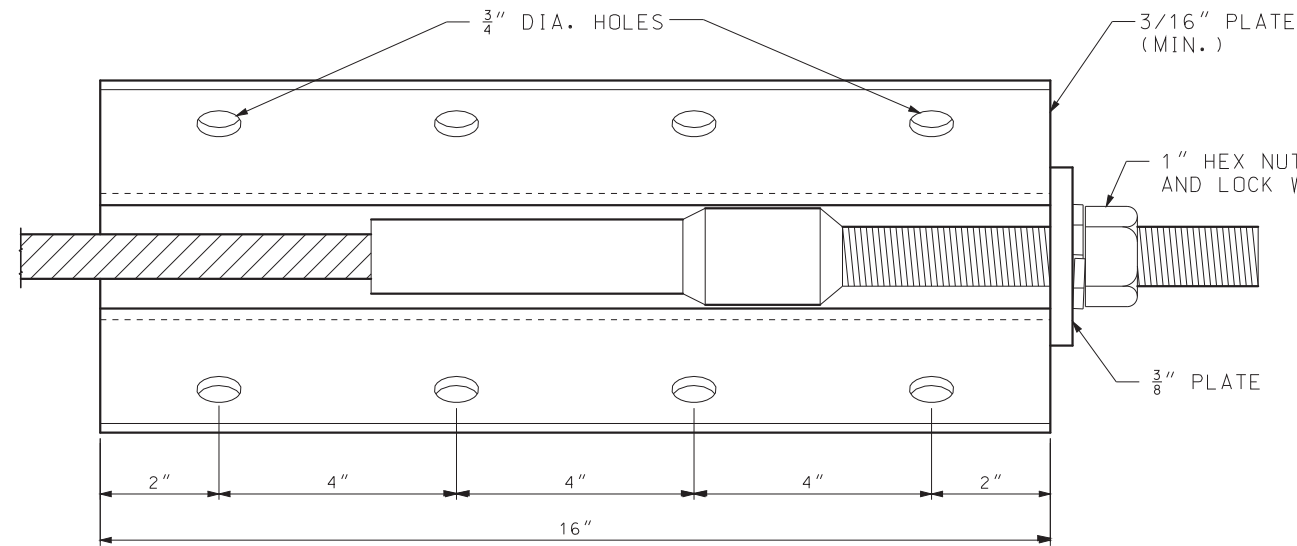
\* A 6" X 3" 10 GAUGE BENT PLATE STRUT  
MAY BE SUBSTITUTED FOR THE C-CHANNEL

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<b>MIDWEST GUARDRAIL SYSTEM (MGS)</b> <b>TERMINAL ANCHOR ENDS</b>
DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017	606.80C	SHEET NO. 2 OF 7

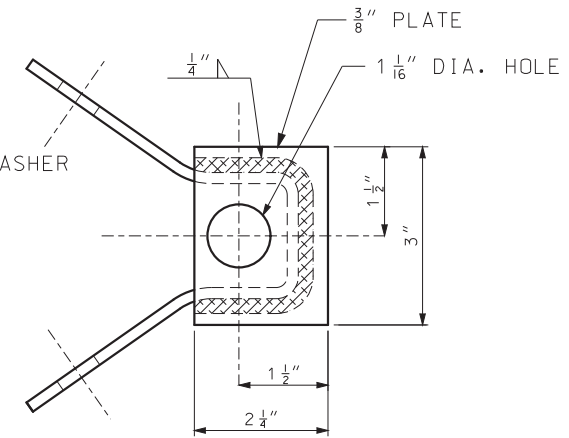
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



