



Longitudinal Rumble Strips and Stripes

SAFETY BENEFITS:



CENTER LINE RUMBLE STRIPS

44-64%

Head-on, opposite-direction,
and sideswipe fatal and
injury crashes

SHOULDER RUMBLE STRIPS

13-51%

Single vehicle, run-off-road
fatal and injury crashes



Source: NCHRP Report 641, *Guidance for the Design and Application of Shoulder and Centerline Rumble Strips.*



Shoulder rumble strips and center line rumble strips are installed on this roadway.

Source: FHWA

Longitudinal rumble strips are milled or raised elements on the pavement intended to alert drivers through vibration and sound that their vehicles have left the travel lane. They can be installed on the shoulder, edge line of the travel lane, or at or near center line of an undivided roadway.

Rumble stripes are edge line or center line rumble strips where the pavement marking is placed over the rumble strip, which can result in an increased visibility of the pavement marking during wet, nighttime conditions.

With roadway departure crashes accounting for more than half of the fatal roadway crashes annually in the United States, rumble strips and stripes are designed to address these crashes caused by distracted, drowsy, or otherwise inattentive drivers who drift from their lane. They are most effective when deployed in a systemic application since driver error may occur on all roads.



Example of an edge line rumble stripe.

Source: Missouri DOT

Transportation agencies should consider milled center line rumble strips (including in passing zone areas) and milled edge line or shoulder rumble strips with bicycle gaps for systemic safety projects, location-specific corridor safety improvements, as well as reconstruction or resurfacing projects.

→ For more information on this and other FHWA Proven Safety Countermeasures, please visit <https://safety.fhwa.dot.gov/provencountermeasures>.



Safe Roads for a Safer Future
Investment in roadway safety saves lives