

TECHNICAL REQUIREMENTS

Background

The Lowell Regional Wastewater Treatment Utility (LRWWU) operates and maintains a 32-MGD secondary wastewater treatment facility that treats domestic and industrial wastes from a service area that includes the City of Lowell and four surrounding towns. LRWWU also operates and maintains a stormwater drainage system with over 50 miles of drain lines that discharge stormwater into local waterways, as well as a wastewater collection system with over 200 miles of sewer lines that convey flow to the Duck Island Wastewater Treatment Facility (WWTF). The sewer lines vary in size (diameter) from 6 inches to 10 feet. The Lowell sewerage system, which is mostly a combined sewer system, includes dozens of pump stations, metering stations, and diversion structures.

Scope of Services

The engineering services include master planning of LRWWU's transport and treatment facilities, as well as design services and construction oversight of the repair, replacement, installation or retrofitting of piping systems, building structures, process machinery, mechanical and electrical equipment, and instrumentation.

Because of the complexity of the unit processes and systems within LRWWU's facilities, it may be necessary to expand the initial scope of improvements as work progresses. The sought-after engineering services are bundled into the following work tasks:

- **Master Planning** – Evaluation and refinement of LRWWU's existing master plans: a Long-Term Control Plan (LTCP) for the mitigation of Combined Sewer Overflows (CSOs) and a Capital Improvements Plan (CIP) for upgrades to LRWWU's facilities and infrastructure. Services will include prioritization of projects, value engineering for other project designs, funding strategies, interaction with local stakeholders and decision-makers, and negotiations with state and federal agencies. Particular emphasis will be placed on assisting LRWWU with requirements associated with the following programs: National Pollutant Discharge Elimination System (NPDES), Municipal Separate Stormwater Sewer System (MS4), and LTCP for CSOs.
- **New Pumping Facility (Read Station)** – Design and construction services for an estimated 60-MGD pump station that connects to an existing interceptor sewer. The new pump station will serve as a flood pumping facility as well as an influent pump station for a future wet weather treatment facility.
- **Duck Island WWTF Improvements** – Design and construction services for various improvements to LRWWU's Duck Island WWTF; notably, the replacement of existing sludge dewatering equipment and primary/secondary clarifier mechanisms. LRWWU intends to replace existing belt filter presses with two centrifuges and renovate ten existing clarifiers. Other treatment facility improvements will be included in these upgrades.
- **Pump Station Upgrades** – Design and construction services for upgrades to a variety of mechanical, electrical, and instrumentation/control systems at up to six pump stations. Targeted systems include wastewater pumping, flow measurement, electrical, HVAC, and SCADA.
- **Stormwater Management** – Design and construction services for the separation of stormwater from existing combined sewer system and construction of new sewer infrastructure. LRWWU anticipates two or three separate projects that address surcharging in combined sewer systems. In addition to installation of separate drainage systems, alternative stormwater management strategies will be considered, with a focus on infiltration, storage, attenuation, green solutions, and public education.

Submittal of Qualifications Statement

Submittals must be concise, complete and accurate, without unnecessary elaboration. Supplying information not directly pertaining to the required qualifications response will be viewed unfavorably. The Qualifications Statement should include the following sections with the maximum number of pages as indicated.

- Executive Summary (two pages) – cover letter with summary of qualifications.
- Engineer's Project-Related Experience (ten pages) – experience within the past ten years related to capital and CSO planning, new pump station design, WWTF improvements, pump station renovations, and stormwater management.
- Project Team Qualifications (three pages, excluding resumes) – information describing the roles and qualifications of project team members, including the proposed project manager. Include any teaming arrangements or anticipated utilization of sub-consultants.
- Client References (two pages) – strong and credible client references with contact information, for work relevant to the above projects.

The City of Lowell may disqualify any Engineer it determines to be non-responsive for reasons including, but not limited to:

- Non-responsive to any material requirement of this Request for Qualifications.
- Fails to meet the Minimum Requirements listed in this Request for Qualifications.
- Qualification Statements that misrepresent goods or services or provide demonstrably false information.

RESPONSE REQUIREMENTS

Qualifications Statement Requirements

To be considered for the work, the prospective engineer must submit a Statement of Qualifications containing the following information:

- a) Engineer's demonstrated ability in preparing construction contract documents and providing construction services for municipal waste water system projects in Massachusetts.
- b) Engineer's demonstrated ability in providing engineering services to Massachusetts cities similar to Lowell.
- c) Engineer's demonstrated ability to assist municipalities in optimizing treatment techniques and providing operational support.
- d) The Engineer shall have a minimum of ten (10) years' experience with design and construction services of wastewater treatment plants and collection systems in Massachusetts.
- e) The Engineer shall have worked on at least five (5) projects funded by State SRF loans, and be familiar with the process of securing the loans, and meeting loan requirements and milestones and requisition submissions to the State SRF.
- f) The Engineer must commit an individual project manager with at least five (5) years of project management experience with wastewater system improvements.

