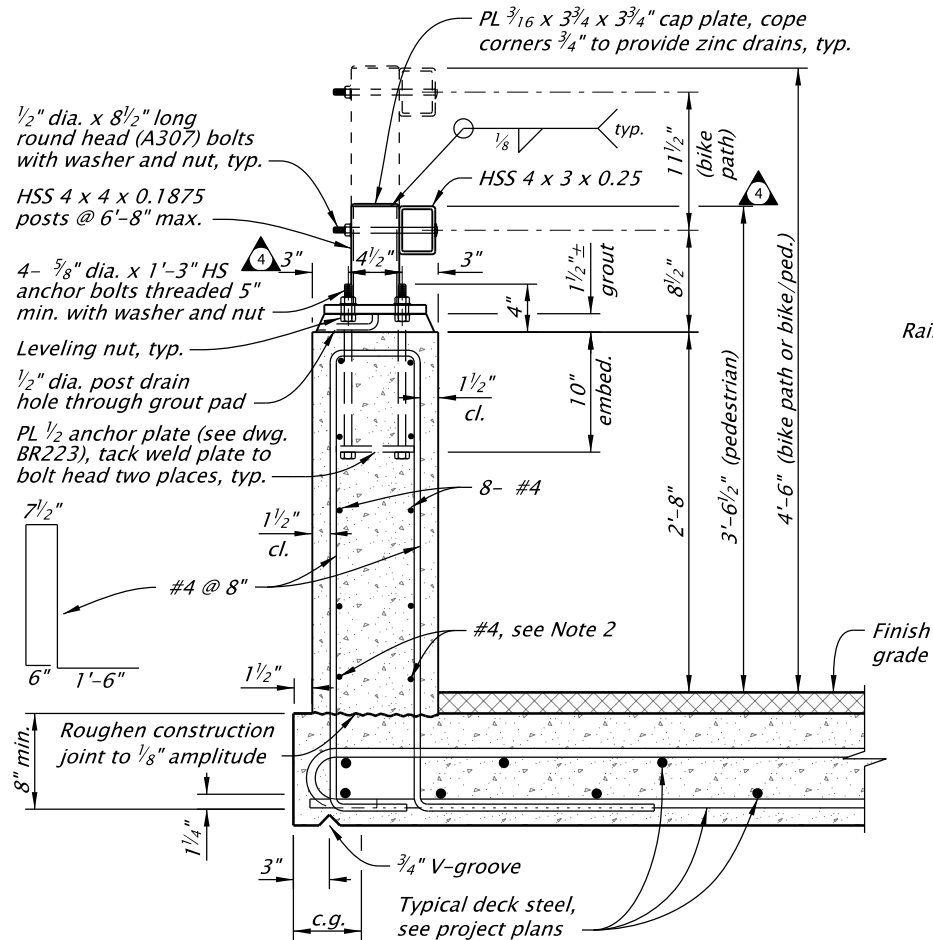
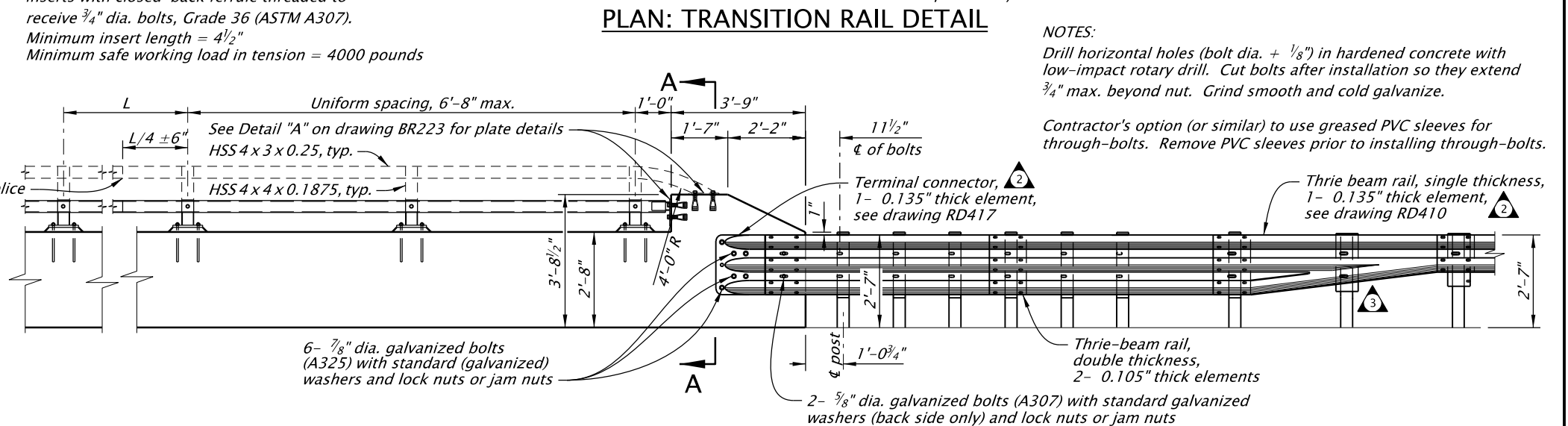
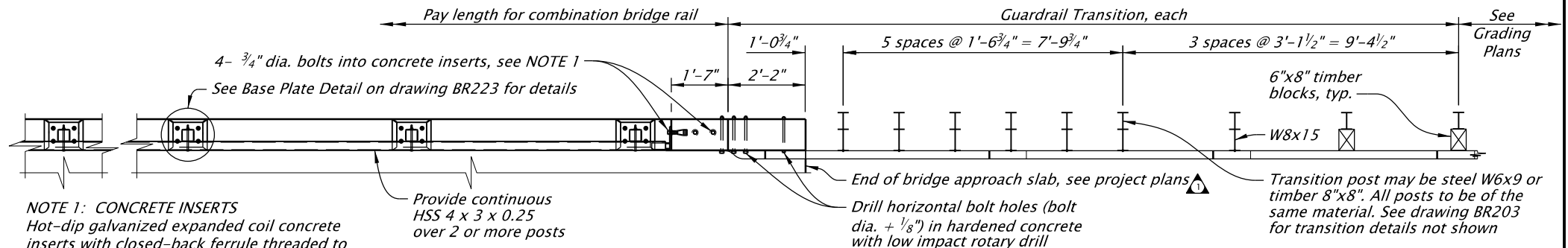


