Truss, Lift and Suspension Bridge

Structural Identification and Seismic Risk Analysis

Client

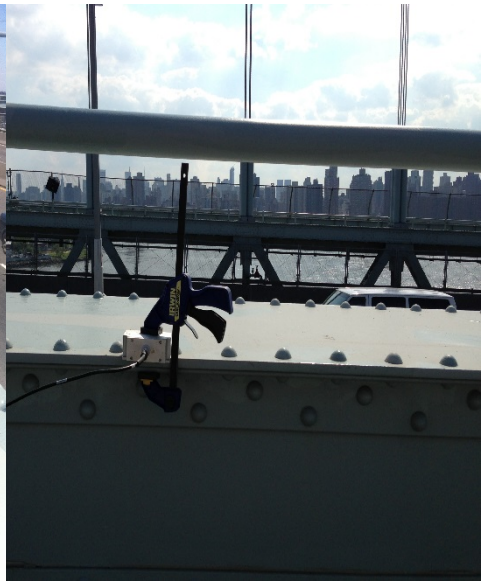
Weidlinger Associates & T.Y. Lin International, Joint Venture

Project

STRAAM was contracted to identify the actual, in-service dynamic characteristics of the three types of bridges, a truss, lift and suspension bridges. The dynamic characteristics of the bridges include the natural frequencies of vibration, and their associated mode shapes as well as the non-linear damping characteristics.

Benefit to the Client

With the baseline dynamic signature of each bridge, Weidlinger Associates & T.Y. Lin International are able to calibrate the finite element models to better reflect the actual characteristics and behavior of the structures.



Instrumentation

STRAAM Group has developed the SKG (Structurocardiograph) which is a self-contained, modular, ruggedized precision data acquisition system. These are very low noise recording devices that provide an on-site preliminary analysis facility. Connected to the SKG are ultra-low noise accelerometers, these devices are tri-axial and have been developed over a long period and we initially developed for military purposes.