

Exhibit A: Consultant's Scope of Services / Work

Commissioning Services for **Area Cooperative Educational Services**

Project: Area Cooperative Educational Services ACES at Chase State Project 244-0044 MAG

Provide Professional Commissioning Engineering Services for the project at ACES at Chase School in Waterbury, CT for "Alterations" and Extension state project No. 244-0044 MAG, as indicated herein:

The project consists of "Alternations", including code & ADA upgrades, site work and new electrical systems, lighting system, plumbing, hot water system, fire protection, communications, and life safety systems. The facility will have upgraded new heating, ventilating, and air conditioning (HVAC) systems and associated energy management control systems. The project shall comply with the State of Connecticut Office of School Construction Grants Guidelines for school construction projects.

CD Draft Plans and specifications are now available and may be viewed free of charge from SPA's website at the following address:

[07312023 Submission](#)

The commissioning process shall be an integral part of the building project in accordance with the High Performance Building Construction (HPBC) Standards for State funded buildings as required by Section 16a-38k of the Connecticut General Statutes and further defined by the Connecticut Building Standard Guidelines Compliance Manual for High Performance Buildings most current version and prepared for the Connecticut Office of Policy and Management. The commissioning process shall include but not limited to the following systems: (1) Establish the General Commissioning Requirements (2) Building Assemblies – see summary of scope by building above for new roofs (3) Fire Protection & Suppression Systems (4) Fire Alarm System (5) HVAC systems and associated energy management control systems including air conditioning, refrigeration systems and associated controls (6) Plumbing Systems including but not limited to domestic hot water systems & water using systems (7) Electrical Systems (8) Lighting controls.

At a **minimum**, the commissioning agent's (CxA) lead person designated as the commissioning authority on this project shall be certified as a commissioning agent by the Building Commissioning Association or equal and shall have acted as the commissioning authority on at least three (3) similar or more complex projects within the last five years. Preferably be or be directly supervised by a Professional Engineer registered in the State of Connecticut or have an S-license.

At a **minimum**, the commissioning agent shall have commissioning experience on at least one project in the last five years with a construction value equal to or greater than \$35,000,000.

The CxA shall be prepared to commence services within ten (10) calendar days of contract execution.

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ACES is seeking a CxA who will commit to staffing this project with persons satisfying as many of the following qualifications as possible.

1. Demonstrated experience with high performance systems design and HVAC control optimization.
2. Demonstrated experience in the operation and troubleshooting of HVAC systems, energy management control systems, fire protection systems, and fire alarm systems.
3. Demonstrated experience in the oversight of testing and balancing of both air and water systems.
4. Demonstrated experience in the oversight of building Operation and Maintenance (O&M) training.
5. Demonstrated experience in the review and approval of O&M manuals prepared by trade contractors.
6. Demonstrated experience in monitoring and analyzing systems operation during warranty period,
7. Demonstrated experience in managing the commissioning process and the preparation of commissioning specifications based on ASHRAE Guideline 0-200S.
8. Demonstrated experience in working successfully with Design Teams and management and trade contractors.

Please note that this Request for Qualifications/Proposal requires that the CxA shall not change key staff that is indicated in the proposal as assigned to work on the project without the Owner's advanced written consent, which shall not be unreasonably withheld. Replacement staff shall have equivalent qualifications as the original staff members.

The CxA shall lead the commissioning process and shall plan, schedule, review, coordinate and oversee the implementation of all commissioning process activities. The CxA shall report to the Owner and coordinate with the Design Team, Construction Manager and the Contractors throughout the commissioning process. The following is an outline of the commissioning process to be performed by CxA, Design Team, Construction Manager, Contractors, and Owner which may be used as a guideline to prepare a proposal. This outline is not meant to be an all-inclusive summary of tasks/services required as a part of the commissioning process.

Initial Phase:

1. CxA shall develop the OPR per the CT HPB requirements.
2. CxA shall review and comment on Basis of Design (BOD) developed by the Design Team to evaluate if BOD meets the intent of the OPR and the initial design goals for compliance with the HPBC Standards.
3. CxA shall provide Commissioning related reporting requirements per section 16a-38k-8.
4. CxA shall develop Commissioning Plan with a list of all equipment to be commissioned, delineation of roles, and details on scope, timeline and deliverables through the process for review by Owner, Design Team and shared with the Construction Manager.

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5. CxA shall develop outline of O&M Manual Requirements, outline of Owner Training Requirements, and outline of Construction Verification Checklists for review by Owner, Design Team and shared with the Construction Manager.
6. CxA shall develop Commissioning Issues and Tracking Log for use by Owner, Design Team, Construction Manager and CxA.
7. CxA shall review and comment on current Construction Documents by the Design Team to evaluate if Documents meet the intent of the OPR, comply with the HPBC Standards design goals.
8. CxA shall provide Specification requirements for Commissioning.
9. CxA shall review and comment on the Design Documents by the Design Team to evaluate if they meet the intent of the OPR, comply with the HPBC Standards and include references to CxA's Commissioning Requirements,
10. CxA shall update Commissioning Issues and Tracking Log for use by Owner, Design Team, Construction Manager and CxA
11. CxA shall attend a minimum four (4) Design Team Coordination Meetings as required to implement commissioning process.
12. CxA shall prepare a Commissioning Process Report for review and use by Owner and Design Team.