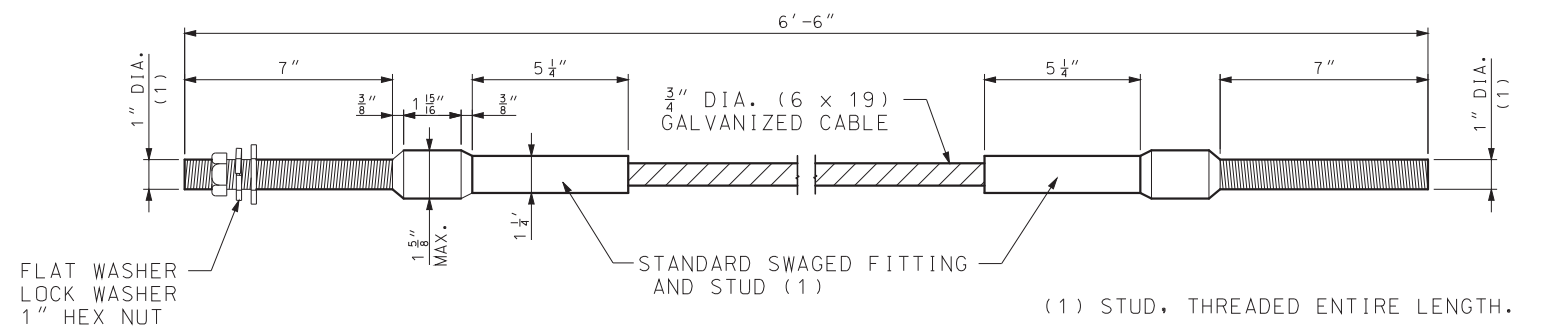
FABRICATION DETAIL



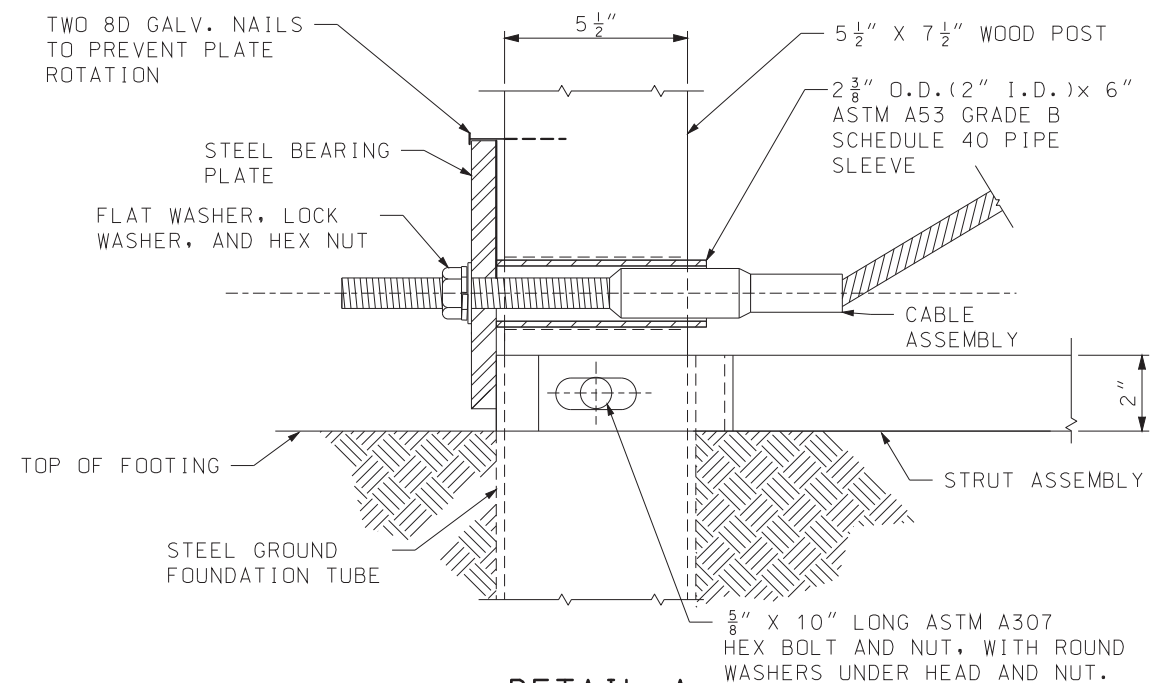
ASSEMBLED VIEW  
ANCHOR BRACKET



END VIEW

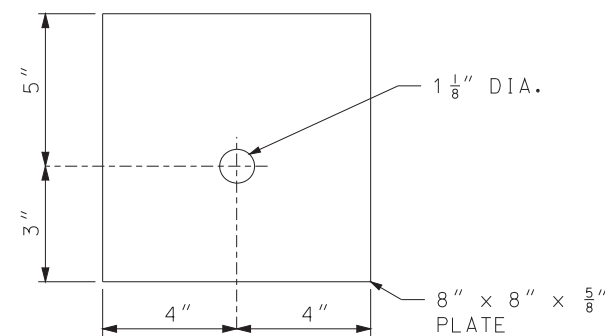


CABLE ASSEMBLY



DETAIL A  
(END POST DETAIL)

FOR LOCATION OF DETAIL A, SEE SHEET 1 OF 7.



STEEL BEARING PLATE

**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI  
 ERIC E. SCHROETER  
 NUMBER PE-28411  
 PROFESSIONAL ENGINEER  
 THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

