

## Sanitary Sewer Lining Operations using Cured-in-Place Pipe (CIPP)

Clinton Township, Michigan



The Charter Township of Clinton is located in Macomb County and encompasses an area of approximately 30 square miles. The sewage collection system is comprised of approximately 300 miles of sanitary sewer and approximately 5,300 sanitary manholes. The age of the Township's sanitary sewer collection system and the existence of sanitary sewer overflows warranted investigation into the cause of high flow rates in the system. Excessive infiltration was defined as a major concern. The Township was proactive in resolving the source of these high flows.

In an effort to decrease the excess infiltration on the sewer system, **Spalding DeDecker Associates, Inc. (SDA)** performed a Sanitary Sewer Evaluation Survey (SSES) of the sewer system, which consisted of blowing non-toxic smoke through the sewer system.

By using a combination of the television inspection and the smoke testing operations, SDA and the Township determined the locations of the sewers that required lining operations. These sewer segments were chosen due to the condition of the pipe and the infiltration amount entering into the sewers.

The lining process features the use of a fabric tube impregnated with an epoxy resin. The tube is inserted into the existing pipeline (via inversion process) and inflated against the pipe wall, then cured by re-circulating hot water or steam. The Cured-in-Place Pipe (CIPP) systems create a close fit pipe within a pipe, which has quantifiable structural strength and can be designed to suit various loading conditions.

There has been a total of five phases that the Township has incorporated throughout the course of the project.

### SPECIAL FEATURES

SDA assisted the Township in administrating plans and specifications and provided construction administration services for over 75 miles of sewer cleaning and television inspection services.

### OWNER / CLIENT

Charter Township of Clinton

### PROJECT START - END

August 2000 - October 2004

### SDA PROJECT NO.

CL00-032