

# UTRC-REGION II NEWSWIRE

## UTRC Press Release

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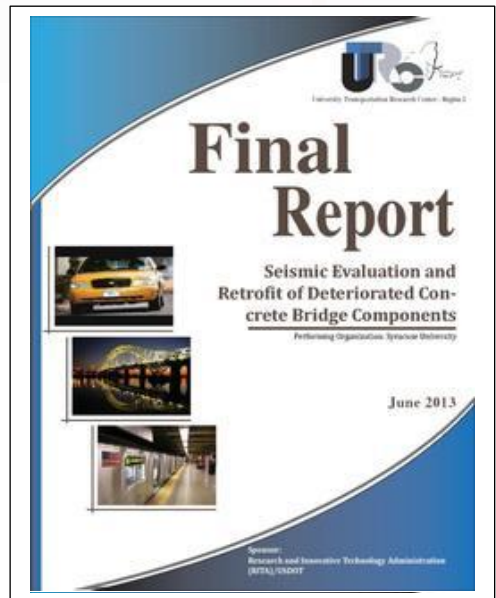
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### The University Transportation Research Center Publishes the Final Report for the Research Project Titled: "Seismic Evaluation and Retrofit of Deteriorated Concrete Bridge Components"

UTRC has released a final report for the research titled: "**Seismic Evaluation and Retrofit of Deteriorated Concrete Bridge Components**", funded by the Research and Innovative Technology Administration/USDOT (RITA). The principal investigator was **Dr. Riyad Aboutaha**, an associate professor of Civil and Environmental Engineering at Syracuse University.

Corrosion of steel bars in reinforced concrete structures is a major durability problem for bridges constructed in New York State (NYS). The heavy use of deicing salt compounds this problem. Corrosion of steel bars results in loss of steel cross section, deterioration of bond between concrete and reinforcing bars, and results in unsymmetrical concrete section that is susceptible to shear stresses produced by torsion. Though earthquake frequency of occurrence and the expected ground accelerations in NYS is less than in western states, the potential for earthquake damage in or around NYS is still very real. Given the level of deterioration in many reinforced concrete bridges in NYS, they are considered vulnerable to major damage during a moderate seismic event. The findings of this investigation suggest the need for seismic retrofit of deteriorated reinforced concrete bridge columns, particularly, those with corroded lap splice in the longitudinal reinforcement. The study also suggests the need for retrofit of corroded pedestal over piers and abutments, as they may cause sudden unseating of girders.

The full report is available for a free download at the UTRC website: <http://www.utrc2.org/research/projects/seismic-evaluation-of-concrete-bridge-components>



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### About The University Transportation Research Center

The University Transportation Research Center (UTRC) is a USDOT Regional Transportation Center addressing surface transportation operations, management, design economics and planning. The Region 2 University Transportation Research Center is one of ten original National Centers, established in 1987, in recognition that transportation plays a key role in the nation's economy and in the quality of people's lives. Located at the City University of New York, the Center is a Consortium of 17 major Academic Institutions in New York, New Jersey, and Puerto Rico. Through the Grant supporting the Center, the mission incorporates research, education and the transfer of technology in the field of transportation. Academically based, the work of Faculty and Students – graduate and undergraduate provide a critical link in resolving our national and regional transportation problems while training the future and current professionals who address our transportation system and their customers on a daily basis. For more information, visit [www.utrc2.org](http://www.utrc2.org).