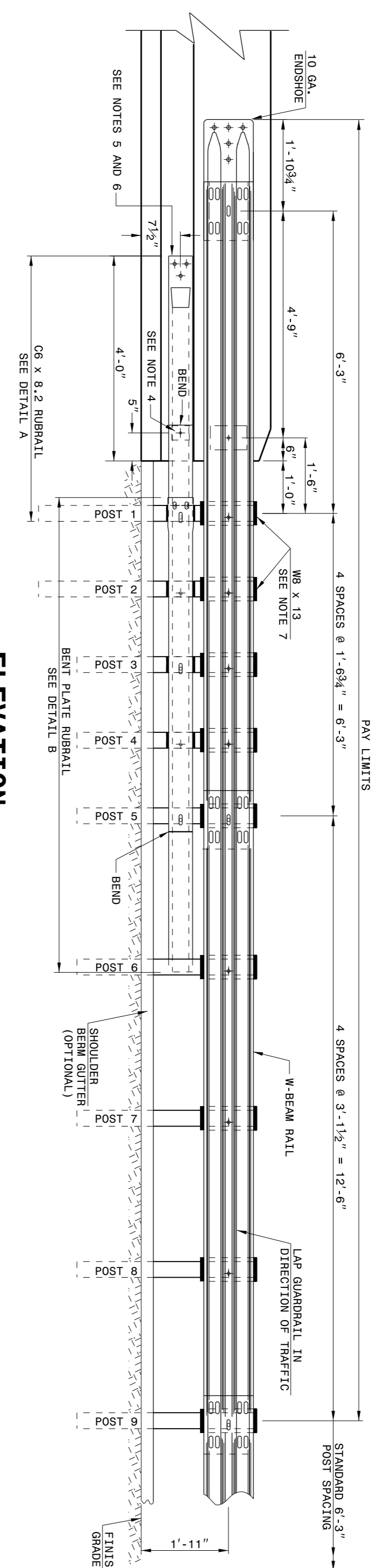
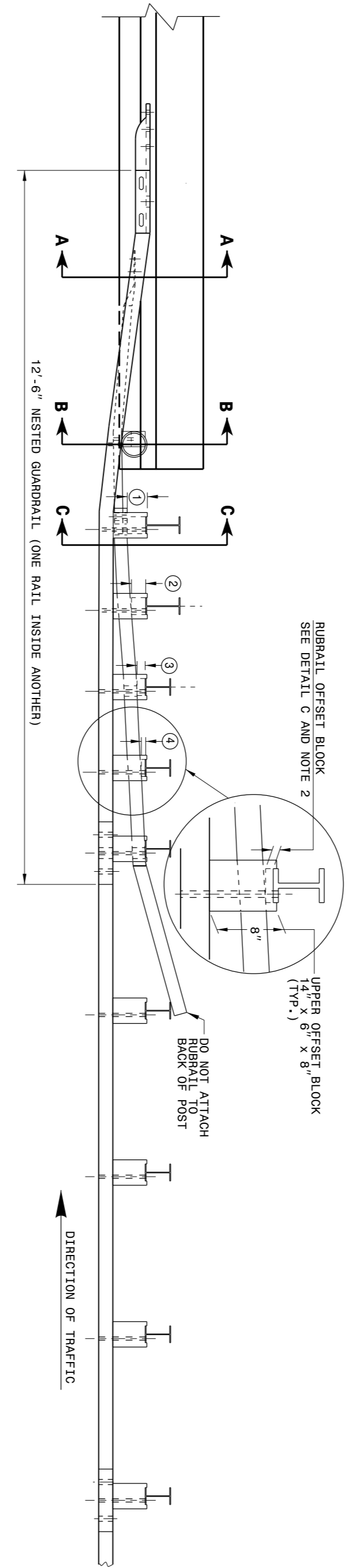


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.



