

**Exhibit A****CITY OF PORTLAND  
AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES****CONTRACT NUMBER 30005721****TITLE OF WORK PROJECT  
Corrosion Control Treatment Pilot**

This Contract is between the City of Portland ("City," or "Bureau") and **Confluence Engineering Group, LLC**, hereafter called Consultant. The City's Project Manager for this Contract is **Michelle Cheek**.

**Effective Date and Duration**

This Contract shall become effective on **March 1, 2017**. This Contract shall expire, unless otherwise terminated or extended, on **June 30, 2019**.

**Consideration**

- (a) City agrees to pay Consultant a sum not to exceed **\$664,930** for accomplishment of the work.
- (b) Interim payments shall be made to Consultant according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

**CONSULTANT DATA AND CERTIFICATION**

Name (print full legal name): Confluence Engineering Group, LLC

Address: 517 Northeast 92<sup>nd</sup> Street, Seattle, WA 98115

Employer Identification Number (EIN): \_\_\_\_\_

[INDEPENDENT CONSULTANTS: DO NOT PROVIDE SOCIAL SECURITY NUMBER (SSN) – LEAVE BLANK IF NO EIN]

City of Portland Business Tax Registration Number: 26-2114192

Citizenship: Nonresident alien ☐ Yes ☒ No

Business Designation (check one): ☐ Individual ☐ Sole Proprietorship ☐ Partnership ☐ Corporation

☒ Limited Liability Co (LLC) ☐ Estate/Trust ☐ Public Service Corp. ☐ Government/Nonprofit

Payment information will be reported to the IRS under the name and taxpayer I.D. number provided above. Information must be provided prior to Contract approval.

**TERMS AND CONDITIONS****1. Standard of Care**

Consultant shall perform all services under this Contract using that care, skill, and diligence that would ordinarily be used by similar professionals in this community in similar circumstances.

**2. Effect of Expiration**

Passage of the Contract expiration date shall not extinguish, prejudice, or limit either party's right to enforce this Contract with respect to any default or defect in performance that has not been corrected.

**3. Order of Precedence**

This Contract consists of these Terms and Conditions, the Statement of Work and Payment Schedule, and any exhibits that are attached. Any apparent or alleged conflict between these items will be resolved by using the following order of precedence:

- a) these Terms and Conditions; b) Statement of Work and Payment Schedule; and c) any exhibits attached to the Contract.

**4. Early Termination of Contract**

- (a) The City may terminate this Contract for convenience at any time for any reason deemed appropriate in its sole discretion. Termination is effective immediately upon notice of termination given by the City.
- (b) Either party may terminate this Contract in the event of a material breach by the other party that is not cured. Before termination is permitted, the party seeking termination shall give the other party written notice of the breach, its intent to terminate, and fifteen (15) calendar days to cure the breach. If the breach is not cured within 15 calendar days, the party seeking termination may terminate immediately by giving written notice that the Contract is terminated.

**5. Remedies and Payment on Early Termination**

- (a) If the City terminates pursuant to 4(a) above, the City shall pay the Consultant for work performed in accordance with the Contract prior to the termination date. No other costs or loss of anticipated profits shall be paid.
- (b) If the City terminates pursuant to 4(b) above, the City is entitled all remedies available at law or equity. In addition, Consultant shall pay the City all damages, costs, and sums incurred by the City as a result of the breach.
- (c) If the Consultant justifiably terminates the Contract pursuant to subsection 4(b), the Consultant's only remedy is payment for work prior to the termination. No other costs or loss of anticipated profits shall be paid.
- (d) If the City's termination under Section 4(b) was wrongful, the termination shall be automatically converted to one for convenience and the Consultant shall be paid as if the Contract was terminated under Section 4(a).
- (e) In the event of early termination the Consultant's work product before the date of termination becomes property of the City.

**6. Assignment**

Consultant shall not subContract, assign, or transfer any of the work scheduled under this agreement, without the prior written consent of the City. Notwithstanding City approval of a subconsultant, the Consultant shall remain obligated for full performance hereunder, and the City shall incur no obligation other than its obligations to the Consultant hereunder. The Consultant agrees that if subconsultants are employed in the performance of this Agreement, the Consultant and its subconsultants are subject to the requirements and sanctions of ORS Chapter 656, Workers' Compensation.

**7. Compliance with Applicable Law**

Consultant shall comply with all applicable federal, state, and local laws and regulations. Consultant agrees it currently is in compliance with all tax laws. Consultant shall comply with Title VI of the Civil Rights Act of 1964 and its corresponding regulations. In connection with its activities under this Contract, the Consultant shall comply with all applicable Grant Terms and conditions. This includes all terms and conditions contained in this Contract and, for a Contract involving a grant, the Grant Terms and Conditions.

**8. Indemnification for Property Damage and Personal Injury**

Consultant shall indemnify, defend, and hold harmless the City, its officers, agents, and employees, from all claims, losses, damages, and costs (including reasonable attorney fees) for personal injury and property damage arising out of the intentional or negligent acts or omissions of the Consultant, its Subconsultants, suppliers, employees or agents in the performance of its services. Nothing in this paragraph requires the Consultant or its insurer to indemnify the City for claims of personal injury or property damage caused by the negligence of the City. This duty shall survive the expiration or termination of this Contract.

**9. Insurance**

Consultant shall obtain and maintain in full force at Consultant expense, throughout the duration of the Contract and any warranty or extension periods, the required insurance identified below. The City reserves the right to require additional insurance coverage as required by statutory or legal changes to the maximum liability that may be imposed on Oregon cities during the term of the Contract.

- (a) Workers' compensation insurance as required by ORS Chapter 656 and as it may be amended. Unless exempt under ORS Chapter 656, the Consultant and all subconsultants shall maintain coverage for all subject workers.

☒ Required and attached // ☐ Proof of exemption (i.e., completion of Workers' Compensation Insurance Statement)

- (b) General commercial liability (CGL) insurance covering bodily injury, personal injury, property damage, including coverage for independent consultant's protection (required if any work will be subContracted), premises/operations, Contractual liability, products and completed operations, in per occurrence limit of not less than \$1,000,000, and aggregate limit of not less than \$2,000,000.

☒ Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduce by Bureau Director or designee

- (c) Automobile liability insurance with coverage of not less than \$1,000,000 each accident. The insurance shall include coverage for any auto or all owned, scheduled, hired and non-owned auto. This coverage may be combined with the commercial general liability insurance policy.

☐ Required and attached // ☐ Waived by Bureau Director or designee // ☒ Reduce by Bureau Director or designee

- (d) Professional Liability and/or Errors & Omissions insurance to cover damages caused by negligent acts, errors or omissions related to the professional services, and performance of duties and responsibilities of the Consultant under this Contract in an amount with a combined single limit of not less than \$1,000,000 per occurrence and aggregate of \$2,000,000 for all claims per occurrence. In lieu of an occurrence based policy, Consultant may have claims-made policy in an amount not less than \$1,000,000 per claim and \$3,000,000 annual aggregate, if the Consultant obtains an extended reporting period or tail coverage for not less than three (3) years following the termination or expiration of the Contract.

☐ Required and attached // ☐ Waived by Bureau Director or designee // ☒ Reduce by Bureau Director or designee

Continuous Coverage; Notice of Cancellation: The Consultant agrees to maintain continuous, uninterrupted coverage for the duration of the Contract. There shall be no termination, cancellation, material change, potential exhaustion of aggregate limits or

non renewal of coverage without thirty (30) business days written notice from Consultant to the City. If the insurance is canceled or terminated prior to completion of the Contract, Consultant shall immediately notify the City and provide a new policy with the same terms. Any failure to comply with this clause shall constitute a material breach of Contract and shall be grounds for immediate termination of this Contract.

**Additional Insured:** The liability insurance coverages, except Professional Liability, Errors and Omissions, or Workers' Compensation, shall be without prejudice to coverage otherwise existing, and shall name the City of Portland and its bureaus/divisions, officers, agents and employees as Additional Insureds, with respect to the Consultant's activities to be performed, or products or services to be provided. Coverage shall be primary and non-contributory with any other insurance and self-insurance. Notwithstanding the naming of additional insureds, the insurance shall protect each additional insured in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured.

