

WATER QUALITY
IMPROVEMENT
PROJECT
PLAN

FOR

TOWN OF SOUTHAMPTON
COMMUNITY PRESERVATION FUND
GRANT APPLICATION

CEDAR AVENUE & BAY VIEW DRIVE NORTH

VILLAGE OF NORTH HAVEN

TOWN OF SOUTHAMPTON

SUFFOLK COUNTY, NY



Owner/Applicant:
North Haven Manor Association
P.O. Box 24
Sag Harbor, NY 11963

March 2023

The Raynor Group, P.E. & L.S. PLLC

860 MONTAUK HIGHWAY P.O. BOX 720 WATER MILL, NY 11976
SURVEYORS CIVIL ENGINEERS SITE PLANNERS



TOWN OF SOUTHAMPTON

Department of Community Preservation
24 W Montauk Hwy, Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920

www.southamptontownny.gov/WQIPP

2023

COMMUNITY PRESERVATION FUND (CPF) WATER QUALITY IMPROVEMENT PROGRAM CHECKLIST/APPLICATION INSTRUCTIONS

The CPF Water Quality Improvement Project Plan (WQIPP) Fund follows the objectives in the adopted [Water Quality Improvement Project Plan](http://www.southamptontownny.gov/WQIPP) (see <http://www.southamptontownny.gov/WQIPP>)

To apply for funding, an application must be COMPLETED and submitted along with detailed narratives and supporting information as described below. The Water Quality Advisory Committee will rank and score projects based on the [Scoring Criteria contained in the application materials](#). Parcel acquisitions will be considered on an ongoing basis, independent of this application process.

Note: Electronic application submission required and 4 - full printed sets of application, site plan and narrative.

Upload application at www.southamptontownny.gov/WQIPPSUBMISSION

A Public Hearing and Town Board Resolution will be required for individual or multiple projects.

WATER QUALITY IMPROVEMENT PROJECT MEANS:

[1] DEFINITIONS:

1. **Wastewater Treatment Improvement Project** means the planning, design, construction, acquisition, enlargement, extension, or alteration of a wastewater treatment facility, including alternative systems to a sewage treatment plant or traditional septic system, to treat, neutralize, stabilize, eliminate or partially eliminate sewage or reduce pollutants in treatment facility effluent, including permanent or pilot demonstration wastewater treatment projects, or equipment or furnishings thereof. Stormwater collecting systems and vessel pumpout stations shall also be included within the definition of a wastewater improvement project.
2. **Nonpoint Source Abatement and Control Program Projects** developed pursuant to section eleven-b of the soil and water conservation districts law, title 14 of article 17 of the environmental conservation law, section 1455b of the federal coastal zone management act, or article forty-two of the executive law;
3. **Aquatic Habitat Restoration Project** means the planning, design, construction, management, maintenance, reconstruction, revitalization, or rejuvenation activities intended to improve waters of the state of ecological significance or any part thereof, including, but not limited to ponds, bogs, wetlands, bays, sounds, streams, rivers, or lakes and shorelines thereof, to support a spawning, nursery, wintering, migratory, nesting, breeding, feeding, or foraging environment for fish and wildlife and other biota.
4. **Pollution Prevention Project** means the planning, design, construction, improvement, maintenance or acquisition of facilities, production processes, equipment or buildings owned or operated by municipalities for the reduction, avoidance, or elimination of the use of toxic or hazardous substances or the generation of such substances or pollutants so as to reduce risks to public health or the environment, including changes in production processes or raw materials; such projects shall not include incineration, transfer from one medium of release or discharge to another medium, off-site or out-of-production recycling, end-of-pipe treatment or pollution control.
5. **The Operation of the Peconic Bay National Estuary Program**, as designated by the United States Environmental Protection Agency. Such projects shall have as their purpose the improvement of existing water quality to meet existing specific water quality standards. Projects which have as a purpose to permit or accommodate new growth shall not be included within this definition



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**COMMUNITY PRESERVATION FUND (CPF)
 WATER QUALITY IMPROVEMENT PROGRAM
 PROPOSAL SUMMARY**

Project Applicant: North Haven Manor Association
 Project Title: Cedar Avenue & Bay View Drive North Stormwater Ponding and Runoff Improvement
 Project Manager Name: Susan Reed

Name	Susan Reed
Title	President
Organization	North Haven Manor Association
Address	P.O. Box 24, Sag Harbor, NY 11963
Phone	917-327-4000
Email	susankreed1@gmail.com

Property owner (if different from Project manager organization):

Name	Same
Affiliation	
Organization	
Address	
Phone	
Email	

Project Address: Intersection of Cedar Ave and Bay View Drive, North Haven, NY SCTM #(S) 0901-003.00-01.00-059.000

Type of Project (Check all that apply):

- Reduction Remediation Restoration

Project Summary: (Provide a brief narrative description of proposed WQIPP project)

The project proposes a stormwater runoff improvement system, including a bioretention facility, a new storm drain and deep leaching pools at the intersection of Cedar Avenue and Bay View Drive North in North Haven Manor, North Haven, NY.

The purpose of the project is to correct a regular and problematic ponding and runoff situation in this location after rainstorms and to prevent stormwater from entering Sag Harbor Bay.

The project is phased:
 Phase I included NHMA contracting with The Raynor Group, P.E. & L.S. PLLC to analyze the roadways and stormwater runoff patterns along Cedar Avenue and Bay View Drive North and to propose a plan to correct the ponding and runoff into Sag Harbor Bay. (Attachment included)
 Phase II will include grading and the installation of the bioretention facility and drainage structures in the vicinity of the ponding area.

The work will be supervised by The Raynor Group and construction will be bid out to, and conducted by a reputable road-drain company.



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If additional information is needed to describe the project; a project narrative can accompany the application. Please limit the narrative to approximately 3 pages of project description, provide a summary of water quality benefits/objectives of approximately 2 pages and provide a cost estimate of approximately 2 to 4 pages with supporting estimates. Any additional materials should be focused specifically on the proposed project with references to other studies that are pertinent

1. PROJECT TYPE (check all that apply)

Must meet at least one of the definitions of "Water Quality Improvement Project" per State Law Chapter 551 cited above. Check all that apply. **Note: Monitoring costs are only potentially eligible for CPF funding within Aquatic habitat restoration projects.**

- Wastewater Treatment Improvement Project
- Non-point source abatement and control
- Aquatic habitat restoration
- Pollution prevention
- Operation of Peconic Bay National Estuary Program (Grant Match)

2. PRIORITY AREA(S) (check all that apply)

Priority areas are defined in the [Water Quality Improvement Project Plan \(WQIPP\)](#).

- 303(d) Impaired
- Peconic Estuary Program - [PEP map](#)
- High
- Medium
- Outside High and Medium priority areas*

*If Outside High and Medium priority areas, explain how the project is relevant to WQIPP goals.

3. PROJECT DESCRIPTION

3a. Existing conditions of applicable groundwater/sub-watershed/waterbody and most recent and relevant data available (provide sources).

The area of concern (stormwater ponding and runoff) is at the intersection of Cedar Avenue and Bay View Drive North in North Haven Manor in the Village of North Haven. Per an analysis by The Raynor Group, runoff from a 5.9 acre tributary area flows into a concentrated runoff area. There are no drainage improvements/facilities within the roadways of the defined tributary area for containing stormwater runoff. (See attached Raynor Group Report)

3b. How the proposed solution addresses the issue in the context of Reduction, Remediation and/or Restoration as per the CPF Water Quality Project Plan. Note all remediation and restoration projects must assure that reduction measures are also addressed.

Using design criteria from the Town of Southampton Road and Drainage Standards, including a 2-inch storm even over the tributary area, The Raynor Group calculated the required volume of stormwater containment for the area to be between 10,000 cubic feet and 16,000 cubic feet. The volume of proposed stormwater containment with the bio-retention facility and stormwater leaching structures for the surface area of the roadways within the tributary area would be approximately 6,000 feet. The Raynor Group recommends installing a bioretention facility, in conjunction with grading and drainage structure improvements at the intersection of Cedar Avenue and Bay View Drive North (see attached Drawing No. C-1) The Raynor Group believes that installing and performing drainage improvements in the vicinity of ponding would be the most efficient and cost-effective way to contain the stormwater runoff and prevent pollutants into Sag Harbor Bay.



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3c. Describe the proposed technology and its demonstrated efficacy in similar settings. May include published data.