ELEVATION

- GENERAL NOTES:
- POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
 - BLOCKOUTS 1 THROUGH 4 REQUIRE LOWER BLOCKOUTS AND/OR RUBRAIL. RUBRAIL IS SECURED TO POST 5 WITH A 5/8" x 4 1/2" BUTTONEAD BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
 - STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9' LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 5/8" x 1 1/4" LONG BUTTONEAD BOLT AND RECTANGULAR PLATE WASHER.
 - SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER.
 - TYPE OF F-RAIL SHOWN IS 8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE F SHAPE AND ATTACH FLUSH WITH THE SLOPED ANCHORAGE.
 - ANCHORAGE: (a) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR RUBRAIL USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS IS 1/2". (b) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR THE W-BEAM END SHOE USING A 4 BOLT HOLD DOWN PLATE (SEE STD. DWG. 862.04). THIS RAIL THE BEAM END SHOE BEHIND THE NESTED GUARDRAIL BARRIER (SEE STD. DWG. 857.01).
 - (c) AT NEW BRIDGE RAIL, ANCHOR THE W-BEAM END SHOE AND RUBRAIL AS DETAILED ON THE STRUCTURE PLANS.
 - POSTS 1 AND 2 ARE W8 x 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W8 x 8.5.



PLAN

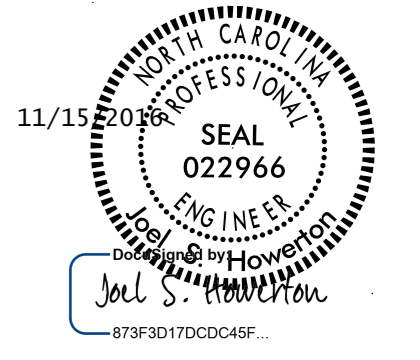
ENGLISH DETAIL DRAWING FOR STRUCTURE ANCHOR UNIT GUARDRAIL ANCHOR UNIT TYPE B-77 FOR F-SHAPE BARRIER

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

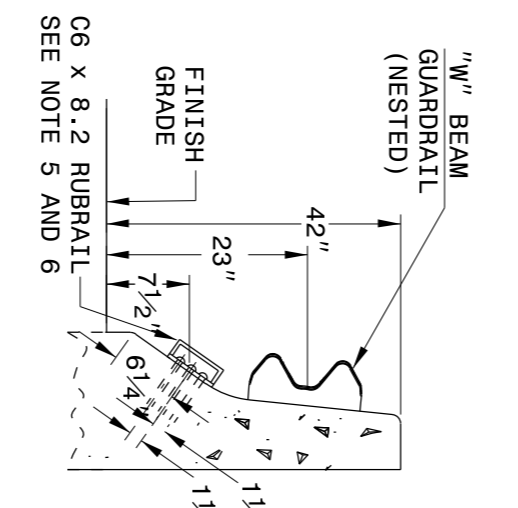
SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON DATE: 06-22-12
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.:

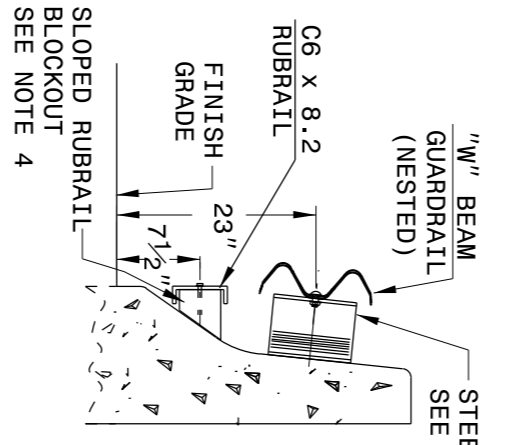


SHEET 4 OF 7 862D03

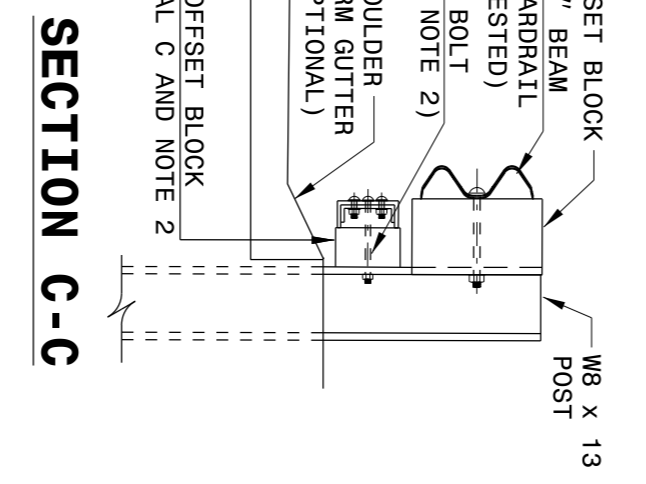
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.