**Certificate(s) of Insurance:** Consultant shall provide proof of insurance through acceptable certificate(s) of insurance, including additional insured endorsement form(s) and all other relevant endorsements, to the City prior to the award of the Contract if required by the procurement documents (e.g., request for proposal), or at execution of Contract and prior to any commencement of work or delivery of goods or services under the Contract. The Certificate(s) will specify all of the parties who are endorsed on the policy as Additional Insureds (or Loss Payees). Insurance coverages required under this Contract shall be obtained from insurance companies acceptable to the City of Portland. The Consultant shall pay for all deductibles and premium. The City reserves the right to require, at any time, complete, certified copies of required insurance policies, including endorsements evidencing the coverage the required.

**Subconsultant(s):** Consultant shall provide evidence that any subconsultant, if any, performing work or providing goods or service under the Contract has the same types and amounts of coverages as required herein or that the subconsultant is included under Consultant's policy.

#### **10. Ownership of Work Product**

All work product produced by the Consultant under this Contract is the exclusive property of the City. "Work Product" includes, but is not limited to: research, reports, computer programs, manuals, drawings, recordings, photographs, artwork and any data or information in any form. The Consultant and the City intend that such Work Product shall be deemed "work made for hire" of which the City shall be deemed the author. If for any reason a Work Product is deemed not to be a "work made for hire," the Consultant hereby irrevocably assigns and transfers to the City all right, title and interest in such work product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrines. Consultant shall obtain such interests and execute all documents necessary to fully vest such rights in the City. Consultant waives all rights relating to work product, including any rights arising under 17 USC 106A, or any other rights of authorship, identification or approval, restriction or limitation on use or subsequent modifications. If the Consultant is an architect, the Work Product is the property of the Consultant-Architect, and by execution of this Contract, the Consultant-Architect grants the City an exclusive and irrevocable license to use that Work Product.

Notwithstanding the above, all pre-existing trademarks, services marks, patents, copyrights, trade secrets, and other proprietary rights of Consultant are and will remain the exclusive property of Consultant.

#### **11. EEO Certification**

In the event Consultant provides in excess of \$2,500.00 for services to the City in any fiscal year, Consultant shall obtain EEO certification from the City.

#### **12. Equal Benefits**

Consultant must comply with the City's Equal Benefits program as prescribed by Chapter 3.100 of the Code of the City of Portland. The required documentation must be filed with Procurement Services, City of Portland, prior to Contract execution.

#### **13. Successors in Interest**

The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and approved assigns.

#### **14. Severability**

The parties agree that if any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

#### **15. Waiver**

The failure of the City to enforce any provision of this Contract shall not constitute a waiver by the City of that or any other provision.

#### **16. Errors**

The Consultant shall promptly perform such additional services as may be necessary to correct errors in the services required by this Contract without undue delays and without additional cost.



**17. Governing Law/Venue**

The provisions of this Contract shall be interpreted, construed and enforced in accordance with, and governed by, the laws of the State of Oregon without reference to its conflict of laws provisions that might otherwise require the application of the law of any other jurisdiction. Any action or suits involving any question arising under this Contract must be brought in the appropriate court in Multnomah County Oregon.

**18. Amendments**

All changes to this Contract, including changes to the scope of work and Contract amount, must be made by written amendment and approved by the Chief Procurement Officer to be valid. Any amendment that increases the original Contract amount by more than 25% must be approved by the City Council to be valid.

**19. Business Tax Registration**

The Consultant shall obtain a City of Portland business tax registration number as required by PCC 7.02 prior to beginning work under this Contract.

**20. Prohibited Conduct**

The Consultant shall not hire any City employee who evaluated the proposals or authorized the award of this Contract for two years after the date the Contract was authorized without the express written permission of the City and provided the hiring is permitted by state law.

**21. Payment to Vendors and Subconsultants**

The Consultant shall timely pay all subconsultants and suppliers providing services or goods for this Contract.

**22. Access to Records**

The Consultant shall maintain all records relating to this Contract for three (3) years after final payment. The City may examine, audit and copy the Consultant's books, documents, papers, and records relating to this Contract at any time during this period upon reasonable notice. Copies of these records shall be made available upon request. Payment for the reasonable cost of requested copies shall be made by the City.

**23. Audits**

- (a) The City may conduct financial and performance audits of the billings and services specified in this Contract at any time in the course of the Contract and during the three (3) year period established by paragraph 22. Audits will be conducted in accordance with generally accepted auditing standards as promulgated in Government Auditing Standards by the Comptroller General of the United States Government Accountability Office.
- (b) If an audit discloses that payments to the Consultant exceed the amount to which the Consultant was entitled, the Consultant shall repay the amount of the excess to the City.

**24. Electronic Signatures**

The City and Consultant may conduct this transaction, including any Contract amendments, by electronic means, including the use of electronic signatures.

**25. Merger Clause**

This Contract encompasses the entire agreement of the parties, and supersedes all previous understandings and agreements between the parties, whether verbal or written.

**26. Dispute Resolution/Work Regardless of Disputes**

The parties shall participate in mediation to resolve disputes before conducting litigation. The mediation shall occur at a reasonable time after the conclusion of the Contract with a mediator jointly selected by the parties. Notwithstanding any dispute under this Contract, the Consultant shall continue to perform its work pending resolution of a dispute, and the City shall make payments as required by the Contract for undisputed portions of the work. In the event of litigation no attorney fees are recoverable. No different dispute resolution paragraph(s) in this Contract or any attachment hereto shall supersede or take precedence over this provision.

**27. Progress Reports: ☒ Applicable ☐ Not Applicable**

If applicable, the Consultant shall provide monthly progress reports to the Project Manager as described in the Statement of the Work and Payment Schedule.

**28. Consultant's Personnel: ☒ Applicable ☐ Not Applicable**

If applicable, the Consultant shall assign the personnel listed in the Statement of the Work and Payment Schedule for the work required by the Contract and shall not change personnel without the prior written consent of the City, which shall not be unreasonably withheld.

**29. Subconsultants**

The Consultant shall use the subconsultants identified in its proposals. The Consultant shall not change subconsultant assignments without the prior written consent of the Chief Procurement Officer. The City will enforce all social equity Contracting and Minority, Women and Emerging Small Business (M/W/ESB) subContracting commitments submitted by the Consultant in its proposals. Failure to use the identified M/W/ESB subconsultants without prior written consent is a material breach of Contract.



For Contracts valued \$50,000 or more, the Consultant shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this Contract by reference, reporting ALL subconsultants employed in the performance of this agreement. An electronic copy of the MUR may be obtained by contacting the PTE Contract Compliance Specialist.

### **30. Third Party Beneficiaries**

There are no third party beneficiaries to this Contract. Enforcement of this Contract is reserved to the parties.

### **31. Conflict of Interest**

Consultant hereby certifies that, if applicable, its Contract proposal is made in good faith without fraud, collusion or connection of any kind with any other proposer of the same request for proposals or other City procurement solicitation(s), that the Consultant as a proposer has competed solely on its own behalf without connection or obligation to, any undisclosed person or firm. Consultant certifies that it is not a City official/employee or a business with which a City official/employee is associated, and that to the best of its knowledge, Consultant, its employee(s), its officer(s) or its director(s) is not a City official/employee or a relative of any City official/employee who: i) has responsibility in making decisions or ability to influence decision-making on the Contract or project to which this Contract pertains; ii) has or will participate in evaluation or management of the Contract; or iii) has or will have financial benefits in the Contract. Consultant understands that should it elect to employ any former City official/employee during the term of the Contract then that the former City official/Consultant employee must comply with applicable government ethics and conflicts of interest provisions in ORS Chapter 244, including but not limited to ORS 244.040(5) and ORS 244.047, and the City's Charter, Codes and administrative rules, including lobbying prohibitions under Portland City Code Section 2.12.080.