The bioretention facility is constructed to allow stormwater runoff to infiltrate into groundwater. The local native soils don't allow water to quickly infiltrate into groundwater. An engineered soil mix will replace the native soils with an installed underdrain connection suspended above the base of the replaced soils for improved nitrogen fixation. The design allows for physical filtering and adsorption to remove pollutants. Pollutant removal is estimated at 75-80% Nitrogen, 70-75% Phosphorus, 80-85% Total Suspended Solids. The proposed drainage improvements include a catch basin with an overflow grate pipe to five (5) 8' diameter x 12' deep leaching pools to prevent flooding and protect from direct discharge and erosion from the larger volumes of stormwater runoff that is seen in the area.

3d. How the project supports Town of Southampton, Suffolk County, NYSDEC, Long Island Nitrogen Action Plan (LINAP) or other adopted goals/policies (provide references with page numbers).

As per the Town of Southampton WQIPP this project would improve the quality of surface and bay waters by reducing nutrient loading, toxins, and sedimentation (pg. 6). This project would be classified as a 'stormwater collecting system' as per the Town of Southampton WQIPP (pg. 16). The Town of Southampton WQIPP identifies the goal of remediation as 'improving water quality by reducing contaminated stormwater runoff from entering surface bodies (pg. 58). The installation of the bioretention facility and drywells allows for the reduction of stormwater runoff directly discharging into Shelter Island Sound. Green infrastructure (6.11) is part of the LINAP goals. The bioretention facility uses biological process to decrease the amount of nitrogen infiltrating groundwater.

3e. Review the following statements and indicate whether they are applicable to your project. For all "Yes" responses, please indicate how your project addresses the requirements indicated.

YES	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	If stormwater system or drainage is proposed: The project must indicate compliance with the New York State Stormwater Design Manual (2015 and as updated).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	If project is related to farmland: Describe any Agricultural Stewardship Plan or other long term strategy for Nitrogen abatement.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	If the project is for habitat restoration: The narrative must address how underlying causes are being ameliorated and expected outcomes for local species populations or other ecological considerations are given.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	If project is a Sewage Treatment Plant (STP) or cluster treatment system: Fund allocation request is based on cost for reduction of pre-existing conditions and not for purpose of accommodating new density (describe pre-existing density and associated flow (gallons per day) and total projected nitrogen reduction in narrative). Include detailed information on how many homes the system would treat as well as potential for formation of Sewer District, if required by Suffolk County Health Department or Town Law.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	If the project is requesting grant match: Include information related to funding program source and purpose of application and any relevant items on this checklist. Note: A Town Board resolution will be required in order to encumber matching funds for grant applications.

4. WATER QUALITY BENEFIT

4a. Identify Nitrogen, Pathogen or Pollutant of Concern (POC) including Existing Condition and Target Reduction.

As with most stormwater runoff, the runoff along the roads of North Haven Manor includes oil and other pollutants—including pesticides, garden and yard chemicals, and bacteria from septic systems. The bioretention facility removes pollutants at an estimated rate of 75-80% Nitrogen, 70-75% Phosphorus, 80-85% Total Suspended Solids. Please see the attached reduction of pollutants estimate (Appendix E) using the EPA STEPL.

4b. Describe plans for collecting and reporting on water quality over time.

Should CPF funds be awarded, in order to comply with CPF requirements, a formal plan for data collection and reporting will be established in cooperation with the Town.



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4c. Indicate useful life of proposed technology (must meet or exceed five years).

The bioretention facility has an estimated lifespan from 20-40 years. Proper maintenance and installation of the bioretention facility plays a vital role in extending the expected lifespan of the facility. The drainage improvements, which consists of precast leaching structures have a useful life of more than fifty years, provided proper maintenance of the structures is performed.

5. COST FACTORS

5a. Explain how you have confirmed that the proposed budget is reasonable, appropriate and necessary. If available, provide third party estimates or other documentation of how costs were determined.

The proposed budget was developed by The Raynor Group, P.E. & L.S. PLLC. The Raynor Group has extensive knowledge in preparing construction estimates for various projects.

5b. Describe any matching funds to be provided.

Phase 1 of this project was the commissioning of an analysis and recommendations from The Raynor Group. The North Haven Manor Association paid \$2500 for this report.

5c. Explain: i. Why project cannot proceed and intended benefits cannot be achieved without external funding.
 ii. if funds are awarded at a lower level than requested, or if there are cost overruns, explain how the project will proceed.

The North Haven Manor Association is a Homeowners Association encompassing 88 homes. We operate on a modest budget comprised of dues from homeowners. We are able to afford the Raynor Group analysis and recommendation, and the funds for clearing of the area, but we do not have the funds to afford the installation of the bioretention facility as designed and proposed.

6. MANAGEMENT, EXPERIENCE, ABILITY

6a. Describe applicant's experience in completing similar projects.

The Board of Directors of the North Haven Manor Association supervises annual projects including road regrading and repair, landscaping, and snow removal. A reputable and experienced contractor will be hired by the Association to perform the work.

6b. Describe community support or opposition to project. If there is opposition, explain how this is to be addressed.

This project is supported by the Board of Directors of the North Haven Manor Association which is elected by the residents. It is also supported by the neighbors directly adjacent to the proposed project.

6c. Describe any permits needed and time frame/status of approvals. If permits are approved, indicate same.

There are no permits needed for these improvements. The improvements are located within an area owned by the North Haven Manor Association, on private roads within the Village of North Haven.



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7. MAINTENANCE, MONITORING, EVALUATION

Estimate ongoing maintenance costs and explain how these will be supported. Explain stewardship and monitoring activities planned for ensuring sustainability of the project.

The North Haven Manor Association will support the maintenance costs of the finished project, including but not limited to inspecting the pre-treatment pea gravel diaphragm, annual inspections of mulch coverage, edging to ensure runoff can enter the bioretention facility, watering to establish the plantings during the first growing season, weeding and removing dead plant material annually, cleaning of the new drain and leaching pools. This will be accomplished through our annual association budget. Long-term monitoring will occur by observing the quantity and quality of water entering the bioretention facility and overflow catch basin.

8. DURATION OF PROJECT

8a. Provide a projected project timeline. Note: The Committee will only make recommendations for shovel-ready projects that can commence this fiscal year.

The North Haven Manor Association anticipates that this project will take 2-3 weeks to complete. The project is shovel ready and the Association is ready to commence work as soon as the project and funds are approved.

8b. If project is multi-year or phased, provide a breakdown of budget and milestones for each year and phase.

Not Applicable.

9. ATTESTATION

Allocation of CPF funds will not be for the purpose of accommodating new growth, as this is prohibited by State law. Check all boxes & sign.

- We certify that funds will not be directed for projects for the purpose of accommodating new growth.
- We understand that progress reports will need to be generated as specified in our Water Quality Improvement Contract AND a final report showing qualitative and/or quantitative data will be generated upon project completion. .

Signature: _____

Susan Reed

Date 3-14-2023

10. REQUIRED ATTACHMENTS Confirm that the following required documents are attached to this application:

- Photos of existing conditions
- Location Map
- State Environmental Quality Review Act (SEQRA) Long or Short Environmental Assessment Form (EAF)
<https://www.dec.ny.gov/permits/6191.html>
- Completed EPA Spreadsheet Tool for Evaluating Pollutant Load (STEPL)
<https://www.epa.gov/nps/spreadsheet-tool-estimating-pollutant-loads-step1> or similar standardized methodology (describe)
- Project budget (see attached template)
- Ownership commitment is provided via letter of intent (LOI) for non-municipal owners or municipal resolution for municipal owners
- Public agencies must complete SEQRA on the project and submit determination of significance and associated documentation.

11. OTHER ATTACHMENTS

List other attachments provided, including cost estimates, bids, plans, documentation of matching funds, and other as appropriate to demonstrate project readiness, quality, feasibility, and cost effectiveness



BUDGET PROPOSAL

Is the applicant a municipality? Yes No
 If yes, please enter the request date or anticipated request date of RFP (Request for Proposals) _____.

