

Administration of Project: East Providence School District

Project Name Martin Middle School Renovation and Addition Response Deadline Date March 10, 2023 Time 2:00 p.m.
Project Location 111 Brown St Project Number EPSD.DISTRICT.2023.005
City / County East Providence, Rhode Island 02914 Owner Representative Superintendent of Schools or designee
Owner East Providence School District Contracting Authority East Providence School Committee
No. of paper copies requested 3 No. of electronic copies requested (PDF) 1

Submit the requested number of Statements of Qualifications directly to Craig Enos at 1998 Pawtucket Avenue, East Providence, RI 02914. See Required Elements of Proposal and Submittal Instructions section for more information.

Submit all questions regarding this RFP in writing to Craig Enos, Director of Finance via email cenos@epschoolsri.com with the project number included in the subject line (no phone calls). Questions may be submitted until five (5) business days before the response deadline and will be answered electronically until three (3) business days before the response deadline. Answers will be sent to the Proposers designated contact person at their email address as well as posted publicly on the school district website and Bidnet Direct. The name of the party submitting a question will not be included with the answer. The East Providence School District is the awarding authority and reserves the right to reject any and all proposals or parts of proposals; to waive any defects, information, and minor irregularities; to accept exceptions to these specifications; to award contracts or to cancel this Request for Qualifications if it is in the District's best interest to do so.

Client/Project Overview

EPSD is seeking proposals from well qualified vendors for Commissioning Services for Edward R. Martin Middle School, located at 111 Brown Street in East Providence, RI. Martin Middle School was built in 1977 and comprises of approximately 170,000 square feet. The building was originally designed as a junior high school, in an open classroom concept. Currently there are four academic "houses" within the building. The program as submitted to RIDE will require multi-phase renovation and addition, demolishing portions of the existing building but keeping the support spaces to remain operational.

Upon occupancy of the new 3 floor addition at Martin Middle School, the existing vacated academic wing will be demolished to allow for development of a new student commons, driveways, parking areas and play areas. The project's scope includes abatement and demolition services required to complete the work.

Program Summary:

- Light/ Comprehensive Renovation approx. 41,320 sf (Art & Music, Gym, Cafeteria, Auditorium)
- New addition for 3 story Academic Core approx. 82,000 sf (grades 6-8)
- New addition for 2 story PreK wing approx. 47,000 sf
- Administrative offices

- This project will require careful coordination between Ownership/Facilities/Project Manager/Construction Manager and the Architect.

Peregrine Group has been selected to lead the project in direct coordination with the Owner. Ai3 Architects, Inc has been retained for Design Services.

- In performing the scope of services the Commissioning Agent will consider acceptable industry standards, including but not limited to, those developed by the American Society of Heating, Air Conditioning and Refrigeration (ASHRAE), Building Commissioning Association, the Green Building Council (LEED), and the Collaboration for High Performance Schools (CHPS). Unless otherwise stated, the Full Building Commissioning shall meet the commissioning requirements of RIDE and NE CHPS.

Conceptual Schedule [Subject to Change]

- Schematic Design (SD) Complete beginning March 2023
- Preconstruction Construction Manager Award end of March 2023
- SD Submission to RIDE end of March 2023
- Development Design (DD) Complete mid-April 2023
- DD Submission to RIDE mid-May 2023
- Construction Documents 90% (CD) Complete September 2023
- CD Submission to RIDE end of September 2023
- Construction Phase 1 enabling, Gr 6-8 Academic Wing start October 2023- February 2025
- Construction Phase 2 Pre-K Wing start February 2025- April 2026
- Construction Phase 3 Site start December 2025- August 2026
- Construction complete year end 2026