### **32. Respectful Workplace Behavior**

The City of Portland is committed to a respectful work environment, free of harassment, discrimination and retaliation and other inappropriate conduct. Every individual has a right to work in a professional atmosphere where all individuals are treated with respect and dignity. The City's HR Rule 2.02 covers all employees with the City of Portland as well as consultants, vendors or consultants who provide services to the City of Portland. By signing this Contract/Agreement, the Consultant indicates compliance with all terms and conditions contained in this Contract including HR 2.02.

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## **STATEMENT OF THE WORK AND PAYMENT SCHEDULE**

### **INTRODUCTION**

Due to the recent changes in Portland's system, a meeting was held between the Environmental Protection Agency (EPA), Oregon Health Authority (OHA) and the Portland Water Bureau (PWB or City) in April and August 2016 to discuss lead results and corrosion control. Based on the results of that meeting and current needs of the PWB, consultant services are required in support of the Corrosion Control Treatment Pilot Project (Project). As identified in the Request for Proposal (RFP) 00000462, PWB secured funding to begin a water quality corrosion study. Results are anticipated in the summer of 2017 and are expected to provide further information regarding the mechanisms of lead release in PWB's system. PWB requires evaluation of treatment scenario(s), including those available to achieve the previously specified optimal corrosion control treatment (OCCT; pH 9 and alkalinity 20 mg/L), that further minimize lead levels at PWB customer taps. The Consultant's work shall be performed in two Phases described in detail below.

Once commencing work on the corrosion control treatment pilot, the City may advertise for design services for the recommended improvements resulting from this Project. As identified in the RFP, the Consultant is ineligible to propose as a prime proposer on the procurement action for that RFP solicitation.

PWB must maintain a high quality and consistent team throughout the duration of this phase of the Project and into the next design phase. This shall require the Consultant to potentially work with other PWB Consultants and their subconsultants during the term of this Project.

### **STATEMENT OF THE WORK**

Under this Contract the Consultant shall be performing the following two phases for this Project:

#### **Phase 1**

Phase 1 requires the Consultant's summary of background information and defining the recommended way forward and if there is a need for bench- and/or pilot-scale testing to be conducted. Defining the way forward and testing needs shall include documenting pertinent historical information and decision criteria for evaluating bench- and pilot-testing results and subsequently selecting the recommended treatment scenario for full scale implementation following completion of pilot testing. Work shall include development of bench- and pilot-scale testing experimental plans, advising PWB staff how to provide support (such as harvesting materials from the PWB distribution system and/or providing access to the currently operating Process Research Stations [PRSSs]), conducting bench-scale testing, and development/planning for pilot-scale testing as needed. The Consultant shall begin Phase 1 after receipt of Notice to Proceed (NTP) from the PWB Project Manager. The NTP for Phase 1 must be approved by the Principal Engineer in Charge of the PWB Engineering Services Group (ESG), Design Section. Currently this position is assigned to David Peters, P.E.

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### Phase 2

Phase 2 requires the Consultant to implement pilot-scale testing (design, installation, start-up and testing of pilot study systems that have been defined during Phase 1). Work shall include the Consultant preparing the Pilot Study Operations Plan, fabrication and installation of equipment, training, general oversight, technical support, data compilation, review, and evaluation, summary and evaluation of the Treatment Pilot results, recommendations for a treatment scenario for full-scale implementation, development of a facilities plan including land use issues, and final report preparation and presentation. The Consultant shall begin Phase 2 after receipt of Notice to Proceed (NTP) from the PWB Project Manager. The NTP for Phase 2 must also be approved by the Principal Engineer in Charge of the PWB Engineering Services Group (ESG), Design Section.

### Project Management

In addition to the phased work the Consultant shall perform Project Management during all phases of the Project for work associated with the contract. This Project Management work is described below.

#### Tasks P1.T6 and P2.T7 – Project Management

- A. Kickoff Meeting – The PWB Project Manager (PM) shall schedule a kickoff meeting to be attended by the Consultant PM and key Project staff identified by the Consultant and PWB PM, via on-line teleconference meeting to inaugurate the official start of the Project. The Consultant PM shall discuss the overall Project Management Plan, define the roles and responsibilities of the Consultant's staff, establish the Project schedule and identify action items, milestones, key deliverables and deadlines. The kickoff meeting date shall be no sooner than the date on the Notice to Proceed.
- B. Per the RFP, the Consultant shall provide the PWB PM with a Project Work Plan. The Project Work Plan shall indicate when the tasks in the Project work requirements are planned to be performed along with budget and QA/QC plan. These reports shall be provided electronically within 30 days from Notice to Proceed. The Consultant shall maintain and update the Project Work Plan on a monthly basis throughout the term of the contract.
- C. Progress review meetings – The PWB PM shall schedule weekly progress meetings (to be included within the already-identified workshops, bi-weekly, and quarterly meetings as defined in this scope of work whenever possible) with the Consultant to discuss the following:
  - 1) Status of the responses to the action items discussed at the prior meeting.
  - 2) Review Consultant's progress of the Project, which includes Consultant reporting on the current activities and highlight of which tasks are going on as planned and which tasks that having issues.
  - 3) Discuss outline of how to resolve current issues, identify the parties responsible for resolving the issues, and the target completion date.
  - 4) Solicit input from PWB staff regarding current work activities.
  - 5) Discuss monthly Progress Reports, identify potential issues and plans to address issues moving forward.
- D. Manage the Project schedule and budget as well as technical resources and coordinate with PWB's PM as needed.
- E. Project Schedule updates shall be provided electronically with the monthly status report for months in which the Project schedule was revised.
- F. Conduct biweekly and quarterly meetings with PWB staff, regulators, and other stakeholders, that include the following:
  - Biweekly data reviews during pilot testing.
  - Quarterly data reporting, summarization, and interpretation during pilot testing. Include senior staff from Consultant that function as a technical advisory committee (TAC).
- G. Consultant shall prepare meeting agenda and minutes. The Agenda and Meeting minutes shall be prepared by the Consultant electronically in a Microsoft Word format. Agendas shall be provided to the PWB PM within one (1) week prior to the scheduled meeting. Meeting minutes shall be provided by the Consultant via email to the PWB PM within two (2) weeks after the scheduled meeting date. The PWB PM shall be responsible for review of monthly invoice and status report; review of Project Work Plan; participation in monthly progress meetings; review and comment on agenda and meeting notes; and providing electronic comments to the Consultant within two (2) weeks of receipt of the meeting minutes.
- H. Project administration and billings – Consultant shall administer and manage the Project to ensure that all tasks and subtasks the Consultant and their subconsultants are responsible for are properly executed according to sound Project Management Principles, and to complete the scope of work and deliverables according to the approved schedule and budget. Invoice and Progress Reporting shall be followed in accordance to the terms of the contract.
  - 1) Progress Reports - Consultant shall provide the PWB PM with monthly summary reports highlighting work progress during the previous month and listing unresolved outstanding issues. One (1) electronic copy of each monthly report shall be submitted to City's PM by the 15<sup>th</sup> of the next month. Progress reports shall be broken down by task as outlined in "Exhibit A – Budget Detail" and related sections of this contract, and shall compare percentages complete with percentages of budget spent.
  - 2) Consultant shall submit invoices per the instructions and requirements included to the contract.

### Deliverables

Consultant's Deliverables shall include:

- A. Kickoff meeting minutes.
- B. Project Work Plan
- C. Monthly invoice and progress report.



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- D. Meeting minutes as identified in tasks below.

### **PWB PM and PWB Responsibilities**

- A. Review kickoff meeting minutes.
- B. Review Project Work Plan
- C. Participate in weekly progress meetings.
- D. Review monthly invoice and progress report.
- E. Review meeting minutes as identified in tasks below.

### **Phase 1, Scope of Work and Deliverables**

Work shall consist of existing document reviews, developing performance assessment decision criteria for evaluation of treatment alternatives, initiating and conducting bench-scale studies, reviewing bench-scale study findings, and producing a pilot-scale testing experimental plan. Specific tasks to be completed by the Consultant include the following:

#### **Task P1.T1. – Documentation of Way Forward**

Consultant shall complete reviews of pertinent Lead and Copper Rule (LCR)-related documentation that have been recently produced separately from this contract.

