

CITY OF PORTLAND  
AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES

CONTRACT NO.

SHORT TITLE OF WORK PROJECT:  
Design Services for the Washington Park Reservoirs Improvements Project

This contract is between the City of Portland ("City," or "Bureau") and AECOM, hereafter called Contractor. The City's Project Manager for this contract is Jerry Moore.

**Effective Date and Duration**

This contract shall become effective on January 2013. This contract shall expire, unless otherwise terminated or extended, on June 30, 2021.

**Consideration**

- (a) City agrees to pay Contractor a sum not to exceed \$15,200,000 for accomplishment of the work.
- (b) Interim payments shall be made to Contractor according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

=====

**CONTRACTOR DATA AND CERTIFICATION**

Name (please print): \_\_\_\_\_

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

Employer Identification Number (EIN) \_\_\_\_\_  
[INDEPENDENT CONTRACTORS: DO NOT PROVIDE SOCIAL SECURITY NUMBER (SSN) – LEAVE BLANK IF NO EIN]

City of Portland Business License # \_\_\_\_\_

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:** Contractor 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 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 Contractor 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, Contractor shall pay the City all damages, costs and sums incurred by the City as a result of the breach.
- (c) If the Contractor justifiably terminates the contract pursuant to subsection 4(b), the Contractor'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 Contractor shall be paid as if the Contract was terminated under Section 4(a).
- (e) In the event of early termination the Contractor's work product before the date of termination becomes property of the City.

### 6. Assignment

Contractor 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 subcontractor, the Contractor shall remain obligated for full performance hereunder, and the City shall incur no obligation other than its obligations to the Contractor hereunder. The Contractor agrees that if subcontractors are employed in the performance of this Agreement, the Contractor and its subcontractors are subject to the requirements and sanctions of ORS Chapter 656, Workers' Compensation.

### 7. Compliance with Applicable Law

Contractor shall comply with all applicable federal, state and local laws and regulations. Contractor agrees it currently is in compliance with all tax laws.

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

Contractor 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 Contractor, its Subcontractors, suppliers, employees or agents in the performance of its services. Nothing in this paragraph requires the Contractor 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

During the term of this contract, Contractor shall maintain in force at its own expense, the insurance noted below:

(a) Workers' Compensation insurance in compliance with ORS 656.017, which requires subject employers to provide Oregon workers' compensation coverage for all their subject workers (contractors with one or more employees, unless exempt under ORS 656.027).

(b) Commercial General Liability insurance with a combined single limit of not less than \$1,000,000 per occurrence for Bodily Injury and Property Damage. It shall include contractual liability coverage for the indemnity provided under this contract, and shall provide that City of Portland, and its agents, officers, and employees are Additional Insureds, but only with respect to the Contractor's services to be provided under this Contract:

Required by operating Bureau \_\_\_

Waived by operating Bureau Director or designee \_\_\_

(c) Automobile Liability insurance with a combined single limit of not less than \$1,000,000 per occurrence for Bodily Injury and Property Damage, including coverage for owned, hired, or non-owned vehicles, as applicable:

Required by operating Bureau \_\_\_

Waived by operating Bureau Director or designee \_\_\_

(d) Professional Liability insurance with a combined single limit of not less than \$1,000,000 per claim, incident, or occurrence. If insurance is provided on a "claims made" basis the Contractor shall acquire "tail" coverage or continue the same coverage for three years after completion of the contract, provided coverage is available and economically feasible. If not feasible, contractor shall notify City immediately.

Required by operating Bureau \_\_\_

Waived by operating Bureau Director or designee \_\_\_

(e) There shall be no cancellation, material change, reduction of limits, or intent not to renew any required insurance without 30 days written notice from the Contractor or its insurer(s) to the City.

(f) Certificates of insurance. The Contractor shall furnish acceptable insurance certificates to the City showing the required insurance coverage. The certificate will specify all of the parties who are Additional Insureds. Certificates and insurers are subject to City approval. Complete policy copies shall be provided to the City upon request. The Contractor shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

### 10. Ownership of Work Product

All work product produced by the Contractor 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 Contractor 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

Contractor 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. Contractor shall obtain such interests and execute all documents necessary to fully vest such rights in the City. Contractor 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 Contractor is an architect, the Work Product is the property of the Contractor-Architect, and by execution of this contract, the Contractor-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 Contractor are and will remain the exclusive property of Contractor.

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

**12. Equal Benefits**

Contractor 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 Contractor 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 License**

The Contractor shall obtain a City of Portland business license as required by PCC 7.02 prior to beginning work under this Contract.

**20. Prohibited Conduct**

The Contractor 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 Subcontractors**

The Contractor shall timely pay all subcontractors and suppliers providing services or goods for this Contract.

**22. Access to Records**

The Contractor shall maintain all records relating to this Contract for three (3) years after final payment. The City may examine, audit and copy the Contractor'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 agreement at any time in the course of the agreement 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 Contractor exceed the amount to which the Contractor was entitled, the Contractor shall repay the amount of the excess to the City.

#### 24. Electronic Signatures

The City and Contractor 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 Contractor 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 Contractor shall provide monthly progress reports to the Project Manager as described in the Statement of the Work and Payment Schedule.

#### 28. Contractor's Personnel: /\_\_\_/ Applicable /\_\_\_/ Not Applicable

If applicable, the Contractor 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. Subcontractors

The Contractor shall use the subcontractors identified in its proposals. The Contractor shall not change subcontractor assignments without the prior written consent of the Chief Procurement Officer. Failure to use the identified M/W/ESB subcontractors without prior written consent is a material breach of contract.

