TOWN OF GLASTONBURY
REQUEST FOR QUALIFICATIONS
PARKER TERRACE PUMP STATION ENGINEERING SERVICES
RPGL-2023-23

DUE DATE AND TIME: DECEMBER 6, 2022 by 11:00 AM

The Town of Glastonbury will be accepting proposals from qualified individuals or firms to provide engineering services in conjunction with the proposed replacement of the Parker Terrace Sewage Pump Station. Interested individuals and firms should obtain the complete RFQ and related information from the Town's website at www.glastonburyct.gov. Responses to the Proposal must be submitted electronically no later than the time and date indicated above. **LATE PROPOSALS WILL NOT BE CONSIDERED**.

Responses can be submitted at the following link: https://app.negometrix.com/buyer/2832, under the RFQ title "***RPGL-2023-23 – Parker Terrace Pump Station Engineering Services***". Respondents will be required to create a profile before submitting their proposal. Step-by-step instructions on how to register as a vendor are available at this website:

https://help.negometrix.com/en/support/solutions/articles/9000177626-register-on-negometrix4

An optional project meeting and site visit will be held on November 15, 2022 at 9:30AM at the pump station, located at 30 Parker Terrace, Glastonbury.

The Town reserves the right to waive informalities or reject any part of, or the entire proposal, when said action is deemed to be in the best interests of the Town.

An Affirmative Action/Equal Opportunity Employer. Minority/Women/Disadvantaged Business Enterprises are encouraged to submit a proposal.

Mary F. Visone
Purchasing Agent

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SECTION I - GENERAL INFORMATION

BACKGROUND INFORMATION

- The Town of Glastonbury wishes to retain a Consultant to provide engineering evaluation and design services related to the replacement of the existing Parker Terrace Sewage Pump Station located on Parker Terrace. This pump station presently handles an average daily flow of 1.01 million gallon per day (MGD), and was initially placed in service in 1967 last upgraded in 1985.

- The Consultant shall perform an evaluation of alternatives for the replacement of the pump station, including associated costs, permitting requirements, estimated design fees, and proposed schedule for design and construction. As part of the evaluation, the Consultant shall also review the adequacy and condition of downstream piping including sewage force main and provide recommendations for improvements, including design and construction costs as required.

GENERAL INTENT

The purpose of this Request for Qualifications ("RFQ") is to solicit proposals from qualified from individuals or firms to provide engineering services in conjunction with the proposed replacement of the Parker Terrace Sewage Pump Station.

It is the Town's intention to replace the existing dry pit pump system with a submersible pumping system to eliminate confined space entry requirements. The Consultant shall provide an evaluation of alternative pump systems for review by the Town.

SPECIAL CONSIDERATIONS

The study entitled "***Town of Glastonbury Connecticut Water Pollution Control Authority Sanitary Sewer Master Plan dated March 2015***" prepared by Weston & Sampson Engineers. All issues, considerations, and recommendations of this report relative to the Parker Terrace Pump Station shall be addressed by the Consultant. The relevant section from this report is included as Attachment C to this Request for Qualifications, and the full Town Sanitary Sewer Master Plan can be found at Sanitary Sewers | Glastonbury, CT (glastonburyct.gov)

SITE VISIT

An optional project meeting and site visit will be held on November 15, 2022 at 9:30 AM at the pump station, which is located on Parker Terrace.

GENERAL SCOPE OF WORK

- Review all existing State and Town files, reports, and plans about the facility and applicable appurtenances.

- Provide an engineering report detailing the following:

    1. A review of the contributing sewer shed and consideration for both existing and future (fully developed) design flows.
    2. A review of pump station design alternatives and all associated costs, including estimated design fees, permitting requirements, and proposed schedules.
    3. An evaluation of downstream piping design alternatives and costs.
    4. Recommended design alternatives with rationale.

- Future engineering design and permitting phase services for the selected design alternative including the following:

    1. Perform field survey to include ground elevations, property line data, underground facilities and utilities, and any other features impacting the work.
    2. Prepare project design calculations and prepare construction plans. Plans shall be submitted to the Town at 30%, 70%, and 90% complete and at the final stage.
    3. Prepare permit applications, coordinate the application process, and attend all meetings required in the permit application process for all local, State, or Federal Permits. The Consultant shall identify all permit requirements to the Town.
    4. Prepare bid specifications, special conditions, incorporate Town “boiler plate”, and provide all other documents required to complete a total bid package suitable for advertising.
    5. Attend meetings and public hearing to obtain feedback from the public, interested parties, and policymakers, and to present findings of the report.