Consultant shall facilitate a workshop at PWB's facilities that is expected to last approximately 6 hours which shall (a) discuss and finalize review information and decision criteria, (b) define which treatment technologies should be retained for further evaluation, and (c) obtain PWB consensus on the need for additional bench-scale and/or pilot-scale testing and methodology (criteria) for reviewing test results. Following the workshop, a summary technical memorandum (TM) shall be prepared to document the rationale for retaining or dropping Optimized Corrosion Control Treatment (OCCT) strategies such that the way forward to OCCT implementation is sound and defensible and summarize the need and rationale for additional bench- and/or pilot-scale testing to demonstrate OCCT performance and fill identified knowledge gaps.

#### **Deliverables**

- A. Workshop at PWB facilities. Consultant team attendees shall include Melinda Friedman, Alex Mofidi, David Cornwell, Damon Roth, Pierre Kwan, and Ben Klayman. Decisions shall be documented in workshop minutes.
- B. TM1 titled "Corrosion Control Options and Performance Assessment Decision Criteria" approximately 5-10 pages in length.

### **PWB PM and PWB Responsibilities**

- A. Provide meeting space at PWB facilities for the workshop and attend with the proper PWB staff.
- B. Review TMs and provide comments back to Consultant within three (3) weeks of receipt of TMs.
- C. Review workshop minutes and provide comments back to Consultant.

#### **Task P1.T2. – Bench-Scale Testing**

Bench testing shall be conducted by the Consultant and include corrosion scale analysis assessment of various harvested materials from PWB's system followed by bench-scale OCCT coupon jar tests. Scale analysis shall be conducted using scanning electron microscope (SEM) analysis in conjunction with energy-dispersive X-ray spectroscopy (EDS) and/or X-ray fluorescence (WRF) and X-ray diffraction (XRD) spectrometry.

During bench testing, a total of 80 coupons shall be tested; divided into two 5-week rounds, with each round having orthophosphate and pH/alkalinity tests. Two coupon materials shall be evaluated for each test condition: brass and pure lead. An additional set of copper with lead solder coupons can be added to this testing for an additional fee if requested by the PWB PM but is not required at this time.

The first round of testing shall evaluate three orthophosphate doses in both surface water (SW) and groundwater (GW). Duplicate samples shall be tested, for a total of 24 test jars. In addition to orthophosphate testing, 4 pH/alkalinity conditions shall be tested, including a SW control, a GW control, a moderately-high pH SW (pH ~8.6), and a high pH SW (pH ~9.3). It is assumed that pH adjustment shall not be applied to the GW. Duplicate samples shall be tested, for a total of 16 test jars. The testing shall be anticipated to last for 5 weeks for samples to reach equilibrium conditions.

For the second round of sampling the duplicate samples tested in the first round shall be divided from their corresponding test jars, and each set of test jars shall be blended with either SW or GW at a different ratio. Testing shall evaluate two SW:GW blends (at this time, the blends are anticipated to be 85:15 and 15:85) moving in both directions: equilibrated surface water that gets blended with groundwater and equilibrated groundwater that gets blended with surface water. Because the duplicates shall be tested with different blends, each SW:GW blend and test condition shall only be tested in one jar. It is anticipated that this testing shall only extend for 4 weeks because the focus shall be on the short-term shift following the blended conditions.

#### **Deliverables**

- A. TM2 titled "Bench-Scale Testing Experimental Plan" approximately 3-5 pages in length.



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- B. Bench-scale testing that consists of up to 80 coupons as described above.
- C. Scale analyses of materials harvested from PWB's distribution system and/or the existing three Process Research Solutions (PRS) stations being operated in PWB's system (analyses to be conducted on up to three [3] separate material samples).
- D. TM3 titled "Bench-Scale Testing Results."

### **PWB PM and PWB Responsibilities**

- A. Provide all appropriate shipments of surface water and groundwater to the Consultant's laboratory in Virginia.
- B. Provide materials harvested from the system to Consultant.
- C. Review TMs and provide comments back to Consultant within three (3) weeks of receipt of TM.

### **Task P1.T3. – Develop Pilot-Scale Testing Plan**

A pilot testing plan shall be developed to include evaluating two of the existing PRS coupon-style test rigs (coupon rigs) and additional test rigs that the Consultant shall design and manufacture which shall test distribution-system materials (material rigs). If requested in writing by the PWB PM, one of the existing three PRS coupon rigs may be sacrificed for scale analysis for additional fee. Any additional fees shall be added to the Contract by a written amendment. Recommendation for PRS scale analysis shall be provided by Consultant at the end of the pilot testing. All rigs shall be installed to equilibrate at the Lusted Hill Treatment Facility (LHTF) test site as soon as possible.

### **Deliverables**

- A. TM4 titled "Pilot-Scale Testing Experimental Plan" approximately 3-5 pages in length.

### **City Project Manager and PWB Responsibilities**

- A. Advise Consultant if additional scale analyses are desired.
- B. Review TMs and provide comments back to Consultant within three (3) weeks of receipt of TM.

### **Task P1.T4. – Bench Testing Results Review and Pilot Test Planning Workshop**

A full-day workshop (6 hours) shall be held at PWB's facilities to discuss results of bench-scale testing, scale analyses, and the pilot-testing plan. The output of this workshop shall be documentation of the decision criteria which were applied to assess bench-scale results and determine the way-forward in pilot testing. This workshop shall be attended by our key team members to ensure input is obtained covering our in-depth expertise.

### **Deliverables**

- A. Workshop at PWB facilities. Consultant team attendees shall include Melinda Friedman, Alex Mofidi, David Cornwell, Damon Roth, Pierre Kwan, and Ben Klayman. Decisions shall be documented in workshop minutes.

### **PWB PM and PWB Responsibilities**

- A. Provide meeting space at PWB facilities for the workshop and attend with the proper PWB staff.
- B. Review workshop minutes and provide comments back to Consultant.

## **Phase 2, Scope of Work and Deliverables**

Work shall include conducting the pilot-scale testing, delivering the full-scale facilities plan, and the OCCT report that can be used to obtain OHA approvals. Specific tasks to be completed by the Consultant include the following:

### **Task P2.T1. – Pilot Design and Installation**

Consultant shall design the Material Rig pilot units and develop drawings and specifications information that shall be provided to PWB for their review before fabrication begins. The equipment shall be fabricated by the Consultant. Pilot equipment enclosures (likely either shipping containers or similar) for the test rigs shall be brought to PWB's facilities at the same time as rig installation. Each Material Rig pilot unit is expected to test three (3) materials from PWB's system to include copper pipe with lead soldered joints, brass meters with nutating discs, and galvanized service lines. The total number of Material Rigs to be fabricated is three (3). Testing of additional materials and fabrication and operation of additional testing rigs can be conducted at additional fee.

Pilot testing shall be defined by three evaluation periods that include (1) harvesting (target dates between March and before June 2017), (2) equilibration (target between June and July 2017), and (3) testing (target from August 2017 through January 2018 for a total of seven months). The need for additional trials that involve switching back-and-forth between blends of groundwater and surface water shall be determined at the end of Phase 1 and can be conducted at additional fee upon direction from the PWB Project Manager.

### **Deliverables**

- A. Briefing document "Material Test Rig Plans and Specifications" which shall be a combination of drawings and text, expected to be approximately 5-10 pages in length (drawings shall be on 11-inch x 17-inch sized pages).
- B. Material rigs shall be fabricated by the Consultant and include up to 3 rigs that house a total of 3 materials each to test the following conditions: 1 unit housing 3 materials (one copper/lead solder, one brass meter, and one galvanized pipe) testing existing water quality and 2 units (each housing the same 3 materials as above) each testing a chemical

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treatment condition (i.e., total of two treatment conditions). The test rigs shall all be fed 100% Bull-Run water. All test rigs shall be located at the LHFT. Additional conditions and/or water blends can be tested at additional fee upon written authorization from the PWB Project Manager.

- C. Testing rig enclosures to house Coupon and Material rigs shall be provided by Consultant.

