

Title:	Measuring Faulting on Jointed Concrete Pavements
The Problem:	<p>In terms of pavement performance indicators, TxDOT collects most of its required information through a contracted vendor. Faulting data, one of the essential measurements, is estimated from longitudinal profile data and it is neither reliable nor accurate enough for establishing performance measures.</p> <p>Reforms enacted by MAP-21 include transitioning to a performance-based program, including establishing national performance goals for Federal-aid highway programs. The FAST Act supports and continues this overall performance management approach, within which states invest resources in projects that collectively will make progress toward national goals. The FAST Act shortens the time frame for states and MPOs to make progress toward meeting performance targets under the National Highway Performance Program and clarifies the significant progress timeline for the Highway Safety Improvement Program performance targets.</p> <p>Research is needed to create a reliable measurement system to monitor, measure and calculate faulting on all jointed concrete pavements</p>
Technical Objectives:	<p>The objective of this research is to develop a system to collect and verify faulting data of jointed concrete pavements in an accurate manner at highway speeds during daylight conditions.</p> <p>The researchers shall address the following:</p> <ol style="list-style-type: none"> 1. Investigate available technologies that can be used to measure highway faulting and report advantages and disadvantages of each. 2. Based on the findings, develop a system that can be used to collect faulting data at highway speeds during daylight conditions. The system shall be accurate enough to meet the requirements required by FAST Act. 3. Test the equipment in the field to ensure accuracy and precision. 4. Establish a benchmark methodology to verify and validate that the faulting data collected are accurate. <p>The expectation of this project is that the end product will obtain a TRL level 8.</p>
Desired Deliverables:	<ol style="list-style-type: none"> 1. Technical memorandum for each task completed. 2. Monthly progress reports. 3. Value of Research (VoR) that includes both qualitative and economic benefits, to be included in the final research report. 4. Product - a usable prototype piece of equipment to measure faulting on jointed concrete pavements at highway speed. 5. Research report documenting the findings of the research, including a methodology for calculating faulting following federal requirements through the FAST Act. 6. Project Summary Report.
Proposal Requirements:	<ol style="list-style-type: none"> 1. Utilize the "Proj/Agre" and "PA_Form" templates located at the TxDOT RTI website. 2. Proposals will be considered non-responsive and will not be accepted for technical evaluation if they are not received by the deadline or do not meet the requirements stated in RTI's University Handbook, which is also located at the RTI website. 3. Proposals should be submitted in PDF format, 1 PDF file per proposal. File name should include project name and university abbreviation. 4. This project will be tracked during the life of the project using a Technology Readiness Level (TRL) scale. For more information about the use of a TRL, click.