



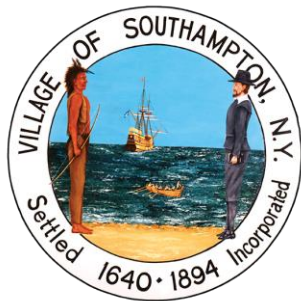
## Village of Southampton

### Town of Southampton Community Preservation Fund 2022

#### Wickapogue Pond Watershed Bioswales

#### ATTACHMENTS

Resolution .....	1
SEQRA Determination and Short Environmental Assessment Form.....	2
Southampton Town WQIPP location map.....	12
Southampton Village Subwatersheds Map .....	13
Consultant Qualifications .....	14
Village of Southampton Water Quality Improvement Program Green Infrastructure Project list/ranking.....	24
Existing Conditions.....	27
Engineer's Cost Estimate .....	28
Plant List .....	29
Pollutant Load Reduction Calculations .....	31
Village of Southampton Water Quality Improvement Program Project Identification Map.....	32
Design Plans .....	33



# Village of Southampton

23 MAIN STREET  
SOUTHAMPTON, NEW YORK 11968-4899

Phone: (631) 283-0247

Fax: (631) 283-4990

Website: [www.southamptonvillage.org](http://www.southamptonvillage.org)

## Resolution

2022-824

4/12/2022

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**Information: RESOLVED**, that the Village of Southampton hereby authorizes the Mayor or his designee to execute any and all documents pertaining to the 2022 Town of Southampton Community Preservation Fund Water Quality Improvement Program application to support estimated project costs associated with the following projects:

1. West Main Street Bioswales - \$246,729
2. Gin Lane Phase 2 Stormwater Mitigation
3. Old Town Pond dredging design/implementation 4,161,597
4. Lake Agawam Algae Harvesting
5. Old Town Pond Watershed Bioswales - \$741,197
6. Wickapogue Watershed Bioswales - \$361,405
7. Phillips Pond Watershed Bioswales - \$282,040

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**Department:** Village Hall

**Category:** Resolutions

**Financial Impact**

**Sponsors:**

**Functions:**

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## Body

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## Voting

Motioned: Jesse Warren

Seconded: Joseph McLoughlin

Y: Jesse Warren, Gina Arresta, Joseph McLoughlin, Robin Brown, Roy Stevenson

N: None

A: None

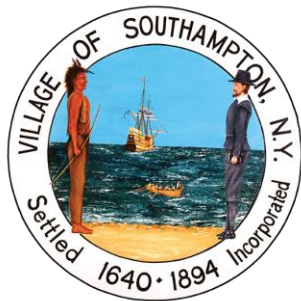
N/A:

Certified By:

Cathy M. Sweeney

Village Clerk

Incorporated Village of Southampton



# Village of Southampton

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Phone: (631) 283-0247

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Website: [www.southamptonvillage.org](http://www.southamptonvillage.org)

## Resolution

**2022-829**

**4/12/2022**

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**WHEREAS, the Village of Southampton is applying for funding to the Town of Southampton 2022 Community Preservation Fund Water Quality Improvement Program for Wickapogue Watershed Bioswales; and**

**WHEREAS, the Village Board has reviewed the provisions of the New York State Environmental Quality Review Act (SEQRA), as related to the proposed action; and**

**WHEREAS, the proposed action is classified as an Unlisted Action; and**

**WHEREAS, the Village Board has conducted a review of the information contained in the SEQRA documentation consisting of a Short Environmental Assessment Form (SEAF) prepared by Nelson, Pope & Voorhis, LLC; and**

**WHEREAS, the potential impacts and the magnitude and importance of potential impacts and benefits have been considered and a Negative Determination was recommended.**

**NOW, THEREFORE, BE IT RESOLVED, the Village Board hereby adopts a Negative Declaration pursuant to the State Environmental Quality Review Act for the Wickapogue Watershed Bioswales water quality improvement project.**

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**Department:** Village Hall

**Category:** Resolutions

**Financial Impact**

**Sponsors:**

**Functions:**

---

## Body

---

## Voting

Motioned: Jesse Warren

Seconded: Gina Arresta

Y: Jesse Warren, Gina Arresta, Joseph McLoughlin, Robin Brown, Roy Stevenson

N: None

A: None

N/A:

Certified By:

Cathy M. Sweeney

Village Clerk

Incorporated Village of Southampton

# Short Environmental Assessment Form

## Part 1 - Project Information

### Instructions for Completing

**Part 1 – Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 – Project and Sponsor Information</b>			
Village of Southampton			
Name of Action or Project: Wickapogue Pond Subwatershed Bioswale Infrastructure Project			
Project Location (describe, and attach a location map): The ROW along Wickapogue Road and Narrow Lane.		SEE ATTACHED	
Brief Description of Proposed Action: Bioswale infrastructure will be installed along the ROW of Wickapogue Road and Narrow Lane to treat stormwater that would otherwise flow directly into catch basin that directs the water into an overland swale to inlet at Wickapogue Pond through existing infrastructure. All technologies will conform to the NYSDEC Stormwater Management Design Manual and, where necessary, will be enhanced to improve pre-treatment and inlet control as well as outlet control. Long Island native plants will be used. The bioswale will be designed to reduce discharges of pollutants from stormwater runoff into Wickapogue Pond.			
Name of Applicant or Sponsor: Village of Southampton		Telephone: 631-283-0247	
		E-Mail: ggoleski@southamptonvillage.org	
Address: 23 Main Street			
City/PO: Southampton		State: NY	Zip Code: 11968
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: No permits. Funding is requested from Town of Southampton CPF		NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		1.85	acres
b. Total acreage to be physically disturbed?		0.30	acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		0.30	acres <span style="border: 1px solid black; padding: 2px;">Village road system</span>
4. Check all land uses that occur on, are adjoining or near the proposed action: <input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify): Institutional <input type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: N/A - project is a bioswale (green infrastructure) installation; no energy will be used other than for construction.	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ N/A - project is a bioswale (green infrastructure) installation; no water supply will be used other than temporary irrigation from a water truck (if needed) during establishment of plantings.	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ N/A - project is a bioswale (green infrastructure) installation; no wastewater will be generated.	NO	YES	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? <span style="border: 1px solid black; padding: 2px;">Wickapogue Road Historic District</span> b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



Project: Wickapogue Watershed Bioswale

Date: 4/12/22

## *Short Environmental Assessment Form Part 2 - Impact Assessment*

**Part 2 is to be completed by the Lead Agency.**

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept “Have my responses been reasonable considering the scale and context of the proposed action?”

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project: Wickapogue Watershed

Date: 4/12/22

### **Short Environmental Assessment Form Part 3 Determination of Significance**

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

Based on the Part 1 and 2 of the Short Environmental Assessment Form, no moderate or large impacts have been identified. The project will create bio-swale infrastructure along the ROW to add temporary detention of stormwater to be treated to reduce discharges of pollutants from the stormwater into the water body.

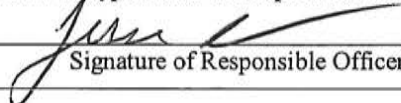
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

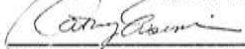
Village of Southampton  
 \_\_\_\_\_  
 Name of Lead Agency

4/12/22  
 \_\_\_\_\_  
 Date

Jesse Warren  
 \_\_\_\_\_  
 Print or Type Name of Responsible Officer in Lead Agency

Mayor  
 \_\_\_\_\_  
 Title of Responsible Officer

  
 \_\_\_\_\_  
 Signature of Responsible Officer in Lead Agency

  
 \_\_\_\_\_  
 Signature of Preparer (if different from Responsible Officer)

**PRINT FORM**





WATERSHED 14C WICKAPOQUE RD  
1.5" W.O.D. (BOTH PERCENTILE STORM)

IMPERVIOUS AREA  
AREA = 6,647 SF  
REQUIRED STORAGE VOL. (AREA X INCHFEET X RUNOFF COEFF.)  
(6,647 SF X 1 FT X .86) = 5,716.47 CF (SAT 651 CF)

PERVIOUS AREA  
AREA = 22,483 SF  
REQUIRED STORAGE VOL. (AREA X INCHFEET X RUNOFF COEFF.)  
(22,483 SF X 1 FT X .3) = 6,744.9 CF (SAT 675 CF)

TOTAL REQUIRED STORAGE = 5641.57 CF

PROPOSED BIOSWALE AREA

BIOSWALE 1  
AREA = 866 SF  
PONDING DEPTH 12"  
TOTAL VOLUME = 866 CF

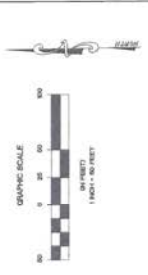
BIOSWALE 2  
AREA = 477 SF  
PONDING DEPTH 12"  
TOTAL VOLUME = 477 CF

TOTAL STORMWATER STORAGE PROVIDED = 13431 CF

WATERSHED 14C ESTIMATED TREATMENT FROM MODELING:  
TK 53 LBSE/FEAR  
TSS 4114 LBSE/FEAR  
FC 105 BILION/FEAR  
RUNOFF 0.4 ACRE-FE/FEAR

1. LOCATION	WICKAPOQUE RD
2. DATE	10/20/2022
3. DRAWN BY	WICKAPOQUE RD RIGHT OF WAY (14C)
4. CHECKED BY	WICKAPOQUE RD
5. DATE	10/20/2022
6. PROJECT	VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK
7. SCALE	1" = 40'
8. SHEET	1 OF 10

**NELSON POPE VOORHIS**  
Landscape Architecture







WATERSHED 16, WICKAPOQUE PARK  
 1.5" VAD (BOTH PERCENTILE STORM)

IMPERVIOUS AREA  
 AREA = 36,841 SF  
 REQUIRED STORAGE VOL. (AREA X INCHFEET X RUNOFF COEFF.)  
 (36,841 SF X .1 FT X .86) = 3,066.42 CF (SAY 3,067 CF)

PERVIOUS AREA  
 AREA = 58,008 SF  
 REQUIRED STORAGE VOL. (AREA X INCHFEET X RUNOFF COEFF.)  
 (58,008 SF X .1 FT X .3) = 1,740.24 CF (SAY 1,740 CF)

TOTAL REQUIRED STORAGE = SAY 5,547 CF

PROPOSED RAIN GARDEN AREA

RAIN GARDEN 1:  
 AREA = 852 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 852 CF

PROPOSED BIOSWALE AREA

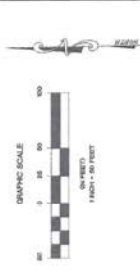
BIOSWALE 1:  
 AREA = 4,917 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 4,917 CF

