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## **1.10 PREFACE**

### **Introduction**

The Bid Documents/Proposed Contract Documents are issued for the information of Bidders submitting bids for this project and the work described herein, at the time and place indicated in the *Invitation to Bid* (Section 1.20). These Bid Documents, subject to revision by addendum, in accordance with provisions stated below, will be incorporated in and made part of the contract documents for this project.

If the City elects to reject all bids and re-advertise for new bids to be received at a time later than that indicated in the *Invitation to Bid*, these Bid Documents will cease to be applicable and new Bid Documents will be issued by the City. Bidders submitting bids at the newly established bid date and time must obtain the new Bid Documents and base their bids upon them, as they will be bound by it in the event they are awarded a contract.

### **Applicable Specifications**

Work shall comply with the following standards which are hereby incorporated into these bid documents by reference:

1. City of Scappoose Public Works Design Standards (PWDS), with Resolution 14-28, Ch 1 & 5 amendments. Design standards and standard detail drawings are available at:  
<https://www.ci.scappoose.or.us/publicworks/page/public-works-design-standards>,
2. Technical Specifications for Miller Road Basalt Well (MR-4),
3. Oregon Water Resources Department (OWRD) standards for well construction (OAR 690-200 and 690-210), and
4. Other standards identified in these Bid Documents by reference.

Sectional references in these Bid Documents refer to sections of the specifications listed above and any applicable modifications to sections or subsections contained herein.

Licensing per ORS 468A.720 (working with asbestos) is not required for this project (ORS 279C.365(1)(j)).

### **Revisions Prior to Time of Opening of Bids**

The City reserves the right to make necessary changes or corrections to the Bid Documents. The City will post addenda to the City website and, if applicable, virtual planroom.

Bidders, not the City of Scappoose, shall be responsible for failure of Bidders to provide an accurate email address to receive Addenda. Bids shall incorporate all Addenda. Bids may be rejected if opened and found by the City to not be based on all Addenda.

### **Plans and Specifications May Be Retained by Bidder**

These Bid Documents are non-refundable and do not be returned to the City, **except** as necessary to submit a bid.

## **Protest Process**

### **1. Prior to Bid**

#### **A. Specification Protest Process:**

- a) **Delivery:** A bidder must deliver a protest of specifications to the City in writing no later than ten (10) calendar days prior to the bid date as follows:

Specification Protest  
Bid Number: **#2023-08**  
City of Scappoose  
Attn: Susan Reeves, City Recorder  
33568 E. Columbia Ave.  
Scappoose, OR 97056

- b) **Content:** A bidder's written protest must include
- i. A detailed statement of the legal and factual grounds for the protest,
  - ii. A description of the resulting prejudice to the bidder, and
  - iii. A statement of the form of relief requested or any proposed changes to the specifications.
- c) **City Response:** The City may reject without consideration any bidder's protest after the deadline established for submitting protest. The City shall provide notice to the applicable bidder if it entirely rejects a protest. If the City agrees with the bidder's protest, in whole or in part, the City shall either issue an addendum reflecting its determination or cancel the solicitation.
- d) **Extension of Closing:** If the City receives a written protest from a bidder in accordance with this rule, the City may extend the bid closing date if the City determines an extension is necessary to consider the protest and to issue addenda, if any, to the Bid Document.
- e) **Judicial Review:** Review of the City's decision relating to a specification protest shall be in accordance with ORS 279B.405.

### **2. Protest Award**

#### **A. Protests and Judicial Review of Contract Award**

- a) **Purpose:** The award by the City of Scappoose City Council of the contract shall constitute a final decision of the City to award the contract if no written protest of the award is filed. A Bidder may protest the award of a contract, or the intent to award a contract, whichever occurs first, if the conditions set forth in ORS 279B.410(1) are satisfied. A Bidder must file written protest with the City and exhaust all administrative remedies before seeking judicial review of the City's Contract Award decision.

- b) **Delivery:** A bidder must deliver a written protest to the City of Scappoose within seven (7) days after issuance of the Notice of Intent to Award the Contract as follows:

Contract Award Protest  
Bid Number: #2023-08  
City of Scappoose  
Attn: Susan Reeves, City Recorder  
33568 E. Columbia Ave.  
Scappoose, OR 97056

Notice of Intent to Award will be sent via email to all bidders and will be posted on the City web site at:

<https://www.ci.scappoose.or.us/rfps>

- c) **Content of Protest:** A Bidder's written protest shall specify the grounds for the protest to be considered pursuant to ORS 279B.410(2).
- d) **City Response:** The City shall not consider a bidder's contract award protest after the timeline established for submitting such protest. The City shall issue a written disposition of the protest in a timely manner as set forth in ORS 279B.410(4). If the City upholds the protest, in whole or in part, the City may in its sole discretion either award the contract to the successful protestor or cancel the solicitation.
- i. **Judicial Review:** Judicial review of the Council's or its designee's decision relating to a contract award protest shall be in accordance with ORS 279B.415. No protest against award because of the content of specifications shall be considered after the deadline established for submitting such protest.

**INVITATION TO BID #2023-08**

**CITY OF SCAPPOOSE**

**MILLER ROAD BASALT WELL(MR-4)**

**Bid Submission Deadline: 2:00 pm (PST) on October 27, 2023**

**At 33568 E Columbia Ave., Scappoose, OR 97056**

Notice is hereby given that sealed bids for furnishing a portion of the materials, and all equipment, labor, and services for the **Miller Road Basalt Well (MR-4)** project (Project) for the City of Scappoose (City) will be accepted at City Hall until **2:00 PM on October 27, 2023**. All bids received on or before this date and time and in proper form will be publicly opened and read in the City Hall Council Chambers at the time set forth above as the deadline for receipt of bids, and thereafter bid documents, shall be made available for public inspection. Bids received after this date and time will not be considered. First-tier subcontractor disclosure forms are due within two (2) working hours after the bid submission deadline.

The Work to be done under this Contract consists of drilling, constructing, and testing a new municipal water supply well in Scappoose, OR. The Work includes:

- Mobilization, site preparation, erosion control and water management associated with drilling a new Municipal drinking water well
- Drilling, constructing, and testing a new Municipal drinking water well at the Miller Road wellfield.
- Demobilization and site cleanup

The solicitation schedule and deadlines are generally as follows:

- Bid Submission Deadline:
- Anticipated Notice of Intent to Award:
- City Council Contract Authorization:
- Desired Final Completion:

Contract Documents, including plans and specifications, may be examined from <https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4> for free and downloaded. A fee is required for hard copies, which is not refundable. Return of the documents is not required. **Bids shall only be considered valid if Bidder is included on the official Plan Holder List. Only the download or purchase of the Contract Documents, plans, and specifications from Willamette Print & Blueprint will place the Bidder on the official Plan Holder List.** The City reserves the right to make changes to the Invitation to Bid and the resulting contract via written addenda, prior to the bid submission deadline. The City will not mail notice of addenda but shall publish notice of any addenda on the City's website (<https://www.ci.scappoose.or.us/rfps>), at City Hall, and in the WPB virtual planroom. Check the City website frequently until the bid submission deadline as the City may, in its discretion, provide additional notices.

No bid will be received or considered unless the bid is submitted in writing and received on the prescribed forms included in the Contract Documents, mailed or delivered to the City of Scappoose City Hall, 33568 E Columbia Avenue, Scappoose, Oregon 97056 in a sealed envelope plainly marked on the envelope "SEALED BID" and specifying the project name and bearing the name, address, and telephone number of

the bidder, as well as the bid opening date. All bids must be prepared on the prescribed forms and signed in ink by an authorized representative. Facsimile and/or emailed bids will not be accepted.

No proposal shall be considered by the City of Scappoose unless the Bid contains a statement by the Bidder that the Bidder will comply with the provisions of ORS 279C.800 to 279C.870 and 40 U.S.C. 276(a) pertaining to prevailing wages, as applicable. Contractor licensing under ORS 468A.720 for working with asbestos-containing materials is not a requirement of this project. Each bid must contain a statement as to whether or not the bidder is a resident bidder as defined in ORS 279A.120. Each bid must also contain confirmation that bidder is registered with the Oregon Construction Contractors Board (CCB) – no bid will be received or considered unless the bidder is registered with the Oregon CCB, as required by ORS 701.035 et seq. No bid will be considered unless the First-Tier Subcontractor Disclosure form is submitted by the specified deadline. Facsimile and/or emailed disclosure forms will not be accepted.

Contractors must be qualified in accordance with the applicable parts of ORS 279 in order to enter into a contract with the City of Scappoose for public work in the State of Oregon. The City of Scappoose will investigate and determine the qualifications of the bidders as part of its evaluation of the bids.

Proposals must be submitted on the prescribed forms and must be accompanied by certified check, cashier's check, or bid bond executed in favor of the City of Scappoose in an amount not less than ten percent (10%) of the amount of Bidder's maximum Bid price (including all optional work items). The successful bidder will be required to furnish to the City of Scappoose a performance bond and a payment bond each equal to one hundred percent (100%) of the amount of the bid with the selected (if any) optional work items as determined by the City. The successful bidder and all subcontractors shall be required to furnish to the Oregon Construction Contractors Board a public works bond in the amount of \$30,000, unless exempt under ORS 279C.

The City of Scappoose reserves the right to reject any and all bids, to waive any irregularities, and to accept the bid deemed in the best interests of the City of Scappoose. The City of Scappoose may reject any bid not in compliance with all prescribed public bidding procedures and requirements and may reject for good cause any or all bids upon a finding of the City it is in the public interest to do so.

#### **Questions:**

Submit questions to: Robyn Cook, GSI Water Solutions, Inc. via email at [rcook@gsiws.com](mailto:rcook@gsiws.com)

Replies to questions will be posted to the City's website at: <https://www.ci.scappoose.or.us/rfps>

<https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4>

### 1.30 BIDDER'S CHECKLIST

- \_\_\_ Read all specifications, including, but not limited to, Technical Specifications, Miller Road Basalt Well (MR-4), and/or addenda to these bid documents and review the plans and all documents included by reference.
- \_\_\_ Complete the Bid Schedule in ink or typed characters.
- \_\_\_ Cross-out and initial bid items entries, if they are changed or corrected. Do not use whiteout liquid or tape to correct item entries.
- \_\_\_ Check City website and review issued addenda and fill in the Addenda Statement on the Bid Form Signature Page. Clarification responses, in the form of a Question-and-Answer document, will be issued on the City website periodically in order to answer questions. *These clarifications should not be considered addenda.*
- \_\_\_ Fill in all other required information on the Bid Forms and affix signatures in ink.
- \_\_\_ Fill in and sign the Non-Collusion Affidavit.
- \_\_\_ Fill in and sign the Compliance Signature Form.
- \_\_\_ Fill in and sign the City of Scappoose Bid Guaranty Form. Bids not accompanied by the City of Scappoose Bid Guaranty Form may be deemed non-responsive and rejected.
- \_\_\_ Fill in the "Bidder Residency Statement" on the Bid Form Signature Page.
- \_\_\_ The Bidder shall deliver, as part of the bid, a written certification that the Bidder has not discriminated and will not discriminate against minority, women, or emerging small business enterprises in obtaining any required subcontracts. Failure to do so will be grounds for disqualification.
- \_\_\_ Fill in the Construction Contractor's Board statement on the Bid Form Signature page and possess a current, valid license issued by the Construction Contractor's Board.
- \_\_\_ Detach, complete, and submit the First-Tier Subcontractors Disclosure Form provided in SECTION 2.40. This form may be submitted with the bid or in a separate sealed envelope marked with "FIRST-TIER SUBCONTRACTORS DISCLOSURE FORM" along with the bidder's name, project name and project number. When submitted separately, it shall be submitted no later than two work hours after the time designated for receiving bids.

**2.10 INSTRUCTIONS TO BIDDERS**  
**MILLER ROAD BASALT WELL (MR-4) PROJECT**  
**FOR**  
**CITY OF SCAPPOOSE**

**1. Defined Terms**

Certain terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

**1.1 CITY/OWNER** – City of Scappoose

**1.2 BIDDER** – one who submits a Bid directly to CITY as distinct from a sub-bidder, who submits a bid to a Bidder.

**1.3 Issuing Office** – the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

**1.4 Successful Bidder** – the lowest, responsible Bidder to whom CITY (on the basis of CITY's evaluation as hereinafter provided) makes an award.

**1.5 First-Tier Subcontractor** – an individual, firm or corporation having a direct contract with the Contractor for furnishing labor or furnishing labor and materials in connection with the performance of a part of the work.

**2. Copies of Bidding Documents**

**2.1** Complete sets of the Bidding Documents may be obtained from

<https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4> for free and downloaded. A fee is required for hard copies, this amount is not refundable and return of the documents is not required.

**2.2** Complete sets of Bidding Documents must be used in preparing Bids; CITY does not assume responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

**2.3** CITY in making copies of Bidding Documents available on the above terms only do so for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

**3. Qualifications of Bidders**

**3.1** To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five days after Bid Opening, upon CITY's request, detailed written evidence such as financial data, previous experience, present commitments, and other such data as may be called for below or elsewhere in these documents. Each Bid must contain evidence of Bidder's qualification to do business in Oregon.

**4. Examination of Bidding Documents, Other Data, and Site**

**4.1** It is the responsibility of each Bidder before submitting a Bid:



- 4.1.1** To examine thoroughly and carefully study the Bidding Documents, including any Addenda and other related data identified in the Bidding Documents;
- 4.1.2** To visit the site and become familiar with and satisfy Bidder as to the general, local and Site conditions that may affect cost, progress, performance or furnishing of the Work;
- 4.1.3** To become familiar with and satisfy Bidder as to all federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the Work;
- 4.1.4** To obtain and carefully study (or assume responsibility to do so) all reports of explorations and tests of subsurface conditions at or contiguous to the Site, all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site, all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, performance or furnishing of the Work or which are related to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto, and be responsible for all costs associated with these examinations including all restoration work and damages which may be a result of such investigations;
- 4.1.5** To agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary to the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- 4.1.6** To become aware of the general nature of the work to be performed as indicated in the Bidding Documents;
- 4.1.7** To correlate the information known to BIDDER, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- 4.1.8** To promptly give CITY written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by CITY is acceptable to BIDDER; and
- 4.1.9** To determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work.
- 4.2** Information and data reflected in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to CITY by the owners of such Underground Facilities or others, and the CITY does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Contract Documents.

**4.3** The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given CITY written notice of all conflicts, errors, ambiguities, and discrepancies that BIDDER has discovered in the Bidding Documents and the written resolutions thereof by CITY are acceptable to BIDDER, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

**4.4** Failure to comply with Sections 4.1 through 4.3 above will not relieve the Successful Bidder of its obligation to enter into a contract and complete the contemplated work in strict accordance with the Bidding Documents.

## **5. Availability of Lands for Work**

The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor.

## **6. Interpretations and Addenda**

**6.1** All questions about the meaning or intent of the Bidding Documents are to be directed to CITY. Interpretations or clarifications considered necessary by CITY in response to such questions will be issued by Addenda and will be posted on the website where the plans are stored at:

<https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4>. Questions received less than five (5) calendar days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda shall be binding. Oral and other interpretations or clarifications will be without legal effect.

**6.2** Addenda may also be issued to modify the Bidding Documents as deemed advisable by CITY.

## **7. Bid Guaranty**

**7.1** Each Bid must be accompanied by Bid Guaranty made payable to CITY in an amount of ten percent (10%) of BIDDER's maximum Bid price, which includes the base bid and all additive alternatives, and in the form of a certified or cashier's check or a Bid Bond on the form attached to the Bidding Documents or one conforming substantially to it, meeting the requirements of ORS 279C.365 and issued by an acceptable surety.

**7.2** The Bid Guaranty of Successful Bidder will be retained until such Bidder has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid Guaranty will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within ten (10) days after the Notice of Award, CITY may annul the Notice of Award and the Bid Guaranty of that Bidder will be forfeited. The Bid Guaranty of other Bidders whom CITY believes to have a reasonable chance of receiving the award may be retained by CITY until the Effective Date of the Agreement or the

sixtieth (60th) calendar day after the Bid opening, whereupon Bid Guaranty furnished by such Bidders will be returned. Bid Guaranty with Bids which are not competitive will be returned upon execution of the Agreement between CITY and the Successful Bidder.

## **8. Contract Times**

The number of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment are set forth in the Contract (or incorporated therein by reference to the attached Bid Form).

## **9. Substitute or "Or-Equal" Items**

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that an "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to CITY, application for such acceptance will not be considered by CITY until after the Effective Date of the Agreement, unless a pre-bid approval process is specified for certain material or equipment items. The procedure for submission of any such application by CONTRACTOR and consideration by CITY is set forth in ORS 279C.345.

## **10. Subcontractors, Suppliers, and Others**

**10.1** Bidders are required to disclose information about certain first-tier subcontractors when the contract value for a Public Improvement is estimated by the CITY to be greater than \$100,000 (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor or labor and materials would be greater than or equal to: (i) 5% of the project Bid, but at least \$15,000; or (ii) \$350,000 regardless of the percentage, the Bidder must disclose the following information about that subcontract either in its Bid submission, or within two hours after Bid Closing:

(A) The subcontractor's name;

(B) The category of Work that the subcontractor would be performing, and

(C) The dollar value of the subcontract. If the Bidder will not be using any subcontractors that are subject to the above disclosure requirements, the Bidder is required to indicate "NONE" on the accompanying form.

**THE CITY MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE. THE DISCLOSURE FORM IS ATTACHED TO THE BID DOCUMENT.**

**Submission.** A Bidder shall submit the disclosure form required by this rule either in its Bid submission, or within two working hours after Bid Closing.

**Responsiveness.** Compliance with the disclosure and submittal requirements of ORS 279C.370 and this rule is a matter of Responsiveness. Bids that are submitted by Bid Closing, but for which the disclosure submittal has not been made by the specified deadline, are not Responsive and shall not be considered for Contract Award.

**10.2** If these Bidding Documents require, separate from and in addition to those requirements as identified in paragraph 10.1 above, the identity of certain Subcontractors, Suppliers and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to CITY, Bidder shall submit with the bid a list of all such Subcontractors, Suppliers and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be supplemented by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by CITY.

**10.3** If CITY has reasonable objection after due investigation to any proposed subcontractor, other person or organization, either may before giving the Notice of Award, request the apparent Successful Bidder to submit an acceptable substitute, in which case the apparent Successful Bidder shall submit an acceptable substitute, that Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and CITY may consider such prior adjustment in evaluating Bids and making the Contract award.

**10.4** If the apparent Successful Bidder declines to make any such substitution, CITY may award the Contract to the next lowest Bidder that proposes to use acceptable subcontractor, other person, or organization. The declining to make any such substitution will not constitute grounds for sacrificing the Bid Guaranty of any Bidder. Any subcontractor, other person, or organization so listed and to whom the CITY does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to CITY subject to revocation of such acceptance after the Effective Date of the Agreement as provided in the resulting Contract.

**10.5** No Contractor shall be required to employ any subcontractor, other person, or organization against which they have reasonable objection.

## **11. Bid Form**

**11.1** The Bid Form is included with the Bidding Documents; additional copies may be obtained from <https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4>

**11.2** All blanks on the Bid Form must be completed by printing in ink or be typewritten.

**11.3** A Bid by a corporation shall be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

**11.4** A Bid by a partnership shall be executed in the partnership name and signed by a partner, whose title shall appear under the signature, accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

**11.5** A Bid by an individual shall show the Bidder's name and official address.

**11.6** A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture shall be shown below the signature.

**11.7** All names shall be printed in ink or be typewritten below the signatures.

**11.8** The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form by BIDDER).

**11.9** The address and telephone number for communications regarding the Bid shall be shown.

**11.10** If BIDDER is an out-of-state corporation, the Bid shall contain evidence of authority to conduct business as an out-of-state corporation in Oregon where the Work is to be performed. BIDDER's Oregon Construction Contractor's Board license number shall also be shown on the Bid form.

## **12. Submission of Bids**

Bids and first-tier subcontractor disclosure forms shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in separate opaque sealed envelopes, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), date of opening, the applicable words "Sealed Bid" or "First-Tier Subcontractor Disclosure Form", name and address of Bidder and accompanied by the Bid guaranty and other required documents. If the Bid and/or disclosure form is sent through the mail or other delivery system, the sealed envelopes shall be enclosed in separate envelopes with the applicable notation "sealed bid" or "First-Tier Subcontractor Disclosure Form" on the face. It is the Bidder's sole responsibility to see that its Bid and disclosure form are received within the proper time.

## **13. Modification and Withdrawal of Bids**

**13.1** Bids may be modified or withdrawn at any time prior to the opening of Bids. This may be done by the BIDDER in person or upon the BIDDER's written request delivered to the place where Bids are to be submitted. A telephoned request for withdrawal of a Bid will not be recognized as a legitimate means for withdrawal of a Bid.

**13.2** If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with CITY and promptly thereafter demonstrates to the reasonable satisfaction of CITY that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid guaranty will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Bidding Documents.

## **14. Opening of Bids**

Bids will be opened and (unless obviously non-responsive) read aloud publicly at the place where Bids are to be submitted.

## **15. Bids to Remain Subject to Acceptance**

All Bids will remain subject to acceptance for forty-five (45) days after the Bid opening, but CITY may, in its sole discretion, release any Bid and return the Bid guaranty prior to that date. CITY and the apparent low Bidder may, by written agreement, extend the period during which the Bid is subject to acceptance.

## **16. Award of Contract and Protests**

**16.1** CITY reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non-responsive, unbalanced or conditional Bids and to reject the Bid of

any Bidder if CITY believes that it would not be in the best interest of the CITY to make an award to that Bidder, whether because the Bid is non-responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by CITY. CITY also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder including the possible selection of optional work items. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

**16.2** In evaluating Bids, CITY will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

**16.3** CITY may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Bidding Documents.

**16.4** CITY may conduct such investigations as CITY deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Bidding Documents to CITY's satisfaction within the prescribed time.

**16.5** If the contract is to be awarded, it will be awarded to the lowest responsible Bidder as that term is set forth in ORS 279A.010 and whose evaluation by CITY indicates to CITY that the award will be in the best interests of the CITY. In determining the lowest responsible Bidder, CITY will: (a) check the list created by the Oregon Construction Contractors Board for bidders who are not qualified to hold a public improvement contract; and (b) determine whether the Bidder has met the standards of responsibility in accordance with ORS 279C.375. CITY will document CITY's determination of responsibility with the Oregon Construction Contractors Board within 30 days after the date the CITY awards the contract. Separate schedules may be awarded to the same or different Contractors. Bidders are allowed to specify on the Bid Form a deduction in their total Bid if multiple schedules are awarded to the same Contractor. The lowest total Bid shall be determined by adding schedules and subtracting any deductions provided.

**16.6** If the contract is to be awarded, CITY will issue a Notice of Intent to Award and give Successful Bidder a Notice of Award at least seven (7) days after the Notice of Intent to Award is issued and within forty-five (45) days after the day of the Bid opening or within such extended period as CITY and CONTRACTOR shall agree in writing.

**16.7** All protests and judicial review procedures shall be undertaken in accordance with ORS 279B.410 and ORS 279B.415. A bidder must file a written protest to the CITY within seven (7) days of the Award of a Contract or the Notice of Intent to Award Contract, whichever occurs first. The BIDDER's written protest shall specify the grounds for the protest to be considered by the CITY.

## **17. Signing of Agreement**

When CITY gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten (10) days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to CITY with the required liability and workers compensation insurance certificates, and payment and performance bonds. Within thirty (30) days thereafter, CITY shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

## **18. Retainage**

Provisions concerning retainage and CONTRACTORS' rights to deposit securities in lieu of retainage are set forth in SECTION 3.50 of the Contract Documents. In lieu of retainage, provisions may be made as provided in ORS 279C.560 for depositing with CITY approved bonds or securities of value equal to the retainage.

## **19. Performance and Payment Bonds**

ORS 279C sets forth performance bond and payment bond requirements. When the successful Bidder delivers the executed Agreement to the CITY, it shall be accompanied by the required performance and payment bonds. Attorneys-in-fact who sign bonds must file with each bond a notarized and effective copy of their power of attorney dated the same date as the Bonds. Bond forms enclosed in the Bidding Documents must be used.

## **20. Conflict of Interest**

No member, officer, or employee of the CITY, or its designees or agents, no member of the governing body of the CITY, and no other public official of the CITY who exercise any function or responsibility with respect to this Contract during his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in Work performed in connection with this Contract.

## 21. Expected Schedule

The project intends to follow the schedule as follows:

Event	Location	Date	Time
Solicitation Advertisement	Business Tribune, Spotlight, City Website	9/18/2023	8:00 AM
Pre-Bid Site Visit (Optional)	Project Site	10/5/2023	10:00 AM
Pre-Bid Questions Due	Email*	10/9/2023	2:00 PM
Responses to Pre-Bid Questions Distributed by City	WPB Planroom**	10/13/2023	4:00 PM
Bids Due/ Bid Opening	Scappoose City Hall	10/27/2023	2:00 PM
First Tier Subcontractor List Due	Scappoose City Hall	10/27/2023	4:00 PM
Notice of Intent to Award***	City Website, Email	11/3/2023	4:00 PM
Protest Period Closes	NA	11/10/2023	4:00 PM
Council Authorization***	City Council	11/20/2023	7:00 PM
Notice of Award	City Website, Email	11/21/2023	10:00 AM
Contract Start (Estimated)***	N/A	11/22/2023	-
Notice to Proceed	N/A	Upon Approval of Contractor Submittals	
Substantial Completion	N/A	5/31/2024	-
Desired Final Completion	N/A	6/14/2024	-

\*Submit questions to the City's Consultant, GSI Water Solutions, Inc., by emailing Robyn Cook at [rcook@gsiws.com](mailto:rcook@gsiws.com)

\*\*<https://www.wpbplanroom.com/jobs/159/details/miller-road-basalt-well-mr-4>

\*\*\*These dates are subject to change at the sole discretion of the City.

**END OF INSTRUCTIONS TO BIDDERS**



## **2.20 BID PROPOSAL FORM**

THIS BID IS SUBMITTED TO:

City of Scappoose

33568 E. Columbia Avenue

Scappoose, OR 97056

The undersigned, hereinafter called "Bidder," declares that the only person or parties interested in this bid are those named herein; that this bid is, in all respects, fair and without fraud; that it is made without collusion with any official of Scappoose, Oregon; and that the bid is made without any connection or collusion with any person making another bid on this contract.

THE UNDERSIGNED BIDDER FURTHER DECLARES: That the Bidder has read and thoroughly understands the bid documents governing the work embraced in this improvement and the method by which payment will be made for said work; that the Bidder has visited the site and made such investigation as is necessary to determine the character of the materials and conditions to be encountered in the work; that if this bid is accepted, the Bidder will contract with the City of Scappoose, Oregon, for the construction of the proposed improvement in a form of contract herein outlined, and provide the necessary equipment, materials, tools, apparatus, and labor, as specified in conformance with the requirements of the contract, and at the prices established by this Agreement.

