DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Greybarn- Sayville Planned Development District (PDD-GS)
Change of Zone Application #CZ2017-009

458 Lakeland Avenue
Hamlet of Sayville, Town of Islip
Suffolk County, New York

NPV No. 16130

Volume 1 of 2
Main Text, Figures and Plans

Prepared for Submission to:
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c/o Town Department of Planning and Development
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Contact: Ron Meyer, Commissioner
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May 2021

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458 Lakeland Avenue
Hamlet of Sayville, Town of Islip
Suffolk County, New York

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Date of Acceptance by Lead Agency: _____

Comments to the Lead Agency are to be submitted by: _____

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SUMMARY

Introduction

This document is a Draft Environmental Impact Statement (DEIS) for a proposed 1,365-unit residential development known as **Greybarn-Sayville Planned Development District** (PDD-GS; hereafter, the *"proposed project"*). This proposed project is located on the site of the former Island Hills Country Club, a 114.34-acre property in the hamlet of Sayville, Town of Islip, Suffolk County, New York. The subject site is located on the west side of Lakeland Avenue and the east sides of Bohemia Parkway and Hauppauge Road, between 11th Street and Sterling Place; the address of the site is 458 Lakeland Avenue.

The Island Hills Country Club ceased operations in 2015, and is presently unused and unoccupied. This property is gated and fenced, the country club buildings are closed and sealed, and the golf course has not been maintained as such since the site was closed.

This document describes the proposed project, identifies its potential adverse environmental impacts and the significance of those impacts, and examines mitigation measures where necessary. Further, it is intended to assist the Islip Town Board (as lead agency under the State Environmental Quality Review Act [SEQRA]), in taking a "hard look" at the proposed project to enable the Board to render an informed decision on the application.

Project Design, Layout and Operations

The proposed project includes the creation of the proposed PDD-GS into the Town Zoning Code, as well as the change of zone for the subject site into the newly-created PDD GS district. for the entire site. A conceptual plan has been prepared for the proposed change of zone and to provide a basis for analysis under SEQRA in this DEIS (see **the Conceptual Site Layout Plan** *in a pouch at the back of this document)*. The proposed project involves rezoning the site from its existing Residence AAA district to PDD-GS, followed by development of the 1,365-unit rental residential community. The Applicant (385 IH LLC) has used the Residence CA zoning district as an outline for the proposed site-specific PDD-GS. Specifically, the Town Board instituted the Residence CA district for multi-family residential development having locational characteristics including:

- proximity to a downtown center or in the alternative existing retail services.
- convenient access to public transportation services.
- a site of sufficient size and shape so as to provide for the adequate buffers, landscaping and setbacks.
- a site of sufficient size so as to provide for adequate parking while still maintaining a residential appearance to the site.
- a site shall be of sufficient size so as to provide for ample open space and/or recreation areas consistent with the needs of the residents

In this way, the site would be built under some of the development standards that are well-established in the Town, so that the physical layout of the site will be consistent with that of other, CA-zoned properties.

The project will include on-site stormwater controls and sanitary wastewater treatment systems, connections to the public water supply, interior recreational and accessory amenities (limited to the site's residents, and including interior open spaces, outdoor pool/patio areas, and an internal walking trail network), and a 25-acre public open space area along the perimeter of the site, in which a pedestrian path is proposed.

A number of the project's features represent Community Benefits, which are required for a PDD in the Town of Islip, and include:

- designating 217 of the units as "affordable," as defined by the Town in Section 68-3, for rent at rates below prevailing market rates for a comparable unit;
- providing a 25-acre public park around the perimeter of the site;
- generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs
- generation of an annual net tax revenue benefit to the Connetquot Central School District (CSD) of $2.99 million
- installing a new sewer force main southward to downtown Sayville, so that businesses can connect to it and be served by the project's sanitary wastewater treatment system; and
- designing the capacity of the project's sewage treatment plant (STP) with a capacity in excess of that needed for the project, in order to accommodate the sewage flow from the downtown Sayville businesses (cumulative impacts associated with this feature are addressed in **Section 4.2**).

The applicant offers sewer main infrastructure as a no-cost monetary benefit to the Town of Islip. Such infrastructure may be used for treatment of existing wastewater flow generated in the downtown Sayville area, which provides a substantial nitrogen environmental reduction benefit based on existing conditions. The Town will determine when and how such sewering will occur. To realize this benefit, the Town will need to form a sewer district which will include a map and plan and rate/cost information for connectees. Once the service area of the district is determined, additional analyses may be needed to assess potential growth based on the district, existing zoning, Town comprehensive planning efforts and land use analysis. Given these factors, the offer of sewer main infrastructure remains a monetary benefit to the Town to address groundwater and downgradient surface water impacts from existing development

The Residence AAA district permits a variety of development types, including detached single-family homes, places of worship, public parks or libraries, municipal buildings, railway stations, and agricultural or nursery uses. Based on the minimum lot size of 40,000 square feet (SF) in

the Residence AAA District, an estimated 98 homes could be developed on the site (see **Yield Map**, *in a pouch at the back of this document*).

Anticipated Impacts

Soils and Topography

Soils - The characteristics of soils on the subject property are not expected to present an impact on the project following the implementation of appropriate mitigation measures (i.e., grading, installation of appropriate landscape species, appropriate sanitary and drainage design, etc.) to be instituted through project design.

Soil Borings, Depth to Groundwater - Review of soil boring logs revealed that soils underlying the subject property generally consist of well drained fine sand with traces of gravel. In addition, percolation tests conducted at the subject property found that the soils maintain a high rate of permeability and exhibit excellent drainage characteristics. As a result, the proposed project is not expected to present any significant impacts related to drainage and recharge following development.

Stormwater System - All stormwater runoff generated on the property will be retained and recharged in a drainage system conforming to Town requirements, which includes the ability to handle 8 inches of runoff. While the project's drainage system is designed for 5 inches of storage, it is expected that the high percolation rate of the site's soils will enable the project's drainage system to handle the required 8 inches of runoff. The proposed project will require a 37.5% relaxation of the Town requirements (from 8 inches of storage to 5 inches of storage, though it is expected that the proposed system will operate at the 8-inch level) in this regard. All stormwater will be collected as well as recharged within the site through a series of roadside catch basin and drywells, and a 1.78-acre pond/retention area to be excavated in the center of the site. The Town Engineering Department will review the system for sufficiency as part of the site plan review process.

The project's drainage system will be designed to comply with State Pollutant Discharge Elimination System requirements under the NYSDEC SPDES General Permit (GP-0-20-001) and Chapter 47 of the Islip Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval. The SWPPP evaluates the proposed drainage system to ensure that it meets the NYSDEC and Town requirements for treatment and retention of stormwater runoff. The SWPPP must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges from a property once developed. Drainage for the project will be designed and installed in accordance with Town of Islip and NYSDEC SWPPP requirements.

Wastewater System - Sewage generated by the residences and the amenity spaces will be conveyed by a gravity sewer sub collection system to an on-site STP. The gravity sewer will be

designed in accordance with the SCDHS, SCDPW and the Ten States Standards. The STP will be constructed to treat 377,000 gallons of sewage per day. The design flow for sewage generated on the project is estimated at 307,125 gpd. The STP will be designed to handle an additional 69,875 gpd of sewage from offsite sources. The sewage treatment process will be a sequencing batch reactor. This process is commonly utilized in similar facilities throughout Suffolk County and long-term operation of this types of system has demonstrated that effluent will routinely meet the NYSDEC SPDES requirements for reduction of nitrogen and suspended solids. Approvals from the SCDHS, NYSDEC and SCDPW will be required. Specifically, review and approval of an Engineering Report and Construction Plans and Specifications by the SCDHS and SCDPW will be required, ensuring that this facility will be built to and operated in conformance to established regulations. Finally, the STP will be required to obtain a SPDES permit from the SCDHS/NYSDEC.

A groundwater mounding analysis was prepared to investigate the maximum height of a mound that will form directly below the leaching pools of the STP discharge system and to determine what, if any, local effects the mound will have on site and with regards to the surrounding area. Based on this study, no significant adverse impacts are expected as a result of groundwater mounding beneath the stormwater and wastewater systems. As a result, the project will not exacerbate any off-site drainage issues that may occur in the area of the proposed site.

Soil and Recognized Environmental Conditions - The July 2018 Phase II Environmental Site Assessment (ESA) recommended actions to address the Recognized Environmental Conditions (RECs) identified with respect to the subject site, including preparation of a Soil and Materials Management Plan (SMMP), sampling, remediating and decommissioning the existing drainage and septic systems, cleaning out and removing the aboveground storage tanks), and UICs (i.e., the storm drains and septic systems), and inspecting the buildings for asbestos-containing material (ACM). The applicant has prepared the recommended SMMP, and the RECs associated with the ASTs, ACM and UICs will be addressed as part of the onset of construction of the proposed project. As a result of the studies and remediation programs completed on the site since 2006, the analyses conducted for the 2018 Phase I and II ESAs and the recommendations contained therein, and anticipating completion of those recommended remediation efforts, no significant soil contamination issues remain unaddressed on the subject property.

Topography - Clearing and grading of the site will be necessary to provide appropriate and stable surface areas to allow development of the proposed project. Overall, it is anticipated that 109.22 acres (95.5%) of the subject property will be subject to grading operations. However, the majority of the site is comprised of relatively flat topography which does not require extensive overall grading; therefore, no significant adverse impacts are expected. It is anticipated that approximately 268,883 cubic yards (CY) of soil will be “cut”, of which 222,043 CY will be retained on-site for use as “fill”; the remaining 46,840 CY will be removed from the site). Given the nature of the site’s topography, the re-use of cut material as fill, implementation of erosion control measures during construction, and the Town’s review and approval process, no significant adverse long-term impacts are expected with respect to

topography. Subsequent to change of zone approval, full grading and drainage plans will be prepared for the site plan application. These plans will be subject to further review by the Town Engineer and Planning staff prior to approval and construction.

The project will conform to the applicable steep slope protection regulations of Section VI. O/Preservation of Natural Environment of the Town Subdivision and Land Development Regulations.

Water Resources

Surface Water - As there are no natural surface water bodies or wetlands on or tributary to or from the site, no such surface waters can or will be impacted by the proposed project.

Drainage/Flooding - Development of the site will result in a greater quantity of impervious surfaces than under existing conditions; however, the proposed project will also result in effective containment of drainage on the site based on stormwater storage for a design storm event. As a result, the quantity of runoff generated on-site will be increased as a result of the proposed project but will be directed to the on-site drainage containment system. Specifically, installation of an on-site drainage system to current design standards will ensure retention of drainage on the site based on an applicable design storm capacity and subject to review and approval of the Town Engineer during site plan review. As a result, potential impacts related to stormwater recharge that could leave the site and potentially impact neighboring properties at lower elevations will be managed through the installation of the drainage system. The project sponsor will be requesting a Planning Board relaxation from the Land Development Regulations requirement for an 8 inch storm event.

The system will be designed to comply with SPDES requirements under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (the "General Permit", GP-0-20-001). Based on existing developments in the area, local geologic conditions, and adequate depth to groundwater, subsoils are expected to be of suitable quality to allow efficient recharge of stormwater, subject to further evaluation during subsequent project review.

Potential stormwater impacts include erosion, sedimentation, direct overflow to surface water, and impaired quality of recharge water. Erosion and sedimentation will be controlled through design and the SWPPP, such that surface transport of sediment will not occur. There are no nearby water bodies, and the site will not generate direct runoff off-site as a result of the proposed stormwater containment and recharge system. Water quality impacts are not expected based on employment of best management practices for control of stormwater through containment and leaching systems that attenuate pollutants. As a result, no significant adverse impacts from stormwater have been identified.

Nationwide Urban Runoff Program (NURP) Study (1982) - It is noted that approximately 92.2% of the site consists of vegetation and bare soils. Under the proposed project, impervious

surfaces will be increased resulting in an increase in stormwater runoff which will require retention. In conformance with Town of Islip requirements, all stormwater runoff generated by impervious surfaces will be retained on-site, and will be recharged to groundwater. The drainage system will be designed to accommodate at least 5 inches of storage. The Applicant will be requesting a Planning Board relaxation from the Town's Land Development and Subdivision ordinance design criteria requiring storage capacity for an 8-inch storm event. The Town will be responsible for the review and approval of the drainage design, to be conducted during site plan review.

The drainage system will be designed to comply with SPDES requirements under NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity and Chapter 47 of the Town Code.

Based upon information presented in the NURP Study, the increased recharge volume (discussed in detail below) is not anticipated to contain significant concentrations of pollutants. In conformance with Town requirements, all stormwater runoff generated by impervious surfaces will be retained on-site and would infiltrate through surface detention systems and subsequently be recharged to groundwater. The NURP Study found that any organic chemicals that may be present in stormwater generally volatilize on surfaces, and inorganic chemicals and bacteriological indicators are removed as recharge infiltrates through soil.

Based on project design through use of the stormwater system noted above, the proposed development of the site is not expected to have a significant impact to groundwater resources underlying the property and surrounding area as related to the recharge of stormwater runoff.

Hydrologic Conditions - It is expected that the substantial increase in the acreage of impervious surfaces on the site will result in a substantial increase in the volume of stormwater runoff generated on-site, with an associated increase in the volume of water recharged to groundwater on-site. This will benefit groundwater resources, by increasing the amount of groundwater available for eventual use as potable water.

A Groundwater Mounding Analysis was prepared by PWGC for the proposed project, to *"…investigate the maximum height of a mound that will form below the leaching pools [for the STP] and to determine what, if any, local effects the mound will have on site and with regards to the surrounding area."* The analysis calculated the horizontal distance that the mound of effluent recharged from the site could extend. The analysis states as follows in this respect:

> Solving the equation… produces a result of 5,369 feet. This means that at this distance from the center of the leaching area after a significantly long period of time and at a constant recharge rate of 4.28 feet/day there will be no detectable increase in the water table. Again, this a very conservative analysis. The peak mounding conditions will occur directly under the center of the proposed leaching field on site at the Greybarn-Sayville development. The mound created will theoretically have a parabolic type of shape to it

where it starts to drop off rapidly right after the extents of the leaching field and start to take on an asymptotic trajectory where it gradually returns to the natural water table at 5,369 feet from the center of the field.

There are no public water supply wellfields within 1,000 feet of the subject site in the downgradient direction (south), and this area is fully served by public water supplied by the SCWA (suggesting that there are no private potable water wells in this area). In consideration of these two conditions, it may be concluded that recharge generated on the project site will not impact the quality of groundwater that would be used for public or private use.

Groundwater Quality - The subject site is not located in any established Suffolk County, Town of Islip, or private Sewer District. While there exists a private STP east of Lakeland Avenue serving Sayville Commons, sewer district adjacent to the east, it does not have the capacity to meet the wastewater treatment needs of the proposed project. Thus, the proposed project is not able to utilize an existing public sewer system to convey its sanitary wastewater to an off-site STP for treatment and disposal.

The proposed STP has been designed with a capacity in excess of the volume of wastewater expected from the proposed project (307,125 gpd), as well as additional capacity to handle the 69,875 gpd from the downtown hamlet businesses. Thus, the STP will have a capacity of 377,000 gpd.

As one of the Community Benefits, the proposed project includes extension of a sanitary sewer line from the on-site STP to the downtown Sayville hamlet center south of the site, so that this area can be served by the project's tertiary STP. This benefit will have the effect of providing treatment for the downtown area for water quality benefits, and will assist in encouraging growth in the downtown area by making wastewater treatment available. The benefit of the conveyance pipe and treatment capacity will come with no public cost; however, the individual connections to the new system would be borne by each landowner.

Nitrogen Budget - The SONIR computer model results for the proposed project indicate that a total of 237.85 MG/yr of water will be recharged on the site. The concentration of nitrates (as nitrogen) in this recharge is determined to be 5.02 mg/l for the proposed project as compared to 5.45 mg/l for pre-existing conditions when the golf course was in operation and 0.72 mg/l for the current fallow golf course conditions. The nitrogen load associated with the proposed project is 9,951.00 lbs/year. The concentration and load include the additional treatment capacity for the downtown Sayville area as will be described below. This represents an increase over the pre-existing condition when the golf course was in operation which was 4,052.39 lbs/year and 499.84 lbs/year for the current fallow golf course.

In order to offset and mitigate the increase in nitrogen load associated with the proposed project, the proposed project includes installation of a sewer main and expanded STP capacity to treat 69,875 gpd of wastewater from downtown Sayville (which is accounted for above). For

comparison purposes, discharge of this wastewater would have an untreated concentration of 50 mg/l[1], as compared with a treated concentration of 8 mg/l. This results in a substantial reduction of nitrogen within the same watershed. Downtown Sayville is located nearer to Great South Bay and Green's Creek. The removal of this effluent from downtown Sayville, with conveyance to the STP on the subject site, and treatment to 8 mg/l with on-site discharge at that concentration represents a substantial water quality benefit. Groundwater as well as downgradient surface water impacts will be reduced as a result of the treatment of this effluent.

This analysis indicates that the proposed project will have a substantial beneficial impact with respect to nitrogen in water quality, particularly when compared pre-existing golf use conditions. No significant adverse nitrogen impacts are expected based on the proposed mitigation.

Other Potential Sources of Impact - The project Applicant is responsible for the operation of other project sites on Long Island. The partially completed Greybarn project in Amityville is an example of one of these properties. R Squared contracts with a landscape service contractor to have all landscape and turf maintenance done by a professional company that adheres to rigid industry standards.[2] Fertilization is properly applied after adjusting the pH of soil to maximize plant uptake of nutrients. Well maintained turf results in maximum uptake of nitrogen. Fertilizer is costly to apply and as a result is used judiciously to only apply what is necessary to maintain healthy turf. This reduces the application of fertilizer, and also reduces the amount that is leached through the root zone to groundwater. Nitrogen in fertilizer is applied at 0.25 lbs/1000 SF, four times per year, for a total of 1.0 lbs/1000 SF. This coupled with the reduced area of fertilized landscape results in a low concentration of nitrogen attributable to landscaping. Typically residential nitrogen application is in the range of 2.04 lbs/year. When compared with a subdivision of homeowners, with each homeowner applying fertilizer to achieve a green lawn, the fertilization under the proposed Greybarn at Sayville project will be less.

It is noted that no storage or mixing of chemicals will occur on-site, as the landscape contractor stores and mixes any application materials and brings them to the site. The practices noted above are typical of all lawn/landscape maintenance conducted by landscape contractors. These practices are intended to maximize effectiveness and minimize use of product and will be completed by trained personnel, NYSDEC licensed pesticide applicators, and in conformance with label instructions. All landscaping requires maintenance and such maintenance practices are typical for all types of development. As discussed herein, the use of a landscape maintenance contractor is expected to reduce use of chemicals as compared with use of the

[1] SCDHS General Guidance Memo #28 includes guidelines for siting proposed or expanded STPs; this memo indicates: "A total nitrogen concentration of 50 mg/l may be used when calculating the equivalent mass loadings."

[2] Greybarn uses Wade Associates, Inc. for landscape maintenance. Conversations with the principal, Gus Wade on November 12, 2018 provided information to further the understanding and assessment of landscape maintenance.

site under single family residential zoning. There is also a reduction in application of fertilizers and pest controls as compared to the prior golf course use, which would have involved more intensive turf maintenance practices to support golf use and play. Given the information presented herein, no significant adverse impact is expected with respect to other potential source of impact involving chemical storage and use.

208 Study - The Site is located in Groundwater Management Zone VI. It is recommended in the 208 Study that development in this zone utilize public sewers if available, or provide for wastewater collection/treatment with nitrogen removal. Therefore, the proposed development will direct all sanitary wastewater to an on-site sewage treatment facility. As a result, the proposed project will be designed to implement those recommendations of the 208 Study that involve groundwater protection and best management practice for protection of water supply and management of wastewater, and therefore no adverse impacts are anticipated.

Suffolk County Comprehensive Water Resource Management Plan SCCWRMP; (2015) - A detailed analysis indicates that the proposed project conforms to all of the applicable Groundwater Resource Management, Drinking Water Supply, and Wastewater Management Goals of the SCCWRMP.

Green's Creek and Brown's River Watershed Management Plan (January 2007) - While the subject site is within the Green's Creek Watershed, it is not within the surface drainage area of Green's Creek. This means that stormwater runoff generated on the site does not flow from the site to reach this surface water body, either by surface flow or through public storm sewer system outfall. As required by Town Code, the proposed project will include a drainage system that will retain and recharge all stormwater on the site, so that the proposed project will not contribute to the water quality impacts currently experienced by Green's Creek.

<u>Ecology</u>

Vegetation - The impacts to the ecological resources of a site are generally a direct result of clearing of natural vegetation, increased human activity and associated wildlife stressors, and the resulting loss and fragmentation of wildlife habitat. While most of the development area is mowed grass (90.04 acres) there remains portions of natural habitats (14.94 acres) on the site. Most of this natural vegetation is composed of Pitch Pine – Oak Forest habitat covering an area of 8.44 acres. There are portions of this habitat along the southwest and southeast edge of the property that have remained untouched since prior to 1948.

Natural areas of the site are fragmented and mostly near the perimeter of the site. Consequently, these areas are subject to off-site impacts such as automobile traffic, domestic pets and activities occurring in the yards of adjoining residential properties. In addition, these areas are bordered by the golf course which operated from approximately 1938 to 2015. The golf course was subject to mowing and turf care practices including fertilization and pest control, as well as the stresses of golf play. Natural areas on the site are not considered pristine and are compromised due to these existing influences.

The project will ultimately provide 58.55 acres of landscaped (primarily consisting of native revegetated and limited fertilized lawn) area within the project site. Of the landscaped acreage, 36.51 acres will be low-mow meadow and 10.02 acres will be native landscapes; the remaining 12.02 acres will be fertilized and irrigated. As a result, 46.53 acres of native restored habitat will combine with 5.12 acre of remaining natural vegetation to ensure that 51.65 acres (or 45.2%) of the site will continue to provide natural habitat for wildlife. The project will result in some removal of portions of existing woodland vegetation on the property; however, this will be offset by restored natural areas in combination with retained wooded areas. It is noted that the majority of the proposed development will occur in areas which were previously cleared for landscaping or now consist of Successional Southern Hardwood forest, which is of less ecological value as it is currently impacted by the predominance of invasive species found within this habitat.

Wildlife - The majority of the site is or was maintained turf for a golf course. This area comprises 90.05 acres or 78.76% of the site. The golf course ceased operations in 2015, but the site is still being mowed. The majority of existing natural habitat within the development area is dominated by Pitch Pine – Oak Forest. The property is not expected to act as a refuge for rare native flora or fauna, but does contain a small population of local birds and mammals and limited herptiles. The existing habitat as well as proposed site conditions will favor those wildlife species that prefer edge and suburban habitats and those that are tolerant of human activity. Most of the species present on the property are tolerant of human activity and will continue to utilize the site.

The phased development and establishment of significant native restoration areas will allow existing mobile species to relocate within the site. Some loss of less-mobile species is expected; however, wildlife inhabiting the site is common to the area. A total of 5.12 acres of natural vegetation is proposed to remain within the project site, which when combined with restored native habitats will provide 51.65 acres (or 45.2%) of the site in natural habitat for wildlife. Although the proposed project will provide less natural area, the development areas are expected to provide substantial restored habitat that will support wildlife species on the site.

In the short term, through phasing, other undeveloped areas of the site will experience increases in wildlife populations. It is possible that lands adjacent to the property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat on-site and within the area where larger areas of natural open space currently remain. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands would be expected to result in a net decrease in population size for most species. The removal of 9.82 acres of existing natural habitat will be offset by restoration of native habitats on the site. Similar to current conditions, it is anticipated that species that prefer edge habitat will be prevalent within the proposed development.

The golf course use was subject to turf maintenance through fertilization and application of pesticides/herbicides for pest control. The proposed project will practice turf maintenance that will reduce potential impacts by: reducing the acreage of maintained turf from 90.05 acres to 12.02 acres; reducing application rates of fertilizers to approximately 1/3 that of the golf course use (limited fertilizer will be used after proper pH adjustment to establish healthy turf); and minimizing applications of pest control chemicals. When compared to the usage of a residential subdivision, where each homeowner performs lawn maintenance (and may or may not apply fertilizer and if so, may apply fertilizers at an excessive rate), the proposed project's use of a licensed landscaping contractor would ensure that only approved fertilizers are applied, and at the proper rates to result in less use of fertilizer. Additionally, the acreage of fertilized landscaping would be greater for a golf course than for a residential subdivision, and both of these uses would have greater fertilized acreages than the proposed project.

Given the information presented herein, no significant adverse impact is expected with respect to wildlife, as the proposed project reduces the use of chemicals as compared with the prior golf course as well as use of the site for a single-family subdivision in conformance with zoning.

Rare and Endangered Species Potential - The NY Natural Heritage Program identified sixteen (16) records of known occurrences of rare or state-listed plants, significant natural communities or other significant habitats on or in the vicinity of the subject site, plus the documented occurrence of endangered sandplain gerardia on a nearby property. These natural communities do not occur on the subject site, and the rare species mentioned above, were not seen during its three site inspections. The Stiff Tick Trefoil, Sandplain Agalinis and Few-Flowered Nut Sedge were listed as endangered and present within 0.4 miles southwest of the project site however there was no indication of their presence during site visits conducted by NPV. In April of 2021, NPV ecological staff conducted a follow-up inspection of the subject site to look for the 16 rare species and sandplain gerardia identified on property to the southwest and to look for habitat they may support these species. During that inspection, none of the species or rare ecological communities were observed and the limited remaining habitat on-site was so fragmented or degraded due to prior clearing of the understory and maintenance of the site, that the species are not expected to be present. As such, no impacts to rare, threatened or endangered plant species or significant natural communities are anticipated from the proposed project.

Comprehensive Conservation Plan, (CCP) Long Island National Wildlife Refuge Complex (2006) - It is noteworthy that the CCP is a plan for the management of the National Wildlife Refuges on Long Island. Consequently, none of the six Goals of the CCP, nor any of the 24 Objectives of the CCP apply to property outside of the refuges evaluated, including the project site. Similarly, the CCP made no recommendations for use or management of any non-refuge properties. As such, the CCP has no jurisdiction over the project site, and so the achievement of its Goals and Objectives will have no impact on the proposed project.

Although the project site closely approaches the boundaries of the SNWR, developed residential properties separate the project site from both the Sayville Unit and the FAA Property, which minimize the potential for the proposed project site to interact with or otherwise impact the SNWR. Other than from project site wildlife displaced during construction migrating through residential lots to the SNWR, the residential nature of the project is such that there would be minimal potential for it to impact the SNWR. It is expected that post-construction conditions would preclude interactions between the site and SNWR either by wildlife on the project site travelling between the site and the SNWR, or by wildlife passing through the project site to access the SNWR. Such a conclusion is realized in consideration of the following:

- the presence of developed residential lots on land between the project site and the SNWR would discourage wildlife from traversing such land to reach the SNWR;
- the lack of suitable vegetation and habitat, and the developed nature and general level of activity on the project site would not be attractive to larger fauna (e.g., opossum, raccoon, deer) to occupy the site, reducing the potential for such species to migrate to the SNWR;
- the lack of suitable vegetation and habitat, and the developed nature and general level of activity on the project site would tend to discourage larger fauna from attempting to pass through the subject site from areas to the north and east to reach the SNWR.

In addition, it is significant that maintained lawn area will be reduced from 90.05 acres to 12.02 acres and maintenance practices associated with turfed areas will also be reduced. The establishment of additional restored native habitat on the subject site, 51.65 acres (or 45.2%) of the site, will provide a substantial wildlife benefit that will complement the existing refuge properties in the vicinity of the site. As a result, the project will support the SNWR to a greater extent than the pre-existing golf course use and/or a single-family subdivision that conforms to zoning, though a clustered-lot subdivision could produce a greater acreage of restored native habitat than the proposed project (due to its lower yield and, hence, reduced developed surfaces, and the ability of a clustered-lot layout to concentrate the lots into a limited portion of the overall site, to maximize contiguous open spaces).

<u>Air Quality</u>

The following summaries of the potential impacts of the project on air quality during construction and subsequent occupancy of the project are taken from the Air Quality Analysis.

Mobile Screening - The first level of "air quality screening" as provided in New York State Department of Transportation's (NYSDOT's) The Environmental Manual (TEM) is essentially a traffic analysis consistent with the Highway Capacity Manual (HCM). The TEM provides guidance on determination for a required microscale analysis which is based on the consideration of several standards. Per TEM I-1 Level of Service (LOS) Screening, intersections potentially impacted by the project must be screened for overall LOS. If the LOS is A, B, or C, no further analyses are required. If any signalized intersections have LOS predicted D, E, or F, significant vehicle queuing may occur and

further analysis may be required for up to the three worst intersections.

As a result of the traffic impact study [TIS] findings, no significant change in the Level of Service will result from the project. Further, per the TIS, delay times will not increase and may go down slightly. Thus, further mobile analysis should not be required for the project as it would not result in a significant air quality impact.

Construction Screening - The short-term use of heavy equipment operations will result in a temporary, minor increase in pollutant emissions from various equipment used in the construction process for a short-term. However, the major concern during the construction operation will be the control of fugitive dust during site clearing, excavation, demolition and grading operations [addressed below].

In addition, trucks, compressors, cranes, excavators and other equipment will be maintained and in good working condition and turned off when not in use. This will reduce the idling of unused equipment in adherence of state regulations. Reduced idling will reduce potential air pollution.

Given the air quality analyses provided herein, no significant adverse air quality impacts are expected as a result of the operation of the proposed project.

<u>Vehicle Traffic, Transportation and Roadways</u>

The following summaries of the potential impacts of the project on vehicle traffic, transportation and roadways are taken from the TIS.

Trip Generation – To identify the impacts each development phase will have on the Study Area roadways and Study Intersections, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the generated traffic when traveling to and from the Study Area.

Traffic analyses were conducted for six (6) project development phases. These analyses are cumulative from phase to phase. Phase 1 analyzes the traffic impact of the construction of Lot 1, Phase 2 analyzes the traffic impacts of Lot 1 and Lot 2, etc.

As can be seen from the [analysis], Phase 1 is anticipated to generate 50, 61 and 61 trips during the AM, PM and Saturday peak hours, respectively, Phase 2 will generate 130, 159 and 159 trips during the AM, PM and Saturday peak hours, respectively, Phase 3 will generate 244, 299 and 299 trips during the AM, PM and Saturday peak hours, respectively, Phase 4 will generate 348, 426 and 426 trips during the AM, PM and Saturday peak hours, respectively, Phase 5 will generate 425, 520 and 520 trips during the AM, PM and Saturday peak hours, respectively and Phase 6 will generate 492, 601 and 601 trips during the AM, PM and Saturday peak hours, respectively.

Accidents – The increase in accident occurrence was estimated by factoring the existing number of accidents by the increase in traffic anticipated by the proposed project. A worst-case scenario between the AM and PM peaks was utilized.

Upon review of the [analysis], it can be seen that the additional traffic volume on the study roadway will contribute minimally to the existing accident rates and only one location may see an average increase of 1 accident per year.[3]

Intersection Capacity Analyses – To identify the impacts created by each phase of the proposed project, capacity analyses were conducted at the study intersections for the No Build and Build Conditions during the weekday AM, PM and Saturday midday peak hours for the school peak season and during the weekday AM, PM, Friday PM and Saturday midday during summer season. The results of the capacity analyses for the No Build and Build

[3] A further review of crashes that occurred at the intersections with more than 3 crashes per year and higher than statewide accident rate in the vicinity of the site was conducted. From the Table above, three locations were identified (Sunrise Highway North Service Road at Lakeland Avenue, Lakeland Avenue between North Service Road and South Service Road and Sunrise Highway South Service Road at Lakeland Avenue) with a total of 48 accidents over the 3-year period. Of the 48 crashes, 25 (52%) are rear-end collisions, 7 (15%) involves overtaking and 6 (12%) are unknown type accidents. 30 (63%) of the 48 accidents resulted in property damage. Only 18 (37%) of the 48 accidents resulted in an injury. The accident reports of these 48 accidents were reviewed to identify the possible causes of these accidents and identify potential countermeasures to reduce the accidents at these locations. From the review of the reports, 41 (85%) of the 48 crashes are attributed to driver inattention, 3 (6%) are weather related, 1 (2%) involves a defective car, 1 (2%) is attributed to debris/obstruction and 2 (4%) are related to unknown type crashes. It should be noted that accidents associated with driver inattention are not correctable by geometric or any improvements to traffic flow. The increase use of cell phones and other electronic devises when driving may have increased the number of distracted drivers and hence the potential increase of such accidents associated with distraction and driver error. As previously noted, the amount of traffic added to Lakeland Avenue by the proposed project should not increase this type of crashes. However, as will be seen later in this report, the following physical or geometric improvements have been proposed and will be constructed by the applicant to mitigate the traffic and safety impacts.

- Widen Lakeland Avenue between Chester Road and 11th Street to provide an additional northbound through lane. The widening will begin around Eastover Road and extends to meet the existing 2 lane section of Lakeland Avenue just north of 11th Street. The segment of Lakeland Avenue between Eastover Road and Chester Road will be striped to provide one shared northbound left turn/through lane into Chester Street and one through lane.
- The southbound approach of this intersection of Lakeland Avenue at NYS Route 27 North Service Road which currently provides an exclusive through lane, a shared through/right turn lane and an exclusive right turn lane will be redesigned to provide two exclusives through lanes and two exclusive right turn lanes. Minor signal timing adjustments will also be conducted for the northbound left turn phase.

According to the 2018 New York State Department of Transportation Post Implementation Evaluation System (PIES) Reduction Factor Report, the addition of lanes may reduce injury accidents by 36%. Therefore, the physical or geometric improvements proposed on Lakeland Avenue as part of this project will improve safety on this corridor.

Conditions were compared to determine the impact that will be created at the study intersections for each phase. The changes in levels of service from the No Build to the Build conditions were then compared to determine where there was an increase in LOS that is considered a significant impact according to the Town's Subdivision and Land Development Regulations, the criteria for determining impacts. Mitigations were then applied to specific intersections to improve the identified significant impacts. The capacity analyses were conducted at the Study intersections for mitigated conditions.

The TIS concludes as follows:

Based on the results of the TIS, as detailed in the body of this report, it is the professional opinion of Nelson & Pope that the construction of Phases 1, 2 and 3 of the proposed project will not significantly impact the operation of the roadways and intersections adjacent to the site. The impacts created by Phases 4, 5 and 6 can be mitigated by the implementation of the proposed improvements measures. With these improvement measures, the Lakeland Avenue corridor and the intersections in the study area will continue to operate at No Build or better levels of service after the full build out of the project.

However, the arterial analyses results conducted document numerous instances of low arterial speeds and congested conditions on Lakeland Avenue, which is keeping with conditions observed in the field. Mitigation proposed on Lakeland Avenue between Eastover Road and the NY27 North Service Road would serve to provide additional capacity sufficient to offset the project's impacts at those specific locations, and thus would improve or maintain No Build conditions representative of the overall performance of the Lakeland Avenue corridor. South of Eastover Road, however, vehicles will continue to have difficulty accessing Lakeland Avenue at unsignalized intersections. Field observations indicate periods of uninterrupted traffic flow along this segment of Lakeland Avenue that forces side street vehicles to utilize shorter gaps in traffic than might be preferred, which results in the need for vehicles on the arterial to brake. These conditions, which are not necessarily apparent based strictly on software results, can nevertheless be expected to be exacerbated by the additional traffic estimated by the proposed project.

Congestion on Brook Street and Montauk Highway - Traffic from the proposed project that will be using Montauk Highway has already been accounted for in the trip distribution and generation and hence included in the traffic analyses. However, to further identify any potential impact of any increase in use of Brook Street and Montauk Highway by the traffic from the proposed project to avoid congestion at the interchange, we assumed a conservative 10% of the project traffic anticipated to use NYS Route 27 (Sunrise Highway) during the PM peak hours will use Montauk Highway as a bypass. Based on our trip generation and distribution for the full build out of the project, a total of 73 vehicles will be leaving the site to head west on NYS Route 27 (Sunrise Highway) and a total 113 vehicles will be heading to the site travelling east on NYS Route 27 (Sunrise Highway). These numbers will result in 8 vehicles using Montauk Highway as a bypass travelling west and 12

vehicles using Montauk Highway as a bypass travelling east. These numbers amount to, at most, 1 vehicle every 5 minutes. This increase will not exacerbate the existing traffic congestion on these roadways; hence the proposed project will not create any significant impacts on the operation of these roadways.

Traffic Conditions at the Nearby Long Island Rail Road (LIRR) Grade Crossings - In order to model the at grade crossing on Railroad Avenue, the intersection of the railroad crossing and Railroad Avenue was analyzed as a two-phase pre-timed traffic signal with a cycle length equivalent to average time between trains during the peak hours. The train phase is the eastbound/westbound phase with a cycle length equal the average time the gates are in a down position during the peak hours. The northbound/southbound phase has a green phase equal to the average time the gates were in an upward position during the peak hours. The northbound/southbound traffic volumes equal the Railroad Avenue traffic going through the tracks during the peak hours. The eastbound/westbound railroad traffic equal the number of eastbound and westbound trains during the peak hours. The SimTraffic simulation included the railroad crossing. The videos are available for viewing by the town if required.

The SimTraffic analyses of the railroad crossing simulation was compared with the observed queues at the railroad crossing during the weekday AM and PM peak hours.

The queues observed on Railroad Avenue in the vicinity of the railroad crossing during AM and PM peak hours are similar to those in the Sim Traffic Simulation, hence the modelling results reasonably reflect prevailing conditions. Considering the current traffic flow conditions on Railroad Avenue in the vicinity of the railroad track, the additional traffic from the proposed residential development will not exacerbate the current traffic flow conditions.

The Oakdale Merge - The proposed project is projected to generate 39 eastbound and 112 westbound trips during the AM peak that will traverse the Oakdale Merge section of Sunrise Highway. During the AM peak hour approximately 4,500 vehicles travel in the eastbound direction and 6,600 vehicles in the westbound direction. Therefore, during this period the proposed project will generate slightly less than 2 additional vehicles per minute to the westbound traffic and less than one vehicle per minute in the eastbound direction. During the PM peak hour, the proposed project is expected to generate 113 eastbound and 73 westbound trips that will traverse the Oakdale Merge. Therefore, during this period the proposed project will generate slightly less than 2 additional vehicles per minute to the eastbound traffic and slightly more than one vehicle per minute in the westbound direction. This additional traffic volume is extremely minimal, especially when considering existing

traffic volumes on the roadway and will have an imperceptible effect on existing conditions.[4]

Parking at Sayville LIRR Station and Downtown Sayville - Based on the current availability of parking within the Sayville Downtown Area and the LIRR parking lots, there will be an adequate number of parking spaces to support the additional demand from the potential residents of the Island Hills development. To further reduce or eliminate the need for parking at the trains station by potential residents, the applicant is proposing to provide private shuttle services (private transit) to transport residents to and from the train station during the AM and PM commuter peak hours. The applicant will be working on the details of this service as the project progresses.

Parking observations were also made at the Ronkonkoma Station during the peak (9am - 10am), when all commuters would have parked their vehicles for two typical weekdays. On both days more than 260 parking spaces were available. Therefore, there is adequate parking (paid and unpaid) available at the Ronkonkoma Station to accommodate the estimated 56 residents that could potentially use the Ronkonkoma Station.

The availability of parking in the Sayville downtown area during weekends will be significantly higher than what was observed during weekdays since the LIRR parking lots will be highly under-utilized on weekends. Hence, there will be adequate parking to support any weekend shoppers from the Island Hills development.

School-Related Transportation Issues - In response to comments from the Town on the proposed development's impact on school related traffic field observations were conducted at the following schools on May 30th and June 3rd, 2019 during the AM drop-off periods and the PM pick-up periods.

- Edward J. Bosti Elementary School
- Oakdale-Bohemia Middle School
- Connetquot High School

To determine the level of impact the proposed development will have, if any, on school related transportation of these parking areas by potential residents, an estimate of the number of potential number of school children that will reside at the development was determined. The proposed residential development contains a total of 1365 residential units. Based on the fiscal and economic analyses conducted for this project, a total of 210 school aged children will reside in this residential development. The as-of- right

[4] Based on the timeline for the improvement projects being considered at the Oakdale Merge by NYSDOT, it can be expected that congested conditions will continue to prevail at that location. The traffic generated by the proposed project will have a proportionally greater impact on conditions than would as of right development.

development of 98 single family homes will generate a total of 144 school aged children, 66 less than the proposed development. The 210 students will be distributed between the elementary, middle and high school. Based on the number of grades from K through 12, of the 210 school aged children, we estimated 97 elementary school children, 48 middle school children and 65 high school students. Based on this estimate, the elementary school children will generate between 2 and 3 school buses, the middle school children will generate between 1 and 2 buses and the high school students will generate between 1 and 2 buses.

Based on our field observations as noted above, the addition of few more school buses will not significantly impact traffic flow and congestion on the surrounding roadways and should not require any changes to the current bus routes. Data obtained from the Pre-K Through 12th Grade Nassau/Suffolk County School Enrollment for 2014 through 2019 show that the student enrollment at the Connetquot Central School District consistently declined over the five (5) school year periods. The Connetquot Central School District lost a total of 502 students over the 5-year period. Based on this trend and the current bus utilization, the additional students could be accommodated in the current bus fleet and hence may not require any changes to the current fleet. Additionally, any increases in the number of vehicles dropping off and picking up students, driving to and parking at the school facilities was included in the trip generation and distribution of traffic for the proposed project and hence will be reflected in the capacity analyses results of the study intersections. Any traffic flows and congestion issues at the school facilities are existing and only occur for a short period of time during the morning drop-off periods and the afternoon pick-up periods. The project traffic traveling to and from these school facilities should not significantly impact the current operation of the school facilities.

However, to improve the current traffic condition during the short period of time they occur, the following can be considered:

- Have more than one arrival and departure time per school (stagger the arrival and departure times by 30 minutes). This can be done by grades. For example, have Grade 3 thru 5 students arrive half an hour before Pre-K thru 2. This will help distribute traffic and relieve traffic congestion.
- Install signs along the drop off /pick up areas to encourage parents not to double park during drop off and pickups. This will improve traffic circulation and hence reduce traffic congestion

<u>Land Use, Zoning and Plans</u>

Land Use – The Island Hills golf course closed in 2015 and the site has been vacant and unused since that time. The proposed project will change the land use type of the site, from Vacant to Residential. Generally, residential use is the dominant land use in the area at present (though there are a variety of land uses represented in the area), and the specific type of residential use represented by the project, multi-family residential, is located near the site, though there is no

individual site of a size comparable to the subject site The proposed project features a 25± acre park surrounding the development, thereby clustering the proposed multiple family residential use within the property. This feature provides a perimeter setback that will be accessible to the public and therefore will add to the park-like setting and available park space in the area.

The project will increase the amount and intensity of development on the site as compared to existing use and use if the site were developed under current zoning and as per the recommendations of the Sayville Hamlet Study and the Sunrise Highway Corridor Study; it would further decrease the amount of open space but would provide an additional 25 acres of public recreational space. This density requires a change of zone from the Town Board. Through the zone change, the applicant seeks to establish a use on the site that will enhance the character of the community through superior site design, architecture and landscape setting, and provide needed apartment style living options to serve a need in the community and the region. Given the diversity of land use types in the area which includes single-family residential, high-density (multifamily) residential, commercial, industrial, institutional, religious, and active/passive open space uses, the proposed project will complement land uses in the area.

In summary, the project would be appropriate at this location with respect to the land use pattern, given its proximity to similar and complementary land uses in all four directions and the absence of a distinct, overarching pattern of land uses in the larger vicinity.

Zoning - Zoning Pattern in Area – The proposed project will change the zoning classification of the site, from Residence AAA to PDD-GS. The Residence AAA district is a low-density residential zone, whereas the proposed PDD is a high-density residential development, thereby introducing a substantial site zoned for high-density residential use in an area where sites of a similar size zoned in this way are not already present, or where other zones for high-density residential use are already present. Thus, the proposed project would represent a significant change with respect to the pattern of local zoning. However, there are no other large sites in the area that are available for re-development, so that there is no other likely sites on which a comparable PDD could be located, which reduces the potential impact that the precedent set by the proposed project could lead to additional such high-density development. Also, because the subject site is so large, it has the capability of providing deep perimeter setbacks for the buildings, to reduce the sense of high-density development for outside observers.

A PDD zoning provides the flexibility in site design that is necessary to achieve land use goals and provide benefits to the community in conjunction with a proposed land use. It is acknowledged that a PDD district is not presently found in the area, so that the project's use of this district represents an impact to the local zoning pattern. However, the PDD enables development of a project which includes benefits to the community, and conforms to Town engineering/design requirements and standards.

The authority of a Town to establish planned unit development zoning districts is set forth in NYS Town Law Section 261-c, and Section 261-b addresses incentive zoning.

Zoning - NYS Town Law Section 261-b. 2 – Analyses demonstrates that the proposed project satisfies Town Law Section 261-b for the proposed PDD; it will mitigate the anticipated impacts of the vehicle trips generated on-site, not endanger public safety and/or security, promote public health, provide a healthy environment for its residents and visitors, prevent overcrowding of the site or an undue concentration of population, promote alternative energy production, and provide for all necessary public services.

NYS Town Law Section 261-c - Planned unit development zoning districts. A town legislative body is hereby authorized to enact, as part of its zoning local law or ordinance, procedures and requirements for the establishment and mapping of planned unit development zoning districts. Planned unit development district regulations are intended to provide for residential, commercial, industrial or other land uses, or a mix thereof, in which economies of scale, creative architectural or planning concepts and open space preservation may be achieved by a developer in furtherance of the town comprehensive plan and zoning local law or ordinance.

- The proposed project is intended to and will provide needed, quality rental residential units (including 217 units designated to affordable) to the public, on a large, previously-developed property located within an established residential community and adjacent to significant regional roadways.
- The site is sufficiently large to provide substantial perimeter setbacks, which will reduce the potential for apparent "massing" of the buildings for observers on neighboring sites. Additionally, the taller proposed structures will be set at the largest setbacks form the site's border, further reducing potential visual impacts.
- The buildings will all be designed under a single architectural treatment, and, when considering the proposed overall landscaping plan, will provide an attractive appearance.
- The project will provide its own on-site wastewater treatment system and will extend a sewer line south to serve the Sayville downtown business area.
- The project includes a 25-acre park that will be open to the public.

Zoning - Proposed PDD Regulations –The proposed project will create a new zoning district in the Town Zoning Code that would apply only to the subject site. To mitigate possible inconsistencies with the proposed PDD and existing NYS Town Law Sections 261-b, 261-c, 262, and 263, the PDD should be adopted as a Local Law pursuant to the Statute of Local Governments Section 10(b) and Municipal Home Rule Law Section 10. The project will be developed in conformance with the specific use, setback and bulk standards of this new district, which are based on the standards of the Residence CA district.

The proposed site-specific PDD is structured with the Residence CA district as its base; however the PDD-GS is being requested as opposed to the Residence CA district because some variation from bulk requirements and uses are required for the proposed project. Specifically, height, floor area ratio (FAR) and permitted and accessory uses vary from those required or permitted in the Residence CA district. The type and level of amenities offered by the proposed project, as well as a higher quality level of common areas (e.g. lobbies, hallways, etc.), creates greater floor area than traditionally provided in conventional garden apartment developments and is greater than what is permitted in the Residence CA district.

It is noteworthy that the Residence CA district (and development having the physical characteristics and density of that district) is already found in the area to the north (Sunrise gardens), east (Sayville Commons) and the west (Village Court;), so that while there would be a change in the pattern of zoning districts in the area, the physical manifestation of this new zoning district would be of land uses that are already well-represented in the area. That is, the new PDD would provide for the same types of land uses that are already found on adjacent and nearby properties. In this way, the potential impact of this change in the pattern of zoning is ensured to be compatible and appropriate for the site and area.

Zoning - Town Zoning Code Section 68-166 – The guidelines for development and use of the site are modeled after an existing zoning district in the Town Zoning Code in order to provide a baseline for orderly development through the site specific PDD. The project will be developed based on the yield, bulk and setback requirements of the Town's Residence CA district.

The proposed project will conform to the applicable terms of the Town's Subdivision and Land Development Regulations, as administered by the Town Engineering Division during the site plan application review process.

With respect to the requested density bonus for the proposed PDD, the following aspects of the project provide community benefits that would, as required by the PDD-GS requirements, offset the increased residential yield. These aspects include:

- 217 affordable units
- 25 acres of public open space
- Generation of approximately 1,404.0 FTE job opportunities during construction and approximately 60.1 FTEs during operation.
- Generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs
- Generation of an annual net tax revenue benefit to the Connetquot CSD of $2.99 million
- Sanitary sewer line extension to serve downtown Sayville businesses (Phases I and II)
- Extra capacity designed into project's STP, to serve the flow from downtown Sayville
- Committing to using a combination of alternative energy sources and LEED® features

- Furthering the goals of the Town of Islip and the County of Suffolk, which include positive economic growth and the retention of young people, in terms of providing quality rental housing opportunities.
- Satisfying the standards given in Section 261 of the NY Town Law for a PDD, ensuring that the benefits of the PDD concept are realized.
- Relating to community context by its conformance to similar and complementary uses on abutting sites to the east, west and south.
- Conforming to the spirit and intent of the type of use recommended for the site in the 1976 Sayville Hamlet Study. Though the golf course cannot be retained, residential development is clustered on the site to provide a quality multiple family/apartment use with internal sense-of-place and community enhancement through a 25-acre passive/active perimeter park.
- Using the site in conformance with the recommendations of the 2009 Sunrise Highway Corridor Study (for continued recreational use) is not viable. It is noted that this Study was not adopted by the Town of Islip Town Board.
- Providing a "sense of place" through attractive community architecture, gathering areas, walking opportunities, landscaping and interior setbacks and open space.
- Utilizing a superior site design providing on-site stormwater retention/recharge, utilities and services, and public open space/recreational amenities.
- Utilizing high-quality architecture and landscaping design.
- Maintaining the site privately, thereby minimizing the increase in public expenditures for road, sanitary wastewater treatment and drainage system maintenance.

The above-listed considerations, taken in conjunction with the dollar value of a number of the expected benefits, establish that the project would compensate for the requested increased yield of the project made possible by the use of the PDD concept and the Town's density incentive legislation.

Land Use Plans - Sayville Hamlet Study (1976) – This study recommended that the subject site be retained in its then-present golf course use by applying a scenic easement on the property (encouraged by a tax abatement) or, failing that, be re-developed with a clustered residential project. Such a re-development scenario could include an executive size golf course as an amenity for the site's residents. The recommended easement was not pursued, so that the prior country club operation (and associated taxation) continued unchanged, eventually forcing the owner to close the operation and sell the property.

It should be noted that this recommendation was established 44 years ago (and reaffirmed 11 years ago in the Sunrise Highway Corridor Study), and reflects Town and public goals for the site, as well as economic conditions of the then-site owner, in the mid-1970s. However, this recommendation was not realized and, since that time, the need for quality rental, and particularly affordable quality rental housing has increased while renewed golf course use is not supported by current economic conditions. The proposed project is intended to address both

of the above-described residential needs, by providing significant numbers of rental housing by use of the PDD concept and as provided for in the Town Zoning Code.

The proposed project seeks the maximize the number of units allowed under the Residence CA district, on which the proposed PDD zoning is based, to simultaneously address the above-described housing needs and to generate sufficient revenue to provide the necessary on-site and off-site mitigation measures, Community Benefits and utilities.

The alternative recommendation in the Sayville Hamlet Study was also considered. The recommendation was to retain the golf club or encourage cluster-type development with a potential executive-sized golf course. The development is in effect a cluster-style development which offers a 25-acre perimeter park area accessible to the public. The proposed project can be compared with Alternative 7 in this DEIS which assumes a PDD similar to the proposed project, with an executive-style golf course as a recreational amenity for the site's residents.

Land Use Plans - Suffolk County Sunrise Highway Corridor Study (August 2009) – This document recommends that the site be retained in its existing Residence AAA zoning to support continued golf course use. It suggests that it may be advisable to designate the site as a recreational zoning district to support the golf course. If redevelopment becomes inevitable, the study recommends a clustered residential subdivision under the existing zoning (approximately 107 units) that retains the golf course or open space. These two land use types were evaluated in this DEIS separately in Alternative 2 (in the form of a conventional subdivision of 98 units, and not a cluster of about 107 units) and Alternative 6 (a general commercial recreational use). With respect to low-density residential use of the site, it is acknowledged that, for similar yields (i.e., 107 or 98 units), a cluster layout would generally cause lesser adverse impacts from clearing, paved surfaces, recharge volume, and open space retention than from a conventional subdivision. However, the analysis concludes that:

> …Alternative 2 would not achieve the Applicant's goals or objectives, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community.

With respect to a commercial recreational use, the prior country club operation was forced to close because it was no longer commercially viable, and the owner sold the property, suggesting that the site can no longer support the type of golf course that once operated on the site. If the site were to be re-developed, economic considerations would tend toward a rezoning from Residence AAA to a district that would allow for sufficient development to compensate for the cost of land acquisition and development. With respect to rezoning the site from the Residence AAA district to a recreational district (to assist in supporting renewed golf course use), Alternative 6 of this document investigates such an action, and determined that such a rezoning is not feasible for <u>any</u> commercial recreational use.

The foregoing discussion establishes that the combination of clustered Low-Density Residential use with a golf course that was recommended by the Sunrise Highway Corridor Study is not tenable for the subject site, considering the low level of community support for the golf course and the inability of a low-density residential use (whether clustered or not) to meet the fiscal and planning goals of the landowner.

The proposed project does seek a change of zone to permit the Greybarn development community, open space opportunities and benefits that are offered. The change of zone is subject to Town Board review, and this DEIS presents the proposed project, potential impacts and mitigation and alternatives, to assist the Town Board in reaching an informed-decision.

Community Facilities and Services

Property Taxes - The Town of Islip and Suffolk County, as well as other local taxing jurisdictions will greatly benefit from an increase in such property tax revenues, resulting from the proposed project.

Public Schools - According to residential demographic multipliers published by the Center for Urban Policy Research at Rutgers University, the proposed development is projected to generate 2,705 residents, of which an estimated 210 will be school-age children, and of these 199 would be expected to attend public schools of the Connetquot CSD (note: as only a small portion of the site is in the Sayville UFSD, and in that area, no residences are proposed, no school-age children of the project are expected to attend the Sayville UFSD). Based on the 2019-20 enrollment in the Connetquot CSD, the proposed project would represent a 2.87% increase in enrollment, necessitating an increase in district expenditures of approximately $3.95 million annually. Such an enrollment increase would tend to halt or stem the trend in decreasing enrollment and district fiscal conditions experienced in the Connetquot CSD over the past 10 years. Through taxation, the proposed project is projected to generate an increased level of school district taxes allocated to the Connetquot CSD, of $6,480,320 annually, which would more than fully offset the added costs to the district to provide educational services to the 199 students generated by the proposed project. It is expected that the revenue will exceed the cost of education to provide a surplus of $2,990,184 per year.

Police Services - The project site will continue to be patrolled by the SCPD's Fifth Precinct, Sector 503. The proposed project will significantly change the nature of the use of the site from vacant fenced land to an occupied residential community. The community will be occupied by individuals, couples and families and will potentially need police response. The site design will include appropriate safety and security systems, such as fire, smoke and security alarm systems and outdoor lighting, and employment of a qualified safety/security patrol.

Additionally, the increase development will increase vehicle use of local roadways, increasing the potential for traffic accidents, which would also increase SCPD response. The following concern was noted in the SCPD response:

New traffic patterns and the increased flow regarding the influx of occupants will increase accidents and calls for police services. This project development would have an impact on the workload of Sector 503 and the Fifth Precinct. Emergency response time and public safety is a variable which requires careful consideration.

This DEIS includes a detailed Traffic Impact Study that evaluates traffic and proposes mitigation to ensure that an appropriate Level of Service is maintained on area roads. Additional traffic congestion and/or change in response times is not expected as a result of the project, given the proposed mitigation. The project will increase annual tax allocations to the SCPD to $1,160,529 which is expected to assist in offsetting the expected increase in offset the costs to provide police services.

Fire Department and Ambulance Services - The proposed project will continue to be serviced by the West Sayville Fire Department and the Community Ambulance Service. The site is currently vacant, and this use would change the site to be occupied by a residential community. It is expected that the proposed project will have the effect of changing the nature of potential calls for emergency services to the site, as well as increasing the potential for need of emergency services of both the West Sayville Fire Department and the Community Ambulance Service, due to the new residents in the vicinity. For the West Sayville Fire Department, such changes would include a reduced need for response to brush fires (due to reduced acreage of open spaces, presence of maintained landscaping, presence of on-site safety/security staff, on-site fire hydrant network) , and need for additional types of emergency responses associated with the site residents (such as medical emergencies, in-home accidents, auto accidents, etc.). The proposed project will be constructed in conformance with all applicable building and fire codes. The site will be designed to accommodate emergency service response vehicles.

The project will generate $440,160 per year in tax revenue to the West Sayville Fire District, and $105,324 will be allocated to the Community Ambulance Service annually. These tax revenues are expected to contribute to the budgets of these services and assist in offsetting increased demand for services as a result of the project.

Public Water Supply - The project will utilize public water for all of its domestic needs, to be supplied by the SCWA (a Letter of Water Availability has been received). It is expected that the location and number of connections from the SCWA distribution system to the project will be determined during the site plan review process, to be conducted under the jurisdiction of the Town Engineering Department in coordination with the SCWA.

The expected domestic consumption of the project, 307,125 gpd is not anticipated to impact the ability of the SCWA to serve the subject site and existing customers. The SCWA is chartered to provide water to its service district customers, based on approved tariffs.

An additional estimated 34,813 gpd of water are anticipated to be used for landscape irrigation, all of which would be provided by the on-site irrigation well. As this volume would be applied

only during the estimated 5-month irrigation season (assumed to be from mid-May to mid-October), total water use on the site will be 341,938 gpd during the irrigation season and 307,125 gpd outside of it.

Sanitary Wastewater Treatment - In addition to treating all of the wastewater generated on-site, the proposed STP will also be designed to handle a portion of the wastewater generated in downtown Sayville hamlet, specifically from commercial sites. In order to accomplish this, a sanitary sewer line from the project's STP will be installed southward along Lakeland Avenue to the downtown Sayville hamlet center. Such a benefit will have the effect of treating wastewater in the downtown area at no public cost for the installation program; however, the individual connections to the new system would be borne by each landowner.

The project's STP will be constructed to treat 377,000 gpd of sewage. The design flow for sewage generated from the project is estimated at 307,125 gpd, leaving capacity for 69,875 gpd of flow (from existing downtown development that connects to this extension and from future growth in the downtown area served) from downtown Sayville hamlet.

Impacts on Lakeland Avenue from installation of the 4-inch sewer line are expected, and would include disruption of traffic flow, congestion associated with construction vehicle movements, noise, odors and dust from construction activities (e.g., trench excavation, pipe installation, trench filling and repaving). However, these impacts will be temporary in duration and, as only portion of Lakeland Avenue will undergo construction activity at any one time, limited in extent.

Solid Waste Removal and Disposal - It is anticipated that the residential and clubhouse facilities of the proposed project would generate a total of 10,220 lbs/day of solid waste, to be removed by a private carter operating under contract with the project's Property Owner's Association (POA). Solid wastes generated in the residences and in the non-residential spaces will be deposited in roll-off carts inside each building, from where each cart will be rolled outdoors for regularly-scheduled removal by a certified carter operating under a contract with the owner of the project and disposed of at an approved facility. It is expected that project management will develop and implement a recycling program developed in coordination with the private carter.

Energy Supply -The proposed project will use PSEG and National Grid to supply electricity and natural gas resources to the proposed project, respectively. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed project. The Applicant expects to use electricity as the primary form of energy consumed on the site; heating systems, major appliances, lighting-, and cooking are expected to be based on the use of electricity, and natural gas would be used for other purposes, such as swimming pool heating.

The Applicant seeks to provide energy-efficient housing in conformance with Town Code Section 68-30, and embraces the concept of ensuring a more energy-efficient project than

mandated by merely meeting the NYS Energy Code. Energy efficiency benefits the overall environment, reduces dependency on non-renewable resources thus providing an energy policy and use benefit, and benefits the residents through decreased operational costs of living space and site amenities. In general, energy-conserving materials, fixtures and mechanical systems will be utilized where practicable to reduce the total energy demand of the project. No determination by the Applicant regarding use of solar energy equipment or systems has been made at the present stage of the application process. The Applicant is committed to incorporating appropriate energy-saving designs, materials, equipment and systems, and is willing to consider active solar energy systems (e.g., rooftop solar panels) and LEED® features and concepts, but such decisions will be made later, during the site plan application process.

Community Character

Visual Character - The following discussion of the project's potential for impact on the visual character of the surrounding neighborhood from differences in visual appearances was prepared by the project's architect.

> The Greybarn team has sited the buildings based upon an extensive study and analysis of the site. The site plan is based upon understanding the site's topography, locations existing healthy, mature trees landscaping and using these features to preserve and enhance views from the surrounding neighborhoods into site.
>
> As can be seen in the Viewshed Analysis [**Appendix D-2**], at the size of this site and over the distances from the property lines to the proposed buildings, the additional height of going from 2-1/2 stories to 3-stories will only be minimally perceivable.

The photosimulations demonstrate that the views of the project site as well as views along the length of the bordering roadways will be substantially improved upon construction of the proposed project. The anticipated removal of brush and debris in the site's perimeter buffer will widen and deepen vistas into the site (of and between the proposed residential buildings), and simultaneously open up vistas along the bordering roadways. These vistas will be enhanced by landscaping and park space available to the public.

The following discussion of the project's potential for impact on the visual character of the surrounding neighborhood from proximity of the new buildings to observers was prepared by the project's architect.

> The buildings have been placed much further back from the property lines than is typical for other types of housing. Creating not only walking/biking paths around the entire perimeter of the site that are open to the public. This also opens up wider views to the sky and sunlight than if the streets were lined with new, customary single-family homes.

In order to make height easier to understand, we have developed a Zoning Height Diagram [see **Appendix D-3**]. We have used the Bohemia Parkway side of the site for purposes of this analysis, but the principals apply to all of the roadways around the proposed PDD-GS.

The homes immediately across Bohemia Parkway from the site are within the Residence B zoning district and we have assumed that if single -family homes were to be constructed on the proposed site they would be covered by the provisions of the Residence AAA zoning district. The specific requirements of the districts for heights and setbacks are:

- Residence B: building height – 2 stories /28 feet; 25-foot front yard setback
- Residence AAA: building height – 2-1/2 stories/35 feet; 50-foot front yard setback

In comparison to the setbacks, the **Conceptual Layout Plan** shows the following building setbacks for the proposed PDD-GS:

- 2-story buildings: 35-foot height; 75-foot front yard setback (minimum 267.7 feet provided, to Carrie Avenue)
- 3-story buildings: 45-foot height; 75-foot front yard setback (minimum 105.1 feet provided, to Eleventh Street)
- 4-story buildings: 55-foot height; 100-foot front yard setback (minimum 211.1 feet provided, to Eleventh Street)

For the proposed zoning regulations of the PDD-GS, it is expected that 2-story and 3-story buildings will have a minimum setback of 100 feet, and 4-story buildings will have minimum setback of 200 feet. These setbacks are proposed to reduce potential visual impacts to visual resources and thereby, on community character. Specifically, relative to Bohemia Parkway, the shortest setback for a 3-story building will be about 135 feet, and the least setback for a 4-story building, will be about 350 feet.

The potential for adverse visual impacts due to the difference in building height (i.e., of the project's four-story buildings versus those of the single-family, 2-½ story buildings that characterize the surrounding area) was evaluated. Despite the higher buildings allowed by the proposed PDD as compared to that allowed by the Residence AAA district, the substantially greater front yard setbacks of the proposed PDD would result in less intrusion into the viewscape than would result from development conforming to the Residence AAA district. The ability to secure greater building setbacks is due to the large size of the site and the use of multi-unit structures, which enable substantial perimeter setbacks, which could not be provided if the site were subdivided into individual lots, which would require some of those lots to be located abutting the site's perimeter.

Noise - In comparison to its current generally vacant state as a former golf course, unavoidable short-term noise impacts will result from construction on the site.

Generally, the development of the property will result in a change in the ambient noise levels with noise generated by property maintenance and vehicle movements in the interior roadways and parking areas, and from typical human related activities. The proposed use as a multi-family housing development is compatible with the nearby residential uses and noise related to these uses will be consistent with residential development, with the exception that the common areas of the site will be controlled by the POA, whereas, in comparison to a single family residential development, noise generation varies between the individual homeowners and use of their properties.

It is expected that noise from vehicles on local arterials and background noise from Sunrise Highway will continue to be the dominant source of noise in the area following construction. As with any developed site, there is the potential for generation of periodic noise related to site activities following development of the site as a multifamily development. The most common sources of intermittent noise generating activities will be related to vehicular access to the new development, vehicles driving on the interior driveways and parking areas, and maintenance of landscaping on the site.

In summary, following construction, the only regularly occurring sources of noise which may be audible to nearby residents related to the long-term use of the property is expected to be associated with vehicular ingress and egress from the development and movement within the site. This traffic will proceed at low speeds and will not cause a perceptible increase above ambient noise, particularly due to the vehicle traffic consisting mainly of passenger cars. Other than maintenance of lawn and garden areas on the site and the envisioned accessory amenity uses to occur indoors are typically quiet in their operations, any occurrence of loud sounds would be random and intermittent as is the case with any development.

Based on the above analysis and lack of necessity to implement noise mitigation proposed, no noise-related impacts are expected.

Lighting - The proposed project includes a lighting system designed to establish a safe and secure environment for its residents and visitors, and that will provide pole-mounted illumination only in those areas where it is necessary and appropriate. These areas include the internal roadways and parking areas, as well as the STP and the three site access points. Lighting will not be provided at the pool/patio areas, along the internal sidewalk network, or along the walking trail in the 25-acre public park, as the permitted hours for the park will be from dawn to dusk.

The project's lighting will conform to the requirements of Town Code Chapter 68, Article LII, with all lighting fixtures proposed to be dark-sky compliant. This design consideration will help to minimize the potential for enhancing or contributing to diffuse sky-glow. With the exception

of the three site access drives, no pole-mounted lights will be placed within 50 feet of the site boundaries. In this way, the potential for fugitive lighting to pass through the perimeter vegetation buffer and bordering roadways to impact the neighboring residences will be minimized.

Demography - Projections of Sayville population, age cohort distributions and household types were prepared to the year 2023 to determine the trends in these parameters without and with the proposed project. The data indicate that a slight increase in total population in Sayville is expected through 2023 with a small decrease in the pre school-age cohort, and a more substantial decrease in school-age population. The adult cohort in Sayville would experience an increase, reflective of the general aging of the Sayville population. With respect to housing, a small increase in total households is expected, with an increase in owner-occupied units and a substantial decrease in rental units. This trend would attract younger and/or less affluent potential occupants, as this type of residence is generally more affordable to these cohorts.

The data includes the effects of the proposed project on the demographic characteristics of Sayville anticipated in 2023. As can be seen, with the proposed project, the total population in the hamlet would be increased substantially (whereas if the project is not built, the total population would increase only slightly). The project would cause a substantial increase in pre school-age children and a lesser increase in school-age children. In the same way as noted above, these two trends would be of interest to the local school district, for planning purposes. That is, if the project is not built, the Connetquot CSD should expect a decrease in enrollments, whereas if the project is built, the district can expect an increase in enrollments. Finally, the project would cause an increase in the adult cohort.

With respect to housing, the proposed project would increase the total number of households in Sayville, with an increase in rental units (which is the goal of the Town, the community, and the intent of Applicant). As the units in the proposed project would all be rental units, the project would not increase the number of owner-occupied units in Sayville.

Property Values - The following summarizes the results of the analysis prepared for the Impact Study and Analysis of Real Property document.

> The proposed use is residential apartments. Close to Sunrise Highway and a short distance from Sayville's train station and downtown, the property lends itself to upscale and well-designed rental homes, which also fill a growing demand situated on Long Island in general and specifically for this area.
>
> The proposed zoning is a site-specific Planned Development District (PDD) based on the Town's existing Residence CA District zoning, which, at its maximum, would permit 1,371 units. The ultimate density will be determined at the conclusion of this process.

In the last ten years or so we have seen the development of numerous higher end luxury rental communities be developed throughout Long Island. These developments have targeted and filled a need for much needed housing stock for our young professionals and our empty nesters. The most significant developer of these communities has been The Avalon Bay Company. They have built several on Long Island; two in Melville, one in Smithtown, one in Port Jefferson, one in Garden City and another in Huntington Station.

In addition there is: Fairfield Knolls at West Sayville, a 55 and over rental community of one-bedroom and two-bedroom apartments located in the Hamlet of West Sayville; the Fairfield Broadway Knolls at Holbrook, a luxury rental community of one-bedroom and two-bedroom apartments located in Holbrook, Town of Brookhaven; the Rosemont Brookhaven, a luxury rental community of one-bedroom, two-bedroom, and three-bedroom apartments located in Bellport, Town of Brookhaven; the Enclave at Charles Pond, a luxury rental community of one-bedroom and two-bedroom apartments located in Coram, Town of Brookhaven; the Jefferson at Farmingdale Plaza also luxury rental community of one-bedroom and two-bedroom apartments located in the Village of Farmingdale, Town of Oyster Bay; and the Hawthorne Apartments, another luxury rental community of one-bedroom and two-bedroom apartments located in the Village of Valley Stream, Town of Hempstead. Furthermore, the Town of Islip recently approved the redesign of a high end rental project at the Windwatch site in Hauppauge. This involves two separate rental towers which surround a townhouse development and a hotel. This is not yet open.

In addition to the detailed analyses we have considered the limited data surrounding the Garden City Avalon and the Melville Avalon. In the case of the two Avalon communities in the Town of Huntington, both in Melville and Huntington Station, they are adjacent to residential communities of Townhouses that have prospered. Both are Country Pointe Developments. What these types of projects have shown us is that there is a tremendous need for this type of housing and they create their own community, which then blends in with and becomes a part of the surrounding land use pattern and community

Cultural Resources

A Phase 1 Archaeological Investigation was prepared for the subject site in 2006, to determine the presence and, if such resources were found, the extent of cultural resources on the portion of the site to be developed at that time, for a differing development proposal. A total of 1,016 shovel test holes were excavated on the site. No pre-historic or historic artifacts or features were encountered., and no further work was recommended. In response to the layout of the proposed Greybarn-Sayville PDD, an Addendum to the Phase I investigation was prepared in 2018. This study excavated an additional 583 test holes (in those areas of the site not previously evaluated, to reflect the current proposal development area). The Addendum found only isolated pre-historic finds; no historic artifacts or features were encountered, and no further work was recommended.

Emergency Preparedness

General Discussion of Emergency Preparedness - The proposed project will re-develop and re-occupy the site, so that there will be a potential for impact to the site's residents from natural and human-related disasters. However, it is expected that the project's conformance to Town and NYS requirements for engineering review, stormwater/drainage control, fire safety, evacuation, building construction and overall site development will protect the site and its residents from impacts from most if not all reasonably foreseeable natural and human-related disasters that could occur. It is also expected that local, Town, County and NYS emergency police, fire safety, health, and social services would be available to help protect the site and its residents during a disaster, by measures such as evacuation, direct intervention (e.g., dispatching firefighters to attack wildfires, or pumping of floodwaters, snow plowing, powerline repair, etc.). The site is not located within a flood plain area and therefore not subject to flooding. The site is located within convenient proximity to both the eastbound and westbound lanes of Sunrise Highway and therefore should evacuation become necessary, transportation systems are in place to permit vehicular access to major roads.

2014 Update to the Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan (2008) - The All-Hazard Mitigation Plan does not include recommendations specific to the project site or to the type of development represented by the proposed project. Generally, the types of disaster addressed in the All-Hazard Mitigation Plan focus that would apply to the subject site are related to stormwater/flooding and wildfires. As discussed above, it is expected that conformance to the applicable Town and NYS requirements for stormwater system design, and for conformance to applicable Town, County and NYS requirements for fire safety measures, will protect the site and its residents from potential impacts from most if not all reasonably foreseeable natural and human-related disasters that could occur.

Open Space and Recreation

As the subject site is presently closed and unavailable to the public as an open space or recreational resource, the proposed project will not cause any reduction in the availability of such land to the public. To the contrary, the project will have the beneficial impact of increasing the acreage of public open space/recreational resources, by removing the existing perimeter fencing and developing a 25-acre active/passive park along the site's perimeter. This facility will be privately owned and maintained by the project's POA, but will be open to the public.

The proposed project will not encroach upon any of the existing park or recreational facilities in the vicinity. Given the on-site recreational amenities and public park space, it is expected that many residents will use these resources for their park interests. New residents may use existing public open space and recreational resources in the area; however, would not be expected to overburden these facilities as these public parks are large enough to accommodate all likely, day-to-day visitors and only intermittent, incremental use by some of the site residents would be expected. Finally, the number of local public recreational sites available to the project's

residents would tend to spread the project's visitation geographically, to reduce the potential impact of visitation at any one site.

Local Economy

Potential impacts to the local economy are generally positive and beneficial. The proposed project will add new rental apartments in an area that is in need of this housing stock. The low vacancy rate of existing multiple family housing supports the need and demand for the project. Consequently, based on local rental communities and low vacancy rates, the proposed project fits within a rent and size increment that supports the local housing market and will help to meet existing demand for this type of housing.

There are positive and beneficial economic benefits to downtown Sayville expected to result from the project in the form of consumer demand to support local business. The median household income in the Greater Sayville Area $103,468. Local businesses will capture a portion of the spending associated with this income for food, apparel, entertainment, personal care products and services and other expenditures. The spending power of this population and income is significant, such that if just 10% of the household income were spent locally, this would represent over $14 million. As a result, Sayville and surrounding communities can expect economic benefits from spending by occupants of the Greybarn community as a result of the proposed project.

Construction-Related Impacts

Noise – The construction phase of the project will include site grading and clearing, excavation and building activities that will result in elevated noise levels from vehicle engines, stationary equipment/generators, dump trucks, excavating equipment (e.g., bulldozers, excavators, front-end loaders and similar earth moving equipment), and construction/building activities (involving trucks and use of stationary equipment/generators such as cement mixers/spreaders).

Sound levels during construction are intermittent as well as variable depending on the type of work being completed during various phases of the construction process; however, such impacts are limited in both geographic extent and in time, and measures can be implemented to reduce these potential impacts. Noise levels will vary based on the construction phase, but typically heavy equipment utilized during the site preparation phase results in the highest levels of noise associated with development. Generally, the clearing/grading operation, typically the noisiest and therefore most severe impact to the neighborhood, is generally completed over a short time span.

A construction entrance would be placed at the Lakeland Avenue site entrance and the development area is large enough to allow staging and construction to occur within the site boundaries, thus limiting potential construction traffic disruption to the portion of Lakeland Avenue between the site entrance and NYS Route 27, and minimizing potential impact to neighboring properties as well.

Equipment-related construction noise is expected to be in the range of 76 to 88 dBA at a distance of 50 feet. However, clearing and grading activities will not occur closer than about 60 feet from the site's perimeter and, except for the nine homes along the west side of Chester Road, the nearest houses are across the bordering roadways, and so are an estimated 50 additional feet away. For the Chester Road properties, the perimeter park (if that development scenario is approved) is designed to be deeper, to provide more noise buffering for the rear yards of these homes. It is noteworthy that the above separation distances represent the minimum separations expected, as they have been taken from the interior edge of the public perimeter park; the separations between receptors and the proposed buildings are substantially greater (at least 100 and up to about 220 feet from the site's border). During and after construction, a vegetated perimeter buffer will be preserved to attenuate noise generated on the project site.

At a distance of 100 feet (the anticipated minimum distance to the nearest residential receptor, associated with site clearing and grading phase operations), sound levels are expected to be attenuated, thereby reducing potential impacts to these receptors. This attenuation is "the inverse square law", in which noise generated by a point source (e.g., a piece of construction equipment) is reduced by 6 dBA for every doubling of the distance between source and receptor. The loudest noise levels of equipment are 88 dBA, as measured at a distance of 50 feet. Thus, at a distance of 100 feet, these noises would be reduced to 82 dBA, which would be "annoying", and characteristic of a busy traffic intersection. This represents the highest level of noise impact expected, as other noise-generating construction activities would be farther from these receptors (150 to 270 feet), so that attenuation would be greater, and would thereby cause lesser impacts.

Additionally, as noted above, potential construction noise impacts would be intermittent, episodic and temporary, so that the noise impacts would also be limited in duration. Construction noise is inevitable in the short term and will be audible to surrounding residents; however, this impact is unavoidable and will be mitigated by limiting construction during hours proscribed by the Town of Islip Code in Chapter 35. Construction-related activity is exempt from the maximum sound levels as long it occurs between 7 AM and 8 PM. Contractors will be required to limit the hours of construction to within the period 7 AM to 6 PM on weekdays only (no construction activity is permitted on weekends and holidays) under Chapter 35 of Town Code.

Based on the above analysis, no significant, long-term construction noise-related impacts are expected.

An analysis was performed to consider whether construction noise would result in disturbances at the Edward J. Bosti Elementary School and, if so, to determine whether mitigation measures should be implemented or construction in portions of the site be limited to summer months when school is not in session. Based upon this "worst case" analysis, at the closest location where construction is to occur (1,300 feet from the school property) and assuming the use of

three construction sources with individual sound pressure levels of 89.0 dBA (when combined utilizing decibel addition results in 93.8 dBA), there is a minimal increase in the sound level of 1.6 dBA, which is barely discernable. The majority of construction will be located at a much greater distance and will be further attenuated and thus, no significant impact is anticipated, nor is there a need to modify the construction schedule to account for the school year.

Odors and Dust - Possible impacts to local air quality that could occur during construction include the generation of dust (airborne particulate matter) during clearing and grading of the property, from unvegetated areas and from material tracked off site and deposited on adjacent streets. The potential for impact during construction with respect to the generation of airborne dust (and specifically, fugitive dust that reaches neighboring properties) could result from activities related to clearing, transfer of soil, and regrading; and following regrading, the presence of bare soil which can become airborne in windy conditions. There are many variables that affect potential dust generation and the potential for impacts. Dust emissions can vary substantially from day to day, and depend upon the level of activity, type of activity, prevailing meteorological conditions, moisture content and silt content of the soil (i.e. particles smaller than 75 microns in diameter).

To mitigate potential for erosion and generation of fugitive dust, control measures are to be employed during construction. Water trucks are to be utilized for suppression of dust during land clearing and grading activities. Unvegetated areas are to be seeded or planted with other groundcovers as soon as is feasible following regrading, and will continue to be monitored and sprayed during dry periods to prevent dust generation. Grading activities that could potentially generate airborne emissions will not be conducted if winds are in excess of 15 mph. Finally, the use of rumble strips is the control method proposed to be employed at the construction exit to minimize the quantity of material that is tracked off site.

Erosion and associated dust control measures will conform to applicable Town requirements; these mitigation measures are expected to include, but not be limited to, street sweeping on adjacent roadways, the use of groundcovers and seeding, drainage diversions, soil traps, water sprays and minimization of the time span that bare soil is exposed to elements, to minimize the potential for impacts to sensitive on- or off-site natural or developed areas. The applicant has successfully applied control measures such as “rumble strips” (which cause truck tires to shed any mud trapped within the tire treads), and will install same at the construction entrance to reduce soil on truck tires from being tracked onto adjacent roadways, thereby reducing the potential for dust to be raised in order to mitigate this potential construction related impact. Overall, development of the subject properties is not anticipated to result in significant erosion/sedimentation or stormwater impacts due to the use of proper site grading procedures, implementing erosion controls and, for the long-term, use of properly-designed drainage systems, and particularly to conformance to the Town-required measures specified in the SWPPP and Erosion Control Plans and subject to the oversight of the Town Building Department.

Trip Generation, Vehicle Access, Parking, and Loading/Unloading & Staging Areas - It is expected that the construction entrance will be located at the existing site vehicle entrance on Lakeland Avenue. As it is also expected that the majority of truck trips to and from the site would use NYS Route 27 (Sunrise Highway) to approach and depart the area, the portion of Lakeland Avenue that these vehicles would utilize will be limited. This would also reduce the potential impacts related to traffic flow during construction to this limited portion of Lakeland Avenue, as well as the potential impacts from air, noise, odors, and dust associated with truck traffic to the residents along this portion of Lakeland Avenue.

Construction activities would be limited to the hours of 7:00 AM to 6 00 PM on weekdays and, if necessary, on Saturdays. Generally, it is expected that school buses will be operating in the area on weekdays between 6:30 AM and 9:00 AM, and 2:00 PM and 4:30 PM. It is expected that construction workers would arrive prior to 7:00 AM, and depart after 6:00 PM so that interactions with school buses may occur from construction worker traffic in the mornings (as workers would depart after school bus operations have ceased in the evening). Truck trips for material and equipment deliveries and pick-ups could occur at diverse times between 7:00 AM and 6:00 PM, throughout the workday, but would take place primarily in the mid-morning hours (when workers would be present to receive/administer such deliveries/pick-ups), and outside the hours off school bus activities. As a result, interactions between truck trips and school buses are not expected, as trucks would not generally be traveling in the area when school buses are also present. This would tend to minimize the potential for accidents or impacts to school bus drop-offs, pick-ups and travel along Lakeland Avenue, or to any school-related pedestrians. Generally, construction vehicle traffic and its impacts would be temporary in duration and would occur on roads that have sufficient capacity to accommodate this traffic with minimal potential for impact. As a result, no significant or long-term construction or safety impacts to local roadways or the residents in the area are anticipated.

It is expected that areas for construction worker parking, truck loading/unloading, and material storage/staging will be designated within each Phase area, at the onset of development of each Phase. Assuming that the project's two main internal roadways will be installed in Phase 1, the site's residents will always have two vehicle accesses available that would not serve construction traffic, in case those drivers choose to avoid interactions with construction trucks using the third site vehicle access on Lakeland Avenue.

Excess Soil Disposition - Based on a preliminary analysis, it is expected that 46,840 CY of excess soil generated during grading activities will have to be removed from the site. Assuming that trucks having a capacity of 40 CY are used to remove this material, a total of 1,171 truckloads would be required, or 2,342 truck trips would come to and depart from the site. Soil removal is a temporary condition that will occur during construction activities at the site. Truck access to the site is via Sunrise Highway, a major arterial roadway/state highway. The convenient access to Sunrise Highway and the short-term nature of this activity minimizes the significance of this impact. Control measures are outlined below with respect to further mitigation of these activities.

With respect to potential impacts from the soil removal process (such as dust and truck and equipment noises), these impacts will be temporary in duration, would be limited to the project site and, potentially, the neighboring residences, would be limited to weekday hours, and would conform to any and all Town requirements for specific hours of operation.

An off-site re-sale and transfer location will be used to dispose of the excess soil; the specific location has not been determined as of yet, but the trucks from the site will use major roadways to the greatest extent practicable to approach that facility. As such, all of the loaded trucks will depart the site via northbound Lakeland Avenue, and turn onto NYS Route 27 (Sunrise Highway) to depart the area. In this way, impacts to the residences along Lakeland Avenue will be limited to the fewest residences possible, and impacts to locales to the south will be eliminated altogether. The Applicant is willing to agree to a Town-specified limitation on the location of the construction entrance and/or use of Lakeland Avenue in this regard, to be established during the site plan review and approval process.

In any case, impacts would be limited in duration and geographic scope and would not be expected to be significant given the close proximity of a major east-west roadway.

Proposed Mitigation

<u>Soils and Topography</u>

- Erosion and sedimentation may occur during the construction phase. The potential impacts with respect to erosion potential can be overcome by using proper grading techniques and implementing erosion control measures, installing proper drainage facilities and using suitably-adapted drought-tolerant indigenous vegetative species for landscaping as well as site stabilization and restoration.
- Landscaping practices common applied to sandy soil areas will be employed and implemented at the time of construction, following the site plan review and approval process which will include landscape plan preparation. This will ensure that potential impacts with respect to a sandy surface layer are adequately addressed and as a result, no long-term soil impacts are expected.
- Short-term soil impacts will be mitigated through erosion control measures which are detailed under a site-specific erosion control plan.
- Fill may be required in some areas of the property and it is expected that the material required can be obtained from on-site sources and redistributed as necessary.
- A protocol shall be established to ensure that any topsoil imported to the site shall come from a NYSDEC certified source.
- All created soil slopes will be 1:3 or less and will be stabilized using ground cover material.
- All stormwater runoff generated on the property will be retained and recharged in a drainage system conforming to Town requirements, which includes the ability to handle a minimum of 8 inches of runoff. While the project's drainage system is designed for 5 inches of storage, it is expected that the high percolation rate of the site's soils will enable the

project's drainage system to handle the required 8 inches of runoff. The Town Engineering Department will review the system for sufficiency as part of the site plan review process.

- The grading plan is used for preliminary drainage design and DEIS analysis. A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of overall site grading and will require Town review and approval prior to initiation of grading activities.
- An additional safeguard is achieved through the NYSDEC SPDES review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre.
- As no significant adverse impacts are anticipated with respect to geological resources, the proposed mitigation measures are expected to be sufficient to properly protect these resources, so that no additional mitigation measures are necessary or proposed.
- This work will be conducted in coordination with the SMMP to address contaminated surface soils on the site.

Water Resources

- In conformance with the Town of Islip requirements, all stormwater runoff generated on developed surfaces will be retained on-site, to be recharged to groundwater through the proposed drainage system for the project. This system will be subject to detailed review by Town engineering staff during the site plan review process, ensuring that no impacts will occur to off-site properties. As such, no additional mitigation measures are necessary or proposed.
- Adherence to the proposed SWPPP (to be prepared for the SPDES General Permit and would include an erosion control plan) would ensure that stormwater generated during the construction period is controlled, and that erosion and its associated impacts is minimized. As such, no additional mitigation measures are necessary or proposed.
- Provision of an on-site STP which will be designed with extra capacity to accommodate off-site sources will mitigate impacts to groundwater quality from any on-site recharge of sanitary wastewater. The applicant will construct this STP, and will install 10,300 feet of conveyance pipe as well as expanded treatment capabilities to serve downtown Sayville with wastewater treatment.
- No significant increase in the potential for adverse impact on groundwater quality is anticipated from accidental spillage or release of toxic or hazardous chemical substances. The nature of the proposed residential use is such that no toxic or hazardous materials (other than common household cleaners) would be present or used on the project site.

Ecology

- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas.
- The loss of Successional Southern Hardwood Forest and Pitch Pine - Oak habitat on the property will be partially mitigated through the replanting of both habitat types within the subject site.

- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- No known invasive plant species will be utilized, including those species specifically those species listed in Suffolk County Local Law 27-2009 and 6 NYCRR Part 575.
- As no impacts associated with the CCP are expected, no mitigation measures in this regard are necessary or proposed.

Air Quality

- Dust control measures are recommended during construction. These measures are anticipated to be sufficient to control these potential impacts. It is noted that any such impacts are short-term, temporary impacts and do not represent a long-term impact.
- Dust monitoring and mitigation measures are a part of the SMMP; therefore, potential impacts from dust raised by disturbance of impacted soils will be subject to a high level of control.
- As a result of the findings in the Air Quality Analysis, no further analysis in regard to potential air quality impacts due to operation of the project, as it is not expected to result in a significant adverse impact on air quality.

Vehicle Traffic, Transportation and Roadways

- From the review of the capacity analyses results for each of the phases contained in the analyses section of this report, the analyses indicated that 34 of the 36 study intersections will continue to operate at No Build levels of Service (LOS) after the completion of Phases 1, 2 and 3 of the proposed project. Two intersections did experience changes in LOS from the No Build to Build Conditions. However, with minor signal adjustments that can be accommodated by the current signal controllers, these two intersections will continue to operate at No Build LOS or better after the completion of Phases 1, 2 and 3 of the project. Based on the Town's Subdivision and Land Development Regulations' criteria for determining impacts, the increase in delay, experienced at the study intersections during all analyzed peak hours for both the school peak and summer seasons does not result in a significant impact. Therefore, no mitigation measures are required at these intersections under Phases 1, 2 and 3 of the projects.

  It is therefore our professional opinion that the construction of up to Phase 3 (678 units) of the proposed project will not significantly impact the operation of the intersections within and around the Study Area.

- The results of the capacity analyses for Phase 4 indicated that the southbound approach at the intersection of Lakeland Avenue at NYS Route 27 North Service Road experiences an increase in delay of more than 29 seconds for both the PM and Friday PM peak periods and the overall intersection delay also increased by more than 9 seconds during the PM and the Friday PM peak periods. These increases, in delay, are considered significant impacts and hence will require mitigation.

In order to mitigate these impacts, the southbound approach of this intersection which currently provides an exclusive through lane, a shared through/right turn lane and an exclusive right turn lane will be redesigned to provide two exclusives through lanes and two exclusive right turn lanes. Minor signal timing adjustments will also be conducted for the northbound left turn phase.[5]

With this mitigation, the Town's Subdivision and Land Development Regulations' criteria for no significant impacts will be met during all the studied peak periods with and without other planned developments.

- The results of the capacity analyses for Phases 5 and 6 indicated that, the intersections of Lakeland Avenue and NYS Route 27 North Service Road and Lakeland Avenue at Tariff Street/Johnson Avenue experiences increases in delay that are considered significant impacts and hence will require mitigations.

  In addition to the mitigation recommended for Phase 4, with the development of Phases 5 and 6 additional mitigations are recommended. In order to mitigate these impacts at the intersection of Lakeland Avenue and Tariff Street/Johnson Avenue, the northbound approach will be widened to provide an exclusive left turn lane enabling the redistribution of green time to improve the failing westbound approach.[6]

With these mitigations, the Town's Subdivision and Land Development Regulations' criteria for no significant impacts will be met during all the studied peak periods with and without other planned developments

- In order to respond to the Town's comment on the current operation of the Lakeland Avenue corridor in the vicinity of the proposed project site and potential impact of the proposed project on this corridor a further review of traffic analyses results was conducted. As stated above, the mitigation measures recommended for Phase 5 of the project are adequate to mitigate the impacts associated with Phase 6 of the project. However, the following additional mitigation measure has been proposed to further improve the operation of the Lakeland Avenue corridor after the construction of Phase 6 of the project.