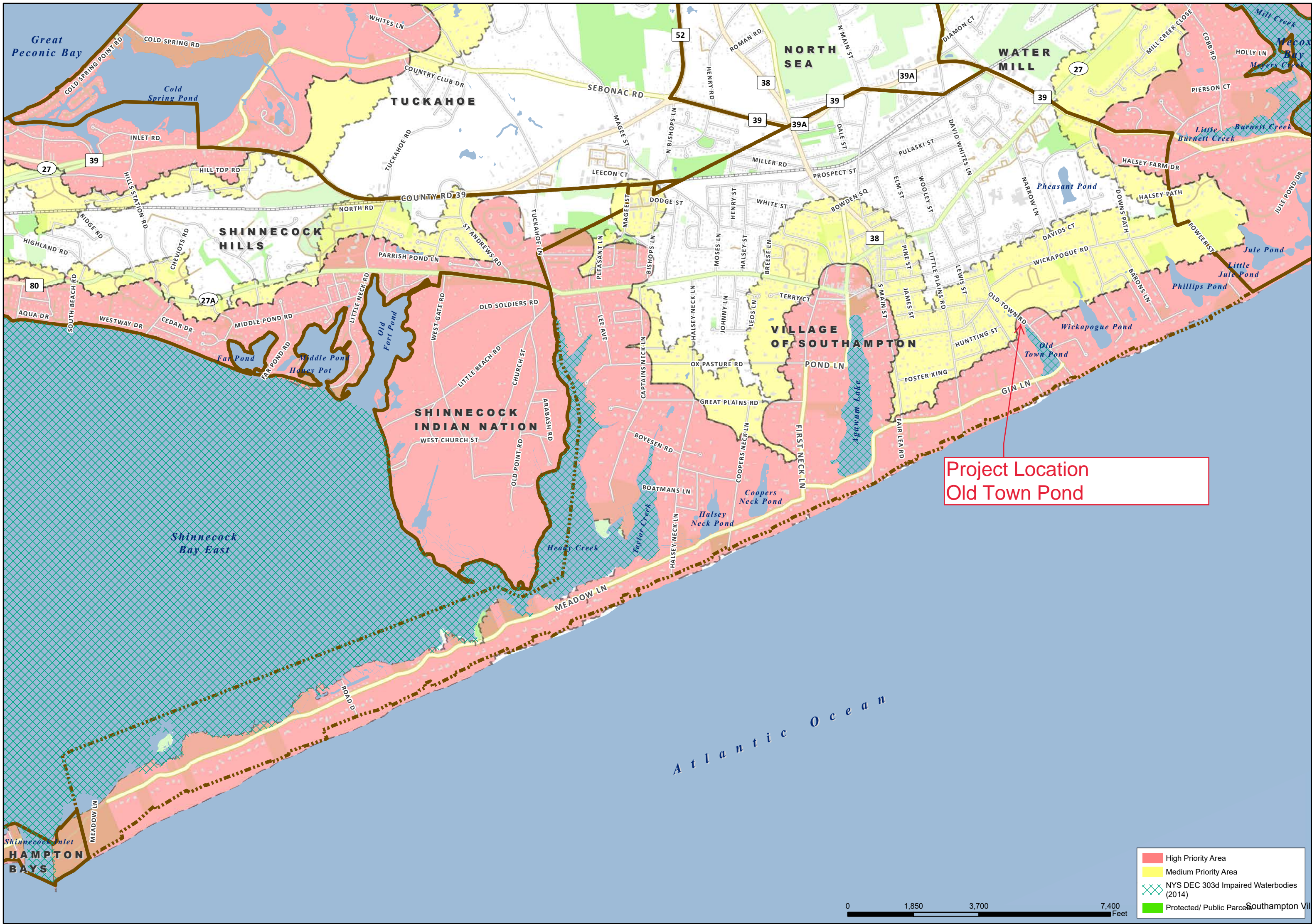
TOTAL STORMWATER STORAGE PROVIDED = 5,989 CF

WATERSHED 16 ESTIMATED TREATMENT FROM MODELING:  
 TP: 2.0 LBS/YEAR  
 TN: 0.0 LBS/YEAR  
 TS: 698 LBS/YEAR  
 PC: 629 LBS/YEAR  
 RUNOFF: 2.5 ACRE-FIT/YEAR

EXISTING DRY STREAM

1. DRAWING NO.	DATE	BY	SCALE
2. DATE	BY	SCALE	
WICKAPOQUE RD RIGHT OF WAY AND WICKAPOQUE PARK (16) WICKAPOQUE RD SOUTHAMPTON VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK			
PROJECT NO. 16-0001 SHEET NO. 1 OF 10		DATE: 10/20/2016 DRAWN BY: JAC CHECKED BY: JAC DATE: 10/20/2016 JOB NO.: 16-0001 FILE NO.: 16-0001 GROUP: 16-0001	
<b>NELSON POPE VOORHIS</b> INCORPORATED • 1948 • 1000 WEST 10TH STREET, SUITE 100, DENVER, CO 80202 TEL: 303.733.8900 FAX: 303.733.8901 WWW.NPV.COM			





Project Location  
Old Town Pond

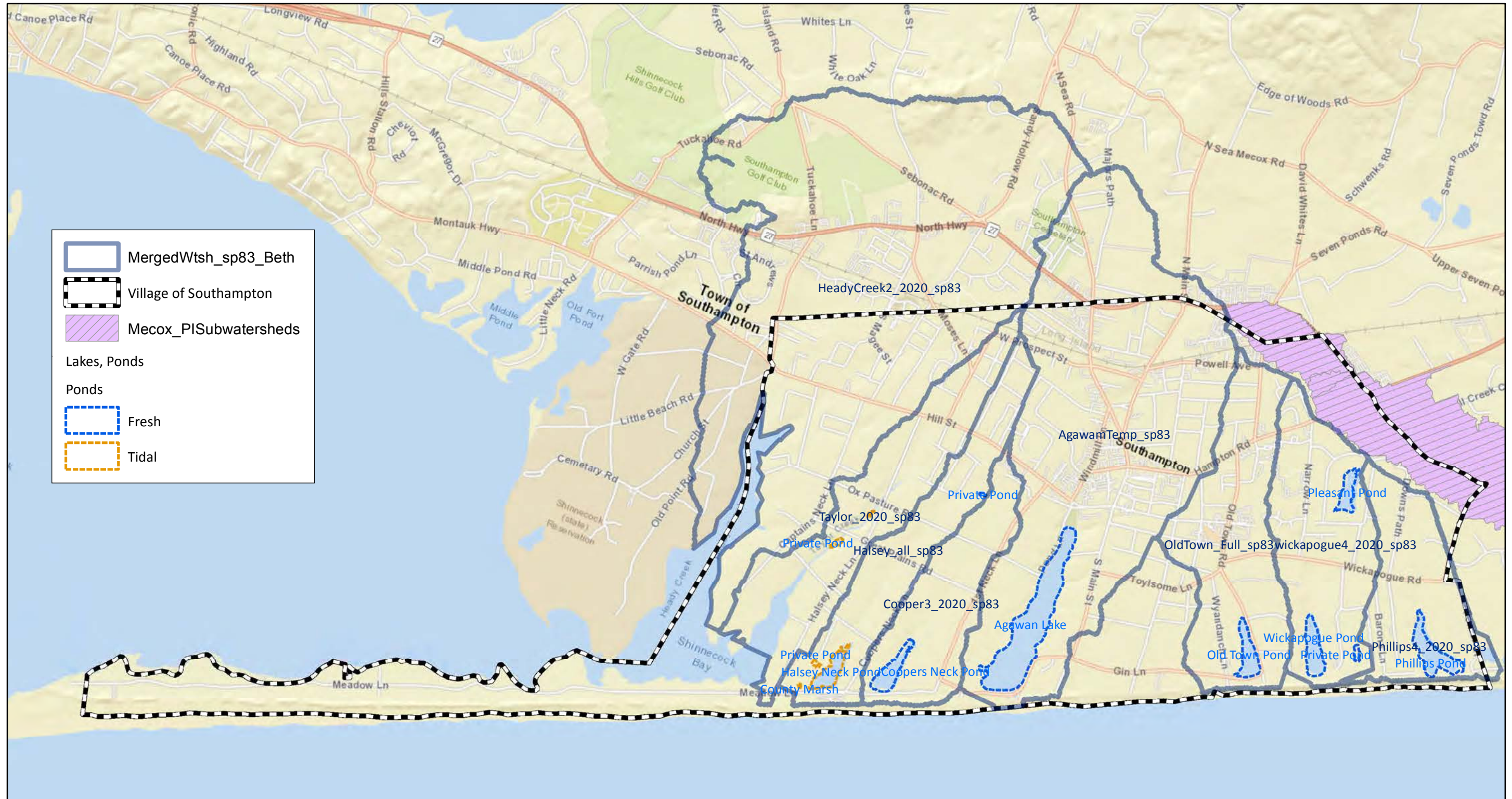
# Town of Southamptton CPF Water Quality Improvement Project Plan

## VILLAGE OF SOUTHAMPTON



Suffolk County Real Property Tax Service  
COPYRIGHT 2016, COUNTY OF SUFFOLK, N.Y.  
This property tax map parcel line work used with permission of  
Suffolk County Real Property Tax Service Agency (R.P.T.S.A.)

Prepared By: The Town of Southamptton Dept of Geographic Information Systems Date: 7/5/2016 - MAP ID: 2514



**FIGURE 16  
SUBWATERSHEDS MAP**

Source: ESRI WMS; Village of Southampton data  
Scale: 1 inch = 2,500 feet



Village of  
Southampton  
  
WQIPP



## Title

Managing Partner of Firm, Nelson, Pope & Voorhis, LLC; Melville, New York

## Education & Training

- SUNY at Stony Brook; Master of Science in Environmental Engineering, concentration in Water Resource Management, 1984
- Princeton Associates; Groundwater Pollution and Hydrology Short Course, Princeton, New Jersey, 1983
- New York State Health Department, Environmental Health Training Course, Hauppauge, New York, 1982
- Southampton College of Long Island University; Bachelor of Science in Environmental Geology, 1977
- OSHA 10-Hour Construction Industry Training
- 

## Professional Affiliations, Certifications & Training

- American Planning Association, Washington, D.C.
- National Association of Environmental Professionals, Alexandria, VA
- Environmental Assessment Association, Scottsdale, Arizona
- American Water Resources Association, Syracuse, New York
- New York Water Pollution Control Association, Riverdale, NY
- Water Pollution Control Federation, Washington, D.C.
- Long Island Seaport & EcoCenter, Inc., Director, Port Jefferson, NY
- Boy Scouts of America, Trained Scoutmaster, Nathaniel Woodhull District,
- Historical Society of Port Jefferson, Trustee, Port Jefferson, NY
- Environmental Conservation Board, Village of Port Jefferson, NY
- Port Jefferson Village, Waterfront Advisory Committee, Port Jefferson, NY
- Town of Brookhaven Mount Sinai Harbor Advisory Committee, Medford, NY
- Brookhaven Conservation Advisory Council, Medford, NY

## Professional Experience

Charles Voorhis is a professional planner (AICP) and a certified environmental professional (CEP) with both private sector and public sector experience. Mr. Voorhis has managed municipal projects including regional and local planning studies, wetlands and shoreline restoration, environmental impact statements, permit compliance and environmental analysis. Charles Voorhis has over 39 years of professional environmental planning experience, including the position of Director of Environmental Protection of the Town of Brookhaven, supervising the environmental implementation of the Town of Brookhaven Comprehensive Plan Update and secured grants under the Local Waterfront Revitalization Program. As a private consultant for over 23 years, Mr. Voorhis has managed environmental planning and analysis of large scale planning and development projects throughout Nassau and Suffolk Counties. Recent projects include a study to eradicate aquatic invasive/nuisance species in upper and lower Canaan Lakes, Yaphank, stormwater management studies on the north and south shores for the Town of Brookhaven and Town of Islip, completion of the Water Supply Management & Watershed Protection Strategy for the Town of Southold, completion of the Suffolk County North Shore Embayments Watershed Management Plan, and completion of the Lake Agawam Comprehensive Management Plan, as well as numerous environmental impact statements, wetland and shoreline feasibility analyses and management plans.

## Project Experience

- Great Cove Watershed Management Plan, 2011
- Town of Southold Comprehensive Plan Update, Economic Chapter, 2010
- Beaver Dam Creek Watershed Management Plan, 2009
- Lake Agawam Comprehensive Management Plan, 2009
- Southold TDR Planning Report and GEIS, 2008
- The Residences at North Hills, DEIS and FEIS, 2005-06
- Town of Southold Comprehensive Implementation Strategy, 2003
- Southampton Agricultural Opportunities Subdivision, DEIS, FEIS and Findings, 2001
- Old Orchard Woods, DEIS and FEIS, 2000
- Town of Smithtown Armory Park, DEIS, 2000
- Town of Southold Water Supply Management & Water Protection Strategy, 2000
- Knightsbridge Gardens, DEIS and FEIS, 1997
- Camelot Village @ Huntington, DEIS, 1997
- Airport International Plaza, DEIS and FEIS, 1996
- Price Club @ New Rochelle, DEIS and FEIS, 1995
- Commack Campus Park @ Commack DEIS and FEIS, 1994
- Water Mill Shops @ Water Mill DEIS, 1993
- Town of Brookhaven Land Use Plan, 1987

## Title

Landscape Ecologist

## Education & Training

- University of MN at Twin Cities, Masters Degree in Landscape Architecture, 2000
- University of MN at Duluth, Bachelor of Science Biology, Art and Chemistry, 1993
- Certified Professional in Erosion and Sediment Control (CPESC)
- Certified Wetland Delineator from University of MN Qualifications.