Commissioning (Cx) Agent Service to Be Provided

- Categories of services for the project may include Full Building Commissioning defined as commissioning activities for new construction or major addition and renovation which should follow the project phases from the Schematic Design Phase through construction.
- Commissioning Activities
 - HVAC systems: Heating, ventilating and air conditioning systems, and all mechanical equipment forming a part of these systems including, but not limited to, all boilers, chillers direct expansion refrigeration equipment, fuel storage and handling systems, pumps, piping air handler systems, terminal equipment, fans, exhaust systems, ventilation systems, variable frequency drives, heat recovery systems, thermal solar systems, and automated temperature controls and energy management systems.
 - Plumbing systems and all equipment forming a part of these systems including, but not limited to potable and not-potable water systems, water pressure booster systems, service water heating systems, sanitary waste and vent systems, laboratory waste and acid neutralization systems, natural gas systems, and compressed air systems.
 - Electrical Power Systems and all equipment forming a part of these systems including, but not limited to, electrical supply and distribution systems, emergency and standby power systems including automatic transfer switching systems, lighting and lighting control systems, low voltage systems, grounding and bonding systems, audio visual systems, and interfaces to automated temperature/building automation control systems.
 - Voice Data, Video Systems and all equipment forming a part of these systems including, but not limited to cabling, switches, servers, routers and interfaces.
 - Life Safety Systems and all equipment forming a part of these systems including, but not limited to, security and surveillance systems, fire alarm systems, fire protection and suppression systems, fire pump systems, egress lighting, and egress pressurization.
 - Building Automation and Controls and all equipment forming a part of these systems including but not limited to, the interface of these systems with HVAC systems, fire alarm and security systems.
 - Other building systems including, but not limited to, acoustic, American with Disabilities ACT, Rhode Island State Building Code and NE-CHPS.

The Cx Agent will be expected to provide commissioning services from Schematic Design Phase and continue through preparation of construction documents, bidding, construction, close-out and building occupancy as phased or as otherwise noted. The Cx Agent, will be expected to support the Owner through the RIDE submissions as required. Reference RIDE Regulations for additional information and requirements as necessary.

Project Documents

- Stage II Documents
- Commissioning Agent Scope of Services, Exhibit A

Required Elements of the Proposal:

A successful proposal will be concise and to the point. All proposals should address the following:

- **Proposal shall not exceed 10 pages in length**
- Identification of team and roles and responsibility of all Cx team members
 - Resumes for all assigned team members, with personal references
- Firm relevant commissioning experience/qualifications
- Provide project pricing based on Project Phases and additional allowances
 - Schematic Design through Construction Document Phases
 - Bidding Phase
 - Construction Phases- Grades 6-8 and Pre-K Wing
 - Acceptance Phase per Construction Phases
 - Project Closeouts per Construction Phases
 - Post Commissioning per Construction Phase
- Sample matrixes including design review report, issues log, training plan, field reports
- References - please include three (3) clients/projects of similar scope and size including contact name, address, phone number and email address
- Current Project and Backlog Information: Provide a list of your current projects and projects in your backlog in the region.

Interview: After submitting responses to the RFP, the short-listed firms may be interviewed by the Contracting Authority and Owner. The purpose of the interview will be to meet the proposed Project team, become familiar with key personnel, and understand the project approach and ability to meet the stated objectives for the Project. Please be prepared to discuss with specificity the firm’s capacity to conduct this work in compliance with the timetable, budget and any other Owner expectations. The Contracting Authority will notify the selected firm(s) to schedule time(s) for the interview(s).

Selection Schedule: subject to change.

RFP Advertise	Feb 20, 2023
Proposals due	March 10, 2023 2pm
Interviews if required	Week of March 13, 2023
Selection of Cx Agent	Week of March 27, 2023

Cancellation and Rejection: The Contracting Authority reserves the right to reject all proposals and cancel at any time for any reason this solicitation, any portion of this solicitation or any phase of the Project. The Contracting Authority shall have no liability to any proposer arising out of such cancellation or rejection. The Contracting Authority reserves the right to waive minor variations in the selection process. The Contracting Authority shall not reimburse proposers for any expenses related to their preparation and submission of a proposal including interviews.

Submittal Instructions

Firms are required to submit the accompanying documents.

Electronic submittals should be combined into one PDF file named with the project number listed on the RFP and your firm's name. Use the "print" feature of Adobe Acrobat or similar software for creating a PDF rather than using a scanner. If possible, please reduce the file size of the PDF. Also, please label the CD or thumb drive and the sleeve with the project number and firm name if applicable.

Paper copies of the proposal, if requested, should be stapled only. Do not use special bindings or coverings of any type. Cover letters and transmittals are permitted but not necessary.

Facsimile copies of the Statement of Qualifications will not be accepted.