  - Widen Lakeland Avenue between Chester Road and 11th Street to provide an additional northbound through lane. The widening will begin around Eastover Road and extends to meet the existing 2 lane section of Lakeland Avenue just north of 11th Street.[7]

[5] Note that road widenings will not require any takings of privately-owned land, but will take place within the road ROWs.
[6] Note that road widenings will not require any takings of privately-owned land, but will take place within the road ROWs.
[7] The applicant is considering the mitigation measure recommended by the Town to eliminate the intersection of Lakeland Avenue and Chester Road. The east-west portion of Chester Road will be eliminated and access to Chester Road will be provided via a new intersection of Chester Road and the signalized Site Access.

- The segment of Lakeland Avenue between Eastover Road and Gibbons Court/Site Access will be striped to provide two through lanes and one northbound left turn into the Site Access.

With these improvements the traffic flow along the Lakeland Avenue corridor will improve significantly.

The proposed mitigations will improve both the operation of the Lakeland Avenue corridor and the measures of effectiveness after the construction of the proposed project. [8]

Land Use, Zoning and Plans

- As the project would be appropriate with respect to the land use pattern in the vicinity given its proximity to similar and complementary land uses in all four directions and the absence of a distinct, overarching pattern of land uses in the larger vicinity, no further mitigation measures are necessary or proposed.
- Analysis demonstrates that the proposed project satisfies NYS Town Law Sections 261-b and 261-c, in that it will mitigate the anticipated impacts of the vehicle trips generated on-site, not endanger public safety and/or security, promote public health, provide a healthy environment for its residents and visitors, prevent overcrowding of the site or an undue concentration of population, promote alternative energy production, and provide for all necessary public services. Therefore, no further mitigation measures are necessary or proposed.
- Analysis indicates that the proposed project satisfies the Town policy requirements for multi-family residential development in the Residence CA district, under which requirements and standards the project will be developed. Therefore, no additional mitigation measures are necessary or proposed.
- The proposed project will provide for the housing diversity that the Town recognizes is necessary (i.e., rental housing and affordable rental housing) based on economic conditions, demographic trends and existing housing stock. As such, no further mitigation measures are necessary or proposed.

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[8] With these mitigations, the Town's Subdivision and Land Development Regulations criteria for no significant impacts will be met during all studied peak periods, with and without other planned developments.

The project will result in greater parking demand at LIRR and municipal parking facilities than would as of right development. However, based on the current overall availability of parking at the LIRR parking lots, there will be an adequate number of parking spaces to support the additional demand from the potential residents of the Island Hills development. As a result, no mitigation in this regard is necessary or proposed.

It is acknowledged that the proposed project will increase parking demand at LIRR and municipal parking facilities than would as of right development. However, since the proposed project would not necessitate mitigation at these lots, no mitigation would be necessary for the lesser parking demand associated with as of right development.

- The proposed project conforms to the spirit and intent of the type of use recommended for the site in the 1976 Sayville Hamlet Study. Though the golf course cannot be retained, residential development is clustered on the site to provide a quality multifamily/apartment use with internal sense-of-place and community enhancement through a 25-acre passive/active perimeter park. This study dates to 1976, and the proposed use is updated to address the Town's current rental and workforce housing needs. The proposed project seeks to address the housing needs and to provide the necessary on-site and off-site mitigation measures, Community Benefits and utilities and therefore, no further mitigation is necessary or proposed. Consideration may be given to Alternative 7 in this DEIS which provides a PDD with an executive golf course for use by site residents.
- Use of the site in conformance with the recommendations of the 2009 Sunrise Highway Corridor Study is not viable. It is noted that this Study was not adopted by the Town of Islip Town Board. The Town Board has legislative authority over a change of zone, and this DEIS provides information for the Town Board to consider in order to reach an informed-decision on the proposed project.

<u>Community Facilities and Services</u>

- Development of the proposed project will generate approximately $10,149,131 in total tax revenue, which exceeds the $274,246 generated by the site in its under existing conditions. Therefore, the proposed project may ultimately create an additional $9.87 million in annual tax revenues to be distributed to all applicable community services providers, particularly to the Connetquot CSD. No further mitigation is necessary or proposed.
- The proposed project represents an increase in enrollment for the Connetquot CSD, for which an estimated increase in expenditures of about $3.49 million/year will result. However, the proposed project is anticipated to generate taxes of $6,480,320 per year, resulting in a net surplus revenue to the school district of about $2,990,184 million per year. This net revenue could ease the district's need to tap into additional fund balances and could also help alleviate an increased burden on other taxpayers throughout the district. No further mitigation is necessary or proposed.
- The proposed project will include current building materials and safety installations per the NYS Building and Fire Codes, such as fire and smoke alarms and sprinkler systems. The project will be planned with suitable access for emergency vehicles and will include installation of fire hydrants as directed through the site plan review process. The project will also include a full-time professional safety and security service.
- By its issuance of a Water Availability Letter, the SCWA confirms that it can and will provide applicable water services to the site and project. No further mitigation is necessary or proposed.
- The proposed project will provide and maintain private on-site recreational facilities for the exclusive use of its residents, as well as a 25-acre public park along the site's perimeter.
- In conformance with Town requirements, the proposed project will utilize a private carter to remove and dispose of all site-generated solid wastes, and will develop and implement a recycling program.

- Water and energy resources will be conserved through use of energy- and water-conserving design principles, building materials, mechanical and plumbing systems, plumbing fixtures and appliances and rain sensors on irrigation systems, which will further minimize the volume of water required from the public water supply.
- The project's internal roadways, sidewalks, lighting systems, and recreational areas, as well as its drainage system, STP and sanitary sewer connection will be owned, operated and maintained by the project's POA, obviating potential increased public costs for these responsibilities.

Community Character

- Analysis indicates that the proposed buildings will not result in adverse visual impacts for observers on adjacent residential sites or the bordering roadways. However, the Applicant could consider additional plantings in the perimeter vegetation buffer, to further screen the project.
- As the noise analysis prepared for the proposed project indicates that no significant adverse impacts are anticipated with respect to receptors on the site or in the vicinity, the Applicant does not propose to implement noise mitigation measures beyond the noise-reducing measures in the applicable Building Code requirements.
- It is expected that the project's conformance to the applicable standards of Chapter 68, Section LII (Outdoor lighting) will be sufficient to adequately mitigate potential impacts from fugitive lighting. However, the Applicant could consider additional screen plantings in the perimeter vegetation buffer, to increase the level of lighting obscuration.

Cultural Resources

- Neither of the two Phase 1 Archaeological Investigations revealed the presence of, or the suspected presence of, cultural resources, or historic or architecturally significant structures on the subject; no further investigation was warranted. As such, no mitigation measures with respect to cultural resources is necessary or proposed.

Emergency Preparedness

- The Applicant will ensure that the project incorporates appropriate building materials, mechanical systems, and design elements to support a safe built environment on the site that will protect the residents in case of a natural and/or human-related disaster.
- The Applicant acknowledges that the project design, construction, operation and maintenance will be subject to engineering, building/construction requirements and fire safety review by the Town.

Open Space and Recreation

- The Applicant will fund and construct a 25-acre perimeter park, which will be owned, operated and maintained by the project's POA.
- Potential impacts on public open spaces and parks associated with increased usage would be offset by increased access/usage fees paid by such increased visitation.

Local Economy

- The proposed project contributes to the local economy in a positive and beneficial way and therefore no mitigation is proposed or necessary.

Construction-Related Impacts

- A video record of existing roadway conditions will be prepared prior to the start of construction, to establish baseline conditions. At the completion of construction, any and all damage to local roads and/or roadway improvements that may have been caused by construction activities related to the project will be repaired or replaced by the Applicant, at the Applicant's expense, as directed by the Town Highway Department. Work for such repairs will be funded via a Letter of Credit at an appropriate level, to be determined by the Town as part of the site plan application review.
- Construction-related impacts such as dust raised by truck movements and odors from truck and/or equipment exhausts may occur; however, such impacts are limited geographically, and would be temporary in duration.
- Short term impacts may include dust, noise, truck activity on roads and disturbance in the area. Truck access will be only from the new site access on Lakeland Avenue, and all equipment, materials and trucks will be stored and staged within the site.
- A water truck will be provided during construction to wet dry soils when necessary.
- Groundwater impacts which may occur during construction activities could potentially result from recharge of stormwater containing substance from building materials and equipment stored on-site. Building materials are anticipated to be inert and therefore are not expected to have an adverse impact on groundwater beneath the site. Equipment stored on-site which will be utilized during clearing and construction activities will be properly maintained and reputable contractors will be used for all site work.
- Potential noise impacts associated with construction activities will be mitigated by ensuring that these activities comply with the Town of Islip Noise Code Chapter 35, which specifies maximum permissible sound pressure levels.
- Noise-dampening practices will be utilized during construction to minimize the impact on surrounding areas including keeping all mechanical construction equipment maintained in good working order to minimize noise levels.
- The construction process will conform to the SWPPP to be prepared for the project and reviewed and approved by the Town.
- The erosion control measures to be implemented conform to applicable Town requirements and are expected to include, but not be limited to, use of groundcovers, drainage diversions, soil traps, water sprays and minimization of the time span that bare soil is exposed to erosive elements.
- Areas designated for construction worker parking, truck loading/unloading, and material storage/staging will be located within the project site, and will thereby mitigate potential impacts to the Lakeland Avenue corridor.

Alternatives Considered

With respect to the reason for analyzing alternatives in a DEIS and thereby allow for an informed comparison to be conducted by the decision-making agencies, the SEQRA Handbook Fourth Edition (NYSDEC, 2020) states *"The goal of analyzing alternatives in an EIS is to investigate means to avoid or reduce one or more identified potentially adverse environmental impacts. 6 NYCRR Part 617.9(b)(5)(v) requires that the alternatives discussion includes a range of reasonable alternatives that are feasible considering the objectives and capabilities of the project sponsor. In general, the need to discuss alternatives will depend on the significance of the environmental impacts associated with the proposed action. The greater the impacts, the greater the need to discuss alternatives. "*

The following Alternatives 1 through 6 were described in the Final Scope (see **Appendix A-5**); Alternative 1 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the proposed project is not implemented, and Alternative 7 was added by the Applicant. Alternative 7 is a PDD at the same yield as the proposed project but includes some townhouse units and features an "executive" golf course that may be a viable option. The analyses for all seven alternatives include discussions of the anticipated impacts and potential mitigation measures for each scenario, each of which is briefly described as follows (more detailed descriptions of each scenario are provided in **Sections 5.1** through **5.7**):

- **Alternative 1: No Action** - assumes that the zoning, use and conditions of the site remain unchanged, and that no site development occurs.
- **Alternative 2: Development per Existing Zoning** - assumes a conventional single-family subdivision that conforms to the site's existing Residence AAA zoning district.
- **Alternative 3: Proposed Project at Reduced Yield** - assumes a PDD for a mix of single-family lots and townhouse apartments.
- **Alternative 4: Rezone to Residence AA District with Recreational Use** - assumes a clustered subdivision of attached single-family dwellings with an executive-style golf course as a recreational amenity for the site's residents.
- **Alternative 5: Multi-Generational Housing** - assumes a mix of non age-restricted apartments and a Life Cycle Community consisting of senior apartments, a congregate care center, assisted living (where medical assistance is available upon request), and nursing home (where continuous medical supervision is provided).
- **Alternative 6: Rezone to Recreational Service G District** - assumes rezoning of the site for public recreational development of the site.
- **Alternative 7: Rental Multi-Family and Townhouse Development with On-Site Golf Course** - assumes a PDD having the same yield as the proposed project, with an executive-style golf course as a recreational amenity limited to use of the site's residents.

Note that the yields for the alternatives were established at a level that, like the proposed

project and including the effect of roadway mitigation measures, would not adversely impact overall traffic flow in the area.

Permits and Approvals Required

Prior to the issuance of any permits or approvals, the Applicant and Lead Agency must fulfill the requirements of SEQRA. This document is part of the official record under the SEQRA process outlined in Title 6 of the New York Code of Rules and Regulations (6 NYCRR) Part 617, with statutory authority and enabling legislation under Article 8 of the NYS Environmental Conservation Law (ECL). The Islip Town Board is the Lead Agency for the change of zone application, as the application that triggered the SEQRA process is under the jurisdiction of that Board. The Town Board determined that the proposed project is a Type I Action pursuant to SEQRA, and the regulating provisions of 6 NYCRR Part 617. As lead agency under SEQRA, the Town Board adopted a Positive Declaration on the proposed project and conducted formal scoping in conformance with 6 NYCRR Part 617.8, providing forums for oral and written comments on the Draft Scope of the content for this DEIS, which was issued as the Final Scope. This DEIS describes the proposed project, catalogues site and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project, as determined by the Final Scope.

This DEIS provides the Islip Town Board and all involved agencies with information necessary to render informed decisions on the change of zone application. Once accepted by the lead agency as complete, this document will be subject to public and agency review, a public hearing, and a subsequent period wherein written public and/or agency comments accepted. This period is followed by preparation of a Final EIS (FEIS) that addresses the substantive verbal or written comments provided. Upon acceptance of the FEIS, the Town Board will be responsible for the adoption of a Statement of Findings on the information contained in the EIS. Each involved agency will prepare its own Findings Statement independently of the lead agency, pursuant to SEQRA, prior to rendering its own decision on the change of zone application. The application will then proceed through the Change of Zone process and, if approved, the subject site will be rezoned to PDD-GS, and the Applicant will then proceed to a detailed Site Plan application for the Town Engineering Division to review, in consideration of the description and impact analyses contained in the EIS.

Should the Town Board approve the change of zone application, the permits and approvals listed in **Table S-1** would be required prior to commencement of project construction.

TABLE S-1
PERMITS AND APPROVALS REQUIRED

Issuing Agency	Required Permit or Approval
Town Board	Adoption of Local Law (for PDD-DG District)
	Change of Zone (PDD-GS) Approval
	SEQRA Review (as lead agency)
Town Engineering Division	Site Plan Approval
	Subdivision Approval
Town Building Department	Demolition Permit
	Building Permits
Town Department of Public Works	Road Access Permits
SCDHS	SCSC Article 4 (Water Supply) Review/Approval
	SCSC Article 6 (Sanitary System) Review/Approval
	Subdivision Approval
SCSA*	Conceptual Approval
SCWA	Water Supply Connection Approval
SCDPW	NYS Highway Law 136 & Road Access Permit
	Application for Road Usage
	Application for Debris Removal/Demolition Permit
SCPC*	NYS General Municipal Law S-239 Review/Approval
NYSDEC	Mining Permit for Ponds *(if required)*
	Pond Stocking Approval *(if stocking proposed)*
	Long Island Well Permit *(if on-site well proposed)*
	SWPPP Approval
	SPDES Permit (GP-0-20-001)

* SCSA-Suffolk County Sewer Agency; SCPC-Suffolk County Planning Commission.

SECTION 1.0

DESCRIPTION OF THE PROPOSED PROJECT

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Introduction

This document is a Draft Environmental Impact Statement (DEIS) for a proposed 1,365-unit residential development known as **Greybarn-Sayville Planned Development District** (PDD-GS; hereafter, the *"proposed project"*). This proposed project is located on the site of the former Island Hills Country Club, a 114.34-acre property in the hamlet of Sayville, Town of Islip, Suffolk County, New York. The subject site is located on the west side of Lakeland Avenue and the east sides of Bohemia Parkway and Hauppauge Road, between 11th Street and Sterling Place; the address of the site is 458 Lakeland Avenue. **Figures 1-1a and 1-1b** show the location of the project site *(all figures are located in the section following the main text of this document)*.

The site is identified by the Suffolk County Tax Map numbers listed in **Table 1-1**; the **Boundary and Topographic Survey** (*in a pouch at the back of this document*) indicates the location of each tax lot.

TABLE 1-1
TAX LOTS
Project Site

District	Section	Block	Lot(s)
0500	257	03	03
	280	01	2
			3
			4
			10
			15.1
			16

The Island Hills Country Club ceased operations in 2015, and is presently unused and unoccupied. This property is gated and fenced, the country club buildings are closed and sealed, and the golf course has not been maintained as such since the site was closed.

The application for the proposed project includes the creation of the proposed PDD-GS into the Town Zoning Code, as well as the change of zone for the subject site into the newly-created PDD GS district. for the entire site. A conceptual plan has been prepared for the proposed change of zone and to provide a basis for analysis under the State Environmental Quality Review Act (SEQRA) in this DEIS (see **Figure 1-2** and the **Conceptual Site Layout Plan** *(in a pouch at the back of this document)*. The proposed project involves rezoning the site from its existing Residence AAA district to PDD-GS, followed by development of the 1,365-unit rental residential community. The Applicant (385 IH LLC) has used the Residence CA zoning district as an outline for the proposed site-specific PDD-GS. Specifically, the Town Board instituted the Residence CA district for multi-family residential development having locational characteristics including:

- proximity to a downtown center or in the alternative existing retail services.
- convenient access to public transportation services.
- a site of sufficient size and shape so as to provide for the adequate buffers, landscaping and setbacks.
- a site of sufficient size so as to provide for adequate parking while still maintaining a residential appearance to the site.
- a site shall be of sufficient size so as to provide for ample open space and/or recreation areas consistent with the needs of the residents

In this way, the site would be built under some of the development standards that are well-established in the Town, so that the physical layout of the site will be consistent with that of other, CA-zoned properties.

The project will include on-site stormwater controls and sanitary wastewater treatment systems, connections to the public water supply, interior recreational and accessory amenities (limited to the site's residents, and including interior open spaces, outdoor pool/patio areas, and an internal walking trail network), and a 25-acre public open space area along the perimeter of the site, in which a pedestrian path is proposed.

A number of the project's features represent Community Benefits, which are required for a PDD in the Town of Islip, and include:

- designating 217 of the units as "affordable," as defined by the Town in Section 68-3, for rent at rates below prevailing market rates for a comparable unit;
- providing a 25-acre public park around the perimeter of the site;
- generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs
- generation of an annual net tax revenue benefit to the Connetquot Central School District (CSD) of $2.99 million
- installing a new sewer force main southward to downtown Sayville, so that businesses can connect to it and be served by the project's sanitary wastewater treatment system; and
- designing the capacity of the project's sewage treatment plant (STP) with a capacity in excess of that needed for the project, in order to accommodate the sewage flow from the downtown Sayville businesses (cumulative impacts associated with this feature are addressed in **Section 4.2**).

The applicant offers sewer main infrastructure as a no-cost monetary benefit to the Town of Islip. Such infrastructure may be used for treatment of existing wastewater flow generated in the downtown Sayville area, which provides a substantial nitrogen environmental reduction benefit based on existing conditions. The Town will determine when and how such sewering will occur. To realize this benefit, the Town will need to form a sewer district which will include a map and plan and rate/cost information for connectees. Once the service area of the district is

determined, additional analyses may be needed to assess potential growth based on the district, existing zoning, Town comprehensive planning efforts and land use analysis. Given these factors, the offer of sewer main infrastructure remains a monetary benefit to the Town to address groundwater and downgradient surface water impacts from existing development

The Residence AAA district permits a variety of development types, including detached single-family homes, places of worship, public parks or libraries, municipal buildings, railway stations, and agricultural or nursery uses. Based on the minimum lot size of 40,000 square feet (SF) in the Residence AAA District, an estimated 98 homes could be developed on the site (see **Yield Map**, *in a pouch at the back of this document*).

This document describes the proposed project, identifies its potential adverse environmental impacts and the significance of those impacts, and examines mitigation measures where necessary. Further, it is intended to assist the Islip Town Board (as lead agency under SEQRA), in taking a "hard look" at the proposed project to enable the Board to render an informed decision on the application.

1.2 Project Background, Need, Objectives and Benefits

1.2.1 Description of the Town's PDD Ordinance

A change of zone application for the proposed project was submitted to the Town in March 2017. The application requests Town Board approval to rezone the subject site to PDD-GS and to simultaneously add a new "Island Hills Planned Development District" section to the Town Zoning Code (Chapter 68 of the Town Code) wherein development standards and regulations specific to that PDD will be codified (see **Appendix A-1**). A description of "Planned Development District" (PDD; also known as a "Planned Unit Development") is given in Section 261-c of the New York State (NYS) Town Law, as follows:

> Section 261-c. Planned unit development zoning districts. A town legislative body is hereby authorized to enact, as part of its zoning local law or ordinance, procedures and requirements for the establishment and mapping of planned unit development zoning districts. Planned unit development district regulations are intended to provide for residential, commercial, industrial or other land uses, or a mix thereof, in which economies of scale, creative architectural or planning concepts and open space preservation may be achieved by a developer in furtherance of the town comprehensive plan and zoning local law or ordinance.

The Town of Islip does not have a general PDD ordinance in its Zoning Code, and so the Town Board relies on authority granted it under Section 261-b. 2. of the NYS Town Law to establish location-specific Planned Development Districts. The authority is provided in NYS Town Law as follows:

> Section 261-b. 2. Authority and purposes. In addition to existing powers and authorities to regulate by planning or zoning, including authorization to provide for the granting of

incentives, or bonuses pursuant to other enabling law, a town board is hereby empowered, as part of a zoning ordinance or local law adopted pursuant to this article, or by local law or ordinance adopted pursuant to other enabling law, to provide for a system of zoning incentives, or bonuses, as the town board deems necessary and appropriate consistent with the purposes and conditions set forth in this section. The purpose of the system of incentive, or bonus, zoning shall be to advance the town's specific physical, cultural and social policies in accordance with the town's comprehensive plan and in coordination with other community planning mechanisms or land use techniques. The system of zoning incentives or bonuses shall be in accordance with a comprehensive plan within the meaning of *section two hundred sixty-three* of this article.

Note that Section 261-b.2 provides for "incentive zoning" as a vehicle whereby the goals of the PDD may be achieved. Incentive zoning is defined by Section 261-b 1.c as *"… the system by which specific incentives or bonuses are granted, pursuant to this section, on condition that specific physical, social, or cultural benefits or amenities would inure to the community [i.e., "community benefits"]."* Section 261-b 1.b defines Community Benefits as *"…open space, housing for persons of low or moderate income, parks, elder care, day care or other specific physical, social or cultural amenities, or cash in lieu thereof, of benefit to the residents of the community authorized by the town board."*

Under the proposed PDD-GS regulations for the project (see **Appendix A-1**), the site would be permitted a density of up to 9 residential units/acre; for the 114.34-acre subject site, this would be 1,029 units (also known as the "as-of-right [AOR] yield"). These same regulations require that at least 10% of the AOR yield (103 units) be designated for "affordable" or "workforce" units, which will be permanently designated for occupancy at a rate below market rate.

In addition, these regulations also allow for extra, or "incentive" density to be developed, to be offset via use of one or more of the three mechanisms below, each allowing incentive density at a rate of 1 unit/acre:

- proposing affordable units to be additional as-of-right units,
- using alternative renewable energy sources to satisfy 30% of the project's energy needs, or
- committing to achieving Leadership in Energy and Environmental Design (LEED®) Certified or NGBS (Bronze) Standards status for site development.

Finally, when incorporating incentive yield, the proposed PDD-GS regulations would limit the overall yield on the subject site to 12 units/acre, or 1,372 units.

The Applicant proposes to provide for the requested incentive yield by:

- designating 114 additional units beyond the 103 AOR units as affordable, and
- using a combination of alternative energy sources and LEED® features (see **Appendix A-2**).

Thus, the total number of affordable units provided by the project is 217. In this way, the proposed project provides a substantial number of affordable units as a Community Benefit sought by NYS Town Law Section 261-b 2.

It is anticipated that the proposed project's inclusion of substantial public open space, provision of 217 affordable rental units, and provision of sanitary wastewater treatment and disposal to businesses in the Sayville hamlet downtown represent the Community Benefits noted in Section 261-b.1.b (see above) and provided by the Applicant via the requested PDD-GS. The number of proposed residential units is about 12 units/acre for the site.

The Community Benefits for the proposed project are substantial and are presented in **Section 1.2.5** below; the project's conformance to the goals and requirements for a PDD under NYS Town Law are discussed in **Section 3.2.2**.

1.2.2. Project Background and History

Site History

As noted above, the Island Hills Country Club closed in 2015, and the site was closed and gated at that time; the property has remained unused and unoccupied since, except for occasional visits by maintenance personnel operating at the direction of the site owner 385 IH LLC (the Applicant), which owns all of the parcels that comprise the subject site, as shown in the **Boundary and Topographic Survey** and the **Conceptual Site Layout Plan**.

Phase I and Phase II Environmental Site Assessment (ESA) reports were prepared for the subject site by P.W. Grosser Consulting, Inc. (PWGC) in 2018 (see below). The following information on the history of the site has been derived from these documents:

> Historical information for the subject property and information from internet searches indicates that it was first developed and operated as a golf course in 1927, and the current pool house was the original club rental/caddie building. During a portion of World War II, the golf course was temporarily shut down and the site was used as a paratrooper training landing zone.
>
> PWGC performed a review of readily available aerial photographs showing the subject property and surrounding area. Photographs were reviewed for the years available which include 1938 to 2015. Review of the photos is summarized below.

Date	Source*	Issues Noted	Description
1938	AP	Yes	The subject property appears to be developed as a golf course, the club house in the northeastern section of the site is constructed.
1947 - 2015	AP, CD	Yes	The golf course appears to have been improved with several additional buildings between 1954 and 1962, including the pool house, the pro-shop, the central maintenance building [CMB] and

			the south maintenance building [SMB; see **Figure 1-3**]. A road running between Lakeland Avenue and the golf course in front of the club house was closed and a parking lot was created in front of the club house. The city directory includes listings for a caterer.

* AP - aerial photography; CD - City Directory.

It is expected that the subject site was substantially cleared and graded when the golf course was initially developed in 1927, though documentation of the site is not available until the 1938 aerial photographs were taken.

Application History

The Applicant submitted a change of zone application for the site with the Islip Town Board in early 2017 (see **Appendix A-3**). In response to that submittal and as mandated by SEQRA, the Town Board conducted a coordinated review with interested and involved agencies, and ultimately chose to assume lead agency status. On December 19, 2017, the Town Board issued a Positive Declaration on the application, requiring preparation of an EIS (see **Appendix A-4**). The Applicant prepared a draft scope and submitted it to the Town Board, which conducted a public scoping meeting in May 2018. Following a period of review and comment, the Town Board issued its Final Scope on June 19, 2018 (see **Appendix A-5**). It is on this document that this DEIS has been prepared.

Easements

The **Boundary and Topographic Survey** *(in a pouch at the back of this document)* shows that there are three easements on the project site. These include:

- Electric Easement, 10 feet wide, abutting the property's southern boundary along Sterling Place;
- Telephone, Gas & Electric Easement, 25 feet wide within the site on the eastern half of the Chester Road Right-of-way (ROW); and
- Water Easement, 50 feet wide, within the site on the western side of Lakeland Avenue.

Additionally, an area of about 13,500 square feet (SF) lies in an area affected by a C&R (Covenant and Restriction) recorded in the County Clerk's office. It is within the subject site, south of and abutting the above-named water easement, along Lakeland Avenue. This C&R was filed in 1927 and prohibits the construction of a wireless tower, a piggery for more than two pigs, or a "flat roof "structure at this location (see **Appendix A-6**).

Finally, there is some land within the site in mapped Town road ROWs that have not been implemented as such. These include:

- Durham Road (1,775 feet);
- Chester Road (600 feet);
- Fifth Street (485 feet); and
- Sixth Street (615 feet).

History of Environmental Site Assessments and Remediation Activities

The project site has been the subject of several previous ESAs and remediation efforts. The following information in this regard has been taken from the 2018 Phase I ESA prepared by PWGC (see **Appendix B-1** and **Figure 1-3**).

Phase I Environmental Site Assessment by PWGC - Parcels 1 and 2 (April 2006)

The 2006 Phase I encompassed the lots associated with the club house parking lot (not the building) and with the two residential houses. The following items of note were identified in the Phase I, including one REC [Recognized Environmental Condition]:

- Asbestos was likely observed in the south residential house and potentially exists in the northern residential house, as well.
- Several sanitary structures were observed in the parking lot of the club house. An evaluation of the sanitary system revealed that it consists of two separate systems: one system consists of a single leaching pool and the second system consists of septic tank, a distribution tank, and five primary cesspools. The sanitary system was identified as a REC.
- In the basement of the northern residential property, adjacent to a boiler, a 4-inch diameter hole was present in the concrete floor. It appeared that this drain was used to discharge water from the boiler during maintenance.
- An inspection of the southern residential property revealed the presence of gas and oil storage associated with the lawnmower and yard equipment. A small area of oil staining was present. PWGC also observed two 5-gallon pails that looked as if they may have contained oil.

Phase II Environmental Site Assessment by PWGC – Parcels 1 and 2 (April 2006)

To address the REC identified in the preceding Phase I, sampling of the club house's two eastern sanitary systems was conducted in February 2006. Samples were collected from the one standalone leaching pool and from three of the primary leaching pools of the second system and analyzed for SCDHS [Suffolk County Department of Health Services] SOP [Standard Operating Procedure] 9-95 criteria; the samples from the larger system were also analyzed for pesticides and herbicides. Analytical results indicated that one of the primary leaching pools (S-4) of the larger system contained exceedances of SCDHS Action Levels for volatile organic compounds (VOCs) and copper, indicating that remediation was required. In addition, S-4 also contained detectable concentrations of two pesticides; however, the concentrations were less than the Recommended Soil Cleanup Objectives (RSCOs).

Based upon the concentrations observed in S-4, additional sampling was conducted in March 2006 to investigate the three other primary leaching pools in the larger system and to investigate groundwater quality in the vicinity of S-4. Analytical results from the three leaching pools were less than applicable standards. Two groundwater samples were collected approximately 10 feet downgradient of S-4; groundwater was encountered approximately 20 feet below grade. Groundwater analytical results contained several VOCs in slight exceedance of NYSDEC [NYS Department of Environmental Conservation] Ambient Water Quality Standards [AWQS], particularly several chlorobenzene compounds, acetone (a typical

laboratory contaminant), benzene, and toluene – the maximum concentration was 72 µg/L [micrograms per liter] of chlorobenzene. PWGC recommended remediation of S-4 and indicated that, based upon the relatively low exceedances in the groundwater, no further action would be warranted past removing the source material in S-4.

Phase I Environmental Site Assessment by PWGC – Parcels 4, 6, 7, and 8 (June 2006)
An additional Phase I was prepared that covered the golf course and its associated buildings. The Phase I ESA indicated that the site was first developed as a golf course in 1927 and the current pool house was the original club rental / caddy building. Briefly during World War II, the golf course was shut down and the property was used as a paratrooper training landing zone. Following the war, the property resumed its operation as a golf course.

Clubhouse

- Three additional sanitary systems are located on the north side of the building for the bar/restaurant and two locker rooms (it was later determined during the July 2006 Phase II that there were only two sanitary systems located on the north side of the building). The two sanitary systems on the east side of the building were previously documented under the April 2006 Phase I ESA.
- A transformer pad located south of the club house contained staining. Transformers are typically owned and maintained by the local power authority.

Pro-shop

- Manholes were observed south of the building and a sanitary vent along the center of the building, indicating the potential for two sanitary systems to be associated with the pro-shop.
- A 550 gallon fuel oil AST [aboveground storage tank] was located east of the building and was in direct contact with the soil. No signs of leaks were observed.
- Evidence of a potential UST [underground storage tank] was observed.

SMB [South Maintenance Building]

- A below grade sanitary system is located south of the building. Staining was observed in a slop sink, indicative of improper discharges.
- A maintenance pit was observed in the south garage bay.
- A 300 gallon diesel AST within secondary containment was identified. The AST appeared to be in good condition.
- A 1,000 gallon gasoline UST was identified near the building.
- A chemical storage trailer was located north of the SMB.

CMB [Central Maintenance Building]

- A sanitary system with one structure at grade was observed northeast of the building.

Pool house

- A manhole potentially related to a sanitary system was identified on the north side of the building.

Stormwater drains are located in the parking lots near the club house, the pool house, the SMB, and two stormwater drains were identified within the golf course.

Throughout the buildings, numerous typical cleaning supplies were identified. The majority of the chemical storage was located in the SMB and the storage container located north of the building. The chemical storage consisted mainly of fertilizers, fungicides, plant growth regulators, motor oil, lubrication oil, and waste oil. Storage of 5 gallon pails of chlorine were observed in the pool house pump room.

A debris pile was observed in a wooded section between Holes 1 and 2. The remains of several metal 55 gallon drums were observed, most of which were in poor condition and could not hold liquid. A plastic 55 gallon drum was observed which contained an unknown liquid. Drum labels were not observed. Another two debris piles were observed in the vicinity of Holes 13 and 16 that contained soil and landscaping.

Phase II Environmental Site Assessment by PWGC (July 2006)

A Phase II ESA was performed to assess general site conditions and to address RECs identified in the June 2006 Phase I. Phase II activities included collecting soil samples across the golf course from shallow and deep depths and near petroleum storage tanks, collection of groundwater samples, and sampling of on-site sanitary and stormwater systems. [Soil borings on the site are shown on the **Grading, Drainage and Utility Layout Plan**, *in a pouch at the back of this document*.]

Club house

- Investigation of the clubhouse identified two sanitary systems to the north of the clubhouse (located to the northeast and northwest). Sampling of the systems identified elevated VOCs in the northeast system. Remediation of that system would be required. The northwest system did not require remediation.
- A soil sample was collected adjacent to the transformer and analyzed for PCBs [polychlorinated biphenyls]; results were non-detect. No further action was necessary for the transformer and pad oil staining.

Pro-shop

- Analytical results from a soil sample collected adjacent to the 550 gallon AST contained detectable concentrations of some SVOCs [semi-volatile organic compounds]; however, concentrations were less than applicable NYSDEC RSCOs, indicating remediation would not be required.
- The sanitary system was sampled for SCDHS criteria and pesticides. No detections in excess of SCDHS Action Levels were encountered, so remediation of this system would not be required.
- An additional sanitary system may have been identified in the golf cart storage area which could not be further investigated at the time.
- The suspected UST was located and estimated to be 550 gallons.
- A soil sample was collected from mounded soil east of the pro-shop and analyzed for VOCs, SVOCs, metals, pesticides, and herbicides. Six compounds were identified that exceeded RSCOs at the time.

Golf course

- The two stormwater drains on the golf course were sampled for SCDHS SOP 9-95 criteria, pesticides, and herbicides. Analytical results showed no remediation was required.
- Twenty-nine soil samples were collected from the golf course areas from the fairways and landscaping debris piles around the course as a whole. Analytical results identified elevated levels of metal (mainly mercury) and historic pesticides when compared to RSCOs present at the time from a majority of the samples. When compared to current regulations, less than 35% of the samples exceeded RSCOs.
- Six groundwater samples were collected from around the site to determine general groundwater quality. Samples were analyzed for VOCs, SVOCs, metals, pesticides, and herbicides. Analytical results were less than AWQS [ambient water quality standards] with the exception of some metals in the unfiltered samples, likely due to the result of turbidity. Filtered samples were not run at the time.

CMB [Central Maintenance Building]

- Due to a collapsing concrete cover, the sanitary system was not sampled. [Note that the structure was not accessible at the time, but the sampling was conducted later as part of the applicant's due diligence, so that the SCDHS was not involved at that time. This structure was later sampled as part of the October 2015 work described below.]

SMB [South maintenance Building]

- A soil sample collected from the maintenance pit was sampled for VOCs, SVOCs, metals, pesticides, and herbicides. Analytical results showed removal of the sediment and sealing of the pit was recommended.
- The slop sink drain was traced to a below grade sanitary structure south of the SMB. The structure was 1 foot below grade, uncovered, and sampled. Results showed remediation was required due to elevated SVOCs, mercury, and one pesticide compound.
- The two stormwater drains were also sampled; one of them contained exceedances of two pesticides and mercury exceeding indicating that remediation was required.
- One soil sample was collected adjacent to the 1,000 gallon gasoline UST. The sample was collected from 10 to 12 feet below grade and analyzed for VOCs and SVOCs. Analytical results were non-detect, indicating that a release from the tank has not occurred.
- Two surface soil samples were collected near the chemical storage trailer and analyzed for pesticides, and herbicides. One pesticide and mercury were detected at concentrations slightly exceeding RSCOs, consistent with the sitewide samples for the property. These results indicated that no specific release occurred in the vicinity of the former chemical storage area.

Pool house

- The sanitary system is located southwest of the building and consists of a single leaching pool. It was sampled and results showed remediation was not required.

UIC [Underground Injection Control] Remediation by F&E (2007)

To address contamination noted in PWGC's April 2006 Phase II, additional sampling of the sanitary and stormwater drains in the parking lot east of the club house was conducted on August 7, 2007 by Freudenthal & Elkowitz Consulting Group, Inc (F&E) under the oversight of

SCDHS. F&E characterized and collected sediment samples from thirteen sanitary and stormwater drains. Analytical results indicated that eight structures required remediation. In general, exceedances of the stormwater drains were typically from SVOCs and/or metals and from the sanitary system were VOCs and/or metals.

From September 14, 2007 to September 24, 2007, the SCDHS observed F&E direct the remediation of the sanitary and stormwater systems in the parking lot east of the club house. Endpoint samples were collected from leaching structures for submission to SCDHS. On April 1, 2008, the SCDHS provided a letter indicating that satisfactory remediation of the concerned areas of contamination had been accomplished and that no further extraction was mandated. This addressed the concerns of the PWGC 2006 Phase II report.

Removal of UST by VIP (2010)

On June 17, 2010, VIP Plumbing and Heating Contracting, Inc. (VIP) contracted with C2G Environmental Consultants for the removal of a 1,000-gallon gasoline UST from the subject property, in the vicinity of the SMB. No evidence of soil contamination was observed by means of screening the soils on site. The UST was inspected for cracks and holes; none were observed. A representative from the SCDHS was on-site to oversee the removal.

A composite soil sample was collected from the sidewalls and bottom of the excavation and analyzed for VOCs and SVOCs. Analytical results were non-detect and no further action regarding that UST was requested.

Phase I Environmental Site Assessment by PWGC (2014)

In December 2014, PWGC conducted a Phase I ESA at the subject property. This Phase I covered only Lot 15.1, the golf course. The following items of note were identified in the Phase I that have not been previously discussed:

- Several areas of soil and debris stockpiles were observed. The soil stockpile, which includes top soil, sand and recycled concrete aggregate (RCA), is located along the northern property line near the tee box for hole 10. There were no signs of staining or improper dumping in the location of these stockpiles. Debris and organic brush piles were identified on the western and eastern property lines. These debris piles were mainly organic matter (leaves, tree branches, wood, etc.). There was no evidence of improper dumping in these organic stockpiles.
- Evidence of the UST at the pro-shop was still present, indicating that the UST had not been removed

Site Remediation by PWGC (October 2015)

Several RECs identified over the years were addressed in October 2015.

Pro-shop

- The suspected 550 gallon UST was excavated. The UST was located approximately 6 inches below the concrete slab and was determined to be 330 gallons. There were no

holes identified in the UST and there was no evidence of contamination beneath the UST. A soil sample was collected 4 feet below grade and analyzed for VOCs and SVOCs. Analytical results were less than Soil Cleanup Levels. No further action was recommended for this REC.

- The potential second sanitary system was investigated. The below grade piping near the sanitary vent was uncovered and it was traced towards the previously known system, indicating that there was not a second system present. No further action was recommended for this REC.

CMB

- The cesspool structure located northeast of the CMB was sampled for SCDHS SOP 9-95 criteria. Analytical results were less than SCDHS Cleanup Objectives; therefore, no further action was recommended for this REC.

Club house

- A geophysical survey was conducted in the area of the suspected four leaching pools located to the northeast of the building. The geophysical survey and several test pits determined that there were only three leaching pools. The septic tank and three leaching pools were pumped out and sediments removed. There were no cracks or holes observed in the septic tank. Approximately 1 to 2 feet of sediments were removed from the leaching pools and endpoint samples were collected for analysis. No exceedances of SCDHS Cleanup Objectives were identified. No further action was recommended for this REC.
- The primary leaching pool of sanitary system located to the northwest of the building was also remediated. Approximately 2 to 3 feet of sediments were removed from the leaching pool and an endpoint sample was collected for analysis. No exceedances of SCDHS Cleanup Objectives were identified. No Further action was required.

SMB

- The primary leaching pool was remediated by removing 2 to 3 feet of sediments and collection of an endpoint sample for analysis. The two stormwater drains in the adjacent parking lot were also remediated by removing 2 to 3 feet of sediments; endpoint samples were. No exceedances of SCDHS Cleanup Objectives were identified. No further action was recommended for this REC.
- The maintenance pit in the garage was remediated by removing approximately 1 foot of sediment in the pit. A drain at the bottom of the pit was uncovered and an additional 1.5 feet of soil was removed from the drain. An endpoint sample was collected for. No exceedances of SCDHS Cleanup Objectives were identified and the drain at the bottom of the pit was sealed. No further action was recommended for this REC.

This remedial effort addressed most of the open issues identified in the previous Phase I reports with the exception of the surface soil issue associated with the use of turf maintenance chemical on the golf course.

Phase I Environmental Site Assessment by Partner (2017)

In September 2017, Partner conducted a Phase I ESA. Conclusions in this report consist of the following:

- Based on the information gathered from PWGC's Phase I and Phase II inspections in 2006 and 2007, Partner concludes that the former use of agricultural chemicals is expected to represent a significant environmental concern.
- Partner agrees that further management of onsite soils will be required if the subject property use changes, and that vertical mixing would be the most cost-efficient method for the amount of soil located at the site. SCDHS has not commented on the use of vertical mixing, but this technique is an accepted means to address concerns related to former agricultural/golf properties. The management of on-site soils was further assessed following the 2018 Phase II and the SMMP (see **Section 1.6.5**).
- A site management plan should be developed and approved by regulatory agencies; perimeter air monitoring is usually required during projects of this scope, and soil sampling throughout the process will be necessary.
- Partner agrees that, prior to construction activities, all remaining environmental structures (stormwater drains and cesspools) should be closed and sampled as appropriate. Any remaining ASTs should be cleaned and properly disposed of. Soil beneath each AST should be sampled if there is any indication of staining, leakage, or other visual signs of possible AST failure.

Partner's conclusion of significant environmental concern was based upon the limited 2006 investigation and the applicable regulations at the time. The Applicant is committed to completing the recommended soil management and system closures identified by Partner in 2017. The Soil and Materials Management Plan (SMMP) and the associated 2018 Phase I/Phase II are discussed in **Section 1.6.5**.

1.2.3 Public Need and Municipality Objectives

The proposed project will provide a permanent land use within the hamlet of Sayville through the construction of 1,365 rental apartment units. Additionally, the public will have access to a new, 25-acre open space along all of the property's borders, in which a public pedestrian path will be installed. Further off-site public benefits are proposed to serve public need as will be discussed in more detail herein.

The project responds to the public need for increased quality rental housing opportunities in the area. Since the nationwide slump in the housing market around 2010, the demand for rental housing – including for affordable units – is on the rise. This is particularly true on Long Island, which is characterized by higher property values and cost of living when compared to other parts of the state and nation. The lack of affordable housing has had a considerable negative economic impact on the region with respect to its young residents. Many businesses have been unable to find a skilled workforce, and have therefore been forced to relocate off of Long Island. The proposed development is responsive to this need, contributing to the long-term economic health

of the community through the provision of rental housing opportunities. The proposed project has been designed to incorporate internal walkability, sense-of-place features, safe and convenient pedestrian access throughout the site, and on-site recreational amenities for its residents. The proposed project would provide a significant number (1,365) of rental apartment units, thereby providing a positive contribution toward addressing demand for such housing needs in the Town (see also **Appendix C-1**).

The proposed use fulfills a housing need recognized in comprehensive planning documents analyzed herein and evidenced by current conditions. These plans include the Sayville Hamlet Study (1976) and the Suffolk County Sunrise Highway Corridor Study (August 2009). The proposed use is consistent with other rental housing developments in the Town with regards to overall density and floor-area ratio (FAR). A more detailed assessment of the proposed project's conformance to applicable land use plans is provided in **Section 3.2.2**.

The project will reduce the burden on some community service providers relative to as-of-right development through private ownership and maintenance of the internal open space, roadways, sanitary wastewater treatment system (i.e., the STP and the sewer connection to downtown Sayville), and drainage system, thereby reducing the need for Town highway maintenance, snow plowing, drainage system maintenance and related efforts. The project's building design and resident facilities (e.g., the indoor recreation amenities, the outdoor pool/patio areas, outdoor furniture, and project landscaping) will establish a sense of place and community interaction on the site. As determined by the analysis in **Appendix C-2**, the project will result in significantly increased tax revenues for public service providers, which will assist in offsetting the expected incremental increase in demand for these services.

1.2.4 Objectives of the Project Sponsor

The following discussion of the project's conformance to housing market needs has been taken from the Conclusions portion of the Market Analysis (see **Appendix C-1**):

> The…market analysis illustrates the strength of the local multifamily rental housing market in Central Long Island and in the area surrounding the Island Hills Golf Club. The area's low vacancy rates (2.2 percent in the Greater Sayville Area), and consistently increasing residential rents show that the market is ripe for additional multifamily housing units.
>
> In recent years, as Central Long Island's population continues to age, the area has experienced very little population growth. From 2010 through 2018, Central Long Island experienced only 0.2 percent household growth. This stagnant growth is likely at least partially attributable to the area's relatively old housing stock, which predominantly consists of owner-occupied single-family homes. The lack of housing diversity particularly affects smaller households (single-person and two-person households), many of which are comprised of millennials [assumed to include young singles] or seniors. An individual who earns median income ($81,700) can afford less than one quarter of the for-sale homes on the market.

Nationally, demand for multifamily rental housing continues to increase, especially among the millennial generation. Young adults today face economic hurdles that make it difficult to purchase a home, including increased housing costs coupled with stagnant wages and increased levels of student debt. This is especially true in the New York Metro Area, which has one of the highest average home price-to-income ratios in the country. Young adults' preferences are also changing, with many choosing to marry and/or start a family later in life, further delaying the decision to purchase a home. Many millennials, as well as seniors who have chosen to "downsize," are drawn to high-quality rental developments that offer extensive amenities that make life convenient and comfortable.

Regional household growth projections by the New York Metropolitan Transportation Council suggest that Central Long Island has an opportunity to significantly grow through year 2040. Attracting new households would increase the size of the local talent pool, positively impacting the local economy. Additionally, ensuring that young households have the opportunity to rent in Central Long Island will also ensure that later, as owners age out of their single-family homes, there is an adequate supply of potential buyers with established roots in the community. Rental opportunities serve as an "investment gateway," enabling younger households to begin establishing roots in a particular geographic area. Later, when they decide to become homeowners, those households are likely to remain in same geographic area, increasing demand for local for-sale housing, thereby boosting property values and benefitting existing homeowners in the surrounding community.

In consideration of the demographic, employment and real estate data collected, and the analyses conducted for the Market Analysis, it is the Applicant's expectation that there is a demand for the type of housing offered by the project in the area, so that the proposed project will prove successful from fiscal and land use perspectives and will service community needs and objectives of the project sponsor in providing an attractive form of housing for millennials and seniors who wish to remain in the community and on Long Island.

The Applicant's objectives in pursuing the proposed project include the following:

- Enable provision of Community Benefits, as required by the NYS Town Law for a PDD, and include:
  - provision of 217 affordable units;
  - provision of a 25-acre public park around the perimeter of the site;
  - generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs;
  - generation of an annual net tax revenue benefit to the Connetquot CSD of $2.99 million;
  - installing a sewer line to downtown Sayville, so that businesses can connect to it and be served by the project's sanitary wastewater treatment system; and
  - providing the additional capacity at the on-site private STP to serve the flow from the businesses in downtown Sayville that are connected to the new sewer.

- Open up a large portion of the site (approximately 20%) that historically was available only to members of the private golf club, and provide an off-street pedestrian path and adjacent park spaces on the perimeter of the site for public use.
- Provide a positive addition to the Sayville community, transforming a closed and shuttered golf club which has become an eyesore into a tax-generating, upscale community.
- Construct a beautifully-designed and landscaped community that will be an asset to the Sayville community.
- Significantly increase revenues generated from property taxes above what is currently collected.
- Generate significant sales to the county and property taxes that will benefit the Connetquot CSD as well as the West Sayville Fire Department and Ambulance and Library Districts.
- Utilize the flexibility inherent in the PDD concept to locate incentivized yield on the subject site.
- Provide needed housing choices for singles, couples and empty-nesters who want to live in Sayville but can't find the maintenance-free lifestyle they want and need.
- Increase home values in the community by increasing the pool of potential homebuyers who will need larger living space.
- Provide high-quality rental housing that is lacking in the area.
- Create an economic boon to downtown Sayville that has been weakened by the recession, a change in buying habits due to online shopping, and the lack of sanitary sewers.
- Reduce the amount of nitrogen and other chemicals going into the groundwater by implementing an on-site state-of-the-art STP to serve both the proposed development and downtown Sayville businesses. This investment in much-needed sanitary infrastructure that is in high demand throughout Suffolk County would allow, subject to Town approval, economic growth and development in downtown Sayville.
- Establish a design that reflects the rich architectural heritage of the South Shore.

The Applicant's objective is motivated in part by the desire to produce a profitable economic return on the land investment, which would result from a high-quality development. The Applicant seeks to provide uses and public benefits that will enable the site to be redeveloped in a manner that achieves Town goals, and complements the surrounding land uses while providing an economic return to local taxing jurisdictions through increased tax revenues and job creation.

Most importantly, the project sponsor seeks to build a successful, quality rental housing community that will become an asset to its residents and the surrounding community. The Applicant intends to make this community unique and desirable through quality construction and superior architecture. The development will include indoor and outdoor recreational amenities, landscaping, open space and buffering for aesthetic appeal. As much of the existing vegetated perimeter buffer will be retained as practicable, and will be supplemented with additional landscape plantings. It is also noted that drainage system design will ensure conformance with

Town requirements, and will conform to applicable NYSDEC permitting requirements (see additional information in **Section 1.4.3**).

The Applicant seeks to provide energy-efficient housing in conformance with Town Code Section 68-30, and embraces the concept of ensuring a more energy-efficient project than mandated by meeting the NYS Energy Code. Energy efficiency benefits the overall environment, reduces dependency on non-renewable resources thus providing an energy policy and use benefit, and benefits the residents through decreased operational costs of living space and site amenities. In general, energy-conserving materials, fixtures and mechanical systems will be utilized where practicable to reduce the total energy demand of the project. No determination by the Applicant regarding use of solar energy equipment or systems has been made at the present stage of the application process. The Applicant will incorporate appropriate energy-saving designs, materials, equipment and systems, and is willing to consider active solar energy systems (e.g., rooftop solar panels) and LEED® features and concepts, but such decisions will be made later, during the site plan application process (see **Section 1.4.5**).

1.2.5 Benefits of the Proposed Project

<u>Provision of Community Benefits to Offset the Increased Yield</u>
In conformance with Town Zoning Code requirements for use of affordable units as an incentive in the proposed PDD-GS District, the project provides a substantial number of such units as a Community Benefit sought by NYS Town Law Section 261-b 2. **Table 1-2** summarizes information on the dollar values of the Community Benefits of the proposed project, as well as preliminary information on the approximate timing of when each will be implemented.

The combined Community Benefits and features justifying the incentive zoning of the proposed project include:

- 217 affordable units
- 25 acres of public open space
- Generation of approximately 1,404.0 FTE job opportunities during construction and approximately 60.1 FTEs during operation.
- Generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs
- Generation of an annual net tax revenue benefit to the Connetquot CSD of $2.99 million
- Sanitary sewer line extension to serve downtown Sayville businesses (Phases I and II)
- Extra capacity designed into project's STP, to serve the flow from downtown Sayville
- Committing to using a combination of alternative energy sources and LEED® features
- The project will further the goals of the Town of Islip and the County of Suffolk, which include positive economic growth and the retention of young people, in terms of providing quality rental housing opportunities.

- The proposed project satisfies the standards given in Sections 261-b and 261-c of the NY Town Law for incentive bonus density and a PDD, respectively, ensuring that the benefits of the PDD concept are realized.
- The project will relate to community context by its conformance to similar and complementary uses on abutting sites to the east, west and south.
- The proposed project conforms to the spirit and intent of the type of use recommended for the site in the 1976 Sayville Hamlet Study. Though the golf course cannot be retained, residential development is clustered on the site to provide a quality multiple family/apartment use with internal sense-of-place and community enhancement through a 25-acre passive/active perimeter park.
- Use of the site in conformance with the recommendations of the 2009 Sunrise Highway Corridor Study (for continued recreational use) is not viable. It is noted that this Study was not adopted by the Town of Islip Town Board.
- Provide a "sense of place" through attractive community architecture, gathering areas, walking opportunities, landscaping and interior setbacks and open space.
- The project will utilize a superior site design providing on-site stormwater retention/recharge, utilities and services, and public open space/recreational amenities.
- The project will utilize high-quality architecture and landscaping design.
- The site will be privately maintained, thereby minimizing the increase in public expenditures for road, sanitary wastewater treatment and drainage system maintenance.

The above-listed considerations, taken in conjunction with the dollar value of a number of the expected benefits (in **Table 1-2**), establish that the project would compensate for the requested increased yield of the project made possible by the use of the PDD concept and the Town's density incentive legislation.

<u>Incentive Zoning/PDD Goals</u>

As discussed in **Section 1.2.1**, the project conforms to the yield and density regulations of the new PDD under which the project is to be developed, which will in turn be incorporated into the Town Zoning Code. It is acknowledged that the density of the proposed project, which is about 12 units/acre, is higher than some residential properties in the vicinity. However, it is noteworthy that the area is developed at a range of densities, from low to medium/high (i.e., 1 to 6± units/acre). The figure shows that land contiguous to the west is developed at 2 units/acre, while properties to the north and south are developed at a density of 6 units/acre (half that of the project). The project is not out of character with the area, based on the mix of densities in the area the project features noted above. Further information on land use is provided in **Section 3.2**. The proposed project will increase the acreage of higher-density residential development in the vicinity of the project site; however, the site is large and well-suited for this type of development in consideration of the setbacks, buffers, visual character, perimeter park accessible to the public, location adjoining Sunrise Highway, the need for this form of housing and the extensive public benefits it includes. There are two sites in the area having the same or similar density as the proposed project, so that the proposed project will not set a precedent for higher density development in the area.

TABLE 1-2
COMMUNITY BENEFITS

Community Benefit	Value ($) (1)	Timing of Implementation
217 affordable units	26,289,960 (2)	Continually, as each phase is constructed and the residences are occupied
25-acre public park	2,500,000 (3)	
Increase in annual wages from direct jobs	4,030,687	
Increase in annual wages from indirect jobs	5,323,179	
Increase in annual wages from induced jobs	2,300,386	
Net annual tax revenue increase for Connetquot CSD	2,990, 184 (4)	
Installing sanitary sewer line to downtown Sayville	6,715,330 (5)	Commences with Phase 1 of residential construction program; completion no later than completion of Phase 3
Providing capacity at STP for sanitary flow from downtown Sayville businesses		

(1) 2019 dollars.
(2) Determined by taking the difference between the average annual market rents and the average annual work force housing rents and applying a market capitalization rate of 10%.
(3) Reflects value of the park acreage assuming $100,000/acre and improvement costs (e.g., walking path, fitness areas, dog runs, etc.).
(4) Reflects increased tax revenue allocated to Connetquot CSD in excess of increased district expenditures for enrollment increase from project.
(5) Includes Phase I of STP construction and Sayville Business District access to sanitary system construction ($3,828,107) and Phase II Sayville Business District Low Pressure Sewers (engineering cost estimate of ($2,887,223).

Fiscal and Economic Benefits

The following discussions of fiscal and economic impacts associated with the project have been taken from the Fiscal and Economic Impact Summary (see **Appendix C-2** and **Table 1-3**).

Fiscal Impacts

- For taxing purposes, and according to the Town of Islip Assessor, the total estimated market valuation of the proposed project is approximately $39.3 million. The proposed project will significantly increase taxes generated by the site, resulting in a substantial increase in revenues distributed to each taxing jurisdiction. Upon full build-out and a stabilized year of operations, the proposed project is estimated to contribute over $10.1 million[1] in annual tax revenue.
- Upon full build-out, over $7.3 million will be received by the two school districts, with the Connetquot CSD anticipated to receive over $6.4 million and the four tax lots in the Sayville UFSD [Union Free School District; SCTM number 0500-257-3-3 and 0500-280-1-2, 3, and 4] to generate $483,302 in tax revenue.

[1] It is important to note that there will be an incremental tax increase that would be realized by the Town until all of the improvements are fully taxed. It is anticipated that the proposed project will be built in phases, with the completion of the proposed project to occur in 2026.

TABLE 1-3
SUMMARY OF KEY FISCAL FINDINGS

Fiscal Parameter	Impact
Total Residents	2,705
School-Aged Children	*210*
School-Aged Children Projected to Attend Public Schools	*199*
Expenditures Incurred by Connetquot CSD by Project	$3,490,136
Projected Total Tax Revenue: Proposed Project	$10,149,131
To Sayville UFSD	*$483,302*
To Sayville Library District	*$32,225*
To Connetquot CSD	*$6,480,320*
To Connetquot Library District	*$312,539*
To Suffolk County	*$1,233,627*
To Town of Islip	*$812,072*
To Other Local and Special Taxing Jurisdictions	*$795,046*
Net Annual Revenue (Impact) on Connetquot CSD	$2,990,184

Source: Analysis by Nelson, Pope & Voorhis, LLC.

- An additional $312,539 is projected to be levied by the Connetquot Library District and $32,225 by the Sayville Library District.
- Over $1.2 million, or 12.2% of the total tax revenues, are projected to be distributed to Suffolk County, and approximately $812,000 (8.0% of the tax revenue) is projected to be levied to the Town of Islip.
- The West Sayville-Oakdale Fire District is projected to levy over $440,000, or 4.3% of the total tax revenue generated by the proposed project, and the Sayville Community Ambulance is projected to generate $105,324 or 1.0% of all revenues.
- The balance of the current property tax revenues is projected to be apportioned to various other local taxing jurisdictions including NYS Real Property Tax Law, NYS MTA [Metropolitan Transportation Authority] Tax, and the Town Street Lighting District, among others.
- It is projected that 210 school-aged children will reside at the proposed project. The majority of the site (117.1 acres, or 99.2%) is located within the Connetquot CSD, and a small portion (0.93 acres, or 0.8%) is located within the boundaries of the Sayville UFSD. However, it is not expected that any of the residential development will occur within the boundaries of the Sayville UFSD, and for the purpose of this analysis, it was assumed that all students would be enrolled in the Connetquot CSD.
- It is estimated that a total of 11 students will attend private schools; the remaining 199 students are likely to attend public schools within the Connetquot CSD.
- It is estimated that the 199 students will result in additional costs to the Connetquot CSD amounting to approximately $3.49 million per academic year. However, the proposed project is anticipated to levy tax revenues for the Connetquot CSD, estimated to total over $6.4 million per year upon full build-out. These property tax revenues would cover all associated expenses incurred by the 199 public-school students, resulting in a net surplus

revenue to the Connetquot CSD of nearly $3.0 million per year. This net revenue could ease the district's need to tap into additional fund balances and could also help alleviate an increased burden on other taxpayers throughout the district

Economic Impacts of Construction

A summary of key economic findings during construction is provided in **Table 1-4.**

TABLE 1-4
SUMMARY OF KEY ECONOMIC FINDINGS
Construction

Impact Type	Output (Revenue)	Employment (Number of Jobs)	Labor Income (Wages)
Total: All Phases of Construction			
Direct Impact	$318,274,045	1,404.0	$158,796,084
Indirect Impact	$100,845,575	708.0	$41,287,695
Induced Impact	$138,471,866	941.0	$49,237,746
Total Impact	$557,591,480	3,052.9	$249,321,523

Source: Direct impact of output (annual revenues) and employment provided by R Squared Development, LLC; Labor income estimated by New York State Department of Labor; Analysis by Nelson, Pope & Voorhis, LLC, via IMPLAN software.

Economic Impacts of Annual Operations

A detailed analysis of direct, indirect and induced impacts generated annually during operations is outlined in **Table 1-5** below. It is important to note that each of these impacts is permanent and on-going and they are projected on an annual basis, assuming continued stabilized operations.

TABLE 1-5
ECONOMIC IMPACTS OF A STABILIZED YEAR OF OPERATIONS
Proposed Project

Impact Type	Output (Revenue)	Employment (Number of Jobs)	Labor Income (Wages)
Direct Impact	$41,416,404	60.1	$4,030,687
Indirect Impact	$14,124,823	104.4	$5,323,179
Induced Impact	$6,431,337	42.8	$2,300,386
Total Impact	$61,972,565	207.2	$11,654,253

Source: Direct impact of output (annual revenues) and employment provided by R Squared Development, LLC; Labor income estimated by New York State Department of Labor; Analysis by Nelson, Pope & Voorhis, LLC, via IMPLAN software.

Covenants and Restrictions Proposed

The proposed project does not include any C&Rs, and the Applicant does not propose any such measures at this time. It is anticipated that, if a change of zone is granted that C&Rs will be imposed to address required mitigation, phasing, and other concerns raised by the public or Board members during the Change of Zone process.

1.3 Project Location and Existing Site Conditions

1.3.1 Project Location

This project is located on the site of the former Island Hills Country Club, in the hamlet of Sayville, Town of Islip. The subject site is located on the west side of Lakeland Avenue and the east sides of Bohemia Parkway and Hauppauge Road, between 11th Street and Sterling Place; the address of the site is 458 Lakeland Avenue. **Figures 1-1a and 1-1b** provide the site's regional and local location, respectively. The property's tax lots are listed in **Table 1-1**, and depicted on the **Boundary and Topographic Survey**.

The subject site is located in an area dominated by single-family residential development, as detached homes on individual lots (see also **Section 3.2.1, and Figure 3-2**). Notable properties in the vicinity include Baymen Soccer Field and West Sayville National Wildlife Refuge (WSNWR), both about 800 feet to the south, St. Lawrence Parish Cemetery (across Lakeland Avenue to the east), the Community Ambulance Company facility (abutting the subject site on Lakeland Avenue), and Edward J. Bosti Elementary School, about a half-mile to the west.

The site is within the following planning and service zones and districts:

- Residence AAA Zoning District
- Groundwater Management Zone VI (300 gpd/acre)
- Greens Creek Watershed
- Connetquot CSD (99.2% of the site)
- Sayville Union Free School District (UFSD; 0.8% of the site)
- West Sayville Fire Department
- Community Ambulance Company, Inc.
- Suffolk County Police Department (SCPD), Fifth Precinct, Sector 503
- Town Water District (taxing entity; service not provided)
- Suffolk County Water Authority (SCWA), Distribution Area 1
- Public Service Electric and Gas (PSEG), Long Island (electricity)
- National Grid (natural gas)
- Town Department of Environmental Control (solid waste removal; service not provided)

1.3.2 Existing Site Conditions

The subject property is 114.34 acres in size and is currently unused and unoccupied. This property is gated and fenced, the country club buildings are closed and sealed, and the golf course has not been maintained as such since the site was closed, though maintenance personnel visit the site and selectively mow portions of the property.

As noted in **Section 1.2.2**, much of the site was cleared and developed as vegetated golf course-related surfaces (e.g., fairways, roughs, tees and greens, etc.), which now are generally not

maintained. The site is now dominated by untended vegetation (90.05 acres, or 78.8% of the site), with about 4.38 acres of paved surfaces, 0.15 acres of former ponds, 3.86 acres of unvegetated surfaces (former golf course sand traps), and 0.96 acres of building footprint.

As can be seen upon review of **Figure 1-3** and the **Boundary and Topographic Survey**, the 114.34-acre site is presently developed and occupied by the closed Island Hills Country Club. The site features seven structures, of which six are found in the site's northeastern portion. From north to south, these structures include (see **Figure 1-3**):

- a pool house (swimming pool adjacent to its south);
- the former golf course clubhouse;
- a vacant single-family house;
- a golf course pro shop/golf cart storage facility; and
- a vacant single-family house.
- the CMB
- the SMB

The 18 golf holes and driving range occupy the majority of the site; a narrow buffer of vegetated space lines the boundary of the site.

The site is connected to the SCWA distribution system, as well as to the electricity system of PSEG and natural gas services of National Grid. None of these services are presently consumed on the site. An irrigation well is located along the site's western property line; it is used exclusively for golf course and landscape irrigation, but is no longer in active use. It is not known whether this well is permitted by the NYSDEC or is equipped with a meter.

The clubhouse is served by three septic systems, and each of the two maintenance buildings, each single-family house, the pro shop/golf cart storage building and the pool house have a septic system.

<u>Phase I Environmental Site Assessment</u>
Appendix B-1 contains the text portion of the most recent Phase I ESA prepared for the site (June 2018) prepared by PWGC; the appendices to the report are recorded on a CD [compact disk] that is attached hereto. The following Executive Summary summarizes the outcome of that Phase I ESA.

> The purpose of the Phase I ESA was to identify and evaluate the presence of Recognized Environmental Conditions (RECs) at the subject site. RECs are the presence or likely presence of any hazardous substance or petroleum product under conditions that indicate an existing release, a past release or material threat of a release of any hazardous substance or petroleum product into structures on the property or into the ground, groundwater or surface water of the property.

Work was conducted in accordance with the American Society for Testing and Materials (ASTM) Standard E 1527-13 (Standard Practices for Environmental Site Assessment: Phase I Environmental Site Assessment Process), 40 Code of Federal Regulations (CFR) Part 312 (Standards and Practices for All Appropriate Inquiry; Final Rule) and PWGC's proposal for services.

PWGC evaluated the findings associated with the subject property and identified three RECs, one HRECs [historic RECs] and no CRECs [controlled RECs] with respect to the subject property. Conditions determined to be RECs are detailed below:

- The site has a long history of being an active golf course. Chemicals such as pesticides, herbicides, and fertilizers have been used at the site; the majority of the chemical storage and mixing was conducted by the SMB. Samples from previous site assessments reveal that the surface soils are impacted with metals and pesticides, predominantly mercury, chlordane, and heptachlor epoxide. Debris piles and mounds of soil were historically observed and sampled. During the recent site inspection, these piles and mounds were not identified; however, the presence of overgrown vegetation may have made inspection of these piles difficult. As the property no longer operates as a golf course and redevelopment of the property is contemplated, these conditions represent a REC.

- Three ASTs [aboveground storage tanks] were identified at the site: one 275 gallon AST located in the basement of each residential house and one 550 gallon AST located adjacent to the pro-shop and in direct contact with the soil. The ASTs were in varying conditions from good to fair and there was no evidence of leaks from the ASTs. The ASTs are still partially full of liquids and over time, the ASTs, without proper maintenance may fail. The presence of these ASTs represents a REC.

- Several of the onsite sanitary and stormwater systems were successfully remediated in 2007 and in 2015. The golf course ceased operations shortly after the 2015 remediation, so the structures remediated in 2015 are unlikely to be impacted; however, a significant amount of time has passed since the 2007 remediation occurred of the structures in the club house parking lot. Continued use after the remediation may have resulted in additional impact to that system; therefore, the presence of the sanitary and stormwater drains in the parking lot of the club house and the two stormwater drains on the course represent a REC.

- The subject property is identified as a NYSPILLS site. Spill number 05-11071 was opened on December 12, 2005, due to a bad check valve observed during a tank test. No contamination was found, the check valve was replaced, and the tank passed a new test. The NYSDEC closed spill number 05-11071 on March 21, 2006; therefore, this represents a HREC.

Based on the identified RECs, PWGC recommends a Phase II ESA be performed at the site. The Phase II ESA should include:

- General characterization of surface soils across the golf course to determine the extent of impact from the site's historic operation as a golf course. Samples should be analyzed for a minimum of pesticides, metals, and herbicides. Preparation of a Soil and Materials Management Plan (SMMP) may be appropriate to document the procedures for properly handling shallow soils and soil from the debris pile if the site is to be redeveloped. [The SMMP has been prepared and can be found in **Appendix B-3**; it is discussed in **Section 1.6.5**.]
- The stormwater and sanitary systems should be sampled, remediated if necessary, and decommissioned with SCDHS and EPA [Environmental Protection Agency as they are no longer in service as part of the redevelopment of the property.
- The ASTs should be cleaned and removed from the site as part of the redevelopment of the property.

Although not a part of the ASTM E1527-13 scope, the following additional site concerns must be considered:

- Based on the apparent age of the buildings at the site, it is possible that ACM [asbestos-containing material] are present within the structures. PWGC recommends that, prior to demolition or renovation of the buildings, a proper asbestos survey be performed, and identified ACM properly abated.

<u>Phase II Environmental Site Assessment</u>

Appendix B-2 contains the text portion of the Phase II ESA, prepared in July 2018 in response to the Phase I ESA noted above. The appendices to this report are recorded on a CD that is attached hereto. The following text summarizes the purpose and testing program undertaken for the Phase II ESA.

The purpose of the Phase II ESA was to evaluate surface and subsurface conditions at the property related to its use as a golf course to obtain sound, scientifically valid data concerning actual property conditions.

The scope of this environmental assessment was divided into three segments: evaluation of shallow soils, evaluation of deep soils, and evaluation of groundwater. PWGC utilized prior experience of performing environmental investigations at golf courses and agricultural properties to identify a sampling frequency appropriate for the subject property. Sampling was conducted between May 17 and June 15, 2018. The locations of the shallow soil borings, deep soil borings, and groundwater monitoring wells are shown on Figure 3 [in **Appendix B-2**] which is overlain with an aerial image of the golf course.

This Phase II ESA is limited to the area of the golf course and does not include the on-site buildings or parking lots. The RECs associated with the ASTs and UICs will be addressed at a

later time as a part of redevelopment of the property. No additional effort is necessary to address the HREC associated with the historic spill as the spill has been closed. This Phase II also addressed deficiencies of the 2006 Phase II including:

- Site sampling was more diverse in that it addressed each of the various course components (greens, tee boxes, fairways, roughs, and undeveloped area). The 2006 investigation focused mainly on fairways.
- Site sampling evaluated contaminant levels at depth, where the previous sampling were surface soils only.
- Groundwater samples included filtered samples for metals so errors related to sample turbidity could be properly addressed.
- Significant regulation changes with the NYSDEC occurred between 2006 and 2018 with respect to use based cleanup objectives and beneficial reuse of soils. The 2018 Phase II accounted for these changes.

Based on the results of the Phase II ESA, PWGC offered the following conclusions:

- The site's usage has resulted in impact to the shallow soils. Generally, the impact is focused on the greens and tee boxes, with less impact on the fairways and driving range. Little to no impact was observed in the roughs and woods and are generally similar to what would be observed in a residentially developed area. The shallowest soils exhibit the most impact which decreases with depth. The most prevalent contaminant observed, in terms of frequency and concentration, was mercury; other contaminants included chromium, arsenic, cadmium, lead, and several pesticides.
- Generally, soils at the site greater than 2 feet below grade met UUSCOs (Unrestricted Use Soil Cleanup Objectives) indicating that the contaminants did not migrate significantly downwards. Within the greens and tee boxes, exceedances of RRSCOs were observed up to a depth of approximately 2.5 feet deep.
- The groundwater quality at the site has not shown evidence of being impacted by the site's usage.

The Applicant is committed to completing the recommended soil management and system closures identified by PWGC in 2018, see **Section 1.6.5**.

1.4 Project Design, Layout and Operations

1.4.1 Overall Site Layout

Table 1-6A and the **Conceptual Layout Plan** show that the project will be developed in six Phases (numbered 1-6), with each Phase to occupy its correspondingly-numbered Lot; the site will be subdivided accordingly, as shown in **Figure 1-4**. Site and project characteristics under both existing and proposed conditions are presented in **Table 1-6B**. Architect's materials depicting the types of building style the Applicant proposes to develop, as well as general views depicting site elements can be found in **Appendix D-1**.

TABLE 1-6A
SITE DEVELOPMENT SCHEDULE

Building	Residences/Buildings				Parking			
	Micro	1-Bdrm.	2-Bdrm.	Total	Required*	Built	Landbanked	Total
Lot/Phase 1 *(20.9 acres; 12,000 SF of clubhouse amenity space)*								
1		32	31	63				
2		30	29	59				
6	4			4				
7	4			4				
8	4			4				
9	4			4				
STP								
Maintenance								
Totals	*16*	*62*	*60*	*138*	*242*	*209*	*33*	*242*
Lot/Phase 2 *(24.2 acres)*								
3		30	29	59				
4		32	31	63				
5		49	51	100				
Totals		*111*	*111*	*222*	*389*	*335*	*54*	*389*
Lot/Phase 3 *(23.1 acres)*								
10		49	51	100				
11		30	29	59				
12		41	43	84				
13		38	37	75				
Totals		*158*	*160*	*318*	*557*	*486*	*71*	*557*
Lot/Phase 4 *(13.7 acres)*								
14		41	43	84				
15		32	31	63				
16		32	31	63				
17		39	40	79				
Totals		*144*	*145*	*289*	*506*	*449*	*57*	*506*
Lot/Phase 5 *(18.3 acres; 12,000 SF of clubhouse amenity space)***								
18		32	31	63				
19		38	37	75				
20		30	29	59				
21	4			4				
22	4			4				
23	4			4				
24	4			4				
Totals	*16*	*100*	*97*	*213*	*373*	*321*	*52*	*373*
Lot/Phase 6 *(12.6 acres)*								
25		30	29	59				
26		32	31	63				
27		32	31	63				
Totals		*94*	*91*	*185*	*324*	*289*	*35*	*324*
TOTALS	**32**	**669**	**664**	**1,365**	**2,391**	**2,089**	**302**	**2,391**

* Per Town Parking Code rate of 1.75 spaces/unit.

TABLE 1-6B
SITE AND PROJECT CHARACTERISTICS

Parameter	Proposed Project	Existing Conditions
Use	Multi-Family Residential	Vacant
Yield	1,365 units & 24,000 SF amenity spaces	Closed golf course
Zoning	PDD-GS	Residence AAA
Wastewater Treatment	On-Site STP	Septic Systems
Surface Types (acres)**:**	---	---
Building Footprint	13.10	0.96
Paved Surfaces	31.86	4.38
Water Surfaces	3.46	0.15
Unvegetated	2.25	3.86
Landscaped	58.55	90.05
Fertilized & Irrigated	*12.02*	*0*
Not Fertilized or Irrigated	---	*90.05*
Native Landscaped	*10.02*	*0*
Native Low-Mow Meadows	*36.51*	*0*
Natural	5.12	14.94
Total Site Area	114.34	114.34
Water Resources:	---	---
Sanitary Flow (gpd)	307,125 (1)	0
Landscape Irrigation (gpd)	34,813 (2)	0
Total Water Use (gpd)	341,938 (3)	0
Recharge Volume (MGY)	237.85(4)	89.21/82.82(5)
Nitrogen Recharged (lbs/yr)	9,951.00/2,713.84(4)	4,052.39/499.84(5)
Nitrogen Concentration (mg/l)	5.02/1.37(4)	5.45/0.72(5)
Trip Generation (vph):	---	---
Weekday AM Peak Hour	491 (6)	0
Weekday PM Peak Hour	601 (6)	0
Saturday Mid-Day Peak Hour	601 (6)	0
Miscellaneous:	---	---
Employees (FTE)	60.1	1
Total Residents	2,705	0
School-Age Children	210	0
Total Taxes ($/year)	10,149,131	274,246
School Taxes ($/year)	6,963,622	187,353
School Expenditures ($/year)	3,490,136	0
School Fiscal Impact (+/-$/year)	+3,473,486	+187,353
Parking Required (min.)	2,389 (7)	n/a
Parking Provided	2,391	n/a

(1) Assumed usage of proposed project, based on SCDHS design flow factors; see **Table 1-9**.
(2) Assumed to be provided from the on-site irrigation well, for 150-day irrigation season.
(3) Includes water supplied by the SCWA and the on-site irrigation well.
(4) See **Appendix E-3** and **Section 2.2.2.**
(5) See **Appendix E-2** and **Section 2.2.1.**
(6) Assumes off-site traffic mitigation measures are implemented; see **Appendix F-1**.
(7) Per Town Parking Code rate of 1.75 spaces/unit.

There are six groupings of residential structures, one grouping for each phase. A total of 27 residential structures are planned, with one additional building planned for the STP and maintenance department. The STP and maintenance building are to be constructed as part of Phase 1.

The resident amenity areas (limited to the site residents) will be located within the ground floor levels of four buildings in Phase 1 and in four additional buildings in Phase 5. A community garden is planned for Phase 3, and each grouping of buildings will be served by an outdoor swimming pool/patio area, a shade structure/gazebo, and a pool equipment shed.

In addition to the STP, the project will include a stormwater system that includes a new, artificial drainage/retention pond, and connections to the public water supply, and sitewide recreational amenities (including interior open spaces and an internal walking trail network), and a 25-acre public open space along the perimeter of the site, in which a pedestrian path is proposed.

The proposed project provides for three widely-dispersed driveways, located on the property's northern, southwestern and northeastern frontages on 11th Street, Hauppauge Road, and Lakeland Avenue, respectively. The two former access points will be connected by a roadway crossing north-south through the central portion of the site. The latter access drive is an east-west roadway that intersects the north-south roadway in a traffic circle in the north-central part of the property. Each of the groupings of residential buildings are accessed off these roads, via driveways into head-in parking areas.

1.4.2 Structures

Residences

Table 1-6A provides information on the numbers of micro, 1- and 2-bedroom units in the project, as well as the floor area of the amenity spaces. **Table 1-7** provides the average unit square footages of the residential units.

TABLE 1-7
SUMMARY OF RESIDENCE FLOOR AREAS

Residence Type	Yield (units)	Average Unit Size (SF)
Micro Units	32	420 SF*
1-Bedroom Units	669	890 SF
2-Bedroom Units	664	1,180 SF
Totals	**1,365 units**	**1,392,370 SF**

* Does not meet 600 SF minimum unit size per Town regulations, but would be allowed under proposed PDD-GS regulations.

The following discusses the analysis of proposed building heights and building setbacks, it was prepared by the project's architect to evaluate the proposed building heights as perceived by

outside observers, particularly in relation to allowed building heights in the other zoning districts in the immediate area (see also **Section 3.4.2**).

> The buildings have been sited to take advantage of the existing grading of the site. All buildings located around the perimeter of the site are 3-stories; 4-story buildings are located only in the middle of the site and in lower-lying areas, using the site grading to minimize their perceived height.

As described in **Section 1.2.1**, the proposed project seeks a rezone of the site to a PDD-GS, which enables an increase in density that will be partially offset by designating a portion of that increase as affordable units. The Town of Islip does not have a general PDD ordinance in its Zoning Code, and so the Town Board relies on authority granted it under Section 261-b. 2. of the NY Town Law to establish location-specific PDDs. Note that the proposed PDD-GS is based on the uses, yields and bulk requirements of the Residence CA zoning district.

Under the proposed PDD-GS regulations for the project, the site would be permitted a density of up to 9 units/acre, or 1,029 units (the AOR yield). The Long Island Workforce Housing Act (LIWHA), NYS General Municipal Law Section 699 requires that at least 10% of the AOR yield (103 units) be designated for "affordable" units, which will be permanently designated for occupancy at a rate below market rate as determined pursuant to Town of Islip Zoning Code Section 68-3, Affordable Housing. The proposed PDD-GS regulations allow for additional, incentive density, provided that this incentive yield is offset by compensating features designating the incentive units as affordable.

One of the offset mechanisms for incentive yield is designation of affordable units, set at a rate of up to 1 unit/acre, or 114 additional affordable units. The project proposes a total of 217 affordable units. In this way, the proposed project provides a substantial number of affordable units as sought by the Town Zoning Code, whereas, under the site's existing Residence AAA zoning, which would allow for only 98 units, of which 10 would be affordable units (it is expected that several additional units would be allowed, subject to Town approval and as allowed for under LIWHA. In this way, the goals of the LIWHA would be more closely met than would otherwise be the case under the existing zoning.

<u>Amenity Areas and Operations</u>

Indoor recreational ("clubhouse") space are proposed; access to these resources will be limited to the site's residents. The clubhouse amenities may include fitness centers, yoga and spin studios, screening rooms, club rooms, community kitchens, community workspace/library, and meeting rooms. These indoor amenities would be distributed amongst the first-floor levels of four structures in Phase 1 and four structures in Phase 5, where the second floors are occupied by the "micro" units. The areas of these indoor amenities would total 24,000 SF, within an overall 29,520 SF of floor space.

Outdoor recreation amenities for the use of the residents are also proposed in the form of open spaces, pool/patio areas, and an internal walking/bicycle trail network, dog park, grilling areas,

and community garden. Finally, the project includes a recreational amenity that will be available to the general public: a 25-acre public open space along the perimeter of the site, in which a pedestrian path is proposed.

Based on the Final Scope, operations related to household wastes and site maintenance are included herein. It is expected that potentially toxic and hazardous chemicals in the form of common household-grade cleaners will be present on the site, maintained by tenants for their use in the residences. It is expected that the tenants will exercise good judgement in the use, storage and disposal of these substances. The Town provides educational information pertaining to household pollutants, and operates the Stop Throwing Out Pollutants (STOP) program to assist Town residents in properly managing household wastes.[2] In addition, processing of waste through a centralized STP will assist in monitoring and management of the waste stream and prevention of disposal to individual on-site sanitary disposal systems.

Additionally, building maintenance staff may keep separate supplies of commercial-grade cleaners in janitor closets or other containment not accessible to the tenants. Finally, the site maintenance staff may maintain toxic and hazardous substances in the maintenance building and for the STP. The use, storage and disposal of these substances may be subject to Suffolk County Sanitary Code (SCSC) Article 7 and/or Article 12 regulation. In such a case, it will be the responsibility of the site management to ensure that proper facilities are established for storage, that staff is properly trained in the use of these substances, and that conforming emergency containment and clean-up procedures are established.

1.4.3 Clearing, Grading and Drainage System

Clearing

Clearing will be based on the grading and drainage plan for the site. A preliminary grading and drainage plan has been prepared to establish limits of clearing as well as to ensure property grading and drainage for the proposed project in conformance with applicable requirements. These site plan elements also provide a basis for environmental analysis included in this DEIS. Based on the surface type values in **Table 1-6b**, it is anticipated that the proposed project will require the clearing of an estimated 109.22 acres (95.5%) of the site, which may be assumed to represent the acreage subject to grading. **Table 1-8** details the types and acreages of each cover type on the site at present that are expected to be cleared and graded.

[2] http://www.islipny.gov/component/content/article/148-departments/3196-stopprogram

TABLE 1-8
CLEARING

Existing Cover Type	Existing Acreage (acres)	Anticipated to be Cleared (acres)	Anticipated to Remain (acres)	Percent of Cover Type to be Removed
Building Footprint	0.96	0.96	0	100.0
Paved Surfaces	4.38	4.38	0	100.0
Water Surfaces	0.15	0.15	0	100.0
Unvegetated	3.86	3.86	0	100.0
Landscaped	90.05	90.05	0	100.0
Natural	14.94	9.82	5.12	65.7
Totals	**114.34**	**109.22**	**5.12**	**95.5**

Grading

As shown in the **Grading, Drainage and Utility Layout Plan** (*in a pouch at the back of this document*), it is expected that narrow areas of now-vegetated buffers along the site's boundaries will be retained and the remainder of the property will be subject to clearing and grading.

Based on the **Grading, Drainage and Utility Layout Plan**, it is expected that approximately 268,883 cubic yards (CY) of soil will be excavated during grading operations for the overall project, of which an estimated 222,043CY will be retained on-site for use as fill. The remaining 46,840 CY will be removed from the site for sale as fill material elsewhere (if it displays appropriate characteristics for this use), or disposal at a licensed and approved construction and demolition (C&D) landfill.

Drainage System

All stormwater runoff generated on the property will be retained and recharged in a drainage system designed to provide effective stormwater management and conform to the design requirements of the Town Engineer insofar as practicable, with the exception of the Town's requirement for a capacity of 8 inches of storage. The proposed design will store 5 inches of runoff; however, because of the high percolation rate of the soils on-site, it is expected that the project's drainage system will be able to handle 8 inches of runoff. The Applicant will be requesting a 37.5% Planning Board relaxation from the Town's Land Development and Subdivision ordinance design criteria requiring storage capacity for an 8-inch storm event. As shown in the **Grading, Drainage and Utility Layout Plan**, all stormwater will be collected as well as recharged within the site through a series of roadside catch basin and drywells, and a 1.78-acre pond/retention area to be excavated in the center of the site. As shown in the plan, the system is required to have a minimum capacity of 1,034,970 cubic feet (CF), and has a design capacity of 1,390,146 CF of storage, conforming to a 5 inch storm, not including a factor for soil percolation. The Town Engineering Department will review the system for sufficiency as part of the change of zone, and will review drainage in more detail as part of the site plan review process.

The project's drainage system will be designed to comply with State Pollutant Discharge Elimination System (SPDES) requirements under the NYSDEC SPDES General Permit and Chapter 47 of the Islip Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval. The SWPPP evaluates the proposed drainage system to ensure that it meets the NYSDEC and Town requirements for treatment and retention of stormwater runoff. The SWPPP must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges from a property once developed.

The following description of the project's drainage system has been prepared by the project's engineer:

> Area Flooding/Drainage Assessment
> Drainage for the project will be designed and installed in accordance with Town of Islip and NYSDEC SWPPP requirements. A separate permit for the construction and operation of a stormwater treatment system will be obtained from the NYSDEC.
>
> Runoff generated within the project area will be contained on-site. A Pond/Retention Area, swales, and leaching pools will be designed and installed to store runoff for a 5-inch rain event. A SWPPP will be also developed. This plan requires the post development peak runoff rates to not exceed the pre-development peak runoff rates for a 100-year storm. Since all stormwater will be disposed of on-site and be filtered by the natural sands that are present; no additional stormwater treatment devices will be required or installed.
>
> Generally, retention ponds with a bottom elevation 2.0 feet above the groundwater elevation will be unlined. Ponds with less than two feet of separation between the bottom elevation of the pond and the groundwater elevation will be lined on the bottom and the sloped walls. Where provided, the liner will be extended vertically along the slope of the pond walls such that that the top of the liner will terminate a minimum of two feet above the groundwater elevation. Whenever practical, swales and ponds will be interconnected to limit the potential of an overflow condition.
>
> Soil erosion and sediment control plans will be prepared and implemented during construction will be prepared in accordance SWPPP and the Town of Islip requirements. Installation of the stormwater infrastructure will depend on the construction phasing of the project, however there will be adequate storage volumes available for the disturbed areas. During construction and after construction completion, the drainage system will be inspected in accordance with the NYSDEC SWPPP requirements.

The system will be designed to comply with SPDES requirements under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (hereafter, the "General Permit", GP-0-20-001). Based on existing developments in the area, local geologic conditions, and adequate depth to groundwater, subsoils are expected to be of suitable quality to allow

efficient recharge of stormwater, subject to further evaluation during subsequent project review (see **Section 1.6.6** for additional information in regard to erosion control during construction).

1.4.4 Vehicle Access, Internal Road System and Internal Circulation

Multi-Modal Transportation

The proposed project includes several multi-modal transportation features, including:

- internal sidewalks;
- a network of private pedestrian paths between the residential buildings, the amenity areas, and the site's perimeter (linking to the public sidewalks);
- walking trails within the 25-acre public park;
- bicycle racks for residents of the site to bicycle within the community; and
- access to Long Island Bus Route 57, which currently operates along Hauppauge (Terry) Road. The two nearest stops are at the intersections with Bourne Boulevard and St. Johns Street; Route 57 operates between Smithaven Mall and Railroad Avenue at Montauk Highway, in Sayville.

Parking

Based on the Town Parking Code requirement of 1.75 spaces/unit, a total of at least 2,389 parking spaces is required. The **Conceptual Layout Plan** shows that a total of 2,391 spaces will be provided, as 2,089 spaces distributed among the residential structures and 302 "landbanked" spaces, which are not immediately constructed but are designated in case such additional spaces prove necessary in the future. A parking relaxation from the Town Planning Board or a parking variance from the Town ZBA will be required for approval of the proposed landbanked parking. All spaces will be "head-in," and conform to Town standards for length and width.

Vehicle Access

Three vehicle access points are proposed, on the north (onto Eleventh Street), the northeast (onto Lakeland Avenue), and the southwest (onto Hauppauge [Terry] Road). The Lakeland Avenue access will continue to be controlled by the existing traffic signal, and the other two accesses will be controlled by a Stop sign for exiting vehicles.

Internal Road System and Maintenance

The project's northern and southwestern access points will be connected to each other by an internal roadway crossing north-south through the central portion of the site; the third access, in the northeast onto Lakeland Avenue, will lead to an east-west roadway that intersect the north-south road in a traffic roundabout in the north-central portion of the site. Each of the groupings of residential buildings are accessed off these roadways, via driveways into head-in parking areas.

The two project internal roads will have a paved width of 30 feet, and will be lighted, curbed, and striped, and will be connected to the project's comprehensive drainage system. The project's

internal roadways will not be offered to the Town for dedication as Town roads, but will remain in private ownership, to be maintained by the owner.

All of the project's internal roadways will conform to the applicable design requirements of the Americans with Disabilities Act (ADA). Additionally, the Applicant is willing to consider incorporating "Complete Streets" principles such as bicycle lanes in roadway design, where appropriate. Inclusion of such features would be decided in conjunction with input from the Town Planning Department during the site plan review process.

Emergency Access

Emergency access is effectively provided by the multiple access locations into the proposed development. The three vehicle access points at Eleventh Street, Lakeland Avenue and Hauppauge [Terry] Road will be designed for appropriate turning radii and width dimensions for emergency access purposes. These access points are distributed at the north, northeast and southwest parts of the proposed development to provide multiple dispersed and separate access locations for emergency vehicles.

Internal Circulation

As shown in the **Conceptual Layout Plan**, the project site will have two internal roadways, which traverse north-south and east-west, intersecting in a traffic circle in the property's north-central area. All vehicle access to the residential and amenity buildings will be directly off these two roadways, leading directly to parking lot aisles.

