

Ranney Collector Well Lateral Cleaning

PART 1 – GENERAL

DESCRIPTION OF WORK

A: PROJECT SCOPE.

This specification covers cleaning of the existing City of Woodland Ranney Well lateral well screens 2, 3B, 4B, and Alignments 1, 2, and 3, including pre- and post-maintenance pumping tests, closed-circuit television inspection, and disinfection.

B: GENERAL.

The elevations for various components of the collector well are:

Top of Caisson (shaft) Elevation:	37.00 feet msl
Grade Elevation:	37.00 feet msl
Bottom of Caisson:	-14.50 feet msl
Centerline of Lateral:2	-11.50 feet msl
Centerline of Lateral:3B	-7.80 feet msl
Centerline of Lateral:4B	-6.70 feet msl
Centerline of Lateral: Alignment 1	-9.0 feet msl
Centerline of Lateral: Alignment 2	-9.0 feet msl
Centerline of Lateral: Alignment 3	-9.0 feet msl
Lewis River Static water level	OHWL 11.00 feet msl
Caisson Diameter	13 feet

The Contractor shall provide all equipment, personnel, materials, and services to satisfactorily complete the work in accordance with these specifications. All workmanship and materials shall meet or exceed the industry standards usually applied to such work. By bidding this work, the Contractor acknowledges that they understand the nature and extent of the work for cleaning the existing laterals.

The Contractor will exercise care during the cleaning of the well to avoid damage to existing piping, electrical controls, and other appurtenances that are not to be removed. The Contractor shall provide acceptable erosion control for the site, complying with the conditions of any applicable Washington State Department of Ecology (DOE) permits (if required) to prevent harmful materials, construction debris, and excessive suspended solids from entering the adjacent waterway (Lewis River).

The requirements specified herein shall be considered the minimum requirements for cleaning of the well laterals. The Contractor shall be responsible for satisfying any state regulation otherwise exceeding these specifications.

C: QUALIFICATIONS OF BIDDER

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1 through 9 in this Section:

The Owner will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1. Evidence that the Bidder meets Supplemental Criteria 2 through 9 shall be provided by the Bidder as stated later in this Section.

Criteria 1 – Federal Debarment

Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.

Documentation: The Bidder shall not be listed as having an “active exclusion” on the U.S. government’s “System for Award Management” database (www.sam.gov).

Criteria 2 – Delinquent State Taxes

Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder does not owe delinquent taxes to the Department of Revenue. If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the Owner by the deadline listed below.

Criteria 3 – Claims Against Retainage and Bonds

Criterion: The Bidder shall not have a record of three or more claims filed against the retainage or payment bonds for public works projects in the 3 years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless

there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the Owner) that the Bidder has not had claims against retainage and bonds in the 3 years prior to the bid submittal date. If the Bidder has had claims against retainage and bonds in the three years prior to the bid submittal date, they shall submit a list of the public works projects completed in the 3 years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

Criteria 4 – Public Bidding Crime

Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.

Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

Criteria 5 – Termination for Cause / Termination for Default

Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in 5 years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the 5

years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

Criteria 6 – Lawsuits

Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Owner shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet terms of construction related contracts.

Criteria 7-Contract Time (Liquidated Damages)

Criterion: The Bidder shall not have had liquated damages assessed on any projects it has completed 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet contract time, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Owner.

Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Owner) that the Bidder has not had liquidated damages assessed on any projects it has completed within the 5 years prior to the bid submittal date, or shall submit a list of Projects with assessed liquated damages along with Owner contact information, and number of days assessed liquated damages.

Criteria 8-Experience and Capacity

Criterion: The Bidder shall have sufficient current capacity and experience to meet the requirements of this Project. The Bidder shall have successfully completed at least three projects, of a similar size and scope, during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 60 percent of the bid amount submitted by the Bidder.

