



**BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND**

**AB 6504
July 16, 2024
Consent Agenda**

AGENDA BILL INFORMATION

TITLE:	AB 6504: Sewer Pump Station Generator Replacement Bid Award	<input type="checkbox"/> Discussion Only <input checked="" type="checkbox"/> Action Needed: <input checked="" type="checkbox"/> Motion <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution
RECOMMENDED ACTION:	Award the Sewer Pump Station Generator Replacement contract to Valley Electric Co of Mt. Vernon and appropriate funds for the project.	

DEPARTMENT:	Public Works
STAFF:	Jason Kintner, Chief of Operations/Public Works Director Patrick Yamashita, Deputy Public Works Director Clint Morris, Capital Division Manager Christopher Marks, Utilities Engineer
COUNCIL LIAISON:	n/a
EXHIBITS:	1. Project Location Map
CITY COUNCIL PRIORITY:	3. Make once-in-a-generation investments to update and modernize aging infrastructure, capital facilities, and parks.

AMOUNT OF EXPENDITURE	\$ 1,102,212
AMOUNT BUDGETED	\$ 403,562
APPROPRIATION REQUIRED	\$ 698,650

EXECUTIVE SUMMARY

The purpose of this agenda bill is to award a public works construction contract for the Sewer Pump Station Generator Replacement project (SU0109).

- As required by the Department of Ecology, each of the City’s 18 pump stations has a connected standby generator to maintain sewer pumping operations in the event of grid power failure.
- The City’s ongoing generator replacement program ensures that each generator is replaced prior to the end of its service life, which is typically 25-30 years.
- The underground standby generators at sewer Pump Stations 23 and 25 are the last two generators in this cycle requiring replacement.
- RH2 Engineering, Inc. was contracted by the City in 2021 to perform engineering design for replacement of both generators. Design work was completed in May of this year.
- Additional work to address structural issues, electrical space constraints, and ventilation requirements within the existing underground vaults that will house the new generators has significantly increased costs of the project beyond the approved 2023-2024 budget for the construction phase.

- Two bids were received; the lowest responsive bid is \$879,947.
- An appropriation of \$698,650 is needed to fully fund the project. Construction is scheduled to begin in August 2025.

BACKGROUND

The City owns and operates a sewage collection system to convey sewage to two locations where it can be discharged to King County's sewer system. The City's system is comprised of 115 miles of collection pipes, 2,446 manholes, 16.7 miles of Lakeline, 17 pump stations, and 1 flush station. Much of this system was originally constructed in the late 1950s and early 1960s under three utility local improvement districts (ULIDs) by the Mercer Island Sewer District.

Due to the Island's topography, the sewer system utilizes gravity flow for the collection system to reach the pumping stations. These pumping stations then move the sewage around the perimeter of the Island, through the Lakeline, to two discharge points into the King County sewer system for further pumping and treatment.

The Department of Ecology requires emergency backup power to keep pump stations operational and flowing during grid outages. For Mercer Island, backup power comes in the form of diesel generators located mostly in underground vaults near each respective pump station (a few generators are above ground). To meet minimum reliability requirements, the Capital Improvement Program (CIP) has funded a systematic sewer system generator replacement program since the 2009-2010 biennium.

The underground standby generators at sewer Pump Stations 23 and 25 were last replaced in 1988 and 1998, respectively. Of the 18 stations, they are the last remaining generators requiring replacement in the current cycle (see Exhibit 1).

In 2021, the City contracted with RH2 Engineering, Inc. (RH2) for the development of bid-ready construction documents to replace the two generators on a like-for-like basis. After initial site visits and analysis, RH2 determined that neither of the existing underground vaults met current National Electric Code (NEC) working space requirements, National Fire Protection Association (NFPA), and International Fire Code (IFC) regulations and found the concrete vault lids to be in poor structural condition.

These unanticipated issues expanded the project scope to include relocation of electrical equipment above ground to free up vault space, installation of fuel tank vent piping to meet current fire codes, and replacement of the vault lids at both sites, resulting in significant project costs above resources authorized in the 2023-2024 biennium. RH2 finalized the engineering and design in May of this year and the project was advertised for bids. At completion of design, the engineer's estimated construction cost was \$897,623.

ISSUE/DISCUSSION

PROJECT DESCRIPTION

The City of Mercer Island's Sewer Pump Station Generator Replacement project will replace the 40 kilowatt diesel generators at Pump Stations 23 and 25, located at 5406 96th Ave SE and 4266 E Mercer Way, respectively. The existing vault lids will be removed and replaced. Ventilation and electrical will be rerouted and relocated to meet current local, state, and federal regulations. The electrical work will require that both stations be taken offline; therefore, installation of a complete temporary sewer bypass system will be included as a contractor work item. The bypass system will consist of above ground pumps and piping to divert sewer flows around the station during construction. Testing and startup construction items will include

integration of the new generators and generator components with the City’s Supervisory Control and Data Acquisition (SCADA) network.

