

# **DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**Strong's Yacht Center - Proposed Boat Storage Buildings**

**5780 West Mill Road, Hamlet of Mattituck**

**Town of Southold, Suffolk County, New York**

## **Lead Agency**

Town of Southold Planning Board  
Town Hall Annex  
54375 State Route 25  
Southold, New York 11971  
(631) 765-1938

## **Prepared By**



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## **Applicant**

Strong's Yacht Center, LLC.  
5780 West Mill Road  
Mattituck, NY 11952

December 2021

Revised November 2022

Date by which comments must be submitted: [To be Completed After Acceptance]

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**5780 West Mill Road, Hamlet of Mattituck**

**Town of Southold, Suffolk County, New York**

**Lead Agency:** Town of Southold Planning Board  
Town Hall Annex  
54375 Main Road  
Southold, New York 11971  
(631) 765-1809

**Applicant:** Strong's Yacht Center, LLC.  
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**Project Location:** 32.96-acre parcel  
5780 West Mill Road  
Hamlet of Mattituck, Town of Southold  
Suffolk County, New York  
SCTM Nos: 1000-106-6-10 and 13.4

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## **EXECUTIVE SUMMARY**

### **Introduction**

This document is a Draft Environmental Impact Statement (DEIS) prepared in accordance with the State Environmental Quality Review Act (SEQRA) and its implementing regulations at 6 NYCRR Part 617 for the action contemplated herein and is based upon the Amended Final Scope issued by the Town of Southold Planning Board (the "Planning Board"), as lead agency, on April 5, 2021 and the Planning Board's Clarifications and Comments in Response to Final Scope Amendment from the Applicant dated same. This DEIS evaluates the potential adverse impacts associated with the proposed action, which consists of the development of two boat storage buildings of 52,500 square feet (SF) and 49,000 SF, along with associated improvements including water supply, sewage disposal, site grading and drainage, landscaping, and lighting, to support the existing operations of the Strong's Yacht Center (SYC). The proposed buildings would be situated on a 32.96±-acre parcel located on the west side of Mattituck Creek, which is zoned Marine II (M-II) and Residential Low-Density A (R-80), located at 5780 West Mill Road in the hamlet of Mattituck (the "subject property"). The subject property is designated Suffolk County Tax Map (SCTM) No. 1000-106-6-10 and 13.4.

This DEIS evaluates the following issues, as set forth in the Amended Final Scope dated April 5, 2021, issued by the Planning Board:

- Soils and Topography
- Water Resources
- Flooding and Climate Change
- Ecological Resources
- Consistency with Community Plans and Studies
- Human Health
- Transportation
- Aesthetic Resources
- Community Character
- Open Space and Recreation
- Noise
- Air Quality
- Social and Economic Impacts
- Construction-Related Impacts
- Archaeological and Cultural Resources

This Executive Summary is designed solely to provide an overview of the proposed action, a brief summary of the potential adverse impacts identified, and mitigation measures proposed as well as alternatives considered. Review of the Executive Summary is not a substitute for the full evaluation of the proposed project performed in Sections 1.0 through 4.0 of this DEIS and the alternatives analysis performed in Section 5.0 of this DEIS.

### **Description of the Proposed Project**

The proposed project would be undertaken at the existing SYC property, which is currently comprised of boat slips with associated ramps and fueling and developed with seven (7) buildings, including one residence and six (6) buildings to support the operation of the marina, sales, maintenance, dockage, and storage of boats. The existing marina includes approximately 45 boat slips and two liftwells with travelifts capable of hauling 50-ton and 85-ton vessels. The marina currently accommodates boats and yachts ranging from 18-to-133± feet in length. In the winter months, SYC provides both indoor and outdoor storage for 96 boats and 40 yachts. SYC also hosts the Cornell Cooperative Extension (CCE) Floating Upwelling Systems (FLUPSY) in dockside areas that are used for shellfish harvesting.

The proposed action includes the construction of two, one-story buildings of 52,500 SF and 49,000 SF for the purpose of providing indoor winter storage of larger yachts, up to 86 feet in length. Each building would be constructed with radiant heating for the purpose of climate-controlled (heated) space, which is essential for maintaining electrical systems in the types of vessels to be stored. Currently, the larger boats that utilize local waters in the peak season are being transported to warmer climates in the winter months due to a lack of adequate storage in the Town of Southold and across Long Island. Based upon an average yacht size of 60 feet in length, it is estimated that approximately 88 yachts could be stored within the proposed buildings; all of which would arrive to the site via Mattituck Inlet and Mattituck Creek. Due to the height and length of the expected boats to be stored, the existing buildings at SYC cannot be used. Specifically, the height of the doors on the existing buildings are approximately 24 feet. The current yachting market is producing both longer and taller vessels with the height of a typical yacht at 35± feet. The proposed buildings would be constructed with door and ceiling heights capable of accommodating such vessels.

It is anticipated the boat owners would be existing customers who currently dock at SYC or Strong's Water Club, or new yacht customers from the surrounding Southold community, as well as other owners on Long Island, Westchester County, and in the States of Connecticut and New Jersey. In the fall season, the yachts would be transported to SYC via Mattituck Inlet and be delivered by either SYC staff or be captained by the yacht owners or a licensed boat captain.

The proposed two storage buildings would be placed to the west of the existing Buildings 7 and 8 and are depicted as proposed Building 9 and Building 10 on the site plans. In order to construct the proposed buildings at an elevation equivalent to the existing marina buildings and adjacent boat lift, approximately 4.59 acres of material would be excavated and removed to accommodate the proposed action (the "Construction Excavation Area"). Upon clearing and material removal, the elevations would be reduced from an average of 50 feet above mean sea level (AMSL) to 10 feet AMSL. The proposed first floor elevation (FFE) of each proposed building is 10 feet AMSL. This removal of material to reduce the elevation is required in order to transport yachts to and from the water via a boat lift or "travelift" as the size and weight of these boat types cannot be transported via a traditional boat trailer and vehicle.

Approximately 134,921 cubic yards (CY) of material would be removed from the Construction Excavation Area, which is proposed to occur in two phases. Phase 1 includes approximately 123,000± CY of material and Phase 2 is the remaining 12,000± CY of material. To accommodate the excavation and removal of material in Phase 1, the proposed action includes the construction of a 1,454±-foot haul road from the Construction Excavation Area to West Mill Road. The proposed haul road would vary in width from 16± feet to 30± feet and would be partially situated on an existing unpaved road through the R-80 portion of the subject property. At the conclusion of construction, the haul road is proposed to remain in place and would function as a gated emergency access to SYC, if required. Phase 2 would be accommodated via the existing access driveway off West Mill Road.

The proposed action also includes the construction of an Evergreen Macro Gravity Retaining Wall System (hereinafter "Evergreen concrete retaining wall"). The proposed Evergreen concrete retaining wall would be constructed along the west side of Buildings 9 and 10, the north side of Building 10, and southeast of Building 9, to stabilize the area excavated to accommodate the proposed action and correct existing stabilization issues to the west of Buildings 7 and 8, that have been caused by unconsolidated dredge spoils deposited in the past by the USACOE. The proposed wall consists of precast concrete modular units that are fabricated off-site and are shipped for assembly on-site. The modular units are then placed in pre-determined locations to lock together and create a wall with a safety factor of greater than 2.0, with 1.5 being the code minimum. Once in place and backfilled, seeding and use by bird species promote growth in the trays that are built into the wall to create a "green" wall over a period of two-to-three years.

Based upon a Tree Inventory and Tree Removal Plan completed by Dr. William Bowman of Land Use Ecological Services, Inc. (LUES), the subject property includes 2,408 trees with 1,054 trees (43.72 percent) on the R-80 zoned portion of the subject property and 1,354 trees (56.2 percent) on the M-II zoned portion of the subject property. In total, the proposed action would require the removal of 634 trees (26.3 percent) with 15 trees

(0.62 percent) from the R-80 zoned portion of the subject property and 619 trees (25.7 percent) from the M-II zoned portion of the subject property. Approximately 73 percent (1,774 trees in total) of the total trees at the subject property would be retained with 1,039 trees (43.1 percent) retained on the R-80 zoned portion of the subject property and 735 trees (30.5 percent) retained on the M-II zoned portion of the subject property. As part of the proposed action, there would be a replanting of 135 trees (95 Pitch Pines and 40 small trees, such as Staghorn Sumac and Shadbush). Additionally, SYC would contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee.

There are currently 23 stalls provided on-site, with the proposed action including the creation of 34 new parking stalls on-site by striping gravel-surfaced areas that are currently used for parking but are not formally marked. Upon implementation of the proposed action, the available parking would be increased from 23 stalls to 57 stalls. The proposed action would not modify on-site circulation.

All sanitary waste is currently accommodated by two, individual on-site sewage disposal systems -- one for the existing residence and the second for the SYC operation. Upon implementation of the proposed action, the total projected sanitary waste generation would increase by 18± gpd from 1,058± gpd to 1,076± gpd (based on the SCDHS design flow factors of 0.06 gpd/sf for Non-Medical Office Space, 0.04 gpd/SF for General Industrial Use, and 10 gpd/boat slip for Marina, and 300 gpd for single-family residential use). As part of the proposed action, the existing sanitary system that serves the residence would remain, and two (2) Innovative and Alternative On-Site Wastewater Treatment System (I/A OWTS) would be installed (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings).

The proposed action also includes an extension of the Suffolk County Water Authority (SCWA) public water main from Naugles Drive for on-site connection and installation of a new hydrant at the site entrance on West Mill Road. As part of the water supply improvements, two of the existing four on-site wells would be converted for irrigation supply only and the remaining two would remain inactive.

The overall land area that would be affected by the proposed action is approximately 6.51± acres, which includes the upland area to be excavated and/or cleared as well as those land areas on the existing SYC facility where infrastructure improvements would be undertaken (hereinafter, the "Project Area"). As part of the proposed action, a stormwater management system would be installed and would consist of on-site leaching pools and French drains designed to accommodate and recharge stormwater runoff from the Project Area as well as off-site contributing areas. The proposed stormwater management plan is designed to accommodate a two-inch rain event, in accordance with Town of Southold regulations (Chapter 236 Stormwater Management).

## **Potential Impacts**

### **Soils and Topography**

According to the US Department of Agriculture (USDA) *Soil Survey of Suffolk County, New York* and the USDA Natural Resources Conservation Service Web Soil Survey for Suffolk County, New York, the subject property is comprised of seven soil types: Carver and Plymouth sands, 15 to 35 percent slopes (CpE), Fill land dredged material (Fd), Plymouth loamy sand, 3 to 8 percent slopes (PIB), Plymouth loam sandy, 8 to 15 percent slopes (PIC), Riverhead sandy loam, 0 to 3 percent slopes (RdA), Riverhead sandy loam, 3 to 8 percent slopes (RdB), Tidal Marsh (Tm) and Water. However, soils within the Project Area are limited to soils mapped as CpE, PIB, PIC, RdA, RdB, and Tm. Based on the *Soil Survey*, there are select soils within the Project Area that have moderate-to-severe engineering limitations for the development of streets or parking lots due to slopes (PIB and RdB soils are noted as moderate and PIC soils are noted as severe), moderate to severe limitations for sanitary disposal systems due to slopes and soils that have rapid permeability (PIC are noted as moderate and CpE soils are noted as severe), and severe limitations for landscaping due to slopes (CpE) and a sandy surface layer (PIC). All of the noted limitations associated with slope and sandy surface layer would be overcome with

the proposed excavation and regrading of the Project Area to a flat elevation. Regarding the potential for rapid permeability, the proposed new sanitary system would be situated in the PIC soils. However, soil borings have been performed by McDonald Geoscience for both sanitary systems and there were no limitations identified. Additionally, as part of a Geotechnical Engineering Assessment performed by PWGC, the drainage ability of on-site soils has been evaluated and the drainage characteristics have been determined to be good, with a limited area of soil near the proposed Building 9 having a high concentration of fines. Soil mixing would be performed. It is noted that there are no sanitary disposal systems to be located in this area. Overall, based on the above, there are no engineering limitations that would impact the proposed development or result in significant adverse impacts associated with the development of the Project Area.

The Geotechnical Engineering Assessment and associated Memo Report included soil characterization in the areas of proposed excavation and the permanent retaining wall, and also evaluated the proposed cut material with an approximate breakdown of the volumes of the various soil deposits, structural design, drainage, site preparation, slope stability and vibrations during construction. Based on the Geotechnical Engineering Assessment, the soils have been determined to be structurally suitable for the proposed buildings and retaining wall, with no slope stability issues. There are also no vibration impacts expected from soil excavation or construction activities.

Of the proposed 135,000± CY of cut, approximately 63 percent of the material has been identified as quality sand, with the remaining 37 percent of the material classified as poor to fair. Upon excavation and loading on to trucks, the material in its raw form would be transported to a facility for stockpiling and processing, and eventually sold as a finished product to the ultimate end user. Such uses could be beach replenishment, aggregate for roadway construction, pre-cast concrete products, etc. Material may also be transported directly to a local site for re-use. Given that this project is still in the environmental review process, and the ultimate re-use facility or location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations.

An Erosion and Sediment Control Plan has been developed for the proposed development. The specific methods and materials employed in the installation and maintenance of erosion control measures would comply with the *New York State Standard and Specifications for Erosion and Sediment Control, Blue Book* (November 2016).

Based on the Grading and Drainage Plan, the proposed grading program would reduce average grade from 50 feet AMSL to 10 feet AMSL within the Phase 1 Construction Excavation Area, and from 47 feet AMSL to 10 feet AMSL in the Phase 2 Construction Excavation Area. As provided by the project engineer, the existing slopes within the Project Area would be modified to reduce steep sloped areas (i.e., those greater than 15 percent) by 50 percent. To stabilize the slopes within the Project Area and to correct existing slope instability due to unconsolidated materials, an evergreen concrete retaining wall of approximately 875 feet in length and of varying height is proposed to the north and west of the proposed boat storage buildings. Portions of the retaining wall would be vegetated for a visually appealing wall that serves to blend with the landscape. Additionally, upland of the retaining wall, newly landscaped areas and erosion control blankets would stabilize soils. Overall, based on the above, no significant adverse impacts associated with modifications in topography would be expected.

## **Water Resources**

### Groundwater

Based on published data by the US Geological Survey, as well as soil borings conducted by McDonald Geoscience in September 2018 and by PWGC in June 2021, groundwater elevation at the subject property is approximately 3 feet AMSL. As the topography on the site ranges from approximately 6 feet to 50 feet AMSL, the depth to groundwater ranges from approximately 3 feet below grade surface (bgs) to 47 feet bgs. The subject property is located in Hydrogeologic Zone IV, which encompasses the North Fork, Shelter Island, and the northern and

eastern portion of the South Fork. Zone IV is characterized by shallow flow systems that discharge to streams and marine waters.

A numerical 3-D groundwater modeling assessment and report has been prepared to address the potential impacts from the soil excavation on-site that the Amended Final Scope identified as “potentially capable of affecting the hydrology and zones of influence for nearby private wells, and the quantity of water available after excavation is completed.” The groundwater model was employed rather than taking monthly water level observations over the course of a year because the model can reliably predict groundwater levels and aquifer responses under numerous different conditions and scenarios. Also, rather than one year of data, multiple years of groundwater level data were used to construct and calibrate the model (in this particular case some of the local monitoring wells used to construct the model had monthly data going back as far as 1975), which allows for more long-term averages to be used. This also allows for the identification of anomaly years, such as when drier or wetter conditions may prevail. Longer term groundwater trends (rising or falling water levels and potential causes) can be observed as well when looking back over many years as opposed to a single year.

Based on the 3-D groundwater modeling assessment, as the proposed site excavation would take place entirely above the water table and the proposed site modifications would only slightly add more water to the local aquifer system due to the increased recharge post construction, the proposed site excavation would not have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence. Additionally, the proposed connection to the SCWA water main and withdrawing only irrigation supply on-site, would reduce the water to be withdrawn from the aquifer post-construction. Less water withdrawal has multiple benefits with regards to the site having less of an influence on neighboring wells, and on saltwater intrusion and upconing.

Regarding the impact on quantity and quality, the 3-D groundwater model included particle tracking from the subject property where particles were released from beneath the proposed site excavation and tracked forward until they reached a termination point. Groundwater recharging beneath the Construction Excavation Area was shown to flow towards Mattituck Creek and was not intercepted by any of the domestic supply wells that are in proximity to the subject property. As such, the model demonstrates that the neighboring wells would not be impacted with respect to groundwater quality as a result of the proposed site excavation.

Shallow groundwater beneath the subject property flows eastward towards Mattituck Creek and the United States Geological Survey (USGS) data supports this flow direction as does the 3-D groundwater model flow simulations. Under the post excavated conditions, a slight increase in the water table of 0.01 feet is predicted immediately beneath the proposed Construction Excavation Area due to the increase in stormwater recharge.

The Groundwater Modeling Report evaluated whether the proposed excavation would alter the saltwater interface in a way that may cause saltwater intrusion into the aquifer or nearby wellhead zones of influence. The difference between the excavated and unexcavated site conditions being that the surface elevations at the location of the proposed excavation are decreased from between 25 to 50 feet AMSL to 5 feet AMSL (assumed foundations/footings) and the recharge occurring within the limits of the proposed excavation is increased from 0.0085 feet/day to 0.0101 feet/day. Slightly increasing the recharge across the area of the proposed site excavation increases the amount of freshwater being received by the aquifer and in turn would have the effect of causing the saltwater interface to migrate seaward and downward. Under the excavated site conditions, the water table is expected to rise 0.01± feet due to the increased recharge, resulting in a saltwater interface that is approximately 0.40 feet deeper and a freshwater lens that is 0.41 feet thicker. As such, saltwater intrusion is not expected to occur as a result of the proposed site excavation, but just the opposite is predicted. With less water withdrawal from the aquifer and an increase in recharge, there is a beneficial impact with regards to the saltwater interface position beneath the site.

As part of the proposed action, an extension of the public water main for connection to the SCWA is proposed. Consultations were undertaken with SCWA and in correspondence dated October 20, 2017, public water has been confirmed to be available to the subject property through an extension of the existing water main located 765± feet west of the subject property on Naugles Drive. Accordingly, as part of the proposed action, the water

main extension would be installed from Naugles Drive through West Mill Road to the main entrance to SYC. The water main would be installed along the western portion of the marina and service the existing buildings, single-family residence, and the two proposed boat storage buildings. As confirmed by SCWA, the extension of the public water main would also allow for existing landowners to connect to the public supply system, by request to the SCWA. Upon implementation of the proposed action, the two existing on-site supply wells near Buildings 1 and 7 would be converted for use for non-potable water supply only (i.e., irrigation) and the on-site supply wells near Buildings 2 and 3 would be abandoned. A fire hydrant is proposed north of the entrance to the marina, on the west side of West Mill Road.

Potable water usage for post-development conditions would increase by 18 gpd from 1,058± gpd to 1,076± gpd (based on Suffolk County Department of Health Services [SCDHS] design flow factors [SCDHS Standards For Approval Of Plans And Construction For Sewage Disposal Systems For Other Than Single-Family Residences] of 0.00 gpd/SF for boat storage and 0.06 gpd/SF for non-storage [bathrooms]). This increase is associated with employees and not the building area as such space would be utilized for storage. The total volume of 1,076± gpd would be served entirely from the public water supply, as noted above. Regarding water usage associated with other activities associated with the boat storage use, there would be an increase in water usage for the power washing of boat bottoms in the fall season (approximately 50 gallons per boat) and boat washing in the spring prior to waxing (approximately 170 gallons per boat). Bottom painting and detailing/waxing does not require any additional water usage. This water supply would also be provided from the new SCWA water connection.

Irrigation supply is also proposed with the installation of automatic underground sprinkler systems with rain sensors to serve new planting areas. In total, approximately 1.22 acres of the 1.91± acres of new landscaping would be irrigated via the existing on-site wells to be retained near Buildings 1 and 7. Based upon one inch of water per week for the irrigation season of 26 weeks (i.e., mid-April to mid-October), approximately 437 gpd for the irrigation season or 218± gpd (averaged annually) is projected.

Regarding sanitary waste generation and disposal, the existing flow associated with SYC is approximately 1,058 gpd. Based on SCDHS design flow factors sanitary waste generation for post-development conditions would increase by 18± gpd from 1,058± gpd to 1,076± gpd (based on the SCDHS design flow factors of 0.06 gpd/sf for Non-Medical Office Space, 0.04 gpd/SF for General Industrial Use, 0.06 gpd/SF for non-storage (bathrooms), 10 gpd/boat slip for Marina, and 300 gpd for single-family residential use). As part of the proposed action, the existing sanitary system that serves Building 1 would remain, and two (2), 600-gallon, I/A OWTS would be installed (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings).

As the subject property is located in Groundwater Management Zone IV, Article 6 of the Suffolk County Sanitary Code (SCSC) restricts the maximum permitted sanitary discharge for the use of on-site sanitary systems to 600 gpd per acre or, approximately 9,498 gpd (based on the developable land area of 15.83 acres, as explained in Sections 1.2.3 and 2.2.1 of this DEIS). Accordingly, the proposed action complies with the maximum permitted density set forth in Article 6 of the SCSC subject to a waiver for usage of employee count and not the storage building area. The proposed application is subject to a SCDHS Board of Review variance to vary the design flow factor for the storage buildings to consider employee usage rather than building area. An application was initially filed with the SCDHS on July 18, 2018, and consultations with the SCDHS are ongoing.

Regarding Article 7 of the SCSC, the subject property is not located in a regulated deep recharge area and is not located within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area. As such, the proposed action is not subject to Article 7 restrictions. Regarding Article 12, SYC maintains a current Article 12 Permit (active through August 31, 2022) for existing tanks and chemicals stored and used on-site. There are no changes proposed to the existing tanks or volume of materials stored on-site. As such, there is no additional Article 12 permitting required for the proposed action. The proposed liquid propane gas (LPG) tanks are subject to compliance with the 2020 NYS Fire Code and the National Fire Protection Association 58 – Liquefied Petroleum Gas Code, which

sets forth requirements for installation, setbacks, and protection from vehicle impacts. Accordingly, through Building Department review, it is the Southold Fire Marshal that would review and approve such LPG tanks.

SYC is a New York State Department of Environmental Conservation (NYSDEC)-registered Pesticide Business as it provides commercial aquatic antifouling paint application services. SYC was issued the registration by NYSDEC on February 19, 2020 and is active through December 31, 2022. The SYC staff would continue to renew the Aquatic Antifouling Applicator Certification, as required.

### Stormwater Runoff and Drainage

The proposed action would increase the total impervious surface area from 2.62± acres to 4.98± acres and would modify land coverages from woodland to landscape and pervious pavers. Accordingly, there would be a resultant increase in the volume of stormwater runoff generated on the subject property. As indicated on the Grading and Drainage Plan, the proposed action includes drainage controls for approximately 7.77 acres (338,387 SF) of land area, which includes the Project Area and off-site contributing land area due to site topography. The proposed drainage controls include leaching pools of varying depths and French drains which includes the use of pervious gravel. The proposed stormwater management system is designed to accommodate a two-inch rain event in accordance with §236-7.A of the Town Code and includes four tributaries. Overall, as the proposed drainage plan would improve on-site stormwater management and provide drainage for areas that are currently not served, there would be a resultant benefit from the proposed action. A consistency analysis with Chapter 236 of Town Code (Stormwater Management) is included in Section 2.2 of this DEIS and demonstrates the proposed action to be in compliance, and/or consistent with, the performance standards for a stormwater management control plan, as set forth in §236-18.

Prior to construction, and in accordance with the NY State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharge during Construction Activities regulations, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared to ensure compliance with erosion and sediment control practices set forth in the *New York Standards and Specifications for Erosion and Sediment Control* (NYSDEC, 2016), as well as the water quality and quantity requirements set forth in the *New York State Stormwater Management Design Manual* (NYSDEC, 2015).

### Wetlands and Surface Waters

On January 31, 2020, NYSDEC issued a Non-Jurisdictional Determination for all activities landward of the existing bulkhead and 10-foot contour and a Tidal Wetlands Permit (Permit No. 1-4738-01843/00028) for all activities within the regulated adjacent area (*Install two dry wells/leaching pools and concrete retaining wall. Add French drain system to west side of existing one-story building. All roadway and parking area material will be gravel only. All work must be done in accordance with the plans prepared by Howard W. Young LLS last revised 1/2/2020 and stamped by NYSDEC approved 1/31/2020*). For those activities regulated under Chapter 275 (Town Trustees Permit) of the Town Code, which is limited to the striping of parking and installation of 180± feet of French drains adjacent to Building 8, all work would be done so in accordance with Town regulations.

A “Boat (Vessel) Study” was prepared to evaluate the projected changes in boat traffic within the Mattituck Inlet and Creek, the existing and potential surface water quality impacts associated with the projected changes in boat traffic, and the monitoring and enforcement protocols that are in place. Based on SYC data and publicly available data, approximately 2,000 boats, yachts, commercial fishing vessels, government/public vessels, personal watercrafts, and kayaks and Stand-Up Paddleboards (SUPs) are docked or use Mattituck Creek annually. It is estimated that approximately 547 boats are active in Mattituck Harbor on a peak season day. The proposed action includes approximately 88 yachts to be stored. The yachts will arrive to the facility at the close of boating season (i.e., September-December), hauled from the water via the 85-ton travelift and transported to the heated storage buildings, and the same boats will be removed from storage, returned to Mattituck Creek via the travelift, and exit Mattituck Inlet in the beginning of the boating season (i.e., April-June). Given a 12-week timeframe for entry to storage in the Fall and the same timeframe to remove boats from



storage in the Spring, this equates to an average of approximately seven (7) boats per week or between one two boats per day. SYC would maintain a schedule for all boats entering or leaving the storage facility.

Upon implementation of the proposed action, SYC would still offer dockage/boat slips, fuel station, sewage pump-out services, marine travelift system, dry dock and interior storage of boats (but with heated indoor storage for larger yachts post-development), boat maintenance, repair, and detail services, and boat painting/antifouling services to all yachts utilizing the facilities. Furthermore, an increase in boat traffic is not expected to result in significant adverse impacts to surface waters as all boats are to be in operable condition, with no discharges of gray or black water from holding tanks, and no fuel leaks or heavy exhaust; and also subject to monitoring and enforcement of the USCG and Town of Southold Bay Constable.

The proposed action does not include any modification to Mattituck Harbor that would alter tidal flow and does not introduce a vessel length that is currently not using the Harbor today. Therefore, the use of Mattituck Harbor for boat travel to SYC for the purpose of winter storage does not require a water/tidal flow modeling/study. Based on National Oceanic and Atmospheric Administration (NOAA) data, as well as an independent Mattituck Inlet Survey with soundings at low tide that was performed by H&L Contracting LLC, the tidal range for Mattituck Creek is approximately five feet. At low tide, depths average between 9-to-10± feet. At high tide, the average depths range from approximately seven (7) to 14 feet outside of the channel and 14-to-15± feet within the channel. The SYC marina accommodates boats and yachts 18-to-133± feet in length, which can all safely navigate Mattituck Creek. As indicated earlier, the average yacht size to be stored under the proposed action would be 60± feet. As such, the projected 88 vessels to be stored, at an average length of 60 feet and a maximum of 86 feet in length, can be accommodated without impacts to the Inlet or Creek.

The new vessels that are expected to utilize SYC for storage would be expected to comply with U.S. Environmental Protection Agency (U.S. EPA) federal regulations for the engine types on board. Also, both the US Coast Guard and the Town of Southold Bay Constable are responsible for monitoring and enforcement of activities within Mattituck Harbor. The addition of 88 yachts in Mattituck Creek would be imperceivable to existing users as the storage and launch of the yachts would take place over a 12-week period. The existing measures in place to police Mattituck Creek with regards to water quality and boat traffic safety are sufficient to accommodate the proposed action. Therefore, the proposed action would not require the development of additional policing methods to address the threat of water quality and boat traffic safety would not be needed.

Regarding the impact on Mattituck Harbor Water Quality, surface water quality data from 2000 through 2020 within Mattituck Creek was obtained from the SCDHS Bureau of Marine Resources. Bay Station 055320 (Latitude 41.009, Longitude -72.548583), the closest marine monitoring station to SYC, is located 155± feet northeast of the subject property. As SYC purchased the subject property in the fall of 2016, the data for an eight-year time period (2012-2020) was reviewed to identify conditions prior to and after SYC acquired the property. Based on the data, the water quality observed at Bay Station 053320 since SYC purchased the subject property in 2016 is consistent with the overall water quality of Long Island Sound. The seasonal fluctuations in Nitrogen, Dissolved Oxygen, and Chlorophyl-a are comparable to those in Long Island Sound and overall water quality was identified as fair to good based on conditions set forth in the Long Island Sound Study (LISS). Overall, the water quality of Mattituck Harbor between 2012 and 2020 is comparable to that of eastern Long Island Sound. Accordingly, SYC has not contributed to water quality degradation in Mattituck Harbor.

Review of the Suffolk County Subwatershed Plan was also performed to address the impact of nitrogen loading on the overall health of Mattituck Creek. Lower levels of Dissolved Oxygen and Harmful Algal Blooms (HAB) events indicate the water quality of Mattituck Creek trends towards poor. However, these water quality issues are not attributed to the maritime industry but to stormwater runoff and warming waters. As the proposed action includes a drainage plan that complies with the Town's stormwater management regulations, no significant adverse impacts associated with stormwater runoff would be expected.

Another key indicator of water quality is the state of the shellfish harvests. Mattituck Creek is seasonally uncertified for shellfishing from May 1 to December 31 by the NYSDEC. These seasonal closures have occurred since the 1980s. Based on historic information reviewed, the primary reasons for these closures are the

presence of saxitoxins and HABs such as (*Aureococcus anophagefferens*), two types of red tides (*Alexandrium fundyense* and *Dinophysis acuminata*), and rust tide (*Cochlodinium polykrikoide*). The HAB events are closely related to increasing water temperatures and occur almost annually in Long Island's waters. To assist in improving water quality on Mattituck Creek, SYC was chosen by CCE to serve as a FLUPSY host.

Furthermore, based on the data and sources reviewed, the boating industry was not identified as a contributor to the degradation of surface water quality for Mattituck Creek or Long Island Sound. The proposed action would introduce 88 yachts to Mattituck Creek over a 12-week period (seven [7] per week or one-to-two yachts per day when averaged over the 12-week period for receiving boats or hauling back into Mattituck Creek). As all yachts are required to meet both state and Federal discharge and engine exhaust standards and the No Discharge Zones would prohibit yachts from dumping sewage into Mattituck Creek, there would be no associated impacts to the waters of Mattituck Harbor. Additionally, the proposed action includes several measures to protect surface water quality, including a SWPPP, upgrades to the existing sanitary systems to I/A OWTS, and post-development drainage controls to accommodate and recharge stormwater on-site. As the proposed action would introduce an imperceptible number of new boats and yachts to Mattituck Creek and Long Island Sound and SYC would implement measures to protect surface water quality on-site, the proposed action would not introduce new risks to surface water quality.

### **Flooding and Climate Change**

Based on the Federal Emergency Management Agency (FEMA) Map Panel ID: 36103C0143H, the eastern portion of the subject property that is currently developed with the operating marina Buildings 2, 5 through 8 is located within the Special Flood Hazard Area (SFHA) Zone AE, which is the 100-year flood zone, with a Base Flood Elevation (BFE) of 8 feet. Areas in Zone AE are subject to inundation by the one percent annual chance (or 100 year) flood. The northeast portion of the subject property that is developed with Building 3 and area to the south of Building 8 are situated within Zone X: 0.2 percent annual chance or 500-year flood zone. The existing residential structure (Building 1) and all areas landward of Elevation 8.0 are within Zone X: Area of Minimal Flood Hazard (i.e., area is outside a SFHA).

The Project Area inclusive of the proposed retaining wall, storage buildings, new and replacement I/A sanitary systems, drainage infrastructure, and new pavement areas would occur entirely outside of a SFHA (i.e., FEMA Flood Zone X). However, the FEMA Flood Zone X is based upon the current elevations of the subject property. The flood zone boundary between Zone AE: Elevation 8 feet BFE and Zone X: 500-year flood runs north-south at Elevation 8 feet AMSL. Upon implementation of the proposed action, the Project Area would reduce to Elevation 10 feet AMSL with the proposed cut and removal of material. The Zone X designation is also based upon the current elevations of the Project Area (i.e., 7.10± feet to 46.1± feet AMSL). Upon implementation of the proposed action, the Project Area elevation would decrease to Elevation 9 feet AMSL.

It is noted that the adjacent mapped floodplain is Zone AE with BFE of 8 feet and building within this area would require the lowest habitable building level (i.e., First Floor Elevation) to be placed at BFE plus 2 feet or Elevation 10 feet. Accordingly, Buildings 9 and 10 would be constructed with an FFE at Elevation 10 feet. Other proposed improvements, including new pavement, drainage infrastructure, and I/A sanitary systems would be situated at approximately Elevation 10 feet AMSL. Although the proposed action is outside of the mapped floodplain, the proposed storage buildings would be compliant with NYS requirements for new construction in the Zone AE floodplain.

Pursuant to 6 NYCRR Part 490, the potential sea level rise of 16 inches (or 1.33± feet) by 2050 is considered a reasonable analysis based on the definition of the projections as "amount of sea-level rise that is about as likely as not...to be exceeded by the specified time interval." Under this scenario, Mean High Water (MHW) at the subject property would increase from 4.0± feet AMSL to 5.3± feet AMSL, and thus, would not affect the existing buildings or infrastructure. Based upon available mapping provided by the New York State Department of State (NYSDOS), sea level rise of 12 and 24 inches would not be expected to impact the property beyond the bulkhead

and MHW. Based on the proposed elevations of 10 feet AMSL and minimum 9 feet AMSL for the proposed buildings and infrastructure, respectively, sea level rise of 16 inches would not impact the Project Area.

Utilizing the New York State Energy Research and Development Authority (NYSERDA) Future Coastal Floodplain Mapper, sea level rise with storm inundation were evaluated at the subject property, under the post-development condition. At a 10-year recurrence interval with 18 inches of sea level rise (2050s), inundation could occur at Buildings 2, 7 and 8, and the eastern portions of Buildings 3 through 6 could be affected. Building 1 would be unaffected. At a 100-year recurrence interval with 18 inches of sea level rise (2050s), inundation across the property could occur but Building 1 would be unaffected. With the proposed FFE of 10 feet for each building and the top elevation of all infrastructure at a minimum 9 feet AMSL, this scenario is not expected to impact the proposed buildings or infrastructure.

With a 16 inch or 1.33±-foot rise in sea level, the groundwater model predicts that groundwater beneath the site would rise to an elevation of 3.05 feet AMSL (NAVD 88), or a rise of 1.31 feet (model predicted the post excavated site groundwater elevation to be 1.74 feet AMSL [NAVD 88]) without any sea level rise. The Boring Logs indicate depth to groundwater at 6.4± feet bgs (or 1.4± feet AMSL) at Boring B1 (the location of the replacement system identified as Sanitary System No. 2) and at 7.6± feet bgs (or 1.2± feet AMSL) at Boring B2 (the location of the new system identified as Sanitary System No. 1). As shown on the Utility Plan, the top elevation of both Sanitary Systems Nos.1 and 2 would be 9.4± feet AMSL and the base of the leaching galleys would be 4.4 feet AMSL. Based on existing conditions, the distance between the bottom of the leaching pool and groundwater for Sanitary System No. 1 is approximately 3.2 feet and Sanitary System No. 2 is approximately 3.0 feet. When applying a projected 1.31-foot rise in groundwater elevation in the 2050s, this separation distance would decrease to 1.7± feet and 1.9± feet for System Nos. 1 and 2, respectively.

The recommended separation distance to groundwater for sanitary leaching fields is three feet. As such, should sea level rise occur as projected, the system would be non-compliant with current design requirements. However, in the 2050 condition, modifications to the leaching field could be implemented by elevating and installing a pump station. However, the manufacturer lifespan of the I/A OWTS is 30 years, and thus, by the 2050s, new systems could be expected. Should the projections of sea level rise be realized, the new systems to be installed would be required to comply with the regulations at that time.

Regarding drainage infrastructure, the recommended separation distance to groundwater is two feet. The proposed stormwater leaching fields would be installed with top elevations ranging from 9-to-9.5± feet AMSL and varying pool depths. Based on existing conditions, the groundwater separation would range from 3.0± feet to 4.0± feet. A 1.31-foot rise in groundwater elevation would decrease the separation distance to 1.7± feet to 2.7± feet. Should this scenario occur, the drainage infrastructure could be replaced and/or supplemented with shallow drainage structures to accommodate stormwater runoff.

## **Ecological Resources**

Ecological surveys were conducted at the 32.96-acre subject property by Dr. William Bowman of LUES on various dates in 2020 and 2021. Specifically, field surveys and work were performed by Dr. Bowman on September 18, 2020, October 21, 2020, January 17, 2021, May 13, 2021, July 19-28, 2021, and August 24, 2021. During the field inspection, a total of 122 vascular plant species were observed, including 53 woody plants, 64 herbaceous plants, and three ferns. Additionally, 91 birds, 20 mammals and three herptiles were observed or are expected to occur on the site. Dr. Bowman's field work also included a tree survey with species identification. LUES also prepared the proposed tree removal plan with species identification and analysis, in coordination with Young & Young Engineering, as the project engineer.

The existing ecological communities present at the site include Coastal Oak-Beech Forests, Successional Southern Hardwood forests, Successional shrublands, a small tidal wetland area associated with Mattituck Creek, and anthropogenic cover types such as mowed lawn with trees and landscaping, buildings, and paved and pervious road and parking surfaces.

The proposed action has a construction footprint of 6.51± acres resulting in the physical disturbance and permanent loss of 4.32± acres of high-quality Coastal Oak-Beech forest, 1.19± acres of southern successional hardwood forest, and 0.54± acre of successional shrubland. The loss of successional shrubland habitat is associated with the proposed 16-foot-wide haul road traversing the site from the proposed excavation areas to Mill Road. Upon implementation of the proposed action, the acreage of buildings, impervious surfaces, and gravel driveways and parking areas would increase from 3.70± acres to 8.37± acres and would then comprise approximately 25.4 percent of the site.

The Bulk Schedule requirements for properties in the M-II Zoning District require a minimum of 20 percent (3.29 acres) of the 16.46± acres in the M-II zone to be maintained as landscaping or natural areas under §280 (Zoning) of the Town Zoning Code. Under the proposed action, 6.46± acres within the M-II zone (approximately 51.4 percent) would be maintained as natural vegetation comprised of Coastal Oak-Beech forest and successional forest and 1.67 acres of plantings and landscaping (including retaining wall plantings). As such, the proposed preservation of approximately 8.13 acres of vegetation (i.e., 6.46± acres of existing natural vegetation and 1.67± acres of planted vegetation) within the M-II Zoning District is consistent with and substantially exceeds the 20 percent minimum requirement pursuant to §280 (Zoning) of the Town Zoning Code.

Approximately 13.77 acres of southern successional hardwood forest and successional shrublands would be retained; these areas are located on the western R-80 zoned portion of the property adjacent to West Mill Road. Approximately 8.28 acres of Coastal Oak-Beech forest would be maintained on the site, largely in the northern portion of the M-II zoned property interspersed between existing residential structures, with some forest along the southern property boundary in the R-80 zoned portion. The approximate 0.63-acre of tidal wetlands located along the shoreline of Mattituck Creek would be preserved under the proposed action.

Based on the preliminary site plan, the proposed development would result in the clearing/removal of approximately 634 trees. Of the 634 trees, 15 trees would be removed from the R-80 zoned portion of the subject property and 619 trees would be removed from the M-II zoned portion of the subject property. Approximately 70 percent of the trees proposed for removal consist of various oak (*Quercus sp.*) and American beech trees with an average size of 12.8-inches diameter at breast height (DBH). The remaining 30 percent are comprised of Norway Maple (*Acer platanoides*), Red Maple (*Acer rubrum*), Tree of Heaven (*Ailanthus altissimo*), Shadbush (*Amelanchier canadensis*), Gray Birch (*Betula populifolia*), Pignut Hickory (*Carya glabra*), Flowering Dogwood (*Cornus florida*), Autumn Olive (*Eleagnus umbellata*), American Beech (*Fagus grandifolia*), Eastern Red Cedar (*Juniperus virginiana*), Apple (*Malus sp.*), Mimosa (*Albizzia julibrissin*), White Mulberry (*Morus alba*), Pitch Pine (*Pinus rigida*), Japanese Black Pine (*Pinus thunbergii*), Cottonwood (*Populus deltoides*), Bigtooth Aspen (*Populus grandidentata*), Bird Cherry (*Prunus avium*), Black Cherry (*Prunus serotina*), Black Locust (*Robinia pseudoacacia*), and Sassafras (*Sassafras albidum*). Overall, upon implementation of the proposed action, 73.0± percent of all trees on the overall subject property (i.e., 1,740 of the 2,408 total trees) would be retained. Approximately 54.2 percent of the trees in the M-II Zoning District (i.e., 735 of the 1,354 trees on the M-II zoned portion) would be retained.

The Coastal Oak-Beech forests on the subject property consist of 1,647± American beech, oak, hickory, red maple, and sassafras trees. Upon implementation of the proposed action, approximately 66.8 percent of these native trees would be retained. In addition, under the proposed action, approximately 66 percent of the trees greater than 12-inches in DBH would be preserved. Additionally, approximately 86 Pitch Pine trees, as well as shrubs and groundcover, would be established in a 27,333 SF planting area along the new forest edge (predominantly pitch pine) with an additional 40 small trees, including Staghorn Sumac and Shadbush, on the proposed retaining wall.

Some of the 8.28± acres of Coastal Oak-Beech forest and 3.48± acres of successional southern hardwoods to be maintained under the proposed action would be adversely impacted by the creation of new forest edges. The edge effect impacts are found to occur up to 195-feet from the north- and east-facing forest edges. Due to the historical disturbances associated with clearing for agricultural uses, commercial marine construction, and

construction of two residential structures, much of the existing Coastal Oak-Beech forests are currently (or were previously) subjected to edge effects from adjacent clearing or development. Approximately 3.52 acres of the existing Coastal Oak-Beech forests are currently located more than 195-feet from an existing forest edge associated with the commercial marina or residential structures. The proposed project would result in a new forest edge and, accordingly, result in changes in microclimate that will penetrate up to 195-feet into the existing Coastal Oak-Beech forests. Under post-project conditions, all of the site's 8.28± acres of Coastal Oak-Beech forests would be less than 195-feet from existing or new forest edges.

As mitigation, the magnitude of the potential adverse impacts of new edge effects would be reduced by the planting of 27,333 SF of native trees and shrubs along the new forest edge. This planted area is approximately 20-30 feet wide and would include multi-layered plantings (i.e., trees, shrubs, and herbaceous plants that at maturity will occupy ground-, understory-, and canopy-levels) with conifer trees (i.e., 86 pitch pine trees) to minimize light penetration into the new forest. This planting area would also include 57 lowbush blueberry shrubs and 4,295 switch grass plants. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forest area on the property would increase from 11.76-acres to 12.38-acres.

The subject property is adjacent to the 27±-acre Town of Southold Mill Road Preserve located between Mill Road and the residential properties on North Drive. The Mill Road Preserve has an ecological community composition similar to the subject property with successional shrublands and forest proximal to Mill Road and Coastal Oak-Beech forests located to the east. The project would result in the creation of a new forest edge approximately 105 feet from the Mill Road Preserve boundary along a short reach (approximately 99 feet) of the shared property boundary located in the northeastern corner of the Preserve. This area is proximal to historical disturbance associated with the clearing, filling, and hardening of the west shoreline of Mattituck Creek on the subject property in the 1950s-1960s. The existing oak-dominated and successional forests in this portion of the property have regenerated on the bare, exposed substrate.

The potential impacts associated with the new forest edge could include potential changes to the forest microclimate and increased abundance of invasive plants and wildlife species, as previously described. These edge effects are expected to extend approximately 195 feet into Mill Road Preserve from the northeastern corner of Mill Road Preserve. The total area of the Mill Road Preserve that may be potentially impacted by edge effects associated with the new clearing limit on the SYC property is approximately 0.38 acre (16,419± SF).

Existing residential properties are located along the eastern border of Mill Road Preserve. Therefore, the eastern border of Mill Road Preserve is expected to have existing edge-related impacts due to past tree clearing on these residential properties and the utility right-of-way and an increased abundance of invasive plants and nest predators and parasites. Accordingly, some of this 0.38-acre area represents an intensification of an existing forest edge rather than creation of an entirely new edge. The area subject to new or enhanced edge effects accounts for approximately two percent of the 18±-acres of mature oak-beech forests in Mill Road Preserve. Thus, the proposed action would not be expected to have significant adverse impacts on the forest habitat quality or composition through the large majority of the Mill Road Preserve. Furthermore, the magnitude of potential edge effects is expected to decrease over time due to the proposed landscaping comprised of native trees, shrubs, and herbaceous plants including pitch pine (*Pinus rigida*), lowbush blueberry (*Vaccinium angustifolia*), and switch grass (*Panicum virgatum*). Proposed edge plants would facilitate the development over time of a dense "wall" of vegetation comprised of maintained canopy trees, regenerating trees, and shrubs to fill in open space at the edge. This "sealing" of the edge through development of multiple layers of vegetation may reduce the penetration of light into the forest and decrease the depth of edge impacts towards the interior of Mill Road Preserve.

The decreased habitat availability associated with the loss of 32 percent of the site's forest habitat would likely decrease the abundance and diversity of the plant and wildlife species that utilize the site. Wildlife that utilizes the site's successional shrubland and successional forest habitats would not be adversely impacted by the proposed action due to the maintenance of 13.77± acres (approximately 89 percent) of these successional

habitats. Similarly, wildlife species that are habitat generalists and utilize all of the site's habitats (i.e., successional habitats, forests, and developed areas) are also unlikely to be adversely impacted by the proposed action, due to their general tolerance for human activity.

Wildlife species that are most likely to be adversely impacted by the proposed action, specifically the reduction in Coastal Oak-Beech forest habitats from 12.60 acres to 8.28 acres, include birds or other wildlife that inhabit mature forests, forest interiors, or have large patch size requirements. Songbirds that are expected to utilize the site's Coastal Oak-Beech forests include species that forage for insects on and under bark (such as woodpeckers and nuthatches), glean insects from canopy foliage (such as vireos), and/or catch airborne insects (such as flycatchers and wood pee-wees). Some bird species may be found in both small and large habitat patches, whereas other bird species are more frequently found in larger habitat patches than smaller patches. Bird species that are not dependent on habitat patch size and/or species that have tolerance for small habitat patches or edge habitats are likely to continue to utilize the smaller wooded habitat patches remaining after completion of the project.

The Acoustic Report was also evaluated and no long-term noise-related impacts to birds and bird habitat expected to result from the operation of the proposed boat storage facility. Post-development, no significant adverse noise-related impacts would result. Additionally, no adverse impacts to wildlife or wildlife habitat are expected to result from new outdoor lighting associated with the proposed action. The proposed lighting shall be dark skies-compliant, downward directed lighting resulting in no increase in light levels beyond the limit of the proposed buildings, access roads, and parking surfaces.

Eastern box turtles are expected to be found in any of the vegetated upland habitats on the site. The project would result in a loss of approximately 6.05 acres of upland forest and shrubland habitat for eastern box turtle. Potential adverse impacts to eastern box turtle would be avoided or minimized by conducting sweeps or surveys for box turtles prior to commencement of clearing, grading, and excavation activities, and relocation of any observed turtles to on-site areas that would not be disturbed. Silt fencing or other barriers would be installed around work areas to prevent turtles from returning to construction areas.

No significant adverse impacts to tidal wetlands located on-site or within Mattituck Creek are expected to result from the proposed action. No physical disturbance to tidal wetlands is proposed, and the project provides for mitigation measures that would contribute to potential surface water quality and habitat quality improvements in Mattituck Creek, such as new I/A OWTS's and new stormwater drainage infrastructure.

## **Consistency with Community Plans and Studies**

### Land Use

Upon implementation of the proposed action, the M-II zoned portion of the site utilized by SYC would be modified from seven to nine buildings, increasing the total GFA from 68,817 SF to 170,317 SF (represents a 40 percent expansion). The two additional buildings (identified as Buildings 9 and 10 on the proposed site development plans) would be situated perpendicular to the west of Buildings 7 and 8, which are situated parallel to Mattituck Creek. The proposed two buildings would require modification of the upland portion of the site to accommodate the construction at similar elevation to the current SYC facility. Specifically, approximately 6.51 acres of land would be disturbed and excavated requiring approximately 135,000 CY of material that would need to be removed from the subject site.

The proposed Building 9 would be located west of Building 8 and would be approximately 49,000 SF. The proposed Building 10 would be located northwest of Building 8 and would be approximately 52,500 SF. All yachts would arrive to and leave SYC via Mattituck Creek, relying upon the existing 85-ton travelift to lift the boats from the water and transport them to and from the storage buildings. Upon arrival to SYC, only SYC employees would have access to the vessels inside the building for any requested or required maintenance or repairs.

Upon implementation of the proposed action, the current marine use would remain unchanged. As presented in the Town's Local Waterfront Revitalization Program (LWRP) and evaluated further in this section of the DEIS, Mattituck Harbor (Mattituck Inlet and Mattituck Creek) is the only harbor fronting the Long Island Sound in the Town of Southold and was identified as one of 10 maritime centers on Long Island in the Long Island Sound Coastal Management Program. Maritime uses at the subject property has persisted for over 60 years and would continue to be as such upon implementation of the proposed action. Moreover, from a land use perspective, the proposed action is consistent with the underlying intent of the prevailing zoning for the M-II zoning district (see Zoning discussion in this section of the DEIS below). Accordingly, based on the above, no significant adverse land use impacts would result from the proposed action.

### Zoning

The proposed action would occur primarily within the M-II zoning district of the Town of Southold, with only a portion of the proposed project affecting the R-80 zoned portion. The Project Area is 6.51 acres with 5.84 acres located within the M-II portion of the site and 0.67 acre located in the R-80 portion of the site. Only the proposed haul road would be located on the R-80 portion of the site and would remain post development to serve as an emergency access route to the subject property from Mill Road.

The proposed development is intended to support the current SYC operation and would be entirely located on the M-II portion of the site. As excerpted from Section 280-54 of the Zoning Code, the intent of the M-II zoning district is "...to provide a waterfront location for a wide range of water-dependent and water-related uses, which are those uses which require or benefit from direct access to or location in marine or tidal waters and which, in general, are located on major waterways, open bayfronts or the Long Island Sound." The proposed action is consistent with this intent in that it seeks to provide storage facilities for yachts that are of a size that require transport via water (as opposed to smaller boats that can be trailered).

Among the nine permitted uses in the M-II zoning district, the proposed action is consistent with §280, Article XIII A(5), "Boatyards for building, storing, repairing, renting, selling or servicing boats, which may include the following as an accessory use: office for the sale of marine equipment or products, dockside facilities for dispensing of fuel and, where pumpout stations are provided, rest room and laundry facilities to serve overnight patrons." A consistency analysis with the bulk and dimensional requirements in Section 3.1.2 of this DEIS indicates that the proposed development complies with the requirements for development in the M-II zoning district.

### Southold Town Comprehensive Plan Update (Adopted September 2020)

A consistency analysis with the 2020 Comprehensive Plan is included in Section 3.1.2 of this DEIS and demonstrates that the proposed action is consistent with the goals and objectives relevant to the subject property and proposed maritime use.

### Town of Southold Local Waterfront Revitalization Program

A consistency analysis with the Town of Southold LWRP is included in Section 3.1.2 of this DEIS and demonstrates that the proposed action is consistent with the policies relevant to the subject property and proposed maritime use.

### Town of Southold Town Code Chapter 275 – Wetlands and Shoreline

All of the proposed development would occur landward of the existing SYC buildings. Activities within 100-feet of Town wetlands are limited to the proposed striping to formalize parking stalls in existing gravel-surfaced areas, and the proposed French drains on the east side of Building 8. The proposed action is consistent with the standards for issuance of a Trustees Wetlands Permit set forth at §275-12 of the Town Code.

### Mattituck Watershed Management Plan

The Mattituck Watershed Management Plan, which is part of the larger Long Island Sound, North Fork Study, identifies the need to protect local groundwater and surface water resources while also noting that excess nitrogen is a primary factor contributing to water impairment in local marine waters, primarily as a result of conventional sanitary systems. The proposed I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L in accordance with SCSC Article 19. As such, the proposed sanitary system would reduce nitrogen loading and be more protective of groundwater quality than continuing to utilize the existing conventional septic system. As such, the proposed action would be consistent with the Mattituck Watershed Management Plan.

### NYSDOS Significant Coastal Fish and Wildlife Habitat

The subject property lies adjacent to the west of Mattituck Creek and south of Mattituck Inlet, which are designated as Mattituck Inlet Wetland and Beaches by the NYSDOS as a Significant Coastal Fish and Wildlife Habitat. The proposed action would occur outside the designated habitat and would not affect any significant fish or wildlife communities. Furthermore, all stormwater from the Project Area and off-site contributing areas would be contained and recharged on-site. The proposed action would not affect the Applicant's participation in the Town's Pump-Out program; nor would it affect the existing CCE Marine Program that occurs on-site. It is noted that the NYSDEC issued a Tidal Wetlands Permit for the proposed action and all conditions in the issued permit would be implemented. Based on the foregoing, the proposed action would not have a significant adverse impact on the adjacent Significant Coastal Fish and Wildlife Habitat.

### **Human Health**

Four 2,000-gallon LPG tanks are proposed to support the proposed radiant heat for the two boat storage buildings. The LPG tanks are subject to the 2020 NYS Fire Code and the National Fire Protection Association 58 – Liquefied Petroleum Gas Code, which sets forth requirements for installation, setbacks, and protection from vehicle impact. The proposed fire plan would comply with these two codes. Additionally, at the recommendation of the Southold Fire Marshal, a Fire Safety Plan has been developed by SYC to provide hazard locations, utility and water supply information, and emergency procedures for its employees. Furthermore, the proposed plan was submitted to the Mattituck Fire Department and no potential service issues were identified. As stated in the correspondence from the Chief of the department, the local department is fully capable of servicing SYC with the proposed improvements. The proposed action would not require SYC to modify its current quantities of chemicals stored on-site nor require additional chemicals be stored on-site.

With the projected increase in stormwater recharge, the proposed action would result in a slight increase in the water table of 0.01± feet immediately beneath the Project Area. The model shows no particle deflections or trajectory changes, and thus, no effects on nearby wells are anticipated. Additionally, the particle tracking analysis completed in the Groundwater Modeling Report indicated the domestic supply wells, having relatively low pumping rates have, as expected, very narrow zones of influence. When comparing existing to post-development conditions, there are no noticeable changes in particle track trajectories. This is due to the fact that the proposed site excavation would take place entirely above the water table and the proposed site modifications are only slightly adding more water to the local aquifer system due to the increased recharge post construction. As such, the proposed site excavation would not have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence. Therefore, the proposed action would not have an adverse impact on groundwater quantity nor the surrounding local domestic supply wells.

### **Transportation**

A Traffic Impact Study (TIS) was prepared by Dunn Engineering Associates. As part of the preparation of this TIS, the following tasks were undertaken:



- Several personal, on-site field observations were made to observe the traffic movements under various conditions.
- Collection and analysis of current existing traffic data, including traffic volumes and signal timings, as available from the Town of Southold, the Suffolk County Department of Public Works, and the New York State Department of Transportation (NYSDOT).
- Automatic Traffic Recorder (ATR) Counts at key locations on West Mill Road, Cox Neck Road and North Road (CR 48). At the request of the Town of Southold Planning Board the ATRs were conducted during the individual seasons of the year. The ATRs also included vehicle classification studies. The counts were collected over a seven -day period to include Saturday and Sunday data.
- Supplementary intersection turning movement counts were collected at two key intersections to determine intersection capacity. The turning movement counts were collected during the weekday morning peak hours of 7:00 am to 9:00 am and pm peak hours of 4:00 pm to 6:00 pm. The intersection turning movement counts also collected data on pedestrian traffic in the intersection and truck and bus data also. As with the ATRs the turning movement counts were collected seasonally. Intersection turning movement counts were collected at the intersections of:
  - Cox Neck Road at West Mill Road/Breakwater Road
  - North Road (CR 48) at Cox Neck Road
  - Eastbound North Road (CR 48) at Northbound North Road
  - West Mill Road at Bayview Avenue/Selah Lane
- An examination was made of the traffic flow on West Mill Road, Cox Neck Road and North Road (CR 48) in the vicinity of the site.
- Recent accident records obtained from NYSDOT were reviewed to determine if any accident problems exist in the vicinity of the site.
- A trip generation analysis was performed to determine the additional traffic attributable to the proposed project once complete and fully operational. In addition, a trip generation analysis was also performed to determine the additional traffic that would be generated due to the construction of the new storage buildings with particular emphasis on the numbers of trucks need to facilitate the project.
- A directional distribution analysis was performed to distribute both the completed project related site-generated traffic and the construction related traffic onto the surrounding street network.
- A trip assignment analysis was performed determine traffic volumes that would result from the increase of site-generated traffic related to the completed project being added to existing traffic to determine the impact of the proposed development on the surrounding street system. A trip assignment analysis was also performed to examine the addition of site-generated construction traffic to existing traffic to determine the impact of the proposed development on the surrounding street system
- Capacity analyses were performed at key study intersections as listed in Item 4 above, to examine their ability to accommodate both the existing traffic volume and the additional site-generated traffic once the project is complete and the construction related traffic while the project is being developed.
- A review of the access arrangements was made. The review include access during construction and once the project is complete

- An evaluation of the available parking and on-site circulation was made regarding traffic circulation, safety, maintenance, and adequacy of layout.
- Conclusions were made regarding the traffic impact of the development on the surrounding street network based on the data and facts gathered in this study.
- As a result of comments received from the Town and its consultants, additional data was collected during August of 2022. This data included:
  - Intersection turning movement counts at the intersections of Cox Neck Road at Bergen Avenue, and Sound Avenue at Bergen Avenue for the evaluation of an alternative routing plan for the excavation phase of the proposed project.
  - Pedestrian and bicycle counts were taken from 6:00 AM to 6:00 PM during a weekday on Cox Neck Road at Westphalia Road, West Mill Road at Bayview Drive/Selah Lane, Cox Neck Road/West Mill Road at Breakwater Road, and Bergen Avenue at Cooper's Road.
  - ATR counts were taken at the northerly terminus of West Mill Road at the entrance/exit to Strong's Yacht Center and on Bergen Avenue between Sound Avenue and Cox Neck Road.
  - Accident Records were updated to include all of 2021 from the NYSDOT. The accident request was made for the latest three-year period ending December 31, 2021. Accident records were also requested and received from the Town of Southold Police Department.
- An AUTO-TURN analysis was conducted to determine the viability of the proposed trucking route accommodate trucks that will haul material from the site to facilitate the building of the project. AUTO-TURN analysis was conducted at the following locations.
  - The 90-degree turn in West Mill Road near the Strong's entrance.
  - The S-curve along West Mill Road/Cox Neck Road near Breakwater Road.
  - Turning movements at Sound Avenue at Cox Neck Road.
  - Turning movements at Sound Avenue at Northville Turnpike.
  - Turning movements at Northville Turnpike at County Road 58
  - Turning movements at Sound Avenue at Bergen Avenue.
  - Turning movements at Cox Neck Road at Bergen Avenue.
- An alternative routing plan, alternative material mitigation plan and the barging alternative have been evaluated.
- The pavement analysis, which included ESAL calculations, as prepared by TSPE was evaluated.
- The vibration analysis performed by SoundSense has been reviewed and summarized.

As indicated in the TIS, the adjacent highway and street system will be able to accommodate the proposed project. Although there would be a minimal increase in traffic from the development of the project, the development of the site, as proposed, will not cause a significant negative impact on traffic conditions. The following points should be recognized:

1. The proposed access plan has been designed to adequately provide for the projected traffic entering and exiting the access driveway to assure the public safety and to minimize traffic congestion.
2. The additional site-generated traffic resulting from the proposed project can be expected to add only 11 entering and 2 exiting trips during the weekday morning peak hour. During the weekday P.M. peak hour, the site-generated volumes are anticipated to be 11 exiting and 2 entering vehicle trips. These trips will be generated by new employees at the site arriving in the morning and departing in the

evening. Other random trips will occur during the day, but the number of these trips will be low and in the range of none to one or two in an hour.

3. The intersection capacity analyses conducted to measure the impact of the new site-generated traffic on the surrounding street and highway network indicate the new traffic can be accommodated with negligible traffic impact.
4. The amount of construction traffic the project will generate during each phase of construction was determined and the potential impacts examined utilizing intersection capacity analyses. The intersection capacity analyses indicated that the construction generated traffic would have minimal impact on the capacity of the road network.
5. Five half years of accident data were obtained on Cox Neck Road/West Mill Road and the intersection of Cox Neck Road at Sound Avenue/West Mill Road. There are no demonstrative conditions along the road that would indicate that the project volumes would increase the potential for additional accidents. Accidents occurring at the intersection of Cox Neck Road at Sound Avenue/North Road were typical of those occurring at similar signalized intersections with similar traffic volumes.
6. Counts of pedestrian and bicycle usage along Cox Neck Road/Mill Road indicated only minimal usage by pedestrians and bicycles. The accident study revealed one accident involving bicycles or pedestrians. Despite the relative narrowness of the road the small numbers of additional vehicles the project will generate during construction and after completion should not increase the hazards to bicycles and pedestrians also using the road. Motor vehicles operating on any public roadway within New York State must share the roadway with bicycles and pedestrians using the same road. As such any motor vehicle will have to give way to pedestrians and bicyclists using the road. In most cases, they will be able to move over and pass the slower moving bicycles and pedestrians. In some cases, they may have to slow and allow a vehicle traveling in the other direction to pass before moving over to pass the bicycle or pedestrian. This is a common occurrence on the relatively narrow eastern Long Island roadways and is currently occurring on Cox Neck Road/West Mill Road, but with fewer trucks. The minor increase in truck trips is unlikely to cause any additional problems.
7. Cox Neck Road/West Mill Road, particularly the section north of Breakwater Road have generally light traffic volumes so the combined small vehicle and large vehicle traffic even with the additional truck loading from site generated construction should be tolerated by the existing road structure. The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it.
8. An alternative project has been developed that includes the construction of two boat storage buildings of 52,500 SF and 49,000 SF to support the smaller boat storage operations of SYC, along with elevating the roof heights of three existing buildings to accommodate larger vessels. As such, this alternative would still require 11 new employees working Monday thru Friday as does the proposed action. The alternative will generate the same amount of traffic as does the proposed action during the hours of analysis. The primary difference with respect to traffic impacts once the project is completed, is the new buildings under the alternative will be used for the storage of significantly smaller boats than would the buildings constructed under the proposed action. The proposed action would store boats of sixty feet or more, while the buildings constructed under alternative would store up to 300 smaller boats. Boats more than 60 feet cannot be trailered to the site and must arrive via the water. Smaller boats, as are anticipated to be stored in the project alternative, can readily be transported to and from the site by trailer. It is anticipated the half the smaller boats (i.e., 150) stored at the site would arrive and depart by trailer, which would have a greater traffic impact than the proposed action.

9. The proposed site plan which provides 57 total parking spaces with 4 handicapped spaces will adequately meet the parking needs of SYC. All site parking is accessed from a centralized access aisle located between the bulkhead along Mattituck Inlet and the buildings. The aisle has a minimum width of 24 feet and is often more generous than that. The site circulation plan is adequate for the intended purpose.
10. The construction of the project will generate a substantial amount of truck traffic. A designated route has been proposed to carry the increased truck traffic for the construction period. The designated truck route utilizes the Long Island Expressway (I-495) to County Road 58 (Old Country Road) to County Road 43 (Northville Turnpike) to Sound Avenue to Cox Neck Road to West Mill Road. The route is within the capacity of the roadways to carry the truck traffic.
11. There will be no offsite staging areas utilized during any phase of the project's construction. All construction material will be delivered to the site directly from suppliers via the designated truck route. Excavated material from the site will be transported directly to the material handler via the designated truck route. Construction materials and excavated materials removed from the site will not be transported on weekends. No roadways other than designated truck route will be used for transportation of project materials.
12. The potential of the increased truck traffic resulting from the project's construction to cause vibrations adjacent to the roadway was evaluated. It was determined that the project trucks would not cause vibrations that would impact adjacent historical structures or residential homes,
13. An alternative was evaluated which would have hauled the material excavated from the site via barges brought to the SYC. That alternative proved unfeasible. The Mattituck Inlet did not have sufficient depth to allow the barges to operate. In addition, the inlet channel has significant curvature that further prohibits navigation of the waterway by barges.
14. A series of potential mitigation measures have been suggested, including retaining approximately 10 percent of the required excavation material on an unused residentially zoned portion of the site, monitoring and repairing damage to Cox Neck Road/West Mill Road during the construction period, and making traffic control improvement to the roadways.

### **Aesthetic Resources**

Upon implementation of the proposed action, the visual setting and aesthetic character of the site would remain as a maritime use with full-service marina and yacht operation with accessory buildings. The two proposed boat storage buildings would be situated to the west of Buildings 7 and 8, at a slightly higher FFE. Specifically, the proposed buildings would be situated at Elevation 10 feet AMSL, which is two (2) feet above the FFE's for Buildings 7 and 8 (i.e., situated at Elevation 8± feet AMSL). Based on the architectural elevations provided by the architect, Jeffrey T. Butler, P.E., P.C., the proposed height of the buildings would be 39 feet-3 inches from grade to the eave and 45 feet-8 inches from grade to the top of ridge. The mean roof height is 42 feet-6 inches. With a proposed 10-foot AMSL FFE for both buildings, the top (mean height between eave and ridge) elevation of the buildings would be 55.67 feet ASML.

As noted in the 2020 Comprehensive Plan (page 32), a prominent identifying feature for the hamlet of Mattituck is Mattituck Creek which provides public waterfront access opportunities that are important to the Town as a maritime center. It is important to note SYC does not provide public waterfront access and none is proposed as part of the proposed action. The proposed action supports the importance of and reliance upon the maritime industry in the Town by providing overwintering storage for larger vessels.

Due to site topography, the proposed action requires soil and vegetation removal that would alter the tree line by setting it back an additional 500± feet from the current condition. Supplemental plantings along the

retaining wall are proposed to create a “sealed edge” of vegetation. As illustrated on Renderings A-1, A-3, A-5, and A-13 (and evaluated further below), the existing visual setting of the SYC operations at the water’s edge with woodland landward in the background would be maintained. The supplemental plantings would retain the existing natural and visual features at the property.

Thirteen (13) viewsheds were assessed for the existing visual setting of SYC from points surrounding the site, including users of the Creek. To understand the potential visual impact of the proposed action on surrounding sensitive visual receptors, the same viewpoints were assessed with post-development structures rendered. The Zone of Visual Influence considers existing surrounding development and existing operations at the subject property as well as changes in topography that could impact the proposed action’s visibility. Based on the 13 viewsheds, the following is expected:

- Views from the East: Under existing conditions, the current views are of Mattituck Creek, SYC operations and portions of the woodland upland area. Under post-development conditions, the views would be similar because Buildings 6, 7, and 8 would obscure views of the proposed buildings.
- Views from the North: Under existing conditions, the current views are of the woodland upland area and a portion of the existing operations. Under post-development conditions, the views would consist of the forested area to be retained, the southern façade of Building 9, and similar to the proposed action, views of existing Buildings 7 and 8 would remain visible.
- Views from the South: Under existing conditions, the current view of the subject property is of limited operations in the southeast portion of the subject property and Mattituck Creek. Under post-development conditions, the post-development views would be similar to existing conditions. Select docks and bulkhead would remain visible as well as the eastern façade of Building 8 and southern portion of Building 7. Most of Buildings 9 and 10 would be obscured from view. However, the top of the eave for Building 9 would be visible to the southwest and most of the eastern façade and eave of Building 10 would be visible to the northwest. Furthermore, the northeastern corner of the Evergreen concrete retaining wall would be visible between Buildings 7 and 10. The impact to the visual setting of the subject property would be minimal.
- Views from the West: Under existing conditions, the SYC operation and future improvements would not be visible from Mill Road.
- Views from most southern trail on Mill Road Preserve towards SYC: Under existing conditions, the current view of the subject property is of the undeveloped upland heavily forested area. The marina operations and Mattituck Creek are obscured by the forested area and the topography. Under post-development conditions, the views would consist of the woodland area of the subject property that would not be disturbed and a portion of the western and southern façades and roof of Building 9, the roof and a portion of the southern façade of Building 10, and a portion of the western façade of existing Building 8. The cover in the setback area would remain. The impact to the visual setting of the subject property would be minimal.
- Views from 5106 West Mill Road towards SYC: Under existing conditions, the current view of the subject property is the roofs of Buildings 7 and 8 and Mattituck Creek beyond. Under post-development conditions, the views would be similar. Views of portions of the roofs of Buildings 7 and 8 would remain. All woodland area between the property line and edge of disturbance would remain. However, the view southwest would include the roof of Building 10 and a portion of the northern façade of the building. Additionally, the top of the vegetation on the northern portion of the Evergreen concrete retaining wall would aid in obscuring views onto the proposed buildings. Overall, the viewshed change is not significant.

***Strong's Yacht Center – Proposed Boat Storage Buildings***

***5780 West Mill Road, Mattituck, Town of Southold, Suffolk County, NY***

- Views from a Kayak: As part of the DEIS, representative views from a kayak of typical yachts at the Inlet Entrance near Breakwater, a 95-foot yacht adjacent to the Old Mill Restaurant (at the narrowest part of the Inlet), and a 95-foot yacht in front of SYC dockage and buildings were taken. These photographs demonstrate the type of vessels expected to be stored at SYC.

Although the views of the subject property would be altered as a result of the proposed action, they would not be significant as depicted by the photo-simulations, landscaping plans, and architectural elevations. Buildings 7 and 8 would effectively screen most of the proposed Buildings 9 and 10 from properties to the east of the subject property.

The proposed action would expand in line with the existing scale of development on the subject property. The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. The proposed Evergreen concrete retaining wall as well as the higher elevation of areas north, west, and south of the proposed action would also screen much of the views of Buildings 9 and 10. Although the intent of the proposed retaining wall is for slope stabilization, the proposed vegetation along the retaining wall would create a green wall such that it would blend into the existing landscape.

### **Community Character**

While the proposed action would increase the building area on the subject property, the overall proposed density complies with the bulk and dimensional requirements set forth for the M-II zoning district. Additionally, the proposed action requires the modification of land, soil, topography, tree cover and soil material; however, the character of the subject property for maritime use would be maintained. The existing pattern of maritime uses with residential uses landward of Mattituck Creek and interspersed along the water's edge would still be maintained.

Upon project implementation, the tree line would be setback for a distance of approximately 500 feet. As illustrated on Renderings A-1, A-3, A-5, and A-13, the existing visual setting of the SYC operations at the water's edge with woodlands landward in the background and the tree line would be maintained.

The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site.

To accommodate the proposed action, 5.51± acres of the existing forested land (Coastal Oak-Beech Forest / Successional Southern Hardwood) on the western portion of the subject property would be removed. While the proposed action would remove a portion of the existing forested land, 11.76± acres of forested area on the western portion of the subject property would remain. The proposed action would modify the existing topography on site to achieve a level building area and thus, would modify the existing tree line west of Buildings 7 and 8 on the subject property. Upon project implementation, the tree line would be setback for a distance of approximately 500 feet. As 11.76± acres of forested land (Coastal Oak-Beech Forest / Successional Southern Hardwood) would remain on the western portion of the site and the tree line would be minimally setback, the subject property would continue to provide a rural aesthetic and character for the surrounding area upon project implementation.

The proposed action would be consistent with the community character of the surrounding area, including to boaters and others traversing the waters of Mattituck Creek and Mattituck Inlet. Mattituck Creek has an

established maritime and commercial component. As part of these components, buildings are present along the creek to support the maritime and commercial uses of this area. As such, the construction of two additional buildings on the subject property, which is currently improved with seven (7) buildings for the existing maritime use, is consistent with the community character of the subject property and surrounding area. It is noted that during boating season (i.e., June through September), the proposed two buildings would be empty (or largely empty as some boat owners may elect not to launch their boats in a particular season) and there would be no activity occurring on that portion of the subject property. Additionally, as described in this section of the DEIS above, the proposed buildings would be constructed behind Buildings 7 and 8 such that the proposed buildings would not be visibly obtrusive to passersby traversing Mattituck Creek. The proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. As such, implementation of the proposed action would not have a significant adverse impact on community character for boaters traversing Mattituck Creek as similar buildings currently exist along the creek, on the subject property and are part of the established maritime and commercial uses in this area.

As indicated in the 2020 Comprehensive Plan, the Vision Statement for the Town of Southold is, “future planning shall be compatible with existing community character while supporting and addressing the challenges of continued land preservation, maintain a vibrant local economy, creating efficient transportation, promoting a diverse housing stock, expanded recreational opportunities and protecting natural resources” (page 1). The proposed action is supportive of several components of the Town’s vision statement including improving the economy, expanding recreational activities, and protecting natural resources. Siting the storage buildings at SYC is protective of the maritime culture associated with the Town of Southold as it would provide indoor winter storage for boaters on local waters at a facility that has existed along Mattituck Creek for over 60 years. Constructing and operating winter boat storage buildings would bring additional jobs and a new tax revenue stream to the Town of Southold. In addition to direct benefits to the Town, the Applicant is responding to a market demand for larger boat owners looking for local indoor winter storage.

Overall, based on the above, no significant adverse community character impacts would result from the proposed action.

## **Open Space and Recreation**

### Impacts to Mattituck Harbor

As depicted on Rendering A-3, the post-development views of SYC from the south along Mattituck Creek would be similar to existing conditions. Select docks and the bulkhead would remain visible as well as the eastern façade of Building 8 and southern portion of Building 7. Most of Buildings 9 and 10 would be obscured from view. However, the top of the eave for Building 9 would be visible to the southwest and most of the eastern façade and eave of Building 10 would be visible to the northwest. Furthermore, the northeastern corner of the Evergreen concrete retaining wall would be visible between Buildings 7 and 10. Additionally, as discussed in Section 2.2.2 of this DEIS, the proposed action would not disrupt the existing tidal flows or depths of Mattituck Harbor nor impact the existing user groups of Mattituck Harbor. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Mattituck Harbor. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. The proposed action would benefit Mattituck Harbor as it would continue to support the boating community as it would allow owners of larger vessels the option of climate-controlled storage rather than transport to warmer waters for the winter months. Therefore, no significant adverse impacts to Mattituck Harbor are anticipated.

### Impacts to Oregon Marsh State Tidal Wetlands

Use of this passive open space would remain unaffected by the proposed action. During operation, the proposed action would only introduce activity at SYC during the early spring (April-May) and late fall (October-November) that would not be discernible from the existing conditions. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Oregon Marsh State Tidal Wetlands. There would be no new impact on Oregon Marsh State Tidal Wetlands from April to September 30th, which is likely to be a time when NYSDEC issues the most permits for its use. Therefore, no significant adverse impacts to Oregon Marsh State Tidal Wetlands are anticipated.

### Impacts to Mill Road Preserve

Mill Road Preserve is accessible year-round to both residents and visitors to the Town of Southold. It is expected the highest volume of use for the trails would remain the same as existing conditions, between April and September. During construction, which is anticipated to commence in mid-December 2023 and be completed in October 2024, there would be a slight increase in activity during the timeframe during which the trails are frequently used. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code and the truck activity associated with excavation would be limited to the weekdays. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Mill Road Preserve.

The existing forest edge of the Mill Road Preserve would be altered as a result of the proposed action. The ecological community composition of Mill Road Preserve is comparable to the proposed action. The proposed action would result in an intensification of use within the existing forest edge as edge effects would be shifted to approximately 70 feet from the shared property boundary with the subject property in the northeast corner of Mill Road Preserve. The effects of the edge would extend approximately 200 feet in to Mill Road Preserve. However, as indicated in the ecological assessment, the proposed action would not result in significant adverse impacts on the forest habitat quality for Mill Road Preserve.

The highest volume of activity at SYC is during the boating season, which is March 15 through September 15. During this time, boats are transported to and from Mattituck Harbor via travelifts, boaters, fishermen, and CCE FLUPSY operators access the floating docks, and boaters utilize the pump-out services and fueling station. Upon implementation of the proposed action, this high volume of activity during this season under the proposed action would remain the same as existing conditions and corresponds with the highest volume of use for the trails.

Off-season activity at SYC, from approximately September 15 through March 15, includes boat maintenance and repairs which would continue upon implementation of the proposed action. As part of the proposed action, additional activity at SYC during the early spring (April-May) and late fall (October-November) would only be for the transporting of the yachts to and from the storage buildings and Mattituck Creek. From Mill Road Preserve, the addition of this activity would not be discernible from existing conditions and would occur when the trail is not frequently used. As indicated in Viewpoint 4 discussed earlier in Section 3.4.2, post-development views would consist of the woodland area of the subject property to not be disturbed and a portion of the western and southern façades and roof of Building 9, the roof and a portion of the southern façade of Building 10, and a portion of the western façade of existing Building 8. The cover in the setback area would remain.

The proposed action would not alter the public's enjoyment of the Town-owned preserve property during all phases of the action as there would be no new impact on Mill Road Preserve from April to September 30, which



is likely to be a time when the trails are most frequently used. Overall, based on the above, no significant adverse impacts to Mill Road Preserve are anticipated.

### Impacts on Vessel Traffic

As explained in the Boat (Vessel) Study, it is estimated that approximately 547 boats are active in Mattituck Harbor on a peak season day. As concluded in the Boat (Vessel) Study, the proposed action would increase boats in the off-peak season (i.e., April-May for yachts returning to the water and October-November for yachts arriving to SYC for storage) for a 12-week timeframe in the spring and fall. As such, this averages to an increase of seven boats per week or one-to-two per day during this off-peak time. This increase is nominal and would not inhibit other maritime uses on Mattituck Harbor. Also, SYC will schedule all boats to/from its facility. As the vessel traffic would be comparable to existing conditions, it is not anticipated the proposed action would alter the ability of personal watercrafts and non-motorized watersports, such as kayaks and SUPs, to navigate within Mattituck Harbor. Viewpoints 12 and 13 indicate navigability within Mattituck Harbor is not impacted by larger vessels as they were taken from the perspective of a kayak with a 95-foot yacht present adjacent to the existing SYC operations. Additionally, many of the yachts to be accommodated by the proposed action are anticipated to be existing boats utilizing local waters customers electing to store their yachts in a climate-controlled facility closer to home rather and eliminates the need to relocate the vessel to warmer climates for winter storage. Therefore, no significant adverse impacts to vessel traffic on Mattituck Harbor are anticipated.

### **Noise**

SoundSense, the acoustical engineering firm for the proposed action, has prepared an Acoustic Report to evaluate the existing acoustic conditions at the subject property, as well as the analysis of the expected acoustic impacts of the proposed development. The acoustic analysis included the collection of existing sound level readings at the subject property as well as readings along the planned truck route for the excavation and construction phases. These existing sound levels served as the background sound levels for the area that were incorporated into all noise predictions completed for the proposed project. The measured sound levels were used in conjunction with: (1) the traffic data generated in the TIS to assess the potential increases in traffic noise both during construction and in the Build condition, and (2) the equipment types and utilization factors provided by Red Rock Industries to develop a construction noise model. Any potential increases in sound levels at the receiving locations evaluated due to increased vehicle/truck passbys, construction activities, and final sound levels with the new development have been considered for the proposed project.

### Construction Noise Impacts

While receivers near the subject property would be temporarily impacted by the construction noise, noise impacts due to construction are specifically exempt from the Noise Code. Additionally, all construction activities would be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity would be limited to Monday to Friday from 7:00 am to 5:00 pm as mitigation offered by the Applicant. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start. No work would be performed on Federal or State holidays, or on Sundays.

The Acoustic Report evaluated 18 receptor locations and found there to be a significant increase in noise at receivers R1-R16 for at least one phase of construction for either the peak hour or 8-hour Leq. For Receivers R1- R8, the increases are predominantly due to sound created at the Project Site from construction activities. These increases would be considered a significant impact, as defined by the NYSDEC criteria, during the periods of construction. However, the construction-related noise impacts would be limited to the times and days specified, which are permitted by Town Code, and would be temporary. For receivers R9-R18, any increase in the sound levels would be dependent on additional traffic, which is highest during the excavation phases. Sound levels are higher than recommended by the NYSDOT at receivers R10-R14 during the excavation phases, and

during all construction at receivers R14 and R15. However, the NYSDOT criteria are not standards, and these increases are temporary only during construction.

Additionally, the sound levels presented represent exterior sound levels. Based on NYSDOT criteria, the sound levels in interior spaces would be 20-25 dB less than the levels shown. As excavation is proposed for mid-December through May, the majority of this period would see most residents indoors and would minimize the impact to quality of life. If the reduction of 20 dB is applied to the traffic data for receivers R10-R14, which exceed the outdoor recommendations from the NYSDOT, the interior recommendations for interior noise levels are met and would be within the NYSDOT recommended criteria for those receivers.

For the construction phase, the impacts would occur from late-March to late-September, when outdoor activities are occurring. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code.

To mitigate noise impacts to surrounding properties and wildlife during the excavation and construction phases, the following measures would be implemented: any vehicle which requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep; all trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Rod from County Route 48; and all trucks utilized would be Tier 4 certified by U.S. EPA standards.

#### Post-Development Impact Analysis

As a proposed winter storage facility, the buildings would be largely inactive for almost half of the year. The noise would occur when boats are loaded into and out of the building. Due to the proposed grading, the retaining wall would function as a sound barrier, largely containing the noise within the graded area. No receiving locations exceed 6 dBA above the Existing Condition sound levels. This is categorized as “no impact” as classified by the NYSDEC evaluation criteria. The greatest predicted increase would be 4 dBA at Receiver R2. Furthermore, the projected sound levels also meet the conditions of the Noise Code at all receiving locations. The results of the analysis show that in the Build Condition that mitigation measures would not be required.

#### **Air Quality**

An Air Quality Evaluation was prepared to evaluate construction-related impacts and post-development conditions at SYC.

#### Mobile Source Evaluation

Short term air quality impacts may occur during the excavation phase of the project; however, long-term air quality impacts would be inconsequential. Post-development, the addition of stationary emission sources is not proposed and vehicular traffic due to the expansion would be minimal. The analysis of the air quality impacts due to construction activities was completed considering the types of the activities conducted and the type of equipment utilized during each phase.

Air emissions would be generated from the operation of on-road mobile construction equipment as well as employee passenger vehicles during construction of the proposed project. Vehicle miles traveled (VMT) data for each on-road construction vehicle and employee trip were estimated from roundtrip distances and the number of vehicles and employees based on the activity specific construction schedule. It was assumed that all on-road construction vehicle equipment would use diesel fuel and all passenger vehicles would use gasoline. Typical vehicle types would be passenger car, passenger trucks, and single unit short-haul construction vehicles. On-road mobile equipment emission rates for those pollutants discussed earlier (i.e., CO, NO<sub>x</sub> and PM) were estimated. The emission rates were compared to the U.S. EPA General Conformity De Minimis Table. General Conformity ensures that the actions taken by a federal agency do not interfere with a state's plan to attain or maintain national standards for air quality or contribute to NAAQS violations. Based on the analysis,

the anticipated emission rates for each phase of the project are well within the annual Conformity De Minimis threshold, therefore it is expected that on-road vehicle emission generated from the project construction would not have a significant adverse impact on air quality.

Air emissions would be generated from the operation of off-road mobile construction equipment. The U.S. EPA has adopted multiple tiers of emission standards, which are based upon engine size and manufacture year. The engine tier standards were established to reduce soot, smog and other types of dangerous pollutants that are emitted from diesel engines. In 1998, Tier 1 standards were introduced for equipment under 37 KW. The more stringent Tier 2 standards took effect from 2001 to 2006, and yet more stringent Tier 3 standards phased-in from 2006 to 2008 (Tier 3 standards applied only for engines from 37-560 kW). In May 2004, the U.S. EPA signed the final rule introducing Tier 4 emission standards, which were phased-in over the period of 2008-2015. The Tier 4 emission introduced substantial reductions of NO<sub>x</sub> (for engines above 56 kW) and PM (above 19 kW). CO emission limits remain unchanged from the Tier 2-3 stage. Tier 4 equipment, as defined by the U.S. EPA, correlates to the most recent and most stringent emission standards established by the U.S. EPA and California Air Resources Board. As excerpted from the Air Quality Evaluation, Tier 4 engine certification is applicable to new engines found in off-road equipment including construction, mining and agricultural equipment, marine vessels and workboats, locomotives and stationary engines found in industrial and power generation applications. "As of January 1, 2014, these emissions standards apply to new engines that power equipment commonly found in most construction and agricultural applications while new engines manufactured for much larger applications including marine, locomotives must have met the standard by January 1, 2015. These emissions standards apply to new and remanufactured engines and do not apply to older engines."

The analysis performed herein evaluates the potential impacts associated with trucks and equipment that are equipped with engines that are Tier 3 or Tier 4 compliant for a conservative air quality impact assessment approach; however, it is noted that the Applicant has committed to utilizing trucks and equipment that are all Tier 4 compliant. As described above, Tier 4 regulations are the strictest U.S. EPA emissions requirements for off-highway diesel engines. As such, the use of all Tier 4 compliant trucks and equipment would further reduce emissions of PM and NO<sub>x</sub> ensures that federal emission standards are being achieved. Based on the analysis, emission estimates are well within significant threshold values and, therefore, no significant adverse impacts from mobile off-road emissions would be expected.

Fugitive dust was also evaluated and quantified without mitigation. Based on the total area of construction (6.51± acres) and the total project duration of approximately 13 months, the Total Suspended Particulate (TSP) emission rate of 1.2 tons/acre/month of activity yields a total TSP emission rate for the entire project to be approximately 101.5 tons of TSP, without mitigation. However, in order to mitigate the impact of the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed during construction, as necessary: minimizing the exposed area of erodible earth; applying wet suppression to material piles and unpaved areas when there is visible dust; use of covered haul trucks to move construction material; use of plastic sheet coverings for material piles; and a material wind barrier consisting of a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area. With the implementation of the above measures, there would be no significant adverse impacts created by fugitive dust generation and the resultant air quality impacts would be avoided.

#### Carbon Stock Removal Evaluation

Carbon stock is the amount of carbon that has been stored within the forest ecosystem, mainly within living biomass (trees and other vegetation) and soil, and to a lesser extent, in dead wood and forest litter as the result of CO<sub>2</sub> uptake from the atmosphere. Anything that absorbs more carbon from the atmosphere than it releases is called a "carbon sink." Because of the complexity of estimating forest carbon stock, and to maximize efficiency for the purpose of this project, the carbon sequestering evaluation used formulas from published studies to calculate carbon stock estimates for live adult trees and estimated the associated carbon stock values for the remaining three carbon pools using ratio estimates. Studies have estimated that 17± percent of total forest

carbon stock is stored in above-ground biomass, 6± percent is stored in below-ground biomass, >1± percent is stored in dead wood, 5± percent is stored in forest litter, and 72± percent is stored in the soil.

Under existing conditions, there are 2,408 mature trees (greater than 6 inches in diameter) at the subject property. The existing total above-ground green weight was estimated to be approximately 5,721,580 lbs. and the total carbon stock is estimated to be approximately 2,488,887 lbs. Based upon a conservative 650 tree removal number (although field adjustments are likely to reduce this number), there would remain 1,758 trees on the subject property. As a result of the tree removal, it is estimated that the above-ground green weight would decrease by 1,799,078 pounds, and the total loss of stored carbon due to tree removal would be approximately 782,599 lbs. However, the carbon stock ratios are estimates for a variety of forest types and is not specific to Long Island. Also, based on the soil borings, the soil material consists of predominantly sand with little to no organic material with the exception of a less than 6-inch topsoil in some areas. Carbon sequestering removal ability in soil is directly related to the content of organic material, therefore it can be assumed that the carbon stock ratios are an overestimate.

There are many uncertainties when evaluating carbon fluxes from vegetation growth and land-use change in the global carbon cycle. This is not considered to be a significantly sized clearing area and, therefore, adverse impacts due to tree clearing/carbon stock loss are considered negligible. It is also noted that regulations for the removal of carbon sinks do not exist at the local, state or federal level; however, the proposed clearing is consistent with the prevailing bulk and dimensional requirements of the M-II zoning district set forth in the Town Zoning Code (Chapter 280). Zoning permits a maximum lot coverage of 30 percent and the proposed plan includes 24.7 percent lot coverage.

#### Carbon Sequestration due to Hard Clam Farming

The Air Quality Evaluation quantified the existing FLUPSYs as hard clams benefit the ecosystem by acting as a carbon sink. It is estimated that on average that the shell of a marketable hard clam (about 1" in shell height and less than 2" in length) contains 2.93 grams of carbon and the farming program is expected to result in the harvesting of 1.5 million clams annually. Thus, the projected 1.5 million clams harvested annually have the potential to sequester 9,680 lbs. of carbon. As such, this program has the beneficial impact of carbon sequestration. It is noted that the number of clams harvested have well exceeded the minimum goal of 1.5 million/year. As such, this sequestration number provided herein represents the minimum expected annually.

#### Supplemental Planting

The proposed action includes the planting of 135 trees, including 95 pitch pine trees (minimum 4-5 feet height) and 40 trees consisting of staghorn, sumac, and shadbush to offset carbon stock loss in the Project Area. The planting of 135 pine trees would reduce the carbon sink loss from the assumed 650 trees (for the purpose of this analysis, as described above) to 515 trees. Using the same methodology discussed earlier in this section, it is estimated that 95 adult pitch pine trees would store 80,191 lbs. (40± tons) of carbon, decreasing total carbon storage loss (above & below-ground biomass) from 391 tons to 351 tons. This decrease does not include the 40 additional small trees, which would have some additional benefit.

Overall, based on the above, no significant adverse air quality impacts would result from the proposed action.

### **Social and Economic Impacts**

#### Proposed Services

Upon implementation of the proposed development, SYC would have two new buildings (52,500 SF and 49,000 SF) for the sole purpose of indoor, heated storage for larger vessels (i.e., yachts). The existing storage buildings would remain the same and a reconfiguration of the staging areas and dry-dock storage is not proposed. Boat owners who typically store their boats in warmer climates in the winter and those looking to store their boats

in climate-controlled space locally are the anticipated new yacht customers. It is anticipated the boat owners would be existing customers who currently dock at SYC or Strong's Water Club, new yacht customers from the surrounding Southold community, as well as other owners on Long Island, Westchester County, and in the States of Connecticut and New Jersey. The boats would arrive to the facility at the close of boating season (i.e., October-November) via Mattituck Inlet, be hauled from Mattituck Creek via the existing 85-ton travelift and moved to the boat storage buildings. At the beginning of the next boating season (i.e., April-May), the same boats would be removed from storage, returned to Mattituck Creek via the 85-ton travelift, and exit through Mattituck Inlet. It is estimated that approximately 88 boats per season would be stored in the new buildings.

Additionally, the following facility improvements are proposed: the provision of potable water via public water connection, two I/A OWTS for sanitary waste management (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings and one new system), formalization of on-site stormwater management system, landscaping, lighting improvements, and additional parking spaces to support the existing and future operations of SYC. Typical operations would continue during construction.

The repair, maintenance, fueling, washing and detailing of boats would occur in the same manner as they currently do on-site. Repair and maintenance would occur within the on-site buildings and/or at the existing dock. All materials used for such services are marine grade and common to the maritime industry. It is noted that the proposed action would not alter the maximum amounts of chemicals and antifouling paint stored on-site and any spills or releases observed either on land or into the water would be required to be reported in compliance with state hazardous material spill response protocol. The sale of marine fuel would continue under post-development conditions and any spills or releases observed either on land or into the water would be required to be reported in compliance with state hazardous material spill response protocol.

The offering of indoor storage for larger vessels post-development is a service that is currently offered to smaller vessels at SYC. The only exception is that the type of vessels to be stored cannot be brought to SYC via trailers on roadways (which does occur with smaller vessels for winter storage) but must arrive to and leave the site via Mattituck Creek and the existing boat lift at SYC. The existing 85-ton travelift used for the existing operation is sufficient to accommodate the yachts of the proposed action.

#### Projected Employment Post-Development

Upon implementation of the proposed action, SYC projects that an additional 11 employees would be added to increase the number of employees at SYC to 28. The number of employees on-site would vary seasonally. Currently, from Monday through Friday, 17 full-time employees are on-site. On Saturday's from approximately March 15 through September 15 (season), 12 employees are on-site and from September 16 through March 15 (off-season), the number decreases to four. On Sunday's during the season, approximately four employees are on-site and during the off-season, only one employee is on-site. The anticipated 11 new employees are anticipated to primarily be on-site on weekdays only.

These new employees would be for the boatyard only and include positions for boat maintenance, machinery operators, engine technicians, administrative, and wood and fiberglass re-finishing personnel.

In addition to the benefits presented above, upon implementation of the proposed action, the method of sanitary disposal would be upgraded from one individual on-site subsurface system to an I/A OWTS, which is consistent with the Town and County's intent to reduce nitrogen loading from sanitary waste. Also, a stormwater management system comprised of leaching pools and French drains which includes the use of pervious gravel would be installed to accommodate and recharge stormwater runoff from 7.77± acres, inclusive of the Project Area as well as additional surrounding land area. Finally, the proposed extension of the water main for connection to the SCWA would provide the opportunity for surrounding properties with private water wells to connect to public water.

### Increased Assessed Value

Consultations were undertaken with the Southold Assessor for post-development tax revenue. In correspondence dated June 25, 2021, the Southold Assessor advised that the increase in the Assessed Value would be approximately \$41,000. With no exemptions the increase in the property taxes would be estimated at \$59,450 based on the 2020-21 tax rate. However, the property would be eligible for the 485-b Business Investment Exemption, which is based on a sliding scale over 10 years. For the first 3 years, there would be a 50 percent reduction for the increased assessment attributable to the two new buildings. For each year after, the reduction would decrease as follows: Year 4: 40 percent Year 5: 30 percent, Year 6: 20 percent, Years 7 thru 9: 10 percent, and Year 10: 5 percent.

### Economic Impact Analysis

As part of the economic impact analysis, the projected gross revenues over the next 4 years, inclusive of 2024 with assumed project completion were inputted into the Marina Economic Impact Calculator (MEIC) to generate the Annual Revenue Regional Comparison, Summary of Economic Impacts, Economic Impacts by Major Industry Group, State and Local Tax Impacts, and Federal Tax Impacts. The projected economic output for 2022, 2023 and 2024 were performed. For 2021, the Applicant has advised that 2020 numbers are similar, and thus, was not performed. As excerpted from the MEIC analysis, the potential direct, indirect, and induced impacts were included. The direct effects are those take place only in the industry immediately affected (e.g., Construction, Manufacturing, Wholesale Trade, Transportation and a portion of Finance & Insurance). The projected direct impact is 60 jobs.

The indirect effects are related to inter-industry transactions (e.g., if a marina closes it will no longer need locally produced materials or services. This will affect all of their suppliers, possibly resulting in a further loss of a few more jobs). Finally, the induced effects measure the effects of the changes in household income. Based on the MEIC, as of the most current year evaluated (2020), the total local, state and federal tax impact of SYC was \$3,624,706. Upon implementation of the proposed action, the total tax revenue is estimated to increase to \$4,478,039.

SYC's projected revenue from boat sales in 2024 is approximately 82 percent of its total revenue, as compared to the current 86 percent and nearly 77 percent higher than the regional marinas. However, its revenue from boat storage is projected to increase to approximately 5.14 percent of its total revenue, which is below that of the region by approximately 1.6 percent but higher than the current percentage of 3.23 percent. Fuel and merchandise sales are projected to slightly increase by approximately 0.1 percent and 0.2 percent, respectively. Boat service is projected to increase by approximately 1.65 percent.

### **Construction-Related Impacts**

The proposed project would be completed in approximately 13 months based upon construction activities being undertaken for five or six-day work weeks based upon the phase. Phases 1 and 2 are excavation phases to occur over 5.5 to 6.5 months with trucking for material removal planned for Monday-Friday from 7:00 am to 5:00 pm. Phase 3 is the construction phase to occur over six months with workdays planned for Monday-Saturday with various hours between 7:00 am and 7:00 pm pursuant to §180-6 Prevention of Noise – Standards of the Town Code. A description of each phase follows.

### Wildlife Survey

Prior to site preparation, field inspections would occur to identify the presence of the eastern box turtle and relocation of any observed turtles to on-site areas that would not be disturbed.

### Site Preparation

The site preparation phase would occur over approximately two weeks and would include tree removal and grubbing. During this phase, the following equipment would be staged and used on-site: excavator, feller buncher, woodchipper, tub grinder, and payloader. All of this equipment would be assigned an operator and approximately four laborers are expected. One trailer with driver is expected daily during this phase as well.

During this phase, the proposed crushed concrete haul road would be constructed from the proposed Construction Excavation Area to West Mill Road, as shown on the Excavation Phasing Plan and Aerial Overlay. This haul road would be used for the entirety of Phase 1 and would remain as an emergency access road post-construction. It is noted that the proposed entrance to the temporary haul road was shifted from the original design to increase the buffer distance to the nearest residential properties. The proposed haul road was shifted to the south on West Mill Road and is located approximately 145± feet south of the single-family residence located at 4105 West Mill Road. Internally, the haul road was shifted to maintain a separation distance of approximately 259 feet to the single-family residence located at 5106 West Mill Road.

### Phases 1 and 2: Excavation

Phase 1 would occur over approximately 5 to 6 months with a commencement date of mid-December 2023. During Phase 1, approximately 123,000 CY of material would be excavated and removed via the temporary haul road. Based on 30 CY trucks, Phase 1 would generate 4,100 total trips. With 40 trucks available per day for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 1 could be completed in 5 months. Also, during this phase, the following equipment would be used on-site: two payloaders, two excavators, one fuel truck / water truck, and two bulldozers. All equipment with exception to the fuel truck/water truck would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, two flagmen, and four laborers. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start.

Phase 2 would be up to 1 month (2 to 4 weeks) with a commencement date of May 2024. During Phase 2, approximately 12,000 CY of material would be excavated and removed via the existing access driveway to SYC. Based on 30 CY trucks, Phase 2 would generate 400 total trips. With 40 trucks available for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 2 could be completed in 2 weeks. All of the equipment detailed in Phase 1 above would remain on-site with the same staff. At the completion of Phase 2, the temporary guard booth would be removed, and the access would be gated to prevent unauthorized entry.

### Phase 3: Construction

Phase 3 would occur over approximately 6 months with a commencement date of May 2024. During Phase 3, it is expected that work would be performed 6 days per week (Monday-Saturday) with time limited to 7:00 am to 7:00 pm in accordance with §180-6 Prevention of Noise – Standards of the Town Code. During Phase 3, the construction of the retaining wall, two buildings (Total Gross Floor Area [GFA]: 101,500 SF), parking area, and all infrastructure (drainage, water supply and 2 sanitary systems) would be undertaken. It is anticipated that Phase 3 would generate a total of 60 truck trips for the construction of the retaining wall and another 101 truck trips (12 trucks for material delivery and 89 trucks for concrete foundation) for the two boat storage buildings. A similar guard booth would be situated along the existing internal driveway to direct incoming deliveries and employees, to inspect exiting vehicles, and to enforce safety protocols.

As indicated in the Construction Details, the retaining wall construction would be approximately three weeks and would require the following equipment: one payloader, one excavator, one skid steer, and one mini excavator. All equipment would be assigned an operator and four laborers would be on-site. It is noted that during construction of the retaining wall, drainage infrastructure and building foundations would be performed. Additional equipment to be used on-site for this work include two payloaders, one excavator, one

fuel truck, two skid steers, one mini excavator, one bulldozer, one scissor lift, and one telescopic forklift. Other than the fuel truck, all equipment would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, and laborers would range from 20 to 60.

It is recognized that the Town of Southold regulates construction-related noise (Chapter 180 of the Town Code) by limiting the times of construction activities to 7:00 am to 7:00 pm, on weekdays and Saturday. As such, in accordance with Town Code and indicated above, all construction activities would be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity would be limited to Monday to Friday from 7:00 am to 5:00 pm as mitigation offered by the Applicant. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start. No work would be performed on Federal or State holidays, or on Sundays. Also, all trucks would be Tier 4 certified by U.S. EPA standards and all gasoline or diesel-powered machinery would be equipped with adequate mufflers. Additionally, any vehicle that requires the use of a back-up alarm would use a white noise back-up alarm rather a single tone beep, and all trucks and drivers would be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48. The additional mitigation measures have been incorporated into the proposed project to reduce the impact of noise on the surrounding properties.

To address potential construction-related vibration impacts impact to nearby residents and truck traffic on local roads, a Vibration Report was prepared by SoundSense. In August 2022, SoundSense documented the existing vibration conditions at various locations near the project site and vibration data from a representative truck expected to be used during construction. Analysis of the construction equipment has shown that there is no predicted impact to any nearby neighbors. Additionally, using the data collected near the project site, there is no predicted impact to any nearby historic structures from truck traffic. To ensure that vibration is responsibly managed, a vibration monitoring plan during construction at the project site to protect nearby historic structures of concern and ensure that ground-borne vibrations are not a disturbance to nearby neighbors. This plan includes installation of vibration monitoring terminals at four locations and monitored through all phases of construction.

Overall, while the proposed action would have construction-related impacts, they would be temporary in duration and would cease upon completion of construction.

### **Archaeological and Cultural Resources**

The evaluation of potential cultural resources (direct and indirect effects) was undertaken by the project archaeologist, Carol S. Weed, MA (RPA) and in consultation with NYS Office of Parks, Recreation and Historic Preservation (OPRHP). As part of this evaluation, a Phase IA Archaeology (2021a) report, Reconnaissance-level Historic Resources Survey, and Phase IB Archaeological Assessment documents (2021b) were prepared.

In correspondence dated July 29, 2021, OPRHP indicated that no historic properties would be affected by the proposed project. NY State Historic Preservation Office (SHPO) did, however, determine that the platform water tower and accessory building at 3380 West Mill Road was eligible for listing on the State/National Registers of Historic Places (S/NRHP). The two structures lie about 100 feet (30 meters) south of the south end of the proposed stabilized recycled concrete aggregate (RCA) shoulder. The only indirect effect that might result in an effect to this resource is vibration. However, trucks and other heavy-duty vehicles commonly use West Mill Road and have done so for many years. Moreover, field observation did not indicate any surficial damage due to daily truck movements. Based on recommendations from C. Weed, prominent markers such as orange cones would be placed at the south end of the stabilized RCA shoulder during the construction period to ensure that the construction truck maintain distance from the resource.

Based on the results of the Phase IB survey, the project archaeologist has indicated that no archaeological sites will be affected by the proposed action. The Phase IB report was submitted to OPRHP and on November 18,



2021, OPRHP requested the geotechnical engineering borings to document evidence of the deposition of dredge spoils along the southern portion of the Project Area. The requested documentation was provided, and a request for Phase IB testing in this area has been requested in correspondence dated December 3, 2021. This additional work has been performed and in correspondence dated January 24, 2022, OPRHP determined that based on the supplemental Phase IB archaeological investigation, no archaeological sites were identified, and no additional archaeological investigation is needed.

In correspondence dated April 8, 2022, OPRHP requested the preparation of a Construction Protection Plan for construction-related vibration impacts on the two eligible structures: Mattituck Creek Tide Mill / Old Mill Restaurant and the Water Tower and Building. In response, as part of the Vibration Report prepared by Sound Sense, a Construction Protection Plan has been included. Additionally, in response to comments from the Town of Southold Planning Board during review of the initial DEIS filed in December 2021, all historic structures along the entire route were identified and evaluated in the Vibration Report. As indicated in the Vibration Report, there is no predicted impact to any nearby historic structures from truck traffic. However, to ensure that vibration is responsibly managed, a vibration monitoring plan during construction at the project site to protect nearby historic structures of concern and ensure that ground-borne vibrations are not a disturbance to nearby neighbors.

### **Proposed Mitigation Measures**

#### **Soils and Topography**

- The grading program would result in an excess cut of 134,921 CY of material. All excess soils will be transported to a registered or permitted facility in accordance with NYSDEC Part 360 for re-use or local site. As the ultimate location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations at this time.
- To stabilize the slopes within the Project Area and to correct existing slope instability due to unconsolidated materials, a concrete retaining wall of approximately 875 feet in length and varying height will be installed to the north and west of the proposed boat storage buildings. Portions of the retaining wall would be vegetated for a visually appealing wall that serves to blend with the landscape. Upland of the retaining wall, landscaped areas would use erosion control blankets and plantings to minimize erosion to the existing slope of the surrounding area on the M-II zoned parcel. The Geotechnical assessment confirms that the existing soils are favorable for stable open cuts for placement of the retaining wall.
- Erosion and sedimentation controls will be undertaken prior to and during construction and would include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures will be routinely inspected and maintained such that no sediment would be transported off-site.
- To minimize fugitive dust emissions, the following measures will be undertaken: watering down access ways, stockpiles, and material prior to loading; limit on-site vehicular speeds to 5 miles per hour (mph); soil stockpiles would be covered; all trucks carting loose material and construction debris would be covered; and a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Any debris observed during site preparation including demolition debris, new fill and excavation areas, vegetation, topsoil, roots, and other deleterious materials deemed unsuitable, will be removed from the proposed construction areas, and replaced with controlled fill. Site clearing, grubbing, and

stripping will be performed during dry weather conditions to prevent excessive rutting and the mixing of organic debris with the underlying soils.

- To avoid poorly draining soils on the south side of Boat Storage Building No. 2 (Proposed Building 9), soil mixing would be implemented.
- The haul road layout is orientated along the west edge of the excavation, which maintains the separation distance between vehicle traffic and the closest residence in order to mitigate potential vibration impacts associated with soil excavation or construction activities.

### **Water Resources**

- The proposed new and replacement systems with I/A OWTS technology will reduce the effluent nitrogen concentration on site, in accordance with Article 6 and Article 19 standards of the SCSC.
- The proposed action includes the installation of a stormwater management system that will contain and recharge stormwater from a two-inch rain event from the Project Area and off-site contributing areas. The proposed stormwater management controls will include both structural infiltration (on-site leaching pools) and non-structural methods (pervious gravel) for infiltration.
- The proposed stone blend pavement will reduce the area of impervious surface on the site while also providing for effective infiltration for stormwater.
- The proposed connection to the public water supply will reduce on-site groundwater withdrawal and will offer the ability to connect to the public water system to neighboring property owners.
- The proposed *Erosion and Sediment Control Plan* will include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. Prior to construction, a SWPPP will be prepared and will address additional items during construction such as concrete washout areas, temporary stabilization, and erosion and sediment maintenance and inspection procedures.

### **Flooding and Climate Change**

- The placement of buildings at FFE 10.0 feet AMSL and other infrastructure at a minimum elevation of 9.0 feet AMSL will mitigate potential flood impacts based upon the adjacent flood zone boundary.
- All project elements have been located landward of the existing floodplain.

### **Ecological Resources**

- Approximately 8.28 acres of Coastal Oak-Beech forests on the subject property (approximately 66 percent of the existing 12.60± acres) will be retained. These remaining Coastal Oak-Beech forests retain 70 percent of the site's oak (*Quercus sp.*), American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), hickory (*Carya sp.*), and sassafras (*Sassafras albidum*) trees.
- Overall, the project retains 11.76± acres of forest habitat (comprised of Coastal Oak-Beech and successional forests), 75.4 percent of the site's approximately 2,400 trees, and 70.6 percent of all trees greater than 12-inches in diameter.

**Strong's Yacht Center – Proposed Boat Storage Buildings****5780 West Mill Road, Mattituck, Town of Southold, Suffolk County, NY**

- To mitigate for the loss of forest trees associated with the project, a total of 135 trees would be replanted, including 86 pitch pine trees (minimum 4-5 feet height) to be planted along the western and southern edges of the proposed development. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.
- To mitigate for potential noise impacts to birds and wildlife during construction, the use of white noise back-up alarms rather than single, tone beeps would be used, there would be no Jake Brake mechanisms on the site, and all trucks would be U.S. EPA Tier 4-compliant.
- The proposed project will shift the eastern edge of the existing forests up to 520-feet to the west. To mitigate the edge effects and potential habitat degradation in the retained forests on the subject property and the Town of Southold Mill Road Preserve, the following measures will be undertaken:
- Planting 27,333± SF of native trees, shrubs and groundcover along the new forest edge. This planted area is approximately 20-to-30 feet in width and will include dense, multi-layered plantings (i.e., plants that at maturity will occupy understory, and canopy-levels) with abundant conifer trees (86 pitch pine trees) to minimize light penetration into the new forest. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forested area on the subject property will increase from 11.76 acres to 12.39 acres.
- The proposed retaining wall features topsoil-filled planting trays that will be planted with native ground-vegetation, shrubs, and small trees. Native species that will be planted on the retaining wall include bayberry (*Morella pensylvanica*), staghorn sumac (*Rhus typhina*), shadbush (*Amelanchier canadensis*), groundsel bush (*Baccharis halimifolia*), Virginia creeper (*Parthenocissus quinquefolia*), switch grass (*Panicum virgatum*), and common milkweed (*Asclepias syriaca*). The vegetation established on the proposed retaining wall will serve to further reduce the intensity of the new forest edge.
- The proposed activities include construction of a stormwater management system that will collect, treat, and infiltrate stormwater generated from a two-inch rainfall event from the roofs of the proposed buildings. Stormwater management infrastructure shall include catch and leaching basins and French drains. Two of the existing metal warehouse buildings will also be connected to the proposed stormwater management infrastructure, reducing transport of sediments, nutrients, and pollutants to Mattituck Creek from these existing structures.
- Nutrient reduction measures included in the proposed action include the replacement and up-grade of the existing conventional sanitary system that services the existing office, marina, and other buildings with an I/A OWTS, and a new I/A OWTS to service the proposed boat storage buildings. Both new I/A OWTS shall conform with the Suffolk County Sanitary Code and are designed to reduce total nitrogen in treated effluent to 19 mg/L and remove an average of 70 percent of influent nitrogen concentrations. The proposed I/A OWTS upgrades ensure that the proposed action does not contribute additional nutrient loading to Mattituck Creek (and potential adverse impacts to wetlands) and represents an improvement compared to nutrient loading under existing site conditions.
- All tree clearing for the proposed action will occur during the winter months (between December 1 and February 28) in accordance with NYSDEC guidance to avoid potential impacts to the New York State-threatened northern long-eared bat (*Myotis septentrionalis*), as the site's forests provide suitable summer roost habitat for this species.
- To avoid or minimize potential impacts to eastern box turtles, sweeps or surveys for box turtles will be conducted prior to commencement of clearing, grading, and excavation activities, and any observed

turtles will be relocated to areas that will not be disturbed. Silt fencing or other barriers will be installed around work areas to prevent turtles from returning to construction areas.

### **Consistency with Community Plans and Studies**

- The setback from the edge of disturbance to Mill Road Preserve would be vegetated and is 105 feet to increase the distance between the most southern trail in the Mill Road Preserve and the proposed action as well as maintain the existing wooded appearance of the surrounding area.
- The upland landscaped area will create a multi-layer screen for edge protection and visual enhancement to screen the proposed buildings from surrounding views to the south.
- To mitigate for the loss of forest trees associated with the project, a total of 135 trees would be replanted, including 86 pitch pine trees (minimum 4-5 feet height) to be planted along the western and southern edges of the proposed development. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.
- The landscaping proposed for the proposed action (51.4 percent), inclusive of the Evergreen concrete retaining wall, would exceed the minimum requirement of 20 percent, pursuant to bulk and dimensional requirements within the M-II zoning district.
- The proposed Evergreen concrete retaining wall is designed to become a green wall that will blend with the landscape to soften views.
- The area surrounding the two proposed storage buildings would be screened by the proposed Evergreen concrete retaining wall and the existing forested areas to be retained on the subject property.
- The proposed design provides for greater side and rear yard setbacks than what is required (Required Side, Both Side, and Rear Yards: 25 feet, 50 feet combined, and 25 feet, respectively; Proposed: 28 feet, 77.7 feet, and 91.3 feet).

### **Human Health**

- The setbacks for the LPG tanks would be compliant with the 2020 NYS Fire Code and the National Fire Protection Association 59 – Liquefied Petroleum Gas Code and would be surrounded by concrete retaining walls.
- SYC would continue to ensure certified staff implement appropriate handling and storage protocol for chemicals stored on site consistent with the Article 12 permit and Pesticide Business under Category 5D - Aquatic Antifouling requirements.
- A Fire Safety Plan has been developed by SYC, which provides hazard locations, utility and water supply information, and emergency procedures for its employees.

### **Transportation**

- Appropriate signage for construction access on West Mill Road will be installed for proper wayfinding.

***Strong's Yacht Center – Proposed Boat Storage Buildings***

***5780 West Mill Road, Mattituck, Town of Southold, Suffolk County, NY***

- An on-site guard booth will be placed along the proposed haul road (for the Phase 1 Excavation) and on the SYC property (for Phase 2 excavation and construction phases). The purpose of such booth is to house an on-site staff person who will direct incoming construction-related traffic and to inspect vehicles upon exiting.
- SYC will mandate that all construction-related trucks be Tier 4 certified by U.S. EPA standards and Jake Brakes would be turned off.
- Asphalt binder will be installed on the shoulder of Mill Road to prevent damage from tag axles.
- To minimize impacts to the surrounding community, truck trips for excavation will be limited to 7:00 am to 5:00 pm five days per week (Monday to Friday) and truck trips for construction will be limited to 7:00 am to 7:00 pm six days per week (Monday to Saturday) in accordance with §180-6 Prevention of Noise – Standards of the Town Code.
- The construction company engaged to complete the work has committed to utilize company multi-occupant vehicles to transport many of the construction workers to the site.
- The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. The Applicant will commit to quickly repairing any potholes that appear in the roadway during the construction activity to minimize the potential for vibrations that could affect existing structures. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it. Additionally, at the request of the Town, SYC would be willing to sign a corporate guarantee for the repair of any road damages to pre-development condition.
- Prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible.
- All trucks associated with the construction of the proposed action will be limited to traveling at 30 mph on Cox Neck Road/West Mill Road and all neighboring roads. The posted speed limit is 35 mph.
- During the construction period, Cox Neck Road/West Mill Road will be monitored daily to detect any rough surfaces or potholes that develop. The roadway imperfections will be corrected by forces employed by the applicant.
- Flaggers will be used for maintenance and protection of traffic at locations where severe curves in the truck route or at intersections where turns are being made by project trucks that may require crossing of the yellow double barrier lines.

**Aesthetic Resources**

- The relocation of the proposed haul road to increase the separation distance to the nearest residential property at 5106 West Mill Road will minimize the visual impacts of truck activity during construction.

- To mitigate light trespass and glare, all lighting will be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The proposed lighting will also comply with the lighting standards set forth in §172-5.
- To mitigate visual impacts from the proposed action to the residence at 5106 West Mill Road, the existing tree line at the southern property boundary will be maintained as a natural visual buffer to operations at SYC.
- Supplemental plantings along the retaining wall will create a “sealed edge” of vegetation.
- The edge of disturbance has been moved closer to Building 9 to increase the distance between the proposed action and Mill Road Preserve.
- The proposed grading program and Evergreen concrete retaining wall require the removal of soils from the subject property. This results in a design where the proposed buildings are situated at similar elevations to the existing buildings and are masked and screened from views to the East and along Mattituck Creek by the existing buildings.
- The proposed Evergreen retaining wall will provide visual mitigation when it is vegetated. It will blend in with the surrounding woodland and landscape.

### **Community Character**

- The siting of the proposed buildings at elevations similar to the existing buildings preserves the long-standing maritime views along Mattituck Creek.
- The proposed grading program and Evergreen concrete retaining wall require the removal of soils from the subject property. This results in a design where the proposed buildings are situated at similar elevations to the existing buildings and are masked and screened from views to the east and along Mattituck Creek by the existing buildings.
- The proposed Evergreen retaining wall will blend in with the surrounding woodland and landscape.

### **Open Space and Recreation**

- The excavation phases will limit soil removal to the weekdays so as to not disrupt weekend visits to the Town Preserve.
- Supplemental plantings proposed at southern property line will buffer the viewshed from residences to the south of subject property.

### **Noise**

- Construction activities will be limited to Monday to Saturday from 7:00 am to 7:00 pm in accordance with the Town Noise Code (Chapter 180). No work would be completed on Federal or State holidays, or on Sundays.
- In accordance with the Town Noise Code (Chapter 180), excavation phases will be limited from Monday to Friday from 7:00 am to 5:00 pm. No work will be completed on Federal or State holidays, or on Sundays.

- During construction phases, work on Saturdays and after 5:00 pm Monday to Friday will only include vehicle and machinery maintenance and planning. No work will be completed on Federal or State holidays, or on Sundays.
- Any vehicle which requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep.
- All trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.
- All trucks utilized will be Tier 4 certified by U.S. EPA standards.

### **Air Quality**

- To minimize the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed:
  - Minimizing the exposed area of erodible earth.
  - Applying wet suppression to material piles and unpaved areas when there is visible dust.
  - Use of covered haul trucks to move construction material.
  - Use of plastic sheet coverings for material piles.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles will not remain idling for more than five minutes at a time.
- The use of all Tier 4 certified trucks and equipment will further reduce emissions of PM and NOx.
- The projected 1.5 million clams harvested annually have the potential to sequester 9,680 lbs. of carbon. As such, this program has the beneficial impact of carbon sequestration.
- The proposed planting of 95 pitch pine trees will store 80,191 lbs. (40± tons) of carbon, decreasing total carbon storage loss (above & below-ground biomass) from 391 tons to 351 tons.

### **Social and Economic Impacts**

- At the recommendation of the Town Fire Marshal, a Fire Safety Plan has been prepared to provide hazard locations, utility and water supply information, and emergency procedures for its employees.

### **Construction-Related Impacts**

- Prior to the commencement of site clearing, all existing trees to be retained will be clearly marked with silt fencing and/or tagging to prevent removal during the site clearing phase.
- Prior to site preparation, field inspections will occur to identify the presence of the eastern box turtle and relocation of any observed turtles to on-site areas that would not be disturbed.
- Erosion and sedimentation controls will be undertaken prior to and during construction and will include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked

onto local roads. All erosion and sediment control measures will be routinely inspected and maintained such that no sediment would be transported off-site.

- All trucks associated with the construction of the proposed action will be limited to traveling at 30 mph on Cox Neck Road/West Mill Road and all neighboring roads. The posted speed limit on West Mill Road is 35 mph.
- The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. The Applicant will commit to quickly repairing any potholes that appear in the roadway during the construction activity to minimize the potential for vibrations that could affect existing structures. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it. Additionally, at the request of the Town, SYC would be willing to sign a corporate guarantee for the repair of any road damages to pre-development condition.
- Prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible.
- Flaggers will be used for maintenance and protection of traffic at locations where severe curves in the truck route or at intersections where turns are being made by project trucks that may require crossing of the yellow double barrier lines.
- In accordance with Chapter 180 of the Town Code, all construction activities will be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity will be limited to Monday to Friday from 7:00 am to 5:00 pm. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start.
- The grading program will result in an excess cut of 134,921 CY of material. All excess soils will be transported to a registered or permitted facility in accordance with NYSDEC Part 360 or local site for re-use. As the ultimate location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations at this time.
- Any vehicle that requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep.
- All trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.
- All trucks will be required to be Tier 4 certified by U.S. EPA standards.
- The construction manager will inspect all construction vehicles and equipment to ensure proper maintenance of their emission control equipment and also control the idling of construction vehicles. Fugitive dust emissions will be mitigated with the use of water during dry periods.
- A sweeper will be employed daily during the excavation phase to remove loose sediment from West Mill Road.



- All stockpiles will be covered.
- All equipment storage/staging will be located within the area of disturbance only on-site, as well as all contractor and worker parking, to minimize off-site traffic impacts.
- The proposed haul road has been relocated approximately 29 feet to the south to increase the separation distance to the nearest residence such that the proposed haul road will be approximately 259 feet from the haul road to the pool at the adjacent residence.
- The proposed haul road entrance on West Mill Road has been relocated approximately 60 feet to the south to increase the separation distance to the nearest residential property. The proposed separation distance is 145 feet.
- Approximately 90 percent of the material to be removed during the excavation phase will be removed via the haul road, and the remaining 10 percent will be removed from the existing site driveway on West Mill Road.
- The proposed stockpile and construction staging areas will be setback a minimum distance of 25 feet from the adjacent residential property.
- A security booth and gate will be positioned at the entry/exit to the haul road for Phase 1 excavation and on the SYC property for Phase 2 excavation and construction, for the purpose of vehicle inspection and providing driver instruction.
- Prominent markers such as orange cones will be placed at the south end of the stabilized RCA shoulder during the construction period to ensure that the construction trucks will maintain distance from the platform water tower and accessory building at 3380 West Mill Road to minimize vibration impacts to these structures.
- In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles shall not remain idling for more than five minutes at a time.
- To minimize the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed:
  - Minimizing the exposed area of erodible earth.
  - Applying wet suppression to material piles and unpaved areas when there is visible dust.
  - Use of covered haul trucks to move construction material.
  - Use of plastic sheet coverings for material piles.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Asphalt binder will be installed on the shoulder of West Mill Road to prevent damage from tag axles.
- Signage for construction vehicles entering the haul road will be installed on West Mill Road for proper wayfinding.
- There will be no weekend construction work between September 15 and October 31 for the Fall Festival season.
- Vibration monitoring terminals will be installed at four locations and monitored through all phases of construction. If vibration levels exceed permissible levels (based on the Peak Particle Velocity [PPV])

defined in the Vibration Report), the following steps will be taken for Vibration Monitoring at Locations 1-3:

- The acoustic consultant and construction management team will be notified if an exceedance is measured.
  - The time and location of construction activities when the exceedance is measured will be provided to the acoustic consultant.
  - If the exceedance is an RMS exceedance, the RMS velocity will be verified in the Syscom ROCK's cloud portal.
  - Should the cause of the exceedance be linked to the construction activities, construction will be halted immediately until appropriate measures, such as operating fewer pieces of equipment or moving construction activities away from the construction area boundary, can be completed.
  - The only exception to halting construction would be if it would be a life safety issue for the construction workers, or if it would result in an unsafe structure at the time of halting the construction. In each of these cases. Construction should only be continued until such time that all workers would be safe and that all structures are stable and would not be in danger of collapse.
- The following specific procedures would be followed for the protection of the Water Tower and Building:
    - Arrival and departure times for all trucks to be loaded and leaving with building materials will be logged by the construction management team. All scheduled traffic must occur within defined work hours.
    - Should an alert be triggered, the time of the alert will be correlated with the arrival times of all trucks coming to the project site.
    - If it is confirmed that exceedance is due to operation of a truck associated with the construction, truck operators will be required to reduce speeds near the Water Tower and Building so that vibration is reduced. All drivers are to be notified of any speed restrictions.
    - Should two alerts confirmed to be due to truck vibration occur on the same day, truck trips will be halted until additional data can be collected and mitigation can be implemented.

### **Archaeological and Cultural Resources**

- Prominent markers, such as orange cones, will be placed at the south end of the stabilized RCA shoulder during the construction period to ensure that the construction trucks will maintain distance from the Water Tower and Building at 3380 West Mill Road to minimize vibration impacts.
- Vibration monitoring terminals will be installed at four locations and monitored through all phases of construction. The locations of the terminals have not been determined; however, one of the four locations will be installed as close as possible to the foundation of the Water Tower and Building. The following specific procedures would be followed for the protection of the Water Tower and Building:
  - Arrival and departure times for all trucks to be loaded and leaving with building materials will be logged by the construction management team. All scheduled traffic must occur within defined work hours.
  - Should an alert be triggered, the time of the alert will be correlated with the arrival times of all trucks coming to the project site.
  - If it is confirmed that exceedance is due to operation of a truck associated with the construction, truck operators will be required to reduce speeds near the Water Tower and Building so that vibration is reduced. All drivers are to be notified of any speed restrictions.
  - Should two alerts confirmed to be due to truck vibration occur on the same day, truck trips will be halted until additional data can be collected and mitigation can be implemented.

