

## PROJECT OVERVIEW REPORT

1. UTC Identifying Number  
69A3551847102
2. Center Identifying Number  
CAIT-UTC-REG85
3. Project Title  
Identifying the Effect of Bridge Deterioration on Load Distribution
4. Principal Investigator & Contact Information  
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5. Rutgers/CAIT Project Manager  
Patrick Szary, Ph.D.
6. Customer Principal  
Richard Dunne, National Director of Bridge Preservation  
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100 Corporate Drive  
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7. Project Description  
The main objectives of this research are to 1) determine correlations between structural monitoring data and bridge condition, 2) develop analytical methods for processing and interpreting structural monitoring data, and 3) develop a model for predicting the remaining service life of structural members based on strain responses and other monitoring data.
8. Implementation of Research Outcomes (or why not implemented)  
The intended outcome of the project is to demonstrate the effect of bridge aging and deterioration on structural behavior and live load distribution. This knowledge will enable a more accurate estimation of demands experienced by girders which will lead to a more accurate evaluation of bridge load-carrying performance and may provide evidence for a revision of load distribution methods for design analysis.
9. Impacts/Benefits of Implementation (actual, not anticipated)  
To Be Determined

## 10. Dates and Budget

Start date: 9/1/2023

End date: 10/31/2024

UTC (CAIT) Dollars: \$150,000

Cost Sharing: \$0

Total Dollars: \$150,000

## 11. Keywords

load distribution, SHM, NDE, instrumentation, bridge health, load rating

## 12. Web Links (Reports and Project Website)

<https://cait.rutgers.edu/research/identifying-the-effect-of-bridge-deterioration-on-load-distribution/>