CITY OF WAUKESHA
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Committee: Board of Public Works	**Date:** 8/5/2021
Common Council Item Number: ID #21-2671	**Date:** 8/17/2021
Submitted By: Alex Damien, Interim Director of Public Works	**City Administrator Approval:** Kevin Lahner, City Administrator
Finance Department Review: Bridget Souffrant, Finance Director	**City Attorney's Office Review:** Brian Running, City Attorney
Subject: Review and act on the alternative for the South Side Pump Station Consolidation project.	

Details:
In 2012 the City completed a detailed cost analysis of potential gravity interceptor routes to determine the cost feasibility of constructing interceptor sewers verses maintaining six existing sanitary pump stations on the south side of the City. The results of that study showed that a gravity interceptor in combination with routing flows to an upgraded existing pump station was potentially cost effective. Up to five pump stations could be eliminated.

Earlier in 2021, the Department of Public Works solicited proposals and hired Donohue and Associates to provide engineering analysis and design services to determine the exact composition of the most cost-effective project. Donohue completed the alternatives analysis portion of the project which showed the most cost-effective alternative to be elimination of two pump stations (Sunset Dr & Burr Oak) with interceptors. The remaining four pump stations would be upgraded and remain in service.

Comparing the cost of the Sunset Dr/Burr Oak interceptors combined with the upgrades at the other four pump stations against upgrading all six pump stations/force mains, the initial cost is $9,339,000 for upgrading all the pump stations/force mains alternative while the gravity interceptor/4 station alternative is approximately $10,224,000. At year 20, the present worth of the pump stations/force mains is approximately $12,000,000 and the gravity interceptor alternative is approximately $12,500,000. At year 40, which is a DNR time frame for reviewing the cost effectiveness of interceptor projects, the present worth of the pump stations/force mains is approximately $17,000,000 and the gravity interceptor alternative is approximately $16,500,000. Gravity interceptor sewers have an effective useful life of at least 60 years.

Donohue's original cost proposal included a lump sum cost of $87,225 for alternatives analysis. Following alternative analysis, if the gravity interceptor option was determined to be the most cost-effective option, the additional lump sum cost was $484,500. If instead, replacement pump stations and force mains were determined to be the most cost-effective option, that additional lump sum cost was $325,545. For the recommended hybrid of gravity interceptors combined with the 4 pump station upgrade alternative, the additional lump sum cost is $432,180.

Options & Alternatives:
Either the pump station/force main alternative or gravity interceptors/4 station upgrade alternative may be chosen. The pump stations/force main has a lower initial cost. The present worth of each alternative is approximately equal at year 21. After this time, the gravity interceptors/4 station upgrade alternative has a lower present worth.

Financial Remarks:
Analysis and design services are eligible for Clean Water Fund Loan reimbursement
Design Expense
Account 7399-68290-71440

Previously approved pump station/force main option - $325,545
Previously approved interceptor only option - $484,500
Recommended interceptors/4 station upgrade option - $432,180

Executive Recommendation:
Recommend approval of interceptor/4 station upgrade alternative for the South Side Pump Station Consolidation project.