## **Alternatives and Their Anticipated Impacts**

### **Alternative 1: No-Action Alternative**

The No-Action Alternative involves leaving the site as it currently remains, absent the proposed action and the continuation of the site as a full-service marina with boat sales and maintenance services of SYC. The No-Action alternative would not result in any changes to traffic patterns, utilities provided (e.g., water usage), air quality, ecological resources, water resources, or soils and topography. There would be no changes to the visual quality of the site, or the character of the community. The projected job generation and increased tax revenue would not be realized. Overall, the subject property is a privately owned parcel situated within the M-II zoning district of the Town of Southold and the objective of the Applicant is to develop the property in accordance with the prevailing zoning regulations. Accordingly, the No-Action Alternative does not achieve the objectives of the Applicant.

### **Alternative 2: Alternative Material Removal Plan**

This alternative includes an alternative method of material removal to eliminate the use of roadways for truck transport of materials off-site. As part of this review, SYC undertook consultations with four barging companies to determine if such method is a feasible alternative for the proposed action. As indicated in the correspondence from H&L Contracting dated June 24, 2021, each of the four barging companies advised that the depths of Mattituck Inlet are not adequate for the types of barges required for material removal. Specifically, the barges need a minimum of 10 feet draft at low tide to avoid hitting the inlet floor bottom and damaging the barge. As indicated in Section 2.2.1 of this DEIS and illustrated in the Mattituck Inlet soundings performed for SYC, the average depth of draft at low tide is five (5)-to-seven (7) feet. Additionally, the existing sharp S turns upon entering the Inlet on the first and second corner bends are very tight and would not allow the width or depth necessary to safely navigate these areas. Accordingly, the barging of material is not a viable alternative for the proposed action.

It is also noted that, during preparation of the DEIS and in response to a Planning Board Member meeting held on-site, the option to install a cement plant on-site to eliminate the need to transport the excavated material off-site was investigated. Through consultations with LI Precast, it was determined that the total concrete volume for the proposed project (i.e., for the cement in the retaining wall, floor slabs and foundations) is limited to 5,345 CY, of which the total volume of sand in the concrete is limited to 30 percent or 1,604 CY. As the proposed action includes 135,000± CY of soil removal, there would be limited benefit to having a cement plant on-site as the limited amount of sand required for the cement plant (1,604 CY) is approximately one percent of the total material. Overall, based on the above, the processing of sand with an on-site cement plant and the potential impacts that arise with on-site processing including dust and noise generation, as well as the financial cost associated with plant operations, has been determined not feasible.

### **Alternative 3: Constructing the Project on Another Site**

This alternative is to consider another parcel for the proposed action; however, this alternative is more appropriate for actions involving new development rather than a development that is an expansion and supporting service to a current use that relies upon the infrastructure and staff of the existing business. Specifically, the SYC operation is a full-service marina, sales, maintenance, and storage facility located on the subject property, which is a 32.96±-acre parcel partially zoned (i.e., 16.46± acres) and has been developed for over 60 years for marine use. The construction of the proposed storage buildings on another parcel is not feasible for the Applicant as the operation to support the storage of yachts (i.e., existing docks, boat lift, staffing, maintenance, and service equipment) are located at SYC. Furthermore, the proposed project is designed to attract large yachts that can only enter and exit by water, and thus, another site equipped with the infrastructure required is not feasible for this applicant.

#### **Alternative 4: Constructing the Proposed Buildings Without the Need for Excavation**

This Alternative Plan includes the construction of two boat storage buildings of similar area to the proposed action (i.e., 49,000 SF and 52,500 SF) on the existing M-II zoned portion of the subject property without the topographic modifications that are required as part of the proposed action. The two proposed buildings would be placed at the existing average elevations of 36.95± feet AMSL for Building 1 and 37.88± feet AMSL for Building 2. Building height, as defined in §280-4 of the Town Zoning Code, is “[t]he vertical distance measured from the average elevation of the existing natural grade adjacent to the building, before any alteration or fill, to the highest point of the roof for flat and mansard roofs and to the mean height between eaves and ridge for other type roofs.” Accordingly, the maximum building height of 35 feet from average grade elevations allows for a maximum height of 71.95 feet for Building 1 and 72.88 feet for Building 2.

As the purpose of the proposed action is to accommodate vessels of an average length of 60 feet, but as large as 86 feet, this alternative design with the buildings at the site’s top elevation without excavation cannot accommodate large vessel storage. Specifically, the large boats cannot be transported via road (either internally at SYC or public road) because the length and weight of such boats require the vessels to be lifted directly from the water and hauled via the 85-ton travelift on relatively flat grades. As such, to meet the intended purpose of the proposed action, this alternative plan would require the new top elevation buildings to be utilized for smaller boats (300 boats in total), and modifications of the existing Buildings 6, 7 and 8 for increased roof height such that large vessels could be accommodated in these lower elevation buildings. Specifically, the height of the doors on the existing indoor storage buildings are approximately 24 feet, and thus, roof heights would need to be increased by approximately 11 feet to comply with the maximum height requirement in the M-II zoning district. However, the roof heights on the existing buildings cannot be raised. Therefore, the existing buildings would be reconstructed with higher roofs to accommodate larger boats. The lower-elevation buildings would also be modified for radiant heating, which is an important component for the types of vessels to be stored indoors. The required LPG tanks are illustrated on the Alternate Plan.

Access to the new storage buildings would be internal to the subject property via an access driveway situated between Buildings 7 and 8. As such, for smaller boats brought to the site via trailers, the existing SYC entrance would be used. It is expected that approximately 50 percent of the boats (i.e., 150) would arrive by trailer and the remainder via Mattituck Inlet. The arrival and departure of the smaller boats would occur over a three-month time period (September to December [arrival] and April-June [departure]).

Similar to the proposed action, this alternative would require slope stabilization measures to correct existing slope failure behind Buildings 7 and 8, which has occurred due to the erosion of the upland slope and presence of unconsolidated materials behind the upland slope face that were deposited by the USACOE as part of past dredging projects. As indicated on the Alternate Plan, a concrete retaining wall would be constructed to the south and east of the new storage buildings, which would accomplish slope stability for both of these areas. As the retaining wall would be largely screened by the adjacent building from viewers along Mattituck Creek, the type of retaining wall that is proposed for the preferred action would not be required. Overall, the grading program for this Alternate Plan would result in approximately 2,939 CY of cut material for export off-site.

It is noted that the Amended Final Scope required a separate alternate design that included only the reconfiguration or reconstruction of existing buildings for larger boat storage, which is Alternative 6 below. However, as described in the respective subsection, Alternative 6 would adversely impact an important customer base for SYC (i.e., storage of boats less than 40 feet) should buildings be reconfigured for large vessels without any expansion (i.e., new buildings). As such, this Alternative 4, includes both construction without excavation and the reconstruction of the lower buildings because the Applicant does not intend to impact the recreational boaters who require storage for vessels of 40 feet or less.

#### **Alternative 5: Constructing Smaller Building(s) with Less Excavation**

This alternative would include a reduction in the size of the two proposed buildings in order to reduce the volume of material to be cut and removed from the site. However, the proposed concrete and Evergreen

concrete retaining wall would still be required and the construction cost would not make this an economically viable plan for the Applicant.

#### **Alternative 6: Reconfiguration or Reconstruction of Existing Buildings On-Site for Larger Boat Storage**

This alternative includes the reconfiguration or reconstruction of existing buildings for larger boat storage, which would impact the storage capacity for smaller boats (less than 40 feet). The intent of this alternative is to eliminate the proposed excavation of adjacent land; however, this alternative would have a significant impact to the local boating community with smaller vessels that rely upon SYC for storage (and the accompanying winterization and pre-launch preparation). Upon implementation of this alternative, SYC would be required to significantly decrease or eliminate service to smaller vessels. Accordingly, this alternative is not feasible for the Applicant unless additional buildings can be constructed at the upper elevation for smaller vessels, as presented in Alternative 4.

#### **Alternative 7: Alternative Material Mitigation Plan**

An alternative material mitigation plan has been evaluated to reduce the volume of material to be removed from the subject property by placing approximately 13,500 cy of material on the R-80-zoned parcel. The material would be placed within the Successional Shrubland area at a depth of approximately 12 inches and setback approximately 20 feet from the Successional Southern Hardwoods. The resultant impact on transportation would be the elimination of 450 trucks from the excavation phase, which would reduce the excavation phase by 11.25 days or approximately two weeks (as the proposed excavation phase would occur Monday – Friday only).

#### **Alternative 8: Alternative Routing Plan**

This alternative includes the use of Bergen Avenue for outgoing (full) trucks and the use of Cox Neck Lane for incoming (empty) trucks, during the excavation phase only. Arriving trucks would follow the original Truck Route plan, making a left turn from east bound Sound Avenue onto north bound Cox Neck Road/West Mill Road. Departing trucks hauling material from the site would utilize West Mill Road/Cox Neck Road and then turn west onto Bergen Avenue to Sound Avenue.

#### **Permits and Approvals Required**

The proposed action is subject to permits and approvals from the Planning Board (site plan review and approval), Town of Southold Board of Trustees (Local Waterfront Revitalization Program [LWRP] Consistency Approval and Wetlands Permit), Suffolk County Department of Health Services (SCDHS) (water supply and wastewater disposal), and the New York State Department of Environmental Conservation (NYSDEC) (State Pollution Discharge Elimination System [SPDES] General Permit for Stormwater Discharge during Construction Activities), Town of Southold Highway Superintendent (review temporary road apron and possible curb cut permit), and New York State Office of Parks, Recreation, and Historic Preservation (review for archaeological significance). Suffolk County Water Authority (SCWA) has reviewed the proposed application and the availability of water has been determined through the extension of the existing water main. On January 31, 2020, NYSDEC issued a Tidal Wetlands Permit (Permit ID 1-4738-01843/0028) and a Non-Jurisdictional Determination for all work landward of the 10-foot contour. The Suffolk County Planning Commission (SCPC) has General Municipal Law Section 239-m planning review authority over the proposed action. Utility service connections are also required from PSEG Long Island.

## **1.0 DESCRIPTION OF PROPOSED ACTION**

### **1.1 Project Location and Site Conditions**

#### **1.1.1 Project Location**

##### Subject Property

The Strong's Yacht Center, LLC. (hereinafter "SYC") is located on a portion of an overall 32.96±-acre property situated on the west side of Mattituck Creek, south and east of West Mill Road, within the hamlet of Mattituck, Town of Southold (see Figure 1 in Appendix A) (hereinafter, the "subject property"). The subject property is identified on the Suffolk County Tax Map as District 1000 – Section 106 – Block 6 – Lot(s) 10 and 13.4 (see Figure 2 in Appendix A) and is split-zoned Marine II Industry (M-II) and Residential Low-Density A (R-80) (see Figure 3 in Appendix A). Approximately 16.46± acres are zoned M-II and the remaining 16.5± acres are zoned R-80. The SYC operates entirely on the M-II portion of the subject property.

##### Mattituck Harbor

As described in the U.S. Army Corps of Engineers (USACOE) "Fact Sheet for Mattituck Harbor published on March 5, 2021" (hereinafter, the "USACOE Fact Sheet"), Mattituck Harbor is comprised of the Mattituck Inlet and Creek, which is a 2.25± mile long federal navigational channel extending from the Long Island Sound to the hamlet of Mattituck. The channel is 100 feet wide at Mattituck Inlet and 80 feet wide throughout Mattituck Creek. Mattituck Harbor has two jetties, the east which was constructed in 1906 and the west jetty which was constructed in 1938. Mattituck Harbor is identified by the USACOE as a harbor of refuge during severe storms, which also supports recreational boating, and hosts several commercial marinas and public boat launch sites that provide public access to the waters of Long Island Sound.<sup>1</sup>

The USACOE has performed maintenance dredging projects in Mattituck Harbor since 1896 when the first Federal Navigational Program (FNP) was adopted.<sup>2</sup> The most recent dredging of Mattituck Harbor was completed under Section 111 of the Continuing Authorities Program (CAP) in 2014 during which 100,000 cubic yards (CY) of material was dredged and placed on Baillie Beach in Mattituck, approximately 0.55 mile north of the subject property.

Mattituck Harbor is identified by the Town of Southold as "the only harbor fronting on Long Island Sound... [serving as] both a recreational and commercial port and is the site of one of the Town's largest concentrations of marine facilities, second only to Greenport Village" (Local Waterfront Revitalization Plan, (Section II-J, Reach 1-3 and Reach 1-4).

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<sup>1</sup><https://www.nan.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/487466/fact-sheet-mattituck-harbor-ny/>.

<sup>2</sup><https://www.usace.army.mil/Portals/74/docs/Topics/LISDMMP/LIS-DMMP-Main-Report-PRDraft-August2015.pdf>.

### **1.1.2 Existing Site Conditions**

#### ***Subject Property***

##### Existing Buildings and Services

As noted above, the subject property is split-zoned for M-II (16.46± acres) and R-80 (16.5± acres). SYC operates entirely on the M-II zoned portion and the R-80-zoned portion of the subject property is currently undeveloped. The *General Layout Plan* (see Appendix C) indicates the M-II zoned portion or SYC operational area is currently comprised of boat slips with associated ramps and fueling and developed with seven buildings to support the operation of the marina, as well as the sale, maintenance, dockage, and storage of boats. Information provided by the Applicant indicated there are currently 45 boat slips at the marina with no more than 40 active at any one time. The additional dock spaces are kept open for fueling access or drop-off for service access.

The seven buildings located on the subject property are identified on the site development plans as follows:

- Building 1: one-story residence (1,610 square feet [SF])
- Building 2: two-story office (2,702 SF)
- Building 3: one-story storage (17,320 SF)
- Building 5: one-story storage (341 SF)
- Building 6: one-story storage (10,786 SF)
- Building 7: one-story storage (15,076 SF)
- Building 8: one-story storage (22,425 SF)

It is noted that Building 4, a former 169 SF shed, was demolished in 2018. It is further noted that SYC maintains a different building numbering system. This DEIS uses the building numbers assigned on the site development plans.

Building 1 is upland from the marina operations and is a private one-story residence with a garage where the marina manager resides. Building 2 is the office for the marina operations. Buildings 3, 6, 7 and 8 are mostly large warehouse-type buildings with large access garage doors. Building 5 is a shed-style building. There are maintenance vehicles and equipment throughout the marina as well as dry docked boats. The existing accessways within the marina are asphalt paved or gravel paths. The boat slips are accessible via metal gangways from the bulkhead on the eastern side of the subject property.

The existing services provided to customers by SYC include yacht sales, full yacht system maintenance, repair, and custom fabrication. SYC is an authorized Sunseeker Yachts, Cruisers Yachts and Volvo service center. These services require that SYC maintain machines, parts, wood, and canvas shops, as well as diesel and gas fuel sales. At any given time, SYC can service over 200 concurrent work orders for customers. These work orders can range from battery replacement to preventative engine maintenance, fiberglass repair, and other maintenance needs. There are currently four (4) warehouse-type storage buildings and a shed building, Buildings 3 through 8, at the subject property, as shown on the *General Layout Plan* (see Appendix C). These buildings support not only the boat and

yacht maintenance operation but support winter storage for 96 yachts and boats. In addition to indoor storage, SYC provides outdoor winter storage for 40 boats and yachts.

The boat types serviced at SYC include sailboats, motor yachts, Express Cruisers, center consoles, sports fishing, commercial fishing, trawlers, as well as government boats for the United States Coast Guard (USCG), New York State Department of Environmental Conservation (NYSDEC), Mattituck Fire Department, and others.

SYC also provides 45 in-water dockage slips during the boating season. The marina accommodates boats and yachts 18-to-133± feet in length with the majority between 40± feet to 60± feet. The typical yacht size is 50-to-80± feet in length. See Table 1 below for the number of boats and yachts at SYC during the 2020 boating season.

**Table 1 – 2020 Yacht Inventory at SYC**

<b><u>Boat and Yacht Length</u></b>	<b><u>Number of Boats and Yachts</u></b>
Up to 29 feet	17 boats
30 feet to 39 feet	33 boats
40 feet to 49 feet	30 boats
50 feet to 59 feet	24 yachts
60 feet to 105 feet	22 yachts

The average yacht size during the 2020 season was 30± feet to 49± feet, which made up 50 percent of the boats and yachts at SYC. Of the aforementioned boats and yachts, approximately 45 were docked at SYC and the remaining were stored in the existing storage buildings and dry docked on the marina property. In addition to servicing private yacht clients, SYC also provides docking slips and services for six (6) of the 12 commercial fishing boats that are based in Mattituck Inlet. All 12 of these fishing boats are privately owned. Services available to these boats include ice, electric, pump out, and boat maintenance.

It is important to note that the current maritime use has existed on-site for over 60 years.<sup>3</sup> Prior to the sale of the marina in 2016 to SYC, the subject property was known as the Mattituck Inlet Marina.

#### Existing Shellfish Restoration Program

Strong's Marine has had an active relationship with the Cornell Cooperative Extension (CCE) for over 30 years, commencing at its Mattituck Bay location, and in 2017, upon acquisition of SYC property, became a designated host for the CCE Marine Program for shellfish restoration. As a host, SYC has an executed Memorandum of Understanding (MOU) (see Appendix M) with the CCE Marine Program to support CCE's involvement with the Long Island Shellfish Restoration Project (LISRP), inclusive of housing Floating Upwelling Systems (FLUPSY) in dockside areas that are used by CCE for shellfish harvesting. SYC has committed to being a FLUPSY host through 2030. In addition to hosting the FLUPSY units, SYC provides funding to the CCE Marine Program to operate and maintain the units. The intent of the LISRP is to "...enhance natural stocks of hard clams and eastern oysters throughout the Long Island

<sup>3</sup> [https://docs.dos.ny.gov/opd-lwrrp/LWRRP/Southold\\_T/Amendment1/Final/SoutholdAmend.pdf](https://docs.dos.ny.gov/opd-lwrrp/LWRRP/Southold_T/Amendment1/Final/SoutholdAmend.pdf)



*region and establish self-sustaining populations and help improve water quality...”* As part of this program, NYSDEC instructed CCE to “...spawn, grow-out and plant millions of clams and oysters throughout Long Island...” with FLUPSY’s being the most efficient method for the grow-out of seed clams.<sup>4</sup>

According to SYC, as a host, the CCE Marine Program has enabled approximately 6 million clams to be grown at the marina over the last year (and over 10 million in the last four years). A minimum of approximately 1.5 million clams per year are expected to be harvested from the FLUPSY units at SYC. Once harvested, the clams are relocated to a NYSDEC-designated sanctuary site pursuant to the LISRP. Furthermore, each of the eight (8) FLUSPYs currently located at SYC enable 600 gallons of water per minute to be passed through the millions of juvenile clams housed in these systems (see Appendix M). As clams are filter feeders, in the harvesting efforts have led to improved water quality as excess nutrients are removed from the water.<sup>5</sup> According to CCE, the Mattituck Inlet has proven to be the best location for regrowth in the Town of Southold and the FLUPSY site at SYC is integral to shellfish restoration on Long Island. It is also noted that SYC continues to support CCE in its other initiatives including its future kelp and eelgrass restoration efforts.

### **Surrounding Land Uses**

SYC operates entirely on the M-II zoned portion, which is immediately adjacent to: the R-80-zoned portion of the subject property as well as one single family residential lot (5106 West Mill Road) to the west; Mattituck Creek to the east; residential uses and the Mill Road Preserve to the south; and the former Mattituck Creek Tide Mill (Old Mill Restaurant) and a single-family residence (formerly the Frame Water Tower) to the north. Land uses beyond the immediate adjacent parcels and within a 1,000-foot radius of the subject property include maritime, recreational, open space, single-family residential and agricultural uses (see Figure 4 in Appendix A). A description of the land uses follows.

- **North:** North of the Old Mill Restaurant is the Mattituck Commercial Dock marina with slips for commercial boats and the Mattituck Fishing station with approximately 40 recreational fishing boats. Uses further north are single-family residential, open space, and agricultural. The single-family residence located at 5102 Mill Road is owned by SYC. Further north, at the inlet to Mattituck Creek, is the NYSDEC Mattituck Creek Waterway Access Site which provides boat and kayak launches, boat slips, a fishing pier, picnic tables, and walking trails.<sup>6</sup>
- **South:** Beyond the Mill Road Preserve, a 27-acre parcel owned and maintained by the Town of Southold with a trailhead and parking lot on West Mill Road, are single-family residential uses.
- **East:** Across Mattituck Creek to the east are single-family residential uses, many with private docks, and a maritime (M-II zoned) use parcel with commercial fishing dock and loading pier.
- **West:** To the west of the subject property along West Mill Road are residential and agricultural land uses.

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<sup>4</sup> <https://lishellfishrestorationproject.org/>

<sup>5</sup> <https://shellfish.ifas.ufl.edu/environmental-benefits/>

<sup>6</sup> <https://www.dec.ny.gov/outdoor/7780.html>

Review of the Town of Southold zoning map indicates the zoning is generally consistent with the land uses within 1,000 feet of the subject property (see Figures 3 and 4 in Appendix A). The zoning within 1,000 feet of the subject property includes R-80 and M-II zoned properties to the north, R-80 to the south, R-80 and M-II to the east and Residential Low-Density (one-acre minimum) (R-40) and R-80 to the west. Review of the Town of Southold Tax Map Inquiry indicates that the two parcels to the north of the subject property, zoned M-II similar to the subject property, have a Town land use designation of industrial. However, the Town land use map indicates the subject property has a Town land use designation of commercial although the parcels to the north and the subject property are used in a similar manner (i.e., marinas with commercial and recreational docking). Additionally, the northern most parcel to the east of the subject property, zoned M-II similar to the subject property, has a Town land use designation of industrial and is also used in a similar manner as SYC (i.e., commercial fishing dock and loading pier operated by the King Family). The other parcels zoned M-II south of the King Family commercial fishing dock and pier are residentially developed and have a Town land use designation of medium density residential. The properties zoned R-80 to the west of the subject property are agricultural uses.

## **1.2 Project Description**

### **1.2.1 Project Design and Layout**

As indicated on the site development plans prepared by the project engineer, Young & Young Engineering, in Appendix C, the proposed action includes the construction of two, one-story buildings, at 52,500 SF and 49,000 SF, for the indoor winter storage of yachts. Each building would be constructed with radiant heating for the purpose of climate-controlled storage. Additionally, the proposed action includes an extension of the public water main from Naugles Drive for on-site connection, installation of a new hydrant at the site entrance on West Mill Road, conversion of two existing on-site wells for irrigation supply only, replacement of an existing individual on-site sanitary system with an Innovative and Alternative On-Site Wastewater Treatment System (I/A OWTS), and installation of one additional I/A OWTS.

The overall land area that would be affected by the proposed action is approximately 6.51± acres, which includes the upland area to be excavated and/or cleared as well as those land areas on the existing SYC facility where infrastructure improvements would be undertaken (hereinafter, the "Project Area"). This Project Area is detailed later in this section of the DEIS (see Table 3).

As illustrated on the *Alignment Plan* (see Appendix C), the proposed two storage buildings would be placed to the west of the existing Buildings 7 and 8 and are depicted as proposed Building 9 and Building 10. In order to construct the proposed buildings at an elevation equivalent to the existing marina buildings and adjacent boat lift, approximately 4.59 acres of material would be excavated and removed to accommodate the proposed action (the "Construction Excavation Area").

Upon clearing and material removal, the elevations would be reduced from an average of 50 feet above mean sea level (AMSL) to 10 feet AMSL. The proposed first floor elevation (FFE) of each proposed building is 10 feet AMSL. This removal of material to reduce the elevation is required in order to

transport yachts to and from the water via a boat lift or “travelift” as the size and weight of these boat types cannot be transported via a traditional boat trailer and vehicle.

Approximately 134,921± cubic yards (CY) of material would be removed from the Construction Excavation Area, which is proposed to occur in two phases. Phase 1 includes approximately 123,000± CY and Phase 2 is the remaining 12,000± CY. To accommodate the excavation and removal of material in Phase 1, the proposed action includes the construction of a 1,454±-foot haul road from the Construction Excavation Area to West Mill Road (Appendix C). The proposed haul road would vary in width from 16± feet to 30± feet and would be partially situated on an existing unpaved road through the R-80 portion of the subject property. At the conclusion of construction, the haul road is proposed to remain in place and would function as a gated emergency access to SYC, if required. Phase 2 would be accommodated via the existing access driveway off West Mill Road.

The proposed action also includes the construction of an Evergreen Macro Gravity Retaining Wall System (hereinafter “Evergreen concrete retaining wall”). The proposed Evergreen concrete retaining wall would be constructed along the west side of Buildings 9 and 10, the north side of Building 10, and southeast of Building 9, to stabilize the area excavated to accommodate the proposed action and correct existing stabilization issues to the west of Buildings 7 and 8, that have been caused by unconsolidated dredge spoils deposited in the past by the USACOE. As indicated in the Engineering Design Report prepared by Jeffrey T. Butler, P.E., P.C. and included in Appendix H, proposed wall consists of precast concrete modular units that are fabricated off-site (Bellport, New York) and are shipped for assembly on-site. The modular units are then placed in pre-determined locations to lock together and create a wall with a safety factor of greater than 2.0, with 1.5 being the code minimum. Once in place and backfilled, seeding and use by bird species promote growth in the trays that are built into the wall to create a “green” wall over a period of two-to-three years.

Based upon a Tree Inventory and Tree Removal Plan completed by Dr. William Bowman of Land Use Ecological Services, Inc. (LUES) (see Appendix N), the subject property includes 2,408 trees with 1,054 trees (43.72 percent) on the R-80 zoned portion of the subject property and 1,354 trees (56.2 percent) on the M-II zoned portion of the subject property. Of the 2,408 total trees at the subject property, 1,647 trees (38.2 percent) are classified as Coastal Oak-Beech Forest and 12.7 percent of the Project Area’s trees surveyed are classified as large trees with diameters greater than 18 inches. In total, the proposed action would require the removal of 634 trees (26.3 percent) with 15 trees (0.62 percent) from the R-80 zoned portion of the subject property and 619 trees (25.7 percent) from the M-II zoned portion of the subject property. Approximately 73 percent (1,774 trees in total) of the total trees at the subject property would be retained with 1,039 trees (43.1 percent) retained on the R-80 zoned portion of the subject property and 735 trees (30.5 percent) retained on the M-II zoned portion of the subject property.

It is recognized that the number of trees for removal have increased from the previously-projected 493 trees to the current 634 trees. During preparation of the DEIS, the project ecologist performed a comprehensive tree survey of the entire site and also prepared an updated tree removal plan based on such survey, and this resulted in a greater number of trees in the Project Area. However, during preparation of the DEIS, the project design was modified to decrease tree removal on the southern portion of the Project Area to limit disturbance of Coastal Oak-Beech forests, to supplement plantings along the west and southern boundaries to seal the forest edge, including the increase in Pitch Pine trees from 73 to the current 86. Additionally, the proposed planting schedule was modified by the

project ecologist for native species of shrubs and trees in a multi-layered design that further minimizes the impact of the newly created forest edge. All of these measures were done to minimize the potential ecological impacts of the proposed development. Further discussion of the ecological communities and impact assessment are included in Section 2.4 of this DEIS.

As provided by the project engineer and summarized in the tables below, the existing land cover types would be modified upon implementation of the proposed action. Table 2 provides a coverage breakdown for the overall subject property (32.96± acres) and Table 3 evaluates the Project Area (6.51± acres).

**Table 2 – Site Data for Subject Property (32.96± acres): Existing and Post-Development Conditions**

<b>Land Use/Cover Type</b>	<b>Existing</b>	<b>Post-Development</b>	<b>Change</b>
Roads, Buildings and Pavement	2.62± acres	4.98± acres	+2.36 acres
Forested (Coastal Oak-Beech Forest / Successional Southern Hardwood)	17.27± acres (12.6±acres/4.67±acres)	11.76± acres (8.28 acres/3.48 acres)	-5.51 acres
Meadow/Brushland (Successional Shrubland)	10.83± acres	10.29± acres	-0.54 acre
Non-vegetated (Bare Earth)	0.29± acre	0.00± acre	-0.29 acre
Wetlands (tidal)	0.63± acre	0.63± acre	0.00
Landscaping/Planted Areas	0.24± acre	1.91± acres	+1.67 acres
Pervious (Gravel and Stone blend Pavement)	1.08± acres	3.39± acres <sup>(a)</sup>	+ 2.31 acres
<b>Total</b>	<b>32.96± acres</b>	<b>32.96± acres</b>	

Notes: <sup>(a)</sup> Includes 0.67± acre of the proposed haul road to remain post-development.

As indicated in Table 2 above, upon implementation of the proposed action, the area of forested area (Coastal Oak-Beech Forest / Successional Southern Hardwood) on the overall subject property would decrease from 17.27± acres to 11.76± acres (i.e., a decrease of 5.51± acres) and the area of meadow and brushland (Successional Shrubland) by 0.54± acre (from 10.83± acres to 10.29± acres). The existing non-vegetated (bare earth) area would also be removed. The proposed development would increase the area of impervious surface by 2.36± acres (from 2.62± acres to 4.98± acres) and would also increase the area of landscaping/planted areas by 1.67± acres (from 0.24± acre to 1.91± acres). Pervious (gravel and stone blend) areas would increase by 2.31± acres (from 1.08± acres to 3.39± acres). There would be no change to the existing wetland area of 0.63± acre.

Table 3 below provides a summary of the changes in cover types within the Project Area (6.51± acres) that affects the M-II portion of the subject property for the proposed development and a 0.67±-acre portion of the R-80 portion for the proposed haul road. As explained earlier, the Project Area includes the upland area to be excavated and/or cleared as well as those land areas on the existing SYC facility where infrastructure improvements would be undertaken.

**Table 3 – Site Data for Project Area (6.51± acres): Existing and Post-Development Conditions**

Land Use/Cover Type	Existing	Post-Development	Change
Roads, Buildings and Pavement M-II	0.13± acre	2.49± acres	+ 2.36 acres
Forested (Coastal Oak-Beech Forest / Successional Southern Hardwood) M-II R-80	5.38± acres 0.13± acre	0.00± acre 0.00± acre	5.38± acres 0.13± acre
Meadow/Brushland (Successional Shrubland) M-II R-80	0.0± acre 0.54± acre	0.00± acre 0.00 ± acre	0.0± acre 0.54± acre
Non-vegetated (Bare Earth) M-II	0.29± acre	0.00± acre	-0.29 acre
Wetlands (tidal) M-II	0.00± acre	0.00± acre	None within Project Area
Landscaping/Planted Areas	0.00± acre	1.67± acres	+1.67 acres
Pervious (Gravel and Stone blend) M-II R-80	0.04± acre 0.00± acre	1.68± acres 0.67± acre	+1.64 acres +0.67 acre
<b>Project Area Total</b>	<b>6.51± acres</b>	<b>6.51± acre</b>	

As indicated above, the proposed action would impact approximately 0.67± acre of land in the R-80 zoned portion of the subject property for the proposed haul road inclusive of 0.13± acre of forested area and 0.54± acre of meadow/brushland (Successional Shrubland) would be removed. The remaining 5.84± acres of land are within the M-II portion of the subject property. Of this 5.84± acres, approximately 5.38± acres of forested area and 0.29± acre of bare earth (unvegetated) land would be removed. The remaining land area includes impervious and pervious (gravel and stone blend) areas that would be modified within the Project Area for post-development conditions. There are no wetland areas within the Project Area.

### **1.2.2 Access and Parking**

The existing access to SYC is via West Mill Road (see *General Layout Plan* in Appendix C) and no changes are proposed. From the entry point at West Mill Road, a paved and gravel internal driveway which runs approximately 1,137 linear feet (0.22± mile) from north to south along a large extent of the SYC facility. From Building 6 to Building 8, the internal driveway is predominately gravel with concrete pads between buildings. The proposed action includes an extension of the existing internal driveway to access the proposed Buildings 9 and 10, with pervious stone blend pavement (see *Grading and Drainage Plan* in Appendix C).

On-site parking (23 total stalls) is provided throughout the site with two (2) at the residence, eight (8) paved stalls to the north of Building 2, and 13 paved stalls to the east side of Building 3. As part of the proposed action, additional surface parking stalls would be created by striping gravel-surfaced areas that are currently used for parking but not formally marked. As illustrated on the *Alignment Plan* (see Appendix C), 34 new parking stalls would be created with 11 stalls located along the east side of Building 7, four (4) stalls located on the south side of Building 8, and 19 stalls located to the east of

Building 8. Upon implementation of the proposed action, the available parking would be increased from 23 stalls to 57 stalls. The proposed action would not modify on-site circulation.

As further discussed in Section 1.3.2 of this DEIS, the proposed action would generate 11 additional jobs, which would increase the total number of employees to 28. Further analysis of the access and on-site parking is included in Section 3.3 of this DEIS.

### **1.2.3 Sanitary Wastewater Disposal and Water Supply**

#### ***Sanitary Wastewater Disposal***

Article 6 of the Suffolk County Sanitary Code (SCSC) regulates sewage disposal for the protection of water resources and sets forth density restrictions based on Groundwater Management Zones. As the subject property is located within Groundwater Management Zone IV (see Section 2.2.1 of this DEIS for additional information), Article 6 of the SCSC limits the maximum permitted sanitary discharge to on-site sewerage systems to 600 gallons per day per acre (gpd/acre).

The subject property is 32.96± acres with 16.46± acres zoned M-II and the remaining 16.5± acres zoned R-80. Approximately 0.63± acre on the M-II zoned portion of the site contains regulated tidal wetlands and are, therefore, deducted when determining the total permissible flow. Based on the overall 32.33± acres, the total permissible flow is 19,398 gpd. However, as the proposed development considers only the M-II portion of the site, the total permissible flow would be 9,498 gpd based on a land area of 15.83± acres (i.e., 16.46± acres minus the 0.63± acre of tidal wetlands).

The existing sanitary flow on the subject property is approximately 1,058 gpd, inclusive of Building 1, the marina manager's residence. All sanitary waste is currently accommodated by two, individual on-site sewage disposal systems -- one for the existing residence and the second for the SYC operation.

As provided by the project engineer and included on the *Utility Plan* (see Appendix C), the total projected sanitary waste generation for post-development conditions would increase by 18± gpd from 1,058± gpd to 1,076± gpd (based on the SCDHS design flow factors of 0.06 gpd/sf for Non-Medical Office Space, 0.04 gpd/SF for General Industrial Use, 0.00 gpd/SF for boat storage, 0.06 gpd/SF for Non-storage (bathrooms), 10 gpd/boat slip for Marina, and 300 gpd for single-family residential use). This projected increase is represented in the non-storage/bathroom area of 304 SF.

As part of the proposed action, the existing sanitary system that serves Building 1 would remain, and two (2) I/A OWTS would be installed (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings). A summary of the sanitary calculations and buildings to be served is provided below.

Allowable Sanitary Density Flow: (600 gpd/acre) x (15.83 ± acres) = 9,498± gpd

#### **Design Calculations for Sanitary System No. 1 (New System):**

General Industrial: 4,910 SF x 0.04 gpd/SF (density load) = 196 gpd

Boat Storage: 61,205 SF x 0.00 gpd/SF (density load) = 0 gpd

New Boat Storage: 101,196 SF x 0.00 gpd/SF (density load) = 0 gpd

Non-storage (bathrooms): 304 SF x 0.06 gpd/SF (density load) = 18 gpd  
Total Design Flow for System No. 1: 214± gpd

**Design Calculations for Sanitary System No. 2 (Replacement System):**

Office: 2,702 SF x 0.06 gpd/SF (density load) = 162 gpd  
Marina: 40 boat slips x 10 gpd/boat slip (density load) = 400 gpd  
Total Design Calculations System No. 2: 562± gpd

**Existing Single-Family Residence Sanitary System (Building 1) (To Remain):**  
= 300 gpd

**Total Sanitary Discharge On-Site: 1,076± gpd**

It is noted that the projected sanitary flow for the two storage buildings includes only the restroom area, as these buildings would be dry storage. An application to the SCDHS and Board of Review for approval of the proposed design flow has been filed (see Appendix J). Additionally, as part of this action, the Applicant would file a restrictive covenant with the SCDHS to reduce the design flow for the M-II zoned parcel. Further discussion of sanitary waste and disposal is included in Section 2.2.2 of this DEIS.

### ***Water Supply***

There are currently four (4) private wells on-site, as there is no existing connection to the public water supply system. As part of the proposed action, a connection to the public water supply is proposed and two existing on-site supply wells near Buildings 1 and 7 would be converted for use for non-potable water supply only (i.e., irrigation) and the on-site supply wells near Buildings 2 and 3 would be abandoned. Current water demand for potable use is approximately 1,058 gpd. There is no irrigation system on-site.

Consultations with the Suffolk County Water Authority (SCWA) have been undertaken (see correspondence dated October 20, 2017 in Appendix K) and public water is available to the subject property through an extension of the existing water main located 765± feet west of the subject property on Naugles Drive. Upon implementation of this extension and connection, two of the on-site wells would no longer be used for potable supply but rather remain for irrigation of proposed landscaping. The other two on-site wells would be abandoned.

Based upon SCDHS design flow factors set forth in the "Sanitary Wastewater Disposal" subsection above, the projected volume of potable water for post-development conditions would be 1,076± gpd plus additional water use for the power washing of boat bottoms in the fall season (approximately 50 gallons per boat<sup>7</sup>) and boat washing in the spring prior to waxing (approximately 170 gallons per boat<sup>8</sup>). These services would be offered to boat storage customers when arriving for storage and when exiting storage for the boat season. Bottom painting and detailing/waxing does not require any

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<sup>7</sup> Based on a 3500 PSI/2.5 GPM pressure washer operated for approximately 20 minutes = 50± gallons per boat (source: <https://www.protocolreviews.com>)

<sup>8</sup> Based on 5/8", 100-foot length hose, water usage is 8.5 gpm for approximately 20 minutes (as water is controlled with spray attachment) or 170± gallons per boat.

additional water usage. This water supply would also be provided from the new SCWA water connection.

Additional water for irrigation would be expected from the two remaining on-site supply wells. Approximately 1.22± acres of the 1.91± acres of landscaping would be irrigated and based on an assumption of one inch of watering per week for the irrigation season (26 weeks) less precipitation inputs during the season, approximately 437± gpd during the irrigation season or 218± gpd (averaged annually) of irrigation supply would be withdrawn from the two remaining wells. As such, water withdrawal from the on-site wells would reduce from 1,058± gpd to 218± gpd. To reduce water demand for irrigation, native and/or drought-tolerant species would be planted. Also, the proposed irrigation system would be equipped with rain sensors to eliminate unnecessary water use.

Upon implementation of the proposed extension, there would be an opportunity for existing landowners to connect to the public water supply system by application to the SCWA. According to SCWA, in correspondence dated October 21, 2020 (see Appendix K), 40 properties were identified within a 500-foot radius of the subject property. Of the 40 properties, two were connected to public water and seven had public water connection available but were not connected. Further discussion of potable and irrigation water demands, and the proposed connection to the public water supply, are included in Section 2.2.2 of this DEIS.

#### **1.2.4 Site Landscaping, Lighting and Fencing**

##### **Site Landscaping**

The proposed landscaping within the Project Area includes site and retaining wall plantings. As indicated on the *Proposed Landscape Plan* (see Appendix C) prepared by Jeffrey T. Butler, P.E., P.C., the landscaping schedule includes four segments: upland (beyond top of the retaining wall), retaining wall north, retaining wall west, and surrounding site at or above building elevation.

Vegetation proposed in the upland area would include plantings of evergreen trees (Pitch Pine [*Pinus Rigida*]), shrubs (Lowbush Blueberry [*Vaccinium angustifolium*]), and grasses/groundcover (Switchgrass [*Panicum virgatum*]) that would be create a multi-layer screen for edge protection and visual enhancement. Vegetation in the surrounding site area, at or above building elevation, would include evergreen trees (Pitch Pine [*Pinus Rigida*]) and shrubs (Lowbush Blueberry [*Vaccinium angustifolium*]). The northern and western portions of the retaining wall would include shrubs (i.e., Bayberry [*Myrica Pensylvanica*]) and small trees (Staghorn Sumac [*Rhus Typhina*] and Shadbush [*Amelanchier canadensis*]), and a variety of grasses/groundcover (i.e., Switchgrass [*Panicum virgatum*], Virginia Creeper [*Parthenocissus quinquefolia*], Common Milkweed [*Asclepias syriaca*], and Groundsel Bush [*Baccharis halimifolia*]). Three sections on the Evergreen concrete retaining wall would be filled with topsoil to allow for seeding by wildlife. Upon implementation of the proposed action, the area of landscape would increase by 1.67± acres. The proposed landscaping plan is discussed further in Section 3.1.2 of this DEIS.

##### **Site Lighting**

The proposed site lighting would consist of 14-foot light poles and wall mounted building fixtures. As indicated on the *Details* sheet (see Appendix C), the proposed action includes three 14-foot lamp poles



with LED fixtures (two at the above ground tanks between Buildings 7 and 10 and one south of Building 8 at the retaining wall); 38 wall sconces around the eastern and southern sides of Building 10 and the northern, eastern, and southern sides of Building 9, and western sides of Buildings 7 and 8; and 13 wall lights along the northern and western sides of Building 10 and along the western side of Building 9. To mitigate light trespass and glare, all lighting would be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The proposed lighting would comply with the lighting standards set forth in §172-5 and would be subject to the review and approval of the Town of Southold Building Department.

### **Fencing**

Post-development fencing proposed includes a six-foot high black vinyl clad fence at the top of the Evergreen retaining wall (see *Alignment Plan* in Appendix C) in accordance with §280-105 of the Town Code. Existing perimeter fencing located at the northern boundary of SYC would remain in place.

## **1.2.5 Grading and Drainage**

### ***Grading***

As indicated on the *Excavation Phasing Plan* (see Appendix C), the proposed action includes the construction of the two boat storage buildings at Elevation 10± feet AMSL, in order to allow for direct access and transport of yachts from the existing boat lift station situated to the east of Buildings 7 and 8. Grading to this elevation is necessary as it allows for the maximum uphill incline for larger boats that cannot be trailered to be transported via travelift from Mattituck Creek to the proposed boat storage buildings. At a higher elevation, the travelift would be unable to ascend the incline to move the boats to the boat storage buildings.

The elevation of the Project Area, as indicated on the *Existing Conditions Map* (see Appendix C), ranges from 7± feet to 50± feet AMSL. Based on data provided by the project engineer, the proposed grading program includes the removal of approximately 135,000± CY of material. As indicated on the *Excavation Phasing Plan* (see Appendix C), the Construction Excavation Area is 4.59± acres and would be completed in two phases. Phase 1 would consist of 3.79± acres and Phase 2 would consist of the remaining 0.80± acre. During Phase 1, a temporary haul road ranging in width between approximately 16 feet and 30 feet would be constructed. The haul road would extend approximately 1,454± feet to the northwest across the R-80 portion of the subject property and would connect to West Mill Road for material removal. The proposed haul road would be constructed on an existing dirt path and reinforced with soil and crushed concrete. Approximately 123,000± CY of material would be needed to grade the area of Phase 1 to 9± feet AMSL. Phase 2 includes the grading of 0.80± acre and the removal of the remaining 12,000± CY of material. During Phase 2, all material would be removed via the extended internal driveway between Buildings 7 and 8 that connects to the existing access route in the marina and trucked north to the main entrance of the marina.

Following the two phases of clearing and grading, the proposed Evergreen concrete retaining wall would be constructed. The intent and purpose of the retaining wall is to stabilize the slope to be disturbed by the proposed action and to correct existing stabilization issues caused by former deposited dredge spoils by the USACOE. As detailed on the *Grading and Drainage Plan*, see Appendix C, the bottom elevation of the proposed Evergreen concrete retaining wall would be 20± feet AMSL.

and ranges in height with top elevations between 40± feet AMSL to 50 ± feet AMSL. Overall, the height of the Evergreen concrete retaining wall ranges from 20± feet to 30± feet. It is important to note that from the bottom elevation of the Evergreen concrete retaining wall, the ground would be graded down to 9± feet AMSL. The proposed pavement, drainage and sanitary infrastructure, pervious parking areas and two buildings would all be situated at elevations ranging from approximately 9 feet to 10 feet AMSL. Further discussion and evaluation of the proposed grading program are included in Sections 2.1.2 and 3.10 of this DEIS.

### ***Drainage***

Under existing conditions, there are few existing drainage structures (controls) on the site. There are a few grates/drainage inlets and in other areas, stormwater infiltrates through existing landscaped/planted areas or gravel surfaces. On the vegetated uplands, stormwater is recharged naturally through infiltration.

As indicated on the *Grading & Drainage Plan* (see Appendix C), the proposed action includes the installation of on-site leaching pools and French drains which includes the use of pervious gravel as stormwater management methods to accommodate and recharge stormwater runoff from 7.77± acres, which includes the Project Area as well as additional surrounding land area. Four (4) tributary areas are proposed to be constructed within the area of disturbance to capture stormwater runoff from the proposed buildings and the western side of Building 7 and all of Building 8. Tributary Areas 3 and 4 have also been designed to handle a portion of off-site stormwater due to existing natural grades. The proposed stormwater management plan is designed to accommodate a two-inch rain event, in accordance with Town of Southold regulations (Chapter 236 Stormwater Management). Further discussion and analysis of the proposed stormwater management plan is included in Section 2.2.2 of this DEIS.

### **1.2.6 Utilities**

The proposed action would increase electrical supply demand from PSEG Long Island. As provided by Jeffrey T. Butler, P.E., P.C., the proposed design is expected to include a 120/208 Volt, 3-Phase, 4-wire, 2,000-amp service for Buildings 9 and 10 (see Appendix P). Upon preparation of the electrical plans, further consultations would be undertaken with PSEG Long Island. However, due to the projected additional electrical load, the project architect anticipates service availability.

The proposed buildings would be heated but not cooled, with the heating source planned as radiant flooring supplied by liquid propane gas (LPG). Each building would be serviced with two, 2,000-gallon LPG tanks that are proposed to be contained in a concrete vault adjacent to the buildings. Further discussion and analysis of the proposed utility connections are included in Section 4.1.

### **1.2.7 Solid Waste Management**

All solid waste generated on-site is disposed of in one (1) eight-yard dumpster. The dumpster is emptied weekly by a licensed private carter. The Applicant indicated that currently, all cardboard, and plastic generated by on-site operations are recycled through the Town of Southold. Old batteries are

recycled with a local company. Most engine oil is reused to heat the repair shop. Engine oil not reused is recycled with a local company.

Upon implementation of the proposed action, solid waste, recyclables, and wastes generated by the boat maintenance operation would continue to be handled in the same manner as it is today. As the proposed action would include the storage of approximately 88 new boats for the winter months, there are no significant increases in solid waste generation expected.

### **1.3 Project Objective and Benefits**

#### **1.3.1 Objective of the Proposed Project**

The objective of the proposed project is to provide SYC with the ability to provide indoor, climate-controlled winter storage for larger vessels. Climate-controlled (heated) space is essential for maintaining electrical systems in the types of vessels to be stored. Currently, the larger boats that utilize local waters in the peak season are being transported to warmer climates in the winter months due to a lack of adequate storage in the Town of Southold and across Long Island. Based upon an average yacht size of 60 feet in length, it is estimated that approximately 88 yachts could be stored within the proposed buildings during the winter months; all of which would arrive to the site via Mattituck Inlet and Mattituck Creek.

Due to the height and length of the expected boats to be stored, the existing buildings at SYC cannot be used. Specifically, the height of the doors on the existing buildings are approximately 24 feet. The current yachting market is producing both longer and taller vessels with the height of a typical yacht at 35± feet. The proposed buildings would be constructed with door and ceiling heights capable of accommodating such vessels.

Additionally, SYC intends to improve the existing facility with constructing new parking, installing drainage, connecting to the public water supply, and correcting an area of the site that has been susceptible to erosion due to dredge spoils placed on-site as part of routine federal maintenance dredging projects.

#### **1.3.2 Benefits of the Proposed Project**

In addition to meeting a market demand for the storage service that SYC intends to provide, the implementation of the proposed action would realize certain social, economic, and environmental benefits, including job creation, increased tax revenue, upgrades to sanitary disposal systems, and providing the opportunity for surrounding properties with private water wells to connect to the public water supply. Additionally, this location provides waterfront access with suitable draft (i.e., depth of water), the existing infrastructure required to lift and move boats of the lengths expected, and of particular importance, the zoning that permits the proposed use. As a Marine-II zoned site, the Town Board has already determined this location to be suitable for the permitted use. Furthermore, the proposed action is consistent with the stated goals of the Town of Southold Local Waterfront Revitalization Program (LWRP) and Southold Town Comprehensive Plan adopted in September 2020 (hereinafter the “2020 Comprehensive Plan”). A discussion of the stated benefits follows.

### ***Job Creation and Increased Tax Revenue***

There are approximately 17 full-time staff employed by SYC for maintenance, sales, and marina operations. Since the application was submitted in 2019, the number of full-time employees has increased by four from 13 to 17 positions due to the growth in boat sales and required maintenance and storage needs during the off-season. Upon implementation of the proposed action, an additional 11 full-time positions are expected to be created. The types of jobs to be created include boat maintenance, machinery operators, engine technicians, wood and fiberglass re-finishing personnel, and administration. The salary ranges for the new full-time positions could be expected from approximately \$50,000 to \$125,000.

In addition to the creation of jobs, the proposed action is also expected to increase tax revenue to the Town of Southold, Suffolk County, and the State of New York. In 2020, the six Suffolk County locations owned and operated by Strong's Marine paid over \$7.46 million in payroll and over \$2.7 million in taxes (over \$2.5 million in sales tax, \$201,867 in Real Estate Taxes and over \$254,481 in state withholding taxes). Based on an average cost of \$20,000 per boat for service and storage annually, and an expected 88 yachts to be stored on site, the approximately \$1,760,000 would generate an additional \$151,800 annually in sales tax. Additional sales tax would also be generated by the expected increase in yacht sales by SYC. This projected increase in sales tax from boat sales is \$322,575.

Within the Town of Southold, the proposed development is expected to increase property taxes by \$59,450 per year based upon the Southold Assessor (see correspondence dated June 25, 2021 in Appendix E); however, the property would be eligible for the 485-b Business Investment Exemption, which is a tax reduction on a sliding scale over 10 years. For the first 3 years, there would be a 50 percent reduction for the increased assessment attributable to the two new buildings. For each year after, the reduction would decrease as follows: Year 4: 40 percent, Year 5: 30 percent, Year 6: 20 percent, Years 7 thru 9: 10 percent, and Year 10: 5 percent.

The proposed action represents a continued investment of the applicant into the Town of Southold, which over the last eight years, has included property investments that have contributed nearly \$300,000 into the Town's land preservation trust via the 2 percent real estate transfer tax (pursuant to Chapter 17 – Article IV. Community Preservation Fund).

See Section 3.9 of this DEIS for further discussion of the social and economic impacts of the proposed action.

### ***Upgrades to Sanitary Systems***

The proposed action includes the installation of one new I/A OWTS and the replacement of the existing on-site sanitary system with an I/A OWTS. The two systems would be designed to serve the SYC operations, inclusive of all buildings, the office and marina. As a recognized issue in the LWRP (Section II, Reach 1-27), *“Due to the age of much of the residential development with the Reach, the cesspools of Waterfront lots may be located close to both the creek shoreline and the groundwater table, thus presenting a potentially significant source of pollution to the surface waters of the creek and the groundwater feeding into it. These systems, in combination with the stormwater discharge sites, are thought to be contributors to pollution levels in Mattituck Creek.”*

***Extension of the Public Water Main for Potential Connections by Other Landowners***

The proposed action includes an extension of the SCWA water main from Naugles Drive by 765± feet to allow for the site to be served by the public water supply system. The extension of the public water main would allow for existing landowners to connect to the public supply system, by request to the SCWA. Information was obtained from SCWA noting those properties that could connect, if requested, and is included in Appendix K.

***Existing Site is Zoned for Proposed Use and Marine Infrastructure is in Place***

The existing zoning that permits the proposed use. As a Marine-II zoned site, the Town Board has already determined this location to be suitable for the permitted use. Additionally, the subject property is an existing yacht center with waterfront access and suitable draft (i.e., depth of water) for the types of yachts that currently use the facility and expected to be stored on-site post-development. Furthermore, SYC has the existing infrastructure in place required to lift and move boats of the weight and lengths expected.

***Project is Consistent with the Town's LWRP***

The proposed project is consistent with the Town's LWRP as it seeks to enhance the current maritime use of the property by responding to a demand for indoor climate-controlled storage for larger boats (yachts). As indicated in the LWRP's Proposed Land Use Map (see Figure 5 in Appendix A), the subject property is identified for commercial land use. At the time, the LWRP was approved in 2014, SYC was the "Mattituck Inlet Marina" until its sale and name change in 2016. As stated in the LWRP (Section II-J, Reach 1-3 and Reach 1-4):

*"The water-dependent and water-enhanced uses in Reach 1 are concentrated in Mattituck Inlet and Creek. Within the Town, this is the only harbor fronting on Long Island Sound. It is both a recreational and commercial port and is the site of one of the Town's largest concentrations of marine facilities, second only to Greenport Village.*

*The Inlet and Creek have regional significance as the only major harbor on Long Island Sound to the east of the Mt. Sinai/Port Jefferson harbors, a distance of about 40 miles. This regional importance was identified in the Long Island Sound Coastal Management Program (DOS, 1999). The Inlet was identified as one of ten Maritime Centers on Long Island Sound. **Maritime Centers provide the most suitable and appropriate locations for new or expansion of existing water-dependent commercial and industrial uses.**" (emphasis added)*

The proposed action is consistent with the above.

As further indicated in the LWRP (Section II D-5 and D-6):

*"Marinas respond to the strong demand in the region for recreational boating and services...Marinas help support leisure activities associated with and dependent upon coastal resources."*

Boat storage is a customary accessory use to marinas and while SYC can accommodate smaller boats, there is a need for storage by larger boat owners. It is also important to note that the types of yachts that are expected to be stored at SYC upon project completion (i.e., yachts that are approximately 50-to-86-feet) either occupy the slips at SYC or are active in Mattituck Harbor. These are not boat or yacht types that would be considered new to the existing traffic in Mattituck Harbor.

Of noted importance in the LWRP is for the continuation of the water-dependent uses and the development pressures. As stated in the LWRP: *“There are not many development constraints within Reach 1, a situation that makes this Reach highly vulnerable to residential development pressures.”* The proposed project would continue the existing maritime use.

It is recognized that several residential property owners are opposed to the SYC expansion for various reasons, including temporary construction impacts and the required excavation to achieve a level building footprint; however, as a property that has existed in its current form for 60 years and is zoned for maritime use, the proposed development is responding to an industry demand by recreational boaters while including appropriate mitigation measures in the construction and design in consideration of the surrounding residential land uses (see the impact analyses in Section 2.0 of this DEIS).

### ***Project is Consistent with the 2020 Comprehensive Plan***

The Southold Town Comprehensive Plan adopted in September 2020 (2020 Comprehensive Plan) Land Use Map (see Figure 4 in Appendix A) identifies the entirety of the subject property as commercial use; however, as noted above, the subject property is split-zoned for M-II (16.46± acres) and R-80 (16.5± acres). SYC operates entirely on the M-II zoned portion and the R-80-zoned portion of the subject property is currently undeveloped. As evaluated in Section 3.1.2 of this DEIS, the proposed action complies with and is consistent with the goals and recommendations set forth in various chapters, including Land Use and Zoning, Transportation and Infrastructure, Community Character, Natural Resources and Environment, Economic Development and Natural Hazards.

## **1.4 Construction and Operations**

### **1.4.1 Construction**

The proposed project would be completed in approximately 13 months based upon construction activities being undertaken for five or six-day work weeks based upon the phase. Phases 1 and 2 are excavation phases to occur over 5.5 to 6.5 months with trucking for material removal planned for Monday-Friday from 7:00 am to 5:00 pm. Phase 3 is the construction phase to occur over six months with workdays planned for Monday-Saturday with various hours between 7:00 am and 7:00 pm pursuant to §180-6 *Prevention of Noise – Standards* of the Town Code. A description of each phase follows.

### **Wildlife Survey**

Prior to site preparation, field inspections would occur to identify the presence of the eastern box turtle and relocation of any observed turtles to on-site areas that would not be disturbed.

### **Site Preparation**

The site preparation phase would occur over approximately two weeks and would include tree removal and grubbing. During this phase, the following equipment would be staged and used on-site: excavator, feller buncher, woodchipper, tub grinder, and payloaders. All of this equipment would be assigned an operator and approximately four laborers are expected. One trailer with driver is expected daily during this phase as well.

During this phase, the proposed crushed concrete haul road would be constructed from the proposed Construction Excavation Area to West Mill Road, as shown on the *Excavation Phasing Plan* and *Aerial Overlay* in Appendix C. This haul road would be used for the entirety of Phase 1 and would remain as a potential emergency access road post-construction. The haul road would dead-end at the top of the slope and could be used to direct water down from the higher elevation onto a structure fire. There would be no access for vehicles or personnel past that point. According to the project engineer, there are no slope issues for the haul road. The estimate of RCA required to provide a six-inch horizon for the haul road and shoulders out on West Mill Road is approximately 700 CY.

It is noted that the proposed entrance to the temporary haul road was shifted from the original design to increase the buffer distance to the nearest residential properties. The proposed haul road was shifted to the south on West Mill Road and is located approximately 145± feet south of the single-family residence located at 4105 West Mill Road. Internally, the haul road was shifted to maintain a separation distance of approximately 259 feet to the single-family residence located at 5106 West Mill Road.

### **Phases 1 and 2: Excavation**

Phase 1 would occur over approximately 5 to 6 months with a commencement date of mid-December 2023. During Phase 1, approximately 123,000 CY of material would be excavated and removed via the temporary haul road. Based on 30 CY trucks, Phase 1 would generate 4,100 total trips. With 40 trucks available per day for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 1 could be completed in 5 months. Also, during this phase, the following equipment would be used on-site: two payloaders, two excavators, one fuel truck / water truck, and two bulldozers. All equipment with exception to the fuel truck/water truck would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, two flagmen, and four laborers. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start.

Phase 2 would be up to 1 month (2 to 4 weeks) with a commencement date of May 2024. During Phase 2, approximately 12,000 CY of material would be excavated and removed via the existing access driveway to SYC. Based on 30 CY trucks, Phase 2 would generate 400 total trips. With 40 trucks available for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to

Friday), Phase 2 could be completed in 2 weeks. All of the equipment detailed in Phase 1 above would remain on-site with the same staff. At the completion of Phase 2, the temporary guard booth would be removed, and the access would be gated to prevent unauthorized entry.

### **Phase 3: Construction**

Phase 3 would occur over approximately 6 months with a commencement date of May 2024. During Phase 3, it is expected that work would be performed 6 days per week (Monday-Saturday) with time limited to 7:00 am to 7:00 pm in accordance with §180-6 *Prevention of Noise – Standards* of the Town Code. During Phase 3, the construction of the retaining wall, two buildings (Total Gross Floor Area [GFA]: 101,500 SF), parking area, and all infrastructure (drainage, water supply and 2 sanitary systems) would be undertaken. It is anticipated that Phase 3 would generate a total of 60 truck trips for the construction of the retaining wall and another 101 truck trips (12 trucks for material delivery and 89 trucks for concrete foundation) for the two boat storage buildings. A similar guard booth would be situated along the existing internal driveway to direct incoming deliveries and employees, to inspect exiting vehicles, and to enforce safety protocols.

As indicated in the Construction Details, the retaining wall construction would be approximately three weeks and would require the following equipment: one payloader, one excavator, one skid steer, and one mini excavator. All equipment would be assigned an operator and four laborers would be on-site. It is noted that during construction of the retaining wall, drainage infrastructure and building foundations would be performed. Additional equipment to be used on-site for this work include two payloaders, one excavator, one fuel truck, two skid steers, one mini excavator, one bulldozer, one scissor lift, and one telescopic forklift. Other than the fuel truck, all equipment would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, and laborers would range from 20 to 60.

It is recognized that the Town of Southold regulates construction-related noise (Chapter 180 of the Town Code) by limiting the times of construction activities to 7:00 am to 7:00 pm, on weekdays and Saturday. As such, in accordance with Town Code and indicated above, all construction activities would be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity would be limited to Monday to Friday from 7:00 am to 5:00 pm as mitigation offered by the Applicant. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start. No work would be performed on Federal or State holidays, or on Sundays. Also, all trucks would be Tier 4 certified by U.S. Environmental Protection Agency (U.S. EPA) standards and all gasoline or diesel-powered machinery would be equipped with adequate mufflers. Additionally, any vehicle that requires the use of a back-up alarm would use a white noise back-up alarm rather a single tone beep, and all trucks and drivers would be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48. The additional mitigation measures have been incorporated into the proposed project to reduce the impact of noise on the surrounding properties

Overall, while the proposed action would have construction-related impacts, they would be temporary in duration and would cease upon completion of construction. Section 3.10 of this DEIS provides further analysis of the construction-related impacts.



**1.4.2 Operations**

Upon implementation of the proposed action, the boat storage buildings would be used to store larger boats/yachts, up to 86 feet in length, for the winter months. It is anticipated the boat owners would be existing customers who currently dock at SYC or Strong's Water Club, or new yacht customers from the surrounding Southold community, as well as other owners on Long Island, Westchester County, and in the States of Connecticut and New Jersey.

In the fall season, the yachts would be transported to SYC via Mattituck Inlet and be delivered by either SYC staff or be captained by the yacht owners or licensed boat captain. As explained in the Boat (Vessel) Study in Appendix M, these types of boats are typically captained (i.e., the owner does not drive the boat). Once the yachts arrive, they would be lifted from Mattituck Creek at the existing lift station and moved to the boat storage buildings. In the spring, the yachts would be launched back into Mattituck Creek. The hours of operation would be the same as existing conditions, i.e., 8:00 am to 4:30 pm Monday through Friday and by appointment only on Saturday during the same hours. At times, the maintenance and service operations occur between 7:00 am and 7:00 pm.

As noted in Section 1.1.2, the marina accommodates boats and yachts 18-to-133± feet in length, with the typical yacht size being 50-to-80± feet in length. The proposed two boat storage buildings would be able to store a total of 88± yachts based on an average boat size of 60± feet in length and 17± feet in beam for the winter months only. These boat storage buildings would be able to accommodate boats 50-to-86 feet (maximum) in length. Based on the dimensions of the proposed buildings, SYC anticipates being able to accommodate the following yacht types in the new boat storage buildings:

**Table 4 - Typical Yachts to be Stored at SYC Under Proposed Action**

<b>Yacht Type</b>	<b>Draft</b>	<b>Beam</b>	<b>Weight</b>	<b>Length</b>
66-foot Sunseeker	5 feet 11 inches	17 feet 3 inches	85,000 pounds	68 feet
76-foot Sunseeker	5 feet 7 inches	19 feet 6 inches	118,000 pounds	77 feet
86-foot Sunseeker	6 feet 5 inches	21 feet 3 inches	147,000 pounds	86 feet

Upon implementation of the proposed action, SYC projects that an additional 11 employees would be added to increase the number of employees at SYC to 28. The number of employees on-site would vary seasonally. Currently, from Monday through Friday, 17 full-time employees are on-site. On Saturday's from approximately March 15 through September 15 (season), 12 employees are on-site and from September 16 through March 15 (off-season), the number decreases to four. On Sunday's during the season, approximately four employees are on-site and during the off-season, only one employee is on-site. The anticipated 11 new employees are anticipated to primarily be on-site during weekdays only. These new employees would be for the boatyard and include positions for boat maintenance, machinery operators, engine technicians, administrative, and wood and fiberglass re-finishing personnel.

**1.5 Required Permits and Approvals**

The proposed action is subject to the following permits and approvals:

**Table 5 – Required Permits and Approvals**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Filing Date</b>
Town of Southold Planning Board	Site Plan Review and Approval	July 17, 2018
Town of Southold Board of Trustees	LWRP Consistency and Wetlands Permit	July 17, 2018
Town of Southold Highway Superintendent	Review temporary road apron, possible curb cut permit required	TBD
Suffolk County Department of Health Services	Water Supply and Sanitary Disposal	July 18, 2018
Suffolk County Planning Commission	Referral	Following coordinated review by lead agency
Suffolk County Water Authority	Extension of Water Main and New Connection	October 20, 2017
NYS Department of Environmental Conservation	State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharge during Construction Activities	Permit Dependent
	Tidal Wetlands Permit and Non-Jurisdictional Determination	(NYSDEC Tidal Wetlands Permit ID 1-4738-01843/0028 dated January 31, 2020)
	Pesticide Business Registration	February 19, 2020
NYS Office of Parks, Recreation, and Historic Preservation	Review for archaeological significance	TBD
PSEG Long Island	Electric service connection	TBD

## **2.0 NATURAL ENVIRONMENTAL RESOURCES**

### **2.1 Soils and Topography**

#### **2.1.1 Existing Conditions**

##### ***Soils***

The *Soil Survey of Suffolk County, New York (Soil Survey)* was published by the United States Department of Agriculture (USDA) Soil Conservation Service in 1975 to assist land users in determining the potential limitations of soil types.<sup>9</sup> Generally, soils that have similar profiles are grouped into a soil “series” and the series is then broken down into “mapping units” based upon the slope, texture, and other characteristics.

According to the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey for Suffolk County, New York (USDA WSS), the subject property is comprised of seven soil types: Carver and Plymouth sands, 15 to 35 percent slopes (CpE), Fill land dredged material (Fd), Plymouth loamy sand, 3 to 8 percent slopes (PIB), Plymouth loam sandy, 8 to 15 percent slopes (PIC), Riverhead sandy loam, 0 to 3 percent slopes (RdA), Riverhead sandy loam, 3 to 8 percent slopes (RdB), Tidal Marsh (Tm) and Water. However, soils within the Project Area are limited to soils mapped as CpE, PIB, PIC, RdA, RdB, and Tm. An excerpt from the Soil Survey Map with both the Construction Excavation Area and Haul Road locations depicted is included as Figure 6 in Appendix A. Table 6 below provides the mapped soil types on the subject property and the location on-site based on the topographic setting described earlier.<sup>10</sup>

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<sup>9</sup> Warner, John W. Jr., et al. *Soil Survey of Suffolk County, New York*. United States Department of Agriculture and Cornell University Agricultural Experiment Station. 1975.

<sup>10</sup> United States Department of Agriculture. Natural Resources Conservation Service. Web Soil Survey. Retrieved from: <https://websoilsurvey.sc.egov.usda.gov/>. Accessed July 2020.

**Table 6 – Soil Types Mapped on Subject Property**

Symbol	Mapping Unit	Slopes	Approximate % of Site	Landform/Topographic Setting on SYC Parcel
CpE	Carver and Plymouth sands	15-35%	30.3±	Upland and Valley Slopes
RdB	Riverhead sandy loam	3-8%	26.5±	Upland
PIC	Plymouth loamy sand	8-15%	11.8±	Upland and Valley Slopes, Upland margin
Tm	Tidal Marsh	--	11.2±	Marina, floodplain edge
RdA	Riverhead sandy loam	0-3%	8.9±	Upland
PIB	Plymouth loamy sand	3-8%	8.4±	Upland
W	Water	--	2.1±*	None
Fd	Fill land, dredged material	--	0.9±*	Marina, filled inlet

\*These soil types are located outside of the area of disturbance for the proposed action.

Source: United States Department of Agriculture. Natural Resources Conservation Service. Web Soil Survey. Retrieved from <https://websoilsurvey.sc.egov.usda.gov/>. July 2020.

As indicated in Table 6 above, the subject property is comprised of moderate to steeply sloped CpE and PIC sands and loamy sands and gently sloped to nearly level sandy loams (RdA, RdB, and PIB). During field visits, the subject property was observed to have four distinct topographic settings: Floodplain, Upland Slope, Valley Slope, and Upland) (see Figure 7 in Appendix A). These topographic settings have been included in Table 6. As shown in Table 6, and depicted on Figure 6 in Appendix A, the CpE and PIC soils form the valley slope and encompasses the eastern one-third of the subject property. The central and western thirds of the subject site are comprised of the PIB, RdA, and RdB sandy loams. Though fall and shrublands now, in the historic period these soils were cultivated on the property. The Tm and Fd soils are mapped in the southeast quadrant and coincide with fill episodes that are documented between 1962 and 1984 (see Section 3.11).

Relevant excerpts from the *Soil Survey* relating to the soil series and mapping units are presented below:

*Carver Series*

*The Carver series consists of deep, excessively drained, coarse-textured soils. These soils are nearly level to steep and are throughout the county on rolling moraines and broad outwash plains. Slopes range from zero to 35 percent. Natural fertility is very low. Permeability is rapid throughout. The root zone is 30 to 40 inches thick.*

*Carver and Plymouth sands, 15 to 35 percent slopes (CpE)*

*CpE are almost exclusively on moraines except for a few steep areas on side slopes along some of the more deeply cut drainage channels on outwash plains. On morainic landforms these areas are large, and slopes generally are complex, especially on the Ronkonkoma moraine. On the outwash plains the areas are in long, narrow strips, parallel to the drainage channels. This unit*

can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soils. The hazard of erosion is moderate to severe on the soils in this unit. These soils are droughty, and natural fertility is low. Moderately steep to steep slopes are a limitation to use. The soils of this unit are poorly suited to crops commonly grown in the county. Areas of these soils have not been cleared for farming. A few areas in the western part of the county along the north shore are being used as homesites.

#### Plymouth Series

The Plymouth series consists of deep, excessively drained, coarse-textured soils that formed in a mantle of loamy sand or sand over thick layers of stratified coarse sand and gravel. These nearly level to steep soils are throughout the county on broad, gently sloping to level outwash plains and on undulating to steep moraines. Plymouth soils have low to very low available moisture capacity. Natural fertility is low. Permeability is rapid in all of these soils except those of the silty substratum phase. Permeability is moderate in the silty layer of soils in the silty substratum phase. The root zone is confined mainly to the upper 25 to 35 inches.

#### Plymouth loam sandy, 3 to 8 percent slopes (PIB)

PIB are on moraines and outwash plains. Slopes are undulating, or they are single along the sides of intermittent drainageways. The undulating areas are generally large. The areas along intermittent drainageways are narrow and long, and they follow the course of the drainage channel. The hazard of erosion is slight on this soil and it tends to be droughty. In the western part of the county, this soil is mainly used for housing developments.

#### Plymouth loam sandy, 8 to 15 percent slopes (PIC)

PIC are moderately sloping soils on moraines and outwash plains. Where it occurs on moraines, slopes are rolling in many places, and the surface is broken by closed depressions. On outwash plains this soil is on the short side slopes along intermittent drainageways. Areas on moraines are fairly large, but most other areas are small and long and narrow. The hazard of erosion is moderate to severe because of slope and the sandy texture of this soil. A cropping system that includes several years of close-growing crops is necessary to provide adequate protection from erosion. Slope and droughtiness are the main limitations on this soil for most nonfarm uses. This soil is not well suited to crops commonly grown in the county. Most of this soil is wooded. Small acreages are cleared and are farmed with adjoining areas of level or gently sloping soils. Such areas are used mainly for growing grasses, but some areas are idle. Where extensive excavating is not needed, some areas are used for estate-type housing developments.

#### Riverhead Series

The Riverhead series consists of deep, well-drained, moderately coarse textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. These soils occur throughout the county in rolling to steep areas on moraines and in level to gently sloping areas on outwash plains. These soils range from nearly level to steep; however, they generally are nearly level to gently sloping.

*Riverhead soils have moderate to high available moisture capacity. Internal drainage is good. Permeability is moderately rapid in surface layer and in the subsoils and very rapid in the substratum. Natural fertility is low. The root zone is mainly in the upper 25 to 35 inches.*

*Riverhead Sandy Loam, 0 to 3 percent slopes (RdA)*

*RdA soils are generally on outwash plains, and the areas are large and uniform. Where this soil occurs on outwash plains, it generally has slope characteristics of this landform. Slopes are undulating in places. A few small, irregular areas are on moraines. The hazard of erosion is slight on this Riverhead soils. The soil is limited only by moderate droughtiness in the moderately coarse textured solum. The soil is well suited to all crops commonly grown in the county, and it is used extensively for that purpose. Most areas in the western part of the county, however, are used for housing developments and industrial parks.*

*Riverhead Sandy Loam, 3 to 8 percent slopes (RdB)*

*RdB soils are in narrow bands on outwash plains along the side slopes of deep, intermittent drainageways. Slopes are short. The hazard of erosion is moderately severe on this soil. Controlling erosion is the main concern of management and reduces its usefulness for farming although it is suited to crops commonly grown in the county. This soil is limited by droughtiness and by the difficulty of applying irrigation water. The response of crops to applications of lime and fertilizer is good. Slope limits the use of large farm machines. A few small tracts were formerly cleared and farmed along with adjoining less sloping soils, but many of these areas are now in grass or brush because the use of heavy farm equipment on these areas is impracticable. Many of the larger areas of this soil are used for housing developments where large lots are needed. These rolling areas are in the western part of the county.*

*Tidal Marsh (Tm)*

*Tidal marsh is made up of wet areas that are throughout the county around the borders of calmer embayments and tidal creeks. These level areas are not inundated by daily tide flow, but they are subject to flooding during abnormally high moon or storm tides. The areas range from about 2 to several hundred acres. Tidal marsh has an organic mat on the surface that ranges from a few inches to several feet in thickness. The organic mat overlies pale-gray or white sand. In many places the profile for the marsh is made up of alternating layers of sand and organic material as a result of sand deposited on the organic mat during abnormally high storm tides. They are best suited to use as habitat for certain types of wildlife.*

The *Soil Survey* was utilized for information regarding the potential limitations to the proposed development for each of the soils. A description of the engineering and planning limitations for these soil types is included in the table below. As noted in Table 6, above, Water (W) and Fill land, dredged material (Fd) soils are located outside of the Project Area and are not included in Table 7, below.

**Table 7 – Soil Engineering and Planning Limitations**

Symbol	Mapping Unit	Slopes	Homesites*	Sewage Disposal Fields	Streets & Parking Lots	Lawns & Landscaping
CpE	Carver and Plymouth sands	15-35%	S - slopes	S - slopes <sup>3</sup>	S - slopes	S - slopes
PIB	Plymouth loamy sand	3-8%	SL	SL <sup>3</sup>	M - slopes <sup>1</sup>	S - sandy surface layer
PIC	Plymouth loamy sand	8-15%	M - slopes	M <sup>3</sup> - slopes	S - slopes <sup>2</sup>	S - sandy surface layer
RdA	Riverhead sandy loam	0-3%	SL	SL <sup>3</sup>	SL	SL
RdB	Riverhead sandy loam	3-8%	SL	SL <sup>3</sup>	M - slopes <sup>1</sup>	SL
Tm	Tidal marsh	--	S - high water	S - high water	S - high water	S - high water

NOTES:  
 Engineering and Planning Limitation Rating:  
 SL = Slight – Few or no limitations or limitations can be overcome at little cost.  
 M = Moderate – Limitation is harder to correct or that it is not possible in some areas to correct entirely.  
 S = Severe – Severely limited by some soil characteristic that is difficult to overcome or that the costs of overcoming the limitation are excessive.

Limitations:  
 [1] Slight for town or county roads.  
 [2] Moderate for town or county roads.  
 [3] Possible pollution hazards to lakes, springs, or shallow wells in these rapidly permeable soils.

\*The *Soil Survey of Suffolk County* evaluates the engineering and planning limitations of soils for the development of homesites. However, as the Soil Survey does not include ratings for other types of buildings, the homesites evaluation is used to determine potential limitations for the development of the proposed action.

Source: Warner, John W. Jr., et al. *Soil Survey of Suffolk County, New York. United States Department of Agriculture and Cornell University Agricultural Experiment Station. 1975. Pages 50-58.*

## **Soil Borings**

McDonald Geoscience performed three soil borings (B1, B2, and B3) in September 2018 to identify underlying soil deposits and to determine the filtration and drainage of the soils within the locations of the proposed sanitary systems. As indicated on the McDonald Geoscience test hole data sheets and figures (see Appendix H), Boring B1 was drilled to a depth of 17 feet and is located southeast of the corner of Building 3 in a sandy area on the upland slope. Boring B2 was drilled to a depth of 13 feet and is located southwest of Building 7 and northwest of Building 8. Boring B3 was drilled to a depth of 21 feet and is located west of Building 7 on the northernmost valley ridge within the proposed Construction Excavation Area. Soil was classified based on the Unified Soil Classification System (USCS).<sup>11</sup>

A summary of the borings, according to the test hole data sheets, follows:

- Boring B1: The area drilled included two feet of mixed sand and loam, underlain, generally by pale brown fine sand (SP: poorly graded) and water in pale brown fine sand (SP: poorly graded) to the extent drilled of 17 feet. Groundwater was encountered at a depth of 7.6 feet below grade surface (bgs) or Elevation 1.4 feet AMSL.
- Boring B2: The area drilled included six inches of mixed sand and loam, underlain, generally by pale brown fine sand (SP: poorly graded) and water in pale brown fine sand (SP: poorly graded) to the extent drilled of 13 feet. Groundwater was encountered at a depth of 6.4 feet bgs or Elevation 1.2 feet AMSL.
- Boring B3: The area drilled included three inches of brown sandy silt (ML: low plasticity), underlain, generally by pale brown silt (ML: low plasticity) from 3 to 11 feet, brown clayey sand (SC: plastic fines) from 11 feet to 13 feet, and pale brown fine sand (SP: poorly graded) from 13 feet to the extent drilled of 21 feet. No groundwater was encountered at this boring location.

The tidal range on September 25, 2018 was accessed from the National Oceanic and Atmospheric Administration (NOAA) website for historic data at Mattituck Inlet (Station 8512668), to determine the tide when the borings were completed.<sup>12</sup> Based on the published NOAA tidal data for September 25, 2018, low tide was at 6:09 am and high tide was at 12:22 PM. As indicated in Appendix H, the soil borings were taken at 9:00 am. As such, the tide was rising when the borings were taken.

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<sup>11</sup> The USCS classification system includes a primary and a secondary descriptor, with the following meanings:

<b><u>Primary Letters</u></b>	<b><u>Secondary Letters</u></b>
G: Gravel	W: Well Graded
S: Sand	P: Poorly Graded
M: Silt	M: Non-Plastic Fines
C: Clay	C: Plastic Fines
O: Organic	L: Low Plasticity
Pt: Peat	H: High Plasticity

<sup>12</sup><https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=8512668&units=standard&bdate=20180901&edate=20180930&timezone=LST/LDT&clock=12hour&datum=MLLW&interval=hilo&action=monthlychart>



## **Geotechnical Assessment**

A Geotechnical Engineering Assessment was prepared by P.W. Grosser Consulting Inc. (PWGC) for soil characterization in the areas of proposed excavation and the permanent retaining wall, and to evaluate the proposed cut material with an approximate breakdown of the volumes of the various soil deposits. The Geotechnical Engineering Assessment included 13 soil borings to correspond to the locations of the proposed retaining wall, cut slope, stormwater conveyance systems, boat storage buildings, haul road, and two locations that were provisionally identified as archaeologically sensitive in the Phase 1A Archaeological Assessment (see Appendix T). A copy of the Geotechnical Engineering Memo Report is included in Appendix H and a summary of the findings follows.

The 13 soil borings were taken continuously from the surface down to 12 feet or 16 feet bgs and at five (5) foot intervals thereafter. Borings B-1 and B-2 were conducted for archeological characterization. Borings B-3 through B-13 were conducted in proposed excavation and construction areas. As described in the Geotechnical Engineering Memo Report (see Appendix H), the subsurface was revealed to consist of the following Stratums, with a description of the Unified Soil Classification System (USCS) Soil Classification Guide included in Appendix B of the Geotechnical Engineering Memo Report:

**Stratum 1: Reddish-Brown Fine Sand (SP, SP-SM, SM):** A surface layer of fine-grained reddish-brown sand was encountered below the topsoil. The material consisted of medium-to-fine grained sand with trace to little amounts of silty sand. The material was loose in terms of relative density. The sands were classified as SP, SP-SM and SM in accordance with USCS. Stratum 1 was generally found between 0 to 17 feet bgs, with thicker deposits encountered at higher elevation borings (B-2, B-12, B-13). This material is considered suitable for foundation bearing for deposits with low silt composition.

**Stratum 2: Tan Medium Sand (SP, SW):** The material consisted of tan and light brown, fine-to-coarse grained sands with trace gravel and trace silt. The material was generally found between 4 to 55 feet bgs, extending into the groundwater table. The material was loose to dense in terms of relative density. The tan sands were classified as SP and SW in accordance with USCS. Boring B-13 found a deposit with high gravel content and was classified as GP. The material is considered suitable for foundation bearing. This material was present in each boring.

**Stratum 3: Grey Sand with Shells, Possible Dredge Spoils (SP):** A layer of coarse-to-medium grained grey sand was encountered at shallow depths at lower elevation borings (B-9, B-10, B-11). The material was generally found between elevation 0± feet and elevation 8+ feet NAVD88. The grey sands included trace to little amounts of shells. The material was loose in terms of relative density. The material was classified as SP in accordance with USCS. This material is considered unsuitable for foundation bearing based on the loose blow counts. PWGC believes that this material was deposited onsite as dredge spoils as it was found where the spoils were suspected of being. Additionally, this material was generally found above the groundwater table yet contained noticeable amounts of shell.

**Stratum 4: Organic Clay (OL, SC):** A thin layer of soft grey organic clay to clayey sand was encountered between at shallow depths at lower elevation borings (B-9, B-10). The material was generally found between elevation 3± feet and elevation 7± feet NAVD88. The clay included trace amounts of shells. The material was soft or loose in terms of relative density. The material was classified as OL or SC in accordance with USCS. This material is considered unsuitable for foundation bearing based on the loose blow counts and high fine-grained content.

**Stratum 5: Dense Sand and Gravel (SP):** A layer of very dense, brown sand and gravel with trace silt was encountered between elevation 43± feet and elevation 36± feet NAVD88 in only one (1) boring, B-13. The material was very dense in terms of relative density and had a Standard Penetration Testing (SPT) value of above 66 blows/ft. The material was classified as SP in accordance with USCS. This material is considered possible fill and will be removed in the excavation phase when encountered. This material was not encountered in any other location onsite.

**Stratum 6: Uncontrolled Fill:** The eastern boundary of the Construction Excavation Area was observed to have a deposit of uncontrolled sandy fill with debris. The material appeared to be mostly grey and brown sand with gravel. A tire and other debris were also observed to be embedded within the deposit. This deposit appears to be limited to a narrow strip along the top of the upland slope. The area was not accessible by drill rig due to the steep slope and, therefore, PWGC did not find this Stratum within the soil borings. The thickness is unknown.

Clay was encountered at various depths in the soil borings obtained from McDonald Geoscience and PWGC. Boring B3 obtained from McDonald Geoscience encountered clay between 11 feet to 13 feet in the Construction Excavation Area (see soil boring logs and figure in Appendix H). As the proposed Construction Excavation Area would include material removal to elevation 10± feet AMSL, the limited clay material encountered would be removed from the site. Borings B-9 and B-10 obtained from PWGC encountered clay between elevation 3± feet to elevation 7± feet AMSL (see soil boring logs in Appendix H). As shown on Sheet C-102 in Appendix H, B-9 is located outside any development area and B-10 is located within a proposed building foundation area. Per the Amended Final Scope, peat formations were not observed in any of the soil borings completed by either McDonald Geoscience or PWGC.

Groundwater was encountered in Borings B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, and B-12, and was generally encountered between 2.5 feet AMSL and 1.0 feet AMSL.

Using NOAA historic tidal data at Mattituck Inlet (Station 8512668), the closest station reported fluctuation of about 7 feet. As indicated in Appendix H, the soil borings on April 28, 2021 were taken between 9:00 am and 3:15 pm. Based on this, the tide was rising when B-01, B-02, and B-03 were taken and the tide was going out when B-04 was taken. The soil borings on April 29, 2021 were taken between 8:23 am and 3:12 pm. The tide was rising when B-05 was taken and began to go out as B-06 was taken. The soil borings on April 30, 2021 were taken between 8:29 am and 2:46 pm. The tide was going out when B-07 was taken and was rising when B-08, B-09, B-10, and B-11 were taken. The soil borings on May 3, 2021 were taken between 8:12 am and 2:57 pm. The tide was going out when B-12 was taken and rising when B-13 was taken.

## **Soil Quality**

Enviroscience Consultants, Inc. (Enviroscience) collected four soil samples from the embankment at the rear of the marina buildings in September 2020 (see Appendix H). Soil samples were submitted to Phoenix Environmental Laboratories, Inc. of Manchester, Connecticut, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory (ELAP ID 11301).

Two samples were analyzed for:

- Volatile organic compounds (VOCs) by U.S. EPA Method 8260
- Semi-volatile organic compounds (SVOCs) by U.S. EPA Method 8270
- Pesticides by U.S. EPA Method 8081
- Herbicides by U.S. EPA Method 8151
- Poly-chlorinated biphenyls (PCBs) by U.S. EPA Method 8082
- Metals by U.S. EPA Method 6010/7471

Two samples were analyzed for:

- VOCs by U.S. EPA Method 8260

Sample data was compared to the Soil Cleanup Objectives (SCOs) for Unrestricted Use (UUSCOs) specified in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives (December 2006).

With the exception of several metals, no compounds analyzed for were detected at concentrations above the laboratory method detection limit. The metals detected in samples from the site did not exceed their respective UUSCOs.

## **Topography**

Based upon the United States Geological Survey (USGS) Topographic Map, Mattituck Hills Quadrangle (see Figure 8 in Appendix A) and the *Existing Conditions Map* (see Appendix C), the elevation of the subject property ranges from 6± feet AMSL at the existing bulkhead along the majority of the eastern property line, to 50± feet AMSL at the junction of the valley slope and uplands. The existing marina operations and buildings are located between Elevations 6± feet and 8± feet AMSL. The intervening valley slopes generally trend northwest to southeast in the southeast quadrant of the property and then generally west to east further north. The slopes are marked by relatively shallow ridges and swales that generally terminate at the upland slope line. The upland slope face is 8± feet to 20± feet AMSL in most places and the elevation increase to the 40± feet and 50± feet contours which are marked by broad terraces near the upland juncture. The upland area ranges from 40± feet AMSL to 50± feet AMSL and continues west to West Mill Road.

The subject site is marked by a set of two ridges and an intervening swale. The swale is broad and relatively shallow while the ridges are broadly terraced between the tops of the 50± feet and 30± feet AMSL contours and then more narrowly terraced between the top of the 30± feet AMSL contour and the bottom of the 20± feet AMSL contour.

As provided by the project engineer and indicated in Table 8 below, the existing slopes for the Project Area are primarily greater than 10 percent (i.e., approximately 82 percent of the site).

**Table 8 - Existing Slopes**

<b>Slope Breakdown</b>	<b>% of Site</b>
0-10 percent slopes	18%
10-15 percent slopes	39%
Greater than 15 percent slopes	43%

***Historic Environmental Context***

As indicated in the Phase 1A Archaeological Assessment included in Appendix T, based on aerial photography, the topography of the eastern third of the subject property has been the subject of significant alteration episodes occurring between 1962 and 2006. These affected the upland and valley slopes, and marina location. At least one of the episodes was the result of dredge deposition in a now-filled inlet. The filling was under the direction of the USACOE as part of their larger program to maintain the Mattituck Creek inlet and channel. Review of published records indicate maintenance dredging conducted under USACOE commercial permits was done between 1921 and the 1970s (Morgan et al. 2005, Batten and Kraus 2006). Some action-specific sand mining by the USACOE, acquired from dredging, occurred as late as 2014. However, most of these materials were sent to the inlet mouth to try to control beach erosion (USACOE 2021).

Aerial photographs from 1962 and 1978 show the gradual filling of the inlet in SYC's southeast quarter, which coincides with an unnamed inlet shown on the 1947 USGS quadrangle (see Phase 1A Archaeological Assessment included in Appendix T).

The 1962 aerial also clearly shows the breaking of the upland slope line and vegetation clearing on the valley slope and upland to create space for existing Building 1 west of and upslope of Building 3 and perhaps most importantly the creation of the land elevation upon which the marina now sits. That filling episode created space for Buildings 6, 7, and 8 between 1962 and 1978. By 1984, the unnamed inlet south and west of Building 8 had been mostly filled, with filling ongoing to the east of Building 8. This filling included the area denoted as Tm soils on the *Soil Survey*.

The final upland slope break is documented on the 2006 aerial photograph, which illustrates a large break in the upland slope and near the valley slopes behind Building 8. This "scar" appears to gradually fill south to north so that by 2020, the area of existing slope instability lies to the west of the gap between Buildings 7 and 8. Based on observations made during the walkover of the eastern edge of the proposed Construction Excavation Area on March 25, 2021 by project archaeologist, Carol S. Weed, MA (RPA), dredge spoil appears to have been emplaced atop the east side of the valley slope, effectively creating the top of the broken upland slope line. As noted in the Phase 1A Archaeological Assessment, the origin of the spoil is unknown but historic documents indicate that dredge spoil was deposited on-site and particularly on the west side of Mattituck Creek by the USACOE as part of the maintenance dredging program noted above (Morgan et al. 2005, Friends 1986). The Geotechnical Assessment detailed above also confirms such deposits.

## **2.1.2 Potential Impacts**

### ***Soils***

The proposed action would result in the disturbance of soils for removal of material for regrading, building foundations, drainage and sanitary waste infrastructure, utility installation, pervious parking areas, and landscaping. Based upon the preliminary site plan and site data provided by the project engineer, the total land area to be disturbed is approximately 6.51 acres. The disturbance of soils for construction and regrading activities increases the potential for erosion and sedimentation. As indicated in the NYSDEC's *New York State Standards and Specifications for Erosion and Sediment Control, Blue Book* (July 2016), the erosion potential of a site is determined by five factors: soil erodibility, vegetative cover, topography, climate, and season.

Soil erodibility is dependent on the structure, texture, and percentage of organic matter in the soil. Vegetative cover protects soils from the erosive forces of precipitation and runoff or overland flow, as top growth vegetation shields the soil surface from precipitation while the root mass holds soil particles in place. Also, grasses limit the speed of runoff and help to maintain the infiltration capacity of the soil. The establishment and maintenance of vegetation are identified as the most important factors in minimizing erosion during development. Topography, including both slope length and steepness, influences the volume and velocity of surface runoff. Long slopes carry more runoff to the base of the slope, and steep slopes increase runoff velocity. The climate also affects erosion based upon the volume of runoff. Rainfall frequency, intensity and duration have direct influences on the ability for stormwater to infiltrate soils. Finally, seasonal variations in temperature and rainfall affect the erosion potential of soils.

As indicated in Section 2.1.1, the *Soil Survey* provides engineering and planning limitations for all soil types. Based on the mapped soil types present within the Project Area, there are moderate-to-severe engineering limitations associated with select soils for the development of streets or parking lots due to slopes (PIB and RdB soils are noted as moderate and PIC soils are noted as severe). This limitation would be overcome with the proposed excavation and regrading of the Project Area. As presented and evaluated later in this subsection, the slopes within the Project Area would be modified to regrade select areas with slopes of 15 percent or greater, reducing the area of steep slopes within the Project Area from 51 percent to 1 percent. The area of slopes between 10 and 15 percent would decrease from 12 percent to 1 percent. The area of slopes less than 10 percent would increase from within the Project Area from 37 percent to 98 percent. Regarding the proposed haul road, its placement and route considers existing cleared areas and existing topography such that there would be no limitations.

The proposed Evergreen concrete retaining wall would be constructed within an area mapped as CpE and PIC soils. It is also noted that the Geotechnical Engineering Assessment performed by PWGC evaluated the existing soils for slope stability. As discussed later in this subsection and included in the Geotechnical Engineering Memo Report in Appendix H, slopes have been determined to be stable with no impact to nearby properties. The Engineering Design Report and Documentation in Appendix H reviewed the soil borings completed by PWGC to assure design compatibility with the native soils, properties, and groundwater elevation. It was concluded that the design principles utilized for this

gravity wall system are consistent with the requirements for the proposed Evergreen concrete retaining wall.

As indicated in Section 2.1.1 of this DEIS, clay was encountered in Boring B3 within the Construction Excavation Area; however, this material would be removed as part of the proposed regrading program. Clay was also generally encountered in PWGC Borings B-9 and B-10 at elevation 3± feet to elevation 7± feet AMSL. It is noted that B-9 is located outside any development area and B-10 is located within a proposed building foundation area. As such, there would no engineering or planning limitations associated with on-site clay material.

The *Soil Survey* also indicates moderate to severe limitations for sanitary disposal systems due to slopes and soils that have rapid permeability (PIC are noted as moderate and CpE soils are noted as severe). It is noted that the existing sanitary system (and the entirety of the existing SYC development) is mapped as CpE, and thus, prior construction has created a relatively flat area and modification of the soil profile. The proposed new sanitary system would be situated in the PIC soils. As indicated in Section 2.1.1 of this DEIS, soil borings have been performed by McDonald Geoscience for both sanitary systems (B1 and B2). There were no limitations identified. Additionally, as part of the Geotechnical Assessment performed by PWGC, the drainage ability of on-site soils has been evaluated. Overall, the drainage characteristics have been determined to be good, with a limited area of soil near the proposed Building 9 having a high concentration of fines. Soil mixing would be performed. It is noted that there are no sanitary disposal systems to be located in this area.

In the area of the proposed boat storage buildings, soils are mapped as PIC and CpE which are noted as having limitations of moderate and severe, respectively, due to slopes. The proposed regrading program would eliminate this limitation. It is also noted that after excavation and prior to construction, additional borings would be performed as the initial geotechnical investigation determined loose soil deposits within the southern footprint of Building 9 may require improvement for foundation bearing.

Regarding the proposed landscaping, all landscape would be placed in soils mapped as CpE and PIC soils. These soils are noted as having severe limitations for landscaping due to slopes (CpE) and a sandy surface layer (PIC). These limitations would be overcome as areas would be regraded and topsoil would be introduced to establish plantings.

Overall, based on the above, there are no engineering limitations that would impact the proposed development or result in significant adverse impacts associated with the development of the Project Area.

#### Proposed Grading Program

The proposed action includes the removal of approximately 135,000± CY of earthen material. The removal would occur in two phases, which are delineated on the *Excavation Phasing Plan* in Appendix C. Phase 1 would include the cut and removal of 123,000± CY to bring the elevation down to 10 feet AMSL. The maximum depth of cut in Phase 1 would be 40 feet. Phase 2 would include the cut and removal of 12,000± CY of earthen material to bring the elevation down to 10 feet AMSL. The maximum depth of cut in Phase 2 would also be 40 feet. During the construction phase (Phase 3), there would be no removal of cut material for building foundations, or drainage and sanitary infrastructure. The

maximum depth of cut would be 5 feet for the proposed drainage leaching pools. No fill material is proposed.

#### Projected Construction Trucks and Proposed Route

As part of the site preparation phase, a crushed concrete haul road would be constructed from the proposed Construction Excavation Area to West Mill Road, as shown on the *Excavation Phasing Plan* and *Haul Road Plan* in Appendix C. This haul road would be used for the entirety of Phase 1 and would remain as an emergency access road post-construction.

Phase 1 would occur over approximately 5 to 6 months with a commencement date of mid-December 2023. During Phase 1, the haul road would be constructed and approximately 123,000 CY of material would be excavated and removed. Based on 30 CY trucks, Phase 1 would generate 4,100 total trips. With 40 trucks available per day for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 1 could be completed in 5 months.

As indicated on the Truck Route Map in the Traffic Impact Study (TIS) in Appendix O, trucks would exit the haul road, turn left on to West Mill Road, which becomes Cox Neck Road, and at the signalized intersection with Sound Avenue, trucks would proceed west.

Phase 2 would be approximately 1 month (2 to 4 weeks) with a commencement date of May 2024. During Phase 2, approximately 12,000 CY of material would be excavated and removed via the existing access driveway to SYC. Based on 30 CY trucks, Phase 2 would generate 400 total trips. With 40 trucks available for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 2 could be completed in 2 weeks. As indicated on the Truck Route Map in the TIS in Appendix O, trucks would exit the access driveway on to West Mill Road, which becomes Cox Neck Road, and at the signalized intersection with Sound Avenue, trucks would proceed west.

It is noted that the material from the subject property would likely be transported to a registered or permitted NYSDEC Part 360 facility, likely located within 15 miles of the project location, for processing and re-use. Upon excavation and loading on to trucks, the material in its raw form would be transported to a facility for stockpiling and processing, and eventually sold as a finished product to the ultimate end user. Such uses could be beach replenishment, aggregate for roadway construction, pre-cast concrete products, etc. Material may also be transported directly to a local site for re-use. Given that this project is still in the environmental review process, and the ultimate re-use facility or location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations. However, the transportation costs of these types of aggregates often drive their use, and it often becomes financially restrictive to transport these types of materials greater than 50 miles.

#### Geotechnical Engineering Assessment

A Geotechnical Engineering Assessment and associated Memo Report was prepared by PWGC for soil characterization in the areas of proposed excavation and the permanent retaining wall, and to evaluate the proposed cut material with an approximate breakdown of the volumes of the various soil deposits. As part of the assessment, PWGC performed borings to investigate the soils that make up the planned excavation cut, and evaluated the on-site soils for structural design, drainage, site preparation, slope

stability, and vibrations during construction. A copy of the Geotechnical Engineering Memo Report is included in Appendix H and a summary follows.

#### *Structural Design*

The Geotechnical Engineering Memo Report summarizes the soil design parameter recommendations for the generalized soil layers described in Section 2.1.1 of this DEIS. As excerpted from the Geotechnical Engineering Memo Report, based on the soil conditions encountered during the field investigation, the conventional shallow foundations (spread/strip footings) for the proposed boat storage buildings are feasible. However, additional borings would be conducted after the excavation phase. Regarding the retaining wall, it has been determined that the soil design parameters are suitable based on the characterization of Stratum 1, 2 and 5.

#### *Site Preparation*

The Geotechnical Engineering Memo Report recommended specific practices during site preparation. As a result of recommendations made by PWGC, any debris observed during site preparation including demolition debris, new fill and excavation areas, vegetation, topsoil, roots, and other deleterious materials deemed unsuitable, would be removed from the proposed construction areas, and replaced with controlled fill. Site clearing, grubbing, and stripping would be performed during dry weather conditions to prevent excessive rutting and the mixing of organic debris with the underlying soils. This clearing, grubbing, and stripping would occur during the site preparation phase of construction, which is approximately two weeks. If, during this period, excessive rain or wet weather occurs, the work would be delayed. However, the overall construction schedule provided in this DEIS includes over-estimates should delay occur.

#### *Drainage*

The Geotechnical Engineering Memo Report evaluated the soil conditions for drainage. As indicated in said Report, the soils of Stratum 1 and 3 are considered to have fair to good drainage characteristics. Stratum 2 appears to be excellent in terms of drainage characteristics. The soils of Stratum 4, encountered in Borings B-9 and B-10, have high concentrations of fines, and would have poor drainage characteristics. As such, mitigation measures to avoid poorly draining soils on the south side of Boat Storage Building No. 2 (Proposed Building 9) would include soil mixing. As discussed below, the subject site contains excellent quality, clean sand for use in soil mixing. As indicated above, clay was encountered at various depths in the McDonald Geoscience Boring B3 (clay encountered clay between 11 feet to 13 feet; boring located west of Building 7 on the northernmost valley ridge within the proposed Construction Excavation Area) and PWGC Borings B-9 and B-10 (clay was encountered at 3± feet to 7± feet AMSL); however, B-9 is located outside any development area and B-10 is located within a proposed building foundation area, which would be regraded to Elevation 10 feet AMSL. The limited clay material encountered in drainage areas would be removed from the site.

#### *Quality and Quantity of Proposed Cut Soils*

PWGC performed borings to investigate the soils that make up the planned excavation cut. The table below shows the samples that were sent to the laboratory for sieve analysis and which Stratum they were representative of. Sieve analysis results are attached to the Geotechnical Engineering Memo Report in Appendix H.



**Table 9 – Sieve Analysis Sample Results**

<b>Stratum</b>	<b>Sample Selected (Boring, Depth Interval)</b>
<u>Stratum 1</u> : Reddish-Brown Fine Sand	Boring B-3, 4'-6'
<u>Stratum 2</u> : Tan Medium Sand	Boring B-6, 10'-12'
<u>Stratum 3</u> : Grey Sand w/ Shells, Dredge Spoils	Boring B-10, 6'-8'
<u>Stratum 4</u> : Organic Clay	none
<u>Stratum 5</u> : Dense Sand and Gravel (SP)	Boring B-13, 8'-10'
<u>Stratum 6</u> : Uncontrolled Fill w/ Debris	none

PWGC evaluated the collected soil samples in terms of the soil quality for potential disposal locations and conclude the following:

- (1) The clean sands of Stratum 2 would likely have value as a sand material.
- (2) The sands of Stratums 1 and 5 would be too finely graded, have high silt content and, for Stratum 5, too high in gravel content.
- (3) Stratums 3 and 4 are mostly located at elevations and locations outside the soil cut.
- (4) Stratum 6 is uncontrolled fill with debris that is of poor quality.

The soil cut volume was estimated by the project engineer, Young & Young Engineering, to be approximately 123,000 CY for Phase 1 and 12,000 CY for Phase 2. PWGC performed calculations that break down the overall volume into the distinct Stratums that were encountered during field exploration. The calculations are based on the delineated area of the excavation, soil classifications from the field investigation and professional judgement on stratigraphy between the boring locations. As indicated in the table below, of the proposed 135,000 CY of cut, approximately 63 percent of the material has been classified as quality sand. The remaining 37 percent of the material has been classified as poor to fair.

**Table 10 - Soil Type Breakdown of Cut Volume**

<b>Stratum</b>	<b>Phase 1 Quantity</b>	<b>Phase 2 Quantity</b>	<b>Total Approx. Quantity</b>	<b>Quality as Sand</b>
<u>Stratum 1:</u> Reddish-Brown Fine Sand	39,240 CY	4,611 CY	43,851 CY	Fair to Poor
<u>Stratum 2:</u> Tan Medium Sand	78,985 CY	5,867 CY	84,852 CY	Excellent
<u>Stratum 3:</u> Grey Sand w/ Shells, Dredge Spoils	0	0	0	Fair
<u>Stratum 4:</u> Organic Clay	0	0	0	Poor
<u>Stratum 5:</u> Dense Sand and Gravel (SP)	2,675 CY	1,522 CY	4,197 CY	Fair
<u>Stratum 6:</u> Uncontrolled Fill w/ Debris	2,100 CY	0	2,100 CY	Poor
	123,000 CY	12,000 CY	135,000 CY	

It is noted that the destination location for the cut material is dependent upon the quality of the material and its ability for reuse. Regarding quality, EnviroScience performed grab samples to assess soil quality, which has been determined clean and unrestricted for disposal. The Applicant has not yet identified the disposal locations for the cut material; however, it is assumed that all material will be transported to points west of the subject property. The transport to points west of the site have been considered in the traffic impact analysis and local truck routes from the subject property to County Road 48 (see Section 3.3 of this DEIS).

*Slope Stability*

PWGC performed soil borings B-12 and B-13 along the proposed retaining wall to characterize the soils representative at the slope of the soil cut. The boring results indicate that the soils at these locations are medium dense to dense sands with gravels (Stratum 2). Prior to the installation of the permanent retaining wall system, the soil cut is recommended to be sloped on 1.5:1 (Horizontal: Vertical) slope. This recommendation is based on Occupational Safety and Health Administration (OSHA) guidelines for excavation safety in Type C (granular, i.e., sandy) soils. A 1.5:1 slope is a 34° angle, which is equivalent to the soil friction angle of the on-site soils. As indicated by PWGC, granular soils of this composition (sand with gravel) and relative compaction (medium dense to dense) are favorable for stable open cuts. A cut on a 34° angle taken from the base of the proposed retaining wall will not extend horizontally onto the property of the nearest resident, 5106 Mill Road. Therefore, slope stability is not a concern to nearby properties.

*Vibrations*

The potential for vibrations from soil excavation and construction were also considered in the geotechnical engineering assessment. As indicated in the Geotechnical Engineering Memo Report,

equipment and vehicles used for the soil excavation and construction would produce vibrations that would be imparted to the soils. Construction vibrations are typically recorded as Peak Particle Velocity (PPV) measured in units of in/second. The US Bureau of Mines RI 8507 report is the common reference for establishing safe construction vibration levels. Acceptable vibration levels for modern, wood-framed residential structures are established to be a maximum of 0.5 in/second.

Offsite travel of the vibrations is dependent on the construction methods employed and in-situ relative density of the onsite soils. Based on the analysis, the medium dense to dense soils of Stratum 2 are favorable for limiting vibration effects. Vibrations of significant levels can be eliminated with avoiding disruptive practices such as installation of driven piles or sheet pile installation. These types of processes are not proposed, and thus, no impacts are expected.

Excavation and construction activity are anticipated to consist mostly of heavy vehicle traffic from excavators and haul trucks. The CALTrans Transportation and Construction Vibration Guidance Manual includes a table that lists expected vibration levels for different equipment. The equipment expected to be used during construction at this site, such as 'Large Bulldozer' and 'Loaded Trucks', are stated to have expected PPV's at 25 feet away of 0.89 and 0.076 in/second, respectively. These PPV values are lower than the 0.5 in/second threshold and will be separated from nearby residential properties at larger distances than 25 feet. Also, the haul road layout is orientated along the west edge of the excavation, which maintains the separation distance between vehicle traffic and the closest residence. As such, there are no vibration impacts expected from soil excavation or construction activities.

Although the geotechnical engineering analysis concluded no expected vibration impacts, additional vibration analyses were undertaken by SoundSense and are discussed in Section 3.10 of this DEIS. The report in its entirety is included in Appendix R of this DEIS.

### Soil Quality

As indicated in Section 2.1.1 of this DEIS, soil samples from the embankment at the rear of the marina buildings were taken and analyzed in September 2020 (see Appendix H). Sample data was compared to the SCO for UUSCOs specified in 6 NYCRR Part 375-6, Remedial Program Soil Cleanup Objectives (December 2006). With the exception of select metals, no compounds analyzed were detected at concentrations above the laboratory method detection limit. The metals detected in samples from the site did not exceed their respective UUSCOs.

### Proposed Erosion and Sedimentation Controls

An *Erosion and Sediment Control Plan* (see Appendix C) has been developed for the proposed development. The specific methods and materials employed in the installation and maintenance of erosion control measures would comply with the *New York State Standard and Specifications for Erosion and Sediment Control, Blue Book* (November 2016). As indicated on the *Erosion and Sediment Control Plan*, the following measures would be undertaken and/or implemented prior to and maintained during construction:

- Existing vegetation to remain would be protected (by installation of construction fence or other approved means) and would remain undisturbed.

- Clearing and grading would be scheduled so as to minimize the extent of exposed areas and the length of time that areas are exposed, graded, and stripped. Areas would be kept stabilized through the use of temporary seeding as required. Seed mixtures shall be in accordance with soil conservation service recommendations. In areas where soil disturbance has temporarily or permanently ceased, temporary and/or permanent soil stabilization measures would be installed and/or implemented within seven days.
- The length and steepness of cleared slopes would be minimized to reduce runoff velocities, and runoff would be diverted away from cleared slopes.
- Sediment would be trapped on the site and not permitted to enter adjacent properties, public roads, or drainage systems. Sediment barriers would be installed along the limits of disturbance prior to the start of construction and would be maintained until construction is complete.
- A stabilized construction entrance would be maintained to prevent soil and loose debris from being tracked onto local roads. The construction entrance would be maintained until the site is permanently stabilized.
- All stormwater would be retained on-site. Drainage inlets installed on-site would be protected from sediment buildup through the use of appropriate inlet protection.
- Dust mitigation would be implemented during construction, as follows:
  - Water-down access ways, stockpiles, and material prior to loading.
  - Limit on-site vehicular speeds to 5 miles per hour (mph).
  - Soil stockpiles would be covered.
  - All trucks carting loose material and construction debris would be covered.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Sediment barriers and other erosion control measures would remain in place until upland disturbed areas are permanently stabilized. Following permanent stabilization, paved areas would be cleaned of soil and debris and drainage systems would be cleaned and flushed, as necessary.
- Property maintenance of erosion control measures is to be performed as indicated by periodic inspection and after heavy or prolonged storms. Maintenance measures are to include but are not limited to cleaning of recharge basins, sediment traps and drywells, cleaning and repair of sediment barriers, repair of berms and runoff diverters, and cleaning and repair of inlet protection devices.
- To minimize material being brought onto local roads, the following measures would be implemented:
  - All trucks for Phase 1 would enter and exit the subject property utilizing the temporary haul road connected to West Mill Road. The temporary haul road would include a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.
  - All trucks for Phase 2 would enter and exit the subject property utilizing the main entrance to SYC. The construction entrance would include a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.
  - Following each day of sand and removal activities, the local streets would be swept nightly.

The aforementioned erosion and sedimentation controls would minimize the potential impacts associated with construction activities. Prior to construction, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared and submitted for the proposed development (see Section 2.2.2 of this DEIS).

Overall, based on the above, no significant adverse impacts associated with on-site soils, or from the disturbance of the site would be expected.

### ***Impacts to Seagrass and Shellfish***

As requested in the Amended Final Scope for the DEIS, this section of the document is to address existing seagrass and shellfish adjacent to the subject property for the purpose of determining potential impacts from erosion and sedimentation. Pursuant to the NYSDEC Statewide Seagrass Map included as Figure 9 in Appendix A, there is no seagrass present in Mattituck Inlet or Mattituck Creek. Furthermore, based on CCE's Eelgrass Program,<sup>13</sup> which tracks historic and current locations of eelgrass on Long Island, there is no historic or current presence of eelgrass in Mattituck Inlet and Mattituck Creek. Accordingly, as there are no seagrasses or eelgrasses present, there would be no impacts to such grasses.

Regarding shellfish, the proposed action includes the installation of a stormwater management system (see *Grading and Drainage Plan* in Appendix C and as evaluated in Section 2.2.2 of this DEIS) to accommodate and recharge all stormwater on-site from the Project Area and off-site contributing areas. Additionally, SYC funds and is a host to the CCE FLUPSY program and is, therefore, committed to improving water quality and shellfish restoration in Mattituck Creek (see Section 1.1.2 of this DEIS). As the proposed action includes the installation of a stormwater management system as well as the implantation of erosion and sediment controls during construction, no significant adverse impacts from sedimentation to shellfish and the existing CCE FLUPSY unit would occur.

### ***Topography***

The proposed action requires a modification of the site's topography to accommodate the proposed development footprint. Based on the *Grading and Drainage Plan* (see Appendix C), the proposed grading program would reduce average grade from 50 feet AMSL to 10 feet AMSL within the Phase 1 Construction Excavation Area, and from 47 feet AMSL to 10 feet AMSL in the Phase 2 Construction Excavation Area. As provided by the project engineer, the existing slopes within the Project Area would be modified to reduce steep sloped areas (i.e., those greater than 15 percent) by 50 percent. The table below provides a slope breakdown for the existing and post-development conditions.

**Table 11 - Post-Development Slope Breakdown within Project Area**

<b>Slope Breakdown</b>	<b>% of Site (Existing)</b>	<b>% of Site (Post-Development)</b>	<b>Change</b>
0-10 percent slopes	37%±	98%±	+61%±
10-15 percent slopes	12%±	1%±	-11%±
Greater than 15 percent slopes	51%±	1%±	-50%±

To stabilize the slopes within the Project Area and to correct existing slope instability due to unconsolidated materials, an evergreen concrete retaining wall of approximately 875 feet in length

<sup>13</sup> [http://www.seagrassli.org/conservation/managers/eelgrass by town southold.html](http://www.seagrassli.org/conservation/managers/eelgrass%20by%20town%20southold.html).

and varying height is proposed to the north and west of the proposed boat storage buildings. Portions of the retaining wall would be vegetated for a visually appealing wall that serves to blend with the landscape. Additionally, upland of the retaining wall, newly landscaped areas and erosion control blankets would stabilize soils. As indicated in the Geotechnical Assessment subsection above, the granular soils and relative compaction are favorable for stable open cuts for placement of the retaining wall, and thus, there are no slope stability issues.

Overall, based on the above, no significant adverse impacts associated with modifications in topography would be expected.

### **2.1.3 Proposed Mitigation**

The following mitigation measures have been included in the proposed project to effectively minimize or eliminate any potential adverse impacts associated with development of the site:

- The grading program would result in an excess cut of 134,921 CY of material. All excess soils will be transported to a registered or permitted facility in accordance with NYSDEC Part 360 for re-use or local site. As the ultimate location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations at this time.
- To stabilize the slopes within the Project Area and to correct existing slope instability due to unconsolidated materials, a concrete retaining wall of approximately 875 feet in length and varying height will be installed to the north and west of the proposed boat storage buildings. Portions of the retaining wall would be vegetated for a visually appealing wall that serves to blend with the landscape. Upland of the retaining wall, landscaped areas would use erosion control blankets and plantings to minimize erosion to the existing slope of the surrounding area on the M-II zoned parcel. The Geotechnical assessment confirms that the existing soils are favorable for stable open cuts for placement of the retaining wall.
- Erosion and sedimentation controls will be undertaken prior to and during construction and would include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures will be routinely inspected and maintained such that no sediment would be transported off-site.
- To minimize fugitive dust emissions, the following measures will be undertaken: watering down access ways, stockpiles, and material prior to loading; limit on-site vehicular speeds to 5 mph; soil stockpiles would be covered; all trucks carting loose material and construction debris would be covered; and a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Any debris observed during site preparation including demolition debris, new fill and excavation areas, vegetation, topsoil, roots, and other deleterious materials deemed unsuitable, will be removed from the proposed construction areas, and replaced with controlled fill. Site

clearing, grubbing, and stripping will be performed during dry weather conditions to prevent excessive rutting and the mixing of organic debris with the underlying soils.

- To avoid poorly draining soils on the south side of Boat Storage Building No. 2 (Proposed Building 9), soil mixing would be implemented.
- The haul road layout is orientated along the west edge of the excavation, which maintains the separation distance between vehicle traffic and the closest residence in order to mitigate potential vibration impacts associated with soil excavation or construction activities.

## **2.2 Water Resources**

### **2.2.1 Existing Conditions**

#### ***Groundwater***

#### **Regional Geology / Hydrogeology**

The geologic setting of Long Island is well documented and consists of crystalline bedrock composed of schist and gneiss overlain by layers of unconsolidated deposits. Immediately overlying the bedrock is the Raritan Formation, consisting of the Lloyd sand confined by the Raritan Clay Member. The Lloyd sand is an aquifer and consists of discontinuous layers of gravel, sand, sandy and silty clay, and solid clay. The Raritan Clay is a solid and silty clay with few lenses of sand and gravel, abundant lignite and pyrite, and gray, red or white in color. Above the Raritan Clay lies the Magothy Formation. The Magothy Aquifer consists of layers of fine to coarse sand of moderate to high permeability, with inter-bedded lenses of silt and clay of low permeability resulting in areas of preferential horizontal flow. Therefore, this aquifer generally becomes more confined with depth. The Magothy Aquifer is overlain by the Upper Glacial Aquifer. The Upper Glacial Aquifer is the water table aquifer at this location and is comprised of medium to coarse sand and gravel with occasional thin lenses of fine sand and brown clay. This aquifer extends from the land surface to the top of the Magothy and, therefore, is hydraulically connected to the Magothy Aquifer.

#### **Depth to Groundwater and Groundwater Flow Direction**

To determine the depth to groundwater on the site, the following resources were utilized:

- Published 2016 USGS Groundwater Map.
- Soil borings conducted by McDonald Geoscience in September 2018.
- Soil borings conducted by PWGC in June 2021.

#### **USGS 2016 Groundwater Map**

Based upon the USGS Water Table Elevation Map (see Figure 10 in Appendix A), groundwater elevation is approximately 3 feet AMSL. As the topography on the site ranges from approximately 6 feet to 50 feet AMSL, the depth to groundwater beneath the site would be expected to range from approximately 3 feet bgs to 47 feet bgs.

#### McDonald Geoscience 2018 Borings

The McDonald 2018 borings (see Section 2.1.1 and Appendix H) were taken adjacent to existing Marina buildings at location points where proposed sanitary systems are to be located (see Appendix C). Specifically, as described in Section 3.1.1 of this DEIS, Boring B1 was drilled to a depth of 17 feet and is located southeast of the corner of Building 3 in a sandy area on the upland slope. Boring B2 was drilled to a depth of 13 feet and is located southwest of Building 7 and northwest of Building 8. Boring B3 was drilled to a depth of 21 feet and is located west of Building 7 on the northernmost valley ridge within the proposed Construction Excavation Area. Of the three borings completed, only Borings B1 and B2 encountered groundwater. In Boring B1, groundwater was encountered at a depth of 7.6 feet bgs or Elevation 1.4 feet AMSL. In Boring B2, groundwater was encountered at a depth of 6.4 feet bgs or Elevation 1.2 feet AMSL.

#### PWGC 2021 Borings

The PWGC 2021 borings (see Section 2.1.1 and Appendix H) were taken in the upland areas and found groundwater elevation to range from 1.0± feet AMSL to 2.5± feet AMSL. Groundwater was encountered in borings B-4 through B-12. Borings B-5 and B-12 were taken along the proposed northern boundary of the Evergreen concrete retaining wall. Borings B-3 and B-6 were taken within the proposed building footprint of Building 10. Borings B-4 and B-8 were taken within the proposed building footprint of Building 9. Boring B-7 was taken at the base of the southwestern corner of the proposed Evergreen concrete retaining wall. Borings B-9, B-10, and B-11 were taken south of the proposed building footprint of Building 9. The shallowest groundwater was encountered in B-11 at the southern boundary of the subject property.

#### Groundwater Flow Direction

Based upon the Suffolk County's recent groundwater models developed for the Long Island Nitrogen Action Plan (LINAP) (included in Appendix D - Subwatershed Mappings, Score Cards and Planning Criteria of the Suffolk County Subwatershed Wastewater Plan [SWP]), the local groundwater flow direction is projected to be east and north towards Mattituck Creek and the Long Island Sound beyond (see Figure 11 in Appendix A). Groundwater flow beneath the site is to the east towards Mattituck Creek. A field study was not completed to confirm the groundwater flow as was requested in the Amended Final Scope. However, the groundwater flow beneath the site was confirmed in the three-dimensional, sub-regional, numerical groundwater flow models run to simulate local aquifer conditions in the Mattituck area in the groundwater modeling report, summarized below and included in Appendix L of this DEIS. A carefully constructed and calibrated model can reliably predict groundwater levels and aquifer responses under numerous different conditions and scenarios. Multiple years of groundwater level data were used to construct and calibrate the model (in this particular case some of the local monitoring wells used to construct the model had monthly data going back as far as 1975) as opposed to a single 12-month period. This allowed for more long-term averages to be used and also provides for the identification of anomaly years such as when drier or wetter conditions may prevail. Longer term groundwater trends (rising or falling water levels and potential causes) can be observed as well when looking back over many years as opposed to a single year.



Groundwater Modeling Report

As part of this DEIS a Groundwater Modeling Report was prepared by PWGC and is included in Appendix L. The purpose of this Groundwater Modeling Report was as follows:

1. To construct and calibrate an accurate three-dimensional, sub-regional, numerical groundwater flow model that could reliably be used to simulate local aquifer conditions in the Mattituck area.
2. To identify nearby local domestic supply wells and determine if the proposed excavation would adversely impact any wellhead zone of influence or the quantity or quality of water in the aquifer system for residential water supply.
3. To provide an analysis of the groundwater on site and its contribution to the aquifer serving the nearby wells under existing conditions and the potential adverse effects, if any, to the aquifer system serving nearby wells following the excavation.
4. To evaluate the nature of the aquifer that supplies the nearby wells and the relationship of the subject property as a contributing source and that the proposed excavation would not affect the quantity of water available to the nearby wells.
5. To determine the direction of groundwater travel on site and travel times and whether the proposed excavation would disrupt or interrupt groundwater travel or timeframes to reach surface waters.
6. To estimate the depth of the freshwater lens and elevation of the saltwater interface.
7. To evaluate whether the proposed excavation would alter the saltwater interface in a way that may cause saltwater intrusion into the aquifer or nearby wellhead zones of influence.
8. To evaluate whether the proposed excavation would cause upconing and saltwater intrusion by reducing the amount of fresh water entering the aquifer used by the nearby wells; and
9. To estimate at what elevations does potable freshwater begin and end (at the expected saltwater interface) on site pre and post excavation.

A summary and findings of the Groundwater Modeling Report are included in Section 2.2.2 of this DEIS.

**The Long Island Comprehensive Waste Treatment Management Plan (208 Study)**

The Long Island Comprehensive Waste Treatment Management Plan was prepared in 1978 as a management plan for Long Island's groundwater resources. The plan was established under Section 208 of the 1972 Federal Water Pollution Control Act Amendments and is now commonly referred to as the "208 Study." The 208 Study divided Long Island into eight hydrogeologic zones, investigated waste control practices and identified best management practices to protect both ground and surface waters.

The subject property is located in Hydrogeologic Zone IV (see Figure 12 in Appendix A). Zone IV encompasses the North Fork, Shelter Island, and the northern and eastern portion of the South Fork. It is characterized by shallow flow systems that discharge to streams and marine waters. A large portion of Zone IV on the North Fork has been contaminated as a result of agricultural activities. Fertilizers are a significant source of nitrates to the groundwater in the North Fork and the eastern South Fork.

The 208 Study included area wide alternatives for each hydrogeologic zone. For Zone IV, the relevant highest priority area wide alternatives are as follows:

- *Reduce excessive use of irrigation water and require the permitting, regulation and monitoring of irrigation wells.*
- *Minimize population density by encouraging large lot development (one dwelling unit/one or more acres), where possible to protect the groundwater from future pollutant loadings.*
- *Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to surface and ground waters.*
- *Provide routine maintenance of on-site disposal systems.*

A consistency analysis with these recommendations is included in Section 2.2.2 of this DEIS.

### **The Long Island Special Groundwater Protection Area Plan (SGPA Plan)**

There are nine designated special groundwater protection areas (SGPA) on Long Island, including North Hills, Oyster Bay, West Hills/Melville, Oak Brush Plains, South Setauket Woods, Central Suffolk, Southold, South Fork and Hither Hills. The subject property is not located within an SGPA (see Figure 13 in Appendix A).

### **Water Supply and Surrounding Wells**

The subject property is currently served via four on-site private wells for potable water demand only. The existing wells were installed prior to the acquisition of the property by SYC, and thus, well completion reports are not held by the Applicant. Based on the factors and uses summarized below, the existing wells are projected to supply an annual approximate demand of 1,058 gpd for potable water supply. It is noted that the subject property does not currently have an irrigation system.

#### ***Existing Water Usage:***

General Industrial: 4,910 SF x 0.04 gpd/SF = 196 gpd  
Boat Storage: 61,205 SF x 0.00 gpd/SF = 0 gpd  
Office: 2,702 SF x 0.06 gpd/SF = 162 gpd  
Marina: 40 boat slips x 10 gpd/boat slip = 400 gpd  
Existing Single-Family Residence: 300 gpd/residence = 300 gpd  
Total: 1,058 gpd

Public Supply (Suffolk County Water Authority)

District 30 of the SCWA is proximate to the site with an existing water main located on Naugles Drive (approximately 765 feet northwest of the subject property). Based upon the Public Water Supply Well Maps published by SCWA, there are two public water supply wellfields located within a one-mile radius of the subject property:

1. SCWA – Inlet Drive Well Field – This wellfield is located approximately 0.43-mile northwest of the subject property
2. SCWA – Sunset Drive Well Field – This wellfield is located approximately 0.70-mile northwest of the subject property.

Based on the 500-foot radius map prepared by Young & Young Engineering (see Appendix K), there are 40 properties identified within a 500-foot radius of the subject property. Consultations were undertaken with the SCWA to determine the water source for the 40 surrounding properties and, for those not connected, whether a public water connection was available. According to the SCWA, in correspondence dated October 21, 2020 (see Appendix K), of the 40 nearby properties, two (2) are connected to public water and seven (7) have public water connection available. The remaining 31 properties were indicated as not being connected to public water and a connection ability could only be confirmed with an application to the SCWA. The table below summarizes the data provided by SCWA and Figure 14 in Appendix A depicts the location of these 40 properties in relation to the SCWA – Inlet Drive and SCWA – Sunset Drive Well Fields.

