



Yorktown Town Hall
363 Underhill Avenue, P.O. Box 703
Yorktown Heights, NY 10598

(914) 962-5722
www.yorktownny.org

April 29, 2019

**RE: Request for Proposals (RFP) for Inflow & Infiltration Flow Study
Town of Yorktown/Peekskill Sanitary Sewer District**

The Town of Yorktown seeks to obtain the services of a professional engineering firm to perform a flow study that will quantify the amount of inflow and infiltration that is occurring within the collection system of the Town of Yorktown/Peekskill Sanitary Sewer District.

Each company, if interested, should respond to this Request for Proposals by 11:00 am on **Wednesday 6/5/2019**. Format shall be two (2) printed copies submitted to Diana Quast, Town Clerk, at the following mailing address: Yorktown Town Hall, 363 Underhill Ave, Yorktown Heights, NY 10598. The following information must be provided:

1. Statement indicating your interest in providing professional engineering services.
2. Firm brochure outlining the firm's background and experiences. If sub-consultants are proposed, a similar brochure shall be submitted.
3. A listing and brief narrative description of up to five (5) projects involving similar type services provided to public or private clients within the last 5 years. References with names and telephone numbers must be included for the projects.
4. A project organization chart indicating key personnel who will be assigned to the project. Sub-consultant personnel should be included as appropriate. Limit key personnel to no more than five (5) names.
5. Include resumes of personnel noted on the project organization chart.
6. Describe your Project Approach, 1-page maximum using standard font size.

A pre-bid meeting will be held for interested parties on Wednesday 5/22/2019 at 10 am at the Yorktown Heights Water Pollution Control Plant, 2200 Greenwood Street.

Any questions may be submitted to Diana Quast, Town Clerk, via email at dquast@yorktownny.org or at the following mailing address: Yorktown Town Hall, 363 Underhill Ave, Yorktown Heights, NY 10598.

We look forward to a response from your firm.

Please complete the following & send back for our records/distribution list:

_____ **Yes, we plan to submit a RFP for professional services:**

Contact Person: _____ **Phone:** _____

Email Address: _____

RFP for Inflow & Infiltration Flow Study

Town of Yorktown/Peekskill Sanitary Sewer System

4/29/2019

The Town of Yorktown owns and operates a sanitary sewage collection system in the northwest portion of the Town, the Peekskill Sanitary Sewer District. Wastewater flow from the Town collection system is conveyed to trunk sewers of the Westchester County-owned collection system and then ultimately treated at the Peekskill Wastewater Treatment Plan.

There are approximately 5,900 parcels in the Peekskill Sanitary Sewer District, of which approximately 4,000 are connected to Town sewer (the remainder are still on individual septic systems). The infrastructure includes a total of eight (8) pumping stations, sewer collection piping, manholes and force mains.

In December 2016 the Town received a Notice of Violation from the New York State Dept of Environmental Conservation concerning sanitary sewer overflows in three locations: Hill Boulevard, Lee Boulevard and Farmwalk Pump Station. Following subsequent meetings and correspondence with NYSDEC representatives, a Proposed Order on Consent was issued in September 2018.

At this time the Town is seeking the services of a professional engineering firm to undertake an inflow and infiltration flow study to determine the extent and location of excessive I&I within the Peekskill Sanitary Sewer District.

The scope of services for the inflow and infiltration flow study shall be as outlined herein.

Project Background

During the period from June 2014 to December 2016, the Town reported 21 sanitary sewer overflows, see Attachment #1. The overflows primarily occurred in the Peekskill Sanitary Sewer District and numerous reports were due to blockages, i.e. grease and debris in the sewer lines. In follow-up correspondence with the NYSDEC dated February 2017, the Town updated the various activities undertaken to reduce the potential for sanitary sewer overflows (see Attachment #2).

Upon receipt of the NOV in September 2018, the Town worked with the NYSDEC on a defined scope of work and timeline for performance of the I/I flow study, see Attachment #3.

The Town is required to report the results of the study to NYSDEC by June 2020 and also must identify any sub-areas that will need further evaluation as part of a Sanitary Sewer Evaluation Survey (SSES).

