September 26, 2016

Re: Request for Proposals- Commissioning Services
0303801 – Psychological and Brian Sciences Building
University of Iowa

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

The scope of work for this project will include Design, Construction/Acceptance, and Occupancy/Operations Phase commissioning services.

1.0 Background

This project will construct a new 35,000 nsf/66,500 gsf facility to relocate the Department of Psychological and Brain Sciences and raze the southeast wing of Seashore Hall. This six-level addition will be located to the east of and connected to Spence Laboratories. The addition includes the department office suite, two classrooms, student learning commons, multiple human research lab suites (non-wet lab), faculty offices, conference rooms, graduate student/post-doc workspace and a dock to serve Spence Laboratories and the new building. Fit out of the fourth floor is being carried forward as two bid alternates.

Project is not seeking LEED certification.

The Owner’s Project Requirement (OPR) for this project consists of the 2016 University of Iowa Design Standards and Procedures.

2.0 Scope of Work

The primary role of the successful CxA 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 CxA 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 0-2013 and NIBS Guideline 3-2012 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**

Commissioning during the Design Phase shall ensure that the Owner’s Project Requirements are documented and captured within the Contract Documents. The CxA shall complete the following:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Coordinate with the Owner’s Representative and oversee the commissioning process during design.</td>
<td></td>
</tr>
<tr>
<td>2. Perform a quality control design review of the Design Documents. Refer to ASHRAE Guideline 0-2013, Annex N and addendum, for expected standard of care. Reviews shall:</td>
<td>Complete Owner provided REVIEW COMMENT form</td>
</tr>
<tr>
<td>a. Verify compliance with the OPR.</td>
<td></td>
</tr>
<tr>
<td>b. Verify system control sequences against one-line diagrams, flow diagrams, and equipment details and specifications.</td>
<td></td>
</tr>
<tr>
<td>c. Opportunities for making building operations and maintenance easier (i.e.: Equipment Accessibility, System Control, etc.).</td>
<td></td>
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<tr>
<td>3. Perform quality reviews at the following benchmarks:</td>
<td></td>
</tr>
<tr>
<td>a. Design Development Documents</td>
<td></td>
</tr>
<tr>
<td>b. Final Construction Documents</td>
<td></td>
</tr>
<tr>
<td>4. Participate in the following design review meetings. The primary function of the CxA is to note deviations and conflicts between the OPR, UI Design Standards and Procedures, and industry best practices.</td>
<td>Updated REVIEW COMMENT form</td>
</tr>
<tr>
<td>a. Design Development Documents</td>
<td>In Person</td>
</tr>
<tr>
<td>b. Final Construction Documents</td>
<td>In Person</td>
</tr>
<tr>
<td>5. Edit University Of Iowa standard Specification Section 01 91 13 COMMISSIONING. The commissioning specifications shall be transmitted to the Design Professional in electronic form and shall include review of the following:</td>
<td>Edited standard specification</td>
</tr>
<tr>
<td>a. List of systems and assemblies included in the commissioning scope of work. Include sampling rates.</td>
<td></td>
</tr>
<tr>
<td>b. Cross references to all applicable and related specification sections</td>
<td></td>
</tr>
<tr>
<td>c. References for inclusion into individual equipment and systems specification</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Deliverable</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>7. Create System Sequencing Flowchart. Flowchart shall graphically indicate the logical system, equipment, and component startup and commissioning sequence required to maximize schedule efficiency. Contractor shall be responsible for task durations. Transmit flowchart to the Design Professional for coordination with the contract documents.</td>
<td>System Commissioning Flowchart</td>
</tr>
<tr>
<td><strong>Construction Phase</strong></td>
<td></td>
</tr>
</tbody>
</table>

Commissioning during the Construction Phase shall verify that the project achieves the objectives of the Owner’s Project Requirements, as expressed by the contract documents. The CxA shall complete the following tasks:

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<tr>
<td>8. Conduct a kick-off meeting with the Contractor, including installation subcontractors, to discuss commissioning scope, coordination and schedule as identified in the commissioning specifications. Prepare and distribute meeting minutes.</td>
<td>Meeting Minutes</td>
</tr>
<tr>
<td>9. Review Contractor Construction Schedule. Verify that schedule indicates the logical system, equipment, and component startup, testing and commissioning sequence required to maximize schedule efficiency.</td>
<td>Review Comments</td>
</tr>
<tr>
<td>10. Review applicable Contractor submittals concurrent with the Design Team reviews. CxA will review submittals to create Commissioning Checklists and Functional Performance Testing forms.</td>
<td>Review Comments</td>
</tr>
<tr>
<td>11. Develop project specific Construction Checklists. Incorporate the manufacturer’s pre-start and start-up checks into the checklists. Provide checklists to contractors within two (2) weeks after system, equipment or component submittal approval.</td>
<td>Project specific Construction Checklists</td>
</tr>
<tr>
<td>12. After receipt of the Controls Submittal, participate in a meeting with the Owner's Representative, Design Professional, Contractor, Controls subcontractor, Mechanical subcontractor and Electrical subcontractor to review the submittal</td>
<td>Project observation report</td>
</tr>
</tbody>
</table>
and mechanical/electrical systems. Focus will be on how the selected sequences of operation interact with the mechanical/electrical systems. Additional focus will be on defining and assigning responsibilities for construction activities; i.e. control installation, control programming, and equipment start-up that will allow the pre-functional testing and start-up of mechanical/electrical systems.

13. Prepare Functional Performance Test scripts for the commissioned equipment and systems. Submit for Owner’s Representative and Contractor within two (2) weeks after system, equipment or component submittal is approved. Scripts shall:
- be repeatable for use in subsequent existing building commissioning efforts
- contain unambiguous pass/fail acceptance criteria
- be fully customized for the project. Scripts shall not contain items that do not apply to the project.

14. 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.

15. In conjunction with required site visits, conduct on-site Cx meetings to review progress, coordination, and issues resolution. Prepare and distribute meeting minutes.

16. 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 issue the log 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 shall 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:

<table>
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<tr>
<td>17. 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.</td>
<td>Completed functional test reports</td>
</tr>
<tr>
<td>18. The CxA shall manipulate the building automation system as indicated in the statement of qualifications section listed below.</td>
<td></td>
</tr>
<tr>
<td>19. 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.</td>
<td>Updated Cx Log</td>
</tr>
<tr>
<td>20. Verify Owner training schedule and format. Refer to ASHRAE Guideline 0-2005 for expected standard of care.</td>
<td>Review Comments</td>
</tr>
<tr>
<td>21. Review Operation and Maintenance Manuals. Verify that sections for each commissioned system, piece of equipment, and component contains the information listed in specification section 01 78 23 OPERATIONS AND MAINTENANCE MANUAL.</td>
<td>Review Comments</td>
</tr>
<tr>
<td>22. Transmit to the Contractors one (1) electronic and two (2) hard copies of Commissioning Documentation to be inserted into the Operation and Maintenance (O&amp;M) Manuals. The intent is to provide a combined O&amp;M and Commissioning Systems Manual for use by the Owner’s personnel in Operations and Existing Building Commissioning activities. A separate Commissioning Systems Manual will not be required. Documentation shall include:</td>
<td>Updated documents</td>
</tr>
<tr>
<td>a. completed functional test reports, including as-commissioned setpoints, sequence of operation, operating parameters, etc.</td>
<td></td>
</tr>
<tr>
<td>b. ongoing optimization guidelines and detailed, equipment specific maintenance recommendations.</td>
<td></td>
</tr>
<tr>
<td>23. Transmit to the Owner one (1) electronic copy of Commissioning Documentation listed above.</td>
<td>Updated documents</td>
</tr>
</tbody>
</table>

**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:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>24. Conduct seasonal and/or deferred systems testing.</td>
<td>Completed functional test reports</td>
</tr>
<tr>
<td>25. Participate in Lessons Learned meeting.</td>
<td>Project observation report</td>
</tr>
<tr>
<td>26. Schedule and attend warranty walkthrough two (2) months prior to end of warranty period.</td>
<td>Project observation report</td>
</tr>
</tbody>
</table>

