

Traffic Safety Engineering

BACKGROUND

The Traffic Safety Engineering Action Team (TSEAT), broadly addresses various engineering-related aspects of traffic safety. The activities involved herein include: the identification of potentially hazardous locations; efforts to facilitate and disseminate research into the causal and contributory effects of roadway infrastructure on traffic crashes; and the development and implementation of low-cost countermeasures.

As a variety of unique issues are involved in both intersection-related and lane departure crashes, therefore separate assessments were conducted of recent safety trends and countermeasure programs within each subarea. However, given the integrated nature of the TSEAT, a single set of broad strategies has been identified for implementation as a part of the SHSP.

In Michigan during 2015, lane departure crashes accounted for 17.1 percent of crashes and 46.2 percent of fatal crashes. While lane departure crashes comprise nearly half of fatal crashes, this percentage has been reduced from more than 48.6 percent in 2011, as lane departure fatalities decreased from 444 to 413.

Primary objectives in this area are to identify cost-effective strategies that reduce unintentional lane departure, as well as alert the driver should a departure event occur. A secondary objective is to assist the driver in returning to the travel lane safely and minimize the consequences of departure by creating clear zones along the roadside.

A lane departure crash definition has been created, which added a flag to each crash record in order to simplify lane departure analysis.

There were 90,752 intersection crashes in Michigan during 2015, representing 30.1 percent of all the reported crashes. Such crashes resulted in 242 fatalities (25.1 percent of the statewide total) and 1,639 incapacitating injuries (33.7 percent of the statewide total).

MDOT has sponsored research to investigate roundabouts and converting four-lane roadways to three lanes. Other research has examined dynamic intersection warning devices, ground-mounted flashing beacons, and other low-cost safety improvements.

The identification and analysis of high-risk intersections has also remained a high safety priority. MDOT has continued to use various software tools including SafetyAnalyst and Roadsoft, which, along with the *Transparency Report*, has helped to identify the most problematic intersections

MDOT continues promoting routine signal re-timing to further enhance intersection safety. Currently, more than **75.0 percent** of trunkline corridors have been retimed, with more scheduled for the immediate future.

Additionally, MDOT has set aside categorical safety funding for local agencies for road safety audits, the installation of centerline and shoulder rumble strips, guardrail upgrades, clear zone improvements, and other projects that target locations that have experienced fatal and incapacitating injury crashes. These projects, along with other research and systemic and systematic safety improvements, have provided the foundation for deeper understanding of lane departure crash characteristics and prospective countermeasures.

STRATEGIES

- Support, promote and implement the Toward Zero Deaths National Strategy related to infrastructure safety through outreach and communication
- Identify and resolve safety data issues
- Promote and sponsor research on infrastructure safety
- Broaden the use of currently accepted and proven countermeasures
- Develop, research, and pilot test new countermeasures

- Collaborate with partners to identify and promote opportunities for funding

For action plans and accomplishments, please visit the GTSAC web site at:

http://www.michigan.gov/msp/0,4643,7-123-72297_64773_41646-145624--,00.html