UTC Project Information

Project Title	Development of a Low-Cost Conductive Measurement Technique to Augment Objective Methods for Damage Detection in Concrete Pavements
University	University of Minnesota
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Funding Source(s) and Amounts Provided (by each agency or organization)	$92,887 USDOT $46,443 UMN
Total Project Cost	$139,329
Agency ID or Contract Number	DTRT13-G-UTC44
Start and End Dates	January 31, 2017 to January 30, 2018
Brief Description of Research Project	Detection of degradation has the potential to improve the long-term performance and integrity of highway pavements. The ongoing challenge in non-destructive evaluation techniques is to efficiently identify degradation prior to a visible impact on performance. The objective of this research is to leverage the two approaches of conductive sensing and easily deployable imaging techniques to allow for identification of distress in a timely and efficient manner. The project will develop guidelines for using a conductive sensor pattern for damage location. Once the location is broadly identified, ultrasonic array technology could be used for a detailed analysis of the area of interest.
Describe Implementation of Research Outcomes (or why not implemented)	N/A
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	The study will produce guidelines on the use of a conductive sensor pattern for micro-crack detection and location, including the sensor type, expected sensitivity, and environmental conditions. These guidelines will assist local

	and state highway agencies to (a) select and implement sensors to evaluate their concrete highway pavement, and (b) collect more performance data to assess their highway preservation practice.
Web Links	<www.chpp.egr.msu.edu>

- Reports
- Project website