Title:	Develop Guidelines for Precoating Aggregates of Seal Coats
The Problem:	Seal coats are the predominant tool Texas employs for pavement preservation. This past year, numerous severe seal coat failures associated with a poor bond between the rock and the asphalt binder have resulted in a substantial loss of money, not to mention a poor public image for TxDOT. TxDOT places more than 20,000 lane-miles per year of seal coats. Because most of the contracted seal coats are constructed with hot-applied asphalt cement, it is generally required that the aggregate be precoated. Precoating is intended to reduce negative effects of dust on aggregate and to ensure a good bond to the spray applied hot binder. There have been recent reports of freshly coated seal coat rock which does not bond to the asphalt. This was confirmed in laboratory tests in research project 0-6881, Recycled Engine Oil Bottoms and Polyphosphoric Acid in Texas Binders, where negative effects of REOBs on precoating materials have been observed to affect bonding. Standard Specification Item 302, Aggregates for Surface Treatments, allows the contractor to select any type of asphalt material and in any quantity unless directed otherwise by the Engineer. TxDOT is in need of guidelines to assist the Engineer in selecting the best types of precoating asphalts, target quantities, and other additives to ensure a product which will bond well to the asphalt binder. It may also be necessary to develop or identify test methods to aid in the selection of optimum binder type and quantity, and whether any additional additives are needed.
Technical Objectives:	The researchers shall address the following: 1. Review literature to identify precoating guidelines and test methods. 2. Establish test protocol for characterizing aggregate precoating. 3. Conduct lab studies on different types of precoating materials. 4. Monitor performance of test sections constructed in the annual seal coat program. 5. Propose guidelines and acceptance criteria for precoating seal coat aggregates. The expectation of this project is that the end product will obtain a TRL level 8.
Desired Deliverables:	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. Research report documenting the findings of the research, including guidelines and acceptance criteria for precoating seal coat aggregates. 5. Project Summary Report.
Proposal Requirements:	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.