PROJECT PROPOSAL SUMMARY

Project Title (the "Project"): Kentucky Avenue Pump Station (KAPS) Upgrade

FOTH Project Number:

CLIENT Project Number: (If applicable)

CLIENT: City of Sheboygan

Address: 3333 Lakeshore Dr., Sheboygan, WI 53081

Phone No: (920) 459-0220 Email Address: Jordan.skiff@sheboyganwi.gov; JS996@sheboyganwi.gov

Scope of Services: Client hereby agrees to retain Consultant to perform the following Services:

Design and construction administration related engineering services for the Kentucky Avenue Pump Station (KAPS) as outlined in Exhibit A.

Schedule: Services shall be performed according to the following schedule:

Design services to start upon authorization and follow the estimated durations shown in Exhibit A. Construction administration services to coincide with individual construction contract TBD.

Compensation: In consideration of these Services, the Client agrees to pay Consultant compensation as follows:

☒ Unit Cost/Time Charges (Standard Rates) for an estimated cost range for design phase services is $358,000 to $389,000. The final cost, within that range, will depend on the design option selected by the City, following an options evaluation conducted at the start of the design phase.

Optional Gate Assistance Allowance (Added to the above estimated cost if selected): Includes up to 40 hours of engineering effort (or a maximum of $8,000) to assist with existing gate repairs and potentially incorporate those repairs into the project. These efforts will be tracked separately. If the allowance is exceeded, any additional work can be agreed upon and added through a future Addendum.

Note on River Overflow Site: Through the design, Foth is planning to re-establish the mechanical functions of the structure and detail cleaning requirements. If the City requests Foth to engage with the DNR or other entities regarding allowable use, permitting, public engagement, agreements, etc., additional scope and efforts will be added accordingly through an Addendum.

Note on Construction Administration: Construction Administration efforts are not included in the estimated cost above. Additional compensation related to construction administration services, if requested, will be added through an Addendum. The scope of construction administration services will be determined after the design phase is complete and once the level of construction administration effort provided by Foth is agreed upon with the City.

EXHIBIT A

Note:
Per the City's request, an options evaluation has been added to the design phase, which is not described in this document. This evaluation will be conducted at the start of the design phase to assist the City in determining the final design scope.

CITY OF SHEBOYGAN
PUBLIC WORKS

Engineering Services for Kentucky Ave. Pump Station (KAPS) Upgrade

RFP NUMBER: R25-WWTP-01
November 14, 2025

Foth Infrastructure & Environment, LLC
7044 S. Ballpark Drive, Suite 200
Franklin, WI 53212

Client Contact:
Daniel F. Snyder, PE
414.336.7918 Office
262.939.0709 Cell

Foth Infrastructure & Environment, LLC

7044 S Ballpark Drive
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Lead Process Designer
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Electric, Controls & SCADA Sub-Consultant:
Grindeland Engineering, Milwaukee
Bruce Grindeland, PE
262.777.9105
Bruce@Grindeland.net

Structural & Architectural Sub-Consultant:
EUA, Green Bay/Milwaukee
Cole Sladky, AIA
920.278.0342
ColeS@EUA.com

HVAC & Plumbing Sub-Consultant:
IBC, Milwaukee
Mike Roller, PE
262.522.4422
MikeR@IBCEngineering.com

November 14th, 2025

Jordan Skiff, Wastewater Superintendent
City of Sheboygan Department of Public Works Wastewater Division
3333 Lakeshore Drive | Sheboygan, WI 53081

RFP # R25-WWTP-01, Engineering Design for Kentucky Avenue Pump Station Upgrade

Dear Mr. Skiff:

Thank you for the opportunity to present our proposal for engineering services for the Kentucky Avenue Pump Station (KAPS) Upgrade project. We appreciate the City's trust and have a strong understanding of goals and objectives for this important initiative.

Since our initial site investigations in 2020, our team has thoroughly assessed the project's scope and objectives. From this, we developed a tailored approach that goes beyond the RFP's standard requirements. The plan includes major equipment replacements designed for a 20–30-year lifespan, a strategy to cut long-term HVAC operational costs by approximately 50% through creating two distinct HVAC zones, and significant savings by eliminating the need for major bypass pumping during construction. These enhancements are detailed in the proposal, presenting the most effective long-term solution for the City while highlighting our capabilities, expertise, and proven experience with complex pump station projects.

How Foth can assist with KAPS improvements:

Extensive pump station experience and troubleshooting expertise.
An extensive portfolio of designs and retrofits enables the delivery of practical, cost-effective solutions backed by proven results.

Firsthand knowledge and tailored approach for KAPS's critical role.
Our team has visited the KAPS site and designed dozens of similar pump stations, bringing a deep understanding of operational nuances that significantly impact operator satisfaction and long-term operational costs.

Commitment to smart spending and maximizing the investment return.
Close collaboration with clients identifies the best investments, incorporates thorough alternative analyses, and eliminates wasteful expenditures.

Local presence and dedication to long-term partnerships
Based in Wisconsin, our team is dedicated to building lasting relationships within the communities we live, work, and serve.

We would be honored to collaborate with the City on this vital project. Our commitment is to address current challenges with effective, innovative solutions while ensuring improvements remain as economical as possible.

Foth is prepared to execute the City's standard consulting agreement with certain revisions incorporated to align with the terms and conditions currently governing our other projects for the City. Alternatively, if preferred, we are willing to enter into an agreement identical in form to those previously executed for similar work.

Sincerely,

Foth Infrastructure & Environment, LLC

Daniel Snyder, PE
Client Contact

Dale Broeckert, PE
Project Manager & Co-Designer

PROJECT DESIGN TEAM

KENTUCKY AVENUE PUMP STATION UPGRADE

Our professionals provide flexible, engineering-led delivery methods and a dedicated core team of consistent resources. The objective is to establish a strategic partnership focused on a win-win solution that meets your definition of value. To do so, our team will maintain the availability and capacity required to meet the project schedule.

CITY OF SHEBOYGAN
PUBLIC WORKS

DANIEL SNYDER, PE
Client Contact

DALE BROECKERT, PE
Project Manager & Co-Designer

Equipment Selection, Sequencing Strategy, Controls & Constructibility Coordination

MATT EBERHARDT, PE
Lead Process Designer

Hydraulics, Process, Pump Station Features/Function, Deliverables Quality Control

IKE BERTELS, PE
Project Engineer

Process & Site Design

BRUCE GRINDELAND, PE
Lead Engineer

Electrical, Controls, & SCADA Design

COLE SLADKY, AIA
Lead Structural & Architect

Structural & Architectural Design

MIKE ROLLER, PE
Lead Engineer

HVAC & Plumbing Design

ibc engineering services, inc.

SUBCONTRACTORS & PARTNERS

Grindeland Engineering • Electrical, Controls, & SCADA Design

EUA • Structural & Architectural Design

IBC Engineering • HVAC & Plumbing Design

DAN SNYDER, PE | CLIENT CONTACT

BS Civil Engineering | MS Civil Engineering | License: WI
Years Experience: 50

Dan brings 50 years of experience in civil engineering and has worked on hundreds of infrastructure projects from planning through construction. His expertise includes pump stations, interceptor sewers, water systems, detention basins, culverts, roadways, and channel improvements. Dan has partnered with many communities to identify and implement practical solutions that improve service for residents. He is skilled at managing projects with tight permitting requirements and aggressive schedules, ensuring timely and compliant delivery.