- g) The Engineer must maintain an office within 100 miles of Lowell City Hall (located at 375 Merrimack Street, Lowell MA).

COMPARATIVE CRITERIA

MASTER PLANNING

	Highly Advantageous	Advantageous	Not Advantageous
I. General Qualifications A proven track record with similar-sized New England wastewater utilities	Has outstanding experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has adequate experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has limited experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size
II. Presentation, Communication & Vision A superior vision for providing valuable engineering services	Has communicated, through the submittal process, a superior vision for providing engineering services valuable to the project	Has communicated, through the submittal process, an adequate vision for providing engineering services valuable to the project	Has communicated, through the submittal process, a limited vision for providing engineering services valuable to the project
III. Project Team An experienced and capable project team and project manager	Has a superior project team and an experienced project manager, both with significant expertise relevant to the project	Has a project team and an experienced project manager, one of which has limited expertise relevant to the project	Has a project team and an experienced project manager, both with limited expertise relevant to the project
IV. CIP/LTCP Planning The ability to successfully develop Capital Improvements Plans (CIP) and Long-term Control Plan (LTCP)	Has experience/resources that indicate a strong likelihood of successfully developing LRWWU's CIP & LTCP	Has experience/resources that indicate a moderate chance of successfully developing LRWWU's CIP & LTCP	Has experience/resources that indicate the potential of successfully developing LRWWU's CIP & LTCP
V. Agency Negotiation The ability to successfully negotiate with state or federal agencies regarding NPDES or LTCP issues	Has experience/resources that indicate a strong likelihood of successfully negotiating with EPA/MADEP regarding NPDES/LTCP issues	Has experience/resources that indicate a moderate chance of successfully negotiating with EPA/MADEP regarding NPDES/LTCP issues	Has experience/resources that indicate the potential of successfully negotiating with EPA/MADEP regarding NPDES/LTCP issues
VI. References Strength and credibility of client references	The proposal indicates ten or more strong and credible client references with contact information	The proposal indicates five – nine strong and credible client references with contact information	The proposal indicates less than five strong and credible client references with contact information

READ PUMP STATION

	Highly Advantageous	Advantageous	Not Advantageous
I. General Qualifications A proven track record with similar-sized New England wastewater utilities	Has outstanding experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has adequate experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has limited experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size
II. Presentation, Communication & Vision A superior vision for providing valuable engineering services	Has communicated, through the submittal process, a superior vision for providing engineering services valuable to the project	Has communicated, through the submittal process, an adequate vision for providing engineering services valuable to the project	Has communicated, through the submittal process, a limited vision for providing engineering services valuable to the project
III. Project Team An experienced and capable project team and project manager	Has a superior project team and an experienced project manager, both with significant expertise relevant to the project	Has a project team and an experienced project manager, one of which has limited expertise relevant to the project	Has a project team and an experienced project manager, both with limited expertise relevant to the project
IV. New Pump Station The ability to successfully design and oversee construction of a large-scale new pump station	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a large, new pump station	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a large, new pump station	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a large, new pump station
V. Wet-Weather Treatment The ability to successfully integrate a wet-weather treatment facility with a new pump station	Has experience/resources that indicate a strong likelihood of successfully integrating a wet-weather treatment facility with a new pump station	Has experience/resources that indicate a moderate chance of successfully integrating a wet-weather treatment facility with a new pump station	Has experience/resources that indicate the potential of successfully integrating a wet-weather treatment facility with a new pump station
VI. References. Strength and credibility of client references	The proposal indicates ten or more strong and credible client references with contact information	The proposal indicates five – nine strong and credible client references with contact information	The proposal indicates less than five strong and credible client references with contact information

DUCK ISLAND WWTF IMPROVEMENTS

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II. Presentation, Communication & Vision A superior vision for providing valuable engineering services	Has communicated, through the submittal process, a superior vision for providing engineering services valuable to the project	Has communicated, through the submittal process, an adequate vision for providing engineering services valuable to the project	Has communicated, through the submittal process, a limited vision for providing engineering services valuable to the project
III. Project Team An experienced and capable project team and project manager	Has a superior project team and an experienced project manager, both with significant expertise relevant to the project	Has a project team and an experienced project manager, one of which has limited expertise relevant to the project	Has a project team and an experienced project manager, both with limited expertise relevant to the project
IV. Clarifier Mechanisms Firm demonstrates the ability to successfully design and oversee construction of a clarifier replacement project	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a clarifier replacement project	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a clarifier replacement project	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a clarifier replacement project
V. Centrifuge Installation Firm demonstrates the ability to successfully design and oversee construction of a centrifuge installation project	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a centrifuge installation project	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a centrifuge installation project	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a centrifuge installation project
VI. References. Strength and credibility of client references	The proposal indicates ten or more strong and credible client references with contact information	The proposal indicates five – nine strong and credible client references with contact information	The proposal indicates less than five strong and credible client references with contact information