Work Plan

In this Work Plan, the Town of Yorktown will undertake an inflow and infiltration flow study of the sanitary sewage collection system tributary to the County's trunk sewer system within the Peekskill Sanitary Sewer District. The purpose of the evaluation is to identify major sources of inflow and infiltration (I/I) that are occurring within the collection system. The work plan shall include the following:

1. The sanitary sewer collection system within the Peekskill Sanitary Sewer District will be evaluated.
2. The Consultant shall develop a flow monitoring plan to set flow meters in selected manholes for sub-areas that consist of 10,000 to 30,000 linear feet of sewer. In establishing the sub-areas to be monitored, Consultant shall evaluate flow data from a prior I/I study. If feasible flow data from the prior study and this current study may be used to estimate progression of I/I.
3. Record manhole flow data for an approximate time period of 10 weeks.
4. During the flow evaluation period, install and monitor a rain gauge to measure rainfall concurrent with wastewater flow monitoring.
5. Monitor groundwater levels weekly in each sub-area concurrent with wastewater flow monitoring in order to determine the impact of changes in groundwater level on sewer system flows.
6. Compare the collected data against industry standards and compare to the allowable per capita flow allowed under the County Sewer Act.
7. Should the investigation of the public sewer lines exceed the allowable standards, make recommendations for further testing and evaluation. An analysis of the findings and options of corrective measures such as point repairs, CIPP lining, and manhole waterproofing shall be prepared in a summary report, along with priority order listing and budgetary cost estimates.

Professional Services Scope of Work

The engineering services that are required for the project are described below and shall be in accordance with the EPA Handbook entitled Sewer System Infrastructure Analysis and Rehabilitation and the WEF Manual of Practice No. FD-6, Existing Sewer Evaluation and Rehabilitation. In addition, the collected data set should be compared to Section 824.72.2 of the Westchester County Environmental Facilities Sewer Act, which states "Excessive infiltration and inflow means the quantity of flow entering the County sewer system which is greater than 150 gallons per capita per day.

Task 1: Inventory of Existing Conditions

Under this task, the Consultant shall attend a kickoff meeting with the Town to review the project scope and available information, including the following:

- Mapping of the existing sewer collection system

- Available flow data from a prior flow study. Also from an ongoing Westchester County flow evaluation of the Yorktown sewer flows
- Capacity, management, operations, and maintenance plan (CMOM)
- Field reports (including any CCTV reports), water consumption data and wastewater flow records
- Conduct interviews with Town staff.

Limited Manhole Inspections – Conduct a limited inspection program to determine the general condition of the sewer system. Inspect approximately 10% of the total number of manholes in the sewer system.

Pump Station Data Review – Review flow and run time data available from the Town’s wastewater pump stations in order to evaluate within which pump station service areas I/I is most significant. Compare flow data to plant influent flow data.

Task 2: Mapping Development

Update the Town’s GIS wastewater collection system map based on data collected during the study. In addition, develop mapping to illustrate the I/I tasks performed during the evaluation and the study findings.

Task 3: Flow Monitoring

Divide the Town’s sewer system into sub-areas that range from approximately 10,000 to 30,000 linear feet of sewer in size. Install a continuous flow meter to measure wastewater flow at the outlet of each sub-area over a 10-week high groundwater period.

Utilize instantaneous flow monitoring, as appropriate, to supplement the continuous flow data obtained (e.g., to quantify infiltration in small sub-areas where continuous flow monitoring may not be warranted).

Task 4: Rainfall Monitoring

Install one tipping bucket style rain gauge within the Town to measure rainfall concurrent with continuous wastewater flow monitoring in order to determine the impact of rainfall of varying amounts and intensity on sewer system flows.

Task 5: Groundwater Monitoring

Monitor groundwater levels weekly in each sub-area concurrent with continuous wastewater flow monitoring in order to determine the impact of changes in groundwater level on sewer system flows. The groundwater gauging locations will be selected in an effort to obtain representative information on groundwater levels throughout the sewer system.

Task 6: Data Evaluation

Evaluate the flow, rainfall, groundwater and manhole inspection data collected during the study in order to quantify I/I in each sub-area and to identify those sub-areas in which infiltration and inflow are excessive.

Task 7: Draft Report

Prepare a draft report documenting the tasks performed during this evaluation and the results of the I/I evaluation. In addition, provide recommendations for follow up I/I investigations through a Sewer System Evaluation Survey (SSES). The recommendations shall include a detailed scope of SSES work.

Task 8: Workshop

Participate in a workshop with the Town to present the results of the draft report and obtain Town input.

Task 9: Final Report

Finalize the draft report based on input received from the Town during the project workshop.

Optional Tasks

The Town may require additional assistance from the Consultant that cannot be defined at this time. It is anticipated that the Town will try to obtain funding for the flow study and/or the sanitary sewer evaluation should any program funding become available from New York State, Environmental Facilities Corp, etc. The Town may also need assistance from time-to-time with meeting support or responding to inquiries from NYSDEC personnel. Under this task, payment will be made at the normal hourly billing rate scheduled of the Consultant. Authorization under this task will be when and as directed by the Town in writing.

