



Florida Department of Transportation Research

Improving Safety in Pavement Field Testing

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Current Situation

As part of its pavement evaluation program, the Florida Department of Transportation drives over 500,000 miles annually in its mission to collect pavement condition and performance data. Some of this work is conducted by vehicles that often travel at prevailing speeds, requiring the pavement testing operators (PTOs) to drive the vehicle, operate the onboard computer, and survey the roadway. This may lead to distracted driving situations and risks to the PTOs. And while many methods have been adopted that minimize the need for stationary testing, there are situations that require a work zone and traffic controls. Stationary testing can result in risks from inattentive drivers to (PTOs) or testing equipment.

Research Objectives

University of South Florida researchers examined the current state of safety practice for pavement field operators working either at highway speeds or within temporary traffic controls.

Project Activities

The researchers conducted a literature review and a nationwide questionnaire survey to determine the state of safety practice for both mobile and stationary PTO work. In the literature review, the researchers documented safety devices as well as rules and plans established in other states. The survey questions allowed the researchers to compare field practices across the nation as well as determine desired improvements.

For mobile testing, advanced safety features were found that allow the PTO to perform needed tasks with less intervention and more safely. For example, high resolution cameras with real-time processing can reduce the need for PTO attention. Voice recognition applications can reduce or eliminate the need for the PTO to look away from the road. Equipment which monitors following distance, lane departure, and driver fatigue can provide direct safety benefits.

For stationary testing, options were found for warning drivers and protecting PTOs. Devices like changeable message signs, portable rumble strips, and speed-activated displays can make drivers aware of the need for caution and lane changes. There are also devices that provide a strong alert warning to drivers who are near to intruding into the work zone. The literature contains several designs that can manage heavier traffic or more layers of warning devices.

The survey asked about the need for safety improvements for PTO work, what safety features had been developed or adopted, unique safety practices, and suggestions and comments regarding PTO safety. Thirty-two states responded, many focusing on improved safety for stationary testing. Many useful adaptations of existing practices were reported.

Project Benefits

Based on their findings, the researchers were able to make many recommendations related to all aspects of PTO work. From software interfaces to work zone marking, these recommendations can make PTO work safer for both operators and the traveling public.

For more information, please see www.fdot.gov/research/.



This pavement testing vehicle is equipped with ground penetrating radar.