#### 30. Third Party Beneficiaries

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

---

### STATEMENT OF THE WORK AND PAYMENT SCHEDULE

**NOTE** - For contracts pertaining to A/E services for a new construction or major retrofit project intended for LEED™ certification:

- If the A/E firm is designated as being responsible for the registration, documentation, and submittal for LEED™ certification (as opposed to having an independent LEED™ consultant), then encourage that the successful A/E firm become a member of the U.S. Green Building Council (USGBC) to facilitate this responsibility. Being a member is not a requirement for submittal.
- Tie the final payment to the successful submittal of the LEED™ application to the Green Building Certification Institute (GBCI).
- Consider including a requirement in the contract that the firm cannot substitute members of the A/E team working with the City without notification to, and written permission from, the City.
- With regards to any and LEED™ credit compliance documentation provided to the City or the Green Building Certification Institute (GBCI) for this project (but not including any plans, drawings, schema and/or designs), the Contractor and Subcontractors agree to grant the City a limited, irrevocable, perpetual, non-exclusive, transferable, royalty-free, worldwide, and sublicensable right to use, reproduce, prepare derivative works from, distribute, display and publish such compliance documentation in any and all media and formats known now or in the future. This right is granted at the time such information is submitted to the City and/or uploaded or entered within LEED™ Online and shall be retained by the City regardless of whether the Project is submitted for LEED™ certification review. Such rights and licenses shall survive the cancellation of registration for the project, as well as a denial or revocation of LEED™ Certification for the project by GBCI, or abandonment of LEED™ Certification by the City. The City will use any such documentation for the purpose of applying for LEED™ certification and for educational purposes designed to promote the green building features and benefits of the project.

**DELETE ABOVE INSTRUCTIONS AND ANY INSTRUCTIONS BELOW IN BRACKETS**

**SCOPE OF WORK**

**CONTRACTOR PERSONNEL** *[Use these provisions as applicable]*

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

NAME	ROLE ON PROJECT

**SUBCONTRACTORS** *[If none, indicate "NONE"]*

The Contractor shall assign the following subcontractors to perform work in the capacities designated:

NAME	ROLE ON PROJECT

The City will enforce all diversity in workforce and Minority, Women and Emerging Small Business (M/W/ESB) subcontracting commitments submitted by the Contractor in its Proposal. For contracts valued \$100,000 or more, the Contractor shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this contract by reference, reporting ALL subcontractors employed in the performance of this agreement. An electronic copy of the MUR may be obtained at: <http://www.portlandonline.com/shared/cfm/image.cfm?id=119851>.

**COMPENSATION** *[Modify these provisions to meet your specific needs]*

The maximum that the Contractor can be paid on this contract is \$ \_\_\_\_\_ (hereafter the "not to exceed" amount). 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 Contractor may be less than that amount.

The Contractor is entitled to receive progress payments for its work pursuant to the Contract as provided in more detail below. The City will pay Contractor based on these invoices for acceptable work performed and approved until the "not to exceed" amount is reached. Thereafter, Contractor 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 Contractor 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 Contractor's compensation will be based on the Contractor's bills previously submitted for acceptable work performed and approved.

**PAYMENT TERMS: Net 30 Days**

**Hourly Rates**

The billing rates shall not exceed those set forth below:

[List those rates here.]

**Standard Reimbursable Costs**

The following costs will be reimbursed without mark-up:

- \*\*
- \*\*

**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 %.

**Adjustment of Labor Rates Due to Inflation**

Annual adjustment of hourly rates will be considered upon written request from the Consultant. Approval of a request for rate increases is solely within the City's discretion and under no circumstances is the City obligated to approve such a request.

Rate increases are subject to the following limitations:

- No increases will be granted before the one-year anniversary of the contract;
- No more than one increase shall be granted per contract year;
- Rate increases may not exceed the then-current average inflation rate for the Portland Metropolitan Area (as determined from the US Department of Labor statistics);
- Rate increases shall not be retroactive.

Other than the impact of inflation as described above, hourly rates may not be increased.

**Progress Payments**

On or before the 15<sup>th</sup> of each month, the Contractor shall submit to the City's Project Manager an invoice for work performed by the Contractor during the preceding month. The invoice shall contain the City's Contract Number and set out all items for payment including, but not limited to: the name of the individual, labor category, direct labor rate, hours worked during the period, and tasks performed. The Contractor shall also attach photocopies of claimed reimbursable expenses, if applicable. The Project Coordinator shall stamp and approve all subconsultant invoices and note on the subconsultant invoice what they are approving as "billable" under the contract. 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 Contractor shall develop a billing format for approval by the City.

The City shall pay all amounts to which no dispute exists within 30 days of receipt of the invoice. 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.

The Contractor shall make full payment to its subcontractors within 10 business days following receipt of any payment made by the City to Contractor.

INDEPENDENT CONTRACTOR CERTIFICATION STATEMENT

SECTION A

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

Contractor Signature \_\_\_\_\_ Date \_\_\_\_\_ Entity \_\_\_\_\_

If entity does not have Workers' Compensation Insurance, City Project Manager and Contractor complete the remainder of this form.

SECTION B

ORS 670.600 Independent contractor 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 contractor" 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.

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

SECTION C

Independent contractor certifies he/she meets 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 contractor 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. Contractor 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.

Contractor Signature \_\_\_\_\_ Date \_\_\_\_\_

**CONTRACTOR 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 Contractor 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 contractor as defined in ORS 670.600.

**Contractor Name Here**

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

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

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

Contract No. \_\_\_\_\_

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

**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

## **Design Services for the Washington Park Reservoirs (WPR) Improvements Project Scope of Work (Draft)**

### **Introduction**

The Portland Water Bureau (PWB) is contracting with AECOM (Contractor) for the design aspects of the Washington Park Reservoirs (WPR) Improvements Project. PWB is engaging the Contractor for the basic purpose of designing and developing plans and specifications for a Construction Manager/General Contractor (CM/GC) contract that involves constructing buried finished water storage generally within the existing footprint of the existing Reservoir No. 3. This will involve construction of a new buried reservoir and shifting the new reservoir structure east to avoid construction in the toe of the existing landslide. A compressible inclusion will be placed between the landslide mass and the proposed storage facilities to isolate the new reservoir structure from the active slide. The new reservoir will be a single 15 MG irregular-shaped polygon, conventionally-reinforced concrete structure. Support structures (such as stormwater basin, reservoir drainage and overflow basin, and dechlorination facilities, etc.) for the new reservoir will be constructed at the existing Reservoir No. 4 site. The goal is to maintain and protect the existing historic features where practical.

The reservoir will include a center divider wall to create two storage areas in the structure. The project will include piping upgrades on the site, separate inlet and outlet piping to the reservoir, and a mixing system to promote water circulation in the reservoir. Foundation and drainage improvements will be required under the reservoir due to existing soil conditions under the structure footprint.