MIDWEST GUARDRAIL SYSTEM (MGS)  
 TERMINAL ANCHOR ENDS

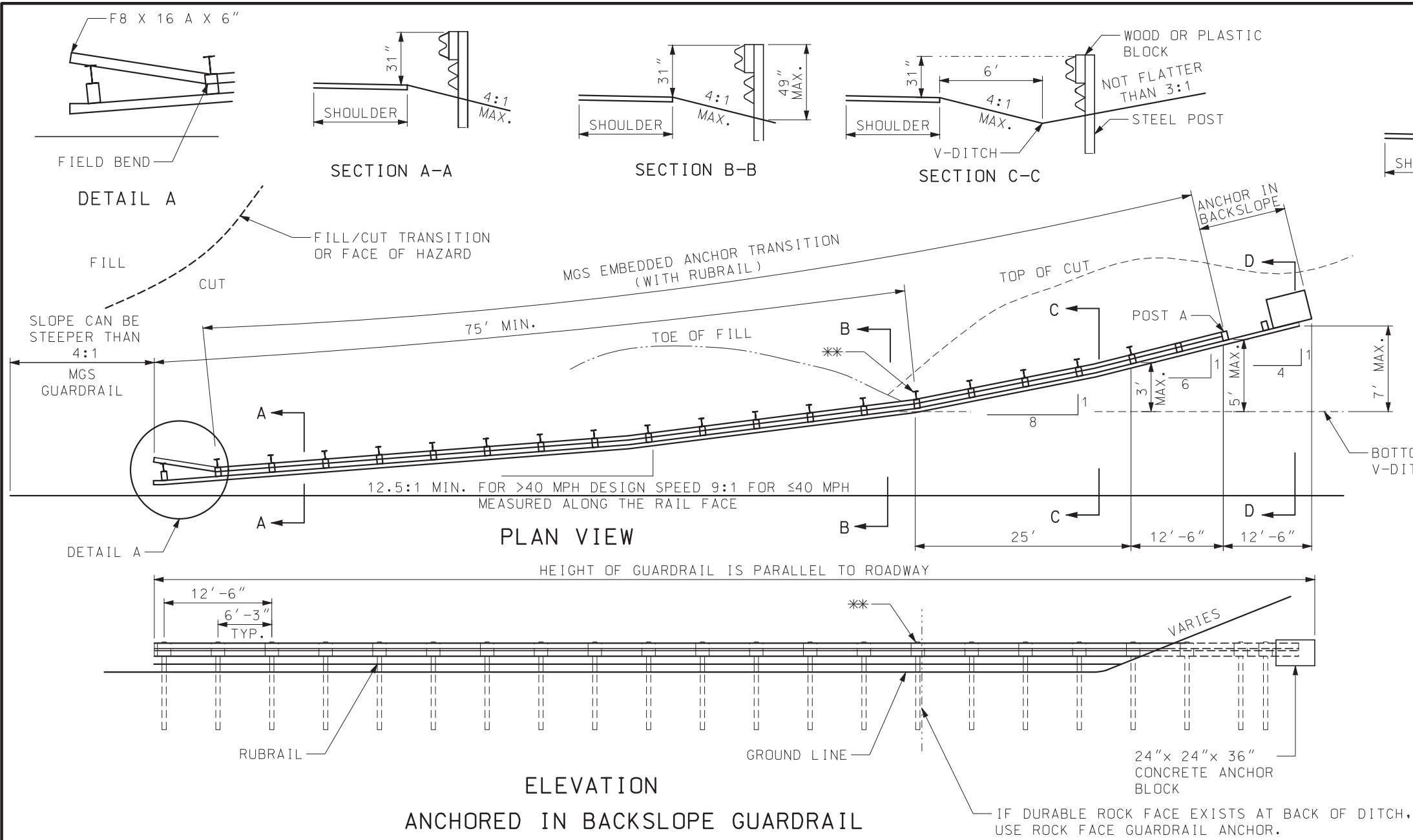
DATE EFFECTIVE: 07/01/2017  
 DATE PREPARED: 5/1/2017

606.80C

SHEET NO.  
 3 OF 7

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



**GENERAL NOTES:**

FOR END ANCHOR DETAILS, SEE SHEET 1-3 OF 7.

RUBRAIL BEGINS WHEN THE DISTANCE BETWEEN THE GUARDRAIL AND THE GROUND IS 18" AND INCREASING.

END ANCHOR POSTS 1 AND 2 SHALL HAVE FOUNDATION TYPE AS SHOWN ON SHEET 3 OF 7.

THE CONTRACT UNIT PRICE FOR EMBEDDED GUARDRAIL ANCHOR SHALL INCLUDE THE CONCRETE ANCHOR, EXCAVATION AND BACKFILLING, OR TERMINAL CONNECTOR, AND ALL INCIDENTAL HARDWARE AND WORK NECESSARY TO COMPLETE THE INSTALLATION.

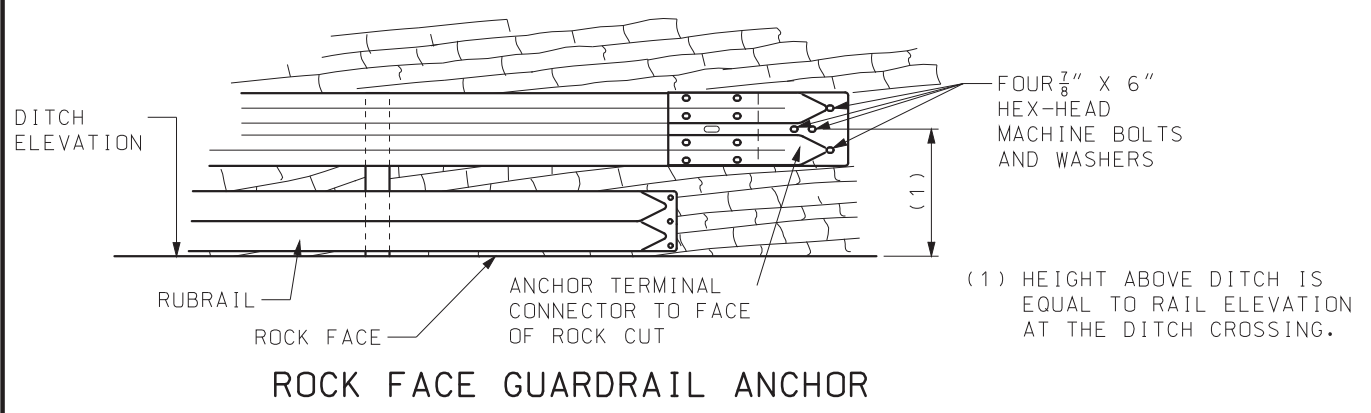
THE EMBEDDED ANCHOR TRANSITION SHALL EXTEND 50' ± BEYOND THE DITCH LINE AND TERMINATE A MINIMUM OF 12 INCHES BELOW GROUND ELEVATION OF THE BACKSLOPE.

BLOCKOUTS WILL NOT BE REQUIRED FOR ANY POST WHICH WILL BE COMPLETELY BELOW GROUND. THE ALIGNMENT OF SUCH POSTS SHALL BE APPROVED BY THE ENGINEER.

