

**Town of Shrewsbury, MA
W&S Project No. 2160206**

March 24, 2016

Mr. Matthew Sarcione
Assistant Town Planner
100 Maple Avenue
Shrewsbury, Massachusetts 01545

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

Dear Mr. Sarcione,

Weston & Sampson has reviewed AECOM's August 2015 report entitled "New Sewer Service Evaluation for the Pointe at Hills Farm Development," and subsequent March 8, 2016 supplemental update (hereinafter referred to as "The Report") and has the following preliminary comments:

Flows

- The estimated flow for the Pointe was considered to be 35,000 gpd based on average daily flow, however, design of sewers and pump stations and their hydraulic capacity shall be based on peak flow. The Applicant should provide peak flows and revise findings for pump stations and pipeline capacities.
- The Report does not indicate that any I/I values are included for the piping within the development.

Pipelines and Hydraulic Capacity:

- Some surveyed pipeline data used in The Report directly conflicts with existing records and observations made by Weston & Sampson and therefore should be verified.
- The Applicant should provide information on the method of determining surveyed pipe diameters.
- Weston & Sampson recommends that the design capacity of all pipes in the study area be taken as 80% of the full theoretical capacity and that The Report findings be revised.

Pump Stations

- The data provided by Thompson-Liston Associates on the Cherry Street pump station appear to be design drawings generated by a developer. In the absence of town-owned record drawings, we would seek verification from town personnel, or through a field inspection, regarding the actual configuration (e.g. wet well size) of this pump station.
- Section 5.4, No.4 states that pump station runtimes for Cherry Street are within industry standards, but Section 8.2 states that they are not; please clarify. Information on industry standards for pump station runtimes per hour should be cited.
- There is no mention in The Report regarding the output of pumps at upstream Quail Hollow pump station being greater than pumping rates at downstream Stoney Hill pump station.

- Stoney Hill pump station runtimes were evaluated, but there is no mention of its ability to handle additional flows from the Pointe.
- The Report notes that there is a significant ragging issue at the Cherry Street pump station. Additional flows to this pump station will only exacerbate this ragging problem, thereby increasing maintenance to the station. The Applicant should provide a non-dispersibles control protocol for the development.
- Based on the drawdown test data provided it does not appear the Stoney Hill pump station has enough capacity to handle additional peak flow from the development. Please review and clarify.
- The Report states that the town should consider using the surge tank at the Cherry Street pump station and that a review of the odor control system should be performed to ensure its sizing is correct for when the tank is in use. Additional flow to the station will only exacerbate odor issues and such evaluation and necessary upgrades should be borne by the Applicant.
- All pump station capacity should be based on peak flows for the development. We disagree with use of observed maximum diurnal flows as peak flow.

Please note that this does not constitute our final review of The Report, but rather serves as a preliminary notation of issues requiring additional information or clarification. At this time we recommend that Weston & Sampson proceed with the field verification task as outlined in our February 29, 2016 proposal.

Please feel free to contact Kent Nichols or me if you have any questions.

Very truly yours,

WESTON & SAMPSON



Hillary Lacirignola, PE
Project Manager/Team Leader

cc: Jeffrey Howland, PE., Town Engineer

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