BID RESULTS

The project was advertised on June 12, 2024, and a pre-bid meeting was held on June 18, 2024, with three construction firms in attendance. Two construction bids were received and opened on July 1, 2024. The lowest responsive bid was received from Valley Electric Co. of Mt. Vernon (Valley) in the amount of \$879,947, which is two percent lower than the engineer’s construction cost estimate. The table below shows bid results.

COMPANY NAME	BID AMOUNT + 10.2% WA SALES TAX
* Valley Electric Company of Mt. Vernon	\$879,947
McClure and Sons, Inc.	\$1,134,810
Engineer’s Estimate	\$897,623

**Lowest responsive bidder*

The lowest responsive bidder, Valley, has completed many electrical systems repair, replacement, and upgrade projects for public agencies across the Pacific Northwest. These include projects of similar scopes of work within the last four years for the University of Washington, the City of Lynnwood, and Snohomish County Public Utility District. More notably, they are currently working with the City on the SCADA Sewer Equipment Replacement project, which includes work at all eighteen pump stations. Valley is also performing complete upgrades to sewer Pump Station 11 as part of King County’s North Mercer Island Interceptor and Enatai Interceptor project.

Review of the Labor and Industries (L&I) website confirms Valley is a contractor in good standing with no license violations, outstanding lawsuits, or L&I tax debt. Based on the review of the Valley bid submittal and reference checks, staff has determined that Valley is the lowest responsive bidder for this project and staff recommends awarding the project to Valley.

PROJECT BUDGET

RH2, having completed the project design, will provide support services during construction and Brown and Caldwell, the City’s contracted programmer, will provide SCADA software configuration services. City staff will provide project management and perform inspection services.

Adding costs for contingency and this supporting work brings the total estimated cost of the project to \$1,102,212, which exceeds the approved 2023-2024 budget. Factors that increased cost include expansion of scope to address NEC, NFPA, and IFC code requirements, structural design and replacement of structurally deficient vault lids and inflation. Project costs are summarized in the table on the following page.

SEWER PUMP STATION GENERATOR REPLACEMENT (SU0109) PROJECT BUDGET	
DESCRIPTION	TOTAL
Construction	\$798,500
Washington State Sales Tax @ 10.2%	\$81,447
Total Construction Contract Award to Valley Electric Co. of Mt Vernon	\$879,947
Project Design (RH2)	\$63,265
Construction Contingency – 10%	\$87,995
Construction Support Services (RH2)	\$46,125
Project Management/Utility Team	\$12,589
Inspection Services	\$7,700
SCADA Software Configuration (Brown and Caldwell)	\$4,591
Total Estimated Project Cost	\$1,102,212
Total 2023-2024 Budget Available for Project SU0109	\$403,562
Budget Appropriation Needed	\$698,650

Staff proposes appropriating the additional \$698,650 needed to complete this critically important project from the existing Sewer Fund balance. At completion of the contract, any funds not used on this project will remain in the Sewer Fund.

NEXT STEPS

Staff recommends awarding the bid to Valley, authorizing the City Manager to execute a contract with Valley for construction of the Sewer Pump Station Generator Replacement project, appropriating the necessary funds to complete the construction, and setting the total project budget to \$1,102,212.

Work on this project will begin as soon as feasible; however, easement restrictions for Pump Station 25 do not allow any work between Memorial Day to Labor Day and long equipment lead-times of up to 52 weeks will delay the construction start until next year. Nonetheless, approval of the bid award is needed now to procure the equipment. Construction is tentatively scheduled to begin in August of 2025 and will take six weeks to complete. Prior to the start of construction, residents near the project sites will be notified of the upcoming work.

After project completion, the service life of both station generators will be extended to 2050. This cycle of the generator replacement program for the 18 stations in the sewer system will be complete, and the program will not restart until 2027 per the City’s General Sewer Plan.

RECOMMENDED ACTION

Award the Sewer Pump Station Generator Replacement project to Valley Electric Co of Mt Vernon, a Washington-based company, in the amount of \$879,947, authorize the City Manager to execute a contract with Valley Electric Co of Mt Vernon for the construction of the Sewer Pump Station Generator Replacement project, and appropriate \$698,650 from the Sewer Fund balance and set the project’s total budget at \$1,102,212.