Minority Participation Requirements

Not required at this time.

RFP for Inflow & Infiltration Flow Study

Town of Yorktown/Peekskill Sanitary Sewer System

Firm Name: _____

Prepared By: _____

Date: _____

Professional Service Fee

Task	Task	Quantity	Units	Rate	Subtotal
1	Inventory of Existing Conditions				
2	Map Development				
3-5	Flow, Rainfall & Groundwater Monitoring				
6	Data Evaluation				
7-9	Reporting				
A	Optional Assistance with Funding Applications	1	Lump Sum	ALLOWANCE	\$7,000
B	Optional Meeting Assistance w/ NYSDEC	1	Lump Sum	ALLOWANCE	\$8,000
	TOTAL BID PRICE				

Attachment 1

Sanitary Sewer Overflows

Sewage Spills (T) Yorktown 6/1/14 - 6/1/16

DATE	LOCATION	WATERSHED	AMOUNT	CAUSE	DISCHARGE PT
6/4/2014	Swed Circle	Yorktown	unk	Blockage	Shrub Oak Brook Trib
6/13/2014	Wildwood St	Peekskill	20 g	Blockage	Pavement
9/7/2014	Parmly Rd	Peekskill	100-150 g	Construction Accident	Ground
10/5/2014	Lee Blvd	Peekskill	100 g	Blockage	Pavement
10/16/2014	Lee Blvd	Peekskill	25 g	Blockage	Pavement
12/29/2014	Hill Blvd	Peekskill	75 g	Blockage	Pavement
12/30/2014	Sterling Terr	Peekskill	75 g	Broken Force Main	Storm Drain
1/24/2015	Commerce St	Yorktown	150 g	Blockage	Pavement
3/13/2015	Hill Blvd	Peekskill	25 g	Blockage	Pavement
5/22/2015	Sterling Terr	Peekskill	25 g	Broken Force Main	Storm Drain
4/13/2016	Old Crompound Rd	Peekskill	20 g	Blockage	Lawn
5/9/2016	Farmwalk Rd	Peekskill	50 g	Broken Force Main	Roadway
6/8/2016	Farmwalk Rd	Peekskill	50Gall	Broken Force Main	roadway
10/20/2016	Kirby Close road	Peekskill	20 g	Blockage	Grass and Side walk
11/5/2016	Jefferson Oval	Peekskill	40g	Blockage	Roadway
11/17/2016	Lee Blvd	Peekskill	25g	Blockage	Roadway
11/23/2016	Hill Blvd	Peekskill	100 gal	Pipe corrosion	shrub oak brook
11/25/2016	Farmwalk Rd	NYC	50Gall	Broken Force Main	Roadway
12/5/2016	Sidney Ct	NYC	50Gall	Blockage	Lawn
12/17/2016	Hill Blvd	Peekskill	50Gall	Blockage	Roadway
12/21/2016	Hill Blvd	Peekskill	25	Blockage	Grass and Side walk
3/13/2017	Jefferson Oval	Peekskill	1000gal	Sewer line blockage	Shrub oak brook

Attachment 2

NYSDEC Correspondence dated February 2017



Yorktown Town Hall
363 Underhill Avenue, P.O. Box 703
Yorktown Heights, NY 10598

(914) 962-5722
www.yorktownny.org

February 16, 2017

Ms. Shohreh Karimipour, P.E.
Regional Water Engineer
New York State Department of
Environmental Conservation
100 Hillside Avenue, Suite 1W
White Plains, NY 10603

Re: Town of Yorktown Sewer Collection System

Shohreh:

We are in receipt of your letter dated 1/23/2017, which was a follow-up to our meeting held on 1/17/2017 at the NYSDEC office.

