UTC Project Information – Project 2.3	
Project Title	2.3: Measuring Adhesion Between Binders and Aggregates Using Particle Probe Scanning Force Microscopy at Low Temperatures
University	University of Vermont
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Co-PI(s)	NA
Co-PI Contact Information	NA
Funding Source(s) and Amounts Provided (by each agency or organization)	TIDC $90,000 UVM $89,377
Total Project Cost	$179,377
Agency ID or Contract Number	ORCID.org ID Number: 0000-0002-0847-2542
Start and End Dates	Start 1/1/19 End 12/31/20
Brief Description of Research Project	Low temperature cracking is one primary distress of pavement materials in New England area. It is estimated that only half of the major US roads are in good condition, whereas thirteen percent are in poor condition. This project will measure adhesion between plain binders and aggregate minerals at low temperatures, and measure adhesion between modified binders and aggregate minerals at low temperatures. Numerical modeling is performed to understand the effects of chemical constituents on the adhesion between asphalt binders and aggregates. The findings could provide potential guidance of asphalt mixtures in low temperature regions since the proper combination of aggregates and binders will be accurately evaluated based on more accurate adhesion results.
Describe Implementation of Research Outcomes (or why not implemented)	None yet
Impacts/Benefits of Implementation	None yet
Web Links • Reports • Project website	None yet