### **PWB PM and PWB Responsibilities**

- A. Provide materials harvested from the system to the Consultant.
- B. Review briefing document materials and provide comments back to Consultant within two (2) weeks of receipt of briefing documents.

### **Task P2.T2. – Develop Pilot Testing Operations Plan**

The Consultant shall prepare a pilot-study Operations and Safety Plan (OSP) as the Material Rigs are being designed. The Consultant shall provide an operations training session for PWB staff after successful start-up of the rigs. The OSP shall include a troubleshooting checklist and all other pertinent daily checklists and instructions to make the document a practical tool that is easy to use.

### **Deliverables**

- A. Operations and Safety Plan (OSP) document shall be approximately 5-10 pages in length and include all necessary checklists and instructions for operating the fabricated Material Rigs.

### **City Project Manager and PWB Responsibilities**

- A. Review Operations and Safety Plan (OSP) and provide comments back to Consultant within two (2) weeks of receipt of briefing documents.

### **Task P2.T3. – Provide Pilot Testing Training, Operations, Oversight, and Documentation**

Testing shall be conducted by using the Coupon and Material Rigs described above. The Consultant shall be on-site to provide start-up training. Startup training shall include safety training for chemical use and the use of other pertinent materials and equipment. During testing, it is expected that PWB staff shall be the primary operators to both check on the pilot equipment on a regular basis and to conduct water quality sampling. If additional as-needed technical support is required by PWB staff, Consultant shall provide on-site assistance on-site for up to three (3) days per month for the seven (7) month testing period. Additional on-site report can be provided for additional fee.

Pilot testing results shall be documented at regular intervals as well as at the end of testing. The Consultant shall format, organize, trend, analyze, perform QA/QC, and post data to a shared cloud-based file folder for easy viewing and analysis by all team members.

During the seven-month testing period, test documentation shall include bi-weekly and quarterly progress reviews to discuss results, allow time for modifying the testing approach if needed, or perform other adjustments that would be beneficial to the program. Bi-weekly meetings shall be internet-hosted videoconference meetings. Quarterly meetings shall be attended in person by at least one of either Melinda Friedman or Alex Mofidi (if one does not attend in person, they shall be available to attend by teleconference or Webex). After the seven-month pilot- testing work is completed, a final report (including description of all scale analysis testing and bench- and pilot-scale findings and results) shall be provided.

### **Deliverables**

- A. Up to two-days of training for equipment safety, chemical safety, and other related equipment operations and data management requirements and duties.
- B. Operations support consisting of the availability of consultant to be on-site up to three days per month if assistance is required.
- C. Managing testing data and reporting of test results to PWB project manager.
- D. Bi-weekly (every 2 weeks, up to 11 total) progress review teleconference meetings (with computer screen sharing via an internet-based webinar/videoconference platform).
- E. Quarterly (every three months, up to 2 total) face-to-face meetings at PWB facilities attended by at least one of either Melinda Friedman or Alex Mofidi (if one does not attend in person, they shall dial-in via teleconference or Webex) to be supported by pilot testing summary TMs (i.e., TM4 “Quarter 1 Pilot Results” and TM5 “Quarter 2 Pilot Results”). Each of these quarterly TMs may be between 5 to 20 pages in length depending on the amount of data generated.
- F. A DRAFT of a final pilot testing report titled “OCCT Pilot-Scale Testing Results Report” shall be prepared and presented to PWB during Task 4 (pilot testing findings workshop). As it is possible that not all data shall have been received, reviewed, and checked for quality control by the workshop, a full DRAFT report shall likely not be available until after the workshop. Comments from the workshop shall be incorporated into the DRAFT that is then provided to PWB’s project manager. The report is expected to be approximately 10 to 30 pages in length and include appendices with bench-scale results, project TMs, pilot equipment information, and other pertinent information.

### **PWB PM and PWB Responsibilities**



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- A. Provide appropriately qualified staff to attend training and conduct regular operations of the pilot-testing equipment which shall include handling testing chemicals, performing treatment process status checks, conducting water quality analyses, and collecting and delivering accurate test data to Consultant in the format specified by Consultant.
- B. Review all deliverable documents and provide comments back to Consultant within three (3) weeks of receipt of deliverable.
- C. Provide a pressurized supply of treated Bull Run surface water allowing a supply flow of up to 15 gallons per minute at a minimal pressure of 20 psi.
- D. Provide a discharge receiving location for all pilot testing water (up to 15 gallons per minute).
- E. Perform and bear the cost of all water quality analyses for the pilot work, to include analytes and all consumable materials for general/physical (pH, alkalinity, hardness, etc.), total and dissolved metals (e.g., lead, copper, iron, etc.), disinfectant related parameters (total and free chlorine residual, ammonia, etc.) and others as needed and approved by the PWB PM.
- F. Provide the appropriate staff to attend each bi-weekly meeting by teleconference.
- G. Provide the appropriate staff and meeting space at PWB offices for each Quarterly meeting.

### **Task P2.T.4 – Conduct Pilot Testing Findings Workshop**

The objectives of this workshop shall be to present pilot scale findings and to select the OCCT process that shall be carried forward into the Facilities Plan (Task 5). Approximately 4-5 hours shall be spent summarizing pilot findings while a remaining 1-2 hours shall be used to evaluate treatment facility design with a qualitative, multi-criteria analysis (MCA). This procedure shall assist PWB staff in selecting self-imposed cost and benefit specifications that various end-result criteria can be judged within. This process shall result in a facility design that can meet PWB's needs for issues such as constructability, cost efficiency, operations needs, safety, environmental stewardship, customer needs, and others. During the MCA process, the Consultant shall be assessing design and operations items such as chemicals, operating conditions, and applicable alternative design techniques for the chosen OCCT to achieve its treatment goals in a safe and efficient manner. These shall be scrutinized against issue ratings such as net present value in capital and operational costs, environmental impact, anticipated water quality issues, engineering design, and ease of operations, and overall capability of meeting OCCT needs.

#### **Deliverables**

- A. Workshop at PWB facilities. Consultant team attendees shall include Melinda Friedman, Alex Mofidi, David Cornwell, Damon Roth, Pierre Kwan, and Ben Klayman. Decisions shall be documented in workshop minutes.

#### **PWB PM and PWB Responsibilities**

- A. Provide meeting space at PWB facilities for the workshop and attend with the proper PWB staff.

### **Task P2.T.5 – Develop Full-Scale Facility Plan**

Upon selection of the full-scale treatment scenario, Consultant shall complete the preliminary planning documents which shall include both (a) a land-use study for the full-scale facility, and (b) preliminary facility plans. It is expected that the facility shall be located within or adjacent to the LHFT.

The land use study shall include preparing the land use application and leading the public review process. Preparing the draft land use application shall include completing mapping, a draft Wildlife Conservation Plan (WCP), land use application outline, site layout, neighborhood meetings, and meeting with Multnomah County planning and engineering staff. The land use application shall then be prepared for submission to Multnomah county and include a permitting strategy, finalized land use application narrative, finalized WCP, coordination of landscape planning documents, further meetings with Multnomah County, meetings with PWB and preparations for and participation in a public hearing.

Items to be included in the preliminary facility plans shall include process flow diagrams, recommended operational ranges and control set points, chemical dosages, estimated equipment sizes and layouts, estimated site and space determinations, preliminary worker health and safety protection measures, estimated permit requirements, estimated operational complexity for running and maintaining the system, and capital design/construction and annual cost operating estimates. The plan shall also include chemical specifications (including vendor-supplied quality assurance [QA] requirements) and pertinent QA testing by PWB.

#### **Deliverables**

- A. Meeting to discuss Land Use Study Issues
- B. Land Use Study deliverables to include the following:
  - 1) Draft land use application and draft WCP;
  - 2) Memorandum describing site constraints and recommendations to reduce impacts on wildlife;
  - 3) Up to seven (7) meetings with PWB to develop strategy and other pertinent permitting information;
  - 4) Up to three (3) neighborhood meetings;
  - 5) Pre-application conference;
  - 6) Final land use application, narrative, and final WCP; and,
  - 7) Prepare for and attend Public Hearing (pre-meeting agenda and follow-up responses to issues if necessary);
- C. Meeting to discuss facilities plan requirements.