- Future construction phase services including the following:

    1. Assist the Town in review of all bid submissions and questions arising out of the bid process.
    2. Review shop drawings, test reports, and technical computations to assure conformance with design requirements.
    3. Visit site to answer technical and construction questions, provide supplement and support to Town inspection staff.
    4. Perform construction inspection services, including change orders, design modifications, to assure compliance with plans and specifications.

SECTION II – CONSULTANT'S SERVICES

PROJECT DELIVERABLES

- The Consultant shall perform professional services as stated herein and according to instructions received from the Town. The Consultant's services shall include all design, bidding and construction administration related incidental services including estimates.

- All drawings, reports, data, and other documents prepared by the Consultant according to this Agreement shall be submitted to the Town for review and approval. Resulting work products of the Consultant pursuant to this solicitation shall become property of the Town of Glastonbury.

- No such approval shall in any way be construed to relieve the Consultant of their responsibility for technical adequacy or operate as a waiver of any of the Town's rights under this Agreement. The Consultant shall remain liable to the Town according to applicable laws and practices for all damages to the Town caused by the Consultant's negligent performance of any of the services furnished under this Agreement.

- The Consultant shall conduct regular meetings as necessary with the project team, at a location established by the Town to review progress. The Consultant will provide written notes of each meeting to all attending parties before the next meeting. The Consultant shall be expected to be present at public meetings associated with this project, which may need to be conducted with user groups on site or elsewhere. Specifics will be identified prior to start of work.

- The Consultant's services under agreements reached shall be as described above. The Town does not guarantee future design and construction phase work. However, any executed Consultant agreement shall contain provisions for future phases of work. The scope and fee for future phases will be negotiated at a later date pending full project funding and satisfactory Consultant performance during the study phase.

- The Town shall not be obligated to accept any proposal and the Town shall reserve the sole right to determine the appropriateness of any proposal for this work.

PROJECT SUBMITTALS

The Respondent shall be expected to submit the following materials, at a minimum:

Text:

- Printed material shall be 8-1/2 x 11. General text within the document shall be no smaller than a 12 point font;
- Fold-out pages shall be 11" x 17";
- Text will be bound in a manner acceptable to the Town;
- Text will be provided with printed or colored covers.

Drawings:

- All drawings shall be 24" x 36" or 30" x 42" in size, unless approved by the Town;
- Drawings shall be no smaller than 40 scale for engineering documents and 1/8" scale for architectural documents, unless approved by the Town;
- Each sheet of drawings shall be numbered as a part of a set;
- One set of reproducible Mylar record drawings and five sets of prints shall be provided;
- One copy of the final report, in MS Office format, and one set of final drawings in AutoCAD format, compatible with the Town's system, must be provided in electronic format.

PROJECT COORDINATION

The Respondent will work closely with the Superintendent of Sanitation throughout all phases of the project. The Town will provide access to the property, all available plans and drawings.

SECTION III - SUBMISSION OF PROPOSAL

MINIMUM REQUIREMENTS

- The Respondent shall have an assigned project manager to oversee this work and act as liaison to the Town. The Respondent shall list all proposed staff. The Respondent shall submit detailed resumes/references for any proposed staff, in-house or sub-contracted.

- The Respondent shall demonstrate sufficient staff resources to perform the work.

- The Respondent shall have a Professional Engineer licensed in the State of Connecticut assigned to the project.

- The Respondent shall have demonstrated experience with similar sewage pump station replacement or rehabilitation projects within the past five (5) years, including representative projects with flow capacity of 1.0 MGD or greater.

TERM OF SERVICE / TIME FOR COMPLETION

- The selected firm will be expected to commence services within 15 days of contract execution or on such other schedule as mutually agreed to with the Town. The Town anticipates allocating up to 6 months of overall time for the project design described herein including data collection, meetings, consultant preparation, Town approvals, etc. A schedule for completion will be mutually agreed upon between the Town and the selected respondent. The final design estimate will be used in the Town's budgeting process to finalize the funding request for the overall project.

