

# Proposed 284-Lot Subdivision Map of Willow View Estates

## **The Woodmere Club**

99 Meadow Drive

Hamlet of Woodmere, Town of Hempstead,  
Village of Lawrence, and Village of Woodsburgh,  
Nassau County, New York

PREPARED FOR

**Nassau County Planning Commission**  
1194 Prospect Avenue  
Westbury, NY, 11590

PREPARED BY

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April 2020

**DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**PROPOSED 284-LOT SUBDIVISION  
99 MEADOW DRIVE  
HAMLET OF WOODMERE, TOWN OF HEMPSTEAD  
VILLAGE OF LAWRENCE, AND VILLAGE OF WOODSBURGH  
NASSAU COUNTY, NEW YORK**

**PROJECT LOCATION:** 116.72±-acre parcel located at 99 Meadow Drive, Hamlet of Woodmere, Town of Hempstead, Village of Lawrence, and Village of Woodsburgh, Nassau County, New York  
Nassau County Land and Tax Map: Section 41, Block F, Lots 37, 40, 48, 310, 3024, 3028, 3030, 3031, 3032; Section 41, Block D, Lots 53 and 55; and Section 41, Block 72, Lot 1

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**DATE OF PREPARATION:** April 2020

**AVAILABILITY OF  
DOCUMENT:**

This document is a Draft Environmental Impact Statement (DEIS) prepared on behalf of the above-referenced Applicants. Copies are available for public review and comment at the offices of the Lead Agency. This DEIS is also available electronically at <https://www.nassaucountyny.gov/4705/Willow-View-Estates-Subdivision-SEQR>.

**DATE OF ACCEPTANCE:** May 14, 2020

**DEIS COMMENT DEADLINE:**

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# 1

## Executive Summary

### 1.1 Introduction

This document is a DEIS for the proposed 284-lot subdivision<sup>1</sup> of the 116.72±-acre Woodmere Club in accordance with the State Environmental Quality Review Act (SEQRA) and its implementing regulations at 6 NYCRR Part 617 for the action contemplated herein, and is based upon the Final Scope that was adopted by the Nassau County Planning Commission (the “NCPC” or “Lead Agency”) on September 26, 2019.

The Woodmere Club is a 116.72±-acre private golf and country club located at 99 Meadow Drive, within the Hamlet of Woodmere (Town of Hempstead), Village of Lawrence and Village of Woodsburgh, Nassau County, New York.

The site is generally bounded by Broadway to the north; Atlantic Avenue to the south; Meadow Drive and Ivy Hill Road to the east; and local roadways including Sherwood Lane, Iris Street, Rose Street, Tulip Street, Ivy Street, East Hawthorne Lane, Copperbeech Lane, and Auerbach Lane to the west. Existing access to the subject property is provided via Meadow Drive, Ivy Hill Road, Atlantic Avenue, and Railroad Avenue.

This Executive Summary is designed to provide an overview of the proposed action, a brief summary of the potential adverse impacts identified, and mitigation measures proposed, as well as alternatives considered. Review of the Executive Summary is not a substitute for the

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<sup>1</sup> The proposed subdivision map has been minimally modified from the original subdivision application from 285-lots to 284-lots to reflect the most recent survey data available.

full evaluation of the proposed action performed in Sections 2.0 through 7.0 of this Draft Environmental Impact Statement (DEIS).

### 1.1.1 Description of the Proposed Action

As indicated above, the proposed action consists of the subdivision of the 116.72±-acre subject property into 284 single-family residential lots in accordance with the prevailing bulk and dimensional zoning regulations of the Town of Hempstead B Residence, Village of Lawrence Residence AA, and Village of Woodsburgh, Residence 1A and 2A zoning districts. Of the 284 single-family residential lots, 248 lots would be located within the Town of Hempstead B Residence zoning district, 12 lots would be located within the Village of Lawrence Residence AA zoning district (two of which, Lots 232 and 235, are partially located within the Village of Woodsburgh 1A Residence zoning district), 23 lots would be located within the Village of Woodsburgh Residence 1A zoning district (six of which, Lots 223, 236, 237, 238, 239, and 240, are partially located within the Village of Lawrence Residence AA zoning district), and one lot would be located within the Village of Woodsburgh Residence 2A zoning district. The individual lots included in the proposed subdivision have been designed to conform to the minimum lot area requirements of the zoning districts in which they are located as show below and in Table 1 of the DEIS.

#### Minimum Lot Size Requirements

Municipality	Zoning District	Minimum Required Lot Area (Square Feet)	Number of Proposed Lots
Town of Hempstead	B Residence	6,000	248
Village of Lawrence	Residence AA	40,000	12 <sup>1</sup>
Village of Woodsburgh	Residence 1A	43,560	23 <sup>2</sup>
Village of Woodsburgh	Residence 2A	87,120	1

1. Lots 232 and 235 are predominately sited within the Village of Lawrence Residence A-A zoning district. Small portions of these lots are also located within the Village of Woodsburgh 1A Residence zoning district. The prevailing zoning for the municipality in which the lot is predominately located in would be applicable.
2. Lots 223, 236, 237, 238, 239, and 240 are predominately sited within the Village of Woodsburgh 1A Residence zoning district. Small portions of these lots are also located within the Village of Lawrence Residence A-A zoning district. The prevailing zoning for the municipality in which the lot is predominately located in would be applicable.

Each of the proposed 284 single-family residential lots adheres to prevailing zoning requirements. As such, the proposed subdivision would be developed as-of-right under existing zoning, with no variances necessary.

Access to the Woodmere Club is currently provided by Meadow Drive, Ivy Hill Road, Atlantic Avenue, and Railroad Avenue. The proposed action would maintain these access points while creating additional access to the site via an extension of the dead end at Tulip Street, Prospect Avenue at Broadway, and Porter Place at Meadow Drive.

PSEG Long Island provides electrical service to the subject property and is expected to continue to serve the proposed single-family homes upon implementation of the proposed action. The subject property is located within the service area of National Grid and natural gas is the preferred method of heating for the proposed project. Potable water supply to

the subject property is currently provided by New York American Water (NYAW), as the site is located within NYAW's Lynbrook Operations District, and it is anticipated that NYAW would continue to serve the single-family residences upon implementation of the proposed action. The subject property is currently connected to the Nassau County Sewage Disposal Districts No. 1 and 2, which discharge to the Bay Park Sewage Treatment Plant (STP). Capacity is available at the Bay Park STP thus wastewater generated by the proposed action would continue to be serviced by the Nassau County Department of Public Works (NCDPW). Relevant service providers were contacted during preparation of this DEIS. A detailed discussion regarding the availability of services to the subject property is discussed in Sections 3.8 and 3.9 of this DEIS, and documentation of correspondence with these service providers has been included in Appendix N.

The subject property currently contains six artificial ponds that collect stormwater on the site and discharge to the Woodmere Basin. Upon implementation of the proposed action, stormwater runoff from the proposed new roadways throughout the subject property would be managed through the creation of stormwater bioretention areas, three of which would be created by modifying the six artificial ponds. These bioretention areas will accommodate runoff from a three-inch rainfall event (or greater, in accordance with prevailing regulations), with overflow into tidal wetlands at Woodmere Channel via existing outfalls. The individual residential lots to be created under the proposed action would manage their own stormwater and runoff needs post-development via on-site leaching pools. Section 3.2 of the DEIS includes a more detailed discussion of stormwater management measures and applicable regulations.

Upon approval of the proposed subdivision and securing all other applicable approvals and permits, it is the Applicant's intent to build 284 new single-family homes. Although the actual construction sequence will depend upon a variety of factors, such as the timing of permits/approvals, seasonal and weather conditions, contracting, the availability of equipment and materials, and economic factors, among others, it is anticipated that the demolition of existing structures, and construction of subdivision infrastructure would take approximately 12 to 18 months. As the future single-family homes would be designed subsequent to subdivision approval, and some are expected to be custom homes, it is not possible to determine an exact duration of construction. However, it is anticipated that houses within the Town of Hempstead would be constructed at a rate of approximately 50 houses a year over approximately five years, while development within the Villages would be contingent on the sale of the subdivided lots as they are more likely to be custom-designed by a builder or future homeowner. A detailed discussion of the potential impacts of the demolition and construction associated with the proposed action is provided in Section 3.13 of the DEIS.

### **1.1.2 Site History**

Development of the subject property and surrounding areas dates to the 1860's when the opening of the Rockaway branch of the Long Island Rail Road (LIRR) spurred development in southwest Nassau County. In this general time period, Robert L. Burton, purchased 200 acres of woodland and 100 acres of marsh and meadowland in Woodsburgh for a high-end suburban development. Burton laid out streets, dredged Woodmere Bay, built a bridge,

tennis courts, golf links, and erected a club house which was connected to gas, water, and electric. Other urban land investors purchased properties in neighboring Cedarhurst, Lawrence, and Hewlett Bay Park, and hired dredging companies to create deep-water channels for yacht and ferry access in order to attract urban elites to some of the earliest planned communities on Long Island. The Woodmere Club was originally built as part of Burton's development in 1908, moving to its present location in 1910 after being sold to Maximillian Morgenthau, President of the Hudson Bay Realty Company. Later, the Woodmere Club expanded to include some of the lands of the Rockaway Huntington Club.

Since 1910, the Woodmere Club has operated as a private golf and country club; at one time even considered one of the pre-eminent golf and country clubs on Long Island. However, due to a steady decline in golf membership, as well as a shift in demographics in the area, the Club has experienced a steep decline in membership over the past five years.

In 2017 the Club was sold to Titan Golf, who, according to their website is "a creative golf club operator that works with financially challenged private golf clubs to expand the longevity of the club." Titan Golf then hired Troon, the largest golf course and club management company in the world to operate the Woodmere Club. Since taking over ownership, Titan Golf has taken many steps to stabilize membership, including significantly reducing annual membership dues from \$25,000 to \$12,000. However, even with these reduced dues, which are more than 20-50 percent below those of other area clubs, there has been little influx of new members. As a result, Titan Golf has lost over \$4,000,000 by continuing operations of the Woodmere Club.

In the private country club industry, membership dues are the primary revenue source. Industry leaders maintain that 250 Full Member Equivalents is required to keep a club viable. Unfortunately, with fewer than 150 Full Member Equivalents, the continued operation of the Woodmere Club has become unsustainable. Projected losses for Fiscal Year 2019 are estimated at over \$1,500,000.

There is no path forward for the Woodmere Club to regaining its place as an economically viable private golf course and country club. It is anticipated that attrition will continue to be steady as members age, and are recruited by other, healthier clubs in the area. The decision by ownership to close the Club following the 2020 season is supported by Troon and considered fiscally responsible.

### **1.1.3 Application and SEQRA History**

As continued operation of the existing Woodmere Club is no longer economically feasible, the property owners are seeking to develop the site in accordance with prevailing zoning, and in character with the single-family residential neighborhoods that surround the site. Accordingly, on December 20, 2018, a formal application was submitted by WG Woodmere LLC, LH Barick LLC, and SG Barick LLC, (the "Applicants") to the NCPC for preliminary approval of a subdivision map for 99 Meadow Drive, the Woodmere Golf Club, Hamlet of Woodmere, Town of Hempstead, Village of Lawrence, and Village of Woodsburgh, Nassau County, New York, known as Section 41, Block F, Lots 37, 40, 48, 310, 3024, 3028, 3030, 3031, 3032, Section 41, Block D, Lots 53 and 55, and Section 41, Block 72, Lot 1, on the Nassau County Land and Tax Map.



The NCPC reviewed the application, including Part I of the Full Environmental Assessment Form ("Full EAF"), upon receipt, and declared itself Lead Agency for the purposes of conducting an environmental review in accordance with SEQRA. On January 31, 2019, the NCPC commenced a coordinated review process, circulated the Full EAF, and provided notice to Involved Agencies that the NCPC intended to act as the SEQR Lead Agency. The NCPC did not receive any objection from Involved Agencies with respect to acting as the SEQR lead agency for the proposed action within the time frames provided by 6 NYCRR 617(b)(3).

On March 7, 2019, the NCPC acting as Lead Agency, classified the proposed action as Type I, and issued a Positive Declaration indicating that the proposed action may have a significant adverse impact on the environment and requiring preparation of a DEIS.

Pursuant to 6 NYCRR § 617.8, a public scoping process was initiated. The Applicants submitted a Draft Scope on May 30, 2019 which was made available to the public and involved and interested agencies for review. A public scoping session was held on June 26, 2019, and the public comment period was held open until August 14, 2019<sup>2</sup>.

The Final Scope was adopted by the NCPC on September 26, 2019, and identified the following as potential significant adverse environmental impacts to be addressed in this DEIS: Physical Alteration of Land; Surface Water, Floodplains, Stormwater and Groundwater Resources; Ecology and Wetlands; Aesthetic Resources; Historic and Archaeological Resources; Recreational Opportunities and Open Space; Transportation; Energy; Infrastructure and Community Services; Zoning, Land Use and Community Character; Noise, Odors, and Lighting; Climate Change; and Construction Impacts. The Final Scope is included in Appendix A of this DEIS.

#### **1.1.4 Purpose, Need, and Benefit**

The purpose of the proposed action is to subdivide the subject property in accordance with prevailing zoning to allow for future development of single-family residences in character with the surrounding communities. As discussed above, continued operation of the existing golf and country club is no longer an economically viable option for the subject property. Single-family homes would maximize the economic value of the subject property while minimizing impacts to the surrounding single-family neighborhoods.

Benefits of the redevelopment of the subject property that have been identified include:

- › Redevelopment of a site that would otherwise sit vacant and unmaintained, as the Woodmere Club is scheduled to close due to decline membership and on-going losses
- › Increase the economic value of the property and a subsequent increase of the tax base of the three municipalities
- › Direct, indirect, and induced economic benefits from the addition of new residents to the area and increase discretionary spending at local shops and restaurants within the Five Towns.

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<sup>2</sup> The public comment period was held open until August 14, 2019 after an extension was granted by the Applicants to allow for additional time for public comments to be submitted.

### 1.1.5 List of Required Permits/Approvals

The proposed action is expected to require the following permits and approvals.

#### Required Permits and Approvals

<b>Agency</b>	<b>Required Permit or Approval</b>
<b>Village of Lawrence Planning Board</b>	Subdivision
<b>Village of Lawrence Building Department</b>	Floodplain Development Permit
<b>Village of Woodsburgh Planning Board</b>	Subdivision
<b>Village of Woodsburgh Building Department</b>	Floodplain Development Permit
<b>Village of Cedarhurst*</b>	Subdivision
<b>Town of Hempstead Highway Department</b>	Right of Way Permit
<b>Town of Hempstead Building Department</b>	Floodplain Development Permit
<b>Nassau County Planning Commission</b>	Subdivision, 239m and 239n Referrals
<b>Nassau County Department of Public Works</b>	239f Review Review Pursuant to Real Property Law Sec. 334-a
<b>Nassau County Department of Health</b>	Sanitary & Water Supply, Realty Subdivision Approval
<b>New York State Department of Environmental Conservation</b>	Article 25 Tidal Wetlands Permit, Article 15 (Title 5) Protection of Waters Permit, Section 401 Water Quality Certification, SPDES General Permit GP-0-20-001, Stormwater Management Plan
<b>United States Army Corps of Engineers</b>	Jurisdictional Determination, Nationwide or Individual Permit under Section 404 of the Clean Water Act/Section 10 of the Rivers and Harbors Act
<b>New York State Department of State</b>	Consistency Review with NYS Coastal Policies
<b>PSEG Long Island</b>	Electricity Supply
<b>National Grid</b>	Natural Gas Supply (Potential)
<b>New York American Water</b>	Water Supply
<b>Town of Hempstead Town Board</b>	Recharge Basin Dedication

\*Neighboring Village having subdivision approval authority.

In order to properly assess the impacts of the whole action, and not just the proposed subdivision itself, prototypical development of the proposed single-family lots was prepared. Typical residential plot plans of a 6,000 SF lot and a 40,000 SF lot (Appendix B) were included in the analyses contained herein.

## 1.2 Potential Impacts and Proposed Mitigation Measures

This section discusses potential significant adverse impacts of the proposed action, and mitigation measures proposed to reduce same. Unless otherwise noted, mitigation measures would be undertaken and funded by the Applicant.

### 1.2.1 Physical Alteration of Land

#### Prior Alteration of Natural Land Surfaces

Redevelopment of the Woodmere Club would require the clearing, filling, and regrading of approximately 108.24± acres of the subject property. As such, existing soils would be disturbed as the site is prepared to support the proposed single-family residences. However, as the subject property was previously disturbed during the original development of the golf course and country club in 1910, and expansion to its current size in 1939, further disturbance of existing soils would not present a significant adverse impact. A Phase IA Archaeological Study (Phase IA) prepared by VHB in January 2019 includes historic maps, records, and existing soil surveys (Appendix K) that indicate that the majority of the subject property has been impacted in the nineteenth century by cutting and filling of the marshy lands, dredging of the subject property along Brosewere Bay for construction of the Woodmere Basin and Channel and subsequent construction of the golf course, tennis courts, main clubhouse and associated buildings and structures. Furthermore, maintenance of the grounds and installation of drainage, electric, and other below-ground utilities to support the golf course and country club use occurred in the late twentieth through twenty-first century. This evidence suggests that most of the subject property and the soils has been thoroughly disturbed. Section 3.5 of this DEIS contains a detailed description of the site's history.

#### Soils

The *United States Department of Agriculture (USDA) Web Soil Survey* indicates that the subject property is comprised of soil/land type mapped as Udipsamments, wet substratum (Ue); Riverhead sandy loam (RdB); Urban land-Riverhead complex (UrA); and Water (W). However, the majority of the soils identified on the subject property (84.5± percent) are Ue. Section 3.1.1 of this DEIS contains a detailed description of soil characteristics for the soils identified on the subject property.

#### Soil Suitability and Engineering Limitations

The USDA Natural Resources Conservation Service website and the *Soil Survey of Nassau County* were consulted for information regarding the potential limitations to development that each of the soils may possess. Limitations associated with Ue soils which make up the vast majority of the subject property are depicted below.

### Soil Engineering and Planning Limitations

Symbol	Mapping Unit	Slopes	Dwellings without Basements	Dwellings with Basements	Local Roads and Streets	Lawns and Landscaping
Ue	Udipsammments, wet substratum	0-3%	Not limited	Not limited	Not limited	Very limited (F)

Source: United States Department of Agriculture. Natural Resources Conservation Service. *Web Soil Survey*. Available online at <https://websoilsurvey.sc.egov.usda.gov/>. Accessed February 2019.

As the subject property has been previously disturbed for the creation and maintenance of the golf course, the general information conveyed in the *Soil Survey* has been supplemented with a site-specific geotechnical investigation.

### Site-Specific Geotechnical Investigation

A geotechnical investigation by Soil Mechanics Drilling Corp ("Soil Mechanics") was performed to confirm the accuracy of the soils identified by the *Soil Survey of Nassau County*, accurately characterize the types of existing soils, and identify potential engineering limitations that could impact the proposed action. The results of the site-specific geotechnical investigation indicate that the areas drilled (17 test borings at locations throughout the site) are covered by 2± to 11± feet of loam, loose soil fill, soft compressible peat and organic silt and clay. These soils are underlain, generally, by a moderately dense to dense-coarse to fine sand with traces of silt and gravel extending to the deepest depths drilled. Accordingly, the actual soils on the site do not exhibit the engineering limitations of the Ue soils as set forth in the *Soil Survey of Nassau County*. Moreover, these results confirm what would be expected to be observed at the site given the previous disturbances discussed above.

Regarding the limitations of Ue to support lawns and landscaping; the subject property has operated for over a century as a well-maintained golf course with greens, fairways, roughs, and hazards, thus, it is clear that potential limitations related to the ability of the site to support lawns and landscaping for the future residential development have been overcome.

### Subsurface and Environmental Conditions

Roux Associates completed a Phase I Environmental Site Assessment (ESA) for the property owners, dated March 28, 2017 (see Appendix D) in order to identify recognized environmental conditions (RECs) (including controlled [CREC] and historic [HRECs] conditions) present at the subject property. No recognized environmental conditions (RECs) or controlled recognized environmental conditions (CRECs) were identified in connection with the subject property.

The following Historical Recognized Environmental Conditions (HREC's) were identified in connection with the site:

- › Underground Storage Tank (UST) Removal: Two USTs were removed from the Site in 1990 and 2011, respectively. According to the New York State Department of Environmental Conservation (NYSDEC) Spills Database, spills associated with these USTs

have been closed. Therefore, the former USTs and associated closed spills are considered a HREC in relation to the site. No further action is warranted.

- › Spill Incidents: Several NYSDEC Spill incidents were identified for the site. According to the NYSDEC Spills Database, the reported spills identified for the Site have been closed. The former spills associated with the site are considered a HREC in relation to the site. No further action is warranted.

The aforementioned HREC's do not pose a present land use restriction, nor warrant recommendations for clean-up. As such, spills associated with the subject property have been resolved and closed.

### **Topography**

A site-specific Topographic Survey Map was completed in 2017 (Appendix G) illustrating elevations on the subject property ranging from 3± feet above mean sea level (amsl) at the southern portion of the site, to 28± feet amsl at the northern portion of the site, with undulations throughout associated with the subject property's current use as a golf course. As with any development project, disturbance of land will occur. Implementation of the proposed action would require the clearing of the existing golf course, clubhouse, and other improvements from the subject property. Suitable fill material will be brought to the subject property to achieve proposed grades. Approximately 250,000 cubic yards (CY)<sup>3</sup> of fill will be required in order to raise the site to the necessary grade to be in conformance with the requirements of the Zone AE base flood elevation (BFE) 9-to-11 feet flood zone in which the site is located.

Stockpiled and imported topsoil is expected to be utilized in final grading at the proposed residential lots to support the installation of landscaping. A preliminary grading plan is presented in Appendix B of this DEIS.

Due to the presence of existing infrastructure, the area of the site in proximity to Ivy Hill Road will not be regraded. For the areas of the subject property along the tidal wetland boundaries on the south side of Woodmere Basin, this grading strategy would minimize the importation of fill near wetlands.

Upon regrading, topography of the site will range from a low of approximately 1-to-3 feet amsl at the base of the bioretention basins, to the highest point of 22 feet amsl along Broadway to match the existing elevation of the roadway. Current elevations of existing roadways surrounding the subject property would remain unaltered. Roadways internal to the proposed subdivision would have elevations greater than 9 and up to approximately 21 feet amsl (Appendix B), except where necessary to meet existing roadways.

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<sup>3</sup> As the engineering and design process advances, earthwork calculations contained herein would be confirmed or refined as needed.

**Existing and Proposed Slopes**

<b>Percent Slopes</b>	<b>Existing</b>	<b>Proposed</b>
0-10%	88%	85%
10-15%	5%	10%
15% or greater	7%	5%

As the natural site soils and topography have been significantly altered as a result of the development of the golf course over time, there will be no significant adverse impacts to natural soils or topographic features. The addition of fill, required such that the proposed homes can meet FEMA requirements, will further raise the topography of the site.

In order to ensure that there would be no significant adverse impacts to soils or topography upon implementation of the proposed action, the following mitigation measures will be employed:

- › Suitable topsoil would be reused to the extent practicable
- › Suitable fill material would be used as fill
- › To minimize the need for earth moving, the subdivision has been designed to take advantage of existing drainage facilities and topographic depressions to facilitate stormwater management (a full discussion of stormwater management is found in Section 3.2 of this DEIS)
- › A detailed erosion and sediment control plan has been developed, identifying the specific measures to be implemented. See Sheets C-5.1 and C-5.2 in Appendix B
- › A SWPPP would be developed
- › The Applicants will be coordinating with NCDH to initiate the required sampling and soil management prior to site development
- › Scheduling of clearing and grading activities will be done in a manner to minimize the total area of land disturbed at any one time
- › The length of time areas of the site exposed will be limited by installing pavement and plantings within exposed areas as soon as practicable
- › Sediment barriers (e.g., silt fence, hay bales) would be installed along the limits of the disturbance for the duration of the work to avoid sediment from the site washing into adjacent properties, wetlands, or roads
- › Stabilization of graded and stripped areas and stockpiles via temporary seeding or other effective cover to mitigate erosion
- › Protection of drainage inlets through the use of sediment barriers, sediment traps, etc., to prevent sediment buildup
- › Implementation of fugitive dust control measures such as the covering of stockpiles, temporary seeding, use of a water truck during extended dry periods, etc.

- › Establishment of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.

## **1.2.2 Water Resources and Floodplains**

### **Surface Water**

Based on a review of the NYSDEC Freshwater Wetlands, NYSDEC Tidal Wetlands and United States Fish and Wildlife Services National Wetland Inventory (NWI) Maps, as well as an ecological field survey conducted by a Certified Ecologist, multiple surface water features are present at, and adjacent to the subject property, including six artificial ponds, and a tidal basin – the Woodmere Basin. The six artificial ponds receive stormwater runoff from portions of the subject property, are interconnected via underground piping, and overflow via the existing outfalls at the Woodmere Basin.

Implementation of the proposed action would result in the reshaping and expansion of the existing artificial ponds to create a total of four bioretention areas as part of the proposed stormwater management system. In addition, a new biofiltration swale would be created for treatment of overflow stormwater before discharge to Woodmere Basin via three existing outfalls. Native upland, facultative and wetland plantings would be installed within, and surrounding the bioretention facilities, to improve both the quantity and quality of vegetated wetland habitat as compared to existing conditions. The plantings installed within and surrounding the bioretention facilities will help to filter stormwater prior to discharging into the Woodmere Basin, thus improving the overall quality of the stormwater discharged.

### **Floodplains**

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM), Panel No 36059C0302G, the majority of the subject property is within the Special Flood Hazard Area (SFHA) Zone AE (BFE 9, 10 and 11 feet). To prepare maps that illustrate the extent of flood hazards in a community, FEMA conducts engineering studies known as Flood Insurance Studies (FISs). The FIS results define the flood hazards for the community and are summarized in a technical document known as the FIS report. The report includes details about the study methodology used, historical flooding in the community, and other relevant information. FEMA exercises caution in ensuring the results of the FIS are accurately represented on the FIRM. This risk information presented on the FIRM is based on meteorological, hydrologic, hydraulic, and topographic data, as well as open-space conditions, flood control works, and development. The extent of the floodplains as mapped by FEMA are therefore based on observed trends and not future potential conditions. The subject property's location requires that the proposed action adhere to the provisions set forth in Chapter BZ, Article XXXIV of the Hempstead Town Code, Chapter 94 of the Lawrence Village Code, and Chapter 77 of the Woodsburgh Village Code, which, among other things, specify a requirement that the lowest habitable space be located two feet above BFE. The BFE at the subject property ranges from 9-to-11 feet amsl. Therefore, the lowest proposed habitable building finished floor elevation would range from 11 feet to 13 feet amsl.

In addition, associated utility infrastructure would be designed in accordance with the specifications of the utility providers (sewer, electric, natural gas, etc.), including requirements associated with flood protection. The proposed subdivision roads would have final elevations at least two feet above the respective BFE, except as required to meet existing roadways, with the highest proposed roadway elevation exceeding 20 feet amsl. Adequate drainage will be provided throughout the proposed subdivision to reduce exposure to flood damage. The proposed action will be consistent with the relevant flood zone requirements of the respective local municipalities.

Regarding potential impacts to the floodplain as a result of implementation of the proposed action, the subject property is separated from the Atlantic Ocean by a system of barrier islands that provide natural buffers from the effects of storms and protect inland development from flooding. As such, the proposed development would not be subject to coastal wave action. The coastal floodplain itself is wide (i.e., several miles across), thus water is not confined, and can flow throughout the entirety of the floodplain along the coast. Accordingly, development activities at the subject property would not have the potential to result in significant impacts to flooding conditions in the area, as the volume and velocity is stretched out over a distance and is diminished.

### **Stormwater**

The subject property has been operated as a golf course since 1910. For the past 109 years, a majority of stormwater runoff from the subject property has been captured on-site via the existing six artificial ponds. Stormwater that does not infiltrate or evapotranspire is permitted to pond at the site or be discharged to Woodmere Basin via two outfalls at the northern portion of the Basin nearest to the clubhouse; and one outfall at the southwest portion of the Basin, near Keene Lane/Rutherford Lane. Drainage from the site that is directed to the ponds may be held for a period of time allowing sediments to settle to the bottom, before the stormwater is discharged via a system of interconnected underground pipes to the Basin. The areas immediately surrounding Woodmere Basin, along Keene Lane, Martha Lane and south of Ivy Hill Road, do not feed into the existing piped pond system and discharge directly into the basin without any treatment. As a result, pesticides, herbicides, fertilizers, and other heavy landscape maintenance techniques that may have been used at the golf course has the potential to have impacted water quality in Woodmere Basin and Woodmere Channel over the past century.

Implementation of the proposed action would result in the reshaping and expansion of the six artificial ponds to create bioretention areas as part of the proposed stormwater management system. A biofiltration swale would also be installed to accommodate treatment of overflow stormwater before discharge to the Woodmere Basin via three existing stormwater outfalls to be retained. Vortechs (or equivalent) water quality chambers will be installed within the outfalls to provide additional treatment. Additionally, if deemed suitable for use, the proposed stormwater management system will tie into the subject property's existing stormwater treatment structures.

Native upland, facultative, and wetland plantings would be installed surrounding the bioretention areas, thereby substantially improving the quantity and quality of vegetated



wetland habitat at the subject property. These plantings will also substantially increase the amount of native-vegetated wetland habitats at the subject property and provide valuable stormwater treatment functions that will benefit the quality of stormwater prior to discharge into Woodmere Basin. Furthermore, the cessation of golf course management practices has the potential to result in overall water quality improvements.

Under existing conditions, the subject property currently generates approximately 474,327 cubic feet (CF) of stormwater runoff, based on a three-inch rainfall event. Under proposed conditions the subject property would generate approximately 522,744 CF of stormwater runoff volume based on a three-inch rainfall event.

However, the proposed modified/expanded bioretention areas and bioretention swale will provide significantly greater capacity than under existing conditions, particularly when considering the additional storage to be provided within the individual proposed residential parcels via individual leaching pools.

Disturbing more than one acre, the proposed action will be subject to the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). Accordingly, a Stormwater Pollution Prevention Plan will be designed in accordance with the prevailing regulations and submitted to the Town of Hempstead, and Villages of Lawrence and Woodsburgh; and a Notice of Intent will be submitted to NYSDEC.

### **Groundwater**

According to site-specific *Geotechnical Evaluation*, which included 17 borings across the subject property conducted on October 22, 2019, groundwater was encountered at depths ranging from approximately 2-feet-8± inches to 17-feet-7± inches bgs (see *Subsoil Investigations* plan [sheets 1 and 2 of 2] in Appendix E). Based on this data, much of the site exhibits relatively shallow groundwater, whereas portions of the property near Broadway (i.e., furthest from Woodmere Basin) have the greatest existing depths to groundwater.

Based on the shallow depth to groundwater, to mitigate against installation of building foundations and stormwater management structures reaching groundwater, said structures will be designed to provide a minimum separation distance of two feet above observed groundwater levels. Excavations are not expected to reach groundwater. Any required dewatering during construction would be conducted in accordance with applicable regulations and any discharge from dewatering will be conducted within the limitations of the SPDES General Permit GP-0-20-001 and/or the NYSDEC's Long Island Well permitting program (see 6 NYCRR Part 602), which may apply if the total capacity of temporary dewatering wells will exceed 45 gallons per minute. The construction manager will determine appropriate dewatering means and methods as necessary in accordance with prevailing regulations.

### **Saltwater Intrusion**

Upon implementation of the proposed action, all operation of the two existing private irrigation wells on-site would be eliminated. These wells together pump approximately 213,987± gpd of groundwater from beneath the subject property, on average, for irrigation

of the golf course, thus existing impacts that these wells may have on groundwater levels or freshwater flow (potential contributors to saltwater intrusion), would be mitigated upon implementation of the proposed action.

Elevated concentrations of chloride can be an indicator of saltwater intrusion. Based on a review of the 2018 Annual Drinking Water Quality Report for NYAW's Lynbrook distribution area, the highest measured level of Chlorides in drinking water was 29.8 parts per million (ppm), which is well below the applicable Maximum Contaminant Level (MCL) drinking water standard of 250 ppm. This suggests that significant Chlorides contamination is not occurring in this service area.

Moreover, the Long Island Commission for Aquifer Protection, which is a consortium of water utility representatives, elected officials and scientists, issued a publication entitled, *State of the Aquifer* (2016),<sup>4</sup> which discusses a wide range of water quality and water supply issues facing the region, including saltwater intrusion. That report identifies specific locations across Long Island where saltwater contamination has been found, but does not identify the area of the proposed action as having experienced saltwater intrusion issues. The report further describes measures being taken by local water providers to identify and address potential saltwater intrusion conditions.

The subject property is located outside the boundaries of any SGPA. Therefore, there will be no impact to SGPA resources.

### **Coastal Resources**

The South Shore Estuary Reserve (SSER) Comprehensive Management Plan addresses a broad geography and a wide range of issues related to the quality of the SSER's resources. However, based on a detailed review of the Plan, many of the SSER Plan's analyses and recommendations are not applicable to the proposed action. As the proposed subdivision will be served by public sewer, there will be no discharge of wastes to ground or surface waters at the subject property, and as a residential use, no process water discharges would result. Additionally, the proposed action is a private development application not involving public facilities. The only relevant findings and recommendations of the Plan are related to stormwater management. A consistency analysis of the proposed action with the relevant recommendations of the SSER Plan is included in Section 3.2.2 of the DEIS.

The subject property is within the Coastal Area of New York State according to the New York State Department of State (NYSDOS) Coastal Boundary map (Figure 13). For actions in the Coastal Area requiring State agency approval(s), EISs must include a discussion of the action's consistency with the relevant State Coastal Policies. The coastal policies of New York State are set forth in 19 NYCRR § 600.5, and the New York State Coastal Management Program is governed by 44 coastal policies.<sup>5</sup> An analysis of the consistency of the project with these policies is included in Sections 3.2.2 of the DEIS.

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<sup>4</sup> Long Island Commission for Aquifer Protection. *State of the Aquifer 2016*. Available at: [http://www.liaquifercommission.com/images/LICAP\\_State\\_of\\_the\\_Aquifer\\_2016.pdf](http://www.liaquifercommission.com/images/LICAP_State_of_the_Aquifer_2016.pdf). Accessed September 2019.

<sup>5</sup> Except for the portion of the coastal area on Long Island Sound, for which a special, consolidated set of 13 policies has been promulgated.

The proposed action would be in compliance with prevailing stormwater management regulations and relevant water resource management plans. As no significant adverse impacts to water resources have been identified, no further mitigation measures are proposed.

### **1.2.3 Ecology and Wetlands**

#### **Ecological Communities and Vegetation**

The majority of the existing ecological communities that currently occur at the subject property would persist under the proposed action (i.e., they would continue to be represented at the site). The cultural ecological communities to be disturbed or removed are either NYNHP unranked cultural communities or are ranked as demonstrably or apparently secure, with wide distributions throughout New York State, and are listed as follows: mowed lawn, mowed lawn with trees, unpaved road/path, paved road/path, urban structure exterior, construction/road maintenance spoils, estuarine riprap/artificial shore, farm pond/artificial pond, common reed marsh, successional shrubland, successional southern hardwoods, high salt marsh, and low salt marsh. These existing ecological communities were observed during the field surveys to have habitat functional values of poor or fair.

The subject property is primarily comprised of cultural ecological communities that have been created or substantially altered in association with current and historical land use of the site as a golf course and country club. The vast majority (approximately 90.0 percent) of the subject property is occupied by maintained turf grasses and landscaping associated with the eighteen-hole golf course, and impervious surfaces comprise an additional 6.1 percent of existing land coverage.

The primary impact of the proposed action on habitat and vegetation would be a reduction in the amount of landscaped habitat (i.e., the ECNYS Mowed Lawn and Mowed Lawn with Trees communities) from 91.8 percent to approximately 66.0 percent of the site coverage, and an increase in impervious surfaces (ECNYS Paved Road/Path and Urban Structure Exterior communities) from 6.1 percent to approximately 30.0 percent of the site coverage.

Water quality improvements may result from the cessation of golf course management practices and increases in native vegetation resulting from conversion of the ponds to stormwater management features (bioretention basins). As a result, the overall habitat quality and wetland functional value of the ponds will improve. Moreover, installation of the biofiltration swale along the western shoreline of Woodmere Basin will contribute additional high-quality, vegetated wetland and upland habitats to an area currently occupied by low-quality and largely unvegetated cultural habitats. The two tidal wetland communities that occur along the unbulkheaded sections of the Woodmere Basin shoreline which were the only two ecological communities at the subject property that were determined by VHB to provide "good" habitat functional values, would be preserved under the proposed action.

Based on the foregoing, no significant adverse impacts to ecological communities and vegetation are anticipated.

## **Wildlife**

The wildlife fauna that occupies the golf course and country club facilities is primarily composed of birds and mammals that occur within cultural communities and are adapted to human presence and activity. The primary impact of the proposed action on wildlife would be the clearing of existing vegetated habitats as the proposed subdivision lots are developed. The immediate effect of clearing would be the displacement of resident species. However, the majority of the species that utilize the subject property are considered to be generally mobile (e.g., mostly birds and mammals), and, therefore, would be displaced to adjacent and nearby areas. As development of the subdivided lots is expected to occur in stages rather than simultaneously, displaced species are expected to occupy as-yet uncleared portions of the subject property as well as properties in the general surrounding area. Following development, and similar to existing conditions, the residential lots would continue to support the landscaped and developed ecological communities that currently dominate the vast majority of the subject property. As such, it is anticipated that a similar species assemblage of common birds and mammals adapted to cultural communities and human presence/activity will occupy the subdivision lots following development. Due to the proposed decrease in landscaped habitat, corresponding decreases in population density are anticipated for some resident species, however, As the quantity of freshwater wetlands and surface waters would increase, a corresponding increase in the species density of resident wildlife within these habitats is expected.

Based on the foregoing analyses, no significant adverse impacts to local and regional wildlife are anticipated as a result of the proposed action.

## **Rare/Protected Species**

No New York State or federally-listed rare/protected plant or wildlife species were observed at the subject property during the field survey, and no NYNHP records currently exist for known occurrences of New York State-listed animals or plants at the subject property. The subject property does not include potential habitat for the two federally-listed vascular plants that are known to occur in Nassau County, and the shoreline area does not represent a significant potential habitat for the three federally-listed shorebirds that occur in Nassau County. With respect to the federally-listed northern long-eared bat, correspondence from the NYNHP indicates that no records currently exist for known occurrences of northern long-eared bat or northern long-eared bat roost trees at or in the vicinity of the subject property. Based on the foregoing, the removal of trees at the subject property during development of the subdivision lots would not result in prohibited incidental take of northern long-eared bat.

## **Wetlands and Surface Waters**

The two tidal wetland communities that occur along the un-bulkheaded sections of the Woodmere Basin shoreline (High Salt Marsh and Low Salt Marsh communities) would be preserved under the proposed action. The proposed bioretention areas would store, filter and infiltrate stormwater to the subsurface, and the shoreline biofiltration swale would filter sediments and pollutants from stormwater overflow before reaching Woodmere Basin. As a

result, improvements to the water quality of stormwater overflow to the intertidal and subtidal wetland communities of Woodmere Basin may be anticipated as compared to existing conditions, where untreated stormwater discharges directly to Woodmere Basin.

As a result of the proposed action, the existing acreage of wetlands/surface waters at the subject property would increase from 4.87 acres to 5.41 acres, a 0.54 increase.

Based on these considerations, no significant adverse impacts to tidal wetlands are anticipated as a result of the proposed action. Following full development of the subdivision, the subject property would continue to function ecologically as a site dominated by landscaping and development. In contrast to existing conditions, the future landscaped communities would consist of smaller, fragmented habitats (i.e., residential front and rear yards interspersed with houses, driveways, roads and sidewalks) as opposed to the unfragmented landscaped communities of the existing golf course fairways. A quantitative increase in freshwater wetlands and surface waters at the subject property would occur and be augmented by qualitative improvements to these communities. The tidal wetland communities along the ecologically sensitive shoreline of Woodmere Basin would remain undisturbed and would continue to be protected by the regulations and development restrictions of the NYSDEC and USACE.

The wildlife fauna that occupies the golf course and country club facilities is primarily composed of birds and mammals that occur within cultural communities and are adapted to human presence and activity. To a lesser extent, the artificial ponds, vegetated marshes and tidal shorelines of the subject property provides habitat opportunities for species associated with wetlands and surface waters. Under the assumption that resource availability is the only limiting factor affecting wildlife population density, in the short-term, it is anticipated that uncleared portions of the subject property and in the general surrounding area would experience a temporary increase in wildlife populations during clearing, grading and construction on the lots under development.

Following development, and similar to existing conditions, the residential lots would continue to support the landscaped and developed ecological communities that currently dominate the vast majority of the subject property. As such, it is anticipated that a similar species assemblage of common birds and mammals adapted to cultural communities and human presence/activity will occupy the subdivision lots following development. Due to the proposed decrease in landscaped habitat, corresponding decreases in population density are anticipated for some resident species.

In order to ensure that there would be no significant adverse impacts to ecological resources and wetlands upon the implementation of the proposed action, the following mitigation measures will be employed:

- › The proposed bioretention basins would store, filter and infiltrate stormwater to the subsurface, and the shoreline biofiltration swale would filter sediments and pollutants from stormwater overflow before reaching Woodmere Basin. As a result, significant improvements to the water quality of stormwater overflow to the intertidal and subtidal wetland communities of Woodmere Basin are anticipated as compared to existing conditions, where untreated stormwater discharges directly to Woodmere Basin.

- › The alteration/expansion of the five golf course ponds to be converted to bioretention basins would result in a 0.54 acre increase in wetland/surface water acreage at the subject property.
- › As compared to existing conditions, significant qualitative improvements to wetland/surface water habitats at the subject property would occur under the proposed action, The alteration/expansion of the six ponds to be converted to bioretention basins would result in the installation of native upland, facultative and wetland plantings within and surrounding these features, thereby substantially improving the quantity and quality of vegetated wetland habitat at the subject property, as compared to the existing largely unvegetated conditions of the ponds. Furthermore, the cessation of golf course management practices may result in water quality improvements, through reduced turbidity and pollutants inputs. Moreover, the installation of the vegetated biofiltration swale would substantially increase the amount of native-vegetated wetland habitat at the subject property, while providing valuable stormwater treatment functions and significant improvements to the water quality of stormwater discharge to Woodmere Basin, as compared to existing conditions.

#### **1.2.4 Aesthetic Resources**

Existing aesthetic characteristics of the subject property are those of a typical golf course, including well-maintained lawns, tee boxes, putting greens, fairways and sand traps. A defining feature of the site is the existing clubhouse which is a colonial style estate building constructed with horizontal white wooden slats. Clubhouse amenities such as the swimming pool, patio areas, and seven tennis courts are visible from the interior of the site. Accessory structures, including the tennis office, golf cart shed, grounds and maintenance garage, and paved parking lots, adjoin the clubhouse. These structures are all situated near the eastern boundary of the subject property at the intersection of Keene Lane and Ivy Hill Road.

The subject property is surrounded by single-family residential neighborhoods. Many of the existing homes in the areas directly surrounding the site experience views of the subject property, although due to the presence of existing vegetative buffers and/or fencing that lines much of the site, many of these views are somewhat obstructed. Existing views of the subject property from the surrounding neighborhoods would be impacted as followed:

- › Views from Broadway: Upon implementation of the proposed action, the view from locations to the north along Broadway would remain mostly obstructed, however some existing trees would be removed to accommodate the proposed grading. Rear yards of the proposed single-family homes that would abut Broadway and may be partially visible through the existing vegetative buffer.
- › Views from Meadow Drive/Ivy Hill Road: Upon implementation of the proposed action, views from this area will shift from that of the golf course, to views of the new single-family homes. Specifically, the views from this location will be of the rear yards, and associated fencing, and landscaping of the proposed single-family residences.
- › Views from Atlantic Avenue: Upon implementation of the proposed action, a portion of the existing buffer of mature trees will be removed to accommodate the proposed

grading of the subject property. Rear yards of the proposed single-family residences will be about the rear yards of existing homes on Atlantic Avenue. Views will shift from that of the vegetative buffer and golf course, to views of the vegetative buffer and rear yards of the new single-family homes.

- › Local roadways to the West: Upon implementation of the proposed action, existing views of the subject property will shift from those of a golf course, to views of the proposed single-family homes. However, from the majority of the residential roadways to the west of the subject property, views of the subject property would remain obstructed by vegetation and the existing single-family residences.

### **NYSDEC Program Policy**

In 2000, NYSDEC issued the Program Policy – “Assessing and Mitigating Visual Impacts” (the “Program Policy”) to provide a standardized method for evaluating the significance of a visual impact within the context of SEQRA. The Program Policy’s methodology for evaluating an action’s aesthetic and visual impact primarily focuses on the identification of nearby aesthetic resources of statewide or national significance. A review of the list of aesthetic resources of statewide or national significance, as described in the Program Policy, indicates that no such resources exist within one-half mile of the subject property.

Since there are no aesthetic resources of statewide or national significance within the study area, the proposed action would not fall within any viewsheds of the same. As described above, the human built aesthetic condition of the study area is that of moderately- to densely-developed residential suburban neighborhoods, similar to what is proposed.

Plans for the development of the future single-family residences would be completed upon approval of the proposed subdivision. As such, design details for the subsequent lot buildout is presently unknown. However, future residences would be constructed in accordance with prevailing bulk and dimensional requirements. Further, new houses within the Villages of Lawrence and Woodsburgh would be subject to site plan review, in accordance with review processes outlined in the respective municipal codes designed to ensure that new construction fits in with the existing character of the surrounding communities.

The design of the individual lot development has not yet been undertaken, and would not be advanced to the necessary level of detail to fully define aesthetic characteristics until after the subdivision has been approved, and the lots are actually made available for construction. However, the respective municipalities have processes in place to ensure that the aesthetic nature of new development is consistent with the overall character of the communities (i.e. Village of Lawrence Board of Building Design, Village of Woodsburgh Architectural Advisory Committee).

In order to ensure that potential impacts to aesthetic resources are minimized to the extent feasible, the following mitigation measures will be employed:

- › The design of future residences would be consistent with the prevailing zoning and bulk area and dimensional requirements of the municipality in which the individual lots are located in order to construct residences that fit in with the character of the surrounding neighborhoods.

- › Where feasible, existing trees on the subject property will be retained (Appendix K).
- › Construction fencing will be installed around the border of the subject property to provide visual screening during construction activities.

Based on the foregoing, no significant adverse impacts to aesthetic resources have been identified. Therefore, no further mitigation is proposed, beyond those measures described above, and measures that may be required during subsequent site plan approvals prior to commencement of construction on the individual lots.

### **1.2.5 Historic and Archaeological Resources**

The history of the Woodmere Club is connected to the development of initial planned communities in the Five Towns. Originally inhabited by the Rockaway Indians, devastating epidemics and conflicts with European settlers greatly reduced the Native American population. By the eighteenth century, an agricultural economy supplemented by fishing and other maritime trades prevailed until after the American Revolution. By 1860 the Villages of Woodmere and Hewlett were established, their development linked to the arrival of the railroad which spurred development in southwest Nassau County. A station was built at Brower's Point, and the name of the area was changed to Woodsburgh after Samuel Wood, a wealthy businessman who bought up all the farms in the area including the present-day Woodmere Country Club property, donated land for building the railroad station north of the subject property and set out to build an upscale development.

After Samuel Wood died, his estate passed into the hands of Andrew Hewlett. A portion of the Wood/Hewlett estate (comprising 200 acres of woodland and 100 acres of marsh and meadowland south of the railroad track and 100 acres north of the railroad) was eventually purchased by Robert L. Burton for development of a high-end restricted suburban development. Burton teamed up with investors of properties to the east and west, to design aesthetically-pleasing and thoughtfully-planned neighborhoods that would draw urban elites. The Woodmere Club was originally built as part of Burton's development in 1908 on land in the Village of Woodsburgh east of the project area. Shortly thereafter, Burton sold the development to Maximilian Morgenthau, President of the Hudson Bay Realty Company. In 1910, the Woodmere Club moved to its present location. The Woodmere Club eventually expanded to include some of the lands of the Rockaway Hunting Club.

#### **Historic Resources**

Historic resources include districts, buildings, structures, objects, and sites that are listed or may be eligible for listing in the National Register of Historic Places (NRHP), or that are landmarked locally. There are no S/NR-listed or previously determined eligible resources within the project site. Therefore, the proposed action will have no effects on historic architectural resources within the subject property.

There are two historic districts located immediately adjacent to the project area: the Flower Streets Historic District (USN05993.000005) and the Rockaway Hunt Historic District (USN05941.000402). Both districts have been determined eligible for listing on the NR. The proposed residential lots that are located adjacent to the Flower Streets Historic District



would be similar in size and layout to the lot sizes and layouts in that neighboring historic district. Similarly, the proposed residential lots that are located adjacent to the Rockaway Hunt Historic District would be similar in size and layout. to that historic district.

Based on this historic contextual analysis, the proposed action would not have any significant, direct effects on the neighboring historic districts.

### **Archaeological Resources**

A letter dated July 10, 2018 from the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) indicated that the project is located within an archaeologically sensitive area, and that a Phase IA archaeological survey was warranted (Appendix L). Based upon that initial review, the Woodmere Clubhouse (USN 05993.000007) was determined not eligible for listing on the S/NRHP by OPRHP staff. VHB completed a Phase IA Archaeological Assessment in January 2019 (Appendix L) in accordance with the guidelines outlined in the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* issued by the New York Archaeological Council (1995) and the *Phase I Archaeological Report Format Requirements* issued by the New York State OPRHP (2005).

There are no S/NR-listed or previously-determined eligible archaeological sites located within the subject property. Archival research established a general sensitivity for archaeological sites within the subject property, but a review of historic maps, historical records, and existing soils surveys indicated that the majority of the property was impacted in the late nineteenth through the twentieth century by cutting and filling of the marshy lands, dredging of the property along Brosewre Bay for construction of the Woodmere Channel and basin, and subsequent construction of the golf course, tennis courts, main clubhouse and associated buildings and structures. These land transformations are evident on historic maps, which illustrate changes in the land from farming in the north and marsh in the south (c. 1844-1903) to recreational use in the twentieth and twenty-first centuries (c. 1914-2016). Furthermore, maintenance of the grounds and installation of drainage, electric, and other below-ground utilities in the late twentieth through twenty-first century were photo-documented during field reconnaissance. This evidence suggests that most of the property has been thoroughly disturbed and, therefore, is unlikely to yield intact evidence of archaeological sites. The Phase IA report was submitted to OPRHP and VHB received a concurrence letter from SHPO dated February 27, 2019 (Appendix K) stating that the site does not meet the eligibility criteria of the New York State and National Registers of Historic Places, and that no additional archaeological work is necessary.

In the northern section of the project area, two structures were illustrated on mid- to late-nineteenth century maps. In this section of the project area, the landscape shows evidence of filling and recontouring for the construction of tee boxes, greens and sand traps. Because the depth of disturbance associated with these activities was unknown, a limited Phase IB archaeological survey was recommended within roughly two acres in the northern portion of the parcel in the vicinity of the map-documented structures. VHB completed the Phase IB Archaeological Survey (Phase IB) in May 2019 (Appendix L). Based upon inspection in the field, all 33 shovel test pits contained soils that were disturbed by grading, filling, and redeposition of soils. Due to the low density and diversity of the artifacts recovered, along

with the lack of soil integrity from which they were recovered, the archaeological remains were determined not eligible for listing on the S/NR. Based on these findings, no additional archaeological investigations were recommended. The results of the Phase IB survey were submitted to OPRHP on July 23, 2019. In a letter dated August 2, 2019, the OPRHP stated that they concur with VHB's findings and that the State Historic Preservation Office (SHPO) has no remaining concerns regarding the project's potential to impact archaeological resources (Appendix L).

The proposed action would not have any adverse effects on historic or archaeological resources within the subject property. Therefore, no mitigation is required for the proposed action with respect to cultural resources.

### **1.2.6 Recreational Opportunities and Open Space**

The subject property is a private, members only golf and country club and is thus not a public recreational or open space resource. However, there are several recreational areas and facilities within the study area with amenities such as ballfields, ice skating rinks, picnic areas, playgrounds and public open spaces. Additionally, there are eight other golf courses (four public and four private) within a radius of approximately five miles surrounding the subject property.

The Town of Hempstead has over 60 parks that serve the recreational and open space needs of town residents. Nassau county manages 30 parks for county residents. Three New York State parks are located within five miles of the site. Section 3.6.1 includes a list of parks within five miles of the subject property.

Implementation of the proposed action would result in the loss of a private, members-only golf course, where eight other golf courses are located within a five-mile span. As a privately owned and operated, members-only club, the subject property is not available or accessible to the general public. Thus, while the proposed action would result in the loss of a golf course, it would not result in a loss of a publicly-accessible recreational or open space resource.

Numerous public open spaces, parks and playgrounds, recreational areas and facilities, and golf courses and clubs (public and private) exist in proximity to the subject property. Residents of the proposed development would have access to surrounding recreational facilities and amenities, only a few of which would require the purchase of daily or seasonal Nassau County passes, or private memberships for the Rockaway Hunting Club, Lawrence Yacht and Country Club, The Seawane Club and Inwood Country Club. The fees associated with passes and membership to public facilities, and property tax revenue generated by the proposed action, would help to offset any marginal cost increases associated with increased use of municipal facilities by project residents.

Although not codified, as part of its map checklist the Town of Hempstead requires new subdivisions to dedicate three percent of the subject property as open space or to pay cash in lieu of such dedication. The proposed action acknowledges this requirement and will comply as appropriate. Neither the Village of Lawrence nor Village of Woodsburgh specify

an open space requirement for new subdivisions. Additionally, the NCPC does not include an open space requirement as part of its subdivision approval.

Therefore, even with the loss of the subject property as a private golf course, current recreational resources are adequate for the additional population generated by the proposed action. As no significant adverse impacts to recreational resources/opportunities or open space have been identified, no mitigation is warranted or proposed.

### **1.2.7 Transportation**

A Traffic Impact Study (TIS) was prepared by VHB to provide a comprehensive evaluation of the potential traffic impacts associated with the proposed action (see Appendix C). The purpose of the TIS is to determine whether any significant traffic impacts would result from the proposed action and to propose and evaluate mitigation measures, if required. To determine the potential traffic impacts of the proposed project, the following intersections were identified for detailed analysis under the Existing, future No-Build and future Build conditions:

- › Broadway at Washington Avenue (Signalized)
- › Broadway at Spruce Street (Signalized)
- › Broadway at Cedarhurst Avenue/Briarwood Lane (Signalized)
- › Broadway at Grove Avenue (Signalized)
- › Broadway at Meadow Drive (Signalized)
- › Broadway at Woodmere Boulevard (Signalized)
- › Broadway at Brower Avenue/Irving Place (Signalized)
- › Broadway at Franklin Avenue (Signalized)
- › Broadway at West Broadway/Harris Avenue/Piermont Avenue (Signalized/  
3 Intersections)
- › West Broadway at Woodmere Boulevard (Signalized)
- › West Broadway at Prospect Avenue/Derby Avenue (Signalized)
- › West Broadway at Cedarhurst Avenue (Signalized)
- › Central Avenue at Washington Avenue (Signalized)
- › Central Avenue at Spruce Street (Signalized)
- › Central Avenue at Cedarhurst Avenue (Signalized)
- › Central Avenue at Prospect Avenue (Signalized)
- › Central Avenue at Woodmere Boulevard (Signalized)
- › Broadway at Prospect Avenue (Unsignalized)
- › West Broadway at Grove Avenue (Unsignalized)

- › Central Avenue at Grove Avenue (Unsignalized)
- › Meadow Drive at Porter Place (Unsignalized)
- › Meadow Drive at Railroad Avenue/Keene Lane (Unsignalized)
- › Broadway at Rockaway Turnpike/Meadow Lane (Signalized)
- › Central Avenue at Rockaway Turnpike (Signalized)
- › West Broadway at Washington Avenue/Arlington Road (Signalized)
- › West Broadway at Rockaway Turnpike/Burnside Avenue (Signalized/ 2 intersections)
- › West Broadway at West Broadway Merge (Unsignalized)
- › West Broadway at Rockaway Turnpike (Unsignalized)
- › Meadow Drive – From Broadway to Railroad Avenue/Keene Lane

Based on the results of the study, more completely described herein, it has been concluded that the development of subject project will not have a significant impact on the study intersections or roadway network.

#### **Level of Service Analyses**

Level of Service analyses were conducted for the Existing, No-Build and future Build conditions for the study area intersections. To determine the future Build Condition traffic volumes, the project generated trips were added to the No-Build traffic volumes at the key intersections.

Critical approaches at the unsignalized intersection of W. Broadway at Grove Avenue, Central Avenue at Grove Avenue, Meadow Drive at Porter Place and Meadow Drive/Ivy hill Road at Railroad Avenue/Keene Lane will operate in the Build Condition at an acceptable overall intersection LOS D or better during all periods analyzed.

The unsignalized intersection of Broadway at Prospect Avenue degrades in operation going from the No-Build to Build Condition. During the a.m. peak hour, Broadway at Prospect Avenue operates at an acceptable LOS D in the No-Build Condition and degrades to LOS F in the Build Condition. During the p.m. and Sunday peak hours, Broadway at Prospect Avenue operates at an acceptable LOS D in the No-Build Condition and degrades to LOS E in the Build Condition. During the Saturday peak hour, Broadway at Prospect Avenue operates at LOS B in the No-Build Condition and degrades to LOS C in the Build Condition but still operates at an acceptable LOS. These degradations in LOS are a result of site generated traffic exiting at Prospect Avenue, which creates a new approach to the intersection. Due to the extents of the degradation, mitigation measures were investigated including a two-way left turn lane on Broadway along the frontage of the subject property, to accommodate left turns in the eastbound and westbound directions separately from through traffic, and provide an intermediary area for eastbound left turns to Prospect Avenue and westbound left turns to the proposed development, in order to improve overall operation of the intersection. A detailed discussion of proposed mitigation measures is included in Section 3.7.3 of the DEIS.

Based on significant concerns regarding travel delays along the Broadway corridor that were raised during public scoping for the proposed action, the TIS also included speed and delay runs, which involved traversing the 2.3-mile long stretch of this roadway between Meadow Lane and West Broadway during peak weekday periods in both directions.

Based on the foregoing, the TIS determined that the corridor currently experiences a level of delay that is consistent with the series of signalized intersections that a vehicle must traverse along the 2.3-mile roadway segment. However, while some congestion exists, which is to be expected, the travel time in both directions during the weekday peak periods do not approach the 30-minute to one-hour travel times that were asserted during public scoping.

### **Trip Generation**

Using the Institute of Transportation Engineers (ITE) rates, the proposed action is likely to generate 211 trips (entering 53 and exiting 158 trips) during the a.m. peak hour, 282 trips (entering 178 trips and exiting 104 trips) during the p.m. peak hour, 133 trips (entering 72 trips and exiting 61 trips) during the Saturday midday peak, and 265 trips (entering 143 trips, and exiting 122 trips) during the Sunday midday peak.

The results of the analysis consider a detailed review of existing traffic volumes which illustrate a significantly lower estimate on Saturdays in comparison to what would be considered typical. This can be attributed to the large percentage of residents within the study area that observe the Sabbath, and are therefore prohibited from driving on Saturdays. In order to account for the likelihood that the residents of the proposed subdivision would fall into a similar demographic split, a reduction factor of 50% was applied to the generated trips during the Saturday peak hour, and more conservative trip generation factors were used for the Sunday midday peak hour to better reflect actual conditions.

In addition, it is important to note that the existing Woodmere Club catering/event hall and golf course is currently open and generating traffic on the surrounding roadway network. The traffic currently being generated by this use will be eliminated in the future condition with the site's redevelopment. Nonetheless, no credit was taken for these trips, resulting in a high-side conservative estimate of impacts in the TIS.

### **Arterial Highway Analysis**

In order to understand the effect of the site-generated traffic in the Build condition on the operation of the Broadway Corridor included within the study area, an arterial analysis was performed. This analysis considered the overall eastbound/westbound operation of Broadway as it relates to the passage of traffic through each proceeding intersection. The arterial analysis gives arterial speed and the level-of-service. The site generated traffic will result in very small decreases to the arterial speed of travel along Broadway and no degradation to the arterial LOS.

As a result, it can be determined that the site generated traffic will not result in a significant impact to the operation of the existing roadway network.

Based on the detailed evaluation of potential impacts of the sites proposed redevelopment, the majority of the study intersections were found able to accommodate the additional site

traffic with minimal impact to operations. However, the unsignalized intersection of Prospect Avenue at Broadway was found to experience capacity deficiencies associated with the newly created northbound approach. As discussed above, in order to mitigate this condition, a two-way left turn lane (TWLTL) was investigated on Broadway along the frontage of the property (where additional land could be provided to accommodate the necessary widening). This TWLTL would accommodate left turns in the eastbound and westbound direction separately from the through traffic and would provide an intermediary area for left turns in the northbound and southbound directions of travel, which improves the overall operation.

**Traffic Mitigation Results – AM Peak Hour**

Intersection	Approach	No-Build 2022		Build 2022		Build with Mitigation	
		Delay	LOS	Delay	LOS	Delay	LOS
Prospect Avenue & Broadway	EB	2.1	A	2.2	A	10.4	B
	WB			0.6	A	10.1	B
	NB			52.8	F	26.0	D
	SB	33.1	D	54.0	F	25.7	D

**Traffic Mitigation Results – PM Peak Hour**

Intersection	Approach	No-Build 2022		Build 2022		Build with Mitigation	
		Delay	LOS	Delay	LOS	Delay	LOS
Prospect Avenue & Broadway	EB	2.4	A	2.6	A	10.0	A
	WB			2.2	A	10.7	B
	NB			79.2	F	26.9	D
	SB	26.6	D	40.0	E	20.5	C

**Traffic Mitigation Results – Saturday Midday Peak Hour**

Intersection	Approach	No-Build 2022		Build 2022		Build with Mitigation	
		Delay	LOS	Delay	LOS	Delay	LOS
Prospect Avenue & Broadway	EB	0.4	A	0.4	A	7.9	A
	WB			0.8	A	8.3	A
	NB			15.1	C	12.1	B
	SB	14.4	B	16.9	C	12.3	B

**Traffic Mitigation Results – Sunday Midday Peak Hour**

Intersection	Approach	No-Build 2022		Build 2022		Build with Mitigation	
		Delay	LOS	Delay	LOS	Delay	LOS
Prospect Avenue & Broadway	EB	1.0	A	1.0	A	8.7	A
	WB			1.4	A	9.9	A
	NB			54.7	F	20.2	C
	SB	27.1	D	45.9	E	18.0	C

It should be noted that the eastbound and westbound approaches during each of the time periods studied increased in delay as a result of the addition of the two-way left turn lane. Examination of the results revealed that this was due to the fact that the Existing condition approach to the intersection includes both the left turn and through movements within a single lane group for the approach for which the results are reported. In the Build condition, the center lane provides a dedicated left turn lane approach which does not include the weighted average of both the left turn and through movements. As a result, the approach does not include a weighted average of both the left turns and through movements (which effectively have a 0.0 second delay associated with them). Accordingly, the approach delay appears to increase despite the addition of the left-turn lanes.

**Conclusions**

Based on the results of the analyses conducted, VHB arrived at the following conclusions related to traffic:

- › The proposed Willow View Estates Development is expected to generate 211 trips (entering 53 & exiting 158) during the a.m. peak hour, 282 trips (entering 178 & exiting

104) during the p.m. peak hour, 133 trips (entering 72 & exiting 61) during the Saturday midday hour, and 265 trips (entering 143 & exiting 122) during the Sunday midday hour.