Roadway and Traffic-Related Improvements

A Traffic Impact Study (TIS)t has been prepared for the proposed project. The study evaluated thirty-five intersections and was prepared based on the Final Scope as adopted by the Town Board. Based on the results of the TIS (see **Appendix F-1**), a number of road improvements are recommended to ensure safe ingress/egress at the site and to maintain adequate roadway operations surrounding the site. Note that the off-site roadway widenings described below will not require any takings of privately-owned land, but will take place within the road ROWs. The following roadway and/or traffic-related improvements are recommended in the TIS, in order to mitigate the anticipated traffic impacts of the proposed project:

> Based on the results of the Traffic Impact Study as detailed in the body of this report, the construction of Phases 1, 2 and 3 of the proposed project, totaling 678 residential units, will not significantly impact the operation of the roadways and intersections adjacent to the site. The impacts created by Phases 4, 5 and 6 (up to the full build out of 1,365 residential units) can be mitigated by the implementation of the following improvement measures. With these improvement measures, the intersections in the study area and the Lakeland Avenue/Railroad Avenue corridor will continue to operate at No Build or better levels of service after the full build out of the project.

- The southbound approach of the intersection of Lakeland Avenue at NYS Route 27 North Service Road which currently provides an exclusive through lane, a shared through/right

turn lane and an exclusive right turn lane will be redesigned to provide two exclusives through lanes and two exclusive right turn lanes. Minor signal timing adjustments will also be conducted for the northbound left turn phase.

- The northbound approach of the intersection of Lakeland Avenue and Tariff Street/Johnson Avenue will be widened to provide an exclusive left turn lane enabling the redistribution of green time to improve the failing westbound approach.
- Widen Lakeland Avenue between Chester Road and 11th Street to provide an additional northbound through lane. The widening will begin around Eastover Road and extends to meet the existing 2 lane section of Lakeland Avenue just north of 11th Street. The segment of Lakeland Avenue between Eastover Road and Chester Road will be striped to provide one shared northbound left turn/through lane into Chester Street and one through lane.

1.4.5 Utilities

Wastewater Disposal System

The subject site is not located in any established Suffolk County, Town of Islip, or private Sewer District nor are there any existing STPs in the area of the site that could accommodate or be expanded to accommodate the wastewater generated by the proposed project.

Sanitary wastewater flow and discharge requirements are determined by the SCDHS, under the jurisdiction of SCSC Article 6, which also addresses sewage facility requirements for realty subdivisions, development and other construction projects in order to limit the loading of nitrogen in various groundwater management zones as established by the SCDHS. As promulgated under Article 6, a Population Density Equivalent must be determined for the site in order to determine the type of sewage disposal system that would be allowed for a proposed project. This equivalent (or total allowable flow) is then compared to the design sewage flow for the project. If the project's design sewage flow exceeds the Population Density Equivalent, a community sewerage system or on-lot sewage treatment system is required. If the project's design sewage flow is less than the site's Population Density Equivalent, a conventional subsurface sewage disposal system may be used, provided individual systems comply with the current design standards and no community sewerage system is available or accessible.

The project site is located within Groundwater Management Zone VI as defined by the SCDHS. Based on the requirements of Article 6, if an on-site septic system is proposed, no more than 300 gallons may be discharged per acre (assumed for calculation purposes as 40,000 SF) on a daily basis within this zone (i.e., 300 gpd/acre). This discharge rate implies a density of 1 unit/acre; in contrast, a density of 12 units/acre implies a discharge of 3,600 gpd/acre. The site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. Therefore, as no such resources are present on the site, the net site area is 114.34 acres in size, and the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

114.34 acres x 300 gpd/acre = *34,302 gpd*

As tabulated in **Table 1-9** below, the project design flow is greater than the allowable flow, so the Applicant proposes to construct an on-site STP.

The following general descriptions of the project's wastewater treatment system was prepared by the project's engineering consultant.

Sewage Collection, Treatment and Disposal

Sewage generated by the residences and the amenity spaces will be conveyed by a gravity sewer sub collection system to an on-site STP. The gravity sewer will be designed in accordance with the SCDHS, SCDPW [Suffolk County Department of Public Works] and the Ten States Standards. Pipes will be constructed of PVC [poly vinyl chloride] pipe, and precast concrete manholes will be installed when there is a change in direction or size of the pipes, or to provide convenient access points to the collection system for maintenance personnel. Each ground floor residence will have a separate connection to the sewer collection system. Residences located above the ground floor will share a sewer house connection.

All sewage generated on-site will flow from the sewage collection system into a sewage pumping station adjacent to the proposed STP. The pumping station will convey sewage to the holding tanks, screens and process tanks within the STP. The pumping station will be designed for a flow rate of 377,000 gpd. The design flow for the project is estimated at 307,125 gpd. The pump station will be designed to handle an additional 69,875 gpd of flow from off-site sources [see below]. The installation of the collection system will occur in phases since land grading activities will be required to ensure sewer pipes are installed in conformance with regulatory requirements. Sewer pipes installed underneath the main access roadways will be installed when that roadway is constructed.

The STP will be constructed to treat 377,000 gallons of sewage per day. The design flow for sewage generated on the project is estimated at 307,125 gpd. The STP will be designed to handle an additional 69,875 gpd of sewage from offsite sources.

The STP will be completely enclosed within a building. The building will have architectural features and exterior fenestrations to mimic a barn. The sewage treatment process will be a sequencing batch reactor. This process is commonly utilized in similar facilities throughout Suffolk County and long term operation of this types of system has demonstrated that effluent will routinely meet the NYSDEC SPDES requirements for reduction of nitrogen and suspended solids.

The STP will be constructed at the commencement of the project [i.e., as part of Phase 1]. The process tanks will be constructed of reinforced concrete. A total of six tanks will be constructed. Four tanks will be process tanks and will permit operation of the treatment plant at the lower flows while construction of the residential units proceeds in phases. As additional residences become available and sewage flows increase, additional process tanks will be put online. The sewage treatment plant will have additional process tanks to store influent flow such that processing of the sewage can continue during low influent flows. This

will significantly improve the effluent quality. A separate process tank will store waste activated sludge. Waste activated sludge will be removed from the site on a monthly or longer basis by a waste hauler for additional offsite processing. The sewage treatment plan will have both influent and effluent screens. The effluent screens will further reduce the concentration of suspended solids such that it will reduce the size and maintenance requirements of the leaching pool groundwater disposal system. Standby power will be designed and installed such that the sewage treatment plant will be operation in the event of a primary power failure.

Treated effluent will discharge into a leaching pool groundwater disposal system. Due the relatively shallow depth from grade to the water table beneath the project site [see **Section 2.1.1],** the groundwater disposal system will be designed and installed in accordance with SCDPW standards for discharge to a disposal system with a high groundwater condition. There will be four separate leaching pool clusters, such that one leaching pool cluster can be held out of service at all times in reserve, to address any surge in demand. The groundwater disposal system will be designed for two hundred percent of the daily design flow. The complete installation of the groundwater disposal system will occur when the STP is constructed.

The proposed STP has been designed with a capacity in excess of the volume of wastewater expected from the proposed project (307,125 gpd), as well as additional capacity to handle the 69,875 gpd from the downtown Sayville hamlet business district. Thus, the STP will have a capacity of 377,000 gpd. Approvals from the NYSDEC, SCDHS and SCDPW will be required; review and approval of an Engineering Report and Construction Plans and Specifications by the SCDHS and SCDPW would be required, ensuring that this facility will be designed, constructed operated in conformance to established regulations. Finally, the STP will be subject to a SPDES permit from SCDHS issued on behalf of the NYSDEC.

<u>Sanitary Sewer Collection System</u>

As noted in **Section 1.2.5**, as one of the Community Benefits, the proposed project includes both Phases of a two-phase extension of a sanitary sewer line from the on-site STP to the downtown Sayville hamlet center south of the site, so that this area can be served by the project's tertiary STP. This benefit will have the effect of providing treatment for the downtown area for water quality benefits, and will assist in encouraging redevelopment in the downtown area by making wastewater treatment available. The benefit of the conveyance pipe and treatment capacity will come with no public cost; however, the individual connections to the new system would be borne by each landowner during Phase II.

It is expected that the new sewer line would be installed in two phases; in Phase I, the Applicant will provide an estimated 10,500 feet of 4-inch diameter force main from the STP easterly to Lakeland Avenue, then south beneath that roadway south to Montauk Highway (Suffolk County Route 80). From that intersection, Phase II construction (also provided by the Applicant) will install 4-inch force mains will run east and west on Montauk Highway within the downtown Sayville hamlet area (see **Appendix A-7**).

Water Supply System

Assuming that the amount of wastewater generated by the project represents the amount of water supplied to the project, the sanitary design flow rates used by the SCDHS for wastewater system design indicate that the project's anticipated domestic water consumption would total 307,125 gpd (see **Table 1-9**). Water will be provided to the site by the SCWA.

It is expected that 12.02 acres of project's landscaping (10.5% of the site) will be irrigated, and at a rate of 16 inches per year, which would result in an irrigation demand averaging 34,813 gpd over the estimated 5-month irrigation season (assumed from roughly mid-May to mid-October). This volume would be provided from the project's on-site irrigation well (see below).

As a result (see **Table 1-9**), the proposed project is expected to use a total of 341,938 gpd during the period mid-May to mid-October (of which 307,125 gpd would be provided by the SCWA and 34,813 gpd would come from the on-site irrigation well), and 307,125 gpd from mid-October to mid-May (all of which will be provided by the SCWA).

TABLE 1-9
ANTICIPATED DOMESTIC WATER USE AND WASTEWATER FLOWS (1)

Component	Yield	Flow Factor (2)	Usage
Residences (Micro units)	32 units	225 gpd/unit	7,200 gpd
Residences (1-bedroom units)	669 units	225 gpd/unit	150,525 gpd
Residences (2-bedroom units)	664 units	225 gpd/unit	149,400 gpd
Domestic Use/Wastewater Flow	**---**	**---**	**307,125 gpd**

(1) SCDHS Population Density Equivalent for site is 34,302 gpd.
(2) Per SCDHS design criteria for wastewater system sizing.

The following general descriptions of the project's potable water and irrigation water distribution systems were prepared by the project's engineering consultant.

> Water for potable use will be supplied by the SCWA. The installation of the water services will be in compliance with SCDHS and SCWA Standards. Each building will have a separate water service from the existing SCWA distribution system located on the adjacent streets that surrounds the project site [see **Figure 3-5c**]. Each building will have a separate tap, water meter, and a backflow prevention device in accordance with regulatory requirements. The estimated daily volume of potable water at the project completion will be 307,125 gpd [see **Table 1-9**]. Potable water will not be used for irrigation purposes. The installation of the water services will coincide with land grading and building construction activities.
>
> Water for fire protection will be supplied from the SCWA distribution system. The fire services will be capable of handling the required flow rates. If required, a fire suppression booster pumping station will be installed to increase the water pressure for the fire suppression systems within the buildings. Backflow prevention devices will be installed in accordance with SCWA requirements. Fire hydrants will be located in the vicinity of the entranceway of each

building and throughout the site in accordance with the local fire department requirements. The fire hydrants will be owned and maintained by the POA [Property Owners Association]. The installation of the fire suppression services will be constructed in phases to coincide with land grading and building construction activities.

Irrigation Water Supply and Distribution System
Irrigation water for the project will be provided either by the existing well that previously serviced the Island Hills Golf Course, or by a new on-site irrigation well that would be installed for the proposed project. The existing well and pump is permitted by the NYSDEC. The existing well is located adjacent to Bohemia Parkway south of 11th Street [see **Figure 1-3**]. The existing well and pump can adequately meet the irrigation requirements for this project. A new irrigation distribution system will be installed to service the landscape areas and the main landscaping pond. Irrigation water will not be utilized to fill grass lined swales and retention ponds constructed solely for the purpose of retaining site runoff, however irrigation water will be utilized to maintain turf lawns and vegetation in these areas. The SCWA is aware the potable water system will not be used for irrigation purposes. The project sponsor is aware the SCWA will require notification if potable water will be utilized for irrigation purposes.

All necessary connections, meters, easements and installations will be provided to ensure adequate water supply. The potable water consumed by the project will be supplied from SCWA Distribution Area 1.

Energy
Section 1.3.2 notes that the subject site is presently connected to the service networks of PSEG and National Grid, but neither form of energy is presently consumed on the site. At the present stage of the SEQRA review process, detailed utility services plans have not been prepared, so more detailed descriptions or analyses of energy service connections are not available. However, such plans will be prepared as part of the site plan application, which will be submitted to the Town Engineering Division for review and approval.

It is expected that both of these existing service connections will be closed and removed by the proposed project, and new service connections will be made to the proposed project. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed project. In addition, energy-saving materials, mechanical systems, design and construction practices will be utilized where practicable to reduce the total energy demand of the project.

The Applicant understands that energy-efficiency benefits the overall environment, reduces dependency on non-renewable resources, and benefits residents through decreased operational costs. As indicated in **Section 1.2.1**, the Applicant seeks to provide energy-efficient housing in conformance with Town Code Section 68-30, and embraces the concept of ensuring a more energy-efficient project than mandated by merely meeting the NYS Energy Code. The Applicant

plans to utilize alternative energy sources and energy-conserving materials, fixtures and mechanical systems where practicable to reduce the total energy demand of the project. No final determinations have been made by the Applicant regarding use of specific alternative energy sources, equipment or systems, at the present stage of the application process. Generally, the Applicant is committed to incorporating appropriate energy-saving designs, materials, equipment and systems, and is willing to consider active solar energy systems (e.g., rooftop solar panels) and LEED® features and concepts, but such decisions will be made later, during the site plan application process. However, **Appendix A-2** discusses anticipated passive and active sustainable features and design characteristics that will be considered at that time.

It is expected that specific sustainable energy-related features, systems and equipment will be determined in concert with the appropriate Town agencies during the site plan application review process.

Solid Waste Removal

As confirmed by the Town, the project will not be served by the Town for garbage pick-up or disposal. The site manager will hire a private carter to perform this operation. The Applicant has indicated that it will conduct solid waste removal procedures and practices similar to those it has established at its other facilities, particularly at the Greybarn-Amityville property. The following information on the anticipated solid waste-related storage and removal operations has been provided by the Applicant:

- The garbage generated in the units and the non-residential spaces will be bagged by the occupants and taken to trash chutes in each building, where the combined trash is stored in roll-off carts.
- The site management will contract with a certified and licensed private carter for removal and disposal of garbage and recycled materials. On the designated pick-up days, maintenance staff in each building will wheel the roll-off carts outside for pick-up.
- Items too large or otherwise not suitable for the chutes will be taken to outdoor dumpsters placed on pads in the parking area abutting each building. These dumpsters will be removed by the carter when filled, as alerted by the site maintenance staff.
- The Applicant will develop and implement a site recycling program, in coordination with the private carter contracted to perform the removal operations in this regard.

1.4.6 Site Landscaping, Lighting and Recreational Amenities

Site Landscaping

Appendix D-4 presents some generalized information on the types and arrangements of landscape vegetation to be planted in the various parts of the project site, including between and along the groups of residential buildings in each of the project's six phases , around the drainage pond, areas along the internal roadways, within the amenity areas , and the perimeter public park. The Landscape Concept Summary **(see Appendix D-4)** has been designed in consideration of the **Tree Survey** prepared for the project site.

The overall landscape concept provides five areas of focus with typical planting scenarios that would complement the use of the areas. Throughout the entirety of the site, a non-mowed grass is used in all open spaces to provide a sense of naturality to the site and encourage the outdoor use of the site's residents. The use of open space is prevalent in areas surrounding the pond and the perimeter public park. The remainder of the site is heavily focused on creating a transition between the natural and built environment by placing trees and shrubs along the internal roadways, building edges and other amenities.

It is assumed that 12.02 acres (20.5%) of the 58.55 acres of landscaped areas will be irrigated, at a rate of 16 inches, to be applied over the anticipated 5-month (150-day) irrigation season. This volume of irrigation use averages 34,813 gpd, and will be provided by the golf course irrigation well, which will be repurposed by the Applicant for this purpose.

In order to minimize potential adverse impacts to groundwater quality from applications of landscape chemicals, landscape species that require little or no fertilization (beyond an initial application, upon planting) will be used to the maximum extent practicable. Any use of landscape chemicals other than fertilizers, such as herbicides, fungicides, etc. will be strictly limited to only those areas affected, and applied only when such use is necessary to maintain landscape health and integrity. Additionally, it is expected that:

- the project will utilize only trained and certified personnel to perform all chemical applications;
- chemicals will be properly approved for use by the pertinent public/governmental agencies (e.g., NYSDEC, SCDHS, etc.);
- the storage, use, and application of landscape chemicals will be performed in conformance with applicable regulations and procedures of the NYSDEC and/or SCDHS;
- all chemical storage facilities, chemical application equipment loading areas, and chemical waste disposal activities will conform to applicable requirements of the NYSDEC and/or SCDHS;
- necessary governmental permits related to the use, application and storage of landscape chemical will be obtained and maintained in good order by the Applicant; and
- proper emergency response provisions will be incorporated into the project's overall maintenance system.

Fertilizer use is considered in the groundwater nitrogen budget model presented in **Section 2.2**. It is expected that, cumulatively, the above-described protective measures related to landscape chemical use will be protective of groundwater quality beneath and down-gradient of the project site, and upon surface water bodies in the down-slope direction, specifically Green Creek and Great South Bay.

<u>Lighting</u>

According to the **Lighting Layout Plan** (*in a pouch at the back of this document*), a comprehensive lighting system will be implemented to establish a safe and secure environment with illumination

only in those areas where it is necessary. The proposed project will illuminate the internal roadways and parking areas, along with safety lighting in other appropriate locations such as the STP and the site access points. Lighting is not proposed along the internal sidewalk network, or along the walking trail in the 25-acre public park (as the permitted hours for the park will be from dawn to dusk); however, this will be reviewed further at the time of site plan review.

Lighting will be consistent with current Town standards and requirements provided in Chapter 68, Article LII, with all lighting proposed to be dark-sky compliant with downcast fixtures. This will minimize the potential for enhancing or contributing to diffuse sky-glow. With the exception of the three site access drives, no pole-mounted lights will be placed within 50 feet of the site boundaries. In this way, the potential for lighting impacts beyond the property boundaries will be minimized, particularly in consideration of the buffering vegetation along the site's perimeter.

Recreational Amenities

As noted in **Section 1.4.2**, the project includes amenity spaces for its residents. These include 24,000 SF of indoor spaces in the ground floors of the four structures in Phase 1 and in Phase 5:

- access to these indoor amenity spaces will be limited to the site's residents;
- access will be controlled by a card system issued to the residents; and
- these interior amenity spaces may include fitness centers, yoga and spin studios, screening rooms, club rooms, community kitchens, community workspace/library, and meeting rooms.

Outdoor recreation amenities for the exclusive use of the residents are also proposed, in the form of pool/patio areas for each of the six development phases. Additionally, open spaces and an internal walking/bicycle trail network dog park, grilling areas, and community garden for the residents are proposed, to unify all six phases of the site.

Finally, the project includes a recreational amenity that will be available to the general public: a 25-acre public open space along the perimeter of the site, in which a pedestrian path is proposed (see below).

1.4.7 Open Space System

Based on the values in **Table 1-6b**, a total of 67.13 acres of the site (58.7%) will be open space (comprised of landscaped surfaces, the retention pond, and retained natural vegetation). All of this acreage and these spaces will remain within the ownership of the Applicant, and will be transferred to the POA (see **Section 1.4.8** below) after completion of the project. The 25-acre park will be open to the public but will remain privately-owned by the POA. The Applicant (and, later, the POA) will maintain all open spaces and private amenity spaces on the site.

Only the STP and sanitary sewer extension will be offered to the SCDPW for dedication (see below). The Applicant does not anticipate the need for an easement to protect public access to

the 25-acre park but, if such a mechanism is requested by the Town, the Applicant is willing to provide it.

1.4.8 Site Management

The project site will be subdivided, as shown in **Figure 1-4**. After completion of construction, the Applicant will transfer ownership of the site to a POA which will henceforth operate, manage and maintain the site. The POA will be responsible for upkeep of all of the site's facilities, pools and community recreational amenities, and utility systems, including but not limited to the residential units, the STP, the sanitary sewer extension, the drainage system, and the landscaping, as well as all management activities associated with the residences. The POA may provide such activities by hiring its own dedicated maintenance staff, or contract out such work to one or more private firms. The POA will contract with a qualified, licensed carter for removal of all solid wastes generated on the site. The POA will offer to dedicate the STP and the sanitary sewer extension to the SCDPW which would, if the offer is accepted, own, operate and maintain these facilities. If the SCDPW declines the offer, the POA will continue to own, operate and maintain the STP and the sewer extension privately.

It is expected that the site manager will assign staff to provide maintenance and upkeep services to each structure as well as to the various recreational amenity areas/facilities. It is not known at this time whether each building will have its own staff assigned to it, or staff will be assigned to a group of buildings, or staff will be tasked on an as-needed basis. However, the Applicant will provide thorough and efficient maintenance and upkeep services to all of the site, and will adjust such policies and procedures as the site becomes occupied and operational.

As noted in **Table 1-6B** a total of 2,705 residents are estimated for the proposed project, of which 210 will be school-age children, aged 5 to 17 years. The information in **Appendix C-2** indicates a total of 60.1 FTE employees are anticipated on the site, as workers associated with the various amenity spaces and maintenance workers. It is expected that these jobs will be day-time positions and would be present on the site from roughly 9 AM through 5 PM.

As shown in the **Conceptual Site Layout Plan**, access at each of the three vehicle accesses will be controlled by a manned gate house. As indicated by the Applicant, these gate houses will be manned on a 24/7 basis, by professionals employed by a private security firm contracted to provide security functions, which will include patrols and camera surveillance.

1.5 Permits and Approvals Required

Prior to the issuance of any permits or approvals, the Applicant and Lead Agency must fulfill the requirements of SEQRA. This document is part of the official record under the SEQRA process outlined in Title 6 of the New York Code of Rules and Regulations (6 NYCRR) Part 617, with statutory authority and enabling legislation under Article 8 of the NYS Environmental Conservation Law (ECL). The Islip Town Board is the Lead Agency for the change of zone application, as the application that triggered the SEQRA process is under the jurisdiction of that

Board. The Town Board determined that the proposed project is a Type I Action pursuant to SEQRA, and the regulating provisions of 6 NYCRR Part 617. As lead agency under SEQRA, the Town Board adopted a Positive Declaration on the proposed project and conducted formal scoping in conformance with 6 NYCRR Part 617.8, providing forums for oral and written comments on the Draft Scope of the content for this DEIS, which was issued as the Final Scope. This DEIS describes the proposed project, catalogues site and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project, as determined by the Final Scope.

Should the Town Board approve the change of zone application, the permits and approvals listed in **Table 1-10** would be required prior to commencement of project construction.

TABLE 1-10
PERMITS AND APPROVALS REQUIRED

Issuing Agency	Required Permit or Approval
Town Board	Adoption of Local Law (for PDD-DG District)
	Change of Zone (PDD-GS) Approval
	SEQRA Review (as lead agency)
Town Engineering Division	Site Plan Approval
	Subdivision Approval
Town Building Department	Demolition Permit
	Building Permits
Town Department of Public Works	Road Access Permits
SCDHS	SCSC Article 4 (Water Supply) Review/Approval
	SCSC Article 6 (Sanitary System) Review/Approval
	Subdivision Approval
SCSA*	Conceptual Approval
SCWA	Water Supply Connection Approval
SCDPW	NYS Highway Law 136 & Road Access Permit
	Application for Road Usage
	Application for Debris Removal/Demolition Permit
SCPC*	NYS General Municipal Law S-239 Review/Approval
NYSDEC	Mining Permit for Ponds *(if required)*
	Pond Stocking Approval *(if stocking proposed)*
	Long Island Well Permit *(if on-site well proposed)*
	SWPPP Approval
	SPDES Permit (GP-0-20-001)

* SCSA-Suffolk County Sewer Agency; SCPC-Suffolk County Planning Commission.

This DEIS provides the Islip Town Board and all involved agencies with information necessary to render informed decisions on the change of zone application. Once accepted by the lead agency as complete, this document will be subject to public and agency review, a public hearing, and a subsequent period wherein written public and/or agency comments accepted. This period is

followed by preparation of a Final EIS (FEIS) that addresses the substantive verbal or written comments provided. Upon acceptance of the FEIS, the Town Board will be responsible for the adoption of a Statement of Findings on the information contained in the EIS. Each involved agency will prepare its own Findings Statement independently of the lead agency, pursuant to SEQRA, prior to rendering its own decision on the change of zone application. The application will then proceed through the Change of Zone process and, if approved, the subject site will be rezoned to PDD-GS, and the Applicant will then proceed to a detailed Site Plan application for the Town Engineering Division to review, in consideration of the description and impact analyses contained in the EIS.

As noted in **Section 1.2.2**, there are at present three easements on the site: These include:

- Electric Easement, 10 feet, along the property's southern boundary on Sterling Place;
- Telephone, Gas & Electric Easement, 25 feet wide, within the site on the eastern half of the Chester Road Right-of-way (ROW); and
- Water easement, 50 feet wide, within the site on the western side of Lakeland Avenue.

Additionally, an area of about 13,500 SF lies in an area affected by a C&R recorded in the County Clerk's office. It is within the subject site, south of and abutting the above-named water easement, along Lakeland Avenue. This C&R was filed in 1927 and prohibits the construction of a wireless tower, a piggery for more than two pigs, or a "flat roof "structure at this location.

1.6 Construction Process and Operations

Section 1.6 describes the general construction process and presents more detailed information on various aspects associated with construction of the proposed project. **Section 4.1** describes and analyzes the anticipated impacts associated with these construction activities, and describes the proposed mitigation measures. It is noteworthy that the phased nature of the proposed project causes the construction impacts to be limited in scale to only the impacts associated with the units in that phases, and will be limited in duration to only the time needed to construct those units in that phase.

1.6.1 General Description of the Construction Process

In general, the construction process will begin with demolition of all of the existing golf and country club-related buildings on the site, as well as removal of the septic systems, underground fuel or other types of storage tanks, and the existing utility connections. If any asbestos-containing materials are found to be present, they will be removed and disposed of in conformance with applicable requirements, procedures, and permitting processes. Soil remediation measures outlined in **Section 1.6.5** will be performed at this time. Site clearing and grading operations can then commence. Dust monitoring and mitigation measures are a part of the SMMP; therefore, potential impacts from dust raised by disturbance of impacted soils will be subject to a high level of control.

At the onset of the clearing and grading stage, clearing limits will be flagged and installation of staked hay bales and silt fencing along the development area periphery will occur (which would also establish the limits of clearing and grading). Such actions will protect those limited areas of natural vegetation on the site from impact, so that these can be incorporated into the project's perimeter buffering. Then, clearing operations can begin, followed by grading necessary to implement the drainage and wastewater treatment systems, utility connections, and for proper building and roadway foundations. Although not anticipated, it is noted that if debris is found in any areas of the site designated to remain in a natural state, it will be removed by hand (to minimize disturbance to these areas). All clearing and other debris will be properly handled and disposed of in approved facilities. Generally, the Applicant seeks to balance the amounts of soil to be cut and filled for the project, in order to minimize the time necessary to establish project grades, as well as the cost associated with soil import or export, although this will ultimately depend on the final grading plan, which will be completed during Site Plan review. In order to minimize the time span that denuded soil is exposed to erosive elements and thereby raise dust, excavations for the curbs, roads, building foundations, wastewater system, drainage system and utilities will take place immediately after grading operations have been completed. Water sprays and temporary stabilization/seeding and other similar best management practices will also be utilized during the construction process to minimize dust and potential erosion on inactive area surfaces.

Once construction of the units, drainage system and STP connection are complete, asphalt road surfaces will be laid, followed by soil preparation using topsoil and installation of the landscaping, which will be performed while the utility connections are commissioned.

In order to minimize the length of roadways in the area that construction-related vehicles (particularly trucks) will traverse to and from the site (assuming such vehicles will approach the site on NYS Route 27), the construction entrance will be located at the existing site vehicle entrance on Lakeland Avenue. In this way, the potential for impacts to the neighborhood from such use (e.g., dust, truck noises and engine emissions, increased roadway congestion and commuter inconvenience) would be minimized and limited to the portion of Lakeland Avenue between the site entrance and NYS Route 27. The two main internal roadways will be installed in Phase 1, so that three vehicle access points will be available for the site's residents at the conclusion of this phase. As the Lakeland Avenue entrance will also be used by construction vehicles during construction of Phases 2 through 6, site residents will have the other two accesses available to access and depart the site without interacting with construction vehicles, depending on the time of day, day of the week (it is expected that construction will occur only on weekdays) and level of construction vehicle traffic. It is expected that areas for construction worker parking, truck loading/unloading, and material storage/staging will be located within each Phase area.

Truck traffic associated with various stages of construction activities are expected, particularly with road construction and construction of the residences. These trips are primarily associated with delivery of equipment and building materials, and will vary depending on the stage of construction, the number of buildings being constructed and overlapping construction activities, availability of materials and other factors. Truck trips may also involve many deliveries in one

day, followed by an extended period during which no deliveries are made. An example would be delivery of forms for concrete setup, which could involve multiple deliveries in a day, and then no deliveries until concrete is ready to be poured or forms are ready to be removed. Over the course of a day, if the worst case scenario involves simultaneous construction of roads, amenities, utilities and residential units (which could occur at times during the construction schedule), estimates can be provided of the average number of trucks per day for construction of various components of the project.

1.6.2 Construction Schedule

It is anticipated that the proposed project will be constructed in 6 phases over a period of 74 months (see **Figure 1-4** for the locations of each phase, and **Table 1-11** lists the project components to be built in each phase). For example, if the overall construction period were to begin in early June 2021 it would conclude in early August 2027.

TABLE 1-11
PROJECT PHASING

Phase	Constructed During Phase
1	STP, Maintenance Bldg., 16 Micro units, 62 1-bdrm units, 60 2-bdrm units
2	111 1-bdrm units, 111 2-bdrm units
3	158 1-bdrm units, 160 2-bdrm units
4	144 1-bdrm units, 145 2-bdrm units
5	16 Micro units, 100 1-bdrm units, 97 2-bdrm units
6	94 1-bdrm units, 91 2-bdrm units;

Each phase of the overall construction period will include activities such as clearing, grading, construction of the residential and accessory commercial structures spaces and improvements, and site finishing/landscaping. Each phase is estimated to last either 16 or 20 months, but overlapping of phases is planned in order to fit project development within the overall 74-month construction period.

As noted above, the entire construction period would last about 8 to 10 years; however, it should be remembered that construction activities occurring on the site would vary within that time span That is, construction activities would not assume a continuous, unvarying level of intensity during all 74 months of construction. There will be lulls in construction activities, as one phase nears an end and the following phase begins, or activities may increase during periods of overlap in phases. Also to be considered is that, as each phase ends, the location of construction activities (and their associated impacts) would shift within the site to another phase area. Consequently, the nature, intensity and scale of construction-related impacts would vary within each phase, and would be associated with the numbers of construction workers on-site as well as with the work tasks to be accomplished during each part of each phase.

Generally, the construction-related impacts of the proposed project will be limited in duration,

will vary in intensity during the construction process, and will shift geographically as each phase undergoes development. In terms of the permanent use and occupancy of the project site, construction is of limited duration and will be managed by the Applicant to comply with Town Code requirements and proper construction management practice.

As there are no significant types or acreages of sensitive natural (e.g., steep slopes, wetlands, wildlife habitats or protected plant species, etc.) or scenic (e.g., overlooks, cultural sites, historic structures, etc.) features on the site, no measures to protect such resources are necessary or proposed.

With respect to the hours of the workday during which construction activities will be conducted, Chapter 35 of the Town Code was referenced, as this ordinance regulates noise generation in the Town. For the hours 7 AM to 8 PM, noise audible at a residential site may not exceed 55 dBA at the property line; however, construction-related activities are specifically exempted from this regulation. Nevertheless, the Applicant expects to limit the hours of construction to within the period 7 AM to 6 PM, on weekdays and, should the construction schedule require it, Saturdays. Construction on Sundays or holidays is not expected.

1.6.3 Designated Construction Areas

Construction equipment storage/staging areas and construction worker parking areas will be designated within the site, in each Phase area as that Phase is constructed. "Rumble strips" will be placed at the site construction entrance, to prevent soil on truck tires from being tracked onto local roads, and a water truck will be available to wet excessively dry soils, in order to minimize potential impacts from dust raised.

1.6.4 Trip Generation, Vehicle Access and Public Roadway Use

Because of its proximity to NYS Route 27 (Sunrise Highway), it is expected that all construction vehicle access will be limited to Lakeland Avenue, with no access through any abutting properties; it is anticipated that this access point will become the project's entrance at the end of the construction process. It is anticipated that construction-related vehicle trips to and from the site will primarily occur outside of the hours when school buses will be operating in the area, thereby minimizing the potential for accidents or impacts to school buses or school-related pedestrians. Generally, construction vehicle traffic and its impacts would be temporary in duration and would occur on roads that have sufficient capacity to accommodate this traffic with minimal potential for impact. As a result, no significant or long-term construction or safety impacts to local roadways or the residents in the area are anticipated.

1.6.5 Soil and Materials Management Plan (SMMP)

The existing soil quality conditions on the subject site were investigated as described by the Phase I and II ESAs, which are appended to this DEIS in **Appendices B-1 and B-2**, respectively, and are summarized in **Section 1.3.2**. In association with these documents, an SMMP (see **Appendix B-**

3) was prepared, to *"…support the redevelopment of the property, and detail the best management practices to be employed during construction for the handling of impacted soils."* The SMMP also addresses the potential for dust raised during the construction period and provides appropriate dust control measures.

The following has been taken from the SMMP:

1.0 INTRODUCTION

P.W. Grosser Consulting, Inc. (PWGC) has prepared this Soil and Material Management Plan (SMMP) for the property located at 458 Lakeland Avenue in Sayville, New York, known as the former Island Hills Golf Club. This SMMP has been prepared to support the proposed redevelopment of the property and details the best management practices to be employed during construction for the handling of impacted soils. Historic environmental site assessments (ESAs) revealed the presence of elevated concentrations of several metals, particularly mercury, and pesticides related to the site's long-term usage as a golf course. This document is to be implemented and managed by the property developer in conjunction with an environmental consultant.

PWGC recommended preparation of a SMMP that details the proper handling of on-site soils to be protective for on-site personnel and the surrounding community in the event of soil intrusive activities or if the property is redeveloped.

2.0 SOIL MANAGEMENT

Currently, the property is mostly composed of an overgrown golf course and several support buildings for the former operation of the golf course. Regional groundwater flow beneath the subject property is in a generally southerly direction as obtained from groundwater contour maps developed by the United States Geologic Survey for Long Island in 2013.
In order to properly protect the environment and public health from the metals and pesticides detected, soil management at the site will consist of the following:

- Non-disturbed areas of the property which are to remain naturally vegetated and do not exceed RRSCOs [Restricted Residential Soil Cleanup Objectives] will not require soil management.
- Site development, such as roads, parking areas, sidewalks, concrete slabs, or other impervious layers will act as a physical barrier to prevent contact with soils in these areas. No other soil management procedures will be required in these areas.
- In areas not included above, soil management may consist of the following options:
  - **Clean Soil Cap** - Construction of a 1 foot thick soil cap, in accordance with NYSDEC Part 360.13, in areas where the current landscaping is disturbed. The soil cap will be sampled at the following frequency and as described in Section 2.1:

Fill Material Quantity (cubic yards)	**Number of VOC Samples**	**Number of Non-VOC Samples**
0 - 300	2	1
301 - 1,000	4	2
1,001 –-10,000	6	3
10,000+	Two per every additional 10,000 cubic yards or fraction thereof	One per every additional 10,000 cubic yards or fraction thereof

Inline Table1 – Table sourced from Part 360-13-Minimum Analysis Frequency for Fill Material

Fill material will be sampled for metals, PCBs, pesticides, and SVOCs. VOC sampling of the fill material will not be required except in areas where their presence is possible, such as historic petroleum spill areas or if odors or elevated photoionization detector readings are detected. Asbestos sampling will not be required if the on-site structures are properly abated prior to demolition. Analytical results will be compared to the lower of Part 375 RRSCOs and PGSCOs {Protection of Groundwater Soil Cleanup Objectives] to meet the General Fill requirements. The soil cap will be covered with a grass/sod or vegetation layer to act as an additional barrier. To document the transition between the clean soil cap and deeper soils, a professional survey will be completed or a demarcation barrier, such as orange construction fencing, will be placed beneath the clean soil cap.

- **Vertical Mixing** - Vertical mixing is the widely-accepted process of remediating impacted surface soils by mechanically mixing them with cleaner soil found at greater depths. This method is based on the principle that the environmental and public health risk from these compounds is a function of the surface soil concentrations of these compounds to which a person is exposed; lowering concentrations of compounds lowers the risk to the person exposed to them. As soils generally deeper than 2 feet met UUSCOs [Unrestricted Use Soil Cleanup Objectives], vertical mixing will reduce compound concentrations in the surface soil to concentrations less than RRSCOs and PGSCOs. Below this level, small amounts of these compounds are an acceptable environmental and public health risk, even in cases where exposure to the soil is continuous or over long periods. Vertical mixing will consist of thorough mixing of the top 1 foot of surface soils and may be performed by means of an excavator or by successive passes over the site with a scraper. The method used to perform the vertical mixing will be dependent upon the size of the work area.

- **On-Site Burial** - On-site burial of impacted soils in excavated areas, depending on contaminant concentrations and the depth to groundwater or proximity to surface water may be conducted. The PGSCOs and the mobility of contaminants will be considered to ensure a proper buffer zone between impacted soils and the groundwater table. Buried soils will require a 1 foot cap of clean soil and a grass/sod or vegetation layer to act as a barrier to impacted soils or an impervious layer such as roads, parking areas, sidewalks, or concrete slabs.

- **Landscape Berms** - Landscape berms may be constructed on the property in undeveloped open areas of the property, such as in buffer areas. The landscape berms will require a 1 foot cap of clean soil and a grass/sod or vegetation layer to act as a barrier to impacted soils.

- **Soil Removal** - Excess soil will be characterized for disposal purposes. Soil wastes will be transported to properly permitted off-site disposal facilities in accordance with NYSDEC Part 360. Other soils, if determined to have a beneficial use, will be transported to other appropriate sites in accordance with NYSDEC Part 360.

To prevent tracking of potentially impacted soil into areas where neither remediation nor other risk management measures are planned, the following precautions will be taken:

- Access to areas in which a clean soil cap has been constructed will be limited by temporary barricade fencing until landscaping activities have been completed.
- Vehicles and equipment will be cleaned or washed down prior to moving from impacted areas to areas in which soil mitigation is not necessary or has already been completed.
- Erosion controls (i.e. silt fencing or equivalent) will be installed to prevent runoff from impacted areas from entering areas in which soil mitigation is not necessary or has already been completed.

When possible, PWGC recommends minimizing excavation and disturbance of soils or re-use of deeper soils at the greens and tee boxes and placement of an impervious layer above these areas to reduce the need for soil management.

2.1 Endpoint Sample Collection

PWGC will collect endpoint soil samples after soil management measures are completed to determine whether surface soil concentrations of the trigger compounds are less than NYSDEC RRSCOs and PGSCOs which is the applicable maximum cleanup objectives for General Fill requirements. The number of samples collected will ultimately be determined based upon the areas disturbed and completed with a soil cap in accordance with the sampling frequency detailed in Inline Table 1. Samples may be collected from vertically mixed stockpiles or in situ after placement of the 1 foot thick soil cap. In-situ soil sampling will be biased towards areas that were previously sampled and contained exceedances of RRSCOs unless those areas are capped with an impervious layer, such as roads, parking lots, sidewalks, or concrete slabs. Soil samples will be collected from zero to two feet below grade using a stainless steel hand auger and will be submitted to a New York State Department of Health (NYSDOH) certified laboratory for analysis. Samples will be analyzed for TAL metals by United States Environmental Protection Agency (USEPA) method 6010C/7471B and organochlorine pesticides by USEPA method 8081B. If analytical results indicate concentrations of metals or pesticides greater than NYSDEC RRSCOs or PGSCOs, there will be further soil mixing in that area until endpoint sample results are less than NYSDEC RRSCOs and PGSCOs

2.2 Dust Control

Dust from work activities could contain contaminants of concern. The on-site environmental technician will monitor dust levels and take immediate action when necessary. The environmental technician will implement the dust control plan [below] if there is any actual or potential visible dust. Dust suppression measures will be employed in accordance with the NYSDEC DER [Department of Environmental Remediation]-10 Appendix 1B for Fugitive Dust and Particulate Monitoring. The primary sources of dust will be equipment, vehicular traffic, and construction activities on exposed soils.

2.3 Dust Control Plan/Monitoring

Dust monitoring will be conducted during intrusive activities in areas of concern, specifically during removal of the vegetative layer and excavating in the greens, tee boxes, and fairways, where contaminants were identified that exceeded RRSCOs. If there is dust or the potential for dust in areas of concern, the environmental technician will direct that the area be wet down. Calcium chloride may be used if the problem cannot be controlled with water. Dust control measures may include the following methods and, as good practice, can also be implemented at times when dust monitoring is not being conducted to prevent the migration of non-impacted dust off-site, as well as potentially impacted dust:

- Water may be applied to designated work areas prior to any clearing, mixing, or other earthmoving operations.
- Water may be applied to disturbed work areas several times per day during dry weather periods.
- The disturbed areas may be sprayed down at the end of each day to form a thin crust.
- Earth moving activities at the site may be suspended if winds steadily exceed 15 miles per hour and creates a dust issue.
- Unpaved haul roads and equipment paths may be watered on a sufficient basis to prevent dust emissions. An alternative to frequent watering may be to pour a 4-inch thick layer of gravel.
- Transportation of soils on-site may be performed in a covered vehicle or the soils must be sufficiently watered to prevent dust emissions.
- Vehicle speeds may not exceed 10 miles per hour and the site may be posted with speed signs.
- Parking areas shall be designated and may be sufficiently watered or gravel-lined to prevent dust emissions.
- Excavated areas and materials may be covered after excavation activities ceased.

If the particulate monitor detects concentrations greater than 150 $\mu g/m^3$ [microgram per cubic meter] (15 minute average) over the daily background or if visible dust is observed, the environmental technician will take corrective actions as defined herein, including the use of water for dust suppression and if this is not effective, requiring workers to wear APRs with high efficiency particulate air filter (HEPA) cartridges.

Absorption pathways for dust and direct contact with soils will be cut off by the required use of latex gloves, hand washing, and decontamination exercises when necessary.

The environmental technician will record air monitoring data and must ensure that air monitoring instruments are calibrated and maintained in accordance with the manufacturer's specifications. Instruments will be zeroed daily and checked for accuracy. Monitoring results will be recorded daily on the log included as Appendix D [of **Appendix B-3**].

The following action levels will be used:

- Total respirable dust at background in breathing zone: continue.
- Total respirable dust at 150 µg/m^3 (15 minute average) greater than background in breathing zone: Level C PPE - HEPA filters.

3.0 REPORTING

Upon completion of site capping, a Construction Completion Report will document the completion of the effort. The report will document that soil was managed in accordance with this plan and that endpoint sample results indicate that the surface soils do not contain concentrations of metals or pesticides greater than their respective NYSDEC RRSCOs. The Completion Report will be submitted to the developer following final capping of the site.

1.6.6 Erosion and Sedimentation Control

The SWPPP includes details of erosion controls required during construction to contain stormwater runoff on site during construction and ensure that there is no transport of sediment off site. The Erosion Control Plan will be prepared in accordance with the recommendations of the *NYSDEC Standards and Specifications for Erosion and Sedimentation Control* and the NYSDEC Technical Guidance Manual. Use will be made of measures including:

- silt fencing and temporary diversion swales installed along the perimeter of the limits of clearing within the site to minimize/prevent sediment from washing into the natural buffer areas, adjacent streets and properties.
- inlet protection installed around all grated drainage inlets to trap sediments in stormwater runoff.
- dust control and watering plan and a stabilized construction entrance to minimize the tracking of dirt and debris from construction vehicles onto adjacent roadways.
- designation of material and topsoil stockpile areas as well as use of silt fencing and anchored tarps to prevent/reduce wind-blown dust and erosion from rainwater.
- establishment of a stabilized stone vehicle washing station which drains into an approved sediment-trapping device.

The proposed locations, sizes, and lengths of each of the temporary erosion and sediment control practices planned during site construction activities, and the dimensions, material specifications,

and installation details for all erosion and sediment control practices will also be provided on the Erosion Control Plan.

Conformance to Chapter 47 of the Town Code and to the requirements of NYSDEC SPDES review of stormwater control measures is necessary, to be consistent with Phase II stormwater permitting requirements for the General Permit. Under this program, a site-specific SWPPP must be prepared and submitted to the Town for review and approval prior to final site plan approval.[3] Once the SWPPP has been approved by the Town, the Applicant will file a Notice of Intent with the NYSDEC to obtain coverage under the General Permit. The General Permit requires that inspections of the construction site be performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained during the construction period.

1.6.7 Excess Soil Disposition

As discussed in **Section 1.4.3**, it is estimated that 46,840 CY of excavated soil will remain after filling operations for the overall project are completed, so that this material will be removed from the site. Assuming that trucks having a capacity of 40 CY per load, a total of 1,171 truckloads will be required. The length of time necessary to remove this volume of soil (that is, to conduct the removal operation) will depend upon the number of loading stations established: the more loading stations, the faster the removal operation will proceed, and the shorter the time needed to conduct the removal operation.

Table 1-12 provides estimates of the length of time needed to conduct the soil removal operation for the proposed project, assuming that 40 CY trucks are used, and each truck makes two round trips daily. The estimated 2,342 soil transport truck trips would only occur on the segment of Lakeland Avenue extending northward to NYS Route 27 (Sunrise Highway).

As the project will be developed in six phases, not all 46,840 CY of excess soil will be generated at one time, and so not all of this soil will require removal at one time. As a result, the volume of excess soil generated during each phase will be substantially reduced, so that the soil removal operation will be substantially shorter in duration and, therefore represent a substantially reduced potential impact on the neighborhood, from noise, dust and truck traffic on local roadways.

[3] The SWPPP must include: a description of existing site conditions including topography, soils, potential receiving water bodies and stormwater runoff characteristics, a description of the proposed project, construction schedule, the erosion and sediment controls planned during construction activities and the details of the post construction stormwater management system design and consistency of said system with the *NYS Stormwater Design Manual*, appropriate maintenance procedures for the erosion and sediment controls and each component of the post construction drainage system, pollution prevention measures during construction activities, a post-construction hydrologic and hydraulic analysis for all structural components of the post construction stormwater management system for a 1, 10 and 100 year storm event, and comparison of existing and post construction peak stormwater discharges. The SWPPP must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges from a property once developed.

TABLE 1-12
RANGE IN NUMBER OF TRUCKLOADS*
Removal of Excess Soil from Site

Number of Loading Stations	For 46,840_ CY of Excess Soil, 1,171 Truckloads Removed		
	Number of truckloads removed daily	Number of truck trips to/from the site daily	Duration of removal process
1	32	64	37 days
2	64	128	19 days
3	96	192	13 days
4	128	256	10 days
5	160	320	8 days

* Assuming 40 CY trucks are used, each truck making two round trips per day.

SECTION 2.0

NATURAL ENVIRONMENTAL RESOURCES

2.0 NATURAL ENVIRONMENTAL RESOURCES

2.1 Soils and Topography

2.1.1 Existing Conditions

Soils

The subject site was most recently used as a golf course and as a result, surface soils have been altered and redistributed to form the contours and elevations associated with this most recent use. Soil conditions on the site are inventoried through review of the Soil Survey of Suffolk County, prepared by the US Department of Agriculture in 1975[1]. This is a useful source of soils information that identifies soil types resulting from natural deposition and modification, as well as man-induced alterations associated with land use. The Soil Survey indicates that the following six soil types underlie the subject property (see **Figure 2-1**):

- CpA - Carver and Plymouth sands, 0-3% slopes; occupies 21.12 acres/18.5% of site
- CpC - Carver and Plymouth sands, 3-15% slopes; occupies 10.04 acres/8.8% of site
- CuB - Cut and Fill Land, gently sloping; occupies 0.91 acres/0.8% of site
- De - Deerfield sand; occupies 0.68 acres/0.6% of site
- RdA - Riverhead sandy loam, 0-3% slopes; occupies 52.26 acres/45.7% of site
- RhB - Riverhead and Haven soils, graded, 0-8% slopes; occupies 29.32 acres/25.6% of site

The characteristics of these soil types are identified in the Soil Survey as follows:

Carver and Plymouth sands, 0-3% slopes (CpA) - These soils are mainly on outwash plains; however, they are also on some flatter hilltops and intervening draws on moraines. A small part of this mapping unit is slightly undulating. The hazard of erosion is slight on the soils in this unit. These soils are droughty natural fertility is low. These soils are not well suited to the crops commonly grown in the county. Because these soils tend to be droughty, lawns and shrub plantings are difficult to establish and maintain. Almost all of this unit has been left in woodland or in brush. Many areas previously cleared for farming are now idle. Most areas in the western part of the county and near the shores of the eastern part of the country are used for housing developments.

Carver and Plymouth sands, 3-15% slopes (CpC) - These soils are mainly on rolling moraines; however, they are also on the side slopes of many drainage channels on the outwash plains. Individual areas of this mapping unit are large on the rolling topography of the Ronkonkoma Moraine, and in these areas, slopes are complex. On the outwash plain, this unit is in long, narrow strips parallel to drainageways. The hazard of erosion is slight to moderate on the soils in this unit. These soils are droughty, and natural fertility is low. In some places, slop is a

[1] Updated/digitized maps used for figures from Soil Survey Geographic Database for Suffolk County, New York (SSURGO); USDA Natural Resources Conservation Service; 2010; updated September 24, 2015; the Suffolk County Soil Survey (**Warner, 1975)** provides soil descriptions/constraints.

limitation to use. These soils are not well suited to crops commonly grown in the county. These sandy soils severely limit installation and maintenance of lawns and landscaping shrubs. Almost all of these soils are in woodland.

Cut and Fill Land, gently sloping (CuB) - This unit is made up of level to gently sloping areas that have been cut and filled for nonfarm uses. Slopes arrange from 1 to 8 percent, and because of final grading around houses and other buildings, slopes generally are complex. The areas generally are large but some areas are about 5 acres in size. This land has few, if any, limitations to use as building sites.

Deerfield sand (De) - This soil is between areas of somewhat poorly drained soils and well drained or excessively drained soils at slightly higher elevations. Slopes are 3 percent or less and are slightly concave in places. Except for some areas along the south shore, most areas of this soil are small. The hazard of erosion is slight. This soil is fairly well suited to crops commonly grown in the county. It is seasonally too wet or too dry in the root zone. Natural fertility is low. Small areas of Deerfield sand have been cleared for farming. Generally, this soil has been left in woodland with adjoining areas of wetter soils; however, many areas in the southwestern part of the county have been filled and are used as sites for housing developments. In some places, slab-type construction has been used without filling.

Riverhead sandy loam, 0-3% slopes (RdA) - This soil has the profile described as representative of the series. It generally is on outwash plains, and the areas are large and uniform. Where this soil occurs on outwash plans, 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 soil. This soil is limited only by moderate droughtiness in the moderately coarse textured solum. It tends to develop a plowpan if it is intensively farmed. This soil is well suited to crops commonly grown in the county, and it is used extensively for that purpose.

Riverhead and Haven Soils, graded, 0-8% slopes (RhB) - This mapping unit consists of areas of Riverhead sandy loam, of Haven loam, or of both. The areas have been altered by grading operations for housing developments, shopping centers, industrial parks, and similar nonfarm uses. In the western part of the county, areas of this mapping unit are very large, and large acreages are used as sites for housing developments. These soils are suited to most grasses and shrubs generally used for lawns and landscaping. In places very deeply cut or filled areas are slightly droughty and need supplemental irrigation. The response of plants to application of lime and fertilizer is food. The practice generally is to build on the soils immediately after grading; therefore, the number of existing buildings on areas of the soils in this unit is the main factor in determining their future uses.

Table 2-1 provides a listing of those factors of each soil type that may present limitations on site development, as well as those soil features that should be considered when developing the site. It is noted that 98.6% of the site is overlain by four soil types (CpA, CpC, RdA and RhB) which display generally slight to moderate limitations on development. The severe limitations that

TABLE 2-1
SOIL PROPERTIES & LIMITATIONS

Parameter	CpA	CpC	CuB	De	RdA	RhB
Engineering properties:						
Depth to seasonal high-water table	>4 feet		**	1-1/2 to 2	>4 feet	*
Profile/USDA texture	0-22 in.: Fine sand to coarse sand 22-60 in.: Coarse sand to gravelly sand			0 to 25 in.: Sand to fine sand or loamy sand. 25-53 in.: Sand to stratified sand and gravel.	0-32 in.: Sandy loam and fine sandy loam 32-65 in.: Sand, loamy sand, gravelly sand, gravelly loamy sand	
Permeability	0-22 in.: >6.3 in./hr. 22-60 in.: >6.3 in./hr.			0 to 25 in.: > 6.3 in./hr. 25-53 in.: > 6.3 in./hr.	0-32 in.: 2.0-6.3 in./hr. 32-65 in.: >6.3 in./hr.	
Available moisture capacity	0-22 in.: 0.03-0.04 in./in. 22-60 in.: 0.02-0.04 in./in.			0 to 25 in.: 0.04 - 0.06 in./in. 25-53 in.: 0.02 - 0.04 in./in.	0-32 in.: 0.11-0.15 in./in. 32-65 in.: 0.02-0.07 in./in.	
Suitability as a Source of:						
Topsoil	Poor: coarse texture		**	Poor: coarse texture	Good	*
Fill Material	Good: needs binder in places			Good	Good: material below a depth of 27 inches needs binder in places	
Soil features affecting:						
Highway location	Poor trafficability; extensive cuts and fills likely on CpC		**	Seasonal high water table	---	*
Embankment foundation	Strength generally adequate for high embankments; slight settlement; moderately steep to steep slopes on CpC			Strength generally adequate for high embankments; slight settlement		
Foundations for low buildings	Low compressibility; large settlement possible under vibratory load; moderately steep to steep slopes on CpC			Low compressibility; large settlement possible under vibratory load; seasonal high water table	Low compressibility	
Farm ponds (reservoir)	Rapid permeability; moderate and moderately steep to steep slopes on CpC			Seasonal high water table; rapid permeability	Rapid permeability in layers of substratum	
Irrigation	Very low available moisture capacity; rapid water intake; moderate and moderately steep to steep slopes on CpC			Seasonal high water table; very low available moisture capacity; rapid water intake	Moderate to rapid water intake; moderate available moisture capacity	
Limitations of the soil for:						
Sewage disposal fields	Slight	Slight to moderate: slopes in places	Slight	Moderate: seasonal high water table a depth of 1-1/2 to 2 feet	Slight	Slight
Homesites						
Streets & parking lots		Moderate to severe: slopes	Moderate: slopes			Moderate: slopes
Lawns, landscaping & golf fairways	Severe: sandy surface layer		Severe: sandy surface layer	Severe: sandy surface layer		Slight
Paths & trails			Moderate: sandy surface layer			
Picnic grounds & extensive play areas						

* Riverhead and Haven soils, graded, 0 to 8 slopes (RhB) have not been included since characteristics are too variable to estimate for all limitations.
** Per Soil Survey, not included because characteristics are too variable to estimate.

these soils present are associated with steep slopes and presence of a sandy surface layer which can readily be addressed through use of typical grading, drainage and landscaping techniques.

Soil Borings and Depth to Groundwater

Specific information regarding soil characteristics was obtained during the installation of two sets of soil borings installed on the subject property. The first set, completed in November of 2016 (see **Appendix B-4**) included six borings over the entire site, and indicated water table elevations as shown in **Table 2-2**:

TABLE 2-2
SOIL BORING RESULTS
November 2016

Boring	Estimated Surface Elevation (feet asl*)	Depth to Water Table (feet bgs**)	Estimated Elevation of Water Table (feet asl)
SB-1	31	13	18
SB-2	49	Not encountered	--
SB-3	33	15	18
SB-4	31	11	20
SB-5	30	12	18
SB-6	43	Not encountered	---

* asl - above sea level
** bgs - below ground surface

These borings indicate that the water table only had a vertical variation of 2 feet from north to south (18 to 20 feet asl).

The second set of borings was installed in May 2018 as part of the Phase II ESA prepared for the project (see **Appendix B-2**), and enabled detailed analyses of subsurface soil and groundwater quality conditions. The following **Table 2-3** summarizes the water table elevation-related data of that study.

TABLE 2-3
SOIL BORING RESULTS
May 2018

Boring	Estimated Surface Elevation (feet asl)	Depth to Water Table (feet bgs)	Estimated Elevation of Water Table (feet asl)
SB-001	36	18	18
SB-002	25	8	17
SB-003	42	23	19
SB-004	44	23	21
SB-005	32	8	24

The second set of borings, completed after the first round of borings, found that the water table elevations exhibited a perceptible slope trending downward in a southeasterly direction, from a low elevation of 17 to 19 feet asl in the site's eastern, southeastern and southern parts toward the northwest, where elevations were 21 to 24 feet asl. It is expected that the differences in water table elevations and configurations between late-2016 and mid-2018 reflect changes in the water-year conditions based on recharge of precipitation over that time period.

Review of the soil boring logs generated based on the observation of soil samples collected by East Coast Geoservices at the property generally indicates that below the surficial top soil layer overlying the site, soils generally consist of well drained fine sand with traces of gravel.

In addition, a percolation test was conducted at the subject property during October of 2018 the purpose of which was to assess the leaching capabilities of subsurface soils related to drainage and sanitary design. The study included the installation of five (5) percolation test wells at locations throughout the property followed by percolation testing conducted in accordance with 10NYCR, Appendix 75-A and the NYSDOH Residential On-site Wastewater Treatment Design Handbook. The percolation test wells at each location were installed at depths equivalent to the bottom of the leaching structures proposed for each area and varied in depth from eight to eighteen feet below ground surface (bgs).

Following installation, each of the test wells were presoaked for at least four (4) hours to the greatest extent practicable, one (1) day prior to percolation testing. The percolation tests were conducted by filling each test well with water to a depth of six (6) inches above the well bottom and then measuring the rate of drop from six (6) inches to five (5) using an electronic water level indicator. The testing at each well was repeated a minimum of three (3) times and/or until two (2) successive tests were approximately equivalent.

The following **Table 2-4** summarizes the results for each percolation test well.

TABLE 2-4
PERCOLATION TEST RESULTS
October 2018

Test Well ID#	Test #1	Test #2	Test #3	Test #4	Test #5
	minutes				
PW-1	0.33	0.22	0.10	0.08	NC
PW-2	49	35	22	23	25
PW-3	(see Note below)				
PW-4	0.46	0.56	0.52	0.63	NC
PW-5	16	16	14	15	NC

Notes: NC – Test Not Conducted
Water poured into test well drained too quickly to measure. Continuous water flow poured into well at a rate of approximately one (1) gallon per minute only resulted in a rise in water level to four (4) inches above the bottom of the well. Once water flow was terminated, drainage was instantaneous.

Review of the results above finds that the soils in the locations of the subject property that were subject to soil borings and percolation tests maintain excellent leaching capabilities for sanitary and drainage installations. A copy of the percolation report which includes the locations of the percolation tests is provided in **Appendix A-8**.

Soil and Recognized Environmental Conditions

The prior country club use on the site included a number of operational aspects that resulted in potential and/or actual contamination of soil and groundwater quality on and below the site. These impacts were determined and evaluated in the numerous ESAs conducted between 2006 and 2018 and are detailed in **Section 1.2.2** of this document, and so need not be repeated here.

In consideration of these evaluations, new Phase I and II ESAs were prepared for the applicant in 2018 to summarize any remaining unaddressed issues that may merit remediation. As detailed in **Section 1.3.2**, the Phase I ESA (dated June 2018) found a number of items, for which recommendations were provided, and so need not be repeated here.

In response to the recommendations of the Phase I ESA, a Phase II ESA was prepared in July 2018 (see **Section 1.3.2**). The scope of this Phase II ESA was limited to the area of the golf course and did not include the buildings or parking areas. The applicant has prepared the recommended SMMP (see **Appendix B-3**). The RECs associated with the ASTs, ACM and UICs will be addressed as part of the onset of construction of the proposed project. No additional effort is necessary to address the HREC associated with the historic spill as the spill has been closed.

Topography

Similar to soils, since the subject site was most recently used as a golf course, surface topography has been altered over most of the subject site. **Figure 2-2** depicts the topographic character of the project site, which had been altered from pre-golf course use conditions. The site has generally flat topography, but is divided into three areas of similar elevation: the eastern portion is somewhat lower than the southern and the northwestern portions. More specifically, the eastern portion of the site is generally 25 to 35 feet above sea level (asl), while the south and northwest portions vary between 40 and 50 feet asl.

The highest elevations on the site are approximately 50 feet asl, found in numerous locations in the northwestern portion of the property; these areas are associated with elevated tees and greens of the golf course. The lowest elevation is about 25 feet, in the eastern portion of the site. In the lower elevation areas of the site, the minimum depth to the water table is about 10 feet bgs, while in the area of the highest elevation areas, the water table is about 28 feet bgs.

Figure 2-3 depicts the project site's slopes, divided into five slope intervals. **Table 2-5** below indicates the acreages and percentages of these slope intervals. As can be seen, the majority of the site (104.1 acres, or 72.1%) is characterized by slopes of less than 10%, with an additional 5.6% (6.35 acres) exhibiting moderate slopes. Only approximately 3.3% of the site (3.79 acres) would be considered to have steep slopes (i.e., 15% and greater, as defined by the Town Subdivision and Land Development Regulations).

TABLE 2-5
SLOPE ANALYSIS*

Slope Intervals and Areas (acres)					
Less than 10%	10% - 14.9%	15% - 19.9%	20% - 24.9%	25% and above	Total
104.20	6.35	2.74	0.88	0.17	114.33

* See **Figure 2-3**.

It is noted that the Town's review and approval process will apply to the proposed project, including conformance to the applicable Town slope protection standards codified in the Town Subdivision and Land Development Regulations. The following states the Purpose of these regulations.

> The maintenance and protection of existing topographical features and in particular steep slopes [defined in the Town Code as an area of land with a gradient of 15% or more over a horizontal length of at least 25 feet and extending over a horizontal width of at least 25 feet] is essential to the health, safety and welfare of Town of Islip residents. The protection of these areas is necessary to prevent soil erosion, sedimentation, loss of protective vegetation, drainage hazards and flooding. It also allows for the provision of safe building sites, proper access for pedestrians, vehicles and emergency equipment and the protection of wildlife habitat.

The corresponding regulations are listed and the project's conformance is discussed in **Section 2.1.2** below.

2.1.2 Anticipated Impacts

<u>Soils</u>
Based on the values in **Table 1-6B**, it is estimated that a total of about 109.22 acres (95.5% of the site) will be cleared and subject to grading to construct the buildings, paved surfaces, drainage pond and new landscaping associated with the project. Consequently, it is expected that development will occur on each of the six soil types present. However, the type and amount of that development vary significantly. Comparison of **Figures 2-1 and 1-2a** indicates that the CuB and De soils (which occupy only minimal amounts of the property) will be disturbed to only minimal degrees, and will be occupied by open landscaped areas. The four remaining soils, which occupy much larger amounts of the site, will all be developed with residential buildings, the STP and maintenance building, paved surfaces, landscaping and the drainage pond.

Table 2-1 can be used to determine soil properties and constraints with respect to the types of development proposed for each soil type listed. For the four soil types on the subject property whereon the large majority of development will occur, moderate to severe constraints are related to the presence of a sandy surface layer (CpA and CpC), and slopes (CpC and RhB). These

constraints can be readily addressed through proper engineering of slopes, grading/drainage, and soil preparation for landscaping to establish groundcover.

With respect to the STP, it is noted that this facility will be sited on areas overlain by CpA soils, which display only slight limitations on the operation of such a facility. The drainage pond will be located on CpA and CpC soils which provide a suitable base for establishment of the pond and will facilitate leaching over overflow stormwater will benefit from rapid permeability of these soils. Conformance with the applicable minimum standard for vertical separation between the water table and the recharge facilities of the STP and drainage system will be sufficient to allow for their proper operation.

Soils exhibiting limitations related to sandy surface layer comprise approximately 28.6% of the subject property. This limitation is not expected to be an impediment to location of roads, parking, or buildings. Establishment of turfed and landscaped areas will be 48.8% of the site, and impediments with respect to a sandy surface layer will be managed through soil preparation for the intended use. Soils will be amended to establish healthy growing conditions and nutrient and water retention properties needed to support the limited areas of landscaping. In the case of the proposed project this may potentially affect lawns, ornamental shrubs and turf grasses. The potential impacts related to this limitation with respect to erosion potential and revegetation can be overcome by using proper grading techniques and erosion control measures, installing proper drainage and using suitably-adapted drought tolerant indigenous vegetative species for landscaping as well as site stabilization and restoration. These measures will be used to minimize potential impacts due to surface soils where appropriate. Landscaping practices common to sandy soil areas will be employed and implemented at the time of construction, following the site plan review and approval process which will include landscape plan preparation. This will ensure that potential impacts with respect to a sandy surface layer are adequately addressed and as a result, no long-term soil impacts are expected.

Soils exhibiting limitations related to slopes comprise 10.2% of the site. The limitation of slopes may affect the installation of sewage disposal fields, homesites, streets and parking lots as well as the establishment of landscape vegetation related to concerns of providing stable surface areas to properly control erosion and drainage. The site plan has been designed to take slope constraints into consideration. Roads have been placed in low slope areas and homesites are planned in areas with construction areas of flatter surfaces. Planned grading of strategic locations of the site will be necessary to provide appropriate and stable surface areas to allow development of the proposed project.

Limitations related to seasonal high water are limited to only the De soils and only comprise approximately 0.6% of the subject property. This portion of the property is proposed to be occupied by open landscaped surfaces. Potential impacts related to a seasonal high water table elevation are expected to be extremely limited and related to flooding, which will be mitigated through proper grading and drainage system design.

The overall grading of the property is expected to result in a well graded cut and fill soil characteristic that will provide a suitable and stable soil surface for the intended use. Grading will be conducted with heavy equipment that will redistribute soils in the general area of their origin, and there are no soil sorting processes that would generate excessive fine material.

In consideration of the above, the characteristics of soils on the subject property are not expected to present an impact on the project following the implementation of appropriate mitigation measures (i.e., grading, installation of appropriate landscape species, appropriate sanitary and drainage design, etc.) to be instituted through project design.

Soil Borings, Depth to Groundwater

Review of soil boring logs revealed that soils underlying the subject property generally consist of well drained fine sand with traces of gravel. In addition, percolation tests conducted at the subject property found that the soils maintain a high rate of permeability and exhibit excellent drainage characteristics. As a result, the proposed project is not expected to present any significant impacts related to drainage and recharge following development.

The soil boring logs also revealed that the water table is encountered at depths ranging from a minimum of eight feet to a maximum of twenty-three feet bgs, or at elevation ranging from seventeen to twenty-four feet above msl. The depth to the water table in the areas planned for sanitary system leaching field (approximately 23 feet) and drainage system leaching facilities and the leaching capabilities of the underlying soils, when considered relative to drainage and sanitary system design and soil percolation test results (see **Section 2.2.1, Soil Borings and Depth to Groundwater**), indicate that these leaching systems will function properly, and are expected to mitigate any potential for groundwater mounding or alterations of groundwater flow direction following project development.

Stormwater Systems

All stormwater runoff generated on the property will be retained and recharged in a drainage system conforming to Town requirements, which includes the ability to handle 8 inches of runoff. While the project's drainage system is designed for 5 inches of storage, it is expected that the high percolation rate of the site's soils will enable the project's drainage system to handle the required 8 inches of runoff. The proposed project will require a 37.5% relaxation of the Town requirements (from 8 inches of storage to 5 inches of storage, though it is expected that the proposed system will operate at the 8-inch level) in this regard. All stormwater will be collected as well as recharged within the site through a series of roadside catch basin and drywells, and a 1.78-acre pond/retention area to be excavated in the center of the site. The Town Engineering Department will review the system for sufficiency as part of the site plan review process.

The project's drainage system will be designed to comply with State Pollutant Discharge Elimination System requirements under the NYSDEC SPDES General Permit (GP-0-20-001) and Chapter 47 of the Islip Town Code. Under these requirements, a site-specific Stormwater Pollution Prevention Plan (SWPPP) must be prepared and submitted to the Town for review and approval as a condition to final site plan approval. The SWPPP evaluates the proposed drainage

system to ensure that it meets the NYSDEC and Town requirements for treatment and retention of stormwater runoff. The SWPPP must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is no net increase in peak stormwater discharges from a property once developed. Drainage for the project will be designed and installed in accordance with Town of Islip and NYSDEC SWPPP requirements. Additional details regarding the stormwater system are provided herein.

Runoff generated within the project area will be contained on-site. A Pond/Retention Area, swales, and leaching pools will be designed and installed to effectively store runoff for a 5-inch rain event. This plan requires the post development peak runoff rates to not exceed the pre-development peak runoff rates for a 100-year storm. Since all stormwater will be disposed of on-site and be filtered by the natural sands that are present; no additional stormwater treatment devices will be required or installed.

The bottom of the unlined retention pond will be 2 feet above the groundwater table. Pond areas with less than two feet of separation between the bottom of the pond and groundwater will be lined along the bottom. The liner will be extended vertically along the slope of walls such that that the top of the liner will be a minimum of two feet above the groundwater. Whenever practical, swales and the pond will be interconnected to limit the potential of an overflow condition.

Soil erosion and sediment control plans will be prepared and implemented during construction will be prepared in accordance SWPPP and the Town of Islip requirements. Installation of the stormwater infrastructure will depend on the construction phasing of the project, however there will be adequate storage volumes available for the disturbed areas. During construction and after construction completion, the drainage system will be inspected in accordance with the NYSDEC SWPPP requirements.

The system will be designed to comply with SPDES requirements under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (hereafter, the "General Permit", GP-0-20-001). Based on existing developments in the area, local geologic conditions, and adequate depth to groundwater, subsoils are expected to be of suitable quality to allow efficient recharge of stormwater, subject to further evaluation during subsequent project review (see **Section 1.6.6** for additional information in regard to erosion control during construction).

<u>Wastewater Systems</u>

Sewage generated by the residences and the amenity spaces will be conveyed by a gravity sewer sub collection system to an on-site STP. The gravity sewer will be designed in accordance with the SCDHS, SCDPW and the Ten States Standards.

The STP will be constructed to treat 377,000 gallons of sewage per day. The design flow for sewage generated on the project is estimated at 307,125 gpd. The STP will be designed to handle an additional 69,875 gpd of sewage from offsite sources.

The sewage treatment process will be a sequencing batch reactor. This process is commonly utilized in similar facilities throughout Suffolk County and long-term operation of this types of system has demonstrated that effluent will routinely meet the NYSDEC SPDES requirements for reduction of nitrogen and suspended solids.

Treated effluent will discharge into a leaching pool groundwater disposal system. Due the relatively shallow depth from grade to the water table beneath the project site**,** the groundwater disposal system will be designed and installed in accordance with SCDPW standards for discharge to a disposal system with a high groundwater condition. There will be four separate leaching pool clusters, such that one leaching pool cluster can be held out of service at all times in reserve, to address any surge in demand. The groundwater disposal system will be designed for two hundred percent of the daily design flow. The complete installation of the groundwater disposal system will occur when the STP is constructed.

Approvals from the SCDHS, NYSDEC and SCDPW will be required. Specifically, review and approval of an Engineering Report and Construction Plans and Specifications by the SCDHS and SCDPW will be required, ensuring that this facility will be built to and operated in conformance to established regulations. Finally, the STP will be required to obtain a SPDES permit from the SCDHS/NYSDEC.

PWGC prepared a groundwater mounding analysis to investigate the maximum height of a mound that will form directly below the leaching pools of the STP discharge system and to determine what, if any, local effects the mound will have on site and with regards to the surrounding area.

A total of 600 leaching pools are being proposed for the project with only 150 pools receiving STP effluent at any given time. A simplified conservative approach was taken with regard to establishing an equivalent discharge bed area. The bottom area of 150 leaching pools was combined into a single composite area (A) totaling 11,781 SF. In reality, 150 pools will occupy more than this area as the pools will be arrayed in a linear fashion with 8 feet between rows of pools. The smaller composite area is being used in the analysis as it will reduce the total area that the peak daily discharge will be spread out over and, thus, produce a conservative estimate of a mound height. A square shaped area was further used to additionally concentrate the STP effluent and produce a higher mounding effect. Thus, a square area with equal length (L) and width (W) dimensions of 108.5 feet each is being conservatively used in the analysis.

The percolation rate of STP effluent into groundwater was then calculated using the peak daily design flow rate of 377,000 gpd and a leaching area of 11,781 SF. This produced a maximum percolation rate (i) of 4.28 feet/day (2.14 inches/hour). With the required infiltration rate established specific hydrogeological parameters used in mounding analyses were then researched for the site based on soil borings conducted by PWGC as part of the Phase II Environmental Site Assessment investigation. Generally, the shallow soils at the site were characterized as medium to course sands with gravel. Specific yields (Sy) for materials of this nature are cited as having average values of 0.26 to 0.27. Published USGS information was

reviewed for local hydraulic conductivity (KH) values as well as the initial saturated aquifer thickness (hi). USGS maps for the Upper Glacial aquifer in the area of the site indicate fairly conductivity material with an estimated horizontal hydraulic conductivity of 2,000 gpd/SF (267.4 feet/day) and a saturated aquifer thickness on the order of 100 feet.

The Hantush Derivation (**1967**) for calculating groundwater mounds under rectangular recharge areas was employed to solve for the maximum expected mound height beneath the proposed leaching area.

Using the variables and methods described above a maximum 1.2 foot rise in the water table directly beneath the leaching area was predicted. A time period of 10 years was selected to provide a sufficiently long duration in order for the leaching system to reach steady state conditions (i.e., conditions are no longer changing with increasing time). As per SCDPW requirements the leaching pools need to be installed a minimum of 3 feet above the high historical groundwater elevation for the area. Based on the predicted maximum groundwater mound height the bottoms of the leaching pools should not become submerged due to saturated conditions. During periods of recharge as STP effluent leaches out of the bottoms of the pools the unsaturated zone between the pool bottoms and the water table will become wetted. As the area in and around the leaching pool fields is prohibited to be anything other than a grassed area per SCDPW requirements no utilities or building foundations should be impacted other than those associated with the STP.

The horizontal extents of the mounding effects were also evaluated as part of this analysis. Equations developed by Herman Bouwer (**1999**) using the Thiem equation (radial well flow hydraulics) as a basis were employed to estimate the radius of influence of the leaching field under steady state conditions.

Utilizing the method above yielded a result of 5,369 feet. This means that at this distance from the center of the leaching area after a significantly long period of time and at a constant recharge rate of 4.28 feet/day there will be no detectable increase in the water table elevation. The peak mounding conditions will occur directly under the center of the proposed leaching field. The mound created will theoretically have a parabolic type of shape to it where it starts to drop off rapidly right after the extents of the leaching field and start to take on an asymptotic trajectory where it gradually returns to the natural water table at 5,369 feet from the center of the field.

The STP is proposed to have 600 shallow leaching pools with only 150 in service at a time. Thus, a rotational usage pattern could be established, if necessary, to reduce over usage of any particular grouping of leaching pools. The analysis assumes a constant recharge rate of 377,000 gpd, which is the proposed peak STP capacity. In reality, the plant will not operate at capacity very often and flows will likely constantly vary and be considerably lower than 377,000 gpd. The leaching pools will also be arrayed in a larger and more linear type of configuration than evaluated under this analysis, this will create an overall lower mounding height and with a lower mounding height it will also have less reach or effect in the horizontal direction as well.

The mounding study report has been provided in **Appendix E-9.** Based on this study, and the analyses presented above concerning soils, depth to groundwater and topography, no significant adverse impacts are expected as a result of stormwater and wastewater systems. It is important to note that drainage on the site is expected to be effectively contained as a result of the information presented herein, and as a result, will not exacerbate any off-site drainage issues that may occur in the area of the proposed site. Further information with respect to water quality is presented in **Section 2.2.1**.

Soil and Recognized Environmental Conditions

As discussed above, the July 2018 Phase II ESA recommended actions to address the RECs identified with respect to the subject site, including preparation of a Soil and Materials Management Plan, sampling, remediating and decommissioning the existing drainage and septic systems, cleaning out and removing the ASTs, and UICs (i.e., the storm drains and septic systems), and inspecting the buildings for ACM.

The applicant has prepared the recommended SMMP (included as **Appendix B-3**), and the RECs associated with the ASTs, ACM and UICs will be addressed as part of the onset of construction of the proposed project.

As a result of the studies and remediation programs completed on the site since 2006, the analyses conducted for the 2018 Phase I and II ESAs and the recommendations contained therein, and anticipating completion of those recommended remediation efforts, no significant soil contamination issues remain unaddressed on the subject property.

Topography

The subject site is a fallow golf course, which was subject to clearing and grading to establish the 18-golf holes and related site features for this use. Clearing and grading of the site will be necessary to provide appropriate and stable surface areas to allow development of the proposed project. Overall, it is anticipated that 109.22 acres (95.5%) of the subject property will be subject to grading operations. However, as shown on **Figure 2-3**, the majority of the site is comprised of relatively flat topography which does not require extensive overall grading, therefore, no significant adverse impacts are expected. The most extensive grading in terms of depth of excavation and filling is expected to occur in the northern, central and southeastern portions of the property that exhibits the most severe slopes in order to accommodate the STP, recharge/detention pond and drainage swale, respectively. In addition, the drainage pond and recharge basin locations will involve soil removal from the site to establish these features. The excavation materials will be used as fill elsewhere on the site. Overall it is anticipated that approximately 268,883 CY of soil will be “cut”, of which 222,043 CY will be retained on-site for use as “fill”; the remaining 46,840 CY will be removed from the site). Fill will be required in some areas of the property and the material required can be obtained from on-site sources and redistributed as necessary. Profiles of the internal roadway system will be prepared at the time of site plan review, to conform with Town road grade design specifications in order to provide a safe road system, and this will control overall site grading. In general, the site will continue to exhibit its regional topographic profile decreasing in elevation from north to south. All created

soil slopes will be 1:3 or less and will be stabilized using ground cover material. As a result, it is expected that topographic impacts will be minimized to the maximum extent practicable. The preliminary grading plans provided herein provide information for the purpose of SEQRA analysis. Subsequent to change of zone approval, full grading and drainage plans will be prepared for the site plan application. These plans will be subject to further review by the Town Engineer and Planning staff prior to approval and construction.

A safeguard against erosion from steep slopes is achieved through the NYSDEC SPDES review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre (SPDES GP-0-20-001). Under this program, a Notice of Intent (NOI) must be filed with the NYSDEC 60-days prior to commencement of construction, and a site-specific SWPPP must be maintained on site. In addition, a copy of the final NOI, the SWPPP, and erosion & sedimentation control plans will be submitted to the Town simultaneously with the NYSDEC submission. This process, as well as construction and operation of the proposed project are discussed in **Section 1.6.6**.

The following are the applicable steep slope protection regulations in Section VI. O/Preservation of Natural Environment of the Town Subdivision and Land Development Regulations, with brief discussions of the project's conformance to each:

3. *Any construction designs shall preserve, to the maximum extent possible, the natural terrain and natural drainage lines of the plot including, but not limited to, tidal and freshwater wetlands, beaches, dunelands, steep slopes, bluffs, prime agricultural soils, unique vegetation and established habitat, floodplains, watercourses and primary sources of groundwater in accordance with these regulations, the Town of Islip Zoning Ordinance, the Comprehensive Plan and associated updates.*

It is expected that the proposed project's grading program will disturb much of the site's existing steep slopes (defined as slopes at or above 15%). As shown in **Figure 2-3**, these areas are small in size, and collectively total only 3.79 acres, or 3.3% of the site. Those areas of steep slopes within the proposed perimeter park will be retained intact, reducing the area of steep slope impact. Additionally, it is noted that the site was subject to clearing and grading when the golf course was developed, approximately 100 years ago. As such, it is questionable that there would remain any natural slopes on the site that would be impacted by grading for the proposed project. Regardless of the nature of the site's slopes today, the proposed project (particularly its drainage system) has been designed in a way that minimizes the acreage that would require (beyond simple removal of groundcovers) extensive grading.

12. *Natural buffer areas may be required by the Planning Board as deemed necessary in order to minimize impacts resulting from new construction, to protect existing and/or future homeowners, to maintain slopes, to enhance aesthetic value, to preserve existing viewsheds, to minimize erosion and to preserve significant natural vegetation areas.*

The project includes a perimeter park of varying depth, which will serve as a natural buffer around the entire property. Those areas of steep slopes within the proposed perimeter park will be retained intact, reducing the area of steep slope impact.

The following are the steep slope protection regulations as stated in Section VI. P/Topography of the Town Subdivision and Land Development Regulations, with brief discussions of the project's conformance to each:

2. *Minimum Lot Area Requirements*
   - *2.1 All parcels involved in a subdivision must contain at least the minimum required lot area for the zone in which it is located excluding all land defined as a steep slope under this section.*
   - *2.2 Each building lot must contain a building envelope, in conformity with all setback requirements, that contains an area twice the area of the building footprint on a proposed map that does not contain any steep slopes.*
   - *2.3 The lot must otherwise comply in all respects with all portions of the Islip Town Code including these regulations.*

   N/A; the proposed project is a PDD and, as such, is not subject to subdivision into individual residential lots. The PDD is proposed to subdivide the site into six (6) large lots, one for each of the six development phases. However, development within the lots will conform to the overall PDD bulk and setback requirements that will be amended to the Town Zoning Code, including exclusion of land defined as steep slopes when considering minimum required lot area.

3. *Grading*
   - *3.1 It is the policy of the Town of Islip to minimize and avoid at all possible the regrading of sites that results in the cutting or filling of streets or house locations, the clearing and/or stripping of natural ground cover and the destruction of natural topographic features.*

   It is expected that the proposed project's grading program will disturb much of the site's existing steep slopes (defined as slopes at or above 15%). As shown in **Figure 2-3**, these areas are small in size, and collectively total only 3.79 acres, or 3.3% of the site. Those areas of steep slopes within the proposed perimeter park will be retained intact, reducing the area of steep slope impact. Additionally, It is noted that the site was subject to clearing and grading when the golf course was developed, approximately 100 years ago. As such, it is questionable that there would remain any natural slopes on the site that would be impacted by grading for the proposed project. Regardless of the nature of the site's slopes today, the proposed project (particularly its drainage system) has been designed in a way that minimizes the acreage that would require (beyond simple removal of groundcovers) extensive grading.

3.2 Subdivision layouts and site plans shall be designed to maintain existing natural conditions insofar as such designs are consistent with other applicable standards for street and lot grades and drainage set forth in these regulations.

3.3 Development lots shall provide minimum yard areas having slopes not steeper than five (5) percent extending twenty five (25) feet in front, twenty five (25) feet in the rear and ten (10) feet to the sides of the proposed building.

3.4 Subdivision lots shall provide driveway access from the street to the garage, carport or parking place at a slope not exceeding eight percent (8%) in grade, and no less than one percent (1%) in grade. Vertical curves shall be used to prevent a gradient change of over five percent (5%).

3.5 No artificial slope exceeding five percent (5%) in grade or less than one percent (1%) in grade resulting from the regrading of the natural land shall be permitted to encroach on any front, rear or side yard, except as approved by the Planning Board.

N/A; the proposed project is a PDD and, as such, is not subject to subdivision into individual residential lots. The PDD is proposed to subdivide the site into six (6) large lots, one for each of the six development phases. However, development within the lots will conform to the overall PDD bulk and setback requirements that will be amended to the Town Zoning Code.

3.6 No artificial slope steeper than thirty-three and one-third percent (33 1/3%) resulting from this regrading of the natural land shall be permitted at any location.

As stated above, in general, the site will continue to exhibit its regional topographic profile decreasing in elevation from north to south. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material.

3.7 All regrading areas shall be covered with topsoil to a depth of six (6) inches and seeded according to the specifications set forth in Appendix C of these regulations, and a performance bond to guarantee the installation of said topsoil and seeding thereof shall be filed by the developer as generally required for public improvements.

3.8 Maps submitted as part of every subdivision and/or road opening application shall include detailed description of existing and proposed surface grades. Individual plot plans submitted shall conform to the intent of the approved conceptual grading scheme.

3.9 No regrading on any site shall be undertaken without an approved site plan from the Division of Engineering or issued Building Permit.

3.10 The Developer shall be required to contain all surface water runoff on the subject site or to the established standard and satisfaction of the Planning Board. If the elevation of the site is filled to the level of or above the adjacent property or properties, appropriate engineering design features shall be required (swales, yard

inlets, etc.) to ensure that adjacent properties are not flooded. Reverse flooding of existing properties due to parcel regrading shall also be considered and avoided.

The proposed project will conform to all applicable Town application submission and project design standards and requirements, including but not limited to: topsoil and seeding of graded areas, mapping, Town approval and permitting, and stormwater control.

4. Retaining Walls

4.1 Placement of walls shall be generally discouraged for all development and redevelopment in the Town of Islip. If no reasonable alternative can be identified, then the following guidelines shall be adhered to when placing walls on any property in any district within the Town of Islip.

4.2 Where an application involves the utilization of walls, the minimum review standards and wall setbacks shall be pursuant to Article XXX of the Islip Town Code.

The proposed project includes several sections of new retaining wall (see **Grading, Drainage and Utility Layout Plan**). These walls will fully conform to Town standards and requirements, including review and approval of the Town Engineer during the site plan application review process.

4.3 All retaining walls shall be constructed in accordance with sound engineering standards contained herein.a. Where retaining walls are required by reason of plot grading or terrain they shall be designed by a Licensed Engineer and approved by the Town Engineer prior to construction.

All engineering design aspects, including its drainage system and associated grading program, have been designed by NYS-licensed Professional Engineers to fully conform to Town standards and requirements, including review and approval of the Town Engineer.

b. All retaining walls shall be contained on applicant's property within the setbacks stated in the Town Code.

As shown in the **Grading, Drainage and Utility Layout Plan**, all of the proposed retaining wall sections of the proposed project will be fully contained within the subject site.

4.4 Any existing wall and walls built without permits may be modified to adhere to any of the above restrictions, after review and approval of the Town Engineer.

N/A; any existing retaining walls on the site will be removed and, if new retaining walls are to be installed in the same location, the new walls will fully conform to Town standards and requirements, including review and approval of the Town Engineer.

4.5 Fencing and/or railing on top of retaining walls shall be installed pursuant to the Building Code and the direction of the Town Engineer. Said fence or rail shall be open and/or decorative in design if a potential visual impact has been identified during the review of the application.

N/A; the proposed project includes several sections of retaining walls, but none includes any fencing on top.

5. Placement of Fill

5.1 Placement of fill shall be generally discouraged for all development and redevelopment in the Town of Islip. If no reasonable alternative can be identified, then the following guidelines shall be adhered to when placing fill on any property in any district within the Town of Islip.

5.2 A permit and determination of site plan review from Division of Engineering is required for placement of fill that:

a. covers an area greater than two hundred (200) square feet, or

b. requires more than ten (10) cubic yards of fill, or

c. alters permanent average grade more than one (1) foot

5.3 All fill must be clean fill, i.e. following the minimum specifications for Item Number 2BF - Special Borrow Fill as found in the Town of Islip Specifications Manual. It is the property owner's responsibility to ensure that any and all fill used complies with the minimum specifications.

5.4 It shall be the owner's responsibility to remove any existing or excess fill from the subject property if so directed by the Town Engineer. The property owner shall be further responsible to restore any disturbed area to its natural or pre-filled grade and vegetated state pursuant to the direction and complete satisfaction of the Town Engineer.

5.5 The property owner shall replace, at his or her own expense, all sections of fill which have been damaged or displaced, for reasons including but not limited to carelessness or neglect on the part of the owner or natural causes such as storms.

5.6 A bond may be required at the discretion of the Town Engineer to cover the costs of fill removal, installation of drainage, or other related mitigation, if necessary.

5.7 If in the opinion of the Town Engineer improper use of fill or excessive fill occurs on any parcel, it shall be the property owner's responsibility to correct the problem immediately. The Town Engineer may default any bond in order to rectify any such situation or withhold any site development permissions.

5.8 Relocated fill on properties (i.e. fill dug from another section of the subject property) shall not be reused elsewhere on the subject property without review pursuant to this section and the approval of the Town Engineer.

5.9 Any person, firm, corporation or entity violating the above provisions shall also be subject to the provisions of Town Code Article XXXI.

In order to meet the design of the **Grading, Drainage and Utility Layout Plan**, the proposed project will require grading of an estimated 109.22 acres of the site, disturbing

an estimated 268,883 CY of soil. Conversely, the plan requires the use of fill totaling 222,043 CY. All of this fill material will originate as cut material from within the property; no use of off-site fill will be necessary. The unused 46,840 CY of cut will be removed from the site for disposal at an approved C&D facility. As part of the site plan application review process, the project will obtain proper Town approvals and permits for all grading-related activities, including: drainage and grading plan design, placement of fill, slope restoration, topsoil cover, and removal of excess material.

Given the nature of the site's topography (wherein only limited amounts of steep slopes are present and in a number of small, scattered areas, and so limited in area of steep slope disturbance), the balancing of cut and fill materials, implementation of erosion control measures during construction, and the Town's review and approval process (including conformance to the applicable Town Code slope protection standards codified in the Town Subdivision and Land Development Regulations regarding steep slope impacts), no significant adverse long-term impacts are expected with respect to topography.