ESTIMATED QUANTITIES		3'-6 1/2" rail	4'-6" rail
Concrete Volume	(ft³/ft)	2.26	2.26
Reinforcement Weight	(lbs/ft)	23.39	23.39
Structural Steel Weight	(lbs/ft)	18.0	30.0
Total Rail Weight	(lbs/ft)	357	369
Center of Gravity	(cg, ft)	0.572	0.581

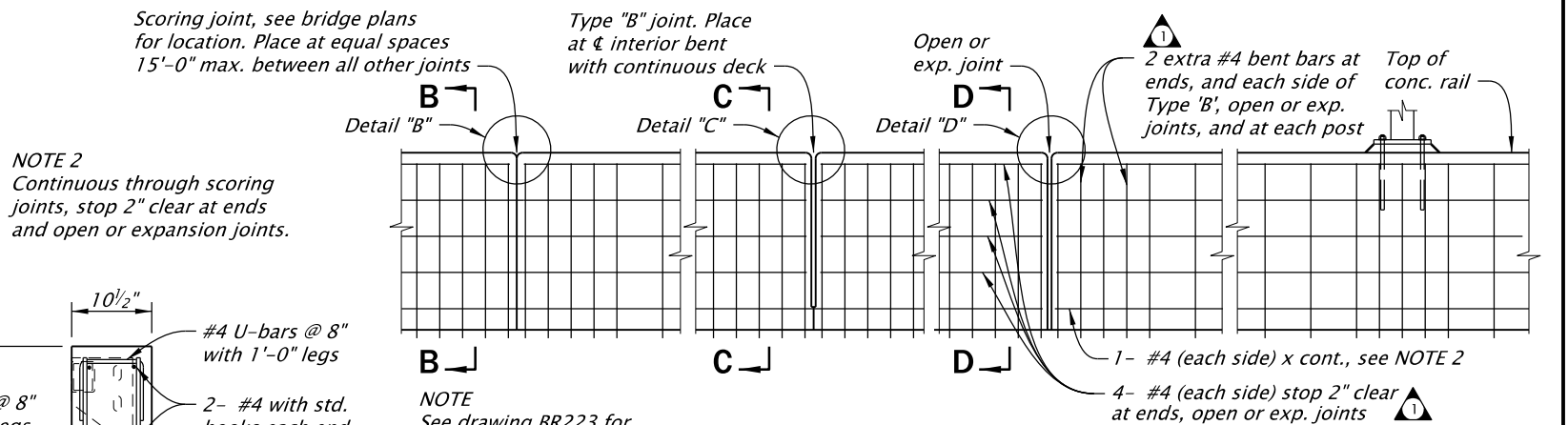


TYPICAL RAIL SECTION

- GENERAL NOTES:**
Provide steel tubing conforming to ASTM A500, Grade B, A501 or A618.
Provide reinforcing steel conforming to ASTM A706, or AASHTO M31 (ASTM A615) Grade 60. Splice #4 bars 1'-4" min.
Provide concrete Class 3300 - 1 1/2 or 3/4.
Provide steel posts and plates conforming to AASHTO M183 (ASTM A36) unless otherwise noted.
Provide high strength anchor bolts (Grade 105) according to Oregon Standard Specification 02560.30 (b).
Construct rail (posts and parapet) normal to grade in the longitudinal direction and vertical in the transverse direction.
Hot-dip galvanize structural steel including fasteners after fabrication. Provide Galvanize-Control Silicon posts and horizontal rail steel tubing according to Oregon Standard Specification 02530.70. Tap nuts and inserts 0.021" oversize after galvanizing in accordance with ASTM A563.
Use 4'-6" height for bikeways when called for on project plans.



ELEVATION: TRANSITION RAIL DETAIL



ELEVATION - REINFORCEMENT

Accompanied by drawings BR203, BR223, RD401, RD402, RD407, RD408, RD410, RD417, RD412	
All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
FLUSH MOUNTED COMBINATION BRIDGE RAIL	
2024	
DATE	REVISION DESCRIPTION
01-2023	Revised accompanied by dwg references, General text revisions.
07-2024	General text revisions.
01-2025	Thrie-beam transition revised: CAD standards updates
07-2025	Dimensions adjusted.
01-2026	Duplicated note deleted.
CALC. BOOK NO.	N/A
SDR DATE	13-JAN-2026
BR220	