- › The analysis concluded the traffic generated by the proposed development can be accommodated without significant negative impacts to the adjacent roadway network with the proposed access plan identified in this report.
- › Each of the Signalized study intersections maintain their operation at an LOS D or better during all time periods analyzed.
- › The proposed site access approach for the subdivision located on at the intersection of Broadway and Prospect Avenue degrades in operation due to the additional northbound approach exiting traffic which does not presently exist. While a traffic signal warrant analysis did not indicate that a new traffic signal would be a reasonable mitigating measure at this location, the operation of this intersection was mitigated to function below capacity by the addition of a center two-way left turn lane along the frontage of the premises on Broadway.
- › The traffic associated with the proposed development is not expected to result in any significant change in the rate or severity of accidents in the area.
- › The on-street parking provided within the premises, as well as driveways for each of the residential homes created, will be more than adequate to accommodate the parking demand for the proposed Willow View Estates project.
- › Based on observations conducted at the existing Woodmere Club catering/event hall and golf course, the existing property generates 90 trips (entering 67, exiting 23) during the a.m. peak hour, 55 trips (entering 5, exiting 50) during the p.m. peak hour, and 75 trips (entering 43 & exiting 32) during the Sunday midday peak hour. While this traffic will be eliminated in the future condition as a result of the Proposed Development, no credit was applied to account for the reduction in traffic within the study area to provide a more conservative analysis.
- › A careful review of the proposed Subdivision Plan shows that the internal site roadways will provide for adequate on-site circulation.
- › The proposed 284-unit subdivision will not have any significant impact on the traffic operations in the area.

### **1.2.8 Energy**

PSEG Long Island currently provides electricity to the subject property. Based upon an analysis of electricity bills for the one-year period between May 2018 to April 2019 the existing club uses approximately 1,056 megawatt hours (MWh) of electricity. National grid currently provides natural gas service to the subject property. Based upon an analysis of natural gas from the one-year period between June 2016 and May 2019, the existing Club used approximately 3,954 million British thermal units (MMBtu). As the moratorium on natural gas hook ups was recently lifted, it is expected that the proposed action would continue to be served by National Grid.



The local municipal building codes for Hempstead, Lawrence and Woodsburgh refer to the Energy Conservation Construction Code of New York State (ECCCNYS) as being the minimum requirement for all developments. The ECCCNYS requires that all government, commercial and residential buildings in the State must follow the International Energy Conservation Code (IECC). As such, the proposed action will adhere to all relevant IECC regulations and requirements.

The United States Department of Energy (USDOE) Prototype Model for single-family homes in New York, which is based upon the IECC 2012 Code, was utilized to determine the approximate amount of electricity usage of the proposed project. The proposed development is expected to utilize 3,099 +/- MWh per year of electricity, representing an increase of 2,042 +/- MWh from existing conditions. It is expected that electricity for the proposed development would be supplied via existing PSEG Long Island infrastructure. However, the existing infrastructure would be extended throughout the proposed subdivision in order to reach and service each of the individual residential homes.

Consultations were undertaken with PSEG Long Island on June 12, 2019, requesting availability for electric service in connection with the proposed action. To date, no response has been received. However, on behalf of the Applicant, VHB contacted PSEG Long Island and was directed to Mr. Richard Scrivano, Lead Engineer in the Nassau Distribution division. By telephone conversations on October 10, 2019, and November 13, 2019, Mr. Scrivano advised VHB that, based on a preliminary review of the application materials circulated by the Lead Agency, it did not appear that the proposed action would require any significant off-site improvements in order to render services. For the purposes of this DEIS, no off-site infrastructure improvements are expected to be needed.

Overall, based on the above, electricity is expected to be available to service the proposed residential subdivision.

It is expected that the proposed development would be supplied natural gas via existing National Grid infrastructure with an extension needed to reach the individual residential homes. The specific utility extension plans have not been developed at this time but would be developed at the time of Building Permit approvals. On November 25, 2019, National Grid lifted its recent gas moratorium and will begin processing new applications for natural gas service.

Consultations were undertaken with National Grid on June 12, 2019, requesting availability for natural gas service in connection with the proposed action. In addition, a follow-up letter was sent to National Grid on November 15, 2019. To date, no response has been received. However, it is expected that the energy purveyor would process the application request before the residential houses are constructed. The proposed development is anticipated to

use approximately 18,000± MMBtu per year of natural gas<sup>6</sup> (Appendix M). This energy use is not entirely new, as the existing Woodmere Country Club utilizes natural gas under existing conditions, such that the net increase is approximately 14,706 MMBtu. The addition of 284 single-family residential customers would be a nominal, incremental increase, whereas National Grid currently has approximately 606,000 existing customers on Long Island.<sup>7</sup>

Overall, based on the above, natural gas is expected to be used, if available at the time of construction and no significant adverse energy impacts are anticipated with respect to natural gas use.

Although there would be an increase to overall energy usage from existing conditions to proposed conditions, the proposed project will be compliant with applicable New York State Building and Energy Codes including the IECC Residential Provisions and additional energy efficiency measures would be available to prospective homeowners. A detailed discussion on of alternative energy sources is provided in Section 3.18 and 3.12 of the DEIS.

## 1.2.9 Infrastructure and Community Facilities

### Water

Potable water to the subject property is currently supplied by New York American Water (NYAW). The subject property is within NYAW's Lynbrook Operations District, which serves approximately 73,840 people in 31 communities in the vicinity of the subject property.<sup>8</sup> The aquifers utilized by the company are the Magothy, Jameco and Lloyd. The average amount of water pumped and supplied to the 31 communities in the area including and surrounding the subject property is approximately 2,629,954 gpd out of the 9,326,096,000 gallons of water withdrawn annually.<sup>9</sup> Based on mapping provided by Maser Consulting (as consultant to the Applicants), there are water mains located in Broadway, Meadow Drive, Keene Lane, Ivy Hill Road, and Porter Place.

The proposed development is expected to generate a demand of 93,720± gpd of water for combined domestic and irrigation water use. Overall, there would be a net increase in potable water demand upon the NYAW district of 82,817± gpd, however the current withdrawal of 77,252± gpd of water for irrigation of the golf course sourced from the two private wells under existing conditions would be eliminated. The net increase of 82,817± gpd on the water district equates to only 3.1 percent of the district's existing daily pumpage.

The subject property would remain connected to the existing water mains described above. In addition, water mains would be installed throughout the proposed subdivision to provide water supply to the individual residential lots. The detailed design of the proposed

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<sup>6</sup> United States Department of Energy. *Building Energy Codes Program. – Residential Prototype Building Models* Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed September 2019.

<sup>7</sup> Mr. Keith Rooney, Director of Government Relations, National Grid. The Hauppauge Industrial Association, 11<sup>th</sup> Annual Energy and Environmental Conference on October 16, 2019.

<sup>8</sup> New York American Water. *2018 Water Quality Report: Lynbrook Operations District*. Available at: <http://www.amwater.com/ccr/lynbrook.pdf>. Accessed June 2019.

<sup>9</sup> New York American Water. *2018 Water Quality Report: Lynbrook Operations District*. Available at: <http://www.amwater.com/ccr/lynbrook.pdf>. Page 6. Accessed June 2019.

connections and routing through the subject property would be subject to design review and approval by NYAW.

The Town of Hempstead, Village of Lawrence and Village of Woodburgh do not have any specific design requirements relating to the conservation of water for new residential homes in their respective Town/Village codes.

### **Sewer**

The subject property is connected to the Nassau County Sewage Disposal Districts No. 1 and 2. Under the proposed action, the subject property would remain connected to this sewer system and would direct sanitary waste to Nassau County's existing Bay Park STP for treatment. In addition to the existing connections to remain, sewer mains would be extended throughout the proposed subdivision to reach each of the proposed residential lots. Based on a design factor of 300 gpd per residence,<sup>10</sup> the proposed 284 residential lots are expected to generate 85,200± gpd of sewage effluent. This is an increase in sewage generation as compared to the 10,903± gpd generated by the Woodmere Club facility under existing conditions. However, The NCDPW has confirmed that Bay Park STP has available capacity to treat the anticipated quantity of wastewater (Appendix N), with capacity to spare. Sewage generation from the proposed action represents approximately 0.1± percent of the current quantity of wastewater treated by the Bay Park STP, and only 0.7± percent of the remaining unused capacity of the plant. Correspondence was sent to NCDPW on June 4, 2019, regarding the availability of the DPW to accommodate the daily anticipated sewage flow from the proposed residential development. A response was received on June 24, 2019 stating that the Nassau County sanitary sewer collection system as well as the Bay Park Sewage Treatment Plant has sufficient capacity to support and treat the daily sanitary discharge of 85,200 gpd in connection with the proposed action.

### **Solid Waste**

The subject property is in the service area of Sanitary District 1, one of five independent sanitary districts within the Town of Hempstead. The estimated quantity of solid waste that would be generated by the proposed project is approximately 48.6± tons/month at 100 percent occupancy. This represents a decrease of 7.4± tons/month from existing conditions.

Solid waste per year from the subject property is not expected to result in a significant impact upon local or regional solid waste management practices, especially given that a similar quantity of solid waste is generated by the Woodmere Club facility under existing conditions.

### **Educational Facilities**

The majority of subject property lies within the Lawrence UFSD, with only two small parcels on the southeastern side located within the Hewlett-Woodmere UFSD under existing conditions. Under the proposed development, 284 lots would fall within the Lawrence UFSD,

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<sup>10</sup> Nassau County Department of Public Works. *Minimum Design Sewage Flow Rates*. 2011.

and the last remaining proposed lot would be partially within the Lawrence UFSD, and partially within the Hewlett-Woodmere UFSD. For the purposes of this DEIS, it is assumed that this lot would be absorbed into the Lawrence UFSD.

In order to estimate the number of school-aged children (SAC) that would be generated by the proposed project for the Lawrence UFSD, the 2013-2017 American Community Survey 5-Year Estimates census data was analyzed.<sup>11</sup> Data was analyzed separately for the Woodmere Census Designated Place (CDP), the Village of Lawrence and the Village of Woodsburgh. Based on similar factors of public and private school aged children within the Woodmere CDP, the Village of Lawrence, and the Village of Woodsburgh, it is anticipated that the proposed action would generate 227 school aged children of which approximately 72 would be expected to attend public school.

A review of enrollment data for the Lawrence UFSD indicates a current enrollment of 2,642 students, which reflects a steady decline in enrollment of approximately 300 students over the past 10 years. The 72 additional public SAC that would be generated by the proposed development would represent only 2.7 percent of the current enrollment, and would be well below the historic enrollment that was accommodated by the local school district.

Based on the foregoing, there will be no adverse impact on educational facilities within the Lawrence UFSD.

### **Police, Ambulance/Emergency Medical Services**

Police protection at the subject property is provided by the NCPD Fourth Precinct. It is expected that the NCPD Fourth Precinct would continue to provide police protection and primary ambulance/EMS services to the subject property following completion of the proposed project.

Based on standards contained in the *ULI Development Impact Assessment Handbook*, two police officers and 0.6 police vehicle are required per 1,000 individuals. Based on these factors, 910 residents are projected to generate a need for 1.8± (rounded up to two) and 0.5± (rounded up to one) additional police personnel and vehicle, respectively.

The NCPD Emergency Ambulance Bureau (EAB) provides primary ambulance and emergency medical services to the subject property. It is estimated that one vehicle and 4.1 EMS personnel per 30,000 individuals would be required to serve a new population. Based on the projected 910 residents to be generated by the proposed project under the jurisdiction of

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<sup>11</sup> United States Census Bureau. *American Fact Finders – School Enrollment 2013-2017 American Community Survey 5-Year Estimates*. Available at: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>. Accessed September 2019.

the NCPD EAB, a demand for  $0.03\pm$  and  $0.12\pm$  (each rounded up to one) EMS vehicle and personnel is anticipated, respectively.

The subject property is within the service area of two different fire departments, including the Lawrence-Cedarhurst Fire Department (LCFD) and the Woodmere Fire Department (WFD). The LCFD enlists 85 volunteer firefighters and EMS personnel. The portion of the subject property within the LCFD generally includes all proposed lots within the Village of Lawrence, and a tiny portion on the central westernmost portion bordering Sherwood Lane, Iris Street, Rose Street, Tulip Street and Ivy Street to the east. The remainder of the subject property falls within the jurisdiction of the WFD which enlists 75 volunteer firefighters and EMS personnel.<sup>12</sup> It is expected that the LCFD and WFD would continue to provide fire protection and secondary ambulance/EMS services to the subject property following completion of the proposed project. Access to the proposed development would be accommodated by the construction of several new access drives and circulation areas in compliance with applicable regulations and standards for firefighting equipment and emergency service vehicle access (as would be confirmed by the Nassau County Fire Marshall during site plan review). Each of the proposed subdivided residences would be constructed to the latest New York State Building and Fire Code and would be fitted with fire alarms and sprinklers.

A total of 82 residents,<sup>13</sup> out of the total 910 residents for the subject property, would be served by the LCFD. Based on planning standards contained in the *ULI Development Impact Assessment Handbook* (1994), it is estimated that 1.65 fire personnel per 1,000 individuals is required to serve a new population. The projected increase in residents at the subject property that fall under the jurisdiction of the LCFD of approximately 82 people would generate a demand for  $0.13\pm$  (rounded to one) additional fire personnel.

The rest of the 828 residents would be served by the WFD. Based on planning standards contained in the *ULI Development Impact Assessment Handbook* (1994), the projected increase in residents at the subject property that fall under the jurisdiction of the WFD of approximately 828 people would generate a demand for  $1.37\pm$  (rounded to two) additional fire personnel.

Based on the foregoing analysis there would be a minimal impact on the LCFD and WFD fire departments. It is noted that the additional residential units located at the subject property could also add to the pool of potential volunteer firefighters.

Based on the foregoing, the proposed action would not have a significant adverse impact with respect to police, fire protection and secondary EMS services for both the LCFD and WFD.

No significant adverse impacts to infrastructure or community facilities are expected as a result of implementation of the proposed action.

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<sup>12</sup> Woodmere Fire Department. *About Us*. Available at: <https://woodmerefd.com/about/>. Accessed September 2019.

<sup>13</sup> Based on a conservative estimate of approximately 3.32 person per owner-occupied residential unit in the Village of Lawrence and approximately 3.22 persons per owner-occupied unit in Woodmere CDP.

### 1.2.10 Zoning, Land Use and Community Character

Zoning, and land use in the areas surrounding the golf course consist predominantly of single-family residential. Other limited uses include two-family and multi-family residential, commercial, institutional (religious and educational), municipal, transportation/parking, open space/recreational, and surface water.

The subject property is located within the Town of Hempstead's B Residence District, the Village of Lawrence's Residence AA District, the Village of Woodsburgh's Residence 1A District and the Village of Woodsburgh's Residence 2A District. The 284 single-family residential lots created as a result of the proposed action would be developed in conformance with the bulk and dimensional standards of each of the zoning districts for which the subject property is located in.

No variances are being requested as part of the proposed action.

#### Lot Size Analysis

As actual lot size within any given district is variable, a lot size analysis was conducted in order to assess the actual lot sizes of residential lots adjacent to the subject property. In total, 250 residential lots were evaluated; 85 in the unincorporated portion of the Town of Hempstead; 76 in the Village of Lawrence; 71 in the Village of Woodsburgh; and 18 in the Village of Cedarhurst. The results of the analysis are summarized below.

#### Lot Size Analysis for Tax Parcels in Tax Blocks Adjoining the Subject Property

	Town of Hempstead	Village of Lawrence	Village of Woodsburgh	Village of Cedarhurst
Number of Parcels	85	76	71	18
Median Lot Size (SF)	8,400	14,500	20,473	8,800
Mean Lot Size (SF)	8,930±	20,275	21,388±	9,090
Maximum Lot Size (SF)	15,040	156,816	85,392	11,360
Number of Lots <6,000 SF	2	1	0	0

As indicated above, lot size within the study area ranges from <6,000 SF to 156,816 SF. The analysis demonstrates that lots immediately surrounding the portion of the subject property in the Town of Hempstead are generally small, consistent with the predominance of adjacent zoning districts with smaller minimum lot sizes.

Lots immediately surrounding those portions of the subject property in the Village of Lawrence and Village of Woodsburgh are more variable in size, though they are generally larger in size, consistent with the predominance of zoning districts with larger minimum lot sizes. Lots studied within these areas included the Village of Lawrence AA, BB and C-1 Residence districts (40,000, 12,000, and 9,000 SF lot size minimums, respectively), and the

Village of Woodsburgh A, B, and C Residence districts (20,000, 14,500, and 12,000 SF lot size minimums, respectively).

Those neighborhoods surrounding the northern portion of the subject property are the most densely developed. Housing density surrounding the site decreases gradually moving south towards the southern boundary of the subject property. Overall, the land use immediately adjoining the subject property is characterized by single-family residential neighborhoods of mixed densities.

To ensure that the proposed subdivision is consistent with the character of the surrounding areas from a zoning perspective, based on the results of the lot size analysis, the proposed single family residential lots in the Town of Hempstead portion of the subject property would range from 6,000 SF to 20,886+/- SF. On average, new lots would be approximately 7,000 SF in size, larger than the minimum lot size requirement of the district, and slightly smaller than the mean lot size of adjacent parcels.

Lots within the Village of Lawrence portion of the subject property would range from 45,952±- to 81,588±-SF, averaging around 55,000 SF, thus complying with the 40,000-SF minimum area requirement. These proposed lots would be significantly larger than the mean lot size of adjacent lots in the Village. The proposed subdivision is also consistent with §182-10 of the Code of the Village of Lawrence – factors for considering large subdivisions.

The lots within the Village of Woodsburgh portion of the subject property would range from 43,605±- to 232,117±-SF, averaging close to 59,000 SF in size, thus complying with the 43,560-SF minimum area requirement. These proposed lots would be significantly larger than the mean lot size of adjacent lots in the Village as well. The proposed subdivision is also consistent with §131 of the Code of the Village of Woodsburgh – Subdivision of Land.

### **Community Character**

As described in detail in Section 3.10.1 of the DEIS, according to the guidance provided in *The SEQR Handbook*, “[i]n the absence of a current, adopted comprehensive plan, a lead agency has little formal basis for determining whether a significant impact upon community character may occur.” Therefore, according to the *SEQR Handbook*, community character is influenced by the built and natural environment, the social environment of the area, and prevailing community planning and zoning standards.

In this case, the built environment of the study area consists of single-family residential neighborhoods complemented by commercial and institutional uses. In regard to the social environment, the community character of the study area is also influenced by the substantial population of devout Jewish residents, as demonstrated by the numerous religious uses found within the study area. The *SEQR Handbook* also emphasizes the “reliance upon a municipality’s comprehensive plan and zoning as expressions of the community’s desired future state or character.” As discussed further in Section 3.10 there are no relevant comprehensive plans, thus the zoning within the study area, which is predominantly single-family residential, re-emphasizes the single-family residential character of the community.

A comment made during the public scoping process asked for the DEIS to evaluate the “Vision Plan” for the Village of Woodsburgh. However, at that time, the “Vision Plan” was not

completed or adopted. Subsequently, in December 2019, during the course of the Applicant's preparation of this DEIS, the Board of Trustees of the Village of Woodburgh adopted a "Vision Plan." Therefore, consistent with the provisions of the Final Scope, this DEIS addresses the implications of the "Vision Plan." In summary, although a "Vision Plan" has been adopted, the Village of Woodburgh's land use regulations have not been amended accordingly, such that the proposed action as presented in this DEIS remains consistent with the Village's prevailing zoning and other current land use controls; and the Applicant has initiated litigation challenging the "Vision Plan." The primary effect of the recommendations "Vision Plan," if implemented with the necessary local legislation and if ultimately determined to be valid, would be to reduce the single-family development yield on the portion of the Woodmere Club in Woodburgh by 50 percent or more and to establish a new zoning district in the area around the Woodmere Club's clubhouse and nearby facilities. See further discussion in Sections 3.10.1 and 3.10.1 of this DEIS.

As described in Section 3.10.1, according to the guidance provided in *The SEQR Handbook*, "[i]n the absence of current, adopted comprehensive plan, a lead agency has little formal basis for determining whether a significant impact upon community character may occur. Although no comprehensive plan exists in the Village of Woodmere, Village of Lawrence, or the Town of Hempstead, a number of relevant New York State and Nassau County plans and studies were identified and summary of the proposed action's consistency with each was included in Section 3.10.1 of this DEIS.

The result of this consistency analysis demonstrates that the proposed subdivision would be consistent with local zoning regulations and relevant NYS and Nassau County plans. As such, no significant adverse impacts with respect to zoning, land use and community character are anticipated, and therefore, no mitigation measures are proposed.

## **1.2.11 Noise, Odors, and Lighting**

### **Noise**

The subject property is situated in an established suburban community where the main source of environmental sound is from street traffic, including passenger vehicles, as well as buses and commercial trucks which frequently travel along Broadway, on which the site fronts. Trains traveling through the LIRR Cedarhurst and Woodmere stations also contribute to existing ambient sound conditions. Additionally, due to the subject property's proximity to John F. Kennedy (JFK) International Airport, which is situated 2.4± miles to the west of the subject property, overhead air traffic is also a notable source of environmental sound in this location.

The NYSDEC noise policy<sup>14</sup> provides guidance on the methods to assess potential noise impacts and avoid or reduce adverse impacts. If long-term operations due to a proposed project would increase noise by 3 dB or less, there would be a minimal effect in future noise

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<sup>14</sup> NYSDEC. DEC Program Policy – Assessing and Mitigating Noise Impacts.



conditions and there is no need for mitigation, as they are considered to be imperceptible in most environments. For increases greater than 3 dB, mitigation may be warranted.

### **NYSDEC Guidelines for Assessing Long-Term Operational Noise Impact and Mitigation**

<b>Noise Level Increase (dB)</b>	<b>Impact Determination</b>	<b>Need for Mitigation</b>
0 to 3	No impact	None
3 to 6	Potential adverse impact for the most sensitive receptors	Mitigation may be needed for the most sensitive receptors.
6 to 10	Potential adverse impact depending on existing noise level and character of land use	Mitigation is generally needed for most residential receptors.
10 or more	Adverse impact	Mitigation is warranted where reasonable.

To evaluate existing ambient noise, ambient sound measurements were conducted at eight locations around the project site at location relatively close to the project site and the proposed construction activities. These measurements generally show noise levels ranging from 56 to 73 dBA.

Since construction activities are short-term in relation to operational noise, separate thresholds are generally used to assess construction noise. According to NYSDEC policy, a proposed action should generally not raise ambient sound levels above 65 dBA in non-industrial settings or above 79 dBA in industrial environments. Therefore, given the temporary nature of construction noise, an increase in ambient noise of 10 dBA or more that would increase levels above 65 dBA is considered a reasonable construction noise threshold. Beyond these levels, it is recommended that BMPs be used to minimize the effects of construction noise.

Based on the results of the noise measurements, and NYCDEC guidelines, the construction noise limit for the proposed action ranges from 66 to 83 dBA. Noise in excess of this range (greater than 10 dB above existing ambient conditions) would result in the need for implementation of Best Management Practices (BMP).

Upon implementation of the proposed action, the subject property would operate as a single-family residential community. Thus, operational noise associated with the proposed action would be that of a typical suburban neighborhood. As previously discussed, the main source of sound in the completed development would be passenger vehicle street traffic. Since the operational noise generated by the proposed single-family residential development would be essentially the same as the existing ambient noise conditions in the surrounding residential areas, no significant adverse noise impacts on those surrounding areas are expected upon the completion of project.

The proposed action would introduce new sources of noise that may temporarily affect existing noise-sensitive receptors in the area immediately surrounding the subject property. The potential for construction related noise impacts is dependent upon the phase of construction, the type, amount and location of construction equipment, and the amount of time such equipment operates over a workday.

The analysis contained herein includes a model of construction noise using standard methods for residential development in a manner that is consistent with federal guidelines. The analysis demonstrates that the single-family residential development that adjoins the subject property or faces the subject property along its street frontages, which are the closest receptors that could be affected by construction-related noise, will not experience a 10 dBA increase from existing conditions.

Construction noise levels would not increase existing ambient conditions by more than 10 dBA and there would not be significant adverse noise impacts. Since there would be no significant adverse noise impacts, BMPs are not required. Nevertheless, contractors should consider using best management practices, as safe, feasible, and reasonable, to minimize potential construction noise. In efforts to reduce potential noise impacts during construction, noise reduction measures would include the following:

- › Construction activities will be limited to non-sensitive time periods as defined by each local municipal ordinance. Any activities that span between two or more municipalities would be scheduled in accordance with the most stringent of the municipal noise ordinances. (e.g., shorter workday or prohibition on weekend work). Supplemental stationary construction equipment, such as generators or air compressors, will be located as far as possible from noise-sensitive sites.
- › Of the various types of construction equipment, diesel engines can be the most significant noise source. The contractor will ensure that all equipment is operating properly and is fitted with the appropriate noise-reducing features such as exhaust mufflers and engine compartment shields.
- › Most wheeled and tracked construction equipment is required to have back-up alarms for safety purposes. Due to their tonal character, these alarms are often a significant noise concern. Special back-up alarms may be implemented including ambient-adjusted alarms which only sound five decibels higher than ambient conditions or "quacker" which have a less tonal character. Flagging may also be used to eliminate the need for back-up alarms.
- › Mitigation may include re-routing truck routes and minimizing idling times.
- › Acoustic enclosures may be used to reduce emission from small construction equipment, such as generators.
- › Temporary noise barriers or noise blankets can be installed between construction equipment and sensitive receptors to provide significant noise reduction (typically 5 to 15 decibels).
- › As more detailed information on the construction equipment and methods become available as the project design advances, the contractor shall prepare a noise control plan to further evaluate the potential for construction noise impact and identify specific mitigation measures that will be implemented.
- › A key aspect to minimizing the effects of construction noise is maintain good communication with the nearby residences and informing them of the schedule of

construction activities and the approaches that will be taken to minimize construction noise.

Further details regarding noise-related construction impacts is provided in Section 1.3.13 of this Executive Summary and Section 3.11.2 of this DEIS.

### **Odor**

The Final Scope acknowledges that no known odor impacts are associated with the proposed residential subdivision. Therefore, no analysis of odor related impacts is included in the DEIS.

### **Lighting**

The subject property is situated in an established suburban community which contains a variety of artificial light sources. The primary sources of artificial light in the immediate surrounding area are varying types of overhead street lighting, automobile headlights and exterior residential property lighting. Within the subject property, the primary sources of artificial light are the exterior lighting of the Woodmere Club clubhouse and lighting within the adjacent surface parking lot.

Following the completion of the subdivision and subsequent development of the residential lots, the subject property would operate as a single-family residential neighborhood. Though a formal lighting plan has not been developed for the proposed action, it is anticipated that any overhead street lighting or exterior residential lighting would be designed in a manner consistent with the applicable requirements of the Town of Hempstead code, as previously described, and as otherwise required by the Villages of Lawrence and Woodsburgh. As a result, no significant spillover of lighting onto adjacent properties is anticipated.

The Lead Agency's Positive Declaration and its Final Scope do not note the potential for lighting impacts upon specific, individual receptors. However, the Gan Chamesh Ed Day Care Center is mentioned generally with respect to potential noise, odor and lighting impacts within the Positive Declaration. Given that the Gan Chamesh Ed Day Care Center is located approximately 485 feet away from the nearest portion of the subject property; the presence of several developed properties, structures (e.g., single-family residences) and intervening vegetation between the center and the subject property; and the fact that street lighting is already present along Broadway, Linden Street and Central Avenue between the center and the subject property (and throughout the surrounding neighborhood), it is reasonable to assume that there would be no adverse effects associated with the proposed action, including street lighting to be installed as required.

As no adverse lighting impacts are anticipated, no associated mitigation measures are proposed. Lighting fixtures (including street lighting) would be designed to meet the requirements of the respective municipalities, including requirements for shielding and light spill prevention which would reduce the potential for adverse effects.

## 1.2.12 Climate Change

### **Special Flood Hazard Areas and Floodplain Management Standards**

As previously discussed, portions of the subject property are within the SFHA Zone AE (BFE 9-11 feet). The extent of the floodplains as mapped by FEMA are based on observed trends and not future potential conditions. Although the proposed action includes the grading and filling of the subject property to modify the existing topography, implementation of the proposed action is not anticipated to substantially alter the existing floodplains. This is primarily due to the fact that the subject property is within a floodplain subject to coastal inundation (i.e., rather than a stream flood), where the floodplain is broad and covers a vast area. Thus, the subject property's floodplains would remain as they are today. Those portions of the subject property within SFHA Zone AE would be required to adhere to the provisions set forth in the local municipal floodplain zoning codes. Where applicable (i.e., within the SFHAs), the proposed action will fill lots or otherwise raise the first floors of the future residential structures to a minimum elevation of two feet above the corresponding AE zone elevation. These design standards will reduce the proposed development's vulnerability to the potential impacts of flooding to the greatest extent possible. Accordingly, impacts related to the flooding aspects of climate change are not anticipated.

### **NYSDEC Coastal Erosion Hazard Area (CEHA)**

The subject property is not within the limits of a mapped CEHA. As such, construction activities under the proposed action would not take place within a mapped CEHA area, nor would any CEHA-related impacts be anticipated.

### **Sea Level Rise**

Although the FEMA FIRM does not consider sea level rise in its establishment of the floodplain, efforts have been made for the proposed action to account for potential impacts the subject property may encounter as it relates to sea level rise. Per the CRRRA data, sea level could rise by a maximum of approximately 72-inches by the year 2100. However, this projection reflects the most extreme scenario. As to not contribute to a situation of severe over-design, VHB provides conservative estimates utilizing the medium to high-medium range sea level rise projections. Under the medium to high-medium range projections presented by the CRRRA, sea level is expected to increase by 2.8 feet to 3.9 feet amsl by the year 2100.

Even under the high-medium sea level rise projection of  $6.33 \pm$  feet amsl, the proposed roadways and residences would remain above projected sea levels for the year 2100. As such, the proposed action is not expected to be adversely impacted by sea level rise.

The proposed subdivision would tie into the existing roadway network surrounding the subject property. The elevations of the existing roadways would not be altered under the proposed action. New roadways to be constructed north of Keene Lane are located within Zone AE with BFE's of 9 and 10 feet. Per Nassau County map checklist, all new roadways within a subdivision are required to be elevated at least 2 feet above the BFE and tie into the

existing roadway network. The proposed action would meet these requirements and all new roadways would have a minimum elevation of 2 feet above BFE throughout the subdivision.

### **Greenhouse Gas (GHG) Emissions**

GHG emissions were calculated for direct and indirect stationary sources. These estimates were conducted in accordance with the NYSDEC Policy guidance. The analysis shows the proposed action is expected to produce a total of 995 tons per year of CO<sub>2</sub>e from direct stationary sources and 1,667 tons per year of CO<sub>2</sub>e from indirect stationary sources. When comparing the project's anticipated emissions to the GHG from all of Long Island (36,003,349 tons CO<sub>2</sub>e), the project is expected to contribute 0.01 percent of total Long Island GHG emissions. As such, the proposed action will not significantly contribute to GHG emissions, and thus, will not substantially contribute to climate change.

*The SEQR Handbook* indicates that a proposed action's impact on climate change be considered primarily in terms of sea level rise, flooding, and greenhouse gas emissions.

Though parts of the subject property exist within the 100-year floodplain, residences in these portions of the subject property would be constructed in accordance with all pertinent floodplain standards (i.e., lowest floor elevations at least 2-feet above the corresponding BFE); under these development standards, the proposed residences are not anticipated to be significantly impacted by flooding. Relatedly, the proposed action is not anticipated to be adversely impacted by sea level rise, as all proposed new roadways and residences would remain above the high-medium projected sea levels for the year 2100.

The proposed action would not significantly contribute to greenhouse gas emissions. The GHG emissions generated by the proposed residences, being powered by natural gas and electricity, would represent less than 0.01 percent of GHG emissions generated throughout Long Island. Though alternative heating technologies exist (i.e., oil furnaces, all electric homes), use of these alternative technologies would result in higher GHG emissions.

Based on the foregoing, the proposed action is not expected to significantly contribute to climate change, nor is it expected to be adversely impacted by the effects of the same. Accordingly, no climate change mitigation measures are required.

## **1.2.13 Construction Impacts**

### **Traffic**

A Traffic Impact Study (TIS) was performed to evaluate traffic impacts of the proposed action, including construction-related traffic impacts. Based on an anticipated construction period of six to seven years, it is anticipated that the construction of the single-family residences will occur at a rate of approximately 50 homes each year. Construction traffic associated with the development will include trucks for performing operations on the site, the delivery and removal of materials, as well as worker's vehicles and tradesman vans. Trucks will arrive at the site via Broadway by the Nassau Expressway (NYS Route 878) or Rockaway Turnpike. Local suppliers of construction material may arrive from other roadways to the site based on their origin.

It is noted that the site requires a significant amount of fill material to raise the site to required grade in accordance with the requirements of the flood zone. This material is estimated at 250,000 CY. This material will be brought to the site over the course of the 5-year build out period, reducing the frequency of truck trips bringing the material to the site. Assuming 25 CY of material per truck and 200 working days per year yields an average of 10 trucks laden with fill material to the site per day. Over an 8-hour day, this equates to an average of less than two fill truck deliveries to the site per hour.

The following is a list of proposed mitigations related to traffic impacts during construction:

- › A temporary construction entrance will be established on Broadway in a location determined through consultation with the NCDPW and the Town of Hempstead
- › The developer of Willow View Estates will dictate the routes used by construction associated traffic; in particular trucks and large construction equipment, to minimize any impacts to traffic conditions on the roadways in the area
- › All large truck traffic will be routed to arrive and depart the site via major roadways to the maximum degree possible
- › A large construction vehicle routing plan will be in place to ensure that no large trucks will utilize the local roadway system, minimizing any impacts in the area
- › Parking and storage of all construction worker vehicles and construction equipment will be maintained on site
- › No parking of vehicles or equipment will occur on the surrounding roadways
- › Laydown areas for any materials that will be stockpiled on the site will be provided on site
- › Material deliveries, removal of debris and other trucking operations will take place over the course of an entire day, as necessary, thereby reducing any impact on adjacent roadways
- › Fill material will be brought to the site over the course of the 5-year build out period, reducing the frequency of truck trips bringing the material to the site and deliveries will be controlled to arrive via major roadways and will not use local secondary streets
- › All construction activities will be overseen by a Construction Manager (CM) and dictated by a Construction Management Plan developed in coordination with the Town of Hempstead, the Village of Lawrence and the Village of Woodsburgh
- › The public can express any issues during construction to the Town, which would then notify the Applicant; and, if necessary, the Department would oversee the implementation of any corrective action.

### **Air Quality**

Construction activities in connection with the proposed development have the potential to emit GHG and affect air quality because of engine emissions from on-site construction equipment and dust-generating activities such as earth movement, vehicles traveling on

unpaved surfaces, and loading/unloading operations. The Applicant will work with the Town and Villages to develop a Construction Management Plan that would require the construction contractors to adhere to all applicable regulations regarding emission control of construction vehicles and dust controls proposed in Section 3.13.1 of this DEIS. This would include, but not be limited to, maintenance of all motor vehicles, machinery, and equipment associated with construction activities and the proper fitting of equipment with mufflers or other regulatory-required emissions control devices. Additionally, construction specifications will require that all diesel equipment used on-site will be fitted with their original manufacturer's engine emission controls such as oxidation catalysts or diesel particulate filters. Proper maintenance and emissions control measures of equipment will reduce potential GHG emissions associated with the construction of the proposed development.

The proposed project would be subject to all NYSDEC regulations that pertain to construction activities and the protection of air quality. The proposed development would combine emission reduction measures that are mandated by law and are common practice in large-scale New York State construction projects. Furthermore, the proposed development is subject to a SWPPP which contains a detailed erosion and sediment control plan identifying the specific measures to be implemented. An erosion and sediment control plan has been developed for the proposed action, as detailed on Sheets C-5.1 and C-5.2 of Appendix B.

The Contractor would be responsible for protective measures around the construction and demolition work to protect pedestrians and prevent dust and debris from leaving the site and entering the surrounding community. Appropriate means are proposed to be used to mitigate fugitive dust, as follows:

- › A dust control program would be put into effect immediately before any work is begun and, temporary irrigation systems or a water truck would be provided to water down the construction sites on a regular basis.
- › Water trucks would be mobilized to water down temporary roadways and large areas of site clearing.
- › Highly-traveled unpaved areas and perimeter areas may require a sprayed-on adhesive consisting of polymer emulsion products (emulsifiers) for controlling fugitive dust generated by truck traffic on unpaved areas.
- › Street cleaning trucks would be employed to wash down adjacent streets on a regular basis.
- › Construction areas would be completely enclosed with fencing to reduce dust from leaving the construction area
- › Erosion and sediment control measures would be implemented prior to demolition and construction and maintained on a continuing basis during construction and upon permanent development.
- › Final grading and stabilization would occur as soon as possible, so as not to leave soil exposed for a long duration.

- › Graded and stripped areas and stockpiles, while kept to a minimum, would be stabilized through the use of temporary seeding or salt hay as required. Seed mixtures would be in accordance with the National Resources Conservation Service recommendations.
- › Main construction access points are to be furnished with a truck tire and vehicle wheel wash so that debris will not be tracked off the property onto public roads.

## **Noise**

A comprehensive analysis of potential construction-related noise impacts has been performed for the proposed action (see Section 3.11.2 of the DEIS). The potential for noise impacts due to construction activities would depend upon the phase of construction, the type, amount and location of construction equipment, and the amount of time such equipment operates over a workday.

It is estimated that demolition of existing on-site facilities and installation of subdivision infrastructure would occur over a period of 12-18 months, while housing lot development would occur over a period of 60-66 months. The loudest phase of noise would be the earthwork phase which includes movement of fill by truck, excavators and back hoes to move soil around the site, grading and a vibratory compactor to compact the soil.

Based on the results of a construction noise assessment at 95 receptor location in the study area, construction including trucking operations and stationary equipment would generate noise levels ranging from 32 to 49 dBA (Leg) at receptor locations in the study area. Future noise levels (including existing and construction source), would increase up to 0.7 dBA at all receptors. As previously discussed, the single-family residential development that adjoins the subject property or face the subject property along its street frontages are the closest receptors that could be affected by construction-related noise but will not experience a 10 dBA increase from existing conditions.

The Final Scope specified that particular attention should be paid to the potential for construction-related noise impacts on the Gan Chamesh Ed Day Care Center. However, this facility is located approximately 485 feet to the north of the subject property, and due to the rapid attenuation of sound with distance, any impacts at that location are not expected to be significant and would be mitigated by the implementation of standard construction BMPs as discussed below.

- › The Gan Chamesh Ed Day Care Center is located approximately 485 feet to the north of the subject property, and due to the rapid attenuation of sound with distance, any impacts at that location are not expected to be significant and would be mitigated by the implementation of standard construction BMPs, as discussed in Section 3.11.3
- › The Hebrew Academy of the Five Towns and Rockaway is located approximately 600 feet to the west of the subject property and it is anticipated that impacts at this location would not be significant and would be mitigated
- › The Kulanu Academy, located approximately 875 feet to the west of the subject property, would not be significantly impacted by construction related noise and would be mitigated by BMP



- › With respect to the Gesher Early Childhood Center, as this education center is located approximately 1,950 feet north of the subject property, significantly further from the subject property (and the associated construction noise sources), and no significant construction related noise impacts are expected at locations nearer to the subject property, no such impacts upon the Gesher facility would be expected to result from implementation of the proposed development.

As the noise analysis shows that no sensitive receptor locations will experience a 10 dBA increase over existing ambient levels, there would be no significant adverse construction noise impact. Overall, construction-related noise impacts would be temporary, would be minimized to the extent practicable by conforming with the applicable municipal noise ordinances, being scheduled not to occur during overnight sensitive hours, and by implementing BMPs to reduce source noise levels as presented in Section 3.11.3 (and below).

As discussed above, construction noise levels would not increase existing ambient conditions by more than 10 dBA and there would not be significant adverse noise impacts. Since there would be no significant adverse noise impacts, BMPs are not required. Nevertheless, contractors should consider using best management practices, as safe, feasible, and reasonable, to minimize potential construction noise as discussed in Section 3.11.3 of the DEIS.

## 1.3 Alternatives

Pursuant to 6 NYCRR §617 and the Final Scope, this DEIS contains descriptions and evaluations of reasonable alternatives to the proposed action that are feasible for the Applicant to pursue, including:

- › **Alternative 1:** SEQRA- Mandated No Action Alternative: Assumes the subject property would continue to operate as it does under existing conditions (i.e., a private members-only golf and country club) for as long as the club use remains economically feasible.
- › **Alternative 2:** 284-Lot Cluster Configuration Alternative: Similar to the proposed action, but assumes subdivision of the subject property into 284 single-family residential lots with changes to the lot size and layout of the subdivision map. Specifically, some of the proposed lots within the Village of Lawrence and Village of Woodsburgh would be smaller, thereby allowing for an increase in contiguous open space.
- › **Alternative 3:** Reduced-density Subdivision with Nine-hole Golf Course.: Only a portion of the subject property would be redeveloped with residential uses, with the remainder of the subject property redeveloped with a nine-hole golf course.

A summary of the quantifiable environmental impacts of each alternative is presented in table format below:

**Comparison of Alternatives**

<b>PARAMETER</b>	<b>PROPOSED ACTION</b>	<b>ALTERNATIVE 1: NO ACTION</b>	<b>ALTERNATIVE 2: 284-LOT CLUSTER CONGIFURATION</b>	<b>ALTERNATIVE 3: REDUCED- DENSITY SUBDIVISION, WITH NINE-HOLE GOLF COURSE ALTERNATIVE</b>
Meets Applicant's Objectives	Yes	No	Yes	No
Type of Development	Subdivided Single-family Residential Lots	Private Golf Club	Subdivided Single-family Residential Lots	Subdivided Single-family Residential Lots with Nine-hole Golf Course
Number of Residential Units	284	0	284	258
Population (persons)	910	0	910	829
School-Aged Children	227	0	227	211
Water Usage (gallons)	Potable: 85,200± Irrigation: 8,520± Total: 93,720±	Potable: 10,903± Irrigation: 213,987± Total: 224,890±	Potable: 85,200± Irrigation: 8,520± Total: 93,720±	Potable: 77,400± Irrigation: 7,740± Total: 85,140±
Sewage Generation (gallons)	85,200±	10,903±	85,200±	77,400±
Solid Waste (tons/month)	48.4±	56.0±	48.4±	44.1±
Traffic Generation				
AM Peak Hour	211	90	211	208
PM Peak Hour	282	55	282	282
Saturday Peak Hour	133		133	148
Sunday Peak Hour	265	75	265	253

Notes:

# 2

## Description of the Proposed Action

### 2.1 Introduction

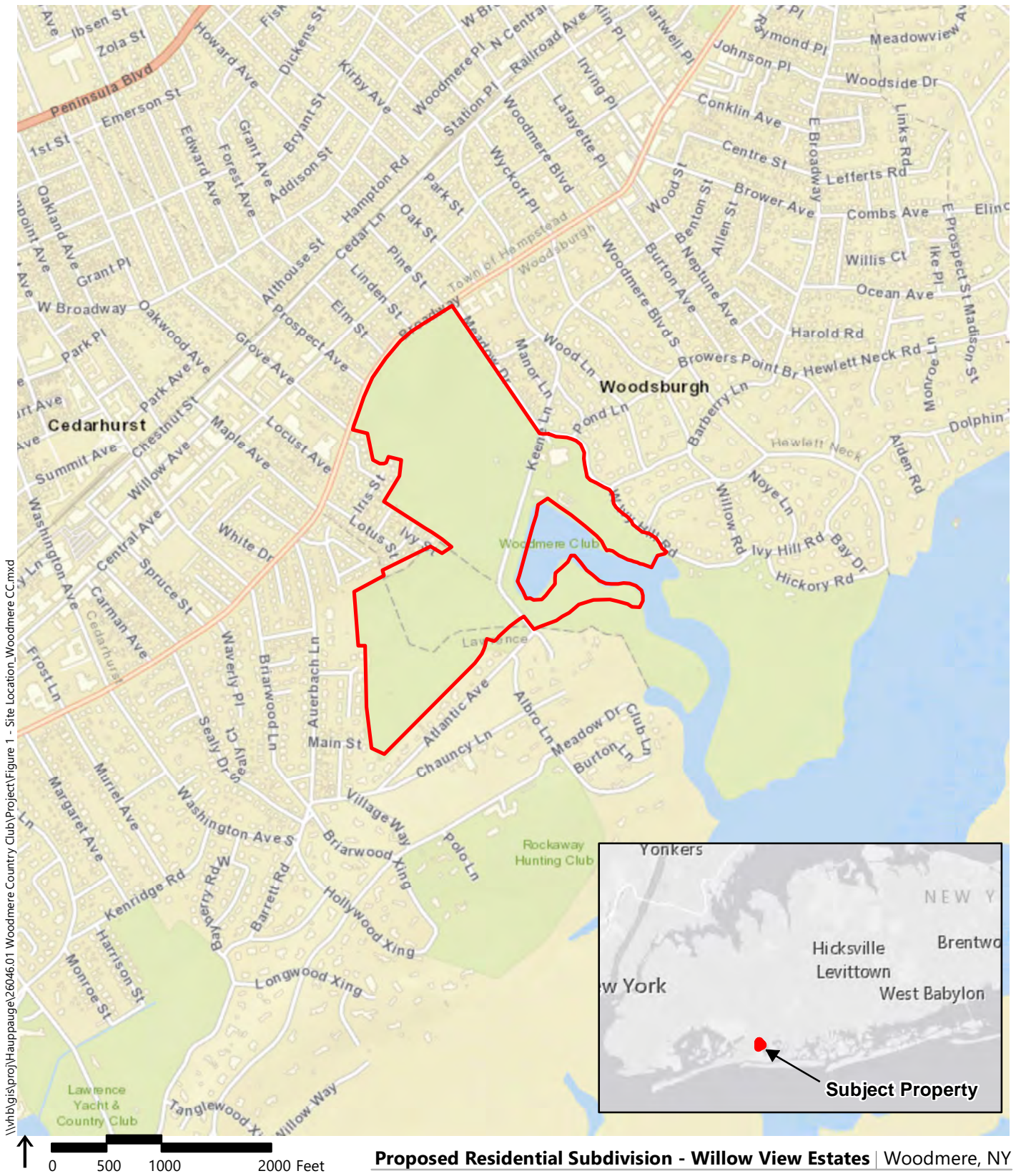
This document is a Draft Environmental Impact Statement (DEIS) prepared in accordance with the State Environmental Quality Review Act (SEQRA) and its implementing regulations at 6 NYCRR Part 617 and the Final Scope adopted by the Nassau County Planning Commission (the “Commission” or “NCPC”) as the Lead Agency on September 26, 2019 (Appendix A). This document analyzes the potential significant adverse environmental impacts associated with the proposed action, which consists of a 284-lot residential subdivision<sup>15</sup> (the “proposed action”) of the 116.72±-acre Woodmere Club, situated at 99 Meadow Drive, Woodmere, New York (the “subject property” or “site”) (Figure 1) and the construction of related infrastructure and appurtenances.

#### 2.1.1 Site Location

The Woodmere Club is located at 99 Meadow Drive within the hamlet of Woodmere (Town of Hempstead), Village of Lawrence, and Village of Woodsburgh, Nassau County, New York (Figure 2). The subject property is designated on the Nassau County Land and Tax Map as Section 41, Block F, Lots 37, 40, 48, 310, 3024, 3028, 3030, 3031, 3032; Section 41, Block D, Lots 53 and 55; and Section 41, Block 72, Lot 1.

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<sup>15</sup> The proposed subdivision map has been minimally modified from the original subdivision application from 285-lots to 284-lots to reflect the most recent survey data available.



\\vhb\gis\pro\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 1 - Site Location\_Woodmere CC.mxd

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Site Location Map**

99 Meadow Drive  
Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodsburgh  
Nassau County

All boundaries are approximate.

Sources: NYS Ortho Imagery (2016);  
NYS Civil Boundaries, NYS Office of Information Technology Services GIS Program Office (GPO)





\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 2 - Municipality Boundaries.mxd

0 250 500 1000 Feet

- Subject Property
- Municipality Boundaries

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Municipal Boundaries Map**

99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

All boundaries are approximate.

Source: ESRI, NYS GIS Program Office

The site is generally bounded by Broadway to the north; Atlantic Avenue to the south; Meadow Drive and Ivy Hill Road to the east; and multiple local roadways, including Sherwood Lane, Iris Street, Rose Street, Tulip Street, Ivy Street, East Hawthorne Lane, Copperbeech Lane, and Auerbach Lane to the west.

Existing access to the subject property is provided via Meadow Drive, Ivy Hill Road, Keene Lane, Atlantic Avenue, and Railroad Avenue. The subdivision would create new site access points and internal roadways throughout the property. Specifically, new access points would be constructed at the intersection of Broadway and Prospect Avenue to the northwest, the intersection of Meadow Drive and Porter Place to the northeast, and Tulip Street to the west. Nine internal roadways would be constructed within the subject property, facilitating adequate circulation and providing street frontage along each of the proposed subdivided lots. Additional details regarding the proposed access points and internal roadways are provided in the Traffic Impact Study appended hereto as Appendix C.

### 2.1.2 Zoning

Approximately 55.5± acres (48%) of the subject property is situated within the Town of Hempstead B Residence zoning district, while 21.4± acres (18%) lie within the Village of Lawrence Residence AA zoning district, 39.3± acres (33%) lie within the Village of Woodsburgh Residence 1A zoning district and 0.52± acres (1%) lie within the Village of Woodsburgh Residence 2A zoning district (Figure 3). The individual lots included in the proposed subdivision have been designed to conform to the minimum lot area requirements of the zoning districts in which they are located.

The minimum lot area requirements for each of the applicable zoning districts, as well as the number of proposed lots within each municipality are shown in Table 1.

**Table 1 Minimum Lot Size Requirements by Zoning District**

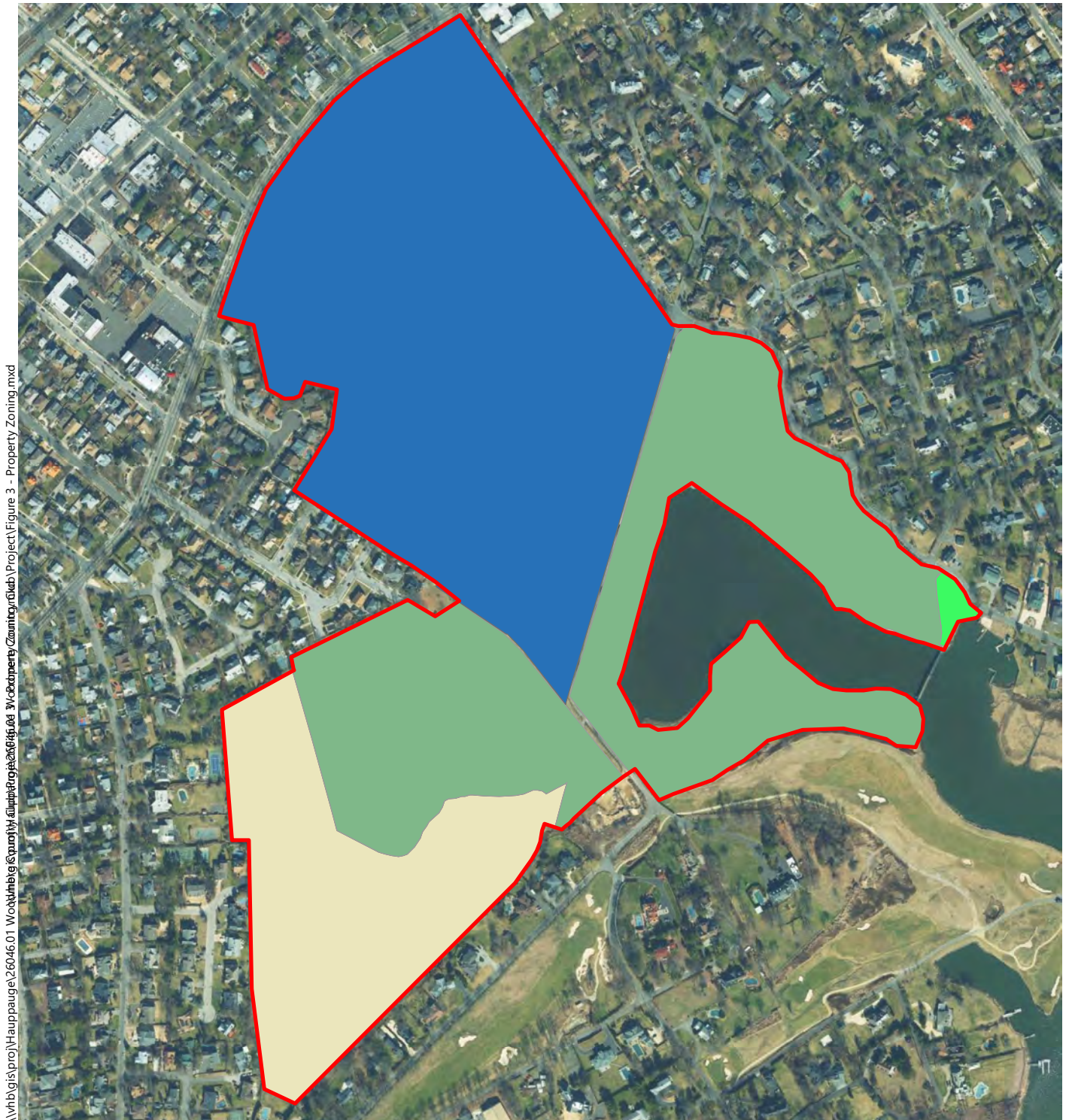
Municipality	Zoning District	Minimum Required Lot Area (Square Feet)	Number of Proposed Lots
Town of Hempstead	B Residence	6,000	248
Village of Lawrence	Residence AA	40,000	12 <sup>1</sup>
Village of Woodsburgh	Residence 1A	43,560	23 <sup>2</sup>
Village of Woodsburgh	Residence 2A	87,120	1

1. Lots 232 and 235 are predominately sited within the Village of Lawrence Residence A-A zoning district. Small portions of these lots are also located within the Village of Woodsburgh 1A Residence zoning district. The prevailing zoning for the municipality in which the lot is predominately located in would be applicable.
2. Lots 223, 236, 237, 238, 239, and 240 are predominately sited within the Village of Woodsburgh 1A Residence zoning district. Small portions of these lots are also located within the Village of Lawrence Residence A-A zoning district. The prevailing zoning for the municipality in which the lot is predominately located in would be applicable.

## 2.2 Site Development History

Prior to its development in the early twentieth century, historical maps show the subject property as agricultural fields and wetlands (Appendix K). Following the sale of the subject property in the early 1900s, construction on The Woodmere Club golf and country club





\\vhb\gis\proj\Hauptpaugel\26046.01 Woodmere\GIS\Property\Map\Project\Figure 3 - Property Zoning.mxd

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Zoning Map - Subject Property**

99 Meadow Drive

Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodsburgh

Nassau County

Subject Property

Town of Hempstead	Village of Lawrence	Village of Woodsburgh
B Residence	Residence A-A	1A Residence
		2A Residence

All boundaries are approximate.

Sources: NYS Ortho Imagery (2016);  
Town of Hempstead (2003), Village of Cedarhurst, Village of Hewlett Neck (2010),  
Village of Lawrence (1982), and Village of Woodsburgh (1990) Zoning Maps.

began. The development involved land recontouring, including cutting and dredging to form the Woodmere Channel, and subsequent filling to shape the golf course. Upon completion in 1910, the Woodmere Club was opened. Though originally confined to the land adjoining Railroad Avenue, the Club expanded to its current size after the acquisition of land from the Rockaway Hunting Club in 1939.<sup>16</sup>

Today, the Woodmere Club consists of an 18-hole private golf course, above ground swimming complex, 6 Har-Tru tennis courts and a clubhouse. The clubhouse contains several dining options and regularly hosts weddings, bar/bat mitzvahs, engagement parties, sweet sixteen parties, corporate functions, holiday celebrations, and other private events.

## 2.3 SEQRA History

On December 20, 2018, a formal application was submitted by WG Woodmere LLC, LH Barick LLC, and SG Barick LLC, (the "Applicants") to the Nassau County Planning Commission for preliminary subdivision approval of the subject property. The Commission reviewed the application, including Part I of the Full Environmental Assessment Form ("Full EAF"), and declared itself Lead Agency for the purpose of conducting an environmental review in accordance with SEQRA.

On January 31, 2019, the Commission commenced a coordinated review process, circulated the Full EAF, and provided notice to Involved Agencies that the Commission intended to act as the Lead Agency. Following a coordinated review within involved agencies, the Commission declared itself as Lead Agency.

On March 7, 2019, the Lead Agency classified the proposed action as Type I, and issued a Positive Declaration indicating that the proposed action may have a significant adverse impact on the environment and requiring preparation of a DEIS.

Pursuant to 6 NYCRR § 617.8, a public scoping process was initiated. The Applicants submitted a Draft Scope on May 30, 2019 which was made available to the public and involved and interested agencies for review. A public scoping session was held on June 26, 2019, and the public comment period was held open until August 14, 2019<sup>17</sup>. The Final Scope was adopted by the Commission on September 26, 2019, and identified the following as potential significant adverse environmental impacts to be addressed in the DEIS: Physical Alteration of Land; Surface Water, Floodplains, Stormwater and Groundwater Resources; Ecology and Wetlands; Aesthetic Resources; Historic and Archaeological Resources; Recreational Opportunities and Open Space; Transportation; Energy; Infrastructure and Community Services; Zoning, Land Use and Community Character; Noise, Odors, and Lighting; Climate Change; and Construction Impacts. The Final Scope is included in Appendix A.

Once the DEIS is accepted as complete by the Commission, it will be made available for public review and comment. All substantive comments received during the DEIS public

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<sup>16</sup> The Woodmere Club. *About*. <https://woodmereclub.com/about/> Accessed March 2019.

<sup>17</sup> The public comment period was held open until August 14, 2019 after an extension was granted by the Applicants to allow for additional time for public comments to be submitted.



comment period will be addressed in a Final Environmental Impact Statement (FEIS). The FEIS will then be distributed and a public consideration period will be established. Upon expiration of the public consideration period, the Commission can then adopt a SEQRA Findings Statement, and make a substantive decision on the proposed action. Involved agencies must also each adopt their own Findings Statements prior to issuing substantive decisions on applications within their jurisdiction.

## 2.4 Physical Characteristics of the Site

As indicated above, the subject property consists of a private golf and country club with a three-story clubhouse containing a fitness center, bar, dining area, meeting rooms, and banquet hall, in addition to the golf course. The clubhouse is located on the eastern boundary of the subject property near the intersection of Meadow Drive, Ivy Hill Road, and Keene Lane/Railroad Avenue,<sup>18</sup> and is adjoined by six tennis courts, a pro shop, cart house, and a paved parking lot. Adjacent to the tennis courts is a tennis office, the grounds and maintenance garage, a swimming pool, hot tub, and patio area.

The remainder of the subject property consists of an eighteen-hole private golf course with common golf course features such as paved and unpaved cart paths, six artificial ponds, and ancillary grounds and maintenance equipment sheds (see aerial imagery at Figure 4, below). The golf course is landscaped with manicured lawns, tee boxes, putting greens, fairways, and sand traps. Trees exist, mostly along the edges of the fairways, and phragmites and wetland vegetation are found along the waterfront portions of the site.

Existing site coverages at the subject property are provided in Table 2, below:

**Table 2 Existing Site Coverage**

<b>Land Cover Type</b>	<b>Existing Acreage</b>
Impervious (roads, buildings and other paved surfaces)	7.33±
Golf course grounds and landscaping	104.52±
Surface Water (Total)	4.87±
<i>Artificial Ponds</i>	2.28±
<i>Other Wetland Areas</i>	2.59±
<b>TOTAL</b>	<b>116.72± acres</b>

## 2.5 Utilities and Infrastructure

PSEG Long Island provides electrical service to the subject property. Utility poles with overhead wires exist in various locations surrounding the subject property and connect to the site to serve the existing clubhouse. PSEG Long Island is expected to continue to serve the proposed single-family residential properties upon implementation of the proposed action. Section 3.8 of this DEIS includes a detailed discussion of energy supply.

<sup>18</sup> For the purposes of this DEIS, Rutherford Lane, Railroad Avenue, and Keene Lane are collectively referred to as Keene Lane hereinafter.



\\vhb\gis\pro\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 4 - Aerial Imagery.mxd



Subject Property

**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

**Aerial Imagery**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodburgh  
 Nassau County

All boundaries are approximate.

Sources: NYS Ortho Imagery (2016);  
 NYS Civil Boundaries, NYS Office of Information Technology Services GIS Program Office (GPO)

The subject property is located within the service area of National Grid. Gas mains exist to the east in Meadow Drive, to the north in Broadway, to the west in Sherwood Lane, to the southeast in Ivy Hill Road, and to the south in Atlantic Avenue. Further details regarding the use of natural gas is provided in Section 3.8. Alternative heating methods are discussed further in Sections 3.8 and 3.12 of this DEIS.

Potable water supply to the subject property is currently provided by New York American Water (NYAW), as the site is located within NYAW's Lynbrook Operations District. Water mains exist to the north in Broadway, to the east in Meadow Drive, to the northeast in Keene Lane, and to the southeast in Ivy Hill Road. An additional water main is also present within Porter Place. It is anticipated that NYAW would continue to serve the single-family residences upon implementation of the proposed action. Additional information is provided in Section 3.9.

The subject property is currently connected to the Nassau County Sewage Disposal Districts No. 1 and 2, which discharge to the Bay Park Sewage Treatment Plant (STP). The Bay Park STP treats approximately 56 million gallons per day (gpd), well below its permitted capacity of 70 million gpd. Wastewater generated by the proposed action would continue to be serviced by the Nassau County Department of Public Works (NCDPW). Sewer line extensions would be necessary to connect the individual homes to the existing sewer mains serving the subject property and surrounding neighborhoods. Additional information is provided in Section 3.9. Correspondence with NCDPW to regarding the ability of existing infrastructure to serve the proposed action was undertaken as part of the DEIS analysis and is included in Appendix N.

The subject property currently contains six artificial ponds that collect stormwater on the site. These ponds are piped together underground, discharging to the Woodmere Basin via outfalls along Keene Lane. Upon implementation of the proposed action, stormwater runoff from the proposed new roadways throughout the subject property would be managed through the creation of four stormwater bioretention areas (Bioretention Areas A through D) three of which would be created via the modification of the six existing artificial ponds (see Sheet Nos. C3.1 through C3.6 in Appendix B). The bioretention areas will accommodate runoff from a three-inch rainfall event (or greater), with overflow into tidal wetlands at Woodmere Channel via three existing outfalls to be retained. The individual residential lots to be created under the proposed action would manage their own stormwater and runoff needs post-development on-site via leaching pools, to be installed within each of the individual residential lots. Section 3.2 includes a more detailed discussion of stormwater management measures.

## **2.6 Purpose, Need and Benefits**

The purpose of the proposed action is to subdivide the subject property into 284 lots, ultimately to be developed with single-family homes. The 284 proposed lots would be similar in size to lots in the areas surrounding the site, reinforcing the established development pattern within the existing neighborhoods.



Throughout its history, the Woodmere Club has continued to grow to meet the demand of its increasing membership enrollment, expanding to its current size in 1939, and undergoing significant renovations in 1994.