PWB is engaging the Contractor for permitting, design and assistance during construction services. PWB will execute a separate Professional, Technical and Expert (PTE) services contract to hire a firm to provide the geotechnical engineering services for the project that will be an integral part of PWB's Project Team. The Contractor's team will work with and become a part of PWB's Project Team which consists of: PWB's Project Manager (PM), PWB Project Team Leads, other PWB personnel, and PWB's Contractors. This team will hereafter be called "the Project Design Team" or "Design Team."

Documents provided by the PWB in the course of the project might allow a person to identify those areas of structural or operational vulnerability that would permit unlawful disruption to, or interference with, the provision of water services and for other reasons may be exempted under the Public Records Law, may be designated as "Confidential" or "Not for Public Disclosure" and these designations shall be honored by all contractors and subcontractors working on this project. The Contractor has signed the Confidentiality Statement attached as Exhibit C. The Contractor shall obtain this signed Confidentiality Form from each of its subconsultants prior to the commencement of their work.

## Work Requirements

The Contractor shall be responsible for work necessary to develop and complete detailed plans and specifications, and to provide public involvement, land use review, historical review, and permitting required to construction of the project. The work products shall be in a PWB accepted format that will be used for the construction of the Washington Park Reservoir Improvements Project and all features as listed in this Scope.

PWB shall hire a consultant to provide the geotechnical engineering services for the project under a separate contract. The Contractor shall work with the PWB to integrate the geotechnical engineering consultant into the Project Design Team and to implement the geotechnical design and recommendations developed by PWB's geotechnical engineering consultant.

Clearance from the State Historic Preservation Office (SHPO) is required for alteration or demolition of structures that are listed on the National Register of Historic Structures. Negotiation and coordination with SHPO and the City's Historic Landmarks Commission will be necessary in order to reach an approvable design.

This work will result in at least three concurrent land use reviews. A Type IV Demolition Review will be required to demolish Reservoir No. 3; a Type III Historic Design Review will be required to reconstruct Reservoir No. 3 and make alterations to Reservoir No. 4; and a Type III Conditional Use Review will be required in order to reconstruct Reservoir No. 3 and convert Reservoir No. 4 to a new use. The site includes "conservation" and "scenic resources" overlay zones. It may be necessary to add "modifications" to the Historic Design Review.

If the construction area extends more than 25 feet into nearby environmental overlay zones, a Type II or III Environmental Review will be required.

PWB has a draft reservoir historic structures report (RHSR) for the WPR facilities that will be made available to the Contractor for their use during design.

The Contractor shall proceed with the design based on the Basis of Design Report (BDR) for Washington Park Reservoirs Improvements, Dated May 2012; the Preliminary Geotechnical Evaluation for Washington Park Reservoir Improvements, Portland, Oregon, Dated: July 2011; the Geotechnical Data Report for Washington Park Reservoir Improvements, Portland, Oregon, Dated December 2010; and Washington Park (WP) Adjustments BDR (currently under development).

The public features, reservoir support facilities and piping discussed in the BDR's are conceptual. The Contractor shall fully develop these elements providing complete detailed plans and specifications and all public involvement, land use review, historical review and permitting required for construction.

The WP BDR, Preliminary Geotechnical Evaluation, Geotechnical Data Report and the WP Adjustments BDR for the Washington Park Reservoir Improvements will be made available to the Contractor, subject to the Confidentiality Statement referenced above. The Contractor may request other documents from the PWB as needed for design, subject to the confidentiality policy of the Agreement.

The work is to be constructed at Washington Park, located at 2521 & 2549 SW Murray Avenue, Portland, Oregon.

### A. Project Features

The Contractor shall complete the design of a 15 MG Buried, Conventional, Reinforced, Irregular Shaped, Concrete Reservoir consisting of two 7.5 MG cells. The Contractor's design shall include the following features:

- 1) Site civil work and staging.
- 2) Mechanical, Electrical, Instrumentation and Control:
  - A. Actuated isolation valves;
  - B. Design and modeling for water circulation to maintain water quality and prevent dead zones in the reservoir;
  - C. Design for reservoir washdown facilities;
  - D. Full electrical and instrumentation site survey and incorporation of existing system into the design of new facilities to include sequencing, demolition, and incorporation of existing branch circuits and devices to remain;
  - F. Motor Control Center (MCC) and electrical distribution required for new facilities and replacement of existing facilities as may be required of Land Use, Historical review and permitting;
  - G. Ventilation system; and,
  - H. Instrumentation as required such as flow meters, level indicators, high water and overflow alarms, entry alarms, water quality instrumentation. All devices are required to be connected and transmit data over PWB's Supervisory Control and Data Acquisition (SCADA) system per PWB standards.
- 3) Piping and Reservoir Drainage:
  - A. Inlet and outlet piping;
  - B. Header to connect existing Reservoir No. 3 supply mains;
  - C. Reservoir drain piping;
  - D. Dechlorination facility;
  - E. Sediment removal facility for reservoir cleaning;
  - F. Underdrain system and drainage for flow from drainage slope; and,
  - G. Overflow, drainage, and water quality/circulation piping from any water features incorporated into the public facilities.
- 4) Emergency Reservoir Overflow System:
  - A. New overflow piping;
  - B. Evaluation of overflow requirements and downstream impacts; and,
  - C. Overflow facility.
- 5) Road Improvements:
  - A. Permanent and temporary gravel access roads on site; and,
  - B. Reconstruction of existing paved access roads.
- 6) Erosion Control:
  - A. Provide temporary and permanent erosion control.
- 7) Site and Stormwater Drainage:
  - A. Slope drainage and stability including support structures;
  - B. Stormwater best management practices; and,
  - C. Stormwater facility.
- 8) Public Facilities:
  - A. Incorporate historic and cultural resources mitigation, re-use, and re-development;

- B. Through a public process and incorporating constraints of historical review and permitting, design surface features to enhance the public experience and use of the facilities;
  - C. Restore surfaces – blend with existing contours; and,
  - D. Grade surfaces to support landscaping and stormwater management requirements.
- 9) Landscaping:
- A. Landscape design and mitigation for construction impacts to meet land use requirements;
  - B. Non-native vegetation removal and redevelopment with native species; and,
  - C. Resource Assessment.
- 10) Site Security:
- A. Maintain or reconstruct security fencing.
  - B. Door and hatch alarms.
  - C. Incorporate existing security cameras into design including evaluation of replacement camera poles that are architecturally compatible with the historic features.
- 11) Slide Mitigation: Incorporate geotechnical design services into design.
- 12) Construction Delivery Method: Project to be CM/GC delivered.