2.1.3 Proposed Mitigation

- Erosion and sedimentation may occur during the construction phase. The potential impacts with respect to erosion potential can be overcome by using proper grading techniques and implementing erosion control measures, installing proper drainage facilities and using suitably-adapted drought-tolerant indigenous vegetative species for landscaping as well as site stabilization and restoration.
- Landscaping practices common applied to sandy soil areas will be employed and implemented at the time of construction, following the site plan review and approval process which will include landscape plan preparation. This will ensure that potential impacts with respect to a sandy surface layer are adequately addressed and as a result, no long-term soil impacts are expected.
- Short-term soil impacts will be mitigated through erosion control measures which are detailed under a site-specific erosion control plan.
- Fill may be required in some areas of the property and it is expected that the material required can be obtained from on-site sources and redistributed as necessary.
- A protocol shall be established to ensure that any topsoil imported to the site shall come from a NYSDEC certified source.
- All created soil slopes will be 1:3 or less and will be stabilized using ground cover material.
- All stormwater runoff generated on the property will be retained and recharged in a drainage system conforming to Town requirements, which includes the ability to handle a minimum of 8 inches of runoff. While the project's drainage system is designed for 5 inches of storage, it is expected that the high percolation rate of the site's soils will enable the project's drainage system to handle the required 8 inches of runoff. The Town Engineering Department will review the system for sufficiency as part of the site plan review process.
- The grading plan is used for preliminary drainage design and DEIS analysis. A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of

overall site grading and will require Town review and approval prior to initiation of grading activities.

- An additional safeguard is achieved through the NYSDEC SPDES review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre.
- As no significant adverse impacts are anticipated with respect to geological resources, the proposed mitigation measures are expected to be sufficient to properly protect these resources, so that no additional mitigation measures are necessary or proposed.
- This work will be conducted in coordination with the SMMP to address contaminated surface soils on the site.

2.2 Water Resources

2.2.1 Existing Conditions

Surface Water, Drainage/Flooding & NURP Study

Surface Water - There are no natural surface water bodies on the subject site (see **Figure 2-6**). There are several water hazards on the golf course, but these are entirely artificial in origin. Further, there are no natural surface water bodies in the vicinity in the downslope (southerly) direction that are tributary to runoff from the subject site.

A description/discussion of the Green's Creek watershed and the quality of surface water within it are presented in the sub-section titled "Water Resources Plans and Studies" below.

Drainage/Flooding - Stormwater runoff currently generated on the subject site either recharges within the property by infiltrating into the soil on-site (the large majority of the site includes pervious surfaces), or flows downslope into collection areas where it is directed into the property's existing drainage system. Anecdotal evidence of flooding has been reported by local residents in the area of Green's Creek which is located approximately 1,500 feet southeast of the subject property. The subject property has not exhibited any indication of issues related to flooding (the site is in FEMA Flood Hazard Zone A; see **Figure 2-7**) and it is concluded that the flooding issues noted above are related to the general high groundwater conditions in the area and not a result of recharge from the subject property.

NURP Study (1982) - The Long Island Regional Planning Board prepared the LI Segment of the Nationwide Urban Runoff Program (NURP) Study (**Koppelman, 1982**). This program attempted to address, among other things, the following:

- the actual proportion of the total pollutant loading attributed to stormwater runoff, given the presence of other point and non-point sources and conditions within the receiving waters;

The purpose of the NURP Study, carried out by the US Geological Survey, was to determine:

- the source, type, quantity, and fate of pollutants in stormwater runoff routed to recharge basins; and
- the extent to which these pollutants are or are not attenuated as they percolate through the unsaturated zone.

In order to accomplish this, five recharge basins, located in areas with distinct land use types, were selected for intensive monitoring during and immediately following storm events. Five recharge basins (three in Nassau and two in Suffolk), were chosen for the study on the basis of type of land use from which they receive stormwater runoff. While this document and the testing conducted dates back to 1982, it is a useful reference given the comprehensive nature of the sampling of sediments from recharge facilities of various land use types. There are no more up-to-date references that resulted in the generation of such comprehensive empirical data for various land use practices on Long Island. The following is a listing and description of each drainage area:

Site Location	Land Use
Centereach	Strip Commercial
Huntington	Shopping Mall, Parking Lot
Laurel Hollow	Low Density Residential (1-acre zoning)
Plainview	Major Highway
Syosset	Medium Density Residential (1/4-acre zoning)

The land use included in the NURP report that is most like the proposed use would be medium density residential (the Syosset site was the example analyzed). The empirical data generated by the NURP study results for this land use type are shown in **Table 2-6**.

None of the parameters examined within the NURP Study violated the standards for the reported constituents at the studied site, with the exception of turbidity and pH. As expected, slightly elevated levels of heavy metals were detected; however, their concentrations were significantly reduced through attenuation and did not exceed standards. Chloride concentrations generally increase by two orders of magnitude during the winter months. Chloride is not attenuated in soils like lead and chromium (**Koppelman, 1982**), and thus it is anticipated that the amount of chloride contributed to groundwater will be correlated with the amount of salt applied to roadways and parking areas within the stormwater drainage area. Nitrogen was detected at a concentration of 2.55 mg/l, which is less than the drinking water standard of 10 mg/l. However, this elevated concentration likely the result of sanitary discharges and fertilization practices conducted at the time of testing. This exemplifies the need for control of landscape practices and determination of fertilizer (including nitrogen) application on a site-specific basis as well as treatment of sanitary discharges. These analyses are conducted for the proposed project and documented in **Section 2.2.2.** Finally, coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through the soil.

TABLE 2-6
STORMWATER IMPACTS FROM LAND USE
NURP Study, Syosset (Medium Density Residential)

Parameter	Medium Density	Standard
Spec. Cond. (µmhos)	104	[n]
pH	5.1	6.5-8.5
Turbidity (NTU)	26	5
Hardness (mg/l)	16.5	[n]
Calcium (mg/l)	4.85	[n]
Magnesium (mg/l)	1.2	[n]
Sodium (mg/l)	4.25	[n]
Potassium (mg/l)	1.4	[n]
Sulfate (mg/l)	7.05	250
Fluoride (mg/l)	0.1	1.5
Chloride (mg/l)	7.3	250
Nitrogen-Total (mg/l)	2.55	10
Phosphorus (mg/l)	0.010	[n]
Cadmium (µg/l)	2.5	10
Chromium (µg/l)	1.0	50
Lead (µg/l)	6.0	50
Arsenic (µg/l)	0.0	25
Coliform (MPN)	13.0	[n]
Coliform, fecal	3.0	[n]

Source: Koppelman, 1982, p. 26-29
[n] - no standard for parameter

Based on the sampling program, the NURP Study reached the following relevant findings and conclusions:

Finding: Stormwater runoff concentrations of most of the inorganic chemical constituents for which analyses were performed were generally low. In most cases, they fell within the permissible ranges for potable water; however, there were two notable exceptions:

- median lead concentrations in stormwater runoff samples collected at the recharge basin draining a major highway (Plainview) consistently exceeded the drinking water standards;
- chloride concentrations in stormwater runoff samples generally increase two orders of magnitude during the winter months.

Conclusion: In general, with the exception of lead and chloride, the concentrations of inorganic chemicals measured in stormwater runoff do not have the potential to adversely affect groundwater quality.

Finding: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^0 MPN [most probable number] to 10^{10} MPN per acre per inch of precipitation.

Conclusion: Coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through the soil.

The handling of stormwater for the proposed use and potential impact on groundwater will be considered in **Section 2.2.2**.

Hydrologic Conditions

Groundwater on Long Island is derived from recharge of precipitation, sanitary wastewater discharge, and irrigation. Generally, recharge water passes downward through the unsaturated subsurface zone to the water table, which is the upper surface of saturated soils that comprise the Upper Glacial aquifer. Generally, the water table underlying Long Island forms a linear mound of groundwater that crests under the central portion of the Island. The apex of this crest forms an east-west trending ridge in the water table, known as the groundwater divide, that gradually slopes downward towards the north and south shores of Long Island. The configuration of this groundwater mound creates a hydraulic gradient, which causes groundwater to flow downslope under gravity in a direction perpendicular to contours of equal elevation (generally toward the north and south shores) as they descend from the groundwater divide. In addition to horizontal flow, water flow within the central and inland portions of the Island is characterized by a deep flow system which exhibits a generally vertical component that provides recharge to the deeper Magothy and Lloyd aquifers (see **Figure 2-4**), before flowing to the north and south shores in these deeper aquifers. Groundwater recharge along the shorelines tends to flow horizontally in a shallow flow system through the Upper Glacial aquifer and eventually discharges from subsurface systems into streams or marine surface waters (**Krulikas, 1986**).

The water table elevation shown in **Figure 2-5** (i.e., groundwater beneath the site is between 15 feet asl at the southerly property line, and about 22 feet asl beneath the site's northern border) generally confirms the corresponding information provided by the on-site soil borings described in **Section 2.1.1.** , As described in **Section 2.1.1**, the topographic elevation of the site varies between 25 and 50 feet asl. In the area of the site's lowest elevation, the water table is about 10 feet bgs, while in the area of the site's highest elevation, the water table is about 28 feet bgs. Based on contours depicted in **Figure 2-5**, groundwater in the unconfined, shallow (Upper Glacial) aquifer will flow in a southerly direction in the vicinity of the project site.

Review of **Figures 2-5 and 3-5c** indicates that there are no public water supply wellfields in the area downgradient and within 1,000 feet of the subject site. Additionally, **Figure 3-5d** shows that the SCWA maintains its distribution network throughout this area, supporting a conclusion that there are no private potable water supply wells in this area.

Groundwater Quality

SCWA Annual Water Quality Report (2018) – The most recent Annual Water Quality Report of the SCWA was referenced to determine the quality of water in the area beneath the subject site. The

report was issued in early 2018, and listed test results conducted on water provided to the public during 2017. As noted, the subject site is located in SCWA Distribution Area 1. The results of the tests are provided in **Table 2-7**, and show that, while a number of inorganic compounds, one synthetic organic compound, and three disinfection byproducts were detected, none of these were above or near their respective NYSDEC regulatory limits. Additionally, no volatile organic compounds, and no pharmaceuticals were detected.

TABLE 2-7
GROUNDWATER QUALITY DATA, 2017
SCWA Distribution Area 1

Parameters	Average Value	Maximum Contaminant Limit (MCL)
Inorganic Compounds		
Alkalinity, total, mg/l	37.2	[n]
Aluminum, mg/l	0.03	[n]
Ammonia, free mg/l	ND	[n]
Arsenic, µg/l	ND	10
Barium, mg/l	ND	2
Boron, mg/l	ND	[n]
Bromide, mg/l	ND	[n]
Cadmium, µg/l	ND	5
Calcium, mg/l	12.8	[n]
CO_2, calculated, mg/l	6.1	[n]
Chloride, mg/l	18.7	250
Chromium, total, µg/l	ND	100
Cobalt-59, µg/l	ND	[n]
Color, color units	ND	15
Copper, mg/l	0.05	AL=1.3
Dissolved solids, total, mg/l	79	[n]
Fluoride, mg/l	ND	2.2
Hardness, total, mg/l	38.5	[n]
Hexavalent Chromium, µg/l	0.14	[n]
Iron, µg/l	186	300
Lead, µg/l	ND	AL=15
Lithium, µg/l	1.6	[n]
Magnesium, mg/l	1.56	[n]
Manganese, µg/l	ND	300
Molybdenum, µg/l	ND	[n]
Nickel, µg/l	1.3	100
Nitrate, mg/l	1.40	10
Perchlorate, µg/l	0.16	15
Phosphate, total, mg/l	0.66	[n]
pH	7.2	[n]

pH, field, pH units	7.3	[n]
Potassium, mg/l	0.63	[n]
Silicon, mg/l	4.5	[n]
Sodium, mg/l	7.3	[n]
Specific conductance, µmho/cm	128	[n]
Strontium-88, mg/l	0.036	[n]
Sulfate, mg/l	8.0	250
Surfactants, mg/l	ND	0.50
Titanium, µg/l	ND	[n]
Total Organic Carbon (TOC), mg/l	ND	[n]
Turbidity, NT units	ND	5
Vanadium, µg/l	ND	[n]
Zinc, mg/l	ND	5
Synthetic Organic Compounds, Pesticides and Personal Care Products		
Alachlor ESA, µg/l	ND	50
Alachlor OA, µg/l	ND	50
Aldicarb sulfone, µg/l	ND	2
Aldicarb sulfoxide, µg/l	ND	4
1,2-Dibromomethane (EDB), µg/l	ND	2
Diethyltoluamide (DEET), µg/l	ND	50
1,4-Dioxane, µg/l	0.13	50
Hexazinone, µg/l	ND	50
Metalaxyl, µg/l	ND	50
Metolachlor, µg/l	ND	50
Metolachlor ESA, µg/l	ND	50
Metolachlor OA, µg/l	ND	50
Perfluorohexane Sulfonic Acid, µg/l	ND	50
Perfluorononanoic Acid, µg/l	ND	50
Perfluorooctane Sulfonate, µg/l	ND	50
Terbacil, µg/l	ND	50
Tetrachloroterephthalic Acid (TCPA), µg/l	ND	50
Volatile Organic Compounds		
Chlorobenzene, µg/l	ND	5
Chlorodifluoromethane, µg/l	ND	5
Cis-1,2-Dichloroethene, µg/l	ND	5
Dibromomethane, µg/l	ND	5
Dichlorodifluoromethane, µg/l	ND	5
1,3-Dichlorobenzene, µg/l	ND	5
1,1-Dichloroethane, µg/l	ND	5
1,2-Dichloroethane, µg/l	ND	5
1,1-Dichloroethene, µg/l	ND	5
1,2-Dichloropropane, µg/l	ND	5
Ethyl Benzene, µg/l	ND	5
Methylethylketone (MEK), µg/l	ND	50
Methyl-Tert-Butyl Ether (MTBE), µg/l	ND	10

o-Xylene, µg/l	ND	5
p,m-Xylene, µg/l	ND	5
Tetrachloroethene, µg/l	ND	5
Tetrahydrofuran, µg/l	ND	50
Toluene, µg/l	ND	5
1,2,4-Trichlorobenzene, µg/l	ND	5
1,1,1-Trichloroethane, µg/l	ND	5
Trichloroethene, µg/l	ND	5
Trichlorofluoromethane, µg/l	ND	5
1,2,3-Trichloropropane, µg/l	ND	5
1,1,2-Trichlorotrifluoroethane, µg/l	ND	5
Pharmaceuticals and Personal Care Products		
Carbamazepine, µg/l	ND	50
Dilantin, µg/l	ND	50
Gemfibrozil, µg/l	ND	50
5-(4-Hydroxyphenyl)-5-Phenylhydantoin, mg/l	ND	50
Ibuprofen, µg/l	ND	50
Imidacloprid, µg/l	ND	50
Lamotrigine, µg/l	ND	50
Meprobamate, µg/l	ND	50
Phenobarbital, µg/l	ND	50
Primidone, µg/l	ND	50
Sulfamethoxazole, µg/l	ND	50
Disinfectant and Disinfection By-Products		
Bromochloroacetic Acid, µg/l	ND	50
Bromodichloroacetic Acid, µg/l	ND	50
Bromodichloromethane, µg/l	ND	80**
Bromoform, µg/l	ND	80**
Chlorate, µg/l	0.09	[n]
Chlorine, residual, mg/l	0.87	4
Chloroform, µg/l	0.36	80**
Dibromochloromethane, µg/l	ND	80**

ND - Not detected.
[n] - No standards for parameter
AL - Action Level.
** The MCL is the sum of the four ** compounds.

On-Site Water Quality Test Results - PWGC conducted a Phase II ESA at the subject property in July of 2018 and included the collection of groundwater samples from six (6) monitoring wells installed throughout the property. The samples from each well were analyzed for the presence of volatile and semi-volatile organic compounds as well as pesticides, herbicides and metals. No semi-volatile organic compounds, pesticides or herbicides were detected in any of the samples collected. Only one volatile organic compound (acetone) was detected but is suspected to have originated as a laboratory contaminant since there is no known source on the subject property. The only metals detected above their respective groundwater quality standards were iron,

manganese and sodium and were concluded to have originated from natural sources (native rocks and minerals) which are typically found in Long Island groundwater. A copy of the Phase II ESA report is provided in **Appendix B-2**.

Nitrogen Budget - The groundwater budget for an area is expressed in the hydrologic budget equation, which states that recharge equals precipitation minus evapotranspiration plus overland runoff. This indicates that not all rain falling on the land is recharged. Loss in recharge is represented by the sum of evapotranspiration and overland runoff. The equation for this concept is expressed as follows:

$$\mathbf{R = P - (E + Q)}$$

where: **R** = recharge
P = precipitation
E = evapotranspiration
Q = overland runoff

Nelson, Pope & Voorhis, LLC (NPV) has utilized a microcomputer model developed for its exclusive use in predicting both the water budget of a site and the concentration of nitrogen in recharge. The model, named **SONIR** (**S**imulation **of N**itrogen **in R**echarge), utilizes a mass-balance concept to determine the nitrogen concentration in recharge. Critical in the determination of nitrogen concentration is a detailed analysis of the various components of the hydrologic water budget, including recharge, precipitation, evapotranspiration and overland runoff.

The **SONIR** model includes four sheets of computations: 1) Data Input Field; 2) Site Recharge Computations; 3) Site Nitrogen Budget; and 4) Final Computations. All information required by the model is input in Sheet 1. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data which is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates, degradation and losses, and final recharge. Users must apply caution in arriving at assumptions in order to ensure justifiable results. There are a number of variables, values and assumptions concerning hydrologic principles, which are discussed in detail in a user manual developed for the SONIR Model and provided in **Appendix E-1.**

The model was run to obtain the existing water budget and nitrogen concentration in recharge (see **Table 1-6B**). The site currently has a total site recharge of 89.21 million gallons per year (MGY), with a total nitrogen concentration of 5.45 milligrams per liter (mg/l) and 4,052.39 pounds (lbs) of nitrogen loading per year under conditions when the golf course was operational and the

balance is precipitation nitrogen which is an existing condition related to atmospheric deposition. An additional nitrogen budget was prepared for the now current conditions associated with a fallow golf course that is periodically mowed, but not fertilized or irrigated. Under these conditions, the site has a total site recharge of 82.82 MGY, with a total nitrogen concentration of 0.72 mg/l and 499.84 lbs of nitrogen loading per year. The results of these analyses are presented in **Appendix E-2.**

Water Resources Plans and Studies

208 Study - The Long Island Regional Planning Board, in conjunction with other agencies, prepared a management plan for Long Island groundwater resources in 1978 under a program funded by Section 208 of the 1972 Federal Water Pollution Control Act Amendments. The purpose of the 208 Study was to investigate waste disposal options and best practice for ground and surface water protection. The study delineated Hydrogeologic Zones for the formulation of management plans based on groundwater flow patterns and quality (**Koppelman, 1978**). The site is located in Groundwater Management Zone VI, a zone that discharges to Moriches Bay and the eastern portions of the Great South Bay where due to a low flushing rate, contaminant concentrations are not sufficiently dispersed and diluted.

Stormwater runoff is the vehicle by which pollutants move across land and through the soil to groundwater or surface waters. Contaminants accumulate or are disposed of on land and developed surfaces. Sources of contaminants include:

- animal wastes;
- highway deicing materials;
- decay products of vegetation and animal matter;
- fertilizers;
- pesticides;
- air-borne contaminants deposited by gravity, wind or rainfall;
- general urban refuse;
- by-products of industry and urban development; and
- improper storage and disposal of toxic and hazardous material.

It has been recommended that Zone VI be protected through the expansion of sewering and the control of stormwater runoff, as well as the minimization of population density, where possible.

Suffolk County Comprehensive Water Resource Management Plan (2015) - The 2015 Suffolk County Comprehensive Water Resource Management Plan (SCCWRMP) is an update to the 1987 SCCWRMP to reflect more recent development trends, resource plans and studies, and government programs and regulations pertinent to water supply and water resource protection. The following description of that update program has been taken from the Executive Summary, dated March 2015:

Introduction

Water is the single most significant resource for which Suffolk County bears responsibility. As the impact of Superstorm Sandy underscored, more than at any time in our history, we are obliged to come to terms, in every sense, with the water that surrounds us. Suffolk County's water quality is at a tipping point. We face an alarming trend in the quality of the water our families drink, compounded by impairment of many bodies of water in which our families play. Moreover, the source of these impairments has demonstrably degraded the wetlands that serve as our last line of natural defense against storm surge.

While today our drinking water generally meets quality standards, elevating levels of contaminants raise serious concern. Many of our rivers, estuaries and bays are impaired as result of eutrophication. Nitrogen, which primarily spews from residential septics and cesspools, as well as fertilizer, are the principle culprits that spur hypoxia, harmful algal blooms, diminution of sea and shellfisheries, and degradation of our protective natural infrastructure – wetlands and seagrass beds that act as wave and storm surge buffers. Sea level rise, which also contributes to marshland degradation, is projected to raise groundwater levels, increasing vulnerability to saltwater inflation, and further compromising on-site wastewater treatment infrastructure largely composed of cesspools and septic tanks.

Perhaps nowhere have we seen the impact of nitrogen pollution in more stark terms than in the Great South Bay. At one time, this bay produced more than half the clams eaten in our country. However, over the past quarter-century, the clam harvest in the Great South Bay has fallen by 93 percent, destroying an entire industry which once accounted for 6,000 jobs. While clams were once over-harvested, they have largely failed to recover due to recurrent brown tides fed primarily from nitrogen from septic systems and cesspools. We must decide if this type of impaired surface water body will be our region's future or if we can restore our bays to health.

In advance of the release of the 2015 Suffolk County Comprehensive Water Resources Management Plan ("Comp Plan"), this Executive Summary Update is spotlighting the Comp Plan's critical findings, and relevant post-Superstorm Sandy considerations, in order to spur a critical public dialogue about the scope of the problem and begin to frame near-term solutions. While many environmental issues related to groundwater and surface waters have arisen since the previous Plan (1987), one elemental condition has remained constant: the vast majority of Suffolk residents rely on on-site wastewater disposal systems that discharge to groundwater. In addition, fertilizer use, industrial and commercial solvents, petroleum products, pesticides and a host of other manmade contaminants have had profound and long-lasting impacts on groundwater quality, as well as on fresh surface waters and coastal marine waters into which groundwater and stormwater runoff discharge.

In the face of sea-level rise and extreme weather events, Suffolk County is compelled to devise the means and methods to live and thrive with the water beneath, by and around us.

The updated SCCWRMP delineated and addressed the following Critical Findings:

Critical Findings

"We have a million and a half people, approximately 74%, or roughly a million people, who are not sewered. This is probably the only place in the world with that large a density in this tight a space where the waste is going into a sole source aquifer immediately beneath us that we're drinking, and this is a big concern."

Downward Trajectory in Groundwater Quality:

1. Nitrogen is public water enemy #1, as nitrate contamination from unsewered housing and fertilizer use poses a threat to both drinking water supplies and coastal marine habitat and resources. Nitrogen-induced nutrient loading and eutrophication can lead to many negative impacts on estuarine environments including harmful algal blooms (HABs), hypoxia [little or…], and even anoxia [no oxygen];
2. Volatile organic chemicals (VOCs), another priority contaminant group, derived from commercial, industrial, and consumer use, impacting large portions of the aquifer, public water supply and private wells;
3. Pesticides pose a threat, especially to private wells in agricultural areas; and,
4. Pharmaceuticals and personal care products are an emerging concern.

Surface Water Impairments:

5. Due to excess coliform bacteria and nitrogen, many of the water bodies surrounding Suffolk County have been designated as impaired by the NYSDEC. In fact, the vast majority of Long Island's 60-mile long South Shore Estuary Reserve was declared impaired by the NYSDEC in 2010.
6. Brown tide algae invasions have been plaguing Long Island estuaries for nearly a quarter-century, according to Dr. Chris Gobler of Stony Brook's School of Marine & Atmospheric Sciences (SoMAS), obliterating a shellfish habitat that once provided one half of all hard clams for the nation.
7. There was an 18-36% loss of tidal wetlands between 1974 and 2001 according to NYSDEC.
8. The NYS Seagrass Taskforce estimates that the 200,000 acres of seagrass in Long Island's bays and harbors in 1930 have shrunk by nearly 90% to 22,000 acres.

The costs of redressing water-related issues are significant; the economic consequences of not doing so are potentially devastating in property values alone. Then there is Long Island tourism, producing revenues of $4.7B/yr, with approximately 28% of visitors – 5.1M/yr – visiting parks and beaches. "Coastal habitats shield people and property from sea-level rise and storms," reducing their exposure by half, according to marine ecologists at Stanford Woods Institute for the Environment.

Nitrogen from Unsewered Areas

Suffolk County, with a population larger than 11 states and a region that derives its drinking water from the ground, must pay particular attention to the 360,000 sub and non-performing septic/cesspools in Suffolk, accounting for well over 74% of the homes. They are particularly problematic in areas with high water tables and in close proximity to surface waters. When

flooded or submerged in groundwater, septic systems do not function as designed and they fail to adequately treat pathogens. Excess nitrogen from sewage threatens our valuable natural resources, coastal defenses, and human health.

Suffolk County has identified priority high density (greater than 5 homes per acre) and medium density (1 to 5 homes per acre) residential subregions within the contributing areas with the following characteristics:

1. With a depth to groundwater of 10 feet or less; and/or
2. Contribute to an area that is listed as a 303(d) impaired water body.

Finally, the updated SCCWRMP settled on the following management goals, designed to protect groundwater and surface water resources:

<u>Water Resource Management Plan Goals</u>
The goals and objectives summarized on Table ES-1 are targeted to protect and improve ground and surface water quality in the coming years, recognizing that maintenance of these invaluable resources is vital to the health and economic well-being of Suffolk County residents, and to enable provision of a healthy and safe supply of potable water to County residents through 2030. Although it is acknowledged that full achievement of these goals within the next twenty years may not be realized, the recommendations presented in this document provide the framework for continued improvement of the County's water resources and provision of a reliable, high quality potable supply for future generations.

The goals and objectives are consistent with County policy declarations that are articulated in the Suffolk County Sanitary Code:

…760-701: "The designated best use of all groundwaters of Suffolk County is for public and private water supply, and of most surface waters for food production, bathing and recreation…it is hereby declared to be the policy of the County of Suffolk to maintain its water resources as near to their natural condition of purity as reasonably possible for the safeguarding of the public health, and to that end, to require the use of all available practical methods of preventing and controlling water pollution from sewage, industrial and other wastes, toxic or hazardous materials, and stormwater runoff" and

760-401: "the policy of the County of Suffolk is to protect the groundwater to insure the availability of an adequate and safe source of water supply for generations to come by: enforcing the local, state and federal laws regulating water supply; promoting the extension of public water supply to all areas of the County; maintaining a process of groundwater planning; carrying out research and development in the field of alternatives to community water supply; and by promoting education and acceptance of the importance of groundwater management and protection."

Green's Creek and Brown's River Watershed Management Plan (January 2007) - The Green's' Creek and Brown's River Watershed Management Plan (hereafter, "*the Green's Creek WMP*") was prepared by the Town of Islip in response to the preparation of the South Shore Estuary Reserve (SSER) Comprehensive Management Plan (see **Figure 2-8**). That document states as follows with respect to general surface water quality impacts that drove creation of the SSER Plan, and led to the Green's Creek WMP:

> The water quality of the creeks and bay has deteriorated as impervious surfaces have increased, in turn increasing surface runoff into the water bodies. Pollutant-laden runoff surface flows into wetlands or is collected into storm drain system where pipes and headwalls discharge it into the waterbodies. The runoff carries automotive oils, lawn fertilizers and pesticides, animal wastes, sediments, and garbage. The polluted runoff and heavy flows discourage native vegetation in the creeks, increased algae growth in the ponds, suffocate wildlife species, reduce aesthetics and erode the shorelines. The pollutants are carried to the bay, where the negative effects continue on a larger scale.

The following description of the Green's Creek WMP and its recommendations is taken from the Executive Summary of that document.

> This Watershed Management Plan (WMP) focuses on Green's Creek and Brown's River in the Town of Islip, Suffolk County, New York. Green's Creek and Brown's River are tributaries to the Great South Bay portion of the South Shore Estuary Reserve (SSER). The WMP characterizes the natural resources, habitats, and environment of the watersheds, identifies water quality and living resource impairments, recommends actions to protect the watersheds from further degradation, and develops a strategy to restore the watersheds. The plan also forms a framework to guide future decisions and provides a point of reference by which progress can be measured.
>
> The overall goal of this WMP is the protection, restoration, and enhancement of water quality and living resources in Green's Creek and Brown's River.
>
> For the Green's Creek and Brown's River corridors, the specific goals that will aid in achieving the overall goal are:
>
> - Improve the water quality in the Green's Creek and Brown's River watersheds
> - Improve the ecological health in the Green's Creek and Brown's River watersheds
> - Enhance the eligibility of the watersheds for funding through participation in partnerships in regional environmental initiatives
>
> Section 2, *Watershed Characterization,* includes review of the geographic setting, examination the water quality classifications, identification of the existing drainage infrastructure and connectivity and an outline of the municipal jurisdictions within the watersheds. Section 3, *Protection and Management Recommendations,* includes recommendations and actions that, if undertaken, can improve watershed habitat, increase

community watershed knowledge, and reduce pollutant sources and levels. Section 4, *Pollutant Load Analysis and Restoration Actions,* includes analysis of pollutant loads from surface runoff at each outfall, recommendations for improvements and identification of specific target projects and actions. The final section, *Implementation Strategies,* identifies coordination efforts required, new codes, revisions to existing policies and programs, and sources of funding necessary to implement the proposed
actions and recommendations.

In order to advance the WMP's goals and objectives, this document recommends that a number of measures be undertaken. These recommendations are summarized as follows:

- *Habitat protection and management recommendations* including wetland and fish habitat restoration measures such as dredge spoils removal, tidal flow improvements, invasive species removal, hydrologic improvements, riparian buffers reestablishment, improvements to fish passage, instream habitat, and shoreline, and trout population research.
- *Educational and outreach recommendations* including increasing knowledge of pollution impacts to homeowners, boaters, and commercial establishments, expanding tributary identification signage and providing interpretive exhibits, and expanding school watershed educational programs.
- *Point and nonpoint source pollution management and control recommendations* including increasing monitoring programs and educational efforts, implementing drainage area-wide structural control of the water quality storm event, and implementing non-structural programs for road maintenance, pest management and sanitary system review to reduce pollution loads generation.
- *Institutional recommendations* including establishing task forces and collaborative efforts with school and stakeholder organizations.

Several priority actions and target projects have been identified as having the greatest potential individual impacts on the water quality in the waterbodies. The priority actions include:

- improvements to infrastructure maintenance programs,
- fertilizer and pesticide use reduction through development of Integrated Pest Management (IPM) plans,
- land acquisition of sensitive parcels whose development would negatively impact the waterbodies; and,
- installation of drainage infrastructure that will capture and recharge or treat and release the water quality storm event (WQSE).

The greatest pollutant mitigation can be realized by focusing target projects on the subwatersheds identified as contributing the largest loads. The recommended target projects include:

- six locations under Town jurisdiction (Tariff Street, Jones Drive, and Brook Street on Green's Creek and Astor Drive, Valerie Court, and Amy Street on Brown's River) with a total estimated construction cost for implementing the proposed improvements on $590,000, and;
- six roadway drainage locations on Montauk Highway and Middle Road that are under Suffolk County jurisdiction and will total $1,750,000 in estimated construction costs.

As shown in **Figure 2-8**, according to the Green's Creek WMP, the project site is within the watershed of Green's Creek, but is not within the surface drainage boundary of Green's Creek, meaning that none of the runoff from the site reaches this surface water body. As such, with respect to surface flow of stormwater, there is no connection between the subject site and this surface water body; the subject site does not contribute to the water quality impacts currently experienced on either Green's Creek or the SSER.

The Green's Creek WMP includes a number of recommendations pertinent to governmental bodies, but does not provide any recommendations applicable or specific to the subject site.

2.2.2 Anticipated Impacts

<u>Surface Water, Drainage/Flooding & the NURP Study</u>
Surface Water - As there are no natural surface water bodies or wetlands on or tributary to or from the site, no such surface waters can or will be impacted by the proposed project.

Drainage/Flooding – Development of the site will result in a greater quantity of impervious surfaces than under existing conditions; however, the proposed project will also result in effective containment of drainage on the site based on stormwater storage for a design storm event. As a result, the quantity of runoff generated on-site will be increased as a result of the proposed project but will be directed to the on-site drainage containment system. Specifically, installation of an on-site drainage system to current design standards will ensure retention of drainage on the site based on an applicable design storm capacity and subject to review and approval of the Town Engineer during site plan review. As a result, potential impacts related to stormwater recharge that could leave the site and potentially impact neighboring properties at lower elevations will be managed through the installation of drainage as outlined herein and in **Section 1.4.3**. The project sponsor will be requesting a Planning Board relaxation from the Land Development Regulations requirement for an 8 inch storm event.

All stormwater runoff generated on the property will be retained and recharged in a drainage system conforming to Town requirements, which includes the ability to requirement to handle 8 inches of runoff. While the project's drainage system is designed for 5 inches of storage, it is expected that the high percolation rate of the site's soils will enable the project's drainage system to handle the required 8 inches of runoff. Nevertheless, a 37.5% relation from Town design requirements will be required from the Town Planning Board. As shown in the **Grading and Drainage Plan**, all stormwater will be collected as well as recharged within the site through a series of roadside catch basin and drywells, a 1.78-acre pond/retention area to be excavated in

the center of the site and a drainage swale will be graded in the southeastern corner of the property. As shown in the plan, the system will have a capacity of 1,390,146.1 cubic feet (CF) of storage, exceeding the capacity of 1,034,970 CF for 5 inches of storage by 34.32%. The Town Engineering Department will review the system for sufficiency as part of the site plan review process.

This plan requires the post development peak runoff rates to not exceed the pre-development peak runoff rates for a 100-year storm. Since all stormwater will be disposed of on-site and be filtered by the natural sands that are present; no additional stormwater treatment devices will be required or installed.

The bottom of unlined retention pond will be 2 feet above the groundwater table. Any pond areas with less than two feet of separation between the bottom of the pond and groundwater will be lined along the bottom. The liner will be extended vertically along the slope of walls such that that the top of the liner will be a minimum of two feet above the groundwater. Whenever practical, swales and the pond will be interconnected to limit the potential of an overflow condition.

A detailed grading and drainage plan will be prepared as part of site plan application, subsequent to Town Board approval of the requested change of zone. The Town will be responsible for the review and approval of the drainage design, to be conducted during site plan review.

Potential stormwater impacts include erosion, sedimentation, direct overflow to surface water, and impaired quality of recharge water. Erosion and sedimentation will be controlled through design and the SWPPP, such that surface transport of sediment will not occur. There are no nearby water bodies, and the site will not generate direct runoff off-site as a result of the proposed stormwater containment and recharge system. Water quality impacts are not expected based on employment of best management practices for control of stormwater through containment and leaching systems that attenuate pollutants. As a result, no significant adverse impacts from stormwater have been identified.

As discussed in **Section 1.4.3**, The system will be designed to comply with SPDES requirements under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (the "General Permit", GP-0-20-001). Based on existing developments in the area, local geologic conditions, and adequate depth to groundwater, subsoils are expected to be of suitable quality to allow efficient recharge of stormwater, subject to further evaluation during subsequent project review.

NURP Study (1982) - It is noted that approximately 92.2% of the site consists of vegetation and bare soils. Under the proposed project, impervious surfaces will be increased resulting in an increase in stormwater runoff which will require retention.

In conformance with Town of Islip requirements, all stormwater runoff generated by impervious surfaces will be retained on-site, and will be recharged to groundwater. The drainage system will

be designed to accommodate at least 5 inches of storage. The Applicant will be requesting a Planning Board relaxation from the Town's Land Development and Subdivision ordinance design criteria requiring storage capacity for an 8-inch storm event. The Town will be responsible for the review and approval of the drainage design, to be conducted during site plan review.

The drainage system will be designed to comply with SPDES requirements under NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity and Chapter 47 of the Town Code.

Based on information presented in the NURP Study, the project's drainage system design is expected to be an appropriate means of handling stormwater. It is noted that the Syosset site did exhibit nitrogen concentrations of 2.55 mg/l in sediments associated with recharge facilities. While this is less than the drinking water standard for nitrogen of 10 mg/l, it is important to consider stormwater as a source of nitrogen in overall site recharge. The proposed project is in conformance with the applicable recommendations of the NURP Study in regard to the proposed stormwater recharge system.

Based upon information presented in the NURP Study, the increased recharge volume (discussed in detail below) is not anticipated to contain significant concentrations of pollutants. As noted above, in conformance with Town requirements, all stormwater runoff generated by impervious surfaces will be retained on-site and would infiltrate through surface detention systems and subsequently be recharged to groundwater. The NURP Study found that any organic chemicals that may be present in stormwater generally volatilize on surfaces, and inorganic chemicals and bacteriological indicators are removed as recharge infiltrates through soil.

Based on project design through use of the stormwater system noted above, the proposed development of the site is not expected to have a significant impact to groundwater resources underlying the property and surrounding area as related to the recharge of stormwater runoff.

Hydrologic Conditions

Regionally, groundwater is observed to flow in a southerly direction and the depth to the water table has been found to range from eight to twenty-three feet below ground surface on the subject site. This provides an adequate unsaturated zone when considering project design through which recharge can percolate prior to reaching the water table, resulting in the attenuation and filtration of many potential pollutants. This conclusion is supported by the conclusions of the Nationwide Urban Runoff Program, for a site in medium-density residential use, which corresponds to that of the project site.

As discussed in **Section 1.4.5**, the proposed project is anticipated to generate a volume of sanitary effluent which is greater than the allowable flow for use of a septic system on the site, so that connection to an on-site STP is necessary.

The STP will be constructed to treat 377,000 gallons of sewage per day. The design flow for sewage generated on the project is estimated at 307,125 gpd. The STP will be designed to handle an additional 69,875 gpd of sewage from offsite sources.

The sewage treatment process will be a sequencing batch reactor. This process is commonly utilized in similar facilities throughout Suffolk County and long term operation of this types of system has demonstrated that effluent will routinely meet the NYSDEC SPDES requirements for reduction of nitrogen and suspended solids.

Treated effluent will discharge into a leaching pool groundwater disposal system. Due the relatively shallow depth from grade to the water table beneath the project site**,** the groundwater disposal system will be designed and installed in accordance with SCDPW standards for discharge to a disposal system with a high groundwater condition. There will be four separate leaching pool clusters, such that one leaching pool cluster can be held out of service at all times in reserve, to address any surge in demand. The groundwater disposal system will be designed for two hundred percent of the daily design flow. The complete installation of the groundwater disposal system will occur when the STP is constructed.

Approvals from the NYSDEC, SCDHS and Suffolk County Department of Public Works (SCDPW) will be required; review and approval of an Engineering Report and Construction Plans and Specifications by the SCDHS and SCDPW would be required, ensuring that this facility will be designed, constructed operated in conformance to established regulations. Finally, the STP will be subject to a SPDES permit from SCDHS issued on behalf of the NYSDEC.

It is expected that the substantial increase in the acreage of impervious surfaces on the site will result in a substantial increase in the volume of stormwater runoff generated on-site, with an associated increase in the volume of water recharged to groundwater on-site. This will benefit groundwater resources, by increasing the amount of groundwater available for eventual use as potable water.

A Groundwater Mounding Analysis was prepared by PWGC for the proposed project, to *"…investigate the maximum height of a mound that will form below the leaching pools [for the STP] and to determine what, if any, local effects the mound will have on site and with regards to the surrounding area."* That report (see **Appendix E-9**) states as follows:

> The proposed sewage treatment plant (STP) will be capable of treating and discharging a peak daily flow rate of 377,000 gpd of wastewater. The plant effluent is proposed to be discharged to groundwater via a series of shallow 10-foot diameter leaching pools. Depth to groundwater in the area of where the STP effluent leaching pools are being considered is on the order of 8 feet. The shallow depth to groundwater, the large number of leaching structures proposed and the estimated peak daily design flow rate will create an artificial groundwater mound in the vicinity of the discharge field. This groundwater mounding analysis has been performed to investigate the maximum height of a mound that will form

directly below the leaching pools and to determine what, if any, local effects the mound will have on site and with regards to the surrounding area.

With respect to the potential vertical rise in the water table as a result of effluent recharge, the analysis states as follows:

> The calculator output predicts a maximum 1.2-foot rise in the water table directly beneath the leaching area. A time period of 10 years was selected to provide a sufficiently long duration in order for the leaching system to reach steady state conditions (i.e., conditions are no longer changing with increasing time).
>
> As per SCDPW requirements the leaching pools need to be installed a minimum of 3 feet above the high historical groundwater elevation for the area. Based on the predicted maximum groundwater mound height the bottoms of the leaching pools should not become submerged due to saturated conditions. During periods of recharge as STP effluent leaches out of the bottoms of the pools the unsaturated zone between the pool bottoms and the water table will become wetted. As the area in and around the leaching pool fields is prohibited to be anything other than a grassed area per SCDPW requirements no utilities or building foundations should be impacted other than those associated with the STP.

The analysis calculated the horizontal distance that the mound of effluent recharged from the site could extend. The analysis states as follows in this respect:

> Solving the equation… produces a result of 5,369 feet. This means that at this distance from the center of the leaching area after a significantly long period of time and at a constant recharge rate of 4.28 feet/day there will be no detectable increase in the water table. Again, this a very conservative analysis. The peak mounding conditions will occur directly under the center of the proposed leaching field on site at the Greybarn-Sayville development. The mound created will theoretically have a parabolic type of shape to it where it starts to drop off rapidly right after the extents of the leaching field and start to take on an asymptotic trajectory where it gradually returns to the natural water table at 5,369 feet from the center of the field.
>
> The STP is proposed to have 600 shallow leaching pools with only 150 in service at a time. Thus, a rotational usage pattern could be established to reduce over usage of any particular grouping of leaching pools. The analysis assumes a constant recharge rate of 377,000 gpd, which is the proposed peak STP capacity. In reality, the plant will not operate at capacity very often and flows will likely constantly vary and be considerably lower than 377,000 gpd. The leaching pools will also be arrayed in a larger and more linear type of configuration than evaluated under this analysis, this will create an overall lower mounding height and with a lower mounding height it will also have less reach or effect in the horizontal direction as well.

Figure 3-5c shows that there are no public water supply wellfields within 1,000 feet of the subject site in the downgradient direction (south), and **Figure 3-5d** shows that this area is fully served by

public water supplied by the SCWA (suggesting that there are no private potable water wells in this area). In consideration of these two conditions, it may be concluded that recharge generated on the project site will not impact the quality of groundwater that would be used for public or private use.

Groundwater Quality

The subject site is not located in any established Suffolk County, Town of Islip, or private Sewer District. While there exists a private STP east of Lakeland Avenue serving Sayville Commons, sewer district adjacent to the east, it does not have the capacity to meet the wastewater treatment needs of the proposed project. Thus, the proposed project is not able to utilize an existing public sewer system to convey its sanitary wastewater to an off-site STP for treatment and disposal.

Sanitary wastewater flow and discharge requirements are determined by the SCDHS, under the jurisdiction of SCSC Article 6, which also addresses sewage facility requirements for realty subdivisions, development and other construction projects in order to limit the loading of nitrogen in various groundwater management zones as established by the SCDHS. As promulgated under Article 6, a Population Density Equivalent must be determined for the site in order to determine the type of sewage disposal system that would be allowed for a proposed project. This equivalent (or total allowable flow) is then compared to the design sewage flow for the project. If the project's design sewage flow exceeds the Population Density Equivalent, a community sewerage system or on-lot sewage treatment system is required. If the project's design sewage flow is less than the site's Population Density Equivalent, a conventional subsurface sewage disposal system may be used, provided individual systems comply with the current design standards and no community sewerage system is available or accessible.

The project site is located within Groundwater Management Zone VI as defined by the SCDHS. Based on the requirements of Article 6, if an on-site septic system is proposed, no more than 300 gallons may be discharged per acre (assumed for calculation purposes as 40,000 SF) on a daily basis within this zone. The site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. Therefore, as no such resources are present on the site, the net site area is 114.34 acres in size, and the Population Density Equivalent (total allowable flow) on the subject site is 34,302 gpd as determined in **Section 1.4.5**. As the project design flow of 307,125 gpd is greater than the allowable flow, the Applicant proposes to construct an on-site STP.

The following general description of the project's wastewater treatment system was prepared by the project's engineering consultant.

Sewage Collection, Treatment and Disposal

Sewage generated by the residences and the amenity spaces will be conveyed by a gravity sewer sub collection system to an on-site STP. The gravity sewer will be designed in accordance with the SCDHS, SCDPW and the Ten States Standards. Pipes will be constructed of PVC [poly vinyl chloride] pipe, and precast concrete manholes will be installed when there

is a change in direction or size of the pipes, or to provide convenient access points to the collection system for maintenance personnel. Each ground floor residence will have a separate connection to the sewer collection system. Residences located above the ground floor will share a sewer house connection.

All sewage generated on-site will flow from the sewage collection system into a sewage pumping station adjacent to the proposed STP. The pumping station will convey sewage to the holding tanks, screens and process tanks within the STP. The pumping station will be designed for a flow rate of 377,000 gpd. The design flow for the project is estimated at 307,125 gpd. The pump station will be designed to handle an additional 69,875 gpd of flow from off-site sources [see below]. The installation of the collection system will occur in phases since land grading activities will be required to ensure sewer pipes are installed in conformance with regulatory requirements. Sewer pipes installed underneath the main access roadways will be installed when that roadway is constructed.

The STP will be constructed to treat 377,000 gallons of sewage per day. The design flow for sewage generated on the project is estimated at 307,125 gpd. The STP will be designed to handle an additional 69,875 gpd of sewage from offsite sources.

The STP will be completely enclosed within a building. The building will have architectural features and exterior fenestrations to mimic a barn. The sewage treatment process will be a sequencing batch reactor. This process is commonly utilized in similar facilities throughout Suffolk County and long term operation of this types of system has demonstrated that effluent will routinely meet the NYSDEC SPDES requirements for reduction of nitrogen and suspended solids.

The STP will be constructed at the commencement of the project [i.e., as part of Phase 1]. The process tanks will be constructed of reinforced concrete. A total of six tanks will be constructed. Four tanks will be process tanks and will permit operation of the treatment plant at the lower flows while construction of the residential units proceeds in phases. As additional residences become available and sewage flows increase, additional process tanks will be put online. The sewage treatment plant will have additional process tanks to store influent flow such that processing of the sewage can continue during low influent flows. This will significantly improve the effluent quality. A separate process tank will store waste activated sludge. Waste activated sludge will be removed from the site on a monthly or longer basis by a waste hauler for additional offsite processing. The sewage treatment plan will have both influent and effluent screens. The effluent screens will further reduce the concentration of suspended solids such that it will reduce the size and maintenance requirements of the leaching pool groundwater disposal system. Standby power will be designed and installed such that the sewage treatment plant will be operation in the event of a primary power failure.

Treated effluent will discharge into a leaching pool groundwater disposal system. Due the relatively shallow depth from grade to the water table beneath the project site [see **Section**

2.1.1], the groundwater disposal system will be designed and installed in accordance with SCDPW standards for discharge to a disposal system with a high groundwater condition. There will be four separate leaching pool clusters, such that one leaching pool cluster can be held out of service at all times in reserve, to address any surge in demand. The groundwater disposal system will be designed for two hundred percent of the daily design flow. The complete installation of the groundwater disposal system will occur when the STP is constructed.

The proposed STP has been designed with a capacity in excess of the volume of wastewater expected from the proposed project (307,125 gpd), as well as additional capacity to handle the 69,875 gpd from the downtown hamlet businesses. Thus, the STP will have a capacity of 377,000 gpd.

Approvals from the NYSDEC, SCDHS and Suffolk County Department of Public Works (SCDPW) will be required; review and approval of an Engineering Report and Construction Plans and Specifications by the SCDHS and SCDPW would be required, ensuring that this facility will be designed, constructed operated in conformance to established regulations. Finally, the STP will be subject to a SPDES permit from SCDHS issued on behalf of the NYSDEC.

As noted in **Section 1.2.5**, as one of the Community Benefits, the proposed project includes extension of a sanitary sewer line from the on-site STP to the downtown Sayville hamlet center south of the site, so that this area can be served by the project's tertiary STP. This benefit will have the effect of providing treatment for the downtown area for water quality benefits, and will assist in encouraging growth in the downtown area by making wastewater treatment available. The benefit of the conveyance pipe and treatment capacity will come with no public cost; however, the individual connections to the new system would be borne by each landowner.

It is expected that the new sewer line (4-inch diameter force main) would run from the STP easterly to Lakeland Avenue, then south beneath that roadway south to Montauk Highway (Suffolk County Route 85). From that intersection, 4-inch force mains will run east to Hanson Place, and westerly to West Lane (see **Appendix A-7**). As part of the Community Benefits of the proposed PDD, the Applicant will provide the portion of the sewer main beneath Lakeland Avenue, from the project site to Montauk Highway.

Nitrogen Budget - Utilizing the same mass balance model described in **Section 2.2.1**, the water balance and concentration of nitrogen in recharge were calculated for the proposed project. **Table 1-6B** provides tabulations of existing and proposed site conditions, respectively. These coverage quantities were used in the SONIR model to obtain the results described herein.

The SONIR computer model results for the proposed project (**Appendix E-3**) indicate that a total of 237.85 MG/yr of water will be recharged on the site. The concentration of nitrates (as nitrogen) in this recharge is determined to be 5.02 mg/l for the proposed project as compared to 5.45 mg/l for pre-existing conditions when the golf course was in operation and 0.72 mg/l for the current fallow golf course conditions. The nitrogen load associated with the proposed project is

9,951.00 lbs/year. The concentration and load include the additional treatment capacity for the downtown Sayville area as will be described below. This represents an increase over the pre-existing condition when the golf course was in operation which was 4,052.39 lbs/year and 499.84 lbs/year for the current fallow golf course.

In order to offset and mitigate the increase in nitrogen load associated with the proposed project, the proposed project includes installation of a sewer main and expanded STP capacity to treat 69,875 gpd of wastewater from downtown Sayville (which is accounted for above). For comparison purposes, discharge of this wastewater would have an untreated concentration of 50 mg/l[2], as compared with a treated concentration of 8 mg/l. This results in a substantial reduction of nitrogen within the same watershed. Downtown Sayville is located nearer to Great South Bay and Green's Creek. The removal of this effluent from downtown Sayville, with conveyance to the STP on the subject site, and treatment to 8 mg/l with on-site discharge at that concentration represents a substantial water quality benefit. Groundwater as well as downgradient surface water impacts will be reduced as a result of the treatment of this effluent.

This benefit is quantified on Sheet 4 of **Appendix E-3**, which demonstrates that the reduction in nitrogen 7,237.16 lbs/year. When removed from the project nitrogen load of 9,951.00 lbs/year, the resultant reduced load is 2,713.84 lbs/year. When factoring in the reduction in load, the concentration of nitrogen in recharge is reduced to 1.37 mg/l. The project will have substantially less nitrogen load that the pre-existing conditions when the golf course was in operation.

A summary of the nitrogen impact assessment results is provided in **Table 2-8** below.

TABLE 2-8
NITROGEN IMPACT ASSESSMENT RESULTS

Parameter	Existing Prior Golf	Existing Fallow Land	Proposed Pre-Mitigation	Proposed With Mitigation
Nitrogen Concentration (mg/l)	5.45	0.72	5.02	1.37
Nitrogen Load (lbs)[2]	4,052.39	499.84	9,951.00	2,713.84

This analysis indicates that the proposed project will have a substantial beneficial impact with respect to nitrogen in water quality, particularly when compared pre-existing golf use conditions. No significant adverse nitrogen impacts are expected based on the proposed mitigation.

Other Potential Sources of Impact - The project Applicant is responsible for the operation of other project sites on Long Island. The partially completed Greybarn project in Amityville is an example of one of these properties. R Squared contracts with a landscape service contractor to have all

[2] SCDHS General Guidance Memo #28 includes guidelines for siting proposed or expanded STPs; this memo indicates: "A total nitrogen concentration of 50 mg/l may be used when calculating the equivalent mass loadings."

landscape and turf maintenance done by a professional company that adheres to rigid industry standards.[3] Fertilization is properly applied after adjusting the pH of soil to maximize plant uptake of nutrients. Well maintained turf results in maximum uptake of nitrogen. Fertilizer is costly to apply and as a result is used judiciously to only apply what is necessary to maintain healthy turf. This reduces the application of fertilizer, and also reduces the amount that is leached through the root zone to groundwater. Nitrogen in fertilizer is applied at 0.25 lbs/1000 SF, four times per year, for a total of 1.0 lbs/1000 SF. This coupled with the reduced area of fertilized landscape results in a low concentration of nitrogen attributable to landscaping. Typically residential nitrogen application is in the range of 2.04 lbs/year. When compared with a subdivision of homeowners, with each homeowner applying fertilizer to achieve a green lawn, the fertilization under the proposed Greybarn at Sayville project will be less.

Other use of chemicals is similar. Individual homeowners can apply as much crabgrass preventer/pre-emergent chemical and/or Roundup® weed killer as they wish, simply by purchasing and applying the materials. No license is required to apply chemicals and there are no limits on the herbicide/pesticide chemicals that can be applied. The proposed project will be managed through a contract with a landscape company that adheres to stringent industry standards. Landscape contractors are trained in the proper use of chemicals to minimize application rates and maximize effectiveness in achieving the purpose of pest control and properly maintained landscaping. There is a practical side in that reducing the application of landscape maintenance products also reduces cost to the operator. The end result is that less chemical product is applied by a landscape service contractor than a typical homeowner.

In the case of Greybarn at Sayville, a contractor will be used and that company has trained personnel, NYSDEC licensed herbicide/pesticide applicators and any use of chemicals is consistent with recommended rates of the manufacturer. Any lawn/landscape care will involve limited use of pre-emergent (crabgrass preventer), weed control, insect control and spot use of Roundup®. The selected contractor indicates that a typical regimen of application involves application of lime 1 time/year at a rate of 0.5 lbs/1000 SF for pH adjustment to maintain healthy turf. Roundup® may be applied; however, this is a spot, foliar application, only on sunny days and the product controlling the target plants is also subject to evaporation and lack of transport. Pre-emergent is applied two times per year on turf and one time per year on landscape beds, primarily during the spring season. Broad-leaf weed control is used on a spot basis for effective control. Insect control may be used one time per year typically in July.

It is noted that no storage or mixing of chemicals will occur on-site, as the landscape contractor stores and mixes any application materials and brings them to the site. The practices noted above are typical of all lawn/landscape maintenance conducted by landscape contractors. These practices are intended to maximize effectiveness and minimize use of product and will be completed by trained personnel, NYSDEC licensed pesticide applicators, and in conformance with label instructions. All landscaping requires maintenance and such maintenance practices are

[3] Greybarn uses Wade Associates, Inc. for landscape maintenance. Conversations with the principal, Gus Wade on November 12, 2018 provided information to further the understanding and assessment of landscape maintenance.

typical for all types of development. As discussed herein, the use of a landscape maintenance contractor is expected to reduce use of chemicals as compared with use of the site under single family residential zoning. There is also a reduction in application of fertilizers and pest controls as compared to the prior golf course use, which would have involved more intensive turf maintenance practices to support golf use and play. Given the information presented herein, no significant adverse impact is expected with respect to other potential source of impact involving chemical storage and use.

Water Resources Plans and Studies

208 Study - The Site is located in Groundwater Management Zone VI. It is recommended in the 208 Study that development in this zone utilize public sewers if available, or provide for wastewater collection/treatment with nitrogen removal. Therefore, as noted above, the proposed development will direct all sanitary wastewater to an on-site sewage treatment facility. As a result, the proposed project will be designed to implement those recommendations of the 208 Study that involve groundwater protection and best management practice for protection of water supply and management of wastewater, and therefore no adverse impacts are anticipated.

Suffolk County Comprehensive Water Resource Management Plan (2015) - The following lists the Goals of the updated SCCWRMP that pertain to the proposed project, along with brief discussions as to the project's conformance to each.

Groundwater Resource Management Goals

GOAL 1: All groundwater shall be in compliance with the stricter of New York State Ambient Groundwater standards and guidance values or Maximum Contaminant Level Goals (MCLGs) to the greatest extent feasible and practical. Water quality that is better than the existing standards should be preserved, to the greatest extent feasible and practical.
This Goal is addressed to regulating agencies and public water suppliers. However, the proposed project will support this Goal to the extent that it will conform to SCSC Article 6 and Article 12 requirements, which will minimize potential adverse impacts to groundwater quality.

GOAL 2: Nitrogen loading should be reduced to the greatest feasible and practical for the protecting of current and future drinking water supplies and to restore/maintain ecological functions of streams, lakes, estuaries and marine waters. Arrest and reverse the trend of increasing nitrogen concentrations in ground and surface waters to the greatest extent feasible and practical by decreasing the nitrogen loading from septic systems and fertilizers.
Nitrogen loading to groundwater is reduced to the greatest extent practicable by providing a tertiary STP for the proposed project. This will help slow the trend of increasing nitrogen added to the aquifer, and the project will remove an existing source of nitrogen impact to the watershed by providing sewering capabilities for downtown Sayville. Fertilizer use is limited to 12.02 acres (10.5%) of the site, and proper turf management will ensure maximum uptake of nutrients by turf grass.

GOAL 3: Concentrations of other regulated and unregulated contaminants in groundwater should be minimized to the greatest extent feasible and practical, to protect current and future drinking water supplies and to restore/maintain ecological functions of streams, lakes, estuaries and marine waters. Reduce the discharge of volatile organic compounds and other regulated and unregulated contaminants to groundwater.
The proposed project will support this Goal to the extent that it will conform to SCSC Article 6 and Article 12 requirements, which will minimize potential adverse impacts to groundwater quality. In addition, since the project is residential in nature, few potentially toxic or hazardous substances would be present or used on the site.

GOAL 4: Land use patterns should be consistent with the protection of the County's groundwater and surface water resources, including the protection of existing and future drinking water supplies.
The proposed project will provide a land use pattern that is in keeping with protection of groundwater and surface water resources. The project will retain natural vegetation, limit fertilizer dependent vegetation, and will provide for the development of an STP which will be designed with extra capacity to accommodate off-site sources. This will allow the project to conform to the SCCWRMP with respect to minimizing nitrogen impacts originating in unsewered areas. The project will therefore provide measures for protection of existing and future drinking water supplies.

GOAL 5: Groundwater quality and quantity should be maintained to protect and preserve the County's drinking water supply and natural resources.
*Nitrogen budget modeling (see **Table 1-6B**) shows that the proposed project will have lower amounts of and concentrations of nitrogen in its recharge than would be the case for either use of the site under existing zoning or the prior golf course operation. Based on water resource evaluation of the project, no adverse water resource impacts are anticipated and therefore, the proposed project will protect and preserve the County's drinking water supply and natural resources.*

GOAL 6: Groundwater levels should be maintained to protect and preserve the long-term sustainability and ecological functions of existing surface water resources.
The proposed project is not expected to change groundwater levels as a result of proper STP design well in conformance with Town and County regulations. Site use is dispersed such that recharge will be distributed around the site and thus is not expected to impact groundwater elevations.

<u>Drinking Water Supply Goals</u>
GOAL 2: A community public water supply should be available to all Suffolk County residents.
This Goal is addressed to regulating agencies and public water suppliers. It is noted that the proposed project will connect to the public water supply network of the SCWA for drinking water purposes, and will provide necessary connections to that network.

GOAL 3: Residential and commercial irrigation should be managed to reduce peak demands on water supply infrastructure.
Irrigation water for the project will be provided either by the existing well that previously serviced the Island Hills Golf Course, or by a new on-site irrigation well that would be installed for the proposed project. The existing well and pump is permitted by NYSDEC, and has a capacity of 750 gallons per minute. The existing well is located adjacent to Bohemia Parkway south of 11th Street. The existing well and pump can adequately meet the irrigation requirements for this project. A new irrigation distribution system will be installed to service the landscape areas and the main landscaping pond. Irrigation water will be utilized to maintain turf lawns and vegetation in these areas. The SCWA is aware the potable water system will not be used for irrigation purposes. The project sponsor is aware the SCWA will require notification if potable water will be utilized for irrigation purposes. The irrigation well system will be independent of the SCWA system and therefore will not affect peak demands of the SCWA for drinking water supply.

Wastewater Management Goals

GOAL 1: Improve groundwater quality to maintain a potable water supply to serve existing and future populations by reducing effluent nitrogen loads from existing and future onsite sewage disposal systems and sewage treatment plants.
Nitrogen loads have been modeled and determined to not cause a significant adverse impact. Nitrogen loads are decreased as a result of the proposed STP, fertilizer dependent limitations, and proper turf management as well as providing sewage conveyance and treatment for downtown Sayville.

GOAL 3: Reduce and/or eliminate the impacts of pharmaceuticals and personal care products from wastewater effluent for increased public health and marine life protection.
The STP for the proposed project will be designed, constructed , operated and maintained under the purview of appropriate County and NYS agencies, and will be subject to review and permitting procedures of the SCDHS, SCDPW and NYSDEC. At the present time, an STP is not required by these reviewing entities to treat wastewater for discarded pharmaceuticals and/or personal care products. The proposed project is not of a type that would tend to increase the potential for illicit discarding of pharmaceuticals and personal care products any more than development under the site's existing zoning.

GOAL 4: Provide development opportunities for continued economic growth to support future population growth while limiting wastewater nitrogen discharge.
The project will increase tax revenue to taxing jurisdictions including the school district. The project will provide needed housing opportunities for workers in businesses in the Town and community, will provide consumers for local business and will increase employment opportunities providing a significant economic benefit from construction, operation and beneficial ripple effect on the economy. The project limits wastewater discharge impact through use of an STP for on-site sanitary waste treatment as well as provision for treatment of wastewater from downtown Sayville.

Green's Creek and Brown's River Watershed Management Plan (January 2007) - As discussed above and demonstrated by **Figure 2-8**, while the subject site is within the Green's Creek Watershed, it is not within the Surface Drainage Area of Green's Creek (see also Figure GR 2.2.3 of this plan). This means that stormwater runoff generated on the site does not flow from the site to reach this surface water body, either by surface flow or through public storm sewer system outfall. As required by Town Code, the proposed project will include a drainage system that will retain and recharge all stormwater on the site, so that the proposed project will not contribute to the water quality impacts currently experienced by Green's Creek.

2.2.3 Proposed Mitigation

- In conformance with the Town of Islip requirements, all stormwater runoff generated on developed surfaces will be retained on-site, to be recharged to groundwater through the proposed drainage system for the project. This system will be subject to detailed review by Town engineering staff during the site plan review process, ensuring that no impacts will occur to off-site properties. As such, no additional mitigation measures are necessary or proposed.
- Adherence to the proposed SWPPP (to be prepared for the SPDES General Permit and would include an erosion control plan) would ensure that stormwater generated during the construction period is controlled, and that erosion and its associated impacts is minimized. As such, no additional mitigation measures are necessary or proposed.
- Provision of an on-site STP which will be designed with extra capacity to accommodate off-site sources will mitigate impacts to groundwater quality from any on-site recharge of sanitary wastewater. The applicant will construct this STP, and will install 10,300 feet of conveyance pipe as well as expanded treatment capabilities to serve downtown Sayville with wastewater treatment.
- No significant increase in the potential for adverse impact on groundwater quality is anticipated from accidental spillage or release of toxic or hazardous chemical substances. The nature of the proposed residential use is such that no toxic or hazardous materials (other than common household cleaners) would be present or used on the project site.

2.3 Ecology

2.3.1 Existing Conditions

<u>Vegetation</u>
The project site is predominantly developed with a golf course and associated landscaping. Areas of natural vegetation exist in patches throughout the property. The site is primarily surrounded by residential development. Contiguous vegetation in the area generally does not exist, as the landscape is highly fragmented due to the existing residential development, except for the Sayville National Wildlife Refuge that lies to the southwest of the project site.

The 114.34-acre subject parcel was inspected on May 29, 2018 and August 17, 2018 and a follow-up visit was conducted on April 14, 2021. The first two ecological inspections were conducted

during early morning hours generally around 7-9 AM to target the browsing, feeding and activity periods when wildlife would be expected to be observed and the third inspection was performed in the afternoon. Inspections were conducted during the spring and summer seasons using the random transect method which seeks out wildlife activity in expected areas based on habitat, canopy, shrub and groundcover vegetation, and the level of activity in the surrounding area. This method is opportunistic in terms of visiting each habitat type on the property and recording observations of wildlife that is observed directly or detected by calls, tracks or other evidence. Personnel trained in wildlife observations completed the survey and recorded species based on the survey. Since it is not possible to observe all wildlife that may be expected, information recorded during these inspections is noted in species lists included in this section and is supplemented by additional information including natural research of species expected based on Long Island habitat types, information from the NY Breeding Bird Atlas, and contact with the NY Natural Heritage Program, as referenced in this section. Qualifications of NPV staff that inspected the subject parcel are included in **Appendix G-1** and supplemental information is contained in **Appendices G-2** through **G-6**.

Most of the site is fallow golf course that remains subject to mowing; however, the 2021 field inspection indicated that maintenance has become infrequent. Nevertheless, areas of the project site developed with the golf course and associated facilities can best be described as Mowed Lawn, Mowed Lawn with Trees, and Paved and Unpaved Paths/Roadways as characterized by Edinger *et al. (***2014**). The small remaining natural areas within the property can best be described as Pitch Pine-Oak Forest and Successional Southern Hardwood Forest as described by the classification system developed by the NYSDEC **Edinger *et al.* (2014)**; however, much of the understory in these areas have been removed, thereby limiting the natural ecological value of these areas.

The Island Hills Country Club main building and club member facilities are located in the northeast corner of the property. A small shed is located in the center of the property and the remaining maintenance facilities are located in the southwest corner of the site along Bohemia Parkway. There are two locations where previously wooded areas are used for the dumping of landscape debris. The remainder of the development area is landscaped and maintained as the golf course. **Figure 2-9** provides a habitat map of the subject property. The existing site habitat quantities as determined by aerial photography and field inspections by NPV are presented in **Table 2-9** and changes in habitat quantities will be described further herein. Below is a detailed description of the habitat types found on site along with a list of species present or expected on the site.

Edinger **(2014),** defines Successional Southern Hardwood Forest as *"a 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 elms (Ulmus americana), slippery elm (Ulmus rubra), white ash (Fraxinus americana), red maples (Acer rubrum), box elders (Acer negundo), silver maple (Acer saccharinum), sassafrass (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. This is a broadly defined community and several seral and regional variants are known." Species found within this habitat type include multiflora rose (*Rosa multiflora*), sassafrass (*Sassafrass albidum*), black cherry (*Prunus serotina*), white oak (*Quercus alba*), and tree-of-heaven (*Ailanthus altissima*). As evidenced in historic aerial photographs included in **Appendix G-2,** the area dominated by this forest type was previously cleared. As a result of the previous clearing in this area and subsequent lack of maintenance, this forest type became established within a 6.5-acre portion of the overall site.

The New York Natural Heritage Program ("NYNHP") classifies ecological communities by their relative rarity or conservation status based on their presence and distribution globally and at the state level. These ranks carry no legal weight but the NYNHP believe they are accurate. The global rank ("G") reflects the rarity or conservation status of the ecological element throughout the world and the state rank ("S") reflects the rarity or conservation status within the State of New York. Rarity is ranked primarily on a scale of 1 to 5 with 1 being among the rarest of habitats and 5 being demonstrably secure. Other unique designations such as "GX" ("believed to be extinct globally") and "SE" ("non-native species, not native to New York State") are also available. The global rank for ecological communities is an estimate of the rarity of the State habitat type throughout its range.

Edinger **(2014)** lists Successional Southern Hardwood Forest as having a NYNHP ranking of "G5 S5" indicating that this ecological community is "demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery," and "demonstrably secure in New York State."

Edinger (2014) defines Pitch Pine-Oak Forest as *"a mixed forest that typically occurs on well-drained, sandy soils of glacial outwash plains or moraines; it also occurs on thin, rocky soils of ridgetops. The dominant trees are pitch pine (Pinus rigida) mixed with one or more of the following oaks: scarlet oak (Quercus coccinea), white oak (Q. alba), red oak (Q. rubra), or black oak (Q. velutina). The relative proportions of pines and oaks are quite variable within this community type. Examples can range from having widely spaced pines that are often emergent above the oak canopy to a nearly pure stand of pines with only a few widely spaced oak trees. The shrub layer is well-developed with scattered clumps of scrub oak (Quercus ilicifolia) and a nearly continuous cover of low heath shrubs such as lowbush blueberries (Vaccinium pallidum, V. angustifolium) and black huckleberry (Gaylussacia baccata). The herbaceous layer is relatively sparse; characteristic species are bracken fern (Pteridium aquilinum var. latiusculum), wintergreen (Gaultheria procumbens), and Pennsylvania sedge (Carex pensylvanica)."* Species found within this habitat include Pitch Pine *(Pinus rigida),* White Oak *(Q. alba)* and Red oak *(Q. rubra).* Most of the area which includes this dominant forest type was left untouched since 1948 as seen in the historic aerial photographs included in **Appendix G-2.** As a result of the lack of clearing in these locations, the Pitch Pine-Oak forest is present over 8.44 acres of the project site.

According to Edinger **(2014)**, Pitch Pine-Oak Forests have a NYNHP rarity ranking of G4G5 and S4. The G4G5 ranking means that this ecological community at the global level is "demonstrably

secure globally, though it may be quite rare in parts of its range, especially at the periphery" or is "apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery." The S4 ranking means that Pitch Pine-Oak forests are "apparently secure in New York State." It is noted that natural areas of the site are fragmented and mostly near or along the perimeter of the site. Consequently, these areas are subject to off-site impacts such as automobile traffic, domestic pets and activities occurring in the yards of adjoining residential properties. In addition, these areas are bordered by the golf course which operated from approximately 1938 to 2015. The golf course was subject to mowing and turf care practices including fertilization and pest control, as well as the stresses of golf play. As a result, natural areas on the site are not considered pristine and are compromised due to these past influences.

The remainder of the site is comprised of landscaped areas, previously functioning man-made ponds with torn liners that are now dry, unvegetated clearings, and impervious surfaces/structures. There are no NYNHP rarity rankings for these specific terrestrial cultural and palustrine cultural communities; however, they are consistent with those communities that Edinger et al., classify as "unranked cultural" or "throughout New York State." **Table 2-9** below provides the quantities of the habitats encountered on the site.

TABLE 2-9
HABITAT QUANTITIES
Existing Conditions

Coverage Type	Existing Conditions	
	Coverage (acres)	Percent
Landscaped	**90.05** (1)	**78.76**
Natural	**14.94**	**13.07**
Water Surfaces	**0.15** (2)	**0.13**
Unvegetated	**3.86**	**3.37**
Pervious Paths	0.28	0.25
Sand Traps	2.80	2.45
Cleared	0.77	0.67
Paved Surfaces	**4.38**	**3.83**
Building Footprint	**0.96**	**0.84**
Total	**114.34**	**100.00**

(1) All existing landscaping is not irrigated or fertilized.
(2) Composed of decorative ponds adjacent to golf course clubhouse.

Appendix G-3 presents a list of vegetation observed or expected on site given the habitats present; it is based upon field investigations conducted by NPV on May 29, 2018, August 17, 2018, and April 14, 2021. This list is not meant to be all-inclusive but was prepared as part of these field inspections to provide a detailed representation of what is found on site. Care was taken to identify any species that might be unusual for the area.

Wildlife

Site inspections were performed on May 29, 2018, August 17, 2018, and April 15, 2021 by NPV staff, whose qualifications can be found in **Appendix G-1**. Relatively few wildlife species other than songbirds were observed on site, although it is expected that the woodland and terrestrial cultural habitats on the property should support a variety of wildlife species common to suburban habitats, particularly those species that are more tolerant of human activity. Species that avoid humans and/or those species that are sensitive to development are less likely to inhabit the site. The following paragraphs describe the wildlife observed or expected on site. Further detail regarding potential wildlife on site and adaptability to a change in habitat is provided in **Appendix G-4**.

Birds- Avian species that might be expected on the property include a variety of woodpeckers, wrens, titmice, nuthatches, thrushes, creepers, flycatchers, swallows, warblers, corvids, thrashers, orioles and blackbirds, doves, starling, grosbeaks, finches, towhees and sparrows. During the warmer months, a variety of warblers may also migrate into the area. Owls and raptors may use the site for hunting and limited numbers may breed in the surrounding areas. The subject site is not expected to be critical habitat for any avian species utilizing the site.

During the site visits, northern cardinals, blue jays, mourning doves, chickadees, mockingbirds, tufted titmouses, red-winged blackbirds, northern flickers, song sparrows, catbirds, pine warblers, house sparrows, American Crows, and a red-tailed hawk were all seen or heard on site. During a site visit conducted by the Applicant's Director of Environmental Affairs, wild turkeys (*Meleagris gallopavo)* were identified within the project site. To provide a more detailed representation of the avian species potentially present on site, the NYS Breeding Bird Atlas was reviewed to obtain data from the 2000-2005 Breeding Bird Survey for the census block encompassing the subject parcel (**Appendix G-5)**. This study surveyed the entire State by 25 km² census blocks over a five-year period (2000 to 2004) to determine the bird species which breed within the State. Most of the species listed by the NYSDEC breeding bird survey are likely to be found on site. No unique species or species of special concern are expected given the surrounding site uses. The bird species either identified or expected to use the site are listed in **Appendix G-4** site. **Table 2-10** below contains a summary of the expected bird species to be found on the property and those that were identified during the three field inspections.

TABLE 2-10
BIRD SPECIES

	cedar waxwing	*Bombycilla cedrorum*
	great horned owl	*Bubo virginianus*
*	red tailed hawk	*Buteo jamaicensis*
*	northern cardinal	*Cardinalis cardinalis*
	American goldfinch	*Carduelis tristis*
	house finch	*Carpodacus mexicanus*
	yellow-billed cuckoo	*Coccyzus americanus*
*	Northern flicker	*Colaptes auratus*
	Northern bobwhite	*Colinus virginianus*

rock pigeon	*Columba livia*
Eastern wood-pewee	*Contopus virens*
* American crow	*Corvus brachyrhynchos*
* blue jay	*Cyanocitta cristatta*
chestnut-sided warbler	*Dendroica pensylvanica*
yellow warbler	*Dendroica petechia*
* gray catbird	*Dumetella carolinensis*
willow flycatcher	*Empidonax traillii*
common yellowthroat	*Geothlypis trichas*
barn swallow	*Hirundo rustica*
wood thrush	*Hylocichla mustelina*
Baltimore oriole	*Icterus galbula*
orchard oriole	*Icterus spurious*
Eastern screech owl	*Megascops asio*
red-bellied woodpecker	*Melanerpes carolinus*
**Wild turkeys	*Meleagris gallopavo*
* song sparrow	*Melospiza melodia*
* northern mockingbird	*Mimus polyglottus*
black-and-white warbler	*Mniotilta varia*
brown-headed cowbird	*Molothrus ater*
great-crested flycatcher	*Myiarchus crinitus*
* black-capped chickadee	*Parus atricapillus*
* tufted titmouse	*Parus bicolor*
* house sparrow	*Passer domesticus*
Rose-breasted grosbeak	*Pheucticus ludovicianus*
downy woodpecker	*Picoides pubescens*
hairy woodpecker	*Picoides villosus*
rufous-sided (eastern) towhee	*Pipilo erythrophthalmus*
rose-breasted grosbeak	*Pheucticus ludovicianus*
black-capped chickadee	*Poecile atricapillus*
common grackle	*Quiscalus quiscula*
ovenbird	*Seiurus aurocapilla*
white-breasted nuthatch	*Sitta carolinensis*
chipping sparrow	*Spizella passerina*
field sparrow	*Spizella pusilla*
European starling	*Sturnus vulgaris*
brown thrasher	*Toxostoma rufum*
house wren	*Troglodytes aedon*
American robin	*Turdus migratorius*
eastern kingbird	*Tyrannus tyrannus*
blue-winged warbler	*Vermivora pinus*
red-eyed vireo	*Vireo olivaceus*
* mourning dove	*Zenaida macroura*
* pine warbler	*Dendroica pinus*
*Red-winged blackbird	*Agelaius phoeniceus*

* Species observed on site by NPV staff.
** Species observed on site by Applicant's staff

Mammals - The habitats found on the proposed project site are expected to support a number of mammal species. Small rodents and insectivores such as mice, shrews and voles are expected to be the most abundant mammals, but the property and surrounding area should also support larger mammals. White-tailed deer nesting site and the eastern gray squirrel were observed on the subject site and racoon tracks were seen.

A list of the mammal species that are expected to occur on the property is provided in **Appendix G-4**. This list is not meant to be all-inclusive but is intended to provide a list of the most common species. **Table 2-11** below lists a summary of the expected mammal species to be found on the property.

TABLE 2-11
MAMMAL SPECIES

short-tailed shrew	*Blarina breuicauda*
Virginia opossum	*Didelphis virginiana*
big-brown bat	*Eptesicus fuscus*
southern-flying squirrel	*Glaucimys volans*
silver-haired bat	*Lasionycteris noctivagans*
red bat	*Lasiurus borealis*
woodchuck	*Marmota monax*
striped skunk	*Mephitis mephitis*
meadow vole	*Microtus pennsylvanicus*
pine vole	*Microtus pinetorum*
house mouse	*Mus musculus*
long-tailed weasel	*Mustela frenata*
mink	*Mustela vison*
Keen's bat	*Myotis keenii*
little-brown bat	*Myotis lucifugus*
**white-tailed deer	*Odocoileus virginianus*
muskrat	*Ondarta zibethicus*
white-footed mouse	*Peromyscus leucopus*
Eastern pipistrelle	*Pipistrellus subflavus*
***racoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
Eastern mole	*Scalopus aquaticus*
* Eastern gray squirrel	*Sciurus carolinensis*
masked shrew	*Sorex cinereus*
Eastern cottontail	*Sylvilagus floridanus*
Eastern chipmunk	*Tamis striatus*
red fox	*Vulpes vulpes*
meadow-jumping mouse	*Zapus hudsonicus*

* Species observed on site by NPV staff during field visits.
** Deer bed was located however the species was not present during field visits.
*** Prints

Amphibians and Reptiles - Considering the current condition of the site and the lack of water in the existing ponds, this site is not expected to provide a sustainable habitat for amphibian species. However, there are two toads that are common on Long Island in upland habitats. The spadefoot toad occurs in woods, shrublands and fields with dry, sandy loam soils, and breeds in temporary pools **(Behler and King, 1979)**. The Fowler's toad prefers sandy areas near marshes, irrigation ditches and temporary pools. These species are the most likely amphibians to be present on the site given proper living conditions. Salamanders and frogs may have also potentially utilized the ponds on the property during the golf course operations at the site; however, no amphibian species were visually observed during the site visits as the ponds contained no water at the time. Species that were not observed during these surveys, but would be expected based on site habitat, are included in the species list found in **Table 2-12** in order to fully account for potential impacts to observed and expected amphibians and reptiles.

TABLE 2-12
REPTILE AND AMPHIBIAN SPECIES

Amphibians	
common gray treefrog	*Hyla versicolor*
Eastern spadefoot toad	*Scaphiopus holbrooki [s]*
Fowler's toad	*Bufo woodhousei fowleri*
American bullfrog	*Rana catesbeiana*
green frog	*Rana clamitans*
marbled salamander	*Ambystoma opacum [s]*
red-backed salamander	*Plethodon cinerus cinerus*
red-spotted newt	*Notophthalmus viridescens*
spotted salamander	*Ambystoma maculatum*
spring peeper	*Hyla crucifer*
wood frog	*Rana sylvatica*
Reptiles	
common snapping turtle	*Chelydra serpentina*
Eastern box turtle	*Terrepene Carolina [s]*
Eastern garter snake	*Thamnophis sirtalis*
eastern milk snake	*Lampropettis d. triangulum*
Eastern ribbon snake	*Thamnophis s. sauritus*
Northern ringneck snake	*Diadophis punctatus*
Northern water snake	*Natrix sipedon sipedon*
painted turtle	*Chrysemys picta*
stink pot	*Sternotherus odoratue*

[s] NYSDEC special concern species
* Species observed on site by NPV staff

Several species of reptiles might potentially be found on the property, including the eastern garter snake, and eastern milk snake (**Wright, 1957**). These species are terrestrial species found in a variety of habitats. The garter snake is relatively tolerant of human activity but prefers moist soils and would have been present near the small ponds to the northeast of the property. The milk snake is found in soils of varying moisture content. These snakes are all colubrid snakes,

which feed on whole animals such as worms, insects or small amphibians (**Behler and King, 1979**). The larger milk snake will also take small rodents and birds (**Behler and King, 1979**).

The only turtle species common to terrestrial habitats on Long Island (although listed in New York State as a species of special concern) is the eastern box turtle, which requires very little water (**Obst, 1988**). The species is found in a variety of habitats and prefers moist woodlands. The box turtle feeds primarily on slugs, earthworms, wild strawberries and mushrooms (**Behler and King, 1979**). The similar wood turtle utilizes both aquatic and terrestrial habitats but is restricted to eastern Long Island (**Conant and Collins, 1991**).

A list of reptile species that might occur on site given the existing habitats is included in **Appendix G-4**. This list is not intended to be all-inclusive but provides a detailed representation of what is or is likely to be found on site.

Rare and Endangered Species Potential

No rare, threatened or endangered plants were observed by NPV on site. The NY Natural Heritage Program (ECL 9-1503) was contacted to determine if there is any record of rare plants, habitats or wildlife in the vicinity. The Natural Heritage Program returned sixteen (16) records of known occurrences of rare or state-listed plants or significant natural communities in the vicinity of the subject site. **Table 2-13** lists the species or habitat identified, the date of documentation, location, type of habitat the species was found in, and whether habitat that may support the species is found on the subject property. Also included in **Table 2-13** is the federally endangered Sandplain gerardia which was not included in NYNHP's letter but has been documented as being present at the nearby FAA property to the southwest. Correspondence with the Natural Heritage Program is contained in **Appendix G-6** and provides additional information including State and Heritage Conservation Status. No endangered species were encountered during inspections of the property by NPV staff.

TABLE 2-13
DOCUMENTED NEARBY RARE AND PROTECTED SPECIES AND NATURAL COMMUNITIES

Common Name	Date	Location	Habitat-Type	Habitat Onsite? (Yes/No)
Frosted Elfin	No date	0.4 miles from site	No information from NYNHP; typically coastal oak-heath forests, pitch pine-heath barrens, pitch pine-oak forests, pitch pine-oak-heath woodlands, pitch pine-scrub oak barrens, and Hempstead Plains grasslands when wild lupine & wild indigo are present	No
Edward's Hairstreak	1991-6-30	0.3 miles from site	Pine-oak woods, interspersed grasslands & clearing, succeeding into scrub oak and rich mix of grasses and forbs	No

Common Name	Date	Location	Habitat-Type	Habitat Onsite? (Yes/No)
Coastal Barrens Buckmoth	1984-10	275 yards SSW of site	Pine-oak woods, interspersed grasslands & clearing, succeeding into scrub oak and rich mix of grasses and forbs	No
Herodias or Pine Barrens Underwing	1989-07-04	0.35 miles SW of site	Pine-oak woods, interspersed grasslands & clearing, succeeding into scrub oak and rich mix of grasses and forbs	No
Natural Communities				
Maritime Grassland	N/A	0.35 miles SW of site	Grassland community with few emergent trees and shrubs; a grassland that has been kept open by mowing and herbicides and contains mid-aged pine barrens interspersed with grassy areas	No
Vascular Plants				
Stiff Tick Trefoil	1985-09-12	120 yards SW of site	Maritime grassland	No
Showy Aster	1997-09-08	170 yards SW of site	Successional pine barrens grassland. Open, sandy, grass-herb dominated maritime grassland with bluestem and wild indigo	No
Southern Yellow Flax	1997-07-08 & 1985	185 yards SW of project site	Grassy, successional pine barrens at edge of the Federal Aviation administration (FAA) tower facility. 1985: The plants were growing in a successional pine barrens.	No
Flax-leaf Whitetop	1997-09-08	190 yards SW of site	Successional pine barrens grassland with man-made structures. The plants are in the open, sandy, grass-herb dominated clearing.	No
Velvety Bush Clover	1985-09-12	250 yards SW of site	Successional pine barrens grassland.	No
Sandplain Wild Flax	1992-09-09	250 yards SW of site	cleared pine barrens around towers that is dominated by bluestem.	No
Stargrass	2010-08-31	275 yards SW of site	The habitat is scattered pines with broad grassy swaths, a few exotics, and old structures. The pine barrens grassland is good quality.	No
Northern Blazing Star	2010-08-31	0.2 miles SW of site	Within good quality grasslands dominated by little bluestem, aster, clover, and wild indigo.	No
Sandplain Agalinis	2010-08-31	0.3 miles SW of site	The plants are in a good quality pine barrens grassland consisting of scattered pines with broad, grassy swaths. There are few exotics and structures.	No
Slender Pinweed	1997-09-08	0.3 miles SW of site	Successional pine barrens grassland and an Andropogon meadow. There are pine barrens grassland species present.	No
Few-flowered Nut Sedge	1985-09-12	0.4 miles SW of site	Grassland around towers. There are some open sandy areas.	No
Other Documented Nearby Rare Plants Not Mentioned in NYNHP's Letter				
Sandplain gerardia	Present maintained	FAA property	Grasslands	No

Figure 2-9 provides a map of habitat types on the property, their locations and actual and relative sizes. As shown on this map, 90.05 acres or 79 percent of the 114.34-acre site has in the recent past been cleared, landscaped and maintained for use as a country club and golf course. The remaining 24.29 acres of land consists of 13 small scattered "pockets" of pitch pine-oak forest totaling 8.44 acres, numerous mostly smaller scattered pockets of Successional Southern Hardwood Forest (6.5 acres), two very small former (dried up) ponds with torn liners (0.15 acres), impervious developed land including buildings and pavement covering 5.34 acres, and a total combined 3.86 acres of cleared or unvegetated land. Based on this mix of habitat types, past disturbances, landscaping, and property maintenance, limited natural habitat currently exists onsite and based on the three field inspections conducted by NPV, none of the rare species or rare ecological communities listed in **Table 2-13** were found on the site. In addition, the understory in areas containing pitch pine-oak forest and successional southern hardwood forest were previously cleared or thinned during the site's use as a golf course, apparently to keep these areas open for golfers, thereby reducing the natural qualities of these areas as habitat.

Comprehensive Conservation Plan, Long Island National Wildlife Refuge Complex *(2006)*
This plan was prepared and adopted by the US Fish & Wildlife Service in September 2006. It describes the known habitat and wildlife resources within the designated refuge areas on Long Island, and addresses management issues for each. The following is the Purpose and Need sub-section of the plan.

> This Comprehensive Conservation Plan (CCP) for the Long Island National Wildlife Refuge Complex (Complex) was prepared pursuant to the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997. An Environmental Assessment (EA), required by the National Environmental Policy Act of 1969 was prepared concurrent with the draft CCP.
>
> This final CCP presents the combination of management goals, objectives, and strategies that we believe will best achieve our vision for the Complex; contribute to the National Wildlife Refuge System (Refuge System) mission; achieve refuge purposes; fulfill legal mandates; address key issues; and incorporate sound principles of fish and wildlife management, and serve the American public. The CCP will guide management decisions and actions on the refuge over the next 15 years. It will also be used as a tool to help the state of New York natural resource agencies, our conservation partners, local communities, and the public understand our priorities.

Among the individual refuges evaluated in the CCP were the Sayville Unit (26± acres) and associated FAA Property (101± acres), now designated as the Sayville National Wildlife Refuge SNWR; see **Figure 2-10**). Both areas are proximate to the project site but are separated from the subject site by intervening existing residential development. The northeastern corner of the Sayville Unit is located approximately 260 feet from the site's western border on Hauppauge Road, and the northern boundary of the FAA Property is about 750 feet south of the project site's southern border. Included in the CCP were brief descriptions of the habitats and wildlife species

of each refuge, with particular emphasis on rare, threatened or endangered species present. The following is taken from the CCP for the Sayville Unit (including the FAA Property).

Terrestrial Habitats

Sayville, and its associated 101-acre FAA property, consists primarily of pitch pine and scrub oak stands, interspersed with grasslands dominated by little bluestem. The FAA property supports the largest population in New York State of the federally listed endangered sandplain gerardia. The continual management of sandplain gerardia at Sayville and other Complex refuges is vital for its recovery. The FAA was legally mandated to transfer the 101-acre property to the Service after the buildings were removed. At this point, the buildings have been removed, but the property has yet to be transferred.

A variety of terrestrial migratory birds uses the refuge, and the potential exists for attracting more grassland-dependent birds.

Fish and Wildlife

The lack of surface waters at Sayville limits its species diversity to terrestrial species. Its terrestrial habitats, young pitch pines, scrub oaks, and grasslands, provide excellent habitat for Neotropical migratory birds and resident passerines.

Birds

Raptors.- Sayville provides important migratory habitat for certain raptor species, particularly American kestrel, and sharp-shinned, Cooper's, and red-tailed hawks.

Other Migratory Birds.- Songbirds are a conspicuous component of species at Sayville. That songbird community is diverse, and includes many Neotropical migrant species. Breeding songbirds dominant in forested habitats include the ovenbird, American redstart, common yellowthroat, gray catbird, and rufous-sided towhee. Breeding songbirds dominant in shrub and grassland habitats include song sparrows, swallows, and blue-winged, yellow, and prairie warblers.

Mammals

Dominant terrestrial mammals include white-tailed deer, eastern cottontail, gray squirrel, eastern mole, eastern chipmunk, white-footed mouse, meadow vole, red fox, opossum, short-tailed shrew, and raccoon.

Reptiles and Amphibians

Eastern box turtles and eastern hognose snakes are of interest because of their perceived current decline on Long Island, where both were once considered abundant, dominant species.

Rare, Threatened or Endangered Species

On September 7, 1988, sandplain gerardia was listed as an endangered species under the provisions of the Endangered Species Act of 1973, as amended. The plant is known to grow

at two sites on Cape Cod, six sites on Long Island, one site in Baltimore County, Maryland, and one site in Washington County, Rhode Island. Its overall population has declined from 49 historical records to the 10 populations that remain today. Its decline can be attributed to the loss and degradation of suitable habitat caused by increased development, vegetative succession, and changing historical disturbance regimes.