Relevant Project Experience - Partial List

KR Lift Station Design, Village of Mount Pleasant, WI. Project Manager/Client Contact.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Project Manager/Client Contact.
Southside Interceptor, City of Sheboygan, WI. Project Manager/Client Contact.
I-94 Corridor Lift Station, Village of Raymond, WI. Facilities Planning Project Manager, Project Manager/Client Contact.
Pike Creek Lift Station, Village of Somers, WI. Design Manager/Client Manager.
Lakeview Corp Park Lift Station, Village of Pleasant Prairie, WI. Design Manager/Client Contact.

DALE BROECKERT, PE | PROJECT MANAGER & CO-DESIGNER

BS Civil Engineering | License: WI
Years Experience: 21

Dale has over 20 years of experience in the areas of civil engineering, construction estimating and management, water system design, and engineered water and wastewater pump and control systems. He has been involved in some capacity with work on over 60 lift stations.

In addition to his work in the consulting industry, Dale has spent several years in the construction, pump, controls, and SCADA industries. As a result of these experiences, he brings a unique understanding of the contractor, engineer, owner, and vendor perspectives to projects and bidding. Dale is also involved throughout the water and wastewater industry in the upper Midwest.

Relevant Project Experience - Partial List (see tables to follow)

Hoods Creek Attenuation Basin Expansion Design, Caledonia Utility District, WI. Lead Pump Selection & Application Engineer.
White Potato Lake Lift Station, Town of Brazeau, WI. Lead Pump Selection & Application Engineer.
WWTP Lift Station, Village of Pepin, WI. Lead Pump Selection & Application Engineer.
KAPS Existing Pump Performance Evaluation, City of Sheboygan, WI. Lead Testing Engineer.
Metro #18 Lift Station, City of Madison, WI. Lead Pump Selection & Application Engineer.
Elk Vale Lift Station Rehab, City of Rapid Valley, SD. New Pump Application Review Engineer.

> **The planning team at Foth acts as an extension to our staff and is always intent on the goal of making our community a better place to live and do business in.**
> Kari Morgan | Village of Raymond, WI

MATT EBERHARDT, PE | LEAD PROCESS DESIGNER

BS Civil Engineering | MS Environmental Engineering | License: WI, IA, MN
Years Experience: 21

Matt is a process engineer with over 20 years of consulting experience. His responsibilities include planning studies, design, and construction services for municipal and industrial wastewater pumping and treatment systems. Matt has significant wastewater facility experiences and is skilled in leading design teams and coordinating technical work products. He has worked extensively in both rehabilitating existing systems and designing new systems.

Matt's work in lift station rehabilitation and expansion has included design of pumping systems, in-channel grinders, and odor control systems. He is also skilled with flow projections, hydraulic calculations, condition assessments, and cost estimating.

Relevant Project Experience - Partial List (see tables to follow)

KR Lift Station Design, Village of Mount Pleasant, WI. Lead Process Engineer.
Hoods Creek Attenuation Basin Expansion Design, Caledonia Utility District, WI. Lead Process Engineer.
Central Lift Station and Attenuation Basin Facilities Plan, Caledonia Utility District, WI. Lead Engineer and Project Manager.
Dominican Lift Station Design, Caledonia Utility District, WI. Lead Engineer.
St. Bonifacius (L24) Lift Station Design, Metropolitan Council Environmental Services, MN. Lead Engineer.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Lead Process Engineer and Technical Project Manager.
Elk Vale Lift Station Rehab, City of Rapid Valley, SD. Lead Process Engineer.

IKE BERTELS, PE | CO-PROCESS & SITE DESIGN

BS Civil Engineering
Years Experience: 5

Ike is a water and wastewater engineer with five years of consulting experience, providing planning, design, and construction services for municipal water and wastewater treatment and distribution systems. His expertise includes technical design for new and existing systems, pump performance analysis and optimization, expansion phasing, and cost estimation.

Ike has worked on lift station expansion and rehabilitation projects, including greenfield WWTP pumping systems, peak flow bypass pumping and filtering systems, and technical reviews of lift station design. He is skilled in hydraulic calculations, force main design, wastewater coating products, and process valve replacement.

Relevant Project Experience - Partial List

Hurricane Creek Regional Water Reclamation Facility, City of Anna, TX. Civil Design Analyst & Task Manager.
WWTP Lift Station Improvements, City of Whitewright, TX. Civil Design Analyst and Task Manager.
Data Center Industrial Wastewater Lift Station Design, West Memphis, AR. Project Manager and Lead Design Engineer.
Wastewater Lift Station Design Reviews, City of Denison, TX. Civil Design Analyst.
Well Pumping Station and Storage Tank, Leonard, TX. Civil Design Analyst.
Lakeland WTP HMO Addition and Improvements, City of Elkhorn, WI. Project Civil Engineer.
BRCC WTP and Storage Building, Black River Falls, WI. Project Civil Engineer.

SUBCONSULTANTS

GRINDELAND ENGINEERING | ELECTRICAL, CONTROLS, & SCADA DESIGN

Foth and Grindeland Engineering (Grindeland) partner on all water/wastewater/stormwater projects involving electrical, controls, and SCADA. Grindeland is a full-service electrical, controls, and SCADA design group that has multidisciplinary staff, including troubleshooting, design, CAD, P&IDs, PLC/HMI programming checks, and field technician work.

IBC ENGINEERING | HVAC & PLUMBING DESIGN

Foth and IBC partner on all water/wastewater/stormwater projects involving mechanical components such as HVAC and plumbing. IBC is a robust group providing full-service plumbing and HVAC design and calculations. Their staff is well-versed in troubleshooting, design, and startup of systems.

EUA | STRUCTURAL & ARCHITECTURAL DESIGN

Foth and EUA partner on structural and architectural facility projects across our various business units. EUA brings an excellent group of experts that carefully tailor their team members to the needs of each individual project and client. Their staff is well-versed in heavy mechanical and industrial facilities along with the careful touches that go into the arts, historic, and aged facilities.

These teamed partnerships have provided excellent outcomes for our clients time and time again. Together, we work seamlessly to find the best and most complete solutions.

BRUCE GRINDELAND, PE | ELECTRICAL, CONTROLS, & SCADA DESIGN

BS Electrical and Electronics Engineering | License: WI, IA
Years Experience: 40

Bruce brings 40 years of experience in the water and wastewater industry and is a licensed professional engineer in Wisconsin and Iowa. Before founding Grindeland Engineering, he spent 20 years with a systems integration company and previously worked as an electrical engineer for a Wisconsin consulting firm. Bruce's project experience includes treatment plants, pump stations, elevated storage tanks, booster stations, and other process facilities. He has extensive expertise in custom pump station control panels, MCCs, RTUs, SCADA integration, remote monitoring solutions, and site electrical upgrades. His background ensures reliable, efficient electrical and control systems for complex municipal projects.

Relevant Project Experience - Partial List

KR Lift Station Design, Village of Mount Pleasant, WI. Lead Electrical & Controls Engineer.
Central Lift Station Design, Caledonia Utility District, WI. Lead Electrical & Controls Engineer.
Dominican Lift Station Design, Caledonia Utility District, WI. Lead Electrical & Controls Engineer.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Lead Electrical & Controls Engineer.
Little Beaver Creek Lift Station, Johnston, IA. Lead Electrical & Controls Engineer.

