

PROJECT EXPERIENCE

Design South Professionals, Inc.

Project

Inflow and Infiltration Abatement Program
Anderson, South Carolina

Client

City of Anderson
Anderson, South Carolina

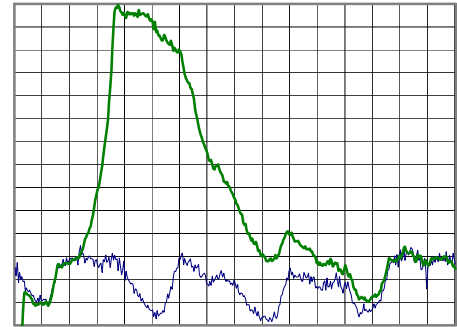
Scope

The City of Anderson maintains two separate sanitary sewer systems that transport wastewater from the City, Anderson County and Homeland Park to two treatment plants. During significant rainfall events, large amounts of rain-dependent inflow and infiltration (RDII) enter the sewer systems that overloads the hydraulic capacity of each system resulting in the flooding of the Influent Pump Station at each plant and sanitary sewer overflows (SSO's) around the City.

Design South was retained to analyze both Rocky River and Generostee Sanitary Sewer Systems as part of an Inflow and Infiltration Abatement Program. The program strives to eliminate as much of I/I entering the sewer systems as possible and then increase capacity as needed. The overall goals for the I/I Study were to determine the amount of I/I entering each system; determine the amounts of I/I contributed by the City, the County and Homeland Park to each system; calculate a new I/I contribution percentage for each entity in accordance with prior practice and the Agreements of record; and develop a comprehensive I/I reduction plan.

The first phase of this program consists of flow monitoring of both main trunk lines, I/I analysis of flow monitored data, breakdown of RDII among the responsible parties, development of computer simulation models for both systems, development of preliminary design storm for SCDHEC approval. The second phase of this program consists of identifying the mini-systems that exhibit large RDII, determining major sources of RDII within each identified mini-system, performing a cost-effective analysis regarding repair and rehabilitation versus transport and treatment of RDII, and recommend plans for sewer rehabilitation and system improvements in order to eliminate the SSO's and reduce RDII.

As part of Phase 2, a comprehensive smoke testing program (STP) was developed to further investigate sources of I/I when the analysis indicated that greater than 5 percent of RDII seen at the plants was observed in a specific sub-system. At this time, many of the identified mini-systems have been smoke-tested. After the remaining identified mini-systems have been smoke tested, sewer rehabilitation and improvements will be determined.



Cost \$350,000

Completed Ongoing