The CCP includes a number of Goals for management within the refuges, which are informed by specific Objectives and associated Strategies to achieve those Objectives *"…designed to enhance the quality, effectiveness, and sustainability of our management priorities. They will increase our protection and management of endangered, threatened or other species of concern, including migratory wildlife. They will also increase the number and quality of opportunities for compatible, wildlife-dependent, public recreation, and allow the Complex to benefit from its proximity to New York City and urban communities."* Following are the Goals and Objectives of the CCP:

Goal 1. **Improve the biological diversity and integrity of upland cover types to sustain high quality habitat for migratory passerine birds.**
Objective 1: White-tailed deer management
Objective 2: Invasive plant management
Objective 3: Restore and maintain fire dependent native plant communities
Objective 4: Restore and enhance bird populations
Objective 5: Increase grassland size to benefit nesting grassland birds

Goal 2. **Restore the biological health of aquatic habitats to high-quality conditions on the Complex salt marshes, bays, tidal**
Objective 1: Reduce Phragmites
Objective 2: Enhance habitat conditions for salt marsh sharp-tailed sparrow and seaside sparrow
Objective 3: Decrease insecticide use in marsh communities
Objective 4: Shoreline restoration
Objective 5: Oyster Bay
Objective 6: Enhance brook trout

Goal 3. **Restore and increase the biological diversity and integrity of native grasslands to foster endangered plant recovery and the communities upon which they depend.**
Objective 1: Sandplain gerardia
Objective 2: Grasslands

Goal 4. **Enhance the functionality of coastal strand habitats as they relate to beach nesting Colonial water birds and shorebirds to meet optimal population levels.**
Objective 1: Assess plover/tern breeding potential
Objective 2: Active management of habitat/predator/public use

Goal 5. Provide priority wildlife-dependent recreational and educational opportunities when compatible with the resource and available funding.
Objective 1: Visitor Service Plan
Objective 2: Headquarters/Visitor Facility
Objective 3: Public Access to Refuge Lands
Objective 4: Interpretation
Objective 5: Wildlife Observation and Photography
Objective 6: Environmental Education
Objective 7: Fishing
Objective 8: Hunting

Goal 6. Communicate and collaborate with local communities and partners throughout Long Island to promote the National Wildlife Refuge System and the Complex.
Objective 1: Outreach

The subject site has no direct inter-relationship with the Sayville National Wildlife Refuge. The subject site was operated as a golf course from approximately 1938 to 2015. Since cessation of golf course use, mowing is still conducted to maintain the property. The site is separated from the refuge by intervening residential development. Potential ecological impacts of the proposed project are addressed in the next section.

2.3.2 Anticipated Impacts

<u>Vegetation</u>
The impacts to the ecological resources of a site are generally a direct result of clearing of natural vegetation, increased human activity and associated wildlife stressors, and the resulting loss and fragmentation of wildlife habitat. While most of the development area is mowed grass (90.04 acres) there remains portions of natural habitats (14.94 acres) on the site. Most of this natural vegetation is composed of Pitch Pine – Oak Forest habitat covering an area of 8.44 acres. There are portions of this habitat along the southwest and southeast edge of the property that have remained untouched since prior to 1948.

As was noted in **Section 2.3.1**, natural areas of the site are fragmented and mostly near the perimeter of the site. Consequently, these areas are subject to off-site impacts such as automobile traffic, domestic pets and activities occurring in the yards of adjoining residential properties. In addition, these areas are bordered by the golf course which operated from approximately 1938 to 2015. The golf course was subject to mowing and turf care practices including fertilization and pest control, as well as the stresses of golf play. Natural areas on the site are not considered pristine and are compromised due to these existing influences.

The changes in habitat quantities for the overall property are listed in **Table 2-14**. The planned development will ultimately provide 58.55 acres of landscaped (primarily consisting of native revegetated and limited fertilized lawn) area within the project site. Of the provided landscaped

acreage, 36.51 acres will be low-mow meadow and 10.02 acres will be native landscapes; the remaining 12.02 acres will be fertilized and irrigated. As a result, 46.53 acres of native restored habitat will combine with 5.12 acre of remaining natural vegetation to ensure that 51.65 acres (or 45.2%) of the site will continue to provide natural habitat for wildlife. The project will result in some removal of portions of existing woodland vegetation on the property as quantified in **Table 2-14** below; however, this will be offset by restored natural areas in combination with retained wooded areas. It is noted that the majority of the proposed development will occur in areas which were previously cleared for landscaping or now consist of Successional Southern Hardwood forest, which is of less ecological value as it is currently impacted by the predominance of invasive species found within this habitat.

TABLE 2-14
HABITAT QUANTITIES
Existing Conditions and Proposed Project

Coverage Type	Existing Conditions		Proposed Project		Change (acres)
	Coverage (acres)	Percent	Coverage (acres)	Percent	
Landscaped	**90.05** (1)	**78.76**	**58.55**	**51.20**	**-31.50**
Fertilized and Irrigated	0.00	0.00	12.02	10.51	+12.02
Native Landscapes	0.00	0.00	10.02	8.76	+10.02
Native Low-Mow Meadow	0.00	0.00	36.51	31.93	+36.51
Natural	**14.94**	**13.07**	**5.12**	**4.48**	**-9.82**
Water Surfaces	**0.15** (2)	**0.13**	**3.46** (3)	**3.02**	**+3.31**
Unvegetated	**3.86**	**3.37**	**2.25**	**1.97**	**-1.61**
Pervious Paths	0.28	0.25	2.25	1.97	+1.97
Sand Traps	2.80	2.45	0.00	0.00	-2.80
Cleared	0.77	0.67	0.00	0.00	-0.77
Paved Surfaces	**4.38**	**3.83**	**31.86**	**27.87**	**+27.48**
Sidewalks, Paths and Patio	2.75	2.41	9.91	8.67	**+7.16**
Roadway and Parking	1.63	1.42	21.95	19.20	**+20.32**
Building Footprint	**0.96**	**0.84**	**13.10**	**11.46**	**+12.14**
Total	**114.34**	**100.00**	**114.34**	**100.00**	**0.00**

(1) All existing landscaping is not irrigated or fertilized.
(2) Composed of decorative ponds adjacent to golf course clubhouse.
(3) Includes new 1.78-acre pond/detention area and 1.68 acres of pools.

Although specific plans for the development of the proposed townhomes have not been developed at this time, an estimate of coverage proposed in the **Conceptual Layout Plan** was used for the purpose of quantifying habitat loss is provided in **Table 2-14**.

Wildlife

The majority of the site is or was maintained turf for a golf course. This area comprises 90.05 acres or 78.76% of the site. The golf course ceased operations in 2015, but the site is still being mowed. The majority of existing natural habitat within the development area is dominated by Pitch Pine – Oak Forest. The property is not expected to act as a refuge for rare native flora or fauna, but does contain a small population of local birds and mammals and limited herptiles as listed in **Section 2.3.1**. The existing habitat as well as proposed site conditions will favor those wildlife species that prefer edge and suburban habitats and those that are tolerant of human activity. Most of the species present on the property are tolerant of human activity and will continue to utilize the site.

The phased development and establishment of significant native restoration areas will allow existing mobile species to relocate within the site. Some loss of less-mobile species is expected; however, wildlife inhabiting the site is common to the area. A total of 5.12 acres of natural vegetation is proposed to remain within the project site, which when combined with restored native habitats will provide 51.65 acres (or 45.2%) of the site in natural habitat for wildlife. Although the proposed project will provide less natural area, the development areas are expected to provide substantial restored habitat that will support wildlife species on the site.

In the short term, through phasing, other undeveloped areas of the site will experience increases in wildlife populations. It is possible that lands adjacent to the property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat on-site and within the area where larger areas of natural open space currently remain. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands would be expected to result in a net decrease in population size for most species. The removal of 9.82 acres of existing natural habitat will be offset by restoration of native habitats on the site. Similar to current conditions, it is anticipated that species that prefer edge habitat will be prevalent within the proposed development.

The golf course use was subject to turf maintenance through fertilization and application of pesticides/herbicides for pest control. The proposed project will practice turf maintenance that will reduce potential impacts by: reducing the acreage of maintained turf from 90.05 acres to 12.02 acres; reducing application rates of fertilizers to approximately 1/3 that of the golf course use (as described in **Section 2.2.2**, limited fertilizer will be used after proper pH adjustment to establish healthy turf); and minimizing applications of pest control chemicals. When compared to the usage of a residential subdivision, where each homeowner performs lawn maintenance (and may or may not apply fertilizer and if so, may apply fertilizers at an excessive rate), the proposed project's use of a licensed landscaping contractor would ensure that only approved fertilizers are applied, and at the proper rates to result in less use of fertilizer. Additionally, the acreage of fertilized landscaping would be greater for a golf course than for a residential subdivision, and both of these uses would have greater fertilized acreages than the proposed project.

Other use of chemicals is similar. Individual homeowners can apply as much crabgrass preventer, and/or pre-emergent and weed killer chemicals as each sees fit, and the golf course would have involved much more application of chemical products (due to the larger acreages of fairways, tees, greens, etc.). The proposed project will be managed through a contract with a landscape company that adheres to stringent industry standards. A contractor will be used and that company has trained personnel, NYSDEC licensed herbicide/pesticide applicators and any use of chemicals is consistent with recommended rates of the manufacturer. Any lawn/landscape care will involve limited use of pre-emergent (crabgrass preventer), weed control, insect control and spot use of weed killer. It is noted that no storage or mixing of chemicals will occur on-site, as the landscape contractor stores and mixes any application materials and brings them to the site. The practices noted above are typical of all lawn/landscape maintenance conducted by landscape contractors. These practices are intended to maximize effectiveness and minimize use of product and will be completed by trained personnel, NYSDEC licensed pesticide applicators, and in conformance with label instructions. All landscaping requires maintenance and such maintenance practices are typical for all types of development. As discussed herein, the use of a landscape maintenance contractor is expected to reduce use of chemicals as compared with use of the site under single family residential zoning. There is also a reduction in application of fertilizers and pest controls as compared to the prior golf course use, which would have involved more intensive turf maintenance practices to support golf use and play. Most significant is that the maintained turf area will be reduced from 90.05 acres to 12.02 acres, and will be more carefully managed than golf or a residential subdivision. Given the information presented herein, no significant adverse impact is expected with respect to wildlife, as the proposed project reduces the use of chemicals as compared with the prior golf course as well as use of the site for a single-family subdivision in conformance with zoning.

Rare and Endangered Species Potential

As previously stated, the NY Natural Heritage Program identified sixteen (16) records of known occurrences of rare or state-listed plants, significant natural communities or other significant habitats on or in the vicinity of the subject site, plus the documented occurrence of endangered sandplain gerardia on a nearby property. As described in **Section 2.3.1** above, these natural communities do not occur on the subject site, and the rare species mentioned above, were not seen by NPV during its three site inspections. The Stiff Tick Trefoil, Sandplain Agalinis and Few-Flowered Nut Sedge were listed as endangered and present within 0.4 miles southwest of the project site however there was no indication of their presence during site visits conducted by NPV. In April of 2021, NPV ecological staff conducted a follow-up inspection of the subject site to look for the 16 rare species and sandplain gerardia identified on property to the southwest and to look for habitat they may support these species. During that inspection, none of the species or rare ecological communities were observed and the limited remaining habitat on-site was so fragmented or degraded due to prior clearing of the understory and maintenance of the site, that the species are not expected to be present. As such, no impacts to rare, threatened or endangered plant species or significant natural communities are anticipated from the proposed project.

Comprehensive Conservation Plan, Long Island National Wildlife Refuge Complex *(2006)*
It is noteworthy that the CCP is a plan for the management of the National Wildlife Refuges on Long Island. Consequently, none of the six Goals of the CCP, nor any of the 24 Objectives of the CCP apply to property outside of the refuges evaluated, including the project site. Similarly, the CCP made no recommendations for use or management of any non-refuge properties. As such, the CCP has no jurisdiction over the project site, and so the achievement of its Goals and Objectives will have no impact on the proposed project.

Although the project site closely approaches the boundaries of the SNWR, developed residential properties separate the project site from both the Sayville Unit and the FAA Property, which minimize the potential for the proposed project site to interact with or otherwise impact the SNWR. Other than from project site wildlife displaced during construction migrating through residential lots to the SNWR, the residential nature of the project is such that there would be minimal potential for it to impact the SNWR. It is expected that post-construction conditions would preclude interactions between the site and SNWR either by wildlife on the project site travelling between the site and the SNWR, or by wildlife passing through the project site to access the SNWR. Such a conclusion is realized in consideration of the following:

- the presence of developed residential lots on land between the project site and the SNWR would discourage wildlife from traversing such land to reach the SNWR;
- the lack of suitable vegetation and habitat, and the developed nature and general level of activity on the project site would not be attractive to larger fauna (e.g., opossum, raccoon, deer) to occupy the site, reducing the potential for such species to migrate to the SNWR;
- the lack of suitable vegetation and habitat, and the developed nature and general level of activity on the project site would tend to discourage larger fauna from attempting to pass through the subject site from areas to the north and east to reach the SNWR.

In addition, it is significant that maintained lawn area will be reduced from 90.05 acres to 12.02 acres and maintenance practices associated with turfed areas will also be reduced. The establishment of additional restored native habitat on the subject site, 51.65 acres (or 45.2%) of the site, will provide a substantial wildlife benefit that will complement the existing refuge properties in the vicinity of the site. As a result, the project will support the SNWR to a greater extent than the pre-existing golf course use and/or a single-family subdivision that conforms to zoning, though a clustered-lot subdivision could produce a greater acreage of restored native habitat than the proposed project (due to its lower yield and, hence, reduced developed surfaces, and the ability of a clustered-lot layout to concentrate the lots into a limited portion of the overall site, to maximize contiguous open spaces).

2.3.3 Proposed Mitigation

- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas.

- The loss of Successional Southern Hardwood Forest and Pitch Pine - Oak habitat on the property will be partially mitigated through the replanting of both habitat types within the subject site.
- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- No known invasive plant species will be utilized, including those species specifically those species listed in Suffolk County Local Law 27-2009 and 6 NYCRR Part 575.
- As no impacts associated with the CCP are expected, no mitigation measures in this regard are necessary or proposed.

2.4 Air Quality

2.4.1 Existing Conditions

The following description of the property's existing air quality conditions and the applicable air quality standards has been taken from the Air Quality Analysis prepared for the proposed project by B. Laing Associates, of Fort Salonga (see **Appendix A-9**).

<u>Ambient Air Quality</u>
Existing air quality is good for the project site. The median air quality index (AQI) in 2017 for Suffolk County, New York was 39.[4] An AQI between 0 and 50 is satisfactory and air pollution poses little or no risk. Existing air quality standards for New York State are found in the State Ambient Air Quality Standards (SAAQS) which largely mimic the National Ambient Air Quality Standards (NAAQS). Possible relevant pollutants for mobile sources are particulate matter (PM), ozone (O_3) and carbon monoxide (CO). Carbon monoxide is the dominant pollutant and so, it is modeled as provided in NYSDOT's The Environmental Manual (TEM). **Table 2-15** lists the NAAQS.

NYSDEC monitors air quality throughout the state. There are currently 58 active air monitoring sites in New York State. Parameters observed vary from air monitoring sites. Four (4) monitoring sites are located within NYSDEC Region 1 (Long Island) with one (1) site in Nassau County and three (3) sites in Suffolk County. The closest monitoring site to the project is 5150-10 located at Sagamore Junior High School at 57 Division Street, Holtsville, New York. Parameters are described below.

Particulate matter less than 2.5 microns in size ($PM_{2.5}$) is measured in Holtsville, New York at station 5151-10. The 5151-10 station had an annual mean standard for last three (3) years (2015-2017) of 6.7 ug/m^3 [microns per cubic meter]. This annual mean was well below the 12 ug/m^3 standard. The 5151-10 station had an average of 98th percentile for last 3 years 15.7 ug/m$^{3.}$ This average was well below the 35 ug/m^3 standard.

[4] According to the United States Environmental Protection Agency (EPA) Outdoor Air Quality Data, Air Quality Index Report.

Ozone is measured at the 5151-10 station in Suffolk County. It is the only pollutant that occasionally exceeds the standard both in NYSDEC Region 1 and State-wide. It is formed from the long-term transport of hydrocarbon emissions in the mid-western United States and as such, is not a "local" enforcement issue on emissions. The average 3 year annual mean for this pollutant was 0.067 parts per million (ppm) for the years 2015 to 2017. The first highest maximum daily eight hour average was 0.081 ppm in 2017 when it slightly exceeded the 0.070 ppm standard.

TABLE 2-15
NATIONAL AMBIENT AIR QUALITY STANDARDS*

Pollutant	Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead	Primary & Secondary	Rolling 3-month average	0.15µg/m^3	Not to be exceeded
Nitrogen Dioxide	Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary & Secondary	Annual	53 ppb	Annual Mean
Ozone	Primary & Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution, $PM_{2.5}$	Primary	Annual	12 µg/m^3	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m^3	Annual mean, averaged over 3 years
	Primary & Secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
Particle Pollution, PM_{10}	Primary & Secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulphur Dioxide	Primary	1-hour	75 ppb	Not to be exceeded more than once per year on average over 3 years
	Secondary	8-hour	0.5 ppm	Not to be exceeded more than once per year

* http://www.dec.ny.gov/chemical/8542.html

Sulfur dioxide (SO_2) is monitored at station 5151-10. In 2017, the annual average was recorded at 0.16 parts per billion (ppb) versus an annual standard not to exceed 30 ppb and the one hour average for the last three years (2015-2017) have peaked at 4.43 ppb versus a standard of 75 ppb.

Carbon Monoxide (CO) is not measured at station 5151-10. The closest monitoring station is approximately 40 miles to the west at Queens College 2 (7096-15) and Queens College Near Road (7096-16). The highest one hour value in 2017 at 7096-15 was 1.78 ppm versus a

standard of 35 ppm. The highest eight hour value was 0.90 ppm versus a standard of 9.0 ppm. The highest one hour value in 2017 at 7096-16 was 1.76 ppm versus a standard of 35 ppm. The highest eight hour value was 1.20 ppm versus a standard of 9.0 ppm.

Nitrogen dioxide (NO_2) and lead are also not measured at station 5151-10. Monitoring sites are located in Region 2.

Existing conditions noted above are compared with air resource conditions as related to the proposed project in the next section.

2.4.2 Anticipated Impacts

The following description of the potential impacts of the project, and of its potential impacts during construction, is taken from the Air Quality Analysis (see **Appendix A-9**).

<u>Mobile Screening</u>

The first level of "air quality screening" as provided in NYSDOT's TEM is essentially a traffic analysis consistent with the Highway Capacity Manual (HCM). This Traffic Impact Study was provided by Nelson & Pope dated November 2018 and is appended to this report by reference. The TEM provides guidance on determination for a required microscale analysis which is based on the consideration of several standards.

Per TEM I-1 Level of Service (LOS) Screening, intersections potentially impacted by the project must be screened for overall LOS. If the LOS is A, B, or C, no further analyses are required. If any signalized intersections have LOS predicted D, E, or F, significant vehicle queuing may occur and further analysis may be required for up to the three worst intersections. In this case, twenty one (21) signalized intersections and twenty one (21) unsignalized intersections were analyzed by the professional traffic operations engineer (PTOE) for LOS in the existing, no build and build phases in both the school phase and summer phase. The analysis for these intersections included Other Planned Developments (OPD). OPD refers to developments located near the project area that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the collected field data. For this analysis, the data for the signalized intersections in the school phase were utilized. The LOS for both the AM and PM scenario in these intersections are provided in Tables 2 and 3, respectively [see **Appendix A-9**]. Figure 2 [see **Appendix A-9**] depicts the analyzed intersections in aerial view. Sensitive receptors[5] (i.e., schools, hospitals, etc.) were noted during this air quality analysis for potential impact. There are few schools that exist within the range of the proposed action. The closest sensitive receptor to the project is New Life Nursery School and Church located approximately 600 feet east at 380 Lakeland Ave. This receptor is bordered on the west by residential homes on Chester Street and on the east by Lakeland Ave. The local VFW and

[5] 1,000 foot receptor analysis required for modeling. Few sensitive receptors mentioned are outside this determined distance but noted for their existence.

Community Ambulance Company exist to the north. The closest intersection analyzed for the project in this location was Lakeland Avenue and Gibbons Court. The LOS level for the proposed Project is B in both the AM and PM scenarios.

Edward J. Bosti Elementary School is located at 50 Bourne Boulevard approximately 1200 feet to the west of the project. The school is bordered to the east by Paramold Manufacturing and ball fields to the west along Locust Avenue. The closest intersection analyzed for the project in this location was Smithtown Avenue and Terry Road/Island Boulevard to the north. The LOS level for the proposed project is B in the AM scenario and LOS A in the PM scenario.

Sayville Middle School and Lincoln Avenue Elementary School are both located to the east of the project east of Johnson Avenue. The closest intersection analyzed for the project in this location was Johnson Avenue and NYS Route 27 South Service Road. The LOS level for the proposed Project is C in the AM and PM scenario.

AM School Peak Scenario - Twenty-one signalized intersections were analyzed for the first level of screening in both the AM and the PM scenario in the Traffic Impact Study. In the AM condition, the findings of the capacity analysis determined that the overall LOS for eighteen (18) of the 21 intersections would achieve LOS of A, B or C as a result of the Project. Thus, no further air quality analysis would be required for those intersection of A, B or C.

Three intersections in the AM traffic analysis resulted in overall LOS of D, E or F in the existing, no build and/or build phases in the school phase. These intersections located north of the site and north of NYS Route 27 included (1) Smithtown Avenue and NYS Route 27 North Service Road, (2) Lakeland Avenue and NYS Route 27 North Service Road and (3) Johnson Avenue and NYS Route 27 North Service Road. These intersections, although LOS D, E or F, should not require microscale analyses as there will be no change from LOS in the no build to the build scenario. For example, for the intersection of Smithtown Avenue and NYS Route 27 North Service Road, the LOS in the existing condition is D and the LOS in the no build scenario is E. The LOS with the project developed is E. Thus, the LOS level will not decrease as a result of the project. This is similar to the intersections of Lakeland Avenue and NYS Route 27 North Service Road and Johnson Avenue and NYS Route 27 North Service Road. The LOS level will not degrade as the project is advanced.

PM School Peak Scenario - In the PM condition, the findings of the capacity analysis determined that the overall LOS for seventeen (17) of the 21 intersections would achieve LOS of A, B or C as a result of the Project. Thus, no further air quality analysis would be required for those intersections.

Four intersections in the PM traffic analysis resulted in LOS of D, E or F. These intersections included (1) Smithtown Avenue and NYS Route 27 North Service Road, (2) Lakeland Avenue and NYS Route 27 North Service Road, (3) Johnson Avenue and NYS Route 27 North Service Road which are located north of the site and north of NYS Route 27 and (4) Lakeland Avenue and Tariff Street/Johnson Avenue which is located south of the project. These intersections,

although LOS D, E or F, should not require microscale analyses as there will be no change from LOS in the no build to the build scenario. For example, for the intersection of Lakeland Avenue and Tariff Street/Johnson Avenue, the LOS in the existing condition is D and the LOS in the no build scenario is D. The LOS with the project developed is E. However, with proposed mitigation measures the LOS level is D. Thus, the LOS level, with mitigation, will not decrease as a result of the project. The intersection of Lakeland Avenue and NYS Route 27 North Service Road will actually improve as a result of the project in the PM condition. The no build scenario is LOS F. The build scenario with mitigation will upgrade the LOS level to E. The intersection of Smithtown Avenue and NYS Route 27 North Service Road will have a LOS E in both the no build scenario and build scenario. This is similar to the intersection of Johnson Avenue and NYS Route 27 North Service Road. Thus, the LOS level will not degrade as the project is advanced.

As a result of the above traffic findings, no significant change in the Level of Service will result from the project. Further, per the Traffic Impact Study, delay times will not increase and may go down slightly. Thus, further mobile analysis should not be required for the project as it would not result in a significant air quality impact.

Construction Screening

The short-term use of heavy equipment operations will result in a temporary, minor increase in pollutant emissions from various equipment used in the construction process for a short-term. However, the major concern during the construction operation will be the control of fugitive dust during site clearing, excavation, demolition and grading operations. Fugitive dust is essentially airborne soil particles caused by heavy equipment operations entraining the soil into the air. To a lesser extent, some fugitive dust emissions will arise from wind erosion of the exposed soils. All construction related air quality impacts will be of relatively short duration. Best construction management practices will be employed to reduce soil erosion and possible sources of fugitive dust. This generally includes the daily use of water/spray trucks in dry periods, anti-tracking pads at construction entrances and adherence to a Storm Water Pollution Prevention Plan (SWPPP) or Erosion and Sediment Control methods.

In addition, trucks, compressors, cranes, excavators and other equipment will be maintained and in good working condition and turned off when not in use. This will reduce the idling of unused equipment in adherence of state regulations. Reduced idling will reduce potential air pollution.

With respect to the buildings on the site, the primary source of emissions is associated with the combustion of fossil fuels in heating systems. However, the NYSDEC does not regulate such emissions from residential structures of the size and type proposed. Further, the Applicant expects to heat the buildings using electrically powered systems (e.g., heat pumps), so there would be no air emissions at all. As such, the above air quality analysis was properly limited to consideration of only the emissions from vehicle exhausts.

Given the air quality analyses provided herein, no significant adverse air quality impacts are expected as a result of the operation of the proposed project. It is recommended that measures be implemented to control fugitive dust during construction.

2.4.3 Proposed Mitigation

- Dust control measures are recommended during construction. Measures outlined in **Section 1.6**, Construction and Operation, are sufficient to control these potential impacts. It is noted that any such impacts are short-term, temporary impacts and do not represent a long-term impact.
- Dust monitoring and mitigation measures are a part of the SMMP; therefore, potential impacts from dust raised by disturbance of impacted soils will be subject to a high level of control.
- As a result of the findings in the Air Quality Analysis, no further analysis in regard to potential air quality impacts due to operation of the project, as it is not expected to result in a significant adverse impact on air quality.

SECTION 3.0

HUMAN ENVIRONMENTAL RESOURCES

3.0 HUMAN ENVIRONMENTAL RESOURCES

3.1 Vehicle Traffic, Transportation and Roadways

A detailed Traffic Impact Study (TIS; dated November 2018) was prepared by Nelson & Pope (N&P) for the proposed project; it was submitted to the Town for review by the Town's traffic engineering consultant, L. K. McLean Associates, P.C. (LKMA) in late November 2018. The following is a brief chronology of the subsequent TIS reviews, revisions and re-submissions.

- TIS (dated November 2018) submitted to Town, November 27, 2018
- LKMA TIS review memo, April 4, 2019
- Revised TIS (dated September 2019) & Response Memo to Town, September 2019
- LKMA TIS review memo, February 2020
- Revised TIS (dated May 2020; see **Appendix F-1**)
- N&P Response Memo to Town, June 18, 2020 (see **Appendix F-2**)
- LKMA TIS review memo to Town, October 13, 2020 (see **Appendix F-3**)
- Town e-mail to LKMA, November 9, 2020
- LKMA response memo to Town, December 7, 2020 (see **Appendix F-4**)
- N&P response memo to LKMA, December 24, 2020 (see **Appendix F-5**)

In addition to the traffic analysis of the existing traffic conditions and impacts of the proposed project (e.g., roadway conditions, accidents and intersection capacity analyses), the scope for the DEIS required additional analyses in the TIS, related to:

- public transportation resources;
- existing congestion on Brook Street and Montauk Highway from traffic bypassing the congestion at the Heckscher Spur interchange with NYS Route 27 (Sunrise Highway);
- the influence on traffic conditions at the nearby LIRR grade crossings;
- the Oakdale Merge;
- parking availability at the Sayville LIRR Station and in municipal lots in downtown Sayville; and
- school bus-related transportation impacts.

The TIS provides the information outlined in the final scope. The following material in this sub-section has been taken from the TIS.

> This report summarizes the results of a detailed investigation of the traffic impacts associated with the development scenario(s) by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and traffic pattern that will be generated during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network. **Figure 3-1** shows the Study Area and Study Intersections.

Appendix F-6 contains a memo prepared by the Town's traffic engineering consultant (L. K. McLean Associates, P.C.; LKMA) to the Town Principal Planner, confirming that the methodology

for trip distribution, background traffic growth rate, peak analysis hours and projected no-build and build horizon years proposed by Applicant's traffic engineer was acceptable and conformed to the final scope. The memo concluded:

> In summary, based on the forgoing, and subject to any conditions set forth in our findings, the proposed methodologies are acceptable for the purposes described.

One aspect of the final scope was clarified through further assessment and correspondence between LKMA on the behalf of the Town and N&P. **Appendix F-7** contains an e-mail from LKMA approving the Applicant's traffic engineer request to not prepare 5- and 10-year post-construction analyses in the TIS, as *"…unnecessary given the comprehensive nature of the analyses already being prepared, and the fact that such analyses were not required of other major developments in the area."*

3.1.1 Existing Conditions

<u>Roadway Conditions</u>

This section of the report provides an overview of existing transportation conditions including roadway inventories, transit facilities, pedestrian amenities, existing traffic volumes, accident data, traffic signal timing plans and intersection geometries.

New York State Route 27 – Sunrise Highway is an east-west principal arterial under the jurisdiction of NYSDOT. In the vicinity of the proposed project, Sunrise Highway is a controlled access highway with continuous 2-lane service roads that parallel the 3-lane express roadway. The section of Sunrise Highway closest to the project site was last counted by NYSDOT in 2003 which recorded an Annual Average Daily Traffic (AADT) of 113,159 vehicles per day (vpd) and the current forecast AADT is shown as 108,939 vpd on the NYSDOT Traffic Data Viewer (NYSDOT TDV), an online interface with an interactive map containing state-wide traffic volume data. Approximately 2 miles west of the project site on Sunrise Highway, as the highway traverses a section of the Connetquot River State Park Preserve, is a bottleneck section known as the "Oakdale Merge". The environmentally sensitive nature of the adjacent wetlands imposes width constraints resulting in the 2-lane east and westbound service roads merging with the 3 express lanes of the highway. Delays are common on this section of Sunrise Highway during weekday AM and PM commuter peak periods. The Oakdale Merge begins around Exit 46 in the eastbound direction and around Exit 47A in the westbound direction. The AADT volumes for this section of roadway were 120,274 vpd (2003 count data: NYSDOT) and forecast to present day with an average of 115,750 vpd.

New York State Route 27 South Service Road (NYS Route 906C) is a one-way eastbound roadway under the jurisdiction of the NYSDOT. In the vicinity of the proposed project, the South Service Road has 2 travel lanes and provides controlled access to Sunrise Highway with traffic signals at intersections with local arterial and collector roadways and stop control on adjacent local roadways. Exclusive turn lanes are frequently provided at signalized intersections. The AADT on this roadway varies considerably by location- approaching

Smithtown Avenue the AADT is 4,115 vpd, approaching Lakeland Avenue the AADT is 15,326 vpd and approaching Johnson Avenue the AADT is 9,515 vpd. This roadway is primarily fronted by commercial properties. The posted speed limit is 35 mph in the vicinity of the site. In the vicinity of the site the horizontal alignment of the roadway is slightly curving, and the vertical alignment is slightly rolling. The pavement and pavement markings on this roadway are in fair condition.

New York State Route 27 North Service Road (NYS Route 906D) is a one-way westbound roadway under the jurisdiction of the NYSDOT. In the vicinity of the proposed project, the North Service Road has 2 travel lanes and provides controlled access to Sunrise Highway with traffic signals at intersections with local arterial and collector roadways and stop control on adjacent local roadways. Exclusive or shared turn lanes are frequently provided at signalized intersections. The AADT on this roadway varies considerably by location. Approaching Johnson Avenue, the AADT is approximately 11,240 vpd, approaching Lakeland Avenue the AADT is approximately 15,3450 vpd and approaching Smithtown Avenue the AADT is approximately 4,980 vpd. This roadway is primarily fronted by commercial properties. The posted speed limit is 40 mph in the vicinity of the site. In the vicinity of the site the horizontal alignment of the roadway is slightly curving, and the vertical alignment is slightly rolling. The pavement and pavement markings on this roadway are in fair condition.

Montauk Highway (CR 80) is an east-west minor arterial roadway under the jurisdiction of the (SCDPW) with an AADT of approximately 16,000 vpd. Montauk Highway is known as Main Street as it traverses downtown Sayville. The majority of Montauk highway in the study area provides one travel lane in each direction but the westerly section of Montauk highway near Brook Street provides one lane in each direction separated by a two-way left-turn lane. Exclusive turn lanes are provided at key locations and intersections. On-street parking is permitted in designated areas. This roadway is primarily fronted by commercial properties. The posted speed limit is 40 mph west of Munson Lane, 35 mph between Rollstone Avenue and Munson Lane and 30 mph east of Rollstone Avenue. The horizontal alignment of the roadway in downtown Sayville is straight, and the vertical alignment is slightly rolling. The pavement and pavement markings on this roadway are in fair condition.

Lakeland Avenue is a north-south roadway which exists as CR 93 north of the Sunrise Highway North Service Road and is under the jurisdiction of the Town of Islip to the south. North of Sunrise Highway, Lakeland Avenue is classified as a minor arterial roadway and has 2 travel lanes in each direction separated by a two-way left-turn lane with a posted speed limit of 50 mph. Exclusive turn lanes are provided at key locations and signalized intersections. The northern section, which has an AADT of 26,580 vpd (NYSDOT), provides access to NYS Route 454 and connectivity to the Long Island Expressway (LIE) as well as the Ronkonkoma Train Station. North of Sunrise Highway, Lakeland Avenue is primarily fronted by commercial uses with a few residential properties mixed in. South of Sunrise Highway, Lakeland Avenue is considered a collector roadway and provides connectivity between Sunrise Highway and downtown Sayville. There is one travel lane in each direction with a posted speed limit of 30 mph. South of the LIRR grade crossing, the roadway becomes known as Railroad Avenue.

On-street parking is prohibited on Lakeland Avenue but is permitted in designated areas on Railroad Avenue. The southern portion of Lakeland Avenue has an AADT of 18,290 vpd (N&P data) and the section of Railroad Avenue has an AADT of 13,285 vpd (N&P data). In the vicinity of the site the horizontal alignment of the roadway is straight, and the vertical alignment is flat. The pavement and pavement markings on this roadway are in good condition.

Terry Road/Tariff Street is a local collector roadway that provides connectivity between the South Service Road and Lakeland Avenue. The section west of Durham Road is known as Terry Road and has a northwest/southeast orientation with an AADT of 2,323 vpd (N&P data). The section east of Durham Road is known as Tariff Street and has an east/west orientation with an AADT of 3,718 vpd (NYSDOT). This roadway is fronted by residential properties and has a posted speed limit of 30 mph. It is striped with a full double yellow barrier line as well as white shoulder markings to form travel lanes that are approximately 12 feet in width. Dedicated bike lanes are not provided. Generally speaking, the shoulder area is of varying width, but narrows and does not provide space for on-street parking. However, there are some sections with a wider shoulder area that can accommodate vehicles. The roadway is primarily without curb or sidewalk, but these features may be present intermittently. There is all-way stop control present at two intersections and traffic signals are present at Island Boulevard/Smithtown Avenue as well as the Lakeland Avenue intersections, which are the western and eastern limits of the roadway, respectively. In the vicinity of the site the horizontal alignment of the roadway is straight, and the vertical alignment is flat. The pavement and pavement markings on this roadway are in fair condition.

Bohemia Parkway is a north/south local roadway that provides connectivity between the South Service Road and Terry Road. Bohemia Parkway extends south from the South Service Road for approximately 0.9 miles with the southern terminus at Mobile Street. The west side of the roadway, north of Terry Road, is fronted by residential properties and the opposite side is fronted by the project site. South of Terry Road, both sides of Bohemia Parkway are fronted by residential properties. The pavement width is approximately 28 feet in width and pavement markings are not present. There is curb and sidewalk provided on the west side of the roadway, north of Terry Road, with no sidewalk and sporadic curb south of Terry Road. No parking restrictions are posted, and the speed limit is 30 mph. In the vicinity of the site the horizontal alignment of the roadway is straight, and the vertical alignment is flat. The pavement and pavement markings on this roadway are in fair condition.

Sterling Place is a local northeast/southwest roadway that extends east from Terry Road for approximately 450 feet with its eastern terminus at Carrie Avenue. The south side of Sterling Place is fronted by residential properties and the north side is fronted by the project site. There are no pavement markings present and the roadway is approximately 25 feet wide. Curb or railroad tie front the properties on the south side of the roadway only. The posted speed limit is 30 mph. The horizontal alignment of the roadway is straight, and the vertical alignment is slightly rolling. The pavement and pavement markings on this roadway are good condition.

Carrie Avenue is a north/south local dead-end roadway, approximately 32 feet wide, that extends north from Tariff Street for approximately 2,000 feet. The south side of the roadway is fronted by residential properties and the north side of the roadway is fronted by the project site. Pavement markings and sidewalks are not present, but curb is provided on both sides of the roadway. No parking restrictions are posted, and the speed limit is 30 mph. The horizontal alignment of the roadway is straight, and the vertical alignment is flat. The pavement and pavement markings on this roadway are in good condition.

Chester Road is a north/south local roadway, approximately 34 feet wide, that extends north from Tariff Street for approximately 0.8 miles and there is a short, northern east/west section approximately 200' long, which provides connectivity to Lakeland Avenue. The southern and northern limits of Chester Road are controlled by stop signs but there is a traffic signal detection loop present on the eastbound approach at Lakeland Avenue, which operates on a delay that cycles the signal at Gibbons Court to provide gaps on the main line during peak periods. Pavement markings or sidewalks are not present, but curb is provided on both sides of the roadway. No parking restrictions are posted, and the speed limit is 30 mph. The horizontal alignment of the roadway is straight, and the vertical alignment is flat. The pavement and pavement markings on this roadway are in fair condition.

Descriptions of each study intersection, summarizing lane configuration, traffic control, pedestrian accommodations, and other features are presented in the TIS; a more detailed summary of the study intersections is contained in Appendix A [in **Appendix F-1**].

<u>Accidents</u>

The most recent three years of accident data for the study intersections and roadways was obtained from the NYSDOT's Accident Location Information System (ALIS). This data was reviewed and analyzed. The accident data is contained in Appendix D [in **Appendix F-1**]. The study locations are as follows:

- Smithtown Avenue from North Service Road to Island Boulevard/Terry Road
- Terry Road/Tariff Street from Island Boulevard/Smithtown Avenue to Lakeland Avenue
- Bohemia Parkway from South Service Road to Terry Road
- 11th Street from Bohemia Parkway to Lakeland Avenue
- Carrie Avenue from Marion Street to Terry Road
- Lakeland Avenue from North Service Road to Montauk Highway
- Depot Street from Greeley Avenue to Lakeland Avenue
- Montauk Highway from Garfield Avenue to Hiddink Street/Hanson Place
- Johnson Avenue from North Service Road to South Service Road
- Hiddink Street from Railroad Avenue to Montauk Highway
- Montauk Highway at Brook Street
- Montauk Highway at Cherry Avenue
- Cherry Avenue at Brook Street

The continuous roadway sections listed above, account for all intersections within the stated limits. Within the study area, there were a total of 263 accidents from March 2014, through February 2018 (3 years). No fatal accidents were recorded during the study period. Table 1 [in **Appendix F-1**] summarizes the accidents by severity and in an effort to minimize the size of the table, locations that did not experience any accidents during the study period were omitted.

As can be seen from Table 1 [in **Appendix F-1**], a majority of the accidents, 67% (175), involved property damage only, 33% (88 accidents) involved injury and 0 accidents resulted in a fatality. The locations with the highest number of accidents are Lakeland Avenue at North Service Road and Lakeland Avenue at South Service Road, which experienced 20 and 19 crashes respectively or an average of 6.7 and 6.3 accidents per year. A majority of these crashes resulted in property damage only, 60% at the North Service Road and 63% at the South Service Road. The location with the 3rd highest number of crashes is Lincoln Avenue and Hiddink, with 11 accidents or 3.7 per year. Again, the majority of accidents (72%) resulted in property damage only. Within the study area, only 7 locations experienced 3 or more crashes annually.

Table 2 [in **Appendix F-1**] summarizes crashes by type to highlight locations that may experience a frequency of a specific collision type that is susceptible to correction by engineering measures.

A review of Table 2 [in **Appendix F-1**] indicates that the three most prevalent accident types were rear end accidents (25%), right angle accidents (19%) and other/unknown type accidents (12%), followed by overtaking accidents (11%) and accidents involving parked vehicles (10%).

Due to the relatively low accident occurrence at a majority of the study locations, the 7 intersections or roadway segments which experience 3 or more crashes annually were selected for further analysis. When determining which intersections to select for further analysis we considered crash experience criteria within the Federal Manual of Uniform Traffic Control Devices (MUTCD) under the crash experienced warrant for traffic control signal needs studies, Chapter 4C. The manual states that when considering an intersection for the highest level of traffic control (traffic signal) the following criteria should be satisfied- *Five or more reported crashes, of types susceptible of correction by a traffic control signal, have occurred within a twelve-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash.* Therefore, we feel that providing further analysis for locations with 3 or more accidents of any type annually is a conservative approach.

The following **Table 3-1** provides a rate comparison of the 7 locations to the statewide average. As can be seen, 5 locations experience accident rates that exceed the statewide average *(see shading)*. Based on the proposed project trip assignments, the project is anticipated to add incremental volume to these locations. Therefore, the anticipated traffic

increase at each location and future project accident rates based on these volumes [see **Section 3.1.2**].

TABLE 3-1
ACCIDENT RATE COMPARISON

Location	Average Number of Accidents (per year)	Intersection/Linear Section Accident rate	
		Calculated Accident Rate	NYSDOT Accident Rate
Sunrise Highway North Service Rd. @ Lakeland Ave.	6.7	0.60	0.32
Lakeland Ave. North Service Rd. to South Service Rd.	3.0	3.94	3.22
Sunrise Highway South Service Rd. @ Lakeland Ave.	6.3	0.66	0.32
Railroad Ave. @ Depot St.	3.0	1.15	0.18
Montauk Highway @ Greene Ave.	3.0	0.35	0.52
Montauk Highway @ Foster Ave.	3.3	0.51	0.52
Lincoln Ave. @ Hiddink St.	3.7	1.67	0.29

Intersection Capacity Analyses

Capacity analyses were conducted for the 2018 Existing Conditions at the study intersections.[1] . The following is a summary of the capacity analyses results for the 2018 existing conditions during the weekday AM, PM and Saturday peak periods for the school peak season and the Weekday AM, PM, Friday PM, and Saturday peak hours for the summer season. The existing models were calibrated for the weekday AM and PM School peak hours since they represent the worst conditions, and the model results for each existing condition validated based on comparing these results to field observations and measurements of travel time, vehicle speeds and delays. After the Synchro model was developed, the capacity analyses results were reviewed to identify intersections and roadway segments with potential issues[2]. Detailed field observations were then conducted at these study intersections to field measure vehicles queues and delays. The following summarizes the results of the field measured delays and queues compared to the capacity analyses results for the most critical corridor in the study area (Lakeland Avenue/Railroad Avenue) during the weekday AM and PM school peak hours.

Signalized Intersections

The capacity analysis results at the signalized intersections during the analyzed peak periods for both the school peak and summer seasons are discussed below:

- *Smithtown Avenue at NYS Route 27 North Service Road* - During the Existing school peak condition, the signalized intersection of Smithtown Avenue and NYS Route 27 North Service Road operates at overall LOS D, D and B during the AM, PM and Saturday midday peak hours respectively. Individual movements experience LOS

[1] Utilizing the Synchro software package.
[2] SimTraffic was utilized to simulate traffic flows.

ranging from A to E. During the Existing summer peak condition, the signalized intersection of Smithtown Avenue and NYS Route 27 North Service Road operates at overall LOS B, C, D and B during the AM, PM, Friday PM and Saturday midday peak hours respectively. Individual movements experience LOS ranging from A to D.

- *Smithtown Avenue at NYS Route 27 South Service Road* - During the Existing school peak and summer conditions, the signalized intersection of Smithtown Avenue and NYS Route 27 South Service Road operates at overall LOS B during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to C.

- *Lakeland Avenue at NYS Route 27 North Service Road* - During the Existing school peak condition, the signalized intersection of Lakeland Avenue and NYS Route 27 North Service Road operates at overall LOS D, E and C during the AM, PM and Saturday midday peak hours respectively. Individual movements experience LOS ranging from A to F. During the Existing summer peak condition, the signalized intersection of Lakeland Avenue and NYS Route 27 North Service Road operates at overall LOS C, D, E and C during the AM, PM, Friday PM and Saturday midday peak hours respectively. Individual movements experience LOS ranging from A to F.

- *Lakeland Avenue at NYS Route 27 South Service Road* - During the Existing school peak and summer conditions, the signalized intersection of Lakeland Avenue and NYS Route 27 South Service Road operates at overall LOS C during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to D.

- *Johnson Avenue at NYS Route 27 North Service Road* - During the Existing school peak condition, the signalized intersection of Johnson Avenue and NYS Route 27 North Service Road operates at overall LOS E, D and B during the AM, PM and Saturday midday peak hours respectively. Individual movements experience LOS ranging from A to F. During the Existing summer peak condition, the signalized intersection of Johnson Avenue and NYS Route 27 North Service Road operates at overall LOS C during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from B to E.

- *Johnson Avenue at NYS Route 27 South Service Road* - During the Existing school peak and summer conditions, the signalized intersection of Johnson Avenue and NYS Route 27 South Service Road operates at overall LOS C or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to D.

- *Lakeland Avenue at Gibbons Court* - During the Existing school peak and summer conditions, the signalized intersection of Lakeland Avenue at Gibbons Court operates

at overall LOS A during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to C.

- *Lakeland Avenue at Tariff Street/Johnson Avenue* - During the Existing school peak and summer conditions, the signalized intersection of Lakeland Avenue at Tariff Street/Johnson Avenue operates at overall LOS D or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to F.

- *Lakeland Avenue at Manton Street* - During the Existing school peak and summer conditions, the signalized intersection of Lakeland Avenue at Manton Street operates at overall LOS B or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to C.

- *Montauk Highway at Brook Street* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Brook Street operates at overall LOS A during the AM, PM, Friday PM and Saturday midday peak hours.

- *Montauk Highway at Cherry Avenue* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Cherry Avenue operates at overall LOS B or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to D.

- *Montauk Highway at Greene Street* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Greene Avenue operates at overall LOS B during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to E.

- *Montauk Highway at Gillette Avenue/Railroad Avenue* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Gillette Avenue/Railroad Avenue operates at overall LOS B or better during the AM, PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to E.

- *Montauk Highway at Lincoln Avenue/Shopping Center* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Lincoln Avenue/Shopping Center operates at overall LOS C or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to E.

- *Montauk Highway at Foster Avenue/Shopping Center* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway at Foster Avenue/Shopping Center operates at overall LOS C or better during the AM, PM,

Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to E.

- *Montauk Highway at Hiddink Street/Hanson Place* - During the Existing school peak and summer conditions, the signalized intersection of Montauk Highway Hiddink Street/Hanson Place operates at overall LOS C or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to D.

- *Smithtown Avenue at Terry Road/Island Boulevard* - During the Existing school peak and summer conditions, the signalized intersection of Smithtown Avenue at Terry Road/Island Boulevard operates at overall LOS B or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to C.

- *Cherry Avenue at Brook Street* - During the Existing school peak and summer conditions, the signalized intersection of Cherry Avenue at Brook Street operates at overall LOS B or better during the AM, PM, Friday PM and Saturday midday peak hours. Individual movements experience LOS ranging from A to B.

Unsignalized Intersections

The LOS results for the unsignalized intersections show that all the intersections operate at acceptable LOS D or better during the existing conditions for all analyzed peak periods except for eastbound Chester Road at the intersection of Lakeland Avenue and Chester Road which operates at LOS F during all analyzed peak periods. The northbound approach at the intersection of Montauk Highway and Greeley Avenue/Shopping Center Driveway operate at LOS E or F during the PM and Saturday peak hours. The eastbound Depot Street approach at Railroad Avenue also operates at LOS E during the Saturday summer peak hour. As previously mentioned, during field observations conducted to calibrate the existing conditions model, vehicles were observed exiting the minor approaches of stop-controlled leg of intersections along Lakeland Avenue, Railroad Avenue and Montauk Highway during gaps shorter than five (5) seconds. Therefore, the unsignalized intersections along the Lakeland Avenue/Railroad Avenue corridor were analyzed with and without the calibration of the AM and PM school peak hour Synchro models. Tables 13 and 14 [in **Appendix F-1**] present the results of the capacity analyses at these intersections with and without the calibration.

From the review of Tables 13 and 14, the levels of service at the intersections with and without the calibration are comparable except for the eastbound Chester Road approach at the intersection of Lakeland Avenue and Chester Road that operate significantly better with the calibration. The results of the analyses show that the stop-controlled approaches of the intersections on the Lakeland Avenue/Railroad Avenue corridor except for Chester Road will operate at acceptable LOS D or better during the weekday AM and PM school peak hours with and without the calibration. Without the calibration the Chester Road approach operates at LOS E and F during the weekday School AM and PM peak hours respectively. With

the calibration the Chester Road approach will operate at LOS C during the weekday school AM peak hour and at LOS D during the weekday school PM peak hour.

It was also noted during the field observations that there is a loop on the eastbound Chester Road approach tied to the traffic signal at the intersection of Lakeland Avenue and Gibbons Court capable of putting a call to the signal controller when there is a need for vehicles to exit Chester Road. Therefore, the Synchro results for the intersection of Lakeland Avenue at Chester Road are very conservative as confirmed by the field delay measurements since the analyses did not take into consideration the effect of the loop. Hence, as supported by the field delay measurements, the operation of the eastbound Chester Road approach is better than presented in the traffic analyses.

Public Transportation

Within the study area, public transit is provided primarily by Suffolk County Transit and the LIRR. The following discussions outline the exiting local bus and train service in the study area.

Suffolk County Transit (SCT) has three (3) bus lines (S40, S57 and S59) that service locations in and around the study area.:

Route S40 - This route runs between the Babylon Railroad and Patchogue Railroad Stations. Stops along this route include Good Samaritan Hospital, Islip Town Hall and South Brookhaven Health Center. The bus operates on Montauk Highway in downtown Sayville within approximately 1.5 miles of the site. The bus operates approximately every half hour and runs from 5:30 am to 9:30 pm.

Route S57 - This route runs between Main Street in Sayville and Smith Haven Mall in Lake Grove. Stops along this route include Terry Road and Tariff Street, in the vicinity of the site, Ronkonkoma LI MacArthur Airport and Ronkonkoma Railroad. The bus operates approximately every hour and runs from 7:00 am to 6:25 pm with limited service on Saturdays.

Route S59 - This route runs between Main Street in Sayville and Smith Haven Mall in Lake Grove. Stops along this route include the intersection of Johnson Avenue at Tariff Street, in the vicinity of the site, and Ronkonkoma Railroad. The bus operates approximately every hour and runs from 7:00 am to 6:45 pm with limited service on Saturdays.

The LIRR, a division of the Metropolitan Transit Authority (MTA), provides passenger rail service to Suffolk County, Nassau County, Queens, Brooklyn and Manhattan. Major hubs provide transfer to several public transit options. Suffolk/Nassau locations provide transfer to Long Island bus services, Queens/Brooklyn locations and provides transfer to the subway/city bus and Penn Station in Manhattan and transfers to New Jersey Transit and Amtrak.

The Sayville Stop of the Montauk Branch of the LIRR is located on Depot Street, approximately 1.5 miles from the site. This station is approximately 50 miles from Penn Station and travel times are about 90 minutes during peak commuting periods. During peak periods, trains generally leave every 25-50 minutes, with off-peak and weekend trains scheduled hourly.

The Ronkonkoma Stop of the Ronkonkoma Branch of the LIRR is located on Railroad Avenue, approximately 4.5 miles from the site. This station is approximately 50 miles from Penn Station and travel times are about 70 minutes during peak commuting periods. During peak periods, trains generally leave every 20-30 minutes, with off-peak and weekend trains scheduled hourly.

Congestion on Brook Street and Montauk Highway

To address concerns raised by Sayville residents on the potential impacts of the proposed project on the existing congestion on Brook Street and Montauk Highway, due the traffic bypassing the congestion at the Heckscher Spur interchange with NYS Route 27, travel time and delay runs were conducted along the following two corridors for a typical AM (7am-9am) and PM (4pm-7pm) peak periods for both the school peak season and the summer season using GPS and video technology which effectively outdates the traditional floating car technique to compare travel times using both routes.

- Corridor 1 - Travelling to and from the proposed site and the Heckscher Spur Interchange/Southern State Parkway via NYS Route 27 (Sunrise Highway). Corridor 1 is approximately 5 miles long.
- Corridor 2 - Travelling to and from the proposed site and the Heckscher Spur Interchange/Southern State Parkway via Montauk Highway. Corridor 2 is approximately 7.5 miles long.

Prior to conducting the travel time runs, a Dash Cam device was mounted in the test vehicle and set to record. A minimum of three (3) speed runs were conducted for each travel direction during both the AM and PM peak periods for both the school and summer seasons. During each run, the device reports the vehicle's exact latitude, longitude, speed, distance and bearing once every second and saved in kml and excel formats. The average speed and travel time for each study roadway segment was calculated. The run corresponding to the lowest average travel speed was used for the speed analyses. The results of the speed study for each period are summarized in Tables 7 and 8 [in **Appendix F-1**].

The travel speed data in Tables 7 and 8 [in **Appendix F-1**] show that Corridor 2 is longer than Corridor 1 and the travel times are lower on Corridor 1 during the AM peak hours and hence there is no incentive to use Brook Street and/or Montauk Highway to bypass any congestion on either eastbound or westbound NYS Route 27 (sunrise Highway) during the AM peak hour for both the school and summer peaks. During the PM peak hour, the travel times on Corridor 1 are slightly longer than those for Corridor 2 but not significant enough to incentivize the use of Montauk Highway and Brook Street as a bypass to avoid congestion on Sunrise Highway, especially when the proposed development is closer to Sunrise Highway than

Montauk Highway. It was observed during our field observations and speed and delay runs that most of the vehicles appear to use Exit 45 (Montauk Highway) instead of Exit 44 (Sunrise Highway), do so to bypass the vehicle queues leading to Exit 44. [3]However, the delays these vehicles encounter on Montauk Highway after using Exit 45 wipes out the time saved by avoiding Exit 44, making the difference in travel time between Corridor 1 and Corridor 2 insignificant.

Train Crossing Operational Analysis

Video recordings were made at the Railroad Avenue train crossing to document it's operation and effects on the traffic along Railroad Avenue. The railroad gate was monitored during the weekday AM and PM and Saturday school season peak periods. Whenever the railroad gates go down, the time of occurrence, duration of the closure, the direction of the train, and the vehicular queue was recorded was documented [see Table 47, in **Appendix F-1**].

Upon review of the videos, the duration during which the gates were down ranged from 45 seconds to 3 minutes 15 seconds. As can be seen in Table 47 above, the longest queues along northbound and southbound Railroad Avenue as a result of the railroad gate closure occur during the PM peak hour. The longest observed queues during the AM and PM peak hours are 16 and 30 vehicles respectively. These queues were sometimes observed to block side streets. However, the queues always cleared upon the opening of the railroad gate. Traffic on Railroad Avenue was observed to flow smoothly with some delays when the railroad gate is open. Under Phase 6 of the proposed project (Full Build-Out Scenario), a total of 14 northbound and 35 southbound vehicles will be added to the railroad crossing during the AM peak hour and a total of 35 northbound and 22 southbound vehicles will be added to the railroad crossing during the PM peak hour. The additional traffic will result in an increase of about 1 vehicle every 2 minutes on both the northbound and southbound Railroad Avenue at the crossing. With a maximum observed railroad gate closure of 3 minutes 15 seconds, the proposed project could add two vehicles to the current northbound and southbound queues during the worst-case scenario. These additional queues will not significantly impact the current traffic flow.

The Oakdale Merge

The project scope states that "NYS Route 27, Sunrise Highway, currently experience significant recurring congestion during weekday AM and PM peak hours, largely due to the presence of the interchange with the Southern State Parkway and the Heckscher Spur of the Southern State Parkway, and discontinuous service roads in the area known as the Oakdale Merge. The TIS should include an analysis of conditions on NY27 Sunrise Highway, including the project's potential impact on future operating conditions on the highway, potential mitigation measures and the project applicant's role in implementation of mitigation."

[3] When queues extend onto the southbound Heckscher Spur mainline due to congestion on eastbound Sunrise Highway. This behavior leads to increased delay on Montauk Highway.

The Oakdale Merge is located approximately 2 miles west of the project site on Sunrise Highway, as the highway traverses a section of the Connetquot River State Park Preserve. The environmentally sensitive nature of the adjacent wetlands imposes width constraints currently resulting in the 2-lane east and westbound service roads merging with the 3 express lanes of the highway. Delays are common on this section of Sunrise Highway during weekday AM and PM commuter peak periods. The Oakdale merge begins around Exit 46 in the eastbound direction and around Exit 47A in the westbound direction. The AADT volumes for this section of roadway were 120,274 vpd (2003 count data: NYSDOT) and forecast to present day with an average of 115,750 vpd.

Currently NYSDOT PIN 0059.27 is under construction on the Oakdale Merge section of Sunrise Highway with a contract completion date of 11/14/2019.[4] The project scope includes the following:

- Milling/pavement restoration.
- Drainage improvements.
- The opening of the median barrier on Sunrise Highway (NY27) between Pond Road and Oakdale-Bohemia Road for emergency vehicle access.
- The closure of the first eastbound South Service Road entrance ramp to mainline Sunrise Highway, just east of the Connetquot Avenue overpass.
- Modification to roadway delineators.
- Upgrades to deficient guide rail sections.
- Install ramp metering at several westbound entrance ramps prior to the Oakdale Merge.

<u>Parking at Sayville LIRR Station and Downtown Sayville</u>

In order to identify the impact of the proposed residential development on the existing LIRR parking lots and municipal parking areas in the Sayville Downtown area, a parking analyses of the existing parking was conducted. The following steps were followed to identify the parking impacts of the proposed project:

- In addition to the LIRR parking lots, the Town of Islip planning was contacted to identify all Town of Islip Parking lots within Downtown Sayville.
- Parking surveys were conducted on June 6th, 2018 when schools were in session from 7am to 9 pm at the identified parking areas.
- The parking data was summarized to identify existing peak parking demand.

[4] PIN 0059.27 was under construction when the TIS was prepared, but has since been completed. NYSDOT has also conducted an alternatives analysis of a number of potential improvements at the merge. In addition, solicitation for consultant services to advance a major improvement project to the preliminary design stage is underway. The preliminary and final design process for a project of the magnitude envisioned in the alternatives analysis is likely to take a minimum of three to five years, with construction beyond then, as financial conditions permit. Thus, no relief is likely in the near future, well beyond the build year of this project.

- The potential number of residents in the proposed project that will utilize these facilities was estimated.
- A parking analysis to determine the availability of parking in the downtown parking area and LIRR parking lots to accommodate the new residents was conducted.

A total of four (4) Municipal and three (3) railroad parking areas were studied.[5] The following **Table 3-2** [Table 47 in the TIS; see **Appendix F-1**] summarizes the existing supply broken down by the studied parking areas. The Municipal and railroad parking lots contain a total of 554 and 603 parking spaces respectively.

TABLE 3-2
EXISTING PARKING SUPPLY

Type of Parking	Parking Area	Total Number of Spaces
Municipal Lots	Sayville Parking Lot 4 (south of Middle Road between Gillette Avenue and Collins Avenue)	134
	Sayville Parking Lot 5 (south of Main Street between Candee Avenue and Gillette Avenue)	29
	Sayville Parking Lot 6 (south of Main Street between Candee Avenue and Greene Avenue)	187
	Sayville Parking Lot 15 (Center Street)	204
Total		554
Railroad Lots	Sayville Railroad Station North Parking Lot	331
	Sayville Railroad Station Southeast Parking Lot	119
	Sayville Railroad Station South Parking Lot	153
Total		603

Table 50 [in **Appendix F-1**] shows the existing parking surveys conducted at the parking areas shown in **Table 3-2**. A review of Table 50 [in **Appendix F-1**] reveals that the peak parking demand times for the individual parking areas vary considerably. Parking Lots 4, 5 and LIRR North parking lot are highly utilized during weekdays with overall peak utilization ranging from 90% to 100%. The Municipal parking areas have an overall peak parking utilization of 334 spaces (60%). This translates to an overall municipal parking availability of 220 parking spaces during the peak weekday parking demand. The Railroad parking areas have an overall peak parking utilization of 497 parking spaces (82%) during the peak weekday parking demand resulting in an availability of 106 parking spaces during the peak weekday parking demand.

[5] A parking accumulation survey was conducted at the parking areas between the hours of 7 am – 9 pm on an hourly basis on Wednesday June 6, 2018.

3.1.2 Anticipated Impacts

Trip Generation

To identify the impacts each development phase will have on the Study Area roadways and Study Intersections, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the generated traffic when traveling to and from the Study Area.

The trip generation estimates for the proposed development under each development phase were prepared utilizing data under Land Use Code 221- Multifamily Housing (Mid-Rise) from the ITE publication, *Trip Generation, Tenth Edition*. The ITE trip generation publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country. The ITE Trip Generation Handbook is a valuable reference for traffic studies, as it is by far the most comprehensive source of empirical data on traffic impacts for different land uses. **Table 3-3A** summarizes the trip generation estimates for each lot on the site. [6]

As previously mentioned, traffic analyses were conducted for six (6) project development phases. These analyses will be cumulative from phase to phase. Phase 1 will analyze the traffic impact of the construction of Lot 1, Phase 2 will analyze the traffic impacts of Lot 1 and Lot 2, etc. **Table 3-3B** is a summary of the anticipated trip generation for each of the six phases.

[6] Under as of right zoning, approximately 98 single-family homes could be developed on the 114-acre parcel, estimated in the study report to potentially generate 1,240 Vehicle Trip Ends (VTE) per day. Development of the site as proposed under the PDD zoning could be expected to generate approximately 6,400 new VTE per day. Thus, the proposed rezoning and development of the site under the requested PDD zoning represents approximately 400% more new trips added to the adjacent roadways than as of right development.

Specifically, during the weekday AM peak hour, 98 single family homes would generate 74 total vehicle trips, 18 entering and 56 exiting the property, while development under the PDD zoning would generate 492 trips, 127 entering and 365 exiting. During the weekday PM peak hour, as of right development would generate 100 total trips (62 entering and 37 exiting trips) while the proposed PDD would generate 601 trips, 365 entering and 236 exiting. Finally, during the Saturday midday peak hour, as of right development of the site would generate 100 total trips, 54 entering and 46 exiting, while under the proposed PDD zoning, 601 trips would be added to the roadway network, 294 entering trips and 307 exiting trips.

Depending on the ultimate site configuration of any project of this magnitude, local roadways would experience considerably greater traffic volumes due to the proposed project than under as of right development. Many of the local intersections in the immediate vicinity of the project site currently experience relatively low traffic volumes, and increases at certain local intersections near the project site as great as 170% are anticipated.

TABLE 3-3A
TRIP GENERATION FOR EACH SITE LOT

Time Period	Lot 1 (138 units)		Lot 2 (222 Units)		Lot 3 (318 units)		Lot 4 (289 units)		Lot 5 (213 units)		Lot 6 (185 units)		Total	
AM	13	enter	21	enter	29	enter	27	enter	20	enter	17	enter	127	enter
	37	exit	59	exit	85	exit	77	exit	57	exit	50	exit	365	exit
	50	total	**80**	total	**114**	total	**104**	total	**77**	total	**67**	total	**492**	total
PM	37	enter	60	enter	85	enter	77	enter	57	enter	49	enter	365	enter
	24	exit	38	exit	55	exit	50	exit	37	exit	32	exit	236	exit
	61	total	**98**	total	**140**	total	**127**	total	**94**	total	**81**	total	**601**	total
Saturday	30	enter	48	enter	69	enter	62	enter	46	enter	39	enter	294	enter
	31	exit	50	exit	71	exit	65	exit	48	exit	42	exit	307	exit
	61	total	**98**	total	**140**	total	**127**	total	**94**	total	**81**	total	**601**	total

TABLE 3-3B
TRIP GENERATION FOR EACH DEVELOPMENT PHASE

Time Period	Phase 1 Lot1 (138 units)		Phase 2 Lot1+Lot 2 (360 Units)		Phase 3 Lot 1+Lot 2 +Lot3 (678 units)		Phase 4 Lot 1+Lot 2 + Lot 3+Lot 4 (967 units)		Phase 5 Lot 1+Lot 2 +Lot 3+Lot 4 +Lot 5 (1180 units)		Phase 6 Lot 1+Lot 2 +Lot 3+Lot 4 +Lot 5+Lot 6 (1365 units)	
AM	13	enter	34	enter	63	enter	90	enter	110	enter	127	enter
	37	exit	96	exit	181	exit	258	exit	315	exit	365	exit
	50	total	**130**	total	**244**	total	**348**	total	**425**	total	**492**	total
PM	37	enter	97	enter	182	enter	259	enter	316	enter	365	enter
	24	exit	62	exit	117	exit	167	exit	204	exit	236	exit
	61	total	**159**	total	**299**	total	**426**	total	**520**	total	**601**	total
Saturday	30	enter	78	enter	147	enter	209	enter	255	enter	294	enter
	31	exit	81	exit	152	exit	217	exit	265	exit	307	exit
	61	total	**159**	total	**299**	total	**426**	total	**520**	total	**601**	total

As can be seen from the tables above, Phase 1 is anticipated to generate 50, 61 and 61 trips during the AM, PM and Saturday peak hours, respectively, Phase 2 will generate 130, 159 and 159 trips during the AM, PM and Saturday peak hours, respectively, Phase 3 will generate 244, 299 and 299 trips during the AM, PM and Saturday peak hours, respectively, Phase 4 will generate 348, 426 and 426 trips during the AM, PM and Saturday peak hours, respectively, Phase 5 will generate 425, 520 and 520 trips during the AM, PM and Saturday peak hours, respectively and Phase 6 will generate 492, 601 and 601 trips during the AM, PM and Saturday peak hours, respectively.

Accidents

The increase in accident occurrence at these locations was estimated by factoring the existing number of accidents by the increase in traffic anticipated by the proposed project. A worst-case scenario between the AM and PM peaks was utilized. Based on the anticipated traffic volumes, **Table 3-4** summarizes the anticipated changes.

TABLE 3-4
FORECAST ACCIDENT RATE COMPARISON

Location	Existing		Forecast	
	No. of Accidents (over a 3-year period)	Average No. of Accidents (per year)	No. of Accidents (over a 3-year period)	Average No. of Accidents (per year)
Sunrise Highway North Service Road @ Lakeland Avenue	20	6.7	21.5	7.2
Lakeland Avenue between North Service Road and South Service Road	9	3.0	10.8	3.6
Sunrise Highway South Service Road @ Lakeland Avenue	19	6.3	21.8	7.3
Railroad Avenue @ Depot Street	9	3.0	9.5	3.2
Montauk Highway @ Greene Avenue	9	3.0	9.1	3
Montauk Highway @ Foster Avenue	10	3.3	10	3.3
Lincoln Avenue @ Hiddink Street	11	3.7	11.2	3.7

Upon review of the table, it can be seen that the additional traffic volume on the study roadway will contribute minimally to the existing accident rates and only one location may see an average increase of 1 accident per year.[7]

[7] A further review of crashes that occurred at the intersections with more than 3 crashes per year and higher than statewide accident rate in the vicinity of the site was conducted. From the Table above, three locations were identified (Sunrise Highway North Service Road at Lakeland Avenue, Lakeland Avenue between North Service Road and South Service Road and Sunrise Highway South Service Road at Lakeland Avenue) with a total of 48 accidents over the 3-year period. Of the 48 crashes, 25 (52%) are rear-end collisions, 7 (15%) involves overtaking and 6 (12%) are unknown type accidents. 30 (63%) of the 48 accidents resulted in property damage. Only 18 (37%) of the 48 accidents resulted in an injury. The accident reports of these 48 accidents were reviewed to identify the possible causes of these accidents and identify potential countermeasures to reduce the accidents at these locations. From the review of the reports, 41 (85%) of the 48 crashes are attributed to driver inattention, 3 (6%) are weather related, 1 (2%) involves a defective car, 1 (2%) is attributed to debris/obstruction and 2 (4%) are related to unknown type crashes. It should be noted that accidents associated with driver inattention are not correctable by geometric or any improvements to traffic flow. The increase use of cell phones and other electronic devises when driving may have increased the number of distracted drivers and hence the potential increase of such accidents associated with distraction and driver error. As previously noted,

Intersection Capacity Analyses

To identify the impacts created by each phase of the proposed project, capacity analyses were conducted at the study intersections for the No Build and Build Conditions during the weekday AM, PM and Saturday midday peak hours for the school peak season and during the weekday AM, PM, Friday PM and Saturday midday during summer season. The results of the capacity analyses for the No Build and Build Conditions were compared to determine the impact that will be created at the study intersections for each phase. Tables summarizing the No Build and Build Conditions levels of service results were prepared and included in Appendix I [in **Appendix F-1]** of the report. The changes in levels of service from the No Build to the Build conditions were then compared to determine where there was an increase in LOS that is considered a significant impact according to the Town's Subdivision and Land Development Regulations, the criteria for determining impacts. Mitigations were then applied to specific intersections to improve the identified significant impacts. The capacity analyses were conducted at the Study intersections for mitigated conditions and are reported in Tables contained in Appendix I [in **Appendix F-1**] of the report.[8]

Summary of Analyses Results for Phase 1

The analyses indicated that 34 of the 36 study intersections will continue to operate at No Build levels of Service (LOS) after the completion of the Phase 1 of the proposed project. Two intersections did experience changes in LOS from the No Build to Build Conditions. However, with the minor signal adjustments that can be accommodated by the current signal controllers, these two intersections will continue to operate at No Build levels of better after the completion of Phase 1 of the project.

Based on the Town's Subdivision and Land Development Regulations' criteria for determining

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the amount of traffic added to Lakeland Avenue by the proposed project should not increase this type of crashes. However, as will be seen later in this report, the following physical or geometric improvements have been proposed and will be constructed by the applicant to mitigate the traffic and safety impacts.

- Widen Lakeland Avenue between Chester Road and 11th Street to provide an additional northbound through lane. The widening will begin around Eastover Road and extends to meet the existing 2 lane section of Lakeland Avenue just north of 11th Street. The segment of Lakeland Avenue between Eastover Road and Chester Road will be striped to provide one shared northbound left turn/through lane into Chester Street and one through lane.
- The southbound approach of this intersection of Lakeland Avenue at NYS Route 27 North Service Road which currently provides an exclusive through lane, a shared through/right turn lane and an exclusive right turn lane will be redesigned to provide two exclusives through lanes and two exclusive right turn lanes. Minor signal timing adjustments will also be conducted for the northbound left turn phase.

According to the 2018 New York State Department of Transportation Post Implementation Evaluation System (PIES) Reduction Factor Report, the addition of lanes may reduce injury accidents by 36%. Therefore, the physical or geometric improvements proposed on Lakeland Avenue as part of this project will improve safety on this corridor.

[8] A copy of the determination of significant impact from the Town's Subdivision and Land Development Regulations (SEQR manual) is also contained in Appendix I [in **Appendix F-1]**.

impacts, the increase in delay experienced at the study intersections during all analyzed peak hours for both the school peak and summer seasons do not result in a significant impact. Therefore, no mitigation measures are required at these intersections under Phase 1 of the project.

The No Build arterial analyses and measures of effectiveness will be maintained after the construction of Phase 1 of the project.

Summary of Analyses Results for Phase 2 With and Without Other Planned Developments
The results of the analyses for Phase 2 with and without other planned developments are similar to those for Phase 1. Hence, the finding for the two phases are the same.

The No Build arterial analyses and measures of effectiveness will be maintained after the construction of Phase 2 of the project.

Summary of Analyses Results for Phase 3 With and Without Other Planned Developments
The results of the analyses for Phase 3 with and without other planned developments are similar to those for Phases 1 and 2. Hence, the finding for Phases 1, 2 and 3 are the same.

The No Build arterial analyses and measures of effectiveness will be maintained after the construction of Phase 3 of the project.

Summary of Analyses Results for Phase 4
The analyses indicated that one signalized intersection will require physical improvements and the rest of the signalized intersection will continue to operate at No Build LOS with minor signal timing adjustments where necessary.

The proposed mitigations will improve both the operation of the arterial and the measures of effectiveness after the construction of Phase 4 of the project.

Summary of Analyses Results for Phase 5
The analyses indicated that two signalized intersections will require physical improvements and the rest of the signalized intersections will continue to operate at No Build LOS with minor signal timing adjustments were necessary.

The proposed mitigations will improve both the operation of the arterial and the measures of effectiveness after the construction of Phase 5 of the project.

Summary of Analyses Results for Phase 6
The analyses indicated that two signalized intersections will require physical improvements and the rest of the signalized intersections will continue to operate at No Build LOS with minor signal timing adjustments where necessary. The widening of Lakeland Avenue between Eastover Road and 11th Street to provide an additional northbound lane and the elimination of the intersection of Lakeland Avenue and Chester Road will further improve the operation

of the Lakeland Avenue corridor and the intersections within that segment of Lakeland Avenue.

The proposed mitigations will improve both the operation of the arterial and the measures of effectiveness after the construction of Phase 6 of the project.

It is therefore our professional opinion that the construction of Phase 6 with the implementation of the physical improvements at the intersections of Lakeland Avenue and NYS Route 27 North Service and Lakeland Avenue and Tariff Street/Johnson Avenue, the widening of Lakeland Avenue and the elimination of the intersection of Lakeland Avenue and Chester Road will not significantly impact the operation of the intersections within and around the study area.

Additional Mitigation Measure for Phase 6
(elimination of the Chester Road at Lakeland Avenue intersection)
In the February 2020 memo from the Town commenting on the project Traffic Impact study, the town recommended the review of an alternative mitigation measure to eliminate the intersection of Lakeland Avenue and Chester Road. The east-west portion of Chester Road to be eliminated and access to Chester Road provided via a new intersection of Chester Road and the signalized Site Access. The intent of the mitigation measure is to eliminate the need for the unconventional signal operation and provide a more efficient operations for the vehicles at Chester Road. Figure 31 is a conceptual plan showing this optional improvement.

As stated previously, the mitigation measures proposed by the applicant for Phase 6 of the project are adequate to mitigate the impacts associated with Phase 6 of the project. However, the optional additional mitigation measure recommended by the Town to further improve the operation of the Lakeland Avenue corridor after the construction of Phase 6 of the project have been analyzed. Tables 45 and 46 [in **Appendix F-1**] summarize the 95th percentile queue lengths on intersection movements along the Lakeland Avenue corridor in the vicinity of the site that will see increase in traffic volumes due to the proposed project. These tables present a comparison of the No Build, Build and Build with mitigations conditions during the weekday AM and PM school peak periods. It can be seen from the tables below that the reduction in the northbound queue lengths is not significantly different from the reduced queue lengths achieved by the mitigation proposed by the applicant under phase 6. Hence the additional migration recommended by the Town by itself will not further improve queues. However, this mitigation will eliminate the delays associated with the eastbound Chester Road traffic at Lakeland Avenue.

The TIS concludes as follows:

Based on the results of the TIS, as detailed in the body of this report, it is the professional opinion of Nelson & Pope that the construction of Phases 1, 2 and 3 of the proposed project will not significantly impact the operation of the roadways and intersections adjacent to the site. The impacts created by Phases 4, 5 and 6 can be mitigated by the implementation of the

proposed improvements measures [see **Section 3.1.3**]. With these improvement measures, the Lakeland Avenue corridor and the intersections in the study area will continue to operate at No Build or better levels of service after the full build out of the project.

However, the arterial analyses results conducted document numerous instances of low arterial speeds and congested conditions on Lakeland Avenue, which is keeping with conditions observed in the field. Mitigation proposed on Lakeland Avenue between Eastover Road and the NY27 North Service Road would serve to provide additional capacity sufficient to offset the project's impacts at those specific locations, and thus would improve or maintain No Build conditions representative of the overall performance of the Lakeland Avenue corridor. South of Eastover Road, however, vehicles will continue to have difficulty accessing Lakeland Avenue at unsignalized intersections. Field observations indicate periods of uninterrupted traffic flow along this segment of Lakeland Avenue that forces side street vehicles to utilize shorter gaps in traffic than might be preferred, which results in the need for vehicles on the arterial to brake. These conditions, which are not necessarily apparent based strictly on software results, can nevertheless be expected to be exacerbated by the additional traffic estimated by the proposed project.

Congestion on Brook Street and Montauk Highway

Traffic from the proposed project that will be using Montauk Highway has already been accounted for in the trip distribution and generation and hence included in the traffic analyses. However, to further identify any potential impact of any increase in use of Brook Street and Montauk Highway by the traffic from the proposed project to avoid congestion at the interchange, we assumed a conservative 10% of the project traffic anticipated to use NYS Route 27 (Sunrise Highway) during the PM peak hours will use Montauk Highway as a bypass. Based on our trip generation and distribution for the full build out of the project, a total of 73 vehicles will be leaving the site to head west on NYS Route 27 (Sunrise Highway) and a total 113 vehicles will be heading to the site travelling east on NYS Route 27 (Sunrise Highway). These numbers will result in 8 vehicles using Montauk Highway as a bypass travelling west and 12 vehicles using Montauk Highway as a bypass travelling east. These numbers amount to, at most, 1 vehicle every 5 minutes. This increase will not exacerbate the existing traffic congestion on these roadways; hence the proposed project will not create any significant impacts on the operation of these roadways.

Train Crossing Operational Analysis[9]

In order to model the at grade crossing on Railroad Avenue, the intersection of the railroad crossing and Railroad Avenue was analyzed as a two-phase pre-timed traffic signal with a cycle length equivalent to average time between trains during the peak hours. The train phase is the eastbound/westbound phase with a cycle length equal the average time the gates are

[9] The results of the traffic simulation conducted for the traffic study indicate that the traffic generated by the proposed project will result in slight increases in queues at the LIRR grade crossings as compared to as of right development.

in a down position during the peak hours. The northbound/southbound phase has a green phase equal to the average time the gates were in an upward position during the peak hours. The northbound/southbound traffic volumes equal the Railroad Avenue traffic going through the tracks during the peak hours. The eastbound/westbound railroad traffic equal the number of eastbound and westbound trains during the peak hours. The SimTraffic simulation included the railroad crossing. The videos are available for viewing by the town if required.

The SimTraffic analyses of the railroad crossing simulation was compared with the observed queues at the railroad crossing during the weekday AM and PM peak hours. Table 48 [in **Appendix F-1**] summarizes the maximum northbound and southbound queues at the railroad crossing obtained from the SimTraffic simulation.

As can be seen from the review of tables 47 and 48 [in **Appendix F-1**], the queues observed on Railroad Avenue in the vicinity of the railroad crossing during AM and PM peak hours are similar to those in the Sim Traffic Simulation, hence the modelling results reasonably reflect prevailing conditions. Considering the current traffic flow conditions on Railroad Avenue in the vicinity of the railroad track, the additional traffic from the proposed residential development will not exacerbate the current traffic flow conditions.

<u>The Oakdale Merge</u>

The proposed project is projected to generate 39 eastbound and 112 westbound trips during the AM peak that will traverse the Oakdale Merge section of Sunrise Highway. During the AM peak hour approximately 4,500 vehicles travel in the eastbound direction and 6,600 vehicles in the westbound direction. Therefore, during this period the proposed project will generate slightly less than 2 additional vehicles per minute to the westbound traffic and less than one vehicle per minute in the eastbound direction. During the PM peak hour, the proposed project is expected to generate 113 eastbound and 73 westbound trips that will traverse the Oakdale Merge. Therefore, during this period the proposed project will generate slightly less than 2 additional vehicles per minute to the eastbound traffic and slightly more than one vehicle per minute in the westbound direction. This additional traffic volume is extremely minimal, especially when considering existing traffic volumes on the roadway and will have an imperceptible effect on existing conditions.[10]

<u>Parking at Sayville LIRR Station and Downtown Sayville</u>

During the scoping process, the issue of the level of use of the Sayville downtown parking areas including the LIRR parking lots by the potential future residents of the proposed residential development was raised and included in the final scope of the proposed PDD**.** To determine the level of use of these parking areas by potential residents, an estimate of the number of potential users was determined.

[10] Based on the timeline for the improvement projects being considered at the Oakdale Merge by NYSDOT, it can be expected that congested conditions will continue to prevail at that location. The traffic generated by the proposed project will have a proportionally greater impact on conditions than would as of right development.

The proposed residential development contains a total of 1,365 residential units. Based on the fiscal and economic analyses conducted for this project, a total of 2,313 adults (non-school age) residents will reside in this residential development.

To determine the number of adult residents of the development who will likely be employed and potentially use public transit, data from the U.S. Census Bureau specifically for Sayville was utilized.

Based on the US Census Data for Sayville, 60% of Adult residents will likely be employed. Applying these number to the potential number of Island Hills residents, a total of 1,388 Island Hills residents will likely be employed. A percentage of these working residents will likely use the LIRR to commute to their place work. The same census data indicated that approximately 8% of workers use the railroad. Given that Sayville residents have the option to use either the Sayville Station or the Ronkonkoma Station, we assume that 4% of commuters will use the Sayville Station and the other 4% of commuters will use the Ronkonkoma Station. Applying these percentages, the potential number of employed residents in the proposed development will result in an estimate of 56 potential LIRR users from the Island Hills development for both the Sayville and Ronkonkoma Stations.[11]

Based on the current availability of parking within the Sayville Downtown Area and the LIRR parking lots, there will be an adequate number of parking spaces to support the additional demand from the potential residents of the Island Hills development. To further reduce or eliminate the need for parking at the trains station by potential residents, the applicant is proposing to provide private shuttle services (private transit) to transport residents to and from the train station during the AM and PM commuter peak hours. The applicant will be working on the details of this service as the project progresses.

Parking observations were also made at the Ronkonkoma Station during the peak (9am - 10am), when all commuters would have parked their vehicles for two typical weekdays. On both days more than 260 parking spaces were available. Therefore, there is adequate parking (paid and unpaid) available at the Ronkonkoma Station to accommodate the estimated 56 residents that could potentially use the Ronkonkoma Station.

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[11] Based on the current overall availability of parking at the LIRR parking lots, while there will be an adequate number of parking spaces to support the additional demand from the potential residents of the Island Hills development, the project will generate significantly greater parking demand at these facilities than would as of right development.
With regard to municipal parking, development of the site under the proposed zoning will result in proportionally greater parking demand in the Downtown Sayville business district than would development as of right. As stated above, the proposed project at full development would result in an increase in population of the Sayville hamlet of approximately 15%. While the report provided no definitive efforts to estimate increased municipal parking demand, a simple linear extrapolation of parking demand based on this increase in population would result in increased parking demand for 83 spaces. While there is capacity available in many of the parking areas surveyed, several were at or near capacity, and could therefore not accommodate this increased demand.

The availability of parking in the Sayville downtown area during weekends will be significantly higher than what was observed during weekdays since the LIRR parking lots will be highly under-utilized on weekends. Hence, there will be adequate parking to support any weekend shoppers from the Island Hills development.

School-Related Transportation Issues

In response to comments from the Town on the proposed development's impact on school related traffic field observations were conducted at the following schools on May 30th and June 3rd, 2019 during the AM drop-off periods and the PM pick-up periods.

- Edward J. Bosti Elementary School
- Oakdale-Bohemia Middle School
- Connetquot High School

Edward J. Bosti Elementary School - The Edward J. Bosti Elementary School is located at 50 Bourne Boulevard, less than 0.5 miles from the proposed site. The morning arrival times and afternoon dismissal times at this school are scheduled at 9:05 am and 3:35 pm respectively. Field observations were conducted at this school between 8:30 am and 9:30 am and from 3pm to 4pm to observe firsthand, the pickup and drop off at the school to get a clear understanding of the existing operation and how the proposed project may or may not affect the existing school arrival and dismissal patterns. From an overall perspective the busy drop-off time period lasted for approximately 20 minutes between 8:50 AM to 9:10 AM and the busy pick up period lasted for approximately 30 minutes between 2:30 PM to 3 PM. During these short time periods minor congestion was observed on Bourne Boulevard and the loop access to the school. No Traffic flow and circulation issues were observed during these time periods. Drop-offs and pick-ups were done in an orderly manner. Outside of these time periods, no traffic congestion issues were observed on the roadways in the vicinity of the school.

Oakdale-Bohemia Middle School - The Oakdale-Bohemia Middle School is located at 60 Oakdale-Bohemia Road, approximately 2.5 miles from the proposed site. The morning arrival times and afternoon dismissal times at this school are scheduled at 7:40 am and 2:44 pm respectively. Field observations were conducted at this school between 7:20 am to 8:00 am and from 2:00 pm to 3pm to observe firsthand, the pickup and drop off at the school to get a clear understanding of the existing operation and how the proposed project may or may not affect the existing school arrival and dismissal patterns. From an overall perspective the busy drop-off time period lasted for approximately 25 minutes between 7:25 AM to 7:50 AM and the busy pick up period lasted for approximately 15 minutes between 2:30 PM to 2:45 PM. During these short time periods significant amount of congestion was observed on northbound Oakdale-Bohemia Road and the access to the school especially during the afternoon pick-up period. Outside of these time periods, no traffic congestion issues were observed on the roadways in the vicinity of the school. The following is a more detailed description of the field observations.

- During drop-off in the morning all buses were observed lined up along the bus drop-off area along the eastside of the school. The students were discharged from the buses at the same time (around 7:45 am). All the students entered the school building in an orderly manner using the two main doors on the eastside of the building. No conflicts between students and vehicles were observed.
- Parents entered the school from the north driveway and dropped-off students on the south side of the school building. After dropping off the students, parents looped around the perimeter of the parking lot and exit via the north access if their destinations were north on Oakdale-Bohemia Road or via the south access if their destination were south on Oakdale-Bohemia Road. Cones were deployed along the parking lot perimeter to prohibit the use of the middle parking lanes.
- Long queues were observed on Oakdale-Bohemia Road during the drop-off periods.
- Security personnel were present to direct traffic and help minimize traffic conflicts.
- All buses left the school after drop-off in an orderly manner.
- The queues on the school drop-off area and on Oakdale-Bohemia Road cleared around 7:50am.
- The morning drop-off observations were similar to the afternoon pick-up observations.
- During the afternoon pick-up period, all the buses lined-up in the bus pick up area around 2:30 pm. Parents were also lined up along the parent drop-off/pick-up area on the south side of the school. Around 2:40 students boarded the buses and all the buses left the school via both the north and south driveways in an orderly manner around 2:45 pm.
- Similar to the drop-off, parent picked-up students and looped around the perimeter of the parking lot to exit the school via the north and south driveways. Vehicles exiting the north driveway experienced longer queues since most of the exiting vehicles were making left turns onto Oakdale Bohemia Road. Left turning vehicles experienced an average of 20 seconds of delay per vehicle.

Overall, Oakdale-Bohemia Road and the school access points and drop-off/pick-up areas experienced delays and traffic congestion during the drop-off and pick-up periods that lasted at most 30 minutes. Outside these time periods no traffic congestion and traffic flow issues were observed. These types of conditions are common at many schools in Long Island.

Connetquot High School - The Connetquot High School is located at 190 7th Street, in Bohemia New York, approximately 3.8 miles from the proposed site. The morning arrival times and afternoon dismissal times at this school are scheduled at 7:00 am and 1:30 pm, 2:11 pm respectively. Field observations were conducted at this school between 6:30 am to 7:30 am and from 1:00 pm to 2:30 pm to observe firsthand, the pickup and drop off at the school to get a clear understanding of the existing operation and how the proposed project may or may not affect the existing school arrival and dismissal patterns. From an overall perspective the busy drop-off time period lasted for approximately 30 minutes between 6:45 AM to 7:15 AM and the busy pick up period lasted for approximately 50 minutes between 1:30 PM to 2:20

PM. During these short time periods congestion was observed on 7th Street and the access to the school. Outside of these time periods, no traffic congestion issues were observed on the roadways in the vicinity of the school. The following is a more detailed description of the field observations.

- At the High School the bus drop-off area is totally separated from the parent drop of area. The bus drop of are is in front of the school building on the east side and the parent drop-off area is in front of the school building on the west side.
- During drop-off in the morning all buses were observed dropping students along the bus drop-off area and left the school via the bus loop area and 7th Street in an orderly manner.
- Parents dropped off the students along the parent drop off area and looped around to exit the school via 7th Street in an orderly manner.
- Long queues were observed on 7th Street during the drop-off periods.
- Security personnel were present at the entrance to direct traffic and pedestrian crossing to help minimize traffic and pedestrian conflicts.
- All buses left the school after drop-off in an orderly manner.
- During the afternoon pick-up period, all the buses lined-up in the bus pick up area Parents were also lined up along the parent drop-off/pick-up area. Around 2:10 students boarded the buses and all the buses left the school via 7th Street in an orderly manner.
- Parents picked up the students along the parent drop off/pick-up area and looped around to exit the school via 7th Street in an orderly manner.

Overall, 7th Street and the school access point and drop-off/pick-up areas experienced delays and traffic congestion during the drop-off and pick-up periods that lasted at most 30 minutes in the morning and 50 minutes in the afternoon. Outside these time periods no traffic congestion and traffic flow issues were observed. These types of conditions are common at many schools in Long Island.

To determine the level of impact the proposed development will have, if any, on school related transportation of these parking areas by potential residents, an estimate of the number of potential number of school children that will reside at the development was determined. The proposed residential development contains a total of 1365 residential units. Based on the fiscal and economic analyses conducted for this project, a total of 210 school aged children will reside in this residential development. The as-of- right development of 98 single family homes will generate a total of 144 school aged children, 66 less than the proposed development. The 210 students will be distributed between the elementary, middle and high school. Based on the number of grades from K through 12, of the 210 school aged children, we estimated 97 elementary school children, 48 middle school children and 65 high school students. Based on this estimate, the elementary school children will generate between 2 and 3 school buses, the middle school children will generate between 1 and 2 buses and the high school students will generate between 1 and 2 buses.

