



Replace Standard STOP Sign with Flashing LED STOP sign

Flashing LED STOP signs help to increase visibility, reduce accidents, and improve compliance with STOP sign rules.

Implementation Strategy

How and Where to Apply

- Flashing LED STOP signs are best applied at intersections with high crash rates, low driver compliance, or where STOP signs are frequently missed due to visibility or driver distraction.
- They are especially effective at rural or unsignalized intersections and locations where traditional STOP signs have proven insufficient in reducing crash occurrences.
- These signs use embedded LED lights that flash to draw driver attention, particularly in low-light, adverse weather, or nighttime conditions.

Key Stakeholders

State DOTs, Traffic Safety Engineers

Proactive Implementation

LED STOP signs should be proactively installed at intersections with prior crash histories or observed issues with driver compliance. They are particularly suited for locations flagged during network screening as having potential for safety improvement. Installation during routine sign upgrades can keep implementation costs low while maximizing visibility and impact.

Use in a Safe System Approach

Flashing LED STOP signs support the SSA by improving road design (Safe Roads) and enhancing driver awareness and decision-making (Safe Road Users) at critical intersections. This increases sign visibility, encourages better compliance.

Countermeasure Overview

Objective: Improve driver awareness of intersections as viewed from the intersection approach

Strategy: Install flashing beacons at stop-controlled intersections

Selected Related Countermeasures

- CM1** Add High-Visibility Pavement Markings
- CM2** Increase intersection sight distance
- CM3** Improve Intersection Lighting

Cost: \$ (Low)

Service Life: 5 years

Benefit-Cost Ratio: 25:1

Targeted Solution



CONTRIBUTING FACTORS

- Reduced visibility
- Driver inattention
- Non-Compliance



TARGET CRASH TYPE

- Angle
- Rear-end
- Turning



ROAD FACILITY TYPE

- Not specified



AREA TYPE

- All

Safety Linkage



NCHRP 500 Series

Unsignalized Intersection



AASHTO'S TOWARD ZERO DEATHS

Safer Infrastructure

SAFE SYSTEM APPROACH

Safer Roads

SAFE SYSTEM ROADWAY DESIGN

TIER 1

TIER 2

TIER 3

TIER 4

Tier 4

LED STOP sign. Source: carmanah.com

41%

LED STOP signs help reduce the frequency of angle crashes¹

¹ CME ID: 6602

Resources

- [Impact of Flashing LED Stop Signs on Crash Reduction and Driver Behavior](#)
- [Flashing LED Stop Sign and Optical Speed Bars](#)

