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To: [SRF AIS](#)
Cc: [John W. Desens](#); [McKinley, Suzanne](#)
Subject: Wolsey, South Dakota AIS Waiver Request for Wafer Style Check Valves and Butterfly Valves
Date: Thursday, July 9, 2020 9:27:51 AM
Attachments: [Pages from Specs - Wolsey Pump House Improvements.pdf](#)
[Sylax Butterfly Valves.pdf](#)
[Pages from Plans - Wolsey Pump House Improvements.pdf](#)
[Flomatic Check Valve.pdf](#)
[Wolsey Pump House Tentative Schedule.pdf](#)
[RE EXT Wolsey South Dakota AIS Request for Product Research Pre-Bid Opening.msg](#)

South Dakota DENR is formerly submitting an availability waiver request on behalf of the City of Wolsey, SD and AB Contracting LLC (see attached e-mail chain regarding lack of AIS compliant valve availability) for wafer style check valves and butterfly valves. The city of Wolsey has received a \$326,000 Drinking Water SRF loan for a pump house replacement project. The total construction contract amount is \$247,613.16, and the valves in question are [REDACTED] of the total contract. The project was recently bid and awarded with construction planned to start September 1, 2020 and the valves being needed approximately September 23, 2020 (see attached proposed schedule).

On May 21, 2020 South Dakota DENR was made aware that the engineer was not able to find AIS compliant specialty valves to fit within the design parameters of the project. The consulting engineer for the community had contacted suppliers and been informed that the valves currently specified are not AIS compliant, further the suppliers have indicated they are not aware of any AIS compliant manufactures for the specified valves. On that date South Dakota DENER requested EPA conduct pre-waiver market research to identify if any AIS compliant valves are available to meet the project requirements and specifications.

On June 4, 2020 based on the EPA market research it appeared valves manufactured by [REDACTED] would meet the project specifications and be AIS compliant. The consulting engineer informed all bidders of the proposed manufacturer and proceeded to open and award bids. After award of the bids AB Contracting LLC and their supplier Ferguson Waterworks contacted Davis Valves and were informed that the valves in question were not AIS compliant and that the contact provided for the company was no longer employed (see attached E-mail chain). As no other compliant manufacturers were found at the time the city, contractor and State of South Dakota are now proceeding with a formal availability waiver request.

Below is a description of the need for the specified valves and the quantity of each needed. Attached are the relevant pages from the specifications manual, plan sheets, and the manufacturers specification sheets regarding the valves in question.

Because of the existing building foundation size and location of the existing pump pedestals and outlet line to the tower, there are only 14 inches between flanges at the connections to each of the 2 new pumps. It is necessary to fit a butterfly valve and check valve within this 14-inch span for both pumps. This is the only way to take one pump out of service for future maintenance if needed (the check valves keep the tower pressure from pushing back at the pumps and the butterfly valves can be turned off if needed to take out a pump in the future).

Originally specified were Flowmatic 4888VFD or equal wafer style check valves and Flowmatic Sylax 3

full-lug style or equal butterfly valves. These wafer style valves fit against each other and are much narrower than standard valves, allowing them to fit in the 14-inch span. Regular valves would require about 36 inches or maybe more (to fit two of them in a row as needed), so they are not an option. Without butterfly valves, Wolsey would need to shut down their entire water distribution system if they needed to take out a pump for repair or replacement in the future, so we do not want to remove those valves from the design.

There are 3 butterfly valves (at [REDACTED] each as bid) and 2 wafer style check valves (at [REDACTED] each as bid) proposed.

If there are questions or additional information is needed please contact me. Thank you,

Andy Bruels, P.E.
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Water & Waste Funding Program
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This waiver request was submitted to the EPA by the state of South Dakota. All supporting correspondence and/or documentation from contractors, suppliers or manufacturers included as a part of this waiver request was done so by the recipient to provide an appropriate level of detail and context for the submission. There may be documents with project diagrams, schedules, and supplier correspondence in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing DWSRFWaiver@epa.gov.

2. The solenoid shut-off valve shall open and close via discrete electrical signals. The valve shall be equipped with a two-way solenoid valve that will allow the valve to open when energized.
3. The solenoid valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include a needle valve, Y-strainer, solenoid valve and isolation ball valves. The solenoid shut-off valve shall be operationally and hydrostatically tested prior to shipment.
4. The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. All ferrous surfaces shall be coated with 4 mils of epoxy. The main valve seat ring shall be bronze per ASTM B61. The needle valve and isolation ball valves shall be brass, and control line tubing shall be copper. The solenoid shall have a brass body, weatherproof enclosure and be suitable for operation on 115 volts.
5. The solenoid shut-off valve shall be suitable for pressures of 50 to 300 psi at flow rates up to 100 gpm.