PROPOSAL INSTRUCTIONS

- By submitting a proposal, Respondent represents that they have thoroughly examined and become familiar with the Scope of Services outlined in this RFQ and are capable of performing the work to achieve the Town's objectives.

- Respondents submitting a proposal for this solicitation are directed to respond online through a secure e-Procurement portal. Responses can be submitted at the following link: https://app.negometrix.com/buyer/2832, under the RFQ title "***RPGL-2023-23 – Parker Terrace Pump Station Engineering Services***". Respondents will be required to create a profile before submitting their proposal. Step-by-step instructions on how to register as a vendor are available at this website:

  https://help.negometrix.com/en/support/solutions/articles/9000177626-register-on-negometrix4

  Respondents will be required to upload their response as **ONE (1) consolidated pdf file** which includes the following:

  1. Proposal Response as per the requirements herein
  2. Attachment A - Town of Glastonbury Response Page
  3. Attachment B - Town of Glastonbury Non-Collusion Statement

- All respondents are required to submit the information detailed below. **Responses shall be organized and presented in the order listed below to assist the Town in reviewing and rating proposals.** Responses should be presented in appropriate detail to thoroughly respond to the requirements and expected services described herein.

  1. Table of Contents to include clear identification of the material provided by section and number.

  2. A letter of transmittal indicating the firm's understanding of the Scope of Services and interest in the project and any other information that would assist the Town in making a selection. This letter must be signed by a person legally authorized to bind the firm to a contract.

  3. Name, email address and telephone number of person(s) to be contacted for further information or clarification.

  4. Copy of license or certification to perform the work required, as applicable.

  5. Proposals shall demonstrate that the Respondent has the resources and capabilities necessary to meet all project requirements. Respondents will be responsible for budget and construction costs estimates including escalation, engineering fees, contingency, administrative costs. This shall include sub-consultants, estimators and other resources as proposed.

  6. A background statement including a description of relevant experience and qualifications of the firm/individual submitting the proposal and the number of years the respondent has been in business.

  7. Respondent shall provide a list of 3-5 references and examples of previous similar projects successfully completed with the last five (5) years with the contact name,

address and telephone number of the owners' representative in each project. The Town reserves the right to contact these organizations regarding the services performed by the firm.

8. Respondent's overall approach to implementation of the project described herein including the respondent's ability to provide all of the services identified in Section II.

9. A proposed schedule for completion of the engineering services as required to meet the Town's intended schedule.

10. A concluding statement as to why the respondent is best qualified to meet the needs of the Town.

11. Proposal Response Form (**ATTACHMENT A**).

12. Description of any exceptions taken to this RFQ. If any proposal involves any exception from the stated requirements and specifications, they must be clearly noted as exceptions and attached to the proposal.

13. Respondent is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003 and revised October 29, 2013 and effective November 28, 2013. Respondent shall acknowledge that they have reviewed the document in the area provided on **ATTACHMENT A.** The selected respondent will also be required to complete and sign an Acknowledgement Form prior to award. The Code of Ethics and the Acknowledgment Form can be accessed at the Town of Glastonbury website at www.glastonburyct.gov. Upon entering the website click on the **Bids & Proposals Icon** which will bring you to the links for the **Code of Ethics** and the **Acknowledgement Form**.

14. Statement of Non-Collusion (**ATTACHMENT B**).

15. Any technical questions regarding this RFQ shall be made in writing and directed to Mike Manfre, Superintendent of Sanitation by email at mike.manfre@glastonbury-ct.gov. For administrative questions concerning this proposal, please contact Mary F. Visone, Purchasing Agent, by email at purchasing@glastonbury-ct.gov. All questions, answers, and/or addenda, as applicable, will be posted on the Town's website at www.glastonburyct.gov (Upon entering the website click on Bids & Proposals Icon, click on the Bid Title to view all proposal details and document links). **It is the respondent's responsibility to check the website for addenda prior to submission of any proposal.** Note: Responses to requests for more specific contract information than is contained in the RFQ shall be limited to information that is available to all respondents and that is necessary to complete this process. The request must be received at least five (5) business days prior to the advertised response deadline.

