

Request for Qualifications (RFQ) | RFQ501: Commissioning and Retro-Commissioning Services

RFQ501 submissions are due at **3 p.m. Eastern Time on Tuesday, July 19, 2016.**

Instructions provided in following.

Consultant Qualification Program overview

MIT academic and administrative leaders are working in collaboration to envision how our campus and surroundings could evolve to meet future academic and research needs and continue to foster innovation.



The MIT 2030 framework (<http://web.mit.edu/mit2030/framework.html>) provides guidelines that help focus and clarify our efforts. This framework informs a broad spectrum of campus improvement projects from individual systems upgrades (including roofs and windows) and the repurposing of spaces and buildings to partial or complete renovations, new construction, and the best use of Institute-owned land and properties.

While several projects have been completed or are underway, this is only the beginning of the many building project opportunities that will be addressed within the MIT 2030 framework. To support a growing portfolio of future project activity, we seek to increase our understanding of the capabilities of architectural, engineering, and consulting services firms in order to create a more diverse portfolio of professionals that are best suited to work with MIT.

The Offices of Campus Planning, Campus Construction, Utilities & Maintenance, and Infrastructure Business Operations are jointly initiating a Consultant Qualification Program to identify and prequalify professional design and consulting service providers for the planning, renovation, and new construction of facilities infrastructure on a 163-acre campus consisting of 12.6 million square feet and 152 buildings.

This Consultant Qualification Program will broadly solicit and prequalify firms for upcoming MIT design and engineering projects, and position MIT for design excellence through the selection of highly qualified, cost-effective consultants. Requests for Qualification will be issued by discipline and, in some cases, by project type. This initial round of RFQs focuses primarily on small and recurring project types.

Through the Consultant Qualification Program, firms will be admitted to a prequalified roster designed primarily for these small and recurring project types. For some types of recurring services, MIT will place several firms under multi-year repetitive service contracts. To select repetitive service providers, MIT will invite a select number of prequalified firms to submit additional material (e.g., a proposal) and/or interview. For other services, MIT will use the prequalified roster as a basis for inviting firms to submit proposals when a project emerges. Large capital projects and other singular projects will continue to use a separate competitive selection process.

This initial series of Request for Qualifications is issued to firms in one or more of the following service areas:

- Architectural Services for Academic Offices and “New Pedagogy” Technology Classrooms
- Geotechnical Engineering and Licensed Site Professional / Massachusetts Contingency Plan Services
- Structural Engineering
- Code Consulting
- Commissioning & Retro-Commissioning
- Building Deficiency and Mitigation Studies

Firms are encouraged to respond to more than one RFQ in the event that they seek work in multiple service areas.

The Consultant Qualification Program launches in spring 2016 with a pilot round of RFQs. After the initial round has been completed, additional rounds of RFQs will be issued for other disciplines and project types. It is the intent of the program to broadly solicit firms in an open call for qualifications.

RFQ501 Overview

MIT seeks qualifications from firms with expertise in Commissioning (Cx) and Retro-Commissioning (Retro-Cx) services.

Firms selected for work under this RFQ will provide on-call Cx and Retro-Cx services for MIT.

Those services include:

- **Cx:** Verifying that all building systems perform interactively according to the design intent and meet MIT’s operational needs; documenting the commissioning process, activities and results; and providing formal operational training to MIT staff. This will be achieved through a review of the construction documents with a view towards the commissioning process, testing procedures, acceptance and the post construction phase with actual verification of performance. The commissioning process shall encompass and coordinate the functions of operational performance, equipment startup, control system operation, testing and balancing, load testing, performance testing, integrated systems testing, and training.
- **Retro-Cx:** Overseeing and documenting the process, activities and results by assessing condition of building equipment/components and verifying that building systems perform interactively according to the original design, or meet MIT’s current operational needs (project specific). This will be achieved first through the planning and investigation phases with a review of the as-built documents, interviews with the occupants and operators, site investigation of facility equipment and systems, and verification of system functionality and performance. Implementation phase will include MIT (supported by the commissioning consultant) reviewing, prioritizing, and implementing identified optimizations, upgrades, or fixes to issues. Verification phase tests proper final operation following implementation.

In recent years, MIT has launched between 10 – 20 commissioning efforts annually, and anticipates a substantial increase in small- to medium-sized commissioning projects over the next three years. To expedite project start-up for these initiatives – and to optimize the fit between projects, budgets, and the

firms ultimately selected to complete the work – MIT expects to establish repetitive service contracts with approximately six firms who will serve as MIT’s service providers for Cx and Retro-Cx over the next three years.

MIT is seeking Cx firms whose team consists of members with sufficient commissioning expertise in each of the systems being commissioned. Interested firms should:

- demonstrate significant depth of experience in commissioning services for higher education clients; and
- demonstrate significant depth of experience in commissioning services for a broad range of building types and associated building systems (e.g., academic, administrative, residential, lab/research, recreation/student life).

