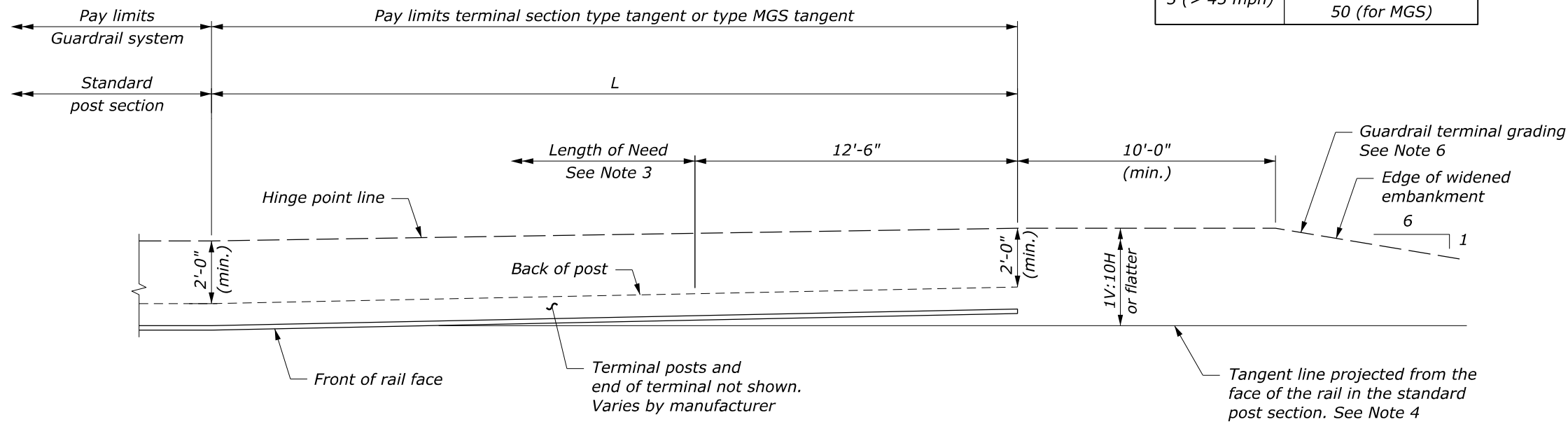


PLAN
PREFERRED GRADING

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



PLAN
ALTERNATIVE 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 from the edge of shoulder, or use a taper according to the 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.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

**FLH STANDARD
MGS AND G4
W-BEAM GUARDRAIL
TYPE TANGENT TERMINAL
AND GRADING**

STANDARD APPROVED FOR USE 6/2005 REVISED: 6/2022	STANDARD 617-20
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Designer Notes: FLH Standard Drawing 617-20
Last Updated: August 2021

MGS and G4 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.

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

August 2021

- Converted from CFL Detail to FLH Standard