This SWPPP was prepared in accordance with SPDES Permit No. GP-0-20-001 and must be kept on the job site and available for use of contractors and sub-contractors. Certifications by applicant/developer and by the contractors/subcontractors are included. A copy of the Notice of Intent (NOI), which must be filed at least 5 days prior to the commencement of any work along with the MS4 SWPPP acceptance form, is included herein. Notice of Termination (NOT) must be filed when all stormwater management facilities are in place and the site has been stabilized with specified vegetation. Sample inspection forms are included. Operation and maintenance plan is attached and included both temporary and permanent facilities maintenance. This SWPPP, together with all required plans, completed inspection forms and log of activities including any mitigation of items noted on inspection forms must be kept on the job site and available for inspection by all regulatory authorities.

# FULL STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REPORT

Prepared For:

### **ILLINOIS PROPERTIES 26 LLC**

Village of New Hempstead, Rockland County, New York

Prepared By:



ATZL, NASHER & ZIGLER

Engineers – Surveyors – Planners 232 North Main Street New City, New York 10956 Tel. (845) 634-4694 • Fax (845) 634-5543

This plan has been prepared to comply with the provisions of the SPDES general permit no. GP-0-20-001, issued by the New York State Department of Environmental Conservation for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared and revised under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

Date: April 12, 2024

Job No. 5030

Ryan A. Nasher, P.E. License No.: 89066 New York State Professional Engineer

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### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

### **SECTION 1:**

# OPERATION INSPECTION AND MAINTENANCE PLAN REPORT

BY

ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

TEL: (845) 634-4694 FAX: (845) 634-5543 E-MAIL: rnasher@anzny.com

### 1.0 INTRODUCTION

### 1.1 Notice of Intent:

Section 402 of the Clean Water Act requires permits for stormwater discharge from construction activities, which disturb one or more acres of land to obtain a permit. To implement this law, the New York State Department of Environmental Conservation (NYSDEC) issued the General Permit GP-0-20-001 for Stormwater Discharges from Construction Activities. The Notice of Intent (NOI) is the means to obtain coverage under this permit.

### 1.2 SWPPP Goals and Objective:

The goal of the Stormwater Pollution Prevention Plan (SWPPP) is to control runoff of pollutants from the project site during and after construction activities by complying with the NY State Pollutant Discharge Elimination System (SPDES) Stormwater Permit for construction activities and local rules and regulations. The SWPPP will implement the following practices:

- Reduction or elimination of erosion and sediment loading to waterbodies during construction;
- Control of the impact of stormwater runoff on the water quality of the receiving waters;
- Control of the increased volume and peak rate of runoff during and after construction; and
- Maintenance of stormwater controls during and after completion of construction.

The SWPPP will incorporate the proper selection, sizing and siting of the Stormwater Management Practices (SMPs) to protect water resources from stormwater impacts. The design of the proposed SMPs were determined using current engineering methodologies to provide appropriate sizing criteria to avoid overburdening stormwater conveyance structures. Erosion and Sediment Control (ESC), Water Quantity Control, and Water Quality Controls are inter-related components of the SWPPP.

The SWPPP is intended to be a "living" document. The document should be revised and updated by a qualified professional whenever site conditions dictate. Any proposed revisions shall undergo review by the owner or his designated representative prior to incorporation in the SWPPP and implementation at the site. Any proposed modifications shall be in accordance with the New York State Department of Environmental Conservation's technical standards.

### 2.0 SITE DESCRIPTION

### 2.1 Project Name & Location:

Illinois Properties 26 LLC Village of New Hempstead Rockland County, New York Village of New Hempstead Tax Map: Section 42.18, Block 2, Lot 24.

### 2.2 Owner/Operator Name & Address:

Illinois Properties 26, LLC Attention: Hillel Kahan 51 Forest Road, Unit 316-84 Monroe, NY 10950

Phone: 845-293-3570

Email: hkahan@platinumdevlp.com

### 2.3 General Contractor\*:

(Company Name)	
(Street Address)	
(City, State, Zip Code)	
(Phone Number)	

### 2.4 Description:

The project is located at 775 North Main Street, in the Village of New Hempstead, Rockland County, New York. The site has an area of about 3.11 acres. The existing site consists of a two-story masonry building, one-story building, parking lot, wood/grass cover and some landscaping areas. The proposed development includes the construction of a two-story addition on the west side of the existing two-story masonry building, parking lot, and some landscaping areas.

<sup>\*</sup>Note – General Contractor shall be identified prior to commencement of work.

Soil Name	Soil Map Symbol	Hydrological Soil Group
Watchaug fine sandy loam	Wc	C
Wethersfield gravelly silt loam, 3 to 8 percent slopes	WeB	С

<sup>\*</sup> Source: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Soil disturbing activities will include clearing and grubbing; installation of a stabilized construction entrance; grading (cuts & fills); excavation for the installation of drainage pipes, SMPs, sanitary sewer connections, water main connections, building foundations, stormwater management facilities and the preparation for final planting and seeding.

### 2.5 Impervious Cover:

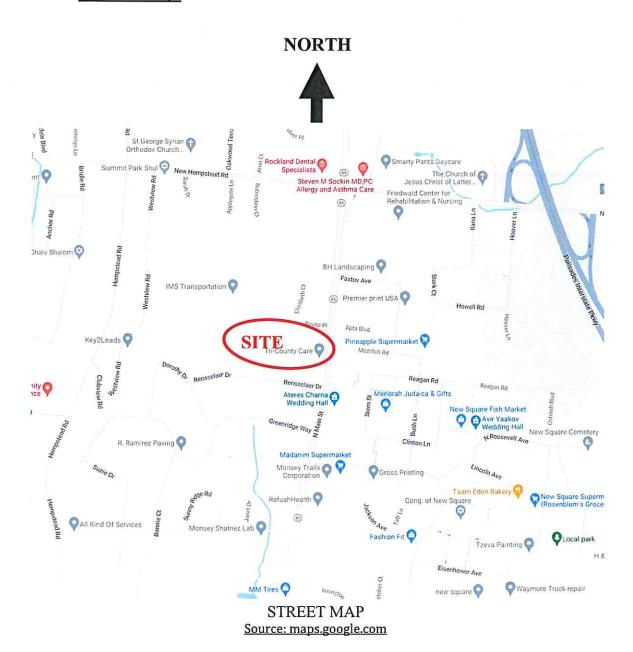
Impervious cover within the planned disturbance will increase from 0.834 acres in the existing condition to 1.227 acres in the proposed condition.

### 2.6 Site Area:

The site is approximately 3.11 acres, and 1.054 acres will be disturbed by the proposed construction activities.

<sup>\*\*</sup> HSG "C" was used in the drainage calculations.

### 2.7 Location Map:



### 2.8 Sequence of Major Activities:

Phasing and schedule of construction is as follows (several phases will overlap):

- Phase 1: Clearing and grubbing of designated areas
- Phase 2: Land grading according to the approved site development plan
- Phase 3: Building construction
- Phase 4: Paving and utilities construction
- Phase 5: Final Grading, landscaping

### The general order of activities will be as follows:

- 1. Schedule a pre-construction meeting.
- 2. Locate natural resources and the limit of disturbance per approved plans.
- 3. Install perimeter erosion and sediment control practices (silt fences).
- 4. Install construction entrances and temporary staging.
- 5. Limit grading for installation of E&SC practices.
- 6. Dispose clearing and grading materials as construction progresses.
- 7. Stockpile topsoil and stabilize.
- 8. Perform rough grading/cut & fill and stabilize inactive areas.
- 9. Install utilities and drainage structures.
- 10. Construct foundation and building structure as per plan.
- 11. Apply soil restoration practices as described in the plan.
- 12. Perform final stabilization, i.e. top soil and landscaping.
- 13. Remove sediment accumulations and complete permanent post construction SMPs per the approved plan.
- 14. Remove E&SC practices and apply for a Notice of Termination (N.O.T.).

### 3.0 CONTROLS

### 3.1 Erosion and Sediment Controls Stabilization Practices:

### 3.1.1 Temporary Stabilization:

Topsoil, stockpiles, and soils that are exposed and left bare for a period of 14 days which are not being graded, not under active construction for 14 days or more, or not scheduled for permanent seeding within 14 days will be stabilized with temporary seed and mulch. All grass seed mixtures and application rates shall comply with Sediment and Erosion Control Plan.

Areas of the site, which are to be paved; will be temporarily stabilized by applying stone sub-base until bituminous pavement can be applied.

### 3.1.2 Permanent Stabilization:

Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 14 days after the last construction activity.

### 3.2 Structural Practices:

Proposed measures will include silt fences, super silt fence, storm inlet protection, stockpile, concrete washout, and stabilized construction entrance.

### 3.3 Stormwater Management Water Quality:

Stormwater runoff generated by parking, and the rooftop will be directed towards the proposed underground infiltration system through a combination of sheet flow, catch basin, pipes, and a pretreatment system.

The stormwater management system has been designed to comply with the most recent NYSDEC design manual requirements. The underground infiltration system is designed to treat the first flush water quality volume of the required impervious area, according to NYSDEC redevelopment rules.

The property owner shall be responsible for the long-term operation, maintenance and inspection of the proposed stormwater management facilities and provide maintenance records to the Village of New Hempstead.

### 3.3.1 Name of Receiving Waters:

Tributary watercourse to PASCACK BROOK. The site is not located in a designated TMDL watershed area.

### 3.4 Peak Flow Attenuation:

In order to provide the zero net increase of peak runoff an Underground Infiltration System has been proposed.

### 3.5 Runoff Conveyance Systems:

The stormwater pipes are design to convey the 10-year peak flow discharge.

### 3.6 Other Controls:

#### 3.6.1 Waste Materials:

#### 3.6.2 Hazardous waste:

All hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. Site personnel will be instructed in these practices and \_\_\_\_\_\_\_\_, Job Supervisor, individual who is responsible for managing the day to day site operations, will be responsible for seeing that these procedures are followed (Job Supervisor shall be identified 30 days prior to commencement of work).

#### 3.6.3 Sanitary Waste:

A licensed sanitary waste management contractor (sanitary waste management contractor to be identified 30 days prior to commencement of work) will collect all sanitary waste from the portable units.

### 3.6.4 Offsite Vehicle Tracking:

A stabilized construction entrance and gravel pad will be provided to wash or spray-clean trucks over before leaving the site in order to prevent track-out of dirt, mud, debris and dust. In addition, trucks will be covered with a tarp and at least 6 inches of freeboard clearance will be maintained to keep excessive dust from escaping the truck during hauling operations.

### 3.7 Timing of Control Measures:

As indicated in the Sequence of Major Activities, the stabilized construction entrance and other sediment and erosion control activities will be constructed prior to earthwork activities on any part of the site. Any soil areas that are exposed and left bare for a period of 14 days which are not being graded, not under active construction for 14 days or more, or not scheduled for permanent seeding within 14 days will be treated with temporary seed and mulch. Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and mulch. After the entire site is stabilized, accumulated sediments will be removed from the sediment and erosion control structures and the controls will be removed.

### 3.8 <u>Certification of Compliance With Federal, State And Local Regulations:</u>

The stormwater pollution prevention plan reflects New York State Department of Environmental Conservation requirements for storm water management and erosion and sediment control, as established in Article 17, Titles 7, 8 and Article 70 of the Environmental Conservation Law. To ensure compliance, this plan was prepared in accordance with guidelines issued with the SPDES General Permit for Storm Water Discharges from Construction Activities that are Classified as "Associated with Construction Activity", published by the NYSDEC.

### 4.0 MAINTENANCE & INSPECTION PROCEDURES

### 4.1 Sediment & Erosion Control Inspection And Maintenance Practices:

The following are inspection and maintenance practices that will be used in coordination with the SWPPP Construction Log Book prepared for this project, the template which is included in Appendix A, to maintain sediment and erosion controls:

- The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP, an required by the SPDES General Permit for Stormwater Discharges, have been adequately installed or implemented to ensure overall preparedness of the site for commencement of construction. Qualified professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, or someone working under the direction and supervision of a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist (person must have experience in the principles and practices of erosion and sediment control). The template for the initial inspection and assessment is included in Appendix A.
- All control measures will be inspected by a qualified professional at least once each week (7 days) and immediately following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of discovery.
- Provide sprinkle water on the dirt road during hot summer or when appropriate to prevent particles to be air born.
- Built up sediment to be removed from the silt fence when it has reached 1/3
  the height of the fence. Sediment traps will be cleaned when built up
  sediments reaches 25 percent of design capacity.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- A maintenance inspection report will be filled out after each inspection and will become part of the SWPPP.
- , Job Supervisor Trained Individual per GP-0-20-001, will select individuals who will be responsible for coordinating efforts with the qualified professional for regular inspections, maintenance and repair activities, and filling out the inspection and maintenance report forms. Inspection reports will summarize:

- 1. Name of Inspector
- 2. Qualifications of Inspector
- 3. Date of Inspection
- 4. Weather Conditions
- 5. Areas inspected, including measurements
- 6. Areas that have undergone temporary and permanent stabilization
- 7. Indicate all disturbed areas that have not undergone active site work during the previous 14-day period
- 8. Observed condition of all erosion and sediment control practices
- 9. Inspect all sediment control practices and record approximate degree of sediment accumulation as a percentage of the sediment storage volume
- 10. Actions Taken to Correct Problems
- 11. Incorporate changes necessary to the SWPPP

The template for regular inspections is included in Appendix A.

- Personnel selected for inspection and maintenance responsibilities will receive training from the Job Supervisor and/or the qualified professional. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on site in good working order.
- The Operator shall ensure that a record of all inspection reports is maintained in the SWPPP Construction Log Book. The site logbook shall be maintained on site and be made available to the permitting authorities upon request. Prior to the commencement of construction, the Operator shall certify in the site log book that the SWPPP was prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. The Operator shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. The Operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis. The template for SWPPP Construction Log Book is included in Appendix A.
- Prior to filing of the Notice of Termination (NOT) or the end of permit term, the Operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. Final stabilization means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80% has been established, or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structure. The template for final inspections is included in Appendix A.

- Clean out all **temporary** structures and pipes upon completion of the project.
- When the site has been finally stabilized, the operator must submit a Notice of Termination form to terminate coverage under the SPDES General Permit GP 0-20-001. The permittee must identify all of the permanent stormwater management structures that have been constructed. In addition, an manual describing the operation and maintenance practices that will be necessary for the structures to function as designed after the site is stabilized must be finalized and in-place. The permittee must also certify that the permanent structure have been constructed as described in the SWPPP.

The inspection procedures that will be used for the construction of the proposed Stormwater management facilities are included in the CONSTRUCTION INSPECTION CHECKLIST FORM prepared for this project, the template of which is included in Appendix B, to be used to ensure proper construction.

### 4.2 Summary of SWPPP Required Document Filings:

The following table provides a summary of the required forms and inspections that need to be completed as part of the SWPPP requirements and which checklist or report document forms need to be used for each:

Name of Document	Form to be Used	When to complete
Pre-Construction Meeting Documents Form	Appendix A – SWPPP Construction Site Log Book	Prior to beginning of construction
Owner/Operator Certification	Appendix A, SWPPP Report	Prior to beginning of construction
Prime Contractor Certification	SWPPP Report	Prior to beginning of construction
Sub-Contractor Certification	SWPPP Report	Prior to beginning of construction
Pre-Construction Site Assessment Form	Appendix A	Prior to beginning of construction
Construction Duration Inspection Forms	Appendix A	Every seven days
Three-Month Status Reports	Appendix A	Every three months
SMPs Construction Inspection Checklist Form	Appendix B	During the construction of the proposed stormwater facilities
Final Stabilization and Retention of Records	Appendix B	At completion of project
Spill Control & Prevention Log	Appendix C	Before and after completion of Project
Stormwater Facilities Maintenance Plan and Inspection Checklists	Appendix D	After completion of Project

### 5.0 NON-STORM WATER DISCHARGES

### 5.1 Non-Stormwater Discharges:

It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Water from water line flushing.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from natural springs)

### 6.0 INVENTORY FOR POLLUTION PREVENTION PLAN

### 6.1 Material substances:

The materials or substances listed below are expected to be present on the site during construction:

- Concrete
- Detergents
- Paints (enamels and latex)
- Metal Studs
- Roofing Materials
- Tar and Paving Materials
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Masonry Block

### 7.0 SPILL CONTROL & PREVENTION

### 7.1 <u>Material Management Practices:</u>

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff:

### 7.1.1 Good Housekeeping:

The following good housekeeping practices will be followed on site during the construction project:

- An effort will be made to store only enough products required to do the job.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Product will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The Job Supervisor will inspect daily to ensure proper use and disposal of materials on site.

### 7.1.2 <u>Hazardous Products:</u>

The following practices will be used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not reseal able.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturer's or local and State recommended methods for proper disposal will be followed.

### 7.2 **Product Specific Practices:**

The following product specific practices will be followed on site:

### 7.2.1 Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations.

### 7.2.2 Fertilizers:

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Storage will be in a covered shed. The content of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

### 7.2.3 Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm drainage system, but will be properly disposed of according to manufacturer's instructions or State and local regulations.

### 7.2.4 Concrete Trucks:

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

### 7.3 Spill Control Practices:

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanups:

- Manufacturer's recommended methods for spill cleanup will be clearly
  posted and site personnel will be made aware of the procedures and the
  location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the
  material storage areas on site. Equipment and materials will include, but not
  be limited to, brooms, dustpans, mops, rags, gloves, goggles, kitty litter,
  sand, sawdust, and plastic and metal trash containers specifically for this
  purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.
- Spills of toxic or hazardous material will be reported to the appropriate State
  or local government agency, regardless of the size of the spill. The Spill
  Control & Prevention Log form provided in Appendix C should be used for
  this purpose.
- The spill prevention plan will be adjusted to include measures to prevent a
  repetitive type of spill from re-occurring and how to clean up the spill if it
  does re-occur. A description of the spill, what caused it, and the cleanup
  measures will also be included.
- The Job Supervisor responsible for daily site operations, will be designated as the spill prevention and cleanup coordinator. He will designate at least

three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of the responsible spill personnel will be posted in the material storage area and in the office trailer on site.

### 8.0 SUPPORTING PLANS & REPORTS

- 1. Site Plan Drawings prepared by Atzl, Nasher & Zigler
- 2. Soil & Erosion Control Plans prepared by Atzl, Nasher & Zigler
- 3. Stormwater Management Design Report by Atzl, Nasher & Zigler

### 9.0 POLLUTION PREVENTION PLAN CERTIFICATION

#### 9.1 OWNER/OPERATOR CERTIFICATION

"I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that this document and all corresponding attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgement that I will receive as a result of submitting this NOI. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction and agree to comply with all the terms and conditions of the general permit for which this NOI is being submitted."

Signed:(Owner/Operator)	Date:
( The state of the	
(Printed Name & Title)	
(Company Name, Address & Telephone Number)	

### 10.0 CERTIFICATION BY CONTRACTORS

Made pursuant to the State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP 0-20-001) for:

Illinois Properties 26 LLC, Village of New Hempstead, Rockland County, New York

### 10.1 Prime Contractor Certification:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the stormwater pollution prevention plan for the construction site identified in this plan as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

Prime Contractor:	
(Signature)	(Company)
(Name)	(Street Address)
(Title)	(City, State, Zip Code)
(Date)	(Phone Number)

### 10.2 Sub-Contractor Certification:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the stormwater pollution prevention plan for the construction site identified in this plan as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

Sub-Contractor:	
(Signature)	(Company)
(Signature)	(Company)
(Name)	(Street Address)
(Title)	(City, State, Zip Code)
(Date)	(Phone Number)

#### CONTRACTOR and SUBCONTRACTOR CERTIFICATION STATEMENT

for the New York State Department of Environmental Conservation (DEC) State Pollutant Discharge Elimination System Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)

As per *Part III.A.6* on page 13 of *GP-0-20-001* (effective March 08, 2023):

'Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and sub-contractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.'

The owner or operator shall have each contractor and subcontractor involved in soil disturbance sign a copy of the following certification statement before they commence any construction activity:

of the tonowing ter (incation s	atement before they	commence any construction activity:	
	NYR		
Name of Construction Site	DEC Permit ID	Municipality (MS4)	
"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New You State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York could subject me to criminal, civil and/or administrative proceedings.			
Responsible Corporate Officer/Partner S	Signature Date		
Name of above Signatory	Name of	Company	
Title of above Signatory	Mailing A	Address	
Telephone of Company		e, and Zip	
Identify the specific elements of the	SWPPP the contra	ctor or subcontractor is responsible for:	
And in the second of the secon			
'TRAINED CONTRACTOR' FOR TI	HE CERTIFIED CO	ONTRACTOR OR SUBCONTRACTOR	
Name of Trained Employee	Title of Trai	ined Employee NYSDEC SWT	

A copy of this signed contractor certification statement must be maintained at the SWPPP on site

Appendix - A

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### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# APPENDIX-A CONSTRUCTION SITE LOGBOOK

BY

### ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS
232 NORTH MAIN STREET
NEW CITY, NY 10956

TEL: (845) 634-4694 FAX: (845) 634-5543 E-MAIL: rnasher@anzny.com

### NY STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

### SWPPP CONSTRUCTION SITE LOG BOOK

For

### **ILLINOIS PROPERTIES 26 LLC**

Village of New Hempstead Rockland County, New York

### Table of Contents

- I. Pre-Construction Meeting Documents.
  - a. Preamble to Site Assessment and Inspections
  - b. Operator's Certification
  - c. Qualified Professional's Credentials & Certification
  - d. Pre-Construction Site Assessment Checklist
- II. Construction Duration Inspections
  - a. Directions
  - b. Modification to the SWPPP
- III. Monthly Summary Reports
- IV. Monitoring, Reporting, and Three-Month Status Reports
  - a. Operator's Compliance Response Format

Properly completing forms such as those contained in this document meet the inspection requirement of NYSDEC SPDES GP for Construction Activities. Completed forms shall be kept on site at all times and made available to authorities upon request.

I. PRE-CONSTRUCTION MEI	ETING DOCUMENTS	
Project Name Illinois Properties 26	LLC	
Permit No.	Date of Authorization	
Name of Operator	***************************************	
Prime Contractor		

a. Preamble to Site Assessment and Inspections -the following information to be read by all person's involved in the construction of stormwater related activities:

The Operator agrees to have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements.

When construction starts, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater (Construction Duration Inspections). The Operator shall maintain a record of all inspection reports in this site log book. The site log book shall be maintained on site and be made available to the permitting authorities upon request. The Operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis (Monthly Summary Report).