PUMP STATION UPGRADES

	Highly Advantageous	Advantageous	Not Advantageous
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III. Project Team An experienced and capable project team and project manager	Has a superior project team and an experienced project manager, both with significant expertise relevant to the project	Has a project team and an experienced project manager, one of which has limited expertise relevant to the project	Has a project team and an experienced project manager, both with limited expertise relevant to the project
IV. New Pump Station Firm demonstrates the ability to successfully design and oversee construction of a pump station upgrade project	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a pump station upgrade project	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a pump station upgrade project	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a pump station upgrade project
V. SCADA Integration Firm demonstrates ability to successfully integrate pump stations into existing SCADA network	Has experience/resources that indicate a strong likelihood of successfully integrating a pump station upgrade into an existing SCADA network	Has experience/resources that indicate a moderate chance of successfully integrating a pump station upgrade into an existing SCADA network	Has experience/resources that indicate the potential of successfully integrating a pump station upgrade into an existing SCADA network
VI. References. Strength and credibility of client references	The proposal indicates ten or more strong and credible client references with contact information	The proposal indicates five – nine strong and credible client references with contact information	The proposal indicates less than five strong and credible client references with contact information

STORMWATER MANAGEMENT

	Highly Advantageous	Advantageous	Not Advantageous
I. General Qualifications A proven track record with similar-sized New England wastewater utilities	Has outstanding experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has adequate experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size	Has limited experience, with a proven track record, delivering engineering services to NE wastewater utilities of similar size
II. Presentation, Communication & Vision A superior vision for providing valuable engineering services	Has communicated, through the submittal process, a superior vision for providing engineering services valuable to the project	Has communicated, through the submittal process, an adequate vision for providing engineering services valuable to the project	Has communicated, through the submittal process, a limited vision for providing engineering services valuable to the project
III. Project Team An experienced and capable project team and project manager	Has a superior project team and an experienced project manager, both with significant expertise relevant to the project	Has a project team and an experienced project manager, one of which has limited expertise relevant to the project	Has a project team and an experienced project manager, both with limited expertise relevant to the project
IV. Sewer Construction/Separation The ability to successfully design and oversee construction of a sewer installation/separation project	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a sewer installation/separation project	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a installation/sewer separation project	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a sewer installation/separation project
V. Infiltration/Storage The ability to successfully design and oversee construction of a stormwater infiltration/storage project	Has experience/resources that indicate a strong likelihood of successfully designing and overseeing construction of a stormwater infiltration/storage project	Has experience/resources that indicate a moderate chance of successfully designing and overseeing construction of a stormwater infiltration/storage project	Has experience/resources that indicate the potential of successfully designing and overseeing construction of a stormwater infiltration/storage project
VI. References. Strength and credibility of client references	The proposal indicates ten or more strong and credible client references with contact information	The proposal indicates five – nine strong and credible client references with contact information	The proposal indicates less than five strong and credible client references with contact information

Clarification of Qualifications

The Project Selection Committee will make its determination of qualifications solely upon clear and unambiguous qualifications submittals.

Return of Qualifications Statement

The City of Lowell shall retain for its records any and all materials submitted by prospective engineers in response to this RFP.

Interviews

The City of Lowell reserves the right to conduct or waive interviews, and to select finalists from the pool of applicants based upon the qualifications of each engineer. If interviews are required, evaluation of the prospective engineers will be based upon the content and quality of the engineer's presentation. LRWU may ask questions at the end of the engineer's presentation. The parties who make presentations must be the same as those named as assigned to the project in the proposal. Prospective engineers will be given ample notification to adequately prepare for a presentation and interview.

- The Project Selection Committee can request interviews for any or all of the five projects, but only to the firms that meet the qualifications.

Selection Recommendation

The Project Selection Committee will select an engineer for each of the five projects described within. The selection will be based on the qualifications outlined above. The Project Selection Committee shall determine the most advantageous proposal from a responsible and responsive engineer, taking into consideration only the qualifications and the evaluation criteria set forth in this RFP.

- The Project Selection Committee can recommend awards for any of the five projects to one engineering firm or any combination of qualified engineering firms.

Schedule

July 2, 2014	RFP issued
July 17	Proposals Due
July 21 – July29	Project Selection Committee reviews proposals
August 4 – August 15	Potential Interviews
August 22	City of Lowell selects an engineering firm for each of the five (5) projects