

St. Paul Interceptor System Rehabilitation: Program 8088

Description:

The interceptors located in Inver Grove Heights, Maplewood, Roseville, Shoreview, St. Paul, and Vadnais Heights are in need of rehabilitation and/or replacement. The project will rehabilitate existing interceptor facilities to ensure reliable service.

Purpose and Justification:

MCES staff has identified numerous condition rating 5 sites within the St. Paul Area Interceptor system. Condition rating 5 is awarded to pipe sections that show the most significant defects. A condition rating 5 warrants immediate rehabilitation. Of the identified sites, the majority are rating 5 due to severe corrosion. The remaining condition 5 rated sites are due to an unknown void or break in the pipe. The sites that are experiencing severe corrosion also have adjacent rating 4 pipe sections which may result in simultaneous rehabilitation or future projects. The risk of delaying this project includes loss of service, environmental impacts from a spill, and the high costs associated with an emergency response should there be a collapse.

Current Projects:

Project Title	Project ID
SPIS – Vadnais Heights & Maplewood	808810
SPIS – Phalen Golf Course	808820
Interceptor 8566-370 and 7705 Rehab.	808821
SPIS – Roseville & St. Paul	808830
St. Paul Sandstone Tunnel Cleaning / Rehab.	808841
Interceptor 1-MS-100 Access and Cleaning	808880

Interceptor 1-MS-100 Access and Cleaning: Project 808880

A Deep Tunnel Interceptor Evaluation Report identified approximately 356 cubic yards of debris within Interceptor 1-MS-100 located between 800 and 2,700 feet upstream of relief structure R02. This project will provide temporary conveyance and access, and the removal of the debris.

Interceptor 8566-370 and 7705 Rehabilitation: Project 808821

Inspection has revealed condition ratings of 5 and 4 within the three sites that will be rehabilitated under this project. For Site 1 the lining project extends from MH 10-1 to MH 9- 2 along Interceptor 8566-370. This site includes rehabilitation of approximately 860 feet of 54-inch RCP, 585 feet of 60- inch RCP, and 3 manholes. This site is primarily rated Condition 5 and therefore a high priority for rehabilitation. For Site 2 the lining project extends from MH 9-2 to Meter M701 along Interceptor 8566-370. This site includes rehabilitation of approximately 1,351 feet of 60-inch RCP, 1,295 feet of 72-inch RCP, and 5 manholes. For Site 3 the lining

project extends from MH 4-3 to the Junction with Interceptor 1-MS-100 along Interceptors 8566-370 and 7705. This site includes rehabilitation of approximately 2,326 feet of 72-inch RCP, 109 feet of 96-inch RCP, and 2,765 feet of 60-inch PCCP.

St. Paul Sandstone Tunnel Cleaning and Rehabilitation: Project 808841

Inspection of the sandstone tunnels on St Paul's Westside (1-SP-230, 1-SP-237 and 1-SP-234) indicates failure of mainline tunnel sections and drift service connections, debris that requires removal, and inadequate access. The tunnels are partially lined, the invert and side walls are either brick, clay tile or concrete. The upper portion of the tunnels are exposed sandstone. The project will be done in two phases. The first phase will construct access and remove the debris to prevent further damage and allow for thorough inspection. The second phase will rehabilitate the Sandrock tunnel.

SPIS – Phalen Golf Course: Project 808820

This project will rehabilitate portions of each of the following St. Paul interceptors: 7122, 8566-370, 7705, 1-SP-200, and 1-SP-201. The interceptors to be lined ranges from 30 to 96 inches in diameter. Most of the work is anticipated to be cured-in-place pipe (CIPP) lining of the interceptor pipe. Where needed, maintenance holes on interceptors to be lined will be rehabilitated. Rehabilitating maintenance holes will consist of brick replacement, tuck pointing, lining, grouting, or replacement.

SPIS – Roseville & St Paul: Project 808830

This project will rehabilitate portions of interceptors 1-RV-430 and 1-RV-433 in the City of Roseville and St. Paul interceptors 8851. The interceptors to be lined ranges from 24 to 42 inches in diameter. Most of the work is anticipated to be cured-in-place pipe (CIPP) lining of the interceptor pipe. Where needed, maintenance holes on interceptors to be lined will be rehabilitated. Rehabilitating maintenance holes will consist of brick replacement, tuck pointing, lining, grouting, or replacement.

SPIS – Vadnais Heights & Maplewood: Project 808810

This project will rehabilitate portions of interceptor 7122 located in Maplewood and Vadnais Heights. The sections of interceptor to be lined ranges from 36 to 72 inches in diameter. Most of the work is anticipated to be cured-in-place pipe (CIPP) lining of the interceptor pipe. Where needed, maintenance holes on the interceptor will be rehabilitated. Rehabilitating maintenance holes will consist of brick replacement, tuck pointing, lining, grouting, or replacement.