

10-SEP-2018 11:42
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 Jover-ton AT CSD-292595

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR GUARDRAIL ANCHOR UNIT TYPE B-77 SHOP CURVED	ENGLISH DETAIL DRAWING FOR GUARDRAIL ANCHOR UNIT TYPE B-77 SHOP CURVED
SHEET 1 OF 2 B-77SC	SHEET 1 OF 2 B-77SC	SHEET 1 OF 2 B-77SC

ELEVATION

GENERAL NOTES:
 1) RUBRAIL BLOCKS LOCATED ON POSTS 1 THROUGH 4 ARE OFFSET DRILLED AND SECURED WITH 5/8" BUTT-ON BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE BLOCKS ONLY TO POSTS 2 AND 4. SECURE RUBRAIL AND BLOCKS TO POSTS 1 AND 3. RUBRAIL IS SECURED TO POST 5 WITH A 5/8" x 4 1/2" BUTT-ON BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
 2) STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9' LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 3/8" x 3" LAG BOLTS WITH FLAT WASHERS. SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER. TOE OF THE BARRIER OR BRIDGE RAIL.
 3) ANCHORAGE: EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS. RUBRAIL SHALL BE ANCHORED USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS SHALL BE 1/2".
 4) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, THE W-BEAM END SHOE SHALL BE ANCHORED USING A 4 BOLT HOLD DOWN PLATE. A 4 BOLT INSERT ASSEMBLY IS ALLOWED ON PRECAST REINFORCED CONCRETE BARRIER (SEE STANDARD 862.04). THE W-BEAM END SHOE SHALL BE INSTALLED BEHIND THE NESTED W-BEAM ELEMENTS.
 5) NEW BARRIERS SHALL BE ANCHORED AS DETAILED ON THE STRUCTURE PLANS.
 6) POSTS 1 AND 2 ARE W8 X 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W8 X 8.5.
 7) POSTS 3 AND 4 ARE W8 X 13, 7'-6" LONG.

PLAN

GUARDRAIL ANCHOR UNIT TYPE B-77

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SHEET 2 OF 2 B-77SC	SHEET 2 OF 2 B-77SC	SHEET 2 OF 2 B-77SC

SECTION A-A

POST	THICKNESS	BOLT LENGTH
1	4 1/4"	9"
2	3 1/4"	5"
3	2"	6"
4	1"	3"

SECTION B-B

SECTION C-C

SECTION D-D

**DETAIL C
RUBRAIL BLOCKOUT**

**DETAIL E
SLOPED RUBRAIL BLOCKOUT**

**DETAIL F STEEL POST
"W8 X 13 X 7'-6"**

**DETAIL B
BENT PLATE RUBRAIL**

**DETAIL A
C6 X 8.2 RUBRAIL**

**DETAIL B
BENT PLATE RUBRAIL**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

SEE PLATE FOR TITLE

ORIGINAL BY: E.E. WARD	DATE: 06-04-04
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: miscguardrail/NCHRP350approved/B-77.dgn	



10/18/2022