



Request for Council Action

TO: Mayor and City Council
THROUGH: Tim Murray, City Administrator
FROM: Mark DuChene, City Engineer
MEETING DATE: August 13, 2019
SUBJECT: Approve Professional Services Contract for Comprehensive Sanitary Sewer Plan Update

Background:

Included in the approved 2019 sanitary sewer enterprise fund (602 fund) budget was \$100,000 in professional services for an update to the City's comprehensive sanitary sewer plan (CSSP). The last time the City's long range sewer plan was examined was in 2006 as part of the City's Urban Growth Study. Since that time, many of the assumptions/growth projections used in that study have changed and staff feels now is an appropriate time to update the City's CSSP for the following reasons:

- The City is currently completing the 2040 Comprehensive Plan. The City's CSSP should be updated to reflect changes in land use and zoning as well as updated growth projections.
- The City of Medford and Wolf Creek Autobahn have both approached the City of Faribault about connecting their respective sanitary sewer systems to the City's system. Impacts of these connections on the City's system need to be evaluated for both short term and long term impacts/design considerations.

The City solicited a proposal from the engineering firm Bolton and Menk, Inc. (BMI) for updating the CSSP. BMI is recommended as they are the engineer completing the feasibility study for the Medford sewer connection. Using the same firm to look at the whole system (since BMI would be looking at a large portion of the system as part of the Medford connection evaluation) will provide better coordination and efficiency. The quote received is well below the budgeted amount.

Recommendation:

Approve Professional Engineering Services Proposal from Bolton and Menk

Attachments:

- Professional Engineering Services Proposal from Bolton and Menk



Real People. Real Solutions.

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July 26, 2019

Mark DuChene
Director of Engineering
1200 Belview Trail
Faribault, MN 55021

RE: Proposal for Comprehensive Sanitary Sewer Plan Update
City of Faribault, MN

Dear Mr. DuChene,

The City of Faribault's Comprehensive Sanitary Sewer System Plan requires updates and will reaffirm the City's framework for current sanitary system capacity and validate the required capital improvements for system expansion. We also understand that the City of Faribault is looking at two possible new connections, one for the City of Medford and one for Wolf Creek. Faribault is looking for a realistic estimate of future growth projections, their impact on sanitary sewer service and the feasibility of adding the proposed future connections of Medford and Wolf Creek. Bolton & Menk, Inc. has a foundation in municipal services on which we have constructed a vast understanding of sanitary sewer system analysis, planning, and regulation. Our approach will provide a fresh look at the City's current sanitary sewer plan, analyze the existing system capacity, evaluate future capacity needs and update your current report.

Scope of Services

Task 1: Communication

- A kick-off meeting will be scheduled after Notice-to-Proceed.
- Discuss system deficiencies and future interceptor plans with City staff.
- Exchange digital information, as available.
- Up to three additional progress meetings as preliminary materials are developed.

Task 2: Develop Sanitary Sewer Collection System Model

- Review City sanitary sewer system records and current spreadsheet based sanitary sewer assessment.
- Review and revise sanitary service districts and sewersheds, as needed.
- Review and revise wastewater service flows using current and future land uses, as needed.
- Assign peak flow rate factors and appropriate peaking factors to each sewershed.
- Develop hydraulic model framework.
- Autodesk's Storm and Sanitary Analysis (SSA) will be used for hydraulic model development. The new hydraulic model will be a substantial upgrade from the current spreadsheet based model and will provide a more dynamic tool for sanitary sewer system assessments.
 - Known lift station capacities, measured flows at the treatment plant, the current spreadsheet based model and all other supplemental data will be incorporated into the model to calibrate to the

- maximum extent practicable. The known system flows will inform the current per capita flow rate, city-specific peaking factors, and flows from industrial/commercial land uses.
- We will utilize lift station data to develop expected flow rates for similar land uses and apply to areas of the model that do not contain measured flow data.
 - Current flow conditions, future buildout conditions, and future trunk/interceptor options will be modeled.

We assume that applicable system geometric information is available in a CAD or GIS format that is readily available for use in the hydraulic model. If there are gaps in the geometric data, we will present the areas to the City for additional field data collection or as-built research. We will also use Light Detection and Ranging (LiDAR) surface topography to populate missing rim elevations and use adjacent slopes or minimum grade calculations to populate missing invert (flow line) elevations.

- Analyze the current sanitary collection system to determine:
 - Adequacy of the existing sewer service system
 - Existing lift station capacity
 - Review of sewer system for potential operational issues
 - Identification/verification of sewer rehabilitation projects and other capital improvements
- Determine future sanitary collection system needs to:
 - Identify increases in pipe size needed to accommodate future service flow changes
 - Target areas that could benefit from alignment changes or addition of interceptor lines
 - Identify the need for additional lift stations
 - Size an intercommunity interceptor for combined waste water treatment.
 - An effective timeline for system improvements
 - A Capital Improvement Plan that establishes the required costs for improvements
 - A basis for financing options

Task 3: Comprehensive Sanitary Sewer System Plan Language Updates

- Thoroughly review the City's current Comprehensive Sanitary Sewer System Plan dated January 11, 1993 and the Urban Growth Study, 2006. Anticipated modifications to bring the plan into compliance with the 2040 Comprehensive Plan will be identified.
- Collect all information required for plan update, including data tables and figures.
- Update plan tables and calculations

We assume that digital copies of the plan tables are not available and will need to be updated. We will work with City staff to reproduce the original calculations used to develop peak flow values, system capacities, etc. Where applicable, the tables will be updated to include new information.

- Provide estimated costs for capital improvements, including future intercommunity interceptors, lift station updates and replacements, pipe capacity increases, etc.
- Prepare preliminary and final Comprehensive Sanitary Sewer System Plan Report

Fees

Bolton & Menk will plan a system for the City of Faribault that is both resilient and cost efficient. The Scope of Work and Fee described herein is flexible. In other words, we understand that budgets are important. The Scope and Fee have been assembled to include the items described by the City, but individual scope items can be revised to best meet the needs of your plan. Our Project Understanding and Scope of Services includes several project assumptions. The Fee schedule described below assumes that the City will provide the items listed. If changes to the Scope are required based on any changes these assumptions, we will assemble the scope and fee revisions and submit to the City for review and approval prior to commencement of additional work.

Client: City of Faribault Project: Comprehensive Sanitary Sewer Plan Update		Bolton & Menk, Inc.					
Task No.	Work Task Description	Client Service Manager	Project Manager	Water Resources Engineer	Clerical	Total Hours	Total Cost
1.0	Communication	16	16	0	0	32	\$5,400
2.0	Develop Sanitary Sewer Collection System Model	4	18	112	0	134	\$17,300
3.0	Comprehensive Sanitary Sewer System Plan Language Updates	4	16	140	2	162	\$20,700
Total Hours		24	50	252	2	328	
Total Fee						\$43,400	

We look forward to working with the City of Faribault and are excited for the opportunity to complete the Sanitary Sewer System Plan Update for you. I will personally serve as your lead contact on this project. Please contact me at 612-803-5223 or seth.peterson@bolton-menk.com if you have any questions regarding our proposal.

Sincerely,

Bolton & Menk, Inc.



Seth A. Peterson, PE

Senior Principal Environmental Engineer

Cc: Travis Block, Public Works Director
Tim Olson, Bolton & Menk, Inc.

Approved:

Kevin F. Voracek, Mayor

Timothy C. Murray, City Administrator