## Work Tasks

The design effort will be organized into the following Tasks, which are intended to accomplish design of the above-listed features, detailed plans and specifications, and to provide public involvement, land use review, historical review, permitting, CM/GC coordination, and construction support required to construction of the project.

### B. Project Management

Contractor shall perform the following Project Management tasks:

- 1) Development of Project Design Management Plan:
- A. Develop a Project Management Work Plan that includes coordination with PWB's geotechnical engineering consultant, coordination with PWB's CM/GC, quality control plan, meetings with PWB and other stakeholders, specific tasks, a description of phases and deliverables, schedule, and an explanation of how the Design Team will interact;
  - B. Develop a Project Design Team that incorporates technical disciplines, capabilities, and experience commensurate with the project feature design needs, and PWB's geotechnical engineering consultant for all geotechnical design services require for the project;
  - C. Prepare a project schedule with proposed times for deliverables, lead time needed for permits and expectations for PWB review;
  - D. Supervise the work of the Project Design Team, including coordination and partnering with the PWB's geotechnical consultant;
  - E. Monitor project scope, schedule, costs, and projected work cash flows with monthly updates to the PWB Program and Project Manager;
  - F. Participate in a project meeting and site/area tour with PWB project staff and others to review all phases of the work;
  - G. Meet with the PWB project manager to review the work plan and make any revisions;
  - H. Work with the PWB Project Manager to coordinate design activities with PWB and other City personnel;
  - I. Manage design quality control activities in accordance with the Design Quality Management Plan (DQMP);

- J. Coordination with the CM/GC responsible for construction, including review of the Guaranteed Maximum Price (GMP) for construction.
  - K. Provide a lead role in all required neighborhood meetings and develop all materials and displays as required; and,
  - L. Develop a Public Education and Involvement Plan including Public Advisory Committee (PAC) to develop the design of the public facilities and surface features.
- 2) Develop, implement, and monitor project design schedule and budget.
  - 3) Participate in weekly meetings with PWB Project Manager on project status.
  - 4) Participate in bi-weekly meetings with PWB Project Manager and stakeholders on permits and land use application.
  - 5) Prepare of monthly project summary reports for distribution to PWB;
  - 6) Develop a Design Quality Management Plan (DQMP).
  - 7) Attend additional meetings as required (assume a minimum of 40 meetings).
  - 8) Develop a Design and Construction Cost Control Plan.
  - 9) Develop a Project wide Risk Management Plan and Register, including an explanation of how Risk and Conflict Management will be addressed and documented.
  - 10) Provide Monthly Payment Requests.
  - 11) Coordinate with multiple stakeholders, City Bureaus, and Design Team.
  - 12) Provide detailed project status reports.
  - 13) Perform Risk and Conflict Management.

**C. Geotechnical Engineering** - Contractor shall be responsible for the following:

- 1) Incorporate PWB's geotechnical engineering consultant into the design team.
- 2) Meet with key members of the design team and PWB representatives to review the Geotechnical Data Report and the Preliminary Geotechnical Evaluation report. Review facility layout and provide recommendations for the reservoir and location of other facilities.
- 3) Develop additional geotechnical field work and investigations to be performed by the geotechnical engineering consultant as required for the design of the project including:
  - A. Evaluate surface and subsurface soil conditions for the reservoir, piping, outfall, slope stability and retaining structures for bearing capacity, settlement, type of foundations required, and any construction requirements.
  - B. Evaluate groundwater levels and possible drainage issues related to the existing drainage systems and new drainage systems plus any mitigation measures required.
  - C. Provide and incorporate site specific seismic evaluation with seismic coefficients and design response spectra on the reservoir, landslide, piping and appurtenances, and outfall.
- 4) Provide geotechnical review of all aspects and phases of the project including geotechnical engineering consultant review of all structures.

## Exhibit A

**D. Design** - Contractor shall complete the Project design, which includes the components described in (1) through (20) below.

**Design Milestones:** The design process will include the following milestones. Each milestone will include submittals to the PWB as appropriate to the level of design completion. Design deliverables are summarized in the Workflow Diagram for each stage. Further clarification is provided below:

The first two milestones are intended to develop design data and narrow down alternatives in a timely manner so that the main design effort can proceed as soon as possible. These milestones will be subject to informal or abbreviated PWB review. After the Preliminary Design and Alternative Analysis phase a design workshop will be held with PWB.

**Design Data Gathering** – This phase will collect, assess and summarize the design data available from PWB and existing documentation. Contractor shall prepare a design memorandum of the findings and design data to be used. The Design Memo will include:

- Public Involvement** – Public Education, Involvement and Outreach Plan Outline;
- Permitting** – Permitting Matrix and Permitting Plan;
- Visible Features**-Historical inventory and assessment, tree inventory, site analysis, ADA review, biological and resource assessments, building uses, needs assessment;
- Civil** - Site analysis, site survey, subsurface utility locates, stormwater analysis;
- Structural** - Geotechnical coordination, seismic design criteria, geotech exploration plan;
- Piping and Mechanical** – Operational assessment, preliminary piping layout, design criteria, preliminary hydraulics; and,
- Electrical** – Electrical and instrumentation site survey, design criteria, security assessment.

**Preliminary Design and Alternative Analysis** – this phase will review opportunities and constraints with existing features, and with the Basis of Design documents for new facilities. Contractor anticipates that the major features of project configuration will be fixed with the BDR's, but the design details and some features will be subject to alternatives analysis. Contractor shall prepare a design memorandum. The Design Memo will include:

- Public Involvement** – Public Education, Involvement and Outreach Plan, stakeholder interviews;
- Permitting** – Permitting Matrix and Permitting Plan, updated;
- Visible Features-Alternatives** - Historical preservation, salvage and demolition plan, tree protection plan, site layouts, landscape concept plan, water features concept plan, architectural program;
- Civil** – Detailed site map, utilities, stormwater detention basin and site access concepts
- Structural** - Reservoir foundation alternatives, reservoir layout, seismic assessment, access, slide stabilization;
- Piping and Mechanical** – water quality, piping layout, circulation concepts, reservoir ventilation, O&M needs, overflow assessment; and,
- Electrical** – Electrical one-line, electrical features, site lighting preliminary instrumentation list, security features.