The prime Cx firm responding to this RFQ must have a team that will be assigned and committed to the projects, including a lead Commissioning Professional (CxP) who will be the party on site coordinating the commissioning effort and managing the commissioning discipline leads. MIT desires a Cx team that will provide consistency throughout the project and can satisfy as many of the following requirements as possible:

- extensive field experience in the operation and troubleshooting of HVAC systems and energy management control systems
- knowledgeable in building operation and maintenance, as well as O&M training
- demonstrated commissioning experience in all systems to be commissioned
- knowledgeable in test, adjust, and balance of air and water systems
- experienced in energy-efficient equipment design and control strategy optimization, energy features energy use/savings calculations
- direct experience in monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment
- demonstrated experience with total building commissioning approach, including building envelope, fire alarm systems, and other specialty systems
- excellent verbal and writing communication skills. Highly organized and able to work with both management and trade contractors
- experienced in writing commissioning specifications
- experience in the use of web-based project tracking software for commissioning activities (in-house or 3rd party software)
- a bachelor’s degree in mechanical or electrical engineering is strongly preferred for the Lead CxP, and P.E. license is desired. However, other technical training, past commissioning, and field experience will be considered as a substitute
- membership and certification as a Certified Commissioning Professional with the Building Commissioning Association is desired but not required
- experienced in commissioning LEED, Green Globes, etc.
- will provide consistent, quality staffing across the three-year period
- will provide consistent, competitive rates across the three-year period
- will advance MIT’s sustainability goals through each initiative

In addition, MIT is seeking creative approaches to the application of Institute sustainability principles. MIT's shared principles for sustainability focus on stewardship, life-cycle thinking, resiliency, innovation and demonstration, and transparency. For more information, please see *MIT Campus Sustainability Working Group Recommendations: An Integrative Vision for our Buildings, Materials, Stormwater, Landscape and Labs*, November 30, 2015 at:

<https://sustainability.mit.edu/sites/default/files/documents/SWGRRecommendations-FinalSmall-11-30.pdf>

Instructions to applicants

Requirements

Qualifications are due at **3 p.m. Eastern Time on Tuesday, July 19**, by email to inbox@workflow.e-builder.net. Files must be emailed in formats explained below via a single email or the submission will not be received.

Submittal format

Please include the following attachments in your emailed submittal:

- A) Completed Consultant Qualification Form, submitted in 2003 – 2007 Word document format. File can be downloaded at <https://campusplanning.mit.edu/RFQs> (Please save this document without altering the file format and respond to all questions.)
- B) Supplemental materials, submitted as PDF attachments and labeled as requested. *Please see the following section for a list of supplemental materials.*

PLEASE NOTE: MIT is piloting an automated submission system. Please be sure to submit materials in the formats requested; materials submitted in alternate file formats may not be received. If you do not receive an auto-confirmation e-mail after submitting your materials, please send an e-mail to CQPinfo@mit.edu. No phone calls.

Questions

Submit all questions via email to CQPinfo@mit.edu by **Friday, June 17**. Include the name and number of the RFQ in the subject line. MIT will respond to all questions within 10 business days via an addendum posted to the Office of Campus Planning RFQ webpage:

<https://campusplanning.mit.edu/RFQs>.

No phone calls.

MIT will notify applicants of their prequalification status in August.

Supplemental materials

Please provide the following supplemental materials as PDF attachments to your emailed submittal. Please label each PDF as requested below.

Description of Firm, Experience & Proposed Staffing

1. Cover Letter

Please provide an introductory letter summarizing your qualifications for the services described within this RFQ. Note prior experience at MIT and with peer institutions.

Provide as separate PDF labeled as “Letter-[FIRM NAME]”. Limit response to 1 page.

2. Firm Profile

Please provide an overview of the firm and its work, describing the firm’s capabilities, experience and knowledge. Profile should demonstrate range of experience (project types, client mix) and commitment to sustainability.

Provide as separate PDF labeled as “Profile-[FIRM NAME]”. Limit response to 1 page.

3. Comparable Project Experience

Please provide six (6) examples of comparable work, including Cx (3 examples) and Retro-Cx (3 examples) services completed in the last five (5) years. Projects in higher education and at peer institutions are preferred. Please provide the following information for each project:

- the name and location of the project
- a general description of the project and the type of work performed by your firm
- the name, address, email address, phone number, and contact person for the project owner
- key staff from your firm involved in the project
- nature of time and schedule constraints
- phases included (Concept/Design/Construction/Testing/Turnover/Warranty)
- management of relationships with owners, users, and contractors
- systems/disciplines commissioned as part of the project
- inclusion of innovative or sustainable design concepts

Provide as separate PDF labeled as “Experience-[FIRM NAME]”. Limit response to 6 pages.