**Table 12 – Water Source for Surrounding Properties within 500-foot Radius of Subject Site**

<b>#</b>	<b>SCTM No.</b>	<b>Property Use</b>	<b>Public Water Available</b>	<b>Connected to Public Water?</b>
1	1000-99-3-23.1	Undeveloped wetland	Yes	No
2	1000-99-4-23	Pier/Wharf	Yes	No
3	1000-106-4-2	Seasonal Residence/Waterfront	Yes	No
4	1000-106-4-3	Other Storage/Waterfront	Yes	No
5	1000-106-4-4	Residence/Waterfront	Yes	No
6	1000-106-4-5	Residence/Waterfront	Yes	Yes
7	1000-106-4-6	Residence/Waterfront	Yes	Yes
8	1000-106-6-1	Pier/Wharf	Subject to SCWA Review	No
9	1000-106-6-2	Flood Control/Waterfront	Subject to SCWA Review	No
10	1000-106-6-3	Restaurant/Waterfront	Subject to SCWA Review	No
11	1000-106-6-4.1	Restaurant/Waterfront	Subject to SCWA Review	No
12	1000-106-6-5	Residence	Subject to SCWA Review	No
13	1000-106-6-7	Residence	Subject to SCWA Review	No
14	1000-106-6-8	Agricultural	Subject to SCWA Review	No
15	1000-106-6-13.1	Residential Vacant Land	Subject to SCWA Review	No
16	1000-106-6-13.7	Residence	Subject to SCWA Review	No
17	1000-106-6-18	Residence	Subject to SCWA Review	No
18	1000-106-6-19	Residence	Subject to SCWA Review	No
19	1000-106-6-20.1	Residence	Subject to SCWA Review	No
20	1000-106-6-20.3	Municipal Park	Subject to SCWA Review	No
21	1000-106-6-22.1	Undeveloped land	Subject to SCWA Review	No
22	1000-106-6-23	Residence	Subject to SCWA Review	No
23	1000-106-6-25	Residence/Waterfront	Subject to SCWA Review	No
24	1000-106-6-27.1	Residence/Waterfront	Subject to SCWA Review	No
25	1000-106-6-27.2	Residence/Waterfront	Subject to SCWA Review	No
26	1000-106-6-28.1	Residential Vacant Land	Subject to SCWA Review	No
27	1000-106-6-28.4	Residence/Waterfront	Subject to SCWA Review	No
28	1000-106-6-29	Residence/Waterfront	Subject to SCWA Review	No
29	1000-106-6-30	Residence	Subject to SCWA Review	No
30	1000-106-6-38.2	Residence	Subject to SCWA Review	No
31	1000-106-6-38.3	Residential Vacant Land/Waterfront	Subject to SCWA Review	No
32	1000-106-9-2.3	Agricultural	Yes	No
33	1000-106-9-3	Agricultural	Subject to SCWA Review	No
34	1000-106-9-4.1	Residence	Subject to SCWA Review	No
35	1000-106-9-4.9	Agricultural	Subject to SCWA Review	No
36	1000-106-9-4.10	Residential Vacant Land	Subject to SCWA Review	No
37	1000-106-9-4.11	Residential Vacant Land	Subject to SCWA Review	No
38	1000-107-1-1.3	Estate/Waterfront	Yes	No
39	1000-107-1-11	Residence/Waterfront	Subject to SCWA Review	No
40	1000-107-1-12	Residence/Waterfront	Subject to SCWA Review	No

### Surrounding Private Wells

Based on the data provided by SCWA and presented in the table above, there are 31 properties that are not connected to the public water supply, and thus, served with private wells. Additionally, seven properties have the ability to connect to the public water supply but remain served with private wells for potable water supply.

### Existing Groundwater Quality

#### *SCWA Published Data*

The existing groundwater quality in the area, based on recent available drinking water quality data published by the SCWA for the 2021 calendar year, was reviewed. Specifically, the following was reviewed:

- 2022 SCWA Annual Drinking Water Quality report for Distribution Area 30
- 2022 Supplemental Report for Inlet Drive Wellfield
- 2022 Supplemental Report for Sunset Drive Wellfield

The drinking water quality for Distribution Area 30 was analyzed for several groups of chemical compounds including volatile organic compounds (VOCs), naturally occurring inorganic compounds, disinfectants and disinfectant byproducts, and synthetic organic compounds such as Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), Pharmaceuticals and Personal Care Products (PPCPs), Pesticides and Herbicides. Additionally, SCWA has performed microbiological testing including Heterotrophic Plate Count (HPC), and radiological testing. VOCs were not detected in groundwater samples except for two compounds (1,2-Dichloropropane and MTBE) with all listed values below the Maximum Contaminant Levels (MCLs). Inorganic compounds were detected with values below MCLs as well as values without established MCLs. Groundwater samples had an average pH of 7.4 and turbidity of 0.51. Disinfectants and disinfectant byproducts were detected with all values listed below MCLs. Synthetic organic compounds such as PFAS, PPCPs, Pesticides and Herbicides were detected with all listed values below MCLs. Microbiological testing included quarterly sampling for total coliform bacteria, HPC and E. coli. In 2021, Distribution Area 30 tested positive for total coliform, negative for HPC in storage tanks, and negative for E. coli. Radiological testing showed detections of Gross Beta and Radon-222 below the MCL except for Radon-222 which does not have an established MCL.

The Inlet Drive wellfield located at 950 Inlet Drive, Mattituck was analyzed for the same groups of chemical compounds as Distribution Area 30, except for the disinfectant and disinfectant byproduct group, with slight variations in the compound list. VOCs were not detected in groundwater samples except for one compound (chloroform) which does not have an established MCL. Inorganic compounds were detected with values below MCLs as well as values without established MCLs. Groundwater samples had an average pH of 6.1 and turbidity was not detected. Synthetic organic compounds such as PFAS, PPCPs, Pesticides and Herbicides were detected with all listed values below MCLs. Microbiological testing included sampling for total coliform bacteria, HPC and E. coli. The Inlet Drive

wellfield tested positive for total coliform, negative for E. coli, and the average HPC was 4-5 cfu/mL. Radiological testing was not performed.

The Sunset Drive wellfield located at 930 Sunset Drive, Mattituck was analyzed for the same groups of chemical compounds as Distribution Area 30, except for the disinfectant and disinfectant byproduct group, with slight variations in the compound list. VOCs were not detected in groundwater samples except for one compound (chloroform) which does not have an established MCL. Inorganic compounds were detected with values below MCLs as well as values without established MCLs. Groundwater samples had an average pH of 6.2 and turbidity was not detected. Synthetic organic compounds such as PFAS, PPCPs, Pesticides and Herbicides were detected with all values below MCLs. Microbiological testing included sampling for total coliform bacteria, HPC and E. coli. The Inlet Drive wellfield did not detect total coliform, E. coli, or HPC. Radiological testing was not performed.

#### *Environmental Data Resources (EDR) Report*

PWGC reviewed an environmental database report compiled by Environmental Data Resources (EDR) of Shelton, Connecticut as part of this DEIS (see Appendix L). The purpose of the review was to identify any environmental concerns impacting groundwater quality for the subject property or nearby properties in the vicinity of the subject property. Databases reviewed included federal and state lists of known spill sites or suspected contaminated sites, lists of known handlers or generators of hazardous waste, lists of known waste disposal facilities, and lists of aboveground and underground storage tanks (ASTs and USTs). PWGC's review of the environmental database and available groundwater quality data did not identify any environmental concerns impacting groundwater at the subject property or surrounding properties that would be exacerbated by the redevelopment plans for the SYC.

### **Sanitary Waste Generation and Discharge**

All sanitary waste generated on-site is accommodated via a subsurface sewage disposal system located between Buildings 2 and 3. Based upon data provided by the project engineer and included on the *Utility Plan* in Appendix C, the existing total sanitary waste generation is approximately 1,058 gpd. Below is a breakdown of the existing sanitary flow:

- Residence: 300 gpd
- Office: 2,702 SF x 0.06 gpd/SF (density load) = 162 gpd
- Marina: 40 boat slips x 10 gpd/boat slip (density load) = 400 gpd
- General Industrial Storage: 4,910 SF x 0.04 gpd/SF (density load) = 196 gpd

### **Suffolk County Sanitary Code**

#### Article 6 - Single-Family Residences, Realty Subdivisions, Developments and Other Construction Projects)

Article 6 of the Suffolk County Sanitary Code (SCSC) regulates sewage disposal for realty subdivisions, development, and other construction projects for the protection of water resources. To limit nitrogen loading in various groundwater management zones, Article 6 sets forth population density equivalents. The subject property is located within Groundwater Management Zone IV (see Figure 15

in Appendix A). Pursuant to Article 6 of the SCSC, the maximum permitted sanitary discharge to individual sewerage systems is 600 gpd/acre, and when exceeded, a community sewage system method of disposal is required.

The subject property is 32.96± acres with 16.46± acres zoned M-II and the remaining 16.5± acres zoned R-80. Approximately 0.63± acre on the M-II zoned portion of the site contains regulated tidal wetlands and are, therefore, deducted when determining the total permissible flow. Based on the overall 32.33± acres, the total permissible flow is 19,398 gpd. However, as the proposed development considers only the M-II portion of the site, the total permissible flow would be 9,498 gpd based on a land area of 15.83± acres (i.e., 16.46± acres minus the 0.63± acre of tidal wetlands). As noted, in this Section of the DEIS above, the site currently generates approximately 1,058 gpd of sanitary waste, which is below the maximum allowable sanitary flow.

Additionally, as of Resolution No. 702-2020 adopted on October 16, 2020, I/A OWTS are required for new or expanded single-family residences and new “other construction” projects effective on July 1, 2021. New construction for other construction projects includes construction of a new, detached structure that requires a sanitary system; addition to or modification of an existing structure that requires the addition or modification of a sanitary system; a change of use requiring the installation of a sanitary system or increase in wastewater capacity; or a major reconstruction project. The amendments to Article 6 of the SCSC also expanded the list of I/A OWTS technologies allowed, modified the horizontal separation distance requirements for I/A OWTS and modified the design capacity for modified subsurface sewage disposal systems from 15,000 gpd to 30,000 gpd. It is noted that Resolution No. 702-2020 was adopted, in-part, based on the findings of the SWP which determined that utilizing I/A OWTS for all new or expanded construction is vital to a countywide strategy to reduce nitrogen pollution from onsite wastewater systems (page 4-17). The SWP also concluded that utilizing “I/A OWTS is the most cost-effective means of reducing nitrogen pollution from on-site wastewater resources in Suffolk County.”

#### Article 7 – Water Pollution Control

Article 7 of the SCSC is intended “to safeguard all the water resources of the County of Suffolk especially in deep recharge areas and water supply sensitive areas, from discharges of sewage, industrial and other wastes, toxic or hazardous materials and stormwater runoff.” The deep recharge areas are identified on the *Suffolk County Sanitary Code – Article 7 Groundwater Management Zones & Water Supply Sensitive Areas* map (SCDHS, 1999) as Groundwater Management Zones I, II, III and V. The Article 7 map also illustrates portions of Suffolk County as water supply sensitive areas. As defined at §760-703 of the SCSC, a water supply sensitive area includes: “[a] groundwater area separated from a larger regional groundwater system where salty groundwater may occur within the Upper Glacial aquifer, and where deepening of private wells and/or the development of community water supplies may be limited;” “[a]reas in close proximity to existing or identified future public water supply wellfields....[i.e.,] within 1,500 feet upgradient or 500 feet downgradient of public supply wells screened in the Upper Glacial aquifer;” and “[a] limited water budget area...” Article 7 provides additional restrictions for the deep recharge zones and water supply sensitive areas including stringent limitations on toxic and hazardous materials storage and discharge.

Pursuant to the Article 7 Map (see Figure 16 in Appendix A), the subject property is located in Groundwater Management Zone IV, which is not a regulated deep recharge area. Furthermore, the subject property is not within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area.

Article 12 – Toxic and Hazardous Materials Storage and Handling Controls

Article 12 of the SCSC regulates the storage and handling of toxic and hazardous materials for the protection of groundwater quality. As depicted on the *Utility Plan* in Appendix C, there are currently five aboveground storage tanks (AST), with only four tanks operational. A description of the on-site tanks with assigned tank numbers pursuant to SCDHS records follows.

1. AST Tank #6: 2,000 Gallon / Gasoline (north side of Building 3) – this tank has secondary containment capable of containing the entire capacity.
2. AST Tank #7: 6,000 Gallon / Diesel Fuel (north side of Building 3) – this tank has secondary containment capable of containing the entire capacity.
3. AST Tank #8: 275 Gallon / No. 2 Fuel Oil (Heating) (inside Building 2 on the eastern side of building) – this tank is indoors and its capacity does not require secondary containment.
4. AST Tank #9: 275 Gallon / No. 2 Fuel Oil (Heating) (inside Building 2 on the eastern side of building) – this tank is indoors and its capacity does not require secondary containment.
5. AST Tank #10 275 Gallon/ No. 2 Fuel (Heating) (inside Building 3 on the northern side of building) (not in use) – this tank is indoors and its capacity does not require secondary containment.

SYC maintains an Article 12 Permit from SCDHS dated September 1, 2017 for the storage of hazardous materials at the subject property (see Appendix J). The permit is active through August 31, 2022. It is noted that SYC staff receives training and certification to adequately handle and operate the materials associated with the existing marina operation. All tanks are inspected annually.

In addition to the above, SYC also stores and utilizes various chemicals for boat maintenance and repairs. The table below includes a full inventory of such chemicals.



**Table 13 – On-Site Stored Chemicals for Boat Maintenance, Repair and Detailing**

<b>Chemical</b>	<b>Maximum Amount Stored</b>
Denatured Alcohol	6 Quarts
Turpentine	4 Gallons
Fiberglass	300 Pounds
Dewaxer	6 Quarts
Xylene	3 Gallons
Adhesive Remover	5 – 18 oz. Aerosol Cans
Teak Cleaner	10 Gallons
Household bleach	4 Gallons
Biodegradable Parts Cleaner	25 Gallons
On and Off Hull and Bottom Cleaner	6 Gallons
Muriatic Acid	5 Gallons
Strip Away Varnish Remover (Biodegradable & Environment Friendly)	6 Quarts
Simple Green (Non-Toxic Biodegradable All-Purpose Cleaner)	6 Quarts
Engine Oil	160 Gallons in 5 Gallon Pails
Waste Oil – Repurposed as Fuel Oil for Furnace in Shop	800 Gallons
Non-Toxic Antifreeze for Boat Water System Winterizations	630 Gallons in 1 Gallon Containers
Ethylene Glycol Antifreeze for Engine Cooling Systems	60 Gallons in 1 Gallon Containers
Antifouling Paint (Ablative Non-Copper based)	80 Gallons
Enamel Paint – Boat hulls and Buildings	50 Gallons

### Other Facility Permits

#### Boat Painting/Antifouling Certification

In accordance with NYCRR Part 325 and Environmental Conservation Law (ECL) Article 33 *Pesticides*, SYC is a registered Pesticide Business with the NYSDEC as it provides commercial aquatic antifouling paint application services. Aquatic antifouling paints are ablative non-copper based “pesticide products used on vessel hulls, boat bottoms, structures and other marine surfaces to inhibit the growth of aquatic organisms.”<sup>14</sup> SYC received a registration certificate from the NYSDEC on February 19, 2020 certifying it as a Pesticide Business under Category 5D - Aquatic Antifouling (see Appendix M). This registration is valid through December 31, 2022. Currently, the quantity of water-based aquatic antifouling paint stored on-site is 80 gallons.

Pursuant to §325.18 - Certification Training Course Requirements for Commercial Technicians and Courses Designed for Recertification of Commercial and Private Applicators, the current SYC staff has completed the necessary 30 hours of training or equivalent training courses required to handle aquatic antifouling paint application services.

<sup>14</sup><https://www.dec.ny.gov/permits/41072.html>. Accessed December 2020.

### **Suffolk County Subwatershed Wastewater Plan (SWP)**

In July 2020, SCDHS prepared the Suffolk County SWP, as part of the LINAP and to fulfill the recommendations of the Suffolk County Comprehensive Water Resources Management Plan, to address and reduce nitrogen pollution in surface waters and groundwater within Suffolk County. The intent of the SWP is to provide a roadmap for Suffolk County to take meaningful steps to implement recommendations aimed at reducing nitrogen loading from wastewater resources into the waters of Suffolk County. The SWP found that an estimated 63.6 percent of the nitrogen reaching groundwater in Suffolk County subwatersheds originates from on-site wastewater systems (page 1-4).

The SWP provides nitrogen reduction recommendations through the LINAP, individual estuary programs (e.g., Long Island Sound), and individual Town/Village initiatives. Therefore, SWP is a small part of a larger Suffolk County initiative to reduce nitrogen pollution in County water resources.

The SWP indicates Mattituck Inlet/Creek, Low, and Tidal Tributaries (Tribes) subwatershed contributes to the Long Island Sound, Suffolk County East subwatershed. Approximately 40.92 percent of the entire subwatershed is within the 0–2-year groundwater contributing area. According to the LINAP models (included in *Appendix D - Subwatershed Mappings, Score Cards and Planning Criteria* of the SWP), the entire M-II zoned portion of the subject property and eastern side of the R-80 zoned portion of the subject property are within the 0-2-year groundwater contributing area to the Mattituck Inlet/Creek, Low, and Tidal Tribes subwatershed (see Figure 11 in Appendix A). The remaining area of the R-80 zoned portion of the subject property falls within the 2–10-year groundwater contributing area to the Mattituck Inlet/Creek, Low, and Tidal Tribes subwatershed. As indicated in the Groundwater Modeling Report included in Appendix L of this DEIS, the Suffolk County travel times are based on water table travel to the surface water body. The groundwater model predicted travel time of 4 to 4.5 years is based on a deeper starting point (40 feet into the water table).

As set forth in the SWP, this subwatershed is Priority Rank 1, which means it has moderate to severe water quality impacts, the highest nitrogen load, or is poorly flushed (page 2-69). Of the Long Island Sound subwatersheds, 22 percent are Priority Rank 1, 19 percent are Priority Rank 2, 48 percent are Priority Rank 3, and 11 percent are Priority Rank 4 (page 2-75).

### **Suffolk County Comprehensive Water Resources Management Plan**

The *Suffolk County Comprehensive Water Resources Management Plan* was completed in 2015 to set forth goals and objectives targeted to protect and improve ground and surface water quality based upon updated water quality investigations. The primary areas for improvement identified in the plan are as follows: Nitrogen, VOC's, Pesticides, Pharmaceuticals and Personal Care Products (PCP's) and Potable Supply. The plan outlines recommendations for improving conditions in each of the aforementioned areas. The recommendations are primarily guided towards additional evaluation of groundwater and surface water, development of alternative on-site wastewater treatment options for residential and non-residential properties, educational outreach programs for fertilizer and pesticide reduction and expansion of the potable water supply to communities where public water is not available. While this plan outlines specific goals that are municipally minded, the overall intent of the plan is to reduce the overall levels of containments, such as fertilizers, pesticides and nitrogen in our ground and surface waters. A consistency analysis with these recommendations is included in Section 2.2.2 of this DEIS.

### ***Stormwater Runoff and Drainage***

Under existing conditions, as a facility that has existed in its current state for 60 years, there are few existing drainage structures (controls) on the site. There are a few grates/drainage inlets within the existing operational marina portion of the subject property and in other areas, stormwater infiltrates through existing landscaped/planted areas or gravel surfaces. On the vegetated uplands, stormwater is recharged naturally through infiltration.

### **Chapter 236 of Town Code – Stormwater Management**

The Town of Southold regulates stormwater management and discharge associated with land-disturbing activities and projects that involve a replacement of or addition to impervious surfaces. Pursuant to §236.16(A) of the Town Code, all development, construction, excavation, and landscaping activities regulated under Chapter 236 of the Town Code are to be conducted in accordance with an approved stormwater management control plan. An analysis of the proposed project's consistency with Chapter 236 of the Town Code is included in Section 2.2.2 of this DEIS.

### **New York State Pollutant Discharge Elimination System Permit (SPDES)**

The NYSDEC administers the State of New York's National Pollutant Discharge Elimination System-approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State ECL Article 17, Titles 7, 8 and Article 70. Specifically, the General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) applies to the following construction activities:<sup>15</sup>

- *Construction activities involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land; excluding routine maintenance activity that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility.*
- *Construction activities involving soil disturbances of less than one (1) acre where the Department has determined that a SPDES permit is required for stormwater discharges based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters of the State.*
- *Construction activities located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.*

An owner or operator of a construction activity that is eligible for coverage under this permit must obtain coverage prior to the commencement of construction activity. Projects covered under the SPDES GP-0-20-001 are required to develop and implement a SWPPP that meets the criteria set forth by NYSDEC.

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<sup>15</sup> [https://www.dec.ny.gov/docs/water\\_pdf/constgp020001.pdf](https://www.dec.ny.gov/docs/water_pdf/constgp020001.pdf)

Section 2.2.2 of this DEIS discusses the proposed project's compliance with the New York SPDES GP-0-20-001.

### **New York State Stormwater Management Design Manual**

The NYSDEC's *New York State Stormwater Management Design Manual (2015) (NYS Stormwater Design Manual)* was prepared to provide standards for stormwater management practices (SMPs), after site-specific conditions are considered, to protect waters from adverse impacts associated with stormwater runoff. Standard SMPs are structural practices that are acceptable for water quality treatment and meet the performance standards of this manual. Acceptable SMPs for stormwater management and treatment are divided into five broad groups (pages 3-7 and 3-8): (I) stormwater ponds which involves a permanent pool of water or a combination of permanent pool and extended detention to treat stormwater runoff; (II) stormwater wetlands which includes the use of wetlands, shallow marsh area and small permanent pools and extended detention storage to treat stormwater runoff; (III) infiltration practices which involves capturing and temporarily storing stormwater runoff before infiltration to the underlying soils; (IV) filtering practices which involves capturing, temporarily storing stormwater runoff and passing it through a filter bed of treatment media such as sand, organic matter or soil; and (V) open channel practices which involves capturing and treating stormwater within designed dry or wet cells.

As noted above, under existing conditions, stormwater runoff is captured in a few grates/drainage inlets within the existing operational marina portion of the subject property and in other areas, stormwater infiltrates through existing landscaped/planted areas or gravel surfaces. On the vegetated uplands, stormwater is recharged naturally through infiltration. The proposed project's consistency with the *NYS Stormwater Design Manual, 2015* included in Section 2.2.2 of this DEIS.

### **New York State Standards and Specifications for Erosion and Sedimentation Control, Blue Book**

The NYSDEC's *New York State Standards and Specifications for Erosion and Sedimentation Control, Blue Book* (November 2016) provides standards and specifications for the selection, design and implementation of erosion and sediment control practices. This manual provides guidance for the development of Erosion and Sediment Control Plans for inclusion in a SWPPP as part of the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001, current version). The standards and specifications provide criteria on minimizing erosion and sediment impacts from construction activity involving soil disturbance to protect the waters of the State of New York from sediment loads during runoff events (page 1.1). This manual is divided into four (4) sections with associated standards and specifications: site planning, preparation and management; erosion control (runoff control); erosion control (soil stabilization); and sediment control. The appropriate standards set forth in this manual should be incorporated into all Erosion and Sediment Control Plans. The proposed project's consistency with the *New York State Standards and Specifications for Erosion and Sedimentation Control, Blue Book* (November 2016) is included in Section 2.2.2 of this DEIS.

### **Nationwide Urban Runoff Program (NURP Study)**

The *Long Island Segment of the Nationwide Urban Runoff Program (NURP Study)* was published in 1982 by the Long Island Regional Planning Board to address pollutant loading contributed by nonpoint sources. It has been concluded that nonpoint urban runoff is the most significant nonpoint source of stormwater runoff pollution. While these conclusions had been made, there was still uncertainty regarding the role of urban runoff in contaminant transport. As such, the *NURP Study*, has attempted to address some critical uncertainties, as follows:

- *the actual proportion of the total pollutant loading that can be attributed to stormwater runoff, given the presence of other point and non-point sources and conditions within the receiving waters;*
- *sources, wash-off/transport mechanisms and receiving water impacts;*
- *the appropriate criteria to be used in determining the existence of a runoff problem; and*
- *the effectiveness and cost of proposed but relatively untried non-structural control measures.*

The findings and conclusions of the *NURP Study* led to a series of recommendations and priorities for implementation regarding stormwater runoff for the protection of groundwater and surface water resources. A list of these recommendations follows.

#### *Groundwater Recommendations:*

- *Continue to use recharge basins wherever feasible for the disposal of stormwater and the replenishment of the groundwater.*
- *Avoid maintenance practices that would interfere with the natural revegetation of basins by grasses and shrubs.*
- *Use “ecological recharge basins” only where their aesthetic value justifies the additional cost.*
- *Consider the use of in-line storage leaching drainage systems, or components thereof, as a substitute for recharge basins in areas, other than parking lots, where maintenance will be assured and where the value of the land for development purposes is greater than the cost of installing and maintaining the underground system. Storage leaching drainage systems should also be considered for use where the installation of recharge basins is not feasible.*
- *Prevent illegal discharges to drainage systems or recharge basins. Such discharges, which often result from improper storage or deliberate dumping of chemicals, must be controlled at the source.*

#### *Surface Water Recommendations:*

- *Preclude any additional direct discharge of stormwater runoff into surface waters, using all available means for detention and/or recharge to reduce bacterial loads.*
- *Protect stream corridors from encroachment, so that the stream reaches that will become dry because of the lowering of the water table due to sewerage will always be available for stormwater detention and recharge.*
- *Inform local officials and the public regarding the nature and cost of the nonpoint source controls that must accompany further development or redevelopment and of needed changes in current practices relating to dog waste clean-up and disposal and public feeding of waterfowl.*

- *Initiate studies, including mathematical modeling where appropriate, to identify the most promising opportunities for effecting changes in certification status at reasonable cost.*
- *Initiate pilot programs designed to encourage the proper clean-up and disposal of canine fecal material and to discourage public feeding of waterfowl in order to determine the impact of such programs on receiving water quality.*
- *To achieve some portion of an important beneficial use of areas currently in violation of the standard for the taking of shellfish:*
  - *Investigate the physical, political and economic constraints on the wider use of controlled shellfish harvesting in conjunction with depuration or transplanting to certified areas.*
  - *Devise measures for minimizing or overcoming those constraints.*
- *Pursue the investigation, begun with Salmonella study, to identify and quantify the presence of human enteric pathogens in stormwater runoff and in the receiving waters. For sewage a relationship has been established between the presence of total and fecal coliforms and the associated presence of human pathogens. However, over 90% of the coliform load in estuarine waters is contributed by stormwater. Therefore, investigations into whether such a relationship exists for stormwater should be continued and expanded.*

A consistency analysis of the proposed action with the relevant recommendations of the *NURP Study* regarding stormwater management, is included in Section 2.2.2 of this DEIS.

### **Nonpoint Source Management Handbook**

The *Nonpoint Source Management Handbook*, which was prepared as part of the U.S. EPA's 208 Plan Implementation Program, is divided amongst several elements: Land Use; Stormwater Runoff; On-site Systems; Highway Deicing; Fertilizer; Animal Waste; Well Location, Construction, Use and Abandonment; Boat Pollution; and Site Plan Review and Ordinances. The *Nonpoint Source Management Handbook* makes a variety of recommendations for counties, municipalities, engineers, etc., for controlling non-point sources of groundwater contamination. Relevant recommendations from this study, along with a review of the project's consistency therewith, are presented in Section 2.2.2 of this DEIS.

### **Wetlands and Surface Waters**

#### **Wetlands**

The subject property lies adjacent to Mattituck Creek, a marine water body that supports recreation and commerce. Pursuant to the NYSDEC Tidal Wetlands Map (see Figure 17 in Appendix A), Intertidal Marsh (IM) wetlands are present in the southeastern portion of the subject property and Littoral Zone (LZ) are present along the eastern boundary of the subject property. An assessment of these ecological communities is further discussed in the *Ecological Report* completed by Land Use Ecological Services (LUES) in Appendix N and further addressed in Sections 2.4.1 and 2.4.2 of this DEIS. The existing bulkhead that runs along the majority of the eastern property line is also visible. Review of the NYSDEC Freshwater Wetlands Map indicates that there are no freshwater wetlands present on the subject property nor adjacent properties (see Figure 18 in Appendix A).

The tidal wetlands to the south of the existing bulkhead were flagged by En-Consultants in June 2017 and depicted on the *Alignment Plan* in Appendix C. The mean high water (MHW) was delineated in February 2021 at an approximate elevation of 4.0 feet ASML.

New York State Environmental Conservation Law (ECL) Article 25 – Tidal Wetlands

As discussed above, NYSDEC-mapped IM and LZ tidal wetlands are present along the eastern boundary of the subject property and southeast portion of the subject property east of the existing bulkhead. The New York State Tidal Wetlands Permit Program is regulated by Article 25, Environmental Conservation Law 6 NYCRR Part 661. In New York State, tidal wetlands are defined as:

- (a) those areas which border on or lie beneath tidal waters, such as, but not limited to, banks, bogs, salt marsh, swamps, meadows, flats or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters.*
  
- (b) all banks, bogs, meadows, flats and tidal marsh subject to such tides, and upon which grow or may grow some or any of the following: salt hay (Spartina patens and Distichlis spicata), black grass (Juncus Gerardi), saltworts (Salicornia ssp.), sea lavender (Limonium carolinianum), tall cordgrass (Spartina pectinata and Spartina cynosuroides), hightide bush (Iva frutescens), cattails (Typha angustifolia and Typha latifolia), groundsel (Baccharis halmifolia), marsh mallow (Hybiscus palustris) and the intertidal zone including low marsh cordgrass (Spartina alterniflora).*

Regulating the tidal wetlands of New York State enables the State, “to preserve and protect tidal wetlands, and to prevent their despoliation and destruction, giving due consideration to the reasonable economic and social development of the state.”

Within the tidal wetlands of New York State, the following activities are regulated and require a permit from NYSDEC pursuant to Article 25 Title 4 (§25-0401 - Regulated Activities):

*“(A)activities subject to regulation hereunder include any form of draining, dredging, excavation, and removal either directly or indirectly, of soil, mud, sand, shells, gravel or other aggregate from any tidal wetland; any form of dumping, filling, or depositing, either directly or indirectly, of any soil, stones, sand, gravel, mud, rubbish, or fill of any kind; the erection of any structures or roads, the driving of any pilings or placing of any other obstructions, whether or not changing the ebb and flow of the tide, and any other activity within or immediately adjacent to inventoried wetlands which may substantially impair or alter the natural condition of the tidal wetland area.*

*The depositing or removal of the natural products of the tidal wetlands by recreational or commercial fishing, shellfishing, aquaculture, hunting or trapping, shall be excluded from regulation hereunder, where otherwise legally permitted.*

*Activities, orders, and regulations of the department of health or of units of local government with respect to matters of public health shall be excluded from regulation hereunder, except as hereinafter provided. Copies of all such public health orders and regulations affecting tidal wetlands shall be filed*

*with the department of environmental conservation. The commissioner may require modification of such orders or regulations if he deems it necessary to implement the policy of this act.*

*The commissioner shall review all current mosquito control projects to determine whether they are having any adverse impact on tidal wetlands. Where any adverse impact is found, the commissioner following a public hearing, may require modification of such projects if he deems it necessary to implement the policy of this act.*

*Where the dredging or filling is in the navigable waters of the state or is for the reconstruction or repair of certain dams and docks, and where such activity also substantially affects tidal wetlands, any person undertaking such activity must seek permission under this act as well as under any other applicable law.*

NYSDEC issued a Non-Jurisdictional Determination and Tidal Wetlands Permit (Permit No. 1-4738-01843/00028) on January 31, 2020 for the proposed action, which is further discussed in in Section 2.2.2 of this DEIS.

#### Chapter 275 (Wetlands and Shoreline) of Town of Southold Town Code

Chapter 275 of the Town Code, *Wetlands and Shoreline*, provides regulations for Town-identified wetlands. The purpose of Chapter 275 is “to ensure for the citizens of the Town of Southold the protection, preservation, proper maintenance and use of its wetlands, giving due consideration to the reasonable economic and social development of the Town.” The Board of Trustees of the Town of Southold regulates Town wetlands, which include “any freshwater wetland, tidal wetland, beach, bank, bluff, dune, flat, marsh, swamp, wet meadow, bog, or vernal pool, any creek, estuary, stream, pond, canal, or lake, land underwater, land subject to tidal action, land within 100 feet of the areas listed above, and all Town waters.” The proposed action’s consistency with the applicable sections of Chapter 275 of the Town Code (§275-3 *Findings, Purpose, Jurisdiction, Setbacks* and §275-12 *Standards for Issuance of Permit*) are presented in Section 2.2.2 of this DEIS.

### **Surface Water**

#### Mattituck Harbor (Inlet and Creek)

As discussed in the Boat (Vessel) Study, appended in Appendix M, Mattituck Harbor is a federal navigational channel comprised of Mattituck Inlet and Mattituck Creek. Mattituck Harbor extends 2.25± miles south from Long Island Sound to the hamlet of Mattituck. Mattituck Inlet is approximately 100 feet wide, and Mattituck Creek is approximately 80 feet wide throughout. Mattituck Harbor has two jetties at Mattituck Inlet, the east which was constructed in 1906 and the west jetty was constructed in 1938. USACOE deemed Mattituck Harbor a navigational asset to the United States with regards to commerce as it supports recreational boating and several marinas, including SYC, and serves as a “Harbor of Refuge” during severe storms.



### Mattituck Inlet Soundings and Tidal Range

Inlet soundings at low tide were performed by H&L Contracting LLC for Mattituck Creek from the Inlet at Long Island Sound to SYC on April 8, 2020 (see the Boat [Vessel] Study in Appendix M). Overall, average channel depths at low tide are in the 9-to-10 feet range with most areas significantly deeper than that. While channel depths decrease along the banks, the approximate centerline of the navigation channel has adequate depth for boats/yachts to traverse without grounding and boat captains would utilize on-board navigational charts to guide safe movements. The channel depths are adequate for the boat/yachts that are expected to utilize the SYC storage facilities (with similar yacht types currently utilizing Mattituck Creek). As outlined in Table 3 in Section 2.2.4 of Appendix M, the drafts of the boats/yachts range from approximately 5-feet-11-inches to 6-feet-8-inches. It should also be noted that vessels a part of the commercial fishing fleet currently dock along Mattituck Creek, and these vessels have greater channel depth requirements with greater drafts (i.e., 7 feet typical drafts).

The tidal range for Mattituck Creek is approximately five feet.<sup>16</sup> At low tide, depths adjacent to SYC average between 9-to-10 feet within the channel. At high tide, the average depths range from 14-to-15 feet. As noted above, there two areas immediately north of SYC with depths greater than 25 feet and at high tide would be approximately 30 feet, providing substantial draft for the yachts typically serviced by the existing marina.

### Mattituck Inlet Dredging Program

As discussed in Appendix M, Mattituck Harbor is a designated Federal Navigation Channel under the Rivers and Harbors Act of 1896 (29 Stat. 202), modified in 1935 (P.L. 74-409) and 1964. This designation gives authority to the USACOE to maintain the navigability of the channel. Due to the filling of Mattituck Inlet and Creek through natural processes, USACOE routinely dredges Mattituck Inlet and Mattituck Creek to ensure the water body remains safe for navigation. Dredging programs ensure higher water quality as natural ecosystems can function as intended. A rehabilitation project for the west jetty was completed in 1996 and maintenance dredging for the channel at Mattituck Inlet was completed in 2004.

As discussed in Appendix M, USACOE, NYSDEC, and the Town of Southold coordinated to develop a routine dredging program for Mattituck Inlet in the early 2000's. The program was formalized in 2014. The existing program provides for a minimum channel depth of 7 feet from Long Island Sound to the hamlet of Mattituck. In 2014, approximately 100,000 CY of material was dredged from the channel of Mattituck Inlet to make the depth 13 feet. The dredged material was placed along the shoreline of Bailie Beach in Mattituck.

### Waterbody Classification (6 NYCRR Part 701)

The classification of all waters in New York State are defined at 6 NYCRR Part 701 of the New York State Code. These classifications are broken down into four types of waterbodies (i.e., fresh surface waters, saline [marine] surface waters, groundwaters, and trout waters). The classifications provide descriptive designations that define the best usage for each type of classified waterbody. General

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<sup>16</sup> <https://marineweather.net/tide/mattituck-inlet-long-island-sound-ny-tides>

conditions that apply to all water classifications, as defined at 6 NYCRR §701.1, is “the discharge of sewage, industrial waste or other wastes shall not cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge.”

As Mattituck Creek falls into the saline surface water category, saline (marine) surface waters are classified as followed (6 NYCRR §§ 701.10 through 701.14):

- *Class SA – The best usages of Class SA waters are shellfishing for market purposes, primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival.*
- *Class SB - The best usages of Class SB waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival.*
- *Class SC - The best usage of Class SC waters is fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.*
- *Class I - The best usages of Class I waters are secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. In addition, the water quality shall be suitable for primary contact recreation, although other factors may limit the use for this purpose.*
- *Class SD - The best usage of Class SD waters is fishing. These waters shall be suitable for fish, shellfish and wildlife survival. In addition, the water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. This classification may be given to those waters that, because of natural or man-made conditions, cannot meet the requirements for fish propagation.*

According to the NYSDEC Environmental Resource Mapper, Mattituck Creek is classified as a Class SA saline surface water (see Figure 19 in Appendix A).<sup>17</sup>

### Shellfishing

Shellfishing is a permissible activity within Mattituck Creek. The waters of Mattituck Inlet and Mattituck Creek adjacent to the subject property are seasonally uncertified according to 6 NYCRR Part 41 (*Sanitary Conditions on Shellfish Lands*) of the New York State Code. Section 41.3 lists those “shellfish lands in Suffolk County [that] are in such sanitary conditions that shellfish thereon shall not be taken for use as food and such lands are designated as uncertified areas.”<sup>18</sup> According to §41.3(7)(iv), Mattituck Inlet and the majority of Mattituck Creek is seasonally uncertified such that from May 1 to December 31 shellfish harvesting is not allowed in Mattituck Inlet or Mattituck Creek (see Figure 20 in Appendix A).

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<sup>17</sup><https://www.dec.ny.gov/animals/38801.html>

<sup>18</sup>[https://www.dec.ny.gov/outdoor/103483.html#Mattituck Inlet and Mattituck Creek7](https://www.dec.ny.gov/outdoor/103483.html#Mattituck%20Inlet%20and%20Mattituck%20Creek7)

Since the 1980s, Mattituck Creek's shellfishing areas have been routinely closed due to water quality issues. These water quality issues can be attributed to stormwater runoff into the creek in addition to changes in dissolved oxygen levels. Since 1995, the Town Board of Trustees and NYSDEC began collecting water quality data to determine changes in Mattituck Creek<sup>19</sup>. A drainage system was installed on Bayview Avenue on the west side of Mattituck Creek, located south of SYC, and improvements in water quality were seen. NYSDEC has periodically reopened portions of Mattituck Creek for shellfishing since 2000. The stipulation for remaining open to shellfishing was that no more than three inches of rainfall could accumulate over seven consecutive days. In April 2012, 92 acres of Mattituck Creek were closed for shellfishing due to the presence of saxitoxins, which are harmful to humans if consumed.<sup>20</sup> This was the first time NYSDEC closed Mattituck Creek to shellfishing since the agency began sampling for the biotoxin 2006, when the first large-scale shellfishing closure was enforced by NYSDEC due to a harmful algal bloom. It is important to note that pursuant to the SWP, there are four Harmful Algal Blooms (HABs) monitored within the marine water bodies of Suffolk County: brown tide (*Aureococcus anophagefferens*), two types of red tides (*Alexandrium fundyense* and *Dinophysis acuminata*), and rust tide (*Cochlodinium polykrikoide*). Toxic blooms like these are closely related to warmer weather and occur almost annually in Long Island's waters. Mattituck Creek was not reopened to shellfishing until April 2014.<sup>16</sup>

As noted Section 1.1.1 of this DEIS, the subject property is a designated host for the CCE Marine Program for shellfish resotation. A portion of the existing marina is a shellfish nursery that has enabled approximately 6 million clams to be grown using eight (8) FLUPSY's over the last year (see Appendix M) and over 10 million in the last four years . A minimum of approximately 1.5 million clams per year are expected to be harvested from the FLUPSY units at SYC. Once harvested, the clams are relocated to a NYSDEC-designated sanctuary site pursuant to the LISRP.

North of the subject property, along the west side of Mattituck Creek, is Mattituck Commercial Dock marina with slips for commercial boats and the Mattituck Fishing station with approximately 40 recreational fishing boats. Further north, towards the mouth of Mattituck Creek, is the NYSDEC Mattituck Creek Waterway Access Site which provides boat and kayak launches, boat slips, a fishing pier, picnic tables, walking trails, and parking.<sup>21</sup> Breakwater Park is also located north of the subject on the east side of Mattituck Inlet. There is a parking lot, restrooms, a playground, volleyball courts, and swimming beach. Fishing along the breakwater is a popular activity. South of the subject property, along the west side of Mattituck Creek are residential land uses.

North of the subject property, along the eastern side of Mattituck Creek are residential land uses and an M-II parcel with commercial fishing dock and loading pier. Many of the residences along the water have docks leading to Mattituck Inlet. Further north, along the east side of Mattituck Creek is State-owned and Town-owned recreation and open space that includes preserved areas and Bailie Beach Park. Bailie Beach Park which is part of the Mattituck Park District is only accessible to Town of Southold residents. There is also a Scout Lodge that is popular amongst Boys Scouts and Girl Scouts for camping. No fishing is permitted, and the beach does not have a lifeguard. To the south of the subject property, along the east side of Mattituck Creek, are residential land uses.

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<sup>19</sup> <https://suffolktimes.timesreview.com/2014/01/dec-declares-mattituck-creek-ok-for-shellfishing/>

<sup>20</sup> <https://www.newsday.com/long-island/suffolk/dec-shuts-shellfish-harvesting-in-southold-1.3644504>

<sup>21</sup> <https://www.dec.ny.gov/outdoor/7780.html>

Overall, as described above, the existing land uses along Mattituck Inlet and Creek (including the subject property) is consistent with the intended best use for designated Class SA waterbodies as shellfish harvesting is allowed during permitted seasons and there are primary and secondary contact recreation and fishing.

Suffolk County Department of Health Services (SCDHS) Office of Ecology – Bureau of Marine Resources Surface Water Quality Monitoring Database

As discussed in the Strong's Yacht Center – Boat (Vessel) Study (see Appendix M), SCDHS conducts surface water quality monitoring for Mattituck Inlet and Mattituck Creek as part of various monitoring and management programs. For Mattituck Inlet and Mattituck Creek, there are five (5) monitoring stations – two at Mattituck Inlet and three in Mattituck Creek in the northern, central, and southern portions of the creek. Bay Station 055320 is the closest monitoring station to the subject property. Data from 2000 through 2020 was provided by SCDHS for this monitoring station.

The time period between 2012 and 2020 was analyzed to establish a baseline of water quality conditions before and after the Applicant purchased the subject property in September 2016. The data concluded the water quality trends were typical of the entirety of Mattituck Inlet and Mattituck Creek as well as followed the seasonal trends of Long Island Sound. There was no indication that the Applicant's purchase of the subject property and subsequent operation of the marina impacted water quality conditions. Based on historic news articles for Mattituck Inlet and Mattituck Creek related to water quality, the water quality issues in Mattituck Harbor have existed for at least 20 years and harmful algal blooms occur annually. Specifically, mussels within Mattituck Creek tested positive for marine biotoxins, such as saxotoxins, which causes paralytic shellfish poisoning if consumed by humans. The Town of Southold overall has made efforts to curtail stormwater runoff from entering Mattituck Creek to reduce potential impacts to water quality. See Section 3.0 in Appendix M for additional data and the full analyses completed.

Draft New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy

Section 303(d) of the Clean Water Act (CWA), *“requires states to identify the subset of state waterbodies where water quality standards are not met and where uses are not supported. The Section 303(d) List includes those waters (and associated pollutants) that do not support uses, and which require development of a Total Maximum Daily Load (TMDL) strategy.”* The Draft New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy (hereinafter “303(d) List of Impaired Waters”) was issued on June 20, 2018. Mattituck Inlet/Creek Lower and Tidal Tributaries (1702-0020) was added to the 303(d) List of Impaired Waters in 2018 due to pathogens from urban areas and stormwater runoff entering the waterbody. As a result of these pollutant sources, there are shellfishing restrictions and limitations for Mattituck Inlet/Creek Lower and Tidal Tributaries.<sup>22</sup> The official description of all shellfish closures for uncertified or closed areas is listed at 6 NYCRR Part 41 (*Sanitary Conditions on Shellfish Lands*) of the New York State Code. Section 41.3 lists those “shellfish lands in Suffolk County [that] are in such sanitary conditions that shellfish thereon shall not be taken for use as food and such lands are designated as uncertified areas.”<sup>23</sup> As discussed above, Mattituck

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<sup>22</sup> [https://www.dec.ny.gov/docs/water\\_pdf/section303d2018.pdf](https://www.dec.ny.gov/docs/water_pdf/section303d2018.pdf)

<sup>23</sup> [https://www.dec.ny.gov/outdoor/103483.html#Mattituck Inlet and Mattituck Creek7](https://www.dec.ny.gov/outdoor/103483.html#Mattituck%20Inlet%20and%20Mattituck%20Creek7)

Inlet and the majority of Mattituck Creek are seasonally uncertified, such that from May 1 to December 31 shellfish harvesting is not allowed in Matticuk Inlet or Mattituck Creek.

#### NYSDOS Significant Coastal Fish and Wildlife Habitat

The subject property lies adjacent to the west of Mattituck Creek and south of Mattituck Inlet, which are designated by the New York State Department of State (NYSDOS) as a Significant Coastal Fish and Wildlife Habitat (see Figure 21 in Appendix A). The Coastal Fish and Wildlife Habitat Assessment Form for the Mattituck Inlet Wetland and Beaches, accessed from the NYSDOS website, indicated this habitat consists of “approximately 60 acres of tidal wetland and creek, 10 acres of shoals and mudflats, and 80 acres of protected park district land (including beaches) located on either side of the Mattituck Inlet jetties. North of the wetland, Mattituck Inlet, a deepwater inlet with strong tidal flushing, enter Long Island Sound. South of the inlet, Mattituck Creek extends south for one mile with moderate residential and marina development.”<sup>24</sup> Mattituck beaches along both sides of the inlet have provided significant nesting habitat. Mattituck Creek supports a productive local recreational fishery along with the wetland which serves as an important habitat for a variety of other wildlife and marine life (including shellfish).

### **2.2.2 Potential Impacts**

#### ***Groundwater***

##### **Groundwater Modeling Report**

A numerical 3-D groundwater modeling report and assessment has been prepared by PWGC (see Appendix L) to address the following, as set forth in the Amended Final Scope: “(1) analyze and discuss in detail the impacts on private wells in the surrounding area including technical details on groundwater depth, quality, quantity, freshwater lens, saltwater interface, amount of flow in gallons per minute (GPM), direction of travel, and travel times. Include zones of influence from each wellhead; and (2) analyze and discuss the effect of excavation on groundwater, as well as any expected impacts to neighboring wells. Include an analysis on the potential for salt-water intrusion into neighboring well as a result of the excavation's effect on groundwater in the area.” As further explained by the Planning Board in its clarification of the Amended Final Scope on April 5, 2021, the DEIS is to address the “potential moderate to large impacts from significant soil excavation on-site that is potentially capable of affecting the hydrology and zones of influence for nearby private wells, and the quantity of water available after excavation is completed. Because the aquifer can fluctuate seasonally, conducting this study over time is important to account for all seasons including summer when quantities may be significantly lower due to less rainfall.”

A finite difference method (FDM) model was utilized to predict aquifer responses under steady state and transient conditions that result from the proposed excavation to take place at the existing Yacht Center site on Mattituck Creek in Mattituck, NY. The modeling platform was run using the USGS program MODFLOW (MODFLOW 2005). The software package used to run the model code was Groundwater Vistas Version 8.16 (GV8) Build 15 by Environmental Simulations, Inc.

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<sup>24</sup> [https://www.dos.ny.gov/opd/programs/consistency/Habitats/LongIsland/Mattituck Inlet Wetland.pdf](https://www.dos.ny.gov/opd/programs/consistency/Habitats/LongIsland/Mattituck%20Inlet%20Wetland.pdf).

A three-dimensional, sub-regional, numerical groundwater flow model was constructed to represent a portion of the North Fork of Long Island, centered around the Mattituck area. The model extents encompass an area that ranges from the Long Island Sound on the north, the Great Peconic Bay to the south, approximately Aldrich Lane to the west, and approximately Alvahs Lane to the east (see Figure 3 in the Groundwater Modeling Report in Appendix L).

As explained in the Groundwater Modeling Report (Section 1.1 – Background), a groundwater model was employed rather than taking monthly water level observations over the course of a year because it has several advantages. A carefully constructed and calibrated model can reliably predict groundwater levels and aquifer responses under numerous different conditions and scenarios. Multiple years of groundwater level data were used to construct and calibrate the model (in this particular case some of the local monitoring wells used to construct the model had monthly data going back as far as 1975) as opposed to a single 12-month period. This allows for more long-term averages to be used and also provides for the identification of anomaly years such as when drier or wetter conditions may prevail. Longer term groundwater trends (rising or falling water levels and potential causes) can be observed as well when looking back over many years as opposed to a single year.

The groundwater model developed for SYC is able to predict groundwater levels under a variety of conditions, predict groundwater travel times, flow paths, estimate wellhead capture zones or zones of influence and can also be used to model the saltwater interface and thickness of the freshwater lens under different stresses such as changing recharge patterns or excavated site conditions (model potential saltwater intrusion or upconing effects). Again, the model developed for SYC relied upon many years of USGS local groundwater level data for its construction and to a high degree of calibration. A single year of monthly groundwater level observations would not provide anywhere near the same ability of a properly prepared groundwater model to carry out the desired analyses that have been requested.

A summary of the analyses and findings of the Groundwater Modeling Report are included below, with the report included in its entirety in Appendix L of this DEIS.

#### Impacts on Local Domestic Supply Wells

As part of the Groundwater Modeling Report, the nearby local domestic supply wells were identified and an analysis was conducted of the potential impacts on any wellhead zone of influence, as well as on the quantity and quality of water in the aquifer system for residential water supply. Figure 9 of the Groundwater Modeling Report in Appendix L identifies the location of local private wells.

Wellhead zone of influence is evaluated using particle tracking. MODPATH Version 5 was employed to analyze and visualize the particle tracks. MODPATH is a particle-tracking post-processing model that computes three-dimensional flow paths using output from groundwater-flow simulations based on MODLFOW, the USGS finite-difference groundwater flow model. The program uses a semi-analytical particle-tracking scheme that allows an analytical expression of a particle's flow path to be obtained within each finite-difference grid cell. A particle's path is computed by tracking the particle from one cell to the next until it reaches a boundary, an internal sink/source, or satisfies another termination criterion (i.e., a certain time in the future or the past). Under the existing condition, a ring or cluster of particles were installed around each of the well screens that were identified for lots that surround

the subject site that are not serviced by the SCWA. The particles were set to reverse track back to their respective points of origin. The predicted particle tracks or paths depict the wellhead zones of influence or capture.

The particle tracking analysis indicates the domestic supply wells as having relatively low pumping rates (325 gpd) which are expected to have very narrow zones of influence. Figure 14 in the Groundwater Modeling Report in Appendix L depicts the predicted wellhead zones of influence under existing / unexcavated conditions and also shows the ground surface contours. The model was then run under excavated/post-development conditions to determine if excavating the site would have any influence on surrounding wellhead zones of influence. Figure 15 in the Groundwater Modeling Report in Appendix L presents the model output for this condition where nothing changes except for the ground surface elevation within the limits of excavation at SYC and the amount of recharge occurring within those limits (the recharge increases from 0.0085 feet/day to 0.0101 feet/day).

When comparing existing to post-development conditions, as explained in the Groundwater Modeling Report, there are no noticeable changes in particle tracking trajectories. This is due to the fact that the proposed site excavation would take place entirely above the water table and the proposed site modifications would only slightly add more water to the local aquifer system due to the increased recharge post construction. As such, the proposed site excavation would not have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence.

Additionally, SYC is proposing to convert two of the four on-site wells to be used for irrigation. Figure 14a of the Groundwater Modeling Report in Appendix L depicts the two wells to be utilized for irrigation purposes only. The significance of this change is that by utilizing the two wells for only irrigation, less water would be withdrawn from the aquifer post-construction. The annualized daily pumping rate from SYC would be reduced to 218 gpd as opposed to the average domestic supply pumping rate of 325 gpd (0.225 gpm). As indicated in the Report, less water withdrawal has multiple benefits with regards to the site having less of an influence on neighboring wells, and what is later addressed, on saltwater intrusion and upconing.

Regarding the impact on quantity and quality, the 3-D groundwater model included particle tracking from the subject property where particles were released from beneath the proposed site excavation and tracked forward until they reached a termination point. Groundwater recharging beneath the Construction Excavation Area was shown to flow towards Mattituck Creek (see Figure 16 of the Groundwater Modeling Report in Appendix L) and was not intercepted by any of the domestic supply wells that are in proximity to the subject property. As such, the model demonstrates that the neighboring wells would not be impacted with respect to groundwater quality as a result of the proposed site excavation.

#### Potential Impacts on Groundwater Quantity

The Groundwater Modeling Report also included an analysis of the groundwater at the site and its contribution to the aquifer serving the nearby wells under existing conditions and the potential adverse effects, if any, to the aquifer system serving nearby wells following the proposed excavation. As indicated in the Report, shallow groundwater beneath the subject property flows eastward towards Mattituck Creek. USGS data supports this flow direction as do the groundwater model flow simulations (see Figure 16 in the Groundwater Modeling Report in Appendix L).



The groundwater model was calibrated to a current recharge rate of 0.0085 feet/day or 37.23 inch/year (76 percent of annual precipitation of 49 inches). Over the approximately 16.5-acre M-II zoned parcel, the volume of recharge under existing conditions is 2,230,489.80 feet<sup>3</sup>/year or 6,110.93 feet<sup>3</sup>/day. Post-development, the subject site would have an additional 2.36± acres as impervious. The entire excavated area is planned to be constructed with a drainage and sub-surface recharge system that would collect and recharge nearly 100 percent of the precipitation that lands upon it. The actual drainage plan accommodates 7.77± acres of land area, which includes the Project Area and contributing off-site area (as explained later in this subsection). This system would greatly reduce runoff and evapotranspiration effects, and thus, have a net increase with regards to groundwater recharge. As set forth in the Report, the post-development recharge volume across the entire 16.5-acre M-II site is estimated at 2,345,038.08 feet<sup>3</sup>/year or 6,424.76 feet<sup>3</sup>/day. Comparing the existing to post-development conditions, approximately 114,548.28 feet<sup>3</sup>/year of additional recharge would reach the aquifer system.

Under both existing and post-development conditions the post excavated site, groundwater flows towards Mattituck Creek. Figures 16 and 16a in the Groundwater Modeling Report in Appendix L depicts these conditions. Under the post excavated conditions, a slight increase in the water table of 0.01 feet is predicted immediately beneath the proposed Construction Excavation Area due to the increase in stormwater recharge. The model shows no particle deflections or trajectory changes, and thus, no significant adverse impacts on nearby wells are anticipated.

#### Aquifer Evaluation

As part of the groundwater modeling analysis, the nature of the aquifer that supplies the nearby wells and the relationship of the subject property as a contributing source was evaluated. As excerpted from the Report, the aquifer system beneath the site is comprised of multiple hydrogeologic units. The upper or most shallow unit where the neighboring domestic supply wells are screened is commonly referred to as the Harbor Hill Outwash. Directly beneath that is a thin, highly permeable layer that is known as the Ronkonkoma Drift. Immediately below that is a confining clay layer. Figure 4 in the Groundwater Modeling Report in Appendix L depicts a typical cross section through the groundwater model with all layers and hydrogeologic units numbered and identified.

The upper two hydrogeologic units are considered and modeled as unconfined aquifers while the units below them are treated as confined aquifers or layers. Thus, the shallow aquifer where the domestic supply wells are screened, being unconfined, can be directly susceptible to surface-related activities. However, as explained above, though the site is being excavated, the excavation takes place entirely above the water table and would not affect the quantity or quality of the groundwater as it relates to the nearby domestic supply wells. A slight increase in groundwater recharge is expected to take place post excavation once the site is developed. This increase in quantity is relatively minimal and would not be predicted to affect the nearby wells. Figures 16 and 16a in the Groundwater Modeling Report in Appendix L shows no significant adverse impacts or noticeable differences in particle tracks or trajectories between the existing and post-development conditions.



### Impacts on Groundwater Travel Time

The Groundwater Modeling Report determined the direction of groundwater travel on site and travel times and evaluated whether the proposed excavation would disrupt or interrupt groundwater travel or timeframes to reach surface waters.

Groundwater flow direction, as indicated earlier, is in an easterly direction towards Mattituck Creek. The modeling included a line of particles installed along the western boundary of the proposed Construction Excavation Area and released at approximately 40 feet below the water table at that location, which is consistent with SCDHS requirements for domestic supply well screen depths. The particles are then tracked forward and head eastward towards the creek. They start with a downward trajectory and then eventually begin to flow upwards towards the creek bed. Under the existing conditions, the groundwater travel time from the location of the western boundary of the proposed Construction Excavation Area to Mattituck Creek would be between 4 and 4.5 years with a starting depth of 40 feet below the water table. Figure 17 in the Groundwater Modeling Report in Appendix L depicts this model output.

Post-development, Figure 17a in the Groundwater Modeling Report in Appendix L depicts the model run under post excavation conditions where the soil is removed from the proposed excavation area down to an elevation of 5 feet AMSL and the recharge over that same area is increased slightly to account for subsurface recharge via roofs and paved surfaces. The buildings are proposed to have a finished first floor elevation of 10 feet AMSL. The modeled elevation of 5 feet AMSL accounts for the excavation required to construct and install the building foundation elements. Under post-development conditions, no noticeable changes in particle tracks or trajectories are observed when compared to Figure 17 in the Groundwater Modeling Report in Appendix L which presents the unexcavated/existing conditions. Additionally, the travel times are posted in half-year increments along the tracks and these again are identical to the unexcavated scenario showing travel times of between 4 and 4.5 years to travel from roughly 40 feet below the water table at the western excavation boundary to the bottom of Mattituck Creek. Thus, the groundwater model predicts that the proposed site excavation would not disrupt groundwater flow directions or travel times to reach the nearby surface water body.

### Freshwater – Saltwater Interface

The Groundwater Modeling Report identified the depth of the freshwater lens and elevation of the saltwater interface. Estimation of the saltwater interface was accomplished using the 3-D numerical groundwater model and checked using analytical methods. The USGS program SEAWAT Version 4 was employed to model and simulate saltwater. The SEAWAT program is a coupled version of MODFLOW and MT3DMS designed to simulate 3-D, variable density, saturated groundwater flow and multi-species transport. The variable density flow (VDF) process in SEAWAT is based on the constant density groundwater flow process of MODFLOW-2000. The VDF process uses the familiar and well established MODFLOW methodology (finite difference method) to solve the variable density groundwater flow equation. The MT3DMS part of SEAWAT, referred to as the Integrated MT3DMS Transport (IMT) process solves the solute transport equation.

The analytical method used to check the modeling results is the Ghyben-Herzberg relation. This relation states that for every foot above sea level in water table elevation that exists, the saltwater

interface will be 40 times that below sea level. In most situations, the Ghyben-Herzberg relation underestimates the depth to the saltwater interface, and thus, it can be used for conservative preliminary estimates.

As explained in Section 2.1.1 of this DEIS and in the Groundwater Modeling Report, the existing unexcavated site had two test holes conducted in September of 2018 by McDonald Geoscience for the purpose of sanitary design. The water table elevations in these test holes were observed to be at 1.2 and 1.4 feet AMSL (NAVD 88). PWGC also performed 13 soil borings in June 2021 where groundwater was found at 1.0 to 2.5 feet AMSL across the site at that time. The groundwater model under steady state conditions and calibrated to USGS April 2016 groundwater conditions predicted groundwater elevations at the two 2018 test hole locations of 1.48 and 1.45 feet AMSL. Under the same conditions, the model predicted the water table elevation beneath the middle of the proposed excavation limits for the unexcavated case to be 1.73 feet AMSL (NAVD 88) (see Figure 11a of the Groundwater Modeling Report in Appendix L). Based on the Ghyben-Herzberg relation, the saltwater interface would then be expected to least be at an elevation of -69.2 feet AMSL (NAVD 88). The thickness of the freshwater lens is 70.93 feet.

Figure 18 in the Groundwater Modeling Report in Appendix L depicts a cross section through the model showing the predicted saltwater extents based on chloride concentrations. The saltwater interface is predicted to be contained in layer 4 of the model beneath the site excavation limits. The elevations of the top and bottom of layer 4 beneath the proposed site excavation area are -75 and -87.88 feet AMSL (NAVD 88). Using the shallowest elevation of layer 4 as a conservative position for the saltwater interface, the elevation would then be -75 feet AMSL which is 5.8 feet deeper than estimated by the Ghyben-Herzberg relation. As referenced above, the Ghyben-Herzberg relation tends to underestimate the interface depth as it was calculated to be -69.2 feet AMSL, a minimum difference of 5.8 feet. The model predicts a freshwater lens thickness of 76.73 feet.<sup>25</sup> Figures 18a through 18d in the Groundwater Modeling Report in Appendix L show plan views through the upper four layers of the model and depict the horizontal extents of the saltwater under the unexcavated site conditions. The figures depict a landward migration of the interface with depth as would be expected. Layer 4 directly beneath the proposed site excavation limits shows near complete saltwater conditions, indicating that the interface would be between -75 and -87.88 feet AMSL.

#### Proposed Excavation Evaluation – Saltwater Intrusion into the Aquifer

The Groundwater Modeling Report evaluated whether the proposed excavation would alter the saltwater interface in a way that may cause saltwater intrusion into the aquifer or nearby wellhead

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<sup>25</sup> The two methods of analysis provide differing results because they each use a different type of analysis. The Ghyben-Herzberg solution is an analytical method that tends to underestimate the saltwater lens thickness. The groundwater model uses a numerical approach to solve the flow and transport schemes based on the finite difference method. The Ghyben-Herzberg method also does not consider time and is essentially a steady state solution. The groundwater model solved the variable density flow analysis using time steps and stress periods to simulate saltwater movement. Though the two methods of analysis will provide different results they should be reasonably close, which in general terms means being within 10% or less of one another as is the case here. The Ghyben-Herzberg method is a conservative analysis that as stated, in most real situations, underestimates the depth to the saltwater interface and was performed as a check on the modeling results. The groundwater model predicted a slightly deeper depth to the interface which supports the observation of the Ghyben-Herzberg tending to underestimate the depth.

zones of influence. The groundwater model was run under the excavated site conditions to evaluate potential saltwater interface effects that maybe caused as a result of the excavation. The difference between the excavated and unexcavated site conditions being that the surface elevations at the location of the proposed excavation are decreased from between 25 to 50 feet AMSL to 5 feet AMSL and the recharge occurring within the limits of the proposed excavation is increased from 0.0085 feet/day to 0.0101 feet/day. Figures 18 and 18a through 18d in the Groundwater Modeling Report in Appendix L depict the existing saltwater conditions prior to the site being excavated. Slightly increasing the recharge across the area of the proposed site excavation increases the amount of freshwater being received by the aquifer and in turn would have the effect of causing the saltwater interface to migrate seaward and downward. Under the excavated site conditions, the water table is expected to rise 0.01 feet due to the increased recharge (see Figures 11a and 13a in the Groundwater Modeling Report in Appendix L for unexcavated and excavated site groundwater conditions). Applying the Ghyben-Herzberg relation to the slightly higher water table elevation indicates that the saltwater interface is approximately 0.40 feet deeper, and the freshwater lens is 0.41 feet thicker. As such, saltwater intrusion is not expected to occur as a result of the proposed site excavation, but just the opposite is predicted.

Figure 19 in the Groundwater Modeling Report in Appendix L is a cross sectional view through the model output depicting the excavated site conditions and the chloride concentrations. Layer 4 where the saltwater interface is expected to occur beneath the site excavation is 12.88 feet thick. Based on the Ghyben-Herzberg relation, a deepening of at least 0.40 feet is expected. The layer being over 12 feet thick, the groundwater model, as constructed, is unable to differentiate this increase graphically. However, comparing Figures 18 and 19 in the Report in Appendix L, a difference in Layer 3 is noticed. Under the existing conditions (Figure 18), in layer 3 just to the north of the Construction Excavation Area, the saltwater interface is present. Reviewing Figure 19 for the post-development condition, the chloride concentrations that were observed in Figure 18 are no longer present. Similar observations can be made by comparing the plan views shown in Figures 18a through 18d in the report in Appendix L for the unexcavated case to Figures 19a through 19d in the report in Appendix L for the excavated case. Here again, the chlorides concentrations are predicted to be pushed towards Mattituck Creek away from the site and the surrounding or neighboring domestic supply wells. This is, as stated above, the opposite effect of saltwater intrusion. The neighboring domestic supply wells were all shown to have zones of influence that track inland away from Mattituck Creek (see Figure 14a in the Groundwater Modeling Report in Appendix L). By locally moving the chloride concentrations towards Mattituck Creek, wells in proximity to the site would experience a subtle improvement with regards to saltwater intrusion.

Also, to be considered in regard to the saltwater interface and indicated earlier, two existing water supply wells would to be removed from service as the entire site would be connected to the SCWA for domestic water supply and the two remaining on-site wells would be converted to irrigation wells. Post-development, the two wells would have overall less water consumption then their combined existing condition. The net effect is again less water withdrawal from the aquifer and a benefit with regards to the saltwater interface position beneath the site.

#### Proposed Excavation Evaluation – Upconing

The Groundwater Modeling Report evaluated whether the proposed excavation would cause upconing and saltwater intrusion by reducing the amount of freshwater entering the aquifer used by the nearby

wells. As indicated above, there would be an increase in recharge to the aquifer post-development which would result in a slight increase of the water table elevation, which results in a deepening of the saltwater interface. Upconing occurs when there is a decrease in the water table elevation which would be the opposite of what is predicted to occur under the post excavated site conditions. Therefore, no significant adverse impacts due to upconing could occur.

#### Potable Freshwater Elevation Estimate

As part of the Groundwater Modeling Report, the analysis included identifying the elevation at which potable freshwater begins and ends (at the expected saltwater interface) both in the existing and post-development conditions. Under existing or unexcavated site conditions, the water table beneath the proposed Construction Excavation Area is predicted to be 1.72 feet AMSL (NAVD 88) (see Figure 11a in the Groundwater Modeling Report in Appendix L). The saltwater interface under the unexcavated site conditions is estimated to be at an elevation of -68.8 feet AMSL (NAVD 88) based on the Ghyben-Herzberg relation. The groundwater model estimates the saltwater interface under the existing conditions to be contained within layer 4 of the model. Layer 4 at the location of the proposed site excavation has a top elevation of -75 feet AMSL (NAVD 88) and a bottom elevation of -87.88 feet AMSL (NAVD 88).

The post-excavated site groundwater conditions are predicted by the groundwater model to show a slight increase in groundwater elevation right at the center of the proposed excavation limits. The groundwater elevation is predicted to increase by 0.01 feet, or to an elevation of 1.73 feet AMSL (NAVD 88) under the post excavated site conditions (see Figure 13a in the Groundwater Modeling Report in Appendix L). The Ghyben-Herzberg relation then estimates the saltwater interface to deepen by 0.40 feet, or to an elevation of -69.2 feet AMSL (NAVD 88). The groundwater model still predicts the saltwater interface to remain in layer 4 of the model (see Figure 19 in the Groundwater Modeling Report in Appendix L) and as the layer is over 12 feet thick it is unable to distinguish a more precise elevation under post excavated site conditions. Assuming the worst-case conditions that the top elevation of layer 4 previously saw chloride concentrations of at least 250 mg/l under the existing condition, then under the post excavated site conditions, the interface elevation is expected to be deeper than -75 feet AMSL (NAVD 88).

#### **The Long Island Comprehensive Waste Treatment Management Plan (208 Study)**

As noted in Section 2.2.1 of this DEIS, the *208 Study* sets forth the relevant highest priority area wide alternatives for Zone IV:

- *Reduce excessive use of irrigation water and require the permitting, regulation and monitoring of irrigation wells.*
- *Minimize population density by encouraging large lot development (one dwelling unit/one or more acres), where possible to protect the groundwater from future pollutant loadings.*
- *Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to surface and ground waters.*
- *Provide routine maintenance of on-site disposal systems.*

As noted on the *Utility Plans* (see Appendix C), the proposed action includes discontinuance of the use of existing on-site wells for potable water and connection to the public water supply through extension of the water main. Two existing wells near Buildings 1 and 7 would remain for on-site irrigation use and the two wells near Buildings 2 and 3 would be abandoned. The proposed irrigation system would implement smart irrigation controls to reduce or eliminate the use of the irrigation system during periods of rain. The irrigation system would be installed with a drip line to prevent evaporation as well as rain sensors so as to not go on while it is raining. However, the proposed landscaping would consist of native and/or drought-tolerant plants and groundcover to reduce irrigation needs.

Regarding sanitary density and pollutant loading, the proposed action includes the existing sanitary system that serves Building 1 which would remain, and two (2) I/A OWTS would be installed (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings). The I/A OWTS is an on-site decentralized wastewater treatment system. The proposed I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L, in accordance with Section 760-1907D.2 in Article 19 (*Management of Innovative and Alternative Onsite Wastewater Treatment Systems*) of the SCSC. As required, the two I/A OWTS would be maintained in accordance with Suffolk County standards. According to Section XVII(b) in Article 6 of the SCSC, the bottom of any leaching structure is required to be at least three feet above the highest expected/recorded groundwater elevation at the proposed system's location and at least two feet for shallow alternative systems (leaching pools, leaching galley, gravelless absorption trench systems and gravelless absorption bed systems) approved by the Department. As the proposed action would install the two I/A OWTS and maintain a three-foot separation distance between the bottom of the leaching structures to groundwater, the proposed action would comply with this standard of the SCSC.

Regarding stormwater, the proposed development has been designed to comply with the Town's stormwater regulations set forth in Chapter 236 of the Town Code. As evaluated later in this section, the stormwater drainage system is designed to retain a two-inch rainfall on-site. In addition, an erosion and sediment control plan has been developed and prior to construction, a SWPPP will be developed.

Overall, based upon the above analyses, the proposed development plans are consistent with the goals and standards set forth in the 208 Study.

### **The Long Island Special Groundwater Protection Area Plan (SGPA Plan)**

As noted in Section 2.2.1, the subject property is not within the SGPA. Thus, no significant adverse impacts are anticipated.

### **Suffolk County Comprehensive Water Resources Management Plan**

The recommendations outlined in the Suffolk County Comprehensive Water Resources Management Plan were focused on Nitrogen, VOC's, PCP's, and Potable Supply. These recommendations were municipally minded as the recommendations revolved around additional studies, developing new regulations and code changes, public outreach and education and creating a reliable funding stream for recommended projects. However, the overall intent of the plan is to reduce the overall levels of contaminants, such as fertilizers, pesticides and nitrogen in our ground and surface waters.

The proposed action complies with the intent of the *Suffolk County Comprehensive Water Resources Management Plan*, as two I/A OWTS are to be installed to collect and treat sanitary waste generated for the proposed action and marina operations. I/A OWTS, while newer in use, have shown evidence of removing emerging contaminants of concern. Utilizing this system would minimize pollution risks to Mattituck Creek and the groundwater table. Situating the two I/A OWTS away from the shoreline would decrease the risk of pollution as the systems are at a higher elevation and provide a greater separation between the system and groundwater.

Based upon the above analyses, the proposed development plans meet the overall intent of the *Suffolk County Comprehensive Water Resources Management Plan*.

## **Potable Water Supply**

### Domestic and Fire Water System Demand

As noted earlier, there are four on-site private wells that service the subject property. As part of the proposed action, an extension of the public water main for connection to the SCWA is proposed. Consultations were undertaken with SCWA and in correspondence dated October 20, 2017 (see Appendix P), public water has been confirmed to be available to the subject property through an extension of the existing water main located 765± feet west of the subject property on Naugles Drive. Accordingly, as part of the proposed action, the water main extension would be installed from Naugles Drive through West Mill Road to the main entrance to SYC. The water main would be installed along the western portion of the marina and service the existing buildings, single-family residence, and the two proposed boat storage buildings. As confirmed by SCWA, the extension of the public water main would also allow for existing landowners to connect to the public supply system, by request to the SCWA.

Upon implementation of the proposed action, the two existing on-site supply wells near Buildings 1 and 7 would be converted for use for non-potable water supply only (i.e., irrigation) and the on-site supply wells near Buildings 2 and 3 would be abandoned. A fire hydrant is proposed north of the entrance to the marina, on the west side of West Mill Road.

Based on SCDHS design flow factors of 0.00 gpd/SF for boat storage and 0.06 gpd/SF for non-storage (bathrooms), potable water usage for post-development conditions would increase by 18 gpd from 1,058± gpd to 1,076± gpd. This increase that is associated with employees and not the building area as such space would be utilized for storage. The total volume of 1,076± gpd would be served entirely from the public water supply, as noted above. Additionally, water usage associated with other activities associated with the boat storage use would include water for the power washing of boat bottoms in the fall season (approximately 50 gallons per boat) and for boat washing in the spring prior to waxing (approximately 170 gallons per boat). These services would be offered to boat storage customers when arriving for storage and when exiting storage for the boat season. Bottom painting and detailing/waxing does not require any additional water usage. This water supply would also be provided from the new SCWA water connection.

Irrigation Water Supply and Distribution System

Irrigation supply is also proposed with the installation of automatic underground sprinkler systems with rain sensors to serve new planting areas. In total, approximately 1.22± acres of the 1.91± acres of new landscaping would be irrigated via the existing on-site wells to be retained near Buildings 1 and 7. Based upon one inch of water per week for the irrigation season of 26 weeks (i.e., mid-April to mid-October), approximately 437± gpd for the irrigation season or 218± gpd (averaged annually) is projected.

**Table 14 - Irrigation Demand**

	<b>Input/Assumption</b>	<b>Proposed Action</b>
<b>Irrigation Area</b>	1 inch/week <sup>1</sup> ; Irrigation period of 26 weeks (April 15-October 15) and only native, drought-tolerant species would be planted to reduce irrigation needs.	53,143 SF
<b>Average Precipitation</b>	26 inches/week less precipitation of 24± inches <sup>2</sup> during 26-week irrigation season	
<b>Need - Precipitation</b>	2 inches/irrigation season	
<b>Conversion</b>	2 inches/irrigation season/12 inches/foot	0.2 foot/irrigation season
<b>Total Cubic Feet</b>	0.2 foot/irrigation season x 53,143sf [area to be irrigated (sf)]	10,629 cubic feet/irrigation season
<b>Total Gallons</b>	10,629 cubic feet/irrigation season x 7.48 gallons/cubic foot	= 79,502 total gallons (for irrigation season) = 437 gallons per day (for irrigation season) = 217.8 gallons/day (annual average)

1. Melby, Peter, ASLA. Simplified Irrigation Design. PDA Publishers, Mesa, AZ. 1988.
2. Islip, NY Historical Data. National Weather Service NOAA (<http://www.weather.gov/okx/IslipHistorical>)

Overall, the post-development withdrawal from on-site supply wells would be reduced from the current 1,058± gpd to 218± gpd (averaged annually). As indicated above, this decrease combined with the increase in recharge from a stormwater management system would have a resultant benefit to the with regards to the saltwater interface position beneath the site.

**Sanitary Waste Generation**

As indicated in Section 2.2.1 of this DEIS, the existing sanitary waste generation associated with SYC is approximately 1,058 gpd. Based on SCDHS design flow factors (SCDHS Standards For Approval Of Plans And Construction For Sewage Disposal Systems For Other Than Single-Family Residences), sanitary waste generation for post-development conditions would increase by 18± gpd from 1,058± gpd to 1,076± gpd (based on the SCDHS design flow factors of 0.06 gpd/sf for Non-Medical Office Space, 0.04 gpd/SF for General Industrial Use, and 10 gpd/boat slip for Marina, and 300 gpd for single-family residential use).

As part of the proposed action, the existing sanitary system that serves Building 1 would remain, and two (2), 600-gallon, I/A OWTS would be installed (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings).

A summary of the sanitary calculations and buildings to be served is provided below.

Design Calculations for Sanitary System No. 1 (New System):

General Industrial: 4,10 SF x 0.04 gpd/SF (density load) = 196 gpd

New Boat Storage: 101,500 SF x 0.00 gpd/SF (density load) = 0 gpd

Non-storage (bathrooms): 304 SF x 0.06 gpd/SF (density load) = 18 gpd

Total Design Flow for System No. 1: 214± gpd

Design Calculations for Sanitary System No. 2 (Replacement System):

Office: 2,702 SF x 0.06 gpd/SF (density load) = 162 gpd

Marina: 40 boat slips x 10 gpd/boat slip (density load) = 400 gpd

Total Design Calculations System No. 2: 562± gpd

Existing Single-Family Residence Sanitary System (Building 1) (To Remain):

Total System = 300 gpd

Total Sanitary Discharge On-Site: 1,076± gpd

It is noted that the projected sanitary flow for the two storage buildings includes only the restroom area, as these buildings would be dry storage.

### **Suffolk County Sanitary Code**

#### Article 6 – Single-Family Residences, Realty Subdivisions, Developments and Other Construction Projects

As the subject property is located in Groundwater Management Zone IV, the maximum permitted sanitary discharge for the use of on-site sanitary systems is 600 gpd per acre or, approximately 9,498 gpd (based on the developable land area of 15.83 acres, as explained in Sections 1.2.3 and 2.2.1 of this DEIS). Based on the SCDHS design flow factors, the overall projected sanitary flow for post-development conditions is 1,076± gpd, as calculated above in this Section of the DEIS. Accordingly, the proposed action complies with the maximum permitted density set forth in Article 6 of the SCSC subject to a waiver for usage of employee count and not the storage building area. As discussed in Section 1.2.3 of this DEIS, the proposed application is subject to a SCDHS Board of Review variance to vary the design flow factor for the storage buildings to consider employee usage rather than building area. An application was initially filed with the SCDHS on July 18, 2018. A Notice of Incomplete Application was received on December 27, 2018 advising that restrictive covenants for flow reduction and a lot line modification to address Lots 13.4 and 1.0 that differ from the 1981 tax maps would be required. Additional materials have been filed with the SCDHS and consultations are ongoing. All correspondence to and from SCDHS is included in Appendix J.



As indicated in this Section of the DEIS above, the proposed action includes the installation of two 600-gallon I/A OWTS, one replacing the existing sanitary system and one new system. Each I/A OWTS would be designed with 5 leaching galleys with 50 percent future expansion in accordance with SCDHS standards. Sanitary System No. 1 would be installed between Buildings 9 and 10 with the control panel and blower in Building 10. Sanitary System No. 2 would be installed to the south of Building 3 with the control panel and blower in this building.

As noted on the *Utility Plan* (see Appendix C) and summarized in the table below, the I/A OWTS systems would comply with the minimum horizontal and vertical separation distances as set forth in Article 6 of the SCSC.

**Table 15 – Minimum Horizontal and Vertical Separation Distances for I/A OWTS**

<b>Minimum Separation Distances</b>	<b>Required</b>	<b>Provided</b>
Building on Slab	5 feet	5 feet
Water Service Lines/Laterals/Mains	10 feet <sup>1</sup>	10 feet
Leaching Structures	3 feet <sup>2</sup>	8 feet
Groundwater	2 feet/3 feet <sup>3</sup>	3 feet

<sup>1</sup>A minimum of 10-foot separation is required between water service line/laterals/mains and the edge of all stormwater drainage leaching structures.

<sup>2</sup>Distribution manholes or distribution boxes installed preceding gravel-less absorption trench systems or other leaching structures (other than leaching pools or galleys) may be installed a minimum of 3 feet to the leaching structures.

<sup>3</sup>The bottom of any leaching structure is required to be at least three feet above the highest expected/recorded groundwater elevation at the proposed system's location and at least two feet for shallow alternative systems (leaching pools, leaching galley, gravelless absorption trench systems and gravelless absorption bed systems) approved by the Department.

As noted in adopted Resolution 702-2020 for approving amendments to Article 6 of the SCSC, I/A OWTS are “capable of achieving significantly and measurably reduced total nitrogen concentrations as compared to conventional onsite wastewater treatment systems.” I/A OWTS are on-site decentralized wastewater treatment systems that, at a minimum, are designed to reduce total nitrogen in treated effluent to 19 mg/L. As noted in the Suffolk County SWP, “an ancillary benefit of treating and disposing of wastewater through onsite systems is the local recharge of water back into Suffolk County’s groundwater system so that the integrity and volume of Suffolk County’s sole source aquifer is maintained” (page 1-5). The proposed I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L, in accordance with Section 760-1907D.2 in Article 19 of the SCSC.

An application for Article 6 Permit was initially filed with the SCDHS in 2018 and consultations with the SCDHS are ongoing. It is noted that the application is subject to a Board of Review Variance for the proposed design as the design flow factors have been varied for a self-storage factor rather an industrial factor due to the nature of the proposed buildings. Specifically, as indicated in the Application for Variance in Appendix J of this DEIS, a variance from the design flow standards for the project has been requested because the indoor boat storage buildings are essentially self-storage buildings with respect to sanitary flow. These buildings are not utilized during the storage season, in essence the boats are placed into storage and not removed until the following year, which is similar to

the self-storage use. Flow has been calculated from the small bathroom area. Additionally, a waiver was requested from the subdivision requirements as the neighboring property is not willing to participate with the subdivision application. Finally, since the initial filing of the DEIS in December 2021, the following changes have been made to the proposed development plans, at the request of the Health Department:

- The existing residential structure now has a separate 2-inch diameter water service line that taps off the water main extension, prior to the RPZ device. Originally, the 2-inch diameter water service line for the residential structure was located along the water main extension, after the RPZ device. Due to head loss within the RPZ and from the approximately 50 ft change in elevation near the house, a booster pump would have been required to provide adequate pressure at the house connection. The relocation of the proposed tap for the residential dwelling to a location upstream of the RPZ device reduces the head loss and eliminates the need for a booster pump.
- A gravity retaining wall was added around Sanitary System No. 2.

The applicant continues its consultations with the SCDHS, and a Board of Review hearing is pending.

#### Article 7 – Water Pollution Control

As indicated in Section 2.2.1 of this DEIS, the subject property is not located in a regulated deep recharge area and is not located within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area. As such, the proposed action is not subject to Article 7 restrictions.

#### Article 12 – Toxic and Hazardous Materials Storage and Handling Controls

The Amended Final Scope requires an analysis of the proposed four LPG tanks with Article 12; however, SCDHS does not regulate LPG storage. The LPG tanks are subject to compliance with the 2020 NYS Fire Code and the National Fire Protection Association 58 – Liquefied Petroleum Gas Code, which sets forth requirements for installation, setbacks, and protection from vehicle impacts (see Southold Fire Marshal correspondence in Appendix P). Accordingly, through Building Department review, it is the Southold Fire Marshal that would review and approve such LPG tanks.

As indicated in Section 2.2.1 of this DEIS, SYC maintains a current Article 12 Permit (active through August 31, 2022) (see Appendix J) for the existing tanks and chemicals stored and used on-site. There are no changes proposed to the existing tanks or volume of materials stored on-site. As such, there is no additional Article 12 permitting required for the proposed action.

### **Other Facility Permits**

#### Boat Painting/Antifouling Certification

As indicated in Section 2.2.1 of this DEIS, SYC is a NYSDEC-registered Pesticide Business as it provides commercial aquatic antifouling paint application services. SYC was issued the registration by NYSDEC

on February 19, 2020 and is active through December 31, 2022 (see Appendix M). The SYC staff would continue to renew the Aquatic Antifouling Applicator Certification, as required.

### **Suffolk County Subwatershed Wastewater Plan (SWP)**

As described in Section 2.2.1 of this DEIS, the M-II zoned portion and the eastern side of the R-80 zoned portion of the subject property are situated within the 0-2-year groundwater contributing area to the Mattituck Inlet/Creek, Low, and Tidal Tribs subwatershed (see Figure 11 in Appendix A). The remaining area of the R-80 zoned portion of the subject property is situated within the 2-10-year groundwater contributing area to the Mattituck Inlet/Creek, Low, and Tidal Tribs subwatershed. For properties within a 0 to 25 year-contributing area, the SWP encourages the use of I/A OWTS or STP's to limit nitrogen loading to subwatersheds. As such, the proposed action complies with the SWP.

In addition to sanitary waste, nutrient pollution also originates from other sources including stormwater discharge, pesticides and fertilizers. The proposed project includes the installation of a stormwater management system to accommodate and recharge stormwater generated within the Project Area. Additionally, the proposed landscape materials would include species that are suitably adapted to the site conditions to limit or preclude the need for fertilizers and pesticides. Accordingly, based on the above, the proposed development would be consistent with the intent of SWP to reduce nitrogen loading to surface waters.

### **Stormwater Runoff and Drainage**

The proposed action would increase the total impervious surface area from 2.62± acres to 4.98± acres and would modify land coverages from woodland to landscape and pervious pavers. Accordingly, there would be a resultant increase in the volume of stormwater runoff generated on the subject property.

As indicated on the *Grading and Drainage Plan* (see Appendix C), the proposed action includes drainage controls for approximately 7.77 acres (338,387 SF) of land area, which includes the Project Area and off-site contributing land area due to site topography. The proposed drainage controls include leaching pools of varying depths and French drains which includes the use of pervious gravel. The proposed stormwater management system is designed to accommodate a two-inch rain event in accordance with §236-7.A of the Town Code and includes four tributaries:

- **Tributary Area 1** is 86,997 SF and would collect runoff from the northern portion of the roof of Building 10, the area between Buildings 7 and 10, and the western portion of the roof of Building 7. Total Storage Required: 5,387 CF / Total Storage Provided: 5,425 CF
- **Tributary Area 2** is 72,426 SF and would collect runoff from the southern portion of the roof of Building 10 and northern portion of Building 9. Total Storage Required: 10,626 CF / Total Storage Provided: 10,934 CF
- **Tributary Area 3** is 78,010 SF and would collect runoff east of Buildings 9 and 10 and west of Buildings 7 and 8. Also, off-site stormwater due to existing natural grades would be

accommodated in this area. Total Storage Required: 8,764 CF / Total Storage Provided: 10,570 CF

- **Tributary Area 4** is 100,954 SF and would collect runoff south of Building 9 and all of Building 8. Also, off-site stormwater due to existing natural grades would be accommodated in this area. Total Storage Required: 7,851 CF / Total Storage Provided: 8,164 CF

Overall, as the proposed drainage plan would improve on-site stormwater management and provide drainage for areas that are currently not served, there would be a resultant benefit from the proposed action.

### **Chapter 236 of Town Code – Stormwater Management**

The Town of Southold regulates stormwater management and discharge associated with land-disturbing activities and projects that involve a replacement of or addition to impervious surfaces. Pursuant to §236.16(A), all development, construction, excavation and landscaping activities regulated under Chapter 236 are to be conducted in accordance with an approved stormwater management control plan.

A consistency analysis with the performance standards for a stormwater management control plan, as set forth in §236-18, is included below.

- A. The site erosion, sedimentation and stormwater runoff control measures shall be appropriate for existing topography, vegetation and other salient natural features of the site. The plan shall indicate that the development will preserve natural features, minimize grading and cut and fill operations, ensure conformity with natural topography, and retain natural vegetation and trees to the maximum extent practicable in order to create the least erosion potential and adequately handle the volume and rate or velocity of surface water runoff.*

As discussed in Sections 1.2.5 and 2.1.2 of this DEIS, approximately 4.59± acres would be excavated and regraded for the proposed action. The proposed grading program is necessary in order to allow for direct access and transport of yachts from the existing boat lift station situated to the east of Buildings 7 and 8 to the new storage buildings. During excavation and construction, erosion and sedimentation controls would be implemented and a SWPPP would be filed.

As discussed in Section 2.1.2 of this DEIS, the Geotechnical Engineering Assessment prepared for the proposed project evaluated and concluded that the proposed construction methods would ensure that there are no slope stability issues. Furthermore, the Engineering Design Report and Documentation (see Appendix H) reviewed the soil borings conducted by PWGC to assure design compatibility with the native soils and groundwater elevation. It was concluded the design principles utilized for this gravity wall system are consistent with the requirements for the proposed Evergreen concrete retaining wall.

As indicated on the *Erosion and Sediment Control Plan* in Appendix C, portions of the upland areas on the northern and western slopes of the M-II zoned parcel would be planted with erosion

control blankets and plantings to stabilize soils. Regrading of the proposed landscaping area and utilizing topsoil to introduce plantings would overcome engineering limitations due to slopes. The establishment and maintenance of vegetation is the most important factor in minimizing erosion during development.

The previous grading of the subject property created a relatively flat area and modified the soil profile such that there would be no limitations for the installation of the two I/A OWTS systems. As discussed in Section 2.1.2, the soil borings performed by McDonald Geoscience for both proposed sanitary systems concluded there to be no engineering limitations for the new systems. To avoid potentially poorly draining soils on the south side of the proposed Boat Storage Building No. 2 (Proposed Building 9), soil mixing would be completed. No fill is proposed as part of the proposed action.

Post-development stormwater management controls are also proposed. As indicated on the *Grading and Drainage Plan* in Appendix C, the proposed stormwater management plan would accommodate stormwater runoff from 7.77 acres, which includes the Project Area as well as contributing off-site land area such that all stormwater runoff from the development area would be contained and recharged on-site. The methods of drainage control include leaching pools of varying depths and French drains which includes the use of pervious gravel. The proposed stormwater management system is designed to accommodate a two-inch rain event in accordance with §236-7.A of the Town Code.

Overall, based on the above, the proposed action would comply with this performance standard.

- B. Site grading, excavation and filling shall minimize destruction of natural vegetation, the potential for erosion, sedimentation and stormwater runoff and the threat to the health, safety and welfare of neighboring property owners and the general public.*

The proposed action includes the removal of approximately 135,000 cy of soil material, the removal of 634 trees and replanting of 135 trees (95 Pitch Pines and 40 small trees, such as Staghorn Sumac and Shadbush, on the proposed retaining wall). The proposed *Erosion and Sediment Control Plan* (see Appendix C) includes the protection of existing vegetation to remain by installation of construction fence or other approved means and would remain undisturbed, clearing and grading would be scheduled so as to minimize the extent of exposed areas and the length of time that areas are exposed, graded, and stripped, all stormwater would be retained on-site, a stabilized construction entrance would be constructed, flush inlet protection would be utilized, silt fencing would be installed, concrete washout would be installed at construction entrances, and temporary stockpile areas would be constructed on a 1:3 slope with a maximum height of 15 feet above grade with a silt fence perimeter and covered to minimize dust. Additionally, the Engineering Design Report and Documentation (see Appendix H) for the Evergreen concrete retaining wall concluded the design principles utilized for this gravity wall system are consistent with the requirements for the proposed Evergreen concrete retaining wall and that the proposed cut on a 34° angle taken from the base of the proposed Evergreen concrete retaining wall would not extend horizontally onto the property of the nearest resident, 5106 Mill Road. Therefore, slope stability would not be a concern to nearby properties. As such, the proposed action would comply with this performance standard.

- C. *Erosion, sedimentation and stormwater runoff shall be controlled prior to, during, and after site preparation and construction. During grading operations, appropriate measures for dust control shall be undertaken.*

As part of the proposed action, erosion and sediment control plans have been prepared, which include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. Additionally, soil stabilization measures through erosion control blankets would be employed.

The proposed action includes dust control measures through the use of watering during dry periods, limiting on-site vehicular speeds, and all trucks carting loose material and construction debris would be covered. Also, all stockpiles would be either covered or vegetated, as necessary, and a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area. Additionally, a SWPPP would be prepared and filed prior to construction.

As such, the proposed action would comply with this performance standard.

- D. *Areas exposed by site preparation shall be protected during site construction with hay bales, silt fencing, temporary vegetation and/or mulching to meet the requirements of the NYSDEC Erosion Control Manual.*

As explained in Section 2.1.2 of this DEIS, the proposed *Erosion and Sediment Control Plan* (see Appendix C) includes the use of silt fencing and inlet protection. Additionally, soil stabilization measures through erosion control blankets would be employed. As such, the proposed action would comply with this performance standard.

- E. *Natural drainage patterns shall be protected and incorporated into site design. Where natural drainage patterns are demonstrated to be adversely affecting a beach or surface waters of the State of New York, as defined herein, drainage patterns may be altered in a manner which reduces the threat to such beach or surface waters of the State of New York, as defined herein, and does not create other flooding or erosion problems.*

Natural drainage patterns have been considered in the proposed drainage plan. As indicated earlier, the proposed action includes drainage controls for approximately 7.77 acres (338,387 SF) of land area, which includes the Project Area and off-site contributing land area due to site topography. The proposed drainage plan would accommodate and recharge all stormwater within the Project Area and sized to accommodate a two-inch rain event, as required by Town Code. As such, the proposed action would comply with this performance standard.

- F. *Site preparation, including stripping of vegetative cover and grading, shall be undertaken so that no individual building site is stripped of its vegetation cover more than 30 days prior to commencement of construction. Soils exposed or disturbed by site preparation shall remain so for the shortest practical period of time during site clearing, construction and restoration.*

As indicated in Sections 1.4.1 and 3.10 of this DEIS, the site preparation phase is approximately two weeks. During the excavation phase, soils would be removed and placed directly into trailers for off-site removal. Erosion control blankets would be utilized for soil stabilization and temporary seeding would also be implemented. The only stockpiled soils would be topsoil reserved for placement in graded areas, which would be covered. As such, the proposed action would comply with this performance standard.

- G. *Disturbed soils shall be stabilized and revegetated or seeded as soon as practicable. During the interim, erosion protection measures such as temporary vegetation, retention ponds, recharge basins, berming, silt traps and mulching shall be used to ensure that sedimentation is minimized and mitigated.*

As indicated above, erosion control blankets, temporary seeding and new plantings would stabilize soils and provide effective erosion control. Additionally, the soil cut for the permanent retaining wall system would be based upon the recommendation for a 1.5:1 (Horizontal: Vertical) slope. This recommendation is based on OSHA guidelines for excavation safety in Type C (granular, i.e., sandy) soils. A 1.5:1 slope is a 34° angle, which is equivalent to the soil friction angle of the on-site soils. As such, the proposed action would comply with this performance standard.

- H. *In no case shall stormwater be diverted to another property either during site preparation or after development. In appropriate cases, with the approval of the Superintendent of Highways, drainage control measures may be implemented in the right-of-way attendant to an adjacent Town highway, at the applicant's expense.*

The proposed *Grading and Drainage Plan* has been designed to capture and accommodate all stormwater generated from the Project Area and surrounding areas on-site. Overall, as the proposed drainage plan would improve on-site stormwater management and provide drainage for areas that are currently not served, there would be a resultant benefit from the proposed action. As such, the proposed action would comply with this performance standard.

- I. *During the construction period, disposal of stormwater runoff generated by development activity shall be handled on site. Baling, mulching, debris basins, silt traps, silt fencing, use of fibrous cover materials or similar measures shall be used to contain soil erosion on the site.*

As discussed above, the proposed *Erosion and Sediment Control Plan* (see Appendix C) includes the use of silt fencing and inlet protection. Additionally, soil stabilization measures would be implemented with erosion control blankets, temporary seeding, new plantings, and the proposed Evergreen concrete retaining wall. As such, the proposed action would comply with this performance standard.

- J. *All projects, regardless of the area of groundwater removal and/or grading, shall retain a natural vegetative buffer zone along water bodies, including wetlands and marshes...*

The proposed development would be situated landward of existing buildings that front Mattituck Creek. There would be no removal of existing tidal wetland vegetation and no

activities that would impact Mattituck Creek. As such, the proposed action complies with the intent of this standard.

- K. Natural land features such as shallow depressions shall be used, wherever possible, to collect stormwater on site for recharge.*

The upland area of the subject property includes varied topography where natural stormwater collection is likely to occur. A portion of this area would be disturbed as part of the overall excavation and grading program. However, as part of the proposed action, stormwater management infrastructure would be installed which, as evaluated in the Groundwater Modeling Report, would increase the on-site stormwater recharge with beneficial impacts to the groundwater. Specifically, as explained earlier in this section, slightly increasing the recharge across the area of the proposed Construction Excavation Area increases the amount of freshwater being received by the aquifer and in turn would have the effect of causing the saltwater interface to migrate seaward and downward. Under the excavated site conditions, the water table is expected to rise 0.01 feet due to the increased recharge. As such, the proposed action would comply with the intent of this performance standard.

- L. Site designs shall minimize impermeable paving.*

The proposed action would minimize impermeable paving with the new access routes to Buildings 9 and 10 to consist of a stone blend pavement. The proposed 34 parking stalls to be striped would all be on existing gravel-surfaced area that is currently used for parking but not formally striped. As such, the proposed action would comply with this performance standard.

- M. Stormwater runoff shall not be directly discharged to surface waters of the State of New York, as defined herein. Stormwater pollutants shall not be discharged directly into a surface water of the State of New York, as defined herein, but shall be attenuated by using holding ponds, sedimentation basins, perimeter berming, vegetated buffer areas and other measures that reduce flow velocity and increase storage time. Pollutants shall not be discharged into wetlands. In addition, any filtering devices constructed as part of the drainage system must be adequately maintained in order to function properly.*

The proposed action would not include the discharge of stormwater runoff to the adjacent Mattituck Creek. As indicated on the *Grading and Drainage Plan* in Appendix C, the proposed action includes the installation of leaching pools of varying depths and French drains in areas east and west of Building 8. The proposed stormwater management system would accommodate stormwater from the Project Area and off-site contributing areas and is designed to accommodate a two-inch rain event in accordance with §236-7.A of the Town Code. As such, the proposed action would comply with this performance standard.

- N. All wetland vegetation shall be maintained. Dredging and site construction should not disturb wetlands either by direct removal of vegetation or substrate or by the alteration of adjacent slopes that would undermine the stability of the substrate unless permitted by Chapter 275. Grading equipment shall not be allowed to enter into or cross any watercourse or wetland without an approved SWPPP, Department approval, or in compliance with Chapter 275.*



The existing tidal wetland vegetation located along the southeast property boundary would not be disturbed. Land disturbance within 100-feet of the tidal wetland boundary would be limited to 180± linear feet of French drains that are five-feet wide-by-four feet deep along the southeast side of Building 8 and the striping of parking stalls in gravel-surfaced areas currently used for same. It is noted that the proposed action was reviewed and approved by the NYSDEC, and a Tidal Wetlands Permit was issued on January 31, 2020 (see Appendix I). Overall, based on the above, the proposed action would comply with this performance standard.

- O. Subsurface sediments shall be maintained to provide structural support for the soils of the wetlands.*

The proposed action would not disturb any of the adjacent wetland vegetation areas. As such, the proposed action would comply with this performance standard.

- P. The elevation of a wetland shall not be altered unless it is part of a wetland restoration project approved by the Town and/or the Department.*

The proposed action does not include any work within a wetland. As such, the proposed action would comply with this performance standard.

- Q. No vegetation required by any agency as a buffer to a natural protective feature shall be disturbed by grading, erosion, sedimentation, or direct removal of vegetation.*

The proposed action does not include any disturbance to the existing tidal wetland vegetation or any natural protective feature on-site. As such, the proposed action would comply with this performance standard.

- R. Fill shall not encroach on natural watercourses, constructed channels, wetlands, or floodway areas. All fill shall be compacted at a final angle of repose which provides stability for the material, minimizes erosion and prevents settlement. All temporary stockpiles and/or graded areas shall be protected with erosion control measures to include, but not be limited to, hay bales, silt fencing, and vegetation to meet the minimum requirements of the New York State Stormwater Design Manual.*

The proposed action does not include any fill material. During excavation and construction, temporary stockpiles of cut material awaiting transport or topsoil for planting would be covered. Also, as indicated on the proposed *Erosion and Sediment Control Plan* (see Appendix C), all temporary stockpiles would have a maximum height of 15 feet above grade, have maximum slopes of 1 on 3, and located at a minimum distance of 50 feet from concentrated stormwater flows and inlets. Silt fencing and inlet protection would also be used. The proposed *Grading and Drainage Plan* and *Erosion and Sediment Control Plan* have been developed and designed in accordance with the standards and specifications of the *NYS Stormwater Design Manual* (2015) and *New York State Standards and Specifications for Erosion and Sediment Control, Blue Book* (November 2016). As such, the proposed action would comply with this performance standard.

- S. *Trails and walking paths along water bodies shall be sited and constructed so they are not a source of sediment, as may be required by Chapter 275 and/or as part of an approved SWPPP.*

Trails and walking paths are not proposed as part of the proposed action, and there are no trails present on the subject property. As such, this standard is not applicable to the proposed action.

- T. *The amount and velocity of runoff from a site after development shall approximate its predevelopment characteristics. However, if the site is adjacent to coastal waters, stormwater shall be contained on site, to the maximum extent practicable, to prevent direct discharge of runoff to coastal waters.*

The proposed action includes drainage controls to accommodate and recharge stormwater from the Project Area and off-site contributing areas. There would be no stormwater runoff to Mattituck Creek or off-site. As such, the proposed action would comply with this performance standard.

- U. *Natural floodplains and drainage swales shall not be altered or disturbed in a manner which decreases their ability to accommodate and channel stormwater runoff and floodwaters. If no practicable alternative to the location of development, roadway, driveways, and similar surfaces within these areas exists, such facilities shall be sited and constructed to minimize and mitigate the amount and velocity of stormwater entering the channel, floodplain or swale and to approximate the original functions of the undisturbed condition.*

A small portion of the proposed disturbance is within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), (FEMA Map Panel ID: 36103C0143H) Special Flood Hazard Area (SFHA) Zone AE, which is subject to inundation by the one-percent annual chance (or 100 year) flood, along the western sides of Buildings 7 and 8. This disturbance includes striping gravel-surfaced areas that are currently used for parking but not formally marked and the installation of 180± linear feet of French drains that are five feet wide-by-four feet deep on the southeast side of Building 8. The areas to be disturbed for the proposed Buildings 9 and 10 are in Zone X outside of the 100-year floodplain. The locations of Buildings 9 and 10 would be graded to 10 feet AMSL and meet the existing elevation of the adjacent floodplain. It is noted that there are no drainage swales present on the subject property. Overall, based on the above, the proposed action would comply with this performance standard.

- V. *No land having a slope equal to or greater than 20% shall be developed or disturbed except for conservation measures or measures intended to remove debris which inhibits the functioning of natural or engineered drainage and erosion control measures except access ways to shorelines permitted by Chapter 275. Natural vegetation and topography shall be retained to stabilize soils and reduce the volume of stormwater overflow.*

The proposed action requires a modification of the site's topography to accommodate the proposed development footprint. Based on the *Grading and Drainage Plan* (see Appendix C), the proposed grading program would reduce average grade from 50± feet to 10± feet within the Phase 1 Construction Excavation Area, and from 47± feet to 10± feet in the Phase 2 Construction Excavation Area. As provided by the project engineer, the existing slopes within the Project Area would be modified to reduce steep sloped areas (i.e., those greater than 15 percent) by 50

percent. As indicated in Section 2.1.2 of this DEIS, to stabilize the slopes within the Project Area and to correct existing slope instability due to unconsolidated materials, a concrete retaining wall of approximately 875 feet in length and varying height is proposed to the north and west of the proposed boat storage buildings. Portions of the retaining wall would be vegetated for a visually appealing wall that serves to blend with the landscape. Additionally, upland of the retaining wall, landscaped areas would use erosion control blankets and plantings to minimize erosion to the existing slope of the surrounding area on the M-II zoned parcel. As indicated in the Geotechnical Engineering Assessment in Section 2.1.2 of this DEIS, the granular soils and relative compaction are favorable for stable open cuts for placement of the retaining wall. Therefore, there are no slope stability issues. Furthermore, as noted earlier, the proposed *Grading and Drainage Plan* accommodates stormwater from the Project Area as well as from surrounding off-site property such that natural drainage patterns would not be disturbed.

An alternative to the cut and removal of soils to decrease the elevation of the Project Area has been prepared and is evaluated in Section 5.4 of this DEIS. Of importance is that due to the presence of unconsolidated material, the slopes present and existing stability issues due to the nature of the material deposited, a retaining wall would still be required to accomplish building at the higher elevation. As such, slopes of greater than 20 percent would still require modifications.

- W. On lands having slopes of less than 20% but composed of highly erodible soils, development proposals shall include consideration of the load-bearing capacity of the soils. Unless it can be demonstrated that the soils can be stabilized with a minimum of on-site disturbance and no adverse impacts to the stability of neighboring properties, the development proposal shall not be approved as submitted.*

As indicated in Section 2.1.2, to prevent slope stability issues, the soil cut is recommended to be sloped on 1.5:1 (Horizontal: Vertical) slope. This recommendation is based on OSHA guidelines for excavation safety in Type C (granular, i.e., sandy) soils. A 1.5:1 slope is a 34° angle, which is equivalent to the soil friction angle of the on-site soils. As indicated by PWGC, granular soils of this composition (sand with gravel) and relative compaction (medium dense to dense) are favorable for stable open cuts. A cut on a 34° angle taken from the base of the proposed retaining wall would not extend horizontally onto the property of the nearest resident, 5106 Mill Road. Therefore, slope stability is not a concern to nearby properties.

The Engineering Design Report and Documentation (see Appendix H) reviewed the soil borings conducted by PWGC to assure design compatibility with native soils and groundwater elevation. It was concluded the design principles utilized for this gravity wall system are consistent with the requirements for the proposed Evergreen concrete retaining wall.

- X. All permanent and/or final vegetation and mechanical erosion control measures called for in approved plans shall be installed within the time limits specified by the Stormwater Management Officer, and no later than the time limits specified by the Stormwater Management Officer or noted in the stormwater management control plan.*

This is noted and the proposed action would comply with this standard.

Based upon the above analyses, the proposed development plans are consistent with the goals and standards set forth in Chapter 236 of the Town Code.

Overall, while the proposed action would increase the volume of stormwater runoff generation, there would be adequate storage capacity to accommodate all stormwater runoff on-site. The stormwater infrastructure proposed to be installed would provide substantially greater capacity as compared to the existing condition with only minimal stormwater infrastructure in place.

### **SPDES General Permit for Construction Activities**

As indicated earlier, the proposed action would disturb approximately 6.51 acres of land. As such, the SPDES General Permit (GP-0-20-001, current version) requires that a SWPPP be prepared for the proposed development and such SWPPP is to include a detailed erosion and sediment control plan to manage stormwater generated on-site during construction activities, as well as for post-construction stormwater management. In accordance with said regulations, a SWPPP would be prepared to ensure compliance with erosion and sediment control practices set forth in the *New York Standards and Specifications for Erosion and Sediment Control* (NYSDEC, 2016), as well as the water quality and quantity requirements set forth in the *New York State Stormwater Management Design Manual* (NYSDEC, 2015). A *Sediment and Erosion Control Plan* has been prepared (see included in Appendix C of this DEIS), which includes, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. As required as part of the GP-0-20-001 permit conditions, the project site would be inspected by a certified SWPPP inspector a minimum of once per week during construction. The inspections would verify the effectiveness and status of the aforementioned measures and identify any measures that need to be maintained, replaced or modified to improve performance. Prior to filing the Notice of Termination (NOT), the site would be inspected, and all permanent storm water systems would be cleaned of accumulated debris, as necessary. As coverage under the GP-0-20-001 would be obtained, and the aforementioned erosion and sedimentation control measures would be implemented as part of the proposed action, no significant adverse impacts during construction are expected.

### **New York State Stormwater Management Design Manual**

As noted in Section 2.2.1, the *NYS Stormwater Design Manual, (2015)* provides structural standards for SMPs that are acceptable for stormwater management and water quality treatment. In accordance with the performance standards and SMPs of this manual, the proposed action would utilize leaching pools of varying depths and French drains which includes the use of pervious gravel designed for a two-inch rain event pursuant to §236-7.A of the Town Code. Furthermore, as mentioned above in this section, the SPDES GP-0-20-001 would be obtained and a SWPPP would be prepared for the proposed action in accordance with the design standards of the *NYS Stormwater Design Manual, (2015)*.

### **New York State Standards and Specifications for Erosion and Sedimentation Control (Blue Book)**

As noted in Section 2.2.1 of this DEIS, the *New York State Standards and Specifications for Erosion and Sedimentation Control, Blue Book* (November 2016) provides standards and specifications for erosion and sediment control practices for the development of Erosion and Sediment Control Plans as part of

the SPDES General Permit. As explained and excerpted from Section 2.1.2 of this DEIS, an *Erosion and Sediment Control Plan* has been prepared (see Appendix C of this DEIS) and includes the following erosion and sediment controls:

- Existing vegetation to remain would be protected (by installation of construction fence or other approved means) and would remain undisturbed.
- Clearing and grading would be scheduled so as to minimize the extent of exposed areas and the length of time that areas are exposed, graded, and stripped. Areas would be kept stabilized through the use of temporary seeding as required. Seed mixtures shall be in accordance with soil conservation service recommendations. In areas where soil disturbance has temporarily or permanently ceased, temporary and/or permanent soil stabilization measures would be installed and/or implemented within seven days.
- The length and steepness of cleared slopes would be minimized to reduce runoff velocities, and runoff would be diverted away from cleared slopes.
- Sediment would be trapped on the site and not permitted to enter adjacent properties, public roads or drainage systems. Sediment barriers would be installed along the limits of disturbance prior to the start of construction and would be maintained until construction is complete.
- A stabilized construction entrance would be maintained to prevent soil and loose debris from being tracked onto local roads. The construction entrance would be maintained until the site is permanently stabilized.
- All stormwater would be retained on-site in accordance with §236-4 of the Town Code. Drainage inlets installed on-site would be protected from sediment buildup through the use of appropriate inlet protection.
- Dust mitigation would be implemented during construction, as follows:
  - Water-down access ways, stockpiles, and material prior to loading.
  - Limit on-site vehicular speeds to 5 mph.
  - Soil stockpiles would be covered.
  - All trucks carting loose material and construction debris would be covered.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Sediment barriers and other erosion control measures would remain in place until upland disturbed areas are permanently stabilized. Following permanent stabilization, paved areas would be cleaned of soil and debris and drainage systems would be cleaned and flushed, as necessary.
- Property maintenance of erosion control measures is to be performed as indicated by periodic inspection and after heavy or prolonged storms. Maintenance measures are to include but are not limited to cleaning of recharge basins, sediment traps and drywells, cleaning and repair of sediment barriers, repair of berms and runoff diverters, and cleaning and repair of inlet protection devices.
- To minimize material being brought onto local roads, the following measures would be implemented:
  - All trucks for Phase 1 would enter and exit the subject property utilizing the temporary haul road connected to West Mill Road. The temporary haul road would include a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.

- All trucks for Phase 2 would enter and exit the subject property utilizing the main entrance to SYC. The construction entrance would include a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.
- Following each day of sand and removal activities, the local streets would be swept nightly.

All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. These erosion and sedimentation controls would minimize the potential impacts associated with site development and construction activities. All proposed measures are consistent with the Blue Book and no significant adverse impacts from erosion and sediment controls would be anticipated.

### **Nationwide Urban Runoff Program (NURP)**

The relevant recommendations from the *NURP Study*, as it pertains to stormwater runoff for the protection of groundwater and surface water resources, are as follows along with the proposed project's consistency therewith.

#### *Groundwater Recommendations*

- *Continue to use recharge basins wherever feasible for the disposal of stormwater and the replenishment of the groundwater.*

Due to shallow groundwater conditions and limited land area, no recharge basins are proposed. The proposed action would utilize on-site leaching pools and French drains which includes the use of pervious gravel in four tributary areas to accommodate stormwater runoff. There is adequate separation distance to groundwater for effective functioning of the drainage infrastructure. In accordance with Chapter 236 of the Town Code, the proposed drainage system has been designed for the two-inch rain event and has also considered off-site contributing areas in the proposed design. Also, groundwater withdrawal from the site would decrease from 1,058± gpd to 218± gpd upon implementation of the proposed action due to the public water supply connection. Overall, the proposed action is consistent with this recommendation as on-site containment and recharge would be provided.

- *Consider the use of in-line storage leaching drainage systems, or components thereof, as a substitute for recharge basins in areas, other than parking lots, where maintenance will be assured and where the value of the land for development purposes is greater than the cost of installing and maintaining the underground system. Storage leaching drainage systems should also be considered for use where the installation of recharge basins is not feasible.*

As indicated above, the proposed drainage system includes the use of leaching pools and French drains which includes the use of pervious gravel to accommodate and recharge stormwater on-site. As such, the proposed action is consistent with this recommendation.

- *Prevent illegal discharges to drainage systems or recharge basins. Such discharges, which often result from improper storage or deliberate dumping of chemicals, must be controlled at the source.*

All chemicals are currently stored in accordance with best management practices and permitted under Article 12 of the SCSC. No changes to chemical storage nor chemical storage volumes are anticipated as part of the proposed action. There would be no discharge to drainage systems.

#### *Surface Water Recommendations*

- *Preclude any additional direct discharge of stormwater runoff into surface waters, using all available means for detention and/or recharge to reduce bacterial loads.*

The proposed drainage plan includes on-site structural (i.e., on-site leaching pools) and non-structural (i.e., pervious gravel) methods for stormwater containment. There would be no discharge of stormwater to Mattituck Creek.

- *Protect stream corridors from encroachment, so that the stream reaches that will become dry because of the lowering of the water table due to sewerage will always be available for stormwater detention and recharge.*

There is no sewerage proposed as part of the proposed action. All sanitary waste would be accommodated in two I/A OWTS such that recharge would continue, but effluent would be treated to the standard of 19 mg/L. Also, groundwater withdrawal from the site would decrease from 1,058± gpd to 218± gpd upon implementation of the proposed action due to the public water supply connection. Finally, the proposed drainage plan would accommodate and recharge stormwater from a land area of approximately 7.77 acres. Overall, the proposed action is consistent with this recommendation.

### **Nonpoint Source Management Handbook**

The relevant recommendations provided in the *Nonpoint Source Management Handbook* were reviewed and a discussion of the proposed project's consistency therewith follows:

#### Chapter One -Land Use

- *Limit the removal of natural vegetation and the creation of lawn areas.*

Implementation of the proposed action would involve the clearing of 5.51± acres of the 17.27±-acre forested area (Coastal Oak-Beech Forest / Successional Southern Hardwood) and 0.54± acres of meadow and brushland (Successional Shrubland). However, 1.67± acres of landscaped area and groundcover would be created with native and/or adaptive, low-maintenance and drought tolerant species to stabilize the slopes and enhance the visual screen of the subject property from views to the north, west, and south. The remaining naturally vegetated area west of the Project Area would remain undisturbed (i.e., 11.76± acres of forested area [Coastal Oak-Beech Forest/Successional Southern Hardwood] and 10.29± acres of meadow/bushland [Successional Shrubland]).

The tree survey completed by LUES determined that within the Subject Property there were 2,408 trees (see Appendix N). Based on the site development plans prepared by the project engineer and the tree survey completed, 634 trees would be removed to construct the two boat storage buildings, access roads, and Evergreen concrete retaining wall. As presented in Section 1.2.1, approximately 73.7 percent (1,774) of the total trees at the subject property would be retained with 1,039 trees (43.1 percent) retained on the R-80 zoned portion of the subject property and 735 trees (30.5 percent) retained on the M-II zoned portion of the subject property. Of the 2,408 total trees at the subject property, 1,647 trees (38.2 percent) are classified as Coastal Oak-Beech Forest and 12.7 percent of the Project Area's trees surveyed are classified as large trees with diameters greater than 18 inches. However, 66.8 percent of the total Coastal Oak-Beech Forest trees and 66 percent of the total trees with diameters larger than 18 inches would be retained. As such, the proposed action is consistent with this recommendation.

## Chapter Two -Stormwater Runoff

As excerpted from the Recommendations section of Chapter Two (pages 33-36), the following are recommendations relevant to the site planning and design of a stormwater management system:

- *Minimize grade changes and site clearing*
- *Retain native vegetation on steep slopes, in swales, on excessively drained sandy-gravelly soils, on soils with a high content of silts, fine sands and clays, and in areas with a high-water table or adjacent to surface waters.*
- *Avoid the use of paved surfaces such as parking lots and roadways where the presence of the following conditions indicate potential problems:*
  - *Severely sloped terrain;*
  - *Flood plain areas;*
  - *Existing swales;*
  - *Lowland areas;*
  - *Depressions, kettleholes; and*
  - *Soil constraints listed as severe or moderate.*
- *Incorporate the following general stormwater controls checklist into the site design as needed:*
  - *Reduce the extent of impermeable surfaces insofar as possible.*
  - *Use swales and shallow depressions to collect stormwater on-site, wherever possible.*
  - *Provide temporary on-site areas to receive stormwater runoff flows that are generated by construction and other site development activities.*
  - *Do not allow increased sediment resulting from construction or operational phase of site development to leave the site or to be discharged into stream corridors, marine or freshwater wetlands.*
  - *Do not allow the dumping or filling of excess soil or other materials generated from site development into swales and surface waters.*
  - *Minimize the amount of soil area exposed to rainfall and the period of exposure. Cover or plant exposed soils as soon as possible.*

Upon implementation of the proposed action, the proposed grading program and design would meet the existing grade at Buildings 7 and 8. Grading the area of disturbance to Elevation 10 allows for the maximum incline the lifts can operate to move boats from



Mattituck Creek to Buildings 9 and 10. The proposed action would retain all existing woodlands west of the Project Area and to the east at the area of disturbance, 634 trees would be removed. The area landscaped vegetation would increase by 1.67± acres from existing conditions of 0.24± acre to 1.91± acres. The proposed development would also incorporate stone blend pavement in the proposed access routes in lieu of impermeable pavement.

Sedimentation and erosion control measures would be employed during construction in accordance with the *Erosion and Sediment Control Plan* that has been prepared (see Appendix C). As indicated on the *Erosion and Sediment Control Plan*, erosion and sedimentation controls would be undertaken prior to and during construction and would include, at minimum, stockpile protection, minimizing the extent and duration of exposed areas, installation of sediment barriers and sediment traps (silt fencing), and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. These erosion and sedimentation controls would minimize the potential impacts associated with site development and construction activities to ensure proper function.

There are also recommendations for stormwater management during site development (pages 43-52). Relevant to the proposed action are the following recommendations:

*Natural Vegetation*

- *Use natural vegetation as an important nonstructural alternative in the control of stormwater runoff and erosion/sedimentation.*
- *Stabilize exposed slopes during and after construction, by using temporary and/or permanent, structural or nonstructural stabilization measures.*

As discussed above, erosion and sedimentation controls would include, at minimum, stockpile protection, minimizing the extent and duration of exposed areas, installation of sediment barriers and sediment traps (silt fencing), and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. As discussed in Section 2.1.2, the soil cut proposed for the Evergreen concrete retaining wall would not extend horizontally onto the property of the nearest resident, 5106 West Mill Road and slope stability would not be a concern to nearby properties. Additionally, regarding the retaining wall, the soil design parameters are suitable based on the characterization of Stratum 1, 2 and 5. Furthermore, existing trees to be retained would be clearly marked with silt fencing and/or tagging to prevent removal during the site clearing phase.

*In-Line Storage (Nationwide Urban Runoff Program)*

- *Use an in-line storage system for the collection of stormwater runoff from parking lots and roadways.*

In accordance with the above recommendations, the *Grading and Drainage Plan* has been prepared (see Appendix C) and includes the installation of leaching pools and French drains which includes the use of pervious gravel as stormwater management methods in the Project

Area. Four tributary areas are proposed to be constructed within the area of disturbance and capture stormwater runoff from the proposed buildings and the roof of Building 8. The drainage areas would be graded to convey stormwater to inlet structures. Stormwater management in the areas of Buildings 1 through 6 would remain the same as under existing conditions.

Soil and Slope Stabilization Measures

- *Use stabilization techniques to prevent erosion.*

Slopes disturbed as a result of the proposed action would be stabilized with the retaining wall and vegetation of the retaining wall and upland area. Although extensive grading would be required for the proposed action, the above measures would adequately protect the slopes from erosion and correct existing slope instability due to unconsolidated materials.

Based on the above, the proposed action would be consistent with these recommendations.

Chapter Three – On-Site Systems

- *Follow County Health Department guidelines.*

The proposed action has been filed with the SCDHS for Article 6 permitting. As such, the proposed systems (I/A OWTS) would be designed and installed in accordance with Article 6 as well as Article 19 of the SCSC.

Chapter Five – Fertilizer

- *Retain as much of the natural vegetation of the site as possible. Minimize grade changes and site clearing.*
- *Use native plants for the planting of areas that have been disturbed by grading. Consider the use of alternative types of groundcover and other plant materials to avoid or reduce lawn area and the consequent need for fertilizer applications, extensive watering and maintenance.*

Upon implementation of the proposed action, the area of forested area (Coastal Oak-Beech Forest/Successional Southern Hardwood) on the overall subject property would decrease from 17.27± acres to 11.76± acres (i.e., a decrease of 5.51± acres) and the area of meadow and brushland (Successional Shrubland) by 0.54± acre (from 10.83± acres to 10.29± acres). As indicated on the *Proposed Landscape Plan* (see Appendix C) and discussed in the *Ecological Report* in Appendix N, 8.13 acres within the M-II zone (51.4 percent) will be maintained as natural vegetation comprised of Coastal Oak-Beech forest and Successional Southern Hardwood forest. Additionally, 1.67± acres of plantings and landscaping, inclusive of the Evergreen concrete retaining wall plantings, is proposed. The proposed landscaping would be native, drought-tolerant plant species that would not require regular maintenance with fertilizers or pesticides. Proposed plantings include evergreen trees (Pitch Pine [*Pinus Rigida*]), shrubs (Lowbush Blueberry [*Vaccinium angustifolium*] and Bayberry [*Myrica Pensylvanica*]), small trees (Staghorn Sumac [*Rhus Typhina*], and Shadbush [*Amelanchier canadensis*]), and a variety of grasses/groundcover (Switchgrass [*Panicum virgatum*],

Virginia Creeper [*Parthenocissus quinquefolia*], Common Milkweed [*Asclepias syriaca*], and Groundsel Bush [*Baccharis halimifolia*]). In addition to the proposed landscape program, to mitigate the removal of approximately 634 trees, approximately 135 trees would be planted. A total of approximately 86 Pitch Pine trees will be established in a 27,333 SF planting area along the new forest edge along with shrubs and groundcover, and 40 small trees, such as staghorn sumac and shadbush, on the proposed retaining wall. An additional nine (9) Pitch Pine would be planted in the lower building area adjacent to the LPG tanks. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.

### **Wetlands and Surface Waters**

This subsection evaluates the proposed project's consistency with the relevant standards and regulations that apply to the proposed development or components thereof. Additionally, the potential impacts to wetlands and surface waters are also included herein. However, it is important to restate the Applicant's commitment to Mattituck Creek through its involvement with CCE in the shellfish restoration program located at SYC.

As indicated in Section 1.1.2 of this DEIS, SYC is a designated host for the CCE Marine Program for shellfish restoration, which includes housing FLUPSY units in dockside areas that are used by CCE for shellfish harvesting. SYC has committed to being a FLUPSY host and assist in the funding of the program on its property through 2030. According to CCE, the Mattituck Inlet has proven to be the best location for regrowth in the Town of Southold and the FLUPSY site at SYC is integral to shellfish restoration on Long Island. Based on SYC's commitment to the CCE Marine Program, it is of importance to the Applicant that no activities on-site impact Mattituck Creek or Inlet.

### **Wetlands**

#### New York State Environmental Conservation Law (ECL) Article 25 – Tidal Wetlands

On January 31, 2020, NYSDEC issued a Non-Jurisdictional Determination for all activities landward of the existing bulkhead and 10-foot contour and a Tidal Wetlands Permit (Permit No. 1-4738-01843/00028) for all activities within the regulated adjacent area (*Install two dry wells/leaching pools and concrete retaining wall. Add French drain system to west side of existing one-story building. All roadway and parking area material will be gravel only. All work must be done in accordance with the plans prepared by Howard W. Young LLS last revised 1/2/2020 and stamped by NYSDEC approved 1/31/2020*).

The Boat (Vessel) Study, appended in Appendix M and further discussed later in this section, required an assessment of the existing wetland and marsh conditions at SYC and evaluated the potential impact the proposed action would have on both resources. As indicated on Figure 17 in Appendix A, tidal wetland vegetation is present in the southeastern portion of the subject property and Mattituck Creek runs along the entire eastern boundary of the subject property. The wetland delineation was completed in June 2017 as part of the NYSDEC Tidal Wetlands Permit application. There are no activities proposed within the wetland areas and all regulated activities within NYSDEC's jurisdiction

have been approved. For those activities regulated under Chapter 275 (Town Trustees Permit), which is limited to the striping of parking and installation of 180± feet of French drains adjacent to Building 8, would be done so in accordance with Town regulations. As noted in the Boat (Vessel) Study and in Section 2.2.1 of this DEIS, there are no seagrasses present nor is there a historic presence of eelgrass in Mattituck Creek. Overall, based on the above, the proposed action would not result in any significant adverse impacts to tidal wetlands, tidal marsh or seagrasses.