Based on our field observations as noted above, the addition of few more school buses will not significantly impact traffic flow and congestion on the surrounding roadways and should not require any changes to the current bus routes. Data obtained from the Pre-K Through 12th Grade Nassau/Suffolk County School Enrollment for 2014 through 2019 show that the student enrollment at the Connetquot Central School District consistently declined over the five (5) school year periods. The Connetquot Central School District lost a total of 502 students over the 5-year period. Based on this trend and the current bus utilization, the additional students could be accommodated in the current bus fleet and hence may not require any changes to the current fleet. Additionally, any increases in the number of vehicles dropping off and picking up students, driving to and parking at the school facilities was included in the trip generation and distribution of traffic for the proposed project and hence will be reflected in the capacity analyses results of the study intersections. Any traffic flows and congestion issues at the school facilities are existing and only occur for a short period of time during the morning drop-off periods and the afternoon pick-up periods. The project traffic traveling to and from these school facilities should not significantly impact the current operation of the school facilities.

However, to improve the current traffic condition during the short period of time they occur, the following can be considered:

- Have more than one arrival and departure time per school (stagger the arrival and departure times by 30 minutes). This can be done by grades. For example, have Grade 3 thru 5 students arrive half an hour before Pre-K thru 2. This will help distribute traffic and relieve traffic congestion.
- Install signs along the drop off /pick up areas to encourage parents not to double park during drop off and pickups. This will improve traffic circulation and hence reduce traffic congestion

3.1.3 Proposed Mitigation

- From the review of the capacity analyses results for each of the phases contained in the analyses section of this report, the analyses indicated that 34 of the 36 study intersections will continue to operate at No Build levels of Service (LOS) after the completion of Phases 1, 2 and 3 of the proposed project. Two intersections did experience changes in LOS from the No Build to Build Conditions. However, with minor signal adjustments that can be accommodated by the current signal controllers, these two intersections will continue to operate at No Build LOS or better after the completion of Phases 1, 2 and 3 of the project. Based on the Town's Subdivision and Land Development Regulations' criteria for determining impacts, the increase in delay, experienced at the study intersections during all analyzed peak hours for both the school peak and summer seasons does not result in a significant impact. Therefore, no mitigation measures are required at these intersections under Phases 1, 2 and 3 of the projects.

It is therefore our professional opinion that the construction of up to Phase 3 (678 units) of

the proposed project will not significantly impact the operation of the intersections within and around the Study Area.

- The results of the capacity analyses for Phase 4 indicated that the southbound approach at the intersection of Lakeland Avenue at NYS Route 27 North Service Road experiences an increase in delay of more than 29 seconds for both the PM and Friday PM peak periods and the overall intersection delay also increased by more than 9 seconds during the PM and the Friday PM peak periods. These increases, in delay, are considered significant impacts and hence will require mitigation.

  In order to mitigate these impacts, the southbound approach of this intersection which currently provides an exclusive through lane, a shared through/right turn lane and an exclusive right turn lane will be redesigned to provide two exclusives through lanes and two exclusive right turn lanes. Minor signal timing adjustments will also be conducted for the northbound left turn phase.[12]

  With this mitigation, the Town's Subdivision and Land Development Regulations' criteria for no significant impacts will be met during all the studied peak periods with and without other planned developments.

- The results of the capacity analyses for Phases 5 and 6 indicated that, the intersections of Lakeland Avenue and NYS Route 27 North Service Road and Lakeland Avenue at Tariff Street/Johnson Avenue experiences increases in delay that are considered significant impacts and hence will require mitigations.

  In addition to the mitigation recommended for Phase 4, with the development of Phases 5 and 6 additional mitigations are recommended. In order to mitigate these impacts at the intersection of Lakeland Avenue and Tariff Street/Johnson Avenue, the northbound approach will be widened to provide an exclusive left turn lane enabling the redistribution of green time to improve the failing westbound approach.[13]

With these mitigations, the Town's Subdivision and Land Development Regulations' criteria for no significant impacts will be met during all the studied peak periods with and without other planned developments

- In order to respond to the Town's comment on the current operation of the Lakeland Avenue corridor in the vicinity of the proposed project site and potential impact of the proposed project on this corridor a further review of traffic analyses results was conducted. As stated above, the mitigation measures recommended for Phase 5 of the project are adequate to

[12] Note that road widenings will not require any takings of privately-owned land, but will take place within the road ROWs.
[13] Note that road widenings will not require any takings of privately-owned land, but will take place within the road ROWs.

mitigate the impacts associated with Phase 6 of the project. However, the following additional mitigation measure has been proposed to further improve the operation of the Lakeland Avenue corridor after the construction of Phase 6 of the project.

- Widen Lakeland Avenue between Chester Road and 11th Street to provide an additional northbound through lane. The widening will begin around Eastover Road and extends to meet the existing 2 lane section of Lakeland Avenue just north of 11th Street.[14]

- The segment of Lakeland Avenue between Eastover Road and Gibbons Court/Site Access will be striped to provide two through lanes and one northbound left turn into the Site Access.

With these improvements the traffic flow along the Lakeland Avenue corridor will improve significantly.

The proposed mitigations will improve both the operation of the Lakeland Avenue corridor and the measures of effectiveness after the construction of the proposed project. [15]

3.2 Land Use, Zoning and Plans

3.2.1 Existing Conditions

Land Use

The aerial photograph in **Figure 1-3** shows that the subject site is presently classified as a Vacant former golf course/country club property.

Figure 3-2 shows the pattern of land uses in the vicinity. The following summarizes the land uses[16] of the properties within approximately 1,000 feet in the area surrounding the site:

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[14] The applicant is considering the mitigation measure recommended by the Town to eliminate the intersection of Lakeland Avenue and Chester Road. The east-west portion of Chester Road will be eliminated and access to Chester Road will be provided via a new intersection of Chester Road and the signalized Site Access.

[15] With these mitigations, the Town's Subdivision and Land Development Regulations criteria for no significant impacts will be met during all studied peak periods, with and without other planned developments.

The project will result in greater parking demand at LIRR and municipal parking facilities than would as of right development. However, based on the current overall availability of parking at the LIRR parking lots, there will be an adequate number of parking spaces to support the additional demand from the potential residents of the Island Hills development. As a result, no mitigation in this regard is necessary or proposed.

It is acknowledged that the proposed project will increase parking demand at LIRR and municipal parking facilities than would as of right development. However, since the proposed project would not necessitate mitigation at these lots, no mitigation would be necessary for the lesser parking demand associated with as of right development.

[16] Residential Density defined as follows: Low-Density: ≥1.0 ac/unit; Medium-Density: >0.20 ac to <1.0 ac/unit; High-Density: ≤0.20 ac/unit.

North - Medium-Density Residential, High-Density (Multifamily) Residential, Commercial & Utility (recharge basin); *Nearby:* Low-Density Residential, Medium-Density Residential, High-Density (Multifamily) Residential, Open Space, Institutional, Industrial, Transportation & Commercial

East - Low-Density Residential, Medium-Density Residential, High-Density (Multifamily) Residential, Institutional (cemetery & church), Commercial; *Nearby:* Low-Density Residential, Medium-Density Residential, High-Density (Multifamily) Residential, Institutional, Open Space & Utility

South - Low-Density Residential, Medium-Density Residential, High-Density (Multifamily), Residential; *Nearby:* Low-Density Residential, Medium-Density Residential, High-Density (Multifamily) Residential, Institutional, Open Space, Industrial, & Commercial

West - Medium-Density Residential, High-Density (Multifamily) Residential & Commercial;; *Nearby:* Medium-Density Residential, High-Density (Multifamily), Residential, & Commercial

Figure 3-2 shows that immediately surrounding the subject site is predominantly single-family dwellings developed at low and medium densities. In addition, high-density, multifamily properties are found in the area. In the general area surrounding the subject site, there is a wide range of land use types in the vicinity, having a wide range of land use intensities. NYS Route 27 (Sunrise Highway) is a dominant land use factor in the area, comprising a major transportation corridor. The corridor along Sunrise Highway includes commercial and high density residential uses with generally lower density residential use at greater distances from the highway. The area surrounding the sites exhibits a wide range of uses including: intermittent commercial uses, a cemetery, a church, industrial use, high-density residential use and open space. Key uses in the area include the Sayville Plaza to the northeast across Sunrise Highway, the Sayville Commons apartments (for 55 years and older) across Lakeland Avenue to the east, the St. Lawrence Parrish Cemetery and the New Life Community Church east of the site, south of which are the Fairfield Apartments and the Coral Lane multifamily developments, the Bayman Soccer Fields and the West Sayville National Wildlife Refuge to the south, and the Edward J. Bosti Elementary School and the Eastern Suffolk BOCES Milliken Technical Center generally southwest of the subject site beyond the 1,000-foot radius. These uses are intermixed with small commercial uses and single family residential use.

<u>Zoning</u>

Figure 3-3 shows the pattern of land uses in the vicinity. The following summarizes the zoning of the properties within approximately 1,000 feet in the area surrounding the site:

North - AAA, CAA, Business 1, Business 3, GSD & GST; *Nearby:* A, AA, CA, B, Business 3 & GSC

East - AA, B, CA, CAA, Business 1, Business 3, & GSD; *Nearby:* A, AA, B, C, CA, & Business 2

South - AAA & B; *Nearby:* AAA, B, CA, BD & Industrial 1

West - AA, AAA, B, Business 1 & Industrial 1; *Nearby:* AA, CA, Business 1, Business 2, & Industrial 1

The figure illustrate that, similar to the pattern of land uses discussed above, the pattern of zoning in the area reflects the wide range of land use types in the area. Low and medium-density residential zones dominate to the east, west and south, with business and commercial zones along the Sunrise Highway corridor. Commercial zones are found just north of that roadway, followed by low- and medium-density residential zones. However, sites zoned for industrial uses, institutional uses, open spaces, and high-density residential uses are found in the area both north and south of Sunrise Highway as well.

The subject site is presently zoned in the Residence AAA district. Permitted uses in Residence AAA district include detached single-family homes, church or similar place of worship, parish house, public school, public library or municipal building, municipal park, municipal playground or municipal recreation building or use, railway right-of-way or passenger station, but not including railway yards or freight stations, agriculture or nursery use. Additionally, a seasonal residential community is allowed under Town Board Special Permit, a private club mooring wharf for pleasure craft only, an automobile parking field, a private membership club, fraternity or lodge; cemetery, and private or parochial school, including preschool programs, elementary and secondary schools colleges and universities are allowed by Planning Board Special Permit, and public utility, community building, museum, private boathouse or bathhouse, historical or memorial monument, model house for a period of six months, and boat berths are allowed under Special Exception approval from the Town Board of Appeals.

As shown in the **Yield Map** *(in a pouch at the back of this document)* , and based on the minimum lot size of 40,000 SF in the Residence AAA District, 98 lots could be delineated on the site.

Table 3-5 lists the various bulk and setback requirements of the Residence AAA zoning district, which currently apply to the project site.

TABLE 3-5
ZONING REQUIREMENTS
Residence AAA District

Parameter	Requirement
Height, Principal Building	35 feet, 2-1/2 stories
Lot Occupancy (FAR), maximum	0.25
Area Density, minimum	40,000 SF
Living Area per Unit, minimum	900 SF (1)
Lot Width, minimum	150 feet
Front Yard, minimum	50 feet
Side Yards, minimum, each	30 feet
Side Yard, minimum, combined	60 feet
Rear yard, minimum	40 feet

(1) For a one-story dwelling. For a two-story dwelling where the second story contains the same living area as the first story, the minimum ground floor area shall be 650 SF. For all other types of dwellings, the minimum living area of the ground floor shall be 750 SF.

An additional layer of control over development is provided by the Town's Subdivision and Land Development Regulations. The following is taken from the Authority and Purpose sub-section of these regulations.

2. These regulations are established to protect health, safety and general welfare, while providing for the future orderly growth and coordinated development of the Town. These goals will be accomplished by affording adequate facilities for the housing, transportation, distribution, comfort, convenience, safety, health and welfare of its population. These regulations shall be further based upon the following considerations:

   2.1 Conformance with the Comprehensive Plan, Zoning Ordinance and Official Map.

   2.2 Recognition of a desirable relationship to the general land form, its topographic and geologic character, to natural drainage, to the recharge of the groundwater aquifer and to the flood plain and ecological concerns.

   2.3 Recognition of desirable standards of subdivision and site plan design for pedestrian and vehicular traffic, traffic calming, surface water runoff, storage and/or discharge, utility services and building sites for the land use contemplated.

   2.4 Encouragement of flexible subdivision and site plan design to promote the planning objectives of the Comprehensive Plan, to realize development and maintenance economies, to incorporate smart growth principles, and to provide for a variety of housing types.

   2.5 Provision for such facilities that are desirable adjuncts to the contemplated use, including, but not limited to, parks, recreation areas, schools sites, firehouses, emergency services, water service, energy delivery, fire wells and off-street parking.

   2.6 Preservation and protection of such natural resources and assets as lakes, ponds, streams, tidal waters, wetlands, beaches, dunelands, steep slopes, bluffs, prime agricultural soils, flora, fauna, indigenous species, biodiversity, habitat, general scenic beauty and historic features of the town.

3. The provisions of these regulations shall be administered to ensure that all applicable uses are adequately sited, have proper access, do not negatively impact surrounding land uses, have adequate on-site drainage and contain adequate onsite parking. These regulations shall supplement and facilitate the provisions of the Comprehensive Plan and associated updates, community identity studies and neighborhood studies, Chapter 68 entitled Zoning, all other provisions of the Islip Town Code, the New York State Building Code, the Official Map of the Town of Islip and the Capital Budget.

<u>Land Use Plans</u>

Sayville Hamlet Study (1976) - In the mid-1970's, the Town of Islip began to prepare a

Comprehensive Plan. As part of and in support of that effort, the Town first prepared a number of hamlet "Community Identity" studies, the results and recommendations of which would be considered in the Comprehensive Plan, when prepared (the Town Comprehensive Plan was adopted by the Town in 1979, and is presently being updated). The hamlets of Oakdale, West Sayville, Sayville, and Bayport were evaluated in one such study. The following is taken from that 1976 document.

> Town Objectives
> The Town of Islip is in the process of developing planning studies (with the help of Federal funding) for all communities within the Town. When these studies are completed, they will provide an invaluable planning tool for the growth and development of the Town of Islip. This volume deals with the communities of Oakdale, West Sayville, Sayville and Bayport. Combining these communities into one Study Area will provide the Town with an analysis of the interrelated problems, as well as those problems specifically related to each community.
>
> The following objectives have been established as guidelines by the Town for each of the community plans.
>
> - Preserve residential areas
> - Satisfy housing needs
> - Provide opportunities for recreation
> - Protect environmental features
> - Project commercial and industrial needs and their proper locations
> - Evaluate traffic and road networks
> - Provide adequate public service
> - Promote community awareness
>
> This [1976] volume reflects the combined efforts of the Town of Islip Department of Planning and Development, other Town Departments and the Consultants. Although the final report is as timely as possible, fluctuating circumstances require that this study be periodically reviewed and updated to be a viable planning tool.

The project site was designated within the hamlet of West Sayville, and the following is the Study's recommendation for the property.

> Residential
> Residential policies for this area should be consistent with and as proposed for Oakdale, especially south of Montauk Highway. North of Montauk Highway, residential areas should again be preserved by maintaining present zoning for vacant residential properties and no down-zoning.
>
> Another large parcel of open space is the Island Hills Golf Course. This large piece of open space should be protected as a scenic easement through a tax abatement or, ultimately,

encouraged as a cluster-type development with, perhaps, an executive-size golf course incorporated into the site development plan.

Suffolk County Sunrise Highway Corridor Study (August 2009) - The following material, taken from the adopted 2009 Suffolk County Planning Department report, describes the goal and intent of that Study.

Introduction

This study was initiated by the County Executive in response to increasing concerns over the impact of development along Sunrise Highway for that portion extending along a 12.7-mile segment straddling the towns of Islip and Brookhaven. These concerns included traffic congestion and safety issues on Sunrise Highway including the service roads, traffic impacts and land use conflicts to the neighborhoods that adjoin the highway as well as potential adverse impacts to existing centers, including downtowns.

The study was completed with a unique interagency approach. From the beginning, all of the involved agencies came together to define the project and contribute valuable information and professional assistance. The agencies included the New York State Department of Transportation, the Suffolk County Department of Public Works, the Town of Brookhaven Department of Planning, Environmental and Land Management, the Town of Islip Department of Planning and the Town of Islip Department of Public Works (Division of Traffic Safety). The Suffolk County Department of Planning served as the coordinator of the project.

This approach is a recognition that agency coordination of planning within the corridor is essential to a comprehensive understanding of current and emerging problems as well as the identification of alternative policy options. From this process, sound information can be utilized by involved stakeholders and decision makers to create and implement the desired vision for the future.

Sunrise Highway, State Route 27, is an east-west roadway that begins in southern Queens and terminates in Montauk. Its total length is 70.6 miles and its limited-access length is 49.7 miles.

This report analyzes the area surrounding a 12.7-mile segment of Sunrise Highway within the towns of Islip and Brookhaven. The length of Sunrise Highway in the study area is 7.4 miles in the Town of Islip, and 5.3 miles in the Town of Brookhaven.

The study area covers 3,105 acres (4.85 square miles) and contains parcels of land with a close connection to Sunrise Highway. The area is 0.5% of the total area of Suffolk County. The studied segment includes the parcels adjacent to Sunrise Highway from Islip Terrace east to North Bellport.

The western boundary of the study area is Heckscher State Parkway and the eastern boundary lies just east of Bellport Station Road.

Much of the land in the study area is developed, but there are some significant areas of vacant land. There are also several properties that could reasonably be redeveloped. The study area contains a significant number of units of multiunit housing in housing complexes as well as numerous single-family residences near Sunrise Highway. In addition, the study area contains many shopping centers, other commercial development and significant industrial development.

The goal of this study is to identify policies and practices that will help to manage growth within the Sunrise Highway corridor in a manner that will improve the quality of development, provide for a balance of land uses and a reduction of commercial sprawl, minimize the impact on traffic and minimize the impact of land use conflicts with surrounding communities. The study includes broad guidelines as well as recommendations for land uses and traffic impact mitigation.

As shown in **Figure 3-4**, the Sunrise Highway Corridor Study recommended Low-Density Residential use for the site, under its existing Residence AAA zoning:

Island Hills Country Club 0500-280.00-01.00-015.001 Recommendation: Retain existing Residence AAA zoning. Consideration should also be given to the designation of a recreational zoning district in order to protect this valuable recreational use and preserve this existing oasis of open space. Retain golf course or if an application is received, allow as-of-right development or similar FARS and density and require cluster subdivision which preserves golf course or any other open space on site. TDRs should be considered if on-site yield is incompatible with golf course. Actual yield would be about 107 units if developed under the existing Residence AAA District.

3.2.2 Anticipated Impacts

Land Use

The Island Hills golf course closed in 2015 and the site has been vacant and unused since that time. The proposed project will change the land use type of the site, from Vacant to Residential. Generally, residential use is the dominant land use in the area at present (though there are a variety of land uses represented in the area), and the specific type of residential use represented by the project, multi-family residential, is located near the site, though there is no individual site of a size comparable to the subject site The proposed project features a 25± acre park surrounding the development, thereby clustering the proposed multiple family residential use within the property. This feature provides a perimeter setback that will be accessible to the public and therefore will add to the park-like setting and available park space in the area.

The project will increase the amount and intensity of development on the site as compared to existing use and use if the site were developed under current zoning and as per the recommendations of the aforementioned plans; it would further decrease the amount of open space but would provide an additional 25 acres of public recreational space. This density requires a change of zone from the Town Board. Through the zone change, the applicant seeks to

establish a use on the site that will enhance the character of the community through superior site design, architecture and landscape setting, and provide needed apartment style living options to serve a need in the community and the region. Given the diversity of land use types in the area which includes single-family residential, high-density (multifamily) residential, commercial, industrial, institutional, religious, and active/passive open space uses, the proposed project will complement land uses in the area.

In summary, the project would be appropriate at this location with respect to the land use pattern, given its proximity to similar and complementary land uses in all four directions and the absence of a distinct, overarching pattern of land uses in the larger vicinity.

A number of supplemental studies have been prepared for the Applicant to understand land use in the area and to consider the benefits and potential impacts of the proposed project. These studies are relevant to the assessment of the appropriateness of the proposed land use and its potential impacts. As discussed in **Section 1.2.4**, **Appendix C-1** includes a market analysis that demonstrates the need for the proposed project and supports the proposed use as contributing housing stock that will assist in retaining millennials and those seeking apartment opportunities. **Section 1.2.5** discusses two additional studies pertinent to the project's residential market suitability and fiscal aspects. **Appendix C-2** provides a fiscal and economic assessment that quantifies the anticipated tax revenue and school district surplus revenue after considering the cost of education of school age children expected to occupy the development. This study also quantifies construction jobs and operational jobs as well as the beneficial ripple effect on the local and regional economy. **Appendix C-3** includes a real estate impact analysis intended to determine if the proposed land use will impact real estate values of properties proximate to the subject site.

The economic and housing market-related aspects of all four of the above-referenced studies are discussed in **Section 3.8**.

<u>Zoning</u>

Zoning Pattern in Area - The proposed project will change the zoning classification of the site, from Residence AAA to PDD-GS. The Residence AAA district is a low-density residential zone, whereas the proposed PDD is a high-density residential development, thereby introducing a substantial site zoned for high-density residential use in an area where sites of a similar size zoned in this way are not already present, or where other zones for high-density residential use are already present. Thus, the proposed project would represent a significant change with respect to the pattern of local zoning. However, there are no other large sites in the area that are available for re-development, so that there is no other likely sites on which a comparable PDD could be located, which reduces the potential impact that the precedent set by the proposed project could lead to additional such high-density development. Also, because the subject site is so large, it has the capability of providing deep perimeter setbacks for the buildings, to reduce the sense of high-density development for outside observers.

A PDD zoning provides the flexibility in site design that is necessary to achieve land use goals and provide benefits to the community in conjunction with a proposed land use. It is acknowledged that a PDD district is not presently found in the area, so that the project's use of this district represents an impact to the local zoning pattern. However, as discussed below the PDD enables development of a project which includes benefits to the community, and conforms to Town engineering/design requirements and standards.

The authority of a Town to establish planned unit development zoning districts is set forth in NYS Town Law Section 261-c, and Section 261-b addresses incentive zoning. Further assessment of the project's conformance to these NYS Town Law Sections by use of a PDD for the subject site is provided below.

NYS Town Law Section 261-b 2. - Authority and purposes. In addition to existing powers and authorities to regulate by planning or zoning, including authorization to provide for the granting of incentives, or bonuses pursuant to other enabling law, a town board is hereby empowered, as part of a zoning ordinance or local law adopted pursuant to this article, or by local law or ordinance adopted pursuant to other enabling law, to provide for a system of zoning incentives, or bonuses, as the town board deems necessary and appropriate consistent with the purposes and conditions set forth in this section. The purpose of the system of incentive, or bonus, zoning shall be to advance the town's specific physical, cultural and social policies in accordance with the town's comprehensive plan and in coordination with other community planning mechanisms or land use techniques. The system of zoning incentives or bonuses shall be in accordance with a comprehensive plan within the meaning of section two hundred sixty-three [NYS Town Law Section 263] of this article.

The following are the Purposes in View of NYS Town Law Section 263, with analyses of the project's conformance to each.

- *Lessen congestion in the streets;*
  A Traffic Impact Study has been completed and finds that while the road system can accommodate the PDD with planned mitigation and transportation improvements, the proposed PDD will add significantly more traffic to the local roadways than under current zoning, and this increased traffic will have an impact on current existing delay and congestion. Additionally, the project site is located along a Suffolk Transit Bus Route (#57), which could help reduce vehicle trips. The proposed project is designed with on-site accessory amenities which may help to reduce the need for residents to travel off site for recreation. The site is less than ½ mile walking distance to Sayville Plaza to the northeast, along sidewalks on the west side of Lakeland Avenue and the north side of the Sunrise Highway North Service Road. Sayville Plaza has a variety of restaurants and retail stores. There are walking opportunities with sidewalks on Bohemia Parkway and the South Service Road to access businesses along Sunrise Highway to the north and west. The combination of on-site amenities, internal walkability and sense-of-place, along with public transportation and walkability to off-site goods and services could help to reduce dependence on the automobile. Certainly residents will own and use cars and so an in-

depth traffic study of the areas immediately surrounding the site and beyond was completed. The TIS demonstrates that traffic can be accommodated on area roads with the use of mitigation measures outlined in the TIS and the appropriate sections of the DEIS, although current and projected congestion and delay will be impacted more so than under as of right development.

- *Secure safety from fire, flood, panic and other dangers;*
  The proposed project will establish a residential use on the site that will be designed to current site plan, building and fire code standards, upon Town Fire Marshall review and approval of turning radii, fire hydrant locations, private accesses, and turnarounds. The site is not located in a flood plain, and the building will meet all current code requirements. The site plan is designed to facilitate emergency response (fire, police, ambulance), if necessary. There are no known dangers associated with the site, and the type of development is multiple family residential that is common in the area.

- *Promote health and general welfare;*
  The project includes features that will promote walking and the general welfare of its residents, by its provision of on-site indoor and outdoor recreational amenities, the internal walking trails, and the 25-acre perimeter park. It is well-established that pedestrian activity in general is a passive form of exercise that is beneficial and healthful to the public.

- *Provide adequate light and air;*
  The project has been designed to provide substantial landscaped open spaces between the buildings, which would benefit the residents and produce an attractive project that fits within the local development pattern. The perimeter park provides public space between the new development and existing neighborhoods and promotes open feel as well as light penetration and air circulation. The project will include a landscape plan that will place grasses, shrubs and trees throughout the interior of the site and along the site's perimeter, so that the spaces between the residential buildings and between the developed portions of the site and bordering roadways will convey a sense of openness.

- *Prevent the overcrowding of land;*
  The site design is one that has been demonstrated to be successful and attractive to residents seeking a multiple family apartment lifestyle. The land is not overcrowded as the interior space is walkable and provides a sense-of-place, and is consistent with sound planning principles. The community features a 25-acre public space around the perimeter of the site. The overall design will feature a landscaped active/passive park setting to complement the interior development areas and encourage public use. The project will provide substantial landscaped space between the buildings, which will result in an open, visually-attractive project that precludes a sense of overcrowding of development or population. The 2,391 parking spaces proposed (as 2,089 installed and 302 spaces landbanked) will conform to Town Parking Code requirements of 1.75 spaces/unit.

- *Avoid undue concentrations of population;*
  The proposed project will provide a development that will encourage residential occupancy of the site for those seeking the lifestyle offered. The project will not concentrate any population type onto the project site, as it is a rental apartment development that is open to tenancy to all demographic groups. One demographic group that would benefit from the project is households seeking affordable, quality rental housing. The project will provide 217 affordable units (15.9% of the total) at 80% of the US HUD Nassau/Suffolk Median Family Income as approved by the Town Board in the PDD-GS. It is acknowledged that the project will increase the overall population of Sayville by an estimated 16%, on a site that represents 3.3% of Sayville's land area.

- *Make provision for, so far as conditions may permit, the accommodation of solar energy systems and equipment and access to sunlight necessary therefor;*
  The proposed project will not foreclose the possibility for use of solar energy systems, and is designed to permit access to sunlight. It is acknowledged that aspects of the site and/or project (e.g., four-story building heights, large property with substantial sky exposure, etc.) would be well-suited to solar energy systems. However, no determination by the Applicant has been made at the present stage of the application process regarding use of specific solar energy equipment or systems (e.g., rooftop solar panels). It is expected that specific sustainable energy-related features, systems and equipment will be determined in concert with the appropriate Town agencies during the site plan application review process.

- *Facilitate the practice of forestry; and*
  The subject site is a fallow golf course and does not provide opportunities to facilitate the practice of forestry. There is no forest on the subject site that could be retained and/or managed as part of the proposed project; the only wooded portions of the site are in the form of narrow bands between fairways and as narrow buffers along the site's bordering roadways.

- *Facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements.*
  Adequate transportation is provided by safe roads, on-site parking (conforming to Town standard of 1.75 spaces/unit) and internal circulation, with off-site mitigation planned through the recommendations of a detailed Traffic Impact Study. The proposed project includes an on-site STP for treatment and recharge of treated effluent for the project as well as connection to downtown Sayville for additional treatment capacity. The proposed project will utilize a number of public services and utility providers, including the Connetquot CSD, the West Sayville Fire Department, the SCPD (5th Precinct), the SCWA (water), PSEG (electricity), and National Grid (natural gas). The Applicant has contacted service providers through this DEIS process, and will submit applications as appropriate to service providers to notify and/or obtain approvals for connections and services.

NYS Town Law Section 261-c - Planned unit development zoning districts. A town legislative body is hereby authorized to enact, as part of its zoning local law or ordinance, procedures and requirements for the establishment and mapping of planned unit development zoning districts. Planned unit development district regulations are intended to provide for residential, commercial, industrial or other land uses, or a mix thereof, in which economies of scale, creative architectural or planning concepts and open space preservation may be achieved by a developer in furtherance of the town comprehensive plan and zoning local law or ordinance.

- The proposed project is intended to and will provide needed, quality rental residential units (including 217 units designated to affordable) to the public, on a large, previously-developed property located within an established residential community and adjacent to significant regional roadways.
- The site is sufficiently large to provide substantial perimeter setbacks, which will reduce the potential for apparent "massing" of the buildings for observers on neighboring sites. Additionally, the taller proposed structures will be set at the largest setbacks form the site's border, further reducing potential visual impacts.
- The buildings will all be designed under a single architectural treatment, and, when considering the proposed overall landscaping plan, will provide an attractive appearance.
- The project will provide its own on-site wastewater treatment system and will extend a sewer line south to serve the Sayville downtown business area.
- The project includes a 25-acre park that will be open to the public.

The above analyses demonstrates that the proposed project satisfies Town Law Sections 261-b and 261-cfor the proposed PDD; it will mitigate the anticipated impacts of the vehicle trips generated on-site, not endanger public safety and/or security, promote public health, provide a healthy environment for its residents and visitors, prevent overcrowding of the site or an undue concentration of population, promote alternative energy production, and provide for all necessary public services.

Proposed PDD Regulations - The proposed project will create a new zoning district in the Town Zoning Code that would apply only to the subject site (see **Appendix A-1**). To mitigate possible inconsistencies with the proposed PDD and existing NYS Town Law Sections 261-b, 261-c, 262, and 263, the PDD should be adopted as a Local Law pursuant to the Statute of Local Governments Section 10(b) and Municipal Home Rule Law Section 10. The project will be developed in conformance with the specific use, setback and bulk standards of this new district, which are based on the standards of the Residence CA district (see **Table 3-6**).

The proposed site-specific PDD is structured with the Residence CA district as its base; however the PDD-GS is being requested as opposed to the Residence CA district because some variation from bulk requirements and uses are required for the proposed project. Specifically, height, floor area ratio (FAR) and permitted and accessory uses vary from those required or permitted in the Residence CA district. The type and level of amenities offered by the proposed project, as well as a higher quality level of common areas (e.g. lobbies, hallways, etc.), creates greater floor area

than traditionally provided in conventional garden apartment developments and is greater than what is permitted in the Residence CA district.

TABLE 3-6
ZONING CONFORMANCE
Proposed Greybarn-Sayville PDD

Parameter	Conformance	
	Requirement (1)	Provided
Building Height, max.:	---	---
2-Story Residential	35 feet, 2 stories	35 feet, 2 stories
3-Story Residential	45 feet, 3 stories	45 feet, 3 stories
4-Story Residential	55 feet, 4 stories	55 feet, 4 stories
Building FAR*, max.	30% **	35.4%
Lot Area, min.	80,000 SF	4,980,650 SF
Lot Width, min.	200 feet	443 feet
Density, max.	12 units/acre***	11.94 units/acre
Front Yard Depth, min.:	---	---
2-Story Residential	75 feet	267.7 feet
3-Story Residential	75 feet	116.3 feet
4-Story Residential	100 feet	211.1 feet
Rear Yard Depth, min.	50 feet	134.5 feet
Side Yard Width, min.	50 feet	105.1 feet
Parking, min. ****	2,389 spaces	2,391 spaces

(1) Duplicates zoning requirements of Residence CA District.
* Floor-Area Ratio.
** If density bonus has been granted, 37%.
*** If density bonus has been granted, per Section 68-173.1.
**** 1.75 spaces/unit.

It is noteworthy that the Residence CA district (and development having the physical characteristics and density of that district) is already found in the area to the north (Sunrise gardens), east (Sayville Commons) and the west (Village Court;), so that while there would be a change in the pattern of zoning districts in the area, the physical manifestation of this new zoning district would be of land uses that are already well-represented in the area. That is, the new PDD would provide for the same types of land uses that are already found on adjacent and nearby properties. In this way, the potential impact of this change in the pattern of zoning is ensured to be compatible and appropriate for the site and area.

Town Zoning Code Section 68-166 – The guidelines for development and use of the site are modeled after an existing zoning district in the Town Zoning Code in order to provide a baseline for orderly development through the site specific PDD. The project will be developed based on the yield, bulk and setback requirements of the Town's Residence CA district. **Table 3-6** presents the pertinent standards of the CA district, with the corresponding value of the proposed project.

That is, the proposed PDD-GS will be developed under the same General Site Criteria as apply to the Residence CA zoning district. The following presents the project's conformance to the Town's policy for multi-family residential use, as expressed by the General Site Criteria for the Residence CA zoning district.

A. *The site shall be located within a convenient distance to a downtown center or in the alternative existing retail services.*
The project proposes the installation of sidewalks along the site's frontage on Lakeland Avenue, which will connect to the existing sidewalk. Thus, a continuous pedestrian path will be provided between the project site and the downtown Sayville area. However, the proposed project is two miles from downtown Sayville, a trip length not generally considered walkable On other local roadways adjacent to the site, walkability in general is limited due to the lack of pedestrian facilities. The site plan offers no external sidewalk or pedestrian facilities on any of those roadways, either to downtown Sayville or any other local facilities, including schools, parks, etc. It is accessible by car or bus, although bus service is extremely limited and sparsely used. The site is within a few minutes' drive of Sayville Plaza, and is less than ½ mile by foot using the existing sidewalks in the area. The site is within a short driving distance to additional retail goods and local services in both downtown Sayville and the various commercial spaces along the Sunrise Highway commercial corridor. Additionally, the project includes 24,000 SF of on-site accessory amenity space exclusive to the site's residents.

B. *The site shall maintain convenient access to public transportation services.*
The project site lies along a portion of Suffolk Transit Bus Route #57 along Hauppauge (Terry) Road on the project's southwestern frontage, which will give site residents convenient access to destinations between Smithaven Mall and Railroad Avenue at Montauk Highway, in Sayville. The closest bus stop is on the east side of Hauppauge (Terry) Road, just north of Sterling Place. It should be noted that Suffolk County Bus Routes traditionally offer limited areas of service, long headways, and are not comprehensive nor convenient to access Greater Long Island. In addition, Suffolk County has recently significantly reduced bus service in general on Long Island.

C. *The site shall be of sufficient size and shape so as to provide for the required buffer, landscaping and setback requirements.*
The project site is over 114 acres in size, and is capable of satisfying all of the buffer, landscaping and setback standards of the Residence CA district and, by extension, the proposed PDD-GS district. Specifically, the maximum building height, minimum lot area, minimum lot width, and minimum front, rear, and side yard depths will be satisfied (see **Table 3-6**), and the maximum allowed density and FAR requirements will not be exceeded, under the terms of the proposed PDD-GS as a density bonus is being sought.

D. *The site shall be of sufficient size so as to provide for adequate parking in accordance with Town standards while still maintaining a residential appearance to the site.*

Based on the Town parking requirement of 1.75 spaces residence, a total of at least 2,389 on-site parking spaces are required. The proposed project will provide 2,391 spaces, of which 302 spaces will be landbanked.

E. *The site shall be of sufficient size so as to provide for ample open space and/or recreation areas consistent with the needs of the residents and the goals of the Town of Islip.*
Nearly 22% of the site (an estimated 25 acres) will be a public park around the entire perimeter of the project site. Within the site, and reserved for the site's residents, will be substantial indoor and outdoor recreational spaces, including walking trails, pool/patios, gazebos, a community garden and gathering areas.

The above analysis indicates that the proposed project satisfies some of the Town policy requirements for multi-family residential development in the Residence CA district.

The proposed project will conform to the applicable terms of the Town's Subdivision and Land Development Regulations, as administered by the Town Engineering Division during the site plan application review process.

With respect to the requested density bonus for the proposed PDD, **Section 1.2.5** discusses those aspects of the proposed project that will provide community benefits that would, as required by the PDD-GS requirements, offset the increased residential yield. These aspects include:

- 217 affordable units
- 25 acres of public open space
- Generation of approximately 1,404.0 FTE job opportunities during construction and approximately 60.1 FTEs during operation.
- Generation of an estimated $11.65 million in annual wages for direct, indirect and induced jobs
- Generation of an annual net tax revenue benefit to the Connetquot CSD of $2.99 million
- Sanitary sewer line extension to serve downtown Sayville businesses (Phases I and II)
- Extra capacity designed into project's STP, to serve the flow from downtown Sayville
- Committing to using a combination of alternative energy sources and LEED® features
- Furthering the goals of the Town of Islip and the County of Suffolk, which include positive economic growth and the retention of young people, in terms of providing quality rental housing opportunities.
- Satisfying the standards given in Section 261 of the NY Town Law for a PDD, ensuring that the benefits of the PDD concept are realized.
- Relating to community context by its conformance to similar and complementary uses on abutting sites to the east, west and south.
- Conforming to the spirit and intent of the type of use recommended for the site in the 1976 Sayville Hamlet Study. Though the golf course cannot be retained, residential development is clustered on the site to provide a quality multiple family/apartment use

with internal sense-of-place and community enhancement through a 25-acre passive/active perimeter park.

- Using the site in conformance with the recommendations of the 2009 Sunrise Highway Corridor Study (for continued recreational use) is not viable. It is noted that this Study was not adopted by the Town of Islip Town Board.
- Providing a "sense of place" through attractive community architecture, gathering areas, walking opportunities, landscaping and interior setbacks and open space.
- Utilizing a superior site design providing on-site stormwater retention/recharge, utilities and services, and public open space/recreational amenities.
- Utilizing high-quality architecture and landscaping design.
- Maintaining the site privately, thereby minimizing the increase in public expenditures for road, sanitary wastewater treatment and drainage system maintenance.

The above-listed considerations, taken in conjunction with the dollar value of a number of the expected benefits (in **Table 1-2**), establish that the project would compensate for the requested increased yield of the project made possible by the use of the PDD concept and the Town's density incentive legislation.

<u>Land Use Plans</u>

Sayville Hamlet Study (1976) - This study recommended that the subject site be retained in its then-present golf course use by applying a scenic easement on the property (encouraged by a tax abatement) or, failing that, be re-developed with a clustered residential project. Such a re-development scenario could include an executive size golf course as an amenity for the site's residents. The recommended easement was not pursued, so that the prior country club operation (and associated taxation) continued unchanged, eventually forcing the owner to close the operation and sell the property.

It should be noted that this recommendation was established 44 years ago (and reaffirmed 11 years ago in the Sunrise Highway Corridor Study), and reflects Town and public goals for the site, as well as economic conditions of the then-site owner, in the mid-1970s. However, this recommendation was not realized and, since that time, the need for quality rental, and particularly affordable quality rental housing has increased while renewed golf course use is not supported by current economic conditions (see below and **Section 5.6**). The proposed project is intended to address both of the above-described residential needs, by providing significant numbers of rental housing by use of the PDD concept and as provided for in the Town Zoning Code.

The proposed project seeks the maximize the number of units allowed under the Residence CA district, on which the proposed PDD zoning is based, to simultaneously address the above-described housing needs and to generate sufficient revenue to provide the necessary on-site and off-site mitigation measures, Community Benefits and utilities.

The alternative recommendation in the Sayville Hamlet Study was also considered. The recommendation was to retain the golf club or encourage cluster-type development with a

potential executive-sized golf course. The development is in effect a cluster-style development which offers a 25-acre perimeter park area accessible to the public. The proposed project can be compared with Alternative 7 in this DEIS which assumes a PDD similar to the proposed project, with an executive-style golf course as a recreational amenity for the site's residents.

Suffolk County Sunrise Highway Corridor Study (August 2009) - This document recommends that the site be retained in its existing Residence AAA zoning to support continued golf course use. It suggests that it may be advisable to designate the site as a recreational zoning district to support the golf course. If redevelopment becomes inevitable, the study recommends a clustered residential subdivision under the existing zoning (approximately 107 units) that retains the golf course or open space. These two land use types were evaluated in this DEIS separately in Alternative 2 (in the form of a conventional subdivision of 98 units, and not a cluster of about 107 units) and Alternative 6 (a general commercial recreational use). With respect to low-density residential use of the site, it is acknowledged that, for similar yields (i.e., 107 or 98 units), a cluster layout would generally cause lesser adverse impacts from clearing, paved surfaces, recharge volume, and open space retention than from a conventional subdivision. However, the analysis contained in **Section 5.2** concludes that:

> …Alternative 2 would not achieve the Applicant's goals or objectives, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community.

With respect to a commercial recreational use, the prior country club operation was forced to close because it was no longer commercially viable, and the owner sold the property, suggesting that the site can no longer support the type of golf course that once operated on the site. If the site were to be re-developed, economic considerations would tend toward a rezoning from Residence AAA to a district that would allow for sufficient development to compensate for the cost of land acquisition and development. With respect to rezoning the site from the Residence AAA district to a recreational district (to assist in supporting renewed golf course use), Alternative 6 of this document (see **Section 5.6**) investigates such an action, and determined that such a rezoning is not feasible for <u>any</u> commercial recreational use:

> …the Applicant determined that none of the commercial recreational uses permitted in the Recreational Service G District would be viable for the subject site, in consideration of the consumer needs, goals and expectations in the 21st century market place. Specifically, based on the Applicant's experience in this regard, the following briefly indicates why each permitted use would not be appropriate on the subject site:
>
> - The prior Island Hills Country Club (a facility based on its golf course) at the site was not commercially viable and is now closed;
> - Swimming pools and bath houses, are municipal uses, and performing arts centers may be municipal uses as well;

- Drive-in movie theaters were a popular movie venue in the mid-20th century but by the 21st century, the rise of the internet has replaced and superseded their attractiveness, with the result that drive-ins have long since disappeared from the landscape;
- Additionally, due to recent events and lack of large public entertainment alternatives, temporary "pop-up" facilities have recently garnered renewed interest;
- Commercial riding stables/academies have not been a viable use in the Islip area for many years, and only a few existing stables remain in the region, and no new commercial ones have been proposed;
- The balance of the permitted uses may be appropriate and viable on small sites located in downtown areas or in industrial and commercial centers, but are not viable on a 114-acre standalone site in proximity to residential development.

In summary, none of the uses permitted with or without a special permit in the Recreational Service G District are realistic or viable alternatives for the development of the subject site.

It is also noteworthy that the Applicant is a developer of high-quality residential, industrial and office projects, and has no experience or business interest in the types of commercial recreational projects that are the basis for this alternative. As such, this alternative is not reasonable or feasible to the Applicant, and so is not pursued further.

The foregoing discussion establishes that the combination of clustered Low-Density Residential use with a golf course that was recommended by the Sunrise Highway Corridor Study is not tenable for the subject site, considering the low level of community support for the golf course and the inability of a low-density residential use (whether clustered or not) to meet the fiscal and planning goals of the landowner.

The proposed project does seek a change of zone to permit the Greybarn development community, open space opportunities and benefits that are offered. The change of zone is subject to Town Board review, and this DEIS presents the proposed project, potential impacts and mitigation and alternatives, to assist the Town Board in reaching an informed-decision.

3.2.3 Proposed Mitigation

- As the project would be appropriate with respect to the land use pattern in the vicinity given its proximity to similar and complementary land uses in all four directions and the absence of a distinct, overarching pattern of land uses in the larger vicinity, no further mitigation measures are necessary or proposed.
- Analysis demonstrates that the proposed project satisfies NYS Town Law Sections 261-b and 261-c, in that it will mitigate the anticipated impacts of the vehicle trips generated on-site, not endanger public safety and/or security, promote public health, provide a healthy environment for its residents and visitors, prevent overcrowding of the site or an undue concentration of population, promote alternative energy production, and provide for all

necessary public services. Therefore, no further mitigation measures are necessary or proposed.

- Analysis indicates that the proposed project satisfies the Town policy requirements for multi-family residential development in the Residence CA district, under which requirements and standards the project will be developed. Therefore, no additional mitigation measures are necessary or proposed.
- The proposed project will provide for the housing diversity that the Town recognizes is necessary (i.e., rental housing and affordable rental housing) based on economic conditions, demographic trends and existing housing stock. As such, no further mitigation measures are necessary or proposed.
- The proposed project conforms to the spirit and intent of the type of use recommended for the site in the 1976 Sayville Hamlet Study. Though the golf course cannot be retained, residential development is clustered on the site to provide a quality multifamily/apartment use with internal sense-of-place and community enhancement through a 25-acre passive/active perimeter park. This study dates to 1976, and the proposed use is updated to address the Town's current rental and workforce housing needs. The proposed project seeks to address the housing needs and to provide the necessary on-site and off-site mitigation measures, Community Benefits and utilities and therefore, no further mitigation is necessary or proposed. Consideration may be given to Alternative 7 in this DEIS which provides a PDD with an executive golf course for use by site residents.
- Use of the site in conformance with the recommendations of the 2009 Sunrise Highway Corridor Study is not viable. It is noted that this Study was not adopted by the Town of Islip Town Board. The Town Board has legislative authority over a change of zone, and this DEIS provides information for the Town Board to consider in order to reach an informed-decision on the proposed project.

3.3 Community Facilities and Services

The project site is located in the following service districts and/or service areas of the following community service providers:

- Connetquot CSD (99.2% of the site)
- Sayville UFSD (0.8% of the site)
- West Sayville Fire Department
- Community Ambulance Company, Inc.
- SCPD, Fifth Precinct, Sector 503
- Town Water District (taxing entity; service not provided)
- SCWA, Distribution Area 1
- PSEG, Long Island (electricity)
- National Grid (natural gas)
- Town Department of Environmental Control (solid waste removal; service not provided)

With the exceptions of the Town Water District and the SCWA, each of the above-listed service providers was contacted by letter to inform them of the project and solicit input with respect to the service capabilities and limitations (if any) on each. The Town Water District was not contacted as it is a taxing entity only and does not provide water services. The SCWA was not contacted as it had already provided its Letter of Water Availability for the site and project. **Appendix H** contains the relevant correspondence, with responses (if provided).

3.3.1 Existing Conditions

Property Taxes

The following brief discussion of the site's existing tax generation and distribution is taken from the Fiscal and Economic Impact Summary, **Appendix C-2**.

> …the majority of the Town's revenues are levied through property tax generation, which is based upon a rate per $1,000 of assessed valuation for a given parcel. As indicated in **Table 3-7**, property owners within this part of the Town of Islip are currently[17] taxed at a rate of $24.947 - $27,320 per $1,000 of assessed valuation, depending on location within school districts and other jurisdictional boundaries. These tax rates account for property taxes paid to either Connetquot CSD/Library District or Sayville UFSD/Library District, in addition to Suffolk County, various Town districts, Metropolitan Transportation Authority, West Sayville-Oakdale Fire District, Sayville Community Ambulance, and other local taxing jurisdictions.
>
> The site currently generates a total of $274,246 in property tax revenues. Of this, approximately 71.7% of the total taxes generated by the site are distributed to the two (2) school districts, with Connetquot CSD receiving $174,350 and Sayville UFSD receiving $13,003 in tax revenue. An additional $8,409 is levied by the Connetquot Library District and $867 by the Sayville Library District. Suffolk County receives $33,190, or 12.1% of the total tax revenues, and the Town of Islip an additional $21,848 or 8.0% of total revenues received by the site. The West Sayville-Oakdale Fire District levies approximately $11,842 or 4.3% of the total tax revenue generated by the subject property, and the Sayville Community Ambulance generates $2,834 or 1.0% of all revenues. The balance of the current property tax revenues are apportioned to various other local taxing jurisdictions, as seen in **Table 3-7**.

Public Schools

Based on the site's current use and condition, and confirmed by the Applicant, there are currently no school-age children residing on the site. As of 2017, there were a total of 5,892 students enrolled in the Connetquot CSD.

Figure 3-5a shows the locations of educational resources in the vicinity of the site. The following brief discussion of the site's school-related issues is taken from the Fiscal and Economic Impact Summary, **Appendix C-2**:

[17] The Town of Islip's fiscal year is between December 1, 2017 and November 30, 2018.

TABLE 3-7
EXISTING TAX REVENUES

Taxing Jurisdiction	**Current Tax Rate** (per $1,000 Assessed Valuation)	Current Taxes	Percent of Total Taxes
Total: School Tax	**18.496 - 20.029**	**$196,629**	**71.7%**
Sayville School District	18.777	$13,003	4.7%
Sayville Library District	1.252	$867	0.3%
Connetquot School District	17.645	$174,350	63.6%
Connetquot Library District	0.851	$8,409	3.1%
Total: County Tax	**3.139**	**$33,190**	**12.1%**
County General Fund	0.186	$1,967	0.7%
County Police	2.953	$31,224	11.4%
Total: Town Tax	**1.326 - 2.126**	**$21,848**	**8.0%**
General Town (I)	0.713	$562	0.2%
Town Excluding Villages (I)	0.035	$28	< 0.1%
Combined Highway (I)	0.578	$456	0.2%
General Town (II)	1.107	$10,832	3.9%
Town Excluding Villages (II)	0.058	$568	0.2%
Combined Highway (II)	0.961	$9,403	3.4%
Total: Other Tax	**1.986 - 2.026**	**$22,579**	**8.2%**
New York State Real Property Tax Law	0.424	$4,483	1.6%
Out of County Tuition	0.066	$698	0.3%
West Sayville-Oakdale Fire District	1.120	$11,842	4.3%
Street Lighting District (I)	0.073	$58	< 0.1%
Street Lighting District (II)	0.113	$1,106	0.4%
Sayville Comm. Ambulance	0.268	$2,834	1.0%
Town Water District	0.035	$370	0.1%
Garbage District	--	$978	0.4%
Fed EPA Clean Air Mand.	--	$83	< 0.1%
New York State MTA Tax	--	$127	< 0.1%
TOTALS	**24.947 - 27.320**	**$274,246**	**100.0%**

Source: Town of Islip Receiver of Taxes; analysis by NPV, LLC.

The majority of the site (99.2%) is located within the Connetquot CSD, and a small portion (0.8%) is located within the boundaries of the Sayville Union Free School District (UFSD). The Connetquot CSD is comprised of seven (7) elementary schools, two (2) middle schools and one (1) high school, while the Sayville UFSD is comprised of three (3) elementary schools, one (1) middle school and one (1) high school.

…both school districts' enrollment has declined significantly over the past ten (10) years between 2010-08 and 2019-20. The enrollment within the Connetquot CSD witnessed a 17.8% decline (a loss of 1,192 students), and the enrollment within the Sayville UFSD decreased by 14.3%, or 471 students, in that time period.

According to the New York State School Report Card, Fiscal Accountability Supplement for the Connetquot CSD, expenditures averaged $16,292 per general education student and $39,999 per special education student during the 2017-18 academic year. Likewise, in Sayville UFSD, expenditures averaged $15,171 per general education student and $48,774 per special education student during the 2017-18 academic year.

…the Connetquot CSD passed a budget of $199,437,938 for the 2020-21 academic year, and Sayville UFSD passed a budget of $96,208,308 for the 2020-21 academic year. Similar to municipal budgets, school district budgets are projected to be balanced. A closer examination of the audited and reported 2020 Connetquot CSD financial data reveals that the district generated over $205.1 million. Of this, over $114.9 million was levied through property taxes and assessments, over $57.2 million from state aid and an additional $2.2 million through federal aid. In 2020, expenditures nearly equaled revenues, at approximately $210.4 million. This included over $118.2 million for education expenses and over $44.5 million for employee benefits. The school district experienced a $5.2 million deficit in 2020, and total indebtedness of approximately $33.1 million.

Likewise, a closer examination of the audited and reported 2020 Sayville UFSD financial data reveals that the district generated approximately $94.2 million. Of this, over $54.6 million was levied through property taxes and assessments, over $27.6 million from state aid and over $1.4 million from federal aid. This also includes $29.8 million generated from proceeds of debt. In 2020, expenditures were far below revenues, at approximately $97.6 million. This included over $52.8 million for education expenses and over $20.0 million for employee benefits. The school district experienced a $3.4 million deficit in 2020, and the bonded indebtedness is $36.0 million.

Police Services

Figure 3-5b indicates the locations of police stations in the vicinity of the site. The site and surrounding area are located within the jurisdiction of the Fifth Precinct, Sector 503 of the SCPD. Based on the nature and extent of the site's current land uses and activities, it is expected that the SCPD patrol responsibilities are primarily oriented toward general safety and security functions associated with trespassing and/or oversight for brush fires on the former golf course property, and responses to traffic accidents on bordering roadways (with potential need for emergency medical response).

The following information on existing SCPD services is taken from the response letter:

The subject site is located within the confines of the SCPD Fifth Precinct, Sector 503. The Fifth Precinct is located at 125 Waverly Avenue, Patchogue… The Fifth Precinct covers 75.006 square miles of southern half of the Town of Brookhaven and southeastern part of the Town of Islip. There are approximately 240,000 residents serviced, plus working, business patrons and vacationing transient population in the thousands. The Fifth Precinct has 195 sworn members and 17 non-sworn.

> The Department has categorized the intersection of Lakeland [Avenue] and Sunrise Highway (Route 27) as a high crash area. Current maps show limited access to the planned site.

The subject site currently generates annual property tax revenues in the amount of $31,224 to the SCPD, which assists in offsetting the costs to the SCPD in providing patrol services.

Fire Department and Ambulance Services

Figure 3-5b shows the locations of the fire stations in the area; the project site is within the limits of the West Sayville Fire District, which is served by the West Sayville Fire Department. Considering the site's existing condition and uses, it is expected that the department's current service-related responsibilities are primarily oriented toward general fire prevention and response functions, response to brush fires, and need of emergency medical response. The subject site is also served by the Community Ambulance Company, Inc., which maintains a facility at 420 Lakeland Avenue, abutting the project site to the east.

The subject site currently generates property tax revenues in the amount of $11,842 per year to the West Sayville Fire District, and $2,834 annually to the Community Ambulance Company.

Public Water Supply

The subject site is located within the Town Water District; this entity does not provide water service within the Town but exists as a municipal administrative body for such service (the Town of Islip does not have a Water Department). As noted in **Section 2.2.1**, public water supply to the area surrounding the site is provided by the SCWA; the subject site is located within Distribution Area 1. Based on the current site use and condition (a closed former country club with no occupancy), it is expected that the site currently consumes only a minimal amount of water from the public water supply system of the SCWA. As the site is no longer irrigated, under current conditions, no water is pumped from the existing on-site irrigation well.

Figure 3-5c shows the locations of wellfields in the area of the subject site; as can be seen, there are four wellfields nearby, of which two are upgradient and two are cross-gradient. There are no wellfields down-gradient of the subject site (see **Figure 3-5d**), so that recharge generated on-site is not expected to presently impact any public water supply wellfields. The SCWA "blends" the water pumped from each wellfield within its distribution system prior to delivery to its customers, so that no site is served by only one wellfield. Water mains which presently serve the area include a 12-inch main beneath Lakeland Avenue, an 8-inch line beneath 11th Street, 10-inch lines beneath East Golf Street and Bohemia Parkway, and a 6-inch line beneath Sterling Place.

Sanitary Wastewater Treatment

The structures on the project site are presently served by individual septic tank/leaching pool (conventional) systems. As the site is presently closed and vacant, no potable water is assumed to be consumed, so there is no sanitary wastewater generation on the site.

There is no public sanitary wastewater treatment plants in the area. Smaller private sewage treatment plants are present in conjunction with multiple family housing in the area; however,

these STPs serve individual developments. It is assumed that all wastewater generated in the area is treated in individual STPs or conventional septic systems on each developed property.

Solid Waste Removal and Disposal

Based on the vacant condition of the subject site, it is not expected that any solid waste is generated at present.

The Town Department of Environmental Control (DEC) manages the Town's solid waste stream, and oversees recycling and garbage collection. The Town's Multi-Purpose Recycling Center in Holbrook handles approximately 300 tons of recyclable materials weekly, including metals, glass, plastics, paper and cardboard as well as white goods (large appliances such as refrigerators, washing machines, etc.). The Town recycles approximately thirty percent of the residential waste stream. The Department has developed markets for recyclables, depending upon quantities and commodity. The following additional information on current Town solid waste removal and disposal practices has been taken from the Town DEC response letter:

Town Solid Waste disposal facilities include the following:

- Blydenburgh Road Clean Fill, Hauppauge - Construction and demolition debris - no commingled solid waste;
- MacArthur Waste-to-Energy Facility - Municipal solid waste - need permit for disposal;
- Yard Waste Compost Facility, Ronkonkoma - leaves, grass trimmings, cut-up trees - produce compost for sale;
- WRAP Facility, Sayville - Materials Recovery Facility for residential curbside recyclables, dual stream (separate newsprint, corrugated and commingled containers) transfer station for construction/demolition debris and bulk items, household hazardous waste facility, propane tank disposal and e-waste recovery facility.

Energy Supply

PSEG provides electrical service to the site and the area, and National Grid serves as the natural gas supplier for the area. Based on the vacant nature of the site usage, little if any of either of these energy forms is presently consumed on the project site.

3.3.2 Anticipated Impacts

As noted in **Section 3.3.1**, each of the above-listed service providers was contacted by letter to inform them of the project and solicit input with respect to the service capabilities and limitations (if any) on each. **Appendix H** contains the relevant correspondence, with responses (if provided). A discussion of tax revenues that will be allocated to service providers is provided below, followed by a discussion of the potential impact of the proposed project on each of the noted community service providers.

Property Taxes

Many of the Town and County's community services and facilities are supported in large part by

the revenues generated through property taxes. The Town of Islip and Suffolk County, as well as other local taxing jurisdictions will greatly benefit from an increase in such property tax revenues, resulting from the proposed project. The following brief discussion of the site's anticipated tax generation and distribution is taken from **Appendix C-2**.

> Upon full build-out and a stabilized year of operations, the proposed project (which includes the cumulative operations of Phase 1, Phase 2, Phase 3, Phase 4, Phase 5, and Phase 6) is estimated to contribute over $10.1 million in annual tax revenue. Of this, over $7.3 million will be generated by the two school districts, with Connetquot CSD anticipated to generate over $6.4 million and Sayville UFSD $483,302 in tax revenue. An additional $312,539 is projected to be levied by the Connetquot Library District and $32,225 by the Sayville Library District. Over $1.2 million, or 12.2% of the total tax revenues, are projected to be distributed to Suffolk County, and approximately 8.0% of the total tax revenue is projected to be levied to the Town of Islip. The West Sayville-Oakdale Fire District is projected to levy over $440,000, or 4.3% of the total tax revenue generated by the proposed project, and the Sayville Community Ambulance is projected to generate $105,324 or 1.0% of all revenues. The balance of the current property tax revenues is projected to be apportioned to various other local taxing jurisdictions, as seen in **Table 3-8**.

<u>Public Schools</u>

According to residential demographic multipliers published by the Center for Urban Policy Research at Rutgers University, and as shown in Table 11 of **Appendix C-2**, the proposed development is projected to generate 2,705 residents, of which an estimated 210 will be school-age children, and of these 199 would be expected to attend public schools of the Connetquot CSD (note: as only a small portion of the site is in the Sayville UFSD, and in that area, no residences are proposed, no school-age children of the project are expected to attend the Sayville UFSD). Based on the 2019-20 enrollment in the Connetquot CSD, the proposed project would represent a 2.87% increase in enrollment, necessitating an increase in district expenditures of approximately $3.95 million annually (see **Table 3-9**). Such an enrollment increase would tend to halt or stem the trend in decreasing enrollment and district fiscal conditions experienced in the Connetquot CSD over the past 10 years (see **Appendix C-2**). Through taxation, the proposed project is projected to generate an increased level of school district taxes allocated to the Connetquot CSD, of $6,480,320 annually, which would more than fully offset the added costs to the district to provide educational services to the 199 students generated by the proposed project. Based on **Table 3-9**, it is expected that the revenue will exceed the cost of education to provide a surplus of $2,990,184 per year.

TABLE 3-8
ANTICIPATED TAX REVENUE, Overall Project

Taxing Jurisdiction	Current Taxes	Projected Taxes	Increase in Taxes	Percent of Total Taxes
Total: School Tax	**$196,629**	**$7,308,386**	**$7,111,757**	**72.0%**
Sayville School District	$13,003	$483,302	$470,299	4.8%
Sayville Library District	$867	$32,225	$31,358	0.3%
Connetquot School District	$174,350	$6,480,320	$6,305,969	63.9%
Connetquot Library District	$8,409	$312,539	$304,130	3.1%
Total: County Tax	**$33,190**	**$1,233,627**	**$1,200,437**	**12.2%**
County General Fund	$1,967	$73,098	$71,131	0.7%
County Police	$31,224	$1,160,529	$1,129,305	11.4%
Total: Town Tax	**$21,848**	**$812,072**	**$790,224**	**8.0%**
General Town (I)	$562	$20,896	$20,334	0.2%
Town Excluding Villages (I)	$28	$1,026	$998	0.0%
Combined Highway (I)	$456	$16,940	$16,484	0.2%
General Town (II)	$10,832	$402,608	$391,776	4.0%
Town Excluding Villages (II)	$568	$21,094	$20,527	0.2%
Combined Highway (II)	$9,403	$349,509	$340,105	3.4%
Total: Other Tax	**$22,579**	**$795,046**	**$772,467**	**7.8%**
NYS Real Property Tax Law	$4,483	$166,632	$162,149	1.6%
Out of County Tuition	$698	$25,938	$25,240	0.3%
West Sayville-Oakdale Fire District	$11,842	$440,160	$428,318	4.3%
Street Lighting District (I)	$58	$2,139	$2,082	0.0%
Street Lighting District (II)	$1,106	$41,097	$39,992	0.4%
Sayville Comm. Ambulance	$2,834	$105,324	$102,490	1.0%
Town Water District	$370	$13,755	$13,385	0.1%
Garbage District	$978	N/A	N/A	N/A
Fed EPA Clean Air Mand.	$83	N/A	N/A	N/A
New York State MTA Tax	$127	N/A	N/A	N/A
TOTALS	**$274,246**	**$10,149,131**	**$9,874,885**	**100.0%**

Source: Town of Islip Receiver of Taxes; Town of Islip Assessor; Analysis by Nelson, Pope & Voorhis, LLC.

TABLE 3-9
FISCAL IMPACT ON SCHOOL DISTRICT

Parameter	General Education	Special Education	Totals
Existing Enrollment	6,016	1,001	7,017
Percentage of Existing Enrollment	85.7%	14.3%	100.0%
Enrollment Increase, Connetquot CSD: Proposed Project	171	28	199
Expenditure per Student	$14,604	$35,459	--
Anticipated Expenditure Increase: Proposed Project	$2,497,284	$992,852	$3,490,136
Anticipated Taxes to Connetquot CSD: Proposed Project	--	--	$6,480,320
Net Additional Revenue	--	--	**$2,990,184**

Source: Connetquot CSD; New York State Education Department; Analysis by NPV, LLC.

Police Services

The project site will continue to be patrolled by the SCPD's Fifth Precinct, Sector 503. The proposed project will significantly change the nature of the use of the site from vacant fenced land to an occupied residential community. The community will be occupied by individuals, couples and families and will potentially need police response. The site design will include appropriate safety and security systems, such as fire, smoke and security alarm systems and outdoor lighting, and employment of a qualified safety/security patrol.

Additionally, the increase development will increase vehicle use of local roadways, increasing the potential for traffic accidents, which would also increase SCPD response. The following concern was noted in the SCPD response:

> New traffic patterns and the increased flow regarding the influx of occupants will increase accidents and calls for police services. This project development would have an impact on the workload of Sector 503 and the Fifth Precinct. Emergency response time and public safety is a variable which requires careful consideration.

This DEIS includes a detailed Traffic Impact Study that evaluates traffic and proposes mitigation to ensure that an appropriate Level of Service is maintained on area roads. Additional traffic congestion and/or change in response times is not expected as a result of the project, given the proposed mitigation. The project will increase annual tax allocations to the SCPD to $1,160,529 which is expected to assist in offsetting the expected increase in offset the costs to provide police services.

Fire Department and Ambulance Services

The proposed project will continue to be serviced by the West Sayville Fire Department and the Community Ambulance Service. The site is currently vacant, and this use would change the site to be occupied by a residential community. It is expected that the proposed project will have the effect of changing the nature of potential calls for emergency services to the site, as well as increasing the potential for need of emergency services of both the West Sayville Fire

Department and the Community Ambulance Service, due to the new residents in the vicinity. For the West Sayville Fire Department, such changes would include a reduced need for response to brush fires (due to reduced acreage of open spaces, presence of maintained landscaping, presence of on-site safety/security staff, on-site fire hydrant network) , and need for additional types of emergency responses associated with the site residents (such as medical emergencies, in-home accidents, auto accidents, etc.).

The proposed project will be constructed in conformance with all applicable building and fire codes. The site will be designed to accommodate emergency service response vehicles. The West Sayville Fire Department and the Community Ambulance Service were informed of the project through correspondence contained in **Appendix H**.

The project will generate $440,160 per year in tax revenue to the West Sayville Fire District, and $105,324 will be allocated to the Community Ambulance Service annually. These tax revenues are expected to contribute to the budgets of these services and assist in offsetting increased demand for services as a result of the project.

Public Water Supply

The project will utilize public water for all of its domestic needs, to be supplied by the SCWA (see confirming Letter of Water Availability in **Appendix H**). It is expected that the location and number of connections from the SCWA distribution system to the project will be determined during the site plan review process, to be conducted under the jurisdiction of the Town Engineering Department in coordination with the SCWA.

The following has been provided by the SCWA, in response to a request for written confirmation that the SCWA can and will provide sufficient potable water to serve the project.

> Per your request, we have determined that there is an existing water main adjacent to the above captioned property from Lakeland Avenue and East Gulf [Golf/] Street and based upon the water requirements provided in your application dated June 7, 2018, the Suffolk County Water Authority (SCWA) has sufficient capacity to this property provided your client pays us for the improvements to our distribution system. This letter is also being issued based on our requirement that your client is installing a well for irrigation use; should that change in the future, you must contact us.
>
> Connection fees, which include any applicable water main surcharges, or directional bore fees, will be required for service line installations, as well as service line and RPZ [reduced pressure zone] applications and inspections. An RPZ device is required on commercial properties.
>
> SCWA recommends the use of smart irrigation control systems and drought tolerant plantings to promote conservation and minimize the impact of peak pumpage so as to ensure compliance with the SCWA Water Conservation Plan.

The expected domestic consumption of the project, 307,125 gpd is not anticipated to impact the ability of the SCWA to serve the subject site and existing customers. The SCWA is chartered to provide water to its service district customers, based on approved tariffs.

An additional estimated 34,813 gpd of water are anticipated to be used for landscape irrigation, all of which would be provided by the on-site irrigation well. As this volume would be applied only during the estimated 5-month irrigation season (assumed to be from mid-May to mid-October), total water use on the site will be 341,938 gpd during the irrigation season and 307,125 gpd outside of it.

Sanitary Wastewater Treatment

As discussed in **Section 1.4.5**, use of existing sanitary sewer lines or off-site wastewater treatment capacity is not available to the project site, and the project's design sanitary wastewater flow is greater than the allowable flow under SCSC Article 6 for use of septic systems, so the Applicant proposes to construct an on-site STP.

In addition to treating all of the wastewater generated on-site, the proposed STP will also be designed to handle a portion of the wastewater generated in downtown Sayville hamlet, specifically from commercial sites. In order to accomplish this, a sanitary sewer line from the project's STP will be installed southward along Lakeland Avenue to the downtown Sayville hamlet center. Such a benefit will have the effect of treating wastewater in the downtown area at no public cost for the installation program; however, the individual connections to the new system would be borne by each landowner.

The project's STP will be constructed to treat 377,000 gpd of sewage. The design flow for sewage generated from the project is estimated at 307,125 gpd, leaving capacity for 69,875 gpd of flow (from existing downtown development that connects to this extension and from future growth in the downtown area served) from downtown Sayville hamlet.

Impacts on Lakeland Avenue from installation of the 4-inch sewer line are expected, and would include disruption of traffic flow, congestion associated with construction vehicle movements, noise, odors and dust from construction activities (e.g., trench excavation, pipe installation, trench filling and repaving). However, these impacts will be temporary in duration and, as only portion of Lakeland Avenue will undergo construction activity at any one time, limited in extent. Cumulative impacts associated with the proposed sanitary sewer extension to the Sayville hamlet center are discussed in **Section 4.2**.

Solid Waste Removal and Disposal

It is anticipated that the residential and clubhouse facilities of the proposed project would generate a total of 10,220 lbs/day of solid waste, as follows:

Generator	Solid Waste Generation Rate	Quantity	Waste Generated (lbs/day)
Residents	3.5 lbs/day/resident*	2,706 residents	9,471
Amenity Spaces	3.12 lbs/day/100 SF**	24,000 SF	749
Total	---	---	**10,220**

* Per **Nemerow (2009)**.
** Per http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/Service.htm.

The following comments pertinent to the project's waste handling and disposal practices have been taken from the Town's response letter:

> The Town Refuse Collection and Disposal will not serve the proposed project with the collection and disposal of solid waste.
>
> The contracted private carter will presumably collect and dispose of all solid waste generated within the facility. The Town requests an active waste recycling program be implemented as soon as possible.

Solid wastes generated in the residences and in the non-residential spaces will be deposited in roll-off carts inside each building, from where each cart will be rolled outdoors for regularly-scheduled removal by a certified carter operating under a contract with the owner of the project and disposed of at an approved facility. It is expected that project management will develop and implement a recycling program developed in coordination with the private carter.

Energy Supply

The proposed project will use PSEG and National Grid to supply electricity and natural gas resources to the proposed project, respectively. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed project. The Applicant expects to use electricity as the primary form of energy consumed on the site; heating systems, major appliances, lighting-, and cooking are expected to be based on the use of electricity, and natural gas would be used for other purposes, such as swimming pool heating.

As noted in **Section 1.2.4:**

> The Applicant seeks to provide energy-efficient housing in conformance with Town Code Section 68-30, and embraces the concept of ensuring a more energy-efficient project than mandated by merely meeting the NYS Energy Code. Energy efficiency benefits the overall environment, reduces dependency on non-renewable resources thus providing an energy policy and use benefit, and benefits the residents through decreased operational costs of living space and site amenities. In general, energy-conserving materials, fixtures and mechanical systems will be utilized where practicable to reduce the total energy demand of the project. No determination by the Applicant regarding use of solar energy equipment or

systems has been made at the present stage of the application process. The Applicant is committed to incorporating appropriate energy-saving designs, materials, equipment and systems, and is willing to consider active solar energy systems (e.g., rooftop solar panels) and LEED® features and concepts, but such decisions will be made later, during the site plan application process.

3.3.3 Proposed Mitigation

- Development of the proposed project will generate approximately $10,149,131 in total tax revenue, which exceeds the $274,246 generated by the site in its under existing conditions. Therefore, the proposed project may ultimately create an additional $9.87 million in annual tax revenues to be distributed to all applicable community services providers, particularly to the Connetquot CSD. No further mitigation is necessary or proposed.
- The proposed project represents an increase in enrollment for the Connetquot CSD, for which an estimated increase in expenditures of about $3.49 million/year will result. However, the proposed project is anticipated to generate taxes of $6,480,320 per year, resulting in a net surplus revenue to the school district of about $2,990,184 million per year. This net revenue could ease the district's need to tap into additional fund balances and could also help alleviate an increased burden on other taxpayers throughout the district. No further mitigation is necessary or proposed.
- The proposed project will include current building materials and safety installations per the NYS Building and Fire Codes, such as fire and smoke alarms and sprinkler systems. The project will be planned with suitable access for emergency vehicles and will include installation of fire hydrants as directed through the site plan review process. The project will also include a full-time professional safety and security service.
- By its issuance of a Water Availability Letter, the SCWA confirms that it can and will provide applicable water services to the site and project. No further mitigation is necessary or proposed.
- The proposed project will provide and maintain private on-site recreational facilities for the exclusive use of its residents, as well as a 25-acre public park along the site's perimeter.
- In conformance with Town requirements, the proposed project will utilize a private carter to remove and dispose of all site-generated solid wastes, and will develop and implement a recycling program.
- Water and energy resources will be conserved through use of energy- and water-conserving design principles, building materials, mechanical and plumbing systems, plumbing fixtures and appliances and rain sensors on irrigation systems, which will further minimize the volume of water required from the public water supply.
- The project's internal roadways, sidewalks, lighting systems, and recreational areas, as well as its drainage system, STP and sanitary sewer connection will be owned, operated and maintained by the project's POA, obviating potential increased public costs for these responsibilities.

3.4 Community Character

3.4.1 Existing Conditions

Visual Character

Appendix D-2 contains a series of photographs of the site and of those portions of its perimeter that lie along the bordering roadways, taken by the Applicant's architect. These photographs depict the existing visual character of the property, and are then used as the base upon which computer-simulated views of the proposed project have been superimposed (see **Section 3.4.2**); the following description of these photographs was prepared by the Applicant's architect:

> At nine (9) locations around the perimeter of the site, photographs of the existing view were taken and photo-simulations of what the same view might look like after the proposed project is constructed have been created. These views include:
>
> 1. Looking toward the southeast from the intersection of Eleventh Street and Bohemia Parkway
> 2. Looking toward the southeast from in front of 724/728 Bohemia Parkway
> 3. Looking toward the northeast from in front of the recharge basin on Bohemia Parkway
> 4. Looking toward the north from Terry Road just south of the intersection with Bohemia Parkway
> 5. Looking toward the northeast from the intersection of Terry Road and Sterling Place
> 6. Looking toward the north from the intersection of Carrie Avenue and Marion Street
> 7. Looking toward the north from the end of Durham Road
> 8. Looking toward the north from the intersection of North 3rd Street and Chester Road
> 9. Looking toward the south from the intersection of Lakeland Avenue and 11th Street
>
> These views were chosen to provide:
>
> - Views at major approaches to the site
> - Views into the site from most of the surrounding neighborhoods
> - Views from locations closest to the proposed buildings to truly represent the project

The photographs demonstrate that the project site is presently occupied by a closed country club operation, and is characterized by open vistas across an unused former golf course whereon vegetation (both the fringe of former woods kept as a visual buffer, and the former fairways, tees and greens of the golf course holes) are generally untended and are undergoing natural succession.

Noise

The environmental impact of noise can have various effects on human beings ranging from annoyance to hearing loss. A noise problem is said to exist when noise interferes with human activities (**Rau and Wooten, 1980**). Various noise scales have been developed to describe the response of an average human ear to sound. The most common unit utilized to characterize

noise levels is the A-weighted decibel (dBA), which weighs the various components of noise according to the response of the human ear. Because the human ear perceives the middle range of frequencies better than the high or low frequencies, the dBA scale assigns the middle range a much larger "loudness" value than higher and lower frequencies. For the purpose of this report, sound levels are reported in L_{eq} and range (minimum/maximum). L_{eq} refers to the energy-average sound level for a specific time period and relates sound intensity level to time as the "equivalent sound level" scale expressed in dBA. L_{eq} is commonly utilized as a statistical average sound level in noise impact prediction.

Physical measurements of noise may be measured in dBA using a sound level meter. The meter collects frequency values, which are automatically interpreted as a function of human hearing frequency response (according to the weighted decibel scale). The weighted scale thus provides a measure of noise that is meaningful for assessing ambient noise environments and potential noise impacts as heard by human beings. On average, a change of 3 dBA is required for the average person to detect a difference in the level of noise, whereas a change between 2 and 3 dBA is the level associated with the threshold of detection and a change in the range of 5 dBA is noticeable and is considered to be an impact (see **Table 3-10**).

TABLE 3-10
AVERAGE ABILITY TO PERCEIVE CHANGES IN NOISE LEVELS

Change (dBA)	**Human Perception of Change in Sound Levels**
2-3	Barely perceptible, threshold of detection
5	Readily noticeable
10	Doubling or halving of the loudness of sound
20	Dramatic change
40	Difference between a faintly audible sound and very loud sound

Source: Fundamentals and Abatement of Highway Traffic, Report No. PB-222-703, FHWA, June 1973.

As a point of reference and comparison, an increase of 3 dBA equates to a doubling of the sound energy. This phenomenon is related to the logarithmic nature of the decibel scale, which will be explained below. In the same respect, a decrease of 3 dBA appears to the listener as a halving of noise. **Table 3-11** relates changes in dBA to a receiver as compared to a base reference of 60 dBA.

TABLE 3-11
COMMON SOUND LEVELS AND REACTIONS

Sound Source	Sound Level (dBA)	Apparent Loudness	Typical Human Reaction
Military jet Air raid siren	130	128X as loud	Limit of amplified speech
Amplified rock music	110	32X as loud	Maximum vocal effort
Jet takeoff at 500 meters Train horn at 30 meters	100	16X as loud	
Freight train at 15 meters	95		
Heavy truck at 15 meters Busy city street Loud shout	90	8X as loud	Very annoying Hearing damage (8+ hours)
Busy traffic intersection	80	4X as loud	Annoying
Highway traffic at 15 meters Train horn at 500 meters Gas lawn mower at 10 feet Noisy restaurant	70	2X as loud	Telephone use difficult
Predominantly industrial areas Light car traffic at 15 meters City or commercial areas Residential areas close to industry Noisy office	60	Base reference	Intrusive
Quiet office Suburban areas with medium-density transportation	50	½ as loud	Speech interference
Public library	40	¼ as loud	Quiet
Soft whisper at 5 meters	30	$^{1}/_{8}$ as loud	Very quiet
	10	$^{1}/_{32}$ as loud	Just audible
Threshold of hearing	0	$^{1}/_{64}$ as loud	

Note: The minimum difference in sound level noticeable to the human listener is 3 dBA. A 10 dBA increase in level appears to double the loudness, while a 10 dBA decrease halves the apparent loudness.

Sources: NYSDOT, 1980 and White, 1975

Physical measurements of noise may be measured in dBA using a sound meter. The meter collects frequency values, which are automatically interpreted as a function of human hearing frequency response (according to the A-weighted decibel scale). The weighted scale thus provides a measure of noise which is meaningful for assessing ambient noise environments and potential noise impacts as heard by human beings. Sound levels decrease with distance from the source as a result of dispersion which is predicted using the "inverse square law," which applies a reduction of 4.5 dBA for each doubling of distance from a line source (such as a roadway) and 6 dBA reduction for a point source (a stationary source). This reduction effect is due to natural dispersion only and is not a function of the presence of barriers or other objects (**USDOT, 1980**),

which may result in additional attenuation of noise. Also, because the decibel scale is logarithmic, the laws for addition of logarithms must be utilized for addition of decibels. The addition of two similar noise levels will result in an increase of 3 dBA. For example, a noise level of 50 dBA added to an existing noise level of 50 dBA would result in an end noise level of 53 dBA, an increase that is considered to be the threshold for human detection. In addition to attenuation by distance from the source, vegetation and noise barriers also result in attenuation of noise levels. Densely wooded areas are expected to have an attenuation rate of 5 dBA for every 100-foot depth of woods (up to a maximum attenuation of 10 dBA). For low-density vegetation, a nominal amount of attenuation of 2 to 3 dBA per 100 feet of woods may be expected to occur. The attenuation of noise due to barriers (walls and buildings) is a function of the height and composition of the barrier. A barrier capable of reducing sound energy transmission through the structure which interrupts the line of sight between a source and a receptor, will generally provide a minimum sound reduction of 5 dBA.

By utilizing this information, it is possible to combine the background noise, source noise and attenuating factors to predict sound levels resulting from a particular source. The adjusted level is the noise level associated with the source after it is attenuated by distance and other attenuating factors such as structures interrupting the line of sight between the source and receptor, noise barriers, and thick vegetation. The adjusted level is combined with the ambient level using the concepts of decibel addition.

Chapter 35 of Islip Town Code Noise was adopted in 1986 with the intent of preventing unreasonably loud and disturbing noises deemed to be detrimental to the life, health, welfare and good order of the people of the Town of Islip. The chapter provides definitions, a listing of prohibited noises, maximum permissible A-weighted sound pressure levels and exceptions. As defined by Chapter 35, a noise violation is a disturbance caused by any of the prohibited noise sources which:

1. Annoys or disturbs a reasonable person of normal auditory sensitivities; or
2. Is clearly audible outside the residential, real property boundary from which it originates; or
3. Is loud, disturbing, unusual, unreasonable and unnecessary as well as audible outside the structure or the real property boundary from which it originates.

Examples of prohibited noise levels include the following: electronics (tv/radio, etc.); horns; animals; shouting; engines; defects in vehicles; heavy equipment used in construction (except between the hours of 7:00 a.m. and 8:00 p.m. on weekdays); loading/unloading; construction of buildings (except between the hours of 7:00 a.m. and 8:00 p.m. on weekdays); commercial music, explosives; and, ice cream trucks (while idling at a stop for more than one minute).

The maximum permissible A-weighted sound pressure levels for sound source property and receiving property categories are provided in §35-4, stating that "*no person shall cause, suffer, allow or permit the operation of any source of sound on a particular category of property or any public lands or right-of-way in such a manner so as to create a sound level that exceeds the particular sound level limits set forth in Chapter 35 Attachment 1 Noise Control Table 1* (image included below) *when measured at or within the real property boundary line of the receiving property*". As illustrated in the image below, there is a higher threshold for commercial or industrial land use when considered a source property as compared to residential sources. For example, the maximum sound level generated by commercial or industrial property measured at a residential property line is 65 dBA for the hours 7 a.m. to 10 p.m., whereas the level is decreased to 55 dBA if generated by a residential source.

Noise Control Table 1
Maximum Permissible A-Weighted Sound Pressure Levels in dBA

Sound Source Property Category	Receiving Property Category					
	Another Apartment within multidwelling building		Residential		Commercial (all times)	Industrial (all times)
	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.		
Apartment within multidwelling building	45	40	55	50	65	75
Residential	—	—	55	50	65	75
Commercial or public lands or right-of-way	—	—	65	50	65	75
Industrial	—	—	65	50	65	75

As stated in §35-4(B), there are a number of acts that are exempted from the maximum permissible sound levels, including noise generated by construction activity. Specifically, the following acts are exempt from the A-weighted sound pressure level limits set in Table 1 (above):

1. Noise from the operation of heavy equipment, including the operation of any pile driver, pneumatic hammer, derrick, electric hoist, bulldozer, grinder or other appliance, between the hours of 7:00 a.m. and 8:00 p.m. on weekdays.
2. Noise from the construction, excavation, demolition, alteration or repair of any building between the hours of 7:00 a.m. and 8:00 p.m. on weekdays.

Also exempted from the maximum permissible sound levels is noise generated by the operation of domestic equipment, including any power saw, drill, sander, router, lawn or garden device, leaf or snowblower, insect control device, between the hours of 7:00 a.m. and 8:00 p.m. on weekdays, or between the hours of 10:00 a.m. and 5:00 p.m. on Sundays.

In order to assess potential noise impacts of the project, several factors must be considered including the location of potential sensitive noise receptors, existing background environment and sources of noise, potential noise generated by the project, and noise attenuation factors. As the subject property is not presently used other than maintenance of the grounds, only natural

sources of noise and period mowing of the grass are generated on the site, and no significant adverse impacts to the area are attributable to the project site.

The proposed development site is located between Sunrise Highway South Service Road to the north and generally bounded by Bohemia Parkway (and Hauppauge Road) at the west, Lakeland Avenue (as well as Chester Road, Durham Road, and Carrie Avenue) at the east and Sterling Place at the south. Vehicular traffic and residential activity from the surrounding homes are the major sources contributing to the ambient noise environment in the area. The primary receptors for consideration of potential noise impacts are the residential homes that surround the property to the west, east, and south and the Edward J. Bosti Elementary School located on the south side of Bourne Boulevard over 1,200 feet west of the westernmost property line of the site.

NPV conducted a field visit at the property and in the surrounding area to prepare a characterization of existing sources of noise and to monitor sound levels during typical weekday morning hours. A total of twelve (12) sound level monitoring stations were selected including eleven (11) stations along the subject site property line and one (1) on Bourne Boulevard at Edward J. Bosti Elementary School. Station locations are shown on **Figure 3-6**. These locations were selected as being areas closest to proposed development areas on the site and representing the worst case for analysis of potential noise related impacts at nearby residential properties and the nearby school.

The sound level measurements were collected on June 29, 2018 beginning at 8:15 a.m. using a SPER Scientific Model 8400029 Digital Type II Sound Level Meter that was calibrated before the period of readings. The time of monitoring was chosen to begin at a time period with typical ambient noise and accounting for commuting traffic on Sunrise Highway. One hundred noise readings were taken at 10-second intervals at the stations and from these data the average continuous sound level was computed.

Sound levels fluctuate, and it is common to provide an average of sound levels over a period of time to describe the "equivalent continuous noise level" or L_{eq}. Stations #1-11 follow the perimeter of the clockwise beginning at Station 1 which is located approximately 150' south of the east-west portion of Chester Road and continuing around to Station 11 opposite Fulton Avenue along the northern property line at the proposed main entrance to the development. Station 12 is located on Bourne Boulevard in front of the elementary school. Sound level data sheets providing each measurement for each of the locations, field notes, and a graphic representation of sound levels are provided in **Appendix I-1** and a summary of the L_{eq} results are provided below in **Table 3-12**.

Comparison of these results with the examples of typical sound levels listed in **Table 3-11** (Common Sound Levels and Reactions) indicates that the average continuous sound levels (L_{eq}) are levels characteristic of areas ranging from suburban areas with medium-density transportation, to residential areas close to industry with light car traffic, to highway traffic at 15 meters. The levels for Station 7 were the highest of all stations due to the proximity to the travel lanes of Terry Road and Bohemia Parkway as well as due to landscaping activity at a number of

homes in the vicinity during monitoring.

TABLE 3-12
SUMMARY OF NOISE MONITORING DATA

Station	L_{eq}
1	53.9
2	51.6
3	45.8
4	43.8
5	56.4
6	56.3
7	71.8
8	52.2
9	63.0
10	57.7
11	62.9
12	63.9

The levels at Stations 3 and 4 which are located east of the project site and on side street had the lowest continuous sound levels which was due to low level of passing cars and trucks and no other sources of noise being generated during the monitoring period. Sources of background noise noted during the monitoring consisted mainly of passing vehicle traffic, landscaping, and natural sources.

Lighting

The only outdoor lighting on the site at present are small, wall-mounted safety/security fixtures located among the existing golf course buildings and the two residences in the northeastern corner of the site, and at the two maintenance structures in the central and southwestern portions of the site (see **Figure 1-3**). The only lighting that is provided currently is at the southwestern maintenance building; it operates on a timer. As a result, the site is generally dark at night, with some illumination cast on the perimeter of the site from the few street lights on the bordering roadways.

Demography

Table 3-13 presents some current demographic information on the hamlet of Sayville, wherein the subject site is located. As can be seen, of the total population in the hamlet, an estimated 4.72% are pre school-age children, school-age children constitute 18.59% of the hamlet's inhabitants, and 76.69% of the residents are adults.

This population resides in 5,976 households, of which 78.75% are owner-occupied and 21.25% are rental units.

TABLE 3-13
DEMOGRAPHIC CHARACTERISTICS, 2018
Sayville

Total Population	Age			Housing		
	Pre School-Age (<1 - 5 yrs.)	School-Age (5 - 19 yrs.)	Adults (>19 yrs.)	Total Households	Owner-Occupied	Rented
16,975	802	3,155	13,018	5,976	4,706	1,270

Source: US Census Bureau, Census 2010 Summary File 1. esri Forecast for 2023, referenced November 20, 2018.

Property Values

Appendix C-3 contains the Impact Study and Analysis of Real Property prepared by the Breslin Appraisal Company, Inc., of Huntington, New York conducted for the proposed project. The purpose of the study is to determine the potential impact of the proposed project on surrounding and area real estate values. The study involved looking at the subject proposal, comparing it to other similar type communities on Long Island to determine whether those have impacted surrounding property values. The following lists the other communities on which the study was prepared.

- Fairfield Knolls at West Sayville
- Fairfield Broadway Knolls at Holbrook
- The Rosemont Brookhaven
- The Enclave at Charles Pond
- The Jefferson at Farmingdale Plaza
- The Hawthorne Apartments, Valley Stream

3.4.2 Anticipated Impacts

Visual Character

The following discussion of the project's potential for impact on the visual character of the surrounding neighborhood from differences in visual appearances was prepared by the project's architect.

> The Greybarn team has sited the buildings based upon an extensive study and analysis of the site. The site plan is based upon understanding the site's topography, locations existing healthy, mature trees landscaping and using these features to preserve and enhance views from the surrounding neighborhoods into site.
>
> As can be seen in the Viewshed Analysis [**Appendix D-2**], at the size of this site and over the distances from the property lines to the proposed buildings, the additional height of going from 2-1/2 stories to 3-stories will only be minimally perceivable.

The photosimulations presented in **Appendix D-2** demonstrate that the views of the project site as well as views along the length of the bordering roadways will be substantially improved upon

construction of the proposed project. The anticipated removal of brush and debris in the site's perimeter buffer will widen and deepen vistas into the site (of and between the proposed residential buildings), and simultaneously open up vistas along the bordering roadways. These vistas will be enhanced by landscaping and park space available to the public.

The Viewshed Analysis demonstrates:

> The diagram shows these heights at the proposed distances from the property line create an open view of the sky and access to sunlight than would be possible under a conventional subdivision in the Residence AAA or Residence B districts; however, it is noted that comparable views could be created under a clustered subdivision.

The following discussion of the project's potential for impact on the visual character of the surrounding neighborhood from proximity of the new buildings to observers was prepared by the project's architect.