Exhibit A
Commissioning Agent Scope of Services

1) Schematic Design through Construction Document Phases

- a) Review and comment on clarity and completeness of the Owner's Project Requirements (OPR) document developed by the Owner, OPM, and design team. Provide assistance as necessary to ensure thoroughly developed document.
- b) Within thirty days of the expected contract, the Cx Agent shall prepare and submit to the OPM a Design Phase Commissioning Plan to include:
 - i) General Building Information. A very brief description of the building's location, size and type of use;
 - ii) Commissioning Team Information: a list of the Cx Agent's team members, and their contact information along with contact information for the OPM, Design Team, CM and Owner commissioning representatives.
 - iii) Commissioning Task Matrix: a matrix or narrative describing major commissioning activities and the commissioning team member(s) designated to lead and assist with fulfilling those objectives;
 - iv) Commissioning Scope of Work: A detailed scope of work highlighting the systems that will be commissioned as indicated in the contract, and what commissioning task will need to occur over the design process. This section shall also cover the level of detail needed for the project's design documentation and the content of the commissioning specifications.
 - v) Commissioning Schedule: A preliminary commissioning schedule which is cross-referenced with the Project's schedule highlighting dates when key commissioning activities need to be completed.
 - vi) Commissioning Forms: description of the forms to be complete for various phases of the commissioning process and where they are located or can be obtained.
 - vii) Systems Manual. Define the roles, responsibilities, and requirements of the OPM, Design Team, Construction Manager (CM) and subcontractors in the compilation and preparation of the Systems Manual.
- c) Contractor shall review and comment on the clarity and completeness of the Basis of Design (BOD) document developed by the design team.
- d) Contractor shall perform a thorough review of all drawings and specifications. These reviews shall occur at the following milestones: Schematic Design, Design Development, 90% complete Construction Documents, 100% Construction Documents and shall review and comment on their completeness, coordination among design disciplines, and adherence to the OPR. Such review shall include each of the following issues:
 - i) Review and provide input on how to facilitate effective commissioning (including sufficient accessibility, test ports, monitoring points and related features).
 - ii) Review for adequacy of the energy efficiency and adequacy of the effectiveness of building layout and efficiency of system types and components for building shell, HVAC systems and lighting systems.
 - iii) Review envelope design and assemblies for thermal and water integrity, moisture vapor control and assembly life.
 - iv) Review HVAC, lighting, fire control, emergency power, security control system, strategies and sequences of operation for adequacy and efficiency.

- v) Review commissioned systems layout and their impact on the other systems and the facility as a whole toward facilitating operations and maintenance (including equipment accessibility and system control).
 - vi) Review systems relating to thermal, visual, acoustical, air quality comfort, and air distribution and report on their compliance with the design intent.
 - vii) Review and report on building materials, landscaping, use of water resources, and waste management and their respective possible impact on the environment and their compliance with the design intent.
 - viii) Review and comment on the adequacy of the specified building operations and maintenance plan.
 - ix) Review and comment on the adequacy of specified operator training requirements.
 - x) Review the bid documents and comment on the adequacy of building commissioning specifications including testing requirements by equipment type.
 - xi) Review the mechanical concepts/design and recommend enhancements for operational efficiency improvements.
 - xii) Review the electrical concept/systems and recommend enhancements for operational or efficiency improvements.
 - xiii) Review the Construction Documents, including the drawings and specifications prepared for each subcontractor, to assess their completeness and coordination among the various disciplines, to assess provisions for construction sequencing, materials and equipment delivery and storage, site and building access, testing requirements, and training requirements.
 - xiv) Review life cycle cost analysis of the mechanical systems relative to energy efficiency operations and maintenance, indoor air quality, functionality, and sustainability.
- e) For each review milestone and within two (2) weeks of receipt of documents, Cx Agent shall prepare a Design Review Report which shall include a list of documents reviewed by titled and issue number or date as well as a record of issues and findings that require further attention (Issues Log). The Design Review Report and Issues Log shall be submitted to the Owner/OPM, Design Team and CM for discussion and resolution. Once acted upon by the appropriate party, each issue shall be back-checked by the Cx Agent who shall revise the Design Review Report and Issues Log to include the issues resolution and back-check results and re-issue the report to the Owner/OPM, Design Team and CM.
- f) Attend design review meetings on an as-needed basis. Meetings shall be coordinated by the OPM and will be held on a weekly basis.
- g) Cx Agent shall, through the OPM, organize, coordinate and conduct a controls integration meeting with the mechanical, electrical and systems control engineers who are part of the Design Team to discuss integration issues between equipment systems and disciplines so that integration issues and responsibilities are clearly described in the construction specifications.
- h) Cx Agent shall develop commissioning specifications (the "Cx Specifications") for inclusion in the Construction Documents. Schedule for completion of the Cx Specifications shall be commensurate with the overall Project schedule. The Cx Specifications shall, at a minimum, define the commissioning requirements for each specification section, for a special specification division, and for each of the systems and equipment to be commissioned as identified in the Contract, and shall be coordinated for format and content with the project manual developed by the Design Team.
- i) Cx Specifications shall include, but shall not be limited to, requirements for commissioning submittals, start up and checkout test plans, functional test development support, pre-functional

