

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

**CONTRACT NUMBER 30005569**

**TITLE OF WORK PROJECT**

**Commissioning Services, Fundamental and Enhanced,  
on a Requirements Basis for The Portland Building**

This contract is between the City of Portland ("City," or "Bureau") and Interface Engineering, Inc., hereafter called Consultant. The City's Project Manager for this contract is Kristin Wells.

**Effective Date and Duration**

This contract shall become effective on December 1, 2016. This contract shall expire, unless otherwise terminated or extended, on November 30, 2021.

**Consideration**

- (a) City agrees to pay Consultant a sum not to exceed \$198,720 for accomplishment of the work. Contract amount includes 15% Owner-controlled contingency up to \$26,000.
- (b) Interim payments shall be made to Consultant according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

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**CONSULTANT DATA AND CERTIFICATION**

Name (print full legal name): Interface Engineering, Inc.

Address: 100 SW Main Street, Suite 1600; Portland, OR 97204

Employer Identification Number (EIN): 93-0576423

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

City of Portland Business Tax Registration Number: 374974

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.

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**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 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, and an umbrella or excess liability coverage of \$2,000,000. 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 \$3,000,000 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) 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 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 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**

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Consultant shall perform the tasks listed below for this project one phase at a time and shall be expected to work closely with designated City personnel to accomplish these goals:

Primary Scope: LEEDv3 Fundamental & Enhanced Commissioning (per current City requirements).

Add Alternate #1: LEEDv4 Additional Commissioning Additional Items.  
Price individual additional elements.

Add Alternate #2: Twenty (20) hours of WELL Commissioning coordination.  
Price individual additional elements.

Consultant shall provide assistance to Design Build Relocate Contractor for LEED accreditation during design. *Consultant shall complete Phase 1 and only proceed with the consecutive phases and alternates upon written approval from the City's Project Manager.*

**Systems to be commissioned include:**

- All HVAC Equipment & Systems
  - o Controls
  - o VRF (Variable Refrigerant Flow) system
- VFD's (Variable Frequency Drive)
- Plug Load Management
- Lighting Vacancy Sensors
- Scheduled or occupancy sensor lighting controls
- Daylight dimming controls
- Emergency power systems
- Security systems
- Life safety systems (fire alarm, egress lighting, fire protection)
- Plumbing systems
- Access control system and integration with ADA operators
- Central building automation systems, including linkages to remote monitoring and control sites (this excludes any security-related control systems or interlocks).



- All equipment of the heating, ventilating and air conditioning systems.
- Central plant systems (boilers, chillers, pumps, etc.).
- Domestic and process water pumping systems.
- Lighting control systems.
- Public address system.
- Other systems specific to project and program

#### **PHASE 1 – VALIDATION AND CRITERIA DESIGN REVIEW**

- o Consultant (CxA) shall conduct a commissioning kick off meeting to introduce the commissioning process and to discuss standards, strategies and target requirements of the commissioned systems.
- o CxA shall review the Owner's Project Requirements prepared by the City and the design team for clarity and completeness and make recommendations for updating as required.
- o CxA shall review the DBR (Design Build Relocate Contractor) team's Basis of Design documents for clarity and completeness and verify the Architectural and MEP&F drawings and specifications are coordinated
- o CxA shall prepare a draft Commissioning Plan. See detailed requirements under Commissioning Plan listed below.
- o CxA shall review of the Mechanical Electrical Plumbing & Fire (MEP&F) & Life Safety 100% Schematic Design submittal.
- o The focus of the review will be how well the MEP&F design lends itself to construction, future operations and maintenance.
- o CxA shall attend one design workshop to review the CxA's comments on the SD with the design team.

