

Install Rectangular Rapid Flashing Beacon (RRFB)



Rectangular Rapid Flashing Beacons (RRFBs) are user-activated amber LED lights that flash in a rectangular pattern to alert drivers to the presence of pedestrians at unsignalized crossings.

Implementation Strategy

How and Where to Apply

- RRFBs are ideal for mid-block crossings or uncontrolled intersections with moderate to high pedestrian activity.
- They should be installed at marked crosswalks where pedestrian visibility or yielding behavior is a concern.
- According to FHWA guidelines, they must comply with MUTCD interim approval and can be paired with high-visibility crosswalk markings and signage.

Use in a Safe System Approach

Supports Safer Road Users and Safer Roads by increasing driver awareness and encouraging yielding behavior. RRFBs provide timely, visible cues to drivers, reducing the risk of pedestrian crashes, especially in multilane or high-speed corridors.

Key Stakeholders

Local and state transportation agencies
Pedestrian safety planners

Proactive Implementation

Agencies can identify high-risk pedestrian crossings using crash data, speed profiles, and land use factors (e.g., near schools, transit stops, or retail areas). RRFBs can be deployed systemically as a proactive low-cost pedestrian safety enhancement, especially in urban corridors or where traditional signals are not warranted.

Countermeasure Overview

Objective: Reduce Pedestrian Exposure to Vehicular Traffic

Strategy: Install or Upgrade Traffic and Pedestrian Signals

Selected Related Countermeasures

- CM1** Install Pedestrian Hybrid Beacons
- CM2** Add pedestrian refuge islands
- CM3** Advance yield lines and signage

Cost: \$ (Moderate to High)

Service Life: 10 years

Benefit-Cost Ratio: 6.5:1

Targeted Solution



CONTRIBUTING FACTORS

- Risky crossing behavior



TARGET CRASH TYPE

- Crossing-related



ROAD FACILITY TYPE

- Not specified



AREA TYPE

- Rural

Safety Linkage



NCHRP 500 Series

Intersection



SAFE SYSTEM APPROACH

Safe Road Users

SAFE SYSTEM ROADWAY DESIGN

TIER 1

TIER 2

TIER 3

TIER 4

Tier 4



AASHTO'S TOWARD ZERO DEATHS

Safer Vulnerable Users

73%

Reduce rural intersection crashes of all types and severities ¹

69%

Reduce fatal and injury crashes ²

¹ CMF ID: 11169

² CMF ID: 11158

Resources

- MUTCD Chapter 3B: Pavement and Curb Markings
- Unsignalized Intersection Improvement Guide
- FHWA Safety Evaluation of STOP AHEAD Pavement Markings



Rapid Flashing Beacon. Source: RRFB