checklists and functional test execution, training plan development and execution, operations and maintenance manuals, as-built drawings and coordination among subtrades.

- ii) Cx Specifications shall specifically include specifications for the start-up protocols including an identification of any and all equipment for instrumentation needed for measurements during pre-functional testing and functional performance testing, so that these requirements and any specialized equipment or instrumentation will be clearly delineated and provide for in the Construction Documents. These procedures shall also be included in the Design Team/CM pertinent bid specifications for relevant subcontractors
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- i) The Cx Agent shall develop the Construction Phase Commissioning Plan (“the Cx Plan”) including all documentation identifying and describing all required functional performance tests and defining clear procedures for the commissioning process. The Cx Plan shall be provided to the Design Team, OPM and CM for review and approval and incorporation into sub-contractor bid documents. At a minimum the plan shall include:
 - i) General Building Information. A very brief description of the building’s location, size and type of use.
 - ii) Commissioning Team Information: a list of the Cx Agent’s team members, and their contact information along with contact information for the OPM, Design Team, CM and Owner commissioning representatives.
 - iii) Commissioning Task Matrix: a matrix or narrative describing major commissioning activities and the commissioning team member(s) designated to lead and assist with fulfilling those objectives.
 - iv) Commissioning Scope of Work: Detailed description of all systems schedule for commissioning, including the nature of the testing to be performed for each piece of equipment, for each sub-system and for each system.
 - v) Deliverables: Clearly defined with deadlines, responsible parties, deliverables may include schedules, test plans, test reports, training plans and final reports.
 - vi) Schedule: The schedule shall be coordinated with the overall Project schedule as established by the OPM.
 - vii) Checkout, Startup & Pre-functional Testing: Define the process and procedures to be used for the installation review, startup and pre-functional testing process and required integration between these activities for each piece of equipment, subsystem, and system.
 - viii) Functional Performance Testing: Describe the functional performance testing process, including prerequisites and any special equipment or instrumentation needed to obtain necessary measurements during performance testing. Include requirements for deferred seasonal functional performance testing as appropriate.
 - ix) Test Guidelines: Include requirements for review, approval and documentation practices and test acceptance criteria.
 - x) Training & Turnover: Identify training requirements, and responsibilities for development of the training plan and participation by the Commissioning Team members in the training process. The training program shall assure that the Owner’s building operation personnel receive adequate training for the proper operation of the new facility systems. Define required O&M, as-built and commissioning deliverables and the deliverables turnover procedure, with references to the construction specifications as appropriate, to ensure that the school district receives all necessary documentation from the CM.
 - xi) Other commissioning-related correspondence, checklist, test forms, and documentation.
 - xii) Upon OPM’s receipt of 100% complete Construction Documents, Contractor shall provide to the OPM six (6) hard copies and one (1) electronic copy (DOC and PDF formats) on flash drive of the Commissioning Plan, specification and graphic materials.

2) Bidding Phase

- a) Cx Agent shall attend and participate in the pre-bid meeting(s) defining, to those in attendance, what is involve in the commissioning process, reviewing the sequence and schedule of the commissioning phase, and explaining its importance to the Project.
- b) Cx Agent shall assist the Design Team and OPM in responding to requests from prospective bidders for information or clarification relating to commissioning.
- c) Upon request of the OPM, Cx Agent shall evaluate and provide input to the OPM and Design Team with respect to proposals received from Construction Managers, equipment suppliers, subcontractors or advisers providing equipment, materials or services in connection with the Project.

