



# Wastewater Systems

Sewer System Evaluation Survey  
Newark, Illinois

Surcharging occurring in the Village of Newark during wet weather has caused wastewater flows to increase to unmanageable levels within the sanitary sewers and wastewater treatment facility (WWTF). The Village commissioned Engineering Enterprises Inc. to perform a Sewer System Evaluation Survey (SSES) to identify the infiltration and inflow (I/I) sources and gather data to design cost effective corrective measures.

Various field techniques including manhole inspections, nighttime flow isolations, smoke testing and televising were applied. To comprehend the severity of basement backups, residents completed a questionnaire.

The results of these items were compiled to further summarize proximity and severity of I/I. Based upon the findings, the total infiltration amount exceeds the design average flow of the WWTF and the total inflow amount exceeds the design maximum flow of the WWTF.

The proposed sanitary sewer system rehabilitation program focuses on

rehabilitating the sanitary sewer pipes and sanitary sewer manholes. The recommended corrective measures for the pipes combine bore and jack, remove and replace, and cured in-place pipe liner. With minimal impact to the surrounding environment, cured in-place pipe liner is a “no-dig” system. The liner renews the sanitary sewer by providing a barrier against I/I. In comparison to conventional removal and replacement, cured in-place pipe liner ensures significant cost savings.

The recommended corrective measures for the manholes combine new frames and lids and/or an epoxy sealant. These recommendations will decrease the I/I within the sanitary sewer system. More importantly, these recommendations will minimize the potential for basement backups.

**Construction Cost:**  
\$625,000

**Project Features:**

- Rehabilitated 84 manholes
- Remove and replace 1,600 linear feet of sanitary sewer
- Bore and jack 250 linear feet of sanitary sewer
- 5,750 linear feet of cured-in-place pipe liner