As requested we are sending the following information for review by the NYSDEC:

1. The Town continues to investigate the recent problems that have caused blockages and surcharges at sanitary sewer manholes along Hill and Lee Boulevards. From historical records and institutional knowledge we know that these lines were installed with a minimum slope and are susceptible to flow impedance by small increases in solids and problems caused by flushable/non-flushable wipes. The Town Sewer Department is instituting a more rigorous cleaning/flushing program for the gravity sewer lines along Hill and Lee; these pipelines will be inspected and cleaned monthly at a minimum. Within the next few months we will also be implementing a 3-part improvement program:
 - a. Undertake a pipeline television inspection program of these pipes to get more detailed data on the current conditions. See **Attachment #1** for the proposal received from Green Mountain Pipeline Services; the Town is working internally to receive the required approvals and execute a purchase order with this firm by 4/30/17.
 - b. Install flow meters in sanitary sewer manholes to get early warning of potential problems. See **Attachment #2** for a technical memorandum from GHD Consulting Services Inc. that recommends the flow meters to be implemented. The Town will be seeking to pilot 2-3 locations with the equipment to make sure it can effectively perform its intended function. Timeline: 2-3 months.
 - c. Introduce legislation to strengthen the Town Code and require yearly reporting for commercial businesses that have grease traps (these will be in addition to the requirements that require business owners to make grease traps available for inspection by Town personnel). See **Attachment #3** for a draft of the Town Code changes that are being reviewed and considered by the Town Board, which will require a public hearing and referral to other Town departments and other interested parties prior to adoptions. Timeline: 4-5 months.

2. A revised Capacity, Management, Operation and Maintenance (CMOM) Plan prepared by GHD Consulting Services Inc. and dated February 2017 (see **Attachment #4**).
3. Technical memorandum/design report for the Jefferson Park and Farmwalk Pump Station Elimination Evaluation prepared by GHD Consulting Services Inc. and dated 12/15/2016 (see **Attachment #5**).

Should you have any questions regarding the above items, please call myself or Mr. Michael Quinn, P.E. the Town Engineer who assisted me in preparing this submittal.

Respectfully,



Michael Grace
Town Supervisor

\\mk:F:\Sewer Plant\Pump Station Elimination Project\karimipour_lee_hill_farmwalk_dec_02-15-17_ltr.docx

cc: Cosimo Pagano, GHD
Armand DeAngelis, NYS DEC
Michael McDermott, Town Attorney
Ed Mahoney, Assistant Wastewater Superintendent

Attachments

LIST OF ATTACHMENTS

ATTACHMENT 1:

PROPOSAL FROM GREEN MOUNTAIN PIPELINE

ATTACHMENT 2:

GHD TECHNICAL MEMO / FLOW METERS

ATTACHMENT 3:

DRAFT OF TOWN CODE / GREASE TRAPS

ATTACHMENT 4:

CMOM DATED FEBRUARY 2017

ATTACHMENT 5:

GHD TECHNICAL MEMO / PUMP STATION ELIMINATION

ATTACHMENT 6:

**GHD ENGINEERING REPORT / SEWER DISTRICT BUILD
OUT**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Region 3

100 Hillside Avenue, Suite 1W, White Plains, NY 10603

P: (914) 428-2505 | F: (914) 428-0323

www.dec.ny.gov

January 23, 2017

Honorable Michael Grace
Supervisor, Town of Yorktown
Town Hall
363 Underhill Avenue
PO Box 703
Yorktown Heights, NY 10598

Re: January 17, 2017 Technical Meeting - Town of Yorktown Sewer Collection System

Dear Supervisor Grace:

A meeting was held at DEC's White Plains Office on January 17, 2017 to discuss the frequent blockages at Hill and Lee Boulevards and the recurrent breaks on the Farmwalk Road force main. Present at that meeting were Michael Grace, Michael Quinn, Michael McDermott and Edward Mahoney, Town of Yorktown; Andrew Stor, NYCDEP; Shohreh Karimpour, Meena George and Armand DeAngelis, NYSDEC.

The causes of the repeated sanitary sewer overflows (SSOs) and corrective action proposals were discussed. Included in those discussions was an outline by the Town of plans to possibly eliminate the Farmwalk pump station and rehabilitate the Jefferson Park pump station in an effort avoid future force main breaks.

To address the above conditions, the Department requests submission of the following by COB February 16, 2017:

- An engineering report identifying problem areas in the collection system. The report should evaluate and prioritize those problem areas and offer proposals for corrective action and a timeline for completion.
- A revised Capacity, Management, Operation and Management (CMOM) Plan providing enhanced collection system mapping and greater detail concerning collection system maintenance and inspection. The Plan must specify the operational procedures and protocols for proactive preventive measures and post sewage overflow response. Also, discussions of sewer use law implementation and grease trap monitoring should be added. Provide, in addition, a description of heightened procedures for SSO reporting. Include in such reports accurate details concerning duration, quantification and the final point of discharge.
- A copy of the preliminary design report for upgrades to the Farmwalk Road and Jefferson Park pump stations.