The Bidder further agrees that the Bidder has exercised its own judgement regarding the interpretation of subsurface information and has utilized all data which it believes pertinent from the Engineer, CITY, and other sources in arriving at its conclusion.

### **THE UNDERSIGNED ALSO AGREES AS FOLLOWS:**

FIRST: To do any extra work and furnish other materials which cannot properly be classified under bid items, and to accept as full compensation therefore, such prices as may be determined according to the provisions of the Contract.

SECOND: That this bid is firm and shall not be withdrawn or revoked by the Bidder for a period of thirty (30) calendar days from the date of the bid opening and that within ten (10) calendar days from the date of the "Notice of Award" of this bid, to execute the Public Improvement Contract, and to furnish the City of Scappoose with satisfactory performance and payment bonds in the sum of the total amount of the contract guaranteeing the faithful performance of the work and payment of all bills.

THIRD: To meet the substantial and final completion dates and to complete work in all respects within the contract time specified herein.

FOURTH: In compliance with ORS 279C.840 and as part of this bid, the Bidder herein agrees that it shall be a condition of its bonds that in performing this contract it shall pay and cause to be paid not less than the prevailing rate of wages as of the date of advertisement for this bid to each and every worker who may be employed in and about the performance of this contract. If the City determines at any time that the prevailing rate of wages has not been or is not being paid as required by the contract, the City may

retain from the monies due to the Contractor an amount sufficient to make up the difference between the wages actually paid and the prevailing rate of wages, and may also cancel this contract.

FIFTH: That all of the applicable provisions of Oregon law relating to public contracts (ORS 279A, 279C) are, by this reference, incorporated in and made part of this bid.

SIXTH: It is agreed that if the Bidder revokes or withdraws its bid within the 30-day period following the bid opening date or if the Bidder is awarded the contract for the work herein proposed and shall fail or refuse to execute the contract and furnish the specified performance and payment bonds within ten (10) calendar days after receipt of notification of acceptance of its bid, then, in either of these events, the bid security deposited herewith according to the conditions of this Bid shall be forfeited to and retained by the City as liquidated damages in accordance with the Contract Documents; and it is agreed that the said sum is a fair measure of the amount of damages the City will sustain in case the Bidder shall so withdraw its bid or fail or refuse to execute the contract for the said work and to furnish the performance and payment bonds as specified in the Contract Documents. Bid security in the form of a cashier's or certified check drawn on a lending institution of Oregon shall be subject to the same requirements as a bid bond.

SEVENTH: If you desire to limit the number of contracts to be awarded to your firm at this opening of bids, please complete one of the following limiting statements:

LIMITING STATEMENTS:

- 1. This bid is conditioned upon my (our) not being awarded more than \_\_\_\_\_ of the contracts on which I (we) have bid at this opening of bids.
- 2. This bid is conditioned upon my (our) not being awarded contracts at this opening of bids for an aggregate total amount in excess of \$ \_\_\_\_\_.

EIGHTH: The undersigned declares by signing of this proposal that the undersigned bidder has not discriminated and will not discriminate against minority, women, or emerging small business enterprises in obtaining any required subcontracts. The signing of this proposal constitutes certification of compliance upon which the City is entitled to rely on.

### BID SCHEDULE

Bid Form Item No.	Items of Work and Materials	Approx. Quantity	Units	Unit Price	Extended Price
1	Mobilization and Demobilization including all equipment and incidental items for site prep, spill prevention, installing a new production well, and site cleanup.	1	Lump Sum	\$	\$
2	Spill Prevention and Control.	1	Lump Sum	\$	\$
3	Erosion Control.	1	Lump Sum	\$	\$
4	Turbidity Reduction and Water Management.	1	Lump Sum	\$	\$
<b>Basalt Well</b>					
5	Complete surface seal within 12-inch borehole.	330	Linear Feet	\$ /foot	\$
6	Upper borehole: drill minimum 12-inch diameter hole and furnish, install, and remove temporary casing, as needed.	330	Linear Feet	\$ /foot	\$
7	Lower borehole: drill minimum 8-inch diameter hole.	270	Linear Feet	\$ /foot	\$
8	Lower borehole: furnish, install, and remove temporary casing, as needed.	270	Linear Feet	\$ /foot	\$
9	Upper borehole; furnish and install 8-inch nominal 0.250 wall (minimum) steel production casing.	333	Linear Feet	\$ /foot	\$
10	Furnish, install, and cut 12-inch diameter drive shoe	1	Lump Sum	\$	\$
11	Lower borehole (Optional): furnish and install 6-inch pipe size low carbon steel well casing/screen blank (provide manufacturer's specifications).	20	Linear Feet	\$ /foot	\$
12	Lower borehole (Optional): furnish and install 6-inch pipe size stainless steel wire-wrap screen (provide manufacturer's specifications).	280	Linear Feet	\$ /foot	\$
13	Conduct plumbness and alignment testing.	1	Lump Sum	\$	\$
14	Conduct well development – dual-isolation surging and pumping.	24	Hours	\$ /hour	\$
15	Conduct well development – Pumping with test pump.	8	Hours	\$ /hour	\$
16	Perform video inspection.	2	Lump Sum	\$	\$
17	Perform well disinfection.	1	Lump Sum	\$	\$
18	Perform production well surface completion.	1	Lump Sum	\$	\$
19	Standby time.	8	Hours	\$ /hour	\$
20	Preauthorized hourly work.	8	Hours	\$ /hour	\$
<b>Possible Additive: Alluvial Well</b>					
21	Cement grout abandonment of 8-inch borehole	270	Linear Feet	\$ /foot	\$
22	Cement grout abandonment of 12-inch borehole	130	Linear Feet	\$ /foot	\$
23	Complete surface seal, including 5-foot transition seal and casing pullback.	200	Linear Feet	\$ /foot	\$
24	Furnish and install 8-inch pipe size steel production casing/screen blank (provide manufacturer's specifications).	173	Linear Feet	\$ /foot	\$
25	Furnish and install 8-inch pipe size stainless steel wire-wrap screen (provide manufacturer's specifications).	30	Linear Feet	\$ /foot	\$
26	Furnish and install filter pack assuming 60 feet. Cost includes casing pullback.	60	Linear Feet	\$ /foot	\$
27	Conduct plumbness and alignment testing.	1	Lump Sum	\$	\$

28	Conduct well development – impulse generation and dual-isolation surging and pumping.	24	Hours	\$ /hour	\$
29	Conduct well development – Pumping with test pump.	8	Hours	\$ /hour	
30	Perform video inspection of well casing and screen.	1	Lump Sum	\$	\$
31	Perform well disinfection.	1	Lump Sum	\$	\$
32	Perform production well surface completion.	1	Lump Sum	\$	\$

<i>Well Testing</i>					
33	Basalt well completion: furnish, install and remove power for pump, test pump, temporary discharge line, and valves and appurtenances.	1	Lump Sum	\$	\$
33-A	Alluvial well completion: furnish, install and remove power for pump, test pump, temporary discharge line, and valves and appurtenances.	1	Lump Sum	\$	\$
34	Run performance step-rate test (basalt well), step-rate test (optional for alluvial well) and constant-rate test.	48	Hours	\$ /hour	\$

<b>TOTAL BASE BID PRICE – ITEM NO.'S 1 THROUGH 20, 33 AND 34</b>					<b>\$</b>
<b>TOTAL ADDITIVE ALTERNATE PRICE – ITEM NO.'S 21 THROUGH 32, 33-A AND 34</b>					
<b>TOTAL BID PRICE – ITEM NO.'S 1 THROUGH 34:</b>					

Total Base Bid Price – Item No.'s 1 through 20, 33 and 34:

\$\_\_\_\_\_ (Figures)

\_\_\_\_\_ Dollars

and \_\_\_\_\_ cents (Written)

Total Additive Alternate Price – Item No.'s 21 through 32, 33-A and 34:

\$\_\_\_\_\_ (Figures)

\_\_\_\_\_ Dollars

and \_\_\_\_\_ cents (Written)

**Grand Total Bid Price – Item No.'s 1 through 34:**

\$\_\_\_\_\_ (Figures)

\_\_\_\_\_ Dollars

and \_\_\_\_\_ cents (Written)

The Total Bid Amount shall be presented both in words and figures for the total bid amount of the Miller Road Production Well MR-4 Base Bid Form. In the event of discrepancy, the amount shown in words shall dictate. ***Award will be partially based on the lowest responsive Grand Total Bid Amount.***

The Contractor acknowledges that quantities shown on the Bid Forms are estimates only and actual quantities will be determined upon final well design and decommissioning. Final payment will be based on actual quantities determined as per the Contract Documents.

### SIGNATURE PAGE

The undersigned Bidder hereby represents that it **(is \_\_\_\_\_, or is not \_\_\_\_\_)** a “resident bidder” pursuant to ORS 279A.120 and ORS 279C.365. A “resident bidder” means a bidder that has paid unemployment taxes or income taxes in this state during the twelve (12) calendar months immediately preceding submission of the bid, has a business address in this state, and has stated in the bid whether the Bidder is a “resident bidder.”

The undersigned Bidder is licensed by the Oregon Construction Contractor’s Board (Oregon CCB) in accordance with ORS 701.026.

The undersigned Bidder has carefully examined all bidding documents and addenda (if any) numbered \_\_\_\_ through \_\_\_\_ inclusive.

The undersigned Bidder hereby represents that this bid is made without connection to any person, firm, or corporation making a bid for the same project, and is in all respects fair and without collusion or fraud.

Accompanying this Bid is a bid guaranty in the form of a certified check, cashier’s check, or bid bond in the sum of at least ten (10) percent of the total bid, payable to City of Scappoose which is to be forfeited as liquidated damages in accordance with Section 2.10 Instructions to Bidders.

In the event this Bid is accepted by the City and the undersigned fails to execute a satisfactory contract and bond(s), and after receiving written notice within ten (10) calendar days from the date of receipt of notification, the City may, at its option, declare that the undersigned has abandoned the contract and thereupon this Bid shall be returned to the undersigned.

---

Printed Name of Bidder

---

Company Name

---

Title

---

Street Address

---

Telephone

---

City, State, Zip

---

Fax Number

---

Federal Tax ID Number

---

Email Address

---

Oregon CCB License Number

---

Oregon CCB Expiration Date

Dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

**ACKNOWLEDGEMENT FOR SOLE PROPRIETORSHIP OR PARTNERSHIP**

In witness hereto, the undersigned has set his or her hand this day of \_\_\_\_\_, 20\_\_.

**SIGNATURE OF BIDDER** \_\_\_\_\_

**TITLE** \_\_\_\_\_

**ACKNOWLEDGEMENT FOR CORPORATION**

In witness hereto, the undersigned corporation has caused this instruction to be executed and its seal affixed by its duly authorized officers this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**NAME OF CORPORATION** \_\_\_\_\_

**SIGNATURE OF BIDDER** \_\_\_\_\_

**TITLE** \_\_\_\_\_

**ATTEST SECRETARY** \_\_\_\_\_

### 2.30 BID GUARANTY

Accompanying this proposal is \_\_\_\_\_  
("bidder's bond," "cash" or "certified check") in the amount of \_\_\_\_\_ Dollars  
(\$\_\_\_\_\_) which amount is not less than ten percent (10%) of the total amount of the  
Bidder's maximum bid price including the base bid and all additive alternatives.

If this proposal shall be accepted and the undersigned shall fail to or neglect to contract as aforesaid, and to give a Payment and Performance Bond in the sum of the total amount of the bid as aforesaid, with sureties satisfactory to the City Council within ten (10) days from the date of receiving from the City Council the contract prepared and ready for execution, the City Council may, at its option, determine that the bidder has abandoned the contract, and thereupon forfeiture of the security accompanying this proposal shall operate and the same shall be the property of the City of Scappoose as provided by ORS 279C.385. It is further understood that the bid shall not be withdrawn or revoked for thirty (30) days after the scheduled closing time for receiving bids.

SIGNED and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Signature of Bidder \_\_\_\_\_

(legal name of person)

By \_\_\_\_\_

(typed or printed name)

Title \_\_\_\_\_

Name of Contractor \_\_\_\_\_

Business Address \_\_\_\_\_

\_\_\_\_\_

Telephone Number \_\_\_\_\_



## 2.40 FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

Bid Closing: **Friday, October 27, 2023 at 2:00 PM (PST)**

Disclosure Submittal Deadline: **Friday, October 27, 2023 at 4:00 PM (PST)**

This form must be completed, signed and submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

Bidders are required to disclose information about certain first-tier subcontractors (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor and material would be greater than or equal to: (i) 5% of the project Bid, but at least \$15,000; or (ii) \$350,000 regardless of the percentage, the Bidder must disclose the following information about that subcontractor either in its Bid submission, or within two hours after Bid Closing.

List below the names of each subcontractor that will be furnishing labor or furnishing labor and materials and that are required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter 'NONE' if there are no subcontractors that are required to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED).

Subcontractor Name	Dollar Value	Category of Work
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.**

Form submitted by (Bidder Name): \_\_\_\_\_

Contract Name: \_\_\_\_\_ Phone No.: \_\_\_\_\_

## 2.50 TAX LAWS COMPLIANCE SIGNATURE FORM

Every public contract that is subject to Oregon Revised Statute 279B must include a representation and warranty from the Bidder that the Bidder has complied with the tax laws of this state or a political subdivision of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318. The public contract must also require a covenant from the contractor to continue to comply with the tax laws of this state or a political subdivision of this state during the term of the public contract and provide that a contractor's failure to comply with the tax laws of this state or a political subdivision of this state before the contractor executed the public contract or during the term of the public contract is a default for which a contracting agency may terminate the public contract and seek damages and other relief available under the terms of the public contract or under applicable law.

By signing below, Bidder certifies compliance with the tax laws of the State of Oregon or a political subdivision of the State of Oregon and provides a covenant to continue to comply with the tax laws of this state or a political subdivision of this state for the duration of this contract.

---

Bidder's Signature

---

Date

## 2.60 NON-COLLUSION AFFIDAVIT

State of \_\_\_\_\_, County of \_\_\_\_\_

I state that I am \_\_\_\_\_ (title) of \_\_\_\_\_ (name of firm) and that I am authorized to make this affidavit on behalf of my firm and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication, or agreement with any other contractor, bidder, or potential bidder, except as disclosed on the attached appendix.

(2) Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

(5) \_\_\_\_\_ (name of firm), its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency for violating any non-collusion statutes and have not in the last four years been convicted of or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract.

I state that \_\_\_\_\_ (name of firm) understands and acknowledges that the above representations are material and important and will be relied on by the City of Scappoose in awarding the contract(s) for which this bid is submitted. I understand, and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the City of Scappoose of the true facts relating to the submission of bids for this contract.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Name of Firm / Position

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

## 2.70 RESPONSIBILITY DETERMINATION FORM

*NOTE: THIS FORM TO BE COMPLETED BY CITY. IT IS INCLUDED IN THE CONTRACT DOCUMENTS FOR BIDDERS' INFORMATION ONLY.*

Project Name: \_\_\_\_\_

Bidder's Business Entity Name: \_\_\_\_\_

Bidder's CCB License Number: \_\_\_\_\_

Form Submitted By (Contracting Agency): City of Scappoose

Form Submitted by (Representative Name): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

CITY has:

☐ Checked the list created by the Oregon CCB under ORS 701.227 for bidders who are not qualified to hold a public improvement contract.

☐ Determined whether the Bidder has met the standards of responsibility. In doing so, CITY has considered whether the BIDDER:

☐ Has available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities.

☐ Holds current licenses that businesses or service professionals operating in this state must hold in order to undertake or perform the work specified in the contract.

☐ Is covered by liability insurance and other insurance in amounts required in the solicitation documents.

☐ Qualifies as a carrier-insured employer or a self-insured employer under ORS 656.407 or has elected coverage under ORS 656.128.

☐ Has disclosed the bidder's first-tier subcontractors in accordance with ORS 279C.370.

☐ Has a satisfactory record of performance.

☐ Has a satisfactory record of integrity.

☐ Is qualified legally to contract with the City of Scappoose.

☐ Has supplied all necessary information in connection with the inquiry concerning responsibility.

☐ Determined the Bidder to be (check only one of the following):

☐ Responsible under ORS 279C.375 (3)(a) and (b).

☐ Not responsible under ORS 279C.375 (3)(a) and (b).

(Attach documentation if CITY finds the BIDDER not to be responsible)

**This form and any attachments must be submitted within 30 days after the date of Contract Award to the Oregon Construction Contractors Board, PO Box 14140, Salem, OR 978309-5052, Phone (503) 378-4621, Fax (503) 373-2007.**

**3.10 PUBLIC WORKS CONTRACT**

**FOR**

**Miller Road Basalt Well (MR-4)**

1. This Contract is by and between the City of Scappoose ("City") and ("Contractor"), collectively referred to as "the Parties."

**2. Term**

Unless terminated sooner under the provisions of this Contract, the term of this Contract shall be from \_\_\_\_\_, 2023, to \_\_\_\_\_, 20\_\_.

Substantial Completion shall be achieved by May 31, 2024.

**3. Contract Documents**

The Contract Documents which comprise the entire agreement between City and Contractor concerning the Work consist of the following:

- This Agreement (Public Works Contract)
- Exhibits to this Agreement, if applicable
- Performance, Payment, and other Bonds
- Notice to Proceed
- City of Scappoose Public Works Design Standards (PWDS) and Standard Detail Drawings,
- Construction plans, \_\_\_\_\_ through \_\_\_\_\_ (bound separately)
- Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive
- CONTRACTOR's Bid Proposal
- Documentation submitted by CONTRACTOR prior to Notice of Award

The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents.

**4. Payments**

City of Scappoose shall pay the Contractor, upon the submission of invoices, the prices stipulated in this Contract for supplies delivered and accepted or services rendered and accepted. City of Scappoose shall pay the Contractor within thirty (30) days of the receipt of a properly completed and submitted invoice. The Contractor may submit no more than one invoice per month.

Notwithstanding any other additional requirements of this Contract, invoices shall contain the contract number, the date(s) supplies were delivered, or services were furnished; a detailed

description of the supplies or services furnished, and a price breakdown showing contract prices and units. All applications for payment shall be submitted to the Consultant and City of Scappoose to the following:

**Attn: Dave Sukau, [dsukau@cityofscappoose.org](mailto:dsukau@cityofscappoose.org)**

**33568 East Columbia Avenue**

**Scappoose, Oregon 97056**

**and;**

**Attn: Robyn Cook, [rcook@gsiws.com](mailto:rcook@gsiws.com)**

**650 NE Holladay Street; Suite 900**

**Portland, Oregon 97232**

Failure to strictly comply with this provision may result in a delay in payment.

**5. Type of Contract and Compensation**

This is a requirements contract for the goods and services specified. The quantities of goods and services specified are estimates only and are not purchased by this Contract. CITY is not obligated to purchase goods of the type covered by this Contract exclusively from Contractor. Except as this Contract may otherwise provide, quantity variance between "estimated" and actual orders placed shall not constitute the basis for an equitable price adjustment.

**Contract compensation shall not exceed \$ \_\_\_\_\_**

**6. Insurance**

During the term of this Contract, Contractor shall purchase and maintain any insurance required by this Contract. Contractor shall furnish acceptable certificates of insurance and additional insured endorsements to City of Scappoose within ten (10) days after award of this contract, and prior to commencement of any contract work.

Contractor shall be responsible for the payment of all premiums and deductibles and shall indemnify City of Scappoose for any liability or damages that City of Scappoose may incur due to Contractor's failure to purchase or maintain any required insurance.

Contractor shall maintain insurance of the types and in the amounts described below. Contractor shall have the right to provide a self-insured retention for these coverages in an amount not-to-exceed \$2,000,000.00.

**(1) Commercial General Liability Insurance**

Commercial General Liability insurance, with coverage limits not less than:

- (a) \$2,000,000.00 per occurrence, bodily injury and property damage; and
- (b) \$3,000,000.00 general aggregate, bodily injury and property damage.

Such coverage will be equivalent to or better than the Insurance Service Office (ISO) standard coverages, conditions, and extensions, and shall not contain limitations or exclusions for Blanket Contractual, Broad Form Property Damage, Personal Injury, Premises-Operations, Products and-Completed Operations, Independent Contractors, Fire Legal Liability, and Explosion, Collapse, and Underground (XCU).

**(2) Business Auto Liability Insurance**

Automobile bodily injury and property damage liability insurance covering all motor vehicles, whether owned, non-owned, leased, or hired, with not less than the following limits:

- (a) Bodily injury: \$1,000,000.00 per person; \$1,000,000.00 per accident; and
- (b) Property damage: \$1,000,000.00 per accident.

**(3) Worker's Compensation Insurance**

Oregon statutory workers' compensation and employer's liability coverage, including broad form all states protection, if applicable, voluntary compensation and Federal endorsement. Employer's liability coverage shall have the following limits:

- (a) Bodily Injury by Accident: \$1,000,000.00 each accident
- (b) Bodily Injury by Disease: \$1,000,000.00 each employee
- (c) Bodily Injury by Disease: \$1,000,000.00 policy limit

Contractors who are non-subject workers meeting one of the exceptions in ORS 656.027 may not be required to carry workers compensation insurance. Any Contractor requesting an exemption from the workers compensation coverage listed above must make that request in writing, stating the Contractor's qualification for exemption under ORS 656.027.

Failure of City to demand certificates of insurance, additional insured endorsements or other evidence of full compliance with these insurance requirements or failure of City to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

The insurance required under this Paragraph shall:

- (1) Include (as evidenced by endorsement) CITY and its directors, officers, representatives, agents, and employees as additional insureds with respect to work or operations connected with the contract (excluding Professional Liability and Worker's Compensation policies);
- (2) Require Contractor to give City not less than thirty (30) days written notice prior to termination, cancellation, or non-renewal of coverage;
- (3) Insurance policies shall be purchased only from insurance companies that meet City A.M. Best Rating criteria of "A-" or better (excluding SAIF) and are authorized to do insurance



business in Oregon;

- (4) Contractor will cause its underwriters of insurance policies to waive their rights of subrogation arising from the work performed under this Contract;
- (5) Contractor's insurance shall apply as primary and will not seek contribution from any insurance or self-insurance maintained by, or provided to, the additional insureds listed above. This must be noted on the insurance certificate.

## **7. Indemnification**

- A. To the fullest extent permitted by law, Contractor agrees to fully indemnify, hold harmless, and defend City, their elected officials, officers, employees, and agents from and against all claims, demands, losses, suits, damages, losses, attorney fees, and costs of every kind and description and expenses incidental to the investigation and defense thereof, resulting from, based upon or arising out of, or incidental, or in any way connected with any act, omission, fault or negligence in whole or in part of Contractor, its agents, contractors, sub-contractors, or employees in the performance or nonperformance of Contractor's obligations under this Contract.
- B. The obligations of Contractor under this provision will not in any way be affected or limited by the absence in any case of insurance coverage or by the failure or refusal of any insurance carrier to perform any obligation on its part to be performed under insurance policies affecting this Contract. In no way shall the Contractor limit its liability under this Contract.
- C. This indemnity shall survive the termination of this Contract or final payment hereunder. This indemnity is in addition to any other rights or remedies which City and the other parties to be indemnified may have under the law or under this Contract. In the event of any claim or demand made against any party which is entitled to be indemnified hereunder, City may in its sole discretion reserve, retain or apply any monies due to the Contractor under the contract for the purpose of resolving such claims; provided, however, that City may release such funds if the Contractor provides City with adequate assurance of the protection of City's interests. City shall be the sole judge of whether such assurances are adequate.

## **8. Termination for Convenience**

City may terminate this Contract, in whole or in part, at any time by written notice to the Contractor when it is in City's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. City of Scappoose will not be responsible for payment for any work performed after the time of termination. After termination, the Contractor shall promptly submit to City its termination claim for payment. If the Contractor has any property in its possession belonging to City, the Contractor will account for the same, and return it to City in the manner that City directs.

## **9. Termination for Default**

- A. City may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension; (ii) Make progress, so as to endanger performance of

this contract; or (iii) Perform any of the other provisions of this contract.

- B. City's right to terminate this contract under subdivision (A) of this clause may only be exercised if the Contractor does not cure such failure within 10 calendar days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Administrator specifying the failure.
- C. If City terminates this contract in whole or in part under the default provisions, it may acquire, under the terms and in the manner the Contracting Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to City for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.
- D. Contractor shall be paid the contract price only for completed supplies or services delivered and accepted. If it is later determined by City that Contractor had an excusable reason for not performing, such as a strike, fire, flood, or other event that is not the fault of, or is beyond the control of, Contractor, City may allow Contractor to continue work, or may treat the termination as a termination for convenience.
- E. The rights and remedies of City in this Article are in addition to any other rights and remedies provided by law or under this Contract.

#### **10. Applicable Law and Jurisdiction**

This Contract shall be governed by Oregon law, without resort to any jurisdiction's conflicts of law principles, rules, or doctrines. Any suit or action arising from this Contract shall be commenced and prosecuted in the courts of Columbia County, Oregon, or the U.S. District Court for the District of Oregon, in Portland, Oregon, as applicable. The parties agree to submit to the jurisdiction and venue of these courts.

#### **11. Waiver and Nonwaiver**

- A. A waiver by one party of a right to a remedy for breach of this Contract by the other party shall not be deemed to waive the right to a remedy for a subsequent breach by the other party. City's acceptance of goods or services, or payment under this Contract, shall not preclude City from recovering against Contractor or Contractor's surety for damages due to Contractor's failure to comply with this Contract.
- B. Both parties having had the opportunity to consult an attorney regarding the provisions of this Contract, the parties agree to waive the principle of contract interpretation that an ambiguity will be construed against the party that drafted the ambiguous provision.

#### **12. Mediation**

Should any dispute arise between the parties concerning this agreement that is not resolved by mutual agreement, it is agreed that it will be submitted to mediated negotiation prior to any party commencing litigation. In such an event, the parties to this agreement agree to participate in good faith in a nonbinding mediation process. The mediation shall take place in Scappoose, or St.

Helens, Oregon. The mediator shall be selected by mutual agreement of the parties, but in the absence of such agreement each party shall select a temporary mediator and those mediators shall jointly select the permanent mediator. The mediator's fees and costs shall be borne equally by the parties.

### **13. Severability/Survivability**

If any of the provisions contained in this Contract are held by a court of law or arbitrator to be illegal, invalid, or unenforceable, the enforceability of the remaining provisions shall not be impaired, and the parties shall negotiate an equitable adjustment of this Contract so that the purposes of this Contract are affected. All provisions concerning indemnity survive the termination or expiration of this Contract for any cause.