The operator shall also prepare a written summary of compliance with this general permit at a minimum frequency of every three months (Operator's Compliance Response Form), while coverage exists. The summary should address the status of achieving each component of the SWPPP.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization<sup>3</sup> using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

- 1 "Qualified Professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control).
- 2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
- 3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

### b. Operators Certification

Name (Please Print):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Title	Date:	
	Email:	
c. Qualifi	ied Professional's Credentials & Certification	
this project and described in the	fy that I meet the criteria set forth in the General Permit to conduct site d that the appropriate erosion and sediment controls described in the set following Pre-construction Site Assessment Checklist have been adequed, ensuring the overall preparedness of this site for the commendations.	SWPPP and as uately installed
Name (Please	Print):	
	Date:	
	Email:	
necessary) 1. Notice of Inte Yes No NA	ent, SWPPP, and Contractors Certification:  a Notice of Intent been filed with the NYS Department of Conservation?	as
[] [] [] Is the [] [] Is the [] [] [] Is a continuous certist	e SWPPP on-site? Where? e Plan current? What is the latest revision date? opy of the NOI (with brief description) onsite? Where? all contractors involved with stormwater related activities signed a contraction? fication? fon Site Assessment Checklist (continued)	otor's

	esou No	NA
[]	[]	<ul> <li>[] Are construction limits clearly flagged or fenced?</li> <li>[] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.</li> </ul>
[]	[]	[ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.
		ce Water Protection NA
		[ ] Clean stormwater runoff has been diverted from areas to be disturbed. [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
		[] Appropriate practices to protect on-site or downstream surface water are installed. [] Are clearing and grading operations divided into areas <5 acres?
		ized Construction Entrance NA
		[] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[]	[]	[] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[]	[]	[] Sediment tracked onto public streets is removed or cleaned on a regular basis.
		eter Sediment Controls NA
[] []	[]	[] Silt fence material and installation comply with the standard drawing and specifications. [] Silt fences are installed at appropriate spacing intervals [] Sediment/detention basin was installed as first land disturbing activity.
		tion Prevention for Waste and Hazardous Materials
Yes []	No []	NA [] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
		[] The plan is contained in the SWPPP on page

### II. CONSTRUCTION DURATION INSPECTIONS

#### a. Directions:

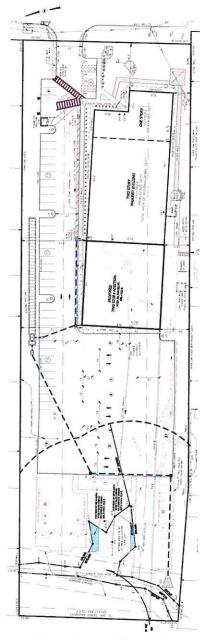
Inspection Forms will be filled out during the entire construction phase of the project. Required Elements:

- (1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- (2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- (3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

- (5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- (6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

### CONSTRUCTION DURATION INSPECTIONS



SITE PLAN/SKETCH

Inspector (Print Name)	Date of Inspection	
Qualified Professional (Print Name)	Qualified Professional Signature	

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

### CONSTRUCTION DURATION INSPECTIONS

	taining Water Quality
	No NA
[] [	[] Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[][	] [] Is there residue from oil and floating substances, visible oil film, or globules or grease?
	] [] All disturbance is within the limits of the approved plans.
[] [	] [] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?
1. Ge Yes 1 [] [	ekeeping neral Site Conditions No NA  [ ] Is construction site litter and debris appropriately managed?  [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?  [ ] Is construction impacting the adjacent property?  [ ] Is dust adequately controlled?
Yes ] [] [ [] [ [] [	mporary Stream Crossing  No NA  [ ] Maximum diameter pipes necessary to span creek without dredging are installed.  [ ] Installed non-woven geotextile fabric beneath approaches.  [ ] Is fill composed of aggregate (no earth or soil)?  [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.
1. Exc	ff Control Practices cavation Dewatering No NA
	] [] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
	<ul> <li>[ ] Clean water from upstream pool is being pumped to the downstream pool.</li> <li>[ ] Sediment laden water from work area is being discharged to a silt-trapping device.</li> <li>[ ] Constructed upstream berm with one-foot minimum freeboard.</li> </ul>
	vel Spreader
	No NA
[] [	
[] [	flow.  [ ] Flow sheets out of level spreader without erosion on downstream edge.
LIL	j [ ] 1 1011 sheets out of lover spreader without erosion on downstream edge.
	erceptor Dikes and Swales
	No NA
[] [	] [] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.

4. Stone Check Dam Yes No NA
[] [] Is channel stable? (flow is not eroding soil underneath or around the structure).  [] [] Check is in good condition (rocks in place and no permanent pools behind the structure).
[] [] Has accumulated sediment been removed?.
5. Rock Outlet Protection  Yes No NA  [ ] [ ] Installed per plan.  [ ] [ ] Installed concurrently with pipe installation.
Soil Stabilization  1. Topsoil and Spoil Stockpiles  Yes No NA  [] [] [] Stockpiles are stabilized with vegetation and/or mulch.  [] [] [] Sediment control is installed at the toe of the slope.
2. Revegetation  Yes No NA  [ ] [ ] Temporary seedings and mulch have been applied to idle areas.  [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings
Sediment Control  1. Stabilized Construction Entrance  Yes No NA  [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.  [ ] [ ] Installed per standards and specifications?  [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?  [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?
2. Silt Fence  Yes No NA  [] [] [] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).  [] [] [] Joints constructed by wrapping the two ends together for continuous support.  [] [] [] Fabric buried 6 inches minimum.  [] [] [] Posts are stable, fabric is tight and without rips or frayed areas.  [] [] Sediment accumulation is% of design capacity.
3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)  Yes No NA  [] [] [] Installed concrete blocks lengthwise so open ends face outward, not upward.  [] [] Placed wire screen between No. 3 crushed stone and concrete blocks.  [] [] Drainage area is 1acre or less.  [] [] [] Excavated area is 900 cubic feet.  [] [] [] Excavated side slopes should be 2:1.  [] [] [] 2" x 4" frame is constructed and structurally sound.  [] [] Posts 3-foot maximum spacing between posts.

[]	[]	[] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[]	[]	
4. 7	Гетр	orary Sediment Trap
Ye	s No	NA
[]	[]	[] Outlet structure is constructed per the approved plan or drawing.
		[] Geotextile fabric has been placed beneath rock fill.
[]	[]	[] Sediment accumulation is% of design capacity.
5. 7	emp	orary Sediment Basin
	s No	· · · · · · · · · · · · · · · · · · ·
[]	[]	[] Basin and outlet structure constructed per the approved plan.
		[] Basin side slopes are stabilized with seed/mulch.
		Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[]	[]	[] Sediment accumulation is% of design capacity.
Not	ŗ	Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.  Construction inspection checklists for post-development stormwater management practices
		can be found in Appendix F of the New York Stormwater Management Design Manual.

#### CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

- 1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
- 2. The SWPPP proves to be ineffective in:
  - a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
  - b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
- 3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

# III. Monthly Summary of Site Inspection Activities

Name of Permitted Facility:  Location:			Today's Date:	Reporting Month
			Permit Identification #:	
Name and Telep	hone Number of Site Inspec	tor:		
Date of Inspection	Regular / Rainfall based Inspection	Name of Inspector	r Iten	ns of Concern
			***************************************	
WW994494MA-44-4-4-4-4-				
				***************************************
	****			
Owner/Opera	tor Certification:			
supervision in acc he information su directly responsib belief, true, accur	penalty of law that this doc ordance with a system design ibmitted. Based on my inquir- le for gathering the informati- rate, and complete. I am awa- suant to Section 210.45 of the	ed to assure that qualified properties of the person or persons ion, the information submited that false statements in	personnel properly gat who manage the syste tted is, to the best of	hered and evaluated em, or those persons my knowledge and
Signature of Permitt	ee or Duly Authorized Represent	ative Name of Perr	nittee or Duly Authorize	d Representative date
Ouly authorized repre	esentatives <u>must</u> have written autl	horization, submitted to DEC, t	o sign any permit docum	ents.

### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## **APPENDIX-B**

## **CONSTRUCTION INSPECTION CHECKLISTS**

BY

ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

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Stormwater System Design Construction Inspection Checklist Form

# STORMWATER MANAGEMENT CONSTRUCTION INSPECTION CHECKLIST FORM

	ILLINOIS PROPERTIES 26 LLC Village of New Hempstead, Rockland County, NY			
Site Status:				
Date of Inspection:				
Time of Inspection:				
Weather Conditions (including recent rainfal	l):			
Inspector's Name:				

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
Material (including protective coating, if specified)		
2. Diameter		
Dimensions of metal riser or pre-cast concrete outlet structure		
Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

2. Subgrade Preparation		
Area beneath embankment stripped of all Vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
Watertight connectors and gaskets     properly installed		
Anti-seep collars properly spaced and having watertight connections to pipe		
Backfill placed and tamped by hand under "haunches" of pipe		
Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		
3. Pipe Spillway Installation		
Concrete pipe		
Pipe set on blocks or concrete slab for pouring of low cradle		
Pipe installed with rubber gasket joints     with no spalling in gasket interface     area		
<ol> <li>Excavation for lower half of anti-seep collar(s) with reinforcing steel set</li> </ol>		

Entire area where anti-seep collar(s)     will come in contact with pipe coated with     mastic or other approved waterproof sealant		
Low cradle and bottom half of anti- seep collar installed as monolithic pour and of an approved mix		·
Upper half of anti-seep collar(s) formed with reinforcing steel set		
<ol> <li>Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)</li> </ol>		
Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		Proposition and the second sec
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti- seep collar elevation before traversing with heavy equipment		
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser	dia	American contract con
Riser base excavated or formed on stable subgrade to design dimensions		
CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		

Dry and stable subgrade			
Riser base set to design elevation			
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely			
Watertight and structurally sound collar or Gasket joint where structure connects to pipe spillway			
C. Poured concrete structure			
Footing excavated or formed on stable Subgrade, to design dimensions with reinforcing steel set			
Structure formed to design dimensions, with reinforcing steel set as per plan			
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)			
Forms stripped & inspected for "honeycomb" prior to backfilling; parge if necessary			
5. Embankment Construction			
Fill material			
Compaction			
Embankment			
Fill placed in specified lifts and compacted with appropriate equipment			
Constructed to design cross-section, side slopes and top width			
Constructed to design elevation plus allowance for settlement			
6. Impounded Area Construction			
Excavated / graded to design contours and side slopes			
Inlet pipes have adequate outfall protection			
Forebay(s)			

-		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel Constructed to design grades and elevations		
CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable Subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with Reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross- Section with proper transition to existing ground		
Filter fabric in place	The second secon	Name (Name (Na
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization	·	
Approved seed mixture or sod	The state of the s	published to the control of the cont
Proper surface preparation and required soil Amendments		

Excelsior mat or other stabilization, as per plan			
10. Miscellaneous			
Drain for ponds having a permanent pool		-	
Trash rack / anti-vortex device secured to outlet structure			
Trash protection for low flow pipes, orifices, etc.			
Fencing (when required)			
Access road			Maria de la companya del companya de la companya de la companya del companya de la companya de l
Set aside for clean-out maintenance			
11. Stormwater Wetlands			
Adequate water balance			
Variety of depth zones present			
Approved pondscaping plan in place reinforcement budget for additional plantings			
Plants and materials ordered 6 months prior to construction			
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)			
Wetland buffer area preserved to maximum extent possible		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Comments:			
Actions to be Taken:			
	- And the second		

## VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# APPENDIX-C

## SPILL CONTROL AND PREVENTION LOG

 $\mathbf{BY}$ 

## ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

TEL: (845) 634-4694 FAX: (845) 634-5543

E-MAIL: rnasher@anzny.com

Date of Spill Material Spilled	Spill Location	Cause	Cleanup	Agency Reported (Toxic/Hazardous)	Reoccurance Prevention Measure
				-	THE CONTRACT OF THE CONTRACT O
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### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# APPENDIX-D MAINTENANCE AGREEMENT

BY

## ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

TEL: (845) 634-4694 FAX: (845) 634-5543

E-MAIL: rnasher@anzny.com

## STORMWATER FACILITIES MAINTENANCE PLAN AGREEMENT RE: ILLINOIS PROPERTIES 26 LLC (TAX MAP DESIGNATION: 42.18-2-24)

Whereas, the Village of Hempstead ("Village") and Illinois Properties 26 LLC ("Facility Owner") want to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Village for the above named project, and

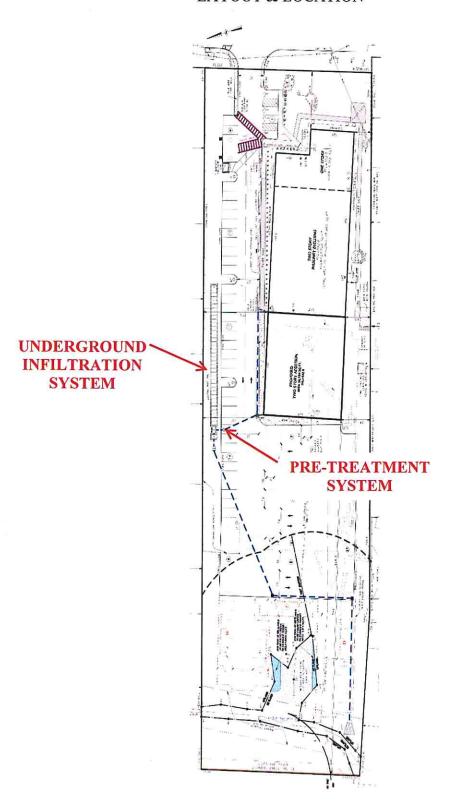
Whereas, the Village and the Facility Owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Village and the Facility Owner agree as follows:

- 1. This agreement binds the Facility Owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.
- 2. The Facility Owner shall erect or post, in the immediate vicinity of the stormwater management facilities, a conspicuous and legible sign of not less than (18" X 24") or (10" X 12" for footprints smaller than 400 sq.ft.) bearing information shown on Schedule B.
- 3. The Facility Owner shall maintain, clean, repair, replace and continue the stormwater control measures as listed in Schedule C as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage pipes, catch basins, pre-treatment systems, underground infiltration systems, control structures etc., but only to the extent that the same are shown on Schedule C.
- 4. The Facility Owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
- 5. The Facility Owner shall provide for the annual inspection of the stormwater control measures, in perpetuity, to determine the condition and integrity of the measures. A Professional Engineer licensed by the State of New York shall perform such inspection. The inspecting engineer shall prepare and submit to the Village within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the Stormwater control measures.
- 6. The Facility Owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the Stormwater control measures except in accordance with written approval of the Village.
- 7. The Facility Owner shall undertake all necessary repairs and replacement of the stormwater control measures at the direction of the Village or in accordance with the recommendations of the inspecting engineer within 60 days of the directive or inspection.
- 8. The Facility Owner shall provide to the Village, prior to Mayor's endorsement, a

	security for the maintenance and c form of a letter of credit or escrow accor			
9.	This agreement shall be recorded in th	ie Office	of the County Clerk,	County of Rockland.
10.	If ever the Village determines that the stormwater control measures i undertake corrective action specific Village is authorized to undertapreservation, continuation or main affix the expenses thereof as a tax li	n accorded by thake such	dance with the project or by the highest day as reason of the stormwater	ect plan or has failed to inspecting engineer, the ably necessary for the
11.	This agreement is effective as occupancy for the above referen			the first certificate of
V	illage of New Hempstead		Illinois Propertie	es 26 LLC
By: Ab	pe Sicker, Mayor	By	: Hillel Kahan	
State of	New York, County of Rockland ss.:			
me or p within i	before me, the undersign proved to me on the basis of satisfactory e instrument and acknowledged to me that he instrument, the individual, or the personant.	vidence t ne execute	o be the individual who ed the same in his capac	ose name is subscribed to the city, and that by his signature
			Notary Public	
State of	New York, County of	) ss.:		
o me o within i	, before me, the undersign proved to me on the basis of satisfactory instrument and acknowledged to me that hinstrument, the individual, or the personant.	evidence ne execute	to be the individual whe ed the same in his capac	ose name is subscribed to the city, and that by his signature
			Notary Public	

### SCHEDULE "A"

# STORMWATER MANAGEMENT FACILITIES (UNDERGROUND INFILTRATION SYSTEMS) LAYOUT & LOCATION



#### SCHEDULE "B"

# STORMWATER MANAGEMENT SYSTEM INSPECTION AND MAINTENANCE SCHEDULE

#### **Stormwater Structures:**

- Stormwater pipe
- Catch Basins
- Pretreatment System (First Defense)
- Underground Infiltration System

### **Inspections Schedule:**

- Stormwater Pipes:
  - o Annual, after major storms: Check for debris at inlets, outlets, and cleanouts.
- Catch Basins:
  - o Biannual, after major storms (check for trash, excessive sediment, and oil sheen).
- Pre-Treatment System (First Defense):
  - o Biannual, after major storms (check for trash, excessive sediment, and oil).
- Underground Infiltration System:
  - o Annual, after major storm: Check that pipes are clear of debris.
  - Annual, after major storm: Check that sediment storage does not exceed 15% capacity.
  - o Annual, after major storm: Check that pipe dewaters.
  - o Annual, after major storm: Check for oil accumulation.

#### Maintenance Schedule:

- Stormwater Pipes.
  - o Clean as found necessary by inspection.
- Catch Basins:
  - Must be cleaned of sediment at least once per year during the month of April and at all other times as necessary to prevent the discharge of pollutants from the system.
- Pretreatment device (First Defense):
  - Clean out trash, sediment, and oil when necessary.
- Underground Infiltration System:
  - o Clear inlets, outlets, and control structure of debris.

- o Clean out oil, trash, and sediment.
- o In subsequent years, inspections can be based on first year observations or local requirements.
- o Inspect the unit immediately after an oil, fuel or chemical spill.
- o A licensed waste management company shall remove oil and sediment and dispose responsibly per NYSDEC and Town of Clarkstown regulations.

# Stormwater Piping Inspection and Maintenance Checklist

Project:		
Location:		
Site Status:		
Date:		
Inspector Signature:	Inspector Name	e (print):
Inspection/Maintenance Items	Satisfactory or Unsatisfactory	Comments/Corrective Action
1. Inspection (Quarter-annually, After Major St	orms)	1
Accumulated sediment exceeds 10% of the diameter of the pipe.		
Vegetation the reduces free movement of water through pipes.		
3. Pipe damage: Any dent that increases flow area by more than 10% or puncture that impacts performance		
Trash accumulated to reduce free movement of water through pipes.		
Inspector shall use one sheet for each individual pipe run (Provide sketch to show location of unsatisfactory items)		
ACTIONS TO BE TAKEN:		
COMMENTS:		
		and the second s

# Catch Basin Inspection and Maintenance Checklist

Pı	oje	ct:			
L	Location:				
		tatus:			
	ite:		TP:		
In	spe	ctor Signature:	Inspector Name	(print):	
		Inspection/Maintenance Items	Satisfactory or Unsatisfactory	Comments/Corrective Action	
1.	In	spection (Quarter-annually, After Major St	orms)		
	1.	Accumulated debris or sediment depth exceed sump or impedes flow from inlet or outlet pipes			
	2.	Inlet or outlet pipe damaged			
	3.	Contaminants & pollutants visible			
	4.	Cover/grate functioning properly			
	5.	Structure: no cracks larger than 1/2"			
	6.	Ladder			
	7.	Mosquito breeding habitat			
2.	Se	diment	***************************************		
	1.	Depth of sediment (inches)*			
	2.	Depth of oil (inches)**			
	3.	Sediment and oil have been removed			

Inspector shall use one sheet for each catch basin/manhole. (Provide sketch to show location of unsatisfactory items.)

<sup>\*</sup>If measured depth of sediment is greater than 3 inches, the system shall be cleaned as per the manufacturer recommendations.

<sup>\*\*</sup>Any presence of oil shall be removed immediately.

# Pre-Treatment (First Defense) System Inspection and Maintenance

roje	et:		
ocat	tion:		
te S	tatus:		
Date: Time:			
spe	ctor Signature:	Inspector Name	(print):
	Inspection/Maintenance Items	Satisfactory or Unsatisfactory	Comments/Corrective Action
In	let/Outlet Structures (Quarter-annually, A	fter Major Storms)	
1.	Clear of debris and functional?		
2.	Trash rack clear of debris and functional?		
3.	Sediment accumulation?		
4.	Condition of concrete/masonry?		
5.	Outfall channels function, not eroding?		
6.	If confined space entry is required; OSHA		
	regulations should be followed.		
7.	Other? (describe)		
Ba	asin Bottom (Quarter-annually, After Majo	r Storms)	
1.	Excessive sedimentation?		
2.	Any standing water?		
St	ructural Condition (Monthly or as needed)	<u> </u>	
1.	Structural repairs to inlet and outlets as		
	needed?		
2.	Any differential settlement?		
	In 1. 2. 3. 4. 5. 6. St 1.	te Status:  ate:  Inspection/Maintenance Items  Inlet/Outlet Structures (Quarter-annually, At  Clear of debris and functional?  Trash rack clear of debris and functional?  Sediment accumulation?  Condition of concrete/masonry?  Outfall channels function, not eroding?  If confined space entry is required; OSHA regulations should be followed.  Other? (describe)  Basin Bottom (Quarter-annually, After Major I. Excessive sedimentation?  Any standing water?  Structural Condition (Monthly or as needed)  Structural repairs to inlet and outlets as	Inspector Name  Inspection/Maintenance Items  Inspector Name  Satisfactory or Unsatisfactory  Inlet/Outlet Structures (Quarter-annually, After Major Storms)  1. Clear of debris and functional?  2. Trash rack clear of debris and functional?  3. Sediment accumulation?  4. Condition of concrete/masonry?  5. Outfall channels function, not eroding?  6. If confined space entry is required; OSHA regulations should be followed.  7. Other? (describe)  Basin Bottom (Quarter-annually, After Major Storms)  1. Excessive sedimentation?  2. Any standing water?  Structural Condition (Monthly or as needed)  1. Structural repairs to inlet and outlets as needed?

3. Other? (describe)			
4. Sediment			
1. Depth of sediment (inche	es)*	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
2. Depth of oil (inches)**			
3. Sediment and oil have be	een removed		
manufacturer recommendations.			
**Any presence of oil shall be rem  If any of the above inspection its corresponding completion dates  ACTIONS TO BE TAKEN:	ems are UNSATISFAC	TORY, list con	rective actions and the
If any of the above inspection its corresponding completion dates	ems are UNSATISFAC	TORY, list con	rective actions and the
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If any of the above inspection its corresponding completion dates  ACTIONS TO BE TAKEN:	ems are UNSATISFAC	TORY, list con	rective actions and the
If any of the above inspection its corresponding completion dates	ems are UNSATISFAC	TORY, list con	rective actions and the

# **Underground Infiltration System Inspection and Maintenance**

Pı	oje	et:		
		tion:		
		tatus:		
	ate:		en e	
In	spe	ctor Signature:	Inspector Name	(print):
		Inspection/Maintenance Items	Satisfactory or Unsatisfactory	Comments/Corrective Action
1.	In	let/Outlet Structures (Quarter-annually, Af	ter Major Storms)	
	1.	Clear of debris and functional?		
	2.	Trash rack clear of debris and functional?		
	3.	Sediment accumulation?		
	4.	Condition of concrete/masonry?		
	5.	Outfall channels function, not eroding?		
	6.	If confined space entry is required; OSHA		
		regulations should be followed.		
	7.	Other? (describe)		
2.	Ba	sin Bottom (Quarter-annually, After Major	· Storms)	
	1.	Excessive sedimentation?		
	2.	Any standing water?		The second secon
3.	Sti	ructural Condition (Monthly or as needed)		
	1.	Structural repairs to inlet and outlets as		The state of the s
		needed?	The state of the s	
	2.	Any differential settlement?		