Documentation: The Bidder shall, if and when required as detailed below, on a form to be provided by the Owner, provide the Bidder's gross dollar amount of work currently under

contract, the Bidder's gross dollar amount of contracts currently not completed, five major pieces of equipment anticipated to be on the project and whether the equipment is leased or owned, number of years the contractor has been in business, number of superintendents and their years of experience on staff, superintendent assigned to this project and their number of years of experience, and three project references of similar size and scope during the 5-year period immediately preceding the bid submittal deadline for this project. The Owner may check owner references for the previous projects and may evaluate the owner's assessment of the Bidder performance.

Criteria 9- Ranney Well Lateral Cleaning Construction Experience

Criterion: The Contractor or Subcontractor shall have successfully completed at least five Ranney Well Lateral Cleaning projects in the ten years previous to the bid opening for this project. At least one of the five projects successfully completed must have been within Washington State.

Documentation: The Bidder shall, if and when required as detailed below, shall provide (on the form provided by the Contracting Agency) the Project name, Owner contact information, whether the project was completed for a government agency, number of laterals cleaned, award contract amount, completion date, and project description for five projects.

As evidence that the Bidder meets Supplemental Responsibility Criteria 2 through 9 stated above, the apparent two lowest Bidders must submit to the Owner by 12:00 P.M. (noon) of the third business day following the bid submittal deadline, a written statement verifying that the Bidder meets Supplemental Criteria 2 through 9 together with supporting documentation (sufficient in the sole judgment of the Owner) demonstrating compliance with Supplemental Responsibility Criteria 2 through 9.

The form for this documentation can be found in Appendix A of these specifications. The Owner reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Owner also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Owner may consider mitigating factors in determining whether the Bidder complies with the requirements of the Supplemental Criteria.

The basis for evaluation of Bidder compliance with these mandatory and Supplemental Criteria shall include any documents or facts obtained by Owner (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data

from the Bidder; (ii) information obtained directly by the Owner from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Owner which is believed to be relevant to the matter.

If the Owner determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Owner shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within 2 business days of the Owner's determination by presenting its appeal and any additional information to the Owner. The Owner will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Owner will not execute a contract with any other Bidder until at least 2 business days after the Bidder determined to be not responsible has received the Owner's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Owner to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Owner no later than 5 business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Owner in the Bid Documents.

The City of Woodland reserves the right to reject any and all Bids and waive any informality in the bids.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

A. TEMPORARY PUMPING

The Contractor will need to supply and install temporary raw water pumping equipment in the Ranney Wet well with discharge piping and valving that can be temporarily connected to the raw water transmission main. The temporary pumping is necessary to maintain raw water flow of up to 1.5 MGD (1,000 gpm) @ 205-feet of total dynamic head (TDH) to the Owner's Water Treatment Plant (WTP) for the construction period. The temporary pumping, piping and valving system is to be designed by the Contractor. The Contractor will be allowed to isolate and dewater the Ranney Well for construction activities during day time working hours (8 a.m. to 6 p.m.) and will only pump water to the WTP by utilizing

the temporary pumping, piping and valving system between the period when construction activities end each day (up to a maximum of 12 hours per day) and when they resume the following work day. The temporary pumping, piping and valving system will also provide raw water to the WTP during weekend and holiday periods when construction activity is not occurring. The Contractor will need to coordinate the operation of the temporary pumping, piping and valving system with the Owner to ensure WTP operations are not adversely impacted.

The Contractor will also need to supply and install a temporary pumping and settling system with appropriate pumping equipment, piping, valving and temporary power, as required to allow between 500-1,000 gpm to be pumped from the Ranney Wet well during cleaning and development of the existing laterals. This temporary pumping, piping, valving, and settling system, including provision for electrical power, as needed is to be designed by the Contractor.

