NCHRP 17-113 COUNTERMEASURES

Lower Posted Speed From 55 Mph To 45 Mph

SPEEDING

Lowering the posted speed limit from 55 mph to 45 mph involves reducing the regulatory speed to better reflect the road's context, safety conditions, and surrounding land use.

Implementation Strategy

How and Where to Apply

- This countermeasure is applied on road segments where crash history, land use changes, or roadway design no longer support higher speeds.
- It is especially relevant on suburban arterials, rural highways transitioning into developed areas, or corridors with frequent driveways, intersections, or pedestrian activity.
- Locations with a pattern of speed-related crashes, insufficient sight distance, or traffic calming needs are also candidates for a posted speed reduction.

Use in a Safe System Approach

Reducing posted speeds supports Safe System elements of safe speeds, crash energy management, and designing for human error, helping to minimize the kinetic energy involved in collisions and reducing the likelihood of severe injuries or fatalities.

Key Stakeholders

Traffic engineering departments, law enforcement agencies

Proactive Implementation

Lowering posted speed limits from 55 mph to 45 mph can be proactively applied on corridors with high crash rates, frequent speeding, or vulnerable road users. Agencies can use speed studies and crash data to identify priority locations where reduced speeds would improve safety.

Countermeasure Overview

Objective: Ensure that roadway design and traffic control elements support appropriate and safe speeds

Strategy: Reduce speeds and volumes on both neighborhood and downtown streets with the use of traffic calming and other related countermeasures.

Targeted Solution

CONTRIBUTING FACTORS	▪ Fixed object ▪ Overturn ▪ Reduced reaction time
TARGET CRASH TYPE	▪ Run-off-road
ROAD FACILITY TYPE	▪ All
AREA TYPE	▪ Urban

Safety Linkage

NCHRP 500 Series

Speeding

SAFE SYSTEM APPROACH

Safe Speeds

AASHTO'S TOWARD ZERO DEATHS

Improved Safety management

SAFE SYSTEM ROADWAY DESIGN

TIER 1
TIER 2
TIER 3
TIER 4

Tier 2

Selected Related Countermeasures

- CM1 Dynamic speed feedback signs
- CM2 Enhanced police enforcement operations
- CM3 Speed limit reduction campaigns

Cost: $ (Low)

Service Life: 10 years

Lower Posted Speed . Source: ncdot

Safety Benefits

36% Reduce non-intersection crashes of fatal and serious injury types.[1]

11% Reduce non-intersection crashes of fatal, serious, minor and possible injury types [2]

[1] CMF ID: 4183
[2] CMF ID: 4182

Resources

- FHWA Speed Management Program
- NCHRP Report 966: Posted Speed Limit Setting Procedure and Tool
- MUTCD Section 2B.13: Speed Limit Signs
- ITE Speed Management for Safety Guide