    No other Glastonbury Town employee, elected official, or evaluation committee member should be contacted concerning this RFQ during the proposal process. Failure to comply with this requirement may result in disqualification.

Failure to include any of the above-referenced items in the submitted proposal may be grounds for disqualifying said proposal.

EVALUATION CRITERIA

The Town of Glastonbury shall select the responsible and responsive proposal which is determined by the Town to be the best suited, most advantageous, and provides the best value to the Town on the basis of the criteria included in this Request for Qualifications. The Town shall not be obligated to accept any proposal and the Town shall reserve the sole right to determine the appropriateness of any proposal for this work. The Town expressly reserves the right to negotiate with the selected firm prior to an award of any contract pursuant to this RFQ. Best value shall be determined by consideration of the following factors.

- The Respondent's technical understanding of the scope of services evidenced by the quality of the proposal submitted and responsiveness to the Town's requirements as summarized herein, including completeness, clarity, and visual appeal of the response.

- The relevant background & experience of the Respondent in providing similar services elsewhere including demonstrated successful performance on other pump station rehabilitation / replacement projects.

- The specific background, qualifications and relevant experience of the individuals designated to provide services, especially those of the designated account representative, and other key personnel to be assigned to the project.

- Respondent's overall approach to the work and services to be provided for the project described herein including the respondent's ability to provide all of the services identified in the project scope.

- Proposed schedule and demonstrated commitment to the Town of Glastonbury's timetable for the project.

- Licensed by the State of Connecticut to perform the work required and involved.

- The Respondent's responsiveness and compliance with the RFQ requirements and specifications, including any exceptions attached or contained in the proposal.

REFERENCES

As part of the overall evaluation, The Town of Glastonbury shall review references provided in the respondent's proposal to determine the quality of services performed for other clients.

SELECTION PROCESS

- This request for qualifications does not commit the Town of Glastonbury to award a contract or to pay any costs incurred in the preparation of a proposal to this request. All proposals submitted in response to this request become the property of the Town of Glastonbury. The Town of Glastonbury reserves the right to accept or reject any or all proposals received as a result of this request, to negotiate with the selected respondents, the right to extend the contract for an additional period or to cancel in part or in its entirety the RFQ, if it is in the best interests of the Town to do so.

- A Selection Committee, appointed by the Town Manager, will evaluate all proposals received for completeness and the respondent's ability to meet all requirements as outlined in this proposal. The Committee will then short list the specific firms whose proposals best meet all criteria required and may conduct interviews with these firms. Upon completion of interviews, the Selection Committee will forward to the Town Manager a list of firms recommended for further consideration.

- Based on the results of the interview process the top-rated firms will be invited to submit a proposed Scope of Services and fee proposal. The Town Manager or his designee will review the Scope of Services, fee proposals, and other factors with the top-rated firm(s) and negotiate a specific agreement based on these discussions.

- Additional technical information may be requested from any respondent for clarification purposes, but in no way changes the original proposal submitted.

TIMELINE

The Town intends to adhere to the schedule listed below as closely as possible, but reserves the right to modify the schedule in the best interest of the Town as required.

Publicize RFQ	**11/7/22**
Optional Pre-Proposal Meeting	**11/15/22**
RFQ Due Date	**12/6/22 @11:00 AM**
Interviews with Top Respondents	**1/5/23**
Contract Effective Date	**On or before 3/26/23**

INSURANCE REQUIREMENTS

INSURANCE

The Respondent shall, at its own expense and cost, obtain and keep in force during the entire duration of the Project or Work the following insurance coverages covering the Respondent and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town of Glastonbury and their employees and agents as an Additional Insured** on a primary and non-contributory basis to the Respondent's Commercial General Liability and Automobile Liability policies. **These requirements shall be clearly stated in the remarks section on the Respondent's Certificate of Insurance**. Insurance shall be written with insurance carriers approved in the State of Connecticut and with a minimum Best's Rating of A-VIII with all policies written on an occurrence form basis. In addition, all carriers are subject to approval by the Town. Minimum Limits and requirements are stated below:

1) Worker's Compensation Insurance:

- Statutory Coverage
- Employer's Liability
- $1,000,000 each accident/$1,000,000 disease-policy limit/$1,000,000 disease each employee
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and their employees and agents.