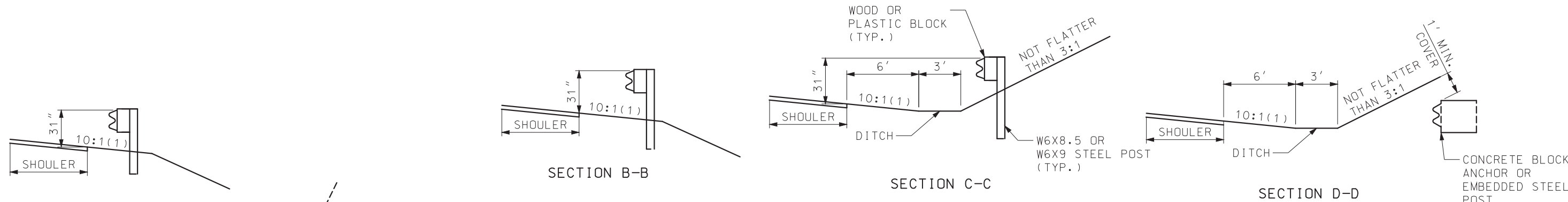
SEE OTHER DRAWINGS AND STANDARD SPECIFICATIONS FOR MATERIAL AND CONSTRUCTION REQUIREMENTS NOT SHOWN.

COST OF SHAPING ROCK FACE FOR PLACING OF TERMINAL CONNECTOR, DRILLING HOLES, FURNISHING AND PLACING BOLTS, WASHERS, CAULKING, ANCHORS AND END SHOE TO BE INCLUDED IN THE PRICE OF GUARDRAIL ANCHOR, ROCK FACE.

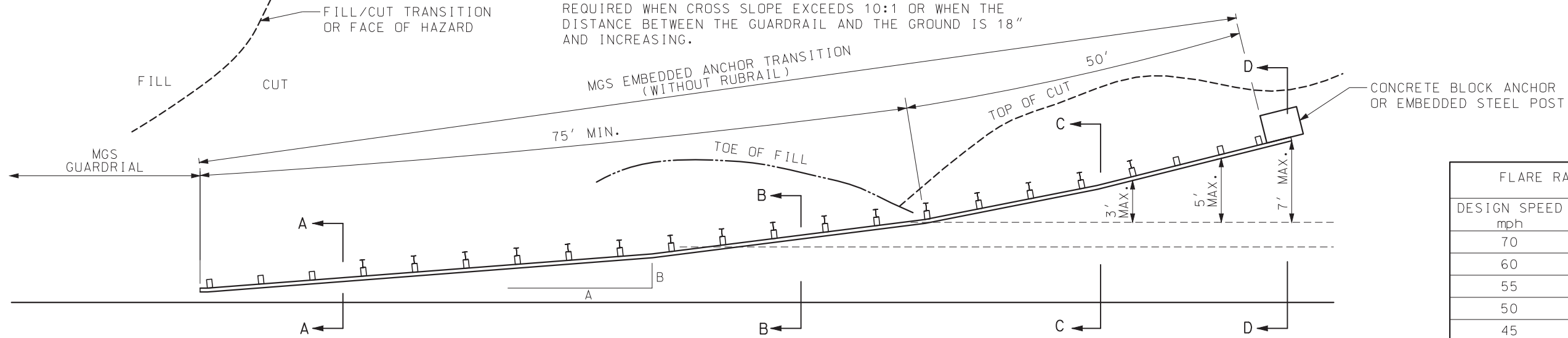
\* THE POST BEHIND THE DITCHLINE MAY BE SHORTENED TO PROVIDE 48" MIN. EMBEDMENT.



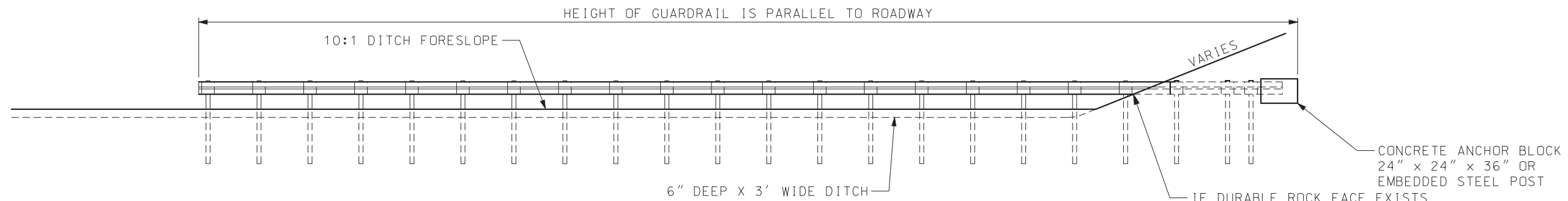
	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b>	
	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<b>MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL ENDS EMBEDDED AND ROCK FACE (V-DITCH STEEPER THAN 10:1, 4:1 MAX. FORESLOPE)</b>	
	DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017	606.80C



(1) MAX. CROSS SLOPE SHALL NOT EXCEED 4:1. RUBRAIL IS REQUIRED WHEN CROSS SLOPE EXCEEDS 10:1 OR WHEN THE DISTANCE BETWEEN THE GUARDRAIL AND THE GROUND IS 18" AND INCREASING.