3. Other? (describe)		
4. Sediment		
1. Depth of sediment (inches)*		
2. Depth of oil (inches)**		
3. Sediment and oil have been removed		
*If measured depth of sediment is greater than 3 inches manufacturer recommendations.  **Any presence of oil shall be removed immediately.	the system shall be	cleaned as per the
If any of the above inspection items are UNSATIST corresponding completion dates below:	FACTORY, list co	orrective actions and the
ACTIONS TO BE TAKEN:		

COMMENTS:

### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## **APPENDIX-E**

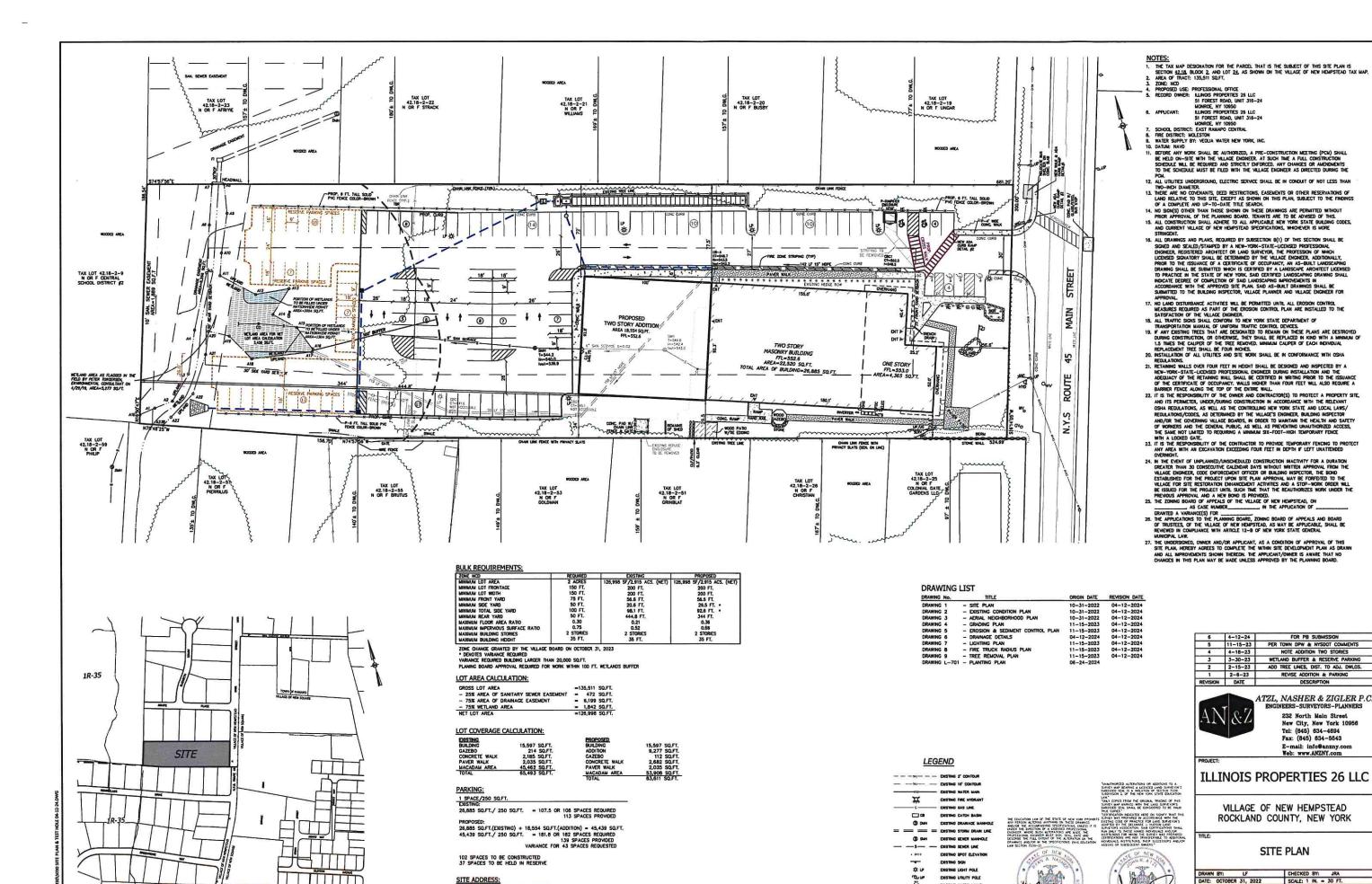
# CONSTRUCTION PLANS IN (11"X17") FORMAT

BY

## ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956 TEL: (845) 634-4694

FAX: (845) 634-5543 E-MAIL: rnasher@anzny.com



VICINITY MAP

DOSTINO CAS VALVE

COCCOCCOCCO EXISTING STONEWALL

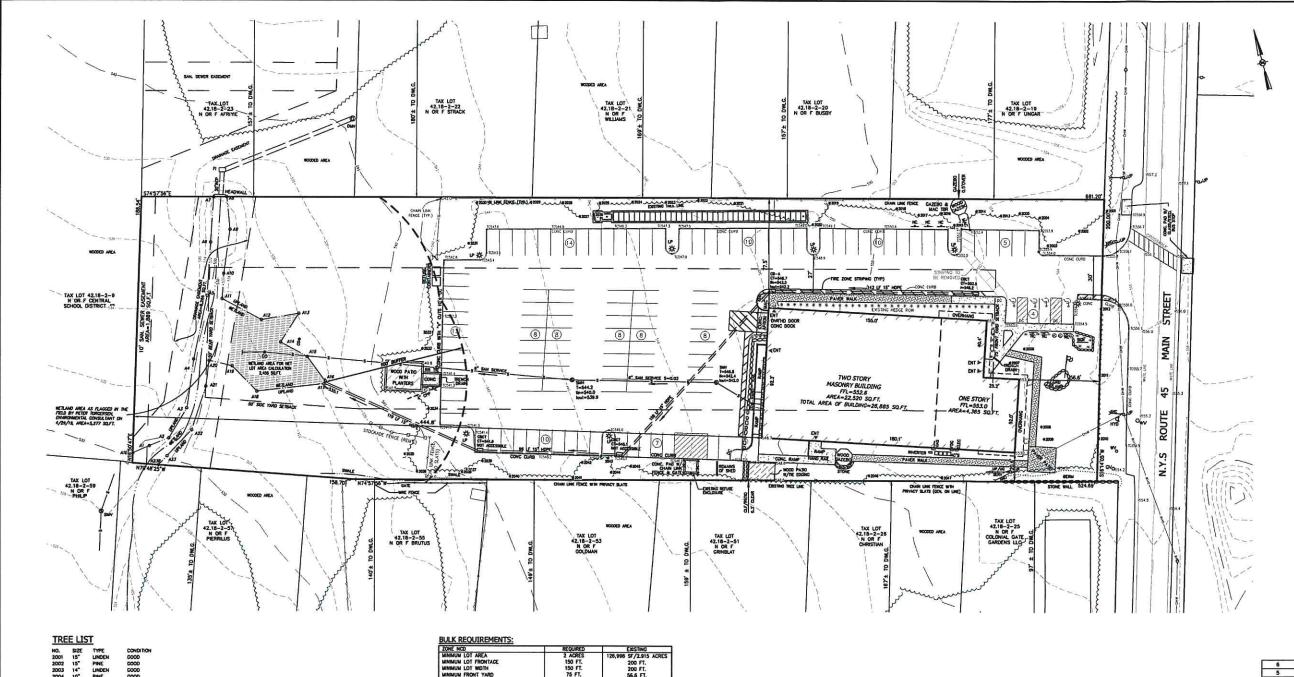
RYAN A. NASHER P.E.

N.Y.S. P.E. LIC. NO. 89066

N.Y.S. NJ.S. LIC. NO. 50228

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TREE LEGEND O DENOTES EXISTING TREE TO REMAIN

X DENOTES EXISTING TREE TO BE REMOVED DENOTES EXISTING TREE TO BE REMOVED

ZONE NCD	REQUIRED	EXISTING
MINIMUM LOT AREA	2 ACRES	126,998 SF/2,915 ACRES
MINIMUM LOT FRONTAGE	150 FT.	200 FT.
MINIMUM LOT WIDTH	150 FT.	200 FT.
MINIMUM FRONT YARD	75 FT.	56.6 FT.
MINIMUM SIDE YARD	50 FT.	20.6 FT.
MINIMUM TOTAL SIDE YARD	100 FT.	98.1 FT.
MINIMUM REAR YARD	50 FT.	444,8 FT.
MAXIMUM FLOOR AREA RATIO	0.30	0.21
MAXIMUM IMPERVIOUS SURFACE RATIO	0.75	0.52
MAXIMUM BUILDING STORIES	2 STORIES	2 STORIES
MAXIMUM BUILDING HEICHT	35 FT.	35 FT.

SPECIAL PERMIT REQUIRED FROM THE VILLAGE BOARD VARIANCE REQUIRED BUILDING LANCER THAN 20,000 SQ.FT. PLANING BOARD APPROVAL REQUIRED FOR WORK WITHIN 100 FT. WETLANDS BUFFER

#### LOT AREA CALCULATION:

| CROSS LOT AREA | -135,511 SQ.FT. | -23X AREA OF SANTARY SEWER EASEMENT | -135,511 SQ.FT. | -73X AREA OF DRANKAGE EASEMENT | -5,99 SQ.FT. | -7,53X WETLAND AREA | -1,642 SQ.FT. | -1,642 SQ.FT. | -1,649 SQ.F

#### LOT COVERAGE CALCULATION:

EGSTING BUILDING GAZEBO CONCRETE WALK PAVER WALK MACADAM AREA TOTAL

### PARKING:

1 SPACE/250 SQ.FT. EXISTING: EXISTING: 26,885 SQ.FT. / 250 SQ.FT. = 107.5 OR 108 SPACES REQUIRED 113 SPACES PROVIDED

#### LEGEND

LEG	END
ж	DISTING 2' CONTOUR
— —×o— —	DISTING 10' CONTOUR
	COSTING WATER MAIN
X	DOSTING FIRE HYDRANT
G	DUSTING GAS LINE
C a	EXISTING CATCH BASIN
(D) DMH	DISTING DRAWAGE MANNOLE
	DOSTING STORM DRAIN LINE
(C) SMH	EXISTING SEVER MANHOLE
	COSTING SCHEM LINE
• 340.0	DUSTING SPOT ELEVATION
	CUSTING SIGN
<b>* •</b>	DISTING LIGHT POLE
TO UP	EXISTING UTLITY POLE
×	EDISTING WATER VALVE
,cv	

COCCOCCO EXISTING STONEWALL







6	4-12-24	FOR PB SUBMISSION
5	11-15-23	PER TOWN DPW & MYSDOT COMMENTS
4	4-18-23	NOTE ADDITION TWO STORIES
3	3-30-23	WETLAND BUFFER & RESERVE PARKING
2	2-15-23	ADD TREE LINES, DIST. TO ADJ. DWLGS
1	2-6-23	REVISE ADDITION & PARKING
REVISION	DATE	DESCRIPTION



ATZL, NASHER & ZIGLER P.C

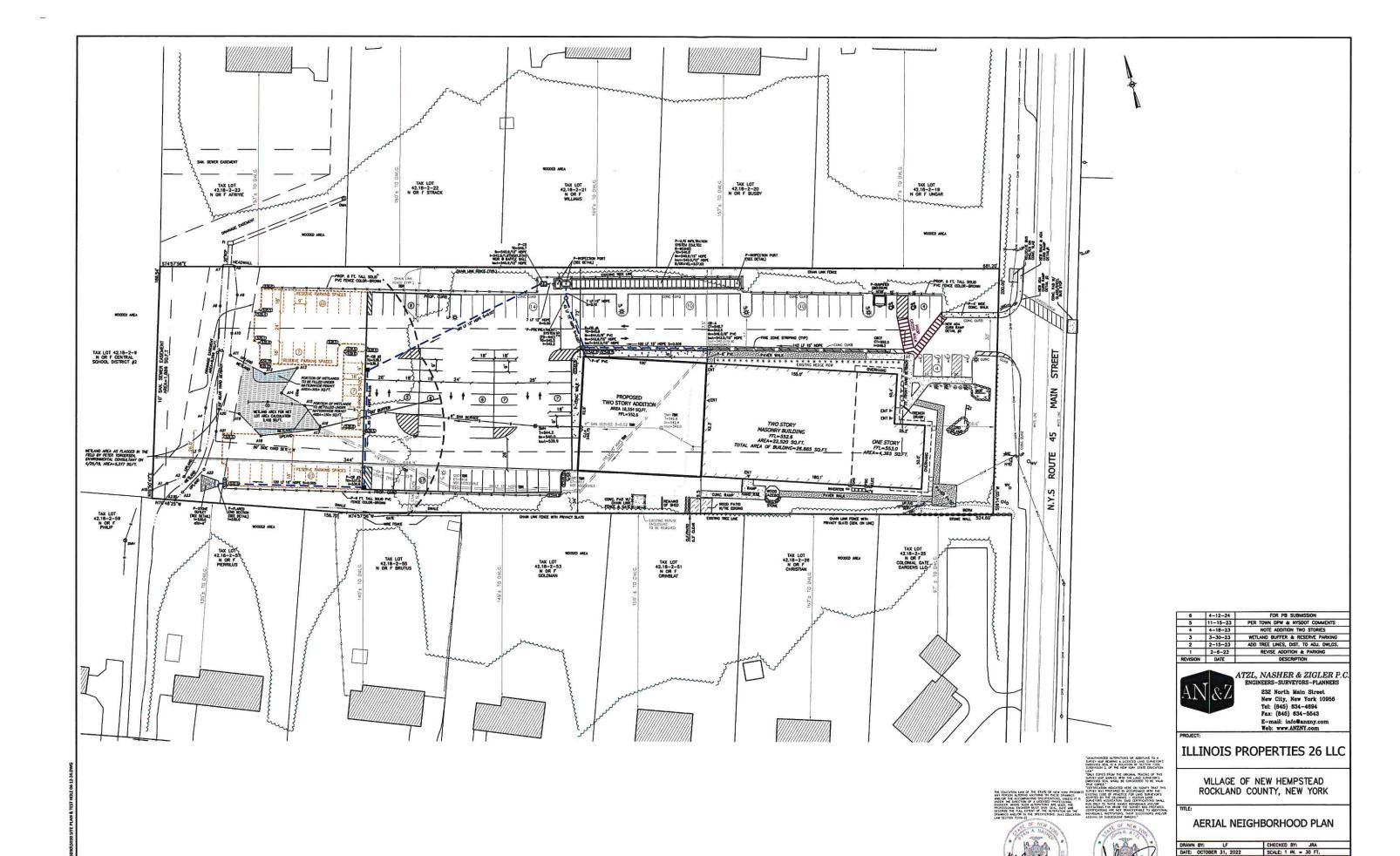
232 North Main Street New City, New York 10956 Tel: (645) 634-4694 Fax: (845) 634-5543 E-mail: info@anzny.com Web: www.ANZNY.com

