

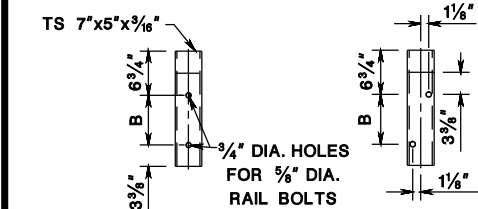
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BDCTD-02-REVISIONS TO CD-609-13
BDCTD-01-ORIGINAL SHEET



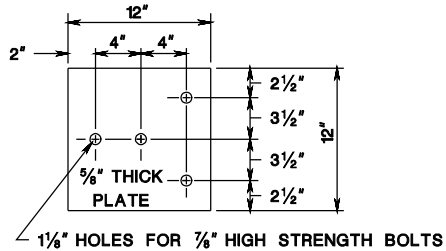
DIM.	POSTS #1 - #11	POST #12
A	1'-5 3/4"	1'-1 1/8"
B	7 3/8"	3 3/4"

BLOCKOUT DIMENSIONS

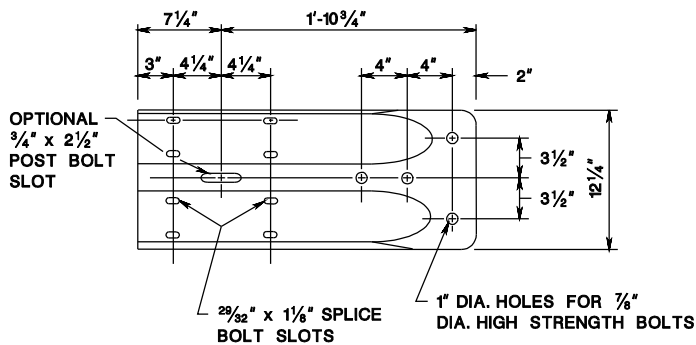
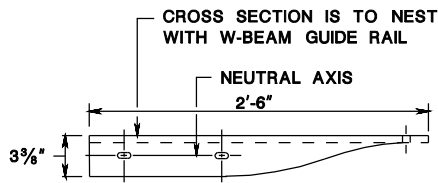
NOTES:

- STEEL FOR STRUCTURAL TUBE TO BE ASTM A500 GRADE B, WELDED AS PER ANSI/AWS D1.1 STRUCTURAL WELDING CODE, AND GALVANIZED.
- SEE CD-609-18 FOR POST AND RAIL BOLT DETAILS.

STRUCTURAL TUBE BLOCKOUTS TL-3 ATTACHMENTS (CD-609-14, 15, 16, 17, 17B, 17C)

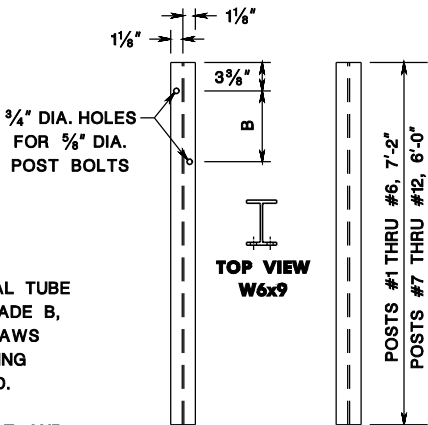


BACKUP PLATE FOR W-BEAM TERMINAL CONNECTOR

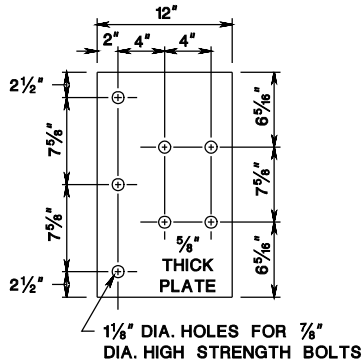


(AASHTO M180, CLASS B, TYPE 1) (10 GAUGE)

