EXHIBIT A

Scope of Engineering

Services and Related Matters

RFP #26-2017

Investigation / Design Services for Town Branch WWTP Thickening Process Evaluation and Equipment Upgrades

Lexington - Fayette Urban County Government (LFUCG) Division of Water Quality

The Lexington-Fayette Urban County Government is accepting proposals from interested consulting engineering firms for the Investigation / Design Services for Town Branch Wastewater Treatment Plant (WWTP) Thickening Process Evaluation and Equipment Upgrades.

1. General Project Description

The CONSULTANT shall perform professional services as hereinafter stated which shall include but is not limited to customary civil, structural, mechanical, electrical engineering, and programming services as related to the Investigation / Design for Town Branch WWTP Thickening Process Evaluation and Équipment Upgrades.

Per the Group Two Sanitary Sewer System and WWTP Remedial Measures Plan, the intent of the Thickening Process Evaluation and Equipment Upgrade is to replace equipment that has surpassed its useful life therefore increasing reliability and lowering operating cost by improving efficiency. Construction of the Thickening Equipment Upgrades must be complete by December 31, 2019. Currently identified for replacement but not limited to is the internal equipment of the two existing gravity thickeners; drives, rakes, and skimmers. Other items to be considered are windows, doors, odor control equipment, heaters, ventilation, the plant water system in the area and hydrants. The Thickening Process Evaluation will include adding thickening capacity. Two WAS thickening centrifuges have been removed due to advanced deterioration resulting in the equipment being non-operational. This results in an overload condition of the gravity sludge thickeners during higher flows. LFUCG would like to compare the cost of building a new gravity thickener to adding thickening centrifuges. Other equipment to consider is the replacement of the existing primary sludge pumps and equipment related to the thickening process after the primary clarifiers and prior to the primary digesters. A Preliminary Engineering Report will be completed evaluating equipment replacement options.

Funding for this project is 100% sewer fund revenue, no federal fund involvement is expected.

2. Scope of Work: Thickening Process Evaluation and Equipment Upgrades

The Thickening Process Evaluation and Equipment Upgrades will evaluate the most efficient way to increase thickening capacity and replace equipment that has surpassed its useful life to increase reliability while lowering operating cost by improving efficiency. The project must be completed by **December 31, 2019**.

During the design the CONSULTANT will compare additional thickening options and work to install new equipment that will enhance the process. Equipment currently identified for replacement is listed below.

- Replacement of drives, rakes and skimmers in the 2 existing gravity thickeners
- Addition of thickening capacity

Other related equipment and building repairs to be evaluated during preliminary review:

- Plant water review in the area of the gravity thickeners
- Replacement of hydrants in the area
- Lighting outside and in the gravity thickener buildings
- Flow meters and valves
- New primary sludge pumps
- Gravity Thickener's Odor control
- Rooftop Heater
- Ventilators
- Tank Ventilation
- Doors and windows
- General building structural review
- Roof replacement

A. Task 1: Existing Thickening Process Review

- (1) Interview Town Branch Wastewater Treatment Plant Operations and Management staff for input regarding the current process equipment control and functionality related to the Thickening Process.
- (2) Collect any other supporting data needed for design decisions.

B. Task 2: Develop Equipment/Process Replacement Concepts and Schedules

- (1) Prepare a conceptual layout for each concept evaluated along with design calculations.
- (2) Conduct a 20-year life cycle and present worth analysis for each conceptual design evaluated.
- (3) Prepare preliminary cost estimates and implementation schedules for all conceptual designs.
- (4) Present Preliminary Engineering Report to Treatment Plant Management Staff for a review of all conceptual designs and receive guidance for progress towards the final design.
- (5) LFUCG will respond in writing to the preliminary Engineering Report, providing authorization for work under Task 3.

C. Task 3: Detailed Design

- (1) Conduct detailed design progress meetings at 25%, 50%, and 90% completion. The dates for these progress meetings will be decided on during the first pre-design meeting. Progress reports and drawings will be submitted one week before the Lexington-Fayette Urban County Government review and comment. (3 copies)
- (2) Conduct and present any related design calculations to support the new equipment/process.
- (3) Furnish detailed cost estimates for probable cost and revise the 20-year life cycle and present worth analysis for the 50% review and the final design.
- (4) Update project schedules at 25%, 50% and 90%?

