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Safety Impacts of Pavement Edge Drop-offs

Edge drop-off is the difference in height between a road lane and the (paved or unpaved) shoulder of that lane or another travel lane of the roadway. If the height difference is relatively small, there is little safety risk to motorists traveling the section of roadway where edge drop-off conditions exist. However, as the vertical elevation difference between the road lane and shoulder increases, there is significant risk to the safety



of the traveling public. In the event that a vehicle leaves the travel lane, allowing two of its wheels to drop off the edge of the roadway, vehicle handling and stability are affected. Attempts by the driver to bring the vehicle back into the travel lane can result in an accident involving that vehicle and potentially additional vehicles, especially at high speeds.

What Are You Doing to Monitor Dangerous Edge Drop-off Conditions?

A two year study headed by researchers at the Iowa Center for Transportation Research and Education (CTRE) has resulted in a report released in July 2006 entitled "[Safety Impacts of Pavement Edge Drop-offs](#)". This report makes the recommendation that agencies take remedial action to correct shoulder drop-offs of two (2) inches or greater. It also recommends that, "The FHWA should continue to encourage and support the development, validation and use of mobile sensing equipment to measure and record pavement and shoulder conditions."

Roadware Can Help!

In addition to rut depth measurement, Roadware's Laser XVP transverse profiling system is ideal for the detection and calculation of edge drop-off conditions. The system measures the transverse profile of the full lane width using scanning lasers with an accuracy of 1 mm (0.04"). Roadware's custom Edge Drop-off software then precisely calculates edge drop-off based on the measured transverse profile of the road and provides the user with a convenient visual display of results.

Key Benefits

- Increased safety and efficiency when compared to manual field inspection; no need to stop traffic or physically walk the road.
- Improved accuracy and objectivity when compared to visual field inspection.
- Cost effective, fast and easy to use equipment and software for reporting of dangerous edge drop-off conditions.
- Maximize the investment in your existing ARAN or provide higher economy of scale for your Data Collection Services survey contract.

Roadware Data Collection Services customers can request edge drop-off measurements to be included in their data collection surveys, and ARAN owners can have the Laser XVP system integrated into their data collection vehicles. Please contact us at 800-828-2726 or info@roadware.com, or see us at the China Transpo Conference in Beijing www.roadware.com/conferences to discuss your requirements.

A promotional graphic for Roadware, split into two vertical panels. The left panel has a dark, textured background and contains the text: "Roadware is the world's leading provider of data collection equipment and services for the roadway management sector". The right panel has a solid orange background and contains the text: "Products and services include:" followed by a list of services: "Automated data collection and analysis services" with two sub-points: "for asset management applications" and "for pavement management applications", and "ARAN automated data collection equipment".

Roadware is the world's leading provider of data collection equipment and services for the roadway management sector

Products and services include:

- Automated data collection and analysis services
 - for asset management applications
 - for pavement management applications
- ARAN automated data collection equipment

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