



Sheldon A. Neeley, Mayor

CITY OF FLINT PROPOSAL NO.21000556
PRIMARY CLARIFIER IMPROVEMENTS

Date Posted: 10/3/2020

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PRIMARY CLARIFIER IMPROVEMENTS

On Tuesday, March 10, 2020, Governor Gretchen Whitmer declared a State of Emergency after two individuals were confirmed testing presumptively positive for COVID-19. On Thursday, March 12, 2020, Mayor Sheldon A. Neeley declared a local State of Emergency to exist in the City of Flint as a result of the threat of COVID-19. On Sunday, March 15, 2020, effective March 17, 2020, Mayor Neeley, based on the COVID-19 public health threat, closed City Hall to the public. Residents were asked to take precautionary measures. On March 22, 2020, Mayor Neeley asked residents to participate in a voluntary shelter in place. City Council approved the continuation of the declaration of a State of Emergency.

Based on the White House guidelines issued on March 16, 2020, and these guidelines are still in place. It is recommended that people not gather in groups larger than 10 people in order to "flatten" the curve and slow the spread of the virus. On March 24, 2020, Governor Whitmer instituted Executive Order 2020-21, a temporary requirement to suspend activities that are not necessary to sustain or protect life, prohibiting "in-person" work with exceptions for essential and critical infrastructure workers.

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Sheldon A. Neeley
Mayor

Finance Department
Division of Purchases & Supplies

Joyce A. McClane
Purchasing Manager

REQUEST FOR PROPOSALS AND QUALIFICATIONS

OWNER:

THE CITY OF FLINT
DEPARTMENT OF PURCHASES AND SUPPLIES
1101 S. SAGINAW STREET, ROOM 203
FLINT, MI, 48502

Project Name: PRIMARY CLARIFIER IMPROVEMENTS – ENGINEERING SERVICES

Proposal No.: 210000556

The City of Flint is soliciting Statements of Qualifications (SOQ) from qualified consulting firms to provide consulting services in support of the City's [Primary Clarifier Improvements](#).

[*This is a Qualification Based Selection \(QBS\) process. Cost or billing rates will not be included in the evaluation criteria, so the consultant should exclude any references to these in the SOQ.*](#)

If your firm is interested in providing the requested services, please submit one(1) original proposal AND one (1) unbound with all requested information, EXCEPT, the total price of your proposal. Outside of the envelope, the enclosed proposal should clearly identify that the information submitted is the **PROPOSAL ONLY** – With the title of the Proposal and Proposal Number.

In a separate envelope, the **TOTAL PRICE** of the proposal that is submitted must be in a **SEALED ENVELOPE**. The outside of the enclosed **TOTAL PRICE** should clearly identify that the information submitted is the **TOTAL PRICE ONLY – With the title of the Proposal and Proposal Number.**

For this project, faxed bids to the Purchasing Department will not be accepted. Bidding Documents shall meet requirements set forth in the Specification. Section 00 10 20, Instructions to Bidders.

A City selection committee will review the SOQ'S received and select the consultants it feels are the most qualified to furnish professional services to the City of Flint; however, the city reserves the right to conduct interviews with a short-list of firms as necessary.

The city reserved the right to reject any and or all SOQ's and waive any informalities therein. The SOQ is prepared at the consultant's expense and becomes city property, and therefore a public record. Proposal Guarantee shall provide assurance that the bidder will, upon acceptance of the bid, execute the necessary Contract with the City. No bid may be withdrawn for one hundred twenty (120) days after scheduled closing time for receiving bids.

Proposals submitted by Bidders who have been debarred, suspended, or made ineligible by any Federal Agency will be rejected. The project is funded through the State Clean Water Revolving Loan program and requirements of the program are included in the Contract Documents.

Each bidder agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

The City of Flint reserves the right to reject all bids and to waive irregularities in bidding.

All additional bid documents, requirements, addendums, specifications and plans/drawings (if utilized) are available on the Purchasing page of the City of Flint's web site at <https://www.cityofflint.com/finance/purchasing/> under "open bids" and the specific bid or proposal number assigned to this notice.

Anticipated Bid Submission Schedule:

Date Released/Bid Posted to City's Website:	Monday, October 5, 2020
Bid Advertisement:	Monday, October 5, 2020
Final Date for Questions:	Wednesday, October 14, 2020 at 2:00 PM EST
Final Addendum:	Monday, October 19, 2020 by 5:00 PM EST
Bid Due Date:	Monday, November 2, 2020 by 2:00 PM EST
	ELECTRONIC BIDS ARE NOT ACCEPTED
	DROP OFF BIDS
	(A MASK MUST BE WORN)

The dates provided above are estimated dates only and may be subject to change.