D. Task 4: Bidding Services

- (1) Prepare final plans and specifications ready for bidding. Plans and specifications are to be provided in both hard copy and standard electronic format compatible with Lexington-Fayette Urban County Government equipment. The most recent plans and specifications have been submitted in PDF format. software. A minimum of 7 copies will be required.
- (2) Coordinate and submit plans, specifications, and permit application to the Kentucky Division of Water for the purposes of receiving a construction permit.
- (3) Provide customary bidding services including preparation of advertisement, conducting pre-bid meeting, issuing required addenda, evaluating bids and providing a recommendation of award.

E. Task 5: Construction Administration Services

- (1) Track, review and approve all shop drawings.
- (2) Track change orders, review requests, recommendation comments, and prepare the paper work to be submitted to council.
- (3) Track and answer all Request for Information (RFIs)
- (4) Coordinate and lead monthly construction progress meetings.
- (5) Conduct construction inspections and submit weekly reports once construction begins. Please submit estimated hours per week, total hours included for inspections and the hourly rate with your detailed cost estimate
- (6) Take before and after photos of all stages of construction.
- (7) Review and approve contractor's monthly payment applications.

- (8) Attend and maintain test reports for all equipment start-up for the project.
- (9) Coordinate final inspection of completed work and prepare the final punch list.
- (10) Transfer field notes from the contractor's drawings and submit final as-built drawings to the owner.

NOTE: This outline is not intended to be all inclusive but is intended to be a guide for prospective firms as to the general expectations of the Owner. The Lexington-Fayette Urban County Government will not compensate firms for the cost of proposal preparation.

3. Detailed Cost Estimates

The CONSULTANT shall prepare a detailed cost estimate for this proposal based on the Tasks defined in this Request for Proposal. The estimate shall show a preliminary schedule estimating the time necessary to complete the Tasks outlined with a unit price associated. The intent of this proposal is to show the number of hours associated with a lump sum fee for the Thickening Process Evaluation and Equipment Upgrades. If your firm has additional Tasks that would be recommended show the new Tasks as separate line items with the scope well defined.

4. Proposal Content

The proposal will contain the following components.

- A. Cover Letter
- B. Scope/fee (Detailed Cost Estimate) No more than 8 pages. The attached Fee Schedule completed with your estimated cost will be the last page in this section.
- C. Estimated Schedule No more than 4 pages.
- D. Project Team with One-Page Resumes (Do not submit resumes for individuals contributing less than 10% of total man hours allocated)
- E. A list of 5 similar projects with owner contact information. This section shall be no more than 5 pages total.

5. Schedule and Completion

The proposed timeline for completion of the Scope of Services outlined in the proposal is as follows:

Thickening Process Evaluation and Equipment Upgrades

Award Design Contract
Meeting to Review Final Design – 90% Completion
Bid Opening
Award of GC Contract

November 2017 March 2018 April 2018 June 2018

The CONSULTANT shall coordinate the exact time and location of all meetings with the Plant Engineer, Division of Water Quality.

NOTE: Schedule may be adjusted based on final negotiations. When submitting the schedule with your proposals please indicate if your firm could complete this project any sooner than the estimated time above.

6. Method of Invoice and Payment

The CONSULTANT shall submit monthly for basic services or work rendered, based upon the CONSULTANT'S estimate of the portion of the total services actually completed during the billing cycle. Each invoice shall be accompanied by a breakdown of hours attributed to each task for both the billing cycle and the cumulative project period. Also include the percent Disadvantaged Business Enterprise (DBE) cost with each monthly invoice.

The Director of Water Quality or his designee shall respond to the invoice within thirty days of receipt, either denying or approving payment. Specific project time sheets and other payroll information may be subject to reviews and audits by the Lexington-Fayette Urban County Government.

7. Miscellaneous

All plans, specifications and accompanying documents are subject to review by the Lexington-Fayette Urban County Government's Division of Water Quality, Division of Engineering, Division of Risk Management and Division of Building Inspection. The CONSULTANT shall be responsible for incorporating the comments and requirements of the divisions into all documents.