PLANNING/ENGINEERING/DESIGN	Town CPF Request	Matching Funds Committed	Matching Funds Pending	Estimated Total Project Costs
Task 1-Commissioning of Drainage Analysis and Recommendations by The Raynor Group (see Attached Report)	\$-	\$-2,500.00	\$-	\$-2,500.00
Task 2-Prepare Construction Drawings	\$-	\$-3,000.00	\$-	\$-3,000.00
Task 3-	\$-	\$-	\$-	\$-0.00
Task 4-	\$-	\$-	\$-	\$-0.00
Task 5-	\$-	\$-	\$-	\$-0.00
Task 6-	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
Planning/Engineering/Design Cost Total	\$-0.00	\$-5,500.00	\$-0.00	\$-5,500.00

Contractual Services				
Maintenance of Bioretention Facility (Semi-Annually)	\$4,000.00	\$-	\$-	\$-4,000.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
Contractual Services Cost Total	\$4,000.00	\$-0.00	\$-0.00	\$-4,000.00

Construction & Site Improvements				
Clearing & Revegetation	\$-	\$-5,000.00	\$-	\$-5,000.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
	\$-	\$-	\$-	\$-0.00
Construction & Site Improvements Cost Total	\$-0.00	\$-5,000.00	\$-0.00	\$-5,000.00



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COMMUNITY PRESERVATION FUND (CPF) WATER QUALITY IMPROVEMENT PROGRAM LETTER OF INTENT

APPLICANT'S INFORMATION

Owner: North Haven Manor Association

Contact First and Last Name: Susan Reed

Contact Address: 16 Shelter Island Avenue, Sag Harbor, NY 11963

Contact Phone: 917-327-4000

Contact Email: susankreed1@gmail.com

CONTRACT RECIPIANT INFORMATION

Name/Organization: North Haven Manor Association

Contact Person/Officer: Susan Reed, President

Contact Address: 16 Shelter Island Avenue

Contact Phone: 917-327-4000

Contact Email: susankreed1@gmail.com

PROJECT INFORMATION

Project Title: Cedar Avenue and Bay View Drive North Ponding and Stormwater Runoff Improvements

Project Location: Cedar Avenue and Bay View Drive North, North Haven NY

Project Description (1-3 sentences): _____

The project proposes a stormwater runoff improvement system, including a bioretention facility, new storm grate and five (5) 8' diameter x 12' deep leaching pools at the intersection of Cedar Avenue and Bay View Drive North in North Haven Manor, North Haven, NY. The purpose of the project is to correct a regular and problematic ponding and runoff situation in this location after rainstorms and to prevent stormwater from entering Sag Harbor Bay.

