



PROJECT BRIEF

Kennesaw Pedestrian Tunnel Automated Monitoring

PROJECT PROFILE

CLIENT:
Bradshaw Construction

LOCATION:
Kennesaw, GA

VALUE:

- Real-time monitoring provided early warnings of unacceptable or surprise movement

SERVICES PROVIDED:

- Real-time monitoring

“The system provided alarms during the planned 24/7 tunneling operation and associated compensation grouting. The system was able to alert team members providing early warnings of unacceptable or surprise movement.”



AUTOMATED INSTRUMENTATION & MONITORING

Geocomp monitored the tracks and tunnel construction at the Kennesaw Pedestrian Tunnel. The tunnel allows visitors to a downtown park to cross beneath one of the most active CSX railroad lines running through the City of Kennesaw, Georgia. Geocomp monitored the vertical displacement of the tracks and alignment of the 13.5-ft diameter tunnel using Automated Motorized Total Stations (Leica) reading each minute and iSiteCentral® monitoring on the web. The system provided alarms during the planned 24/7 tunneling operation and associated compensation grouting. The system was able to alert team members providing early warnings of unacceptable or surprise movement. The tunnel convergence monitoring was provided using a second AMTS machine and target prisms on 10-ft spacing within the tunnel. All of the data for the tunnel and tracks was provided on iSiteCentral®.



BACKGROUND

As part of the revitalization efforts for downtown Kennesaw, Bradshaw Construction was contracted to construct a pedestrian railroad underpass that enables pedestrians to safely visit the eastern side of the downtown area. For years, pedestrians had to dangerously cross the CSX railroad tracks if they wanted to visit the Southern Museum of Locomotive History and other sites on the eastern side of downtown. The 115-ft-long and 8-ft-tall tunnel runs beneath four tracks operated by CSX Transportation and required real-time monitoring that was specified by the project engineer.