

Research Project Statement 22-032 FY 2022 Annual Program

Title:	Quantify Maximum Accumulated Seal Coat Layers for Stability
The Problem:	TxDOT has numerous sections of roadway that have seal coats as the riding surface. TxDOT has a significant investment in seal coats, with over \$300 million annually. Ensuring that the seal coat is used on a good candidate pavement will lower risk to TxDOT and lead to better performing sections of pavement. During seal coat training, TxDOT employees continue to ask, "How many seal coats are too many?" This is a very good question that has not been investigated. With TxDOT's strong preventive maintenance program that includes a seal coat cycle, many roads in Texas are performing very well with multiple seal coats; however, others are not. The question is, how many seal coats can be added before the surface becomes unstable and therefore not a good candidate for an additional seal coat?
Technical Objectives:	This research shall evaluate the maximum allowable amount of seal coat layers on a roadway while maintaining roadway surface stability. To achieve this objective, the work to be performed shall include: 1. Examine the influence of accumulated seal coats over time on pavement performance. 2. Document problems associated with multiple layers of stacked seal coats. 3. Evaluate the implications of stacked seal coats on application rates and material combinations. 4. Develop guidelines to determine when a pavement is a good candidate, or not a good candidate, for placing additional seal coat layers, including optimal strategies for future seal coat seasons. The expectation of the project end product(s) shall attain a Technology Readiness Level of 8.
Anticipated Deliverables:	 Technical memorandum for each task completed. Monthly progress reports. Value of Research (VoR) that includes both qualitative and economic benefits, to be included in the final research report; not a stand-alone deliverable. Research report documenting the findings of the research, including guidelines for placing additional seal coat layers and strategies for future seal coat seasons. Project Summary Report
Proposal Requirements:	 Utilize the "Proj/Agre" and "PA_Form" templates located at the <u>TxDOT RTI website</u>. 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 <u>University Handbook</u>, which is also located at the RTI website. Proposals should be submitted in PDF format, 1 PDF file per proposal. File name should include project name and university abbreviation. 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 <u>TRL</u>, click.