#### Chapter 275 – Wetlands and Shoreline Wetland Permit Requirements for the Town of Southold

As discussed in Section 2.2.1, the Town Board regulates activities that could affect wetland areas, including the following: (1) any freshwater wetland, tidal wetland, beach, bank, bluff, dune, flat, marsh, swamp, wet meadow, bog, or vernal pool; (2) any creek, estuary, stream, pond, canal, or lake; (3) land under water; (4) land subject to tidal action; (5) land within 100 feet of the areas listed above; and (6) all town waters (§275-3 of the Town Code). A consistency analysis of the regulated activities with the standards for the issuance of a permit is included below.

##### §275-12 Standards for Issuance of Permit

*The Board of Trustees may adopt a resolution directing the issuance of a permit to perform operations applied for only if it determines that such operations will not substantially:*

##### *A. Adversely affect the wetlands of the Town.*

As shown on the *Utility Plan* (see Appendix C), land disturbance within 100 feet of the tidal wetland boundary is limited to 180± linear feet of French drains that are five feet wide-by-four feet deep on the southeast side of Building 8. The other modification within the regulated tidal wetland area is the formalization of the existing gravel parking area currently used by vehicles and for boat storage to implement striping. However, the striping would not result in land disturbance and would remain gravel cover. The two proposed climate-controlled boat storage buildings, Evergreen concrete retaining wall, four 2,000-gallon LPG tanks, and I/A OWTS systems have been sited landward of the tidal wetlands. It is important to note the construction of the proposed action does not include any in-water disturbance. Additionally, as indicated above, a NYSDEC Tidal Wetlands Permit has been issued.

##### *B. Cause damage from erosion, turbidity or siltation.*

The proposed activities within 100 feet of the tidal wetland include striping of an existing area currently used for parking and boat storage and installing French drains alongside an existing building. It is the intent of SYC to clearly delineate its on-site parking and formalize on-site stormwater management. All stormwater from the Project Area and off-site contributing areas would be accommodated and recharged on-site. Furthermore, an erosion and sediment control plan has been developed in accordance with Chapter 236 of the Town Code, the *New York State Standards and Specifications for Erosion and Sedimentation Control, Blue Book* (November 2016) and thus, there would be no impacts to Mattituck Harbor from erosion or sedimentation. Overall, the proposed action would not cause damage from erosion, sedimentation, or siltation and is consistent with this standard.

*C. Cause saltwater intrusion into the freshwater resources of the Town.*

As indicated above, activities within 100 feet of the regulated tidal wetland include stripping of an existing area currently used for parking and boat storage and installing French drains alongside an existing building. Additionally, the proposed development includes a connection to the public water supply such that on-site groundwater withdrawal from the existing wells near Buildings 1 and 7 would be reduced from 1,058± gpd to 218± gpd.

It is further noted that as part of this DEIS, a Groundwater Modeling Report was performed to evaluate the potential for saltwater intrusion. As summarized earlier in this section and as excerpted from the Report included in Appendix L of this DEIS, by slightly increasing the recharge across the area of the proposed Construction Excavation Area, the amount of freshwater being received by the aquifer increases and in turn would have the effect of causing the saltwater interface to migrate seaward and downward. Under the excavated site conditions, the water table is expected to rise 0.01 feet due to the increased recharge. As such, saltwater intrusion is not expected to occur as a result of the proposed site excavation, but just the opposite is predicted. Also, two existing water supply wells are going to be removed from service as the entire site would be connected to the SCWA for domestic water supply and the two remaining on site wells will be converted to irrigation wells. Post-development, the two wells would have overall less water consumption than their combined existing condition. The net effect is again less water withdrawal from the aquifer and a benefit with regards to the saltwater interface position beneath the site. As such, the proposed action would not result in saltwater intrusion and is consistent with this standard.

*D. Adversely affect fish, shellfish or other beneficial marine organisms, aquatic wildlife and vegetation or the natural habitat thereof.*

As indicated above, activities within 100 feet of the regulated tidal wetland include stripping of an existing area currently used for parking and installing French drains alongside an existing building. There would be no expected impact of these activities on the aquatic life or vegetation. It is important to restate that SYC funds and hosts the CCE FLUPSY units that are used for shellfish harvesting. The Applicant's work with the CCE Marine Program has enabled approximately 6 million clams to be grown at the marina over the last year (and over 10 million in the last four years) and each of the existing eight FLUPSY's allows 600 gallons of water per minute (4,800 gallons of water per minute total) to pass through millions of juvenile clams leading to improved water quality (see CCE correspondence in the Boat [Vessel] Study in Appendix M). A minimum of approximately 1.5 million clams per year are expected to be harvested from the FLUPSY units at SYC. Once harvested, the clams are relocated to a NYSDEC-designated sanctuary site pursuant to the LISRP. According to CCE, the Mattituck Inlet has proven to be the best location for growth rate in the Town of Southold and the FLUPSY site at SYC is integral to shellfish restoration on Long Island. It is the intent of the Applicant to continue this successful program at the SYC facility. Therefore, the proposed action is consistent with this standard.

*E. Increase the danger of flood and storm-tide damage.*

The subject property is currently bulkheaded and all proposed development is landward of existing buildings. As indicated above, activities within 100 feet of the regulated tidal wetland include striping of an existing area currently used for parking and installing French drains alongside an existing building. Additionally, the proposed FFE for the new buildings is 10± feet, which complies with the adjacent flood zone to the east, which is Zone AE: Base Flood Elevation (BFE) 8.

The potential impacts of sea level rise have also been evaluated in Section 2.3 of this DEIS and no significant adverse impacts from flooding are expected. As indicated earlier in this analysis, the proposed action includes the installation of on-site drainage controls to accommodate and recharge stormwater on-site. Additionally, the land disturbance within 100 feet of the regulated tidal wetland area would not alter the existing grade and would not increase the likelihood of flooding. Land disturbance within 100 feet of the tidal wetland boundary is limited to 180± linear feet of French drains that are five feet wide-by-four feet deep on the southeast side of Building 8 and striping to formalize the existing gravel parking area currently used by vehicles and for boat storage. Therefore, the proposed action has mitigated the potential impact of flood and storm-tide damage and is consistent with this standard.

*F. Adversely affect navigation on tidal waters or the tidal flow of the tidal waters of the Town.*

The proposed action would be constructed at an existing operational yacht center and marina, with no activities proposed within Mattituck Creek. As indicated above, activities within 100 feet of the regulated tidal wetland include striping of an existing area currently used for parking and boat storage and installing French drains alongside an existing building. None of these activities will affect navigation or tidal flow on Mattituck Creek. Therefore, the proposed action complies with this standard.

*G. Change the course of any channel or the natural movement or flow of any waters.*

In-water work is not proposed as part of the proposed action. Routine maintenance conducted by the USACOE for Mattituck Harbor would continue without any impact from the SYC operation or proposed expansion. Therefore, the proposed action is consistent with this standard.

*H. Weaken or undermine the lateral support of other lands in the vicinity.*

The regulated activities within 100 feet of the tidal wetlands would have no impact on weakening or undermining the lateral support of other lands. Therefore, the proposed action is consistent with this standard.

*I. Otherwise adversely affect the health, safety and general welfare of the people of the Town.*

The regulated activities within 100-feet of the tidal wetlands would have no impact on the health, safety and general welfare of the community. Therefore, the proposed action is consistent with this standard.

*J. Adversely affect the aesthetic value of the wetland and adjacent areas.*

The proposed striping of gravel-surfaced areas currently used for parking and installation of French drains adjacent to Building 8 would have no impact on the aesthetic value of the wetland and adjacent areas. Therefore, the proposed action is consistent with this standard.

Overall, based on the above analysis, the proposed regulated activities would have no significant adverse impacts to the adjacent tidal wetlands. The proposed installation of French drains would actually result in beneficial impacts by providing a method of stormwater runoff control where none currently exists.

## **Surface Waters**

The Amended Final Scope required that this DEIS evaluate the potential impacts to surface waters in a "Boat (Vessel) Study." Accordingly, a Boat (Vessel) Study has been prepared and is included in Appendix M of this DEIS. The Boat (Vessel) Study identifies the existing and projected changes in boat traffic within the Mattituck Creek and Inlet, the existing and potential surface water quality impacts associated with the projected changes in boat traffic, and the monitoring and enforcement protocols that are in place. A summary of the Boat (Vessel) Study follows.

### *Projected Change in Boat Traffic*

As indicated in Table 1 of the Boat (Vessel) Study, based on SYC data and publicly available data, approximately 2,000 boats, yachts, commercial fishing vessels, government/public vessels, personal watercrafts, and kayaks and Stand-Up Paddleboards (SUPs) are docked or use Mattituck Creek annually. It is estimated that approximately 547 boats are active in Mattituck Harbor on a peak season day.

The proposed action includes approximately 88 yachts arriving to SYC in the fall for storage and departing in the spring for boating season. The yachts will arrive to the facility at the close of boating season (i.e., September-December), hauled from the water via the 85-ton travelift and transported to the heated storage buildings, and the same boats will be removed from storage, returned to Mattituck Creek via the travelift, and exit Mattituck Inlet in the beginning of the boating season (i.e., April-June). Given a 12-week timeframe for entry to storage in the Fall and the same timeframe to remove boats from storage in the Spring, this equates to an average of approximately seven (7) boats per week or between one two boats per day. SYC would maintain a schedule for all boats entering or leaving the storage facility.

It is noted that the existing uses and operations would not change upon implementation of the proposed action. SYC would still offer dockage/boat slips, fuel station, sewage pump-out services, marine travelift system, dry dock and interior storage of boats (but with heated indoor storage for larger yachts post-development), boat maintenance, repair, and detail services, and boat painting/antifouling services to all yachts utilizing the facilities. Furthermore, an increase in boat traffic is not expected to result in significant adverse impacts to surface waters as all boats are to be in operable condition, with no discharges of gray or black water from holding tanks, and no fuel leaks or

heavy exhaust; and also subject to monitoring and enforcement of the USCG and Town of Southold Bay Constable (see the Boat [Vessel] Study in Appendix M).

#### *Mattituck Inlet Soundings and Tidal Range*

The proposed action does not include any modification to Mattituck Harbor that would alter tidal flow and does not introduce a vessel length that is currently not using the Harbor today. Therefore, the use of Mattituck Harbor for boat travel to SYC for the purpose of winter storage does not require a water/tidal flow modeling/study.

Review of NOAA data (<https://tidesandcurrents.noaa.gov>), as well as an independent Mattituck Inlet Survey with soundings at low tide that was performed by H&L Contracting LLC, indicates that the tidal range for Mattituck Creek is approximately 5.0 feet (see Sections 1.2.1 and 1.2.2 in the Boat [Vessel] Study, and Figures 2 and 3 in the Boat [Vessel] Study). At low tide, depths average between 9-to-10± feet. At high tide, the average depths range from approximately seven (7) to 14 feet outside of the channel and 14-to-15± feet within the channel. The SYC marina accommodates boats and yachts 18-to-133± feet in length, which can all safely navigate Mattituck Creek. As indicated earlier and in the Boat (Vessel) Study, the average yacht size to be stored under the proposed action would be 60± feet. As such, the projected 88 vessels to be stored, at an average length of 60 feet and a maximum of 86 feet in length, can be accommodated without impacts to the Inlet or Creek.

#### *Mattituck Harbor Dredging*

As presented in Section 1.1.1 of the Boat (Vessel) Study and discussed in Section 1.1.1 of this DEIS, Mattituck Harbor is a designated Federal Navigation Channel under the Rivers and Harbors Act of 1896 (29 Stat. 202), modified in 1935 (P.L. 74-409) and 1964. This designation gives authority to the USACOE to maintain the navigability of the channel. The most recent dredging of Mattituck Harbor was completed in 2014. Prior to this, maintenance dredging for the channel was completed in 2004 and in 1996, a west jetty rehabilitation project was completed. The proposed action does not include or require any in-water work as the proposed yacht size is able to safely navigate the Inlet and Creek.

#### *Marine/Environmental Specifications for Boats/Yachts*

As indicated in the Boat (Vessel) Study, the U.S. Environmental Protection Agency (EPA) regulates exhaust and evaporative emissions for non-road spark-ignition engines, vessels, and equipment (73 FR 59034, October 8, 2008). The U.S. EPA also regulates emissions from marine compression-ignition (diesel) engines installed in marine vessels, ranging in size and application from small recreational vessels to large ocean-going vessels under various federal rules (including 40 CFR 1042 [Tier 3 and 4 engines], 40 CFR 1068 [General Compliance], 40 CFR 89 [Tier 1 and 2 below 37 kW], and 40 CFR 94 [Tier 1 and 2 at or below 37 kW]). The new vessels that are expected to utilize SYC for storage would be expected to comply with the aforementioned federal regulations for the engine types on board.

#### *Mattituck Harbor Water Quality*

The Amended Final Scope requires the Applicant to evaluate the potential impact of the proposed 88 vessels on surface water quality for Mattituck Creek. Publicly available surface water data from the



SCDHS Bureau of Marine Resources as well as the Suffolk County SWP and Long Island Sound Study (LISS) were reviewed to assess how water quality trends in Mattituck Creek compared to eastern Long Island Sound and if there was any correlation to poor water quality and an increase in maritime traffic since SYC began operating at the subject property in 2016.

Surface water quality data within Mattituck Creek is collected by the SCDHS Bureau of Marine Resources. Through coordination with SCDHS, PWGC obtained water quality data that was collected between 2000 and 2020, as part of the marine monitoring program (SCDHS, 2021). Surface water quality monitoring data was provided by the SCDHS Office of Ecology, Yaphank, N.Y.) (see Appendix B in the Boat [Vessel] study). As shown in Figure 5 of the Boat (Vessel) Study included in Appendix M, Bay Station 055320 (Latitude 41.009, Longitude -72.548583) is the closest marine monitoring station to SYC, located 155± feet northeast of the subject property. As SYC purchased the subject property in the fall of 2016, PWGC reviewed the data reported for Bay Station 055320 for an eight-year time period (2012-2020) to identify conditions prior to and after SYC acquired the property.

As summarized in Table 5 of the Boat (Vessel) Study, the water quality observed at Bay Station 053320 since SYC purchased the subject property in 2016 is consistent with the overall water quality of Long Island Sound. The seasonal fluctuations in Nitrogen, Dissolved Oxygen, and Chlorophyll-a are comparable to those in Long Island Sound and overall water quality was identified as fair to good based on conditions set forth in the LISS. Overall, the water quality of Mattituck Harbor between 2012 and 2020 is comparable to that of eastern Long Island Sound. Accordingly, SYC has not contributed to water quality degradation in Mattituck Harbor.

Review of the Suffolk County SWP was also performed to address the impact of nitrogen loading on the overall health of Mattituck Creek. Lower levels of Dissolved Oxygen and HAB events indicate the water quality of Mattituck Creek trends towards poor. However, these water quality issues are not attributed to the maritime industry but to stormwater runoff and warming waters. As the proposed action includes a drainage plan that complies with the Town's stormwater management regulations, no significant adverse impacts associated with stormwater runoff would be expected.

Another key indicator of water quality is the state of the shellfish harvests. As discussed in Section 2.2.1, Mattituck Creek is seasonally uncertified for shellfishing from May 1 to December 31 by the NYSDEC. These seasonal closures have occurred since the 1980s. Based on historic information reviewed, the primary reasons for these closures are the presence of saxitoxins and HABs such as (*Aureococcus anophagefferens*), two types of red tides (*Alexandrium fundyense* and *Dinophysis acuminata*), and rust tide (*Cochlodinium polykrikoide*).<sup>26</sup> The HAB events are closely related to increasing water temperatures and occur almost annually in Long Island's waters. To assist in improving water quality on Mattituck Creek, SYC was chosen by CCE to serve as a FLUPSY host.

Based on the data and sources reviewed, the boating industry was not identified as a contributor to the degradation of surface water quality for Mattituck Creek or Long Island Sound. The proposed action would introduce 88 yachts to Mattituck Creek over a 12-week period (seven [7] yachts per week or one-to-two per day when averaged over the 12-week period for receiving boats or hauling back into Mattituck Creek). As all yachts are required to meet both state and Federal discharge and engine exhaust standards and the No Discharge Zones would prohibit yachts from dumping sewage into

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<sup>26</sup><https://www.newsday.com/long-island/suffolk/dec-shuts-shellfish-harvesting-in-southold-1.3644504>

Mattituck Creek, there would be no associated impacts to the waters of Mattituck Harbor. Additionally, the proposed action includes several measures to protect surface water quality, including a SWPPP, upgrades to the existing sanitary systems to I/A OWTS, and post-development drainage controls to accommodate and recharge stormwater on-site.

As the proposed action would introduce an imperceptible number of new boats and yachts to Mattituck Creek and Long Island Sound and SYC would implement measures to protect surface water quality on-site, the proposed action would not introduce new risks to surface water quality.

#### *Tidal Wetlands and Marsh*

As indicated in the Boat (Vessel) Study and earlier in this section, although mapped NYSDEC Tidal Wetlands are located on the subject property, the proposed action would not disturb or alter any wetland vegetation. Additionally, the NYSDEC has reviewed the proposed plan and a Tidal Wetlands Permit was issued on January 31, 2020.

The proposed striping to formalize parking stalls and the proposed French drains both on the southeast side of Building 8 are within 100 feet of NYSDEC mapped tidal wetlands and therefore subject to review by the Town of Southold Town Trustees pursuant to §275-3(C)(5). The Town Trustees jurisdiction is limited to 100 feet from tidal wetlands and their review of the proposed action is therefore limited and does not include the landward uses proposed. Furthermore, the proposed action is compliant with all Parts set forth at §275-12 (Standards for Issuance of Permit). The proposed improvement of the stormwater management system would have beneficial impacts on the tidal wetlands as the French drains would capture and recharge stormwater from the Project Area and off-site contributing areas. Finally, as there are no seagrasses or eelgrass in Mattituck Creek, no significant adverse impacts would result. Overall, based on the above, the proposed action would not result in any significant adverse impacts to tidal wetlands, tidal marsh or seagrasses.

#### *Monitoring and Enforcement*

Both the US Coast Guard and the Town of Southold Bay Constable are responsible for monitoring and enforcement of activities within Mattituck Harbor. Based on the proposed use (i.e., construction of two boat storage buildings and associated appurtenances), the Town's request for the Applicant to devise methodology to police and monitor water quality suggests a much more intense use. The scope of the proposed action does not involve improvements within Mattituck Creek. The addition of 88 yachts in Mattituck Creek would be imperceptible to existing users as the storage and launch of the yachts would take place over a 12-week period. The yachts would arrive to the facility at the close of boating season (September - December) and the same yachts would be launched again in the beginning of the boating season (April - June). Given a 12-week timeframe for entry to storage in the Fall and the same timeframe to remove boats from storage in the Spring, this equates to an average of approximately seven (7) boats per week or between one two boats per day. SYC would maintain a schedule for all boats entering or leaving the storage facility. As concluded in the Boat (Vessel) Analysis, the measures in place to police Mattituck Creek with regards to water quality and boat traffic safety are sufficient to accommodate the proposed action. Therefore, the proposed action would not require the development of additional policing methods to address the threat of water quality and boat traffic safety would not be needed.

Based on the analyses set forth in the Boat (Vessel) Study (see Appendix M), the proposed action would not contribute to water quality degradation and would integrate appropriate measures aimed at improving water quality of receiving waters such as the inclusion of I/A OWTS systems and proposed stormwater management system on site.

#### Surface Waterbody Classification

Mattituck Creek is classified as a Class SA saline surface water, according to NYSDEC Environmental Resource Mapper,<sup>27</sup> as noted in Section 2.2.1 of this DEIS. Following implementation of the proposed action, the classification of Mattituck Creek would remain Class SA (see Figure 19 in Appendix A). The proposed boat storage buildings would enable the Applicant to continue to support the local recreational boating industry on Mattituck Creek by providing winter storage for larger boats up to 86 feet in length. Additionally, the Applicant would continue to provide space for commercial fishermen to dock their boats and provide maintenance services for the boats, as necessary. The FLUPSY units would continue to increase the productivity of Mattituck Creek and support local shell fishing initiatives. Furthermore, the proposed action would not alter surrounding land uses that provide recreational and fishing opportunities along Mattituck Inlet and Mattituck Creek.

#### Significant Coastal Fish and Wildlife Habitat

Mattituck Creek is located to the adjacent east of the subject property and Mattituck Inlet is located to the north of the subject property. As noted in Section 2.2.1 of this DEIS, these surface waters, identified as the Mattituck Inlet Wetland and Beaches, are NYSDOS designated Significant Coastal Fish and Wildlife Habitat. The proposed action would occur outside the designated habitat and would not affect any significant fish or wildlife communities. Furthermore, the proposed action would implement a comprehensive stormwater management program to capture and recharge all stormwater on-site such that no runoff would overflow into Mattituck Creek or onto surrounding properties. The proposed action would not affect the Applicant's participation in the Town's Pump-Out program; nor would it affect the existing CCE Marine Program that occurs on-site.

It is noted that the NYSDEC issued a Tidal Wetlands Permit for the proposed action. The Applicant would abide by the conditions in the issued permit as well as the general conditions of NYSDEC tidal wetlands permits. The Applicant will integrate all conditions set forth in the NYSDEC permit prior to and during construction of the proposed action.

No significant adverse impacts to tidal wetlands located on-site or within Mattituck Creek are expected to result from the proposed action. No physical disturbance to tidal wetlands is proposed, and the project provides for mitigation measures that would contribute to potential surface water quality and habitat quality improvements in Mattituck Creek, such as new I/A OWTS's and new stormwater drainage infrastructure.

Based on the foregoing, the proposed action would not have a significant adverse impact on the adjacent Significant Coastal Fish and Wildlife Habitat.

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<sup>27</sup><https://gisservices.dec.ny.gov/gis/erm/>

### **2.2.3 Proposed Mitigation**

The proposed project includes the following mitigation measures that effectively minimize or eliminate any potential adverse impacts:

- The proposed new and replacement systems with I/A OWTS technology will reduce the effluent nitrogen concentration on site, in accordance with Article 6 and Article 19 standards of the SCSC.
- The proposed action includes the installation of a stormwater management system that will contain and recharge stormwater from a two-inch rain event from the Project Area and off-site contributing areas. The proposed stormwater management controls will include both structural infiltration (on-site leaching pools) and non-structural methods (pervious gravel) for infiltration.
- The proposed stone blend pavement will reduce the area of impervious surface on the site while also providing for effective infiltration for stormwater.
- The proposed connection to the public water supply will reduce on-site groundwater withdrawal and will offer the ability to connect to the public water system to neighboring property owners.
- The proposed *Erosion and Sediment Control Plan* will include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. Prior to construction, a SWPPP will be prepared and will address additional items during construction such as concrete washout areas, temporary stabilization, and erosion and sediment maintenance and inspection procedures.

## **2.3 Flooding and Climate Change**

The Amended Final Scope required the potential significant adverse impacts of climate change, sea-level rise, and flooding on the proposed action to be assessed in two separate impact categories of the Natural Environmental Resources analysis of the DEIS - Impacts on Water Resources and Impact on Flooding. To avoid redundancy and present a cohesive analysis in this DEIS, the required analyses set forth in both the Impacts on Water Resources and Impact on Flooding regarding climate change, sea-level rise, and flooding have been combined into this section.

### **2.3.1 Existing Conditions**

#### ***Floodplains***

According to the FEMA Map Panel ID: 36103C0143H (see Figure 22 in Appendix A), the overall subject property is mapped as follows:

- The eastern portion of the subject property that is currently developed with the operating marina Buildings 2, 5 through 8 is located within the SFHA Zone AE, which is the 100-year flood zone, with a BFE of 8 feet (see Figure 22 in Appendix A). Areas in Zone AE are subject to inundation by the one percent annual chance (or 100 year) flood.
- The northeast portion of the subject property that is developed with Building 3 and area to the south of Building 8 are situated within Zone X: 0.2 percent annual chance or 500-year flood zone.
- The existing residential structure (Building 1) and all areas landward of Elevation 8.0 are within Zone X: Area of Minimal Flood Hazard (i.e., area is outside a SFHA).

### ***Climate Change***

The New York State Legislature passed the 2014 Community Risk and Resiliency Act (CRRA) to ensure that best available data is considered when evaluating and predicting the potential impact of climate risks and extreme weather events associated with sea-level rise, storm surges, and flooding on development or planning initiatives when considering the expenditure of State monies, facility-siting regulations are developed, and the issuance of State permits. By the year 2100, it is anticipated that the 10- year storm could occur every three years. The CRRA outlined five provisions to ensure an adequate assessment of a project's risk to sea-level rise is completed prior to being granted approval by a State agency. The five provisions include: (1) the adoption of official sea-level rise projections; (2) consideration of sea-level rise, storm surge, and flooding in facility siting, permitting, and funding; (3) Smart Growth Public Infrastructure Policy Act criteria; (4) model local laws concerning climate risk; and (5) guidance on natural resiliency measures.<sup>28</sup> The subsequent section discusses the manner in which NYSDEC addresses sea level rise and the sea level rise projections formulated by the New York State Energy Research and Development Authority (NYSERDA).

### **Sea Level Rise (6 NYCRR Part 490 Regulations)**

CRRA required NYSDEC to adopt science-based sea-level rise projections into regulations by January 1, 2016. NYSDEC adopted science-based projections in 6 NYCRR Part 490 – Projected Sea-level Rise. The intent of Part 490, as excerpted from §490.1 – Purpose, is:

*"[t]his Part establishes science-based projections of sea-level rise for New York State's tidal coast, including the marine coasts of Nassau, Suffolk and Westchester counties and the five boroughs of New York City, and the main stem of the Hudson River, north from New York City to the federal dam at Troy.*

Additionally, the applicability of this Part, as laid out in §490.2 – Applicability, is such that:

*"[t]his Part applies to consideration of sea-level rise by the Department, other State agencies, and applicants for relevant permits, approvals, and funding in the context of programs specified in the Community Risk and Resiliency Act."*

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<sup>28</sup> <https://www.dec.ny.gov/energy/104113.html>

The sea level rise projections were based on the 2011 ClimAID Report (ClimAID data) published by the NYSERDA, which took into consideration 16 global climate models that were then synthesized to apply to New York State. NYSERDA's role in sea level rise projections in New York State are discussed later in this section of the DEIS. Utilizing the ClimAID data allowed for a more realistic assessment of New York State's vulnerability to sea level rise that would otherwise be absent from more global models available.<sup>29</sup>

As set forth §490.3, there are varying confidence levels in the data:

- *Low projection - The amount of sea-level rise that is consistent with historical rates of sea-level rise and is very likely (the 10th percentile of ClimAID model outputs) to be exceeded by the specified time interval.*
- *Low-Medium projection - The amount of sea-level rise that is likely (the 25th percentile of ClimAID model outputs) to be exceeded by the specified time interval.*
- *Medium projection - The amount of sea-level rise that is about as likely as not (the mean of the 25th and 75th percentiles of ClimAID model outputs) to be exceeded by the specified time interval.*
- *High-Medium projection - The amount of sea-level rise that is unlikely (the 75th percentile of ClimAID model outputs) to be exceeded by the specified time interval.*
- *High projection - The amount of sea-level rise that is associated with high rates of melt of land-based ice and is very unlikely (the 90th percentile of ClimAID model outputs) to be exceeded by the specified time interval.*

These projections were completed for the following specific geographic regions of New York State: Mid-Hudson Region, New York City/Lower Hudson Region, and Long Island Region. The table below is excerpted from §490.4 – Projections provides the projections for the Long Island Region:

**Table 16 – 6 NYCRR Part 490 New York State Sea Level Rise Projections: Long Island**

	Projection	Low	Low-Medium	<b>Medium</b>	High-Medium	High
Time Interval	2020s	2"	4"	<b>6"</b>	8"	10"
	2050s	8"	11"	<b>16"</b>	21"	30"
	2080s	13"	18"	<b>29"</b>	39"	58"
	2100	15"	21"	<b>34"</b>	47"	72"

To evaluate the projected change in sea level rise, a 30-year planning projection was considered as three decades is a standard period of time to characterize the current climate, per World Meteorological Organization (WMO).<sup>30</sup> WMO indicates that climate is, "the "average weather"...defined as the measurement of the mean and variability of relevant quantities of certain variables (such as temperature, precipitation or wind) over a period of time....The classical period [to define climate] is 30 years." Therefore, this DEIS considers the medium confidence level (2050s) and its effect on the subject

<sup>29</sup> <http://www.nyserra.ny.gov/climaid>

<sup>30</sup> <https://www.wmo.int/pages/prog/wcp/ccl/faqs.php#q1>

property as that is a 30-year period from the existing conditions of the proposed action. As indicated in Table 16, the medium projection for 2050 is 16 inches (1.33± feet) of sea level rise on Long Island.

Based upon available mapping provided by the NYSDOS, the current condition at SYC was compared to sea level rise of 12 inches and 24 inches (see Figure 23 in Appendix A). As depicted in the figures, sea level rise of 12 and 24 inches would not be expected to impact the property beyond the bulkhead and MHW. As indicated on the *Alignment Plan* (see Appendix C), MHW at the subject property coincides with the top of the bulkhead and was mapped at approximately 4.0 ± feet. Based on a 16-inch or 1.33± feet projection in the 2050s, MHW would be expected to increase to 5.3± feet AMSL. The existing bulkhead ranges from 6.0± feet to 6.8± feet, and thus, would remain higher than MHW.

The existing building elevations are as follows:

- Bldg. 2 FFE = 9.6± feet
- Bldg. 3 FFE = Range 8.9± feet to 9.3± feet
- Bldg. 6 FFE = 8.9± feet
- Bldg. 7 FFE = 7.7± feet
- Bldg. 8 FFE = Range 7.3± feet to 7.4± feet

Based on the elevations, the 2050s projection would not be expected to impact the existing buildings.

### **Sea Level Rise with Storm Inundation (NYSERDA)**

NYSERDA is a public benefit corporation in New York State with the mission to, “[a]dvance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.”<sup>31</sup> Specifically as it relates to climate change, NYSERDA has published two ClimAID reports, one in 2011 and a revision in 2014, which detail the temperature, precipitation, extreme events, and sea level rise projections for New York State. The 2014 report utilized the findings of the Coupled Model Intercomparison Project and Phase 5 (CMIP5) climate models included in the Intergovernmental Panel on Climate Change’s (IPCC’s) Fifth Assessment Report.<sup>32</sup> Data analyzed using IPCC’s method assessed variables that climate models could not previously simulate, such as changes in ice sheet dynamics.<sup>33</sup> NYSERDA subsequently revised its sea level rise projection scenarios to now consider 35 climate models instead of the 16 climate models utilized to calculate the projections in the 2011 report. Similar to the 2011 report from which the CRRRA criteria was developed and is discussed earlier in this section of the DEIS, the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles were considered for potential revision. The modeling concluded the sea level rise projections for Long Island (Region 4 – Montauk Point) would remain the same as those presented in the 2011 ClimAID report and discussed earlier in this section of the DEIS.

NYSERDA has developed a Future Coastal Floodplain Mapper for Lower New York State (hereinafter called “NYSERDA Mapper”) to understand how the existing mapped floodplain could be modified in

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<sup>31</sup><https://www.nyserda.ny.gov/About>

<sup>32</sup><https://www.nyserda.ny.gov/About/Publications/Research-and-Development-Technical-Reports/Environmental-Research-and-Development-Technical-Reports/Response-to-Climate-Change-in-New-York>

<sup>33</sup><http://www.nyserda.ny.gov/climaid>



scenarios where 12, 18, 24, 36, 48, 60, and 72 inches of sea level rise are experienced under the following storm conditions: 10-year, 50-year, 100-year, and 500-year. were formulated using data available from historic storm event frequency and intensity.<sup>34</sup> The NYSERDA Mapper projections differ from the data presented in the 2011 and 2014 ClimAID reports in that storm inundation is considered to evaluate the future expansions of the floodplains when sea level rise is assumed. When analyzing SYC's susceptibility to sea level rise using the NYSERDA Mapper, the median scenario from CRRRA for the 2050s was applied, 18 inches.

As indicated earlier in this section of the DEIS, Buildings 2, and 5 through 8, are located in Zone AE (BFE 8), Building 3 is located in the 0.2 Annual Chance Flood Hazard. Building 1 (existing residential structure) and the area upland of the currently developed marina buildings is in Zone X, an area of minimal flood risk. Review of the NYSERDA Mapper under two storm scenarios were considered and mapped: (1) 18 inches of sea level rise in the 2050s and a 10-year storm event; and (2) 18 inches of sea level rise in the 2050s and a 100-year storm event. At a 10-year recurrence interval (see Figure 24 in Appendix A) with 18 inches of sea level rise (2050s), storm inundation could occur at existing Buildings 2, 7 and 8, and the eastern portions of existing Buildings 3 through 6 could be affected. The existing Building 1 would be unaffected. At a 100-year recurrence interval (see Figure 24 in Appendix A) with 18 inches of sea level rise (2050s), storm inundation could occur across the SYC property, with Building 1 unaffected.

### **Groundwater Table Elevation**

With sea level rise, the effects on coastal water tables are also important for consideration. As described by the USGS Freshwater-Saltwater Interactions Along the Atlantic Coast – A Regional Assessment of the Ground-Water Resources Program (2017), the landward and upward movement of sea water into the coastal aquifers will raise groundwater and saltwater will infiltrate the drinking water. Due to location of the subject property along the Mattituck Creek, sea level rise is expected to have an equal rise in groundwater elevation (i.e., a 16-inch rise in sea level would cause an equal 16-inch rise in groundwater elevation).

As part of the Groundwater Modeling Report prepared by PWGC (see Section 2.2.2 and Appendix L of this DEIS), the groundwater model was used to simulate a 16-inch increase in sea level and predict what the groundwater conditions would look like on site should that occur. As indicated in Figure 20 of the Groundwater Modeling Report in Appendix L, the model predicts the groundwater beneath the site to rise to an elevation of 3.05 feet AMSL (NAVD 88), or a rise of 1.31 feet (model predicted the post excavated site groundwater elevation to be 1.74 feet AMSL (NAVD 88) without any sea level rise – see Figure 19a of the Groundwater Modeling Report in Appendix L).

Based on the building elevations presented above, there would be no impacts to the current buildings.

### **Precipitation**

After reviewing the *Climate at a Glance: City Time Series* available through the NOAA National Center for Environmental Information, between 1940-2000 at New York (LaGuardia), which is also on the

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<sup>34</sup> [https://services.nyserdera.ny.gov/SLR\\_Viewer/default](https://services.nyserdera.ny.gov/SLR_Viewer/default)



North Shore of Long Island along the Long Island Sound similar to the location of the proposed action, the average monthly precipitation was 3.97± inches. Since 2017, there has been an overall downward trend in annual precipitation.<sup>35</sup> On Long Island, there is on average 3-to-4.5 inches of precipitation per month.<sup>36</sup> Annually, in Suffolk County, there is approximately 50 inches of precipitation. Precipitation can include rain, freezing rain, sleet, snow, or hail. Groundwater recharge varies annually but has been estimated to be anywhere between 50 to 75 percent of the annual precipitation.<sup>37</sup>

While there is a decrease in overall precipitation, there has been an increase in heavy precipitation events. The LISS defines a heavy precipitation event as, “*greater than 0.5 inches and 1 inch over a 24-hour period.*”<sup>38</sup> The LISS evaluated trends in heavy precipitation events from 1940 to 2020 and there has been an 11 percent increase in 0.5-inch rain events and 17 percent increase in 1-inch rain events during this time period. The potential impact of increased precipitation on the proposed action is discussed in Section 2.3.2.

The potential impacts of floodplains, climate change and precipitation on the proposed action are discussed in Section 2.3.2.

### **2.3.2 Potential Impacts**

#### ***Floodplains***

As indicated in Section 2.3.1 and shown on Figure 22 in Appendix A, the Project Area inclusive of the proposed retaining wall, storage buildings, new and replacement I/A sanitary systems, drainage infrastructure, and new pavement areas would occur entirely outside of a SFHA (i.e., FEMA Flood Zone X). However, the FEMA Flood Zone X is based upon the current elevations of the subject property. The flood zone boundary between Zone AE: Elevation 8 feet BFE and Zone X: 500-year flood runs north-south at Elevation 8 feet AMSL. Upon implementation of the proposed action, the Project Area would reduce to Elevation 10 feet AMSL with the proposed cut and removal of material. The Zone X designation is also based upon the current elevations of the Project Area (i.e., 7.10± feet to 46.1± feet AMSL). Upon implementation of the proposed action, the Project Area elevation would decrease to Elevation 9 feet AMSL.

It is noted that the adjacent mapped floodplain is Zone AE with BFE of 8 feet and building within this area would require the lowest habitable building level (i.e., First Floor Elevation) to be placed at BFE plus 2 feet or Elevation 10 feet. Accordingly, Buildings 9 and 10 would be constructed with an FFE at Elevation 10 feet. Other proposed improvements, including new pavement, drainage infrastructure, and I/A sanitary systems would be situated at approximately Elevation 10 feet AMSL.

Although the proposed action is outside of the mapped floodplain, the proposed storage buildings would be compliant with NYS requirements for new construction in the Zone AE floodplain, as follows: “*When there is a base flood elevation available, the lowest floor including any basement, must be at or*

<sup>35</sup><https://www.ncdc.noaa.gov/cag/>

<sup>36</sup>[https://www.usgs.gov/centers/ny-water/science/long-island-precipitation-and-recharge?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/centers/ny-water/science/long-island-precipitation-and-recharge?qt-science_center_objects=0#qt-science_center_objects)

<sup>37</sup> United States Geological Survey, 2013.

<sup>38</sup> <https://longislandsoundstudy.net/ecosystem-target-indicators/heavy-precipitation/>

above the base flood elevation (plus two feet beginning in 2007). Elevation may be by means of properly compacted fill, a solid slab foundation, or a "crawl space" foundation which contains permanent openings to let flood waters in and out. Non-residential structures may be flood proofed in lieu of elevation."<sup>39</sup> Other proposed improvements, including new pavement, drainage infrastructure, and I/A sanitary systems would be situated at Elevation 9.40± feet AMSL.

As discussed later in this Section, the *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act* provides flood-risk management guideline elevations for structures and identifies the following relevant considerations when developing in areas of flood risk: siting of structures, design considerations, utilizing climate-informed science to guide elevations, and structure-specific elevation guidelines. The proposed action includes siting the proposed buildings at Elevation 10 feet AMSL, which complies with the adjacent flood zone of Zone AE (BFE:8 feet) and floodplain development regulations of BFE plus 2 feet freeboard. The Town of Southold has codified this requirement at §148-19 (A)(1-2). Additionally, the proposed stormwater infrastructure and sanitary systems have been sited at similar elevations and there would be adequate separation distances to groundwater for infiltration. Finally, as discussed later in this section, the Project Area is not expected to be impacted by flooding due to sea level rise or storm inundation. Impacts from sea level rise and storm inundation are concentrated at the bulkhead. Overall, the proposed action has adequately considered recommendations set forth in the *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act*

The Town of Southold addresses floodplain development in Chapter 148 *Flood Damage Prevention* of the Town of Southold Town Code. The proposed action is required to comply with the applicable standards of Chapter 148-16 *Standards for All Structures* which includes: (A) the anchoring of new or substantially improved structures within the SFHA pursuant to State and local anchoring laws for resisting wind forces; (B)(1-3c) utilization of construction material resistant to flood damage and minimizes flood damage, any enclosed areas below the lowest floor of a new, substantially improved or existing structure within Zones A1-A30, AE, AH or Zone A with BFE data is to be used only for parking, building, access or storage and is designed to automatically equalize hydrostatic pressure on exterior walls and to allow the entry and exit of floodwaters (the design must be certified by a licensed professional engineer or architect to ensure there's at least two openings affixed with louvers, valves, screens, or other coverings which permit one square inch of opening for every square foot of enclosed space subject to flooding and be located no higher than one foot above the lowest adjacent finished grade SF); and (C)(1-4) new and replacement utilities must be located at or above the BFE or designed to prevent water from entering or accumulating within the components during a flood, new and replacement water supply and sanitary sewage systems must be designed to minimize or eliminate the infiltration of water into the systems, and on-site waste disposal systems must be located to avoid impairment or contamination from water during a flood.

As the Project Area is outside of a coastal high hazard area, the development would also comply with the standards of Chapter 148-19 *Nonresidential Structures (Except Coastal High Hazard Areas)*, which include: (A)(1-2) locating the lowest floor two feet above BFE in new or substantially improved nonresidential structures and floodproofing the building in areas below two feet above BFE for structures within Zones A1-A30, AE, AH, or Zone A with BFE data.

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<sup>39</sup> <https://www.dec.ny.gov/lands/40576.html>. Accessed May 2021.

In accordance with Chapter 148-16 of the Town Code, the new and replacement I/A OWTS systems would be designed to prevent the infiltration of floodwaters that could impact the components. No other standards are applicable as Buildings 9 and 10 are located in Zone X. In accordance with Chapter 148-19, the proposed Buildings 9 and 10 would be constructed with a FFE of 10 feet AMSL, which is two feet above the adjacent BFE of 8 feet. No other standards are applicable as Buildings 9 and 10 are located in Zone X. The location of the proposed buildings upholds the Town's purpose of implementing floodplain regulations which is to, "*promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas...*"<sup>40</sup> Therefore, coastal flooding would not impact the proposed action.

Finally, the Amended Final Scope required an evaluation of the susceptibility of the final elevation of the proposed landscaping to future inundation from nor'easters and other weather events. As indicated on the *Proposed Landscape Plan* (see Appendix C), all proposed landscaping would be incorporated into the proposed Evergreen concrete retaining wall. The bottom elevation of the Evergreen concrete retaining wall would be approximately 20 feet AMSL and reach a maximum top elevation of 50 feet AMSL. Accordingly, the proposed landscaping is located outside areas of potential future flood inundation during storm events.

Overall, based on the proposed design, no flooding impacts are expected.

### ***Climate Change***

#### **Sea Level Rise (6 NYCRR Part 490 Regulations)**

As indicated in Section 2.3.1 of this DEIS, the potential sea level rise of 16 inches (or 1.33± feet) by 2050, following the CRRRA medium projection, is considered a reasonable analysis based on the definition of the projections as "amount of sea-level rise that is about as likely as not...to be exceeded by the specified time interval." Under this scenario, MHW at the subject property would increase from 4.0± feet AMSL to 5.3± feet AMSL, and thus, would not affect the existing buildings or infrastructure.

Based upon available mapping provided by the NYSDOS, the potential condition at SYC was compared to sea level rise of 12 inches and 24 inches (see Figure 23 in Appendix A). As depicted on this figure, sea level rise of 12 and 24 inches would not be expected to impact the property beyond the bulkhead and MHW. Based on the proposed elevations of 10 feet AMSL and minimum 9 feet AMSL for the proposed buildings and infrastructure, respectively, sea level rise of 16 inches would not impact the Project Area.

#### **Sea Level Rise with Storm Inundation (NYSERDA)**

Utilizing the NYSERDA Future Coastal Floodplain Mapper, sea level rise with storm inundation were evaluated at the subject property, under the post-development condition (see Figure 24 in Appendix A). At a 10-year recurrence interval with 18 inches of sea level rise (2050s), inundation could occur at Buildings 2, 7 and 8, and the eastern portions of Buildings 3 through 6 could be affected. Building 1 would be unaffected. At a 100-year recurrence interval with 18 inches of sea level rise (2050s),

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<sup>40</sup><https://www.dec.ny.gov/lands/40576.html>. Accessed May 2021.

inundation across the property could occur but Building 1 would be unaffected. With the proposed FFE of 10 feet for each building and the top elevation of all infrastructure at a minimum 9 feet AMSL, this scenario is not expected to impact the proposed buildings or infrastructure.

The *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act* provides flood-risk management guideline elevations for structures. The following should be considered when developing in areas of flood risk: siting of structures, design considerations, utilizing climate-informed science to guide elevations, if a lake is present, structure-specific elevation guidelines, and if transportation infrastructure is proposed. As it relates to the proposed action, siting of structures, design considerations, utilizing climate-informed science to guide elevations, and structure-specific elevation guidelines are applicable.

Generally, the guidance recommends the structures should be sited in a manner that avoids negative impacts to adjacent and downstream areas due to water-level changes, storm surge, increased storms, and considers the service life of the structure. The proposed action does not include any in-water work that would impact adjacent or downstream areas. The proposed action would improve stormwater management and reduce on-site flooding. For the proposed action, the shortest service life is approximately 30 years for the I/A OWTS. The CRRA and NYSERDA projections considered for the proposed action therefore extends to the anticipated service life of the I/A OWTS and both systems have been located above these projections. Therefore, the proposed action has taken into consideration negative impacts to adjacent and downstream areas and the service life of the proposed structures.

Elevating structures two feet above the BFE for non-critical infrastructure and three feet above BFE for critical infrastructure is also recommended. Critical infrastructure includes components of wastewater utilities, including all electrical, mechanical, and control systems associated with pump stations and treatment facilities that are responsible for conveyance of wastewater to and through the treatment facility to maintain primary treatment and disinfection during the flood event.<sup>41</sup> The control panels for the I/A OWTS and pump station are considered critical infrastructure and would be sited at an elevation of BFE plus three feet, i.e., at elevation 11 feet or greater. The pump station and I/A OWTS lids are watertight, such that flood waters will not enter the system.

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<sup>41</sup> Pursuant to *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act*, "Critical equipment for wastewater facilities includes conveyance and treatment system components that must be protected to ensure continuous operation of the facility. Such equipment includes, but is not limited to, all electrical, mechanical, and control systems associated with pump stations and treatment facilities that are responsible for conveyance of wastewater to and through the treatment facility to maintain primary treatment and disinfection during the flood event. Other critical equipment includes equipment that, if damaged by flood conditions, would prevent the facility from returning to pre-event operation after the cessation of flood conditions. For water supply facilities, critical equipment would include similar components used for pumping and treatment, and wells that could be subject to contamination during a flood. Less critical is equipment that if flooded, can be brought back into operation quickly...Protection for existing equipment that is below the recommended elevation may be achieved by means other than elevation to protect the equipment from water damage or wave action, and saltwater exposure if located in tidal zones. Such other means may include construction of barriers, watertight enclosures, or additional methods of protection. There should also be protection from salt corrosion in marine environments as warranted."

It is important to note the climate-informed science-based projections should only be utilized for structure elevation if they are greater than the BFE plus two feet. In the case of the proposed action, the projections from the CRRA and NYSERDA are below two feet. Therefore, although Buildings 9 and 10 are outside of the mapped floodplain, they have been sited at an elevation of 10 feet AMSL, which is two feet above the adjacent BFE and are higher than the CRRA and NYSERDA projections considered for the proposed action.

Based on the information provided in Table 4 of *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act*, the proposed action is considered a large non-residential structure in a non-tidal area. The recommendation is structures in non-tidal areas, like the proposed action, should be sited at two feet above the one-percent flood level. The Project Area is outside of the one-percent flooding area. Additionally, the proposed action has been situated two feet above the adjacent BFE. Therefore, the proposed action has taken into consideration recommendations made for large non-residential structures in non-tidal areas.

The proposed action has adequately considered relevant recommendations set forth in the *New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act*.

### **Groundwater Table Elevation**

As indicated in Section 2.3.1 of this DEIS, with a 16 inch or 1.33±-foot rise in sea level, the groundwater model predicts that groundwater beneath the site would rise to an elevation of 3.05 feet AMSL (NAVD 88), or a rise of 1.31 feet (model predicted the post excavated site groundwater elevation to be 1.74 feet AMSL [NAVD 88]) without any sea level rise – see Figure 19a of the Groundwater Modeling Report in Appendix L). Given the availability of borings, the 1.31 feet rise has been applied to the current groundwater elevation for a projected 2050 Groundwater Elevation and 2050 Groundwater Separation distance to groundwater from the various proposed infrastructure (see Table 17 below).

**Table 17 - Analysis of Proposed Improvements and Separation Distances to Groundwater with Sea Level Rise (Part 490 Regulations – 2050 Medium Scenario of 16")**

Proposed Improvement	GW Elevation (Data Source)	GW 2050 Elevation**	Proposed Elevation	GW Separation (Current BGS)	GW Separation (2050 BGS)
Sanitary System No. 1 (New)	1.2 feet AMSL (McDonald B2)	2.5± feet AMSL	Top of System: 9.4 feet; Depth of Leaching Galleys: 3.0 feet; Base of Galleys: 4.4 feet	3.2± feet	1.9± feet **
Sanitary System No. 2 (Replacement System)	1.4 feet AMSL (McDonald B1)	2.7± feet AMSL	Top of System: 9.4 feet; Depth of Leaching Galleys: 3.0 feet; Base of Galleys: 4.4 feet	3.0± feet	1.7± feet **
Tributary Area No. 1 – Drainage Leaching Field 1.0	2.0 feet AMSL (PWGC B-5)	3.3± feet AMSL	5.0 feet Deep Pools	3.0± feet	1.7± feet **
Tributary Area No. 2 - Drainage Leaching Field 2.0	1.2 feet AMSL (McDonald B2)	2.5± feet AMSL	4.7 feet Deep Pools	3.5± feet	2.2± feet
Tributary Area No. 3 – Drainage Leaching Field 3.0	1.2 feet AMSL (McDonald B2)	2.5± feet AMSL	4.25 feet Deep Pools	3.0± feet	1.7± feet **
Tributary Area No. 4 - Drainage Leaching Field 4.0	1.0 feet AMSL (PWGC B-8)	2.3± feet AMSL	5.0 feet Deep Pools	4.0± feet	2.7± feet
Proposed Building 9	1.0 feet AMSL (PWGC B-8)	2.3± feet AMSL	FFE: 10 feet	9.0± feet	7.7± feet
Proposed Building 10	1.2 feet AMSL (McDonald B2)	2.5± feet AMSL	FFE: 10 feet	8.8± feet	7.5± feet
LPG Vault Building 9	3.0 feet AMSL (PWGC B-11)	4.3± feet AMSL	Elevation 9.0± feet AMSL	6.0± feet	4.7± feet
LPG Vault Building 10	2.0 feet AMSL (PWGC B-5)	3.3± feet AMSL	Elevation 9.0± feet AMSL	7.0± feet	5.7± feet

\*\*2050 Separation from proposed grade elevation to base of structures is less than the current recommended separation distance to groundwater for sanitary effluent (3 feet) or stormwater (2 feet). (SCDHS Standards for Approval of Plans and Construction for Sewage Disposal Systems for Other Than Single-Family Residences, July 2020; New York State Stormwater Management Design Manual, January 2015). Due to the existing site condition with the existing marina operations and buildings located between Elevations 6± feet and 8± feet AMSL, the proposed final grade elevation of 10 feet is the maximum elevation possible to accommodate boat transport via the travelift. Specifically, the 85-ton travelift hauls boats directly from the water and can only traverse on relatively flat grades.

As summarized in Section 2.1.2 of this DEIS, the Boring Logs indicate depth to groundwater at 6.4± feet bgs (or 1.4± feet AMSL) at Boring B1 (the location of the replacement system identified as Sanitary System No. 2) and at 7.6± feet bgs (or 1.2± feet AMSL) at Boring B2 (the location of the new system identified as Sanitary System No. 1). As shown on the *Utility Plan* (see Appendix C), the top elevation of both Sanitary Systems Nos.1 and 2 would be 9.4± feet AMSL and the base of the leaching galleys would be 4.4 feet AMSL. Based on existing conditions, the distance between the bottom of the leaching pool and groundwater for Sanitary System No. 1 is approximately 3.2 feet and Sanitary System No. 2 is approximately 3.0 feet. When applying a projected 1.31-foot rise in groundwater elevation in the 2050s, this separation distance would decrease to 1.7± feet and 1.9± feet for System Nos. 1 and 2, respectively.

The recommended separation distance to groundwater for sanitary leaching fields is three feet. As such, should sea level rise occur as projected, the system would be non-compliant with current design requirements. However, in the 2050 condition, modifications to the leaching field could be implemented by elevating and installing a pump station. However, the manufacturer lifespan of the I/A OWTS is 30 years, and thus, by the 2050s, new systems could be expected. Should the projections of sea level rise be realized, the new systems to be installed would be required to comply with the regulations at that time.

Regarding drainage infrastructure, the recommended separation distance to groundwater is two feet. The proposed stormwater leaching fields would be installed with top elevations ranging from 9-to-9.5± feet AMSL and varying pool depths. Based on existing conditions, the groundwater separation would range from 3.0± feet to 4.0± feet. A 1.31-foot rise in groundwater elevation would decrease the separation distance to 1.7± feet to 2.7± feet. Should this scenario occur, the drainage infrastructure could be replaced and/or supplemented with shallow drainage structures to accommodate stormwater runoff.

### **Precipitation**

As indicated in Section 2.3.1, there has been a downward trend in annual precipitation but an increase in heavy precipitation events. Pursuant to §236-7.A of the Town of Southold Town Code, *“all land-disturbing activities or the addition or replacement of impervious surfaces shall provide temporary and permanent construction controls and shall be required to contain a two-inch rainfall on site, even where approval of the Stormwater Management Officer is not required under this chapter.”*

As indicated earlier in this section and in Section 1.2.5 of this DEIS, the proposed stormwater management plan is designed to accommodate a two-inch rain event, in accordance with Town of Southold regulations (Chapter 236 Stormwater Management) and Tributaries 3 and 4 would accommodate a portion of off-site stormwater due to existing natural grades. The Groundwater Modeling Report included in Appendix L of this DEIS evaluated the impacts of the additional recharge on-site. As summarized in Section 2.2.2 of this DEIS (and included in its entirety in Appendix L), the proposed drainage system would greatly reduce runoff and evapotranspiration effects, and thus, have a net increase with regards to groundwater recharge. The post-development recharge volume across the entire 16.5-acre M-II site is estimated at 2,345,038.08 feet<sup>3</sup>/yr. or 6,424.76 feet<sup>3</sup>/day. Comparing the existing to post-development conditions, approximately 114,548.28 feet<sup>3</sup>/yr. of additional recharge would reach the aquifer system.

Under both existing and post-development conditions the post excavated site, groundwater flows towards Mattituck Creek. Under the post excavated conditions, a slight increase in the water table of 0.01 feet is predicted immediately beneath the excavation area. The groundwater model shows no particle deflections or trajectory changes, and thus, the increased recharge would have no effect on nearby wells.

**NYSDEC Using Natural Measures to Reduce the Risk of Flooding and Erosion Guidance, August 2020**

As discussed in Section 2.3.1 of this DEIS, the CRRRA outlined five provisions when considering the expenditure of State monies, development of facility-siting regulations, and the issuance of State permits for projects within the coastal area of the State vulnerable to sea-level rise. Including: (1) the adoption of official sea-level rise projections; (2) consideration of sea-level rise, storm surge, and flooding in facility siting, permitting, and funding; (3) Smart Growth Public Infrastructure Policy Act criteria; (4) model local laws concerning climate risk; and (5) guidance on natural resiliency measures *Using Natural Measures to Reduce the Risk of Flooding and Erosion* was published by NYSDEC and NYSDOS with the intent to provide guidance to decisions makers to consider natural processes and the use of natural resources to enhance resiliency and reduce the risk from sea-level rise, storm surge, flooding, erosion, and extreme weather events instead of relying on tradition hard structural measures. Natural resiliency measures are defined as, “actions to conserve, restore, or mimic natural landforms or features and natural processes that reduce risk from flooding and erosion,” (page 3-1).<sup>42</sup>

The document outlines two types of natural resiliency measures: natural feature conservation and nature based/soft structural measures (3-1).<sup>43</sup> Natural feature conservation entails implementing non-structural measures to preserve the natural features as they currently exist. Measures like this include relocating assets outside of vulnerable areas, increasing setbacks to reduce the siting of structures in vulnerable areas, and adapting structures to withstand flood events. The benefit to this method is its efficiency and is not as costly as recreating or restoring the natural feature present. Utilizing soft structural measures involves natural feature restoration and nature-based feature construction. Natural feature restoration reestablishes degraded areas to align with pre-development conditions. Nature-based feature construction mimics the natural features and a preferred method when natural features enhance resiliency but do not sufficiently reduce risk. These methods typically require more maintenance but are still more cost-effective than hard structures.

The document identifies 17 natural features and three subsequent nature-based approaches that reduce the risk of flooding and erosion in coastal, stream/riverine, and upland settings (4-1).<sup>44</sup> Table 18 below is an excerpt of Table 4-1 from the document:

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<sup>42</sup> [https://www.dec.ny.gov/docs/administration\\_pdf/crranaturalmeasuresgndc.pdf](https://www.dec.ny.gov/docs/administration_pdf/crranaturalmeasuresgndc.pdf)

<sup>43</sup> *Ibid.*

<sup>44</sup> *Ibid.*



**Table 18 – Natural Measures to Reduce the Risk of Flooding and Erosion**

<u>Natural Features That Reduce Risk</u>	<u>Coastal</u>	<u>Stream/Riverine</u>	<u>Upland</u>
<u>Highly Dynamic (likely to move or change significantly as energy and water from storms or other sources is absorbed)</u>			
Bank	X	X	
Barrier island	X	X	
Beach	X	X	
Bluff	X	X	
Dune	X	X	
Floodplain	X	X	
Inlets	X	X	
Nearshore Area	X		
Riparian Area		X	
Shoals	X		
Stream		X	
Submerged Aquatic Vegetation	X		
Wetlands, non-tidal freshwater	X		X
Wetlands, tidal	X		
<u>More Stable</u>			
Forests			X
Maritime Forests	X		
Shellfish Beds/Reefs	X		

Of the natural features identified, the floodplain, maritime forest, and tidal wetlands are present at the subject property and an inlet is located northwest of the subject property at Mattituck Inlet. The FLUPSY units are not considered shellfish beds or reefs.

The nature-based techniques recommended include constructing stormwater green infrastructure, nature-based coastal techniques, and nature-based stream techniques. The construction of stormwater green infrastructure technique enhances the natural capture of rainwater, uses vegetation combined with grading, fill or addition or removal of structural components to improve the infiltration of stormwater into the ground. Nature-based coastal techniques mimic the natural shoreline processes to reduce the risk of erosion to human assets on coastal shorelines. Similar to the stormwater green infrastructure technique, nature-based coastal techniques rely on vegetation with grading, fill or addition or removal of structural components. The three most common approaches include bank stabilization, in-water features, and floodplain reconnection. Nature-based stream techniques mimic the natural shoreline processes to reduce the risk of erosion to human assets on stream and riverine shorelines. This technique also relies on vegetation with grading, fill or addition or removal of structural components and is best implemented where there is low to moderate wave energy and no fetch or wind-driven waves. The design is most effective when it mimics the morphology, hydrology, and sediment transport of the stream or river. The three common approaches utilized include stream stabilization techniques, floodplain reconnection, and stream daylighting.

As the proposed action does not entail in-water work and the eastern shoreline at Mattituck Creek is bulkheaded, it is not feasible to implement nature-based techniques as part of the proposed action. The proposed action does include natural feature conservation as non-structural measures would be implemented to improve the resiliency of the proposed buildings and infrastructure. Locating Buildings 9 and 10 at BFE 10 feet, which is two feet above the adjacent BFE 8 feet and locating the proposed I/A OWTS outside of the floodplain mitigates potential impacts from future sea-level rise, storm surge, flooding, erosion, and extreme weather events. Additionally, the proposed action would be located landward of all regulated tidal wetlands such that all wetland areas would continue to function in their natural state and serve as a protective shoreline feature. This decision ensures these assets are not sited in vulnerable areas. Utilizing non-structural measures like these are effective as they reduce both short-term and long-term flood damage and are a more cost-effective management technique (page 3-2).<sup>45</sup>

The proposed action has been designed in accordance with the nature-based coastal techniques outlined in *Using Natural Measures to Reduce the Risk of Flooding and Erosion* to the extent practicable and complies with the aforementioned recommendations set forth by NYSDEC and NYSDOS as part of the CRRA to implement natural measures to reduce flooding and erosion.

**NYSDEC Community Risk and Resiliency Act Guidance for Consideration of Flood Risk in Smart Growth Public Infrastructure Assessment, August 2020**

*The Community Risk and Resiliency Act Guidance for Consideration of Flood Risk in Smart Growth Public Infrastructure Assessment* was published by the NYSDEC as guidance for mitigating risk from sea-level rise, storm surge, and flooding for public-infrastructure projects.

As the subject property is a private development application, this guidance document is not applicable to the proposed action. However, in accordance with the Amended Final Scope, the relevant recommendations are summarized below:

- Public infrastructure projects should be sited, designed, and constructed to prevent and minimize damage associated with future sea-level rise, storm surge, and flooding.
- Public infrastructure agencies should assess whether infrastructure projects are consistent with mitigation of risk due to sea-level rise, storm surge, and flooding.
- Assessment processes should incorporate the recommendations, flood risk management guidelines and information sourced in New York State Flood Risk Management Guidance.
- Construction of new infrastructure projects should be avoided in flood-hazard areas, as defined by the flood-risk management guidelines in the New York State Flood Risk Management Guidance.
- Interagency, community, and stakeholder collaboration in project development decisions is encouraged.

Overall, the proposed action has taken into consideration the recommendations in this guidance document. As indicated in Table 17 and presented in this Section, the proposed action has been sited

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<sup>45</sup> [https://www.dec.ny.gov/docs/administration\\_pdf/crranaturalmeasuresgndc.pdf](https://www.dec.ny.gov/docs/administration_pdf/crranaturalmeasuresgndc.pdf)

outside of high flood risk areas and includes building to elevations in accordance with the adjacent flood zone (i.e., Zone AE: BFE 8 feet) to minimize impacts from flood and extreme storm events. The proposed infrastructure has also been sited to minimize impacts from flood and extreme storm events. Therefore, although the proposed action is not for public infrastructure, future flood risks have been mitigated to the maximum extent practicable as recommended by this guidance.

### ***Impact on Proposed Landscaping***

As discussed earlier in this Section, the bottom elevation of the Evergreen concrete retaining wall would be approximately 20 feet AMSL and reach a maximum top elevation of approximately 50 feet AMSL. Accordingly, the proposed landscaping is located outside areas of potential future flood inundation during storm events. The placement of the surrounding landscaping and Evergreen concrete retaining wall would also stabilize the slopes within the Project Area and provide an area for natural infiltration of stormwater. Additional information regarding the plantings for the Evergreen concrete retaining wall is discussed in Section 3.4.2. Therefore, the proposed landscaping has been designed to minimize potential impacts from flooding and storm events.

### **2.3.3 Proposed Mitigation**

Based on the above analyses, the proposed development is not expected to be adversely impacted by future climate change impacts. The proposed development has incorporated the following mitigation measures to avoid potential impacts associated with flooding:

- The placement of buildings at FFE 10.0 feet AMSL and other infrastructure at a minimum elevation of 9.0 feet AMSL will mitigate potential flood impacts based upon the adjacent flood zone boundary.
- All project elements have been located landward of the existing floodplain.

## **2.4 Ecological Resources**

### **2.4.1 Existing Conditions**

#### ***Introduction***

Ecological surveys were conducted at the 32.96-acre subject property by Dr. William Bowman of LUES on various dates in 2020 and 2021. Specifically, field surveys and work were performed by Dr. Bowman on September 18, 2020, October 21, 2020, January 17, 2021, May 13, 2021, July 19-28, 2021, and August 24, 2021. During the field inspection, a total of 122 vascular plant species were observed, including 53 woody plants, 64 herbaceous plants, and three ferns. Additionally, 91 birds, 20 mammals and three herptiles were observed or are expected to occur on the site. Dr. Bowman's field work also included a tree survey with species identification. LUES also prepared the proposed tree removal plan with species identification and analysis, in coordination with Young & Young Engineering, as the project engineer. An Ecological Report has been prepared by LUES, which is included in Appendix N of this DEIS and includes the aforementioned Tree Survey and Tree Removal Plan. A summary of the Ecological Report and tree analysis follows.

**Ecological Communities**

Between the mid-1950s and 1984, the site consisted of agricultural fields adjacent to West Mill Road, a small tree plantation or orchard, forests, and a marina facility, as indicated by aerial imagery from Suffolk County. During this time, cleared land associated with the agricultural and commercial marine uses accounted for approximately 58 percent (19.1 acres) of the 32.96-acre property. Aerial imagery of the site from 1962 and 1984 is provided in Figures 1 and 2 in the Ecological Report. The agricultural use on the western portion of the site appears to have been abandoned in the late 1980s. The existing ecological communities now present at the site include Coastal Oak-Beech Forests; successional habitats that have developed on the former agricultural lands including southern successional hardwood forests and successional shrublands; a small tidal wetland area associated with Mattituck Creek; and anthropogenic cover types such as mowed lawn with trees and landscaping, buildings, and paved and pervious road and parking surfaces. The existing boundaries of the site’s ecological communities are shown in Figure 3 in the Ecological Report and the acreage of each ecological community type and the percentage of the total site area are provided in Table 19 below (as excerpted from Table 1 of the Ecological Report). Descriptions of the ecological communities observed are provided along with the New York Natural Heritage Program community descriptions from Edinger et al (2014).

**Table 19 – Existing Ecological Communities at Subject Property**

<b>Ecological Community</b>	<b>Acres</b>	<b>Percent</b>
Coastal Oak-Beech Forest	12.60±	38.2%
Successional Shrubland	10.83±	32.9%
Successional Southern Hardwoods	4.67±	14.2%
Buildings and Paved Surfaces	3.70±	11.2%
Tidal Wetlands	0.63±	1.9%
Unvegetated Sand Slope	0.29±	0.9%
Mowed Lawn with Trees and Landscaping	0.24±	0.7%
<b>Total</b>	<b>32.96±</b>	<b>100%</b>

**Coastal Oak-Beech Forests**

Coastal Oak-Beech Forest represent 12.60± acres, or 38.2 percent of the site, from the steep, east-facing slope adjacent to the existing marina extending west on the site’s hilltops and slopes. The following is the definition of this community as described by Edinger et al (2014):

“A hardwood forest with oaks (*Quercus spp.*) and American beech (*Fagus grandifolia*) codominant that occurs in dry, well drained, loamy sand of morainal coves of the coastal plain. Some occurrences are associated with maritime beech forest. American beech can range from nearly pure stands to as little as about 25 percent cover. The forest is usually co-dominated by two or more species of oaks, usually black oak (*Quercus velutina*) and white oak (*Q. alba*). Scarlet oak (*Q. coccinea*) and chestnut oak (*Q. montana*) are common associates. Red oak (*Q. rubra*) may be present at low density, and is a key indicator species along with sugar maple

(*Acer saccharum*) and paper birch (*Betula papyrifera*). There are relatively few shrubs and herbs. Characteristic ground layer species are Swan's sedge (*Carex swanii*), Canada mayflower (*Maianthemum canadense*), white wood aster (*Eurybia divaricata*), beech-drops (*Epifagus virginiana*), and false Solomon's seal (*Maianthemum racemosum*). Typically, there is also an abundance of tree seedlings, especially of American beech; beech and oak saplings are often the most abundant “shrubs” and small trees.”

The high-quality Coastal Oak-Beech Forest on the site consist of abundant large trees (ranging between 6 and 39 inches in diameter). American beech (*Fagus grandifolia*) accounts for approximately 33 percent of the tree stems with the remainder of the canopy consisting of relatively equal proportions of black oak (*Quercus velutina*), white oak (*Q. alba*), scarlet oak (*Q. coccinea*), and chestnut oak (*Q. montana*). Red maple (*Acer rubrum*) and pignut hickory (*Carya glabra*) are also present as canopy trees. Tree species that are dominant in the understory are American beech and red maple, and, to a lesser extent, the various oak species. The shrub- and ground layers of vegetation are sparse due to the dense shade under the beech-dominated canopy and heavy browsing from white-tailed deer.

Coastal Oak-Beech Forests in New York State are typically found on the north-facing slopes of glacial moraines of Suffolk and Richmond Counties. Numerous examples occur along the North Shore of Suffolk County from Wildwood State Park to Route 48 in Southold; from Big Woods (Southampton) to Montauk Point on the South Fork (NYNHP, 2020); the headland necks of Suffolk County that extend into Long Island Sound, such as Lloyd Neck (Greller, 1977); and small patches farther west on Long Island into Nassau County and eastern Queens counties (Greller, 1977).

Edinger et al (2014) indicates that this ecological community is restricted to Suffolk and Richmond Counties in New York State with a rarity ranking of G4 and S3 indicating that this community type is considered “apparently secure” globally and “vulnerable” in New York State, i.e., vulnerable to disappearing from New York (but not currently imperiled) due to rarity or other factors.

### **Successional Southern Hardwoods**

Successional southern hardwoods represent 4.67± acres, or 14.2 percent of the site. The following is the definition of this community as described by Edinger et al (2002):

“Hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. “Characteristic trees and shrubs include any of the following: American elm (*Ulmus americana*), slippery elm (*U. rubra*), white ash (*Fraxinus americana*), red maple (*Acer rubrum*), box elder (*Acer negundo*), silver maple (*A. saccharinum*), sassafras (*Sassafras albidum*), gray birch (*Betula populifolia*), hawthorns (*Crataegus spp.*), eastern red cedar (*Juniperus virginiana*), and choke-cherry (*Prunus virginiana*). Certain introduced species are commonly found in successional forests, including black locust (*Robinia pseudo-acacia*), tree of heaven (*Ailanthus altissima*), and buckthorn (*Rhamnus cathartica*). Any of these may be dominant or codominant in a successional southern hardwood forest. Southern indicators include American elm, white ash, red maple, box elder, choke-cherry, and sassafras. This is a broadly defined community and several seral and regional variants are known.

At the site, this ecological community is dominated by early successional tree species including black cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*), eastern red cedar (*Juniperus*

*virginiana*), Norway maple (*Acer platanoides*), and bird cherry (*Prunus avium*) that have re-grown on formerly cleared areas or former agricultural fields. The understory and ground layers in the site's successional forests consist of dense thickets of multiflora rose (*Rosa multiflora*), various brambles (*Rubus phoenicolasius* and *Rubus alleghanensis*), catbriar (*Smilax rotundifolia*), Asiatic bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), and poison ivy (*Toxicodendron radicans*).

Edinger et al (2014) indicates that this ecological community is distributed throughout New York State with a rarity ranking of G5 and S5 indicating that these communities are considered “demonstrably secure” both in globally and in New York State.

### **Successional Shrublands**

Vegetation typical of successional shrublands represents 10.83± acres, or 32.9 percent of the subject property on the former agricultural lands on the western portion of the property. The following is the definition of this community as described by Edinger et al (2014):

“A shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or otherwise disturbed. This community has at least 50 percent cover of shrubs. Characteristic shrubs include gray dogwood (*Cornus racemosa*), eastern red cedar (*Juniperus virginiana*), raspberries (*Rubus spp.*), serviceberries (*Amelanchier spp.*), choke-cherry (*Prunus virginiana*), wild plum (*Prunus americana*), sumac (*Rhus glabra*, *R. typhina*), nanny-berry (*Viburnum lentago*), and arrowwood (*Viburnum dentatum var. lucidum*). Non-native invasive shrubs include hawthornes (*Crataegus spp.*), multiflora rose (*Rosa multiflora*), Russian and autumn olive (*Elaeagnus angustifolia*, *E. umbellata*), buckthorns (*Rhamnus cathartica*, *Frangula alnus*), and shrubby honeysuckles (*Lonicera tatarica*, *L. morrowii*, *L. maackii*).”

The successional shrublands at the site are dominated by autumn olive (*Elaeagnus umbellata*) with thickets of brambles (*Rubus phoenicolasius*, *Rubus allegheniensis*, and *Rubus flagellaris*) and multiflora rose (*Rosa multiflora*). Native and old field grasses and wildflowers including goldenrods (specifically *Solidago rugosa*, *Solidago canadensis*, and *Euthamia graminifolia*), pearly everlasting (*Anaphalis margaritacea*), and intermediate dogbane (*Apocynum cannabinum*) are present along the maintained margins of trails and paths. Invasive fountain grass (*Miscanthus sp.*) was also common.

The site's successional shrublands contain many small stands of successional trees, mostly black cherry (*Prunus serotina*) and eastern red cedar (*Juniperus virginiana*), with infestations of Asiatic bittersweet (*Celastrus orbiculatus*). Edinger et al (2014) indicates that this ecological community is distributed throughout New York State with a rarity ranking of G4 and S4 indicating that these communities are considered “apparently secure” both in globally and in New York State.

### **Tidal Wetlands**

The site's tidal wetlands are located along Mattituck Creek in an un-bulkheaded section of shoreline at the southern end of the property. These tidal wetlands occupy approximately 0.63± acre or 1.9 percent of the property. The tidal wetlands consist mostly of *Spartina alterniflora*-dominated intertidal marsh. The landward margin of the tidal wetlands is dominated by invasive common reed (*Phragmites*

*australis*) with scattered groundsel bush (*Baccharis halimifolia*) and marsh elder (*Iva frutescens*). There is a narrow band of high marsh vegetation between the Phragmites and intertidal marsh, including salt hay (*Spartina patens*), spike grass (*Distichis spicata*), and seaside lavender (*Limonium carolinianum*).

### **Tidal Wetlands in Mattituck Creek**

Approximately 60-acres of tidal wetlands and 10-acres of unvegetated shoals and mudflats are located within Mattituck Creek; mostly on the east side of Mattituck Creek to the north of West Mill Road and including the New York State Mattituck Creek Tidal Wetlands Preserve. In 2005, the tidal wetlands in Mattituck Creek were comprised largely (more than 90-percecnt) of native intertidal and high marsh communities with relatively low abundance of invasive Phragmites-dominated marshes (NEIWPC, 2015). No submerged aquatic vegetation beds, e.g., eelgrass (*Zostera marina*), are known to occur in Mattituck Creek (Long Island Sound Study, 2017).

The tidal wetlands and beaches of Mattituck Inlet are designated as a Significant Coastal Fish and Wildlife Habitat by the NYSDOS (NYSDOS, 2005). As indicated in Section 2.2.1 of this DEIS, Mattituck Creek is designated as a Significant Coastal Fish and Wildlife Habitat, in part, as it is one of few or rare undeveloped tidal wetlands in eastern Suffolk County with a deepwater inlet and strong tidal flushing tributary to Long Island Sound (NYSDOS, 2005). Ecosystem functions and values provided by the tidal wetlands of Mattituck Creek include supporting fish and shellfish populations and a productive recreational fishery, uptake or trapping of land-derived nutrients and contaminants, providing wildlife habitat, protecting upland and shoreline areas from flooding and erosion, and providing water-based recreational opportunities.

The wetlands of Mattituck Inlet provide foraging and breeding habitat for a wide variety of fish and wildlife species including wading birds (such as great egret, snowy egret, and green heron), least and common tern, osprey, and waterfowl (such as American black duck, gadwall, and mallard). Federal- and New York State-protected shorebirds, such as piping plover and least tern, nest on the nearby beaches adjacent to Mattituck Inlet and forage in appropriate tidal wetlands, shoals and mudflats, and estuarine waters of Mattituck Creek. Mattituck Creek supports populations of marine and estuarine fish including bluefish, striped bass, weakfish, fluke, black sea bass, winter flounder, striped and northern sea robins, blackfish, oyster toadfish, and scup.

Shellfish that inhabit the waters in and adjacent to Mattituck Creek include surf clams, hard clams, oysters, and blue mussels. The northern reaches of Mattituck Creek are certified by the NYSDEC for the harvest of shellfish during the months January through April. The headwaters of Mattituck Creek (upstream of Point Pleasant) and the Howards Creek and Long Creek tributaries are not certified for shellfish harvest. The NYSDEC Mattituck Inlet/Creek is assessed as an impaired waterbody due to pathogen pollution from urban and storm runoff (NYSDEC, 2016).

### **Plants**

Table 20 below (as excerpted from Table 2 of the Ecological Report) includes a plant list for the subject property and is based on ecological surveys completed by Dr. Bowman in 2020 and 2021. A total of

122 vascular plant species were observed at the site, including 53 woody plants, 66 herbaceous plants, and three ferns.

**Table 20 – Plant Species List for Subject Property**

<b>Common Name</b>	<b>Scientific Name</b>
<b>TREES, SHRUBS AND WOODY VINES</b>	
Box Elder	<i>Acer negundo</i>
Norway Maple	<i>Acer platanoides</i>
Red Maple	<i>Acer rubrum</i>
Silver Maple	<i>Acer saccharinum</i>
Tree-of-Heaven	<i>Ailanthus altissima</i>
Mimosa	<i>Albizzia julibrissin</i>
Shadbush	<i>Amelanchier canadensis</i>
Porcelainberry	<i>Ampelopsis brevipedunculata</i>
Groundsel Bush	<i>Baccharis halimifolia</i>
Japanese Barberry	<i>Berberis thunbergia</i>
Gray Birch	<i>Betula populifolia</i>
Pignut Hickory	<i>Carya glabra</i>
Asiatic Bittersweet	<i>Celastrus orbiculatus</i>
Sweet Fern	<i>Comptonia peregrine</i>
Flowering Dogwood	<i>Cornus florida</i>
Autumn Olive	<i>Elaeagnus umbellata</i>
American Beech	<i>Fagus grandifolia</i>
Black Huckleberry	<i>Gaylussacia baccata</i>
American Holly	<i>Ilex opaca</i>
Marsh Elder	<i>Iva frutescens</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Mountain Laurel	<i>Kalmia latifolia</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
White Mulberry	<i>Morus alba</i>
Bayberry	<i>Morella pensylvanica</i>
Virginia Creeper	<i>Parthenocissus quinquefolia.</i>
Pitch Pine	<i>Pinus rigida</i>
Japanese Black Pine	<i>Pinus thunbergii</i>
Cottonwood	<i>Populus deltoides</i>
Big-toothed Aspen	<i>Populus grandidentata</i>
Bird Cherry	<i>Prunus avium</i>
Black Cherry	<i>Prunus serotina</i>
Callery Pear	<i>Pyrus calleryana</i>
Apple	<i>Malus sp.</i>
White Oak	<i>Quercus alba</i>
Scarlet Oak	<i>Quercus coccinea</i>
Chestnut Oak	<i>Quercus montana</i>
Red Oak	<i>Quercus rubra</i>



<b>Common Name</b>	<b>Scientific Name</b>
Black Oak	<i>Quercus velutina</i>
Black Locust	<i>Robinia pseudoacacia</i>
Multiflora Rose	<i>Rosa multiflora</i>
Blackberry	<i>Rubus allegheniensis</i>
<b><u>TREES, SHRUBS AND WOODY VINES</u></b>	
Northern Dewberry	<i>Rubus flagellaris</i>
Wineberry	<i>Rubus phoenicolasius</i>
Sassafras	<i>Sassafras albidum</i>
Catbriar	<i>Smilax rotundifolia</i>
Bittersweet Nightshade	<i>Solanum dulcamara</i>
Poison Ivy	<i>Toxicodendron radicans</i>
Late Lowbush Blueberry	<i>Vaccinium angustifolia</i>
Highbush Blueberry	<i>Vaccinium corymbosum</i>
Early Lowbush Blueberry	<i>Vaccinium pallidum</i>
Linden Viburnum	<i>Viburnum dilatatum</i>
Arrowwood	<i>Viburnum dentatum</i>
Wild Grape	<i>Vitis sp.</i>
<b><u>HERBACEOUS PLANTS</u></b>	
Yarrow	<i>Achillea millefolium</i>
Redtop Bent Grass	<i>Agrostis alba</i>
Bent Grass	<i>Agrostis sp.</i>
Garlic Mustard	<i>Alliaria petiolate</i>
Field Garlic	<i>Allium vineale</i>
Common Ragweed	<i>Ambrosia artemisiifolia</i>
Pearly Everlasting	<i>Anaphalis margaritacea</i>
Broom Sedge	<i>Andropogon virginiana</i>
Corn Chamomile	<i>Anthemis arvensis</i>
Sweet Vernal Grass	<i>Anthoxanthum odoratum</i>
Indian Hemp	<i>Apocynum cannabinum</i>
Wild Sarsaparilla	<i>Aralia nudicaulis</i>
Mugwort	<i>Artemisia vulgaris</i>
Common Milkweed	<i>Asclepias syriaca</i>
Seabeach Orach	<i>Atriplex mucronate</i>
Hoary Alyssum	<i>Berteroa incana</i>
Shepherd's Purse	<i>Capsella bursa-pastoris</i>
Pennsylvania Sedge	<i>Carex pensylvanica</i>
Lamb's Quarters	<i>Chenopodium album</i>
Horseweed	<i>Conyza canadensis</i>
Yellow Nut Sedge	<i>Cyperus esculentus</i>
Orchard Grass	<i>Dactylis glomerata</i>
Wild Carrot	<i>Daucus carota</i>
Common Hairgrass	<i>Deschampsia flexuosa</i>
Hairgrass	<i>Deschampsia sp.</i>
Deer Tongue	<i>Dichanthelium sp.</i>

<b>Common Name</b>	<b>Scientific Name</b>
Hairy Rosette Panic Grass	<i>Dicanthelium acuminatum</i>
Spike Grass	<i>Distichlis spicata</i>
Crab Grass	<i>Digitaria sanguinalis</i>
Indian Strawberry	<i>Duchesnea indica</i>
Quack Grass	<i>Elytrigia repens</i>
Beech Drops	<i>Epifagus virginiana</i>
Stink Grass	<i>Eragrostis cilianensis</i>
Daisy Fleabane	<i>Erigeron annuus</i>
Horseweed	<i>Erigeron canadensis</i>
<b><u>HERBACEOUS PLANTS</u></b>	
Slender Flat-topped Goldenrod	<i>Euthamia caroliniana</i>
Common Flat-topped Goldenrod	<i>Euthamia graminifolia</i>
Fescue	<i>Festuca sp.</i>
White Avens	<i>Geum canadensis</i>
Canada Hawkweed	<i>Hieracium canadense</i>
Soft Rush	<i>Juncus effusus</i>
Greene's Rush	<i>Juncus greenei</i>
Secund Rush	<i>Juncus secundus</i>
Path Rush	<i>Juncus tenuis</i>
Wild Peppergrass	<i>Lepidium virginicum</i>
Seaside Lavender	<i>Limonium carolinianum</i>
Fountain Grass	<i>Miscanthus sp.</i>
Common Yellow Woodsorrel	<i>Oxalis stricta</i>
Deertongue Grass	<i>Panicum clandestinum</i>
Mile-a-Minute Vine	<i>Persicaria persicaria</i>
Timothy Grass	<i>Phleum pratense</i>
Common Reed	<i>Phragmites australis</i>
Pokeweed	<i>Phytolacca americana</i>
English Plantain	<i>Plantago lanceolata</i>
Japanese Knotweed	<i>Polygonum cuspidatum</i>
Lady Thumb Smartweed	<i>Polygonum persicaria</i>
Sheep Sorrel	<i>Rumex acetosella</i>
Bitter Dock	<i>Rumex obtusifolius</i>
Glasswort	<i>Salicornia sp.</i>
Little Bluestem	<i>Schizachyrium scoparium,</i>
Wood Grass	<i>Scirpus cyperinus</i>
Blue-stemmed Goldenrod	<i>Solidago caesia</i>
Rough-stemmed Goldenrod	<i>Solidago rugosa</i>
Smooth Cordgrass	<i>Spartina alterniflora</i>
Salt Hay	<i>Spartina patens</i>
Small White Aster	<i>Symphotrichum racemosum</i>
Common Dandelion	<i>Taraxacum officinale</i>
Purple Top	<i>Tridens flavus</i>
Common Mullein	<i>Verbascum Thapsus</i>

Common Name	Scientific Name
<b>FERNS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Marginal Wood Fern	<i>Dryopteris marginalis</i>
Common Polypody	<i>Polypodium virginanum</i>
Christmas Fern	<i>Polystichum acrostichoides</i>

### Wildlife

Table 21, Table 22, and Table 23 (as excerpted from Tables 3 through 5 of the Ecological Report) include the birds, mammals, and herptiles, respectively, observed or expected to occur on the subject property based on field surveys performed by Dr. Bowman in 2020 and 2021. The range of ecological communities present on the site provides habitats for wildlife species inhabiting both early successional habitats and mature forest patches.

### Birds

Approximately 91 bird species were observed or are expected to occur on the site (see Table 21). Approximately 60 percent of these birds (i.e., 54 species) may utilize the property for breeding habitat based on the observed habitat conditions and known bird breeding activity documented in the 2008 New York Breeding Atlas in the vicinity of Mattituck (McGowan and Corwin, 2008). Approximately 38 percent of these birds (i.e., 34 species) are expected to transiently utilize the site seasonally, such during the summer months only, only during spring and autumn migrations, or as overwintering habitat. The remaining species (57 species) can be found year-round in appropriate habitats on Long Island.

The mature Coastal Oak-Beech forests provide high-quality habitat that may be utilized by a variety of songbirds including American redstart (*Setophaga ruticilla*), wood thrush (*Hylocichla mustelina*), great crested flycatcher (*Myiarchus crinitus*), black-and-white warbler (*Mniotilta varia*), ovenbird (*Seiurus aurocapilla*), and northern parula (*Parula americana*). Due to the proximity to existing forest edges along former agricultural lands, residential properties, and the commercial marina, the site's forests are also utilized by common suburban birds. These species include American robin (*Turdus migratorius*), house wren (*Troglodytes aedon*), common flicker (*Colaptes auratus*), tufted titmouse (*Baeolophus bicolor*), blue jay (*Cynaocitta cristata*), and cardinal (*Cardinalis cardinalis*). Dead trees, snags, and limbs in these forests provide habitat for cavity-nesting birds and woodpeckers including red-bellied woodpecker (*Melanerpes carolinus*) and downy woodpecker (*Picoides pubescens*). In addition, the dense thickets of shrubs and small trees on the former agricultural lands provide excellent habitat for songbirds which prefer dense vegetation including song sparrow (*Melospiza melodia*), American goldfinch (*Spinus tristis*), yellow warbler (*Dendroica petechia*), ruby-crowned kinglet (*Regulus calendula*), common yellowthroat (*Geothlypis triches*), gray catbird (*Dumetella carolinensis*), northern mockingbird (*Mimus polyglotta*), and yellow-rumped warbler (*Dendroica coronata*).

Table 21 – Bird Species Observed/Expected On-site

Scientific Name	Common Name	Observed <sup>1</sup> /Expected (O/E)	Breeding Status (Y/N) <sup>2</sup>	Year Round/ Migrant/ Overwintering <sup>3</sup>
<i>Accipiter cooperii</i>	Cooper's Hawk	E	Y	Y
<i>Accipiter striatus</i>	Sharp-shinned Hawk	E	N	Y
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	O	Y	Y
<i>Anas platyrhynchos</i>	Mallard	O	Y	Y
<i>Anas rubripes</i>	American Black Duck	E	N	Y
<i>Ardea alba</i>	Great Egret	E	N	M
<i>Ardea Herodias</i>	Great Blue Heron	E	N	Y
<i>Baeolophus bicolor</i>	Tufted Titmouse	O	Y	Y
<i>Bombycilla cedrorum</i>	Cedar Waxwing	E	Y	Y
<i>Bubo virginianus</i>	Great Horned Owl	E	Y	Y
<i>Branta canadensis</i>	Canada Goose	E	Y	Y
<i>Buteo jamaicensis</i>	Red-tailed Hawk	O	Y	Y
<i>Cardinalis cardinalis</i>	Northern Cardinal	O	Y	Y
<i>Carduelis tristis</i>	American Goldfinch	O	Y	Y
<i>Carpodacus mexicanus</i>	House Finch	O	Y	Y
<i>Carpodacus purpureus</i>	Purple Finch	E	N	Y
<i>Cathartes aura</i>	Turkey Vulture	O	N	Y
<i>Catharus guttatus</i>	Hermit Thrush	E	N	O
<i>Catharus fuscescens</i>	Veery	E	N	M
<i>Certhia americana</i>	Brown Creeper	E	N	Y
<i>Chaetura pelagica</i>	Chimney Swift	O	N	M
<i>Charadrius melodi</i>	Killdeer	E	N	Y
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	E	N	M
<i>Colaptes auratus</i>	Northern Flicker	O	Y	Y
<i>Columba livia</i>	Rock Pigeon	E	Y	Y
<i>Contopus virens</i>	Eastern Wood Pewee	E	Y	Y
<i>Corvus brachyrhynchos</i>	American Crow	O	Y	Y
<i>Corvus ossifragus</i>	Fish Crow	E	Y	Y
<i>Cyanocitta cristata</i>	Blue Jay	O	Y	Y
<i>Dendroica caerulescens</i>	Black-throated Blue Warbler	E	N	M
<i>Dendroica coronate</i>	Yellow-rumped Warbler	O	N	M
<i>Dendroica caerulescens</i>	Black-throated Blue Warbler	E	N	M
<i>Dendroica coronata</i>	Yellow-rumped Warbler	E	N	M
<i>Dendroica palmarum</i>	Palm Warbler	E	N	M
<i>Dendroica petechia</i>	Yellow Warbler	E	Y	M
<i>Dendroica striata</i>	Blackpoll Warbler	E	N	M
<i>Dendroica virens</i>	Black-throated Green Warbler	E	N	M
<i>Dumetella carolinensis</i>	Gray Catbird	O	Y	Y
<i>Empidonax traillii</i>	Willow Flycatcher	E	Y	M

## Strong's Yacht Center – Proposed Boat Storage Buildings

5780 West Mill Road, Mattituck, Town of Southold, Suffolk County, NY

Scientific Name	Common Name	Observed <sup>1</sup> /Expected (O/E)	Breeding Status (Y/N) <sup>2</sup>	Year Round/ Migrant/ Overwintering <sup>3</sup>
<i>Egretta thula</i>	Snowy Egret	E	N	M
<i>Geothlypis trichas</i>	Common Yellowthroat	O	Y	Y
<i>Hirundo rustica</i>	Barn Swallow	O	Y	Y
<i>Hylocichla mustelina</i>	Wood Thrush	E	Y	M
<i>Icterus galbula</i>	Baltimore Oriole	E	Y	M
<i>Junco hyemalis</i>	Dark-eyed Junco	O	N	M
<i>Larus argentatus</i>	Herring Gull	O	N	Y
<i>Larus delawarensis</i>	Ring-billed Gull	O	N	Y
<i>Larus marinus</i>	Great Black-backed Gull	O	N	Y
<i>Meleagris gallopavo</i>	Wild Turkey	O	Y	Y
<i>Melanerpes carolinus</i>	Red-bellied Woodpecker	O	Y	Y
<i>Melospiza melodia</i>	Song Sparrow	O	Y	Y
<i>Mimus polyglottos</i>	Northern Mockingbird	O	Y	Y
<i>Mniotilta varia</i>	Black-and-white Warbler	O	Y	Y
<i>Molothrus ater</i>	Brown-headed Cowbird	E	Y	Y
<i>Myiarchus crinitus</i>	Great-crested Flycatcher	E	Y	M
<i>Otus asio</i>	Eastern Screech Owl	E	Y	Y
<i>Pandion haliaetus</i>	Osprey	E	N	M
<i>Parula americana</i>	Northern Parula	E	N	M
<i>Passer domesticus</i>	House Sparrow	E	Y	Y
<i>Passerella iliaca</i>	Fox Sparrow	E	N	O
<i>Passerina cyanea</i>	Indigo Bunting	E	N	M
<i>Phasianus colchicus</i>	Ring-necked Pheasant	E	Y	Y
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	E	Y	M
<i>Picoides pubescens</i>	Downy Woodpecker	O	Y	Y
<i>Picoides villosus</i>	Hairy Woodpecker	O	Y	Y
<i>Pipilo erythrophthalmus</i>	Eastern Towhee	O	N	Y
<i>Piranga olivacea</i>	Scarlet Tanager	E	Y	M
<i>Poecile atricapillus</i>	Black-capped Chickadee	O	Y	Y
<i>Quiscalus quiscula</i>	Common Grackle	O	Y	Y
<i>Regulus calendula</i>	Ruby-crowned Kinglet	O	N	M
<i>Regulus satrapa</i>	Golden-crowned Kinglet	O	N	M
<i>Sayornis phoebe</i>	Eastern Phoebe	O	Y	Y
<i>Setophaga petechia</i>	Yellow Warbler	O	Y	Y
<i>Setophaga pinus</i>	Pine Warbler	O	N	M
<i>Setophaga ruticilla</i>	American Redstart	E	Y	M
<i>Scolopax minor</i>	American Woodcock	E	Y	Y
<i>Sitta carolinensis</i>	White-breasted Nuthatch	E	N	Y
<i>Spizella passerine</i>	Chipping Sparrow	E	N	Y
<i>Spizella pusilla</i>	Field Sparrow	E	N	Y
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	E	N	O
<i>Sturnus vulgaris</i>	European Starling	E	Y	Y
<i>Tachycineta bicolor</i>	Tree Swallow	O	Y	Y
<i>Thryothorus ludovicianus</i>	Carolina Wren	O	Y	Y

<i>Scientific Name</i>	Common Name	Observed <sup>1</sup> /Expected (O/E)	Breeding Status (Y/N) <sup>2</sup>	Year Round/ Migrant/ Overwintering <sup>3</sup>
<i>Toxostoma rufum</i>	Brown Thrasher	E	Y	M
<i>Troglodytes aedon</i>	House Wren	O	Y	Y
<i>Turdus migratorius</i>	American Robin	O	Y	Y
<i>Tyrannus tyrannus</i>	Eastern Kingbird	E	N	M
<i>Vermivora pinus</i>	Blue-winged Warbler	E	N	M
<i>Vireo gilvus</i>	Warbling Vireo	E	Y	M
<i>Vireo griseus</i>	White-eyed Vireo	E	Y	M
<i>Vireo olivaceus</i>	Red-eyed Vireo	O	Y	M
<i>Vireo solitarius</i>	Blue-headed Vireo	E	N	M
<i>Zenaidura macroura</i>	Mourning Dove	O	N	Y
<i>Zonotrichia albicollis</i>	White-throated Sparrow	O	N	O

<sup>1</sup>Species Observed During Field Surveys in 2020 and 2021 (WP Bowman)

<sup>2</sup>Based on New York State Breeding Bird Atlas (McGowan and Corwin, 2008); Y = Yes, Breeding is known to occur in local Breeding Bird Atlas Blocks (Blocks #7054C, 7054D, 6954D, 6953B, and 7053A); N = No, Breeding is not known to occur in local Breeding Bird Atlas Blocks.

<sup>3</sup>Y= Species can be found year round; M= Species can be found in summer months only (for breeding birds) or species can be found during spring or autumn migrations; O= Species are expected to overwinter

## **Mammals**

Mammal species (or scat/sign of these species) observed at the site include gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), meadow vole (*Microtus pennsylvanicus*), white-footed mouse (*Peromyscus leucopus*), raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*). Table 22 provides a list of all mammal species observed or expected to occur on site based on habitat preferences (Connor, 1971) and the ecological communities present. All observed or expected mammals are common in suburban landscapes; prefer open, early successional habitats; and/or are tolerant of human activity.

Bat species that utilize forested habitats on Eastern Long Island include big brown bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*), and northern long-eared bat (*Myotis septentrionalis*) (Fishman, 2013; Connor, 1971). Big brown bat and red bat are habitat generalists typically foraging in forest edges, open habitats, and over wetlands and surface waters. Northern long-eared bats utilize a wide variety of upland woodland and forest types (NYNHP, 2016), but are typically associated with mature interior forest (Carroll et al, 2002) and tend to avoid woodlands with significant edge habitat (Yates and Muzika 2006). Other studies have found that northern long-eared bat can also be found using younger forest types (NYNHP, 2016). Recent bat monitoring conducted by the NYSDEC has suggested that northern long-eared bats on eastern Long Island are not sensitive to forest patch size and may utilize forest patch as small as one acre (Hoff, 2019). The northern long-eared bat (*Myotis septentrionalis*) was listed in 2016 as threatened by the U.S. Fish and Wildlife Service (USFWS) and the NYSDEC.

The project site may provide habitat for these bat species during the summer months and migration periods in the spring and autumn. There is growing evidence that northern long-eared bat also overwinter on eastern Long Island, hibernating in human structures and foraging for winter-flying moths when temperatures exceed 4°C (Hoff, 2019). During the summer months, bats are expected to

forage within the site's forest, forest edge, and successional shrubland habitats and over the wetlands and surface waters of Mattituck Creek. Tree cavities and crevices serve as day roosts for these species, with human structures also used by big brown bat.

**Table 22 – Mammal Species Observed/Expected On-Site**

<i>Scientific Name</i>	Common Name
<i>Blarina brevicauda</i>	Short-tailed Shrew
<i>Didelphis virginiana</i>	Virginia Opossum
<i>Eptesicus fuscus</i>	Big Brown Bat
<i>Lasiurus borealis</i>	Eastern Red Bat
<i>Marmota monax</i> <sup>1</sup>	Woodchuck
<i>Microtus pennsylvanicus</i> <sup>1</sup>	Meadow Vole
<i>Mus musculus</i>	House Mouse
<i>Myotis lucifugus</i>	Little Brown Bat
<i>Myotis septentrionalis</i>	Northern Long-eared Bat
<i>Odocoileus virginianus</i> <sup>1</sup>	White-tailed Deer
<i>Peromyscus leucopus</i> <sup>1</sup>	White-footed Mouse
<i>Pitymys pinetorum</i>	Pine Mouse
<i>Procyon lotor</i> <sup>1</sup>	Raccoon
<i>Rattus norvegicus</i>	Norway Rat
<i>Scalopus aquaticus</i>	Eastern Mole
<i>Sciurus carolinensis</i> <sup>1</sup>	Gray Squirrel
<i>Sorex cinereus</i>	Masked Shrew
<i>Sylvilagus floridanus</i> <sup>1</sup>	Eastern Cottontail
<i>Tamias striatus</i> <sup>1</sup>	Eastern Chipmunk
<i>Vulpes vulpes</i>	Red Fox

<sup>1</sup>Indicates species or sign observed on-site.

### Reptiles and Amphibians

Few species of reptiles and amphibians are expected to occur on the subject site due to the absence of freshwater habitats. The species that are expected to be present based upon site observations, existing habitat types, and the New York State Herpetological Atlas (NYSDEC, 2009) are listed in Table 23. The New York State Herpetological Atlas provides known records of reptile and amphibian species from 1990-1998 for each 7.5-minute USGS topographic quadrangle within New York State. The expected reptile and amphibian species listed in Table 5 in Appendix N are based on the Southold, NY quadrangle. The eastern box turtle (*Terrapene carolina*) is listed as a New York State Species of Special Concern and is a common inhabitant of dry and moist woodlands, brushy fields, marsh edges, and bottomlands (Massachusetts Division of Fisheries and Wildlife, 2015). Redback salamander can be found in woodlands throughout New York State. The common and ubiquitous garter snake can be found in various woodlands, fields, and suburban habitats.

**Table 23 – Reptile and Amphibian Species Observed/Expected On-Site**

<i>Scientific Name</i>	Common Name
<i>Plethodon cinereus cinereus</i>	Redback Salamander
<i>Terrapene carolina</i> <sup>1</sup>	Eastern Box Turtle

<i>Scientific Name</i>	<i>Common Name</i>
<i>Thamnophis sirtalis</i> <sup>1</sup>	Common Garter Snake

<sup>1</sup> Indicates species or sign observed on-site.

### **Endangered, Threatened, Rare Species or Significant Ecological Communities**

No endangered, threatened, or rare species or significant ecological communities were observed during the ecological surveys conducted. Consultations were undertaken with the New York Natural Heritage Program (NYNHP) and in correspondence dated December 1, 2020, the NYNHP indicated the piping plover (*Charadrius melodus*), a New York State threatened species, is the only record of a known occurrence of a rare or state-listed animal or plant or significant natural community on or in the vicinity of the site (Appendix 1 in Appendix N of this DEIS). Piping plovers nest at Breakwater Beach located more than 0.5 miles away on the west side of Mattituck Inlet. There is no breeding or foraging habitat for piping plover present on the site.

The NYSDEC EAF Mapper (<https://gisservices.dec.ny.gov/eafmapper/>) indicated the potential for southern sprite (*Nehalennia integrecollis*), a damselfly listed as a Species of Special Concern in New York State, to occur in the vicinity of the project site. Southern sprite are found in coastal plain ponds on Long Island (NYNHP, 2010). Due to the absence of suitable habitat, Southern spire are not expected to occur on the subject property.

As described above, the site contains habitat that could be utilized by the northern long-eared bat (*Myotis septentrionalis*) during the summer months for foraging and diurnal roosting. The northern long-eared bat was listed as threatened by both the USFWS and New York State in 2016 due to population declines caused by white-nose syndrome (WNS), a disease caused by an invasive fungus that kills affected hibernating bats during the winter months. Northern long-eared bats roost during the daytime in cavities or crevices of living trees and snags (i.e., standing dead trees) or underneath loose or exfoliating bark. The site has large trees with loose bark, such as red maple and white oak, and potential for cavities in live trees or snags. Due to the northern long-eared bat's potential use of diverse upland forest types and the presence of large trees with loose bark, this species may utilize the site for foraging and roosting habitat in the summer months.

The availability of summer habitat is not limiting for northern long-eared bat. Accordingly, loss of summer habitat is not recognized as a threat to the conservation of this species (USFWS, 2016); rather, WNS is the primary threat to northern long-eared bat within its summer habitats.

Three species listed as Species of Special Concern by New York State are expected to occur on or utilize the site. Species of Special Concern are species for which a welfare concern or risk of endangerment has been documented in New York State. These three species include:

**Table 24 - Species of Special Concern**

Eastern Box Turtle	<i>Terrapene carolina</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>



Eastern box turtle (*Terrapene carolina*) may be found in a wide variety of habitats including in open deciduous forests, woodlands, forested bottomlands, open field and field edges, thickets, marshes, bogs, and stream banks. Eastern box turtles are expected to be found in any of the vegetated upland habitats on the site. Eastern box turtles are threatened by development of their habitat, mortality on roadways, mortality from mowing of lawns and early successional habitats, and collection as pets.

Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*) inhabit various upland and wetland forests during the breeding season including fragmented forests within agricultural, suburban, and urban landscapes, with sharp-shinned hawks preferring forest edge habits. Cooper's hawks breeding sites have been expanding in New York over the last several decades. Cooper's hawks prefer to nest in forests with a closed canopy, trees that are more than 30 years old, and moderate to heavy shrub cover (Beans and Niles, 2003). The site's Coastal Oak-Beech forests provide suitable, but not optimal, nesting habitat due to the relative absence of shrub cover. Sharp-shinned hawks were not documented to nest anywhere in Nassau or Suffolk Counties by McGowan and Corwin (2008). During the winter months, both species frequent residential areas to hunt for songbirds at bird feeders. Both species are expected to utilize the subject site as foraging habitat during any season.

### **Forest Resources**

As noted in the Ecological Report, the Town of Southold is comprised largely of agricultural and residential land uses, which collectively account for 63± percent of the Town's land area. Based on analysis of the 2016 National Land Cover Data obtained from the Multi-Resolution Land Characteristics Consortium (MRLC), approximately 4,500 acres of forest cover is present within the Town of Southold. Forest cover accounts for approximately 2.42 percent of the Town of Southold's land area interspersed within these predominantly agricultural and residential lands (see Figure LC-1 in the Ecological Report). The Town's forests are located on lands with various existing uses including open space and recreation, residential, agricultural, and commercial land uses. The Mattituck Creek watershed has relatively higher proportions of existing forest cover compared to the entire Town. Specifically, forest cover is approximately 15 percent (340 acres) of total land area within the 2,259±-acre 25-year contributing watershed of Mattituck Creek (SCDHS, 2020) (Figure LC-2).

Ecosystem services provided by forests include: habitat for birds and other wildlife; maintaining groundwater and surface water quality; soil and sediment stabilization; removal of air pollutants such as nitrogen and sulfur oxides, ozone, volatile organic compounds (VOCs), and particulates; atmospheric carbon uptake; and groundwater recharge. The loss of these 5± acres of forest would result in a reduction of the ecological benefits and ecosystem services provided by these forests and contribute incrementally along with other forest losses in the Town and Mattituck Creek watershed to an overall loss of forest ecosystem services. Other forest losses in the Town are largely related to residential development, which has resulted in 5,336 new residential units within the Town since 1980.

### **Tree Survey and Identification**

Pursuant to §280-133(B)(2)(c) of the Town of Southold Town Code, site plan applications must identify, "The location of existing natural features, including but not limited to... trees of six inches in

*diameter at a point three feet above the trunk base.”* As such, as part of this DEIS, a tree survey was prepared by LUES which included the field identification of all trees greater than 6-inches in diameter. The total number of trees within the subject property boundary with diameters greater than 6-inches is 2,408±. Approximately 1,054 trees are on the R-80 zoned portion and approximately 1,354 trees are on the M-II zoned portion. Twenty-six tree species were recorded. Dominant tree species present were various oaks including black oak (10.8 percent), scarlet oak (7.6 percent), white oak (5.8 percent), and chestnut oak (3.4 percent); American beech (19.2 percent); red maple (11.3 percent); black locust (11.0 percent); black cherry (8.3 percent), eastern red cedar (6.2 percent), and sassafras (5.8 percent). The mean diameter of the sampled trees was 11.9-inches. Large trees are abundant on the property with trees greater than 18-inches in diameter accounting for 12.7 percent of sampled trees.

#### **2.4.2 Potential Impacts**

The proposed action has a construction footprint of 6.51± acres resulting in the physical disturbance and permanent loss of 4.32± acres of high-quality Coastal Oak-Beech forest, 1.19± acres of southern successional hardwood forest, and 0.54± acre of successional shrubland (see Table 25, as excerpted from Table 6 of the Ecological Report). The loss of successional shrubland habitat is associated with the proposed 16-foot-wide haul road traversing the site from the proposed excavation areas to Mill Road. Upon implementation of the proposed action, the acreage of buildings, impervious surfaces, and gravel driveways and parking areas would increase from 3.70± acres to 8.37± acres and would then comprise approximately 25.4 percent of the site.

The Bulk Schedule requirements for properties in the M-II Zoning District require a minimum of 20 percent (3.29 acres) of the 16.46± acres in the M-II zone to be maintained as landscaping or natural areas under §280 (Zoning) of the Town Zoning Code. Under the proposed action, 6.46± acres within the M-II zone (approximately 51.4 percent) would be maintained as natural vegetation comprised of Coastal Oak-Beech forest and successional forest and 1.67 acres of plantings and landscaping (including retaining wall plantings). As such, the proposed preservation of approximately 8.13 acres of vegetation (i.e., 6.46± acres of existing natural vegetation and 1.67± acres of planted vegetation) within the M-II Zoning District is consistent with and substantially exceeds the 20 percent minimum requirement pursuant to §280 (Zoning) of the Town Zoning Code.

Approximately 13.77 acres of southern successional hardwood forest and successional shrublands would be retained; these areas are located on the western R-80 zoned portion of the property adjacent to West Mill Road. Approximately 8.28 acres of Coastal Oak-Beech forest would be maintained on the site, largely in the northern portion of the M-II zoned property interspersed between existing residential structures, with some forest along the southern property boundary in the R-80 zoned portion. The approximately 0.63 acre of tidal wetlands located along the shoreline of Mattituck Creek would be preserved under the proposed action.

**Table 25 – Proposed Changes in Ecological Community Coverages**

	<b>Existing</b>	<b>% of Existing</b>	<b>Proposed</b>	<b>% of Proposed</b>	<b>Change in Acres</b>	<b>% Change</b>
Coastal Oak-Beech Forest	12.60 acres	38.2%	8.28 acres	25.1%	-4.32	-34.3%
Successional Shrubland	10.83 acres	32.9%	10.29 acres	31.2%	-0.54	-5.0%
Buildings and Paved Surfaces (inclusive of gravel and stone blend pavement)	3.70 acres	11.2%	8.37 acres	25.4%	+4.67	+126.2%
Successional Southern Hardwoods	4.67 acres	14.2%	3.48 acres	10.6%	-1.19	-25.5%
Unvegetated Sand Slope	0.29 acres	0.9%	0.0 acres	0.0%	-0.29	-100.0%
Tidal Wetlands	0.63 acres	1.9%	0.63 acres	1.9%	0.0	0.0%
Mowed Lawn with Trees and Landscaping	0.24 acres	0.7%	1.91 acres	5.8%	+1.67	+695.8%
Total Site	32.96 acres	100%	32.96	100%	--	--

**Potential Impacts to Forest Resources**

Approximately 11.76 acres of forests (8.28 acres of Coastal Oak-Beech Forest and 3.48 acres of Successional Southern Hardwoods) would be retained on the subject property under the proposed action; however, 5.51± acres of the 6.51±-acre Project Area currently consists of upland forest habitat. These 5.51± acres of forest area to be developed comprise 32 percent of the upland forests on the subject property and 34 percent of the site's Coastal Oak-Beech forest.

A tree survey of all site trees greater than 6-inches in diameter was performed by Dr. Bowman and is included in Appendix B of the Ecological Report. Based on the preliminary site plan, the proposed development would result in the clearing/removal of approximately 634 trees. Of the 634 trees, 15 trees would be removed from the R-80 zoned portion of the subject property and 619 trees would be removed from the M-II zoned portion of the subject property. Table 26 below provides a breakdown of tree removal from each portion of the subject property.

Approximately 70 percent of the trees proposed for removal consist of various oak (*Quercus* sp.) and American beech trees with an average size of 12.8-inches diameter at breast height (DBH). The remaining 30 percent are comprised of Norway Maple (*Acer platanoides*), Red Maple (*Acer rubrum*), Tree of Heaven (*Ailanthus altissimo*), Shadbush (*Amelanchier canadensis*), Gray Birch (*Betula populifolia*), Pignut Hickory (*Carya glabra*), Flowering Dogwood (*Cornus florida*), Autumn Olive (*Eleagnus umbellata*), American Beech (*Fagus grandifolia*), Eastern Red Cedar (*Juniperus virginiana*), Apple (*Malus* sp), Mimosa (*Albizia julibrissin*), White Mulberry (*Morus alba*), Pitch Pine (*Pinus rigida*), Japanese Black Pine (*Pinus thunbergii*), Cottonwood (*Populus deltoides*), Bigtooth Aspen (*Populus grandidentata*), Bird Cherry (*Prunus avium*), Black Cherry (*Prunus serotina*), Black Locust (*Robinia pseudoacacia*), and Sassafras (*Sassafras albidum*).

**Table 26 – Tree Clearing Data (>6-inch Diameter)**

Description	Quantity	Percent (%)
R-80 to Be Cleared	15	0.62
M-II to Be Cleared	619	25.7
Total to Be Cleared	634	26.3
R-80 Trees to Remain	1,039	43.1
M-II Trees to Remain	735	30.5
Total # of Trees to Remain at Subject Property	1,774	73.7
Total # of Trees (>6-inch diameter) within Boundary of Subject Property	2,408	--
Proposed On-Site Tree Plantings	135	--

Overall, upon implementation of the proposed action, 73.0± percent of all trees on the overall subject property (i.e., 1,740 of the 2,408 total trees) would be retained. Approximately 54.2 percent of the trees in the M-II Zoning District (i.e., 735 of the 1,354 trees on the M-II zoned portion) would be retained.

As noted in the Existing Conditions section, the Coastal Oak-Beech forests on the subject property consist of 1,647± American beech, oak, hickory, red maple, and sassafras trees. Upon implementation of the proposed action, approximately 66.8 percent of these native trees would be retained. In addition, under the proposed action, approximately 66 percent of the trees greater than 12-inches in DBH would be preserved. Additionally, approximately 86 Pitch Pine trees, as well as shrubs and groundcover, would be established in a 27,333 SF planting area along the new forest edge (predominantly pitch pine) with an additional 40 small trees, including Staghorn Sumac and Shadbush, on the proposed retaining wall.

***Edge Effects***

Some of the 8.28± acres of Coastal Oak-Beech forest and 3.48± acres of successional southern hardwoods to be maintained under the proposed action would be adversely impacted by the creation of new forest edges. Forest edges exhibit differences in microclimate, plant composition, plant density, and habitat quality compared to forest interiors. Accordingly, forest edges are often utilized by different wildlife and plant species compared to forest interiors. Studies have found that the changes in microclimate in forests (i.e., ambient light, air and soil temperatures, wind speed, relative humidity, etc.) occur up to 195-feet from the north- and east-facing forest edges

The subject property has approximately 12.60±-acres of Coastal Oak-Beech forest. Due to the historical disturbances associated with clearing for agricultural uses, commercial marine construction, and construction of two residential structures, much of the existing Coastal Oak-Beech forests are currently (or were previously) subjected to edge effects from adjacent clearing or development. Approximately 3.52 acres of the existing Coastal Oak-Beech forests are currently located more than 195-feet from an existing forest edge associated with the commercial marina or residential structures. The proposed project would result in a new forest edge and, accordingly, result in changes in microclimate that will penetrate up to 195-feet into the existing Coastal Oak-Beech forests. Under

post-project conditions, all of the site's 8.28± acres of Coastal Oak-Beech forests would be less than 195-feet from existing or new forest edges.

The new forest edge would likely result in an intensification of the existing edge effects at the site, likely resulting in colonization and increased growth of invasive plant species and reduction in habitat quality for nesting songbirds, and increased abundance of predators and invasive competitors. In addition, the proposed project may result in increased numbers of invasive birds, such as European starling (*Sternus vulgaris*), house sparrow (*Parus domesticus*), and brown-headed cowbird (*Molothrus ater*), as these birds thrive in habitats created by humans and often nest on or in buildings.

After construction, mature trees that were formerly located in sheltered interior sites would be located at or proximal to the new forest edge, and thus, exposed to increased wind and wind-blown salt, particularly during coastal storms. Tree species that would be located at this new edge include species that are typically tolerant of coastal conditions and wind-blown salt (such as oaks and American beech) and/or species that are tolerant of disturbed habitats (such as sassafras, bird cherry, and black locust). However, increased mortality in these new edge trees is expected post-construction due to windthrow, disturbance to roots/root injury, and salt pruning.

As mitigation, the magnitude of the potential adverse impacts of new edge effects would be reduced by the planting of 27,333 SF of native trees and shrubs along the new forest edge. This planted area is approximately 20-30 feet wide and would include multi-layered plantings (i.e. trees, shrubs, and herbaceous plants that at maturity will occupy ground-, understory-, and canopy-levels) with conifer trees (i.e. 86 pitch pine trees) to minimize light penetration into the new forest. This planting area would also include 57 lowbush blueberry shrubs and 4,295 switch grass plants. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forest area on the property would increase from 11.76-acres to 12.38-acres.

### ***Potential Impacts to Mill Road Preserve***

The subject property is adjacent to the 27±-acre Town of Southold Mill Road Preserve located between Mill Road and the residential properties on North Drive. The Mill Road Preserve has an ecological community composition similar to the subject property with successional shrublands and forest proximal to Mill Road and Coastal Oak-Beech forests located to the east. The project would result in the creation of a new forest edge approximately 105 feet from the Mill Road Preserve boundary along a short reach (approximately 99 feet) of the shared property boundary located in the northeastern corner of the Preserve. As shown in the 1962 aerial image (see Figure 1 in the Ecological Report), this area is proximal to historical disturbance associated with the clearing, filling, and hardening of the west shoreline of Mattituck Creek on the subject property in the 1950s-1960s. The existing oak-dominated and successional forests in this portion of the property have regenerated on the bare, exposed substrate (see Figure 1 in Ecological Report).

The potential impacts associated with the new forest edge could include potential changes to the forest microclimate and increased abundance of invasive plants and wildlife species, as previously described. These edge effects are expected to extend approximately 195 feet into Mill Road Preserve from the northeastern corner of Mill Road Preserve. The total area of the Mill Road Preserve that may be potentially impacted by edge effects associated with the new clearing limit on the SYC property is

approximately 0.38 acre (16,419± SF).

Existing residential properties are located along the eastern border of Mill Road Preserve, as shown in Figure 4 in the Ecological Report. Therefore, the eastern border of Mill Road Preserve is expected to have existing edge-related impacts due to past tree clearing on these residential properties and the utility right-of-way and an increased abundance of invasive plants and nest predators and parasites. Accordingly, some of this 0.38-acre area represents an intensification of an existing forest edge rather than creation of an entirely new edge. The area subject to new or enhanced edge effects accounts for approximately two percent of the 18±-acres of mature oak-beech forests in Mill Road Preserve. Thus, the proposed action would not be expected to have significant adverse impacts on the forest habitat quality or composition through the large majority of the Mill Road Preserve.

Furthermore, the magnitude of potential edge effects is expected to decrease over time due to the proposed landscaping comprised of native trees, shrubs, and herbaceous plants including pitch pine (*Pinus rigida*), lowbush blueberry (*Vaccinium angustifolia*), and switch grass (*Panicum virgatum*). Proposed edge plants would facilitate the development over time of a dense “wall” of vegetation comprised of maintained canopy trees, regenerating trees, and shrubs to fill in open space at the edge. This “sealing” of the edge through development of multiple layers of vegetation may reduce the penetration of light into the forest and decrease the depth of edge impacts towards the interior of Mill Road Preserve.

### **Potential Impacts to Wildlife**

The decreased habitat availability associated with the loss of 32 percent of the site’s forest habitat would likely decrease the abundance and diversity of the plant and wildlife species that utilize the site. Wildlife that utilize the site’s successional shrubland and successional forest habitats would not be adversely impacted by the proposed action due to the maintenance of 13.77± acres (approximately 89 percent) of these successional habitats. Similarly, wildlife species that are habitat generalists and utilize all of the site’s habitats (i.e., successional habitats, forests, and developed areas) are also unlikely to be adversely impacted by the proposed action, due to their general tolerance for human activity. Examples of these habitat generalists include raccoon, opossum, and white-tailed deer as well as birds such as American robin, common grackle, black-capped chickadee, blue jay, and wild turkey.

Wildlife species that are most likely to be adversely impacted by the proposed action, specifically the reduction in Coastal Oak-Beech forest habitats from 12.60 acres to 8.28 acres, include birds or other wildlife that inhabit mature forests, forest interiors, or have large patch size requirements. Songbirds that are expected to utilize the site’s Coastal Oak-Beech forests include species that forage for insects on and under bark (such as woodpeckers and nuthatches), glean insects from canopy foliage (such as vireos), and/or catch airborne insects (such as flycatchers and wood pee-wees). Some bird species may be found in both small and large habitat patches, whereas other bird species are more frequently found in larger habitat patches than smaller patches. Bird species that are not dependent on habitat patch size and/or species that have tolerance for small habitat patches or edge habitats are likely to continue to utilize the smaller wooded habitat patches remaining after completion of the project.

Many of the bird species that inhabit the site and have been found to be insensitive to patch size, utilize small forest patches (between 2.0 and 8.0 acres in area), or utilize edge habitats include American robin (*Turdus migratorius*), gray catbird (*Dumetella carolinensis*), house wren (*Troglodytes aedon*), Carolina wren (*Thryothorus ludovicianus*), common grackle (*Quiscalus quiscula*), common flicker (*Colaptes auratus*), tufted titmouse, (*Baeolophus bicolor*), black-capped chickadee (*Poecile atricapillus*), blue jay (*Cynaocitta cristata*), cardinal (*Cardinalis cardinalis*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*Leuconotopicus villosus*), red-bellied woodpecker (*Melanerpes carolinus*), white-breasted nuthatch (*Sitta canadensis*), indigo bunting (*Passerina cyanea*), warbling vireo (*Vireo gilvus*), great-crested flycatcher (*Myiarcus crinitus*), and American redstart (*Setophaga ruticilla*). These species are expected to persist on the subject property, albeit at lower abundance due to less available habitat and reduced habitat quality in remaining forests resulting from intensification of adverse edge effects, including increased abundance of nest predators and nest parasites.

Forest bird species that are patch-size dependent during the breeding season and require relatively large habitat patches or utilize the interior of forest habitat patches, such as red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapilla*), black-and-white warbler (*Mniotilta varia*), veery (*Catharus fuscescens*), wood thrush (*Hylocichla mustelina*), and scarlet tanager (*Piranga olivacea*) (Galli et al, 1976; Banner and Schaller, 2001) are less likely to utilize the site after the reduction from 12.60± to 8.28± acres of Coastal Oak-Beech forest. As discussed below, the existing forest patches at the site are too small to provide high-quality breeding habitat of the most area sensitive forest birds, such as wood thrush and scarlet tanager, and edge effects related to nest predation and nest parasitism are likely already pervasive. The suitability of the site for some forest breeding birds may be lost as the available habitat, 8.28± acres, drops below the published habitat patch size requirements for species such as red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapilla*), and black-and-white warbler (*Mniotilta varia*). However, these patch size-dependent bird species are likely to continue to utilize the approximately 18-acres of Coastal Oak-Beech forest on the adjacent Mill River Preserve, as well as smaller habitat patches during the spring and fall migrations.

The loss of the 5.51± acres of on-site forest contributes incrementally along with other forest losses in the Town to a decrease in the number of habitat patches that are large enough to support stable populations of forest birds. Other forest losses in the Town are largely related to residential development, which has resulted in 5,336 new residential units within the Town since 1980 (Town of Southold, 2017).

None of the songbird species expected to utilize the subject property are listed as Endangered, Threatened, or Species of Special Concern in New York State. Most of the bird species present on the subject property are not listed on the USFWS Species Birds of Conservation Concern list (USFWS, 2021). In addition, the patch-size dependent bird species identified above, red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapilla*), and black-and-white warbler (*Mniotilta varia*), are not identified as Birds of Conservation Concern by the USFWS (USFWS, 2021). Accordingly, the displacement or loss of habitat at the site for individuals of these abundant bird species, even those that are patch-size dependent, is not likely to adversely impact the regional populations of these species.

Many songbird populations have been declining in abundance in the Northeastern United States since the 1970s. Two songbirds that may potentially utilize the site as breeding habitat are listed as “Species of Greatest Conservation Need” in New York State. Species of Greatest Conservation Need are species

that are experiencing some level of population decline, have identified threats that may put them in jeopardy, and need conservation actions to maintain stable population levels or sustain recovery. The two songbird species that are classified as Species of Greatest Conservation Need that are expected to utilize the site are wood thrush (*Hylocichla mustelina*) and the scarlet tanager (*Piranga olivacea*). Wood thrushes typically breed in deciduous forests with an abundance of saplings and high density of tall shrubs. Wood thrushes may breed in small habitat patches (2.5 to 12.5 acres) or smaller but have been found to have lower nest productivity in these small habitat patches due to nest predation by cowbirds, jays, crows, raccoons, and domestic and feral cats.

Scarlet tanagers prefer mature deciduous and mixed forests with tall trees, moderately open to closed canopy, and well-developed understory. Scarlet tanagers breed successfully in large habitat patches. Habitat patches in landscapes with 50 percent or less forest cover must be 30-170 acres in area to be moderately to highly suitable for tanager breeding.

The site does not provide high quality breeding habitat for wood thrush or scarlet tanager due to (1) the paucity of understory vegetation, (2) the relatively small area of the existing forest patch (12.60± acres on property and approximately 37 acres with adjoining Mill Road Preserve), and (3) nest predation due to proximity to existing forest edges and human development. Thus, the loss of the 4.32± acres of Coastal Oak-Beech habitat resulting from the proposed action would reduce habitat for foraging (particularly during migration periods) for these species, but not result in the loss of high-quality nesting habitat that would significantly adversely impact the populations of these two species of Conservation Need.

The potential for the proposed action to generate noise from construction activities, vehicular traffic, and operation of the proposed boat storage facility is analyzed in detail in the Acoustic Report (see Appendix R). The analysis indicated existing noise conditions within the natural ecological communities on the subject property are between 40-45 dBA. Analysis of potential noise levels at nearby residential sites (such as 5106 West Mill Road, 800 North Drive, and 805 North Drive) indicated that noise levels in the property's natural areas may increase temporarily during project construction to 66 dBA during tree removal/grubbing (in December), 76 dBA during excavation phases (between December to June), and 71 dBA during building and drainage construction phases (between June to November). Under the proposed build conditions, noise levels are expected to increase slightly by 3-4 dBA from 40-45 dBA to 44-48 dBA. Under proposed build conditions, sound levels will not increase by more than 6 dBA above existing conditions and, therefore, is consistent with "no impact" following NYSDEC standards for impacts to human receptors. As there are no standards for wildlife, the human standards were applied.

Noise pollution associated with industrial activities, roads, and major highways has been found to result in ecological impacts such as lower bird breeding densities and poorer body condition. For example, chronic industrial noise levels of 75-90 dBA generated by compressor stations on natural gas pipelines in Alberta, Canada resulted in a 15 percent decrease in the observed breeding ovenbirds pairs (*Seiurus aurocapilla*) in forests adjacent to the compressor stations and 15-to-66-percent decrease in other species including red-breasted nuthatch (*Sitta canadensis*), red-eyed vireo (*Vireo olivaceus*), and yellow-rumped warbler (*Dendroica coronata*). Anthropogenic noise was also found to increase stress and reduce body condition in songbirds, but not adversely impact survivorship, in urban habitats compared to more rural habitats. Simulated roadway noise that increased noise levels (Leq) by 11-20 dBA experienced by birds was found to alter the species composition and abundance



of the avian community, alter foraging and nesting behavior, and reduce nestling body condition. Potential impacts to birds adjacent to these industrial facilities and simulated roadway noise was attributed to increasing stress levels; noise interference with bird songs used to attract mates and defend breeding territories; and altered foraging and nesting behavior.

Over the long-term, the maximum projected noise levels would remain under 50 dBA and would not increase by more than 4 dBA compared to existing conditions. This increase in sound levels is less intense than the industrial sources and simulated roadway noise that have been documented in the scientific literature to adversely impact birds; thus, no long-term noise-related impacts to birds and bird habitat expected to result from the operation of the proposed boat storage facility.

Potential noise levels during daytime construction hours over the 12-month construction period (45-76 dBA compared to 44 dBA under existing conditions) slightly overlap with the range of the chronic industrial levels (75-90 dBA) that have been found to impact bird breeding productivity (Habib et al, 2007) and are similar to the change in sound levels (11-20 dBA) that have been found to adversely impact bird community composition and abundance, foraging and nesting behavior, and body condition. It should be noted that potential noise impacts during construction would only occur during daytime construction hours and noise levels would return to background conditions; in contrast, studies identifying adverse impacts to birds due to noise have analyzed more continuous noise associated with industrial facilities and large roadways. However, due to the increase in daytime noise levels, it is expected that a temporary reduction in the habitat quality provided by the adjacent forest for bird reproduction would occur during the construction period. Mitigation measures to lessen the magnitude of short-term, noise-related impacts during construction to neighbors are discussed in the Acoustic Report and include the use of white noise back-up alarms rather than single, tone beeps; no use of Jake Brake mechanisms on site; and use of dump trucks that meet USEPA Tier 4 standards. These mitigation measures would serve to reduce potential impacts to birds and wildlife by decreasing high frequency noise.

No adverse impacts to wildlife or wildlife habitat are expected to result from new outdoor lighting associated with the proposed action. The proposed lighting shall be dark skies-compliant, downward directed lighting resulting in no increase in light levels beyond the limit of the proposed buildings, access roads, and parking surfaces.

### ***Potential Impacts to Endangered, Threatened, Rare Species or Significant Ecological Communities***

As indicated in Section 2.4.1 of this DEIS, there were no endangered, threatened, or rare species or significant ecological communities were observed during the ecological surveys conducted and the NYNHP indicated the piping plover (*Charadrius melodus*), a New York State threatened species, on or in the vicinity of the site. However, the piping plovers nest at Breakwater Beach, which is located more than 0.5± mile from the subject property and there is no breeding or foraging habitat present on the site. As such, there would be no impacts to piping plover.

The NYSDEC EAF Mapper (<https://gisservices.dec.ny.gov/eafmapper/>) indicated the potential for southern sprite (*Nehalennia integracollis*), a damselfly listed as a Species of Special Concern in New York State, to occur in the vicinity of the project site. However, as southern sprite are found in coastal plain ponds on Long Island and there is no such habitat on the subject property, there would be no impacts to this species.

As described in the Wildlife section below, the site contains habitat that could be utilized by the northern long-eared bat (*Myotis septentrionalis*) during the summer months for foraging and diurnal roosting. The NYSDEC recommends that any cutting of trees occur during the winter months (between December 1 and February 28) to avoid a potential take of this protected species. As such, the proposed tree removal would be scheduled to occur within this timeframe. Accordingly, no adverse impacts to northern long-eared bat populations would result from the proposed action. It is also noted that the winter cutting of forest trees would also minimize potential impacts to breeding wildlife and birds.

Three species listed as Species of Special Concern by New York State are expected to occur on or utilize the site. These three species include:

Eastern Box Turtle	<i>Terrapene carolina</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>

Eastern box turtles are expected to be found in any of the vegetated upland habitats on the site. The project would result in a loss of approximately 6.05 acres of upland forest and shrubland habitat for eastern box turtle. Potential adverse impacts to eastern box turtle would be avoided or minimized by conducting sweeps or surveys for box turtles prior to commencement of clearing, grading, and excavation activities, and relocation of any observed turtles to on-site areas that would not be disturbed. Silt fencing or other barriers would be installed around work areas to prevent turtles from returning to construction areas.

Cooper's hawk (*Accipiter cooperii*) and Sharp-shinned hawk (*Accipiter striatus*) inhabit various upland and wetland forests during the breeding season, including fragmented forests within agricultural, suburban, and urban landscapes, and with sharp-shinned hawks preferring forest edge habits. The site's Coastal Oak-Beech forest provides suitable, but not optimal, nesting habitat due to the relative absence of shrub cover. Sharp-shinned hawks were not documented to nest anywhere in Nassau or Suffolk Counties. During the winter months, both species frequent residential areas to hunt for songbirds at bird feeders and during any season, are expected to utilize the subject site as foraging habitat. While the proposed action would result in a loss of foraging habitat and degradation of habitat quality for Cooper's hawk (*Accipiter cooperii*) and Sharp-shinned hawk (*Accipiter striatus*), these species would likely continue to hunt the human-tolerant songbirds and doves that could be expected on the developed portion of the property and the remaining Coastal Oak-Beech and successional woodlands.

### **Potential Impacts to Tidal Wetlands**

No physical disturbance to the small area (0.63-acre) of intertidal marsh and high marsh tidal wetlands on the southern end of the property is proposed and, accordingly, there would be no loss of tidal wetland area resulting from the proposed action.

Construction and waterfront development actions may result in indirect impacts to adjacent and proximal wetlands through stormwater runoff (both during construction and under future conditions) that may transport sediments or pollutants to these wetlands, increased nutrient loading to surface waters and wetlands from sanitary systems, and erosion due to increased vessel wakes. The wetlands

and surface waters of Mattituck Creek are designated as a Significant Coastal Fish and Wildlife Habitat and threats to these wetlands identified by the NYSDOS include any activity that would substantially degrade the water quality in Mattituck Creek or would adversely affect the biological productivity of this area including chemical contamination, oil spills, excessive turbidity, and waste disposal (including vessel wastes). Long Island's tidal wetlands are also adversely impacted by other factors including sea level rise, eutrophication of estuarine waterbodies, low sediment supply, expansion of invasive *Phragmites australis*, erosion caused by recreational and commercial vessel wakes, and other factors. The seaward edge of tidal marshes along creek banks, particularly in large tidal channels such as Mattituck Creek, are subject to erosional forces from wind-driven waves during storms and vessel wakes. Mattituck Creek is subject to a 5-mph (no wake zone) enforced by the US Coast Guard and Town of Southold Bay Constable to maintain safe navigational conditions. No wake zones reduce the potential for the erosion of marsh edges due to vessel wakes.

The proposed action provides several mitigation measures and best management practices to minimize the potential for adverse impacts to the 0.63-acre of on-site tidal wetlands and the approximately 60 acres of tidal wetlands located in Mattituck Creek.

The proposed action would not substantially increase vessel traffic within Mattituck Creek. The proposed action includes two buildings for the purpose of winter boat storage. The project does not include the use of these buildings year-round, does not propose year-round boat traffic in an out of SYC, does not propose any additional docks, nor does it propose the use of any existing facilities at SYC to house boats that arrive to the site for storage. It is estimated that approximately 88 boats per off-season would be stored in the new buildings. Accordingly, given a 12-week timeframe for entry to storage in the fall and the same timeframe to remove boats from storage in the spring, this equates to an average of approximately seven (7) boats per week or one-to-two boats per day. It is estimated that approximately 547 boats are active in Mattituck Creek on a peak season day, which occurs in the summer season (i.e., July or August), when temperatures are higher. The entry and return of boats to the water from storage would occur outside of this peak season day. However, even if the increase of one-to-two boats per day were to occur on a peak season day, this would equate to 0.18-to-0.36 percent increase in boat traffic, which is nominal and would not impact tidal marshes due to vessel traffic.

The proposed action provides for stormwater management that would serve to minimize potential for degradation of existing tidal wetlands and water quality through nutrient or sediment pollution. The proposed development shall be constructed under the requirements and specifications of a SWPPP prepared in accordance with the NYSDEC SPDES General Permit No. GP-0-20-001 and Chapter 236 "Stormwater Management" of the Town Code. The site's SWPPP includes both permanent and temporary best management practices to minimize potential impacts from stormwater runoff to surface waters of the site's wetlands and Mattituck Creek. Temporary best management practices would also be employed to prevent erosion and transport of sediments, litter, and debris during construction actions, and include silt fences, silt sack inlet protection, soil stockpile protection measures, temporary seeding and mulching, stabilized construction entrances, and designated concrete wash-out areas.

Permanent infrastructure practices installed to collect, treat, and infiltrate stormwater shall include stormwater catch and leaching basins and French drains to collect stormwater runoff generated by a two-inch rainfall event from the roofs of the proposed buildings. Two of the existing metal warehouse

buildings would also be connected to the proposed stormwater management infrastructure, reducing transport of sediments, nutrients, and pollutants to Mattituck Creek from these existing structures.

Nutrient loading to adjacent surface waters has adverse impacts to tidal wetlands due to potential smothering of wetland grasses by rafts of marine algae, increased marsh bank instability, and expansion of invasive *Phragmites* at the landward edge of marshes. SYC operates a pump-out vessel to minimize potential for unauthorized discharge of waste holding tanks and maximize compliance with the Mattituck Harbor and Long Island Sound No Discharge Zones. Nutrient reduction measures included in the proposed action include the replacement and up-grade of the existing conventional sanitary system that services the existing office, marina, and other buildings with an I/A OWTS, and a new I/A OWTS to service the proposed boat storage buildings. Both I/A OWTS shall conform with the Suffolk County Sanitary Code and are designed to reduce total nitrogen in treated effluent to 19 mg/L and remove an average of 70 percent of influent nitrogen concentrations. The proposed I/A OWTS upgrades ensure that the proposed action would not contribute additional nutrient loading to Mattituck Creek (and potential adverse impacts to wetlands) and represents an improvement compared to nutrient loading under existing site conditions.

Based on the above, no significant adverse impacts to tidal wetlands located on-site or within Mattituck Creek are expected to result from the proposed action. No physical disturbance to tidal wetlands is proposed, and the project provides for mitigation measures that would contribute to potential surface water quality and habitat quality improvements in Mattituck Creek, such as new I/A OWTS's and new stormwater drainage infrastructure.

### **2.4.3 Proposed Mitigation**

The following measures have been incorporated into the proposed development to mitigate any potential adverse impacts to ecological resources including forests, wildlife, and wetlands:

- Approximately 8.28 acres of Coastal Oak-Beech forests on the subject property (approximately 66 percent of the existing 12.60± acres) will be retained. These remaining Coastal Oak-Beech forests retain 70 percent of the site's oak (*Quercus sp.*), American beech (*Fagus grandifolia*), red maple (*Acer rubrum*), hickory (*Carya sp.*), and sassafras (*Sassafras albidum*) trees.
- Overall, the project retains 11.76± acres of forest habitat (comprised of Coastal Oak-Beech and successional forests), 75.4 percent of the site's approximately 2,400 trees, and 70.6 percent of all trees greater than 12-inches in diameter.
- To mitigate for the loss of forest trees associated with the project, a total of 135 trees would be replanted, including 86 pitch pine trees (minimum 4-5 feet height) to be planted along the western and southern edges of the proposed development. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.

- To mitigate for potential noise impacts to birds and wildlife during construction, the use of white noise back-up alarms rather than single, tone beeps would be used, there would be no Jake Brake mechanisms on the site, and all trucks would be U.S. EPA Tier 4-compliant.
- The proposed project will shift the eastern edge of the existing forests up to 520-ft to the west. To mitigate the edge effects and potential habitat degradation in the retained forests on the subject property and the Town of Southold Mill Road Preserve, the following measures will be undertaken:
  - Planting 27,333± SF of native trees, shrubs and groundcover along the new forest edge. This planted area is approximately 20-to-30 feet in width and will include dense, multi-layered plantings (i.e., plants that at maturity will occupy understory, and canopy-levels) with abundant conifer trees (86 pitch pine trees) to minimize light penetration into the new forest. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forested area on the subject property will increase from 11.76 acres to 12.39 acres.
  - The proposed retaining wall features topsoil-filled planting trays that will be planted with native ground-vegetation, shrubs, and small trees. Native species that will be planted on the retaining wall include bayberry (*Morella pensylvanica*), staghorn sumac (*Rhus typhina*), shadbush (*Amelanchier canadensis*), groundsel bush (*Baccharis halimifolia*), Virginia creeper (*Parthenocissus quinquefolia*), switch grass (*Panicum virgatum*), and common milkweed (*Asclepias syriaca*). The vegetation established on the proposed retaining wall will serve to further reduce the intensity of the new forest edge.
- The proposed activities include construction of a stormwater management system that will collect, treat, and infiltrate stormwater generated from a two-inch rainfall event from the roofs of the proposed buildings. Stormwater management infrastructure shall include catch and leaching basins and French drains. Two of the existing metal warehouse buildings will also be connected to the proposed stormwater management infrastructure, reducing transport of sediments, nutrients, and pollutants to Mattituck Creek from these existing structures.
- Nutrient reduction measures included in the proposed action include the replacement and upgrade of the existing conventional sanitary system that services the existing office, marina, and other buildings with an I/A OWTS, and a new I/A OWTS to service the proposed boat storage buildings. Both new I/A OWTS shall conform with the Suffolk County Sanitary Code and are designed to reduce total nitrogen in treated effluent to 19 mg/L and remove an average of 70 percent of influent nitrogen concentrations. The proposed I/A OWTS upgrades ensure that the proposed action does not contribute additional nutrient loading to Mattituck Creek (and potential adverse impacts to wetlands) and represents an improvement compared to nutrient loading under existing site conditions.
- All tree clearing for the proposed action will occur during the winter months (between December 1 and February 28) in accordance with NYSDEC guidance to avoid potential impacts

to the New York State-threatened northern long-eared bat (*Myotis septentrionalis*), as the site's forests provide suitable summer roost habitat for this species.

- To avoid or minimize potential impacts to eastern box turtles, sweeps or surveys for box turtles will be conducted prior to commencement of clearing, grading, and excavation activities, and any observed turtles will be relocated to areas that will not be disturbed. Silt fencing or other barriers will be installed around work areas to prevent turtles from returning to construction areas.

### **3.0 HUMAN ENVIRONMENTAL RESOURCES**

#### **3.1 Consistency with Community Plans and Studies**

##### **3.1.1 Existing Conditions**

There are numerous plans that guide the land use and development patterns in the Town of Southold, within the hamlet of Mattituck, and specific to the proposed development application at the subject property. Several plans exist at the Town level, including the 2020 Comprehensive Plan, Town of Southold LWRP, Mattituck Watershed Management Plan, and Chapter 275 (Wetlands) in the Town Code. Other plans and regulations exist at the County level for the protection of water resources, including Articles 6, 7, and 12 of the SCSC. At the State level, the relevant regulations of Article 25 of the ECL (Tidal Wetlands) and the implementing regulations at Part 661 apply.

The Amended Final Scope adopted April 5, 2021 by the Planning Board requires each of the aforementioned plans to be considered and consistency of the proposed action therewith to be evaluated. This section sets forth a general background for each plan, followed by an impact assessment in Section 3.1.2 of this DEIS.

##### ***Existing Land Uses***

As discussed in Section 1.1.2 of this DEIS, the land uses within a 1,000-foot radius of the subject property include a mixture of maritime, agricultural, recreational open space, and single-family residential uses (see Figure 4 in Appendix A). The corresponding photographs were taken in September 2020, March 2021, April 2021, and June 2021 to illustrate the subject property and the surrounding land uses within 1,000 feet of the subject property are described below and included in the Photograph Log in Appendix G of this DEIS.

The 2020 Comprehensive Plan provided a breakdown of land use categories within the hamlets of Mattituck and Laurel (see Table 27 below) and Figure 4 in Appendix A. As noted in Section 1.1.2 of this DEIS, the 2020 Comprehensive Plan land use map indicates that the existing land use for the entire subject property is commercial use; however, the subject property is split-zoned with approximately 16.46± acres located within the M-II zoning district and the remaining 16.5± acres located within the R-80 zoning district. The 16.5±-acre R-80 zoned portion of the subject property is currently undeveloped.

**Table 27 – Mattituck/Laurel Land Use Description (2020 Comprehensive Plan)**

<b>Land Use</b>	<b>Acres</b>	<b>Percentage (%)</b>
Agriculture	2,983	39.4±
Residential	2,412	31.9±
Recreation & Open Space	850	11.2±
Transportation	529	7.0±
Vacant	446	5.9±
Commercial	133*	1.8±
Utilities	98	1.3±
Institutional	76	1.0±
Industrial	42	0.6±
<b>Total Acres</b>	<b>7,569</b>	<b>100±</b>

\*Subject property is classified entirely as “commercial” in the 2020 Comprehensive Plan

**Subject Property**

The overall subject property is comprised of 32.96±-acres, with 16.46 acres zoned for commercial (M-II) use, and the remaining 16.5 acres zoned for residential (R-80) use. On the commercial portion of the subject property, a maritime use (marina and related maintenance/repair) has existed for over 60 years and was formerly known as “Mattituck Inlet Marina and Shipyard”, as indicated in the LWRP (Section II-J Reach 1-5).

The subject property is accessed via the southern terminus of West Mill Road (see Photograph No. 1). The eastern portion of the subject property at Mattituck Creek is bulkheaded and improved with an operational marina that includes six (6) support buildings for the operation of the marina, boat/yacht sales, maintenance, and storage that are accessed via an internal driveway extending a linear distance of approximately 1,137 feet (0.22± mile) from the northern extend of SYC (see Photograph No. 2). The existing marina is also improved with approximately 45 boat slips, two liftwells with travelifts (including a 50-ton travelift to the south of the SYC Office building [Building 2] and an 85-ton travelift to the east of Building 7) and fueling stations and electrical hook-ups for boats (see Photograph Nos. 3 through 11).

The southeastern portion of the subject property, east of the existing bulkhead, includes approximately 0.63± acre of NYSDEC-regulated tidal wetlands. Northeast of the wetlands are the docks reserved for commercial fishing vessels and the CCE FLUPSY units (see Photograph No. 12).

Two single-family residences are located upland of the operational marina, one on the subject property (Building 1) and one adjacent located at 5106 West Mill Road. These residences are accessed from the east side of West Mill Road, west of the intersection at Naugles Drive (see Photograph No. 13). Building 1 is the marina manager’s residence (see Photograph No. 14). 5106 West Mill Road is private property unrelated to SYC’s operations (see Photograph No. 15). The majority of the subject property, west of the operational marina, is currently undeveloped (i.e., approximately 28 acres) and consists of Coastal Oak-Beech Forest, Successional Shrubland, and Successional Southern Hardwoods that is used as private trails by the Applicant, and Unvegetated Sand Slope (see Photograph Nos. 16 through 23). It is



important to note that the existing SYC operations are visible from uses along the eastern shore of Mattituck Creek (see Photograph Nos. 24 and 25).

### **Surrounding Properties**

The surrounding area can be generally characterized as maritime, with residential, agricultural, open space, and recreational, including the walking trails in the adjacent Town Preserve. Residential uses are prominent on both the eastern and western banks of Mattituck Creek, with some residences having private docks (see Figure 4 in Appendix A). A description of the land uses, both within the 1,000-foot radius of the subject property and outside of the radius, follows:

- **North:** To the immediate north of the subject property are two buildings - the former Mattituck Creek Tide Mill (Old Mill Restaurant) located along the waterfront on the east side of West Mill Road and a single-family residence located on the west side of West Mill Road, formerly the Frame Water Tower (see Photograph Nos. 26 and 27). North of the subject property, within the 1,000-foot radius, is the Mattituck Commercial Dock marina with slips for commercial boats (see Photograph No. 28). Uses north of the Mattituck Commercial Dock marina, outside of the 1,000-foot radius, are single-family residential (see Photograph No. 29) and the Mattituck Fishing station with approximately 40 recreational fishing boats. The single-family residence located at 5102 Mill Road is owned by SYC. Further north, at the mouth of Mattituck Creek, is the NYSDEC Mattituck Creek Waterway Access Site which provides boat and kayak launches, boat slips, a fishing pier, picnic tables, and walking trails (see Photograph No. 30).<sup>46</sup> Additionally, a State-owned open space area, Oregon Marsh State Tidal Wetlands, is located east of Mattituck Inlet. This area is accessible to the public with the issuance of a permit for nature studies and observations. A discussion regarding resources available at Oregon Marsh State Tidal Wetlands is discussed in Section 3.6 of this DEIS.
- **South:** To the south of the subject property is the Mill Road Preserve, a 27-acre parcel owned and maintained by the Town of Southold with a trailhead and parking lot on West Mill Road (see Photograph No. 31). South of the subject property, within the 1,000-foot radius, is a large lattice transmission tower with transmission lines traveling west to east across Mattituck Creek and extends above the existing trees in the surrounding area (see Photograph No. 32). Single-family residential uses are adjacent to the south of the subject property and beyond the 1,000-foot radius (see Photograph Nos. 33 through 35).
- **East:** To the immediate east of the subject property is Mattituck Creek. Across Mattituck Creek to the northeast, within the 1,000-foot radius, are single-family residential properties, some with private docks leading to Mattituck Creek (see Photograph No. 36), and a maritime (M-II zoned) use parcel with commercial fishing dock and loading pier. To the east and southeast of the subject property are single-family residences well-screened by vegetation along the banks of Mattituck Creek (see Photograph Nos. 37 and 38).

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<sup>46</sup><https://www.dec.ny.gov/outdoor/7780.html>. Accessed October 2020

- West: West of the subject property along West Mill Road, within the 1,000-foot radius, are agricultural land uses and single-family residences with less vegetated buffers (see Photograph Nos. 39 through 40).

### **Existing Zoning**

### **Subject Property**

As described in Section 1.1.1 of this DEIS, the subject property is split-zoned with approximately 16.46± acres located within the M-II zoning district and the remaining 16.5± acres located within the R-80 zoning district (see Figure 3 in Appendix A). The SYC operates entirely within the M-II portion of the subject property.

As set forth in §280, Article XIII, *Marine II (M II) District*, of the Town Zoning Code, the permitted uses of the M-II zoning district include the following:

- (1) One one-family detached dwelling per single and separate lot of record in existence as of the date of adoption of this article.*
- (2) Marinas for the docking, mooring and accommodation of recreational or commercial boats, including the sale of fuel and oil primarily for the use of boats accommodated in such marina.*
- (3) Boat docks, slips, piers or wharves for charter boats carrying passengers on excursions, pleasure or fishing trips or for vessels engaged in fishery or shellfishery.*
- (4) Beach clubs, yacht clubs or boat clubs, including uses accessory to them, such as swimming pools, tennis courts and racquetball facilities.*
- (5) Boatyards for building, storing, repairing, renting, selling or servicing boats, which may include the following as an accessory use: office for the sale of marine equipment or products, dockside facilities for dispensing of fuel and, where pumpout stations are provided, rest room and laundry facilities to serve overnight patrons.*
- (6) Mariculture or aquaculture operations or research and development.*
- (7) Boat and marine engine repair and sales and display, yacht brokers or marine insurance brokers.*
- (8) Buildings, structures and uses owned or operated by the Town of Southold, school districts, park districts and fire districts.*
- (9) Retail sale or rental of fishing, diving or bathing supplies and equipment if accessory to a marina or boatyard or ship's loft or chandlery.*

Chapter 280 Attachment 4 (Bulk Schedule for Business, Office and Industrial Districts) of the Town Zoning Code sets forth bulk and dimensional requirements for the M-II Zoning District, as shown in the table below.

**Table 28 – Bulk and Dimensional Requirements of the M-II Zoning District**

<b>Dimensional Regulation</b>	<b>Requirement</b>
Minimum Lot Size	80,000 SF
Minimum Lot Width	150 feet
Minimum Lot Depth	150 feet
Minimum Front Yard	35 feet
Minimum Side Yard	25 feet
Minimum Both Side Yards	50 feet
Minimum Rear Yard	25 feet
Minimum Landscape Area	20 percent
Maximum Lot Coverage	30 percent
Maximum Building Height <sup>[1]</sup>	35 feet
Maximum Number of Stories	2

<sup>[1]</sup> Building Height, as defined in §280-4 of the Town Zoning Code, is “The vertical distance measured from the average elevation of the existing natural grade adjacent to the building, before any alteration or fill, to the highest point of the roof for flat and mansard roofs and to the mean height between eaves and ridge for other type roofs.”

Article XX. Landscaping, Screening and Buffer Regulations

Article XX of the Town Zoning Code sets forth standards for landscaping, screening and buffers. Section 3.1.2 of this DEIS sets forth said standards and consistency of the proposed action therewith.

**Surrounding Properties**

Review of the Town of Southold zoning map indicates the zoning is generally consistent with the land uses within 1,000 feet of the subject property (see Figures 3 and 4 in Appendix A). The zoning within 1,000 feet of the subject property includes R-80 and M-II zoned properties to the north, R-80 to the south, R-80 and M-II to the east and Residential Low-Density (one-acre minimum) (R-40) and R-80 to the west. Review of the Town of Southold Tax Map Inquiry indicates that the two parcels to the north of the subject property, zoned M-II similar to the subject property, have a Town land use designation of industrial. However, the Town land use map indicates the subject property has a Town land use designation of commercial although the parcels to the north and the subject property are used in a similar manner (i.e., marinas with commercial and recreational docking). Additionally, the northern most parcel to the east of the subject property, zoned M-II similar to the subject property, has a Town land use designation of industrial and is also used in a similar manner as SYC (i.e., commercial fishing dock and loading pier operated by the King Family). The other parcels zoned M-II south of the King Family commercial fishing dock and pier are residentially developed and have a Town land use designation of medium density residential. The properties zoned R-80 to the west of the subject property are agricultural uses.

The Town’s LWRP indicates the sloping wooden terrain around Mattituck Creek, specifically near Mattituck Inlet provides ideal sites for residential development. Based on the prevailing zoning, the residential development is of low and medium density.

### ***Relevant Planning Documents***

#### **Southold Town Comprehensive Plan Update (Adopted September 2020)**

The 2020 Comprehensive Plan was adopted in the fall of 2020 and replaces the previous plan that was originally adopted by the Town in the late 1970's and updated in 1989. The 2020 Comprehensive Plan was prepared to “shape future updates to the Town Code and policy decisions regarding the appropriate use of the Town's resources” and “to guide future management of the Town's expected growth and for encouraging economic activity suitable to the Town's character” (page i). Its Vision Statement, as created through the public participation process, is as follows: “future planning shall be compatible with existing community character while supporting and addressing the challenges of continued land preservation, maintain a vibrant local economy, creating efficient transportation, promoting a diverse housing stock, expanded recreational opportunities and protecting natural resources” (page 1).

The 2020 Comprehensive Plan is comprised of 13 chapters that address various Town resources, both natural and manmade, that influence policy decisions about land use and zoning within the Town. The 2020 Comprehensive Plan provides both Town-wide and specific hamlet planning goals and objectives within each chapter to achieve the vision of this plan. Below are the relevant Town-wide and hamlet goals and objectives from the 2020 Comprehensive Plan as they relate to the proposed action. The proposed action's consistency with the relevant sections of the 2020 Comprehensive Plan Update is included in Section 3.1.2 of this DEIS.

#### **Land Use and Zoning**

Pursuant to the Mattituck/Laurel Land Use Map (see Figure 4 in Appendix A), the subject property is mapped entirely for commercial use. However, as noted above in this section and in Section 1.1.2 of this DEIS, the subject property is split-zoned with approximately 16.46± acres located within the M-II zoning district and the remaining 16.5± acres located within the R-80 zoning district. The 16.5±-acre R-80 zoned portion of the subject property is currently undeveloped. The 2020 Comprehensive Plan provides theoretical buildout scenario estimates for different land uses by hamlet. The commercial and industrial buildout scenario calculates the potential SF of commercial and/or industrial development as compared to existing development within each hamlet. As depicted on Figure 3.4 - Existing and Potential Future Commercial/Industrial Development by Hamlet (page 3 in Chapter 3), Mattituck/Laurel has the third highest amount of development potential with the Town. Based on the data provided in Figure 3.4, there is currently 800,000 SF of commercial and industrial development within the hamlets of Mattituck and Laurel, and the buildout scenario indicates a potential for 1,700,000 SF more commercial and industrial development in Mattituck/Laurel (from 800,000 SF for existing to 2,500,000 SF for future buildout). Relevant to the subject property is its existing commercial use as an operational marina within the hamlet of Mattituck with the potential to expand its commercial services on-site.

Chapter 3 sets the foundation for the subsequent chapters in the 2020 Comprehensive Plan by providing an overview of current land use and zoning and presents broad goals for future land use and zoning to achieve the vision in this plan. The broad goals for land use and zoning each relate to the subsequent chapters where more in-depth goals and objectives are identified. The remaining chapters

of the 2020 Comprehensive Plan narrow the focus to the specific land use topics: transportation and infrastructure, community character, water and land resources, economic development, housing, agriculture, land preservation, human services, natural hazards, and parks and recreation. Further, Chapter 3 of the 2020 Comprehensive Plan identifies goals/issues for the Mattituck/Laurel area in which the subject property is located. The Town-wide and broad and general goals for land use and zoning as well as the goals/issues for the Mattituck/Laurel area are summarized below.

- *Goal 5: Protect the Town Character*
- *Goal 6: Protect and Enhance the Town's Natural Resources and Environment*
  - *Protect groundwater and surface water quality and quantity.*
  - *Protect land-based natural resources including agricultural soils and natural habitat for wildlife.*
- *Goal 7: Economic Prosperity (Facilitate the growth of existing businesses and encourage new business for stable and sustainable employment)*
  - *This includes agriculture, aquaculture, health care, renewable energy, tourism, light industrial, retail/service-based and maritime-related industry. Balance economic prosperity with maintaining a high quality of life, the environment, and the unique character of the communities.*

#### Transportation and Infrastructure

Chapter 4 (Transportation and Infrastructure) of the 2020 Comprehensive Plan addresses goals to address traffic congestion, to improve traffic, pedestrian, and bicycle safety, and the integrity of utilities to serve future development within the Town. Also, the 2020 Comprehensive Plan notes the intention of the Town to re-evaluate zoning districts relative to the traffic generated by uses within the districts and the need for additional infrastructure to support future development (pages 18 and 31 in Chapter 4). There are no relevant goals and objectives for traffic as it relates to the subject property.

The relevant goals and objectives for infrastructure are summarized below:

- *Goal 1: Reduce stormwater runoff*

The Town recognizes that as development increases, impermeable surfaces would likely increase and there would also be a resultant increase in stormwater runoff generation. In addition to traditional stormwater infrastructure, green infrastructure technologies, such as constructed swales and vegetated retention areas, are recommended to be integrated into stormwater design.

- *Goal 2: Evaluate alternatives to public sewers*

The 2020 Comprehensive Plan notes that extending public sewer may not be feasible due to construction and maintenance restraints as well as growth inducing concerns. As such, evaluating alternative methods to treating sanitary waste (e.g., on-site or small community systems) is an important infrastructure goal for the Town.

### Community Character

Chapter 5 (Community Character) of the 2020 Comprehensive Plan indicates that, “*the Town’s character is anchored in the scenic quality of its bucolic-built environment and its landscapes and waterscapes.*” (page 1 in Chapter 5). Of noted importance to the community is maintaining the quality of life when facing future development within the Town.

The relevant goals and objectives are as follows:

- *Goal 2: Protect Cultural Resources*
  - *Objective 2.4 – Protect and enhance resources that are significant to the culture of Southold Town.*
    - *(B) – Protect the character of historic agricultural and maritime areas by maintaining appropriate scales of development, intensity of use, and architectural style.*
    - *(C) – Preserve and encourage traditional uses defining the agricultural and maritime character of the area.*
  
- *Goal 3: Preserve Quality of Life in Residential Neighborhoods*
  - *Objective 3.2 – Reduce impacts from traffic.*
  - *Objective 3.3 – Reduce impacts from noise and light pollution*
  - *Objective 3.4 – Preserve community character of residential neighborhood.*
  
- *Goal 4: Protect Natural Heritage*
  - *Objective 4.1 – Elevate and preserve the Town’s natural heritage through preservation of the working landscapes and waterscapes and the people who interact with them.*
    - *(B) – Provide for and support the commercial and recreational use of Southold Town’s marine ecosystems.*
  - *Objective 4.2 – Protect and restore ecological quality throughout Southold Town*
    - *(B) – Promote sustainable use of living marine resources in Long Island Sound, the Peconic Estuary, and Town waters.*
    - *(C) – Avoid adverse changes to the Long Island Sound and Peconic Bay ecosystems that would result from impairment of ecological quality.*
  
- *Goal #5: Protect the Unique Character of Individual Hamlets*

As indicated on page 13 of Chapter 5 in the 2020 Comprehensive Plan, the Town utilized individual hamlet plans from 2005 to 2010 that developed from a community-led initiative to generate short-term and long-term recommendations for each hamlet. In 2008, the Hamlet Study Implementation Panel (HIP) was formed to implement the recommendations of the stakeholders. By 2009, many of the short-term recommendations of the hamlet plans were implemented and completed. The 2020 Comprehensive Plan integrates those long-term recommendations from the hamlet plans.

The recommendations for the hamlets of Mattituck and Laurel addressed topics such as revitalizing Mattituck Inlet into a maritime hub, creating a village park for community events, targeting parking behind the retail and service areas, supporting the closure of Love Lane for community events and continuing the operation of the post office. Of the specific

recommendations, only one recommendation is relevant to the subject property as a commercial maritime use and is identified below.

- (A) – Revitalize Mattituck Inlet into a recreational and commercial maritime hub*
- (2) Update and implement the Harbor Management Plan.*

### Natural Resources and Environment

Chapter 6 (Natural Resources and Environment) of the 2020 Comprehensive Plan addresses the existing natural resources and environmental features in the Town. The Town's locational setting with the Long Island Sound to the north and Peconic Estuary to the south is noted ecologically important. The natural resources and environment goals and objectives are separated into two categories – water resources and land resources.

The relevant goals and objectives for water resources, are as follows:

- *Goal 1: Conserve water quantity*
- *Goal 2: Protect groundwater quality*
- *Goal 3: Protect surface water quality*
  - *Objective 3.1 – Continue to implement the goals and objectives of the LWRP, Peconic Estuary Program (PEP), CCMP, and LISS to address target issues on surface water quality.*
  - *Objective 3.4 – Minimize illicit discharges into surface waters.*
  - *Objective 3.5 – Avoid and minimize non-point pollution of coastal waters.*
- *Goal 4: Improve watershed management*
  - *Objective 4.4 – Limit the potential for adverse cumulative impacts of watershed development on water quality and water quantity.*
- *Goal 5: Protect freshwater and marine habitats*
  - *Objective 5.1 – Identify, protect and enhance quality of coastal habitats.*
  - *Objective 5.2 – Protect tidal and freshwater habitats*
    - *(A) – Continue to achieve a “no net loss” policy of tidal and freshwater wetlands.*

The relevant goals and objectives for land resources, are as follows:

- *Goal 1: Protect soils and geologic features*
  - *Objective 1.4 – Preserve the unique geologic features of the Town through avoidance and/or minimization of impacts from development and natural disasters.*
- *Goal 2: Protect upland habitats and trees*
  - *Objective 2.1 – Preserve and manage the Town's grasslands, old field, and woodlands habitats to achieve the highest ecological quality and species diversity.*
  - *Objective 2.2 – Protect and restore upland habitat ecological quality by adhering to the following measures:*
    - *(A) – Retain and add indigenous plants to maintain and restore values of upland ecological communities.*
    - *(B) – Protect existing indigenous plants from loss or disturbance to the extent practical.*
    - *(C) – Avoid permanent adverse change to ecological processes that provide values to the residents of the Town and the region.*
    - *(D) – Reduce adverse impacts on upland habitats due to development.*

- *(E) – Mitigate impacts of new development where avoidance of impacts is not practicable.*
- *Goal 3: Protect fish and wildlife resources*
  - *Objective 3.3 – Protect and restore Significant Coastal Fish and Wildlife Habitats.*
- *Goal 7: Adapt to the effects of climate change and rising sea levels*
- *Goal 9: Continue to manage solid waste and hazardous waste.*
  - *Objective 9.7 – Ensure maximum public safety through continued management of household and industrial hazardous waste collection, storage, and disposal.*
- *Goal 10: Reduce light pollution*

### Economic Development

Chapter 7 (Economic Development) of the 2020 Comprehensive Plan addresses economic development within the Town. As noted in this Chapter, all goals and objectives were formulated using extensive community input that considered the Town's history, past economic development initiatives, changes in demographics and socio-economic status of residents, and businesses within the Town.

*As indicated on page 1 of Chapter 7, "Industrial and commercial zoning districts provide for important land uses that serve many needs within the community and the region. They are seen as beneficial because they are essential to a strong tax base for the Town. Commercial/industrial lands result in: higher tax base, which helps support school budgets (approximately 60 percent of the total tax levy is school district taxes); employment creation within the community; provision of consumer and service business needs within the community."*

As discussed above in this section of the DEIS and explained in Chapter 3 (Land Use and Zoning) of the 2020 Comprehensive Plan, Mattituck/Laurel has the third highest amount of development potential with the Town based on SF or building area. At the time of the 2020 Comprehensive Plan's development and adoption, a tax base analysis was conducted which indicated that the *"Town's tax base appeared to be sound, with a healthy balance of residential and non-residential uses. Southold Town has established an optimal mix of businesses, and industrially zoned businesses. The analysis found that it was not likely that the existing zoning mix would have major implications for the tax base"* (page 2 of Chapter 7).

The relevant goals and objectives, for economic development, are as follows:

- *Goal 1: Encourage new and facilitate the growth of existing business sectors that pursue stable and suitable employment.*

The 2020 Comprehensive Plan identifies targeted business sectors including agriculture, aquaculture, health care, renewable energy, tourism, light industrial, retail/service-based and the maritime-related industry.

- *Goal 2: Promote economic development that ensures an adequate tax base without compromising the unique character of the Town.*
  - *Objective 2.4 – Expand and improve infrastructure as appropriate, to serve existing businesses and accommodate new growth.*



- (A) – As commercial/industrial development occurs in conformance with Town zoning, maintain and provide infrastructure in a manner that supports the planned non-residential growth of the Town.
- Goal 4: Preserve and encourage industries that support existing and future agriculture and aquaculture uses
  - Objective 4.7 – Continue to pursue relationships through Cornell Cooperative Extension and other key players to promote the Town's aquaculture industry, and the Southold Project in Aquaculture Training (SPAT).
- Goal 5: Preserve, encourage, and continue to support existing and future maritime uses as an important business sector within the Town's economy.
  - Objective 5.1 – Maintain consistency with the policies adopted under the Local Waterfront Revitalization Program.
  - Objective 5.4 – Consider amendments to the zoning of larger marinas to better accommodate and position them as a viable use in the Town's economy.
  - Objective 5.7 – Enhance the connection between Mattituck Inlet and the hamlet center.
    - (B) – Increase access through regular dredging of Mattituck Inlet.

### Natural Hazards

Chapter 12 (Natural Hazards) of the 2020 Comprehensive Plan acknowledges the threats of natural hazards to the Town and the increase in occurrence of natural hazards, including:

- Flooding (coastal, riverine, flash, urban)
- Nor'easters (extra tropical cyclones, including severe winter low-pressure systems)
- Coastal erosion
- Severe storms (windstorms, thunderstorms, hail, tornadoes)
- Hurricanes (tropical cyclones, tropical storms, tropical depressions)
- Sea level rise
- Drought
- Extreme temperature (heat wave or cold temperatures)
- Wildfire

As the subject property is located within the Town of Southold, there is a potential threat of the aforementioned natural hazards. Furthermore, as the subject property is located near the coast along Mattituck Creek, the subject property is potentially susceptible to flooding and sea level rise. As described in Section 2.3.1 of this DEIS, a majority of the eastern portion of subject property currently developed with the commercial marina is situated within the SFHA Zone AE, which is the 100-year flood zone. The northeast portion of the subject property that is developed with Building 3 is situated within Zone X, which includes 500-year flood zone areas. The 2020 Comprehensive Plan indicates that the rate of sea level rise within the next 20 years is predicted to increase as a result of warming oceans and would contribute to worsening coastal flooding and related hazards such as erosion (page 1 of Chapter 12).

Chapter 12 provides three goals for addressing natural hazards which includes mitigating the effects of natural hazards, completing a post disaster recovery and reconstruction plan and providing education to the public about natural hazards. Only one of the three town-wide goals for addressing natural hazards is relevant to the subject property, as identified below.

- *Goal 1: Mitigate the effects of natural hazards to achieve coastal resiliency, protect public safety, and reduce economic loss.*

This goal recognizes the need to mitigate natural hazards to ensure those hazards will not cause injury or death to people, and to reduce economic loss to structures and property. This goal also acknowledges that coastal resiliency is the ability of a place to withstand coastal hazards (e.g., flooding and sea level rise) while minimizing threats to human life and property.

The proposed action's consistency with each of the goals and objectives set forth above from the 2020 Comprehensive Plan are evaluated in Section 3.1.2 of this DEIS.

### **Town of Southold Local Waterfront Revitalization Program**

The Town of Southold LWRP was originally adopted on November 30, 2004 and approved by the NYSDOS on June 21, 2005 with concurrence from the United State Office of Ocean and Coastal Resources Management on November 2, 2005. The Town amended the LWRP on June 23, 2011 and approved by the NYSDOS on February 25, 2014 with concurrence from the United States Office of Ocean and Coastal Resources Management on July 24, 2014.

The LWRP supplements the State's Coastal Management Plan by highlighting the waterfront issues that are critical to the local community and setting forth policies that future coastal development must abide by. The Town's LWRP used other local planning frameworks, including but not limited to the Town's previous Comprehensive Plans, LISS, and Long Island Sound Regional Coastal Management Program (LISRCMP) to guide the development of the LWRP policies.

As indicated in the LWRP, the Town of Southold contains 160 miles of shoreline. To inventory the coastal areas of the Town, the LWRP divides the Town into 10 reaches. The subject property is within Reach 1 which "*...stretches east along the Long Island Sound shoreline from the boundary between the Town of Riverhead and Southold to Duck Pond Point, Cutchogue. Its inland boundary is Old Sound Avenue and County Route 48. The Reach includes the communities of Mattituck Hills and Oregon Hills, as well as the northern reaches of Mattituck hamlet.*" (see Figure 25 in Appendix A).

The LWRP follows the LISRCMP policies which outlines 13 waterfront revitalization policies to address the Town of Southold's resources. These policies are based on the 44 coastal policies set forth in 19 NYCRR § 600.5 and the New York State Coastal Management Plan and cater to the unique needs. The categories include Developed Coast policies, Natural Coast policies, Public Coast policies, and Working Coast policies. Each policy category contains a specific goal for each Coast, and these goals are identified within the Planning Framework section of the LWRP. In summary, as excerpted from the LWRP:

**Strong's Yacht Center – Proposed Boat Storage Buildings****5780 West Mill Road, Mattituck, Town of Southold, Suffolk County, NY**

- *The Developed Coast* - Enhance community character by improving the quality of existing development, promoting a sense of connection to the Sound, and focusing growth and investment to preserve the positive relationship between the built and natural landscapes and between existing and new development.
- *The Natural Coast* - Reclaim the value and achieve sustainable use of the Sound's natural resources by improving the quality and function of ecological systems, respecting the dynamics of shoreline change, and providing high quality coastal waters.
- *The Public Coast* - Connect people to the Sound and its public resources by improving visual and physical access and by providing a diversity of recreational opportunities.
- *The Working Coast* - Reinvigorate the Sound's working waterfront, its jobs and products, at appropriate locations by protecting uses dependent on the Sound, furnishing necessary infrastructure, providing business and marketing assistance, and promoting efficient harbor operations.

The 13 policies implement the NYSDOS 44 coastal policies and represent a local refinement of the LISRCMP Policies. Said policies and consistency therewith are included in Section 3.1.2 of this DEIS.

**Town of Southold Town Code Chapter 275 – Wetlands and Shoreline**

As presented in Section 2.2.1 of this DEIS, the Board of Trustees of the Town of Southold regulates wetlands and the shoreline. Within Chapter 275 of the Town Code, wetlands of the Town of Southold are identified as “any freshwater wetland, tidal wetland, beach, bank, bluff, dune, flat, marsh, swamp, wet meadow, bog, or vernal pool, any creek, estuary, stream, pond, canal, or lake, land underwater, land subject to tidal action, land within 100 feet of the areas listed above, and all Town waters.”

The proposed action includes regulated activities within 100 feet of a Town wetland and is, therefore, subject to a Town of Southold Board of Trustees Wetlands Permit. An analysis of the Town regulations under Chapter 275 are included in Section 2.2.2 of this DEIS and also summarized in Section 3.1.2, as required by the Amended Final Scope.

**Mattituck Watershed Management Plan**

The Mattituck Watershed Management Plan is part of a larger study entitled “Plan for Decentralized Wastewater Treatment in the Long Island Sound Watershed, North Fork, NY” prepared by Peconic Green Growth, Inc. in March 2014<sup>47</sup> (hereinafter the “Long Island Sound, North Fork Study”). The Long Island Sound, North Fork Study identifies the need to protect local water resources including groundwater and surface waters. The study notes that clean surface water and groundwater resources are critical for the Towns of Riverhead and Southold as they depend upon the maritime, agricultural and tourism industries (page 1-1).

As indicated on page 1-1 of the study, excess nitrogen is a primary factor contributing to water impairment in local marine waters, primarily as a result of conventional sanitary systems. Within the study area of the Long Island Watershed in the Towns of Riverhead and Southold, 97 percent of the

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<sup>47</sup><http://peconicgreengrowth.org/wastewater/li-sound-nf-study/>

parcels are not served by municipal sewers and 72 percent are developed with OWTS. The Long Island Sound, North Fork Study states that

*“the existing cesspools and septic systems are primary sources of excess nitrogen, which impact water quality for both groundwater and surface water bodies in the Long Island Sound Watershed on the North Fork. The excess nitrogen feeds increasingly toxic algal blooms, which in turn negatively impact shellfish and fish by reducing available dissolved oxygen, as well as contributing to the acidification of water bodies”* (page 1-1).

The Long Island Sound, North Fork Study includes three pilot engineering assessments for proposed decentralized community-wastewater treatment systems, including one for West Mattituck. The West Mattituck engineering report provides estimates for a larger OWTS designed to handle the equivalent of 416 residences adjacent to Mattituck Creek on its western banks. As shown on Figure 26 in Appendix A, the subject property is located outside of the boundaries of the proposed sewer service area. While the engineering assessment only focuses on residential uses, the subject property is situated adjacent to Mattituck Creek and also currently utilizes a septic OWTS. As stated above, on-site septic systems are a primary source of excess nitrogen impacting surface water and groundwater quality. Refer to Section 3.1.2 of this DEIS for the proposed action's consistency with the Long Island Sound, North Fork Study.

#### **NYSDOS Significant Coastal Fish and Wildlife Habitat**

As discussed in Section 2.2.1 of this DEIS, the subject property is adjacent to Mattituck Inlet Wetland and Beaches, which is identified as a Significant Coastal Fish and Wildlife Habitat (see Figure 21 in Appendix A). This area provides significant nesting habitat and is productive for recreational fishing. Additionally, as presented in Sections 1.1 and 2.2.1 of this DEIS, the USACOE maintains a dredging program for Mattituck Inlet, identified as a, “Harbor of Refuge, to ensure the water body remains safe for navigation which further enhances the water quality and natural ecosystem of Mattituck Inlet.” A consistency analysis completed in Section 2.2.2 of this DEIS is summarized below in Section 3.1.2, as required by the Amended Final Scope.

#### **Suffolk County Sanitary Code**

##### Article 6 of the SCSC – Single-Family Residences, Realty Subdivisions, Developments and Other Construction Projects

As discussed in Section 2.2.1, the intent of Article 6 is to protect groundwater resources by setting forth population density equivalents for sanitary discharge. As the proposed action is within Groundwater Management Zone IV (see Figure 15 in Appendix A), the maximum permitted sanitary discharge to individual sewerage systems is 600 gpd/acre or 9,498 gpd for the gross land area of 15.83±-acres. As indicated on the *Utility Plan* (see Appendix C), under existing conditions, the subject property generates approximately 1,058 gpd of sanitary waste, which is below the maximum allowable sanitary flow. As described in Section 2.2.1 of this DEIS, adopted Resolution No. 702-2020 requires I/A OWTS for new or expanded single-family residences and new other construction projects effective on July 1, 2021. The amendments to Article 6 of the SCSC also expanded the list of I/A OWTS technologies

allowed, modified the horizontal separation distance requirements for I/A OWTS and modified the design capacity for modified subsurface sewage disposal systems from 15,000 gpd to 30,000 gpd.

A consistency analysis completed in Section 2.2.2 of this DEIS is summarized below in Section 3.1.2 of this DEIS.

#### Article 7 of the SCSC – Water Pollution Control

As discussed in Section 2.2.1 of this DEIS, the intent of Article 7 is to ensure that within deep recharge zones, water resources within Suffolk County are protected from discharges from sewage, industrial and other wastes, toxic or hazardous materials and stormwater runoff. Additionally, Article 7 protects water supply sensitive areas that are within 1,500 feet upgradient or 500 feet downgradient of public supply wells screened in the Upper Glacial aquifer. As evaluated in Section 2.2.1 of this DEIS, based on the Article 7 Map (see Figure 16 in Appendix A), the subject property is outside of a regulated deep recharge area. Furthermore, the subject property is not within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area.

#### Article 12 of the SCSC – Toxic and Hazardous Materials Storage and Handling Controls

As discussed in Section 2.2.1 of this DEIS, Article 12 regulates the storage and handling of toxic and hazardous materials for the protection of groundwater quality. As indicated in Section 2.2.2 of this DEIS, there are four operational ASTs on the subject property and SYC maintains an Article 12 permit for all tanks. Additionally, SYC stores several materials regulated under Article 12. Table 13 in Section 2.2.1 of this DEIS provides a summary of the existing chemicals stored at SYC. A consistency analysis completed in Section 2.2.2 of this DEIS is summarized below in Section 3.1.2 of this DEIS, as required by the Amended Final Scope.

### **3.1.2 Potential Impacts**

#### ***Land Use***

Upon implementation of the proposed action, the M-II zoned portion of the site utilized by SYC would be modified from seven to nine buildings, increasing the total GFA from 68,817 SF to 170,317 SF (represents a 40 percent expansion). The two additional buildings (identified as Buildings 9 and 10 on the proposed site development plans in Appendix C) would be situated perpendicular to the west of Buildings 7 and 8, which are situated parallel to Mattituck Creek. The proposed two buildings would require modification of the upland portion of the site to accommodate the construction at similar elevation to the current SYC facility. Specifically, approximately 6.51 acres of land would be disturbed and excavated requiring approximately 135,000 CY of material that would need to be removed from the subject site.

The proposed Building 9 would be located west of Building 8 and would be approximately 49,000 SF. The proposed Building 10 would be located northwest of Building 8 and would be approximately 52,500 SF. All yachts would arrive to and leave SYC via Mattituck Creek, relying upon the existing 85-ton travelift to lift the boats from the water and transport them to and from the storage buildings.

Upon arrival to SYC, only SYC employees would have access to the vessels inside the building for any requested or required maintenance or repairs.

Both of the proposed buildings would be constructed with radiant floor heating, relying upon LPG tanks for the purpose of climate-controlled storage. In total, there would be four (4) LPG tanks for each building with a total capacity of 8,000 gallons. The LPG tanks would be above ground and contained in a concrete vault adjacent to each building.

In addition to the proposed storage buildings, the proposed action includes the replacement of an existing individual on-site sanitary system with an I/A OWTS, and installation of one additional I/A OWTS. The existing sanitary system that serves Building 1 would remain. The proposed action also includes an extension of the public water main from Naugles Drive for on-site connection, installation of a new hydrant at the site entrance on West Mill Road, conversion of two existing on-site wells near Buildings 1 and 7 for irrigation supply only and abandonment of two on-site wells near Buildings 2 and 3. The extension of the public water main would also allow for existing landowners to connect to the public supply system, by request to the SCWA.

As indicated on the *Grading & Drainage Plan* (see Appendix C), the proposed action includes the installation of on-site leaching pools and French drains which includes the use of pervious gravel as stormwater management methods to accommodate and recharge stormwater runoff. Four (4) tributary areas are proposed to be constructed within the area of disturbance to capture stormwater runoff from the proposed buildings and the western side of Building 7 and all of Building 8. Tributary Areas 3 and 4 have also been designed to handle a portion of off-site stormwater due to existing natural grades. The proposed stormwater management plan is designed to accommodate a two-inch rain event, in accordance with Town of Southold regulations (Chapter 236 Stormwater Management).

*Proposed Parking*

As indicated on the *Utility Plan* in Appendix C, based on the current and post-development storage area, the Town of Southold parking ordinance (§280-78.A) requires 262 surface parking stalls, as set forth below.

<u>PARKING CALCULATION</u>	
<u>PARKING REQUIRED</u>	
SINGLE FAMILY DETACHED RESIDENCE	= 2 STALLS
OFFICE = 2,702 SF @ 1 STALL/100 SF	= 27 STALLS
MARINA = 40 BOAT SLIPS @ 1 STALL/BOAT SLIP	= 40 STALLS
STORAGE = 167,448 SF @ 1 STALL/1,000 SF	= 168 STALLS
25 EMPLOYEES @ 1 STALL/EMPLOYEE	= 25 STALLS
TOTAL REQUIRED	= 262 STALLS
<u>PARKING PROVIDED</u>	
TOTAL PROVIDED	= 57 STALLS
HANDICAPPED PARKING PROVIDED	= 4 STALLS

There are currently 23 stalls provided on-site, with the proposed action including the creation of 34 new parking stalls on-site by striping gravel-surfaced areas that are currently used for parking but are not formally marked. As indicated on the *Alignment Plan* in Appendix C, 11 stalls would be located

along the east side of Building 7, four (4) stalls would be located on the south side of Building 8, and 19 stalls would be located to the east of Building 8. Upon implementation of the proposed action, the available parking would be increased from 23 stalls to 57 stalls. It is noted that the new buildings are for boat storage only and would not generate significant vehicular traffic by boat owners or the additional 11 employees expected post-development.

The overall site access to SYC would remain the same as existing conditions from West Mill Road. A stone blend pavement access route to Buildings 9 and 10 would be provided between Buildings 7 and 8 from the internal road of the existing marina. The area surrounding the two storage buildings would be screened by the proposed retaining wall and the existing forested areas that would be retained on the subject property.

#### *Proposed Landscape Plan*

The proposed action also includes the planting of new landscaped areas along the southern property line to supplement the existing woodland area, as well as screening vegetation to the north and west adjacent to the proposed Evergreen concrete retaining wall, and plantings within the wall itself. Regarding the proposed site landscaping on the southern property line, as indicated on the *Proposed Landscape Plan* prepared by the project architect (see Appendix C), these plantings would include Pitch Pine (*Pinus Rigida*) trees and one species of shrub (i.e., Low Bush Blueberry [*Vaccinium angustifolium*]).

The proposed plantings adjacent to and incorporated into the retaining wall have been designed by Jeffrey T. Butler, P.E., P.C. and are included on the *Proposed Landscape Plan* (see Appendix C). As indicated on said plan, the proposed landscaping schedule includes four segments: upland (beyond top of the retaining wall), retaining wall north, retaining wall west, and surrounding site at or above building elevation.

The upland area is between the six-foot chain-link fence atop the Evergreen concrete retaining wall and extends to the edge of the area of disturbance. Vegetation proposed in the upland area would include plantings of Pitch Pine (*Pinus rigida*) at least four-to-five feet tall to screen the proposed buildings from surrounding views to the south, Lowbush Blueberry (*Vaccinium angustifolium*), and Switchgrass (*Panicum virgatum*).

The northern and western portions of the retaining wall would include Bayberry (*Myrica pensylvanica*) and two varieties of small trees including Shadbush (*Amelanchier canadensis*), and Staghorn Shadbush (*Rhus typhina*), and the following varieties of groundcover: Virginia Creeper (*Parthenocissus quinquefolia*), Switchgrass (*Panicum virgatum*), Common Milkweed (*Asclepias syriaca*), and Groundsel Bush (*Baccharis halimifolia*). The northern landscaped shelf of the Evergreen concrete retaining wall would be approximately 157 feet long in linear distance and the western landscaped shelf of the wall would be approximately 80 feet long in linear distance.

Three sections of the Evergreen concrete retaining wall would be filled with topsoil to allow for seeding by wildlife. A 144±-foot long in linear distance and 124±-foot long in linear distance topsoil-filled section of the Evergreen concrete retaining wall would be located north and south of the western landscape schedule, respectively. A 370±-foot long in linear distance topsoil-filled section of the Evergreen concrete retaining wall would be located west of the northern landscape schedule.

The proposed plantings in the adjacent area at or above building elevation would include Pitch Pine (*Pinus rigida*) at least four-to-five feet tall, and one variation of shrub including Lowbush blueberry (*Vaccinium angustifolium*). This landscaping schedule is proposed south, east, and west of the concrete retaining wall for the two liquid propane tanks that would be located south of Building 9. Overall, the proposed plantings are intended to soften the view of the modified slope from the east.

#### *Proposed Site Lighting*

The proposed site lighting would consist of light poles and building fixtures. Specifically, as indicated on the *Details* sheet (see Appendix C), the proposed action includes three 14-foot lamp poles with LED fixtures (two at the above ground tanks between Buildings 7 and 10 and one south of Building 8 at the retaining wall); 38 wall scones at 14-feet above grade around the eastern and southern sides of Building 10 and the northern, eastern, and southern sides of Building 9, and western sides of Buildings 7 and 8; and 13 wall lights along the northern and western sides of Building 10 and along the western side of Building 9. Each lamp pole would include a shielded fixture such that all light would be directed downwards with no upward glare. To mitigate light trespass and glare, all lighting would be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The proposed lighting would comply with the lighting standards set forth in §172-5 and would be subject to the review and approval of the Town of Southold Building Department.

Upon implementation of the proposed action, the current marine use would remain unchanged. As presented in the Town's LWRP and evaluated further in this section of the DEIS, Mattituck Harbor (Mattituck Inlet and Mattituck Creek) is the only harbor fronting the Long Island Sound in the Town of Southold and was identified as one of 10 maritime centers on Long Island in the Long Island Sound Coastal Management Program. Maritime uses at the subject property has persisted for over 60 years and would continue to be as such upon implementation of the proposed action. Moreover, from a land use perspective, the proposed action is consistent with the underlying intent of the prevailing zoning for the M-II zoning district (see Zoning discussion in this section of the DEIS below). Accordingly, based on the above, no significant adverse land use impacts would result from the proposed action.

#### **Zoning**

The proposed action would occur primarily within the M-II zoning district of the Town of Southold, with only a portion of the proposed project (the haul road) affecting the R-80 zoned portion. As set forth in Tables 2 and 3 in Section 1.2.1 of this DEIS, the Project Area is 6.51 acres with 5.84 acres located within the M-II portion of the site and 0.67 acre located in the R-80 portion of the site. Only the proposed haul road would be located on the R-80 portion of the site and would remain post development to serve as an emergency access route to the subject property from Mill Road.

The proposed development is intended to support the current SYC operation and would be entirely located on the M-II portion of the site. As excerpted from Section 280-54 of the Zoning Code, the intent of the M-II zoning district is “...to provide a waterfront location for a wide range of water-dependent and water-related uses, which are those uses which require or benefit from direct access to or location in marine or tidal waters and which, in general, are located on major waterways, open bayfronts or the Long Island Sound.” The proposed action is consistent with this intent in that it seeks to provide storage



facilities for yachts that are of a size that require transport via water (as opposed to smaller boats that can be trailered).

Among the nine permitted uses in the M-II zoning district, the proposed action is consistent with §280, Article XIII A(5), “*Boatyards for building, storing, repairing, renting, selling or servicing boats, which may include the following as an accessory use: office for the sale of marine equipment or products, dockside facilities for dispensing of fuel and, where pumpout stations are provided, rest room and laundry facilities to serve overnight patrons.*”

A consistency analysis with the bulk and dimensional requirements for development within the M-II zoning district is included in the Bulk Zoning Table on the *General Layout Plan* (see Appendix C) and demonstrated below.

**Table 29 - Consistency Analysis with Bulk & Dimensional Regulations for M-II Zoning District**

	<b>Requirement</b>	<b>Proposed</b>
Minimum Lot Size	80,000 SF	717,085 SF
Minimum Lot Width	150 feet	740± feet
Minimum Lot Depth	150 feet	1,600± feet
Minimum Front Yard	35 feet	26.5 feet (existing structure)
Minimum Side Yard	25 feet	28.0 feet
Minimum Both Side Yards	50 feet	77.7 feet
Minimum Rear Yard	25 feet	91.3 feet
Minimum Landscape Area	20 percent	51.4 percent
Maximum Lot Coverage	30 percent	24.7 percent
Maximum Building Height	35 feet	<35 feet
Maximum Number of Stories	2	1

As indicated in the table above, the proposed development complies with the bulk and dimensional requirements for the M-II zoning district. There is an existing structure on the SYC property (outside of the Project Area) that is set back 26.5 feet from the front yard boundary and does not, therefore, comply the zoning requirement. However, this is an existing condition that dates back to the 60-year maritime use of the property and is not a nonconformity created by the proposed action.

**Building Height**

As indicated in Table 29, the proposed buildings are indicated as less than 35 feet. Building Height, as defined in §280-4 of the Southold Zoning Code, is the “vertical distance measured from the average elevation of the existing natural grade adjacent to the building, before any alteration or fill, to the highest point of the roof for flat and mansard roofs and to the mean height between eaves and ridge for other type roofs.” As indicated in the Elevation drawings in Appendix D of this DEIS, the proposed buildings are 39-feet-3-inches from grade to the eave and 45-feet-8-inches from grade to the top of ridge. The mean roof height is 42-feet-6-inches. With a proposed 10-foot FFE for both buildings, the top (mean height between eave and ridge) elevation of the buildings would be 55.67± feet ASML. The average elevation of the existing natural grade for the two proposed buildings are as follows: Building 10 - 39.83± feet AMSL and Building 9 - 28.73± feet AMSL. As such, the maximum permitted building

heights, pursuant to the definition, would be Building 10 - 74.83± feet and Building 9 - 63.73± feet AMSL. Accordingly, the proposed buildings at top elevation of 55.67± feet ASML are below the maximum permitted height.

Article XX, Landscaping, Screening and Buffer Regulations

Article XX of the Town Zoning Code sets forth standards for landscaping, screening and buffers. Pursuant to §280-91, these standards are “...intended to enhance the appearance and natural beauty of the Town and to protect property values through preservation and planting of vegetation, screening and landscaping material. Specifically, these standards are intended to enhance the appearance of major travel corridors and business areas; to reduce excessive heat, glare and accumulation of dust; to provide privacy from noise and visual intrusion; and to prevent the erosion of the soil, excessive runoff of drainage water and the consequent depletion of the groundwater table and the pollution of water bodies.”

➤ *General Requirements, §280-92:*

Section 280-92(A)-(F) sets forth provisions that apply to any use in all zoning districts. Such provisions are included below and a description of the proposed plan as it relates to said provision follows.

- A. *Landscaping, trees and plants required by these regulations shall be planted in a growing condition according to accepted horticultural practices, and they shall be maintained in a healthy growing condition...*
- B. *A screening fence or wall required by these regulations shall be maintained by the property owner in good condition throughout the period of the use of the lot...*
- C. *All landscaping, trees and planting material adjacent to parking areas, loading areas or driveways shall be properly protected from vehicular damage by barriers, curbs or other means.*
- D. *To the extent possible, existing trees, vegetation and unique site features, such as stone walls, shall be retained and protected. Existing healthy, mature trees, if properly located, shall be fully credited against the requirements of these regulations.*
- E. *Where lot size and shape or existing structures do not make it feasible to comply with the requirements for a front landscaped area or landscaped parking area, the Planning Board may approve planters, plant boxes or pots containing trees, shrubs and/or flowers to comply with the intent of these regulations.*
- F. *In cases where the edge of the pavement within a public right-of-way does not coincide with the front lot line, the property owner shall landscape the area between the front lot line and the edge of the street pavement.*

As indicated on the *General Layout Plan* in Appendix C, upon implementation of the proposed action, 51.4 percent or 8.13± acres of the M-II property would consist of either planted trees, shrubs and ground cover (1.67± acres), or existing vegetation that would be maintained (6.46± acres). The existing vegetation to remain includes woodland area located primarily to the north, south and west

of the Project Area, and the planting plan includes landscaping on portions of the proposed Evergreen concrete retaining wall, in the adjacent upland area for additional screening and along the southern portion of the Project Area for visual screening. Specifically, as indicated on the *Proposed Landscape Plan* in Appendix C:

- The upland area of the Evergreen concrete retaining wall extends from the six-foot chain-link fence atop to the edge of the Construction Excavation Area. plantings of evergreen trees (Pitch Pine [*Pinus Rigida*]), shrubs (Lowbush Blueberry [*Vaccinium angustifolium*]), and grasses/groundcover (Switchgrass [*Panicum virgatum*]) that would be create a multi-layer screen for edge protection and visual enhancement to screen the proposed buildings from surrounding views to the south.
- The northern and western portions of the retaining wall would include shrubs (i.e., Bayberry [*Myrica Pensylvanica*]) and small trees (Staghorn Sumac [*Rhus Typhina*] and Shadbush [*Amelanchier canadensis*]), and a variety of grasses/groundcover (i.e., Switchgrass [*Panicum virgatum*], Virginia Creeper [*Parthenocissus quinquefolia*], Common Milkweed [*Asciopias syriaca*], and Groundsel Bush [*Baccharis halimifolia*]). The northern landscaped portion of the Evergreen concrete retaining wall would be approximately 157 feet long in linear distance and the western landscaped portion of the wall would be approximately 80 feet long in linear distance.
- Three sections of the Evergreen concrete retaining wall would be filled with topsoil to allow for seeding by wildlife. A 144±-foot long in linear distance and 124±-foot long in linear distance topsoil-filled section of the Evergreen concrete retaining wall would be located north and south of the western landscape schedule, respectively. A 370±-foot long in linear distance topsoil-filled section of the Evergreen concrete retaining wall would be located west of the northern landscape schedule.
- The proposed plantings in the adjacent area at or above building elevation would include evergreen trees (Pitch Pine [*Pinus Rigida*]) and shrubs (Lowbush Blueberry [*Vaccinium angustifolium*]). This landscaping schedule is proposed south, east, and west of the concrete retaining wall for the two liquid propane tanks to be located south of Building 9.

Overall, as 51.4 percent of the M-II zoned portion of the subject property would consist of either landscape or retained natural vegetation, the proposed action is consistent with the aforementioned general requirements.

➤ *Front Landscaped Area, §280-93:*

*Pursuant to §280-93(B), “[a] front landscaped area shall be required for all uses in all zoning districts. The required landscaped area shall be covered with grass or other ground cover and shall include appropriate trees and shrubs. As a minimum, in all nonresidential districts and in the Hamlet Density Residential and R-40 Low-Density Residential Districts, one shade tree having a caliper of two inches shall be planted within the front landscaped area for each 40 feet or fraction thereof of lot frontage. The purpose of the landscaping is to enhance the appearance of the use on the lot but not to screen the use from view.”*

The front yard of the subject property consists of entirely woodland area in the northern extent of the site and a limited area of the SYC facility with two existing buildings. The proposed action includes an expansion project that would occur in the rear and side yards, and landward of the existing SYC buildings. Accordingly, this requirement is not relevant to the proposed action.

➤ *Transition Buffer Area, §280-94:*

Pursuant to §280-94, “[t]he purpose of the transition buffer area is to provide privacy from noise, headlight glare and visual intrusion to residential dwellings. A buffer area shall be required along all boundaries of a nonresidential lot abutting any lot in a residential district.” Section 280-94 C. requires that the buffer area be “...of evergreen planting of such type, height, spacing and arrangement as, in the judgment of the Planning Board, will effectively screen the activity on the lot from the neighboring residential area. As a minimum, the planting shall consist of a double row of trees six feet in height planted at intervals of 10 feet on center. Nonevergreen planting may be included to supplement evergreen planting, but not to take its place.” Section 280-94 D. allows for the use of a “landscaped earthen berm, wall or fence of a location, height, design and materials approved by the Planning Board...for any portion of the required planting and/or buffer area.”

The Project Area is adjacent to the R-80 zoning district to the north, south and west. As indicated on the *Alignment Plan* and *Proposed Landscape Plan* (see both in Appendix C), the existing woodland to the north, south and west would be retained. As the proposed action would result in the creation of a new forest edge for the Coastal Oak-Beech Forest and Successional Forest on the subject property, supplemental plantings are proposed as mitigation for edge effects (see Section 2.4 of this DEIS for further discussion). As such, the proposed action would comply with this performance standard.

➤ *Landscaped Parking Area, §280-95:*

Pursuant to §280-95(A), “[a]ll uses required to provide 20 or more off-street parking spaces shall have at least 10 square feet of interior landscaping within the paved portion of the parking area for each parking space and at least one tree with a two-inch caliper for every 10 parking spaces or fraction thereof. Each separate landscaped area shall contain a minimum of 100 square feet, shall have a minimum dimension of at least eight feet, shall be planted with grass or shrubs and shall include at least one tree of not less than two-inch caliper.” Section 280-95(B) requires that “[a] landscaped area shall be provided along the perimeter of any parking area except that portion of the parking area which provides access to a street or parking facility on an adjacent lot. Accessways to adjacent lots shall not exceed 24 feet in width and shall not exceed two in number for each purpose. The landscaped area shall have a minimum dimension of four feet, shall be planted with grass or shrubs and shall include at least one tree of not less than two-inch caliper for every 40 feet along the perimeter of the parking area. In cases where the parking area adjoins a public sidewalk, the required landscaped area shall be extended to the edge of the sidewalk.” Finally, §280-95(C) requires that tree types used in parking lots “...shall include honey locust, pine, oak or other similar fast-growing, hardy varieties or existing trees where appropriately located.”

The proposed action includes the creation of new parking stalls on-site by striping gravel-surfaced areas that are currently used for parking but are not formally marked. As indicated on the *Alignment Plan* in Appendix C, 34 new parking stalls would be created with 11 stalls located along the east side of Building 7, four (4) stalls located on the south side of Building 8, and 19 stalls located to the east of

Building 8. Upon implementation of the proposed action, the available parking would be increased from 23 stalls to 57 stalls. As these parking areas are existing, no additional plantings are proposed.

➤ *Properties located adjacent to creeks, § 280-96:*

Pursuant to §280-96, *“The rear yards of properties located adjacent to creeks shall include natural vegetation and/or shall contain suitable planted vegetation to a minimum of 20 feet inland from the mean high-water-line elevation or wetland boundary to prevent erosion of the shoreline. Vegetation within the buffer strip shall not be fertilized or chemically treated.”*

The existing tidal vegetation area to the east of Building 8 would remain undisturbed. There are no proposed supplemental plantings along the eastern property line adjacent to Mattituck Creek as the proposed development would occur landward of the existing SYC buildings. Therefore, the proposed action is consistent with this requirement.

**Relevant Plans**

**Southold Town Comprehensive Plan Update (Adopted September 2020)**

As noted in Section 3.1.1 of this DEIS, the Town of Southold adopted the 2020 Comprehensive Plan in September 2020 and provides specific goals and objectives for the Town. The relevant goals and objectives from the 2020 Comprehensive Plan and the proposed action’s consistency therewith is presented below. A summary of the relevant chapters, goals and objectives are also provided in the table below.

**Table 30 – Consistency Analysis with the 2020 Comprehensive Plan**

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
<b>Land Use and Zoning</b>	Goal 5: Protect the Town Character	<p>As noted in the 2020 Comprehensive Plan, many factors contribute to the quality of life within the Town of Southold including the Town’s scenic, cultural and natural resources (see page 33 in Chapter 3). The Land Use and Zoning chapter cites to the Community Character chapter where it indicates that the development patterns of Southold “were guided by agriculture and maritime industries centered on waterways and overland transportation routes. The Town’s overall character is anchored in the scenic quality of its built environment, landscapes, and waterscapes” (page 1 in Chapter 5). The existing character of the site and surrounding area is primarily mixed-use maritime at the water’s edge with residential land uses adjacent and landward of such maritime uses. The subject property has been an established maritime use for 60 years and is zoned accordingly. It is noted that review of the Town of Southold Tax Map Inquiry indicates that the two parcels to the north of the subject property, zoned M-II similar to the subject property, have a Town land use designation of industrial. However, the Town land use map indicates the subject property is a Town land use designation of commercial although these parcels are used in a similar manner (maritime use). Additionally, the northern most parcel to the east of the subject property, zoned M-II similar to the subject property, has a Town land use designation of industrial but is also used in a similar manner as SYC with commercial fishing docks and loading pier. The other parcels zoned M-II and located south of the commercial fishing dock and loading pier are residentially developed and have a Town land use designation of medium density residential. The properties zoned R-80 to the west of the subject property are agricultural uses.</p> <p>The proposed action would expand in line with the existing scale of development on the subject property with the proposed buildings placed landward (behind) Buildings 7 and 8, and perpendicular to Mattituck Creek, such that the length and mass would not be visibly obtrusive to users of Mattituck Creek. The proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the existing maritime-use buildings on-site.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 6: Protect and Enhance the Town's Natural Resources and Environment</p> <ul style="list-style-type: none"> <li>• Protect groundwater and surface water quality and quantity.</li> <li>• Protect land-based natural resources including agricultural soils and natural habitat for wildlife.</li> </ul>	<p>As evaluated in Section 2.2.2 of this DEIS, the proposed action would be protective of groundwater as well as surface water quality and quantity. The proposed action includes the replacement of an existing individual on-site sanitary system with an I/A OWTS, and the installation of one additional I/A OWTS to accommodate all sanitary waste from the proposed development in accordance with SCDHS requirements. As indicated in Section 1.3.2 of this DEIS, a recognized issue in the LWRP is the presence of cesspools and conventional septic systems near the Mattituck Creek shoreline that contribute to pollution levels in Mattituck Creek. As the proposed action would replace and upgrade an existing septic system with an I/A OWTS and install an additional I/A OWTS, the proposed sanitary system would reduce nitrogen loading. The proposed sanitary system would comply with Articles 6 and 19 of the SCSC and would be 8,422± gpd below the maximum permitted sanitary discharge for the subject property (i.e., 1,076± gpd for post-development conditions whereas 9,498 gpd is the allowable sanitary discharge). With regard to surface waters, the proposed sanitary systems would be located within the 0–2-year groundwater contributing area to the Mattituck Inlet/Creek, Low, and Tidal Tribs subwatershed. However, the installation of the two I/A OWTS would be set back from the creek and would be consistent with the recommendation of the SWP that encourages the use of I/A OWTS to limit nitrogen loading to subwatersheds. Additionally, the proposed landscape materials would include species that are suitably adapted to the site conditions to limit or preclude the need for fertilizers and pesticides which can also contribute to nutrient pollution.</p> <p>The proposed action also includes the installation of a stormwater management system that would contain and recharge stormwater runoff on-site from a two-inch rain event. The proposed stormwater management controls would include both structural infiltration (on-site leaching pools) and non-structural methods (pervious gravel) for infiltration to accommodate and recharge stormwater from the Project Area and off-site contributing areas. It is noted that the NYSDEC issued a Tidal Wetlands Permit for the proposed action. Additionally, as evaluated in Sections 2.2.2, the proposed action is consistent with the Town standards for the issuance of Trustees Wetlands Permit set forth in §275-12 of the Town Code. Overall, based on the above, the proposed action would not have any significant adverse impacts on groundwater or surface water quality.</p> <p>With regard to groundwater quantity, the proposed action would minimally increase potable water demand by 18 gpd for the new employees from 1,058± gpd to 1,076± gpd, and an additional 220± gallons per year per boat for power washing and washing services in the fall and spring, which would be served by the SCWA. The proposed action includes discontinuance of the use of existing on-site wells for potable water and connection to the public water supply through extension of the water main. Two existing wells would remain for on-site irrigation use only. In total, approximately 1.22± acres of the 1.91± acres of landscaping would be irrigated with a projected average annual demand of 218± gpd. The proposed irrigation system would implement smart irrigation controls to reduce or eliminate the use of the irrigation system during periods of rain. The irrigation system would be installed with a drip line to prevent evaporation as well as rain sensors so as to not go on while it is raining. Furthermore, the proposed landscaping would consist of native and/or drought-tolerant plants and groundcover to reduce irrigation needs.</p> <p>As presented in Section 2.2.2 and discussed in the Groundwater Modeling Report (see Appendix L), groundwater flows east and north towards Mattituck Creek under existing and post-development conditions. A slight increase in the water table of 0.01 feet is predicted immediately beneath the proposed excavation area. The model also demonstrates that there would be no effects on nearby public and private wells. Additionally, the particle tracking analysis indicated that the domestic supply wells have relatively low pumping rates (325 gpd) with very narrow zones of influence. When comparing existing conditions to post-development conditions, there are no noticeable changes in particle track trajectories. This is due to the fact that the proposed site excavation would take place entirely above the water table and the proposed site modifications would only slightly add more water to the local aquifer system due to the increased recharge post-construction. As such, the proposed site excavation is not predicted to have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence. Therefore, the proposed action would not have any significant adverse impact on groundwater quantity nor the surrounding local domestic supply wells.</p> <p>With regard to protecting land-based natural resources, as discussed in Section 2.4.2 of this DEIS, to mitigate for the loss of forest trees associated with the proposed project, approximately 95 Pitch Pine trees would be planted. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds. Furthermore, to mitigate the potential edge effects, the proposed design includes 27,333± SF of native trees, shrubs and groundcover along the new forest edge. This planted area is approximately 20-to-30 feet in width and will include dense, multi-layered plantings (i.e., plants that at maturity will occupy understory, and canopy-levels) with abundant conifer trees (86 pitch pine trees) to minimize light penetration into the new forest. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forested area on the subject property will increase from 11.76 acres to 12.39 acres.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 7: Economic Prosperity (Facilitate the growth of existing businesses and encourage new business for stable and sustainable employment)</p> <ul style="list-style-type: none"> <li>This includes agriculture, aquaculture, health care, renewable energy, tourism, light industrial, retail/service-based and maritime-related industry. Balance economic prosperity with maintaining a high quality of life, the environment, and the unique character of the communities.</li> </ul>	<p>As described in Section 3.1.1 of this DEIS and according to the LWRP, the current maritime use has existed on-site for over 60 years and supports the maritime industry within the Town of Southold. The proposed project seeks to expand the business services of SYC to meet an unmet demand for indoor heated winter storage of yachts on the east end of Long Island.</p> <p>As indicated in Section 3.9.2 of this DEIS, the proposed action would create jobs, increase tax revenue to various taxing jurisdictions and increase sales tax revenue. Upon implementation of the proposed action, an additional 11 full-time positions are expected to be created by SYC. In addition to the creation of jobs, the proposed action is also expected to increase tax revenue to the Town of Southold, Suffolk County, and the State of New York. Based on consultations with the Southold Assessor (see correspondence dated June 25, 2021 in Appendix E), upon implementation of the proposed action, the Assessed Value would increase by approximately \$41,000. With no exemptions, the increase in the property taxes would be estimated at \$59,450 based on the 2020-21 tax rate. However, the property would be eligible for the 485-b Business Investment Exemption, which is based on a sliding scale over 10 years. For the first 3 years, there would be a 50 percent reduction for the increased assessment attributable to the two new buildings. For each year after, the reduction would decrease as follows: Year 4: 40 percent, Year 5: 30 percent, Year 6: 20 percent, Years 7 thru 9: 10 percent, and Year 10: 5 percent. After Year 10, the property taxes would not be eligible for exemptions.</p> <p>Sales tax revenue is also projected to increase upon implementation of the proposed action. As provided by SYC, based on an average cost of \$20,000 per boat for service and storage annually, and an expected 88 yachts to be stored on site, the approximately \$1,760,000 would generate \$151,800 annually in sales tax. Additional sales tax of approximately \$322,575 is projected to be generated by increased yacht sales by SYC.</p> <p>As analyzed in Sections 2.1.2, 2.2.2, 2.3.2, and 2.4.2 of this DEIS, the proposed action is protective of the environment (e.g., soil erosion, groundwater, surface water, flooding, and ecological resources) and would comply with all relevant standards and regulations. The proposed action would also maintain the existing character of the site and surrounding area. As evaluated in Section 3.5.2 of this DEIS, the existing character of the site surrounding area is a maritime setting along the water line (inclusive of water-dependent commercial uses and water-dependent recreational uses) with residential land uses adjacent and landward of the maritime uses. The proposed development responds to an industry demand for large vessel storage, while including appropriate mitigation measures in the construction and design in consideration of the surrounding residential land uses. The proposed action would expand in line with the existing scale of development on the subject property placing the new buildings landward (behind) Buildings 7 and 8 and perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to users of Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. The proposed retaining wall selected for the development would be planted and in time, would blend into the natural landscape. Finally, the proposed landscape plan buffers the additional buildings from surrounding residential uses. Overall, the proposed action continues the maritime use of the property while responding to a market demand, while maintaining the visual setting of the site as a mixed-use maritime with residential community.</p> <p>Overall, based on the above, implementation of the proposed action would facilitate the growth of SYC's and provide continued support to the maritime industry within the Town of Southold. The proposed action would balance economic prosperity while maintaining a high quality of life, the environment and the unique character of the surrounding community. As such, the proposed action is consistent with this goal of the 2020 Comprehensive Plan.</p>
<p><b>Transportation and Infrastructure</b></p>	<p>Infrastructure Goal 1: Reduce stormwater runoff</p> <p>The intent of this goal is for the Town to address the concern that an increase in development will lead to an increase in impermeable surfaces. In addition to traditional systems, the Town would also like to see green infrastructure such as vegetated swales be used in stormwater management systems designed for development within in the Town.</p>	<p>The proposed action would increase the total impervious surface area from 2.62± acres to 4.98± acres. Accordingly, there would be a resultant increase in the volume of stormwater runoff generated on the subject property. The proposed action includes the installation of a stormwater management system to accommodate and recharge all stormwater runoff from the Project Area and off-site contributing areas on-site. The proposed drainage system would be designed to accommodate a two-inch rain event in accordance with Chapter 236 of the Town Code. While stormwater runoff generation would increase upon implementation of the proposed action, the proposed stormwater management system would include structural infiltration (on-site leaching pools) and non-structural methods (pervious gravel) for infiltration such that no stormwater runoff from the Project Area would run overland off-site or into Mattituck Creek.</p>



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	<p>Infrastructure Goal 2: Evaluate alternatives to public sewers</p> <p>The intent of this goal is for the Town to address the financial burden associated with constructing, maintaining, and extending the public sewer. The Town would like for future development within the Town to consider treating sewage effluent on-site or community-based systems. The Town notes that a roadblock to growth within the Town is the inability to treat wastewater.</p>	<p>The proposed action includes the replacement of an existing individual on-site sanitary system with an I/A OWTS, and the installation of one additional I/A OWTS to accommodate all sanitary waste from the proposed development in accordance with SCDHS requirements. As discussed in Section 2.2.2 of this DEIS, the proposed sanitary systems would comply with Articles 6 and 19 of the SCSC. As such, the proposed action is in keeping with this goal of the 2020 Comprehensive Plan.</p>
<p><b>Community Character</b></p>	<p>Goal 2: Protect Cultural Resources</p> <ul style="list-style-type: none"> <li>• Objective 2.4 – Protect and enhance resources that are significant to the culture of Southold Town.                             <ul style="list-style-type: none"> <li>○ (B) – Protect the character of historic agricultural and maritime areas by maintaining appropriate scales of development, intensity of use, and architectural style</li> <li>○ (E) – Preserve and encourage traditional uses defining the agricultural and maritime character of the area.</li> </ul> </li> </ul>	<p>As noted in Section 3.6.1 of this DEIS, Mattituck Inlet is the only harbor fronting the Long Island Sound in the Town of Southold and was identified as one of ten maritime centers on Long Island in the Long Island Sound Coastal Management Program. The surrounding area around Mattituck Inlet and Mattituck Creek has been an important maritime center for over 60 years.<sup>48</sup> Thus, the community character of Mattituck Inlet and Mattituck Creek, including the subject property and those areas surrounding it, have had an established commercial and maritime component as rooted in the Town’s overall character. As part of these components, buildings are present along the creek to support the maritime and commercial uses of this area. As such, the construction of two additional buildings on the subject property, which is currently improved with seven (7) buildings for the existing maritime use, is consistent with the maritime character of the subject property and surrounding area. The proposed project seeks to expand the business services of SYC to meet an unmet demand for indoor heated winter storage of yachts on the east end of Long Island. The proposed action would expand in line with the existing scale of development on the subject property. The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site.</p> <p>It is further noted that the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) has reviewed the proposed action and a determination of no impact upon cultural resources (historic and archaeology) has been issued (see Section 3.11.2 and Appendix T of this DEIS).</p> <p>Based on the above, the proposed action would be consistent with this goal and relevant objective.</p>

<sup>48</sup> [https://docs.dos.ny.gov/opd-lwrp/LWRP/Southold\\_T/Amendment1/Final/SoutholdAmend.pdf](https://docs.dos.ny.gov/opd-lwrp/LWRP/Southold_T/Amendment1/Final/SoutholdAmend.pdf)

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 3: Preserve Quality of Life in Residential Neighborhoods</p> <ul style="list-style-type: none"> <li>• Objective 3.2 – Reduce impacts from traffic.</li> <li>• Objective 3.3 – Reduce impacts from noise and light pollution</li> <li>• Objective 3.4 – Preserve community character of residential neighborhood.</li> </ul>	<p>As indicated in the TIS (see Appendix O), the excavation phase would generate the most amount of traffic. The excavation phase has been scheduled such that it would occur during the winter months when there is less traffic and would not occur on weekends. Proper wayfinding measures would be utilized, a site guard booth would be constructed to direct construction traffic, Tier 4 certified by U.S. EPA standards trucks would be used and all Jake Brakes would be turned off, and an asphalt binder will be installed on the shoulder of Mill Road. Impacts have been mitigated to the maximum extent practicable.</p> <p>As described in Section 3.4.2 of this DEIS, the proposed site lighting would consist of light poles and building fixtures as shown on the <i>Details</i> sheet (see Appendix C). To mitigate light trespass and glare, all lighting would be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The photometric analysis illustrated on the <i>Details</i> sheet (see Appendix C) demonstrates that the proposed design would not result in any off-site or trespass lighting. As such, the proposed action would be consistent with this goal from the 2020 Comprehensive Plan.</p> <p>To mitigate potential impacts from noise generation during construction, all excavation, loading, and removal operations would occur Monday through Saturday from 7:00 am to 5:00 pm in accordance with §180-7 of the Town Code (Noise, Prevention of). No work would be performed on Federal or State holidays. Also, all gasoline or diesel-powered machinery would be equipped with adequate mufflers to reduce the impact of noise on the surrounding community. Additionally, the Jake Brake that is on some diesel engines would be turned off to minimize the noise associated with the trucks and all backup alarms on trucks would be minimized by on-site traffic control. Although the proposed action would result in an increase in ambient noise levels during construction, they would be temporary in duration and all activities would comply with the Town Noise Code. In the post-development conditions, the proposed use is for boat storage with vessels arriving via Mattituck Creek. As a proposed winter storage facility, the buildings would be largely inactive for almost half of the year. The noise would occur when boats are loaded into and out of the building. Due to the proposed grading, the retaining wall would act as a sound barrier, largely containing the noise within the graded area. no receiving locations exceed 6 dBA above the Existing Condition sound levels. This is categorized as no impact as classified by the NYSDEC evaluation criteria. The greatest predicted increase would be 4 dBA at Receiver R2. Furthermore, the projected sound levels also meet the conditions of the Noise Code at all receiving locations.</p> <p>Regarding community character, based upon the diversity of land uses and zoning designations within the 1,000-foot radius of the subject property, the community character of the surrounding area is likewise varied. The community character of the site and surrounding area is predominantly maritime use along the water's edge with residential uses interspersed. The proposed action would maintain this mixed-use setting. The proposed design situates the proposed buildings behind Buildings 7 and 8 and perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to users of Mattituck Creek. The proposed landscape plan includes buffer plantings for surrounding residential land uses. As indicated in the renderings prepared by Jeffrey T. Butler, P.E., P.C., the post-development viewshed would minimally change with the proposed design.</p> <p>Based on the above, the proposed action would be consistent with this goal and objectives of the 2020 Comprehensive Plan.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 4: Protect Natural Heritage</p> <ul style="list-style-type: none"> <li>• Objective 4.1 – Elevate and preserve the Town's natural heritage through preservation of the working landscapes and waterscapes and the people who interact with them.                             <ul style="list-style-type: none"> <li>○ (B) – Provide for and support the commercial and recreational use of Southold Town's marine ecosystems.</li> </ul> </li> <li>• Objective 4.2 – Protect and restore ecological quality throughout Southold Town                             <ul style="list-style-type: none"> <li>○ (B) – Promote sustainable use of living marine resources in Long Island Sound, the Peconic Estuary, and Town waters.</li> <li>○ (E) – Avoid adverse changes to the Long Island Sound and Peconic Bay ecosystems that would result from impairment of ecological quality.</li> </ul> </li> </ul>	<p>As noted in Section 3.6.1 of this DEIS, Mattituck Inlet is the only harbor fronting the Long Island Sound in the Town and was identified as one of ten maritime centers on Long Island in the LISRCMP. The areas surrounding Mattituck Inlet and Mattituck Creek are identified in the Town's LWRP as an important maritime center as all water-dependent uses within the Reach are concentrated on Mattituck Inlet and Mattituck Creek (Section II D-5 and Section II-J Reach 1-3). Furthermore, according to the 2020 Comprehensive Plan, the development patterns of the Town of Southold "were guided by agriculture and maritime industries centered on waterways and overland transportation routes. The Town's overall character is anchored in the scenic quality of its built environment, landscapes, and waterscapes" (page 143). Thus, the community character of Mattituck Inlet and Mattituck Creek, including the subject property and those areas surrounding both the inlet and creek, have had an established commercial and maritime component as rooted in the Town's overall character. As part of these components, buildings are present along the Creek to support the maritime and commercial uses of this area. As such, the construction of two additional buildings on the subject property, which is currently improved with seven (7) buildings for the existing maritime use, is consistent with the maritime character of the subject property and surrounding area.</p> <p>The proposed development would respond to an industry demand for large vessel storage while including appropriate mitigation measures in the construction and design in consideration of the surrounding residential land uses. The proposed action would expand in line with the existing scale of development on the subject property. Based on the above, the proposed action would preserve the working waterscape within this area of the Town as well as support the commercial use of the Town's marine ecosystems.</p> <p>Regarding ecological resources, an ecological inventory and assessment has been performed by LUES. As noted in Section 2.4.2, wildlife species that are most likely to be adversely impacted by the proposed action, specifically the reduction in Coastal Oak-Beech forest habitats from 12.60 acres to 8.28 acres, include birds or other wildlife that inhabit mature forests, forest interiors, or have large patch size requirements. Bird species that are not dependent on habitat patch size and/or species that have tolerance for small habitat patches or edge habitats are likely to continue to utilize the smaller wooded habitat patches remaining after completion of the project. These species are expected to persist on the subject property, albeit at lower abundance due to less available habitat and reduced habitat quality in remaining forests resulting from intensification of adverse edge effects, including increased abundance of nest predators and nest parasites. The displacement or loss of habitat at the site for individuals of abundant bird species, even those that are patch-size dependent, is not likely to adversely impact the regional populations of these species. No adverse impacts to wildlife or wildlife habitat are expected to result from new outdoor lighting associated with the proposed action. The proposed lighting shall be dark skies-compliant, downward directed lighting resulting in no increase in light levels beyond the limit of the proposed buildings, access roads, and parking surfaces such that it would not impact wildlife</p> <p>Furthermore, the proposed action would not affect the Applicant's participation in the Town's Pump-Out program; nor would it affect the existing CCE Marine Program that occurs on-site. These services would continue to enhance the quality of the coastal habitats within Mattituck Creek.</p>
	<p>Goal 5: Protect the Unique Character of Individual Hamlets</p> <p>(A) – Revitalize Mattituck Inlet into a recreational and commercial maritime hub</p> <p>(2) Update and implement the Harbor Management Plan.</p>	<p>The 2020 Comprehensive Plan states that the development patterns of Southold "were guided by agriculture and maritime industries centered on waterways and overland transportation routes. The Town's overall character is anchored in the scenic quality of its built environment, landscapes, and waterscapes" (page 1 in Chapter 5). As noted in Section 3.6.1 of this DEIS, Mattituck Inlet is the only harbor fronting the Long Island Sound in the Town of Southold and was identified as one of ten maritime centers on Long Island in the Long Island Sound Coastal Management Program. The surrounding area around Mattituck Inlet and Mattituck Creek has been an important maritime center for over 60 years. Thus, the community character of Mattituck Inlet and Mattituck Creek, including the subject property and those areas surrounding it, have had an established commercial and maritime component as rooted in the Town's overall character.</p> <p>The 2020 Comprehensive Plan also acknowledges the importance of protecting the maritime culture and industry as it is a part of the unique character of the Town and more specifically the hamlet of Mattituck. According to the 2020 Comprehensive Plan "[i]n 1998, the Town recognized the importance of the working landscapes and adopted the Community Preservation Project Plan to preserve not only the land, but also the people who interact with it for their livelihood. In 2004, Southold Town's LWRP was adopted, elevating the importance of protecting the working maritime culture and the areas historically and presently committed to them" (page 12 in Chapter 5). As such, the proposed action would maintain the maritime use of the subject property along Mattituck Creek and expand the business services of SYC to meet an unmet demand for indoor and heated winter storage of yachts on the east end of Long Island. The proposed action would keep those yachts that utilize local waters during the peak season on Long Island rather than being transported to warmer climates in the winter which would further support and revitalize the maritime and commercial hub in this area. Overall, the proposed action would be consistent with this goal and objective from the 2020 Comprehensive Plan.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
<b>Natural Resources and Environment</b>	<u>Water Resources Section:</u> Goal 1: Conserve water quantity	The proposed action would increase potable water demand by 18± gpd for new employees and additional 220± gallons per year per boat for power washing and washing services in the fall and spring, which is an insignificant increase. Of importance, upon implementation of this proposed action, the total potable water demand of SYC (1,076± gpd plus any additional water for boat washing/power washing, which could be approximately 220 gallons per year for each boat) would be served entirely by the SCWA through a water main extension to be funded by SYC. This would decrease the amount of water being withdrawn on-site via private wells. This water main extension would give the seven property owners, identified in Table 12 and discussed in Section 2.2.1 of this DEIS, with the ability to connect to public water but remain served by private wells the opportunity to connect to SCWA and further decrease the amount of water being withdrawn from the aquifer. An irrigation system is proposed to be installed with the water supply to be provided via two of the four existing on-site wells. While the irrigation supply would represent a new withdrawal on-site, with 218± gpd projected to be used (averaged annually), the net withdrawal of groundwater on-site remains less than under the current condition. As indicated in Section 2.2.1 of this DEIS, the existing water demand supplied by on-site wells is 1,058± gpd. As indicated in the Groundwater Modeling Report (see Appendix L and Section 2.2.2 of this DEIS), the decrease in on-site water withdrawal combined with the increase in stormwater recharge with the proposed drainage system would result in a beneficial impact on the depth of the freshwater lens and no impact on surrounding wells. Based on this above, the proposed action would conserve water quantity to the practicable extent possible and would be consistent with this goal of the 2020 Comprehensive Plan.
	Goal 2: Protect groundwater quality	As evaluated in Section 2.2.2 of this DEIS and described in this table above, the proposed action complies with all relevant standards, regulations and agency recommendations intended for the protection of groundwater quality, including the 208 Study, Suffolk County Comprehensive Water Resources Management Plan, Articles 6, 7, 12, and 19 of the SCSC, and SWP.
	Goal 3: Protect surface water quality	As evaluated in Section 2.2.2 of this DEIS and described in this table above, the proposed action would not have any significant adverse impacts on surface water quality.
	<ul style="list-style-type: none"> <li>Objective 3.1 – Continue to implement the goals and objectives of the LWRP, Peconic Estuary Program (PEP), CCMP, and LISS to address target issues on surface water quality.</li> </ul>	As evaluated in this section of the DEIS, the proposed action would be consistent with the Town’s adopted LWRP. The Town’s LWRP used local planning frameworks includes the LISRCMP to guide the development of the LWRP policies. As evaluated in the Boat (Vessel) Study in Appendix M and summarized in Section 2.2.2 of this DEIS, the seasonal fluctuations in Nitrogen, Dissolved Oxygen, and Chlorophyl-a at the water quality monitoring station closest to the subject property are comparable to those in Long Island Sound and overall water quality of Mattituck Harbor was identified as fair to good based on conditions set forth in the LISS. Overall, the water quality of Mattituck Harbor between 2012 and 2020 is comparable to that of the eastern Long Island Sound. As the proposed action would rely on boats existing within local waters,
	<ul style="list-style-type: none"> <li>Objective 3.4 – Minimize illicit discharges into surface waters.</li> </ul>	The proposed action would not involve any illicit discharges into any nearby surface waters.
	<ul style="list-style-type: none"> <li>Objective 3.5 – Avoid and minimize non-point pollution of coastal waters</li> </ul>	As indicated earlier, the proposed action includes upgrading the existing on-site conventional septic system to an I/A OWTS and a new I/A OWTS would be installed. As indicated on the <i>Water and Sanitary Details</i> (see Appendix C) and described in Section 2.2.2 of this DEIS, there would be an adequate separation distance of three feet between the bottom of the I/A OWTS structures and groundwater in accordance with Article 6 of the SCSC (see Table 15 in Section 2.2.2 of this DEIS) to protect surface water and groundwater against potential contaminants and other pollutants. Furthermore, the proposed stormwater management system would contain and recharge stormwater from the Project Area and off-site contributing areas via structural (on-site leaching pools) and non-structural methods (pervious gravel) for infiltration. As such, the proposed action would minimize non-point pollution of coastal waters.
	Goal 4: Improve watershed management <ul style="list-style-type: none"> <li>Objective 4.4 – Limit the potential for adverse cumulative impacts of watershed development on water quality and water quantity</li> </ul>	The proposed action includes an expansion of the existing maritime use in accordance with the bulk and dimensional requirements for development in the M-II zoning district. The analyses presented in Section 2.2.2 of this DEIS, and discussed in this table above, demonstrate that the proposed development would not impact water quality or quantity. Regarding cumulative impacts, there were no potential developments identified by the Town of Southold for cumulative assessment.

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 5: Protect freshwater and marine habitats</p> <ul style="list-style-type: none"> <li>• Objective 5.1 – Identify, protect and enhance quality of coastal habitats.</li> <li>• Objective 5.2 – Protect tidal and freshwater habitats</li> </ul>	<p>As indicated in Sections 2.2.2 and 2.4.2 of this DEIS, the subject property is located to the adjacent west of Mattituck Creek and to the south of Mattituck Inlet which are both NYSDOS designated Significant Coastal Fish and Wildlife Habitat. The proposed action would occur outside the designated habitat and would not affect any significant fish or wildlife communities. Furthermore, the proposed action would implement a comprehensive stormwater management program to capture and recharge all stormwater from the Project Area and off-site contributing areas such that no runoff would overflow into Mattituck Creek or onto surrounding properties. The proposed action has also been reviewed and approved through the issuance of a Tidal Wetlands Permit from the NYSDEC.</p> <p>It is further noted that the projected change in boat traffic is minimal. As indicated in the Boat (Vessel) Study in Appendix M of this DEIS, the projected 88 vessels to be stored in the proposed buildings would arrive and leave the site via Mattituck Creek over a 12-week period in the spring and fall months. When averaged over the period of arrival or departure, the projected number of boats averages to seven (7) boats per week or one-to-two boats per day. With approximately 547 boats active in Mattituck Creek on a peak season day, even if the increase of one-to-two boats per day were to occur on a peak season day, this would equate to 0.18-to-0.36 percent increase in boat traffic. Such an increase is nominal.</p> <p>The proposed action would also not affect the Applicant's participation in the Town's Pump-Out program; nor would it affect the existing CCE Marine Program that occurs on-site. These services would continue to enhance the quality of the coastal habitats within Mattituck Creek.</p> <p>As noted in Section 2.4.2, no physical disturbance to the small area (0.63-acre) of intertidal marsh and high marsh tidal wetlands on the southern end of the property is proposed and, accordingly, there would be no loss of tidal wetland area resulting from the proposed action.</p> <p>The proposed project provides for mitigation measures that would contribute to potential surface water quality and habitat quality improvements in Mattituck Creek, such as new I/A OWTS's and new stormwater drainage infrastructure.</p>
	<p><u>Land Resources Section:</u></p> <p>Goal 1: Protect soils and geologic features</p> <ul style="list-style-type: none"> <li>• Objective 1.4 – Preserve the unique geologic features of the Town through avoidance and/or minimization of impacts from development and natural disasters.</li> </ul>	<p>The proposed action would modify the upland and valley slope; however, the existing slope face shows natural moraine and outwash plain sediments that have been augmented in places with spoil and dredged material. While the landform would be modified, the proposed development includes structural stabilization to correct existing slope failure due to the placement of dredge material. As indicated in Section 2.1.3 of this DEIS, mitigation measures have been incorporated into the proposed design, including erosion and sedimentation controls that would be undertaken prior to and during construction. Also, site clearing, grubbing, and stripping would be performed during dry weather conditions to prevent excessive rutting and the mixing of organic debris with the underlying soils. As such, the proposed action would be consistent with this recommendation of the 2020 Comprehensive Plan.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 2 – Protect upland habitats and trees</p> <ul style="list-style-type: none"> <li>• Objective 2.1 – Preserve and manage the Town’s grasslands, old field, and woodlands habitats to achieve the highest ecological quality and species diversity.</li> <li>• Objective 2.2 – Protect and restore upland habitat ecological quality by adhering to the following measures:                             <ul style="list-style-type: none"> <li>(A) – Retain and add indigenous plants to maintain and restore values of upland ecological communities.</li> <li>(B) – Protect existing indigenous plants from loss or disturbance to the extent practical.</li> <li>(C) – Avoid permanent adverse change to ecological processes that provide values to the residents of the Town and the region.</li> <li>(D) – Reduce adverse impacts on upland habitats due to development.</li> <li>(E) – Mitigate impacts of new development where avoidance of impacts is not practicable.</li> </ul> </li> </ul>	<p>In total, the proposed action would require the removal of 634 trees (26.3 percent) with 15 trees (0.62 percent) from the R-80 zoned portion of the subject property and 619 trees (25.7 percent) from the M-II zoned portion of the subject property. Approximately 73 percent (1,774 trees in total) of the total trees at the subject property would be retained with 1,039 trees (43.1 percent) retained on the R-80 zoned portion of the subject property and 735 trees (30.5 percent) retained on the M-II zoned portion of the subject property. To mitigate the impacts to the forest edge, the Applicant will plant 27,333 SF of native trees, shrubs and groundcover along the new forest edge. This planted area is approximately 20-30 feet wide and will include dense, multi-layered plantings (i.e., plants that at maturity will occupy understory, and canopy-levels) with abundant conifer trees (i.e., 86 pitch pine trees) to minimize light penetration into the new forest. After the establishment of these natural vegetation areas to be located landward of the proposed retaining wall, the total forest area on the property will increase from 11.76± acres to 12.39± acres. Additionally, to mitigate for loss of forest resources, the Applicant will contribute fifty (50) native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds</p>
	<p>Goal 3 – Protect fish and wildlife resources</p> <ul style="list-style-type: none"> <li>• Objective 3.3 – Protect and restore Significant Coastal Fish and Wildlife Habitats.</li> </ul>	<p>The subject property lies adjacent to the west of Mattituck Creek and south of Mattituck Inlet, which are designated by the NYSDOS as a Significant Coastal Fish and Wildlife Habitat. The proposed action would occur outside the designated habitat and would not affect any significant fish or wildlife communities. Furthermore, all stormwater from the Project Area and off-site contributing areas would be contained and recharged on-site. The proposed action would not affect the Applicant’s participation in the Town’s Pump-Out program; nor would it affect the existing CCE Marine Program that occurs on-site. It is noted that the NYSDEC issued a Tidal Wetlands Permit for the proposed action and all conditions in the issued permit would be implemented.</p> <p>As described in Section 2.4.2 of this DEIS and included in the Ecology Report in Appendix N, the decreased habitat availability associated with the loss of 32 percent of the site’s forest habitat would likely decrease the abundance and diversity of the plant and wildlife species that utilize the site. Wildlife that utilizes the site’s successional shrubland and successional forest habitats would not be adversely impacted by the proposed action due to the maintenance of 13.7 acres (approximately 89 percent) of these successional habitats. Similarly, wildlife species that are habitat generalists and utilize all of the site’s habitats (i.e., successional habitats, forests, and developed areas) would also unlikely be adversely impacted by the proposed action, due to their general tolerance for human activity. Examples of these habitat generalists include raccoon, opossum, and white-tailed deer as well as birds such as American robin, common grackle, black-capped chickadee, blue jay, and wild turkey. Wildlife species that would be most likely adversely impacted by the proposed action, specifically the reduction in Coastal Oak-Beech forest habitats from 12.60± acres to 8.28± acres, include birds or other wildlife that inhabit mature forests, forest interiors, or have large patch size requirements. Songbirds that are expected to utilize the site’s Coastal Oak-Beech forests include species that forage for insects on and under bark (such as woodpeckers and nuthatches), glean insects from canopy foliage (such as vireos), and/or catch airborne insects (such as flycatchers and wood pee-wees). Some bird species may be found in both small and large habitat patches, whereas other bird species are more frequently found in larger habitat patches than smaller patches. Bird species that are not dependent on habitat patch size and/or species that have tolerance for small habitat patches or edge habitats are likely to continue to utilize the smaller wooded habitat patches remaining after completion of the project. Many of the bird species that inhabit the site and have been found to be insensitive to patch size, utilize small forest patches (between 2.0 and 8.0 acres in area), or utilize edge habitats. These species are expected to persist on the subject property, albeit at lower abundance due to less available habitat and reduced habitat quality in remaining forests resulting from intensification of adverse edge effects, including increased abundance of nest predators and nest parasites.</p>

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	Goal 7 – Adapt to the effects of climate change and rising sea levels.	As described in Section 2.3.2 of this DEIS, implementation of the proposed action would not increase the subject property’s susceptibility to sea level rise with and without storm inundation. With regard to coastal flooding and sea level rise, the <i>New York State Flood Risk Management Guidance for Implementation of the Community Risk and Resiliency Act</i> provides flood-risk management guidelines for the elevation of structures. As the subject property cannot be relocated outside of the coastal zone, certain considerations would be considered to address the risk of future flooding. Although Buildings 9 and 10 are outside of the mapped floodplain, they would be sited at an elevation of 10 feet AMSL, which is two feet above the adjacent BFE. This is the recommended elevation for non-critical infrastructure such as the proposed action. While it is not expected that there would be any significant adverse impacts from climate change, sea level rise and coastal flooding, the separation distances from drainage and sanitary leaching infrastructure to groundwater would be reduced with rising groundwater elevations. As such, modifications to select systems may be required by the 2050s should the projections be accurate. As such, the Applicant would continue to assess the subject property’s vulnerability to sea level rise and ensure any actions to be taken are consistent with the prevailing guidance to protect the overall operations of the marina. As such, the proposed action is consistent with this goal of the 2020 Comprehensive Plan.
	Goal 10 – Reduce light pollution	As indicated earlier in this section of the DEIS, the proposed site lighting plan has been designed in accordance with Chapter 172 of the Town Code (Outdoor Lighting). As such, the proposed action would be consistent with this goal from the 2020 Comprehensive Plan.
<b>Economic Development</b>	Goal 1 – Encourage new and facilitate the growth of existing business sectors that pursue stable and suitable employment.	The subject property has been an established marina use for over 60 years and supports the maritime industry within the Town of Southold. The proposed project seeks to expand the business services of SYC to meet an unmet demand for indoor and heated winter storage of yachts on the east end of Long Island. As indicated in Section 1.3.2 of this DEIS, the proposed action would create new jobs for the servicing of the larger vessels to be stored on-site, while continuing to support SYC as an important maritime use on Mattituck Creek. In turn, the proposed action benefits the existing SYC staff as the business operation responds to market demands for indoor climate-controlled storage. As such, the implementation of the proposed action would facilitate the growth of SYC and provide continued support to the maritime industry within the Town of Southold. As such, the proposed action is consistent with this goal of the 2020 Comprehensive Plan.
	Goal 2 – Promote economic development that ensures an adequate tax base without compromising the unique character of the Town. <ul style="list-style-type: none"> <li>• Objective 2.4 – Expand and improve infrastructure as appropriate, to serve existing businesses and accommodate new growth.                             <ul style="list-style-type: none"> <li>(A) – As commercial/industrial development occurs in conformance with Town zoning, maintain and provide infrastructure in a manner that supports the planned non-residential growth of the Town.</li> </ul> </li> </ul>	As indicated in Section 3.9.2 of this DEIS, the proposed action would increase tax revenue to various taxing jurisdictions and increase sales tax revenue. Based on the Southold Assessor (see Appendix E), the proposed action would increase property taxes by approximately \$59,450 based on the 2020-21 tax rate. Sales tax revenue is also projected to increase by approximately \$151,800 annually from the storage and boat repair, maintenance and/or upgrade services performed by SYC staff. Additional sales tax of approximately \$322,575 is projected to be generated by increased yacht sales by SYC.  As analyzed in Section 2.1.2 (Soil and Topography), Section 2.2.2 (Water Resources), Section 2.3.2 (Flooding and Climate Change), and Section 2.4.2 (Ecological Resources) of this DEIS, the proposed action would be designed to be protective of the environment (e.g., soil erosion, groundwater, surface water, flooding, and ecological resources). The proposed action would also be consistent with the community character of the surrounding area, as described above. Overall, based on the above, implementation of the proposed action would facilitate the growth of SYC’s and provide continued support to the maritime industry within the Town of Southold. The proposed action would balance economic prosperity while maintaining a high quality of life, the environment, and the unique character of the surrounding community. As such, the proposed action is consistent with this goal and objective of the 2020 Comprehensive Plan.

Chapter	2020 Plan Goal/Objective	Consistency Analysis with Proposed Action
	<p>Goal 4 – Preserve and encourage industries that support existing and future agriculture and aquaculture uses</p> <ul style="list-style-type: none"> <li>• Objective 4.7 – Continue to pursue relationships through Cornell Cooperative Extension and other key players to promote the Town's aquaculture industry, and the Southold Project in Aquaculture Training (SPAT).</li> </ul>	<p>As indicated in Section 1.1.2 of this DEIS, the subject property is a designated host for the CCE Marine Program for shellfish restoration. As a host, SYC has an executed MOU with the CCE Marine Program to support CCE's involvement with the LISRP, inclusive of housing FLUPSY in dockside areas that are used by CCE for shellfish harvesting. The intent of the LISRP is to "...enhance natural stocks of hard clams and eastern oysters throughout the Long Island region and establish self-sustaining populations and help improve water quality..." As part of this program, NYSDEC instructed CCE to "...spawn, grow-out and plant millions of clams and oysters throughout Long Island..." with FLUPSY's being the most efficient method for the grow-out of seed clams.<sup>49</sup> According to SYC, as a host, the CCE Marine Program has enabled approximately 6 million clams to be grown at the marina over the last year (and over 10 million in the last four years). A minimum of approximately 1.5 million clams per year are expected to be harvested from the FLUPSY units at SYC. Once harvested, the clams are relocated to a NYSDEC-designated sanctuary site pursuant to the LISRP. Furthermore, each of the eight (8) FLUPSYs currently located at SYC enable 600 gallons of water per minute to be passed through the millions of juvenile clams housed in these systems (see the Boat [Vessel] Study in Appendix M). According to CCE, the Mattituck Inlet has proven to be the best location for regrowth in the Town of Southold and the FLUPSY site at SYC is integral to shellfish restoration on Long Island. Upon project implementation, the subject property would continue to host the CCE Marine Program. The proposed action would not impact the existing CCE Marine Program. As such, the proposed action would be consistent with this goal and objective of the 2020 Comprehensive Plan.</p>
	<p>Goal 5 – Preserve, encourage, and continue to support existing and future maritime uses as an important business sector within the Town's economy.</p> <ul style="list-style-type: none"> <li>• Objective 5.1 – Maintain consistency with the policies adopted under the Local Waterfront Revitalization Program.</li> <li>• Objective 5.4 – Consider amendments to the zoning of larger marinas to better accommodate and position them as a viable use in the Town's economy.</li> <li>• Objective 5.7 – Enhance the connection between Mattituck Inlet and the hamlet center.                             <ul style="list-style-type: none"> <li>(A) Create a program aimed at providing bicycle use between the local marinas and the hamlet center.</li> <li>(B) – Increase access through regular dredging of Mattituck Inlet.</li> </ul> </li> </ul>	<p>The ability for large marinas to expand services that cater to customer needs is specifically recognized by Objective 5.4 of this goal. The proposed action would further this goal by expanding its services to meet an unmet demand for indoor and heated winter storage of yachts on the east end of Long Island. As mentioned in this section above, the proposed action would create jobs, increase tax revenue to various taxing jurisdictions and increase sales tax revenue further supporting the Town's economy.</p> <p>Regarding Objective 5.1, as evaluated in this section of the DEIS below, the proposed action is consistent with the adopted LWRP.</p> <p>Regarding Objective 5.4, as excerpted from the 2020 Comprehensive Plan, "Large marinas are facing pressures to expand their services to include swimming pools, restaurants, boat rentals, <b>storage space</b>, and other services that cater to their customer's needs. In order to accommodate this demand and continue to promote Southold's traditional maritime heritage, the Town should consider zoning amendments for marinas of appropriate size and location to better match the needs of their clients" (<b>emphasis added</b>) (page 21 in Chapter 7). While this objective seeks zoning amendments to allow for such uses, the proposed action does not require any such relief under the M-II zoning district. The subject property is an important maritime use as it has been established within the Town for over 60 years. The proposed action would be a viable use as it would expand upon the existing marina use without the need for any zoning amendments. As such, the proposed action would achieve this objective without the need for zoning amendments.</p> <p>Finally, regarding Objective 5.7, as excerpted from the 2020 Comprehensive Plan, "Mattituck Inlet is an important economic, environmental, and recreational resource in the hamlet of Mattituck. Located just north of the hamlet center, Mattituck Inlet runs two miles into the North Fork from Long Island Sound and is the only harbor on the 50± mile stretch between Port Jefferson and Orient Point. As such, Mattituck serves as an important maritime location with the Inlet being a popular destination for boaters. The hamlet's accessibility to water, in addition to a designated anchorage, a Town park and boat ramp, marinas, and maritime uses located close to the hamlet center make it a key economic driver" (page 23 in Chapter 7). The proposed action would provide yacht storage in the off-season and is not anticipated to generate foot traffic to the hamlet center. Therefore, this objective is not applicable. As discussed in Sections 1.1.1, 1.3.1, and 2.2.2, USACOE would continue its routine dredging of Mattituck Harbor. The proposed action does not include or require any in-water work as the proposed yacht size is able to safely navigate the Inlet and Creek. Therefore, this objective is not applicable.</p>
<p><b>Natural Hazards</b></p>	<p>Goal 1 – Mitigate the effects of natural hazards to achieve coastal resiliency, protect public safety, and reduce economic loss.</p> <p>Goal 2 – Complete a Post-Disaster Recovery Plan and Reconstruction Plan</p> <p>Goal 3 – Provide education to the public relating to natural hazards</p>	<p>As excerpted from the 2020 Comprehensive Plan, "Building coastal resiliency into the Town's plan will help the economy, make housing safer, and protect future investments in property, both private and public" (page 4 in Chapter 12). While the goals and objectives of this chapter are directed to the Town to address, the proposed action implements several initiatives to improve the subject property's coastal resiliency, protect public safety, and reduce economic loss. The FFE of the proposed boat storage buildings would be 10 feet AMSL, two feet above the adjacent FEMA floodplain, as required by Chapter 148 (Flood Damage Prevention) of the Town of Southold Town Code. Other infrastructure would be situated at a minimum elevation of 9 feet AMSL. Sea level rise projections discussed in Section 2.3.2 would not inundate the subject property and impacts from sea level rise and storm inundation are concentrated at the bulkhead. Additionally, if a 16-inch rise in groundwater elevation occurred, the drainage infrastructure proposed would be supplemented with shallow drainage structures to accommodate stormwater runoff. As discussed in Section 2.3.2, if the water table experienced the 0.01-foot rise projected, the groundwater model (see Appendix L) shows no particle deflections or trajectory changes, and thus, the increased recharge would have no effect on nearby wells. The proposed action's consideration of flooding and climate change impacts protects the subject property as well as the Applicant's investment in the operation of the marina, boat maintenance, and boat storage facilities. Goals 2 and 3 are not applicable to the proposed action and therefore a consistency analysis was not completed.</p>

<sup>49</sup> <https://lishellfishrestorationproject.org/>



As indicated in Table 30 above, the proposed action is consistent with the relevant goals and objectives of the 2020 Comprehensive Plan.

**Town of Southold Local Waterfront Revitalization Program**

The 13 policies implement the NYSDOS 44 coastal policies and represent a local refinement of the LISRCMP policies. Said policies and consistency therewith are included in the table below.

Table 31 - Consistency Analysis with the Town of Southold LWRP

Coast	Policy Description	Analysis of Proposed Action
<p><b>Developed Coast</b> <i>Policy 1</i></p>	<p>Foster a pattern of development in the Town of Southold that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.</p>	<p>Upon implementation of the proposed action, the existing maritime use on the subject property would continue. The proposed action would expand in line with the existing scale of development on the subject property. The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. As described in Section 3.5.2 of this DEIS, 5.51± acres of the existing forested land on the western portion of the subject property would be removed. However, 11.76± acres of forested area on the western portion of the subject property would remain and an additional 1.67± acres of landscaping would be planted. Upon project implementation, the tree line would be setback for a distance of approximately 500± feet. As indicated on the renderings included in the Appendix Q of this DEIS, the existing visual setting (i.e., maritime use with vegetated upland area) would not be significantly altered.</p> <p>As the proposed action would expand the services of SYC, which is currently developed with an operational marina, the proposed development would make efficient use of the existing infrastructure (on-site and in the vicinity of the site) and upgrade on-site infrastructure. The proposed development would discontinue the use of existing on-site wells for potable water and would connect to the public water supply through extension of the water main. The two existing wells near Buildings 1 and 7 would remain for on-site irrigation use only and the on-site supply wells near Buildings 2 and 3 would be abandoned. This water main extension would give the seven property owners, identified in Table 12 and discussed in Section 2.2.1 of this DEIS, with the ability to connect to public water but remain served by private wells the opportunity to connect to SCWA and further decrease the amount of water being withdrawn from the aquifer. The proposed action also includes the replacement of an existing individual on-site sanitary system with an I/A OWTS, and the installation of one additional I/A OWTS to accommodate all sanitary waste in accordance with SCDHS requirements. As the proposed action would replace and upgrade an existing conventional septic system with an I/A OWTS and install an additional I/A OWTS, the proposed sanitary system would reduce nitrogen loading and be more protective of groundwater quality than continuing to utilize the existing conventional septic system.</p> <p>The proposed development would offer a beneficial use of its coastal location as it would respond to an industry demand for recreational boaters while including appropriate mitigation measures in the construction and design in consideration of the surrounding residential land uses. The proposed project seeks to expand the business services of SYC to meet an unmet demand for indoor heated winter storage of yachts on the east end of Long Island. According to the applicant, this investment in additional Yacht storage would ensure this marina continues to operate for many years to come as a working marina and not succumb to the pressures of transitioning to residential with private waterfront use, or a hotel, motel or restaurant development which are all permitted by special exception use permit. Furthermore, the proposed action is also consistent with the 2020 Comprehensive Plan and the underlying intent of the prevailing zoning for the M-II zoning district as analyzed in this section of the DEIS, above. As such, based upon the above, the proposed action would be consistent with the intent of this policy.</p>
<p><i>Policy 2</i></p>	<p>Preserve historic resources of the Town of Southold.</p>	<p>There are no known historic or archaeological resources on or adjacent to the subject property that would be adversely impacted by the proposed action. A Phase 1A and Phase 1B was conducted on the subject property and the NYS OPRHP has issued a determination of no impact upon cultural resources (see Section 3.11.2 and Appendix T of this DEIS).</p>
<p><i>Policy 3</i></p>	<p>Enhance visual quality and protect scenic resources throughout the Town of Southold.</p>	<p>The proposed action would not have a significant adverse impact on the visual quality or scenic resources throughout the Town of Southold. As analyzed in Section 3.4.2 of this DEIS, although the views of the subject property would be altered as a result of the proposed action, they would not be significant as depicted by the photo-simulations, landscaping plans, and architectural elevations (see Appendices C and Q). Buildings 7 and 8 would effectively screen most of the proposed Buildings 9 and 10 from properties to the east of the subject property. The proposed Evergreen concrete retaining wall as well as the higher elevation of areas north, west, and south of the proposed action would also screen much of the views of the proposed Buildings 9 and 10. Although the intent of the proposed retaining wall is for slope stabilization, the proposed evergreens and vegetation along the retaining wall and six-foot black vinyl fence would also aid in screening the proposed buildings from being visible.</p> <p>The two proposed buildings would be setback behind existing Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. As such, the proposed development would not have an adverse impact on scenic resources including agricultural land, open space and natural resources. Although no formal inventory of scenic resources has been completed by the Town, per the 2020 Comprehensive Plan, the Town is seeking to strengthen its management of important scenic viewsheds from State Routes 25, 48, and other Town roadways to be identified (page 3 Chapter 5). Accordingly, based upon the above, the proposed action would be consistent with the intent of this policy.</p>

Coast	Policy Description	Analysis of Proposed Action
<b>Natural Coast</b>		
Policy 4	Minimize loss of life, structures, and natural resources from flooding and erosion.	The FFE of the two proposed boat storage buildings would be at elevation 10 feet AMSL, two feet above the adjacent FEMA floodplain, as required by Chapter 148 (Flood Damage Prevention) of the Town Code, to minimize the loss of life, structures and natural resources from flooding and erosion. Sea level rise projections discussed in Section 2.3.2 would not inundate the subject property and impacts from sea level rise and storm inundation are concentrated at the bulkhead. Additionally, if a 16-inch rise in groundwater elevation occurred, the drainage infrastructure proposed would be supplemented with shallow drainage structures to accommodate stormwater runoff. As discussed in Section 2.3.2, if the water table experienced the 0.01-foot rise projected, the groundwater model (see Appendix L) shows no particle deflections or trajectory changes, and thus, the increased recharge would have no effect on nearby wells. Furthermore, the proposed action would include erosion and sedimentation control measures to be undertaken prior to and during construction and would include, at minimum, stockpile protection, minimizing the extent and duration of exposed areas, installation of sediment barriers and sediment traps (silt fencing), and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. These erosion and sedimentation controls would minimize the potential impacts associated with site development and construction activities to ensure proper function. Based on the above, the proposed action would be consistent with the intent of this policy.
Policy 5	Protect and improve water quality and supply in the Town of Southold.	As evaluated in Section 2.2.2 of this DEIS, the proposed action includes the replacement of an existing individual on-site sanitary system with an I/A OWTS, and the installation of one additional I/A OWTS to accommodate all sanitary waste from the proposed development in accordance with SCDHS requirements. As the proposed action would replace and upgrade an existing septic system with an I/A OWTS and install an additional I/A OWTS, the proposed sanitary system would reduce nitrogen loading and be more protective of groundwater quality than continuing to utilize the existing conventional septic system. The proposed action also includes the installation of a stormwater management system that would contain and recharge stormwater from a two-inch rain event, in accordance with the Town Code. The proposed stormwater management controls include both structural infiltration (on-site leaching pools) and non-structural methods (pervious gravel). Additionally, the proposed action would discontinue the use of existing on-site wells for potable water and would connect to the public water supply through extension of the water main. The two existing wells near Buildings 1 and 7 would remain for on-site irrigation use only and the on-site supply wells near Buildings 2 and 3 would be abandoned. The proposed irrigation system would implement smart irrigation controls to reduce or eliminate the use of the irrigation system during periods of rain. The irrigation system would be installed with a drip line to prevent evaporation as well as rain sensors so as to not go on while it is raining. The proposed landscaping would consist of native and/or drought-tolerant plants and groundcover to reduce irrigation needs. Furthermore, as analyzed in Section 2.2.1 of this DEIS, there are no upgradient or downgradient water supply wells in the vicinity of the subject property. Accordingly, based upon the above, the proposed action would be consistent with the intent of this policy.
Policy 6	Protect and restore the quality and function of the Town of Southold's ecosystem.	<p>To mitigate the impacts to the forest edge, the Applicant will plant 27,333 SF of native trees, shrubs, and groundcover along the new forest edge. This planted area is approximately 20-30 feet wide and will include dense, multi-layered plantings (i.e., plants that at maturity will occupy understory, and canopy-levels) with abundant conifer trees (i.e., 86 pitch pine trees) to minimize light penetration into the new forest. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forest area on the property will increase from 11.76±-acres to 12.39±-acres. Additionally, the Applicant will contribute fifty (50) native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.</p> <p>Furthermore, the proposed action would include erosion and sedimentation control measures to be undertaken prior to and during construction and would include, at minimum, stockpile protection, minimizing the extent and duration of exposed areas, installation of sediment barriers and sediment traps (silt fencing), and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. These erosion and sedimentation controls would minimize the potential impacts associated with site development and construction activities to protect the quality and function of the Town's ecosystem. Based on the above, the proposed action would be consistent with the intent of this policy.</p>
Policy 7	Protect and improve air quality in the Town of Southold.	As discussed in Section 3.8.2 of this DEIS, the following mitigation measures will be put in place during construction to diminish the impacts from fugitive dust: minimizing the exposed area of erodible earth; applying wet suppression to material piles and unpaved areas when there is visible dust; use of covered haul trucks to move construction material; use of plastic sheet coverings for material piles; and six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area. The Air Quality Report (see Appendix S) concluded that long-term air quality impacts would be inconsequential as the addition of stationary emission sources is not proposed and vehicular traffic due to the implementation of the proposed action would be minimal. Additionally, the existing CCE FLUPSY units would continue to operate as part of the proposed action. This program has a beneficial impact on carbon sequestration and therefore improves the water and air quality of the Town of Southold. As such, the proposed action would be consistent with the intent of this policy.