**ILLINOIS PROPERTIES 26 LLC** 

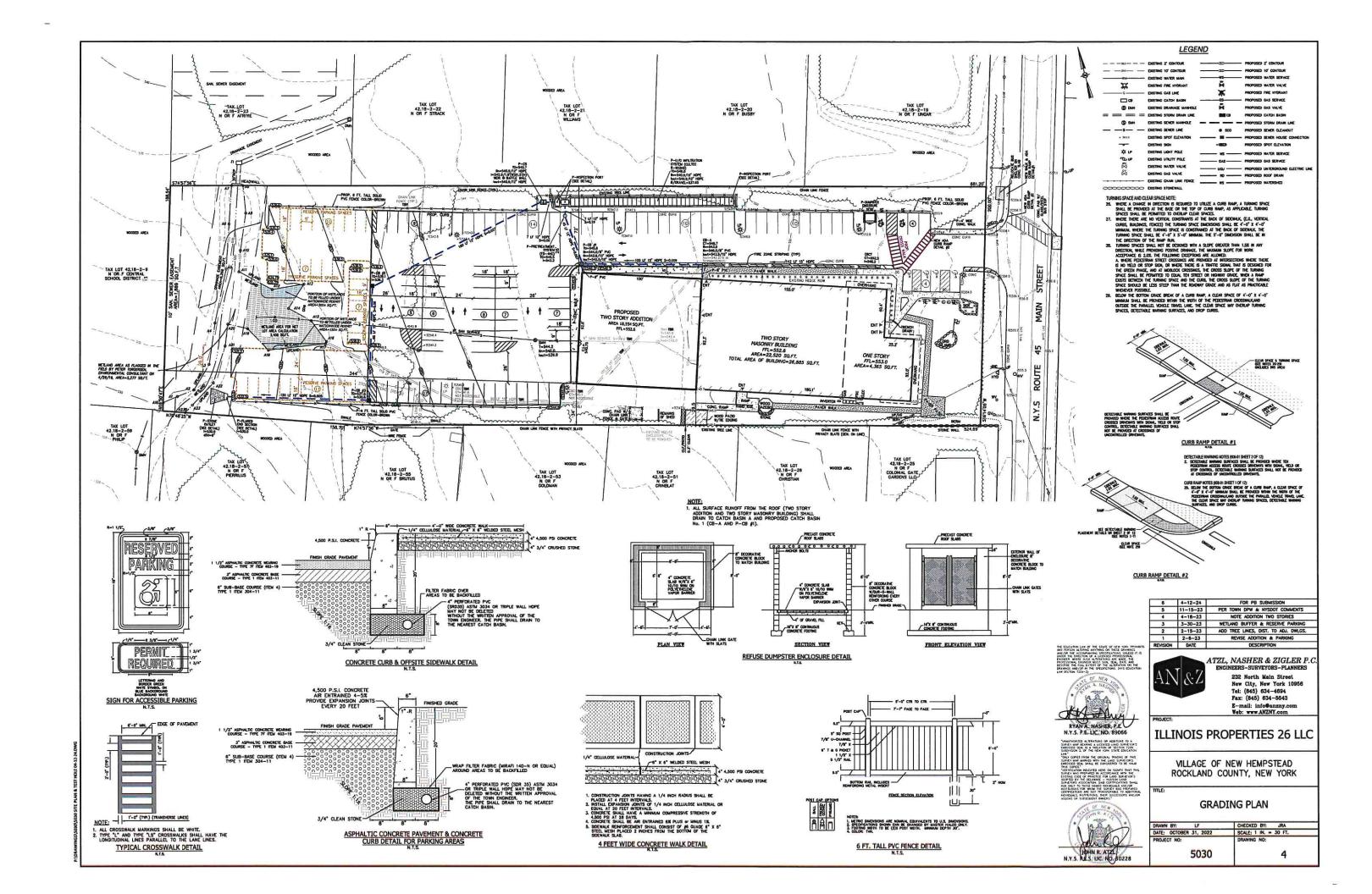
VILLAGE OF NEW HEMPSTEAD ROCKLAND COUNTY, NEW YORK

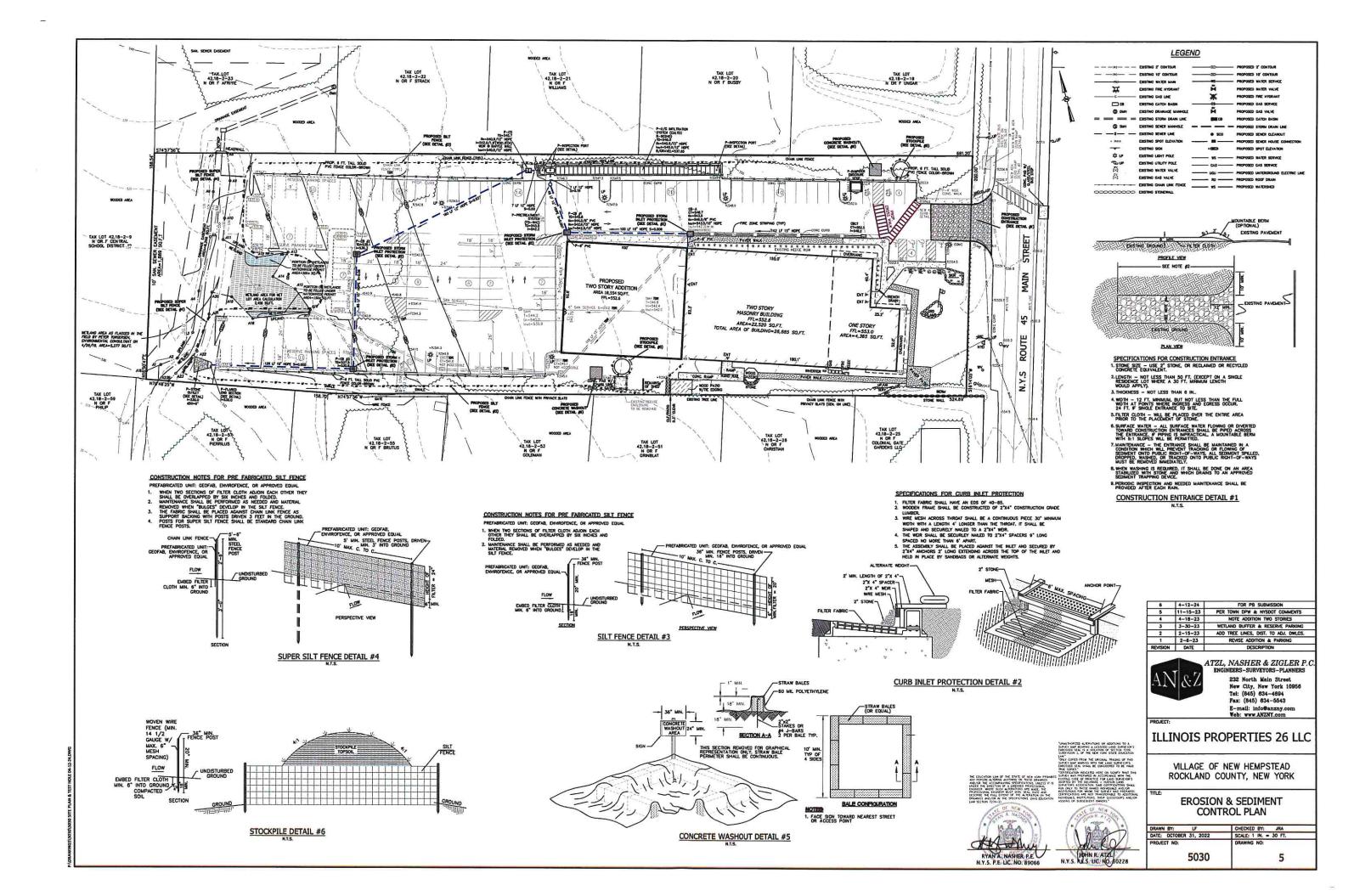
**EXISTING CONDITION** 

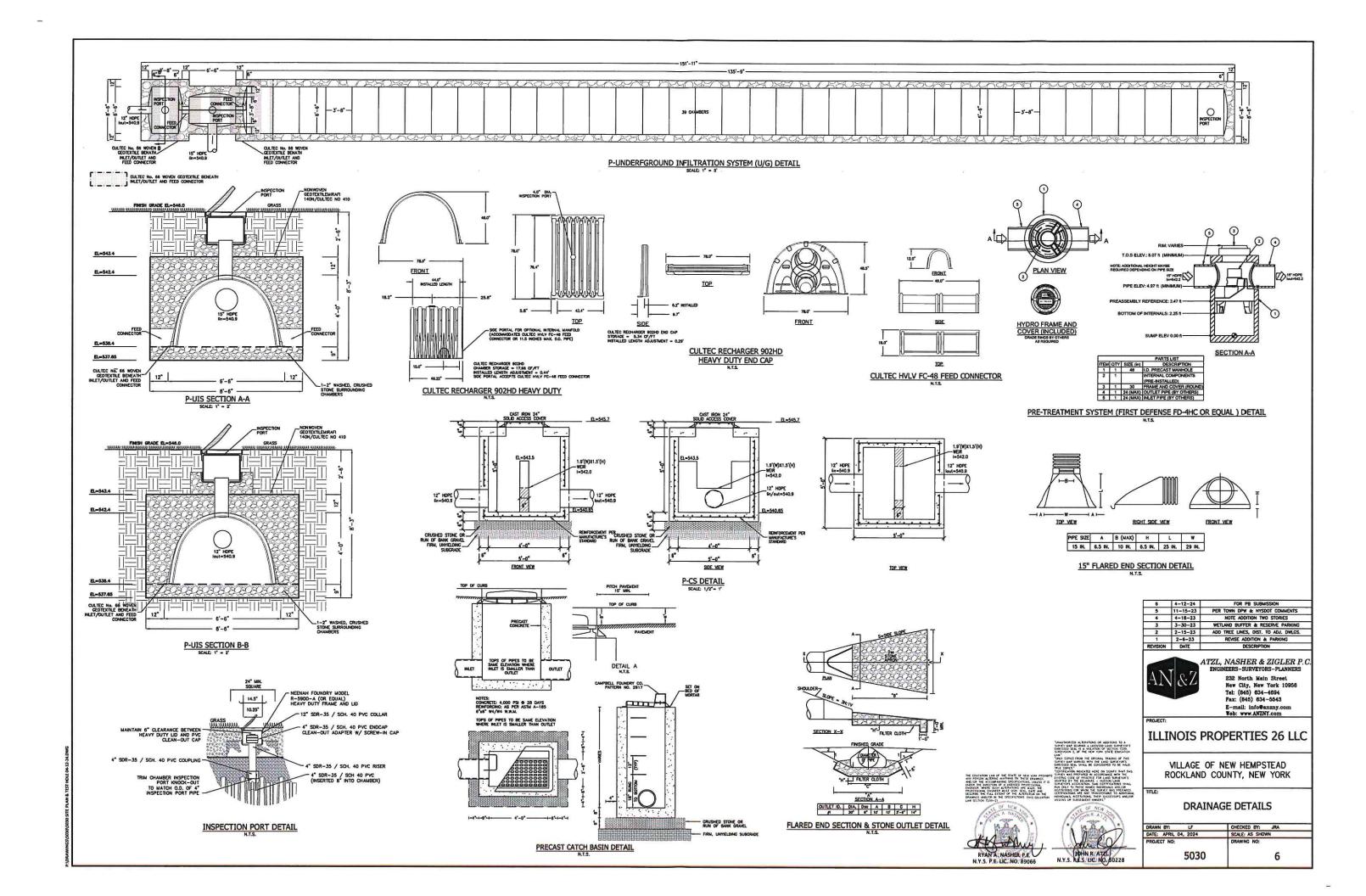
DRAWN BY: LF	CHECKED BY: JRA
DATE: OCTOBER 31, 2022	SCALE: 1 IN. = 30 FT.
PROJECT NO:	DRAWING NO:
5030	2

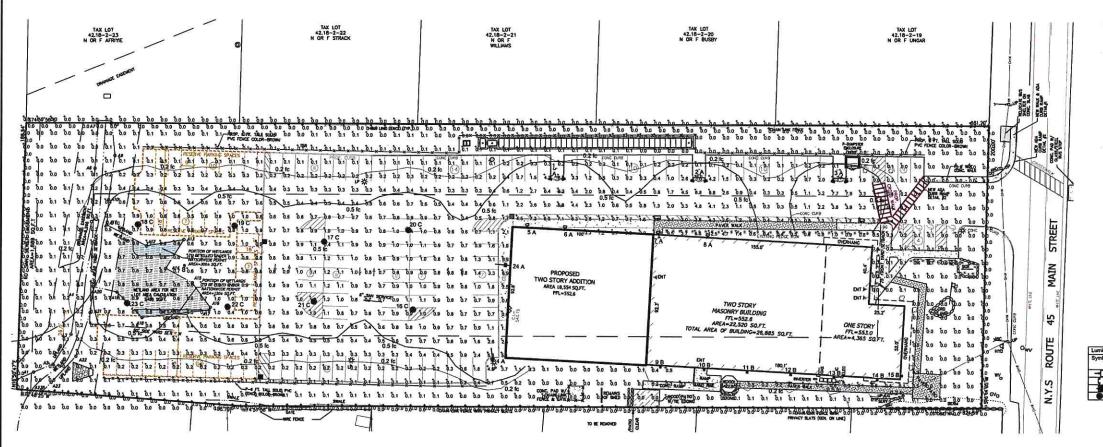


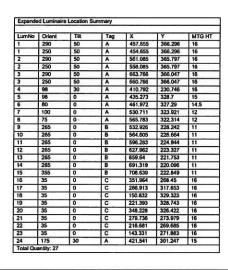
N.Y.S. N.S. LIC. NO. 50228











Calculation Summary										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpcLr	PtSpcTb	Mater Type
Property Line	Muminance	Fc	0.00	0.0	0.0	N.A.	N.A.	10	NA.	Horizontal
Site	Illuminance	Fc	0.29	12.5	0.0	NA.	N.A.	10	10	Horizontal

Symbol	Qly	Label	Arrangement	Description	Tag	LLF.	Luminaire	Luminaire Watts	Total Watts
-0	6	X17XFU80 @40W_3K	Single	EXISTING FLOODLIGHT	A	1.000	5361	40.98	245.80
-	3	X17XFU80 @40W_3K + BULL2	TWIN @ 40	EXISTING FLOODLIGHT	A	1.000	5361	40.96	245.80
-	7	WPLED5N	Single	NEW WALLPACK	В	1.000	155	5.19	36.33
	8	ALEDST26Y	Single	NEW POST TOP	С	1.000	3395	26.3789	211.03









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ATZL, NASHER & ZIGLER P.C

6 4-12-24 FOR PB SUBMISSION
5 11-15-23 PER TOWN DPW & NYSDOT COMMENTS
4 4-16-23 NOTE ADDITION TWO STORIES
3 3-30-23 WETLAND BUFFER & RESERVE PARKING

 2
 2-15-23
 ADD TREE LINES, DIST. TO ADJ. DWLCS.

 1
 2-6-23
 REVISE ADDITION & PARKING

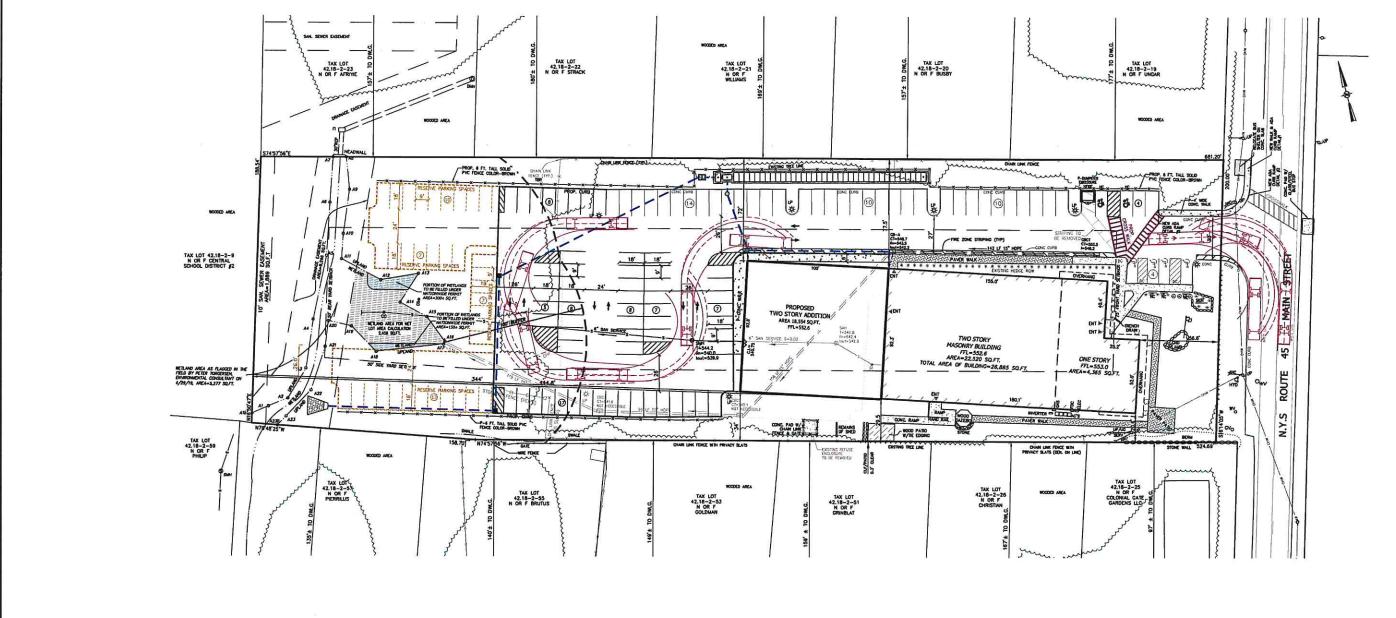
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 DATE
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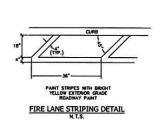
232 North Main Street New City, New York 10956 Tel: (845) 634-4694 Fax: (845) 634-5543 E-mail: info@anzny.co Web: www.ANZNY.com

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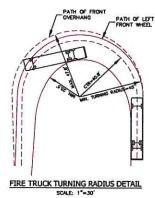
VILLAGE OF NEW HEMPSTEAD ROCKLAND COUNTY, NEW YORK

LIGHTING PLAN









"UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR T EMBOSSED SEAL IS A MUCLATION OF SECTION 7209. SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION





REVISION	DATE	DESCRIPTION
1	2-6-23	REVISE ADDITION & PARKING
2	2-15-23	ADD TREE LINES, DIST. TO ADJ. DWLGS
3	3-30-23	WETLAND BUFFER & RESERVE PARKING
4	4-18-23	NOTE ADDITION TWO STORIES
5	11-15-23	PER TOWN DPW & MYSDOT COMMENTS
6	4-12-24	FOR PB SUBMISSION



ATZL, NASHER & ZIGLER P.C ENGINEERS-SURVEYORS-PLANNERS 232 North Main Street New City, New York 10958 Tel: (845) 634-4894 Fax: (845) 634-5543

E-mail: info@anzny.co Web: www.ANZNY.com

**ILLINOIS PROPERTIES 26 LLC** 

VILLAGE OF NEW HEMPSTEAD ROCKLAND COUNTY, NEW YORK

FIRE TRUCK RADIUS PLAN

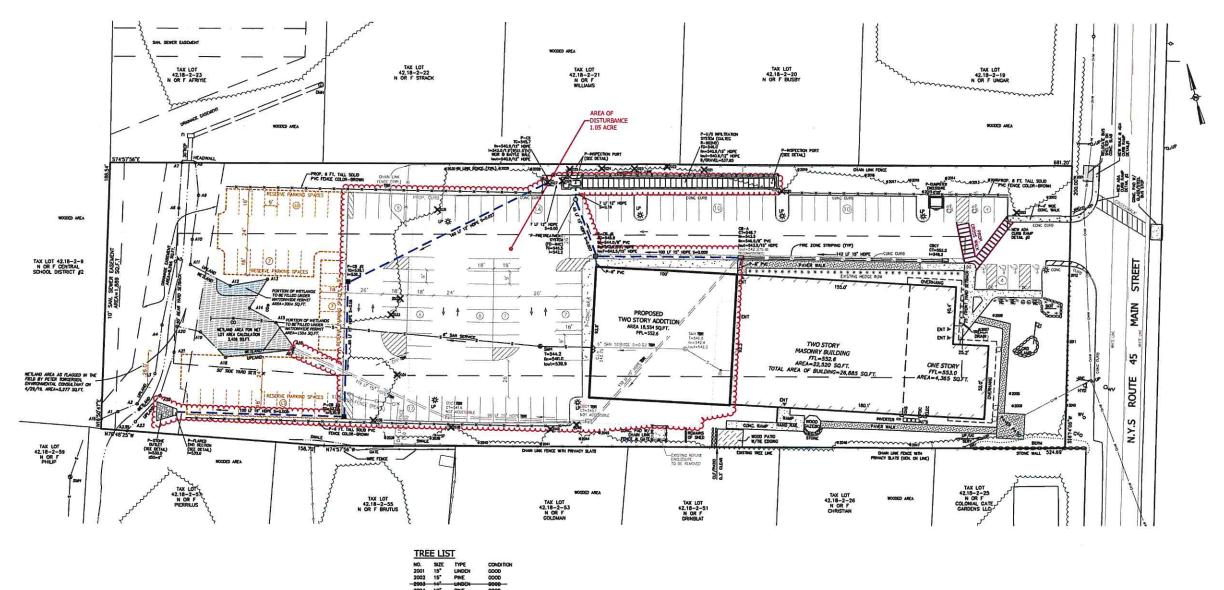
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4 1	DRAWN BY: LF	CHECKED BY: JRA	-
	DATE: OCTOBER 31, 2022	SCALE: 1 IN. = 30 FT.	-
RO/_	PROJECT NO:	DRAWING NO:	
NO. 50228	5030	8	

**LEGEND** 

DUSTING GAS LINE EXISTING STORM DRAW LINE - EXISTING SEWER LINE

EXISTING SIGN
EXISTING LIGHT POLE
EXISTING WATER VALVE
EXISTING GAS VALVE

EXISTING CHAIN LINE FENCE



TREE LEGEND

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UNAUTHORIZED ALTERATIONS OR ADDITIONS TO A SURVEY MAP BEARINGS A LICENSED LAND SURVEYOR'S EMBOSSED LEAL IS A WOLATION OF SECTION 7209. SUBDIVISION 2. OF THE NEW YORK STATE EDUCATION

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Web: www.ANZ

VILLAGE OF NEW HEMPSTEAD

**ILLINOIS PROPERTIES 26 LLC** 

ROCKLAND COUNTY, NEW YORK

TREE REMOVAL PLAN

DRAWN BY: LF DATE: OCTOBER 31, 2022	CHECKED BY: JRA SCALE: 1 IN. = 30 FT.
PROJECT NO: 5030	DRAWING NO:

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#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

#### **SECTION 2:**

## STORMWATER SYSTEM DESIGN REPORT COMPLYING WITH NYS STORMWATER MANAGEMENT DESIGN MANUAL JANUARY 2015

BY

ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS
232 NORTH MAIN STREET
NEW CITY, NY 10956

TEL: (845) 634-4694 FAX: (845) 634-5543

E-MAIL: rnasher@anzny.com





232 North Main Street, New City, NY 10956 Tel: (845) 634-4694 Fax: (845) 634-5543

Email: rnasher@anzny.com

April 12, 2024

Village of New Hempstead 108 Old Schoolhouse Rd New City, NY 10956

Att.: Gle

Glenn McCreedy, P.E.

Village Engineer

Ref.:

Illinois Properties 26 LLC (Job #5030)

Village of New Hempstead, Rockland County, New York

Sub:

Hydraulic and hydrological study

#### 1.1 INTRODUCTION:

The following hydraulic/hydrological study has been prepared for the above-mentioned project to provide zero net increase of the peak runoff and water quality mitigation for the proposed project in the Village of Hempstead, Rockland County, New York. The project disturbed area is 1.054 acres (45,933 sq.ft) which is greater than 1-acre; therefore, a general construction permit is required according to the NYSDEC 2015 version of the design manual.

#### 1.2 SITE LOCATION:

The project is located at 775 North Main Street, in the Village of New Hempstead, Rockland County, New York.

#### 2.0 HYDROLOGICAL SOIL GROUP:

The soil on site is the following, based on data from United States Department of

Agriculture (USDA) soil survey.

Soil Name	Soil Map Symbol	Hydrological Soil Group	
Watchaug fine sandy loam	Wc	C	
Wethersfield gravelly silt loam, 3 to 8 percent slopes	WeB	С	

<sup>\*</sup> Source: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

<sup>\*\*</sup> HSG "C" is used in drainage calculation.

#### 3.1 EXISTING CONDITION:

The existing drainage area consists of one watershed (WS#1). The drainage area consists of woods/grass, parking lot, a two-story masonry building, and some impervious areas. The drainage area is delineated on the Existing Condition Drainage Map (E-1)

#### 3.2 DEVELOPED CONDITION:

The proposed drainage area will remain the same as the existing watershed area (2.388 acres). The developed condition consists in the construction of a two-story addition on the west side of the existing two-story masonry building, a parking lot, and some landscaping areas. The drainage area delineation is shown on the Developed Condition Drainage Map (D-1).

#### 4.0 DRAINAGE STUDY:

Very truly

Due to the proposed improvement, the peak runoff from the designated drainage area will be increased. The hydrological software, HydroCAD has been used to calculate pre and post peak runoff rates for 1, 10, and 100-year design storm events.

#### 5.0 MITIGATION MEASURES:

The hydrology and hydraulics study for this project has been undertaken to examine the pre and post construction drainage conditions.

To attenuate the post-developed peak flow to pre-developed peak flow, and address water quality mitigation requirements, an Underground Infiltration System has been proposed. The location of the system is shown on the site plan drawings.

• Underground Infiltration System (Cultec R-902HD).

HydroCAD has been used to calculate peak flows for different storm events at the outlet "Point of Interest", for Existing and Developed Condition and to simulate stormwater being routed through the proposed stormwater management structures in order to determine the final peak runoff of the site. The peak flow in the proposed development site will be decreased by 0.2% to 37.7% at P.O.I.#1 after routing through the proposed SMPs.

If you have further questions or concerns, feel free to contact me. Thank you.

Ryan A Nasher, P.E.

P:\STORWWATER MANAGEMENT\5030\SWPPP Report\SWPPP Section 2 - Drainage\5030 Drainage Narrative.docx

Summary Table

#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## **SUMMARY TABLE**

BY

ATZL, NASHER & ZIGLER

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TEL: (845) 634-4694 FAX: (845) 634-5543

E-MAIL: rnasher@anzny.com

ENGINEERS-SURVEYORS-PLANNERS 232 North Main Street New City, NY 10956

Tel: (845) 634-4694 Fax: (845) 634-5543 **JOB: ILLINOIS PROPERTIES 26 LLC (5030)** 

CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

# SUMMARY FLOW EXSITING AND DEVELOPED CONDITIONS 1, 10, & 100 YEA STORMS PEAK RUNOFF

STORM FREQUENCY (YEAR)	EXISTING CONDITION PEAK FLOW (CFS) (PER HYDROCAD)	DEVELOPED CONDITION PEAK FLOW (CFS) (PER HYDROCAD)	% CHANGE
1	4.43	2.76	-37.7
10	9.93	8.80	-11.4
100	19.41	19.38	-0.2

<sup>\*</sup> Note: Peak flow attenuation and the required water quality treatment volume will be provided by the proposed underground infiltration system (Cultec R-902HD or Approved Equal).

#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## **LOCATION MAPS**

BY

ATZL, NASHER & ZIGLER

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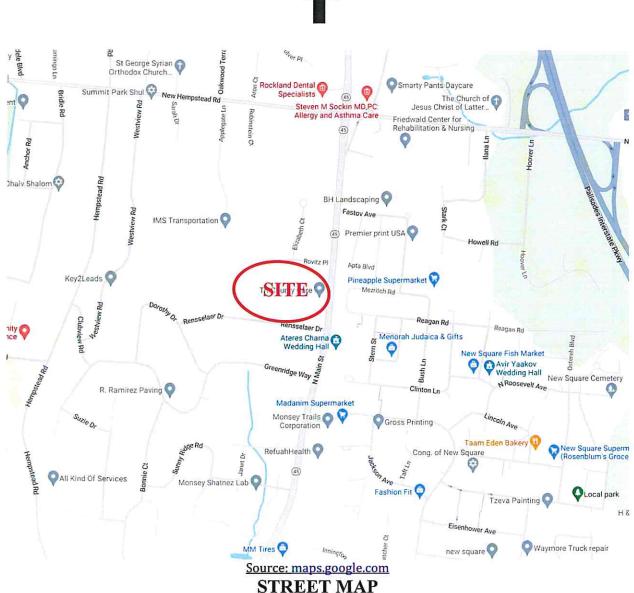
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#### **JOB: ILLINOIS PROPERTIES 26 LLC (5030)**

CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24





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New City, NY 10956 Tel: (845) 634-4694 Fax: (845) 634-5543

#### **JOB: ILLINOIS PROPERTIES 26 LLC (5030)**

CALCULATED BY: WS CHECKED BY: RN

DATE: 04/12/24 DATE: 04/12/24

#### NORTH





Source: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

**SOIL MAP** 

#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## **DRAINAGE CALCULATION**

BY

#### ATZL, NASHER & ZIGLER

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CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

#### **EXISTING CONDITION:**

The existing drainage area consists of one watershed (WS#1), with an area of about 2.388 acres. The drainage area consists of woods/grass, parking lot, a two-story masonry building, and some impervious areas. The drainage area is delineated on the Existing Condition Drainage Map (E-1).

#### WS#1:

The soil within WS#1 belongs to Hydrological Soil Group "C".

$$A = 2.388 \text{ Acres} \begin{vmatrix} \text{Composition} & \text{HSG C} \\ \text{A}_{\text{Wood/grass}} = & 0.47 \text{ acs} \\ \text{A}_{\text{Grass}} = & 0.552 \text{ acs} \\ \text{A}_{\text{Impervious}} = & 1.366 \text{ acs} \end{vmatrix}$$

Due to the small size of the watershed, the time of concentration is considered the minimum of 0.1 hours.