*Consultant shall proceed with the following phases only upon written approval from City's Project Manager:*

#### **PHASE 2 – DEVELOPED DESIGN REVIEW**

##### **Developed Design Document (DD) Review**

- o CxA shall review of the MEP&F 100% Design Development submittal and provide a written report of its findings. The focus of the review will be how well the MEP&F design lends itself to construction, future operations and maintenance.
- o CxA shall develop commissioning specifications for the 100% DD submittal and, working with the design team, shall finalize them at the approx. 80% DD review.
- o CxA shall check the Basis of Design and verify that the architectural and MEP&F drawings are coordinated and make recommendations to update as required.
- o CxA shall attend one design workshop to review the CxA's comments on the 100% design development design with the design team.
- o Attend commissioning meetings as part of the commissioning process.

##### **Implementation Document (CD) Review**

- o CxA shall incorporate commissioning requirements into the Implementation Documents.
- o CxA shall provide a review of the MEP&F drawings and specifications at 50% and 100% Implementation Document submittals and provide a written report of its findings.
- o Focus of the review will be how well the MEP&F design lends itself to construction, future operations and maintenance.
- o CxA shall check documents to ensure that they comply with the Basis of Design and verify that the architectural and MEP&F drawings are coordinated.
- o CxA shall attend two construction document design workshop meetings with the project team to review the findings during the 50% and 100% submissions.
- o CxA shall document in writing each workshop meeting attended and submit to City's Project Manager.
- o At the completion of the CD phase CxA shall review the OPR and make recommendations to update as required.
- o CxA shall coordinate with the DBR to ensure that all required training for City maintenance staff is specified in the project construction documents and is properly carried out by the DBR.

##### **Further Clarification of Services**

- o At each design review level CxA shall provide a concentrated review of the HVAC system's sequence of operations and controls system.
- o Throughout the design period CxA shall be available to the City and the DBR via phone and email to clarify any of the CxA's recommendations and comments and to provide any additional assistance as some of the Cx activities and CxA deliverables are in the Criteria and Developed Design phases.
- o Throughout the design CxA shall be available to assist the project team in analyzing costs estimates and any suggested value engineering by the DBR.
- o CxA shall provide all written design submittal reports to the City within three weeks after CxA's receipt of the submittal from the design team.
- o Within one week after the completion of each workshop attended by the CxA, the CxA shall prepare and deliver a written report to the City documenting all recommendations and comments developed regarding MEP&F issues reviewed during the workshop.

##### **Commissioning Plan – Detailed Requirements**

- o CxA shall prepare a detailed commissioning plan for this project. The plan is an informational document and must: Describe the commissioning responsibilities of the CxA, the City, DBR, design team and the subcontractors;
- o Identify what systems are to be commissioned;
- o Provide an overview of the method of verification and documentation that will be used during the commissioning process.

- o Develop and review start-up and check out forms.
- o Describe functional testing procedures of commissioned systems; submit to City for review and approval;
- o Include functional test procedures for the installing contractor to perform and verify systems performance in accordance with the commissioning plan.
- o Witness functional testing of commissioned systems;
- o Document commissioning issues to all parties;
- o Conduct spot checking for testing and air balancing contractor. Verify proper balancing has been completed;
- o Develop a commissioning report to include the following
  - o CxA shall review the Commissioning Plan with the City and DBR. As required by the City and DBR, CxA shall modify the plan and submit it to the City and DBR for review and approval.
  - o Upon approval, CxA shall issue the final plan and review it with the DBR and appropriate subcontractor.

#### **Commissioning Schedule**

- o CxA shall develop, at a time mutually agreed by the City and CxA, a Commissioning Schedule for all systems that are to be commissioned.
- o CxA shall develop the Commissioning Schedule in conjunction with a review and in coordination with the DBR's construction schedule.
- o CxA shall submit the Commissioning Schedule to the City, design team, and DBR for their review and approval.
- o Upon approval of the schedule, CxA shall monitor and update the Commissioning Schedule on a periodic basis.

