



Need for Innovation

Horizontal curves make up a small percentage of total roadway miles, yet they account for one-quarter of all highway fatalities. The majority of curve related crashes are attributed to speeding and driver error and involve lane or roadway departures. There are a number of traditional low-cost countermeasures to help keep vehicles on the road and in their lane, however, their applications can be limited. This leads to the need for additional research and testing of more dynamic devices to assist traffic engineers in managing speed and safety across their roadway networks.

Project Overview

The objective of this project is to evaluate the effectiveness of Sequential Dynamic Curve Warning System (SDCWS) in reducing vehicle speeds and the frequency and severity of speed related crashes on horizontal curves on rural roadways. Twelve treatment sites and 24 control sites were selected in Iowa (1), Missouri (1), Texas (4), Washington (3) and Wisconsin (3). Speed data will be collected before and immediately after the installation, as well as after 12, 18 and 24 months. Guidelines and recommendations for implementing SDCWS displays for curves will be included in the final report.

Project Status

The final report and a summary of the final report are available at https://www.fhwa.dot.gov/hfl/partnerships/safety_eval/tapco.cfm

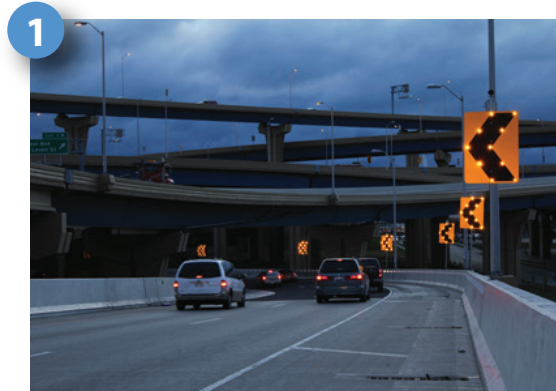
Project Team

Traffic and Parking Control Co., (TAPCO) – Technology Provider
Evaluation Team:
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1 The System consists of a series of solar-powered, LED-enhanced BlinkerSigns® (a Curve Warning BlinkerSign and an array of Chevron BlinkerSigns) that are installed throughout a curve.



2 Approaching vehicles, sensed by a radar in the advanced curve warning sign, trigger the controller that wirelessly activates the LED signs to flash sequentially through the curves to warn speeding drivers to slow down.



3 Iowa State Highway 144



4 Wisconsin State Highway 20

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