### **14. Intellectual Property**

Contractor shall hold harmless, defend and indemnify City, its directors, officers, employees and agents from any loss of any kind, based on a claim that the work performed, or products provided hereunder, including material(s) or any part thereof, constitutes infringement of any patent, trademark, trade-name, copyright, trade secret, or other intellectual property infringement, including but not limited to claims arising out of the manufacture, sale or use of such work, products or materials. Such indemnification shall include all damages and costs incurred by City as the result of the claim, including attorney fees and expert witness fees.

### **15. Inspection of Services**

City has the right to inspect and test all supplies/services called for under the contract, to the extent practicable, at all times and places during the term of the contract. City shall perform inspections and tests in a manner that will not unduly delay the work.

If any of the supplies or services do not conform with contract requirements, City may require the Contractor to replace the supplies or perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in supplies or services cannot be corrected by re-performance, City of Scappoose may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the supplies/services performed.

If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, City may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by City or (2) terminate the contract for default.

### **16. Title and Risk of Loss**

If this Contract is for the supply of goods, Contractor shall bear the risk of loss until the goods have been delivered to the site designated by City and an authorized City employee or agent has taken possession of them. Title to goods shall pass to City upon City's payment for those goods. If this Contract is for the rental or lease of Contractor's goods, the Contractor shall bear the risk of loss to Contractor's goods. Contractor agrees to carry insurance to cover any such losses. Title to the

Contractor's goods shall remain with Contractor while goods are in City's possession. If this Contract is for the repair or servicing of City of Scappoose owned goods, Contractor shall bear the risk of loss until the goods have been delivered to the site designated by City and an authorized City employee or agent has taken possession of them. Title to City owned goods shall remain with City while goods are in Contractor's possession. Contractor agrees to carry insurance to cover any losses/damages to City's goods while in Contractor's possession.

#### **17. Acceptance, Rejection, and Revocation of Acceptance**

If this Contract is for the supply of goods or equipment, then City shall be deemed to have accepted goods only after the goods have been delivered by Contractor, and City has had a reasonable opportunity after delivery to inspect the goods. Prior to acceptance, City may reject any goods that fail to conform to the requirements of this Contract. City may revoke its acceptance of goods that fail to conform to this Contract if the failure to conform was not reasonably discoverable by ordinary pre-acceptance inspection or evaluation. Acceptance may be revoked under this Paragraph even if City has started using the goods before discovering that they do not conform to the contract. Upon request by City, Contractor shall replace or repair to City's satisfaction any goods that have been rejected by City or the acceptance of which has been revoked by City under this Paragraph. Failure to replace or repair those goods within a reasonable time after City's request shall be a material breach of this Contract.

#### **18. Audit and Inspection of Records**

- A. Contractor shall maintain a complete set of records relating to this Contract in accordance with generally accepted accounting procedures. Contractor shall permit the authorized representatives of City, to inspect and audit all work, materials, payrolls, books, accounts, and other data and records of Contractor relating to its performance under this Contract until the expiration of three (3) years after final payment under this Contract.
- B. Contractor further agrees to include in all of its subcontracts under this Contract a provision to the effect that the subcontractor agrees that City, or any of their duly authorized representatives shall, until the expiration of three (3) years after final payment under the subcontract, have access to and the right to examine any directly pertinent books, documents, papers, and other records of the subcontractor.
- C. The periods of access and examination described in subparagraphs A and B of this Section for records that relate to (1) disputes between City and Contractor, (2) litigation or settlement of claims arising out of the performance of this Contract, or (3) costs and expenses of this Contract as to which exception has been taken by the Comptroller General or any of his or her duly authorized representatives, shall continue until all disputes, claims, litigation, appeals, and exceptions have been resolved.

#### **19. Project Managers**

The Contractor's designated Project Manager shall be the Contractor's representative for the administration of the contract documents and the supervision of the work. In all matters relating to the performance of the work and payment therefore, and in all situations involving actual,

recommended or proposed changes, City shall accept commitments and instructions of the Contractor only from the Project Manager or a duly authorized representative of the Project Manager so designated in writing.

City's Project Manager for this Contract is: **Dave Sukau**, Public Works Director, at (503) 543-7146 ext. 234 or [dsukau@cityofscappoose.org](mailto:dsukau@cityofscappoose.org)

City's Consultant Project Manager for this project is **Robyn Cook**, GSI Water Solutions, Inc., at (971)200-8505 or [rcook@gsiws.com](mailto:rcook@gsiws.com).

Contractor's Project Manager for this Contract is:

\_\_\_\_\_, at (\_\_\_\_) - \_\_\_\_ - \_\_\_\_\_ or  
\_\_\_\_\_ (email).

## **20. Notices and Communications**

All notices and other communications concerning this Contract shall be written in English and shall bear the contract number assigned by City. Notices and other communications may be delivered personally, by electronic mail, by facsimile, or by regular, certified, or registered mail.

A notice to City will be effective only if it is delivered to that person designated in writing in either a) the Notice of Award of this Contract, b) the Notice to Proceed under this Contract, or c) to another individual specifically designated by this Contract. A notice to the Contractor shall be effective if it is delivered to the individual who signed this Contract on behalf of Contractor at the address shown with that signature, to a corporate officer if Contractor is a corporation, to a general partner if Contractor is a partnership, or to another individual designated in writing by the Contractor in the contract or in a written notice to City.

## **21. Contractor's Status and General Responsibilities**

Contractor is an independent Contractor for all purposes and is entitled to no compensation from City other than that provided by this Contract. Contractor shall inform City of Contractor's Federal Internal Revenue Service Employer Identification Number, or, if Contractor is an individual with no employer identification number, Contractor's Social Security Number. The Contractor and its officers, employees, and agents are not officers, employees, or agents of City as those terms are used in ORS 30.265. The Contractor, its employees or officers shall not hold themselves out either explicitly or implicitly as officers, employees, or agents of City for any purpose whatsoever, nor are they authorized to do so.

Contractor shall provide and pay for all labor, materials, equipment, utilities, and other goods or services necessary for full contract performance unless this Contract specifically provides otherwise. Contractor shall supervise and direct contract performance using its best skill and shall be responsible for selecting the means of contract performance. If, during or after the term of this Contract, Contractor learns of any actual or potential defect in the services provided under this Contract, of any problem associated with the results of contract performance, or of any nonconformance with a provision of this Contract or of Federal, state, or local law, Contractor shall inform City immediately in writing with a full description of the defect, problem, or nonconformance.

Contractor acknowledges that City is supplying pre-purchased mechanical equipment and that Contractor is responsible for this equipment during handling and installation. Costs to repair any damage to the equipment by Contractor will be borne by Contractor.

**22. Assignment and Sub-contracting**

Contractor shall not assign any of its rights or subcontract any of its responsibilities under this Contract without the prior written consent of City. Contractor shall include in each subcontract any provisions necessary to make all of the provisions of this Contract fully effective. Contractor shall provide all necessary plans, specifications, and instructions to its suppliers and subcontractors to enable them to properly perform their work.

**23. Prompt Payment**

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime contractor receives from City. The prime contractor agrees further to return retainage payments to each subcontractor within 10 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of City.

**24. Liens Prohibited**

Contractor shall not permit any lien or claim to be filed or prosecuted against City, its property, or its right-of-way on account of any labor or material furnished or any other reason for work arising out of this Contract. If any lien shall be filed, Contractor shall satisfy and discharge or cause such lien to be satisfied and discharged immediately at Contractor's sole expense.

**25. Nondiscrimination**

During the term of this contract, Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, sexual orientation, disability, or national origin.

**26. Hours of Labor – Goods and Services**

Pursuant to ORS 279B.020, ORS 279B.235, and ORS 279C.520 the Contractor shall pay employees for overtime work performed under this contract in accordance with ORS 653.010 to 653.261 and the Fair Labor Standards Act of 1938 (29 U.S.C. 201 et seq.).

Workers will be paid not less than the applicable prevailing wages rates in accordance with 279C.838 and 279C.840.

Contractor is required to submit certified payroll statements pursuant to ORS 279C.845.

If contractor fails to pay for labor or services, the agency shall pay and withhold these amounts from the payments due to the contractor. Daily, weekly, weekend and holiday overtime will be paid as required in ORS 279C.540, ORS 279C.515, 279C.520; OAR 839-025-0020(2).

Employer must provide a written schedule to employees showing the number of hours per day and days per week with the employee may be required to work. Employer must promptly pay for any medical services they have agreed to pay, ORS 279C.520, 279C.530; OAR 839-025-0020(2).

## **27. Warranty**

Notwithstanding any express warranties provided elsewhere in this contract, the implied warranties of merchantability and of fitness for a particular purpose shall not be deemed to be excluded or modified, and contractor may not exclude or modify them. Contractor warrants that all goods provided under this contract are new, of high quality, and free from defects in design or manufacture. Goods provided under this contract shall be covered by any additional warranty customarily provided by Contractor or by the manufacturer of the goods.

## **28. Compliance with Laws and Regulations**

Contractor shall adhere to all applicable federal, state, and local laws, regulations, executive orders and ordinances applicable to the work under this Contract. The Contractor shall comply with the clauses required in every public contract entered into in the State of Oregon as set forth in ORS 279B.220, 279B.225, 279B.230, 279B.235, 279C.505, 279C.510, 279C.515, 279C.520, and 279C.530, which are hereby incorporated by reference.

When a project is subject to both the State of Oregon and Federal Prevailing Wage Rate Law, workers will be paid not less than the higher of the applicable state or federal rate. This does not apply to “residential construction” projects, ORS 279C.830(1)(b), OAR 839-025-0020(4)(c), 839-025-0037.

Every contractor and sub-contractor must have a public works bond filed with the CCB before starting work on the project, unless exempt, pursuant to ORS 279C.836. Contractor shall also file a payment bond with the City as required by ORS 279C.380 and 279C.390.

Contractor acknowledges that the Oregon Government Standards and Practices laws (“Ethics Laws”), as set forth in ORS 244.010 et seq. are applicable to contractors when performing certain work on behalf of City under contract and that the individual employees and agents of Contractor may be treated as public officials under ORS 244.020 (14). Contractor agrees to determine whether and under what circumstances it or its agents are subject to the Ethics Laws, as referenced herein and incorporated by reference, and shall comply and ensure compliance by those subject to Contractor’s control when performing work under this Contract.

## **29. Prohibited Interests**

No City Council member, officer, employee, or agent (or any member of the immediate family or the partner of any of the aforementioned) shall have any direct or indirect interest in this contract or its proceeds during, or within one year after, that person’s tenure with City, except to the extent such interest is permitted and disclosed as may be required under applicable law and City policy.

No City Council member, officer, employee, or agent (or any member of the immediate family or the partner of any of the aforementioned) shall solicit or accept, and Contractor shall not offer or

give to any City Council member, officer, employee or agent (or any member of the immediate family or the partner of any of the aforementioned), any gratuities, favors, or anything of monetary value, in connection with the administration of this Contract, except to the extent permitted by applicable law and City policy.

No member of, or delegate to, the Congress of the United States shall be admitted to a share or part of this contract or to any benefit arising therefrom.

**30. Safety**

Notwithstanding any safety provisions elsewhere in this contract, and in addition to Contractor's own safety procedures, Contractor shall implement and enforce all safety requirements that are standard in the industry and/or are required by the Oregon Occupational Health and Safety Administration (OSHA).

**31. Time of Essence**

Time is of the essence in this contract. Contractor's failure to deliver goods/services on time shall be a material breach of this contract. If Contractor fails to deliver goods/services on time, City, at its discretion, may procure those goods/services from another source. If the price paid by City for goods/services procured from another source under this Paragraph is higher than the price under this contract, Contractor shall pay City the difference between those prices. City may deduct that difference from any amount City owes Contractor.

**32. Paragraph Headings and Other Titles**

The parties agree that paragraph headings and other titles used in this Contract are for convenience only and are not to be used to interpret this Contract.

**33. Integration, Modification, and Administrative Changes**

These Contract documents (as defined in Article 2 of this contract) include the entire agreement of the parties and supersedes any prior discussions or agreements regarding the same subject. These Contract documents may be modified in writing by a modification that has been signed by individuals authorized to bind each of the parties contractually. City reserves the right to make administrative changes to the contract unilaterally. An administrative change means a written contract change that does not affect the substantive rights of the parties.

**34. Authority**

The representatives signing on behalf of the parties certify that they are duly authorized by the party for whom they sign to make this Contract.

**35. Certificate of Oregon Tax Law Compliance**

By signature hereto, both parties agree to this Contract as written. Contractor affirms, under penalty of perjury as provided in ORS 305.385(6), that to the best of its knowledge it is not in violation of any Oregon Tax Laws set forth at ORS Chapters 118, 314, 316-18, 321 and 323 and the



elderly rental assistance program under ORS 310.630-310.706; under ORS 320.005-320.150; under ORS 403.200-403.250 and any local tax laws administered by the Oregon Department of Revenue under ORS 305.620.

**36. Registration in SAM.gov**

The Contractor shall register in the System for Award Management (SAM), which is the primary registrant database for the U.S. Federal Government and shall update the information at least annually after the initial registration and maintain its status in the SAM through the Term of this Agreement. Information regarding the process to register in the SAM can be obtained at Sam.gov.

**37. Whistleblower Protection**

Contractor receiving ARPA funds shall under or through this contract post notice of the rights and remedies provided to whistleblowers under No Fear Act Pub. L. 107-174. 29 CFR § 1614.703 (d).

**38. Inspections; Information**

Contractor shall permit, and cause its subcontractors to allow the State of Oregon, the federal government and any party designated by them to:

- A. Examine, visit and inspect, at any and all reasonable times, the property, if any, constituting the Project.
- B. Inspect and make copies of any accounts, books and records, including, without limitation, its records regarding receipts, disbursement, contracts, and any other matters relating to the Project, and to its financial standing, and shall supply such reports and information as reasonably requested.
- C. Interview any officer or employee of the Contractor, or its subcontractors, regarding the Project.

**39. Equal Opportunity**

Contractor shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60).

**40. Copeland "Anti-Kickback" Act**

Contractor shall comply with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

**41. Debarment and Suspension (Executive Orders 12549 and 12689)**

A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

**42. Prohibition on purchasing telecommunications or surveillance equipment, services, or systems.**

As required by 2 CFR 200.216, federal grant or loan recipients and subrecipients are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment, video surveillance services or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Prohibitions extend to the use of Federal funds by recipients and subrecipients to enter into a contract with an entity that "uses any equipment, system, or service that uses covered telecommunications equipment or services" as a substantial or essential component of any system, or as critical technology as part of any system. Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list.

**43. Preference to United States made goods**

As appropriate and to the extent consistent with law, the contractor should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

**44. Procurement of recovered materials over \$10,000**

The Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include

procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

**45. Termination for cause and for convenience**

Contractor shall address termination for cause and for convenience, including the manner by which it will be affected and the basis for settlement.

The Contract Owner shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. The Contract Owner shall exercise this option by giving Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

**46. Byrd Anti-Lobbying Amendment (31 U.S.C 1352) for Awards to Contractors and Subcontractors in Excess of \$100,000**

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

**Certification Regarding Lobbying**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**47. Contract Workers and Safety Standards Act**

The Contract Work Hours and Safety Standards Act requires all contractors—prime and sub—to pay laborers and mechanics performing on a federal service contract and federal and federally assisted construction contract over \$100,000, 1.5 times their basic rate of pay for all hours worked over 40 in a workweek. Employers are liable to employees for these unpaid wages. The failure of a contractor to comply with this Act may also result in liability under the False Claims Act. Employees who are due unpaid wages under the Contract Work Hours and Safety Standards Act may file a complaint with the Wage and Hour Division within the U.S. Department of Labor. The DOL may then enforce the provisions of the Act against violators.

**48. Compliance with Federal Environmental Acts**

Contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15).

**49. Simplified Acquisition Threshold of 2022**

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

Upon any breach of this Agreement by Contractor, the Contract Owner shall have all remedies available to it both in equity and/or at law

**CONTRACTOR**

**CITY OF SCAPPOOSE**

By: \_\_\_\_\_  
*(signature)*

By: \_\_\_\_\_  
*(signature)*

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Federal Employer ID Number

**3.20 PERFORMANCE BOND**  
**MILLER ROAD BASALT WELL (MR-4)**  
**FOR**  
**CITY OF SCAPPOOSE**

KNOW ALL PEOPLE BY THESE PRESENTS:

That we, \_\_\_\_\_,  
as Principal, and \_\_\_\_\_,  
a corporation duly authorized to do business in the State of Oregon as Surety, are jointly and severally held and bound unto the City of Scappoose (County of Columbia, State of Oregon) in the sum of \_\_\_\_\_ for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS \_\_\_\_\_, the Principal herein on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into an agreement with the City of Scappoose (County of Columbia, State of Oregon), the Obligee herein, the complete terms and conditions of which are contained in the document entitled "Contract Documents for Miller Road Basalt Well (MR-4) Project," all as hereto attached and made a part hereof, whereby the Principal undertakes to do all labor, furnish all equipment, and furnish all material in accordance with all the terms and conditions set forth in the Contract Documents; and promptly to make payment for all labor, services, and material and promptly pay sums due the Industrial Accident Fund and State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969 as amended; and to save harmless the Obligee from any reason of the work, as set out more fully in the Contract Documents; and to do and perform all things in the Contract Documents required, in the time and manner and under terms and conditions therein set forth; and in conformity with all laws, State and Federal, applicable thereto, including but not limited to the requirements of Oregon Revised Statutes Chapter 279C relating to public contracts, which is hereby made a part hereof as if fully copied herein.

NOW, THEREFORE, if the Principal herein shall in the time and manner, and under the terms and conditions prescribed, well and faithfully do, perform, and furnish all matters and things as by them in the Contract undertaken, and as by law, State and Federal prescribed, then this obligation shall be void, but otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following further conditions:

- a) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action, or proceeding thereon that is instituted later than the period of time allowed by the applicable State or Federal Regulation after the complete performance of the Contract and final settlement thereof.
- b) The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this Bond, and

it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
PRINCIPAL

By: \_\_\_\_\_

\_\_\_\_\_  
(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_

\_\_\_\_\_  
(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Countersigned:

\_\_\_\_\_  
Resident Agent

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**3.30 PAYMENT BOND**  
**MILLER ROAD BASALT WELL (MR-4)**  
**FOR**  
**CITY OF SCAPPOOSE**

KNOW ALL PEOPLE BY THESE PRESENTS:

That we, \_\_\_\_\_,  
as Principal, and \_\_\_\_\_,  
a corporation duly authorized to do business in the State of Oregon as Surety, are jointly and severally held and bound unto the City of Scappoose (County of Columbia, State of Oregon) in the sum of: \_\_\_\_\_ for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS \_\_\_\_\_, the Principal herein on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into an agreement with the City of Scappoose (County of Columbia, State of Oregon), the Obligee herein, the complete terms and conditions of which are contained in the document entitled "Contract Documents for Miller Road Basalt Well (MR-4) Project," all as hereto attached and made a part hereof, whereby the Principal undertakes to do all labor, furnish all equipment, and furnish all material in accordance with all the terms and conditions set forth in the Contract Documents; and promptly to make payment for all labor, services, and material and promptly pay sums due the Industrial Accident Fund and State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969 as amended; and to save harmless the Obligee from any reason of the work, as set out more fully in the Contract Documents; and to do and perform all things in the Contract Documents required, in the time and manner and under terms and conditions therein set forth; and in conformity with all laws, State and Federal, applicable thereto, including but not limited to the requirements of Oregon Revised Statutes Chapter 279C relating to public contracts, which is hereby made a part hereof as if fully copied herein.

NOW, THEREFORE, if the Principal herein shall promptly pay all persons furnishing labor, services, material, or insurance to the Principal, or to their subcontractors, or to their assigns, on or about the work; and shall save harmless the Obligee, its officers and agents, from all claims therefore; and shall pay all sums due the Industrial Accident Fund, the State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969, then this obligation shall be void, but otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following further conditions:

- a) All material men and all persons who shall supply such laborers, mechanics of subcontractors with material, supplies, or provisions for carrying on such work, shall have a direct right of action against the Principal and Surety on this bond, second only to the right of the Obligee under this bond, which right of action shall be asserted in proceedings instituted in the appropriate court of the State of Oregon, and insofar as permitted by the laws of Oregon, such rights of action shall be asserted in a proceeding instituted in the name of the Obligee to the use and benefit of the



person, firm or corporation instituting such action and of all persons, firms, or corporations having claims hereunder shall have the right to be made a party to such proceeding (but not later than two years after the complete performance of the contract and final settlement and judgment rendered thereon).

- b) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action, or proceeding thereon that is instituted later than the period of time allowed by the applicable state or federal regulation after the complete performance of the contract and final settlement thereof.
- c) The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or to the specifications.
- d) It is understood and agreed that the surety shall be liable for payment of wages in an amount not less than the applicable prevailing rate of wages as of the date of the bid opening to each and every person who may be employed in the performance of the contract or any part of the contract.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_

PRINCIPAL

By: \_\_\_\_\_

\_\_\_\_\_

(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

\_\_\_\_\_

SURETY

By: \_\_\_\_\_

\_\_\_\_\_

(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Countersigned:

\_\_\_\_\_

Resident Agent

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3.40 MAINTENANCE AND WARRANTY BOND**

**MILLER ROAD BASALT WELL (MR-4)**

**FOR**

**CITY OF SCAPPOOSE**

KNOW ALL PEOPLE BY THESE PRESENTS:

That we, \_\_\_\_\_,

as Principal, and \_\_\_\_\_,

a corporation duly authorized to do business in the State of Oregon as Surety, are jointly and severally held and bound unto the City of Scappoose (County of Columbia, State of Oregon) in the sum of:

\_\_\_\_\_ for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS \_\_\_\_\_, the Principal herein on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into an agreement with the City of Scappoose (County of Columbia, State of Oregon), the Obligee herein, the complete terms and conditions of which are contained in the document entitled "Contract Documents for Miller Road Basalt Well (MR-4) Project," all as hereto attached and made a part hereof, whereby the Principal undertakes to do all labor, furnish all equipment, and furnish all material in accordance with all the terms and conditions set forth in the Contract Documents; and promptly to make payment for all labor, services, and material and promptly pay sums due the Industrial Accident Fund and State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969 as amended; and to save harmless the Obligee from any reason of the work, as set out more fully in the Contract Documents; and to do and perform all things in the Contract Documents required, in the time and manner and under terms and conditions therein set forth; and in conformity with all laws, State and Federal, applicable thereto, including but not limited to the requirements of Oregon Revised Statutes Chapter 279C relating to public contracts, which is hereby made a part hereof as if fully copied herein.

WHEREAS the Principal has completed the improvements and has applied to the Obligee to accept the improvements and in connection therewith, the Principal has agreed to guarantee the work performed against any and all defects in workmanship and materials for one (1) year from the date of acceptance of the improvements as determined by certification of the City of Scappoose, Oregon, the date of completion being certified as \_\_\_\_\_, 20\_\_\_\_. Should corrections in the work be required due to defects in materials and/or workmanship during the one-year period, then as to such corrective work the period shall be extended for and cover to the same extent as if within the original one-year period for an additional one (1) year period from the date of acceptance of the corrective work as certified by the City of Scappoose, Oregon.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall guarantee the work performed under the Contract against any and all defects in workmanship and materials for the period of one (1) year from acceptance of the completed work and any corrective work performed under the

guarantee, as certified by the City of Scappoose, then this obligation shall be void, otherwise to remain in full force and effect.

SIGNED and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_).

\_\_\_\_\_  
PRINCIPAL

By: \_\_\_\_\_

\_\_\_\_\_  
(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_

\_\_\_\_\_  
(typed or printed name)

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Countersigned:

\_\_\_\_\_  
Resident Agent

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 3.50 SELECTION OF RETAINAGE OPTION

WHEREAS, the Contractor either intends to enter or has entered into a certain contract with the City of Scappoose for the Miller Road Basalt Well (MR-4) Project. Retainage in the amount of five percent (5%) of the contract price of the work completed will be held by the City for up to thirty (30) days after the project has been accepted by the City in writing. Oregon law (ORS 279C.560) allows specific alternatives for the holding and accounting of this retainage at the option of the Contractor. FAILURE TO EXECUTE AND SUBMIT THIS FORM PRIOR TO PREPARATION OF THE FIRST PROGRESS PAYMENT WILL RESULT IN AUTOMATIC SELECTION OF THE FIRST OPTION.

The Contractor elects the following option in providing for retainage for the above-named project. (Check one only.)

\_\_\_1. The City will withhold payment and invest the retainage with the City investment portfolio. Interest on the account will accrue to the Contractor. Funds in the account will be released to the Contractor within thirty (30) days of acceptance of the project.

\_\_\_2. The Contractor will set up an interest-bearing account in a commercial bank or trust company in \_\_\_\_\_, Oregon \_\_\_\_\_ (name of lending institution) in the name of the City of Scappoose. The City will place the five percent (5%) retainage, withheld from each progress payment, into the interest-earning account. Funds in the account will be under the control of the City and will be released and will be released to the Contractor within thirty (30) days of final acceptance of the project. Interest on the account will accrue to the Contractor.

Bank Contact: \_\_\_\_\_

Contact Telephone Number: \_\_\_\_\_

\_\_\_3. Before the first progress payment is made, the Contractor will deposit acceptable bonds or securities, equal to at least five percent (5%) of the contract amount, with the City or with a bank or trust company in Oregon. The bank or trust company will provide a safekeeping receipt to the City. **The securities must cover all of the retainage.**

Acceptable bonds and securities to be held in lieu of retainage:

1. Bills, certificates, notes, bonds, or other obligations of the United State, its agencies, or its wholly-owned corporations.
2. Indebtedness of the Federal National Mortgage Association.

The Contractor will deposit \_\_\_\_\_

\_\_\_\_\_

(description of bonds or securities) in the amount of \$\_\_\_\_\_ with  
\_\_\_\_\_ with (depository name and address) on \_\_\_\_\_  
(date) and instruct the named depository to provide the City with a safekeeping receipt and to  
hold the bonds or securities until authorized by the City to release them.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Federal Tax I.D. Number

\_\_\_\_\_  
By (Signature)

\_\_\_\_\_  
By (Please print)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

#### **4.10 PROJECT INFORMATION**

##### **WORK TO BE DONE**

The Work to be done under this Contract consists of the following in Scappoose, Oregon:

- Drilling, constructing, and testing a Municipal water supply well at the Miller Road wellfield.
- Additional and incidental Work as called for by the Specifications and Plans

##### **APPLICABLE SPECIFICATIONS**

The Technical Specifications that are applicable to the Work on this Project are the City of Scappoose Public Works Design Standards (PWDS) and Standard Detail Drawings, the most recent edition of the American Water Works Association (AWWA) standards (as applicable), Oregon Water Resources Department (OWRD) standards for well construction (OAR 690-200 and 690-210), and/or Technical Specifications for Miller Road Basalt Well (MR-4). Any conflicts will brought to the attention of the City.

##### **CLASS OF PROJECT**

This is a City of Scappoose Public Works Project.

##### **PROJECT CONTACTS**

Submit written questions to the City Project Manager via email, fax, or letter.

