

UTC Project Information	
Project Title	MPC-589 – Use of the IDEAL-CT Test for Pavement Cracking to Achieve a Balanced Asphalt Mix Design
University	University of Utah
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT, Research and Innovative Technology Administration \$40,000 Utah Department of Transportation \$134,000
Total Project Cost	\$174,000
Agency ID or Contract Number	69A3551747108
Start and End Dates	January 12, 2019 to July 31, 2023
Brief Description of Research Project	This project will evaluate the ability of a new tests, called the IDEAL-CT, to determine potential cracking performance of asphalt mixtures. The data will be compared to the results previously obtained by using the SCB IFIT tests (AASHTO TP-124) in terms of relation to field performance, repeatability, and simplicity. The goal being the selection of the most cost effective test as it is well known that the easier the test is to run, the more likely it will be implemented by a highway agency as long as it provides reliable data.
Describe Implementation of Research Outcomes (or why not implemented)	The IDEAL-CT is being used as a test for quality control of asphalt mixtures by many highway agencies across the country.
Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	Millions of dollars are spent every year in maintenance due to premature cracking observed in asphalt concrete road surfaces. Having a test with known repeatability that can easily and reliably evaluate the potential of asphalt mixtures for cracking will result in significant savings.
Web Links <ul style="list-style-type: none"> • Reports • Project Website 	<ul style="list-style-type: none"> • MPC Research Report – Variability of the IDEAL-CT Test for Pavement Cracking to Achieve a Balanced Asphalt Mix Design • UDOT Report – Balanced Asphalt Concrete Mix Performance in Utah, Phase VI: Multi-Laboratory Testing of Ideal-CT

	<ul style="list-style-type: none">• Journal Article – <u>Physicochemical Characterization of Short and Long-Term Aged Asphalt Mixtures for Low-Temperature Performance</u>• Technical Paper – <u>Practicality of Driven Parameters of Semicircular Bending Test at Intermediate Temperature</u>• Research Article – <u>Methods to Evaluate Intermediate Temperature Properties of Asphalt Mixtures by the Semicircular Bending Test</u>• Research Article – <u>A Long-Term Field Study of the Ability to Predict Thermal Cracking of Asphalt Mixtures Tested by the Bending Beam Rheometer</u>• UDOT Report – <u>Balanced Asphalt Concrete Mix Performance in Utah, Phase V: Field Evaluation for Intermediate and Low-Temperature Cracking</u>• UDOT Report – <u>Balanced Asphalt Concrete Mix Performance in Utah, Phase IV: Cracking Indices for Asphalt Mixtures</u>
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