2.06 CHECK VALVES

- A. Check valves shall be Flowmatic model 4888VFD or equal wafer style valve with ductile iron body, stainless steel valve guide, and stainless steel spring.

2.07 BUTTERFLY VALVES

- A. Butterfly valves shall be Flowmatic Sylax 3 Full-Lug Style or equal conforming to NSF/ANSI 61 and NSF/ANSI 372.

2.08 PIPING

- A. Refer to Section 33 1120 - Water Mains and Appurtenances
- B. Refer to Section 33 1220 - Interior pipping and Appurtenances

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All pumps, controls, piping and other appurtenances shall be installed, leveled, aligned and secured into position as recommended by the respective manufacturer and as required on the drawings and specified herein. The Contractor shall be responsible for coordinating electrical service connections between the control panel and the electrical utility company.

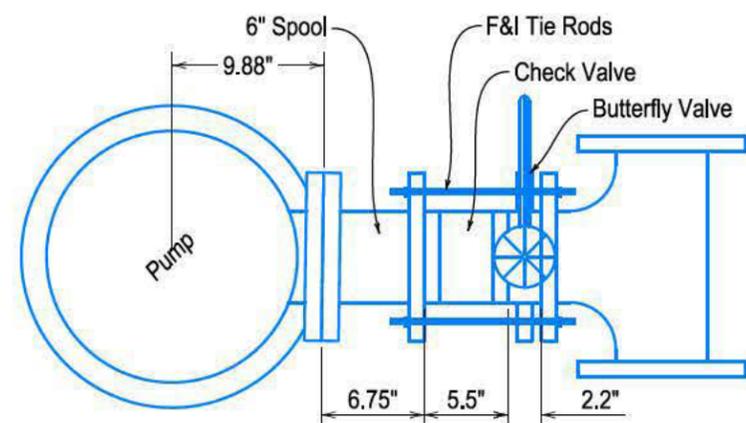
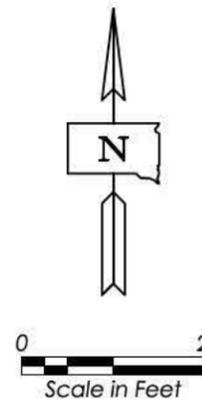
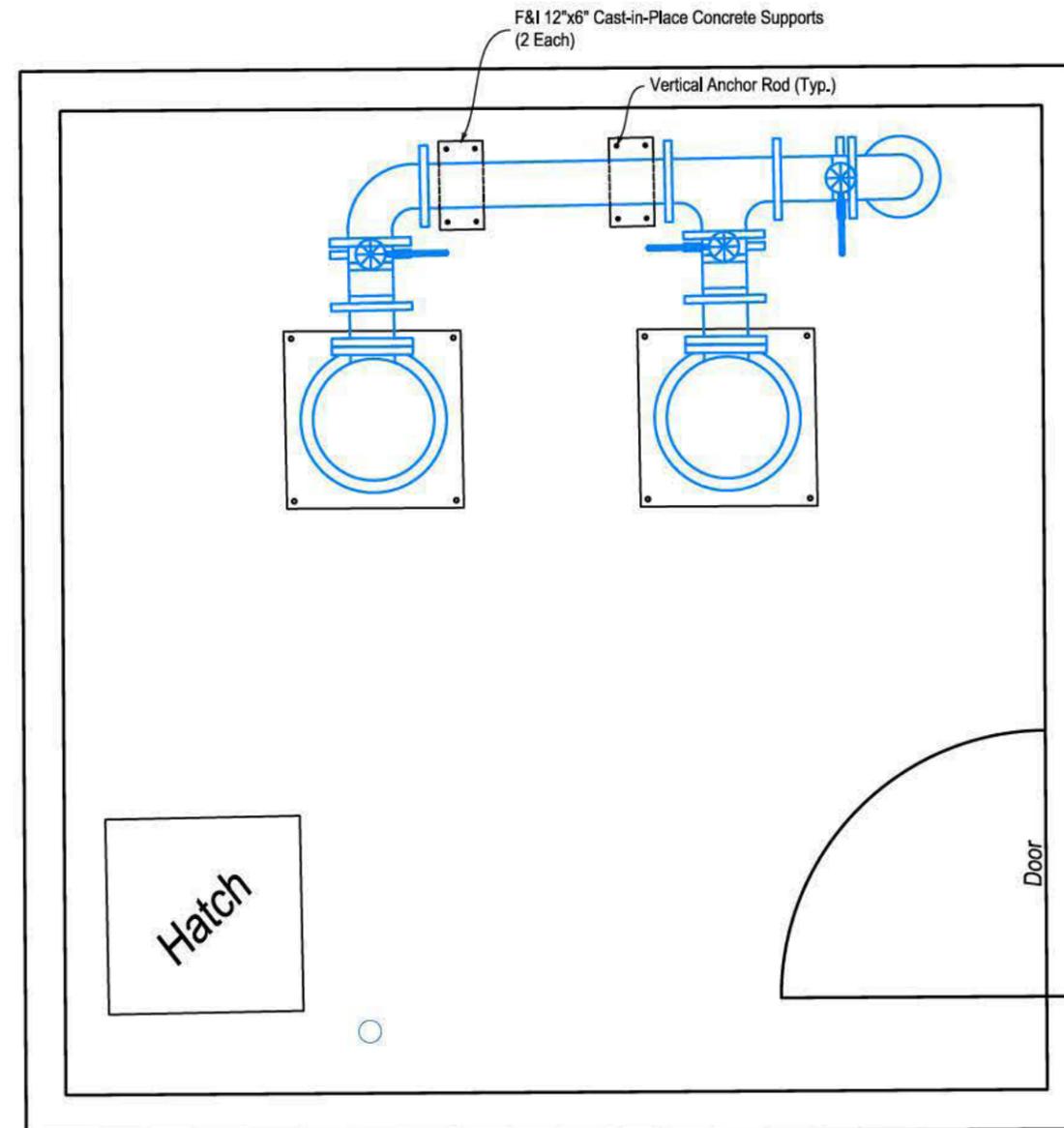
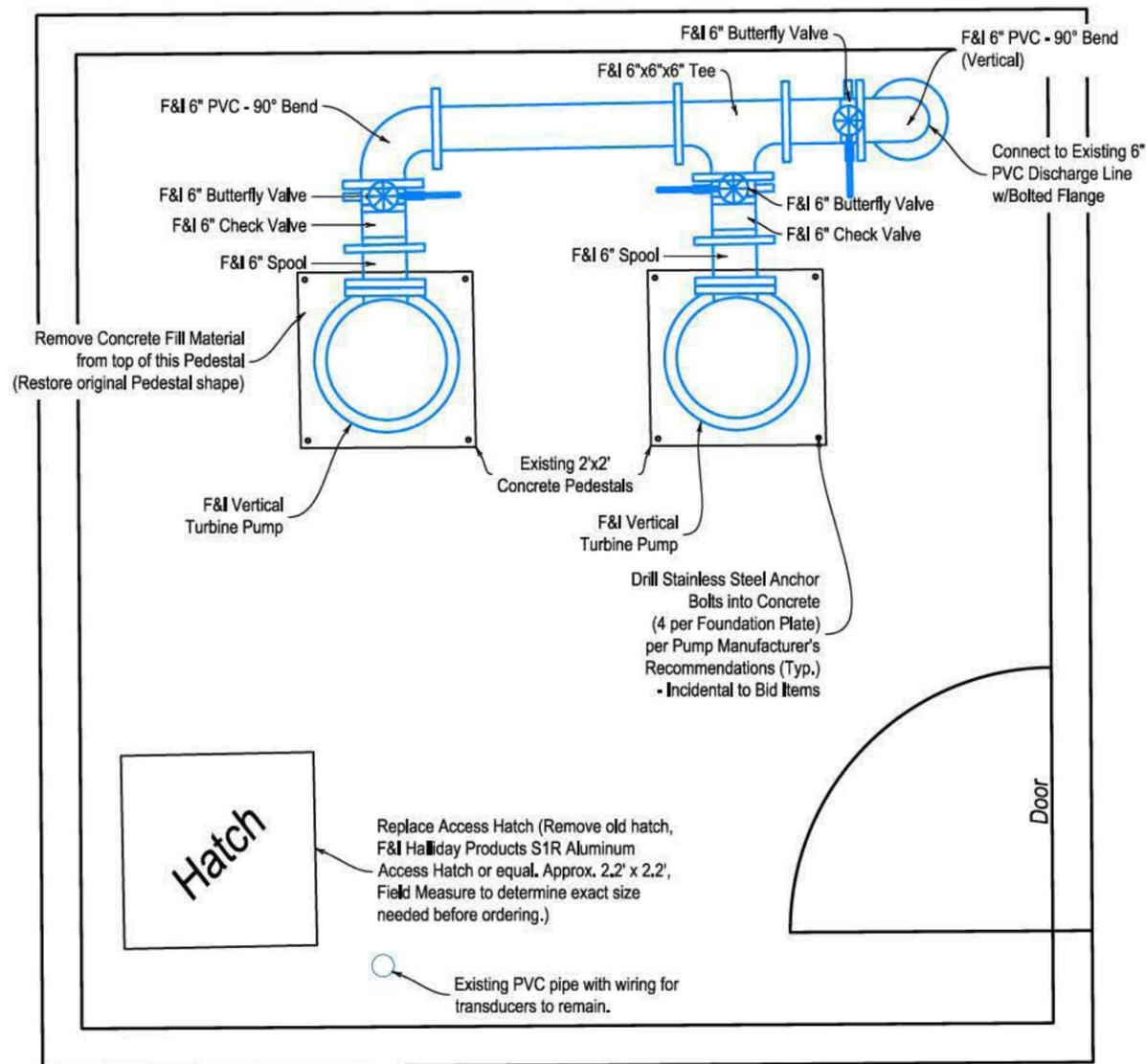
3.02 DISINFECTION