## Professional Affiliations, Certifications & Training

- MN American Society of Landscape Architects.
- MN Stormwater Assessments and Maintenance with the St. Anthony Falls Research Center.
- Invasive Plant Sub-Committee, Town of Huntington.
- Board Member, Long Island Native Plant Initiative
- LI Horticultural Society.

## Professional Experience

Prior to becoming a Long Island resident, Mr. Schmidt was a Landscape Ecologist with the Washington Conservation District in Minnesota where he designed and built over 100 projects dedicated to improving water quality annually. Prior to the District, Mr. Schmidt conducted EIS, wetland delineations, wetland restoration and alternative storm water designs and, site planning for new and renovated developments and habitat restorations for URS Corporation.

Mr. Schmidt is a wildlife biologist and landscape ecologist with over 20 years of natural resource experience. Mr. Schmidt has expertise in designing and constructing alternative methods for managing storm water runoff in an environmentally conscious way. He has created designs for habitat restorations, raingardens, bio-infiltration swales, bio-retention basins and stormwater ponds for many different sized sites and locations ranging from small backyard raingardens to a large 500-foot long raingarden for a commercial property.

Mr. Schmidt has assisted in the design of raingardens, such as the “10,000 Rain Garden Initiative” in Kansas City, Missouri and the Metro Blooms and Blue Thumb Programs in Minnesota. Mr. Schmidt is a co-author of three books on plant selections for stormwater management applications entitled, “Plants for Stormwater Design” Volumes 1 and 2, and the “Blue Thumb Guide to Raingardens”.

## Project Experience

- Over 1,000 Infiltration and Green Infiltration Systems have been designed and built of various sizes throughout the US.
- Raingarden Projects on public land from design through construction and maintenance for the cities of Burnsville, Maplewood, Bloomington, Plymouth, Arden Hills and Minnetonka MN.
- Commercial infiltration projects for IKEA, Target, USPS, Stillwater Country Club, various religious institutions, colleges and universities.
- Green Initiative Report for the city of Minneapolis, MN, determining where to implement city’s green initiatives, such as green roofs, raingardens, bio-infiltration practices and pervious pavements.
- Cliff Fen Park, Burnsville, MN, designed and implemented a project to improve water quality by restoring a historic wetland using surface water that bypassed the area.
- MAC (Minnesota Airport Commission) Storm Water Pond, Minneapolis, MN. The MSP Airport directed stormwater to a low land area. A restoration plan and a 40 acre stormwater pond facility for treatment was created.
- Sergeant’s Lake Project, Minneapolis, MN created a floodplain forest wetland along the Mississippi River for the MAC.
- Wetland Delineations at multiple locations throughout the Midwest and the State of Virginia.

## Title

Assistant Landscape Ecologist

## Education & Training

- Bachelor of Arts Degree in Architecture and Earth Science (double major), Landscape Studies (minor), University of Pennsylvania, 2017

## Computer Skills

- Proficient in AutoCAD and SketchUp, GIS
- Proficient in Adobe Creative Suite (Illustrator, Photoshop, InDesign, Lightroom)
- Proficient in Autodesk Revit, Rhino, Grasshopper, Rhino VRay,
- Experience in 3D printing (MakerBot and Powder Prints)
- Experience in Laser Cutting

## Language Skills

- Fluent in Spanish

## Professional Experience

Ashley Crespo holds a Bachelor of Arts Degree with a double major in Architecture and Earth Science, and a minor in Landscape Studies and has recently joined NP&V. Ms. Crespo contributes professional planning and graphic expertise for NP&V's sustainable landscape design services. Her skills are used to bring redevelopment concepts to life creating 3D views, photo simulations, and shadow studies. Ms. Crespo integrates the existing environment and proposed landscaping with the built environment through site analysis, model making and preparation of graphic illustrations. Ms. Crespo has created rain garden designs and wetland buffer restorations ranging in size and location from small backyard gardens to a large 700-foot long median. She also designs promotional, educational and environmental signage for raingardens, solar arrays, parks and institutional properties.

Ms. Crespo regularly assists with environmental monitoring visits focusing on habitat composition, delineation and field assessments for a variety of terrestrial and marine habitats across Long Island.

## Relevant Experience

- **Asst. Landscape Ecologist, Nelson, Pope & Voorhis, LLC, Melville NY:**
  - Ecological and Environmental Analysis
    - Southern Pine Beetle Surveys
    - Preparation of ecological sections of EIS documents
  - Wetland Restoration Plan Design and Review:
    - Lake Agawam Restoration Plan
    - The Meadows Restoration Plan
  - Environmental Signage:
    - Ronkonkoma Train Station Rain Garden Signage
    - Manorhaven Park and Preserve
  - Shadow Studies and Visual Assessment:
    - New Rochelle Downtown Overlay Zone
    - Village of Woodsburgh Planning and Zoning Analysis
    - 2016 Arthur Ave CEQR EAS
- **Architectural Intern, N2Design and Architecture (Pt Washington, NY):** Daily tasks included drafting, expediting contract administration responsibilities, and site surveys. Ms. Crespo was also responsible for the set up of all construction drawings for the current projects, as well as the input of all redline changes and revisions.
- **Summer Institute Intern, NYC Parks and Recreation (NYC, NY):** Through the NYC Parks Initiative, she worked with a group of teenagers who were interested in sustainable design. She was responsible for creating and teaching weekly lessons that explored the local landscape and human dynamics through site analysis, model making, graphic presentations and SketchUp tutorials.
- **Soil Biogeochemistry Research Assistant, University of Pennsylvania (Philadelphia, PA):** Assisted with the processing and packaging of soil samples from the Luquillo CZO plot in Puerto Rico to be analyzed by the Carbon-Nitrogen elemental analyzer. In summer, partnered with the US Forest Service to conduct soil pit extractions in the Delaware River Basin.



NELSON & POPE  
ENGINEERS & SURVEYORS

**Russell Z. Scott, P.E.**

**Transportation & Municipal Site Department**

**Education:**

BSCE, Rensselaer  
Polytechnic Institute

**Registration/Certifications:**

Professional Engineer:  
New York

Certified Nuclear  
Moisture/Density  
Equipment Operator

**Years with This Firm:** 17

**Affiliations:**

American Society of Civil  
Engineers (ASCE)

New York State  
Association of  
Transportation Engineers  
(NYSATE)

**Continuing Education**

**Coursework:**

Designing and  
Implementing  
Roundabouts

University of Wisconsin at  
Madison (2007)

Work Zone Safety  
Inspection, National  
Highway Institute (2001)

Techniques for Pavement  
Rehabilitation,  
ASCE/FHWA (2002)

Roadside Design, ASCE  
(2003)

Certificate in Traffic  
Engineering, Polytechnic  
University (2006)

**Professional Profile**

Mr. Scott has 17 years' experience in traffic engineering and civil engineering fields. His responsibilities have included the project management of various traffic signal and roadway projects for the New York State Department of Transportation, Nassau County Department of Public Works, Suffolk County Department of Public Works, private development clients, local Towns and Villages. Tasks have included conceptual layout, alignment computations, drainage design, traffic signal design, grading design and quantity take-off and estimating.

**Experience:**

**Town of Islip**

**Streetscape Improvement Projects, Town of Islip**

Mr. Scott is project manager for this streetscape improvement contracts that encompasses three projects for the downtown revitalization along NY27A in which N&P is to provide Final Design Plans and obtain a New York State Department of Transportation Highway Work Permit.

**Nassau County Department of Public Works**

**Long Island Motor Parkway Mixed-Use Trail**

Project Manager for the Motor Parkway Trail Vision Plan, an initiative to restore and enhance important transportation connections through Nassau County and adapting to new environmentally-friendly and healthy forms of transportation.

**Town of Brookhaven**

**Stony Brook Road Traffic Improvements**

Project Manager overseeing the necessary engineering services for the implementation of traffic improvements along Stony Brook Road, from North Country Road (NYS 25A) to Smithtown Bypass (NYS 347), excluding the area between Development Drive and Oxhead Road, approximately 10,000 feet)

**North County Road Complete Streets Miller Place, NY**

Project Manager for this design and construction inspection services safety improvement project that encompasses a one-mile segment of North Country Road between Honey Lane and Rolling Road, in the hamlet of Miller Place.

**Governor's Office of Storm Recovery Projects (GOSR)**

Project Manager for Master Drainage Study projects awarded to Nelson and Pope under NY Rising Community Reconstruction Program of the Governor's Office of Storm Recovery. They included the following:

- Survey, inventory, and drainage infrastructure upgrade plan for the Bellmore/Merrick and Seaford/Wantagh South of Merrick road outfalls, storm

drains and bulkhead in the Town of Hempstead.

- Development of a comprehensive drainage infrastructure master plan for the Village of Lindenhurst
- Prepare a Hydrologic and Hydraulic (H&H) drainage improvement study and plan to gain a watershed understanding of the hydrology and hydraulics affecting the Village of East Rockaway and the Hamlet of Bay Park in the Town of Hempstead.

### **Roundabout Design**

**Locations: Lower Sheep Pasture Road Intersections, Town of Brookhaven  
NYS Route 9A, Village of Ardsley, Town of Greenburgh**

N&P was retained by the Town of Brookhaven to analyze and develop modern roundabout designs for two STOP controlled intersections on Lower Sheep Pasture Road in Setauket and a major signalized intersection on NYS Route 9A for the Town of Greenburgh's Ridgehill Study/Roadway Improvement Project. Mr. Scott assisted in this project which included capacity analysis utilizing VISSIM software; conceptual design; topographic survey and mapping; community outreach; preliminary and final design; construction inspection & support services and construction survey stakeout.

### **Town of Brookhaven**

#### **Mastic Beach Municipal Parking Lot**

Project Manager for this Town of Brookhaven Department of Housing and Human Services project for the preparation of decorative lighting plans and sidewalk for the parking lot in compliance with Town Code and the Illuminating Engineering Society of North America standards. Plans included the electrical distribution system and connection to LIPA's system for service. N&P also prepared landscaping plans for trees, shrubs, and grass at the perimeter of the parking lot and at interior islands and provided construction phase services.

#### **Town of Brookhaven Aquatic Center Parking Lot, Mastic Beach**

Project Manager for this Town of Brookhaven Department of Housing and Human Services project which includes the construction of a new parking lot. Project components include survey and mapping; construction plans, bid specifications; bid review and award assistance and construction inspection.

#### **Multi-Use Court at Town of Brookhaven Aquatic Center, Mastic Beach**

Project Manager for this Town of Brookhaven Department of Housing and Human Services project for a multi-purpose court. Project components include topographic surveying and mapping; construction plans; bid review and award assistance and construction inspection.

#### **Municipal Parking Lot on Broadway, Rocky Point**

Project Manager for this Town of Brookhaven Department of Housing and Human Services project which includes soil borings; survey and mapping; detailed design and construction plans; bid specifications and assistance with award; grant application and construction inspection.

**Traffic Signal/Pedestrian Improvements at Neighborhood Road @ Mastic Road and Bayview Drive @ Cranberry Drive, Mastic Beach**

Project Manager for this Town of Brookhaven Department of Housing and Human Services project which includes survey and mapping; traffic signal plans; intersection improvement plans; pavement marking & signing plans; cost estimates; bid specifications; bid review and award assistance.

**Shore Road Stormwater Infrastructure Improvements, Mt. Sinai**

Project Manager for this NYSDOT grant funded project to progress stormwater infrastructure improvements along Shore Road between Mt. Sinai-Coram Road and Rocky Hill Road in Mt. Sinai. The project area is adversely impacted by stormwater runoff and by erosion of Shore Road where it borders Mt. Sinai Harbor. The goal of the project is to provide working solutions through green infrastructure stormwater management practices and shoreline stabilization using a combination of structural and natural techniques in order to establish a more appropriate and functional interface between the natural resources of Mt. Sinai Harbor and the transportation linkage provided by Shore Road. The overall project is expected to have significant benefits in reducing pollutant load to Mt. Sinai Harbor, and will improve aesthetics and function of the existing road infrastructure.

**Energy Efficient Street Lighting Study – Town of Brookhaven**

Project Manager for the study of potential energy efficient street lighting alternatives to the existing high pressure sodium (HPS) and low pressure sodium (LPS) street light fixtures being used throughout the Town. The objective of the study was to compare the life-cycle cost over a 20-year period for each type of technology versus the current. The life cycle cost included the initial capital cost, as well as applicable yearly energy and maintenance costs.

**Amagansett Drive Storm Drainage**

Design Engineer for this project which involved studying and improving the storm drainage facilities in the vicinity of Amagansett Drive in the Sound Beach area. The study consisted of defining tributary areas and different alternatives for water quality treatment of stormwater runoff. This project also included the design of water quality drainage devices, slope stabilization of an existing washed out bluff, and outfall protection, preparation of construction documents, procuring NYSDEC permits, and assisting the Town of Brookhaven during the bid phase.

**West Meadow Creek Stormwater Management for Various Roadways**

Design Engineer on this project which involved stormwater mitigation improvements for a tributary area of approximately 24 acres in the Old Stony Brook area. This

project entailed the design and preparation of mitigation plans which included water quality drainage design, roadway demolition and restoration, erosion control plans and details, procurement of NYSDEC permits, and assisting the Town of Brookhaven during the bid phase.

### **Town of Islip**

#### **Connetquot Stormwater Project**

Project Manager for this Town of Islip project for design of stormwater and road improvements on Middlesex Avenue between Shore Avenue and east to the street end at Grand Canal in Oakdale. The streets in this area experience flooding during significant rainfall events making it difficult for residents to access their properties. N&P identified and developed alternatives to address the storm water quantity/quality issues. Project components included survey and mapping; test holes; drainage investigation; environmental permitting; preparation of conceptual plans; detailed design & construction plans; bid specifications and bid award assistance.

### **Suffolk County**

#### **Improvements at the Intersections of CR 51 @ CR 94 and CR 63 @ CR 104/NYS 24, Riverhead, Suffolk County**

Mr. Scott provided engineering assistance for the initial three concepts on this Suffolk County Department of Public Works intersection improvement project which entails the reconfiguration of the existing traffic circle into a modern roundabout along with other related traffic improvements. He is now serving as the Project Manager to develop additional concept, perform additional analysis and will progress the preliminary and final design. The project will entail analyzing traffic counts and data, creating and applying growth factors to the traffic data and, using VISSIM software, determining the lane configurations needed to achieve an acceptable level of service for a modern roundabout in an effort to address traffic congestion and safety concerns in the downtown Riverhead area.

### **Town of Oyster Bay**

#### **Syosset Streetscape & Walkability Improvement Project**

Nelson & Pope has been retained by the Town of Oyster Bay for a project to improve pedestrian walkability, accessibility and safety in the heavily congested downtown Syosset commercial area. Mr. Scott served as the Project Manager for this TEP project which included the preparation of the Design Approval Document, design of new pedestrian crosswalks and upgrade of existing pedestrian crossings; installation of decorative pavers at pedestrian crossings; creation of pedestrian safe havens; installation of decorative lighting; creation of green spaces through the planting of street trees and planters; replacement of large areas of concrete sidewalk with

decorative paving stones and the installation of benches, trash receptacles & directional signage.

#### **Massapequa Park Drainage, Massapequa**

Mr. Scott was a project engineer involved in the study and design of drainage improvements for Park Avenue located in the Village of Massapequa. A range of alternatives was developed in an effort to reduce the volume of runoff diverted to the Village street network at Park Lane/ Pennsylvania Avenue. The project also consisted of the design and preparation of the roadway improvement plans which included roadway plan and profile sheets, along with the preparation of detailed construction quantity takeoff and construction bid documents.

#### **Colony Lane Area Roadway Improvements, Syosset**

This project entailed the study of existing storm drainage systems, topographic survey of existing conditions and a comprehensive design report for approximately eight miles of Town owned roadways in Syosset along with three Nassau County owned recharge basins. Mr. Scott's tasks include organizing and coordinating the field personnel in collection of storm drainage system as-built information, creating a drainage study plan, developing a preliminary design for drainage improvements, analysis of existing recharge basins, preparation of a comprehensive design report including description of typical existing roadway features and conditions and identification of non-standard or deficient design elements. Also included in the report are alternative solutions and recommendations to address deficiencies in the existing drainage system and roadway construction.

#### **Town of Hempstead**

##### **Coes Neck Park, Baldwin**

Mr. Scott was Project Manager for this project which entailed the preparation of contract drawings, bid documents and engineering cost estimate for Coes Neck Park. Project components included sports field layouts (handball, tennis, basketball), electrical service analysis and upgrades, surveying and mapping, lighting and other miscellaneous site improvements.

##### **Bedford Avenue Area Drainage and Roadway Improvements, Hempstead**

The project entailed the study and analysis of the existing drainage system within a mile of a residential neighborhood in conjunction with the development of a project design report and preparation of contract documents and specifications. Mr. Scott's responsibilities included analyzing the existing drainage system to determine the need for modifications, generating new roadway profiles to improve storm drainage flow and determining the amount of restoration necessary outside the roadway section.

##### **Bay Drive Area Drainage and Roadway Improvements, Hempstead**

This project entailed the study and analysis of the existing drainage system within a residential neighborhood in conjunction with the development of a project design report that described existing conditions such as geometry, pavement condition, traffic control devices, etc. Mr. Scott's tasks included analyzing the existing drainage system to ascertain any necessary modifications, generating new roadway profiles to improve storm drainage flow, developing an improved centerline profile, preparing construction plans, contract documents and specifications.

### **Town of Islip**

#### **Connetquot Stormwater Project**

Mr. Scott was Project Manager for this Town of Islip project to implement storm water and road improvements on Middlesex Avenue between Shore Avenue and east to the street end at Grand Canal in Oakdale. The streets in this area experience flooding during significant rainfall events making it difficult for residents to access their properties. N&P identified and developed alternatives to address the storm water quantity/quality issues. Project components included survey and mapping; test holes; drainage investigation; environmental permitting; preparation of conceptual plans; detailed design & construction plans; bid specifications and bid award assistance.

### **Nassau County**

#### **Meadow Lane/Marbridge Road Flooding Mitigation**

Mr. Scott was Project Manager for this Nassau County Department of Public Works project which entailed performing a detailed investigation and report for recommendations to mitigate significant flooding conditions on Meadow Lane in the vicinity of Marbridge Road in Lawrence which occurred during storm events. The Meadow Lane/Marbridge Road/Causeway Road drainage area is located in the Incorporated Village of Lawrence in the vicinity of the Lawrence Golf Club and Bannister Creek, which discharges into Reynolds Channel near the Atlantic Beach Bridge. N&P inventoried the existing drainage system within the project limits and identified potential drainage issues, and subsequently developed and evaluated feasible corrective alternatives including related costs and implementation requirements and constraints.

### **New York State Department of Transportation**

#### **Various Roadway Improvement Plans for NYSDOT, Nassau and Suffolk Counties**

Mr. Scott's responsibilities included various design tasks including typical sections, MPT details, pavement widening, traffic signal plans, grading, pavement markings and drainage. He was also responsible for the preparation of plans in AutoCAD.

**Various SCDPW, NCDPW and Town Roadway Improvement Permit Plans, Nassau and Suffolk Counties**

Mr. Scott was involved with the preparation and design of traffic signal and traffic signal modification plans for private developers and municipalities in Suffolk County.

**Traffic Signal Projects, Various Locations  
( NYSDOT, Nassau County, Suffolk County, Town of Brookhaven)**

These projects include the design of traffic signals from modifications to existing traffic signals to completely new traffic signals throughout Long Island. Mr. Scott's tasks include developing construction plans illustrating the proposed improvements with appropriate State, County or Town item numbers and details, including the location of traffic signal poles, pedestrian signal poles, pullboxes, detector loops, proper signal head placement, sizing of steel conduit, wiring diagrams, spacing diagrams, sequence diagrams. Traffic signal as-builts were prepared once the construction of the traffic signal was complete.

