

## CONCRETE BARRIER

There are currently no VDOT approved permanent MASH concrete barrier systems. Refer to [Appendix I](#) for guidelines on use of the current NCHRP 350 permanent concrete barrier. For temporary concrete barrier (traffic barrier service) refer to the VDOT Work Area Protection Manual.

## BARRIER TERMINALS GENERAL CRITERIA

Guardrail/barrier terminals are to be provided for all installations regardless of "Functional Classification". Terminals develop the necessary tension at the end of the system in order to redirect a vehicle and, if hit, minimize the damage to a vehicle and its occupants. The termini of guardrail/barrier must be designed and located so there are no exposed blunt ends that a vehicle could impact.

New terminals must meet MASH requirements and be on the MASH approved products list. The Engineer shall perform an assessment of existing guardrail terminals within the project limits using the most current IIM-TE-366. All terminals shall be installed per the manufacturer's instructions and the Road and Bridge Standards.

A site investigation shall be made to determine whether a terminal should be upgraded, or eliminated. For gaps between two runs of guardrail approximately 200' or less, closing the gap by continuing the run of guardrail is recommended, thereby eliminating the need for a terminal. Verify that the guardrail is still necessary. If it is, verify the LON (Length of Need).

Radial guardrail is not to be used in place of a MASH approved terminal section. Radial terminal sections that exist within the project limits shall be upgraded to an approved terminal section. Refer to **Section J-3** for additional guidance.

Before replacing a substandard terminal, the location of the existing terminal shall be checked to ensure sufficient length of need has been provided in the run of guardrail to adequately shield the hazard for which it was installed. In some cases it may be necessary to extend the guardrail to better shield the hazard or to provide for a more suitable site that would not require grading.

The site preparation for all installations shall be in accordance with current Standards and manufacturers' requirements.

An appropriate transition is required when used with an existing NCHRP 350 system that is not being upgraded to MASH.

### GR-6

This buried in the back slope NCHRP 350 terminal is allowed until a MASH equivalent is developed and approved. A GR-MGS4 transition will be required. Refer to Appendix I for additional guidance.

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\* Rev. 1/18