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### D. Preliminary Facility Plan Specifications Report.

#### PWB PM and PWB Responsibilities

- A. Provide site drawings, geotechnical, environmental, permitting, or other related information to Consultant.
- B. Provide meeting space at PWB facilities for the various meetings and attend with the proper PWB staff.
- C. Review all deliverable documents and provide comments back to Consultant in a timely fashion.

### Task P2.T6. – Prepare OCCT Report for OHA

The OCCT report shall serve to summarize the approach taken, methodologies used and key findings to arrive at the OCCT solution. The report shall address required elements as stated in OAR 333-061-0034(3).

#### Deliverables

- A. OCCT Report.
- B. OCCT Report Presentation to PWB Stakeholders and OHA.

#### PWB PM and PWB Responsibilities

- A. Provide meeting space at PWB facilities for the various meetings and attend with the proper PWB staff.
- B. Review all deliverable documents and provide comments back to Consultant within three (3) weeks or receipt of deliverable documents.

## PROJECT SCHEDULE

As outlined in the Request for Proposals, QBS-RFP Solicitation Number 00000462, and identified above, this Project has two phases. PWB shall issue a Notice to Proceed specifying the date the Consultant may begin work for each phase of the work required under the contract.

Phase 1 deliverables (assuming a notice to proceed [NTP] shall be provided by PWB during the first week of March 2017) shall follow the schedule below. Exact dates shall be determined based on progression and results of bench scale testing

#### Task P1.T1. Documentation of Way Forward

- A. Workshop at PWB facilities: March 2017
- B. Delivery of DRAFT TM1: April 2017

#### Task P1.T2. Bench-Scale Testing

- A. Delivery of DRAFT TM2: March 2017
- B. Conduct testing: March – May 2017
- C. Conduct scale analyses: March – April 2017
- D. Delivery of DRAFT TM3: May 2017

#### Task P1.T3. Develop Pilot-Scale Testing Plan

- A. Delivery of DRAFT TM4: June 2017

#### Task P1.T4. Bench Testing Results Review and Pilot Test Planning Workshop

- A. Workshop at PWB facilities: June 2017

Phase 2 deliverables (assuming a notice to proceed [NTP] shall be provided by PWB during the first week of March 2017) shall follow the schedule below. Exact dates shall be determined during development of the Pilot-Scale Testing Experimental Plan prepared under Phase 1.

#### Task P2.T1. Pilot Design and Installation

- A. Delivery of DRAFT plans and specifications briefing document: May 2017
- B. Fabrication of pilot equipment: May – June 2017
- C. Installation of pilot enclosures and equipment: June 2017

#### Task P2.T2. Develop Pilot Testing Operations Plan

- A. Delivery of DRAFT OSP document: July 2017

#### Task P2.T3. Provide Pilot Testing Training, Operations, Oversight, and Documentation

- A. Provide one-day safety and operations training: July 2017
- B. Operate pilot equipment to equilibrate materials: June – July 2017 (note that to meet this timeline, it is required that PWB staff provide harvested materials to the Consultant in or before April 2017)
- C. Start standard pilot testing operations: August 2017
- D. Conduct bi-weekly meetings with PWB: August 2017 – January 2018
- E. Conduct Quarter 1 meeting and reporting: October 2017

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- F. Conduct Quarter 2 meeting and reporting: January 2018
- G. Deliver DRAFT pilot testing report: May 2018

### Task P2.T4. Pilot Testing Findings Workshop

- A. Workshop at PWB facilities: May 2018

### Task P2.T5. Develop Full-Scale Facility Plan

- A. Schedule for Land Use Permitting to be developed between PWB PM and Consultant at a later date to be determined after the start of this contract.
- B. Facilities planning meeting: May 2018
- C. Delivery of DRAFT Facility Plan Specifications Report: June 2018

### Task P2.T6. Prepare OCCT Report for OHA

- A. Delivery of DRAFT OCCT Report: June 2018
- B. Present OCCT Report at one meeting to include interested stakeholders: July 2018

### **NOTICE TO PROCEED**

An NTP shall be issued by the PWB prior to beginning all phases of the Project. The Consultant may not begin work under any phase until the issuance of NTP, for that particular phase, has been provided. The NTP requires the approval by signature of the Principal Engineer in Charge of the PWB ESG, Planning Section. Consultant shall comply with the statement of work, detailed tasks and deliverables contained in the contract and follow the Budget Details (attached as Exhibit A) that are applicable to the Project Phase.

### **WORK ORDERS – NO COST**

As noted above, besides those tasks identified above for Phase 2, the other work required under Phase 2 shall vary based on the outcome of Phase 1 of this Project. Work Orders shall be used during Phase 2 of the Project as a tool to reflect the progress of a phase or particular task, manage various no-cost adjustments to tasks, refine schedules for phases, update schedules due to short time frames, or to make a determination and memorialize the tools to be used when completing tasks under Phase 2.

Prior to receiving the NTP to begin Phase 2 of the Project or during the term of a Project Phase, the PWB PM may provide the Consultant with a written request for specific adjustments to a Task under the Phase. When this occurs, the Consultant shall be required to complete an updated scope, schedule and budget for the specific task(s) and submit their information directly to the PWB PM for review. The Consultant's scope, schedule and budget shall include a detailed description of the revised tasks and services to be provided along with subtasks, deliverables, specifications, schedule, list of Consultant's personnel and subconsultants that shall be completing the tasks. The Consultant shall ensure hourly rates reflective those included to this Contract and apply to the Budget Detail that applies to that particular Phase, attached and incorporated into this Contract as Exhibit A. Any changes to subconsultants or increases to the contract require a formal written amendment.

Once approved by the PWB, a Work Order shall be issued by the PWB PM to the Consultant. The Work Order must be signed by the PWB PM and the Consultant's approving authority prior to any work beginning on that particular task. A sample Work Order shall be made available by the ESG's Contract Administration Branch should the need arise under Phase 2. At no time shall costs exceed the authorized Contract budget or exceed the budgets set under this Contract for Phase I through Phase II. The PWB PM is responsible for maintaining the original, signed copy of all Work Orders and is responsible for providing a copy to the Consultant for their records.

### **Work Order Deliverables**

Work order deliverables shall be Project specific and shall include but not be limited to the following:

1. Work plan based on the update or revised tasks identified within the Work Order.
2. Schedule and revised/updated budget information (providing no additional funds, ONLY adjustments as needed).
3. Consultant's Project lead person and staff performing work/services required. Any revisions to key personnel or subconsultants shall require a formal amendment to the Contract and requires pre-approval by the PWB and City Procurement Office.
4. Usual and/or special coordination, communication, or progress reporting conditions.
5. Schedule of work including major milestones on recommended intermediate products (reports, meetings etc.) and estimated time of completion.
6. All reports and work products shall be submitted electronically in a format appropriate to the product (e.g. documents in Word, spatial products as GIS shapefiles, etc.) along with one hard-copy as designated in the correlating Work Order.

**Amendments to the Contract must follow the City Procurement procedures for an amendment to the Contract. Amendments require the signature and approval of the Chief Procurement Officer and the Consultant's authorized agent.**



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### CONSULTANT PERSONNEL

The Consultant shall assign the following personnel to do the work in the capacities designated:

NAME	ROLE ON PROJECT
Melinda Friedman	President and Principal In Charge
Alex Mofidi	Project Manager and Senior Engineer
Anna Vosa	Project Engineer
Michael Hallett	Field Scientist and Project Administrator

### SUBCONSULTANTS

The following are subconsultants for the Consultant that shall actively participate on this Project and perform the following services:

- Bench-scale testing
- Corrosion scale analyses
- Technical data and information analysis
- Pilot-scale testing experiment and equipment design and operations support
- Land-use permitting
- Full-scale facilities planning
- Support during workshops with PWB

NAME	DMWESB CERTIFICATION TYPE	ROLE ON PROJECT	SUBCONTRACT AMOUNT
Cornwell Engineering Group, LLC	OBE	Develop Bench Test Plan, Conduct Scale Analysis, Conduct Bench Testing, Workshops, QA/QC, Technical Advisory	\$180,334
HDR Engineering, Inc.	OBE	Develop Test Plan, Design and Install Plant, Develop Full Scale Facilities Plan, Workshops, QA/QC, Technical Advisory	\$117,874
Black and Veatch Corporation	OBE	Summarize Past Efforts, PRS Test Plan, Workshops, QA/QC, Technical Advisory	\$29,280
Winterowd Planning	ESB	Land use permitting	\$75,000

The City will enforce all social equity Contracting and Disadvantaged, Minority, Women and Emerging Small Business (D/M/W/ESB) subcontracting commitments submitted by the Consultant in its Proposal. For Contracts valued \$50,000 or more, the Consultant shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this Contract by reference, reporting ALL subconsultants employed in the performance of this agreement. A copy of the Subconsultant Change Request Form can be found on Procurement Services' website under Contractor Resources.

