February 18, 2014

Re: Request for Proposals- Commissioning Services
Dental Science Building –Phase 2 – Renovate South Wing
UI # 0265301
University of Iowa

The University of Iowa, located in Iowa City, Iowa, intends to retain the services of a qualified Design Professional to provide Commissioning (Cx) Services for the above project. Qualified Commissioning Agents (CxA) are invited to submit a proposal based on the scope of services described below.

The proposal shall include qualifications for completing the Construction and Acceptance Phases of Sequences Four (4) through Eight (8) of the above project. Sequences One (1), Two (2), and Three (3) have been completed.

1.0 Background

The major focus of the project is the renovation of College of Dentistry clinic spaces on Floors 2-4 of the south wing. This is Phase Two of a major renovation project for the Dental Science Building. Phase One (Addition) was completed in September 2011. The general scope of the project will include electrical and mechanical system upgrades, fire alarm upgrades, extension of fire sprinkler throughout the south wing, new furniture and equipment for the clinics, abatement of floor tile, mastic and countertops, and upgrades to restrooms and vestibule at the west entrance to make them fully accessible. The project will also include curtain wall upgrades, AMAG access control system and a replacement roof system for the north and south wings as well as the link.

The University has self-performed the commissioning efforts for Sequences 1-3.

This project is seeking LEED certification. This includes Credit EA-3, Enhanced Commissioning.

Total Construction Budget, Sequence 1-8: $ 39.9 M

2.0 Scope of Work

The primary role of the successful Design Professional is to develop and coordinate the execution of a quality assurance plan pertaining to commissioned equipment and systems, observe and document performance, and determine whether systems are functioning in accordance with the Owner’s Project Requirements and the Contract
Documents. Additionally, the successful Design Professional will assist in identifying solutions to non-conforming work. Final resolution will remain the responsibility of the Contractor and Design Professional. Refer to ASHRAE Guideline 0-2005 for acceptable standard of care.

Commissioning Tasks

The Commissioning Agent (CxA) shall complete the following tasks during the Design, Construction, Acceptance, and Occupancy/Operations Phases of the project.

Design Phase

1. Not Applicable.

Construction Phase

Commissioning during the Construction Phase is intended to assure that the Owner’s Project Requirements, as expressed by the contract documents, are met and achieve their specific objectives. The CxA shall complete the following tasks:

1. Conduct a kick-off meeting with the Contractor, including installation subcontractors, to discuss Commissioning scope, plan, coordination and schedule. Prepare and distribute meeting minutes.
2. Coordinate the Commissioning work with Owner’s Representative and Contractors to ensure that Commissioning activities are included in the master construction schedule for each Sequence. As a minimum, identify the following:
   a. Commissioning Team Meetings;
   b. Start and completion of each project phase;
   c. Key system and assembly completion and testing;
   d. Training sessions;
   e. Substantial completion;
   f. Warranty start dates;
   g. Occupant move-in dates;
   h. Warranty walkthrough date (two (2) months prior to end of warranty);
   i. Lessons learned meeting (after final sequence).
3. Review 50% Construction Operation and Maintenance Manuals.
4. Verify Construction Checklists are completed and submitted prior to functional acceptance testing. Construction Checklists are included in the project specifications.
5. Coordinate with and assist the Construction Team in developing a start-up plan for each piece of equipment and system to ensure all recommended procedures are incorporated in the appropriate sequence. This coordination may be best performed by the CxA’s participation in regularly scheduled MEP coordination meetings conducted by the Contractors.
6. Prepare Functional Performance Test procedures/scripts/checklists for the commissioned equipment and systems. Submit for Owner’s Representative and Contractor review two (2) months prior to functional testing in the field.
7. Perform site visits as needed, but at least monthly, during construction to observe component and system installations. Attend planning and job-site meetings to obtain information on construction progress as requested by Owner.
Review construction meeting minutes for revisions and substitutions relating to the Owner's Project Requirements. Assist in resolving any discrepancies identified during regular site inspections. Begin site visits at onset of MEPT rough-in.

8. In conjunction with required site visits, conduct on-site Cx meetings to review progress, coordination, and issues resolution.

9. Review Request for Information (RFI), Instruction to Contractor (ITC); and Change Orders for impact on commissioning and the Owner Project Requirements.

10. Maintain Commissioning Issues Log containing any items that do not meet the OPR or Contract Documents. The log must be detailed enough to provide clarity and point of future reference for the comment. CxA shall update and upload the Issues Log to Submittal Exchange within two (2) days following a site visit and two (2) days prior to Cx meeting.