WS#1 → P.O.I.#1

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#### **DEVELOPED CONDITION:**

The developed condition includes two watersheds (WS#1A & WS#1B). The proposed development includes the construction of a two-story addition on the west side of the existing two-story masonry building, a parking lot, and some landscaping areas. The total drainage area (2.388 acs) will remain the same. The drainage area is delineated on Drainage Map Developed Condition (D-1).

#### **WS#1A:**

Fax: (845) 634-5543

The soil within WS#1A belongs to Hydrological Soil Group "C".

$$A = 1.023 \text{ Acres} \begin{vmatrix} \text{Composition} & \text{HSG} \\ \\ A_{\text{Grass}} = & 0.19 \text{ acs} \\ \\ A_{\text{Impervious}} = & 0.833 \text{ acs} \end{vmatrix}$$

Due to the small size of the watershed, the time of concentration is considered the minimum of 0.1 hours.

#### WS#1A → UNDERGROUND INFILTRATION SYSTEM → P.O.I.#1

#### **WS#1B:**

The soil within WS#1B belongs to Hydrological Soil Group "C".

$$A = 1.365 \text{ Acres} \begin{vmatrix} \text{Composition} & \text{HSG} \\ \\ A_{\text{Grass}} = & 0.435 \text{ acs} \\ \\ A_{\text{Impervious}} = & 0.93 \text{ acs} \end{vmatrix}$$

Due to the small size of the watershed, the time of concentration is considered the minimum of 0.1 hours.

WS#1B → P.O.I.#1

SMP Design

#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

## STORMWATER MANAGEMENT PRACTICE DESIGN CALCULATIONS

BY

#### ATZL, NASHER & ZIGLER

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**ENGINEERS-SURVEYORS-PLANNERS** 

CALCULATED BY: WS CHECKED BY: RN

DATE: 04/12/24 DATE: 04/12/24

232 North Main Street New City, NY 10956 Tel: (845) 634-4694 Fax: (845) 634-5543

## STORMWATER MANAGEMENT PRACTICE SIZING CALCULATIONS

The proposed underground infiltration system will provide water quality treatment and peak flow mitigation for the required 1-yr, 10-yr, and 100-yr storm events at the P.O.I.#1

#### **WQv Requirements:**

#### 1. Base Data:

- Drainage study area = 2.388 acres
- Existing Impervious area in disturbance  $(I_{Ext})=0.834$  acres
- Proposed impervious area in disturbance = 1.227 acres
- New Impervious (I<sub>New</sub>)= 1.227 acres 0.834 acres
- New Impervious (I<sub>New</sub>)= 0.393 acres

$$Imp_{Treat} = I_{New} + 0.25 * I_{Ext}$$

$$Imp_{Treat} = 0.393 \ acres + (0.25 * 0.834 \ acres)$$

$$Imp_{Treat} = 0.602 \ acres$$

- 90% Rainfall Depth = 1.5 inches
- Hydrological Soil Group (HSG): C
- HSG Specific Reduction Factor, S = 0.3

#### 2. Water Quality Volume required before Runoff Reduction:

The impervious cover,

$$I = \frac{0.602 \ acres}{2.388 \ acres} \times 100\% = 25.2\%$$

The runoff coefficient,

$$R_v = 0.05 + 0.009 \times I$$

$$\rightarrow R_v = 0.05 + 0.009 \times 25.2$$

$$\rightarrow R_v = 0.28$$

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CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

Use the 90% rule 1.5" of rainfall in Rockland County,

$$WQ_v = 1.5" \times R_v \times A_{Disturbed}$$

$$\rightarrow WQ_v = 1.5inch\left(\frac{1ft}{12inch}\right)0.28 \times 2.388 \ acs$$

$$\rightarrow WQ_v = 0.083 \ acs. ft. = 3,600.0 \ cu. ft.$$

The required water quality volume, (WQv) = 3,600.0 cu.ft or 0.083 acs.ft.

 $(WQv)_{Required} = 0.083 \text{ acs.ft. or } 3,600.0 \text{ cu.ft}$ 

#### 3. Minimum Runoff Reduction Volume (RRv) Calculations:

$$RRv = \frac{90\% \, Rainfall \, Amount}{12} * 0.95 * S * Al_{New}$$

$$S = 0.3$$

$$RRv = 1.5inch\left(\frac{1ft}{12inch}\right) * 0.95 * 0.3 * 0.602 acres$$

$$RRv = 0.021 \ acs. ft. = 934.0 \ ft^3$$

 $(RRv)_{Minimum} = 0.021$  acs.ft. or 934.0 cu.ft

#### 4. Area Reduction Practice:

No area reduction practice is proposed.

#### 5. Area Reduction Practice:

N/A

#### 6. Recalculate WQv for Site Area Remaining After Area Reduction:

The impervious cover,

$$I = \frac{0.602 \ acres}{2.388 \ acres} \times 100\% = 25.2\%$$

The runoff coefficient,

$$R_{y} = 0.05 + 0.009 \times I$$

$$\rightarrow R_v = 0.05 + 0.009 \times 25.2$$

$$\rightarrow R_v = 0.28$$

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CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

Use the 90% rule 1.5" of rainfall in Rockland County,

$$WQ_v = 1.5" \times R_v \times A_{Disturbed}$$

$$\rightarrow WQ_v = 1.5inch \left(\frac{1ft}{12inch}\right) 0.28 \times 2.388 \ acs$$

$$\rightarrow WQ_v = 0.083 \ acs. ft. = 3,600.0 \ cu. ft.$$

The required water quality volume, (WQv) = 3,600.0 cu.ft or 0.083 acs.ft.

 $(WQv)_{Required} = 0.083 \text{ acs.ft. or } 3,600.0 \text{ cu.ft}$ 

#### 7. Runoff Reduction Volume (RRv) Calculation Per Area Reduction:

The Runoff Reduction Volume (RRv) Credit:

$$\Rightarrow$$
 (RRv)<sub>Area Reduction</sub> = (0.083 acs.ft. - 0.083 acs.ft.)

$$\Rightarrow$$
 (RRv)<sub>Area Reduction</sub> = 0.00 acs.ft.

(RRv)Per Area Reduction = 0.0 acs.ft. or 0.0 cu.ft

#### 8. Incorporate Impervious Are Disconnection:

No rooftop disconnection practices are proposed.

#### 9. Recalculate WQv with Rv Modified for Impervious Disconnection:

The impervious cover,

$$I = \frac{0.602 \ acres}{2.388 \ acres} \times 100\% = 25.2\%$$

The runoff coefficient,

$$R_v = 0.05 + 0.009 \times I$$

$$\rightarrow R_{\nu} = 0.05 + 0.009 \times 25.2$$

$$\rightarrow R_{v} = 0.28$$

Use the 90% rule 1.5" of rainfall in Rockland County,

$$WQ_v = 1.5" \times R_v \times A_{Disturbed}$$

$$\rightarrow WQ_v = 1.5inch\left(\frac{1ft}{12inch}\right)0.28 \times 2.388 acs$$

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#### $\rightarrow WQ_v = 0.083 \ acs. ft. = 3,600.0 \ cu. ft.$

The required water quality volume, (WQv) = 3,600.0 cu.ft or 0.083 acs.ft.

 $(WQv)_{Required} = 0.083 \text{ acs.ft. or } 3,600.0 \text{ cu.ft}$ 

#### 10. Runoff Reduction Volume (RRv) Per Impervious Area Reduction:

The Runoff Reduction Volume (RRv) Credit:

$$\Rightarrow$$
 (RRv)<sub>Al Reduction</sub> = (0.083 acs.ft – 0.083 acs.ft)

$$\Rightarrow$$
 (RRv)<sub>AI Reduction</sub> = 0.00 acs.ft

(WQv)Per Impervious Reduction = 0.0 acs.ft. or 0.0 cu.ft

#### 11. Source Control WQv Treatment Practice:

- An underground infiltration system (Cultec R-902HD or approved equal) has been proposed to provide the required WQv.
- $\rightarrow$  WQ<sub>v</sub> Provided by the U/G Infiltration System = 0.084 acs. ft. @ Elv. 542.0 (as per Hydrocad)
- Required WQv = 3,600.0 cu.ft. or 0.083 acs.ft.
- WQv Provided = 3,640.0 cu.ft. or 0.084 acs.ft.

The total provided WQ volume by the U/G infiltration systems is 3,640.0 cu.ft. >= Required WQv = 3,600.0 cu.ft.

(O.K.) √

#### 12. The Total Provided Runoff Reduction Volume (RRy) Calculation:

• The Grand Total RRv:

$$(RRv)_{Grand\ Total} = (\#7\ (RRv)_{Area\ Reduction} + \#10\ (RRv)_{Al\ Reduction} + \#11\ (RRv)_{SMP\ Provided})$$

$$\Rightarrow$$
 (RRv)<sub>Grand Total</sub> = (0.0 acs.ft. + 0.0 acs.ft. + 0.084 acs.ft.)

$$\Rightarrow$$
 (RRv)<sub>Grand Total</sub> = 0.084 acs.ft.

 $(RRv)_{Grand\ Total} = 0.084\ acs.ft.\ or\ 3,640.0\ cu.ft$ 

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CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

#### 13. Check if Total Provided RRv is Adequate Compared to the Original WQv:

• The  $(RRv)_{Grand\ Total} = 0.084\ acs.ft > (WQv)_{Original} = 0.083\ acs.ft$ .



(OK - No additional WQv by Standard Practice is required)

#### 14. Check if Total Provided RRv is Adequate Compared to the Minimum RRv:

• The  $(RRv)_{Grand\ Total} = 0.084\ acs.ft >= (RRv)_{Minimum} = 0.021\ acs.ft$ .



(Minimum RRv Requirement is Satisfied)

#### 15. Total Drainage area treated with runoff reduction or source control practices:

- Treated area = #4 DA + #8 DA + #11 DA = 0.0 + 0.00 + 1.023 = 1.023 acres
- Impervious Area = #4 IA + #8 IA + #11 IA = 0.0 + 0.00 + 0.833 = 0.833 acres

#### 16. Are all required areas treated by runoff reduction or source control practices:

Yes, no further action required.

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CALCULATED BY: WS CHECKED BY: RN DATE: 04/12/24 DATE: 04/12/24

#### WATER QUANTITY CALCULATION

The proposed underground infiltration system provides water quantity required for 1-yr, 10-yr, 100-yr storm events at the point of interest. The routing calculation through the proposed systems shows that the zero net increase of peak run off from the site could be achieved as described in the following:

#### 1-yr storm:

Q1 (developed) = 
$$2.76 \text{ cfs} < Q1 \text{ (existing)} = 4.43 \text{ cfs}$$

U/G Infiltration System 1-yr storage = 2,914 c.f. @ El. 541.08

#### 10-yr storm:

Q10 (developed) = 
$$8.80 \text{ cfs} < Q10 \text{ (existing)} = 9.93 \text{ cfs}$$

U/G Infiltration System 10-yr storage = 4,069 c.f. @ El. 542.79

#### 100-yr storm:

$$Q100 \text{ (developed)} = 19.38 \text{ cfs} < Q100 \text{ (existing)} = 19.41 \text{ cfs}$$

U/G Infiltration System 100-yr storage = 4,336 c.f. @ El. 543.33

(Please see HydroCad calculations for details)

#### VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

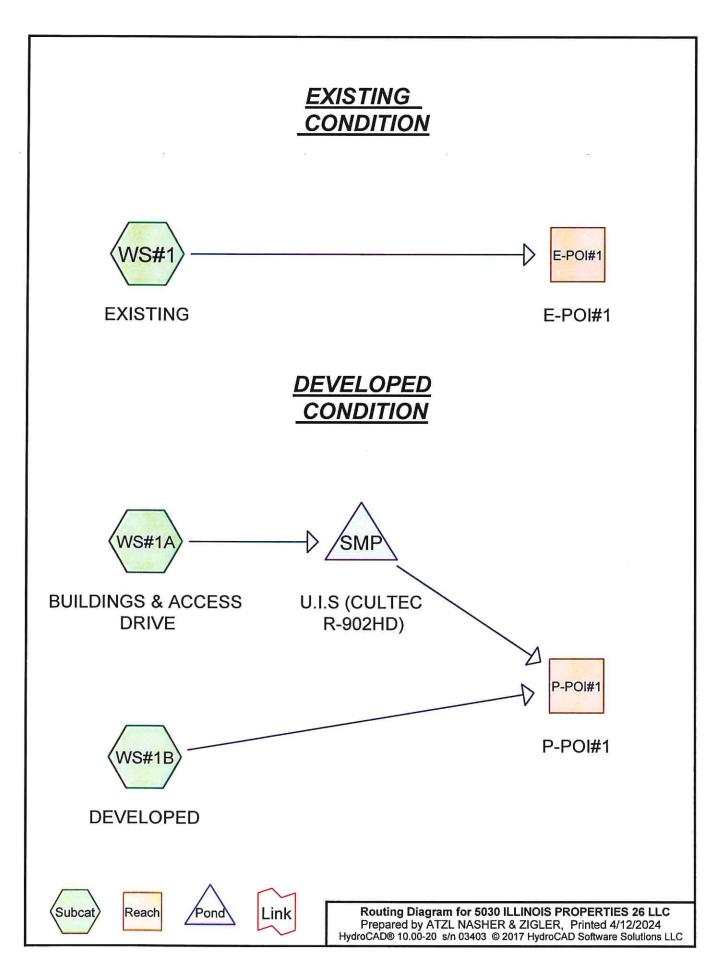
## HYDROCAD MODEL FOR EXISTING AND PROPOSED CONDITIONS 1, 10, AND 100 YEAR STORMS

BY

### ATZL, NASHER & ZIGLER

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Page

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment WS#1: EXISTING

Runoff Area=2.388 ac 57.20% Impervious Runoff Depth=1.62"

Tc=6.0 min CN=88 Runoff=4.43 cfs 0.321 af

Subcatchment WS#1A: BUILDINGS & ACCESS

Runoff Area=1.023 ac 81.43% Impervious Runoff Depth=2.13"

Tc=6.0 min CN=94 Runoff=2.41 cfs 0.181 af

Subcatchment WS#1B: DEVELOPED

Runoff Area=1.365 ac 68.13% Impervious Runoff Depth=1.77"

Tc=6.0 min CN=90 Runoff=2.76 cfs 0.202 af

Reach E-POI#1: E-POI#1

Inflow=4.43 cfs 0.321 af

Outflow=4.43 cfs 0.321 af

Reach P-POI#1: P-POI#1

Inflow=2.76 cfs 0.202 af

Outflow=2.76 cfs 0.202 af

Pond SMP: U.I.S (CULTEC R-902HD)

Peak Elev=541.08' Storage=2,914 cf Inflow=2.41 cfs 0.181 af

Discarded=0.31 cfs 0.181 af Primary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.181 af

Total Runoff Area = 4.776 ac Runoff Volume = 0.705 af Average Runoff Depth = 1.77" 34.48% Pervious = 1.647 ac 65.52% Impervious = 3.129 ac

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#### Summary for Subcatchment WS#1: EXISTING

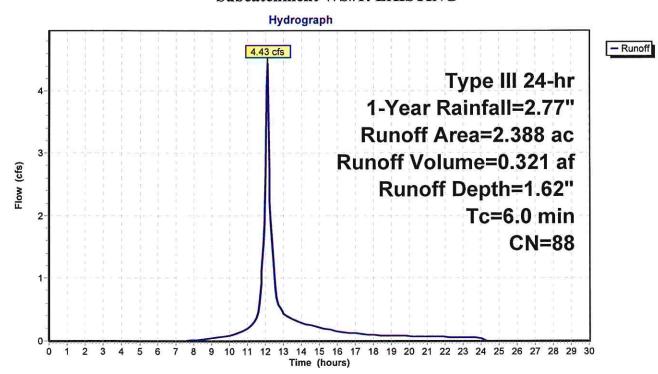
Runoff = 4.43 cfs @ 12.09 hrs, Volume=

0.321 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 1-Year Rainfall=2.77"

_	Area	(ac)	CN	Desc	cription						
	0.	470	76	Woo	ods/grass co	omb., Fair,	HSG C				
	0.	552	74	>759	75% Grass cover, Good, HSG C						
*	1.	366	98	Imp	ervious Co	ver, HSG C					
	2.	388	88	Wei	ghted Aver	age					
	1.	1.022 42.80% Pervious Area									
	1.	1.366 57.20% Impervious Area									
	Tc	Lengt		Slope	Velocity	Capacity	Description				
_	(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)					
	6.0						Direct Entry.				

#### Subcatchment WS#1: EXISTING



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#### Summary for Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE

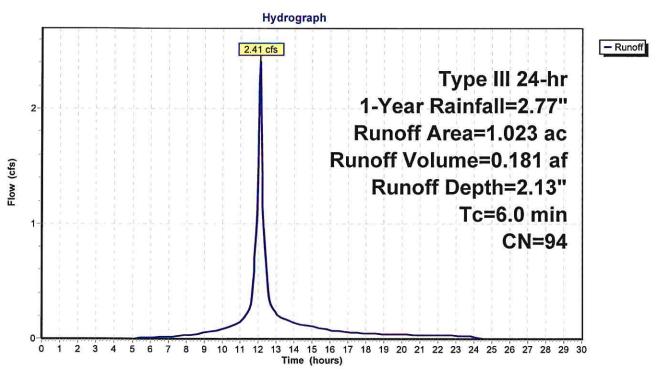
Runoff = 2.41 cfs @ 12.09 hrs, Volume=

0.181 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 1-Year Rainfall=2.77"

	Area (a	ic)	CN	Desc	ription							
	0.83	33	98	Pave	aved parking, HSG C							
_	0.19	90	74	>759	% Grass co	ver, Good,	HSG C					
	1.02	23	94	Wei	ghted Aver	age						
	0.19	90		18.5	7% Perviou	ıs Area						
	0.83	33		81.4	3% Imperv	ious Area						
		Length		Slope	Velocity	Capacity	Description					
_(	min)	(feet)	) (	(ft/ft)	(ft/sec)	(cfs)						
	6.0						Direct Entry					

#### Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE



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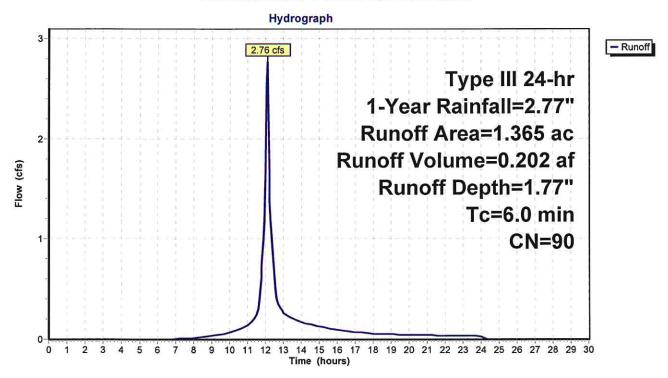
#### Summary for Subcatchment WS#1B: DEVELOPED

Runoff = 2.76 cfs @ 12.09 hrs, Volume= 0.202 af, Depth= 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 1-Year Rainfall=2.77"

Area	(ac)	CN	Desc	cription			
0.	930	98	Pave	d parking,	HSG C		
0.	435	74	>759	% Grass co	ver, Good,	HSG C	
1.	365	90	Wei	ghted Aver	age		
0.	0.435 31.87% Pervious Area				ıs Area		
0.	0.930 68.13% Impervious Area			ious Area			
Tc (min)	Lengt		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0						Direct Entry,	

#### Subcatchment WS#1B: DEVELOPED



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#### **5030 ILLINOIS PROPERTIES 26 LLC**

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#### **Summary for Reach E-POI#1: E-POI#1**

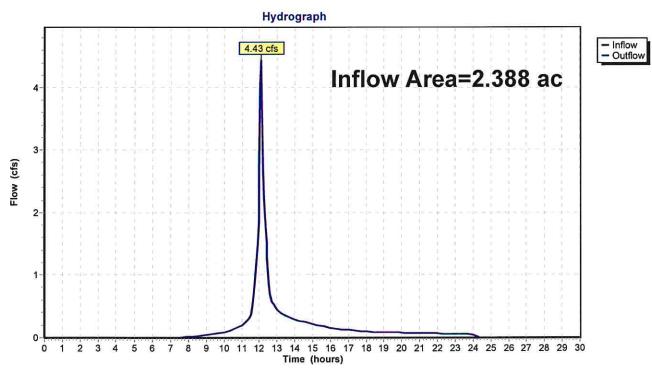
Inflow Area = 2.388 ac, 57.20% Impervious, Inflow Depth = 1.62" for 1-Year event

Inflow = 4.43 cfs @ 12.09 hrs, Volume= 0.321 af

Outflow = 4.43 cfs (a) 12.09 hrs, Volume= 0.321 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach E-POI#1: E-POI#1



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# **Summary for Reach P-POI#1: P-POI#1**

Inflow Area =

2.388 ac, 73.83% Impervious, Inflow Depth = 1.01" for 1-Year event

Inflow

2.76 cfs @ 12.09 hrs, Volume=

0.202 af

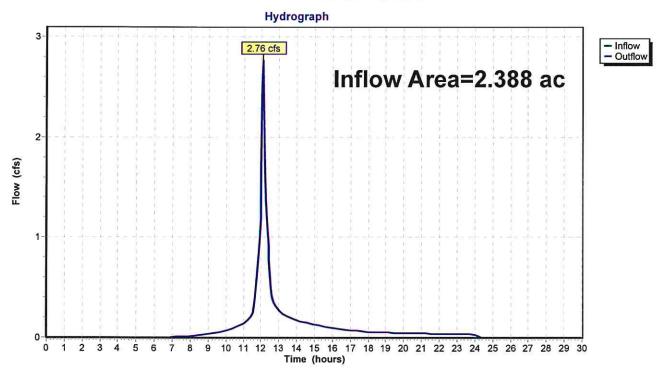
Outflow

2.76 cfs @ 12.09 hrs, Volume=

0.202 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach P-POI#1: P-POI#1



#### **5030 ILLINOIS PROPERTIES 26 LLC**

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# **Summary for Pond SMP: U.I.S (CULTEC R-902HD)**

Inflow Area ==	1.023 ac, 81.43% Impervious, Inflow	Depth = 2.13" for 1-Year event
Inflow =	2.41 cfs @ 12.09 hrs, Volume=	0.181 af
Outflow =	0.31 cfs @ 12.67 hrs, Volume=	0.181 af, Atten= 87%, Lag= 34.6 min
Discarded =	0.31 cfs @ 12.67 hrs, Volume=	0.181 af
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 541.08' @ 12.67 hrs Surf.Area= 1,241 sf Storage= 2,914 cf