STEVE GRINDELAND, PE | ELECTRICAL, CONTROLS, & SCADA DESIGN

BS Electrical Engineering |License: WI, IA
Years Experience: 15

Steve is a licensed professional engineer in Wisconsin and Iowa with more than 15 years of experience in the water and wastewater industry. Before joining Grindeland Engineering, he spent 10 years as a project manager, electrical designer, and estimator for a systems integration company. Steve's expertise includes electrical engineering, specification development, CAD, estimating, and project management. His focus areas include the design of lift stations, booster stations, wells, elevated storage tanks, and treatment plants. His background ensures practical, reliable solutions for complex electrical systems in municipal projects.

Relevant Project Experience - Partial List

KR Lift Station Design, Village of Mount Pleasant, WI. Electrical & Controls Engineer.
Central Lift Station Design, Caledonia Utility District, WI. Electrical & Controls Engineer.
Dominican Lift Station Design, Caledonia Utility District, WI. Electrical & Controls Engineer.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Electrical & Controls Engineer.
Little Beaver Creek Lift Station, Johnston, IA. Electrical & Controls Engineer.

MIKE ROLLER, PE | HVAC & PLUMBING DESIGN

BS Mechanical Engineering | License: WI
Years Experience: 43

With over four decades of technical HVAC and Plumbing project management and design experience, Mike has worked on a broad range of projects for municipal, industrial, and institutional clients. He consistently demonstrates great attention to detail and has been an invaluable asset to IBC Engineering. His portfolio includes HVAC & plumbing projects for lift stations, various wastewater process buildings, well houses and water filtration buildings throughout Wisconsin, Minnesota, and Illinois.

Relevant Project Experience - Partial List

KR Lift Station Design, Village of Mount Pleasant, WI. Lead Plumbing & HVAC Engineer.
Hoods Creek Attenuation Basin Expansion Design, Caledonia Utility District, WI. Lead Plumbing & HVAC Engineer.
Central Lift Station Design, Caledonia Utility District, WI. Lead Plumbing & HVAC Engineer.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Lead Plumbing & HVAC Engineer.

MARK BRESNEHAN, RD | HVAC & PLUMBING DESIGN

BS Mechanical Engineering | License: WI
Years Experience: 25

Mark brings more than 20 years of experience in HVAC and plumbing design for municipal, industrial, and institutional projects. His work reflects strong attention to detail and a commitment to quality, making him a trusted resource for IBC Engineering. His portfolio includes lift stations, wastewater process buildings, well houses, and water filtration facilities across Wisconsin, Minnesota, and Illinois.

Relevant Project Experience - Partial List

KR Lift Station Design, Village of Mount Pleasant, WI. Lead Plumbing & HVAC Designer.
Hoods Creek Attenuation Basin Expansion Design, Caledonia Utility District, WI. Lead Plumbing & HVAC Designer.
Central Lift Station Design, Caledonia Utility District, WI. Lead Plumbing & HVAC Designer.
Pike River Lift Station Design, Village of Mount Pleasant, WI. Lead Plumbing & HVAC Designer.

COLE SLADKY, AIA | STRUCTURAL & ARCHITECTURAL DESIGN

BS Architecture | License: WI
Years Experience: 13

With over a decade of experience, Cole is adept at delivering projects on budget and schedule. He is skilled at understanding how much a project will cost early in the design process, which guides his big-picture approach to completing the work. Cole's optimism radiates through his team on every project, and he looks forward to sharing his enthusiasm with you on your project.

Relevant Project Experience - Partial List

Abbyland WWTP Addition, Abbotsford, WI. Structural & Architect Project Manager, Design.
Abbyland WWTP Screening Building, Abbotsford, WI. Structural & Architect Project Manager, Design.
Agropur MBR Building, Weyauwega, WI. Structural & Architect Project Manager, Design.

SCOTT UHEN, AIA, NCARB, CDT | STRUCTURAL & ARCHITECTURAL DESIGN

BS, MS Architecture | License: WI
Years Experience: 18

Scott brings a wealth of experience in project management, spanning everything from small-scale renovations to large, complex building developments. He is highly skilled in coordinating design documentation, managing consultant teams, and navigating technical building requirements and safety codes. Known for his organizational precision and attention to detail, Scott ensures that every project runs smoothly from concept to completion.

Relevant Project Experience - Partial List

Waukesha Memorial Hospital Central Utility Plant, Waukesha, WI. Structural & Architect Design.
Lockheed Martin Building 350 Facility Refurbishment, Denver, CO. Structural & Architect Design.
Baird Center, Milwaukee, WI. Structural & Architect Design.

PROJECT UNDERSTANDING
EXPECTATIONS & KEY CHALLENGES

Serving over half the City, the Kentucky Avenue Pump Station (KAPS) is a critical component of Sheboygan's wastewater infrastructure. Originally constructed in the 1930s, with partial updates in the 1970s, the facility now faces significant operational and compliance challenges due to aging equipment, outdated systems, and various operational issues.

The City has identified the need for a comprehensive upgrade to restore reliability, reduce clogging and other frequent operational issues, and ensure regulatory compliance. Additionally, the project includes reinstating the river overflow safety site, which provides a final level of overflow protection during emergencies. Our team understands that the scope of this project encompasses key design aspects across mechanical, electrical, structural, HVAC, and process/operational systems.

KEY OBJECTIVES INCLUDE:

- Reinstating function of the river safety site
- Eliminating frequent pump clogging
- Repairing or replacing problematic valves
- Addressing localized issues with the discharge piping
- Updating building ventilation to meet code requirements
- Modernizing outdated electrical controls & backup generator system

Overall Objective
Provide an upgrade to re-establish a 20–30-year lifespan on all major equipment and station functions.

Due to the critical nature of this station, minimizing disruption during construction is essential. The scope has been tailored to avoid the substantial expense and risks associated with implementing a large-scale bypass pumping system. We recognize the City's commitment to energy efficiency and smart technologies—values that align closely with our own. For this reason, our approach integrates these priorities and we continually seek opportunities to incorporate them where they deliver the greatest impact.

Working closely with City staff throughout every phase our approach will provide alignment on decisions, address site-specific challenges, and deliver a design that meets the City's goals for performance, compliance, safety, and long-term value. Coordination and support with the Clean Water Fund is also planned to help optimize funding opportunities and maintain compliance with program requirements.

OUR APPROACH

PROVIDING THE BEST LONG TERM INVESTMENT

The scope and objectives outlined in the RFP have been carefully evaluated, resulting in a customized approach that strategically deviates from the original framework. This design resolves all major aged-equipment issues immediately while providing a long-term solution with an expected lifespan of 20–30 years. By taking this strategic approach, we believe hundreds of thousands of dollars can be saved by avoiding bypass pumping costs during construction. These savings would be best invested into new equipment that will serve the City for decades to come.

OUR MAJOR STRATEGIES FOR SAVINGS & BEST LONG TERM INVESTMENT

Avoiding Discharge Header Piping Replacement. Replacing discharge header piping and installing a large-scale bypass system adds cost and risk. We propose ultrasonic thickness testing on the manifold and discharge piping. If testing confirms the pipe is in near-new condition aside from minor surface repairs, we will avoid replacement.

