Truck Rollover Warning System (TROWS)
July 28, 2015

Location: Oakdale / Woodbury
Partners: MnDOT / FHWA / American Transportation Research Institute / IRD, Inc. / SEH, Inc.
Total project cost: $350,135
Project completion: July, 2015

Description of project
The location of this project at the ramp from southbound I-694 to eastbound I-94 was selected due to the excessive number of large truck rollovers that have occurred there. According to the “Minnesota Motor Vehicle Crash Facts, 2010” and the American Trucking Research Institute’s (ATRI) “Mapping Large Truck Rollover: Identification and Mitigation through Spatial Data Analysis”, this location has had the second most truck rollovers in the state.

The goal of the project is to give truck drivers advance warning. Through the systems engineering process, it was determined that the warning will be for trucks entering at an unsafe speed and during slippery conditions that may increase the likelihood of a roll over or run off the road crash.

The Truck Rollover Warning System (TROWS) is an enhancement of International Road Dynamics, Inc. (IRD)’s current Truck Rollover Warning System. The warning system uses both Weigh-in-Motion (WIM) and Road Surface Detection technologies to provide a new solution to the rollover problem. This project will use the IRD iSINCTM technology to incorporate truck rollover and road condition warnings at a single site, which is a new innovation to current rollover warning systems.

Along with the WIM, a two message blank out sign display will also be installed. The blank out sign will display an LED Truck Rollover (W1-13) and a Slippery When Wet (W8-5). A secondary sign will display an advisory speed for trucks approaching an unsafe speed on the ramp.

Benefits
Improved safety

Next steps
Evaluate system operation and truck driver response to the warning with a follow up project

For More Information
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