Each of the following milestones will be subject to formal PWB review and Independent Technical Review (ITR):

**30% Design** – will include the deliverables identified below under E. Design Quality Management.

## Exhibit A

**Land Use and Permit Package Drawings** – this package will develop drawings that are complete enough for the land use review (90% for some components). A design workshop will be held with PWB at the 60% stage and then the design of these elements will be developed complete enough for the land use permitting package.

**60% Design** – will include the deliverables identified below under E. Design Quality Management.

**90% Design** – will include the deliverables identified below under E. Design Quality Management.

**95% Design** – will include the deliverables identified below under E. Design Quality Management.

**Final Design** – will include the deliverables identified below under E. Design Quality Management.

**Design Elements:**

- 1) Site Analysis
  - A. Opportunities and Constraints - Review and evaluate the existing and future conditions of the site including site grades, piping, reservoir alignments, and exterior features as presented in the BDR's. The BDR's will be used as a guideline during development of Project and is not all inclusive; and,
  - B. Americans with Disabilities Act (ADA) compliance - Review and evaluate existing and future conditions of the site for compliance with ADA.
- 2) Foundation
  - A. Design foundations for the reservoir and other structures based on seismic considerations, the geotechnical aspects of the site, the requirements of the reservoir and the building requirements. Provide and incorporate site specific seismic evaluation with seismic coefficients and design response spectra on the reservoir, piping and appurtenances.
- 3) Structural Design
  - A. Prepare structural design of the proposed reservoir, pipe, appurtenances, Stormwater and overflow structures;
  - B. Recommend seismic criteria and incorporate seismic recommendations into the design; and,
  - C. Obtain PWB approval and acceptance of proposed recommendations prior to proceeding with the design.
- 4) Reservoir Circulation
  - A. Evaluate circulation of water within each reservoir cell;
  - B. Optimize water movement and mixing, and reduce residence time; and,
  - C. Incorporate design criteria into applicable plans and specifications.
- 5) Coatings
  - A. Design coating and lining systems for internal and external use on the Reservoir and piping that minimizes corrosion and leakage.
- 6) Corrosion Design
  - A. Design corrosion protection for the reservoir, piping and appurtenances into the project plans and specifications with input from PWB designated personnel.
- 7) Mechanical Components

- A. Design actuated/isolation valves, pumps, Motor Control Cabinet's (MCC) and electrical service, electrical backup generator, mechanical room, and ventilation system.
- 8) Piping
- A. Design the inlet and outlet piping; conduits and emergency overflow piping; drainage, and storm sewer; and all proposed underground utilities needed for the water improvements. Transient analysis of upstream piping (this is an optional task and shall only be performed after receiving written authorization from PWB PM)
  - B. Prepare specifications, plan and profile drawings.
- 9) Drainage
- A. Design all necessary drainage facilities for the area including surface drainage and water from the reservoir overflow and drains with all detention/infiltration, dechlorination, and sediment removal processes and structures as required by applicable law and regulations;
  - B. Use Bureau of Environmental Services (BES) best management practices for stormwater designs (Erosion and Sediment Control Manual and the Stormwater Management Manual) during the design phase and may also be during the construction phase of the project;
  - C. Evaluate emergency overflow requirements for the reservoir and options for complying with Oregon Health Authority (OHA) Drinking Water Program requirements; and,
  - D. Design emergency overflow facility and piping. Provide an erosion control plan for the site that meets the City code, BES, and Department of Environmental Quality (DEQ) requirements for erosion control during construction.
- 10) Electrical, Instrumentation and Control
- A. Conduct a full electrical and instrumentation site survey and incorporate the existing system into the design of new facilities. Include plans and specifications for sequencing, demolition, and incorporation of existing branch circuits and devices to remain;
  - B. Design an electrical, instrument and control system to provide power, lighting, telemetry, security, and emergency power generation as required for a fully operational facility. The design shall include, but not be limited to, electrical service and distribution; control, telemetry, and actuation/operation for valves, pumps/motors, backup power; system status (annunciation), reservoir level and intrusion sensors;
  - C. Provide a written instrumentation and process narrative (control strategy) as part of Operations & Maintenance (O&M) manual content;
  - D. Provide complete Process and Instrumentation Diagram (P&ID) drawings based on the control strategy, with all set points for all instrumentation devices and equipment;
  - E. Provide equipment list with a unique ID for each piece of equipment;
  - F. Provide a complete electrical circuit and raceway schedule;
  - G. Provide an input output list of all analog and digital circuits. Provide, or incorporate as a condition of the contract documents, instrumentation and controls interconnection drawing (point to point);
  - H. Provide control schematic of all relay logic for all hard wire control circuits, and Non-Programmable Logic Controller (PLC) based controls;
  - I. Provide complete single line drawing of the electrical power system with a short circuit coordination study, and the device settings needed for the over current devices of the electrical system;
  - J. All control systems must comply with and be incorporated into PWB's existing SCADA; and,
  - K. Identify and address needs for PWB staff training associated with operations and maintenance activities, and include training in the specifications.
- 11) Drafting
- A. Meet with PWB's Project Manager to review and clarify format and standards for work product;