However, in recent years, country clubs across the United States have been faced with major challenges; golf and tennis continue to lose popularity; fewer families are purchasing memberships as marriage and fertility rates continue to decline; and young professionals, often with lower income levels and high student debt, are not interested in paying membership fees. These challenges have contributed to a national decline in the number of golf courses and country clubs between 2005 and 2015.<sup>19</sup>

The Woodmere Club has experienced similar challenges. Over the past 5 years, membership has declined substantially, making it increasingly difficult for the Woodmere Club to continue to afford the cost of operations. Due to this steady decline in membership, the Club was sold to Titan Golf in 2017. Titan Golf subsequently hired Troon, the largest Golf Course and Club management company in the world to operate the Club. Since taking over ownership, Titan Golf has significantly reduced annual membership dues from \$25,000 to \$12,000 to try and stabilize membership. However, there has been little influx of new members, even with the reduced dues which are more than 20-50 percent below those of other area clubs. To date, Titan Golf has lost over \$4,000,000 operating the Woodmere Club (Appendix P).

In the private country club industry, membership dues are the primary revenue source. Industry leaders maintain that 250 Full Member Equivalents is required to keep a club viable. Unfortunately, with less than 150 Full Member Equivalents, the continued operation of the Woodmere Club has become unsustainable. Projected losses for Fiscal Year 2019 are estimated at over \$1,500,000. As such, the owners of the Woodmere Club have decided to close operations and seek alternate uses for the subject property (Appendix P).

As the continued operation of the Woodmere Club is not economically viable, the Applicants are proposing a residential subdivision that conforms to the prevailing zoning of the Town of Hempstead, Village of Lawrence and Village of Woodsburgh.

If not subdivided, the Woodmere Club would still be closed. The closure of the Woodmere Club would leave the 116.72± acre property unmaintained, resulting in negative impacts to overall community character. Conversely, the proposed action would redevelop the property as a residential subdivision that would conform to the character of the community.

The proposed action would also yield economic benefits, as it would increase the tax base for each of the three municipalities. Further, the 284 households that would ultimately be developed on the subject property would add to the local economy, and bring increased revenue to local businesses through the purchasing power of the additional households.

Additionally, the proposed action would increase the housing stock within Nassau County, which has a low home vacancy rate of 1.2 percent.<sup>20</sup>

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<sup>19</sup> City-journal.org, *Death of the Country Club*. Available at: <https://www.city-journal.org/country-clubs>. Accessed November 2019.

<sup>20</sup> U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates.

## 2.7 Anticipated Construction Schedule

Upon approval of the proposed subdivision and securing all other applicable approvals and permits, it is the Applicant's intent to build 284 new single-family homes. The general construction sequence presented below is a projection based on current information, whereas the actual construction sequence will depend upon a variety of factors, such as the timing of permits/approvals, seasonal and weather conditions, contracting, the availability of equipment and materials, and economic factors, among others. The anticipated general construction sequence is as follows:

- › Delineate the limits of disturbance
- › Install soil erosion control measures, including silt fencing and anti-tracking pad at construction entrances
- › Demolish and remove existing structures and vegetation
- › Strip topsoil and stockpile in designated areas
- › Excavate and grade bioorientation areas
- › Install drainage infrastructure, including drywells, with protection over open grates, and drainage pipes
- › Grade and fill remainder of subject property
- › Create new roadway entries and internal roadways, starting at Prospect Avenue and Broadway and working north to south
- › Delineate proposed subdivision lots
- › Begin construction of homes, by section
- › Final paving of internal roadways upon completion of housing construction, by section
- › Removal of erosion control devices upon completion of all housing construction.

Construction of the homes located within the Town of Hempstead portion of the subject property is proposed to begin as infrastructure (i.e., roadways, utilities, etc.) are completed. Simultaneously, lots within the Villages of Lawrence and Woodsburgh would be marketed for sale and development of these lots would proceed individually as contracts are signed. Construction of all homes within the Villages would follow the general construction sequence indicated below.

- › Install erosion control devices
- › Demolish and remove any remaining structures/vegetation and underground infrastructure not utilized in new design
- › Installation of building foundations
- › Building construction (framing, siding, roofing, etc.)
- › Utility connections to buildings

- › Fine grading and landscaping of site
- › Building interior finishes
- › Removal of erosion control devices.

It is expected that demolition and construction of subdivision infrastructure would take approximately 12 to 18 months. As the future single-family homes would be designed subsequent to subdivision approval, and various are expected to be custom homes, it is not possible to determine an exact duration of construction. Further, the rate of home construction would vary among municipalities. For example, for the houses within the Town of Hempstead, where the proposed lots are smaller and more uniform, it is likely that they will be built in series by a builder. It is estimated that homes there would be constructed at a rate of approximately 50 houses a year; total build-out is estimated to take approximately five years. It is anticipated that development within the Villages, where lots are larger and less uniform, would be contingent on the sale of the subdivided lots. Homes constructed within the Villages are more likely to be custom-designed by a builder or future homeowner. Therefore, the timeline for full build-out within the Villages cannot be accurately estimated.

Construction activities would be scheduled to be in conformance of applicable standards and regulations.

A detailed discussion of the potential impacts of the demolition and construction associated with the proposed action is provided in Section 3.13 of the DEIS.

## 2.8 Required Permits and Approvals

In order to implement the proposed action, the following permits and approvals are required:

**Table 3 Required Permits and Approvals**

<b>Agency</b>	<b>Required Permit or Approval</b>
<b>Village of Lawrence Planning Board</b>	Subdivision
<b>Village of Lawrence Building Department</b>	Floodplain Development Permit
<b>Village of Woodsburgh Planning Board</b>	Subdivision
<b>Village of Woodsburgh Building Department</b>	Floodplain Development Permit
<b>Village of Cedarhurst</b>	Subdivision
<b>Town of Hempstead Highway Department</b>	Right of Way Permit
<b>Town of Hempstead Building Department</b>	Floodplain Development Permit
<b>Nassau County Planning Commission</b>	Subdivision, 239m and 239n Referrals
<b>Nassau County Department of Public Works</b>	239f Review Review Pursuant to Real Property Law Sec. 334-a
<b>Nassau County Department of Health</b>	Sanitary & Water Supply, Realty Subdivision Approval
<b>New York State Department of Environmental Conservation</b>	Article 25 Tidal Wetlands Permit, Article 15 (Title 5) Protection of Waters Permit, Section 401 Water Quality Certification, SPDES General Permit GP-0-20-001, Stormwater Management Plan (Notice of Intent)
<b>United States Army Corps of Engineers</b>	Jurisdictional Determination, Nationwide or Individual Permit under Section 404 of the Clean Water Act/Section 10 of the Rivers and Harbors Act
<b>New York State Department of State</b>	Consistency Review with NYS Coastal Policies
<b>PSEG Long Island</b>	Electricity Supply
<b>National Grid</b>	Natural Gas Supply (Potential)
<b>New York American Water</b>	Water Supply
<b>Town of Hempstead Town Board</b>	Recharge Basin Dedication

As this is a pending subdivision application, no builders or home models have been identified and as it is expected that custom homes would be developed on various lots, in order to properly assess the impacts of the whole action, prototypical development of the lots were prepared. Typical residential plot plans of a 6,000 SF lot and a 40,000 SF lot are included in this analysis (see Appendix B). These prototypical lots were used to ensure that comprehensive environmental analysis of subdivision development was presented in this DEIS.

# 3

## Existing Conditions, Potential Impacts and Proposed Mitigation Measures

### 3.1 Physical Alteration of Land

The Positive Declaration adopted by the Lead Agency stated that “the Proposed Action involves the construction on and physical alteration of the land surface of the proposed site that may have a significant adverse impact on Land due to the duration of construction and the generation of large volumes of stormwater runoff.”

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Land:

- › Description of prior alterations of natural land surfaces using historic aerial photographs and information from the Soil Survey of Nassau County
- › Identification of general soil types on natural areas of the site, and the characteristics of such soils using the United State Department of Agriculture (USDA) Web Soil Survey and the Soil Survey of Nassau County
- › Discussion of site-specific soil boring information (including depth to groundwater)
- › Examination of the suitability of the soils (stability, quality, etc.) and the potential engineering limitations for the proposed site alterations and proposed uses on the site
- › Summary of the previously completed environmental site assessment(s) (ESA) on the subject property to assess the potential for surface and subsurface contamination and a discussion of the need for further investigation or remediation



- › A summary of topographic information obtained through a review of site-specific topographic surveys including the Survey of the Woodmere County Club in the Inc. Villages of Lawrence & Woodsburgh and the Town of Hempstead, Nassau County, New York, completed by Carman-Dunne, P.C. dated 4/10/17
- › Presentation of grading plans
- › Evaluation of potential impacts to soils and topography, and identification of strategies to minimize such impacts
- › Presentation of road profiles
- › Description of measures that will be implemented to mitigate potential impacts from erosion and off-site sediment transport during construction
- › Description of changes in topography that would result from the proposed action and of proposed earthwork
- › Presentation of cut and fill estimates and discussion of potential impacts associated with same
- › Presentation of construction duration as it relates to land disturbance.

A discussion of existing soil and topographic conditions, potentially significant adverse environmental impacts, and proposed mitigation measures is provided in Sections 3.1.1 through 3.1.3 below.

### **3.1.1 Existing Conditions**

#### **Prior Alterations of Natural Land Surfaces**

A Phase IA Archaeological Study (the "Phase IA") prepared by VHB in January 2019 (Appendix K), includes a review of historic maps, historical records, and existing soils surveys related to the subject property. The Phase IA indicates that the majority of the subject property had been impacted in the nineteenth century by cutting and filling of the marshy lands, dredging of the subject property along Brosewre Bay for construction of the Woodmere Basin and Channel and subsequent construction of the golf course, tennis courts, main clubhouse and associated buildings and structures. These land transformations are evident on historic maps (Appendix K), which illustrate changes in the land from farming in the north and marsh in the south (c. 1844-1903) to recreational use in the twentieth and twenty-first centuries (c. 1914-2016). Furthermore, maintenance of the grounds and installation of drainage, electric, and other below-ground utilities to support the golf course and country club use occurred in the late twentieth through twenty-first century. This evidence suggests that most of the subject property and the soils has been thoroughly disturbed. See Section 3.5 for a detailed description of the site's history.

#### **Subsurface and Environmental Conditions**

Roux Associates completed a Phase I Environmental Site Assessment (ESA) for the property owners, dated March 28, 2017 (see Appendix D). The Phase I ESA was prepared to determine

recognized environmental conditions (RECs) (including controlled [CREC] and historic [HRECs] conditions) present at the private Woodmere Club golf and country club. The property was inspected by Roux Associates personnel on February 24, 2017, and the results of the Phase I ESA are summarized below.

Based on historical document research, Roux Associates was able to establish a history for the subject property dating back to 1940, at which time the property was developed as a country club. By 1951, an historical aerial photograph confirmed the use of the site as a golf course. By 2009, the site was depicted as its current configuration. Based on the review of historical aerial photographs, no environmental concerns in relation to the site were identified. Upon review of the subject property and nearby properties, no adjacent properties were considered environmental concerns in relation to the site. Although numerous spill incidents were identified in the area surrounding the site (within 600± feet) (Appendix B of Phase I ESA in Appendix D).

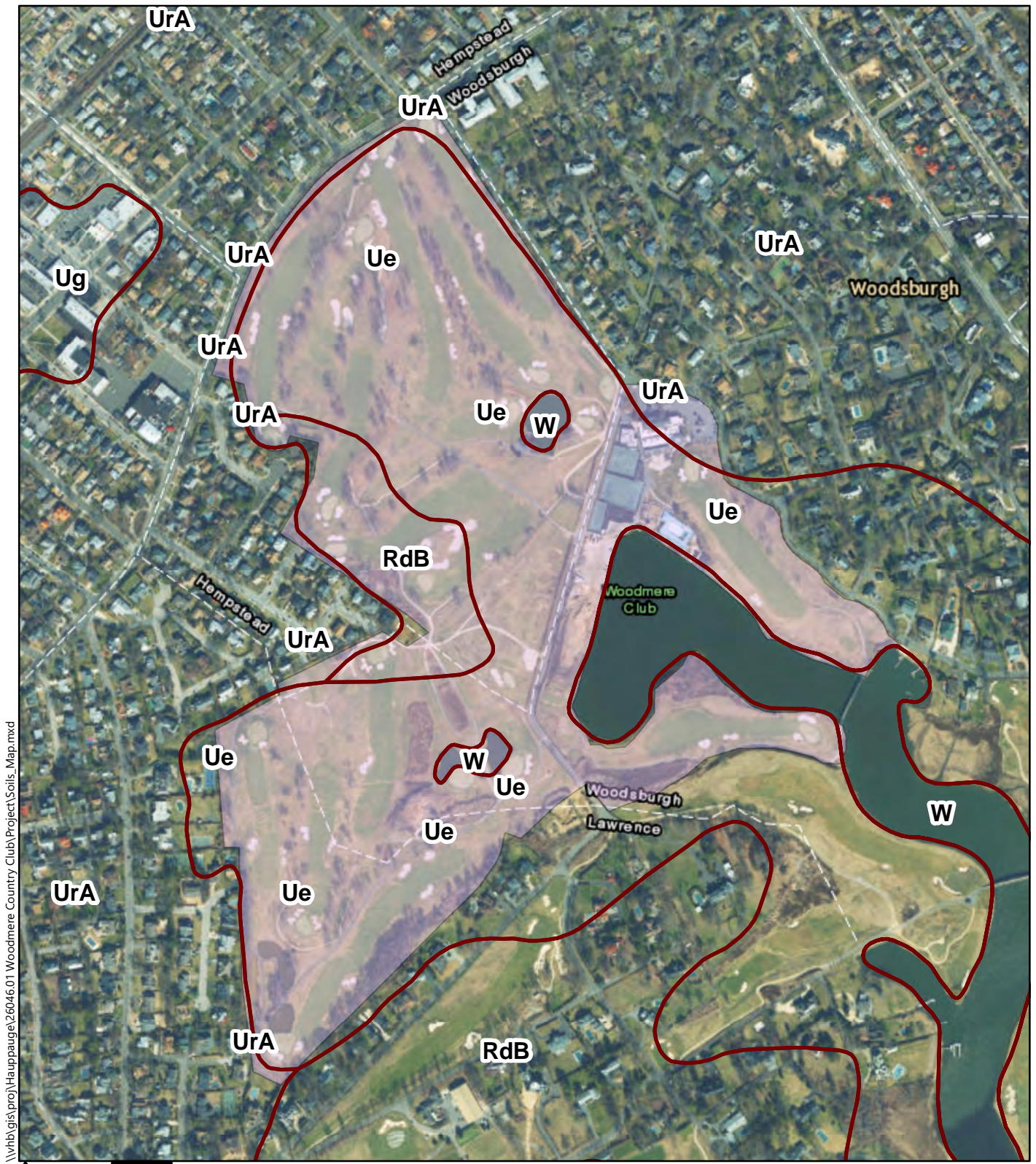
At the time of site reconnaissance, two stockpiles were noted at the site. One pile, covering approximately one-acre, was located south of the maintenance garage. The second stockpile was located in the southeast corner of the site on the corner of Rutherford Lane and Atlantic Avenue. The soil was inspected for evidence of petroleum contamination and was screened with a photo-ionization detector (PID). No positive PID readings were noted and no evidence of petroleum contamination was noted in any of the test pits. The stockpiled soil is not considered an environmental concern in relation to the site.

A storage container housing fertilizers, pesticides, herbicides and equipment associated with those applications was noted immediately south of the maintenance garage. Due to the use of fertilizers, pesticides, and herbicides throughout the site, the Phase I ESA indicates that soil characterization may be required for soil excavation activities undertaken as part of site redevelopment.

Based on the information gathered as a result of the Phase I ESA process, no RECs or CRECs, were identified. However, HRECs were identified for the property, as discussed in Section 3.1.2, below.

### **Soils**

The *USDA Web Soil Survey* indicates that the subject property is comprised of soil/land type mapped as Udipsamments, wet substratum (Ue); Riverhead sandy loam (RdB); Urban land-Riverhead complex (UrA); and Water (W) (see Figure 5 and Table 4). Much of the subject property is predominately comprised of Ue soils, and a concentrated area at the central-western portion of the subject property is comprised of RdB soils. The UrA soils are found intermittently in narrow strips and patches along the borders of the subject property to the north, west and south. Areas classified as Water are limited to the water hazard/stormwater ponds within the subject property, and Woodmere Basin.



\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Soils\_Map.mxd

Proposed Residential Subdivision - Willow View Estates | Woodmere, NY

**Soils Map**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

Soil Type  
 Subject Property

All boundaries are approximate.

Source: ESRI and USDA Soil Survey SSURGO



**Table 4 Soils Types**

Symbol	Soil Type	Approximate Percentage (%) of Site
Ue	Udipsamments, wet substratum	84.5±
RdB	Riverhead sandy loam, 3 to 8 percent slopes	9.3±
UrA	Urban land-Riverhead complex, 0 to 3 percent slopes	4.3±
W	Water	2.0±

Source: United States Department of Agriculture. Natural Resources Conservation Service. *Web Soil Survey*. Available online at <https://websoilsurvey.sc.egov.usda.gov/>. Accessed February 2019.

The *Soil Survey of Nassau County* was used to define the general characteristics of the soil types that are representative of the subject property.<sup>21</sup> According to *the Soil Survey of Nassau County*, "The objective of soil mapping is not to delineate pure taxonomic classes of soils, but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but onsite investigation is needed to plan for intensive uses in small areas".

A description of soils on the site from the *Soil Survey of Nassau County* is presented below. However, as the subject property was significantly disturbed when it was first established as a golf course in 1910, and further expanded in 1939, a verification of the accuracy of the soil types identified by the *Soil Survey of Nassau County* was undertaken. Onsite geotechnical investigations took place on October 31, 2019, the findings of which are provided immediately following the soil descriptions.

#### ***Udipsamments wet substratum (Ue)***

*This unit consists mainly of nearly level low areas that have been filled with sandy material dredged primarily from adjacent waterways. The fill consists of sand 3.5 to 8 feet thick mostly over organic tidal marsh sediments and a few inland freshwater marshes. These soils are well drained or moderately well drained and are very deep. Most areas are long and narrow and range from 5 to 100 acres. Slope ranges from 0 to 3 percent.*

*Commonly, these soils have a surface layer of grayish brown loamy sand about 4 inches thick. The substratum is light gray sand and extends to a depth of 55 inches. It is distinctly mottled below a depth of 35 inches. From a depth of 55 inches to 60 inches or more, it is black, partially decomposed mucky peat.*

*Included with these soils in mapping are areas where the sandy fill is less than 40 inches thick over the organic deposits. These areas are mostly somewhat poorly drained and are at the edge of the unit adjacent to tidal marshes or waterways. They make up 10 percent of many*

<sup>21</sup> Wulforst, John P. *Soil Survey of Nassau County, New York*. United States Department of Agriculture and Cornell University Agricultural Experiment Station. 1987.

*areas. Soil properties include rapid permeability in the sandy layers and moderate in the underlying organic layers, depth to water table is 3.5 feet or more often tidal influenced, very low available water capacity, and very slow runoff. Beach grasses and bayberry or other salt-tolerant brush are on the highest parts of the unit, and reeds are on the lower parts. Many of the areas of these soils are state-owned and are along highway rights-of-way or are part of the barrier islands.*

*The water table in the substratum limits this unit as a site for septic effluent disposal. Pollution from effluent is a hazard to the ground water or in adjacent tidal areas because the sandy material is a poor filter.*

*Settling and compaction of the organic layers limit the unit as a site for dwellings without basements, and the water table is a limitation for dwellings with basements. Some areas of these soils are limited by tidal flooding during intense coastal storms. The use of pilings helps to overcome or alleviate the settling and wetness.*

*Settling of the organic material is the main limitation of the soil as a site for local streets and roads. The rate of settlement varies with time and the amount of organic material.*

*The high sand content limits recreation use and landscaping, and settling is a limitation, especially for permanent structures. Some intensively used areas require a veneer of loamy soil to improve trafficability and to improve water holding capacity for better support of plants. Topsoil, fertilizers, and irrigation are usually needed to overcome droughtiness and low fertility when establishing lawns and shrubs, and most species must be salt tolerant.*

*This unit is poorly suited to all types of wildlife habitat.*

### **Riverhead Series**

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

*In a representative profile, the surface layer is brown to dark brown sandy loam about 12 inches thick. The upper part of the subsoil, to a depth of about 27 inches, is strong-brown, friable sandy loam. The lower part of the subsoil is yellowish-brown, very friable loamy sand to a depth of about 32 inches. Below is yellowish-brown, friable gravelly loamy sand to a depth of about 35 inches. The substratum is very pale brown and brown loose sand and gravel or sand to a depth of 65 inches.*

*Riverhead soils have moderate to high available moisture capacity. Internal drainage is good. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum.*

*Riverhead sandy loam, three to eight percent slopes (RdB)*

*Riverhead Sandy Loam, three to eight percent slopes (RdB) - This soil is on moraines and outwash plains. It generally is in areas along shallow, intermittent drainageways. Slopes generally are moderately short, but large areas on moraines are undulating.*

*The profile of this soil is similar to the one described as representative of the series, though in cultivated areas this soil is likely to be two to three inches shallower to coarse sand and gravel, and the surface layer is likely to contain a slightly larger amount of gravel.*

*The hazard of erosion is moderate to slight on this Riverhead soil. The main concerns of management are controlling runoff and erosion and providing adequate moisture.*

*This soil is well suited to all crops commonly grown in the county, and it is used mainly for this purpose. Most areas in the western part of the county, however, are used for housing developments and as industrial sites.*

*Included with this soil in mapping are small areas of Bridgehampton, Haven and Plymouth soils in a complex pattern. The texture of these soils is marginal to sandy loam. These included soils generally are on large separations. Also included are narrow strips of Haven loam, thick surface layer, along intermittent drainageways, and soils that have a surface layer of loam or fine sandy loam and a subsoil of sandy loam. Included with this soil on moraines are Montauk soils that have a very weak fragipan that formed in loose sandy till.*

*The hazard of erosion is moderate to slight on this Riverhead soil. The main concerns of management are controlling runoff and erosion and providing adequate moisture.*

*This soil is well suited to all crops commonly grown in the county, and it is used mainly for this purpose. Most areas in the western part of the county, however, are used for housing developments and as industrial sites.*

**Urban Land Series**

*This map unit consists of areas where at least 85 percent of the surface is covered with asphalt, concrete or other impervious building material. These areas mostly are parking lots, shopping centers, industrial parks or institutional sites. Many are in the business centers in the villages and cities. Most areas are nearly level, and some are gently sloping. Many areas are rectangular or long and narrow and are mainly adjacent to local main thoroughfares. The areas range from about three acres to as much as several hundred acres.*

*Included with this unit in mapping are small areas of soil that has not been appreciably altered or that is not under an impervious cover. These areas are mainly in lawns or other landscaped areas. Most of the included open areas are well drained Riverhead, Hempstead or Enfield soils or excessively drained Udipsamments.*

*In many areas, rapid or very rapid runoff prevents adequate discharge of runoff from intense rainstorms to safe outlets. A few areas are in low spots where seasonal wetness sometimes causes temporary flooding of the surface or frost heaving and subsequent breakup of surface pavements.*

Urban land-Riverhead complex, zero to three percent slopes (UrA)

*This unit consists of urbanized areas and very deep, well drained soils. It is on the nearly level tops of benches, plains, and broad ridges. The areas are round or irregularly shaped and range from ten to 1,000 acres. This unit consists of about 65 percent urbanized areas, 20 percent Riverhead soils, and 15 percent other soils. The urbanized areas and Riverhead soils are so intermingled that it was not practical to map them separately.*

*The urbanized areas are buildings, roads, driveways, parking lots, and other manmade structures. The typical sequence, depth, and composition of the layers of the Riverhead soils are as follows: the surface layer is dark brown sandy loam to three inches; the subsoil is strong brown fine sandy loam from three to eight inches, yellowish brown fine sandy loam from eight to 17 inches, yellowish brown sandy loam from 17 to 24 inches, and brownish yellow loamy sand from 24 to 35 inches; the substratum is brownish yellow sand from 35 to 52 inches, and brownish yellow gravelly sand from 52 to 60 inches or more.*

*Included with this unit in mapping are small areas of well drained Enfield soils, excessively drained Plymouth soils, and excessively drained to moderately well drained Udipsamments. The Enfield soils are in areas where the subsoil has a higher silt content than that in the Riverhead soils, and they make up about ten percent of the unit. The Plymouth soils are in areas where the subsoil is sandy, and the Udipsamments are where sandy material has been mixed with the surface layer and subsoil. Together, those two soils make up about five percent of the unit.*

*Properties of the Riverhead soils include moderately rapid permeability in the surface layer and subsoil and very rapid permeability in the substratum, moderate available moisture capacity, a very strongly acid or strongly acid soil reaction throughout, slow surface runoff, a slight erosion hazard, a water table at a depth of more than six feet, and a root zone to a depth of 40 inches or more.*

*The areas on which there are no structures are lawns, gardens, small playgrounds, border strips along streets and sidewalks, and a few vacant lots. The soil has few limitations as a site for dwellings with or without basements and for septic effluent disposal. In areas used for septic systems however, pollution is a hazard to the ground water because the substratum is a poor filter of effluent.*

*Generally, a lack of open areas in this unit prevents development of roads and streets or recreation areas. The soil has few limitations for landscaping. The included areas of Plymouth soils and Udipsamments are droughty and low in natural fertility. In these areas irrigation and fertilizers will be needed for successful establishment of lawns and shrubs. Because of the urban nature of this unit, most areas are unsuitable as habitat for wildlife other than songbirds.*

### **Soil Suitability and Engineering Limitations**

The USDA Natural Resources Conservation Service website and the *Soil Survey of Nassau County* were consulted for information regarding the potential limitations to development that each of the soils may possess. Information regarding limitations for these soils for dwellings without basements, dwellings with basements, local roads and streets, and lawns

and landscaping is described in Table 5, below. Information conveyed on the website is general data that is useful for preliminary assessments and presents guidelines as to the characteristics of soils to depths of approximately five feet.

**Table 5 Soil Engineering and Planning Limitations**

Symbol	Mapping Unit	Slopes	Dwellings without Basements	Dwellings with Basements	Local Roads and Streets	Lawns and Landscaping
Ue	Udipsamments, wet substratum	0-3%	Not limited	Not limited	Not limited	Very limited (F)
RdB	Riverhead sandy loam	3-8%	Not limited	Not limited	Somewhat limited (B)	Somewhat limited (G)
UrA	Urban land-Riverhead complex	0-3%	*	*	*	*
W	Water	*	*	*	*	*

\*No limitations assigned for this mapping unit in the *Web Soil Survey*.

Reasons for Limitations:

(B) Frost Action

(F) Droughty

(G) Dusty

Source: United States Department of Agriculture. Natural Resources Conservation Service. *Web Soil Survey*.

Available online at <https://websoilsurvey.sc.egov.usda.gov/>. Accessed February 2019.

The *Soil Survey* explains that soils mapped are not depicted in exact locations or boundaries. As the subject property has been previously disturbed for the creation and maintenance of the golf course, the general information conveyed in the *Soil Survey* has been supplemented with a site-specific geotechnical investigation. The geotechnical investigation was performed to accurately characterize the types of existing soils and provide insight into the limitations of existing soils at the subject property.

### Site-Specific Geotechnical Investigation (2019)

The geotechnical investigation by Soil Mechanics Drilling Corp ("Soil Mechanics") was performed to confirm the accuracy of the soils identified by the *Soil Survey of Nassau County*, accurately characterize the types of existing soils, and identify potential engineering limitations that could impact the proposed action.

The investigation involved a total of 17 test borings at locations throughout the subject property, each of which were drilled from ground surface to 20 feet below grade surface (bgs). The locations of these test holes are shown on the *Subsoil Investigations Drawing Number 19L474.17* (Appendix F).

The results indicate that the areas drilled are covered by 2± to 11± feet of loam, loose soil fill, soft compressible peat and organic silt and clay. These soils are underlain, generally, by a



moderately dense to dense-coarse to fine sand with traces of silt and gravel extending to the deepest depths drilled. Accordingly, the actual soils on the site do not exhibit the engineering limitations of the Ue soils as set forth in the *Soil Survey of Nassau County*.

The geotechnical investigation also examined depth to groundwater and tidal influences throughout the subject property. Natural groundwater was encountered across all 17 boreholes at depths ranging from 2 feet 8 inches to 17 feet 7 inches.

### **Topography**

A review of the United States Geological Survey (USGS) Topographic map (Lawrence, New York quadrangle), USGS LiDAR elevation data,<sup>22</sup> and the site-specific Topographic Survey Map, performed by Carman-Dunne on April 10, 2017 (Appendix F), illustrate elevations at the subject property range from 3± feet above mean sea level (amsl) at the southern portion of the site near the Woodmere Basin, to 28± feet amsl at the northern portion of the site along Broadway.

The northern portion of the subject property (i.e., in the vicinity of the intersection of Broadway with Meadow Drive) exhibits topographic elevations greater than 10 feet amsl, with the highest areas including mounds along Broadway that generally reach 20± to 25± feet, and in one area reaching a maximum of 28± feet (near the intersection of Broadway and Linden Street). South of this area, the rest of the Town of Hempstead portion of the site is at elevation of less than 10± feet, undulating and gently sloping downward toward Keene Lane where site elevations hover around 5± feet. Some higher elevations are present near the subject property's border with residences on Ivy and Tulip Streets, where elevations increase to over 15± feet and exceed 20± feet in limited areas.

The southern/southwestern portion of the site (i.e., in the Villages of Lawrence and Woodsburgh, west of Keene Lane), elevations are also generally below 10 feet, with an area of less than 5 feet elevation surrounding the water feature, and with elevations increasing above 10± feet to approximately 15 feet in the vicinity of the site's border with residences on Lotus, Ivy and Tulip Streets. At the southernmost tip of the subject property that abuts residences on Park Row, Chauncey Lane, and Atlantic Avenue, elevations sharply rise from approximately 10 feet at the on-site paved path to approximately 15 to 18 feet near the property boundary.

The portion of the site that forms a lobe east of Keene Lane and south of Woodmere Basin generally has elevations between 4± and 6± feet amsl, as does the lobe between Ivy Hill Road and the basin.

Generally, the subject property gently slopes southeast downward from Broadway towards the Woodmere Basin. The topography of the site reflects that of a typical golf course, with small areas of low and high elevations distributed throughout in the form man-made hills, tee boxes, and bunkers.

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<sup>22</sup> Nassau County 2-foot contours based on USGS Long Island 2014 LiDAR Collection.

### 3.1.2 Potential Impacts

#### Subsurface and Environmental Conditions

Based on the result of the Phase I ESA process, no RECs, or CRECs were identified in connection with the subject property. Roux Associates identified the following HRECs, in connection with the site (Appendix D):

- › Underground Storage Tank Removal: Two USTs were removed from the Site in 1990 and 2011, respectively. According to the NYSDEC Spills Database, spills associated with these USTs have been closed. Therefore, the former USTs and associated closed spills are considered a HREC in relation to the site. No further action is warranted.
- › Spill Incidents: Several NYSDEC Spill incidents were identified for the site. According to the NYSDEC Spills Database, the reported spills identified for the Site have been closed. The former spills associated with the site are considered a HREC in relation to the site.

All spills associated with the subject property have been resolved and closed and no significant adverse impacts are anticipated with respect to subsurface, groundwater and environmental conditions.

In addition to the identified HREC's the ESA also notes the site has been subject to the extensive use of fertilizers, pesticides, and herbicides, and as such soil characterization is necessary as soil excavation will be undertaken during site development activities. As Nassau County Department of Health (NCDH) has jurisdiction over the proposed subdivision, the Applicants will coordinate with NCDH for the development of an investigation work plan, to undertake required sampling and to develop any necessary remediation/removal and soil management plans prior to site development. Subdivision approval will not be obtained until all NCDH requirements are satisfied.

#### Soils

As the *Soil Survey of Nassau County* indicated, an abundance of Ue soils exist on the site. Based on the soil characteristics discussed above, it would be anticipated that the ability for the subject property to support typical suburban lawns and landscaping would be limited. However, despite the presence of Ue soils, the subject property has operated for over a century as a well-maintained golf course with greens, fairways, roughs, and hazards. Thus, it is clear that any anticipated limitations related to the ability of the site to support lawns and landscaping for the future residential development have been overcome. This conclusion is supported by the 2019 geotechnical investigation which identified the presence dark brown organic loam approximately one foot below grade surface. As identified in Table 5 above, Ue soils have no engineering limitations that would impact the proposed development of single-family homes with and/or without basements.

The results of the site-specific geotechnical investigation also revealed that in some areas of the site, the natural soils present below the fill will support foundation loads of 2-ton per square foot. Other areas will require homes to be founded on piles installed through the fill and organic deposits, into the lower natural sand. It should be noted that according to the geotechnical report (Appendix E) liquefaction, a phenomenon in which saturated soils lose

strength and stiffness due to applied stress (e.g. earthquakes) is not likely and is not needed to be considered in the final design of the proposed action.

Topsoil will be stripped and stockpiled on-site for reuse to the extent feasible. Based on the historic use as a golf course, where regular landscape maintenance is expected to have involved fertilizer and pesticide applications, etc., for any areas where excavation into existing soils is required (e.g., for grading, utility excavation, etc.), soil characterization will be performed during site development activities, and any required soil management will be conducted in accordance with prevailing regulations.

The New York State Department of Environmental Conservation (NYSDEC) requires coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) for construction projects that will involve soil disturbance of one or more acres. As the proposed action would disturb more than one acre, a Storm Water Pollution Protection Plan (SWPPP) would be developed and submitted to the Town of Hempstead, Village of Woodsburgh, Village of Lawrence, and the NYSDEC (Notice of Intent), prior to commencement of construction activity. A SWPPP entails periodic inspections to ensure construction activities are being undertaken in compliance with the approved SWPPP and that the required water quality and quantity controls remain functional.

As a primary component of the SWPPP, a detailed erosion and sediment control plan identifying the specific measures to be implemented, their design and locations (subject to adjustment for field conditions) was developed. The erosion and sedimentation controls to be implemented as part of the SWPPP would include:

- › Protection of existing vegetation to remain undisturbed
- › Scheduling of clearing and grading activities so as to minimize the size of exposed areas and the length of time that areas are exposed
- › Minimizing the length and steepness of cleared slopes to reduce runoff velocities
- › Installation of sediment barriers (e.g., silt fence, hay bales) along the limits of disturbance for the duration of the work
- › Stabilization of graded and stripped areas and stockpiles via temporary seeding or other effective cover
- › Diverting runoff away from cleared slopes
- › Protection of drainage inlets through the use of sediment barriers, sediment traps, etc., to prevent sediment buildup
- › Control of fugitive dust (e.g., covering of stockpiles, temporary seeding, use of a water truck during extended dry periods)
- › Establishment of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads.

These measures are also detailed on Sheets C-5.1 and C-5.2 in Appendix B.

The above measures are designed to be consistent with the relevant portions of the *New York State Stormwater Management Design Manual* ("NYS Stormwater Manual" – NYSDEC 2015) and the *New York State Standards and Specifications for Erosion and Sediment Control* (NYSDEC 2016), as required by Article XXXVIII of the Town of Hempstead Town Code, Chapter 177 of the Village of Lawrence Village Code, and Article IX of Chapter 150 of the Village of Woodburgh Village Code. With the aforementioned control measures employed in accordance with a SWPPP to be approved by each of the three municipalities having jurisdiction, no significant adverse erosion and sedimentation impacts are expected to result upon implementation of the proposed action.

The soils on the site as well as those to be brought in as fill, would be suitable for the proposed development. Engineering limitations associated with on-site soils would be addressed with standard engineering controls, such that they would not hinder site development. In addition, erosion and sediment controls would be installed to minimize impacts to on-site soils. Based on the analysis presented above, and the previous disturbance of the site during the creation and expansion of the golf course, no significant adverse impacts to on-site soils are expected as a result of the implementation of the proposed action.

### **Topography**

As with any development project, disturbance of land will occur. Implementation of the proposed action would require the clearing of the existing golf course, clubhouse, and other improvements from the subject property. Suitable fill material will be brought to the subject property to achieve proposed grades. Stockpiled and imported topsoil is expected to be utilized in final grading at the proposed residential lots to support the installation of landscaping. A preliminary grading plan is presented in Appendix B of this DEIS.

The subject property requires a significant amount of fill material in order to raise the site to the necessary grade to be in conformance with the requirements of the Zone AE base flood elevation (BFE) 9-to-11 feet flood zone in which it is located. The amount of suitable clean fill material needed to meet the proposed grade is estimated at 250,000 cubic yards (CY)<sup>23</sup>. This material will be brought to the site over the course of the 5-year build out period, reducing the frequency of daily truck trips bringing materials to the site. Assuming 25 CY of material per truck and 200 working days per year yields an average of 10 trucks laden with fill material to the site per day. Over an 8-hour day, this equates to an average of less than two fill truck deliveries to the site per hour. While it is anticipated that these fill material deliveries may originate from more than one location on Long Island, these deliveries will be controlled to arrive via major roadways and will not use local secondary streets. Likely arrival routes to Broadway and then the site include the Nassau Expressway and Rockaway Turnpike as will be dictated in a Construction Management Plan to be developed for the project. Section 3.13 of this DEIS includes a detailed discussion of construction impacts associated with the proposed action.

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<sup>23</sup> As the engineering and design process advances, earthwork calculations contained herein would be confirmed or refined as needed.

Due to the presence of existing infrastructure, the area of the site in proximity to Ivy Hill Road will not be regraded (sheets C-3.5 and C-3.6 in *Subdivision Plan Package*, Appendix B). For the areas of the subject property along the tidal wetland boundaries on the south side of Woodmere Basin, this grading strategy would minimize the importation of fill near wetlands. In addition, the areas around the perimeter of the subject property are also not proposed to be regraded.

Upon regrading, topography of the site will range from a low of approximately 1-to-3 feet amsl, at the base of the bioretention basins, to 22 feet amsl along Broadway to match the existing elevation of the roadway. Topography around the proposed single-family residences would slope gently downward away from the homes toward existing and proposed roadways. Current elevations of existing roadways surrounding the subject property would remain unaltered as part of the proposed action. Roadways internal to the proposed subdivision would have elevations greater than 9 and up to approximately 21 feet amsl (Appendix B), except where necessary to meet existing roadways.

**Table 6 Existing and Proposed Slopes**

Percent Slopes	Existing	Proposed
0-10%	88%	85%
10-15%	5%	10%
15% or greater	7%	5%

Based on the level of previous disturbance that has occurred on the subject project, the results of the Phase I ESA, and the analysis above, the proposed action is not expected to result in significant adverse impacts with respect to subsurface conditions, soils and topography.

### 3.1.3 Proposed Mitigation Measures

No significant adverse environmental impacts to soils and topography have been identified as the majority of the subject property has been previously disturbed. However, measures have been incorporated into the proposed action to minimize potential impacts to soil and topography, including the following:

- › Suitable topsoil would be reused to the extent practicable
- › Suitable clean fill material would be used as fill
- › To minimize the need for earth moving, the subdivision has been designed to take advantage of existing drainage facilities and topographic depressions to facilitate stormwater management (a full discussion of stormwater management is found in Section 3.2 of this DEIS)
- › A detailed erosion and sediment control plan was developed, identifying the specific measures to be implemented (see Sheets C-5.1 and C-5.2 in Appendix B),
- › A SWPPP would be developed

- › The Applicants will be coordinating with NCDH to initiate the required sampling and soil management prior to site development
- › Scheduling of clearing and grading activities will be done in a manner to minimize the total area of land disturbed at any one time
- › The length of time areas of the site exposed will be limited by installing pavement and plantings within exposed areas as soon as practicable
- › Sediment barriers (e.g., silt fence, hay bales) would be installed along the limits of the disturbance for the duration of the work to avoid sediment from the site washing into adjacent properties, wetlands, or roads
- › Stabilization of graded and stripped areas and stockpiles via temporary seeding or other effective cover to mitigate erosion
- › Protection of drainage inlets through the use of sediment barriers, sediment traps, etc., to prevent sediment buildup
- › Implementation of fugitive dust control measures such as the covering of stockpiles, temporary seeding, use of a water truck during extended dry periods, etc.
- › Establishment of a stabilized construction entrance to prevent soil and loose debris from being tracked onto local roads
- › An erosion and sediment control plan is detailed on Sheets C-5.1 and C-5.2 in Appendix B. These measures would be implemented to minimize the potential for adverse erosion and sedimentation impacts.

## 3.2 Water Resources and Floodplains

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Surface Water, Floodplains, Stormwater and Groundwater Resources:

- › Identification and description of surface water resources on and adjacent to the subject property
- › Depiction of areas of the subject property located within the 100-and-500-year floodplain including existing development located within the floodplain
- › Identification and confirmation of those portions of the subject property that exist within a designated flood zone using Federal Emergency Management Agency (FEMA) Flood Map Service data
- › Description of existing stormwater management facilities and quantification of existing stormwater
- › Identification of stormwater discharges to existing surface water bodies and wetlands
- › Identification of proposed development within floodplain areas
- › Description of relevant regulations relating to development within floodplain areas and an evaluation of the consistency of the proposed subdivision therewith
- › Identification of depth to groundwater based on available sources and soil borings
- › Discussion of potential impacts to the water table and saltwater intrusion
- › Discussion of potential impacts to groundwater resulting from the proposed development
- › Presentation of drainage plans and description of differences between existing and proposed drainage/stormwater management systems
- › Projection of stormwater to be generated from the proposed action
- › Discussion of the proposed collection and stormwater management systems (including ownership and parties responsible for maintenance, and anticipated changes in drainage patterns and floodwater flows as a result of the proposed project
- › Analysis of the compliance of the proposed stormwater management systems with regulatory requirements
- › Evaluation of existing and post-development drainage calculations
- › Discussion of the project's consistency with the New York State Stormwater Management Design Manual and the New York Standards and Specifications for Erosion and Sediment Control, as well as conformity with the Nassau County Department of Public Works Drainage Requirements
- › Discussion of the Stormwater Pollution Prevention Plan (SWPPP)
- › Discussion of the Nassau County Back Bays Study.

An evaluation of existing surface water, floodplains, stormwater and groundwater conditions, potentially significant adverse environmental impacts to same, and proposed mitigation measures is provided in Sections 3.2.1 through 3.2.2 below, while a detailed discussion of water supply and sewage disposal is included in Section 3.9 of this DEIS.

### **3.2.1 Existing Conditions**

#### **Surface Waters**

In order to identify surface waters on and adjacent to the subject property, a review of NYSDEC Freshwater Wetlands, NYSDEC Tidal Wetlands and United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps<sup>24</sup> was performed. Furthermore, an ecological field survey of the subject property was conducted by a Certified Ecologist. The field survey included identification and evaluation of surface water features among other ecological resources (see Section 3.3).

Based on a review of the above resources and VHB's field survey efforts, there are multiple surface water features present at and adjacent to the subject property, including artificial ponds and a tidal basin, as more particularly described below.

The subject property contains six artificial freshwater ponds that are dispersed throughout the site. According to the NWI map, all six ponds are classified as PUBHx – Palustrine, Unconsolidated, Permanently Flooded, Excavated (Figure 6). None are identified on the NYSDEC Freshwater Wetlands map, which does not identify any such regulated resources at the subject property. These artificial ponds are a part of the aesthetic landscape design of the site, and also receive stormwater runoff from portions of the subject property. Based on information supplied by the applicant, the ponds are interconnected via underground piping and overflow via the two existing outfalls at Woodmere Basin.

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<sup>24</sup> The (USFWS) National Wetland Inventory maps depict the approximate boundaries of wetlands and surface waters. As described by the USFWS, the NWI maps are intended as a guidance resource, rather than for regulatory use by the federal government or other government agencies in determining the jurisdictional status of wetlands. Federal jurisdiction over wetlands is determined by the USACE on a case-by-case basis, through review of jurisdictional determination requests submitted to the USACE.





**Photograph 1:** Representative photo of an existing pond on the eastern side of the subject property west of Keene Lane, facing southwest.



**Photograph 2:** Representative photo of an existing pond located on the southeastern side of the subject property, facing southeast.

Woodmere Basin, which is identified on the NYSDEC Tidal Wetlands map as a tidal surface water body, abuts the subject property to the south and east (Figure 7). This basin extends approximately 0.21-mile from the site before becoming Woodmere Channel, which then stretches for an additional 0.45±-mile before converging into Brosewere Bay to the southeast of the subject property.

Woodmere Basin currently has pressure-treated wooden bulkheads along the western portion near Keene Lane and the northwest corner stretching out to the sand trap adjacent to the basin on the north side (see Figure 8 and representative photos to the right and below). The bulkheads provide shoreline protection between the water and the golf course. Overall, the existing bulkheads are in deteriorating condition, and portions are deteriorated to the point they no longer keep out the ebb and flow of water.



**Photograph 3:** Representative photograph of existing bulkhead located along Woodmere Basin, facing north towards the northwest corner of Keene Lane.





\\vnh\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 6 - NWI.mxd



**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY  
**National Wetlands Inventory**

99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodburgh  
 Nassau County

- Subject Property
- Wetland Type**
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Other

All boundaries are approximate.

Source: ESRI; NYS ortho Imagery (2016);  
 US Fish and Wildlife Service National Wetlands Inventory Mapper;  
 New York State Department of Environmental Conservation  
 Environmental Resource Mapper





\\vhb\gis\proj\Hauptpaugel\26046.01 Woodmere Country Club\Project\Figure 7 - NYSDEC Tidal Wetlands 01.mxd



**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**  
**NYSDEC Tidal Wetlands and Existing Bulkheads Map**

99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

- Subject Property
- Tidal Wetland Areas**
- Dredged Soil (DS)
- Formerly Connected (FC)
- Fresh Marsh (FM)
- High Marsh (HM)
- Existing Bulkhead
- Intertidal Marsh (IM)
- Coastal Shoals, Bars and Mudflats (SM)
- Littoral Zone (LZ)

All boundaries are approximate.

Sources: New York State Department of Environmental Conservation Tidal Wetland Map Images





**Photograph 4:** Representative photograph of existing bulkhead located along Woodmere Basin, facing northwest towards the northwest corner of Keene Lane.



**Photograph 5:** Representative photograph of existing deteriorated bulkhead located along Woodmere Basin, facing southwest towards Martha Lane.

Additional information regarding the ecological wetland conditions of the surface water features described above, as well as associated federal, state and local agency jurisdiction and permitting considerations, is provided in Section 3.3, below.

### **Floodplains**

As depicted by the FEMA Flood Insurance Rate Map (FIRM),<sup>25</sup> Panel No. 36059C0302G, portions of the subject property are located within the Special Flood Hazard Area (SFHA) Zone AE, which is the 100-year flood zone, and Zone X, which includes 500-year flood zone areas. Remaining portions of the subject property are not within a mapped SFHA (also designated as Zone X on the FIRM) (see Figure 8). Among the 100-year flood zone areas, the FEMA-designated Base Flood Elevation (BFE) varies, and is highest in the area immediately surrounding Woodmere Basin, decreasing inland with increased distance from the basin.

To prepare maps that illustrate the extent of flood hazards in a community, FEMA conducts engineering studies known as Flood Insurance Studies (FISs). The FIS results define the flood hazards for the community and are summarized in a technical document known as the FIS report. The report includes details about the study methodology used, historical flooding in the community, and other relevant information. FEMA exercises caution in ensuring the results of the FIS are accurately represented on the FIRM. This risk information presented on the FIRM is based on meteorological, hydrologic, hydraulic, and topographic data, as well as open-space conditions, flood control works, and development. The extent of the floodplains as mapped by FEMA are therefore based on observed trends and not future potential conditions.

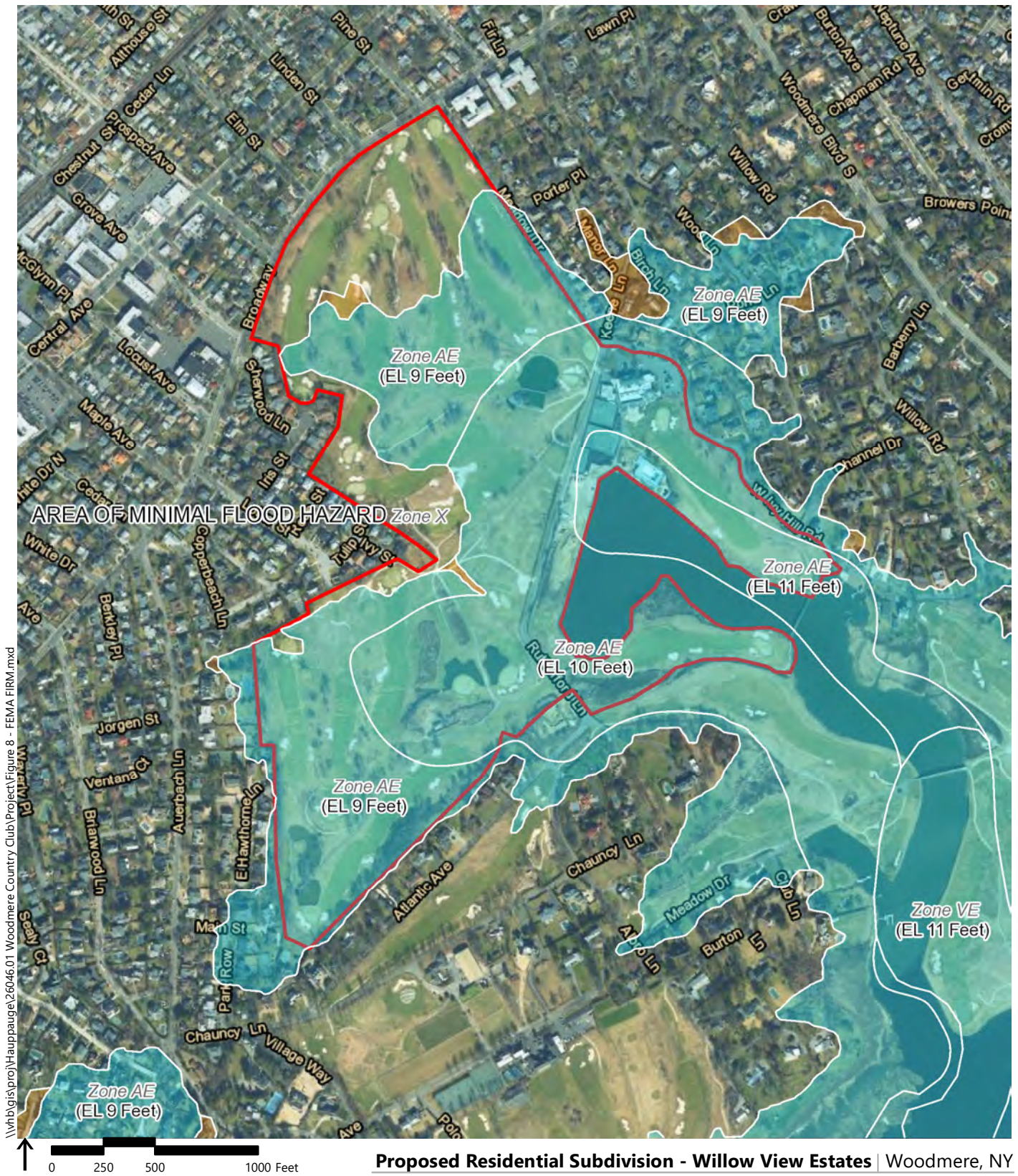
The specific flood zone areas and BFE designations at the subject property are discussed below.

- › The southeast portion of the subject property, along Woodmere Basin near Martha Lane, is located in Zone AE with a BFE of 11 feet
- › The south, central, and east portions of the subject property are located in Zone AE, BFE 10 feet
- › The southwest and northern portion of the subject property are located in Zone AE, BFE 9 feet
- › The northern portion of the subject property is located in Zone X, areas of moderate flood hazard, which are depicted on the FIRM as an area between the limits of the 100-year and 500-year floodplains.

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<sup>25</sup> FEMA Flood Map Service Center. *FEMA Flood Insurance Rate Map*. Available at: <https://msc.fema.gov/portal/search?AddressQuery=99%20meadow%20drive%20woodmere#searchresultsanchor>. Accessed April 2019.





\\vhb\gis\pro\Hauptpaugel\26046.01 Woodmere Country Club\Project\Figure 8 - FEMA FIRM.mxd

**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

**FEMA Flood Insurance Rate Map**

99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodburgh  
 Nassau County

- Flood Hazard Zones
- Subject Property
  - Zone AE
  - Zone X

All boundaries are approximate.

Sources: NYS Ortho Imagery (2016);  
 FEMA's National Flood Hazard Layer (2017)

- › There are two small portions of the subject property, one in the central portion west of Keene Lane and the other towards the northern portion east of Broadway, that are designated as Zone X and within the 500-year flood zone
- › Overall, the subject property is located in Zone AE, BFE 11 feet along the shoreline transitioning into Zone AE, BFE 10 and BFE 9 feet moving inland, and eventually into Zone X.

According to FEMA, areas in Zone AE are subject to inundation by the one-percent-annual-chance flood event (i.e., the 100-year flood), and mandatory flood insurance purchase requirements and floodplain management standards apply. Areas in Zone X are subject to a 0.2 percent annual chance flood event (i.e., the 500-year flood). Mandatory flood insurance purchase and floodplain management standards do not apply to properties in Zone X.

As shown in Figure 8, existing development within the flood zones includes the three-story clubhouse containing a fitness center, bar, dining area, meeting rooms, banquet halls, and other features on the eastern boundary of the subject property, near the intersection of Meadow Drive, Ivy Hill Road, and Keene Lane. The clubhouse is adjoined by six tennis courts, a pro shop, cart house, and a paved parking lot, which are also within the 100-year flood zone. Adjacent to the tennis courts are the tennis office, the grounds and maintenance garage, a swimming pool, hot tub, and patio area. The remainder of the subject property is composed of an eighteen-hole private golf course. A majority of these holes are situated within the 100-year flood zones with the exception of approximately four fairways and putting greens located in the north and northwest portions of the site, within the upland Zone X, outside of the limits of the 100-year and 500-year flood zones. Throughout the course are paved and unpaved cart paths, six artificial ponds, and ancillary grounds and maintenance equipment sheds all of which are within the Zone AE flood zones (BFE 11, 10 and 9).

The Town of Hempstead, Village of Lawrence, and Village of Woodsburgh each set forth provisions in the corresponding Town/Village codes pertaining to flood hazard zones and flood damage prevention. These provisions are based on the FEMA standards and are uniformly designed:

- › To protect human life and health
- › To minimize expenditure of public money for costly flood control projects
- › To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public
- › To minimize prolonged business interruptions
- › To minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone, sewer lines, streets and bridges located in areas of special flood hazard
- › To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard, so as to minimize future flood blight areas
- › To provide that developers are notified that property is in an area of special flood hazard



- › To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

A discussion of the proposed project's consistency with the provisions outlined in each of the Town/Village codes is provided in Section 3.2.2 of this DEIS.

### ***Superstorm Sandy***

In the fall of 2012, Hurricane Sandy (also known as "Superstorm Sandy") made landfall, causing deadly flooding, mudslides and destructive winds from the Caribbean to the U.S. East Coast. The storm caused extensive damage to residences, businesses, roads, infrastructure and major power transmission systems across fourteen counties in New York which were declared as federal disaster areas. Locally, Superstorm Sandy made its way from the Atlantic Ocean traveling over the Far Rockaway peninsula and through the Jones Inlet, Rockaway Inlet, and Reynolds Channel then into Jamaica Bay and Hempstead Bay. The surge affected the Five Towns (i.e., Woodmere, Cedarhurst, Lawrence, the Hewletts, and Woodsburgh) with tidal flooding and widespread backups within the stormwater system affecting area that were beyond the storm surge extent. According to the NYRCR Plan for the Five Towns Community, the storm surge varied from approximately 6 to 11 feet in the Villages and hamlets within the Five Towns.<sup>26</sup>

Superstorm Sandy inundated the subject property as well as surrounding properties.<sup>27</sup> Specifically, the surge flooded almost the entirety of the subject property, excluding the northern portion along Broadway, the central portion east of Lotus Street, and small parcels dispersed along the southern portion of the subject property (Figure 9). The extent of flooding at the subject property during Sandy closely approximated the limits of the 100-year flood zone described above.

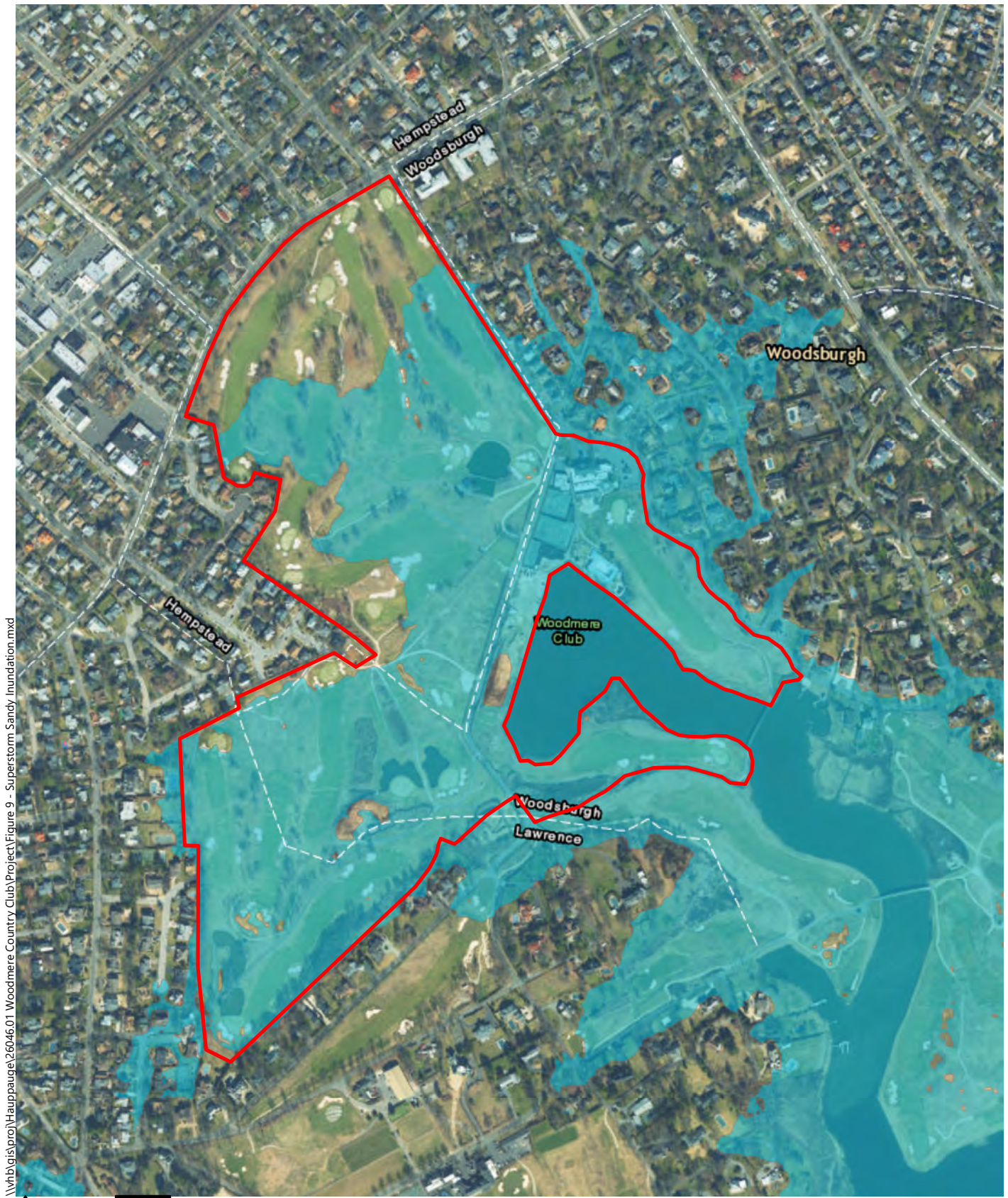
### ***Nassau County Back Bays Coastal Storm Risk Management Study***

The USACE, in partnership with the NYSDEC and Nassau County, is currently conducting a feasibility study (the "Nassau County Back Bays Coastal Storm Risk Management Study") of coastal storm risk management problems within the Nassau County Back Bays area, which includes Woodmere Basin and Woodmere Channel. The objective of the study is to investigate problems and potential measures to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems. Among the potential reduction measures that are being considered are structural measures (e.g., storm surge barriers, tide gates, levees, and floodwalls), non-structural measures (e.g., elevating homes) and natural measures such as marsh restoration and the creation of living

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<sup>26</sup> New York Rising Community Reconstruction Program. *The Five Towns New York Rising Community Reconstruction Plan*. Available at: [https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/fivetowns\\_nyrcr\\_plan.pdf](https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/fivetowns_nyrcr_plan.pdf). Accessed October 2019.

<sup>27</sup> Federal Emergency Management Agency, NAD 1983 State Plane New York Long Island FIPS.



\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 9 - Superstorm Sandy Inundation.mxd

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY  
Superstorm Sandy Inundation Map**

- Subject Property
- Superstorm Sandy Surge Extent

99 Meadow Drive  
Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodburgh  
Nassau County

All boundaries are approximate.

Source: NYS ortho Imagery (2016); FEMA NAD 1983 State Plane New York Long Island FIPS; ESRI



shorelines. Once completed, the study may also include recommendations of actionable and policy implementable items such as floodplain management and Community Rating System enhancement opportunities. However, as the study ongoing and is not expected to be completed for two years, there are currently no recommendations available from this study.

### **Stormwater**

Stormwater runoff is rainwater or melted snow that flows over land, including pavement, roofs, lawns and other landscaping, and does not directly soak into the ground. As noted by the USGS, there are four potential paths of stormwater; some of the flow will be intercepted by vegetation and evaporate into the atmosphere; some will fall onto the ground surface and evaporate; some will infiltrate into the soil; and some will run directly off from the ground surface.<sup>28</sup> As described by the United States Environmental Protection Agency (EPA), "when stormwater is absorbed into soil, it is filtered and ultimately replenishes aquifers or flows into streams and rivers."<sup>29</sup>

The subject property has been operated as a golf course since 1910. For the past 109 years, a majority of stormwater runoff from the subject property has been captured on-site via the existing six ponds, which are interconnected via subsurface pipes. Stormwater that does not infiltrate or evapotranspire is permitted to pond at the site or be discharged to Woodmere Basin via two outfalls at the northern portion of the Basin nearest to the clubhouse; and one outfall at the southwest portion of the Basin, near Keene Lane/Rutherford Lane. Drainage from the site that is directed to the ponds may be held for a period of time allowing sediments to settle to the bottom, before the stormwater is discharged via a system of interconnected underground pipes to the Basin; additional treatment is provided via existing stormwater treatment structures installed within the drainage pipe network. The areas immediately surrounding Woodmere Basin, along Keene Lane, Martha Lane and south of Ivy Hill Road, do not feed into the existing piped pond system and discharge directly into the basin without any treatment. As a result, pesticides, herbicides, fertilizers, and other heavy landscape maintenance techniques that may have been used at the golf course has the potential to have impacted water quality in Woodmere Basin and Woodmere Channel over the past century.

The management of stormwater runoff has been extensively studied and regulated by State and local agencies, as further discussed below.

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<sup>28</sup> United States Geological Survey. *Surface Runoff and the Water Cycle*. Available at: [https://www.usgs.gov/special-topic/water-science-school/science/surface-runoff-and-water-cycle?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/surface-runoff-and-water-cycle?qt-science_center_objects=0#qt-science_center_objects). Accessed October 2019.

<sup>29</sup> Environmental Protection Agency. *EPA Facility Stormwater Management*. Available at: <https://www.epa.gov/greeningepa/epa-facility-stormwater-management>. Accessed September 2019.

