



FY 2025 Annual Program Research Project Statement 25-105

Title:	Improve Safety and Decrease Vehicle Fatalities by Improving Pavement Markings
The Problem:	<p>TxDOT's "End the Streak" has a goal to end all fatalities on Texas roads by 2050 as there has not been a day without a death on Texas roadways since November 7, 2000.</p> <p>In order to make progress on the goal of "End the Streak" and to strive for no vehicle fatalities, in addition to the current initiatives, other strategies must be implemented. One such strategy is increasing the efficacy of pavement markings (striping and retroreflective pavement markers) in several TxDOT districts and monitoring the crash statistics before and after pavement marking and marker improvements for several years. Pavement markings and markers are a relatively low-cost item and may offer a high return on investment in terms of reduced fatalities.</p>
Technical Objectives:	<p>The objectives of this project are:</p> <ul style="list-style-type: none"> • Conduct a literature review and summarize state-of-the practice and key findings. • Identify a CRIS dataset where a contributing crash factor was roadway stripe and retroreflective pavement markers. • With the project team, select a set of roadways in participating districts. • District shall fund pavement marking contracts on the selected roadways to: <ul style="list-style-type: none"> ○ Evaluate selected roadway marking conditions, ○ Renew and maintain all markings, including striping retroreflectivity and replacing lost or ineffective pavement markers. • Conduct a statistical analysis of before and after roadway markings and retroreflective pavement markers upgrade to determine if vehicle fatalities (and other crashes) are reduced. <p>The expected technology readiness level (TRL) for this project is 8.</p>
Anticipated Deliverables:	<ol style="list-style-type: none"> 1. Technical memorandum for each task completed. 2. Monthly progress reports. 3. Project Summary Report 4. Research report documenting the findings of this research, including: <ul style="list-style-type: none"> • Selection of participating district(s), describing upgrades made and TxDOT costs. • Detailed statistical evaluation of crash data before and after the upgrade and a benefit/ cost determination. • Value of Research (VoR) that includes both qualitative and economic benefits.
Proposal Requirements:	<ol style="list-style-type: none"> 1. RFP#1 Q&A Deadline: 12:00 p.m. Central Time, Tuesday, February 20, 2024. 2. Proposal Deadline: 12:00 p.m. Central Time, Thursday, March 21, 2024. 3. Use the current "ProjAgre" and "PA Forms" templates located at the RTI Forms webpage. 4. 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. 5. Proposals should be submitted by the University Liaison in PDF format; (1) PDF file per proposal. File name should include project name and university abbreviation. 6. This project will be tracked during the life of the project using the Technology Readiness Level (TRL) scale. 7. The 2021 Texas Legislative Session requires that universities be in compliance with Senate Bill 475 by submitting a completed and signed TxDOT Security Questionnaire (TSQ) to RTIMAIN@txdot.gov. Universities that have not submitted a completed and signed TSQ one week after award will be considered non-compliant and unable to participate in the Program.