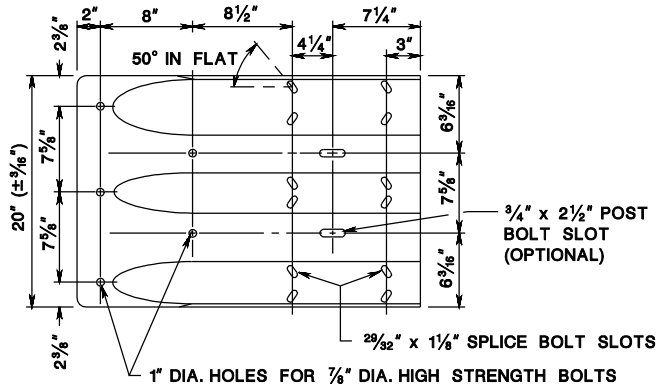
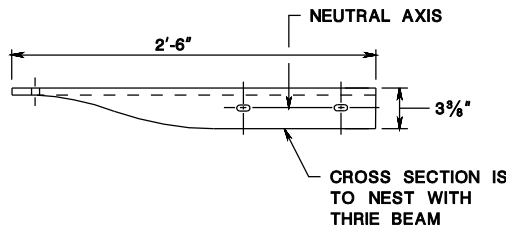
W-BEAM TERMINAL CONNECTOR



POSTS - TL-3 ATTACHMENTS (CD-609-14, 15, 16, 17, 17B, 17C)

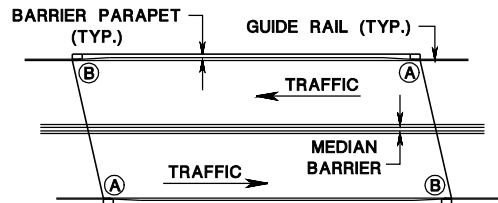


BACKUP PLATE FOR THRIE BEAM TERMINAL CONNECTOR

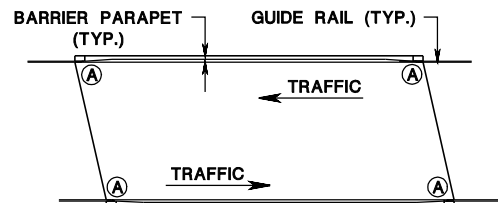


(AASHTO M180, CLASS B, TYPE 1) (10 GAUGE)

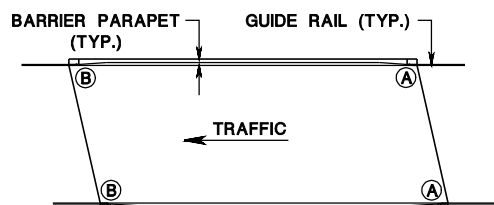
THRIE BEAM TERMINAL CONNECTOR



TWO WAY TRAFFIC - DIVIDED



TWO WAY TRAFFIC - UNDIVIDED

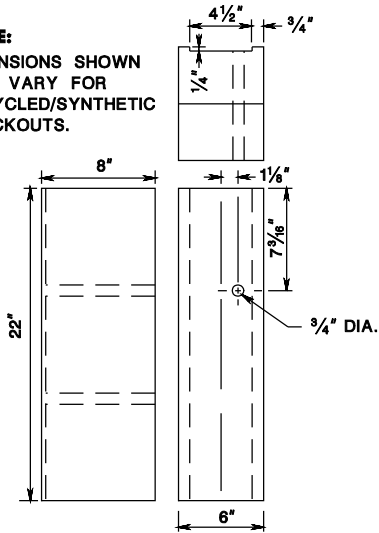


ONE WAY TRAFFIC

BRIDGE ATTACHMENT TYPES

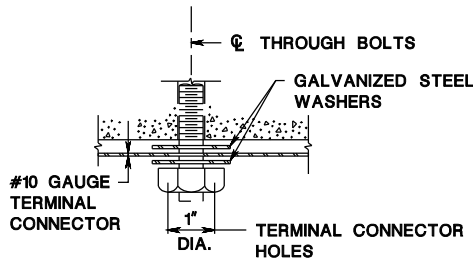
NOTE:

DIMENSIONS SHOWN MAY VARY FOR RECYCLED/SYNTHETIC BLOCKOUTS.