Department of
Environmental
Conservation

Thank you for your cooperation. If you have any questions, please call me at (914) 428-2505 x-355.

Sincerely,

A handwritten signature in black ink, appearing to read "Armand De Angelis". The signature is fluid and cursive, with the first name being the most prominent.

Armand De Angelis
Environmental Program Specialist 2
Region 3

cc: S. Karimipour
M. George
K. Kosinski
A. Stor, NYCDEP
M. Quinn, (T) Yorktown

Attachment 3

NYSDEC Correspondence dated September 2018

SCHEDULE A

Schedule of Compliance

-DRAFT

NYSDEC Case No. R3-20180912-159

Respondent: TOWN OF YORKTOWN
Facility: Waste Water Treatment Plant

I. Within 30 days of the effective date of this Order:

The Respondent shall submit to the Department an Infiltration and Inflow ("I/I") Study Work Plan for the Peekskill Sewer collection system within the Respondent's ownership or control. The I/I Study shall gather wastewater flow information from defined subareas of the Peekskill collection system during both wet and dry weather events. The I/I Study Work Plan shall include a schedule based on gathering flow data during seasonal weather patterns.

II. By ~~April 1, 2020~~ December 31, 2019:

The Respondent shall complete the I/I Study of the Peekskill collection system within the Respondent's ownership or control, as outlined in the Work Plan. The Respondent shall submit to the Department a copy of the I/I Study Report for approval. The report shall include an analysis of the gathered flow information and identify and prioritize the collection system areas for further field evaluation. Areas identified for further field evaluation will be based on US EPA Guidelines for excessive I/I. There may be areas that do not require further field evaluation.

a. If a submission is rejected by the Department, Department staff shall notify the Respondent of the deficiencies in writing. Within 30 days of receiving notification of the deficiencies, the Respondent shall send Department staff a revised submittal that addresses the deficiencies.

a-b. Once the I/I Study Report has been approved by the Department, an electronic copy shall be submitted to Department staff.

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III. Within 60 Days of the submission of the I/I Study Report:

The Respondent shall submit to the Department for approval a Sewer System Evaluation Survey (SSES) Work Plan for the Peekskill collection system areas identified for further field evaluation in Item II above as per the EPA SSES guidance document. This work is expected to ~~include~~ should include closed circuit television (CCTV) investigations, sewer cleaning, flow isolation, dye testing, smoke testing, sump pump inspections and illicit connections.

a. If a submission is rejected by the Department, Department staff shall

Commented [CEE(2): "should" is hopefully an acceptable compromise on this. A little stronger than "may" but still not binding. Staff wanted to keep it as is but I suggested this as a compromise.

notify the Respondent of the deficiencies in writing. Within 30 days of receiving notification of the deficiencies, the Respondent shall send Department staff a revised submittal that addresses the deficiencies.

a.b. Once the SSES Work Plan has been approved by the Department, an electronic copy shall be submitted to Department staff.

IV. Within 18 Months of the submission of the SSES Work Plan:

The Respondent shall submit to the Department for approval a Report summarizing SSES Work Tasks completed based on the approved SSES Work Plan. The report will identify areas of the collection system where SSES work was done, an evaluation of the collected field data, and sewer lengths recommended for remediation. The report will include estimated capital costs and a schedule for the implementation of remediation plan(s). Upon the Department's written approval of the SSES remediation plan(s) and schedule, the remediation plan(s) and schedule shall be incorporated into and enforceable under this Order.

a. If a submission is rejected by the Department, Department staff shall notify the Respondent of the deficiencies in writing. Within 30 days of receiving notification of the deficiencies, the Respondent shall send Department staff a revised submittal that addresses the deficiencies.

a.b. Once the Report has been approved by the Department, an electronic copy shall be submitted to Department staff.

V. By June 30, 2019:

The Respondent shall submit to the Department a report of activities undertaken pursuant to this schedule and ongoing Capacity, Management, Operation, and Maintenance ("CMOM") program, including accompanying photographs and the costs associated with developing and implementing remediation plan(s) and CMOM program. The Respondent shall continue to submit reports meeting the requirements in this Item on a semi-annual basis until the approved SSES remediation plan and schedule have been fully completed.

Commented [CEE(3): Staff is adamant about keeping this date for this item. Note that this is just a status report that would be due at this time.

All submissions pursuant to this Schedule of Compliance shall be made to Department staff:

Meena George
NYSDEC Region 3
100 Hillside Avenue, Suite 1W
White Plains, New York, 10603
Case No. R3-20180912-159
meena.george@dec.ny.gov