

Pedestrian crossing beacons — rectangular rapid flashing beacon

Definition

An RRFB device is a pedestrian-activated (“push button”) beacon system located at the roadside and acting as a supplement to pedestrian warning signs at unsignalized intersections or mid-block crosswalks. The beacon employs an irregular flash pattern similar to the stutter flash used on emergency vehicles. RRFB devices must be used in conjunction with other treatments, such as warning and regulatory signage, advance stop/yield markings, marked and/or raised crosswalks, etc.

Objective

To alert drivers to the presence of pedestrians and their intention to cross the roadway.

Advantage

Increases driver yielding rates.

When used together with other treatments, RRFBs can reduce the incidence of “multiple-threat” crashes at crosswalks on multi-lane roads.

Allows for normal traffic flow when not actuated — i.e. it is only “on” when actually needed.

Relatively low cost — can be powered by solar or AC.

Challenge

Interim approval status with FHWA.

Pedestrians may misinterpret the flashing light and not wait for traffic to stop before entering the crosswalk.

Resources

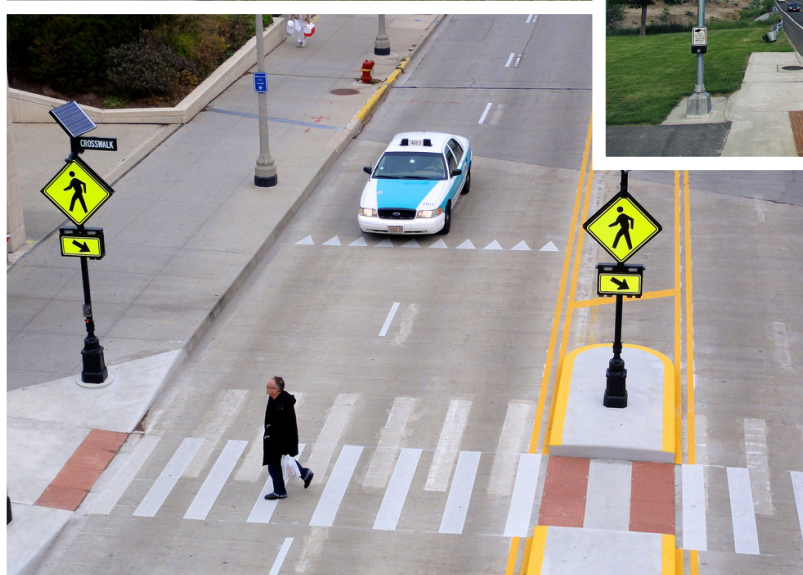
