

UTC Project Information – Project #	
Project Title	Steel-Free Concrete Bridge Decks
University	University of Maine
Principal Investigator	Eric Landis
PI Contact Information	landis@maine.edu
Co-PI(s)	William Davids
Co-PI Contact Information	william.davids@maine.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	TIDC (\$219,681); Other (\$14,100)
Total Project Cost	\$233,781
Agency ID or Contract Number	
Start and End Dates	6/1/22 – 6/30/24
Brief Description of Research Project	<p>Bridge decks, the parts of the structure that carries the main loads, are traditionally made of concrete reinforced with steel. A variety of factors, the most common being deicing salts, can lead to corrosion of the embedded steel causing dangerous cracking and delaminations of the top and bottom surfaces. The proposed research seeks to develop a concrete deck technology for which little or no conventional reinforcement is required. The technology relies on providing the structural conditions necessary to invoke a so-called arching action in the concrete. This condition negates the need for tension reinforcement in the concrete. We are proposing a newly developed, non-metallic fiber reinforcement to provide sufficient toughness in the concrete while eliminating the corrosion problems that plague northern vehicle bridges. The outcome of this combined analytical and laboratory work will be a plan for implementing a demonstration project.</p>
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	To be completed after actual implementation has occurred
Impacts/Benefits of Implementation (actual, not anticipated)	To be completed after actual implementation has occurred
Web Links <ul style="list-style-type: none"> ● Reports ● Project website 	

