

Case Study

Wireless Broadband Solutions for Structural Monitoring

Raising a Bridge Without Shutting Down a Road.

Bayonne Bridge Project to Raise Roadbed Without Shutting Down Traffic Requires 24/7 Wireless Monitoring.

Situation

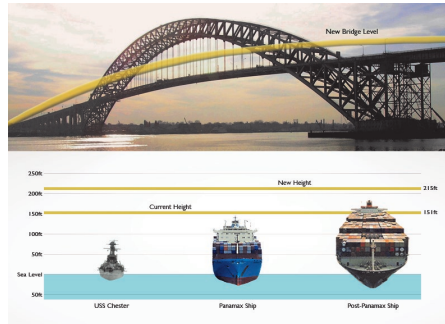
The Bayonne Bridge spanning the waterway between New Jersey and New York is the fourth longest steel arch bridge in the world. Because the bridge is only 151 feet above the water, large container ships often cannot cross under it to reach the marine terminals of Port Newark, Elizabeth and Howland Hook in Staten Island. The Port Authority has launched a rebuilding project to raise the roadbed to allow passage for larger ships while keeping the bridge open to traffic flow.

This massive project requires 24/7 real-time structural monitoring, tying together a variety of different instruments. Cellular communications proved unsuitable due to the rigid uptime and connectivity requirements of the project.

Communication Solution

Intuicom provided project contractor Leica Geosystems a wireless network solution including a mix of Intuicom EB-3 Plus and EB-6 Plus 900 MHz radios to support both Ethernet and Serial communications.

The network provided reliable communications between 10 Leica Total Station instruments, four GPS receivers and specialized software.



The plan marks the first time engineers will construct a new bridge as traffic continues to flow on the existing roadway below.

Results

Reliable communications, a mission-critical component of effective monitoring, was easily and quickly established using the Intuicom solution. The wireless network has worked continuously since the beginning of the project, allowing Leica Geosystems to proceed safely with the schedule.



Customer: Leica Geosystems, Engineered Solutions Division

Web Site: www.leica-geosystems.us

Country/Region: United States

Application: Real-time, 24/7 monitoring of a variety of instruments over a wireless network.

Customer Profile

Leica Geosystems, part of Hexagon, is a leading developer, manufacturer and distributor of products, systems, and software that capture, visualize and process 3D spatial data through the employment of advanced technologies.

The NY/NJ Port Authority operates the Bayonne Bridge. The bridge has a 5,780 feet span and carried approximately 3.5 million vehicles into New York in 2012.

Products Utilized in Solution

- Leica-Geosystems Total Stations
- Mixed GPS receivers
- Intuicom EB-3 Plus
- Intuicom EB-6 Plus



www.intuicom.com