Plug-Flow detention time= 83.6 min calculated for 0.181 af (100% of inflow) Center-of-Mass det. time= 83.5 min (875.5 - 792.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	537.651	1,843 cf	8.50'W x 146.03'L x 5.75'H Field A
			7,137 cf Overall - 2,530 cf Embedded = 4,607 cf $\times$ 40.0% Voids
#2A	538.40'	2,530 cf	Cultec R-902HD x 39 Inside #1
			Effective Size= $69.8$ "W x $48.0$ "H $\Rightarrow$ 17.65 sf x $3.67$ 'L = $64.7$ cf
			Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap
			Cap Storage= $+2.8 \text{ cf } x 2 x 1 \text{ rows} = 5.5 \text{ cf}$
		4.050 0	

4,373 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices	
#1	Discarded	537.65'	5.000 in/hr Exfiltration over Surface area	
			Conductivity to Groundwater Elevation = 534.65'	Phase-In= 0.01'
#2	Primary	542.00'	1.9' long Sharp-Crested Rectangular Weir 2 End	Contraction(s)

**Discarded OutFlow** Max=0.31 cfs @ 12.67 hrs HW=541.08' (Free Discharge) —1=Exfiltration (Controls 0.31 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=537.65' (Free Discharge)

2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

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# Pond SMP: U.I.S (CULTEC R-902HD) - Chamber Wizard Field A

#### Chamber Model = Cultec R-902HD (Cultec Recharger® 902HD)

Effective Size= 69.8"W x 48.0"H => 17.65 sf x 3.67'L = 64.7 cf Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap Cap Storage= +2.8 cf x 2 x 1 rows = 5.5 cf

39 Chambers/Row x 3.67' Long +0.52' Cap Length x 2 = 144.03' Row Length +12.0" End Stone x 2 = 146.03' Base Length

1 Rows x 78.0" Wide + 12.0" Side Stone x 2 = 8.50' Base Width 9.0" Base + 48.0" Chamber Height + 12.0" Cover = 5.75' Field Height

39 Chambers x 64.7 cf + 2.8 cf Cap Volume x 2 x 1 Rows = 2,530.2 cf Chamber Storage

7,137.4 cf Field - 2,530.2 cf Chambers = 4,607.2 cf Stone x 40.0% Voids = 1,842.9 cf Stone Storage

Chamber Storage + Stone Storage = 4,373.1 cf = 0.100 af Overall Storage Efficiency = 61.3% Overall System Size = 146.03' x 8.50' x 5.75'

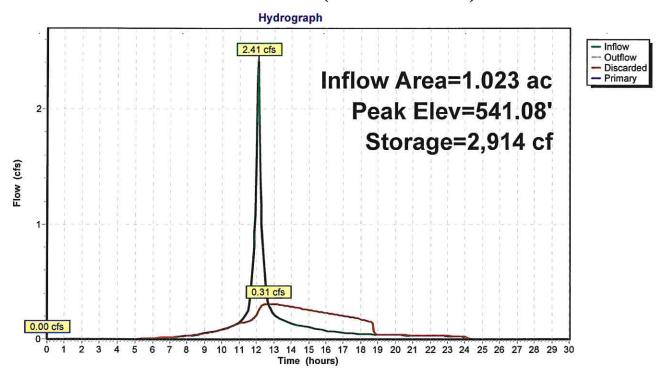
39 Chambers 264.3 cy Field 170.6 cy Stone



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# Pond SMP: U.I.S (CULTEC R-902HD)



Primary (cfs)

5.18

5.95

6.73

7.54

8.36

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# Stage-Discharge for Pond SMP: U.I.S (CULTEC R-902HD)

Discharge Discarded

(cfs)

0.40

0.40

0.41

0.41

0.42

(cfs)

5.58

6.35

7.14

7.95

8.78

Elevation	Discharge	Discarded	Primary	Elevation
(feet)	(cfs)	(cfs)	(cfs)	(feet)
537.65	0.00	0.00	0.00	542.95
537.75	0.15	0.15	0.00	543.05
537.85	0.15	0.15	0.00	543.15
537.95	0.16	0.16	0.00	543.25
538.05	0.16	0.16	0.00	543.35
538.15	0.17	0.17	0.00	
538.25	0.17	0.17	0.00	
538.35	0.18	0.18	0.00	
538.45	0.18	0.18	0.00	
538.55	0.19	0.19	0.00	
538.65	0.19	0.19	0.00	
538.75	0.20	0.20	0.00	
538.85	0.20	0.20	0.00	
538.95	0.21	0.21	0.00	
539.05	0.21	0.21	0.00	
539.15	0.22	0.22	0.00	
539.25	0.22	0.22	0.00	
539.35	0.23	0.23	0.00	
539.45	0.23	0.23	0.00	
539.55	0.23	0.23	0.00	
539.65	0.24	0.24	0.00	
539.75	0.24	0.24	0.00	
539.85	0.25	0.25	0.00	
539.95	0.25	0.25	0.00	
540.05	0.26	0.26	0.00	
540.15	0.26	0.26	0.00	
540.25	0.27	0.27	0.00	
540.35	0.27	0.27	0.00	
540.45	0.28	0.28	0.00	
540.55	0.28	0.28	0.00	
540.65	0.29	0.29	0.00	
540.75	0.29	0.29	0.00	
540.85	0.30	0.30	0.00	
540.95	0.30	0.30	0.00	
541.05	0.31	0.31	0.00	
541.15	0.31	0.31	0.00	
541.25	0.32	0.32	0.00	
541.35	0.32	0.32	0.00	
541.45	0.33	0.33	0.00	
541.55	0.33	0.33	0.00	
541.65	0.34	0.34	0.00	
541.75	0.34	0.34	0.00	
541.85	0.34	0.34	0.00	
541.95	0.35	0.35	0.00	
542.05	0.42	0.35	0.07	
542.15	0.71	0.36	0.36	
542.25	1.12	0.36	0.76	
542.35	1.61	0.37	1.24	
542.45	2.16	0.37	1.79	
542.55	2.77	0.38	2.39	
542.65	3.42	0.38	3.03	
542.75	4.10	0.39	3.72	
542.85	4.83	0.39	4.43	
			,	

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# Stage-Area-Storage for Pond SMP: U.I.S (CULTEC R-902HD)

			_
Elevation	Surface	Storage	Elevation
(feet)	(sq-ft)	(cubic-feet)	(feet)
537.65	1,241	0	542.95
537.75	1,241	50	543.05
537.85	1,241	99	543.15
537.95	1,241	149	543.25
538.05	1,241	199	543.35
538.15	1,241	248	
538.25	1,241	298	
538.35	1,241	348	
538.45	1,241	422	
538.55	1,241	521	
538.65	1,241	621	
538.75	1,241	720	
538.85	1,241	818	
538.95	1,241	917	
539.05	1,241	1,015	
539.15	1,241	1,113	
539.25	1,241	1,210	
539.35	1,241	1,307	
539.45	1,241	1,403	
539.55	1,241	1,500	
539.65	1,241	1,596	
539.75	1,241	1,691	
539.85	1,241	1,786	
539.95	1,241	1,880	
540.05	1,241	1,974	
540.15	1,241	2,068	
540.25	1,241	2,161	
540.35	1,241	2,254	
540.45	1,241	2,347	
540.55	1,241	2,438	
540.65	1,241	2,530	
540.75	1,241	2,620	
540.85	1,241	2,709	
540.95	1,241	2,798	
541.05	1,241	2,886	
541.15	1,241	2,972	
541.25	1,241	3,058	
541.35	1,241	3,142	
541.45	1,241	3,224	
541.55	1,241	3,305	
541.65	1,241	3,384	
541.75	1,241	3,461	
541.85	1,241	3,536	
541.95	1,241	3,608	
542.05	1,241	3,676	
542.15	1,241	3,740	
542.25	1,241	3,797	
542.35	1,241	3,851	
542.45	1,241	3,901	
542.55	1,241	3,951	
542.65	1,241	4,001	
542.75	1,241	4,050	
542.85	1,241	4,100	

Surface

(sq-ft) 1,241

1,241

1,241

Storage

4,150

4,199

4,249

(cubic-feet)

#### **5030 ILLINOIS PROPERTIES 26 LLC**

Type III 24-hr 10-Year Rainfall=5.05"

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment WS#1: EXISTING

Runoff Area=2.388 ac 57.20% Impervious Runoff Depth=3.72"

Tc=6.0 min CN=88 Runoff=9.93 cfs 0.740 af

Subcatchment WS#1A: BUILDINGS & ACCESS

Runoff Area=1.023 ac 81.43% Impervious Runoff Depth=4.36"

Tc=6.0 min CN=94 Runoff=4.74 cfs 0.371 af

Subcatchment WS#1B: DEVELOPED

Runoff Area=1.365 ac 68.13% Impervious Runoff Depth=3.92"

Tc=6.0 min CN=90 Runoff=5.92 cfs 0.446 af

Reach E-POI#1: E-POI#1

Inflow=9.93 cfs 0.740 af

Outflow=9.93 cfs 0.740 af

Reach P-POI#1: P-POI#1

Inflow=8.80 cfs 0.529 af

Outflow=8.80 cfs 0.529 af

Pond SMP: U.I.S (CULTEC R-902HD)

Peak Elev=542.79' Storage=4,069 cf Inflow=4.74 cfs 0.371 af

Discarded=0.39 cfs 0.289 af Primary=3.98 cfs 0.082 af Outflow=4.37 cfs 0.371 af

Total Runoff Area = 4.776 ac Runoff Volume = 1.557 af Average Runoff Depth = 3.91" 34.48% Pervious = 1.647 ac 65.52% Impervious = 3.129 ac

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#### Summary for Subcatchment WS#1: EXISTING

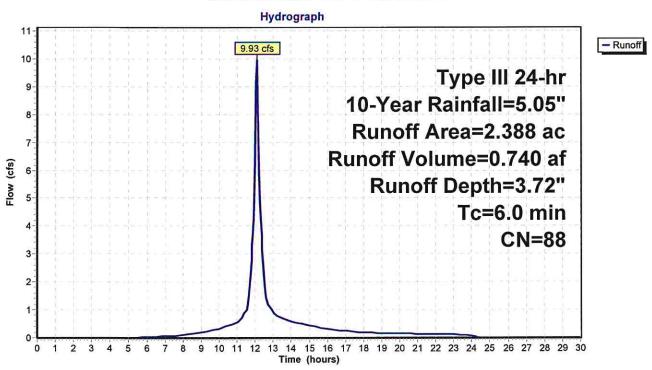
Runoff = 9.93 cfs @ 12.09 hrs, Volume=

0.740 af, Depth= 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 10-Year Rainfall=5.05"

_	Area (ac)	CN	Des	cription			
	0.470	76	Woo	ods/grass co	omb., Fair,	HSG C	
	0.552	74	>75	% Grass co	ver, Good,	HSG C	
*	1.366	98	Imp	ervious Co	ver, HSG C		
	2.388	88	Wei	ghted Aver	age		
	1.022		42.8	0% Pervio	ıs Area		
	1.366		57.2	0% Imperv	ious Area		
	Tc Len	_	Slope	Velocity	Capacity	Description	
	(min) (fe	eet)	(ft/ft)	(ft/sec)	(cfs)		
	6.0					Direct Entry.	

#### Subcatchment WS#1: EXISTING



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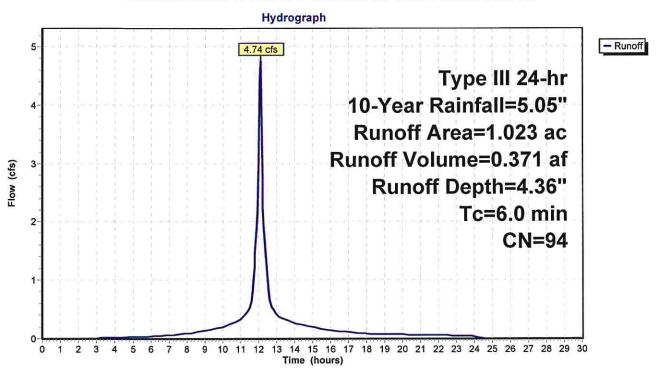
#### Summary for Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE

Runoff = 4.74 cfs @ 12.09 hrs, Volume= 0.371 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 10-Year Rainfall=5.05"

Area	(ac)	CN	Desc	ription			
0.	833	98	Pave	d parking,	HSG C		
0.	190	74	>759	% Grass co	ver, Good,	, HSG C	
1.	023	94	Wei	ghted Aver	age		
0.	190		18.5	7% Perviou	ıs Area		
0.	0.833		81.4	3% Imperv	ious Area		
Tc (min)	Lengt (feet		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0						Direct Entry,	

#### Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE



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#### Summary for Subcatchment WS#1B: DEVELOPED

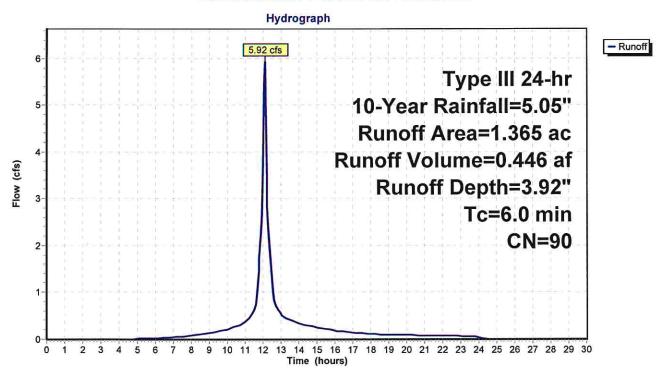
Runoff = 5.92 cfs @ 12.09 hrs, Volume=

0.446 af, Depth= 3.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 10-Year Rainfall=5.05"

Area	(ac)	CN	Desc	cription			
0.	930	98	Pave	ed parking,	HSG C		
0.	435	74			ver, Good,	HSG C	
1.	365	90	Wei	ghted Aver	age		
0.	435		31.8	7% Pervio	us Area		
0.	930		68.1	3% Imperv	ious Area		
Tc (min)	Lengt		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0						Direct Entry,	

#### Subcatchment WS#1B: DEVELOPED



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#### **Summary for Reach E-POI#1: E-POI#1**

Inflow Area =

2.388 ac, 57.20% Impervious, Inflow Depth = 3.72" for 10-Year event

Inflow =

9.93 cfs @ 12.09 hrs, Volume=

0.740 af

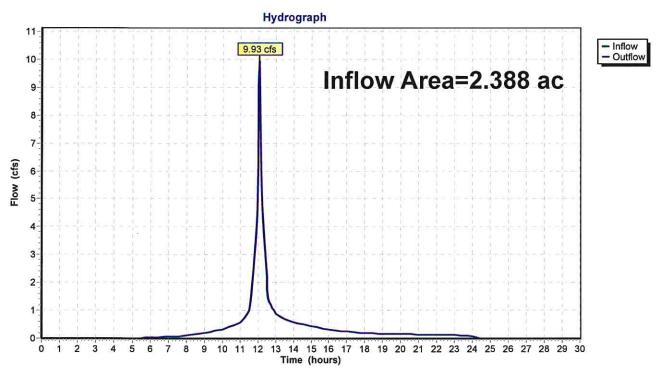
Outflow =

9.93 cfs @ 12.09 hrs, Volume=

0.740 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach E-POI#1: E-POI#1



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# **Summary for Reach P-POI#1: P-POI#1**

Inflow Area =

2.388 ac, 73.83% Impervious, Inflow Depth = 2.66" for 10-Year event

Inflow

8.80 cfs @ 12.13 hrs, Volume=

0.529 af

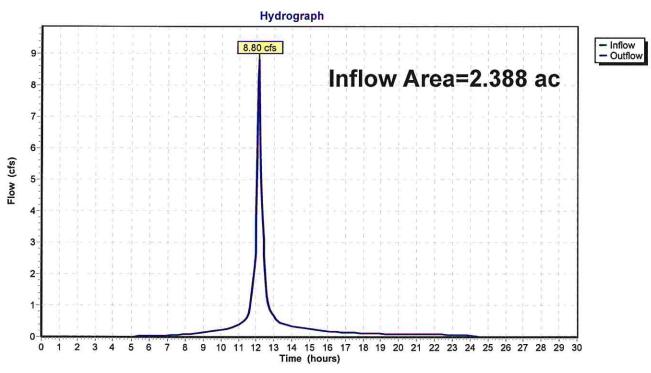
Outflow =

8.80 cfs @ 12.13 hrs, Volume=

0.529 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach P-POI#1: P-POI#1



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# Summary for Pond SMP: U.I.S (CULTEC R-902HD)

Inflow Area =	1.023 ac, 81.43% Impervious, Inflow	Depth = $4.36$ " for 10-Year event
Inflow =	4.74 cfs @ 12.09 hrs, Volume=	0.371 af
Outflow =	4.37 cfs @ 12.15 hrs, Volume=	0.371 af, Atten= 8%, Lag= 4.0 min
Discarded =	0.39 cfs @ 12.15 hrs, Volume=	0.289 af
Primary =	3.98 cfs @ 12.15 hrs, Volume=	0.082 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 542.79' @, 12.15 hrs Surf.Area= 1,241 sf Storage= 4,069 cf

Plug-Flow detention time= 80.5 min calculated for 0.371 af (100% of inflow) Center-of-Mass det. time= 80.4 min (853.6 - 773.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	537.65'	1,843 cf	8.50'W x 146.03'L x 5.75'H Field A
			7,137 cf Overall - 2,530 cf Embedded = 4,607 cf x 40.0% Voids
#2A	538.40'	2,530 cf	Cultec R-902HD x 39 Inside #1
			Effective Size= $69.8$ "W x $48.0$ "H => $17.65$ sf x $3.67$ 'L = $64.7$ cf
			Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap
			Cap Storage= $+2.8 \text{ cf } x 2 x 1 \text{ rows} = 5.5 \text{ cf}$

4,373 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	537.651	5.000 in/hr Exfiltration over Surface area
			Conductivity to Groundwater Elevation = 534.65' Phase-In= 0.01'
#2	Primary	542.00'	1.9' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

**Discarded OutFlow** Max=0.39 cfs @ 12.15 hrs HW=542.77' (Free Discharge) —1=Exfiltration (Controls 0.39 cfs)

Primary OutFlow Max=3.86 cfs @ 12.15 hrs HW=542.77' (Free Discharge)

2=Sharp-Crested Rectangular Weir (Weir Controls 3.86 cfs @ 2.87 fps)

#### Pond SMP: U.I.S (CULTEC R-902HD) - Chamber Wizard Field A

#### Chamber Model = Cultec R-902HD (Cultec Recharger® 902HD)

Effective Size= 69.8"W x 48.0"H => 17.65 sf x 3.67'L = 64.7 cf Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap Cap Storage= +2.8 cf x 2 x 1 rows = 5.5 cf

39 Chambers/Row x 3.67' Long +0.52' Cap Length x 2 = 144.03' Row Length +12.0" End Stone x 2 = 146.03' Base Length

1 Rows x 78.0" Wide + 12.0" Side Stone x 2 = 8.50' Base Width

9.0" Base + 48.0" Chamber Height + 12.0" Cover = 5.75' Field Height

39 Chambers x 64.7 cf + 2.8 cf Cap Volume x 2 x 1 Rows = 2,530.2 cf Chamber Storage

7,137.4 cf Field - 2,530.2 cf Chambers = 4,607.2 cf Stone x 40.0% Voids = 1,842.9 cf Stone Storage

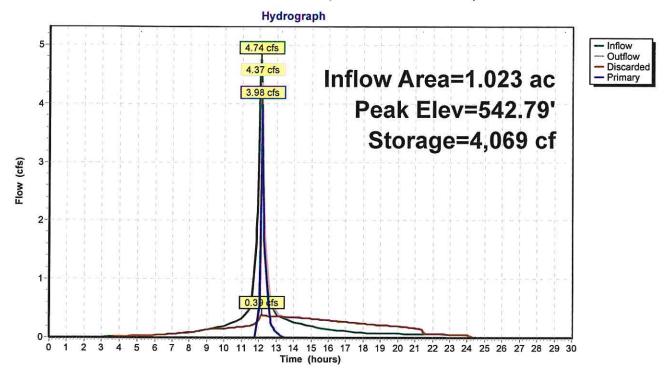
Chamber Storage + Stone Storage = 4,373.1 cf = 0.100 af Overall Storage Efficiency = 61.3% Overall System Size = 146.03' x 8.50' x 5.75'

39 Chambers 264.3 cy Field 170.6 cy Stone



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# Pond SMP: U.I.S (CULTEC R-902HD)



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# Stage-Discharge for Pond SMP: U.I.S (CULTEC R-902HD)

		<b></b>		
Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	E
537.65	0.00	0.00	0.00	
537.75	0.15	0.15	0.00	
537.85	0.15	0.15	0.00	
537.95	0.16	0.16	0.00	
538.05	0.16	0.16	0.00	
538.15	0.17	0.17	0.00	
538.25	0.17	0.17	0.00	
538.35	0.18	0.18	0.00	
538.45	0.18	0.18	0.00	
538.55	0.19	0.19	0.00	
538.65	0.19	0.19	0.00	
538.75	0.20	0.20	0.00	
538.85	0.20	0.20	0.00	
538.95	0.21	0.21	0.00	
539.05	0.21	0.21	0.00	
539.15	0.22	0.22	0.00	
539.25	0.22	0.22	0.00	ŀ
539.35	0.23	0.23	0.00	
539.45	0.23	0.23	0.00	
539.55	0.23	0.23	0.00	
539.65	0.24	0.24	0.00	
539.75	0.24	0.24	0.00	
539.85	0.25	0.25	0.00	
539.95	0.25	0.25	0.00	
540.05	0.26	0.26	0.00	
540.15	0.26	0.26	0.00	
540.25	0.27	0.27	0.00	
540.35	0.27	0.27	0.00	
540.45	0.28	0.28	0.00	
540.55	0.28	0.28	0.00	
540.65	0.29	0.29	0.00	
540.75	0.29	0.29	0.00	
540.85	0.30	0.30	0.00	
540.95	0.30	0.30	0.00	
541.05	0.31	0.31	0.00	
541.15	0.31	0.31	0.00	
541.25	0.32	0.32	0.00	
541.35	0.32	0.32	0.00	
541.45	0.33	0.33	0.00	
541.55	0.33	0.33	0.00	
541.65	0.34	0.34	0.00	
541.75	0.34	0.34	0.00	
541.85	0.34	0.34	0.00	
541.95	0.35	0.35	0.00	
542.05	0.42	0.35	0.07	
542.15	0.71	0.36	0.36	
542.25	1.12	0.36	0.76	
542.35	1.61	0.37	1.24	
542.45	2.16	0.37	1.79	
542.55	2.77	0.38	2.39	
542.65	3.42	0.38	3.03	
542.75	4.10	0.39	3.72	
542.85	4.83	0.39	4.43	

Elevation	Discharge	Discarded	Primary
(feet)	(cfs)	(cfs)	(cfs)
542.95	5.58	0.40	5.18
543.05	6.35	0.40	5.95
543.15	7.14	0.41	6.73
543.25	7.95	0.41	7.54
543.35	8.78	0.42	8.36

