

**WEST SOUND UTILITY DISTRICT
RESOLUTION 603-16**

**A RESOLUTION OF THE
WEST SOUND UTILITY DISTRICT BOARD OF COMMISSIONERS
AUTHORIZING AN ADDENDUM TO THE PROFESSIONAL
SERVICES CONTRACT WITH BHC ENGINEERS, INC. TO
PROVIDE FINAL DESIGN SERVICES FOR
WELL #1 RESERVOIR AND WELL #22 PROJECTS**

WHEREAS, on September 21, 2015, the District selected BHC Engineers, Inc. to perform preliminary engineering services for the development of a new Well #1 reservoir and installation of Well #2 pump house; and

WHEREAS, on April 4, 2016, the District expanded the scope of BHC services for the preparation of preliminary engineering plans for the Well #1 reservoir and pump house; and

WHEREAS, it is of interest to the District to expand the scope of engineering services by having BHC provide final design and construction document preparation services for the Well #1 reservoir and pump house and Well #22 pump house; NOW, THEREFORE,

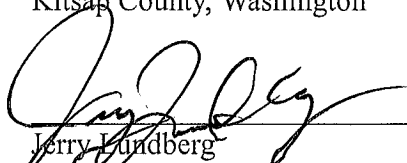
THE BOARD OF COMMISSIONERS OF WEST SOUND UTILITY DISTRICT HEREBY RESOLVES:

Section 1. The Board of Commissioners hereby approves the attached addendum to the professional services contract (Exhibit "A") from BHC Engineers, Inc. for prepare final design and construction document services for the Well #1 reservoir and pump house and Well #22 pump house.

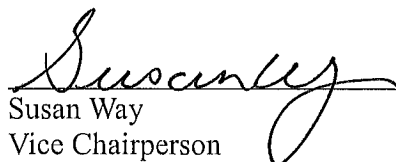
Section 2. The General Manager is hereby authorized to execute the addendum to this professional service contract with BHC Engineers, Inc. for an additional amount not to exceed \$112,752, plus an \$11,300 contingency for potential BHC engineering services during permitting, bidding and construction.

APPROVED and ADOPTED by the Board of Commissioners of West Sound Utility District at a Board meeting scheduled on May 16, 2016.

WEST SOUND UTILITY DISTRICT
Kitsap County, Washington



Jerry Lundberg
Chairperson



Susan Way
Vice Chairperson



James J. Hart, Secretary

ATTACHMENT A
Amendment #2
West Sound Utility District
Well #22 Well House and Well #1/#5 Reservoir and Pump Station
Scope of Work
Engineering Services

Project Understanding

West Sound Utility District (the District) is requesting engineering services for two projects: the Well #22 Well House and the Well #1/#5 Reservoir and Pump Station. Each project is described briefly below.

Well #22 Well House

Well #22 was installed in 2011 to a depth of 1,525 ft, and the well has the potential to produce 500 gallons per minute (gpm). The Well #22 site also contains Well #9R which was installed in 2011 to a depth of 744 ft and has the potential to produce 200 gpm. Well #9R contains levels of manganese and hydrogen sulfide that may require treatment.

Both wells are located on a District owned parcel east of Lund Ave SE, near the intersection with SE Greenbriar Place. The property is bordered by single family homes which may be sensitive to noise and odor. This property has a history of vandalism and illegal dumping.

This project consists of installing a well pump and constructing a new pump house and treatment facilities to perfect the water right for Well #22. At this time, it is the District's intent that only Well #22 will be operational. Provisions to accommodate future operation of Well #9R should be included in the design.

Preliminary design work and a draft Project Report were completed in January 2016. The preliminary design work included limited water quality testing. Recommendations for Well #22 included chlorination using bulk sodium hypochlorite and fluoridation using sodium fluoride; no additional treatment was recommended.

Well #1/#5 Reservoir and Pump Station

This project consists of replacing the existing Well #1/#5 reservoir with a new smaller capacity reservoir that serves the adjacent booster pump station. The existing booster pump station will also be replaced with a new station that provides the needed capacity to pump from the Well #1/#5 reservoir to the Powell Reservoir in the 314 pressure zone.

A draft Project Report was completed in January 2016, and a Reservoir and Pump Station Evaluation Technical Memo was completed in April 2016. The Technical Memo recommended that the reservoir be approximately 23,000 gallons and the pump station be a duplex system that includes two redundant 800 gpm pumps, with one placed in a standby mode.

Aeration treatment to strip hydrogen sulfide from the well water is also required. The above ground portion of the existing reservoir will be demolished and the existing pump station will be removed. The foundation of the existing reservoir and below ground utilities may or may not be demolished,

depending on District preferences and design requirements. Gas chlorination and fluoridation facilities are located adjacent to the existing booster pump station and these facilities will remain in place.