FLARE RATE	
DESIGN SPEED mph	A:B
70	15:1
60	13:1
55	12:1
50	11:1
45	10:1
40	9:1
30 OR LESS	7:1



ELEVATION  
ANCHORED IN BACKSLOPE GUARDRAIL

**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI  
 ERIC E. SCHROETER  
 NUMBER PE-28411  
 PROFESSIONAL ENGINEER

MIDWEST GUARDRAIL SYSTEM (MGS)  
 EMBEDDED ANCHOR TRANSITION  
 EMBEDDED TERMINAL ENDS (FLAT DITCH)

DATE EFFECTIVE: 07/01/2017  
 DATE PREPARED: 5/1/2017

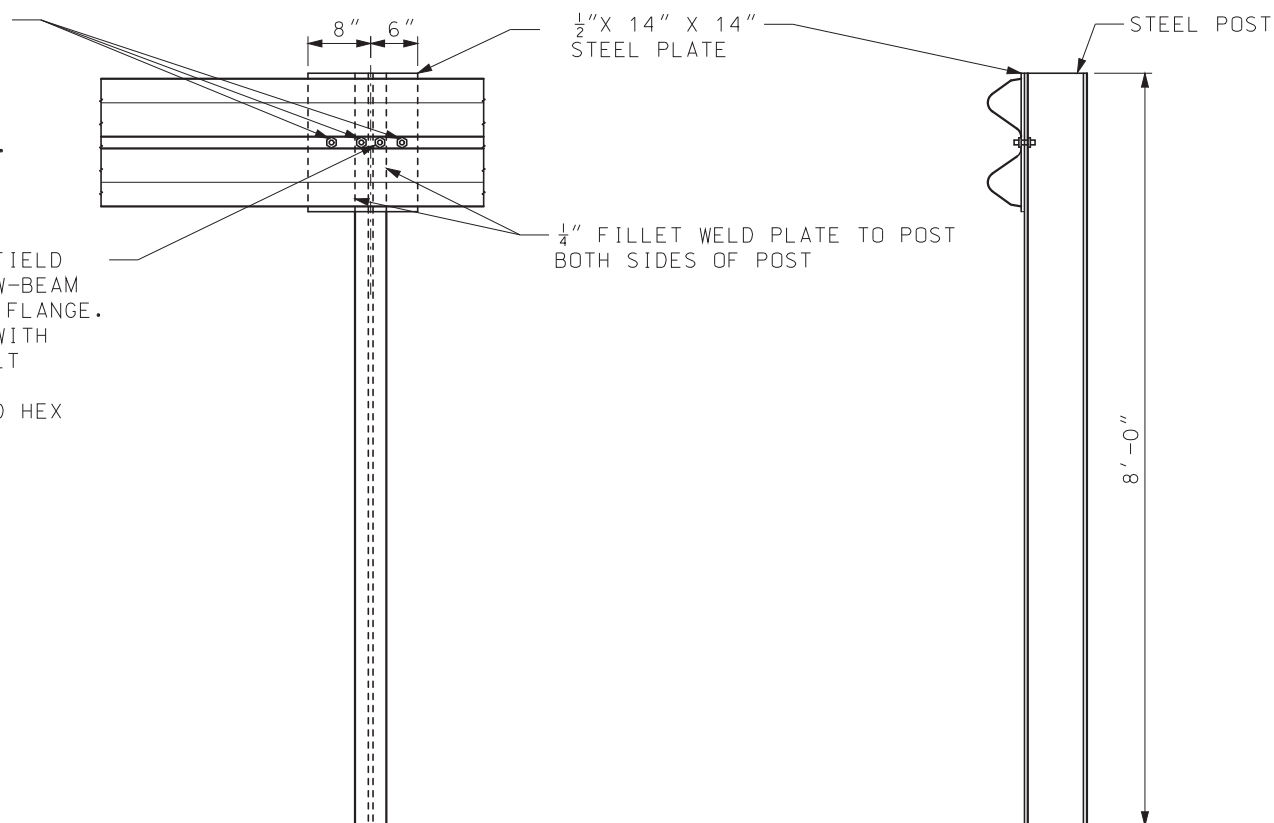
606.80C

SHEET NO. 5 OF 7

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

3 - 1" Ø HOLES TO BE FIELD DRILLED IN W-BEAM ELEMENT AND ATTACHED WITH  $\frac{7}{8}$ " Ø HEX HEAD BOLTS  $1\frac{7}{16}$ " LONG EACH WITH ONE SQUARE WASHER AND HEX NUT.

