

Mark

November 21, 2013

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Mr. Jack Marren, Supervisor and Town Board
Town of Victor
85 East Main Street
Victor, New York 14564

RE: Pump Station Evaluation for Additional Development
PS 18 - High Street
LaBella Project No. 208375.192

Dear Jack:

As requested, we have evaluated the impact of two projects to PS 18 – High Street Pump Station under Planning Board review. These projects are the Eastgate Square Expansion and Historic High Point Phase 3 developments.

Pump Station Overview

The High Street Pump Station No. 18 (PS 18) was constructed in 1990 and is located near the intersection of Valentown Road and High Street in the Town of Victor. The station is an above grade, dual hut station. Each hut contains two pumps piped in series. Based on the diameter of the sheaves we measured in the field, the station is operating at 1720 rpm, and, if well maintained, would have a duty point of 400 gpm @158 feet TDH. From correspondence we have reviewed, it was originally operated at 1615 rpm's with a duty point of 275 gpm @146 feet TDH.

This pump station serves the northern portion of the Town's collection system, roughly the area east and west of Route 96, from the town line southward to Victor Crossing (Wal-Mart Plaza). The tributary area includes Eastview Mall, Victor Crossing, High Point Office Park, Somerset Hill Subdivision and other retail/commercial and residential development along and neighboring Route 96. Three town-owned pump stations (PS 19 - Eastview Mall, PS 20 - Route 96 U-Haul, and PS 21 - Victor Crossing [Wal-Mart]) all feed to PS 18. PS 18 discharges to a gravity sewer along High View Trail, back-lot to and along Barchan Dune Rise and Cobblestone Creek Road, in route to PS 14 - Cobblestone Creek Pump Station.

Hydraulic Loading – Projects under Planning Board Consideration

- Eastgate Square Expansion:
Development: Two retail buildings with 17,108 and 4,000 s.f, total 21,108 s.f.
Average Daily Flow: 21,108 s.f. @ 0.1 gpd/s.f. = 2,111 gpd
Conveyance: Gravity flow, approx. 4,300 l.f. to pump station
- Historic High Point Retail Phase 3
Development: Two retail buildings with 15,000 and 10,000 s.f, total 25,000 s.f.
Average Daily Flow: 25,000 s.f. @ 0.1 gpd/s.f. = 2,500 gpd
Conveyance: Gravity flow, approx. 1,500 l.f. to pump station

Total hydraulic loading for projects under Planning Board consideration: $2,111 + 2,500 = 4,611$ gpd.

Hydraulic Loading – “Approved” Projects

Approved projects include projects with preliminary approval with final approval pending, projects that are awaiting or are under construction, and projects or portions of projects that have been constructed but are not currently occupied.

- High Point Development
Development: Residential 72 units
Office Buildings 390,000 s.f.
Average Daily Flow: 72 units @ 250 gpd/unit + 390,000 s.f. @ 0.1 gpd/s.f. = 57,000 gpd
Conveyance: Gravity flow, approx. 5,500 l.f. to pump station
- Victor Crossings
Development: Three outbuildings totaling about 24,500 s.f.
Available lease space in constructed buildings: approx. 23,500 s.f.
Average Daily Flow: 48,000 s.f. @ 0.1 gpd/s.f. = 4,800 gpd
Conveyance: Pump station discharging to gravity sewers, approx. 2,300 l.f. to pump station

Total hydraulic loading for approved projects: $57,000 + 4,800 = 61,800$ gpd.

Pump Station Performance – Current and Future

Data collected by the Town of Farmington was obtained from January 1 to August 31 of this year. The data was tabulated to determine the average station run time during days with precipitation or wet weather and non-precipitation or dry weather days as well as the maximum station daily run times.

The station operated on average 8.6 hours per day during non-precipitation “dry” days and 8.9 hours per day during days with precipitation. The maximum station operation day was 13.1 hours, and recently the station has increasingly been receiving daytime high water alarms.

The Farmington Sewer and Water District smoke tested the Town’s collection system and noted many clean out covers were missing. The missing covers were linked to high inflow to the system and the covers were replaced in August. From September through October, the station did not show any appreciable decrease in pump running hours.

The additional flow from both the development under Planning Board consideration and other “approved” projects will result in approximately 2.8 hours of additional run time on an average day.

Conclusions and Recommendations

The additional flow from the projects under Planning Board Consideration and other “approved” development will increase the station’s run time by approximately 2.8 hours. This will result in highly elevated run times. Modifications of the pump station will be required as flows from all projects are realized. The majority of this flow (61,791 of the 66,402 gpd) and the increased runtime (2.6 of 2.8 hours) is related to other “approved” projects.

The time required to build-out the “approved” development (over 430,000 s.f. of office space and 72 residential units) will be considerable, giving the Town time to react to the issue. We recommend the two

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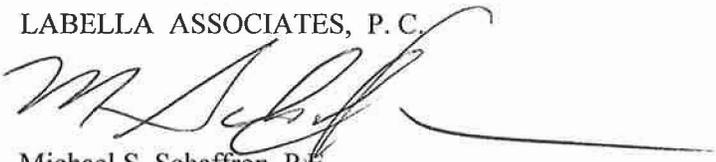
proposed developments under Planning Board review be approved and that the Town initiate planning efforts to modify the PS 18 High Street to safely accommodate the anticipated flows.

Modification of the pump's speed to attain increased pumping rates would require replacement of sheaves, belts and larger motors. With larger pumps, starters and electrical service may need to be upgraded. After active use for 23 years, a pump station replacement may be warranted. Station modifications should include emergency power generation.

Please do not hesitate to call should you have any questions.

Very truly yours,

LABELLA ASSOCIATES, P. C.



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