

Dulles International Airport

Client:

Metropolitan Washington
Airport Authority (MWAA)

Location:

Washington, DC

Services Provided:

- Instrumentation installation
- Data aggregation, reduction and display
- Developed the secure link transmitting real-time data from survey to presentation system

Value Provided:

- Real-time performance monitoring provided essential data for assessing deformation/movement during construction
- Automated data logging allowed for multiple daily readings in critical or restricted construction areas
- Link between GeoMos and *iSiteCentral*TM provided seamless and automatic integration of geodetic and geotechnical data

Background & Project Challenges

In 2000, the Metropolitan Washington Airport Authority (MWAA) implemented its most ambitious capital construction campaign to date. The \$78.5 million West Domestic Tunnel Corridor project supports an automated

airport train system, which runs underground and connects the main terminal with the midfield concourses and replaces the mobile lounges currently in use.

In mid-2004, the contract was awarded for the West Automated People Mover (WAPM) construction job, followed in early 2005 by the East Automated People Mover (EAPM) contract.

The project challenge was that MWAA issued detailed specifications that called for real time deformation monitoring with data made available through the internet. The specifications called for optical monitoring targets mounted on buildings structures, support of excavation and tunnel linings, with fully automated motorized total stations with a measurement precision of 1mm for sight distances up to 100m, with wireless data links to control site. The system needed to operate 24/7 and the real-time data had to be available on the internet.

Geocomp Role & Accomplishments

Geocomp developed a link between the Geodetic Monitoring Software (GeoMos) system which controls the survey network and Geocomp's *iSiteCentral*TM online data collection and presentation system. Geocomp created a secure IP link between the *iSiteCentral*TM SQL database and SQL database used by the GeoMos system.

Data added to the GeoMos system is automatically loaded into the *iSiteCentral*TM database, from which the *iSiteCentral*TM web pages create reports. The work was completed within two weeks of notification to start, and enabling web access to real time instrumentation data from the Dulles site.