Acceptance Phase (Prior to Substantial Completion)

Commissioning during the acceptance phase is intended to demonstrate the performance of the equipment and systems installed during the construction phase meet the requirements of the Contract Documents. The acceptance phase must occur prior to Substantial Completion. The CxA shall complete the following:

1. Update commissioning schedule and plan with Owner’s Representative and Contractor.
2. Conduct functional testing to demonstrate that systems and components are operating according to the Owner’s Project Requirements, University Design Standards, Contract Documents and applicable industry standards. Functional testing shall include operating the system and components through each of the written sequences of operation, and verification of proper integration to other system or systems as required.
3. Verify building controls.
4. Review the preliminary and final Testing, Adjusting and Balancing (TAB) report to verify all equipment is included and performance of each is per contract requirements.
5. With assistance and collaboration of the TAB and controls contractors, perform the following:
   a. Utilizing the trend data captured, optimize static and differential pressure control setpoints and reset limits.
   b. Verify calibration of airflow monitoring stations
   c. Verify the re-circulating flow balance and maintenance accessibility.
6. Update Commissioning Issues Log with any acceptance testing items that do not meet the OPR or Contract Documents. Provide the log and acceptance test results and recommendations to the Owner’s Representative and Contractors.
7. Coordinate retesting as necessary. One retest of each major system will be provided as part of normal checkout. Additional retests will be considered outside the normal scope of work.
9. Submit electronic copy of LEED Commissioning documentation. Items indicated as completed by the University will be provided to the CxA for inclusion in the final LEED documentation.
<table>
<thead>
<tr>
<th>Documentation/Task</th>
<th>Completed by UofI</th>
<th>To be completed by CxA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designate CxA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Document OPR/BOD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Review OPR/BOD</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Develop Cx Plan</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Incorporate Cx Requirements</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Construction Doc. Review</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Review Submittals</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Verify Installation and Performance</td>
<td>Sequence 1-3</td>
<td>Sequence 4-8</td>
</tr>
<tr>
<td>Develop Systems Manual</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Verify Training</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Complete Commission Report</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conduct 10-month Walkthrough</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

10. Submit Electronic copy of Commissioning Report at Substantial Completion. Report to include, at a minimum, the following:
   a. Executive Summary of Commissioning Activities.
   b. List of incomplete commissioning milestones with anticipated completion dates. Include seasonal and/or deferred testing milestones.
   c. Narrative of systems and equipment successfully commissioned to date. List should not include systems or equipment with outstanding issues.
   d. Updated Commissioning Issues Log. Include anticipated resolution date for open items.
   e. Recommendations for continuous commissioning activities for verifying on-going energy conservation.

12. Transmit to the Contractors [one (1) electronic] and [four (4) hard] copies of Commissioning Documentation to be inserted into the Operation and Maintenance (O&M) Manuals.
   a. The intent of this requirement is to provide a combined O&M and Commissioning Systems Manual for use by the Owner’s personnel for Operations and Existing Building Commissioning activities. A separate Commissioning Systems Manual will not be required.
   b. Coordinate format and organization of O&M Manuals with Contractor. Like systems are to be submitted together under a single binder tab or heading. Refer to standard Specification Section 01 78 23 OPERATION AND MAINTENANCE DATA.
   c. Commissioning Documentation for a given system or piece of equipment is to be modeled after ASHRAE Guideline 4-2008 and should include, as applicable:
      i. Executive summary of system and major components.
      ii. Completed functional test reports, including as-commissioned setpoints, sequence of operation, operating parameters, etc.
      iii. Operating procedures for all normal, manual, and emergency modes of operation.
      iv. Ongoing optimization guidelines and detailed, equipment specific maintenance recommendations.
v. Completed test reports, startup reports, etc.

**Occupancy / Operations Phase**

Commissioning during the Occupancy / Operations Phase is intended to assist the facility operating staff in identifying any defects in the installed equipment or system operation. The CxA shall complete the following:

1. Schedule and attend seasonal and/or deferred testing of HVAC systems. Submit reports to Owner for inclusion into O&M Manuals.
2. Participate in Lessons Learned meeting.
3. Schedule and attend warranty walkthrough two (2) months prior to end of warranty period.

**Systems to be Commissioned and Sampling Rate**

1. Sequence 4-8 Exhaust and Supply VAV, VAV with Reheat, VAV with Radiant, and VAV with Exhaust Hood: Performance testing of 20% of units in each sequence, including at least one each of the configurations previously listed. Verification of 100% of occupied/unoccupied occupancy sensor controls via BAS trending.
2. Sequence 4-8 Occupancy Sensors: Performance testing of 10% of lighting control zones in each sequence.
3. Sequence 4-8 Exhaust Hoods: Performance testing of 100% of units in each sequence.
5. Sequence 8 Heat Exchanger HX-1S and HX-2S 1/3-2/3 valves: Performance test staging under final load.
6. Sequence 8 Pumps HP-1S and HP-2S: Performance test lead/lag staging under final load.
8. Sequence 8 Pump CHP-3S and CHP-4S: Verify pump speed controls and reset.
9. Sequence 8 Exhaust Fans: Verify interlock between exhaust fans and washer/decontaminators in Room S490.