### COMPENSATION

The maximum amount that Consultant can be paid on this Contract is \$664,930, (hereafter the "not to exceed" amount), as described in the Budget Detail attached to this Contract as Exhibit A. Table 1 below provides a brief overview of costs by Project Phase and Task.

Phase		Tasks						
Phase ID	Cost	P1.T6	P1.T1	P1.T2	P1.T3	P1.T4		
1 – Review , Recommend & Bench Testing	Phase 1	Project Mgmt.	Document & Way Forward	Bench Testing	Develop Pilot Plan	Results Workshop	N/A	N/A
	\$ 254,478	\$ 16,188	\$ 39,028	\$ 128,581	\$ 39,440	\$ 31,241		
		P2.T7	P2.T1	P2.T2	P2.T3	P2.T4	P2.T5	P2.T6



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2 – Complete Pilot Testing & Facilities Planning	Phase 2 \$ 410,452	Project Mgmt. \$ 29,664	Design & Install Pilot \$ 55,972	Pilot Operation Plan \$ 13,932	Conduct Pilot Testing \$ 120,427	Results Workshop \$ 36,812	Full-Scale Facilities Plan \$ 130,114	OCCT Report for OHA \$ 23,531
<b>Total:</b>		<b>\$ 664,930</b>						

*Table 1*

The “not to exceed” amount includes all payments to be made pursuant to this Contract, including reimbursable expenses, if any. Nothing in this Contract requires the City to pay for work that does not meet the Standard of Care or other requirements of the Contract. The actual amount to be paid Consultant may be less than that amount.

The Consultant is entitled to receive progress payments for its work pursuant to the Contract as provided in more detail below. The City shall pay Consultant based on these invoices for acceptable work performed and approved until the “not to exceed” amount is reached. Thereafter, Consultant must complete work based on the Contract without additional compensation unless there is a change to the scope of work.

**Any estimate of the hours necessary to perform the work is not binding on the City. The Consultant remains responsible if the estimate proves to be incorrect. Exceeding the number of estimated hours of work does not impose any liability on the City for additional payment.**

If work is completed before the “not to exceed” amount is reached, the Consultant’s compensation shall be based on the Consultant’s bills previously submitted for acceptable work performed and approved.

Consultant shall evaluate and certify subconsultants invoices for payment, including review and determination of whether each charge is accurate and constitutes payment for fully authorized and completed Work, and maintain complete records regarding performance of this Service.

**All work product produced by the Contractor and delivered to the City under this Contract is the exclusive property of the City.**

**PAYMENT TERMS: Net 30 Days**

## **Hourly Rates**

**The PWB has authorized an annual 2% rate increase. The first annual rate increase is estimated to be March 2018. The hourly billing rates shall not exceed those set forth in the table below.**

Role on Project	Consultants and Subconsultant	Hourly Rate March 2017	Hourly Rate March 2018	Hourly Rate March 2019
President and Principal-In-Charge	Consultant – Melinda Friedman	\$ 215	\$ 219	\$ 224
Project Manager and Senior Engineer	Consultant – Alex Mofidi	\$ 195	\$ 199	\$ 203
Project Engineer	Consultant – Anna Vosa	\$ 145	\$ 148	\$ 151
Field Scientist and Project Admin.	Consultant – Michael Hallett	\$ 125	\$ 128	\$ 130
President and Technical Specialist	Subconsultant – David Cornwell	\$ 233	\$ 238	\$ 242
Project Engineer	Subconsultant – Damon Roth	\$ 140	\$ 143	\$ 145
Laboratory Technician	Subconsultant – Richard Brown	\$ 100	\$ 102	\$ 104
Senior Professional Associate	Subconsultant – Pierre Kwan	\$ 251	\$ 256	\$ 261
Field Engineer	Subconsultant – Verena Winter	\$ 144	\$ 147	\$ 150
Senior Engineer	Subconsultant – Ben Klayman	\$ 240	\$ 245	\$ 250
Permit Manager	Subconsultant – Greg Winterowd	\$ 162	\$ 165	\$ 169
Environmental Planning	Subconsultant – Tim Brooks	\$ 162	\$ 165	\$ 169
Senior Planner	Subconsultant – Jesse Winterowd	\$ 119	\$ 121	\$ 124
Environmental Scientist	Subconsultant – Anita Smythe	\$ 109	\$ 111	\$ 133
Project Coordinator	Subconsultant – Justine Stimler	\$ 80	\$ 81.50	\$ 83
Note: Rate increases are not accounted for in the budget detail but total project costs shall not increase due to rate increases				

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### Standard Reimbursable Costs

The following costs shall be reimbursed without mark-up:

- Travel, including mileage, beyond a 100-mile radius of Portland when specifically required by the Contract;
- Document reproduction directly attributable to the Contract; and,
- Approved Reimbursable Direct Costs.

### Travel Expenses

It is the policy of the City that all travel shall be allowed only when the travel is essential to the normal discharge of Consultant's responsibilities under the Contract. All travel shall be conducted in the most efficient and cost-effective manner resulting in the best value to the City. Consultant's Project Manager shall provide a written advance request for any upcoming trips for approval by City Project Manager.

The travel must comply with all the requirements set forth in this section and must be for official City business only. Personal expenses shall not be authorized at any time. All expenses are included in the total maximum Contract amount. In addition to meals and lodging, travel expenses shall be reimbursed for airfare and rental vehicles only if Consultant is acting within the course and scope of his/her duties under this Contract. Receipts are required for all out-of-state travel expenses. All Consultant representatives shall fly "coach class," unless Consultant personally pays the difference. All Consultant representatives shall be limited to economy or compact size rental vehicles, unless Consultant personally pays the difference.

For any exceptions to the expense items listed above, Consultant must obtain the separate written approval of City's Project Manager in writing prior to incurring any expense for which reimbursement shall be sought. The City shall not pay any mark up over actual allowable reimbursement costs.

### Subconsultant Costs

Compensation for subconsultants shall be limited to the same restrictions imposed on the Consultant. The maximum markup on subconsultant services shall not exceed 5%.

### Progress Payments

Compensation to the Consultant shall be based on invoices, monthly MUR reports and detailed monthly Project progress reports submitted to the PWB, which shall document completion of Project task/subtask or work order and provide detailed documentation of Project activity by the Consultant (including subconsultants). The Consultant is required to follow Generally Accepted Accounting Principles (GAAP). Personal expenditures or expenditures not related to the Project or part of the Contract are not eligible for reimbursement. On or before the 15<sup>th</sup> of each month, the Consultant shall submit to the Water Bureau's Accounts Payable Department an Invoice for work performed by the Consultant during the preceding month. The Invoice shall contain the following:

The Consultant shall enter all pertinent information below on their invoice in order for the City to review and authorize processing of invoices for payment.