2) Commercial General Liability:

- Including Premises & Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors.
- Limits of Liability for Bodily Injury and Building Damage
  Each Occurrence $1,000,000
  Aggregate $2,000,000 (The Aggregate Limit shall apply separately to each job.)
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and their employees and agents.

3) Automobile Insurance:

- Including all owned, hired, borrowed and non-owned vehicles
- Evidence of Combined Single Limit of Liability for Bodily Injury and Building Damage: Per Accident $1,000,000
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and their employees and agents.

4) Errors and Omissions Liability or Professional Services Liability Policy

Provide Errors and Omissions Liability or Professional Services Liability Policy for a minimum Limit of Liability $1,000,000 each occurrence or per claim. The awarded Consultant(s) will be responsible to provide written notice to the Owner 30 days prior to cancellation of any insurance policy.

The Consultant agrees to maintain continuous professional liability coverage for the entire duration of this Project, and shall provide for an Extended Reporting Period in which to report claims for seven (7) years following the conclusion of the Project.

The respondent shall provide a Certificate of Insurance as "evidence" of General Liability, Auto Liability including all owned, hired, borrowed and non-owned vehicles, statutory Worker's Compensation and Employer's Liability and Professional Services Liability coverage.

The respondent shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The awarded Respondent(s) will be responsible to provide written notice to the Owner 60 days prior to cancellation or non-renewal of any insurance policy. The Certificate shall evidence all required coverages including the Additional Insured on the General Liability and Auto Liability policies and Waiver of Subrogation on the General Liability policy. The respondent shall provide the Town copies of any such insurance policies upon request.

INDEMNIFICATION

To the fullest extent permitted by law, the Respondent shall indemnify and hold harmless the Town and their employees and agents consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) to the extent arising out of or resulting from the performance of the Respondent's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Respondent, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Respondent to perform or furnish either of the services, or anyone for whose acts the Respondent may be liable.

ATTACHMENT A
PROPOSAL RESPONSE PAGE

PROPOSAL NO: RPGL-2023-23 **DATE DUE:** DECEMBER 6, 2022

DATE ADVERTISED: NOVEMBER 7, 2022 **TIME DUE:** 11:00 AM

NAME OF PROJECT: PARKER TERRACE PUMP STATION ENGINEERING SERVICES

THE RESPONDENT ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA:

Addendum #1 _____(Initial/Date) **Addendum #2** _____(Initial/Date) **Addendum #3** _____(Initial/Date)

It is the responsibility of the respondent to check the Town's website for any Addenda before submitting the proposal.

CODE OF ETHICS:

I / We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I /We are selected. Yes _____ No _____ *

***Respondent is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the respondent has not agreed to the above statement.**

Type or Print Name of Individual	**Doing Business as (Trade Name)**
Signature of Individual	**Street Address**
Title	**City, State, Zip Code**
Date	**Telephone Number / Fax Number**
E-Mail Address	**SS # or TIN#**

ATTACHMENT B
NON-COLLUSION STATEMENT

The company submitting this proposal certifies that it is being submitted without any collusion, communication or agreement as to any matter relating to it with any other Respondent or competitor. We understand that this proposal must be signed by an authorized agent of our company to constitute a valid proposal.

Date: _____

Name of Company: _____

Name and Title of Agent: _____

By (SIGNATURE): _____

Address: _____

_____

_____

Telephone Number: _____

ATTACHMENT C
EXCERPT "TOWN OF GLASTONBURY CONNECTICUT WATER POLLUTION CONTROL AUTHORITY, SANITARY SEWER MASTER PLAN DATED MARCH 2015"
PREPARED BY WESTON & SAMPSON ENGINEERS, INC.

6.0 Municipal Wastewater Pumping Stations

6.0.1 Parker Terrace Wastewater Pumping Station

6.0.1.1 Existing Conditions

The Parker Terrace Wastewater Pumping Station is located on Parker Terrace and was originally constructed in 1967 to service Northwestern Glastonbury near the Town line with East Hartford. Due to planned growth within the subarea, the Town completely replaced the pumping station in1985. Since construction of the new pumping station was completed in 1985 only minor modifications have been completed, including replacement of the three wastewater pumps and VFD system in 2009.

