

ATL Sanitary Sewer Evaluation



Background

The world's busiest airport, Hartsfield-Jackson Atlanta International Airport (ATL), is constantly evolving and adding new infrastructure to support a growing customer base. Prior to 2014, the airport possessed very limited details on the condition of its sanitary sewer collection system. As part of a bigger vision, ATL needed to know the condition of these existing assets to plan adequate time for upgrades and preventative maintenance prior to new infrastructure coming on line.

Challenge

To gather the essential information, ATL required a comprehensive sanitary sewer evaluation study (SSES). This assessment included closed-circuit television (CCTV) inspections and pipe cleaning, manhole inspections, flow monitoring, and surveying. Along with the SSES, the airport requested prioritized rehabilitation recommendations for enacting system improvements and developing future operating and maintenance schedules.

Solution

As a subconsultant on the facilities, asset management and sustainability contract at ATL, Woolpert assessed over 70,000 linear feet of pipe across ATL's sanitary sewer system. This assessment effort included all associated manholes and main lines serving the concourses, as well as the larger sewer lines crossing under runways. In addition, Woolpert collected flow data from nine separate metering sites for use in the development of hydraulic models. The project team trained airport staff to use these models to assess system capacity and apply the resulting data to ongoing asset management requirements.

Woolpert completed the ATL SSES project with the following items:

- Review of previous SSES study data and conversion of data to a GIS-compatible format
- Surveys of manholes with missing invert elevations
- Final report of findings and rehabilitation recommendations

CLIENT

Hartsfield-Jackson Atlanta International Airport (ATL)

LOCATION

Atlanta, GA

CHALLENGE

Accurate sewer condition assessment supporting maintenance and development

SOLUTION

Sanitary sewer evaluation study (SSES)

TECHNOLOGY

- CCTV

BENEFITS

- Up-to-date infrastructure conditions
- Baseline for asset management program
- Foundation for capital improvement planning

Outcome

Woolpert's SSES identified critical sewer lines in urgent need of rehabilitation. These findings are helping ATL develop a capital improvement program, specifically tied to sanitary sewer infrastructure, that will lower the airport's risk for unexpected sewer failures.

The Woolpert-developed hydraulic models support sewer capacity evaluations across ATL. Woolpert modeled existing airport conditions as well as options for future development. These models ultimately resulted in the creation of ATL's 2030 sanitary sewer master plan.

Benefits

This ongoing SSES project provides ATL with a clear picture of the condition of its underground sanitary sewer infrastructure. The system maps generated during the SSES give ATL accurate resources for comparing actual field conditions to as-built documentation.

This project will also serve as the baseline for asset management activities related to the sanitary sewer system. The newly collected data can be loaded into ATL's asset management program for use in developing future maintenance schedules.

Through SSES, Woolpert provided ATL with a clear, timely understanding of its sanitary sewer system and the risks associated with improper system maintenance and failure.