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Addendum #1 – 9/26/2011
CP144260 – Campus Utility System
Notice 11-25 RFQ for Commissioning

1. See the attached “Scope of Services to be Provided” consisting of three pages, attached, for expanded clarification of services scope.
2. The Commissioning firm will be responsible for hiring the Testing and Air Balancing (TAB) firm. The current CU approved firms are:
 - a. Checkpoint
 - b. Finn & Associates
 - c. JPG Engineering
 - d. TAB Services
3. Regarding Section II – Submittal Requirements, subsection D – Project Approach (page 10): This is in reference to your firm's and your consultants' budget, methodology, cost control, and quality control methodology. For example, how would your firm track costs within the budgetted amount for your services, and communicate if overages were likely to occur.
4. Regarding Section II – Submittal Requirements, subsection C – Prior Experience (page 9): It is expected that your firm's submission would include individual resumés and proposed experience as a team.
5. Regarding Section II – Submittal Requirements, subsection A – Project Team (page 9): Time commitment of staff identifies the percentage of time particular members will be involved on this project. Current and projected workload identifies availability of staff and/or the firm to work on this project, i.e. may be currently employed on a number of projects which are a certain percent complete, and staff would be available to work on this project by the date needed.
6. Regarding Section II – Submittal Requirements, subsection E (page 10): If your firm's work would require the use of local labor and/or materials, the response might address use in the past and how labor and/or materials were obtained.
7. Both Appendices C and D are required to be signed and submitted with the your RFQ response.
8. In regards to fee proposals (**not** to be submitted with your RFQ response), it is expected a lump sum fee for all services described in the RFQ will be presented along with unit price list for labor hours and/or specific services.

9. Reference University of Colorado Boulder Campus Standards available at <http://www.colorado.edu/facilitiesmanagement/pdc/construction/standards/index.html> for reference to standard testing requirements.
10. There are no specific “state procedures” for commissioning, rather the Commissioning Firm shall ensure that the commissioning process is in accordance with ASHRAE Guideline 0-2005.

END

SCOPE OF SERVICES TO BE PROVIDED

The proposal is divided and detailed for the stages of the project. Project Background Information

- A. Commissioning Services Performed in the Design Phase
- B. Commissioning Services Performed in the Construction Phase
- C. Commissioning Services Performed in the Warranty Phase

THE COMMISSIONING PROCESS

The proposal shall outline the Commissioning Process. The services are outlined as follows:

- I. Insert Company Flow Chart Describing Process Graphically
- II. Commissioning Services Performed in the Design Phase
 1. Kick-Off Meeting with Owner (Reps) and Design Team to discuss Commissioning Process & Plan. Deliver meeting minutes to attendees
 2. Facilitate Design Commissioning Coordination meetings with design team to discuss the results of design reviews and to develop and review status of commissioning specification/plan, each member's tasks and commissioning project deliverables during design phase. Prepare and submit meeting minutes to attendees
 3. Draft Commissioning Plan
 4. Draft Division 18000 Commissioning Specification for all commissioned systems. Coordinate this document with the architect and engineers and integrate the commissioning specification into the overall project specification package. This document will include a detailed description of the responsibilities of all parties, details of the commissioning process; reporting and documentation requirements, including formats; alerts to coordination issues, deficiency resolution; start-up requirements; functional testing process; specific functional test requirements, including testing conditions and acceptance criteria for each piece of equipment being commissioned.
 5. Coordinate a controls integration meeting where the electrical and mechanical engineers, Owner's Rep and the Commissioning Firm discuss integration issues between equipment, systems and disciplines to ensure the integration issues and responsibilities are clearly described in the specifications.
 6. Perform a Design Review
 7. Perform Basis of Design (Design Intent Document) Review from the Design Engineer.

8. Draft Preliminary PFPT (pre-functional performance test) system readiness checklists
9. Draft Preliminary FPT (functional performance test) narratives
10. Draft list of system trends to be completed beginning 1-week before FPT system demonstrations
11. Make suggested commissioning reference inserts into the Construction Documents, and Specification Divisions 1, 15, 16, & 17
12. Provide air & water balancing specification review.

C. Commissioning Services Performed in the Construction Phase

1. Kick Off Meeting With Owner (Reps), Design Team & CM/GC to Discuss Commissioning Process & Plan. Prepare and submit meeting minutes to attendees.
2. Facilitate Commissioning meetings throughout construction. Prepare and submit meeting minutes to attendees.
3. Review RFI's, addendums, and change order proposals
4. Review air & water balancing plan
5. Coordinate and direct commissioning activities using consistent protocols and forms, regular communications, consultations with all necessary parties and schedule updates.
6. Work with Owner and CM/GC in maintaining commissioning plan and project timeline
7. Review Contractors PFPT updates
8. Review Equipment submittals in sync with the design team for equipment being commissioned.
9. Review O & M submittals in sync with the design team for equipment being commissioned
10. Review and update FPT's based on Contractor feedback
11. Deliver FPT's for Contractor use in completing system FPT dry-run
12. Commissioning Firm shall review contractor/manufacturer supplied equipment start-up forms prior to start-up.
13. Commissioning Firm shall observe random contractor & manufacturer's equipment startup procedures on systems being commissioned based on field visits (coordinated with project schedules and A/E).
14. Review Contractors' equipment and system training plans, timeline, and training documents
15. Perform Site visits (coordinated with project schedules and A/E) and document System Readiness Installation Observations, Progress Photos, & distribute Field Reports
16. Develop & update field notes, PFPT Corrective Action Log & Pending Issues Log throughout project
17. Review Preliminary & Final Balancing Report
18. Facilitate FPT demonstration with Owner (Reps) & Contractors.
19. Assist in development of SCADA graphics, alarms, maintenance tags, and hysteresis.
20. Collect PLC printouts during FPT demonstration

21. Collect SCADA printouts during FPT demonstration
22. Collect SCADA trending printouts
23. Maintain FPT Corrective Action Log
24. Facilitate seasonal deferred FPT demonstration
25. Facilitate 10-month warranty meeting with facility staff and review commissioning plan and lessons learned
26. Project Closeout & deliver Final Commissioning Report to the Owner (includes paper & CD copy of final report)

D. Commissioning Services Performed in the Warranty Phase

1. Facilitate seasonal deferred FPT demonstration
2. Maintain FPT Corrective Action Log
3. Facilitate 10-month warranty meeting with facility staff and review commissioning plan and lessons learned
4. Project Closeout & deliver Final Commissioning Report to the Owner (includes paper & CD copy of final report)
5. Assist with the development of the CMMS system.

SAMPLE FORMS

Provide as part of your firm's RFQ Submittal, as a minimum, the following Documentation Sample Forms for the commissioning process including:

- Sample of a Commissioning Plan
- Sample of a Commissioning Specification
- A Sample of a Design Review Report
- Sample of a System Functional Performance Test Narrative
- A TAB Review Report
- Commissioning Process Test Plan & Schedule