The project site is located east of Retsil Road within Veterans Memorial Park which is owned by the Kitsap County Parks with an easement benefitting the District.

A landslide near the south side of the existing reservoir occurred in 1998. The existing reservoir was constructed in April 1966, is of welded steel construction, and serves pressure zone 314. The reservoir is 47 ft in diameter and 8 ft high, for a total capacity of 103,820 gallons. The base elevation is 111 ft and the overflow elevation is 119 ft. The reservoir may contain lead paint beneath the most current re-coating which was done in November 2000.

The District desires to begin construction of these projects in October 2016.

Scope of Work

Task 1: Project Management, Coordination and QA/QC

- a. Coordinate with District staff and project team.
- b. Prepare and submit monthly invoices.
- c. Coordinate and meet with District staff.
- d. A senior level principal will review all documents before they are submitted to the District as part of the BHC QA/QC Program. The review will be both a constructability review and document review to ensure the documents meet industry standards of care. This will occur at the 90% and 100% complete stages of design.
- e. Conduct up to one meeting with the Washington State Department of Health (DOH).

Task 1 – District Responsibilities:

- a. Review meeting minutes.

Task 1 – Assumptions:

- a. Meetings will include one BHC team member and will be held at District or DOH offices, as appropriate.

Task 1 – Deliverables:

- a. Monthly invoices.
- b. Meeting minutes.

Task 2: Project Report

- a. Prepare the DOH Project Report including project description, alternatives analysis, basis of design criteria, opinion of probable construction cost, and preliminary drawings. The draft Project Report prepared in January 2016 will be updated to include the booster pump station replacement and revised reservoir sizing criteria.

Task 2 – District Responsibilities:

- a. Review draft Project Report and provide comments.

Task 2 – Assumptions:

- a. The District is primarily responsible for public outreach related to the project. BHC can provide technical support (preliminary layouts, treatment description, etc.) for the outreach, as needed.
- b. Iron and manganese treatment is not required at either site. Chlorination at the Well #22 well house will be with a bulk hypochlorite system. The chlorination system at the Well#1/#5 site will remain in place and does not need to be altered.

Task 2 – Deliverables:

- a. Draft and Final copies of the DOH Project Report.

Task 3: Permitting Assistance

- a. Prepare Source Approval documents for Well #22. Some of the Source Approval materials have already been prepared by the hydrogeologist, Craig Russell, and were provided to the District. BHC will obtain that information from the District and provide the additional engineering elements (piping drawings, pump specifications, etc.) that are required as part of the Source Approval. The Source Approval documentation will be submitted to DOH.
- b. Submit Plans and Specifications for DOH approvals.
- c. Provide structural calculations for foundations to the District to be submitted to the County or City.

Task 3 – District Responsibilities:

- a. Provide Source Approval information prepared by Craig Russell.
- b. The District is primarily responsible for permitting and permit coordination. The District will coordinate with regulatory agencies and prepare permit related information including the SEPA checklist and Determination of Non-Significance, County and City permits, critical areas permits, and any other required permits.

Task 3 – Assumptions:

- a. It is assumed that a SEPA Determination of Non-Significance will be justified for the project. An EA or EIS will not be required. The District will be the lead agency for the SEPA process.
- b. A cultural resources or archaeological evaluation is not expected to be required and has not been included in this scope.
- c. Structural calculations for buildings and the reservoir will be provided by the Contractor via the submittal process. The District will then provide these calculations to the City or County.

Task 3 – Deliverables:

- a. Source Approval documentation to be submitted to DOH
- b. Plans and Specifications to be submitted to DOH.
- c. Structural calculations for foundations to be submitted to the District.

Task 4: Design Well #1/#5 Reservoir and Pump Station

BHC will design the Well #1/#5 Reservoir and pump station in accordance with the Project Report. It is anticipated that a performance specification approach will be used for the reservoir, pump station package, and prefabricated enclosures. Salient characteristics of the reservoir, pump station package, and prefabricated enclosures will be specified so that the contractor and suppliers can complete the design and construct the reservoir, pump station package, and prefabricated enclosures. The existing gas chlorination and fluoridation facilities will remain in

place. BHC will prepare the specifications for interior and exterior coatings and cathodic protection for the reservoir. BHC will perform the foundation design. Site improvements, including fencing, driving/parking surfaces, landscaping, drainage improvements, lighting, and signage will be designed per District requirements. Connection to the District's existing water distribution system will be designed. BHC will design necessary electrical power, instrumentation, and controls required for the new reservoir and pump station. Pre-engineered power, instrumentation, and control panels will be specified where possible. Deliverables will be provided at the following milestones:

- a. 90% completion - Review comments from the Project Report will be included in the 90% complete documents, and will include general and civil drawings; structural, mechanical and electrical plans and sections; and process and instrumentation diagrams. Specifications will include bidding documents and agreement, general conditions and special provisions, and technical specifications. An opinion of probable construction cost will also be included. District comments will be incorporated and the contract documents will be submitted to DOH for project construction approval.
- b. 100% completion - The 100% complete Contract Documents will address DOH review comments and serve as the bidding documents.

