

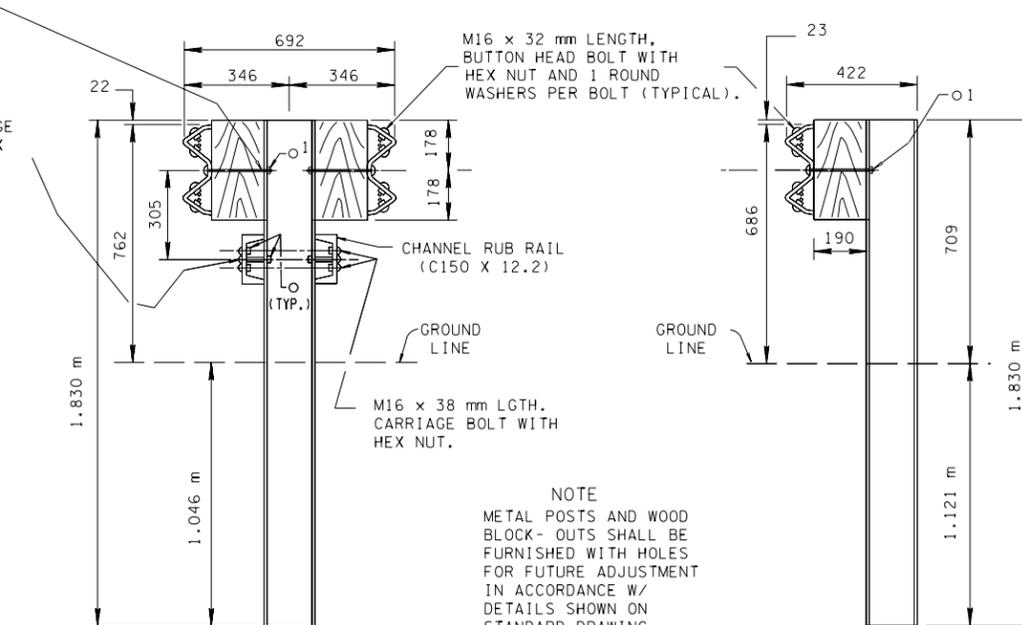
SIDE VIEW
MEDIAN DIVIDER
GUARDRAIL
(W-BEAM/RUB RAIL ALT.)

FRONT VIEW
MEDIAN DIVIDER
GUARDRAIL
(SHOWING BOLT HOLES FOR W-BEAM RAIL)

NOTE
WOOD POSTS AND WOOD
BLOCK-OUTS SHALL BE
FURNISHED WITH HOLES
FOR FUTURE ADJUSTMENT
IN ACCORDANCE W/
DETAILS SHOWN ON
STANDARD DRAWING
SM-GR-13.

M16 x 241 mm LENGTH, BUTTON HEAD BOLT WITH
HEX NUT AND 1 WASHER PER BOLT. (TYPICAL)
(SEE ADDITIONAL HOLES REQD. ON SM-GR-13)

M16 x 76 mm
LGTH. CARRIAGE
BOLT WITH HEX
NUT



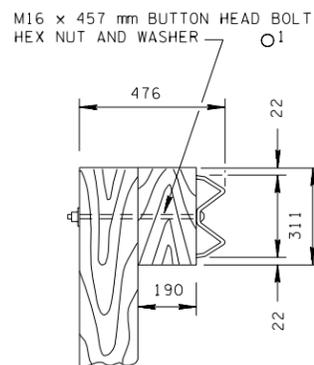
SIDE VIEW
MEDIAN DIVIDER GUARDRAIL

SIDE VIEW
SINGLE GUARDRAIL

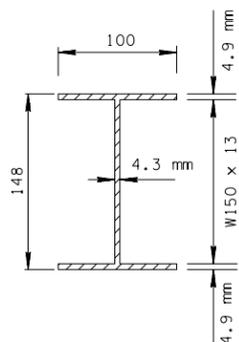
NOTE
METAL POSTS AND WOOD
BLOCK-OUTS SHALL BE
FURNISHED WITH HOLES
FOR FUTURE ADJUSTMENT
IN ACCORDANCE W/
DETAILS SHOWN ON
STANDARD DRAWING
SM-GR-13.

- REV. 11-1-95: CHANGED TO METRIC.
- REV. 7-29-96: ADDED DIMENSION TO SIDE VIEW FOR SINGLE GUARDRAIL. REV. 7-29-98: DELETED DETAILS FOR MEDIAN DIVIDER GUARDRAIL USING THRIE-RAIL. CHANGED STEEL BLOCK-OUT TO WOOD BLOCK-OUT IN ALL DETAILS AND NOTES.
- REV. 9-5-98: GENERAL REVISION THROUGHOUT DRAWING. CHANGED DRAWING NO. FROM SM-GR-13 TO SM-GR-12.
- REV. 3-22-99: CHANGED NUMBER OF WASHERS WHERE BLOCK-OUT ATTACHES TO POST FROM 2 TO 1.
- REV. 9-11-02: ADDED GENERAL NOTE (C) ADDED WELDED STEEL SHAPES FOR W200X19 AND W200X31.3 GUARDRAIL POSTS.
- REV. 5-27-03: CHANGED GENERAL NOTE (D) AND MOVED GENERAL NOTE (C) TO STANDARD DRAWINGS SM-GR-13 AND SM-GR-13A.