Creating a Separate Entry & Separate HVAC Zones. The proposed approach creates two distinct HVAC zones to meet code compliance and improve energy efficiency. The upper floor, which houses high-value MCCs, controls, and SCADA equipment, will be designated as a de-rated space with superior climate control—protecting and extending the life of this critical infrastructure. The lower zone, encompassing all other floors, will be classified as Class 1 Division 2 and will feature a separate sealed entrance near the stairway. It will include specialized circulation requirements based on occupancy status. During early design, feasibility of sealing the upper floor from the lower levels will be evaluated. Once confirmed, this strategy should enable a two-thirds reduction in air circulation requirements for the Class 1 Division 2 zone when it is in its unoccupied state, resulting in annual estimated HVAC operational cost savings of approximately 50% or more compared to the standard 6 ACH tempered continuous ventilation approach.

Full Replacement of Pumps with New Dry-Pit Submersible Pumps with Non-Clogging Technology. Class 1 Division 2 dry-pit submersible pumps with advanced impeller designs will be installed, eliminating the line shaft system and enabling full HVAC zone separation. Self-reversing de-ragging technology removes the need for mixer or chopper pumps, reducing costs. Pumps will be sized to increase flow capacity, which will be documented in the Facility Plan for DNR submission.

Full Replacement of Class 1 Division 2 Rated Electrical Equipment/Fixtures in the Lower HVAC Zone. All new Class 1 Division 2 rated electrical equipment and fixtures will be designed and specified for the lower HVAC zone to meet the updated area classification. This includes installing new LED lighting, modernized switches, and consolidating or removing unnecessary electrical components to enhance safety and efficiency in the space.

Full Replacement of Motor Control Center w/Integral VFD Space. A completely new MCC lineup will be designed and specified to replace the aged and obsolete equipment. The new MCC and control systems will be installed in a different location, allowing the existing equipment to remain operational during the transition. Once the new MCC is in place and connected to a separate power feed, pumps will be transferred one at a time, ensuring that four of the five pumps remain online throughout the upgrade. This approach enables installation of required conduit seal-offs for the electrical conduits, which are necessary to establish the separate HVAC zones.

Full Replacement of Generator. A new diesel generator will be selected to replace the aged and obsolete unit. Previous evaluations confirmed that replacement parts for the existing generator are no longer available. During the design phase, collaboration with the City will determine whether the new generator is best suited for installation in the existing location or as an exterior sound-attenuated unit. Fuel storage requirements will also be reviewed and factored into this comparison. This replacement strategy ensures a functional and maintainable generator for the next 20–30 years.

3D Scan of the Interior and Exterior of the Facility. A comprehensive 3D survey scan of both the interior and exterior of the facility will be performed. This scan will generate a highly accurate point cloud, providing detailed dimensional data for the entire facility. The information will be critical for precisely locating new walls, illustrating mechanical piping modifications around pumps and valves, positioning HVAC equipment and ductwork, and assessing available space for equipment installation and removal. Enhanced accuracy in these plans will significantly reduce unforeseen conflicts during construction and help minimize the potential for costly change orders.

PROJECT APPROACH
CUSTOMIZED SCOPE ITEMS

Note:
Per the City's request, an options evaluation has been added to the design phase, which is not described in this document. This evaluation will be conducted at the start of the design phase to assist the City in determining the final design scope.

Below is a customized scope designed to provide the best overall long-term investment. This strategy avoids unnecessary bypass costs and directs resources toward new equipment that will deliver reliable performance and expected results for decades to come. We have utilized a Track-Change format to allow for easy comparison with the original RFP scope. Note, the final project scope will be determined collaboratively between Foth and City staff.

Engineering design for an upgrade project with the following anticipated components:

a. Structural/Architectural

i. Construct chain-link fence along the west property line.

ii. Reinforce stand-alone brick wall shielding pad-mounted transformer.

~~ii.~~1. Confirmed existing condition was poor and the brick needs to be replaced – proposed solution to replace brick with single wythe CMU and a precast cap on top to reduce water intrusion.

iii. Evaluate supports to ensure adequacy for increased loads (new air handlers, piping, etc.).

iv. Add caged ladder to exterior wall for roof access, with locked entry gate and/or removable lower section.

v. Paint interior walls.

~~v.~~1. Per the pre-proposal site visit, the first-floor existing block will remain as is due to being in good condition; below grade levels (equipment platforms) will receive selective painting, i.e. areas where paint is currently peeling away from existing substrate.

vi. Remove 1st floor tile, grind & seal concrete.

~~vi.~~1. Per the pre-proposal site visit, the existing floor tile was in good condition, not requiring removal, grinding, and sealing of the existing concrete.

vii. Replace front double doors & insulated north overhead door.

viii. Replace glass block with brick. Retain operable windows for ventilation.

ix. Replace concrete face pieces above block windows.

x. Add new entry/egress door to the east side of the building. The door will lead to an interior vestibule to create two (2) separate HVAC zones, separating the main floor from the lower floors. The vestibule's mezzanine will be structurally designed to hold the weight of new HVAC equipment being added for the lower Class 1 Division 2 zone.

xi. Add a structural plate designed to cover the existing first floor equipment access opening located along the west wall near the electrical gear. The plate will create an air tight separation between the first floor and the lower floors. The cap will be designed with a lifting handle for the crane hook.

~~ix.~~xii. Cap the five (5) existing first floor penetrations upon removal of the existing motors and line shafts to create an air tight separation.

~~x.~~xiii. Tuck point building masonry as needed.

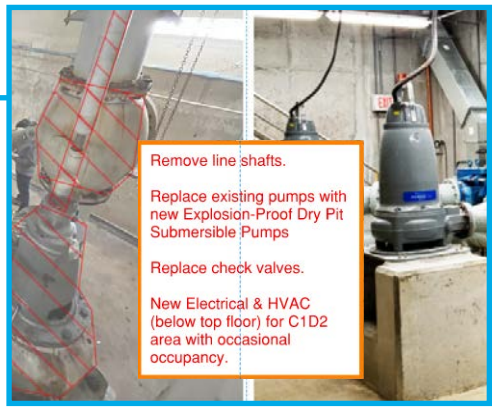
b. Mechanical:

~~i. Upgrade pump shaft guards *OR* Install submersible pumps for 1 & 5 (with greasing nozzles).~~ Replace all five (5) pumps with new Dry-Pit Submersible pumps with Non-Clogging Technology. Modify base, suction piping, and discharge piping in the immediate area of the pumps to accommodate installation

1. The new dry-pit submersible motors will be explosion proof rated to meet the Class 1 Division 2 safety rating in this area. The new pumps will be sized to increase the station's overall flow capacity, which will be documented in the Facility Plan submitted to the DNR.

City to

ii. ~~Replace header piping downstream of check valves.~~ Perform ultrasonic thickness testing on the header and discharge piping downstream of the check valves.



PROJECT APPROACH
CUSTOMIZED SCOPE ITEMS

~~1.~~ If the pipe is in near-new condition, aside from minor surface/spot repairs, replacement will be avoided.
1. Blast and recoat all mechanical piping.
2. Make in-place spot repairs to surface damage found on pipe exteriors.

~~ii.~~iii. Review pump impeller sizing; consider modifications to increase pumping capacity

iv. Assess valves and associated piping/hardware for rebuilding or replacement, as necessary. ~~Note that the check valve arm on one of the pumps has a fabricated bracket and should be replaced with the project.~~

~~iii.~~1. Replace check valves immediately downstream of pumps, other valves are not planned to be replaced unless they are found to have functional issues.

v. Replace duplex sump pump system & controls.

