

Explanation of Third-party Testing and Commissioning Services

There are two types of commissioning agents: Mechanical Commissioning Agents, who are engineers and handle mechanical, electrical and plumbing (MEP) systems; and Building Envelope Commissioning Agents, who are architects that specialize in exterior enclosure systems.

Commissioning agents are professional consultants that participate in design peer review, limited construction oversight and provide guidance and advice on highly specialized issue resolution during construction. Mechanical commissioning agents also work to calibrate the settings and controls on all equipment to make sure that systems are working together in their most energy-efficient modes.

3rd party testing agencies are called in to perform specific types of construction quality tests to assure the strength and quality of installed materials. Different individuals may be dispatched for different types of tests. They often lack a comprehensive understanding of the project and cannot provide guidance or advice holistically. They derive some test results on site, while other tests involve sample collection with a subsequent lab test producing results.

In addition to the usual construction testing, this project requires specialized testing – often done by a subcontractor to the testing agent – to confirm that the building exterior enclosure (“envelope”) will be sufficiently airtight.

The contract and procurements currently entertained for this project are:

1. 3rd Party Testing Agent, UTS (awarded):

Primarily responsible for testing the strength of concrete, soil compaction, asphalt paving, structural connections and fire barrier walls. This is a testing service, not a professional consultant that can provide guidance and advice. They are called in to perform specific tests as needed during construction.

2. Mechanical Commissioning Agent (Cx), RW Sullivan (recommended for award):

A professional consultant working independently of the design team and of the contractor.

- During design, they will provide specifications to include the specification book to make sure the General Contractor is responsible for the necessary support of mechanical commissioning at the end of construction.
- At the start of construction, the Cx will review submittals for mechanical equipment and advise the design team of any issues before the equipment is ordered, supplementing the design engineer's review.
- At the end of construction, the Cx does the bulk of their work.
 - They first make sure that all equipment, especially mechanical and lighting, is responding to control commands as it is supposed to.
For example, does a remote command to turn on a unit and set it to 70F actually turn on the unit and actually set the temperature. They pursue resolution of any issued with the contractor.
 - Then, they work to calibrate each piece of equipment in a system such that all elements of the system are working in concert with each other at their most efficient settings, for each season.
For example, if a pump is working extra hard to deliver flow to a unit that is not able to utilize all that flow at the same rate, then the pump can be turned down to eliminate energy waste, etc.

The “building envelope” refers to all components of the exterior walls, windows, doors, roof, insulation, air/vapor barrier and waterproofing/sealants that create a complete exterior enclosure that is waterproof and airtight.

3. Building Envelope Testing, Partner TBD (not procured yet):

A testing company with some capacity to offer strategic advice to design a testing plan with consideration of cost economies weighed against the risk of not getting a certificate of occupancy if the ultimate full-building air infiltration test called “blower door test” does not pass at the end of the project.

Procurement Status and Strategy:

- Per CCBC direction, this scope was removed from the 3rd Party Testing contract prior to award.
- The OPM recommends obtaining advice on testing strategy and scope through UTS’s often-used specialty subcontractor and then deciding to either procure the testing through a separate public procurement or through a change order to UTS’s contract, supported by three competitive bids from subcontractors. The change order approach is limited to 25% of UTS’s contract, so the separate public procurement is more likely.

4. Building Envelope Commissioning Agent (BECx), Partner TBD (bidding complete, not recommending award):

A professional consultant focused on building envelope design, similar to but independent from the designer’s expertise in this area. First, they are meant to provide a peer review of the envelope design, which on this project is likely too late to do and likely not necessary based on the designer’s confidence in their passive-house design. Secondly, they are meant to participate in identifying an envelope-testing strategy, provide limited observation of how the envelope is put together, witness for first of each type of test and provide advise on modification of installation and expertise in case issue-resolution is required.

Procurement Status and Strategy:

- A Request for Proposals (RFP) was advertised and two proposals were received. Both exceed \$100,000 which is a substantially higher value than the project budget can support.
- The OPM recommends cancelling the procurement and proceeding without a BECx on the project.
- Code requires passing the “blower door” test that will be provided by Partner # 3 above. There should be sufficient professional expertise and oversight on the project to make the BECx scope redundant, especially given the late stage of design at this point.

The Town of Lincoln
c/o Assistant Town Administrator, Dan Pereira
16 Lincoln Rd
Lincoln, MA 01773

Lincoln Community Center Project
Lincoln, MA

March 28, 2025

Recommendation to Award
Mechanical Commissioning Agent Services Contract

Dear Mr. Pereira:

We recommend that the Town of Lincoln award the **Mechanical Commissioning Agent Services Contract** for the Lincoln Community Center Project to the lowest responsible and responsive bidder, **R.W. Sullivan Engineering** of 529 Main Street, Suite 203, Boston, MA 02129-1107, at a not-to-exceed contract value of **\$40,040**.

A blue ink signature of the name "Kseniya Slavsky".

Kseniya Slavsky
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RW Sullivan Cost Proposal Submission

Lincoln Community Center Project – Lincoln, MA Commissioning Services – Cost Proposal Form	TOTAL HOURS	TOTAL FEE
Design & Bid Phase Services		
Commissioning Kick-Off Meeting with Team		
Review Owner's Project Requirements		
Review Basis of Design (prepared by Design team)		
Review of 90% CD Documents and Meeting		
Review of 100% CD Documents and Meeting		
Development of Commissioning Specifications		
Development of Commissioning Plan		
Construction Phase Services		
Update Construction Phase Cx Plan and integrate with overall project schedule and Lead Cx Kickoff meeting		
Review of Contractor Submittals, RFI's, Mtg. Minutes, Etc.		
Coordinate and lead Controls Integration Meeting		
Develop and Distribute Construction Checklists		
Witness Initial HVAC Piping Pressure Test & Flushing		
Witness Initial Ductwork Testing & Cleaning		
Field Visits to Verify Installation Checklists		
Review Mock-Ups and/or First Piece Installations		
Verify Equipment Start-up		
Review and Verify TAB Reports		
Develop Functional Performance Test Procedures		
Oversee & Document Functional Systems Testing		
Develop & Maintain Cx Issue Log		
Review O&M Manual		
Review System Manual		
Verify Operator & Occupant Training		
Production of Final Cx Report		
Additional Site Visits (# of Visits)		
Additional Attendance for Meetings, Virtual (# of Meetings)		
Post-Occupancy Phase Services		
Coordinate and Witness Opposite Season & Deferred Testing		
Perform a Near Warranty End Review, Interview and Assistance		
Project Expenses		
Grand Total, Fees & Expenses		\$40,040