### **PHASE 3 – CONSTRUCTION AND ACCEPTANCE PHASE SERVICES**

#### **Construction Document Review and Clarification**

- o Assist the DBR Construction Manager and subcontractors with interpreting and achieving the intent of the commissioning activities specified in the contract documents
- o CxA shall review the construction documents and work with the DBR and design team to clarify any design issues that may require resolution prior to construction.
- o Throughout the course of the project CxA shall act as a third-party representative of the City and shall work with the DBR, the City, and design team to help clarify and resolve design and construction installation issues.
- o Throughout the course of the project CxA shall provide assistance to the City as required in the review of MEP&F RFIs and change order requests, etc.

#### **Updated Commissioning Plan**

- o CxA shall meet with the DBR and MEP&F subcontractors to review the Commissioning Plan and review the commissioning process for the project.
- o If, during the review with the subcontractors, changes or modifications are requested, CxA shall review these separately with the design team and the City.
- o CxA shall make such modifications to the Commissioning Plan as the City, the DBR and the design team determines to be necessary.

#### **Review of Mechanical, Electrical, and Plumbing and Fire Subcontractor Submittal**

- o CxA shall provide a review of subcontractor mechanical and electrical and fire system submittals and shop drawings, to familiarize CxA with the specific equipment that the subcontractors will be installing on the project and allow CxA to tailor its tests to the specific pieces of equipment.
- o CxA shall perform its submittal review concurrently with that of the design team.
- o CxA shall bring to the City's and design team's attention any discrepancies with the design documents that are found. Resolution of these problems will be the responsibility of the City and design team.

#### **Review of Controls Subcontractor's Software**

- o CxA shall review the controls subcontractor's shop drawings, sequence of operations and control logic. This review is intended to familiarize CxA with the control logic and specific types of instruments that the subcontractor will use to meet the design criteria.
- o CxA shall also review the lines of software code that the subcontractor is intending to use in the DDC system.

#### **On-site Construction Observation**

- o Attend commissioning meetings as part of the commissioning process. Participate in construction meetings as required.
- o CxA shall provide on-site construction observation visits during the construction phase of the project. Observe installation of each commissioned system by conducting site visits. Submit construction administration items to design team for review and distribution.
- o These visits will be based on the construction schedule, but must include at least ten site visits over the duration of the project. These visits must occur such that a CxA representative is on site and attends a project team (the City /DBR) meeting. The purpose of these visits will be to acquaint CxA with the progress of the construction, and become familiar with the systems that will be tested and commissioned. These visits are also intended to allow CxA to more accurately schedule the commissioning processes so that CxA can easily interface with the completion of the construction
- o CxA shall bring to the attention of the City, DBR and subcontractors any discrepancies CxA observes between the actual construction and the design documents.



o CxA shall document each site visit by a written report that is distributed to the City and DBR. The report must include a field report and running discrepancy/recommendation log.

#### **Development of DBR Commissioning Log Books and Pre-Functional Test Check-off Sheets**

- o CxA shall prepare commissioning log books for the DBR.
- o The log books must contain DBR, pre-functional test check-off sheets to be distributed to DBR for use in verifying compliance with completion of installation and start-up for the commissioning process.
- o The log books must include a master commissioning log book for the DBR and separate trade-specific commissioning log books for the mechanical, electrical, plumbing, and controls subcontractors.
- o It will be the responsibility of DBR and subcontractors to complete these pre-functional check-off sheets prior to functional testing.
- o CxA shall review the results of these check-off sheets and randomly inspect them to verify their compliance.