### ***New York State Department of Environmental Conservation (NYSDEC) Standards***

In the NYSDEC manual, *Reducing the Impacts of Stormwater Runoff From New Development*, the concept of stormwater management is such that there are quantitative controls, or a system of vegetative and structural measures, which can be used “to control increased volume and rate of surface runoff caused by man-made changes to the land” to convey stormwater flows and avoid flooding, and qualitative controls, that can also be used “to control or treat pollutants carried by surface runoff” (page 5). The goal of stormwater management is to prevent substantial alteration of the “quantity and quality of stormwater run-off from any specific development... from predevelopment conditions” (page 6).

As indicated in the *NYS Stormwater Manual*,<sup>30</sup> stormwater management planning includes the calculation of the stormwater volume for a site, incorporating any runoff reduction features or techniques in place, and the use of standard stormwater management practices (SMPs) and control practices, as applicable given site-specific considerations. Acceptable SMPs for stormwater treatment can capture and treat the full stormwater volume and meet performance standards designed in the *NYS Stormwater Manual*, including the removal of pollutants before stormwater reaches groundwater or surface waters. Broad categories of acceptable practices include stormwater wetlands, infiltration practices (capturing and temporarily storing stormwater before allowing it to infiltrate into the soil), filtering practices (capturing, temporarily storing stormwater and passing it through a filter bed of treatment media) and open channel practices (capturing and treating stormwater within designed dry or wet cells).

According to the *NYS Stormwater Manual*, infiltration practices can be used as an accepted quantity control for stormwater, provided the infiltration rate is greater than five inches per hour. A discussion of the proposed action’s adherence to these NYSDEC stormwater standards is presented in Section 3.2.2 of this DEIS, below.

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

The EPA Phase I Rule was issued in 1990 and regulates stormwater discharges associated with industrial activities. As defined at 40 CFR 122.26(b)(14), industrial activities include construction activities (e.g., clearing, grading and excavation) that result in the disturbance of five acres or more of land area. The Phase I Rule requires such activities to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for stormwater discharges (or coverage under an NPDES-approved State permit). The EPA Phase II stormwater rule was implemented to regulate (among other things) construction activities disturbing less than five acres, but greater than one acre of land. NYSDEC administers New York’s NPDES-approved SPDES program, which includes a General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001 - current version). This General Permit applies to the following construction activities when stormwater runoff may discharge to Waters of New York State (including Waters of the United States):

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<sup>30</sup> New York State Department of Environmental Conservation (originally prepared by Center for Watershed Protection), *New York State Stormwater Management Design Manual* (Albany, NY: NYSDEC, 2015). Available at: <http://www.dec.ny.gov/chemical/29072.html>.

- › Construction activities involving soil disturbances of one or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land.
- › Construction activities involving soil disturbances of less than one acre where NYSDEC has determined that a SPDES permit is required for stormwater discharges based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters of the State.

Projects covered under the SPDES GP-0-20-001 General Permit (current version) are required to develop and implement a SWPPP that meets criteria set forth by NYSDEC. All SWPPPs must include practices consistent with the New York Standards and Specifications for Erosion and Sediment Control (2016 Blue Book).<sup>31</sup> Many construction sites must also comply with the *NYS Stormwater Manual* to address post-construction stormwater discharges.

The SPDES GP-0-20-001 General Permit, which became effective January 29, 2015, includes added requirements for eligibility for coverage in cases where there is potential for construction activities to impact historic and archeologically significant properties. NYSDEC and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) developed a screening process that is incorporated into the SPDES GP-0-20-001 eligibility requirements to identify and address potential impacts on archeological and historic resources. Section 3.5 of this DEIS addresses potential impacts to cultural resources and presents the results of consultations with OPRHP regarding the subject property, which conclude that no buildings are listed on the State or National Register and the Woodmere Clubhouse is not eligible for listing on either register.

In addition, the USEPA Phase II rule requires permits be obtained for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in New York State-designated urbanized areas. The Town of Hempstead, Village of Lawrence and Village of Woodsburgh are designated urbanized areas with regulated MS4s.<sup>32</sup> The SPDES General Permit for Stormwater Discharge from MS4s (GP-0-15-003) requires that permittees meet a variety of requirements that are generally designed to encourage municipalities and/or public agencies to actively seek to reduce the amount of contaminants that reach waters of the State through stormwater runoff, including:

- › To inventory and analyze stormwater runoff generated within the MS4 jurisdiction;

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<sup>31</sup> New York State Department of Environmental Conservation. *New York State Standards and Specifications for Erosion and Sediment Control*. July 2016; Available at: <http://www.dec.ny.gov/chemical/29066.html>.

<sup>32</sup> New York State Department of Environmental Conservation. *Designation Criteria for Identifying Regulated Municipal Separate Storm Sewer Systems (MS4s)*, Revised May 2010; available from [http://www.dec.ny.gov/docs/water\\_pdf/ms4gpdscrit.pdf](http://www.dec.ny.gov/docs/water_pdf/ms4gpdscrit.pdf).

- › To engage in public education and outreach efforts that disseminate information on the sources of stormwater runoff, potential causes of contamination of stormwater runoff, and the impacts of same on surface water quality; and
- › To implement and enforce stormwater management regulations for land development activities within the MS4 jurisdiction that are at least as stringent as SPDES General Permit requirements.<sup>33</sup>

In accordance with the above-referenced requirements for MS4s, the Town of Hempstead, Village of Lawrence and Village of Woodsburgh have set forth provisions in the corresponding Town/Village codes pertaining to stormwater management, as follows:

- 1) Article XXXVIII of the Town of Hempstead Building Zone Ordinance (“Hempstead BZO”) entitled, *Stormwater Management and Erosion and Sediment Control*
- 2) Chapter 177 of the Village of Lawrence Code (“Lawrence Village Code”) entitled, *Stormwater Management and Erosion and Sediment Control*; and
- 3) Article IX of Chapter 150 of the Village of Woodsburgh Code (“Woodsburgh Village Code”) entitled, *Erosion and Sediment Control* (in which stormwater management is included).

The shared purpose of all three of the above codes, as stated within each, is to “establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within [each] jurisdiction...”

The stormwater management objectives for the Town of Hempstead, Village of Lawrence, and Village of Woodsburgh are as follows:

- (a) *Meet the requirements of minimum measures 4 and 5<sup>34</sup> of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised;*
- (b) *Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised;*
- (c) *Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream [creek and channel<sup>35</sup>] temperature, and streambank [bank] erosion and maintain the integrity of stream [creeks and] channels;*
- (d) *Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;*

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<sup>33</sup> New York State Department of Environmental Conservation. *New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s)*, effective May 1, 2015; Available at: [http://www.dec.ny.gov/docs/water\\_pdf/ms4permit.pdf](http://www.dec.ny.gov/docs/water_pdf/ms4permit.pdf).

<sup>34</sup> Minimum measure 4 is the *Construction Site Stormwater Runoff Control* and minimum measure 5 is the *Post Construction Stormwater Management in development and Redevelopment*.

<sup>35</sup> This additional language is from Village of Woodsburgh only, and does not appear in the other two Town/Village Codes.

- (e) *Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and*
- (f) *Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.*

Land development activities are subject to the review and approval of a SWPPP that must be prepared in accordance with the provisions of the respective municipal Codes. The project is also subject to NCDPW review pursuant to § 239-f of the New York Municipal Law, as the proposed action involves a subdivision and curb cut(s) on property fronting a county roadway (i.e., Broadway). See Section 3.2.2 for a discussion of the proposed project's effect on on-site stormwater conditions and consistency with the Town and County stormwater requirements.

#### ***The Five Towns NY Rising Community Reconstruction Plan (March 2014)***

The Five Towns New York Rising Community Reconstruction (NYRCR) Plan addresses a wide range of topics and projects for each respective municipality within the Five Towns planning area (see Section 3.10 for complete discussion of the NYRCR Plan). Among these are recommendations pertaining specifically to stormwater infrastructure upgrades in Woodmere Census-Designated Place (CDP) and the Village of Lawrence.

While the NYRCR Plan does not specifically identify the subject property as being a critical area in need of stormwater infrastructure upgrades. Nonetheless, Section 3.2.2 of this DEIS, below, includes a discussion of the proposed stormwater management plan as well as the projects consistency with the recommended stormwater infrastructure upgrades outlined by the NYRCR Plan.

#### ***Existing Drainage Characteristics***

Currently, there is minimal stormwater management infrastructure on the subject property. As discussed above, the six on-site ponds receive runoff from portions of the subject property. These ponds are piped together underground and ultimately discharge to Woodmere Basin via three existing on-site outfalls. Drainage from the site is minimally treated by the six ponds, as stormwater is held for a period of time, providing the opportunity for sediments to settle to the bottom before discharging into the basin. The areas surrounding Woodmere Basin, along Keene Lane, Martha Lane and south of Ivy Hill Road, do not feed into the existing piped pond system and discharge via overland flow directly into the basin without any treatment.

See Section 3.2.2 for a discussion of the regulations and standards that apply to the proposed development of the subject property with regard to stormwater management, including the requirements of the NCDPW and the three municipalities in which the proposed action would occur.

## Groundwater Resources

Long Island is a sole source aquifer region, which means that groundwater is the single supply source for potable water. Thus, land use has the potential to impact the quality of the water supply. According to NYSDEC, “the aquifers underlying Long Island are among the most prolific in the country. Almost all of Long Island’s drinking water is from groundwater with surface water an insignificant contributor... The three most important Long Island aquifers are the Upper Glacial Aquifer, the Lloyd Aquifer, and the Magothy Aquifer.”<sup>36</sup>

More specifically, according to NYSDEC,

- › *The Upper Glacial Aquifer is an unconfined aquifer directly underlying the ground surface. The Upper Glacial aquifer was formed during the last ice age.*
- › *The Magothy is the largest of Long Island's aquifers. Consisting of sand deposits alternating with clay, it attains a maximum thickness of approximately 1,100 feet and is the source of water for most of Nassau County and about half of Suffolk County.*
- › *The Raritan Formation underlies the Magothy. Its two primary units are an upper clay member and a lower sand member named the Lloyd Sand. The clay member separates the Magothy and Lloyd aquifers and serves as a confining unit for the underlying Lloyd Sand aquifer. The clay member has a maximum thickness of 300 feet.*
- › *The Lloyd Aquifer is the deepest and oldest of Long Island's aquifers. It is a sand and gravel formation ranging in thickness from zero to five hundred feet. At its deepest, it is 1,800 feet below the surface. The water contained in the Lloyd aquifer is about six thousand years old. Not many wells tap this formation and New York Environmental Conservation Law § 15-1528 establishes a moratorium on the use of water from this formation in order to maintain it for future generations.*<sup>37</sup>

Groundwater flow on Long Island is characterized by a groundwater divide, extending east-to-west along its length. To the north of the groundwater divide, which in the vicinity of Nassau County extends across roughly the center of the County (in the general vicinity between I-495 and Jericho Turnpike), horizontal groundwater flow is generally to the north; in areas south of the divide, it is toward the south. Review of the USGS *Water-Table and Potentiometric-Surface Altitudes in the Upper Glacial, Magothy, and Lloyd Aquifers beneath Long Island, New York, April-May 2013* publication indicates that the regional groundwater flow direction beneath the subject property is generally to the south, as the subject property is south of the groundwater divide.

The aforementioned USGS publication indicates that water table elevations in the vicinity of the site ranges from approximately 3-to-9 feet amsl (NAVD88<sup>38</sup>) (see Figure 10). According

<sup>36</sup> New York State Department of Environmental Conservation. *Long Island Aquifers*. Available at: <https://www.dec.ny.gov/lands/36183.html>. Accessed October 2019.

<sup>37</sup> New York State Department of Environmental Conservation. *Long Island Aquifers*. Available at: <https://www.dec.ny.gov/lands/36183.html>. Accessed October 2019.

<sup>38</sup> North American Vertical Datum of 1988. A vertical datum is a surface of zero elevation to which heights of various points are referred in order that those heights be in a consistent system. More broadly, a vertical datum is the entire system of the zero- elevation surface and methods of determining heights relative to that surface. In 1993, NAVD 88 was affirmed as the official vertical datum in the National Spatial Reference System (NSRS) for the Conterminous United States and Alaska (<https://www.ngs.noaa.gov/datums/vertical/>).



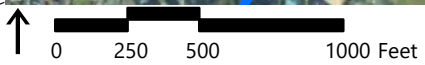
to the topographic survey of the subject property (Appendix F), topographic elevations on the subject property generally range from approximately 3 feet amsl in the southern/southwestern portion of the site to approximately 28 feet amsl in the northern portion of the site near Broadway (also see Section 3.1.1 of this DEIS). Accordingly, published groundwater elevation data would suggest that the depth to groundwater in the vicinity of the site is estimated to range from approximately 0-to-15 feet bgs (Figure 11).

Site-specific depth to groundwater is available from the *Geotechnical Evaluation* performed at the subject property. A discussion of complete results is contained in Section 3.1 of this DEIS, and the *Geotechnical Evaluation* report is included in its entirety in Appendix E.

According to these subsoil investigations, which included 17 borings across the subject property conducted on October 22, 2019. At the time of the respective borings, groundwater was encountered at depths ranging from approximately 2-feet-8± inches to 17-feet-7± inches bgs (see *Subsoil Investigations* plan [sheets 1 and 2 of 2] in Appendix E). Based on these data, much of the site exhibits relatively shallow groundwater, whereas portions of the property near Broadway (i.e., furthest from Woodmere Basin) have the greatest existing depths to groundwater.



\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 10 - Water Table Elevation.mxd

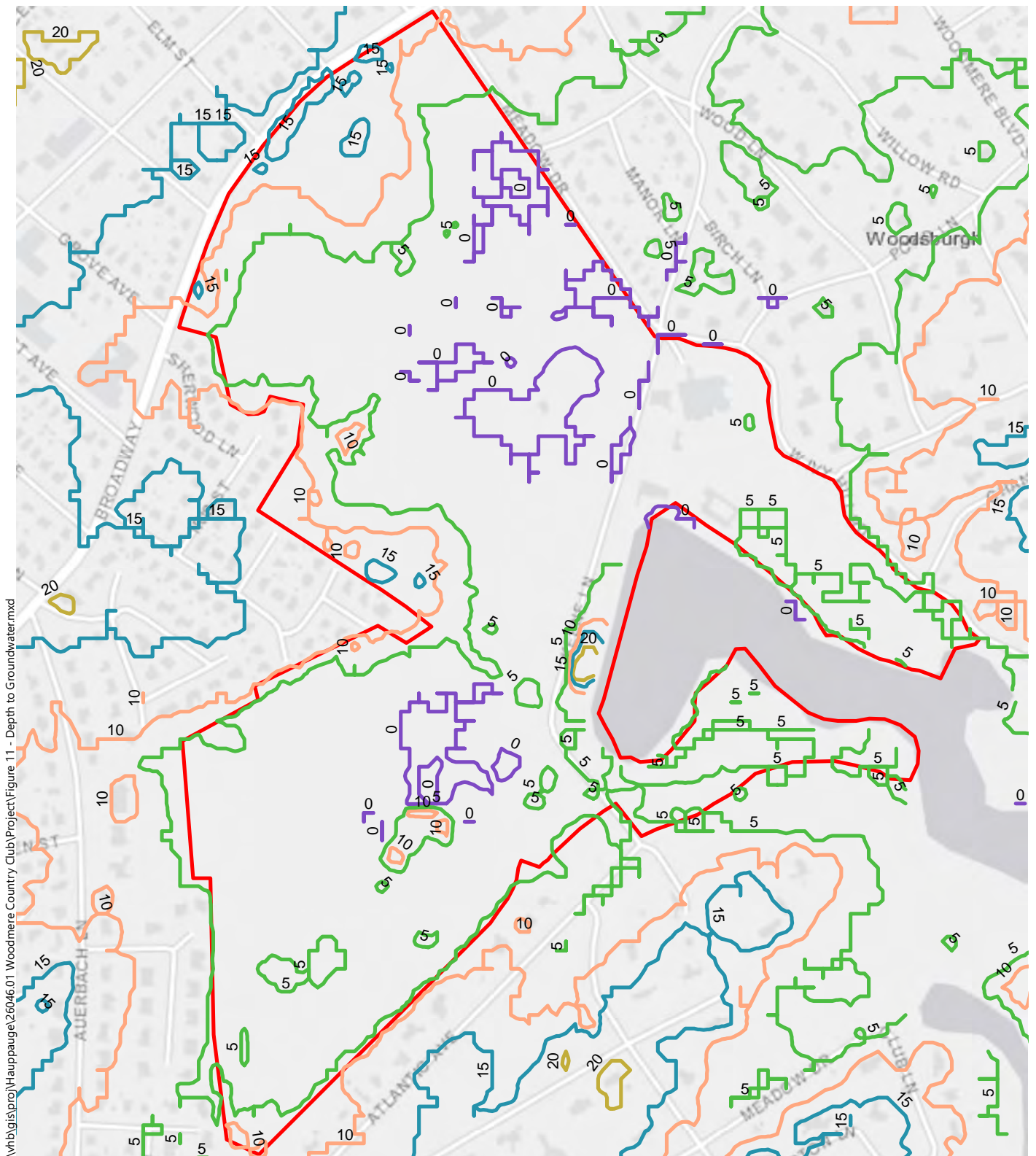


- Subject Property
- Water Table Elevation (Feet)

**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY  
**Water Table Elevation Map**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodburgh  
 Nassau County

All boundaries are approximate. Sources: NYS Ortho Imagery (2016); NYS Civil Boundaries, NYS Office of Information Technology Services GIS Program Office (GPO)





\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 11 - Depth to Groundwater.mxd



**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

- Subject Property
- Depth to Groundwater Countours (feet)**
- 0
- 5
- 10
- 15
- 20
- 25
- 30

**Depth to Groundwater Map**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

Sources: NYS Ortho Imagery (2016);  
 NYS Civil Boundaries, NYS Office of Information Technology Services GIS Program Office (GPO)

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

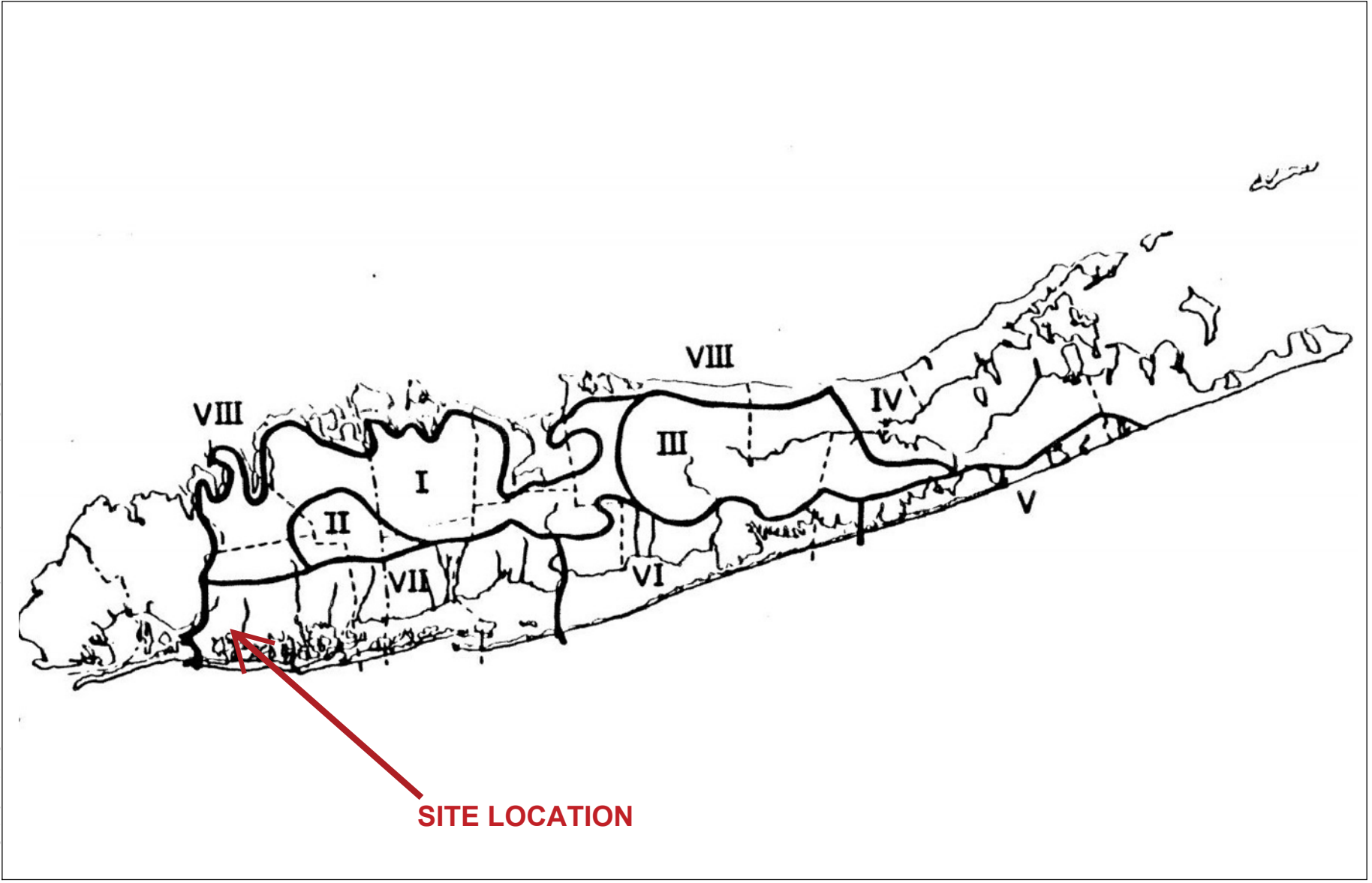
In 1978, Long Island was divided into eight hydrogeologic zones in the Long Island Comprehensive Waste Treatment Management Plan (the "208 Study"). The subject property is located within Hydrogeologic Zone VII, according to the *208 Study* (Page 46, Volume I) (see Figure 12). Zone VII is the South Shore Shallow Flow Discharge System, which is located south of the Magothy recharge zone. According to the *208 Study*, key considerations related to land use in this Zone are that contamination from activities in Zone VII will mainly affect the Glacial aquifer (i.e., the potential to affect deeper aquifers is reduced due to the shallow flow characteristics of the zone), and streamflow will diminish if sewerage occurs without recharge or streamflow augmentation.

The *208 Study* lists structural and non-structural recommendations, and from these recommendations defines the Highest Priority Areawide Alternatives to manage potential impacts to groundwater in each Hydrogeologic Zone. For Zone VII, the Highest Priority Areawide Alternatives relevant to the subject property and proposed use, as follows:

- › Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to ground or surface waters.
- › Control animal populations and animal waste disposal.

The other Highest Priority Areawide Alternative for Hydrogeologic Zone VII refers to the siting of new landfills, which are not relevant to the proposed action. The proposed action's consistency with the relevant Highest Priority Areawide Alternatives mentioned above is discussed in Section 3.2.2 of this DEIS.

\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure X - Hydrogeologic Zone Map.mxd



↑ Not To Scale

**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

**Hydrogeologic Zone Map**

99 Meadow Drive  
Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodsburgh  
Nassau County

All boundaries are approximate.

Source: Long Island Regional Planning Board - Long Island Comprehensive Waste Treatment Management Plan

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

Special Groundwater Protection Areas (SGPAs), which have been designated as Critical Environmental Areas (CEAs) by New York State, are significant, largely undeveloped or sparsely developed geographic areas of Long Island that provide recharge to portions of the deep flow aquifer system. They represent a unique, final opportunity for comprehensive, preventive management to preclude or minimize land use activities that can have a deleterious impact on groundwater. Nine SGPAs are located on Long Island: North Hills, Oyster Bay, West Hills-Melville, Oak Brush Plains, South Setauket Woods, Central Suffolk, Southold, South Fork and Hither Hills. According to the *SGPA Plan*, the subject property is situated outside the boundaries of all SGPAs; therefore, no further analysis of this resource is required.

### **Coastal Resources**

#### ***The South Shore Estuary Reserve Comprehensive Management Plan***

The South Shore Estuary Reserve Act was enacted by the New York State Legislature to protect and manage the South Shore Estuary Reserve (SSER) as a single integrated estuary and a maritime region of statewide importance. The Reserve extends 75 miles east from the New York City/Nassau County line to the Village of Southampton in Suffolk County. From south to north, the Reserve extends from the mean high tide line on the ocean side of the barrier beach to the inland limits of the mainland watersheds that drain into the western bays, Great South Bay, and the eastern bays.<sup>39</sup> The barrier beach along the Atlantic Ocean, the estuary's shallow interconnected bays and tidal tributaries provide highly productive habitats. The subject property is located within the estuary's western bays, specifically north of Brosewre Bay.

The Act created the SSER Council and charged it with preparing a SSER Comprehensive Management Plan (hereinafter, the "SSER Plan"), which was adopted on April 12, 2001, as well as advising on its implementation and effectiveness. The SSER Plan recommends implementation actions for State, federal, and local governments; non-profit organizations, businesses, and academic institutions to:

- › Improve and maintain water quality;
- › Protect and restore living resources;
- › Expand public use and enjoyment;
- › Sustain and expand the estuary economy; and
- › Increase education, outreach, and stewardship.

The Long Island SSER encompasses one of the State's unique estuaries and its 326 square miles of watershed in Nassau and Suffolk counties. Formed by barrier islands along the

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<sup>39</sup> New York State Department of State, Office of Planning and Development. *Long Island South Shore Estuary Reserve Comprehensive Management Plan*. Available at: <https://www.dos.ny.gov/opd/sser/pdf/Full%20CMP%20Document.pdf>. Accessed May 2019.

Atlantic Ocean, the estuary's shallow, interconnected bays and tidal tributaries provide highly productive habitat and support the largest concentration of water-dependent businesses in the State. The SSER Plan provides a blueprint for the long-term health of the Reserve's bays and tributaries, its tidal wetlands and wildlife, and its tourism and economy. Implementation of the SSER Plan will ensure that continuing efforts are made to improve the Reserve's water quality, restore its living resources, protect its rich maritime heritage, and expand its estuary-related economy.

The SSER Plan provides recommendations within each chapter, and the following are recommendations relevant to the subject property and proposed action:

- › Adopt best management practices to control drainage, erosion and sedimentation prior to and during construction.
- › Adopt best management roadway operation and maintenance.
- › Ensure compliance with existing State Pollution Discharge Elimination System (SPDES) permits.

The proposed action's consistency with the relevant recommendations mentioned above is discussed in Section 3.2.2 of this DEIS.

#### ***New York State Department of State Coastal Management Program***

The subject property is within the Coastal Area of New York State according to the New York State Department of State (NYS DOS) Coastal Boundary map (Figure 13).

The federal Coastal Zone Management Act was passed in 1972 to encourage coastal states to develop and implement Coastal Management Programs (CMPs). The act was established as a United States national policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the Nation's coastal zone for current and succeeding generations. In New York State, the CMP is administered by the NYSDOS under the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. NYSDOS has established 44 coastal policies that promote the beneficial use of coastal resources, prevent their impairment or otherwise address activities that may affect resources within the New York State Coastal Zone.

Consistency review with NYS Coastal Policies is required for projects that are subject to federal funding, permits and/or authorizations. A detailed assessment of the proposed action's consistency with the relevant NYS Coastal Policies is included in Section 3.2.2 of this DEIS, below.





\\vhb\gis\proj\Hauptauge\26046.01 Woodmere Country Club\Project\Figure 13 - NYS Coastal Zones.mxd

0 500 1000 2000 Feet **Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

- Subject Property
- Landward Coastal Area Boundary
- Significant Coastal Fish and Wildlife Habitats

**Coastal Zone Map**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

All boundaries are approximate.

Sources: New York State Department of State (NYSDOS) Landward Coastal Area Boundary (2016);  
 NYSDOS Significant Coastal Fish and Wildlife Habitats (2014).



## 3.2.2 Potential Impacts

### Surface Waters

Implementation of the proposed action would result in reshaping and expansion of the existing artificial ponds to create a total of four bioretention areas as part of the proposed stormwater management system. In addition, a new biofiltration swale would be created for treatment of overflow stormwater before discharge to Woodmere Basin. As a result of these proposed changes, there will be a net increase of 0.54± acre in the existing size of surface waters at the subject property. There would be no proposed changes or activities occurring within the Woodmere Basin surface water as a result of the proposed action.

As discussed in further detail in Section 3.3.2, below, native upland, facultative and wetland plantings would be installed within and surrounding the bioretention facilities, thereby improving both the quantity and quality of vegetated wetland habitat at the subject property as compared to the existing conditions, where the ponds are largely unvegetated or have limited biodiversity. The cessation of golf course management practices has the potential to result in water quality improvements to the five ponds, through reduced turbidity and pollutant inputs. The installation of the vegetated biofiltration swale would increase the amount of native-vegetated wetland habitat at the subject property, while providing valuable stormwater treatment functions to minimize potential water quality impacts upon Woodmere Basin due to stormwater discharge.

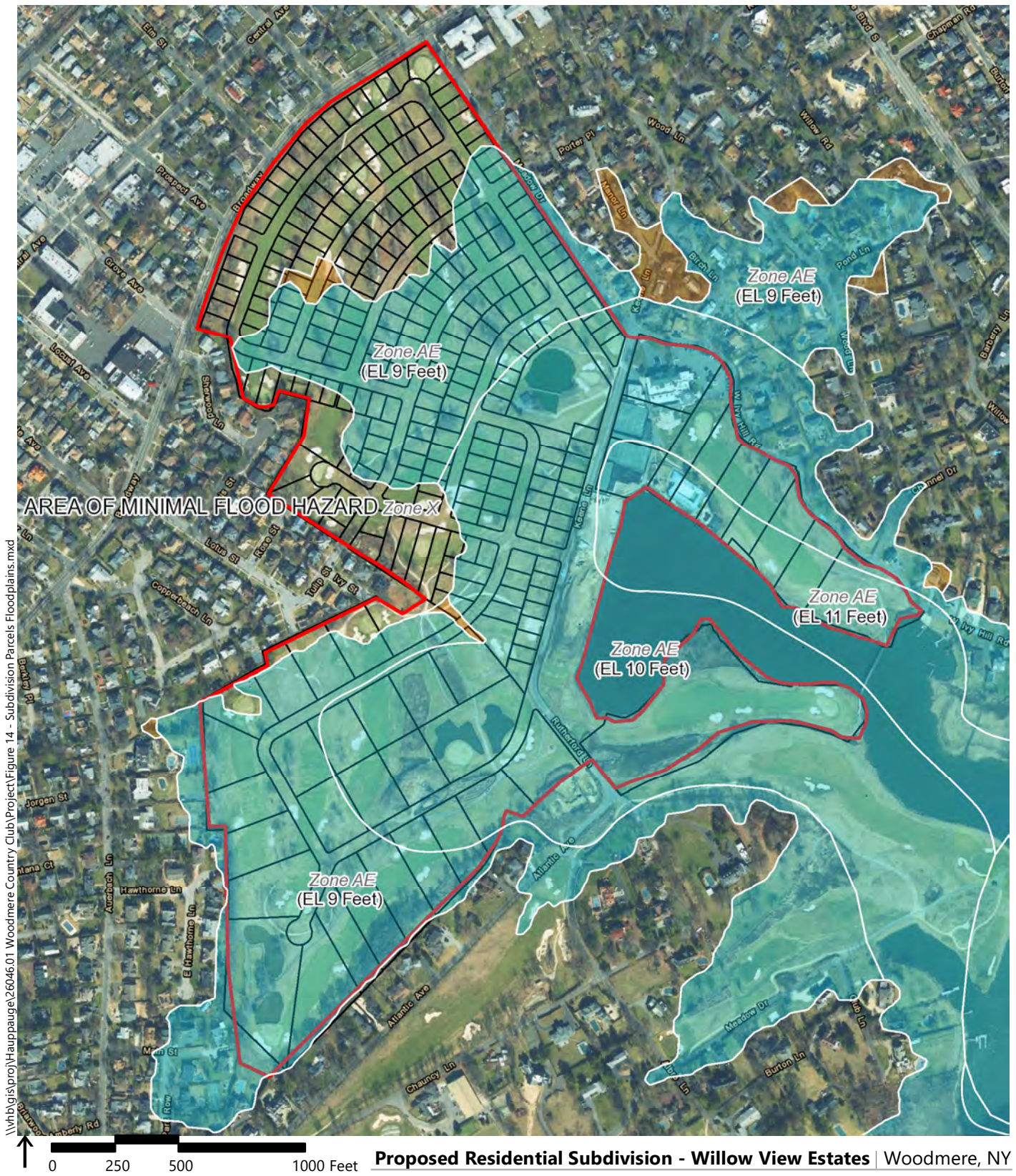
Based on the foregoing, no significant adverse impacts to surface water features are expected as a result of the proposed action. Refer to Section 3.3, below, for a further discussion of the bioretention and biofiltration facilities and additional analysis of potential impacts to ecological wetland resources, as well as associated regulatory and permitting considerations.

### Floodplains

As indicated in Section 3.2.1 of this DEIS, the majority of the subject property is within the SFHA Zone AE (BFE 9, 10 and 11 feet) (Figure 14 below), and is, therefore, subject to the provisions of the respective local flood ordinances set forth at:

- › Chapter BZ (Building Zone Ordinance), Article XXXIV of the Hempstead Town Code;
- › Chapter 94 of the Lawrence Village Code; and
- › Chapter 77 of the Woodsburgh Village Code.





\\vhb\gis\pro\Hauptpaugel\26046.01 Woodmere Country Club\Project\Figure 14 - Subdivision Parcels Floodplains.mxd

- Subject Property
- Proposed Lot Boundaries
- Flood Hazard Zones**
- Zone AE
- Zone X

All boundaries are approximate.

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Proposed Subdivision Lots within Floodplains**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

Sources: NYS Ortho Imagery (2016);  
 FEMA's National Flood Hazard Layer (2017)



Among other requirements, these local codes each require the lowest floor within the future residences to be located at or above two feet above BFE. As the BFEs at the subject property range from 9-to-11 feet amsl, the lowest allowable floor elevations would range from 11-to-13 feet amsl, in accordance with these local codes. Although the homes that will ultimately be constructed at each of the proposed subdivision lots have not yet been designed, it is assumed for the purposes of this DEIS that all proposed homes would be designed to be consistent with the applicable local flood ordinance requirements for floor elevations, which are protective against flooding impacts. For those proposed lots that are not located within a flood zone, no minimum elevation would apply, as those properties are not expected to be at risk for flooding impacts.

The Town of Hempstead, Village of Lawrence, and Village of Woodsburgh each set forth other requirements in the corresponding Town/Village Codes pertaining to flood hazard zones and flood damage prevention. The relevant provisions set forth in these codes, including the proposed development's consistency with the same, is shown below.

*The following standards apply to all new subdivision proposals and other proposed development in areas of special flood hazard (including proposals for manufactured home and recreational vehicle parks and subdivisions):*

- › *Proposals shall be consistent with the need to minimize flood damage;*
- › *Public utilities and facilities, such as sewer, gas, electrical and water systems, shall be located and constructed so as to minimize flood damage; and*
- › *Adequate drainage shall be provided to reduce exposure to flood damage.*

The proposed development would be subject to these provisions and the requirement of having the lowest floor elevation situated two feet above the BFE. All associated utility infrastructure would be designed in accordance with the specifications of the utility providers (sewer, electric, natural gas, etc.), including any requirements associated with flood protection. The proposed subdivision roads would have final elevations at least two feet above the respective BFE, except as required to meet existing roadways, with the highest proposed roadway elevation exceeding 20 feet amsl.

With respect to stormwater management, as discussed in detail in the *Stormwater* subsection, below, adequate drainage will be provided throughout the proposed subdivision to reduce exposure to flood damage.

*Within Zones A1-A30 and AE, on streams without a regulatory floodway, no new construction, substantial improvements or other development (including fill) shall be permitted unless:*

- › *The applicant demonstrates that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any location; or*
- › *The [Town of Hempstead/Village of Lawrence/Village of Woodsburgh] agrees to apply to the Federal Emergency Management Agency (FEMA) for a conditional FIRM revision, FEMA approval is received and the applicant provides all necessary data, analyses and mapping and reimburses the [Town of Hempstead/Village of Lawrence/Village of Woodsburgh] for all fees and other costs in relation to the application. The applicant must also provide all*

*data, analyses and mapping and reimburse the [Town of Hempstead/Village of Lawrence/Village of Woodsburgh] for all costs related to the final map revision.*

As discussed above, the subject property is located within the SFHA Zone AE. The BFE is highest in the area immediately surrounding Woodmere Basin and decreases with distance from tidal surface waters. The subject property is located closest to coastal Transect 52 in the FEMA FIS<sup>40</sup> for Nassau County, which provides estimated stillwater elevations and BFEs at different locations across transects, and which informs the FEMA FIRMs. The transect locations are chosen to closely represent the conditions in their locality and, thus, provide representative flood information for the local area. According to FIS data for Transect 52, which (at its nearest point) is located approximately 2.3 miles south of the subject property (proximate to the intersection of Bay Boulevard and Park Street), the BFE is 9-to-13 feet for the overall Zone AE. Specifically, for the subject property, according to the FEMA FIRM, Panel No. 36059C0302G, the BFE is 9-to-11 feet.

The subject property is located in a coastal floodplain separated from the Atlantic Ocean by a system of barrier islands and inland bays. These barrier islands are an important landform that provide natural buffers from the effects of storms and are important to the protection of inland development from flooding. The subject property is an area subject to coastal inundation, and not within a stream flooding area, which has different flood risk characteristics. The coastal floodplain is wide (i.e., several miles across), and not limited, as compared to a stream where water can only flow within the narrow, confined areas along the streambed. Water in the coastal floodplain is not confined and can flow throughout the entirety of the floodplain along the coast. Accordingly, development activities at the subject property would not have the potential to result in significant impacts to flooding conditions in the area, as the volume and velocity is stretched out over a distance and is diminished.

As the subject property is located in an inland area, protected by the barrier islands, the proposed development would not be subject to coastal wave action. This is confirmed by the FIS and FEMA FIRM. Flood elevations due to a 100-year storm event would be between 9-11 feet BFE, and would ultimately push to an inland location. The flood elevations would be spread out, from west to east, over the entire floodplain distance, not limited only to the subject property. As a result, the proposed development activities (including filling and grading activities) would not be expected to substantially alter the BFE at the subject property or on surrounding properties. As part of the proposed action, the residences and all surrounding areas would be raised above existing grades, thereby minimizing the flood hazard risk to the residences sited within the existing floodplain, and would not increase the depth of flooding by more than one foot.

As required by these local code provisions, the Applicants would comply with requirements related to any necessary map revision, which is not anticipated. Overall, the proposed action is consistent with these flood zone requirements.

*Anchoring. New structures and substantial improvement to structures in areas of special flood hazard shall be anchored to prevent flotation, collapse, or lateral movement during the base*

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<sup>40</sup> Federal Emergency Management Agency. *Flood Insurance Study for Nassau County New York*. FIS Number 36059CV000A. Revised September 11, 2009.

*flood. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.*

Although the future residences have not yet been designed, it is expected that the foundations for these new, modern structures will be designed so as to prevent flotation, collapse, or lateral movement during the base flood as well as resist strong winds, as required, in accordance with this standard.

*Construction materials and methods. New construction and substantial improvements to structures shall be constructed with materials and utility equipment resistant to flood damage; New construction and substantial improvements to structures shall be constructed using methods and practices that minimize flood damage.*

The Applicants are aware of code requirements relative to providing materials and equipment resistant to flood damage. Although the future residences have not yet been designed, it is assumed that the proposed houses would be designed and constructed with materials and utility equipment resistant to flood damage and would utilize best management practices during the construction phase to minimize flood damage, as required in accordance with this standard. Relevant best management practices for mitigating flood damage may include waterproofed foundations, raised finished floors and raised mechanical equipment, among others. Upon consultation with PSEG Long Island and other utility providers, the proposed development is expected to install a shared underground trench for all utilities to be provided (e.g., cable, electric, gas, etc.). The residences would be built in accordance with the Building Code requirements for flood hazards zones as set forth in the respective municipal codes.

*Utilities:*

- › *New and replacement electrical equipment, heating, ventilating, air conditioning, plumbing connections, and other service equipment shall be located at or above the base flood elevation or shall be designed to prevent water from entering and accumulating within the components during a flood and to resist hydrostatic and hydrodynamic loads and stresses. Electrical wiring and outlets, switches, junction boxes and panels shall be elevated to or above the base flood elevation unless they conform to the appropriate provisions of the electrical part of the Building Code of New York State or the Residential Code of New York State for location of such items in wet locations;*
- › *New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;*
- › *New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters. Sanitary sewer and storm drainage systems for buildings that have openings below the base flood elevation shall be provided with automatic backflow valves or other automatic backflow devices that are installed in each discharge line passing through a building's exterior wall; and*
- › *On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.*

The proposed houses would be designed in accordance with the requirements of the respective utility providers, including requirements that minimize or eliminate the potential

for infiltration of floodwaters into utility systems. It is noted that the proposed development would be connected to the County sanitary sewer system and would not involve the installation of on-site waste disposal systems.

*Within Zones A1-A30, AE and AH and also Zone A if base flood elevation data are available, new construction and substantial improvements shall have the lowest floor (including basement) elevated to or above two feet above the base flood elevation.*

As indicated above, the residences in the proposed development are expected to have the lowest floor elevations at or above two feet above the BFE.

Based on the above, the proposed action will be consistent with the relevant flood zone requirements of the respective local municipalities, and no significant adverse flooding impacts are anticipated.

### **Superstorm Sandy**

As discussed above, Superstorm Sandy inundated a majority of the subject property, as well as surrounding properties within the limits of the 100-year floodplain (see Figure 9 above). Upon implementation of the proposed action, all development within the within floodplain areas on the subject property would comply with the respective local requirements (i.e., Chapter BZ, Article XXXIV of the Hempstead Town Code, Chapter 94 of the Lawrence Village Code, or Chapter 77 of the Village of Woodburgh Code) and thus would be compliant with FEMA flood insurance requirements. These requirements are expected to be protective of the proposed residences in the event of a future 100-year flood event or a storm event similar to Superstorm Sandy.

### **Stormwater**

It is anticipated that the volume of stormwater runoff generated on the subject property would be increased under the proposed action as a result of the development of new roadways within the subdivision, as well as new single-family residences, driveways, walkways, patios and other impervious surfaces within the proposed residential lots. As demonstrated by the *Street Grading and Drainage Plan* (see C-3.1-C-3.6 of the *Subdivision Plan Package* in Appendix B), stormwater runoff from the proposed subdivision roadways would be collected and managed through the creation of four Bioretention Areas located throughout the proposed development. The design intent is for runoff to be retained within these areas and to be recharged through the underlying soils to groundwater. The final design of the Bioretention Areas is expected to provide for overflow, when necessary, to Woodmere Basin and Woodmere Channel via three existing stormwater outfalls to be retained. The condition of the existing stormwater treatment structures is currently unknown; and although it has not yet been determined if these structures will be suitable for continued use, it is anticipated that they will require replacement. However, the structures will be assessed during the final design phase, and, if deemed suitable, will be tied into the proposed stormwater treatment infrastructure. As noted on Sheet C-3.5 in Appendix B, the new overflow structures would be connected to the existing outfall pipes. These outfalls would be fitted with Vortechs (or equivalent) water quality chambers to provide additional treatment prior to discharge.

In accordance with anticipated NYSDEC requirements, the project would limit the peak discharge rates through the existing outfall locations to pre-development rates. In addition, this project is proposing to provide pre-treatment of runoff by means of vegetated bio-filtration swales and Water Quality Units as made by Vortech, or approved equal, prior to discharge into surface waters. The individual developed lots would manage their own post-development runoff via leaching pools that would be installed upon development of the individual residences.

As detailed below, the proposed action is expected to provide adequate storage capacity to accommodate stormwater runoff from the proposed subdivision. Moreover, the proposed modified/expanded bioretention areas and bioretention swale will provide significantly greater capacity as compared to the existing condition of approximately 2.28 acres of artificial ponds, and the overall system will provide substantially greater capacity than under existing conditions, particularly when considering the additional storage to be provided within the individual proposed residential parcels.

Three of the proposed Bioretention Areas (A, B, and D, as shown on the *Street Grading and Drainage Plan* in Appendix B) would be created via the modification of the six existing on-site ponds as part of the stormwater management system for the proposed subdivision. Bioretention Area A (created from three of the existing artificial ponds) would be 133,298± SF in area and located in the southwest corner of the subject property. Bioretention Area B (created from two of the existing artificial ponds) would be 94,837± SF in area and located in the southeast portion of the subject property by Rutherford Lane. Bioretention Area C would be newly excavated (i.e., not modified from an existing pond) at 48,537± SF in area and located in the mid-west portion of the subject property. Bioretention Area D (created from one of the existing artificial ponds) would be 109,156± SF in area and located in the northeast portion of the subject property west of Keene Lane.

As Broadway is a Nassau County roadway, the proposed subdivision would be subject to New York General Municipal Law § 239(f), which requires review and approval of the stormwater management system by NCDPW. NCDW design standards require on-site storage of runoff for an eight-inch rainfall event. However, as only a small portion of the subject property (lots 1 through 21) are located within the drainage-contributing area for Broadway, the Applicant may seek relief from NCDPW design standards to allow for storage of a lesser amount on other portions of the subject property, as appropriate.

Only a limited portion of the subject property (i.e., the 21 lots with frontage along Broadway) would have the potential to impact the County's drainage system. Runoff from the remainder of the property (i.e., the proposed new roadways and those lots not fronting on Broadway) is proposed to be stored and recharged on-site, with overflow discharged to Woodmere Basin as previously described.

As discussed above, the six on-site ponds receive runoff from portions of the subject property. These ponds are piped together underground and ultimately discharge to Woodmere Basin via three existing on-site outfalls. Drainage from the site is minimally treated by the six ponds, as stormwater is held for a period of time, providing the opportunity for sediments to settle to the bottom before discharging into the basin. The areas surrounding Woodmere Basin, along Keene Lane, Martha Lane and south of Ivy Hill

Road, do not feed into the existing piped pond system and discharge via overland flow directly into the basin without any treatment.

Complete drainage calculations for each of the drainage watershed areas that comprise the subject property are provided on the *Street Grading and Drainage Plans* (see Appendix B). The runoff coefficients used to calculate stormwater volumes are as follows:

- › Pavement, roof, concrete and other impervious areas: 1.0
- › Landscaped, grassed, natural or other pervious surfaces: 0.3

Under existing conditions, the subject property currently generates approximately 474,327 cubic feet (CF) of stormwater runoff (Table 7, below), based on a three-inch rainfall event. As discussed above, the six on-site ponds receive runoff from portions of the subject property, excluding the areas surrounding Woodmere Basin along Keene Lane, Martha Lane and south of Ivy Hill Road. Drainage from the site is minimally treated by the six ponds, as stormwater is held for a period of time, providing the opportunity for sediments to settle to the bottom before discharging into the basin.

Under proposed conditions the subject property would generate approximately 700,683 CF of stormwater runoff volume based on a three-inch rainfall event. Compared to existing conditions, the proposed development would generate approximately 48 percent more of stormwater runoff. As discussed in further detail below, the proposed stormwater management for the subject property is more comprehensive than under existing conditions providing a greater amount of stormwater runoff treatment. The stormwater management system includes four Bioretention Areas and one biofiltration swale to treat stormwater before discharging into Woodmere Basin and Woodmere Channel.

**Table 7 Existing and Proposed Volume of Stormwater Runoff Generation**

	Existing Coverage		Proposed Coverage (Full Buildout)		Coefficient	Rainfall	Existing Volume	Proposed Volume (Full Buildout)
	Acres	SF	Acres	SF				
Impervious	7.33	319,296	36.48	1,589,238	1	3"	79,824CF	397,310CF
Pervious	104.52	4,552,910	74.83	3,259,446	0.3	0.25	341,468CF	244,458CF
Surface Water	4.87	212,138	5.41	235,660	1	0.25	53,035CF	58,915CF
<b>TOTAL</b>	<b>116.72</b>	<b>5,084,344</b>	<b>116.72</b>	<b>5,084,344</b>			<b>474,327CF</b>	<b>700,683CF</b>



A preliminary design for the proposed drainage system is shown on the enclosed *Street Grading and Drainage Plans* (see Appendix B). The grading and drainage design would create a total of four drainage watershed areas (A through D), each having a corresponding Bioretention Area. Table 8, below, indicates the amount of storage that would be required within each area to accommodate the volume of a three-inch rainfall event, and the volume provided in each corresponding Bioretention Area.

**Table 8 Required and Provided Drainage Capacity - Roadways**

<b>Drainage Area</b>	<b>Required (cf) Based on 3-inch Rainfall</b>	<b>Provided (cf) in Bioretention Area (minimum)</b>	<b>Low and High Water Elevations for Rainfall Storage*</b>
<b>A</b>	29,726 runoff	94,648 <sup>+</sup>	Low Water Elevation: 3.30' High Water Elevation: 4.65'
<b>B</b>	31,130 runoff	83,332 <sup>+</sup>	Low Water Elevation: 1.00' High Water Elevation: 2.85'
<b>C</b>	56,888 runoff	56,970	Low Water Elevation: 4.00' High Water Elevation: 11.09'
<b>D</b>	75,573 runoff	75,829	Low Water Elevation: 3.00' High Water Elevation: 5.00'

Note: \*Low Water Elevation refers to the bottom of the Bioretention Area, which is the lowest storage elevation for rainwater. High Water Elevation refers to the top of the Bioretention Area which is the highest design elevation of water to achieve the design capacity.

<sup>+</sup>The preliminary grading and drainage plan for Drainage Areas A and B are sized to accommodate runoff from an 8-inch rainfall. Drainage provided under the proposed action exceeds the requirements for all drainage areas.

The Bioretention Areas are specifically designed to accommodate stormwater runoff from the proposed subdivision roadway areas. It is anticipated that stormwater runoff generated within the proposed residential lots will contain and recharge stormwater via leaching pools installed within each lot to a minimum three-inch rainfall design (or greater as required by State or County agency). Example calculations demonstrating three-inch containment for typical lots (i.e., 6,000 SF, 40,000 SF, and 43,560 SF lots) are provided below, and accompanying typical plot plans are provided in Appendix B.

**Table 9 Required and Provided Drainage Capacity – Residential Lots**

<b>Proposed Residential Lot Sizes</b>	<b>Required (cf) Based on 3-inch Rainfall</b>	<b>Provided (cf) in Residential Lots</b>
<b>6,000 SF Lot*</b>	809 runoff	1,009
<b>40,000 SF and 43,560 SF Lot*</b>	5,100 runoff	5,448

Note that the stormwater management system for the proposed residential lots are not shown on the *Street Grading and Drainage Plans*.

\*See discussion in Section 2.1.2 and Table 1 as it relates to the minimum lot sizes dictated by the zoning requirements for the three involved municipalities.

As demonstrated above, the proposed stormwater management system for the subdivision has been designed to store, at a minimum, runoff from a three-inch storm event (or greater),

per local requirements, which represents a significant improvement over existing conditions where only minimal stormwater management infrastructure is present.

In addition to the Bioretention Areas and the leaching pools expected to be installed within the individual residential lots, the proposed stormwater management system is also proposed to include a biofiltration swale, to be constructed within an existing upland area adjacent to the western shoreline of Woodmere Basin. This biofiltration swale would treat stormwater runoff overflowing from select Bioretention Areas in the event of storms exceeding the design capacity, prior to discharging into Woodmere Basin. The swale would also provide additional storage volume for overflow from the proposed bioretention areas during those potential heavier rainfall events. Stormwater runoff discharging from the biofiltration swale would be controlled by multiple weir structures at each outfall to maintain peak discharge flow rates equal to or less than pre-development conditions. As mentioned above, the proposed structures would contain unit filtration devices to provide additional treatment prior to discharge (i.e., removal of suspended solids, debris and trash, and floating product typically seen with roadway runoff).

The bioretention areas and the biofiltration swale would be surrounded with appropriate landscape plantings, as described herein. Bioretention and biofiltration plantings are selected based on their water needs as well as their preferred planting environments and native/adaptive designation. Plantings with deep root systems would aid in both securing the bioretention area and biofiltration swale from erosion caused by stormwater run-off and in providing runoff the opportunity to percolate naturally prior to entering the bioretention area and biofiltration system. Plantings must be able to tolerate wet conditions as well as conditions of drought as they are not often irrigated. For large bioretention areas and biofiltration swales, it is common practice for a seed mix of suitable species to be used. Plant species that may be used for the application of the proposed bioretention and biofiltration areas include, but are not limited to, the following:

- › Little bluestem  
(camper)
- › Weeping lovegrass
- › Creeping red fescue
- › Blue grama (bad river)
- › Switchgrass, Long  
Island
- › Perennial blue flax
- › Blackeyed susan,  
coastal plain
- › Bigleaf lupine
- › Showy ticktrefoil
- › Nodding onion
- › Perennial gaillardia
- › Oxeye daisy
- › Butterfly milkweed
- › Cosmos
- › Red poppy corn
- › Corn poppy, shirley  
mix
- › Partridge
- › Mistflower
- › Hoary skullcap
- › Gray goldenrod
- › Hairy beardtongue
- › White heath aster
- › Showy aster
- › Purple lovegrass
- › Hairawn muhly

As indicated previously, the subject property has been operated as a golf course for the past 109 years. A majority of stormwater runoff from the subject property has been minimally treated before discharging into Woodmere Basin. The areas surrounding Woodmere Basin, along Keene Lane, Martha Lane and south of Ivy Hill Road are not connected to the piped ponds and directly discharge runoff into the basin without treatment. These conditions have the potential to affect the water quality of Woodmere Basin in connection with the use of landscape chemicals and other techniques for golf course maintenance utilized over the past century. Upon implementation of the proposed action, stormwater would be retained on site, and for any overflow that reaches Woodmere Basin, there would be a greater level of treatment beyond what currently occurs on the subject property. Under proposed conditions, stormwater would be more effectively treated to remove pathogens, nitrogen, sediment and other contaminants before discharge into Woodmere Basin.<sup>41</sup> According to the New York State Green Innovation Grant Program, green infrastructure (such as the proposed Bioretention Areas) “improves water quality by reducing and treating stormwater at its source through infiltration and evapotranspiration. Green infrastructure also provides multiple environmental, economic, and social benefits, which include: filtering pollutants, recharging aquifers, rivers and streams, alleviating flooding, preserving wildlife, restoring habitat, cooling the surrounding environment, reducing air pollution, and decreasing energy usage.” Bioretention and biofiltration systems remove pollutants and reduce stormwater runoff by simulating natural ecosystems through species diversity, density and distribution of vegetation, and the use of native species. This allows for the system to be resistant to insects, disease, pollution, and climatic stresses.<sup>42</sup>

The proposed biofiltration swale would be landscaped with those plant species determined to be the most appropriate for the subject property, such as those listed above. Moreover, the installation of the vegetated biofiltration swale would substantially increase the amount of native-vegetated wetland habitat at the subject property, while providing valuable stormwater treatment functions and potential improvements to the water quality of stormwater discharge to Woodmere Basin, as compared to existing conditions. Based on the foregoing analysis, it is anticipated that there would be no significant adverse stormwater impacts under the proposed action. Rather, an overall benefit may be expected, due to improved stormwater management.

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

As the proposed project involves soil disturbance of one or more acres, coverage under the SPDES GP-0-20-001 (or subsequent version) would be obtained prior to implementation of the proposed action.

Specifically, a SWPPP would be developed at the time the subdivision plan is finalized, in accordance with the requirements of the GP-0-20-001, Article XXXVIII of the Hempstead BZO, Chapter 177 of the Lawrence Village Code, and Article IX of Chapter 150 of the Woodsburgh Village Code. The SWPPP is a construction management document that includes a detailed erosion and sediment control plan to manage stormwater generated on-

<sup>41</sup> New York State. *Green Innovation Grant Program*. Available at: <https://www.efc.ny.gov/GreenGrants>. Accessed November 2019.

<sup>42</sup> New York State. *Green Innovation Grant Program*. Available at: <https://www.efc.ny.gov/GreenGrants>. Accessed November 2019.

site during construction activities, along with an analysis of the post-construction stormwater management system for compliance with the GP-0-20-001 and requirements set forth in the respective Code sections of the three municipalities, and description of construction inspections and long-term drainage maintenance requirements. The erosion and sediment control plan is detailed on Sheets C-5.1 and C-5.2 in Appendix B.

All erosion and sedimentation control measures would be installed and maintained in accordance with the SWPPP and/or as otherwise indicated within the *2016 Blue Book*, which provides standards, specifications and criteria on minimizing erosion and sediment impacts from construction activity involving soil disturbance. The *NYS Stormwater Manual*, which provides standards and specifications for selection and design of stormwater management practices to comply with State stormwater management performance standards, would also be used in preparing the SWPPP.

The SWPPP is expected to be reviewed by the assigned Stormwater Management Officers of the Town of Hempstead, Village of Lawrence, and Village of Woodburgh for conformance with GP-0-20-001 and the associated sections of the Town/Villages Codes respective to each municipality. The MS4 SWPPP Acceptance Form (certifying each municipality's acceptance of the SWPPP) must be filed with the Notice of Intent submission to NYSDEC to obtain permit coverage. Coverage under the GP-0-20-001 must be obtained prior to the start of construction activities on the property.

Once coverage under the GP-0-20-001 is obtained and construction begins, the site operator is responsible for compliance with the SWPPP, including ensuring that all erosion and sediment control practices identified in the SWPPP are maintained in effective operating condition at all times. Pursuant to GP-0-20-001 and the requirements outlined in the respective municipal Codes, inspections of construction activity and erosion controls/stormwater management practices are required to be conducted by a qualified inspector at a minimum frequency of once every seven calendar days and within 24 hours of any storm event producing 0.5 inch of precipitation or more (or otherwise in accordance with the latest permit requirements at the time of construction). The site operator is obligated to maintain the record of all inspection reports on the site and address necessary corrective actions identified by the qualified inspector. Implementation of erosion and sediment control measures, as described in *the 2016 Blue Book* and *NYS Stormwater Manual* noted above, as well as the use of best management practices, as also discussed in these publications, would assist in ensuring that the proposed development would minimize stormwater-related impacts to groundwater and surface water resources.

As part of the SWPPP, soil erosion and sediment control measures, designed in accordance with the above, would be implemented prior to the start of and maintained throughout construction of the proposed development. Erosion and sediment control measures would include, but not be limited to the following:

- › Clearing and grading would be scheduled so as to minimize the size of exposed areas and the length of time that areas are exposed.
- › The length and steepness of cleared slopes would be minimized to reduce runoff velocities.

- › Runoff would be diverted away from cleared slopes.
- › Sediment would be trapped on the site by use of silt fencing, temporary sediment basins or other measures deemed necessary.
- › Construction of temporary swales would be implemented to divert runoff and control erosion of land.
- › Soil would be stockpiled and surrounded by a silt fence. Stockpiles that are to remain for longer periods of time would be temporarily vegetated to limit erosion.
- › Each section to be phased during construction would be bordered with a silt fence to protect nearby water quality.
- › Existing and new drainage systems, both on-site and within the public rights-of-way, would be protected with sedimentation bags to prevent sediment from entering the system.
- › Temporary constructed entrances consisting of clean stone would be utilized to prevent tracking of sediment off site from construction vehicles during construction.

See Sheets C-5.1 and C-5.2 in Appendix B for the erosion and sediment control measures to be implemented as part of the proposed action.

These measures would reduce the potential for adverse erosion and sediment impacts. The final SWPPP and corresponding Erosion and Sediment Control Plan would be subject to review and approval by the respective municipalities during the detailed Subdivision review process for the proposed action. Once approved by the municipalities (i.e., prior to construction), documentation would be filed with the NYSDEC to obtain coverage under the aforementioned permit.

Pursuant to the requirements of GP-0-20-001 and the respective municipal Codes, routine maintenance of post-construction stormwater management practices is required to ensure continuous and effective operation of each practice. The SWPPP must include a maintenance schedule for the various stormwater management practices. Additionally, prior to final plan approval, pursuant to Article XXXVIII of the Hempstead BZO, Chapter 177 of the Lawrence Village Code, and Article IX of Chapter 150 of the Woodsburgh Village Code, and prior to filing for termination of coverage under the GP-0-20-001, an Operation and Maintenance Plan outlining the long-term maintenance requirements for on-site stormwater management practices must be prepared. The owner or operator must modify their deed of record to include a deed covenant that requires operation and maintenance of these practices in conformance with the Operation and Maintenance Plan, pursuant to Part V.A.5 of the GP-0-20-001.

As coverage under the General Permit would be obtained, and the aforementioned erosion and sedimentation control measures, as well as the water quantity controls, would be implemented as part of the proposed action, no significant adverse erosion, sedimentation or stormwater impacts are expected.

### ***The Five Towns NY Rising Community Reconstruction Plan (March 2014)***

As mentioned above, the Five Towns NYRCR Plan recommends certain projects relating to stormwater infrastructure upgrades in Woodmere CDP and the Village of Lawrence. The stormwater infrastructure project in Woodmere includes the study and upgrade of the stormwater infrastructure over two phases located in the northern part of the CDP, approximately 0.96 to 1.06 miles north and northwest, respectively, from the subject property.<sup>43</sup> This project would be expected to reduce the vulnerability of built structures in the CDP by addressing problems such as flooding due to poor drainage and inundation by seawater back-flowing through the stormwater sewer system. The stormwater infrastructure project in Lawrence includes addressing inadequate stormwater capacity and the tide entering the outfall pipes backing up into the system along several key transportation routes that are located 0.6± to 1.3± miles southwest of the subject property. This project would install improved stormwater disposal infrastructure such as pipe and catchment upgrades, check valves and swirl separators at the specified transportation routes to reduce flooding.

The NYRCR Plan does not specifically identify the subject property as a recommended project site for any stormwater-related improvement projects or offer other relevant recommendations related to the proposed action. However, the proposed action is expected to result in an overall stormwater benefit, as detailed above. The installation of stormwater infrastructure on the subject property would improve stormwater management conditions on the subject property by increasing on-site storage, and by installing water quality measures that are not present under existing conditions. As the site currently overflows to the Woodmere Basin, Woodmere Channel and ultimately Brosewere Bay, the proposed action may result in a beneficial effect on the water quality of Brosewere Bay and adjacent water bodies.

Overall, it is expected that the proposed action would not adversely affect the relevant goals of the Five Towns NYRCR plan.

### **Groundwater Resources**

With respect to potential impacts upon groundwater resources, it is noted that the proposed action would rely on a community water supply, and the existing private groundwater wells on-site that are used for large quantities of irrigation would be abandoned. The future single-family residences are not expected to directly utilize groundwater beneath the site for any reason. Additionally, the proposed residences would discharge sanitary wastes to the municipal sewers maintained by the NCDPW, such that there would be no on-site discharges of sanitary waste to groundwater or associated potential impacts. As a residential use, there would also be no process water discharges or similar wastes that could potentially be discharged to groundwater. Accordingly, the potential for the proposed action to result in significant adverse impacts to groundwater is substantially limited.

Excavation and installation of building foundations and stormwater management structures have the potential to reach groundwater, as published data and site-specific subsurface

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<sup>43</sup> Following the NYRCR Plan, a Five Towns Drainage Study (August 2015) was completed, which made recommendations consistent with the NYRCR Plan with respect to these described stormwater projects.

investigations indicate shallow groundwater conditions at portions of the subject property (see Section 3.2.1 and the *Geotechnical Evaluation* report in Appendix E of this DEIS). Stormwater drywells (or similar leaching structures, such as leaching galleys) will be implemented for managing runoff from the individual lots. It is expected that these structures would be designed to provide a minimum separation distance beneath the base of the leaching structure of two feet above observed groundwater levels. The final design of the proposed stormwater management system components that will accommodate drainage from the proposed subdivision roadways (i.e., the proposed Bioretention Areas) is also expected to provide a minimum separation distance to groundwater of two feet, such that associated excavations are not expected to reach groundwater. Any required dewatering during construction activities would be conducted in accordance with applicable regulations and any discharge from dewatering will be conducted within the limitations of the SPDES General Permit GP-0-20-001 and/or the NYSDEC's Long Island Well permitting program (see 6 NYCRR Part 602), which may apply if the total capacity of temporary dewatering wells will exceed 45 gallons per minute. The construction manager will determine appropriate dewatering means and methods as necessary in accordance with prevailing regulations.