Storage (cubic-feet) 4,150 4,199 4,249 4,299 4,348

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# Stage-Area-Storage for Pond SMP: U.I.S (CULTEC R-902HD)

	8		8	`
Elevation	Surface	Storage	Elevation	Surface
(feet)	(sq-ft)	(cubic-feet)	(feet)	(sq-ft)
537.65	1,241	0	542.95	1,241
537.75	1,241	50	543.05	1,241
537.85	1,241	99	543.15	1,241
537.95	1,241	149	543.25	1,241
538.05	1,241	199	543.35	1,241
538.15	1,241	248		
538.25	1,241	298		
538.35	1,241	348		
538.45	1,241	422		
538.55	1,241	521		
538.65	1,241	621		
538.75	1,241	720		
538.85	1,241	818		
538.95	1,241	917		
539.05	1,241	1,015		
539.15	1,241	1,113		
539.25	1,241	1,210		
539.35	1,241	1,307		
539.45	1,241	1,403		
539.55	1,241	1,500		
539.65	1,241	1,596		
539.75	1,241	1,691		
539.85	1,241	1,786		
539.95	1,241	1,880		
540.05	1,241	1,974		
540.15	1,241	2,068		
540.25	1,241	2,161		
540.35	1,241	2,254		
540.45	1,241	2,347		
540.55	1,241	2,438		
540.65	1,241	2,530		
540.75	1,241	2,620		
540.85	1,241	2,709		
540.95	1,241	2,798		
541.05	1,241	2,886		
541.15	1,241	2,972		
541.25	1,241	3,058		
541.35	1,241	3,142		
541.45 541.55	1,241 1,241	3,224		
541.65	1,241	3,305		
541.75	1,241	3,384 3,461		
541.85	1,241	3,536		
541.95	1,241	3,608		
542.05	1,241	3,676		
542.15	1,241	3,740		
542.25	1,241	3,797		
542.35	1,241	3,851		
542.45	1,241	3,901		
542.55	1,241	3,951		
542.65	1,241	4,001		
542.75	1,241	4,050		
542.85	1,241	4,100		
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#### **5030 ILLINOIS PROPERTIES 26 LLC**

Type III 24-hr 100-Year Rainfall=9.00"

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment WS#1: EXISTING Runoff Area=2.388 ac 57.20% Impervious Runoff Depth=7.55"

Tc=6.0 min CN=88 Runoff=19.41 cfs 1.502 af

Subcatchment WS#1A: BUILDINGS & ACCESS Runoff Area=1.023 ac 81.43% Impervious Runoff Depth=8.28"

Tc=6.0 min CN=94 Runoff=8.70 cfs 0.706 af

Subcatchment WS#1B: DEVELOPED Runoff Area=1.365 ac 68.13% Impervious Runoff Depth=7.79"

Tc=6.0 min CN=90 Runoff=11.30 cfs 0.886 af

Reach E-POI#1: E-POI#1 Inflow=19.41 cfs 1.502 af

Outflow=19.41 cfs 1.502 af

**Reach P-POI#1: P-POI#1** Inflow=19.38 cfs 1.189 af

Outflow=19.38 cfs 1.189 af

Pond SMP: U.I.S (CULTEC R-902HD) Peak Elev=543.33' Storage=4,336 cf Inflow=8.70 cfs 0.706 af

Discarded=0.42 cfs 0.403 af Primary=8.16 cfs 0.302 af Outflow=8.57 cfs 0.706 af

Total Runoff Area = 4.776 ac Runoff Volume = 3.094 af Average Runoff Depth = 7.77" 34.48% Pervious = 1.647 ac 65.52% Impervious = 3.129 ac

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#### Summary for Subcatchment WS#1: EXISTING

Runoff = 19.41 cfs @ 12.09 hrs, Volume=

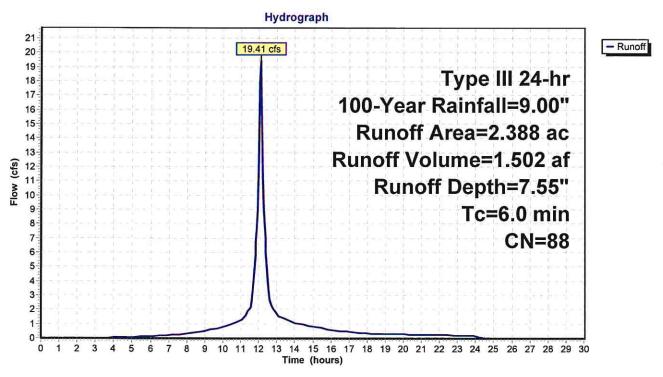
1.502 af, Depth= 7.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 100-Year Rainfall=9.00"

_	Area (ac)	) CN	I Des	cription			
	0.470	76	6 Woo	ods/grass co	omb., Fair,	HSG C	
	0.552	. 74	>75	% Grass co	ver, Good,	HSG C	
*	1.366	98	3 Imp	ervious Co	ver, HSG C		
	2.388	88	8 Wei	ghted Aver	age		
	1.022		42.8	0% Pervio	ıs Area		
	1.366		57.2	0% Imperv	ious Area		
		ngth	Slope	Velocity	Capacity	Description	
	(min) (	feet)	(ft/ft)	(ft/sec)	(cfs)		
	6.0					Direct Entry.	

Direct Entry,

#### Subcatchment WS#1: EXISTING



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#### Summary for Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE

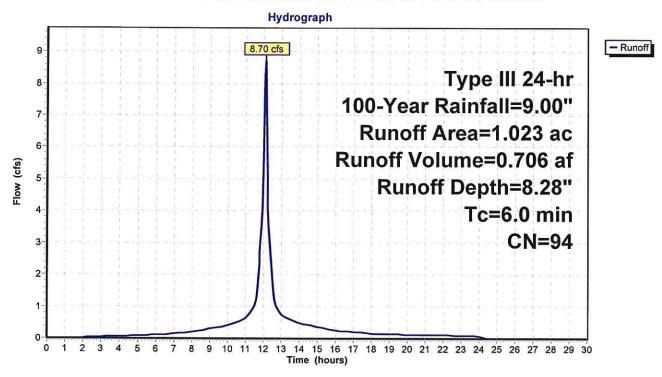
Runoff = 8.70 cfs @ 12.09 hrs, Volume=

0.706 af, Depth= 8.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 100-Year Rainfall=9.00"

Area	(ac)	CN	Desc	cription				
0.	833	98	Pave	ed parking,	HSG C		1/41/11	
0.	190	74	>759	% Grass co	ver, Good,	HSG C		
1.	023	94	Wei	ghted Aver	age			
0.	190			7% Pervio				
0.	833		81.4	3% Imperv	ious Area			
Tc (min)	Lengt (feet		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
6.0						Direct Entry,		

#### Subcatchment WS#1A: BUILDINGS & ACCESS DRIVE



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# Summary for Subcatchment WS#1B: DEVELOPED

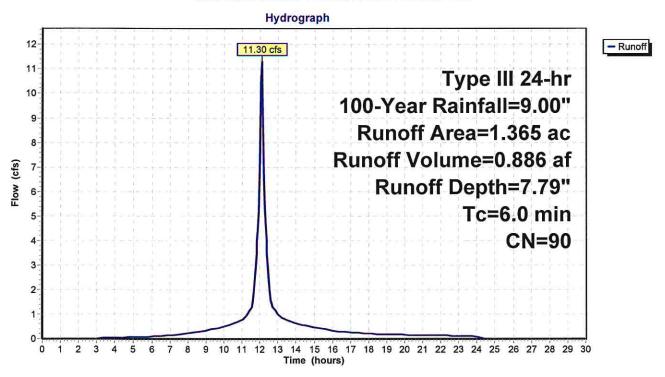
Runoff = 11.30 cfs @ 12.09 hrs, Volume=

0.886 af, Depth= 7.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Type III 24-hr 100-Year Rainfall=9.00"

_	Area (	ac)	CN	Desc	cription			
	0.9	930	98	Pave	ed parking,	HSG C		
_	0.4	135	74	>759	% Grass co	ver, Good,	HSG C	
	1.3	365	90	Weig	ghted Aver	age		
	0.4	135		31.8	7% Perviou	ıs Area		
	0.9	930		68.1	3% Imperv	ious Area		
Y=	Tc (min)	Length (feet)		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
-	6.0						Direct Entry.	

#### **Subcatchment WS#1B: DEVELOPED**



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#### Summary for Reach E-POI#1: E-POI#1

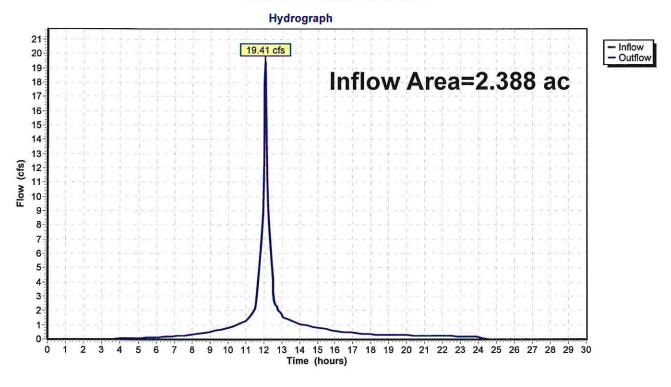
Inflow Area = 2.388 ac, 57.20% Impervious, Inflow Depth = 7.55" for 100-Year event

Inflow = 19.41 cfs @ 12.09 hrs, Volume= 1.502 af

Outflow = 19.41 cfs @ 12.09 hrs, Volume= 1.502 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach E-POI#1: E-POI#1



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# **Summary for Reach P-POI#1: P-POI#1**

Inflow Area =

2.388 ac, 73.83% Impervious, Inflow Depth = 5.97" for 100-Year event

Inflow =

19.38 cfs @ 12.09 hrs, Volume=

1.189 af

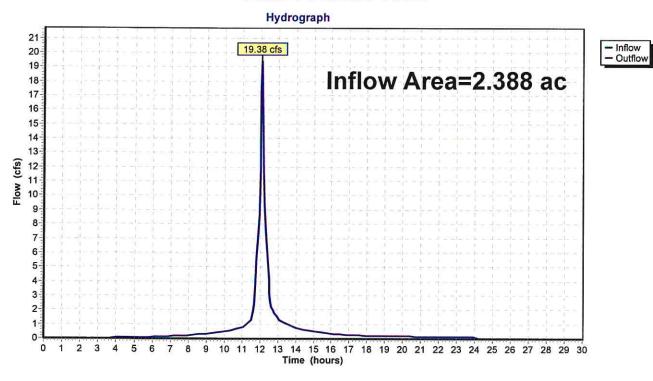
Outflow =

19.38 cfs @ 12.09 hrs, Volume=

1.189 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

#### Reach P-POI#1: P-POI#1



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# Summary for Pond SMP: U.I.S (CULTEC R-902HD)

Inflow Area =	1.023 ac, 81.43%	Impervious, Inflow	Depth = $8.28$ "	for 100-Year event
Inflow =	8.70 cfs @ 12.09 h	rs, Volume=	0.706 af	
Outflow =	8.57 cfs @ 12.10 h	rs, Volume=	0.706 af, Atter	n= 1%, Lag= 1.0 min
Discarded =	0.42 cfs @ 12.10 h	rs, Volume=	0.403 af	-
Primary =	8.16 cfs @ 12.10 h	rs, Volume=	0.302 af	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 543.33' @ 12.10 hrs Surf.Area= 1,241 sf Storage= 4,336 cf

Plug-Flow detention time= 67.1 min calculated for 0.704 af (100% of inflow) Center-of-Mass det. time= 67.0 min (825.7 - 758.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	537.65'	1,843 cf	8.50'W x 146.03'L x 5.75'H Field A
			7,137 cf Overall - 2,530 cf Embedded = 4,607 cf x 40.0% Voids
#2A	538.40'	2,530 cf	Cultec R-902HD x 39 Inside #1
			Effective Size= $69.8$ "W x $48.0$ "H => $17.65$ sf x $3.67$ 'L = $64.7$ cf
			Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap
			Cap Storage= $+2.8 \text{ cf } x 2 x 1 \text{ rows} = 5.5 \text{ cf}$

4,373 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	537.65'	5.000 in/hr Exfiltration over Surface area
			Conductivity to Groundwater Elevation = 534.65' Phase-In= 0.01'
#2	Primary	542.00'	1.9' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Discarded OutFlow Max=0.41 cfs @ 12.10 hrs HW=543.31' (Free Discharge)

1=Exfiltration (Controls 0.41 cfs)

Primary OutFlow Max=8.07 cfs @ 12.10 hrs HW=543.32' (Free Discharge) 2=Sharp-Crested Rectangular Weir (Weir Controls 8.07 cfs @ 3.75 fps)

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# Pond SMP: U.I.S (CULTEC R-902HD) - Chamber Wizard Field A

#### Chamber Model = Cultec R-902HD (Cultec Recharger® 902HD)

Effective Size= 69.8"W x 48.0"H => 17.65 sf x 3.67'L = 64.7 cf Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap Cap Storage= +2.8 cf x 2 x 1 rows = 5.5 cf

39 Chambers/Row x 3.67' Long +0.52' Cap Length x 2 = 144.03' Row Length +12.0" End Stone x 2 = 146.03' Base Length

1 Rows x 78.0" Wide + 12.0" Side Stone x 2 = 8.50' Base Width 9.0" Base + 48.0" Chamber Height + 12.0" Cover = 5.75' Field Height

39 Chambers x 64.7 cf + 2.8 cf Cap Volume x 2 x 1 Rows = 2,530.2 cf Chamber Storage

7,137.4 cf Field - 2,530.2 cf Chambers = 4,607.2 cf Stone x 40.0% Voids = 1,842.9 cf Stone Storage

Chamber Storage + Stone Storage = 4,373.1 cf = 0.100 af Overall Storage Efficiency = 61.3% Overall System Size = 146.03' x 8.50' x 5.75'

39 Chambers 264.3 cy Field 170.6 cy Stone





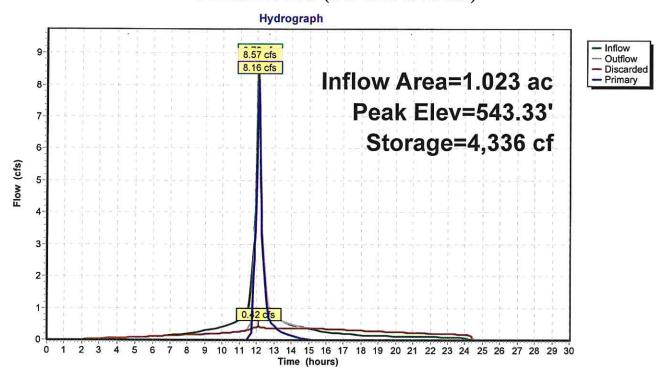
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# Pond SMP: U.I.S (CULTEC R-902HD)



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# Stage-Discharge for Pond SMP: U.I.S (CULTEC R-902HD)

<b>.</b>				1			
Elevation	Discharge	Discarded	Primary	Elevation	Discharge	Discarded	Primary
(feet)	(cfs)	(cfs)	(cfs)	(feet)	(cfs)	(cfs)	(cfs)
537.65	0.00	0.00	0.00	542.95	5.58	0.40	5.18
537.75 537.85	0.15 0.15	0.15	0.00	543.05	6.35	0.40	5.95
537.95	0.15	0.15 0.16	0.00	543.15	7.14	0.41	6.73
538.05	0.16		0.00	543.25	7.95	0.41	7.54
538.15	0.10	0.16	0.00	543.35	8.78	0.42	8.36
538.25	0.17	0.17 0.17	0.00				
538.35	0.17	0.17	0.00 0.00				
538.45	0.18	0.18	0.00				
538.55	0.18	0.18	0.00				
538.65	0.19	0.19	0.00				
538.75	0.20	0.20	0.00				
538.85	0.20	0.20	0.00				
538.95	0.21	0.21	0.00				
539.05	0.21	0.21	0.00				
539.15	0.22	0.22	0.00				
539.25	0.22	0.22	0.00				
539.35	0.23	0.23	0.00				
539.45	0.23	0.23	0.00				
539.55	0.23	0.23	0.00				
539.65	0.24	0.24	0.00				
539.75	0.24	0.24	0.00				
539.85	0.25	0.25	0.00				
539.95	0.25	0.25	0.00				
540.05	0.26	0.26	0.00				
540.15	0.26	0.26	0.00				
540.25	0.27	0.27	0.00				
540.35	0.27	0.27	0.00				
540.45	0.28	0.28	0.00				
540.55	0.28	0.28	0.00				
540.65	0.29	0.29	0.00				
540.75	0.29	0.29	0.00				
540.85	0.30	0.30	0.00				
540.95	0.30	0.30	0.00				
541.05	0.31	0.31	0.00				
541.15	0.31	0.31	0.00				
541.25	0.32	0.32	0.00				
541.35	0.32	0.32	0.00				
541.45	0.33	0.33	0.00				
541.55	0.33	0.33	0.00				
541.65	0.34	0.34	0.00				
541.75	0.34	0.34	0.00				
541.85	0.34	0.34	0.00				
541.95 542.05	0.35 0.42	0.35	0.00				
542.05	0.42	0.35	0.07				
542.15 542.25	1.12	0.36 0.36	0.36 0.76				
542.25 542.35	1.12	0.36	1.24				
542.45	2.16	0.37	1.24				
542.55	2.10	0.37	2.39				
542.65	3.42	0.38	3.03				
542.75	4.10	0.39	3.72				
542.85	4.83	0.39	4.43		;		
		0.57	7.72				

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# Stage-Area-Storage for Pond SMP: U.I.S (CULTEC R-902HD)

Elevation	Surface	Storago	Elevation	Surface	Storogo
(feet)	(sq-ft)	Storage (cubic-feet)	(feet)	(sq-ft)	Storage (cubic-feet)
537.65	1,241	· · · · · · · · · · · · · · · · · · ·	542.95		
537.75	1,241	0 50	543.05	1,241 1,241	4,150 4,199
537.85	1,241	99	543.15	1,241	4,199
537.95	1,241	149	543.25	1,241	4,249
538.05	1,241	199	543.35		4,299
538.15	1,241	248	343.33	1,241	4,346
538.25	1,241	248 298			
538.35	1,241	298 348			
538.45	1,241	422			
538.55	1,241	521			
538.65	1,241	621			
538.75	1,241	720			
538.85	1,241	818			
538.95	1,241	917			
539.05	1,241	1,015			
539.15	1,241	1,113			
539.25	1,241	1,210			
539.35	1,241	1,307			
539.45	1,241	1,403			
539.55	1,241	1,500			
539.65	1,241	1,596			
539.75	1,241	1,691			
539.85	1,241	1,786			
539.95	1,241	1,880			
540.05	1,241	1,974			
540.15	1,241	2,068			
540.25	1,241	2,161			
540.35	1,241	2,254			
540.45	1,241	2,347			
540.55	1,241	2,438			
540.65	1,241	2,530			
540.75	1,241	2,620			
540.85	1,241	2,709			
540.95	1,241	2,798			
541.05	1,241	2,886			
541.15	1,241	2,972			
541.25	1,241	3,058			
541.35	1,241	3,142			
541.45	1,241	3,224			
541.55	1,241	3,305			
541.65	1,241	3,384			
541.75	1,241	3,461			
541.85	1,241	3,536			
541.95	1,241	3,608			
542.05	1,241	3,676			
542.15	1,241	3,740			
542.25	1,241	3,797			
542.35	1,241	3,851			
542.45	1,241	3,901			
542.55	1,241	3,951			
542.65	1,241	4,001			
542.75	1,241	4,050			•
542.85	1,241	4,100			
	-	· 1			

# **ILLINOIS PROPERTIES 26 LLC**

# VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# **SECTION 3:**

# SPDES ACKNOWLEDGEMENT LETTER, FILLED OUT NOTICE OF INTENT (N.O.I.), AND MS4 SWPPP ACCEPTANCE FORM

BY

**ATZL, NASHER & ZIGLER** 

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

> TEL: (845) 634-4694 FAX: (845) 634-5543 E-MAIL: rnasher@anzny.com

#### NOTICE OF INTENT



# **New York State Department of Environmental Conservation**

# Division of Water 625 Broadway, 4th Floor

NYR					
	(for	DEC	use	only)	_

Albany, New York 12233-3505

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001 All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

# -IMPORTANTRETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

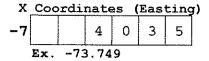
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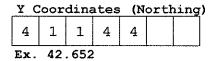
Project Site Information										
Project/Site Name										
ILLINOIS PROPERTIES 26										
Street Address (NOT P.O. BOX)										
7 7 5 NORTH MAIN STREET										
Side of Street  O North O South O East • West										
City/Town/Village (THAT ISSUES BUILDING PERMIT)  V I L L A G E O F N E W H E M P S T E A	D									
State         Zip         County           N Y         1 0 9 5 0 -         R O C K L A N D	DEC Region									
Name of Nearest Cross Street										
RENSSELAER DRIVE										
Distance to Nearest Cross Street (Feet)	Project In Relation to Cross Street  O North South O East O West									
Tax Map Numbers Section-Block-Parcel	Tax Map Numbers									
42.18-2-24										

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

#### https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.





- 2. What is the nature of this construction project?
  - O New Construction
  - Redevelopment with increase in impervious area
  - O Redevelopment with no increase in impervious area

SELECT ONLY ONE CHOICE FOR EACH	pre and post development conditions.								
Pre-Development Existing Land Use	Post-Development Future Land Use								
O FOREST	O SINGLE FAMILY HOME Number of Lots								
O PASTURE/OPEN LAND	O SINGLE FAMILY SUBDIVISION								
O CULTIVATED LAND	O TOWN HOME RESIDENTIAL								
O SINGLE FAMILY HOME	O MULTIFAMILY RESIDENTIAL								
O SINGLE FAMILY SUBDIVISION	O INSTITUTIONAL/SCHOOL								
O TOWN HOME RESIDENTIAL	O INDUSTRIAL								
O MULTIFAMILY RESIDENTIAL	● COMMERCIAL								
O INSTITUTIONAL/SCHOOL	O MUNICIPAL								
O INDUSTRIAL	O ROAD/HIGHWAY								
● COMMERCIAL	O RECREATIONAL/SPORTS FIELD								
O ROAD/HIGHWAY	OBIKE PATH/TRAIL								
O RECREATIONAL/SPORTS FIELD	O LINEAR UTILITY (water, sewer, gas, etc.)								
O BIKE PATH/TRAIL	O PARKING LOT								
O LINEAR UTILITY	O CLEARING/GRADING ONLY								
O PARKING LOT	O DEMOLITION, NO REDEVELOPMENT								
OOTHER	O WELL DRILLING ACTIVITY * (Oil, Gas, etc.)								
	O OTHER								
*Note: for gas well drilling, non-high volume	e hydraulic fractured wells only								
4. In accordance with the larger common plan enter the total project site area; the tot existing impervious area to be disturbed (activities); and the future impervious are disturbed area. (Round to the nearest tent	al area to be disturbed; for redevelopment a constructed within the h of an acre.)								
Total Site Total Area To Exis	Future Impervious ting Impervious Area Within								
	To Be Disturbed Disturbed Area								
3.1 1.1	0.8 1.2								
5. Do you plan to disturb more than 5 acres o	of soil at any one time? O Yes • No								
6. Indicate the percentage of each Hydrologic									
A B 2	C D 8								
7. Is this a phased project?	O Yes ● No								
8. Enter the planned start and end dates of the disturbance activities.	End Date 0 5 / 2 0 2 4 - 0 8 / 0 8 / 2 0 2 5								

aréa?