#### **Development of Functional Test Procedures**

- o Based on the information obtained from CxA review of design criteria and construction documentation, CxA shall develop functional test procedures for those systems to be commissioned.
- o These functional test procedures must provide a detailed procedure for testing the system and a record sheet for recording the test results.
- o The test procedures must be explicit and exact, and must ensure that the test can be easily repeated by more than one tester, and the same results obtained.
- o CxA shall review these test procedures with the City, DBR and select subcontractors. If required, the test procedures must be modified and then approved by these parties.
- o CxA shall issue the final functional test procedures to the City and DBR
- o Functional test procedures must be provided for the following systems (if included in the project):
  - o All HVAC equipment and systems
  - o Building automation systems (BAS)
  - o Plug load management system
  - o Life safety systems
  - o Lighting Vacancy Sensors
  - o Scheduled or occupancy sensor lighting controls.
  - o Daylight dimming controls.
  - o Domestic water systems
  - o Fire sprinkler systems and fire pumps
  - o Emergency power and switching gear including solar power systems
  - o Fire alarm/emergency generators/elevators/automatic temperature controls (BAS) coordination and interfacing
  - o Security Systems including access control, monitoring (CCTV and audible address), and alarm equipment.
  - o Access control system and integration with ADA operators.
  - o Low Voltage Systems including audio/visual, paging, intercom and overhead speaker.
  - o DAS (distributed antenna system)

#### **Review of Test, Adjust and Balance (TAB) Work**

- o CxA shall review the TAB submittal.
- o Using its own instrumentation, CxA shall spot check the results of the TAB subcontractor. CxA shall review the results of the TAB work and make recommendations to the DBR and the City about any problems or discrepancies identified in the TAB of the systems.
- o CxA shall review the subcontractor's final report and provide review comments and any recommendations concerning the TAB report to the City and DBR for their review and disposition.
- o CxA shall include a copy of the final balancing report, including all final balancing logs and a listing of any deficiencies in the system's performance, in the final commissioning report.

#### **Functional Testing and Document Results**

- o CxA shall commission all systems described in the commissioning plan through the performance of the functional test procedures.
- o CxA shall schedule all testing based on the commissioning schedule, the completion of the work, the systems testing and balancing.
- o During the testing, CxA shall provide a weekly commissioning report to the City and DBR describing CxA progress and results. In addition, CxA shall develop and maintain a discrepancy/recommendations log as systems are corrected and retested.
- o If systems do not comply with the testing standards, CxA shall provide recommended solutions to the City and DBR for their review. CxA shall facilitate discussions with this group to obtain a workable solution.
- o All test results must be documented for inclusion in the final commissioning report.

#### **Operational and Maintenance Manual Review**

- o CxA shall review the Operation and Maintenance Manuals and sample warranties promptly following receipt from the DBR via the Owner. These shall be submitted to the CxA as part of the submittal process. These will also be used in the CxA's functional testing and other work.
- o CxA shall verify that the Manuals are complete from an operational point of view and include commissioning information.



- o On an ongoing basis during construction and at the completion of the project CxA shall observe and confirm that construction documents are being properly updated to provide accurate as-built documentation at the completion of the project.
- o CxA shall review all HVAC system, electrical equipment and all other commissioned equipment warranties to verify that the City's responsibilities are clearly defined.

#### **PHASE 4 – OCCUPANCY, OPERATIONS AND WARRANTY PHASE SERVICES**

##### **Operational Staff Training**

- o CxA shall collect all Operations and Maintenance Manuals (O&M Manuals) from the DBR, confirm that they are complete, and deliver the O&M Manuals to the City.
- o CxA shall observe training of the City's maintenance personnel by the manufacturer in system configuration and control sequences, as described in the O&M Manuals.
- o CxA shall coordinate with the DBR to ensure that all required training for City maintenance staff is specified in the project construction documents and is properly carried out by the DBR.

##### **Building Systems Manual**

- o CxA shall supervise the preparation of a Building Systems Manual. The Manual must include the following:
  - o Final version of the Basis of Design (BOD)
  - o System single line diagrams
  - o As-built sequences of operations, control drawings and original set points
  - o Operating instructions for Building Automation System (BAS)
  - o Maintenance schedule of equipment
  - o Recommended schedule for re-commissioning
  - o Recommend schedule of controls calibration

##### **Systems Warranty Period Review**

- o During the systems warranty period(s) CxA shall retest any systems that had their full testing deferred during the initial functional testing due to the lack of peak season conditions. This testing must ensure that all system sequences of operations and capacity have been verified.
- o Throughout the system warranty period(s) CxA shall assist the City in resolving any commissioning questions or systems operations questions.
- o CxA shall provide a site visit within 8-10 months following the start of each system warranty period, during which CxA shall review the performance of all commissioned systems with the City's operations staff and identify any problems that may require review or correction. The CxA shall return 22 months following Substantial Completion to verify proper operations
- o CxA shall provide a written report to the City promptly following each site visit, describing the findings of the warranty reviews and recommendations for any corrective action that may be required.

