



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

**AB 5805
February 2, 2021
Consent Calendar**

AGENDA BILL INFORMATION

TITLE:	AB 5805: Bid Acceptance: SCADA-Water Equipment Replacement Project	<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 SCADA-Water Equipment Replacement project to Bainbridge Island Electric in the amount of \$367,609 and direct the City Manager to execute the construction contract.	

DEPARTMENT:	Public Works
STAFF:	Jason Kintner, Public Works Director Allen Hunter, Utilities Operations Manager
COUNCIL LIAISON:	n/a
EXHIBITS:	1. Map of Five SCADA Water Sites
CITY COUNCIL PRIORITY:	n/a

AMOUNT OF EXPENDITURE	\$ 367,609
AMOUNT BUDGETED	\$ 533,769
APPROPRIATION REQUIRED	\$ n/a

SUMMARY

Water distribution and sewer collection for the City are monitored and controlled remotely by two separate systems: 1) Supervisory Control and Data Acquisition (“SCADA”) for water; and 2) Telemetry for sewer; collectively referred to as SCADA. Due to the varied age and condition of both systems the technology has become obsolete, causing the systems to be unreliable and incapable of meeting the City’s needs.

This agenda bill provides an overview of the SCADA project, the design process, upgrades to the water system, information about the bid results, and staff’s recommendation for awarding the project.

BACKGROUND

In 2017, the City was informed that critical components of the SCADA system were obsolete and no longer available by the manufactures. In addition, frequent alarms, fragmented SCADA components, and loss of reliability within the system prompted an internal evaluation and planning process for replacement of the SCADA system.

The City hired Brown and Caldwell, an engineering firm specializing in SCADA system planning for sewer and water utilities, to help reduce risk, improve redundancies, and design a new SCADA system. These planning

efforts laid the framework for expanding and upgrading the entire SCADA system, which standardizes on the Siemens WinCC OA platform. This platform will provide a consistent, fully integrated, secure monitoring system for water and sewer that improves reliability and operations.

Design and programming work for the SCADA system replacement began in March 2019 with the original intent to bid the water and sewer platforms as one construction package. However, during the design process, it became apparent that the sewer utility was more complex (due to permitting requirements and National Fire Protection Agency 820 Standards).

As a result, the City decided to split the construction advertisement for the SCADA replacement between the two utilities. The SCADA project for the Water Utility was advertised on December 21, 2020 and is ready for construction award. Design and programming for the sewer sites is underway and is expected to be advertised in fall 2021.

PROJECT DESCRIPTION

This project will replace the existing SCADA equipment at five water sites (see Exhibit 1), with equipment programming supplied by Brown and Caldwell under their current contract. Work will involve replacing the programmable logic control panels, field testing and commissioning services for the new control system equipment, associated electrical work, and training operators on the new technology platform.

The project has a single bid schedule based on the type of work performed at each site, such as electrical. Replacing the equipment will occur in phases, starting and finishing a single location before moving to the next. Temporary power will be provided as part of cutover times so that minimal disruption to customers is achieved.

Final plans, specifications, and cost estimates were completed for the SCADA Water Equipment Replacement in fall of 2020 and the project was advertised in mid-December. Bids were received in mid-January and staff is ready to award the construction contract for the water utility.

BID RESULTS AND AWARD RECOMMENDATION

Three construction bids were received and opened on January 14, 2021. The apparent lowest bid was from Bainbridge Island Electric in the amount of \$367,609, which includes Washington State sales tax. A summary of the bid results is provided below:

TABLE 1: BID RESULTS	
Company Name	Total Bid Amount
Bainbridge Island Electric	\$367,609
Technical Systems, Inc. (TSI)	\$387,387
Automated Building Controls Specialist, LLC DBA Albireo Energy, LLC	\$475,390
Engineer's Estimate Cost (range)	\$329,000 to \$465,000

Bainbridge Island Electric is an experienced electrical company doing business since 1975. They have worked with many other public agencies installing electrical equipment and controls for utilities. Bainbridge Island Electric also worked for the City last year as an electrical subcontractor on a successful Utilities project (Replacing 5 Variable Frequency Drives at the Reservoir). The system's integrator subcontractor that will be

used on this project will be Quality Controls Corporation; they are experienced in the water and wastewater industry with work on other control system projects.

A review of the Labor and Industries (L&I) website confirms both Bainbridge Island Electric and Quality Controls Corporation is a contractor in good standing, with no license violations, outstanding lawsuits, or L&I debt. Based on staff’s review of the bid submittals and reference checks, Bainbridge Island Electric is the lowest responsive and responsible bidder for the project.