**Systems to be Commissioned and Sampling Rate**

1. Plumbing Systems.
   a. Domestic Water Pump Skid
   b. Water Heater – Central or Point of Use
2. Mechanical Systems
   a. Air Distribution Systems and associated controls, including
      i. Energy Recovery Systems (Exhaust air system)
      ii. Fan Coil Units
      iii. Cabinet unit heaters and Blower coil units
      iv. Fire Alarm interface
   b. Utility Metering and Verification Systems
   c. Hydronic Systems
      i. Chilled Water Pumps
      ii. Heating Water Systems, including
          1. Heat Exchangers
          2. Heating Water Pumps
      iii. Snowmelt System, including
          1. Heat Exchanger
          2. Pumps
3. Electrical.
   a. Lighting Controls Systems
   b. Emergency Inverter
4. Systems Commissioned by Others
   a. Campus Utility Interface Metering
   b. Fire Alarm Systems.
   c. Access Controls
   d. Audio/Visual Systems
   e. Fire pump, start up by manufacturer per NFPA 20

Testing/sampling will be performed at the rates listed in the 01 91 13 specification template available on the Design and Construction website.
3.0 Schedule

The project is currently in the DD Document phase.

To review the current documents:
1. Please send an e-mail request to: facilities-dcs@uiowa.edu
2. E-mail must include the subject line: RFP Cx - 0303801 – Psychological and Brain Sciences Building
3. To allow for processing, e-mail must include the phone number and physical address of the firm making the request.

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

Final Construction Document Review Meetings March/April 2017
Begin On-Site Construction June 2017
Substantial Completion February 2019

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 or related discipline is strongly preferred. Other technical training, past commissioning, and field experience will also be considered.
3. Hold ASHRAE CPMP Certification, NEBB BSC Accreditation, University of Wisconsin CxAP, AABC CxA Certification, or BCxA CCP Certification.
4. Exhibit extensive experience in the operation and troubleshooting of HVAC systems and energy management control systems.
5. Demonstrate the ability to manipulate the building controls system, including the following functions:
   a. Cycle equipment on and off.
   b. Establish and collect trend data.
   c. Manipulate individual devices, such as dampers and valves.
   d. Manipulate individual setpoints.
e. Manipulate VFD and motor speeds.
6. Exhibit extensive field experience. A minimum of five full years in this type of work is required.
7. Exhibit extensive knowledge in testing and balancing of both air and water systems. NEBB, AABC or TABB certification preferred.
8. Exhibit experience in energy-efficient equipment design and optimization.
9. Exhibit direct experience in monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment.
10. Exhibit excellent verbal and writing communication skills. Highly organized and able to work with both management and trade contractors.

6.0 Proposal Requirements

Include the following:
1. List the individual who will be the lead Cx Agent, with overall responsibility for the project.
2. Provide an organization chart indicating proposed project team.
3. Describe the proposed approach to managing the project.
4. Provide resumes for key staff members.
5. 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.
6. Provide pricing information in the following format:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Fee Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Phase</td>
<td>$</td>
</tr>
<tr>
<td>Construction &amp; Acceptance</td>
<td>$</td>
</tr>
<tr>
<td>Occupancy</td>
<td>$</td>
</tr>
<tr>
<td>Reimbursables</td>
<td>$</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$</td>
</tr>
</tbody>
</table>


After selection, the successful firm shall provide a written proposal on the University of Iowa Letter of Proposal form found on the University’s Facilities Management/Consultants web site. Note that hard copies of the agreement will not be required with the RFP.

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

7.0 Proposal Evaluation and Award

1. The Owner will consider and evaluate the following proposal components:
   a. Firm experience, qualifications, and ability to react to changing workloads
   b. Lead Cx Agent experience, 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 Monday, October 10, 2016.

Submit electronically to:

Jennifer-l-hoffman@uiowa.edu and Emily-s-smith@uiowa.edu

Should you have any questions or comments, please contact:

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Iowa City, Iowa 52242-1922