The water pumped during cleaning and re-development of existing laterals will need to be pumped from the Ranney Well into a settling tank. The settling tank will need to be large enough to provide a flow velocity across the tank of less than 1.5 feet per second. From the settling tank the water will then need to be pumped into the raw water transmission main and up to the WTP when lateral re-development is occurring. At the WTP site, the raw water transmission main's valving will be modified such that the lateral re-development water is redirected and discharged into the WTP's backwash water settling basins rather than to the WTP filters. The raw water transmission main at the WTP includes existing valving that allows raw water to discharge to the WTP filters or to the backwash settling basins by opening and closing the appropriate valving. During lateral re-development work, the valves at the WTP will be opened or closed as appropriate to direct the pumped water into the backwash settling basins. At the completion of lateral re-development work at the end of each day, the Contractor will pump water into the backwash settling basins until said water has a turbidity of less than 35 NTU. At that time, pumping of the settled water can be terminated and the raw water transmission valving at the WTP can be opened and closed as appropriate such that the water to be pumped during non-construction hours is sent to the WTP filters for treatment and to refill the City's existing reservoirs.

Design, implementation, and operation of the two temporary pumping systems described above is the Contractor's responsibility. The Contractor can utilize the floor penetrations for the Ranney Well's three vertical turbine pumps (pump 3 will be removed prior to the start of construction work by the Owner) and the discharge piping manifold and valving at floor elevation 21.00 in the Ranney Well to install and connect temporary piping to the raw water transmission main. The Contractor may utilize available power at the Ranney Well facility for the temporary pumping systems and lateral work. If the Ranney Well facility's existing power supply is inadequate to supply all the power required by the Contractor for

these and other related construction activities, the Contractor is responsible for providing any additional temporary electrical power capacity required.

The Contractor can core a hole (or create a hole by other Owner approved methods) in the inside wall(s) of the "storage room" at floor elevation 37.00, if necessary to route temporary piping or temporary electrical wiring. Contractor shall repair any required penetrations for the above described work, once the project is substantially complete.

Modifications to the existing valving at the temporary manifold, anticipated to be connected to the raw water transmission main at the Ranney Well and at the WTP to allow the pumped water to be directed to either the backwash settling basins or the WTP filters, as appropriate shall also be the Contractor's responsibility to coordinate with the Owner during the construction period. Owner's staff will open and close valves, as required.

The Owner will remove vertical turbine pump and motor no. 3 prior to the start of construction to be reinstalled at a later date, to provide additional working room for the Contractor.

The Contractor will temporarily remove and reinstall an existing submersible dewatering pump and its discharge piping from the Ranney Well. The Contractor can permanently remove the grating and support structure platforms at elevations 11.0 and -1.5. The grating and support structure removed shall be delivered to the WTP by the Contractor for future re-installation by the City. The Contractor is required to provide permanent supports for the existing piping after the existing grating and support structure platforms are removed.

The Contractor shall dewater the caisson to perform the scope of work described herein. The Contractor shall provide color photographs of the dewatered caisson prior to cleaning. A camera will be inserted to the furthest extent possible in each lateral. Closed circuit video will be recorded and provided to the Owner.

Contractor shall present a proposed work plan for the Owner's approval prior to starting work to demonstrate their proposed methods for cleaning the well while allowing on-going use of the well during non-working hours.

B. LATERAL SCREEN CLEANING

Lateral screens shall be mechanically redeveloped to clean the 10-inch diameter perforated pipe lateral screens. There is approximately 570 lineal feet of lateral screen installed in the (6) total laterals to be cleaned as follows:

Lateral	Total Length	Slotted Screen Length	Diameter	Material Type
2	112 feet	63 feet	10-inch	Carbon Steel
3B	91 feet	42 feet	10-inch	Carbon Steel
4B	101 feet	45 feet	10-inch	Carbon Steel
Alignment 1	120 feet	110 feet	12-inch	Stainless Steel
Alignment 2	160 feet	150 feet	12-inch	Stainless Steel
Alignment 3	170 feet	160 feet	12-inch	Stainless Steel

A high-pressure rotating water jet equipped with a flushing wye will be projected into the full accessible length of each lateral in conjunction with an “open end sand line” under controlled conditions of a fully dewatered caisson. This system will be capable of delivering approximately 50 gpm at pressures up to a maximum of 5,000 psi. This work is to be conducted to loosen and remove any deposits of hard scale, sand, and or bacterial slime from the laterals and adjacent aquifer materials and to remove fines from the aquifer and develop a natural permeable gravel pack around the collector laterals. The jet will be hydraulically projected at a controlled rate not to exceed 10 feet per hour to ensure thorough cleaning. Contractor shall adjust the pressure as necessary to prevent damage to the existing laterals.

