



UTC Project Information – Project 3.5	
Project Title	Prevention of Stressed-Induced Failures of Prestressed Concrete Crossties of the Railroad Track Structure: Phase I
University	Western New England University
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Funding Source(s) and Amounts Provided (by each agency or organization)	Federal: \$192,500 WNE University: \$192,713
Total Project Cost	\$385,213
Agency ID or Contract Number	69A3551847101
Start and End Dates	10/01/2018-09/30/2023
Brief Description of Research Project	The problem we are trying to solve is to understand and mitigate premature failures of prestressed concrete crossties (PSCCs), which are an essential structural component of a railroad track structure. The objectives of the project are to identify the main mechanisms of splitting cracks upon detensioning prestressing wires with respect to various geometrical/mechanical parameters and to develop more durable bonding mechanism between concrete and prestressing wires using engineered cementitious materials (ECM).
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	While an output of a 12,000 psi compressive strength ECM has been developed by using locally available resources including aggregates, the research team is still investigating and implementation of research outcomes will be reported upon completion of the research outputs.
Impacts/Benefits of Implementation (actual, not anticipated)	This project is in its research phase. Impacts and benefits will be reported after the implementation phase.
Web Links <ul style="list-style-type: none"> • Reports • Project website 	