Estimated drawing list is shown in Attachment B.

Task 4 – District Responsibilities:

- a. The District will provide its standard Division 0 General Conditions and contract documents.
- b. District to review and approve final Well #1/#5 Reservoir and pump station site configuration.
- c. District to review and provide comments on submittals within one week of delivery.

Task 4 – Assumptions:

- a. It is assumed that the Well #1/#5 site does not contain areas of soil contamination. Addressing issues of soil contamination is out of scope for this project.
- b. The District is primarily responsible for coordination with the County on property, siting, and easement issues. The investigation or preliminary layout of multiple reservoir site locations is not included in this scope.
- c. The District maintains a portable standby generator. A connection for the portable generator will be provided at the reservoir and pump station; permanent standby power will not be provided.
- d. Reservoir and pump station structural design shall conform to the Kitsap County Building Code.
- e. Even though these are shown as separate tasks, one combined set of contract documents will be provided for the Well #1/#5 Reservoir and pump station and the Well #22 Well House.
- f. Plans will be developed in AutoCAD.
- g. Opinions of probable costs will be subject to levels of accuracy and contingency percentages recommended by AACE International (formerly the American Association of Cost Engineers) for different design development levels.

Task 4 – Deliverables:

- a. 90% Completion – Three (3) hardcopies (11"x17" half scale) and one electronic (PDF) copy of the 90% complete contract documents.

- b. 100% Completion – Three (3) hardcopies (11"x17" half scale), three (3) hardcopies (full scale), and one electronic (PDF) copy of the stamped 100% complete contract documents. Electronic deliverables will also be made available in original Word, Excel, or AutoCAD file format.

Task 5: Design Well #22 Well House

BHC will design the Well #22 Well House in accordance with the Project Report. The well house will be a prefabricated unit and contain valving, piping, and flowmeter; power and controls equipment; a separate chlorination system room; and fluoridation equipment. Hydrogen sulfide treatment will not be provided, per the water quality information as discussed in the Project Report. Site improvements, including fencing, driving/parking surfaces, landscaping, drainage improvements, lighting, and signage will be designed per District requirements. Connection to the District's existing water distribution system will be designed. BHC will integrate Well #22 into the District's existing I&C system. Pre-engineered power, instrumentation, and control panels will be specified where possible. Deliverables will be provided at the following milestones:

- a. 90% completion - Review comments from the Project Report will be included in the 90% complete documents, and will include general and civil drawings; structural, mechanical and electrical plans and sections; and process and instrumentation diagrams. Specifications will include bidding documents and agreement, general conditions and special provisions, and technical specifications. An opinion of probable construction cost will also be included. District comments will be incorporated and the contract documents will be submitted to DOH for project construction approval.
- b. 100% completion - The 100% complete Contract Documents will address DOH review comments and serve as the bidding documents.

Estimated drawing list is shown in Attachment B.

Task 5 – District Responsibilities:

- a. The District will provide its standard Division 0 General Conditions and contract documents.
- b. District to review and approve final Well #22 Well House site configuration.
- c. District to review and provide comments on submittals within one week of delivery.

Task 5 – Assumptions:

- a. It is assumed that the Well #22 site does not contain areas of soil contamination. Addressing issues of soil contamination is out of scope for this project.
- b. The hydrogeologist will address issues related to the well itself, including specifying the well pump and well head design.
- c. The District maintains a portable standby generator. A connection for the portable generator will be provided at the well house. Permanent standby power will not be provided at the well house unless energy requirements exceed the capacity of the District portable generators. If permanent standby power is needed at the well house, BHC will discuss with the District and an amendment to this scope and budget will be provided.
- d. Even though these are shown as separate tasks, one combined set of contract documents will be provided for the Well #1/#5 Reservoir and the Well#22 Well House.
- e. Plans will be developed in AutoCAD.
- f. Opinions of probable costs will be subject to levels of accuracy and contingency percentages recommended by AACE International (formerly the American Association of Cost Engineers) for different design development levels.