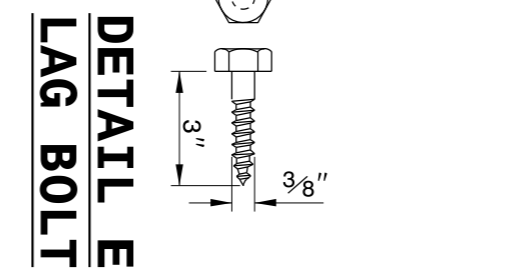
SECTION A-A



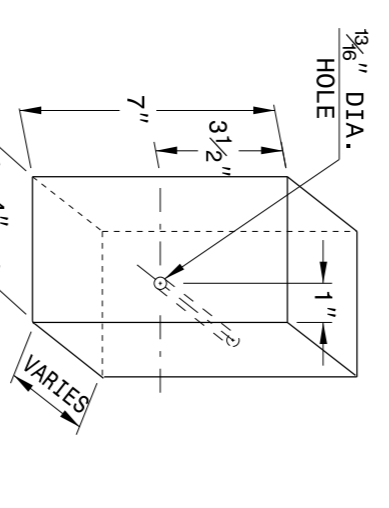
SECTION B-B



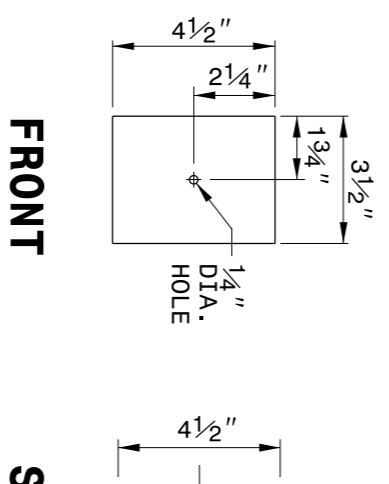
SECTION C-C



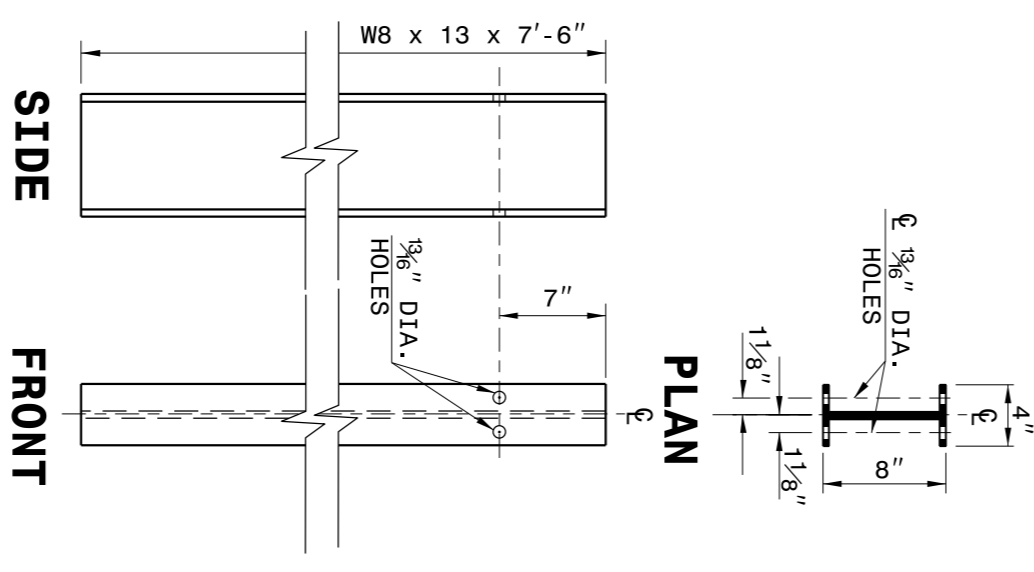
DETAIL E W8 X 13 X 7'-6"