## Village of Southampton - Watershed Projects

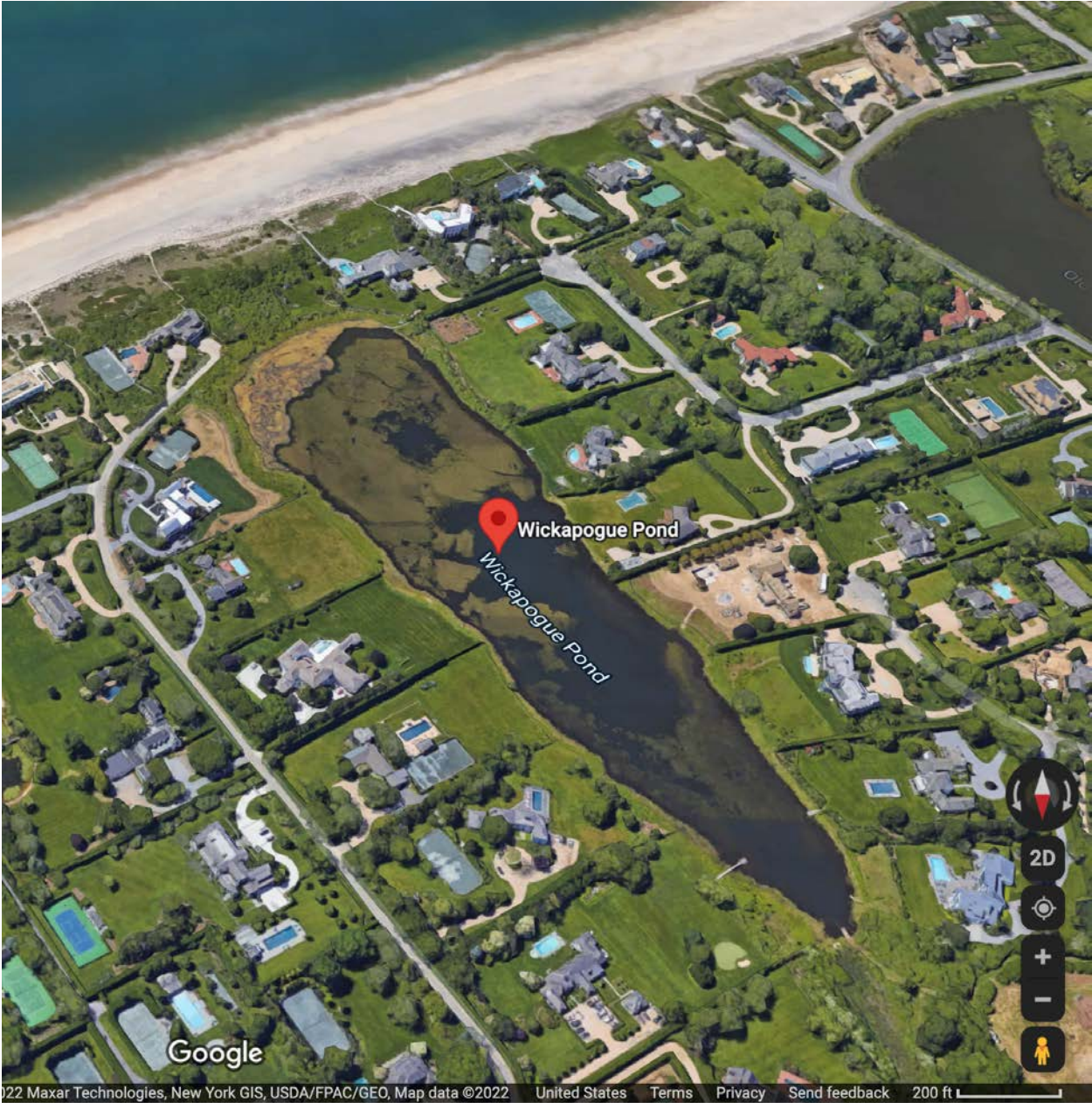
Project #	Location	Ownership	BMP Type	Impervious Treatment Area (SF)	Size Required 1.2" Rain (CF)	Size Required 1.5" Rain (CF)	Size of Practice (SF)	Volume Captured (CF)	TP (lbs/yr.)	TN (lbs/yr.)	TSS (lbs/yr.)	Bacteria (billion/yr.)	Runoff (acre-feet/yr.)	Unit Price	Estimated Cost *	Cost/lb. of Nitrogen	Draft Rank - Cost/lb N	Draft Rank - Nitrogen Reduction
SV-01A	Parking Lot - West Main Street	Village	Bioswale, Tree Trench & Drywells	183,857	18,020	22,522	10,760	10,760	7.0	67.0	4,034	2,845	12.0		\$1,233,645	\$18,412.61	51	1
SV-02A	Open space along Nugent St.	Village	Stormwater to surface in Bioswale	38,580	4,355	4,726	4,500	4,500	2.0	16.3	4,864	615	2.5	\$50.00	\$225,000	\$13,803.68	47	6
SV-02B	Open space along Windmill Lane	Village	Stormwater to surface in Bioswale	52,193	5,845	6,394	5,930	5,930	2.7	22.2	5,792	838	3.4	\$50.00	\$296,500	\$13,355.86	46	4
SV-03A	Corner of North Main Street and N. Sea Road	ROW of Village	ROW Raingarden	20,572	2,370	2,520	2,510	2,510	1.0	8.7	4,443	328	1.7	\$35.00	\$87,850	\$10,097.70	37	11
SV-04A	Vacant lot along North Sea Road	Private - for sale	Tree Trench and Bioswale	11,272	1,015	1,380	1,455	1,455	0.6	4.6	4,217	175	0.7	\$50.00	\$72,750	\$15,815.22	50	22
SV-04B	Vacant lot along Windmill Lane	Private - for sale	Raingarden	10,354	1,105	1,268	1,055	1,055	0.5	4.4	4,206	168	0.7	\$25.00	\$26,375	\$5,994.32	7	23
SV-05A	ROW along Old Town Rd	ROW of Village	ROW Raingarden	5,363	1,200	1,505	1,235	1,235	0.3	2.5	102	109	0.4	\$25.00	\$30,875	\$12,350.00	44	32
SV-05B	ROW along Old Town Rd	ROW of Village	ROW Raingarden	7,996	890	979	890	890	0.4	3.3	4,145	126	0.5	\$25.00	\$22,250	\$6,742.42	12	27
SV-05C	ROW along Old Town Crossing	ROW of Village	ROW BioSwale	12,299	1,945	2,432	2,589	2,589	0.7	5.8	4,032	254	0.9	\$35.00	\$90,615	\$15,623.28	48	18
SV-06A	ROW at corner of Old Town Rd and Wickapogue Rd	ROW of Village	ROW Raingarden	10,468	1,090	1,282	1,100	1,100	0.5	4.4	4,206	168	0.7	\$25.00	\$27,500	\$6,250.00	10	23
SV-06B	ROW at corner of Old Town Rd and Wickapogue Rd	ROW of Village	ROW Raingardens	16,780	1,915	2,055	1,975	1,975	0.9	7.2	4,360	272	1.1	\$25.00	\$49,375	\$6,857.64	13	15
SV-06C	ROW at corner of Old Town Rd and Herrick Road	ROW of Village	ROW Raingarden	11,239	1,735	2,169	1,750	1,750	0.7	5.2	4,268	227	0.8	\$35.00	\$61,250	\$11,778.85	41	19
SV-06D	ROW at corner of Old Town Rd and Herrick Road	ROW of Village	ROW Raingarden	28,651	3,650	4,557	2,515	2,515	2.2	22.2	4,820	863	3.3	\$35.00	\$88,025	\$3,965.09	1	4
SV-06E	ROW at corner of Old Town Rd and Meeting House Ln	ROW of Village	ROW Raingarden	53,540	3,650	8,950	5,380	5,380	4.7	44.0	5,645	1,797	7.3	\$35.00	\$188,300	\$4,279.55	2	2
SV-07A	ROW along Wickapogue Rd	ROW of Village	ROW Raingarden	3,059	440	551	470	470	0.3	1.9	4,043	69	0.3	\$25.00	\$11,750	\$6,184.21	9	35
SV-07B	ROW along Wickapogue Rd	ROW of Village	ROW Raingarden	3,238	1,100	1,370	1,105	1,105	1.2	5.1	4,096	168	0.7	\$25.00	\$27,625	\$5,416.67	4	20
SV-07C	ROW along Wickapogue Rd	ROW of Village	ROW Raingarden	7,777	1,120	1,401	1,105	1,105	0.9	5.0	4,174	179	0.7	\$25.00	\$27,625	\$5,525.00	5	21

SV-07D	ROW along Wickapogue Rd	ROW of Village	ROW Raingarden	6,900	1,920	2,402	1,945	1,945	2.0	9.0	4,226	300	1.2	\$25.00	\$48,625	\$5,402.78	3	10
SV-08A	ROW along Coopers Farm Road	ROW of Village	ROW Raingardens	5,313	1,815	2,267	1,911	1,911	2.0	8.5	4,189	280	1.1	\$25.00	\$47,775	\$5,620.59	6	12
SV-08B	ROW along Coopers Farm Road	ROW of Village	ROW Raingarden	4,958	485	607	525	525	0.2	2.0	4,073	77	0.3	\$25.00	\$13,125	\$6,562.50	11	34
SV-08C	ROW along Coopers Farm Road	ROW of Village	ROW Raingardens	6,158	605	754	630	630	0.3	2.6	4,104	98	0.4	\$25.00	\$15,750	\$6,057.69	8	31
SV-09A	Boatsman Lane	Roadend of Village	ROW Raingarden and Roadend	27,026	5,470	6,835	5,925	5,925	5.1	24.9	4,826	860	3.5	\$40.00	\$237,000	\$9,518.07	29	3
SV-10A	Town Hall	Village?	Landscape Raingardens	16,997	1,775	2,082	2,180	2,180	0.9	7.2	4,360	272	1.1	\$40.00	\$87,200	\$12,111.11	43	15
SV-11A	Bo Roobinson Property	Village?	Landscape Raingardens	14,261	1,870	2,338	1,870	1,870	1.4	8.3	4,328	297	7.2	\$35.00	\$65,450	\$7,885.54	15	13
SV-12A	Sanford Place	Village?	Landscape Raingardens	12,215	1,250	1,562	1,570	1,570	0.6	5.2	4,247	196	0.8	\$35.00	\$54,950	\$10,567.31	39	19
SV-12B	Sanford Place	ROW of Village	ROW Raingarden	5,040	770	961	780	780	0.2	2.0	4,073	77	0.3	\$25.00	\$19,500	\$9,750.00	34	34
SV-12C	Sanford Place	ROW of Village	ROW Raingarden	4,907	480	601	570	570	0.2	2.0	4,073	77	0.3	\$25.00	\$14,250	\$7,125.00	14	34
SV-13A	Downs Family Rec. Area	Village	Landscape Raingardens	17,810	1,745	2,181	1,940	1,940	0.9	7.4	4,371	419	1.7	\$35.00	\$67,900	\$9,175.68	25	14
SV-13B	Downs Family Rec. Area	Village	Landscape Raingardens	26,142	2,560	3,202	2,605	2,605	1.3	11.1	4,576	419	1.7	\$40.00	\$104,200	\$9,387.39	27	7
SV-14A	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	7,690	1,490	1,862	1,500	1,500	0.4	3.3	4,145	126	0.5	\$25.00	\$37,500	\$11,363.64	40	27
SV-14B	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	5,123	861	1,076	866	866	0.3	2.2	4,083	84	0.3	\$25.00	\$21,650	\$9,840.91	35	33
SV-14C	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	6,647	1,328	1,657	1,343	1,343	0.3	2.8	4,114	105	0.4	\$25.00	\$33,575	\$11,991.07	42	30
SV-15	ROW along Narrow Lane	ROW of Village	ROW Raingarden	22,285	3,802	4,752	3,864	3,864	1.1	9.4	4,484	356	1.4	\$25.00	\$96,600	\$10,276.60	38	9
SV-16	Wickapogue Park	ROW of Village	ROW Raingarden and Bioswale	38,841	5,547	6,933	5,569	5,569	2.0	16.6	4,884	629	2.5	\$25.00	\$139,225	\$8,387.05	21	5
SV-17A	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	7,534	1,114	1,430	1,160	1,160	0.4	3.1	4,135	119	0.5	\$25.00	\$29,000	\$9,354.84	26	28
SV-17B	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	8,156	1,332	1,665	1,363	1,363	0.4	3.5	4,155	133	0.5	\$25.00	\$34,075	\$9,735.71	31	26
SV-17C	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	14,478	1,987	2,484	1,988	1,988	0.7	6.1	4,299	230	0.9	\$25.00	\$49,700	\$8,147.54	17	16
SV-17D	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	13,819	2,193	2,742	2,220	2,220	0.7	5.9	4,289	223	0.9	\$25.00	\$55,500	\$9,406.78	28	17
SV-17E	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	8,045	1,322	1,652	1,325	1,325	0.4	3.3	4,145	126	0.5	\$25.00	\$33,125	\$10,037.88	36	27
SV-17F	ROW along Wickapogue Road	ROW of Village	ROW Raingarden	7,799	1,554	1,942	2,200	2,200	0.4	3.5	4,155	133	0.5	\$25.00	\$55,000	\$15,714.29	49	26
SV-18	ROW along Halsey Street	ROW of Village	ROW Raingarden	8,381	1,266	1,582	1,276	1,276	0.4	3.5	4,155	133	0.5	\$25.00	\$31,900	\$9,114.29	24	26

SV-19A	ROW along Breese Lane	ROW of Village	ROW Raingarden	4,673	647	808	650	650	0.2	2.0	4,073	77	0.3	\$25.00	\$16,250	\$8,125.00	16	34
SV-19B	ROW along Breese Lane	ROW of Village	ROW Raingarden	9,767	1,352	1,692	1,354	1,354	0.5	4.1	4,186	154	0.6	\$25.00	\$33,850	\$8,256.10	18	24
SV-19C	ROW along Edwards Lane	ROW of Village	ROW Raingarden	23,630	3,883	4,853	3,895	3,895	1.2	10.0	4,514	377	1.5	\$25.00	\$97,375	\$9,737.50	32	8
SV-20	ROW along Breese Lane	ROW of Village	ROW Raingarden	6,992	1,139	1,424	1,143	1,143	0.4	3.0	4,124	112	0.5	\$25.00	\$28,575	\$9,525.00	30	29
SV-21	ROW along Armande Street	ROW of Village	ROW Raingarden	9,288	1,518	1,897	1,520	1,520	0.5	3.9	4,176	147	0.6	\$25.00	\$38,000	\$9,743.59	33	25
SV-22	ROW along Cooper Street	ROW of Village	ROW Raingarden	8,252	1,140	1,425	1,158	1,158	0.4	3.5	4,155	133	0.5	\$25.00	\$28,950	\$8,271.43	20	26
SV-23	ROW along Cooper Street	ROW of Village	ROW Raingarden	4,785	696	869	700	700	0.2	2.0	4,073	77	0.3	\$25.00	\$17,500	\$8,750.00	23	34
SV-24A	ROW along Howell Street	ROW of Village	ROW Raingarden	1,716	348	435	350	350	0.1	0.7	4,000	28	0.1	\$25.00	\$8,750	\$12,500.00	45	37
SV-24B	ROW along Howell Street	ROW of Village	ROW Raingarden	3,034	425	531	430	430	0.2	1.3	4,032	49	0.2	\$25.00	\$10,750	\$8,269.23	19	36
SV-24C	ROW along Howell Street	ROW of Village	ROW Raingarden	1,368	206	257	207	207	0.1	0.6	3,991	21	0.1	\$25.00	\$5,175	\$8,625.00	22	38

Note: \* The cost figures are for preliminary budgetary purposes only. Costs may be more or less depending on the bidding process and local factors. Costs may be reduced through use of in-kind services, if available.