Following lateral cleaning and redevelopment a closed-circuit camera will be extended full length into each lateral. Owner may witness inspection in real time. A record of the video will be provided to the Owner by the Contractor.

Any sand and debris remaining in the caisson will be removed and deposited adjacent to the collector well for Owner’s disposal.

C. PUMPING TESTS

1. The Contractor shall conduct pre and post maintenance performance testing to determine the physical condition of the laterals and evaluate collector efficiency and yield prior to cleaning the lateral well screens and after cleaning is complete. The length of the constant rate test shall be a minimum 4-hours duration.

Testing will include constant rate pumping tests utilizing the Contractor's pumps for pre-development and post-development, with measurements of discharge and drawdown in the collector and nearby observation well. The well shall be allowed to recover for at least 24 hours before the constant rate pumping test is started, or as allowed permitting the Owner's water need to meet demand.

2. During the post maintenance pumping test, a diver will enter the well to obtain underwater color photographs and conduct lateral flow analysis and to observe screen condition.
3. The Contractor shall be required to pump the well during the tests for the full specified period without shutdown. Water level measurements shall be made in the radial collector well, the single existing monitoring well located in front of the well building, and the river during the test at intervals directed by the Owner.

The pumping tests will be supervised by a hydrogeologist (provided by the Contractor) experienced in testing radial collector wells.

After drawdown has substantially stabilized, the Contractor shall measure the relative velocity of the flow from each of the laterals using remote velocity measuring equipment.

The Contractor shall furnish all necessary equipment to conduct the specified pump tests. All measurements of water level and drawdown shall be accurate within 0.01 foot.

Flow shall be measured using the flow tube (meter) installed in the discharge piping from the well.

The Contractor shall assist the Owner to conduct water quality testing throughout the project, if required.

4. During Cleaning of the well and during the period of final testing of the well, the Contractor shall be required to discharge the water back to the WTP lagoons. The method of disposal shall be in accordance with all applicable rules and regulations and shall be acceptable to the Owner. The Contractor shall furnish all labor, materials, and equipment for constructing temporary pipelines as previously described within these specifications.

The drawdown shall be measured in the collector well and monitoring well, as follows:

	Frequency	Period
Pumping	1 Minute	First 15 Minutes
	5 Minutes	Next 45 Minutes
	15 Minutes	Next 60 Minutes

And at 30-minute intervals thereafter until the end of the test.

D. EROSION AND POLLUTION CONTROL

During the cleaning and pump tests, techniques shall be employed by the Contractor to prevent harmful materials, construction debris, and excessive suspended solids from entering the waterway. The Contractor shall submit his proposed methods to the Owner for review prior to the start of the well cleaning and shall address the following:

1. Diversion of sand, silt and debris removed from the bottom of the caisson and pumped discharges carrying the same to prevent erosion and runoff of solids and debris.
2. Protection of the site from surface erosion during cleaning.
3. Disposal of waste construction/cleaning material.
Disposal of other potential contaminants, which would otherwise be dumped, sprayed, or placed near the waterway or disposal onsite.

E. TEST REPORT

Contractor shall submit a professional report detailing the work, test procedures, and results with recommendations for the continued operation and maintenance of the lateral collectors.

F. SCHEDULE

Contractor shall perform the work associated with cleaning of the Ranney Well laterals, as described within this technical specification section. The work shall begin between November 2023 and March 2024. Contractor shall be substantially complete within 40 calendar days and physically complete within 50 calendar days.

G. PAYMENT

All costs for labor, equipment, and work necessary to clean the existing laterals as specified in this section shall be included in the Ranney Well Lateral Cleaning lump sum bid item as found in the bid proposal.