##### **Project Management:**

**Dave Sukau, Public Works Director**

[dsukau@cityofscappoose.org](mailto:dsukau@cityofscappoose.org) and (503) 543-7146 ext. 234

##### **Project Consultant:**

**Robyn Cook, GSI Water Solutions, Inc.**

[rcook@gsiws.com](mailto:rcook@gsiws.com) and (971)200-8505

#### **4.20 PREVAILING WAGE RATES**

Oregon Prevailing Wage Rates are hereby incorporated into these specifications.

The Oregon Prevailing Wage Rate publications are incorporated by reference and available on BOLI's website at:

[www.oregon.gov/boli](http://www.oregon.gov/boli)

The applicable publications are:

- July 1, 2018 Definitions of Covered Occupations for Public Works Contracts in Oregon
- January 5, 2023 Prevailing Wage Rate Book
- January 11, 2023 Prevailing Wage Rate Amendment

A copy of these rules may be requested by calling the Bureau of Labor and Industries directly.

**Bureau of Labor and Industries – (971) 353-2416 or (971) 353-2286 or [pwr.email@boli.oregon.gov](mailto:pwr.email@boli.oregon.gov)**



## **PART 5.0 – TECHICAL SPECIFICATIONS**

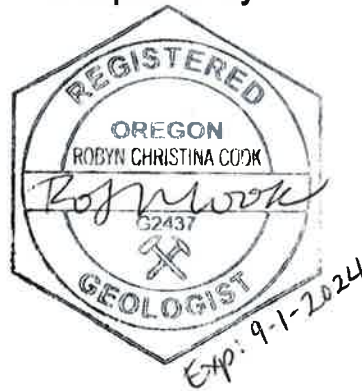
# **TECHNICAL SPECIFICATIONS**

Miller Road Basalt Well (MR-4)

City of Scappoose,  
Oregon

September 2023

Prepared by



GSI Water Solutions, Inc.  
650 NE Holladay St., Suite 900  
Portland, Oregon 97232  
(503) 239-8799

SECTION 00 73 00  
SUPPLEMENTAL CONDITIONS

**1 General**

**1.01 General Conditions**

See Contract Conditions

**1.02 Plans**

Included herein as part of the contract documents are the following site figures, schematics, and construction diagrams:

**Figure 1**      *Miller Road Basalt Well (MR-4) Site Plan*

**Figure 2**      *Conceptual Design – Miller Road Basalt Well (MR-4)*

**Figure 3**      *Conceptual Design – Miller Road Alluvial Aquifer Well (MR-4)*

**Attachment A** *Well Logs – Miller Road Wells*

**1.03 Contract Time**

The work contemplated consists of drilling, constructing, developing, and testing one new production well in the Columbia River Basalt Group (CRBG) aquifer system (or the alluvial aquifer system, depending on the productivity of the CRBG aquifer).

Completion times for the work shall be as follows:

1. All work under this Contract shall be substantially complete by the end of May 2024 and is anticipated to take up to 5 months once work has begun. For the purposes of this project, Substantial Completion shall be defined as completion of drilling, well construction, plumbness and alignment testing, development, and aquifer testing.
2. Completion date for all work under this Contract – including, demobilization, cleanup, well video, and issuance of Final Submittals – shall be two weeks following Substantial Completion.

**1.04 Notice to Proceed**

The City of Scappoose (City; Owner) intends to provide written Notice to Award within 3 calendar days after the City Council award has been executed. Notice to Proceed will be provided when the performance bond and all required insurance policies have been filed with and approved by the Owner. The Owner, however, retains the right to delay the Notice to Proceed for any reason. The Owner will provide the Contractor with notification that the Notice to Proceed will be delayed and an estimate of when the Notice to Proceed will be issued as soon as a delay is anticipated. The Contractor shall not commence work under the Contract until such written notice has been given.

The Contractor shall notify Dave Sukau of City of Scappoose Public Works Department, at 33568 E. Columbia Avenue, Scappoose, Oregon 97056 – (503) 543-7146 option 4, 7 calendar days prior to starting the work.

The Contractor shall commence work in a timely manner to ensure that the project is completed by the Substantial Completion date (May 31, 2024). Once work begins, work shall proceed

continuously per the work hours and days listed in Subsection 1.10 of this Section to completion. The Owner shall authorize the initiation of the development and pump testing portion of the work to coincide with a period of lower water demand (to allow for existing wells at the Site to be offline).

### **1.05 Extra Work and Change Orders**

The Owner may approve Change Orders and extensions of Contract time. All Change Orders must be approved in writing. An adjustment of the surety bond will be negotiated with the Contractor at the time of the change.

The Owner shall have the right to require and the Contractor agrees to do extra work over and above that which is specified by the Contract Documents and covered by the unit prices of the Contract, or negotiated price or prices. Extra work will be a logical part of the Contract, arising from reasonably unforeseeable conditions, changed requirements or new information. Such additional work shall be undertaken only upon written instructions from the Owner's Representative.

Extra work shall be done at prices agreed upon between the Contractor and Owner, but in no event exceeding unit prices established in the Contract. When such order pertains to work of a class or classes for which no unit prices are established, then the agreed adjustment shall be based either on:

- a) unit prices decided on fair and equitable grounds; or
- b) lump sum decided on fair and equitable grounds; or
- c) by force account.

### **1.06 Authority of the OWNER'S REPRESENTATIVE**

The Owner has delegated to GSI Water Solutions, Inc. (the Owner's Representative) the authority to decide all questions, excepting time extensions, which may arise as to the quantity, quality and acceptability of materials furnished and work performed; the rate of progress of the work; interpretation of the Plans and Specifications; the measurement of all quantities; and the acceptable fulfillment of the Contract on the part of the Contractor.

### **1.07 Water, Power and Noise Limits**

The Contractor shall make all arrangements necessary to obtain sufficient power for the well construction and aquifer testing. The site is located next to residential development, and the Contractor shall use all available means to minimize noise during working hours to the extent possible.

Two 110-volt power options are near the drilling site (one exterior outlet on the main building next to the City's generator; one outlet inside the MR-2 well building). The Contractor shall determine whether there is sufficient power available for the work. If power at the site is not sufficient, the Contractor shall provide a generator and fuel. The generator shall have sound levels of 65 to 68 dBA at 23 feet full load span). A line-shaft turbine pump powered by right-angle drive shall not be permitted to conduct aquifer testing.

The Contractor shall be responsible for supplying water as needed during the drilling operation. Limited quantities of water may be obtained from the potable faucets located inside the main building next to the generator and inside the MR-2 building. Alternatively, there is a City hydrant located approximately 40 feet northwest of the well location (Figure 1). A water meter will be

provided to the Contractor (with a \$750 fee, which will be refunded as long as the meter is not damaged) to use water from the Owner's hydrant. A backflow prevention apparatus however, must be obtained from the Owner and shall be installed on the City hydrant before water can be accessed. Acceptable cross-connection control is required for use of the hydrant, including an air gap between the hose and water container (e.g., tank truck). The Contractor shall furnish all valves, hoses, connections, and miscellaneous fittings necessary to obtain sufficient water needed to complete the work.

### **1.08 Site Security and Safety**

The Contractor shall develop, publish, and implement an overall Safety Program for the Project. This program shall conform to all applicable codes and laws. The Contractor shall submit the written Safety Program to the Owner's Representative prior to starting work. The program shall subsequently be distributed to and implemented by the Contractor's personnel as well as its Subcontractors and Suppliers. The Contractor shall fully implement and comply with the Safety Program, and shall submit to the Owner's Representative a letter signed by the Contractor's owner/president affirming such implementation and compliance before on-site work has commenced.

The site for the production well is located on City-owned property within a security fence. The Contractor is responsible for securing equipment and the borehole each day. During times when work is not being conducted at the site, the Contractor shall coordinate with the City to ensure the site is secured in order to protect the public and to prevent unauthorized access, vandalism and theft. The Contractor shall provide temporary fencing as required to protect materials, equipment and miscellaneous items from theft, vandalism, unauthorized access and/or harm.

The Contractor shall provide, install, and maintain barricades, warning devices, and other protection as required.

### **1.09 Schedule and Sequence of Work**

Work to be completed in accordance with the contract times specified in the Agreement.

### **1.10 Work Limits and Hours**

The Contractor shall confine work to the Owner's property upon which the well is to be installed. The Contractor shall coordinate use of the site with other contractors or activities that may be occurring on the site. The Contractor shall limit work to the following daily schedule:

Monday through Friday, excluding holidays:	7:00 AM to 7:00 PM
Saturday:	No work permitted unless approved by Owner or Owner's Representative.
Sunday:	No work permitted.

### **1.11 Standby/Delay Time, Incidental, Authorized Hourly Work**

Time lost to the project schedule can be expected during the course of project execution due to unavoidable and unforeseen events. Time lost to the project due to such circumstances may be originated by the Owner, Owner's Representative, or Contractor. Time lost from stoppage of work at the request of the Owner or Owner's Representative shall be defined as "standby time." Time lost due to the inability of the Contractor to proceed shall be defined as "delay time." These terms are further defined as follows.

Standby time is the duration of idle time greater than 1 hour accrued at the request of the Owner's Representative. The Contractor's workers and equipment shall remain onsite while standby time is in effect. In the event of standby time, the Owner shall pay the Contractor for equipment and crew per hour, not to exceed 8 hours per working day, and only hours between 7:00 AM and 7:00 PM. No standby time will be paid during the required grout-curing period; screen design, fabrication, and shipment to site, or for the recovery period following the step-rate or constant-rate aquifer tests. Payment for standby time shall not be granted to Contractor for time needed to evaluate or correct potential performance or quality issues caused by the Contractor during drilling, construction, or testing. Undue delays may result in payment by the Contractor for Owner's Representative's time.

Delay time is defined as avoidable delays greater than 1 hour caused by neglect in planning, improper scheduling, or sequencing of work by the Contractor. These items shall include, but are not limited to, the Contractor's tardiness and inability to provide the trained staff and adequate equipment in a reasonable manner. Delay time shall not include time lost to the project as a result of conditions beyond the Contractor's control. These unavoidable delays shall include, but are not limited to, inclement weather and unexpected or unusual conditions. In the event of delay time, the Contractor shall credit the Owner for the Owner's Representative's time onsite for the period where delay time is in effect, not to exceed 8 hours per working day. The Contractor may give a 12-hour notice to Owner's Representative that there will be a delay without being assessed damages in the event of equipment breakdown and parts not easily attainable and must be ordered. Shorter notice may suffice at the Owner's Representative's discretion if it does not result in an expenditure of the Owner's Representative's time on the project. A working day shall be defined for this purpose as 7:00 AM to 7:00 PM, including a 1-hour lunch break, Monday through Friday, excluding holidays. Any additional hours worked each day will be negotiated between Owner's Representative and the Contractor.

Authorized hourly work shall include furnishing all equipment, labor, tools, and miscellaneous materials necessary to conduct activities not covered under other bid items as approved by the Owner's Representative in writing. The Owner's Representative and the Contractor will maintain records for this work. The Owner's Representative's record will be binding. No hourly payment will be made to the Contractor for work being performed to condition or ream the borehole, or to repair, clean, or replace equipment that is not in working condition.

## **2 Materials**

**Not Used.**

## **3 Execution**

**Not Used.**

## **4 Measurement and Payment**

**Not Used.**

**END OF SECTION**

SECTION 01 00 00  
GENERAL REQUIREMENTS

**1 General**

**1.01 Work Covered by the Contract Documents**

The completed work will provide the Owner with one new production well (MR-4) at the City's Miller Road site (52515 Miller Road, Scappoose, OR 97056). The production well drill site can be accessed to the west of the intersection of Miller Road and Bryan Drive (Figure 1). The Owner's Representative or Owner will stake the precise location of the new production well prior to the pre-construction meeting. The well is anticipated to be completed to a depth of up to 600 feet below ground surface (bgs) in the basalt aquifer. The total completed depth may be greater or less than anticipated depending on the subsurface conditions encountered during drilling. If the City and the Owner's Representative determine that basalt aquifer is not a favorable source of water, the well will be completed within the alluvial aquifer (approximately 200 feet bgs). The overall work to be completed as part of this project includes drilling, well construction, plumbness and alignment testing, well development, step- and constant-rate aquifer testing, video logging and well disinfection.

**1.02 Work Not Covered by the Contract Documents**

The work for this Contract does not include a permanent pump station including well pump, controls, piping or pump house.

**1.03 Organization and Interpretation of Contract Documents**

- A. Specifications and Plans included in these Contract Documents establish the performance, quality requirements, location and general arrangement of materials and equipment, and establish the minimum standards for quality of workmanship and appearance.
- B. A part of the work that is necessary or required to make each installation satisfactory and operable for its intended purpose, even though it is not specifically called out in the Specifications or on the Plans, shall be performed as incidental work as if it were described in the Specifications and shown on the Plans.

**1.04 Construction Time**

Substantial Completion (drilling, completion, plumbness and alignment testing, development, and aquifer testing of the new well) is five months after work has begun. The Final Completion date for the work is two weeks following Substantial Completion.

**1.05 Hydrogeologic Information**

Well logs for the existing wells at the site (COLU 51685, COLU 52428, and COLU 52612) are provided as an attachment (Attachment A). Other well logs in the vicinity of the Dutch Canyon property are available from the Oregon Water Resources Department (OWRD). This is for the Contractor's information only, and the Owner will not be responsible for the Contractor's application or interpretation of the information, or for spatial variations of subsurface conditions between the well locations.

## **1.06 Examination of Site and Conditions**

Bidders must determine for themselves and to their own satisfaction, all the conditions and circumstances affecting the project or the cost of the proposed Work by personal examination of the site and the Specifications and Plans and by such other means as they may choose. An optional pre-bid meeting will be held at the site on October 5, 2023 at 10:00 AM. It is understood and agreed that information as to underground or other conditions or obstructions indicated in the Specifications and Plans has been obtained by the Owner from data at hand. There is no expressed or implied agreement that such conditions are fully or correctly shown. Bidders must take into consideration the possibility that conditions affecting the cost or quantity of Work may differ from those indicated.

## **1.07 Pre-Construction Conference and Submittals**

A pre-construction conference shall be held at the Miller Road work location, no less than two weeks prior to the start of work. At this meeting the selected Contractor shall submit:

1. Documentation of certifications testing for each welder on the project.
2. Documentation of licensing and bonding of State of Oregon well drillers to be used on the project.
3. A detailed construction schedule, which will be followed by the Contractor throughout the duration of the project, and updated a minimum of once per week, or as needed.
4. The names, addresses, and telephone numbers of two or more persons employed by the Contractor for this work who can be reached during evening and weekend hours to handle emergency matters.
5. Material Safety Data Sheets for any and all hazardous chemical products to be used by the Contractor on this project.
6. A listing of all materials proposed to be furnished for this project showing the supplier's name and address, manufacturer's name and product identification number, and catalog cut sheets to clearly identify materials.

To be submitted after the pre-construction conference and before beginning drilling:

1. Erosion Control Plan for the well drilling location.
2. Water Management Plan for the well drilling location.
3. Spill Prevention, Control, and Countermeasures Plan for the well drilling location.

Work shall not commence until all these items have been received, reviewed and approved by the Owner's Representative and erosion control measures are installed at the well site where work is to begin.

## **1.08 List of Submittals**

The list of submittals is outlined in subsections 1 through 5 below.

### **1.08.1 Submittals Requiring Owner's Representative Approval - General**

The Contractor shall submit the items listed on the following table to the Owner's Representative for review and approval. The Owner's Representative reserves the right to request additional submittals that are not included in this table. Approval by the Owner's Representative shall not relieve the Contractor from responsibility for any error or omission in the submittal. No work may begin until all submittals have been reviewed and approved. Approval of the submittals will be



given in writing prior to beginning any work. No deviations from the approved drawings shall be allowed without the prior approval of the Owner's Representative.

Item	Submittal
Welder certification	Copy, certificate(s)
Bonded well driller license certifications	Copy license(s)
Erosion control	Plan
Water management and turbidity reduction	Plan
Spill prevention, control & countermeasures	Plan
Well screen assembly	Plan, Installation drawings, Equipment List and Manufacturer's Specifications

### **1.08.2 Submittals Requiring Owner's Representative Approval Prior to or During Drilling and Well Installation and Testing Activities**

1. Proposed drilling method and description of method used to ensure that fines are collected as part of the representative formation material samples.
2. Proposed changes in well design, materials used, or cement grouting methods.
3. Drawings for the well site showing the proposed equipment layout, water discharge channels or pipelines, and drill cuttings staging area, if necessary, and obtain approval from the Owner's Representative prior to the start of work at the drill site.
4. Proposed method of sealing production well casing, including materials to be used.
5. Manufacturer's Mill Certificate on steel casing used for the permanent well casing or as blank sections in the well screen assembly.
6. Screen/Liner submittal. The Contractor shall provide a submittal prepared by the screen/liner manufacturer, which includes a schematic of the screen assembly. The schematic shall include collapse and tensile strength, estimated screen weight, screen outside diameter and clear inside diameter, slot size and the square inches of open area per lineal foot of screen.
7. *Possible Additive:* Filter pack sample. A sample of the specified filter pack material shall be provided to the Owner's Representative prior to installation of the screen assembly and filter pack.
8. *Possible Additive:* Method proposed for installing filter pack materials outside of well screens and details of the filter pack and pressure relief screen configuration.
9. *Possible Additive:* Methods for measuring and monitoring depth to the top of the filter pack during filter pack installation, well screen position during casing pullback, development and test pumping, and for adding filter pack if necessary after test pumping.
10. Development tools and methods proposed for development of the new production well.
11. Aquifer Testing, Submittal 1. The step-rate testing plan, including test pump specifications, discharge pipe dimensions, metering and flow control equipment, data measurement equipment, data measurement methods, and pump discharge location.
12. Aquifer Testing, Submittal 2. The constant-rate testing plan, including test pump specifications, discharge pipe dimensions, metering and flow control equipment, data measurement equipment, data measurement methods, and pump discharge location.
13. Aquifer Testing, Submittal 3. Submit within two days of aquifer testing completion, all manually-recorded water-level and pumping-rate test data (step-rate test, constant-rate test, and recovery test data) in hard copy form.

### **1.08.3 Submittals at Completion of Well Construction**

The Contractor shall submit to the Owner's Representative "As-Built" drawings of the new production well. The drawings shall provide information to clearly show calculations, dimensions, and assumptions.

#### **1.08.4 Quality Control Submittals**

1. The Contractor's daily drilling logs, which shall include a description of materials encountered, work completed, and water level measurements **prior to the start of drilling** and periodically taken each day.
2. Drilling fluid additive certification that additives are suitable for potable water well applications.
3. Grout seal additives certification that additives are suitable for potable water well applications.
4. Weight measurements of cement grout seal material at 25 and 75 percent of seal placement.
5. Manufacturer's descriptive data indicating materials of construction including configuration of screen (see also Screen submittal).
6. Results of plumbness and alignment testing.
7. Manufacturer's instructions for preparing and applying chlorine solution for disinfection of wells.

#### **1.08.5 Contract Close Out Submittals**

Contract close out submittals include the final well log, well construction diagrams, aquifer test data (hard copy and electronic file) when performed, start card information, plumbness and alignment test results, well video, and copies of the State Water Well Report submitted to OWRD that documents the drilling and construction of the new production well.

#### **1.08.6 Submittal Procedures**

Unless otherwise specified herein, furnish an electronic copy of all submittals to the Owner's Representative. When submitting hard copies, submit two (2) copies to the Owner's Representative.

The Contractor shall coordinate submittals for related operations to avoid delay when submittals can be reviewed concurrently. The Owner's Representative reserves the right to return submittals requiring coordination without action or marked "SUBMIT SPECIFIED ITEM." Resubmit all related operations submittals simultaneously.

#### **1.08.7 Submittal Reviews**

The Owner's Representative will review and mark each submittal.

The Owner's Representative's review of the submittals is applied to the general characteristics and to a general design only. The Owner's Representative's review does not include a review of dimensions and quantities except that the Owner's Representative will review dimensions only to the extent to coordinate overall control dimensions with other work. Review by the Owner's Representative does not in any way release the Contractor from the responsibility to comply with the requirements of the Contract Documents and for the proper fit, construction sequences, dimensions and quantities. The Owner's Representative's review does not constitute acceptance of departures from the Contract Documents, from supplementary drawings or instructions, and from applicable codes, laws, ordinances, standards or from boards, commissions, agencies, and departments having jurisdiction. The Contractor shall make special note by separate letter and clearly mark on the submittal any deviations from the Contract Documents.

The review by the Owner's Representative of any shop drawings, product data, samples, construction methods, and equipment or any other submittals is only for conformance with the

general design concept of the project and does not extend to consideration of structural integrity, safety, construction feasibility, or practicality, detailed compliance with contract requirements or any other obligation of the Contractor. Any action shown is subject to the requirements of the Plans and Specifications. The Contractor is responsible for the means, methods, and materials used in completing the project, confirming and correlating all dimensions, fabricating and construction techniques, coordinating the work with that of all other trades, and the satisfactory performance of the entire work in strict accordance with the Contract Documents. It is the responsibility of the Contractor to confirm that all specifications, dimensions, and materials will result in the successful completion of the project as described herein and as may result from changed conditions encountered during drilling.

**2 Materials**

**Not Used.**

**3 Execution**

**Not Used.**

**4 Measurement and Payment**

**Not Used.**

END OF SECTION

SECTION 33 21 13A  
MOBILIZATION/DEMOBILIZATION, EROSION CONTROL AND WATER MANAGEMENT

**1 General**

**1.01 Description**

This section includes mobilization, erosion control, water management and site cleanup for the construction of the basalt well (MR-4).

**1.02 Clearing, Site Access, and Security**

The well site is located at a City-owned parcel located on Miller Road to the west of the intersection with Bryan Drive (Figure 1). The Owner will be responsible for providing adequate access to the well at all times. The site is located near a residential area. The drill site shall be secured each night prior to leaving the site. The Contractor shall be responsible for any necessary site preparation.

The Contractor will be responsible for ensuring that underground utilities within a 20-foot radius of the drill site are located and marked, including pre-excavating the borehole location by vacuum or air-knife excavation (potholing) to a depth of six feet and minimum diameter of 16 inches.

The new production well site is fairly level and clear. It is the Contractor's responsibility to visit the site and to assess the effort required to prepare the site for this project. The construction site is level; however, it is anticipated that some site work and improvements, possibly including a gravel drilling pad, may be needed prior to the start of drilling operations. It is the Contractor's responsibility to visit the site and to assess the amount of effort required to prepare the site for the completion of the work under this Contract. The installation of an adequate gravel drilling pad will be the responsibility of the Contractor. For this project, the Contractor will be required to maintain access to existing City well house on the property. Improvements required for the Contractor's access and operations shall be completed by the Contractor. The Contractor shall employ methods to prevent mud and sediment from being tracked onto public streets.

**1.03 Spill Prevention**

The Contractor shall develop and maintain a spill prevention, control and countermeasures (SPCC) plan that addresses the provisions of the Washington State Department of Transportation's Standard Specification Section 1-07.15(1) Spill Prevention, Control and Countermeasures Plan for Construction. A copy of the SPCC plan shall be submitted to the City's Representative prior to mobilizing to the work site.

Use of hydrocarbon products other than fuel, motor oil, hydraulic oil and grease normally used during well drilling and installation shall be minimized. All lubricants or oils used on drill pipe threads, down-hole hammers, or other drilling equipment that could be discharged or otherwise come into contact with aquifer materials and groundwater shall be NSF-approved for use in potable water applications, and adequate measures shall be taken to prevent all oil, fuel and other fluid spills onsite.

The Contractor shall have a spill response kit onsite that includes sufficient materials and equipment to control and prevent discharge of spills offsite or into site catch basins. Contractor personnel shall be familiar with the SPCC plan and trained in the use of spill prevention and response equipment.

The Contractor shall place a protective barrier under drilling rigs, support vehicles, and other equipment to prevent oils, fuels and other fluids from contaminating the site. Drip pans or other protective devices shall be required for all oil, fuel or chemical transfer operations.

#### **1.04 Erosion Control**

The Contractor shall install and maintain erosion control measure in accordance with the Erosion Control Plan submitted per “1.08 – Pre-Construction Conference and Submittals” of Section 01 00 00 of these Specifications. Erosion control shall consist of installation, maintenance, and removal of temporary erosion and sedimentation control measures to prevent erosion and transport of soil and turbid water to offsite locations. Standards for these measures are published under a separate reference: *City of Scappoose Public Works Design Standards*. This publication is available from the City.

The Contractor shall design the Erosion Control Plan to comply with all applicable Owner requirements using measures that will best fit the Contractor's construction sequencing and approved construction schedule. The Erosion Control Plan shall be approved, and the erosion control measures installed and inspected by the Owner or Owner's Representative, prior to the start of drilling. Installation of erosion control measures in accordance with the Erosion Control Plan shall not relieve the Contractor of any responsibility for enforcement actions resulting from violation of the standards set forth by the City. The Contractor will not be paid standby time in the event the project is shut down due to nonconformance with permit and/or regulatory criteria. The Contractor will maintain one copy of the most current approved Erosion Control Plan at the job site.

#### **1.05 Water Management and Turbidity Reduction**

The Contractor shall convey and dispose of water generated during drilling, well development and aquifer testing to the location designated by the Owner shown on Figure 1. The water should first be discharged to a container, such as a roll-off bin or Baker tank, supplied by the Contractor to allow solids to settle from the water prior to being conveyed to the disposal location. The Contractor shall control the water discharged to the site so that erosion does not occur. Up to 1,000 gallons per minute may be discharged to the gravel settling basin located adjacent to the well location. The location of the settling basin is shown on Figure 1. It will be the Contractor's responsibility to provide the necessary means of conveying water from the settling tank to the settling basin.

The Contractor shall provide temporary discharge piping and temporary settling tanks (e.g. Baker Tanks) required to convey water to the approved discharge point. The temporary water storage shall be sufficient to reduce the turbidity of the effluent to 50 nephelometric turbidity units (NTUs) prior to discharging to the settling basin. All facilities and piping shall be sized and constructed by the Contractor to accommodate flow requirements during drilling, development, and testing. Solid matter shall be separated from the effluent prior to disposal. Effluent produced shall not be discharged into streets, neighboring properties, gutters or into any facilities such as stormwater or sanitary sewer systems. No waste shall be introduced into the discharge water.

The Contractor shall prepare and submit a Water Management and Turbidity Reduction Plan as required by “1.08 - Pre-Construction Conference and Submittals” of Section 01 00 00 of these Specifications. The Contractor shall design the Water Management and Turbidity Reduction Plan to comply with all applicable requirements and project specific permits. The Contractor shall confer with the Owner's Representative in developing the Water Management and Turbidity Reduction Plan to ensure that anticipated discharge rates do not exceed the capacity of the

settling basin. If the discharge rates exceed the capacity of the settling basin, the Contractor shall be prepared to discharge to the nearby stormwater drain (Figure 1).