3) Construction Phase

- a) Cx Agent shall coordinate the commissioning work with the CM, OPM and the Design Team and assess whether the commissioning activities are properly accounted for in the master Project schedule.
- b) Cx Agent shall attend construction meetings at least once per month to advise the project team on critical path milestone dates, including equipment delivery and installation, and other matters that impact commissioning and commissioning status.
- c) When equipment to be commissioned is about to be installed and during the installation of such equipment, Cx Agent shall track the progress and quality of the work being performed. To that end, the Cx Agent shall visit the site at such intervals as are appropriate to the state of construction; and whenever a significant amount of work in a specific discipline is being installed or constructed, Cx Agent shall bring to the site visits the specific members of Cx Agent's core team with expertise in such disciplines. Cx agent shall advise the OPM on any issues related to these matters verbally before leaving the site and in writing within seven calendar days of the site visit. The Cx Agent, however, shall not be required to make exhaustive or continuous on-site inspection to check the quality or quantity of the work.
- d) In addition to attending construction meetings, the Cx Agent shall, through the OPM plan and conduct periodic commissioning team meetings, which shall include, at a minimum, the OPM, CM, sub-contractors responsible for the installation of systems to be commissioned, the Design Team, and the facility's operations personnel. These meetings should occur at least monthly during most of the Construction Phase and more frequently during the three months prior to the commencement of the Acceptance Phase. The Cx Agent shall prepare commissioning meeting minutes and distribute them to the OPM and all attendees within seven calendar days of the meeting.
- e) Cx Agent call prepare Pre-Functional Checklists and Functional Test Procedures for commissioned equipment and systems, and process shall:
 - i) Review CM and subcontractor submittals applicable to systems being commissioned concurrently with review by the OPM and Design team to obtain equipment and system information and verify compliance with commissioning needs and requirements; advise the OPM, CM and Design Team of any deficiencies noted that may impact the commissioning execution or intended system performance; review the Design Team's submittal documentation and comments and assist in resolving any discrepancies.
 - ii) Request and review additional manufacturers' or CM's information as required to develop the test procedures, including operations and maintenance materials, contractor start-up plans and component test procedures. Contractor shall request and review all Requests for Information (RFI), change directives and construction contract Change Orders (CO) for any changes that would affect the systems to be commissioned.

- iii) Before startup, gather and review the approved control sequences of operation and interlocks, and work with the OPM, CM, appropriate subcontractors and appropriate members of the design team until sufficient clarity has been obtained, in writing, to be able to write detailed functional performance test procedures.
- iv) The functional performance test procedures shall be developed from industry performance testing standards and supplemented by information contained in approved shop drawings and submittals and shall include requirements for operating each system and its components through each of the written sequences of operation and other significant modes and sequences, including startup, shutdown, unoccupied mode, manual mode, staging, miscellaneous alarms, power failure, security alarm when impacted and interlocks with other systems or equipment.
- v) Submit complete pre-functional checklists and functional performance test procedures and distribute to the OPM, CM, Design Team, and equipment vendors for review as required and to assure understanding prior to execution.
- f) Cx Agent shall review and comment on the CM's systems start-up plans and checkout plans, equipment and component test procedures, and shall coordinate these plans and procedures with the OPM and Design Team and through the OPM, shall facilitate CM compliance with the requirements of the Cx Plan and Construction Documents.
- g) Cx Agent shall review the Testing, Adjusting and Balancing (TAB) execution plan before TAB is executed, and shall monitor functional testing of the control system, and, through the OPM and Design Team, recommend and coordinate such retesting of the control system as may be necessary until, in the opinion of the Contractor, it's ready for use for TAB. In connection with the TAB, Cx Agent shall review air and water systems balancing by spot testing, by reviewing completed reports and by selected site observation.
- h) Cx Agent shall review and comment on the Training Plan developed by the CM. Review the plan for compliance with training requirements of the facility's operations staff and obtain documentation from the Owner attesting to the adequacy and acceptance of the Training Plan.

