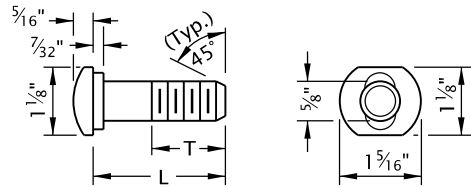
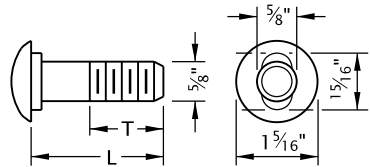


5/8" DIA. RECESSED HEX NUT

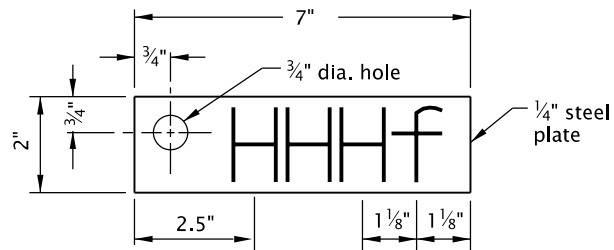


ALTERNATIVE No. 1

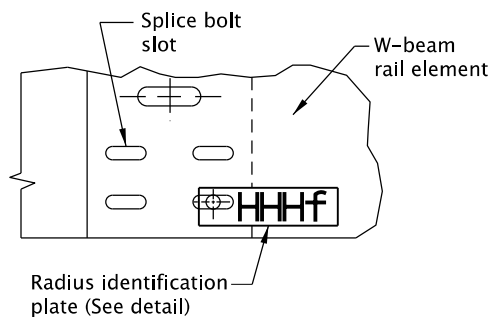


ALTERNATIVE No. 2

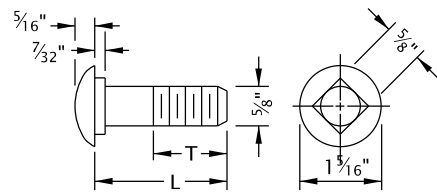
5/8" GUARDRAIL POST/SPICE BOLT (BUTTON HEADED)



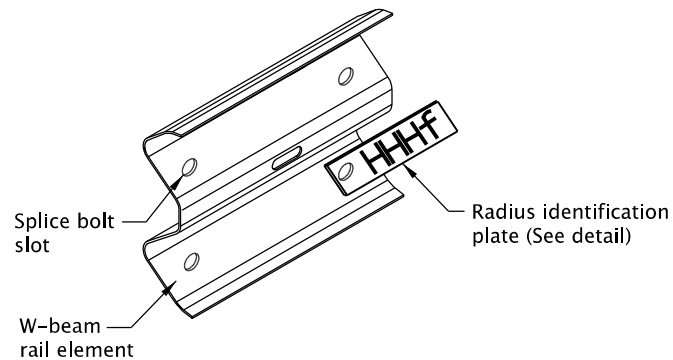
RADIUS IDENTIFICATION PLATE
(See general note 4)



RADIUS IDENTIFICATION PLATE MOUNTING DETAIL
(See general note 5)

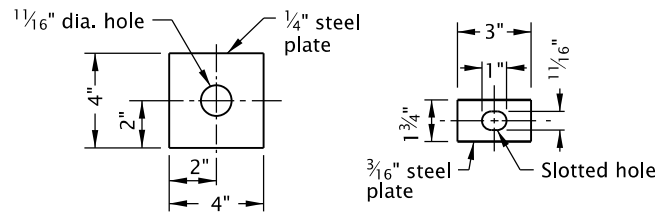


5/8" DIA. CARRIAGE BOLT



BOLT DIMENSION TABLE

Length (L) (in.)	Thread Length (T) (in.)
1 1/4	1 1/8 min.
2	1 3/4 min.
10	4 min.
18	4 min.
25	4 min.

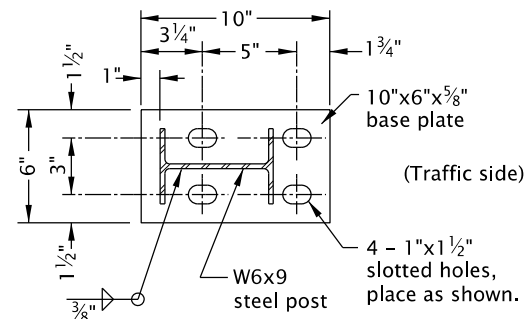


SNOW LOAD
POST WASHER

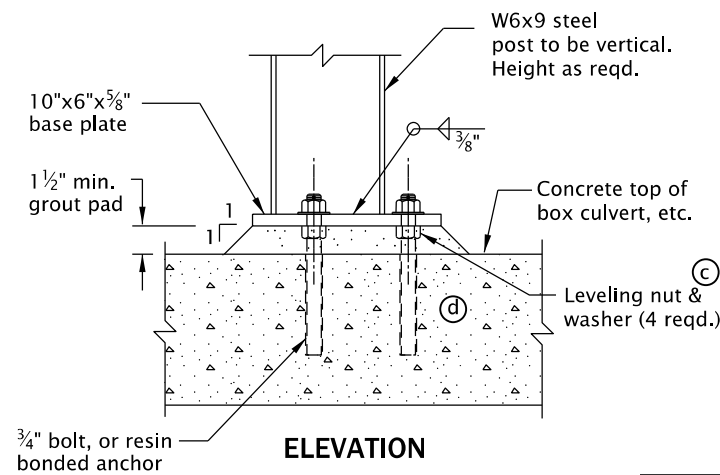
Use in area of heavy snow,
as directed by the engineer
(See general note 6)

SNOW LOAD ^(b)
RAIL WASHER

PLAIN WASHER ^(a)
Use on back of post.



PLAN



ELEVATION

BASE PLATE DETAILS

(For additional details, see Std. Dwgs. RD472 and RD473)
(Use when depth of cover is less
than normal for post installation.)

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. See appropriate guardrail standard drawing(s) for details not shown.
2. For details of guardrail connections to structural handrails, see special details or Standard Drawings as called for on plans.
3. All indicated welds shall attain the full strength of the section welded.
4. Radius dimensions, in feet to the nearest 0.5 foot, shall be placed on the plate with a raised weld bead replacing the letters "HHH", shown on the Radius Identification Plate detail. Digits shall be 1 1/2" min. height and 3/4" max. width. Plate shall be galvanized after placement of digits.
5. The guardrail radius identification plate is to be mounted on the back side of the rail element with the lowest splice bolt nearest the P.C. of the guardrail radius.
6. When required by the plans, a Snow Load Post Washer shall be used on the backside of the post and a Snow Load Rail Washer shall be placed on rail element face. Snow Load Rail Washers shall not be installed on terminals.

SUPPLEMENTARY NOTES:

- (a) Not required if Snow Load Post washer option is used.
- (b) Use rectangular Snow Load Rail washer under bolt head and nut on Type C End Piece as shown.
- (c) Furnished & installed by structure contractor when shown on structure plans.
- (d) 6" min. penetration into concrete slabs other than bridge decks. Cast in place or core and install using approved resin bonding system.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
MIDWEST GUARDRAIL SYSTEM			
STANDARD HARDWARE			
(NUTS, BOLTS, WASHERS AND MISC.)			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	N/A	SDR DATE	13-JAN-2020
			RD416