Water management in accordance with the Water Management and Turbidity Reduction Plan shall not relieve the Contractor of any responsibility for enforcement actions resulting from violation of the standards set forth for discharge of water into the settling basin. The Contractor will not be paid standby time in the event the project is shut down due to nonconformance with permit and/or regulatory criteria. The Contractor will maintain one copy of the most current approved Water Management and Turbidity Reduction Plan at the job site.

## **2 Materials**

### **2.01 General**

The Contractor is responsible for determining whether the site conditions require specific materials and measures to ensure adequate erosion and sedimentation control. Some disturbance is expected, and the Contractor will be responsible for site cleanup. Drilling cuttings must be contained and removed from the site, while creating as little damage to existing conditions as possible. The Contractor will be responsible for restoring the site to existing conditions. The City's Erosion Control Manual provides recommendations for best management practices and materials that can be implemented to meet erosion control requirements. The City's Erosion Control Manual is available upon request.

### **2.02 Drilling Water**

Water is available as described in Subsection 1.07 of Section 00 73 00.

## **3 Execution**

### **3.01 Site Preparation**

The Contractor shall prepare the work site such that ground surface remains stable during drilling, including but not limited to placement of materials sufficient to support the drilling machine and support vehicles, and to prevent dislodging of soil (erosion) and off-site movement of soil (sedimentation), in accordance with the Erosion Control Plan.

The Contractor may dig excavations for drilling fluid circulation and/or water management at the site, with the Owner's approval. It is the Contractor's responsibility to ensure that any excavation is five (5) feet or more beyond toe of cut or filled slopes. A plan showing the proposed excavation location(s) and dimensions must be submitted to the Owner for approval by the City's Engineer.

The Contractor shall coordinate with the Owner regarding access to the locked facility, and ensure that the gate is closed and locked when personnel are not onsite. The Contractor will provide and post "Construction Area, Keep Out" signs at prominent locations along the fence.

### **3.02 Site Cleanup**

The Contractor shall remove rubbish and debris from the site at conclusion of Work. The Contractor shall remove drill cuttings from the site and restore the site to existing conditions.

### **3.03 Erosion Control Installation**

The Contractor shall construct and install the erosion control measures as outlined in the approved Erosion Control Plan. The Contractor shall otherwise employ methods to prevent mud and sediment from being tracked from the well site onto public streets.

### **3.04 Erosion Control Maintenance**

Erosion control measures shall be inspected and maintained as set forth in the approved Erosion Control Plan. Erosion control measures shall be maintained on the site until the potential for erosion to occur, as a result of project activities, has been abated. In no case shall erosion prevention and sedimentation control measures be removed prior to the Owner's inspection and approval.

The Contractor shall ensure that all erosion prevention and sediment control measures shown on the approved plan are installed and function in a manner that meets the standards set in the Contractor's Erosion Control Plan. If the installed erosion prevention and sediment control system does not adequately contain the sediment on the project site, the measures shall be field-adjusted as necessary by the Contractor. Any deletions, additions, substitutions, or any other modification of the measures shown on the approved plan shall be reviewed and approved by the Owner's Representative prior to installation.

During active construction, the Contractor shall inspect and maintain the erosion control facilities and measures daily, and shall adjust, repair, or replace any erosion control measures to ensure that they are functioning properly and as planned. The Contractor shall immediately remove eroded sediment carried or tracked onto the pavement surfaces, off-site areas, or into storm drainage systems such as storm drain inlets, ditches, or culverts. The Contractor shall not flush sediment directly into the storm drainage system. Water containing sediment shall not be flushed or allowed to flow into sanitary systems or waterways without first passing through an approved sediment filtering facility or device adequate to meet the standards for discharge set forth in the City's Erosion Control Manual.

### **3.05 Erosion Control Removal**

When the project is completed or when materials associated with the drilling operations that can erode the site have been removed or managed so that continued erosion potential is minimized to the extent possible, all temporary erosion control measures shall be removed from the construction site, unless otherwise directed by the Owner's Representative. A final inspection is required prior to removal of erosion and sedimentation measures.

### **3.06 Water Management and Turbidity Reduction System Construction and Maintenance**

The Contractor shall construct and install the water management and turbidity reduction systems in accordance with the approved Water Management Plan. The systems shall be inspected daily by the Contractor to ensure that they are operating as planned. In no case will the water management and turbidity reduction measures be removed prior to Owner inspection and approval.

## **4 Measurement and Payment**

### **4.01 Mobilization and Demobilization**

Measurement and payment for mobilization and demobilization shall be on a Lump Sum price as stated in the Bid Form for Bid Item No. 1. The lump sum price shall be full compensation for all labor and materials required to prepare the site for the Work, remove Contractor equipment, and to complete site cleanup after the Work has been performed. The Work is defined as site preparation and cleanup, and completion for the production well.

Progress estimates and payments for Bid Form Item No. 1 will be made in accordance with the following schedule:

1. Mobilization to the site and set up for drilling production well: 50 percent.
2. Site cleanup and demobilization: 50 percent.

### **4.02 Spill Prevention and Control**

The measurement unit for this work is Lump Sum as stated in the Bid Form for Bid Item No. 2. The lump sum price shall be full compensation for all labor and materials required for preparation of the spill prevention and control plan, and implementation of spill countermeasures.

Progress estimates and payments for Bid Form Item No. 2 will be made in accordance with the following schedule:

- A. Submittal of the spill prevention, control and countermeasures (SPCC) plan: 50 percent.
- B. Site clean up and demobilization: 50 percent.

### **4.03 Erosion Control**

The measurement unit for this work is Lump Sum as stated in the Bid Form for Bid Item No. 3. The lump sum price shall include the cost of all labor, materials and equipment used to provide, maintain and remove erosion and sedimentation control devices and measures at the drill site. The lump sum bid price shall include all costs associated with the preparation of the plans, modifications to the plans required to achieve compliance with the Contract and the City Code and maintenance of the measures in accordance with City's Public Works Design Standards. The lump sum bid price shall also include removal or replacement of degraded measures with new materials when directed by the Owner's Representative.

Progress estimates and payments for Bid Form Item No. 3 will be made in accordance with the following schedule:

- C. When the plan has been approved and all erosion and sedimentation control materials and measures are in place for drilling and have been inspected and approved by the Owner's Representative: 50 percent.
- D. Upon completion of all work on the project, final inspection and approval from the Owner's Representative: 50 percent.

### **4.04 Turbidity Reduction and Water Management Control**

The measurement unit for this work is Lump Sum as stated in the Bid Form for Bid Item No. 4. The lump sum bid price shall include the cost of all labor, materials and equipment used to provide



and maintain the approved turbidity reduction and water management control systems at the drill site. The lump sum bid price shall include all costs associated with the preparation of the plans, modifications to the plans required to achieve compliance with the Contract, the turbidity standard set by the City Code and maintenance of the measures in accordance with the regulatory standards for turbidity reduction. The lump sum bid price will also include removal or replacement of degraded measures with new materials when directed by the Owner's Representative.

Progress estimates and payments for Bid Form Item No. 4 will be made in accordance with the following schedule:

- A. When the approved systems and materials are in place for drilling and have been inspected and approved by the Owner's Representative: 50 percent.
- B. Upon completion of all work on the project, final inspection and approval from the Owner's Representative: 50 percent.

END OF SECTION

SECTION 33 21 13B  
BASALT PRODUCTION WELL – MR-4

## 1 General

### 1.01 Scope of Work

This project consists of drilling, constructing, and testing one production well (MR-4). The well will be a municipal drinking water supply source for the City, and will operate concurrently with the existing Miller Road wells (MR-1, MR-2, and MR-3) at the site. This work will include drilling and constructing a production well with an estimated production rate of up to 500 gallons per minute (gpm); collecting and logging formation samples; and developing and disinfecting the well. The anticipated well construction diagram is shown on Figure 2 and summarized in Table 1. Actual design will depend on subsurface conditions encountered during drilling. Aquifer testing is described in Section 33 21 13C.

The Contractor shall supply all materials, labor, appurtenances, equipment, incidentals and testing necessary for the construction of the production well. The Contractor shall perform all operations required to finish the project, complete in place, and ready for its intended use.

The sequence of work shall include the following:

- Mobilize to the work site.
- Set up and maintain a power supply, water supply, and portable sanitary restroom.
- Set up and maintain erosion and sediment control, water management and turbidity reduction, and spill prevention facilities in accordance with the Contractor's plans.
- Perform a utility locate at the well drilling location, including pre-excitation by vacuum or air-knife excavating (potholing) to a depth of six feet below grade. The pre-excitation diameter shall be a minimum of 2-inches greater than the maximum borehole diameter.
- Upper borehole: Drill a 12-inch nominal diameter borehole and advance temporary casing to an anticipated depth of 330 feet below ground surface (into the top of competent basalt).
- Lower borehole: Drill an 8-inch nominal diameter borehole (including advancing temporary casing if need) to an anticipated depth of 600 feet below ground surface or to a depth specified by the Owner's Representative.
- Collect composite formation samples for logging as described in 3.03 of this Section.
- Perform a color video survey of the lower borehole.
- **Complete a step-rate pumping test (refer to Section 33 21 13C). The City will review the results of the step-rate test and decide whether to continue with completing the well in the basalt aquifer. If the well is able to produce sufficient water, then continue the work sequence as follows. If not, follow the work sequence in the *Possible Additive Alternate* section of these Technical Specifications (33 21 13B2).**
- If required by the conditions in the open borehole, install a 6-inch liner assembly from at least fifteen (15) feet above the bottom of the 8-inch casing to the total depth with low carbon steel casing and stainless steel screen (depth intervals determined by the Owner's Representative).
- Complete plumbness and alignment tests.
- Install surface seal (ground surface to at least five feet into competent basalt; depth to be determined during drilling by Owner's Representative).
- Develop the well.
- Complete step-rate and a constant-rate pumping tests, including recovery monitoring (refer to Section 33 21 13C).
- Disinfect the well.
- Perform a color video survey of the final well construction.

## 1.02 Location

The well site is located at the City's Miller Road property (52515 Miller Road, Scappoose, OR 97056) in Scappoose, Oregon (Figure 1). The Owner or Owner's Representative will stake the location of the production well prior to the pre-construction meeting.

## 1.03 Conceptual Well Design and Target Yield

The depth below the ground surface to which casing, or drilling operation shall be terminated will be specified by the Owner's Representative during advancement. The table below provides the approximate construction depths and diameters and the target design well yield.

**Table 1: Conceptual Well Design and Target Yield**

Production Casing Nominal Diameter (inches)	Approximate Borehole Depth (feet)	Target Design Well Yield <sup>1</sup> (gpm)	Well Screen/Liner Nominal Pipe-Size Diameter (inches)	Approximate Length of Screen Assembly <sup>2</sup> (feet)
8	600 feet	300	6	300

<sup>1</sup> The actual well yield may vary due to site-specific subsurface conditions.

<sup>2</sup> Screen assembly includes 280 feet of stainless steel screen and 20 feet of blank low carbon steel casing.

## 1.04 Drilling Permits and Site Clearance

The Contractor shall obtain at its expense the start cards and furnish the well log and well report for the new well to the licensing state agency. The City's water right G-18842 authorizes water production from a basalt well at the Miller Road facility. The City will need to prepare a water right amendment to G-18845 if the well is completed in the alluvial aquifer.

The Contractor will be responsible for ensuring that underground utilities within a 20-foot radius of the drill site are located and marked, including pre-excavating the borehole location by vacuum or air-knife excavation (potholing) to a depth of six feet and minimum diameter of 16 inches.

## 1.05 Standards

The Contractor selected for this work shall be licensed and bonded in the State of Oregon, and must comply with all Oregon Administrative Rules (OAR) for Well Construction and Maintenance, OAR 690-200-005 through 690-235-020.

The Contractor shall obtain at its expense approval for any Special Standards required to complete the well as described in the Plans and Specifications. Requirements for well construction as defined under OAR 690-200-0021, and Special Standards, shall be the responsibility of the Contractor. The Contractor is also responsible for obtaining the necessary permits for the use of water from the Owner's hydrant (refer to "1.07 – Water, Power and Noise Limits" in Section 00 73 00) and discharge of water to the sanitary sewer system (refer to "5 - Water Management and Turbidity Reduction" in Section 33 21 13A).

## 1.06 References

The following is a list of standards, which may be referenced in the contract.

- 1) American Petroleum Institute (API):

- a. Spec 5L-90, Specification for Line Pipe, 38<sup>th</sup> edition.
  - b. API 10-A, Specification for Materials and Testing for Well Cements.
- 2) American Society for Testing and Materials (ASTM)
- a. A53-90b, Standard Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated, Welded, and Stainless.
  - b. A409 Stainless steel casing.
  - c. A139-90, Standard Specification for Electric-Fusion (ARC) Welded Steel Pipe (NPS 4 and Over)
  - d. C33-90, Fine Aggregate
  - e. C150-89, Standard Specification for Portland Cement
  - f. A606 Type 4, HSLA steel casing
- 3) American Water Works Association (AWWA)
- a. A100-20, Standard for Water Wells
  - b. C200-91, Standard for Steel Water Pipe, 6 Inches or Larger
  - c. C206-91, Standard for Field Welding of Steel Water Pipe
  - d. C654-87, Standard for Disinfection of Wells
- 4.) State of Oregon
- a) OAR 690-200 through 690-215
  - b) OAR 333-061-0005 through 333-061-0098

## 1.07 Driller's Daily Log

Daily drilling and formation logs shall be prepared by the Contractor and presented at the end of each week to the Owner's Representative, or upon request. The log shall contain the following information on forms provided by the Contractor and approved by the Owner's Representative.

- Well identification (project well name or start card number).
- Depth, thickness, type, general characteristics and drilling characteristics of each material encountered, evidence of water bearing zones, and note chattering or other drilling action that is evidence of the type of materials being penetrated.
- The size of borehole, the average time required to drill a foot of depth for each formation, and locations where drilling is hard or easy.
- Depths to the bottoms of the borehole, temporary, and permanent casings.
- **Static groundwater level prior to starting each day's work.**
- A record of materials (type and quantity) used during well construction each day, including but not limited to casing, screen, filter pack, fittings, and grout.
- A record of hourly work performed, including but not limited to well development and test pumping.

Accurate measurements of the depth of the borehole below ground surface shall be made by the Contractor with a weighted steel tape or other device approved by the Owner's Representative and recorded in the driller's log. The following measurements shall be recorded: **(1) depth to water prior to commencing drilling each day**, (2) depths of the permanent or temporary casings, (3) depth to the bottom of the liner casing/screen assembly, and (4) depth to the bottom of the borehole.

## 1.08 State of Oregon Well Log and Report

The Contractor shall prepare and submit a well log to OWRD for the production well as is required by the State of Oregon. The Owner will provide the Contractor with the necessary tax lot and

water right information to be included in the State Water Well Report. The Contractor shall submit a draft of the well log and State Water Well Report to the Owner's Representative for review prior to submittal to OWRD. The Contractor shall furnish the Owner and Owner's Representative with a copy of the final well log and the State Water Well Report.

## **2 Materials**

### **2.01 Formation Sample Containers**

The Contractor shall furnish appropriately-sized containers for formation samples. The containers shall have a minimum nominal capacity of one quart. The well name and depth/interval the sample was collected from shall be clearly marked with waterproof ink on the sample container. Formation samples shall be given to the Owner's Representative as requested.

### **2.02 Temporary Casing**

The Contractor shall, if necessary, provide temporary well casing of such strength to reach the maximum designated depth undamaged, and shall be of such strength so that the temporary casing(s) can be completely removed from the well.

If necessary, all pipe used as temporary casing to maintain the borehole walls, or to obtain samples required during the drilling, shall remain the property of the Contractor and be removed from the well site.

### **2.03 Permanent Well Casing**

The permanent well casing shall be new, seamless or electric resistance welded low carbon steel casing with a minimum wall thickness of 0.250 inches for 8-inch nominal diameter. The casing length is anticipated to be 333 feet, from 3 feet above ground surface to an anticipated depth of 330 feet, followed by an optional 6-inch diameter 300-foot well screen assembly with 280 feet of stainless steel screen and 20 feet of blank low carbon steel casing. The length of the permanent well casing may be increased or decreased based on subsurface conditions encountered during drilling.

All well casing and steel pipe shall conform to the latest edition of all relevant specifications, such as, but not limited to ASTM A-53 A or B. Well casing shall have the brand name, wall thickness, and ASTM designation clearly stamped on each pipe. Manufacturer-rejected pipe shall not be used. Well casing shall be clean and free of drilling mud or other foreign material prior to the final disinfecting of the well.

### **2.04 Casing Joints**

All welding shall be done by a certified welder, as certified by an independent testing laboratory as per American Welding Society (AWS) D1.1. Casing joints when welded shall be a complete penetration, vee-groove weld with a 60-degree angle bevel, 1/16-inch root opening, and the feather edge shall be ground to provide a land. The weld shall not use a backing ring. Provide a 1/32-inch surface build/finish. Prior to welding, the contractor shall inspect the bevel edge and if it is serrated or otherwise not smooth it shall be ground smooth. When welding stainless to carbon steel, the Contractor shall use a 309 welding rod.

## **2.05 Pipe Fittings and Specials**

The Contractor shall provide all fittings, drive shoes, welding rings, grout shoes and centering guides as necessary to complete the well.

## **2.06 Well Screen and Fittings**

Well screens, if used, shall be of continuous slot, wire-wrap design, manufactured by Johnson Screens or approved equal. The well screen material shall be Type 304 stainless steel conforming to ASTM requirements. The target screen design shall provide a manufacturer's transmitting capacity of at least 500 gpm with an entrance velocity of less than 0.1 feet/second.

The well screen assembly is defined as that portion of the completed well which includes the well screen(s); blank casing or 0-slot screen below, between, and above the screens; and any bottom and top fittings (weld rings) necessary to make the assembly sand tight. The well screen assembly is expected to consist of a pressure relief screen, production screen and sump. The sump below the screen shall be low carbon steel casing with a minimum wall thickness of 0.250 inches. For bidding purposes, the total length of the screen assembly (280 feet of screen and 20 feet of blank casing) is assumed to total 300 feet.

### **2.06.1 Diameter**

The diameter of the screen(s) is anticipated to be 6-inches pipe-size. The outer winding that forms the screen surface and the internal longitudinal bars shall be joined at each intersection by welding. Both members shall be Type 304 low carbon stainless steel conforming to ASTM requirements.

Because the actual casing and screen lengths, depth setting, and screen slot size are subject to change depending upon conditions encountered during drilling, it is the Contractors responsibility to obtain confirmation from the screen manufacturer that the screen assembly being installed has adequate collapse and tensile strength for the conditions encountered in the borehole.

The Contractor shall provide a certified copy of the manufacturer's screen specification used to formulate the bid for the well screen.

### **2.06.2 Slot Size**

The selection of the screen slot size will be based on a review of the geologic materials, collapse strength, and groundwater entrance velocities for the specified depths. For screen slot opening sizes less than 0.050 inches, the tolerance (as measured in the field by the Owner's Representative) is +/- 0.003 inches. For screen slot opening sizes greater than 0.050 inches, the tolerance is +/- 0.005 inches, as measured in the field by the Owner's Representative. Deviation from these standards may be cause for rejection of well screen materials.

### **2.06.3 Sump and Pressure Relief Screen**

An anticipated 5-foot section of blank low carbon steel casing will serve as a sump, and shall be attached to the bottom-most section of the well screen.

The screen assembly shall include a pressure relief screen (fabricated of the same materials, including slot-size as the production screen) and blank casing riser, which shall provide a minimum ten (10) feet of overlap inside the permanent well casing, as shown on Figure 2.

#### **2.06.4 Welding**

All welding material used to couple screen components shall be stainless. Top and bottom fittings required for the screen assembly shall be manufactured out of the same material as the screens. Joints between screen sections shall be welded and shall have tensile and collapse strength equal to or greater than that of the well screen. Stainless steel 309 welding rod or equivalent shall be used to weld stainless steel screen sections to the low carbon steel blank pipe section. The Contractor may recommend alternative welding materials. Approval of alternates shall be at the Owner's Representative's discretion.

#### **2.06.5 Centering**

The Contractor shall provide centering guides for the production casing and screen assembly as necessary to complete the well.

#### **2.07 Cement Grout**

The requirements for grout materials shall conform to OAR 690-210-0310. A maximum of five percent (by weight) of bentonite clay may be added to the grout mixture to improve its flow properties. To accelerate curing, grout placed beneath the static water level may be made with quickset cement using an accelerating admixture of 2 pounds CaCl per sack of cement, or with ASTM Type III High Early Strength cement. Use of any other additives not expressly allowed in OAR 690-210-0310 shall be subject to the approval of the Owner's Representative.

#### **2.08 Video Logging**

Provide necessary equipment to complete a color video log of the entire length of the completed well with depth below ground surface encoded on the video. The camera shall be equipped with side viewing capability without the use of mirrors. The camera must not have been used to video boreholes containing contaminated groundwater. Contractor shall provide two flash drive copies of the video to the Owner's Representative.

#### **2.09 Temporary Well Cap**

The Contractor shall provide a temporary watertight and secure cover for the wellhead while the Contractor's personnel are not at the well site, and for any period of time between the completion of drilling and testing, and after aquifer testing is complete. The well cap shall have a minimum two (2) inch diameter threaded access port with threaded cap located in the center of the well cap.

### **3 Execution**

#### **3.01 Surface Seal**

The Contractor shall drill a 12-inch borehole and advance temporary casing to an anticipated depth of 330 feet to install the surface seal (at least 5 feet into competent basalt). If the additive alternate (Section 33 21 13B2) is not selected, the surface seal shall be installed in compliance with OAR 690-210-0130, and OAR 690-210-0310 through 690-210-0360 (Figure 2).

#### **3.02 Upper Borehole Drilling**

The Contractor shall provide a drilling rig of sufficient size and capacity to complete the production well as described herein, and to meet the schedule outlined in Section 01 00 00. Dual rotary reverse circulation drilling is not allowed.

The Contractor shall drill the 12-inch borehole and advance casing with cutting shoe using air rotary, reverse circulation drilling, or cable tool methods to the anticipated target depth of 330 feet. The actual drilled depth may vary based on subsurface conditions encountered during drilling. Determination of the actual drilled depth will be made by the Owner's Representative.

Drilling fluid used during well construction shall be air with potable water or approved additives. Additives used during drilling, if necessary, will be NSF 60 compliant for potable water wells.

### **3.03 Lower Borehole Drilling**

The Contractor shall drill the 8-inch lower borehole using air rotary or reverse circulation drilling, and advance temporary casing as needed, to the anticipated target depth of 600 feet. The actual drilled depth may vary based on subsurface conditions encountered during drilling. Determination of the actual drilled depth will be made by the Owner's Representative.

The Contractor shall provide a drilling rig of sufficient size and capacity to complete the production well as described herein, and to meet the schedule outlined in Section 01 00 00.

Drilling fluid used during well construction shall be air with potable water or approved additives. Additives used during drilling, if necessary, will be NSF 60 compliant for potable water wells.

### **3.04 Formation Samples and Analyses**

Cuttings produced during drilling shall be collected by the Contractor as a composite sample across 10-foot intervals and separated at changes in formation type or color. The drilling rig shall be equipped in a manner to safely collect representative formation and water samples.

In the target production zone(s) (140 to 190 feet, and 300 to 600 feet), the Contractor shall collect composite representative formation samples every 5 feet, at changes in formation type or color, or at other intervals specified by the Owner's Representative. Formation samples collected in the production aquifer shall be a minimum volume of 1 quart.

The Contractor shall archive the formation samples in 1-quart sealable, waterproof bags. The depth/interval the sample was collected from shall be clearly marked on the sample bags using waterproof ink. As preservation of the samples is important, the Contractor shall furnish a tarp or other means to keep the samples from exposure to the elements. Formation samples shall be kept onsite until the Owner's representative has logged, photographed and sampled the material, and advised the Contractor to dispose of samples.

### **3.05 Measurements Required During Drilling**

Accurate measurements of the depth of the borehole below ground surface shall be made by the Contractor with a weighted steel tape or other device approved by the Owner's Representative and recorded in the drillers log. The following measurements shall be also recorded in the drillers log: **(1) depth to water prior to commencing drilling each day**, (2) depth of the permanent casing, (3) depth to the bottom of the screen assembly, (4) depth to the bottom of the borehole, and (5) diameter of the borehole and casing in each segment of the borehole. Refer to "1.07 Driller's Daily Log" in this Section for additional information to be included in the driller's log.



### 3.06 Screen Assembly

The Owner's Representative shall provide a recommendation for the screened well liner based on the observed geologic material during drilling, and the outcome of the lower borehole video survey. The Contractor shall provide a design submittal that lists the screen collapse strength and groundwater entrance velocities appropriately sized for and based on the liner placement depth and characteristics of the production zone.

All stainless steel screens and blank low carbon steel sections shall be new and shall be approved in advance by the Owner's Representative. For field assembly, the screen shall be furnished with welding collars and sufficient non-wire wrapped area at the ends to fit centralizers.

Casing centralizers (steel guides) shall be welded to sections, a maximum of 120 degrees apart, and each guide shall lie within the same horizontal plane and vertical alignment. Centralizers shall be placed above and below the well screen and spaced at intervals of not more than 80 feet. Centralizers shall not be placed onto the well screen.

It is the Contractor's sole responsibility to ensure the screen assembly has sufficient tensile and collapse strength to be assembled, landed, and installed without damage to casing, screen, or borehole. If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced at the Contractor's expense, or the Contractor shall replace the well.

An anticipated 5-feet of blank low carbon steel casing shall extend below the bottom-most screen section to serve as a sump.

If for any reason the screen assembly cannot be placed at the final design position or at a depth acceptable to the Owner, the Contractor shall remove and repair any damage to the screen assembly and overdrill the borehole and reinstall the screen assembly at no additional cost to the Owner. In no event shall the Contractor attempt to drive or spud the screen assembly.

Should the screen assembly become displaced at any point during construction, and the offset is determined to be unacceptable to the Owner's Representative, the Contractor shall remove and reinstall the screen assembly at no cost to the Owner. If the screen assembly is damaged during removal or reinstallation, the Contractor shall be solely responsible for its repair or replacement as requested by the Owner.

All work required to be repeated, and all additional materials, labor, and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or be allowed therefore, except as specifically provided herein.

### 3.07 Well Development

***The timing of the well development shall be dependent on the Owner's need to supply drinking water from the City's other nearby Miller Road production wells. The Contractor shall work with the Owner to determine when development activities (and aquifer testing) can take place. Any delays will not result in standby time for the Contractor.***

The Contractor shall develop the well to remove drilling fluid, drill cuttings and fine material from the stratum penetrated by the borehole to ensure a satisfactory hydraulic connection with the water-bearing zone(s) and so that the well will yield water with a low settleable solids content. Well development shall be completed prior to installing the annular surface seal. The Contractor shall notify the Owner's Representative not less than 2 calendar days in advance of the date and time when well development will be started.

