

# ROADWAY SAFETY INSTITUTE

Advancing roadway safety with user-centered solutions

UTC Project Information	
Project Title	Assessing the Impact of Pedestrian-Activated Crossing Systems
University	University of Minnesota
Principal Investigator	John Hourdos
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Funding Source(s) and Amounts Provided (by each agency or organization)	Minnesota Department of Transportation: \$153,962
Total Project Cost	\$153,962
Agency ID or Contract Number	UTC Grant Number: DTRT13-G-UTC35 MnDOT contract 99008 work order 193 CTS# 2016031
Start and End Dates	11/05/2015 – 11/30/2019
Brief Description of Research Project	<p><i>Note: this match project extends past the life of the Roadway Safety Institute grant. Nevertheless, Institute staff will update this form with the final report abstract and a link to the final technical report when available.</i></p> <p>In the past decade, several different treatments aimed at improving pedestrian safety and mobility by positively affecting driver behavior have been designed and deployed. These include the Pedestrian Hybrid Beacon (HAWK), the Rectangular Rapid Flashing Beacon (RRFB), flashing LED crosswalk signs, and several others. Although prior studies have shown that these systems can have an aggregate positive effect on driver yielding rates, their effects on pedestrian crashes is less clear, and richer insight as to their selection and placement is needed. In Minnesota several sites have had these treatments in place long enough that it may be possible to perform safety analyses. Additionally, the Minnesota Traffic Observatory perfected methods for collecting long-period observations, allowing us to investigate the effect of varying conditions such as traffic volume, pedestrian demand, and lighting conditions on driver and pedestrian behavior as well as treatment performance. This project is a two-pronged study that will integrate results from a crash-record-based safety study with direct, long-term, and staged observations of pedestrian-vehicle interactions at crosswalks with particular treatments. The study will cover a minimum of two sites for each selected treatment with varying roadway characteristics, along with appropriate control sites lacking the target treatment. Finally, on selected sites with the target treatments, we aim to conduct a traffic conflict study based on pedestrian and vehicle trajectories in order to identify the individual effect each treatment has on crash potential.</p>

Last updated (9/30/2019)



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Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	Nothing to report.
Impacts/Benefits of Implementation (actual, not anticipated)	Nothing to report.
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	<a href="http://www.cts.umn.edu/Research/ProjectDetail.html?id=2016031">http://www.cts.umn.edu/Research/ProjectDetail.html?id=2016031</a>