

CFL Rumble Strip Guidelines

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Central Federal Lands Rumble Strip Guidelines For Shoulder and Centerline Applications

The use of rumble strips is encouraged on all appropriate CFL projects. The installation of both shoulder and centerline rumble strips should be discussed during project scoping.

The CFL rumble strip guidelines are intended to provide flexibility on where and under what conditions shoulder and centerline rumble strips can be installed. Both shoulder and centerline rumble strips can be installed on any rural roadway. But there are several restrictions on their use and rules for their placement.

Guidelines for Use and Placement of Shoulder Rumble Strips

- Rumble strips are intended to be noisy when driven over. Use rumble strips on rural roads only. Their use is discouraged in developed areas with frequent access points, near campgrounds, near residential areas, etc.
- Shoulder rumble strips are used to alert drowsy or inattentive drivers encroaching onto the paved shoulder. Placement can be site-specific to address a specific condition or installed project-wide.

Examples of site-specific locations:

- On long tangents
- At approach ends of isolated horizontal curves
- Along steep fills with a limited clear zone
- At approaches to narrow bridges
- At documented high-frequency run-off-road crashes sites
- On horizontal curves

Shoulder rumble strips can be used on any type of roadway but are not generally used on mountainous terrain where drivers routinely drive onto the shoulder when negotiating horizontal curves.

Impacts of shoulder rumble placement when bicyclists are use the road

The 2009 Edition of the MUTCD states that shoulder rumble strips should not be placed on roadways used by bicycles unless a minimum clear path of 4 feet is provided at each edge of the roadway or on each paved shoulder as described in AASHTO's *"Guide to the Development of Bicycle Facilities."*

When installing shoulder rumble strips in front of barrier or curb, there must be a minimum usable shoulder width of 5 feet or the shoulder rumble strip must be discontinued 250 feet in advance of the guardrail. The intent is to provide the bicyclists with adequate room to travel on the shoulder.

Offset from edge of pavement. The minimum offset between the shoulder rumble strip and the edge of the pavement is 8 inches.

Road approaches and intersections. Stop shoulder rumble strip installations 250 feet in advance of road approaches and intersections and begin installation 250 feet past road approaches and intersections. Do not install on shoulders adjacent to auxiliary lanes.

Install warning signs. When a section of shoulder rumble strips is first installed within a roadway corridor, it is recommended that warning signs be installed to alert bicyclists and motorists to the new condition. Additional signs are not required when shoulder rumble strips are continued for driveways and intersections.



Warning Sign used in advance of initial shoulder rumble strip installation

Choosing shoulder rumble strip width

The CFL rumble strip standard detail includes three options for shoulder rumble strip width: 4", 8" and 12"

- The 12" width is appropriate for high-speed high-volume highways with truck traffic.
- The 8" is appropriate for roads with a moderate posted speed and moderate volumes and is considered to be the CFL standard width.
- The 4" width is appropriate for use on low-volume roads or roads with pavement widths 24 feet or less.

- State DOT standard rumble strip standard drawings may be used in lieu of the CFL detail.

SRS Reference: http://safety.fhwa.dot.gov/roadway_dept/research/exec_summary.htm

Guidelines for Use and Placement of Centerline Rumble Strips

- Use on rural roads only
- Most effective when crash history indicates head-on and sideswipe type crash history, but can be used regardless of crash history.
- Can be used in spot locations or continuously through a project.
- Discontinued through intersections and access openings.
- Can be used in both passing and no-passing zones.
- Minimum pavement width of 22 feet (two-way roadways) is required.
- Alignment – generally used in mountainous areas on alignments with frequent curvature, but may be used on any type of alignment or terrain
- Note areas where the centerline stripe has worn off from vehicles driving on it to determine appropriate spot location installations.

Centerline rumble strip references:

http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_syn_339.pdf

http://safety.fhwa.dot.gov/roadway_dept/horicurves/fhwasa07002/ch5.cfm