Well development shall be executed using a combination of mechanical surging with a dual-isolation tool equipped with a shrouded submersible pump for simultaneous pumping (only within a screen assembly) and pumping.

The Contractor shall maintain the total length of the well during development and will be required to monitor the rate of sand (and other material) accumulation in the tailpipe and to clean the well casing periodically, as directed by the Owner's Representative.

All well development techniques shall be carried out in a manner that does not cause undue settlement and disturbance of the strata above the water bearing formation, or damage the open borehole. The following are the general requirements of the well development:

1. Water shall be removed from the well during development at a minimum rate of three-hundred (300) gpm.
2. During development, measurements made and recorded by the Contractor shall at a minimum include settleable solids (measured in mL/L with Imhoff cones), the total volume of sediment removed from the well, turbidity (measured in NTU), flow rate (gpm), drawdown (feet), and the short-term specific capacity (gpm per foot of drawdown).
3. The Contractor shall manage development water in accordance with the Water Management and Turbidity Reduction Plan.
4. After completion of the well development, the bottom of the well shall be cleaned of all sand and accumulated materials by a sand pump bailer.

Well development shall continue until water pumped from the well at the maximum test pumping rate is clear and free of fines, and/or no longer improving in the estimation of the Owner's Representative:

1. The sand content shall average not more than 5 mg/L for a pumping cycle of 2 hours duration when pumping at the maximum test pumping rate. The Contractor shall measure and monitor sand content with a centrifugal (Rossum type) sand tester. If the well discharge exceeds the 5 mg/L criterion as measured every 2 hours during the last 10 hours of the constant-rate pumping test the well shall be redeveloped by the Contractor and pumping tests repeated.
2. Well water turbidity shall be measured by the Contractor every 2 hours in the final 10 hours of the constant discharge pumping test. It is specified that a maximum of 5 Nephelometric Turbidity Unit (NTU) will be allowed as criteria of complete development. If the well discharge water is in excess of 5 NTU, the well shall be redeveloped by the Contractor and pumping tests repeated.

Development is anticipated to occur for a minimum of 24 hours for dual-isolation surging and pumping. An additional eight (8) hours for development via pumping shall be conducted after the test pump is set prior to the step- and constant-rate aquifer tests.

The Contractor shall maintain a complete log of development activity including:

- Daily static and pumping water levels.
- Water production rates and volumes.
- Duration of each operation.
- Observation of results.
- Sand content and quantities of sand removed.
- Sand content as a function of production rate.
- Well development progress (sand content, turbidity, volume of water pumped, etc).
- All other pertinent information or as requested by the Owner's Representative.

The Contractor shall manage development water in accordance with the Water Management Plan. Refer to Section 33 21 13A for more detail.

### **3.08 Water Samples**

Water samples may be taken by the Owner's Representative periodically during development. The Contractor shall provide a means to collect water samples (i.e., sample petcock valve) during development.

### **3.09 Plumbness and Alignment**

The Contractor shall maintain the plumbness, alignment, and straightness of the well at all times during drilling and casing. The Contractor shall conduct a plumbness and alignment test after the 12-inch borehole reaches the final depth of the upper borehole; anticipated to be 330 feet. Deviation from perfect alignment shall not exceed two-thirds of the pipe/borehole diameter per 100 foot of length, as specified in AWWA A100-06.

The Contractor shall complete a plumbness test of the production casing in accordance with the procedures of AWWA A100-20. Readings of horizontal deflection shall be made to the nearest 0.05-inch at minimum intervals of ten (10) feet of plummet depth. The test shall be conducted by the Contractor and observed by the Owner's Representative, and a copy of the test data shall be delivered to the Owner's Representative. The cased part of the well will be deemed adequately plumb if the horizontal displacement from the vertical is less than one (1) horizontal foot per one hundred (100) vertical feet.

The Contractor shall also prove the alignment of the well by lowering into the production casing a straight section of pipe as specified in AWWA A100-20 (40 feet long with an outside diameter no smaller than 0.5 inches less than inside diameter of casing being tested). Should the dummy fail to move freely through the production casing, or should the well vary from the vertical in excess of two-thirds the smallest inside diameter of that part of the well being tested per 100 foot of depth, the Contractor shall at their own expense, correct the plumbness and alignment if it fails AWWA A100-20.

If the cased part of the well cannot meet these criteria, the well shall be corrected at the Contractor's expense or abandoned because of the fault of the Contractor and a new well will be constructed at no additional expense to the Owner.

### **3.10 Well Disinfection**

The Contractor shall disinfect the well immediately following the recovery phase of the constant-rate pumping test, or as directed by Owner's Representative. The Contractor shall carry out adequate cleaning procedures immediately preceding disinfection where evidence indicates that normal well construction and development work have not adequately cleaned the wells. All oil, soil, and other materials shall be removed from the well.

The well shall be disinfected in accordance with the requirements of OAR 690-210-380 and ANSI/AWWA C654, except as modified herein. The method of chlorination to be used shall consist of treating the water in the well casing using sodium hypochlorite to provide a chlorine residual of approximately 50 mg/L, circulating the chlorinated water within the well casing and pump column, and pumping the well to remove chlorinated water. The use of calcium hypochlorite is strictly prohibited. The quantity of chlorine compounds required to produce a chlorine residual of 50 mg/L may be calculated by multiplying the appropriate quantity shown in ANSI/AWWA C654, Appendix A, Table A.1 by the appropriate factor. The disinfection solution shall remain in the well

for a minimum of 24 hours. The Contractor is responsible for ensuring that chlorinated water is not discharged to the storm sewer during the disinfection process, per the Water Management Plan.

### **3.11 Video Logging**

Two well video surveys shall be performed, one after the lower borehole has been drilled (to inspect the borehole stability) and one after the well is constructed and tested. **The video camera shall be disinfected prior to beginning the survey.** Video logging must be in color and have side-view capability without the use of mirrors. If the water column in the well is too cloudy, the Contractor shall flush the well with potable water and allow sufficient time for the water column in the well to become clear so that, in the opinion of the Owner's Representative, the video log shows sufficient detail. If the quality of the video does not meet the Owner's Representative's approval, the Contractor shall re-video at no extra expense to the Owner. The Contractor shall notify the Owner's Representative at least two days in advance of performing the video surveys.

### **3.12 Well Surface Completion**

Upon completion of all work in connection with construction, development, testing, and disinfection, the Contractor shall cut off the casing squarely and neatly and install a welded cap at a minimum of 3 feet above grade. The Contractor shall install a 2-inch ID access pipe with a threaded cap to allow for water-level monitoring as part of the final wellhead completion.

Completion shall include the installation of three temporary protection devices (e.g., Jersey barriers or ecology blocks) in an array surrounding the wellhead to ensure construction equipment or other vehicles do not impact the wellhead. The wellhead will likely be developed shortly after construction. As such, the Contractor shall work with the Owner or Owner's Representative to finalize the well completion.

### **3.13 Site Cleanup**

The Contractor shall complete final site cleanup, including but not limited to, removal of all drilling equipment, tools, and unused well materials at the conclusion of all work performed under this contract. The Contractor shall remove drill cuttings from the site and restore the site to pre-construction conditions as specified by the Owner or Owner's Representative. Site cleanup shall meet with the approval of the Owner.

Refer to Section 33 21 13A for additional Site Cleanup information.

## **4 Measurement and Payment**

For all unit price bid items, payment will be based on the actual quantities of each item used or hours of work performed.

### **4.01 Surface Seal**

The measurement unit for this work is Linear Feet (vertical) of 12-inch borehole completed as a surface seal. The measurement shall include all labor, equipment and materials. The value for payment shall be measured to the nearest foot. Measurement shall be taken from the ground surface to the bottom of the surface seal.

Payment shall be the unit price set forth in the Bid Form for Item No. 5 multiplied by the footage of 12-inch borehole sealed. If additional borehole sealing footage is required and approved by the

Owner's Representative beyond what is indicated in these specifications, the Contractor shall be reimbursed for the additional footage of borehole sealed at the unit price specified in the bid schedule submitted by the Contractor for this project.

#### **4.02 Borehole Drilling**

The measurement unit for this work is Linear Feet (vertical) of borehole drilled according to the unit prices for the diameter boreholes required to complete the well. Unit prices for payment of borehole drilling shall be those set forth in the Bid Form for Item No.'s 6, 7, and 8 and include all labor, equipment and materials:

1. Item No. 6 – completion of upper (12-inch nominal diameter) borehole drilling.
2. Item No. 7 – completion of lower borehole (8-inch nominal diameter) drilling.
3. Item No. 8 – Lower borehole: furnish install, and remove temporary casing, as needed.

Payment shall be the unit price set forth in the Bid Form for Item No. 6 multiplied by the 12-inch drilled borehole footage. Payment shall be the unit price set forth in the Bid Form for Item No. 7 multiplied by the 8-inch drilled borehole footage. Payment shall be the unit price set forth in the Bid Form for Item No. 8 multiplied by the 8-inch temporary casing installed to reach the total depth of the lower borehole. If additional borehole drilling footage is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional footage of borehole drilling and temporary casing at the unit price(s) specified in the bid schedule submitted by the Contractor for this project.

#### **4.03 Permanent Casing**

The measurement unit for the 8-inch permanent casing is Linear Feet (vertical) of production casing installed, and shall include all labor, equipment, and materials. The value for payment shall be as measured to the nearest foot. Measurement shall be the total length of casing installed.

Payment shall be the unit price for Item No. 9 multiplied by the total casing footage. If additional casing is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional casing on a per foot basis at the unit price specified.

#### **4.04 Drive Shoe**

The measurement unit for the 12-inch diameter drive shoe and cut is Lump Sum. Payment shall be made at the unit price shown on the Bid Form for Item No. 10, and shall include all labor and incidental materials for furnishing, welding the drive shoe to the temporary casing, and for performing the drive shoe cut. There will be no additional payment for rig time, idle time or standby time for work associated with tooling set-up or removal or while the shoe is being cut.

#### **4.05 Screen Assembly**

The measurement unit for this work is Linear Feet (vertical) of casing blank or screen installed, and shall include all labor, equipment and materials. The value for payment shall be as measured to the nearest foot. Measurement shall be the total length of casing blank and screen installed.

Unit prices for payment of casing blank and screen sections shall be those set forth in the Bid Form for Item No.'s 11 and 12 and include all labor, equipment and materials:

1. Item No. 11 – Furnish and install 6-inch dia. (nominal) low carbon steel casing

2. Item No. 12 – Furnish and install 6-inch dia. (nominal, pipe-size) stainless steel well screen.

Payment shall be the sum of the unit price for Item No. 11 multiplied by the total blank casing footage and the unit price for Item No. 12 multiplied by the total screen footage.

If additional casing blank or screen are required and approved by the Owner's Representative beyond what are indicated in these specifications, then the Contractor shall be reimbursed for the additional casing blank or screen on a per foot basis at the unit price specified.

#### **4.06 Plumbness and Alignment Test**

The measurement unit for this work/service is Lump Sum, and shall include all labor, equipment, and materials. Measurement includes completion and acceptance of tests.

The Owner's Representative shall be present to witness the plumbness and alignment tests of the well. There will be no payment for rig time, idle time, or Standby Time while tests are being run.

The lump sum price for payment shall be as set forth in the Bid Form for Item No. 13.

#### **4.07 Well Development**

The measurement unit for this work is Hours as recorded by the Owner's Representative. Measurement for payment shall be rounded to the nearest ½-hour. Measurement begins when the equipment installed in the well is placed in operation and shall end when the operation is stopped at the direction of the Owner's Representative.

Payment shall be the unit price set forth in the Bid Form for Item No.'s 14 and 15 multiplied by the number of development hours completed.

1. Item No. 14 – Well development (dual-isolation surging/pumping).
2. Item No. 15 – Well development (test pump).

No payment will be made for time unrelated to development, including for example, equipment setup/teardown or install, standby time, repairs, equipment breakdown, tool fishing, and weather delays. No payment will be made for collecting the information needed to maintain a complete log of development activity (see Part 3.08 of this Section).

If additional development time is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional development time on a per hour basis at the per hour price specified.

#### **4.08 Well Video Survey**

The measurement unit for this work is Lump Sum for all work associated with the well video surveys. Measurement shall be completion of each survey and delivery of the flash drives.

Lump sum price for each well video survey shall be as set forth in the Bid Form for Item No. 16.

There will be no additional payment for rig time or idle time while the survey is being conducted. Payment will not be made if the video is poor quality or the video does not cover the specified

depth interval. The Contractor will not be paid for standby time while the well is being flushed and/or while the Contractor is waiting for the well to clear.

#### **4.09 Well Disinfection**

The measurement unit for this work is Lump Sum for all labor, materials, and equipment associated with well disinfection. Measurement shall be completion of disinfection.

The lump sum price for well disinfection shall be as set forth in the Bid Form for Item No. 17.

#### **4.10 Well Surface Completion**

The measurement unit for this work is Lump Sum for all work associated with surface completion at the wellhead, and shall include all labor, equipment and materials. Measurement shall be completion of the well surface completion as specified.

The lump sum price for the surface completion shall be as set forth in the Bid Form for Item No. 18.

#### **4.11 Standby Time and Authorized Hourly Work**

The measurement unit for standby time and miscellaneous hourly work is Hours as recorded by the Owner's Representative. Measurement for payment shall be rounded to the nearest ½-hour.

Payment shall be those set forth in the Bid Form for Item No's. 19 and 20:

1. Item No. 19 – Standby Time
2. Item No. 20 – Preauthorized Hourly Work

Payment shall be the unit price for Item No. 19 multiplied by the number of standby time hours. Payment shall be the unit price for Item No. 20 multiplied by the number of miscellaneous work hours (Owner's Representative's discretion).

Measurement and payment for hourly work includes work authorized by the Owner's Representative and shall be at the bid hourly price. No separate measurement and payment under this bid item will be made for drill rig work that is covered by other bid items for drilling operations, grouting, casing and screen installation, plumbness and alignment testing, well development, or test pump installation or removal. Payment for standby time shall not be granted to Contractor for time needed to evaluate or correct potential performance or quality issues caused by the Contractor during drilling, construction, or testing. Undue delays may result in payment by the Contractor for Owner's Representative's time.

END OF SECTION

SECTION 33 21 13B2  
POSSIBLE ADDITIVE ALTERNATE: ALLUVIAL AQUIFER PRODUCTION WELL

## 1 General

### 1.01 Scope of Work

This possible additive alternate consists of backfilling, constructing, and testing one production well. The well will be a municipal drinking water supply source for the City, and will operate concurrently with the existing Miller Road wells (MR-1, MR-2, and MR-3) at the site. This work will include backfilling the existing borehole drilled as part of Section 33 21 13B and constructing, developing, and testing a production well completed in the shallow alluvial aquifer system. The production rate of the alluvial well is anticipated to be up to 300 gpm. The proposed alluvial well construction diagram is shown on Figure 3 and summarized in Table 2. Actual design will depend on subsurface conditions encountered during drilling that occurred in Section 33 21 13B of these technical specifications. Aquifer testing is described in Section 33 21 13C.

The Contractor shall supply all materials, labor, appurtenances, equipment, incidentals and testing necessary for the construction of the production well. The Contractor shall perform all operations required to finish the project, complete in place, and ready for its intended use.

The sequence of work shall include the following, continuing from the work sequence outlined in Section 33 21 13B of these technical specifications:

- Remove 12-inch temporary casing to a depth of approximately 200 feet bgs.
- Backfill the open borehole with cement grout to an anticipated depth of 200 feet bgs.
- Install the 8-inch production casing and screen assembly from 3 feet ags to an anticipated depth of 200 feet bgs.
- Install filter pack and expose well screen using casing pullback method.
- Complete plumbness and alignment testing.
- Develop the well and add filter pack as needed.
- Complete step-rate and a constant-rate pumping tests, including recovery monitoring (refer to Section 33 21 13C).
- Install a transition and surface seal from the top of the screen assembly to ground surface.
- Disinfect the well.
- Perform a color camera survey of the casing and screen assembly.

### 1.02 Conceptual Well Design and Target Yield

The depths, and slot size of the screen assembly shall be specified by the Owner's Representative, and will be dependent on geologic conditions observed during drilling the upper borehole. The table below provides the approximate construction depths and diameters and the target design well yield.

**Table 2: Conceptual Alluvial Well Design and Target Yield**

Production Casing Nominal Diameter (inches)	Approximate Well Depth (feet)	Target Design Well Yield <sup>1</sup> (gpm)	Well Screen Nominal Pipe-Size Diameter (inches)	Approximate Length of Screen Assembly (feet)
8	200 feet	300	8	30

<sup>1</sup> The actual well yield may vary due to site-specific subsurface conditions.



### 1.03 Standards

The Contractor shall obtain at its expense approval for any Special Standards required to complete the well as described in the Plans and Specifications. Requirements for well construction as defined under OAR 690-200-0021, and Special Standards, shall be the responsibility of the Contractor. The Contractor is also responsible for obtaining the necessary permits for the use of water from the Owner's hydrant (refer to "1.07 - Water Power and Noise Limits" in Section 00 73 00) and discharge of water to the sanitary sewer system (refer to "1.05 - Water Management and Turbidity Reduction" in Section 33 21 13A).

### 1.04 Driller's Daily Log

Daily drilling and formation logs shall be prepared by the Contractor and presented at the end of each week to the Owner's Representative. The log shall contain the following information on forms provided by the Contractor and approved by the Owner's Representative.

- Well identification (project well name or start card number).
- Depth, thickness, type, general characteristics and drilling characteristics of each material encountered, evidence of water bearing zones, and note chattering or other drilling action that is evidence of the type of materials being penetrated.
- The size of borehole, the average time required to drill a foot of depth for each formation, and locations where drilling is hard or easy.
- Depths to the bottoms of the borehole, temporary, and permanent casings.
- **Static groundwater level prior to starting each day's work.**
- A record of materials (type and quantity) used during well construction each day, including but not limited to casing, screen, filter pack, fittings, and grout.
- A record of hourly work performed, including but not limited to well development and test pumping.

Accurate measurements of the depth of the borehole below ground surface shall be made by the Contractor with a weighted steel tape or other device approved by the Owner's Representative and recorded in the driller's log. The following measurements shall be recorded: **(1) depth to water prior to commencing drilling each day**, (2) depths of the permanent or temporary casings, (3) depth to the bottom of the liner casing/screen assembly, and (4) depth to the bottom of the borehole.

### 1.05 State of Oregon Well Log and Report

The Contractor shall prepare and submit a well log to OWRD for the production well as is required by the State of Oregon. The Owner will provide the Contractor with the necessary tax lot and water right information to be included in the State Water Well Report. The Contractor shall submit a draft of the well log and State Water Well Report to the Owner's Representative for review prior to submittal to OWRD. The Contractor shall furnish the Owner and Owner's Representative with a copy of the final well log and the State Water Well Report.

## 2 Materials

### 2.01 Permanent Well Casing

The permanent well casing shall be new, seamless or electric resistance welded low carbon steel casing with a minimum wall thickness of 0.250 inches for 8-inch nominal diameter. The entire casing and screen length is anticipated to be 203 feet. Blank production casing shall extend from 3 feet above ground surface to an anticipated depth of 170 feet, followed by 25-feet of stainless

steel well screen and 5-feet of blank low carbon steel casing below the bottom of the screen. The length of the permanent well casing may be increased or decreased based on subsurface conditions encountered during drilling.

All well casing and steel pipe shall conform to the latest edition of all relevant specifications, such as, but not limited to ASTM A-53 A or B. Well casing shall have the brand name, wall thickness, and ASTM designation clearly stamped on each pipe. Manufacturer-rejected pipe shall not be used. Well casing shall be clean and free of drilling mud or other foreign material prior to the final disinfecting of the well.

## **2.02 Casing Joints**

All welding shall be done by a certified welder, as certified by an independent testing laboratory as per American Welding Society (AWS) D1.1. Casing joints when welded shall be a complete penetration, vee-groove weld with a 60-degree angle bevel, 1/16-inch root opening, and the feather edge shall be ground to provide a land. The weld shall not use a backing ring. Provide a 1/32-inch surface build/finish. Prior to welding, the contractor shall inspect the bevel edge and if it is serrated or otherwise not smooth it shall be ground smooth.

## **2.03 Pipe Fittings and Specials**

The Contractor shall provide all fittings, drive shoes, welding rings, grout shoes and centering guides as necessary to complete the well.

## **2.04 Well Screen and Fittings**

Well screens shall be of continuous slot, wire-wrap design, manufactured by Johnson Screens or approved equal. The well screen material shall be Type 304 stainless steel conforming to ASTM requirements. The target screen design shall provide a manufacturer's transmitting capacity of at least 300 gpm with an entrance velocity of less than 0.1 feet/second.

### **2.04.1 Diameter**

The diameter of the screen is anticipated to be 8-inches pipe-size. The outer winding that forms the screen surface and the internal longitudinal bars shall be joined at each intersection by welding. Both members shall be Type 304 low carbon stainless steel conforming to ASTM requirements.

Because the actual casing and screen lengths, depth setting, and screen slot size are subject to change depending upon conditions encountered during drilling, it is the Contractors responsibility to obtain confirmation from the screen manufacturer that the screen assembly being installed has adequate collapse and tensile strength for the conditions encountered in the borehole.

The Contractor shall provide a certified copy of the manufacturer's screen specification used to formulate the bid for the well screen.

### **2.04.2 Slot Size**

The selection of the screen slot size will be based on the filter pack envelope selected from sieve analyses of samples from the production zone. For screen slot opening sizes less than or equal to 0.050 inches, the tolerance (as measured in the field by the Owner's Representative) is +/- 0.003 inches. For screen slot opening sizes greater than 0.050 inches, the tolerance is +/- 0.005 inches, as measured in the field by the Owner's Representative. Deviation from these standards may be cause for rejection of well screen materials.

### 2.04.3 Sump

An anticipated 5-foot section of blank low carbon steel casing will serve as a sump, and shall be attached to the bottom-most section of the well screen as shown in Figure 3.

### 2.04.4 Welding

All welding material used to couple screen components shall be stainless. Top and bottom fittings required for the screen assembly shall be manufactured out of the same material as the screens. Joints between screen sections shall be welded and shall have tensile and collapse strength equal to or greater than that of the well screen. Stainless steel 309 welding rod or equivalent shall be used to weld stainless steel screen sections to the low carbon steel blank pipe section. The Contractor may recommend alternative welding materials. Approval of alternates shall be at the Owner's Representative's discretion.

### 2.04.5 Centering

The Contractor shall provide centering guides for the casing and screen assembly as necessary to complete the well and provide sufficient annular space to install a complete filter pack around the well screen and seal around the permanent production casing.

## 2.05 Filter Pack Envelope

The Contractor shall furnish and install a filter pack envelope according to the following specifications:

1. Filter pack material shall consist of clean silica sand, conforming to AWWA A100-20 with respect to specific gravity, uniformity, absence of deleterious substances, and non-rounded fragments.
2. Clean silica sand, manufactured by Colorado Silica Sand Inc (CSSI) or approved equal.
3. Gradation: Representative formation samples shall be collected during advancement of the borehole for sieve analyses. The Contractor under direction of the Owner's Representative shall submit select samples for grain size analyses..
4. **The Contractor shall provide a submittal recommending the filter pack gradation and screen slot size based upon results from the grain size analyses of the selected formation samples collected during the upper borehole drilling, and shall be approved by the Owner's Representative prior to screen order.**
5. A sample of the filter pack material(s) proposed for use shall be sieved and the results submitted to and approved by the Owner's Representative prior to the delivery of the material to the job site.
6. The Contractor shall provide a measuring device to sound the filter pack level in the borehole during placement, casing pullback and preliminary development to detect bridging and/or settlement. The Contractor shall also measure the top of the filter pack at the beginning and end of the constant rate pumping test, and replenish, as necessary..

## 2.06 Cement Grout

The requirements for grout materials shall conform to OAR 690-210-0310. A maximum of five percent (by weight) of bentonite clay may be added to the grout mixture to improve its flow properties. To accelerate curing, grout placed beneath the static water level may be made with quickset cement using an accelerating admixture of 2 pounds CaCl per sack of cement, or with ASTM Type III High Early Strength cement. Use of any other additives not expressly allowed in OAR 690-210-0310 shall be subject to the approval of the Owner's Representative.

Cement grout shall be used for both abandoning the lower portion of the borehole and the surface seal (Figure 3).

## **2.07 Video Logging**

Provide necessary equipment to complete a color video log of the entire length of the completed well with depth below ground surface encoded on the video. The camera shall be equipped with side viewing capability without the use of mirrors. The camera must not have been used to video boreholes containing contaminated groundwater. Contractor shall provide two flash drive copies of the video to the Owner's Representative.

## **2.08 Temporary Well Cap**

The Contractor shall provide a temporary watertight and secure cover for the wellhead while the Contractor's personnel are not at the well site, and for any period of time between the completion of drilling and testing, and after aquifer testing is complete. The well cap shall have a minimum two (2) inch diameter threaded access port with threaded cap located in the center of the well cap.

# **3 Execution**

## **3.01 Borehole Abandonment**

The lower borehole (anticipated to be 600 to 200 feet bgs), shall be abandoned in accordance with OAR 690-220.

## **3.02 Surface Seal**

The Contractor shall complete the filter pack placement and surface seal including placement of transition sand after well development and testing has been completed and during pullback of the temporary 12-inch casing. The surface seal shall be installed in compliance with OAR 690-210-0130, and OAR 690-210-0310 through 690-210-0360. The surface seal shall include a transition seal, consisting of two (2) feet of sugar sand on top of the filter pack, and three (3) feet of unhydrated bentonite chips on top of the sugar sand.

## **3.03 Measurements Required During Well Construction**

Accurate measurements of the depth of the borehole below ground surface shall be made by the Contractor with a weighted steel tape or other device approved by the Owner's Representative and recorded in the drillers log. The following measurements shall be recorded daily in the drillers log: **(1) depth to water prior to commencing activities each day**, (2) depth of the permanent casing, (3) depth to the bottom of the screen assembly, (4) depth to the bottom of the borehole, and (5) diameter of the borehole and casing in each segment of the borehole. Refer to "1.04 Driller's Daily Log" in this Section for additional information to be included in the driller's log.

## **3.04 Well Screen (Alluvial Well)**

The Contractor shall provide a recommendation for the well screen and filter pack design, for review and approval by the Owner's Representative. The design shall be based on results of the grain size distribution analyses on select formation samples collected during initial upper borehole drilling. Screen slot size shall be determined based on design of the filter pack. More than one gradation of filter pack, and consequently, more than one screen slot size, may be used in the screen assembly based on formation conditions encountered in the target production zone. The slot size shall be such that the openings retain 90 percent of the graded filter pack material. The

total length of screen, the depth below ground surface where screen openings are to be placed, and the length and location of blank steel casing sections within the screen assembly will be recommended by Owner's Representative.