##### **Final Commissioning Report**

- o CxA shall provide a final commissioning report to the City within 60 days following the 2-year warranty period review. This report must include the following:
  - o Summary of the commissioning process.
  - o Final testing, adjusting and balancing report.
  - o All functional test procedures and their final record sheets.
  - o A final review of how well the systems meet the design intent, noted discrepancies, and any recommendations for modifications.
  - o Copies of all construction commissioning field reports and final construction discrepancy / recommendation log.
  - o Copies of all weekly commissioning reports and final functional testing discrepancy / recommendation log.

##### **Deliverables and schedule for this project shall include:**

- A. On-Time Performance: During the contract, the City will notify the Commissioning Agent (CxA) of work that needs to be performed and scheduled. The CxA is expected to meet or beat the schedule.
- B. The City anticipates performance measures may be based on how well the CxA meets the performance schedule and provides deliverables for all phases of the design process, including, but not limited to, Criteria Design, Developed Design, Implementation Documents, Construction Administration, and Project Closeout.
- C. Other performance measures may or may not include working with the Owner and project delivery team to ensure the project conforms to the Basis of Design (BOD) requirements and project budgets, responsive and effective communication with Owner, Design Team, and DBR, and participation in project closeout. This includes working with the Owner in pursuing Energy Trust of Oregon incentives
- D. Additional information on performance measures will be developed on a project specific basis as part of a collaborative process, with the respective project delivery teams of the individual projects.
- E. Performance Meetings: The CxA, City's project manager, and Owner's Representative will meet, as needed, to discuss performance. Additional meetings are as requested by the City's project managers and the Owner's Representative.

**Consultant shall proceed with the following Alternates only upon written amendment by the City further defining the scope of work:**

Add Alternate #1: LEEDv4 Additional Commissioning Additional Items

Add Alternate #2: Twenty (20) hours of WELL Commissioning coordination.

All deliverables and resulting work products from this contract will become the property of the City of Portland. As such, the Consultant and any Subconsultants grant the City the right to copy and distribute (in any and all media and formats) project deliverables for regulatory, project certification/recognition, program development, public education, and/or for any purposes at the sole discretion of the City of Portland.

#### **CONSULTANT PERSONNEL**

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

NAME	ROLE ON PROJECT	HOURLY RATE
Andy Frichtl, PE, LEED AP	Commissioning Director	\$ 220
Nick Marcyan CxA, CCP	Lead Commissioning Agent	\$ 160
Douglas Cansdale PE, CxA, LEED AP	Senior Commissioning Agent	\$ 160
Kari Friesen, PE, LEED AP, GGP	Commissioning Agent	\$ 130

#### **SUBCONSULTANTS**

The Consultant shall assign the following subconsultants to perform work in the capacities designated:

NAME	ROLE ON PROJECT	SUBCONTRACT AMOUNT	M/W/ESB
Karl Friesen and Associates, LLC	Commissioning	\$ 30,366.00 (21%)	ESB

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 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 that the Consultant can be paid on this contract is \$198,720 (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. The contract amount includes a 15% Owner-controlled contingency of up to \$26,000. Contingency is for additional support, if needed, through detailed design. Additional work will be agreed upon with written amendment to this contract prior to being performed. 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 will 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. It is City policy to pay its vendor invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, vendors shall execute the City's standard ACH Vendor Payment Authorization Agreement. Upon verification of the data provided, the Payment Authorization Agreement will authorize the City to deposit payment for services rendered or goods provided directly into vendor accounts with financial institutions. All payments shall be in United States currency.