4) Acceptance Phase

- a) Cx Agent shall plan, organize, schedule and coordinate all commissioning and other work activities, including pre-functional testing and functional performance testing during this phase of the Project, shall coordinate such activities with the OPM and the CM, and shall lead all commissioning team meetings.
- b) Cx Agent shall update and review the Cx Plan and related documentation as necessary during the commissioning process.
- c) Cx Agent shall review pre-functional checklist execution by site observations and spot checks, shall review all completed pre-functional checklists, shall review the deficiency and resolution log, balancing reports, approved shop drawings, open RFI's and manufacturers' start-up sheets and comment on the readiness for functional performance testing.
- d) Cx Agent shall review the calibration status of sensors and actuators reported during pre-functional check by the installing contractors and shall spot check the same during functional testing.
- e) Working with the CM, equipment vendors and appropriate subcontractors, Cx Agent shall execute, coordinate, witness and assess the functional performance tests for each sub-system and system as established by the Cx Plan and shall coordinate retesting as necessary until satisfactory performance is achieved. Services shall include:
 - i) Coordination, witnessing and assessing performance tests of building envelope components.

- ii) Execution of tests on HVAC equipment during both the heating and cooling season. Tests shall be conducted with the systems utilizing permanent electrical power and, to the extent possible, under full load conditions, though some overriding of control values to simulate conditions may be allowed, if used judiciously.
- iii) Execution of tests using conventional methods, control system trend logs or standalone data loggers, to provide a high level of confidence in proper system function.
- iv) Analyze functional performance trend logs and monitoring data to assess performance.
- v) Maintain a master deficiency and resolution log, which shall become part of the Issues Log and a separate testing record, provide periodic, written progress reports to the OPM, and the Design Team which include test results with recommended actions, coordinate resolution of any deficiencies with the CM and appropriate subcontractors, and witness and document repeat testing, as necessary to indicate whether all deficiencies are corrected.
 - (1) In addition to the Issues Log, the Cx Agent will provide a Commissioning Variance Report. This report will be generated should deficiencies identified on the Issues Log remain unresolved for more than 90 days following addition to the Log, or should they potentially impair the District's use of the facility. The Variance Report should contain the following information:
 - (a) Identification of the specific issue
 - (b) Potential effect to Owner's occupancy or operation
 - (c) Proposed Corrective Action Plan
 - (d) Responsible parties for implementation of the Corrective Action Plan
 - (e) Proposed schedule for Corrective Action Plan
 - (f) Schedule date for system retest/scheduled site visit for verification of corrective action
- vi) Witness all test of commissioned equipment and systems which the Owner may contract for or which may be performed by manufacturer's personnel over whom the Contractor may not have direct control, review and comment on the accuracy of the test reports and the conformance of the test result with the Contract Documents, and document and include the test data and reports of such tests in the commissioning record and in the operations and maintenance manuals.
- f) Cx Agent shall coordinate and participate in the training of the facility's operations and maintenance staff in accordance with the requirements of the training plan, which shall include participation of the appropriate systems and equipment vendors and contractors. Cx Agent shall provide documentation to the OPM that this has been satisfactorily completed.
- g) Cx Agent shall review completed as-built drawings and records, including operation and maintenance manuals prepared by equipment manufacturers, fabricators or installers.
- h) The Cx Agent, with the assistance of the OPM, Design Team and CM shall develop a Systems manual that provides the information needed to understand, operate and maintain the building's systems and assemblies. Systems Manual shall be developed in accordance with ASHRAE 202-2013.
- i) Cx Agent shall participate in meetings and other Project activities relating to system start-up and after Substantial Completion shall participate in the review of the building operations.
- j) Cx Agent shall assess and report to the OPM whether all equipment and systems are working in conformance with the requirements of the Construction Documents and shall make recommendations for modification or adjustment as necessary.
- k) Cx Agent shall review all equipment warranties and advise the OPM, and Design Team of compliance with the Construction Documents.
- l) Cx Agent shall review all testing, adjusting and balancing with respect to each piece of equipment to be commissioned, for each system and combination of systems, and for the facility as a whole; shall assess the adequacy, accuracy and completeness of all final testing, adjusting, and balancing reports; and shall advise the OPM of any necessary corrections.