Raw wastewater is conveyed to the pumping station via one 24-inch gravity sewer. The 24-inch influent sewer is connected through the original pumping station wetwell. The wastewater flows through the original wetwell to a 30-inch ductile iron (DI) gravity sewer where it enters the new pumping station wetwell. The pumping station includes a 10-foot x 20-foot divided concrete wetwell. During the 1985 upgrade, the pumping station capacity was increased to 4,000 gallons per minute (gpm) or 5.76 million gallons per day (MGD). A review of the 2011 through 2013 pumping data indicates that average daily flow to the pumping station is approximately 1.1 MGDor 764 gpm.

The pumping station is configured as a conventional flooded suction type wastewater pumping station with a wetpit section providing wastewater storage and a drypit section housing the wastewater pumping equipment. Three 60-horsepower centrifugal pumps are housed in the below grade drypit. Each pump is a variable speed type Aurora 612/613 pump rated for 2,000 gpm at 61feet of total dynamic head (TDH). The pump motors are located on an intermediate floor thus somewhat protecting the motors from flooding in the drypit should it occur. Power is transferred from the motor through an extended shaft to the wastewater pumping equipment. Each of the pumps is equipped with a mechanical seal and a seal water system for lubrication and cooling of the mechanical seals. The wastewater flows from the pumps through one 12-inch check valve andone 12-inch plug valve and a flow meter before transitioning to a16-inch force main.

The Parker Terrace Wastewater Pumping Station pumps wastewater through an approximately 4,000 foot 16-inch ductile iron force main to the Parker Terrace Interceptor Sewer. The force main was installed in 1967 when the pumping station was constructed. Based on the design

pumping rate of 2,000 gpm the velocity in the 16-inch force main would be 3.2 feet per second (fps). The velocity in the 16-inch force main would be 6.4 fps with both pumps operating at the station capacity of 4,000 gpm. The pumping station force main velocity range falls within the acceptablerange of 2.5 to 8 fps. The town reports that a portion of this force main was replaced due to corrosion.

The pumping station electrical and instrumentation systems are housed within an electrical and control building located over the pumping station structure. The electrical motor control center (MCC) houses a 400-amp, 480-volt, 3-phase electrical service equipped with an automatic transfer switch (ATS). The ATS is connected to a 275-kilowatt Kohler (Model D-268627D) diesel backup generator with an external above ground diesel concrete fuel storage tank. The wastewater pumpsare controlled via a simple wetwell level sensing system which consists of a liquid level transducerand associated operational controls.

The wastewater pumping station site is paved and site fencing is provided. The site fencing appears to be good condition and based on discussions with operations personal sufficient spaceis provided for the operational and maintenance requirements of the pumping station.

A summary of the pumping station information is provided in Table 6-10.

Table 6-10 Parker Terrace Pumping Station Summary	
Pumping Station	
Date of Construction	1967
Date of Subsequent Upgrades	1985
Type of Pumping Station	Flooded Suction
Type of Pumps	Centrifugal
Number of Pumps	3
Design Flow Rate (gpm)	2,000
Design Total Dynamic Head (ft)	61
Wetwell Storage Volume (gallons)	1,496
Force Main	
Diameter (inches)	16
Length (feet)	3,987
Volume (gallons)[1]	41,640
Velocity (ft/s)[1]	3.19 @ 2,000 gpm
Wastewater Flows	
Existing Average Daily Flow (gpd)[2]	1,070,633
Existing Peak Hourly Flow (gpm)[3]	2,007
Peak Infiltration/Inflow (gpd)	1,240,000
Schedule for Improvements	
Next Upgrade	2020

1. Based on a standard nominal internal pipe diameter.
2. Based upon 2011-2013 flow data provided by Town.
3. Existing peak hourly flow is based on a 2.7 peaking factor provided by the Town.

The following deficiencies were noted with the Parker Terrace Pumping Station:

- Very tight conditions as a result of elevator shaft. The elevator is inoperable.
- The force main velocities are less than the recommended cleansing velocity of 3 ft/s when pumping less than 2,000 gpm. Pumps are programmed to run across the line once per day. Pumps ramp to maximum gallons per minute during low flows times to provide scourvelocity within the force main.

