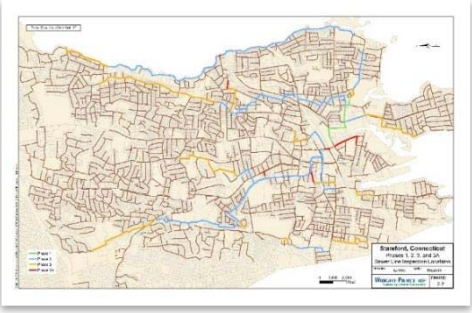
Sanitary Sewer Assessment and Repairs

Stamford, Connecticut

The City of Stamford Water Pollution Control Authority (WPCA) is responsible for a wastewater system that includes approximately 300 miles of sewers, 23 pump stations and a 24-MGD advanced wastewater treatment facility serving a population of approximately 125,000.

In response to a major interceptor failure in the aging collection system, excessive inflow and infiltration (I/I) wet weather flows, and regulatory requirements to perform a capacity, management, operation and maintenance (CMOM) program, the WPCA initiated a comprehensive sewer system and pump station assessment program. Wright-Pierce conducted the multi-phased evaluation of major interceptors and 22 pump stations. The multi-phase program included a condition assessment of large diameter interceptor sewers ranging in size from 24-inch to 60-inch. The goals were to inspect and classify the condition of the sewers using NASSCO PACP standards, estimate the amount of accumulated grit taking up capacity, and evaluate available capacity in order to develop a prioritized rehabilitation program to include in the long-term capital improvement program (CIP).

The initial phase study identified an existing 36-inch and 42-inch major interceptor as having significant corrosion and danger of collapse. Wright-Pierce subsequently provided fast-tracked design and construction engineering services for relining rehabilitation of the interceptor using UV cured CIPP.



LEFT: Sewer line inspection locations map.

BOTTOM LEFT: Visable rebar pipe in danger of collapse.

BOTTOM RIGHT: RedZone HD Profiler system.

Client

City of Stamford

Project at a Glance

- Prioritized multi-phase assessment program
- CCTV, laser and sonar inspections
- NASSCO PACP standards
- Identified large pipeline with significant structural concerns due to corrosion
- Immediately initiated design and rehabilitation
- Identified other pipelines with significant Grade 5 and Grade 4 defects with structural and surface aggregate concerns

Challenges

- Aging system
- Limited available GIS data
- Critical interceptor in danger of collapse
- Immediate response required
- Removal of grit in large 48 and 60-inch sewers to increase capacity