

FY 2010 RESEARCH PROBLEM STATEMENT

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TITLE ([more info](#))

Evaluation of Alternative Pedestrian Traffic Control Devices

PROBLEM (Description of need) ([more info](#))

The Federal Highway Administration (FHWA) recently issued Interim Approval for Optional Use of Rectangular Rapid Flashing Beacons (RRFB) (IA-11) as a supplement to standard pedestrian crossing or school crossing signs at crosswalks at uncontrolled approaches. Evaluations performed in several Florida cities show compliance rates over 80 percent compared to rates in the 15 to 20 percent range for standard beacons. Florida's pedestrian law is a "yield" law whereas in Oregon drivers must stop for pedestrians so the results achieved here might differ.

Other pedestrian traffic control devices have been designed and some installed on an experimental basis in Oregon and elsewhere. One such device is the HAWK which is a pedestrian hybrid signal which as a red indication when a crosswalk is in use and is dark at other times. These have been installed by the City of Portland.

The ODOT Traffic Operations Leadership Team (TOLT) and Oregon Traffic Control Devices Committee (OTCDC) are interested in evaluating the effectiveness of RRFB devices and other devices in improving motorist stop rates at several pedestrian crossings on both state highways and local streets.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY ([more info](#))

A literature review will be completed to identify pedestrian traffic control devices including signals, signs, pavement markings or a combination of these that offer the potential to improve safety at pedestrian crossings. The RRFB and at least one other device not used widely in Oregon but determined to have potential will be identified for experimentation.

The proposed research would identify Oregon locations (both standard pedestrian and school crossings) that have a high rate of vehicles not stopping for pedestrians as measured by crashes, citations, or observations. RRFBs will be installed at one-third of the locations, another new device at a third, and a third will serve as "control". A like number of locations with overhead and ground-mounted pedestrian crossing signs supplemented with standard warning beacons will be included in the evaluation.

At each location, a baseline condition will be established with the collection of "before" data, then "after" data would be collected at intervals of 1 and 2 years at all sites. The data collection would focus on rates of motorist "stop for pedestrians" compliance to see how they compare to standard warning beacons, full traffic signals, and HAWK/pedestrian hybrid signals. Additional data collection could focus on the distance that drivers exhibit yielding behavior in advance of the crosswalk with RRFB rather than standard warning beacons.

BENEFITS ([more info](#))

A successful evaluation of RRFB and other devices in Oregon could identify low cost, highly effective countermeasures that improve pedestrian safety,

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Problem Statement Number: