



TOWN OF SHREWSBURY
RICHARD D. CARNEY MUNICIPAL OFFICE BUILDING
100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

April 22, 2016

Wayne Belec
Senior Project Manager
Waterman Design Associates, Inc.
31 East Main Street
Westborough, MA 01581

Re: Comprehensive Permit Application for the Pointe at Hills Farm
Correspondence and Request for Information, dated April 21, 2016

Dear Mr. Belec:

We have received your correspondence, dated April 21, 2016, as well as the request for additional information related to sewer for the Pointe at Hills Farm from Thomas Parece, AECOM, dated April 21, 2016 (enclosed).

After reviewing both your correspondence and the request for additional information, we contacted Weston & Sampson to discuss the questions pertaining to sewer that were raised in both. As such, we have the following responses.

Response to Request for Additional Information from AECOM, dated April 21, 2016

The request for additional information included a numbered list of items that AECOM is requesting Weston & Sampson respond to or provide. The responses to these listed items, shown in **bold** are included below:

1) Peer Review Survey

At the Technical Review Meeting that occurred on April 8, 2016, between Weston & Sampson, AECOM, and other representatives for the Town of Shrewsbury and for the Applicant (Smart Growth Design), the survey data was discussed, including information pertaining to calculation of rims and inverts. It is our understanding that, though there were different methodologies employed by Weston & Sampson and AECOM, the group ultimately decided that the Weston & Sampson methods would be employed by AECOM as it updated its numbers for sewer. Those updated numbers from AECOM were then to be submitted to Weston & Sampson for their peer review.

2) Average Daily Flow Estimates

After discussing the items raised by AECOM related to Average Daily Flow Estimates, it is the understanding of the Town and of Weston & Sampson that AECOM and Weston & Sampson have the same figures for determining Average Daily Flows. In order to get more information as requested, it would require Weston & Sampson to conduct additional study and survey. Such work was not included in the Scope of Services for Weston & Sampson that was agreed to by the Town and the Applicant (enclosed). Obtaining such additional information is generally the role of the Applicant and their Peer Review.

3 & 4) Pump Stations and Cherry Street Pump Station

It is our understanding that these items were discussed as well at the Technical Review Meeting that occurred on April 8, 2016, as is evidenced by the meeting minutes (enclosed). At that meeting, the potential upgrades that would be necessary for both continued use by the Town, and those necessary to accommodate the flows from the Pointe at Hills Farm were discussed, but ultimately not decided upon. This is because there does not currently exist a detailed list of maintenance upgrades for the Quail Hollow, Stoney Brook, or Cherry Street pump stations. Such a list would require a comprehensive review by Weston & Sampson of all three stations over a period of several months, with some sort of funding mechanism to pay for it. Making this a condition of the decision was discussed at the Technical Review Meeting.

Response to Correspondence from Waterman Design, dated April 21, 2016

A request was submitted to allow for direct contact between AECOM and Weston & Sampson in order to engage in technical discussions. Such contact however should occur at an additional Technical Review Meeting with representatives from the Town and the Applicant's team, similar to what occurred on April 8, 2016. This meeting was agreed to be necessary at the last working session. The Planning & Economic Development Department will work on scheduling this meeting.

In light of the need for further discussion and deliverables on Sewer being necessary, and for additional materials to be submitted to continue the conversation on Traffic, it is the Town's expectation that Architectural Review will be the only item on the agenda for the April 25, 2016 continued public hearing. We are also contemplating holding a special ZBA meeting on May 9, 2016, but this has not been confirmed.

If you have any additional comments or concerns, please do not hesitate to contact me.

Mr. Wayne Belec
April 22, 2016
Page 3 of 3

Sincerely,



Matthew Sarcione
Assistant Town Planner

Enc.

CC: Shrewsbury Zoning Board of Appeals
Daniel Morgado, Town Manager
Kristen Las, AICP, Assist. Town Manager/Economic Development Coordinator
Jeff Howland, PE, Town Engineer
Robert Tozeski, Water & Sewer Superintendent
Paul Haverty, Blatman, Bobrowski, Mead & Talermy, LLC
Robert Engler, SEB LLC
Roderick St. Pierre, Attorney
Fran Zarette, PE, Smart Growth Design
Thomas Parece, PE, AECOM
Hillary Lacirignola, PE, Weston & Sampson
Kent Nichols, PE, Weston & Sampson