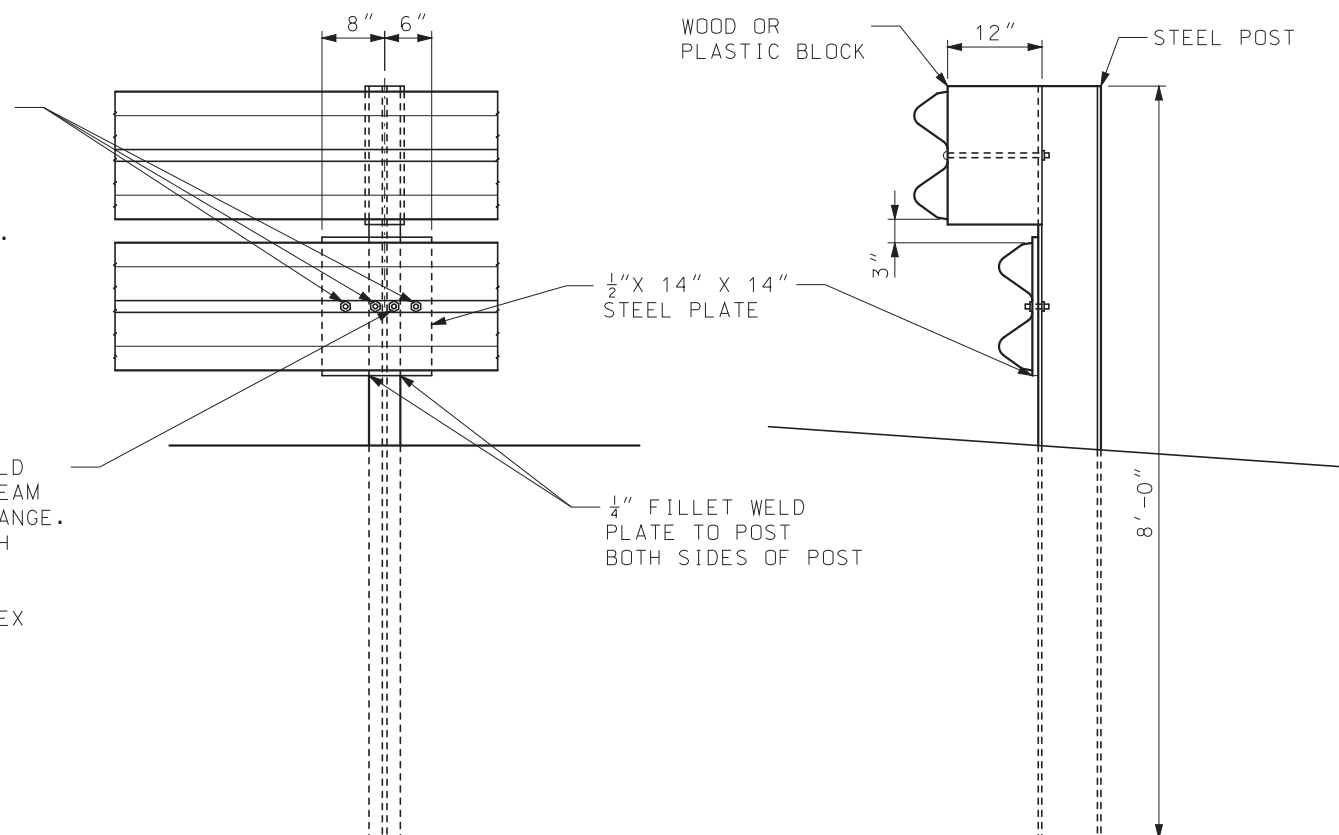
1" Ø HOLE TO BE FIELD DRILLED THROUGH W-BEAM AND THROUGH POST FLANGE. ATTACHED W-BEAM WITH  $\frac{7}{8}$ " Ø HEX HEAD BOLT 2" LONG WITH ONE SQUARE WASHER AND HEX NUT.



EMBEDDED STEEL POST

3 - 1" Ø HOLES TO BE FIELD DRILLED IN W-BEAM ELEMENT AND ATTACHED WITH  $\frac{7}{8}$ " Ø HEX HEAD BOLTS  $1\frac{7}{16}$ " LONG EACH WITH ONE SQUARE WASHER AND HEX NUT.

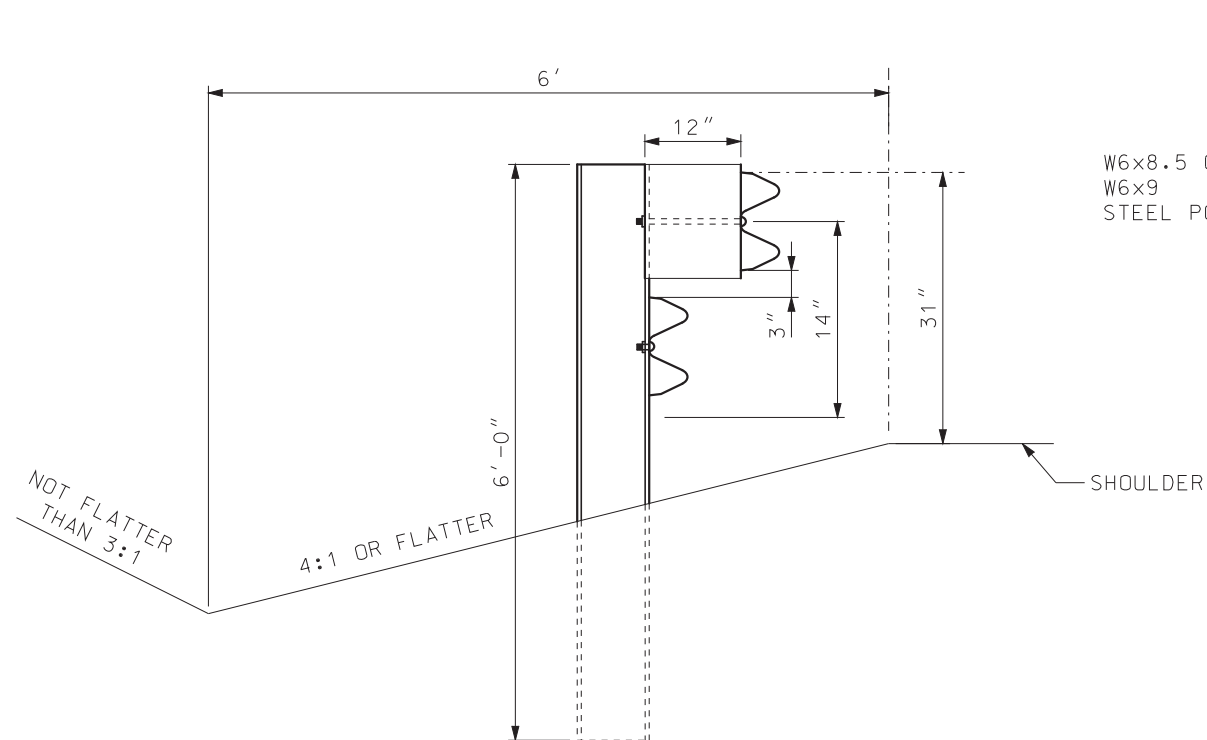
1" Ø HOLE TO BE FIELD DRILLED THROUGH W-BEAM AND THROUGH POST FLANGE. ATTACHED W-BEAM WITH  $\frac{7}{8}$ " Ø HEX HEAD BOLT 2" LONG WITH ONE SQUARE WASHER AND HEX NUT.



