WATER ENGINEER’S REPORT

New Scotland Village

CITY OF ALBANY
COUNTY OF ALBANY
STATE OF NEW YORK

Applicant: Jankow Companies

Prepared by:

Hershberg & Hershberg Consulting Engineers and Land Surveyors
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February 24, 2019
INTRODUCTION:

Hershberg & Hershberg, Consulting Engineers and Land Surveyors, were retained by Jankow Companies (hereinafter the “Applicant”) with an address of PO Box 1366, Guilderland, NY 12087 as site engineer for the construction of a development plan to be known as New Scotland Village. This report is to review sewage generation and transmission for the consideration of the Department of Water & Water Supply and the City of Albany Planning Board.

DESCRIPTION OF EXISTING SITE:

PARCEL AREA

The existing parcel is Tax Map Parcels #64.81-1-(37-40,41-56,64-67,70,72) listed as 563 & 583 New Scotland Ave, 301, 313, 315 & 319 S. Allen Street 90,92,94,95,96,97,98,99,100,101,102,104 & 111 Onderdonk Avenue shown in photo below with a site area of 151,156 SF or 3.47 Acres.
DESCRIPTION OF INTENDED SITE DEVELOPMENT AND USE
Under the current applications the Applicant is proposing one 5 story mixed use building, two 4 story apartment buildings and a 2-story apartment building. Driveway, parking lot, sidewalks, landscaping, and stormwater detention will be provided.

POTABLE WATER USE
The existing site is currently developed. To establish sewage flow generation, the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems (March 5, 2014)\(^1\) is used to compute the Average Daily Flow. Based upon 110 GPD per bed (Method 1: Typical Per-Unit Hydraulic Loading Rates), with an estimated 240 beds in 188 units. Also, a total of 150 seat as is proposed in restaurant/coffee shop facilities and 6,487 Square Feet of Retail Space. These uses require a water usage estimated at 32,299 GPD or an average flow of 22.4 GPM. Peak water use is estimated at 400% of average flow or 89.7 GPM. See table below.

![Table of Water Use](image)

*Source: New York State Design Standards for Intermediate Sized Wastewater Treatment Works, NYSDEC, March 9, 2014*

Potable Water Use is equivalent to Sewer Generation

Fig. No. 2 – Potable Water Usage\`
WATER SYSTEM

The total water treated in 2017 at the Feura Bush Water Filtration Plant was 6,392,650,256 gallons. The daily water production averaged 17,514,110 gallons, with maximum daily production of 21,494,408 gallons. The capacity of this treatment plant is 32,000,000 GPD. The 32,299 GPD flow after construction of the buildings represents an insignificant portion of 0.18% of the average daily water production.

The Albany Water Board maintains water service to this site by way of a 16-inch main on the north side of New Scotland Avenue (installed in 1913) and a 6-inch main on the east side of South Allen Street (installed in 1927). The Applicant proposes to install a new 8-inch Ductile Iron water main connection between the 16” and the 6” main which will serve buildings and a new hydrant. Building D and a new hydrant will be served by an 8” water extension to the north. This main will be constructed in accordance with requirements of the Albany Water Board and the Applicant intends to convey it to the Board upon completion. An excerpt from Sheet 124 of the Water Atlas is reproduced below.
Fig. No. 3 – Portion of Water Atlas Sheet 124
FIRE PROTECTION

There are hydrants located on New Scotland Avenue East of the site and on the west side of South Allen Street opposite the site. There will be two hydrants added as part of this project. Two fire flow tests were made. One was at a hydrant connected to the 16” main on New Scotland Avenue and the second was made at a hydrant connected to a 6” main on South Allen Street. Based on these results as fire pump and a potable water pump will be required in Building A and may also be required in Buildings B & C. A fire protection plan will be submitted as part of the architectural drawings.

CONCLUSION:

It is the Engineer’s opinion that this project can be served by the existing public water system with no negative impact on the existing water system.

Prepared by:

HERSHBERG & HERSHBERG
Daniel R. Hershberg, P.E. & L.S.
APPENDIX A

FLOW TESTS
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<thead>
<tr>
<th>ID</th>
<th>Location</th>
<th>Date</th>
<th>By</th>
<th>Representing</th>
<th>Witnessed By</th>
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<tr>
<td></td>
<td>563 New Scotland Ave</td>
<td>12/15/2018</td>
<td>Gerard Jones</td>
<td>AWD</td>
<td>S Williams</td>
</tr>
</tbody>
</table>

**Purpose of Test**
Requested by Hershberg

**System Demand MGD**
20 MGD

**Pumps In Operation**
NA

**Pressure Regulated Zone**

**Flow Hydrant Location**
561 New Scotland Ave

**Nozzle Size** | **Number of Nozzles** | **Pitot Pressure** | **Pitot Flow GPM** |
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**Total Flow GPM**
1000

**Residual Hydrant Location**
425 New Scotland Ave

**Static Pressure PSI** | **Residual Pressure PSI** | **Fire Flow at 20 psi** |
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<tbody>
<tr>
<td>47</td>
<td>44</td>
<td>3276</td>
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**Remarks**
Hydrant fed off of 16” main

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**Thursday, December 20, 2018**

**Hydrant Flow Test**

**Hydrant Connected to 16” Main on New Scotland Ave.**
**Hydrant Flow Test**

**Hydrant Connected to 6” Main on South Allen St.**

<table>
<thead>
<tr>
<th>Location</th>
<th>563 New Scotland Ave</th>
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<tbody>
<tr>
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<td>12/15/2015/Gerard Jones</td>
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<td>Witnessed By</td>
<td>S Williams</td>
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<tr>
<td>Purpose of Test</td>
<td>System Demand MGD</td>
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<td>Hershberg</td>
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<tr>
<td>Pumps in Operation</td>
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<tr>
<td>Pressure Regulated Zone</td>
<td>[ ]</td>
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<tr>
<td>Flow Hydrant Location</td>
<td>310 S Allen</td>
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<table>
<thead>
<tr>
<th>Nozzle Size</th>
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<th>Pitot Flow GPM</th>
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</thead>
<tbody>
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<td>15</td>
<td>650</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Flow GPM</th>
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**Residual Hydrant Location**

<table>
<thead>
<tr>
<th>Static Pressure PSI</th>
<th>Residual Pressure PSI</th>
<th>Fire Flow at 20 psi</th>
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<tbody>
<tr>
<td>52</td>
<td>32</td>
<td>838</td>
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**Remarks**

- Hydrants fed from 6” main