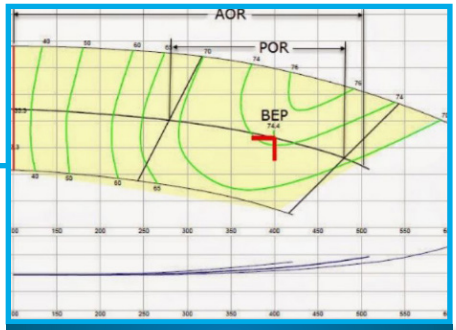
~~iv.~~1. New System shall be Class 1 Division 2, controls may be located in the upper floor if cost effective.

~~v. Replace wet well access manhole covers (2 ea) with 48" covers.~~

2. Larger covers are not planned in this proposal as the new Dry Pit Submersible Pumps with Non-Clogging Technology are expected to accomplish the non-clogging goals; the separate chopper pumps (and associated accessories) are not planned to be needed.

vi. Install new gauge sets on pumps, with isolation valves.

vii. Install ~~automated~~ manual wet well flushing valves and associated piping.

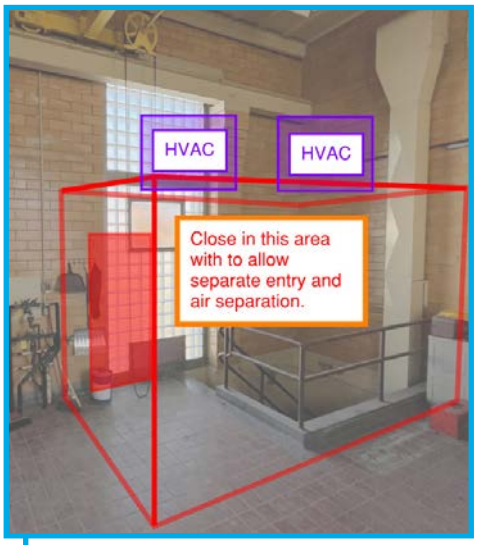


Optimize Pump/Impeller Selection - Increase Capacity and Non-Clogging

c. HVAC & Plumbing

i. Upgrade building ventilation to accommodate two (2) newly separated air-tight zones as follows~~, bringing up to current codes. A roof mounted unit capable of providing six air exchanges per hour is anticipated.~~:

1. Grade level zone (First Floor - Electrical Rm).
   a. Condition Grade level Electrical Rm with Rooftop Unit which would provide heating, cooling and economizer mode operation.
2. Lower level zone (Ventilate Drywell – including various floors) – The following options would be considered.
   a. Option 1: Ventilate at a 6 ACH rate continuously utilizing heat recovery unit and electric unit heaters in the lower levels. Drywell space with this option would be considered non-rated.
   b. Option 2: Maintain Class 1 Division 2 rating of the Drywell. No ventilation provided when Drywell is unoccupied. Upon occupation, provide 30 ACH purge for 10 minutes then ramp to 6 ACH while occupied. This approach would utilize Exhaust fans, makeup air units and VFD drives. Challenges include moving 30 ACH of air for 10 minutes which equates to 20,000 cfm.
   c. Option 3: Maintain Class 1 Division 2 rating of Drywell space. Ventilate continuously at 2 ACH when unoccupied. Upon occupation, engage ventilation rate of 6 ACH while occupied. This would be accomplished with a Heat recovery unit, electric unit heaters located in the drywell space and a gas fired makeup air unit. Advantage of this option is it reduced the required total airflow making it easier to place ductwork and equipment.
   d. **Note that Option 3 is expected to be the preferred option, and is planned for in the cost proposal, but all 3 options would be looked at and reviewed with the City.**
3. Drywell ventilation equipment placement: The separation structure (as referenced as the interior vestibule above) required to separate the Drywell from the Electrical Rm space would also be designed as an equipment mezzanine space which could allow placement of the HVAC equipment above the stair entrance. This would allow the HVAC equipment serving the Drywell to be located inside the Lift Station Structure.



PROJECT APPROACH
CUSTOMIZED SCOPE ITEMS

~~i.~~4.
~~ii. Replace or modify dry well exhaust fans & ductwork as needed.~~
~~iii.~~ii. Assess the condition and adequacy of wet well ventilation fans. Remove south vent and replace any fans as needed. Ductwork to remain and be reused if in good condition and if possible.
~~iv.~~iii. Depending on Emergency Generator replacement option, the existing generator louvers and dampers will be evaluated for replacement.~~Assess generator room dampers for cleaning/adjustment/lubrication needs.~~
~~v.~~iv. ~~Replace gas fired heaters and associated ductwork in the electrical room and lower unit, meeting current codes related to air exchanges and vent sizes.~~ Any lower level drywell heating equipment will be removed
~~vi.~~v. Replace the bathroom toilet and sink along with ventilation exhaust fan, other items to be discussed with the City during final scoping.

d. Electrical & Controls

i. Install new MCC w/integral VFDs. ~~Modify or replace MCC buckets and add VFD feeders in a new location within the building.~~ Note that two of the five existing pumps are equipped with VFDs; there is no plan to add VFDs to the other three pumps.
~~i.~~1. Design such that pumps and other loads can be switched over during operation of the station. Design to allow for required seal-offs between levels.
ii. Design all necessary~~New~~ control and I/O wiring. ~~from recently replaced VFDs to the existing SCADA panel.~~
iii. Design new generator system, including demolition of existing. If new generator is located in the existing generator room, design temporary wiring requirements for connection of a large trailer mounted rental unit. If new generator goes outdoors, design seamless switchover provisions.~~Review generator loadings to determine whether input filters are required.~~
~~iv. Review generator engine, remote radiator and alternator for serviceability.~~
~~v.~~iv. Replace existing MAG meter and other control devices and related conduit/wiring located below grade to comply with Class 1 Div 2 requirements.
~~vi.~~v. Replace SLC500 PLCs with ~~CompactLogix~~ ControlLogix series. ControlLogix needed to meet BABA compliance requirements.
~~vii. Add I/O for new drives. Replace pressure transducers, utilizing the same locations.~~
~~viii.~~vi. Add new ~~Replace electric~~ wiring associated with new HVAC equipment, modify wiring to existing HVAC, as needed.
~~ix.~~vii. Replace 480V main circuit breaker & automatic transfer switch with new location to allow operation from two utility sources during construction.
~~x. Install Besel keypad module.~~

e. Process

~~i. Ascertain whether bypass pumping will be needed during construction. If it is, devise a plan including a traffic control plan for 7th St. to accommodate station flows as needed. Stage construction in a manner to minimize the cost and disruption of this effort.~~ We are proposing on a design that won't require large scale bypass pumping. The construction sequencing will be designed to keep four (4) of the five (5) pumps online to maintain the station's Firm Capacity.

City to

~~ii.~~i. Ascertain whether the wet well configuration currently allows for each side to be isolated for maintenance or repairs. If it doesn't, advise staff on a proposed solution, timeframe and budget number.
~~iii. Specify—and have installed as part of the construction project—a submersible chopper pump in both wet wells, along with associated mechanical, structural, electrical & controls impacts. Refer to a June 2023 memorandum by Foth concerning these options (attached).~~ See notes above regarding the new Dry Pit Submersible Pumps with Non-Clogging Technology accomplishing this goal.