Matthew Sarcione <msarcione@shrewsburyma.gov>

Flows and Survey Data

Wayne Belec <wmb@wdassoc.com>

Thu, Apr 21, 2016 at 12:49 PM

To: Matthew Sarcione <msarcione@shrewsburyma.gov>, "klas@shrewsburyma.gov" <klas@shrewsburyma.gov>, "Paul Haverly (paul@bbmatlaw.com)" <paul@bbmatlaw.com>, "Ronald Rosen (ronaldrosencpa@gmail.com)" <ronaldrosencpa@gmail.com>, "rtozeski@shrewsburyma.gov" <rtozeski@shrewsburyma.gov>
Cc: Fran Zarette <fzarette@gmail.com>, "Rod St.Pierre" <rod@stpierre-law.com>, Robert Engler Robert Engler <bob@s-e-b.com>, "Jason St.Pierre" (jason@stpierre-law.com)" <jason@stpierre-law.com>, Thomas Parece <Tom.Parece@aecom.com>, "Hillary Lacirignola (lacirignolah@wseinc.com)" <lacirignolah@wseinc.com>, "nicholsk@wseinc.com" <nicholsk@wseinc.com>, Mike Scott <mjs@wdassoc.com>

Matt-

Thanks for reaching out to us. AECOM will not have any new information to present for Monday night. We will need to wrap up the discussion at the following hearing. Without additional information from W&S, the departure of Jami and Tom being out of state there hasn't been much activity. Please find the email below from AECOM requesting information from W&S in order that they complete their work. With the clock winding down, we would like to W&S to provide AECOM the requested information ASAP and have AECOM delve into their work early next week. In addition, we would like the two consultants to have an open dialogue to engage in technical discussions in advance of a working session meeting next week to close out the discussion and position the ZBA to put this behind them at the meeting following the 4/25 hearing. You will recall that the technical discussion between Graves Engineering and WDA was effective in putting civil/site issues behind us.

With Sewer being tabled, please advise as to what will be discussed in order that I can, like you, coordinate the team on my end. Also, please authorize the open dialogue between the firms and advise as to when next week we can collective meet again as we had several weeks ago to close this out.

We look forward to hearing from you.

Thanks,

-Wayne

Regards,

Wayne M. Belec

Senior Project Manager/Business Development



Waterman Design Associates, Inc.

31 East Main Street

Westborough, MA 01581

Phone: 508.366.6552

Fax: 508.366.6506

www.watermandesign.com

Also visit our Providence office:

VERI | WATERMAN ASSOCIATES, INC.

www.veriwaterman.com



Please consider the environment before printing this message.

From: Parece, Tom [mailto:Tom.Parece@aecom.com]

Sent: Thursday, April 21, 2016 11:44 AM

To: Wayne Belec

Subject: The Ponte at Hills Farm - Wastewater Capacity Evaluation

Wayne,

As a following-up to this morning's telephone call regarding the W&S information received, the following is a summary of some the outstanding issues.

1. Peer Review Survey

- The Peer Review Survey and the Developer's Survey do not agree with regards to rims and inverts. This information is critical to calculating the carrying capacity of the collection system.
- The Peer Review Team did not provide direction with an explanation on which survey information or combination of survey information that should be used in order to calculate the carrying capacity of the collection system. Please advise.

2. Average Daily Flow Estimates

- Foot Note No. 2 which states "These flows should be based on recent Pump Station Drawdown data."
- Wetwell draw down tests only reflect a "snap shot" in time with regards to the Peak Daily Flow (PDF) pump capacity and don't reflect the Average Daily Flow (ADF) contributed to the collection system and tributary to the pump stations.
- Using wetwell draw down tests to "back calculate" the estimated ADF contributed to the collection system and tributary to the pump stations is not an accurate method and can result in under and/or over estimating the remaining capacity in the system.
- As previously requested, please provide the ADF and estimated Infiltration/Inflow for each of the manhole reaches so that the capacity analysis can be completed.

3. Pump Stations

- During various discussions with the Peer Review Team, it was stated that the three pump station have various maintenance/upgrades required to be addressed.
- A detailed list of the maintenance/upgrades required at the three pumping stations (Quail Hollow, Stoney Brook and Cherry Street) with items identified to be proposed to be addressed by the developer was not provided as previously requested and agreed to.

4. Cherry Street Pump Station

- Draw down tests performed by the Peer Review and Developer indicated that the pump station is over pumping based on the pump name plate and manufacturer's pump curve which reflects a design capacity (PDF) of 350 gpm. Most likely this is caused by the change in force main size from 4-inches to 6-inches which reduced the system TDH.
- The increased pumping rate results in the pumps operating more frequently and for shorter durations (excessive cycling). This excessive cycling can cause motor spline or key damage, bearing damage, and motor overheating. In addition, this excessive cycling directly impacts the life of control components such as pressure switches, starters, relays, and capacitors. Other pump station components, such as check valves, are subject to more frequent operating cycles which reduce their operating life. All of these conditions reduce the life of the pumping system.
- The excessive cycling increases the electrical cost of operating the pump station since the motor locked rotor torque or starting torque requires an initial higher electrical demand.
- The increased pumping rate impacts the downstream system carrying capacity by arbitrarily adding this increase flow.
- Modifying the pumps to the original design capacity (PDF) of 350 gpm will address the above noted issues. Please provide your written concurrence with this modification, so that the pump station is operating as originally designed.

If you have any questions, please contact this office.

Thanks,

Tom

Thomas E. Parece, P.E.
Associate Vice President, Water, New England
D +978-905-2354
M +978-764-9027
tom.parece@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, USA
T +978-905-2100
aecom.com

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Please consider the environment before printing this e-mail.

From: Matthew Sarcione [mailto:msarcione@shrewsburyma.gov]
Sent: Wednesday, April 20, 2016 4:12 PM
To: Wayne Belec; Fran Zarette; Rod St.Pierre; Robert Engler Robert Engler; 'Jason St.Pierre' (jason@stpierre-law.com); Thomas Parece
Subject: Re: Flows and Survey Data

[Quoted text hidden]

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Town of Shrewsbury, Massachusetts

January 21, 2016
Revised February 29, 2016

Mr. Matthew Sarcione
Assistant Town Planner
Planning and Economic Development Department
Richard D. Carney Municipal Office Building
100 Maple Avenue
Shrewsbury, MA 01545

**RE: Comprehensive Permit Application for the Pointe at Hills Farm
440 and 526 Hartford Turnpike - Request for Peer Review: Sewer**

Dear Mr. Sarcione:

Weston & Sampson is pleased to provide you with this proposed scope and budget for peer review services regarding Sewer Infrastructure and Capacity for "The Pointe at Hills Farm." A Comprehensive Permit application for a 280 unit multi-family apartment community at 440 and 526 Hartford Turnpike has been filed with the Shrewsbury Zoning Board of Appeals (ZBA) by Smart Growth Design, LLC.

Based on our current understanding of your needs, we have prepared the attached scope of services to review the application package, site plans, and the Hydraulic Capacity Study and Report for the project prepared by AECOM, and attend as many as two (2) ZBA meetings (Task 1); and to perform field investigations to verify data used in the report (Task 2). Our proposed fee for this project is based on billing rates previously accepted by the Town of Shrewsbury.

We are available to meet with you at your convenience to discuss and refine this proposed scope of services if necessary. We can begin immediately upon your approval of this proposal and issuance of purchase order under our existing agreement for professional engineering services with the town. Should you desire a more formal proposal or separate agreement, please notify me. We appreciate the opportunity to provide this proposal and look forward to working with the town on this project.

If you agree with this proposal and would like to retain Weston & Sampson for these services, please sign below and return one copy to our office.

Very truly yours,
WESTON & SAMPSON ENGINEERS, INC.


Hillary M. Lacirignola, PE
Project Manager/Team Leader

TOWN OF SHREWSBURY


Authorized Signature 3/3/16
Date

Town of Shrewsbury, Massachusetts
Comprehensive Permit Application for the Pointe at Hills Farm – Peer Review: Sewer
Proposed Scope of Services

Task 1 – Peer Review

Review of Comprehensive Permit Application, Site Plans and Report

Weston & Sampson will review the permit application, site plans and the August 2015 report titled *New Sewer Service Evaluation for the Pointe at Hills Farm Development Shrewsbury, Massachusetts* Prepared for St. Pierre & St. Pierre, P.C., by AECOM Technical Services, Inc. We will review assumptions, calculations, adherence to Shrewsbury’s technical standards and Rules and Regulations, and generally accepted engineering practices. We will also review any material or referenced data contained within the report, and data made available on the town’s ZBA website. There is no field work associated with effort, and this task does not include review of work product previously developed or created by Weston & Sampson.

Weston & Sampson will deliver our comments on the permit application and report to the town in a letter format for review by town officials. Weston & Sampson will finalize the letter based on comments from the town and provide it to the ZBA.

Public Hearing

Weston & Sampson will prepare for and attend the next ZBA meeting where Sewer will be discussed, as well as any related following meetings. For the purposes of this proposal, we have budgeted for two (2) such meetings with attendance by two (2) representatives from Weston & Sampson. Shrewsbury pump station projects are managed by Mr. Kent Nichols, PE, and collection systems projects are managed by Ms. Hillary Lacirignola, PE. These projects have typically been handled separately, so both managers will attend each meeting. This task includes as many as 16 hours.