Overall, no significant adverse groundwater impacts are expected to result from excavation and installation of foundations and stormwater management structures.

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

As previously discussed, the subject property is within Hydrogeologic Zone VII, an area of shallow groundwater recharge and predominantly lateral flow southward toward the Atlantic Ocean. The Highest Priority Areawide alternative relevant to the proposed action in the *208 Study* for Zone VII, are:

- › Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to ground or surface waters.

The potential impacts of the proposed action with respect to stormwater runoff are discussed in the above Section 3.2.2. Overall, the proposed action includes a stormwater management system designed to be protective of groundwater and surface water resources in accordance with New York State, Nassau County and respective local requirements. As such, the proposed action is consistent with the relevant recommendation of the *208 Study*.

- › Control animal populations and animal waste disposal.

The subdivision of the subject property to create 284 single-family residential lots is not expected to involve any new concentration of animal populations. Homeowners would be subject to any relevant regulations that apply to the keeping of household pets with respect to animal waste disposal.

The other Highest Priority Area Wide Alternative for Hydrogeologic Zone VII relates to the siting of new landfills, which is not relevant to the proposed action. Overall, the proposed action is consistent with the relevant recommendations of the *208 Study*.



### ***Saltwater Intrusion***

Upon implementation of the proposed action, all operation of the two existing private irrigation wells on-site would be eliminated. These wells together pump approximately 213,987± gpd of groundwater from beneath the subject property, on average, for irrigation of the golf course, thus existing impacts that these wells may have on groundwater levels or freshwater flow (potential contributors to saltwater intrusion), would be mitigated upon implementation of the proposed action.

Potable water would be supplied to the proposed single-family residential lots via the community water supply system maintained by NYAW. Accordingly, the management of the pumpage of groundwater to supply the additional residences within the NYAW service area would be undertaken by the water supplier. Specifically, the subject property is located in the NYAW Lynbrook Operations District, which derives its water from 36 wells drilled into the Magothy, Jameco and Lloyd aquifers. NYAW has been advised of the proposed action by correspondence dated June 4, 2019 (see Appendix N) and by telephone on September 26, 2019. Formal confirmation of water availability remains pending. NYAW was further advised of the proposed action by the NCPC, as Lead Agency for the environmental review of the proposed action, which provided details about the proposed action to NYAW, as did all potential involved agencies and interested parties as part of the coordinated environmental review process. To date, NYAW has not alerted the Applicants or the NCPC of any water supply-related issues, nor has NYAW indicated that provision of the requested amount of water would exacerbate any local saltwater intrusion concerns.

It should also be noted that the proposed stormwater management system is expected to increase the quantity of stormwater runoff that will be contained and infiltrated at the subject property via recharge to the ground, as compared to existing conditions where stormwater is permitted to run overland or overflow from on-site ponds into the Woodmere Basin (see detailed discussion above in the subsection entitled, *Stormwater Runoff*).

Moreover, the Long Island Commission for Aquifer Protection, which is a consortium of water utility representatives, elected officials and scientists, issued a publication entitled, *State of the Aquifer (2016)*,<sup>44</sup> which discusses a wide range of water quality and water supply issues facing the region, including saltwater intrusion. That report identifies specific locations across Long Island where saltwater contamination has been found, but does not identify the area of the proposed action area as having experienced saltwater intrusion issues. The report further describes measures being taken by local water providers to identify and address potential saltwater intrusion conditions.

Elevated concentrations of chloride can be an indicator of saltwater intrusion. Based on a review of the 2018 Annual Drinking Water Quality Report for NYAW's Lynbrook distribution area, the highest measured level of Chlorides in drinking water was 29.8 parts per million (ppm), which is well below the applicable Maximum Contaminant Level (MCL) drinking water

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<sup>44</sup> Long Island Commission for Aquifer Protection. *State of the Aquifer 2016*. Available at: [http://www.liaquifercommission.com/images/LICAP\\_State\\_of\\_the\\_Aquifer\\_2016.pdf](http://www.liaquifercommission.com/images/LICAP_State_of_the_Aquifer_2016.pdf). Accessed September 2019.

standard of 250 ppm. This suggests that significant Chlorides contamination is not occurring in this service area.

Overall, based on the above, the proposed action is not expected to result in a significant adverse environmental impact related to saltwater intrusion.

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

As discussed above, the subject property is located outside the boundaries of any SGPA. Therefore, there will be no impact to SGPA resources.

Overall, based on the foregoing analyses, no significant groundwater impacts are expected to result from implementation of the proposed action.

**Coastal Resources**

***The South Shore Estuary Reserve Comprehensive Management Plan***

The SSER Plan addresses a broad geography and a wide range of issues related to the quality of the SSER's resources. However, based on a detailed review of the Plan, many of the SSER Plan's analyses and recommendations are not applicable to the proposed action. As the proposed subdivision will be served by public sewer, no discharge of wastes to ground or surface waters at the subject property, and as a residential use, no process water discharges would result. Additionally, the proposed action is a private development application not involving public facilities. The only relevant findings and recommendations of the Plan are related to stormwater management. A consistency analysis of the proposed action with the relevant recommendations of the SSER Plan follows:

*Adopt best management practices to control drainage, erosion and sedimentation prior to and during construction.*

As part of the proposed action, the proposed development would adopt best management practices to control drainage, erosion and sedimentation prior to and during construction. See Section 3.2.2 Stormwater Runoff, above, for an in-depth discussion about the proposed projects best management practices for controlling drainage, erosion and sedimentation.

*Adopt best management roadway operation and maintenance.*

The proposed roadways would be offered to the respective municipalities and thus maintained by them. For the purposes of this analysis, it is assumed that the respective municipalities will employ appropriate operation and maintenance practices.

*Ensure compliance with existing State Pollution Discharge Elimination System (SPDES) permits.*

The proposed development would comply with the GP-0-20-001 SPDES permit. See Section 3.2.2 New York State SPDES Program, above, for an in-depth consistency analysis with this permit. No other SPDES permits are expected to be required at this time.

Overall, no significant adverse impacts are expected to result from the proposed action related to stormwater runoff, either during construction or during the operational phase of the proposed action, and the proposed action would be consistent with the relevant

provisions of the SSER Plan. In fact, an overall benefit to the SSER resources may be expected, as the proposed infrastructure would improve stormwater management and treatment on the subject property as compared to existing conditions.

***New York State Department of State Coastal Management Program***

As indicated earlier in this section, the subject property is within the NYS Coastal Area. For actions in the Coastal Area requiring State agency approval(s), EISs must include a discussion of the action's consistency with the relevant State Coastal Policies. The coastal policies of New York State are set forth in 19 NYCRR § 600.5, and the New York State Coastal Management Program is governed by 44 coastal policies.<sup>45</sup> These policies are set forth below in italics, and an assessment of the consistency of the proposed action is presented (in non-italic text) following each policy statement.

*Development Policies*

*Policy 1 – Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.*

The subject property is not considered to be deteriorated. While, in the Applicant's opinion, the site is underutilized, it is zoned for single-family residential use and is being proposed for compatible redevelopment in compliance with the existing zoning. The site is not an "urban waterfront" that might be a suitable candidate for commercial or industrial redevelopment; and, in any case, the current residential zoning in all three municipalities covering the entire site precludes such uses. As the subject property is in private ownership, cultural, recreational and other public uses are not appropriate reuse options. Accordingly, the proposed action is consistent with this policy.

*Policy 2 – Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.*

As discussed under Policy 1, the existing residential zoning of the subject property precludes redevelopment with water-dependent (e.g., commercial or industrial) uses, and makes such uses infeasible at this location. The current use of the site, as a golf course and country club, is also not water-dependent. As such, the proposed action would not displace an existing water-dependent use. Thus, the proposed action would not work counter to advancing this policy.

*Policy 3 – Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.*

The subject property is not located in one of the State's major ports. As such this policy is not applicable to the proposed action.

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<sup>45</sup> Except for the portion of the coastal area on Long Island Sound, for which a special, consolidated set of 13 policies has been promulgated.

*Policy 4 – Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.*

The subject property is not located in a small harbor area. As such this policy is not applicable to the proposed action.

*Policy 5 – Encourage the location of development in areas where public services and facilities essential to such development are adequate.*

As discussed elsewhere in this DEIS, the subject property is expected to be served by all the utilities required to support the proposed development, including water supply, sanitary sewage treatment and disposal, and electricity. The proposed subdivision plan includes adequate accommodations for on-site stormwater management. The site is well-served by the adjacent roadway system, and is proximate to public transportation (e.g., Cedarhurst LIRR station, Woodmere LIRR station, and NICE bus routes). Additionally, the proposed action would place new housing in an area close to shopping and community facilities located along nearby commercial business corridors. Therefore, the proposed action is consistent with this policy.

*Policy 6 – Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.*

This policy pertains to agency review and approval procedures, and is not pertinent to the Applicants' activities involving a private development application. The proposed action is in conformance with the existing zoning and, therefore, by definition, qualifies as a development activity at a suitable location.

#### *Fish and Wildlife Policies*

*Policy 7 – Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.*

The subject property is not located within or adjacent to a Significant Coastal Fish and Wildlife Habitat (SCFWH) (Figure 13). Accordingly, this policy is not relevant to the proposed action. Nonetheless, the proposed action includes a range of measures to mitigate potential project-related impacts to on-site and adjacent surface water and wetland resources in general, such as:

- › Preparation of a SWPPP, to include a detailed phasing plan, erosion and sediment control measures, post-construction control measures, and provisions for inspections and long-term operation and maintenance of the stormwater management system
- › Construction of bioretention basins, which would provide storage and treatment for stormwater runoff generated on the redeveloped property
- › Installation of a shoreline biofiltration swale to filter sediments and pollutants from stormwater overflow before reaching Woodmere Basin

- › Alteration/expansion of the five golf course ponds, to be converted to bioretention basins, which would increase the wetland/surface water acreage at the subject property (as discussed in Section 3.3.2 of this DEIS)
- › Installation of native upland, facultative and wetland plantings
- › Use of best management practices to control drainage, erosion and sedimentation prior to and during construction
- › Cessation of golf course management practices, which is expected to result in water quality improvements.

*Policy 8 – Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.*

The proposed action, involving the development of a single-family residential subdivision, would not entail the storage or use of hazardous materials, other than typical household products; and, therefore, would not pose the potential for hazardous waste discharges or associated bioaccumulation and food chain impacts on local fish and wildlife resources. See the discussion under Policy 7, regarding measures that would be incorporated into the proposed action to mitigate other potential (i.e., sublethal) impacts on ecological resources.

*Policy 9 – Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.*

This policy pertains to governmental actions regarding the recreational use of fish and wildlife resources and, therefore, is not applicable to the proposed action.

*Policy 10 – Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.*

This policy pertains to primarily governmental actions regarding commercial fish and wildlife resources and, in that respect, is not applicable to the proposed action. This policy also is not applicable to the proposed action with respect to the goal of siting new on-shore commercial fishing facilities, as the subject property is not an appropriate potential location for such a use given its residential zoning.

#### *Flooding and Erosion Hazards Policies*

*Policy 11 – Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.*

Portions of the proposed development that would be situated in the Special Flood Hazard Area, AE zone, would be constructed in accordance with all applicable standards promulgated by FEMA and the three municipalities, consistent with this policy. The subject property is not located in the VE zone or in the Coastal Erosion Hazard Area and, therefore, is not susceptible to the additional, intensified hazards associated with construction in these locations.

*Policy 12 – Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.*

The subject property does not contain beaches, dunes, barrier islands or bluffs, and the proposed action would not otherwise damage any such natural protective features, consistent with this policy.

*Policy 13 – The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.*

The proposed subdivision does not envision the construction of new erosion protection structures or reconstruction of existing erosion protection structures on the subject property. To the degree that individual lot owners may pursue such improvements in the future, appropriate application(s) would have to be made to NYSDEC (and possibly the USACE), which would be subject to technical review to ensure that the objectives of this policy are met.

*Policy 14 – Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.*

See the discussion under Policy 13.

*Policy 15 – Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.*

The proposed action does not include mining, excavation or dredging in coastal waters. Therefore, this policy is not applicable.

*Policy 16 – Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.*

The proposed action does not involve the use of public funds for any such protective structures. Therefore, this policy is not applicable to the proposed action.

*Policy 17 – Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.*

As discussed under Policy 13, the proposed subdivision does not envision new or reconstructed erosion protection structures, thereby relying on existing conditions, including salt marshes and tidal flats, to provide shoreline protection. To the degree that individual lot owners would like to pursue shoreline protection structures, appropriate application(s)



would have to be made to NYSDEC (and possibly the USACE), which would be subject to technical review to ensure that the objectives of this policy are met.

General Policy

*Policy 18 – To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.*

It is respectfully submitted that the proposed development does not fall into the category of “proposed major actions in the coastal area.” In any case, this DEIS demonstrates that the proposed action would not significantly impair valuable coastal waters and resources; and the findings statement to be adopted by the Lead Agency (and other involved agencies) at the conclusion of the current DEIS process will be required to “weigh and balance relevant environmental impacts with social, economic and other considerations,” pursuant to 6 NYCRR 617.11(d)(2) of the SEQRA regulations, consistent with this policy.

Public Access Policies

*Policy 19 – Protect, maintain, and increase the level and types of access to public water related recreation resources and facilities.*

The subject property is privately owned and does not provide public access or public water-related recreation. Therefore, the proposed action would not affect such public resources at the site, and would not otherwise impair public access/recreation at off-site locations.

*Policy 20 – Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.*

The subject property is privately owned and does not currently provide public access to public trust lands. Therefore, the proposed action would not affect public access to public trust lands at the site, and would not otherwise impair such access at off-site locations.

Recreation Policies

*Policy 21 – Water dependent and water enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast.*

The subject property is privately owned and does not currently provide public access or public water-related recreation. The proposed action involves the development of a residential subdivision in accordance with the zoning of the site. Therefore, this policy, which is directed at encouraging and facilitating water-dependent and water-enhanced recreation in association with public access to the waterfront, is not applicable to the proposed action.

*Policy 22 – Development when located adjacent to the shore will provide for water-related recreation whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.*

As discussed previously, the subject property currently operates as a private golf course and country club. Therefore, although new or expanded public access is not contemplated, the proposed action would not eliminate any existing public access to the waterfront.

*Historic and Scenic Resources Policies*

*Policy 23 – Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the State, its communities, or the Nation.*

As discussed in Section 3.5 of this DEIS:

- › No S/NR-listed or eligible historic resources have been identified within the subject property. Therefore, the proposed action would not affect historic architectural resources on the site.
- › Although two NR-eligible historic districts are located adjacent to the subject property (the Flower Streets Historic District and the Rockaway Hunt Historic District), the future residences at the subject property would be compatible with the context of these two neighboring districts, with similar lot sizes and layouts.
- › A Phase I archaeological survey completed for the subject property indicates that there are no archaeological sites within the site.

Based on the foregoing, the proposed action would not have any adverse effects on historic or archaeological resources, consistent with this policy.

*Policy 24 – Prevent impairment of scenic resources of statewide significance.*

The subject property does not contain and does not have the potential to impair any scenic resources of statewide significance. Therefore, this policy is not applicable.

*Policy 25 – Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.*

Although the proposed action would change the visual character of the subject property, residential lot development on the site would be consistent with existing development in the surrounding area, resulting in aesthetic compatibility. As discussed in Section 3.4.3 of this DEIS, multiple measures are included in the proposed action to provide mitigation with respect to aesthetic resources:

- › Construction fencing would be installed around the border of the subject property to provide visual screening during construction activities
- › The architectural design of future residences would be aesthetically pleasing, in a manner that would fit with the existing aesthetic character of the surrounding area, as reviewed and approved by the respective municipalities in which the development of each homesite would occur

- › Maintained lawns and landscaping of differing designs would further integrate the new residences into the surrounding community, mimicking landscaping found in nearby neighborhoods
- › Where feasible, existing trees within the subject property would be retained.

*Agricultural Lands Policy*

*Policy 26 – Conserve and protect agricultural lands in the State's coastal area.*

The subject property does not contain agricultural lands. Therefore, this policy is not applicable.

*Energy and Ice Management Policies*

*Policy 27 – Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.*

As the proposed action does not involve the siting or construction of a major energy facility, this policy is not applicable.

*Policy 28 – Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding.*

As the proposed action does not involve ice management, this policy is not applicable.

*Policy 29 – The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.*

As the proposed action does not involve the development of offshore uses or resources, this policy is not applicable.

*Water and Air Resources Policies*

*Policy 30 – Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to State and National water quality standards.*

As the proposed action does not involve the municipal, industrial, or commercial discharge of pollutants, this policy is not applicable.

*Policy 31 – State coastal area policies and management objectives of approved local Waterfront Revitalization Programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.*

This policy pertains to the State water quality classification program; and, therefore, is not applicable to the proposed residential development of the subject property.

*Policy 32 – Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.*

The proposed development would be connected to the existing Nassau County sanitary sewer system serving the subject property. Therefore, this policy, encouraging the use of alternative or innovative (i.e., on-site) sanitary waste systems, is not applicable to the proposed action.

*Policy 33 – Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*

The proposed development would not involve a combined sewer system. Sanitary wastewater would be discharged to the existing Nassau County system serving the subject property; and stormwater would be handled in a separate on-site system. As discussed herein (i.e., under Policies 7, 37 and 44), stormwater practices would be implemented for the proposed action that are protective of coastal waters, consistent with this policy.

*Policy 34 – Discharge of waste materials into coastal waters from vessels subject to State jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.*

The proposed action does not involve the construction of facilities for vessels. Therefore, this policy is not applicable.

*Policy 35 – Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.*

The proposed action does not include dredging, filling or dredged material disposal in coastal waters. Therefore, this policy is not applicable.

*Policy 36 – Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.*

The proposed action does not involve the shipment or storage of petroleum or other hazardous materials. Should any of the future residences utilize heating oil for home heating purposes, storage facilities would be subject to the relevant design requirements of the NCDH and/or the Nassau County Fire Marshal. Adherence to such requirements would be expected to prevent or minimize the potential for spills.

*Policy 37 – Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.*

Best management practices would be implemented to minimize the potential for non-point (i.e., stormwater-related) impacts to coastal waters, including the construction of bioretention basins and a biofiltration swale, and the planting of native/adaptive vegetation to minimize the need for irrigation, fertilizer and landscaping chemicals. To mitigate

potential non-point source impacts during construction, a SWPPP would be prepared and implemented, which would include a detailed phasing plan, erosion and sediment control measures, post-construction control measures, and provisions for inspections and long-term operation and maintenance of the stormwater management system. See further discussion under Policy 7 regarding best management practices during project construction and operation.

With the foregoing and related measures in place, the proposed action would be consistent with this policy.

*Policy 38 – The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.*

The proposed action would rely on a community water supply, and the existing private groundwater wells on-site that are used for large quantities of irrigation for the golf course would be abandoned. Sanitary wastes from the proposed houses would be discharged to the Nassau County system, such that there would be no on-site discharges of sanitary waste to groundwater or associated impacts. Therefore, the potential for the proposed action to result in significant adverse impacts to groundwater is substantially limited, particularly when compared to the existing/prior golf course use of the site and the attendant application of fertilizers and landscaping chemicals.

Measures included in the proposed action directed at minimizing potential impacts on surface water resources, consistent with the surface water protection aspect of this policy, are discussed herein under Policies 7, 37 and 44.

*Policy 39 – The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.*

The proposed action, involving the development of a single-family residential subdivision, would not generate hazardous wastes, other than those related to typical household products. Solid waste management for the proposed development would comply with the requirements of municipality within which each respective home is located, as is the case for all existing residences in these municipalities, such that consistency with this policy is anticipated.

*Policy 40 – Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.*

As the proposed action does not involve a major steam electric generating or industrial facility, this policy is not applicable.

*Policy 41 – Land use or development in the coastal area will not cause national or State air quality standards to be violated.*

The proposed action involves the development of a community of single-family homes, which is not the type of use that generally is associated with significant air emissions, as would be the case with certain industrial uses; and, in fact, an air quality analysis for operation of the proposed development was not included in the Final Scope prepared by the Lead Agency based on an expectation that there would not be a significant impact, much less contravention of federal or state air quality standards. This DEIS identifies a number of measures to minimize potential air quality impacts during project construction, primarily related to proper dust control; however, this is directed at addressing localized effects and, again, does not pertain to any possible violations of air quality standards. Based on these considerations, the proposed action is consistent with this policy.

*Policy 42 – Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.*

This policy relates to State regulatory action under the Federal Clean Air Act, and is not relevant to the Applicant's activities involving a private development application.

*Policy 43 – Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.*

The proposed action, involving the development of a community of single-family homes, does not entail the emission of significant quantities of chemicals that are acid rain precursors, as would be the case with certain industrial uses. Accordingly, the proposed action is consistent with this policy.

#### Wetlands Policy

*Policy 44 – Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*

As discussed in Section 3.3.2 of this DEIS, the proposed action would result in an increase in wetland/surface water area, as well as qualitative improvements to native plant diversity, wildlife habitat and water quality. Mitigation for potential indirect impacts to wetlands on and proximate to the subject property that may be associated with the proposed action would occur with the implementation of stormwater best management practices and other controls, as discussed under Policy 7 with respect to the protection the West Hempstead Bay SCFWH. Any regulated activity that would affect freshwater or tidal wetlands at the subject location would require that appropriate application(s) be made to NYSDEC (and possibly the USACE), which would be subject to technical review to ensure that the objectives of this policy are met.

### **3.2.3 Proposed Mitigation Measures**

Various measures have been incorporated into the overall project design to ensure compliance with the prevailing regulations and relevant management plans. As no significant adverse impacts to water resources have been identified, no further mitigation measures are proposed.



### **3.3 Ecology and Wetlands**

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Ecological Resources and Wetlands:

- › Surface water resources on an adjacent to the subject property will be identified and described
- › An ecological field survey of the site, identifying existing habitats
- › An assessment of the quality and functional capacity of the identified ecological communities
- › Inventories of vegetation and wildlife species observed during the field survey, as well as those expected at the site based on habitat observations and review of NYSDEC databases and other published resources
- › A USFWS Information for Planning and Consultation (IPaC) resource report for federally-listed species
- › A records request to the NYNHP for records of NYS-listed species and/or communities
- › A survey and/or habitat assessment for any rare/protected species identified in agency records as potentially occurring at the site, as applicable
- › A review of both NYSDEC tidal and freshwater wetland maps and the National Wetland Inventory Maps to determine the potential for regulated wetlands to be present on site
- › Field identification and assessment of wetlands and surface waters occurring on site
- › A summary of applicable agency regulatory programs pertaining to the identified wetlands and surface waters
- › Consultations with the NYSDEC and USACE to confirm the presence and limits of wetlands identified on site
- › Copies of wetland permit applications submitted to applicable regulatory agencies, as appropriate
- › A tree inventory and a tree removal plan.

A discussion of existing ecological resources and surface waters, potentially significant adverse environmental impacts, and proposed mitigation measures is provided in Sections 3.3.1 through 3.3.3 below.

### **3.3.1 Existing Conditions**

#### **Methodology**

This section provides a summary of the federal, state and local regulatory programs pertaining to ecological resources, as well as a description of the existing ecological resources (inclusive of wetlands and surface waters) at the subject property.

To determine the extent of ecological resources that may be expected to occur at the subject property, relevant government agency resources for the subject property and vicinity were reviewed, including maps and records maintained by the USFWS, NYSDEC, United States Army Corps of Engineers (USACE), and other government agencies, as noted in the text below.

To supplement the desktop review, an ecological field survey of the subject property was conducted on May 9, 2019 by a Certified Ecologist and Professional Wetland Scientist. The field survey included habitat identification and evaluation, plant and wildlife species inventories, wetland and surface water evaluations, and an assessment of the potential for rare/protected species or habitats to occur at the subject property.

#### **Regulatory Setting**

The following text identifies the federal, state and local legislation and regulatory programs pertaining to ecological resources (i.e., surface waters, wetlands, coastal areas, rare/protected species and habitats) that apply to the proposed action.

#### ***Federal***

##### Clean Water Act

The objective of the Clean Water Act (CWA), also known as the Federal Water Pollution Control Act, is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. The CWA regulates point sources of water pollution, such as discharges of municipal sewage, industrial wastewater, and stormwater runoff; the discharge of dredged or fill material into navigable waters and other waters; and non-point source pollution (e.g., runoff from streets, construction sites, etc.) that enter regulated water bodies from sources other than the end of a pipe. Permitting pursuant to Section 404 of the CWA is administered by the USACE. Pursuant to Section 401 of the CWA, applicants for discharges to navigable waters in New York State must also obtain a Water Quality Certification from the New York State Department of Environmental Conservation (NYSDEC).

##### Rivers and Harbors Act of 1899, Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the USACE, for the construction of any structure in or over any navigable water of the United States, the excavation from or deposition of material in these waters, or any obstruction or alteration in navigable waters of the United States. The purpose of this Act is to protect navigation and navigable channels. Any structures placed in or over

navigable waters, such as pilings, piers, or bridge abutments up to the mean high-water line, are regulated pursuant to this Act.

#### Endangered Species Act

The Endangered Species Act (ES Act) recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The ES ACT provides for the protection of endangered and threatened species and the critical habitats on which endangered and threatened species depend for survival. The ES ACT also prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the ES ACT, and interstate or foreign commercial activities. Review and permitting under Section 7 of the ES ACT are conducted by the USFWS and/or the National Marine Fisheries Service (NMFS).

#### Magnuson-Stevens Act

The Magnuson-Stevens Act outlines the process for the NMFS and the Regional Fishery Management Councils (in the case of the subject property, the Mid-Atlantic Fishery Management Council) to comment on actions proposed by federal agencies (i.e., by issuing permits, authorization or funding for projects) that may adversely impact areas designated as Essential Fish Habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

Adverse impacts on EFH include any impact that reduces the quality and/or quantity of EFH. Adverse impacts may include:

- › Direct impacts, such as physical disruption or the release of contaminants;
- › Indirect impacts, such as the loss of prey or reduction in the fecundity (number of offspring produced) of a managed species; and
- › Site-specific or habitat-wide impacts that may include individual, cumulative, or synergetic consequences of a federal action.

### ***New York State***

#### Tidal Wetlands Act, Article 25, ECL, Implementing Regulations 6 NYCRR §661

Tidal wetlands regulations apply anywhere tidal inundation occurs on a daily, monthly, or intermittent basis. In New York State, tidal wetlands include much of the Hudson River, as well as the marine shores, bays, inlets, canals, and estuaries of Long Island, NYC and Westchester County. The NYSDEC administers the tidal wetlands regulatory program and the mapping of the State's tidal wetlands. A permit is required for various land uses and activities within regulated tidal wetlands and/or wetland adjacent areas, which extend up to 300 feet inland from the tidal wetland boundary (150 feet within the boundaries of New York City). However, the tidal wetland adjacent area can be limited to less than 300 feet, such as by the presence of substantial man-made structures (e.g., bulkheads, seawalls, roadways, etc.) that are a minimum of 100 feet in length, were constructed on or before August 20, 1977 and have remained functional since that time.

*Protection of Waters Program, Article 15, Title 5 ECL, Implementing Regulations 6 NYCRR §608*

The NYSDEC administers the Protection of Waters Program to preserve and prevent undesirable impacts to rivers, streams, lakes and other water bodies. Through this program, the NYSDEC has established and enforces regulations intended to be compatible with the preservation, protection and enhancement of the present and potential values of the water resources, protect the public health and welfare, and consistent with the reasonable economic and social development of New York State.

*Endangered and Threatened Species of Fish and Wildlife; Species of Special Concern, Articles 11 and 13 ECL, Implementing Regulations 6 NYCRR §182*

New York State endangered, threatened and special concern wildlife species are listed in 6 NYCRR Part 182, which prohibits the taking, import, transport, possession or of these species. Pursuant to 6 NYCRR Part 182.8, consultations and potential permitting with NYSDEC are required for any action that might result in incidental take of endangered or threatened wildlife species. With respect to vegetation, New York State protected native plants are listed and afforded protection under 6 NYCRR Part 193.3. Pursuant to 6 NYCRR Part 193.3(e), it is a violation to pick, pluck, sever, remove, damage by the application of herbicides or defoliant, or carry away, any protected native plant without the consent of the owner.

*Waterfront Revitalization of Coastal Areas and Inland Waterways, NYS Executive Article 42 (910 to 923)*

The federal Coastal Zone Management Act was passed in 1972 to encourage coastal states to develop and implement Coastal Management Programs (CMPs). The act was established as a United States national policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the Nation's coastal zone for current and succeeding generations. In New York State, the CMP is administered by the NYSDOS, under the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. NYSDOS has established 44 State coastal policies that promote the beneficial use of coastal resources, prevent their impairment or otherwise address activities that may affect resources within the New York State Coastal Zone. Consistency review with NYS Coastal Policies is required for projects that are subject to federal funding, permits and/or authorizations.

***Local***

Town of Hempstead

Freshwater wetlands located within the Town of Hempstead are regulated pursuant to Town Code § 165. Pursuant to § 165, regulated activities (e.g., clearing, grading, ground disturbance and subdivisions of land) within freshwater wetlands and/or the 100-foot adjacent area of freshwater wetlands require a Village permit.

Pursuant to Town Code § 165, a permit from the Director of the Department of Conservation and Waterways is required for any structure (e.g., bulkheads, docks, etc.) over, on, into or adjacent to any Town waterway.

### Incorporated Village of Lawrence

Freshwater wetlands located within the Incorporated Village of Lawrence are regulated pursuant to Village Code § 98. Pursuant to § 98, regulated activities (such as clearing, grading, ground disturbance and subdivisions of land) within freshwater wetlands and/or the 100-foot adjacent area of freshwater wetlands require a Village permit.

### Incorporated Village of Woodsburgh

Wetlands located within the Incorporated Village of Woodsburgh are not regulated pursuant to the Village Code. However, all federal and New York State regulations pertaining to wetlands and surface waters are applicable to any such resources located within the Village.

## **Existing Conditions**

### ***Ecological Communities and Vegetation***

As observed during the field survey, the 116.72±-acre subject property is primarily composed of cultural ecological communities, which are defined as ecological communities that have been created or substantially altered by humans. The cultural communities observed at the subject property were created in association with current and historical land uses as a golf course and country club.

As shown on Table 2 the vast majority (89.5± percent) of the subject property is occupied by maintained turf grasses and landscaping associated with the eighteen-hole golf course. Impervious surfaces (e.g., the clubhouse building, tennis courts, pro shop, cart house, maintenance garage, swimming pool, patio area, parking lot, driveways, cart paths and other Woodmere Club facilities) comprise 6.1 percent of existing land use and are concentrated primarily along the eastern boundary of the subject property, near the main entrance to the site. Other impervious surfaces (e.g., paved cart paths, equipment/maintenance sheds, etc.) are scattered throughout the golf course. The subject property also includes six artificial ponds and four emergent marshes, which are located on or adjacent to the golf course. Two storage yards containing stockpiled soils, construction equipment and materials occur adjacent to Railroad Avenue/Rutherford Lane. The western shoreline and a portion of the northern shoreline of Woodmere Basin are reinforced with a timber and sheet pile bulkhead. The remainder of the subject property waterfront along Woodmere Basin is not bulkheaded and is comprised of natural shoreline communities occurring between the golf course fairways and the adjacent offsite tidal waters.

In order to further characterize the observed site conditions described above, the NYNHP publication *Ecological Communities of New York State*<sup>46</sup> (ECNYS) was consulted. This guidance provides detailed descriptions and includes global and state rarity rankings for many habitats found within New York State. Utilizing ECNYS, 13 ecological communities were identified at the subject property during the field survey, as shown on Table 10.

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<sup>46</sup> Edinger, G.J., et al. (editors). 2014. *Ecological Communities of New York State*. Second Edition. New York Natural Heritage Program, NYSDEC.

**Table 10 Existing Ecological Communities**

<b>ECNYS Community</b>	<b>Global/NYS Rarity Ranking</b>	<b>Community Distribution</b>	<b>Habitat Functional Value*</b>
Mowed Lawn	unranked cultural community	throughout NYS	poor
Mowed Lawn with Trees	unranked cultural community	throughout NYS	fair
Unpaved Road/Path	unranked cultural community	throughout NYS	poor
Paved Road/Path	unranked cultural community	throughout NYS	poor
Urban Structure Exterior	unranked cultural community	throughout NYS	poor
Construction/Road Maintenance Spoils	unranked cultural community	throughout NYS	poor
Estuarine Riprap/ Artificial Shore	unranked cultural community	Coastal Lowlands, Manhattan Hills, Hudson Valley and Hudson Highlands Ecozones	poor
Farm Pond/Artificial Pond	unranked cultural community	throughout NYS	poor
Common Reed Marsh	unranked cultural community	Coastal Lowlands, Manhattan Hills, Hudson Valley and Hudson Highlands Ecozones	fair
Successional Shrubland	G5/S5	throughout NYS	fair
Successional Southern Hardwoods	G5/S5	southern half of NYS	fair
High Salt Marsh	G4/S3S4	Coastal Lowlands and Manhattan Hills Ecozones	good
Low Salt Marsh	G4/S3S4	Coastal Lowlands and Manhattan Hills Ecozones	good

\*Based on field observations and ECNYS community rankings.

nine of the ecological communities that occur at the subject property comprise most of the existing land uses, including the golf course, site buildings, paved surfaces, shoreline bulkheads and the golf course ponds and marshes. Significantly, the nine ecological communities have not been assigned rarity rankings by the NYNHP. Instead, they are designated by the NYNHP as unranked cultural communities, due to their artificial origin, disturbed/developed conditions and wide distribution throughout New York State. Of the four remaining communities, the Successional Shrubland and Successional Shrubland

communities are ranked by the NYNHP as G5/ S5. According to the NYNHP, the G5 and S5 rankings represent communities that are considered “*demonstrably secure globally*” and “*demonstrably secure in New York State,*” respectively. The High Salt Marsh and Low Salt Marsh communities have been assigned rankings of G4/S3S4. The G4 and S4 rankings represent communities that are considered “*apparently secure globally*” and “*apparently secure in New York State,*” respectively. S3 is indicative of a community that has “*typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.*”

Table 13 also provides a habitat functional value for each of the identified ecological communities, based on VHB’s field observations and the ECNYS community rankings.

The following text provides a description of the 13 ecological communities that occur at the subject property, based upon the ECNYS community definitions and supplemented with qualitative field observations and habitat functional value assessments. An inventory of the vegetation observed at the subject property during the field survey is included in Appendix H.

The impervious surfaces of the Woodmere Club facilities (i.e., the ECNYS Paved Road/Path and Urban Structure Exterior communities) are unvegetated cultural communities that do not function as significant habitat areas for plants and most wildlife. Accordingly, the two communities have poor habitat functional value.

The golf course that occupies the majority of the subject property is representative of the ECNYS Mowed Lawn and Mowed Lawn with Trees communities, which are by far the most prevalent ecological communities at the subject property. The Mowed Lawn community is defined in ECNYS as:

*Residential, recreational or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing and broadleaf herbicide application.*

The Mowed Lawn with Trees community is defined in ECNYS as:

*Residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and it is shaded by at least 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing and broadleaf herbicide application.*

Similar to the two community descriptions above, the golf course supports low-diversity herbaceous flora dominated by the maintained turf grasses (e.g., bluegrasses [*Poa* sp.], fescues [*Festuca* spp.], ryegrasses [*Lolium* spp.], etc.) of the fairways, tee boxes, greens and roughs. The turf grass communities are typically subject to regular maintenance in the form of mowing, thatching and applications of fertilizers, herbicides, fungicides and pesticides. Planted ornamental trees from a variety of species occur throughout the golf course, primarily between fairways and along the golf course perimeter. Among the more commonly occurring tree species are sycamore (*Plantanus occidentalis*), Norway maple (*Acer plantanoides*), sugar maple (*Acer saccharum*), sweetgum (*Liquidambar styraciflua*), northern red oak (*Quercus rubra*), black locust (*Robinia pseudoacacia*) and weeping willow (*Salix*



*babylonica*). The golf course trees include many large, mature individuals of the aforementioned species and other tree species that occur on-site. Ornamental shrubs such as euonymus (*Euonymus* sp.), privets (*Ligustrum* spp.), forsythia (*Forsythia* sp.), yews (*Taxus* spp.) and boxwood (*Buxus* sp.) have also been planted at various locations on the golf course. Based on regular disturbance and maintenance, as well as low vegetative species diversity, the Mowed Lawn community has a poor habitat functional value. Due to the presence of trees that increase vegetative species diversity and provide habitat opportunities for birds and other wildlife, the Mowed Lawn with Trees community at the subject property has a greater overall habitat value (fair). The golf course is traversed by paved cart paths, which are included in the Paved Road/Path community described above, as well as gravel or otherwise unpaved cart paths, which are largely unvegetated habitats that are described by the ECNYS Unpaved Road/Path community.

Tree- and shrub-dominated habitat at the subject property is restricted to a narrow, linear band occurring on historically cleared/disturbed land along the southeastern site boundary, adjacent to the residential properties located along Atlantic Avenue. The observed habitats that comprise this vegetated border area represent limited spatial examples of the ECNYS Successional Southern Hardwoods and Successional Shrubland communities. According to ECNYS, the Successional Southern Hardwoods community is described as:

*A hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed...this is a broadly defined community and several seral and regional variants are known.*

The Successional Shrubland community is described as follows:

*A shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or otherwise disturbed. This community has at least 50% cover of shrubs.*

As observed during the field survey, the dominant tree species that comprise the Successional Southern Hardwoods at the subject property include red maple (*Acer rubrum*), gray birch (*Betula populifolia*), black cherry (*Prunus serotina*), black gum (*Nyssa sylvatica*), and northern red oak. Beneath the canopy, the dense understory strata are comprised mainly of non-native/invasive shrubs and vines, including multiflora rose (*Rosa multiflora*), Tatarian honeysuckle (*Lonicera tatarica*), English ivy (*Helix hedera*) and Japanese honeysuckle (*Lonicera tatarica*). Native vines, including grapes (*Vitis* sp.), poison ivy (*Toxicodendron radicans*) and Virginia creeper (*Parthenocissus quinquefolia*) are also prevalent.

More recently disturbed portions of the vegetated border area are devoid of significant tree cover and are dominated by shrubs. Dominant species occurring within the Successional Shrubland community include multiflora rose (*Rosa multiflora*), Tatarian honeysuckle (*Lonicera tatarica*), southern arrowwood (*Viburnum dentatum*) and hawthorn (*Crataegus* sp.).

Given the limited size and narrow, linear nature of the vegetated border area described above, as well as the presence of adjacent residential and recreational uses, woodland interior habitat does not occur at the subject property. Instead, the border area functions ecologically as an "edge" habitat, and as a vegetated buffer between the residential properties and the golf course. Based on these considerations, the limited Successional

Southern Hardwoods and Successional Shrubland communities at the subject property have fair habitat functional values.

Two storage yards containing stockpiled soils, construction equipment and materials occur adjacent to Railroad Avenue/Rutherford Lane. The two storage yards are representative of the ECNYS Construction/Road Maintenance Spoils community, which is defined as:

*A site where soil from construction work and/or road maintenance materials have been recently deposited. There is little, if any, vegetation.*

Similar to the above description, those portions of the two storage yards that are regularly disturbed due to stockpiling and equipment movement/storage are largely unvegetated, while the remaining portions of the two yards support "weedy" herbaceous vegetation, including mugwort (*Artemisia vulgaris*), lambsquarters (*Chenopodium album*), giant foxtail (*Setaria faberi*), crabgrass (*Digitaria* sp.), pokeweed (*Phytolacca americana*) and other pioneering herbaceous plants of recently disturbed soils. Given its disturbed and largely unvegetated nature, the Construction/Road Maintenance Spoils community has poor habitat functional value.

The golf course includes six artificial ponds constructed for drainage/ornamental purposes, and to serve as water hazards. As observed during the field survey, the artificial ponds do not support significant emergent, submergent or floating vegetative communities, and water quality within the ponds appears to have been impacted by high turbidity and golf course maintenance practices. Due to disturbed and largely unvegetated conditions, as well as poor water quality, the ponds have poor overall habitat functional value. As ECNYS does not have a community description created specifically for golf course ponds, the artificial ponds have been characterized under the similar Farm Pond/Artificial Pond community description. Additional information regarding the ponds is included in the *Wetlands and Surface Waters* section below.

The four disturbed emergent marshes that occur on the golf course are dominated by a near monoculture of the non-native/invasive species common reed (*Phragmites australis*). Accordingly, they have been classified under the ECNYS Common Reed Marsh community description:

*A marsh that has been disturbed by draining, filling, road salts, etc. in which European common reed (Phragmites australis) has become dominant. In extreme examples, common reed forms monotypic stands.*

Taking into account the disturbed conditions, low vegetative diversity and dominance by a non-native/invasive species, the four emergent marshes have fair overall habitat functional value. Additional information regarding the emergent marshes is included in the *Wetlands and Surface Waters* section below.

The subject property includes waterfront land along the tidal waters of Woodmere Basin. The western shoreline and a portion of the northern shoreline area are reinforced with a timber and sheet pile bulkhead. The bulkhead is described by the ECNYS Estuarine Riprap/ Artificial Shore community, which is defined as follows:

*The wetland community of a constructed estuarine shore in which the substrate is composed of broken rocks, wooden bulkheads, or concrete placed so as to reduce erosion. Vegetative cover and species diversity are low compared to natural estuarine shores.*

As observed in the field, the presence of the bulkhead precludes the existence of vegetated wetland communities along this portion of the shoreline. Similar to the ECNYS community description, vegetative cover is virtually non-existent, as compared to nearby vegetated shorelines. Accordingly, Estuarine Riprap/ Artificial Shore community at the subject property has poor overall habitat functional value.

The remainder of the subject property waterfront along Woodmere Basin is not bulkheaded and is comprised of natural shoreline communities occurring within a narrow zone between the golf course fairways and the adjacent offsite tidal waters. As observed during the field survey, the shoreline communities include unvegetated beach sediments interspersed with narrow, discontinuous bands of high and low marsh wetland vegetation. The observed vegetated conditions represent limited spatial examples of the ECNYS High Salt Marsh and Low Salt Marsh communities. The High Salt Marsh community is described in ECNYS as:

*A coastal marsh community that occurs in sheltered areas of the seacoast, in a zone extending from mean high tide up to the limit of spring tides. It is periodically flooded by spring tides and flood tides. High salt marsh typically consists of a mosaic of patches that are mostly dominated by a single graminoid species. The dominant species in many large areas are either salt-meadow grass (*Spartina patens*) or a dwarf form (15 to 30 cm tall) of cordgrass (*Spartina alterniflora*); also common are large areas dominated by spikegrass (*Distichlis spicata*), black-grass (*Juncus gerardii*), and glassworts (*Salicornia* spp.), or a mixture of salt-meadow grass and cordgrass...*

The Low Salt Marsh community is described as:

*A coastal marsh community that occurs in sheltered areas of the seacoast, in a zone extending from mean high tide down to mean sea level or to about 2 m (6 ft) below mean high tide. It is regularly flooded by semidiurnal tides. The mean tidal range of low salt marshes on Long Island is about 80 cm, and they often form in basins with a depth of 1.6 m or greater. The vegetation of the low salt marsh is a nearly monospecific stand of cordgrass (*Spartina alterniflora*).*

Similar to the above community descriptions, *Spartina patens* and *Spartina alterniflora* are the dominant plants species within the two communities, respectively. As both species provide important wetland and ecological functions, the High Salt Marsh and Low Salt Marsh communities at the subject property provide good habitat functional value. However, given the observed limited spatial extent of the High Salt Marsh and Low Salt Marsh communities, the subject property waterfront does not represent a significant source of vegetated wetland habitat. Additional information regarding the tidal wetlands is included in the *Wetlands and Surface Waters* section below.

### **Wildlife**

As described previously, the vast majority of the subject property is composed of cultural ecological communities created in association with current and historical use of the site as a

golf course and country club facility, including maintained turf grasses and landscaping (90.0 percent of existing land use) and impervious surfaces (6.1 percent of existing land use). The majority of the identified ecological communities have poor or fair habitat functional value. Based on these existing conditions, the observed and expected wildlife species assemblage at the subject property is primarily composed of species that occur within cultural communities and that are adapted to human presence and activity. To a lesser extent, the artificial ponds, vegetated marshes and tidal shorelines of the subject property provide habitat opportunities for species associated with wetlands and surface waters.

### Birds

Similar to all U.S. States located on the eastern seaboard, New York State and the subject property occur within the Atlantic Flyway, which is a north-south route for migratory birds in North America. To investigate both migratory and non-migratory bird diversity at the regional and local level, VHB reviewed the following databases:

- › *National Audubon Society Christmas Bird Count*<sup>47</sup> - According to this resource, 131 bird species were identified by bird enthusiasts over 215.25 survey hours within the Southern Nassau County Region during the December 30, 2017 regional bird count (a copy of the survey results is included in Appendix H).
- › *Cornell Lab of Ornithology eBird*<sup>48</sup> - According to this resource, bird enthusiasts reported observations of 79 avian species at North Woodmere Park (located 1.35± miles to the northwest of the subject property) between March 24, 2015 and August 22, 2019 (a copy of the eBird checklist is included in Appendix H).
- › *New York State Breeding Bird Atlas*<sup>49</sup> (NYSBBA) - According to this resource, a total of 53 bird species were identified between 2000 and 2005 within the NYSBBA survey block that the subject property occurs in (Block 6049A). Of these species, 33 are confirmed as breeding, 10 are listed as probable breeders and 10 are listed as possibly breeding within the survey block (a copy of the atlas report for Block 6049A is included in Appendix H).

With respect to site-specific observations, a total of 44 bird species were observed (i.e., seen or heard) at or over the subject property during the VHB field survey (avian species inventory included in Appendix H). The majority of the observed birds are species commonly associated with landscaped and developed habitats in suburban settings, including American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), blue jay (*Cyanocitta cristata*), cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), black-capped chickadee (*Poecile atricapillus*), downy woodpecker (*Picoides pubescens*) and other common songbirds noted on the golf course. Birds that commonly occur within non-vegetated habitats, including rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*) and mourning dove (*Zenaida macroura*) were frequently observed in association with the facility buildings and paved areas. These species likely utilize exterior building surfaces at the subject property for nesting. Birds that occur within wetland and

<sup>47</sup> National Audubon Society. *Christmas Bird Count*. Available at: <http://netapp.audubon.org/cbcobservation/>. Accessed August 2019.

<sup>48</sup> Cornell Lab of Ornithology. *eBird*. Available at: <https://ebird.org/explore>. Accessed August 2019.

<sup>49</sup> McGowan, K.J. and K. Corwin, eds. 2008. *The Atlas of Breeding Birds in New York State*. Cornell University Press. Data also available online at <http://www.dec.ny.gov/animals/51030.html>. Accessed April 2019.

surface water habitats were also observed at or near the golf course ponds, vegetated marshes and tidal shorelines, including red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*), great egret (*Ardea alba*), osprey (*Pandion haliaetus*) and several gull species. The limited Successional Southern Hardwoods/successional Shrubland community, and other brushy border areas at the subject property were noted to support species commonly associated with the edge habitats, including gray catbird (*Dumetella carolinensis*), yellow warbler (*Setophaga petechia*), Carolina wren (*Thryothorus ludovicianus*), American goldfinch (*Spinus tristis*), chipping sparrow (*Spizella passerine*) and house wren (*Troglodytes aedon*).

Many of the bird species listed in the National Audubon Society and Cornell Lab of Ornithology databases, and especially those listed for the NYSBBA survey block where the subject property is located, are species common to suburban landscapes and include many of the species observed at the subject property during the field survey. Other species listed as occurring within the NYSBBA survey block are wading birds, gulls, terns and other shorebirds that occur within ponds, marshes and/or tidal shorelines. It is expected that most, if not all of the birds that occur within the NYSBBA survey block may also occur at the subject property, either as residents, during yearly migratory stopovers, or as occasional transients.

#### Mammals

Two mammal species, eastern cottontail (*Sylvilagus floridanus*) and eastern gray squirrel (*Sciurus carolinensis*), were observed at the subject property during the field survey. In order to determine other mammal species that may utilize the project area, existing surveys of Long Island mammalian populations, including *The Mammals of Long Island, New York*<sup>50</sup> (Connor, 1971) were consulted. Based upon these resources, as well as an evaluation of existing ecological conditions, a limited expected mammalian fauna has been identified for the subject property (species list included in Appendix H).

The fauna includes small rodent species (e.g., mice, moles and shrews), which are expected to be the most abundant mammals at the subject property. However, due to their diminutive sizes and predominantly subterranean life histories, these species are not easily observed. The rodent "pest" species house mouse (*Mus musculus*) and Norway rat (*Ratus norvegicus*) may also occur. Primarily nocturnal mammals such as raccoon (*Procyon lotor*) and Virginia opossum (*Didelphis virginialis*) are also expected on-site. If present, red fox (*Vulpes vulpes*) is likely the top mammalian predator present at the subject property.

#### Herpetofauna

Given the densely developed conditions that characterize the region, southwestern Nassau County does not support a large or diverse herpetofauna (amphibian and reptile), population. According to the New York State Amphibian and Reptile Atlas Project<sup>51</sup> (NYSAPAP), only four amphibian and reptile species were identified within the USGS

<sup>50</sup> Connor, Paul F. 1971. *The Mammals of Long Island*. New York State University of New York, New York Museum and Science Service.

<sup>51</sup>New York State Department of Environmental Conservation. *New York State Amphibian and Reptile Atlas Project*. Available at: <http://www.dec.ny.gov/animals/7140.html>. Accessed June 2019.

Lawrence, New York Topographic Map Quadrangle where the subject property is located during surveys that occurred between 1990 to 1999 (see species list in Appendix H).

With the exception of a non-native red-eared slider (*Trachemys scripta elegans*) turtle observed within one of the golf course ponds, no other herpetofauna were observed within on the golf course or elsewhere at the subject property during the field survey. Although the ponds would normally be expected to host populations of green frog (*Rana clamitans*), bull frog (*Rana catesbeiana*) or other amphibians, it is likely that regular chemical applications to the golf course (e.g., fertilizers, herbicides, fungicides, etc.) impedes or even precludes habitation of the ponds by these species, as amphibians are known to be sensitive to chemical pollutants.<sup>52</sup> Beyond the ponds, the upland portions of the subject property consist of highly maintained landscapes and impervious surfaces that are not conducive to habitation by herpetofauna.

As the diamondback terrapin (*Malaclemys terrapin*) is known to occur within the Lawrence New York, Quadrangle, this turtle species of brackish coastal areas may occur within Woodmere Basin, and the non-bulkheaded portions of the subject property shoreline area represents potential, though limited, egg-laying habitat for diamondback terrapin.

Based on the existing habitat conditions and the low regional herpetofauna species diversity described above, the subject property does not represent a significant habitat area for amphibians and reptiles.

### ***Rare/Protected Species***

No New York State or federally-listed rare/protected plant or wildlife species were observed at the subject property during the field survey.

According to correspondence from the NYNHP, dated May 29, 2019, no records currently exist for known occurrences of New York State-listed animals or plants at the subject property.

The NYNHP correspondence additionally indicates that high-quality examples of the ECNYS High Salt Marsh, Low Salt Marsh and Salt Panne ecological communities occur within Woodmere Basin, and portions of the three communities occur at subject property. As indicated previously, the shoreline zone is comprised of unvegetated beach sediments interspersed with narrow, discontinuous bands of high and low marsh wetland vegetation. As such, limited spatial examples of the High Salt Marsh and Low Salt Marsh communities occur along the subject property boundary, within a narrow zone between the golf course fairways to the north and south of Woodmere Basin and the adjacent off-site tidal waters. Given their limited spatial extent and low vegetative coverage, the High Salt Marsh and Low Salt Marsh communities observed along the subject property boundary do not appear to represent high quality examples of these communities, in contrast to the NYNHP correspondence. Also in contrast to the NYNHP correspondence, the Salt Panne ecological community was not observed at or adjacent to the subject property during the field survey.

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<sup>52</sup> Egea-Serrano, et. al. *Understanding the impact of chemicals on amphibians: a meta-analytic review*. Ecology and Evolution. July 2012 Vol. 2(7), pp. 1382-1397.

Additional information regarding the tidal wetlands is included in the *Wetlands and Surface Waters* section below.

The NYNHP correspondence further indicates that an off-site record from 2009 exists for the bird species yellow-crowned night heron (*Nyctanassa violacea*). Though not listed as endangered, threatened or special concern by the NYSDEC, yellow-crowned night heron is considered rare in New York State. According to the record, yellow-crowned night herons were observed nesting in backyard trees at residential properties located 0.4-mile from the subject property, but not on the subject property.

The unofficial USFWS Information for Planning and Conservation (IPaC) Resource List includes six federally-listed species that are known to occur in Nassau County and that therefore may also occur within the vicinity of the subject property (see Appendix H). The IPaC Resource List does not contain site-specific records for the six species and indicates that critical habitat for the six species has not been designated or does not occur at or in the vicinity of the subject property. The federal and New York State listing categories, field survey results and habitat observations for the six species are provided on Table 11 below.

**Table 11 Rare/Protected Species Summary**

Scientific Name	Common Name	Listing	Field Survey Results	Habitat Observations
<i>Agalinus acuta</i>	Sandplain Gerardia	Federal (E) NYS (E)	Not observed	No potential habitat (grasslands) occurs onsite.
<i>Amaranthus pumilus</i>	Seabeach Amaranth	Federal (T) NYS (T)	Not observed	No potential habitat (upper beaches above mean high water, lower foredunes) occurs onsite.
<i>Calidris canutus rufa</i>	Red Knot	Federal (T)	Not observed	Limited potential foraging habitat (natural shoreline communities) occurs onsite.
<i>Charadrius melodus</i>	Piping Plover	Federal (T) NYS (T)	Not observed	Limited potential foraging habitat (natural shoreline communities) occurs onsite.
<i>Sterna dougallii dougallii</i>	Roseate Tern	Federal (E) NYS (E)	Not observed	Limited potential foraging habitat (natural shoreline communities) occurs onsite.
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Federal (T) NYS (T)	Not observed	Potential roost habitat (trees) occurs onsite.

As shown on Table 11, the subject property does not include potential habitat for the vascular plants sandplain gerardia and seabeach amaranth, which grow in grassland and



upper beach/lower foredune habitats, respectively. The natural shoreline areas at the subject property and the adjacent tidal waters represent potential foraging habitat for the three bird species listed on Table 11: red knot, piping plover and roseate tern. However, as the width of the shoreline area is constrained by the adjacent golf course fairways and tidal waters to either side, terrestrial and intertidal foraging habitat is limited and significant nesting habitat area for the three listed birds and other shorebirds does not exist. Moreover, due to active use and maintenance of the golf course for much of the year, there is a high degree of human presence and activity along the shoreline. Given these factors, and taking into account that designated critical habitat for the three birds does not occur in the vicinity of the subject property, the shoreline area does not represent a significant potential habitat for red knot, piping plover or roseate tern.

Based on the most recent NYSDEC northern long-eared bat occurrence map, summer occurrences of northern long-eared bat have been documented within the Town of Oyster Bay, in eastern Nassau County, but not in the Town of Hempstead (see Appendix H). According to the USFWS *Northern Long-Eared Bat Fact Sheet*,<sup>53</sup> northern long-eared bat is a brown colored, medium-sized bat, ranging in size from 3 to 3.7 inches, with a wingspan of 9 to 10 inches. Winter hibernating habitat for northern long-eared bat occurs within caves, mines or similar habitats (referred to as hibernacula), while summer roosting habitat occurs underneath the bark or in cavities or crevices of living or dead trees. At dusk, the bats emerge from roosts to feed on insects, which they catch in flight using echolocation or glean from vegetation and water surfaces. Foraging habitat includes forested understories, as well as the surfaces of aquatic habitats. Based on the foregoing habitat description, the trees at the subject property represent potential summer (i.e., from April 1 to October 31) roosting habitat for northern long-eared bat.

Due to significant population declines as a result of the white-nose syndrome fungal disease, northern long-eared bat is listed as federally threatened by the USFWS under section 4(d) of the federal Endangered Species Act of 1973 (hereinafter, the "final 4(d) rule").<sup>54</sup> The final 4(d) rule includes certain prohibitions against incidental take, which is defined as killing, wounding, harassing or otherwise disturbing a species that would occur incidental to, and is not the purpose of, an otherwise lawful activity. Pursuant to the final 4(d) rule, incidental take of northern long-eared bat is prohibited if it occurs within a hibernaculum or if it results from tree removal activities that occur within 0.25 mile of a known, occupied hibernaculum. Additionally, incidental take of northern long-eared bat is also prohibited if it results from cutting or destroying a known, occupied maternity roost tree or other trees within a 150-foot radius of a maternity roost tree during the pup season (from June 1 through July 31). Any proposed activity that would result in prohibited incidental take of NLEB, as described above, would require USFWS consultation and/or permitting. Activities that would not result in prohibited incidental take of NLEB as described above can proceed without USFWS consultation or permitting, provided that the activity does not require federal authorization, funding or approvals.

<sup>53</sup> United States Fish and Wildlife Service. 2015. *Northern Long-Eared Bat (Myotis septentrionalis) Fact Sheet*. Available at: <https://www.fws.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html>. Accessed July 2019.

<sup>54</sup> Federal Register Vol. 80, No. 63. Thursday, April 2, 2015.

The final 4(d) rule further indicates that information for the locations of known, occupied hibernacula and maternity roost trees can be obtained from "state Natural Heritage Inventory databases." As detailed previously, the May 29, 2019 correspondence from the NYNHP indicates that no records currently exist for known occurrences of listed species (including records for northern long-eared bat or northern long-eared bat roost trees), at or in the vicinity of the subject property. Moreover, as indicated previously, the most recent NYSDEC northern long-eared bat occurrence map indicates that occurrences of northern long-eared bat have not been documented within the Town of Hempstead. Based on the foregoing, any potential of removal of trees at the subject property would not result in prohibited incidental take of northern long-eared bat.

### ***Wetlands and Surface Waters***

There are six artificial freshwater ponds and four freshwater emergent marshes located on or adjacent to the golf course at the subject property, as shown on Figure 15. The freshwater ponds and marshes occupy 4.44± acres of the subject property, as summarized on Table 12. As described below, the subject property also includes artificial (bulkheaded) and natural shoreline communities located along the tidal waters of Woodmere Basin.

**Table 12 Freshwater Wetland and Surface Water Summary**

<b>Feature</b>	<b>Area (± acres)</b>
Pond 1	0.75
Pond 2	0.32
Pond 3	0.43
Pond 4	0.36
Pond 5	0.17
Pond 6	0.25
Emergent Marsh 1	0.31
Emergent Marsh 2	0.69
Emergent Marsh 3	0.04
Emergent Marsh 4	1.12
<b>Total</b>	<b>4.44</b>





\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 15 - Freshwater Wetlands and Surface Waters.mxd

0 200 400 800 Feet

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Freshwater Wetlands and Surface Waters**

99 Meadow Drive

Town of Hempstead and the

Incorporated Villages of Lawrence and Woodsburgh

Nassau County

- - - Subject Property
- Emergent Wetlands\*
- Ponds\*

Sources: NYS Ortho Imagery (2016);

NYS Civil Boundaries,

NYS Office of Information Technology Services GIS Program Office (GPO)

All boundaries are approximate.



The USFWS National Wetland Inventory NWI Maps (see Figure 6 on Page 79) provide information to the public on the extent and status of the Nation's wetlands. The NWI Maps are guidance documents made available " ...to provide [USFWS biologists] and others with information on the distribution of wetlands to aid in wetland conservation efforts."<sup>55</sup> According to the USFWS wetland classification system utilized by the NWI,<sup>56</sup> the freshwater and tidal wetland features that occur at or adjacent to the subject property are comprised of nine wetland community types, as summarized on Table 13. Considering the presence of those tidal wetlands found on the subject property, total coverage of wetlands and surface waters is approximately 4.87 acres.

**Table 13 NWI Summary**

<b>NWI Classification</b>	<b>Freshwater/ Tidal</b>	<b>Area (acres)*</b>
PUBHx – Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated	Freshwater	2.21
PSS1C - Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded	Freshwater	0.19
PEM5A – Palustrine, Emergent, Phragmites australis, Temporary Flooded	Freshwater	1.56
PSS1R - Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded-Tidal	Freshwater/ Tidal	1.44
E1UBL - Estuarine, Subtidal, Unconsolidated Bottom, Subtidal	Tidal	73,469.26
E2US2N – Estuarine, Intertidal, Unconsolidated Shore, Sand, Regularly Flooded	Tidal	0.11
E1AB1L – Estuarine, Subtidal, Aquatic Bed, Algal, Subtidal	Tidal	0.19
E2EM1P – Estuarine, Intertidal, Emergent, Persistent, Irregularly Flooded	Tidal	0.32
R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	Freshwater/ Tidal	0.02

\*Acres are estimated by the NWI based on review of high-altitude aerial imagery and include portions of wetlands that occur off-site.

Regarding federal regulation, although certain wetlands and surface waters that appear on the NWI maps *may* be regulated by the federal government as waters of the United States, according to the NWI Wetlands Mapper website, "[t]here is no attempt to define the limits of proprietary jurisdiction of any Federal, state, or local government, or to establish the geographical scope of the regulatory programs of government agencies."<sup>57</sup> As a navigable water, Woodmere Basin is a jurisdictional water of the United States and therefore is

<sup>55</sup> United States Fish and Wildlife Service National Wetland Inventory – Overview. Available at: <http://www.fws.gov/wetlands/NWI/index.html>. Accessed July 2019.

<sup>56</sup> Cowardin, et al. *Classification of Wetlands and Deepwater Habitats of the United States*. United States Fish and Wildlife Service. 1979.

<sup>57</sup> United States Fish and Wildlife Service National Wetlands Inventory – Data Limits, Exclusions and Precautions. Available at: <https://www.fws.gov/wetlands/data/Limitations.html>. Accessed July 2019.

regulated by the USACE, pursuant to the CWA. Currently, federal jurisdiction over other waters of the United States located within New York State, including the ponds and marshes at the subject property, is determined on a case-by-case basis by the USACE. Accordingly, a jurisdictional determination request was submitted to the USACE by Roux Associates, Inc. on October 27, 2017. Subsequently, at the request of the USACE, VHB resubmitted data and reports prepared by Roux Associates, and an agency jurisdictional determination is pending. However, it appears that the ponds and marshes at the subject property may be subject to federal regulation as waters of the United States. Federally regulated activities within waters of the United States include draining, placement of fill, construction of structures, bank stabilization, outfalls and other direct impacts that occur below mean high water or ordinary high water. Such actions are subject to regulation and permitting by the USACE.