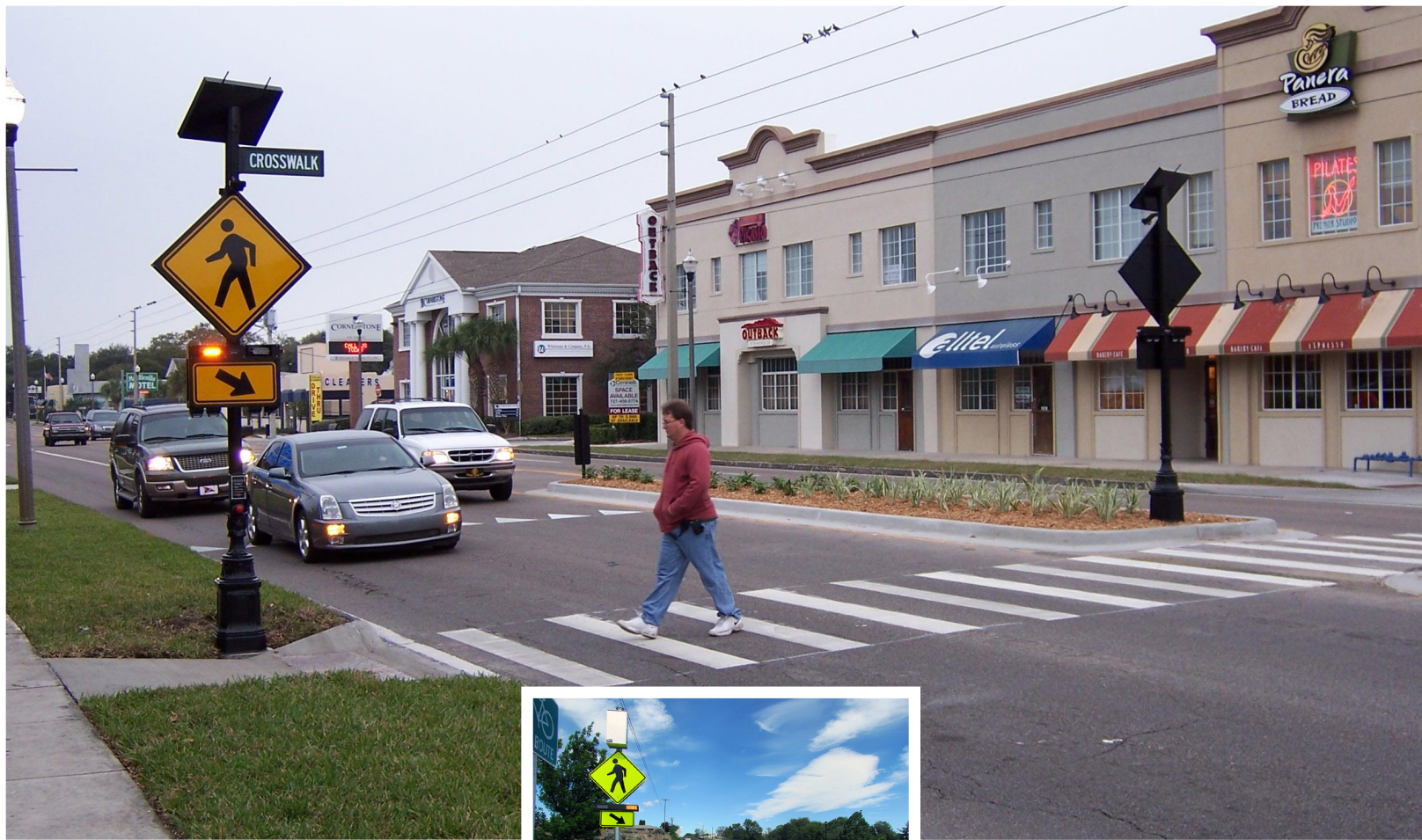
MUTCD, Efficacy of Rectangular-shaped Rapid Flash LED Beacons
http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/stpetersburgprt/index.htm.

FHWA, Safety Treatment Summaries: Rectangular Rapid Flash Beacon (RRFB <http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwasao9009/>).

Evaluation of the Rectangular Rapid Flashing Beacon at Pinellas Trail Crossing in St. Petersburg, Florida
http://katana.hsrb.unc.edu/cms/downloads/FDOT_BA784%2EvaluationRectangularRapidFlashBeaconStPetersburgFlorida.pdf.

Evaluating Pedestrian Safety Countermeasures
<http://www.fhwa.dot.gov/publications/publicroads/11marapr/03.cfm>.

Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report
<http://www.fhwa.dot.gov/publications/research/safety/pedbike/11039/11039.pdf>
[BA784%2EvaluationRectangularRapidFlashBeaconStPetersburgFlorida.pdf](http://www.fhwa.dot.gov/publications/research/safety/pedbike/11039/11039.pdf).



Images (clockwise from main image):

Example of a rectangular rapid flashing beacon at a crosswalk.
Source: Michael Frederick, pedbikeimages.org.

Additional examples:
Sources: Dan Burden; Carol Kachadoorian, Pedsafe; Lara Justine, Flickr; Steven Vance, Flickr.