



## PROJECT BRIEF

# South Ferry Terminal Instrumentation & Monitoring

## PROJECT PROFILE

**CLIENTS:**  
Metropolitan Transportation  
Authority

**LOCATION:**  
New York, NY

### VALUE:

- Remote monitoring provided real-time data of restricted tunnel access

### SERVICES PROVIDED:

- Automated Total Stations and reflective prismatic targets continuously monitored tunnel deformations during construction
- Seismographs to record vibrations caused by construction activities
- Installed tiltmeters to monitor deflection
- Installed inclinometers to monitor lateral deflections during excavation

“To accommodate the difficult access, Geocomp implemented a wireless monitoring system that facilitated remote access to all instruments via radios. And an automated data transfer from the project site to Geocomp’s web-based monitoring and report system, *iSiteCentral*®”



## DESIGN BUILD AND INSTRUMENTATION & MONITORING

The Design-Build contract included underpinning the existing tunnels using mini-piles, and cut-and-cover excavation of the new tunnel. Geocomp provided specialty geotechnical design and monitoring services for the underpinning and tunnel construction. As part of the monitoring program, Geocomp focused on monitoring the underground and aboveground structures, including many historic buildings located throughout southern Manhattan. The project had unique challenges for monitoring, implementation, and logistics which included: the existing tunnels must remain in operation during the construction and access to the tunnels was severely restricted. To accommodate the difficult access, Geocomp implemented a wireless monitoring system that facilitated remote access to all instruments via radios. And an automated data transfer from the project site to Geocomp’s web-based monitoring and reporting system, *iSiteCentral*®, where access to data was available on the web in real-time to authorized users 24/7.



## BACKGROUND

The Metropolitan Transportation Authority and New York City Transit’s improvement project for the South Ferry Terminal subway lines, corrected existing physical and operating deficiencies which limited train capacity and reduced subway reliability for millions of passengers each year. The new platform and station tunnels are located underneath Peter Minuit Plaza in Lower Manhattan, adjacent to Battery Park and the Staten Island Ferry Terminal.