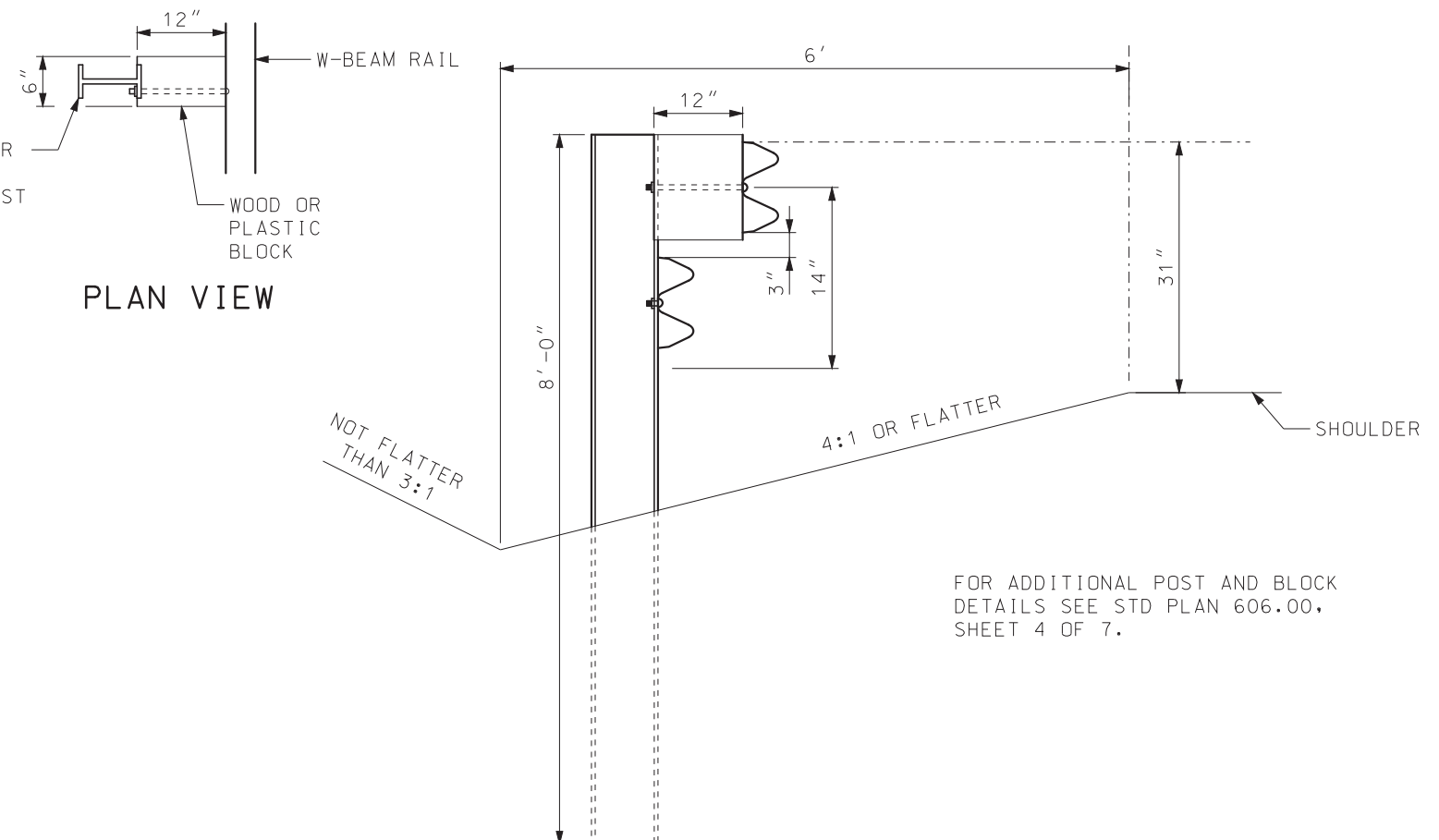
SPECIAL RUBRAIL TO POST CONNECTION AT POST A

 <b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<b>MIDWEST GUARDRAIL SYSTEM (MGS)</b> <b>EMBEDDED ANCHOR TERMINAL ENDS (STEEL POST OPTION)</b>
DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017	606.80C SHEET NO. 6 OF 7