Construction Administration (CA) Phase:

1. CxA shall review and comment on Contractor submittals for systems covered in Commissioning Plan. CxA shall review submittals for compliance with CDs. CxA review shall precede and be superseded by Design Team reviews. Contractor Submittals may include product data, system layouts, Contractor's Coordination Plans, and system O&M Manuals.
2. CxA shall attend a minimum of two (2) Integrated Design Process Meeting, in accordance with Section 16a-38k-3(b) of the Connecticut HPBC Standards.
3. CxA shall develop the final Contractor Construction checklist and submit to the Construction Manager for review and execution and forward copies to the Owner and Design Team.
4. CxA shall develop detailed Functional Performance Tests and submit to the Construction Manager for review and use in their pre-testing of the systems and forward copies to the Owner and Design Team.
5. CxA shall visit the site at intervals appropriate to the stage of the Contractor's operations for systems being commissioned to determine, in general, if the Work is being performed in accordance with CDs. The CxA shall provide a Field Report after each visit for documentation. The CxA shall attend commissioning meeting and provide meeting agenda and meeting minutes. CxA shall coordinate these meetings with the Construction Manager, Owner and Design Team.
6. CxA shall during its site visits review the Contractor's operations for storage and installation of ductwork, HVAC equipment and associated systems to observe and document compliance with Section 16a-38k-3(e) of HPBC Standards for Indoor Air

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Quality Management Plan requirements.

7. CxA shall oversee Contractor's balancing of air and water systems by observing testing of selected areas, reviewing completed balancing reports, and by random spot testing other areas to verify/document results, CxA shall coordinate with the Construction Manager re-testing as necessary until performance is in satisfactory compliance with CDs.
8. CxA shall field check and document completion of Contractor's Construction Verification Checklists.
9. CxA shall establish sampling protocol for Functional Performance Testing of HVAC systems included in the Commissioning Plan, CxA shall observe Functional Performance Testing by Contractors and document deficiencies. CxA shall coordinate HVAC systems optimization and re-testing as necessary until performance is in satisfactory compliance with designed performance goals defined in CDs. CxA should include a minimum of one (1) day for re-testing.
10. CxA shall review and approve the agenda for the Owner's training sessions by Contractors and evaluate the adequacy of training. CxA shall attend a minimum of three (3) training sessions for key building systems as agreed to with the Owner to observe the training is acceptable and adequate.
11. CxA shall maintain Commissioning Issues and Tracking Log including testing and balancing issues, deficiencies and non-conformance items for use by Owner, Design Team, Construction Manager, Contractors and CxA.
12. CxA during site visits shall attend a minimum of one (1) Construction Progress Meeting per month during the construction period, as required to implement the commissioning process. CxA will inspect the progress of the installation of the commissioned systems before or after the meeting and submit for record a report of field observations.
13. CxA shall prepare CA Commissioning Process Report for review and use by Owner, Design Team and Construction Manager. This report should be provided prior to Final acceptance.

Occupancy and Post-Occupancy Operational Warranty Phases:

1. CxA shall oversee and document deferred seasonal testing by the Contractors that could not be done earlier. CxA shall coordinate corrections and re-testing as necessary until performance is in compliance with CDs, CxA to include a minimum of three (3) day for re-testing.
2. CxA shall consult with Owner's operational personnel at appropriate intervals to determine that commissioned systems are operating properly and evaluate if additional personnel training may be required.
3. Three (3) months prior to the warranty expiration, the CxA shall conduct a post-occupancy survey of the Owner's operational personnel to determine any adjustments made to the equipment operation on systems included in the Commissioning Plan. The CxA shall conduct a meeting with design, construction, commissioning and operational staff to evaluate and document comments and concerns resulting from the post-occupancy survey. This includes identification of any warranty related issues and development of a plan for

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resolution.

4. CxA shall assist the Owner in overseeing the resolution of any warranty issues on commissioned systems during the warranty period.
5. CxA shall prepare Final Commissioning Process Report for use by Owner and Design Team at end of warranty period. Final Commissioning Report shall incorporate review comments by Owner and Design Team on CA Commissioning Report, the results of all post-occupancy testing and evaluations and document resolutions to all items on the Commissioning Issues and Tracking Log.
6. The Buildings at Chase are expected to be substantially complete in stages with each of the seven building being turned over at separate times.
There will need to be warranty meeting for each building listed below. The CM@R is developing the overall project schedule and these timeframes will then be established.
 - a. Main Building BLDG 1
 - b. Library and Annex BLDG 2
 - c. International Building BLDG 3
 - d. Arts Hall BLDG 4
 - e. Lower School BLDG 5
 - f. Upper School BLDG 6
 - g. Gymnasium BLDG 7

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End of Section