

Install Safety Edge Treatment



Safety Edge treatment involves shaping the edge of the pavement at a 30-degree angle during resurfacing or construction.

Implementation Strategy

How and Where to Apply

- This countermeasure is applied on rural and two-lane highways, particularly in areas with narrow or unpaved shoulders, high-speed travel, and frequent roadway departure crashes.
- It is most effective on roads with a history of run-off-road crashes, drop-offs greater than 2 inches, or where resurfacing is planned.
- Safety Edge can be integrated with standard paving equipment using a simple shoe attachment and should be applied as part of routine overlay and rehabilitation projects.

Use in a Safe System Approach

Safety Edge supports Safe System principles of forgiving roadways and accommodating human error by providing a smoother, safer way for drivers to recover when they leave the paved surface, reducing the likelihood of overcorrection and rollover crashes.

Key Stakeholders

State DOTs, local law enforcement agencies

Proactive Implementation

This treatment is best implemented proactively as a standard practice during all resurfacing and pavement rehabilitation projects, regardless of crash history. Its low cost and ease of integration make it a highly cost-effective safety improvement.

Countermeasure Overview

Objective: Keep vehicles from encroaching on the roadside.

Strategy: Apply shoulder treatments (Eliminate shoulder drop-offs).

Targeted Solution



CONTRIBUTING FACTORS

- Reduced visibility
- Driver Inattention/distraction



TARGET CRASH TYPE

- Run-off-road



ROAD FACILITY TYPE

- All



AREA TYPE

- Rural

Safety Linkage



NCHRP 500 Series

Run-off road



SAFE SYSTEM APPROACH

Safe Roads



AASHTO'S TOWARD ZERO DEATHS

Safer Infrastructure

SAFE SYSTEM ROADWAY DESIGN

TIER 1
TIER 2
TIER 3
TIER 4

Tier 4

Selected Related Countermeasures

- CM1 Shoulder Rumble Strips
- CM2 High-Visibility Pavement Markings
- CM3 Enhanced Curve Delineation

Cost: Low

Service Life: 10 years

Benefit-Cost Ratio: 10:1

Safety Edge Source: research synthesis

89%

Reduce run-off-road crashes for all severities.¹

¹CMF ID: 9210

Resources

- FHWA Safety EdgeSM Pavement Edge Treatment
- FHWA Every Day Counts (EDC): Safety Edge Initiative
- FHWA Technical Advisory: Pavement Edge Drop-Off (FHWA-SA-01-018)
- NCHRP Report 641: Guidance for the Design and Application of Shoulder and Centerline Rumble Strips