PROJECT APPROACH
CUSTOMIZED SCOPE ITEMS

Note on River Overflow Site: Through the design, Foth is planning to re-establish the existing mechanical functions of the structure and detail cleaning requirements. If the City requests Foth to engage with the DNR or other entities regarding allowable use, permitting, public engagement, agreements, etc., additional scope and efforts will be added accordingly through an Addendum.

f. Miscellaneous

i. Restore impacted property grade, sidewalk & landscaping.

ii. Restore functionality of river bypass. Anticipated work includes the following: **1)** flushing debris from the bypass, **2)** installing a gate or check valve at the river to keep water from backing up, **3)** repair/replace bypass valves as necessary, and **4)** add sluice gate at valve pit.

2. **Bidding services.** Note that the City's front end-documents will be utilized.

3. **Construction Management services:** Consultant shall propose a scope that will minimize expenses while ensuring the successful completion of the project. For example, site inspection may be required at all times while the river bypass is being restored, but only needed to inspect HVAC equipment during start-up.

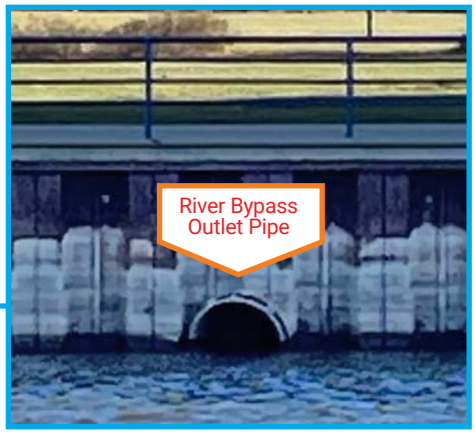
4. **Miscellaneous Considerations:**

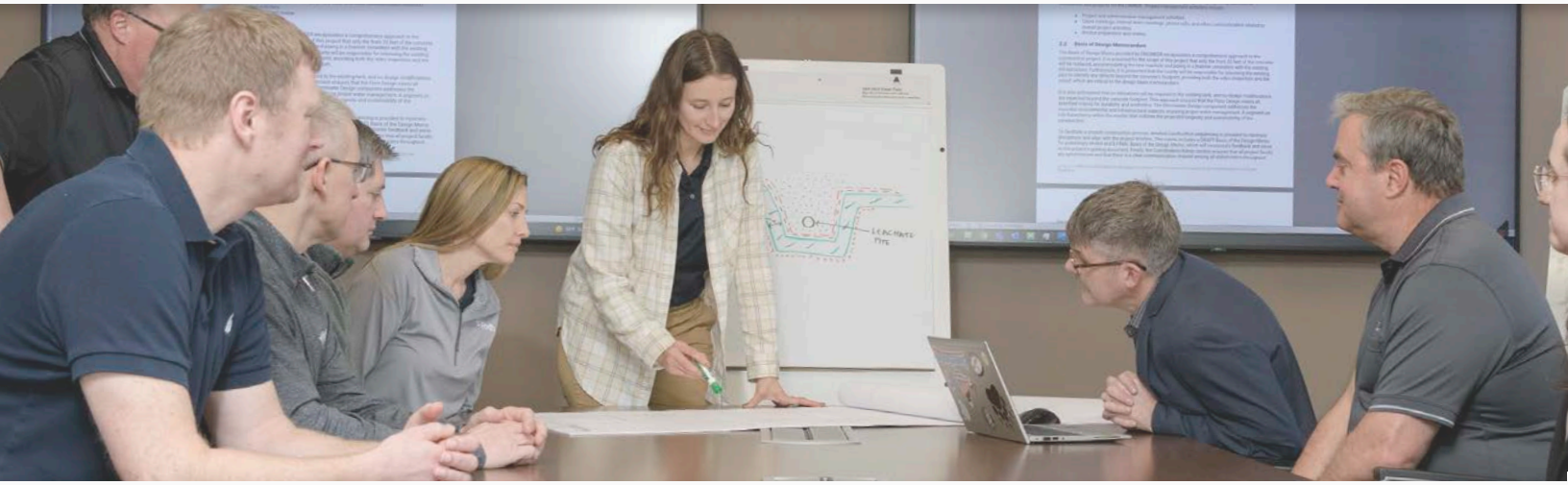
a. If significant energy savings may be expected as a result of this project, Consultant may be asked to provide calculations to WWTP staff to support Focus on Energy incentives.

b. If this project would benefit significantly by the use of smart technology (real-time data, predictive analysis, machine learning, etc.), Consultant should advise the WWTP accordingly during the proposal and/or design process.

c. An Intent to Apply (ITA) for an FY27 Clean Water Fund loan has been submitted. If CWF funding is obtained, this may impact Consultant's scope and schedule. It is not anticipated that the City will qualify for principle forgiveness.

~~c.~~i. Based on the City's population, BABA requirements are expected to be in effect with this loan program. Additional efforts to accommodate BABA requirements are included in proposal pricing.





CLIENT COLLABORATION COMMITMENT

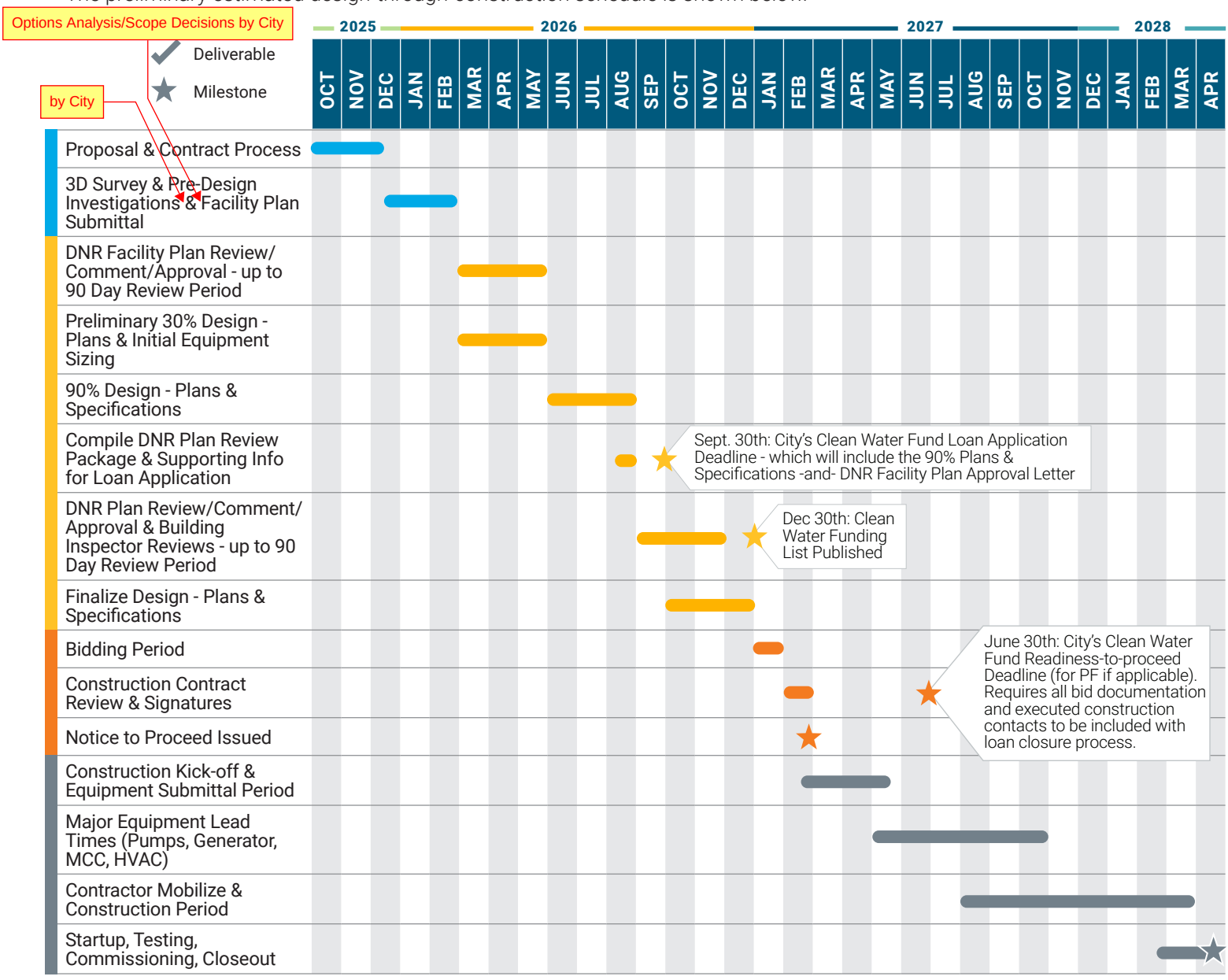
Throughout all phases of design and construction, we will actively engage with your team to ensure alignment and transparency. This includes regular progress reviews, evaluation of design options, schedule updates, and open discussions on key decisions. Our goal is to maintain clear communication and collaboration, ensuring the project meets your expectations and delivers long-term value.