Send to: The City of Flint
Department of Purchases and Supplies
1101 S. Saginaw Street, Room 203 Flint, MI 48502

Effective immediately upon release of these Bidding Documents, and until notice of contract award, all official communications from proposers regarding the requirements of this Bid shall be directed to:

Joyce A. McClane
810-766-7340
jmcclane@cityofflint.com

The City, or designee, shall distribute all official changes, modifications, responses to questions or notices relating to the requirements of this Bid. Addendum to this Bid may be developed and shared with all Vendors. Any other information of any kind from any other source shall not be considered official, and proposers relying on other information do so at their own risk.

Sincerely,



Joyce A. McClane, Purchasing Manager

REQUEST FOR PROPOSALS AND QUALIFICATIONS FOR ENGINEERING SERVICES

PRIMARY CLARIFIER IMPROVEMENTS

Flint Water Pollution Control
G-4652 Beecher Road
Flint, Michigan

INSTRUCTIONS TO BIDDER- SPECIFICATION SECTION 00 10 20

INTRODUCTION

The primary clarifiers are rectangular and are located at the head of the Flint WPCF. They follow the grit removal facilities and precede the secondary treatment aeration tanks. They are laid out in a split configuration between the Battery A and Battery B trains. A total of 6 tanks are included in Battery A and 4 tanks are included in Battery B. Each tank is complete with two longitudinal collectors, one cross collector, one 3-way drive, a scum trough, effluent weirs, an effluent Parshall flume, and four influent sluice gates. All flow coming and leaving the primary clarifiers is combined in common channels between Battery A and Battery B. Some general characteristics of the primary clarifiers can be found in table 1 below.

Since approximately the beginning of 2017, the Flint WPCF laboratory has sporadically detected solids and nutrient concentrations downstream of the primary clarifiers higher than the plant influent concentrations. This occurs quite frequently and is contrary to intended design.

Table 1 – Primary Clarifier Properties

Parameter	Value
Number of Primary Tanks	10
Length (ft)	142 ¹
Width (ft)	41.5 ¹
Average Side Water Depth (ft)	8 ¹
Volume (gal)	353,000 ¹
Design Hydraulic Loading Rate (gpd/sft)	850 ¹

1 – Values from the Flint WPCF Operation and Maintenance Manual Vol 1

PROPOSED EQUIPMENT IMPROVEMENTS

The primary clarifiers (primary settling tanks - PSTs) receive flow after grit removal from a common channel. Waste activated sludge is comingled with the influent and is co-settled with the primary sludge. The settled sludge is pushed toward the primary clarifier influent end by longitudinal flights where it is collected in a sump. Cross collector flights move the sludge toward the sludge pump intake where it can be pumped to the storage tank for the anaerobic digesters feed.

The equipment in the primary clarifiers was installed in the early seventies and has exceeded its expected useful life. The scum troughs and sludge pumps are in good condition, and were refurbished/replaced in 2012. The structural integrity of the tanks and catwalks is showing signs of deterioration. The equipment and structural rehabilitation of the clarifiers is needed to ensure continued, reliable sludge collection and removal to provide effective clarification of the influent flow.

The scope of engineering should, at a minimum, include design specifications for replacing the following for each primary clarifier tank:

- (4) 18"x18" sluice gates
- (4) Electric valve actuators for the sluice gates
- (1) 3-way collector drive
- (2) longitudinal collectors
- (1) cross collector
- Sprockets, chains, wear strips, hardware
- Weirs and troughs

STRUCTURAL ASSESSMENT

The structural condition of the primary settling tanks has been discussed in the asset management plan report. Below are comments from asset management plan:

Primary Tanks 1-6

Cracks in the walls and interior beam should be injected with repair material to prevent future water infiltration and concrete deterioration. Previous repair measures that have failed should also be repaired.

Spalled concrete should be removed until sound concrete is encountered and then repaired with repair material. The location of spalled concrete was observed at the walls around the effluent weirs and at the underside of the walkway platform by the chain and flight motors.

The beam beneath the walkway at the south end of the tank repair. Much of the concrete is deteriorated and is in need of stabilization and reinforcement. The coating on the bottom of the tank is delaminated in several locations. Loose material should be removed and a new coating system should be applied to prevent rebar from being exposed to water. Applying a coating to the walls and slab would extend the useful life of the structure.

