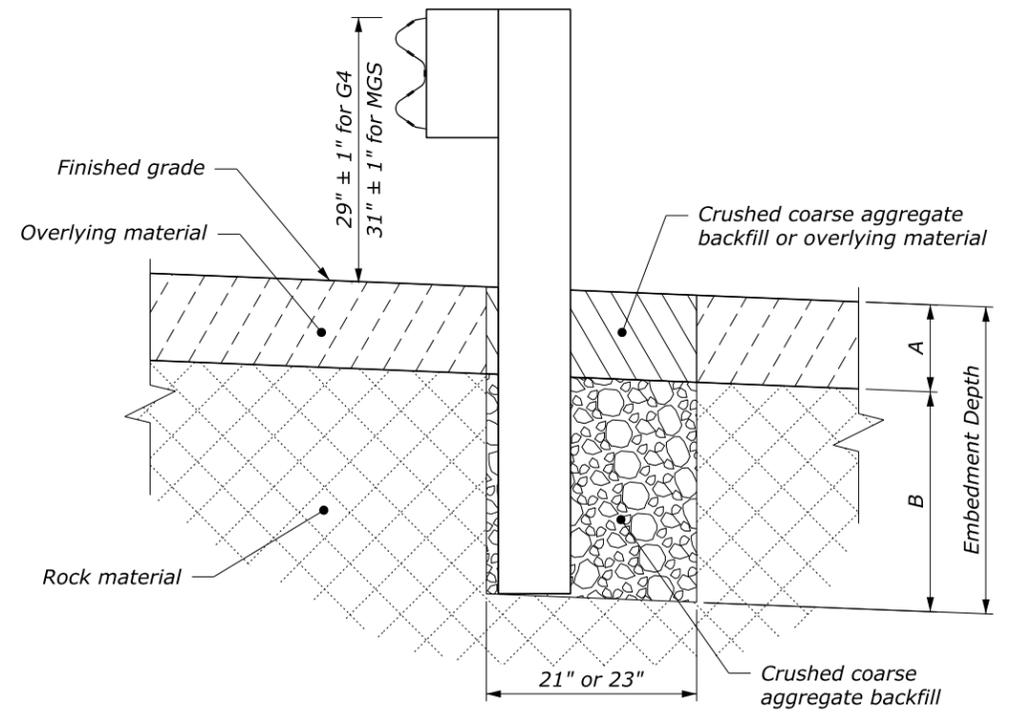


NOTE:

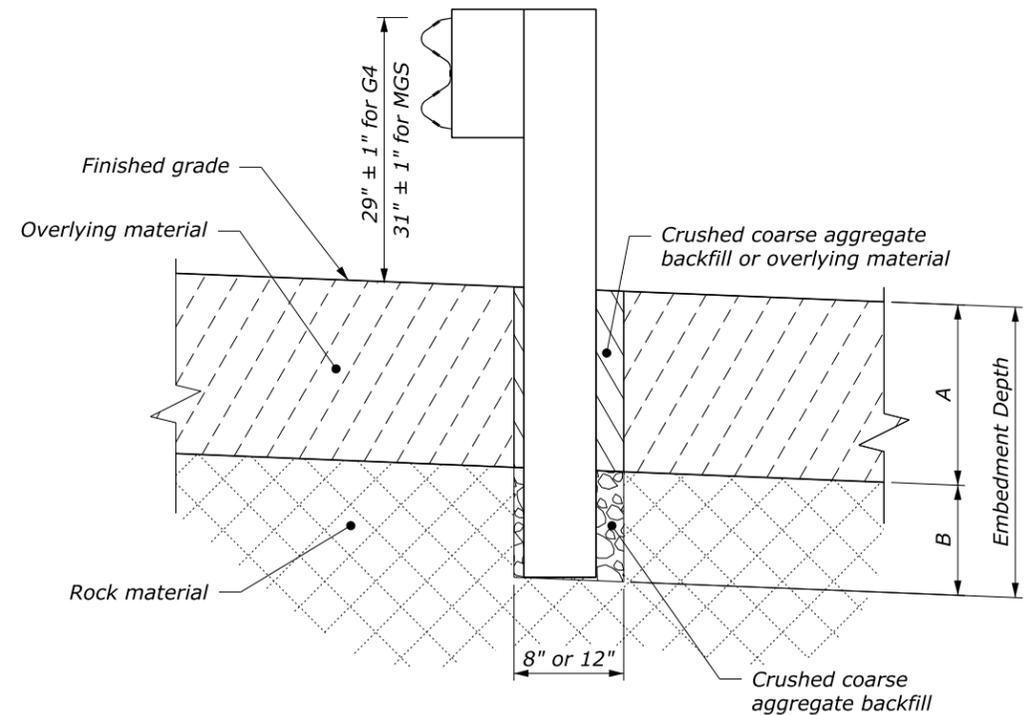
1. Use this standard when posts cannot be embedded to the minimum depth shown on Details C617-10, C617-11, C617-31, or C617-32.
2. Unless otherwise specified, use either the circular or the oblong hole configuration for Case 1 conditions.
3. Use crushed coarse aggregate backfill that conforms to "coarse aggregate for concrete" or "granular backfill for underdrain pipe with geotextile" in Section 703.
4. Place crushed coarse aggregate according to the post requirements in Section 617.
5. Treat field cut galvanized steel post surfaces that expose the base metal with two coats of zinc-oxide paint.



ELEVATION

Case 1: Overlying material depth (A) is 18" or less.

POST EMBEDMENT DIMENSIONS			
HOLE TYPE	EMBEDMENT DEPTH	OVERLYING MATERIAL (A)	DRILLING DEPTH (B)
Case 1	24" to 42"	0 to 18"	24"
Case 2	30" to 42"	> 18" to 30"	12"
	42"	> 30"	42" - A



ELEVATION

Case 2: Overlying material depth (A) is greater than 18".

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL MGS AND G4 W-BEAM GUARDRAIL INSTALLATION IN ROCK	
DETAIL APPROVED FOR USE 04/2020	DETAIL
REVISED:	C617-13

\$\$\$DATE\$\$\$
 \$\$\$TIMES\$\$\$
 \$\$\$DGN\$\$\$
 \$\$\$USER\$\$\$

NOTES TO THE DESIGNER
Last Updated: April 2020

G4 and MGS W-Beam Guardrail Installation in Rock

General Information

Appropriate Applications.

- MGS and G4 W-beam guardrail is designed so that the posts can rotate back in the soil. The rotation in the soil absorbs a significant amount of the impact energy. If the posts are installed in a rigid foundation, such as bedrock, the posts fail to rotate, and less energy is absorbed.

Crash Test Criteria	NCHRP Report 350
Test Level	TL-3
FHWA Eligibility Letter	B-64B
TF 13 Designator	SGR27a-b
Crash Test Report	MwRSF report No. TRP-03-119-03



From MwRSF Research Report No. TRP-03-119-03
<https://mwrsf.unl.edu/researchhub/files/Report246/TRP-03-119-03.pdf>

Limitations. This drawing is included in the plans for all projects with G4 or MGS guardrail in case bedrock or boulders are encountered during post installation.

Layout Guidance.

- See AASHTO *Roadside Design Guide* Section 5.6.7.1

Applicable SCRs

See Designer Notes in Detail Drawings C617-10, C617-11, C617-31, or C617-32 as applicable

Typical Pay Item Used

Typically, there is no direct payment for this work.

Updates

February 2019

- New Detail drawing

April 2020

- Updated Designer Notes