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 will be based on the Consultant's bills previously submitted for acceptable work performed and approved.

#### **PAYMENT TERMS: Net 30 Days**

**Billing Rates**

The billing rates shall not exceed those set forth below:

	Hours	Cost
<b>PHASE 1 – VALIDATION AND CRITERIA DESIGN REVIEW</b>		
Review the OPR & BOD	6	\$ 1,000
Schematic Design Review	28	\$ 4,550
Attend SD workshop meeting	11	\$ 1,700
Subtotal:	45	\$ 7,250
<b>PHASE 2 – DEVELOPED DESIGN REVIEW</b>		
Design Development Review	34	\$ 5,550
Attend DD workshop meeting	11	\$ 1,700
Administration and Cx Meetings	6	\$ 960
Perform 2 Construction Document Reviews	64	\$ 10,200
Attend 2 CD workshop meetings	10	\$ 1,600
Development of Commissioning Plan	5	\$ 800
Development of Commissioning Schedule	7	\$ 1,120
Administration and Cx Meetings	9	\$ 1,500
Subtotal:	146	\$ 23,430
<b>PHASE 3- CONSTRUCTION AND ACCEPTANCE PHASE SERVICES</b>		
Update Commissioning Plan	2	\$ 300
Review Submittals	34	\$ 5,500
Review Control Contractors Software	5	\$ 800
On-site Observation	73	\$ 11,700
Development of Pre-Functional Checklists	24	\$ 3,840
Development of Functional Performance Tests	40	\$ 6,400
Spot-Check of the Test & Balance Report	6	\$ 1,000
Functional Performance Testing	266	\$ 42,500
Operation & Maintenance Manual Review	2	\$ 400
Administration and Cx Meetings	73	\$ 11,700
Subtotal:	525	\$ 84,140
<b>PHASE 4 – OCCUPANCY, OPERATIONS AND WARRANTY PHASE SERVICES</b>		
Seasonal Testing	70	\$ 11,100
Operational Staff Training	18	\$ 2,880
Supervision of the development of the Systems Manual	6	\$ 1,000
9 Month Post-Occupancy Review	16	\$ 2,600
22 Month Post-Occupancy Warranty Review	16	\$ 2,600
Administration and Cx Meetings	7	\$ 1,100
Final Commissioning Report	53	\$ 8,500
Subtotal:	186	\$ 29,780
TOTAL:	902	\$144,600
Add Alternate #1: LEEDv4 Supplemental Tasks		\$ 25,000
Add Alternate #2: 20 Hours of WELL Commissioning Coordination		\$ 3,200
		<b>\$172,800</b>
Add 15% Owner-controlled contingency for additional support, if needed, through detailed design. Additional work will be agreed upon with written amendment to this contract prior to being performed.		<b>\$ 26,000</b>
<b>GRAND TOTAL:</b>		<b>\$198,720</b>



**Progress Payments**

On or before the 15<sup>th</sup> of each month, the Consultant shall submit to the City's Project Manager an invoice for work performed by the Consultant 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 Consultant shall also attach photocopies of claimed reimbursable expenses, if applicable. The Consultant 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 Consultant 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 Consultant shall make full payment to its subconsultants within 10 business days following receipt of any payment made by the City to Consultant.

**ACH 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 will authorize the City to deposit payment for services rendered directly into Consultant accounts with financial institutions. All payments shall be in United States currency.

**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.

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

\_\_\_\_\_  
Date

**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.

**INTERFACE ENGINEERING, INC.**

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

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

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



CONTRACT NUMBER: 30005569

CONTRACT TITLE: Commissioning Services, Fundamental and Enhanced,  
on a Requirements Basis for The Portland Building

**CITY OF PORTLAND SIGNATURES:**

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

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

By: N/A Date: \_\_\_\_\_  
Elected Official

Approved:

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

Approved as to Form:

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Office of City Attorney