Overall the Parker Terrace Wastewater Pumping Station structural components appear to be in good condition with only minor structural patching/modifications required. The majority of the

existing electrical and instrumentation equipment and components are approaching 30 years of service. The typical useful life of industrial electrical and instrumentation equipment and components (a municipal wastewater pumping station is an industrial classification with regards to electrical components) is nominally 20 years. As electrical and instrumentation equipment and components age it becomes increasingly difficult to maintain and repair and parts availability becomes a serious problem. The Parker Terrace Wastewater Pumping Station mechanical components are beginning to show signs of age but appear to be functional and operating correctly. The operations staff did not identify any major operational issues associated with the pumping station.

6.0.1.2 *Future Conditions*

Based on growth analysis completed within this planning study, the Parker Terrace Wastewater Pumping Station has adequate capacity to convey the future flows and a capacity expansion is not required. Although the Parker Terrace Wastewater Pumping Station is in good operational condition the majority of the station is beyond its intended design life as the majority of the pumping station components are approaching 30 years of service. The typical design life for mechanical, electrical and instrumentation equipment and components is nominally 20 years. It is recommended that a complete modernization of the pumping station be undertaken within the next few years with the goal having the upgraded/modernized pumping station operational within the next 5 years. The following upgrades are recommended:

- The pumping station force main is approaching 50 years of service. The structural integrity of the force main needs to be evaluated. Based on information from the Town of Glastonbury, a section has been replaced. As part of the integrity analysis the force main should be completely flushed and clean/pigged and samples taken for analysis. After the force main has been cleaned, it is recommended that pump draw down tests be conducted on each of the wastewater pumps to determine the pumping capacity of each pumping unit.
- Complete replacement of all mechanical equipment, piping and components. As part of the piping modifications an easily accessible bypass should be provided. The two existing wastewater pumps, which were replaced in 2009, should be rebuilt. If a mechanical bar screen is provided, the wastewater pumps should be provided with energy efficient type enclosed impellers. If no mechanical screen is provided vortex type impellers will be required to reduce potential ragging. The existing pump motors should be replaced with close coupled immersible type motors so that the extended shaft drive systems can be removed. Pumping equipment which does not require seal water should also be considered.
- As the Town begins to replace the drypit wastewater pumps for the Parker Terrace, Matson Hill and High Street wastewater pumping station it is recommended that the Town standardize all of the drypit wastewater pumping equipment. It is recommended that the Town standardize the pumps around one manufacturer who provides

close coupled pumping equipment with immersible type motors which do not require seal water. Cornell, Yeomans Chicago, Fairbanks Morse, and Crane all produce high quality drypit wastewater pumping equipment. This standardization approach will allow the WPCA staff to standardize the associated spare parts and service.

- Complete replacement of the electrical and instrumentation equipment and components. The instrumentation system should be a PLC based system which is compatible with the WPCF SCADA system such that the pumping station information can be incorporated via aradio system.
- The Town should monitor the operation of the pumping station in terms of rags and wipes entering the wetwell and impacting pumping operations, and make necessary improvements as warranted.
- A complete modernization of the concrete pumping station structures and building systems. All existing exposed concrete spalls/deterioration should be patched. The pumping station building masonry should be repointed and a new roof should be providedon the pumping station building. A pitched metal roof should be considered pending a structural analysis of the building components.
- It is recommended that an influent flume type flow meter be provided to monitor the daily and instantaneous flows to the pumping station as well as to identify any I/I issues within the tributary sewershed. The flume can be installed within the original wetwell after the screening equipment. The flow meter readings can be hard wired back to the electrical andcontrol room and recorded on a chart recorder and logged via the SCADA system.

The engineer's opinion of the planning/budgeting costs for the upgrades to the Parker Terrace Wastewater Pumping Station is $4,500,000. This includes a 25% contingency, preliminary engineering report, force main investigation, final design engineering, and construction administration. It is recommended that the Town have an additional budget of $638,000 in reserve for the complete replacement of the force main should it be needed for structural reasons since the force main will be approaching 70 years of service at the end of the 20-year planning period. A breakdown of the engineer's opinion of the probable costs for the upgrades to the Parker TerraceWastewater Pumping Station is provided in Appendix D.