Geocomp
Technologies to manage risk for infrastructure

Project Brief

Charter Oak Bridge Strain Gaging and Load Test

Client:

CME Engineering
Connecticut Department of Transportation

Location:

Hartford, CT

Value Provided:

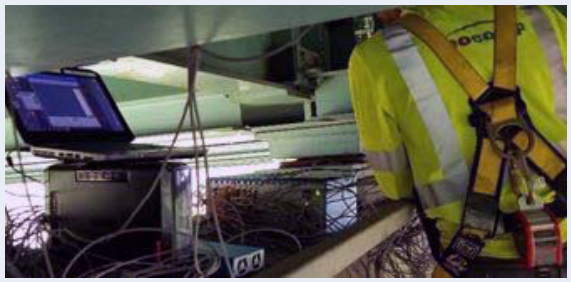
- Design of sensors and data acquisition system
- Installation and commissioning of strain measurement and monitoring system on pre-selected locations
- Load Test of bridge structure under known truck load and traffic
- Data and strain profiles for the monitored members to verify CME model
- Results for more efficient and cost-effective Asset Management decisions

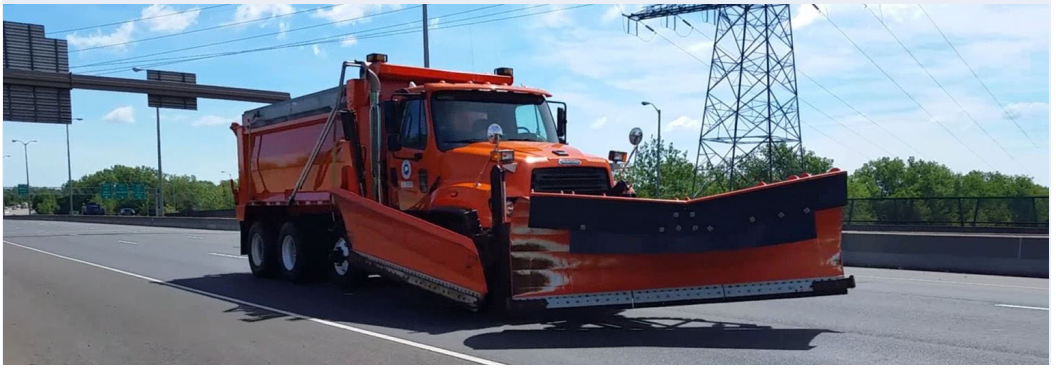
Background & Project Challenges

The existing Charter Oak bridge in Hartford, CT was tested to establish a more accurate load rating in order to maintain the use of the bridge prior to the planned strengthening. The monitoring approach aimed to obtain a better understanding of the actual stresses in the girders under a known load and traffic. The information was planned to be implemented into the previously developed computer model so that an accurate comparison could be made based on the Load and Resistance Factor Rating (LRFR) method.

Geocomp Role & Accomplishments

Geocomp installed an on-site sensor and system, which consisted of 60 spot weldable strain gages that connected to the monitoring system. The strain data was collected at 100 Hz during the load test using a test vehicle with known loads under normal traffic. We then generated reports on the collected data with strain profiles for monitored members.





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