Village of Southampton  
Wickapogue Pond  
Existing Conditions



# PRELIMINARY ENGINEERS ESTIMATE - APRIL 2022

## GREEN INFRASTRUCTURE PROJECTS WICKAPOGUE POND WATERSHED BIOSWALES SOUTHAMPTON, NEW YORK



ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ROUND	QTY	UNIT PRICE	AMOUNT
1	Unclassified Excavation	CY	608.00	1.10	670	\$60.00	\$40,200.00
2	Asphalt Concrete Sawcut	LF	700	1.10	770	\$3.00	\$2,310.00
2A	Asphalt Patch	SF	150	1.10	170	\$20.00	\$3,400.00
3	Silt Protection for Surface Inlet	EA	2.00	1.00	2	\$250.00	\$500.00
4	Topsoil (Roadside)	CY	5.00	1.10	10	\$65.00	\$650.00
5	Turf Establishment (Roadside)	SY	77.00	1.10	80	\$5.00	\$400.00
6	Turf Establishment (Bioswale)	SY	665.00	1.10	730	\$5.00	\$3,650.00
7	Planting	EA	804.00	1.00	800	\$35.00	\$28,000.00
8	Shrub	EA	268.00	1.00	270	\$70.00	\$18,900.00
9	Sand Compost Mix	CY	122.00	1.10	130	\$35.00	\$4,550.00
10	Mulch	CY	122.00	1.00	120	\$35.00	\$4,200.00
11	Rain Guardian	EA	10.00	1.00	10	\$5,000.00	\$50,000.00
11A	Concrete Swale for Rain Guardian	SF	200.00	1.10	220	\$25.00	\$5,500.00
12	Tree Planting	EA	10.00	1.00	10	\$600.00	\$6,000.00
13	Furnish and Install Sign	EA	2.00	1.00	3	\$1,200.00	\$3,600.00
14	Survey Operations	LS	1.00	1.00	1	\$4,000.00	\$4,000.00
15	Work Zone Traffic Control	LS	1.00	1.00	1	\$6,000.00	\$6,000.00
16	Mobilization	LS	1.00	1.00	1	\$4,000.00	\$4,000.00
<b>Subtotal</b>							<b>\$185,860.00</b>
<b>Contingency 15%</b>							<b>\$27,879.00</b>
<b>SUBTOTAL ALTERNATIVE 1</b>							<b>\$213,739.00</b>

Engineer and Design Fee

10% \$21,373.90

**\$25,000**

## Southampton Village Bioswales/Rain Gardens List of Native Plants

Long Island Native Plants will be used. The following list provides examples of species that will be selected for each bio-infiltration area.

### Trees

Serviceberry	<i>Amelanchier laevis</i>
River Birch	<i>Betula negra</i>
Hawthorn	<i>Crataegus sp.</i>
Sweetbay Magnolia	<i>Magnolia virginiana</i>

### Shrubs

Red Chokeberry	<i>Aronia arbutifolia</i>
Black Chokeberry	<i>Aronia melanocarpa</i>
Buttonbush	<i>Cephalanthus occidentalis</i>
Sweet Pepperbush	<i>Clethra alnifolia</i>
Sweet Fern	<i>Comptonia peregrina</i>
Red Osier Dogwood	<i>Cornus sericea</i>
Marsh Mallow	<i>Hibiscus moscheutos</i>
Inkberry	<i>Ilex glabra</i>
Winterberry	<i>Ilex verticillata</i>
Northern Bayberry	<i>Myrica pennsylvanica</i>
Swamp Rose	<i>Rosa palustris</i>
Highbush Blueberry	<i>Vaccinium corymbosum</i>

### Perennials

Native Columbine	<i>Aquilegia canadensis</i>
Swamp Milkweed	<i>Asclepias incarnate</i>
Butterfly Weed	<i>Asclepias tuberosa</i>
New England Aster	<i>Aster novae-angliae</i>
New York Aster	<i>Aster novi-belgii</i>
Yellow Wild Indigo	<i>Baptisia tinctoria</i>
False Blue Indigo	<i>Baptisia australis</i>
Turtlehead	<i>Chelone glabra</i>
Joe Pye Weed	<i>Eupatorium purpureum</i>
Boneset	<i>Eupatorium perfoliatum</i>
Flat-topped goldenrod	<i>Euthamia graminifolia</i>
Sneezeweed	<i>Helenium autumnale</i>
Blue Flag Iris	<i>Iris versicolor</i>
Great Blue Lobelia	<i>Lobelia siphilitica</i>
Blazing Star	<i>Liatris spicata</i>
Bee-balm	<i>Monarda didyma</i>
Wild Bergamot	<i>Monarda fistulosa</i>
Beardstongue	<i>Penstemon digitalis</i>
Mountain Mint	<i>Pycnanthemum muticum</i>
Black-eyed Susan	<i>Rudbeckia fulgida</i>
Seaside Goldenrod	<i>Solidago sempervirens</i>
Blue Vervain	<i>Verbena hastata</i>

Ironweed  
Golden alexander

Vernonia noveboracensis  
Zizea aurea

**Grasses\***

Gray's Sedge  
Fox Sedge  
Soft Rush  
Switchgrass  
Little Bluestem

Carex grayi  
Carex vulpinoidea  
Juncus effusus  
Panicum virgatum  
Schizachyrium scoparium

**Ferns**

Maidenhair Fern  
Lady Fern  
Hay-scented Fern  
Sensitive Fern  
Cinnamon Fern  
New York Fern

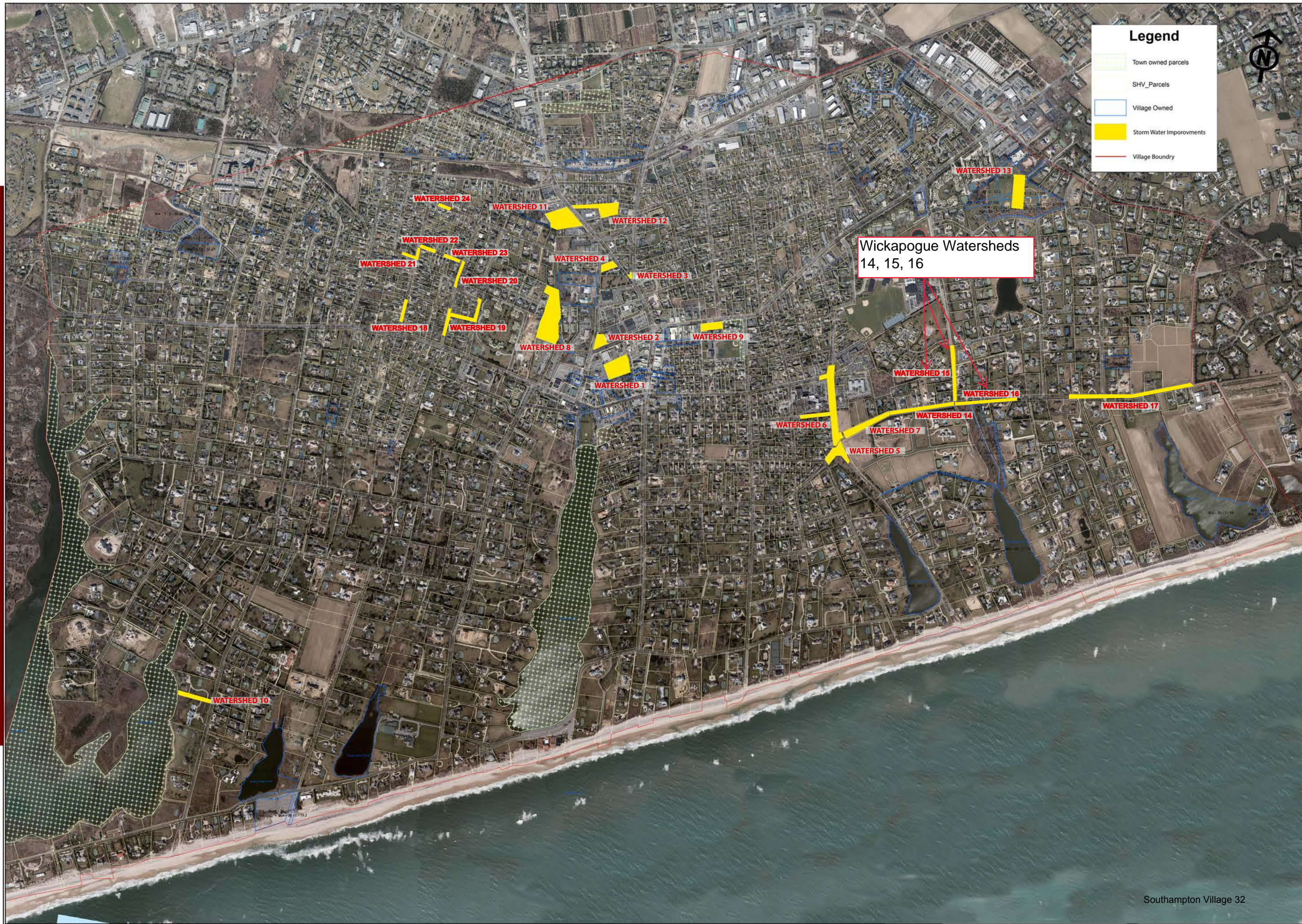
Adiantum pedatum  
Athyrium filix-femina  
Dennstaedtia punctilobula  
Onoclea sensibilis  
Osmunda cinnamomeum  
Thelypteris noveboracensis