According to the NYSDEC Tidal Wetlands Maps (see Figure 7 on Page 80), Woodmere Basin is mapped as Littoral Zone (LZ) tidal wetland. LZ wetlands are defined by the NYSDEC as:

*The tidal wetland zone that includes all lands under tidal waters which are not included in any other category. There shall be no LZ under waters deeper than six feet at mean low water.*

Additionally, an area of Intertidal Marsh (IM) wetlands is depicted along the northern shoreline of Woodmere Basin. IM wetlands are defined by the NYSDEC as:

*The vegetated tidal wetland zone lying generally between average high and low tidal elevation in saline waters. The predominant vegetation in this zone is low marsh cordgrass, *Spartina alterniflora*.*

The extent of the NYSDEC's tidal wetland jurisdiction within upland portions of the subject property was confirmed in agency jurisdictional determinations issued on December 29, 2017 and February 26, 2018 (see Appendix G). The jurisdictional determinations indicate that Woodmere Basin is a regulated tidal wetland and that the regulated tidal wetland adjacent area extends 300 feet landward from the tidal wetland boundary along the south shore of Woodmere Basin. The tidal wetland adjacent area along the western shoreline and part of the northern shoreline of Woodmere Basin is limited by the existing bulkhead. For the remaining areas to the north of Woodmere Basin, the tidal wetland adjacent area extends 300 feet inland or to Ivy Hill Road (whichever occurs first). The jurisdictional determinations further indicate that regulated activities within the tidal wetland adjacent area, including subdivisions of land, will be subject to NYSDEC permitting. With respect to freshwater wetlands, the jurisdictional determinations indicate that there are no NYSDEC-regulated freshwater wetlands located at or near the subject property.

The six artificial ponds on the golf course were created for drainage/ornamental purposes, and to serve as water hazards. The ponds do not support significant emergent, submergent or floating vegetative communities, and water quality within the ponds appears to have been impacted due to high turbidity and golf course maintenance practices, including chemical applications. Similarly, the four disturbed emergent marshes on the golf course have also been impacted by golf course maintenance practices and are dominated by a near monoculture of the non-native/invasive species common reed. Based on these factors, the

ponds and marshes have low overall wetland functional value and are not significant sources of native plant diversity.

The western shoreline and a portion of the northern shoreline of Woodmere Basin are reinforced with a timber and sheet pile bulkhead that precludes the existence of vegetated wetland communities. As detailed previously, the remainder of the subject property waterfront is not bulkheaded and is comprised of natural shoreline communities occurring within a narrow zone between the golf course fairways and the adjacent offsite tidal waters. The shoreline communities include unvegetated beach sediments interspersed with narrow, discontinuous bands of high and low marsh wetland vegetation. The observed vegetated conditions represent limited spatial examples of the ECNYS High Salt Marsh and Low Salt Marsh communities. Based on the bulkheaded shoreline sections and the limited spatial extent of the High Salt Marsh and Low Salt Marsh communities, the overall tidal wetland habitat value of the subject property is low, and the subject property does not represent a significant source of vegetated tidal wetland habitat.

It is important to note that the USACE, in partnership with the NYSDEC and Nassau County, is currently conducting a feasibility study (the "Nassau County Back Bays Coastal Storm Risk Management Study") of coastal storm risk management problems within the Nassau County Back Bays area, which includes Woodmere Basin and Woodmere Channel. The objective of the study is to investigate problems and potential measures to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems. Among the potential reduction measures that are being considered are structural measures (e.g., storm surge barriers, tide gates, levees, and floodwalls), non-structural measures (e.g., elevating homes) and natural measures such as marsh restoration and the creation of living shorelines. Once completed, the study may also include recommendations of actionable and policy implementable items such as floodplain management and Community Rating System enhancement opportunities. However, as the study ongoing and is not expected to be completed for two years, there are currently no recommendations available from this study.

### 3.3.2 Potential Impacts

#### Ecological Communities and Vegetation

As detailed in Section 3.3.1, the subject property is primarily composed of cultural ecological communities that have been created or substantially altered in association with current and historical land use of the site as a golf course and country club. The vast majority (90.0 percent) of the subject property is occupied by maintained turf grasses and landscaping associated with the eighteen-hole golf course, and impervious surfaces comprise an additional 6.1 percent of existing land coverage. Nine of the ecological communities that occur at the subject property are designated by the NYNHP as unranked cultural communities, due to their artificial origin, disturbed/developed conditions and wide distribution throughout NYS. The remaining four ecological communities that occur at the subject property are ranked by the NYNHP as either demonstrably secure or apparently secure in NYS. Based on field observations and taking into account the ECNYS community rankings for the observed ecological communities, 11 of the 13 identified ecological communities were determined to have habitat functional values of poor or fair.

The proposed 284-lot subdivision would permit the construction of several new roadways throughout the subject property and the future development of the subdivision lots with single-family residences and accessory structures. As shown on Table 24, the primary impact of the proposed action on habitat and vegetation would be a reduction in the amount of landscaped or otherwise vegetated habitat (i.e., the ECNYS Mowed Lawn, Mowed Lawn with Trees, Successional Southern Hardwoods and Successional Shrubland communities) from 91.8 percent to 66.0 percent of the site coverage, with a corresponding increase in impervious surfaces (ECNYS Paved Road/Path and Urban Structure Exterior communities) from 6.1 percent to 30.0 percent of the site coverage. The reduction would occur primarily within landscaped communities (i.e., Mowed Lawn and Mowed Lawn with Trees), and would include the removal of some tree- and shrub-dominated buffer areas that presently occur throughout the subject property.

A tree survey was undertaken (Appendix K) to quantify the number of trees that would need to be removed under the proposed action. The tree inventory noted the location and species of trees within the subject property having a diameter at breast height (DBH) of four inches or greater. Those trees occurring in the location of a proposed improvement (i.e., roadways, bioretention areas, future driveways, future residences) or in an area proposed to have a change of grade greater than one-foot were marked for removal; those trees with critical root zones<sup>58</sup> overlapping with these improvements were also marked for removal.

The tree inventory identified 864 trees with a DBH of four inches or greater; of these, approximately 215 were identified as invasive species. In total, 526 trees were marked for removal, including 126 invasive species; the proposed action would therefore require the removal of approximately 400 individual trees of native species. Generally, the trees existing at the subject property comprise buffers created between the existing golf course greens

<sup>58</sup> The critical root zone is defined as a one-foot radius from the base of the tree's trunk for each one inch of tree's DBH. For example, a tree with a DBH of 10-inches would have a critical root zone of 10-feet.



and fairways, and do not represent naturally wooded areas. The locations of all existing trees expected to remain and proposed to be removed are depicted in the *Overall Tree Inventory & Removal Plan* (Appendix K).

As detailed below in the *Wetlands* section, the quantity of freshwater wetlands and surface waters (Farm Pond/Artificial Pond and Common Reed Marsh communities) would increase from 4.87 acres to 5.41 acres due to implementation of the proposed action. Water quality improvements may result from the cessation of golf course management practices and increases in native vegetation resulting from conversion of the ponds to stormwater management features (bioretention basins). As a result, the overall habitat quality and wetland functional value of the ponds will improve. Moreover, installation of the biofiltration swale along the western shoreline of Woodmere Basin (as described in the *Wetlands* section) will contribute additional high-quality, vegetated wetland and upland habitats to an area currently occupied by low-quality and largely unvegetated cultural habitats (Construction Road Maintenance Spoils and Estuarine Riprap/Artificial Shore communities). The two tidal wetland communities that occur along the unbulked sections of the Woodmere Basin shoreline (High Salt Marsh and Low Salt Marsh communities), which were the only two ecological communities at the subject property that were determined by VHB to provide "good" habitat functional values, would be preserved under the proposed action. Furthermore, as the two communities are located within NYSDEC and USACE jurisdictional areas, any proposed land use or activity on the subdivision lots surrounding Woodmere Basin would be subject to the regulations and development restrictions of the two agencies during the permitting process.

In summary, the majority of the existing ecological communities that currently occur at the subject property would persist under the proposed action (i.e., they would continue to be represented at the site). The cultural ecological communities to be disturbed or removed are either NYNHP unranked cultural communities or are ranked as demonstrably or apparently secure, with wide distributions throughout New York State. These existing ecological communities were determined by VHB to have habitat functional values of poor or fair.

Following full development of the subdivision, the subject property would continue to function ecologically as a site dominated by landscaping and development. In contrast to existing conditions, the future landscaped communities would consist of small, fragmented habitats (i.e., residential front and rear yards interspersed with houses, driveways, roads and sidewalks) as opposed to the unfragmented landscaped communities of the existing golf course fairways. A quantitative increase in freshwater wetlands and surface waters at the subject property would occur and be augmented by qualitative improvements to these communities. The tidal wetland communities along the ecologically sensitive shoreline of Woodmere Basin would remain undisturbed and would continue to be protected by the regulations and development restrictions of the NYSDEC and USACE. Based on the foregoing, no significant adverse impacts to ecological communities and vegetation are anticipated.

## Wildlife

As described in Section 3.3.1, based on field observations and taking into account the ECNYS community rankings for the ecological communities that occur at the subject property, 11 of the 13 identified ecological communities are cultural community types that were determined to have habitat functional values of poor or fair. As a result, the wildlife fauna that occupies the golf course and country club facilities is primarily composed of birds and mammals that occur within cultural communities and are adapted to human presence and activity. To a lesser extent, the artificial ponds, vegetated marshes and tidal shorelines of the subject property provides habitat opportunities for species associated with wetlands and surface waters.

The primary impact of the proposed action on wildlife would be the clearing of existing vegetated habitats as the proposed subdivision lots are developed. The immediate effect of clearing would be the displacement of resident species. The majority of the species that utilize the subject property are considered to be generally mobile (e.g., mostly birds and mammals), and, therefore, would be displaced to adjacent and nearby areas. As development of the subdivided lots is expected to occur in stages rather than simultaneously, displaced species are expected to occupy as-yet uncleared portions of the subject property as well as properties in the general surrounding area. In analyzing the overall potential impacts on local and regional wildlife due to displacement, it is noteworthy that many factors influence wildlife population densities other than resource availability, including disease, parasites, predation, weather, human disturbances, etc. Therefore, it is possible that wildlife species populations may already be below the theoretical carrying capacities of the subject property due to one or more limiting factors. For example, development and human activity associated with site use as a golf course and country club are likely limiting factors for many wildlife species. In particular, as noted in Section 3.1.1, development of impervious surfaces and maintenance practices on the golf course are likely a limiting factor for herpetofauna at the subject property and the overall densely developed nature of southwestern Nassau County appears to be a limiting factor for herpetofauna species diversity within the region as a whole.

Notwithstanding the above, under the assumption that resource availability is the only limiting factor affecting wildlife population density, in the short-term, it is anticipated that uncleared portions of the subject property and in the general surrounding area would experience a temporary increase in wildlife populations during clearing, grading and construction on the lots under development. Subsequently, it is anticipated that inter- and intra-specific competition for available resources within these surrounding habitats would result in a net decrease in local population size for most species, until equilibrium between wildlife populations and available resources is achieved. Following development, and similar to existing conditions, the residential lots would continue to support the landscaped and developed ecological communities that currently dominate the vast majority of the subject property. As such, it is anticipated that a similar species assemblage of common birds and mammals adapted to cultural communities and human presence/activity will occupy the subdivision lots following development. Due to the proposed decrease in landscaped habitat, corresponding decreases in population density are anticipated for some resident species.

As the quantity of freshwater wetlands and surface waters would increase, a corresponding increase in the species density of resident wildlife within these habitats is expected. Moreover, due to potential water quality improvements and anticipated increases in native vegetation described previously, the overall habitat quality of the wetlands and surface waters will be improved and will therefore offer opportunities for increased wildlife species diversity. The preservation of the vegetated tidal wetlands communities along the southern and northern shorelines of Woodmere Basin, and the addition of vegetated freshwater wetland and upland communities along the western shoreline will protect and improve wildlife habitat value in the area where the highest wildlife species diversity at the subject property currently occurs.

Based on the foregoing analyses, no significant adverse impacts to local and regional wildlife are anticipated as a result of the proposed action.

### **Rare/Protected Species**

As described in Section 3.3.1, no New York State or federally-listed rare/protected plant or wildlife species were observed at the subject property during the field survey, and no NYNHP records currently exist for known occurrences of New York State-listed animals or plants at the subject property.

The NYNHP correspondence indicates that high quality examples of the ECNYS High Salt Marsh, Low Salt Marsh and Salt Panne ecological communities occur within Woodmere Basin, and that portions of the three communities occur at subject property. As indicated previously, the shoreline zone at the subject property is comprised of unvegetated beach sediments interspersed with narrow, discontinuous bands of high and low marsh wetland vegetation. Based on these observations, limited spatial examples of the High Salt Marsh and Low Salt Marsh communities occur along the subject property boundary, within a narrow zone between the golf course fairways to the north and south of Woodmere Basin and the adjacent offsite tidal waters. Given their limited spatial extent and low vegetative coverage, the observed High Salt Marsh and Low Salt Marsh communities observed along the subject property boundary do not appear to represent high quality examples of these communities, in contrast to the NYNHP correspondence. Also, in contrast to the NYNHP correspondence, the Salt Panne ecological community was not observed at or adjacent to the subject property during the field survey.

Consultations with the NYSDEC under 6 NYCRR Part 182 would be necessary to confirm the above preliminary findings regarding New York State rare/protected ecological communities. However, it is important to note that the entire non-bulkheaded shoreline area and portions of the adjoining uplands are located within the NYSDEC's tidal wetland jurisdiction. Similarly, as a water of the United States, Woodmere Basin is also located within federal (USACE) jurisdiction. As such, any future regulated land use or activity on the proposed waterfront lots that might impact the shoreline wetland communities would be subject to regulation and development restrictions and permitting by the NYSDEC and the USACE.

As summarized in Section 3.3.1, the subject property does not include potential habitat for the two federally-listed vascular plants that are known to occur in Nassau County, and the shoreline area does not represent a significant potential habitat for the three federally-listed

shorebirds that occur in Nassau County. With respect to the federally-listed northern long-eared bat, correspondence from the NYNHP indicates that no records currently exist for known occurrences of northern long-eared bat or northern long-eared bat roost trees at or in the vicinity of the subject property. Based on the foregoing, the removal of trees at the subject property during development of the subdivision lots would not result in prohibited incidental take of northern long-eared bat. However, as the proposed action will require federal (USACE) authorization, Section 7 consultations with the USFWS will be necessary to confirm these preliminary findings.

Based on the foregoing records review, site observations and habitat analyses, no significant adverse impacts to rare/protected species or communities are anticipated as a result of the proposed action. As noted above, NYSDEC and USFWS consultations will be necessary to confirm these preliminary findings.

### **Wetlands and Surface Waters**

The two tidal wetland communities that occur along the un-bulkheaded sections of the Woodmere Basin shoreline (High Salt Marsh and Low Salt Marsh communities) have the highest NYNHP rarity rankings among the 13 ecological communities that occur at the subject property and were the only two ecological communities at the subject property that were determined by VHB to provide "good" habitat functional values. Both communities would be preserved in their entirety under the proposed action. Furthermore, as the two communities are located within NYSDEC and USACE jurisdictional areas, any future regulated land use or activity proposed on the subdivision lots surrounding Woodmere Basin would be subject to the regulations and development restrictions of the two agencies during the permitting process. Proposed land uses and activities would also be subject to all applicable regulations of the Town of Hempstead and the Incorporated Village of Lawrence.

Significantly, the proposed bioretention areas would store, filter and infiltrate stormwater to the subsurface, and the shoreline biofiltration swale would filter sediments and pollutants from stormwater overflow before reaching Woodmere Basin. As a result, improvements to the water quality of stormwater overflow to the intertidal and subtidal wetland communities of Woodmere Basin may be anticipated as compared to existing conditions, where untreated stormwater discharges directly to Woodmere Basin. Based on these considerations, no significant adverse impacts to tidal wetlands are anticipated as a result of the proposed action.

Implementation of the proposed action would result in the filling of Emergent Marshes 1 through 3. Emergent Marsh 4 would be left undisturbed, and the six golf course ponds (Ponds 1 through 6) would be altered/expanded to create four vegetated bioretention basins as part of the stormwater management system for the proposed subdivision. In addition, a vegetated biofiltration swale would be constructed within an existing upland area adjacent to the western shoreline of Woodmere Basin, for treatment of overflow stormwater before it is discharged to Woodmere Basin. As a result of these proposed changes, the existing acreage of wetlands/surface waters at the subject property would increase from 4.87 acres to 5.41 acres.

As described in Section 3.3.1, due to their artificial origin, lack of vegetated conditions, poor water quality and overall degraded state, Ponds 1 through 5 have low overall wetland functional value and are not significant sources of native plant diversity. Similarly, the four disturbed emergent marshes on the golf course have also been impacted by golf course maintenance practices and are dominated by a near monoculture of the non-native/invasive species common reed. Under the proposed action, the alteration/expansion of the six ponds to be converted to bioretention basins would result in a 0.54 acre increase in wetland/surface water acreage at the subject property. Additionally, native upland, facultative and wetland plantings would be installed within and surrounding these features, thereby substantially improving the quantity and quality of vegetated wetland habitat at the subject property as compared to the existing largely unvegetated conditions of the ponds. Furthermore, the cessation of golf course management practices is expected to result in water quality improvements to the six ponds, through reduced turbidity and pollutant inputs. Moreover, the installation of the vegetated biofiltration swale would substantially increase the amount of native-vegetated wetland habitat at the subject property, while providing valuable stormwater treatment functions and potential improvement to the water quality of stormwater discharge to Woodmere Basin, as compared to existing conditions.

Based on the foregoing, the proposed action would result in a quantitative 0.54 acre increase in wetland/surface water area, as well as qualitative improvements to native plant diversity, wildlife habitat and water quality. Accordingly, no significant adverse impacts to freshwater wetlands and surface water communities are anticipated as a result of the proposed action, and substantial improvements habitat functional value are expected.

From a regulatory perspective, as detailed in Section 3.3.1, Woodmere Basin is a jurisdictional water of the United States and therefore is subject to regulation by the USACE. A jurisdictional determination from the USACE regarding the ponds and marshes on the golf course is pending. However, it appears that the ponds and marshes may be subject to federal regulation as waters of the United States. Federally-regulated activities within waters of the United States include draining, placement of fill, construction of structures, bank stabilization, outfalls and other direct impacts that occur below mean high water or ordinary high water. Such actions are subject to regulation and permitting by the USACE. As a requirement of the USACE permitting process, consistency review with New York State Coastal Policies by the NYSDOS will be necessary. Similarly, project review under Section 7 of the ES ACT by the USFWS and/or the NMFS will occur as part of the USACE permitting process.

Pursuant to CWA guidelines, any potential USACE permit for unavoidable filling of waters of the United States would include requirements for compensatory mitigation, beginning at a minimum replacement ratio of 1:1.<sup>59</sup> As such, pending the outcome of the aforementioned jurisdictional determination, the USACE may require compensatory mitigation (i.e., additional expansion of existing on-site wetlands, creation of new on-site wetlands, off-site wetland mitigation, purchase of mitigation bank credits and/or in-lieu fees) for impacts to wetland/surface water area at the subject property. However, as noted above, the alteration/expansion of the six ponds to be converted to bioretention basins would result in

<sup>59</sup> 40 CFR Part 230 - Section 404(b)(1). Guidelines for Specification of Disposal Sites for Dredged or Fill Material.

a 0.54 acre increase in wetland/surface water acreage at the subject property, resulting in greater than a 1:1 mitigation ratio.

With respect to future development, it is important to note that any federally regulated activities within waters of the United States related to future development of the 284 proposed residential lots would also be subject to individual USACE regulation and permitting.

Regarding NYSDEC regulation, as detailed in Section 3.3.1, the NYSDEC jurisdictional determinations for the subject property indicate that regulated tidal wetland adjacent area extends 300 feet landward from the tidal wetland boundary along the south shore of Woodmere Basin. The tidal wetland adjacent area along the western shoreline and part of the northern shoreline of Woodmere Basin is limited by the existing bulkhead. For the remaining areas to the north of Woodmere Basin, the tidal wetland adjacent area extends 300 feet inland, or to Ivy Hill Road (whichever occurs first). Based on these jurisdictional limits, all or portions of the proposed lots located adjacent or proximate to unbulkheaded shoreline areas of Woodmere Basin are located within the NYSDEC's tidal wetland jurisdiction.

Pursuant to 6 NYCRR 666.5(b)(57), any subdivision of land occurring with regulated tidal wetlands or tidal wetland adjacent areas requires an NYSDEC Tidal Wetlands Permit. Accordingly, the proposed 284 lot subdivision of the subject property would require an NYSDEC Tidal Wetlands Permit and would be subject to the applicable NYSDEC development restrictions, as detailed below. Moreover, any future regulated land use or activity (i.e., clearing, grading, ground disturbance, construction of residential structures and associated improvements, installation of utilities, construction of bulkheads, docks or other shoreline structures, etc.) proposed on the individual subdivision lots located within the NYSDEC's tidal wetland jurisdiction would also be subject to NYSDEC permitting and all applicable NYSDEC development restrictions.

As set forth in 6 NYCRR 666.6, the NYSDEC development restrictions for tidal wetlands and adjacent areas, including those pertaining to minimum lot areas, building/impervious surface/septic system setbacks, impervious surface coverage limits and surface water runoff, include the following:

*(a) No person shall undertake any new regulated activity on any tidal wetland or on any adjacent area except in compliance with the following development restrictions:*

*(1) The minimum setback of all principal buildings and all other structures that are in excess of 100 square feet (other than boardwalks, shoreline promenades, docks, bulkheads, piers, wharves, pilings, dolphins, or boathouses and structures typically located on docks, piers or wharves) shall be 75 feet landward from the most landward edge of any tidal wetland. Provided, however, within the boundaries of the city of New York the minimum setback required by this paragraph shall be 30 feet. Further provided, where numerous and substantially all structures which are (i) of the type proposed by the applicant, (ii) lawfully existing on August 20, 1977, and (iii) within 500 feet of the subject property, are located closer to the subject tidal wetland than the minimum setback required by this paragraph, placement of a*

*structure as close as the average setback of these existing structures from the subject tidal wetland shall fulfill the requirements of this paragraph.*

*(2) The minimum setback of any on-site sewage disposal septic tank, cesspool, leach field or seepage pit shall be 100 feet landward from the most landward edge of any tidal wetland.*

*(3) For any on-site sewage disposal cesspool, septic tank, leach field or seepage pit, there shall be a minimum of two feet of soil between the bottom of such pool, tank, field or pit and the seasonal high ground water level, rock, hardpan, or other impermeable materials.*

*(4) Not more than 20 percent of the adjacent area, as such term is defined in this Part, on any lot shall be covered by existing and new structures and other impervious surfaces. Provided, however, this paragraph shall not be deemed to prohibit the coverage of 3,000 square feet or less of adjacent area on any individual lot, lawfully existing on August 20, 1977, by existing and new structures and other impervious surfaces.*

*(5) The minimum lot area for any principal building constructed within the area regulated by this Part, which minimum lot area shall include any wetland portion and any adjacent area portion of such lot, shall be as follows:*

*(i) 20,000 square feet where such principal building will be served by a public or community sewage disposal system; and*

*(ii) 40,000 square feet where such principal building will not be served by a public or community sewage disposal system.*

*Notwithstanding any other provision of this Part, the requirements of this paragraph for buildings to be served by a public or community sewage disposal system shall not be applicable within the boundaries of the city of New York.*

*(6) Notwithstanding the minimum lot size provisions contained in paragraph (5) of this subdivision, the clustering of principal buildings utilized for residential purposes, including multiple family dwellings, shall be permitted at the request of an applicant for a permit under this Part in order to encourage the maintenance of undeveloped areas in or adjoining tidal wetlands. Provided, such clustering procedure shall in no case result in more principal buildings on the area regulated by this Part than would be permitted by the application of the minimum lot size criteria in paragraph (5) of this subdivision.*

*(7) The minimum setback of all hard surface driveways, roads and parking lots and similar impervious surfaces exceeding 500 square feet in size on the property involved, overhead utility line poles and railroads, shall be 75 feet from any tidal wetland. Provided, within the boundaries of the city of New York the minimum setback required by this paragraph shall be 30 feet. Further provided, this provision shall not be applicable to any portion of a regulated activity that involves a crossing or direct access to a tidal wetland on the subject property.*



*(8) Any substantial increase in surface water runoff to tidal waters classified SA, as defined in section 701.5 of this Title, or to any other surface waters which are within 1,000 feet of any SA waters and are adjacent or tributary to such SA waters, shall be prevented from directly running into any such waters by the utilization of sufficient runoff control measures, including but not limited to the installation of dry wells, retention basins, filters, open swales or ponds. Any such dry well, retention basin, filter, open swale or pond to be constructed in order to prevent direct surface water runoff to said SA and other surface waters shall be designed and constructed to handle the water runoff produced on the project site by a five-year storm.*

*(b) The minimum lot size or average lot size provisions contained in paragraphs (5) and (6) of subdivision (a) of this section shall not be applicable to any vacant lot in a subdivision lawfully in existence on August 20, 1977, or in a subdivision which received all required State, regional and local approvals prior to August 20, 1977, for the purposes of placing one single family dwelling on such lot. Furthermore, such provisions shall not be applicable to any single vacant lot which was on record on August 20, 1977 for the purpose of placing one single family dwelling thereon, provided such lot does not adjoin other lots in the same ownership, except that all such lots in the same ownership may be treated together as one lot.*

### 3.3.3 Proposed Mitigation Measures

Mitigation for potential adverse impacts of the proposed action to ecological resources would occur as a result the following:

- › The proposed bioretention basins would store, filter and infiltrate stormwater to the subsurface, and the shoreline biofiltration swale would filter sediments and pollutants from stormwater overflow before reaching Woodmere Basin. As a result, significant improvements to the water quality of stormwater overflow to the intertidal and subtidal wetland communities of Woodmere Basin are anticipated as compared to existing conditions, where untreated stormwater discharges directly to Woodmere Basin.
- › The alteration/expansion of the five golf course ponds to be converted to bioretention basins would result in a 0.54 acre increase in wetland/surface water acreage at the subject property.
- › As compared to existing conditions, significant qualitative improvements to wetland/surface water habitats at the subject property would occur under the proposed action, The alteration/expansion of the six ponds to be converted to bioretention basins would result in the installation of native upland, facultative and wetland plantings within and surrounding these features, thereby substantially improving the quantity and quality of vegetated wetland habitat at the subject property, as compared to the existing largely unvegetated conditions of the ponds. Furthermore, the cessation of golf course management practices may result in water quality improvements, through reduced turbidity and pollutants inputs. Moreover, the installation of the vegetated biofiltration swale would substantially increase the amount of native-vegetated wetland habitat at the subject property, while providing valuable stormwater treatment functions and significant improvements to the water quality of stormwater discharge to Woodmere Basin, as compared to existing conditions.

## 3.4 Aesthetic Resources

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Aesthetic Resources:

- › Detail of the existing aesthetic characteristics of the site and surrounding area through descriptive text and representative photographs
- › Potential changes in views of the subject property and its surroundings upon implementation of the proposed action
- › Comparisons of post-development conditions to existing conditions and to the established aesthetic character of the surrounding neighborhood
- › Description of key features that would serve to minimize potential aesthetic impacts.

Based on the foregoing, a discussion of the existing aesthetic character of the site and surrounding area, potentially significant adverse environmental impacts, and proposed mitigation measures is provided in Sections 3.4.1 through 3.4.3 below.

### 3.4.1 Existing Conditions

To evaluate the visual impacts of the subject property and the surrounding area, site and area visits were conducted on the mornings of June 28<sup>th</sup>, 2017 (at approximately 11:30 a.m.) and April 25<sup>th</sup>, 2019 (at approximately 9 a.m.). Photographs taken during the April 25<sup>th</sup> site visit are included in a photo-log attached to this DEIS (Appendix I). In addition, a subset of images from the attached photo-log are provided in the main body of the DEIS, the locations of which are depicted on Figure 16.

#### **Existing Aesthetic Characteristics**

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

As previously discussed, the subject property consists of an eighteen-hole private golf course and country club. As such, the existing aesthetic characteristics of the site are those of a typical golf course, including well-manicured lawns, tee boxes, putting greens, fairways, and sand traps.

A defining visual feature of the site is the existing clubhouse, which is a colonial-style estate building constructed with horizontal white wooden slats. Large double-hung windows cover much of the face of the clubhouse, each adjoined by green shutters. A matching green awning extends from the circular driveway to the clubhouse entryway steps, upon which four columns support a gabled roof above. The entrance to the driveway is well-maintained with landscaping and decorative fencing.





\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 16 - Photo Map for Text.mxd

**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Photograph Location Map**

99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodburgh  
 Nassau County

- ① Photograph Location and Number
- - - Subject Property
- ▭ Half Mile Radius

All boundaries are approximate.

Source: ESRI, VHB Site Visit April 25, 2019





**Photograph 6:** View of fairways, sand traps, and cart path near the northern boundary of the subject property, facing southwest.



**Photograph 7:** View of a fairway and sand traps abutting residential backyards near Sherwood Lane, facing west.



**Photograph 8:** View of cart paths, tee boxes, and fairways near the western boundary of the subject property, facing southwest.



**Photograph 9:** View of the existing Woodmere Club clubhouse, from the intersection of Keene Lane and Meadow Drive, facing south.

Clubhouse amenities are also visible from the interior of the site, including a swimming pool, patio areas, and seven tennis courts. Accessory structures, including the tennis office, golf cart shed, grounds and maintenance garage, and paved parking lots, adjoin the clubhouse.



These structures are all situated near the eastern boundary of the subject property at the intersection of Keene Lane and Ivy Hill Road.



**Photograph 10:** View of the existing Woodmere Club tennis courts, facing west.



**Photograph 11:** View of on-site maintenance storage area (left) from along Keene Lane, facing southwest.



### ***Surrounding Area***

The visual characteristics of the area surrounding the subject property can generally be described as those typically associated with a suburban, single-family residential community. However, the specific visual and aesthetic elements and characteristics vary among the three municipalities, and zoning districts. Existing aesthetic characteristics of the areas surrounding the subject property are described in detail below.

#### Town of Hempstead (Hamlet of Woodmere)

The surrounding area of the subject property located within the Town of Hempstead generally includes those areas north of Broadway and east of Prospect Avenue, as well as those areas south of Broadway and east of Woodmere Boulevard South. Residences vary greatly in style, although they are typically reflective of mid-20<sup>th</sup> century design. Houses range from one to three stories in height, with the majority being two-and-a-half stories. Despite some variations in architectural styles, common visual characteristics of the residences include gabled roofs and windows facing to all yards. Residential facade materials vary, and include brick, vinyl siding, wooden shingles, and stucco. Lot sizes vary, though typically range from 6,000± SF to 10,000± SF. Residences representative of those typically found in this portion of the study area are shown in Photographs 12 through 14, below.



**Photograph 12:** View of single-family residences along Park Street, north of the subject property.

Front yards in this area are typically improved with common suburban landscaping elements including grass, trees, and shrubs. Yards are enclosed in some locations by hedges and buffers, typically narrow in width and short in stature. Additional privacy screening is rare but is observed between some properties. Such screenings are typically constructed with metal or vinyl fencing.



**Photograph 13:** View of single-family residences on Elm Street, north of the subject property.

The aesthetic character of the single-family neighborhoods located to the north of the subject property within the Town of Hempstead is also defined by the proximity of the houses to one another. Due to the lot size requirements of the prevailing zoning district in this area (see Section 2.1.2 for a detailed discussion of lot size requirements), the lots within this area are often deeper than they are wide. Adjoined driveways and set-back garages are also common.

Consistent with many suburban residential communities, there is a central commercial corridor serving the surrounding residents. The commercial corridor is well integrated into the community, with residences just a block from the main thoroughfare. Commercial buildings are generally uniform in structure, with brick or stucco façades and flat roofs. Building height is a mix of one and two stories. The two-story buildings generally are mixed-use, offering residential apartment space on the second story.





**Photograph 14:** View of single-family residences near 885 West Broadway, north of the subject property.



**Photograph 15:** View of mixed-use commercial and residential uses near the corner of Broadway and Irving Place, northeast of the subject property.

Rental apartment units are provided in nearby multi-story buildings as well. The apartment buildings in the study area are brick structures ranging from three to six stories in height. Consistent with the visual and aesthetic character of the surrounding neighborhood, there is little space between these apartment buildings and the neighboring residences.



**Photograph 16:** View of multi-family residences on Woodmere Boulevard, northeast of the subject property.

#### Village of Lawrence

To the south and west of the subject property is the Village of Lawrence. The aesthetic character of the Village is similar to that of the Town of Hempstead in that the predominant land use is single-family residential. However, within the Village, the aesthetic characteristics generally vary depending upon whether you are in the neighborhoods located to the south of the subject property, or those located to the west of the site.

The aesthetic character of the neighborhoods located to the south of the subject property is that of a more secluded residential neighborhood. Lot sizes are generally larger than those seen in the hamlet of Woodmere, though vary in size based on zoning. Some lots are approximately 15,000± SF in size (i.e., along Atlantic Avenue, Photograph 17), some range from 20,000± to 30,000± SF (Photographs 18 – 20), and others are greater than 40,000± SF. Given the larger lot sizes, houses are typically situated farther apart from one another, and the aesthetic character is dominated by larger properties improved with expansive houses and significant landscaping.





**Photograph 17:** View of single-family residence along Atlantic Avenue, south of the subject property.

Lawns are much larger than those seen in the unincorporated area of the Town of Hempstead, Hamlet of Woodmere, and are improved with well-maintained turf, landscaped berms and flower beds. Additionally, vegetated privacy screens are used heavily. Mature trees and shrubs border many of the properties, blocking views between adjacent houses. Vegetated privacy screens are also present along the fronts of many properties, obscuring views from the street. Many residences are bounded with physical privacy screens, typically constructed of either wood or brick.



**Photograph 18:** View of single-family residence on Ocean Avenue, southwest of the subject property.



**Photograph 19:** View of single-family residences at corner of Longwood Crossing and Barrett Road, southwest of the subject property.



In addition to the dense vegetation observed on residential properties, significant tree coverage defines many of the residential streets. Tall trees line many of the roadways, creating a canopy that spans across the streets in some cases. The prevalence of significant tree cover contributes to the overall character of the neighborhood.



**Photograph 20:** View of single-family residence near the corner of Hollywood Crossing and Barrett Road, southwest of the subject property.

Many of the houses located to the south of the subject property within the Village of Lawrence appear to be newer construction, and a predominance of brick and vinyl siding was noted. The majority of homes are two-and-a-half or three-stories tall, though a few are single-story. Large driveways are also characteristic of this area; many driveways are circular, providing separate ingress and egress.

The Rockaway Hunting Club is located to the south and southeast of - and partially adjoining the subject property. The Rockaway Hunting Club consists of a members-only private golf and country club. In addition to a three-story clubhouse, the property contains over twenty grass and hard surface tennis courts, an eighteen-hole golf course, driving ranges, and other associated turf fields.



**Photograph 21:** View of Rockaway Hunting Club clubhouse on Ocean Avenue, south of the subject property.



**Photograph 22:** View of single-family residence and the Rockaway Hunting Club golf course from the intersection of Ocean Avenue and Albro Lane, south of the subject property.



The Rockaway Hunting Club, like the Woodmere Club, presents a distinct variation from the predominantly residential land use of the surrounding areas. However, since the Rockaway Hunting Club has more marine surface water frontage (i.e., Woodmere Channel and Brosewre Bay) and is surrounded by less densely-developed residential neighborhoods, its deviation from the aesthetic character of the surrounding neighborhoods is far less than that of the Woodmere Club.

The aesthetic character of the neighborhoods within the Village of Lawrence to the west of the subject property differ from those to the south. Lot sizes are generally smaller than the southern portion of the Village of Lawrence and commonly range from 6,000± to 12,000± SF in size, as depicted in Photographs 23 and 24.

In the areas to the west of the subject property, within the Village, the space between houses is noticeably less than that of the homes to the south, although not to the same degree as in the hamlet of Woodmere. For instance, house frontages are not as narrow, and no adjoined driveways were observed. Aside from these general patterns, visual and aesthetic character is variable from street to street.



**Photograph 23:** View of single-family residences on Barrett Road, southwest of the subject property.



**Photograph 24:** View of single-family residences on Sherwood Lane, west of the subject property.

Some streets in the western area of the Village of Lawrence are more reflective of the mid-20<sup>th</sup> century construction that was observed in the Town of Hempstead. These houses are typically two, or two-and-a-half stories in height with mixed design, though building façades are generally wooden shingle, brick, or vinyl siding. Yard setbacks are greater than within the Town of Hempstead. Landscaping within this area of the Village is similar in nature to that of the Town with maintained turf and some shrubbery. Property lines are bounded with less significant vegetative screens and buffers than seen in the southern portion of the Village of Lawrence.

Other streets within this portion of the Village of Lawrence are developed with a more modern design, suggesting recent renovation or construction. Style is again varied, but facades are primarily brick and vinyl siding. Yard setbacks are similar in size, though more significant landscaping was noted in some cases.

Tree coverage is generally less significant than occurs in the southern portion of Lawrence.

### Village of Woodsburgh

The Village of Woodsburgh is situated directly east of the subject property. The aesthetic character is that of a typical suburban, single-family residential community, similar to the adjacent areas in the hamlet of Woodmere. Properties tend to be larger, ranging from 9,000± to 21,000± SF, as depicted in Photographs 26 through 28. However, there are notable exceptions, including the 6,000± SF lots along Meadow Drive, directly across from the subject property (Photograph 25).



**Photograph 25:** View of single-family residences near the intersection of Meadow Drive and Keene Lane, with the Woodmere Club in the background.

Many households in Woodsburgh have a modern design, indicative of more recent construction or renovations. Houses are generally two-and-a-half stories, though there appears to be a higher percentage of three-story houses than in Woodmere. Building facades vary, with a predominance of brick and vinyl siding.





**Photograph 26:** View of single-family residences near the intersection of Barberry Lane and Ivy Hill Road, east of the subject property.



**Photograph 27:** View of single-family residences on Manor Lane, east of the subject property.

Similar to the southern portion of Lawrence, the aesthetic character of Woodsburgh is defined by vegetated areas and mature trees that line many of the residential roads and provide canopy cover. Residential landscaping further contributes to the aesthetic character of the community.





**Photograph 28:** View of single-family residences on Wood Lane, east of the subject property.

Lawns are larger than in Woodmere and tend to be improved with more significant landscaping, including landscaped berms and well-groomed shrubbery. However, landscaping here is generally not as substantial as in the southern portion of Lawrence. As such, in many instances, neighboring houses are still easily visible from one another as limited vegetative buffers between houses are present. In the northwest corner of Woodsburgh are the three-story Mayfair and Crestwood apartment buildings. These are brick buildings with gabled roofs. While the apartment buildings themselves are situated close to one another, they are buffered from neighboring single-family residential properties by sizeable lawns. Consistent with the aesthetic character elsewhere in Woodsburgh, there is substantial tree coverage along the border of the apartment properties.

#### Village of Cedarhurst

Although the subject property is not located directly within the Village of Cedarhurst, it is within a one-half-mile radius, and as such, the Village is within the defined study area for this DEIS and is important to consider when assessing the visual and aesthetic character of the surrounding communities.

The area of Cedarhurst directly across from the subject property is very similar to the Town of Hempstead in terms of aesthetic characteristics. Houses are organized close together, with limited space between residences. The majority of houses are two-and-a-half stories, with varying building construction, including brick, vinyl siding, and wood shingle. Front yard setbacks are shallow with many homes close to the street and sidewalks; front yards generally are simply landscaped with maintained lawns, small trees and shrubs.

Similar to the Hamlet of Woodmere, this area of the Village of Cedarhurst also contains a commercial corridor. Commercial buildings range from one to four stories, with many buildings providing residential apartment spaces on upper floors. These mixed-use buildings share many similar characteristics to those previously described in Woodmere. Roofs are generally flat, and buildings largely have brick exteriors. Additionally, there is a higher prevalence of dedicated apartment buildings, many of which are three-stories or higher. As seen previously, these multi-family residences are situated in close proximity to neighboring single-family properties.



**Photograph 29:** View of mixed-use commercial and residential uses near the intersection of Central Avenue and Columbia Avenue, northwest of the subject property.

Overall, the aesthetic character of the areas surrounding the subject property reflects that of typical suburban single-family neighborhoods on Long Island. Differences in visual and aesthetic character throughout the study area can primarily be attributed to lot size, and the age and style of the homes. The single-family residences within the neighborhoods with smaller lot sizes are organized closer to one another, and vegetation is less prominent, while neighborhoods within the study area with larger lot sizes tend to be spaced further apart, and landscaping/vegetative cover is more significant. Although construction style varies, most houses tend to be about two-and-a-half-stories in height and are indicative of mid- to late-20<sup>th</sup> century construction.

Considering the overall predominance of single-family residential development in the surrounding neighborhoods, the subject property exists in stark contrast to the visual and aesthetic character of the study area.



### 3.4.2 Potential Impacts

#### Potential Changes in Views of the Subject Property

As previously indicated above, the subject property is surrounded by single-family residential neighborhoods. Homes located along Broadway to the north, Meadow Drive and Ivy Hill Road to the east, Atlantic Avenue to the southwest, and various local roadways to the west including Park Row, East Hawthorne Lane, Auerbach Lane, Copperbeech Lane, Ivy Street, Rose Street, Iris Street, and Sherwood Lane have existing views of the golf course and country club. However, as vegetative buffers, and/or fencing line much of the property, from many of these areas, views of the subject property are somewhat obstructed.

#### ***Broadway***

Along much of Broadway, a mix of existing fencing and vegetated buffers obstruct the subject property from view. Following implementation of the proposed action, the view from locations to the north along Broadway would remain mostly obstructed, however some existing trees would be removed to accommodate the proposed grading. Rear yards of the proposed single-family homes would abut Broadway and may be partially visible through the existing vegetative buffer.



**Photograph 30:** View of the subject property from the intersection of Broadway and Prospect Avenue.

### ***Meadow Drive/Ivy Hill Road***

Meadow Drive/Ivy Hill Road runs northwest to southeast along the eastern edge of the subject property from Broadway to the southern boundary of the site. The roadway is known as Meadow Drive between Broadway and Keene Lane within the Town of Hempstead, and as Ivy Hill Road from Keene Lane to the southern boundary of the subject property within the Village of Woodsburgh.

The Meadow Drive section of the roadway presents the most unobstructed views of the subject property. Here, much of the subject property is lined by railroad tie fencing, affording passersby and the existing single-family homes along the east side of Meadow Drive, a mostly unobstructed view of the golf course. Following implementation of the proposed action, these views will shift from that of the golf course, to views of the new single-family homes. Specifically, the views from this location will be of the rear yards, and associated fencing, and landscaping of the proposed single-family residences.



**Photograph 31:** View of the Meadow Drive from within the subject property, near the intersection of Meadow Drive and Keene Lane, facing north.

### **View of the subject property from Meadow Drive facing northwest**

The Ivy Hill Road section of the roadway also presents relatively unobstructed views of the subject property. However, unlike Meadow Drive, railroad tie fencing does not exist along this portion of the roadway, and instead, the subject property is bounded by low-lying shrubbery. Partially obstructed views of the Woodmere Channel exist from this location. Single-family homes currently exist on the eastern side of Ivy Hill Road within the Village of Woodsburgh.





**Photograph 32:** View of the subject property near the intersection of Meadow Drive and Channel Road, overlooking low-lying brush, facing northwest.



**Photograph 33:** View of the subject property and Woodmere Channel near intersection of Meadow Drive and Channel Road, overlooking low-lying brush, facing southwest.

Upon implementation of the proposed action, views of the subject property from these existing homes will shift from that of the golf course, and Woodmere Channel to views of the rear yards, and associated fencing, and landscaping, of the proposed single-family residences.

Elsewhere, views into the subject property would be more open. Three of the proposed lots bordering the Woodmere Channel in this area fall entirely or partially within the NYSDEC Tidal Wetland Adjacent Area Jurisdiction. As such, these lots are subject to building development restrictions pursuant to 6 NYCRR 661.6. Under these regulations, all structures in excess of 100 SF must have a minimum 75-foot setback from the most landward edge of any tidal wetlands. Further, the regulations limit total lot coverage of existing structures, new structures and impervious surfaces to 20 percent of the total lot area. Therefore, under the 6 NYCRR 661.6 development restrictions, these lots would contain reduced impervious surface area (i.e., buildings and pavement) and extensive pervious surface area (i.e., vegetation) and would provide a buffer between the Woodmere Channel and any subsequent development. Views of the Woodmere Channel would thus remain relatively unobstructed along the roadways adjacent to these lots. The lots subject to these regulations are defined in the *Subdivision Plan Package* (Appendix B).

### ***Atlantic Avenue***

Atlantic Avenue runs northeast to southwest from Keene Lane to Chauncey Lane within the Village of Lawrence, acting as a divider between the Woodmere Club and the Rockaway Hunting Club. Single Family homes are located on the north side of Atlantic Avenue, with rear yards abutting the subject property, and views of the Rockaway Hunting Club from the front yard. As illustrated below, a buffer of mature trees exists between the existing homes and the subject property significantly obstructing views of the subject property. The subject property is not visible from the roadway as it is blocked by the single-family homes, and the existing buffer of mature trees.





**Photograph 34:** View of single-family residences along Atlantic Avenue that abut the subject property, south of the subject property, facing north.



**Photograph 35:** View of a vegetative buffer between the subject property and the single-family residences along Atlantic Avenue, facing southwest.

Upon implementation of the proposed action, a portion of the existing buffer of mature trees will be removed to accommodate the proposed grading of the subject property. Rear yards of the proposed single-family residences will abut the rear yards of existing homes on

Atlantic Avenue. Views will shift from that of the vegetative buffer and golf course, to views of the vegetative buffer and rear yards of the new single-family homes.

***Residential Roadways to the West***

Similar to the existing views of the subject property from Atlantic Avenue, the golf course is partially visible from the rear yards of single-family homes on the residential streets west of the subject property, including Sherwood Lane, Iris Street, Rose Street, Tulip Street, Ivy Street, East Hawthorne Lane, Copperbeech Lane, and Auerbach Lane. Generally, views from these rear yards are obstructed by existing vegetative buffers and fencing, however there are areas such as the dead end on Lotus Street, and East Hawthorne Lane, where gaps in the screening elements exist, and the golf course is partially visible from the public areas of the roadways.

Upon implementation of the proposed action, existing views of the subject property will shift from those of a golf course, to views of the proposed single-family homes. However, from the majority of the residential roadways to the west of the subject property, views of the subject property would remain obstructed by vegetation and the existing single-family residences.



**Photograph 36:** View of the subject property from Hawthorne Lane, facing east (photo credit Google Earth).





**Photograph 37:** View of single-family residences proximate to the western boundary of the subject property along Iris Street, facing east towards the subject property.

### **NYSDEC Program Policy**

In addition to the visual assessment summarized above, to address the requirements of the Final Scope, the NYSDEC Program Policy “Assessing and Mitigating Visual Impacts” (hereinafter “the Program Policy”) was consulted.

The Program Policy provides a standardized method for evaluating the significance of a visual impact within the context of the State Environmental Quality Review Act. The Program Policy’s methodology for evaluating an action’s aesthetic and visual impact primarily focuses on the identification of nearby aesthetic resources of statewide or national significance. To determine the presence of such aesthetic resources, the Program Policy provides the following list of sources to be consulted:

- › Properties of historic significance, as identified on the State and/or National Register of Historic Places
- › State Parks
- › Heritage Areas
- › The State Forest Preserve
- › National Wildlife Refuges and State Game Refuges
- › National Natural Landmarks
- › The National Park System, Recreation Areas, Seashores, Forests

- › Rivers designated as National or State Wild, Scenic or Recreational
- › Sites, areas, lakes, reservoirs or highways designated or eligible for designation as scenic
- › Scenic Areas of Statewide Significance
- › State or federally designated trails, or those proposed for designation
- › Adirondack Park Scenic Vistas
- › State Nature and Historic Preserve Areas
- › Palisades Park
- › Bond Act Properties purchased under Exceptional Scenic Beauty category
- › National Heritage Areas.

The Program Policy also stresses the importance of evaluating the existing human-made aesthetic conditions of the area, in order to establish “a ‘baseline’ from which visual change may be measured and visual impact assessed.”

As described above, the basis of the DEC’s analysis of visual impacts revolves largely around the identification of nearby designated aesthetic resources and the evaluation of how these resources may be impacted by the proposed action. A review of the list of aesthetic resources of statewide or national significance, as described in the Program Policy, indicates that no such resources exist within the study area (described previously as a one-half mile radius around the subject property). Since there are no aesthetic resources of statewide or national significance within the study area, the proposed action would not fall within any viewsheds of the same. In addition, the study area is developed with single-family residences of similar characteristics to those that would be built as a result of the proposed action. As such, the proposed action will be consistent with the existing human-made aesthetic conditions of the study area.

Following the subdivision phase of the proposed action, it is the intent of the Applicants to develop the 284 residential lots in accordance with the bulk and dimensional regulations of the prevailing municipal zoning districts, as described in Section 3.10, at which time the subject property would be converted to a single-family residential neighborhood. Views of the subject property would change accordingly.

In 2000, NYSDEC issued the Program Policy “Assessing and Mitigating Visual Impacts” (hereinafter “the Program Policy”) to provide NYSDEC staff with a standardized method for evaluating the significance of a visual impact within the context of the State Environmental Quality Review Act. The procedures and methodologies contained in this Program Policy were utilized in the analysis of the proposed action’s potential impact to visual and aesthetic resources, as summarized below.

### **3.4.3 Proposed Mitigation Measures**

Mitigation measures that have been integrated into the proposed action to lessen potential impacts with respect to aesthetic resources are described below.

- › Construction fencing will be installed around the border of the subject property to provide visual screening during construction activities
- › The design of future residences would be consistent with the prevailing zoning and bulk area and dimensional requirements of the municipality in which the individual lots are located in order to construct residences that fit in with the character of the surrounding neighborhoods
- › Where feasible, existing trees on the subject property will be retained (Appendix J).

The design of the individual lot development has not yet been undertaken, and would not be advanced to the necessary level of detail to fully define aesthetic characteristics until after the subdivision has been approved, and the lots are actually made available for construction. However, the respective municipalities have processes in place to ensure that the aesthetic nature of new development is consistent with the overall character of the communities (i.e. Village of Lawrence Board of Building Design, Village of Woodsburgh Architectural Advisory Committee).

Based on the foregoing, no significant adverse impacts to aesthetic resources have been identified. Therefore, no further mitigation is proposed, beyond those measures described above, and measures that may be required during subsequent site plan approvals prior to commencement of construction on the individual lots.



### 3.5 Historic and Archaeological Resources

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Historic and Archaeological Resources:

- › A Phase 1A Archaeological Documentary Study
- › Consultations with the OPRHP, as needed
- › A Phase 1B Archeological Survey, as needed
- › Identification of neighboring historic districts, and the project-related impacts to the same.

This section examines the historic and archaeological resources within the subject property that may be impacted by the proposed development. Historic resources include districts, buildings, structures, objects, and sites that are listed or may be eligible for listing in the State and National Register of Historic Places (S/NRHP), or that are landmarked locally. Artifacts and archaeological sites are examples of archaeological resources, which are typically found buried within and on the ground. These resources are investigated by archaeologists to identify and interpret human behavior for hundreds or thousands of years. Archaeological deposits range in date from 50 years old to several thousands of years old. Like historic resources, archaeological resources are reviewed for their eligibility for inclusion in the NRHP.

A discussion of the existing historic and archaeological resources, potentially significant adverse impacts, and proposed mitigation measures is provided below.

#### 3.5.1 History of the Subject Property

The Woodmere Country Club is situated within the hamlet of Woodmere (Town of Hempstead), the Incorporated Village of Woodsburgh, and the Incorporated Village of Lawrence. These areas are historically referred to as part of the Five Towns area, which is comprised of Woodmere, Cedarhurst, Lawrence, the Hewletts, and Woodsburgh. As such, the history of the Woodmere Country Club is connected to the development of planned communities in the Five Towns area broadly, with a more intimate connection to the settlements at Woodmere and Woodsburgh. Prior to the formation of Nassau County in 1899, this area - comprising the eastern part of the Rockaways peninsula - was considered part of Queens County.<sup>60</sup>

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<sup>60</sup> Bellot, 1917. *History of the Rockaways From the year 1685 to 1917*. Available at: <https://archive.org/details/cu31924028832941/page/n7>. Accessed January 2019.

Permanent settlement by Europeans did not occur in southwestern Long Island until the middle of the seventeenth century. At that time, the area around eastern Jamaica Bay was inhabited by the Rockaway Indians, a Munsee-speaking Delaware group who probably had stronger cultural ties to Delaware peoples on mainland New York and New Jersey than with the Eastern Algonquian groups of central and eastern Long Island.<sup>61, 62, 63</sup> However, according to some local historical accounts, the name “Reckouwacky” was used by the Canarsie Indians in an effort to distinguish their settlement from other tribal villages in the region.<sup>60</sup> The Munsee speakers that inhabited coastal New York were loosely organized communities with fluid concepts of community and collective membership.<sup>61</sup> The names for some of these groups still resonate today in local geography. The Munsee term for sandy place, Reckouw Hacky, is first mentioned in a 1639 Indian deed of land to the Dutch.

Devastating epidemics and sporadic armed conflicts between the European and Rockaway Indians greatly reduced the Native American population on western Long Island, though hostilities abated after August 1645 when a peace treaty between local Indian groups (including the Rockaway) and Dutch was signed. The Rockaway Indians lost land to the townships of Hempstead and Jamaica, but they reserved the right to camp on unfenced land at Rockaway in exchange for their acknowledgment of European claims.<sup>62</sup> As in other parts of Long Island, undocumented indigenous habitation of marshy and undeveloped areas continued into the twentieth century when they were confronted by urban developers and land speculators; this may well have been the case for the indigenous communities that settled the Rockaways peninsula.

The Dutch ceded control of New Amsterdam to England in 1664, and the area surrounding Jamaica Bay east to Hempstead Bay was settled by both Dutch and English farmers in the 1660s.<sup>64</sup> European village life was concentrated in the Town of Hempstead, with the Rockaways as outlying areas of the town.<sup>60</sup> An indigenous presence continued in the area until the beginning of the eighteenth century. Indeed, one local historian noted that Hog Island (later referred to as Barnum Island), located roughly 3.2 kilometers (two miles) southeast of the project site in Woodmere Bay, was the “headquarters” for the Reckouwacky tribe.<sup>45</sup> The meadows and marshes surrounding Woodmere Bay were utilized for occasional grazing of Indian-owned cattle, based on land negotiations between the tribe and the European settlers. The Euro-American economy of southwestern Long Island at this time was principally agricultural, supplemented by fishing and other maritime trades in communities along the shore. The earliest documented European house in the Rockaways was built by Richard Cornell in around 1690 more than 1.6 kilometers (one mile) southwest of the project area in present-day Far Rockaway; at the time, it is assumed that the area would have been occupied by indigenous structures and little else.<sup>60</sup> The area northeast of the Woodmere Country Club (which comprises portions of present-day Woodsburgh village and Hewlett

<sup>61</sup> Cantwell and Wall, 2001. *Unearthing Gotham: the archeology of New York City*. New Have, CT: Yale University Press.

<sup>62</sup> Goddard, 1978. *Handbook of North American Indians, Volume 15*. Washington DC: Smithsonian Institution.

<sup>63</sup> Grumet, 2005. *The Encyclopedia of New York State*. Syracuse, NY: Syracuse University Press.

<sup>64</sup> Hazelton, 1925. *The Boroughs of Brooklyn and Queens and Counties of Nassau and Suffolk, Long Island, Volume II*. Port Washington, NY: Lewis Historical Publishing.

Neck) was occupied by the Browsers and Hewletts- farming families- in the eighteenth century.

The rural economy was disrupted by the American Revolution. The Battle of Long Island took place in nearby central Brooklyn during August 1776, and despite the efforts of George Washington, New York City quickly came under British control. The southern part of the Town of Hempstead was largely Loyalist in political sentiment, but both Patriot and Loyalist families that remained in the region following the Battle of Long Island suffered hardships as British garrisons were provisioned with crops, wood, and livestock, seriously depleting local resources.<sup>65</sup> Families that had actively aided the British during the Revolution were forced to surrender property to the returning Patriots during the 1780s and 1790s. Pre-war economic patterns were gradually resumed during the early nineteenth century, facilitated by waterborne trade. Early roads were mapped on early- to mid-nineteenth century maps, which show present-day Broadway north of the project area.

By 1860, The villages of Woodmere and Hewlett were established, their development linked to the arrival of the railroad. Prior to this time, the area was inhabited by scattered farming families with an inn, a church, and a country store. The Hewlett and Woodmere Bays contained oyster and clam beds. These and other products of the meadow and marshland were sold by the half-dozen farming families that lived in Woodmere in the mid-nineteenth century. This rural section of the Rockaway peninsula was often referred to as Brower's Point.

The opening of the Rockaway branch of the Long Island Rail Road in the 1860s spurred development in southwest Nassau County. A station was built at Brower's Point, and the name of the area was changed to Woodsburgh after Samuel Wood, a wealthy businessman who bought up all the farms in the area including the present-day Woodmere Country Club property, donated land for building the railroad station north of the subject property and set out to build an upscale development. Around 1870, Wood built the Woodsburgh Pavilion Hotel on the corner of Woodsburgh Boulevard and Broadway east from the subject property, which served 500 wealthy and fashionable guests.<sup>60,66,67</sup> After Samuel Wood died, his estate passed into the hands of Andrew Hewlett.

A portion of the Wood/Hewlett estate (comprising 200 acres of woodland and 100 acres of marsh and meadowland south of the railroad track and 100 acres north of the railroad) was eventually purchased by Robert L. Burton.<sup>60</sup> The large Pavilion Hotel on Woodsburgh Boulevard was demolished, and nearly every residence within the purchased lands was either razed or relocated to the eastern edge of the village. In an effort to develop a high-end restricted suburban development, one local historian notes:

"Burton laid out streets, dredged the creeks in Woodmere Bay, built a bridge, laid out tennis courts and golf links, erected a club house and connected gas, water, electric lights and the telephone system. Burton spent more than a million dollars

<sup>65</sup> Luke and Venebles, 1976. *Long Island in the American Revolution*. New York State American Revolution Bicentennial Commission, Albany.

<sup>66</sup> Vollono, 2012. *A Brief History of the Village of Woodsburgh*. Available at: <https://nebula.wsimg.com/22d531487c79234553b2f5820a30dabe?AccessKeyId=661566C4A2F1F27A2C36&disposition=0&alloworigin=1>. Accessed January 2019.

<sup>67</sup> Vollono, 2015. *Vollono Millicent's Digital Scrapbook – Gardens of Eden: Long Island's Early Twentieth-Century Planned Communities*. Available at: <https://www.millicentvollono.com/gardens-of-eden>. Accessed January 2019.

in improvements. Many residences of great architectural beauty were built on portions of the property sold to individuals, and some of the best-known people made Woodmere their home.”<sup>60</sup>

At the same time that Burton purchased the Wood/Hewlett lands, other urban land speculators were also buying up land in neighboring parts of Cedarhurst, Lawrence, and Hewlett Bay Park. Investors in these properties hired dredging companies to create deep-water channels for yacht and ferry access.<sup>66</sup> Burton teamed up with investors of properties to the east and west, working to enhance transportation and expand amenities for the new planned communities. He and other area developers employed well-known architects and landscape architects to design aesthetically-pleasing and thoughtfully-planned neighborhoods that would draw urban elites. These are among the earliest planned communities on Long Island, that incorporated the ideas of residential parks into the new developments that, due to innovations in transportation, were within a reasonable commuter’s distance to New York City.<sup>68</sup>

The Woodmere Club was originally built as part of Burton’s development in 1908 on land in the Village of Woodsburgh east of the project area. Shortly thereafter, Burton sold the development to Maximilian Morgenthau, President of the Hudson Bay Realty Company.<sup>60</sup> In 1910, the Woodmere Club moved to its present location. The Woodmere Club eventually expanded to include some of the lands of the Rockaway Hunting Club.<sup>69</sup>

During the late nineteenth and early twentieth centuries, the small fishing communities on the south shore of southwest Long Island were transformed into thriving summer resorts. Several large hotels, parks, and beaches were developed for the tourist industry, including the Woodmere Club, the Rockaway Hunting Club (which is adjacent to the Woodmere Club), the Seawane Club and the Inwood Club. During this time, the Woodmere Club employed a series of renowned golf course architects to design the golf course and changes to it over time, including Jack Pirie (who was the resident golf pro in the late 1910s), Seth Jagger Raynor (who updated the course in the 1930s), and Robert Trent Jones, Jr. (whose 1950s plan for the golf course is framed and hanging in the Woodmere Club).

### 3.5.2 Existing Conditions

In order to determine whether known sites of historical and archaeological sensitivity exist on the subject property, the NYS OPRHP Cultural Resource Information System (CRIS) was reviewed. According to CRIS, the subject property is situated within an archaeologically sensitive area.

A project notification was submitted to OPRHP prior to VHB being retained for cultural resources consulting on this project. That initial consultation with OPRHP requested review of the impacts of the proposed project on historic and archaeological resources. A response letter dated July 10, 2018 from OPRHP indicated that the project is in an archaeologically sensitive area, and that a Phase IA archaeological survey was warranted (Appendix K). Based

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<sup>68</sup> Mackay, 2015. *Gardens of Eden: Long Island’s Early Twentieth-Century Planned Communities*. New York: W.W. Norton and Company.

<sup>69</sup> The Woodmere Club. *About*. Available at: <https://woodmereclub.com/about/>. Accessed January 2019.

upon that initial review, the Woodmere Clubhouse (USN 05993.000007) was determined not eligible for listing on the S/NRHP by OPRHP staff.

### Historic Resources

As mentioned above, historic resources include districts, buildings, structures, objects, and sites that are listed or may be eligible for listing in the National Register of Historic Places (NRHP), or that are landmarked locally. The development site includes a minimum of five buildings and two other structures within the project area (Table 14). There are no S/NR-listed or previously determined eligible resources within the project site.

There are two historic districts located immediately adjacent to the project area: the Flower Streets Historic District (USN05993.000005) and the Rockaway Hunt Historic District (USN05941.000402). Both districts have been determined eligible for listing on the NR.

**Table 14 Existing Buildings and Structures**

<b>Buildings/Structure</b>	<b>Age*</b>	<b>USN (if available)</b>	<b>OPRHP determination of eligibility</b>
<i>Buildings</i>			
Woodmere Clubhouse	c.1908	05993.000007	Not eligible
Pool House	c.1950	N/A	N/A
Pro Shop and Cart House	c.1970s	N/A	N/A
Maintenance Building	1952	N/A	N/A
Restaurant and Bar on Fairway	c.1962	N/A	N/A
<i>Structures</i>			
Six Tennis Courts	c.1920s	N/A	N/A
18-hole Golf Course	c.1908	N/A	N/A

\*The age of the buildings and structures are approximations based on Nassau County property cards, historic maps, historic aerials, and written historical accounts.

### Flower Streets Historic District

The Flower Streets Historic District is an approximately 10-acre residential district in Lawrence and Cedarhurst. The residential district that has been determined eligible for listing on the NR by the ORPHP under Criterion A for Community Planning and Development as a planned neighborhood that reflects the patterns of development of southern Nassau County as an automobile suburb, and under Criterion C in Architecture as an ensemble of twentieth-century dwellings that embody Colonial Revival and Gothic Revival modifications of the foursquare form. The district was platted in 1925 and currently consists of 39 dwellings, 37 of which are contributing. The district is bounded by Broadway to the northwest, a split-level development and the Woodmere Club to the northeast, and the Copperbeech historic district to the southwest.



### Rockaway Hunt Historic District

The Rockaway Hunt Historic District is a 400-acre area bordering the southern edge of the subject property. This potential historic district runs along the southeastern edge of Lawrence. The rough border of the district includes Barrett Road and Atlantic Avenue to the northwest, the Woodmere Club to the northeast, marshland and the Isle of Wight neighborhood to the southeast, and a mix of marshland and Lawrence Country Club links to the southwest. The southern half of the district is separated from the remainder of the Village of Lawrence by the Lawrence Country Club golf course and is accessed by Causeway Road.