ANTICIPATED PROJECT TIMELINE

Begin: October/November 2023

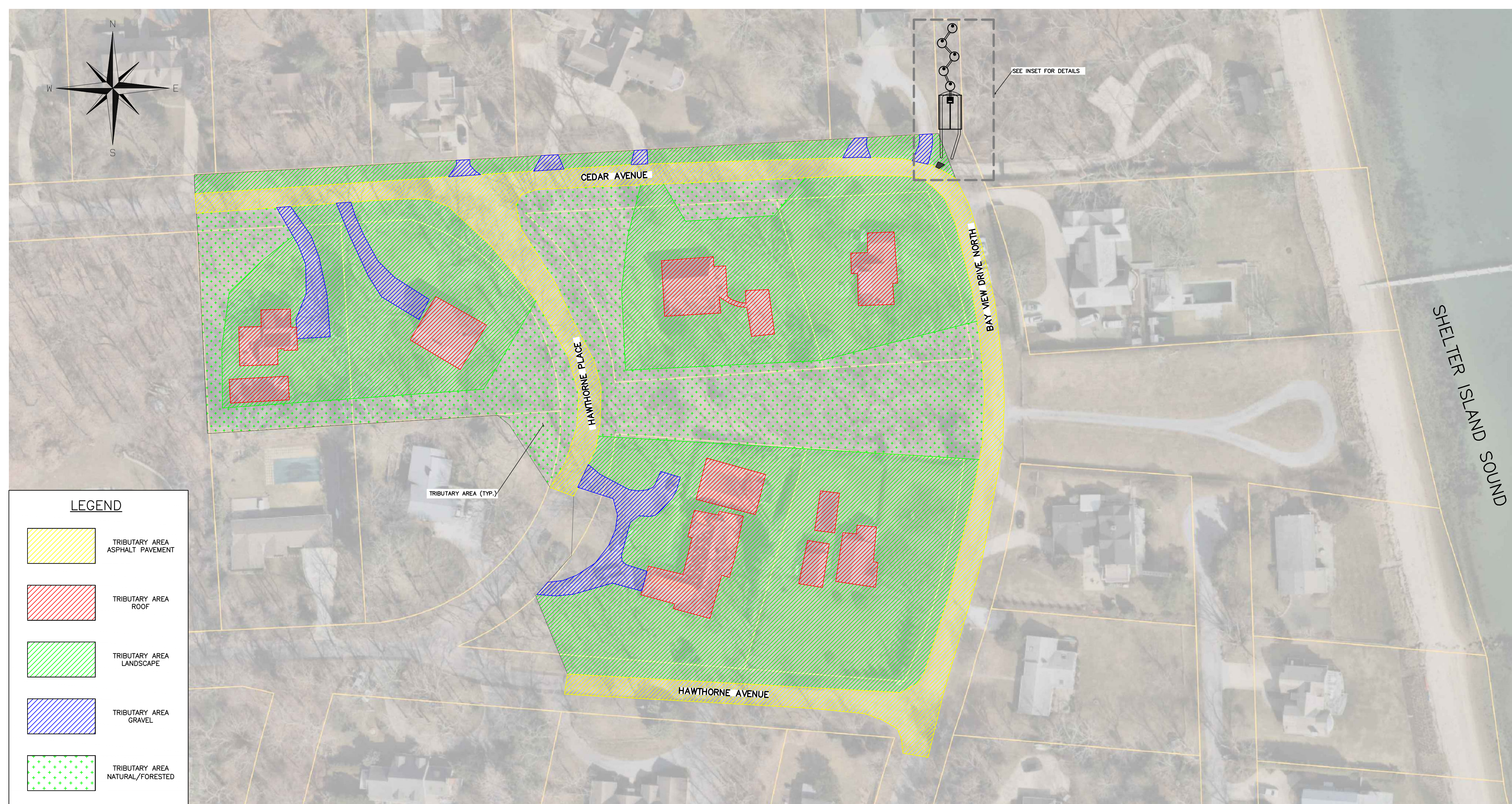
Complete: November/December 2023

Notes: _____



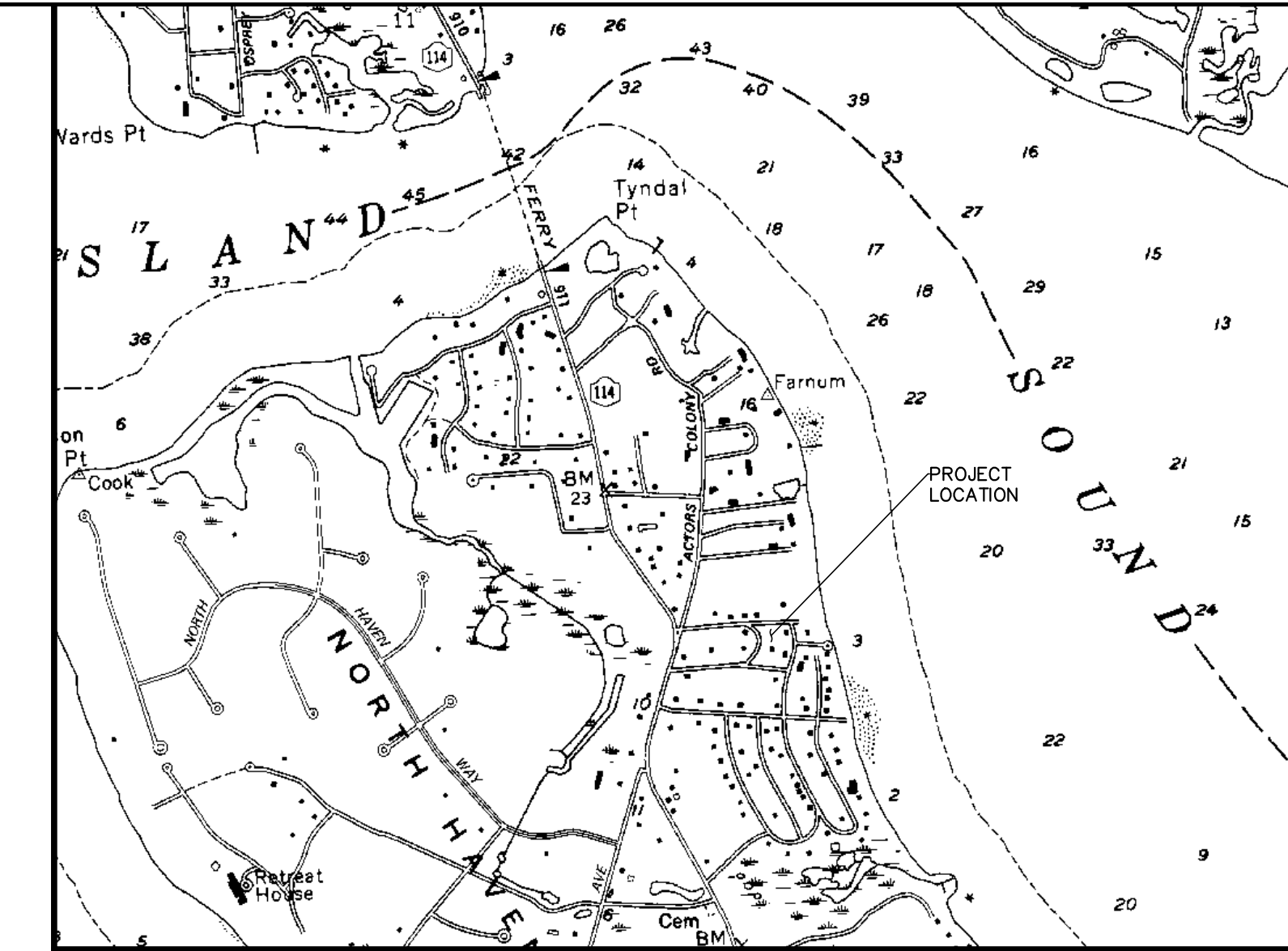
Appendix A

Proposed Project Plan



LEGEND

	TRIBUTARY AREA ASPHALT PAVEMENT
	TRIBUTARY AREA ROOF
	TRIBUTARY AREA LANDSCAPE
	TRIBUTARY AREA GRAVEL
	TRIBUTARY AREA NATURAL/FORESTED



KEY MAP
SCALE: 1" = 1000'

DRAINAGE DESIGN CRITERIA:

- RUNOFF COEFFICIENTS:
ASPHALT PAVEMENT = 1.0
ROOFS = 1.0
LANDSCAPE = 0.2
GRAVEL = 0.9
NATURAL/FORESTED = 0.1
- PROVIDE STORAGE CAPACITY FOR 2" RAINFALL
- 8" DIAMETER DRYWELL CAPACITY = 42.24 C.F./V.F.
- 10" DIAMETER DRYWELL CAPACITY = 68.42 C.F./V.F.
- CATCH BASIN/DRYWELL INTERCONNECTING PIPE TO BE 15" CPEP @ 1.5% MIN. UNLESS NOTED OTHERWISE.

DRAINAGE CALCULATIONS:

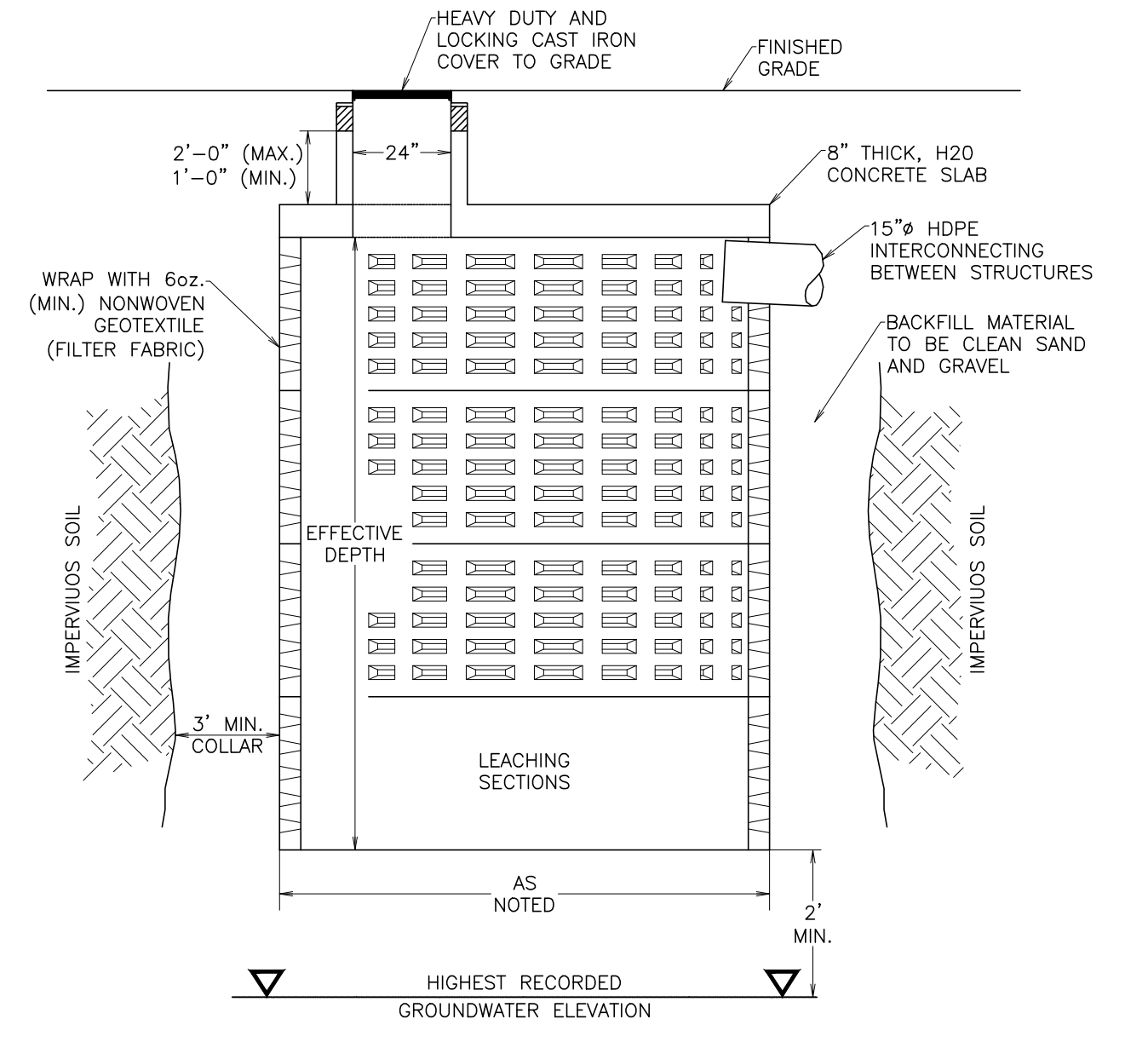
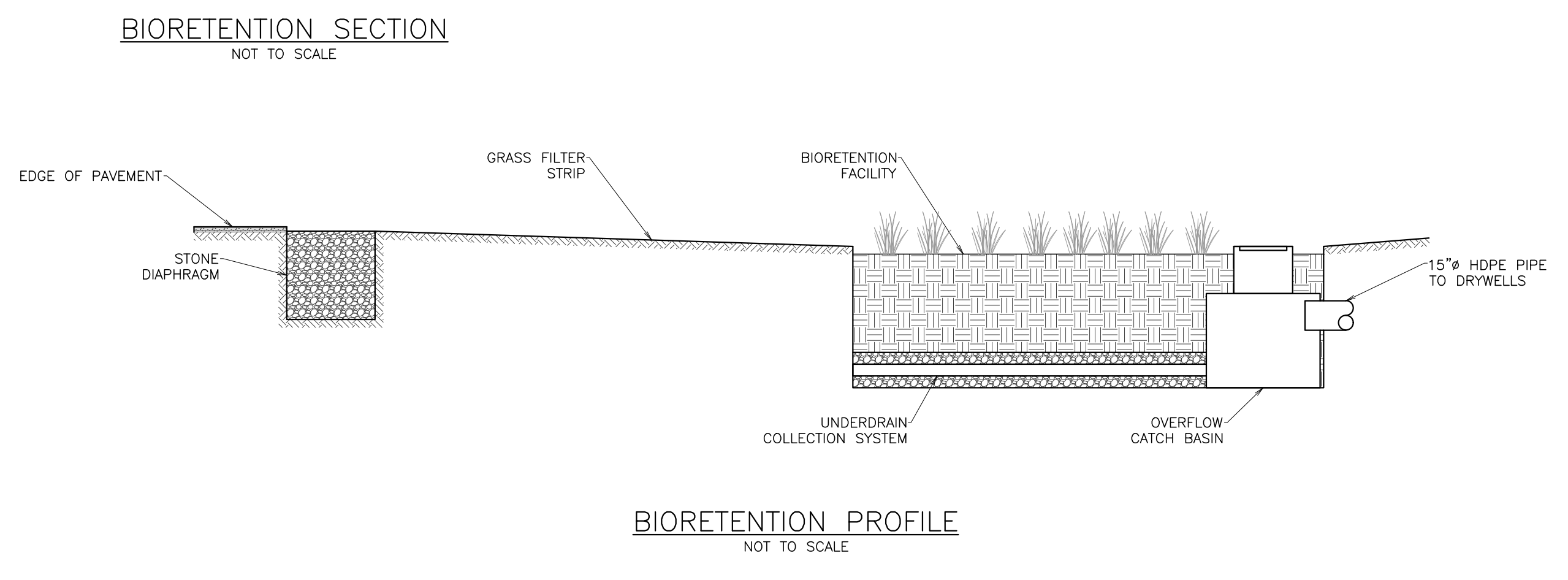
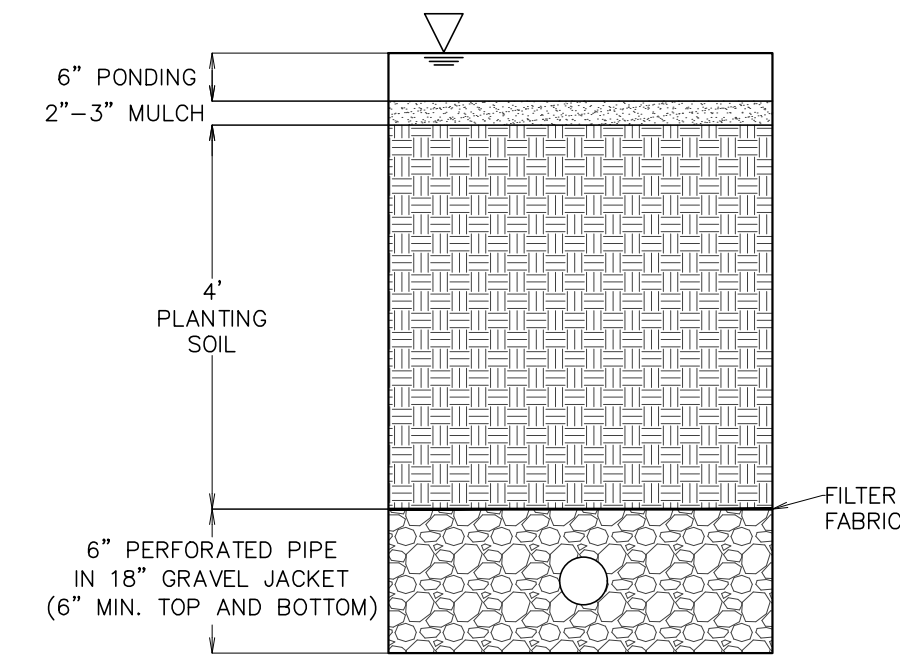
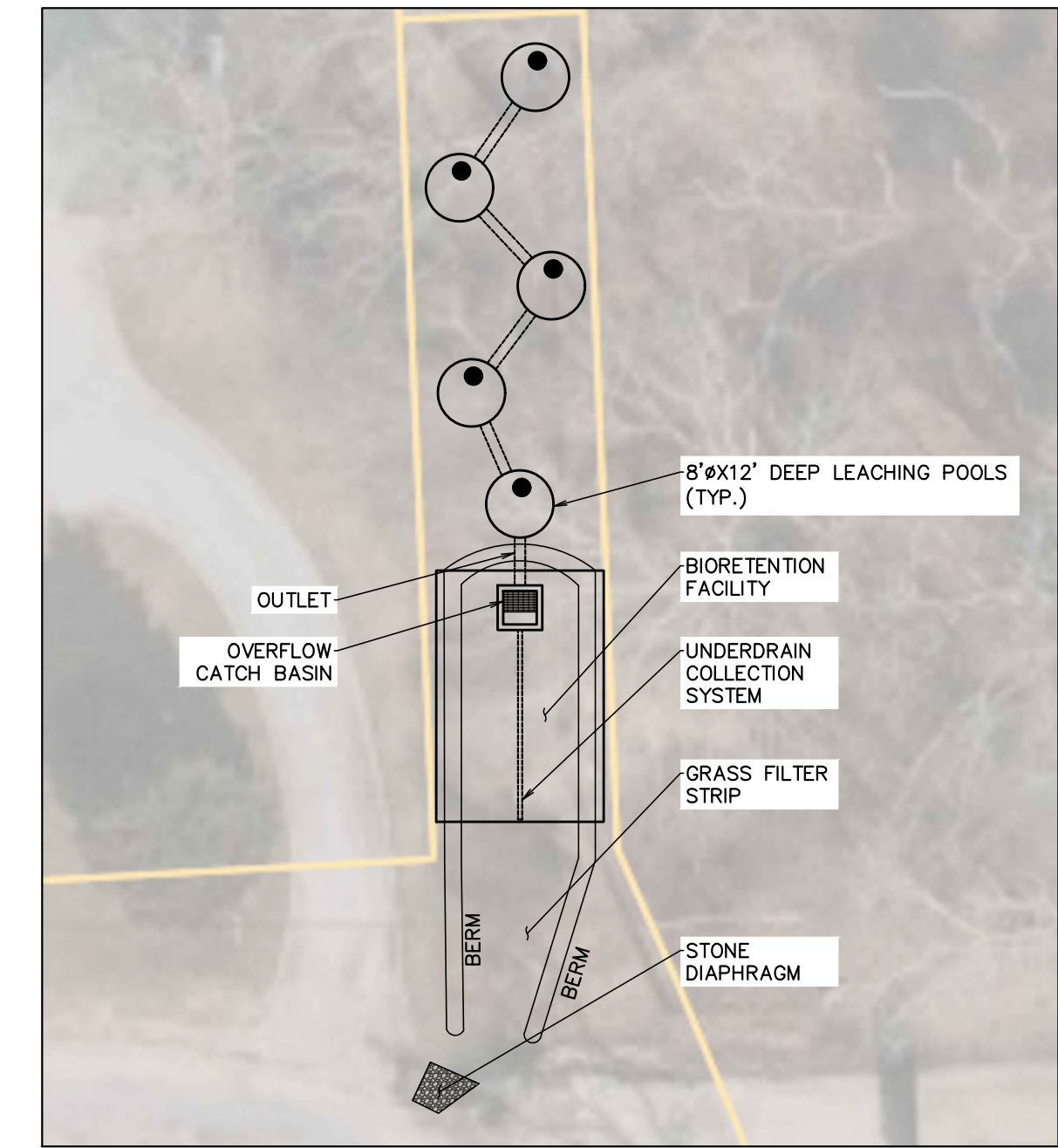
- TOTAL TRIBUTARY AREA = 258,500 S.F.
- ASPHALT PAVEMENT AREA: 34,890 S.F.
- ROOF AREA: 20,150 S.F.
- LANDSCAPE AREA: 133,230 S.F.
- GRAVEL AREA: 9,400 S.F.
- NATURAL/FORESTED AREA: 60,830 S.F.
- COMPOSITE COEFFICIENT NUMBER:
 $C = \frac{(34,980 \text{ S.F.})(1.0) + (20,150 \text{ S.F.})(1.0) + (133,230 \text{ S.F.})(0.2) + (9,400 \text{ S.F.})(0.9) + (60,830 \text{ S.F.})(0.1)}{258,500 \text{ S.F.}}$
C = 0.372
- TOTAL RUNOFF:
Q = CA
Q = (0.372)(2")(258,500 S.F.)
Q = 16,038 C.F. OF STORAGE NEEDED
- DRAINAGE STRUCTURES:
16,038 C.F./42.24 C.F./V.F. = 380 V.F. OF 8" DRYWELLS NEEDED
16,038 C.F./68.42 C.F./V.F. = 235 V.F. OF 10" DRYWELLS NEEDED

DRAINAGE NOTES

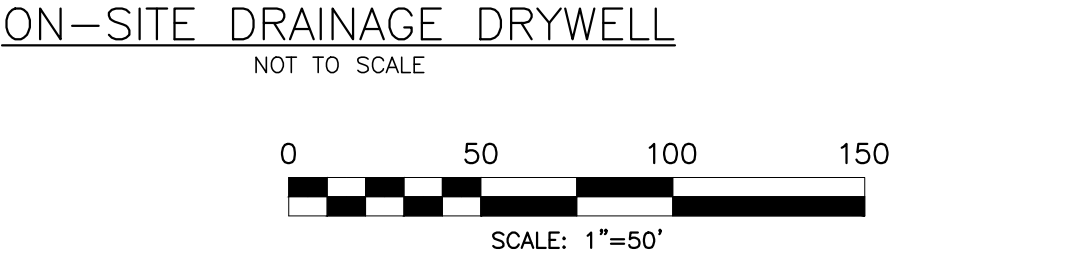
1. DRAINAGE CALCULATIONS ARE BASED ON THE ROAD AND DRAINAGE STANDARDS FOR THE TOWN OF SOUTHAMPTON SUFFOLK COUNTY, NEW YORK, PREPARED FOR THE TOWN OF SOUTHAMPTON HIGHWAY DEPARTMENT, LAST DATED MARCH 2010.