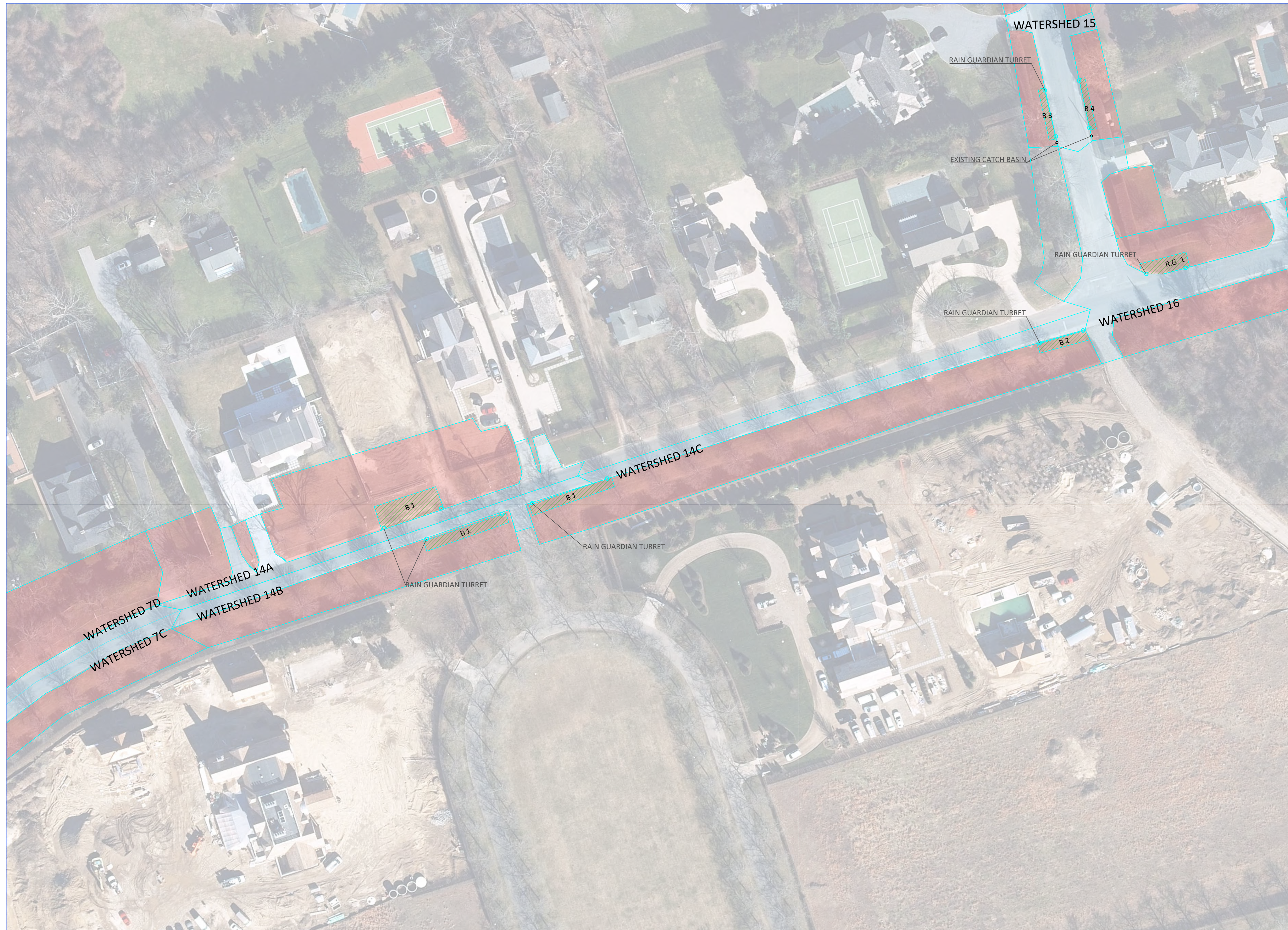
\*In areas where lawn is needed due to accommodate community feedback, the Village will use a Long Island lawn mix of native and/or naturalized grasses that do not require pesticides or fertilizers.

## Village of Southampton - Watershed Projects - Wickapogue Pond Bioswales/Raingardens

Project #	Location	BMP Type	Impervious Treatment Area (SF)	Size Required 1.2" Rain (CF)	Size of Practice (SF)	Volume Captured (CF)	TP (lbs/yr.)	TN (lbs/yr.)	TSS (lbs/yr.)	Bacteria (billion/yr.)	Runoff (acre-feet/yr.)
SV-14A	ROW along Wickapogue Road	ROW Raingarden	7,690	1,490	1,500	1,500	0.4	3.3	4,145	126	0.5
SV-14B	ROW along Wickapogue Road	ROW Raingarden	5,123	861	866	866	0.3	2.2	4,083	84	0.3
SV-14C	ROW along Wickapogue Road	ROW Raingarden	6,647	1,328	1,343	1,343	0.3	2.8	4,114	105	0.4
SV-15	ROW along Narrow Lane	ROW Raingarden	22,285	3,802	3,864	3,864	1.1	9.4	4,484	356	1.4
SV-16	Wickapogue Park	ROW Raingarden and Bioswale	38,841	5,547	5,569	5,569	2.0	16.6	4,884	629	2.5
			80,586		13,142	13,142	4	34	21,710	1,300	5

# Southampton Village Water Quality Improvement Project Plan (WQIPP) Project Identification





**WATERSHED 14A: WICKAPOGUE PARK**  
 1.5" WQv (90TH PERCENTILE STORM)

**IMPERVIOUS AREA:**  
 AREA = 7,690 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (7,690 SF X .1 FT X .98) = 753.62 CF (SAY 754 CF)

**PERVIOUS AREA:**  
 AREA = 24,524 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (24,524 SF X .1 FT X .3) = 735.72 CF (SAY 736 CF)

**TOTAL REQUIRED STORAGE= SAY 1,490 CF**

**PROPOSED BIOSWALE AREA**

**BIOSWALE 1:**  
 AREA = 1,500 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 1,500 CF

**TOTAL STORMWATER STORAGE PROVIDED = 1,500± CF**

**WATERSHED 14A ESTIMATED TREATMENT FROM MODELING:**  
 TP: 0.4 LBS/YEAR  
 TN: 3.5 LBS/YEAR  
 TSS: 4145 LBS/YEAR  
 FC: 126 BILLION/YEAR  
 RUNOFF: 0.5 ACRE-FT/YEAR

**WATERSHED 14B: WICKAPOGUE RD**  
 1.5" WQv (90TH PERCENTILE STORM)

**IMPERVIOUS AREA:**  
 AREA = 5,123 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (5,123 SF X .1 FT X .98) = 502.05 CF (SAY 502 CF)

**PERVIOUS AREA:**  
 AREA = 11,981 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (11,981 SF X .1 FT X .3) = 359.43 CF (SAY 359 CF)

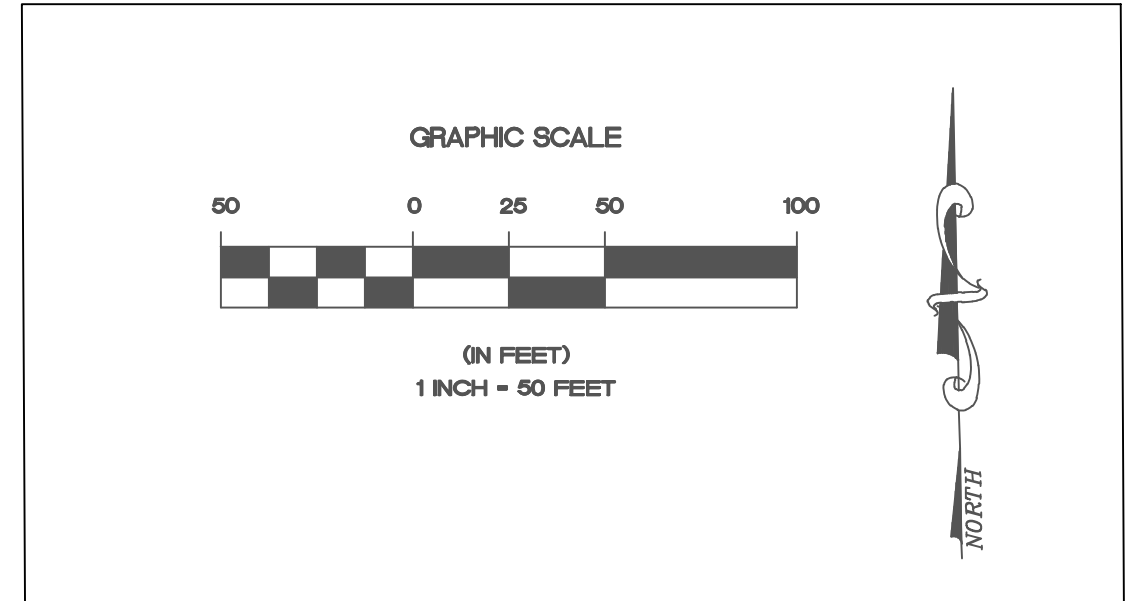
**TOTAL REQUIRED STORAGE= SAY 861 CF**

**PROPOSED BIOSWLAE AREA**

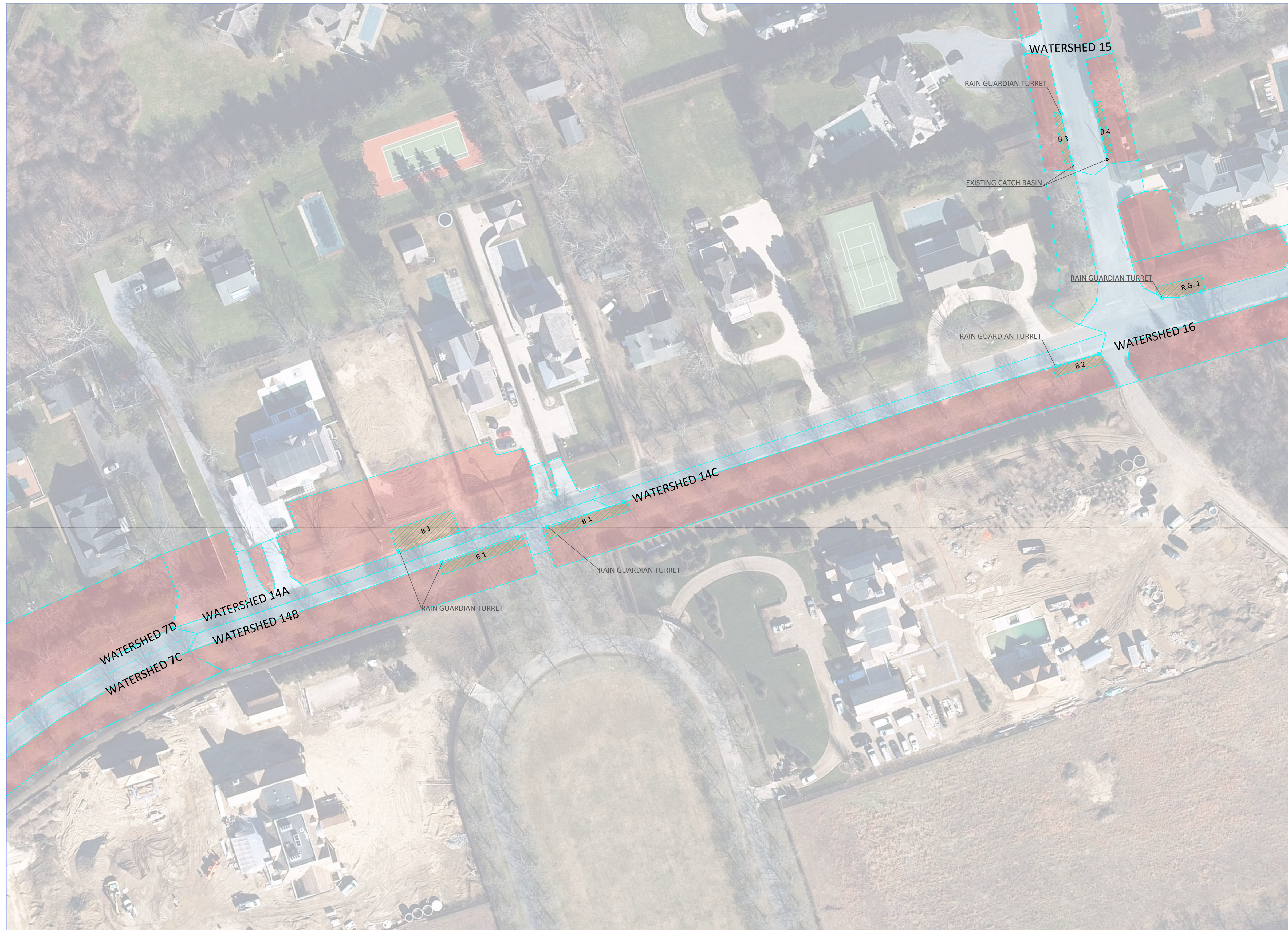
**BIOSWALE 2:**  
 AREA = 866 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 866 CF

**TOTAL STORMWATER STORAGE PROVIDED = 866± CF**

**WATERSHED 14B ESTIMATED TREATMENT FROM MODELING:**  
 TP: 0.3 LBS/YEAR  
 TN: 2.2 LBS/YEAR  
 TSS: 4083 LBS/YEAR  
 FC: 84 BILLION/YEAR  
 RUNOFF: 0.3 ACRE-FT/YEAR