The Rockaway Hunt Club plays a central role in defining the relationship between historic resources in this district and establishing the period of significance. The period of significance is 1878 (when the Rockaway Hunting Club was established) through 1967. According to the OPRHP, the district is eligible for inclusion in the NR under Criterion A for Community Planning and Development for its association with the initial development of the Village of Lawrence, as well as for its planned layout as an exclusive speculative development along winding drives. It is also eligible for inclusion under Criterion C as a unique ensemble of elaborate 19<sup>th</sup>-20<sup>th</sup> century dwellings of varied architectural styles designed by different architects of local and national notability.

### **Archaeological Resources**

#### ***Phase IA Archeological Study***

There are no S/NR-listed or previously determine eligible archaeological sites located within the subject property. As mentioned above, initial consultation with OPRHP for historic and archaeological review resulted in a request from OPRHP to complete a Phase IA Archaeological Assessment, due to the presence of the subject property within an area of archaeological sensitivity. VHB completed the Phase IA Archaeological Assessment in January 2019 (Appendix K). The study was performed in accordance with the guidelines outlined in the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* issued by the New York Archaeological Council (1995) and the *Phase I Archaeological Report Format Requirements* issued by the New York State OPRHP (2005). No structures have been reviewed as part of this Phase IA.

The purpose of the Phase IA is to research the overall archaeological sensitivity of the site, and to determine the extent of historic-period and modern-era disturbances within its boundaries. Archival research is conducted to document the site's use and occupation in the past (including historic-era disturbances), assess the probability that potential archaeological resources will be disturbed by the proposed project, and explain why further archaeological work should or should not be required. In order to accomplish these goals, the Phase IA for the subject property includes a review of data from a variety of digital and archival repositories for relevant information, including archaeological site forms and archaeological surveys conducted near the project area; archival research to determine the range of potential archaeological sites that may exist within the project area; a summary of the specific land use history for the project area that focuses on the physical integrity of potential archaeological resources and the impact of previous disturbance to the

archaeological record; a brief sketch of the area history and how the specific history of the project area fits within that general historical context; and evidence of historic and existing ground disturbance.

Archival research established a general sensitivity for archaeological sites within the subject property, but a review of historic maps, historical records, and existing soils surveys indicated that the majority of the property was impacted in the late nineteenth through the twentieth century by cutting and filling of the marshy lands, dredging of the property along Brosewere Bay for construction of the Woodmere Channel and basin, and subsequent construction of the golf course, tennis courts, main clubhouse and associated buildings and structures. These land transformations are evident on historic maps, which illustrate changes in the land from farming in the north and marsh in the south (c. 1844-1903) to recreational use in the twentieth and twenty-first centuries (c. 1914-2016). Furthermore, maintenance of the grounds and installation of drainage, electric, and other below-ground utilities in the late twentieth through twenty-first century were photo-documented during field reconnaissance. This evidence suggests that most of the property has been thoroughly disturbed and, therefore, is unlikely to yield intact evidence of archaeological sites.

### ***Phase IB Archaeological Survey***

In the northern section of the project area, two structures were illustrated on mid- to late-nineteenth century maps. These were likely situated to face Broadway (between Pine and Elm Streets). There is no surface evidence of these structures. In this section of the project area, the landscape shows evidence of filling and recontouring for the construction of tee boxes, greens and sand traps. Because the depth of disturbance associated with these activities was unknown, a limited Phase IB archaeological survey was recommended within roughly two acres in the northern portion of the parcel in the vicinity of the map-documented structures. The Phase IA report was submitted to OPRHP and VHB received a concurrence letter dated February 27, 2019 (Appendix K).

The goals of the Phase IB study were to recover and document archaeological materials associated with mid-nineteenth through early twentieth century settlement (if present), and/or to document suspected disturbance, before the subject property is disturbed by proposed new construction. This is accomplished by excavating a series of shovel test pits within the archaeological area of potential effect (APE).

VHB completed the Phase IB Archaeological Survey (Phase IB) in May 2019 (Appendix K). The study was performed in accordance with the guidelines outlined in the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* issued by the New York Archaeological Council (1995) and the *Phase I Archaeological Report Format Requirements* issued by the New York State OPRHP (2005). A mapping datum was established at the northeast fence corner of the property, and the locations of shovel test units were designated using metric grid coordinates relative to this point. In accordance with New York Archaeological Council (NYAC) standards, the parcel was tested mostly at 15-meter (49-foot) intervals; shovel testing occurred at 30-meter intervals based on observance of disturbed soils and surface evidence of disturbance in the field. Subsurface testing was performed throughout the APE on low-lying surface areas in accordance with Phase IA

recommendations. Tee boxes, sand traps, and greens were eliminated from subsurface testing.

A total of 33 shovel test pits was excavated throughout the APE. Based upon inspection in the field, all 33 shovel test pits contained soils that were disturbed by grading, filling, and redeposition of soils. A light density of historic-period artifacts (including small fragments of brick, shell, ceramics, glass, coal, and construction nails) was recovered (occasionally with recent trash) in 13 shovel tests throughout the APE. These items date to the early twentieth century and are associated with the Abraham Hewlett historic house (USN05901.003482), which was identified on historic maps in the Phase IA report. However, all artifacts were recovered in soils that were disturbed by construction and maintenance of the golf course. Due to the low density and diversity of the artifacts recovered, along with the lack of soil integrity from which they were recovered, the archaeological remains were determined not eligible for listing on the S/NR. Based on these findings, no additional archaeological investigations are recommended.

The results of the Phase IB survey were submitted to OPRHP on July 23, 2019. In a letter dated August 2, 2019, the OPRHP stated that they concur with VHB's findings and that the State Historic Preservation Office (SHPO) has no remaining concerns regarding the project's potential to impact archaeological resources (Appendix K).

### **3.5.3 Potential Impacts**

The proposed action involves the demolition of all existing buildings and structures on the subject property, and the entire property would be subdivided, graded, and filled in preparation for new residential construction. Most of the property would be subdivided into residential lots interspersed with four bioretention areas, and wetland setbacks and a bio-filtration area along the basin northwest of Woodmere Channel.

#### **Historic Resources**

No S/NR-listed or eligible historic resources have been identified within the subject property. Therefore, the proposed action will have no effects on historic architectural resources within the subject property.

As mentioned above, two NR-eligible historic districts are located adjacent to the subject property: the Flower Streets Historic District and the Rockaway Hunt Historic District. The planning of these residential districts began between 1878 and 1925, at a time when Long Island planners and architects began their first experiments with garden, bedroom, and other planned suburban communities. Indeed, the presence of these districts is tied to the broader historic development of Woodmere, Woodsburgh, Lawrence and Cedarhurst, and the subject property's history is a part of that historical development. As noted above, the Rockaway Hunt Historic District is defined by varied architectural styles and ages. This diversity represents individualism and choice among buyers and their builders, but it also represents a building pattern that extended from 1878 to 1967 (the 50-year mark at the time of the district's Determination of Eligibility).

Although the look and design of the future residences at the subject property are not yet known, the proposed development of homes on the site would be compatible with the context of the Rockaway Hunt Historic District and the Flower Streets Historic District. Because portions of the subject property are situated within the Town of Hempstead and the Villages of Woodsburgh and Lawrence, the proposed lot sizes are developed in relation to lot size allowances specific to the respective municipality in which they are located. Therefore, the proposed residential lots that are located adjacent to the Flower Streets Historic District would be similar in size and layout to the lot sizes and layouts in that neighboring historic district. Similarly, the proposed residential lots that are located adjacent to the Rockaway Hunt Historic District would be similar in size and layout to that historic district. Based on this historic contextual analysis, the proposed action would not have any significant, direct effects on the neighboring historic districts.

### **Archaeological Resources**

As discussed previously, a Phase I archaeological survey (Phase IA and Phase IB) has been completed. The results of which have determined that there are no archaeological sites within the subject property. Based on this assessment, the proposed action will have no effects on archaeological resources.

### **3.5.4 Proposed Mitigation Measures**

The proposed action would not have any adverse effects on historic or archaeological resources within the subject property. Therefore, no mitigation is required for the proposed action with respect to cultural resources.

### **3.6 Recreational Opportunities and Open Space**

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Recreational Opportunities and Open Space:

- › Discussion of existing recreational and open space resources serving the community;
- › An inventory of resources, their status, and any relevant recommendations, as described in relevant County and local studies/plans/policies;
- › An evaluation of the potential impacts on community open space and recreational resources, including the availability of resources to the community following implementation of the proposed action; and
- › An evaluation of the potential demand generated by the proposed new residences.

A discussion of the existing recreational opportunities and open spaces, potentially significant adverse impacts, and proposed mitigation measures is provided in Sections 3.6.1 through 3.6.3 below.

#### **3.6.1 Existing Conditions**

In accordance with the above, this section of the DEIS discusses existing recreational and open space resources serving the communities surrounding the subject property. The potential impacts of the proposed action on community recreational and open space resources, the availability of resources to the proposed community following the implementation of the proposed action, and potential demand generated by the proposed new residences are described and analyzed in this section. Relevant mitigation measures are also discussed.

The subject property is currently improved with the Woodmere Club golf and country club. As a privately owned and operated members-only club, the subject property is not available or accessible to the general public. However, there are several recreational areas and facilities with amenities such as, but not limited to: ballfields; ice skating rinks; picnic areas; and playgrounds, as well as public open spaces (both passive and active), and eight additional golf courses (four private and four public) within a radius of approximately five miles surrounding the subject property (Figure 17).



### ***Existing Recreational Opportunities and Resources***

#### The Town of Hempstead

The Town of Hempstead has over 60 parks that serve the recreational and open space needs of Town residents. Town of Hempstead parks within five miles of the subject property include, but are not limited to, the following:<sup>70</sup>

- › Terrace Gardens, located at 1 Carvel Place in Inwood, is approximately 2.0 miles west of the subject property. The park has tennis courts, handball courts, shuffleboard, a playground and game tables.
- › Hewlett Point Park, located at 130 Hewlett Point Avenue in Bay Park, is approximately 2.1 miles east of the subject property. The park provides bay access to Hewlett Bay and contains tennis courts, volleyball courts, a playground, outdoor and wading pools, play equipment, sitting areas, and picnic tables.
- › East Atlantic Beach Park, located at 20 Troy Avenue in East Atlantic Beach, is approximately 2.7 miles southeast of the subject property. The park provides beach access and has a basketball court and play equipment.
- › Shell Creek Park, located at 1 Vanderbilt Avenue in Barnum Island, is approximately 3.9 miles southeast of the subject property. The park contains basketball, paddleball, and tennis courts, a spray pool, a multi-purpose field, a playground, play equipment, sitting areas, shuffleboard and areas for fishing.
- › Oceanside Park, located at 3800 Mahlon Brower Drive in Oceanside, is approximately 4.6 miles east of the subject property. The park contains basketball, handball, paddleball, tennis, and volleyball courts, softball and baseball fields, multi-purpose fields, a playground, game tables, play equipment, outdoor and wading pools and a roller rink.
- › Elmont Road Park, located at 755 Elmont Road in Elmont, is approximately 4.6 miles north of the subject property. The park contains basketball, handball, and paddleball courts, a spray pool, a multi-purpose field, a little league baseball field, a playground, game tables, play equipment, sitting areas, and shuffleboard.
- › Dutch Broadway Park, located at 2161 Dutch Broadway in Elmont, is approximately 4.9 miles north of the subject property. The park contains baseball, soccer, lacrosse, and football fields as well as a little league baseball field.

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<sup>70</sup> Town of Hempstead. *Parks*. Available at: <https://hempsteadny.gov/facilities/parks>. Accessed May 2019.

### Nassau County

Nassau County manages over 30 parks for County residents to utilize for recreational purposes. The following Nassau County parks are located within a five-mile radius of the subject property.

- › North Woodmere County Park, located at 750 Hungry Harbor Road in Valley Stream, is approximately 1.7 miles northwest of the subject property. The park's athletic facilities include ten tennis courts, six handball/paddleball courts, two basketball courts, two softball fields and one baseball field; football and soccer are also played at the park, and cross-country skiing is available.<sup>71</sup> North Woodmere County Park also has a nine-hole golf course and a lighted driving range, playgrounds, a spray pool/park, picnic and barbecue areas, and a swimming complex which includes an Olympic-sized pool, a diving pool with boards, a water slide, and three pools for children. The shorefront at the park also accommodates fishing and crabbing.
- › Grant Park, located at 1625 Broadway Avenue in Hewlett, is approximately 1.9 miles northeast of the subject property. The 35-acre park's athletic facilities include three basketball courts, four tennis courts, four handball/paddleball courts, three baseball/softball turfed fields, soccer fields, paths for joggers, bicyclists, and strolling.<sup>72</sup> Surrounding the fields are a new play area, gazebo and restrooms, there is also an adult workout area. There are picnic/barbecue areas as well as a roller rink that converts into an ice rink during the winter season. There is a modern playground area designed for separate age groups, as well as a spray pool/park. The lake at the park also provides for fishing.
- › Bay County Park, located at 1 Avenue in East Rockaway, is approximately 2.6 miles east of the subject property. The 96-acre park's athletic facilities include lighted tennis courts (Leisure Pass and fee required), lighted basketball courts, paddle ball courts, a lighted softball field, a baseball field, and multisport fields where soccer, football, lacrosse, and other sports are played (Leisure Pass required).<sup>73</sup> There are bicycle and running paths, as well as a roller rink (fee required). There is a picnic area and various playgrounds, including a spray-pool, a bocce court, and horseshoe pit. The park contains a nine-hole golf course. There is a fishing dock, along with a sailboat launch and launch ramp (Leisure Pass and permit required). The park also includes a dog run.
- › Inwood Park, located at 600 Bayview Avenue in Inwood, is approximately 2.6 miles southwest of the subject property. The 16-acre park's athletic facilities include one

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<sup>71</sup> Nassau County New York. *North Woodmere Park*. <https://www.nassaucountyny.gov/2803/North-Woodmere-Park>. Accessed March 2019.

<sup>72</sup> Nassau County New York. *Grant Park*. <https://www.nassaucountyny.gov/2799/Grant-Park>. Accessed March 2019.

<sup>73</sup> Nassau County New York. *Bay Park*. <https://www.nassaucountyny.gov/2789/Bay-Park>. Accessed March 2019.

lighted multisport field for softball, football and soccer, two basketball courts, two tennis courts and a playground, as well as a walking path around the perimeter of the park, adjacent to the water. There is a lighted roller rink and a picnic area, as well as a fishing dock and boat launch ramp.<sup>74</sup>

- › Tanglewood Park and Preserve, located at 1 Tanglewood Road in Rockville Centre, is approximately 4.1 miles northeast of the subject property. This 11-acre park has nature walking trails and houses the Center for Science Teaching and Learning, a nonprofit educational organization.<sup>75</sup>

#### New York State

Bayswater Point State Park, open to all residents of New York State, is located at 1479 Point Breeze Place in Far Rockaway, approximately 3.0 miles southwest of the subject property. The 12-acre park provides opportunities for passive recreation, such as hiking, fishing, bird watching and picnicking.<sup>76</sup>

Valley Stream State Park, open to all residents of New York State, is located at Valley Stream State Park Road in Valley Stream, approximately 3.7 miles northeast of the subject property. The park offers picnic areas, children play areas, volleyball, baseball and ball fields, nature trail and cross-country ski trails. The park also has a walking course with adult workout areas.

Hempstead Lake State Park, open to all New York State residents, is located at Lakeside Drive in West Hempstead, approximately 4.8 miles northeast of the subject property. The park has twenty tennis courts, children's playgrounds, basketball courts, horseback riding trails, biking and hiking trails and picnic areas. There are also three ponds that are accessible for fishing.<sup>77</sup>

#### Golf Courses and Country Clubs

The following is a list of the eight golf courses located within five miles of the subject property. As indicated below, some of these golf courses are accessible to residents of the Village of Lawrence, the Town of Hempstead, and/or Nassau County. There are four privately-owned golf courses that are available to those who purchase a private membership.

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<sup>74</sup> Nassau County New York. *Inwood Park*. Available at: <https://www.nassaucountyny.gov/2800/Inwood-Park>. Accessed May 2019.

<sup>75</sup> Nassau County New York. *Tanglewood Park and Preserve*. Available at: <https://www.nassaucountyny.gov/2911/Tanglewood-Park-and-Preserve>. Accessed May 2019.

<sup>76</sup> New York State Office of Parks, Recreation, and Historic Preservation. *Bayswater Point State Park*. Available at: <https://parks.ny.gov/parks/86/details.aspx>. Accessed May 2019.

New York State Parks, Recreation and Historic Preservation. *Valley Stream State Park*. Available at: <https://parks.ny.gov/parks/159/>. Accessed November 2019.

<sup>77</sup> New York State Parks, Recreation and Historic Preservation. *Hempstead Lake State Park*. Available at: <https://parks.ny.gov/parks/31/>. Accessed November 2019.

- › Rockaway Hunting Club, located at 615 Ocean Avenue in Lawrence, is adjacent to the subject property to the south. This is an 18-hole, 6,251-yard private golf course, which is relatively flat with five natural water holes.<sup>78</sup> The club also includes features to accommodate golf carts, a driving range, putting green, and a club house.
- › Lawrence Yacht and Country Club, located at 101 Causeway in Lawrence, is approximately one mile southwest of the subject property. This is a private golf course composed of an 18-hole course that is 6,324 yards.<sup>79</sup> The club is private. However, it is governed by the Village of Lawrence's Park Commission. According to the Lawrence Yacht and Country Club website, residents of the Village of Lawrence receive a special rate on all memberships.<sup>80</sup>
- › The Seawane Club, located at 1300 Club Drive in Hewlett Harbor, is approximately 1.5 miles northeast of the subject property. This is an 18-hole, 6,725-yard private golf course.<sup>81</sup> The club also includes features to accommodate golf carts, a club house, ten tennis courts, an outdoor heated pool and a kiddie pool, a children's playground, barbershop, and a restaurant.
- › North Woodmere Golf Course is part of North Woodmere County Park, located at 750 Hungry Harbor Road in Valley Stream, approximately 1.7 miles northwest of the subject property. This is a public nine-hole, par-31 golf course that is 2,282 yards, with holes ranging from 140 yards to 395 yards.<sup>82</sup> The golf course also includes features to accommodate golf carts, lighted driving range, and a putting green.
- › Inwood Country Club, located at 50 Peppe Drive in Inwood is approximately 1.9 miles west of the subject property. This is a private, member-owned country club that includes a golf course, tennis courts, beach club, fitness center, and clubhouse. Inwood's golf course is 6,639 yards, 18-hole, par 71 course, with half the holes set in parkland style and half in links style.<sup>83</sup> The beach club is located in Atlantic Beach, with transportation provided from the country club. The club includes a fitness center, masseuse, barber shop, steam room and sauna. As part of the clubhouse, there are private suites that can be rented.

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<sup>78</sup> The Rockaway Hunting Club. *Course Tour*. Available at: <https://www.rhcnyc.com/course-tour>. Accessed May 2019.

<sup>79</sup> Lawrence Yacht and Country Club. *Golf*. Available at: <http://www.lycc.cc/golf-home>. Accessed May 2019.

<sup>80</sup> Lawrence Yacht and Country Club. *Membership*. Available at: <http://www.lycc.cc/golf-membership>. Accessed May 2019.

<sup>81</sup> The Seawane Club. *Life at the Seawane Club*. Available at: <https://www.seawane.com/seawane-life>. Accessed May 2019.

<sup>82</sup> Long Island Golf. *North Woodmere Golf Course*. Available at: <http://longislandgolf.com/north%20woodmere%20golf.html>. Accessed March 2019.

<sup>83</sup> Inwood Country Club. *Course Tour*. Available at: <https://www.inwoodcc.org/Default.aspx?p=dynamicmodule&pageid=99&ssid=144&vnf=1>. Accessed March 2019.

- › Bay Park Golf Course is part of Bay County Park, a Nassau County Park, located at 1 Avenue in East Rockaway, is approximately 2.6 miles east of the subject property. The golf course borders East Rockaway Channel to the east and Hewlett Bay to the south and west. It has an executive-level nine-hole, par-30 golf course that is 1,956 yards, with holes ranging from 130 yards to 352 yards.<sup>84</sup> The golf course also includes features of golf and caddy carts, a putting green, and clubhouse.
- › The Golf Club at Middle Bay, located at 3600 Skillman Avenue, is approximately 4.9 miles east of the subject property. The golf course is an 18-hole, par 72 course that is approximately 6,821 yards.<sup>85</sup> The golf club also includes a driving range and putting green. The golf club is open to the public with daily greens fees or an annual membership can be purchased.
- › Lido Golf Club, located at 255 Lido Boulevard in Lido Beach, is approximately five miles southeast of the subject property. The golf course is an 18-hole, par 72 course that is approximately 6,900 yards.<sup>86</sup> The golf course includes features to accommodate motorized carts and pull-carts. The course is open to the public with associated resident fees for those within the Town of Hempstead and City of Long Beach as well as non-resident fees.

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<sup>84</sup> Nassau County New York. *Bay Park*. Available at: <https://www.nassaucountyny.gov/1785/Bay-Park>. Accessed March 2019.

<sup>85</sup> The Golf Club at Middle Bay. *About Us*. Available at: <https://www.thegolfclubatmiddlebay.com/the-golf-club-at-middle-bay-about-us/>. Accessed May 2019.

<sup>86</sup> Lido Golf Club. *Course Information*. Available at: <https://www.lidogolf.com/golf/course>. Accessed March 2019.



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|---|---|---|--|
| <ul style="list-style-type: none"> <li>● Town of Hempstead Parks</li> <li>● Nassau County Parks</li> <li>● New York State Park</li> <li>● Golf Courses</li> </ul> | <ul style="list-style-type: none"> <li>1. Terrace Gardens</li> <li>2. Hewlett Point Park</li> <li>3. East Atlantic Beach Park</li> <li>4. Shell Creek Park</li> <li>5. Oceanside Park</li> <li>6. Elmont Road Park</li> <li>7. Dutch Broadway Park</li> <li>8. North Woodmere County Park</li> <li>9. Grant Park</li> <li>10. Bay County Park</li> <li>11. Inwood Park</li> <li>12. Tanglewood Park and Preserve</li> <li>13. Bayswater Point State Park</li> </ul> | <ul style="list-style-type: none"> <li>14. Valley Stream State Park</li> <li>15. Hempstead Lake State Park</li> <li>1. Rockaway Hunting Club</li> <li>2. Lawrence Yacht and Country Club</li> <li>3. The Seawane Club</li> <li>4. North Woodmere Golf Course</li> </ul> | <p><b>Proposed Residential Subdivision-Willow View Estates</b>   Woodmere, NY</p> <p><b>Parkland, Recreation, and Open Space</b></p> <p>99 Meadow Drive<br/>Incorporated Village of Woodmere<br/>Nassau County</p> <p>Source Info: Bing Maps<br/>All boundaries are approximate.</p> |
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## 3.6.2 Potential Impacts

### Loss of Open Space

Implementation of the proposed action would result in the loss of a 116.72±-acre private, members-only golf course, where eight other golf courses are located within a five-mile span. As indicated above, four of these golf courses are accessible to residents of the Village of Lawrence, the Town of Hempstead, and/or Nassau County. There are also four privately-owned golf courses that are available to those who purchase a private membership. It should be noted that as a privately owned and operated, members-only club, the subject property is not available or accessible to the general public. Thus, while the proposed action would result in the loss of a golf course, it would not result in a loss of a publicly accessible recreational resource.

Based on the foregoing, although the existing golf course on the subject property would be eliminated, this would not constitute a significant adverse loss of public open space and recreational resources, as many similar resources exist in the general vicinity.

### Potential Demand for Recreational Opportunities and Open Space

The proposed development would include 284 single-family residential units, with an estimated future population of 910 people.<sup>87</sup> This represents an 11.3 percent increase in the population of the local area (i.e., the Woodmere CDP, Village of Lawrence and Village of Woodsburgh), a 0.12 percent increase in the population of the Town of Hempstead, and a 0.07 percent increase in the population of Nassau County.<sup>88</sup>

As indicated above, recreational facilities in the vicinity of the subject property include numerous public open spaces, parks and playgrounds, recreational areas and facilities, and golf courses and clubs (public and private). Residents of the proposed development would have access to surrounding recreational facilities and amenities (some of which may require the purchase of daily or seasonal passes or memberships). The incremental additional demand upon recreation and open space resources that would result from the above increases in population is not expected to be substantial within these mature, established communities given the numerous and varied public and private recreational and open space resources present.

The fees associated with passes and use of public facilities, and property tax revenues generated by the proposed action,<sup>89</sup> would help to offset any marginal cost increases associated with increased use of municipal facilities by future residents of the proposed subdivision. It should also be noted, that while the proposed action would eliminate one private golf club, the future residents and other residents in the area will continue to enjoy

<sup>87</sup> Based on the 2010 United States Census, the average household size is 3.22 persons in the Woodmere Census Designated Place (CDP); 3.32 persons in the Village of Lawrence; and 2.95 persons in the Village of Woodsburgh.

<sup>88</sup> Based on the 2010 United States Census, there are 17,121 people in Woodmere CDP; 6,483 people in the Village of Lawrence; 778 people in the Village of Woodsburgh; 759,757 people in the Town of Hempstead and 1,339,532 people in Nassau County.

<sup>89</sup> Nassau County and the Town of Hempstead annual budgets include funding for park and recreational facilities, which is raised by property tax levies.

access to four public golf courses and four private country clubs located within approximately five miles of the subject property.

Although not codified, as part of its map checklist the Town of Hempstead requires new subdivisions to dedicate three percent of the property as open space or to pay cash in lieu of such dedication. The proposed action acknowledges this requirement and will comply as appropriate. Neither the Village of Lawrence nor Village of Woodburgh specify an open space requirement for new subdivisions. Additionally, the NCPC does not include an open space requirement as part of its subdivision approval.

Based on the foregoing, it is not expected that implementation of the proposed action would result in significant adverse recreational opportunities or open space. As the proposed action would not directly impact any public recreational resources and it would not place a significant additional demand on these resources, the proposed action also would not result in significant adverse impacts on the availability of recreational resources to the public.

### **Consistency with Applicable Open Space Plans**

#### ***Nassau County Open Space Plan (2001)***

The *Nassau County Open Space Plan* was adopted by the Nassau County Planning Commission on March 13, 2001. This plan provides the first comprehensive, detailed inventory of existing open space resources in Nassau County. It identifies and maps important natural resources, provides recommendations, highlights potential open space options, as well as techniques and funding scores and summarizes relevant reports. The *Nassau County Open Space Plan* states that:

*Nassau County has many sizable municipal parks and recreational areas, as well as preserves (owned by municipalities, State and Federal agencies, private entities and non-profit organizations) which contribute to the existing open space amenities available in the County...As noted in [Table 2], many of these open space amenities provide a wide variety of activities and features for residents and visitors. The parks/preserves contain features such as trails, wetlands, bird sanctuaries, fishing, beaches, and boat launch areas which were also mapped as existing open space resources on the Existing Open Space Map (pg. II-8).*

The *Nassau County Open Space Plan* details the extensive resources present in the County, which further supports the above conclusion that the proposed action would result in a minimal incremental impact on such resources. The subject property is identified on the *Open Space Map* included in the 2001 Plan, classified as a golf course, as part of the Plan's inventory. However, the *Nassau County Open Space Plan* does not include specific recommendations for the subject property, nor does it include recommendations regarding the redevelopment of private golf courses, in general.

#### ***Nassau County Comprehensive Plan***

A review of the 1998 *Nassau County Comprehensive Plan* does not identify any specific recommendations for the subject property or the redevelopment of private golf courses, in general.

### ***New York State Open Space Conservation Plan***

The 2016 *New York Open Space Conservation Plan* (NYSOSC Plan) describes open space conservation goals, actions, tools, resources and programs administered by state and federal agencies and conservation nonprofits.<sup>90</sup> The NYSOSC Plan lists approximately 140 regional priority conservation projects including approximately 7 projects for the Long Island Region. The subject property is not included in the list of Long Island priority conservation projects. In addition, while the NYSOSC Plan discusses the conservation of land resources, it does not provide specific recommendations for the subject property or the redevelopment of private golf courses, in general.

### ***Other Existing Applicable Plans, Studies and Policies***

The Village of Woodsburgh Village Code, Chapter 131, Article V, Section 25 *Reservations and easements* specifies that the Village Planning Board has the right to require, in conjunction with the subdivision of plats, the establishment of a park or parks suitably located for playground or other recreational purposes within the Village. If the Planning Board makes a finding that the proposed site plan presents a case for requiring a park or parks suitable for a playground or recreational purpose, but the size of the parcel is inadequate to fit so, the Planning Board may require a sum of money in lieu thereof to be established by the Planning Board. The prevailing regulations in the Village of Woodsburgh in regard to same are presented below:

- 1) *Each reservation shall be of suitable size, dimensions, topography and general character and shall have adequate street access for the particular purpose or purposes envisioned by the Planning Board. The area shall be shown and marked on the plat as "reserved for park purposes."*
- 2) *Area for parks shall be of reasonable size for neighborhood playgrounds or other recreational uses. Not more than 10% of the area of the subdivision shall be set aside for such purposes.*
- 3) *The ownership of reservations for park purposes shall be clearly indicated on the plat and established in a manner satisfactory to the Planning Board so as to assure their proper future continuation and maintenance.*
- 4) *Where the Planning Board determines that a suitable park or parks of adequate size cannot be properly located in a subdivision or where such a reservation is otherwise not appropriate or practical, the Board may require, as a condition to approval of any such plat, a payment to the village of a sum to be determined by the Planning Board. Moneys collected in such fashion shall constitute a trust fund, which shall be utilized only for park,*

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<sup>90</sup> New York State Department of Environmental Conservation. *New York State Open Space Plan*. Available at: [https://www.dec.ny.gov/docs/lands\\_forests\\_pdf/osp2016final1.pdf](https://www.dec.ny.gov/docs/lands_forests_pdf/osp2016final1.pdf). Accessed November 2019.

*playground or recreation purposes, including the acquisition of land, or for historic preservation purposes or otherwise as provided by law.*

The proposed subdivision does not include on-site parkland reservation, as it is expected that the extent of existing parkland and recreation facilities available throughout the surrounding area is sufficient.

The Town of Hempstead and Village of Lawrence do not have any provisions pertaining to parkland reservation in conjunction with the subdivision of plats in their respective municipal codes.

### **3.6.3 Proposed Mitigation Measures**

No significant adverse impacts to recreational resources/opportunities or open space have been identified by the foregoing analysis. As such, no mitigation is warranted or proposed.

### 3.7 Transportation

The Final Scope requires that the DEIS include a traffic impact study. Accordingly, a Traffic Impact Study was completed that includes the following information and analyses in its evaluation of potentially significant adverse impacts on Transportation:

- › Description of existing roadway features
- › Vehicular turning movement counts at 26 specified intersections during weekday morning (a.m. or AM) and afternoon (p.m. or PM), and Saturday and Sunday midday peak traffic periods
- › Seven-day Automatic Traffic Recorder (ATR) counts at two specified locations
- › Observations of existing traffic entering and exiting the subject property <sup>91</sup>
- › Assessment of No Build traffic volume increases based on background traffic growth and information regarding any planned development projects or roadway/intersection improvements in the study area from the New York State Department of Transportation (NYSDOT), Nassau County Department of NCDPW, Nassau County Planning Commission, Town of Hempstead, and Villages of Lawrence and Woodsburgh
- › Traffic capacity analyses for Existing, No Build and Build conditions for the AM, PM, and Saturday and Sunday midday peak-hour periods
- › Computation of trip generation for the proposed action and assessment of the directional distribution of this traffic on the local roadway system
- › Arterial analysis for the Broadway roadway segment within the study area
- › Analysis of traffic accident data for the most recent three-year period available
- › Evaluation of the access configuration and adequacy of off-street parking to be provided for the proposed development
- › A Traffic Signal Warrant Analysis for the proposed site access on Broadway
- › Discussion of the availability of public transportation options and assessment of the likelihood of such options being used by residents and visitors of the proposed development
- › Qualitative discussion of potential project-related impacts to emergency services
- › Qualitative discussion of pedestrian and bicycle access
- › Identification and analysis of storm evacuation routes
- › Description of proposed sidewalks
- › Assessment of construction traffic impacts

<sup>91</sup> The Final Scope called for observations of entering and exiting traffic to be documented at the existing site access points to The Woodmere Club in order to illustrate and contrast the existing traffic levels with those of the proposed subdivision. Counts were conducted from 8:00 am to 8:00 pm on one typical Wednesday (June 13, 2018) and one typical Sunday (June 17, 2018). In general, most commercial and industrial uses do not generate any significant traffic or parking during the overnight periods. The objective of collecting this data was to establish existing traffic levels that could be applied as a credit or reduced from the projected traffic levels resulting from the proposed development. However, in an effort to develop a more conservative analysis for the DEIS, VHB's Traffic Impact Study did not apply this credit/reduction.

- › Cumulative traffic analysis based on the aforementioned agency outreach regarding planned development projects or roadway/intersection improvements in the study area
- › Identification of traffic mitigation measures, if significant adverse traffic impacts are identified.

A discussion of existing transportation conditions, potentially significant adverse environmental impacts associated with the proposed action, and proposed mitigation measures is provided below, based on the information and analysis contained in a Traffic Impact Study (TIS).<sup>92</sup> The complete TIS is included in Appendix C of this DEIS, and should be consulted to obtain more detailed information than is provided in this synopsis, and should be reviewed in its entirety by any reader who wishes to obtain a full understanding of the transportation analyses that were performed as part of this DEIS. The presentation below is intended to provide an overview understanding of the TIS and should not substitute for reviewing the comprehensive information comprising the TIS.

### **3.7.1 Existing Conditions**

Evaluation of the transportation impacts associated with the proposed action requires a thorough understanding of the current transportation system in the project study area. Existing roadway features, and transportation conditions such as roadway geometry, traffic control devices, peak hour traffic volumes, roadway operating characteristics, and parking availability is summarized below.

#### **Study Methodology**

The following describes the methodology used in the TIS:

- › The proposed “Willow View Estates” preliminary subdivision map and related documents were reviewed to obtain an understanding of the scope and layout of the proposed development.
- › A review was made of the adjacent roadway system and the key intersections that might be significantly impacted by the proposed development were identified, as defined in the Final Scope.
- › Field inventories were made to observe the number and direction of travel lanes at the key intersections, along with signal timing, phasing and cycle lengths.
- › Accident data for the most recent three-year period available for the study area were reviewed, tabulated and summarized.
- › Turning movement counts were collected at the study intersections using Miovision cameras during weekday a.m. and p.m. peak periods and during the midday peak periods on both a typical Saturday and a typical Sunday.

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<sup>92</sup> The TIS was performed the study the potential impacts to traffic and transportation of a proposed 285-lot residential subdivision. Subsequent to the completion of the TIS, the proposed subdivision was modified, resulting in a reduction in lots to 284. All analyses and conclusions presented in the TIS remain applicable and present a slightly high-side conservative estimate of potential impacts.



- › The existing traffic volumes at the key intersections were expanded to the future No-Build year (assumed to be 2022).
- › Any significant other planned developments in the vicinity of the proposed "Willow View Estates" project were identified and the traffic associated with those developments was included in No-Build analysis.
- › The traffic generated by the proposed 285-lot "Willow View Estates" residential subdivision was projected based on recognized traffic engineering standards.
- › The site-generated traffic volumes were distributed along the adjacent roadway network and were added to the No-Build volumes to produce the proposed Build Condition volumes.
- › Capacity analyses were performed for the study intersections and the site driveways for the Existing, and future No-Build and Build conditions.
- › The results of the analyses for the Existing, No-Build, and Build conditions were compared to assess any significant traffic impacts due to the proposed "Willow View Estates" project.
- › The site access points were evaluated. This included a Signal Warrant Analysis conducted for the intersection of Broadway at Prospect Avenue.
- › The adequacy of the proposed off-street parking was evaluated and the site layout was reviewed.
- › The need for traffic mitigation measures was evaluated.

### **Roadway and Intersection Conditions**

The principal roadways and intersections in the project area are described below. The descriptions of the roadways and key intersections include the geometric conditions and traffic control characteristics.

#### ***Broadway***

Broadway is an east-west arterial roadway under the jurisdiction of NCDPW that runs northeasterly from east of the Nassau Expressway (NYS Route 878) approximately 5 miles to its eastern terminus at Merrick Road (County Road 27, CR 27). Within the study area it provides one travel lane in each direction and the NYSDOT Traffic Data Viewer volume data for 2016 put the Average Annual Daily Traffic volume (AADT) on Broadway at approximately 15,258 vehicles per day. The posted speed limit within the study area is 30 miles per hour and, though parking is not restricted, adequate shoulder width is not provided to accommodate on-street parking within the study area. Broadway runs along the north side of the subject property.

#### ***Central Avenue***

Central Avenue is an east-west arterial roadway under the jurisdiction of NCDPW. Within the study area it provides one travel lane in each direction and the NYSDOT Traffic Data Viewer

volume data for 2016 put the AADT on Central Avenue at approximately 20,727 vehicles per day. The posted speed limit within the study area is 30 miles per hour. In the commercial frontages along this roadway, parking is permitted and metered; and along the residential frontages of this roadway, parking is intermittently restricted at certain times of the day (8:00 a.m. to 6:00 p.m.).

### ***West Broadway***

West Broadway is an east-west arterial roadway under the jurisdiction of NCDPW. Within the study area it provides one travel lane in each direction and the NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Central Avenue at approximately 12,831 vehicles per day. The posted speed limit within the study area is 30 miles per hour. Though parking is not restricted, adequate shoulder width is not provided to accommodate on-street parking within the study area.

### ***Washington Avenue***

Washington Avenue is a north-south local roadway under the jurisdiction of the Incorporated Village of Cedarhurst. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Washington Avenue at approximately 3,626 vehicles per day and the speed limit within the study area is 30 miles per hour. Parking is intermittently restricted on both sides of the roadway north of Central Avenue, and is permitted on both sides of the roadway north of West Broadway.

### ***Spruce Street***

Spruce Street is a north-south local roadway under the jurisdiction of the Incorporated Village of Cedarhurst. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Spruce Street at approximately 2,638 vehicles per day north of Central Avenue and this area connects immediately to the location of the Cedarhurst Train Station. North of the intersection with Central Avenue, the roadway allows one-way northbound traffic only. The speed limit within the study area is 30 miles per hour. Parking is permitted on both sides of the roadway but is metered within the commercial frontages located north and south of Central Avenue.

### ***Cedarhurst Avenue***

Cedarhurst Avenue is a north-south local roadway under the jurisdiction of the Incorporated Village of Cedarhurst. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Cedarhurst Avenue at approximately 8,726 vehicles per day. The speed limit within the study area is 30 miles per hour. Metered parking is permitted on both sides of the roadway north of Central Avenue and south of the LIRR Tracks, and is permitted on the east side of the roadway north of the LIRR Tracks.

### ***Grove Avenue***

Grove Avenue is a north-south local roadway under the jurisdiction of the Incorporated Village of Cedarhurst. Within the study area it provides one travel lane in the southbound direction of travel, having recently been modified to accommodate southbound traffic only for the entirety of its span. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Grove Avenue at approximately 3,137 vehicles per day. The speed limit within the study area is 30 miles per hour. Metered parking is permitted on both sides of the roadway south of the LIRR Tracks, and is restricted on the both sides of the roadway north of the LIRR Tracks from 10:00 a.m to 2:00 p.m., Monday through Friday.

### ***Prospect Avenue***

Prospect Avenue is a north-south local roadway under the jurisdiction of NCDPW. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Prospect at approximately 2,657 vehicles per day. The speed limit within the study area is 30 miles per hour. Parking is permitted on both sides of the roadway within the study area.

### ***Meadow Drive***

Meadow Drive is a north-south local roadway under the jurisdiction of the Village of Woodsburgh. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Meadow Drive at approximately 607 vehicles per day. The speed limit within the study area is 30 miles per hour. Two-hour parking is permitted on the east side of the roadway and no parking is permitted on the west side of the roadway. This roadway provides direct access to the Woodmere Club premises at its southern terminus, located at the intersection with Railroad Avenue/Keene Lane and Ivy Hill Road.

### ***Keene Lane***

Keene Lane is a west-east local roadway under the jurisdiction of the Village of Woodsburgh that extends from its intersection with Meadow Drive/Ivy Hill Road /Railroad Avenue east to Woodmere Boulevard. Keene Lane is one-way eastbound and provides a single eastbound lane. The Village of Woodsburgh speed limit has been established at 30 miles per hour. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Keene Lane at approximately 218 vehicles per day. Although not explicitly prohibited by signing, the roadway is narrow in width and does not lend itself to roadside parking. This roadway provides direct access to the Woodmere Club premises at its southwestern terminus, located at the intersection with Meadow Drive and Ivy Hill Road.

### ***Woodmere Boulevard***

Woodmere Boulevard is a north-south local roadway under the jurisdiction of the Town of Hempstead. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Woodmere Boulevard at approximately 7,770 vehicles per day. The posted speed limit within the study area is 30

miles per hour. Three-hour parking between 7:00 a.m. and 7:00 p.m. is permitted on both sides of the roadway within the study area.

### ***Irving Place***

Irving Place is a north-south local roadway under the jurisdiction of the Town of Hempstead. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Irving Place at approximately 2,540 vehicles per day. The posted speed limit within the study area is 30 miles per hour. Parking is permitted on both sides of the roadway within the study area.

### ***Franklin Avenue***

Franklin Avenue is a north-south local roadway under the jurisdiction of the Town of Hempstead. Within the study area it provides one travel lane in each direction. The NYSDOT Traffic Data Viewer volume data for 2016 put the AADT on Franklin Avenue at approximately 4,117 vehicles per day. The posted speed limit within the study area is 30 miles per hour. Ninety-minute parking is permitted on both sides of the roadway within the study area.

### **Study Intersections**

To determine the potential traffic impacts of the proposed project, the following study intersections were identified for detailed analysis under the Existing, future No-Build and future Build conditions:

- › Broadway at Washington Avenue (Signalized)
- › Broadway at Spruce Street (Signalized)
- › Broadway at Cedarhurst Avenue/Briarwood Lane (Signalized)
- › Broadway at Grove Avenue (Signalized)
- › Broadway at Meadow Drive (Signalized)
- › Broadway at Woodmere Boulevard (Signalized)
- › Broadway at Brower Avenue/Irving Place (Signalized)
- › Broadway at Franklin Avenue (Signalized)
- › Broadway at West Broadway/Harris Avenue/Piermont Avenue (Signalized/  
3 Intersections)
- › West Broadway at Woodmere Boulevard (Signalized)
- › West Broadway at Prospect Avenue/Derby Avenue (Signalized)
- › West Broadway at Cedarhurst Avenue (Signalized)
- › Central Avenue at Washington Avenue (Signalized)
- › Central Avenue at Spruce Street (Signalized)

- › Central Avenue at Cedarhurst Avenue (Signalized)
- › Central Avenue at Prospect Avenue (Signalized)
- › Central Avenue at Woodmere Boulevard (Signalized)
- › Broadway at Prospect Avenue (Unsignalized)
- › West Broadway at Grove Avenue (Unsignalized)
- › Central Avenue at Grove Avenue (Unsignalized)
- › Meadow Drive at Porter Place (Unsignalized)
- › Meadow Drive at Railroad Avenue/Keene Lane (Unsignalized)
- › Broadway at Rockaway Turnpike/Meadow Lane (Signalized)
- › Central Avenue at Rockaway Turnpike (Signalized)
- › West Broadway at Washington Avenue/Arlington Road (Signalized)
- › West Broadway at Rockaway Turnpike/Burnside Avenue (Signalized/ 2 intersections)
- › West Broadway at West Broadway Merge (Unsignalized)
- › West Broadway at Rockaway Turnpike (Unsignalized)

The study intersections are shown in Figure 2 in Appendix C. Additional aerial photographs and detailed intersection discussions of each intersection are in Appendix C.

### **Traffic Controls**

The study included a review of the existing study-area traffic controls, including traffic signals and regulatory signing; as indicated by the same, the majority of traffic controls in the area are in general conformance with current requirements and are in good or fair condition. However, it was noted that there were no “STOP” signs present at a number of minor side street intersection approaches. While in some instances this traffic control is not required, the absence of signage at these locations appears to be random rather than the result of jurisdictional policy. However, these intersections were not among those identified above.

### **Existing Traffic Volume Data**

Intersection turning movement counts were collected using Miovision cameras between 7:00 a.m. and 9:00 a.m. (weekday a.m. peak) and between 2:00 p.m. and 6:30 p.m. (weekday p.m. peak) on Thursday, May 10, 2018, and again between 10:00 a.m. and 2:00 p.m. on Saturday, May 12, 2018 and Sunday, May 13, 2018 (Saturday and Sunday midday peak). These traffic counts were conducted so they coincided with the heaviest traffic flows associated with commuter activities in the local area.

While Sunday counts and analysis are not typically performed for studies such as this one, they are included here due to a very large devout Jewish population. This population does

not drive on Saturday due to adherence to their religious beliefs. This characteristic results in Sunday also being a key day of the week in gauging potential traffic impacts.

The existing turning movement count summaries are available in Appendix A of the TIS (Appendix C of this DEIS).

The existing weekday a.m. and p.m. peak traffic volumes and Saturday and Sunday midday peak traffic volumes are shown in Figures 3 through 6 in Appendix C.

Based on significant concerns regarding travel delays along the Broadway corridor that were raised during public scoping for the proposed action, the TIS also included speed and delay runs, which involved traversing the 2.3-mile long stretch of this roadway between Meadow Lane and West Broadway during peak weekday periods in both directions. Speed and delay runs were conducted during the a.m. peak period on Thursday, September 19, 2019 from 7:00 a.m. to 9:00 a.m. and during the p.m. peak period on Thursday, September 19, 2019 from 4:30 p.m. to 6:30 p.m. Multiple runs in each direction were conducted and the average travel time was recorded. The details are provided in Tables A through C in the TIS, with the average travel time for five runs during each peak period in each direction as follows:

- › Westbound during a.m. period – Average travel time = 8.8 minutes
- › Eastbound during a.m. period – Average travel time = 10.0 minutes
- › Westbound during p.m. period – Average travel time = 10.8 minutes
- › Eastbound during p.m. period – Average travel time = 11.0 minutes

As indicated above, the corridor experiences a level of delay that is consistent with the series of signalized intersections that a vehicle must traverse along the 2.3-mile roadway segment. However, while some congestion exists, which is to be expected, the travel time in both directions during the weekday peak periods do not approach the 30-minute to one-hour travel times that were asserted during public scoping.

### **Accident History**

Accident Verbal Description Reports (VDRs) from the NYSDOT Accident Location Information System (ALIS) records for the period of January 1, 2016 through December 31, 2018 were obtained for the following roadway segments:

- › Broadway - From Rockaway Turnpike/Meadow Lane to Harris Avenue/Piermont Avenue (this segment includes eleven study intersections)
- › Central Avenue – From Rockaway Turnpike to Irving Place (this segment includes six study intersections)
- › W. Broadway – From Rockaway Turnpike to Harris Avenue – (this segment includes seven study intersections)
- › Meadow Drive – From Broadway to Railroad Avenue/Keene Lane

The TIS (see Appendix C) includes a detailed discussion of the accidents recorded at the study intersections and roadway segments, as available. These data show that there were no fatalities at any of the accident study locations. The accident types that occurred with the two highest frequencies are rear-end (26± percent of the total) and overtaking (25±



percent). The relatively high incident rates for these two accident types is not unusual for a densely developed area with a large number of signalized intersections. The apparent factors of these two predominant accident types were further examined to see if a pattern could be established such that a viable form of remediation could be proposed to reduce the incidence. Of the rear end accidents reported 71± percent had “following too closely” as an apparent factor. Of the reported overtaking collisions, 43± percent had “passing or lane usage improperly” and 16± percent had “failure to yield right of way” as an apparent factor. These apparent factors are consistent with those normally seen on highly traveled roadways and are primarily the result of driver error.

It should also be noted that there were numerous parked vehicle accidents in the vicinity of the accident study area. As this area contains a mix of residential and commercial uses that permit on-street parking, it is not unusual that there is a pattern of parked vehicle accidents.

### 3.7.2 Potential Impacts

The analysis of future conditions, with and without the “Willow View Estates” project (“Build” and “No-Build” conditions, respectively), was performed to evaluate the effect of the proposed action on future traffic conditions in the area. Background traffic volumes in the study area were projected to the year 2022, reflecting the year when “Willow View Estates” is expected to be completed and fully operational. The No-Build Condition represents the future traffic conditions that can be expected to occur in 2022 if the proposed development is not constructed. The No-Build Condition serves as a basis of comparison to the Build Condition, with the latter scenario representing expected future traffic conditions resulting from both project-generated and non-project-generated traffic.

#### **No-Build Condition**

No-Build traffic volumes include existing traffic and any new traffic due background traffic growth and any other significant planned developments in the immediate vicinity of the proposed action.

#### ***Other Planned Developments***

All municipal agencies with land use jurisdiction in the study area – the Town of Hempstead, the Incorporated Village of Cedarhurst, the Incorporated Village of Woodburgh, and the NCDPW/NCPC – were contacted to determine the extent of any other planned developments in the vicinity of the proposed “Willow View Estates” project site that may impact the study intersections. Although each of the municipalities contacted did not indicate any planned projects in the vicinity of the proposed action, it was observed the flow of traffic on Grove Avenue in Cedarhurst has been modified in comparison to what was in place when traffic volume data was collected (described in detail in Appendix C). Further research indicates that, since March 11, 2019, Grove Avenue now only accommodates southbound traffic from its intersection with West Broadway to its intersection with Broadway. To account for this, the existing traffic volumes based on the data collected were redistributed in the No Build condition to re-route the northbound traffic throughout the roadway network in an appropriate manner.

**Background Traffic Growth**

To account for increases in general population and background growth not related to the proposed “Willow View Estates” project, an annual growth factor was applied to the existing traffic volumes. Based on NYSDOT-published data, the growth rate anticipated for the Town of Town of Hempstead, including the hamlet of Woodmere and Incorporated Village of Woodsburgh is 0.6 percent per year. Thus, a total growth rate of 2.4 percent was applied to the existing traffic data to develop the background traffic based on the anticipated Build year of 2022. The resulting 2022 No-Build traffic volumes for weekday a.m. and p.m. peak hours and Saturday and Sunday midday peak hours are shown in Figure 7 through Figure 10 in Appendix C.

**Build Condition**

To estimate the traffic impact of the proposed action it is necessary to determine the traffic volumes expected to be generated by the development of 285 new single-family homes. The Institute of Transportation Engineers (ITE) publication, *Trip Generation* (10th Edition), a nationally recognized and accepted reference for forecasting trip generation, was used to estimate the peak number of weekday a.m., weekday p.m., Saturday midday, and Sunday midday trips for the proposed development. ITE Land Use Code (LUC) #210 “Single-Family Detached Housing” was used to estimate the number of trips generated by the proposed 285 “Willow View Estates” single-family homes. Table 15, below (duplicated from Table 3 in the TIS in Appendix C of this DEIS), summarizes the unadjusted peak hour trip generation estimates for the proposed action.

**Table 15 Unadjusted Trip Generation Estimates**

Component	Component Size	AM Peak		PM Peak		Saturday Midday Peak		Sunday Midday Peak	
		Rate =		Rate =		Rate =		Rate =	
Single-Family Housing ITE LUC #210	285 Units	0.74		0.99		0.93		0.85	
		Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting
		25%	75%	63%	37%	54%	46%	53%	47%
		53	158	178	104	143	122	128	114
		Total=	<b>211</b>	Total=	<b>282</b>	Total=	<b>265</b>	Total=	<b>242</b>

Based on a detailed review of the existing traffic volumes, it was determined that the level of background traffic activity within the study area was significantly lower on the Saturday when data was collected in comparison with that which would be considered typical. A detailed review of the demographic information available indicated that this was the result of the large percentage of residents who observe the Sabbath and are therefore prohibited from driving on Saturdays. In order to account for the likelihood that the residents of the proposed subdivision would fall into a similar demographic split, a reduction factor of 50 percent was applied to the project-generated trips during the Saturday peak hour. Similarly, the unadjusted Saturday midday peak trip generation was used in place of the unadjusted Sunday midday peak trip generation for the Sunday midday peak period to account for the demographic. Table 16 below (duplicated from Table 4 in Appendix C), summarizes the

adjusted peak hour trip generation estimates for the proposed action based on these conditions.

**Table 16 Adjusted Trip Generation Estimates**

Component	Component Size	AM Peak		PM Peak		Saturday Midday Peak		Sunday Midday Peak	
		Rate =		Rate =		Rate =		Rate =	
Single-Family Housing ITE LUC #210	285 Units	0.74		0.99		0.93		0.85	
		Entering	Exiting	Entering	Exiting	Entering	Exiting	Entering	Exiting
		25%	75%	63%	37%	54%	46%	54%	46%
		53	158	178	104	72	61	143	122
		Total=	<b>211</b>	Total=	<b>282</b>	Total=	<b>133</b>	Total=	<b>265</b>

In addition, it is important to note that the existing Woodmere Club catering/event hall and golf course is currently open and generating traffic on the surround roadway network. To account for this, observations were conducted at each of the site driveways from 8:00 a.m. to 8:00 p.m. on a typical weekday (Wednesday, June 13, 2018) and a typical weekend day (Sunday, June 17, 2018).

Table 17, below (duplicated from Table 4A in Appendix C), summarizes the results of those peak hour observations as they relate to the peak-hour traffic generated by the existing operations on the subject premises.

**Table 17 Woodmere Club Trip Generation**

Component	AM Peak		PM Peak		Sunday Midday Peak	
Existing Woodmere Club	8:15 a.m. – 9:15 a.m.		5:45 p.m. – 6:45 p.m.		12:15 p.m. – 1:15 p.m.	
	Entering	Exiting	Entering	Exiting	Entering	Exiting
	74%	7526	9%	91%	57%	43%
	67	23	5	50	43	32
	Total=	<b>90</b>	Total=	<b>55</b>	Total=	<b>75</b>

In the future condition, the traffic volumes generated by activities at the Woodmere Club would be eliminated, as the existing facilities would be demolished to accommodate the proposed development of the 285-lot residential subdivision. However, to provide a more conservative estimate, the TIS analysis did not apply any credit to the existing roadway volumes to account for this effect.

***Trip Distribution and Assignment***

The calculated trips originating from and destined to the project site under the proposed action were then assigned to the adjacent roadways based on characteristics of the roadway network, the location of the proposed site access points, existing travel patterns, and likely destination points. The resultant trip distribution percentages, based on the breakdown of the Journey-to-Work data, are shown in Figure 11 of Appendix C. These percentages were

then applied to the adjusted trip generation estimates shown in Table 17, above, and assigned to the local roadway network. The resulting project generated traffic volumes for the weekday a.m., p.m., Saturday midday, and Sunday midday peak hours are presented in Figure 12 through Figure 15, respectively, in Appendix C.

To determine the future Build Condition traffic volumes, the project-generated trips were added to the No-Build traffic volumes at the key intersections. The resulting Build traffic volumes for the weekday a.m., p.m., Saturday midday, and Sunday midday peak hours are shown in Figure 16 through Figure 19, respectively, in Appendix C.

### ***Level of Service and Delay Criteria***

The evaluation criteria used to analyze area intersections in the TIS are based on the 2000 and 2010 *Highway Capacity Manual* HCM). The term "level of service" (LOS) is used to denote the different operating conditions that occur at an intersection under various traffic volume loads. It is a qualitative measure that considers a number of factors, including roadway geometry, speed, travel delay and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

When evaluating intersection capacity results, in addition to the LOS, vehicle delay time should also be considered. Vehicle delay time (expressed in seconds per vehicle) is typically used to quantify the traffic operations at intersections. Delay time additionally has a range of values for a given LOS letter designation.

The LOS definitions for both the signalized and unsignalized intersections can be found in Appendix B of the TIS (Appendix C). Additional discussion regarding LOS and vehicle delay, and other measures for analysis of both signalized and unsignalized intersections, is presented in Appendix C.

### ***Level of Service Analysis***

LOS analyses were conducted for the Existing, and future No-Build and Build conditions for the study intersections. The capacity analyses were performed using the traffic analysis software Synchro, Version 10, and computer program developed by Trafficware Ltd.

### ***Signalized Intersection Analysis Results***

The results of the capacity analyses for the signalized intersections in the study area in Existing, No-Build and future Build conditions are summarized in Tables 5 through 8 in the TIS (Appendix C of this DEIS). The detailed capacity analysis worksheets are contained in Appendix C of the TIS.

For the AM peak hour, all study intersections operate well under all conditions and time periods, with increases in delay for the Build versus No-Build condition ranging from 0.1 second to 4.0 seconds. There is an anticipated decrease in delay of 1.3 seconds at the intersection of Franklin Avenue and Broadway.

For PM peak hour, all intersections operate well under all conditions and time periods, with increases in delay for the Build versus No-Build condition ranging from 0.1 second to 3.3 seconds. There is an anticipated decrease in delay of 0.1 second at the intersection of Broadway and West Broadway.

For Saturday midday peak hour, all intersections operate well under all conditions and time periods, with an increase in delay for the Build versus No-Build condition ranging from 0.1 second to 1.6 seconds. There is an anticipated decrease in delay from the No-Build to Build condition of 0.5 second at the intersection of Washington Avenue and Broadway, 0.4 second at the intersection of Woodmere Boulevard and Broadway, and 0.9 second at the intersection of Prospect Avenue and Central Avenue.

For Sunday midday peak hour, all intersections operate well under all conditions and time periods, with an increase in delay for the No-Build versus Build condition ranging from 0.1 second to 2.9 seconds. No decreases in delay from the No-Build to Build condition are anticipated.

All signalized intersections operate at an overall intersection LOS D or better during all peak periods analyzed. Some intersections would experience a degradation in LOS. However, overall, the signalized study intersections would not experience significantly deteriorated operating conditions (in terms of average delay) for the Build versus No-Build condition; and such changes would not be readily perceptible to motorists and, therefore, no mitigation is required. Refer to Table 5 through Table 8 in the TIS for detailed summary data on each signalized study intersection, including results for Existing (2018, at the time the field data were collected), No Build and Build scenarios, for the four peak periods studied (weekday a.m. and p.m., and midday Saturday and Sunday), and showing LOS and average delay results for the overall intersection and for the individual approaches in each study intersection (westbound, eastbound, southbound and northbound).

### ***Unsignalized Intersection Analysis Results***

Tables 9 through 12 in the TIS (Appendix C of this DEIS) present the capacity analysis results for the unsignalized intersection and unsignalized site access points for weekday a.m. and p.m., and Saturday and Sunday midday periods, respectively. These data show that the critical approaches at the unsignalized study intersections generally would operate in the Build Condition at an acceptable overall intersection LOS D or better during all periods analyzed. However, the unsignalized intersection of Broadway at Prospect Avenue would degrade in operation from the No Build to Build condition, as follows: a.m. peak hour – from LOS D to LOS F; p.m. peak hour – from LOS D to LOS E; Saturday peak hour – from LOS B to a still acceptable LOS C; and Sunday peak hour – from LOS D to LOS E. These changes in LOS would result from project-generated traffic exiting at a new (northbound) approach to the intersection opposite Prospect Avenue. Due to the magnitude of the effect, mitigation measures were investigated at this location, as discussed in Section 3.7.3.

It is noted that the analytical methodologies for unsignalized intersections use conservative parameters, such as long critical gaps defining the amount of time needed for vehicles to enter the intersection. Actual field observations indicate that drivers on minor streets generally accept shorter gaps in traffic than is used in the analysis and, therefore, in reality,

such drivers experience less delay than indicated by the analysis results. Therefore, it is expected that drivers at the Broadway at Prospect Avenue intersection would experience less delay in the project Build scenario (i.e., upon build-out of the proposed development) than is presented in this analysis.

### ***Arterial Highway Analysis***

In order to understand the effect of project-generated traffic in the Build condition on traffic operations along the Broadway Corridor in the study area, an arterial analysis was performed. This analysis considered the overall eastbound/westbound operation of Broadway as it relates to the passage of traffic through the progression of intersections along this stretch of roadway, and examined the three conditions (Existing, No Build and Build) during the four peak periods (weekday a.m. and p.m., and Saturday and Sunday midday). The arterial analysis provides arterial speed and the level-of-service. Table 13 through Table 16 in the TIS (Appendix C in this DEIS) summarize the findings, which show that project-generated traffic would result in imperceptible decreases in travel speeds along Broadway (i.e., maximum of 0.6 miles per hour, eastbound during the a.m. peak hour and eastbound during the Sunday midday peak hour) and no degradation to the arterial LOS.

### ***Off-Street Parking Required***

The Town of Hempstead BZO and the Code of the Incorporated Village of Woodburgh do not specify a parking requirement for single family residences. The Code of the Incorporated Village of Lawrence, at § 212-27.C, specifies that each of the 13 proposed lots in this municipality, with a minimum lot size of 40,000 SF, must provide an enclosed garage (attached, semi-attached or detached) containing at least two parking spaces. The Lawrence Village Code, at § 212-28, allows for additional parking in front yard "parking courts," but does mandate any such additional, non-garage parking capacity.

### ***Off-Street Parking Provided***

While the exact design of the proposed residential homes will be determined later in the subdivision process, it can be assumed that each developed residential lot will provide a driveway capable of accommodating at least one vehicle and property frontage capable of accommodating at least one extra vehicle. Additionally, each of the 13 proposed residences within the Village of Lawrence portion of the proposed development would have to include a two-car garage in order to comply with the requirements of the Village Code.

Based upon parking demand studies VHB has conducted at other single-family residential developments, and our review of published resources in the form of the Institute of Transportation Engineers' *Parking Generation* (4<sup>th</sup> Edition), the average peak parking demand for single-family detached housing (ITE Land Use 210) is 1.83 vehicles per dwelling unit. Therefore, the minimum volume of parking that should be provided for the proposed development should be two parked vehicles for every residence, not accounting for the larger lots, which could accommodate more vehicles within the proposed driveways, nor the fact that the frontages of on-street parking available in the vicinity of the site in spaces are not owned or controlled by the Applicant. As a result, some parking demand could be



accommodated in those areas, but they would not solely be used by the proposed action. Therefore, it is our professional opinion that the off-street parking provided would be more than adequate to accommodate the anticipated demand for the proposed action.

### **Site Circulation**

The TIS concludes that the configuration of the proposed residential lots in the Subdivision Layout Plan, as well as the access connections to the surrounding roadway network and the internal site roadways within the subdivision itself, would provide for adequate vehicular circulation on the subject property and linkage with existing roadways in the site vicinity.

### **Public Transportation**

The proposed subdivision is readily accessible to public transportation. The Cedarhurst LIRR station is located approximately 2,500 feet east of the subject property and the Woodmere LIRR station is located approximately 1,500 feet southwest of the site. The area is also served by the Nassau Inter-County Express (NICE) bus routes 31 and 32. Details regarding bus routes are contained in Appendix C of this DEIS.

Even though the site has many public transportation options available for residents and visitors, no credit was taken to reduce the vehicle trips generated by the project. Therefore, the TIS provides for high-side, conservative analysis of the impact of project-generated traffic.

### **Traffic Signal Warrant Analysis**

As previously discussed, the proposed subdivision would result in an increase in the level of traffic on the surrounding roadway network. While the subdivision would provide direct access to Meadow Drive, which includes a traffic signal at its intersection with Broadway, a new access road would be provided on Broadway opposite Prospect Avenue, adding a fourth (northbound) approach to this intersection. Traffic volumes entering and exiting the subdivision at this location could, potentially, be significant and, based on the expected increases in project-generated traffic volumes, a traffic signal warrant analysis was conducted for the Broadway at Prospect Avenue intersection.

