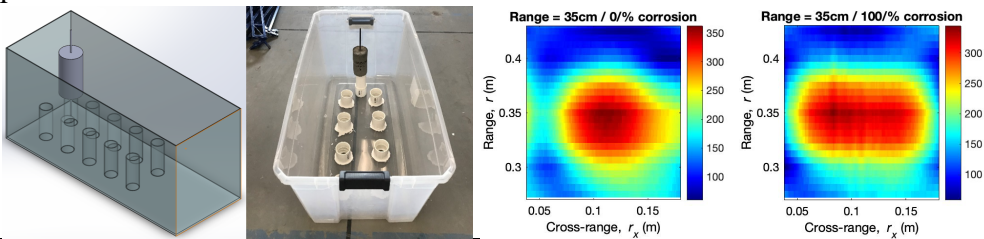


<b>UTC Project Information</b>	
Project Title	Condition Assessment of Corroded Prestressed Concrete Bridge Girders
University	University of Massachusetts Lowell
Principal Investigator	Tzuyang Yu
PI Contact Information	<a href="mailto:Tzuyang_Yu@UML.EDU">Tzuyang_Yu@UML.EDU</a> / (978) 934-2288 Department of Civil and Environmental Engineering University of Massachusetts Lowell Falmouth Hall Room 107-C One University Avenue Lowell, MA 01854
Funding Source(s) and Amounts Provided (by each agency or organization)	Federal: \$86,309; UMass Lowell & WNEU: \$89,174
Total Project Cost	\$175,483
Agency ID or Contract Number	69A3551847101
Start and End Dates	01/01/2019 ~ 06/30/2022
Brief Description of Research Project	The problem we are trying to solve is the condition assessment of corroded prestressed concrete (PC) bridge girders in New England. The problem is important because that PC bridge girders are a critical component of highway bridges. Concrete spalling and prestressing strand corrosion not only cause losses in prestress but also lead to premature failures of PC bridges. We propose to 1) conduct multiphysical field inspection (using 3D photogrammetry, radar, impact-echo, and ultrasound) and to 2) develop an integrated assessment framework for predicting the level of structural damage and prestress losses for PC bridge girders.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	<p>We have developed a method to control the level of steel rebar corrosion inside reinforced concrete cylinder specimens in order to subject them to a pull-out test.</p> 
Impacts/Benefits of Implementation (actual, not anticipated)	This project is in its initial research phase. Impacts and benefits of the research will be reported after the implementation phase.



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Web Links

- Reports
- Project website

- We have submitted our quarterly progress report on September 30, 2021.
- Updates of research activities are posted on our project website at <https://www.uml.edu/Research/tidc/projects/assessment-corroded-prestressed-bridge-girders.aspx>