- A. The correct name of the City's Project Manager (Michelle Cheek)
- B. Invoice date
- C. Date range during which the Services being invoiced for were provided
- D. Invoice number that ends in a "##", which represents the correct invoice sequence of issue. The last invoice submitted on the Project must be clearly labeled "Final Invoice"
- E. The correct Contract number
- F. Original Contract total, not to exceed amount broken out by: Phase(s), Task, Subtask, and Work Order (if applicable)
- G. Statement of changes to the original total, not to exceed amount by amendment(s) and broken out in the same way as in item F of this section, showing the revised Contract amounts
- H. Paid to date amounts showing the amounts submitted for prior to the current invoice (regardless of payment status) and broken out the same way as in item F of this section
- I. Amounts being invoiced for in the current invoice and broken out the same way as in item F of this section, with a roll up of a "Total Amount Billed for This Invoice" line item amount
- J. Balances Remaining after receipt of payment for the current invoice broken out the same way as in item F of this section
- K. Consultant shall describe all Services performed with particularity and by whom it was performed (Consultants individual or subconsultant, labor category, direct labor rate, hours worked during the period) and shall itemize and explain all expenses for which reimbursement is claimed. Reimbursable Expenses shall be broken out into to line item categories, 1) Travel Expenses and 2) General Reimbursable Expenses. Invoices for Basic Services under a specific Phase and Task shall be for completed Basic Services only and shall indicate the percentage of the total Basic Services for that Phase and Task that the amount invoiced represents.



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- L. The Consultant shall also attach photocopies of claimed reimbursable expenses, if applicable
- M. The Consultant shall stamp and approve all subconsultant invoices and note on the subconsultant invoice what they are approving as "billable" under the contract
- N. The billing from the prime should clearly roll up labor and reimbursable costs for the prime and subconsultants – matching the subconsultant invoices

Prior to initial billing, the Consultant shall develop a billing format for approval by the City. Submission of the draft billing document shall be emailed to the PWB Contract Administration Branch at: [Andrew.Urdahl@portlandoregon.gov](mailto:Andrew.Urdahl@portlandoregon.gov) and to the City's Project Manager at [michelle.cheek@portlandoregon.gov](mailto:michelle.cheek@portlandoregon.gov) for final review and approval.

**The Invoice, monthly MUR reports and detailed monthly Project progress report shall be e-mailed to:**  
[wbaps@portlandoregon.gov](mailto:wbaps@portlandoregon.gov)

**A copy of the monthly MUR report shall also be emailed to the City Procurement Compliance Specialist at:**  
[Brenda.Scott@portlandoregon.gov](mailto:Brenda.Scott@portlandoregon.gov)

The City shall make payments to which no dispute exists within 30 days of receipt of the invoice and only after receipt and approval of Consultant's detailed monthly invoice, and all reports, designs, certificates, and documents covered by the invoice have been submitted. Payment of any bill, however, does not preclude the City from later determining that an error in payment was made and from withholding the disputed sum from the next progress payment until the dispute is resolved.

Consultant agrees that the City has no direct or indirect contractual obligation or other legal duty whatsoever to pay the Sub-consultants and other subcontractors of Consultant or otherwise ensure that Consultant makes full and timely payment to those Sub-consultants and subcontractors for services performed on the Project. The Consultant shall make full payment to its subconsultants within 10 business days following receipt of any payment made by the City to Consultant.

### **Automated Clearing House Payments**

It is the City's policy to pay its Consultant invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, Consultants shall execute the City's standard ACH Vendor Payment Authorization Agreement. Upon verification of the data provided, the Payment Authorization Agreement shall authorize the City to deposit payment for services rendered directly into Consultant accounts with financial institutions. All payments shall be in United States currency.



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## WORKERS' COMPENSATION INSURANCE STATEMENT

### IF YOUR FIRM HAS CURRENT WORKERS' COMPENSATION INSURANCE, CONSULTANT MUST SIGN HERE:

I, undersigned, am authorized to act on behalf of entity designated below, and I hereby certify that this entity has current Workers' Compensation Insurance.

Consultant Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Entity: \_\_\_\_\_

### IF YOUR FIRM DOES NOT HAVE CURRENT WORKERS' COMPENSATION INSURANCE, CONSULTANT MUST COMPLETE THE FOLLOWING INDEPENDENT CONSULTANT CERTIFICATION STATEMENT:

As an independent Consultant, I certify that I meet the following standards:

1. The individual or business entity providing labor or services is registered under ORS Chapter 701, if the individual or business entity provides labor or services for which such registration is required;
2. Federal and state income tax returns in the name of the business or a business Schedule C or form Schedule F as part of the personal income tax return were filed for the previous year if the individual or business entity performed labor or services as an independent Consultant in the previous year; and
3. The individual or business entity represents to the public that the labor or services are to be provided by an independently established business. Except when an individual or business entity files a Schedule F as part of the personal income tax returns and the individual or business entity performs farm labor or services that are reportable on Schedule C, an individual or business entity is considered to be engaged in an independently established business when four or more of the following circumstances exist. Consultant: check four or more of the following:
  - \_\_\_\_\_ A. The labor or services are primarily carried out at a location that is separate from the residence of an individual who performs the labor or services, or are primarily carried out in a specific portion of the residence, which portion is set aside as the location of the business;
  - \_\_\_\_\_ B. Commercial advertising or business cards as is customary in operating similar businesses are purchased for the business, or the individual or business entity has a trade association membership;
  - \_\_\_\_\_ C. Telephone listing and service are used for the business that is separate from the personal residence listing and service used by an individual who performs the labor or services;
  - \_\_\_\_\_ D. Labor or services are performed only pursuant to written Contracts;
  - \_\_\_\_\_ E. Labor or services are performed for two or more different persons within a period of one year; or
  - \_\_\_\_\_ F. The individual or business entity assumes financial responsibility for defective workmanship or for service not provided as evidenced by the ownership of performance bonds, warranties, errors and omission insurance or liability insurance relating to the labor or services to be provided.

\_\_\_\_\_  
Consultant Signature

\_\_\_\_\_  
Date

### FOR CITY USE ONLY

**PROJECT MANAGER-COMplete ONLY IF CONSULTANT DOES NOT HAVE WORKER'S COMPENSATION INSURANCE**  
ORS 670.600 Independent Consultant standards. As used in various provisions of ORS Chapters 316, 656, 657, and 701, an individual or business entity that performs labor or services for remuneration shall be considered to perform the labor or services as an "independent consultant" if the standards of this section are met. The Contracted work meets the following standards:

1. The individual or business entity providing the labor or services is free from direction and control over the means and manner of providing the labor or services, subject only to the right of the person for whom the labor or services are provided to specify the desired results;
2. The individual or business entity providing labor or services is responsible for obtaining all assumed business registrations or professional occupation licenses required by state law or local government ordinances for the individual or business entity to conduct the business;
3. The individual or business entity providing labor or services furnishes the tools or equipment necessary for performance of the Contracted labor or services;
4. The individual or business entity providing labor or services has the authority to hire and fire employees to perform the labor or services;
5. Payment for the labor or services is made upon completion of the performance of specific portions of the project or is made on the basis of an annual or periodic retainer.

AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES

\_\_\_\_\_  
City Project Manager Signature

\_\_\_\_\_  
Date



**AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES****CONSULTANT SIGNATURE:**

This Contract may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same Agreement.

The parties agree the City and Consultant may conduct this transaction, including any Contract amendments, by electronic means, including the use of electronic signatures.

I, the undersigned, agree to perform work outlined in this Contract in accordance to the STANDARD CONTRACT PROVISIONS, the terms and conditions, made part of this Contract by reference, and the STATEMENT OF THE WORK made part of this Contract by reference; hereby certify under penalty of perjury that I/my business am not/is not in violation of any Oregon tax laws; hereby certify that my business is certified as an Equal Employment Opportunity Affirmative Action Employer and is in compliance with the Equal Benefits Program as prescribed by Chapter 3.100 of Code of the City of Portland; and hereby certify I am an independent consultant as defined in ORS 670.600.

**Confluence Engineering Group, LLC**

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

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

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

AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES

CONTRACT NUMBER: 30007521

CONTRACT TITLE: Corrosion Control Treatment Pilot

CITY OF PORTLAND SIGNATURES:

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Bureau Director

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Chief Procurement Officer

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Elected Official

Approved:  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Office of City Auditor

Approved as to Form:  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Office of City Attorney