

BUSINESS OF THE CITY COUNCIL CITY OF MERCER ISLAND

AB 6655 April 15, 2025 Consent Agenda

AGENDA BILL INFORMATION

TITLE:	AB 6655: Booster Pump Station Upgrades Project Change Order & Appropriation Request	 Discussion Only Action Needed: Motion Ordinance Resolution
RECOMMENDED ACTION:	Appropriate \$175,000 to cover unforeseen construction expenses on the Reservoir Booster Pump Station Upgrades Project.	

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

AMOUNT OF EXPENDITURE	\$ 2,330,000
AMOUNT BUDGETED	\$ 2,155,000
APPROPRIATION REQUIRED	\$ 175,000

EXECUTIVE SUMMARY

The purpose of this agenda bill is to appropriate \$175,000 from the Water Fund to cover unforeseen construction expenses to complete the Reservoir Booster Pump Station Upgrades Project (90.40.0034).

- On March 19, 2024, the City Council set the total project budget to \$2,155,000 and awarded the Booster Pump Station Project to Strider Construction in the amount of \$1,726,011 (<u>AB 6430</u>).
- On September 6, 2024, existing pumps No. 2 and No. 3 failed irreparably, leaving only two operable pumps. Pump No. 5 was already out of service prior to the project start.
- On September 23, 2024, to restore station operations, the City expedited shipping and installation of two pumps, two standard pump motors, and related mechanical fittings. The overhead hoist was damaged during the installation process. The project's construction contingency of \$172,601 was depleted to cover these additional costs.
- On February 4, 2025, the Contractor discovered a leak in an existing 24 inch fitting. Fixing the leak will require cutting in a new valve and field welding to avoid shutting off water to the Island's largest pressure zone or, alternatively, installing a temporary station bypass.

- The project schedule and design changes resulting from these events have led to costs exceeding their original estimates.
- Work to replace the leak is tentatively scheduled to begin on April 21, 2025 and will take three to five days to complete.
- An appropriation of \$175,000 from the Water Fund is needed to cover the additional unforeseen construction expenses.
- The project is currently 80% complete with final completion anticipated for the end of May 2025.

BACKGROUND

On April 10, 2024, following City Council's approval of <u>AB 6430</u>, the Booster Pump Station Project (90.40.0034) budget was set at \$2,155,000, and a notice to proceed was issued to Strider Construction. The primary scope of the project included replacing the five existing vertical turbine pumps (Pumps 1 through 5) with new Peerless 100 HP vertical split case pumps, as well as installing two smaller Grundfos 25 HP vertical multi-stage pumps (Pumps 6 and 7) at the City's Reservoir site. Upon completion, the project will eliminate the old mercury-containing pumps, improve hydraulic efficiency across all service demand levels, reduce future energy costs, and extend the service life.

Initially, construction was scheduled to begin on January 6, 2025 based on the manufacturer's delivery estimates for the new pumps. However, on September 6, 2024, existing pumps No. 2 and No. 3 failed irreparably, leaving only two pumps operational at the station. Pump No. 5 had already been out of service prior to the project's start.

In response, the City coordinated with Strider Construction and the pump distributor to expedite the shipping and installation of two Peerless 100 HP vertical split case pumps, standard motors, and related mechanical fittings. The City was able to replace the failed pumps months ahead of schedule, restoring full station operation and ensuring continued service availability. However, this expedited action incurred additional costs, and the station's overhead hoist was damaged in the process.

The replacement of Pumps 4 and 5, followed by Pump 1, proceeded as planned into the new year. By February 2025, all five pumps had been successfully replaced, and Strider Construction shifted focus to the installation of the new smaller "jockey pumps" (Pumps 6 and 7). However, on February 4, 2025 while preparing for construction, the contractor discovered a leak in an existing 24-inch fitting.

Repairing this leak requires additional engineering work, including the installation of new valves and field welds to avoid shutting off water to the Island's largest pressure zone, or alternatively, the installation of a temporary station bypass.

ISSUE/DISCUSSION

The unexpected failure of Pumps 2 and 3 at the start of the project led to the early depletion of the \$172,601 construction contingency. Despite this, the project has progressed to 80% completion, with only minor changes. However, the recent discovery of a leak has necessitated additional engineering design support and an expanded scope of work for the construction contractor.

SCOPE OF WORK FOR REPAIR OF LEAK IN PUMP SUCTION HEADER PIPING

City staff, in collaboration with RH2 Engineering, developed a comprehensive plan to address the leaking fitting. The solution involves installing a line stop in the 24-inch welded steel pipe between Pumps 2 and 3.

This line stop will isolate the section of the suction header with the fitting, while maintaining system pressure with Pumps 3, 4, and 5.

Additionally, a dismantling joint, butterfly valve, and two welded flanges will be installed between Pumps 1 and 2, allowing flexibility for future maintenance of the suction header or pump suction valves. The leaking fitting will be replaced with a new 24-inch tee, a dismantling joint, and welded flange between the existing 24-inch butterfly valve and Pump 1. This repair will permanently fix the defective section of piping and provide ability for future maintenance. Notably, implementing a line stop is significantly more cost-effective than a temporary station bypass.

ADDITIONAL APPROPRIATION REQUEST

An additional \$175,000 is needed to cover the cost of the pump suction header piping repair and complete the project. This represents an 8.1% increase to the project budget, and the funds will be allocated from the Water Fund. Updated project costs are shown in the table below.

RESERVOIR BOOSTER PUMP STATION UPGRADES				
PROJECT ELEMENTS	ORIGINAL BUDGET	UPDATED BUDGET		
Construction Contract (Strider)	\$1,726,011	\$1,726,011		
Change Orders 1 & 2 (Strider)		\$36,102		
Change Order 3 (Leak Repair) (Strider)		\$117,731		
Construction Contingency	\$172,601	\$25,000		
Construction Engineering Support (RH2)	\$79,938	\$192,986		
Project Management/Utility Team (City)	\$20,400	\$40,402		
Inspection Services (City & Krazan)	\$70,050	\$31,350		
SCADA Software Configuration (Brown & Caldwell)	\$86,000	\$52,191		
Expedited Pump Delivery (Pump Tech)		\$99,262		
Overhead Hoist Replace (Crane Tech)		\$8,965		
TOTAL PROJECT COST	\$2,155,000	\$2,330,000		
BUDGET APPROPRIATION NEEDED		\$175,000		

NEXT STEPS

Upon approval of the appropriation, staff will process the change order to proceed with the work to repair the leak. Thirty-four working days will be added to the project, setting the new completion date to the end of May 2025.

RECOMMENDED ACTION

Appropriate \$175,000 from the available balance within the Water Fund to complete construction of the Reservoir Booster Pump Station Upgrades Project (90.40.0034).