# Install Intersection Safety **Devices**



Intersection safety devices—such as red-light cameras or warning systems enhance safety by detecting violations and encouraging driver compliance at high-risk intersections.

# Implementation Strategy

## How and Where to Apply

- These devices are typically applied at signalized intersections or highcrash unsignalized locations with frequent violations.
- They are most effective at urban or suburban intersections with documented red-light running or rear-end crashes.
- According to FHWA, intersection safety technology should target behaviors contributing to highseverity collisions, including failure to yield, speeding, and stop violations.

# Use in a Safe System Approach

These devices support Safer Users and Safer Intersections by improving behavior and creating accountability for unsafe actions. Automated enforcement reduces human error by increasing deterrence and encouraging greater compliance with traffic control devices.

## **Key Stakeholders** State and local DOTs

Transportation safety engineers

## **Proactive Implementation**

Intersection safety devices can be deployed proactively at intersections identified through systemic crash analysis, violation tracking, or riskbased screening. Agencies may use speed and red-light cameras, warning beacons, or automated enforcement in corridors with documented noncompliance. Public education and data-sharing partnerships can enhance program effectiveness.

#### Countermeasure Overview

Objective: Reduce operating speeds on specific intersection approaches

Strategy: Provide traffic calming on intersection approaches through a combination of geometrics and traffic control devices

Cost: \$ (Moderate)

Service Life: 10 years

Benefit-Cost Ratio: 12.4:1

#### **TARGET CRASH** TYPE

CONTRIBUTING

**FACTORS** 

**FACILITY** 

Angle Rear-end

Limited sight

Driver inattention

Urban arterial

distance

**Targeted Solution** 

**Turning** 



Urban Suburban

# Safety Linkage



Intersection Crashes



Safer Infrastructure SAFE SYSTEM **APPROACH** 

Safe Roads

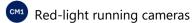
**ROADWAY DESIGN** TIER 1

SAFE SYSTEM

Tier 4

Intersection Safety Devices. Source: Device

## Selected Related Countermeasures



Intersection conflict warning systems

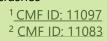
Intersection conflict warning systems

Reduce all crashes at signalized urban and suburban intersections<sup>1</sup>



Safety Benefits

Reduce property-damage-only crashes<sup>2</sup>





#### Resources

- Safety Evaluation At Signalized Intersections
- **INTERSECTION SAFETY STRATEGIES**

