BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND

AB 6512
July 16, 2024
Consent Agenda

AGENDA BILL INFORMATION

TITLE:	AB 6512: 2024 Asbestos Cement (AC) Water Main Replacement Bid Award	☐ Discussion Only ☒ Action Needed: ☒ Motion ☐ Ordinance ☐ Resolution
RECOMMENDED ACTION:	Award the 2024 AC Water Main Replacement construction contract to Kar-Vel Construction and set the total project budget to $5,151,289.	

DEPARTMENT:	Public Works
STAFF:	Jason Kintner, Chief of Operations Patrick Yamashita, Deputy Public Works Director Clint Morris, Capital Division Manger George Fletcher, Senior CIP Project Manager
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	$ 5,151,289
AMOUNT BUDGETED	$ 3,159,000
BUDGET ADJUSTMENT	$ 1,992,289

EXECUTIVE SUMMARY

The purpose of this agenda bill is to award a public works construction contract to replace Asbestos Cement (AC) water main pipe in the upper Mercerwood neighborhood and Greenbrier Lane (Exhibit 1).

- This project replaces over 5,100 feet of AC water main, along with water services, fire hydrants, and other critical water distribution system components.
- A total of 4,300 feet of this project (WU0135) is included in the 2023-2024 Biennial Budget and Capital Improvement Program (CIP) with a total project budget of $3,159,000, funded by the Water Fund.
- Approximately 800 feet of additional AC water main was accelerated for replacement and added to this project due to multiple water main breaks (2014, 2021, and 2023) and subsequent private property damage in 2022-2023. This section of AC water main was originally scheduled for replacement in 2025-2026.
- One contractor bid was received, at a price of $3,737,940. Staff recommends repurposing $1,992,289 from the 2024 Water System Improvements project (WU0131) to fully fund the project.
- Construction is scheduled to occur from September 2024 through May 2025.

BACKGROUND

One of the City's top priorities is to provide safe and reliable drinking water to the community. A major component of achieving that goal is ongoing, planned replacement of portions of the water system that have reached the end of their service life. Each biennium, the City constructs at least one water main replacement project and performs other capital water system upgrades. During each Capital Improvement Program (CIP) budget planning process, City staff evaluate and prioritize water mains for replacement using a scoring matrix that applies rating factors to attributes such as pipe material, age, diameter, condition, water quality, and fire flow.

The City owns and maintains approximately 115 miles of water mains, ranging in size from 4-inches to 30-inches in diameter. Just under 5 miles of those were constructed using Asbestos Cement pipe (also known as "AC" pipe). This material was widely used from the 1940's to the early 1980's for both water and sewer systems; however, as this material reaches its middle and late stages of useful life, it is prone to failure. For pressurized pipes such as water mains, these failures can be catastrophic in nature, where several feet of the pipe can burst or split open.

The City has prioritized the replacement of all known AC pipe within the City's water system over the next six years. While several small areas of AC pipe have been removed from the water system over the past two years as part of other water main replacements, the 2024 AC Main Replacement project is the first all-AC pipe project that will occur over the next several years. The first area identified for AC replacement is the Mercerwood neighborhood in the northeastern part of Mercer Island. Developed in the late 1950's and early 1960's, it is one of the oldest parts of the City's water infrastructure.

Water mains in this area are predominantly AC pipe, in 4-, 6-, and 8-inch sizes. Some of the mains have a history of breaks, some are undersized, many of the water services are galvanized pipe in need of replacement, and many of the hydrants are obsolete. Given the extensive length of AC pipe in Mercerwood, it will take multiple years and multiple projects to replace all of it.

This project will provide timely water system upgrades by strengthening the distribution system, increasing fire flow, improving water quality, replacing aging water services, and taking AC mains out of the water system.

Design work began in October 2023. During the early stages of design, several catastrophic water main breaks occurred to the AC main one block away from the areas identified for the 2024 replacement project, causing private property damage. Given the proximity to the current scope, an 800-foot section of AC main was added to the project (which was originally planned for 2025-2026). That addition significantly increased the cost of the 2024 project. Design work was completed in early June 2024, and the project was then advertised for bids. At completion of design, the engineer's estimated construction cost was $3,847,000.

ISSUE/DISCUSSION

PROJECT DESCRIPTION

The 2024 AC Water Main Replacement project (WU0135) consists of installing 5,100 feet of new 8-inch ductile iron water main, 9 new fire hydrants, 92 water services, and 5 connections to existing water mains.