<b>Coast</b>	<b>Policy Description</b>	<b>Analysis of Proposed Action</b>
<i>Policy 8</i>	Minimize environmental degradation in the Town of Southold from solid waste and hazardous substances and wastes.	As discussed in Section 1.2.6 of this DEIS, SYC currently utilizes one (1) eight-yard dumpster to accommodate solid waste generated by the current operations. The dumpster is emptied on a weekly basis by a private carter. All shrink wrap cardboard, and plastic generated by on-site operations are recycled with the Town of Southold. Old batteries and used engine oil in sealed containers are stored on-site, which are then recycled with local companies. As part of the proposed action, all wastes generated on-site would be handled in the same manner, and no significant change is expected for the additional boat storage. As such, the proposed action would be consistent with the intent of this policy.
<b>Public Coast</b>		
<i>Policy 9</i>	Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Town of Southold.	This policy is not applicable to the proposed action as the existing marina is for private membership to utilize the facilities, which would remain as part of the proposed action. The proposed action would not establish public access to Mattituck Creek. However, the proposed action would respond to an industry demand for local seasonal storage for recreational boaters. The proposed project seeks to expand the business services of SYC to meet an unmet demand for indoor heated winter storage of yachts on the east end of Long Island. This supports an existing recreational use within the Town. As such, while this policy is not applicable, the proposed action would be consistent with the intent of this policy.
<b>Working Coast</b>		
<i>Policy 10</i>	Protect the Town of Southold's water-dependent uses and promote siting of new water-dependent uses in suitable locations.	The proposed action would expand and enhance an existing maritime and water-dependent use. The proposed development would respond to an industry demand for recreational boaters. The proposed project would expand the business services of SYC to meet an unmet demand for indoor heated winter storage of yachts on the east end of Long Island. The proposed development is a suitable location for such use as it is an expansion of an existing maritime use, and it is zoned for such use. As such, the proposed action would be consistent with the intent of this policy.
<i>Policy 11</i>	Promote sustainable use of living marine resources in the Town of Southold.	As discussed in Sections 2.1.2 and 2.2.2 of this DEIS, SYC is a designated host for the CCE Marine Program for shellfish restoration and hosts 8 FLUPSY units. The FLUPSY units at SYC have grown approximately 6 million clams over the last year (and over 10 million in the last four years) and a minimum of approximately 1.5 million clams per year are expected to be harvested from the FLUPSY units at SYC. Once harvested, the clams are relocated to a NYSDEC-designated sanctuary site pursuant to the LISRP. SYC is committed to being a FLUPSY host through 2030. These clams aid in the enhancement and restoration of the shellfish fishery within the Town of Southold and subsequently Long Island. As the proposed action would not result in the disturbance of wetlands, the surrounding marine resources would be maintained in their existing conditions. As such, the proposed action would be consistent with the intent of this policy.
<i>Policy 12</i>	Protect agricultural lands in the Town of Southold.	As shown on Figure 4 in Appendix A of this DEIS, lands identified for agricultural uses by the Town of Southold are located north and west of the subject property. The lands to the west are located across Wet Mill Road. All impacts from the proposed action would be limited to the subject property and no impact to these lands are anticipated. The land north of the subject property is identified as agricultural. However, the land is predominately forested and developed with a residential property with no agricultural uses. This policy is not applicable to the proposed action as no impacts to agricultural lands are anticipated. .
<i>Policy 13</i>	Promote appropriate use and development of energy and mineral resources.	This policy is not applicable to the proposed action as there would be no development of energy or mineral resources.

As indicated in Table 30 above, the proposed action is consistent with the relevant policy goals of the Town of Southold LWRP. As such, no significant adverse impacts to coastal resources would be expected.

### **Town of Southold Town Code Chapter 275 – Wetlands and Shoreline**

As discussed in Section 2.2.1, activities within 100 feet of Town-defined wetlands at §275-3(C)(5) are subject to review by the Town of Southold Town Trustees. All of the proposed development would occur landward of the existing SYC buildings. Activities within 100-feet of Town wetlands are limited to the proposed striping to formalize parking stalls in existing gravel-surfaced areas, and the proposed French drains on the east side of Building 8. As evaluated in Section 2.2.2 of this DEIS, the proposed action is consistent with the standards for issuance of a Trustees Wetlands Permit set forth at §275-12.

### **Mattituck Watershed Management Plan**

As indicated in Section 3.1.1 of this DEIS, the Mattituck Watershed Management Plan is part of a larger study (Long Island Sound, North Fork Study). The Long Island Sound, North Fork Study identifies the need to protect local groundwater and surface water resources while also noting that excess nitrogen is a primary factor contributing to water impairment in local marine waters, primarily as a result of conventional sanitary systems. As explained in Section 3.1.1. of this DEIS, the pilot engineering assessment done for West Mattituck provides estimates for a larger OWTS designed to handle the equivalent of 416 residences adjacent to Mattituck Creek on its western banks. While the subject property is located outside of the boundaries of the proposed sewer service area (see Figure 26 in Appendix A) and the report only focuses on residential uses, the subject property is situated adjacent to Mattituck Creek and currently utilizes a septic OWTS. The recommendations of this engineering assessment relate to the proposed sewer system to reduce nitrogen loading to Mattituck Creek by providing a system that can reduce the discharge of total nitrogen into the creek. While the proposed action is a commercial maritime use and not a residential use, the proposed action would replace and upgrade an existing septic system with an I/A OWTS and install an additional I/A OWTS. The proposed I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L in accordance with SCSC Article 19. As such, the proposed sanitary system would reduce nitrogen loading and be more protective of groundwater quality than continuing to utilize the existing conventional septic system. As such, the proposed action would be consistent with the Mattituck Watershed Management Plan.

### **NYSDOS Significant Coastal Fish and Wildlife Habitat**

As discussed in Sections 2.2.2 and 2.4.2 of this DEIS and in Appendix N, the proposed action would occur outside of the designated habitat. In support of the maritime habitat of Mattituck Creek, the proposed action would implement a comprehensive stormwater management program to capture and recharge all stormwater on-site such that no runoff would overflow into Mattituck Creek or onto surrounding properties. Additionally, the Applicant is required to abide by the conditions of the NYSDEC-issued Tidal Wetlands permit which would provide additional protection of the NYSDOS

Significant Coastal Fish and Wildlife Habitat. Based on the foregoing, the proposed action would not have a significant adverse impact on the adjacent Significant Coastal Fish and Wildlife Habitat.

### **Suffolk County Sanitary Code**

#### Article 6 of the SCSC – Single-Family Residences, Realty Subdivisions, Developments and Other Construction Projects

The subject property is located in Groundwater Management Zone IV, which is not characterized as a deep recharge zone. Pursuant to the regulations contained in Article 6 of the SCSC, the maximum permitted sanitary discharge for the use of on-site sanitary systems is 600 gpd per acre (i.e., approximately 9,498 gpd for the 15.83±-acre developable land area). According to the design flow factors published in the *SCDHS Standards For Approval Of Plans And Construction For Sewage Disposal Systems For Other Than Single-Family Residences* and demonstrated in Section 2.2.2 of this DEIS, post-development conditions would generate 1,076± gpd of sanitary wastewater and would not exceed the allowable sanitary flow of 9,498± gpd.

The proposed action includes the installation of two 600-gallon I/A OWTS, one replacing the existing sanitary system and one new system. Each I/A OWTS would be designed with 5 leaching galleys with 50 percent future expansion. The proposed Sanitary System No. 1 would be installed between Buildings 9 and 10 with the control panel and blower in Building 10 to treat sewage effluent from the proposed two buildings. The total design flow for Sanitary System No. 1 is 214± gpd, as demonstrated in Section 2.2.2 of this DEIS and below.

#### Design Calculations for Sanitary System No. 1 (New System):

*General Industrial: 4,910 SF x 0.04 gpd/SF (density load) = 196 gpd*

*New Boat Storage: 101,500 SF x 0.00 gpd/SF (density load) = 0 gpd*

*Non-storage (bathrooms): 304 SF x 0.06 gpd/SF (density load) = 18 gpd*

*Total Design Flow for System No. 1: 214± gpd*

The proposed Sanitary System No. 2 would be a replacement of the existing subsurface septic system and installed to the south of Building 3 *with the control panel and blower housed in this building. The total design flow for Sanitary System No. 2 is 562± gpd, as demonstrated in Section 2.2.2 of this DEIS and below.*

#### Design Calculations for Sanitary System No. 2 (Replacement System):

*Office: 2,702 SF x 0.06 gpd/SF (density load) = 162 gpd*

*Marina: 40 boat slips x 10 gpd/boat slip (density load) = 400 gpd*

*Total Design Calculations System No. 2: 562± gpd*

Overall, the total flow for the proposed action would be 776± gpd. As the existing single-family residence sanitary system with an existing design flow of 300± gpd would remain upon implementation of the proposed action, the total design flow for post-development conditions would be 1,076± gpd. As described in Section 2.2.2 of this DEIS, an application to the SCDHS and Board of Review for approval of the proposed design flow has been filed (see Appendix J). Additionally, as part

of this action, the Applicant would file a restrictive covenant with the SCDHS to reduce the design flow for the M-II zoned parcel.

As noted on the *Utility Plan* (see Appendix C) and summarized in Table 15 in Section 2.2.2 of this DEIS, the setbacks for the proposed I/A OWTS would comply with the minimum horizontal and vertical separation distances as set forth in Article 6 of the SCSC. Furthermore, the proposed I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L, in accordance with Section 760-1907D.2 in Article 19 of the SCSC.

#### Article 7 – Water Pollution Control

As indicated in Section 2.2.1 of this DEIS, the subject property is not located in a regulated deep recharge area and is not located within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area. As such, the proposed action is not subject to Article 7 restrictions.

#### Article 12 of the SCSC – Toxic and Hazardous Materials Storage and Handling Controls

As discussed in Section 2.2.1 of this DEIS, SCDHS issued an Article 12 permit to SYC on September 1, 2017 for the existing toxic and hazardous materials storage. The current permit expires on August 22, 2022. As discussed in Section 2.2.2 and further discussed in Section 3.2.2 of this DEIS, the proposed action would not require SYC to modify the total volume to be stored as the current volume of chemicals is sufficient to service the yachts to be stored in Buildings 9 and 10. It is noted that SYC staff receives training and certification to adequately handle and operate the materials associated with the existing marina operation.

### **3.1.3 Proposed Mitigation**

Based on the above analyses, the proposed action is not expected to result in any significant adverse impacts to land use or zoning. Additionally, the proposed action is consistent with the relevant community plans and studies. The proposed action has incorporated the following design elements that effectively mitigate any potential adverse impacts:

- The setback from the edge of disturbance to Mill Road Preserve would be vegetated and is 105 feet to increase the distance between the most southern trail in the Mill Road Preserve and the proposed action as well as maintain the existing wooded appearance of the surrounding area.
- The upland landscaped area will create a multi-layer screen for edge protection and visual enhancement to screen the proposed buildings from surrounding views to the south.
- To mitigate for the loss of forest trees associated with the project, a total of 135 trees would be replanted, including 86 pitch pine trees (minimum 4-5 feet height) to be planted along the western and southern edges of the proposed development. In addition, the Applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.

- The landscaping proposed for the proposed action (51.4 percent), inclusive of the Evergreen concrete retaining wall, would exceed the minimum requirement of 20 percent, pursuant to bulk and dimensional requirements within the M-II zoning district.
- The proposed Evergreen concrete retaining wall is designed to become a green wall that will blend with the landscape to soften views.
- The area surrounding the two proposed storage buildings would be screened by the proposed Evergreen concrete retaining wall and the existing forested areas to be retained on the subject property.
- The proposed design provides for greater side and rear yard setbacks than what is required (Required Side, Both Side, and Rear Yards: 25 feet, 50 feet combined, and 25 feet, respectively; Proposed: 28 feet, 77.7 feet, and 91.3 feet).

### **3.2 Human Health**

#### **3.2.1 Existing Conditions**

##### ***Toxic and Hazardous Materials Stored at SYC***

As presented in Section 2.2.1 of this DEIS and further discussed in Section 2.2.2 of this DEIS, the existing services provided by SYC to customers includes full yacht system maintenance, repair, and custom fabrication. In support of these services, SYC stores, handles, and disposes of toxic and hazardous materials such as antifouling paint, batteries, engine oil, and other chemicals on site in compliance with prevailing local, county, state, and federal requirements.

The Amended Final Scope adopted April 5, 2021 by the Planning Board requires an analysis of chemicals stored at SYC and their consistency with NYSDEC regulations. This section sets forth a general background for toxic and hazardous materials stored on-site and prevailing regulations, followed by an impact assessment in Section 3.2.2.

##### **Chemical Storage at SYC**

As indicated in Section 2.2.1 of this DEIS, SYC stores chemicals and products for boat repair, maintenance and detailing (see Table 13 in Section 2.2.1 of this DEIS).

##### **Boat Painting/Antifouling**

As part of the maintenance and repair services provided by SYC, commercial-grade aquatic antifouling paint is used on the yachts and boats. Aquatic antifouling paints are defined as “pesticide products used on vessel hulls, boat bottoms, structures and other marine surfaces to inhibit the growth of aquatic organisms.”<sup>50</sup>

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<sup>50</sup><https://www.dec.ny.gov/permits/41072.html>



### **Battery and Engine Oil Storage**

The maintenance and repair operations at SYC requires the storage of batteries and engine oil. Batteries and engine oil are stored in Building 3. As discussed in Section 1.2.6 of this DEIS, batteries and engine oil are disposed of through contract with a local company. The types and maximum quantities stored are included in Table 13 in Section 2.2.1 of this DEIS.

### **Aboveground Storage Tanks**

There are four operational AST's at SYC that service Buildings 2 through 8 and the operations within. A description of the on-site tanks follows.

1. AST Tank #6: 2,000 Gallon / Gasoline (north side of Building 3)
2. AST Tank #7: 6,000 Gallon / Diesel Fuel (north side of Building 3)
3. AST Tank #8: 275 Gallon / No. 2 Fuel Oil (Heating) (inside Building 2 on the eastern side of building)
4. AST Tank #9: 275 Gallon / No. 2 Fuel Oil (Heating) (inside Building 2 on the eastern side of building)
5. AST Tank #10 275 Gallon/ No. 2 Fuel (Heating) (inside Building 3 on the northern side of building) (not in use)

### ***Regulatory Requirements for Storage of Toxic and Hazardous Materials***

#### **SCSC Article 12 – Toxic and Hazardous Materials Storage and Handling Controls**

As presented in Section 2.2.1, SYC maintains an Article 12 Permit from SCDHS Division of Environmental Quality – Office of Pollution Control dated September 1, 2017 for the storage of the aforementioned hazardous materials in Table 13 at the subject property (see Appendix J). The permit is active through August 31, 2022. The SYC staff receives training and certification to adequately handle and operate the materials associated with the existing marina operation.

#### **NYCRR Part 325 and Environmental Conservation Law (ECL) Article 33 Pesticides**

Pursuant to NYCRR Part 325 and Environmental Conservation Law (ECL) Article 33 *Pesticides*, SYC is a registered Pesticide Business with the NYSDEC Division of Materials Management, Bureau of Pest Management as it provides commercial aquatic antifouling paint application services for yacht and boat customers. SYC received a registration certificate from the NYSDEC on February 19, 2020 certifying it as a Pesticide Business under Category 5D - Aquatic Antifouling (see Appendix M). This registration is valid through December 31, 2022.

Under §33-0922.3 a certified aquatic antifouling business must adhere to standards set forth by the NYSDEC Commissioner specific to the antifouling paint use at the intended location as well as the following additional standards:

- Employ at least one person who is a certified commercial pesticide applicator or technician certified in the application of aquatic antifouling paint or an aquatic antifouling paint applicator at each location required to be registered; or
- Have entered into a contract with another registered business that employs a person who is a certified commercial pesticide applicator or technician certified in the application of aquatic antifouling paint or an aquatic antifouling paint applicator, pursuant to which contract such registered business has agreed to apply aquatic antifouling paint at each such location for such applicant.

Pursuant to §325.18 - Certification Training Course Requirements for Commercial Technicians and Courses Designed for Recertification of Commercial and Private Applicators, personnel applying for commercial technical certification or commercial or private application recertification must complete 30 hours of equivalent training in the following concentration areas:

- Integrated pest management principles and practices;
- Label and labeling comprehension;
- Safety;
- Environment;
- Pests;
- Pesticides;
- Equipment;
- Application techniques; and
- Laws and regulations.

Pursuant to §§33-0921.4 and 33-0921.5, SYC staff responsible for handling and applying antifouling paint must maintain their certifications in three-year cycles and complete the required five hours of coursework for recertification as outlined in §33-0921.6.4 to this Part. SYC staff currently abide by this regulation.

### ***Surrounding Wells***

As presented in Section 2.2.2 of this DEIS, a numerical 3-D groundwater modeling report and assessment has been prepared by PWGC (see Appendix L). The nearby local domestic supply wells were identified, and an analysis was conducted of the potential impacts on any wellhead zone of influence, as well as on the quantity and quality of water in the aquifer system for residential water supply. Wellhead zone of influence is evaluated using particle tracking. The particle tracking analysis indicates the domestic supply wells, having relatively low pumping rates (325 gpd), are expected to have very narrow zones of influence. The model was run for post-development conditions and is discussed below in Section 3.2.2 of this DEIS.

### **3.2.2 Potential Impacts**

#### ***Proposed LPG Tanks***

Four 2,000-gallon LPG tanks are proposed to support the proposed radiant heat for the two boat storage buildings. As discussed in Section 2.2.2 of this DEIS, the LPG tanks are subject to the 2020 NYS Fire Code and the National Fire Protection Association 58 – Liquefied Petroleum Gas Code, which sets forth requirements for installation, setbacks, and protection from vehicle impact (see Southold Fire Marshal correspondence in Appendix P). The proposed fire plan would comply with these two codes. Additionally, at the recommendation of the Southold Fire Marshal, a Fire Safety Plan has been developed by SYC to provide hazard locations, utility and water supply information, and emergency procedures for its employees. A copy of this Fire Safety Plan is included in Appendix P. Furthermore, as evaluated in Section 3.9.2 of this DEIS, the proposed plan was submitted to the Mattituck Fire Department and no potential service issues were identified. As stated in the correspondence from the Chief of the department (see Appendix P), the local department is fully capable of servicing SYC with the proposed improvements.

#### ***Toxic and Hazardous Materials Stored at SYC***

##### **Chemical Storage at SYC**

The proposed action would not require SYC to modify its current quantities of chemicals stored on-site nor require additional chemicals be stored on-site.

##### **Boat Painting/Antifouling**

The proposed action would not require SYC to modify its current quantities of antifouling paint stored on-site as painting services would not be offered to customers storing yachts in Buildings 9 and 10.

##### **Battery and Engine Oil Storage**

The proposed action would not require SYC to modify its current quantities of antifouling paint stored on-site as painting services would not be offered to customers storing yachts in Buildings 9 and 10.

#### ***Regulatory Requirements for Storage of Toxic and Hazardous Materials***

##### **SCSC Article 12 – Toxic and Hazardous Materials Storage and Handling Controls**

As the proposed action includes the seasonal storage of yachts, modifying the quantity and type of chemicals stored at SYC is not anticipated. The current Article 12 permit issued by SCDHS on September 1, 2017 would not be adjusted. SYC would maintain its current Article 12 permit and recertify in August 2022 when the existing permit expires.

### **NYCRR Part 325 and Environmental Conservation Law (ECL) Article 33 Pesticides**

SYC would continue to maintain its Pesticide Business certification under Category 5D – Aquatic Antifouling to support the existing and future maintenance and repairs of yachts and boats of clients as aquatic antifouling paint would continue to be used. SYC staff responsible for handling and applying antifouling paint would maintain their certifications pursuant to this Part. The storage, application, and disposal of aquatic antifouling paint under the proposed action would be consistent with the prevailing requirements of the certification.

Overall, the proposed action would not introduce new or additional volumes of toxic and hazardous materials at the subject property

### ***Impacts to Surrounding Wells***

As discussed in Section 2.2.2 of this DEIS, with the projected increase in stormwater recharge, the proposed action would result in a slight increase in the water table of 0.01 feet immediately beneath the Project Area. The model shows no particle deflections or trajectory changes, and thus, no effects on nearby wells are anticipated. Additionally, the particle tracking analysis completed in the Groundwater Modeling Report (see Appendix L) indicated the domestic supply wells, having relatively low pumping rates (325 gpd) have, as expected, very narrow zones of influence. When comparing existing to post-development conditions, there are no noticeable changes in particle track trajectories. This is due to the fact that the proposed site excavation would take place entirely above the water table and the proposed site modifications are only slightly adding more water to the local aquifer system due to the increased recharge post construction. As such, the proposed site excavation would not have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence. Therefore, the proposed action would not have an adverse impact on groundwater quantity nor the surrounding local domestic supply wells.

### **3.2.3 Proposed Mitigation**

The following measures have been incorporated into the proposed action such that there would be no significant adverse impacts to human health:

- The setbacks for the LPG tanks would be compliant with the 2020 NYS Fire Code and the National Fire Protection Association 59 – Liquefied Petroleum Gas Code and would be surrounded by concrete retaining walls.
- SYC would continue to ensure certified staff implement appropriate handling and storage protocol for chemicals stored on site consistent with the Article 12 permit and Pesticide Business under Category 5D - Aquatic Antifouling requirements.
- A Fire Safety Plan has been developed by SYC, which provides hazard locations, utility and water supply information, and emergency procedures for its employees.

### **3.3 Transportation**

#### **3.3.1 Existing Conditions**

##### ***Introduction***

The transportation analyses presented in Section 3.3 of this DEIS is a summary of the TIS prepared by Dunn Engineering Associates, last revised October 2022. The revised TIS updates accident data to the latest three-year period ending on December 31, 2021, revises the project completion Build analysis to summer 2025, revises the construction Build analysis to spring 2024 and summer 2024, and provides additional information and analyses as requested by the Town of Southold and its consultants in correspondence dated May 9, 2022 and May 6, 2022, respectively. Also, an alternative routing plan for the excavation phase has been presented and evaluated, as well as an alternative material mitigation plan to reduce a percentage of off-site material removal. Both of these alternatives are discussed in Section 5.0 of this DEIS. The TIS can be found in its entirety in Appendix O of this DEIS.

##### **Location**

The SYC site is located on the west side of Mattituck Inlet at the eastern terminus of West Mill Road. The site is bounded on the east by the Mattituck Inlet and west and north by West Mill Road and private properties. On the south the site is bounded by Town of Southold Parkland and private properties. Currently, the site has no access to the adjacent highway system other than from eastern terminus of West Mill Road. The site is located within the hamlet of Mattituck, Town of Southold, New York. Figure 3 (Site Map) in the TIS illustrates the boundaries of the property and the adjacent roadway network.

##### **Methodology**

As part of the preparation of this TIS, the following tasks were undertaken:

- Several personal, on-site field observations were made to observe the traffic movements under various conditions.
- Collection and analysis of current existing traffic data, including traffic volumes and signal timings, as available from the Town of Southold, the Suffolk County Department of Public Works, and the New York State Department of Transportation (NYSDOT).
- Automatic Traffic Recorder (ATR) Counts at key locations on West Mill Road, Cox Neck Road and North Road (CR 48). At the request of the Town of Southold Planning Board the ATRs were conducted during the individual seasons of the year. The ATRs also included vehicle classification studies. The counts were collected over a seven -day period to include Saturday and Sunday data.
- Supplementary intersection turning movement counts were collected at two key intersections to determine intersection capacity. The turning movement counts were collected during the weekday morning peak hours of 7:00 am to 9:00 am and pm peak hours of 4:00 pm to 6:00 pm. The intersection turning movement counts also collected data on pedestrian traffic in the

- intersection and truck and bus data also. As with the ATRs the turning movement counts were collected seasonally. Intersection turning movement counts were collected at the intersections of:
- a) Cox Neck Road at West Mill Road/Breakwater Road
  - b) North Road (CR 48) at Cox Neck Road
  - c) Eastbound North Road (CR 48) at Northbound North Road
  - d) West Mill Road at Bayview Avenue/Selah Lane
- An examination was made of the traffic flow on West Mill Road, Cox Neck Road and North Road (CR 48) in the vicinity of the site.
  - Recent accident records obtained from NYSDOT were reviewed to determine if any accident problems exist in the vicinity of the site.
  - A trip generation analysis was performed to determine the additional traffic attributable to the proposed project once complete and fully operational. In addition, a trip generation analysis was also performed to determine the additional traffic that would be generated due to the construction of the new storage buildings with particular emphasis on the numbers of trucks need to facilitate the project.
  - A directional distribution analysis was performed to distribute both the completed project related site-generated traffic and the construction related traffic onto the surrounding street network.
  - A trip assignment analysis was performed determine traffic volumes that would result from the increase of site-generated traffic related to the completed project being added to existing traffic to determine the impact of the proposed development on the surrounding street system. A trip assignment analysis was also performed to examine the addition of site-generated construction traffic to existing traffic to determine the impact of the proposed development on the surrounding street system
  - Capacity analyses were performed at key study intersections as listed in Item 4 above, to examine their ability to accommodate both the existing traffic volume and the additional site-generated traffic once the project is complete and the construction related traffic while the project is being developed.
  - A review of the access arrangements was made. The review include access during construction and once the project is complete
  - An evaluation of the available parking and on-site circulation was made regarding traffic circulation, safety, maintenance, and adequacy of layout.
  - Conclusions were made regarding the traffic impact of the development on the surrounding street network based on the data and facts gathered in the TIS.
  - As a result of comments received from the Town and its consultants, additional data was collected during August of 2022. This data included:

- Intersection turning movement counts at the intersections of Cox Neck Road at Bergen Avenue, and Sound Avenue at Bergen Avenue for the evaluation of an alternative routing plan for the excavation phase of the proposed project.
  - Pedestrian and bicycle counts were taken from 6:00 AM to 6:00 PM during a weekday on Cox Neck Road at Westphalia Road, West Mill Road at Bayview Drive/Selah Lane, Cox Neck Road/West Mill Road at Breakwater Road, and Bergen Avenue at Cooper's Road.
  - ATR counts were taken at the northerly terminus of West Mill Road at the entrance/exit to Strong's Yacht Center and on Bergen Avenue between Sound Avenue and Cox Neck Road.
  - Accident Records were updated to include all of 2021 from the NYSDOT. The accident request was made for the latest three-year period ending December 31, 2021. Accident records were also requested and received from the Town of Southold Police Department.
- An AUTO-TURN analysis was conducted to determine the viability of the proposed trucking route accommodate trucks that will haul material from the site to facilitate the building of the project. AUTO-TURN analysis was conducted at the following locations.
    - The 90-degree turn in West Mill Road near the Strong's entrance.
    - The S-curve along West Mill Road/Cox Neck Road near Breakwater Road.
    - Turning movements at Sound Avenue at Cox Neck Road.
    - Turning movements at Sound Avenue at Northville Turnpike.
    - Turning movements at Northville Turnpike at County Road 58
    - Turning movements at Sound Avenue at Bergen Avenue.
    - Turning movements at Cox Neck Road at Bergen Avenue.
  - An alternative routing plan, alternative material mitigation plan and the barging alternative have been evaluated (see Section 5.0 of this DEIS).
  - The pavement analysis, which included ESAL calculations, as prepared by TSPE was evaluated.
  - The vibration analysis performed by SoundSense has been reviewed and summarized.

### **Existing Roadway Network**

#### **Roadway Characteristics**

As shown in Figure 3 (Site Map) in the TIS, SYC is located at the easterly terminus of West Mill Road. West Mill Road to the south and west becomes Cox Neck Road in the vicinity of Breakwater Road and continues south until its intersection with Sound Avenue and North Road (County Road 48). According to the NYSDOT Highway Classification Map, Cox Neck Road/West Mill Road is classified as a "Minor Arterial."

Cox Neck Road, at its southerly terminus, intersects Sound Avenue and North Road. Sound Avenue is an east/west Town of Southold roadway. Sound Avenue begins in the Town of Riverhead at New York State Route 25A and runs easterly until it intersects Route 25 in Mattituck east of the project site. The

southerly leg of Sound Avenue from its intersection with Cox Neck Road runs southeast to intersect with New York State Route 25. East of Cox Neck Road is North Road (CR 48) a four-lane divided highway. North Road (CR 48), to the east of Cox Neck Road, and Sound Avenue, west of Cox Neck Road, are classified as “Principal Arterial (other).” Sound Avenue/North Road are also designated as part of the National Highway System and Federal Aid Primary System.

New York State Route 25 is a two-lane east/west State roadway which parallels Sound Avenue/North Road. Route 25 begins in New York City and terminates at Orient Point at the eastern tip of the Town of Southold. Route 25 is designated as “Minor Arterial” within the Town of Southold except that portion east of Greenport. Route 25, except east of Greenport is also not designated as part of the National Highway System nor as part of the Federal Aid Primary System.

Sound Avenue and North Road (County 48) and Route 25 are the principal roadways serving the North Fork of Long Island and the Town of Southold in particular. After its intersection with North Road at Cox Neck Road and North Road (CR 48) Sound Avenue continues southeast to connect to Route 25. Once SYC traffic reaches the intersection of Cox Neck Road with Sound Avenue/North Road its traffic can readily be distributed by the traffic signal at its intersection with Sound Avenue and North Road in all directions onto the primary east /west roadways.

Cox Neck Road/West Mill Road between North Road and SYC is a two-lane road with one lane in each direction. The roadway is under the jurisdiction of the Town of Southold. Except for the commercial properties adjacent to North Road and Sound Avenue on the south, and SYC and the Mattituck Commercial Dock at its northerly terminus, the roadway is lined with rural residential and farming land uses. Twelve commercial fishing boats and the Celtic Quest Party Boat operate from the commercial docks north of Strong's, whose only access is via West Mill Road. In addition to the commercial dock and SYC there is the former Old Mill Restaurant, which is currently vacant but under the process of being renovated for reopening

Several residential subdivision roadways feed into Cox Neck Road. Breakwater Road intersects the roadway midway between North Road and Mattituck Creek and serves a large residential subdivision to the west and north. It also serves as access for the Mattituck Park District at the end of Breakwater Road and the Mattituck Creek Waterway Access off Naugles Drive.

Cox Neck Road/West Mill Road is marked with a double barrier line separating opposing directions of traffic. A 35-mph speed limit is posted along the length of the combined roadway. The roadway varies in width. It is widest as it approaches North Road at 32± feet and then narrowing to generally 26 to 27 feet. Smaller portions narrow to 24± feet and east of Naugles Drive the roadway becomes 22± feet wide. Other than the speed limit signing there is little traffic control signing along Cox's Neck Road/West Mill Road.

Much of the Cox Neck Road/West Mill Road is slightly rolling but there are two areas of significant curves. The first is just north of Bergen Avenue where, going north, the roadway curves sharply to the east turning about 90° and then turns less sharply to the north. Within the curves the road drops to the area between the curves just west of Breakwater Road and then rises in the second curve to peak north of Jackson Landing and the end of the curved section. No warning signs are posted for either north



bound south bound traffic. On the westerly side of the southern curve guide rail has been placed to prevent vehicles from leaving the road. The guide rail is substandard and not properly anchored on the ends. We question whether the two curves should be posted with curve warning signs indicating the “S” curvature of the road and the use of additional chevron signing along the back of both curves.

North of the two curves the roadway straightens out and continues north in a relatively straight line on gently rolling terrain. West and south of Naugle’s Drive the roadway turns fairly sharply to the east. Curve warning signs were posted for northbound traffic approaching the curve and for southbound traffic approaching the same curve. The southbound signs seem to be placed too close to the curve and chevron warning signs along the back of the curve would be useful. To the east of Naugle’s Drive West Mill Road turns to the south and drops vertically. There is a curve warning sign posted for eastbound traffic and an additional sign stating, “SLOW POPULATED AREA”. That sign is posted behind a utility pole and not readily visible.

**Signalized Intersections**

In the vicinity of the site, the following are the significant signalized intersections:

- Sound Avenue/North Road (CR 48) at Cox Neck Road
- North Road (CR 48) at Northwest bound Sound Avenue

The lane configurations at the signalized intersection approaches of Sound Avenue/North Road (CR 48) at Cox Neck Road consist of the following:

1. Eastbound Sound Avenue: A left turn lane, a thru lane and a right turn lane.
2. Westbound North Road (CR 48): A left turn lane, a thru lane and a channelized right turn lane.
3. Southbound Cox Neck Road: A combined left/thru lane and a channelized right turn lane.

The lane configurations at the signalized intersection approaches of North Road (CR 48) at Cox Neck Road consist of the following:

1. Eastbound North Road (CR 48): A thru lane.
2. Northbound Sound Avenue: A left turn lane and a channelized right turn lane.

It is noted that the two signalized intersections are operated by the same traffic signal controller, and thus, function as one signalized intersection.

**Unsignalized Intersections**

In the vicinity of the site, the following are the significant unsignalized intersections:

- West Mill Road at Bayview Avenue/Selah Lane
- Cox Neck Road/West Mill Road at Breakwater Road

It is noted that, for the alternative routing plan, the following additional intersections were evaluated:

- Cox Neck Road at Bergen Avenue
- Sound Avenue at Bergen Avenue

The lane configurations at the unsignalized intersection approaches of West Mill Road at Bayview Avenue/Selah Lane consist of the following:

1. Southbound West Mill Road: A combined left/thru/right lane.
2. Northbound West Mill Road: A combined left/thru/right lane.
3. Eastbound Selah Lane: A combined left/thru/right lane.
4. Westbound Bayview Avenue: A combined left/thru/right lane.

The lane configurations at the unsignalized intersection approaches of Cox Neck Road/West Mill Road at Breakwater Road consist of the following:

1. Eastbound Cox Neck Road: A combined thru/right lane.
2. Westbound West Mill Road: A combined left/thru lane.
3. Southbound Breakwater Road: A combined left/right lane

The lane configurations at the unsignalized intersection approaches of Cox Neck Road at Bergen Avenue consist of the following:

1. Southbound Cox Neck Road: A combined thru/right lane.
2. Northbound Cox Neck Road: A combined left/thru lane.
3. Eastbound Bergen Avenue: A combined left/right lane

The lane configurations at the unsignalized intersection approaches of Sound Avenue at Bergen Road consist of the following:

1. Eastbound Sound Avenue: A combined thru/right lane.
2. Westbound Sound Avenue: A combined left/thru lane.

3. Southbound Bergen Avenue: A combined left/right lane

### **Existing Traffic Flow Conditions**

#### **Traffic Volumes**

##### *Agency Counts Data*

Traffic volume counts were available for Cox Neck Road on the NYSDOT Traffic Data Viewer website (<http://gis.dot.ny.gov/tdv>). The counts were collected in June of 2020, 92 feet south of Rosewood Road and the segment of road had an Annual Average Daily Traffic (AADT) of 2,963 vehicles per day. The average weekday peak hour of traffic occurred between 5:00 pm and 6:00 pm with a combined volume of 264 vehicles per hour. The combined volume varied between 215 and 264 vehicles per hour from 11:00 am to 7:00 pm. Southbound traffic was higher in the morning and early afternoon than northbound until 1:00 pm and then the trend reversed with more traffic northbound than southbound after that.

Traffic count data was also available for Breakwater Road which feeds a considerable amount of traffic into Cox Neck Road/West Mill Road. The count was taken in August 2015, 630 feet south of Stanley Road and recorded an AADT of 1,447 vehicles per day and indicates that Breakwater Road feeds approximately half of the traffic appearing on Cox Neck Road to the south. The count location on Breakwater Road also included a speed study. The study indicated that vehicles operating on Breakwater Road at the survey site had an 85-percentile speed of between 42.9 and 43.9 mph while the posted speed limit was 30 mph. At the survey location Breakwater Road is relatively straight and flat as are much of Cox Neck Road and West Mill Road and it can be anticipated that speeds of this road would be similar to those on Breakwater Road except in the areas of the curves where horizontal and vertical geometric features will suppress speed.

In addition to the volume counts noted the State operates a permanent count station on Route 25 east of Aldrich Lane in the hamlet of Laurel. The permanent count station generates traffic volume trend data for Route 25 in the Town of Southold and Riverhead east of the Riverhead business district. The latest available data from the count station dates to 2013. It shows that the highest volumes occur in July and August. The highest daily traffic occurs on Friday with Saturday and Thursday being close seconds. The counts indicated little traffic growth between 2004 and 2013. The data from the permanent count station is included in the Appendix of this report in the section entitled, "Agency Traffic Data."

Additional historic data has been incorporated into the TIS to cover Sound Avenue between Cox Neck Road and Northville Turnpike, Northville Turnpike between Sound Avenue and Old Country Road (CR 43), and Old Country Road (CR 58), between the Long Island Expressway and Northville Turnpike. The data was received from the NYSDOT and included weekday ATR volume and classification counts. The additional data is included in the Supplemental Data Appendix of the TIS.

It should be noted that the above AADT and the traffic volume count data were not utilized for analysis purposes but were used to define peak periods of highway traffic and are presented for informational purposes.

*Project Count Data*

As requested by the Amended Final Scope additional counts were collected for the project. As the Amended Final Scope requested, traffic data was collected in each of the four seasons of the year. The ATR counts were collected on West Mill Road north of Bayview Avenue, on Cox Neck Road north of Westphalia Road, on Sound Avenue west of Cox Neck Road and on North Road (CR 48) east of Cox Neck Road. The ATR data collection also included a vehicle classification study at each location. It is noted that additional ATR's were collected on West Mill Road east of Naugles Drive and on Bergen Avenue during August 2022.

To obtain specific turning count information for existing traffic during the peak hours of the proposed development, manual turning movement counts were collected at the following four locations:

- Sound Avenue/North Road (CR 48) at Cox Neck Road
- North Road (CR 48) at Northwest bound Sound Avenue
- West Mill Road at Bayview Avenue/Selah Lane
- Cox Neck Road/West Mill Road at Breakwater Road

The turning traffic counts at the locations were collected on several during the winter of 2021, spring of 2021, the summer of 2021 and the fall of 2021. The counts were collected during a typical weekday AM peak period from 7:00 am to 9:00 am, a typical weekday pm peak period of 4:00 pm. to 6:00 pm, and a Saturday peak period of 11:00 am. to 2:00 pm. Additional turning movement counts were taken in August 2022 at the intersections of Cox Neck Road at Bergen Avenue and Sound Avenue at Bergen Avenue during the same data collection periods.

Figure 4 (2021 Existing Traffic Counts) in the TIS illustrates the locations of the counts collected for this Study.

As indicated above, the Amended Final Scope required traffic data be collected during the “four seasons of the year.” Initial data collection was taken in March of 2021 to cover the winter data set. This included the ATR's as described above and turning movement counts at the two signalized intersections of North Road (CR 48) with Sound Avenue and Cox Neck Road. Following additional Amended Final Scope clarification two additional turning movement counts were added to the data collection effort. Those intersection turning movement counts were at West Mill Road at Bayview Avenue/Selah Lane and Cox Neck Road/West Mill Road at Breakwater Road.

Figure 5 (Weekday Average Hourly Volume – Seasonal Comparison, County Road 48) in the TIS shows the variation of hourly traffic count data on Sound Avenue/North Road (CR 48) from season to season. The pattern from season to season is as expected with the highest volumes during the summer and the lowest in the winter; with the fall and spring being in between. Figures 6 and 7 in the TIS shows similar information for Cox Neck Road and West Mill Road. While the summer counts are demonstrably higher

than the winter counts with the spring and fall counts being roughly in between, there is considerably more variation in the count data. This is likely to happen where the count volume is low, and small increases or decreases in traffic dramatically affect the trends. When reviewing Figures 5, 6, and 7, note that the smoothness of the graph and traffic data supporting it is far more even on the higher volume Sound Avenue/North Road, then on the lower volume Cox Neck Road and then the lowest volume West Mill Road.

Additional traffic volume data plots for Saturday and for Sunday at all three count locations, Sound Avenue, Cox Neck Road, and West Mill Road, are provided in the Supplemental Data Appendix of the TIS. Based on the data, the winter counts showed the lowest volumes and the summer the highest on both days. The spring volumes were higher than the fall volumes. The volume plots for all three locations on Saturday and Sunday show considerable variation. The volume trends indicate a rise beginning between 6:00 AM and 7:00 AM rising throughout the morning and generally peaking in midday. Volumes remain high through the afternoon but taper more gradually into the evening.

Plots of the weekday directional volumes at the three count locations indicate that Sound Avenue/North Road experiences traffic flows that are often typical of roadways with significant commuter and worker traffic. The predominant traffic flow is east bound during the morning peak hour and west bound in the evening peak hours. Peak hour flows on Saturday afternoons are higher than the weekday AM and PM peak hours of traffic. The counts taken on Cox Neck Road and West Mill Road did not exhibit the weekday AM and PM peak hours typical of commuter routes. The volumes of traffic on Cox Neck Road were higher during the Saturday afternoon peak hour than during the weekday peaks but were less so on West Mill Road. This was consistent through all seasons. Graphs which show the seasonal variation of traffic on Sound Avenue, Cox Neck Road and West Mill Road for Saturday and Sunday are provided in the Supplemental Data Appendix of the TIS.

As can be expected, the seasonal data indicated that there were significantly lower traffic volumes during the winter period than during the spring and fall, with the highest volumes being recorded during the summer period. There was also considerable difference in the volume of traffic found on Sound Avenue/North Road as opposed to Cox Neck Road and West Mill Road. During the summer studies, Sound Avenue experienced volumes in the range of 16,000 vehicles per day during the weekdays to 20,000 vehicles on a summer Saturday. On Cox Neck Road, weekday volumes were as low as 2,600 vehicles per day to a high of 3,340 vehicles on a summer Saturday. Finally, on West Mill Road, volumes were 500 or slightly lower vehicles per day throughout the week. The volume counts conducted during the other seasons followed a similar profile although lower, with the lowest volumes being found during the winter months.

#### *Vehicle Classification Data*

The vehicle classification counts indicated that heavy vehicles (trucks) as a percentage of the traffic observed exceeded 5 percent of the traffic on Sound Avenue/North Road during the summer, increasing to over 6 percent in the spring and fall, and dropping to between 4 and 5 percent during the winter months. Buses represented approximately one percent of traffic on the road during all seasons.

During the weekdays in the non-summer seasons, buses (most likely school buses) also represented one percent of the traffic on Cox Neck Road and West Mill Road. During the weekend, buses were

generally not present on these roads. The presence of trucks on Cox Neck Road was noted with between 3.6 and 9.4 percent on weekdays, varying seasonally. During the winter, the percentage of trucks reduced to approximately 3.6 percent. Truck usage of West Mill Road was varied from 1.5 to 7.9 percent for the four seasons, also varying seasonally. During the winter the percentage of trucks reduced to 1.5 percent weekdays and less than 2 percent on weekends during the summer. During the winter, , truck usage of West Mill Road was one percent or less during weekdays and weekends. The analysis of the classification data from West Mill Road also indicated that the trucks using the road were smaller than those using Cox Neck Road and Sound Avenue/North Road.

The traffic volume counts were collected in both 2021 and 2022 and this report is being submitted in 2022. Traffic volume data has been summarized for presentation. The 2021 data was grown by 1 percent to simulate 2022 volumes and the August 2022 data was adjusted seasonally by a factor provided by NYSDOT to replicate Spring data in addition to summer data. Figure 8 (2022 Existing Spring Traffic Volumes) in the TIS summarizes the spring 2022 traffic volume counts for the weekday AM and PM peak hours and Saturday peak hours of traffic. Figure 9 (2022 Existing Summer Traffic Volumes) in the TIS summarizes the Summer 2022 traffic volume counts for the weekday AM and PM peak hours and Saturday peak hours of traffic. Similar summarized traffic volume data may be found in the Appendix of this study for the winter 2022 and fall 2022 data collection efforts.

In addition to the ATRs and vehicular volume counts pedestrian and bicycle counts were taken in August of 2022 along Cox Neck Road and West Mill Road. The counts were taken between 6:00 AM and 6:00 PM on a weekday. The counts were done on Cox Neck Road at Westphalia Road, at Cox Neck Road/West Mill Road near Breakwater Road, and West Mill Road at Bayview Avenue/Selah Lane.

The detailed 2021 traffic volume counts, and vehicle classification studies is included in the TIS Appendix entitled, "2021 Traffic Data". Traffic volume counts, pedestrian and bicycle counts, and vehicle classification counts collected in August 2022 can be found in the Supplemental Data Appendix of the TIS.

### **Parking and Site Circulation**

On-site parking is provided throughout the site with eight (8) paved stalls to the north of Building 2, and 13 paved stalls to the east side of Building 3. The number of parking provided at the subject property is non-conforming with the requirements set forth in §§280-78 and 280-79 of the Town of Southold Town Code. Site circulation currently goes from the entrance at West Mill Road and extends south towards Building 8. Vehicles are able to travel both north and south to access the portions of the site.

### **Accident History**

Accident data was requested from the NYSDOT for all accidents that occurred along Cox Neck Road/West Mill Road from its intersection with Sound Avenue/North Road (CR 48) to its terminus at Mattituck Creek and SYC. Accident data for the period January 1, 2017, to June 30, 2020, was provided by NYSDOT. The Accident Verbal Descriptions are provided in the Appendix of the TIS in Appendix O

of this DEIS. Additional data was obtained from NYSDOT in July 2022 to supplement and expand the accident analysis to cover the period from January 1, 2017, to December 31, 2021, a full 60-month period. The additional accident data is provided in the Supplemental Data Appendix of the TIS. In addition to the accident data available from NYSDOT, accident data was obtained from the Southold Town Police for the period January 1, 2018, to December 31, 2021, a period of three years. The accident data obtained from the Police was largely duplicative of the data originally obtained from NYSDOT. The Town Police Accident records are included in the Supplemental Data Appendix of the TIS.

During the 60-month period, a total of 48 accidents occurred. Only eight (8) of the 48 accidents resulted in injuries, and none were fatal. Thirty-two (32) were property damage only and an additional eight (8) accidents were classified as non-reportable, meaning that the value of the property damage was less than one thousand dollars.

Twenty-eight (38) of the accidents were associated with the intersection of Cox Neck Road at Sound Avenue/North Road, with 23 accidents involving rear end accidents; most of those were associated with traffic moving east/west on Sound Avenue/North Road. Five of the rear end accidents were associated with the Yield signs controlling the channelized right turn lanes at the intersection. The rate of accidents occurring at the intersection is not atypical for an intersection with similar volumes.

As noted by NYSDOT, 10 accidents occurred on Cox Neck Road/West Mill Road in the 60-month period. Further details of these 10 accidents are included in the TIS.

The detailed accident data received from the NYSDOT is provided in the TIS Appendix entitled, "Accident Data." The additional data received is included in the Supplemental Data Appendix of the TIS.

### **Planned Roadway Improvements**

To determine whether there are any plans for improvements to the roadways in the study area, the latest available Nassau – Suffolk Transportation Improvement Program (TIP) was reviewed. The review revealed no projects involving the reconstruction and improvement of roadways serving SYC prior to its expected completion. Information obtained from the Town of Southold Highway Department indicated that a segment of Cox Neck Road from just north of Sound Avenue/North Road to Bergen Avenue would be resurfaced with 1-1/2 inches of Type 6 asphalt. This project has been delayed as the Town has determined that drainage work needs to be done prior to the resurfacing. The Town Highway Department has also indicated that resurfacing should be delayed until it is determined how the SYC project will be conducted, with preference to performing the resurfacing after the SYC work is complete.

### **Other Planned Developments**

To properly conduct the TIS, it is necessary to examine the cumulative effects of this project as well as other planned developments in the area. To this end, any other developments approved and planned to be constructed before 2023 (this project's Build year) which may impact traffic conditions in the

area were identified. The Town of Southold was contacted, and a representative of the Planning Department indicated that there were no currently planned projects within the area of the proposed development that would generate significant enough traffic to impact conditions at the Study intersections.

### **3.3.2 Potential Impacts**

#### ***2025 No Build Traffic Volumes***

In order to develop a basis to gauge potential impacts of the proposed traffic on the surrounding roadway network, the 2021 volumes were grown to replicate conditions in 2025 when the project is expected to be complete. The background traffic growth of traffic, as identified by the NYSDOT Data Services Bureau, was added to the 2022 Existing volumes. The anticipated background growth of traffic, as per NYSDOT, is 1.00 percent per year in the Mattituck area. The Town of Southold Planning Department was also consulted to determine if there were any other significant planned projects that would add traffic to the area roadways prior to the completion of the proposed action. No other significant projects were identified. Following this methodology, the 2025 No Build Volumes were generated.

Figure 10 (2025 No Build Summer Traffic Volumes) in the TIS presents the summer 2025 No Build traffic volume counts for the weekday AM and PM peak hours and Saturday peak hours of traffic.

#### ***Site Trip Generation Analysis***

SYC is an existing facility and the existing traffic being generated is already being accommodated on the existing road system. The proposed project would add two storage buildings and other minor modifications that facilitate the use of the new storage space and would upgrade the infrastructure on-site, such as new sanitary systems and public water supply. Other than the new activity generated by the availability of the new storage space, the other site enhancements would not generate additional traffic.

Typically, estimates of traffic a proposed project will generate are developed utilizing the Institute of Transportation Engineer's (ITE) report "Trip Generation" (10<sup>th</sup> edition). The reference contains studies of various potential land uses the numbers of daily and hourly trips those land uses may generate. The data is provided is based on rates of generation, the size of buildings, units of usage (homes, apartments, rooms, beds, etc.) or employees. The "Trip Generation" report contains Land Use Code 420, Marina. The traffic generation rate is based on the number of berths the marina provides. There are no studies based on building sizes or numbers of employees at the facility. SYC currently has 40 berths and will still have only 40 berths upon completion of the project. Based on ITE data there would be no change in traffic generation due to the project.

However, the proposed two new storage buildings at SYC will create some new traffic. SYC anticipates that up to 11 new permanent positions at the subject property associated with the two new buildings. There are currently 17 full-time staff at SYC, and upon implementation of the proposed action, the Applicant expects to create an additional 11 positions to reach a total of 28 employees. There is



currently variation in the number of employees on-site during the week with 17 on-site Monday thru Friday year-round. During the season, 12 are typically on-site on Saturday and 4 on Sunday. Off season there are typically 4 on-site on Saturday and the facility is closed on Sunday in the winter or possibly one staff member during the time period between the peak and off-peak season. This activity is all existing currently. The counts collected for the project already have these employees accounted for, as is all the activity of the existing marina.

As indicated above in this Section of the DEIS, 11 new employees would be added at the site in the future following the construction of the new storage buildings. The additional personnel would accommodate the increased business generated by the presence of the additional yachts wintering at the SYC, including pulling and launching the vessels, prepping them for storage, and performing repairs and regular maintenance. The new employees that would be used to service boats destined for new storage building will primarily work during the weekday. The arrival and departure of these new employees to and from the marina would be the only additional traffic the proposed project would generate once complete and operating.

The actual presence of the stored vessels creates little new traffic except the random drop-off and pickup of a stored vessel by an owner or the owner's crew. However, SYC maintains a schedule for all incoming and outgoing vessels, thus, the arrival of a crew in delivering a vessel or removing a vessel post-development would also be controlled by SYC. This increase in activity would not be noticeable. The only real increase in traffic would come from the 11 new employees that are expected to be brought on to accommodate the additional work that storing the yachts would create. It is assumed that all 11 new employees would work weekday business hours and as such, they are likely to create 11 entering trips in the morning and 11 exiting trips in the evening. This is a small number of additional trips and would have negligible traffic impact on Cox Neck Road/West Mill Road.

Table 32 below, as excerpted from Table 2 - Site Generated Traffic in the TIS provides the number of trips the existing site is currently generating based on the ITE Trip Generation Manual. "Trip Generation" (10<sup>th</sup> edition), is a nationally excepted standard for predicting the trip generating characteristics of typical land uses. It is based on thousands of studies of existing land uses and the amount traffic each land use generates. As indicated above, "Marina" is a land use included in the reference manual and statistics are provided to predict how much traffic would be generated. The marina use utilizes the number of berths the marina has, to predict amount of traffic a 40-berth marina would typically generate. The table below also indicates the number of trips the new employees would create during the weekday AM and PM peak hours and Saturday peak hours of traffic. The new employees would all be scheduled to work during a normal weekday, arriving in the morning and departing in the evening. New employees would not work on Saturday and would not generate additional traffic.

The traffic associated with the current marina operation already exists on the study roadways and the project traffic counts already account for this traffic. To determine the traffic impact of the completed project, it is necessary to focus on the additional traffic the project would add, that would result from hiring 11 new employees. When using employees as a basis of trip generation based on ITE methodology (such as with an office use), the trips generated are generally less than the total employees at the site. Some employees come in early, some come in late, some may not come in that day, or some may be in the field to pick-up a boat. However, to take the most conservative approach to the analysis, it has been assumed that all 11 employees enter the site in the during the AM peak hour

and depart during the PM peak hour. It is further assumed that 2 of those employees are either dropped off or leave the site during the same time period.

**Table 32 – Site Generated Trips**

<i>Use</i>	<i>Vehicle Trips per Hour</i>					
	<b>Weekday A.M. Peak Hour</b>		<b>Weekday P.M. Peak Hour</b>		<b>Saturday Peak Hour</b>	
	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>
Existing Marina with 40 slips (Land Use Code 420)	3	2	6	3	4	5
New Employee Trips (11 New Employees)	11	2	2	11	0	0
<b>Total</b>	<b>14</b>	<b>4</b>	<b>8</b>	<b>14</b>	<b>4</b>	<b>5</b>

Based on the TIS, new trips that the proposed project will generate will largely come from incoming and outgoing of the new employees. While the new business of storing vessels will generate additional equipment and materials being brought to the site, most of these deliveries will use vendors already making deliveries to the site. Vendors such as UPS, the US Post Office, Amazon, and several marine suppliers already deliver parts and materials to the site. The same vehicles that are now making deliveries will just carry additional parts or greater volumes of product but make the same number of trips. The new business may generate some new deliveries, but these would only be expected to be one-to-two per week. It should also be noted that deliveries currently being made to the site are generally occurring between the weekday AM and PM peak hours.

Regarding traffic for boats stored on-site, SYC will maintain a schedule for vessels coming in and out of storage, thus, the arrival of a crew in delivering a vessel to SYC or removing a vessel is controlled by SYC. As indicated in the Boat (Vessel) Study, approximately one-to-two boats per day are anticipated for the fall and spring season, with approximately 90 percent of the yachts being handled by SYC staff or for-hire captains and the remaining 10 percent being owner-operated (i.e., the yacht owner drives the vessel). As such, the trips associated with such would not be noticeable.

As evaluated in the TIS, automatic Traffic Recorder Counts and Vehicle Classification Counts were taken in August 2022 on West Mill Road, 100 feet east of Naugles Drive. The count captured all of the traffic entering and exiting SYC. Due to location of the count, it also captured traffic destined for the Mattituck Commercial Dock on the Mattituck Inlet that serves commercial fishing vessels and a single-family home with access onto West Mill Road. The following was counted, as excerpted from Table 1 in the TIS:

<b>Vehicle Trips per Hour (West Mill Road, 100 feet east of Naugles Drive)</b>					
<b>Weekday A.M. Peak Hour</b>		<b>Weekday P.M. Peak Hour</b>		<b>Saturday Peak Hour</b>	
<b>E/B</b>	<b>W/B</b>	<b>E/B</b>	<b>W/B</b>	<b>E/B</b>	<b>W/B</b>
17	4	7	21	12	14

Based on the above data, the existing SYC may generate more traffic than a typical marina due to the fact that there are other services on-site, including sales of new and used boats and repair/maintenance of boats, as well as the type of boats serviced/docked. The SYC services larger vessels and services other vessels which arrive by water. The existing staff of 17 serves the marina as well as the other services. As a result, the weekday AM, and PM peak hour site generated traffic appears to be more driven by arrival and departure of the existing staff. While the existing traffic generated by may be higher than ITE predictions, it is existing traffic already on the roadways and part of the No Build Condition.

***Directional Distribution Analysis***

To determine the origins and destinations of new vehicles entering and exiting the proposed development, a directional distribution analysis was performed. The additional traffic that would be generated would consist of arrival and departure of new employees. As such, the trip distribution analysis examined the traffic flow along Sound Avenue/North Road during the AM weekday peak hour.

Figure 11 (Site-Generated Traffic Distribution) in the TIS presents the directional distribution of traffic that is expected to arrive at and depart from the proposed development via the existing roadways.

***Traffic Assignment Analysis***

The site-generated traffic estimates and the directional distribution were utilized to assign the expected generated traffic volumes at the proposed shared common access driveway and on the surrounding roadway network.

Figure 12 (Site-Generated Traffic at Completion) in the TIS shows the site-generated traffic for the proposed project during the weekday morning peak hour, and the weekday PM peak hour, and Saturday peak hour of highway traffic using the directional distribution for the new site generated traffic. No assignment of traffic is provided for the Saturday Peak Hour as new traffic is expected to be generated by the completed project.

Figure 13 in the TIS illustrates the Site Generated Traffic (as presented in Figure 12) was added to the 2025 No Build Summer Traffic as presented in Figure 11 in the TIS to create the 2025 Build Summer Traffic Volumes with the completion of the project.

### ***Intersection Capacity Analyses***

#### **Signalized Intersections**

Signalized intersection capacity analyses were performed to determine the ability of vehicles to safely negotiate turning movements at the key signalized location noted below:

- Sound Avenue/North Road (CR 48) at Cox Neck Road
- North Road (CR 48) at Northwest bound Sound Avenue

All analyses were performed in accordance with the latest methodology set forth in the 6th Edition of the Highway Capacity Manual using SYNCHRO software as was utilized for the signalized capacity analyses.

#### **Methodology**

The signalized intersection capacity analysis methodology evaluates the average control delay per vehicle to determine intersection level of service. Several variables impact the measure of control delay, including quality of progression, cycle length, green ratio, and volume-to-capacity (V/C) ratio for the lane group in question.

Level of service for a signalized intersection is defined in terms of the average control delay per vehicle during a peak 15-minute analysis period. Control delay consists of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Six levels of service, from A to F, have been established as measures of vehicle delay. These levels and their related control delay criteria are summarized in Table 2 (Signalized Intersections – Level of Service Criteria) in the TIS.

As marina type operations experience peak activity during the summer months and the counts taken for this study during the four seasons of the year indicated that peak roadway volumes occurred during the summer the capacity analysis focused on peak summer conditions. This analysis reflects conditions which could be expected to prevail after the project is completed and fully operating during peak summer activity of the site and the surrounding roads.

First, a signalized capacity analysis was conducted to examine the existing conditions at the study intersections when the data was collected. The 2022 Existing Analysis verifies that the analysis is correctly modeling operations at the intersections. Next, the 2022 volumes were grown to replicate conditions in 2023 when the project is expected to be complete. The background traffic growth of traffic as identified by the NYSDOT Data Services Bureau was added to the 2022 Existing volumes. The anticipated background growth of traffic as per NYSDOT is 1.00 percent per year in the Mattituck area. The Town of Southold Planning Department was also consulted to determine if there were any other

significant planned projects that would add traffic to the area roadways prior to the completion of the proposed project. No other significant projects were identified. The 2025 No Build traffic analysis was then conducted to determine intersection operating conditions in 2025 without the project.

The signalized intersection capacity analyses were then performed to examine 2025 levels of service with the added traffic from the proposed project (2025 Build Condition).

The signalized intersection capacity analyses results have been provided in comparison tables provided in the section of the TIS Appendix entitled "Intersection Capacity Analyses Summaries." The tables provide the intersection Levels of Service (LOS) and intersection delay by movement, intersection approach, and the overall intersection. These results are presented side by side for the 2022 Existing, 2025 No-Build and 2025 Build Conditions for ease of comparison. The detailed signalized intersection capacity analysis results are provided in the TIS Appendix entitled "Detailed Capacity Analysis Results."

Based on the results of the signalized capacity analysis, the small increase in traffic from the project would create negligible traffic impacts once the project is complete and fully operational. The analysis indicates that no intersection LOS change and there are no individual movement LOS degradations at the intersections.

### **Unsignalized Intersections**

Unsignalized intersection capacity analyses were performed to determine the ability of vehicles to safely negotiate turning movements at Cox Neck Road/West Mill Road at Breakwater Road.

All analyses were performed in accordance with the methodology set forth in the latest edition of the Highway Capacity Manual, 6th Edition, using the same SYNCRHO 11 software as was utilized for the signalized capacity analyses.

### **Methodology**

The unsignalized intersection capacity analysis methodology evaluates the average control delay per vehicle to determine level of service. Level of service for a two-way stop-controlled intersection is defined solely for each minor movement. Several variables impact the measure of delay for a two-way stop-controlled intersection, including the level of conflicting traffic impeding a minor street movement and the size and availability of gaps in the conflicting traffic stream.

Level of service for an unsignalized intersection is defined in terms of the average control delay per vehicle during a peak 15-minute analysis period. Control delay consists of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Six levels of service, ranging from A to F, have been established as measures of vehicle delay. These levels and their related control delay criteria are summarized in Table 3 (Unsignalized Intersections - Level of Service Criteria) in the TIS.

First, the unsignalized capacity analysis was conducted to examine the existing conditions at the study intersections when the data was collected. The 2022 Existing Analysis verifies that the analysis is

correctly modeling operations at the intersections. Next, the 2021 volumes were grown to replicate conditions in 2025 when the project is expected to be complete. The background traffic growth of traffic, as identified by the NYSDOT Data Services Bureau, was added to the 2022 Existing volumes. The anticipated background growth of traffic, as per NYSDOT, is 1.00 percent per year in the Mattituck area. The Town of Southold Planning Department was also consulted to determine if there were any other significant planned projects that would add traffic to the area roadways prior to the completion of the proposed project. No other significant projects were identified. The 2025 No Build traffic analysis was then conducted to determine intersection operating conditions in 2025 without the project.

The unsignalized intersection capacity analyses were then performed to examine 2025 levels of service with the added traffic from the proposed project (2025 Build Condition).

The unsignalized intersection capacity analyses results are provided in comparison tables in the TIS Appendix entitled "Intersection Capacity Analyses Summaries." The tables provide the LOS, volume to capacity ratios (V/C) control delay, and 95<sup>th</sup> percentile queue length by critical intersection approach. These results are presented side by side for the 2022 Existing, 2025 No-Build and 2025 Build Conditions for ease of comparison. The detailed signalized intersection capacity analysis results are provided in the Appendix of the TIS appended in Appendix O of this DEIS in the section entitled Detailed Capacity Analysis Results.

As indicated in the TIS, the results of the unsignalized capacity analysis indicate that the increased traffic from the project would create negligible traffic impacts once the project is complete and fully operational. The analysis indicates that no intersection LOS change and there are no individual movement LOS degradations at the intersections.

### ***Access Examination***

SYC is located at the eastern terminus of West Mill Road and the entrance/exit of the site is essentially a continuation of the roadway. As shown on the site plan West Mill Road ends at the northerly border of the site. There is currently a fence line crossing the northerly border of the site with a gate which allows ingress and egress from the site. To the east of the gate is a garage that also defines the northerly limit of the site. As there is no intersection with cross streets to interfere with traffic entering and exiting the site onto West Mill Road, the site access is safe. The proposed access plan has been designed to provide safe and efficient access for both patrons and employees of the proposed site.

### **Temporary Haul Road and Emergency Access**

A temporary haul road would be developed in the first phase of the project to facilitate the removal of excavated material during the initial grading of the site. The temporary haul road is only planned to be used during the Phase 1 – Excavation portion of the project, a period of 5-6 months. During this period, it would primarily be used by trucks removing excavated material from the site. Following its use as a haul road, the haul road would be used for emergency access to the site by police, fire or ambulance vehicles, should it be necessary.

The haul road would intersect West Mill Road approximately 1,600 feet north of Bay View Avenue and 600 feet south of the almost 90° turn in West Mill Road to the east. Sight distance to the north and south of the proposed temporary intersection would be more than 500 feet in either direction, far more than the suggested intersection sight distance and the required stopping sight distance for intersections. The segment of West Mill Road where the proposed temporary intersection would be constructed experiences light traffic volumes (less than 50 trips per hour), particularly during the late fall, winter, and early spring months when the road would be used. There have also been no recently identified accidents in the vicinity of the intersection. The combination of excellent sight distance and low volumes on West Mill Road indicate that the proposed temporary intersection would operate safely.

It is anticipated that traffic using the temporary haul road come from the south and return to the south. To facilitate the movement of traffic, particularly trucks in and out of the haul road, a wide radius would be used on the southeast corner of the intersection and a 100-foot stabilized shoulder would be provided.

### **Parking and Site Circulation**

Based on the current and post-development storage area, the Town of Southold parking ordinance requires as 262 surface parking stalls are required. A total of 57 spaces are provided with 4 of them being handicapped spaces. There are currently 23 stalls provided on-site. The proposed action including the creation of 34 new parking stalls on-site by striping gravel-surfaced areas that are currently used for parking but are not formally marked. Upon implementation of the proposed action, the available parking would be increased from 23 stalls to 57 stalls.

The ITE provides data on the parking characteristics of Marinas in their reference book "Parking Generation." In the reference, under Land Use Code 420 (Marina), data from a study of the marina use is provided. The basis of the study was on the number of berths provided at the marina and the study found that marinas generated a parking demand of 0.35 parked vehicles per berth. In the case of the SYC the expected demand would be for 14 parked vehicles. It should be noted that the parking demand observed at the marina included all accessory uses at the marina including the servicing and storage of boats, retail sales and service, marina office, and the sale of fuel for boats. All services offered at the SYC.

SYC is unique in their operation in that the number of berths/slips available is relatively small, but their service and storage operations, particularly those proposed, are larger in proportion to the number of slips provided. With this in mind, it is reasonable to include the number of employees into an examination of parking demand. SYC when complete will have up to 27 employees on site. Allowing one space for each of the 27 employees plus the anticipated demand from 40 slips at 14 spaces, the total anticipated demand for parking is 41 parking spaces. It should be recognized that this methodology is conservative and partially double counts activities included in the ITE data. Further, the marina would be fully staffed by 27 employees during the weekdays with lower staffing on site on the weekend, while peak demand generated by the slips and owners using their boats is generated on weekends and holidays.

The SYC currently supplies adequate parking for the existing facility with 23 stalls provided on-site and another area currently used for parking but are not formally marked. The proposed new buildings are for boat storage only and would not generate additional parking demand other than by the new employees that will work in the buildings. The additional 11 employees expected post-development will generate the need for 11 additional parking spaces. Additional parking is being provided for these 11 employees. Again, it should be remembered that the new employees will be Monday through Friday workers while peak demand generated by typical marina operations occur on the weekend and holidays. As such, the proposed 57 total parking spaces with 4 handicapped spaces would adequately meet the parking needs of SYC.

All site parking is accessed from a centralized access aisle located between the bulkhead along Mattituck Inlet and the buildings. The aisle has a minimum width of 24 feet and is often more generous than that. The site circulation plan is adequate for the intended purpose.

### ***Construction-Related Traffic Impacts***

#### **Proposed Construction Schedule**

The TIS relied upon the construction schedule and details provided by Red Rock Construction, included in various sections of this DEIS. As excerpted from the TIS, the following employment, employee trips and trucking was used in the analysis of each phase of the construction activity:

- Clearing and Grubbing of the Site (2 weeks)

Heavy equipment would be brought to the site to perform the work. During this period, the temporary haul road to West Mill Road would be constructed. Equipment would include an excavator, feller buncher, woodchipper, tub grinder and payloader. The equipment would be brought to the site over a two-day period and remain on site for two weeks and be removed. One truck with 30-yard trailer would be used to remove ground-up debris 3 to 4 times per day. The truck with trailer would not remain on site but would return to its base each night. On average, the truck with trailer would generate no more than one entering trip every other hour and one exiting trip every other hour.

Each piece of equipment would have an operator (5) and four additional laborers would support the work. Each morning up to 9 employees and the truck with trailer would arrive at the site and depart at the end of the day.

- Phase 1 Excavation (5-6 months)

Phase 1 (Excavation) will include the removal of 123,000 cubic yards of material from the site. The material will be hauled off the site in 30-yard trailer trucks. In all, the removal of the material will require a total of 4,100 loads with 4,100 empty trucks arriving at the site and 4,100 trucks leaving the site with full loads. The work will thus generate 8,200 truck trips.



Heavy equipment would be brought to the site to perform the work. During this period, 2 loaders, 2 excavators, 2 dozers and 1 fuel/water truck would be brought to the site and would remain through the Phase 2 Excavation. The equipment would be brought to the site over a two-day period and remain on site until the Phase 2 Excavation is complete and be removed. They would be operated by 7 operators that would arrive at the site by personnel vehicle and depart at the end of the day. In addition to the operators, a Project Manager, a Site Safety Supervisor, 2 Flag Personnel and 4 Laborers would report to the site by personnel vehicle for a total of 15 personnel vehicles. Work would be performed from 7:00 am till 5:00 pm five days per week (Monday to Friday).

In addition to the equipment and workers noted above trucks with 30-yard trailers would be used to transport excavated material from the site. These vehicles would begin arriving at 7:00 am and the last would depart at 5:00 pm Monday through Friday. No excavation would take place during the weekend. To meet the project schedule, it is estimated that 40 trips would be made to and from the site during the ten-hour workday. Four trips (entering and exiting) would be made each hour during the day.

Trucking and employee arrivals would be via the temporary haul road. At the end of the Phase 1 Excavation, the temporary haul road would be closed for construction but remain for emergency access.

- Phase 2 Excavation (2 to 4 weeks)

Phase 2 (Excavation) will include the removal of 12,000 cubic yards of material from the site. The material will be hauled off the site in 30-yard trailer trucks. In all, the removal of the material will require a total of 400 loads with 400 empty trucks arriving at the site and 400 trucks leaving the site with full loads. The work will thus generate 800 truck trips.

This Phase would use the same excavation and loading equipment brought to the site for the Phase 1 Excavation and would be operated by the same 15 employees. They would arrive at the site in personnel vehicles.

In addition to the equipment and workers noted above trucks with 30-yard trailers would be used to transport excavated material from the site. These vehicles would begin arriving at 7:00 am and the last would depart at 5:00 pm. No excavation would take place during the weekend. To meet the project schedule, it is estimated that 40 trips would be made to and from the site during the ten-hour workday. To take a conservative approach, it would be assumed that four trips (entering and exiting) would be made each hour during the day.

The Phase 2 Excavation and all subsequent phases would use the main entrance to SYC at the eastern terminus West Mill Road to enter the construction area.

- Retaining Wall Construction (3 weeks)

This phase of the project would be run concurrently with the drainage installation and building construction phases of the project. A loader and an excavator from the prior excavation phase would be used in this phase. In addition, a skid steer and mini excavator would be brought to the site for the work. These pieces of equipment would be operated by 4 operators and be supported by 4 laborers. Eight employees would be required to complete this phase and they would arrive in the morning and depart at the end of the day.

Over the three-week period it is estimated that 60 trucks with trailers would be required to bring in the retaining wall material. Over the 15-day period four loads a day would be brought to the site.

- Drainage Excavation and Installation (2 months):

This phase of the project would be run concurrently with the retaining wall installation and building construction phases of the project. A loader and two excavators from the prior excavation phase would be used in this phase. In addition, a skid steer and mini excavator would be brought to the site for the work. These pieces of equipment would be operated by 5 operators and be supported by 2 laborers. Seven employees would be required to complete this phase and they would arrive in the morning and depart at the end of the day.

One truck with trailer would be used to transport leaching basins and connecting pipe to be installed. It is expected that no more than two total trips per day are contemplated. These trips to the site would not occur during the weekday peak hours of traffic.

- Building Construction (6 months):

Building Construction would be concurrent with the building of the retaining wall and the installation of drainage. Many of the earth moving and loading equipment would be shared between the three operations and had been brought onto the site for the excavation phases of the project. These pieces of equipment would be removed from the site after the completion of the retaining wall and drainage installation. Several pieces would remain until building completion. Several new pieces of equipment, specific to the building construction would be added including one telescopic lift and several scissor and telescopic lifts. The Project Manager and Site Safety Supervisor would oversee the Building Construction, Retaining Wall Construction, and Drainage Installation.

With the concurrent phases noted, the total number of employees on site would vary from 20 to 60 as the building is erected and the retaining wall, drainage, and site work are completed. The construction company engaged to complete the work has committed to utilize company multi-occupant vehicles to transport many of the construction workers to the site. No more than 40 vehicles used for employee transportation should be on site each day. On many days, the number of employee transport vehicles would be lower. For the purpose of this analysis, and to take a conservative approach, 40 vehicles are anticipated to carry construction workers to the site in the

morning and depart in the late afternoon when work is complete. It is expected that most of the work would be done during the weekday period, however some work would carry into Saturday. Saturday would mostly be used for maintenance of equipment and set up for the following week's work.

**Estimated Construction Traffic**

The construction activity has six distinct phases, although three would occur concurrently. The Phase 1 Excavation Phase generates the most daily truck trips (40), but less employee trips (15). The Building Construction Phase and concurrent Retaining Wall and Drainage installation would generate the most employee trips, but less daily truck trips. As noted above, the Building Construction generates between 15 to 40 employee trips. It is expected that during the building construction phase that up to 5 truck trips per day would make deliveries to the site and two trucks per week would remove debris from the site. The traffic analysis of construction activity would focus on these two construction phases of the project which are the ones with peak traffic flow generated by the project.

The Phase 1 Excavation Phase would begin in mid-December and carry through May. Much of the activity would occur during the winter and spring months when traffic volumes are low, as evidenced by the traffic counts conducted during the four seasons of the year. During the Excavation Phases, trucks would take the excavated material south on West Mill Road/Cox Neck Road to Sound Avenue/North Road and then west on Sound Avenue. Due to the nature of the construction work and construction company's location west of Riverhead, it is anticipated that 90 percent of workers would come from the west and 10 percent would come from the east. All truck trips are expected to come from and return to the west, ultimately via the Long Island Expressway (I-495).

Table 33 below is excerpted from Table 5 (Construction Generated Traffic, Phase 1 Excavation) in the TIS, and provides the amount of traffic that the Phase 1 Excavation would generate during the weekday AM and PM peak hours of traffic flow. No traffic is estimated to be generated on Saturday.

**Table 33 – Construction Generated Traffic for Phase 1 – Excavation**

<i>Generator</i>	<i>Vehicle Trips per Hour</i>					
	<b>Weekday A.M. Peak Hour</b>		<b>Weekday P.M. Peak Hour</b>		<b>Saturday Peak Hour</b>	
	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>
Employees (15)	15	4*	4*	15	NA	NA
Trucks (4 per hour)	4	4	4	4	NA	NA
Total	19	8	8	19	NA	NA

\* 4 trips are added to account for potential pick-ups and drop-offs.

Figure 14 (2024 Site Generated Truck Traffic Volumes at Phase 1 Excavation) shows the arrival and departure of construction related traffic during the Phase 1 Excavation for the weekday AM peak hours and PM peak hours. Figure 15 (Site Generated Passenger Vehicle Traffic Volumes at Phase 1 Excavation) presents the site generated passenger vehicles that will be generated during the Phase 1 Excavation for the Weekday AM and PM peak hours. The construction generated traffic resulting from the Phase 1 Excavation was then added to the 2024 Spring No Build traffic and is shown on Figure 16 (2024 No Build Spring Traffic Volumes). The Construction No Build Traffic was developed in the same manner as the Project No Build Traffic growing the 2022 Existing Spring Traffic to 2024 using a 1% per year growth factor. The Composite 2024 Spring Construction Traffic resulting from the Phase 1 Excavation of the site is presented in Figure 17 (2024 Build Spring Traffic Volumes at Phase 1 Excavation).

Table 34 below, as excerpted from Table 6 (Construction Generated Traffic) in the TIS provides the amount of traffic that the Construction Phase concurrent with Retaining Wall and Drainage work would generate during the weekday AM and PM peak hours of traffic flow. It is anticipated that this work would also be done on Saturday during this phase. Early in this phase with the retaining wall and drainage work being done at the same time, up to 60 workers maybe on site at one time. The number of workers would vary after that but would not exceed a maximum of 60. It would be assumed that 60 employees would arrive at the site in the morning and depart in the evening. Some work would be done Saturdays, but it is expected that only partial crews would be on site to do maintenance of equipment and set up for the next week's work. To take a conservative approach, it would be assumed that the Saturday work effort would be the same as during the weekdays for traffic analysis purposes. During this period, truck trips would consist of deliveries of site materials. Additionally, approximately two trips a week would remove debris from the site. The number of deliveries is estimated to be less than five a day and would take place between 9:00 am and 3:00 pm in each peak hour to be examined. To take a conservative approach, it would be assumed that one truck would make a delivery during each peak hour, although this is unlikely to occur.

**Table 34 - Construction Generated Traffic for Building Construction Phase Concurrent with Retaining Wall and Drainage**

Generator	<i>Vehicle Trips per Hour</i>					
	Weekday A.M. Peak Hour		Weekday P.M. Peak Hour		Saturday Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Employees (60)	60	10*	10*	60	10*	60
Trucks (1 per hour)	1	1	1	1	1	1
Total	61	11	11	61	11	61

\* 4 trips are added to account for potential pick-ups and drop-offs.

The materials need for the construction of the buildings, drainage and retaining walls would all come from suppliers west of the site. Trucks delivering these building materials from the west, would arrive on Sound Avenue east bound turning north on Cox Neck Road/West Mill Road. After dropping off their loads they would depart by reversing their arrival route. Workers that would perform the work would also mostly come from the west. It is estimated that 90 percent of the workers would arrive via east bound Sound Avenue to northbound Cox Neck Road/West Mill Road and leave by the reverse of that route. An estimated ten percent of the workers would arrive from the east via west bound North Road to northbound Cox Neck Road/West Mill Road and depart in the reverse of this route.

Figure 18 (Site Generated Passenger Vehicle Traffic Volumes at Building Construction) shows the arrival and departure of construction related traffic during the Building Construction for the weekday AM peak, and PM hours and Saturday peak hours. The construction generated traffic resulting from the building construction following the excavation of the site was then added to the 2024 Summer No Build Traffic Volume and is shown in Figure 19 (2024 Summer No Build Traffic Volume). The Composite 2024 Summer Construction Traffic resulting from the building construction with concurrent retaining wall construction and drainage work is presented in Figure 20 (2024 Build Summer Traffic Volumes at Building Construction).

### ***Analysis of Construction Traffic Impacts***

As noted, the two phases of the construction effort that will generate the most construction related traffic are the Phase 1 Excavation and the Building Construction Phase. The excavation will generate the most truck trips and the Building Phase will create the most total traffic but will include fewer truck trips. The construction traffic from each of these phases have been analyzed against the 2024 No Build Traffic to determine the potential impacts of the Construction traffic on the study intersections. The Phase 1 Excavation traffic was compared with the 2024 No Build traffic based on the spring 2021 counts. The Phase 1 excavation Phase will begin in Mid-December 2023 and last into late Spring of 2024. The Winter 2021 counts exhibited substantially lower volumes than the Spring 2021 counts. It was determined that the Spring data would present a more conservative analysis then utilizing Winter as a base.

The Building Phase of the project will begin in late Spring, early Summer of 2024 and last until the late Fall of 2024. To analyze the impact of the construction traffic related to the Building Phase and consider a worst-case scenario, the No Build 2024 analysis was based on the Summer 2021 count data, as was the analysis of the 2025 Build scenario for the completed project.

The analysis of the signalized intersections was conducted as detailed in the Intersection Capacity Analysis above. The signalized and unsignalized intersection capacity analyses results have been provided in comparison tables provided in the section of the TIS Appendix entitled "Intersection Capacity Analyses Summaries, Construction Traffic." The tables provide the intersection LOS and intersection delay by movement, intersection approach, and the overall intersection. These results are presented side by side for the 2024 No-Build and 2024 Build Conditions for ease of comparison. The detailed signalized and unsignalized intersection capacity analysis results are provided in the TIS Appendix entitled "Detailed Capacity Analysis Results, Construction Traffic."

As indicated in the TIS, the results of the signalized and unsignalized capacity analysis indicate that the increased traffic from the construction project would create negligible traffic impacts once the project

is complete and fully operational. The analysis indicates that no intersection LOS change and there are no individual movement LOS degradations at the intersections.

### ***Additional Considerations***

#### **Truck Routing Plan**

It is anticipated that all truck deliveries for the construction of the project would arrive from the west on Sound Avenue and return using the reverse path. Likewise, the material excavated from the site would be loaded on trucks and removed from the site. Trucks hauling this material would travel to the west on Sound Avenue and return to the site empty also via Sound Avenue. The truck route will utilize Sound Avenue to Northville Turnpike (CR 43) and then Old Country Road (CR 58) to the Long Island Expressway (I 495).

From Sound Avenue, trucks destined for the site would utilize Cox Neck Road/West Mill Road to arrive at the site. During the first two phases of the project's construction, the site would be accessed via temporary construction access onto West Mill Road, approximately 1,600 feet north of Bay View Avenue. The construction of the temporary access would be accomplished at the beginning of the first phase of construction. A temporary haul road from West Mill Road to the portion of the site where the two new buildings are to be located would also be constructed. Following construction of the temporary access and haul road, the site would be cleared, and the initial phase of the construction completed. The Phase 1 Excavation of the site would be completed utilizing the temporary access to West Mill Road and the temporary haul road. At the end of the Phase 1 Excavation, the temporary haul road would be used by emergency access only and would not be used by any truck or employee access to the site. Following the closure of the haul road, all access to the site for construction would be from the existing access to the site at the end of West Mill Road. Figure 20 (Proposed Construction Truck Route) in the TIS indicates trucks used for the construction of the project will utilize Sound Avenue to Cox Neck Road/West Mill Road. Figure 20 in the TIS also shows access to the site via the temporary haul road during the first two phases of construction and the existing site access that will be used for all other phases of the project.

The nature of Cox Neck Road/West Mill Road is fully described in the section of this report entitled, "Roadway Characteristics". Vehicles that traverse Cox Neck Road/West Mill Road will encounter no school zones, and all intersections along the road are unsignalized Stop sign control with Cox Neck Road/West Mill Road as the primary through road with no control. Vehicles on Cox Neck Road/ West Mill Road can move along the entire road from the site to the intersection of Cox Neck Road with Sound Avenue. The speed limit along Cox Neck Road/West Mill Road is 35 mph.

The intersection of Sound Avenue at Cox Neck Road and North Road (CR 48) where site related vehicles either exit Sound Avenue onto Cox Neck Road or enter onto Sound Avenue from Cox Neck Road is the only roadway where traffic control and potential vehicle conflict points might impede traffic flow. The intersection is well designed with separate lanes for all turning movements. A traffic signal under the jurisdiction of the Suffolk County Department of Public Works controls the intersection. The operation of the intersection was analyzed as part of this study. The results of the study are provided in the section of this report entitled, "Analysis of Construction Traffic". The results of the analysis indicated that the site related construction traffic generated by the site can be readily accommodated with

negligible traffic impact. The construction related traffic causes no change in the intersection LOS nor any change in individual movement LOS.

The route that trucks and other vehicles will use during the construction of the site improvements, as shown on Figure 21, is suitable for the expected traffic and can accommodate it with minimal traffic impact. The proposed 30 mile per hour maximum speed to be observed by project trucks on Cox Neck Road/West Mill Road will mitigate concerns of the community. Pictures of Cox Neck Road/West Mill Road between Sound Avenue and the temporary haul road to Strong's Yacht Center are provided in the Supplemental Data Appendix of the TIS.

Sound Avenue west of Cox Neck Road is well suited to carry the site related construction traffic. There are no school zones along the road. East of Cox Neck Road North Road (CR 48) and west of Cox Neck Road are designated as "Truck Route 25". The roadway is designated as "Truck Route 25" due to the low height railroad bridge crossing over Route 25 east of Aldrich Lane. The roadway is also designated as a Federal Aid Primary Roadway and is the only east/west roadway with that classification within the Town of Southold. The speed limit on Sound Avenue is 45 mph.

Sound Avenue west of Cox Neck Road is provided with 11 ft travel lanes, one in each direction and 4 ft shoulders that provide for pedestrians and bicyclists who also use the road. Within the Town of Riverhead, Sound Avenue was repaved within the last 10 years to provide the shoulder adjacent travel lanes as part of a Federal Aid project to provide for bicycle routes within the Town. Pictures of Sound Avenue between Northville Turnpike and Cox Neck Road are provided in the Supplemental Data Appendix of the TIS.

To the west, the truck route moves onto Northville Turnpike (CR 43). Northville Turnpike is a County Road consisting of a single lane in each direction. Shoulders exceeding 5 feet wide flank the travel lanes and provide for pedestrian and bicycle use along the roadway. Turning lanes (left turn and right turn) are provided at important intersections. Where the additional turning lanes are provided, the shoulder narrows. In 2018, Northville Turnpike had an AADT of 6,218 vehicles per day of which 7.84 percent were classified as heavy vehicles. Pictures of Northville Turnpike between Sound Avenue and Old Country Road are provided in the Supplemental Data Appendix of the TIS.

The truck route west of Northville Turnpike (CR 43) to the Long Island Expressway (I 495) will utilize Old Country Road (CR 58). Between Northville Turnpike and the Long Island Expressway (LIE), there are two east bound lanes. West bound, there is one travel lane from Northville Turnpike which become two lanes between Oliver Street and Ostrander Avenue. The two west bound lanes carry through to the LIE. East and west bound through lanes are 11 ft wide and left turn lanes are provided at all intersections and major driveways. Right turn lanes are provided at some major signalized intersections. At the intersection of Old Country Road at Roanoke Avenue, a two-lane roundabout is provided. Except between Northville Turnpike and the vicinity of Oliver Street shoulders are one foot wide and do not accommodate either pedestrians or bicyclists. Sidewalk is provided along Old Country Road to accommodate pedestrians, Bicycles are accommodated on parallel roadways to the north and south of Old Country Road, such as, Middle Road, Pulaski Road/Elton Avenue and New York State Route 25.

In 2018, Northville Turnpike had an AADT of 6,218 vehicles per day of which 7.84 percent were classified as heavy vehicles. In 2019 Old Country Road had an AADT of 24,585 vehicles per day of which

7.60 percent were classified as heavy vehicles. Pictures of Old Country Road between Northville Turnpike and the LIE are provided in the Supplemental Data Appendix of the TIS.

An evaluation of the geometric capacity of the proposed Truck Route to accommodate the project related truck traffic was performed. The evaluation used the CADD based AutoTurn computer program to conduct this examination. The evaluation was conducted to determine whether the wheel paths and perimeter of the trucks being used would stay within their travel lanes while negotiating a number of curves in Cox Neck Road/West Mill Road. In addition to the roadway itself, key intersections where the truck route transitions from one roadway to another. Figures showing the results of this analysis are provided in the Supplemental Data Appendix of the TIS. The results are summarized below.

- **Truck Route Phase 1 Excavation:** Trucks will enter and exit directly on to West Mill Road from the proposed temporary haul road. The intersection will be constructed to facilitate movements at the intersection and the AutoTurn analysis demonstrates this. To the south in the vicinity of Breakwater Road is an S-curve where Cox Neck Road becomes West Mill Road. The radius of these curves is large enough that the site construction traffic will be able to safely negotiate them. The Truck Route moves onto Sound Avenue at the intersection Sound Avenue/CR 48 at Cox Neck Road. The AutoTurn analysis indicates that the necessary turns can be negotiated safely at the intersection. Two other intersections were evaluated: Sound Avenue at Northville Turnpike and Northville Turnpike at Old Country Road. The analysis indicated that the project would also be navigating these intersections without any undue difficulties.
- **Truck Route Phase 2 Excavation:** During this phase of the excavation, trucks will arrive and depart directly from the site at the north end of West Mill Road. The trucks will be required to negotiate the curves east and west of Naugles Road. The curve west of Naugles Road is tighter than the curves to the south and trucks negotiating this section of the road will not be able to stay within their travel lane. East of Naugles Road the curve is also tight, and it will be difficult for the trucks to stay in lane. To overcome this, it is proposed that flaggers be used to control traffic as trucks pass through this area.

An alternate truck route was considered west of Cox Neck Road but is not proposed. This route utilized Sound Avenue to Aldrich Lane to Old Main Road to Main Road (Route 25) to Old Country Road (CR 58) to the LIE (I 495). Aldrich Lane is a Town of Southold Roadway similar in character to Cox Neck Road with residential housing and farming fields fronting the road. It is a designated truck route for Route 25, but the physical condition of the roadway is not as substantial as Sound Avenue. Main Road (Route 25) passes through several hamlet centers and the Aquebogue Elementary School. The intersection of Main Road with Cross River Drive (CR 105) is often congested during weekday peak hours. The proposed truck route avoids public schools, additional residential neighborhood, hamlet centers and possible congestion.

Concern has been expressed regarding the potential impact of project trucks on commercial farming operations along the proposed vehicle route. In particular, operations such as Harbe's Family Farm on Sound Avenue. These sites are particularly popular in the summer and fall and roadways they front on can become congested on weekends. To minimize potential impacts site excavation, hauling and material delivery to the site will be done during weekdays when activities at these facilities are less impactful. It should be noted that both Route 25 in Southold and Sound Avenue in Southold contain similar operations and the proposed site truck route has been recommended primarily to avoid hamlet



centers, an elementary school and typical congestion that occurs in hamlet centers and around traffic signals.

It should be recognized that trucks are already using the roadways that make up the project's designated truck route. The trucks that will be used to haul excavated material from the site will be Peterbilt Tractors with either Frameless East or Mac trailers. The overall length of the truck and trailer will be 55 feet. The width of the vehicle will be 8 feet, which is the maximum allowed by State law. Almost all trucks operating in NYS are 8 feet wide including sanitation trucks, fuel oil, landscaping, and box delivery trucks commonly operating on these roadways. The empty weight of the project haul vehicles will be 32,500 pounds and the Gross Vehicle weight of the vehicles is anticipated to be 107,000 pounds. The vehicles will have 3 axles on the tractor and 3 axles on the trailer. The front axles will have 2 tires and the remaining axles will have 4 tires each. The number of axels and tires is designed to distribute and minimize the impact of the load on the roadways.

Other project-related trucks making material deliveries to the site will be a mix of vehicles. Larger loads will arrive on flatbed tractor trailer with similar axle and tire configurations to those of the haul vehicles. Smaller loads may arrive on tractor trailer vehicles with less axels and tires depending on the weight of the load, while other loads will arrive on single unit flatbed or box trucks. Concrete will arrive at the site in single unit concrete trucks with a minimum of 3 axles and 10 tires. The concrete trucks will be no larger than those used for pouring concrete for the construction of single-family homes and residential pools.

None of the trucks used in the construction of the project will exceed 8 feet in width and none will exceed the weight limits established by State law for vehicles operating on all roadways within the State, including West Mill Road and Cox Neck Road.

### **Impacts on Pedestrian and Bicycle Use**

Pedestrian and cyclist observations were made in association with the intersection turning movement counts collected at the intersections of Cox Neck Road at Westphalia Road, Cox Neck Road/West Mill Road at Breakwater Road and at West Mill Road at Bayview Avenue/Salah Lane. As with the turning movement counts, activity was captured and recorded with video and the videos were observed in the office with the data transcribed into tables giving the number of vehicles, cyclists and pedestrians observed in 15-minute intervals over the observation period. The observation periods were that same as for turning movement counts: the weekday AM peak hours of 7:00 to 9:00 am and the weekday pm peak hours of 4:00 to 6:00 pm and the Saturday peak hours of 11:00 am to 2:00 pm. Further observations were made in response to Town comments on Tuesday, August 9, 2022 and Saturday, August 13, 2022 from 6:00 am to 6:00 pm. The supplemental data from August 2022 are included in the Supplemental Data Appendix.

The cyclist and pedestrian observations indicated very little use of Cox Neck Road/West Mill Road by either bicycles or pedestrians. During most 15-minute observation periods there were no bicycle or pedestrian traffic observed. Table 9 (Summary of Pedestrian and Bicycle Count Data, August 2022) in the TIS presents a daily summary of the pedestrians and bicycles counted at three locations along Cox Neck Road/West Mill Road. As indicated in Table 9, the number of bicycles and pedestrians is very low during the weekday. Both bicycle and pedestrian activity increased on Saturdays. On Saturday, pedestrians crossing Cox Neck Road/West Mill Road accounted for more activity than those walking

parallel to the road. Bicycle activity was identified as bicycles either traveling through the observation point or turning onto or from Cox Neck Road/West Mill Road, but not crossing it.

Cox Neck Road/West Mill Road is typical of most local roadways on eastern Long Island. While each roadway has 50 foot or more rights-of-way, only half is paved, and the remaining undeveloped right-of-way provides no accommodation for pedestrians. Bicycles must share the existing vehicle lanes with other users of the road. Cox Neck Road/West Neck Road is approximately 26 feet wide but varies along its length from 24 to 28 feet. A small portion of West Mill Road east of Naugle's Drive is only 22 feet wide. Pedestrians and bicycles currently use the roadway with the existing traffic and the three-year examination of accidents along the roadway did not indicate any involving either pedestrians or bicycles. Under the completed project up to 13 new trips would be added to this roadway during the weekday AM and PM peak hours of traffic. This small number of additional vehicle trips will not be noticeable and will not affect pedestrians or bicycles using the road.

The construction of the proposed project would add additional trips to Cox Neck Road/West Mill Road for the slightly over one-year construction period. The number of trips would vary over the construction period and the mix of passenger vehicle/truck trips would also vary. The highest number of truck trips would occur during the Excavation phase, which includes the entire winter season when pedestrian and bicycle use is typically lower. During this period, up to 4 trucks per hour would travel both north bound and south bound to the site. Heavy trucks, such as sanitary trucks and fuel oil delivery trucks currently use the roadway and there was one accident evidenced in the accident study, which included five years of data. The addition of four trucks an hour in each direction would not create any capacity issues or create additional hazards not currently experienced by bicycles and pedestrians using the road.

The paved surface of the roadway provides at least 22 feet of width. That is sufficient to operate a two-way roadway with trucks. Motor vehicles operating on any public roadway within New York State must share the roadway with cyclists and pedestrians using the same road. As such any motor vehicle would have to give way to pedestrians and cyclists using the road. In most cases they would be able to move over and pass the slower moving bicycles and pedestrians. In some cases, they may have to slow and allow a vehicle traveling in the other direction to pass before moving over to pass cyclists or pedestrian. This is a common occurrence on the relatively narrow eastern Long Island roadways and is currently occurring on Cox Neck Road/West Mill Road, but with fewer trucks. The minor increase in truck trips is unlikely to cause any additional problems.

There are between 50 to 60 homes that front on Cox Neck Road/West Mill Road between Sound Avenue and the site. Some of these homes may generate school age children that would be bused to school each weekday during the school year from early September through June. These children would be picked up by school buses in the morning and dropped off in the evening. Due to the longer workdays of site construction the drop-off would occur prior to construction workers leaving the site. The drop-offs may encounter a truck removing or bring material to the site. In the morning, the pick-up of students would likely encounter both construction workers headed to the site and occasional trucks also headed to the site. The New York State Vehicle and Traffic Law requires all traffic to stop for school buses with flashing red lights either dropping off or picking up school children. The professional drivers operating trucks engaged in the construction of the project will adhere to the law and the pick-up and drop-off of students is expected to be safe. Students waiting to be picked up in the morning are expected to wait off the road, usually in the driveways to their homes. This is also a safe

practice not expected to be degraded by the passage of an occasional site bound truck or worker headed to the site. It should be remembered that similar activities take place every day within the Town on far busier roadways, such as along Route 25.

### **Impacts On Road Surface Condition Cox Neck Road/West Mill Road**

The Town of Southold Highway Department was contacted to determine the Highway Departments evaluation of Cox Neck Road/West Mill Road condition. In a letter dated May 18, 2021, the former Town of Southold Highway Superintendent, Mr. Vincent Orlando, noted that the roadway was in “.....fair condition. There are some rough locations but for most part fine.” Mr. Orlando also noted recent and planned work on the road:

- 2014 - Section of West Mill Road from Miller Road to Bayview North Drive was micro surfaced.
- 2015 – Small Section of Cox Neck Road 100 feet north of Meday Avenue was resurfaced.
- 2021 – Planned resurfacing with 1-1/2 inches of Type 6 asphalt of Cox Neck Road from North Road (CR 48) to Bergen Avenue.

It is noted that the 2021 project has been delayed as the Town has determined that drainage work needs to be done prior to the resurfacing. The Town Highway Department has indicated that resurfacing should be delayed until the it is determined how the SYC project will be conducted, preferring to perform the resurfacing after that work is complete.

Heavy trucks introduce more wear on the road structure than passenger vehicles, vans, pickup trucks, and other smaller, lighter vehicles. Trucks delivering materials to the site or removing excavated material from the site would all comply with New York State Vehicle and Traffic law regarding the size of vehicles and the permissible weight of vehicles that may operate on the public roads of the State including Cox Neck Road/West Mill Road.

Only half the trips to or from the site will be by fully loaded vehicles. Trucks removing material from the site will return to the site empty and trucks delivering material to the site will leave empty. It was estimated that during the Phases 1 and 2 – Excavation 40 trucks would leave the site each day and return to pick up material empty. The 40 trips would occur over the ten-hour workday or 4 trips each hour. The excavation and removal of material would occur Monday through Friday for a 5-to-6- month period which includes both the Phase 1 and 2 excavations of the site. Other phases of the construction would utilize fewer truck trips.

At the proposed temporary haul road to the site that would connect to West Mill Road south of Naugle's Drive a temporary shoulder would be placed along the road north and south of the access to protect the existing edge of West Mill Road while trucks use that access. A 100-foot-long RCA shoulder would be placed south of the haul road and a wide radius would be provided at the southeast corner to facilitate truck turns off north bound West Mill Road. Upon completion of the work, the RCA shoulder would be removed, and the existing edge of the roadway fully restored. The haul road would remain post-development to serve as an emergency access route to the site. The layout of the temporary haul road intersection with west Mill Road is shown in Figure 22 (Haul Road Access) in the TIS.

Cox Neck Road/West Mill Road, particularly the section north of Breakwater Road have generally light traffic volumes so the combined small vehicle and large vehicle increase in traffic, even with the additional truck loading from site generated construction, should be tolerated by the existing road structure. The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition would be done prior to the commencement of construction and the roadway would be resurveyed following the completion of the project. In coordination with Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it.

To better understand the potential impact of the project, a study of potential pavement impacts was conducted by Tri State Planning, Engineering and Land Surveying, P.C. (TSPE). The study examined the Equivalent Single Axle Loads (ESAL) the current truck route roads were bearing and calculated the additional ESAL loads the same roadways can be expected to bear during the construction of the project. State law restricts the weight of any fully loaded truck. However, the weight on no one axle of the vehicle may exceed 18,000 pounds. Heavy vehicles or those expected to carry heavy loads are designed with additional axles and with all but the steering axle having four, rather than two tires. Additional tires and axles spread the load and lessen the weight on each tire.

Traffic loads, along with environment, damage pavement over time. The simplest pavement structural model assert that each individual load inflicts a certain amount of unrecoverable damage. This damage is cumulative over the life of the pavement, and when it reaches some maximum value, the pavement is considered to have reached the end of its service life. Through study and experimentation, procedures have been developed by the Federal Highway Administration (FHWA) and the NYSDOT to evaluate the ability of a pavement design to withstand the loads that traffic imposes on pavement. ESAL are calculated using traffic including the roadway's Annual Average Daily Traffic and the results of vehicle classification studies that determine the percentage of heavy vehicles utilizing the roadway. Table 10 (ESAL for Proposed Truck Route) presents the calculated ESAL for No Build Condition without the proposed construction and the ESAL for each roadway with the addition of site generated trucks due to the construction of the project.

The ESAL loads are calculated based on a 5-year pavement life in order to take a conservative approach. Actual pavement life is typically calculated as 20 years. The comparison of the impact of the projected truck traffic is minimal on all the proposed truck routes except for West Mill Road which showed an increase in ESAL loading with a 11.14 percent increase and Bergen Avenue, if it is used as an alternative the truck route (See later Section: Alternate Routing of Haul Material). While the increased ESAL loadings by percentage are significant, the significance is due to the existing light traffic volumes found on the roads. The number of ESAL loads projected to occur on West Mill Road are approximately one tenth of those projected to occur on Cox Neck Road. TSPE, as part of the pavement evaluation, also examined the ability of Town of Southold standard pavement section with 1.5 inches of top, 2.5 inches of binder and 4.0 inches of stone or recycled concrete base will support the expected loads from the project truck traffic. The TSPE Pavement Evaluation Report can be found in the Supplemental Data Appendix of the TIS.

### **Heavy Vehicle Traffic Induced Vibrations**

Heavy vehicles operating along the highway can induce vibrations, but the extent that this occurs is dependent on the surface condition of the roadway itself. A heavy vehicle riding on a smooth surface

would generate little vibration, while the same vehicle riding over a rough surface will generate vibrations. Those vibrations can be transmitted in the existing ground material to structures in proximity. Solid and densely packed materials transmit the vibration better than looser more granular material. The sandy soil that Cox Neck Road/West Mill Road lies upon is not conducive to the transmission of vibrations created by trucks.

To examine the potential of trucks to create vibrations that could damage existing structures adjacent to the roadway, Sound Sense performed a vibration study. The study entitled Vibration Report: Vibration Conditions and Expected Impacts: Strong's Yacht Center-5780 West Mill Road – Mattituck, NY is included in Appendix R of this DEIS and a summary follows.

The Vibration Report examined both the potential impact from vibration due to truck traffic on the designated truck route and those from construction activity on site. The Vibration Report identified all the potential significant historical structures along the proposed truck route and determined their distance from the truck route roadway. Anticipated vibration levels were determined for each structure utilizing methodology and data from the Federal Transportation Authority's 2018 Transit Noise and Vibration Impact Assessment Manual ("FTA Guidelines") and the New Hampshire Department of Transportation' 2012 Ground Vibrations Emanating from Construction Equipment ("New Hampshire Guidelines"). Using these guidelines, it was determined that historic structures needed to be more than 17 feet from the truck to be safe from damage. The minimum distance of residential properties to be safe from potential damage was 11 feet. The minimum distance of residential properties to recommended indoor vibrations was 79 feet.

In order to confirm that the calculations were valid, monitoring was conducted at four locations. Locations 1 and 2 were measured at the Mattituck Creek Tide Mill (Old Mill Restaurant) and the Frame Water Tower, respectively. As these locations are connected to the road surface, the accelerometer was adhered to concrete at the foundation of the structures during the readings collected. Location 3 was as close to the southern property line of the site as possible. Location 4 was located at the entrance to the Mill Road Preserve, at 25 feet from the roadway to match reference data presented in the FTA Guidelines. At Locations 3 and 4, the accelerometer was attached to a 6" stake driven into the ground.

After monitoring existing traffic, a fully loaded 30 cubic yard truck was driven past each of the study sites. All the study data indicated that the vibrations recorded at the time the study truck past each of structures and the device located 25 feet from the road were well below those that would cause damage. In addition, the nature of the soil did dampen the vibration impacts such that it was found that the distance trucks needed to be from historic structures and residential structures in order to not damage those structures was two feet. The minimum distance the trucks need to be from structures to meet indoor vibration levels is 29 feet. It was also noted that existing truck traffic often generated similar readings to those found when the test truck was driven by. In summary, the Vibration Study found that the truck traffic generated by construction of would not cause damage to either potentially historic structures along the truck route nor would the trucks cause damage to residential structures either. Vibrations generated by trucks would below recommend indoor vibration levels in all structures.

As has been stated earlier, trucks traveling on a smooth roadway would not create substantial vibrations. A pothole or roughness due to alligator cracking or some other pavement roughness would increase the likelihood that vibrations will be created. The Applicant would commit to quickly

repairing any potholes that appear in the roadway during the construction activity to minimize the potential for vibrations that could affect existing structures.

### ***Additional Considerations***

As required by the Amended Final Scope, a discussion regarding potentially using barges as an alternative for mitigating impacts associated with transporting materials off-site during construction was to be considered. The feasibility of utilizing barges is discussed in Section 5.2 of this DEIS and associated documentation is included in Appendix U of this DEIS.

It is noted that an alternative material mitigation plan has been evaluated to reduce the volume of material to be removed from the subject property by placing approximately 13,500 cy of material on the R-80-zoned parcel. This alternative material mitigation plan is discussed in Section 5.7 of this DEIS.

An Alternate Truck Route has been developed that would reduce the impact of trucks hauling material from the site. This alternative split arriving empty trucks from departing trucks carrying excavated material on the south segment of Cox Neck Road. Arriving trucks would follow the original Truck Route plan, making a left turn from east bound Sound Avenue onto north bound Cox Neck Road/West Mill Road. Departing trucks hauling material from the site would utilize West Mill Road/Cox Neck Road and then turn west onto Bergen Avenue to Sound Avenue. This alternative routing plan is discussed in Section 5.8 of the DEIS.

### ***Potential Traffic Calming Measures During Construction***

Prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible. It is suggested that, during the construction period, the speed limit be reduced along Cox Neck Road/West Mill Road. The current speed limit is 35 miles per hour and could be reduced to 30 or even 25 miles per hour for the duration of the construction activity. The speed limit change would require approval of the NYSDOT or the Southold Town Board depending on the Town's ability to set speed limits.

### ***Conclusions***

As indicated in the TIS, the adjacent highway and street system will be able to accommodate the proposed project. Although there would be a minimal increase in traffic from the development of the project, the development of the site, as proposed, will not cause a significant negative impact on traffic conditions. The following points should be recognized:

1. The proposed access plan has been designed to adequately provide for the projected traffic entering and exiting the access driveway to assure the public safety and to minimize traffic congestion.

2. The additional site-generated traffic resulting from the proposed project can be expected to add only 11 entering and 2 exiting trips during the weekday morning peak hour. During the weekday P.M. peak hour, the site-generated volumes are anticipated to be 11 exiting and 2 entering vehicle trips. These trips will be generated by new employees at the site arriving in the morning and departing in the evening. Other random trips will occur during the day, but the number of these trips will be low and in the range of none to one or two in an hour.
3. The intersection capacity analyses conducted to measure the impact of the new site-generated traffic on the surrounding street and highway network indicate the new traffic can be accommodated with negligible traffic impact.
4. The amount of construction traffic the project will generate during each phase of construction was determined and the potential impacts examined utilizing intersection capacity analyses. The intersection capacity analyses indicated that the construction generated traffic would have minimal impact on the capacity of the road network.
5. Five years of accident data were obtained on Cox Neck Road/West Mill Road and the intersection of Cox Neck Road at Sound Avenue/West Mill Road. There are no demonstrative conditions along the road that would indicate that the project volumes would increase the potential for additional accidents. Accidents occurring at the intersection of Cox Neck Road at Sound Avenue/North Road were typical of those occurring at similar signalized intersections with similar traffic volumes.
6. Counts of pedestrian and bicycle usage along Cox Neck Road/Mill Road indicated only minimal usage by pedestrians and bicycles. The accident study revealed one accident involving bicycles or pedestrians. Despite the relative narrowness of the road the small numbers of additional vehicles the project will generate during construction and after completion should not increase the hazards to bicycles and pedestrians also using the road. Motor vehicles operating on any public roadway within New York State must share the roadway with bicycles and pedestrians using the same road. As such any motor vehicle will have to give way to pedestrians and bicyclists using the road. In most cases, they will be able to move over and pass the slower moving bicycles and pedestrians. In some cases, they may have to slow and allow a vehicle traveling in the other direction to pass before moving over to pass the bicycle or pedestrian. This is a common occurrence on the relatively narrow eastern Long Island roadways and is currently occurring on Cox Neck Road/West Mill Road, but with fewer trucks. The minor increase in truck trips is unlikely to cause any additional problems.
7. Cox Neck Road/West Mill Road, particularly the section north of Breakwater Road have generally light traffic volumes so the combined small vehicle and large vehicle traffic even with the additional truck loading from site generated construction should be tolerated by the existing road structure. The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it. Additionally, at the request of the Town, SYC

- would be willing to sign a corporate guarantee for the repair of any road damages to pre-development condition.
8. As discussed in Section 5.4 of this DEIS, an alternative project has been developed that includes the construction of two boat storage buildings of 52,500 SF and 49,000 SF to support the smaller boat storage operations of SYC, along with elevating the roof heights of three existing buildings to accommodate larger vessels. As such, this alternative would still require 11 new employees working Monday thru Friday as does the proposed action. The alternative will generate the same amount of traffic as does the proposed action during the hours of analysis. The primary difference with respect to traffic impacts once the project is completed, is the new buildings under the alternative will be used for the storage of significantly smaller boats than would the buildings constructed under the proposed action. The proposed action would store boats of sixty feet or more, while the buildings constructed under alternative would store up to 300 smaller boats. Boats more than 60 feet cannot be trailered to the site and must arrive via the water. Smaller boats, as are anticipated to be stored in the project alternative, can readily be transported to and from the site by trailer. It is anticipated the half the smaller boats (i.e., 150) stored at the site would arrive and depart by trailer, which would have a greater traffic impact than the proposed action.
  9. The proposed Site Plan which provides 57 total parking spaces with 4 handicapped spaces will adequately meet the parking needs of SYC. All site parking is accessed from a centralized access aisle located between the bulkhead along Mattituck Inlet and the buildings. The aisle has a minimum width of 24 feet and is often more generous than that. The site circulation plan is adequate for the intended purpose.
  10. The construction of the project will generate a substantial amount of truck traffic. A designated route has been proposed to carry the increased truck traffic for the construction period. The designated truck route utilizes the Long Island Expressway (I-495) to County Road 58 (Old Country Road) to County Road 43 (Northville Turnpike) to Sound Avenue to Cox Neck Road to West Mill Road. The route is within the capacity of the roadways to carry the truck traffic.
  11. There will be no offsite staging areas utilized during any phase of the project's construction. All construction material will be delivered to the site directly from suppliers via the designated truck route. Excavated material from the site will be transported directly to the material handler via the designated truck route. Construction materials and excavated materials removed from the site will not be transported on weekends. No roadways other than designated truck route will be used for transportation of project materials.
  12. The potential of the increased truck traffic resulting from the project's construction to cause vibrations adjacent to the roadway was evaluated. It was determined that the project trucks would not cause vibrations that would impact adjacent historical structures or residential homes,
  13. An alternative was evaluated which would have hauled the material excavated from the site via barges brought to the SYC. That alternative proved unfeasible. The Mattituck Inlet did not



have sufficient depth to allow the barges to operate. In addition, the inlet channel has significant curvature that further prohibits navigation of the waterway by barges.

14. A series of potential mitigation measures have been suggested, including retaining approximately 10 percent of the required excavation material on an unused residentially zoned portion of the site, monitoring and repairing damage to Cox Neck Road/West Mill Road during the construction period, and making traffic control improvement to the roadways.

### **3.3.3 Proposed Mitigation**

The traffic study concludes that the surrounding transportation network will be able to accommodate increased traffic volumes during construction and post-development, with no significant adverse traffic impacts, based upon the following mitigation measures:

- Appropriate signage for construction access on West Mill Road will be installed for proper wayfinding.
- An on-site guard booth will be placed along the proposed haul road (for the Phase 1 Excavation) and on the SYC property (for Phase 2 excavation and construction phases). The purpose of such booth is to house an on-site staff person who will direct incoming construction-related traffic and to inspect vehicles upon exiting.
- SYC will mandate that all construction-related trucks be Tier 4 certified by U.S. EPA standards and Jake Brakes would be turned off.
- Asphalt binder will be installed on the shoulder of Mill Road to prevent damage from tag axles.
- To minimize impacts to the surrounding community, truck trips for excavation will be limited to 7:00 am to 5:00 pm five days per week (Monday to Friday) and truck trips for construction will be limited to 7:00 am to 7:00 pm six days per week (Monday to Saturday) in accordance with §180-6 *Prevention of Noise – Standards* of the Town Code.
- The construction company engaged to complete the work has committed to utilize company multi-occupant vehicles to transport many of the construction workers to the site.
- The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. The Applicant will commit to quickly repairing any potholes that appear in the roadway during the construction activity to minimize the potential for vibrations that could affect existing structures. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it. Additionally, at the request of the Town, SYC would be willing to sign a corporate guarantee for the repair of any road damages to pre-development condition.

- Prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible.
- All trucks associated with the construction of the proposed action will be limited to traveling at 30 mph on Cox Neck Road/West Mill Road and all neighboring roads. The posted speed limit is 35 mph.
- During the construction period, Cox Neck Road/West Mill Road will be monitored daily to detect any rough surfaces or potholes that develop. The roadway imperfections will be corrected by forces employed by the applicant.
- Flaggers will be used for maintenance and protection of Traffic at locations where severe curves in the truck route or at intersections where turns are being made by project trucks that may require crossing of the yellow double barrier lines.

### **3.4 Aesthetic Resources**

#### **3.4.1 Existing Conditions**

##### ***Aesthetic Resources***

To evaluate the existing viewshed of the subject property and the surrounding area, site and area visits were conducted by PWGC in September 2020, March 2021, April 2021, and June 2021 with photographs taken on September 22, 2020, March 10, 2021, March 25, 2021, April 28, 2021, and June 16, 2021. Photographs taken during these site visits, with corresponding dates, are included in Appendix G.

##### **Subject Property**

Access to the subject property is from West Mill Road; however, the location at the eastern terminus of the road at Mattituck Creek and topography of this area limits the view of the SYC from the public roadway (see Photograph No. 1). As explained in Section 3.1.1 of this DEIS, the subject property is currently developed with a full-service marina with associated docks, support buildings, and a sales office. Five single-level accessory buildings with elevated roofs situated parallel to the waterfront along Mattituck Creek support the marina operation (see Photograph No. 2). At the northern extent of the marina is a two-story frame building with associated surface parking (see Photograph No. 3). The eastern portion of the marina operations includes all dock slips for boats with utility connections and fuel stations (see Photograph Nos. 4 through 6). Within the marina operations are also dry-docked boats and various equipment to support the movement and maintenance of the boats (see Photograph Nos. 7 through 9). At the southern extent of the marina is a wooded area and ancillary boat storage along with dock slips for commercial fishing boats, CCE FLUPSY units, and NYSDEC-regulated tidal

wetlands beyond the bulkhead (see Photograph Nos. 11 and 12). There is also a one-story single-family residence accessed via West Mill Road where the marina manager resides (see Photograph Nos. 13 through 15).

As described in Section 3.1.1 of this DEIS, there is undeveloped forested land on the western portion of the subject property, to the adjacent west of the operational marina, with steep slopes. Currently, the elevation in this area rises abruptly from 10± feet AMSL to 40± feet AMSL and then gradually increases to 50± feet AMSL at the western boundary of the subject property along West Mill Road (see Photograph Nos. 16 through 23). The existing forested land expands to the west for a distance of approximately 890 feet, comprising the 16.5±-acre R-80-zoned portion of the subject property. Approximately 11.62± acres of the 16.46±-acre M-II zoned portion of the subject property is undeveloped forested land.

Generally, the aesthetic character of the subject property is defined by its marina use along Mattituck Creek and its largely forested area (Coastal Oak-Beech Forest / Successional Southern Hardwood) (i.e., 17.27± acres) to the west of the existing marina.

### **Surrounding Area**

The aesthetic character of the area surrounding the subject property can be generally described as having flat topography along Mattituck Creek with steep heavily vegetated slopes on the western side of Mattituck Creek and relatively flat topography on the eastern side of Mattituck Creek (see Photograph Nos. 28 and 36 through 38). The Town's LWRP indicates the majority of the west side of Mattituck Creek is steeply sloped with residences at slope edges in heavily wooded areas to obscure their view from the water (Section II-J Reach 1-3). The western bank of Mattituck Creek, north of the subject property, includes commercial, public and private maritime uses, and one-to-two story single-family residences (See Photograph Nos. 26 through 28). There is a vacant restaurant immediately north of the subject property in addition to a two-story single-family residence (see Photograph Nos. 26 and 27). Along West Mill Road, north of the subject property at Mattituck Creek, is the Mattituck Commercial Dock (see Photograph No. 28) and the Mattituck Fishing station with approximately 40 recreational fishing boats. Further north, on the western bank of Mattituck Creek, are single-family residences and the NYSDEC Mattituck Creek Waterway Access Site (see Photograph Nos. 29 and 30). The eastern bank of Mattituck Creek, north of the subject property, includes private maritime uses with one-to-two story single-family residences with some docks leading to Mattituck Creek (see Photograph No. 36). To the east and south of the subject property are one-to-two-story single-family residences well-screened by vegetation along the banks of Mattituck Creek (see Photographs No. 37 and 38).

Immediately adjacent to the south of Building 1 on the subject property is a private two-story residence (5106 West Mill Road) (see Photograph No. 15). South of the subject property is a large lattice transmission tower with transmission lines traveling west to east across Mattituck Creek and extends above the existing trees in the surrounding viewshed (see Photograph No. 32). South of the subject property is Mill Road Preserve, a Town-owned walking trail through mature forest, and one-to-two-story single-family residences (see Photograph No. 32).

Along West Mill Road, to the immediate west of the subject property, are agricultural uses (see Photograph No. 39). To the southwest of the subject property along West Mill Road, are one-to-two

story single-family residences (see Photograph No. 40). The agricultural lands and single-family residences are heavily screened by the existing vegetation and are setback from West Mill Road.

Overall, views of the existing marina operations are well-screened by dense vegetation to the west. The forested undeveloped portion of the subject property and steep slopes obscure views of the marina operations from the west. However, from select views to the north, south, and east of the subject site, portions of the existing marina operations are visible. A description of the views follows:

- North: From the vacant Old Mill Restaurant and single-family residence on West Mill Road immediately north of the subject property entrance, Buildings 2 and 5 at SYC are visible (see Photograph No. 27).
- South: Two single-family residences at the northern terminus of North Drive have obstructed views of Buildings 7 and 8 at SYC (see Photograph Nos 18 and 34). The western undeveloped area of the subject property is visible from the southernmost trail of the Mill Road Preserve (see Photograph No. 31).
- East: The entire marina operation is visible from private residences on the east side of Mattituck Creek (see Photograph Nos. 24 and 25). However, views onto the interior portion of the upland area are obscured by existing forested areas and steep slopes.

#### ***Existing Viewshed / Zone of Visual Influence***

Photographs from various vantage points were taken to illustrate the existing viewshed from select properties adjacent to and within the subject property's zone of visual influence (ZVI), as required by the Amended Final Scope. A ZVI with a radius of 1,000 feet from the subject property was established to identify locations where the subject property could be visible. These viewpoints were then rendered with the proposed improvements to illustrate post-development visual changes. All viewpoints under existing conditions and post-development, are included in Appendix Q of this DEIS. A description of the existing conditions follows, and an analysis of the post-development changes is included in Section 3.4.2 of this DEIS.

- **Viewpoint 1 (Existing Conditions) - Representative view from private residences on east side of Mattituck Creek towards SYC, facing southwest**

This viewpoint depicts the existing view of SYC from private residences on the east side of Mattituck Creek. From this viewpoint, Mattituck Creek, select dock slips, the CCE FLUPSY units, and the bulkhead are visible. To the west of the bulkhead, the southeast corner of Building 7 and northeast corner of Building 8 are also visible. Upland of Buildings 7 and 8, the woodland area is visible as well as a large lattice tower with transmission lines traveling west to east across Mattituck Creek.

- **Viewpoint 2 (Existing Conditions) - View facing north from North Drive (located to the south of the subject property)**

This viewpoint depicts the views from North Drive looking north towards SYC. From this viewpoint, the woodlands on the upland portion of the subject property are visible and largely screens the existing SYC operational area.

- **Viewpoint 3 (Existing Conditions) - View from south of SYC, facing north on Mattituck Creek towards SYC**

This viewpoint depicts the views of SYC from the south. From this viewpoint, Mattituck Creek, select dock slips and the bulkhead are visible. To the west of the bulkhead, the eastern façade of Building 8 is visible along with the southern portion of Building 7. Upland of Buildings 7 and 8, the woodland portion of the subject property is visible.

- **Viewpoint 4 (Existing Conditions) - View from most southern trail on Mill Road Preserve towards SYC**

This viewpoint depicts the views from the most southern trail on Mill Road Preserve towards SYC. From this viewpoint, the woodland portion of the subject property is visible.

- **Viewpoint 5 (Existing Conditions) - View from 5106 West Mill Road towards SYC, facing south**

This viewpoint depicts the view of SYC from 5106 West Mill Road. From this viewpoint, the woodland portion of the subject property and the roofs of Buildings 7 and 8 are visible.

- **Viewpoint 6 (Existing Conditions) - View facing southwest from upland area of SYC property towards SYC**

This viewpoint depicts the views facing southwest from the upland area of SYC property towards SYC. From this viewpoint, the existing woodlands are visible.

- **Viewpoint 7 (Existing Conditions) - View facing southeast from upland area of SYC property towards SYC**

This viewpoint depicts views facing southeast from the upland area of the subject property. From this viewpoint, the edge of the upland slope is visible with some trees present with obscured views of Mattituck Creek, and the topography decreases to Building 8. The existing SYC operations are obscured by the change in elevation and Building 8. During leaf-off conditions, the residence on the east side of North Drive is visible. The eastern shoreline of Mattituck Creek is also visible with some residences along the waterfront.

- **Viewpoint 8 (Existing Conditions) - View from 4255 West Mill Road (Robinson-D'Aires House, Eastview Farm with support buildings, Society for the Preservation of Long Island Antiquities [(SPLIA) MK-18 towards SYC**

This viewpoint depicts views from 4255 West Mill Road towards SYC. From this location, the existing SYC operations are not visible due to changes in elevation and forested areas to the south obstructing the views.

- **Viewpoint 9 (Existing Conditions) - View from 5775 West Mill Road (Old Mill Restaurant, SPLIA MK-19) towards SYC**

This viewpoint depicts views from 5775 West Mill Road (Old Mill Restaurant) towards SYC. From this viewpoint, the main entrance to SYC and Building 2 are visible. However, the layout of SYC is such that Buildings 3 and 4 are not visible from this viewpoint as the buildings are set further west in an area obscured by tree cover. From this viewpoint, Building 2 obscures views of Buildings 5 through 8 as the property curves to the southwest around steep slopes and densely forested areas.

