Install Wider Edgelines (4 In to 6 In)

ROADWAY DEPARTURE

Wider edgelines involve increasing the standard width of pavement edge markings from 4 inches to 6 inches.

Implementation Strategy

How and Where to Apply
- This treatment is typically applied on rural highways, curves, and corridors with high rates of lane departure crashes or low ambient lighting.
- It is particularly effective on roads with narrow shoulders, minimal lighting, frequent wet pavement conditions, or high nighttime travel volumes.
- Wider edgelines can be integrated during resurfacing, pavement marking refresh cycles, or as part of targeted safety projects.

Use in a Safe System Approach
Wider edgelines support the Safe System principles of visibility, reducing exposure, and crash prevention by improving lane definition and providing more forgiving guidance, especially for fatigued, distracted, or older drivers.

Key Stakeholders
State DOTs, local law enforcement agencies

Proactive Implementation
Agencies can proactively implement wider edgelines through systemic safety programs, particularly in corridors identified through crash data analysis or road safety audits. They are also a cost-effective safety enhancement to incorporate into routine resurfacing projects.

Countermeasure Overview

Objective: Keep vehicles from encroaching on the roadside

Strategy: Provide enhanced pavement markings

Targeted Solution

CONTRIBUTING FACTORS
- Reduced visibility
- Driver inattention

TARGET CRASH TYPE
- Run-off road

ROAD FACILITY TYPE
- Rural two-lane highways

AREA TYPE
- Rural

Safety Linkage

NCHRP 500 Series
Run-off Road

AASHTO'S TOWARD ZERO DEATHS
Safer Infrastructure

SAFE SYSTEM APPROACH
Safe Roads

SAFE SYSTEM ROADWAY DESIGN
TIER 1
TIER 2
TIER 3
TIER 4
Tier 4

Selected Related Countermeasures

CM1 Edge-line rumble warnings

CM2 Night-visible lane delineation

CM3 Augmented curve alignment signage

Cost: $ (low)

Service Life: 5 years

Benefit-Cost Ratio: 25:1

Wider Edgelines Source: research synthesis
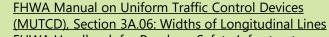
Safety Benefits

37% Reduce non-intersection, fatal and injury crashes on rural, two-lane roads

29% Reduce fatal and injury crashes on rural freeways

[1]CMF ID: 4737
[2]CMF ID: 4739

Resources
- FHWA Manual on Uniform Traffic Control Devices (MUTCD), Section 3A.06: Widths of Longitudinal Lines
- FHWA Handbook for Roadway Safety Infrastructure Improvements