



## PROJECT BRIEF

# Sunnydale Auxiliary Sewer Tunnel Instrumentation & Monitoring

## PROJECT PROFILE

CLIENT:  
Analysis & Solutions Consultants

LOCATION:  
San Francisco, CA

VALUE:

- Prevent local stormwater flooding to the community by monitoring the tunnel

SERVICES PROVIDED:

- Construction risk monitoring
- Real-time settlement, noise and vibration monitoring
- Geotechnical instrumentation

“Instrumentation engineers worked closely with the contractor during the TBM launch and at critical moves under the highway and railway to verify accuracy of the data and watch for any signs of unacceptable performance.”



## INSTALLATION OF GEOTECHNICAL INSTRUMENTS & DATA MANAGEMENT

Geocomp installed automatic motorized total station (AMTS) units, settlement monitoring points, survey reference points, utility monitoring points, railroad monitoring points, and inclinometer casings. Instrumentation engineers worked closely with the contractor during the TBM launch and at critical moves under the highway and railway to verify accuracy of the data and watch for any signs of unacceptable performance. Data was collected and processed through Geocomp’s *iSiteCentral*® data management system, which was available on the web in real-time to authorized users 24/7. In response to residents’ concerns about noise and vibration from the construction, Geocomp also provided real-time monitoring data of this information.



## BACKGROUND

The San Francisco Public Utilities Commission engaged in the \$53 million Sunnydale Auxiliary Sewer Tunnel project to send wastewater eastward to the Sunnydale Transport/ Storage structure, located adjacent to the San Francisco Bay. The objective of the project was provide localized storm flooding protection to the community. The project included the installation of approximately four thousand feet of 8 to 11-ft interior diameter concrete sewer tunnel. The tunnel was installed under the eight-lane State Highway 101 and a major four-track commuter rail station (Caltrain). Due to highly complex geologic conditions and urban infrastructure, there was risk of settlement to both of these important corridors.