## Exhibit A

- B. Provide all drawings, plans, and details in MicroStation V8XM format and in accordance with the most recent version of the PWB's CAD standards and workspace environment. Drafting guidelines are available online at: <http://www.portlandonline.com/WATER/index.cfm?a=178395&c=29861>; and,
- C. Electronic submittals of drawings, plans, and details will include all resource and reference files used to create them.
- 12) Operation & Maintenance Manuals
- A. Prepare preliminary requirements, procedures and documentation to be included in the O&M manual and provide specifications for those requirements; and,
- B. Prepare a complete operating manual with schematics in a format acceptable to PWB with the assistance of the CM/GC Contractor including reservoir and equipment maintenance procedures and schedule, maintenance including trouble shooting data and overhaul procedures.
- 13) Road Improvements
- A. Design access roads for construction and long-term maintenance of the reservoir site; and,
- B. Design restoration of existing access roads.
- 14) Restoration and Landscape Design
- A. Design landscaping based on the conditions of the land use and permit requirements.
- B. Provide recommendations in limiting and mitigating construction and visual impacts to natural resources and incorporate recommendations into the design.
- C. Provide non-native vegetation removal and redevelopment with native species in the landscape design.
- D. Determine grading required in support the landscape design.
- 15) Coordination of Work
- A. Identify and pothole all utilities in pipeline alignments and resolve conflicts by designing new alignments for existing utilities or adjust alignment of new utilities;
- B. Develop a site piping layout. Provide coordinates for all underground utility work including electrical underground conduits and existing utilities in proximity to the work to provide for proper space allocations; and,
- C. Develop space planning zones for the mechanical, electrical, pipe, and structural work to ensure adequate working clearances as required by current codes and for operations and maintenance requirements.
- 16) Permitting
- A. Provide all information, submissions, corrections and additions necessary to obtain required reviews and permits;
- B. All permits and land use documents will be submitted to the Design Team for review;
- C. Take the lead in communications with the Bureau of Development Services (BDS), state and local authorities and other agencies as required for permitting, review and checklist comments;
- D. Provide a SHPO clearance form for the historic structures on the site, documentation to preserve the historic and cultural resources that may be damaged or destroyed by demolition or alterations, and any other documentation of cultural resources needed by SHPO or the City's Historic Landmarks Commission in order for construction to proceed at the site. The report shall serve as a resource for any future construction on the site and for future historic review work;
- E. Identify local, state and federal agencies and other organizations that may require or request review of demolition plans.
- F. Identify agencies or organizations that, while not holding decision-making authority, may wish to be informed or provide input to the demolition planning process.

- G. Consult with the State Historic Preservation Office. Proactively manage the state historic preservation review process and requirements of ORS 358.653.
- H. Develop innovative mitigation, re-use, re-development, or other approaches to conserving historic and cultural resources as required.
- I. Identify the history, style, construction, and any historically significant and character defining features and materials of historic structures. Provide information about the condition of the structures on site and any alterations, including replacement of original components, which may have affected their architectural integrity and valuation as historic structures.
- J. Perform conservation activities required prior to demolition such as photographic (still or video) and written documentation that would ensure preservation of the structures' history, value to the community, and to the history of the PWB.
- K. Add "modifications" to the Historic Design Review as required.
- L. Provide list of expected reviews and permits with projected timelines and requirements for data needed for each permit. Preliminary list of permits and land use reviews are listed below:
  - Type IV Demolition Review will be required to demolish Reservoir No. 3;
  - Type III Historic Design Review will be required to reconstruct Reservoir No. 3 and make alterations to Reservoir No. 4;
  - Type III Conditional Use Review will be required in order to reconstruct Reservoir No. 3 and convert Reservoir No. 4 to a new use;
  - Type III Environmental Review will be required if work extends more than 25 feet into environmental overlay zones;
  - SHPO clearance form for the historic structures;

All required pre-construction permits;

- Grading Permit (1200-C) (DEQ);
- Site Development;

Building Permit;

- Tree Removal and Mitigation;
- Emergency Overflow structure permit and approvals from Oregon DEQ and Oregon DHS (to be submitted through PWB Regulatory Compliance group);
- National Pollutant Discharge Elimination System (NPDES);
- Portland Bureau of Transportation (PBOT) Street Opening Permits; and,
- Any other permits required.

- M. Prepare and provide permits with graphics and attachments to PWB for review prior to submitting for approval. Provide to PWB responses and documents to reviews and permit applications.
- 17) Ecological
- A. Review the design, land use requirements, limits of construction, construction practices, and incorporate into the design to limit and mitigate construction impacts to natural resources; and,
  - B. Review available resources and perform required resource assessments, biological, cultural, etc.
- 18) Public Education and Involvement
- A. Develop a public education, involvement and outreach program;
  - B. Develop, facilitate, provide all materials and provide a lead role for a Public Education and Involvement Plan including Public Advisory Committee (PAC) to develop the design of the public facilities and surface features;

## Exhibit A

- C. Conduct a Community Pre-Assessment to identify individuals, organizations, agencies, and businesses that use or have an interest in the site; and identify their concerns, issues and interests;
  - D. Produce informational materials that may include flyers, brochures, signs, posters, monthly newsletters, comment forms, maps, charts, and drawings during design and construction;
  - E. Assist PWB Public Outreach staff with media inquiries (in a timely manner);
  - F. Provide printing and mailing services for public notifications (e.g., postcards, 6 mailings, 700 pieces per mailing);
  - G. Provide a lead role in project public meetings and programs; and,
  - H. Meetings as required.
- 19) Specifications
- A. Prepare the project documents (detailed design drawings, specifications and other required documents, including addenda) in a manner that meets the City of Portland Purchasing requirements for construction of the project;
  - B. Specifications will use the 2004 Master format Construction Specifications Institute (CSI) format;
  - C. Specifications will stand alone. Elements to be incorporated from the City of Portland Standard Construction Specifications will be fully written into the project specifications and not incorporated by reference; and,
  - D. PWB will prepare specification Division 00 General Conditions for CM/GC and Supplementary Conditions. PWB will also prepare a limited number of Division 01 General Requirements specifications that may apply to the project including the following topics: Summary of Work; Project Coordination; Construction Sequencing; Acronyms and Abbreviations; Terms and Definitions; Temporary Facilities; Submittal Procedures; Material Quality Requirements; Contractor Quality Control; Special Inspection, Observation and Testing; Security Procedures; Project Meetings; Construction Progress and Payment; Temporary Site Water Discharge; Temporary Erosion and Sediment Control; Closeout Procedures.

## 20) Survey

PWB conducted a civil site survey to develop horizontal and vertical control datum, base map, and site feature inventory for the project area, including appropriate ties to PLS control monuments (based on NAD 83/91 coordinates) and City of Portland vertical control monuments. The Contractor shall:

- A. Assess existing PWB survey data to determine if additional surveys are needed. The Contractor shall identify any additional survey needs for design.
- B. Perform surveys as necessary to support design of project features.