PROJECT TIMELINE

KENTUCKY AVENUE PUMP STATION UPGRADE

Our design team is eager and energized to assist the City with this project that has been under discussion and scoping since 2020. Commitment remains strong to deliver an effective strategy for all design elements and project deliverables, ensuring progress continues efficiently through each phase.

The preliminary estimated design-through-construction schedule is shown below.

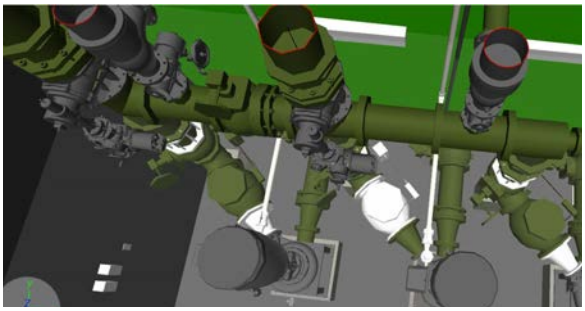


Note: Final Schedule will be based on detailed project scoping and City needs.

ESTIMATED PROJECT TIMEFRAME NOTES

During the construction phase, there will be substantial equipment submittal and delivery lead times. The BABA requirements tied to the Clean Water Fund Loan Program further slow down the process. It's important to note that the Contractor has very little control over the submittal and delivery periods for major equipment, which can significantly extend the overall project timeline. Our team will work closely with the City, State Reviewers, Contractor, and the selected Equipment Vendors throughout all stages of the project to ensure a timely completion and excellent schedule communication.

FEATURED PROJECT EXPERIENCE



L24 Rehabilitation and FM 7020 Replacement
Minnetrista, MN

In 2014, Metropolitan Council Environmental Services (MCES) sought to renovate the L24 Lift Station in order to increase its daily capacity and update its systems. In addition to the lift station, the 7020 forcemain also required replacement. Foth was tasked with design and construction administration for both project components.

Lift station renovations increased capacity from 2.0 MGD to 4.5 MGD. The work involved replacement of system piping, pumps, and valves; updates to the mechanical and electrical systems; addition of structural access and safety features; a new in-channel grinder; replacement of the odor control system; and site access improvements. The existing chemical feed system was temporarily relocated, and the wet well was modified with the addition of corrosion-resistant coating to the walls.

REFERENCE | John Hemming, Principal Engineer, MCES 651.602.4517

PROJECT HIGHLIGHTS

- Predesign 3D Survey
- Facility Plan
- 3D Pipe Modeling Design and Review
- Salvage Substructure
- Safety Improvements

Pike River Lift Station | Mount Pleasant, WI

To address the needs of the development and the growing village, overall infrastructure expansion was required. Foth was tasked with planning, design, and construction oversight for all wastewater conveyance facilities within the expansion.

We designed sanitary sewer facilities that included more than 12 miles of gravity sewer and forcemain and a new 40 MGD lift station. The lift station includes improved methods for scum and wet well cleaning and features that reduce turbulence, odor, and corrosion, along with the flexibility to expand to 75 MGD in the future. To optimize design, a 1:6 scale physical model was constructed and dye tested in conjunction with the Clemson Engineering Hydraulics lab.

REFERENCE | Anthony Beyer, Director of Public Works & Village Engineer 262.664.7849

PROJECT HIGHLIGHTS

- 40 MGD Lift Station, Expandable to 75 MGD
- Three Centrifugal Solids Handling Pumps, 600 HP
- Dual Self-Cleaning Trench Wet Wells
- Dual Electric Service Feeds and Standby Generator
- Predictive Pump Vibration Monitoring System
- MCCs, Controls, & SCADA

> **Their proactive approach has resulted in innovative design solutions, cost efficiencies, and eased management of contractors throughout the construction of this very expensive, complex lift station. Foth has been a resource we have come to trust and rely on to keep our projects moving forward.**
>
> Anthony J. Beyer, PE | Director of Public Works | Village of Mt. Pleasant, WI

L-34 Lift Station | Coon Rapids, MN

Following a condition assessment, we provided rehabilitation design which included replacement of all process piping, new wastewater pumps, and reconfiguration of the influent channel. The sewer junction structure and influent pipe into the wet well were also replaced, and a sewage grinder, bypass channel, and gates were added. Ventilation equipment and ductwork within the lift station were replaced and odor control facilities were replaced. Finally, the concrete in the wet well was rehabilitated and a hydrogen sulfide-resistant coating added.

PROJECT HIGHLIGHTS

- Pump Selection and Replacement
- Suction and Discharge Piping Reconfiguration
- Process Piping and Valves
- Sewage Grinder
- MCCs, Controls, & SCADA

REFERENCE | Dan Chouinard, Principal Engineer, MCES 651.602.4564

Elk Vale Lift Station | Rapid Valley, SD

Originally constructed in 2012, the Elk Vale Lift Station consisted of three pumps, with room for two additional. Due to high operating head, the pumps experienced excessive wear. Flows continued to rise from area growth, and planned decommissioning of a nearby lift station was set to add additional flow. Foth was tasked with designing pump improvements, including the addition of a new pump and replacement of existing pumps. Pump selection and procurement was prioritized due to existing units' condition, along with replacement of the emergency generator with one capable of operating all four pumps. Transient analysis was performed to evaluate station operation and resiliency.

Additionally, the forcemain discharge structure had extremely high hydrogen sulfide concentrations. Through installation of a hydrogen sulfide sampling system, we determined the source of the issue was a partially open valve within the lift station. Working with the oxygen delivery system manufacturer, we also developed enhancements to the existing system that increased the oxygen delivery rate to align with future flow increase.