> The buildings have been placed much further back from the property lines than is typical for other types of housing. Creating not only walking/biking paths around the entire perimeter of the site that are open to the public. ,This also opens up wider views to the sky and sunlight than if the streets were lined with new, customary single-family homes.
>
> In order to make height easier to understand, we have developed a Zoning Height Diagram [see **Appendix D-3**]. We have used the Bohemia Parkway side of the site for purposes of this analysis, but the principals apply to all of the roadways around the proposed PDD-GS.
>
> The homes immediately across Bohemia Parkway from the site are within the Residence B zoning district and we have assumed that if single -family homes were to be constructed on the proposed site they would be covered by the provisions of the Residence AAA zoning district. The specific requirements of the districts for heights and setbacks are:
>
> - Residence B: building height – 2 stories /28 feet; 25-foot front yard setback
> - Residence AAA: building height – 2-1/2 stories/35 feet; 50-foot front yard setback

The diagram shows the orientation of the "Site Line" for the Residence B and Residence AAA zones. The Site Line marks the angle at which a building, if of a conforming height and located at the setback line, would intrude into an observer's viewscape and therefore, represents an approximation of qualitative visual impact. Thus, visual impacts are associated with the interplay of two factors; building height and building setback; a taller building would have more of an impact than a shorter building, if both are at the same setback. Conversely, two buildings of the same height would have differing visual impacts if one were located at a lesser setback (i.e., it is closer to the observer) than the other. The Site Line is intended to illustrate this relationship. (Note: the diagram shows that, if a 3-story building of the proposed PDD-GS were sited at its 75-foot setback, it would intrude into the viewscape to about the same degree as a conforming building in the Residence AAA district.)

In comparison to the setbacks, the **Conceptual Layout Plan** shows the following building setbacks for the proposed PDD-GS:

- 2-story buildings: 35-foot height; 75-foot front yard setback (minimum 267.7 feet provided, to Carrie Avenue)
- 3-story buildings: 45-foot height; 75-foot front yard setback (minimum 105.1 feet provided, to Eleventh Street)
- 4-story buildings: 55-foot height; 100-foot front yard setback (minimum 211.1 feet provided, to Eleventh Street)

For the proposed zoning regulations of the PDD-GS, it is expected that 2-story and 3-story buildings will have a minimum setback of 100 feet, and 4-story buildings will have minimum setback of 200 feet. These setbacks are proposed to reduce potential visual impacts to visual resources and thereby, on community character. Specifically, relative to Bohemia Parkway, the shortest setback for a 3-story building will be about 135 feet, and the least setback for a 4-story building, will be about 350 feet. The potential for adverse visual impacts due to the difference in building height (i.e., of the project's four-story buildings versus those of the single-family, 2-½ story buildings that characterize the surrounding area) was evaluated. As discussed in **Section 1.4.2** and illustrated in **Appendix D-3**, despite the higher buildings allowed by the proposed PDD as compared to that allowed by the Residence AAA district, the substantially greater front yard setbacks of the proposed PDD would result in less intrusion into the viewscape than would result from development conforming to the Residence AAA district. The ability to secure greater building setbacks is due to the large size of the site and the use of multi-unit structures, which enable substantial perimeter setbacks, which could not be provided if the site were subdivided into individual lots, which would require some of those lots to be located abutting the site's perimeter.

<u>Noise</u>
In comparison to its current generally vacant state as a former golf course, unavoidable short-term noise impacts will result from construction on the site; these potential impacts are discussed in **Section 4.1.1**.

Generally, the development of the property will result in a change in the ambient noise levels with noise generated by property maintenance and vehicle movements in the interior roadways and parking areas, and from typical human related activities. The proposed use as a multi-family housing development is compatible with the nearby residential uses and noise related to these uses will be consistent with residential development, with the exception that the common areas of the site will be controlled by the POA, whereas, in comparison to a single family residential development, noise generation varies between the individual homeowners and use of their properties.

It is expected that noise from vehicles on local arterials and background noise from Sunrise Highway will continue to be the dominant source of noise in the area following construction. As with any developed site, there is the potential for generation of periodic noise related to site

activities following development of the site as a multifamily development. The most common sources of intermittent noise generating activities will be related to vehicular access to the new development, vehicles driving on the interior driveways and parking areas, and maintenance of landscaping on the site. These were analyzed and are discussed in the paragraphs below. A noise attenuation worksheet, which provides the values and calculations utilized for each source and station, is provided in **Appendix I-2.**

- Maintenance of common lawn/garden areas. The nearest common areas to be landscaped to residential property lines are located at various distances from surrounding property lines ranging from 25 feet for properties sharing a property boundary with the site (along the eastern property line) to 55 feet where a roadway and buffer separate the site and nearest property line. Attenuation of sound levels is provided with distance, predicted by application of the inverse square law and accounting for the intervening area of woods to remain between the new development and property lines where it is planned (for a reduction of up to 2 dBA). Use of a gas-powered lawn mower was assumed which results in a level of approximately 70 dBA at a distance of 10 feet. When adjusted source levels are combined with the ambient level for morning levels based upon monitoring results, the levels range between 56.9 dBA at Station 4 to 72.1 dBA at Station 7. It is noted that the ambient level at Station 7 was already high due to activity related to lawn maintenance and the resulting 72.1 dBA was a net increase of 0.3 dBA over the ambient level. At other stations, the increase in sound level would be audible at nearby property lines; however, such activities are typical of a residential area, are not sustained for long periods and occur periodically. In addition, while these levels are greater than the maximum permissible levels per Table 1 in Chapter 35, noise from the operation of domestic equipment is exempted from the maximum permissible levels if the maintenance occurs between 7 a.m. and 8 p.m. on weekdays or between the hours of 10 a.m. and 5 p.m. on Sundays. While the code does not exempt such activity on Saturdays, as Sunday hours are permitted, it is assumed that the same hours would apply on Saturdays.

- Motor vehicles. The analysis includes an assessment of combined noise for a common source of noise – the use of motor vehicles within the site. For each station, a realistic number of vehicles was inputted in consideration of the site location (entrance as compared to internal roadway or parking area). The sound levels associated with normal motor vehicle activity is not expected to result in a noticeable change in the noise environment, as it is consistent with existing sources in the vicinity. However, the analysis performed illustrates that at the property lines, the sound levels range between 46.8 for Station 3 and 72.1 at Station 7 (which as noted above is an increase of 0.3 dBA over the ambient based upon monitoring and would vary as with the current conditions and sources of noise). This analysis was not prepared for Station 5 due to the high level of vehicular traffic on Station Road which would make movement within the site indiscernible from background levels.

In summary, following construction, the only regularly occurring sources of noise which may be

audible to nearby residents related to the long-term use of the property is expected to be associated with vehicular ingress and egress from the development and movement within the site. This traffic will proceed at low speeds and will not cause a perceptible increase above ambient noise, particularly due to the vehicle traffic consisting mainly of passenger cars. Other than maintenance of lawn and garden areas on the site and the envisioned accessory amenity uses to occur indoors are typically quiet in their operations, any occurrence of loud sounds would be random and intermittent as is the case with any development.

Based on the above analysis and lack of necessity to implement noise mitigation proposed, no noise-related impacts are expected.

Lighting

As described in **Section 1.4.6**, the proposed project includes a lighting system designed to establish a safe and secure environment for its residents and visitors, and that will provide pole-mounted illumination only in those areas where it is necessary and appropriate. These areas include the internal roadways and parking areas, as well as the STP and the three site access points. Lighting will not be provided at the pool/patio areas, along the internal sidewalk network, or along the walking trail in the 24.6-acre public park, as the permitted hours for the park will be from dawn to dusk.

The project's lighting will conform to the requirements of Town Code Chapter 68, Article LII, with all lighting fixtures proposed to be dark-sky compliant. This design consideration will help to minimize the potential for enhancing or contributing to diffuse sky-glow. With the exception of the three site access drives, no pole-mounted lights will be placed within 50 feet of the site boundaries. In this way, the potential for fugitive lighting to pass through the perimeter vegetation buffer and bordering roadways to impact the neighboring residences will be minimized.

Demography

Table 3-14 below builds on the baseline demographic data discussed above (which represents current, 2018 conditions), with a projection of those data types to the year 2023. The projections enable some analysis of the anticipated trends in the demographic characteristics if the proposed project is not implemented. **Table 3-14** provides some insight as to the trends that may be expected in these characteristics in 2023. Specifically, a slight increase in total population n Sayville is expected, with a small decrease in the pre school-age cohort, and a more substantial decrease in school-age population. These latter two trends would be pertinent to the Connetquot CSD, for planning purposes. The adult cohort in Sayville would experience an increase, reflective of the general aging of the Sayville population. With respect to housing, a small increase in total households is expected, with an increase in owner-occupied units and a substantial decrease in rental units. This trend would attract younger and/or less affluent potential occupants, as this type of residence is generally more affordable to these cohorts.

TABLE 3-14
IMPACT ON DEMOGRAPHIC CHARACTERISTICS, 2018 - 2023
Sayville

	Total Population	**Age**			**Housing**		
		Pre School-Age (<1 - 5 yrs.)	School-Age (5 - 19 yrs.)	Adults (>19 yrs.)	Total Households	Owner-Occupied	Rented
2018	16,975	802	3,155	13,018	5,976	4,706	1,270
2023	17,098	799	2,902	13,397	5,989	4,817	1,172
% Change vs. 2018 (1)	+0.72	-0.37	-8.03	+2.91	+0.22	+2.36	-7.72
With Project	19,803	981	3,112	15,710	7,354	4,817	2,537
% Change vs. 2018 (2)	+15.82	+22.65	+7.24	+17.27	+22.79	0	+116.47

(1) These values represent anticipated Sayville demographic conditions in 2023 if the proposed project is not built.
(2) These values represent anticipated Sayville demographic conditions in 2023 if the proposed project is built.

The table includes the effects of the proposed project on the demographic characteristics of Sayville anticipated in 2023. As can be seen, with the proposed project, the total population in the hamlet would be increased substantially (whereas if the project is not built, the total population would increase only slightly). The project would cause a substantial increase in pre school-age children and a lesser increase in school-age children. In the same way as noted above, these two trends would be of interest to the local school district, for planning purposes. That is, if the project is not built, the Connetquot CSD should expect a decrease in enrollments, whereas if the project is built, the district can expect an increase in enrollments. Finally, the project would cause an increase in the adult cohort.

With respect to housing, the proposed project would substantially increase the total number of households in Sayville, with a substantial increase in rental units (which is the goal of the Town, the community, and the intent of Applicant). As the units in the proposed project would all be rental units, the project would not increase the number of owner-occupied units in Sayville.

Property Values

The following summarizes the results of the analysis prepared for the Impact Study and Analysis of Real Property document (**Appendix C-3**).

> The proposed use is residential apartments. Close to Sunrise Highway and a short distance from Sayville's train station and downtown, the property lends itself to upscale and well-designed rental homes, which also fill a growing demand situated on Long Island in general and specifically for this area.

The proposed zoning is a site-specific Planned Development District (PDD) based on the Town's existing Residence CA District zoning, which, at its maximum, would permit 1,371 units. The ultimate density will be determined at the conclusion of this process.

In the last ten years or so we have seen the development of numerous higher end luxury rental communities be developed throughout Long Island. These developments have targeted and filled a need for much needed housing stock for our young professionals and our empty nesters. The most significant developer of these communities has been The Avalon Bay Company. They have built several on Long Island; two in Melville, one in Smithtown, one in Port Jefferson, one in Garden City and another in Huntington Station.

In addition there is: Fairfield Knolls at West Sayville, a 55 and over rental community of one-bedroom and two-bedroom apartments located in the Hamlet of West Sayville; the Fairfield Broadway Knolls at Holbrook, a luxury rental community of one-bedroom and two-bedroom apartments located in Holbrook, Town of Brookhaven; the Rosemont Brookhaven, a luxury rental community of one-bedroom, two-bedroom, and three-bedroom apartments located in Bellport, Town of Brookhaven; the Enclave at Charles Pond, a luxury rental community of one-bedroom and two-bedroom apartments located in Coram, Town of Brookhaven; the Jefferson at Farmingdale Plaza also luxury rental community of one-bedroom and two-bedroom apartments located in the Village of Farmingdale, Town of Oyster Bay; and the Hawthorne Apartments, another luxury rental community of one-bedroom and two-bedroom apartments located in the Village of Valley Stream, Town of Hempstead. Furthermore, the Town of Islip recently approved the redesign of a high end rental project at the Windwatch site in Hauppauge. This involves two separate rental towers which surround a townhouse development and a hotel. This is not yet open.

In addition to the detailed analyses we have considered the limited data surrounding the Garden City Avalon and the Melville Avalon. In the case of the two Avalon communities in the Town of Huntington, both in Melville and Huntington Station, they are adjacent to residential communities of Townhouses that have prospered. Both are Country Pointe Developments. What these types of projects have shown us is that there is a tremendous need for this type of housing and they create their own community, which then blends in with and becomes a part of the surrounding land use pattern and community.

3.4.3 Proposed Mitigation

- Analysis indicates that the proposed buildings will not result in adverse visual impacts for observers on adjacent residential sites or the bordering roadways. However, the Applicant could consider additional plantings in the perimeter vegetation buffer, to further screen the project.
- As the noise analysis prepared for the proposed project indicates that no significant adverse impacts are anticipated with respect to receptors on the site or in the vicinity, the Applicant does not propose to implement noise mitigation measures beyond the noise-reducing measures in the applicable Building Code requirements.

- It is expected that the project's conformance to the applicable standards of Chapter 68, Section LII (Outdoor lighting) will be sufficient to adequately mitigate potential impacts from fugitive lighting. However, the Applicant could consider additional screen plantings in the perimeter vegetation buffer, to increase the level of lighting obscuration.

3.5 Cultural Resources

As shown in **Figure 3-7**, the project is not within an area designated by the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) as "Sensitive" for the presence of significant re-historic (i.e., before colonization of Long Island in the late 1600's) or historic (i.e., after colonization began) artifacts.

The project site was the subject of a previous re-development Application in 2006, for which a Phase 1 Archaeological Investigation (consisting of a Phase 1a Site Assessment and Phase 1b Excavation Program) was performed. That study (see **Appendix J-1**) was performed on approximately 67 acres in the central portions of site, and involved 1,016 shovel test holes excavated within that area.

The current proposed project would develop a larger portion of the subject site, so that a significant number of additional shovel test excavations are necessary, in the form of a Phase 1b Addendum (see **Appendix J-2**).

The proposed project has been subject of an initial "Consultation Project" submission to the NY State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS; see **Appendix J-3**). SHPO staff will review the submitted descriptive project materials and provide comments and information on any cultural resources that may be present on the site or potentially impacted by the project.

3.5.1 Existing Conditions

<u>2006</u>
The following is taken from the Phase 1 Archaeological Investigation:

> **INTRODUCTION**
> Between April 12 and May 5, 2006, TRACKER-Archaeology Services, Inc. conducted a Phase I A documentary study of a Phase IB archaeological survey for the proposed Island Hills subdivision in Sayville, Town of Islip, Suffolk County, New York. The purpose of the Phase IA documentary study was to determine the prehistoric and historic potential of the property for the recovery of archaeological remains. This was accomplished by a review of the original and current environmental data, archaeological site files, other archival literature, maps, and documents.

A prehistoric site file search was conducted utilizing the resources of the New York State Historic Preservation Office- Field Services Bureau in Waterford, New York. Various historical and archaeological web sites were reviewed for any pertinent information.

The purpose of the Phase IB survey was to recover physical evidence for the presence or absence of archaeological sites on the property. This was accomplished through subsurface testing and ground surface reconnaissance.

The entire property consists of an existing golf course known as the Island Hills Golf and Country Club. It is approximately 120 acres. However, the project area of potential effect (APE) consists of about 67 acres inclusive with a developed area around the clubhouse and some heavily graded areas of the golf course. The property as a whole is bounded on north by 11th Street, to the west by Bohemia Parkway, to the east by Chester Road and Carrie Avenue, and to the south by Sterling and Hauppauge (Terry's) Roads.

PREHISTORIC POTENTIAL

A prehistoric site file search was conducted at the New York State Historic Preservation Office (NYSHPO). Archaeological sites recorded within 1 mile of the study area included:

- No sites recorded.

Indian foot trails passed through the vicinity. One such trail traversed along current day Montauk Highway. Although recorded historically, it undoubtedly existed prehistorically.

Assessing the known environmental and prehistoric archaeological data, we can summarize the following points:

- An intermittent drainage flows through the golf course on the County Soil Survey draining south to Green Creek approximately 1800 feet away. However, the USGS does not depict this stream.
- The project area contains level to some steep sloped topography with well drained and some graded soils.
- An Indian foot trail was reported in the vicinity of the project area.

No prehistoric sites are recorded near the project area.
In our opinion, the study area has a moderate potential for the recovery of prehistoric archaeological remains on level terrain which has not been graded.

HISTORIC POTENTIAL

Contact Period (Seventeenth Century)
At the time of European contact and settlement, the study area was probably occupied by the main branch of the large Patchogue tribe which inhabited the southern portion of the Brookhaven Township.

Eighteenth Century

In 1732 the Colonial Assembly passed an act to build the South Country Road through Islip (present day Montauk Highway). Before this, travel was largely restricted to the interior due to the numerous streams, intersecting southern Islip, making travel unsafe and inconvenient.

A wigwam was recorded along the aforementioned Indian foot trail (see Prehistoric Potential) in this area by Reverend Horton in the 1740's who likely visited there.

Nineteenth Century

The 1836 Colton map depicts the Sayville area with what might be Green Creek east of Connetquot River. Montauk Highway is shown but none of the adjacent roads to the project area are in (Figure 3 [of **Appendix J-1**]). During this century, the main occupations seemed to be farming, fishing, and lumbering. Sayville was a major source of wood, particularly pine, for New York City by 1830.

The 1858 Chace map shows Montauk Avenue, Greens Point, and what appears to be Green Creek. Neither Sunrise Highway nor any other nearby roads to the project area are in yet (Figure 4 [of **Appendix J-1**]).

By the middle of the century, most of the Town's forest had been decimated. In 1844, the railroad construction went through the best part of the remaining forest. Remaining forests cleared for shipbuilding, houses, and other buildings. Pine trees were turned into charcoal and burned in pits in the woods for use in the blacksmith forges before coal became popular. Population now was approximately 2602.

The railroad arrived in 1868 and shortly after Sayville became a bustling resort town.

The 1873 Beers map shows the adjacent Lakeland Avenue with no structures on or adjacent to the project area. The area is shown as becoming subdivided (Figure 5 [of **Appendix J-1**]).

Twentieth Century

The 1904 USGS shows the project area with bordering roads. Structures are seen possibly on or adjacent to the project area (Figure 6 [of **Appendix J-1**]).

An historic site file search was conducted at the New York State Historic Preservation Office (NYSHPO). Archaeological sites recorded within 1 mile of the study area included:

NYSM Site	**NYSHPO Site**	**Distance from APE** ft (m)	**Site Type**
	10305.000603	164 (538)	Franklin Avenue Site: 1920's foundation
	10305.000804 (B)	1380 (4528)	Union Cemetery and Jan Hus Statue: 1893 cemetery
	10305.000604	809 (2654)	Johnson Avenue Site: Mid 20th C foundation

Assessing the known environmental and historic archaeological data, we can summarize the following points:

- An intermittent drainage flows through the golf course on the County Soil Survey draining south to Green Creek approximately 1800 feet away
- The project area contains levels to some steeply sloped topography with well drained and some graded soils.
- An Indian foot trail was reported in the vicinity of the project area.
- Early twentieth century historic map documented structures were recorded possibly on or adjacent to the project area.
- One early twentieth century site was reported across the road from the project area.

In our opinion the study area has a higher than average potential for the recovery of early twentieth century historic archaeological remains.

FIELD METHODS

Walkover-Reconnaissance

Exposed ground surfaces (70 to 100 percent visibility) were subjected to a close quarters walkover, at 3 to 5 meter intervals, to observe for artifacts. Covered ground terrain was reconnoitered at about 15 meters (50 feet) intervals to observe for any above ground features, such as berms, depression, or rock configurations, which could be evidence for a prehistoric or historic site. Photographs were taken of the project area.

Shovel Testing

Shovel tests (ST's) were excavated at about 15 meter (50 foot) intervals across most of the project area. Tees, putting greens, sand traps, and water traps were not tested due to their heavily graded/manufactured landscape. The developed area around the clubhouse which included other buildings, roads, and parking lots was also not shovel tested. The fairways and roughs were subjected to shovel testing.

Each ST measured about 30 to 40 cm. in diameter and was dug into the underlying subsoil (B horizon) 10 to 20 cm. when possible. All soils were screened through ¼ inch wire mesh and observed for artifacts. Shovel tests and surface finds were flagged in the field. All ST's and SF's were mapped on the project area map at this time. Soil stratigraphy was recorded according to texture and color. Soil color was matched against the Munsell color chart for soils. Notes were transcribed in a notebook and on pre-printed field forms.

FIELD RESULTS

Field testing of the project are included the excavation of 1,016 ST's across the project area. No prehistoric artifacts or features were encountered. No historic artifacts or features were encountered. Nine mid-twentieth century buildings were on the project area consisting of the clubhouse, housing for some employees, utility buildings, bathrooms, etc.

The following is taken from the Phase 1b Addendum:

INTRODUCTION

Between June 20 and July 7, 2018, TRACKER Archaeology, Inc. conducted a Phase 1b Addendum archaeological survey for the proposed Island Hills subdivision in Sayville, Town of Islip, Suffolk County, New York. The purpose of the survey was to provide physical evidence for the presence or absence of archaeological sites on the project area. In 2006, a Phase 1a and 1b Archaeological Investigation was conducted on the bulk of this former golf course but buffers were excluded around the periphery adjacent to the neighboring streets. At that time, 1,016 shovel tests were conducted with negative results. The current investigation is a continuation of field testing and includes the remaining portions of the property planned for development.

The remaining project area is about 47 acres in size including buildings, parking areas, sand traps, golf tees, bulldozed areas, paved walking paths, etc. The current project area is limited to the areas along the roads and adjacent residential properties, about 150 to 300 feet wide corridors adjacent to Eleventh Street, Bohemia Parkway, Chester Road, Hauppauge Road, Carrie Avenue, and Sterling Place.

Field testing of the project area included the excavation of 583 ST's. Shovel testing began with ST number 1,017, since the 2006 shovel testing ended at ST 1,016. Vegetation consisted mostly a mowed lawn, with some tall grass (un-mowed) and weeds, and a light scatter of wooded areas. Two prehistoric isolated quartz debitage were recovered at ST 1,268. Eight radial ST's were excavated at 1 and 3 meters to the north, south, east, and west with no additional finds. No historic sites were encountered.

3.5.2 Anticipated Impacts

<u>2006</u>

The following is taken from the Phase 1 Archaeological Investigation:

CONCLUSIONS AND RECOMMENDATIONS

Based upon topographic characteristics, distance to other known prehistoric sites and an Indian trail, the property was assessed as having a moderate potential for encountering prehistoric sites.

Based upon topographic characteristics, distance to historic map documented structures, historic sites, and an Indian trail, the property was assessed as having a higher than average potential for encountering historic sties

The field testing included the excavation of 1,016 ST's on the project area. No historic artifacts or features were encountered. No prehistoric artifacts or features were encountered. No further work is recommended.

2018
The following is taken from the Phase 1b Addendum:

CONCLUSIONS AND RECOMMENDATIONS
During the course of the Phase 1b survey, 583 ST's were excavated. Prehistoric isolated finds were encountered. No historic artifacts or features were encountered. No further work is recommended for the project property.

3.5.3 Proposed Mitigation

- Neither of the two Phase 1 Archaeological Investigations revealed the presence of, or the suspected presence of, cultural resources, or historic or architecturally significant structures on the subject; no further investigation was warranted. As such, no mitigation measures with respect to cultural resources is necessary or proposed.

3.6 Emergency Preparedness

3.6.1 Existing Conditions

General Discussion of Emergency Preparedness
As the subject site is currently a vacant, closed former country club/golf course operation, no private emergency response or disaster recovery procedures (undertaken in response to natural disasters such as drought, flooding, infestation, lightning, hail, tornado, blizzards, hurricanes, nor'easters, earthquakes, coastal erosion, etc., or human-related disasters such as power failure, groundwater contamination, or wildfire)) are presently applied to or practiced on the property.

2014 Update to the Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan (2008)
The following description of the 2014 Update to the Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan of 2008 (hereafter, the "All Hazard Mitigation Plan") has been from the Executive Summary of that document.

The 2014 Update to the 2008 Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan was prepared in accordance with the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 requires states and local governments to prepare all hazard mitigation plans in order to remain eligible to receive pre-disaster mitigation grant funds that are made available in the wake of federally-declared disasters. To restate, by not participating in this process and adopting the resulting plan, municipalities will not be eligible to receive future pre-disaster mitigation grant funding (404 grant funds). It is also important to remember that pre-disaster mitigation grant funds are separate and distinct from those federal and state funds available for direct post-disaster relief (i.e. Public Assistance (PA) and Individual Assistance (IA)). The availability of those funds remains unchanged; if there is a federally declared disaster in Suffolk County, the affected municipalities will still receive immediate recovery assistance regardless of their participation in this plan.

However, DMA 2000 effectively improves the disaster planning process by increasing hazard mitigation planning requirements for hazard events and requiring participating municipalities to document their hazard mitigation planning process and identify hazards, potential losses, and mitigation needs, goals, and strategies.

Several major natural hazard events occurred since the adoption of the original 2008 Hazard Mitigation Plan (HMP) that signaled a call to action throughout Suffolk County to review the risks disasters pose and create solutions. In 2011 Hurricane Irene occurred and then 14 months later the worst natural disaster since 1938 struck Suffolk County- [Superstorm] Sandy. To date, properties still remain damaged and communities are still trying to recover from both Hurricane Irene and Sandy. This plan provided an opportunity for communities to learn from the past and strengthen policies and actions taken to reduce impact from natural disasters.

Suffolk County has seen much success in the implementation of the 2008 HMP. Proactive measures such as protecting critical infrastructure through the purchase of backup generators has proven to be a wise investment and strong pre-disaster preparation reduced damages seen in the aftermath of major disasters. Communities have also considered regulatory standards regarding land-use and zoning that exceed minimum requirements and provide the communities with greater capability to manage development without increasing hazard risk and vulnerability.

The process to update the Suffolk County HMP incorporated the four major tasks taken to develop hazard mitigation plans and their subsequent updates (FEMA 3, specifically:

Organize Resources: From the start, communities should focus on the resources needed for a successful mitigation planning process. Essential steps include identifying and organizing interested members of the community as well as the technical expertise required during the planning process.

Assess Risk: Next, communities need to identify characteristics and potential consequences of hazards. It is important to understand how much of the community can be affected by specific hazards and what the impacts would be on important community assets.

Develop a Mitigation Plan: Armed with the understanding of the risks posed by hazards, communities need to determine what their priorities should be and then look at possible ways to avoid or minimize the undesired effects. The result is a hazard mitigation plan and strategy for implementation

Implement the Plan and Monitor Progress: Communities can bring the plan to life in a variety of ways ranging from implementing specific mitigation projects to changes in the day-to-day operations of the local government. To ensure the success of an on-going program, it is critical that the plan remains relevant. Thus, it is important to conduct period evaluations and make revisions as needed.

The following Executive Summary is organized according to these general steps.

Suffolk County Multi-Jurisdictional Planning Process

DMA 2000 requires states to submit comprehensive Hazard Mitigation Plans (HMPs) to the Federal Emergency Management Agency (FEMA) to be eligible for future pre-disaster mitigation funding. Local governments, including counties, municipalities, tribal governments and special purpose districts must also develop plans. Suffolk County developed and adopted the original county HMP in 2008. The DMA 2000 regulations require that local plans be formally updated and adopted every five years, reassessing their risk and updating their local strategies to manage and mitigate those risks. To comply, Suffolk County and inclusive jurisdictions actively participated in the update of the 2008 Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan. Once the mitigation plan is completed and approved, the participating jurisdictions will continue to address and implement the findings, recommendations and mitigation strategies identified in this plan update.

Extensive outreach efforts by the Suffolk County Department of Fire, Rescue and Emergency Services (FRES) resulted in full participation of all municipalities, as well as the Shinnecock and Unkechaug Tribal Nations. Further, the Suffolk County Water Authority (SCWA) fully participated to achieve the ability to independently apply for grant funding.

It is noted that FEMA and the New York State Office of Emergency Management (NYSOEM) has long been interested in unifying all municipalities under countywide HMPs. The 2008 countywide HMP included eight of the ten Suffolk County towns and their inclusive municipalities. During this update, all municipalities in the County have fully participated in this planning process, resulting in a true countywide HMP. The Town of Islip and several of the villages were previously covered under single jurisdiction local HMPs, which have now been incorporated into this plan update. Further, the Town of Southampton and their inclusive villages conducted a concurrent hazard mitigation planning process, which has also been fully integrated into this countywide plan update.

Within this plan update process, Suffolk County and the participating jurisdictions accomplished the following:

- Developed a Steering Committee and Planning Committee;
- Sought and incorporated the input of the public and stakeholders;
- Reviewed and updated the hazards of concern;
- Profiled and prioritized these hazards;
- Estimated inventory at risk and potential losses associated with these hazards;
- Reviewed and updated hazard mitigation goals and objectives;
- Reviewed and updated the County and local mitigation strategies to address the identified risks and vulnerabilities;
- Updated and developed mitigation plan maintenance procedures to be executed upon plan approval.

The planning process involved a large number of Federal, State, Regional, County and local stakeholders.

As required by DMA 2000, the participating jurisdictions and Suffolk County have informed the public about these efforts and provided opportunities for public comment and input on the planning process. In addition, numerous agencies and stakeholders have participated as core or support members to provide input and expertise to the planning process. This HMP documents the process and outcomes of the jurisdictions' mitigation planning efforts. Announcements regarding the planning process were publicized in local newspapers and on the Suffolk County web site (http://www.suffolkcountyny.gov/RESPOND/). The RESPOND website also offered the general public and stakeholder groups an opportunity to provide their input through community surveys.

Note that the All-Hazard Mitigation Plan is the local agency response to a federal requirement under the DMA 2000 for local agencies to prepare disaster mitigation plans, in order to remain eligible to continue to receive pre-disaster mitigation funds. As such, the disaster-related mitigation and recovery recommendations and procedures of the All-Hazard Mitigation Plan are directed toward local governmental agencies and not to specific properties or applicants.

3.6.2 Anticipated Impacts

General Discussion of Emergency Preparedness

The proposed project will re-develop and re-occupy the site, so that there will be a potential for impact to the site's residents from natural and human-related disasters. However, it is expected that the project's conformance to Town and NYS requirements for engineering review, stormwater/drainage control, fire safety, evacuation, building construction and overall site development will protect the site and its residents from impacts from most if not all reasonably foreseeable natural and human-related disasters that could occur. It is also expected that local, Town, County and NYS emergency police, fire safety, health, and social services would be available to help protect the site and its residents during a disaster, by measures such as evacuation, direct intervention (e.g., dispatching firefighters to attack wildfires, or pumping of floodwaters, snow plowing, powerline repair, etc.). The site is not located within a flood plain area and therefore not subject to flooding. The site is located within convenient proximity to both the eastbound and westbound lanes of Sunrise Highway and therefore should evacuation become necessary, transportation systems are in place to permit vehicular access to major roads.

2014 Update to the Suffolk County Multi-Jurisdictional Multi-Hazard Mitigation Plan (2008)

The All-Hazard Mitigation Plan does not include recommendations specific to the project site or to the type of development represented by the proposed project. Generally, the types of disaster addressed in the All-Hazard Mitigation Plan focus that would apply to the subject site are related to stormwater/flooding and wildfires. As discussed above, it is expected that conformance to the applicable Town and NYS requirements for stormwater system design, and for conformance to applicable Town, County and NYS requirements for fire safety measures, will protect the site

and its residents from potential impacts from most if not all reasonably foreseeable natural and human-related disasters that could occur.

3.6.3 Proposed Mitigation

- The Applicant will ensure that the project incorporates appropriate building materials, mechanical systems, and design elements to support a safe built environment on the site that will protect the residents in case of a natural and/or human-related disaster.
- The Applicant acknowledges that the project design, construction, operation and maintenance will be subject to engineering, building/construction requirements and fire safety review by the Town.

3.7 Open Space and Recreation

3.7.1 Existing Conditions

The site is presently a closed, vacant former country club/golf course operation; it is not open to the public as an open space or recreational space, though evidence of unauthorized trespass is evident in places. As discussed in **Section 2.3.1**, the site is presently vegetated with the unmaintained remnants of the former golf course operation, including grasses on the fairways and rough, as well as the trees between each fairway. A number of public open spaces/recreational sites are located within one mile of the subject site, and include school fields, Town, Suffolk County and NYS parks, a Suffolk County Nature Preserve, and a National Wildlife Refuge (see **Figure 3-8**).

3.7.2 Anticipated Impacts

As the subject site is presently closed and unavailable to the public as an open space or recreational resource, the proposed project will not cause any reduction in the availability of such land to the public. To the contrary, the project will have the beneficial impact of increasing the acreage of public open space/recreational resources, by removing the existing perimeter fencing and developing a 25-acre active/passive park along the site's perimeter. This facility will be privately owned and maintained by the project's POA, but will be open to the public.

The proposed project will not encroach upon any of the existing park or recreational facilities in the vicinity. Given the on-site recreational amenities and public park space, it is expected that many residents will use these resources for their park interests. New residents may use existing public open space and recreational resources in the area; however, would not be expected to overburden these facilities as these public parks are large enough to accommodate all likely, day-to-day visitors and only intermittent, incremental use by some of the site residents would be expected. Finally, the number of local public recreational sites available to the project's residents would tend to spread the project's visitation geographically, to reduce the potential impact of visitation at any one site.

3.7.3 Proposed Mitigation

- The Applicant will fund and construct a 25-acre perimeter park, which will be owned, operated and maintained by the project's POA.
- Potential impacts on public open spaces and parks associated with increased usage would be offset by increased access/usage fees paid by such increased visitation.

3.8 Local Economy

3.8.1 Existing Conditions

The local economy pertinent to the proposed project is characterized by the demographics, employment and residential real estate market in the greater Sayville area and Central Long Island. The supplemental studies noted in **Section 3.2.2** were prepared to understand the local economy and to consider the benefits and potential impacts of the proposed project with respect to the local economy. **Appendix C-1** includes a market analysis that demonstrates the need for the proposed project and supports the proposed use as contributing housing stock that will assist in retaining millennials and those seeking apartment opportunities. **Appendix C-2** provides a fiscal and economic assessment that quantifies the anticipated tax revenue and school district surplus revenue after consideration of the cost of education of school age children expected to occupy the development. This study also quantifies construction jobs and operational jobs as well as the beneficial ripple effect on the local and regional economy. Tax revenue and job creation are important land use considerations, particularly given the beneficial aspects of expanded tax base and employment opportunities. **Appendix C-3** includes a real estate impact analysis intended to determine if the proposed land use will impact real estate values of properties proximate to the subject site. This study examines comparable situations and provides a professional assessment leading to the finding that the proposed project will not adversely impact real estate values in the area[18]. Finally, an analysis quantifying the economic impact of spending by residents of the proposed project on downtown Sayville merchants and the local economy is contained in **Appendix C-4**.

Existing conditions in the local economy are summarized from the bae urban economics report, Market Analysis for the Proposed Greybarn Project, Sayville prepared by bae urban economics and included in **Appendix C-1**.

<u>Demographics</u>

- In recent years, Central Long Island and the immediate project area have experienced stagnant population growth and household growth. Between 2010 and 2018, the number of households in Central Long Island increased by only 0.2%, while the number of households within 1.5 miles of the project site decreased by 0.2%.

[18] As indicated by bae urban economics: There is a dearth of apartment developments in this portion of Long Island and these are the best comparables available. Note that subsidized housing developments should not be considered as comparables, as Greybarn Sayville will be primarily market rate.

- Over three quarters of households in Central Long Island and nearly 70% of households in the immediate project area are family households. The lower proportion of family households in the immediate project area is driven by the high proportion of one-person senior households in the area.
- Overall, household incomes in Central Long Island and the immediate project area are significantly higher than in the New York Metro Area. The median income is $102,060 in Central Long Island and $96,254 in the immediate project area, as compared to $74,510 in the New York Metro Area. The slightly lower median household income in the immediate project area is due to the higher proportion of single-person households.
- The population in Central Long Island and the immediate project area is older than that of the New York Metro Area. The median age in Central Long Island is 41.3, while it is 45.3 years in the immediate project area. In the New York Metro Area, it is 38.7. Over thirty percent of residents in Central Long Island are over the age of 55, while the same is true for 35.6% of residents within 1.5 miles of the project site. The fastest-growing age groups in Central Long Island and the immediate project area are 25 to 34 and 55+.
- The majority of employed residents in Central Long Island (76%) and the immediate project area (77.9%) work in Long Island. Approximately 44% of Central Long Island residents and project area residents travel less than 10 miles to work.

Local Employment

- The largest employment sectors in Central Long Island are healthcare and social assistance (14.6% of all jobs), educational services (11.9% of all jobs), retail trade (11.9% of all jobs), and manufacturing (8.9% of all jobs).
- From 2010 to 2015, the fastest-growing sectors were construction (27.5% growth), accommodation and food services (17.1% growth), other services excluding public administration (15.5% growth), administration and support, waste management and remediation (14.6% growth), and transportation and warehousing (11% growth).
- The number of manufacturing jobs in Central Long Island remains steady, despite losses in the New York Metro Area. From 2010 to 2015, the New York Metro Area lost 8.2% of its manufacturing jobs, while Central Long Island saw a decline of only 0.1%.
- The largest publicly traded companies in Central Long Island are Henry Schein (21,000 employees), MSC Industrial Direct Co. Inc. (6,462 employees), and Verint Systems (5,100 employees). Other large employers include healthcare providers and institutions of higher education such as Stony Brook University and Suffolk County Community College.
- The places with the highest job densities include Melville, Hauppauge, Plainview, Farmingdale, Stony Brook, and Bohemia.
- Approximately 82.5% of Central Long Island workers travel from within Suffolk or Nassau County. Over half commute less than 10 miles, while 81.2% commute less than 25 miles.

Residential Real Estate Market

- In Central Long Island and the immediate project area, the majority of housing units were constructed between 1950 and 1979. Central Long Island and the New York Metro Area

experienced relatively significant housing inventory growth through 2009; however, since 2010, there has been very little housing inventory growth in either geography.

- Homes in Central Long Island are predominantly owner-occupied. Only 20.2% of housing units in Central Long Island are renter occupied, as compared to half of units in the New York Metro Area. In the immediate study area, one quarter of housing units are renter-occupied.
- As of the second quarter of 2018, the average rent for a market-rate two-bedroom apartment in the immediate study area was $2,308. This is slightly higher than the average two-bedroom rent in Central Long Island ($2,119). In the New York Metro Area, the average two-bedroom rent was $2,670 in Q2 2018. Market-rate rents in all three geographies have consistently increased since 2009. Beginning in 2015, rental rates in Central Long Island and the immediate project area began increasing even more sharply than in the New York Metro Area.
- Multifamily vacancy rates are relatively low in the New York Metro Area, Central Long Island, and the immediate project area. As of the second quarter of 2018, the average multifamily vacancy rate within a 1.5-mile radius of the project site was 1.9%.
- The majority of multifamily units in the immediate study area (96.6%) and in Central Long Island (91.1%) have one or two bedrooms. The New York Metro Area has a significantly larger proportion of studios (15.4%) and units with three or more bedrooms (8.1%)[19].
- Over half of multifamily units in the immediate project area are in buildings with between 301 and 400 units, while 35.3% are in buildings with between 51 and 100 units. In Central Long Island, 70% of multifamily units are in buildings with 101 or more units, while 38% of units are in buildings with 301 or more units.
- In the immediate project area, there are no Class A multifamily units. Approximately 43.4% of units are Class B, while 56.6% are Class C. In Central Long Island, 7.5% of units are Class A, 49.2% are Class B, and 43.3% are Class C[20].
- In the immediate project area, no multifamily units were constructed between 2009 and the second quarter of 2018. In Central Long Island, multifamily inventory increased by 7.5%, which is slightly higher than the growth rate in the New York Metro Area during this time period (6.2%). In Central Long Island, three bedroom units experienced the highest growth rate (19.9%).
- According to CoStar, as of July 2018, there were 458 multifamily units under construction in Central Long Island. Additionally, there are 7,736 units proposed. The majority of the proposed units (7,102) are part of the Heartland Town Square project in Brentwood.

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[19] As indicated by bae urban economics: The New York Metro Area, as defined by the US Census, is comprised of 25 counties in New York, New Jersey and Pennsylvania. While it does include New York City, is also includes many suburban areas with comparable density to Central Long Island, as well as many exurban and semi-rural areas with lower density. On the whole, it is a fair comparison. Note it is standard practice in market analysis to include three geographies: study area, a mid-geography (in this case, Central Long Island), and the metro region.

[20] As indicated by bae urban economics: The definitions, per CoStar, can be found on page 46 of the report [see **Appendix C-1].** Class A buildings are the highest quality buildings and are relatively new and have top amenities. Class B buildings ae older than Class A buildings, may or may not be professionally managed, and may have deferred maintenance issues. Class C buildings typically more than 20 years old and may have deferred maintenance issues.

- Most owner-occupied homes in Central Long Island and the immediate project area are single-family homes. Nearly 91% of homes that sold in the immediate project area from July 2017 to June 2018 were single-family homes, while only 9.2% were condos or townhomes. In Central Long Island, an even smaller proportion of homes that sold during this period were condos or townhomes (5.4%).
- Of the three geographies analyzed, the immediate project area has the highest median sale price ($415,000), followed by the New York Metro area ($385,000) and then Central Long Island ($360,000). With the exception of a few individual years in which the New York Metro Area's median home sale price matched that of the immediate project area, the project area has historically had the highest median sale price of the three geographies. The immediate project area is the only geography where the current median home sale price is higher than it was in 2008.
- An analysis of twelve comparable multifamily rental projects in Central Long Island revealed that the average rent per square foot of these projects ranges from $2.06 to $3.17. Apart from newer projects that have not yet fully leased up, vacancy rates in these developments are relatively low. The locations with the highest concentrations of competitive multifamily projects are Bay Shore, Farmingdale, and Port Jefferson.
- There are fewer comparable condominium projects in Central Long Island. Many of the condominium projects that offer similar monthly pricing are age-restricted retirement communities.

3.8.2 Anticipated Impacts

Potential impacts to the local economy are generally positive and beneficial. The proposed project will add new rental apartments in an area that is in need of this housing stock. The low vacancy rate of existing multiple family housing supports the need and demand for the project. **Appendix C-1** addresses the housing affordability and project demand as follows:

<u>Housing Affordability Analysis</u>

- The housing affordability analysis emphasized the limited supply of rental housing in Central Long Island. This especially impacts smaller households (two- and one-person households). An individual who earns median income ($81,700) can afford less than one quarter of the for-sale homes on the market. If that individual is not able to (or does not wish to) purchase a home, he can afford only 180 available rental units in the entire Central Long Island geography.
- The Greybarn Sayville project would provide 1,148 market-rate units affordable to households earning between 100 and 125% of AMI, as well as 217 workforce units affordable to households earning up to 80% of the US HUD Nassau/Suffolk Median Family Income.

<u>Assessment of Project Demand</u>

- According to the New York Metropolitan Transportation Council, Long Island is expected to grow at a faster rate from 2010 through 2050 than in previous decades. Driving this expected increase are employment growth, natural and migration-based population

growth, and land use and housing capacity constraints in New York City, which will push development outwards.

- From 2018 to 2040, Central Long Island is expected to gain 69,885 households, representing a 13.7% increase. Growth rates are expected to be even higher in the Town of Islip, where Greybarn Sayville will be located. From 2018 to 2040, the Town of Islip is expected to gain 20,858 households, representing a 20.1% increase.
- To achieve full lease-up by 2030, Greybarn Sayville would need to capture 4.03% of Central Long Island's projected 2018 – 2030 housing unit demand that remains after accounting for entitled and proposed units. This capture rate seems reasonable, given local market conditions and national trends that continue to bolster demand for multifamily rental housing. Several variables contribute to this growing demand, including economic factors that make homeownership unaffordable for a significant proportion of millennials, changing preferences and lifestyle choices among young adults, and rapidly growing senior populations looking to "downsize."
- Changing housing needs throughout an individual's life creates a cycle known as the "housing spectrum." Multifamily rental housing may be more practical, convenient, and affordable for younger and older households, while owner-occupied single-family homes meet the needs of families with children. Ensuring that there are adequate supplies of both rental and homeownership opportunities ensures that all types of households can meet their needs as their lives change.

Consequently, based on local rental communities and low vacancy rates, the proposed project fits within a rent and size increment that supports the local housing market and will help to meet existing demand for this type of housing.

There are positive and beneficial economic benefits to downtown Sayville expected to result from the project in the form of consumer demand to support local business. **Appendix C-2** provides a fiscal and economic assessment prepared by NPV which indicates an anticipated population of 2,705 residents, including 182 infants and toddlers aged 0-4 years old, 210 school-aged children (between the ages of five [5] and 17 years), and 2,313 adults aged 18 years and older from the 1,365 households. The median household income in the Greater Sayville Area $103,468. Local businesses will capture a portion of the spending associated with this income for food, apparel, entertainment, personal care products and services and other expenditures. The spending power of this population and income is significant, such that if just 10% of the household income were spent locally, this would represent over $14 million. As a result, Sayville and surrounding communities can expect economic benefits from spending by occupants of the Greybarn community as a result of the proposed project.

Appendix C-2 provides the NPV fiscal and economic report that includes the anticipated employees at the project including: types of jobs and potential for secondary impacts from labor pool that will serve the project. The 60.1 FTE direct employment positions created during Phase 6 (and upon full build-out and annual operations of the proposed project) of the development are projected to result in an indirect impact of 104.4 FTE jobs, and an induced impact of 42.8 FTE jobs throughout the region, bringing the total economic impact of operational employment to

207.2 FTE jobs during annual operations of Phase 6, and upon full build-out and annual operations of the proposed project. Projected salaries from operations will collectively total nearly $4.0 million per year, after full buildout of the proposed project. The $4.0 million in direct labor income is projected to result in an indirect impact of nearly $5.3 million and an induced impact of nearly $2.3 million, bringing the total economic impact of labor income to over $11.6 million during the annual operations of Phase 6, and upon full build-out and annual operations of the proposed project. Direct jobs include: Office Management, Administrative Jobs; Leasing Agent Jobs and Maintenance Jobs. Indirect and induced jobs include the following types: Employment services; Services to buildings; Maintenance and repair construction of nonresidential structures; Investigation and security services; Landscape and horticultural services; Full-service restaurants; Limited-service restaurants; Maintenance and repair construction of residential structures; Architectural, engineering, and related services. Therefore, the proposed project is expected to provide economic benefits in the form of job creation and beneficial ripple effect on the economy to Sayville and the region.

There is a clubhouse proposed for use and enjoyment of site residents, much like any multiple family community. The clubhouse amenities may include fitness centers, yoga and spin studios, screening rooms, club rooms, community kitchens, community workspace/library, and meeting rooms. The clubhouse is more for social activity within the community and is provided for the convenience of residents. The clubhouse amenities will not fulfill the needs of residents who will continue to require goods and services from outside the community. As a result, it is expected that the clubhouse amenities will result in an impact to existing establishments within the community. The occupancy of the Greybarn community will add significant spending power at the site, which will filter to the surrounding area in the form of consumer demand and sales by locate establishments thus providing additional economic benefit.

In terms of potential impact on home values within the surrounding area, and as previously referenced, **Appendix C-3** includes a study prepared by Breslin Appraisal Company, Inc. that addresses this issue. Excerpts from the study are provided in **Section 1.2.5**, and the overall finding of the study is reiterated below:

> Based upon this data as well as our general experience, it is our opinion that the development as proposed will have no adverse impacts on surrounding residential real property values, specifically those near Island Hills, and it will not adversely affect the community in any way. It will provide a needed element of housing stock for the community. We would, therefore, urge the town to look favorably on this application.

The real estate value report supports a finding that the proposed project will not adversely impact real estate values of homes in the surrounding area.

The project is expected to result in substantial tax revenue such that a total of $10,149,131 in annual taxes are expected to be levied, based on today's dollars, during a stabilized year of operations of the full project. The portion of tax revenue allocated to the Connetquot CSD is $6,480,320 which, when after considering the cost of education, is expected to result in a

$2,990,184 surplus to the school district. The other tax revenue will benefit other taxing jurisdictions.

The following is taken from the Executive Summary of the Economic Benefit Analysis to Downtown Sayville (see **Appendix C-4**).

Statement of Need

The Greybarn-Sayville PDD responds to the public need for increased quality rental housing opportunities in the area. Since the nationwide slump in the housing market around 2010, the demand for rental housing – especially for affordable and workforce units – is on the rise. This is particularly true on Long Island, which is characterized by higher property values and cost of living when compared to other parts of the state and nation. The lack of affordable housing has had a considerable negative economic impact on the region with respect to its young residents. Many businesses have been unable to find a skilled workforce and have therefore been forced to relocate off of Long Island. The PDD is responsive to this need, contributing to the long-term economic health of the community through the provision of rental housing opportunities. The PDD has been designed using smart growth development principles, by incorporating features and characteristics including internal walkability, sense-of-place features, safe and convenient pedestrian access to on-site amenities (within the site and limited to use of the site's residents), and on-site recreational amenities for its residents. The proposed project will provide a significant number of rental apartment units, thereby providing a positive contribution toward addressing demand for such housing needs in the Town.

In addition, the Greybarn-Sayville PDD will greatly contribute to the long-term economic health of downtown Sayville's local economy. The new residents living within the 1,365 multi-family residential rental units proposed for development at the Greybarn-Sayville PDD will patronize Sayville's downtown establishments, bringing significant new disposable income to the merchants in the community. Consumer activity will ripple through the local community, creating beneficial fiscal and economic impacts throughout Sayville, the Town of Islip, Suffolk County, and the region as a whole.

Key Findings

<u>Demographic and Economic Characteristics</u>

- It is estimated that there are 1,514,342 persons residing within 502,907 households in Suffolk County, as of 2018. These households have a median household income of $99,894.
- Sayville has an estimated population of 16,975 persons residing within 5,976 households, as of 2018. These households have a median household income of $108,315 – slightly higher than Suffolk County's median household income.
- Sayville has a strong local economy, with a downtown that attracts both a local and regional population. There are 706 businesses located within Sayville, which employ 6,328 persons.
- The largest industry sectors in Sayville, in terms of the number of businesses, include retail

trade (140 businesses), other services (95), construction (65), and food services and drinking places (55). In terms of the number of employees, the largest industry sectors include retail trade (1,219 employees), health care and social assistance (1,142), education (921), other services (568), and food services and drinking places (530).

Housing Affordability

- The proposed Greybarn-Sayville PDD is anticipated to add a total of 1,365 micro, one-bedroom and two-bedroom units. Monthly rental rates range from $1,527 for a one-bedroom affordable unit to $2,975 for a two-bedroom market-rate unit.
- Assuming that a household will spend no more than 30% of their annual income on rent, qualifying households for the Greybarn-Sayville PDD would have to earn annual household incomes to afford to reside at the proposed PDD, as shown in **Table 3-15**.

TABLE 3-15
HOUSING AFFORDABILITY THRESHOLDS

Type of Unit	Monthly Rental Rate[21]	Household Income to Afford
One-Bedroom Market-Rate Unit	$2,450	$98,000
One-Bedroom Affordable Unit	$1,527	$61,080
Two-Bedroom Market-Rate Unit	$2,975	$119,000
Two-Bedroom Affordable Unit	$1,878	$75,120
Micro Unit	$1,750	$70,000
Weighted Average: All Units	**$2,612**	**$104,485**

Source: Monthly rental rates provided by R Squared Development, LLC; Analysis by Nelson, Pope & Voorhis, LLC, via IMPLAN software.

- On average, a given rental unit within the proposed project costs $2,612 per month, necessitating a household income of $104,485 to afford to reside there. This is comparable, yet slightly higher than (104.6%) Suffolk County's median household income of $99,894, and slightly lower than (96.5%) Sayville's median household income of $108,315.

Household Expenditures

- According to the latest estimates derived from the United States Bureau of Labor Statistics' Consumer Expenditure Survey, the average household located within Suffolk County spent a total of approximately $128,225 on goods and services in 2018.
- The following goods and services have the greatest likelihood of being purchased and/or consumed in a downtown setting, such as Sayville:
  - Apparel and services
  - Entertainment and recreation
  - Food away from home
  - Food and nonalcoholic beverages at home

[21] All project-based revenues provided by R Squared Development, LLC, in October 2018.

  - Alcoholic beverages
  - Health
  - Household furnishings and equipment
  - Housekeeping supplies
  - Personal care products
  - School books and supplies
  - Smoking products
- These goods and services total $26,099 per year, or 20.4% of Suffolk County residents' consumer spending.
- This figure was multiplied by 104.6% (Suffolk County's median household income compared to the median household income to afford a unit within the proposed PDD) to reflect the annual household expenditures that are anticipated to occur among households residing at the proposed Greybarn-Sayville PDD. The annual expenditures on these goods and services is estimated to total $27,298 per household.
- It is important to note that expenditures are spread out, among retailers and providers throughout the region, and all expenditures will not be spent at downtown Sayville retailers and establishments. As such, it was necessary to apply an estimated share of expenditures that would be spent in downtown Sayville. Further, it was necessary to apply an estimated capture rate, or share of expenditures, that would be spent in downtown Sayville. Standard capture rates range from a conservative 10% of sales on items that households tend to purchase in a regional-type of shopping center or big box retailer, to a more significant capture rate of 25% of sales on items that are largely purchased closer to home. Given these assumptions, it is estimated that approximately $3,972 in expenditures per household, would be spent in downtown Sayville.
- When this figure of $3,972 is applied to the 1,365 households proposed for development at the Greybarn-Sayville PDD, it is projected that these residents will contribute a total of $5.4 million in buying power to downtown Sayville retailers and establishments. These estimated expenditure figures reflect a conservative estimate as it pertains to local market capture and household spending. Assuming an attractive mix of goods and services among Sayville's downtown merchants, a new high-end residential community in a desirable location like that of the proposed project is likely to result in even greater household spending, and a more substantial share of local spending at downtown merchants that are within close proximity to the proposed project. Moreover, new businesses may choose to locate downtown with the influx of 1,365 new households to patronize their establishments.

<u>Anticipated Economic Impacts</u>

- It is projected that household income will total $138.0 million among all 1,365 units proposed for development.
- As seen in **Table 3-16**, it was determined that $138.0 million in household income would support $119.3 million in spending (output) throughout Suffolk County, as well as 742.4 jobs and $42.7 million in labor income per year, upon full build-out and annual operations of the proposed project.

TABLE 3-16
ECONOMIC IMPACTS OF HOUSEHOLD INCOME DURING A STABILIZED YEAR OF OPERATIONS: ANNUAL

Parameter	Suffolk County	Downtown Sayville (Projected)
Output	$119,270,239	$5,963,512
Employment	742.4 jobs	37.1 jobs
Labor Income	$42,407,076	$2,120,354

Source: Analysis by Nelson, Pope & Voorhis, LLC, via IMPLAN software.

- A conservative 5% capture rate was applied, to project the share of these countywide economic benefits that merchants in downtown Sayville could capture. Such absorption figures reflect a conservative estimate, as a new high-end residential community in a desirable location like that of the proposed project is likely to result in substantial household spending, and a greater share of local spending at downtown merchants that are within close proximity to the proposed project.
- In addition to market absorption, it is important to note that downtown businesses are also greatly influenced by its unique and specialized offerings, quality and location, price points, its marketing effectiveness, and its other advantages or deficiencies. No conclusive determination can be made in advance on the actual ability, or inability, for local businesses to capture a portion of market demand. However, in an effort to capture the most demand from the 1,365 new households proposed for the PDD, various marketing techniques should be considered among downtown retailers. Such considerations are beyond the scope of this analysis, but would include the provision of attractive goods and services (including various types of restaurants, food services and drinking places, entertainment and recreational offerings, personal care and sundries, and other apparel and services), appropriate pricing, the physical appearance of the establishment and its setting within a vibrant downtown area, walkability and accessibility, traffic, parking, as well as signage, visibility and related marketing efforts, among others.

When combined with sound economic and market conditions, there is a strong likelihood of success among retailers in downtown Sayville. The Greybarn community will provide patrons for, and spending in, existing establishments in downtown Sayville. This will support jobs, spending, sales tax and business success that economically benefit the community and the region.

3.8.3 Proposed Mitigation

- The proposed project contributes to the local economy in a positive and beneficial way and therefore no mitigation is proposed or necessary.

SECTION 4.0

OTHER REQUIRED SECTIONS

4.0 OTHER REQUIRED SECTIONS

4.1 Construction-Related Impacts

Section 1.6 describes the general construction process and presents more detailed information on various aspects associated with construction of the proposed project. **Section 4.1** below describes and analyzes the anticipated impacts associated with these construction activities, and describes the proposed mitigation measures.

It is noteworthy that the phased nature of the proposed project generally causes construction impacts to be limited in scale to only the impacts associated with the development in that phase, and will be limited in duration to only the time needed to construct the units and amenities in that phase.

4.1.1 Noise

The construction phase of the project will include site grading and clearing, excavation and building activities that will result in elevated noise levels from vehicle engines, stationary equipment/generators, dump trucks, excavating equipment (e.g., bulldozers, excavators, front-end loaders and similar earth moving equipment), and construction/building activities (involving trucks and use of stationary equipment/generators such as cement mixers/spreaders).

Sound levels during construction are intermittent as well as variable depending on the type of work being completed during various phases of the construction process; however, such impacts are limited in both geographic extent and in time, and measures can be implemented to reduce these potential impacts. Noise levels will vary based on the construction phase, but typically heavy equipment utilized during the site preparation phase results in the highest levels of noise associated with development. Generally, the clearing/grading operation, typically the noisiest and therefore most severe impact to the neighborhood, is generally completed over a short time span.

A construction entrance would be placed at the Lakeland Avenue site entrance and the development area is large enough to allow staging and construction to occur within the site boundaries, thus limiting potential construction traffic disruption to the portion of Lakeland Avenue between the site entrance and NYS Route 27, and minimizing potential impact to neighboring properties as well.

Equipment-related construction noise is expected to be in the range of 76 to 88 dBA at a distance of 50 feet. However, clearing and grading activities will not occur closer than about 60 feet from the site's perimeter and, except for the nine homes along the west side of Chester Road, the nearest houses are across the bordering roadways, and so are an estimated 50 additional feet away. For the Chester Road properties, the perimeter park (if that development scenario is approved) is designed to be deeper, to provide more noise buffering for the rear yards of these homes. It is noteworthy that the above separation distances represent the minimum separations

expected, as they have been taken from the interior edge of the public perimeter park; the separations between receptors and the proposed buildings are substantially greater (at least 100 and up to about 220 feet from the site's border). During and after construction, a vegetated perimeter buffer will be preserved to attenuate noise generated on the project site.

Table 4-1 provides sound levels of typical construction equipment anticipated to be used at the project site, audible at a distance of 50 feet. However, at a distance of 100 feet (the anticipated minimum distance to the nearest residential receptor, associated with site clearing and grading phase operations), sound levels are expected to be attenuated, thereby reducing potential impacts to these receptors. This attenuation is "the inverse square law", in which noise generated by a point source (e.g., a piece of construction equipment) is reduced by 6 dBA for every doubling of the distance between source and receptor. The loudest noise levels of equipment listed in **Table 4-1** are 88 dBA, as measured at a distance of 50 feet. Thus, at a distance of 100 feet, these noises would be reduced to 82 dBA which, as listed in **Table 3-11**, would be "annoying", and characteristic of a busy traffic intersection. This represents the highest level of noise impact expected, as other noise-generating construction activities would be farther from these receptors (150 to 270 feet), so that attenuation would be greater, and would thereby cause lesser impacts.

TABLE 4-1
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Item	Noise Level at 50 Feet (dBA)
Air Compressor	81
Asphalt Truck	88
Backhoe	85
Compactor	80
Concrete Mixer	85
Concrete Vibrator	76
Dozer	87
Dump Truck	88
Front End Loader	84
Generator	76
Hoist	76
Impact Wrench (steel bunting)	88
Motor Crane	83
Pneumatic Tools	85
Pump	76
Roller	80
Scraper	88
Shovel	82
Truck (medium & heavy)	88

Additionally, as noted above, potential construction noise impacts would be intermittent, episodic and temporary, so that the noise impacts would also be limited in duration. Construction noise is inevitable in the short term and will be audible to surrounding residents; however, this impact is unavoidable and will be mitigated by limiting construction during hours proscribed by the Town of Islip Code in Chapter 35. Construction-related activity is exempt from the maximum sound levels as long it occurs between 7 AM and 8 PM. Contractors will be required to limit the hours of construction to within the period 7 AM to 6 PM (see below) on weekdays only (no construction activity is permitted on weekends and holidays) under Chapter 35 of Town Code.

Based on the above analysis, no significant, long-term construction noise-related impacts are expected.

An analysis was performed to consider whether construction noise would result in disturbances at the Edward J. Bosti Elementary School and, if so, to determine whether mitigation measures should be implemented or construction in portions of the site be limited to summer months when school is not in session. Based upon this "worst case" analysis, at the closest location where construction is to occur (1,300 feet from the school property) and assuming the use of three construction sources with individual sound pressure levels of 89.0 dBA (when combined utilizing decibel addition results in 93.8 dBA), there is a minimal increase in the sound level of 1.6 dBA, which is barely discernable. The majority of construction will be located at a much greater distance and will be further attenuated and thus, no significant impact is anticipated, nor is there a need to modify the construction schedule to account for the school year.

4.1.2 Odors and Dust

Possible impacts to local air quality that could occur during construction include the generation of dust (airborne particulate matter) during clearing and grading of the property, from unvegetated areas and from material tracked off site and deposited on adjacent streets. The potential for impact during construction with respect to the generation of airborne dust (and specifically, fugitive dust that reaches neighboring properties) could result from activities related to clearing, transfer of soil, and regrading; and following regrading, the presence of bare soil which can become airborne in windy conditions. There are many variables that affect potential dust generation and the potential for impacts. Dust emissions can vary substantially from day to day, and depend upon the level of activity, type of activity, prevailing meteorological conditions, moisture content and silt content of the soil (i.e. particles smaller than 75 microns in diameter).

To mitigate potential for erosion and generation of fugitive dust, control measures are to be employed during construction. Water trucks are to be utilized for suppression of dust during land clearing and grading activities. Unvegetated areas are to be seeded or planted with other groundcovers as soon as is feasible following regrading, and will continue to be monitored and sprayed during dry periods to prevent dust generation. Grading activities that could potentially generate airborne emissions will not be conducted if winds are in excess of 15 mph. Finally, the use of rumble strips is the control method proposed to be employed at the construction exit to

minimize the quantity of material that is tracked off site.

Erosion and associated dust control measures will conform to applicable Town requirements; these mitigation measures are expected to include, but not be limited to, street sweeping on adjacent roadways, the use of groundcovers and seeding, drainage diversions, soil traps, water sprays and minimization of the time span that bare soil is exposed to elements, to minimize the potential for impacts to sensitive on- or off-site natural or developed areas. The applicant has successfully applied control measures such as "rumble strips" (which cause truck tires to shed any mud trapped within the tire treads), and will install same at the construction entrance to reduce soil on truck tires from being tracked onto adjacent roadways, thereby reducing the potential for dust to be raised in order to mitigate this potential construction related impact. Overall, development of the subject properties is not anticipated to result in significant erosion/sedimentation or stormwater impacts due to the use of proper site grading procedures, implementing erosion controls and, for the long-term, use of properly-designed drainage systems, and particularly to conformance to the Town-required measures specified in the SWPPP and Erosion Control Plans and subject to the oversight of the Town Building Department.

4.1.3 Trip Generation, Vehicle Access, Parking, and Loading/Unloading & Staging Areas

As described in **Section 1.6.1**, it is expected that the construction entrance will be located at the existing site vehicle entrance on Lakeland Avenue. As it is also expected that the majority of truck trips to and from the site would use NYS Route 27 (Sunrise Highway) to approach and depart the area, the portion of Lakeland Avenue that these vehicles would utilize will be limited. This would also reduce the potential impacts related to traffic flow during construction to this limited portion of Lakeland Avenue, as well as the potential impacts from air, noise, odors, and dust associated with truck traffic to the residents along this portion of Lakeland Avenue.

Also as noted in **Section 1.6.2,** construction activities would be limited to the hours of 7:00 AM to 6 00 PM on weekdays and, if necessary, on Saturdays. Generally, it is expected that school buses will be operating in the area on weekdays between 6:30 AM and 9:00 AM, and 2:00 PM and 4:30 PM. It is expected that construction workers would arrive prior to 7:00 AM, and depart after 6:00 PM so that interactions with school buses may occur from construction worker traffic in the mornings (as workers would depart after school bus operations have ceased in the evening). Truck trips for material and equipment deliveries and pick-ups could occur at diverse times between 7:00 AM and 6:00 PM, throughout the workday, but would take place primarily in the mid-morning hours (when workers would be present to receive/administer such deliveries/pick-ups), and outside the hours off school bus activities. As a result, interactions between truck trips and school buses are not expected, as trucks would not generally be traveling in the area when school buses are also present. This would tend to minimize the potential for accidents or impacts to school bus drop-offs, pick-ups and travel along Lakeland Avenue, or to any school-related pedestrians. Generally, construction vehicle traffic and its impacts would be temporary in duration and would occur on roads that have sufficient capacity to accommodate this traffic with minimal potential for impact. As a result, no significant or long-term construction or safety impacts to local roadways or the residents in the area are anticipated.

It is expected that areas for construction worker parking, truck loading/unloading, and material storage/staging will be designated within each Phase area, at the onset of development of each Phase. Assuming that the project's two main internal roadways will be installed in Phase 1, the site's residents will always have two vehicle accesses available that would not serve construction traffic, in case those drivers choose to avoid interactions with construction trucks using the third site vehicle access on Lakeland Avenue.

4.1.4 Excess Soil Disposition

As noted in **Section 1.6.6** and based on a preliminary analysis, it is expected that 46,840 CY of excess soil generated during grading activities will have to be removed from the site. Assuming that trucks having a capacity of 40 CY are used to remove this material, a total of 1,171 truckloads would be required, or 2,342 truck trips would come to and depart from the site. Soil removal is a temporary condition that will occur during construction activities at the site. Truck access to the site is via Sunrise Highway, a major arterial roadway/state highway. The convenient access to Sunrise Highway and the short-term nature of this activity minimizes the significance of this impact. Control measures are outlined below with respect to further mitigation of these activities.

With respect to potential impacts from the soil removal process (such as dust and truck and equipment noises), these impacts will be temporary in duration, would be limited to the project site and, potentially, the neighboring residences, would be limited to weekday hours, and would conform to any and all Town requirements for specific hours of operation.

An off-site re-sale and transfer location will be used to dispose of the excess soil; the specific location has not been determined as of yet, but the trucks from the site will use major roadways to the greatest extent practicable to approach that facility. As such, all of the loaded trucks will depart the site via northbound Lakeland Avenue, and turn onto NYS Route 27 (Sunrise Highway) to depart the area. In this way, impacts to the residences along Lakeland Avenue will be limited to the fewest residences possible, and impacts to locales to the south will be eliminated altogether. The Applicant is willing to agree to a Town-specified limitation on the location of the construction entrance and/or use of Lakeland Avenue in this regard, to be established during the site plan review and approval process.

In any case, impacts would be limited in duration and geographic scope and would not be expected to be significant given the close proximity of a major east-west roadway.

4.1.5 Proposed Mitigation

- A video record of existing roadway conditions will be prepared prior to the start of construction, to establish baseline conditions. At the completion of construction, any and all damage to local roads and/or roadway improvements that may have been caused by construction activities related to the project will be repaired or replaced by the Applicant, at the Applicant's expense, as directed by the Town Highway Department. Work for such repairs

will be funded via a Letter of Credit at an appropriate level, to be determined by the Town as part of the site plan application review.

- Construction-related impacts such as dust raised by truck movements and odors from truck and/or equipment exhausts may occur; however, such impacts are limited geographically, and would be temporary in duration.
- Short term impacts may include dust, noise, truck activity on roads and disturbance in the area. Truck access will be only from the new site access on Lakeland Avenue, and all equipment, materials and trucks will be stored and staged within the site.
- A water truck will be provided during construction to wet dry soils when necessary.
- Groundwater impacts which may occur during construction activities could potentially result from recharge of stormwater containing substance from building materials and equipment stored on-site. Building materials are anticipated to be inert and therefore are not expected to have an adverse impact on groundwater beneath the site. Equipment stored on-site which will be utilized during clearing and construction activities will be properly maintained and reputable contractors will be used for all site work.
- Potential noise impacts associated with construction activities will be mitigated by ensuring that these activities comply with the Town of Islip Noise Code Chapter 35, which specifies maximum permissible sound pressure levels.
- Noise-dampening practices will be utilized during construction to minimize the impact on surrounding areas including keeping all mechanical construction equipment maintained in good working order to minimize noise levels.
- The construction process will conform to the SWPPP to be prepared for the project and reviewed and approved by the Town.
- The erosion control measures to be implemented conform to applicable Town requirements and are expected to include, but not be limited to, use of groundcovers, drainage diversions, soil traps, water sprays and minimization of the time span that bare soil is exposed to erosive elements.
- Areas designated for construction worker parking, truck loading/unloading, and material storage/staging will be located within the project site, and will thereby mitigate potential impacts to the Lakeland Avenue corridor.

4.2 Cumulative Impacts

Cumulative impacts are the potential impacts of a proposed action taken in conjunction with other active or anticipated nearby development projects, where the sum may potentially result in cumulative impacts that are greater than the individual impacts from each project. An analysis of cumulative impacts is generally required within a DEIS when it is expected that multiple projects within the same area may result in a greater cumulative impact than is suggested by impact analyses of the individual actions.

As described in The SEQR Handbook (**NYSDEC, 2010**), cumulative impacts are:

> Cumulative impacts occur when multiple actions affect the same resource(s). These impacts

can occur when the incremental or increased impacts of an action, or actions, added to other past, present and reasonably foreseeable future actions. Cumulative impacts can result from a single action or from a number of individually minor but collectively significant actions taking place over a period of time. Cumulative impacts do not have to all be associated with one project sponsor or applicant. They may include indirect or secondary impacts, long-term impacts and synergistic effects.

Cumulative impacts are analyzed in this section, in fulfillment of SEQRA requirements. The analysis includes the following components. First, reasonably foreseeable pending projects are identified that could collectively result in cumulative impacts. Then, each impact category is discussed with respect to potential impacts and how these impacts could potentially be escalated as a result of some combined set of actions, or if no such cumulative impact is expected, this is so noted. The combination of these analyses provides a complete cumulative impact assessment in fulfillment of SEQRA.

The applicant offers sewer main infrastructure as a no-cost monetary benefit to the Town of Islip. Such infrastructure may be used for treatment of existing wastewater flow generated in the downtown Sayville area, which provides a substantial nitrogen environmental reduction benefit based on existing conditions. The Town will determine when and how such sewering will occur. To realize this benefit, the Town will need to form a sewer district which will include a map and plan and rate/cost information for connectees. Once the service area of the district is determined, additional analyses may be needed to assess potential growth based on the district, existing zoning, Town comprehensive planning efforts and land use analysis. Given these factors, the offer of sewer main infrastructure remains a monetary benefit to the Town to address groundwater and downgradient surface water impacts from existing development.

4.2.1 Other Pending Projects

As part of the background information required for the TIS, the Town Department of Planning & Development was contacted with respect to other active or reasonably foreseeable future actions on sites in the vicinity of the project site. As advised by that department, the following proposed planned projects were included:

- **Ronkonkoma Hub** – This project is a Transit Oriented Development which is currently under construction in the vicinity of the Ronkonkoma Train Station generally bounded by Union Street to the north, Village Plaza Drive to the east; Ronkonkoma Avenue , Garrity Avenue and Hawkins Avenue to the east; and the railroad tracks of the Long Island Railroad to the south, in the hamlet of Ronkonkoma, Town of Brookhaven, Suffolk County, New York. The Ronkonkoma Hub TOD is a mix of residential, office, retail, medical office, hotel and restaurant uses. The project is under construction with an expected completion date of 2027. The 2027 completion year is beyond the 2026 completion year of the proposed project. However, to perform a conservative analysis, the Ronkonkoma Hub project traffic was included in the analyses of the final phase (Phase 6) of this project.

- **Islip Pines** – This project is a mixed-use development that is located on the north side of the NYS Route 27 North Service Road just west of Beacon Drive in the Town of Islip, Suffolk County, New York. The Islip Pines project is a mix of residential, office, retail, industrial/research, hotel and restaurant uses. Based on information obtained from Stonefield Engineering, the engineer preparing the traffic study for Islip Pines, Islip Pines is proposed to be constructed in two (2) phases:

    - Islip Pines Phase 1 will be completed in 2022 (2022 Build year) and comprise of 350 residential units, 214,660 SF of retail space and 51,218 SF of Civic space.
    - Islip Pines Phase 2 will be completed in 2027 (2027 Build year) and comprise of 818,130 SF of Industrial/Research space, 200-room Hotel, 277,140 SF of retail space and 302,820 SF of office space.

  The Island Hills project will be constructed in 6 phases with Build years of 2021, 2022, 2023, 2024, 2025 and 2026. Based on this phasing, Phase I of the Islip Pines project was included as a planned development in Phase 2 (2022), Phase 3(2023), Phase 4(2024), Phase 5 (2025) and Phase 6 (2026) of the proposed project. To perform a conservative analysis, a combination of Phases 1 and 2 of the Islip Pines projects was included the traffic analyses for Phase 6 of the proposed project. No other planned developments were considered under Phase 1 of the Island Hills project.

4.2.2 Resource Impact Assessment

Soils and Topography

Soils and topography are site-specific characteristics having potential limitation that would be dealt with on a site-specific basis as each development application is reviewed by Town engineering staff. A combination of pending projects does not represent a significant loss of unique or agricultural soils or topographic features, and therefore can be evaluated and protected as needed based on specific project designs.

Water Resources

Generally, the primary sources of impact to groundwater quality are by the recharge of nitrogen in sanitary wastewater, and by the recharge of stormwater. As described and analyzed in this document, the proposed project will be served by an on-site STP, conforming to SCSC Article 6.

In general, all projects are subject to the review and approval of the SCDHS, ensuring that no impacts to groundwater quality would occur from any one proposal, and thereby minimizing the potential for adverse cumulative impacts to groundwater from nitrogen in wastewater. All stormwater generated on each site will be retained on-site, to be recharged through a comprehensive system of drainage facilities. The design and installation of these systems will be subject to the review of the Town, thereby ensuring that these systems will operate properly. In this way, the potential for adverse cumulative impacts to groundwater resources from stormwater will be minimized.

Surface water impacts of significance relate to contaminant discharge to groundwater that could flow toward surface water bodies particularly Greens Creek and Great South Bay, and/or from stormwater runoff that is improperly or inadequately controlled and could impact surface water via surface flow. The sanitary wastewater treatment system for each of the projects evaluated herein will be subject to the review and approval of the SCDHS, to ensure that the treatment facilities would operate within applicable standards, and thereby minimize the potential for impact to surface water bodies. Additionally, Town engineering requirements prohibit a site design that would allow runoff from exiting a site, which is a secondary layer of protection for surface water resources. Thus, the features of the project itself, as well as its conformance to the County and Town regulations designed to protect this resource, will ensure that no cumulative adverse impacts to surface water resources including Greens Creek and Great South Bay would occur.

Ecology

On a site-specific basis, each project and its site must be subject to a thorough review of ecological resources, which would include field inspection, identification of sensitive species or habitats, contact with the Natural Heritage Program and other evaluations. Protection of these resources would therefore be ensured for each site so that, on a cumulative basis, ecological resources inventories and impact evaluations will also occur.

Air Quality

It is expected that the nature of the three projects evaluated herein will not include any activities that would include a potential for impact to air quality from emissions of toxic or hazardous gasses. Generally, the highest potential for adverse air quality impacts is associated with vehicle exhausts, so that the magnitude of anticipated trip generations for each proposal would be proportional to its potential for air quality impacts. The traffic-related impacts of each project is subject to analysis in the form of a TIS, the output of which is in turn used to calculate the potential for adverse air quality impact, specifically at the intersections potentially most. Impacted by the vehicle trips generated by the project.

Each of the three projects will have been subject to a project-specific TIS, so that the potential impacts at the intersections studied will have been determined (the TIS for the proposed project specifically included the trips generated by the other two projects in its cumulative impact analysis). It is standard procedure during site plan review that, for intersections expected to experience a net decrease in LOS to D, E, or F, the Town would require a Level I Screening Analysis be conducted per NYSDOT TEM. In conclusion, the potential that a detailed air quality screening analysis may be required by the Town during its review of each of the three projects SEQRA review of each of the three projects would ensure that no cumulative adverse impacts to air quality would occur.

Vehicle Traffic, Transportation and Roadways

Traffic associated with the proposed project is addressed through a full TIS that considers other identified pending projects; however, no other pending projects were identified by the Town. Site specific TIS documents are used to assess project impacts, and any future such reports would

consider pending projects at that time, thus ensuring that potential traffic impacts are addressed through mitigation and improvements, if necessary. The TIS for the Greybarn-Sayville PDD is included in **Appendix F-1**, and includes consideration of the traffic-related effects of the two cumulative projects noted above. These other projects will be subject to separate reviews to determine their potential traffic impacts, and so will build on the analysis provided herein with respect to their cumulative impacts. Site plan review and curb cut permits will provide forums for further consideration of traffic and appropriate mitigation. As a result, there is a framework for consideration of actions under site-specific review to ensure that cumulative environmental impacts would not occur.

Land Use, Zoning and Plans

All sites are subject to Town zoning regulations and review under applicable land use plans. In addition, each proposal is subject to environmental review under SEQRA. These reviews will ensure that the pending projects will be consistent with the Town's overall goals, such that no cumulative impacts would be expected.

Community Facilities and Services

The economic benefits resulting from proposed developments are projected to include increased tax revenues, mortgage recording taxes, and increased revenue streams throughout the community.

While multiple/future applications would combine to incrementally increase the demand upon local community services (e.g., fire and police protection, utilities, and solid waste handling), these services will receive an increase in funds from the tax revenues generated from these developments, which would enable these service providers to continue to fund sufficient capability to provide services.

Community Character

Each of the other two pending projects evaluated here would change the appearance of their site. Additionally, aspects of each of these other pending projects such as noise and odor generation, lighting system design, and demographic character would also contribute to establishing the character of each of these developments, and therefore of the potential for impacting that of the surrounding community. Generally, the nature of the Ronkonkoma Hub and Islip Pines projects are such that no significant generation of noises or odors would be associated with either proposal, minimizing the potential for impacts tot their respective communities. With respect to fugitive lighting impacts, exterior lighting would be expected for each project, but each system would be professionally designed and operated under appropriate Town Code requirements, which regulations are designed to minimize potential lighting impacts in the first place. It is acknowledged that there would be substantial impacts to the demographic character of the community from each project, due to added population, added school-age children, and increased employment. However, as noted below, this cumulative effect on the surrounding community would be mitigated by the separation between the three projects evaluated here reducing the potential for cumulative impacts because the impacts of each would be separated geographically, distributing the impacts of each geographically as well.

If these three projects were located in proximity to each other, there would be an increased potential for cumulative impacts to occur to the community's character, as the effect of the types of impacts noted above would be heightened by concentrating their individual impacts into a limited area. However, the three projects under evaluation here are located in different communities (Sayville, Ronkonkoma and Holbrook).

Additionally, the uses to be established on these sites will have been subject to the review and approval of appropriate Town entities, ensuring that sufficient scrutiny has been paid to potential impacts specific to the community in which each project is located. The context of these sites in the area is regulated under the Town Zoning Code, and site plans are subject to review by the Town Planning Board. Each project will be required to conform to zoning (in terms of type of use proposed, building bulk and height, setbacks and retention of natural buffers, etc.) which relates to their locations and surroundings, which would tend to minimize the potential for adverse impacts on the character of the community. This is the case for the proposed project in relation to its neighbors along the bordering roadways; much of the existing perimeter buffer will be retained, there are no activities proposed that would generate excessive noise or odors, and lighting will be provided and conform to Town requirements. Only in regard to the site's residential population would impacts be expected to community character, and this impact has been evaluated elsewhere in this document. In consideration of the above, adverse cumulative changes in community character are not expected.

Cultural Resources

Cultural resources are a site-specific resource that would be dealt with as part of site-specific review of each of the three projects evaluated herein. Projects in culturally sensitive areas would be subject to Cultural Resource Assessments that would identify and protect any identified resources. A combination of pending projects does not represent a combined loss of unique cultural resources provided there are no extant historic structures, historic district issues or known archaeological issues that the sites share in common.

Emergency Preparedness

Each of the three projects under evaluation here will develop their respective sites, so that there will be an increased potential for impact upon each site's occupants from natural and human-related disasters. However, it is expected that each project's necessary conformance to Town and NYS requirements for engineering review, stormwater/drainage control, fire safety, evacuation, building construction and overall site development will protect each site and its occupants from impacts from most if not all reasonably foreseeable natural and human-related disasters. It is also expected that local, Town, County and NYS emergency police, fire safety, health, and social services would be available to help protect each site and its occupants during a disaster, by measures such as evacuation or direct intervention. These three sites are located inland, and so are not located within a flood-prone area, and therefore not subject to flooding. The three sites are located in proximity to major regional east-west roadways (i.e., NYS Route 27, and the LIE) and therefore should evacuation be needed, transportation systems are in place.

The types of disaster addressed in the All-Hazard Mitigation Plan focus that would apply to the three development sites evaluated here are related to stormwater/flooding and wildfires. It is expected that conformance to the applicable Town and NYS requirements for stormwater system design, and for conformance to applicable Town, County and NYS requirements for fire safety measures, will protect the site and its residents from potential impacts from most if not all reasonably foreseeable natural and human-related disasters that could occur.

Open Space and Recreation

Each of the three sites under evaluation here are presently unavailable to the public for use as an authorized active open space or recreational resource. Therefore, the development of each would not cause any individual or cumulative reduction in the amount of such land or recreational facilities that is available to the public. It is acknowledged that the mere presence of an open space may represent a valued public resource whether available for visitation by the public or not. In this respect, these project sites would cumulatively reduce the amount of open space in their vicinities, and so represent a cumulative adverse impact. However, it should be remembered that each of these projects would undergo detailed evaluation and review by the Town, ensuring that open spaces are retained to the extent practicable, commensurate with applicable Town zoning requirements for open space retention.

Generally, it is expected that residents and/or occupants of the three projects would represent potential increases in usage/visitation at the existing public open spaces and recreational facilities. However, such usage increases would not be expected to overburden these facilities, as public parks in the region are large enough to accommodate all likely, day-to-day visitors and only intermittent, incremental use by some of the new residents would be expected. Finally, the number of public recreational sites available to such potential users would tend to spread the visitation increases geographically, to reduce the potential impact of visitation at any one site.

It is noted that these three projects would be required to pay the Town's $1,250/unit park fee, unless the Town Board were to accept the creation of a public park improvement to be developed in the hamlet of Sayville.

Local Economy

The combination of projects outlined for analysis of potential cumulative impacts represents different land uses in geographically separated areas. Islip Pines is located to the east at the intersection of NYS Route 454 and Sunrise Highway, and the Ronkonkoma Hub is located to the north and east of Smithtown Avenue, South of Union Avenue and north of the LIRR.

The local economy as related to the proposed project addressed:

- Housing
- Employment
- Consumer base
- Potential real estate impacts, and
- Tax revenue

Both Islip Pines and the Ronkonkoma Hub involve mixed-use projects that offer housing and commercial/retail use. These differ from the proposed project which is a residential/apartment project. Each will fulfill local and regional needs to different degrees depending on their location. Each use will also offer work force housing which will assist in addressing community housing needs. Given the geographic separation of these projects, no cumulative housing impacts are anticipated.

The other planned projects will also increase construction and operational jobs, as with the proposed project. Operations employment related to the proposed project involves administration and service to the residential project, while Islip Pines and the Ronkonkoma Hub would be expected to offer greater direct employment due to commercial/retail use. All of these projects will benefit the local economy through job creation.

The Greybarn at Sayville project creates a large consumer base that will provide spending power in downtown Sayville and the area since it is a residential project with only resident amenities provided on-site. Islip Pines and the Ronkonkoma Hub will both stimulate economic activity in the form of spending but will also introduce new businesses. Each of these projects will generate economic activity in the form of retail sales, sales tax and support for local and new businesses.

The proposed project was evaluated with respect to potential impact on home values, resulting in a finding that no impact on surrounding home values is expected. Islip Pines is near the corner of two major highways and the Ronkonkoma Hub is near the Ronkonkoma train station. The projects are geographically separated and each will have its own unique consideration with respect to immediately surrounding uses. As a result, this does not represent a cumulative impact.

Each project will generate substantial real estate tax revenue. Typically, the school district is the largest portion of the tax bill, ranging from 60-75% depending on the school district. Both of the other planned projects are located in the Sachem School District and therefore will generate tax revenue in other taxing jurisdictions (school, police, fire, ambulance). The Town tax base will be increased by the combination of these projects. Potential impacts from the combined planned projects identified in the area to the local economy are generally positive and beneficial. Adding housing, employment, consumer spending and tax revenue will benefit the specific areas of each site, and the region in general. No adverse impacts to the local economy are expected.

<u>Construction-Related Impacts</u>

Construction impacts cause temporary increases in the potential for fugitive dust, and construction traffic and noise, but these impacts are limited in time to the construction period. These impacts will occur regardless of the type of land use of each proposal, and are not expected to occur simultaneously, as these projects will be constructed subject to individual schedules. Multiple sites would be subject to construction hour limitations and construction management oversight. The above-noted impacts are temporary and unavoidable; however, proper construction management will limit impacts to the maximum extent. Such measures may include silt fencing, storm drain inlet protection, hay bales, and good housekeeping procedures.

Additional measures that could be considered include temporary construction fencing to provide screening for aesthetic impacts, specifying construction entrances and staging areas in the least obtrusive locations, utilizing stabilized construction entrances and washout areas to minimize the transport of sediment off-site, stabilizing soil stockpiles, using wind screens to minimize fugitive dust and sediment transport off-site.

4.2.3 Summary and Conclusion

In summary, since the three projects evaluated here are located in separate communities distant from each other, their potential to cause significant cumulative impacts are reduced, and considering the necessity to conform to the various land use plans and development regulations (applied at the Town, County and State levels), and the level of governmental scrutiny any future projects will undergo in order to receive approvals and permits, no cumulative impacts have been identified with respect to the proposed project and no other projects are pending that would result in any cumulative impacts.

4.3 Adverse Impacts That Cannot Be Avoided

The site and project have been characterized, and the potential impacts to the existing properties have been assessed, and mitigation measures have been described. Some adverse impacts may still exist for which no mitigation is available. Adverse impacts have been quantified and discussed; for those adverse impacts that cannot be quantified, qualitative discussions have been provided in previous sections of this document. The adverse impacts of the proposed project will be minimized where possible, but this section acknowledges those adverse impacts that may still occur, as follows:

- Grading will alter the topography of much of the subject property.
- There will be temporary increase in local traffic and noise conditions during the construction period.
- Despite the planned mitigation measures (such as soil wetting, etc.), there may be some fugitive dust raised during the construction period.
- There will be an increase in vehicle trips generated on the site and on area roadways when the site is occupied.
- The vehicle trips associated with construction of the project and long-term occupancy of the completed project are expected to increase vehicle emissions. However, the Air Quality Analysis (see **Appendix A-9)** indicates that no further analysis in regard to potential air quality impacts is necessary, as a significant adverse impact on air quality is not expected.
- The project is anticipated to clear a total of 109.22 acres of the overall site. This will reduce the amount of open space and habitat available for wildlife; however, the prior use was that of a maintained golf course.

- There will be an increased potential need for emergency services of the SCPD, the West Sayville Fire Department, and the Community Ambulance Service (increased costs offset by increase in tax revenues).
- There will be increased demand on the energy services of PSEG and National Grid (to be paid for according to rate tariffs).
- There will be increased demand for groundwater, to be supplied by SCWA for domestic purposes, as well as directly on the groundwater system for irrigation. It is noted that the SCWA has issued a Letter of Water Availability for the project.
- Construction activities will generate construction-related debris, which will require temporary on-site storage until it is removed for disposal.

4.4 Irreversible and Irretrievable Commitment of Resources

This subsection is intended to identify those natural and human resources listed in **Sections 2.0 and 3.0** that will be consumed, converted or made unavailable for future use as a result of the proposed project. Development of the proposed project will result in irreversible and irretrievable commitment of resources. The importance of this commitment of resources is not anticipated to be significant, due to the fact that these losses do not involve any resources that are in short supply, ecologically unique in the community or region, or are otherwise substantial.

It is difficult to quantify the exact commitment of resources; however, once the project is complete, the following losses of irreversible and irretrievable resources are expected:

- Building materials used for construction, including but not limited to: wood, asphalt, concrete, fiberglass, steel, aluminum, brick, etc.
- Energy and related resources used in the construction, operation and maintenance, including fossil fuels, electricity and water.
- 109.22 acres of clearing on the overall site, of which 9.82 acres would be undisturbed natural vegetation along the site's perimeter.

4.5 Effects on the Use and Conservation of Energy Resources

An increase in the consumption of energy resources would typically be expected from the intensification of land use on a site, particularly for sites which had been underdeveloped or unused. Therefore, development of the project will increase the use of energy on the site and within in the area. However, the project's demand on these energy sources are not expected to significantly strain the ability of either National Grid or PSEG to supply the site and the area, since each entity is chartered to supply energy within its service area, and each maintains sufficient energy generation (PSEG) and storage (National Grid) facilities and to serve the site.

As indicated in **Section 1.2.1**, in support of the project's use of incentive yield, the Applicant is committed to obtaining 30% of the project's energy needs from alternative renewable energy sources, most likely through passive and active solar energy collection. The Applicant is also committed to incorporating LEED® features, but does not intend to seek LEED® certification.

The Applicant understands that energy-efficiency benefits the overall environment, reduces dependency on non-renewable resources, and benefits residents through decreased operational costs. Therefore, the applicant proposes to construct an energy-efficient project that conforms to the goal and intent of Town Code Section 68-30 by embracing the concept of energy-efficiency to a degree in excess of that mandated by the NYS Energy Code. In pursuit of this goal, energy-conserving materials, fixtures and mechanical systems will be utilized where practicable to reduce the total energy demand of the project. No determination by the Applicant regarding use of specific solar energy equipment or systems (e.g., rooftop solar panels), has been made at the present stage of the application process.