**E. Design Quality Management**

- 1) Contractor shall establish and provide a Design Quality Management Plan (DQMP) that addresses each phase of project design. Prior to implementing the approved DQMP, Contractor shall meet with appropriate PWB Design, Construction, and Operations staff to review and discuss implementation of and updates to the DQMP. The DQMP will include the Design Milestones for the 30%, 60%, 90%, 95% and Final design phases and associated ITR.

The minimum elements to be included at each Design Milestone:

- A. PLANS AND SPECIFICATIONS – Establish and provide the level of detail that meets deliverable for each Design Milestone.
- B. PERMITTING/LAND USE REVIEW
  - Provide a permitting and LUR memo for the initial Design Milestone detailing the permitting requirements for the project, status for each permit, the permitting agency,

- contact information, a preliminary cost estimate for each permit, schedule for delivering the required permitting to meet the timeline for start of construction, and information gathered at pre-application meetings. The schedule shall include time allowed for PWB review, permit submission deadlines, anticipated meeting requirements, time required by the jurisdictional authority for review and public comment, and float time to address public comment and additional submittals that may be required of the permitting agency, as well as identifying the predecessors for each permit in the schedule; and,
- Provide an update to the initial permitting memo for subsequent Design Milestones with status and cost estimate for each permit and an updated schedule and identified predecessors for each permit. Identify delays and actions required/taken to meet the timeline for start of construction. Provide complete applications and required documentation to be submitted with the applications for any permits and LUR that will be required for the project.
- C. DESIGN MEMORANDUM (MEMO)
- Provide a draft technical memo for the initial Design Milestone that includes design assumptions and criteria, description of resolved and outstanding issues, and a discussion of field work, investigations, and shut-down operations; and,
  - Provide an update to the draft technical memo for subsequent Design Milestones on design assumptions and criteria, description of resolved and outstanding issues, and a discussion of field work and investigations, documenting the progress of the work with attachments including resolutions, supporting engineering documents.
- D. SUPPORTING ENGINEERING DOCUMENTATION – Provide copies of any supporting engineering assessment or report that provides technical analysis needed to support engineering decisions and evaluate key assumptions. Provide initial draft of instrumentation and process narrative (control strategy). Provide electronic copies of design calculations, including structural, contract time, liquidated damages, etc.
- E. COST ESTIMATE – Provide construction costs estimate updated at each Design Milestone for each major component of the work (e.g., each separate structure, pipe line, and roadway). Provide a potential list of bid items and units of measurement; and,
- F. SCHEDULE – Provide a design schedule updated at each Design Milestone. Identify delays and actions required/taken to meet the timeline for start of construction. The schedule shall include time allowed for PWB review, permit submission deadlines, anticipated meeting requirements, time required by the jurisdictional authority for review and public comment, and float time to address public comment and additional submittals that may be required of the permitting agency.
- 2) OPERATIONS & MAINTENANCE MANUAL
- A. Provide a draft O&M Manual at the 90% Design Milestone that includes recommended operating procedures, settings for equipment, recommended maintenance schedule, shutdown procedures and lock-out and tag-out procedures.
  - B. Prior to closeout of this contract, provide a final compiled O&M Manual that updates draft manual, incorporates PWB comments and CM/GC O&M submittals including all warranties.
- 3) Independent Technical Reviews - For each design phase milestone Contractor shall provide a team of no less than three principal or senior level engineers who will conduct an independent technical review of the design milestone submittal concurrently with PWB and the Contractor's Project Manager/Project Engineer review. These reviewers will be familiar with this type of project, but not involved with design of this project. Resumes for the principal engineers who will participate in the design milestone review must be included in the Project Team section of the Project Design Management Plan, and shall specifically state their role for these reviews. The Contractor shall be required to provide documented review comments and adjudicated actions of ITR at each milestone.

## Exhibit A

**F. Assistance During Construction** – Contract Administration and construction engineering will be completed by the PWB. The Contractor shall assist the PWB during construction by performing the following services:

- 1) Attend the Pre-construction Conference.
- 2) Make periodic visits to the site to observe, as an experienced and qualified design engineer of record, the progress and quality of the assigned aspects of the work. Based on information obtained during such visits, determine if work is proceeding in accordance with the contract documents. Provide a written response or report to the PWB of observations and recommendations based on the site visits.
- 3) Assist PWB in providing interpretations and clarifications of the contract documents to PWB and assist in preparation of supporting documentation to accompany field orders, construction change directives, or change orders.
- 4) Review shop drawings and submittals when requested and provide written within no more than seven (7) days unless a different schedule is agreed on in advance by PWB.
- 5) Provide Special Inspectors to support construction, as required and approved by PWB and the Bureau of Development Services (BDS). Identify in proposal and fee schedule anticipated Proposers' special inspections.
- 6) Collect and review all operating and maintenance instructions, schedules, certificates of inspection, tests and approvals. These are to be assembled in accordance with the contract documents and transmitted to the PWB with the O&M Manuals.
- 7) The Contractor will: a) accompany the PWB on inspections during Construction and during the final inspection as requested or required by permits; and b) provide reports to PWB after such inspections indicating compliance with contract documents and permits.
- 8) Provide assistance in preparation of responses to construction claims.
- 9) Provide a set of reproducible as-built drawings on Mylar showing those changes made during the construction process (as-builts) based on data furnished by the PWB's CM/GC.
- 10) Provide as-builts electronically on CD-ROM or DVD in MicroStation conforming to PWB standards and scans of original signed as-builts in PDF format. Revised specifications shall be provided in Microsoft Word on CD-ROM or DVD.
- 11) Observe, record, and report to the PWB observations regarding test procedures and start-ups observed.
- 12) Evaluate the selected suggestions from the PWB CM/GC for modifications in the drawings and specifications and report them, with recommendations to the PWB, when requested.
- 13) Provide electronic versions of construction close-out as-builts that are developed by the construction contractor, develop and assure compliance with the project punch list, obtain all operations and maintenance data, obtain all guarantees.