DETAIL C RUBRAIL BLOCKOUT



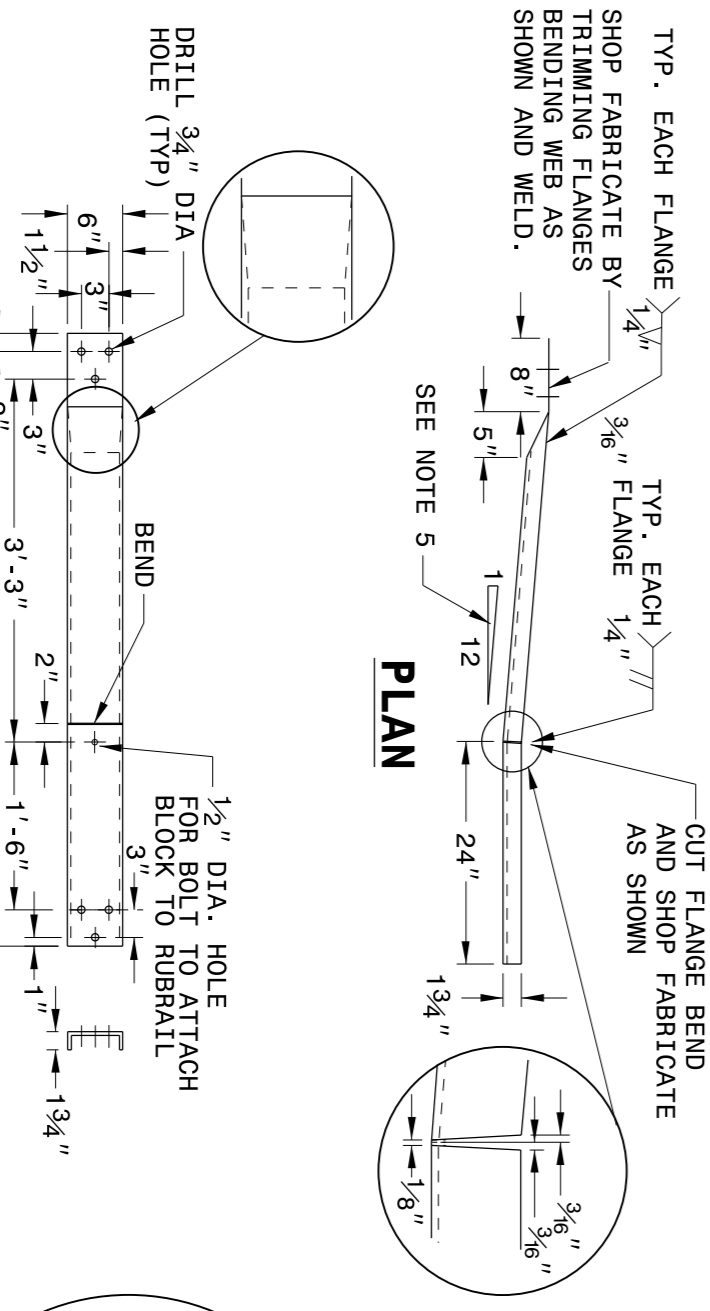
DETAIL D SLOPED RUBRAIL BLOCKOUT



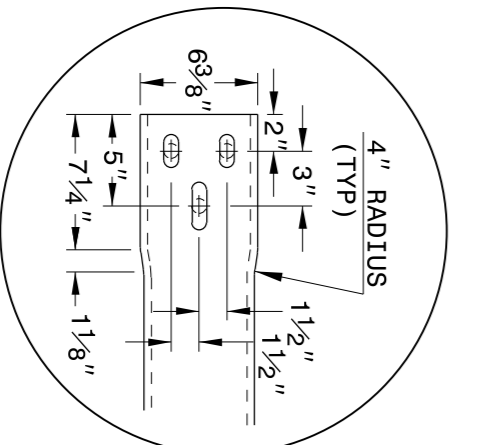
DETAIL F W8 X 13 X 7'-6"