NOTES

1. AERIAL IMAGERY TAKEN FROM NEAR MAPS, DATED MARCH 15, 2022.
2. BIORETENTION FACILITIES SHALL BE PLANTED AS PER RECOMMENDATIONS FROM THE NYSDEC STORMWATER MANAGEMENT DESIGN MANUAL.
3. ALL WORK TO BE PERFORMED SHALL BE AS PER THE NYSDEC STORMWATER MANAGEMENT DESIGN MANUAL.
4. PROPER MAINTENANCE OF THE BIORETENTION FACILITY SHALL BE ADHERED TO. THIS INCLUDES, BUT IS NOT LIMITED TO PROVIDING A STONE DROP (PEA GRAVEL DIAPHRAGM) OF AT LEAST SIX INCHES AT THE INLET, RE-MULCHING AREAS DEVOID OF MULCH ANNUALLY, AND REPLACING DEAD OR DISEASED PLANT MATERIAL.
5. BIORETENTION FACILITY TO BE PLANTED WITH NATIVE SHRUBS, GRASSES, WILDFLOWERS, GROUNDCOVERS, ETC. AS PER THE LATEST VILLAGE OF NORTH HAVEN RECOMMENDED NATIVE PLANTS.



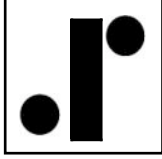
- NOTES:**
1. BRING ALL DRYWELLS TO GRADE; FRAME & GRATE - CAMPBELL #1196 OR EQUAL FRAME & COVER - CAMPBELL #1030 OR EQUAL CURB INLET - CAMPBELL #2617 OR EQUAL.
 2. CONTRACTOR SHALL WRAP DRYWELL RING WITH FILTER FABRIC AS ORDERED BY ENGINEER.
 3. 6" MIN. PENETRATION INTO A VIRGIN STRATA OF SAND AND GRAVEL.



03/13/2023	RCW	TOS CPF APPLICATION	VAG
DATE	BY	DESCRIPTION	APPRVD
REVISIONS			
NORTH HAVEN MANOR ASSOCIATION, INC.			
P.O. BOX 24 SAG HARBOR, N.Y. 11963			
ROADWAYS & DRAINAGE FACILITIES			
CEDAR AVENUE & BAY VIEW DRIVE NORTH, SAG HARBOR, NY 11963			
DRAINAGE ANALYSIS			
THE RAYNOR GROUP, P.E. & L.S., PLLC SURVEYORS CIVIL ENGINEERS SITE PLANNERS DEERFIELD GREEN WATERMILL, NY 11976 P.O. BOX 720 (631)726-7600			
DESIGNED BY: VAG	SCALE: 1" = 50'	DWG. NO.	
DRAWN BY: RCW	DATE: 01/12/2023	C-1	
APPROVED BY: VAG	FILE NO.: 3433		

Appendix B

Drainage Report



The Raynor Group, P.E. & L.S. PLLC

Civil Engineers and Land Surveyors

Deerfield Green
860 Montauk Highway

P.O. Box 720
Water Mill, New York 11976
Phone: (631) 726-7600
Fax: (631) 726-4378

Reports
Design
Environmental Planning

Michael J. Raynor, L.S.
Vincent A. Gaudiello, P.E.

John J. Raynor, P.E., L.S.
Senior Consultant

Richard J. Van de Kieft
(1947 - 2011)

March 13, 2023

Susan K. Reed, President
North Haven Manor Association, Inc.
P.O. Box 24
Sag Harbor, NY 11963

Regarding: North Haven Manor – Drainage Analysis
Cedar Avenue & Bay View Drive North, Sag Harbor, New York
S.C.T.M. Parcel No. 0901-003.00-01.00-059.000

Dear Board Members:

Reference is made to our site inspection and discussions with Susan Reed and Peter Lynch concerning the stormwater runoff and ponding condition in the vicinity of Cedar Avenue and Bay View Drive North.

Our comments and observations are as follows:

On October 18, 2022, we inspected the roadways and reviewed the stormwater runoff patterns along portions of Cedar Avenue and Bay View Drive North. The area of concern is where the two (2) roadways intersect and is adjacent to 31 Cedar Avenue and 5 Bay View Drive. We also observed the construction/development that is being performed at 31 Cedar Avenue.

Based on our field observations and our review of available topographic information, we estimate that the drainage tributary area for the volume stormwater runoff that flows to the subject area is approximately 5.9 acres and has the potential to flow overland through residential parcels and ultimately into Shelter Island Sound. The tributary area includes approximately 600 linear feet of the Cedar Avenue roadway, 500 linear feet of the Bay View Drive roadway, portions of the Hawthorne Avenue and Hawthorne Place roadways and six (6) of the adjacent residential parcels. The tributary area also includes an open space area owned by the Association. The tributary area is shown on the attached Drainage Analysis (Dwg. No. C-1) last dated March 13, 2023.

There are minimal drainage improvements/facilities within the roadways of the defined tributary area for containing stormwater runoff. Accordingly, stormwater flow from the subject tributary area has the potential to negatively impact several residential parcels as well as the water quality of Shelter Island Sound.

Using the design criteria from the Town of Southampton Road and Drainage Standards, including a 2-inch storm event over the tributary area, we calculate the required volume of stormwater containment for the area to be between 10,000 cubic feet and 16,000 cubic feet. The required volume of stormwater containment for just the surface area of the roadways within the tributary area would be approximately 6,700 cubic feet.

In assessing the stormwater runoff and ponding condition for the area, we recommend that a combination of grading, drainage structure and green infrastructure improvements be considered at the intersection of Cedar Avenue and Bay View Drive North as shown on Dwg No. C-1. The Association owns an area (right-of-way) between 27 Cedar Avenue and 31 Cedar Avenue that could be improved with a bio-retention facility that outfalls into standard subsurface drainage leaching structures. The bio-retention area would serve as a means of filtering the stormwater before it is transferred into the drainage leaching structures, which discharge into the ground (groundwater) and surface waters. We believe that installing and performing the drainage improvements in the vicinity of the ponding area (low) would be the most efficient and cost-effective way in containing the stormwater runoff as opposed to installing drainage structures at specific upland locations along the roadways within the tributary area.

Our estimated budget cost for the drainage improvements that would be needed to provide approximately 6,000 cubic feet of stormwater containment, including restoration and maintenance, is approximately \$60,000.00.

At this time, we will make ourselves further available to review and discuss the details of the drainage design including the preparation of plans and specifications for the work.

We note that should the Association decide to undertake and perform the drainage improvements, the work should be coordinated with the development and construction being performed on 31 Cedar Avenue.

Should you have any questions regarding our comments and/or recommendations, please do not hesitate to contact us.

Very truly yours,



Vincent A. Gaudiello, P.E.

VAG
Enc.

