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Underground Water/Wastewater Infrastructure Upgrade

City of Winnebago, Minnesota



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Project Impact

Winnebago has made a concerted effort over the past twenty years to replace the most critical infrastructure within the City. These efforts have replaced or upgraded the water treatment facility, water tower, and waste water treatment facility. Those major system components are in place and adequate, but the underground collection and distribution systems have not been replaced as timely as needed. The burden to replace the necessary underground facilities is greater than

the City's 1,400 residents can manage on their own. This project as proposed would upgrade the sanitary sewer, storm sewer, and water distribution system components in order to provide public use for the next 70 to 100-years. In addition to the underground facilities, the City plans to construct a regional storm water detention basin, which will both improve water quality and alleviate flooding in the area.

Project Status

The City's engineer, Bolton & Menk, Inc. has completed a preliminary engineering report that outlines the project needs, reviews construction alternatives, and analyzes the potential cost impacts. With state financing in addition to local funding for this critical project, the following schedule is proposed:

- Apply for Funding 2015
- Design Improvements and Bid ... 2016
- Begin Construction 2017
- Complete Construction 2018
- Begin Planning for Future Infrastructure Projects 2019

Financing

The estimated costs for the improvements to the Northwest area of Winnebago total nearly \$7 million. The City is prepared to pay for all roadway improvements once the infrastructure is replaced utilizing General Obligation [G.O.] Bonds. The street replacement accounts for over half of the project costs. Funding for the underground infrastructure and storm water practices will need to come from the following sources to make the project feasible:

- State Bonding
 - Clean Water Partnership
 - Drinking Water Revolving Fund
- By securing funding from these sources, the City of Winnebago will be able to undertake this critical project to boost the integrity of its public infrastructure.

Project Background

The City of Winnebago has an urgent and immediate need to replace aged and deteriorated public utility infrastructure in a 25 block region in the northwest corner of the City. This area contains some of the oldest and poorest condition infrastructure, which requires on-going maintenance and repairs.

For the past several years, summer rain events have caused significant flooding in the streets and have resulted in sewer back-ups into homes. These events also result in the need to bypass significant amounts of waste water to the Blue Earth River. The bypasses are necessary due to the surcharging of rain water that enters the sanitary sewer through cross connections with the storm sewer and unsealed joints between pipes.

A majority of this infrastructure was built between 1920 and 1940. The majority of sanitary sewer and storm sewer systems are built with Vitrified Clay Pipe (WCP) and most of the water main consists of Asbestos Cement (AC) Pipe with lead and galvanized iron service lines. As the name indicates, the manufacturing process for AC pipe used asbestos fibers to reinforce the concrete. The use of asbestos for making pipe and other products was completely phased out in the 1980's due to the health risk caused when these materials are cut or broken which releases the asbestos fibers into the air. These mains are aged beyond their useful service life and have been repaired numerous times in recent years due to breakage.

