

Public Works – Engineering Division

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MEMO

DATE: January 4, 2024

SUBJECT: Adjustment to 2024 Ruben Drive Pump Station Elimination Project

The Ruben Drive Pump Station elimination project was funded as part of the 2024 Community Investment Program to eliminate the pump station by the installation of a gravity sewer similar to other projects that have been completed in recent years.

The gravity sewer would replace and extend sewers along Butler Drive from Jennifer Lane to Saratoga Road, Saratoga Road from Butler Drive to Lexington Drive, Lexington Drive from Saratoga Road to Ruben Drive and along Ruben Drive to the pump station. The portion along Lexington Drive and Ruben Drive are in the City of Pewaukee and were scheduled to coordinate with the reconstruction of those roads in 2024.

Preliminary estimates for budget development showed the interceptor was about the same cost as the replacement of the existing pump station and remaining section of force main.

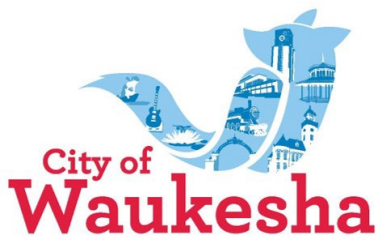
Interceptor (3,600')	\$2.9M
New pump station and force main (2,600')	\$2.7M

Due to the size and complexity of the project, a consultant, Clark Dietz, Inc., was contracted to design the proposed sanitary sewers which included survey, soil borings and bidding documents. As the survey work and soil borings were started, the consultant began a preliminary design along the intended route. Due to the depth of the sewer along Saratoga Drive and Lexington Drive, the consultant asked about the use of trenchless installation methods to help reduce costs by avoiding the extremely deep open cut installation along the route. A route through Priedeman Park was considered to reduce the overall length which required additional survey work and soil borings.

Interceptor by open cut and guided auger boring (3,600')	\$4.6M
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As the survey work, soil borings and preliminary designs were completed, the information was shared with staff and contractors for review. During these reviews, it was determined that additional depth was needed to avoid conflicts with utilities and the soil borings did not support the guided auger boring as an installation method due to the presence of cobbles and boulders. Estimates using a more robust trenchless method such as microtunneling and an extensive open cut operation were prepared.

Interceptor by open cut (3,900')	\$7.9M
Interceptor by open cut and microtunneling (3,900')	\$8.0M



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The updated estimates for both the open cut and microtunneling options become cost unfeasible when compared to replacing the pump station and force main with a breakeven point over 60 years out.

In lieu of pursuing the cost unfeasible sewer interceptor, it is proposed to replace the existing Ruben Drive Pump Station and corresponding force main which have reached the end of their useful life. This work would be completed in 2 separate CIP projects in 2024, utilizing the \$3,000,000 budgeted for the interceptor. Preliminary estimate for the pump station and force main replacement is \$2,900,000.