Appendix C

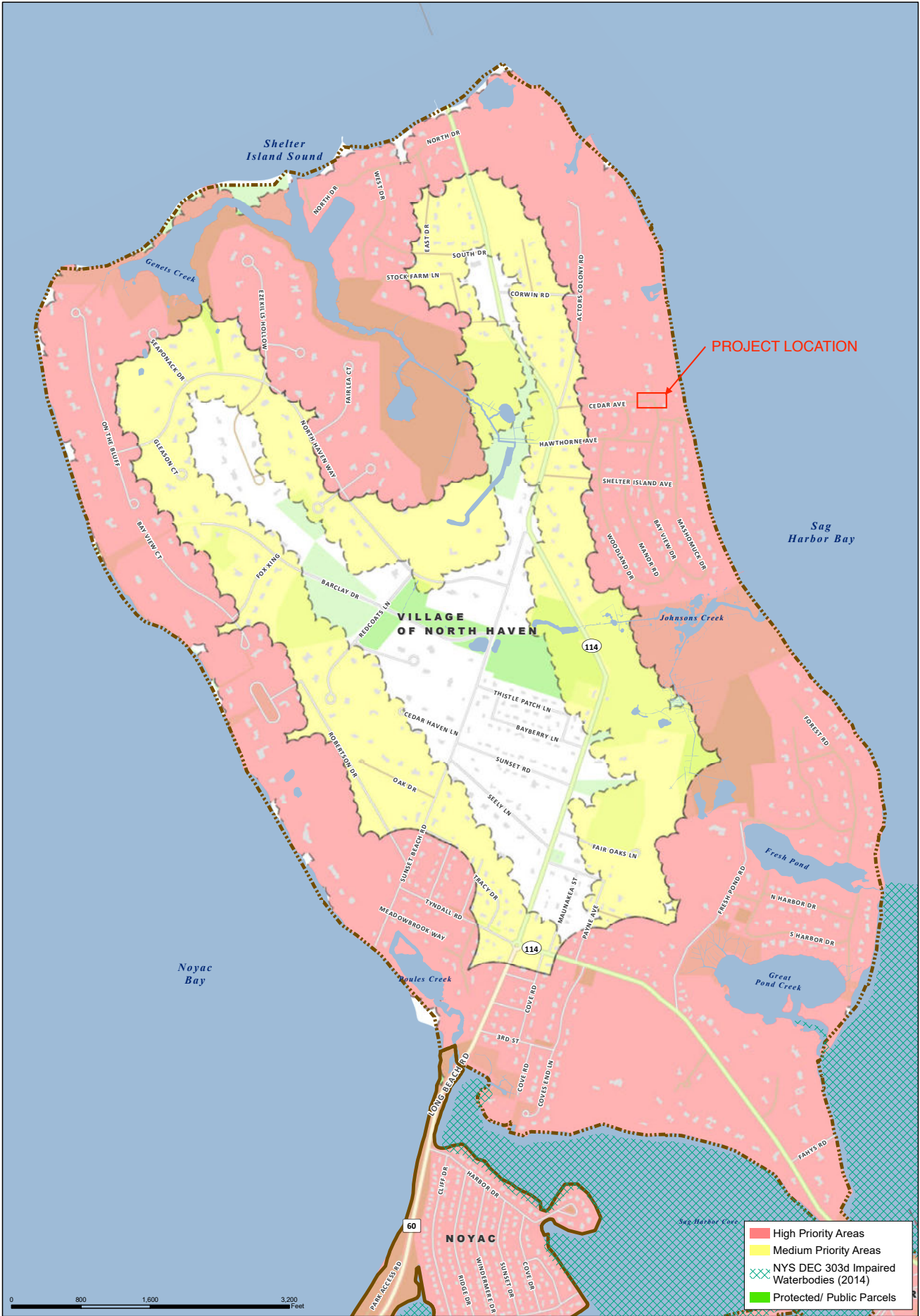
Existing Conditions Photos





Appendix D

Location Map



Town of Southampton CPF Water Quality Improvement Project Plan

VILLAGE OF NORTH HAVEN

Suffolk County Real Property Tax Service
 COPYRIGHT 2016, COUNTY OF SUFFOLK, N.Y.
 Real Property Taxmap parcel linework used with permission of
 Suffolk County Real Property Tax Service Agency (R.P.T.S.A.)



**Location Map
To Accompany
Town of Southampton CPF
Water Quality Improvement Program Application
For Property of
North Haven Manor Association, Inc.
Situate
Village of North Haven
Town of Southampton
Suffolk County, NY**

Appendix E

EPA Spreadsheet Tool for Evaluating Pollutant Load

1. Total load by subwatershed(s)

Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	E. coli Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	E. coli Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with BMP)	E. coli Load (with BMP)	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction	%E. coli Reduction
	lb/year	lb/year	lb/year	t/year	Billion MPN/yr	lb/year	lb/year	lb/year	t/year	Billion MPN/yr	lb/year	lb/year	lb/year	t/year	Billion MPN/yr	%	%	%	%	%
W1	39.8	7.1	147.8	1.0	0.4	3.7	1.0	5.4	0.0	0.0	36.1	6.0	142.4	1.0	0.4	9.3	14.8	3.7	3.5	0.0
Total	39.8	7.1	147.8	1.0	0.4	3.7	1.0	5.4	0.0	0.0	36.1	6.0	142.4	1.0	0.4	9.3	14.8	3.7	3.5	0.0

Appendix F

State Environmental Quality Review Act (SEQRA)
Short Environmental Assessment Form (EAF)

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.

Part 1 – Project and Sponsor Information			
Name of Action or Project: North Haven Manor Association Inc. Stormwater Improvement			
Project Location (describe, and attach a location map): The northeast corner of the intersection of Bay View Drive North and Cedar Avenue.			
Brief Description of Proposed Action: The project sponsor is seeking funding for drainage improvements in order to remedy on-going stormwater ponding and overland runoff into the waters of Shelter Island Sound. The proposed action, which is located within privately owned street rights-of-way, includes a combination of regrading, creation of a grass filter strip and a bioretention facility and installation of five (5) stormwater leaching pools that are 8' diameter x 12' deep to provide filtering treatment of stormwater runoff.			
Name of Applicant or Sponsor: North Haven Manor Association Inc. Susan Reed, President		Telephone: 917-327-4000	
		E-Mail: susankreed1@gmail.com	
Address: P.O. Box 24			
City/PO: Sag Harbor		State: New York	Zip Code: 11963
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"/>
		<input checked="" type="checkbox"/>	<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: Town of Southampton CPF Water Quality Improvement Program		NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3. a. Total acreage of the site of the proposed action? b. Total acreage to be physically disturbed? c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>5.9</u> acres <u>0.06</u> acres <u>9.6</u> acres	Tributary Area Bioretention Facility Street rights-of-way and common areas of subdivision
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): <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 checked="" type="checkbox"/>	<input 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 <input type="checkbox"/>	YES <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 <input checked="" type="checkbox"/>	YES <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 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements? N/A If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO <input type="checkbox"/>	YES <input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? N/A If No, describe method for providing potable water: _____ _____	NO <input type="checkbox"/>	YES <input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? N/A If No, describe method for providing wastewater treatment: _____ _____	NO <input type="checkbox"/>	YES <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? 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 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input 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? The adjacent properties to the east front on Shelter Island Sound. 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 <input type="checkbox"/> <input checked="" type="checkbox"/>	YES <input checked="" type="checkbox"/> <input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
<input type="checkbox"/> Shoreline	<input checked="" type="checkbox"/> Forest	<input type="checkbox"/> Agricultural/grasslands
<input type="checkbox"/> Wetland	<input type="checkbox"/> Urban	<input type="checkbox"/> Suburban
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES
If Yes,	<input type="checkbox"/>	<input type="checkbox"/>
a. Will storm water discharges flow to adjacent properties? The project sponsor is seeking to remedy on-going stormwater ponding and overland runoff into the waters of Shelter Island Sound.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	<input type="checkbox"/>	<input type="checkbox"/>
If Yes, briefly describe: The action includes a combination of regrading, creation of a bioretention facility and installation of five (5) stormwater leaching pools that are 8' diameter x 12' deep to provide filtering treatment for stormwater runoff.		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	NO	YES
If Yes, explain the purpose and size of the impoundment: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	NO	YES
If Yes, describe: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	NO	YES
If Yes, describe: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor/name: <u>Susan Reed</u>		Date: <u>3-14-2023</u>
Signature: <u>Susan Reed</u>		Title: <u>President North Haven Manor Association</u>