The project will remove almost one mile of aging AC main from the water system. The 2024 AC replacement project includes work in the following locations (Exhibit 1):

- 3700 Block of Greenbrier Lane south to SE 40th Street
- 93rd Avenue SE from Mercerwood Drive to SE 43rd Street
- 94th Avenue SE from 93rd Ave SE to SE 43rd Street
- SE 43rd Street from 93rd Avenue to 94th Avenue SE
- Crestwood Place

BID RESULTS

One construction bid was received and opened on June 27, 2024. That bid was received from Kar-Vel Construction with a price of $3,737,940, which is approximately 2.8% below the engineer's upper range construction cost estimate. The following table shows the bid results.

COMPANY NAME	TOTAL BID AMOUNT INCLUDING 10.2% WASHINGTON SALES TAX
Kar-Vel Construction	$3,737,940
Engineer's Estimate:	**Range: $3,011,000 - $3,847,000**

During the time this project was advertised for bids (June 13-June 27), the construction market had numerous similar utility projects available for bid in the region. After the bid opening, staff discussed the single bid response with the design consultant, Consor Inc, and contacted two contractors that were on the plan holder's list. One contractor said their resources were stretched too thin to bid on the Mercer Island project. The other had an issue with their bonding and could not submit a bid on time but had planned on bidding. Timing of the project's bidding period was likely a factor in the limited bid response. However, rebidding the project in the current bidding environment will not guarantee more bids or a lower bid.

The apparent low bidder, Kar-Vel Construction (Kar-Vel), based in Renton, Washington was established in 1990. They have completed several water main and utility infrastructure construction projects for public agencies and private developments in Western Washington, including the City's 2023 Water System Improvements project, which was completed on time and under budget. Currently, Kar-Vel is constructing a water main project for the City of Tukwila.

A review of the Labor and Industries (L&I) website confirms Kar-Vel Construction is a contractor in good standing with no license violations, outstanding lawsuits, or L&I tax debt. Based on review of Kar-Vel's bid submittal and reference checks, staff has determined that Kar-Vel is the lowest responsive bidder for this project and staff recommends awarding the 2024 AC Water Main Replacement project to Kar-Vel Construction.

PROJECT BUDGET

Adding costs for project design, construction contingency, inspection, and project management brings the total estimated project cost to $5,151,289. Historically, staff apply a 20% contingency for utility construction due to the unknowns associated with underground work. However, with this larger project, staff are recommending a 15% contingency. Staff reduced the contingency since recent water main replacement projects have utilized little to no contingency. Project costs are summarized in the table on the following page.

2024 AC WATER MAIN REPLACEMENT PROJECT PROJECT BUDGET (WU0135)	
Description	**TOTAL**
Construction	$3,391,960
Washington State Sales Tax @ 10.2%	$345,980
Total Construction Contract Award to Kar-Vel Construction	**$3,737,940**
Construction Contingency @ 15%	$560,691
Project Design - Consultant	$469,358
Construction Support Services - Consultant	$33,300
Project Management/In-House Staff Support	$250,000
Construction Inspection	$100,000
Total Project Cost	**$5,151,289**
2023-2024 Budget Available for Project WU0135	**$3,159,000**
Additional Budget Resources Required	**$1,992,289**

To complete this project as currently designed and bid, additional funds are needed. Staff recommends repurposing $1,992,289 from the 2024 Water System Improvements project (WU0131) to fully fund the 2024 AC Water Main Replacement project (WU0135).

These resources are available due to the staff team delaying the bid award and construction for the 2024 Water System Improvements project until January 2025. The 2024 Water System Improvements, which is another water main replacement project, will be reprogrammed to 2025 and included in the 2025-2030 CIP. Any unspent funds remaining at the end of the current biennium will remain in the Water Fund.

NEXT STEPS

Public agencies, contractors, and suppliers are still experiencing shortages of materials and long lead times on critical items, such as ductile iron pipe, brass pipe fittings, and other water system accessories. Staff anticipates construction work will begin in September of 2024 and completion of the entire project is expected in May 2024. Staff will work closely with the Kar-Vel team to manage the project timeline and work schedule.

RECOMMENDED ACTION

Award the 2024 AC Water Main Replacement project to Kar-Vel Construction, authorize the City Manager to execute a contract with Kar-Vel Construction in an amount of $3,737,940, and set the total project budget at $5,151,289.