PROJECT BUDGET

Table 2 summarizes the overall project costs and available budget. **No funding appropriation is required.**

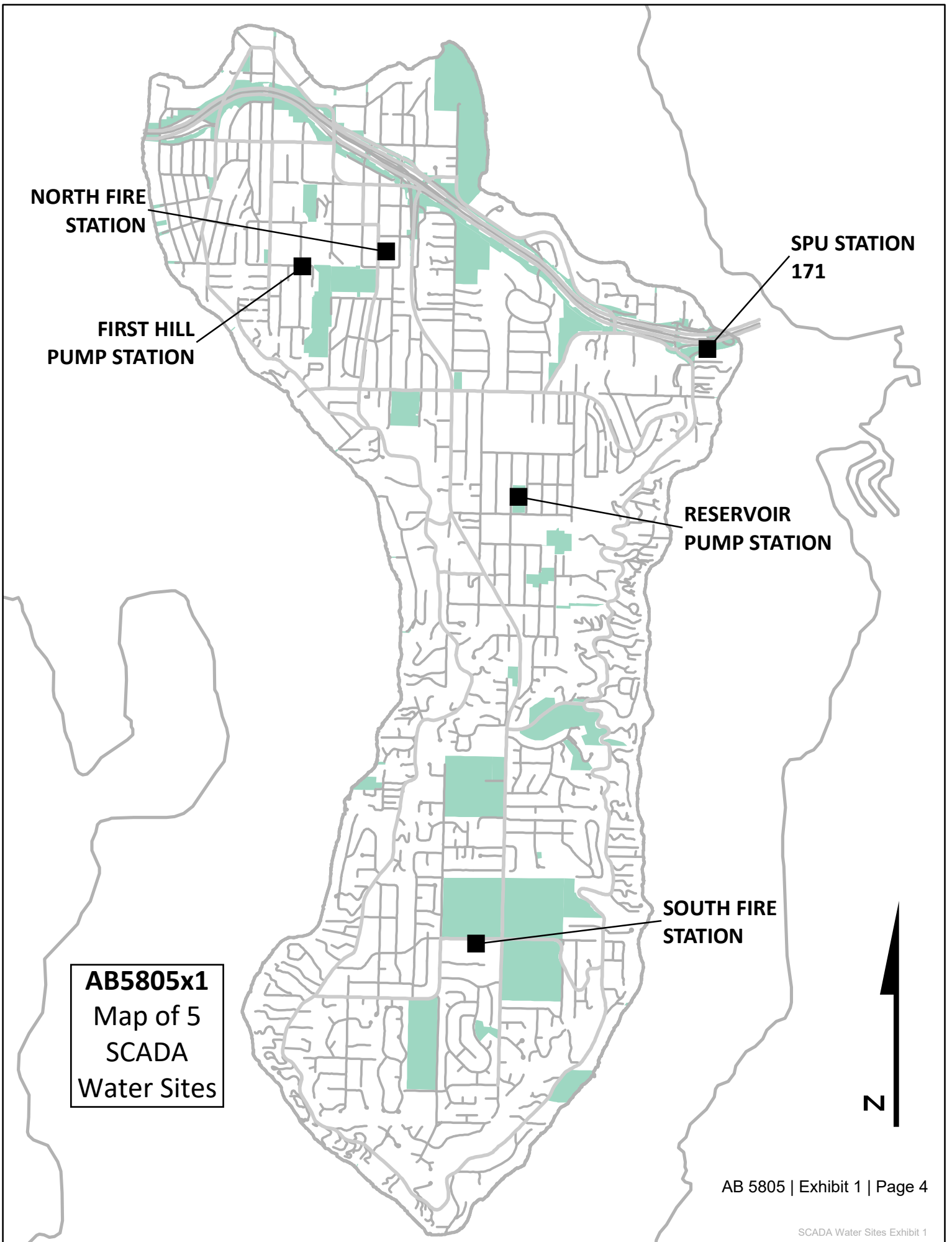
TABLE 2: PROJECT BUDGET	
Description	Project Budget
Construction Contract	\$367,609
Construction Contingency (10%)	\$36,761
Project Management	\$72,787
Inspection Services	\$56,612
Total Project Cost	\$533,769

The complete project schedule is within the approved funding of \$675,000 set in the 2021-2022 Budget.

Construction activities for the SCADA-Water Equipment Replacement are scheduled to begin in March and be completed by October 2021. Water distribution repair is deemed an essential activity to provide for public health, amid the COVID-19 Pandemic, as authorized under the Stay Home, Stay Healthy Order.

RECOMMENDATION

Award the SCADA-Water Equipment Replacement project to Bainbridge Island Electric in the amount of \$367,609 and direct the City Manager to execute the construction contract.



**NORTH FIRE
STATION**

**FIRST HILL
PUMP STATION**

**SPU STATION
171**

**RESERVOIR
PUMP STATION**

**SOUTH FIRE
STATION**

AB5805x1
Map of 5
SCADA
Water Sites