- A. Pumps, piping, valves and other features within the pump house, exclusive of the water storage tanks shall be disinfected according to Specification 33 - 1120

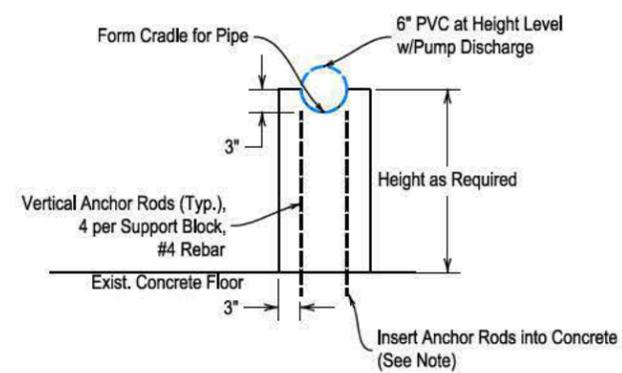
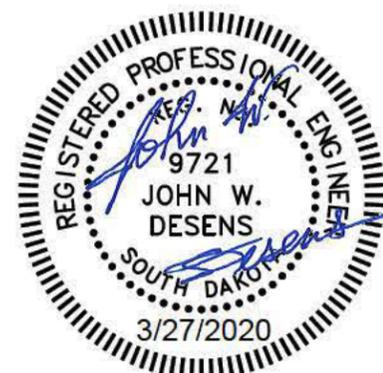
3.03 START-UP

- A. Each pump supplier shall furnish a qualified representative for supervision of system start-up and review of the system operation. He or she shall train the operating personnel in the correct operation and maintenance of the system and provide any maintenance documentation for pumping and control equipment.
- B. Each pump supplier shall furnish the minimum one (1) hour operator training to the owner's operators on the operation and maintenance of the pumps and shall direct the Contractor as to any adjustments necessary for proper operation of the equipment.

END OF SECTION 33 1440



Typical Valve Installation Detail



12"x6" Cast-in-Place Concrete Support Detail

Note: At each anchor rod location, drill a hole in the concrete floor 3 inches deep. The diameter of each hole shall not be less than 1/8 inch nor more than 3/8 inch greater than the overall diameter of the anchor rod. Drilled holes shall be blown out with compressed air to be sure debris has been removed. An epoxy resin adhesive must be used to anchor the rods in the drilled holes. Mix epoxy as recommended by the manufacturer and apply by an injection method. Fill holes 1/3 to 1/2 full of epoxy prior to insertion of the anchor rods. Rotate the rods during insertion to eliminate voids and ensure complete bonding of the rods. Epoxy resin adhesive shall conform to the requirements of ASTM C881, Type IV, Grade 3 (equivalent to AASHTO M 235, Type IV, Grade 3) Class A, B, or C. The minimum gel time shall be 5 minutes.

#	REVISIONS	DATE	BY