APPROVED RECYCLED/
SYNTHETIC MATERIALS

6"x8"x22" BLOCKOUT TL-2 ATTACHMENTS (CD-609-15A, 15B, 16A, 17A, 17D, 17E)



TERMINAL ANCHORAGE

GENERAL NOTES FOR TL-2 & TL-3 ATTACHMENTS (CD-609-14 THRU CD-609-17E)

- THIS GUIDE RAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO A VERTICAL CONCRETE SHAPE AND SHOULD NOT BE CONNECTED DIRECTLY TO A CONCRETE SAFETY SHAPE. CONCRETE SAFETY BARRIER SHOULD BE TRANSITIONED TO A VERTICAL SHAPE AT THE GUIDE RAIL CONNECTION.
- FOR RECOMMENDED ATTACHMENT, REFER TO "BRIDGE ATTACHMENT TYPES", THIS SHEET.
- ALL CROSS SLOPES BETWEEN THE PAVEMENT EDGE AND POSTS TO BE 10H:1V OR FLATTER.
- EMBANKMENT MATERIAL CONFORMING TO THE NJDOT STANDARD SPECIFICATIONS SECTION 203 TO EXTEND AT A 2% SLOPE FOR A MINIMUM OF 2'-0" BEHIND THE POSTS AT WHICH POINT A SLOPE OF NO STEEPER THAN 2H:1V SHOULD EXTEND A MINIMUM OF 4'-0" FURTHER.
- LOCATE DRAINAGE INLETS AND ELECTRICAL JUNCTION BOXES ON APPROACHES SO AS NOT TO INTERFERE WITH GUIDE RAIL POST SPACING.
- STRUCTURAL STEEL PLATES AND SHAPES TO CONFORM TO AASHTO M270 AND BE GALVANIZED PER AASHTO M111.
- HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS TO CONFORM TO AASHTO M164. ZINC COATED BOLTS, NUTS AND WASHERS TO BE TREATED ACCORDING TO AASHTO M232M.
- THE THICKNESS OF THRIE-BEAM AND W-BEAM RAIL ELEMENTS IS 12-GAUGE UNLESS OTHERWISE NOTED.
- FOR ADDITIONAL THRIE BEAM AND W-BEAM DETAILS REFER TO CD-609-1 AND CD-609-18.
- CONCRETE LIP CURB TO BE PAID UNDER 9"x16" CONCRETE VERTICAL CURB (SEE CD-607-1.9).
- W-BEAM AND THRIE BEAM TERMINAL CONNECTORS USE AASHTO M180 MECHANICAL PROPERTIES FOR BEAM & TRANSITION SECTIONS.

GENERAL NOTES FOR TL-3 ATTACHMENTS (CD-609-14, 15, 16, 17, 17B & 17C)

- AT TYPE (A) ATTACHMENTS, THRIE BEAM RAIL ELEMENT WILL REQUIRE ADDITIONAL RAIL BOLT SLOTS FOR POST #1, #3, #5, #7 AND #9. HOLES ARE TO BE SHOP PUNCHED OR DRILLED BEFORE GALVANIZATION. NO FIELD DRILLING IS PERMITTED.
- POSTS 1 THRU 6 TO BE 7'-2" LONG WITH 4'-10" POST EMBEDMENT. POSTS 7 THRU 12 TO BE 6'-0" LONG WITH 3'-8" POST EMBEDMENT.
- WHEN THE CONFIGURATION OF BRIDGE ABUTMENTS AND WINGWALLS DO NOT ACCOMMODATE THE INSTALLATION OF POST 1, THE POST MAY BE ATTACHED TO THE ABUTMENT HEADER WITH THE USE OF A BASE PLATE.
- STRUCTURAL TUBE BLOCKOUTS ARE TO BE USED FOR POSTS 1 THRU 12.

BEAM GUIDE RAIL ATTACHMENTS (MASH TL-2 & TL-3)

N.T.S.

CD-609-13

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

CD-609-13.1

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