REFERENCE | Brandon Quiett, Project Engineer 605.394.4154

PROJECT HIGHLIGHTS

- Pump Selection and Replacement
- Suction and Discharge Piping Reconfiguration
- Generator Replacement
- Transient Analysis

Central Lift Station and Attenuation Basin Modifications Caledonia, WI

Foth is currently working with the Caledonia utility district to design modifications to an existing lift station and force main. The modifications include rehabilitation of the lift station electrical system and wet well as well as improvements to the force main such as the addition of a pigging station and isolation vault. In order to control peak flows at the station, a new attenuation basin and pumping station are being added. The attenuation base will store up to 3.6 MG of wastewater and is supplied by two 15,000 gpm pumps. Capacity at the existing lift station is limited to 13 MGD by the downstream sewer authority. With the addition of a safety site in the future, the full facility will contain design storms up to 45 MGD.

REFERENCE | Anthony Bunkelman, Public Services Director 262.835.4451

PUMP STATION EXPERIENCE

ADDITIONAL PROJECTS (PARTIAL LIST)

Matt and Dale have a wealth of experience with pump stations across Wisconsin, Minnesota, South Dakota, and Iowa. With a variety of types, pump number, and styles, we believe the following table gives a well-rounded picture of our capabilities and experience with pump stations.

Foth Project	# of Pumps	Submersible or Dry-Pit	Walk-In Building	Standby Generator	Capacity Range
Quarry Park Pump Station, Racine County, WI	2	Submersible	No	No	Less Than 1 MGD
KR Pump Station, Village of Mt. Pleasant, WI	4	Dry-Pit	Yes	Yes	Between 1 & 5 MGD
L-80 Pump Station, MCES, MN	3	Submersible	No	On-Site Portable	Between 1 & 5 MGD
Dominican Pump Station, Caledonia, WI	2	Dry-Pit	No	Yes	Less Than 1 MGD
4 Mile Road Pump Station, Caledonia, WI	2	Submersible	Yes	Yes	Between 1 & 5 MGD
Lighthouse Drive Pump Station, Caledonia, WI	2	Dry-Pit	Yes	Yes	Less Than 1 MGD
Caddy Vista Pump Station, Caledonia, WI	3	Dry-Pit	No (Below Grade Pump Room)	Yes	Between 1 & 5 MGD
Little Beaver Creek Segment B Pump Station, Johnston, IA	2	Submersible	Yes	Yes	Between 1 & 5 MGD
Little Beaver Creek Segment C Pump Station, Johnston, IA	2	Submersible	Yes	Yes	Between 1 & 5 MGD
Mackubin & Childs Road Pump Station Rehab, St. Paul, MN	2	Submersible	No	No	Less Than 1 MGD
Wastewater Treatment Plan Solids Handling Upgrades, Georgia Pacific, WI	2	Dry-Pit	Yes	No	Between 1 & 5 MGD
Hoods Creek Attenuation Basin, Caledonia, WI	3	Dry-Pit	Yes	Yes	Over 5 MGD
Landfill Leachate Loading Station, Brown County, WI	2	Dry-Pit	Yes	No	Less Than 1 MGD
Corcoran Pump Station Improvements, MCES, MN	2	Submersible	No	No (Portable Connection)	Between 1 & 5 MGD
WWTP Main Lift Station Upgrade, Bay City, WI	2	Submersible	Yes	Yes	Less Than 1 MGD
WWTP Main Lift Station Upgrade, Stanley, WI	3	Submersible	Yes	Yes	Between 1 & 5 MGD
Stormwater Pumping Station, Waukee, IA	2	Submersible	No	No	Between 1 & 5 MGD
CTH K&V Pump Station Improvements, Caledonia, WI	3	Dry-Pit	Yes	Yes	Over 5 MGD
WWTP Main Lift Station Upgrade, Weyauwega, WI	3	Dry-Pit	Yes	Yes	Between 1 & 5 MGD
WWTP Main Lift Station Upgrade, Elmwood, WI	3	Submersible	Yes	Yes	Less Than 1 MGD
WWTP Main Lift Station Upgrade, Pepin, WI	3	Dry-Pit	Yes	Yes	Less Than 1 MGD
WWTP Main Lift Station Upgrade, Red Wing, MN	3	Dry-Pit	Yes	Yes	Between 1 & 5 MGD
WWTP Main Lift Station Upgrade, Belmont, WI	3	Submersible	Yes	Yes	Less Than 1 MGD
WWTP Main Lift Station Upgrade, Cadott, WI	4	Dry-Pit	Yes	Yes	Less Than 1 MGD
WWTP Main Lift Station Upgrade, Ellsworth, WI	2	Submersible	No	Yes	Between 1 & 5 MGD
WWTP Main Lift Station Upgrade, Spring Valley, WI	3	Submersible	Yes	Yes	Less Than 1 MGD

CLIENT REFERENCES

Our commitment to the City is to deliver **ON TIME**, **ON BUDGET**, at the **HIGHEST LEVEL OF QUALITY**—anticipating **YOUR** needs before being asked.

We pride ourselves on our collaborative approach with client partners. Striving to understand our clients' needs and expectations, we use our knowledge and experience to achieve those shared goals.

In the end, the passion and hard work put into every project is matched by the dedication and care poured into our relationships. A personalized, client-centered approach is what grows and maintains our partnerships.

Nate Steffen

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Elkhorn Water Utility

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NSteffen@CityofElkhorn.gov

Paul Haugen

Water Superintendent
Germantown Water Utility

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PHaugen@GermantownWI.gov

Anthony Bunkelman

Public Services Director
Village of Caledonia, WI

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ABOUT FOTH
ORGANIZATIONAL STRUCTURE

Founded in 1938 in Green Bay, Wisconsin, Foth offers a tradition of personalized, client-centered service and smart solutions to a variety of governmental, industrial, and commercial clients. Our more than 750 employee members deliver technical excellence in three main areas: Infrastructure, Environment, and Production Solutions.

INFRASTRUCTURE SERVICE LINES

WATER | CONSTRUCTION | GEOSPATIAL | PLANNING | TRANSPORTATION | AVIATION

3 Wisconsin-Based Offices with 28+ additional Nationwide

Delivering results from a foundation of personalized service and viewing challenges through the unique lens of each project and program.

MADISON
OFFICE

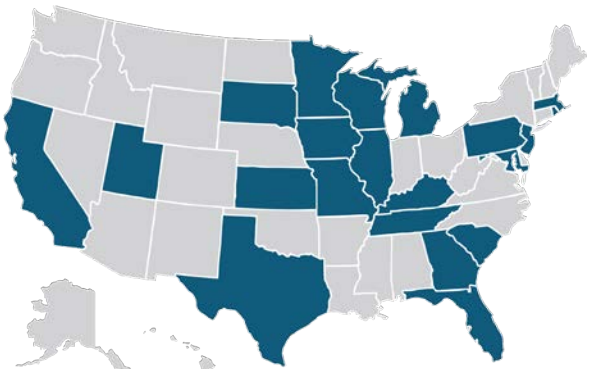
DE PERE, WI
HEADQUARTERS

CITY
OF SHEBOYGAN

FRANKLIN
OFFICE

Clients attest to our ability to function as an extension of your staff—a point of pride for Foth. Our engineers, technicians, and specialists have expertise in all areas of municipal infrastructure projects. Integrating our services into your system is fundamental, and understanding the City of Sheboygan's needs is key.

Foth has a long history of municipal work throughout Wisconsin, and members are committed to building our relationship with the City. Should additional expertise be required for any City projects, our network of staff can quickly assist.



STRATEGICALLY LOCATED TO SOLVE OUR CLIENTS' TOUGHEST CHALLENGES.