Approximate device or equipment quantities per Sequence: (For reference only. CxA to field verify final quantities.)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAV/EAV</td>
<td>54</td>
<td>27</td>
<td>44</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>Oc Sensors</td>
<td>70</td>
<td>54</td>
<td>80</td>
<td>44</td>
<td>37</td>
</tr>
<tr>
<td>Hoods</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**3.0 Schedule**
The project is currently in construction.

To access an electronic copy of the current documents, send an e-mail request to: Facilities-DCS@uiowa.edu and brian-keating@uiowa.edu

The e-mail must include the subject line:
0265301- Dental Science Building –Phase 2 – Renovate South Wing

The project anticipates the following schedule (Dates subject to change):

Sequence 4 Substantial Completion: May 2014
Sequence 5 Substantial Completion: December 2014
Sequence 6 Substantial Completion: July 2015
Sequence 7 Substantial Completion: January 2016
Sequence 8 Substantial Completion: July 2016

**4.0 Test Equipment**

The Contractor shall provide all tools required to start, checkout, and functionally test equipment and systems. CxA shall provide specialized testing equipment, such as supplemental portable data loggers.

Data logging equipment, monitoring devices, specialized equipment, and software not required to be provided by the Contractor in the Contract Documents, and provided by the CxA to monitor, confirm, or verify the contractor’s testing procedures, shall remain the property of the CxA. Equipment provided shall meet the minimum accuracy, calibration, and performance standards required by the performance test.

**5.0 Statement of Qualifications**

It is the Owner’s intent that the person designated as the commissioning authority (CxA), and the key staff members, exhibit the following:

1. Acted as the principal Commissioning Authority for at least five projects.
2. A bachelor’s degree in Engineering is strongly preferred. P.E. license is desired. Other technical training, past commissioning, and field experience will also be considered.
3. Hold ASHRAE CPMP Certification, NEBB BSC Accreditation, University of Wisconsin CxAP, or BCxA CCP Certification.
4. Exhibit extensive experience in the operation and troubleshooting of HVAC systems and energy management control systems.
5. Exhibit extensive field experience. A minimum of five full years in this type of work is required.
6. Exhibit extensive knowledge in testing and balancing of both air and water systems. NEBB, AABC or TABB certification preferred.
7. Exhibit experience in energy-efficient equipment design and optimization.
8. Exhibit direct experience in monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment.
9. Exhibit excellent verbal and writing communication skills. Highly organized and able to work with both management and trade contractors.

6.0 Proposal Requirements

The Proposer shall:

Provide a written proposal on the University of Iowa Letter of Proposal form found on the University’s Facilities Management/Consultants web site.

http://www.facilities.uiowa.edu/pdc/consultants/agreement-form.html

Include the following:
1. List the individual who will be the CxA.
2. Provide an organization chart indicating proposed project team.
3. Provide resumes for key staff members.
4. Briefly describe relevant experience of the proposed team in the following areas.
   List each person’s direct involvement in:
   a. Similar Projects.
   b. Testing and Balancing.
   c. Energy-efficient equipment design and control strategy optimization.
5. Describe your proposed approach to managing the project.

7.0 Proposal Evaluation and Award

1. The Owner will consider and evaluate the following proposal components:
   a. Design Professional experience and qualifications.
   b. CxA qualifications and accreditations.
   c. Key support personnel experience and qualifications.
   d. Project approach.
   e. Design Professional location.
   f. Proposal quality.
   g. Proposed fee.
2. The Owner reserves the right to negotiate and accept any proposal, or to reject all proposals, and to offer to accept any proposal subject to the deletion of any item or group of items of work from the scope of work.
3. The Proposer shall be prepared to attend an interview as part of the evaluation process. The Proposer shall bear all costs associated with preparing the RFP and subsequent interviews.

Respondents’ proposals are due no later than 12:00 pm (Noon) on Tuesday March 4, 2014 and shall be submitted electronically to the address listed below. Combine all requested materials in a single *.pdf file format.
Should you have any questions or comments, please contact:

Brian Keating  
Construction Project Manager  
University of Iowa  
FM - Planning, Design & Construction  
200 University Services Building  
Iowa City, Iowa 52242-1922  
brian-keating@uiowa.edu