Investigation/Design Services for Town Branch WWTP Thickening Process Evaluation and Equipment Upgrades

Fee Schedule

(For a description of task refer to Section 2 of the RFP)

Section 2

Scope of Work: Thickening Process Evaluation and Equipment Upgrades

	Task 1: Existing Process Performance Review		
		Cost Task 1:	
	Tank 2: David on Favingment/Brasses Banksesment Co	noonte	
	Task 2: Develop Equipment/Process Replacement Co	Cost Task 2:	
	Task 3: Detailed Desgin		
		Cost Task 3:	
	Task 4: Bidding Services		
		Cost Task 4:	
	Task 5: Construction Administration Services	Cost Task 5:	
	Details for Task 5.5 - The total cost should be included in Cost Task 5. Please provide the following		
	breakdown. Estimated Weekly Inspection Hrs/Estima	ited Total Inspection Hrs/Hourly Rate.	
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MAYOR JIM GRAY



TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #1

RFP Number: #26-2017 Date: August 17, 2017 Subject: Investigation/Design Services for Town Branch WWTP Thickening Process Evaluation and Equipment Upgrade Address inquiries to: Brian Marcum (859) 258-3320 TO ALL PROSPECTIVE SUBMITTERS: Please be advised of the following clarifications to the above referenced RFP: Pre-proposal sign in sheet is attached. Question Deadline has been changed to August 22, 2017 at 5:00 PM. The proposal opening deadline has been changed to August 31, 2017 at 2:00 PM EST. Todd Slatin, Director **Division of Central Purchasing** All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal. COMPANY NAME:



SIGNATURE OF BIDDER:

Investigati	m/ Design	Services fo	or Town Branch WWTP
Thickening	Process &	Evaluation and	Equipment Upgrades
	8/16/2017	@ Town Bran	ch
		n - Hours	
Mame	Company	Phone #	E-Mail
Tiffing Rook	LFULG-DWG	425-2406	tithey @ lengton ky . gov
Martie Schneider	BCI	268 - 1933	Cschneido @ beigep.com
LARDY D RATUR		268-1937	Wattiff Obeiaspicon
Soe Herry	GRIN	223 3999	jhennfægruinc.com
Bob Smallwood	GRW	223-3999	65 mallwood (2) quine,
Jim Nagle	LFUCG-DWQ	494-9549	unagle & Lotiston Ky. Gov ?
Brad Pennington	LFUC G	425-2421	bearing tome lexing ton Ky, gov
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Michael Devis	Strend	275.85 <i>0</i> 0	mike. davis@strend.com
Rich Smith		859.629.4844	rich. smith @hdring.com
Hes demotes	Tx	859-223-8000	hort Comester D total the
MARK STAGER	LFUCG	425-2413	,
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MAYOR JIM GRAY



TODD SLATIN
DIRECTOR
CENTRAL PURCHASING

ADDENDUM #2

RFP Number: #26-2017 Date: August 24, 2017

Subject: Investigation/Design Services for Town Branch WWTP Thickening

Process Evaluation and Equipment Upgrade

Address inquiries to: Brian Marcum (859) 258-3320

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced RFP:

Attached is the Biosolids Flow Description and Flow Schematic along with requested drawings.

Todd Slatin, Director Division of Central Purchasing

John Stan

All other terms and conditions of the RFP and specifications are unchanged. This letter should be signed, attached to and become a part of your submittal.

COMPANY NAME:	
ADDRESS:	
SIGNATURE OF BIDDER:	



Town Branch WWTP Biosolids Flow Description

Raw Influent flows to 12 Primaries clarifiers, 6 primary tank's on each bank.

There are 2 primary pump stations, each pump station has 6 pumps and a backup plunger pump. (Pumps normally run on a cycle 10 minutes on and 1 minute off, only 1 pump running at a time.) Primary sludge is pumped to distribution box at gravity thickeners.

Waste sludge normally goes to head of plant and back to primary tanks no more than 150 to 160 gpm. (Wasting above 160 gpm overloads our thickeners and they start washing out.)

When we waste more than 160 gpm we split wasting to Primary clarifiers and Secondary Digester Holding tanks. There's a waste line that goes thru Solids Process building, where it can be diverted.

There are 2 Gravity Thickeners—each gravity thickener has a sludge pump and a scum pump. Sludge pumps run from SCADA system, normally run 20 minutes on and 20 minutes off .Pumps can run together or separate from each other. There are 2 Dilution water pumps that pump water from chlorine contact basin to thickener distribution box, only 1 pump runs at a time.

Old centrifuges locations at Solids Process Building; there's piping in place that can send waste to Thickeners or digester and Secondary digester tanks.





