All stainless steel screens and material shall be new and shall be approved in advance by the Owner's Representative. For field assembly, the screen shall be furnished with welding collars and sufficient non-wire wrapped area at the ends to fit centralizers.

Casing centralizers (steel guides) shall be welded to casing sections, a maximum of 120 degrees apart, and each guide shall lie within the same horizontal plane and vertical alignment. Centralizers shall be placed above and below the well screen and spaced at intervals of not more than 80 feet. Centralizers shall not be placed onto the well screen.

It is the Contractor's sole responsibility to ensure the well screen has sufficient tensile and collapse strength to be assembled, landed, and installed without damage to casing, screen, or borehole.

An anticipated 5-feet of blank stainless steel casing shall extend below the bottom-most screen section to serve as a sump.

The well casing string (including blank casing, screen and sump) shall be suspended in tension from the surface by means of an appropriate hanger or clamp. The bottom of the casing string shall be at a sufficient distance above the bottom of the borehole as to ensure that none of the casing will be supported from the bottom of the hole. The Contractor shall verify that the total weight of the casing string is supported by the drill rig.

If for any reason the screen assembly cannot be placed at the final design position or at a depth acceptable to the Owner, the Contractor shall remove and repair any damage to the screen assembly and overdrill the borehole and reinstall the screen assembly at no additional cost to the Owner. In no event shall the Contractor attempt to drive or spud the screen assembly.

Should the screen assembly become displaced at any point during construction, and the offset is determined to be unacceptable to the Owner's Representative, the Contractor shall remove and reinstall the screen assembly at no cost to the Owner. If the screen assembly is damaged during removal or reinstallation, the Contractor shall be solely responsible for its repair or replacement as requested by the Owner.

If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced at the Contractor's expense, or the Contractor shall replace the well.

All work required to be repeated, and all additional materials, labor, and equipment required, shall be furnished at the expense of the Contractor and no claim for additional compensation shall be made or be allowed therefore, except as specifically provided herein.

### **3.05 Filter Pack Envelope**

The filter pack envelope shall be installed using the casing pullback method. The Contractor shall monitor the casing string during pullback to ensure the screen assembly remains in the design location. The Contractor shall maintain the filter pack envelope at all times to prevent heaving and to ensure the screen is not exposed directly to the formation. The filter pack material shall be disinfected with chlorine during placement.

The filter pack material shall be installed in the annular space between the temporary surface casing and permanent well casing using care to ensure that the filter pack does not bridge. The

fill rate shall be uniform and not to exceed ½ cubic feet per minute. The depth of the filter pack shall be monitored continuously. As the filter pack material is being introduced into the well, clean potable water disinfected with a concentration of at least 50 mg/L of available chlorine shall be added to the filter pack.. The filter pack shall be kept above the bottom of the temporary 12-inch casing at all times during installation. An accurate measuring device shall be used to continuously monitor the depth of the filter pack during placement.

As the filter pack envelope is being placed, a swab shall be carefully worked opposite the screened section. As the filter pack settles, more shall be added to bring the top of the filter pack to the specified depth. This operation shall continue throughout the filter pack placement, until the top of the filter pack reaches the required depth and there is no further measurable settlement of the filter pack envelope. A record of all tagged depths shall be kept and made available upon the request of the Owner's Representative.

Filter pack placement and swabbing shall continue uninterrupted until the height of the envelope reaches the design depth.

### **3.06 Well Development**

***The timing of the well development shall be dependent on the Owner's need to supply drinking water from the City's other nearby Miller Road production wells. The Contractor shall work with the Owner to determine when development activities (and aquifer testing) can take place. Any delays will not result in standby time for the Contractor.***

The Contractor shall develop the well to remove drilling fluid, drill cuttings and fine material from the stratum penetrated by the borehole to ensure a satisfactory hydraulic connection with the water-bearing zone(s) and so that the well will yield water with a low settleable solids content. Well development shall be completed prior to installing the annular surface seal. The Contractor shall notify the Owner's Representative not less than 2 calendar days in advance of the date and time when well development will be started.

Well development shall be executed using a combination of impulse generation technology and mechanical surging with a dual-isolation tool equipped with a shrouded submersible pump for simultaneous pumping.

Prior to beginning mechanical or impulse generation well development, the static water volume in the well shall be treated with liquid AQUA-CLEAR® PFD. Treatment volume of the dispersant shall follow manufacturer specifications. The dispersant shall be placed into the screened interval via a tremie line, thoroughly blended, and then agitated repeatedly by swabbing using the dual-isolation tool.

The Contractor shall maintain the total length of the well during development, and will be required to monitor the rate of sand accumulation in the tailpipe and to clean the well casing periodically, as directed by the Owner's Representative.

All well development techniques shall be carried out in a manner that does not cause undue settlement and disturbance of the strata above the water bearing formation. The following are the general requirements of the well development:

1. Water shall be removed from the well during development at a minimum rate of three-hundred (300) gpm.
2. During development, measurements made and recorded by the Contractor shall at a minimum include settleable solids (measured in mL/L with Imhoff cones), the total volume

of sediment removed from the well, turbidity (measured in NTU), flow rate (gpm), drawdown (feet), and the short-term specific capacity (gpm per foot of drawdown).

3. The Contractor shall manage development water in accordance with the Water Management and Turbidity Reduction Plan.
4. After completion of the well development, the bottom of the well shall be cleaned of all sand and accumulated materials by a sand pump bailer.

Well development shall continue until water pumped from the well at the maximum test pumping rate is clear and free of fines, and/or no longer improving in the estimation of the Owner's Representative:

5. The sand content shall average not more than 5 mg/L for a pumping cycle of 2 hours duration when pumping at the maximum test pumping rate. The Contractor shall measure and monitor sand content with a centrifugal (Rossum type) sand tester. If the well discharge exceeds the 5 mg/L criterion as measured every 2 hours during the last 10 hours of the constant-rate pumping test the well shall be redeveloped by the Contractor and pumping tests repeated.
6. Well water turbidity shall be measured by the Contractor every 2 hours in the final 10 hours of the constant discharge pumping test. It is specified that a maximum of 5 Nephelometric Turbidity Unit (NTU) will be allowed as criteria of complete development. If the well discharge water is in excess of 5 NTU, the well shall be redeveloped by the Contractor and pumping tests repeated.

Development is anticipated to occur for a minimum of 40 hours for impulse generation development and dual-isolation surging and pumping. An additional eight (8) hours for development via pumping shall be conducted after the test pump is set prior to the step- and constant-rate aquifer tests.

The Contractor shall measure the depth of the filter pack after development is completed and add filter pack material to bring it up to the design depth.

The Contractor shall maintain a complete log of development activity including:

- **Daily static and pumping water levels.**
- Water production rates and volumes.
- Duration of each operation.
- Observation of results.
- Sand content and quantities of sand removed.
- Sand content as a function of production rate.
- Well development progress (sand content, turbidity, volume of water pumped, etc).
- Filter pack depth and settlement of the pack during development.
- All other pertinent information or as requested by the Owner's Representative.

The Contractor shall manage development water in accordance with the Water Management Plan. Refer to Section 33 21 13A for more detail.

### **3.07 Water Samples**

Water samples may be taken by the Owner's Representative periodically during development. The Contractor shall provide a means to collect water samples (i.e., sample petcock valve) during development.

### **3.08 Plumbness and Alignment**

The Contractor shall maintain the plumbness, alignment, and straightness of the well at all times. The Contractor shall conduct a plumbness and alignment test after the production has been installed. Deviation from perfect alignment shall not exceed two-thirds of the pipe/borehole diameter per 100 foot of length, as specified in AWWA A100-20.

The Contractor shall complete a plumbness test of the production casing in accordance with the procedures of AWWA A100-20. Readings of horizontal deflection shall be made to the nearest 0.05-inch at minimum intervals of ten (10) feet of plummet depth. The test shall be conducted by the Contractor and observed by the Owner's Representative, and a copy of the test data shall be delivered to the Owner's Representative. The cased part of the well will be deemed adequately plumb if the horizontal displacement from the vertical is less than one (1) horizontal foot per one hundred (100) vertical feet.

The Contractor shall also prove the alignment of the well by lowering into the casing assembly a straight section of pipe as specified in AWWA A100-20 (40 feet long with an outside diameter no smaller than 0.5 inches less than inside diameter of casing being tested). Should the dummy fail to move freely through the casing, or should the well vary from the vertical in excess of two-thirds the smallest inside diameter of that part of the well being tested per 100 foot of depth, the Contractor shall at their own expense, correct the plumbness and alignment if it fails AWWA A100-20.

If the cased part of the well cannot meet these criteria, the well shall be corrected at the Contractor's expense or abandoned because of the fault of the Contractor and a new well will be constructed at no additional expense to the Owner. The Contractor shall take care not to contact or damage the screen riser with the plummet or dummy if the plumbness and alignment testing is conducted after the screen assembly is installed. The Contractor shall be responsible for correcting any damage to the screen assembly or replacing the well at the Contractor's expense if the screen riser is damaged during plumbness and alignment testing.

### **3.09 Well Disinfection**

The Contractor shall disinfect the well following the completion of the surface seal, or as directed by Owner's Representative. The Contractor shall carry out adequate cleaning procedures immediately preceding disinfection where evidence indicates that normal well construction and development work have not adequately cleaned the wells. All soil, drilling products, and other materials shall be removed from the well.

The well shall be disinfected in accordance with the requirements of OAR 690-210-380 and ANSI/AWWA C654, except as modified herein. The method of chlorination to be used shall consist of treating the water in the well casing using sodium hypochlorite to provide a chlorine residual of approximately 50 mg/L, circulating the chlorinated water within the well casing and pump column, and pumping the well to remove chlorinated water. The use of calcium hypochlorite is strictly prohibited. The quantity of chlorine compounds required to produce a chlorine residual of 50 mg/L may be calculated by multiplying the appropriate quantity shown in ANSI/AWWA C654, Appendix A, Table A.1 by the appropriate factor. The disinfection solution shall remain in the well for a minimum of 24 hours. The Contractor is responsible for ensuring that chlorinated water is not discharged to the storm sewer during the disinfection process, per the Water Management Plan.

Bacteriological samples shall be collected by the Contractor and submitted by the Contractor to a certified laboratory accredited in the State of Oregon. If the bacteriological test is positive, the



well shall be disinfected again in accordance with AWWA C654, and repeat samples collected and submitted for retesting by the Contractor at no additional cost to the Owner.

### **3.10 Video Logging**

Contractor shall video log the entire length of the completed well from the top of the casing stickup to an anticipated depth of 200 feet bgs. The video logging survey shall be conducted after the well has been installed and tested. Video logging must be in color and have side-view capability without the use of mirrors. If the water column in the well is too cloudy, the Contractor shall flush the well with potable water and allow sufficient time for the water column in the well to become clear so that, in the opinion of the Owner's Representative, the video log shows sufficient detail. If the quality of the video does not meet the Owner's Representative's approval, the Contractor shall re-video at no extra expense to the Owner. The Contractor shall notify the Owner's Representative at least two days in advance of performing the video survey.

### **3.11 Well Surface Completion**

Upon completion of all work in connection with construction, development, testing, and disinfection, the Contractor shall cut off the casing squarely and neatly and install a welded cap at a minimum of 3 feet above grade. The Contractor shall install a 2-inch ID access pipe with a threaded cap to allow for water-level monitoring as part of the final wellhead completion.

Completion shall include the installation of three temporary protection devices (e.g., Jersey barriers or ecology blocks) in an array surrounding the wellhead to ensure construction equipment or other vehicles do not impact the wellhead. The wellhead will likely be developed shortly after construction. As such, the Contractor shall work with the Owner or Owner's Representative to finalize the well completion.

### **3.12 Site Cleanup**

The Contractor shall complete final site cleanup, including but not limited to, removal of all drilling equipment, tools, and unused well materials at the conclusion of all work performed under this contract. The Contractor shall restore the site to pre-construction conditions as specified by the Owner or Owner's Representative. Site cleanup shall meet with the approval of the Owner.

Refer to Section 33 21 13A for additional Site Cleanup information.

## **4 Measurement and Payment**

For all unit price bid items, payment will be based on the actual quantities of each item used or hours of work completed.

### **4.01 Abandonment of Borehole**

The measurement unit for this work is Linear Feet (vertical) of borehole abandoned. The value for payment shall be measured to the nearest foot. Unit prices for payment of abandonment sections shall be those set forth in the Bid Form for Item No.'s 21 and 22 and include all labor, equipment and materials:

1. Item No. 21 – abandonment of 8-inch diameter borehole
2. Item No. 22 – abandonment of 12-inch diameter borehole

#### **4.02 Surface Seal**

The measurement unit for this work is Linear Feet (vertical) of 12-inch borehole completed as a surface seal. The measurement shall include all labor, equipment and materials. The value for payment shall be measured to the nearest foot. Measurement shall be taken from the ground surface to the bottom of the surface seal.

Payment shall be the unit price set forth in the Bid Form for Item No. 23 multiplied by the footage of 12-inch borehole sealed. This total includes the a 5-foot transition seal (2 feet of sugar sand and 3 feet of bentonite chips). If additional seal footage is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional footage of seal at the unit price specified in the bid schedule submitted by the Contractor for this project.

#### **4.03 Screen Assembly**

The measurement unit for this work is Linear Feet (vertical) of blank and permanent well casing and well screen installed, and shall include all labor, equipment and materials. The value for payment shall be as measured to the nearest foot. Measurement shall be the total length of casing and screen installed.

Unit prices for payment of well casing and screen sections shall be those set forth in the Bid Form for Item No.'s 24 and 25 and include all labor, equipment and materials:

3. Item No. 24 – Furnish and install 8-inch dia. (nominal) stainless steel well casing
4. Item No. 25 – Furnish and install 8-inch dia. (nominal, pipe-size) stainless steel well screen.

Payment shall be the unit price for Item No. 24 multiplied by the total casing footage installed and the unit price for Item No. 25 multiplied by the total screen footage installed.

If additional casing or screen is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional casing or screen on a per foot basis at the unit price specified.

#### **4.12 Filter Pack Envelope**

The measurement unit for this work is Linear Feet (vertical) of filter pack envelope installed, and shall include all labor, equipment and materials required to design and install the filter pack, and shall include consolidating and maintaining the filter pack envelope through casing pullback and preliminary development of the well. Measurement for payment shall be rounded to the nearest foot.

Payment shall be the unit price set forth in the Bid Form for Item No. 26 multiplied by the linear footage of filter pack envelope installed.

No separate payment will be made for the time while the filter pack material is added.

If additional filter pack is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional filter pack on a per foot basis at the unit price specified.

#### **4.13 Plumbness and Alignment Test**

The measurement unit for this work/service is Lump Sum, and shall include all labor, equipment, and materials. Measurement includes completion and acceptance of tests.

The Owner's Representative shall be present to witness the plumbness and alignment tests of the well. There will be no payment for rig time, idle time, or Standby Time while tests are being run.

The lump sum price for payment shall be as set forth in the Bid Form for Item No. 27 for the entire depth of the completed well.

#### **4.14 Well Development**

The measurement unit for this work is Hours as recorded by the Owner's Representative. Measurement for payment shall be rounded to the nearest ½-hour. Measurement begins when the equipment installed in the well is placed in operation and shall end when the operation is stopped at the direction of the Owner's Representative.

Payment shall be the unit price set forth in the Bid Form for Item No.'s 28 and 29 multiplied by the number of development hours completed.

1. Item No. 28 – Well development (impulse generation and dual-isolation surging/pumping).
2. Item No. 29 – Well development (test pump).

No payment will be made for time unrelated to development, including for example, standby time, repairs, equipment breakdown, tool fishing, and weather delays. No payment will be made for collecting the information needed to maintain a complete log of development activity (see Part 3.08 of this Section).

If additional time is required and approved by the Owner's Representative beyond what is indicated in these specifications, then the Contractor shall be reimbursed for the additional development time on a per hour basis at the per hour price specified.

#### **4.15 Well Video Survey**

The measurement unit for this work is Lump Sum for all work associated with the well video survey. Measurement shall be completion of the survey and delivery of the flash drives.

Lump sum price for the well video survey shall be as set forth in the Bid Form for Item No. 30.

There will be no additional payment for rig time or idle time while the survey is being conducted. Payment will not be made if the video is poor quality or the video does not cover the specified depth interval. The Contractor will not be paid for standby time while the well is being flushed and/or while the Contractor is waiting for the well to clear.

#### **4.16 Well Disinfection**

The measurement unit for this work is Lump Sum for all labor, materials, and equipment associated with well disinfection. Measurement shall be completion of disinfection.

The lump sum price for well disinfection shall be as set forth in the Bid Form for Item No. 31.

#### **4.17 Well Surface Completion**

The measurement unit for this work is Lump Sum for all work associated with surface completion at the wellhead, and shall include all labor, equipment and materials. Measurement shall be completion of the well surface completion as specified.

The lump sum price for the surface completion shall be as set forth in the Bid Form for Item No. 32.

END OF SECTION

SECTION 33 21 13C  
PRODUCTION WELL AQUIFER TESTING

**1 General**

**1.01 Scope of Work**

The Contractor shall conduct aquifer testing upon completion of the well construction and development, in accordance with these specifications. ***Development and testing may be postponed after the conclusion of well construction, depending on the Owner's ability to provide drinking water from the existing wells during periods of high demand.*** Aquifer testing shall be conducted by the Contractor in four phases:

1. Performance step-rate test.
2. Step-rate test.
3. Constant-rate test.
4. Recovery monitoring.

Prior to aquifer testing, the Contractor shall provide one week's notice to the Owner's Representative so that the Owner can mobilize a sampling team to order sample bottles for collection water quality samples during the test. The Contractor shall provide the necessary equipment to carry out the aquifer tests as directed by the Owner's Representative including, but not limited to, test pump installation, operation, and removal; discharge piping installation and removal; flow-recording apparatus; and a generator (if necessary). The proposed pump depth setting shall be reviewed by the Owner's Representative prior to installing the pumping equipment.

**1.02 Discharge of Test Water**

Discharge of aquifer test water shall be conveyed to the on-site settling basin. Water discharged to the settling basin shall not exceed 50 NTU. The Contractor shall provide a temporary pipeline to the point of discharge that is secure and does not pose a hazard to City employees, visitors or nearby residents. The Contractor shall comply with the requirements of the Erosion Control and Water Management Plan.

**2 Materials**

**2.01 Equipment**

The Contractor shall provide all equipment (pumps, piping, meters, valves, soft motor control, etc.) to successfully complete the pump test under the conditions described in the Specifications. All test pumping equipment furnished by the Contractor shall remain the property of the Contractor and shall be removed from the well site upon completion of the testing.

**3 Execution**

**3.01 General**

Failure of the Contractor's equipment during the step-rate test or the constant-rate test shall negate that particular test, and the test shall be repeated at the Contractor's expense. The Contractor shall receive no payment for a failed test.

### **3.02 Performance Step-Rate Test (Basalt Well)**

The performance step-rate shall occur after completion of drilling the lower borehole to an anticipated depth of 600 feet bgs. The step-test shall consist of operating the pump at up to four different rates, as directed by the Owner's Representative, with up to 90 minutes of pumping at each step rate. Each pumping step will be performed sequentially with no shutdown between steps; the pumping rate shall be increased for each consecutive step. For planning purposes, the step rates are estimated to be 125, 250, 375, and 500 gpm, with the pump set at a depth of up to 400 feet bgs. The Contractor shall exercise care to ensure that the discharge rate at each step remains constant. Fluctuation in the discharge rate during a given step of greater than five (5) percent shall subject the test to termination as a failed test at the discretion of the Owner's Representative. The Contractor shall end the failed test and shall restart the test after recovery of the water level in the well to one-half (0.5) foot of the pre-test static water level or within ninety-five (95) percent of its pre-test water level, whichever is least. If the facilities and systems assembled by the Contractor fail to perform to the minimum standards of these specifications, the performance step-rate test shall be repeated at no cost to the Owner.

### **3.03 Step-Rate Test (Alluvial Well)**

If the basalt well cannot meet the required production rate, a step-test will be completed after the additive alternative (alluvial well) is constructed. The step-rate test shall consist of operating the pump at up to four different rates, as directed by the Owner's Representative, with up to 90 minutes of pumping at each step rate. Each pumping step will be performed sequentially with no shutdown between steps; the pumping rate shall be increased for each consecutive step. For planning purposes, the step rates are estimated to be 100, 200, 300, and 400 gpm, with the pump set at an anticipated depth of 160 feet bgs. The Contractor shall exercise care to ensure that the discharge rate at each step remains constant. Fluctuation in the discharge rate during a given step of greater than five (5) percent shall subject the test to termination as a failed test at the discretion of the Owner's Representative. The Contractor shall end the failed test and shall restart the test after recovery of the water level in the well to one-half (0.5) foot of the pre-test static water level or within ninety-five (95) percent of its pre-test water level, whichever is least. If the facilities and systems assembled by the Contractor fail to perform to the minimum standards of these specifications, the step-rate test shall be repeated at no cost to the Owner.

### **3.04 Constant-Rate Aquifer Test and Recovery Monitoring**

Upon satisfactory completion of either the performance step-rate test (basalt well completion) or the step-rate test (alluvial well completion) and recovery of the water level in the production well to within 0.5 foot of the previously recorded static water level, or within 95 percent of its pre-static water level, whichever is least, the constant-rate aquifer test shall begin at the pumping rate and time of day specified by the Owner's Representative.

The constant-rate aquifer test shall continue without interruption for the period of time specified herein and the discharge rate shall not fluctuate more than five (5) percent. For bidding purposes, the constant-rate pumping test shall be conducted for a period of up to 24 hours at a constant rate of up to 500 gpm. A total of 24 hours also is required for the recovery portion of the pump test. Failure of the Contractor's equipment during the test and/or fluctuation in the discharge rate greater than 5 percent shall void the test and the Contractor shall receive no payment for a failed test. After a failed test, the Contractor shall restart the test after recovery of the water level in the well to one-half (0.5) foot of the pre-test static water level or within 95 percent of its pre-test water level, whichever is least, and continue the test for the specified period.

All aquifer test pumping equipment furnished by the Contractor shall remain their property and be removed from the well site upon completion of testing. The Contractor shall not remove the

pumping equipment from the well until the test is 100 percent completed (i.e., after the recovery period), or as directed by the Owner's Representative.

After removal of the test pumping equipment from the well, the Contractor shall check the level of the filter pack (alluvial well completion), and add more material if needed in accordance with 33 21 13B, Section 3.07.

### **3.05 Test Pump Requirements**

The Contractor shall furnish, install, and remove a test pump capable of pumping at rates up to an estimated 500 gpm with an intake setting at a depth of up to 400 feet bgs (basalt well completion) or 160 feet bgs (alluvial well completion) and maximum anticipated pumping water level of 350 feet bgs (basalt well completion) or 150 feet bgs (alluvial well completion). Pump curves shall be submitted to the Owner's Representative for approval prior to initiating work. The test pump shall be capable of producing and maintaining this flow during the pumping test with all the controls, water meter, and temporary pipeline assembled. The static water level of the alluvial aquifer is approximately 8 feet bgs. The static water level of the basalt aquifer is unknown. The pump shall be equipped with a foot-valve or backflow prevention device to prevent water in the pump column from flowing back down into the well at the time of pump shutdown.

Power is available at the site (in the existing building or onsite generator). The Contractor shall determine whether there is sufficient power available to operate and maintain the test pump during the duration of the test. If power at the site is not sufficient, the Contractor shall provide the power for the pump test using a generator with a sound level at full load of 65 to 68 dBA at 23 feet.

### **3.06 Water Sampling, Flow Control, and Water Level Monitoring**

The Contractor shall furnish and operate the equipment necessary to obtain water samples at the wellhead, measure and record the pump flow while discharging the water, measure the sand content of the discharge water (Rossum sand tester), and measure water levels.

The Contractor shall provide a calibrated instantaneous and totalizing flow meter and/or an orifice weir with manometer tube to measure pumping rates. The flow meter shall be accurate to within 2 percent of the anticipated range of flow rates occurring during each specified test. The orifice weir and manometer tube shall be properly constructed and installed using proper pipe diameters, setbacks, and orifice plates for the anticipated rate of flow. Technical specifications and calibration sheets of metering equipment shall be submitted to the Owner's Representative for approval prior to initiating the tests.

The Contractor shall also furnish a sampling spigot on the discharge pipe at the well head.

The Contractor shall furnish and install two temporary minimum 1¼-inch ID PVC drop pipes to (1) accommodate a water-level sounder, and (2) accommodate a pressure transducer. The drop pipes shall be approximately 400 feet in length for the basalt pumps setting and 160 feet for the alluvial pump setting, and the bottoms perforated and capped. At least one pump-tender shall be on hand at all times to ensure the pump and generator are operating and to take manual water-level measurements throughout the test at intervals specified in Section 3.08 below. The pump-tender shall immediately notify the Owner's Representative in the event of pump or generator failure and the pump shall not be restarted until water levels in the well have recovered, except at the direction of the Owner's Representative.

The discharge rate during pump testing cannot fluctuate more than five (5) percent; therefore instrumentation used by the Contractor shall be sufficiently accurate to measure a one (1) percent

change in the discharge rate. The equipment and set up shall meet the approval of the Owner's Representative.

### 3.07 Temporary Pipeline

The Contractor shall furnish, assemble, and disassemble, a temporary aboveground pipeline of sufficient capacity to permit the test pump to develop the required flows during the aquifer test. Water discharge may require 100 feet or more of temporary pipeline. The Contractor shall determine if 100 feet of temporary pipeline is sufficient to discharge water produced during the aquifer test to the settling basins. The pipeline shall remain the property of the Contractor and be removed from the well site after completion of the aquifer tests, or as directed by the Owner's Representative. The pipeline route shall be approved by the Owner's Representative. The Contractor shall secure the portions of the pipeline outside of the site fencing so that the Contractor can manage the security of the pipeline and so that it does not create a hazard to foot and/or vehicular traffic.

The temporary pipeline shall be sufficiently watertight to prevent damage to the drill site and easements. The ends and joints in the pipeline shall be restrained if necessary to prevent movement or separation of the pipeline during the test pumping.

### 3.08 Required Measurements

During each step of the step-rate test and during the constant-rate aquifer test, the Contractor shall monitor and record the flow rate, total volume (cubic feet or gallons) pumped, and pumping water level using an electronic water level meter. The time and date each measurement is made shall also be recorded. The Contractor shall read and record all water levels relative to a common measuring point that the Contractor shall document on the record. The measuring point to be used for the water level measurements shall be subject to the approval of the Owners Representative. Manual water level measurements shall be made and recorded to an accuracy of one-hundredth of a foot (0.01 foot).