The concrete curb on the walkways over the influent and effluent channels should be repaired by removing all deteriorated concrete and replacing it. As part of the slab replacement new curb angles should be installed to provide a flat uniform edge for new grating.

New grating should be installed over the influent and effluent channels where the old grating is corroded and deformed.

Primary Tanks 7-10

The floor coating is delaminated and missing in several areas. A new coating system should be installed after the old coating is removed. Applying a coating to the walls and slab would extend the useful life of the structure.

Vertical cracks were observed on the walls of the tanks. The cracks generally extended from the base slab, up to and across the walkway (adjacent tanks were not empty to determine if cracks were also present on the other side of the wall). The cracks were spaced approximately 5 to 10 feet along the length of the wall. Several cracks showed signs of previous repairs and some repairs have failed. Water was observed at several cracks.

Four areas on the east wall of Tank No 8 appeared to have previously been repaired. The repair areas were approximately three to seven feet in diameter. No water was observed at these locations.

Several cracks were observed on the interior, longitudinal beam. The cracks varied in size and were more prevalent at column locations. The north end of the beam showed signs of previous repair.

Cracks and scaling were observed on the underside of the walkway at the south end of the tank. The cracks are orientated north to south and some exhibited efflorescence. Spalling and cracks with efflorescence were observed on the north wall of the tank above the effluent launders.

Guardrail posts were embedded into the concrete walkway at the top of the tank. Several post locations had spalling on the underside of the walkway exposing the guardrail post. A few posts had cracks and spalling on the top and side of the walkway which resulted in loose posts.

Corrosion was observed on the effluent weirs of all tanks. The corrosion was concentrated near the top of the weirs near the typical operating water line. One launder had a slight water drip at the interface of the launder and concrete.

The concrete slab over the influent channel had deteriorated areas, likely due to repeated freeze thaw cycles. An estimated 10% of this slab and the associated grating edge angles need repair.

The upper surface of the concrete walkways around the perimeter of the tanks showed signs of deterioration. An estimated 5% of the walkway surface require spall repairs.

The slab over the effluent channel had deteriorated areas. An estimated 10% of the concrete surface and the associated grating edge angles require replacement.

Most of the necessary drawings of the existing facilities, piping, and electrical may be obtained from the City of Flint Water Pollution Control, Wastewater Treatment Plant (WWTP) records. The City of Flint will provide the Engineering Consultant a paper copy of all existing records the Consultant determines would be useful in their work. However, the City does not warrant that the historical records are completely adequate, accurate or that they reflect the existing conditions.

Scope of Services - The Engineering Consultant shall perform the following services:

A. Design

The Consultant shall prepare Design and Construction documents consisting of Civil, Structural, Architectural, Mechanical, Electrical, and Instrumentation drawing sheets and specifications. The Construction Documents shall be developed for the purpose of bidding the construction of the facilities and acquiring a MDEQ Part 41 Construction Permit for the above improvements. Upon MDEQ approval, and receipt of the Permit, the documents shall be used to competitively bid the project for construction. The Consultant shall ensure that the Construction Documents result in a complete and operational system as described above. The design shall incorporate the following project elements:

1. Specifications for concrete repairs of primary clarifier tanks and influent/effluent channels, including walkways.
2. Provide specifications for coating of all tank concrete structures
3. Determine why the Flint WPCF laboratory has sporadically detected solids and nutrient concentrations downstream of the primary clarifiers higher than that of the plant influent concentrations.
4. Design specifications for the replacement of sluice gates.
5. Design specifications for the electric valve actuators for the sluice gates.
6. Design specifications for the replacement of the collector drive, longitudinal collectors and cross collector.
7. Design specifications for the replacement of the sprocket, chain, wear strips, hardware, weirs and troughs.

B. Bidding Support Services

The Consultant shall prepare appropriate bid documents, conduct a prebid meeting with potential contractors, respond to questions during the bidding process, and prepare addenda as required during the course of bidding. The Consultant shall distribute minutes and responses to questions raised at the meeting. The Consultant shall assist in the review of the bids and make a recommendation for award of the Contract. The work is to be coordinated with the Battery A-Grit Improvements Project.

C. Construction Services - The Consultant shall perform the following services during construction:

1. Respond to Construction Contractor Requests for Information (RFIs).
2. Attend regularly scheduled construction meetings during the course of construction. Take and provide the minutes of each meeting to all attendees.
3. Insure that charges and costs are consistent with the Consultant's submitted bid and project schedule.
4. Resolve field engineering issues and provide supervision during construction. The Consultant shall include in the Proposal an anticipated level of resident engineering and onsite inspections.
5. Insure that the Construction Contractor is in compliance with all EPA and EGLE requirements for a CWSRF project. Ex. Review of Davis-Bacon payroll requirements.
6. Update and correct the design drawings to produce project record drawings depicting the as-built conditions.