1	XX/XX/2019	XXX XXX	XX
No.	DATE 7/16/2021	REVISION	BY:
<b>WICKAPOGUE RD RIGHT OF WAY (14A, 14B)</b> <b>WICKAPOGUE RD</b> SITUATED AT <b>SOUTHAMPTON</b> VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK			DWN BY: AC DATE: 01/11/2022 CHK'D BY: RB DATE: JOB No.: 08013 FILE No.: CADD: SW_STORMWATER SCALE: 1" = 50' SHEET: 16 OF 31
<b>NELSON POPE VOORHIS</b> <small>environmental • land use • planning</small> <small>70 Massess Road, Melville, NY 11747 • 631.427.5665 • nelsonpoppevoorhis.com</small>			



**WATERSHED 14C: WICKAPOGUE RD  
1.5" WQv (90TH PERCENTILE STORM)**

**IMPERVIOUS AREA:**  
 AREA = 6,647 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (6,647 SF X .1 FT X .98) = 651.41 CF (SAY 651 CF)

**PERVIOUS AREA:**  
 AREA = 22,483 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (22,483 SF X .1 FT X .3) = 674.49 CF (SAY 675 CF)

**TOTAL REQUIRED STORAGE= SAY 1,328 CF**

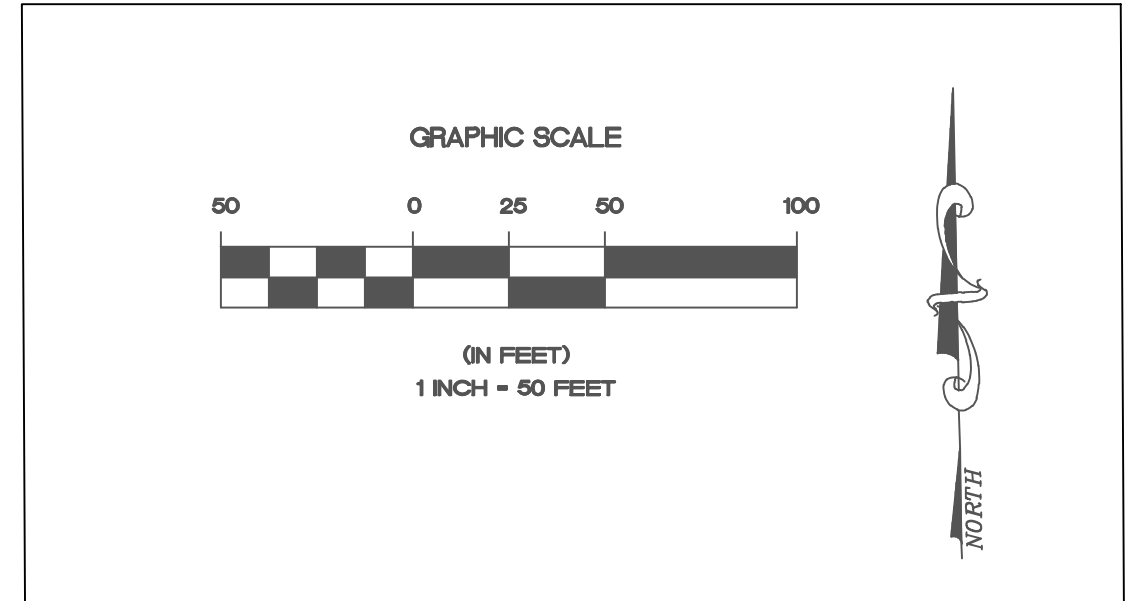
**PROPOSED BIOSWLAE AREA**



**BIOSWALE 1:**  
 AREA = 866 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 866 CF

**BIOSWALE 2:**  
 AREA = 477 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 477 CF

**TOTAL STORMWATER STORAGE PROVIDED = 1343± CF**

**WATERSHED 14C ESTIMATED TREATMENT FROM MODELING:**  
 TP: 0.3 LBS/YEAR  
 TN: 2.8 LBS/YEAR  
 TSS: 4114 LBS/YEAR  
 FC: 105 BILLION/YEAR  
 RUNOFF: 0.4 ACRE-FT/YEAR



1	XX/XX/2019	XXX XXX	XX
No.	DATE 7/16/2021	REVISION	BY:
<b>WICKAPOGUE RD RIGHT OF WAY (14C)</b> <b>WICKAPOGUE RD</b> SITUATED AT <b>SOUTHAMPTON</b> VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK			DWN BY: AC DATE: 01/11/2022 CHK'D BY: RB DATE: JOB No.: 08013
 <b>NELSON POPE VOORHIS</b> <small>environmental • land use • planning</small> <small>70 Massess Road, Melville, NY 11747 • 631.427.5665 • nelsonpoppevoorhis.com</small>			 FILE No: <b>CADD/SV_STORMWATER</b> SCALE: 1" = 50' SHEET: 17 OF 31



**WATERSHED 15: NARROW LANE  
1.5" WQv (90TH PERCENTILE STORM)**

**IMPERVIOUS AREA:**  
 AREA = 22,285 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (22,285 SF X .1 FT X .98) = 2,183.93 CF (SAY 2,184 CF)

**PERVIOUS AREA:**  
 AREA = 53,926 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 53,926 SF X .1 FT X .3) = 1,617.78 CF (SAY 1,618 CF)

**TOTAL REQUIRED STORAGE= SAY 3,802 CF**

**PROPOSED BIOSWALE AREA**

**BIOSWALE 1:**  
 AREA = 2,388 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 2,388 CF

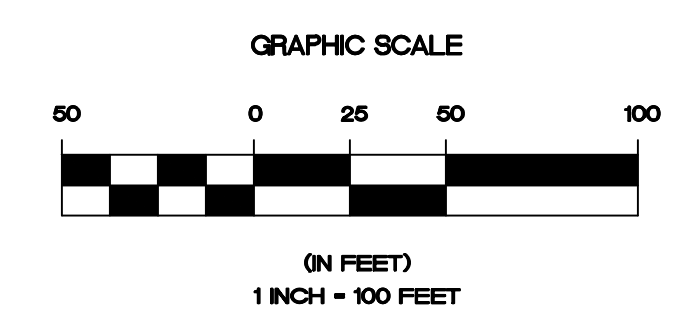
**BIOSWALE 2:**  
 AREA = 828 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 828 CF

**BIOSWALE 3:**  
 AREA = 324 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 324 CF

**BIOSWALE 4:**  
 AREA = 324 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 324 CF

**TOTAL STORMWATER STORAGE PROVIDED = 3,864± CF**

**WATERSHED 15 ESTIMATED TREATMENT FROM MODELING:**  
 TP: 1.1 LBS/YEAR  
 TN: 9.4 LBS/YEAR  
 TSS: 4484 LBS/YEAR  
 FC: 356 BILLION/YEAR  
 RUNOFF: 1.4 ACRE-FT/YEAR



1	XX/XX/20XX	XXX XXX	XX
No.	DATE	REVISION	BY:
<b>NARROW LN RIGHT OF WAY (15)          NARROW LANE          SITUATED AT          SOUTHAMPTON          VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK</b>			DWN BY: AC DATE: 01/11/2022 CHK'D BY: RB DATE: JOB No.: 0803
<b>NELSON POPE VOORHIS</b> <small>environmental • land use • planning          70 Masses Road, Melville, NY 11747 • 631.427.5665 • nelsonpoppevoorhis.com</small>			FILE No.: CADD SW STORMWATER SCALE: 1" = 50' SHEET: 18 OF 31



**WATERSHED 16: WICKAPOGUE PARK**  
**1.5" WQv (90TH PERCENTILE STORM)**

**IMPERVIOUS AREA:**  
 AREA = 38,841 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (38,841 SF X .1 FT X .98) = 3,806.42 CF (SAY 3,807 CF)

**PERVIOUS AREA:**  
 AREA = 58,008 SF  
 REQUIRED STORAGE VOL. (AREA X INCH/FEET X RUNOFF COEF.)  
 (58,008 SF X .1 FT X .3) = 1,740.24 CF (SAY 1,740 CF)

**TOTAL REQUIRED STORAGE= SAY 5,547 CF**

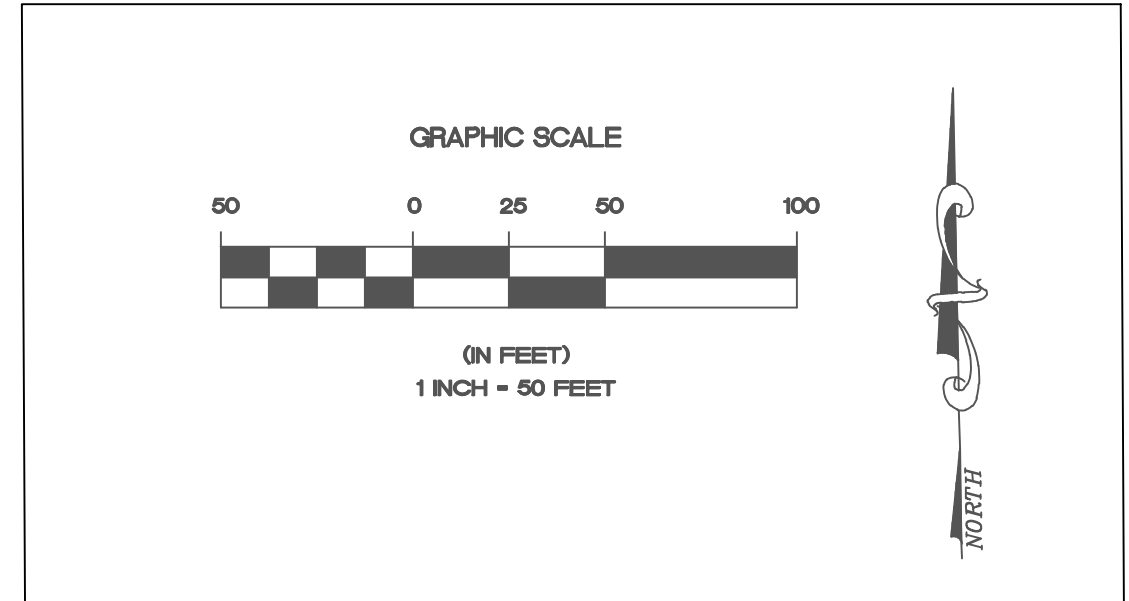
**PROPOSED RAIN GARDEN AREA**  
**RAIN GARDEN 1:**  
 AREA = 652 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 652 CF

**PROPOSED BIOSWALE AREA**  
**BIOSWALE 1:**  
 AREA = 4,917 SF  
 PONDING DEPTH 12"  
 TOTAL VOLUME = 4,917 CF

**TOTAL STORMWATER STORAGE PROVIDED = 5,569± CF**

**WATERSHED 16 ESTIMATED TREATMENT FROM MODELING:**  
 TP: 2.0 LBS/YEAR  
 TN: 16.6 LBS/YEAR  
 TSS: 4884 LBS/YEAR  
 FC: 629 BILLION/YEAR  
 RUNOFF: 2.5 ACRE-FT/YEAR

— EXISTING DRY STREAM



1	XX/XX/2019	XXX XXX	XX
No.	DATE 7/16/2021	REVISION	BY:
<b>WICKAPOGUE RD RIGHT OF WAY AND WICKAPOGUE PARK (16)</b> <b>WICKAPOGUE RD</b> SITUATED AT <b>SOUTHAMPTON</b> VILLAGE OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK			DWN BY: AC DATE: 01/11/2022 CHK'D BY: RB DATE: JOB No.: 08013
<b>NELSON POPE VOORHIS</b> <small>environmental • land use • planning</small> <small>70 Maxess Road, Melville, NY 11747 • 631.427.5665 • nelsonpoppevoorhis.com</small>			FILE No.: CADD/SV_STORMWATER SCALE: 1" = 50' SHEET: 19 OF 31