Appendix K

Soil Investigation

Prepared by Dente Engineering, dated December 7, 2017
December 7, 2017

To: Lecce Law Firm  
Attn: Lou Lecce  
40 British American Boulevard #2  
Latham, New York 12110

Reference: Subsurface Investigation  
Whispering Pines Development  
Rotterdam, New York  
Dente Project No. JB175079

Dear Mr. Lecce:

In April of 2017 the Dente Group, a Terracon Company, was retained by Lecce Law Firm to complete a Subsurface Investigation of the above referenced property. The following is a brief summary of the Subsurface Investigation which included the completion of soil borings, test pits, and infiltration testing. A site location plan, depicting investigated locations, and the referenced logs are attached.

On April 19, 2017, Dente completed four (4) test pits on the southern end of the subject property utilizing a Kubota KX121-3 excavator supplied by Peter K. Frueh Excavating. Soils in this area were found to be composed generally of fine to medium sand with lesser amounts of silt. Groundwater was noted in some of the test pits between about 7' and 9' depths. The test pits were terminated at depths between 6' and 9'. Two (2) infiltration tests were completed adjacent to each test pit, located in opposite directions of the test pit, where possible. Infiltration testing was conducted at depths between about 2' and 5'. Results were dependent upon the localized variables but, in general, infiltration rates were found to be between 10 and 29 inches per hour.

The majority of the soil borings were advanced on the northern end of the subject property between April 25th and 26th, 2017, using an all-terrain, CME 55 drill rig with two shallow borings advanced by hand. Soils in the boring areas generally consisted of fine to medium texture sand with lesser amounts of silt with one area composed of glacial till material. In general, infiltration rates were found to range from nil, the glacial till area, to about 19 inches per hour.

We appreciate the opportunity of be of service. Please do not hesitate to call our office with questions or concerns.
Sincerely,
The Dente Group, A Terracon Company

Olivia R. Burns
Project Manager
LETTER OF TRANSMITTAL

DATE: May 11, 2017  PROJECT NO: FDE-17-79

TO:

Lou Lecce  
Lecce Law Firm  
40 British American Boulevard #2  
Latham, New York 12110

ITEMS ENCLOSED:

<table>
<thead>
<tr>
<th>DRAWINGS</th>
<th>DESCRIPTION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPORT</td>
<td>-Subsurface Investigation Site Plan</td>
</tr>
<tr>
<td>TEST REPORTS</td>
<td>-Subsurface Investigation Logs</td>
</tr>
<tr>
<td>MEETING NOTES</td>
<td>-Infiltration Test Results</td>
</tr>
<tr>
<td>SPECIFICATIONS</td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
</tr>
</tbody>
</table>

If you have any questions, please call our office at your earliest convenience. Thank you.

Olivia R. Burns  
Geotechnician

Distribution:

(2) copies to client  
(1) copy to file
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
The Subsurface Logs present observations and the results of tests performed in the field by the Driller, Technicians, Geologists and Geotechnical Engineers as noted. Soil/Rock Classifications are made visually, unless otherwise noted, on a portion of the materials recovered through the sampling process and may not necessarily be representative of the materials between sampling intervals or locations.

The following defines some of the terms utilized in the preparation of the Subsurface Logs.

SOIL CLASSIFICATIONS

Soil Classifications are visual descriptions on the basis of the Unified Soil Classification ASTM D-2487 and USBR, 1973 with additional comments by weight of constituents by BUHRMASTER. The soil density or consistency is based on the penetration resistance determined by ASTM METHOD D1586. Soil Moisture of the recovered materials is described as DRY, MOIST, WET or SATURATED.

<table>
<thead>
<tr>
<th>SIZE DESCRIPTION</th>
<th>RELATIVE DENSITY/CONSISTENCY (basis ASTM D1586)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SOIL TYPE</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>BOULDER &gt; 12</td>
<td></td>
</tr>
<tr>
<td>COBBLE 3&quot; - 12&quot;</td>
<td></td>
</tr>
<tr>
<td>GRAVEL-COARSE 3&quot; - 3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>GRAVEL - FINE 3/4&quot; - #4</td>
<td></td>
</tr>
<tr>
<td>SAND - COARSE #4 - #10</td>
<td></td>
</tr>
<tr>
<td>SAND - MEDIUM #10 - #40</td>
<td></td>
</tr>
<tr>
<td>SAND - FINE #40 - #200</td>
<td></td>
</tr>
<tr>
<td>SILT/NONPLASTIC &lt; #200</td>
<td></td>
</tr>
<tr>
<td>CLAY/PLASTIC &lt; #200</td>
<td></td>
</tr>
</tbody>
</table>

Note that the classification of soils or soil like materials is subject to the limitations imposed by the size of the sampler, the size of the sample and its degree of disturbance and moisture.
ROCK CLASSIFICATIONS

Rock Classifications are visual descriptions on the basis of the Driller's, Technician's, Geologist's or Geotechnical Engineer's observations of the coring activity and the recovered samples applying the following classifications.

