

Rumble Strips

Driver noncompliance with stop signs can be a serious concern. Several methods can be used to improve visibility, recognition, and compliance at stop sign controlled intersections. One of those methods is rumble strips in advance of the intersection.

While these installations have been in use for many years and several studies have examined where the most effective use of rumble strips can be made, no conclusive information exists that would indicate when to install these devices. Engineering judgement should be exercised when selecting rumble strips as a safety enhancement.

These points should be considered in deciding the use of rumble strips:

1. *Crash History.* The number of crashes and whether these were related to a failure to stop are important considerations.
2. *Opinions of Others.* Law enforcement, county or city attorney, Iowa DOT local maintenance staff, and citizens can provide valuable information, experience, and support.
3. *Other Safety Measures, Existing or Proposed.* Other methods of raising driver awareness such as larger or double Stop and Stop Ahead signs and advance warning signs, flashing beacons, or even lighting all can be considered.
4. *Proximity of Existing Homes.* Noise from vehicles passing over rumble strips can be an irritation to nearby residents. This factor should not necessarily be a reason for

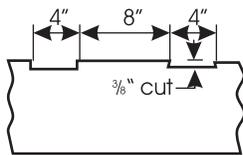
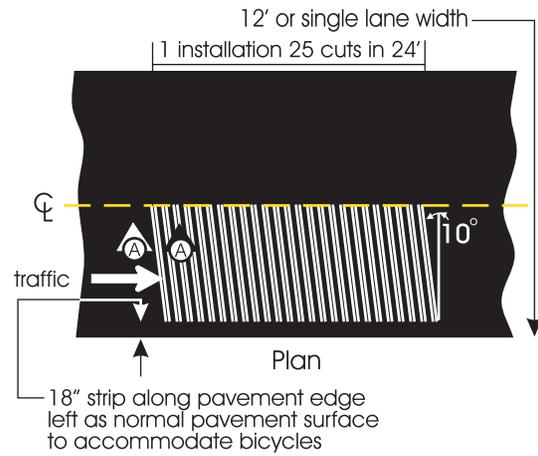
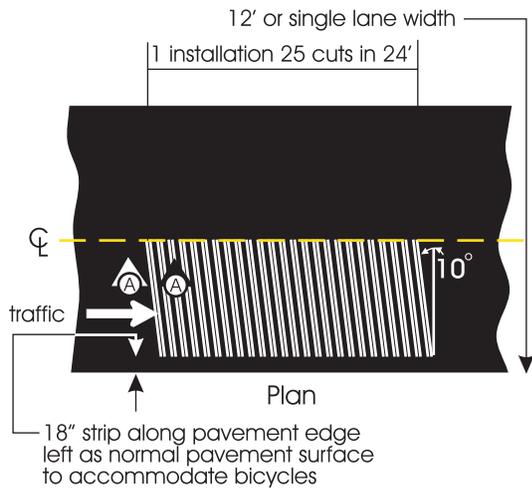
eliminating rumble strips. Consideration should be given to nonstandard spacing to minimize noise near a home.

5. *Intersection Location.* A hill and/or curves in advance of a stop intersection may require additional warning, which rumble strips can provide.
6. *Traffic Conditions.* Volume, speed, and number of commercial vehicles should be taken into account.
7. *Pavement Type.* Stability of rumble strips in some flexible pavements may be less than desirable. Consideration should be given to placing portland cement concrete (PCC) patches with rumble strips in flexible pavements.

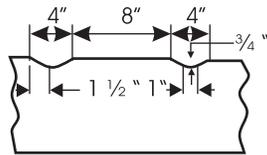
Rumble strips have also been used in some situations other than stop intersections, such as sharp curves, but these applications are rare.

Use of rumble strips can be effective in alerting drivers of stop signs, but installation should be carefully studied in advance. Rumble strips, like signs, are traffic control devices and, as such, create liability concerns for local governments. While no warrants exist to indicate when rumble strips are appropriate, once installed the local jurisdiction will assume a duty to maintain strips properly as provided in Iowa Code Section 668.10(1).

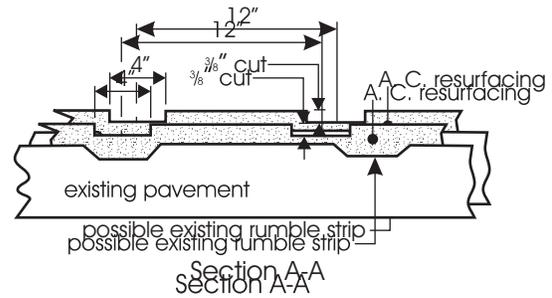
The illustrations on the following page depict suggested design and layout for rumble strips.



Section A-A
rumble strip cut in new PCC or ACC pavement

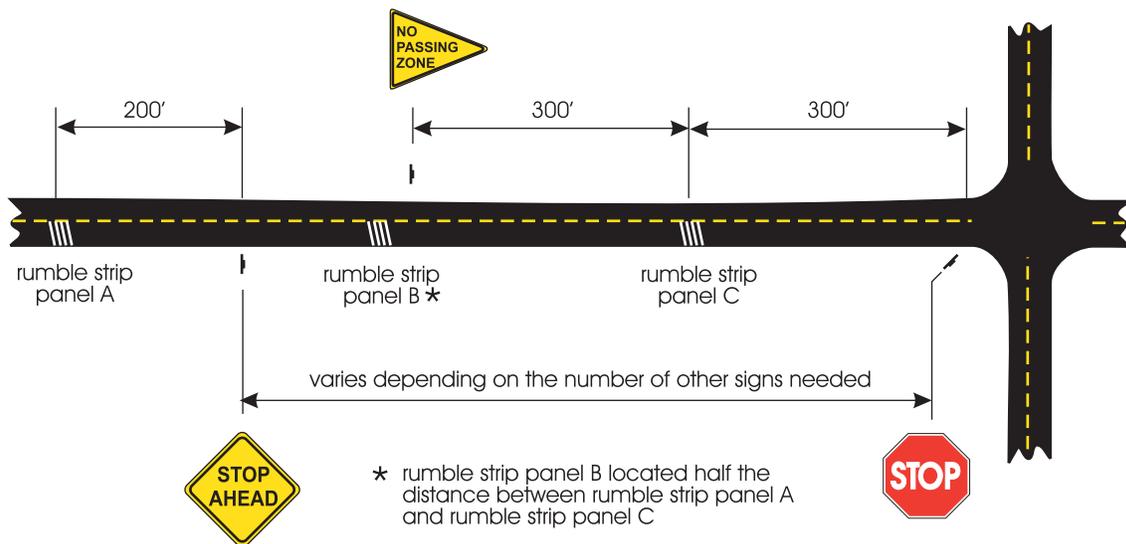


Section A-A
rumble strip placed in plastic PCC concrete



Suggested rumble strip panel in new pavement

Suggested rumble strip panel in resurfacing



Typical rumble strip panel location and signing