Use of new, energy-efficient building materials (e.g., insulations, windows, weather stripping, door seals, etc.) and mechanical systems, (e.g., air conditioners, heating systems, HVAC systems, water heaters, heat pumps, etc.) is anticipated, which would mitigate the usage of energy resources required. Incorporation of such energy-conserving measures is not only required by New York State, but is a sensible business practice, particularly in light of the increasing cost of energy resources. The project will result in an overall development that includes sustainable design elements and Energy Star design/construction, in conformance with the applicable requirements of the Town Code.

The applicant has determined to include numerous advanced energy-related materials and systems in the construction of the project, and has committed to incorporating sustainable features in its design. In summary, though an increase in energy consumption is expected from the project, it is not anticipated that the project will result in any significant adverse impacts on the use and conservation of energy resources.

It is expected that specific sustainable energy-related features, systems and equipment will be determined in concert with the appropriate Town agencies during the site plan application review process.

There will be a short-term increase in energy use during the construction phase of the proposed project. This impact is expected to be of short duration, and the long-term energy demand is expected to remain stable.

4.6 Growth-Inducing Aspects

Growth-inducing aspects of a proposed development are those project characteristics and/or effects which would or could cause or promote further development in the vicinity, either due directly to the project, or indirectly as a result of a change in the population, markets or potential for development in that community. Direct impacts might include, for example, the creation of a major employment center or institutional facility, installation or extension of infrastructure improvements or the development of a large residential project, particularly if that project were designed for a specific demographic group. An indirect impact would cause an increase in the potential for further development in an area, which in turn would result in direct impacts. In this sense, the proposed development projects would contribute to a trend for growth in the vicinity.

As detailed in **Section 3.4.2**, it is expected that the proposed project will change the trajectory of several demographic trends in Sayville, as projected to the year 2023. Absent the project the total population of Sayville is projected to increase by 0.72% from its present (2018) total, and the school-age population is expected to decrease by 8.03 % over that period. However, with the proposed project, Sayville would experience an anticipated growth of 15.82% in total population, and a 7.24% increase in school-age children to the year 2023.

It is anticipated that the project would contribute to an increase in activity for local businesses. The project will increase the number of potential shoppers in an area where commercial and service-oriented businesses are available by relatively short auto trips. These businesses, especially those serving the needs of family-oriented customers, would tend to experience increased activity due to the increase in their customer base; this is viewed as a benefit and does not require new facilities but supports existing ones.

Construction of the residences will create both short-term and long-term job opportunities. In the short-term, development will create construction jobs, and indirectly jobs may be created based on increased patronage of material suppliers. In the long-term, the proposed project will create a number of permanent operation and maintenance-related jobs. These jobs may be filled first from within the local labor pool.

These job opportunities would not require relocation of specialized labor forces or influx of large businesses from outside the area to provide construction support. The number of construction jobs created, estimated at 1,384 FTE over the multi-year phased construction period, is not expected to represent a growth inducing factor as these are temporary in duration; however, job creation is viewed as a substantial benefit to the local job market and local economy.

Development of the project will result in an incrementally increased usage of utilities. Electrical and natural gas services are generally available throughout Long Island, and SCWA water supply is available. Because these facilities and services already exist and have the capacity to service the proposed project, no significant growth is expected to result. As the proposed project is being developed with its own STP, no local or regional treatment facilities are needed to serve the project, so that the project will not induce growth in this respect. However, the proposed project includes capacity in its STP for 69,875 gpd of treatment and a public sanitary sewer improvement that would benefit the existing businesses in downtown Sayville and potentially induce growth in the areas served by that improvement. The potential extent and nature of such growth and associated impacts would be evaluated by the Town as part of its SEQRA review of the sewer district established by the Town to implement the proposed improvement.

As stated in **Section 1.1:**

> The applicant offers sewer main infrastructure as a no-cost monetary benefit to the Town of Islip. Such infrastructure may be used for treatment of existing wastewater flow generated in the downtown Sayville area, which provides a substantial nitrogen environmental reduction benefit based on existing conditions. The Town will determine when and how such

sewering will occur. To realize this benefit, the Town will need to form a sewer district which will include a map and plan and rate/cost information for connectees. Once the service area of the district is determined, additional analyses may be needed to assess potential growth based on the district, existing zoning, Town comprehensive planning efforts and land use analysis. Given these factors, the offer of sewer main infrastructure remains a monetary benefit to the Town to address groundwater and downgradient surface water impacts from existing development

SECTION 5.0

ALTERNATIVES CONSIDERED

5.0 ALTERNATIVES CONSIDERED

Overall Description of Alternatives Analysis

With respect to the reason for analyzing alternatives in a DEIS and thereby allow for an informed comparison to be conducted by the decision-making agencies, the SEQRA Handbook Fourth Edition (NYSDEC, 2020) states *"The goal of analyzing alternatives in an EIS is to investigate means to avoid or reduce one or more identified potentially adverse environmental impacts. 6 NYCRR Part 617.9(b)(5)(v) requires that the alternatives discussion includes a range of reasonable alternatives that are feasible considering the objectives and capabilities of the project sponsor. In general, the need to discuss alternatives will depend on the significance of the environmental impacts associated with the proposed action. The greater the impacts, the greater the need to discuss alternatives. "*

The following Alternatives 1 through 6 were described in the Final Scope (see **Appendix A-5**); Alternative 1 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the proposed project is not implemented, and Alternative 7 was added by the Applicant. Alternative 7 is a PDD at the same yield as the proposed project but includes some townhouse units and features an "executive" golf course that may be a viable option. The analyses for all seven alternatives include discussions of the anticipated impacts and potential mitigation measures for each scenario, each of which is briefly described as follows (more detailed descriptions of each scenario are provided in **Sections 5.1** through **5.7**):

- **Alternative 1: No Action** - assumes that the zoning, use and conditions of the site remain unchanged, and that no site development occurs.
- **Alternative 2: Development per Existing Zoning** - assumes a conventional single-family subdivision that conforms to the site's existing Residence AAA zoning district.
- **Alternative 3: Proposed Project at Reduced Yield** - assumes a PDD for a mix of single-family lots and townhouse apartments.
- **Alternative 4: Rezone to Residence AA District with Recreational Use** - assumes a clustered subdivision of attached single-family dwellings with an executive-style golf course as a recreational amenity for the site's residents.
- **Alternative 5: Multi-Generational Housing** - assumes a mix of non age-restricted apartments and a Life Cycle Community consisting of senior apartments, a congregate care center, assisted living (where medical assistance is available upon request), and nursing home (where continuous medical supervision is provided).
- **Alternative 6: Rezone to Recreational Service G District** - assumes rezoning of the site for public recreational development of the site.
- **Alternative 7: Rental Multi-Family and Townhouse Development with On-Site Golf Course** - assumes a PDD having the same yield as the proposed project, with an executive-style golf course as a recreational amenity limited to use of the site's residents.

Section 5.8 compares the relative impacts of each of these alternatives for each resource

category in comparison between alternatives and the proposed project. **Table 5-1** provides a detailed and quantified comparison between site and development characteristics and impacts of the proposed project and those of the alternatives considered herein.

Transportation Approach to Alternative Impact Analyses

This Draft EIS has a comprehensive analysis and mitigation of potential impacts to transportation systems. An extensive Traffic Impact Study is included in **Appendix F-1**, and this is summarized in **Section 3.1** of this Draft EIS. The TIS focuses on the proposed project; however, based on the assessment of individual phases of the project, the TIS can be effectively used to assess the relative impacts of alternatives as described herein.

The proposed project involves a change of zone to PDD-GS zoning for the entire site. The proposed project involves rezoning the site from its existing Residence AAA district to PDD-GS, followed by development of the 1,365-unit rental residential community. The community will include 32 Micro Units (420 SF), 669 1-Bedroom Units and 664 2-Bedroom Units. It is noted that the 420 SF Micro units would not meet the Town's minimum square footage, but would conform to the proposed PDD-GS regulations. These units will be completed six (6) phases as outlined in **Table 1-6A** with Phase 1 consisting of 138 units, Phase 2 consisting of 222 units, Phase 3 consisting of 318 units, Phase 4 consisting of 318 units, Phase 5 consisting of 213 units, and Phase 6 consisting of 185 units.

The TIS provides capacity analysis (with resulting Level of Service, or LOS) for each phase in order to determine the level of mitigation needed in advance of construction of the project phases. As a result, the traffic analysis used for the phased project can be related to the various alternative project densities to determine the comparative traffic impacts of these phases.

A matrix analysis has been completed to make these comparisons. This matrix analysis is included in **Appendix F-8**, and is described in more detail herein. The matrix analysis begins with a summary of the phases of the proposed project, including the project timetable presented in **Table 1-6A** of this Draft EIS and summarized in the following tables:

Traffic Impact Mitigation Strategy by Phase

Proposed Project Phases

Phase	No Build	Ph. 1	Ph. 2	Ph. 3	Ph.4	Ph. 5	Ph. 6
Build Year	Current	2021	2022	2023	2024	2025	2026
Growth Rate	Table 19	1.8%	2.4%	3.0%	3.6%	4.3%	4.9%
Prop. Action	Table 20	138 units	360 units	678 units	967 units	1,180units	1,365 units

Site Development Schedule **Table 1-6a**

Phase	Micro	1-Bdrm.	2-Bdrm.	Total	Duration	Proposed Project Phasing Timeline						
1	16	62	60	138	16 mo.'s	No Build	Phase 1					
2		111	111	222	16 mo.'s			Phase 2				
3		158	160	318	20 mo.'s				Phase 3			
4		144	145	289	20 mo.'s					Phase 4		
5	16	100	97	213	16 mo.'s						Phase 5	
6		94	91	185	16 mo.'s							Phase 6
Total	32	669	664	1,365								

The Final Scope established a basis for various residential density alternatives, based on these alternatives not having a significant adverse impact on transportation infrastructure. The TIS assesses intersections in the Study Area through highway capacity analysis methods, to determine LOS at each intersection, for each phase of the project. To identify the impacts created by each phase of the proposed project, capacity analyses were conducted at the study intersections for the No Build and Build Conditions during the weekday AM, PM and Saturday midday peak hours for the school peak season and during the weekday AM, PM, Friday PM and Saturday midday during summer season. The results of the capacity analyses for the No Build and Build Conditions were compared to determine the impact that will be created at the study intersections for each phase. Tables summarizing the No Build and Build Conditions levels of service results were prepared and included in the appendices of the TIS. The changes in levels of service from the No Build to the Build conditions were then compared to determine where there was a decrease in LOS that is considered a significant impact according to the Town's Subdivision and Land Development Regulations, the criteria for determining impacts (Chapter VI. Design Submission and Improvement Standards, Section F. Traffic Impact Studies). Mitigation measures were then applied to specific intersections to improve the identified significant impacts. The capacity analyses were conducted at the Study intersections for mitigated conditions and are reported in tables contained in the appendices of the TIS. The matrix analysis in **Appendix F-8** summarizes the Vehicles per Hour for each development phase in consideration of Town standards for achieving no significant impact in the above table.

		Traffic Peak VPH by Proposed Project Phase					
Town Standards for achieving No Significant Impact - Summary		**Ph. 1**	**Ph. 2**	**Ph. 3**	**Ph. 4**	**Ph. 5**	**Ph. 6**
No increase in delay above Town criteria with Mitigation	Peak VPH	VPH	VPH	VPH	VPH	VPH	VPH
Maintain "Operational Effectiveness" with Mitigtion	AM	50	130	244	348	425	492
Maintain LOS equivalent to "No Build" over time	PM	61	159	299	426	520	601
Below Town Subdivison & Land Development Reg's Criteria	Sat	61	159	299	426	520	601
for Significant Impacts at Unsignalized & Signalized Intersections							

Based on the capacity analysis for each phase of the development, the TIS performed iterations of capacity analysis for each intersection and each phase, and then introduced mitigation to reduce delays and maintain LOS for the future Build condition. For each phase of the project, and each intersection studied, the TIS determined that the proposed project would not create a significant adverse impact related to the future No Build and future Build conditions when applying mitigation. The various traffic mitigation measures recommended for key intersections based on traffic growth for project phases are summarized in the table below for, Lakeland Avenue and Route 27, Lakeland Avenue at Tariff Street/Johnson Avenue, and the Lakeland Avenue Corridor. Other intersections studied did not require mitigation as documented in the TIS. The matrix analysis table below also includes findings with respect to maintaining the Build effectiveness for each of the project phases based on mitigation. The final finding of this table is that none of the Study intersections will be significantly impacted by any of the planned project phases, with the inclusion of the mitigation measures recommended in the TIS and summarized below. This finding ensures that the goals of the Town Subdivision and Land Development Regulations are met. This finding is also essential to the comparison of project phases to alternatives, in order to derive conclusions with respect to potential

transportation impacts related to these alternatives. The intersection/phase mitigation table summary excerpted from **Appendix F-8** is provided below.

Traffic Impact Mitigation by Project Phase

Proposed Traffic Mitigation Improvements		Ph. 1	Ph. 2	Ph. 3	Ph. 4	Ph. 5	Ph. 6
No Build effectiveness will be mantained		Yes	Yes	Yes	yes (1)	Yes (1)	Yes (1)
Minor signal adjustments and calibration		Yes	Yes	Yes	Yes	Yes	Yes
Minor increases in delay			Yes	Yes	Yes	Yes	Yes
Lakeland Avenue at NYS Route 27 North Service Road (Fig. 28)							
Two exclusive thru and right turn lanes		NA	NA	NA	Yes	p/o Ph. 4	p/o Ph. 4
Minor Signal Adjustments on NB LT phase		NA	NA	NA	Yes	p/o Ph. 4	p/o Ph. 4
Lakeland Avenue at Tariff Street/Johnson Avenue (Fig. 29)							
Widen NB Approach to provide exclusive LT LT Lane						Yes	p/o Ph. 5
Lakeland Avenue Corridor							
Widening between Eastover Road and 11th Street **(Fig. 30)**		NA	NA	NA	NA	NA	Yes
Elimination of Intersection with Chester Road		NA	NA	NA	NA	NA	Yes
Reduce NB Queues at Gibbons Court		NA	NA	NA	NA	NA	Yes
Eliminate congestion and safety issues at Chester Road		NA	NA	NA	NA	NA	Yes
Significant Impact on Intersection within and around Study Area							
(1) With Proposed Mitigation Strategies by Phase		No	No	No	No (1)	No (1)	No (1)

Alternatives comparison of traffic impacts requires establishing vehicle trip generation rates for each alternative. The matrix analysis in **Appendix F-8** includes the trip generation rates from the Institute of Traffic Engineers Trip Generation Manual in the inset table to the right, for each alternative use. The trip generation rates for AM, PM and Saturday peak hours for each alternative use, appear herein, and in the matrix analysis in **Appendix F-8**. These rates were used to determine total trip generation between alternatives as presented in **Table 5-1**.

ITE Trip Rates for Alternatives

Use	AM	PM	Sat
SF Homes	0.75	1.01	1.01
MF Units	0.46	0.56	0.54
Senior	0.46	0.54	0.23
Ind'l Park	0.40	0.40	0.44
Cong Care	0.07	0.18	0.18
Assistd Liv	0.19	0.26	0.27
Nurs Home	0.17	0.22	0.14

The matrix analysis establishes the traffic peak vehicles per hour for each alternative, to determine how each alternative compares to phases of the proposed project. This in turn allows for a determination to be made with respect to how the traffic each phase meets the meets the Town "delay criteria" for a significant impact. In each case, the comparison test results in a finding of "No," indicating that there is no significant delay, therefore the analysis is valid to compare project phases with the various alternatives in this section as noted below. Additional information regarding traffic assessment of alternatives is provided in **Section 5.9.5**.

Traffic Peak VPH by Alternative

Program	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 7
SF Homes		99	39	59		
MF Units			1,000	122	800	1,365
Senior					59	
Ind'l Park sf						
Cong Care					400	
Aisstd Liv					150	
Nurs Home					120	
Peak VPH	No Action	VPH	VPH	VPH	VPH	VPH
AM		74	492	103	472	492
PM		100	601	129	617	601
Sat		100	591	134	576	601
Comparison		>Ph.1<Ph.2	Ph. 6	>Ph.1<Ph.2	Ph. 6	Ph. 6
Yes/No	No	No	No	No	No	No

5.1 Alternative 1: No Action

5.1.1 Description of Alternative 1

This alternative assumes that the proposed project is not implemented. The No Action alternative would leave the former golf course as fallow land. This DEIS fully describes this alternative in the "Existing Conditions" subsections within **Sections 2.0** and **3.0**.

The land would become increasingly overgrown or be subject to mowing practices; access to the site would be restricted by perimeter fencing, and so would become increasingly attractive to trespassers and other unauthorized visitation. The land would not be in productive use, would generate minimal tax revenue or jobs, would not address the need for rental and affordable housing, and would provide no publicly accessible open space or other benefits. As the site would be unoccupied, no vehicle trips or sanitary wastewater would be generated, and there would be no demand for water supply, or school or emergency services. The zoning of site would remain Residence AAA, and the existing vacant and unused nature of the site would remain unchanged, leaving the land available for redevelopment in conformance with zoning and land use restrictions.

5.1.2 Comparison of Impacts to Proposed Project: Alternative 1

The following is a summary of the anticipated impacts of Alternative 1 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 1 would not involve any re-use of the site or any development activity on it; therefore, there would be no changes in the nature or intensity of its current impacts. In comparison to the impacts anticipated for the proposed project, the impacts of Alternative 1 would be less for all of the resource categories evaluated.

5.1.3 Conclusions

It is noted that Alternative 1 would not achieve the goals or objectives of the landowner/applicant, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development. Thus, this alternative would not be a *"reasonable or feasible*" alternative from the perspective of the project sponsor, under SEQRA.

TABLE 5-1
COMPARISON OF ALTERNATIVES, Site and Project Characteristics (1)

Parameter	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 7
Use	Multi-Family Residential	Vacant	Residential	Mixed Residential	Mixed Residential	Multi-Generational Residential	Multi-Family Residential
Yield	1,365 units & 24,000 SF of amenity spaces	Closed golf course	98 lot subdivision	39 lots & 1,000 rental townhouses	59 lots, 122 attached single-family dwellings & private 9-hole golf course	800 non age-restricted units, 59 age-restricted units, 400 Independent Living units, 150 Assisted Living units & 120-room Nursing Home	1,173 apartments, 192 townhouses, 10,000 SF clubhouse, 8,000 SF Community Space & private 9-hole golf course
Zoning	PDD	Residence AAA	Residence AAA	PDD	Residence AA	PDD	PDD
Wastewater Treatment	On-site STP	Septic systems	Septic systems	On-site STP	On-site STP	On-site STP	On-site STP
Anticipated Clearing (acres)	109.22	0	114±	114±	114±	<109	<109
Surface Types (acres)**:**	---	---	---	---	----	---	---
Building Footprint	13.10	0.96	6.08	22.62	6.42	9.94	13.26
Paved Surfaces	31.86	4.38	36.53	38.02	18.16	33.40	31.21
Unvegetated	2.25	3.86	0	0	0	0	0
Water Surfaces	3.46	0.15	0	0	0	1.78	0
Landscaped	58.55	90.05	71.73	53.70	89.76	69.22	69.87
Natural	5.12	14.94	0	0	0	0	0
Water Resources:	---	---	---	---	---	---	---
Sanitary Flow (gpd) (2)	307,125	0	29,400	236,700	54,300	301,350	307,125
Landscape Irrigation (gpd) (3)	34,813	0	42,575	31,888	53,320	41,098	41,474
Total Water Use (gpd)	341,938	0	71,975	268,588	107,620	342,448	348,599
Recharge Volume (MGY) (4)	237.85	82.82	115.29	199.73	115.61	214.57	217.57
Nitrogen Load (lbs/yr) (4)	9,951.00/2,713.84	4,052.39/499.84	4,883.92	7,989.41	3,957.82	9,568.10	9,171.85
Nitrogen Conc. (mg/l) (4)	5.02/1.37	5.45/0.72	5.08	4.80	4.11	5.35	5.06
Trip Generation (vph/vpd): (5)	---	---	---	---	---	---	---
Weekday AM Peak Hr/Daily	491/7,438	0/0	74/1,021	492/7,956	103/1,533	472/7,926	491/7,438
Weekday PM Peak Hr/Daily	601/7,438	0/0	100/1,201_	601/7,956	129/1,533	617/7,926	601/7,438
Saturday Midday Peak Hr/Daily	601/6,702	0/0	100/963	591/7,085	134/1,441	576/6,735	601/6,702
Miscellaneous:	---	---	---	---	---	---	---
Employees (FTE) (6)	60.1	1	0	44.0	0	281.3	51.6
Total Residents (6)	2,705	0	415	2,155	547	2,551	2,806
School-Age Children (6)	210	0	144	212	118	124	232
Total Taxes ($/yr) (6, 7)	10,149,131	274,246	2,453,791	8,411,770	3,048,758	13,306,918	8,721,561
School Taxes ($/yr) (6, 7)	6,963,622	187,353	1,683,619	5,771,566	2,091,844	9,213,717	5,984,123
School Expenditures ($/yr) (6)	3,490,136	0	2,613,872	3,893,252	2,164,160	2,270,132	4,236,992
School Fiscal Impact (+/-$/yr) (6)	+3,460,483	+187,353	-930,253	+1,878,314	-72,316	+6,943,585	+1,747,131
Parking Required by Code (min.)	2,391	n/a	196	1,750	606	2,587	2,389
Parking Provided	2,391	n/a	196	1,750	606	2,587	2,389

(1) Alternatve 6 not included, as this scenario would not be reasonable or feasible to the Applicant.
(2) Assuming sanitary flow rates specified in SCSC Article 6. This value is assumed to represent the amount of daily water use.
(3) Assuming irrigation water applied at a rate of 16 inches/season, during the anticipated 5-month (150-day) irrigation season.
(4) See **Appendices E-4** (Alt. 2), **E-5** (Alt. 3), **E-6** (Alt 4), **E-7** (Alt. 5), **or E-8** (Alt.7).
(5) Per ITE Trip Generation Manual Tenth edition; see **Appendix F-1**.
(6) See **Appendix C-2**.
(7) For the purposes of analysis, the projected tax revenues assume full taxation of all parcels and do not consider the impact of any tax abatements.

5.2 Alternative 2: Development per Existing Zoning

5.2.1 Description of Alternative 2

As shown in **Conceptual Layout #2**, Alternative 2 would be a traditional, conventional residential subdivision with 98 lots, each having at least 40,000 SF, conforming to the minimum lot size of the Residence AAA district. As some of the lots would be distributed along the perimeter of the site and front on the bordering roadways, little or none of the site's existing natural vegetation (all of which is found in a shallow buffer along the site's perimeter) would likely be retained, so that all 114.34 acres of the site would be expected to be cleared and, generally graded. The lots along the site's perimeter could be reoriented so that their fronts would face inwards toward the internal subdivision road system, leaving their rear yards to form a continuous backyard buffer of retained natural vegetation abutting the local street system. However, such a design scheme would tend to isolate this subdivision from the surrounding neighborhood rather than incorporating it into the neighborhood. It is assumed that there could be up to 98 five-bedroom homes; each home would be 35 feet or 2½ stories in height and would have an attached two car garage and driveway.

Vehicle access points would be provided opposite each existing neighboring street along Sterling Place, Hauppauge (Terry) Road, Bohemia Parkway, Eleventh Street, Lakeland Avenue, Chester Road and Carrie Avenue. Each of these intersections would be controlled by Stop signs for exiting vehicles. The site's roadways would conform to Town standards for width, curbing, striping, signage and drainage facilities; the roads would be offered to the Town for dedication as public roadways, to be owned and maintained by the Town.

Sanitary wastewater generated in each home would be treated in an on-site conventional septic system, in conformance with SCSC Article 6 requirements. Wastewater would not be treated to a tertiary level, so the nitrogen concentration in the water recharged on-site is estimated to be 5.08 mg/l, without provision for regular system maintenance or monitoring for nitrogen removal. Water would be supplied by SCWA and would include domestic/potable water and irrigation water. The project's drainage system would be subject to Town review and approval for design and capacity, including the prevention of runoff flowing from the site onto adjacent properties. or from the site and into the drainage system serving the bordering roadways. Roof runoff would be handled in a subsurface leaching system on each lot, and stormwater runoff generated on the driveways would be allowed to flow downslope into the street system, where it would be combined with road runoff for recharge. It is expected that an on-site recharge basin would be required as part of the drainage system (and possibly located at Durham Road and Fourth Street), in conformance with Town engineering design requirements.

5.2.2 Comparison of Impacts to Proposed Project: Alternative 2

The following is a summary of the anticipated impacts of Alternative 2 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 2 would involve re-development of the entire subject site with conventional 98-lot single-family subdivision served by individual septic systems. As a result, impacts are expected from Alternative 2, though the magnitude of impact to the resources evaluated herein would vary in comparison to those of the proposed project. Specifically, impacts to soils and topography would be greater than those of the proposed project, as all of the site would be cleared and subject to grading, leaving no natural vegetation to serve as retained habitat or visual buffering. Additionally, as discussed in **Section 5.8.1**, soil remediation cleanup levels are contained in 6 NYCRR Part 375. The cleanup standards have two paths: *Unrestricted Use* and *Restricted Use.* Unrestricted Use is the most stringent cleanup standard and allows use of the property for any use. This includes all residential uses as well as farming. Restricted Use provides less-restrictive standards based upon site use and includes residential (more stringent) through industrial (less stringent) uses.

Residential Use under the Restricted Use standards is further divided into two categories: Unrestricted Residential Use allows single family homes and has more stringent cleanup standards. Restricted Residential Use provides cleanup standards for residential properties where some sort of property management is present, such as apartments, condos, etc. it is basically the multi-family standard. The reasoning here is that a less stringent standard is justified because this type of property has larger paved areas, so residents can't just go digging up the ground digging holes, growing food, etc. The apartment management, condominium board, etc prevents residents of the site from coming in contact with soils, which control would not be available in a single family home.

Thus, for Alternative 2, development of the site with single-family homes requires the site to be remediated to more stringent environmental cleanup standards than would be required for multi-family residential like the proposed project. As a consequence, in order to reach the higher required cleanup standards, development of Alternative 2 would require a protracted remedial phase. As the extensive remedial and earth working activities required for single family home development are more extensive, the duration of potential migration risks are greater. Additionally, the economic costs of the remediation to single-family home residential standards over the multi-family home standards cannot be ignored as they severely hinder the potential of a reasonable return on investment.

Water consumption would be less, and so recharge volume would be less than the proposed project. The concentration of nitrogen in recharge would be similar. Impacts to ecology would be greater than the proposed project, as no natural vegetation would be retained as habitat. The lesser amount of re-development would generate fewer vehicle trips, so that air quality and traffic-related impacts would be less than those of the proposed project. Impacts

associated with land use, zoning and planning would be similar to those of the proposed project; among all of the scenarios evaluated here, Alternative 2 would conform most closely to the use and yield recommended for the subject site by the Sayville Hamlet Study and the Sunrise Highway Corridor Study, though inclusion of the recommended golf course cannot be provided.

Alternative 2 would represent lesser demands on local community services; it would generate fewer residents than the proposed project, as well as fewer school-age children, resulting in lesser impacts to local school enrollments. For the Connetquot CSD, Alternative 2 would not generate an amount of school district taxes that would fully offset the costs to the district to provide educational services, resulting in an annual net cost to the district. As there are no cultural resources on the site to be impacted, no such impacts would occur. Impacts associated with emergency preparedness planning and activities would be less, though impacts related to open space and recreation would be greater than the proposed project, as no on-site public park would be provided in Alternative 2. Positive impacts on the local economy would be less, due to the lower amount of taxes generated. Finally, impacts associated with construction would be less, due to a shorter expected duration of construction activities and lesser amount of development altogether.

5.2.3 Conclusions

It is acknowledged that among all of the scenarios evaluated here, Alternative 2 would conform closest to the use and yield recommended by the two plans for the site. It is also acknowledged that Alternative 2 conforms to the existing zoning and poses significantly less impact on surrounding public roadways than the proposed project, but Alternative 2 would not achieve the Applicant's goals or objectives, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community. Thus, this alternative would not be a *"reasonable or feasible*" alternative from the perspective of the project sponsor, under SEQRA.

5.3 Alternative 3: Proposed Project at Reduced Yield

5.3.1 Description of Alternative 3

Conceptual Layout #3 shows that Alternative 3 would be developed with a mixed residential development, having 39 single-family lots arranged along the site's northern, western and eastern boundaries, with a total of 1,000 rental apartments in sixty (60) 2½ story (maximum height of 35 feet) multi-family structures in the site's interior. The yield for this alternative was established at a level that, like the proposed project and including the effect of roadway mitigation measures as planned for the proposed project (to be applied to this alternative should adverse impacts be determined), would not adversely impact overall traffic flow in the area. The site would be rezoned to a PDD district. As the 39 lots would be distributed along the perimeter of the site and have their frontages on the bordering roadways, little or none of the

site's existing natural vegetation (all of which is found in a shallow buffer along the site's perimeter) would likely be retained, so that all 114.34 acres of the site would be expected to be cleared and, generally, graded. It is assumed that up to 39 single-family homes could have five bedrooms. The single-family homes would be 35 feet or 2½ stories in height and would have an attached two car garage and driveway. Five hundred of the rental units would have one bedroom and the other 500 units would have two bedrooms. Parking for the rental units would be in parking lots adjacent to each structure. Ten percent of the rental units would be designated affordable.

Like Alternative 2, access points would be provided opposite each existing neighboring street along Hauppauge (Terry) Road (1), Bohemia Parkway (4), Eleventh Street (1), and Lakeland Avenue (1). These intersections would be controlled by Stop signs for exiting vehicles or, for Lakeland Avenue, the existing traffic signal. The site's roadways would conform to Town standards for width, curbing, striping, signage and drainage facilities; the roads would be offered to the Town for dedication as public roadways, to be owned and maintained by the Town.

All sanitary wastewater generated on the site would be conveyed to an on-site STP for treatment and disposal, in conformance with SCSC Article 6 requirements. The treated wastewater would have a nitrogen concentration of 10 mg/l or less; the nitrogen concentration in the water recharged on-site is estimated to be 4.80 mg/l. Water would be supplied by SCWA and would include domestic/potable water and irrigation water. The project's drainage system would be subject to Town review and approval for design and capacity, including the prevention of runoff flowing from the site onto adjacent properties. or from the site and into the drainage system serving the bordering roadways. Roof runoff would be handled in a subsurface leaching system on each of the 39 lots and at each of the sixty apartment structures, and stormwater runoff generated on the driveways would be allowed to flow downslope into the street system, where it would be combined with road runoff for recharge. It is expected that an on-site recharge basin will be required as part of the drainage system (possibly located at Durham Road and Fourth Street), in conformance with Town engineering design requirements.

5.3.2 Comparison of Impacts to Proposed Project: Alternative 3

The following is a summary of the anticipated impacts of Alternative 3 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 3 would involve re-development of the entire subject site with a mix of single-family lots (39) and 1,000 rental apartments in multi-unit structures, all served by an on-site STP. It is expected that impacts would result from this amount of development, though the magnitude of impact to the resources evaluated herein would vary in comparison to those of the proposed project. Specifically, impacts to soils and topography would be greater than those of the proposed project, as all of the site would be cleared and subject to grading leaving no natural

vegetation to serve as retained habitat or visual buffering. Water consumption would be less, and so recharge volume would be less than the proposed project. The concentration of nitrogen in recharge would be similar. Impacts to ecology would be greater than the proposed project, as no natural vegetation would be retained as habitat. The amount of re-development in Alternative 3 would be similar to that of the proposed project, so that similar amounts of vehicle trips would be generated, resulting in similar levels of air quality impact and similar impacts to local roadways and intersections. Impacts associated with land use, zoning and planning would be similar to those of the proposed project, though with the exception of public schools, impacts to community character would be less. Alternative 3 would represent lesser demands on local community services; it would generate fewer residents than the proposed project, but a similar number of school-age children, resulting in similar impacts to local school enrollments. For the Connetquot CSD, Alternative 3 would generate an amount of school district taxes that would exceed the costs to the district to provide educational services, resulting in an annual net fiscal benefit to the district. As there are no cultural resources on the site to be impacted, no such impacts would occur. Impacts associated with emergency preparedness planning and activities would be similar to those of the proposed project, though impacts related to open space and recreation would be greater than the proposed project, as no on-site public park would be provided in Alternative 3. Positive impacts on the local economy would be less than those of the proposed project, due to the lower amount of taxes generated. Finally, impacts associated with construction would be less, due to a shorter expected duration of construction activities and lesser amount of development altogether.

5.3.3 Conclusions

Though Alternative 3 could potentially be feasible, it is not in keeping with the goals and objectives of the project sponsor, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community. Thus, this alternative would not be a *"reasonable or feasible*" alternative from the perspective of the project sponsor, under SEQRA.

5.4 Alternative 4: Rezone to Residence AA District with Recreational Use

5.4.1 Description of Alternative 4

For Alternative 4, (as shown in **Conceptual Layout #4**), the site would be developed with a total of 181 residences in a mix of residential types, as 59 single-family lots arranged along the site's northern, western, and eastern boundaries, with attached units in sixty-one 35 foot/2-1/2 story dwelling units in the site's interior. An application would be made to the Town Board to rezone the site to the Residence AA district, followed by an application to the Town Planning Board to permit a cluster development of attached dwelling units pursuant to Section 68-641 of the Town Code. As attached units are not an allowed use in the Residence AA zone, Town relief would be necessary for this alternative to be implemented as specified in the scoping document.

As some of the 59 lots would be distributed along the perimeter of the site and have their frontages on the bordering roadways, little or none of the site's existing natural vegetation (all of which is found in a shallow buffer along the site's perimeter) would likely be retained, so that all 114.34 acres of the site would be expected to be cleared and, generally graded. It is assumed that up to 59 single-family homes could have five bedrooms each. Single-family homes would be 35 feet or 2½ stories in height, and would have an attached one car garage and driveway. Half of the 122 attached single-family dwellings would have two bedrooms and the other half would have three bedrooms. Each attached single-family dwelling would be at least two stories in height and would have an attached one-car garage. All 181 units would be owned individually; there would be no rental units in this scenario.

Like Alternatives 2 and 3, vehicle access points would be provided opposite each existing neighboring street along Hauppauge (Terry) Road (1), Bohemia Parkway (4), Eleventh Street (4), Lakeland Avenue (1), and Chester Road (1). Each of these intersections would be controlled by Stop signs for exiting vehicles or, for Lakeland Avenue, the existing traffic signal. The site's roadways would conform to Town standards for width, curbing, striping, signage and drainage facilities; the roads would be offered to the Town for dedication as public roadways, to be owned and maintained by the Town.

This alternative includes a 9-hole executive-style golf course as a private recreation amenity restricted to the use of the site's residents and their guests, to be located in the central portion of the site.

All sanitary wastewater generated on the site would be conveyed to an on-site STP for treatment and disposal, in conformance with SCSC Article 6 requirements. The treated wastewater would have a nitrogen concentration of 10 mg/l or less; the nitrogen concentration in the water recharged on-site is estimated to be 4.11 mg/l. Water would be supplied by SCWA and would include domestic/potable water. Since a golf recreational use is provided in the central portion of the property (labelled "Private Recreational Area" in **Conceptual Layout #4**), it is possible that irrigation water would be from an on-site private well. The project's drainage system would be subject to Town review and approval for design and capacity, including the prevention of runoff flowing from the site onto adjacent properties or from the site and into the drainage system serving the bordering roadways. Roof runoff would be handled in a subsurface leaching system on each of the 59 lots and at each of the 61 attached single-family dwelling structures, and stormwater runoff generated on the driveways would be allowed to flow downslope into the street system, where it would be combined with road runoff for recharge. It is expected that an on-site recharge basin will be required as part of the drainage system (possibly located at Carrie Avenue and Fifth Street), in conformance with Town engineering design requirements.

5.4.2 Comparison of Impacts to Proposed Project: Alternative 4

The following is a summary of the anticipated impacts of Alternative 4 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 4 would re-develop the entire site with 59 detached single-family lots, 122 attached single-family dwellings (in 61 separate structures), and a 9-hole golf course, all served by an on-site STP. As a result, impacts are expected from Alternative 4, though the magnitude of impact to the resources evaluated herein would vary in comparison to those of the proposed project. Specifically, impacts to soils and topography would be greater than those of the proposed project, as all of the site would be cleared and subject to grading, leaving no natural vegetation to serve as retained habitat or visual buffering. Water consumption would be less, and so recharge volume would be less than the proposed project, though the concentration of nitrogen in recharge would be lower as well. Impacts to ecology would be greater than the proposed project, as no natural vegetation would be retained as habitat. The amount of re-development in Alternative 4 would be less than that of the proposed project, so that lower amounts of vehicle trips would be generated, resulting in lower levels of air quality impact and lesser impacts to local roadways and intersections. Compared to the proposed project, impacts to community character would be less for Alternative 4, and impacts associated with land use, and zoning and planning would be less than those of the proposed project as well, due to the significantly lower yield of Alternative 4. With respect to the Sayville Hamlet Study and the Sunrise Highway Corridor Study, Alternative 4 would conform closer to the recommended yield than the proposed project and, while Alternative 4 would provide a golf course on the site, this would be a private 9-hole facility that is not open to the general public, which would not satisfy this plan recommendation.

Alternative 4 would represent lesser demands on local community services; it would generate fewer residents than the proposed project, as well as fewer school-age children, resulting in lesser impacts to local school enrollments. For the Connetquot CSD, Alternative 4 would generate an amount of school district taxes that would not offset all of costs to the district to provide educational services, resulting in an annual net cost to the district. As there are no cultural resources on the site to be impacted, no such impacts would occur. Impacts associated with emergency preparedness planning and activities would be less than those of the proposed project, though impacts related to open space and recreation would be greater than the proposed project, as no on-site public park would be provided in Alternative 4 (the golf course in this scenario would not be available to the general public). Positive impacts on the local economy would be less than those of the proposed project, due to the lower amount of taxes generated. Finally, impacts associated with construction would be less, due to a shorter expected duration of construction activities and lesser amount of development altogether.

5.4.3 Conclusions

It is noted that Alternative 4 would not achieve the goals or objectives of the landowner/applicant, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community. Thus, this alternative would not be a *"reasonable or feasible*" alternative from the perspective of the project sponsor, under SEQRA.

5.5 Alternative 5: Multi-Generational Housing

5.5.1 Description of Alternative 5

Alternative 5 (see **Conceptual Layout #5**) would be developed with 1,529 residences in a mix of residence types suited for a wide range of occupant ages and capabilities (note that, like the proposed project, this yield was established at a level that, including the effect of roadway mitigation measures, would not adversely impact overall traffic flow in the area). In this way, a continuum of residence types would be available on a single, comprehensively planned property, to enable a tenant to dwell on-site throughput their life and receive all appropriate care as that tenant ages and requires increasing levels of medical and social support. The following generally describes each type of residence:

- Age-restricted unit: a residence where at least one of the tenants must be above a set minimum age, typically 55 years of age; no on-site medical or assistive living services are provided.
- Non age-restricted unit: a residence where no minimum age requirement for occupancy is set.
- Independent living units: a residence where at least one of the tenants must be above a set minimum age, typically for older seniors; some medical and/or assistive living services are available. Each unit will have its own kitchen, dining area, bathroom and bedroom.
- Assisted Living unit: a unit within a larger, multi-unit building for occupancy by one or more elderly persons, where 24/7 medical and assistive living services are provided, when called upon. Each unit will have its own kitchen, dining area, bathroom and bedroom; communal dining facilities are typically also available.
- Nursing Home: a room in a large building for occupancy by an elderly person, where 24/7 medical and assistive living personnel are available. Communal dining facilities are available.

The yield for this alternative was established at a level that, like the proposed project and including the effect of roadway mitigation measures as planned for the proposed project (to be applied to this alternative should adverse impacts be determined), would not adversely impact overall traffic flow in the area. This scenario assumes:

- 800 non age-restricted units, in 13 three-story, multi-unit structures;
- 59 age-restricted units, in 1 three-story structure;
- 400 independent living units, in 1 three-story structure;
- 150 assisted living units, in 1 three-story structure; and
- 120 nursing home beds, in 1 three-story structure.

The site would be rezoned to a PDD district. Ten percent of the non, age-restricted units (80 units) would be designated affordable; half would be one-bedroom units and the other half would be two-bedroom units. Similar to the proposed project, this alternative locates the developed area toward the central portion of the site, and assumes the same three access point locations and internal roadway layout as the proposed project; as a result, a similar amount (5± acres or more) of the bordering natural vegetation perimeter buffer could be retained. Thus, a similar amount of the site would be cleared and potentially graded as the proposed project (109± acres). The following details the number and bedroom count of each residence type of Alterative 5:

- non age-restricted units: 400 one-bedroom units and 400 two-bedroom units
- age-restricted units: 12 one-bedroom units and 47 two-bedroom units
- independent living units: 200 one-bedroom units and 200 two-bedroom units
- assisted living units: 150 one-bedroom units
- nursing home (subject to NYS approval): 120 beds

Outdoor amenity areas and indoor amenities similar to those of the proposed project are proposed for the non age-restricted buildings, and may include fitness centers, yoga and spin studios, screening rooms, club rooms, community kitchens, community workspace/library, and meeting rooms.

Like the proposed project, vehicle access points would be provided in the site's northeastern corner (onto Lakeland Avenue), on the north (onto Eleventh Street), and in the site's southwestern corner (onto Hauppauge (Terry) Road. Each of the latter two accesses would be controlled by Stop signs for exiting vehicles.; the Lakeland Avenue access would be controlled by the traffic signal that currently controls this access. Also like the proposed project, the internal roadways in Alternative 5 would not be designed to conform to Town standards for width, so that the roadways would not be offered to the Town, but would remain private to be owned and maintained by the owning entity.

All sanitary wastewater generated on the site would be conveyed to an on-site STP for treatment and disposal, in conformance with SCSC Article 6 requirements. The treated wastewater would have a nitrogen concentration of 10 mg/l or less; the nitrogen concentration in the water recharged on-site is estimated to be 5.35 mg/l. Water would be supplied by SCWA and would include domestic/potable water and irrigation water. The project's drainage system would be subject to Town review and approval for design and capacity, including the prevention of runoff flowing from the site onto adjacent properties. or from the site and into

the drainage system serving the bordering roadways. Roof runoff would be handled in a subsurface leaching system at each of the buildings and at each of the parking lots; stormwater runoff generated on the roads would flow downslope into the curbside sewer system for recharge. As shown on the plan, a 1.71-acre pond/detention area would be excavated on the property as part of the drainage system, eliminating the need for a recharge basin that would otherwise be required by the Town.

5.5.2 Comparison of Impacts to Proposed Project: Alternative 5

The following is a summary of the anticipated impacts of Alternative 5 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 5 would re-develop the entire site with a mix of residential types, including 800 non age-restricted units, 59 age-restricted units, a 400-unit independent facility, a 150-unit assisted living facility, and a 120-room nursing home. This scenario would be served by an on-site STP. As a result, impacts are expected from Alternative 5, though the magnitude of impact to the resources evaluated herein would vary in comparison to those of the proposed project. Specifically, impacts to soils and topography would be similar to those of the proposed project (as this scenario would clear and grade the interior portions of the property, and leave a small amount of natural vegetation as a visual and noise buffer along the site's perimeter). Water consumption would be similar to the proposed project, and so recharge volume and the concentration of nitrogen in recharge would be similar as well. Impacts to ecology would be similar to the proposed project, as only a small amount of perimeter natural vegetation would be retained as habitat. The amount of re-development in Alternative 5 would be similar to that of the proposed project, so that similar amounts of vehicle trips would be generated, resulting in similar levels of air quality impact and similar impacts to local roadways and intersections. Impacts associated with land use, zoning and planning would be similar to those of the proposed project and, with the exception of public schools, impacts to community character would be similar. Alternative 5 would represent lesser demands on local community services; it would generate fewer residents than the proposed project, as well as fewer school-age children, resulting in lesser impacts to local school enrollments. For the Connetquot CSD, Alternative 5 would generate an amount of school district taxes that would exceed the costs to the district to provide educational services, resulting in an annual net fiscal benefit to the district. As there are no cultural resources on the site to be impacted, no such impacts would occur. Impacts associated with emergency preparedness planning and activities would be greater than those of the proposed project (due to the presence of an elderly population), and impacts related to open space and recreation would be greater than the proposed project, as no on-site public park would be provided in Alternative 5. Positive impacts on the local economy would be greater (in the sense of being more beneficial) than those of the proposed project, due to the greater amount of taxes generated. Finally, impacts associated with construction would be similar to the proposed project, due to the similar amount of development in these scenarios.

5.5.3 Conclusions

Alternative 5 would not achieve the goals or objectives of the landowner/applicant, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community. Further, the Life-Cycle component type of development is specialized and heavily dependent on market demand and placement. This type of development is not a development type that the Applicant is familiar with or constructs, and therefore is not in keeping with the goals and objectives of the project sponsor. Thus, this alternative would not be a *"reasonable or feasible*" alternative from the perspective of the project sponsor, under SEQRA.

5.6 Alternative 6: Rezone to Recreational Service G District

This scenario posits that the site is rezoned to the Recreational Service G District, followed by redevelopment of the site with one or more of the recreational permitted in Chapter 68, Article XVIII of the Town Code. These uses include, for example: golf courses, tennis courts, swimming pools, drive-in movie theaters, bowling alleys, performing arts centers, gymnasiums, health centers, spas, skating rinks, miniature golf, commercial stables and riding academies, and child day-care centers. Additional uses are permitted by special permit and include minor restaurant, and private club mooring wharf.

When evaluating the above uses to determine which would be feasible to consider for this scenario, the Applicant determined that none of the commercial recreational uses permitted in the Recreational Service G District would be viable for the subject site, in consideration of the consumer needs, goals and expectations in the 21st century market place. Specifically, based on the Applicant's experience in this regard, the following briefly indicates why each permitted use would not be appropriate on the subject site:

- The prior Island Hills Country Club (a facility based on its golf course) at the site was not commercially viable and is now closed;
- Swimming pools and bath houses are municipal uses;
- Drive-in movie theaters were a popular movie venue in the mid-20th century but by the 21st century, the rise of the internet has replaced and superseded their attractiveness, with the result that drive-ins have long since disappeared from the landscape;
- Additionally, due to recent events and lack of large public entertainment alternatives, temporary "pop-up" facilities have recently garnered renewed interest;
- Commercial riding stables/academies have not been a viable use in the Islip area for many years, and only a few existing stables remain in the region, and no new commercial ones have been proposed.

The balance of the permitted uses may be appropriate and viable on small sites located in downtown areas or in industrial and commercial centers, but are not viable on a 114-acre standalone site in proximity to residential development.

In summary, none of the uses permitted with or without a special permit in the Recreational Service G District are realistic or viable alternatives for the development of the subject site. It is also noteworthy that the Applicant is a developer of high-quality residential and/or industrial projects, and has no experience or business interest in the types of commercial recreational projects that are the basis for this alternative. As such, this alternative is not reasonable or feasible to the Applicant, and so is not pursued further.

5.7 Alternative 7: Rental Multi-Family and Townhouse Project with On-Site Golf Course

5.7.1 Description of Alternative 7

In Alternative 7 (see **Conceptual Layout #7**), the property would be developed with 1,365 residences in a mix of apartments and townhouses. This scenario assumes 1,173 apartments in 13 multi-unit, four-story structures, and 192 townhouses in 20 two-story multi-unit structures. The yield for this alternative was established at a level that, like the proposed project and including the effect of roadway mitigation measures as planned for the proposed project (to be applied to this alternative should adverse impacts be determined), would not adversely impact overall traffic flow in the area.

The site would be rezoned to a PDD district. Similar to the proposed project and Alternative 5, this scenario locates the developed area toward the central portion of the site, and assumes the same three vehicle access points; as a result, a similar amount (5± acres or more) of the bordering natural vegetation perimeter buffer could be retained. Thus, a similar amount of the site would be cleared and, potentially graded, as the proposed project (109± acres). The following details the floor area and bedroom count of each residence type of Alterative 5:

- Townhouse units: 96 two-bedroom units and 96 three-bedroom units
- Apartment units: 586 one-bedroom units and 587 two-bedroom units

Outdoor amenity areas similar to those of the proposed project are assumed for the apartment buildings, and include pools, patios, gazebos, and gathering areas. A clubhouse would be provided for the use of all site residents, and may include fitness centers, yoga and spin studios, screening rooms, club rooms, community kitchens, community workspace/library, and meeting rooms. The southwestern and western portions of the site would be developed with a private, 9-hole executive-style golf course. This facility would be restricted to the use of the site's residents and their guests, as a recreational amenity. Finally, a building in the site's northeastern corner along Lakeland Avenue to serve as a community space.

Like the proposed project, vehicle access points would be provided in the site's northeastern corner (onto Lakeland Avenue), on the north (onto Eleventh Street), and in the site's

southwestern corner (onto Hauppauge (Terry) Road. Each of the latter two accesses would be controlled by Stop signs for exiting vehicles.; the Lakeland Avenue access would be controlled by the traffic signal that currently controls this access. Also like the proposed project, the internal roadways in Alternative 7 would not be designed to conform to Town standards for width, so that the roadways would not be offered to the Town, but would remain in private hands to be owned and maintained by the owning entity.

All sanitary wastewater generated on the site would be conveyed to an on-site STP for treatment and disposal, in conformance with SCSC Article 6 requirements. The treated wastewater would have a nitrogen concentration of 10 mg/l or less; the nitrogen concentration in the water recharged on-site is estimated to be 5.06 mg/l. Water would be supplied by SCWA and would include domestic/potable water. Since a golf recreational use is provided, it is possible that irrigation water for this amenity would be from the existing on-site private irrigation well that had served the Island Hills golf course. The project's drainage system would be subject to Town review and approval for design and capacity, including the prevention of runoff flowing from the site onto adjacent properties. or from the site and into the drainage system serving the bordering roadways. Roof runoff would be handled in a subsurface leaching system at each of the buildings and at each of the parking lots; stormwater runoff generated on the roads would flow downslope into the curbside sewer system for recharge. As shown on the plan, a 3.51-acre pond/detention area would be excavated on the property as part of the drainage system, eliminating the need for a recharge basin that would otherwise be required by the Town.

5.7.2 Comparison of Impacts to Proposed Project: Alternative 7

The following is a summary of the anticipated impacts of Alternative 7 relative to the corresponding impact anticipated for the proposed project for each of the resource categories analyzed in Sections 2.0 and 3.0 of this document (see **Table 5-1**).

Alternative 7 would re-develop the entire site with a mix of residential types, including 1,173 rental apartments, 192 townhouses, and a 9-hole golf course. This scenario would be served by an on-site STP. As a result, impacts are expected from Alternative 7 though the magnitude of impact to the resources evaluated herein would vary in comparison to those of the proposed project. Specifically, impacts to soils and topography would be similar to those of the proposed project (as this scenario would clear and grade the interior portions of the property, and leave a small amount of natural vegetation as a visual and noise buffer along the site's perimeter). Water consumption would be similar to the proposed project, and so recharge volume and the concentration of nitrogen in recharge would be similar as well. Impacts to ecology would be similar to the proposed project, as only a small amount of perimeter natural vegetation would be retained as habitat. The amount of re-development in Alternative 7 would be similar to that of the proposed project, so that similar amounts of vehicle trips would be generated, resulting in similar levels of air quality impact and similar impacts to local roadways and intersections. Impacts associated with land use, zoning and planning would be similar to those of the proposed project and, with the exception of public schools, impacts to community character

would be similar as well. Alternative 7 would represent greater demands on local community services; it would generate more residents than the proposed project, as well as more school-age children, resulting in greater impacts to local school enrollments. For the Connetquot CSD, Alternative 7 would generate an amount of school district taxes that would exceed the costs to the district to provide educational services, resulting in an annual net fiscal benefit to the district. As there are no cultural resources on the site to be impacted, no such impacts would occur. Impacts associated with emergency preparedness planning and activities would be similar to those of the proposed project, and impacts related to open space and recreation would be greater than the proposed project, as no on-site public park would be provided in Alternative 7. Positive impacts on the local economy would be less than those of the proposed project due to the lower amount of taxes generated. Finally, impacts associated with construction would be similar to the proposed project, due to the similar amount of development in these two scenarios.

5.7.3 Conclusions

Alternative 7 project could potentially be feasible and would be consistent with the overall goals of the project sponsor, which are to realize a reasonable return on the investment in land by constructing a high quality multiple family/apartment residential development that addresses a need for rental and affordable housing in the area and provides benefits to the community. Thus, this alternative would be a *"reasonable or feasible"* alternative from the perspective of the project sponsor, under SEQRA.

5.8 Comparison of Anticipated Impacts, Alternatives 1, 2, 3, 4, 5, & 7

It is noted in **Section 5.1.3** that Alternative 1 would not achieve the goals or objectives of the landowner/applicant, and so is not reasonable or feasible from his perspective. As detailed in **Section 5.6** above, Alternative 6 is also not a reasonable or feasible development option from the perspective of the Applicant, and so has not been pursued in this analysis. It is instructive to note that a golf course had previously occupied the subject site, but had closed because it could not be sustained on a fiscal basis. As such, Alternative 6 is not included in the anticipated impact discussion below. Alternatives 2, 3, 4, and 5 may be feasible in the sense that each could be built on this site, but none are in keeping in with the goals and objectives of the project sponsor. Only Alternative 7 could potentially be reasonable and feasible to the Applicant. Nevertheless, for informational purposes and to contrast the adverse and beneficial impacts amongst the alternatives, the following discussions of the relative impacts of the alternatives are presented below.

5.8.1 Soils and Topography

Alternative 1 would not change the acreages of the existing land cover types; no construction would occur on the site, so no impacts to geological resources from excavations, clearing or grading would occur.

Based on the values in **Table 5-1**, it is expected that essentially the entire site will be subject to clearing and general grading in Alternatives 2, 3, and 4, and clearing/grading to a lesser extent (i.e., retaining a narrow fringe along the site's perimeter) in Alternatives 5 and 7. It is expected that either or both a stormwater detention pond and/or a recharge basin be included in these scenarios, so that the volume of soil excavated would be similar to that of the proposed project, and the volume of excess soil (after accounting for re-use on-site as fill) would be similar to that of the proposed project as well.

For the proposed project and Alternatives 2, 3, 4, 5, and 7, the site will first require that the impacted soils be remediated to NYSDEC Part 375 standards. It is noted that the standard to which soil remediation efforts will be held will vary depending upon the type of land use that occupies the site. Generally, the standard to be applied is based on the type of land use proposed or, if multiple uses are proposed, the most sensitive type of land use proposed. Hence, residential land use (such as for Alternatives 2, 3, 4, 5 and 7) will involve a higher (i.e., stricter) level of soil clean-up than would apply to a non-residential land use,, as follows:

- **Alternative 2:** The applicable regulatory guidance value that would pertain to this scenario would be the NYSDEC Part 375 soil cleanup objectives for residential use which are applied to single-family residential developments.
- **Alternative 3:** The applicable regulatory guidance value that would pertain to this scenario would be the NYSDEC Part 375 soil cleanup objectives for residential use which are applied to single-family residential developments as well as restricted-residential use which are applied to developments that are under common ownership or a single owner/managing entity of the site as would be the case for multi-family housing (townhouses). Each guidance value would be directed to each specific development located on the subject property.
- **Alternative 4:** The applicable regulatory guidance value that would pertain to this scenario would be the NYSDEC Part 375 soil cleanup objectives for the residential use which are applied to single-family residential developments as well as restricted-residential use which are applied to developments that are under common ownership or a single owner/managing entity of the site as would be the case for multi-family housing (attached single-family dwellings). Each guidance value would be directed to each specific development located on the subject property. Soil management may not be applicable for the golf course portion of the proposed development.
- **Alternative 5:** The applicable regulatory guidance value that would pertain to this scenario would be the NYSDEC Part 375 soil cleanup objectives for restricted-residential use which are applied to single-family residential developments (independent living and senior community).
- **Alternative 7:** The applicable regulatory guidance value that would pertain to this scenario would be the NYSDEC Part 375 soil cleanup objectives for restricted-residential use which are applied to single-family residential developments (apartment complex and townhouses). Soil management may not be applicable for the golf course portion of the proposed development.

Under all of the above scenarios the NYSDEC Part 375 soil cleanup objectives for the protection of groundwater, which is the applicable maximum cleanup objectives for General Fill requirements, will also apply as per the soil management plan prepared for the proposed project.

During remediation, trucking of large volumes of contaminated soil from the site will be required, increasing heavy vehicle traffic on local roadways during that time. Off-site trucking of contaminated soils also has an environmental cost in fuel used to handle, move and truck the soils large distances, as well as the future environmental concerns at the final disposal site. There is potential for off-site vapor and dust migration, even with mitigation plans in place, to occur during remediation.

With respect to the acreage of land to be cleared and graded, there does not appear to be sufficient reason to pursue any of the alternatives in preference to the proposed project. With respect to the impacts associated with conformance to the NYSDEC Part 375 soil clean-up objectives, Alterative 2 would represent a greater impact than the proposed project and the other alternatives.

5.8.2 Water Resources

In Alternative 1, the hydrology of the site would remain the same and the concentration and pounds per year of nitrogen and agricultural chemicals entering the groundwater regime would not change.

Table 5-1 shows that Alternative 7 would use about the same amount of water as the proposed project, followed in decreasing order by Alternatives 5, 3, 4, and 2, and so would generate less sanitary wastewater than the proposed project in the same order. However, because of differences in impervious surfaces among the alternatives, the volume of recharge would be greatest for the proposed project, followed by Alternatives 7, 5, 3, 4 and 2. Overall, the concentration of nitrogen in water recharged on the site would be highest for Alternative 5, and decreasing for Alternatives 2, 7, the proposed project, then Alternatives 3 and 4.

There does not appear to be sufficient reason to pursue other alternatives based on water resources. The proposed project provides an added water quality benefit of installation of a sewer main and expanded treatment capabilities for up to 69,875 gpd of wastewater from downtown Sayville. This removes nitrogen from sources that are nearer Green's Creek and Great South Bay, and conveying wastewater to the subject site for treatment and recharge at a greater distance from surface water bodies. This is a substantial benefit of the proposed project.

5.8.3 Ecology

In Alternative 1, no impacts to habitats would occur, so there would be no changes in the acreages or quality of the vegetation types or distributions on the property.

It is expected that impacts to ecological resources are directly related to the amount of habitat removal which, for Alternatives 2, 3, and 4 are slightly greater than that of Alternatives 5, 7, 8 and the proposed project (Alternatives 2, 3 and 4 would not retain 5± aces of existing natural vegetation as a buffer along the site's perimeter). Therefore, it is expected that the potential impacts to ecology for these alternatives would be slightly greater than those of Alternatives 5, 7 and the proposed project.

There does not appear to be sufficient reason to pursue other alternatives based on ecological resources. The proposed project provides greater opportunities for habitat restoration, particularly within the 25-acre passive/active park area. Landscape techniques that provide aesthetic enhancement and selective screening can be used to provide foraging and nesting areas for wildlife and enhanced habitat. Overall, the proposed project seeks to improve internal habitat through reduction of fertilized areas and natural restoration areas.

5.8.4 Air Quality

Alternative 1 assumes that the existing vacant, unused state of the site would not change, there would be no vehicle trips generated and no other types of emissions would occur. As a result, no potential source of impact to local air quality conditions would be present, so that no impacts to such resources would occur.

Generally, air quality impacts are associated with vehicle trip generation which, for Alternatives 3 and 7 are similar to those of the proposed project, and decrease for Alternatives 5, 4, and 2.. Therefore, it is expected that air quality impacts of Alternatives 3 and 7 would be similar to those of the proposed project, and decreasingly for Alternatives 5, 4, and 2.

There does not appear to be sufficient reason to pursue other alternatives based on air quality. Impact comparison between the proposed project and other alternatives is similar with respect to this resource.

5.8.5 Vehicle Traffic, Transportation and Roadways

Based on trip generation rates published by the ITE (and neglecting trips generated by the single maintenance employee), Alternative 1 would generate no vehicle trips, so that none of the existing LOSs at local intersections would be changed, and no changes in the levels of usage on local roadways would occur. Any existing traffic flow problems in the vicinity would not be addressed by the applicant. There would be no impacts to either the pedestrian environment or to public transit resources.

As noted above and as shown in **Tables 5-1** and **5-2**, the numbers of vehicle trips generated during the peak hours for Alternatives 3 and 7 will be similar to those for the proposed project, and decreasingly for Alternatives 5, 4, and 2; Generally, the potential for traffic-related impacts are associated with vehicle trips generated. As the proposed project would not significantly adversely impact local traffic flow and intersection operations, (with implementation of the

mitigation measures proposed), and these six alternatives would generate similar or fewer trips than the proposed project, it is not expected that Alternatives 2, 3, 4, 5, or 7 would impact local traffic conditions, with installation of the traffic mitigation measures.

TABLE 5-2
TRIP GENERATIONS
Alternatives 2, 3, 4, 5, and 7

Scenario	Use/Yield	AM Peak Hour (total, vph)	PM Peak Hour (total, vph)	Saturday Peak Hour (total, vph)
Alternative 2	**ITE LUC 210: 98 Single-Family Homes**	**74**	**100**	**100**
Alternative 3	ITE LUC 220: 1,000 Multifamily Units	460	560	540
	ITE LUC 210 39 Single-Family Homes	32	41	51
	Total	**492**	**601**	**591**
Alternative 4	ITE LUC 220: 122 Multifamily Units	56	58	56
	ITE LUC 210: 59 Single-Family Homes	47	61	68
	Total	**103**	**129**	**134**
Alternative 5	ITE LUC 220: 800 Multifamily Units	368	448	432
	ITE LUC 251: 59 Senior Units	27	32	14
	ITE LUC 253: 400 Congregate Care Units	28	72	72
	ITE LUC 254: 150 Assisted Living Units	29	39	41
	ITE LUC 620: 120 Nursing Home Beds	20	26	17
	Total	**472**	**617**	**576**
Alternative 7	**1,365 Mid-Rise Units**	**491**	**601**	**601**

Trip generations for Alternative 5 are projected to be greater than those of the proposed project for each of the three peak periods, so that adverse traffic impacts may occur for this scenario. However, a reduction in yield would reduce vehicle trips, which would reduce traffic-related impacts.

There does not appear to be sufficient reason to pursue other alternatives based on traffic analysis.

In accordance with the Final Scope, the TIS included an evaluation of the reasonable alternatives to the proposed project and their potential traffic-related impacts. The following has been taken from the TIS:

Alternative 1: No Action (Zoning remains the same: the proposed project site remains in its existing use and condition). Under this alternative, the intersections and roadways in the Study Area will operate under No Build Conditions.

Alternative 2: This alternative is based on the development of the site per existing zoning for single family dwellings. A yield of a 98 single family lot subdivision was established in accordance with the Town's Subdivision and Land Development Regulations. Trip

Generation estimates for Alternative 2 were prepared utilizing data under Land Use Code 210- Single-Family Detached Housing from the ITE publication, *Trip Generation, Tenth Edition.* Table 51 [in **Appendix F-1**] is comparison of the trips associated with Alternative 2 and a comparable phase of the proposed project.

As can be seen from Table 51, Alternative 2 generates more trips than Phase 1 of the proposed project but less trips than Phase 2 of the proposed project. Based on the capacity analyses conducted for Phase 1 and Phase 2 of the proposed project discussed in traffic analyses section of the report, it was concluded that the construction of Phase 1 and Phase 2 of the proposed project will not result in significant traffic impacts on the study intersections and surrounding roadways. Based on the trip generation comparison for Alternative 2 and Phases 1 and 2 of the proposed project, the same conclusion can be made for Alternative 2.

Alternative 3: This alternative is based on the development of the site with a multifamily development at a reduced yield, which does not significantly impact roadways in the study area. A yield of 1,000 multifamily rental units with 39 single family ownership units surrounding the rental community with interspersed open space. The structures are 2 ½ stories in height. Trip Generation estimates for Alternative 3 were prepared utilizing data under Land Use Code 210- Single-Family Detached Housing for the ownership units and Land Use Code 220- Multifamily Housing (Low-Rise) for the rental units from the ITE publication, *Trip Generation, Tenth Edition.* Table 52 [in **Appendix F-1**] is a comparison of the trips associated with Alternative 3 and a comparable phase of the proposed project.

As can be seen from Table 52, the trips generated by Alternative 3 are similar to those for Phase 6 of the proposed project. Based on the capacity analyses conducted for Phase 6 of the proposed project, discussed in traffic analyses section of the report, it was concluded that the construction of Phase 6 will require physical improvements at the intersections of Lakeland Avenue and NYS Route 27 North Service and Lakeland Avenue and Tariff Street/Johnson Avenue. With these improvements, Phase 6 of the proposed project will not significantly impact the operation of the intersections within and around the Study Area. Based on the trip generation comparison for Alternative 3 and Phase 6 of the proposed project, the same conclusion can be made for Alternative 3.

Alternative 4: This alternative is based on rezoning the site to a Residence AA District and developed as an attached single-family dwelling clustered subdivision with a private recreation area. A yield of 122 multifamily units with 59 single family units was developed. Trip Generation estimates for Alternative 4 were prepared utilizing data under Land Use Code 210- Single-Family Detached Housing for the single-family units and Land Use Code 220- Multifamily Housing (Low-Rise) for the multifamily units from the ITE publication, *Trip Generation, Tenth Edition.* The private recreation area will not generate external trips. Table 53 [in **Appendix F-1**] is a comparison of the trips associated with Alternative 4 and a comparable phase of the proposed project.

As can be seen from the table above, Alternative 4 generates more trips than Phase 1 of the proposed project but less trips than Phase 2 of the proposed project. Based on the capacity analyses conducted for Phase 1 and Phase 2 of the proposed project, discussed in traffic analyses section of the report, it was concluded that the construction of Phase 1 and Phase 2 of the proposed project will not result in significant traffic impacts on the study intersections and surrounding roadways. Based on the trip generation comparison for Alternative 4 and Phases 1 and 2 of the proposed projects, the same conclusion can be made for Alternative 4.

Alternative 5: This alternative is based on the development of the site as a Life Cycle Community consisting of 800 Multifamily units, 59 Senior Housing units, 400 Congregate Care units, 150 Assisted Living units and 120 Bed Nursing Home. Trip generation estimates for Alternative 5 were prepared utilizing data under ITE Land Use Code 220- Multifamily Housing (Low-Rise), ITE Land Use Code 251 -Senior Housing Detached, ITE Land Use Code 253 – Congregate Care Facility from the ITE publication, *Trip Generation, Tenth Edition.* Table 54 [in **Appendix F-1**] is comparison of the trips associated with Alternative 5 and a comparable phase of the proposed project.

As can be seen from Table 54, the trips generated by Alternative 5 are similar to those for Phase 6 of the proposed project. Based on the capacity analyses conducted for Phase 6 of the proposed project discussed in traffic analyses section of the report, it was concluded that the construction of Phase 6 will require physical improvements at the intersections of Lakeland Avenue and NYS Route 27 North Service and Lakeland Avenue and Tariff Street/Johnson Avenue. With these improvements, Phase 6 of the proposed project will not significantly impact the operation of the intersections within and around the Study Area. Based on the trip generation comparison for Alternative 5 and Phase 6 of the proposed project, the same conclusion can be made for Alternative 5.

Alternative 7: This alternative is based on the development of the site with 1,365 multi-family residential units. The unit count for Alternative 7 is equal to Phase 6 of the proposed project and therefore, the results of the capacity analysis will be the same.

The findings noted above are supported by an analysis comparing the trip generation values for each of the six alternatives against the trip generation values at each phase of the proposed project, to determine whether traffic mitigation measures would be necessary for each alternative, and if so, at what point would installation of mitigation be needed (see **Appendix F-8**). As the TIS established that the mitigation measures needed (and that the Applicant has committed to provide) at each phase of the proposed project would be sufficient to maintain existing LOS conditions at the local intersections, it is expected that these same mitigation measures would be appropriate at the same locations, if found to be necessary, for each alternative. However, the analysis shows that the trip generation values for each alternative would not exceed those of the proposed project, so that no additional mitigation measures beyond those already established for the proposed project would be needed.

The matrix analysis included in **Appendix F-8** tabulates the various arterial roadway LOS and speed by project phase in order to summarize this information from the TIS. The tables below present this information with applicable references to the tables in the TIS.

Arterial Roadway Level of Service (LOS) and Speed (mph) by Project Phase

Arterial		No Build		Ph. 1		Ph. 2		Ph. 3		Ph. 3 (1)	
Lakeland/RR -NB	AM	C	18.9	C	18.8	C	18.6	C	18.4	C	18.4
	PM	C	18.1	C	18.0	D	17.9	D	17.6	D	17.6
Lakeland/RR -SB	AM	C	20.1	C	19.9	C	19.8	C	19.7	C	19.7
	PM	D	16.6	D	16.3	D	15.9	D	15.2	D	15.9
Reference Table No.				25/26		29/30		31/32			

Arterial Roadway Level of Service (LOS) and Speed (mph) by Project Phase

Arterial		No Build		Ph. 4		Ph. 4 (1)		Ph. 5		Ph. 5 (1)		Ph. 6		Ph. 6 (1)	
Lakeland/RR -NB	AM	C	18.8	D	18.0	C	18.3	D	17.9	C	18.2	D	17.7	C	18.5
	PM	D	18.0	D	17.3	D	18.0	D	16.9	D	17.8	D	15.8	D	17.9
Lakeland/RR -SB	AM	C	20.1	C	19.6	C	19.9	C	19.5	C	19.8	C	19.5	C	19.6
	PM	D	16.2	D	14.7	D	17.3	D	14.4	D	16.7	D	13.8	D	16.2
Reference Table No.				34/35				37/38				37/38		40/41	

Appendix F-8 also includes excerpts of the illustrations of roadway improvements needed as mitigation to ensure there is no significant adverse impacts from various phases of the project. These include Lakeland Avenue at Route 27 (Figure 28 of the TIS), Lakeland Avenue at Tariff Street/Johnson Avenue (Figure 29 of the TIS), and Lakeland Avenue Eastover at 11th Street (Figure 30 of the TIS). As noted above, the Applicant is committed to installing the established mitigation measures for the proposed project, and would phase development of the alternatives so that the mitigation measures would be installed when necessary to maintain existing LOS conditions.

5.8.6 Land Use, Zoning and Plans

As the existing land uses and zonings of the site would not change in Alternative 1, the patterns of land use and zoning in the vicinity would not change. The site's conformance to the recommendations of the various applicable land use plans would likewise not be affected, and the potential for redevelopment of the property would continue unchanged.

The land use type and yield assumed for Alternatives 2 and 4 conform more closely to the use and density of the adjacent area to a greater degree than the proposed project. Additionally, Alternative 2 is based on the site's existing Residence AAA zoning, which is not case for the proposed project, whereas Alternative 4 is based on a rezone to the Residence AA district. However, Alternatives 2 and 4 would not address the established need for quality rental housing (including quality affordable housing) in the area, which is the goal of the proposed project. Additionally, the types and yields of the residences in Alternatives 2 and 4 do not lend themselves to affordable housing development, and multi-family developments would not be allowed at this location by Town Code standards. Alternatives 2 and 4 need not and would not provide any of the Community Benefits that would be provided by the proposed project. Like the proposed project, Alternative 2 would not retain the golf course amenity on the site, which was a recommendation of the applicable land use plans. Alternative 4 would include a golf

course, but it would be private and not available to the public, which would not conform to the recommendation of either of the two land use plans evaluated. However, it should be noted that the golf course failed because it was not sufficiently supported to remain fiscally healthy and operative.

The land use types and yields assumed for Alternatives 3, 5, and 7 do not conform to the use and density of the adjacent area. Alternatives 3 and 7 would address the established need for quality rental housing (including quality affordable housing) in the area, which is the goal of the proposed project. Additionally, these scenarios are based on a rezone of the site to PDD, so that Community Benefits would be provided, and include the same or similar Community Benefits of the proposed project (though not a 25-acre park as in the proposed project). Like the proposed project, Alternative 3 would not retain the golf course amenity on the site, which was a recommendation of the two land use plans; Alternative 7 would include a golf course, but it would be private and not available for public use, contrary to the two land use plans. Furthermore, the golf course would not provide for non-resident memberships, as such an arrangement had not proved successful for the prior country club use, and it would be difficult to enlarge the golf facilities to meet the needs of an increased patronage (e.g., parking spaces, clubhouse, practice facilities, etc.).

Generally, neither the proposed project nor any of the alternatives evaluated here would closely conform to the land uses and/or yields recommended for the subject site in either the Sayville Hamlet Study or the Sunrise Highway Corridor Study, though Alternative 2 would conform most closely to the recommendations of each of these plans than the other alternatives and the proposed project.

Though other alternatives may conform more closely to existing zoning (Alternative 2) and some land use recommendations, consideration of a PDD is appropriate to meet current land use and housing needs and the PDD provides a zoning technique to achieve multiple benefits. Alternatives 2 and 4 would produce lower trip generation values. Alternative 7 is similar to the proposed project but provides a golf use for on-site residents instead of a 25-acre public perimeter park, which would otherwise represent a public expense for maintenance. Given these considerations, there not appear to be sufficient reason to pursue other alternatives based on land use and zoning.

5.8.7 Community Facilities and Services

In regard to community services, the site's conditions under Alternative 1 would continue to warrant oversight on the part of police and fire protection personnel. The property would not require services for education, solid waste handling, water supply or energy, and there would be no usage of park or recreational facilities.

As Alternatives 2 and 4 assume less development on the site in comparison to the proposed project, it is expected that, while Alternatives 2 and 4 would utilize the same community service types as the proposed project, it would place fewer demands (or potential demands, in the

cases of emergency services) upon them. Additionally, Alternatives 2 and 4 would generate less property tax revenues than the proposed project, which would not assist these service providers to as large a degree as the proposed project in offsetting the increased costs to provide services.

Alternatives 3, 5, and 7 would result in levels of development on the site more similar to the proposed project, and would utilize the same community service types as the proposed project, with similar levels of demand (or potential demands, in the cases of emergency services) upon them. In compensation, Alternatives 3, 5, and 7 would generate similar levels of property tax revenues as the proposed project, which would provide the financial resources to assist these service providers in offsetting the increased costs to provide services.

Generally, the Town receives less than about 4% of the total taxes generated, so that the higher density and associated higher demand on local services from Alternatives 3, 4, 5 and 7 is not compensated for by increased revenue to the Town.

Though other alternatives may result in less demand for community services, but also generate lower taxes, it is noted that assessment of the proposed project did not identify any significant adverse or unmitigated impacts. Given these considerations, there not appear to be sufficient reason to pursue other alternatives based on community services.

5.8.8 Community Character

The character of the site, as defined by its visual appearances and noise and lighting characteristics would remain unchanged in Alternative 1.

With respect to the overall development density in comparison to that of the community, it is acknowledged that Alternative 2 would closely match the community, whereas those of Alternatives 3, 4, 5, and 7 would be greater than that of the neighborhood. As a result, there would be a greater need to consider and implement site design principles (such as deep setbacks, site grading, use of landscaping, natural buffering, limitations on building height, architectural techniques to minimize impacts, etc.) to minimize impacts to community character.

Development under Alternatives 2, 3, 4, 5, and 7 will change the visual appearance of the subject site, by clearing the existing natural vegetation buffer along the bordering roadways and placing new 2 ½ story residential homes close to and along these roadways (Alternatives 2, 3 and 4), or larger multi-unit residential buildings or industrial buildings (Alternatives 5 and7) farther from the roadways. Additional clearing deeper into the interior of the site would enable some views of the homes and buildings beyond. The proposed project, unlike Alternatives 2, 3, 4 5 and 7, would retain the perimeter buffer for use as a park, thereby providing a visual buffer for outside observers. Additionally, the proposed project would locate its increasingly taller residential structures at increasingly greater distances from the bordering roadways, thereby reducing the potential for adverse visual impacts.

The residential uses assumed for Alternatives 2, 3, 4, 5 and 7 are such that no significant sources of noise generation are anticipated, so that no significant potential for adverse noise impacts on the community are anticipated. It is acknowledged that noise will occur during the construction phase for any redevelopment of the site, but these impacts would be limited in duration, limited to the length of time needed for each particular construction activity (e.g., clearing, grading, soil removal, material deliveries, home construction, etc.), and limited to daytime hours. Generally, because of the variations in the amount and type of development in the alternatives, it is expected that the duration of construction would be greatest for Alternatives 5, 7 and 8, and decreasingly so for Alternatives 3 and 4. As Alternative 2 would involve the least development, this scenario would also represent the shortest potential construction duration.

The proposed project and Alternatives 2, 3, 4, 5, and 7 would increase the amount of lighting on the site from new streetlights and wall-mounted safety/security lighting on each building. However, an impact from fugitive lighting on the character of the community is not anticipated, as the proposed project and all alternatives would have to comply to the Town's "Dark Sky" lighting requirements, including streetlights equipped with cut-off hoods to minimize contribution to diffuse skyglow and directed downward. For the proposed project and all alternatives, sites would be developed after preparation and Town approval of a comprehensive lighting plan that minimizes fugitive lighting, and the safety/security lighting fixtures on the homes would be mounted low, and designed to minimize the horizontal distance that fugitive lighting could extend toward the site's neighbors.

As shown in **Table 5-1**, in decreasing order, Alternatives 7, 5, 3, 4 and 2 would increase the overall population in the community, and in decreasing order for Alternatives 7, 3, 2, 5 and 4 in the number of school-age children in the Connetquot CSD. It is acknowledged that these increases could represent significant impacts on the community's character and on the Connetquot CSD, but it must be remembered that development of each scenario would occur over an extended period of time, enabling the community to adapt.

Other than Alternative 2, there does not appear to be sufficient reason to pursue other alternatives in lieu of the proposed project based on avoiding impacts to community character. Impact comparison between the proposed project and other alternatives is similar with respect to this resource.

5.8.9 Cultural Resources

As investigation has determined that the property has no cultural (whether prehistoric or historic) resources, there would be no impact to this resource in any of the alternative scenarios evaluated herein.

5.8.10 Emergency Preparedness

Alternative 1 would not change the existing nature or level of emergency preparedness of the site; it would continue to be susceptible to fire, as the site is unoccupied and so is not closely supervised.

Generally, the increased development of Alternative 2, 3, 4, 5, and 7 would increase the potential for need of public emergency response or services to the site, as well as the types of emergency services that could be needed. The presence of elderly residents in Alternative 5 would represent a population particularly sensitive to emergency care and transportation needs in case evacuation is necessary. However, the site would be designed and constructed in conformance with all applicable Town, County and NYS building and construction standards, which include consideration of emergency needs and response, such as fire and smoke alarms, and fire-resistant building materials under all of these alternatives.

The site is not in a flood plain area and there are available major transportation corridors near the site for evacuation purposes should such be necessary. All alternative uses and site occupants would be subject to direction of police and fire responders under emergency conditions, as well as relevant regional emergency preparedness plans and governmental instructions.

There does not appear to be sufficient reason to pursue other alternatives based on emergency preparedness.

5.8.11 Open Space and Recreation

In Alternative 1, the subject site would remain closed, and so would remain unavailable to the public as a potential open space or recreational resource. However, the site would also not contribute to the usage of any local public open space or recreational site, as no residents would be generated on it.

In Alternatives 2, 3, 4, 5 and 7, the site would be re-developed as a residential community including private recreational amenities (a 9-hole golf course in Alternatives 4 and 7, and private recreational amenities assumed for Alternatives 2, 3 and 5), with no provision of any public open spaces or recreational amenities. Additionally, these scenarios would generate new residents in the community, that would tend to increase the potential for usage of local public open space and/or recreational resources. However, a portion of the property taxes generated by these alternatives would be allocated to public open space and recreational facility/services providers, which would tend to help offset a portion of the increased costs of these services.

While the Heartland Industrial Park includes a successful and popular 9-hole Executive golf course/driving range/mini-golf facility, this facility represents a small portion of that property, which includes a large amount and number of industrial spaces. Alternatives 2, 3, 4, 5,and 7

would result in an increase in tax allocations to public open space and recreational facility/services providers with no offsetting increase in the provision or cost of such services.

The proposed project would appear to have benefits over other alternatives with respect to open space and recreation. The proposed project will provide a 25-acre perimeter park that will accessible to the public and will provide an added recreational/open space resource in the area. This is a benefit which can be weighed in comparison to Alternatives 4 and 7, which provide a resident-only golf course instead of the perimeter park.

5.8.12 Local Economy

Because the site would remain undeveloped and unoccupied in Alternative 1, it would contribute only its property taxes to the local economy; no employment would be generated, and no sales would be generated in the downtown Sayville businesses. It would also not contribute to any changes in the local rental housing market or home values in the area.

The new residential development represented by Alternatives 2, 3, 4, 5 and 7 would contribute to overall economic conditions in the community, from the increased property taxes generated and from the increased number of potential customers for local businesses. Each alternative will create jobs to varying degrees (see **Table 5-1**), with greater employment opportunities for those alternatives which require support and operational services, including Alternatives 5 (281.3 FTE), 7 (51.6 FTE), and 3 (44.0 FTE).

The proposed project will contribute to the local economy by providing tax revenue, 60.1 FTE jobs, and consumers for local businesses.

5.8.13 Construction-Related Impacts

As there would be no construction in Alternative 1, there would be no impacts associated with such activity.

It is expected that the construction of Alternatives 2, 3, 4, 5, and 7 would cause impacts typical of any large-scale construction project (e.g., noise from construction activities, equipment operations, and vehicle movements, odors from vehicle exhausts, dust raised by vehicle movements, construction traffic on local roads, locations of equipment delivery areas, equipment and material storage areas, staging areas, and worker parking, and removal of excess soil). However, construction impacts are limited in duration and to the length of time that each stage of construction lasts. Generally, because of the variations in the amount and type of development in the alternatives, it is expected that the duration of construction would be greatest for Alternatives 5 and 7, and decreasingly so for Alternatives 3 and 4. As Alternative 2 would involve the least development, this scenario would also represent the shortest potential construction duration. Finally, it must be remembered that construction impacts are unavoidable, and would occur regardless of the type or scale of the project under consideration, but the intensity and duration of construction impacts are mitigated by the scale

of the project: broadly speaking, a smaller project would generate a lower level of impact than a larger project.

There does not appear to be a compelling reason to pursue other alternatives based on construction-related impacts. Impact comparison between the proposed project and other alternatives is similar with respect to this impact category.

5.9 Proposed Mitigation, Alternatives

As Alternative 1 would not involve any changes in the existing conditions of the project site, there would be no impacts associated with this scenario. As such, no mitigation measures would be required for this scenario. Therefore, Alternative 1 is not included in the mitigation analysis below. Additionally, as noted above, Alternative 6 is not reasonable or feasible to the Applicant, and so has not been pursued in this analysis. As such, Alternative 6 is not included in the proposed mitigation discussion below.

5.9.1 Soils and Topography

- The potential for impacts with respect to erosion during construction would be addressed by using proper grading techniques and implementing erosion control measures, installing proper drainage facilities and using suitably adapted drought-tolerant indigenous vegetative species for landscaping as well as site stabilization and restoration.
- Landscaping practices common applied to sandy soil areas would be employed and implemented at the time of construction.
- A detailed grading and drainage plan would be prepared for any site plan application associated with alternatives, and would require Town review and approval.
- NYSDEC SPDES review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of 1-acre would be required.
- Fill material that may be required would be obtained from on-site sources.
- A protocol could be established to ensure that any topsoil imported to the site would come from a NYSDEC-certified source.
- All stormwater runoff generated on the property would be retained and recharged in a drainage system designed to conform to Town design requirements. The Town Engineering Department would review and approve the system as part of the site plan review process.

5.9.2 Water Resources

- In conformance with Town requirements, all stormwater runoff generated on developed surfaces would be retained on-site, to be recharged to groundwater through a drainage system that would be subject to detailed review by Town engineering staff during the site plan review process, ensuring that no impacts would occur to off-site properties or surface water bodies.

- Adherence to the required SWPPP would ensure that stormwater generated during the construction period is controlled, and that erosion and its associated impacts is minimized.
- Conformance to the standards and requirements of SCSC Article 6 in regard to sanitary wastewater treatment and disposal would ensure proper protection of water resources occurs.
- Conformance to the requirements of SCSC Articles 7 and 12 would ensure that no significant increase in the potential for adverse impact on groundwater quality is anticipated from accidental spillage or release of toxic or hazardous chemical substances.

5.9.3 Ecology

- Native plant species that provide food and shelter to wildlife could be utilized in landscaped areas.
- The loss of Successional Southern Hardwood Forest and Pitch Pine - Oak habitat on the property could be partially mitigated through the replanting of diverse habitat types within the subject site.

5.9.4 Air Quality

- Generally, air quality impacts associated with residential development of Alternatives 2, 3, 4, 5 or 7 would be related to vehicle trips generated. As the proposed project would generate more vehicle trips than these of all scenarios, and the Air Quality Analysis contained herein did not reveal any impacts in this regard, it is expected that these five scenarios would likewise not result in air quality impacts, so that no mitigation would be necessary.
- Alternative 5 would result in more vehicle trips than the proposed project, so that it is possible that adverse air impacts could occur. If this scenario is pursued, it would be prudent to prepare an Air Quality Analysis for that scenario, to determine the potential for and extent of any such impact, and establish appropriate mitigation measures.
- If maintenance operations involve toxic or hazardous substances, it is expected that their use, storage, production and disposal would be conducted in conformance with all pertinent Town County, NYS and Federal requirements and regulations, thereby minimizing potential air quality impacts.

5.9.5 Vehicle Traffic, Transportation and Roadways

- It is expected that Alternatives 2, 3, 4, and 7 would require off-site roadway mitigation measures similar to those of the proposed project.
- For Alternative 5, trip generation would be greater than that of the proposed project, so additional traffic analysis would be appropriate if this scenario is pursued.

5.9.6 Land Use, Zoning and Plans

- Alternative 2 would satisfy the Town policy requirements for residential development in the Residence AAA district. Therefore, no mitigation measures in this regard would be necessary.
- Alternatives 2 and 4 conform to the type of residential use recommended for the site in the Sayville Hamlet Study and the Suffolk County Sunrise Highway Corridor Study, but do not include the public golf course as recommended by these plans.
- Alternative 5 does not conform to the type of residential use recommended for the site in the two land use plans, and does not include a golf course that would be available to the public.
- Alternatives 2 and 4 would be appropriate with respect to the land use pattern in the vicinity given their proximity to similar and complementary land uses.
- Alternatives 3 and 7 would provide types of housing diversity that the Town recognizes are necessary based on economic conditions, demographic trends and existing housing stock.
- Alternatives 3, 5 and 7 would conform to the standards for a PDD under NYS Town Law Section 263.

5.9.7 Community Facilities and Services

- All of the alternatives would cause an increase in property taxes generated by the site and, therefore, in the amounts of tax revenue allocated to all community services providers. This would help to offset only a portion of the increased costs to provide such services.
- Alternatives 2, 3, 4, 5 and 7 would represent increases in enrollment for the Connetquot CSD, for which an estimated increase in expenditures would result. However, these alternatives would also cause an increase in tax revenue allocated to the Connetquot CSD, which would provide additional revenue to offset district budgetary needs.
- Construction would include current building materials and safety installations per the NYS Building Code, such as fire and smoke alarms and sprinkler systems.
- Water and energy resources would be conserved through use of energy- and water-conserving design principles, building materials, mechanical and plumbing systems, plumbing fixtures and appliances.

5.9.8 Community Character

- The potential visual impacts of the new construction of each alternative could be mitigated by shifting development farther from the site's perimeter to Increase the distance between outside observers and the project's buildings and to retain as much of the existing naturally-vegetated perimeter buffer as practicable, and by supplementing this buffer with additional natural plantings, by planting trees and shrubs within the site and around and between the buildings in the interior of the property.
- It is expected that conformance to the standards of Chapter 68, Section LII (Outdoor lighting) will be sufficient to adequately mitigate potential impacts from fugitive lighting for

all scenarios evaluated. However, the Applicant could consider additional screen plantings in the perimeter vegetation buffer, to increase the level of lighting obscuration.

5.9.9 Cultural Resources

- As no impacts to cultural resources are anticipated, no mitigation in this regard are necessary or proposed.

5.9.10 Emergency Preparedness

- The Applicant would ensure that all alternatives would incorporate appropriate building materials, mechanical systems, and design concepts to support a safe built environment that will protect the residents in case of a natural and/or human-related disaster.
- All uses would be subject to instruction from existing emergency preparedness plans and instructions from government, as well as fire/police responders in the event of an emergency.

5.9.11 Open Space and Recreation

- Alternatives 2, 3, 4, 5, and 7 would increase property tax allocation to the Town, which would increase the ability of the Town to support public open space and recreational facilities in the area.
- Mitigation for open space and recreation resources is inherent in the design of the proposed project.
- It is noted that Alternatives 2, 3, 4, 5 and 7 would be required to pay the Town's $1,250/unit park fee, unless the Town Board were to accept the creation of a public park improvement to be developed in the hamlet of Sayville.

5.9.12 Local Economy

- As each of the alternatives would result in increased economic activity in the area, from increased tax revenues, employment and commercial/business activity, no mitigation is necessary or proposed.

5.9.13 Construction-Related Impacts

- Generally, because of the variations in the amount and type of development in the alternatives, it is expected that the duration of construction would be greatest for Alternatives 5 and 7, and decreasingly so for Alternatives 3 and 4. As Alternative 2 would involve the least development, this scenario would also represent the shortest potential construction duration.

- Construction impacts are limited in duration and to the length of time that each stage of construction lasts. Construction impacts are unavoidable, and would occur regardless of the type or scale of the project under consideration.
- A construction management plan would be developed to mitigate potential impacts on the adjacent community.

5.10 Conclusion

This section meets SEQRA requirements for assessment and comparison of alternatives. The section identifies a total of seven (7) different alternatives to consider as compared to the proposed project. Each has their own considerations with respect to land use and resource impacts. Complete comparison of quantitative and qualitative impacts and potential mitigation measures is provided herein to provide the Town Board with complete information in consideration of the proposed project and various alternatives.

SECTION 6.0

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6.0 REFERENCES

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