Appendix G

Project Budget Estimate

NORTH HAVEN MANOR ASSOCIATION
CEDAR AVENUE & BAY VIEW DRIVE NORTH WATER QUALITY IMPROVEMENT PROJECT

Construction Cost Estimate

Description of Item	Unit of Measurement	Estimated Quantity	Estimated Unit Cost	Extended Amount
Clearing & Grubbing	LS	1	\$5,000.00	\$5,000.00
Unclassified Excavation (Unsuitable Subgrade Soils for Drainage)	CY	250	\$15.00	\$3,750.00
Pea Gravel	CY	4	\$100.00	\$400.00
Crushed Gravel	CY	35	\$75.00	\$2,625.00
Mulch	CY	6	\$50.00	\$300.00
Planting Soil	CY	90	\$50.00	\$4,500.00
Smooth Interior Perforated Pipe (6-inch Diameter)	LF	23	\$15.00	\$345.00
Smooth Interior Corrugated Polyethylene Pipe (15-inch Diameter)	LF	40	\$30.00	\$1,200.00
Leaching Basin -8-foot Diameter x 12 feet Deep	Each	5	\$5,000.00	\$25,000.00
Grading, Furnish & Spread Topsoil and Seed	SY	55	\$15.00	\$825.00
Catch Basin (4'-0" x 4'-0" x 4'-0")	Each	1	\$3,000.00	\$3,000.00
Filter Fabric	SF	600	\$2.00	\$1,200.00
Bioretention Plantings	LS	1	\$6,000.00	\$6,000.00
Maintenance/Cleaning of Bioretention Facility (Semi-Annual)	LS	2	\$2,000.00	\$4,000.00
TOTAL ESTIMATED CONSTRUCTION COST				\$58,145.00

Prepared 03/13/2023 by The Raynor Group, P.E. & L.S., PLLC

Appendix H

Recommended Native Plants

Village of North Haven

Recommended Native Plants

NATIVE TREES

- American Beech (*Fagus grandifolia*)
- American Holly (*Ilex opaca*)
- American Hornbeam (*Carpinus caroliniana*)
- American Linden (*Tilia Americana*)
- Atlantic White Cedar (*Chamaecyparis thyoides*)
- Black Cherry (*Prunus serotina*)
- Black Oak (*Quercus velutina*)
- Black Birch (*Betula lenta*)
- Black Gum (*Nyssa sylvatica*)
- Chestnut Oak (*Quercus prinus*)
- Common Alder (*Alnus serrulata*)
- Eastern Red Cedar (*Juniperus virginiana*)
- Flowering Dogwood (*Cornus florida*)
- Gray Birch (*Betula populifolia*)
- Hackberry (*Celtis occidentalis*)
- Hawthorne (*Crataegus crusgalli*)
- Ironwood (*Carpinus caroliniana*)
- Persimmon (*Diospyros virginiana*)
- Pignut Hickory (*Carya glabra*)
- Pitch Pine (*Pinus rigida*)
- Post Oak (*Quercus stellata*)
- Quaking Aspen (*Populus tremuloides*)
- Red Oak (*Quercus rubra*)
- Red Maple (*Acer rubrum*)
- Sassafras (*Sassafras albidum*)
- Scarlet Oak (*Quercus coccinea*)
- Shadbush (*Amelanchier canadensis*)
- Speckled Alder (*Alnus rugosa*)
- Swamp Magnolia (*Magnolia virginiana*)
- Swamp White Oak (*Quercus bicolor*)
- Sweet Bay Magnolia (*Magnolia virginiana*)
- Sweet Gum (*Liquidambar styraciflua*)
- Tulip Tree (*Liriodendron tulipifera*)
- White Oak (*Quercus alba*)
- White Ash (*Fraxinus americana*)
- Witch Hazel (*Hamamelis virginiana*)

NATIVE SHRUBS

- American Elder (*Sambucus canadensis*)
- Arrowwood (*Viburnum dentatum*)
- Bayberry (*Myrica pensylvanica*)
- Black Chokeberry (*Aronia melanocarpa*)
- Black Haw (*Viburnum prunifolium*)
- Black Huckleberry (*Gaylussacia baccata*)
- Fetterbush (*Leucothoe racemosa*)
- Highbush Blueberry (*Vaccinium corymbosum*)
- Inkberry (*Ilex glabra*)
- Maleberry (*Lyonia ligustrina*)
- Maple-leaved Viburnum (*Viburnum acerifolium*)
- Mountain Laurel (*Kalmia latifolia*)
- Nannyberry (*Viburnum lentago*)
- Northern Arrowwood (*Viburnum recognitum*)
- Pasture Rose (*Rosa virginiana*)
- Pussy Willow (*Salix discolor*)
- Red Chokeberry (*Aronia arbutifolia*)
- Scrub Oak (*Quercus ilicifolia*)
- Shadbush (*Amelanchier canadensis*)
- Shining Sumac (*Rhus copallina*)
- Sheep Laurel (*Kalmia angustifolia*)
- Steeplebush (*Spirea latifolia*)
- Staggerbush (*Lyonia mariana*)
- Swamp Rose (*Rosa palustris*)

NATIVE SHRUBS (Continued)

- Swamp Azalea (*Rhododendron viscosum*)
- Sweetfern (*Comptonia peregrina*)
- Sweet Pepperbush (*Clethra alnifolia*)
- Spicebush (*Lindera benzoin*)
- Virginia Rose (*Rosa virginiana*)
- Winterberry (*Ilex verticillata*)
- Witherod (*Viburnum nudum*)

NATIVE GRASSES, WILDFLOWERS, GROUNDCOVERS, ETC.

- Blue-eyed Grass (*Sisyrinchium angustifolium*)
- Bluestem Grass (*Andropogon scoparium*)
- Broom Sedge (*Andropogon virginicus*)
- Bearberry (*Arctostaphylos uva-ursi*)
- Beebalm (*Monarda didyma*)
- Bergamot (*Monarda fistulosa*)
- Butterfly Weed (*Asclepias tuberosa*)
- Blazing Star (*Liatris spicata*)
- Blue Lupine (*Lupinus perennis*)
- Birds Foot Violet (*Viola pendata*)
- Bracken Fern (*Pteridium aquilinum*)
- Canada Mayflower (*Maianthemum canadense*)
- Cardinal Flower (*Lobelia cardinalis*)
- Common Hairgrass (*Deschampsia flexuosa*)
- Cinnamon Fern (*Osmunda cinnamomea*)
- Golder Heather (*Hudsonia ericoides*)
- Horsemint (*Monarda punctata*)
- Hay-scented Fern (*Dennstaedtia punctilobula*)
- Lowbush Blueberry (*Vaccinium angustifolium*)
- New England Aster (*Aster novae-angliae*)
- New York Aster (*Aster novi-belgii*)
- New York Fern (*Dryopteris cristata*)
- NY Ironweed (*Vernonia noveboracensis*)
- Pennsylvania Sedge (*Carex pensylvanica*)
- Royal Fern (*Osmunda regalis*)
- Sensitive Fern (*Onoclea sensibilis*)
- Stiff Aster (*Aster linariifolius*)
- Sweet Goldenrod (*Solidago odora*)
- Trailing Arbutus (*Epigaea repens*)
- Wild Indigo (*Baptista tinctorial*)
- Wintergreen (*Gaultheria procumbens*)
- Wild Columbine (*Aquilegia canadensis*)
- Wild Geranium (*Geranium maculatum*)

Appendix I

Letters of Support

March 13, 2023

Mr. Jay Schneiderman, Supervisor
Town of Southampton
116 Hampton Road
Southampton, New York 11968

Re: North Haven Manor Association CPF Grant Application

Dear Supervisor Schneiderman and Town Councilmen & Councilwoman,

We, the Board of Directors of the North Haven Manor Association, are writing in support of the grant application that North Haven Manor is making to the Community Preservation Fund of the Town of Southampton to support a project that will remediate the drainage problems at the intersection of Cedar Avenue and Bay View Drive North in our neighborhood—and protect Sag Harbor Bay from pollution runoff.

We unanimously ask that the Town of Southampton and the Community Preservation Fund approve the grant application for this project.

Sincerely,



Susan Reed, President, on behalf of the Board

John Healy, Vice-President
Peter Lynch, Treasurer
Terie Diat, Co-Secretary
Gail Fiordaliso, Co-Secretary
Sally Jenkins
Larry Baum
Ralph Sica


March 11, 2023

To Whom it May Concern,

I, Kelly Klein , live at 31 Cedar Avenue, I am aware of the grant application North Haven Manor is making to the Community Preservation Fund of the Town of Southampton to support a project that will remediate the drainage problems in this area and protect Sag Harbor Bay.

Because my property is contiguous to the area of issue, I would like to register my support for the application and ask that the Town of Southampton and the Community Preservation Fund to approve the grant application for this project.

Sincerely,



Kelly Klein