4. Depth of Experience

For each type of building and system indicated below, please list the number of Cx and Retro-Cx projects that your firm has completed in the past five years. Indicate which client the project was for, and the gross square footage assessed.

- classroom building
- office/administration building
- lab building – dry, medium service, makerspace
- lab building – high tech (bio/laser/vivarium/etc.)
- residence hall
- student life / recreation and athletics / dining facility
- libraries
- other

Provide as separate PDF labeled as “Depth-[FIRM NAME]”.

5. Sample Work Products

Provide the following work products that members of your team developed. List the team member who wrote the document and the projects on which they were used.

- a) Cx
 1. Three pages of sample pre-functional checklists

2. Six pages of a typical functional test procedure for a large air handler
3. Three pages (not the cover) of comments from a design review
4. Four pages from a typical Commissioning Issues Log

b) Retro-Cx

5. Three pages of typical site assessment forms
6. Sample diagnostic monitoring and trending plan
7. Four pages from a typical master issue/optimization/upgrade list

Provide as separate PDF labeled as “Product-[FIRM NAME]”.

6. Approach

Briefly describe your proposed approach to managing and executing specific project tasks expertly and efficiently for the following:

a) Cx

1. Site visits. Describe how the firm determines how many site visits will be made, at what stages, with what type of personnel and why.
2. Meetings. Describe how the firm determines how many meetings on and offsite will be held/attended, at what stages, with what type of personnel and why.
3. Getting construction checklists filled in accurately and in a timely manner by the Contractor.
4. Ensuring that systems are ready for formal functional testing to insure that testing goes smoothly.
5. Testing support. Describe how you intend to test in the field: how many simultaneous CxP staff, contractor support needed, etc.
6. Test equipment. Describe what test equipment you own and intend to provide to augment any required of the contractor.
7. Testing process. Describe how you will manage requests from the contractor to test partially complete systems.
8. Safety. Describe the safety protocols that will be followed.
9. Reporting. Describe your recommended reporting type and frequency throughout the project.

b) Retro-Cx

1. Site visits. Describe how the firm determines how many site visits will be made, at what stages, with what type of personnel and why.
2. Assessing the appropriate level of investigation and testing (sampling and depth).
3. Testing support. Describe how you intend to test in the field: how many simultaneous CxP staff, contractor support needed, etc.
4. Test equipment. Describe what test equipment you own and intend to provide.
5. Reporting. Describe your recommended reporting type and frequency throughout the project.

Provide as separate PDF labeled as “Approach-[FIRM NAME]”. Please provide a concise response to each inquiry above.

7. Proposed Staffing

Please provide résumés for key personnel who would staff future projects with MIT emerging from this RFQ. Identify proposed principal(s)-in-charge, project manager, and other professional staff, indicating:

- Educational background, including degrees held and/or licenses/professional registrations.
- Project level experience for example projects or others, including specific projects managed, Cx vs. Retro-Cx, and in what capacity. Please describe specialized strengths and experience.

Provide a brief description of this team’s experience working together on similar projects.

Provide as separate PDF labeled as “Staffing-[FIRM NAME]”.

8. Schedule of hourly rates

Please provide a schedule of standard hourly rates for the following categories of work, as well as such other categories as may be appropriate (rates to be inclusive of all overhead and profit):

| Classification | Hourly Rate |
|-------------------------------------|--------------------|
| Principal | |
| Lead CxP | |
| Senior Engineer | |
| Project Engineer | |
| Field Technicians | |
| Administrative Personnel | |
| Other Professional Staff (Describe) | |

Provide as separate PDF labeled as “Rates-[FIRM NAME]”.

NOTE TO APPLICANTS

MIT's insurance requirements are shown below. Applicants who are shortlisted for work at MIT will be expected to provide proof of insurance in these minimum amounts via an insurance certificate as part of the RFP process.

| For all firms except Licensed Site Professional | | |
|---|---|--|
| Workers' Compensation | Statutory, as required by law | |
| Employer's Liability | \$1M per individual and per occurrence | |
| General Liability (including Valuable Papers coverage) | | |
| Bodily Injury | \$1M per occurrence | |
| Property Damage: | \$1M per occurrence or, | |
| | Combined Single Limit for Bodily Injury and Property Damage | \$1M per occurrence/ aggregate |
| Automobile Liability | Same limits as for Commercial General Liability | \$1M per occurrence Combined Single Limit for Bodily Injury and Property Damage |
| Professional Liability | \$2M per occurrence and annual aggregate (Architects & Engineers only). | |
| | Maximum Deductible | \$100K for design fees less than or equal to \$1M; \$350K for design fees greater than \$1M |