The monitoring intervals for the water-level readings for the **step-rate test(s)** are as follows:

Time after pump started or after step-rate increase (min)	Monitoring intervals (min)
0 to 10	1
10 to 60	5
> 60	15

The monitoring intervals for the water-level readings for the **constant-rate test** are as follows:

Time after pump started for constant-rate test (min)	Monitoring intervals (min)
0 to 10	1
10 to 60	5
60 to 240	15
> 240	60

The Contractor may remove the test pumping equipment from the well after the well has recovered to within 95 percent of the pre-test water level or with approval from the Owner's Representative.



## **4 Measurement and Payment**

### **4.01 Furnish, Install and Remove Test Pump and Appurtenances**

The measurement unit for this work is Lump Sum, and shall include all materials, equipment, and labor. Measurement for payment shall be completion of the aquifer tests.

Payment shall be the lump sum price set forth in the Bid Form for Item No.'s 33 (basalt well) or 33-A (alluvial well). No payment will be made for running equipment into or out of the well. No payment shall be made for the recovery testing periods following the step test (anticipated to be a maximum of 24 hours) or for the recovery period following the constant rate test (anticipated to be up to 48 hours). No payment will be made for delays resulting from equipment stuck in the well, arranging major drilling, pumping, or testing apparatus, or failure to conduct the operations in a diligent and workmanlike manner by which the desired results could ordinarily be expected.

### **4.02 Test Pumping**

The measurement unit for this work is Hours as recorded by the Owner's Representative. Measurement for payment shall be rounded to the nearest ½-hour. The time recorded for payment shall commence when the pumping and discharge equipment is installed and are placed in operation, and shall end when the operation is stopped at the direction of the Owner's Representative.

Payment shall be the unit price set forth in the Bid Form for Item No. 34 multiplied by the number of aquifer testing hours completed. No payment will be made for running equipment into or out of the well. No payment shall be made for the recovery testing. No payment will be made for delays resulting from equipment stuck in the well, equipment breakdown, arranging major drilling, pumping, or testing apparatus, or failure to conduct the operations in a diligent and workmanlike manner by which the desired results could ordinarily be expected.

In the event that the step-rate test(s) and/or the constant rate tests are run longer than the times specified, and as approved by the Owner's Representative, then the Contractor shall be paid for the additional time (including equipment rental if applicable) at the hourly unit price specified.

**END OF SECTION**

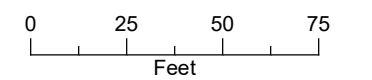
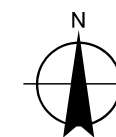


**FIGURE 1**  
**Basalt Well Site Plan**  
 Scappoose, Oregon



**LEGEND**

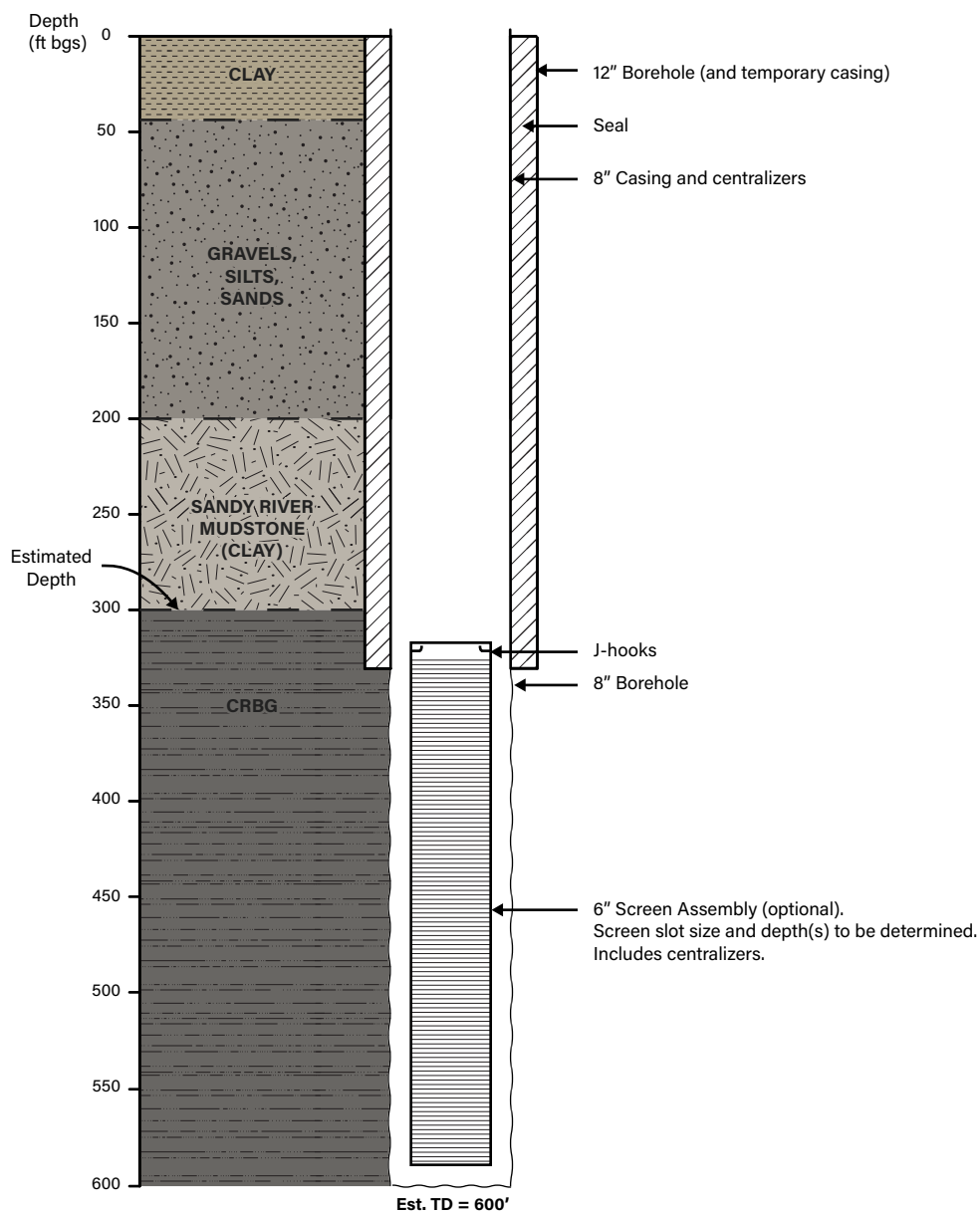
- Basalt Well
- Well
- Treatment Plant
- ◇ Hydrant
- Stormwater
- Sanitary Sewer (Pressure)
- ⋯ Gravity Sewer
- Backwash Pressure Line
- ⋯ Filter Backwash Drain
- ▨ Water Discharge Location
- ▭ Property of Interest
- ▭ Tax Lot



Date: July 20, 2023  
 Data Sources: BLM, ESRI, ODOT, USGS,  
 Aerial Photo 2020



# **MILLER ROAD BASALT WELL (MR-4)**

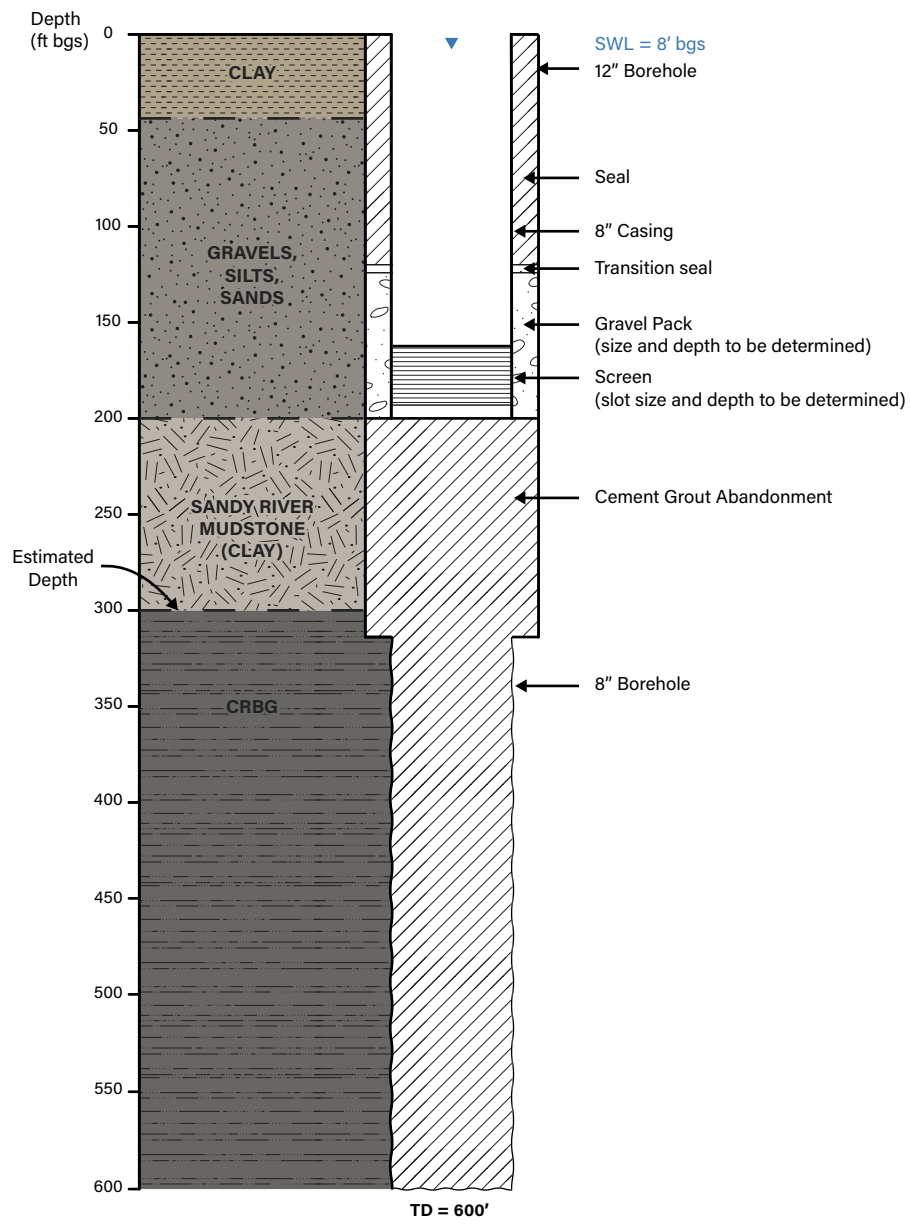


**FIGURE 2**  
**Conceptual Well Design**  
Scappoose, Oregon

## **NOTES**

bgs: below ground surface  
CRBG: Columbia River Basalt Group

# **ADDITIVE ALTERNATE MILLER ROAD ALLUVIAL AQUIFER WELL (MR-4)**



**FIGURE 3**  
**Conceptual Well Design**  
Scappoose, Oregon

## **NOTES**

bgs: below ground surface  
CRBG: Columbia River Basalt Group  
SWL: static water level

**Attachment A**

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**Well Logs**



STATE OF OREGON  
WATER SUPPLY WELL REPORT  
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

WELL I.D. # 44949  
START CARD # 126454

## (1) OWNER:

Well Number 2-01

Name City of Scappoose  
Address 33568 E. Columbia Av  
City Scappoose State OR Zip \_\_\_\_\_

## (2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

## (3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger  
☐ Other \_\_\_\_\_

## (4) PROPOSED USE:

☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Livestock ☒ Other Test well

## (5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 190 ft.

Explosives used ☐ Yes ☒ No Type \_\_\_\_\_ Amount \_\_\_\_\_

## HOLE

## SEAL

Diameter	From	To	Material	From	To	Sacks or pounds
12	0	19	Cement	0	19	15 B495
8	19	170				
6	170	220				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E  
☐ Other \_\_\_\_\_

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_

Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

## (6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 8	+1	170	250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner: 6	+2	170		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 170

## (7) PERFORATIONS/SCREENS:

☐ Perforations

Method \_\_\_\_\_

☒ Screens

Type S.S.

Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
190	180	20		5.5	5.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
180	170	30		5.5	5.5	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

## (8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailor ☒ Air ☐ Flowing  
☐ Artesian

Yield gal/min	Drawdown	Drill stem at	Time
100+		170	1 hr.

Temperature of water 52 Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done? ☐ Yes By whom \_\_\_\_\_

Did any strata contain water not suitable for intended use? ☐ Too little

☒ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_

Depth of strata: \_\_\_\_\_

## (9) LOCATION OF WELL by legal description:

County Col Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 2N N or S Range 1W E or W. WM.  
Section 7 NW 1/4 NW 1/4  
Tax Lot 1200 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) End of Miller St  
Scappoose

## (10) STATIC WATER LEVEL:

8 ft. below land surface. Date 16 March  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

## (11) WATER BEARING ZONES:

Depth at which water was first found \_\_\_\_\_

From	To	Estimated Flow Rate	SWL
8	190	100+	8

## (12) WELL LOG:

Ground Elevation \_\_\_\_\_

Material	From	To	SWL
clay Brown	0	11	
gravel clay Brown	11	14	
clay Blue	14	30	
gravel sand Brown	30	58	
gravel sand green	58	80	
gravel sand	80	110	
gravel sand	110	120	
gravel	120	135	
gravel sand	135	140	
gravel lite sand	140	160	
gravel clean	160	195	
clay Blue gravel	195	210	
clay Blue	210	20	
Boulders & cobbles	60	70	

Date started 9 March Completed 16 March

## (unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_

## (bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number \_\_\_\_\_

Signed A. McMath Date \_\_\_\_\_

WATER RESOURCES DEPT.

SALEM, OREGON

ORIGINAL - WATER RESOURCES DEPARTMENT FIRST COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

RECEIVED  
MAR 20 2001

**STATE OF OREGON**  
**WATER SUPPLY WELL REPORT**  
 (as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

WELL I.D. # L 37092  
 START CARD # W 130326

(1) **OWNER:** Well Number \_\_\_\_\_  
 Name City of Scappoose  
 Address P.O. Box P  
 City Scappoose State Or Zip 97056

(2) **TYPE OF WORK**  
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) **DRILL METHOD:**  
☐ Rotary Air ☐ Rotary Mud ☒ Cable ☐ Auger  
☐ Other \_\_\_\_\_

(4) **PROPOSED USE:**  
☐ Domestic ☒ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Livestock ☐ Other \_\_\_\_\_

(5) **BORE HOLE CONSTRUCTION:**  
 Special Construction approval ☐ Yes ☒ No Depth of Completed Well 194 ft.  
 Explosives used ☐ Yes ☒ No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			
Diameter	From	To	Material	From	To	Sacks or pounds
30"	0	8		0		
20"	8	29	cement		32	39 sks.

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E  
☐ Other \_\_\_\_\_  
 Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
 Gravel placed from 130'6" ft. to 197 ft. Size of gravel 6x9 sand

(6) **CASING/LINER:**

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 16"	0	145	375	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12	130	142	375	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12 "	187'1"	197	375	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) 191

(7) **PERFORATIONS/SCREENS:**  
☐ Perforations Method \_\_\_\_\_  
☒ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
142	187'1"	60		12"		<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) **WELL TESTS: Minimum testing time is 1 hour**

<input checked="" type="checkbox"/> Pump	<input type="checkbox"/> Bailer	<input type="checkbox"/> Air	<input type="checkbox"/> Flowing
Yield gal/min	Drawdown	Drill stem at	Artesian
400	116'5 1/2"		25 Hrs.

Temperature of water 52.8° Depth Artesian Flow Found \_\_\_\_\_  
 Was a water analysis done? ☐ Yes By whom \_\_\_\_\_  
 Did any strata contain water not suitable for intended use? ☐ Too little  
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_  
 Depth of strata: \_\_\_\_\_

(9) **LOCATION OF WELL by legal description:**  
 County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Township 3N N or S Range 1W E or W. WM.  
 Section 7 SE 1/4 NW 1/4  
 Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) Miller Rd  
Scappoose

(10) **STATIC WATER LEVEL:**  
8'4" ft. below land surface. Date 9-11-03  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) **WATER BEARING ZONES:**  
 Depth at which water was first found \_\_\_\_\_

From	To	Estimated Flow Rate	SWL
140	187	400	8'4"
APR 02 2004			
WATER RESOURCES DEPT SALEM, OREGON			

(12) **WELL LOG:**  
 Ground Elevation \_\_\_\_\_

Material	From	To	SWL
Top soil	0	1	
Brown sand, silt, clay	1	3	
Brown cobbles, gravel, sand, silt	3	15	
Brown & grey clay	15	29	
Brown gravel, sand, silt	29	35	
Brown & grey gravel, sand, cemented	35	52	
Brown grey, gravel, sand, silt	52	62	
Grey brown gravel, silt, sand	62	110	
Grey gravel, clay & silt	110	130	
Grey gravel, sand & silt	130	140	
Grey gravel, sand & water	140	158	8'3
Grey gravel, sand cemented, water	158	159	8'4
Grey gravel, sand, loose, water	159	164	8'5

Date started 6-23-03 Completed 9-11-03

(unbonded) Water Well Constructor Certification:  
 I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed [Signature] WWC Number 1321  
 Date 9-23-03

(bonded) Water Well Constructor Certification:  
 I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed [Signature] WWC Number 1445  
 Date 9-23-03



STATE OF OREGON  
WATER SUPPLY WELL REPORT

(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number \_\_\_\_\_  
Name City of Scappoose  
Address P.O. Box P  
City Scappoose State Or Zip 97056

(2) TYPE OF WORK  
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☐ Rotary Air ☐ Rotary Mud ☒ Cable ☐ Auger  
☐ Other \_\_\_\_\_

(4) PROPOSED USE:

☐ Domestic ☒ Community ☐ Industrial ☐ Irrigation  
☐ Thermal ☐ Injection ☐ Livestock ☐ Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 199 ft.  
Explosives used ☐ Yes ☒ No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Sacks or pounds
Diameter	From	To	Material	From	To	
30"	0	8		0		
20"	8	29	cement		32	39 sks.
16"	29	197				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E  
☐ Other \_\_\_\_\_

Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from 130'6 ft. to 197 ft. Size of gravel 6x9 sand

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	16"	0	145		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	10"	130	142		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tail	10"	187'11	197		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Drive Shoe used ☐ Inside ☒ Outside ☐ None  
Final location of shoe(s) 191'

(7) PERFORATIONS/SCREENS:

☐ Perforations Method \_\_\_\_\_  
☒ Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
142	187'11	60		10		<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour

☒ Pump ☐ Bailer ☐ Air ☐ Flowing  
Yield gal/min Drawdown Drill stem at Time  
400 116'5 1/2" 24 Hrs

Temperature of water 52.8° Depth Artesian Flow Found \_\_\_\_\_

Was a water analysis done? ☐ Yes By whom \_\_\_\_\_

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other \_\_\_\_\_

Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:

County Columbia Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 3 N N or S Range 1 W E or W. WM.  
Section 7 SE 1/4 NW 1/4  
Tax Lot 101 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) Miller Rd  
Scappoose

(10) STATIC WATER LEVEL:

8'4" ft. below land surface. Date 9-11-03  
Artesian pressure \_\_\_\_\_ lb. per square inch Date \_\_\_\_\_

(11) WATER BEARING ZONES:

Depth at which water was first found \_\_\_\_\_

From	To	Estimated Flow Rate	SWL
140	187	400	8'4
RECEIVED			
NOV 17 2003			
OCT 23 2003			

(12) WELL LOC: WATER RESOURCES DEPT  
SALEM, OREGON

Material	From	To	SWL
Top soil	0	1	
Brown sand, silt, clay	1	3	
Brown cobbles, gravel			
sand, silt	3	15	
Brown & grey clay	15	29	
Brown gravel, sand,			
silt	29	35	
Brown & grey gravel,			
sand, cemented	35	52	
Brown grey, gravel,			
sand, silt	52	62	
Grey brown gravel,			
silt, sand	62	110	
Grey gravel, clay &			
silt	110	130	
Grey gravel, sand &			
silt	130	140	

Date started 6-23-03 Completed 9-11-03

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Denny Johnson WWC Number 1321 Date 9-23-03

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed Don Ostrom WWC Number 1445 Date 9-23-03

# Hansen Drilling Co., Inc.

6711 N.E. 58th Avenue  
Vancouver, Washington 98661

City of Scappoose  
P.O. Box p  
Scappoose, Or 97056

Site: Miller Rd. Scappoose

Material	From	to	SWL
Grey gravel, sand & water	140	- 158	8'3
Grey gravel, sand, cemented, water	158	- 159	8'4"
Grey gravel, sand, loose, water	159	- 164	8'5
Grey gravel, sand, cemented water	164	- 165	8'5
Grey gravel, sand, loose water	165	- 181	8'4
Grey cemented gravel, sand water	181	- 182	8'3
Grey less cemented gravel & sand water	182	- 188	8'4"
Grey cemented gravel, sand, hard, water	188	- 191	
Green - blue, clay, gravel water	191	- 193	
Green - blue clay	193	- 197	

**RECEIVED**

OCT 23 2003

WATER RESOURCES DEPT.  
SALEM, OREGON



## Hansen Drilling Co., Inc.

6711 N.E. 58th Avenue  
Vancouver, Washington 98661

City of Scappoose  
E. Columbia Ave. to Miller Rd site

## Material in formation

Top soil	0 - 2	SWL
Brown sand & clay	2 - 5	
Brown gravel & clay	5 - 13	7.6 $\frac{1}{2}$
Light grey brown clay	13 - 30	
Brown gravel, silt	30 - 38	
Brown & grey gravel, sand & clay	38 - 71	
Brown & grey cobbles, boulders, gravel, sand, clay	71 - 82	
rey gravel, clay & sand	82 - 129	
Grey gravel, sand & silt	129 - 147	
Grey gravel, silt, sand	147 - 163	
Grey gravel, sand, silt, (water loose)	163 - 195	
Green & grey clay	195 - 205	
Blue clay	205 - 229	
Grey, brown silty clay	229 - 237	
Blue clay	237 - 273	
Grey silty clay	273 - 293	
Grey silty sandy clay	293 - 295	
Grey silty sandy clay (little water)	295 - 296	
rey silty sandy & clay	296 - 300	

Temporary 8" casing installed test hole drilled to 300 ft.  
no water found pulled 8" casing while pressure grouting  
with neat cement grout 203'6" to 300 ft.

30 sks Portland cement

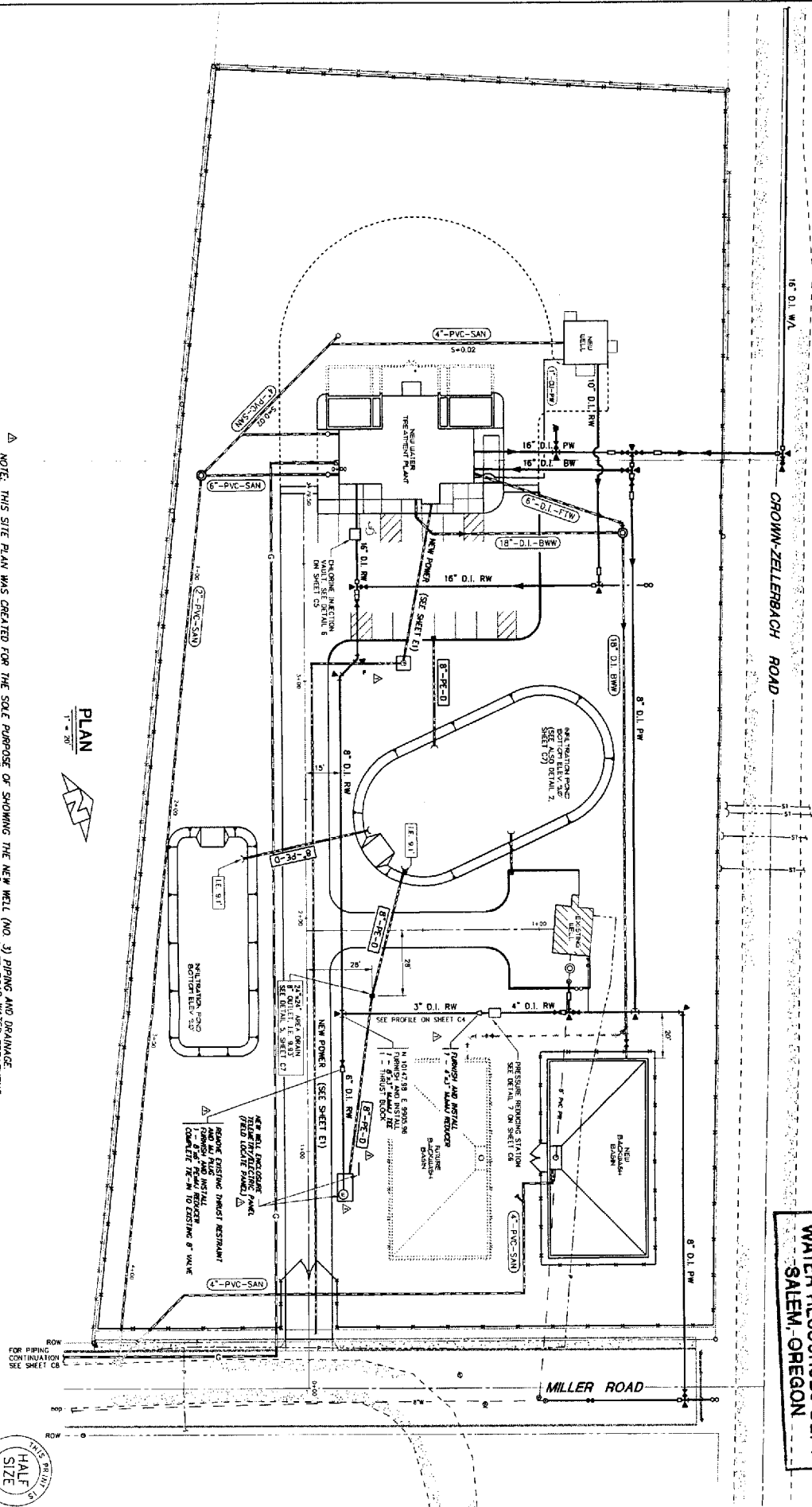
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NOV 30 2004

WATER RESOURCES DEPT  
SALEM, OREGON

NOV 30 2004

WATER RESOURCES DEPT  
SALEM, OREGON



**NOTE:** THIS SITE PLAN WAS CREATED FOR THE SOLE PURPOSE OF SHOWING THE NEW WELL (NO. 3) PIPING AND DRAINAGE. THIS INFORMATION WILL BE INCORPORATED INTO THE "DRAWINGS OF RECORD" FOR THE MILLER ROAD WATER TREATMENT PLANT UPON COMPLETION OF THAT PROJECT.

ALL DIMENSIONS SHALL BE OBTAINED FROM DIMENSIONS SHOWN ON DRAWING, NOT FROM SCALING BY ANY MEANS.

CITY OF SCAPPOOSE  
MILLER ROAD WELL NO. 3

**SITE PIPING AND DRAINAGE PLAN**

LEE ENGINEERING, INC.  
CONSULTING ENGINEERS  
OREGON CITY, OREGON

2

3292

APR 1984