<table>
<thead>
<tr>
<th>CLASSIFICATION TERM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY HARD</td>
<td>NOT SCRATCHED BY KNIFE</td>
</tr>
<tr>
<td>HARD</td>
<td>SCRATCHED WITH DIFFICULTY</td>
</tr>
<tr>
<td>MEDIUM HARD</td>
<td>SCRATCHED EASILY</td>
</tr>
<tr>
<td>SOFT</td>
<td>SCRATCHED WITH FINGERNAIL</td>
</tr>
<tr>
<td>VERY WEATHERED</td>
<td>DISINTEGRATED WITH NUMEROUS SOIL SEAM</td>
</tr>
<tr>
<td>WEATHERED</td>
<td>SLIGHT DISINTEGRATION, STAINING, NO SEAMS</td>
</tr>
<tr>
<td>SOUND</td>
<td>NO EVIDENCE OF ABOVE</td>
</tr>
<tr>
<td>MASSIVE</td>
<td>ROCK LAYER GREATER THAN 36&quot; THICK</td>
</tr>
<tr>
<td>THICK BEDDED</td>
<td>ROCK LAYER 12&quot; - 36&quot;</td>
</tr>
<tr>
<td>BEDDED</td>
<td>ROCK LAYER 4&quot; - 12&quot;</td>
</tr>
<tr>
<td>THIN BEDDED</td>
<td>ROCK LAYER 1&quot; - 4&quot;</td>
</tr>
<tr>
<td>LAMINATED</td>
<td>ROCK LAYER LESS THAN 1&quot;</td>
</tr>
<tr>
<td>FRACTURES</td>
<td>NATURAL BREAKS AT SOME ANGLE TO BEDS</td>
</tr>
</tbody>
</table>

Core sample recovery is expressed as percent recovered of total sampled. The ROCK QUALITY DESIGNATION (RQD) is the total length of core sample pieces exceeding 4" length divided by the total core sample length for N size cored.

GENERAL

- Soil and Rock classifications are made visually on samples recovered. The presence of Gravel, Cobbles and Boulders will influence sample recovery classification density/consistency determination.
- Groundwater, if encountered, was measured and its depth recorded at the time and under the conditions as noted.
- Topsoil or pavements, if present, were measured and recorded at the time and under the conditions as noted.
- Stratification Lines are approximate boundaries between soil types. These transitions may be gradual or distinct and are approximated.
**TEST PIT FIELD LOG**

| PROJECT: Whispering Pines Development | NUMBER: TP-1 |
| LOCATION: Rotterdam, New York | FILE NO. FDE-17-79 |
| CONTRACTOR: Peter K. Frueh, Inc. | DATE: April 19, 2017 |
| MAKE: Kubota | MODEL: KX121-3 |
| WEATHER: Overcast, 45° | CAPACITY: 1/3 cubic yard |
| GROUND LEVEL: +/- 343.0' | TIME START: N/A |

**DEPTH SOIL DESCRIPTION**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Soil Description</th>
<th>Excavation Effort</th>
<th>Boulder Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>+/- 2.5' Topsoil (old corn field)</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>2'</td>
<td>Brown Fine SAND, Little Gray Mottling, trace silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>3'</td>
<td>Grades Brown/Gray Mottled</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>4'</td>
<td>Brown/Gray Mottled Fine SAND and SILT</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>5'</td>
<td>End of test pit 7.0' depth.</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>6'</td>
<td>Groundwater did not accumulate within the test pit upon its completion.</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>7'</td>
<td>Infiltration pipe was installed at 4.0' depth at two opposite locations approximately 30.0' from the test pit.</td>
<td>E</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**BOULDER COUNT**

<table>
<thead>
<tr>
<th>Size Range Classification</th>
<th>Letter Designation</th>
<th>Abbreviations</th>
<th>Excavation Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; - 18&quot;</td>
<td>A</td>
<td>F = FINE</td>
<td>EASY..................E</td>
</tr>
<tr>
<td>18&quot; - 36&quot;</td>
<td>B</td>
<td>M = MEDIUM</td>
<td>MODERATE.............M</td>
</tr>
<tr>
<td>36&quot; &amp; OVER</td>
<td>C</td>
<td>C = COARSE</td>
<td>DIFFICULT............D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F-M = FINE TO MEDIUM</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F-C = FINE TO COARSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>GR = GRAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BN = BROWN</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>YEL = YELLOW</td>
<td></td>
</tr>
</tbody>
</table>
### INFILTRATION TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT NO.:** FDE-17-79  
**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 4/21/17  
**WEATHER:**  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-1A</td>
<td>3.8</td>
<td>1</td>
<td>10.0</td>
<td>1.00</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>11.0</td>
<td>1.00</td>
<td>11.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>10.5</td>
<td>1.00</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>10.3</td>
<td>1.00</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 10.5 inches per hour. Infiltration rate of final trial was 10.3 inches per hour.

| TP-1B         | 4.0              | 1         | 10.5                | 1.00                 | 10.5                            |
|               |                  | 2         | 10.0                | 1.00                 | 10.0                            |
|               |                  | 3         | 10.3                | 1.00                 | 10.3                            |
|               |                  | 4         | 10.3                | 1.00                 | 10.3                            |

Average infiltration rate for three trials was 10.3 inches per hour. Infiltration rate of final trial was 10.3 inches per hour.

**Notes:**  
1. Testing was conducted in general accord with the "Infiltration Testing Requirements" contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location TP-1: Brown/Gray Mottled Fine SAND, trace silt
# TEST PIT FIELD LOG

**PROJECT:** Whispering Pines Development  
**NUMBER:** TP-2  
**LOCATION:** Rotterdam, New York  
**FILE NO.:** FDE-17-79  
**CONTRACTOR:** Peter K. Frueh, Inc.  
**DATE:** April 19, 2017  
**MAKE:** Kubota  
**MODEL:** KX121-3  
**ENGINEER:** ORB  
**WEATHER:** Overcast, 45°  
**CAPACITY:** 1/3 cubic yard  
**BOOM REACH:** +/- 10’  
**GROUND LEVEL:** +/- 343.0’  
**TIME START:** N/A  
**TIME STOP:** N/A

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>SOIL DESCRIPTION</th>
<th>EXCAVATION EFFORT</th>
<th>BOULDER COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1’</td>
<td>+/- 8” Topsoil</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>2’</td>
<td>Brown Fine SAND, Little Gray Mottling and Silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>3’</td>
<td>Grades Brown/Gray Mottled, trace to Some Silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>4’</td>
<td>Grades (WET) at the bottom of the pit</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>5’</td>
<td>End of test pit 6.7’ depth.</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>6’</td>
<td>Groundwater did not accumulate within the test pit upon its completion.</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>7’</td>
<td>Infiltration pipe was installed at 5.0’ depth at two opposite locations approximately 40.0’ from the test pit.</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>8’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

<table>
<thead>
<tr>
<th>BOULDER COUNT</th>
<th>ABBREVIATIONS</th>
<th>EXCAVATION EFFORT</th>
</tr>
</thead>
</table>
| SIZE RANGE CLASSIFICATION | LETTER DESIGNATION | F = FINE  
M = MEDIUM  
C = COARSE  
F-M = FINE TO MEDIUM  
F-C = FINE TO COARSE  
GR = GRAY  
BN = BROWN  
YEL = YELLOW | EASY.................E  
MODERATE............M  
DIFFICULT...........D |
### INFILTRATION TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT NO.:** FDE-17-79

**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 4/21/17

**WEATHER:**  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-2A</td>
<td>4.7</td>
<td>1</td>
<td>18.0</td>
<td>1.00</td>
<td>18.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>17.0</td>
<td>1.00</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>18.0</td>
<td>1.00</td>
<td>18.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>17.5</td>
<td>1.00</td>
<td>17.5</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 17.6 inches per hour.  
Infiltration rate of final trial was 17.5 inches per hour.

| TP-2B         | 4.4              | 1         | 17.0                | 1.00                 | 17.0                            |
|               |                  | 2         | 15.5                | 1.00                 | 15.5                            |
|               |                  | 3         | 15.5                | 1.00                 | 15.5                            |
|               |                  | 4         | 15.3                | 1.00                 | 15.3                            |

Average infiltration rate for three trials was 15.8 inches per hour.  
Infiltration rate of final trial was 15.3 inches per hour.

**Notes:**

1. Testing was conducted in general accord with the "Infiltration Testing Requirements" contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location TP-2: Brown/Gray Mottled Fine SAND, trace to Some Silt
## Test Pit Field Log

**Project:** Whispering Pines Development  
**Number:** TP-3  
**Location:** Rotterdam, New York  
**File No.:** FDE-17-79  
**Contractor:** Peter K. Frueh, Inc.  
**Date:** April 19, 2017  
**Make:** Kubota  
**Model:** KX121-3  
**Engineer:** ORB  
**Weather:** Overcast, 45°  
**Capacity:** 1/3 cubic yard  
**Boom Reach:** +/- 10'  
**Ground Level:** +/- 343.0'  
**Time Start:** N/A  
**Time Stop:** N/A

### Depth vs. Soil Description

<table>
<thead>
<tr>
<th>Depth</th>
<th>Soil Description</th>
<th>Excavation Effort</th>
<th>Boulder Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- 7&quot;</td>
<td>Topsoil</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>1'</td>
<td>Brown F-M Sand, Little Silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>2'</td>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>3'</td>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>4'</td>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>5'</td>
<td>Grades Brown Mottled, Some Silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>6'</td>
<td>Grades Little Silt</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>7'</td>
<td></td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>8'</td>
<td>Grades trace silt (WET)</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>9'</td>
<td>End of test pit 9.0' depth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11'</td>
<td>Groundwater was noted seeping in at the bottom of the test pit. The walls of the test pit began caving in at 6.0' depth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13'</td>
<td>Infiltration pipe was installed at 4.0' and 5.0' depths at two opposite locations approximately 35.0' from the test pit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Remarks:

- Groundwater was noted seeping in at the bottom of the test pit. The walls of the test pit began caving in at 6.0' depth.
- Infiltration pipe was installed at 4.0' and 5.0' depths at two opposite locations approximately 35.0' from the test pit.

### Boulder Count

<table>
<thead>
<tr>
<th>Size Range Classification</th>
<th>Letter Designation</th>
<th>Abbreviations</th>
<th>Excavation Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; - 18&quot;</td>
<td>A</td>
<td>F = Fine</td>
<td>EASY................</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M = Medium</td>
<td>MODERATE...........</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C = Coarse</td>
<td>DIFFICULT...........</td>
</tr>
<tr>
<td>18&quot; - 36&quot;</td>
<td>B</td>
<td>F-M = Fine to Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F-C = Fine to Coarse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>GR = Gray</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BN = Brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>YEL = Yellow</td>
<td></td>
</tr>
<tr>
<td>36&quot; &amp; OVER</td>
<td>C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# INFILTRATION TEST RESULTS

## PROJECT: Whispering Pines Development  
**PROJECT NO.:** FDE-17-79  
**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 4/21/17

**WEATHER:**

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-3A</td>
<td>4.8</td>
<td>1</td>
<td>24.0</td>
<td>0.83</td>
<td>28.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>23.8</td>
<td>1.00</td>
<td>23.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>22.0</td>
<td>1.00</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>21.5</td>
<td>1.00</td>
<td>21.5</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 24.1 inches per hour. Infiltration rate of final trial was 21.5 inches per hour.

| TP-3B         | 3.6              | 1         | 12.0                | 1.00                 | 12.0                            |
|               |                  | 2         | 10.0                | 1.00                 | 10.0                            |
|               |                  | 3         | 10.0                | 1.00                 | 10.0                            |
|               |                  | 4         | 10.0                | 1.00                 | 10.0                            |

Average infiltration rate for three trials was 10.5 inches per hour. Infiltration rate of final trial was 10.0 inches per hour.

**Notes:**

(1) Testing was conducted in general accord with the "Infiltration Testing Requirements" contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location TP-3: Brown F-M SAND, Little Silt
## TEST PIT FIELD LOG

**PROJECT:** Whispering Pines Development  
**NUMBER:** TP-4  
**LOCATION:** Rotterdam, New York  
**FILE NO.:** FDE-17-79  
**CONTRACTOR:** Peter K. Frueh, Inc.  
**DATE:** April 19, 2017  
**MAKE:** Kubota  
**MODEL:** KX121-3  
**ENGINEER:** ORB  
**WEATHER:** Overcast, 45°  
**CAPACITY:** 1/3 cubic yard  
**BOOM REACH:** +/- 10'  
**GROUND LEVEL:** +/- 343.0'  
**TIME START:** N/A  
**TIME STOP:** N/A

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>SOIL DESCRIPTION</th>
<th>EXCAVATION EFFORT</th>
<th>BOULDER COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1'</td>
<td>+/- 1” Topsoil</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>2'</td>
<td>Brown F-M SAND, Little Silt</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>3'</td>
<td>Brown Fine SAND and SILT</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>4'</td>
<td>Grades Brown F-M SAND, Little Silt</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>5'</td>
<td>Grades (WET)</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>6'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11'</td>
<td>Groundwater was noted seeping in at the bottom of the test pit. The walls of the test pit began caving in at 4.5’ depth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12'</td>
<td>Infiltration pipe was installed at 3.0’ depth adjacent to the test pit and approximately 120.0’ southeast of the test pit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

<table>
<thead>
<tr>
<th>BOULDER COUNT</th>
<th>ABBREVIATIONS</th>
<th>EXCAVATION EFFORT</th>
</tr>
</thead>
</table>
| SIZE RANGE CLASSIFICATION | LETTER DESIGNATION | F = FINE  
| 6” - 18” | A | M = MEDIUM  
| 18” - 36” | B | C = COARSE  
| 36” & OVER | C | F-M = FINE TO MEDIUM  
| | | F-C = FINE TO COARSE  
| | | GR = GRAY  
| | | BN = BROWN  
| | | YEL = YELLOW  
| | | EASY.........................E  
| | | MODERATE...............M  
| | | DIFFICULT..............D  


# INFRINGEMENT TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT NO.:** FDE-17-79  
**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 4/21/17

**WEATHER:**  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-4A</td>
<td>3.1</td>
<td>1</td>
<td>14.0</td>
<td>1.00</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>12.0</td>
<td>1.00</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>13.0</td>
<td>1.00</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>12.5</td>
<td>1.00</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 12.9 inches per hour. Infiltration rate of final trial was 12.5 inches per hour.

| TP-4B         | 2.5              | 1         | 16.0                | 1.00                 | 16.0                            |
|               |                  | 2         | 16.0                | 1.00                 | 16.0                            |
|               |                  | 3         | 16.3                | 1.00                 | 16.3                            |
|               |                  | 4         | 16.0                | 1.00                 | 16.0                            |

Average infiltration rate for three trials was 16.1 inches per hour. Infiltration rate of final trial was 16.0 inches per hour.

**Notes:**  
(1) Testing was conducted in general accord with the “Infiltration Testing Requirements” contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location TP-4: Brown Fine SAND and SILT
### Subsurface Log I-5

**Project:** Whispering Pines Development  
**Date:** Start: 4/25/17, Finish: 4/25/17

**Location:** Rotterdam, New York  
**Client:** Lecce Law Firm

**Job Number:** FDE-17-79  
**Drill Type:** CME 55  
**Classification:** O. Burns

**Methods:** 2 1/4" Hollow Stem Augers, ASTM D1586 Drilling Methods with Auto Hammer  
**Surface Elevation:** +/- 354.0'

<table>
<thead>
<tr>
<th>Sample</th>
<th>Blows on Sampler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth</td>
<td>#</td>
</tr>
<tr>
<td>5'</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>10'</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>15'</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Classification / Observations:**
- +/- 4" Topsoil
- Brown TILL noted
- **TILL:** Gray Silt, Some F-C Sand, Little Gravel (MOIST)
- (MOIST, COMPACT TO VERY COMPACT)
- End of boring 11.0' depth.
## INFILTRATION TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT NO.:** FDE-17-79

**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 5/5/17

**WEATHER:**  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-5A</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td>Approximately 3.0’ of presoak water was found remaining within the infiltration pipe at the time of testing. As the presoak water did not infiltrate at this location, the test is considered failed.</td>
</tr>
<tr>
<td>I-5B</td>
<td>3.9</td>
<td>1</td>
<td>16.8</td>
<td>1.00</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>16.0</td>
<td>1.00</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>15.4</td>
<td>1.00</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>13.0</td>
<td>1.00</td>
<td>13.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 15.3 inches per hour. Infiltration rate of final trial was 13.0 inches per hour.

**Notes:**

1. Testing was conducted in general accord with the "Infiltration Testing Requirements" contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

- **Test Location I-5A:** Brown Glacial Till noted
- **Test Location I-5B:** Sand noted at 3.5’-4.0’
**SUBSURFACE LOG I-6A**

**PROJECT:** Whispering Pines Development  
**DATE** START: 4/26/17  
**FINISH:** 4/26/17

**LOCATION:** Rotterdam, New York  
**METHODS:** 2 1/4" Hollow Stem Augers, ASTM

**CLIENT:** Lecce Law Firm  
**D1586 Drilling Methods with Auto Hammer**

**JOB NUMBER:** FDE-17-79  
**SURFACE ELEVATION:** +/- 352.0'

**DRILL TYPE:** CME 55  
**CLASSIFICATION:** O.Burns

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>SAMPLE</th>
<th>BLOWS ON SAMPLER</th>
<th>CLASSIFICATION / OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6&quot; 12&quot; 18&quot; 24&quot;</td>
<td>+/- 4&quot; Topsoil</td>
</tr>
<tr>
<td>1</td>
<td>WH</td>
<td>1</td>
<td>Brown F-M SAND, Little Silt (MOIST)</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>Similar with Silty Seams, rootlets noted</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3</td>
<td>Grades Brown Fine SAND, trace silt</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>1</td>
<td>Similar with Some Mottling (MOIST, LOOSE)</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>4</td>
<td>End of boring 16.0' depth.</td>
</tr>
</tbody>
</table>
## Subsurface Log I-6B

**Project:** Whispering Pines Development  
**Date:** Start: 4/25/17  Finish: 4/25/17

**Location:** Rotterdam, New York  
**Methods:** 2 1/4" Hollow Stem Augers, ASTM D1586 Drilling Methods with Auto Hammer

**Client:** Lecce Law Firm  
**Job Number:** FDE-17-79  
**Surface Elevation:** +/- 356.0'

**Drill Type:** CME 55  
**Classification:** O. Burns

<table>
<thead>
<tr>
<th>Depth</th>
<th>Sample Blows on Sampler</th>
<th>Classification / Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>5'</td>
<td>1 WH/18&quot;</td>
<td>+/- 8&quot; Topsoil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brown/Orange Fine SAND, Little Silt (MOIST)</td>
</tr>
<tr>
<td>5'</td>
<td>2 3 3</td>
<td>Grades Brown F-M SAND, Little Silt</td>
</tr>
<tr>
<td>10'</td>
<td>3 3 5</td>
<td>Grades Brown Fine SAND, Little Mottling, trace silt</td>
</tr>
<tr>
<td>15'</td>
<td>4 4 4</td>
<td>Grades to Brown F-M SAND, trace silt</td>
</tr>
<tr>
<td></td>
<td>5 4 2</td>
<td></td>
</tr>
<tr>
<td>20'</td>
<td>6 3 2</td>
<td>Cobble noted at 20.0' depth (MOIST, LOOSE TO FIRM)</td>
</tr>
<tr>
<td></td>
<td>13 15 15</td>
<td>End of boring 21.0' depth.</td>
</tr>
</tbody>
</table>
## INFILTRATION TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT NO.** FDE-17-79  
**PROJECT LOCATION:** Rotterdam, New York  
**TEST DATE:** 5/5/17  
**WEATHER:**  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-6A</td>
<td>12.8</td>
<td>1</td>
<td>3.0</td>
<td>1.00</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3.5</td>
<td>1.00</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>4.0</td>
<td>1.00</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>4.3</td>
<td>1.00</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 3.7 inches per hour. Infiltration rate of final trial was 4.3 inches per hour.

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-6B</td>
<td>16.9</td>
<td>1</td>
<td>4.0</td>
<td>1.00</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>3.8</td>
<td>1.00</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>4.0</td>
<td>1.00</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>4.0</td>
<td>1.00</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 4.0 inches per hour. Infiltration rate of final trial was 4.0 inches per hour.

**Notes:**  
(1) Testing was conducted in general accord with the “Infiltration Testing Requirements” contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location I-6A: Brown Fine SAND, trace silt  
Test Location I-6B: Brown F-M SAND, trace silt
**PROJECT:** Whispering Pines Development  
**DATE**  
**LOCATION:** Rotterdam, New York  
**METHODS:** 2 1/4" Hollow Stem Augers, ASTM  
**CLIENT:** Lecce Law Firm  
**JOB NUMBER:** FDE-17-79  
**SURFACE ELEVATION:** +/- 341.0'  
**DRILL TYPE:** CME 55  
**CLASSIFICATION:** O.Burns

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>SAMPLE</th>
<th>BLOWS ON SAMPLER</th>
<th>CLASSIFICATION / OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5'</td>
<td>1</td>
<td>2 2 3 4 5</td>
<td>Brown Fine SAND, Little Silt (MOIST)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4 3</td>
<td>Grades Brown F-M SAND, trace silt (MOIST, LOOSE)</td>
</tr>
<tr>
<td>10'</td>
<td></td>
<td></td>
<td>End of boring 7.0' depth.</td>
</tr>
<tr>
<td>15'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## INfiltration Test Results

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-7A</td>
<td>2.8</td>
<td>10.3</td>
<td>1.00</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.0</td>
<td>1.00</td>
<td>11.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.8</td>
<td>1.00</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.8</td>
<td>1.00</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 12.0 inches per hour. Infiltration rate of final trial was 13.8 inches per hour.

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-7B</td>
<td>2.7</td>
<td>6.3</td>
<td>1.00</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.5</td>
<td>1.00</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.0</td>
<td>1.00</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.5</td>
<td>1.00</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 6.1 inches per hour. Infiltration rate of final trial was 6.5 inches per hour.

Notes:
(1) Testing was conducted in general accord with the "Infiltration Testing Requirements" contained in Appendix D of the New York State Storm Water Management Design Manual.

SOIL CLASSIFICATION AT TEST DEPTH
Test Location I-7: Brown Fine SAND, Little Silt
# Subsurface Log I-8

**Project:** Whispering Pines Development  
**Location:** Rotterdam, New York  
**Client:** Lecce Law Firm  
**Job Number:** FDE-17-79  
**Drill Type:** N/A  
**Classification:** O.Burns  

## Methods
2" x 24" Split Spoon Sampler via Hand Methods

## Surface Elevation

## Sample Classification / Observations

<table>
<thead>
<tr>
<th>Depth</th>
<th>Blows on Sampler</th>
<th>Classification / Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>5'</td>
<td>1</td>
<td>Brown F-M SAND, Some Silt (MOIST)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Similar with Little Mottling</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>End of boring 5.0' depth.</td>
</tr>
</tbody>
</table>
### INFILTRATION TEST RESULTS

**PROJECT:** Whispering Pines Development  
**PROJECT LOCATION:** Rotterdam, New York  
**PROJECT NO.:** FDE-17-79  
**TEST DATE:** 5/4/17  
**TESTER:** MJM

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-8A</td>
<td>1.8</td>
<td>1</td>
<td>16.0</td>
<td>1.00</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>16.3</td>
<td>1.00</td>
<td>16.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>15.3</td>
<td>1.00</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>14.0</td>
<td>1.00</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 15.4 inches per hour. Infiltration rate of final trial was 14.0 inches per hour.

| I-8B          | 1.8               | 1         | 16.5                | 1.00                 | 16.5                           |
|               |                   | 2         | 15.3                | 1.00                 | 15.3                           |
|               |                   | 3         | 16.5                | 1.00                 | 16.5                           |
|               |                   | 4         | 15.5                | 1.00                 | 15.5                           |

Average infiltration rate for three trials was 16.0 inches per hour. Infiltration rate of final trial was 15.5 inches per hour.

**Notes:**
1. Testing was conducted in general accord with the “Infiltration Testing Requirements” contained in Appendix D of the New York State Storm Water Management Design Manual.

**SOIL CLASSIFICATION AT TEST DEPTH**

Test Location I-8: Brown F-M SAND, Some Silt
**DENTE ENGINEERING, P.C.**

**SUBSURFACE LOG I-9**

**PROJECT:** Whispering Pines Development  
**DATE** START: 4/26/17  FINISH: 4/26/17

**LOCATION:** Rotterdam, New York  
**METHODS:** 2 1/4" Hollow Stem Augers, ASTM

**CLIENT:** Lecce Law Firm  
**D1586 Drilling Methods with Auto Hammer**

**JOB NUMBER:** FDE-17-79  
**SURFACE ELEVATION:** +/- 341.0'

**DRILL TYPE:** CME 55  
**CLASSIFICATION:** O.Burns

<table>
<thead>
<tr>
<th>DEPTH</th>
<th>#</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>N</th>
<th>CLASSIFICATION / OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>+/- 5&quot; Topsoil</td>
</tr>
<tr>
<td>5'</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>Dark Brown/Brown Mottled F-M SAND, trace silt (MOIST)</td>
</tr>
<tr>
<td>10'</td>
<td></td>
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<td></td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>Grades Brown to Some Silt</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Grades to Brown F-M SAND, trace silt with Occasional Silt Seams (MOIST, LOOSE)</td>
</tr>
<tr>
<td>20'</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>End of boring 8.0' depth.</td>
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<tr>
<td>25'</td>
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<td>30'</td>
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</tbody>
</table>
### INfiltration Test Results

**Project:** Whispering Pines Development  
**Project No.:** FDE-17-79  
**Project Location:** Rotterdam, New York  
**Test Date:** 5/4/17  
**Weather:**  
**Tester:** MJM / JC

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-9A</td>
<td>6.7</td>
<td>1</td>
<td>9.0</td>
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<tr>
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<td>2</td>
<td>8.0</td>
<td>1.00</td>
<td>8.0</td>
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<tr>
<td></td>
<td></td>
<td>3</td>
<td>8.0</td>
<td>1.00</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>8.0</td>
<td>1.00</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 8.3 inches per hour. Infiltration rate of final trial was 8.0 inches per hour.

<table>
<thead>
<tr>
<th>Test Location</th>
<th>Test Depth (feet)</th>
<th>Trial No.</th>
<th>Water Drop (inches)</th>
<th>Elapsed Time (hours)</th>
<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-9B</td>
<td>6.7</td>
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<td>10.3</td>
<td>1.00</td>
<td>10.3</td>
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<td></td>
<td></td>
<td>2</td>
<td>2.3</td>
<td>1.00</td>
<td>2.3</td>
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<td></td>
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<td>3</td>
<td>2.3</td>
<td>1.00</td>
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<td></td>
<td>4</td>
<td>2.0</td>
<td>1.00</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 4.2 inches per hour. Infiltration rate of final trial was 2.0 inches per hour.

**Notes:**  
(1) Testing was conducted in general accord with the “Infiltration Testing Requirements” contained in Appendix D of the New York State Storm Water Management Design Manual.

**Soil Classification at Test Depth**

Test Location I-9: Brown F-M SAND, trace silt with Occasional Silt Seams
<table>
<thead>
<tr>
<th>DEPTH</th>
<th>#</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>N</th>
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<tbody>
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<td>15'</td>
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<tr>
<td>20'</td>
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<td>25'</td>
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<tr>
<td>30'</td>
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</tr>
</tbody>
</table>

**Classification / Observations**

Brown Fine SAND, Some Silt, Silt Seam noted at 3.5'-4.0' depth

Grades Little Mottling

End of boring 5.0' depth.
### INfiltration Test Results

**Project:** Whispering Pines Development  
**Project No.:** FDE-17-79  
**Project Location:** Rotterdam, New York  
**Test Date:** 5/4/17  

**Weather:**  
**Tester:** MJM  

<table>
<thead>
<tr>
<th>Test Location</th>
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<th>Water Drop (inches)</th>
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<th>Infiltration Rate (inches/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-10A</td>
<td>1.8</td>
<td>1</td>
<td>19.3</td>
<td>1.00</td>
<td>19.3</td>
</tr>
<tr>
<td></td>
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<td>2</td>
<td>16.8</td>
<td>1.00</td>
<td>16.8</td>
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<td></td>
<td></td>
<td>3</td>
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<td></td>
<td></td>
<td>4</td>
<td>15.0</td>
<td>1.00</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Average infiltration rate for three trials was 17.0 inches per hour. Infiltration rate of final trial was 15.0 inches per hour.

| I-10B         | 1.6               | 1         | 16.5               | 1.00                 | 16.5                          |
|               |                   | 2         | 14.5               | 1.00                 | 14.5                          |
|               |                   | 3         | 15.0               | 1.00                 | 15.0                          |
|               |                   | 4         | 13.3               | 1.00                 | 13.3                          |

Average infiltration rate for three trials was 14.8 inches per hour. Infiltration rate of final trial was 13.3 inches per hour.

**Notes:**  
(1) Testing was conducted in general accord with the “Infiltration Testing Requirements” contained in Appendix D of the New York State Storm Water Management Design Manual.

**Soil Classification at Test Depth**  
Test Location I-10: Brown Fine SAND, Some Silt