RUBRAIL BLOCKS 7" HIGH x 4" WIDE	POST	THICKNESS	BOLT LENGTH
1	4 1/4"	9"	5" *
2	3 1/4"	5"	6"
3	2"	6"	3" *
4	1"	3"	3" *

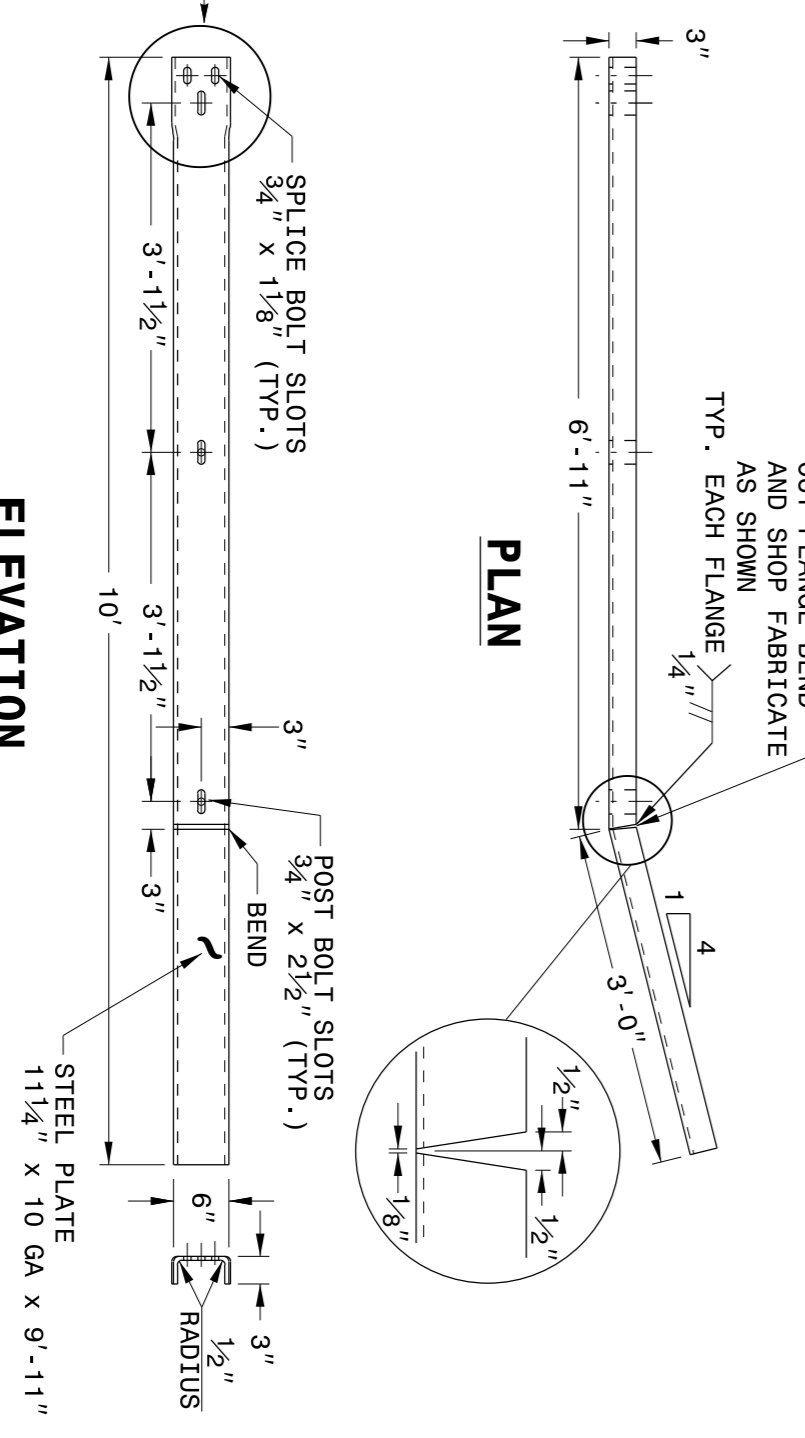
* BOLTS FOR POSTS 1 AND 4 ARE USED TO ATTACH BLOCKOUT TO POST. RUBRAIL NOT ATTACHED TO BLOCK.



ELEVATION DETAIL A C6 X 8.2 RUBRAIL



ELEVATION DETAIL B BENT PLATE RUBRAIL



ELEVATION DETAIL B BENT PLATE RUBRAIL

ENGLISH DETAIL DRAWING FOR STRUCTURE ANCHOR UNIT GUARDRAIL ANCHOR UNIT TYPE B-77 FOR F-SHAPE BARRIER

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

SHEET 5 OF 7 862D03

SHEET 5 OF 7 862D03

*****USER*****