- **Viewpoint 10 (Existing Conditions) - View from 3380 West Mill Road (Old Water Tower, SPLIA- MK-20) towards SYC**

This viewpoint depicts views from 3380 West Mill Road (Old Water Tower) towards SYC. From this viewpoint, the existing SYC operations are not visible due to changes in elevation and forested areas to the east obstructing the views.

- **Viewpoints 11A, 11B and 11C (Existing Conditions) - Representative views from a kayak of typical yachts (44-feet, 68-feet, and 95-feet) at Inlet Entrance near Breakwater**

Viewpoints 11A, 11B, and 11C were taken from a kayak to capture current views of typical yachts of varying lengths (i.e., 44-feet, 68-feet, and 95-feet) at Inlet Entrance near Breakwater. The photographs provided were taken by Jeff Strong on a kayak in July 2021.

- **Viewpoint 12 (Existing Conditions) - Representative view from a kayak of a 95-foot yacht adjacent to the Old Mill Restaurant at the narrowest part of the Inlet**

Viewpoint 12 was taken from a kayak of a 95-foot yacht adjacent to the Old Mill Restaurant at the narrowest part of the Inlet. The photograph was taken by Jeff Strong on a kayak in July 2021.

- **Viewpoint 13 (Existing Conditions) - Representative view from a kayak of a 95-foot yacht in front of SYC dockage and buildings**

Viewpoint 13 was taken from a kayak of a 95-foot yacht in front of SYC dockage and buildings. Similar to Photographs 11A through 11C and 12, the photograph was taken by Jeff Strong on a kayak in July 2021.

### **3.4.2 Potential Impacts**

#### ***Proposed Landscaping***

As presented in Sections 1.2.4 and 2.4.2, site landscaping and retaining wall plantings are proposed. The landscaping schedule is broken up into four segments: upland (beyond top of the retaining wall), surrounding site at or above building elevation, retaining wall west, and retaining wall north.

The upland area beyond the top of the retaining wall includes plantings of Pitch Pine (*Pinus rigida*) at least four-to-five feet tall to screen the proposed buildings from surrounding views to the south, Lowbush Blueberry (*Vaccinium angustifolium*), and Switchgrass (*Panicum virgatum*). The proposed plantings in the adjacent area at or above building elevation south, east, and west of the concrete retaining wall for the two liquid propane tanks that would be located south of Building 9 would include Pitch Pine (*Pinus rigida*) and Lowbush blueberry (*Vaccinium angustifolium*). The northern and western portions of the retaining wall would include Shadbush (*Amelanchier canadensis*), Bayberry (*Myrica pensylvanica*), Staghorn Shadbush (*Rhus typhina*) and the following varieties of groundcover are also proposed: Virginia Creeper (*Parthenocissus quinquefolia*), Switchgrass (*Panicum virgatum*), Common Milkweed (*Asclepias syriaca*), and Groundsel Bush (*Baccharis halimifolia*). A small concrete retaining wall would be located south of Building 9 closer to Building 8 where two of the LP aboveground storage tanks are proposed. Portions of the Evergreen concrete retaining wall would be topsoil-filled to allow for seeding and use by bird species to promote growth in the trays that are built into the wall to create a “green” wall over a period of two-to-three years. Overall, the proposed landscape plan would improve species diversity on the subject property and softens the view of the modified slope from the east.

#### ***Proposed Lighting***

The proposed site lighting would consist of light poles and building fixtures. Specifically, as indicated on the *Details* sheet (see Appendix C), the proposed action includes three 14-foot lamp poles with LED fixtures (two at the above ground tanks between Buildings 7 and 10 and one south of Building 8 at the retaining wall); 38 wall scones at 14-feet above grade around the eastern and southern sides of Building 10 and the northern, eastern, and southern sides of Building 9, and western sides of Buildings 7 and 8; and 13 wall lights along the northern and western sides of Building 10 and along the western side of Building 9. Each lamp pole would include a shielded fixture such that all light would be directed downwards with no upward glare. To mitigate light trespass and glare, all lighting would be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The proposed lighting would comply with the lighting standards set forth in §172-5, as evaluated in Section 3.1.2 of this DEIS, and would be subject to the review and approval of the Town of Southold Building Department. Additionally, the proposed site lighting has been designed to illuminate the subject property in an efficient manner that would minimize nuisances from light intensity, glare and light trespass.

#### ***Viewpoints***

Upon implementation of the proposed action, the visual setting and aesthetic character of the site would remain as a maritime use with full-service marina and yacht operation with accessory buildings. The two proposed boat storage buildings would be situated to the west of Buildings 7 and 8, at a slightly

higher FFE. Specifically, the proposed buildings would be situated at Elevation 10 feet AMSL, which is two (2) feet above the FFE's for Buildings 7 and 8 (i.e., situated at Elevation 8± feet AMSL). Based on the architectural elevations provided by the architect, Jeffrey T. Butler, P.E., P.C. (see Appendix D of this DEIS), the proposed height of the buildings would be 39 feet-3 inches from grade to the eave and 45 feet-8 inches from grade to the top of ridge. The mean roof height is 42 feet-6 inches. With a proposed 10-foot AMSL FFE for both buildings, the top (mean height between eave and ridge) elevation of the buildings would be 55.67 feet ASML.

As noted in the 2020 Comprehensive Plan (page 32), a prominent identifying feature for the hamlet of Mattituck is Mattituck Creek which provides public waterfront access opportunities that are important to the Town as a maritime center. It is important to note SYC does not provide public waterfront access and none is proposed as part of the proposed action. The proposed action supports the importance of and reliance upon the maritime industry in the Town by providing overwintering storage for larger vessels. Additional details on the proposed action's consistency with community character is included in Section 3.5 of this DEIS.

As discussed in Section 3.5.2 of this DEIS, due to site topography, the proposed action requires soil and vegetation removal that would alter the tree line by setting it back an additional 500± feet from the current condition. Supplemental plantings along the retaining wall are proposed to create a "sealed edge" of vegetation. As illustrated on Renderings A-1, A-3, A-5, and A-13 (and evaluated further below), the existing visual setting of the SYC operations at the water's edge with woodland landward in the background would be maintained. The supplemental plantings would retain the existing natural and visual features at the property.

As presented in Section 3.4.1 of this DEIS, 13 viewsheds were assessed for the existing visual setting of SYC. To understand the potential visual impact of the proposed action on surrounding sensitive visual receptors, the same viewpoints were assessed with post-development structures rendered. The ZVI considers existing surrounding development and existing operations at the subject property as well as changes in topography that could impact the proposed action's visibility.

- **Rendering A-1: Post Development Viewpoint 1 - Representative view from private residences on east side of Mattituck Creek towards SYC, facing southwest**

As shown in Photograph No. 1 (Appendix Q), the current view of the subject property is of Mattituck Creek, limited operations in the southeast portion of the subject property, bulkhead, and portions of the woodland upland area.

As depicted on Rendering A-1 in Appendix Q, the post-development views would be similar to existing conditions. Mattituck Creek, the more southern dock slips, CCE FLUPSY units, and the bulkhead would remain visible. Buildings 6, 7, and 8 would obscure views onto the proposed buildings. Beyond the existing buildings, the upland woodland area is visible as well as a large lattice tower with transmission lines traveling west to east across Mattituck Creek. Changes to the visual setting include the introduction of a portion of the roof and top of the garage door of Building 10. Building 9 would not be visible. The impact to the visual setting of the subject property would be minimal.



- **Rendering A-2: Post-Development Viewpoint 2 - View facing north from North Drive single-family residential area south of the subject property**

As shown in Photograph No. 2 (Appendix Q), the current view of the subject property is of the woodland upland area and views of limited operations in the southeast portion of the subject property are obscured by the forested area and the topography.

As depicted on Rendering A-2 in Appendix Q, the post-development views would consist of the forested area to be retained south of the proposed action. Operations visible would include the southern façade of Building 9. Similar to the proposed action, views of existing Buildings 7 and 8 would remain visible.

- **Rendering A-3: Post-Development Viewpoint 3 - View from south of SYC, facing north on Mattituck Creek towards SYC**

As shown in Photograph No. 3 (Appendix Q), the current view of the subject property is of limited operations in the southeast portion of the subject property and Mattituck Creek.

As depicted on Rendering A-3 in Appendix Q, the post-development views would be similar to existing conditions. The select docks and bulkhead would remain visible as well as the eastern façade of Building 8 and southern portion of Building 7. Most of Buildings 9 and 10 would be obscured from view. However, the top of the eave for Building 9 would be visible to the southwest and most of the eastern façade and eave of Building 10 would be visible to the northwest. Furthermore, the northeastern corner of the Evergreen concrete retaining wall would be visible between Buildings 7 and 10. The impact to the visual setting of the subject property would be minimal.

- **Rendering A-4: Post-Development Viewpoint 4 - View from most southern trail on Mill Road Preserve towards SYC**

As shown in Photograph No. 4 (Appendix Q), the current view of the subject property is of the undeveloped upland heavily forested area. The marina operations and Mattituck Creek are obscured by the forested area and the topography.

As depicted on Rendering A-4 in Appendix Q, the post-development views would consist of the woodland area of the subject property that would not be disturbed and a portion of the western and southern façades and roof of Building 9, the roof and a portion of the southern façade of Building 10, and a portion of the western façade of existing Building 8. The cover in the setback area would remain. The impact to the visual setting of the subject property would be minimal.

- **Rendering A-5: Post-Development Viewpoint 5 - View from 5106 West Mill Road towards SYC, facing south**

As shown in Photograph No. 5 (Appendix Q), the current view of the subject property is the roofs of Buildings 7 and 8, and Mattituck Creek beyond.

As depicted on Rendering A-5 in Appendix Q, the post-development views would be similar to existing conditions. Views of portions of the roofs of Buildings 7 and 8 would remain. All woodland area between the property line and edge of disturbance would remain. However, the view southwest would include the roof of Building 10 and a portion of the northern façade of the building. Additionally, the top of the vegetation on the northern portion of the Evergreen concrete retaining wall would aid in obscuring views onto the proposed buildings. Overall, the viewshed change is not significant.

- **Rendering A-6: Post-Development Viewpoint 6 - View facing southwest from upland area of SYC property towards SYC**

As shown in Photograph No. 6 (Appendix Q), the current view of the subject property is of the existing slope and woodland area.

As depicted on Rendering A-6 in Appendix Q, the post-development views would consist of the eastern façades of Buildings 9 and 10 as well as the stone blend gravel area. The slope would no longer exist, and views of the woodland area would only be observed south of the proposed action.

- **Rendering A-7: Post-Development Viewpoint 7 - View facing southeast from upland area of SYC property towards SYC**

As shown in Photograph No. 7 (Appendix Q), the current view of the subject property is of the edge of the upland slope and obscured views onto the roof of Building 8 with Mattituck Creek beyond.

As depicted on Rendering A-7 in Appendix Q, the post-development views would consist of the limit of disturbance and vegetation on the top of the Evergreen concrete retaining wall would be visible with the roofs of Buildings 9 and 10. The roof of Building 8 would remain visible as would views of Mattituck Creek further east.

- **Post-Development Viewpoint 8 – View from 4255 West Mill Road (Robinson-D'Aires House, Eastview Farm with support buildings, Society for the Preservation of Long Island Antiquities [SPLIA] MK-18) towards SYC**

As shown in Photograph No. 8 (see Appendix Q), the subject property is not visible from this viewpoint under existing conditions due to changes in topography and would not be visible under the proposed conditions. As such, a post-development rendering was not prepared.

- **Post-Development Viewpoint 9 - View from 5775 West Mill Road (Old Mill Restaurant, SPLIA MK-19) towards SYC**

As shown in Photograph No. 9 (Appendix Q), the main entrance to SYC and Building 2 are visible from this viewpoint. However, the layout of SYC is such that Buildings 3 and 4 are not visible from this viewpoint as the buildings are set further west in an area obscured by tree cover. From this viewpoint, Building 2 obscures views of Buildings 5, 6, 7 and 8 as the property

curves to the southwest around steep slopes and densely forested areas. As such, a post-development rendering was not prepared.

- **Post-Development Viewpoint 10 - from 3380 West Mill Road (Old Water Tower, SPLIA-MK-20) towards SYC**

As shown in Photograph No. 10 (see Appendix Q), the existing SYC operations are not visible from this viewpoint due to changes in elevation and forested areas to the east obstructing the views. As such, a post-development rendering was not prepared. As such, a post-development rendering was not prepared.

- **Viewpoints 11A, 11B and 11C - Representative views from a kayak of typical yachts (44-foot, 68-foot, and 95-foot) at Inlet Entrance near Breakwater**

As shown in Photograph Nos. 11A, 11B, and 11C (see Appendix Q), yachts of varying lengths utilizing Mattituck Harbor under existing conditions would continue under the proposed action. The subject property is not visible from Mattituck Inlet and the proposed action would not be visible. Therefore, there would be no change under the proposed action. As such, a post-development rendering was not prepared.

- **Viewpoint 12 - Representative view from a kayak of a 95-foot yacht adjacent to the Old Mill Restaurant at the narrowest part of the Inlet**

As shown in Photograph No. 12 (Appendix Q), when a 95-foot yacht traveling down Mattituck Creek in front of Old Mill Restaurant under existing conditions, the view of Old Mill Restaurant is obscured and limited operations in the northern portion of the subject property are visible. This view would remain the same as part of the post-development views. As such, a post-development rendering was not prepared.

- **Rendering A-13: Post-Development Viewpoint 13 (Existing Conditions) - Representative view from a kayak of a 95-foot yacht in front of SYC dockage and buildings**

As shown in Photograph No. 13 (Appendix Q), when a 95-foot yacht is docked at SYC, the current view of the subject property is of limited operations in the central portion of the subject property, woodland upland area, and the residence at 5106 West Mill Road.

As depicted on Rendering A-13 in Appendix Q, the post-development views would be similar to existing conditions along the foreground as views would continue to be of the existing docks, the bulkhead, and Buildings 7 and 8. However, between Buildings 7 and 8, the eastern façade of Building 10 would be visible inclusive of the garage door and roof and a portion of the eastern façade of Building 9 would be visible inclusive of the garage door and roof. Views of the upland area would be modified as the existing slope would be removed and replaced with Buildings 9 and 10.

Although the views of the subject property would be altered as a result of the proposed action, they would not be significant as depicted by the photo-simulations, landscaping plans, and architectural elevations. Buildings 7 and 8 would effectively screen most of the proposed Buildings 9 and 10 from properties to the east of the subject property.

The proposed action would expand in line with the existing scale of development on the subject property. The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. The proposed Evergreen concrete retaining wall as well as the higher elevation of areas north, west, and south of the proposed action would also screen much of the views of Buildings 9 and 10. Although the intent of the proposed retaining wall is for slope stabilization, the proposed vegetation along the retaining wall would create a green wall such that it would blend into the existing landscape.

### ***Impacts of Proposed Haul Road***

Prior to the commencement of Phase 1 of construction in mid-December 2023, a temporary haul road would be constructed extending 1,454± feet east from West Mill Road through the western upland portion of the subject property towards the existing upland slope behind Building 8 (see *Excavation Phasing Plan* and *Haul Road Plan* in Appendix C and Photograph No. 41). To mitigate potential aesthetic impacts to the single-family residence located at 4105 West Mill Road, the entrance to the haul road has been shifted approximately 145 feet further south from this single-family residence (see *Excavation Phasing Plan* in Appendix C and see Photograph No. 42).

As the western portion of the subject property is largely forested with mature trees, the existing vegetation surrounding the proposed haul road inclusive of dense bushes and mature trees, which would be retained, would obscure clear internal views of the haul road and construction activities from surrounding residences (i.e., those residences located along the west and east side of West Mill Road as well as the residences along North Drive, south of the subject property). As discussed in Section 2.2.2 and 2.4.2, the proposed project would shift the eastern edge of the existing forests up to 520-ft to the west. The new forest edge is likely to result in an intensification of the existing edge effect and could result in colonization and increase growth of invasive plants, reduction in habitat quality for nesting songbirds due to lights in the parking areas and buildings, and increased levels of noise and disturbance resulting from human activities, and increased abundance of predators and invasive competitors. To minimize impacts, the proposed action includes the replanting of 27,333 SF of native trees and shrubs along the new forest edge and the proposed retaining wall features native ground-vegetation, shrubs, and small trees, that would serve to further reduce the intensity of the new forest edge. Furthermore, the nearest single-family residence located at 5106 West Mill Road is located approximately 259 feet from the haul road at the closest point. It is noted that the temporary haul road would only be utilized during Phase 1 of construction which is proposed to be completed within approximately five-to-six (5-6) months.

The stabilized RCA shoulder along West Mill Road and proposed entrance to the temporary haul road has been shifted approximately 145 feet to the south of the single-family residence located at 4105 West Mill Road to minimize noise during construction. However, this relocation has an aesthetic benefit. The

existing vegetation to remain along the western boundary of the subject property on West Mill Road would obscure clear views of the stabilized RCA shoulder from this residence. The haul road entrance and stabilized RCA shoulder would be visible from passersby along West Mill Road but would be limited to 100 feet in width (see Photograph Nos. 42 and 43). Furthermore, the existing forested areas located to the north and south of the haul road entrance would be retained and would obscure clear views of the entrance and stabilized RCA shoulder to passersby to the north and south of the proposed entrance (see Photograph No. 44).

As noted in Section 1.2.1 of this DEIS, the haul road internal to the subject property has been shifted approximately 29 feet to the west to mitigate potential noise and visual impacts to the residence located at 5106 West Mill Road. At its nearest point, the haul road would be setback approximately 259 feet southwest to the nearest structure (i.e., the pool) on the single-family residence located at 5106 West Mill Road. As the existing forested woodland area would be maintained within the approximate 259-foot setback and construction vehicles would turn left away from the single-family residence, it is not expected that the haul road and construction vehicles would have a significant adverse aesthetic impact on this single-family residence.

### **3.4.3 Proposed Mitigation**

The following mitigation measures have been included in the proposed project to effectively minimize or eliminate any potential adverse visual impacts:

- The relocation of the proposed haul road to increase the separation distance to the nearest residential property at 5106 West Mill Road will minimize the visual impacts of truck activity during construction.
- To mitigate light trespass and glare, all lighting will be shielded and directed downwards at an intensity compliant with Chapter 172 of the Town Code (Outdoor Lighting). The proposed lighting will also comply with the lighting standards set forth in §172-5.
- To mitigate visual impacts from the proposed action to the residence at 5106 West Mill Road, the existing tree line at the southern property boundary will be maintained as a natural visual buffer to operations at SYC.
- Supplemental plantings along the retaining wall will create a “sealed edge” of vegetation.
- The edge of disturbance has been moved closer to Building 9 to increase the distance between the proposed action and Mill Road Preserve.
- The proposed grading program and Evergreen concrete retaining wall require the removal of soils from the subject property. This results in a design where the proposed buildings are situated at similar elevations to the existing buildings and are masked and screened from views to the East and along Mattituck Creek by the existing buildings.
- The proposed Evergreen retaining wall will provide visual mitigation when it is vegetated. It will blend in with the surrounding woodland and landscape.

### **3.5 Community Character**

#### **3.5.1 Existing Conditions**

The SEQR Handbook provides guidance on determining whether an impact upon community character may be significant (page 84). The SEQR Handbook states:

*Community character relates not only to the built and natural environments of a community, but also to how people function within, and perceive, that community. Evaluation of potential impacts upon community or neighborhood character is often difficult to define by quantitative measures. **Courts have supported reliance upon a municipality's comprehensive plan and zoning as expressions of the community's desired future state or character. (emphasis added)** See the discussion of the case of *Village of Chestnut Ridge v. Town of Ramapo*, 45 AD3d 74 (2d Dept 2007) in Chapter 9, *Notable Court Decisions Under SEQR*. **In addition, if other resource-focused plans such as Local Waterfront Revitalization Plans (LWRP), Greenway plans or Heritage Area plans have been adopted, those plans may further articulate desired future uses within the planning area. (emphasis added)***

Based on the above, community character is determined by the built, natural and social environment, as well as the prevailing community plans (i.e., 2020 Comprehensive Plan and Town LWRP) and zoning for the Town of Southold. As indicated in Section 3.1.1 of this DEIS and illustrated on Figure 4 in Appendix A, the land uses within a 1,000-foot radius of the subject property include maritime, agricultural, recreation, open space, and single-family residential uses. Review of the Town of Southold zoning map indicates the zoning within 1,000 feet of the subject property includes R-80 and M-II zoned properties to the north, R-80 to the south, R-80 and M-II to the east and Residential Low-Density (one-acre minimum) (R-40) and R-80 to the west. Based on site surveys, aerial photographs, and Town of Southold records, the zoning is generally consistent with the land uses within 1,000 feet of the subject property (see Figures 3 and 4 in Appendix A).

Review of the Town of Southold zoning map indicates the zoning is generally consistent with the land uses within 1,000 feet of the subject property (see Figures 3 and 4 in Appendix A). The zoning within 1,000 feet of the subject property includes R-80 and M-II zoned properties to the north, R-80 to the south, R-80 and M-II to the east and Residential Low-Density (one-acre minimum) (R-40) and R-80 to the west. Review of the Town of Southold Tax Map Inquiry indicates that the two parcels to the north of the subject property, zoned M-II similar to the subject property, have a Town land use designation of industrial. However, the Town land use map indicates the subject property has a Town land use designation of commercial although the parcels to the north and the subject property are used in a similar manner (i.e., marinas with commercial and recreational docking). Additionally, the northernmost parcel to the east of the subject property, zoned M-II similar to the subject property, has a Town land use designation of industrial and is also used in a similar manner as SYC (i.e., commercial fishing dock and loading pier operated by the King Family). The other parcels zoned M-II south of the King Family commercial fishing dock and pier are residentially developed and have a Town land use designation of medium density residential. The properties zoned R-80 to the west of the subject property are agricultural uses.

Based upon the diversity of land uses and zoning designations within the 1,000-foot radius of the subject property, the community character of the surrounding area is likewise varied. The community character of the surrounding area is representative of a typical waterfront suburban setting with a commercial and maritime component, recreational component and residential component.

#### 2020 Comprehensive Plan

According to the 2020 Comprehensive Plan, the development patterns of the Town of Southold “were guided by agriculture and maritime industries centered on waterways and overland transportation routes. The Town’s overall character is anchored in the scenic quality of its built environment, landscapes, and waterscapes” (page 143). Thus, the community character of Mattituck Inlet and Mattituck Creek, including the subject property and those areas surrounding both the Inlet and Creek, have had an established commercial and maritime component as rooted in the Town’s overall character.

Several goals of the 2020 Comprehensive Plan as it relates to community character, including the protection of cultural resources, preservation of the quality of life in residential neighborhoods, protection of natural heritage, and protection of the unique character of the individual hamlets are relevant to the current operations at the subject property. As discussed throughout this DEIS, maritime uses in the area surrounding Mattituck Creek and Mattituck Inlet have persisted and are considered maritime centers for over 60 years. SYC has existed at the subject property for 60 years and maintains the traditional maritime uses synonymous with the Town of Southold. Furthermore, SYC ensures that local boats and yachts can remain on local waters and enjoy the waters of the Town of Southold. The existing buildings appropriately reflect the maritime nature of commercial uses along Mattituck Creek and existing operations adhere to prevailing noise and lighting requirements in the Town Code. Additionally, the subject property has not been identified by OPRHP as having historic, cultural, or archaeological significance nor is the subject property identified as a local cultural and archaeological resource. SYC has existed amongst residential and agricultural uses for 60 years and the surrounding area integrates a variety of land uses. The existing operations have improved upon the protection and restoration of the ecological quality of Mattituck Creek as the CCE FLUPSY units have improved water quality since implementation in 2017, as discussed in Section 2.1.2 of this DEIS. Overall, the existing operations at SYC support the community character of the Town of Southold. The way the proposed action continues to support these goals is discussed in Section 3.1.2 and summarized in Section 3.5.2 below.

#### LWRP

As noted in Section 1.3.2 of this DEIS, Mattituck Inlet is the only harbor fronting the Long Island Sound in the Town and was identified as one of ten maritime centers on Long Island in the LISRCMP. The areas surrounding Mattituck Inlet and Mattituck Creek are identified in the Town’s LWRP as an important maritime center as all water-dependent uses within the Reach are concentrated on Mattituck Inlet and Mattituck Creek (Section II D-5 and Section II-J Reach 1-3). Furthermore, the areas surrounding Mattituck Inlet and Mattituck Creek contain steeply sloped forested areas. As discussed in the Town’s LWRP and in Sections 3.1.1 and 3.4.1 of this DEIS, the majority of the west side of Mattituck Creek is steeply sloped with residences along slope edges in heavily wooded areas which obscures views of these residences from Mattituck Inlet and Mattituck Creek (Section II-J Reach 1-3). The density of residential development and agricultural uses on the west side of Mattituck Creek are

heavily screened by the dense tree cover. The east side of Mattituck Creek contains heavily wooded areas with residences concentrated along the waterline. The heavily wooded areas are not steeply sloped as compared to the west side of Mattituck Creek and gently slopes upwards from the creek.

The community character of the immediate area surrounding the subject property within 1,000 feet can be described as varied with a residential neighborhood to the south, east (beyond Mattituck Creek) and west, agricultural uses to the west, established maritime uses (both commercial and recreational) to the east and north, residential and open space to the north, and recreational and residential uses to the south.

### **3.5.2 Potential Impacts**

While the proposed action would increase the building area on the subject property, the overall proposed density complies with the bulk and dimensional requirements set forth for the M-II zoning district as presented in Section 3.1.2 of this DEIS. Additionally, the proposed action requires the modification of land, soil, topography, tree cover and soil material; however, the character of the subject property for maritime use would be maintained. The existing pattern of maritime uses with residential uses landward of Mattituck Creek and interspersed along the water's edge would still be maintained.

Upon project implementation, the tree line would be setback for a distance of approximately 500 feet. As illustrated on Renderings A-1, A-3, A-5, and A-13 (see Appendix Q), the existing visual setting of the SYC operations at the water's edge with woodlands landward in the background and the tree line would be maintained.

The proposed buildings would be constructed behind Buildings 7 and 8 perpendicular to Mattituck Creek such that the length and mass of the proposed buildings would not be visibly obtrusive to surrounding properties located along Mattituck Creek. Furthermore, the proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site.

To accommodate the proposed action, 5.51± acres of the existing forested land (Coastal Oak-Beech Forest / Successional Southern Hardwood) on the western portion of the subject property would be removed. While the proposed action would remove a portion of the existing forested land, 11.76± acres of forested area on the western portion of the subject property would remain. The proposed action would modify the existing topography on-site to achieve a level building area and thus, would modify the existing tree line west of Buildings 7 and 8 on the subject property. Upon project implementation, the tree line would be setback for a distance of approximately 500 feet. As 11.76± acres of forested land (Coastal Oak-Beech Forest / Successional Southern Hardwood) would remain on the western portion of the site and the tree line would be minimally setback, the subject property would continue to provide a rural aesthetic and character for the surrounding area upon project implementation.

The proposed action would be consistent with the community character of the surrounding area, including to boaters and others traversing the waters of Mattituck Creek and Mattituck Inlet. As explained in Section 3.5.1 of this DEIS, Mattituck Creek has an established maritime and commercial component. As part of these components, buildings are present along the creek to support the maritime and commercial uses of this area. As such, the construction of two additional buildings on



the subject property, which is currently improved with seven (7) buildings for the existing maritime use, is consistent with the community character of the subject property and surrounding area. It is noted that during boating season (i.e., June through September), the proposed two buildings would be empty (or largely empty as some boat owners may elect not to launch their boats in a particular season) and there would be no activity occurring on that portion of the subject property. Additionally, as described in this section of the DEIS above, the proposed buildings would be constructed behind Buildings 7 and 8 such that the proposed buildings would not be visibly obtrusive to passersby traversing Mattituck Creek. The proposed buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves) such that it would blend with the aesthetics of existing development on-site. As such, implementation of the proposed action would not have a significant adverse impact on community character for boaters traversing Mattituck Creek as similar buildings currently exist along the creek, on the subject property and are part of the established maritime and commercial uses in this area.

As discussed in the TIS in Appendix O and summarized in Section 3.3 of this DEIS, the arrival and departure of the projected 11 new employees to and from the marina would be the only additional traffic post-development, which is a negligible amount of additional traffic. The actual presence of the stored vessels creates little new traffic except the random drop-off and pickup of a stored vessel by an owner or the owner's crew at almost any time during the day. These projected small number of trips for the proposed action would be imperceptible and would have a negligible traffic impact on Cox Neck Road/West Mill Road.

#### Consistency with the 2020 Comprehensive Plan and LWRP

As indicated in Section 3.5.1 of this DEIS, the SEQR Handbook provides guidance on determining whether an impact upon community character may be significant. Community character is determined by the built, natural and social environment, as well as the prevailing community plans (i.e., 2020 Comprehensive Plan and Town LWRP) and zoning for the Town of Southold.

As indicated in the 2020 Comprehensive Plan, the Vision Statement for the Town of Southold is, "future planning shall be compatible with existing community character while supporting and addressing the challenges of continued land preservation, **maintain a vibrant local economy**, creating efficient transportation, promoting a diverse housing stock, **expanded recreational opportunities** and **protecting natural resources**" (page 1)(**emphasis added**). The proposed action is supportive of several components of the Town's vision statement including improving the economy, expanding recreational activities, and protecting natural resources. Siting the storage buildings at SYC is protective of the maritime culture associated with the Town of Southold as it would provide indoor winter storage for boaters on local waters at a facility that has existed along Mattituck Creek for over 60 years. Constructing and operating winter boat storage buildings would bring additional jobs and a new tax revenue stream to the Town of Southold. In addition to direct benefits to the Town, the Applicant is responding to a market demand for larger boat owners looking for local indoor winter storage. Furthermore, this location provides waterfront access with suitable draft (i.e., depth of water), has the existing infrastructure required to lift and move boats of the lengths expected, and of particular importance, the zoning that permits the proposed use. As a Marine-II zoned site, the Town Board has determined this location to be suitable for the permitted use.

The 2020 Comprehensive Plan further indicates in Chapter 5 (Community Character) at Goal 5, Objective (A)(2) that in the hamlet of Mattituck/Laurel, “revitalize(ing) Mattituck Inlet into a recreational and commercial hub,” (page 15 in Chapter 5) is important and that protecting the maritime culture and industry is critical to preserve the overall character of the Town of Southold. The 2020 Comprehensive Plan identifies that reconnecting the waterfront to the Love Lane business district and updating and implementing the Harbor Management Plan are two goals within the hamlet. The proposed action would not only maintain a current maritime use that has persisted at the subject property for 60 years but would also respond to a market demand for winter storage of larger vessels. As indicated in Section 3.4 of this DEIS, while the proposed development would require the vegetation and soil removal, the existing tree line and supplemental plantings effectively maintain the current viewshed of maritime uses interspersed with residential land uses and recreational/open space. As such, the proposed action would be protective of scenic and natural resources.

As address in Table 31 in Section 3.1.2 of this DEIS, the proposed action is consistent with the applicable recommendations of the LWRP set forth for the developed coast, natural coast, public coast, and working coast.

#### Regional Impacts

The regional impacts of the construction-related truck activity for the entire route have been expressed as a potential issue of concern to the Town of Southold Planning Department. As the exact destination for the excavated material has not yet been determined for reasons explained in this DEIS, the assumed route includes trucks exiting the subject property and utilizing Mill Road, Cox Neck Road, Sound Avenue, Northville Tpke, CR 58 and then to the LIE. As evaluated in Section 3.3 (Transportation), Section 3.7 (Noise), Section 3.10 (Construction-Related Impacts), and Section 3.11 (Archaeological and Cultural Resources), the proposed action would not result in significant adverse traffic, noise, or vibration impacts associated with construction-related activities or operations. Additionally, mitigation measures have been identified for the protection of structures and avoidance of impacts to roadways.

Overall, based on the above, no significant adverse community character impacts would result from the proposed action.

#### **3.5.3 Proposed Mitigation**

The proposed action has incorporated the following measures to effectively mitigate or eliminate any potential adverse impacts to the community character:

- The siting of the proposed buildings at elevations similar to the existing buildings preserves the long-standing maritime views along Mattituck Creek.
- The proposed grading program and Evergreen concrete retaining wall require the removal of soils from the subject property. This results in a design where the proposed buildings are situated at similar elevations to the existing buildings and are masked and screened from views to the east and along Mattituck Creek by the existing buildings.

- The proposed Evergreen retaining wall will blend in with the surrounding woodland and landscape.

### **3.6 Open Space and Recreation**

#### **3.6.1 Existing Conditions**

The Town of Southold offers a variety of land-based and water-based recreational opportunities within its jurisdiction that include but are not limited to parks, preserves, and bike routes. Through the provision of these open space and recreational opportunities, the Town considers the needs, preference, and financial abilities of the residents and visitors of Southold. Within the hamlet of Mattituck, there is approximately 240 acres of open space and recreational areas are operated by the Mattituck Park District, Town of Southold, Suffolk County, and New York State.<sup>51</sup>

Specifically, within the 1,000-foot radius of the subject property as discussed in Section 3.1.1 of this DEIS and illustrated on Figure 4 in Appendix A, there are three passive and active public open space and recreational areas:

- Mattituck Harbor – The Town's LWRP identifies Mattituck Harbor as being owned by both NYSDEC and the Town. Mattituck Harbor extends 2.25± miles south from Long Island Sound to the hamlet of Mattituck and includes Mattituck Inlet and Mattituck Creek. Mattituck Inlet is approximately 100 feet wide, and Mattituck Creek is approximately 80 feet wide throughout. Mattituck Harbor has two jetties at Mattituck Inlet, the east which was constructed in 1906 and the west jetty was constructed in 1938. As excerpted from the Town's LWRP, Mattituck Harbor is "... the only harbor fronting on Long Island Sound. It is both a recreational and commercial port and is the site of one of the Town's largest concentrations of marine facilities, second only to Greenport Village." (Section II – J Reach 1-3). Furthermore, "Mattituck Inlet provide[s] the most suitable and appropriate location[s] for new or expansion of existing water-dependent commercial and industrial uses." (Section II – J Reach 1-4). Additionally, the Long Island Sound Comprehensive Management Program (NYSDOS, 1999) identifies Mattituck Inlet as one of ten maritime centers on Long Island.

The Town's LWRP identifies recreational boating as an important use of the Town's waters and that Reach-1 (Mattituck Inlet) has a high concentration of the Town's recreational boating activity as it is the only harbor fronting Long Island Sound and all water-enhanced uses within the Reach are concentrated in Mattituck Inlet and Mattituck Creek (Section II D-5 and Section II-J Reach 1-3).

As of the LWRP's initial adoption in 2004 and amended LWRP adopted in 2011, there were an estimated 3,370 to 3,530 docking facilities within the Town of Southold (Section II D-5). Specifically, within Mattituck Inlet and Mattituck Creek, the existing marinas provide approximately 300 boat slips (Section II-J Reach 1-4). As discussed in the Boat (Vessel) Study, see Appendix M, it is estimated approximately 547 boats are active in Mattituck Creek on a peak season day. While not publicly accessible, there are approximately 117 privately owned docks

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<sup>51</sup><http://www.southoldtownny.gov/DocumentCenter/View/7856/Southold-Town-Comprehensive-Plan-Appendices-Vol-2>

along Mattituck Creek for those property owners to access Mattituck Creek and Mattituck Inlet. As discussed in the Boat (Vessel) Analysis (see Appendix M), the main user groups of Mattituck Creek include recreational and commercial boaters, personal watercraft (PWCs), as well as unmotorized water sports (i.e., kayaks and SUPs). There are currently three (3) marinas on Mattituck Creek, including the subject property (SYC), the Strong's Water Club (also owned by SYC), and Mattituck Inlet Fishing Station. Boaters can also access Mattituck Creek via three ramps: the Mattituck Creek Waterway Access Site (owned by the NYSDEC) located north of the subject property at Mattituck Inlet and two ramps on North Road Inlet (owned by the Town of Southold and Mattituck Park District) located south of the subject property at the southern terminus of Mattituck Creek. The existing operations are visible from Mattituck Harbor when traveling north and south of SYC in close proximity.

- Oregon Marsh State Tidal Wetlands – The Town's LWRP identifies these 28± acres of tidal wetlands as being owned by NYSDEC and is part of the larger Mattituck Inlet Wetland and Beaches wetland area, south of Bailie Beach Park, that is designated as Significant Coastal Fish and Wildlife Habitat. This area is located 0.06-mile northeast from the subject property. This is a passive open space area accessible to the public by NYSDEC permit which permits nature study and observation. These wetlands are visible from boats on Mattituck Creek and the local roads on the east side of Mattituck Creek (Section II-J Reach 1-14). The existing operations at SYC are visible from this location when facing southwest.
- Mill Road Preserve – Mill Road Preserve is owned and maintained by the Town of Southold. This active open space and recreation area abuts the southeast boundary of the R-80 zoned portion of the subject property and is approximately 27 acres of grassland/shrubland and mature woodland and includes a parking lot at the trailhead and two main hiking trails. The residents of Southold and visitors to the Town have access to this resource. It is assumed the highest volume of use for the trails is between April and September 30<sup>th</sup>. Under existing conditions, in relation to its view of the existing operations of SYC, no other recreational areas identified in the Town's LWRP are within 1,000 feet of the subject property.

Pursuant to the Town's LWRP, "[a]ll marinas in Southold are privately owned and operated, although the majority is open to the public for the payment of a fee." (Section II D-8). SYC adheres to this, and the public can dock or store their boats and yachts at the facility for a fee.

Section 3.6.2 of this DEIS evaluates the potential impact of the proposed action on the aforementioned open space and recreational resources.

### **3.6.2 Potential Impacts**

#### ***Impacts to Mattituck Harbor***

As discussed in Section 3.4.2 of this DEIS and depicted on Rendering A-3 in Appendix Q, the post-development views of SYC from the south along Mattituck Creek would be similar to existing conditions. Select docks and the bulkhead would remain visible as well as the eastern façade of Building 8 and southern portion of Building 7. Most of Buildings 9 and 10 would be obscured from view. However, the top of the eave for Building 9 would be visible to the southwest and most of the

eastern façade and eave of Building 10 would be visible to the northwest. Furthermore, the northeastern corner of the Evergreen concrete retaining wall would be visible between Buildings 7 and 10. Additionally, as discussed in Section 2.2.2 of this DEIS, the proposed action would not disrupt the existing tidal flows or depths of Mattituck Harbor nor impact the existing user groups of Mattituck Harbor. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Mattituck Harbor. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. The proposed action would benefit Mattituck Harbor as it would continue to support the boating community as it would allow owners of larger vessels the option of climate-controlled storage rather than transport to warmer waters for the winter months. Therefore, no significant adverse impacts to Mattituck Harbor are anticipated.

#### ***Impacts to Oregon Marsh State Tidal Wetlands***

Use of this passive open space would remain unaffected by the proposed action. During operation, the proposed action would only introduce activity at SYC during the early spring (April-May) and late fall (October-November) that would not be discernible from the existing conditions. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Oregon Marsh State Tidal Wetlands. There would be no new impact on Oregon Marsh State Tidal Wetlands from April to September 30<sup>th</sup>, which is likely to be a time when NYSDEC issues the most permits for its use. Therefore, no significant adverse impacts to Oregon Marsh State Tidal Wetlands are anticipated.

#### ***Impacts to Mill Road Preserve***

Mill Road Preserve is accessible year-round to both residents and visitors to the Town of Southold. It is expected the highest volume of use for the trails would remain the same as existing conditions, between April and September. During construction, which is anticipated to commence in mid-December 2023 and be completed in October 2024, there would be a slight increase in activity during the timeframe during which the trails are frequently used. As discussed in Section 3.7.2, construction noise would be of temporary nature and all noise impacts would cease upon completion. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code and the truck activity associated with excavation would be limited to the weekdays. Additional operations are limited to boats being taken out of and put into the creek during certain months and operational noise is not expected to have significant adverse effects to those recreational users within Mill Road Preserve.

As discussed in Section 2.4.2 of this DEIS, the existing forest edge of the Mill Road Preserve would be altered as a result of the proposed action. The ecological community composition of Mill Road Preserve is comparable to the proposed action. The proposed action would result in an intensification of use within the existing forest edge as edge effects would be shifted to approximately 70 feet from the shared property boundary with the subject property in the northeast corner of Mill Road Preserve. The effects of the edge would extend approximately 200 feet in to Mill Road Preserve. However, as indicated in the ecological assessment, the proposed action would not result in significant adverse impacts on the forest habitat quality for Mill Road Preserve.

The highest volume of activity at SYC is during the boating season, which is March 15 through September 15. During this time, boats are transported to and from Mattituck Harbor via travelifts, boaters, fishermen, and CCE FLUPSY operators access the floating docks, and boaters utilize the pump-out services and fueling station. Upon implementation of the proposed action, this high volume of activity during this season under the proposed action would remain the same as existing conditions and corresponds with the highest volume of use for the trails.

Off-season activity at SYC, from approximately September 15 through March 15, includes boat maintenance and repairs which would continue upon implementation of the proposed action. As part of the proposed action, additional activity at SYC during the early spring (April-May) and late fall (October-November) would only be for the transporting of the yachts to and from the storage buildings and Mattituck Creek. From Mill Road Preserve, the addition of this activity would not be discernible from existing conditions and would occur when the trail is not frequently used. As indicated in Viewpoint 4 discussed earlier in Section 3.4.2, post-development views would consist of the woodland area of the subject property to not be disturbed and a portion of the western and southern façades and roof of Building 9, the roof and a portion of the southern façade of Building 10, and a portion of the western façade of existing Building 8. The cover in the setback area would remain.

The proposed action would not alter the public's enjoyment of the Town-owned preserve property during all phases of the action as there would be no new impact on Mill Road Preserve from April to September 30, which is likely to be a time when the trails are most frequently used. Overall, based on the above, no significant adverse impacts to Mill Road Preserve are anticipated.

### ***Impacts on Vessel Traffic***

As explained in the Boat (Vessel) Study, it is estimated that approximately 547 boats are active in Mattituck Harbor on a peak season day. As concluded in the Boat (Vessel) Study, the proposed action would increase boats in the off-peak season (i.e., April – May for yachts returning to the water and October – November for yachts arriving to SYC for storage) for a 12-week timeframe in the spring and fall. As such, this averages to an increase of seven boats per week or one-to-two 0.48 boat trips during this off-peak time. This increase is nominal and would not inhibit other maritime uses on Mattituck Harbor. As the vessel traffic would be comparable to existing conditions, it is not anticipated the proposed action would alter the ability of personal watercrafts and non-motorized watersports, such as kayaks and SUPs, to navigate within Mattituck Harbor. Viewpoints 12 and 13 in Appendix Q indicate navigability within Mattituck Harbor is not impacted by larger vessels as they were taken from the perspective of a kayak with a 95-foot yacht present adjacent to the existing SYC operations. Additionally, as noted in Section 2.2.2, many of the yachts to be accommodated by the proposed action are anticipated to be existing boats utilizing local waters customers electing to store their yachts in a

climate-controlled facility closer to home rather and eliminates the need to relocate the vessel to warmer climates for winter storage. Therefore, no significant adverse impacts to vessel traffic on Mattituck Harbor are anticipated.

### ***Impact to Forest Edge***

As indicated in Section 2.4.2, the proposed project would shift the eastern edge of the existing forests up to 520-ft to the west. The potential edge effects and habitat degradation in the retained forests on the subject property and the Town of Southold Mill Road Preserve would be minimized with the proposed replanting of 27,333 SF of native trees and shrubs along the new forest edge. Additionally, the proposed retaining wall features native ground-vegetation, shrubs, and small trees, that would serve to further reduce the intensity of the new forest edge.

### ***Impact to Community Character***

As discussed in Sections 3.1.2 and 3.5.2, Mattituck Harbor is one of 10 maritime centers on Long Island and maritime uses at the subject property have persisted for over 60 years. The proposed action would be consistent with the community character of the surrounding area, which includes boaters and others traversing the waters of Mattituck Creek and Mattituck Inlet as well as buildings present along the creek to support the maritime and commercial uses of this area. Therefore, Mattituck Creek has an established maritime and commercial component. The proposed action would contribute to the existing maritime character of the subject property and surrounding area. To maintain consistency with the existing six (6) storage buildings and blend with the overall aesthetics at SYC, the two proposed boat storage buildings would be constructed with the same material as the existing buildings (i.e., blue siding with white trim windows and eaves).

South of SYC are residential uses along North Drive. As shown on Rendering A-2 in Appendix Q, the post-development views would consist of the forested area to be retained south of the proposed action, the stone blend pavement proposed south of Building 9, and the southern façade of Building 9 visible from the northern terminus of North Drive. Similar to the proposed action, views of existing Buildings 7 and 8 would remain visible. To buffer the views onto the proposed buildings, supplemental plantings are proposed at the southern property boundary. Based on the above, no significant adverse impacts to the community character of Mattituck Harbor are anticipated.

### **3.6.3 Proposed Mitigation**

The proposed development would not result in any significant adverse impacts to open space and recreation as the storage buildings are not used actively year-round and there would not be an intensification of the use during the summer months. As a support business to the recreational boating industry, the proposed action is expected to have a beneficial impact on increasing the availability of storage for large yacht owners. The proposed action has incorporated the following measures to effectively mitigate or eliminate any potential adverse impacts to open space and recreational resources during construction and post development:

- The excavation phases will limit soil removal to the weekdays so as to not disrupt weekend visits to the Town Preserve.

- Supplemental plantings proposed at southern property line will buffer the viewshed from residences to the south of subject property.

### **3.7 Noise**

#### **3.7.1 Existing Conditions**

##### ***Introduction***

SoundSense, the acoustical engineering firm for the proposed action, has prepared an Acoustic Report to evaluate the existing acoustic conditions at the subject property, as well as the analysis of the expected acoustic impacts of the proposed development. The Acoustic Report incorporates all of the required elements included in the Amended Final Scope dated April 5, 2021. A summary of the Acoustic Report follows and the report in its entirety is included in Appendix R of this DEIS.

##### ***Methodology***

The acoustic analysis included the collection of existing sound level readings at the subject property as well as readings along the planned truck route for the excavation and construction phases. These existing sound levels served as the background sound levels for the area that were incorporated into all noise predictions completed for the proposed project. The measured sound levels were used in conjunction with: (1) the traffic data generated in the TIS to assess the potential increases in traffic noise both during construction and in the Build condition, and (2) the equipment types and utilization factors provided by Red Rock Industries to develop a construction noise model. Any potential increases in sound levels at the receiving locations evaluated due to increased vehicle/truck passbys, construction activities, and final sound levels with the new development have been considered for the proposed project. Calculations were completed using SoundPLAN Version 8.2 acoustic modelling software (SoundPLAN). Traffic calculations were completed using the Federal Highway Administration's TNM 2.5 noise model inside SoundPLAN, and construction noise sources used standardized acoustic data available from the FTA Guidelines.

SoundPLAN constructs a 3-D model for all areas analyzed by importing ground elevation data through Google Earth. Using the elevation data, a 3-D Digital Ground Model ("DGM") of the terrain is constructed. Once the DGM is constructed, building height and location information, and roadway information are imported. Additionally, surface composition (soft or hard ground, or water) is considered in the DGM in order to consider soft ground attenuation, reflections from buildings, and propagation over water. Depending on the specific situation analyzed, the DGM is updated to indicate changes in the elevation which would occur through the construction process, such as the excavation and retaining wall construction proposed (see Figure 6 in the Acoustic Report). It is also noted that all calculations completed for the project included frequency-dependent data for accurate calculation of barrier effects/diffraction, although only overall sound pressure levels are presented for each receiving location to simplify the results and compare the results to the Town of Southold Noise Ordinance (Chapter 180), NYSDEC criteria and NYSDOT criteria (as summarized below).

Using the computer-generated model, an existing noise model for traffic was also developed for existing peak traffic generation. Along with the background sound levels collected, these baseline noise levels served as the existing condition sound levels to which the Build Condition predicted sound levels



were compared. This comparison allowed for evaluation against the Town of Southold Noise Ordinance (Chapter 180) and NYSDEC Criteria.

### **Acoustic Criteria**

#### **Town of Southold Noise Ordinance – Chapter 180**

##### *§ 180-5 General prohibition.*

*No person or persons owning, leasing or controlling the operation of any source of noise on any lot or structure within the Town shall permit the establishment of a condition of noise pollution. Except as provided in §180-6, the use of amplifiers, speakers or other machines or devices capable of reproducing amplified or airborne sound from the premises, dwelling or building within the Town shall be considered noise pollution and shall be prohibited at all times.*

##### *§ 180-6 Standards.*

*No person shall create or cause to be emitted any noise pollution which when measured on a sound-level meter from the property line of a complaining property owner exceeds the following standards:*

###### *A. Sunday through Thursday:*

- (1) From 7:00 am to 7:00 pm., airborne or amplified sound in excess of 65 dB(A); and*
- (2) From 7:00 pm. to 7:00 am., airborne or amplified sound in excess of 50 dB(A).*

###### *B. Friday and Saturday:*

- (1) From 7:00 am to 11:00 pm., airborne or amplified sound in excess of 65 dB(A); and*
- (2) From 11:00 pm. to 7:00 am., airborne or amplified sound in excess of 50 dB(A).*

##### *§ 180-8 Exceptions.*

###### *A. The provisions of §180-5 and 180-6 shall not apply to the following:*

- (2) Construction activities between 7:00 am. through 7:00 pm. and the associated use of construction devices or the noise produced thereby, provided that such activities and such equipment and their use comply with the other provisions hereof.*
- (11) Emergency construction or repair work.*
- (14) Emergency stationary and mobile signal devices.*

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

The NYSDEC provides guidance for environmental noise impacts in its technical report 'Assessing and Mitigating Noise Impacts' released October 6, 2000, and revised February 2, 2001. Table 35 below (as excerpted from Table 1 of the Acoustic Report) summarizes the NYSDEC's guidance provided in Section V, Subsection B, Item c.

**Table 35 - NYSDEC Thresholds for Significant Sound Pressure Level (SPL) Increase**

Sound Level Increase (dB)	Impact	Need for Mitigation
0 – 3	No appreciable effect on receptors	No need
3 – 6	Potential for adverse noise impact in cases where the most sensitive of receptors are present	Mitigation may be needed for some sensitive receptors such as churches and theaters
6 – 10	Potential for adverse noise impact depending on existing SPL and character of surround land use and receptors	Mitigation may be needed for most receptors, depending on existing conditions
10 or more	Adverse impact	Deserves consideration of avoidance and mitigation measures in most cases

**NYSDOT Noise Analysis Procedures and Project Environmental Guidelines**

The NYSDOT provides recommended criteria for road noise levels at various receptors in its technical report *NYSDOT Environmental Procedures Manual, Chapter 3.1* (August 1998) (NYSDOT EPM). According to the NYSDOT EPM, the sound levels included are recommended criterion and not standards. It should also be noted that the criteria outlined in the document are guided towards future traffic after project completion. Recommended noise levels from the NYSDOT EPM are included in Table 2 of the Acoustic Report. For the nearest receptors to the roads evaluated for additional traffic for this project, Category B is appropriate for evaluation and is summarized below:

Activity Category	Leq(h) (dBA)	L10(h) (dBA)	Description of Activity Category
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.

**Existing Ambient Sound Levels at the Subject Property**

As excerpted from Section 3.6.4 of the Acoustic Report, to establish the existing or ambient sound levels at the subject property, noise monitoring was performed at two locations (see Figure 1 in the Acoustic Report). Monitoring at Location 1 occurred from April 14, 2021 to April 28, 2021, and at Location 2 from April 28, 2021 to May 3, 2021, and then from May 13, 2021 until May 23, 2021 for a total of four full weeks of data collection. The disruption between May 3, 2021 and May 13, 2021 was due to a disruption in data transmission from the noise monitoring unit. Therefore, additional days were completed after May 13, 2021 to complete the four full weeks of data collection. It is noted that the Acoustic Report considered the effects of inclement weather on data output by obtaining data from the

nearest weather station at East Hampton Airport. For any hour where precipitation was reported, this hour was eliminated from the calculation of existing or ambient condition.

The results of the readings at Locations 1 and 2 are summarized in Table 36 below (as excerpted from Table 3 in the Acoustic Report). The median hourly Leq of 44 dBA was selected to use as the background sound level near the subject property as this was the lowest median sound level collected during the measurements. The Acoustic Report (Section 3.6.12) provides individual graphs to summarize the sound levels by hour for each day of data collection. The reported dominant sounds at the subject property included wildlife, nearby construction activities, and a couple occurrences of boat washing.

**Table 36 - Summary of Acoustic Data Collected at the Subject Property (7 am – 7 pm)**

<b>Metric</b>	<b>Measurement Location</b>	<b>Leq (dBA)</b>	<b>Lmax (dBA)</b>	<b>L10 (dBA)</b>	<b>L50 (dBA)</b>	<b>L90 (dBA)</b>	<b>Lmin (dBA)</b>
Minimum	Location 1	39.4	57.6	48.5	44.1	40.0	29.6
	Location 2	36.3	55.3	38.2	31.6	28.5	24.7
First Quartile	Location 1	42.7	65.1	53.2	47.5	44.1	35.7
	Location 2	42.0	64.0	43.6	36.2	31.7	28.5
Median	Location 1	44.5	67.4	55.6	48.8	46.1	37.8
	Location 2	44.0	67.9	45.8	37.8	33.4	30.2
Third Quartile	Location 1	46.9	70.7	58.0	51.1	47.9	41.4
	Location 2	46.3	72.0	48.4	41.5	36.1	32.3
Maximum	Location 1	58.4	85.4	69.3	63.8	63.2	48.0
	Location 2	65.3	83.3	70.6	54.9	46.6	42.3

**Existing Sound Levels Along Planned Truck Route During Excavation**

In addition to the above-described noise monitoring data taken at the subject property, acoustic readings were collected at four locations along the planned truck route during the excavation phase (see Figure 2 in the Acoustic Report). These acoustic readings were collected on April 20, 2021, in the morning between 7:39 AM and 9:21 AM, and in the afternoon from 3:16 PM to 4:59 PM, and were collected for a duration of 20 minutes each. The results of the readings are summarized in Table 37 below (excerpted from Table 4 of the Acoustic Report).

As explained in the Acoustic Report, the noise monitoring equipment was set up at the roadside (so as to not trespass on private property). As the sound levels of vehicles passing were louder at the reading locations than they would be at the nearest residences, the L90 values have been used to represent the background sound levels at all receiver locations near each reading location. For each location, the lowest L90 measured was used to represent a quieter background noise level and a worst-case scenario for noise impact.

**Table 37 - Summary of Acoustic Data Collected along the Truck Route**

<b>Measurement Location</b>	<b>Time Period</b>	<b>LAeq (dBA)</b>	<b>LASmax (dBA)</b>	<b>L10 (dBA)</b>	<b>L50 (dBA)</b>	<b>L90 (dBA)</b>	<b>LASmin (dBA)</b>
Location 1	7:39am – 7:59am	60	79	56	45	41	37
	3:16pm – 3:37pm	58	81	53	45	41	37
Location 2	8:06am – 8:26am	61	76	65	52	51	49
	3:45pm – 4:05pm	69	92	69	52	46	41
Location 3	8:32am – 8:52pm	68	85	71	64	52	46
	4:10pm – 4:30pm	65	84	68	50	44	40
Location 4	9:01am – 9:21am	67	84	69	57	48	39
	4:39pm – 4:59pm	69	95	70	64	53	46

**Existing Sound Levels with Traffic**

To evaluate the existing condition, traffic data collected by Dunn Engineering were used to complete a traffic noise model in SoundPLAN using the FHA’s TNM 2.5 methodology. Inputs for the model were the baseline peak traffic levels for analysis, as determined by the traffic analysis. Peak traffic levels for both the baseline and additional trips generated as defined in the TIS were used for all analyses. The results of the baseline noise models can be found graphically in Figures 3 through 5 (in the Acoustic Report) for the peak hour sound levels and Figures 6 through 8 (in the Acoustic Report) for the 8-hour sound levels. The overall sound pressure levels at each receiving location considered can be found in Table 38 below (as excerpted from Table 5). It is noted that the 18 receiving locations were selected to assess noise of surrounding properties as well as properties proximate to the planned truck route from the subject site to Sound Avenue. These Existing Condition sound levels are used to evaluate the impacts of construction activities, traffic increases, and the Build Condition for evaluation.

**Table 38 - Existing Conditions at Each Receiving Location Evaluated**

<b>Receiver Number</b>	<b>Location</b>	<b>Peak Hour Existing Condition (dBA)</b>	<b>Eight Hour Existing Condition (dBA)</b>
R1	5106 West Mill Road	44	44
R2	800 North Drive	44	44
R3	805 North Drive	44	44
R4	2010 West Mill Road	44	44
R5	4105 West Mill Road	49	50
R6	200 East Mill Road	44	44
R7	750 East Mill Road	44	44
R8	3329 Grand Ave	44	44
R9	3001 West Mill Road	46	46
R10	1525 West Mill Road	50	50
R11	1480 West Mill Road	52	52
R12	1065 West Mill Road	52	52
R13	155 Breakwater Road	52	52
R14	2100 Cox Neck Road	57	57
R15	2695 Cox Neck Road	55	55

<b>Receiver Number</b>	<b>Location</b>	<b>Peak Hour Existing Condition (dBA)</b>	<b>Eight Hour Existing Condition (dBA)</b>
R16	1475 Cox Neck Road	54	54
R17	1020 Cox Neck Road	56	56
R18	55 Middle Road	60	60

### **3.7.2 Potential Impacts**

#### ***Construction Noise Impacts***

Using the methodologies, construction equipment descriptions, equipment utilizations, sound power levels, and traffic modeling methodologies described in the Acoustic Report, predictions were compiled for sound levels at each phase of construction. As indicated in the Acoustic Report (see Appendix R), blasting and pile driving are not proposed as part of construction. An hourly peak Leq and 8-hour Leq were both calculated for each phase of the construction at the subject property, and these are graphically shown in Figures 7-18 of the Acoustic Report. For the additional areas considered at West Mill Road/Cox Neck Road, and Cox Neck Road, the main noise source is traffic. Therefore, figures for these areas presented focus only on the traffic data for Excavation 2 Phase and the Excavation Drainage Phase, as these were the loudest construction phases for each traffic condition. Figures 19-26 in the Acoustic Report graphically show these results for the 8-hour Leq as well as the peak hour. The projected sound pressure levels for all evaluation scenarios and receivers are summarized in Table 39 and Table 40 below for the 8-hour and peak hour sound levels, respectively (as excerpted from Tables 15 and 16 in the Acoustic Report).

**Table 39 - 8-Hour Leq Sound Levels at All Receivers for Construction Activities and Additional Traffic**

<b>Receiver Number</b>	<b>Location</b>	<b>Existing Condition (dBA)</b>	<b>Tree Removal/ Grubbing (dBA)</b>	<b>Excavation Phase 1 (dBA)</b>	<b>Excavation Phase 2 (dBA)</b>	<b>Retaining Wall Phase (dBA)</b>	<b>Excavation Drainage Phase (dBA)</b>	<b>Construction Phase (dBA)</b>
R1	5106 West Mill Road	44	49	50	50	50	50	50
R2	800 North Drive	44	69	78	80	76	76	76
R3	805 North Drive	44	66	75	73	69	69	68
R4	2010 West Mill Road	44	57	58	60	57	57	57
R5	4105 West Mill Road	50	56	59	61	57	57	57
R6	200 East Mill Road	44	55	55	61	60	60	60
R7	750 East Mill Road	44	54	59	61	59	59	59
R8	3329 Grand Ave	44	58	65	69	68	68	68
R9	3001 West Mill Road	46	51	57	58	52	52	52
R10	1525 West Mill Road	50	53	68	68	62	62	62
R11	1480 West Mill Road	52	54	71	71	64	64	64
R12	1065 West Mill Road	52	54	71	71	64	64	64
R13	155 Breakwater Road	52	53	71	71	64	64	64
R14	2100 Cox Neck Road	57	55	67	67	66	66	66
R15	2695 Cox Neck Road	55	55	66	66	65	65	65
R16	1475 Cox Neck Road	54	55	65	65	62	62	62
R17	1020 Cox Neck Road	56	59	62	62	61	61	61
R18	55 Middle Road	60	63	63	63	62	62	62

**Table 40 - Peak Hour Leq Sound Levels at All Receivers for Construction Activities and Additional Traffic**

<b>Receiver Number</b>	<b>Location</b>	<b>Existing Condition (dBA)</b>	<b>Tree Removal/ Grubbing (dBA)</b>	<b>Excavation Phase 1 (dBA)</b>	<b>Excavation Phase 2 (dBA)</b>	<b>Retaining Wall Phase (dBA)</b>	<b>Excavation Drainage Phase (dBA)</b>	<b>Construction Phase (dBA)</b>
R1	5106 West Mill Road	44	52	57	57	57	57	57
R2	800 North Drive	44	73	57	89	84	84	84
R3	805 North Drive	44	71	54	82	77	77	77
R4	2010 West Mill Road	44	61	66	69	65	65	65
R5	4105 West Mill Road	49	60	66	69	65	65	65
R6	200 East Mill Road	44	59	63	69	68	68	68
R7	750 East Mill Road	44	58	68	69	67	67	67
R8	3329 Grand Ave	44	62	74	78	77	77	77
R9	3001 West Mill Road	46	54	63	64	58	58	58
R10	1525 West Mill Road	50	54	69	69	64	64	64
R11	1480 West Mill Road	52	54	72	72	66	66	66
R12	1065 West Mill Road	52	55	72	72	66	66	66
R13	155 Breakwater Road	52	53	72	72	66	66	66
R14	2100 Cox Neck Road	57	55	68	68	68	68	68
R15	2695 Cox Neck Road	55	55	65	65	68	68	68
R16	1475 Cox Neck Road	54	55	64	64	62	62	62
R17	1020 Cox Neck Road	56	58	62	62	62	62	62
R18	55 Middle Road	60	63	63	63	62	62	62

While receivers near the subject property would be temporarily impacted by the construction noise, noise impacts due to construction are specifically exempt from the Noise Code. Additionally, all construction activities would be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity would be limited to Monday to Friday from 7:00 am to 5:00 pm as mitigation offered by the Applicant. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start. No work would be performed on Federal or State holidays, or on Sundays.

As can be seen from the figures in the Acoustic Report and the tables above, there is a significant increase in noise at receivers R1-R16 for at least one phase of construction for either the peak hour or 8-hour Leq. For Receivers R1- R8, the increases are predominantly due to sound created at the Project Site from construction activities. These increases would be considered a significant impact, as defined by the NYSDEC criteria, during the periods of construction. The construction-related noise impacts would be limited to the times and days specified, which are permitted by Town Code, and would be temporary. For receivers R9-R18, any increase in the sound levels would be dependent on additional traffic, which is highest during the excavation phases. Sound levels are higher than recommended by the NYSDOT at receivers R10-R14 during the excavation phases, and during all construction at receivers R14 and R15. However, as noted in Section 3.6.3 of the Acoustic Report and in Section 3.7.1 of this DEIS, the NYSDOT criteria are not standards, and these increases are temporary only during construction.

Additionally, it should be noted that all sound levels included in the above tables represent exterior sound levels. Based on NYSDOT criteria, the sound levels in interior spaces would be 20-25 dB less than the levels shown. As excavation is proposed for mid-December through May, the majority of this period would see most residents indoors and would minimize the impact to quality of life. If the reduction of 20 dB is applied to the traffic data for receivers R10-R14, which exceed the outdoor recommendations from the NYSDOT, the interior recommendations (see Category E of Table 2 in the Acoustic Report) for interior noise levels are met and would be within the NYSDOT recommended criteria for those receivers.

For the construction phase, the impacts would occur from late-March to late-September, when outdoor activities are occurring. While there would be temporary increases in noise levels during this period, the proposed project would comply with the permitted times set forth in Chapter 180 of the Town Code.

To mitigate noise impacts to surrounding properties and wildlife during the excavation and construction phases, the following measures would be implemented:

- Any vehicle which requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep.
- All trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Rod from County Route 48.
- All trucks utilized would be Tier 4 certified by EPA standards.



**Post-Development Impact Analysis**

As a proposed winter storage facility, the buildings would be largely inactive for almost half of the year. The noise would occur when boats are loaded into and out of the building. Due to the proposed grading, the retaining wall would function as a sound barrier, largely containing the noise within the graded area. Figures 27 through 29 in the Acoustic Report show the graphic presentation of the peak sound levels predicted at the subject property using the noise sources identified in Table 15 of the Acoustic Report, truck acceleration, raised voices, and boat washing, as well as peak future traffic generation along Cox Neck Road and West Mill Road. Table 41 (as excerpted from Table 18 in the Acoustic Report) summarizes the overall sound pressure levels at each of the 18 receptor locations evaluated.

**Table 41 - Sound Pressure Levels at All Receivers in the Build Condition**

<b>Receiver Number</b>	<b>Location</b>	<b>Existing Condition (dBA)</b>	<b>Build Condition (dBA)</b>
R1	5106 West Mill Road	44	44
R2	800 North Drive	44	48
R3	805 North Drive	44	44
R4	2010 West Mill Road	44	44
R5	4105 West Mill Road	49	50
R6	200 East Mill Road	44	44
R7	750 East Mill Road	44	44
R8	3329 Grand Ave	44	44
R9	3001 West Mill Road	46	46
R10	1525 West Mill Road	50	50
R11	1480 West Mill Road	52	52
R12	1065 West Mill Road	52	52
R13	155 Breakwater Road	52	52
R14	2100 Cox Neck Road	57	57
R15	2695 Cox Neck Road	55	55
R16	1475 Cox Neck Road	54	54
R17	1020 Cox Neck Road	56	56
R18	55 Middle Road	60	60

As indicated in the table above, no receiving locations exceed 6 dBA above the Existing Condition sound levels. NYSDEC evaluation criteria categorizes this as no impact. The greatest predicted increase would be 4 dBA at the residence at Receiver R2. Furthermore, the projected sound levels also meet the conditions of the Noise Code at all receiving locations. The results of the analysis show that in the Build Condition that mitigation measures would not be required.

**3.7.3 Proposed Mitigation**

The proposed action would not result in any significant adverse impacts with regards to noise. The proposed action has incorporated the following measures that effectively mitigate any potential adverse impacts during the excavation and construction phases:

- Construction activities will be limited to Monday to Saturday from 7:00 am to 7:00 pm in accordance with the Noise Code. No work would be completed on Federal or State holidays, or on Sundays.

- In accordance with the Noise Code, excavation phases will be limited from Monday to Friday from 7:00 am to 5:00 pm. No work will be completed on Federal or State holidays, or on Sundays.
- During construction phases, work on Saturdays and after 5:00 pm Monday to Friday will only include vehicle and machinery maintenance and planning. No work will be completed on Federal or State holidays, or on Sundays.
- Any vehicle which requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep.
- All trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.
- All trucks utilized will be Tier 4 certified by U.S. EPA standards.

### **3.8 Air Quality**

#### **3.8.1 Existing Conditions**

As part of this DEIS an Air Quality Evaluation was prepared by PWGC and is included in Appendix S. The intent and purpose of the Air Quality Evaluation report was to evaluate construction-related impacts and post-development conditions at SYC. The potential for air quality impacts due to the proposed action was examined in accordance with the Amended Final Scope adopted by the Town of Southold Planning Board. Currently, there are no emission sources at SYC that require NYSDEC air permits, and the proposed construction would not necessitate obtaining any air permits as the addition of permanent emission sources is not in the proposed scope of the project.

#### **3.8.2 Potential Impacts**

##### ***Potential Mobile Pollutants***

Under the Clean Air Act (CAA), the U.S. EPA regulates National Ambient Air Quality Standards (NAAQS) for six common air pollutants considered to be harmful to public health and the environment. These pollutants, known as criteria pollutants, include carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), ozone, and lead. Emissions of volatile organic compounds (VOCs), nitrogen oxides (nitric oxide [NO] and NO<sub>2</sub>, collectively referred to as NO<sub>x</sub>) and other criteria pollutant precursors are also regulated by the U.S. EPA.

Air pollutants produced by passenger vehicles and construction vehicles, also known as mobile emission sources, are a contributor of certain criteria air pollutants. Air quality impacts can result from direct emissions generated by off-road construction vehicles operating onsite, as well indirect emissions from on-road construction vehicles and passenger employee vehicles traveling to and from the site. CO, PM, VOCs, and NO<sub>x</sub> are the main components associated with mobile source emissions and, therefore, were the pollutants included in the scope of the mobile emission portion of this

evaluation. The magnitude of air pollutants that would be generated from mobile emission sources during project construction was estimated and is discussed in more detail in the following sections.

Areas of the United States where the ambient air does not meet NAAQS are considered non-attainment or maintenance areas. Currently, Suffolk County ambient air quality is within NAAQS and, therefore, maintains attainment status for all criteria pollutants.

### **Pollutants Evaluated**

Carbon Monoxide - CO emissions are predominately associated with vehicle sources. This compound has no odor or color and is produced by combustion engines. Carbon monoxide concentrations tend to be highly localized and dissipate over relatively short distances. Thus, CO emissions are typically examined at particular sites where emissions are suspected of being concentrated, such as high trafficked locations, rather than over larger areas.

Oxides of Nitrogen - NO<sub>x</sub> are a group of nitrogen-based compounds which include NO and NO<sub>2</sub>. Approximately nine-tenths of NO<sub>x</sub> emissions from vehicle sources are in the form of NO, with the remainder being NO<sub>2</sub>. However, atmospheric reactions can transform NO into NO<sub>2</sub>. NO<sub>x</sub> reactions in the atmosphere can also contribute to the formation of ozone, another regulated air pollutant. NO<sub>2</sub> is often analyzed on a regional basis, rather than in local areas, due to the atmospheric dispersal associated with its formation reactions. The nature of these reactions also presents challenges in modeling the NO<sub>2</sub> emissions associated with specific vehicular activity. It can be expected that NO<sub>2</sub> emissions would be small due to the limited increase in vehicle use at the site during and post-construction.

Particulate Matter - PM is a wide-ranging category of air pollutants from both natural and human sources. Examples include liquid particles, such as aerosols, as well as solids. Common natural sources include pollen, salt spray, windblown soil, and volcanic ash. Sources associated with human activity include solid combustion byproducts from burning fossil fuels and VOCs emitted from industrial processes. PM is further subdivided into categories based on particle size. PM<sub>2.5</sub> represents particulate matter that is a diameter less than or equal to 2.5 microns while PM<sub>10</sub> represents particles having a diameter less than or equal to 10 microns. Both forms of PM have the capacity to adsorb other pollutants to particle surfaces. PM<sub>2.5</sub> is of special concern since the smaller size of these particles allow them to enter deeper into the human respiratory tract and damage lung tissue. For the purposes of this study PM<sub>10</sub> emissions were estimated. PM<sub>10</sub> values are inclusive of both 10-micron and 2.5-micron PM.

Volatile Organic Compounds - VOCs are compounds that have a high vapor pressure meaning it will evaporate readily. Many are manmade chemicals that are either used or produced as a by-product in the production of refrigerants, paints, and pharmaceuticals or from the combustion of petroleum products. VOCs play a significant role in the formation of ozone and fine particulates in the atmosphere. Excessive accumulation of ozone, fine particulates and other gaseous pollutants result in the production of smog potentially reducing visibility causing respiratory problems.

### **Mobile Source Evaluation**

Short term air quality impacts may occur during the excavation phase of the project; however, long-term air quality impacts would be inconsequential. Post-development, the addition of stationary emission sources is not proposed and vehicular traffic due to the expansion would be minimal. The analysis of the air quality impacts due to construction activities was completed considering the types of the activities conducted and the type of equipment utilized during each phase.

### **On-Road Mobile Emissions**

Air emissions would be generated from the operation of on-road mobile construction equipment as well as employee passenger vehicles during construction of the proposed project. Vehicle miles traveled (VMT) data for each on-road construction vehicle and employee trip were estimated from roundtrip distances and the number of vehicles and employees based on the activity specific construction schedule. It was assumed that all on-road construction vehicle equipment would use diesel fuel and all passenger vehicles would use gasoline. Typical vehicle types would be passenger car, passenger trucks, and single unit short-haul construction vehicles (U.S. Department of Transportation Class 7 type vehicle). On-road mobile equipment emission rates for those pollutants discussed earlier (i.e., CO, NO<sub>x</sub> and PM) were estimated and are presented in Table 42 below, as excerpted from Table 4 in the Air Quality Evaluation in Appendix S. It is noted that hydrocarbon (HC) emission factors were used to calculate VOC values; however, not all HCs are VOC's, therefore, the VOC estimates are conservative.

The U.S. EPA has developed an online tool to calculate the emissions due to on-road construction vehicles (Diesel Emission Quantifier). This tool was utilized to estimate on-road construction vehicle emission levels for the proposed project. It has been assumed that construction vehicles (i.e., delivery trucks and trucks removing debris and material from the subject property) would be traveling to and from the west and within 25 miles of the subject property to the nearest commercial area where a registered or permitted NYSDEC Part 360 facility and equipment suppliers are most likely to be located. Twenty-five miles was used in the calculator as a conservative estimate, but it is more likely that excavated material and suppliers would be located within 15 miles of the proposed project location. It is estimated that 40 trips would take place to and from the site during a 10-hour workday, for a five-day work week.

For the purposes of this analysis, it was assumed that 50 percent of the passenger vehicles would be light-duty vehicles/passenger cars and 50 percent would be light-duty trucks (two axle, 4 tires) and that project employees would live within 25 miles of the subject property. It is assumed that the engines for all the on-road vehicles will meet federal emission discharge standards and it is noted that the construction company engaged to complete the work has committed to utilize company multi-occupant vehicles to transport many of the construction workers to the site to minimize the number of vehicles being utilized and thus minimize associated air emissions.

Emission rates for the passenger vehicles were estimated using the U.S. EPA, Office of Transportation and Air Quality National Transportation Statistics Table 4-43. The table was generated by the U.S. EPA using Motor Vehicle Emission Simulation (MOVES) Version 2014b software. MOVES is an emission modeling system available for download from the U.S. EPA website. As discussed in the Air Quality

Evaluation (see Appendix S), the MOVES software is used to, “estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics.” MOVES incorporates data on vehicle populations, emission rates, and fuel supply information to estimate equipment emission levels. Calendar year 2020 emission rates were used since the data for 2021 and 2022 are only projected rates. It should be noted the projected emission rates are lower than 2020 emission rates.

Table 42 – Estimated On-Road Vehicle Emission Rates

	2020 Emission Rates (grams/mile)**	lbs/day/vehicle	Construction Phase						USEPA Conformity De Minimis Standard
			Tree Removal	Excavation Phase 1	Excavation Phase 2	Retaining Wall Construction	Excavation Drainage Construction	Building Construction	
			lbs pollutant/day	lbs pollutant/day	lbs pollutant/day	lbs pollutant/day	lbs pollutant/day	lbs pollutant/day	
<b>Light-duty gasoline passenger cars</b>									
Total HC*	0.280	0.0308	1.48	26.46	4.81	1.39	3.70	48.11	
Exhaust CO	4.152	0.4573	21.95	392.34	71.33	20.58	54.87	713.34	
Exhaust NOx	0.192	0.0211	1.01	18.14	3.30	0.95	2.54	32.99	
Total PM2.5	0.008	0.0009	0.04	0.76	0.14	0.04	0.11	1.37	
<b>Light-duty gasoline passenger trucks</b>									
Total HC	0.339	0.0373	1.79	32.03	5.82	1.68	4.48	58.24	
Exhaust CO	5.422	0.5971	28.66	512.34	93.15	26.87	71.66	931.53	
Exhaust NOx	0.376	0.0414	1.99	35.53	6.46	1.86	4.97	64.60	
Total PM2.5	0.011	0.0012	0.06	1.04	0.19	0.05	0.15	1.89	
<b>Class 7 4+ Axle Single Unit Dumpster/Hauler</b>									
Total HC*	NA	0.0032	0.00	20.22	3.11	0.00	0.16	0.16	
Exhaust CO	NA	0.0700	0.00	436.95	67.22	0.00	3.36	3.36	
Exhaust NOx	NA	0.1246	0.00	777.72	119.65	0.00	5.98	5.98	
Total PM2.5	NA	0.0008	0.00	4.80	0.74	0.00	0.04	0.04	
<b>On-Road Vehicle Total Project Emissions</b>									
Total HC*	NA	0.0714	3.27	78.71	13.75	3.07	8.34	106.50	100 tons/yr
Exhaust CO	NA	1.1244	50.61	1341.63	231.71	47.45	129.89	1648.23	100 tons/yr
Exhaust NOx	NA	0.1872	3.00	831.39	129.41	2.81	13.49	103.57	100 tons/yr
Total PM2.5	NA	0.0020	0.06	5.84	0.93	0.05	0.18	1.93	100 tons/yr

HC - Hydrocarbon

\*Hydrocarbon emission factors are used to calculation VOC values. Not all hydrocarbons are VOCs so these estimates are conservative.

\*USEPA Estimated National Average Vehicle Emissions Rates per Vehicle by Vehicle Type using Gasoline and Diesel (Grams per mile)

The emission rates were compared to the U.S. EPA General Conformity De Minimis Table. General Conformity ensures that the actions taken by a federal agency do not interfere with a state's plan to attain or maintain national standards for air quality or contribute to NAAQS violations. As indicated in Table 42 above, the anticipated emission rates for each phase of the project are well within the annual Conformity De Minimis threshold, therefore it is expected that on-road vehicle emission generated from the project construction would not have a significant adverse impact on air quality.

### **Off-Road Mobile Emissions**

Air emissions would be generated from the operation of off-road mobile construction equipment. The U.S. EPA has adopted multiple tiers of emission standards, which are based upon engine size and manufacture year. The engine tier standards were established to reduce soot, smog and other types of dangerous pollutants that are emitted from diesel engines. The 1998 nonroad engine regulations were structured as a 3-tiered progression. Each tier involved a phase-in (by horsepower or kilowatt rating) over several years. The first federal standards (Tier 1) for new nonroad or off-road diesel engines were adopted in 1994 for engines over 37 KW to be phased-in from 1996 to 2000. In 1998, Tier 1 standards were introduced for equipment under 37 KW. The more stringent Tier 2 standards took effect from 2001 to 2006, and yet more stringent Tier 3 standards phased-in from 2006 to 2008 (Tier 3 standards applied only for engines from 37-560 kW). In May 2004, the U.S. EPA signed the final rule introducing Tier 4 emission standards, which were phased-in over the period of 2008-2015. The Tier 4 emission introduced substantial reductions of NO<sub>x</sub> (for engines above 56 kW) and PM (above 19 kW). CO emission limits remain unchanged from the Tier 2-3 stage. Tier 4 equipment, as defined by the U.S. EPA, correlates to the most recent and most stringent emission standards established by the U.S. EPA and California Air Resources Board. As excerpted from the Air Quality Evaluation (see Appendix S), Tier 4 engine certification is applicable to new engines found in off-road equipment including construction, mining and agricultural equipment, marine vessels and workboats, locomotives and stationary engines found in industrial and power generation applications. *“As of January 1, 2014, these emissions standards apply to new engines that power equipment commonly found in most construction and agricultural applications while new engines manufactured for much larger applications including marine, locomotives must have met the standard by January 1, 2015. These emissions standards apply to new and remanufactured engines and do not apply to older engines.”*

This analysis evaluates the potential impacts associated with trucks and equipment that are equipped with engines that are Tier 3 or Tier 4 compliant for a conservative air quality impact assessment approach; however, it is noted that the Applicant has committed to utilizing trucks and equipment that are all Tier 4 compliant. As described above, Tier 4 regulations are the strictest U.S. EPA emissions requirements for off-highway diesel engines. As such, the use of all Tier 4 compliant trucks and equipment would further reduce emissions of PM and NO<sub>x</sub> ensures that federal emission standards are being achieved.

The type and the number of vehicles varies according to the phase of the construction and the activity to be executed. The types and quantity of mobile equipment anticipated to be operating onsite during construction are depicted in Table 1 in the Air Quality Evaluation (see Appendix S), and were provided by the Construction Manager, Red Rock Industries.

The excavation phase for removal of 135,000 CY of material is projecting 4,500 CY trailers over a five to six-month period. During Phase 1, approximately 123,000 CY of material would be excavated and removed. Based on 30 CY trucks, Phase 1 would generate 4,100 total trips. With 40 trucks available per day for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 1 could be completed in five months. During Phase 2, approximately 12,000 CY of material would be excavated and removed via the existing access driveway to SYC. Based on 30 CY trucks, Phase 2 would generate 400 total trips. With 40 trucks available for material removal and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 2 could be completed in 2 weeks. It is assumed that no more than two trailers are being loaded at any one-time during excavation.

As indicated in Table 1 in the Air Quality Evaluation in Appendix S of this DEIS, at most, 12 mobile vehicles would be operating during any single phase of the project. It is not anticipated that the vehicles/equipment would all be operating concurrently. In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles shall not remain idling for more than five minutes at a time.

Total CO, NO<sub>x</sub> and PM-10 have been estimated by utilizing U.S. EPA MOVES, Version 2014b software. As discussed in the Air Quality Evaluation (see Appendix S), to calculate CO<sub>2</sub> emissions, MOVES determines the amount of energy it takes to operate a specific vehicle based on the fuel utilized. By understanding the energy used to operate the vehicle, the model calculates the gallons of fuel necessary to operate the vehicle and the CO<sub>2</sub> generated by burning the fuel. The model includes default values based on the fuel type.

The model assumes that all of the carbon in the fuel is converted into CO<sub>2</sub>, although a small portion is initially released into the atmosphere as CO.

The results from a MOVES analysis are limited in the extent of data output directly from the software. The exhaustive data is exported into a HEIDI SQL database, offering an expanded analysis of the raw data from the MOVES software. The emission rates provided in the output date represents the mass of the pollutant for a 24-hour day for a population of vehicles. Raw data HeidiSQL outputs have been included in Appendix A of the Air Quality Evaluation, appended to this DEIS in Appendix S.

The MOVES data was used to determine the hourly and daily emission rates of the four main pollutants generated from diesel engine emissions, including CO, NO<sub>x</sub>, VOCs and PM-10. Emission rates were estimated for all of the off-road mobile construction vehicles anticipated to be operating on site during each phase of the project. The results are displayed in Appendix B, appended to this DEIS in Appendix S.

As displayed in Table 43 below, as excerpted from Table 2 in the Air Quality Evaluation in Appendix S, displays the average per hour rate for each equipment type analyzed. If a type of mobile equipment proposed to be operating during the construction was not an available, the option in MOVES equipment type "other" was utilized.



**Table 43 –Off-Road Mobile Construction Vehicles Hourly Emission Estimates by Equipment Type**

<b>Equipment Type</b>	<b>CO</b>	<b>NOx</b>	<b>VOC</b>	<b>PM-10</b>
Excavator	0.020500	0.044958	0.003787	0.003904
Rubber Tire Loaders	0.120672	0.242864	0.016854	0.021640
Tractors/Loaders/Backhoes	0.279147	0.259793	0.043886	0.040054
Crawlers/Tractors/Dozers	0.060074	0.119737	0.007726	0.009895
Skid Steer Loaders	0.206902	0.193905	0.033570	0.021522
Off-Highway Tractors	0.014715	0.031415	0.001819	0.002018
Dumpers/Tendors	0.000059	0.000620	0.000113	0.000081
Other	0.014578	0.025467	0.001851	0.002375

Federally enforced NAAQS limitations are concentration-based; however, the MOVES software is limited to generating outputs in units of mass rather than concentrations. Since all U.S. states are required to comply with U.S. EPA Federal emission standards, potential impacts of the mobile emissions were evaluated using the threshold values established South Coast Air Quality Management District in California State (SCAQMD)13, which provide guidance values on a pounds per day basis. As indicated in Table 3 in the Air Quality Evaluation (see Appendix S), emission estimates are well within significant threshold values and, therefore, no significant adverse impacts from mobile off-road emissions would be expected.

***Fugitive Dust***

Heavy construction is a source of dust emissions that may impact local air quality. Dust emissions during construction can be associated with activities such as land clearing, ground excavation, earth moving and building construction, and vehicles moving over temporary roads and the construction site. Dust emissions can vary substantially day to day, depending on the level of activity, the specific operations and weather conditions.

**Fugitive Dust Evaluation**

The Environmental Protection Agency's (EPA's) published emission factors most suited to this project (from AP-42, Section 13.2.3.3 "Heavy Construction Operations") are based on field measurements of total suspended particulate (TSP) concentrations from apartment and shopping center construction projects. The estimated emission factors for construction activity operations are as follows:

TSP Emission Rate = 2.69 megagrams (Mg)/hectare/month of activity = 1.2 tons/acre/month of activity

These values were utilized to develop overall estimates from construction throughout the site. They are considered most applicable to construction operations with: (1) medium activity level, (2) moderate silt contents, and (3) semiarid climate. This emission rate is conservatively high for total suspended PM and includes particles larger than 10 microns. Particles 10 microns, and those less than

10 microns, have the capacity to absorb other pollutants to particle surfaces. Particles less than 2.5 microns in size are able to enter deeper into the human respiratory tract causing potential effect.

As discussed in Section 1.2.1 of this DEIS, Table 2 identifies the size of the development areas. The total area of construction is estimated to be 6.51± acres (see Table 3 in Section 1.2.1 of this DEIS) and the total project duration is anticipated to be approximately 13 months. Based on these values and the TSP emission rate of 1.2 tons/acre/month of activity, the total TSP emission rate for the entire project would be approximately 101.5 tons of TSP, without mitigation.

$$\mathbf{13\ months\ x\ 6.51\ acres\ x\ 1.2\ tons/acre/month = 101.5\ tons\ of\ TSP}$$

This value is extremely conservative and does not account for standard mitigation efforts that are undertaken during construction to control dust emissions. In order to mitigate the impact of the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed during construction, as necessary:

- Minimizing the exposed area of erodible earth.
- Applying wet suppression to material piles and unpaved areas when there is visible dust.
- Use of covered haul trucks to move construction material.
- Use of plastic sheet coverings for material piles.
- A material wind barrier consisting of a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.

With the implementation of the above measures, there would be no significant adverse impacts created by fugitive dust generation and the resultant air quality impacts would be avoided.

### ***Carbon Sequestration***

Carbon sequestration is the long-term removal or capture process of carbon dioxide from the atmosphere. Carbon dioxide is naturally captured or sequestered from the atmosphere through biological, chemical, and physical processes. According to the Intergovernmental Panel on Climate Change (IPCC), there are five carbon pools of a terrestrial ecosystem involving biomass/organic material. The five pools are above-ground biomass (living trees and shrubs), below-ground biomass (live roots), dead mass of litter, woody debris and soil organic matter. When inorganic CO<sub>2</sub> is sequestered directly by plant or other living organisms through photosynthesis or chemical reactions this process is referred to as carbon fixation. Trees sequester atmospheric carbon through their growth process and have been suggested as a means to combat increasing levels of atmospheric carbon. Carbon sequestration in soil is primarily facilitated by plants. The CO<sub>2</sub> is removed from the atmosphere by vegetation, and the carbon is stored in the soil's pool of organic carbon. The dead mass of litter and debris are not a major carbon pool as they contribute to a small fraction of the forest total carbon stock. Carbon sequestration is beneficial to the atmosphere because it mitigates CO<sub>2</sub> pollution in the atmosphere.

### **Carbon Stock Estimate Methodology**

A tree survey, where an inventory of tree species and diameter for the area to be cleared, was established. The data was utilized to estimate carbon stock based on above-ground biomass. Estimates were determined utilizing formulas for calculating biomass and carbon sequestering factors found in published sources. As presented in the Air Quality Evaluation (see Appendix S), the following regional regression equation developed by Barrett and Jastremski (1990) was utilized to calculate the total tree stem biomass:

$$Y = b_0 + b_1(D^2H)$$

Where Y is the total tree-stem biomass (in green/live pounds), and the independent variables D and H are the tree diameter at breast height (in inches) and total tree height (in feet),  $b_0$  and  $b_1$  represent regression coefficients. The regression coefficients, developed by and obtained from the United States Department of Agriculture, were used for this analysis. Tree height estimates were based on the LUES recommendation for the species and its growth locations. It was assumed that the trees in the areas to be cleared are at or near maturity.

Once the green/live biomass was assessed, the dry weight of the tree was estimated. A University of Nebraska study estimated that approximately 27.5 percent of a tree's green mass is moisture, therefore, the dry mass would be 72 percent of a tree's green biomass. The carbon content is generally 50 percent of the tree's total weight; therefore, the dry weight was halved to determine the carbon content total.

Based on the carbon stock value estimated for the trees (above and below-ground biomass), and estimated carbon stock ratios (Table 44 as excerpted from Table 6 in the Air Quality Evaluation), a total carbon stock value for the entire forest system (i.e., above-ground biomass and below-ground biomass) and the remaining three carbon pools (dead mass of litter, woody debris and soil organic matter) was approximated. The following method was used:

$$T = B / (17\% + 6\%)$$

$$S = T * 72\%$$

$$L = T * 5\%$$

$$W = T * 0\%$$

*where,*

T = Total C stored in the entire forest system

B = C stored in the trees (above & below-ground), calculated using above methodology

S = C stored in the soil

L = C stored in dead mass & litter

W = C stored in dead wood

**Table 44 – Estimated Carbon Stock Ratios**

<b>Estimated Carbon Stock Ratios across UK Forests in 2015</b>	
Carbon in above-ground biomass (B)	17%
Carbon in below-ground biomass (B)	6%
Carbon in dead wood (W)	< 1%
Carbon in litter (L)	5%
Soil Carbon (S)	72%
<b>Total Forest Carbon</b>	<b>100%</b>

**Carbon Stock Removal Evaluation**

It is estimated that the proposed project would necessitate the clearing of 5.51 acres of forested land (Coastal Oak-Beech Forest / Successional Southern Hardwood) for the proposed boat storage buildings and associated appurtenances (see Figure 1 in the Air Quality Evaluation in Appendix S of this DEIS). Additionally, approximately 123,000 cubic yards of subsurface are anticipated to be removed during Phase 1 of the excavation and approximately 12,000 cubic yards during Phase 2. As such, carbon stock loss estimates were evaluated. Carbon stock is the amount of carbon that has been stored within the forest ecosystem, mainly within living biomass (trees and other vegetation) and soil, and to a lesser extent, in dead wood and forest litter as the result of CO<sub>2</sub> uptake from the atmosphere. Anything that absorbs more carbon from the atmosphere than it releases is called a “carbon sink.” Because of the complexity of estimating forest carbon stock, and to maximize efficiency for the purpose of this project, the carbon sequestering evaluation used formulas from published studies to calculate carbon stock estimates for live adult trees and estimated the associated carbon stock values for the remaining three carbon pools using the ratio estimates indicated in Table 44 above, as excerpted from Table 6 in the Air Quality Evaluation (see Appendix S). Studies have estimated that 17± percent of total forest carbon stock is stored in above-ground biomass, 6± percent is stored in below-ground biomass, >1± percent is stored in dead wood, 5± percent is stored in forest litter, and 72± percent is stored in the soil.

Under existing conditions, there are 2,408 mature trees (greater than 6 inches in diameter) at the subject property. The existing total above-ground green weight was estimated to be approximately 5,721,580 lbs. and the total carbon stock is estimated to be approximately 2,488,887 lbs. The proposed action includes the removal of approximately 650 trees although field adjustments are likely to reduce this number to approximately 630. Assuming 650 trees are removed, there would remain 1,758 trees on the subject property. As a result of the tree removal, it is estimated that the above-ground green weight would decrease by 1,799,078 pounds, and the total loss of stored carbon due to tree removal would be approximately 782,599 lbs. Carbon stock estimates for the trees to be removed can be found in Appendix C of the Air Quality Evaluation in Appendix S of this DEIS. Using the distribution ratios in Table 44 above, carbon storage loss due to all five carbon pools is estimated in the table below.

**Table 45 – Carbon Dioxide Storage Lost Estimates**

<b>Carbon Pool Type</b>	<b>Estimated On-site loss of Stored Forest Carbon (lbs.)</b>
above-ground biomass	578,443
below-ground biomass	204,156
dead wood	8,999
litter	170,130
Soil	2,449,875
<b>Total Forest System</b>	<b>3,402,604</b>

As indicated above, this analysis considered 650 trees for removal; however, the actual number is expected to be less because of field adjustments that would be made to avoid tree removal particularly in the area of the proposed haul road. According to the project engineer, field adjustments of 5-10 feet could reduce the number of trees for removal by approximately 20-to-30.

Additionally, it should be noted that the carbon stock ratios from Table 45 are estimates for a variety of forest types and is not specific to Long Island. The soil characteristic analysis that was completed for the site by PWGC in July 2021 (see Appendix H of this DEIS) has indicated that the Construction Excavation Area is made up of predominantly sandy material. Several soil borings were collected by PWGC in the Construction Excavation Area to determine soil characteristics (see Figure 1 in the Air Quality Evaluation in Appendix S of this DEIS). Soil boring logs for all nine borings obtained by PWGC have indicated the entire depth of the boring, continuous to 12 feet at all locations, consisted of predominantly sand with little to no organic material with the exception of a less than 6-inch topsoil in some areas. As discussed earlier, carbon sequestering removal ability in soil is directly related to the content of organic material, therefore it can be assumed that the carbon stock ratios are an overestimate.

There are many uncertainties when evaluating carbon fluxes from vegetation growth and land-use change in the global carbon cycle. This is not considered to be a significantly sized clearing area and, therefore, adverse impacts due to tree clearing/carbon stock loss are considered negligible. It is also noted that regulations for the removal of carbon sinks do not exist at the local, state or federal level; however, the proposed clearing is consistent with the prevailing bulk and dimensional requirements of the M-II zoning district set forth in the Town Zoning Code (Chapter 280). Zoning permits a maximum lot coverage of 30 percent, and the proposed plan includes 24.7 percent lot coverage.

***Carbon Stock Loss Mitigation Efforts***

**Carbon Sequestration due to Hard Clam Farming**

As discussed earlier in this Section of the DEIS and in the Air Quality Evaluation (see Appendix S), carbon sequestration is the long-term removal or capture process of carbon dioxide from the atmosphere. Carbon fixation or carbon assimilation is the process by which living organisms convert inorganic carbon, particularly in the form of carbon dioxide, into organic compounds. SYC currently funds and hosts a shellfish restoration program operated by CCE Marine Program at its facility and has

committed to being a FLUPSY host through 2030. Last year, approximately 6.0 million clams were harvested (and over 10 million clams were harvested over the last four years), and the program expects to continue to harvest a minimum of 1.5 million clams annually. In addition to their filtration abilities, hard clams also benefit the ecosystem by acting as a carbon sink. CO<sub>2</sub> dissolves in water and is incorporated by shell-producing organisms into calcium carbonate (CaCO<sub>3</sub>). CaCO<sub>3</sub> from mollusks and other organisms can persist indefinitely as limestone, providing a long-term sink for atmospheric CO<sub>2</sub>. Studies have shown that almost half of the CO<sub>2</sub> fixed biologically annually is due to marine organisms. The clam harvesting will help offset the carbon stock loss due to the tree removal.

It is estimated that on average that the shell of a marketable hard clam (about 1" in shell height and less than 2" in length) contains 2.93 grams of carbon and the farming program is expected to result in the harvesting of 1.5 million clams annually. Thus, the projected 1.5 million clams harvested annually have the potential to sequester 9,680 lbs. of carbon. As such, this program has the beneficial impact of carbon sequestration. It is noted that the number of clams harvested have well exceeded the minimum goal of 1.5 million/year. As such, this sequestration number provided herein represents the minimum expected annually.

### **Supplemental Planting**

The proposed action includes the planting of 135 trees, including 95 pitch pine trees (minimum 4-5 feet height) and 40 trees consisting of staghorn, sumac, and shadbush to offset carbon stock loss in the Project Area. The planting of 135 pine trees would reduce the carbon sink loss from the assumed 650 trees (for the purpose of this analysis, as described above) to 515 trees. Using the same methodology discussed earlier in this section, it is estimated that 95 adult pitch pine trees would store 80,191 lbs. (40± tons) of carbon, decreasing total carbon storage loss (above & below-ground biomass) from 391 tons to 351 tons. This decrease does not include the 40 additional small trees, which would have some additional benefit.

Accordingly, based on the above, no significant adverse air quality impacts would result from the proposed action.

### **3.8.3 Proposed Mitigation**

The proposed action would not result in any significant adverse impacts to air quality. The proposed action has incorporated the following measures that effectively mitigate any potential adverse impacts during the excavation and construction phases, and post-development conditions:

- To minimize the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed:
  - Minimizing the exposed area of erodible earth.
  - Applying wet suppression to material piles and unpaved areas when there is visible dust.
  - Use of covered haul trucks to move construction material.
  - Use of plastic sheet coverings for material piles.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.

- In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles will not remain idling for more than five minutes at a time.
- The use of all Tier 4 certified trucks and equipment will further reduce emissions of PM and NO<sub>x</sub>.
- The projected 1.5 million clams harvested annually have the potential to sequester 9,680 lbs. of carbon. As such, this program has the beneficial impact of carbon sequestration.
- The proposed planting of 95 pitch pine trees will store 80,191 lbs. (40± tons) of carbon, decreasing total carbon storage loss (above & below-ground biomass) from 391 tons to 351 tons.

### **3.9 Social and Economic Impacts**

#### **3.9.1 Existing Conditions**

##### ***Existing Services Provided by SYC***

The subject property has been occupied and used for maritime purposes for over 60 years. As indicated in Section 1.1 of this DEIS, SYC currently operates a marina with 45 boat slips (of which, 40 are active and others remain open for fueling or service access) with associated ramps, fueling and maintenance services, and is developed with seven buildings to support its operation. SYC has a boat and yacht sales operation on the property and also provides for the storage of boats in the off-season. In addition, several boats in the commercial fishing industry rely upon SYC for dockage and maintenance. SYC is also a designated host for the CCE shellfish restoration efforts and has FLUPSY units housed at SYC.

##### ***Existing Employment and Taxes at SYC***

SYC currently employs 17 full-time staff directly at this facility. For all six of its Suffolk County locations, SYC paid \$7.46 million in payroll in 2020, with over \$347,000 in state withholding taxes being generated. Additionally, over \$2.7 million in sales and real estate (property) taxes were generated in 2020 (over \$2.5 million in sales tax and \$201,867 in real estate taxes).

##### ***Economic Impacts of SYC***

An evaluation of the projected economic impacts of the proposed action was performed utilizing the Association of Marina Industries (AMI) Marina Economic Impact Calculator (MEIC), which calculates the impact on the local economy based on the facility gross revenues, which is inputted by the user.<sup>52</sup> As excerpted from <https://marinaassociation.org/meicdoc>, the MEIC “estimates the economic impacts generated by marina operations in seven different regions of the US. The impacts are estimated using economic multipliers generated with an IMPLAN input-output model for each region (IMPLAN Group, LLC). Multipliers are mathematical calculations used to estimate the additional economic activity or impacts that occur as a marina’s revenues and earnings ripple through a regional economy. In basic terms, for the marine industry to provide a service to consumers, it must purchase products (i.e. Docks, lines) and services (i.e. Insurance) from other companies. Each of these vendors must also buy goods

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<sup>52</sup> <https://marinaassociation.org/meic>

and services.” The MEIC calculates these as direct, indirect, and the induced effects. As excerpted from the AMI:

1. *Direct effects take place only in the industry immediately affected: if a marina lays-off 5 employees, the marine industry loses 5 employees.*
2. *Indirect effects concern inter-industry transactions: if a marina closes it will no longer need locally produced materials or services. This will affect all of their suppliers, possibly resulting in a further loss of a few more jobs.*
3. *Induced effects measure the effects of the changes in household income: laid-off employees of a marina and its suppliers may reduce what they spend in restaurants and shops since they are no longer employed. These changes affect the related industries.*

It is noteworthy that AMI estimated the total economic impact (direct, indirect and induced) of the marina industry as a whole. As excerpted, “AMI estimates that 11,500 U.S. marina businesses had an \$18 billion economic impact (\$5 billion direct) and supported an estimated 105,000 full or part-time/seasonal employees. The five largest marina industry states, including Florida, California, Texas, New York and Massachusetts, account for \$7.8 billion of this economic output.”

The MEIC also calculates local, state and federal taxes. The specific types of taxes estimated include social insurance tax (employer and employee portion of payroll taxes), sales tax, property tax, motor vehicle licenses, severance tax, corporate profits tax, personal income tax, and various fees and fines (non-taxes). The taxes on production and imports are part of the business taxes.

#### *Existing Economic Impacts of SYC*

The MEIC for SYC is included in Appendix E of this DEIS. For 2018, 2019 and 2020, the Annual Revenue Regional Comparison, Summary of Economic Impacts, Economic Impacts by Major Industry Group, State and Local Tax Impacts, and Federal Tax Impacts were generated based upon the gross revenues inputted by SYC. The following summarizes the existing economic impacts of SYC in 2020, as excerpted from the MEIC:



**Table 46 – Summary of Economic Impacts – SYC 2020**

<b>Impact Type</b>	<b>Employment (Jobs)</b>	<b>Industry Output</b>	<b>Value Added (GDP)</b>	<b>Labor Income</b>
<b>Direct</b>	49	\$5,441,812	\$3,874,966	\$3,109,867
<b>Indirect</b>	10	\$2,207,661	\$1,265,784	\$777,737
<b>Induced</b>	71	\$13,509,124	\$8,688,104	\$5,427,700
<b>Total Impact</b>	124	\$21,292,428	\$13,992,023	\$8,921,523

Notes:

- “Industry Output” represents sales revenues.
- “Value Added” is a broad measure of net economic activity that is comparable to the Gross Domestic Product (GDP), and represents the sum of labor and property income, taxes on production and imports, and capital consumption (depreciation).

It is noted that each of the impact types are more fully described in the Economic Impacts by Major Industry Group included in the MEIC. Regarding the direct jobs, it is important to note that these include jobs that are directly related to the total revenue in their direct jobs count. For example, Construction, Manufacturing, Wholesale Trade, Transportation and a portion of Finance & Insurance which then adds up to their total of direct jobs count (see Economic Impacts by Major Industry Group terminology in the MEIC, included in Appendix E of this DEIS).

The existing local, state and federal tax impacts of SYC were also calculated for 2018, 2019 and 2020. As of the most current year evaluated (2020), the total local, state and federal tax impact of SYC was \$3,624,706.

Table 47 – Summary of Local, State and Federal Taxes – SYC 2020

<b>STATE AND LOCAL TAX IMPACTS</b>	
<b>Description</b>	<b>Tax</b>
Dividends	\$2,691
Social Ins Tax- Employee Contribution	\$3,676
Social Ins Tax- Employer Contribution	\$7,106
Tax on Production and Imports: Sales Tax	\$470,139
Tax on Production and Imports: Property Tax	\$610,126
Tax on Production and Imports: Motor Vehicle Lic	\$8,680
Tax on Production and Imports: Severance Tax	\$204
Tax on Production and Imports: Other Taxes	\$72,958
Tax on Production and Imports: S/L NonTaxes	\$1,898
Corporate Profits Tax	\$75,786
Personal Tax: Income Tax	\$248,778
Personal Tax: NonTaxes (Fines- Fees)	\$32,338
Personal Tax: Motor Vehicle License	\$7,065
Personal Tax: Property Taxes	\$4,644
Personal Tax: Other Tax (Fish/Hunt)	\$2,418
<b>Total State and Local Tax</b>	<b>\$1,548,495</b>
<b>FEDERAL TAX IMPACTS</b>	
Social Ins Tax- Employee Contribution	\$476,184
Social Ins Tax- Employer Contribution	\$426,869
Tax on Production and Imports: Excise Taxes	\$86,924
Tax on Production and Imports: Custom Duty	\$35,996
Tax on Production and Imports: Fed NonTaxes	\$9,155
Corporate Profits Tax	\$306,453
Personal Tax: Income Tax	\$734,642
<b>Total Federal Tax</b>	<b>\$2,076,211</b>

<b>Total Local, State &amp; Federal Tax</b>	<b>\$3,624,706</b>
---------------------------------------------	--------------------

As part of the MEIC, the SYC revenues for each year are compared to other marinas in the region. As of the most current year evaluated (2020), SYC's regional comparison is as follows:

**Table 48 – Annual Revenue Regional Comparison – SYC 2020**

<b>Activity</b>	<b>SYC Revenue</b>	<b>Revenue Percentage (%)</b>	<b>Regional Revenue Percentage (%)</b>	<b>Percentage Difference</b>
<b>Boat Sales</b>	\$16,000,000	85.72	4.8	80.92%
<b>Fuel Sales</b>	\$171,637	0.92	18	-17.08%
<b>Merchandise Sales</b>	\$627,833	3.36	4.7	-1.34%
<b>Boat Storage</b>	\$603,160	3.23	6.7	-3.47%
<b>Lease Revenues</b>	\$0	0	13.3	-13.3%
<b>Boat Rentals</b>	\$0	0	0.1	-0.1%
<b>Food &amp; Beverage Services</b>	\$0	0	0.6	-0.6%
<b>Boat Service</b>	\$1,262,936	6.77	6	0.77%
<b>All Other Activities</b>	\$0	0	45.8	-45.8%

As indicated above, SYC's revenue from boat sales is approximately 86 percent of its total revenue, which is nearly 81 percent higher than the regional marinas. However, its revenue from boat storage is below that of the region by approximately 3.47 percent.

**3.9.2 Potential Impacts**

***Proposed Services***

Upon implementation of the proposed development, SYC would have two new buildings (52,500 SF and 49,000 SF) for the sole purpose of indoor, heated storage for larger vessels (i.e., yachts). The existing storage buildings would remain the same and a reconfiguration of the staging areas and dry-dock storage is not proposed. Boat owners who typically store their boats in warmer climates in the winter and those looking to store their boats in climate-controlled space locally are the anticipated new yacht customers. It is anticipated the boat owners would be existing customers who currently dock at SYC or Strong's Water Club, new yacht customers from the surrounding Southold community, as well as other owners on Long Island, Westchester County, and in the States of Connecticut and New Jersey. The boats would arrive to the facility at the close of boating season (i.e., October-November)

via Mattituck Inlet, be hauled from Mattituck Creek via the existing 85-ton travelift and moved to the boat storage buildings. At the beginning of the next boating season (i.e., April-May), the same boats would be removed from storage, returned to Mattituck Creek via the 85-ton travelift, and exit through Mattituck Inlet. It is estimated that approximately 88 boats per season would be stored in the new buildings.

Additionally, the following facility improvements are proposed: the provision of potable water via public water connection, two I/A OWTS for sanitary waste management (one of which would serve as a replacement system for the current individual on-site sanitary system that serves the office, marina and other SYC buildings and one new system), formalization of on-site stormwater management system, landscaping, lighting improvements, and additional parking spaces to support the existing and future operations of SYC. Typical operations would continue during construction.

The repair, maintenance, fueling, washing and detailing of boats would occur in the same manner as they currently do on-site. Repair and maintenance would occur within the on-site buildings and/or at the existing dock. All materials used for such services are marine grade and common to the maritime industry. It is noted that the proposed action would not alter the maximum amounts of chemicals and antifouling paint stored on-site and any spills or releases observed either on land or into the water would be required to be reported in compliance with state hazardous material spill response protocol. The sale of marine fuel would continue under post-development conditions and any spills or releases observed either on land or into the water would be required to be reported in compliance with state hazardous material spill response protocol.

The offering of indoor storage for larger vessels post-development is a service that is currently offered to smaller vessels at SYC. The only exception is that the type of vessels to be stored cannot be brought to SYC via trailers on roadways (which does occur with smaller vessels for winter storage) but must arrive to and leave the site via Mattituck Creek and the existing boat lift at SYC. The existing 85-ton travelift used for the existing operation is sufficient to accommodate the yachts of the proposed action.

### ***Projected Employment Post-Development***

Upon implementation of the proposed action, SYC projects that an additional 11 employees would be added to increase the number of employees at SYC to 28. The number of employees on-site would vary seasonally. Currently, from Monday through Friday, 17 full-time employees are on-site. On Saturday's from approximately March 15 through September 15 (season), 12 employees are on-site and from September 16 through March 15 (off-season), the number decreases to four. On Sunday's during the season, approximately four employees are on-site and during the off-season, only one employee is on-site. The anticipated 11 new employees are anticipated to primarily be on-site on weekdays only.

These new employees would be for the boatyard only and include positions for boat maintenance, machinery operators, engine technicians, administrative, and wood and fiberglass re-finishing personnel.

In addition to the benefits presented above, as discussed in Section 2.2 of this DEIS, upon implementation of the proposed action, the method of sanitary disposal would be upgraded from one individual on-site subsurface system to an I/A OWTS, which is consistent with the Town and County's intent to reduce nitrogen loading from sanitary waste. Also, a stormwater management system

comprised of leaching pools and French drains which includes the use of pervious gravel would be installed to accommodate and recharge stormwater runoff from 7.77± acres, inclusive of the Project Area as well as additional surrounding land area. Finally, the proposed extension of the water main for connection to the SCWA would provide the opportunity for surrounding properties with private water wells to connect to public water. These benefits have been further discussed in Section 2.2 of this DEIS.

### ***Potential Economic Impacts of SYC***

#### ***Increased Assessed Value***

Consultations were undertaken with the Southold Assessor for post-development tax revenue. In correspondence dated June 25, 2021 (see Appendix E), the Southold Assessor advised that the increase in the Assessed Value would be approximately \$41,000. With no exemptions the increase in the property taxes would be estimated at \$59,450 based on the 2020-21 tax rate. However, the property would be eligible for the 485-b Business Investment Exemption, which is based on a sliding scale over 10 years. For the first 3 years, there would be a 50 percent reduction for the increased assessment attributable to the two new buildings. For each year after, the reduction would decrease as follows: Year 4: 40 percent Year 5: 30 percent, Year 6: 20 percent, Years 7 thru 9: 10 percent, and Year 10: 5 percent.

#### ***Economic Impact Analysis***

As part of the economic impact analysis, the projected gross revenues over the next 4 years, inclusive of 2024 with assumed project completion were inputted into the MEIC to generate the same outputs (Annual Revenue Regional Comparison, Summary of Economic Impacts, Economic Impacts by Major Industry Group, State and Local Tax Impacts, and Federal Tax Impacts). As indicated in Appendix E of this DEIS, the projected economic output for 2022, 2023 and 2024 were performed. For 2021, the Applicant has advised that 2020 numbers are similar, and thus, was not performed.

As excerpted from the MEIC analysis, the potential direct, indirect, and induced impacts are included in the table below. As indicated in Section 3.9.1 of this DEIS, the direct effects are those take place only in the industry immediately affected (e.g., Construction, Manufacturing, Wholesale Trade, Transportation and a portion of Finance & Insurance). As indicated below, the projected direct impact is 60 jobs.

The indirect effects are related to inter-industry transactions (e.g., if a marina closes it will no longer need locally produced materials or services. This will affect all of their suppliers, possibly resulting in a further loss of a few more jobs). Finally, the induced effects measure the effects of the changes in household income.

**Table 49 - Summary of Potential Economic Impacts – SYC 2024**

Impact Type	Employment (Jobs)	Industry Output	Value Added (GDP)	Labor Income
<b>Direct</b>	60	\$6,844,920	\$4,807,928	\$3,968,941
<b>Indirect</b>	11	\$2,823,138	\$1,608,822	\$980,102
<b>Induced</b>	82	\$16,815,081	\$10,810,228	\$6,748,452
<b>Total Impact</b>	146	\$26,669,089	\$17,444,454	\$11,143,885

As indicated in Section 3.9.1 of this DEIS, as of the most current year evaluated (2020), the total local, state and federal tax impact of SYC was \$3,624,706. Upon implementation of the proposed action, the total tax revenue is estimated to increase to \$4,478,039.

**Table 50 - Summary of Local, State and Federal Taxes – SYC 2024**

<b>STATE AND LOCAL TAX IMPACTS</b>	
Description	Tax
<b>Dividends</b>	\$3,438
<b>Social Ins Tax- Employee Contribution</b>	\$4,584
<b>Social Ins Tax- Employer Contribution</b>	\$8,861
<b>Tax on Production and Imports: Sales Tax</b>	\$567,174
<b>Tax on Production and Imports: Property Tax</b>	\$736,055
<b>Tax on Production and Imports: Motor Vehicle Lic</b>	\$10,473
<b>Tax on Production and Imports: Severance Tax</b>	\$246
<b>Tax on Production and Imports: Other Taxes</b>	\$88,016
<b>Tax on Production and Imports: S/L NonTaxes</b>	\$2,291
<b>Corporate Profits Tax</b>	\$96,708
<b>Personal Tax: Income Tax</b>	\$310,100
<b>Personal Tax: NonTaxes (Fines- Fees)</b>	\$40,307
<b>Personal Tax: Motor Vehicle License</b>	\$8,807
<b>Personal Tax: Property Taxes</b>	\$5,789
<b>Personal Tax: Other Tax (Fish/Hunt)</b>	\$3,014
<b>Total State and Local Tax</b>	\$1,885,845
<b>FEDERAL TAXES</b>	

<b>Social Ins Tax- Employee Contribution</b>	\$593,678
<b>Social Ins Tax- Employer Contribution</b>	\$532,417
<b>Tax on Production and Imports: Excise Taxes</b>	\$104,865
<b>Tax on Production and Imports: Custom Duty</b>	\$43,424
<b>Tax on Production and Imports: Fed NonTaxes</b>	\$11,046
<b>Corporate Profits Tax</b>	\$391,051
<b>Personal Tax: Income Tax</b>	\$915,729
<b>Total Federal Tax</b>	\$2,592,194
<b>Total Local, State &amp; Federal Tax</b>	<b>\$4,478,039</b>

As part of the MEIC, the SYC revenues for each year are compared to other marinas in the region. As of the latest projected year evaluated (2024), SYC's regional comparison is as follows:

**Table 51 - Annual Revenue Regional Comparison – SYC 2024**

<b>Activity</b>	<b>Your Revenue</b>	<b>Revenue Percentage (%)</b>	<b>Regional Revenue Percentage (%)</b>	<b>Percentage Difference</b>
<b>Boat Sales</b>	<b>\$17,500,000</b>	81.85	4.8	77.05%
<b>Fuel Sales</b>	<b>\$220,000</b>	1.03	18	-16.97%
<b>Merchandise Sales</b>	<b>\$760,000</b>	3.55	4.7	-1.15%
<b>Boat Storage</b>	<b>\$1,100,000</b>	5.14	6.7	-1.56%
<b>Lease Revenues</b>	<b>\$0</b>	0	13.3	-13.3%
<b>Boat Rentals</b>	<b>\$0</b>	0	0.1	-0.1%
<b>Food &amp; Beverage Services</b>	<b>\$0</b>	0	0.6	-0.6%
<b>Boat Service</b>	<b>\$1,800,000</b>	8.42	6	2.42%
<b>All Other Activities</b>	<b>\$0</b>	0	45.8	-45.8%

As indicated above, SYC's projected revenue from boat sales in 2024 is approximately 82 percent of its total revenue, as compared to the current 86 percent (see Table 48) and nearly 77 percent higher than the regional marinas. However, its revenue from boat storage is projected to increase to approximately 5.14 percent of its total revenue, which is below that of the region by approximately 1.6 percent but higher than the current percentage of 3.23 percent (see Table 48). Fuel and merchandise sales are projected to slightly increase by approximately 0.1 percent and 0.2 percent, respectively (see Table 48). Boat service is projected to increase by approximately 1.65 percent (see Table 48).

### ***Impacts Associated with Ignitable Sources***

The Amended Final Scope requires, in this section of the DEIS, that “the threat of fire and explosion on site from all ignitable sources” be evaluated. It is noted that the subject property is within the service area of the Mattituck Fire Department and consultations were undertaken with the Mattituck Fire Department as well as the Southold Fire Marshal (see Appendix P). As indicated in the reply correspondence dated July 27, 2021, Chief Ed Rittberg of the Mattituck Fire Department indicated that the Mattituck Fire Department “has the capability to handle any fire situation on the proposed plan with the additional hydrant that is being installed.”

Reply correspondence was also received from the Southold Fire Marshal, dated June 24, 2021, wherein both passive and active fire protection measures were provided, as well as a list of specific items to consider during the design, construction and maintenance of the proposed project to manage the risk of a fire event (see Appendix P). In said correspondence, the Fire Marshal recommended a 150-foot Fire Department access area from all exterior walls of the two proposed buildings, and a fire safety plan. However, the Mattituck Fire Department’s correspondence (explained above) was accepted by the Fire Marshal as adequate for not providing the recommended access area; however, the Fire Safety Plan was still recommended (see letter dated August 19, 2021 in Appendix P). In response to same, SYC has developed a Fire Safety Plan and a copy of same is included in Appendix P. The Fire Safety Plan provides hazard locations, utility and water supply information, and emergency procedures for its employees. Accordingly, based on the above-described coordination with both the local fire department and Town Fire Marshal, the proposed action would not create any potential fire safety issues.

### **3.9.3 Proposed Mitigation**

The proposed development would not result in any significant adverse social or economic impacts. As such, mitigation is not required. Regarding fire safety, the following mitigation has been incorporated:

- At the recommendation of the Town Fire Marshal, a Fire Safety Plan has been prepared to provide hazard locations, utility and water supply information, and emergency procedures for its employees.



### **3.10 Construction-Related Impacts**

#### **3.10.1 Purpose and Need for the Proposed Excavation Program**

Based on the *Excavation Phasing Plan* (see Appendix C) and site data provided by the project engineer, the Project Area includes is limited to the 6.51± acres, which includes the upland area to be excavated and/or cleared as well as those land areas on the existing SYC facility where infrastructure improvements would be undertaken. Within the Project Area, the Construction Excavation Area (i.e., the upland area proposed for excavation and regrading to Elevation 10± AMSL is 4.59± acres. As described in Table 3 in Section 1.2.1, the proposed action would impact approximately 0.67± acre of land in the R-80 zoned portion of the subject property for the proposed haul road inclusive of 0.13± acre of forested area and 0.54± acre of meadow/brushland (Successional Shrubland) would be removed. The remaining 5.84± acres of land are within the M-II portion of the subject property. Of this 5.84± acres, approximately 5.38± acres of woodland and 0.29± acre of bare earth (unvegetated) land would be removed. The remaining land area includes impervious and pervious (gravel and stone blend) areas that would be modified within the Project Area for post-development conditions.

The proposed excavation is required in order to construct the proposed buildings at similar elevation to the bulkhead and boat lift. The types of vessels that are desired to be stored indoors cannot be brought to the site via roadway, i.e., trailers. They must be lifted from the water and hauled via a boat lift that cannot ascend steep inclines. As such, the proposed action intends to cut and remove soil material to reduce the average grade from 50 feet AMSL to 10 feet AMSL.

As discussed above and in Sections 1.1.2 and 3.1.2 of this DEIS, siting the proposed action within the Project Area is consistent with the over-60-year history of maritime use of the property. The proposed buildings are permitted within the M-II zoning district and would serve a market demand for larger boat owners that currently use local waters for recreation.

#### **3.10.2 Description of Proposed Construction Schedule and Activities**

As discussed in Section 1.4.1 of this DEIS, the proposed action would be constructed over the course of approximately 13 months. The excavation and removal of material associated with site clearing would take approximately 5 to 6 months based upon loads of 30 CY per truck. Phase 1 of the excavation, which would remove 123,000± CY of material from a 3.79± acre area, would take 5 to 6 months and commence in mid-December 2023. Phase 2 of the excavation, which would remove 12,000± CY of material from a 1.25± acre area, is estimated at 2 to 4 weeks and would commence on or around May 2023. In total, 135,000± CY of material would be removed for the proposed action. It is noted that the estimated volume of material has been calculated using AutoCAD based on the current topographic survey and proposed finished elevations and that a swell factor does not need to be considered.

As outlined on the *Excavation Phasing Plan* (see Appendix C), the clearing of the area of disturbance would include the following:

1. A 1,454± foot crushed concrete haul road would be constructed from the proposed excavation area to West Mill Road, as shown on the *Haul Road Plan* in Appendix C;

2. Topsoil would be stripped from the excavation area and stockpiled on the site for use during site restoration. Stockpiled topsoil would be stabilized with temporary vegetation to prevent dust and erosion. The stockpile would be a maximum height of 15 feet;
3. Sand and gravel would be excavated using front end loaders or similar portable excavation equipment;
4. The bottom elevation of the proposed excavation would be 10 feet; and
5. Bank slopes would not exceed 1 on 3.

The removal of excess material from the subject property would include the following:

1. Sand and gravelly sand would be loaded into dump trailers for removal from the site.
2. The proposed haul road would be stabilized to allow the passage of 22-wheel, 30-yard dump trailers.
3. The proposed haul road would be regraded periodically, and water applied when necessary to reduce windblown sand and dust. Additionally, a six-foot fence with filter fabric would be installed around the north and west portions of the construction area for dust control.
4. A sweeper would be employed daily for road maintenance during the excavation phases.

The project schedule is as follows:

- Prior to site preparation, field inspections would occur to identify the presence of the eastern box turtle and relocation of any observed turtles to on-site areas that would not be disturbed.
- Site Preparation (Tree Removal and Grubbing) and Haul Road Construction (Approximately 2 Weeks): The site preparation phase would occur over two weeks and would include tree removal and grubbing. As indicated in the Construction Details (see Appendix F), during this phase, the following equipment would be staged and used on-site: excavator, feller buncher, woodchipper, tub grinder, and payloader. All of this equipment would be assigned an operator and approximately four laborers are expected. One trailer with driver is expected daily during this phase as well.

During this phase, the proposed crushed concrete haul road would be constructed from the proposed Construction Excavation Area to West Mill Road, as shown on the *Excavation Phasing Plan* and *Haul Road Plan* in Appendix C. This haul road would be used for the entirety of Phase 1 and would remain as an emergency access road post-construction. The haul road would dead-end at the top of the slope and could be used to direct water down from the higher elevation onto a structure fire. There would be no access for vehicles or personnel past that point. According to the project engineer, there are no slope issues for the haul road. The estimate of RCA required to provide a six-inch horizon for the haul road and shoulders out on West Mill Road is approximately 700 CY.

As noted in Section 1.4.1 of this DEIS, the proposed entrance to the temporary haul road was shifted from the original design to increase the buffer distance to the nearest residential properties. The proposed haul road was shifted to the south on West Mill Road and is located approximately 145± feet south of the single-family residence located at

4105 West Mill Road. Internally, the haul road was shifted to maintain a separation distance of approximately 259 feet to the single-family residence located at 5106 West Mill Road.

After installation of the haul road, a temporary guard booth (5-foot by 5-foot) would be placed proximate to the ingress/egress. Its purpose would be to house a staff member responsible for directing incoming trucks, employees, and inspection of exiting trucks to ensure all loads are covered. Should the pandemic still be a concern, the staff member would direct drivers and employees of proper site safety protocols.

- Phase 1 (Excavation): Phase 1 would be completed in approximately five-to-six months with a commencement date of mid-December 2023. During Phase 1, approximately 123,000 CY of material would be excavated and removed. Based on 30 CY trucks, Phase 1 would generate approximately 4,100 total trips. With 40 trucks available for use and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 1 could be completed in approximately 20 weeks. Also, during this phase, the following equipment would be used on-site: two payloaders, two excavators, one fuel truck / water truck, and two bulldozers. All equipment with exception to the fuel truck/water truck would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, two flagmen, and four laborers.
- Phase 2 (Excavation): Phase 2 would be completed in approximately 2 to 4 weeks with a commencement date of May 2024. During Phase 2, approximately 12,000 CY of material would be excavated and removed. Based on 30 CY trucks, Phase 2 would generate approximately 400 total trips. With 40 trucks available per day and time limited to 7:00 am to 5:00 pm five days per week (Monday to Friday), Phase 2 could be completed in two weeks. All of the equipment detailed in Phase 1 above would remain on-site with the same staff. At the completion of Phase 2, the temporary guard booth would be removed, and access would be gated to prevent unauthorized entry.
- Phase 3 (Construction): Phase 3 would be completed in approximately six (6) months with a commencement date of May 2024. During Phase 3, the construction of buildings, parking area, retaining wall, and other infrastructure (drainage, water and sanitary) would be undertaken. It is anticipated that Phase 3 would generate approximately 60 truck trips for the construction of the retaining wall and an additional 101 truck trips for the two boat storage buildings (including trucks for concrete foundation and material delivery). A similar guard booth would be situated along the existing internal driveway to direct incoming deliveries and employees, to inspect exiting vehicles, and to enforce safety protocols.