Task 1 – Peer Review: Sewer – Cost Summary

Staff	Hours	Rate	Total
Team Leader/Client Manager	10	\$170	\$1,700
Project Manager/Team Leader	32	\$143	\$4,576
Project Engineer	16	\$113	\$1,808
Administrative Assistant/COOP	1	\$57	\$57
Expenses	\$200	1.08	\$216
Total			\$8,357

Task 2 – Field Verification of Data

Data Collection & Review

Weston & Sampson will conduct an instrument survey to field verify invert elevations, pipe material and size and pipe slope of three (3) sewer segments (MH 2B-7 to 2B-6; MH 2B-6 to 2B-5; MH 2B-23 to 2B-22). For the purposes of this proposal, we have allotted a ½ crew-day for this task. Costs for police details that may be required for traffic control are not included.

Weston & Sampson will conduct inspections at three sewer pumping stations (Quail Hollow, Stoney Hill, and Cherry Street) for the purposes reviewing and verifying field data and AECOM’s maintenance recommendations. We will also conduct drawdown tests at each station to verify actual pumping rates. We assume that Shrewsbury sewer department personnel will accompany Weston & Sampson during the draw down tests and will be available for discussions regarding maintenance issues.

Draft & Final Report

Weston & Sampson will provide a draft report of our peer review to the Town of Shrewsbury for review by town officials. Weston & Sampson will finalize the report based on comments from the town and provide it to the ZBA.

Task 2 – Peer Review: Sewer – Field Verification of Data

Staff	Hours	Rate	Total
Team Leader/Client Manager	10	\$170	\$1,700
Project Manager/Team Leader	24	\$143	\$3,432
Project Engineer	12	\$113	\$1,356
Administrative Assistant/COOP	1	\$57	\$57
Expenses*	\$100	1.08	\$108
Total			\$6,653

*This cost does not include police details as may be required.



TOWN OF SHREWSBURY

Richard D. Carney Municipal Office Building
100 Maple Avenue
Shrewsbury, Massachusetts 01545-5398

Minutes

The Pointe at Hills Farm 40B Sewer – Technical Meeting April 8, 2016

Present: Kristen Las, Matt Sarcione, Robert Tozeski, Paul Haverty, Jami Walsh, Rod St. Pierre, Jason St. Pierre, Fran Zarette, Wayne Belec, Hillary Lacirignola, Kent Nichols

The group reviewed the proposed plans for Phase I and Phase II of the project, which currently contains 248 units total.

Today is the last day that Jami Walsh is working for AECOM.

Survey work occurred with Weston and Sampson and AECOM on Monday, April 4 and Wednesday, April 6, 2016.

Pipes

The group began the discussion around pipe characteristics and capacity. The pipe under Route 9 near South Street was the main topic of discussion. This pipe is very flat and is 10 inch cast iron. The group agreed that adding anymore flow to this pipe would exacerbate the problem. The developer will propose a solution in this area to either clean and seal the pipe or replace the pipe or some other method acceptable by the town.

Also, AECOM assumed that this pipe was pvc in their calculations, so their calculations need to be revised.

There were other areas that the survey revealed that AECOM had identified pipe sizes incorrectly in their report. The pipe sizes should be revised in the pending report.

An agreement was made to use 80% of the pipe capacity in the analysis rather than the originally proposed 95%.

Weston and Sampson will transmit the average daily flows for the pipe segments to AECOM that were within their September 29, 2014 report.

Pump Stations

The conditions of Quail Hollow, Stoney Hill and Cherry Street pump stations were discussed. R. Tozeski stated that the stations can handle the current flow today. There are current issues with the stations and there will be issues in the future.

Weston and Sampson stated that Stoney Hill pump station cannot take any additional capacity as it is currently operating.

The group discussed how we figure out what needs to be done in the short and long term to these pump stations to accommodate the proposed development and future wear and tear on the pump stations. No one was hired to do those studies from either the town or developer. In addition to the evaluations being performed, cost estimates of short and long term fixes need to be prepared.

Weston and Sampson stated that it would take approximately 4 months to evaluate the pump stations and provide recommendations for short and long term fixes. P. Haverty discussed how this should become part of the ZBA decision. There has to be a funding mechanism for the study and for the fixes.

The group discussed the Cherry Street pump station and the holding tank associated with it. The applicant asked when the Landfill went offline from the Cherry Street pump station and if any additional flow was directed to that pump station. R. Tozeski will help to provide that information.

Summary

The main issues remain the following:

- The pipe under Route 9 at South Street
- The condition of the three pump stations and what would get the stations functioning better today and what would get the pump stations to handle the flow from the proposed development
- Any revisions to the cross country line based upon field work
- Revision to the evaluation based upon 80% capacity

It was agreed that the group needs to meet again technically after the AECOM report is submitted and Weston and Sampson has a chance to review it.

Referenced Materials

xx

Respectfully Submitted,



Kristen D. Las
Assistant Town Manager

4/8/2016
Date