

Vehicle Activated Speed Limit



A vehicle activated speed limit system uses sensors to detect approaching vehicles and displays dynamic speed limit signs or warnings, encouraging drivers to slow down when exceeding safe speeds

Implementation Strategy

How and Where to Apply

- Install vehicle-activated speed limit signs on corridors with a history of speeding, frequent crashes, or near sensitive areas like schools and work zones to alert drivers in real time.
- Use speed and crash data to identify locations where traditional static signs have not been effective at reducing speeds or improving safety.
- Coordinate with enforcement agencies and public awareness campaigns to reinforce compliance and maximize the effectiveness of dynamic speed management systems.

Key Stakeholders

Transportation agencies, local governments, law enforcement

Proactive Implementation

Proactive implementation involves using speed and crash data to identify high-risk locations, such as school zones or areas with frequent speeding, and installing vehicle activated speed limit systems before serious crashes occur. Agencies should coordinate with enforcement and community groups to promote compliance and monitor system effectiveness.

Use in a Safe System Approach

Vehicle-activated speed limit systems support the SSA by managing safe speeds (Safe Speeds) and providing real-time feedback to drivers, helping prevent high-risk situations. This proactive measure also protects vulnerable road users (Safe Road Users) by reducing speed-related crash risks in sensitive areas.

Countermeasure Overview

Objective: Heighten driver awareness of speeding-related safety issues.

Strategy: Implement neighborhood speed watch/traffic management programs (Low Speed Only)

Selected Related Countermeasures

- CM1 Dynamic Speed Display Signs (DSDS)
- CM2 School Zone Flashing Beacons
- CM3 Speed Feedback Trailers

Cost: \$\$ (Moderate)

Service Life: 10 years

Targeted Solution



CONTRIBUTING FACTORS

- Speeding
- Risky Overtaking



TARGET CRASH TYPE

- Speeding



ROAD FACILITY TYPE

- N/A



AREA TYPE

- Urban
- Suburban

Safety Linkage



NCHRP 500 Series

Speeding related Crashes



AASHTO'S TOWARD ZERO DEATHS

Improved Safety Management



SAFE SYSTEM APPROACH

Safe Speeds

SAFE SYSTEM ROADWAY DESIGN

TIER 1

TIER 2

TIER 3

TIER 4

Tier 4



Reminds drivers of speed limits in real time, reducing speeding. Reduce all crashes on rural two-lane roads.



Resources

- [A Comparative Study between Vehicle Activated Signs and Speed Indicator Devices, Jomaa et al. \(2017\)](#)
- [Individual changeable speed warning signs](#)

Vehicle Activated Speed Limit. Source: FHWA

