

High Risk Rural Roads

Fifty-four percent of traffic fatalities nationwide occur on rural roads,²⁶ even though those roads bear only 35 percent of all travel.²⁷ Run-off-road fatalities are designated as a target area in most state Strategic Highway Safety Plans. The bulk of run-off-road deaths occur on two lane rural roads.

SAFETEA-LU included a new program called the High Risk Rural Roads (HRRR) Program as a subset of the Highway Safety Improvement Program (HSIP). It is currently funded as a set-aside from the HSIP. While the HRRR is a new program, it has great potential to make a difference in achieving the goal of **TOWARD ZERO DEATHS**.

Approximately 60 percent of traffic fatalities nationwide occur on rural roads, even though those roads bear only 35 percent of all travel.



The bulk of run-off-road deaths occur on two lane rural roads.

Recommendation: Redefine the scope of eligible activities under the HRRR Program in order to target investments and improve safety on our nation's rural roads.

In order to improve the effectiveness of this program, an effort needs to be made to ensure that funds for this program are focused on improvements that move **TOWARD ZERO DEATHS**. ATSSA recommends that the scope of eligible activities should include the following items in order to target funds towards proven and cost-effective safety improvements:

1. An intersection safety improvement;
2. Installation of rumble strips or another warning device, if the rumble strips or other warning devices do not adversely affect the safety or mobility of bicyclists, pedestrians, and the disabled;
3. Installation of roadway safety devices for pedestrian or bicyclist safety or safety of the disabled;
4. Installation of protective devices at a railway-highway crossing;
5. Construction of a traffic calming feature; (e.g. speed bumps; radar speed feedback devices; bump outs)
6. Improvement of highway signage and pavement markings, including but not limited to any material upgrades and the implementation of any assessment or management method designed to meet state-established performance standards or required by federal regulation or the Manual on Uniform Traffic Control Devices to meet minimum levels of retroreflectivity;
7. Installation of a priority control system for emergency vehicles at signalized intersections;
8. Installation of a traffic control or other warning device at a location with high accident potential;
9. Operational or traffic enforcement activities relating to work zone safety;
10. Installation of guardrails, barriers, and crash attenuators;
11. Installation of barriers between construction work zones and traffic lanes for the safety of motorists and workers;
12. The addition or retrofitting of structures or other measures to eliminate or reduce accidents involving vehicles and wildlife;
13. Installation and maintenance of signs (including Fluorescent Yellow-Green signs) at pedestrian-bicycle crossings and in zones.
14. Installation of a skid-resistant surface at an intersection, horizontal curve, or other location with a high frequency of accidents.



Rumble strips: A cost-effective safety improvement

Recommendation: Delineate edge drop-offs of more than four inches on High Risk Rural Roads.



Edge drop-off on a rural road.

An estimated 11,000 Americans suffer injuries and 160 die each year in crashes related to unsafe pavement edges, at a cost of \$1.2 billion. An edge drop-off of four or more inches is considered unsafe if the roadway edge is at a 90-degree angle to the shoulder surface.²⁸ Near vertical edge drop-offs of less than four inches are still considered a safety hazard to the driving public and may cause difficulty upon reentry to the paved surface. Drivers sometimes tend to "over correct" when they drop off the edge by turning the steering wheel sharply and suddenly to get back on the roadway. This may result in a roll-over crash.

Addressing edge drop-offs could significantly reduce the number of these types of crashes. Since the cost of widening, paving or otherwise directly treating thousands of miles of unpaved shoulders would be cost-prohibitive, the FHWA recommends that state and local jurisdictions consider using a safety edge on resurfacing projects to help eliminate edge drop-offs. The majority of highway fatalities occur on two-lane rural roads, and these roads offer a particular opportunity for this type of treatment.²⁹ Another low-cost countermeasure to improve edge drop-offs is high visibility striping with raised profiles that give audible alerts to errant drivers while also improving wet and/or night visibility.

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Roadway Hardware

Since 1991, Congress has recognized that improving roadway safety hardware can significantly reduce fatalities and injuries on our nation's roadways. In addition, as early as 1994, the FHWA called for the replacement of old and obsolete roadway safety features such as blunt end guardrail terminals. A comprehensive approach to updating and improving roadway safety hardware can be an effective method to accomplishing the goal of **TOWARD ZERO DEATHS**.

The AASHTO model Strategic Highway Safety Plan identified 22 emphasis areas for states to pursue in order to significantly reduce highway crash fatalities. Emphasis Area 15 is Keeping Vehicles on the Roadway, and Emphasis Area 16 is Minimizing the Consequences of Leaving the Road. Three key focus areas evolved from these two emphasis areas – run-off-road crashes, head-on crashes, and crashes with trees in hazardous locations.