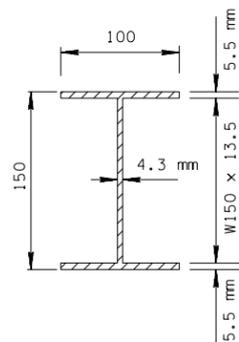
DETAILS FOR WOOD POSTS AND BLOCK-OUTS



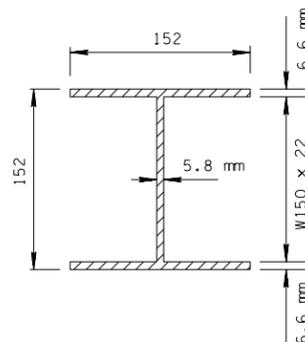
SIDE VIEW
SINGLE GUARDRAIL



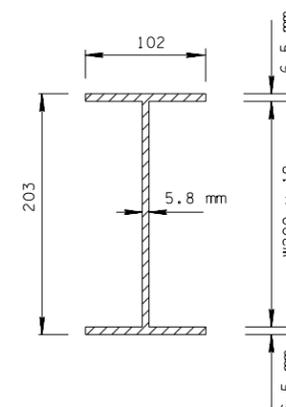
WELDED STEEL SHAPE



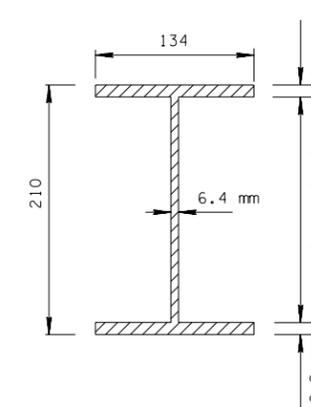
WELDED STEEL SHAPE



WELDED STEEL SHAPE



WELDED STEEL SHAPE



WELDED STEEL SHAPE

LEGEND FOR WASHER REQUIREMENTS

1 OR 2 ROUND WASHERS — o1o2

WOOD SPECIFICATIONS

- (S1) POSTS AND BLOCK-OUTS SHALL BE OF TIMBER WITH A STRESS GRADE OF 8.3 Mpa OR MORE. POSTS WILL HAVE NOMINAL SIZE OF 150 mm X 200 mm. BLOCK-OUTS WILL HAVE NOMINAL SIZE OF 150 mm X 200 mm (TYPICAL SIZE 140 mm X 190 mm). TESTING SHALL BE IN ACCORDANCE WITH WEST COAST LUMBER INSPECTION BUREAU, SOUTHERN PINE INSPECTION BUREAU, OR OTHER APPROPRIATE TIMBER ASSOCIATIONS. TIMBER FOR POSTS SHALL BE ROUGH SAWN (UNPLANED) WITH NOMINAL DIMENSIONS INDICATED. TIMBER FOR BLOCK-OUTS SHALL BE S4S WITH THE TYPICAL DIMENSIONS INDICATED.
- (S2) ALL WOOD POSTS AND BLOCK-OUTS SHALL BE TREATED WITH TIMBER PRESERVATIVE AS REQUIRED BY SUBSECTION 911.02(A) OF THE TENNESSEE STANDARD SPECIFICATION.
- (S3) WOOD POSTS AND BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE RAIL ADJUSTMENT IN ACCORDANCE WITH DETAILS SHOWN ON STANDARD DRAWINGS SM-GR-13.

GENERAL NOTES

- (A) MATERIALS AND SPECIFICATIONS NOT SHOWN IN THESE "SM-GR" SERIES OF DRAWINGS SHALL BE IN ACCORDANCE WITH STANDARD PROVISIONS REGARDING SECTION 705.
- (B) THE CONTRACTOR MAY HAVE OPTIONAL CHOICE OF EITHER THE STEEL W150 x 12.6 OR W150 x 13.5 HOT ROLLED OR WELDED STEEL SHAPE, OR THE WOOD POSTS WITH THEIR COMPANION BLOCK-OUTS AS SHOWN ABOVE, WITHIN THE FOLLOWING STIPULATIONS:
 - (1) THE MIXING OF ANY OF THE ABOVE POSTS TYPES ON A GIVEN PROJECT WILL BE AVOIDED IF POSSIBLE.
 - (2) SHOULD IT BECOME NECESSARY TO CHANGE THE TYPE OF POSTS ON A GIVEN PROJECT, THE POSTS SHALL NOT BE MIXED ON ANY GIVEN RUN OF GUARDRAIL. (EXCEPTION, WOOD POSTS ON GUARDRAIL TERMINALS).
- (C) ON EXISTING STRUCTURES NOT HAVING A VERTICAL FACE FOR THE ATTACHMENT OF TWO RAIL ELEMENTS, USE OF THE W150 x 22 POSTS IS REQUIRED ON THE SEMI-RIGID TO RIGID BARRIER TRANSITION DETAILS, SEE STANDARD DRAWINGS SM-GR-16 AND SM-GR-20. THE BOLT HOLES WILL BE ORIENTED TO THE CENTER LINE OF THE FLANGE OF THE STEEL POST AND WILL BE THE SAME SIZE AND DIMENSION AS THOSE SHOWN ON STANDARD DRAWING SM-GR-13.
- (D) METAL POSTS AND ALL BLOCK-OUTS SHALL BE FURNISHED WITH HOLES FOR FUTURE RAIL ADJUSTMENT IN ACCORDANCE WITH DETAILS SHOWN ON STANDARD DRAWINGS SM-GR-13 AND SM-GR-13A.
- (E) W150 x 13.5 OR W150 x 12.6 POST SHALL BE USED FOR INSTALLATIONS ON BRIDGES AS SHOWN ON STANDARD DRAWING SM-GR-22.
- (F) WELDED STEEL POSTS MAY BE USED AS ALTERNATES TO THE HOT ROLLED STEEL SHAPE. THEY MUST CONFORM TO ASTM A769M AND BE GALVANIZED ACCORDING TO ASTM A123.



ALL UNITS ARE IN MILLIMETERS
UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA
APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

W-BEAM BARRIER
POST DETAILS AND
SPECIFICATIONS