	·-···																																	
	dentif ischar		e ne	ar	es <sup>,</sup>	t s	ur	face	e w	at	erl	ood	ly (	ies	)	to	W	hic	ch	cor	nst	ru	ıct	io	n :	si.	te	ru	.no	ff	wi.	ll		
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<u> </u>			<u>,</u>	I		L		<u> </u>		J	1	1		<u>i i</u>	}		<b>.</b>					I	I		<u> </u>	1	L				L	1		
9a.	Туре	of v	vate	rbc	odţ	, ic	der	ntif	ie	d :	in	Qu	est	io	n. !	9?																		
O Wetland / State Jurisdiction On Site (Answer 9b)																																		
O Wetland / State Jurisdiction Off Site																																		
O W	etland	l / F	'edeı	ral	J	uri	sd	ict	ior	1 (	n	Sit	te	(Ar	ısv	ver	. 9	b)																
OW	etland	l / F	'ede1	ral	J	uri	sd	ict	ìor	ı C	ff	S	ite	<u> </u>																				
O S	tream	/ Cr	eek	On	S	ite																												
<b>S</b>	tream	/ Cr	eek	Of	f	Sit	е																											
O R	O River On Site																																	
O R:	O River Off Site 9b. How was the wetland identified?																																	
O L	O Lake On Site O Regulatory Map																																	
O L	O Lake Off Site O Delineated by Consultant																																	
O Other Type On Site O Delineated by Army Corps of Engineers											rs																							
0 01	ther T	уре	Off	Si	te														the							_		-						
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10.	Has t	he s l) se	urfa gmer	ace nt	w in	ate Ap	rb pe	ody ndi	(ie x E	es) E c	í f	n o GP-	-0- que	esti ·20-	Lor -00	n 9 )13	) b	ee	n i	Lde	nt	if	ie	d a	38	a		C	<b>Y</b>	es	•	) No	<b>)</b>	
11.	Is th Appen	is p	roje C oi	ect f G	1 P-	oca 0-2	te 0-	d i: 001	n c	ne	0	f t	∶h∈	· Wa	ite	ers	she	ds	ic	ien	ti	fi	ed	iı	n				<b>Y</b>	es	•	) No	>	
12.	Is th areas water <b>If no</b>	ass s?	ocia	ate	d ·	wit	h	AA a																				C	<b>Y</b>	es	•	) No	<b>)</b>	
13.	Does exist ident <b>If Ye</b>	ing ifie	impe d as	erv.	io n	us E o	co r	ver F o	an 1 t	id he	wh U	ere SD <i>P</i>	e t A S	he oil	Sc S	il ur	. s ve	10	h r pe	no Ph	as	е	is					C	<b>Y</b> (	es	•	) No	•	
14.	Will regul																	i a r		<del></del>			******	·					) <b>v</b> .	a e		NT.		

15. Does the site runoff enter a separate storm sewer								
system (including roadside drains, swales, ditches, etc)?	O No O Unknown							
16. What is the name of the municipality/entity that owns the separate system?	e storm sewer							
V I L L A G E O F N E W H E M P S T E A D								
17. Does any runoff from the site enter a sewer classified O Yes as a Combined Sewer?	No O Unknown							
18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?	○ Yes ● No							
19. Is this property owned by a state authority, state agency, federal government or local government? ○ Yes ● No								
20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup O Yes ● No Agreement, etc.)								
21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?	● Yes ○ No							
22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? If No, skip questions 23 and 27-39.								
23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?	● Yes ○ No							

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:									
● Professional Engineer (P.E.)									
O Soil and Water Conservation District (SWCD)									
O Registered Landscape Architect (R.L.A)									
O Certified Professional in Erosion and Sediment Control (CPESC)									
Owner/Operator									
Other									
SWPPP Preparer									
A T Z L , N A S H E R & Z I G L E R									
Contact Name (Last, Space, First)									
NASHER RYAN									
Mailing Address									
2 3 2 NORTH MAIN STREET									
City									
NEW CITY									
State Zip  N Y 1 0 9 5 6 -									
Phone Fax									
Email									
RNASHER@ANZNY.COM									
	H								
	<u> </u>								

#### SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name		MI
RYAN		A
Last Name		
N A S H E R		
Signature	#MANA In the second of the sec	
& Arman		Date
		04/16/2024
	J	

25.	Has a construction sequence schedu	le for the planned management	_
	practices been prepared?	• Yes	O No

Temporary Structural	<u>Vegetative Measures</u>
O Check Dams	O Brush Matting
O Construction Road Stabilization	O Dune Stabilization
O Dust Control	○ Grassed Waterway
○ Earth Dike	Mulching
O Level Spreader	O Protecting Vegetation
O Perimeter Dike/Swale	O Recreation Area Improvement
O Pipe Slope Drain	Seeding
O Portable Sediment Tank	O Sodding
O Rock Dam	○ Straw/Hay Bale Dike
O Sediment Basin	O Streambank Protection
○ Sediment Traps	O Temporary Swale
● Silt Fence	● Topsoiling
Stabilized Construction Entrance	O Vegetating Waterways
Storm Drain Inlet Protection	Permanent Structural
O Straw/Hay Bale Dike	
O Temporary Access Waterway Crossing	O Debris Basin
O Temporary Stormdrain Diversion	O Diversion
○ Temporary Swale	O Grade Stabilization Structure
O Turbidity Curtain	Land Grading
○ Water bars	O Lined Waterway (Rock)
	O Paved Channel (Concrete)
Biotechnical	O Paved Flume
O Brush Matting	O Retaining Wall
O Wattling	O Riprap Slope Protection
	Rock Outlet Protection

CONCRETE WASHOUT, STOCKPILE	

#### Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required
 if response to Question 22 is No.

- 27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
  - O Preservation of Undisturbed Areas
  - O Preservation of Buffers
  - O Reduction of Clearing and Grading
  - Locating Development in Less Sensitive Areas
  - O Roadway Reduction
  - O Sidewalk Reduction
  - O Driveway Reduction
  - O Cul-de-sac Reduction
  - O Building Footprint Reduction
  - O Parking Reduction
- 27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).
  - All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
  - O Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.
- 28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

#### Total WQv Required

 				1
0.	0	8	3	acre-feet
 	L			,

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

<u>Mote:</u> Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

# Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing		rotal Co	<u>nt</u>	rib	uti	.ng
RR Techniques (Area Reduction)	Area (acres)	Imp	pervious	<u>. A</u>	rea	(ac	res)
○ Conservation of Natural Areas (RR-1)		and/or		].[			
O Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or		].[			-
O Tree Planting/Tree Pit (RR-3)	·	and/or		<b>-</b>  -	$\perp$		_
O Disconnection of Rooftop Runoff (RR-4).		and/or		].[			
RR Techniques (Volume Reduction)				ן ר	<del></del>		1
○ Vegetated Swale (RR-5) ······				- ∙	$\dashv$	_	_
O Rain Garden (RR-6)				<b>-</b>  •	-		_
○ Stormwater Planter (RR-7)				<b> •</b>	$\dashv$		_
○ Rain Barrel/Cistern (RR-8)				إ.إ	$\dashv$	_	_
O Porous Pavement (RR-9)	· · · · · · · · · · · · · · · · · · ·			إ.	$\perp$		_
○ Green Roof (RR-10)				].[			
Standard SMPs with RRv Capacity				ר ר			<del></del> -
○ Infiltration Trench (I-1) ······				┦∙┞	_		_
O Infiltration Basin (I-2) ······				ا•	_		
Opry Well (I-3)				<b>-</b>  -			
● Underground Infiltration System (I-4) .			0	<b>.</b>  ∙	8	3	3
O Bioretention (F-5)	• • • • • • • • • • • • • • • • • • •			<u>.</u>  .			
O Dry Swale (0-1)	• • • • • • • • • • • • • • • • • • • •			].			
Standard SMPs							
				7 [	Т		
O Micropool Extended Detention (P-1)				┪┇	$\neg \dagger$		$\dashv$
O Wet Pond (P-2)				17	$\dashv$		
O Wet Extended Detention (P-3) ·····				┪	-		$\dashv$
O Multiple Pond System (P-4) ·····				- * -	-		_
O Pocket Pond (P-5) · · · · · · · · · · · · · · · · · · ·				┥╏	$\dashv$		_
O Surface Sand Filter (F-1) · · · · · · · · · · · · · · · · · · ·				╌├	$\dashv$	-	_
O Underground Sand Filter (F-2)				<b>- ·</b>	+	_	
O Perimeter Sand Filter (F-3) ·····				┦•┞	$\dashv$		_
Organic Filter (F-4)				<u> </u>			
O Shallow Wetland (W-1)				<b>- • </b>	$\perp$	_	
O Extended Detention Wetland (W-2)	• • • • • • • • • • • • • • • • • • • •			<b>.</b>  .	_		
○ Pond/Wetland System (W-3)					_		
O Pocket Wetland (W-4)				<b> .</b>			
○ Wet Swale (0-2)	,						

# Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

	USED FOR PRETREATMENT ONLY)				
Alte	rnative SMP	Total Contributing Impervious Area(acres)			
∩ <b>н</b>	ydrodynamic				
_					
_	et Vault	•			
	edia Filter	••			
00	ther				
	le the name and manufacturer of the Alternative SMPs (i.e. etary practice(s)) being used for WQv treatment.				
Propr.	Name Name				
	facturer				
	Redevelopment projects which do not use RR techniques, shause questions 28, 29, 33 and 33a to provide SMPs used, to WQV required and total WQV provided for the project.				
30.	Indicate the Total RRv provided by the RR techniques (Area Standard SMPs with RRv capacity identified in question 29	a/Volume Reduction) and			
	Total RRv provided  0 0 8 4 acre-feet				
	Is the Total RRv provided (#30) greater than or equal to total WQv required (#28).  If Yes, go to question 36.  If No, go to question 32.	the ● Yes ○ No			
32.	32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]				
	Minimum RRv Required				
	Is the Total RRv provided (#30) greater than or equal to a Minimum RRv Required (#32)?	Che O Yes O No			
If Yes, go to question 33. Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP. If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.					

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total <u>impervious</u> area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a.	Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.
	WQv Provided acre-feet
Note:	For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)
34.	Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).
35.	Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? O Yes O No

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing

CPv Required		CPv Provided
0.0	acre-feet	0 acre-feet

36a. The need to provide channel protection has been waived because:

O Site discharges directly to tidal waters or a fifth order or larger stream.

If Yes, go to question 36.

criteria.

- Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.
- 37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

#### Total Overbank Flood Control Criteria (Qp)

TO GOT OF CENTRAL PROPERTY OF CONTINUE OF	correctra (Sb)
Pre-Development	Post-development
9.93 cfs	8.80 <sub>CFS</sub>
Total Extreme Flood Control	Criteria (Qf)
Pre-Development	Post-development
1 9.4 1 CFS	1 9 . 3 8 <sub>CFS</sub>

37a.	The need to meet the Qp and Qf criteria has been waived because:  O Site discharges directly to tidal waters
	or a fifth order or larger stream.  O Downstream analysis reveals that the Qp and Qf controls are not required
38.	Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
	If Yes, Identify the entity responsible for the long term Operation and Maintenance
	THE PROPERTY OWNER
39.	Use this space to summarize the specific site limitations and justification for not reducing $100\%$ of WQv required( $\#28$ ). (See question $32a$ ) This space can also be used for other pertinent project information.
···	

### 4285089826

40.	Identify other DEC permits, existing and new, that are required for this project/facility.						
	O Air Pollution Control						
	O Coastal Erosion						
	O Hazardous Waste						
	O Long Island Wells						
	O Mined Land Reclamation						
	O Solid Waste						
	O Navigable Waters Protection / Article 15						
	O Water Quality Certificate						
	O Dam Safety						
	O Water Supply						
	O Freshwater Wetlands/Article 24						
	O Tidal Wetlands						
	O Wild, Scenic and Recreational Rivers						
	O Stream Bed or Bank Protection / Article 15						
	O Endangered or Threatened Species (Incidental Take Permit)						
	O Individual SPDES						
	O SPDES Multi-Sector GP N Y R						
	O Other						
	● None						
41.	Does this project require a US Army Corps of Engineers Wetland Permit?  If Yes, Indicate Size of Impact.						
42.	Is this project subject to the requirements of a regulated, traditional land use control MS4?						
43.	Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?						
44.	If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.						

#### Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name	MI
HILLEL	
Print Last Name	
KAHAN	
Owner/Operator Signature	
	Date



# Department of Environmental Conservation

## NYS Department of Environmental Conservation Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505

# MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

\*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operato	or Information		
1. Owner/Operator Name:	ILLINOIS PROPERTIES 26 LLC		
2. Contact Person:	HILLEL		
3. Street Address:	51 FOREST ROAD, UNIT 316-84		
4. City/State/Zip:	MONROE, N Y 10950		
II. Project Site Information	on		
5. Project/Site Name:	ILLINOIS PROPERTIES 26 LLC		
6. Street Address:	775 NORTH MAIN STREET		
7. City/State/Zip:	NEW HEMPSTEAD		
III. Stormwater Pollution	Prevention Plan (SWPPP) Review and Acceptance Information		
8. SWPPP Reviewed by:	GLENN MCCREEDY, P.E.		
9. Title/Position:	VILLAGE ENGINEER		
10. Date Final SWPPP Rev	iewed and Accepted:		
IV. Regulated MS4 Informa	ation		
11. Name of MS4:	VILLAGE OF NEW HEMPSTEAD		
12. MS4 SPDES Permit Ide	ntification Number: NYR20A 324		
13. Contact Person:	GLENN MCCREEDY, P.E.		
14. Street Address:	19 SQUADRON BOULEVARD, SUITE #4		
15. City/State/Zip:	NEW CITY, NEW YORK 10956		
16. Telephone Number:	(845) 266-6441 x 101		

MS4 SWPPP Acceptance Form - continued
V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name: GLENN MCCREEDY, P.E.
Title/Position: VILLAGE ENGINEER
Signature:
Date:
VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Appendix-F

# **ILLINOIS PROPERTIES 26 LLC**

## VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# APPENDIX-F INFILTRATION TEST CERTIFICATION

BY

# ATZL, NASHER & ZIGLER

ENGINEERS-SURVEYORS-PLANNERS 232 NORTH MAIN STREET NEW CITY, NY 10956

> TEL: (845) 634-4694 FAX: (845) 634-5543 E-MAIL: rnasher@anzny.com



# **ATZL, NASHER & ZIGLER**

**ENGINEERS-SURVEYORS-PLANNERS** 

232 North Main Street, New City, NY 10956 Tel: (845) 634-4694 Fax: (845) 634-5543

Email: rnasher@anzny.com

April 12, 2024

Village of New Hempstead 108 Old Schoolhouse Rd New City, NY 10956

Att.:

Glenn McCreedy, P.E.

Village Engineer

Re:

Illinois Properties 26 LLC (Job #5030)

Village of New Hempstead Rockland County, New York

Dear Mr. McCreedy, P.E.,

A soil infiltration test was performed on March 4, 2024. The infiltration test location map is attached to this report for your reference (Page 6). The infiltration test failed due to the presence of groundwater.

The results are as follows.

#### Test Hole #1

Infiltration test at a depth of 72-inches (6-feet):

Soil Log	Soil Type	
0" to 24"	Top-soil	
24" to 60"	Sandy Loam	

Groundwater was found at 5.0 feet (60-inch) deep at EL. 532.

#### Test Hole #2

Infiltration test at a depth of 60-inches (5-feet):

Soil Log	Soil Type
0" to 20"	Top-soil
20" to 60"	Sandy Loam

Groundwater was found at 5.0 feet (60-inch) deep at EL. 529.

**Note:** An infiltration practice is not acceptable on the site per the infiltration test.

If you have any questions, please feel free to contact me, thank you.

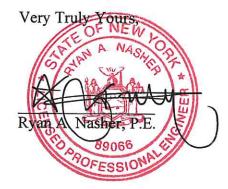




Figure 1: View of the soil profile (TH #1).





Figure 3: View of the soil profile (TH #2).



Figure 4: View of groundwater at 5.0 feet (60-inches) deep (TH #2).

Inf. Test

Sob no. 5030 / 03/04/24

TH#1

0'-24" Top-soil
24"-60" Sondy Loam

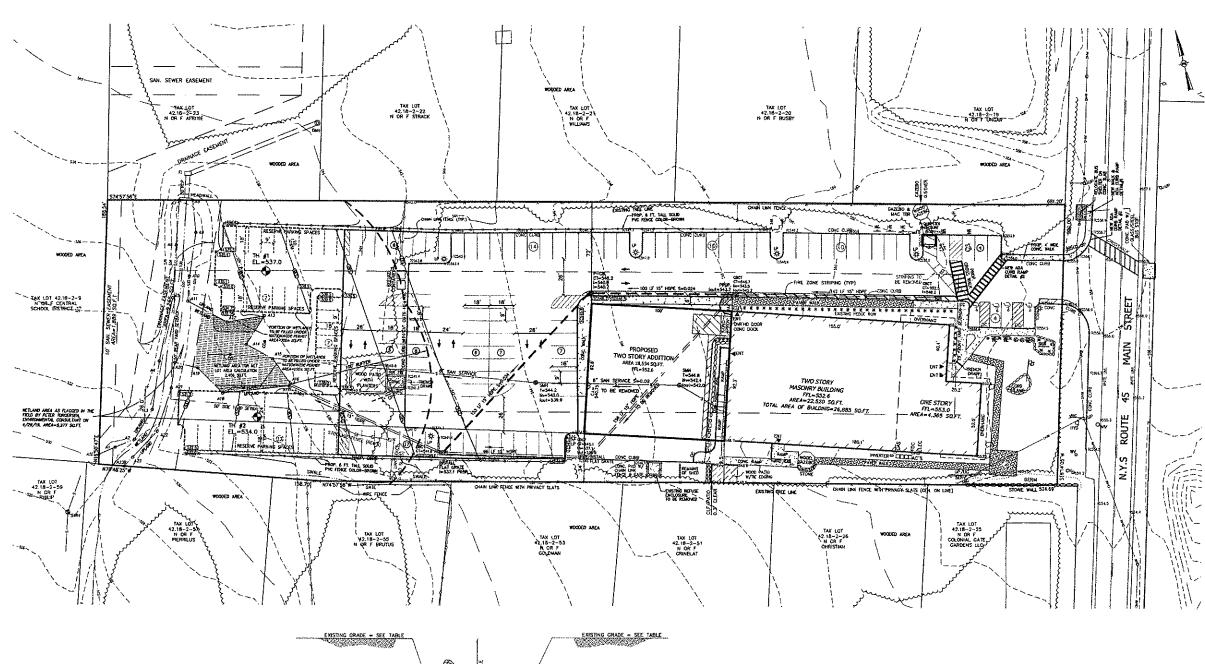
G.W @ 5' deep

TH#2

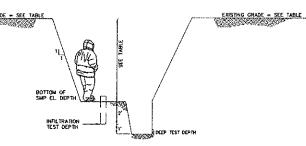
0''-20" Top-soil
20"-60" Sandy Loam

G.W @ 5' deep

Figure 5: Field notes.



- FOR THE SAFETY OF PERSONNEL, SHEETING SHALL BE USED AS REQUIRED IN ANY TRENCH OR EXCAVATION MORE THAN FIVE (5) FEET ABOVE THE PERSONNEL'S FOOTING.



#### TYPICAL INFILTRATION TEST CROSS SECTION

#### INFILTRATION AND DEEP TEST FOR STORMWATER MITIGATION PRACTICE

TEST HOLE	EXISTING GRADE EL.	PROPOSED GRADE EL	INFILTRATION TEST DEPTH	DEEP TEST DEPTH
TH #1	EL = 537.0	EL.=537.0	EL =530.0 (7 DEEP)	£L.=529.0 (6' DEEP)
TH #2	EL-=534.0	EL_=535.0	EL.=530.0 (5' DEEP)	EL.=529.0 (6' DEEP)

#### LEGEND

	EXCENSES 3. CONTONS		PROPOSED 2' CONTOUR
	EXISTING 10" CONTOUR		PROPOSED 10' CONTOUR
	ENSTRIG WATER MAIN		PROPOSED WATER SERVICE
**	EXISTING FIRE HYDRANT	ñ	PROPOSED WATER VALVE
	ERSTANG DAS LINE	3%	PROPOSED FIRE HYDRANT
<b>□</b> æ	ENSTING CATGO BASIN	és	PROPOSED GAS SERVICE
(D) Dalif	ERSTING DRAMAGE HANHOLE	Ä	PROPOSED GAS VALVE
====	EXISTING STORM DRAW LINE	<b>300</b> CB	PROPOSED CATCH BASH
⑤ 33/H	EXCEPTING SEWER MAINCLE		PROPOSED STORM DRAW CINE
	EXISTING SEWER LING	<b>● 50</b> 0	PROPOSED SEWER CLEANOUT
+ 3e0 s	EXISTING SPOT ELEVATION	s	PROPOSED SEWER HOUSE CONNECTION
	EXISTING SIGN	+ CERCO	PROPOSED SPOT ELEVATION
₽⊌	EXISTING LIGHT POLE		PROPOSED WATER SERVICE
مه تاق	EXISTING UTUTY POLE		PROPOSED GAS SERVICE
₩	EXISTING WATER VALVE		PROPOSED UNTURCHOUND GLECTRIC LINE
<b>%</b>	EXISTING GAS VALVE		PROPOSED TOOP DRAW
	EASTING CHARLUNK TENCE		PROPUSZO WATTRINGTO
000000000	EXISTING STONEWALL	⊕н	TEST HOLE LOCATION











ATZL, NASHER & ZIGLER P.C engineers-surveyors-planners 232 North Main Street
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#### **ILLINOIS PROPERTIES 26 LLC**

VILLAGE OF NEW HEMPSTEAD ROCKLAND COUNTY, NEW YORK

#### INFILTRATION AND **DEEP TEST LOCATION**

DRAWN BY: IS	CHECKED BY: RN
DATE: DECEMBER 19, 2023	SCALE: I IN. = 30 FT.
PROJECT NO:	DRAWING NO:
5030	1

Drainage Maps

# **ILLINOIS PROPERTIES 26 LLC**

# VILLAGE OF HEMPSTEAD ROCKLAND COUNTY NEW YORK

# **DRAINAGE MAPS**

BY

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