



**Date:** March 18, 2014

**TO:** Thomas J. Bonfield, City Manager  
**THROUGH:** W. Bowman Ferguson, Deputy City Manager  
**FROM:** Donald F. Greeley, Director, Water Management

**SUBJECT:** Contract SR-58 Cured-In-Place Pipe (CIPP) Installation and Manhole Rehabilitation Project, 2014

**Executive Summary**

On March 06, 2014, bids were received for Contract SR-58, Cured-In-Place Pipe (CIPP) Installation and Manhole Rehabilitation Project, 2014. This project involves rehabilitation of an initial 40,000 linear feet of deteriorated sewer mains and 700 vertical feet of sewer manholes located throughout Durham’s sanitary sewer collection system. Six bids were received and all bids were deemed responsive. The Department recommends Insituform Technologies, LLC (Insituform) of Chesterfield, Missouri, the lowest responsive bidder, be awarded the contract in the amount of \$2,394,570.00.

**Recommendations**

The Department of Water Management recommends that the City Council:

1. Authorize the City Manager to execute a contract with Insituform Technologies, LLC for construction services for the SR-58, Cured-In-Place Pipe Installation and Manhole Rehabilitation Project, 2014, in the amount not to exceed \$2,394,570.00; and
2. Establish a contingency fund for the contract in the amount not to exceed \$239,430.00; and
3. Authorize the City Manager to negotiate and execute change orders for the contract provided the cost of all change orders and the original contract does not exceed the total project cost of \$2,634,000.00

**Background**

The City’s Sewer Collection Permit requires the City to repair any known defects in the system. The deterioration and catastrophic failure of sanitary sewers and manholes can be attributed to one or more factors. Influencing factors can range from poor initial installation, groundwater inflow and infiltration to root intrusion, new construction, and age. Many of the manholes in Durham’s collection system are brick manholes. Brick manholes are subject to the same deterioration factors that affect sewer pipe lines. Additional factors affect the structural integrity of manholes, and contribute to the failure of the mortar joints, walls, and the bench within manholes, including hydrogen sulfide gas buildup, surcharging, and ground settlement.

Through the use of inspections, maintenance records and previously contracted sanitary sewer evaluations, the System Rehabilitation Program identified sewer pipes and manholes in poor and deteriorating condition. The use of the CIPP technology can reduce the time and overall cost associated with the rehabilitation of sewer pipelines. The CIPP process allows for the rehabilitation of sewer lines without the use of extensive excavation and shoring in the area where the sewer line is

located. In most cases, this trenchless technology can be completed with no digging, and minimal service interruptions. The need to excavate and rebuild or replace manholes is also eliminated when using cementitious lining materials for manhole rehabilitation. The materials chemically and mechanically bond to the existing brick and mortar in a manner that fills voids and restores the structural integrity, and greatly reduces inflow and infiltration. Once work is completed, the pipelines are restored to near new pipe structural integrity and capacity and manholes are restored to suitable access and connection points.

**Issues and Analysis**

Below is a summary of the responsive bids received on March 06, 2014. All bids were analyzed and all bids were deemed responsive.

Insituform Technologies, LLC, Chesterfield, MO	\$2,394,570.00*
SAK Construction LLC, O’Fallon, MO	\$2,794,450.00
IPR Southeast, LLC, Stone Mountain, GA	\$2,795,350.00
AM-Liner East, Inc., Sterling, VA	\$2,820,190.50
Layne Inliner, LLC, Charlotte, NC	\$2,996,799.25
Tri-State Utilities, Inc., Chesterfield, MO	\$3,629,757.80

\* Lowest responsive bidder

The total cost of the contract would be \$2,394,570.00, plus \$239,430.00 (contingency), for a potential maximum total of \$2,634,000.00. The Department of Water Management recommends the awarding of Contract SR-58 to the lowest responsive bidder, Insituform. The Insituform safety record information form has been evaluated and approved by Risk Management of the Finance Department.

**Alternatives**

Many sewer reaches and manholes have been identified as being in poor condition and need of rehabilitation. The alternatives identified are 1) to rehabilitate utilizing the more costly construction approach of open-cut replacement; or 2) to not move forward with the project.

Alternative #1 would increase the City’s risk and cost for the project due to the use of open-cut trenching and shoring in streets, lawns, and outfall areas and an increase the complexity of traffic control, worksite safety and security issues. Alternative #1 would delay the completion of rehabilitation of deteriorated sewers. Selecting to not perform the work as stated in Alternative #2 may lead to structural failure of the sewer mains and manholes causing sanitary sewer overflows (SSOs) and environmental damage. Alternative #2 would put the City in violation of its sewer collection permit and potentially the City could receive Notices of Violation (NOVs) and potential fines by the state.

**Financial Impacts**

Funds for this project were approved in the Capital Improvements Program as part of the Sewer Collection System Rehabilitation Project. There are currently funds available for this project in the following accounts: 4100P767-731000-P2877 (\$2,394,570.00) and 4100P767-731900-P2877 (\$239,430.00).

**SDBE Summary**

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by Insituform Technologies, LLC, Chesterfield, MO to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. It was determined that Insituform Technologies, LLC was in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

**SDBE Requirements**

There were no SDBE requirements for this project.

**Workforce Statistics**

The workforce statistics for Insituform Technologies, LLC are as follows:

Total Workforce	26	
Total Females	1	4%
Total Males	25	96%
Black Males	5	19%
White Males	20	77%
Other Males	0	0%
Black Females	0	0%
White Females	1	4%
Other Females	0	0%