**G. CM/GC Support and Interactions**

- 1) Design Activities - Attend five 8-hour meetings with PWB and the PWB CM/GC prior to construction (in addition to the meetings listed elsewhere within this contract).

- 2) Guaranteed Maximum Price (GMP) negotiations - assist PWB during negotiations with the PWB CM/GC for GMP including design clarifications and opinions of construction costs, and review of the GMP.
- 3) Contract packages - provide phased plans and specifications to the PWB's CM/GC during the later portion of the design. The PWB's CM/GC will likely review the plans for constructability and cost, and for issues such as equipment staging, dewatering, erosion control, and spoils disposal. The Contractor shall prepare approximately four GMP work packages.
- 4) Partnering work which includes but is not limited to the following:
  - A. Sponsor partnering workshops with PWB, the PWB CM/GC, and other stakeholders during design and construction;
  - B. Provide and participate in at least two 8-hour partnering workshops during design and two 4-hour follow-up sessions;
  - C. Attend various workshops and provide design information and graphics for the workshops;
  - D. Organize, provide an experienced facilitator and work with PWB and the CM/GC as partners to successfully complete the project within the scope, schedule, and budget; and,
  - E. Develop a partnering agreement.
- 5) Construction – Contractor shall attend up to 20 meetings with PWB and/or the PWB CM/GC staff relating to design, permitting, and other topics that may arise over the course of construction. Some meetings may involve neighborhood groups.
- 6) General - Contractor shall work closely and collaboratively with the PWB and the PWB's CM/GC in completing designs, construction work sequencing, and schedules.

Deliverables shall be considered those tangible resulting work products that are to be delivered to the City such as reports, draft documents, data, interim findings, drawings, schematics, training, meeting presentations, final drawings, and reports.

Deliverables and schedule for this project shall include:

**A. Project Design Management Deliverables**

- 1) Project Design Management Plan;
- 2) Monthly Status Reports;
- 3) QA/QC Plan;
- 4) Cost Control Plan;
- 5) Monthly Payment Request (original only);
- 6) Project Schedule and monthly updates;
- 7) Change Management Plan and Processes;
- 8) Cash flow projections at key deliverables and for fiscal year planning;
- 9) Project wide Risk Management Plan and System – Collaboratively develop and maintain an ongoing risk management plan and register of the Project commencing at the beginning of

## Exhibit A

the Project and updating after each deliverable milestone of the Project to identify overall Project risks and mitigation strategies; and,

- 10) Monthly Subconsultant Payment and Utilization Report by the 15th of each month with invoice. The Contractor shall provide Monthly Status Reports highlighting work progress during the previous month and listing unresolved outstanding issues. One original copy of each Report shall be submitted to PWB's Project Manager along with monthly payment requests. Status reports must be broken down by task and shall compare percentage complete with percentage of budget spent.  
PWB shall provide written comments concerning Status Reports that will be returned to the Contractor within ten (10) working days after receipt of each Report, unless otherwise negotiated. Monthly payment shall be based on a percentage of project completion.

**B. Design Deliverables**

- 1) The minimum elements to be included for each Design Milestone deliverable will be as identified in the Design Quality Management Plan;
- 2) Plans, Specifications, and Cost Estimate - Provide 20 hard copies with ½ sized (11 x 17) plan sets, 1 full size plan set, and 1 electronic copy with all reference files for the various design reviews.

Final Plans and Specifications will include 1 original full sized reproducible plan set sealed by the Contractors Engineer, 1 unbound set of specifications and permitting documentation with attachments, appendices, dividers and cover sealed by the Contractors Engineer.

Plans will be provided in Micro Station Format conforming to PWB standards. Specifications will be provided in Microsoft Word and PDF format. Micro Station and Microsoft Word files will be fully editable without protections;

- 3) Provide tabulated comments and responses for the Plans and Specifications review comments of PWB, Proposer(s) QA/QC, and Proposer(s) Project Manager/Project Engineer. Responses to be accepted by PWB prior to each subsequent Plans and Specifications submission;
- 4) With the exception of Plans and Specifications provide 6 hard copies with ½ sized plan sets and 1 electronic copy with all reference files for all other Design Milestone deliverables;
- 5) Provide tabulated comments and responses for review comments of Design Milestone deliverable. Responses to be accepted by PWB prior to each subsequent submission; and,
- 6) Provide meeting minutes for all meeting with PWB.

**C. CM/GC Subcontractor Bid Phase Deliverables; If and When Requested by PWB PM**

- 1) Prepare meeting notes;
- 2) Provide written responses to clarifications of the contract documents;
- 3) Assist PWB in preparing addenda to subcontractor bid documents as required;
- 4) Provide written responses to bidders' questions; and,
- 5) Provide bid analysis.

**D. Construction Deliverables**

- 1) Conformed-for-construction plans and specs;

- 2) Written response to the PWB of observations and recommendations based on the site visits;
- 3) Written Interpretations and clarifications;
- 4) Field orders;
- 5) Change orders;
- 6) Submittal review comments;
- 7) Field observations, testing and reporting as required by special inspection and permitting authority;
- 8) Written comments based on final inspection;
- 9) Written notice to the PWB that the work is acceptable or of any deficiencies that need to be resolved;
- 10) Responses to construction claims;
- 11) Reproducible as-built drawings on Mylar showing those changes made during the construction process (as-builts) based on data furnished by the CM/GC;
- 12) Electronic as-builts on CD-ROM, DVD or flash drive in MicroStation conforming to PWB standards and scans of original signed as-builts PDF format; and,
- 13) Report detailing test procedures, tests and start-ups.

Phase	Task	Total Hours	Subtotal
1000	Project Management	1768	\$398,810
1000	Subconsultant Support and Coordination	718	\$722,240
1000	Preliminary Design	4524	\$1,822,610
1000	Design Quality Management Plan	236	\$82,600
2000	Project Management	2636	\$705,790
2000	Subconsultant Support and Coordination	1713	\$1,284,150
2000	Design	12364	\$3,701,400
2000	Design Quality Management Plan	2024	\$464,460
3000	Assistance with CM/GC	18737	\$540,350
4000	Assistance During Construction	9752	\$3,252,590
5000	Project Mitigation		\$2,225,000
			\$15,200,000