

GUARDRAIL INSTALLATION IN URBAN SETTINGS

Guardrail is not recommended where curb, or curb and gutter is used. Whenever it is necessary to provide guardrail along a curbed section (no sidewalk or sidewalk space) Standard GR-2 or GR-2A Strong Post Guardrail shall be used in conjunction with Standard CG-3 or CG-7 (4" mountable curb) and the face of the rail should be aligned with the face of curb. For design speeds 45 mph or less, use Standard GR-2. For design speeds greater than 45 mph, use Standard GR-2A or optional stiffening methods which use nested rail or additional w-beam rail on back of post. This decreases the possibility of an errant vehicle striking the curb and vaulting the guardrail.* Standard GR-8 Weak Post Guardrail shall not be used adjacent to any curb.

If the guardrail cannot be aligned with the face of the CG-3 or CG-7 curb, then the maximum practical offset behind the guardrail should be provided. For low-speed roadways with design speeds less than 45 mph the guardrail shall be offset a minimum of 8' behind the face of curb. For high-speed roadways with design speeds 45 to 50 mph, the guardrail shall be offset a minimum of 13' behind the face of curb. For high-speed roadways with design speeds over 50 mph, guardrail is to be allowed with the face of curb and stiffened as noted previously. When using CG-2 or CG-6 (6" barrier curb) guardrail shall be offset a minimum of 8' behind the face to curb for low-speed roadways.

It is usually impractical to install guardrail between the roadway and a pedestrian route. When necessary to provide guardrail along a pedestrian route (at ponds, steep embankments, etc.) the guardrail shall be placed 1' behind the sidewalk (or sidewalk space) provided that minimum offset requirements are met. In these situations, sound engineering judgment should be used in determining guardrail locations and evaluating needs when hazards exist outside the clear zone.

When a sidewalk or shared-use path transitions from the roadway onto a bridge, guardrail is required if the travel way and the sidewalk or shared-use path are separated by a barrier on the bridge. See detail in RDM, Appendix A, Section A-5 for shared-use paths and IIM-LD-55 for sidewalks.

GUARDRAIL LOCATIONS ON FIELD INSPECTION PLANS

The approximate locations of barriers should be shown on Preliminary Field Inspection plans and discussed at the [Preliminary Field Inspection](#). If the locations are not shown, the type, terminals, and placement should be generally discussed. Maintenance of areas protected by barriers should also be discussed at this time.

* Rev. 1/13