- m) Cx Agent shall observe all environmental performance testing, and testing of environmental monitoring systems or tests by manufacturers' personnel over whom Cx Agent may not have direct control, shall review and comment on the accuracy of the test reports and the conformance of the test results with the Contract Documents, and all permits and other applicable requirements, and shall document and include the results of these tests in the Final Commissioning Report.
- n) Cx Agent shall monitor the continuing adjustment, optimization, and modification of all systems to assess whether they meet operating and performance requirements specified in the Contract Documents and shall advise the OPM on a regular basis on the status of this process.
- o) Cx Agent shall coordinate with the OPM to review and recommend appropriate action with respect to the operator training program required by the CM.
- p) Cx Agent shall comment on documentation provided by the CM regarding the provision of all required tools, lubricants, spare parts and miscellaneous stat-up consumables required to be provided by the CM.
- q) Cx Agent may be required by the Owner to provide on-going support to the OPM and the Owner during the first full year of operation on an as-needed basis as a reimbursable service.
- r) Cx Agent shall accompany the OPM and Design Team on a walk-through site visit upon completion of punch list by the CM, review the deficiency and resolution log and report to the OPM on the installation completeness and functionality of all commissioned systems; and shall advise the OPM on any necessary corrections.
- s) Cx Agent shall provide the OPM and Design Team with prompt written notice if Cx Agent becomes aware of any fault or defect or noncompliance with the Construction documents as they may affect the systems to be commissioned.

5) Project Closeout

- a) Cx Agent shall provide a Final Commissioning Report. The report shall include an executive summary, list of participants and the role of each participant, brief building and systems description, an overview of the scope of commissioning and testing and a general description of the testing and verification methods.
 - i) For each piece of commissioned equipment, the report shall address the adequacy of the equipment, documentation and training, in satisfying the requirements of the Contract Documents in each of the following areas:
 - (1) Equipment/system specifications and design intent
 - (2) Equipment/system installation
 - (3) System functional performance and efficiency
 - (4) Description of the verification method used (manual testing, trend logs, data loggers, or other as appropriate) and observations and conclusions from the testing
 - (5) Non-compliance issues referenced to the specific functional test inspection, trend log, and other records where the deficiency is documented
 - (6) Equipment/system operations and maintenance
 - (7) Record documentation
 - (8) Operator and maintenance training
- b) All outstanding non-compliance items shall be specifically listed in the report, and recommendation for improvement to equipment or operations, future actions, commissioning process changes, and other appropriate matters shall also be listed.
- c) Appendices shall contain all acquired sequence documentation, Issues Log, meeting minutes, progress reports, deficiency lists, site visit reports, findings, unresolved issues, communications, and all other relevant information.

- d) Pre-functional checklists and functional performance tests and monitoring data and analysis shall be provided in a separate labeled binder.

6) Post Occupancy

- a) Cx Agent shall, through the OPM, plan, organize, schedule and coordinate required seasonal or deferred testing and deficiency corrections.
- b) Cx Agent Shall provide the final testing documentation for the commissioning record and operations and maintenance manuals.
- c) No later than ten (10) months after Substantial Completion of the Project and after one complete heating and cooling season, the Cx Agent shall return to the Project Site and review outstanding issues related to the original and seasonal commissioning, shall interview facility staff and identify problems and any concerns they may have with the operation and maintenance of the facility as originally intended, shall make suggestions for improvements and for recording any proposed changes in the operations and maintenance manuals, shall identify to the OPM and Owner those issues whose corrections may be covered by equipment and system warranties or by the original construction contract, and shall assist the OPM and the facility staff in development reports and documents and requests for services to remedy outstanding problems. Once deficiencies have been corrected, the Cx Agent may be requested by the Owner to provide oversight on any final testing required and to document the results in the Commissioning Record.
- d) Cx Agent shall execute a Commissioning Certificate of Completion certifying that the functional performance tests for each sub-system and system as established by the Commissioning Plan have been executed and satisfactory performance has been achieved; all items listed on the Issues Log have been appropriately resolved; the ten-month Post Occupancy site visit and Project review have been completed; and the Final Commissioning Report has been submitted to the Owner.