NCHRP 17-113 COUNTERMEASURES

Install Automated Section Speed Enforcement System

SPEEDING

By monitoring vehicle speeds over a segment and automatically capturing violations, section speed enforcement ensures consistent, objective compliance with speed limits without on-site officers.

Implementation Strategy

How and Where to Apply

- Effective in locations with persistent speeding problems or where traditional enforcement is limited or impractical.
- Common applications include school zones, construction areas, high-crash corridors, and urban arterials.
- Deployment options include fixed units, mobile systems, or point-to-point configurations, depending on site needs, but are not suitable for low-volume roads or locations where enforcement is impractical.

Key Stakeholders

State DOTs, MPOs, law enforcement agencies, engineering consultants.

Proactive Implementation

Speed enforcement systems can be proactively deployed in areas with known speeding problems. Agencies may identify sites through speed studies, crash data, or community input, and a systemic approach may target corridors with risk indicators such as high pedestrian volumes, low enforcement visibility, or a history of speed-related crashes.

Use in a Safe System Approach

It supports the Safe Speeds element of the Safe System Approach by enforcing limits consistently and deterring risky driving. By accommodating human mistakes and reducing crash severity, they reinforce the principle that death and serious injuries are unacceptable.

Countermeasure Overview

Objective: Improve efficiency and effectiveness of speed enforcement efforts

Strategy: Increase penalties for repeat and excessive speeding offenders

Selected Related Countermeasures

- CM1 Real-time driver speed display systems
- CM2 Targeted high-visibility speed enforcement
- CM3 Speed limit re-evaluation and public awareness initiatives

Cost: $$$ (Moderate to High)
Service Life: 10 years

Targeted Solution

CONTRIBUTING FACTORS	▪ Unsafe speed ▪ Aggressive driving behaviors
TARGET CRASH TYPE	▪ Speeding
ROAD FACILITY TYPE	▪ Principal Arterial ▪ Freeways ▪ Expressways
AREA TYPE	▪ All

Safety Linkage

NCHRP 500 Series	SAFE SYSTEM APPROACH
Speeding-related Crashes	Safe Speeds
AASHTO'S TOWARD ZERO DEATHS	SAFE SYSTEM ROADWAY DESIGN TIER 1 TIER 2 TIER 3 TIER 4
Improved Safety Management	Tier 2

Automated Section Speed Enforcement System. Source: FHWA.

Safety Benefits

56% Reduces crashes of all types and K, A severities on six-lane, median-divided Principal Arterial – Other Freeways and Expressways (CMF ID: 4142)

37% Reduces crashes of all types and K, A, B, C severities on six-lane, median-divided urban Principal Arterial – Other Freeways and Expressways (CMF ID: 7718)

Resources

- FHWA Speed Safety Camera Program Guide
- FHWA Speed Safety Cameras