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

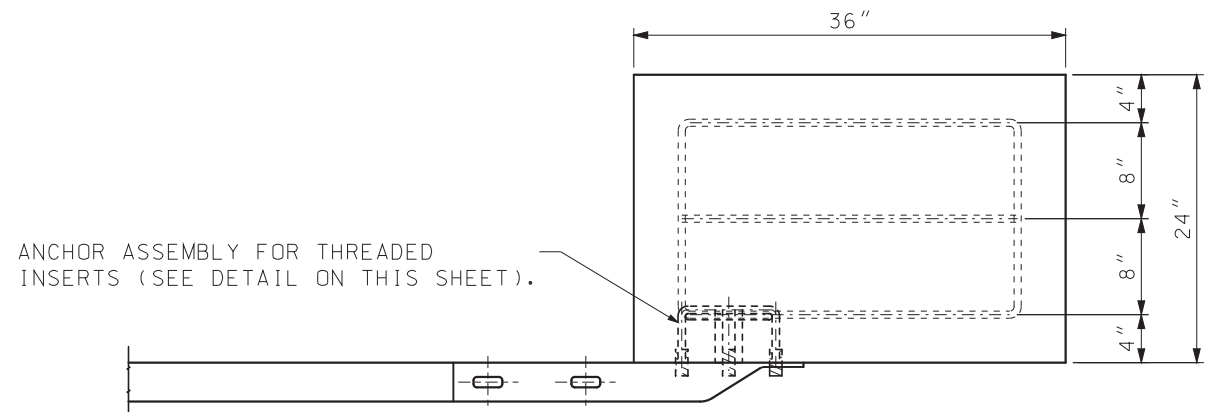


ELEVATION OF 6' STEEL POST AND BLOCK

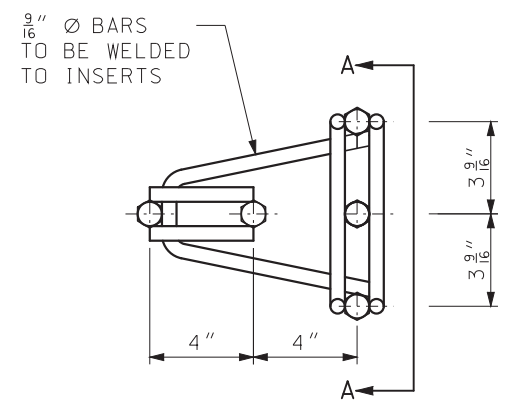


ELEVATION 8' STEEL POST AND BLOCK

FOR ADDITIONAL POST AND BLOCK DETAILS SEE STD PLAN 606.00, SHEET 4 OF 7.

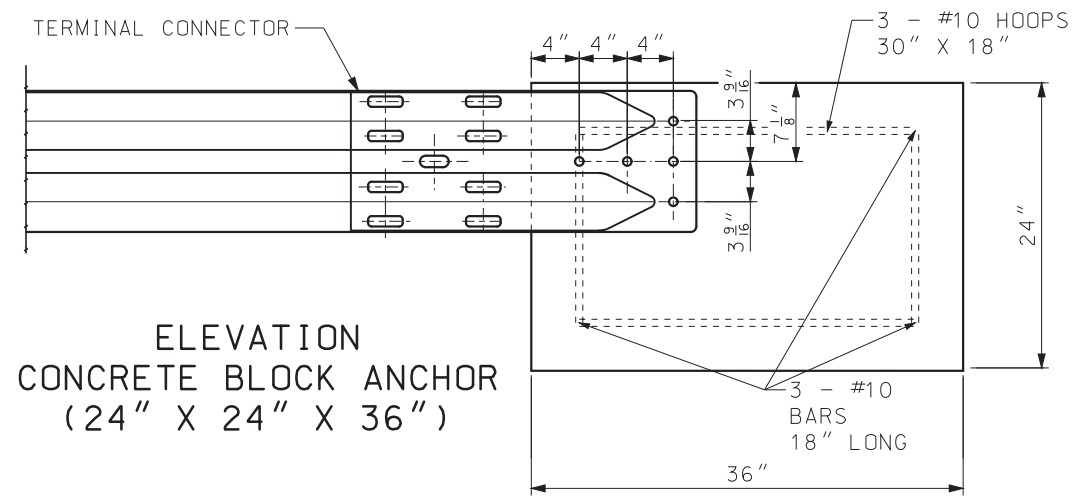


TOP VIEW

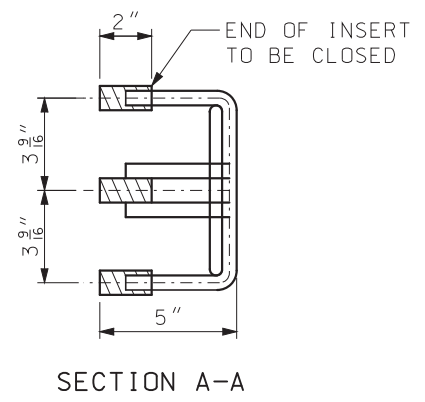


CONCRETE BLOCK ANCHOR ANCHOR ASSEMBLY


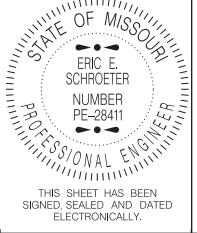
THREADED INSERTS FOR 1 5/16" X 2" GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MINIMUM 1 7/8". INSERTS THREADED MINIMUM OF 1 3/4".



ELEVATION CONCRETE BLOCK ANCHOR (24" X 24" X 36")



SECTION A-A

 <b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<b>MIDWEST GUARDRAIL SYSTEM (MGS)</b> <b>EMBEDDED TERMINAL ENDS</b> <b>GENERAL DETAILS</b>
DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017	SHEET NO. <b>7 OF 7</b>

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.