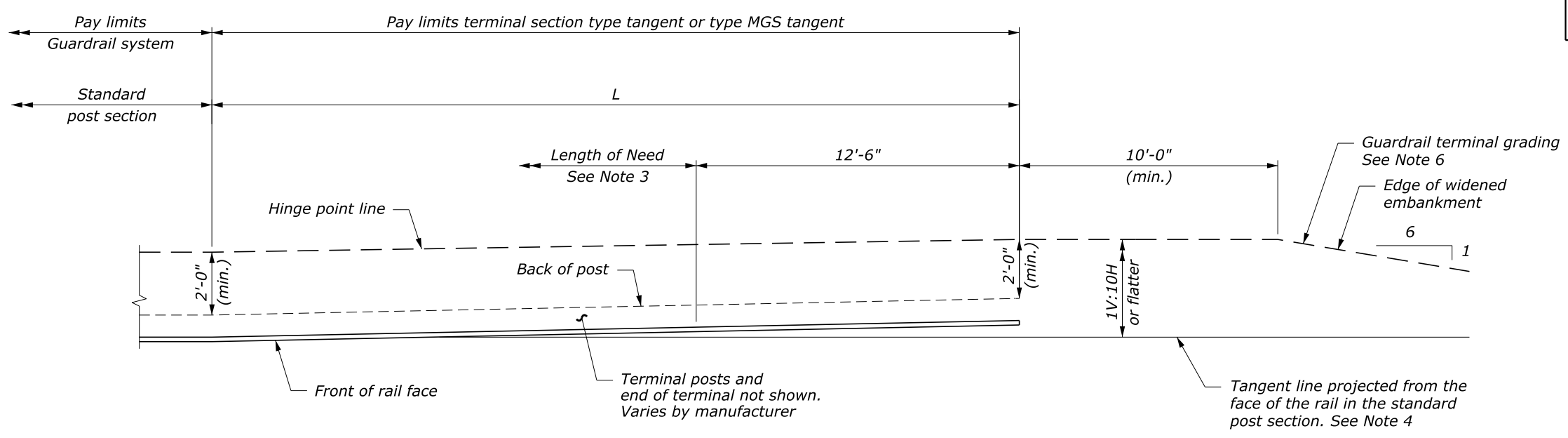


PLAN
PREFERRED GRADING

- NOTE:**
1. Install tangent terminal according to the manufacturer's recommendations. See manufacturer's drawings for other details.
 2. Construct the terminal grading layout as shown in the staking notes or model. If no staking notes or model are provided, use the preferred grading layout as much as practical within site constraints. If necessary because of site limitations, use the alternative grading layout.
 3. For design purposes, the length of need is assumed to begin at post 3. Verify the length of need with the manufacturer for a specific product. Adjust grading as necessary to install the tangent terminal according to the manufacturer's recommendations.
 4. Install terminal at a 1:25 taper or flatter, to position the end farther away from the edge of the shoulder, or use a taper according to manufacturer's recommendations.
 5. Install a reflectorized object marker on the end of the terminal.
 6. Construct a 1V:4H slope outside of the guardrail terminal grading extents where practical.

TEST LEVEL	L (FT)
2 (≤ 45 mph)	25
3 (> 45 mph)	37.5 or 50 (for G4)
	50 (for MGS)



PLAN
ALTERNATIVE GRADING

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL
**MGS AND G4
W-BEAM GUARDRAIL
TYPE TANGENT TERMINAL
AND GRADING**

DETAIL APPROVED FOR USE 04/2020	DETAIL
REVISED:	C617-20

NO SCALE

\$\$\$DATE\$\$\$
 \$\$\$TIME\$\$\$
 \$\$\$DGN\$\$\$
 \$\$\$USER\$\$\$

NOTES TO THE DESIGNER
Last Updated: April 2020

G4 and MGS W-Beam Guardrail, Type Tangent Terminal and Grading

General Information

Appropriate Applications.

- Tangent terminals are proprietary systems. Manufacturers of common tangent terminal systems include Trinity Highway LLC, Road Systems, Inc., and Barrier Systems, Inc. Refer to the manufacturer's recommendations for information on specific flared terminals.

Limitations.

- Site grading in the area of the terminal is an important consideration. Verify that the required grading is included in the project design.

Layout Guidance.

- See AASHTO *Roadside Design Guide*, Section 8.3.3.
- The drawing shows 2 options for grading that are based on Figure 8-3 in the AASHTO *Roadside Design Guide*. Use the preferred grading as much as practical; use the alternative grading in constrained locations.
- See the FLH *Midwest Guardrail System FAQ* document for more information.

Applicable SCRs

Section 563 (if weathering agent applied to galvanized elements)
Section 617
Section 710
Section 725 (if weathering agent applied to galvanized elements)

Typical Pay Item Used

- 61702-0800 Terminal section, type tangent [EA] for G4
- 61702-1500 Terminal section, type MGS tangent [EA] for MGS

Updates

February 2019

- New Detail drawing

April 2020

- Updated Note 5