

COMMISSION FILE NO: 16-160-12 **DATE INTRODUCED:** December 5, 2016

INTRODUCED BY: Executive Director (Signature on File in the Office of the Commission)

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Award of Contract C04010P01, North Shore Metropolitan Interceptor Sewer Evaluation and Preliminary Engineering

SUMMARY:

The Commission is requested to authorize and to direct the Executive Director to negotiate and execute on behalf of the District Contract C04010P01, North Shore Metropolitan Interceptor Sewer (MIS) Evaluation and Preliminary Engineering, with Brown and Caldwell in an amount not to exceed \$939,677. Brown and Caldwell was the highest scoring proposer based on a qualifications-based selection method among three proposals received.

The 72-inch diameter MIS in West Green Tree Road and in West Mill Road has been identified as the main cause of surcharging and separate sewer overflows (SSO's) on the northeast side of the District's separated sewer service area. Wastewater from about 30 square miles in the northeast side is routed through this 72-inch diameter MIS during wet weather.

Considering the conveyance issues related to recent SSO's, this project includes an evaluation and preliminary engineering analysis of identified segments in the MIS conveyance system on the northeast side of the District's sewer service area, including the 72-inch MIS. Conveyance improvements are necessary to comply with the District's Wisconsin Pollutant Discharge Elimination System permit with the Wisconsin Department of Natural Resources.

ATTACHMENTS: **BACKGROUND** ☒ **KEY ISSUES** ☒ **RESOLUTION** ☒
FISCAL NOTE ☒ **S/W/MBE** ☒ **OTHER** ☐ _____

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COMMISSION ACTION: _____ **DATE:** _____

BACKGROUND

Award of Contract C04010P01, North Shore Metropolitan Interceptor Sewer Evaluation and Preliminary Engineering

The North Shore MIS is defined as the MIS system within an area generally bounded by County Line Road to the north, East Fairmount Avenue to the south, North 27th Street to the west, and Lake Michigan to the east. Conveyance restrictions and capacity issues within the MIS in the North Shore have been the cause of SSO's in the past few years at West Green Tree Road and the Milwaukee River. Since 2008, six wet weather events caused significant surcharging in the MIS, enough to activate the overflow at West Green Tree Road. During wet weather, infiltration and inflow overwhelms the MIS and causes conveyance issues that increase the frequency of SSO's and the potential for basement backups. The general scope of the contract will evaluate the North Shore MIS system including the following specific MIS segments that have been identified as areas of concern:

1. 9,300 feet of 72-inch diameter MIS from West Green Tree Road at North River Road to West Mill Road at North Sidney Place
2. Green Tree Road Wet Weather Pump Station (14.5 million gallons per day)
3. 5,300 feet of 42-inch MIS from West Apple Tree Road to East Montecaire Avenue, including potential conflicts with I-43 expansion
4. 7,800 feet of 42-inch diameter MIS in North Lydell Avenue with an excessive number of private connections
5. 2,900 feet of 10-inch diameter pipe in North Range Line Road
6. 6,300 feet of 39-inch special section MIS west of the Milwaukee River in the Village of River Hills and the City of Glendale
7. 600 feet of 15-inch diameter MIS in East Brown Deer Road in the Village of Bayside
8. 325 feet of 10-inch diameter MIS in North Santa Monica Boulevard

Typical relay or replacement to reduce surcharge in the 72-inch diameter MIS would be extremely costly because of the existing sewer limits to the slope of the MIS; therefore, a more systematic solution must be sought. The systematic solution includes alternative flow routing via gravity, force main, relief sewer, storage, green infrastructure, and wet weather flow management for each MIS section identified.

KEY ISSUES

Award of Contract C04010P01, North Shore Metropolitan Interceptor Sewer Evaluation and Preliminary Engineering

Additional tasks were added to the scope of services after the selection of Brown and Caldwell to better connect with the 2050 Facilities Plan. These tasks include:

- Sewer flow model calibration to provide more reliable results and better insight to the causes of conveyance issues to make clear suitable and achievable solutions;
- Evaluation of alternatives using the risk of failure and consequence of failure as developed by the 2050 Facilities Plan; and
- Identification of the level of service based on the needs of each location.

Brown and Caldwell provided a cost proposal of \$757,311, prior to adding the effort for these additional scope items. The cost proposal with the additional scope items is \$939,677.

RESOLUTION

Award of Contract C04010P01, North Shore Metropolitan Interceptor Sewer Evaluation and Preliminary Engineering

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized and directed to negotiate and execute Contract C04010P01, North Shore Metropolitan Interceptor Sewer Evaluation and Preliminary Engineering, with Brown and Caldwell in an amount not to exceed \$939,677.