D. Start-up Services

The Consultant shall assist the Contractor and Owner's staff during the start-up period and shall provide oversight and engineering during the start-up period. The Consultant shall include in the Proposal an anticipated level of office engineering, inspections, and onsite start-up services.

E. Deliverables - The Consultant shall provide the following:

1. Pre-design draft report, five copies for review.
2. Final pre-design report, five copies.
3. 50% design submittals, five copies.

4. Specification documents and drawings. Drawings shall be in AutoCAD format.
5. 90% design submittals, five hard copies and specifications.
6. 100% design submittals, five hard copies and specifications.
7. Bid drawing sets, five hard copies, 24" X 36" drawings, five copies of 11" X 17" drawings, and specifications.
8. Record Drawing Set - one hard copy, 24" X 36" drawings and one electronic AutoCAD copy.

F. Contents of the Proposal The proposal shall be issued in the following format:

1. **Project Team-** Provide an organizational chart with a listing of the Consultant's project team members. Resumes of key project team members shall be attached to the proposal. Sub-consultant resumes shall be included. Consultants shall agree not to substitute key members without written authorization of the City.
2. **Approach and Design Concept-** Describe the Consultant's proposed approach to the pre-design and design of the facilities.
3. **Scope of Services-** Provide a detailed list of all task items to be performed in the conformance with the Scope of Services work herein.
4. **Project Schedule-** Provide a detailed project schedule listing pre-design, design, bidding, and anticipated construction period.
5. **References-** Provide references for any previous projects of this nature or for demonstration of the efficacy of the design concept.
6. **Insurance-** State the insurance types and limits to be maintained by the Consultant during the course of the project.

G. General Bid and Proposal Requirements

The formal detailed proposal is being solicited to provide engineering design and construction management services. Proposal statements must include the following:

1. The name, address, telephone number, and fax number of the consulting engineering firm.
2. The name, telephone number, and e-mail address of the primary contact person for the proposal.

3. Composition of the team proposed to provide the consulting engineering firm's design and construction services, including any subcontractors. The team description should include:
 - a. Specific discipline covered by each team member; that is, mechanical, process, structural, electrical, instrumentation and controls, etc.
 - b. Resumes demonstrating related work experience.
 - c. Indication of the current workload of specific team members, and hours available for this project. Please note that subsequent substitution of proposed team members without City concurrence may result in rejection of the firm for this project.
4. A description of the qualifications of the project manager proposed to lead this project.
5. Ability of the consulting engineering firm and any sub consultants to dedicate proposed project team members to provide the necessary services. Subsequent substitution of proposed team members without City concurrence may result in rejection of the firm for this project.
6. A summary statement indicating the vendor's understanding of the project, its goals and purposes, and the constraints or limitations that must be observed while achieving them.
7. A listing of equipment the consultant envisions needing to obtain the project goals.
8. The design concept and approach to be used to achieve a successful and cost effective project.
9. A detailed Project Scope of Services. References to related experiences on previous projects may be included.
10. A schedule providing milestone dates after a "Notice To Proceed", and expected completion for each phase of the services to be provided.

Detailed responses to the RFP shall be submitted to the City Purchasing Department on or before the deadline date and time specified.

Failure to supply all requested information and documentation listed under proposal statements shall result in bid disqualification.

List any value-added considerations or alternate proposal on a separate sheet of paper.

The proposals will be rated to determine the best value for the City. Ratings will be based on the following factors:

- Qualifications of the firm and the team members to be dedicated to this project, including project-related experience
- Qualifications of the project manager to be dedicated to this project.
- Ability of the firm and dedicated personnel to provide the services.
- Understanding of the project, its goals, purposes, and related constraints.
- Quality of the design, design concept, and the potential for achieving project goals.
- Quality of the proposal, including level of detail and presentation.

These items are not of equal importance. Responding firms will be scored on each category, and a composite rating calculated based on the rating form below. The City reserves the right to reject any and all proposal submittals.

Proposal Statement Evaluation Form			
Item	Score	Weight (%)	Rating
1. Qualifications of firm, project manager, and personnel to be dedicated for provision of services		25	
2. Ability of the firm and dedicated personnel to provide the services (workload)		10	
3. Understanding of the project and its goals		30	
4. Design concept		30	
5. Quality of the proposal, including level of detail and presentation		5	
<i>Total</i>		<i>100</i>	