As indicated in the Construction Details (see Appendix F), the retaining wall construction would be approximately three weeks and would require the following equipment: one payloaders, one excavator, one skid steer, and one mini excavator. All equipment would be assigned an operator and four laborers would be on-site. It is noted that during construction of the retaining wall, drainage infrastructure and building foundations would be performed. Additional equipment to be used on-site for this work include two

payloaders, one excavator, one fuel truck, two skid steers, one mini excavator, one bulldozer, one scissor lift, and one telescopic forklift. Other than the fuel truck, all equipment would remain on-site. Each would be assigned an operator and additional staff on-site would include the construction manager, site safety supervisor, and laborers would range from 20 to 60 workers.

During the construction phase, it is expected that light duty crews would work on Saturday with minimal truck activity. Workdays are planned for Monday-Saturday with various hours between 7:00 am and 7:00 pm pursuant to §180-6 *Prevention of Noise – Standards* of the Town Code.

It is noted that the proposed construction schedule is a maximum time period and considers delays that could occur from unexpected weather and task delays. Task delays could be expected during unexpected snow events or wet weather during site preparation, which would impact work on the site. However, the construction schedule provided in this DEIS includes over-estimates should delay occur. A construction management company and on-site supervisor in close coordination with the Applicant, would monitor and be responsible for maintaining the overall schedule. Regarding impacts associated with COVID-19 (as requested in the Amended Final Scope for the DEIS), all State and Federal mandates would be followed although daily advances suggest that no significant delays would be expected.

### **3.10.3 Potential Impacts**

#### **Site Preparation and Vegetation Removal**

During site preparation, which would occur over approximately two weeks and would include tree removal and grubbing, construction equipment would remain on-site to limit roadway activity for transport. All equipment that is proposed to be used and stored on-site during preparation, excavation and construction would be Tier 4 certified by U.S. EPA standards. Tier 4 equipment, as defined by the U.S. EPA, correlates to the emission milestone established by the U.S. EPA and California Air Resources Board. Tier-4 certified equipment includes all, *“new engines found in off-road equipment including construction, mining and agricultural equipment, marine vessels and workboats, locomotives and stationary engines found in industrial and power generation applications. As of January 1, 2014, these emissions standards apply to new engines that power equipment commonly found in most construction and agricultural applications while new engines manufactured for much larger applications including marine, locomotives must have met the standard by January 1, 2015. These emissions standards apply to new and remanufactured engines and do not apply to older engines.”*<sup>53</sup>

As discussed in Section 1.4.1, the following measures would be implemented during all construction phases to mitigate the impact of noise on surrounding properties:

- No work would be performed on Federal or State holidays, or on Sundays.
- All trucks would be Tier 4 certified by U.S. EPA standards and all gasoline or diesel-powered machinery would be equipped with adequate mufflers.

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<sup>53</sup> <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1039>

- Any vehicle that requires the use of a back-up alarm would use a white noise back-up alarm rather than a single tone beep.
- All trucks and drivers would be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.

During construction of the proposed crushed concrete haul road, a 100-foot-long stabilized RCA shoulder would be constructed south of the haul road entrance to provide for wider turns and safe access for trucks. The temporary haul road would include a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. Upon entry into the property, a security booth would be located on the east side of the temporary haul road to house a site manager responsible for directing trucks to the Construction Excavation Area, inspecting exiting vehicles, and enforcing safety protocols. The 1,454± foot long haul road would be 30± feet wide and narrow to 16± feet extending east through the mostly existing cleared areas within the R-80 zoned portion of the subject property. As the haul road approaches the M-II zoned portion of the subject property, the haul road would widen to 25± feet for 100± feet to match the existing width of the cleared area. As noted earlier in Section 3.4.2 of this DEIS, the proposed haul road was shifted from the original design to increase the buffer distance to the nearest residential properties. Specifically, the proposed haul road entrance was shifted south on West Mill Road to increase the separation distance to the single-family residence located at 4105 West Mill Road, and internally, the haul road was shifted to increase the separation distance to the single-family residence located at 5106 West Mill Road. At its closest point, the haul road is located 259± feet west of the residence at 5106 West Mill Road. This haul road would be used for the entirety of Phase 1 only to facilitate the removal of excavated material during the initial grading of the site. After Phase 1 is complete, the haul road would be retained only as an emergency access road by police, fire, or ambulance vehicles, as necessary.

As discussed earlier in Section 2.1.2, excavation and construction activities were evaluated for vibration impacts. The geotechnical engineering assessment concluded that the medium to dense soils located in the area of excavation and construction would enable vibration effects to be limited if pile driving and sheet pile installation were avoided, which are processes not proposed as part of the proposed action and therefore, no impacts would result. Additional vibration analyses were undertaken by SoundSense and are discussed later in this section.

### **Land Disturbance**

The proposed action would result in a total land disturbance of 6.51± acres. During excavation and construction activities, there is the potential for erosion and sedimentation with prolonged soil exposure and fugitive dust during dry periods. As noted above, to minimize the potential for erosion and sedimentation, an *Erosion and Sediment Control Plan* has been prepared (see Appendix C), which includes, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures would be routinely inspected and maintained such that no sediment would be transported off-site. Additionally, dust control measures would be undertaken with the use of watering during dry periods, limiting on-site vehicular speeds, and all trucks carting loose material and construction debris would be covered. Also, all stockpiles would be either covered or

vegetated, as necessary, and a six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area (see Section 3.8.2 of this DEIS).

As noted earlier in this DEIS, the proposed action would require coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001), which includes the preparation of a SWPPP for submission to both the Town and the NYSDEC prior to any construction activity. As discussed in Section 2.2.2 of this DEIS, the SWPPP would be designed in accordance with the *NYS Stormwater Management Design Manual, (2015)* and would meet the standards and specifications of the *New York Standards and Specifications for Erosion and Sediment Control (Blue Book)(2016)*. Furthermore, the proposed stormwater management system and sediment and erosion controls to be implemented would be consistent with Chapter 236, *Stormwater Management and Erosion and Sediment Control*, of the Town Code.

Based on the above, no significant adverse impacts associated with land disturbance during construction would be expected.

### **Proposed Excavation and Material Removal**

As shown on the *Excavation Phasing Plan* in Appendix C, the proposed action would require the removal of approximately 135,000 CY of material within the identified Construction Excavation Area (approximately 4.59 acres) in the southeast portion of the subject property. As indicated in Section 2.1.2, the calculations are based on the delineated area of the excavation, soil classifications from the field investigation and professional judgement on stratigraphy between the boring locations. The excavation and removal of the materials would be removed in two phases. Phase 1 would encompass approximately 3.79 acres of the excavation area and the removal of 123,000± CY of material is proposed. The area to be excavated would be graded down to 9 feet AMSL. Once the area is excavated, the northern portion of the Evergreen concrete retaining wall would be constructed to stabilize the slope. Phase 2 would commence immediately after Phase 1 is completed and would encompass an approximately 0.80-acre area within the Construction Excavation Area and the removal of 12,000± CY of material is proposed. Similar to Phase 1, the area would be graded down to 9 feet AMSL and trucks would access the area via the main entrance to the subject property from West Mill Road. Similar to Phase 1, a security booth would be sited at the main entrance to SYC to house a site manager responsible for directing trucks to the Construction Excavation Area, inspecting exiting vehicles, and enforcing safety protocols. Once excavation is complete for Phase 2, the western portion of the Evergreen concrete retaining wall would be constructed. As discussed above, trucks entering and exiting the Construction Excavation Area would be directed via the guard in the guard booth at the entrance of the haul road at West Mill Road. All material to be removed during Phase 1 would exit the Construction Excavation Area via the temporary haul road. Trucks exiting would be inspected to ensure no soil or loose debris is introduced onto local roadways.

As outlined in Appendix F, the following construction equipment is proposed for Phases 1 and 2:

- a) 40 trailers with operator
- b) 2 loaders with operator
- c) 2 excavators with operator
- d) 1 fuel truck/water truck with operator
- e) 2 dozers with operator

- f) Additional personnel: 1 project manager, 1 site safety supervisor, 2 flagmen, and 4 laborers

Equipment associated with items b, c, and e would remain on-site throughout both Phases 1 and 2.

As identified in Appendix H and discussed in Section 2.1.2 of this DEIS, vibrations from the operation of machinery are not anticipated as pile driving activities are not proposed and the medium to dense soils would limit vibration effects. Additionally, the recommended soil cut on 1:5:1 (Horizontal: Vertical) slope was based on OSHA guidelines for excavation safety in Type C (granular, i.e., sandy) soils. The required cut would be 34° and would be taken from the base of the proposed retaining wall and would not extend horizontally onto the property of the nearest resident, 5106 Mill Road. Therefore, slope stability would not be a concern to nearby properties. The proposed Evergreen concrete retaining wall would improve slope stability as it would correct existing slope failure due to the placement of dredge material within the Construction Excavation Area.

The potential vibration impacts associated with excavation and material removal are addressed later in this section.

### **Proposed Evergreen Macro Gravity Retaining Wall System**

An Engineering Design Report and Documentation has been prepared by Jeffrey T. Butler, P.E., P.C., and is included in Appendix H of this DEIS. As documented in this report, the proposed Evergreen concrete retaining wall has been used for slope stabilization world-wide for over 35 years. Photographs of similar walls on Long Island and throughout the world have been included in Appendix H to document the use of the wall and the visual appearance of this wall type. As indicated in the photographs, the Evergreen concrete retaining walls are visually more appealing than a traditional retaining wall due to the vegetation and eventual full growth that screens the structure.

The proposed Evergreen concrete retaining wall consists of precast concrete modular units that are fabricated off-site (Bellport, New York) and are shipped for assembly on-site. The modular units are then placed in pre-determined locations to lock together and create a wall with a safety factor of greater than 2.0, with 1.5 being the code minimum. Once in place and backfilled, seeding and use by bird species promote growth in the trays that are built into the wall to create a “green” wall over a period of two-to-three years. The aesthetic and environmental characteristics of this wall, combined with the design philosophy of this proprietary wall, make the Evergreen concrete retaining wall system an ideal solution for projects where slope stabilization is equally as important as maintaining a natural viewshed.

The installation of the proposed wall comes with a mandatory, strict quality control with continuous third-party inspections for both the off-site fabrication and on-site installations as well as Evergreen standard practice for achieving the design intent for safety factor, aesthetic beauty, and job site safety. Specifically, as part of the process, a shop drawing for each modular unit is generated and approved by the Engineer of Record. There would then be a continuous third-party process in place which accompanies the shop drawings from off-site fabrications to on-site assembling, including rebar inspection and concrete testing. In order for each modular unit to be shipped for on-site assembly, the concrete must pass a mandatory 28-day test.

As discussed in Section 2.1.2 of this DEIS, the 1.5:1 slope is a 34° angle for granular soils composed of sand with gravel and medium dense to dense compaction are favorable for stable open cuts. A cut on a 34° angle taken from the base of the proposed Evergreen concrete retaining wall would not extend horizontally onto the property of the nearest resident, 5106 Mill Road. Therefore, slope stability is not a concern to nearby properties. The Engineering Design Report and Documentation (see Appendix H) reviewed the soil borings conducted by PWGC to assure design compatibility with the native soils properties and groundwater elevation. It was concluded the design principles utilized for this gravity wall system are consistent with the requirements for the proposed Evergreen concrete retaining wall. The Engineering Design Report and Documentation for the proposed Evergreen concrete retaining wall considers soil stability and erosive forces including precipitation such that there would be no stability issues.

As outlined in Appendix F, the following construction equipment is proposed for the construction of the Evergreen concrete retaining wall:

- a) 1 excavator with operator
- b) 1 loader with operator
- c) 1 skid steer with operator
- d) 1 mini excavator with operator
- e) Additional personnel: 4 laborers

Equipment associated with items a through d would remain on-site throughout the construction period for the Evergreen concrete retaining wall.

The Engineering Design Report and Documentation in Appendix H also includes Evergreen Retaining Wall Typical Section and Notes, Wall Specifications, Minimum Design Requirements, Fabrication Requirements, Excavation Requirements, Site Preparation Requirements, Minimum Requirements for Transportation and Unloading, and Minimum Wall Erection Requirements.

## **Proposed Building and Infrastructure Phase**

### Buildings and Infrastructure

Prior to the construction of the proposed buildings, additional geotechnical investigation would be completed within the southern footprint of Buildings 9. The soil borings completed in this area during the initial geotechnical investigation indicated loose soil deposits that may require improvement for foundation bearing.

Following the additional geotechnical investigation, the construction of the boat storage buildings and drainage system would commence. The security booth constructed as part of Phase 2 would be used for Phase 3. The site manager would be responsible for directing trucks to the construction area, inspecting exiting vehicles, and enforcing safety protocols.



As outlined in Appendix F, the following construction equipment is proposed for Phase 3, inclusive of the construction of the Evergreen concrete retaining wall (discussed above) and construction of the drainage system:

- a) 2 loaders with operator
- b) 1 excavator with operator
- c) 1 fuel truck with operator
- d) 2 skid steers with operator
- e) 1 mini with operator
- f) 1 dozer with operator
- g) 1 telescopic forklift
- h) Scissor and telescopic lifts
- i) Additional personnel: 1 project manager, 20-60 laborers contingent upon progression of construction

Equipment associated with items a through h would remain on-site throughout the construction period for the Evergreen concrete retaining wall.

#### Utility Infrastructure

The proposed extension of the water main would be in coordination with the SCWA. The Applicant would pay for the water main extension; however, the actual construction would be undertaken by SCWA. The water main extension would be sited within the public right-of-way similar to other public infrastructure.

The Final Scope requested information related to the extension of natural gas service to the subject property. However, the proposed heating source for the proposed storage buildings is not natural gas and therefore, an extension would not be required. The proposed heating source, as discussed in Section 3.1.2 of this DEIS, would be above ground LPG tanks in concrete vaults. The existing buildings at SYC would continue to be heated using recycled engine waste oil.

#### **Construction-Related Traffic Impacts**

As part of the TIS (see Appendix O), the potential construction-related impacts associated with site activity and traffic were evaluated. The construction traffic would include trucks for performing operations on the site as well as the delivery and removal of materials as well as worker vehicles and tradesman vans.

The projected truck trips would be 40 entering trucks and 40 exiting trucks per day during the four-month excavation period for Phase 1 and 40 entering trucks and 40 exiting trucks per day during the one-month excavation period for Phase 2. Entering trucks would be empty and each exiting truck would carry approximately 30 CY of excavated material. Trucks associated with site clearing for Phase 1 would access the subject property via the haul road while trucks associated with site clearing for Phase 2 would access the subject property via the existing site access from West Mill Road and utilize internal access routes.

For the construction of the retaining wall, a total of 60 truck trips will be necessary during the six-month construction period. For the construction of the two boat storage buildings, another 12 truck trips (six [6] per building) will be necessary. Trucks associated with the construction of the retaining wall and boat storage buildings would access the subject property via West Mill Road and existing internal access routes.

All trucks associated with the construction of the proposed action would be limited to traveling at 30 mph on West Mill Road and all neighboring roads. The posted speed limit on West Mill Road is 35 mph.

All construction activities would be overseen by a Construction Manager and dictated by a Construction Management Plan developed in coordination with the Town of Southold. The Construction Manager will facilitate coordination among the appropriate governmental agencies/departments and interested parties to minimize potential construction impacts in the surrounding area. It is also anticipated that the Town of Southold will provide independent oversight on behalf of the public. While the Applicant would strive to ensure that impacts as a result of demolition and construction are minimized, the public can express any issues during construction to the Town, who would then notify the Applicant; and, if necessary, the Town could oversee the implementation of any corrective action.

As indicated in Section 3.3.2 of this DEIS and the TIS, prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible. It is suggested that, during the construction period, the speed limit be reduced along Cox Neck Road/West Mill Road. The current speed limit is 35 miles per hour and could be reduced to 30 or even 25 miles per hour for the duration of the construction activity. The speed limit change would require approval of the NYSDOT or the Southold Town Board depending on the Town's ability to set speed limits.

Overall, no significant adverse traffic impacts during construction are anticipated.

### **Construction-Related Noise Impacts**

It is recognized that the Town of Southold regulates construction-related noise (Chapter 180 of the Town Code) by limiting the times of construction activities to 7:00 am to 7:00 pm, on weekdays and Saturday. The Applicant is also aware of the residential land uses that are located adjacent to the subject site. As such, in accordance with Town Code and indicated above, all construction activities would be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity would be limited to Monday to Friday from 7:00 am to 5:00 pm as mitigation offered by the Applicant. On Saturday's and after 5:00 pm on weekdays, on-site activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start. No work would be performed on Federal or State holidays, or on Sundays. Also, all trucks would be Tier 4 certified by U.S. EPA standards and all gasoline or diesel-powered machinery would be equipped with adequate mufflers. Additionally, any vehicle that requires the use of a back-up alarm would use a white noise back-up alarm rather than a single tone beep, and all trucks and drivers would be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.

Several measures to reduce noise impacts on the surrounding community with regards to truck noise would be implemented. These measures include ensuring the mufflers are adequate on gasoline or diesel-powered machinery, the Jake Brake would be turned off on diesel engine trucks, and engines would be Tier 4 certified by U.S. EPA standards.

Overall, although the proposed action would result in an increase in ambient noise levels during construction, they would be temporary in duration and all activities would comply with the Town Noise Code.

### **Construction-Related Air Quality Impacts**

Construction activities in connection with the proposed development have the potential for temporary air quality impacts such as generating fugitive dust emissions from soil particles that become airborne when disturbed by heavy equipment operation or through wind erosion of exposed soil after groundcover (e.g., landscaping/planted areas, pavement) is removed. Excavation, grading, and loading/unloading materials in trucks also contributes to fugitive dust emissions.

As part of the proposed action, several measures would be implemented to minimize fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed during construction, as necessary:

- Minimizing the exposed area of erodible earth.
- Applying wet suppression to material piles and unpaved areas when there is visible dust.
- Use of covered haul trucks to move construction material.
- Use of plastic sheet coverings for material piles.
- A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.

With the implementation of the above measures, there would be no significant adverse impacts created by fugitive dust generation and the resultant air quality impacts would be avoided.

To reduce emissions during construction, heavy-duty vehicles will not remain idling for more than five minutes at a time and the Applicant is committed to using all Tier 4 certified by U.S. EPA standards trucks and equipment to reduce emissions of PM and NO<sub>x</sub>. As excerpted from the Air Quality Evaluation (see Appendix S of this DEIS), the benefit of a Tier 4 engine is that it, "*significantly reduce emissions of particulate matter (PM) and oxides of nitrogen (NO<sub>x</sub>) to near zero levels. Relative to previous emissions standards, Tier 4 compliant engines reduce emissions by over 95 percent for most agricultural and construction equipment and just over 86 percent for much larger applications like locomotives and marine vessels.*"

### **Construction-Related Vibration Impacts**

To address potential construction-related vibration impacts impact to nearby residents and truck traffic on local roads, a Vibration Report was prepared by SoundSense (see Appendix R of this DEIS). In August 2022, SoundSense documented the existing vibration conditions at various locations near

the project site and vibration data from a representative truck expected to be used during construction. The measurements collected provide a baseline for existing conditions and have been used in the predictions completed for the Project. Predicted vibration levels were used in conjunction with the methodology and data from the FTA Guidelines and the New Hampshire Guidelines. A more detailed description of the methodologies and analyses are in Section 3.6.15 of the Vibration Report.

Although the soil in and around the project area significantly attenuates vibration over short periods of distances, mathematical equations in the Vibration Report were used to evaluate the minimum distance from trucks which would not cause damage to historic and residential structures as well as impact to nearby residences (as defined in Table 2 of the Vibration Report). The minimum distances can be found below in the table below, which was excerpted from Table 6 of the Vibration Report.

**Table 52 - Minimum Distances to Meet Vibration Criteria**

<b>Description</b>	<b>Minimum Distance to Cause No Damage to Historic Structures (ft)</b>	<b>Minimum Distance to Cause No Damage to Residential Structures (ft)</b>	<b>Minimum Distance to Meet Recommended Indoor Vibration Levels (ft)</b>
Loaded Truck from FTA Guidelines	17	11	79
Measured Truck at Location 4	2	2	29

Based on the data collected and calculations provided, it is anticipated that the minimum distance to meet the criteria would be 17 feet based on the data collected and 79 feet based on a worst-case scenario using the federally standardized FTA Guidelines methodology and Equation 3. Although several residences have structures that are closer than 79 feet from the roadway, no residences along West Mill Road or Cox Neck Road have distances closer than 29 feet from the roadway. Although this presents a potential quality of life impact for homes with distances of less than 125 feet from the road, it should be noted that the ambient PPV data collected from typical vehicle traffic on West Mill Road elicited similar vibration readings to the truck passbys. Therefore, while there is a potential quality of life impact for truck traffic impact, that impact is no greater than the existing typical vehicle passbys which are already using West Mill Road and would therefore be no different than any vibration transmitted currently.

Once vehicles turn off West Mill Road and Cox Neck Road, and travel along Sound Avenue, Northville Turnpike, and Route 58, there is also already existing significant truck traffic. A letter was provided to the applicant from Benimax, Inc. a local trucking company noting that Benimax transports up to 500 tons of materials including sand, stone, asphalt, and concrete to the North Fork daily (see Appendix O). It is noted that the 500 tons is equivalent to 14 tractor trailer loads of materials. Benimax notes that they use State Route 25, County Road 48, Sound Avenue, Northville Turnpike, and Country Road 58 on a regular basis for their trucking routes. These are metrics for only one of the trucking providers serving the area. Additional truck traffic from other trucking providers would send additional traffic into the area daily. Therefore, truck traffic along these roadways and associated vibration from loaded trucks is already a part of the existing conditions of these areas.

For any potential damage to historic structures, worst-case scenario calculations conclude that a minimum distance of 17 feet would be required from the roadway surface. However, based on the vibration data collected near the project site, the distance would be 2 feet. For damage to residential structures, the worst-case scenario for damage would be 11 feet and based on the data collected near the Project Site, would be 2 feet. A list of historic structures along the truck route and figures noting the location of each of the historic structures can be found in Table 7 and Figures 3-11, respectively, in the Vibration Report.

As indicated in the Vibration Report, analysis of the construction equipment has shown that there is no predicted impact to any nearby neighbors. Additionally, using the data collected near the project site, there is no predicted impact to any nearby historic structures from truck traffic. However, using the worst-case scenario and the reference data and calculation methodology presented in the FTA guidelines (detailed further in Section 3.6.15 of the Vibration Report), there is a potential impact from truck traffic to the Water Tower and Building located at 3380 West Mill Road. These reference values, equations, and methodologies were developed to be used throughout the United States and do not take Long Island's unique soil structure into account (i.e., Long Island's sandy soil structure efficiently reduces vibration over short distances). While there is no impact anticipated using the data collected on site, the risk of potential vibration in the worst-case scenario is identified in this report. To ensure that vibration is responsibly managed, a vibration monitoring plan during construction at the project site to protect nearby historic structures of concern and ensure that ground-borne vibrations are not a disturbance to nearby neighbors.

As indicated in Section 3.6.17 of the Vibration Report, vibration monitoring terminals would be installed at four locations and monitored through all phases of construction. One of the four locations would be installed as close as possible to the foundation of the Water Tower and Building, an historic structure located near the project site (see Section 3.11 of this DEIS) and the locations of the three remaining terminals have not been determined. However, the terminals would be installed as close to any impacted structures while also maintaining full access to the vibration monitoring terminal (possible locations are included in Figure 13 of the Vibration Report).

If vibration levels exceed permissible levels (based on the RMS Velocity and Peak Particle Velocity [PPV]<sup>54</sup>), the following steps will be taken for Vibration Monitoring at Locations 1-3:

- The acoustic consultant and construction management team should be notified if an exceedance is measured.
- The time and location of construction activities when the exceedance is measured are to be provided to the acoustic consultant.
- If the exceedance is an RMS exceedance, the RMS velocity should be verified in the Syscom ROCK's cloud portal.
- Should the cause of the exceedance be linked to the construction activities, construction should be halted immediately until appropriate measures, such as operating fewer pieces of equipment or moving construction activities away from the construction area boundary, can be completed.

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<sup>54</sup> As indicated in the Vibration Report in Appendix R, RMS Velocity is used to describe a smoothed vibration signal and is used to evaluate human response to vibration levels, and PPV is the maximum peak of the vibration signal and is the metric typically used to evaluate stresses related to building damage.

- The only exception to halting construction would be if it would be a life safety issue for the construction workers, or if it would result in an unsafe structure at the time of halting the construction. In each of these cases. Construction should only be continued until such time that all workers would be safe and that all structures are stable and would not be in danger of collapse.

At location 4 (Water Tower and Building), disturbance to inhabitants is not a concern. The criteria for Location 4 will be for vibration damage only and would be the criteria for vibration damage to historic structures, 0.12 in/s. There are specific procedures for the protection of the Water Tower and Building (further detailed in Section 3.11 of this DEIS).

### **Disposal Location and Alternative Locations**

The Amended Final Scope requires this DEIS “to discuss alternative plans for the disposal of any excavated material that cannot be sold, and provide an evaluation of any disposal sites, other than commercially operated sites specifically designed to receive fill.” The Amended Final Scope also requires “the identification of the off-site disposal location.”

As indicated in Section 2.1.2 of this DEIS, material from the subject property would likely be transported to a registered or permitted NYSDEC Part 360 facility, likely located within 15 miles west of the project location, for processing and re-use. Upon excavation and loading on to trucks, the material in its raw form would be transported to a facility for stockpiling and processing, and eventually sold as a finished product to the ultimate end user. Such uses could be beach replenishment, aggregate for roadway construction, pre-cast concrete products, etc. Material may also be transported directly to a local site for re-use. Given that this project is still in the environmental review process, and the ultimate re-use facility or location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations. However, the transportation costs of these types of aggregates often drive their use, and it often becomes financially restrictive to transport these types of materials greater than 50 miles.

### **Mining**

The Amended Final Scope requests official documentation that no action on-site constitutes mining. It is important to note that under the NYSDEC Mined-Land Reclamation Law, exempt activities include “Excavation or grading operations which are conducted solely in aid of on-site construction or farming, such as excavation for a basement or farm drainage improvements. Operations fall in this exempt category when the operator presents objective evidence to the department which shows that construction or farming will occur at the site concurrently with excavation and grading or immediately after these operations are finished.” Furthermore, pursuant to Article 23, Title 27 (New York State Mined Land Reclamation Law), Section 23-2705, “Mining shall not include the excavation, removal and disposition of minerals from construction projects, exclusive of the creation of water bodies, or excavations in aid of agricultural activities.” It is further noted that Mr. Robert W. Yager, Mined Land Reclamation Specialist, II of the NYSDEC has visited the subject property and has advised that a mining permit was not required for future work as long as the work was being completed in accordance with a Site Plan approved by the Town. Correspondence with Mr. Yager dated April 19, 2021 is included in Appendix I.

### **3.10.4 Proposed Mitigation**

During site preparation, excavation and construction, the following mitigation measures will be implemented to effectively minimize or eliminate any potential adverse impacts:

- Prior to the commencement of site clearing, all existing trees to be retained will be clearly marked with silt fencing and/or tagging to prevent removal during the site clearing phase.
- Prior to site preparation, field inspections will occur to identify the presence of the eastern box turtle and relocation of any observed turtles to on-site areas that would not be disturbed.
- Erosion and sedimentation controls will be undertaken prior to and during construction and will include, at minimum, stockpile protection, inlet sediment control devices for storm structure protection, silt fencing, minimizing the extent and duration of exposed areas, and the construction and maintenance of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads. All erosion and sediment control measures will be routinely inspected and maintained such that no sediment would be transported off-site.
- All trucks associated with the construction of the proposed action will be limited to traveling at 30 mph on Cox Neck Road/West Mill Road and all neighboring roads. The posted speed limit is 35 mph.
- The Applicant is committed to correcting any damage that is done by construction activities. A survey of the pavement condition will be done prior to the commencement of construction and the roadway will be resurveyed following the completion of the project. The Applicant will commit to quickly repairing any potholes that appear in the roadway during the construction activity to minimize the potential for vibrations that could affect existing structures. In coordination with the Town of Southold Highway Department, the before and after surveys will be reviewed, and if damage did occur due to the construction, the appropriate measures will be taken to correct it. Additionally, at the request of the Town, SYC would be willing to sign a corporate guarantee for the repair of any road damages to pre-development condition.
- Prior to the commencement of project construction, it is recommended that Cox Neck Road/West Mill Road be restriped with shoulder edge lines defining the edge of 10-foot travel lanes. The edge lines will better define the road adding safety. The ten-foot travel lanes defined by the edge lines will provide the motorist with the appearance of narrower roadway while providing an area for pedestrians. High grass and any brush should be mowed and removed providing a walkable surface where feasible.
- Flaggers will be used for maintenance and protection of traffic at locations where severe curves in the truck route or at intersections where turns are being made by project trucks that may require crossing of the yellow double barrier lines.
- In accordance with Chapter 180 of the Town Code, all construction activities will be limited to Monday to Saturday from 7:00 am to 7:00 pm. The excavation phases with truck activity will be limited to Monday to Friday from 7:00 am to 5:00 pm. On Saturday's and after 5:00 pm on weekdays, on-site

activity would be vehicle and machinery maintenance and planning for the following workday or Monday for a 7:00 am start.

- The grading program will result in an excess cut of 134,921 CY of material. All excess soils will be transported to a registered or permitted facility in accordance with NYSDEC Part 360 or local site for re-use. As the ultimate location is driven by market conditions and the local need, it is not possible to identify the specific re-use location or alternative locations at this time.
- Any vehicle that requires the use of a back-up alarm will use a white noise back-up alarm instead of a single tone beep.
- All trucks and drivers will be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.
  - All trucks will be required to be Tier 4 certified by U.S. EPA standards.
- The construction manager will inspect all construction vehicles and equipment to ensure proper maintenance of their emission control equipment and also control the idling of construction vehicles. Fugitive dust emissions will be mitigated with the use of water during dry periods.
- A sweeper will be employed daily during the excavation phase to remove loose sediment from West Mill Road.
- All stockpiles will be covered.
- All equipment storage/staging will be located within the area of disturbance only on-site, as well as all contractor and worker parking, to minimize off-site traffic impacts.
- The proposed haul road has been relocated approximately 29 feet to the south to increase the separation distance to the nearest residence such that the proposed haul road will be approximately 259 feet from the haul road to the pool at the adjacent residence.
- The proposed haul road entrance on West Mill Road has been relocated approximately 60 feet to the south to increase the separation distance to the nearest residential property. The proposed separation distance is 145 feet.
- Approximately 90 percent of the material to be removed during the excavation phase will be removed via the haul road, and the remaining 10 percent will be removed from the existing site driveway on West Mill Road.
- The proposed stockpile and construction staging areas will be setback a minimum distance of 25 feet from the adjacent residential property.
- A security booth and gate will be positioned at the entry/exit to the haul road for Phase 1 excavation and on the SYC property for Phase 2 excavation and construction, for the purpose of vehicle inspection and providing driver instruction.



- Prominent markers such as orange cones will be placed at the south end of the stabilized RCA shoulder during the construction period to ensure that the construction trucks will maintain distance from the platform water tower and accessory building at 3380 West Mill Road to minimize vibration impacts to these structures.
- In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles shall not remain idling for more than five minutes at a time.
- To minimize the generation of fugitive dust during construction, particularly during dry periods, the following mitigation measures will be employed:
  - Minimizing the exposed area of erodible earth.
  - Applying wet suppression to material piles and unpaved areas when there is visible dust.
  - Use of covered haul trucks to move construction material.
  - Use of plastic sheet coverings for material piles.
  - A six-foot fence with filter fabric would be installed around the northern and western portions of the Construction Excavation Area.
- Asphalt binder will be installed on the shoulder of West Mill Road to prevent damage from tag axles.
- Signage for construction vehicles entering the haul road will be installed on West Mill Road for proper wayfinding.
- There will be no weekend construction work between September 15 and October 31 for the Fall Festival season.
- Vibration monitoring terminals will be installed at four locations and monitored through all phases of construction. If vibration levels exceed permissible levels (based on the Peak Particle Velocity [PPV] defined in the Vibration Report), the following steps will be taken for Vibration Monitoring at Locations 1-3:
  - The acoustic consultant and construction management team will be notified if an exceedance is measured.
  - The time and location of construction activities when the exceedance is measured will be provided to the acoustic consultant.
  - If the exceedance is an RMS exceedance, the RMS velocity will be verified in the Syscom ROCK's cloud portal.
  - Should the cause of the exceedance be linked to the construction activities, construction will be halted immediately until appropriate measures, such as operating fewer pieces of equipment or moving construction activities away from the construction area boundary, can be completed.
  - The only exception to halting construction would be if it would be a life safety issue for the construction workers, or if it would result in an unsafe structure at the time of halting the construction. In each of these cases. Construction should only be continued until such time that all workers would be safe and that all structures are stable and would not be in danger of collapse.

- As indicated in Section 3.11 of this DEIS, following specific procedures would be followed for the protection of the Water Tower and Building:
  - Arrival and departure times for all trucks to be loaded and leaving with building materials will be logged by the construction management team. All scheduled traffic must occur within defined work hours.
  - Should an alert be triggered, the time of the alert will be correlated with the arrival times of all trucks coming to the project site.
  - If it is confirmed that exceedance is due to operation of a truck associated with the construction, truck operators will be required to reduce speeds near the Water Tower and Building so that vibration is reduced. All drivers are to be notified of any speed restrictions.
  - Should two alerts confirmed to be due to truck vibration occur on the same day, truck trips will be halted until additional data can be collected and mitigation can be implemented.

### **3.11 Archaeological and Cultural Resources**

#### **3.11.1 Existing Conditions**

Cultural resources are defined as archaeological sites (including those dating to both precontact and historic eras), buildings, structures, objects (such as monuments), districts and multiple resource areas (MRAs), cultural landscapes, and traditional cultural properties.

A cultural resource assessment considers both direct and indirect effects on archaeological site and buildings/structures. Direct impact elements are typically defined as those that will result in the removal or displacement of existing soil matrix to various depths or the removal or change in footprints for existing buildings and structures. Indirect effects are those impacts that affect ambient conditions including air quality, noise, odor, viewshed or shadows. The Amended Final Scope (see Appendix B of this DEIS) identified the potential archaeological sensitivity of direct impact areas within the Project Area requiring evaluation as well as the potential impacts on three properties inventoried by the NY State Historic Preservation Office (SHPO) located north and west of SYC on W. Mill Road (see Appendix T). Furthermore, the Amended Final Scope identified four potential indirect effects, including changes in air quality, noise, vibration, and viewshed (setting).

The evaluation of potential cultural resources (direct and indirect effects) was undertaken by the project archaeologist, Carol S. Weed, MA (RPA) and in consultation with OPRHP. A summary of the existing conditions presented by the project archaeologist are included below and all cultural resource assessments are included in Appendix T. The appendix contains the initial Project Notification, Phase IA Archaeology (2021a), Reconnaissance-level Historic Resources Survey, Phase IB Archaeological Assessment documents (2021b), and SHPO correspondence for the proposed project. The data from these various submissions are abstracted below under Phase IA, Phase IB Archaeology, and Reconnaissance-level Historic Resources Survey.

#### ***Phase I Cultural Resource Assessments***

On June 20, 2021, a descriptive detail of the proposed action was submitted to OPRHP. In response, OPRHP assigned the proposed action Project Number 21PR04396. The Phase IA archaeological assessment and a reconnaissance-level historic resources review subsequently were conducted. Both included background and literature research and field walkovers of the Project Area. The reconnaissance-level survey was conducted of the properties sharing a common boundary with SYC and properties within the viewshed of the Project Area. The results of the archaeological and building/structure reviews were summarized in two reports (see Appendix T). Herein, these two reports are referred to C. Weed (2021a) and C. Weed (2021b). Following receipt of SHPO comments on the Phase IA archaeology report, a Phase IB archaeological survey was conducted of the Construction Excavation Area and temporary haul road and is included in Appendix T of this DEIS. A summary of the Phase IA and IB is provided below.

#### **Phase IA Archaeology**

The background and literature review of OPRHP's Cultural Resource Information System (CRIS) within a two-mile search area identified four archaeological sites as having been reported in the area,

including: the Youngs Avenue Site, the James Corwin House Site, the Macri Prehistoric Site, and the Deep Hole 2 (Weed 2021a). The latter site is the only one of the four that yielded temporally diagnostic artifacts. The two artifacts were an Indigenous Nation Late Woodland Levanna-like projectile point fragment and a Colonial-era Euro-American kaolin pipe stem.

The presence of Indigenous Nation occupations in Suffolk County was documented by several researchers throughout the 20<sup>th</sup> century. Of particular interest was a noticeable preference for hilltop locations during the archaeologically-defined Transitional Archaic and Early Woodland periods. A hilltop is located to the north of the Construction Excavation Area on the 60 feet AMSL contour and the 50 feet and 40 feet AMSL contours to the south of the hilltop have level and relatively broad (i.e., 16± feet) terraces.

The presence of such terraces was considered during the walkovers of the direct impact areas in the Project Area. No archaeological materials were observed except those that were obviously in fill contexts. These occurred in uplands along graveled ATV paths and in the eastern section of the Construction Excavation Area where spoil has been deposited (see Section 2.1.1 of this DEIS). Items observed included brick and concrete fragments, a tire, and miscellaneous glass fragments.

Though the walkovers did not result in the identification of Indigenous Nation artifacts on the ground surface, the relatively broad terraces on the 50 feet and 40 feet AMSL contours in the Construction Excavation Area and at the juncture of the valley slope and upland were evaluated as archaeologically sensitive. The primary reasons for this were proximity to a valley slope swale that may have held seasonal potable water and the proximity to the riverine resources in the now-filled inlet and Mattituck Creek.

Overall, the Phase IA concluded that archaeological resources might be present at the north end of the Construction Excavation Area and along the temporary haul road as it trends west from the northwest corner of the Construction Excavation Area. The proposed route of the temporary haul road has been disturbed by an existing ATV oval track and other ATV paths. Thus, C. Weed recommended that Phase IB testing along the proposed temporary haul road extend westward for a distance commiserate with the presence of intact A and B horizon soils. The Phase IA report was submitted to SHPO on July 4, 2021 and revised figures were submitted on July 9, 2021. By comment letter dated July 22, 2021, the OPRHP reviewer, Dr. Timothy Lloyd accepted the Phase IA conclusions and recommendations. Separately, Dr. Lloyd, on July 29, 2021, noted that a Phase IB work plan would not be needed.

### **Phase IB Archaeology**

SHPO concurred with the recommendation that Phase IB archaeological investigations be conducted in parts of the Construction Excavation Area and along the temporary haul road. In the OPRHP July 22 letter, Dr. Lloyd suggested that a field notebook kept by Charles F. Goddard in 1922 might shed light on Indigenous Nation utilization within the general area. That notebook was obtained from the Southold Indian Museum (SIM) and from OPRHP. SIM also provided notebooks dated 1919-1920 and 1923. OPRHP provided access to Goddard's remaining notebooks dated 1921 and 1924 through 1936 as well as two site catalogues on August 6, 2021. Goddard notebooks dated 1919 through 1925 contained information on archaeological objects Goddard and his wife recovered from agricultural fields north and south of East Mill Road and in the vicinity of Grand Avenue. No reference was made to properties on the West Mill Road side of Mattituck Creek on the current SYC property or on abutting

properties. The Goddard recorded the presence of temporally diagnostic objects dated to the archaeological eras referred to as Archaic and Woodland. These East Mill Road archaeological loci are not entered into the OPRHP CRIS system but would be completed before the end of 2021 by Ms. Weed.

Following review of the Goddard data, Ms. Weed submitted an email to Dr. Lloyd on August 20, 2021 specifying Phase IB shovel test pit intervals of 25 feet (7.5 meters) and 33 feet (10 meters). The interval was reduced from the standard 50-foot (15 meter) interval because data obtained by both Mark C. Tweedie and Charles Goddard in similar settings on the North Shore indicated that archaeological artifact scatters in slope terrace settings were tightly clustered and that they might be missed at the standard 50-foot interval. By email dated August 5, 2021, Dr. Lloyd accepted the shorter intervals.

The Phase IB fieldwork was conducted September 19-22, 2021 by an archaeological field crew under the direction of Dr. Matthew D. Spigelman (ACME Heritage Consultants) and Ms. Weed as co-principal investigators. In total, 70 shovel test pits (STPs) were excavated in the north half of the Construction Excavation Area (see Figure 7 in Appendix T) which was considered as possibly archaeologically sensitive. An additional 16 STPs (see Figure 8 in Appendix T) were dug along the temporary haul road. Except for a single fragment of clear glass found in STP H9 on the temporary haul road, no archaeological objects were observed or recovered. Dr. Spigelman and Ms. Weed recommended no further archaeological investigations in the SYC Project Area. The Phase IB report was submitted to OPRHP on October 4, 2021. In response, on November 18, 2021, OPRHP requested the geotechnical engineering borings to document evidence of the deposition of dredge spoils along the southern portion of the Project Area. The requested documentation was provided, and a request for Phase IB testing in this area has been requested in correspondence dated December 3, 2021. This additional work has been performed.

As noted in the Supplemental Phase 1B Assessment dated January 7, 2022 (see Appendix T), the research and field investigations found that the September STP stratigraphic profiles reflected the characteristics of the upper solum as documented in both the USDA Soil Conservation Web Soil Survey data (USDA WSS 2021) and the geotechnical bore profiles (PWGC 2021). Apparent dredge spoil was also identified in several STPs all of which were within the filled inlet or on that inlet's shoreline. Although historic-era artifacts were recovered, the material is identified as building demolition debris, which likely originated offsite and was dumped on-site during or before the inlet filling. None of the historic-era artifacts are associated with Indigenous Nations. No further archaeological work was recommended as there was no evidence of use by Indian Nations peoples was identified and no intact historic-era occupation zones were found.

By correspondence dated January 24, 2022 (see Appendix T), OPRHP determined that based on the supplemental Phase IB archaeological investigation, no archaeological sites were identified, and no additional archaeological investigation is needed.

### **Phase I Reconnaissance-Level Historic Resources Survey**

The reconnaissance-level buildings and structures survey considered four groups of buildings and structures: 1) the three inventoried properties identified in the Amended Final Scope; 2) the SYC buildings and structures; 3) properties directly abutting SYC property lines; and 4) properties that had direct views of project sites.

As indicated in the reconnaissance-level historic resources report, the three inventoried properties hold SHPO Unique Site Numbers (USNs) and their eligibility for the State/National Registers of Historic Places (S/NRHP) is presently listed as Undetermined. The properties are:

1. Robinson-D'Aires House (USN 10310.000347) at 4255 West Mill Road,
2. Old Mill Restaurant (USN 10310.000348) at 5775 West Mill Road, and
3. Old Water Tower (USN 10310.000349) on Suffolk County Tax Parcel 1000-106-6-4.1 (West Mill Road)

The three Undetermined properties were evaluated relative to indirect effects only. None of the properties would be taken by the proposed action and none are on parcels that would be directly impacted by the proposed project. The three properties were detailed in C. Weed 2021b, summarized on Table 1 in that report, and photographs of them are presented in Appendix F of Appendix T of this DEIS.

The Robinson-D'Aires House (USN 10310.000347), located at 4255 West Mill Road, is immediately west of the Naugles Road and West Mill Road intersection but above the elevation of the road intersection (Photographs F1-F10). Ms. Weed concluded that the Robinson-D'Aires House, 4255 West Mill Road, is subject to indirect effects resulting from the construction of the main water line and construction truck traffic during Phase 2 of the construction project.

The Old Mill Restaurant was originally a tide-powered grist mill that began operation in 1821 (C. Weed 2021b, Figure 2, Photographs F11-F14). In 1906, Craven noted that the "mill is now used as a place of public entertainment." From the early 1900s until 2017 it continued to function "as a place of entertainment" and as a restaurant. Ms. Weed concluded that the Old Mill on Mattituck Creek retains no functional mill elements. The footprint of the current structure reflects its use as an eatery with options for both indoor and outdoor dining rather than its function as a tide mill.

The Old Water Tower (USN 10310.000349) no longer functions as such. It reportedly was re-done to serve as a rental residence and according to Jeff Strong (Personal communication 4/28/21) the interior accoutrements have been removed (C. Weed 2021b, Photographs F15-F16). Ms. Weed concluded that the Old Water Tower could be indirectly affected by the construction of the main water line, the associated hydrant which would be positioned about 40 feet (12 m.) northwest of the building's northeast corner, and Phase 2 construction traffic.

The seven SYC buildings and the associated structures (two dry docks and 45 boat slips) were photo documented (C. Weed 2021b, Appendices B and C) and their current function, approximate built-year, and other detail are presented in C. Weed (2021b; Table 4). The SYC buildings and structures, except for the boat slips, were all emplaced during the Mattituck Marina era which lasted from 1961 to 2016 when the Applicant acquired the property (C. Weed 2021b:14). The buildings include a residence (Building 1), an office (Building 2), a tri-unit maintenance/storage building (Building 3), a small storage shed (Building 5), three storage/maintenance buildings (Buildings 6 through 8). Except for one of the units comprising Building 3, all of the SYC buildings and structures are vernacular forms typical of their functional class. The exception was originally a seaplane hangar.

Ten parcels share property boundaries with the subject property (C. Weed 2019b, Table 1 and Appendix D). Of the ten parcels, one is the Mill Road Preserve open space located on the south side of the subject property at 1900 West Mill Road. Eight parcels have residences and, in some instances, support buildings. One parcel, located at 3380 West Mill Road, has no residence. Rather, a platform water tower and accessory building are present on the small lot. The locations of the front facades and outside activity areas were noted for each of the residences. Data also were obtained for the residences' topographic setting (elevation AMSL) and, as applicable, the distance from the Construction Excavation Area and/or the Phase 1 temporary haul road. These observations are discussed in detail in C. Weed 2021b: 15-18.

Ten other parcels would have direct line-of-sight views of the temporary haul road and its entrance/exit off of West Mill Road, existing SYC Buildings 7 and 8 and the upland and valley slopes to the west of those two buildings, or the upland slope and valley slopes east of Building 1 that would be disturbed by the new secondary water line. The same observations made on the residences on the abutting parcels were recorded for the so-called viewshed parcels. These results are detailed in C. Weed 2021b: 19-21.

Overall, C. Weed 2021b concluded there would be no direct or indirect effects on the buildings and structures identified in the Amended Final Town Scope, that are within SYC, that abut the SYC property, or that are within the project's viewshed. In correspondence dated July 29, 2021, OPRHP concurred with Ms. Weed and found that no historic properties would be affected by the proposed project. SHPO did, however, determine that the platform water tower and accessory building at 3380 West Mill Road was eligible for listing on the S/NRHP.

In correspondence dated April 8, 2022, OPRHP requested the preparation of a Construction Protection Plan for construction-related vibration impacts on the two eligible structures: Mattituck Creek Tide Mill / Old Mill Restaurant and the Water Tower and Building (see Appendix T). In response, as part of the Vibration Report prepared by Sound Sense (see Appendix R and Section 3.10 of this DEIS), a Construction Protection Plan has been included. Additionally, in response to comments from the Town of Southold Planning Board during review of the initial DEIS filed in December 2021, all historic structures along the entire route were identified and evaluated, as noted in Section 3.10 of this DEIS and included in the Vibration Report.

As indicated in the Vibration Report and discussed in Section 3.10 of this DEIS, there is no predicted impact to any nearby historic structures from truck traffic. However, using the worst-case scenario and the reference data and calculation methodology presented in the FTA guidelines (detailed further in Section 3.6.15 of the Vibration Report), there is a potential impact from truck traffic to the Water Tower and Building located at 3380 West Mill Road. These reference values, equations, and methodologies were developed to be used throughout the United States and do not take Long Island's unique soil structure into account (i.e., Long Island's sandy soil structure efficiently reduces vibration over short distances). While there is no impact anticipated using the data collected on site, the risk of potential vibration in the worst-case scenario is identified in the Vibration Report. To ensure that vibration is responsibly managed, a vibration monitoring plan during construction at the project site to protect nearby historic structures of concern and ensure that ground-borne vibrations are not a disturbance to nearby neighbors.

As indicated in Section 3.6.17 of the Vibration Report, vibration monitoring terminals would be installed at four locations and monitored through all phases of construction. One of the four locations would be installed as close as possible to the foundation of the Water Tower and Building. The criteria for Location 4 will be for vibration damage only and would be the criteria for vibration damage to historic structures, 0.12 in/s. The following specific procedures would be followed for the protection of the Water Tower and Building:

- Arrival and departure times for all trucks to be loaded and leaving with building materials should be logged by the construction management team. All scheduled traffic must occur within defined work hours.
- Should an alert be triggered, the time of the alert should be correlated with the arrival times of all trucks coming to the project site.
- If it is confirmed that exceedance is due to operation of a truck associated with the construction, truck operators will be required to reduce speeds near the Water Tower and Building so that vibration is reduced. All drivers are to be notified of any speed restrictions.
- Should two alerts confirmed to be due to truck vibration occur on the same day, truck trips are to be halted until additional data can be collected and mitigation can be implemented.

### **3.11.2 Potential Impacts**

As noted in the Existing Conditions section, both direct and indirect effects are evaluated for cultural resources. The proposed project does not include the demolition or alteration to any buildings or structures and, therefore, would have no direct effect on same. The indirect effects that might affect buildings and structures are changes in air quality, noise, vibration, and viewshed (setting). These indirect effects were evaluated for the proposed project as a whole and the results and conclusions applied to buildings and structures that meet the 50-year or older threshold.

As indicated above, in correspondence dated July 29, 2021, OPRHP indicated that no historic properties would be affected by the proposed project. SHPO did, however, determine that the platform water tower and accessory building at 3380 West Mill Road was eligible for listing on the S/NRHP. The two structures lie about 100 feet (30 meters) south of the south end of the stabilized RCA shoulder. The only indirect effect that might result in an effect to this resource is vibration. However, trucks and other heavy-duty vehicles commonly use West Mill Road and have done so for many years. Moreover, field observation did not indicate any surficial damage due to daily truck movements. Based on recommendations from C. Weed, prominent markers such as orange cones would be placed at the south end of the stabilized RCA shoulder during the construction period to ensure that the construction truck maintain distance from the resource.

Based on the results of the Phase IB survey, the project archaeologist has indicated that no archaeological sites will be affected by the proposed action. The review of the Goddard notebooks found no evidence that the Goddards' had conducted archaeological survey of fields abutting West Mill Road in the general Project Area. As indicated in Section 3.11.2 of this DEIS, the Phase IB report was submitted to OPRHP and on November 18, 2021, OPRHP requested the geotechnical engineering borings to document evidence of the deposition of dredge spoils along the southern portion of the Project Area. The requested documentation was provided, and a request for Phase IB testing in this area has been requested in correspondence dated December 3, 2021. This additional work was



performed and no further archaeological work was recommended as there was no evidence of use by Indian Nations peoples was identified and no intact historic-era occupation zones were found. By correspondence dated January 24, 2022 (see Appendix T), OPRHP determined that based on the supplemental Phase IB archaeological investigation, no archaeological sites were identified, and no additional archaeological investigation is needed.

Regarding the construction-related vibration impacts on the two eligible structures: Mattituck Creek Tide Mill / Old Mill Restaurant and the Water Tower and Building, there was no potential impact identified to the Mattituck Creek Tide Mill / Old Mill Restaurant. Under a worst-case scenario, as discussed in Section 3.11.1 above, there is a potential impact from truck traffic to the Water Tower and Building; however, vibration monitoring and specific monitoring and action procedures have been identified for the protection of this structure.

### **3.11.3 Proposed Mitigation**

Based on the historic and archaeological assessments performed, the proposed action would not result in any significant adverse impacts. Additionally, the proposed action incorporates measures during construction to avoid sensitive resources, including:

- Prominent markers, such as orange cones, will be placed at the south end of the stabilized shoulder during the construction period to ensure that the construction trucks will maintain distance from the Water Tower and Building at 3380 West Mill Road to minimize vibration impacts.
- Vibration monitoring terminals will be installed at four locations and monitored through all phases of construction. The locations of the terminals have not been determined; however, one of the four locations will be installed as close as possible to the foundation of the Water Tower and Building. The following specific procedures would be followed for the protection of the Water Tower and Building:
  - Arrival and departure times for all trucks to be loaded and leaving with building materials will be logged by the construction management team. All scheduled traffic must occur within defined work hours.
  - Should an alert be triggered, the time of the alert will be correlated with the arrival times of all trucks coming to the project site.
  - If it is confirmed that exceedance is due to operation of a truck associated with the construction, truck operators will be required to reduce speeds near the Water Tower and Building so that vibration is reduced. All drivers are to be notified of any speed restrictions.
  - Should two alerts confirmed to be due to truck vibration occur on the same day, truck trips will be halted until additional data can be collected and mitigation can be implemented.

## **4.0 OTHER REQUIRED SECTIONS**

### **4.1 Use and Conservation of Energy**

Currently, electrical service is provided to SYC by PSEG Long Island. The proposed development of the two boat storage buildings would increase the overall demand for electricity. According to the project architect, Jeffrey T. Butler, P.E., P.C., the proposed storage buildings would be served with a 120/208 Volt, 3-Phase, 4-wire, 2,000-amp service (see Appendix P). Upon preparation of the electrical plans, further consultations would be undertaken with PSEG Long Island. However, due to the projected additional electrical load, the project architect anticipates service availability.

The proposed buildings would be heated but not cooled, with the heating source planned as the proposed action includes radiant flooring supplied by the LPG. Heat to the proposed buildings would be supplied via four 2,000-gallon LPG tanks that are proposed to be contained in a concrete vault adjacent to the buildings. Each building would be serviced by two LPG tanks. As published by the United States Department of Energy,<sup>55</sup> radiant heat is generated from thermal masses constructed into the concrete slab floor which then distributes the heat throughout the room and the heat created is absorbed by objects within the room. As radiant heating relies on the natural circulation of air within the room to distribute heat, there is more uniform heat distribution throughout the room, resulting in less heat loss than duct-based systems. As such, the proposed radiant heat is an effective energy-efficient solution for heating.

### **4.2 Unavoidable Impacts (Short-Term and Long Term)**

#### **Short-Term Impacts**

Unavoidable short-term impacts are described as “the immediate and temporary results of an action, for example, noise, dust, and truck traffic during construction of a building.”<sup>56</sup> The proposed action would result in unavoidable short-term impacts that would occur during the proposed excavation and construction activities; however, these impacts would be temporary and cease upon completion of construction of the project. These impacts would include:

- A temporary increase in truck traffic associated with the site preparation (2 weeks), and excavation phase (6-7 months) and construction phase (6 months) of the proposed development. However, as indicated in Sections 3.3 and 3.10 of this DEIS, mitigation measures have been incorporated into the proposed action to reduce the traffic-related impacts on the surrounding properties and roadways. Upon completion of construction, the proposed action will have no adverse traffic impacts post-development.
- Construction-related noise would be generated during site preparation (2 weeks), excavation phase (6-7 months), and construction phase (6 months) of the proposed development. However, as indicated in Sections 3.7 and 3.10 of this DEIS, mitigation measures have been incorporated into the proposed action to reduce the noise-related impacts of the construction

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<sup>55</sup> <https://www.energy.gov/energysaver/radiant-heating>

<sup>56</sup> P. 79, The SEQR Handbook, Fourth Edition, NYSDEC (2020)

activities, including compliance with the relevant standards set forth in Chapter 180 of the Town Code. Upon completion of construction, the proposed action will have no adverse noise impacts post-construction.

- The proposed Evergreen concrete retaining wall would be constructed with planting trays that will require approximately two-to-three years before establishment of a “green” wall that will then blend into the landscape.

### **Long-Term Impacts**

The unavoidable long-term impacts are the continuing impacts of an action, such as the loss of undeveloped or vacant land with any building project. Upon implementation of the proposed action, the following long-term impacts would occur and cannot be avoided:

- The proposed development would result in the loss of approximately 634 trees within 5.51± acres of forested area (Coastal Oak-Beech Forest and Successional Southern Hardwood communities) with a resultant decrease in habitat availability for the plants, birds, and wildlife that utilize these habitats. To mitigate for the loss of forest, approximately 135 trees, including 95 Pitch Pine trees, are proposed. Additionally, the applicant will contribute 50 native trees (10-gallon container typical 1-inch caliper, 5-6 feet tall) for installation at high-priority sites with the Town of Southold, as identified by the Town Tree Committee, to enhance and beautify public grounds.
- The proposed clearing would result in a new forest edge, with a resultant intensification of the existing edge effects at the site. The magnitude of the potential impact will be minimized by the planting of 27,333 SF of native trees, shrubs and groundcover and would include multi-layered plantings with abundant conifer trees to minimize light penetration into the new forest. After establishment of these natural vegetation areas located landward of the proposed retaining wall, the total forest area on the property would increase from 11.76 acres to 12.39 acres.
- The proposed action would increase the area of impervious surface on the site by 2.36± acres.
- Stormwater generation would increase post-development due to the projected increase in impervious surface area. However, all stormwater from the Project Area and off-site contributing areas would be accommodated and recharged on-site in accordance with Chapter 236 *Stormwater Management* of the Town Code.

### **4.3 Irretrievable and Irreversible Commitment of Resources**

For any development or new land use, there is a certain commitment of resources (natural and human or man-made) for consumption, conversion or made unavailable for further use as a result of the development and/or use. The construction and operation of the proposed development would require a commitment of natural and human resources, as follows:

- Building and construction-related materials would be committed to achieving the proposed development, including, but not limited to steel and concrete.
- The operation of construction equipment and post-development operations would require electricity, water resources and fossil fuels.
- Approximately 6.05±-acres of forested and meadow/brushland would be cleared to accommodate the proposed development due to the required grading program.
- The proposed action would result in the loss of 5.51± acres of forested area (Coastal Oak-Beech Forest / Successional Southern Hardwood) and 0.54± acre of meadow and brushland (Successional Shrubland).
- A water main extension from the SCWA to the subject property would allow for the connection of additional off-site properties to the public supply by application to the SCWA.
- The water demand for the subject property would increase by approximately 18± gpd (from 1,058± gpd to 1,076± gpd) for potable water, and approximately 220 gallons per year for each boat that requires service prior to/after storage (170± gallons for spring washing and 50± gallons for fall power washing) and 218± gpd for irrigation for post-development conditions. However, the potable supply would be provided by the SCWA and not from on-site wells, thus decreasing local withdrawal by 1,076± gpd plus the volume associated with boat washing/power washing services.
- The on-site sewage generation for disposal would increase by approximately 18± gpd (from 1,058± gpd to 1,076± gpd) for post-development conditions, with all sanitary waste being accommodated with a new I/A OWTS. The existing on-site septic system would be replaced and upgraded to an I/A OWTS. While on-site sewage disposal increases by 18± gpd, the I/A OWTS are compliant with the nitrogen reduction goals of the SCDHS.

#### **4.4 Growth-Inducing Impacts**

Growth-inducing aspects can be generally described as long-term secondary effects of a development, which are either directly or indirectly related to the project. The direct growth-inducement aspects of a project would include the creation of jobs, new institutions (e.g., universities, hospitals) or support facilities (e.g., major retail stores). Indirect growth-inducement aspects are those that increase the development potential of an area.

The proposed action is to accommodate a market demand for indoor, climate-controlled storage for large boats (yachts), which is a use that is permitted under the M-II zoning district. The proposed action is also consistent with the Comprehensive Plan and LWRP, with the use continuing to support the maritime industry in the Town of Southold. There is no proposal to increase the number of slips in the existing marina as the proposed action would not require additional in-water docking. The proposed storage service would serve to store boats in the off-peak winter season, and access to and from the SYC facility would take place via Mattituck Creek as the types of boats to be accommodated are too large for road/trailer transport. The arrivals and departures of the boats to be stored would be

scheduled with SYC and timed accordingly to monitor maritime activity within Mattituck Creek. A portion of these storage boat customers may be existing clients of SYC or the Strong's Water Club, boat owners within the Town, while others are expected to be future boat owners from yacht sales by SYC or other brokers. The existing infrastructure in place, inclusive of the 50-ton lift and 85-ton lift, is sufficient to accommodate the existing client base and the anticipated new boats to be stored.

The proposed action is expected to generate approximately 11 new full-time jobs for servicing of the boats in storage, most of which are expected to be local residents experienced in the maritime industry. There is a resultant beneficial impact of additional employment and wages for the local population.

As the proposed action may encourage growth in the local boating market, there would be no corresponding increase in demand for new institutions or support services.

As a result of the proposed action, potable water supply through a water main extension to SCWA supply wells would be brought to the subject property. The proposed extension on Naugles Drive would enable properties along Naugles Drive the opportunity to connect to public water once the proposed action is complete, as detailed in Section 2.2.1. However, any new connection would be subject to the review and approval of the SCWA.

## **5.0 ALTERNATIVES AND THEIR IMPACTS**

Pursuant to §617.9(b)(5)(v) of the implementing regulations of SEQRA, a DEIS is to include a range of reasonable alternatives to the proposed action that are feasible, considering the objectives and capabilities of the project sponsor. The Amended Final Scope dated April 5, 2021 requires the following alternatives to be evaluated:

- Alternative 1: As-of-Right (No Action) Alternative
- Alternative 2: Alternative Material Removal Plan
- Alternative 3: Constructing Project on Another Site
- Alternative 4: Construct Proposed Storage Buildings Without Excavation
- Alternative 5: Construct Smaller Building(s) With Less Excavation
- Alternative 6: Reconfiguration or Reconstruction of Existing Buildings On-Site for Larger Boat Storage

The following sections evaluate each of the aforementioned alternatives to the proposed action. It is noted that, for the explanations provided below, Alternatives 2, 3, 5 and 6 are not feasible for the Applicant. A comparison of the proposed action with the No-Action Alternative Plan and Alternative 4 Plan is also provided in the table below.

Table 53 - Comparative Analysis of Proposed Plan and Alternatives

	No-Action/ Existing	Proposed Site Plan	Alternate 4: Construction Without Excavation
Land Use	Maritime	Maritime	Maritime
Project Area	0	6.51± acres	6.11± acres
Volume of Cut Material	0	135,000± CY	2,939± CY
Maximum Depth of Cut and Fill	0	40± feet (Cut)	19.4± feet (Cut)
Tree Removal (Greater than 6")	0	595±	
Area of Natural Vegetation to be Removed	0	6.05± acres	4.75± acres
Area of Impervious Surface	2.62± acres	4.98± acres	4.99± acres
Minimum Lot Width	150 feet	740± feet	740± feet
Minimum Lot Depth	150 feet	1,600± feet	1,600± feet
Minimum Front Yard	35 feet	26.5 ± feet (existing building)	26.5± feet (existing building)
Minimum Side Yard	25 feet	28± feet	28± feet
Both Side Yards	50 feet	77.7± feet	77.7± feet
Rear Yard	25 feet	91.3± feet	91.3± feet
Landscape/Planted Area	0.24± acre	1.67± acres	2.05± acres
Lot Coverage	30 percent	24.7 percent	24.7 percent
Building Height	35 feet	<35 feet	35 feet
Number of Stories	2	2	2
Parking Required / Provided	262/23	262/57	262/57
Weekday AM Peak Hour Generation (cars/trucks)	5 (3/2)	18 (14/4)	18 (14/4)
Weekday PM Peak Hour Generation (cars/trucks)	9 (6/3)	22 (8/14)	22 (8/14)
Sat. Midday Peak Hour Generation (cars/trucks)	9 (4/5)	9 (4/5)	9 (4/5)
Total Water Usage	1,058± gpd	1,076± gpd*	1,076± gpd*
Sanitary Generation/Method	Conventional On-Site System	I/A OWTS	I/A OWTS

\*Does not include boat washing/power washing of 220± gallons per year for each boat requiring service prior to/after storage.

### **5.1 Alternative 1: As-of-Right (No-Action) Alternative**

The No-Action Alternative involves leaving the site as it currently remains, absent the proposed action and the continuation of the site as a full-service marina with boat sales and maintenance services of SYC. The No-Action alternative would not result in any changes to traffic patterns, utilities provided (e.g., water usage), air quality, ecological resources, water resources, or soils and topography. There would be no changes to the visual quality of the site, or the character of the community. The projected job generation and increased tax revenue would not be realized. Overall, the subject property is a privately owned parcel situated within the M-II zoning district of the Town of Southold and the objective of the Applicant is to develop the property in accordance with the prevailing zoning regulations. Accordingly, the No-Action Alternative does not achieve the objectives of the Applicant.

### **5.2 Alternative 2: Alternate Material Removal Plan, Including Barge Transport and On-Site Processing**

This alternative includes an alternative method of material removal to eliminate the use of roadways for truck transport of materials off-site. As part of this review, SYC undertook consultations with four barging companies to determine if such method is a feasible alternative for the proposed action. As indicated in the correspondence from H&L Contracting dated June 24, 2021 (see Appendix U), each of the four barging companies advised that the depths of Mattituck Inlet are not adequate for the types of barges required for material removal. Specifically, the barges need a minimum of 10 feet draft at low tide to avoid hitting the inlet floor bottom and damaging the barge. As indicated in Section 2.2.1 of this DEIS and illustrated in the Mattituck Inlet soundings performed for SYC (see Appendix M), the average depth of draft at low tide is five (5)-to-seven (7) feet. Additionally, the existing sharp S turns upon entering the Inlet on the first and second corner bends are very tight and would not allow the width or depth necessary to safely navigate these areas. Accordingly, the barging of material is not a viable alternative for the proposed action.<sup>57</sup>

It is also noted that, during preparation of the DEIS and in response to a Planning Board Member meeting held on-site, the option to install a cement plant on-site to eliminate the need to transport the excavated material off-site was investigated. Through consultations with LI Precast, it was determined that the total concrete volume for the proposed project (i.e., for the cement in the retaining wall, floor slabs and foundations) is limited to 5,345 CY, of which the total volume of sand in the concrete is limited to 30 percent or 1,604 CY (see Appendix U). As the proposed action includes 135,000± CY of soil removal, there would be limited benefit to having a cement plant on-site as the limited amount of sand required for the cement plant (1,604 CY) is approximately one percent of the total material. Overall, based on the above, the processing of sand with an on-site cement plant and the potential impacts that arise with on-site processing including dust and noise generation, as well as the financial cost associated with plant operations, has been determined not feasible.

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<sup>57</sup> SYC currently accommodates boats and yachts that measure 18-to-133± feet in length, with the typical yacht size being 50-to-86± feet in length. The proposed two boat storage buildings would be able to store a total of 88 yachts based on an average boat size of 60± feet in length and 17± feet in beam for the winter months only. These boat storage buildings would be able to accommodate boats 50-to-86± feet maximum in length. Yachts at lengths of 87 feet or greater are stored in the water. All yachts would be hauled from the water via the existing 85-ton travelift, with no modifications required to the on-site equipment. As the expected yacht lengths are currently using the Mattituck Inlet/Creek, there are no navigation restrictions for such vessels.



### **5.3 Alternative 3: Construct Project on Another Parcel**

This alternative is to consider another parcel for the proposed action; however, this alternative is more appropriate for actions involving new development rather than a development that is an expansion and supporting service to a current use that relies upon the infrastructure and staff of the existing business. Specifically, the SYC operation is a full-service marina, sales, maintenance, and storage facility located on the subject property, which is a 32.96±-acre parcel partially zoned (i.e., 16.46± acres) and has been developed for over 60 years for marine use. The construction of the proposed storage buildings on another parcel is not feasible for the Applicant as the operation to support the storage of yachts (i.e., existing docks, boat lift, staffing, maintenance, and service equipment) are located at SYC. Furthermore, the proposed project is designed to attract large yachts that can only enter and exit by water, and thus, another site equipped with the infrastructure required is not feasible for this applicant.

Also, as noted in the SEQR Handbook (page 6, “The EIS and the Concept of Reasonableness”), alternate site locations are not reasonable for consideration by private applicants. As excerpted:

*In 6 NYCRR 617.8(a), “irrelevant or non-significant” issues may (reasonably) be eliminated from further consideration, and in 617.8(f)(5), “the final written scope should include...the reasonable alternatives to be considered.” In 617.9(5)(v), the regulations require that the draft EIS describe and evaluate “the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor.” **For example, private applicant site alternatives should be limited to parcels owned by, or under option to, a private applicant. To demand otherwise would place an unreasonable burden on most applicants to commit to the control of sites which they do not otherwise have under option or ownership. (emphasis added)***

Furthermore, as excerpted from page 118:

*Under which circumstances should a discussion of alternative sites be included in the EIS?*

***617.9(b)(5)(v) specifically states that for private applicants, alternatives may be limited to sites that the sponsors own or have under a purchase option. (emphasis added)*** *For direct government actions, however, there is no parallel limitation, because governments are presumed to have the ability under eminent domain to acquire any appropriate site.*

Accordingly, based on the above, an alternative site location is not appropriate or feasible for the Applicant.

### **5.4 Alternative 4: Construct Proposed Storage Building(s) Without Excavation**

This Alternative Plan includes the construction of two boat storage buildings of similar area to the proposed action (i.e., 49,000 SF and 52,500 SF) on the existing M-II zoned portion of the subject property without the topographic modifications that are required as part of the proposed action (see Appendix V). The two proposed buildings would be placed at the existing average elevations of 36.95± feet AMSL for Building 1 and 37.88± feet AMSL for Building 2. As noted in Section 3.1 of this DEIS, building height, as defined in §280-4 of the Town Zoning Code, is “[t]he vertical distance measured from the average elevation of the existing natural grade adjacent to the building, before any alteration or fill, to the highest point of the roof for flat and mansard roofs and to the mean height between eaves and ridge for other type roofs.” Accordingly, the maximum building

height of 35 feet from average grade elevations allows for a maximum height of 71.95 feet for Building 1 and 72.88 feet for Building 2.

As the purpose of the proposed action is to accommodate vessels of an average length of 60 feet, but as large as 86 feet, this alternative design with the buildings at the site's top elevation without excavation cannot accommodate large vessel storage. Specifically, the large boats cannot be transported via road (either internally at SYC or public road) because the length and weight of such boats require the vessels to be lifted directly from the water and hauled via the 85-ton travelift on relatively flat grades. As such, to meet the intended purpose of the proposed action, this alternative plan would require the new top elevation buildings to be utilized for smaller boats (300 boats in total), and modifications of the existing Buildings 6, 7 and 8 for increased roof height such that large vessels could be accommodated in these lower elevation buildings.

Specifically, and as noted earlier in this DEIS, the height of the doors on the existing indoor storage buildings are approximately 24 feet, and thus, roof heights would need to be increased by approximately 11 feet to comply with the maximum height requirement in the M-II zoning district. However, the roof heights on the existing buildings cannot be raised. Therefore, the existing buildings would be reconstructed with higher roofs to accommodate larger boats. The lower-elevation buildings would also be modified for radiant heating, which is an important component for the types of vessels to be stored indoors. The required LPG tanks are illustrated on the Alternate Plan.

Access to the new storage buildings would be internal to the subject property via an access driveway situated between Buildings 7 and 8. As such, for smaller boats brought to the site via trailers, the existing SYC entrance would be used. It is expected that approximately 50 percent of the boats (i.e., 150) would arrive by trailer and the remainder via Mattituck Inlet. The arrival and departure of the smaller boats would occur over a similar three-month time period (September to December [arrival] and April-June [departure]).

Similar to the proposed action, this alternative would require slope stabilization measures to correct existing slope failure behind Buildings 7 and 8, which has occurred due to the erosion of the upland slope and presence of unconsolidated materials behind the upland slope face that were deposited by the USACOE as part of past dredging projects (see historic topographic maps and Chapter 2 [Environmental and Historic Contexts] of the Phase 1A Archaeological Survey in Appendix T). As indicated on the Alternate Plan in Appendix V of this DEIS, a concrete retaining wall would be constructed to the south and east of the new storage buildings, which would accomplish slope stability for both of these areas. As the retaining wall would be largely screened by the adjacent building from viewers along Mattituck Creek, the type of retaining wall that is proposed for the preferred action would not be required. Overall, the grading program for this Alternate Plan would result in approximately 2,939 CY of cut material for export off-site.

It is noted that the Amended Final Scope required a separate alternate design that included only the reconfiguration or reconstruction of existing buildings for larger boat storage, which is Alternate 6 in Section 5.6 below. As described in the respective subsection, Alternate 6 would adversely impact an important customer base for SYC (i.e., storage of boats less than 40 feet) should buildings be reconfigured for large vessels without any expansion (i.e., new buildings). As such, this Alternative Plan, as Alternative 4, includes both construction without excavation and the reconstruction of the lower buildings because the Applicant does not intend to impact the recreational boaters who require storage for vessels of 40 feet or less.

In summary, this alternative includes:

1. Construction of two storage buildings on the upland area with an approximate FFE of 32 feet AMSL for each building, and top elevations at 71.95 feet AMSL and 72.88 feet AMSL. Combined, the two buildings could accommodate approximately 300 smaller boats (less than 40 feet in length).
2. Reconstruction of Buildings 6, 7 and 8 to raise roof elevations by approximately 11 feet to accommodate larger vessels.
3. Installation of a concrete retaining wall along the perimeter of the development area to stabilize the internal driveway on the south, and grade changes to the west, north and east.

In comparison to the proposed action and evaluated in the subsections below, the implementation of this alternative would result in the following:

1. Regrading of the upland area to accommodate building foundations, driveway, parking, and internal paved area for circulation.
2. Removal of 612 trees with diameters greater than 6 inches (versus the 634 trees required for the proposed action) to accommodate the required access driveway and storage buildings.
3. Significant viewshed changes from the adjacent Town Preserve, from surrounding residential properties as well as from Mattituck Creek as the new buildings would have top elevations at 71.95 feet AMSL and 72.88 feet AMSL (see renderings in Appendix Q).
4. Total area of land disturbance would result in approximately 2,939 CY of cut, which is a decrease of approximately 131,982 CY as compared to the proposed action.
5. Increase in trip generation for the approximately 300 boats expected to be brought to the site via trailers. It is expected that approximately 150 boats would arrive and depart via trailer.
6. The increase in impervious surface area would be similar to that of the proposed action to accommodate the new access driveway, boat storage buildings and associated pavement area.
7. SYC would realize a cost savings of approximately \$750,000 with the reduction in cut material and elimination of the Evergreen concrete retaining wall.
8. The proposed haul road would not be required as this this Alternative Plan would rely on the existing access for construction and post-development arrivals/departures.
9. Three of the existing buildings would be modified to elevate roof heights by 11 feet and new LPG tanks would be installed for radiant heating. These three buildings would accommodate large vessel storage, which is consistent with the intent of the proposed action.

As provided by the project engineer, the post-development site data for the Alternative 4 plan is included in the table below. A comparative analysis to the proposed action is also provided.

**Table 54 – Comparative Analysis of Site Data for the Alternative 4 Plan and Proposed Action**

<b>Land Use/Cover Type</b>	<b>Existing</b>	<b>Alternative 4</b>	<b>Proposed Action</b>	<b>Difference</b>
Roads, Buildings and Pavement	2.62± acres	4.99± acres	4.98± acres	+0.01 acre
Forested (Coastal Oak-Beech Forest / Successional Southern Hardwood)	17.27± acres (12.6±acres/4.67±acres)	12.52± acres (8.71± acres/3.81± acres)	11.76± acres	+0.76 acre
Meadow/Brushland (Successional Shrubland)	10.83± acres	10.29± acres	10.29± acres	+0.00 acre
Non-vegetated (Bare Earth)	0.29± acre	0.00± acre	0.00± acre	0.00 acre
Wetlands (tidal)	0.63± acre	0.63± acre	0.63± acre	0.00 acre
Landscaping/Planted Areas	0.24± acre	2.05± acres	1.91± acres	+0.14 acre
Pervious (Gravel and Stone blend Pavement)	1.08± acres	1.94 ± acres	3.39± acres <sup>(a)</sup>	-1.45 acres
<b>Total</b>	<b>32.96± acres</b>	<b>32.96± acres</b>	<b>32.96± acres</b>	

Notes: <sup>(a)</sup> Includes 0.67± acres of the proposed haul road to remain post-development.

This alternative retains the same footprint as the proposed action; however, the upland area would not be excavated to the extent required for the proposed action. As indicated in the table above, as compared to the proposed action, Alternative 4 would retain an additional 0.76± acre of forested area (Coastal Oak-Beech Forest and Successional Southern Hardwood) and the meadow/brushland on the subject property but remain the same as the proposed action and result in a slightly greater area of impervious surface (additional 0.01± acre). The unvegetated (bare earth) would be removed in its entirety (similar to the proposed action) and area of landscaping/planted areas would also be greater (additional 0.14 acre). Pervious area (gravel and stone blend) would be slightly decreased by 1.45± acres (from 3.39± acres to 1.94± acres). There would be no change to the existing wetland area.

***Soils and Topography***

Based on the mapped soil types, there are moderate-to-severe engineering limitations associated with select soils for the development of streets or parking lots due to slopes (PIB and RdB soils are noted as moderate and PIC soils are noted as severe). This limitation would be overcome with regrading and a concrete retaining wall, and a proposed access route to the new buildings that maintains a maximum of 6.0 percent slope. There are also severe engineering limitations associated with the development of streets or parking lots due to high water for Tm soils. However, as explained in Section 2.2.1 and indicated in Appendix H, depth to groundwater encountered ranged between 45.5 feet bgs and 31.5 feet bgs and would not be encountered during excavation. Therefore, this limitation would be overcome.

The proposed buildings would be placed within areas mapped as CpE and PIC soil types, which are soils noted as having limitations of moderate and severe, respectively, due to slopes. The regrading program would eliminate this limitation. Regarding the proposed landscaping, all plantings would be placed in soils mapped as CpE and PIC soils, which are noted as having limitations for landscaping due to slopes

(CpE) and a sandy surface layer (PIC). These limitations would be overcome with regrading and the importation of topsoil.

As this alternative plan would have a similar footprint to the proposed action, there would be a similar area of land disturbance. Similar to the proposed action, erosion and sedimentation controls would be undertaken prior to and during construction.

Regarding topography, this alternative plan would still require regrading for building foundations. Currently, the elevations in the development area range from 44 feet AMSL to 51 feet AMSL. As indicated on the Alternative Plan, the proposed buildings would be placed at the existing average elevations of 36.95± feet AMSL for Building 1 and 37.88± feet AMSL for Building 2. Based on a maximum building height of 35 feet from average grade elevations, Building 1 would have a maximum height of 71.95 feet AMSL and Building 2 would have a maximum height of 72.88 AMSL. The proposed internal driveway extension to access the buildings would begin at 7.5± feet AMSL and rise to 31± feet AMSL.

Slope stabilization measures would still be required to stabilize the land area around the upland development footprint; however, it would be a concrete wall rather than the Evergreen concrete wall that is proposed as part of the preferred action. As indicated by the project engineer and noted on the Alternative Plan, the total volume of cut material associated with this alternate would be approximately 2,939 CY, which is significantly less than that required for the proposed action. All cut material would be removed via the existing driveway.

Overall, based on the above, the Alternative 4 plan would have no significant adverse impacts associated with on-site soils, removal of soils or topographic changes.

### **Water Resources**

Implementation of this alternative would result in a similar volume of water usage and sanitary waste generation (i.e., 1,076± gpd) as the same number of employees are expected post-development (i.e., 28 total). Regarding water for boat washing and power washing, the volume would be similar (approximately 220 gallons per year for each boat that requires service prior to/after storage [170± gallons for spring washing and 50± gallons for fall power washing]) This alternative would include an extension of the water main, similar to the proposed action. As the landscaped area is greater for this alternative plan, the volume of irrigation supply would be expected to be greater than that for the proposed action.

The existing sanitary system that serves the office, marina, and other SYC buildings would be replaced with an I/A OWTS and an additional I/A OWTS would be installed for the new buildings. Both I/A OWTS systems would be compliant with the minimum horizontal and vertical separation distances as set forth in Article 6 of the SCSC. Additionally, all relevant Articles of the SCDHS SCSC applicable to the proposed action are also applicable to this alternative.

Regarding stormwater management, this alternative would include drainage controls in order to accommodate a two-inch rain event in accordance with §236-7.A of the Town Code. It would be expected that the proposed drainage methods would be similar to that which is proposed with leaching pools of varying depths, French drains, and pervious gravel.

Similar to the proposed action, this alternative would not have a significant adverse impact to the depth and tidal range of Mattituck Harbor and no additional dredging would be required. The monitoring and enforcement of maritime traffic within Mattituck Harbor would remain the same as existing conditions and the proposed action. However, this alternative could potentially introduce additional maritime traffic into Mattituck Harbor as it is anticipated up to 150 smaller boats would arrive to SYC by water. There would also be large vessel (yacht) storage that would also arrive by water. While many of these boats are expected to be from local waters and Mattituck Harbor, this alternative would generate greater boat traffic than the 88 yachts expected as part of the proposed action. However, an increase in boat traffic is not expected to result in significant adverse impacts to surface waters as all boats are to be in operable condition, with no discharges of gray or black water from holding tanks, and no fuel leaks or heavy exhaust; and also subject to monitoring and enforcement of the USCG and Town of Southold Bay Constable (see the Boat [Vessel] Study in Appendix M).

The alternative plan would not include additional activities within the wetland areas that were not included as part of the proposed action and all regulated activities within NYSDEC's jurisdiction pursuant to the Tidal Wetlands Permit (Permit No. 1-4738-01843/00028) issued on January 31, 2020 have been approved. Similar to the proposed action, a Town of Southold Board of Trustees wetlands permit would be required as the striping of an existing area currently used for parking and boat storage adjacent to Building 8 and French drains on the south side of Building 8 would be completed within the Trustees jurisdiction.

Overall, based on the above, the Alternative 4 plan would have no significant adverse impacts associated with water resources.

### ***Ecological Resources***

The Alternate Plan (Minimum Fill Export Alternative) includes the as-of-right construction of two boat storage buildings (52,500 SF and 49,000 SF, respectively) on the higher elevation areas on the western portion of the M-II zoned area without the cut/removal of 135,000 CY of substrate necessary to bring the site to elevation 10± feet AMSL. This Alternative requires a net cut/fill of 2,939 CY. Under this Alternative, existing Buildings 7 and 8 (15,076 SF and 22,245 SF, respectively) would be increased in height to accommodate large boats. Alternative 4 would also include approximately 2,050 linear feet of concrete retaining walls (up to 29-feet in height), a paved 20-foot-wide road to access the new buildings, additional gravel-based driveway and parking surfaces, water supply, sewage disposal using new I/A OWT systems, site grading and drainage, landscaping, and lighting.

The potential ecological impacts of the Alternate Plan are broadly similar to the proposed action. The Alternate Plan results in the loss of 4.75± acres of upland forest habitat (3.89 acres of Coastal Oak-Beech forest and 0.86 acres of Successional Hardwood forests), refer to Table 8 in Appendix N (see Table 55 below), compared to 5.51 acres of forest disturbance under the proposed action (Table 6 in Appendix N).

**Table 55 - Changes in Ecological Community Coverages Under Alternate Plan**

	<b>Existing</b>	<b>% of Existing</b>	<b>Alternate</b>	<b>% of Alternative</b>	<b>Change in Acres</b>	<b>% Change</b>
Coastal Oak- Beech Forest	12.60 acres	38.2%	8.71	25.2	-3.89	-30.9%
Successional Shrubland	10.83 acres	32.9%	10.29	31.2	-0.54	-5.0%
Buildings and Paved Surfaces (inclusive of gravel and stone blend pavement)	3.70 acres	11.2%	3.81	11.4	-0.86	-18.4%
Successional Southern Hardwoods	4.67 acres	14.2%	9.28	30.0	+5.58	+250.8%
Unvegetated Sand Slope	0.29 acres	0.9%	0.00	0.0	-0.29	-100.0%
Tidal Wetlands	0.63 acres	1.9%	0.63	2.1	0.0	0.0%
Mowed Lawn with Trees and Landscaping	0.24 acres	0.7%	0.24	0.6	0.0	0.0%
Total Site	32.96 acres	100%	32.96	100%		

Similarly, Alternative 4 would result in slightly less clearing/removal of trees; approximately 612 trees would be cleared compared to the 634 trees under the proposed action. Alternative 4 would retain 74.6 percent of the trees on the subject property and the proposed action would retain 73.7 percent of the trees. The 74.6 percent of the trees to be retained as part of Alternative 4 represents 1,796 of the subject property's 2,408 trees and 56.3 percent of the trees in the M-II zoned portion of the subject property and 98.1 percent of the trees in the R-80 zoned portion of the subject property.

Accordingly, potential project impacts related to lost wildlife habitat and forest ecosystem services are slightly less under the Alternate Plan as compared to the proposed action. Potential project impacts to Mill Road Preserve are also similar between the proposed action and the Alternate Plan, due to the similar minimum distance between clearing limit and the Mill Road Preserve property boundary, approximately 103-feet and 105-feet, respectively. The potential ecological impacts of the Alternate Plan to wildlife, forests, tidal wetlands, and endangered/threatened species are expected to be broadly similar to the potential impacts of the proposed action, as discussed in Forest Resources, Wildlife, Endangered/Threatened Species, and Tidal Wetlands of the Ecological Report, appended to this DEIS in Appendix N. Mitigation measures, similar to those for the proposed action, would also be employed under the Alternate Plan.

***Flooding and Climate Change***

This alternative plan would be similar to the proposed action in that the two proposed buildings would occur entirely outside of a SFHA (see Figure 22 in Appendix A). Additionally, the two proposed buildings would be constructed at a higher elevation than the adjacent floodplain. The adjacent floodplain is Zone AE with BFE of 8 feet AMSL and two proposed buildings would have a FFE of 32 feet AMSL. Although located outside of the floodplain, this alternative remains consistent with the NYS requirements for new construction in the Zone A floodplain as the lowest habitable building level is greater than two feet above the BFE and would remain consistent with §148-19 (A)(1-2) of the Town Code. Buildings 6 through 8 are existing buildings within the floodplain and the modification would not result in altering the

floodplain or potential for flooding. Similar to the proposed action, the landscaping proposed for this alternative would be outside of the mapped floodplain. Therefore, the landscaping would not be impacted by flooding and storm events.

Similar to the proposed action, MHW at the subject property would increase from 4.0± to 5.3± feet AMSL if 16 inches of sea-level rise were experienced and thus, would not affect the existing buildings or infrastructure. The NYSDOS sea-level rise scenarios of 12 inches and 24 inches (see Figure 23 in Appendix A) and NYSERDA sea-level rise scenarios of 18 inches at 10-year and 100-year recurrence intervals (2050s) (Figure 24 in Appendix A) are not expected to impact the Project Area. Furthermore, this alternative would not be impacted by increased groundwater elevation as the new buildings and drainage infrastructure would be in the upland area.

As the proposed drainage system would be similar to the proposed action, there would be a net increase with regards to groundwater recharge where increases in precipitation would not impact the operations at SYC. However, the withdrawal of water on-site from the private supply wells would continue. Overall, there would be no impact expected on nearby wells.

Overall, based on the above, the Alternative 4 plan would have no significant adverse impacts associated with flooding and climate change.

### ***Consistency with Community Plans and Studies***

#### **Land Use and Zoning**

This Alternative Plan would maintain the maritime use of the subject property, but the new storage buildings would serve smaller boats and the lower building modifications would serve the larger vessels. This alternative plan would include the same post-development total GFA for on-site buildings as the two new buildings are of the same area as that proposed but would not require as extensive of land disturbance as the proposed action and would be constructed at a higher elevation closer to the surrounding residential and recreational uses. Similar to the proposed action, a landscaping plan and site lighting plan would be prepared consistent with the Town of Southold Chapter 280 Article XX and Chapter 272.

Access to the two new buildings would be provided via the existing SYC access on West Mill Road, with a new internal driveway extension from the lower development area to the upland area. The new driveway extension has been designed to consider the existing topography of the Project Area and allows for vehicles with boat trailers to safely traverse the property. Similar to the proposed action, the driveway and proposed parking areas would be stone blend pavement.

The area surrounding the two storage buildings would be screened by a concrete retaining wall and the existing woodland area that would be maintained around the new development area. This alternative would provide four less parking stalls than the proposed action as the four parking stalls proposed on the south side of Building 8 are eliminated under this alternative as the gravel driveway to access the west side of Building 8 would remain. Additionally, a 20-foot-wide access route to the new buildings would be constructed on a 6 percent slope.



Also, as part of this alternate plan, Buildings 6, 7 and 8 would be reconstructed to increase the building height from 24 feet to 35 feet in order to accommodate larger vessels, although those vessels requiring door heights of 35 feet or greater could not be accommodated. In addition to radiant floors being provided in the two new boat storage buildings, Buildings 6 through 8 would now provide radiant floor heating and three additional LPG tanks would be installed. The overall impact of the land use for this alternative is similar to the proposed action as a portion of the existing forested upland area would be cleared and developed for boat storage. The proposed development for this alternative, which is similar to the proposed action, is in accordance with the goals and objectives in the 2020 Comprehensive Plan.

As indicated in Table 53, similar to the proposed action, this alternate plan would comply with the bulk and dimensional requirements of the M-II zoning district. Under this alternative, the minimum lot width, minimum lot depth, minimum front yard, minimum side yard, both side yards, rear yard, lot coverage, building height, and number of stories would be the same as the proposed action. This alternative would include greater landscaped areas than the proposed action.

Additionally, this alternative would require 0.01± acre more of impervious surface and provide for 0.38± acre more of landscape area (planted areas only).

### **Consistency with Plans**

#### *Southold Town Comprehensive Plan Update (Adopted September 2020)*

As this alternative includes a similar development to the proposed action (i.e., continued but expanded maritime use for boat storage), it remains consistent with the Land Use and Zoning, Transportation and Infrastructure, Community Character, Natural Resources and Environment, Economic Development, and Natural Hazards goals outlined in Table 30. This alternative is more supportive of Land Use and Zoning Goal 6, Natural Resources and Environment Land Resources Section Goal 1 Objective 1.4, Goal 2 Objectives 2.1 and 2.2 than the proposed action as the topography of the subject property would not be modified like the proposed action and 22 less trees would be removed. Overall, based on the above, the Alternative 4 plan would have no significant adverse impacts associated with the alternative's consistency with the 2020 Comprehensive Plan.

#### *Town of Southold Local Waterfront Revitalization Program*

This alternative includes a similar development to the proposed action and is, therefore, subject to the same 13 policies of the Town of Southold LWRP. This alternative would have a greater impact to Policy 3 as the new boat storage buildings would be situated at a higher elevation than the proposed action and would impact the visual quality of the surrounding area greater and the higher height of Buildings 6 through 8 would result in a greater visual impact than the proposed action. However, this alternative is more supportive of Policy 6 as less impacts to the forested area would result and the quality and function of the ecosystem would not be as greatly impacted as the proposed action. As the proposed action is consistent with all policies, this alternative would also be consistent.

#### *Town of Southold Town Code Chapter 275 – Wetlands and Shoreline*

This alternative is similar to the proposed action in that it would include striping to formalize parking stalls and stormwater management infrastructure on the south side of Building 8 would be within 100

feet of Town-identified wetlands. As discussed in Sections 2.2.2 and 3.1.2, the proposed action is consistent with all Parts set forth at §275-12 (Standards for Issuance of Permit). Therefore, this alternative would also be consistent with all Parts set forth at §275-12.

*Mattituck Watershed Management Plan*

Similar to the proposed action, this alternative would replace and upgrade an existing septic system with an I/A OWTS. As such, the proposed sanitary system would reduce nitrogen loading and be more protective of groundwater quality than continuing to utilize the existing conventional septic system. As the proposed action is consistent with the Mattituck Watershed Management Plan, this alternative would also be consistent.

*NYSDOS Significant Coastal Fish and Wildlife Habitat*

Similar to the proposed action, this alternative would take place outside of designated NYSDOS Significant Coastal Fish and Wildlife Habitat. Therefore, this alternative would not have a significant adverse impact on the adjacent Significant Coastal Fish and Wildlife Habitat.

*Article 6 of the SCSC – Single-Family Residences, Realty Subdivisions, Developments and Other Construction Projects*

This alternative would include the same sanitary waste generation as the proposed action, 1,076 gpd, as the same use is proposed. Therefore, this alternative would be consistent with Article 6. Furthermore, the Applicant would still be required to file a restrictive covenant with the SCDHS to reduce the design flow for the M-II zoned parcel. Furthermore, similar to the proposed action, the I/A OWTS would be designed to reduce total nitrogen in treated effluent to a minimum of 19 mg/L, in accordance with Section 760-1907D.2 in Article 19 of the SCSC.

*Article 7 – Water Pollution Control*

As discussed in Sections 2.2.1 and 3.1.2, the subject property is not subject to Article 7 restrictions as it is not located in a regulated deep recharge area and is not located within an area that is 1,500 feet upgradient or 500 feet downgradient of a public supply well that screens in Upper Glacial aquifer, or other water supply sensitive area. Therefore, this regulation is not applicable to Alternative 4.

*Article 12 of the SCSC – Toxic and Hazardous Materials Storage and Handling Controls*

As discussed in Sections 2.2.2, 3.1.2, and 3.2.2, the seasonal storage of yachts would not require SYC to modify the quantity and types of chemicals to be stored on-site. SYC would continue to maintain its Category 5D – Aquatic Antifouling certification and apply for recertification when required. Therefore, this alternative is consistent with Article 12.

***Human Health***

Similar to the proposed action, the Fire Safety Plan developed by SYC to provide hazard locations, utility and water supply information, and emergency procedures for its employees would be utilized (see

Appendix P). As the Mattituck Fire Department indicated service availability for the proposed action, it is expected that the Mattituck Fire Department would be able to serve this alternative.

This alternative would require three additional 2,000-gallon LPG tanks than the proposed action to accommodate the radiant heat required for winter storage in Buildings 6, 7, and 8. The LPG tanks for the new buildings would remain the same as the proposed action.

All regulated toxic and hazardous materials stored and used at SYC facility would remain the same as the proposed action and existing conditions as maintenance and repairs would continue to be offered on-site.

Additionally, this alternative would have a similar impact on surrounding wells as the proposed action. This alternative would not connect to public water and the existing wells would remain in use for potable water and irrigation. The Groundwater Modeling Report, included in Appendix L, concluded the proposed action is not predicted to have any impact hydraulically on the nearby surrounding domestic supply wellhead zones of influence. The model additionally demonstrated that the neighboring wells would not be impacted with respect to groundwater quality as a result of the proposed site excavation. Furthermore, similar to the proposed action, groundwater would not be encountered during excavation. Additionally, this alternative would integrate a similar stormwater management infrastructure program as the proposed action and the recharge volume would be similar

Overall, based on the above, the Alternative 4 plan would have no significant adverse impacts associated with human health.

### ***Transportation***

The TIS in Appendix O of this DEIS evaluated this alternative development plan. As summarized in the TIS, the primary difference between the two proposals (i.e., proposed action and the alternative plan) is that the two buildings proposed under the project alternative would be constructed at approximately the existing grade of the site and would not require excavation other than grading to provide a level surface for construction. Once completed, the use of the two buildings would be as storage, consistent with the proposed use under the proposed action. However, the two new buildings would be used for the storage of smaller boats than the two buildings to be constructed under the proposed action. The access roads to the new buildings under the project alternative will not support the use of travel lifts capable of transporting large boats to storage in the new buildings. Also, this alternative includes elevating the roof heights of three existing buildings to accommodate large vessel storage. As such, this alternative would still require 11 new employees working Monday thru Friday. As with the proposed action, the buildings will be used for long term storage and boats will not be stored in the buildings for launching at the owner's use, as is commonly done with rack storage of boats at many marinas. The only boats available for use by owners will be those kept in one of the 40 existing slips at the Yacht Center.

Table 56, as excerpted from Table 7 (Site-Generated Traffic Project Alternative) in the TIS includes the estimated site-generated traffic anticipated during typical peak hours based on the ITE trip generation rates for a 40-slip marina with 11 new employees to support the work to be done in the new storage

buildings. As noted, other than the difference in the elevation of the buildings and increased roof heights of three existing buildings, the primary difference would be that once completed, the new buildings under the alternative will be used for the storage of significantly smaller boats than would the buildings constructed under the proposed action. The proposed action would store boats of an average of 60 feet, in two new buildings, while the buildings constructed under this alternative would store up to 300 smaller boats in the two new buildings. Boats more than 60 feet cannot be trailered to the site and must arrive via the water. Smaller boats, as are anticipated to be stored in the alternative, can readily be transported to and from the site by trailer. It is anticipated that half the smaller boats stored at the site will arrive and depart by trailer (i.e., 150 of the total 300 boats). The TIS considered transport in and out of the facility over the three-month period. The arrival and departure of these boats from storage is not reflected in Table 6 as excerpted from the TIS (see Table 55), as these trips will generally not occur during peak hours and will occur at a rate of a few a day.

**Table 56 - Site-Generated Traffic for Project Alternative**

<i>Generator</i>	<i>Vehicle Trips per Hour</i>					
	<b>Weekday A.M. Peak Hour</b>		<b>Weekday P.M. Peak Hour</b>		<b>Saturday Peak Hour</b>	
	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>
Existing Marina with 40 slips (Land Use Code 420)	3	2	6	3	4	5
New Employee Trips (11 New Employees)	11	2	2	11	0	0
Total	14	4	8	14	4	5

Table 57, as excerpted from Table 8 (Comparison of Site Generated Traffic, Proposed Project versus Alternative Project) in the TIS compares the site generated characteristics of the two alternatives.

**Table 57 – Comparison of Site-Generated Traffic for Proposed Project vs. Alternative Plan**

<i>Use</i>	<i>Vehicle Trips per Hour</i>					
	<b>Weekday A.M. Peak Hour</b>		<b>Weekday P.M. Peak Hour</b>		<b>Saturday Peak Hour</b>	
	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>	<b>Enter</b>	<b>Exit</b>
Proposed Project	14	4	8	14	4	5
Alternative Project	14	4	8	14	4	5
Difference	0	0	0	0	0	0

This alternative would still require 11 new employees working Monday thru Friday as does the proposed action. The alternative will generate the same amount of traffic as does the proposed action during the hours of analysis. The primary difference with respect to traffic impacts once the project is completed, is the new buildings under the alternative will be used for the storage of significantly smaller boats than would the buildings constructed under the proposed action. This alternative would store up to 300 smaller boats, of which approximately half would arrive by trailer and would have a greater traffic impact than the proposed action (which includes boats arriving and departing by water). As noted above, the above tables reflect vehicular trips in the peak hour. As the alternative would increase boat trailers by approximately 150 over a three-month period, the peak hour may not be affected. As such, the peak hour trips are the same for the proposed action and this alternative plan.

### ***Aesthetic Resources***

The two proposed additional buildings would be situated west of Buildings 7 and 8 would be placed at the existing average elevations of 36.95± feet AMSL for Building 1 and 37.88± feet AMSL for Building 2. The maximum building height of 35 feet from average grade elevations allows for a maximum height of 71.95 feet for Building 1 and 72.88 for Building 2. Under the proposed action, the proposed buildings are 39' 3" from grade to the eave and 45' 8" from grade to the top of ridge. The mean roof height is 42' 6". With a proposed 10-foot FFE for both buildings, the top (mean height between eave and ridge) elevation of the buildings would be 55.67 feet ASML. Therefore, this alternative would result in a top height 16.28± feet higher than the proposed action for the proposed additional buildings.

As indicated in the Renderings A-9 and A-10 in Appendix V of this DEIS, from the east and southeast, Alternative 4 would alter the viewshed with the proposed buildings in the upland area. Specifically, views of the property from Mattituck Creek would consist of the building mass rather the vegetation and tree line that is currently visible and would also exist in the post-development conditions for the proposed action. As a result of the increase in top elevation of the buildings, viewshed changes would also be expected from the adjacent Town Preserve and surrounding residential properties. Additionally, the replacement in-kind of Buildings 6, 7 and 8 to increase the roof height so the buildings can accommodate larger boats would slightly alter the viewshed but the 11±-foot increase for a maximum height of 35 feet would not significantly noticeable. Rendering A-9 illustrates only Buildings 7 and 8, which demonstrates a minor change in views of these buildings from the Creek.

As Alternative 4 would not require the proposed haul road, there would be no changes along West Mill Road.

Regarding landscaping and lighting plan, the Alternate Plan would be developed consistent with the requirements set forth at Chapter 280 Article XX Landscaping, Screening, and Buffer Regulations and Chapter 172 of the Town Code (Outdoor Lighting).

Overall, based on the above, the Alternative 4 plan would result in significant changes to the visual setting at the subject property. Rather viewing the roofline of the proposed buildings, this Alternative Plan would result in the complete mass and height of the new buildings in the upland area to be visible. The evergreen retaining wall and supplemental plantings that are visible behind the proposed buildings would not be visible under this Alternative Plan. As such, while this Alternate Plan would result in less material to be cut and removed from the subject property, it would have a greater aesthetic impact than that proposed.

### ***Community Character***

Similar to the proposed action, the existing maritime use at the subject property would continue under this alternative. The overall character of the site would remain the same as existing conditions as similar buildings currently exist along the creek, on the subject property and are part of the established maritime and commercial uses in this area. However, this alternative plan would alter the visual setting by placing the buildings in the upland area and eliminating the current tree line view that would be maintained under the proposed action.

### ***Open Space and Recreation***

Developing the two boat storage buildings on the upland area of the subject property would potentially have an impact on Mattituck Harbor and Mill Road Preserve. As depicted on Renderings A-9 and A-10 in Appendix V, the post-development views from Mattituck Harbor as part of this alternative would modify the viewshed more than the proposed action. The view of the upland area would be modified by locating the proposed boat storage buildings at a higher elevation and views of the forest area would be reduced as a result. Additionally, raising the height of Buildings 7 and 8 would reduce views of the upland forest area. The views of Buildings 9 and 10 would be more intensive as part of this alternative with regards to potential impacts to Mill Road Preserve as the buildings would be sited at a similar elevation to the most southern trail of the Preserve. As no impact to Oregon Marsh State Tidal Wetlands is anticipated for the proposed action, the same would remain for this alternative as the timing of the boat arrival and departures would not coincide with the more intensive use time period of Oregon Marsh State Tidal Wetlands. This alternative assumes that half of the vessels to be accommodated would arrive via Mattituck Harbor and would result in a greater number of vessels utilizing Mattituck Harbor. However, the increase in maritime traffic would not impact the flow of traffic on Mattituck Harbor. It is anticipated that approximately half of the vessels would come by water and half would be trailered to SYC.

### ***Noise***

#### ***Construction Noise Impacts***

As excerpted from the Acoustic Report, the difference in construction noise impacts in the proposed plan as compared to the alternate plan was assessed using the Excavation - Drainage phase. This phase is anticipated to have the highest sound levels created once the excavation is complete and the two plans would be sufficiently different to compare. The same equipment utilizations, sound levels, and traffic generation were used for evaluation, with the only changes made being the location and grading to match the Alternate Site Plan. Figures 30 and 31 in the Acoustic Report present the graphic representation of the data during construction for the peak hour sound level generation and 8-hour Leq sound levels predicted at the subject property. Figures 32 through 35 in the Acoustic Report show the predicted 8-hour Leq and peak hour sound levels at West Mill Road and Cox Neck Road.

Table 58 and 59 (as excerpted from Tables 24 and 25 in the Acoustic Report) summarize the projected sound levels for all receiving locations for the 8-hour Leq and peak hour Leq, respectively, as well as the difference in predicted sound pressure levels from the proposed plan.

**Table 58 – 8-Hour Sound Pressure Levels at All Receivers for Construction Activities and Additional Traffic with the Alternate Site Plan and Difference in Sound Pressure Level compared to the Proposed Plan**

<b>Receiver Number</b>	<b>Location</b>	<b>Existing Condition (dBA)</b>	<b>Proposed Plan Construction (dBA)</b>	<b>Alternate Plan Construction (dBA)</b>	<b>Difference (dBA)</b>
R1	5106 West Mill Road	44	50	51	1
R2	800 North Drive	44	76	78	1
R3	805 North Drive	44	69	71	2
R4	2010 West Mill Road	44	57	61	4
R5	4105 West Mill Road	50	57	60	3
R6	200 East Mill Road	44	60	58	-2
R7	750 East Mill Road	44	59	59	0
R8	3329 Grand Ave	44	68	69	0
R9	3001 West Mill Road	46	52	54	2
R10	1525 West Mill Road	50	62	62	0
R11	1480 West Mill Road	52	64	66	2
R12	1065 West Mill Road	52	64	66	2
R13	155 Breakwater Road	52	64	66	2
R14	2100 Cox Neck Road	57	66	66	0
R15	2695 Cox Neck Road	55	66	66	0
R16	1475 Cox Neck Road	54	65	65	0
R17	1020 Cox Neck Road	56	61	61	0
R18	55 Middle Road	60	62	62	0

**Table 59 – Peak Hour Sound Pressure Levels at All Receivers for Construction Activities and Additional Traffic with the Alternate Site Plan and Difference in Sound Pressure Level compared to the Proposed Plan**

<b>Receiver Number</b>	<b>Location</b>	<b>Existing Condition (dBA)</b>	<b>Proposed Plan Construction (dBA)</b>	<b>Alternate Plan Construction (dBA)</b>	<b>Difference (dBA)</b>
R1	5106 West Mill Road	44	57	58	2
R2	800 North Drive	44	84	87	2
R3	805 North Drive	44	77	80	3
R4	2010 West Mill Road	44	65	70	5
R5	4105 West Mill Road	49	65	68	3
R6	200 East Mill Road	44	68	66	-2
R7	750 East Mill Road	44	67	68	0
R8	3329 Grand Ave	44	77	78	1
R9	3001 West Mill Road	46	58	61	3
R10	1525 West Mill Road	50	64	64	0
R11	1480 West Mill Road	52	66	67	1
R12	1065 West Mill Road	52	66	68	1
R13	155 Breakwater Road	52	66	68	2
R14	2100 Cox Neck Road	57	68	68	0
R15	2695 Cox Neck Road	55	68	68	0
R16	1475 Cox Neck Road	54	66	66	0
R17	1020 Cox Neck Road	56	62	62	0
R18	55 Middle Road	60	62	62	0

As indicated in the summary tables above, there would be an overall increase in sound levels because the grade would no longer function as an acoustic barrier and the transmission loss provided by the retaining wall would be eliminated. This is most evident at R-4, where sound level increases range from 4-5 dBA, as well as additional receivers which show a 1-3 dBA increase. It should be noted, that R6 shows a 2 dBA reduction in expected sound level with the alternate plan. However, all other receptors show either no difference, or an increase in sound levels when the Alternate Site Plan is implemented.



*Build Condition Impacts*

As discussed in Section 3.7 of this DEIS and in the Acoustic Report, the Build Condition for the proposed plan has no impact predicted on the nearby receivers. The most considerable difference between the proposed plan and the alternate plan is the internal driveway ramp which would need to be used to access the storage buildings. Vehicles using this ramp would need to accelerate more significantly to access the area, leading to increased sound generation. Figures 44-46 in the Acoustic Report presents the graphic representation of the data, while Table 60 below (as excerpted from Table 26 in the Acoustic Report) presents the predicted sound levels at all receivers. The Build Condition would still comply with the Noise Code and would have the same anticipated sound level except at R2 where the increase due to the alternate design is only 1 dBA, which is not perceivable.

**Table 60 - Sound Pressure Levels at All Receivers for the Build Condition with the Alternate Site Plan and Difference in Sound Pressure Level compared to the Proposed Plan**

Receiver Number	Location	Description			
		Existing Condition (dBA)	Proposed Plan Construction (dBA)	Alternate Plan Construction (dBA)	Difference in Sound Level
R1	5106 West Mill Road	44	44	44	0
R2	800 North Drive	44	48	49	1
R3	805 North Drive	46	45	45	0
R4	2010 West Mill Road	47	44	44	0
R5	4105 West Mill Road	51	50	50	0
R6	200 East Mill Road	44	45	45	0
R7	750 East Mill Road	44	44	44	0
R8	3329 Grand Ave	44	45	45	0
R9	3001 West Mill Road	47	47	47	0
R10	1525 West Mill Road	60	60	60	0
R11	1480 West Mill Road	63	63	63	0
R12	1065 West Mill Road	63	63	63	0
R13	155 Breakwater Road	63	63	63	0
R14	2100 Cox Neck Road	65	65	65	0
R15	2695 Cox Neck Road	66	66	66	0
R16	1475 Cox Neck Road	64	64	64	0
R17	1020 Cox Neck Road	62	62	62	0
R18	55 Middle Road	63	63	63	0

***Air Quality***

Similar to existing conditions and the proposed action, this alternative would not result in emission sources at SYC requiring NYSDEC air permits and long-term air quality impacts would be inconsequential. Post-development, the addition of stationary emission sources is not proposed as part of this alternative and vehicular traffic due to the expansion will be the same as the proposed action. As more trees would be retained as part of this alternative, the amount of carbon sequestered would be greater than the proposed action. However, the carbon sequestered as a result of hard clam farming would be the same as existing conditions and the proposed action as the current CCE FLUPSY operations

would be maintained during both the proposed action and this alternative. Therefore, the Alternative 4 plan would have similar impacts and benefits as the proposed action.

### ***Social and Economic Impacts***

This alternative would not modify the proposed services or projected employment post-development assumed under the proposed action. Additionally, the same economic impacts, both direct and indirect, would be experienced under this alternative. Therefore, the Alternative 4 plan would have similar beneficial social and economic impacts to the proposed action.

### ***Construction-Related Impacts***

The potential construction-related impacts associated with this Alternative Plan would be less than the proposed action. All construction vehicles would enter and exit the subject property via the existing access to SYC. The construction of the temporary haul road and stabilized RCA shoulder would not be required as part of this alternative. The security booth would be located at the existing entrance to SYC to house the site manager who would be responsible for directing trucks to the Construction Excavation Area, inspecting exiting vehicles, and enforcing safety protocols.

Site preparation and clearing would be less than the proposed action as less trees would be removed. Additionally, the pre-construction geotechnical borings would not be required within the southern footprint of Buildings 9 as the initial soil borings completed within the new location for Building 9 did not identify loose soil deposits. As provided by the project engineer, the approximately 2,939 CY of cut material would require a total of approximately 98 trucks for material removal. The construction phase would be similar to the proposed action, with this Alternative Plan requiring a concrete retaining wall, internal driveway, drainage infrastructure and two boat storage buildings of the same area (i.e., 49,000 SF and 52,500 SF). There may be a slight increase in construction time required for the replacement in-kind to Buildings 6, 7 and 8; however, overall, the total construction duration would be approximately 12-to-13 months. The alternative would require a similar equipment program as the proposed action.

Similar to the proposed action, measures would be taken to minimize the potential for erosion and sedimentation and an *Erosion and Sediment Control Plan* would be prepared.

Similar to the proposed action, all trucks associated with the construction of the proposed action would be limited to traveling at 30 mph on West Mill Road and all neighboring roads. The posted speed limit on West Mill Road is 35 mph.

Similar to the proposed action, the heating source for the storage buildings is not natural gas and therefore, an extension of a natural gas line would not be required. The proposed heating source, as discussed in Section 3.1.2, would be above ground LPG tanks in concrete vaults. Buildings 6, through 8 would include LPG tanks for heating, which would be more than the proposed action.

This alternative would abide by the same measures to mitigate noise on surrounding properties:

- No work would be performed on Federal or State holidays, or on Sundays.
- All trucks would be Tier 4 certified by U.S. EPA standards and all gasoline or diesel-powered machinery would be equipped with adequate mufflers.

- Any vehicle that requires the use of a back-up alarm would use a white noise back-up alarm rather a single tone beep.
- All trucks and drivers would be instructed to disengage all Jake Brake mechanisms once turning on to Cox Neck Road from County Route 48.

This alternative would abide by the same dust mitigation measures to minimize the potential associated impacts. In accordance with 6 NYCRR Subpart 217-3, heavy-duty vehicles would not remain idling for more than five minutes at a time. Furthermore, the use of all Tier 4 certified by U.S. EPA standards trucks and equipment would further reduce emissions of particulate matter (PM) and nitrogen oxides (NOx).

Similar to the proposed action, short-term air quality impacts may occur during construction activities. As less trucks would be required for this alternative, it is expected the off-road mobile emissions would be slightly less than the proposed action. Fugitive dust would also be generated during construction. However, as the clearing area is smaller than the proposed action and construction duration would be similar if not longer than the proposed action, it is anticipated the total TSP emission rate for this alternative would be slightly less than the 101.5 tons calculated for the proposed action.

Similar to the proposed action, all construction activities would be overseen by a Construction Manager and dictated by a Construction Management Plan developed in coordination with the Town of Southold. The Construction Manager will facilitate coordination among the appropriate governmental agencies/departments and interested parties to minimize potential construction impacts in the surrounding area. It is also anticipated that the Town of Southold will provide independent oversight on behalf of the public. While the Applicant will strive to ensure that impacts as a result of demolition and construction are minimized, the public can express any issues during construction to the Town, who would then notify the Applicant; and, if necessary, the Town could oversee the implementation of any corrective action.

Overall, the Alternative 4 plan, with the same mitigation proposed, would not result in significant adverse impacts during construction.

#### ***Archaeological and Cultural Resources***

As the Phase IB survey conducted for the proposed action concluded no archaeological sites would be impacted. the implementation of this Alternative Plan would not have any significant adverse impacts on archaeological and cultural resources.

#### **5.5 Alternative 5: Construct Smaller Building(s) With Less Excavation**

This alternative would include a reduction in the size of the two proposed buildings in order to reduce the volume of material to be cut and removed from the site. However, the proposed concrete and Evergreen concrete retaining wall would still be required and the construction cost would not make this an economically viable plan for the Applicant.

### **5.6 Alternative 6: Reconfiguration or Reconstruction of Existing Buildings for Larger Boat Storage**

This alternative includes the reconfiguration or reconstruction of existing buildings for larger boat storage, which would impact the storage capacity for smaller boats (less than 40 feet). The intent of this alternative is to eliminate the proposed excavation of adjacent land; however, this alternative would have a significant impact to the local boating community with smaller vessels that rely upon SYC for storage (and the accompanying winterization and pre-launch preparation). Upon implementation of this alternative, SYC would be required to significantly decrease or eliminate service to smaller vessels. Accordingly, this alternative is not feasible for the Applicant unless additional buildings can be constructed at the upper elevation for smaller vessels, as presented in Alternative 4.

### **5.7 Alternative 7: Alternative Material Mitigation Plan**

An alternative material mitigation plan has been evaluated to reduce the volume of material to be removed from the subject property by placing approximately 13,500 cy of material on the R-80-zoned parcel. The material would be placed within the Successional Shrubland area at a depth of approximately 12 inches and setback approximately 20 feet from the Successional Southern Hardwoods. The resultant impact on transportation would be the elimination of 450 trucks from the excavation phase, which would reduce the excavation phase by 11.25 days or approximately two weeks (as the proposed excavation phase would occur Monday – Friday only).

It is noted that the volume of material was based upon the guidance and direction of Dr. William Bowman, project ecologist. As indicated in the Ecological Report (see Appendix N), the material would be placed within an 8.60-acre portion of the successional shrublands located on the R-80 zoned parcel. Fill would be placed at a depth of approximately 12 inches above the existing grade throughout the 8.60-acre placement area. The northern and eastern margins of the fill placement area correspond to existing earthen access paths. No material will be placed within 25-ft (minimum) from existing stands of trees within the Successional Southern Hardwood forest areas. The setback of the proposed fill placement area is 25 to 75 ft from the northern property boundary, 75 to 200 ft from the southern property boundary, and 35 to 100 ft from the eastern property boundary.

The ground- and shrub-level vegetation within the successional shrubland would be cut close to ground level and the approximately 12-inches of sand/sandy loam soils from the excavation area would be placed on the existing grade. The cut aboveground biomass from existing herbaceous vegetation, woody vines and brambles, small woody shrubs and trees (i.e., less than 6-inches in DBH) would be collected and removed before spreading of material. The new sandy soils would be seeded with a native upland grassland seed mix comprised of native warm season grasses, such as switch grass (*Panicum virgatum*), Indian grass (*Sorghastrum nutans*), and little bluestem (*Schizachyrium scoparium*). These warm-season grasses provide high quality habitat for wildlife (including grassland birds, small mammals, and raptors), including food resources, nesting sites, and cover during winter months.

The dominant shrubs and vines currently present in the successional shrubland will also re-colonize the seeded fill placement area over time due to 1) seed dispersal by birds and small mammals and 2) some limited re-sprouting of woody trees and shrubs from cut stumps through the shallow sandy soil.

There are approximately 155 trees (greater than 6-inches in DBH) located within the 8.6-acre placement area. To avoid impacts to the root systems of trees within the proposed placement area, no fill will be placed within 3 to 10-ft of existing tree stems (depending on the size of the tree). As indicated in Section 2.4.1 of this DEIS and discussed in the Ecological Report, many of these trees are in poor condition due to extensive loads of invasive vines, specifically Asiatic bittersweet. Due to these tree protection measures, the proposed tree clearing under this alternative would be similar to the proposed action, as described in Table 7 of the Ecological Report.

Similar to the proposed action, this alternative plan results in the loss of 5.51 acres of upland forest habitat (4.32 acres of coastal oak-beech forest and 1.19 acres of successional hardwood forests) (see Tables 6 and 9 in the Ecological Report). Under this plan, an additional 8.60 acres of the successional shrubland would be disturbed through clearing of existing vegetation and placement of sandy loam fill. After establishment ground coverage of the placed material through seeding of warm season grasses, there would be no substantial difference in the ecological community composition of the subject property as compared to the proposed action. However, after several growing seasons, the plant community composition of the Successional Shrubland areas would likely be similar to existing conditions, albeit with a larger component of native warm season grasses, due to the re-sprouting of woody trees and shrubs from cut stumps through the placed fill and re-colonization of these species through seed dispersal. Due to the likely increase in warm season grass coverage under this alternative (in the short term), the ecological community designation for these areas was changed to Successional Shrubland and Successional Old Field.

This alternative plan would result in an increase in short-term impacts to wildlife, such as small mammals and reptiles, including Eastern Box turtle, as compared to the proposed action, as there would be an increase in the area of project disturbance by approximately 8.6 acres and include the successional shrubland that was largely excluded from construction activities under the proposed action. It is expected that there would be mortality to small mammals and herptiles during clearing and grading activities, although some organisms would likely successfully shelter in underground burrows. With the exception of Eastern Box turtles, the small mammals and herptiles that inhabit the site's successional shrublands consist of abundant species with stable populations and, accordingly, the displacement or mortality of individuals at the site are not likely to adversely impact the regional populations of these species. Potential adverse impacts to Eastern Box turtle will be minimized by conducting sweeps or surveys for box turtles prior to commencement of clearing, grading, and excavation activities, and relocation of any observed turtles to on-site areas that will not be disturbed. Silt fencing or other barriers will be installed around work areas to prevent turtles from returning to construction areas.

The new successional meadow habitat created after fill placement and establishment of warm season grasses would provide higher quality habitat compared to the existing conditions. However, this habitat improvement is expected to be temporary (i.e., several years to a decade or more) as the recruitment of invasive species such as autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), and Asiatic bittersweet (*Celastrus orbiculatus*) would return the proposed placement area to its existing conditions over time.

The potential project impacts to Mill Road Preserve would be similar between the proposed action and the Alternate Plan 7, due to the similar minimum distance between clearing limit and the Mill Road Preserve property boundary. Furthermore, the potential ecological impacts to forests and forest wildlife, are expected to be broadly similar to the potential impacts of the proposed action, as there are no differences in project scope between this alternative and the proposed action within these forest areas. Mitigation measures similar to those included in Section 2.4.3 would also be employed under this alternative.

### **5.8 Alternative 8: Alternative Routing Plan**

This alternative includes the use of Bergen Avenue for outgoing (full) trucks and the use of Cox Neck Lane for incoming (empty) trucks, during the excavation phase only. Arriving trucks would follow the original Truck Route plan, making a left turn from east bound Sound Avenue onto north bound Cox Neck Road/West Mill Road. Departing trucks hauling material from the site would utilize West Mill Road/Cox Neck Road and then turn west onto Bergen Avenue to Sound Avenue. This alternate truck route is shown in Figure 23 (Alternate Construction Truck Route) in the TIS.

The advantage of the proposed Alternate Truck Route Plan is that it halves the number of truck trips on Cox Neck Road where there are more residential homes fronting on the road. The departing trucks will use Bergen Avenue which has less than half the number of homes fronting the road.

A data collection effort was undertaken in August of 2022 to evaluate the Alternate Route segment. Seven-day Automated Traffic Count was collected on Bergen Avenue. Intersection turning movement counts were collected at Bergen Avenue at Sound Avenue and Bergen Avenue at Cox Neck Road. Pedestrian observations were also made at the intersection of Bergen Avenue at Coopers Road. The additional data collected to evaluate the Bergen Avenue routing is included in the Supplemental Data Appendix of the TIS. Figure 24 (Site Generated Truck Traffic Volumes at Phase 1 – Excavation – Alternative) in the TIS illustrates the number of site-generated trucks utilizing the alternative truck route and Figure 25 (2024 Build Spring Traffic Volumes at Phase 1 – Excavation – Alternative Truck Route) in the TIS illustrates the composite 2024 traffic volumes with the site generated truck traffic utilizing the alternate truck route.

Utilizing the capacity analysis methodology, the following three intersections would be directly impacted by the Alternate Truck Route during excavation:

- Sound Avenue/County Road 48 at Cox Neck Road
- Sound Avenue at Bergen Avenue
- Bergen Avenue at Cox Neck Road

The results indicate that the trucks generated by the project can be accommodated at each of these intersection with good levels of service. The level of service at each of the study intersections under the Build Alternative remained at Level of Service A or B under all conditions and movement delays either were not affected at all or had minor changes of less than a second.

Regarding pedestrian and bicycle impacts, during the 12-hour weekday observation period, 6 pedestrians walked along Bergen Avenue and 4 pedestrians crossed Bergen Avenue. During the same 12-hour observation period, 8 bicycles were noted riding along Bergen Avenue. During a 12-hour period on a Saturday, 9 pedestrians were observed walking along Bergen Avenue and two crossed Bergen Avenue. Ten bicycles were observed riding along Bergen Avenue during a 12-hour period on a Saturday. Based on the observations, bicycle and pedestrian activity along Bergen Avenue is low during the weekday period when trucks may use the road. It is also low on Saturdays when project related trucks will not be using the road.

Truck turning movement studies were also performed along the alternative route utilizing Bergen Avenue. Those studies indicated that trucks would need assistance from flaggers in making the right turn from Cox Neck

Road to Bergen Avenue, and at the 90-degree curve in Bergen Avenue north of Sound Avenue and in making the right turn from Bergen Avenue onto Sound Avenue.

The acoustic impacts of the Alternative Routing Plan were also evaluated. As sources on Bergen Avenue were not considered in the initial Acoustic Report, additional acoustic data was collected along Bergen Avenue to quantify the existing ambient sound levels on August 2, 2022. Figure 30 in the Acoustic Report shows the location of the readings collected (noted as Location 5) and Table 19 in the Acoustic Report provides the results of the acoustic readings collected. The afternoon L90 was used in the analysis as the ambient sound level. Also, to evaluate traffic, the additional traffic data collection was used (and included in Section 3.6.11 of the Acoustic Report). For additional trips, the additional trip generation data for Excavation Phases 1 and 2 were used as they represent the highest truck traffic during construction.

Using the additional trip generation data, the TNM analyses in SoundPlan were completed for R15 – R18 for receivers on Cox Neck Road, and then for new receivers R19 – R24 for new receivers which were inserted into the model for Bergen Avenue. Using the results, the sound levels at R15 – R18 for the alternate truck plan were compared to the sound levels during Excavation Phase 1 to show the reduction in sound level. Table 22 of the Acoustic Report shows the existing and predicted excavation phase peak hour Leq sound levels, while Table 23 of the Acoustic Report shows the existing and predicted excavation phase 8-hour Leq sound levels at each location. Figures 31 and 32 of the Acoustic Report show the graphic representations of the existing peak hour and 8-hour sound levels, respectively. Figures 33 and 34 of the Acoustic Report show the graphic representation of the excavation phase peak hour and 8-hour Leq sound levels, respectively. As seen in the figures, there is a 1-2 dBA reduction in both peak hour and 8-hour sound levels, showing an improvement in sound levels at the locations along Cox Neck Road. Although there would now be an impact to receivers along Bergen Avenue, all predicted sound levels are lower than the NYSDOT's suggested criteria of 67 dBA at the receivers considered in the alternate plan.



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