The Traffic Signal Warrant Analysis was performed in accordance with the *2009 Manual on Uniform Traffic Control Devices (MUTCD), Revision 2*, published in 2012. There are nine warrants described in the MUTCD. A traffic signal should only be considered if one or more of these nine signal warrants are met. Three of the nine warrants applicable to the proposed action are:

- › Warrant 1, Eight-Hour Vehicle Volume
- › Warrant 2, Four-Hour Vehicle Volume
- › Warrant 3, Peak Hour

Table 21 through Table 23 in the TIS (Appendix C of this DEIS) detail the analysis of the warrants for the proposed action. It was concluded none of the three applicable warrants would be satisfied. Accordingly, the installation of a new traffic signal is not warranted at this

location based on conditions in the project Build scenario and, accordingly, no mitigating scenarios that included the installation of a traffic signal at this location were examined.

### **Conclusions**

Based on the results of the study, more completely described herein, it has been concluded that the development of subject project will not have a significant impact on the study intersections or roadway network. Specifically, the TIS concludes the following:

- › The proposed Willow View Estates Development is expected to generate 211 trips (entering 53 & exiting 158) during the a.m. peak hour, 282 trips (entering 178 & exiting 104) during the p.m. peak hour, 133 trips (entering 72 & exiting 61) during the Saturday midday hour, and 265 trips (entering 143 & exiting 122) during the Sunday midday hour.
- › The analysis concluded the traffic generated by the proposed development can be accommodated without significant negative impacts to the adjacent roadway network with the proposed access plan identified in this report.
- › Each of the Signalized study intersections maintain their operation at a LOS D or better during all time periods analyzed.
- › The proposed site access approach for the subdivision located on at the intersection of Broadway and Prospect Avenue degrades in operation due to the additional northbound approach exiting traffic which does not presently exist. While a traffic signal warrant analysis did not indicate that a new traffic signal would be a reasonable mitigating measure at this location, the operation of this intersection was mitigated to function below capacity by the addition of a center two-way left turn lane along the frontage of the premises on Broadway.
- › The traffic associated with the proposed development is not expected to result in any significant change in the rate or severity of accidents in the area.
- › The on-street parking provided within the premises, as well as driveways for each of the residential homes created, will be more than adequate to accommodate the parking demand for the proposed Willow View Estates project.
- › Based on observations conducted at the existing Woodmere Club catering/event hall and golf course, the existing property generates 90 trips (entering 67, exiting 23) during the a.m. peak hour, 55 trips (entering 5, exiting 50) during the p.m. peak hour, and 75 trips (entering 43 & exiting 32) during the Sunday midday peak hour. While this traffic will be eliminated in the future condition as a result of the Proposed Development, no credit was applied to account for the reduction in traffic within the study area to provide a more conservative analysis.
- › A careful review of the proposed Subdivision Plan shows that the internal site roadways will provide for adequate on-site circulation.
- › The proposed 285-unit subdivision will not have any significant impact on the traffic operations in the area.

### **3.7.3 Proposed Mitigation Measures**

The TIS analysis results indicate that under the project Build scenario, the unsignalized intersection of Prospect Avenue at Broadway would experience capacity deficiencies associated with the newly created northbound approach. In order to mitigate this condition, a two-way left turn lane was investigated on Broadway along the frontage of the subject property (where additional land could be provided to accommodate the necessary widening). This TWLTL would accommodate left turns in the eastbound and westbound directions separately from through traffic and would provide an intermediary area for eastbound left turns to Prospect Avenue and westbound left turns to the proposed development, which improves the overall operation of the intersection. The mitigation results are presented in Table 17 through Table 20 in the TIS (Appendix C of this DEIS). These tables show the Build with Mitigation along with the No-Build and Build (without mitigation) results for easy comparison. The detailed capacity analysis worksheets for this analysis are presented in Appendix C of the TIS, which show that the northbound and southbound approaches of this intersection would operate better in the Build with Mitigation condition (i.e., with construction of the TWLTL) than in the No-Build condition during all four time-periods analyzed.

## 3.8 Energy

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Energy:

- › A description of the existing and proposed energy sources
- › Consultations with energy service providers to confirm the availability of service and identify any necessary infrastructure improvements required to serve the proposed development
- › Discussion of mitigation measures which could reduce energy demands during both the construction and long-term operation
- › The proposed action's conformance with relevant energy conservation programs, including the State Energy Conservation Construction Code.

In accordance with the Positive Declaration and the Final Scope, this section of the DEIS describes the existing and proposed energy sources for the subject property, anticipated usage, and potential mitigation measures which could reduce energy demand during construction and operation of the proposed project.

### 3.8.1 Existing Conditions

#### **Electricity**

PSEG Long Island currently provides electricity to the subject property. Based upon an analysis of electricity bills for the one-year period of May 2018 to April 2019 from PSEG Long Island, the existing country club used approximately 1,056 megawatt hours (MWh) of electricity.

#### **Natural Gas**

National Grid currently provides natural gas service to the subject property. Based upon an analysis of natural gas bills from the one-year period June 2018 to May 2019 from National Grid, the existing country club used approximately 3,953 million British thermal units (MMBtu) of natural gas.

#### ***New York State Energy Conservation Construction Code***

The Energy Conservation Construction Code of New York State (ECCCNYS) requires that all government, commercial and residential buildings in the State, including renovations involving building system replacement, must follow the 2015 International Energy Conservation Code (IECC). The 2015 IECC Residential Provisions (amended as of January 2016) regulate the design and construction of new residential buildings; additions to, alterations of, and/or renovations of existing residential buildings; and additions to, alterations of, and/or renovations of building systems in existing residential buildings for the use and conservation of energy over the life of each such residential building. The 2015 IECC Residential Provisions are intended to provide flexibility to permit the use of innovative

approaches and techniques to achieve the objectives above. The local municipal building codes for Hempstead, Lawrence and Woodburgh refer to the ECCCNY as being the minimum requirement for all developments.

### 3.8.2 Probable Impacts of the Proposed Action

#### Electricity

The United States Department of Energy (USDOE) Prototype Model for single-family homes in New York, which is based upon the IECC 2012 Code,<sup>93</sup> was utilized to determine the approximate amount of electricity usage of the proposed project. The proposed development is expected to utilize 3,099± MWh per year of electricity<sup>94</sup> (Appendix L). This energy use is not entirely new, as the existing Woodmere Country Club currently utilizes electricity under existing conditions, such that the net increase is approximately 2,042± MWh.

It is expected that electricity for the proposed development would be supplied via existing PSEG Long Island infrastructure. The existing infrastructure would be extended throughout the proposed subdivision to reach and service each of the individual residential homes.

PSEG Long Island's service area covers 1,230 square miles and serves 1.1 million customers in Nassau and Suffolk counties, as well as the Rockaway Peninsula in Queens. The infrastructure includes 1,350 miles of electrical lines in the transmission system, 9,000 miles of overhead line and 5,000 miles of underground line in the distribution system.<sup>95</sup> As noted in the Nassau County *1998 Comprehensive Plan*, future development in established areas with adequate infrastructure and facilities is encouraged. The subject property is located within a mature, established residential community. PSEG Long Island has established infrastructure located in the vicinity of the project area, as described above. As such, implementation of the proposed action is not expected to represent a significant new demand on the established infrastructure in surrounding areas.

Consultations were undertaken with PSEG Long Island on June 12, 2019, requesting availability for electric service in connection with the proposed action. To date, no response has been received. For the purposes of this DEIS, no off-site infrastructure improvements are expected to be needed.

Apart from the service availability request, correspondence dated February 27, 2019 was issued by PSEG Long Island to the Nassau County Planning Commission as part of the SEQRA Lead Agency coordination process (see copy of correspondence in Appendix N), which was later provided to the Applicants upon request. This correspondence indicates, in part, that PSEG Long Island should be contacted to obtain design information for potential

<sup>93</sup> The requirements of the later IECC 2015 Code are expected to result in similar results, or potentially increased energy efficiency as compared to the IECC 2012 Code.

<sup>94</sup> The energy analysis was completed based on a 285-lot subdivision plan. Accordingly, the actual energy use for the proposed 284 lot subdivision would be less than what is estimated by the model. United States Department of Energy. *Building Energy Codes Program. – Residential Prototype Building Models* Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed September 2019.

<sup>95</sup> Call Me Power. *PSEG Long Island in New York State*. Available at: <https://callmepower.com/ny/utility/psegliny>. Accessed September 2019.

utility activities that may be needed to support the project, so that same can be considered as part of the SEQRA review of the proposed action.

On behalf of the Applicants, VHB contacted PSEG Long Island to obtain design information, which inquiry was directed to Mr. Richard Scrivano, Lead Engineer in the Nassau Distribution division of PSEG Long Island. By telephone conversations on October 10, 2019 and November 13, 2019, Mr. Scrivano advised VHB that, based on a preliminary review of the application materials circulated by the Lead Agency, it did not appear the proposed action would not require any significant off-site improvements (e.g., new substation[s] or substation expansions, new feeders, etc.) to render service to the proposed subdivision, as the subject property is not located in an area of constrained service. Mr. Scrivano also advised that PSEG Long Island may recommend that electric utilities within the proposed subdivision be installed within a common below-grade trench with other services (e.g., telephone, natural gas). Accordingly, for the purposes of this DEIS, no significant adverse environmental impacts associated with off-site electric infrastructure improvements are anticipated. Line replacements or upgrades and/or other enhancements of the existing grid infrastructure may be necessary, which would be formally determined by PSEG Long Island following the development and submission of load information. A detailed design review would be undertaken by PSEG Long Island at such future time as detailed electrical engineering design information is available, prior to construction.

Overall, based on the above, electricity is expected to be available to the proposed residential subdivision, and no significant adverse energy impacts are anticipated with respect to energy use.

### **Natural Gas**

It is proposed that the residential subdivision would be supplied natural gas via existing National Grid infrastructure. Improvements would be undertaken within the subject property to extend service to the individual residential homes. The specific utility extension plans have not been developed at this time but would be developed at the time of Building Permit approvals, and would be designed to meet the relevant specifications and requirements of National Grid.

In May 2019, New York State DEC rejected an application by National Grid for construction of a new gas pipeline that would bring an additional 400 million cubic feet of natural gas per day to the region. As a result, National Grid has stopped processing new applications for natural gas service from residential, small business, and large development customers. On November 25, 2019, National Grid lifted the gas moratorium and will begin processing new applications for natural gas service. As discussed below, consultations were undertaken with National Grid and it is expected that the energy purveyor would process the application request before the residential houses are constructed.

In accordance with the Final Scope, below is a discussion regarding such alternative energy sources. As noted in the *Electricity* section above, the USDOE Prototype Model for single-family homes in New York was utilized to estimate the approximate natural gas usage of the proposed project. The proposed development is anticipated to use 18,659± MMBtu per year



of natural gas<sup>96</sup> (Appendix L). This energy use is not entirely new, as the existing Woodmere Country Club utilizes natural gas under existing conditions, such that the net increase is approximately 14,706 MMBtu. The addition of 284 single-family residential customers would be a nominal, incremental increase, whereas National Grid currently has approximately 606,000 existing customers on Long Island.<sup>97</sup>

If, at the time of implementation of the proposed action, the gas moratorium remains in effect and natural gas service is not available, the Applicants are committed to accommodating natural gas infrastructure in the proposed development, so that it can be added if or when gas becomes available again. In the interim, alternative measures for home heating would be implemented, through the use of heating oil, or such as by heat pump/electric systems, as further discussed below.

Consultations were undertaken with National Grid on June 12, 2019, requesting availability for natural gas service in connection with the proposed action. In addition, a follow-up letter was sent to National Grid on November 15, 2019. To date, no response has been received.

Overall, based on the above, natural gas is expected to be used, if available at the time of construction and no significant adverse energy impacts are anticipated with respect to natural gas use.

### ***Alternative Energy Sources***

#### All-Electric Homes

All-electric homes use electricity to operate appliances such as water heaters, ovens, and heating systems. Accordingly, these homes are typically constructed without connections to natural gas supply lines or fuel oil tanks. The suitability of all-electric homes varies by region and those homes in the Northeast have a high cost of heating during colder months and have historically limited the efficacy of using all-electric heat pumps and other all-electric equipment.<sup>98</sup> All-electric heat pumps have historically been inefficient in this region, however, current technology and incentive programs have made it more feasible and available for the public to use. While all-electric homes do not rely on natural gas or other fossil fuels, they have a greater demand on electricity. See Section 3.12 for an in-depth analysis of the suitability of all-electric homes.

Using the estimated sizes of the future residences to be constructed in the proposed subdivision, annual energy consumption was estimated using the "Residential Prototype Building Models" created by the USDOE.<sup>99</sup> Houses were assumed to be built to IECC 2012

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<sup>96</sup> The energy analysis was completed based on a 285-lot subdivision plan. Accordingly, the actual energy use for the proposed 284 lot subdivision would be less than what is estimated by the model. United States Department of Energy. *Building Energy Codes Program. – Residential Prototype Building Models* Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed September 2019.

<sup>97</sup> Mr. Keith Rooney, Director of Government Relations, National Grid. The Hauppauge Industrial Association, 11<sup>th</sup> Annual Energy and Environmental Conference on October 16, 2019.

<sup>98</sup> U.S. Energy Information Administration. *One in four U.S. homes is all electric*. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=39293>. Accessed September 2019.

<sup>99</sup> United States Department of Energy. *Building Energy Codes Program*. Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed August 2019.

building code or newer, be heated by electric resistance and have un-heated basements. Under this all-electric alternative, the proposed action would consume 7,299± MWh of electricity per year which is an increase of 4,200± MWh per year on electricity demand as compared to the proposed action, which assumes the use of natural gas for heating, cooking, etc.

#### Fuel Oil

Another alternative energy option would include the use of fuel oil in lieu of natural gas. Based on the same assumptions regarding home sizes, annual energy consumption was estimated using the “Residential Prototype Building Models” created by the USDOE for this alternative.<sup>100</sup> Houses were assumed to be built to IECC 2012 building code or newer, be heated by fuel oil and have un-heated basements. The resulting project would consume 3,099± MWh of electricity per year and 18,659± MMBtu of fuel oil. See Section 3.12 for an estimate of GHG emissions the proposed project would be expected to generate under this energy alternative.

#### Geothermal Systems

Geothermal systems use the natural temperature of the earth for cooling and heating of open space and water. Use of these systems would reduce the demand on fossil fuels for heating and cooling purposes, but would result in some increase in electricity usage (e.g., for the operation of pumps, etc.). See Section 3.12 for a discussion on the technical process of these systems. It is noted that the installation of geothermal systems involves the trenching or installation of tubing below ground. The feasibility of geothermal systems is limited by site conditions, including proximity to nearby structures and subterranean conditions. This alternative source of energy may not be feasible to implement as part of the proposed action, particularly in the case of the proposed lots in the Town of Hempstead, where available lot area is limited by the building foundation, anticipated drainage infrastructure, and other improvements.

#### Solar Photovoltaics and Solar Heating

Solar photovoltaic panels are another alternative to reduce the proposed development’s demand on energy. These systems generate renewable energy that can be used to power a house and offset electricity usage, reducing reliance on the local electricity grid. Solar heating systems can be used to supplement traditional hot water heating methods, which would reduce dependency on other energy sources. See Section 3.12 for a discussion about the installation of photovoltaic panels. It is expected that the proposed action would allow the ability of homeowners to install photovoltaic panels. Solar Ready Homes are homes that are built and equipped for solar technology installation at any point in time. The EPA developed the Renewable Energy Ready Homes (RERH) specifications for builders to assess and equip new homes with a set of features which provide easier, less expensive transitions to solar energy systems after the home is constructed.<sup>101</sup> Although the individual proposed

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<sup>100</sup> United States Department of Energy. *Building Energy Codes Program*. Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed August 2019.

<sup>101</sup> ENERGYSTAR. *Renewable Energy Ready Homes (RERH)*. Available at: [https://www.energystar.gov/partner\\_resources/residential\\_new/related\\_programs/rerh](https://www.energystar.gov/partner_resources/residential_new/related_programs/rerh). Accessed October 2019.

homes have not yet been designed, the Applicants are willing to incorporate Solar Ready features needed to make the transition to solar energy systems easier, to the extent acceptable to the respective Town and Village building departments.

### ***Conformance with Relevant Energy Conservation Programs***

#### New York State Building Code

As part of the proposed action, the proposed development of the 284 residential homes would be subject to the requirements of the relevant energy conservation codes from Chapter 4 [RE] of the 2015 IECC (as may subsequently be amended). The single-family residences have not yet been designed, and would each be subject to design review based on the effective standards at the time of Building Permit applications to the respective local Town and Village Building Departments. Accordingly, each home is expected to meet or exceed the latest building and energy codes.

#### Local Energy Code Requirements

The Town of Hempstead, Village of Lawrence and Village of Woodsburgh do not have any specific design elements relating to the use and conservation of energy for new residential homes in their respective Town/Village codes, beyond those described above pursuant to the 2015 IECC.

#### Utility Service Provider Requirements

Consultations were undertaken with PSEG Long Island and National Grid on June 12, 2019 requesting availability for electric and natural gas service in connection with the proposed action. These consultations are ongoing; however, no specific energy conservation requirements have been identified by either utility to date.

### ***Sustainability Programs***

New York State enacted the Climate Leadership and Community Protection Act (CLCPA) in June of 2019, with the goal of reducing greenhouse gas emissions 85 percent by 2050 and having net zero emissions in all sectors of the economy (see Section 3.12 for a further discussion about the CLCPA).<sup>102</sup> The bill also requires New York to get 70 percent of its electricity from renewable sources by 2030. With this bill in mind, the below summarizes a variety of options that exist for individual homeowners. There are various sustainability and rebate programs that future homeowners would be able to implement for both electric and natural gas usage. The following includes, but is not limited to, a list of programs available to future project residents.

- › Various energy efficiency and renewable/alternative residential system programs administered by the New York State Energy Research and Development Authority (NYSERDA), including:<sup>103</sup>

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<sup>102</sup> The New York State Senate. *Senate Bill S6599*. Available at: <https://www.nysenate.gov/legislation/bills/2019/s6599>. Accessed September 2019.

<sup>103</sup> <https://www.nyserda.ny.gov/All-Programs>. Accessed November 2019.

- NY-Sun Residential Incentive Program, which provides cash incentives and/or financing for the installation of new solar electric photovoltaic systems for residences 25kW or less.
- EmPower New York provides no-cost energy efficiency solutions to income-eligible New Yorkers such as home energy assessments, energy assessments, energy saving tips, installation of high-efficient lighting, attic and wall insulation, replacement of old, inefficient refrigerators and freezers and water-saving showerheads.
- Ground Source Heat Pump Rebate is available on a first-come, first-serve basis in which small systems (those installed in single-family residences and those that use 10 tons or less of cooling capacity) are eligible for rebates of \$15,000 per ton of cooling capacity capped at \$15,000.
- Home Performance with ENERGY STAR is an energy saving program that uses home assessments to inform homeowners where their house is wasting energy to lower the overall energy bill.
- Assisted Home Performance with ENERGY STAR is similar to the Home Performance with ENERGY STAR, but additionally provides those who qualify with a 50 percent discount of the cost of eligible energy efficiency improvements up to \$4,000 per project for single-family homes.
- ENERGY STAR Certified Homes uses technology and advanced building practices to ensure energy efficient home performance. Benefits of having an ENERGY STAR Certified Home include lower ownership cost as energy-saving features and high-efficiency heating and cooling systems are implemented, and each home is performance tested in which each certified home must pass a stringent evaluation of the home's design and compliance with the required standards.
- › Passive House Certification<sup>104</sup> – this is a certification process in which houses are highly-insulated, air-tight, with ultra-efficient heating and cooling to reduce typical heating, ventilation and air conditioning (HVAC) systems and energy demand.
- › New York State offers several tax incentives for residential solar energy installations as follows:<sup>105</sup>
  - Income tax credits for 25 percent of the cost of the solar energy system (capped at a maximum of \$5,000) for new grid connection and net metered residential solar electric and solar thermal systems.
  - Exemption from state sales tax for passive solar space heat, solar water heat and solar space heat.
  - Subject to local municipalities ruling on renewable energy, residences can be exempt from real property tax for 15-years for the cost of solar and other accepted

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<sup>104</sup> <https://www.phius.org/what-is-passive-building> . Accessed November 2019.

<sup>105</sup> New York State Department of Environmental Conservation. *Solar Energy in New York Large and Small Systems for Heat and Power*. Available at: <https://www.dec.ny.gov/energy/43231.html>. Accessed October 2019.

renewable energy systems in NYS ensuring that property taxes do not rise with the installation of renewable equipment.

All of these programs are expected to be available to the future homeowners of the individual proposed residential lots. Although no significant adverse energy impacts are expected, future homeowners will be able to implement alternative efficiency energy measures to the extent acceptable to the respective municipalities. Moreover, the homes would be built to the latest building codes and requirements for the IECC, which would be expected to result in energy efficient homes.

Based on the foregoing, no significant adverse energy impacts associated with the use of electricity or natural gas are expected to occur from implementation of the proposed action. Should the natural gas moratorium persist, alternatives have been analyzed above which the Applicants could implement in place of natural gas. In addition to the alternative sources of energy discussed above, there are various energy efficiency and renewable energy source programs, incentives and rebate available to project residents that would further reduce the project's overall energy usage. Overall, no significant adverse energy impacts are anticipated.

### **3.8.3 Proposed Mitigation Measures**

No significant adverse impacts to the use and conservation of energy are expected to result from implementation of the proposed action. Notwithstanding, as there would be an increase to overall energy usage from existing conditions to proposed conditions, measures will be incorporated into the proposed action as feasible to minimize potential energy impacts. The proposed project will be compliant with applicable New York State Building and Energy Codes including the IECC Residential Provisions.

### **3.9 Infrastructure and Community Facilities**

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Infrastructure and Community Facilities:

- › A discussion of the existing infrastructure serving the subject property;
- › Description of the presence and availability of electricity, natural gas, water supply and sewer infrastructure;
- › Evaluation of the anticipated demand on each of the aforementioned utilities;
- › Description of alternative heating methods to be used should natural gas not be available;
- › Consultations with service providers regarding the availability of their infrastructure to meet the anticipated demands;
- › Details of service extensions or updates to infrastructure, if deemed necessary;
- › Evaluation of the impact on other community service providers, including the Lawrence Union Free School District, the Hewlett-Woodmere Union Free School District, the Nassau County Police Department, the Woodmere Fire Department, the Lawrence-Cedarhurst Fire Department, and the Nassau County Police Department Emergency Ambulance Bureau; and,
- › A discussion of tax implications to community service providers.

A discussion of existing infrastructure and community facilities, potentially significant adverse environmental impacts, and proposed mitigation measures is provided in Sections 3.9.1 through 3.9.3 below.

#### **3.9.1 Existing Conditions**

##### **Electricity**

PSEG Long Island provides electrical service to the subject property. According to Maser Consulting, as consultant to the Applicant, and observations of existing conditions, utility poles and overhead wires currently exist to the north on Broadway, to the east on Meadow Drive, the northern portion of Keene Lane, and to the south on Atlantic Avenue. The existing overhead utility wires on Meadow Drive connect to an overhead utility wire that exists between the intersection of Keene Lane, Meadow Drive and Ivy Hill Road. Along Ivy Hill Road, are two overhead utility wires, one of which runs along the subject property frontage. The overhead utility wire on the subject property diverts electrical service to the existing clubhouse through underground wires. The existing overhead utility wires on the northern portion of Keene Lane provides electrical service to the clubhouse as well.

Based upon an analysis of electricity bills for the one-year period of May 2018 to April 2019 from PSEG Long Island, the existing country club used approximately 1,056 MWh of electricity.



## Natural Gas

The subject property is located within the service area of the natural gas provider National Grid. According to Maser Consulting, there is a low pressure main to the east of the site in Meadow Drive; high and low-pressure mains exist to the north in Broadway; a low-pressure main exists to the west in Sherwood Lane; a low-pressure main exists to the southeast in Ivy Hill Road; and a high-pressure main exists to the south in Atlantic Avenue.

Based upon an analysis of natural gas bills for the one-year period June 2018 to May 2019 from National Grid, the existing country club used approximately 3,953 MMBtu of natural gas last year.

## Water Supply

Potable water to the subject property is currently supplied by NYAW. A subsidiary of American Water, NYAW provides water and/or wastewater services to approximately 350,000 people in New York State. The subject property is specifically within NYAW's Lynbrook Operations District, which serves approximately 73,840 people in 31 communities in the vicinity of the proposed development.<sup>106</sup> The aquifers utilized by the company are the Magothy, Jameco and Lloyd. The average amount of water pumped and supplied to the 31 communities in the area including and surrounding the subject property is approximately 2,629,954 gpd out of the 9,326,096,000 gallons of water withdrawn annually.<sup>107</sup>

Based on mapping provided by Maser Consulting (as consultant to the Applicants), there is a water main to the north in Broadway that varies from 12-16 inches in diameter, a 16 inch main to the east in Meadow Drive, a 16 inch main to the northeast in Keene Lane, and an 8 inch main to the southeast in Ivy Hill Road whose diameter changes to 6 and then 12 inches as it approaches Meadow Drive to the northeast. There is an additional water main present within Porter Place, which intersects with Ivy Hill Road along the subject property frontage.

Based upon a review of water bills for the subject property during the one-year period ending in April 2019, the site uses an average of 10,903± gpd of domestic water. In addition to the domestic water usage for the subject property, based on a review of required NYSDEC Water Withdrawal reporting, an average of approximately 77,252 gpd of irrigated water was used for the manicured golf course during the 2017 irrigation season (May to October) (Appendix N). Irrigation for the golf course is sourced from two private wells with a maximum flow rate of 350 gallons per minute (gpm), each. With the combined domestic water and irrigation usage, the subject property uses approximately 88,155 gpd of water during the irrigation season.

The Town of Hempstead, Village of Lawrence and Village of Woodsburgh do not have any specific design requirements relating to the conservation of water for new residential homes in their respective Town/Village codes.

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<sup>106</sup> New York American Water. *2018 Water Quality Report: Lynbrook Operations District*. Available at: <http://www.amwater.com/ccr/lynbrook.pdf>. Accessed June 2019.

<sup>107</sup> New York American Water. *2018 Water Quality Report: Lynbrook Operations District*. Available at: <http://www.amwater.com/ccr/lynbrook.pdf>. Page 6. Accessed June 2019.

## **Sewage Disposal**

The subject property is currently connected to the Nassau County Sewage Disposal District Nos. 1 and 2, maintained under the auspices of NCDPW. The sewer system discharges to the Bay Park STP for wastewater treatment, which is located on Marjorie Lane in East Rockaway. The Bay Park STP has capacity to provide full secondary treatment of 70 million gallons per day,<sup>108</sup> of which the plant currently processes approximately 56 million gallons per day (see correspondence with NCDPW in Appendix N).

As provided by Maser Consulting (as consultants to the Applicant), there is an 8-inch sewer main to the north in Broadway, an 8-inch main to the east in Meadow Drive, and a 10-inch main to the northeast in Keene Lane that all flow down to a manhole at the intersection of Meadow Drive and Keene Lane. From there, it continues as a 12-inch main for 280± feet and then becomes a 16-inch main as it continues down Ivy Hill Road to the southeast. There is also an 8-inch main running through a portion of the site from west to east from Tulip Street to Keene Lane that also connects to the manhole mentioned above.

Existing wastewater generation at the site is limited to sanitary wastewater and wastewater associated with the laundry in the clubhouse and pool house. Regarding existing sanitary sewage generation at the subject property, using the applicable design factors published by the NCDPW yields an estimate for the existing golf course, clubhouse, and pool house, of 15,954± gpd of sewage effluent.<sup>109</sup> A review of actual recent water bills [see above] suggests the existing facility may generate somewhat less sanitary waste, i.e., approximately 10,903 gpd.

## **Solid Waste**

The subject property currently utilizes a private carter service, Winter Bros. Waste Systems, for solid waste pick up and disposal. Winter Bros. Waste Systems is a garbage collection and recycling company providing a full range of solid waste collection and recycling services to commercial, residential, industrial and municipal customers on Long Island. The company provides services through a network of regional operations including multiple hauling locations, six recycling centers and 12 transfer stations.<sup>110</sup>

Current solid waste generation at the subject property is approximately 56 tons per month according to the 2018-2019 solid waste removal bills from Winters Bros. Waste Systems.

## **Educational Facilities**

The majority of subject property lies within the Lawrence Union Free School District (UFSD). However, the following parcels located on the southeastern side of the subject property (defined on Nassau County Land and Tax Map as Section 41 – Block D – Lots 53 and 55 and

<sup>108</sup>Nassau County New York. *Wastewater Management Program*. Available at: <https://www.nassaucountyny.gov/1882/Wastewater-Management-Program>. Accessed June 2019.

<sup>109</sup> Nassau County Department of Public Works. *Minimum Design Sewage Flow Rates*. 2011.

<sup>110</sup> Winter Bros Waste Systems. Available at: <https://www.wintersbros.com/>. Accessed September 2019.

Section 41 – Block 72 – Lot 1) are located within both the Lawrence UFSD and the Hewlett-Woodmere UFSD.

### **Lawrence Union Free School District**

The Lawrence UFSD is comprised of five schools, including one pre-kindergarten school (Lawrence Early Childhood Center), one primary school housing grades 1-2 (Lawrence Primary School), one elementary school housing grades 3-5 (Lawrence Elementary School), one middle school housing grades 6-8 (Lawrence Middle School), and one high school housing grades 9-12 (Lawrence High School). The Lawrence UFSD encompasses the entire subject property, with the exception of a small area along Ivy Hill Road which is within the Hewlett-Woodmere UFSD (i.e., Section 41, Block D, Lots 53 and 55).

Based on publicly-available resources from the New York State Education Department (NYSED) for the 2018-2019 school year, the total district enrollment for Lawrence UFSD is 2,642 students.<sup>111</sup> According to enrollment data for the past decade, as depicted in Table 18, the Lawrence UFSD has had a relatively stable (i.e., annual enrollment changes of approximately one-to-three percent or less), with an overall trend of declining enrollment resulting in a decrease of approximately 300 students over the most recent ten-year period.

**Table 18 Lawrence UFSD Enrollment by Year**

<b>School Year</b>	<b>Enrollment</b>	<b>Increase/Decrease (+/-)</b>
2018-2019	2,642	+19
2017-2018	2,623	0
2016-2017	2,623	+22
2015-2016	2,645	-68
2014-2015	2,713	-37
2013-2014	2,750	-84
2012-2013	2,834	+3
2011-2012	2,831	-86
2010-2011	2,917	-25
2009-2010	2,942	--

<sup>111</sup> New York State Education Department. *Lawrence UFSD at a Glance*. <https://data.nysed.gov/profile.php?instid=800000049493>. Accessed August 2019.

According to data found within the district's most recent school budget of 2017-2018, the average per pupil expenditure is approximately \$36,622,<sup>112</sup> of which approximately 84 percent, or \$30,798, is financed by the local property tax levy.<sup>113</sup>

### **Police Protection and Ambulance/Emergency Medical Services**

The project site is within the jurisdiction of the Nassau County Police Department (NCPD)–Fourth Precinct.<sup>114</sup> The NCPD Fourth Precinct serves the communities of Inwood, Hewlett, Hewlett Bay Park, Hewlett Neck, Woodsburgh, Hewlett Harbor, Woodmere, Cedarhurst, Lawrence, East Rockaway, Bay Park, East Atlantic Beach, Atlantic Beach Estates, Oceanside, North Long Beach, Atlantic Beach, Island Park, Lido, and Point Lookout. The precinct is located at 1699 Broadway in the Village of Hewlett, approximately 2.0 miles northeast from the subject property. The NCPD Emergency Ambulance Bureau (EAB) provides primary ambulance and emergency medical services to the subject property.

### **Fire Protection**

The subject property is within the service area of two different fire departments, including the Lawrence-Cedarhurst Fire Department (LCFD) and the Woodmere Fire Department (WFD). The LCFD maintains one station located at 75 Washington Avenue in Lawrence, approximately 0.7 mile southwest of the subject property. The LCFD enlists 85 volunteer firefighters and EMS personnel.<sup>115</sup> The portion of the subject property within the LCFD generally includes all proposed lots within the Village of Lawrence, and a tiny portion on the central westernmost portion bordering Sherwood Lane, Iris Street, Rose Street, Tulip Street and Ivy Street to the east (i.e., tax lots Section 41 – Block F – Lots 37, 40, 48, 3028, and 3031).

The remainder of the subject property (i.e., tax lots Section 41 – Block F – Lots 310, 3024, 3030, 3032; Section 41 – Block D – Lots 53, 55; and Section 41 – Block 72 – Lot 1) falls within the jurisdiction of the WFD, which maintains one station located at 20 Irving Place in Woodmere, approximately 0.6 mile northeast of the subject property. The WFD enlists 75 volunteer firefighters and EMS personnel.<sup>116</sup>

<sup>112</sup> New York State Education Department. *Fiscal Accountability Summary 2017-2018*. Available at: <https://data.nysed.gov/fiscal.php?year=2018&instid=800000049493>. Accessed August 2019.

<sup>113</sup> New York State Education Department. *New York State Property Tax Report Card*. Available at: <http://www.p12.nysed.gov/mgtserv/propertytax/>. Accessed November 2019.

<sup>114</sup> Nassau County Police Department. *About Fourth Precinct*. Available at: <https://www.pdcn.org/283/About-Precinct>. Accessed September 2019.

<sup>115</sup> USA Fire Departments. *Lawrence Cedarhurst Fire Department*. Available at: <https://usfiredept.com/lawrence-cedarhurst-fire-department-12797.html>. Accessed February 2019.

<sup>116</sup> Woodmere Fire Department. *About Us*. Available at: <https://woodmerefd.com/about/>. Accessed September 2019.

## 3.9.2 Potential Impacts

### Electricity

As indicated above, the subject property is in the service area of the electricity provider PSEG Long Island. As discussed in Section 3.8.1 above, the USDOE Prototype Model for single-family homes in New York, which is based upon the IECC 2012 Code, was utilized to determine the approximate amount of electricity usage of the proposed development. The proposed project is expected to generate  $3,099 \pm$  MWh per year of electricity<sup>117</sup> (Appendix L). This energy use is not entirely new, as the existing Woodmere Country Club currently utilizes electricity under existing conditions, such that the net increase is  $2,042 \pm$  MWh.

Consultations with PSEG Long Island were initiated on behalf of the Applicants by correspondence dated June 12, 2019, requesting availability for electric service in connection with the proposed action (see Appendix N). No response has yet been received. However, apart from the service availability request, correspondence dated February 27, 2019 was also issued by PSEG Long Island to the Nassau County Planning Commission as part of the SEQRA Lead Agency coordination process, which was later provided to the Applicants upon request. This correspondence indicates, in part, that PSEG Long Island should be contacted to obtain design information for potential utility activities that may be needed to support the project, so that same can be considered as part of the SEQRA review of the proposed action.

On behalf of the Applicants, VHB contacted PSEG Long Island to obtain design information, which inquiry was directed to Mr. Richard Scrivano, Lead Engineer in the Nassau Distribution division of PSEG Long Island. By telephone conversations on October 10, 2019 and November 13, 2019, Mr. Scrivano advised VHB that, based on a preliminary review of the application materials circulated by the Lead Agency, it did not appear the proposed action would not require any significant off-site improvements (e.g., new substation[s] or substation expansions, new feeders, etc.) to render service to the proposed subdivision, as the subject property is not located in an area of constrained service. Mr. Scrivano also advised that PSEG Long Island may recommend that electric utilities within the proposed subdivision be installed within a common below-grade trench with other services (e.g., telephone, natural gas). Accordingly, for the purposes of this DEIS, no significant adverse environmental impacts associated with off-site electric infrastructure improvements are anticipated. Line replacements or upgrades and/or other enhancements of the existing grid infrastructure may be necessary, which would be formally determined by PSEG Long Island following the development and submission of load information. A detailed design review would be undertaken by PSEG Long Island at such future time as detailed electrical engineering design information is available, prior to construction.

<sup>117</sup> The energy analysis was completed based on a 285-lot subdivision plan. Accordingly, the actual energy use for the proposed 284 lot subdivision would be less than what is estimated by the model. United States Department of Energy. *Building Energy Codes Program. – Residential Prototype Building Models* Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed September 2019.

Overall, based on the above, electricity is expected to be available to the proposed residential subdivision, and no significant adverse energy impacts are anticipated with respect to energy use.

### **Natural Gas**

As indicated above, the subject property is in the service area of the natural gas provider National Grid. It is proposed that the residential subdivision would be supplied natural gas via existing National Grid infrastructure. The specific natural gas utility plans have not been developed at this time, but would be developed prior to Building Permit approvals, and would be designed to meet the relevant specifications and requirements of National Grid.

In May 2019, NYSDEC rejected an application by National Grid for construction of a new gas pipeline that would bring an additional 400 million cubic feet of natural gas per day to the region. As a result, National Grid has stopped processing new applications for natural gas service from residential, small business, and large development customers. On November 25, 2019, National Grid lifted the gas moratorium and will begin processing new applications for natural gas service. As discussed above, consultations were undertaken with National Grid and it is expected that the energy purveyor would process the application request before the residential houses are constructed. In accordance with the Final Scope, alternative energy sources have been analyzed in Section 3.8.2 for the proposed development.

It is anticipated that the proposed development would utilize the existing low pressure main to the east in Meadow Drive, high and low pressure main to the north in Broadway, low pressure main to the west in Sherwood, low pressure main to the southeast in Ivy Hill Road, and high pressure main to the south in Atlantic.

As noted in the *Electricity* section above, the USDOE Prototype Model for single-family homes in New York was utilized to estimate the approximate natural gas usage of the proposed project. The proposed development is anticipated to use 18,659± MMBtu per year of natural gas<sup>118</sup> (Appendix L). As noted in the Section 3.8.2, the addition of 284 single-family residential customers would be a nominal, incremental increase, whereas National Grid currently has approximately 606,000 existing customers on Long Island.

If, at the time of implementation of the proposed action, the gas moratorium remains in effect and natural gas service is not available, the Applicants are committed to accommodating natural gas infrastructure in the proposed development, so that it can be added if or when gas becomes available again. In the interim, alternative measures for home heating would be implemented, through the use of heating oil, or such as by heat pump/electric systems, as further discussed in the *Energy* section, 3.8.2, above.

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<sup>118</sup> The energy analysis was completed based on a 285-lot subdivision plan. Accordingly, the actual energy use for the proposed 284 lot subdivision would be less than what is estimated by the model. United States Department of Energy. *Building Energy Codes Program. – Residential Prototype Building Models* Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed September 2019.



Consultations were undertaken with National Grid on June 12, 2019, requesting availability for natural gas service in connection with the proposed action. In addition, a follow-up letter was sent to National Grid on November 15, 2019. To date, no response has been received.

Overall, based on the above, natural gas is expected to be used, if available at the time of construction. As alternative measures of home heating would be available if natural gas supply cannot be secured, no associated significant adverse energy impacts are anticipated.

### Water Supply

As stated above, the subject property currently receives potable water from NYAW. Upon implementation of the proposed action, the subject property would remain to be serviced by NYAW.

Correspondence was sent to NYAW on June 4, 2019, regarding the availability of NYAW to serve the proposed residential development (see Appendix M). A follow-up telephone call was made to NYAW on September 26, 2019, and a second written request was sent to NYAW on November 15, 2019. To date, no response has been received.

As shown in Table 19 below, the proposed development is expected to generate a demand of 93,720± gpd of water.

**Table 19 Anticipated Water Demand**

Land Use	Unit Count	Design Sewage Flow Rate (gpd)	Sewage (gpd)	Irrigation (Factor of 10%)	Total Water Demand (gpd)
Single Family Residential	284	300	85,200±	8,520±	93,720± gpd

Source: Nassau County Department of Public Works. Minimum Design Sewage Flow Rates. 2011.

Additionally, it is estimated that the proposed project would create a demand for approximately 8,520± gpd of water for irrigation purposes. Irrigation was calculated using a factor of ten percent of the expected 85,200± gpd of domestic water demand. Taken together, the proposed project would represent an average daily demand of approximately 93,720± gpd for combined domestic and irrigation water use.

Under the proposed action, the average daily water demand during irrigation seasons is approximately 5,565 gpd more when compared to the existing water demand of 88,155± gpd. However, as noted above, approximately 10,903 gpd of water is currently derived from the NYAW district, whereas the balance (i.e., 77,252± gpd) is sourced from two private wells for irrigation use. Overall, there would be a net increase in potable water demand upon the NYAW district of 82,817± gpd. The withdrawal of 77,252± gpd of water for irrigation sourced from the two private wells under existing conditions would be eliminated.

The net increase of 82,817± gpd on the water district equates to 3.1 percent of the district's existing daily pumpage. Although a response from NYAW remains pending at this time, the overall increase is not significant, such that no significant adverse impacts are anticipated. Moreover, NYAW has not raised any water supply concerns as part of the SEQRA coordinated review process or in response to the multiple requests for service availability.

The subject property would remain connected to the existing water mains described above. In addition, water mains would be installed throughout the proposed subdivision to provide water supply to the individual residential lots, as shown on the *Street Grading and Drainage Plan* (see sheets C-3.1-C-3.6 of *Subdivision Plan Package* in Appendix B). The detailed design of the proposed connections and routing through the subject property would be subject to design review and approval by NYAW.

The proposed project is in the preliminary subdivision approval phase. Therefore, specific building elements have not yet been designed. However, it is expected that the final design of the proposed residential development would be considerate of practicable elements to increase the sustainability of the project, including any measures to reduce water demand.

### **Sewage Disposal**

As discussed above, the subject property is connected to the Nassau County Sewage Disposal Districts No. 1 and 2. Under the proposed action, the subject property would remain connected to this sewer system and would direct sanitary waste to Nassau County's existing Bay Park STP for treatment.

In addition to the existing connections to remain, sewer mains would be extended throughout the proposed subdivision to reach each of the proposed residential lots (see sheets C-3.1-C-3.6 of *Subdivision Plan Package* in Appendix B). Based on a design factor of 300 gpd per residence,<sup>119</sup> the proposed 284 residential lots are expected to generate 85,200± gpd of sewage effluent.

There is an increase in sewage generation expected to result from the proposed action (i.e., as compared to the 10,903± gpd generated by the Woodmere Club facility under existing conditions). The NCDPW has confirmed that Bay Park STP has available capacity to treat the anticipated quantity of wastewater (Appendix M), with capacity to spare. As mentioned above, the Bay Park STP provides full secondary treatment of approximately 56 million gpd, which is well below the plant's permitted capacity of 70 million gpd. Therefore, it is anticipated that the impact to the Bay Park STP would not be significant, as sewage generation from the proposed action represents approximately 0.1± percent of the current quantity of wastewater treated by the Bay Park STP, and only 0.7± percent of the remaining unused capacity of the plant. Accounting for the net increase (i.e., eliminating the sanitary waste generated by the existing, operating country club facility) further reduces the magnitude of the potential impact on sewer infrastructure.

Correspondence was sent to NCDPW on June 4, 2019, regarding the availability of the DPW to accommodate the daily anticipated sewage flow from the proposed residential development. A response was received on June 24, 2019 stating that the Nassau County sanitary sewer collection system as well as the Bay Park Sewage Treatment Plant has sufficient capacity to support and treat the daily sanitary discharge of 85,200 gpd in connection with the proposed action.

<sup>119</sup> Nassau County Department of Public Works. *Minimum Design Sewage Flow Rates*. 2011.

## Solid Waste

The subject property is in the service area of Sanitary District 1, one of five independent sanitary districts within the Town of Hempstead. Sanitary District 1 provides municipal solid waste collection, recycling, transfer and disposal services to over 50,000 residents and various commercial and institutional properties in the Villages of Cedarhurst, Hewlett, Hewlett Bay Park, Hewlett Harbor, Hewlett Neck, Inwood, Lawrence, Woodmere, Woodsburgh and portions of the unincorporated areas of Lynbrook and Green Acres.<sup>120</sup>

The District's 100± employees collect and process approximately 39,000 tons of solid waste per year. The collected solid waste passes through the District's Materials Recovery Facility, where recyclable materials are both manually and mechanically separated from the waste stream for subsequent processing and marketing.<sup>121</sup>

The estimated quantity of solid waste that would be generated by the proposed project has been calculated in Table 20, below.

**Table 20 Projected Solid Waste Generation**

Land Use	Solid Waste Use Category <sup>1</sup>	Generation Rate (per day)	Unit Count <sup>2</sup>	Solid Waste Generation
Single Family Residential	Household	3.5 pounds per capita	910±	3,185± lbs/day
<b>TOTAL</b>				<b>48.4± tons/month</b>

Notes: (1) Use categories from "Source of Waste" column in Table 5.3 of Salvato, J, Environmental Engineering.

(2) Based on 910 residents in the 284 residential units.<sup>122</sup>

Source: Salvato, J. (2003). Solid Waste Management. In Environmental Engineering (5th ed.). Hoboken, N.J.: Wiley.

Based upon this analysis, the proposed development would generate approximately 3,185 pounds of solid waste per day (48.4± tons per month) at 100 percent occupancy. As compared to the existing conditions (i.e., approximately 56 tons per month), the proposed subdivision would generate a similar quantity of solid waste. Residents of the proposed development would dispose of solid waste via curbside collection by public carter service. The Town of Hempstead Sanitary District 1 would serve all residences under the proposed action.

As noted above, Sanitary District 1 collects and processes approximately 39,000 tons of solid waste per year. The 580 tons of solid waste per year from the subject property is not expected to result in a significant impact upon local or regional solid waste management practices, especially given that a similar quantity of solid waste is generated by the Woodmere Club facility under existing conditions.

<sup>120</sup> Sanitary District 1, About Us. Available at: <http://sanitarydistrict1.com/aboutus.html>. Accessed June 2019.

<sup>121</sup> Sanitary District 1, About Us. Available at: <http://sanitarydistrict1.com/aboutus.html>. Accessed June 2019.

<sup>122</sup> United States Census Bureau. American Fact Finder. 2010 Census. Available at: [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml). Accessed August 2019.

Based on the foregoing, there will be no adverse impact on solid waste management practices within Sanitary District 1.

### **Educational Facilities**

As noted above, the majority of subject property lies within the Lawrence UFSD, with only two small parcels on the southeastern side located within the Hewlett-Woodmere UFSD under existing conditions. Under the proposed development, 283 lots would fall within the Lawrence UFSD, and the last remaining proposed lot would be partially within the Lawrence UFSD, and partially within the Hewlett-Woodmere UFSD. For the purposes of this DEIS, it is assumed that this lot would be absorbed into the Lawrence UFSD.

In order to estimate the number of school-aged children (SAC) that would be generated by the proposed project for the Lawrence UFSD, the 2013-2017 American Community Survey 5-Year Estimates census data was analyzed.<sup>123</sup> Data was analyzed separately for the Woodmere Census Designated Place (CDP), the Village of Lawrence and the Village of Woodsburgh, as further described below.

According to this census data, a total of 4,563 students in Kindergarten through 12<sup>th</sup> grade reside in the Woodmere CDP. Averaged over the 5,570 total households that make up the CDP, there are approximately 0.82 SAC residing in each household in the Woodmere CDP. Also, according to census data estimates, of the 4,563 SAC residing in the Woodmere CDP, only 1,472 SAC (i.e., 32 percent) attend public school.

In the Village of Lawrence, the 2013-2017 ACS estimates that there are a total of 1,756 students in Kindergarten through 12<sup>th</sup> grade residing in 2,396 total households (i.e., 0.73 SAC per household). Of these, only 105 (i.e., 6 percent) attend public school.

In the Village Woodsburgh, the 2013-2017 ACS estimates that there are a total of 184 students in Kindergarten through 12<sup>th</sup> grade residing in 300 households (i.e., 0.61 SAC per household). Of these, only 67 (i.e., 36 percent) attend public school.

Applying these factors to the number of proposed residences in each of these three census communities (i.e., 248 in the Town of Hempstead [Woodmere CDP]; 12 in the Village of Lawrence; and 24 in the Village of Woodsburgh) yields an estimate of 227 total SAC, of which approximately 72 would be expected to attend public school.

As provided above, a review of enrollment data for the Lawrence UFSD indicates a current enrollment of 2,642 students, which reflects a steady decline in enrollment of approximately 300 students over the past 10 years. The 72 additional public SAC that would be generated by the proposed development would represent only 2.7 percent of the current enrollment, and would be well below the historic enrollment that was accommodated by the local school district.

Based on the foregoing, there will be no adverse impact on educational facilities within the Lawrence UFSD.

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<sup>123</sup> United States Census Bureau. *American Fact Finders – School Enrollment 2013-2017 American Community Survey 5-Year Estimates*. Available at: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>. Accessed September 2019.

### **Police Protection and Ambulance/Emergency Medical Services**

As indicated above, police protection at the subject property is provided by the NCPD Fourth Precinct. It is expected that the NCPD Fourth Precinct would continue to provide police protection and primary ambulance/EMS services to the subject property following completion of the proposed project.

Based on standards contained in the *ULI Development Impact Assessment Handbook*, two police officers and 0.6 police vehicle are required per 1,000 individuals. Based on these factors, 910 residents are projected to generate a need for 1.82± (rounded up to two) and 0.54± (rounded up to one) additional police personnel and vehicle, respectively. It is estimated that one vehicle and 4.1 EMS personnel per 30,000 individuals would be required to serve a new population. Based on the projected 910 residents to be generated by the proposed project under the jurisdiction of the NCPD EAB, a demand for 0.03± and 0.12± (each rounded up to one) EMS vehicle and personnel is anticipated, respectively. Thus, it is expected that the proposed project would have minimal impact on the cost of police services for the NCPD Fourth Precinct as well as emergency ambulance services provided by the NCPD EAB.

Based on the foregoing, the proposed action would not have a significant adverse impact with respect to police protection and emergency medical services.

### **Fire Protection**

As discussed above, two different fire departments serve the subject property, LCFD and WFD for fire protection and secondary ambulance/EMS services. It is expected that the LCFD and WFD would continue to provide fire protection and secondary ambulance/EMS services to the subject property following completion of the proposed project.

Access to the proposed development would be accommodated by the construction of several new roadways throughout the property providing access to existing roadways at Broadway to the northwest, Meadow Drive/Ivy Hill Road to the north and northeast, Keene Lane to the east, Rutherford Lane to the southeast, and Tulip Street to the southwest. These access drives and circulation areas would be compliant with applicable regulations and standards for firefighting equipment and emergency service vehicle access. Each of the proposed subdivided residences would be constructed to the latest New York State Building and Fire Code and would be fitted with fire alarms and sprinklers. The site would be configured to allow for adequate fire access and to accommodate emergency service vehicles (as would be confirmed by the Nassau County Fire Marshall during site plan review).

As discussed above the LCFD would only serve 26 of the 284 residential subdivisions with 12 housing units located within the Village of Lawrence and 13 housing units in the Town of Hempstead (Woodmere CDP). As such, a total of 82 residents,<sup>124</sup> out of the total 910 residents for the subject property, would be served by the LCFD. Based on planning standards contained in the *ULI Development Impact Assessment Handbook* (1994), it is

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<sup>124</sup> Based on a conservative estimate of approximately 3.32 person per owner-occupied residential unit in the Village of Lawrence and approximately 3.22 persons per owner-occupied unit in Woodmere CDP.

estimated that 1.65 fire personnel per 1,000 individuals is required to serve a new population. The projected increase in residents at the subject property that fall under the jurisdiction of the LCFD of approximately 82 people would generate a demand for  $0.13 \pm$  (rounded to one) additional fire personnel. The ULI multipliers assume that no existing services are provided, thus the actual demand for personnel is expected to be somewhat lower. Additionally, the population projection of 82 additional residents is conservative in that it assumes that the proposed development would not capture any existing residents from within the town and incorporated villages. Thus, there would be a minimal impact on the LCFD fire department.

The rest of the 828 residents would be served by the WFD. Based on planning standards contained in the *ULI Development Impact Assessment Handbook* (1994), the projected increase in residents at the subject property that fall under the jurisdiction of the WFD of approximately 828 people would generate a demand for  $1.37 \pm$  (rounded to two) additional fire personnel. The ULI multipliers assume that no existing services are provided, thus the actual demand for personnel is expected to be somewhat lower. Additionally, the population projection of 828 additional residents is conservative in that it assumes that the proposed development would not capture any existing residents from within the town and incorporated villages. Thus, there would be a minimal impact on the WFD fire department.

It is noted that the additional 284 new residential units located at the subject property could add to the pool of potential volunteer firefighters, as it is anticipated that the proposed action would generate a residential population of approximately 914 persons.

It is estimated that one vehicle and 4.1 EMS personnel per 30,000 individuals would be required to serve a new population. Based on the projected 82 residents to be generated by the proposed project under the jurisdiction of the LCFD, a demand for  $0.002 \pm$  and  $0.011 \pm$  (each rounded up to one) EMS vehicle and personnel is anticipated, respectively. As already noted, no existing services are accounted for in these multipliers, so actual demand is anticipated to be lower. Moreover, the population projection of 86 additional residents under the LCFD jurisdiction is conservative in that it assumes that the proposed development would not capture existing residents from within the town and incorporated villages. Thus, demand on ambulance services provided by LCFD would not be significant.

Based on the projected 828 residents to be generated by the proposed project under the jurisdiction of the WFD, a demand for  $0.02 \pm$  and  $0.11 \pm$  (each rounded up to one) EMS vehicle and personnel is anticipated, respectively. As already noted, no existing services are accounted for in these multipliers, so actual demand is anticipated to be lower. Additionally, the population projection of 828 additional residents under the WFD jurisdiction is conservative in that it assumes that the proposed development would not capture existing residents from within the town and incorporated villages. Thus, demand on ambulance services provided by WFD would not be significant.

Based on the foregoing, the proposed action would not have a significant adverse impact with respect to fire protection and secondary EMS services for both the LCFD and WFD.



### **3.9.3 Proposed Mitigation Measures**

No significant adverse infrastructure impacts are expected to result from implementation of the proposed action. Notwithstanding this, as there would be an increase to overall energy, natural gas, and water usage as well as increases in sewage generation from existing conditions to proposed conditions, the following measures have been incorporated into the proposed action to minimize potential impacts on infrastructure:

- › The proposed development would be connected to both public water and sewer systems.
- › The proposed development would replace the existing private recreational use with single family residential use limiting the release of nitrates into the environment associated with the fertilization of the golf course.

### **3.10 Zoning, Land Use and Community Character**

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Zoning, Land Use and Community Character:

- › A description of the existing land uses and zoning of the subject property and surrounding area, including an approximate one-quarter mile study area
- › An evaluation of lot sizes of adjacent properties
- › A description of the characteristics of surrounding zoning districts, including permitted uses, dimensional standards and minimum lot sizes
- › An assessment of the compatibility of the proposed subdivision with the established land uses in the surrounding area
- › Identification, review, and discussion of existing relevant land use plans for each of the three municipalities
- › A description of the proposed changes in land use on the site, as well as a detailed description of the proposed development
- › A description and quantification of the areas to be developed with buildings, roadways, walkways, and other impervious areas
- › An evaluation of the proposed subdivision's compliance with the bulk and dimensional requirements of the prevailing zoning districts
- › A consistency analysis of the lot sizes included in the proposed subdivision with those of proximate properties.

A comment made during the public scoping process called for the DEIS to evaluate the "Vision Plan" for the Village of Woodsburgh. Although the "Vision Plan" was not completed or adopted at that time, these actions were subsequently undertaken by the Village, during the course of the Applicant's preparation of this DEIS. Accordingly, consistent with the provisions of the Final Scope, the DEIS addresses the implications of the "Vision Plan" with respect to the proposed action. As there are no other local (Town or Village) land use or comprehensive planning documents available at this time, much of the analysis included in this section of the DEIS is based upon the zoning ordinances of the Town of Hempstead and the Village of Lawrence, as well as the Village of Woodsburgh (for which no Code revisions have occurred in furtherance to the "Vision Plan").

A discussion of existing zoning, land use and community character, potentially significant environmental impacts, and proposed mitigation measures is provided below.

### 3.10.1 Existing Conditions

#### Land Use and Zoning

The 116.72±-acre subject property currently consists of the Woodmere Club golf and country club with a member only, eighteen-hole golf course, clubhouse, and associated amenities (e.g., parking, maintenance facilities, etc.). In addition to its use as a private recreational facility, the Woodmere Club hosts private events, such as weddings, bar mitzvahs, luncheons, bridal showers, business outings, and award ceremonies.

The three-story clubhouse contains several dining facilities and bars, banquet halls, a fitness center, and other associated amenities. Exterior facilities include a swimming pool, patio area, six tennis courts, the tennis office, a cart house, and the grounds and maintenance garage.<sup>125</sup> These existing structures are situated on the eastern boundary of the subject property, at the intersection of Meadow Drive, Ivy Hill Road and Keene Lane. A paved parking lot abuts the clubhouse, providing access to the clubhouse via the Meadow Drive/Ivy Hill Road/Keene Lane intersection. Keene Lane provides access along the southernmost boundary of the subject property, connecting Atlantic Avenue to Meadow Drive/Ivy Hill Road. There are no other vehicular access points for the subject property. There are, however, several paved and unpaved golf cart paths throughout the golf course. In addition to the above-mentioned facilities, several grounds and maintenance sheds are scattered throughout the property.

As the golf course comprises the majority of the subject property, much of the current land cover consists of lawns, tee boxes, putting greens, fairways, and sand traps typical of a golf course. The course also contains six artificial ponds and lies adjacent to the Woodmere Channel. Other vegetation, including deciduous trees, is found throughout the course, and wetland-associated vegetation occurs in limited locations.

The existing land coverages for the subject property are outlined in Table 21, below.

**Table 21 Existing Site Coverages**

Type of Coverage	Acreage (Percent)
Impervious (roads, buildings and other paved surfaces)	<b>7.33± (6.3%)</b>
Pervious (turf, landscaping, sand traps, etc.)	<b>104.52± (89.5%)</b>
Water (artificial ponds and wetlands)	<b>4.87± (4.2%)</b>
<b>Total</b>	<b>116.72± (100%)</b>

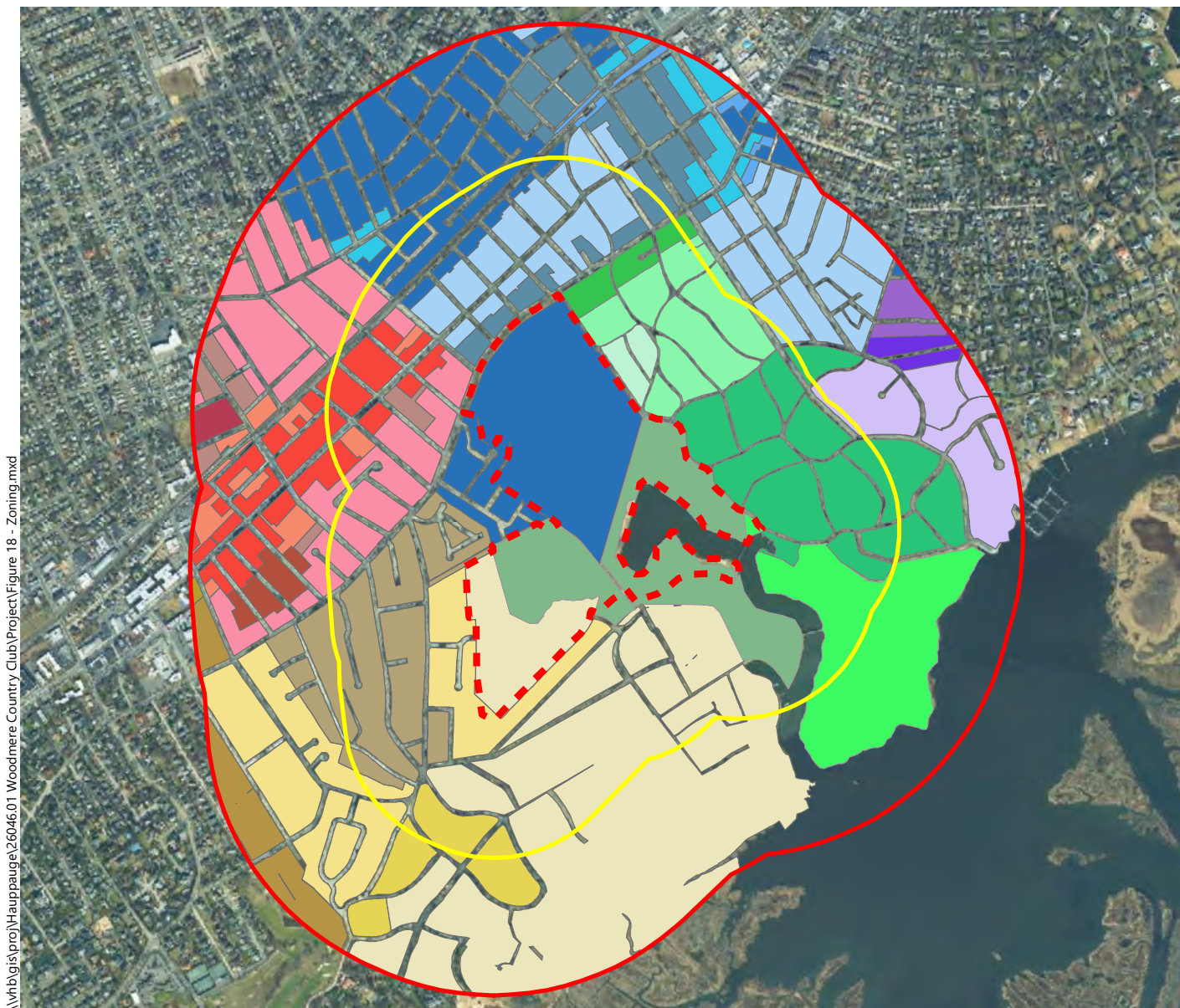
The subject property spans three distinct municipalities; the unincorporated portion of the Town of Hempstead (hamlet of Woodmere, 55.5± acres), the Incorporated Village of

<sup>125</sup> The Woodmere Club. *About*. <https://woodmereclub.com/about/>. Accessed March 2019. This information was confirmed by a site visit conducted by VHB on April 25, 2019.

Lawrence (21.4± acres) and the Incorporated Village of Woodsburgh (39.82± acres). The subject property lies within the following zoning districts:

- › The Town of Hempstead – B Residence District
- › The Incorporated Village of Lawrence – Residence AA District
- › The Incorporated Village of Woodsburgh –Residence 1A District
- › The Incorporated Village of Woodsburgh – Residence 2A District

Figure 18 provides the zoning classifications of the subject property, and parcels located within a one-half-mile radius of the site. The dimensional requirements of each zoning district within the subject property are presented in Table 22, and the permitted uses of these districts are provided below.



\\vhb\gis\pro\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 18 - Zoning.mxd



**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

**Zoning - Subject Property and Surrounding Area**

99 Meadow Drive

Town of Hempstead and the

Incorporated Villages of Lawrence and Woodsburgh

Nassau County

- Subject Property
- Quarter Mile Radius
- Half Mile Radius

Town of Hempstead	Village of Cedarhurst	Village of Hewlett Neck	Village of Lawrence	Village of Woodsburgh
A Residence	Apartments	Residence A	Residence A	1A Residence
B Residence	General Business	Residence B	Residence A-A	2A Residence
Business	Municipal Lands	Residence C	Residence B	A Residence
C Residence	Public Parking		Residence B-B	B Residence
Parking Field	Residential R-1		Residence C-1	C Residence
	Residential R-2		Business K	D Residence

Sources: NYS Ortho Imagery (2016); Town of Hempstead (2003), Village of Cedarhurst, Village of Hewlett Neck (2010), Village of Lawrence (1982), and Village of Woodsburgh (1990) Zoning Maps.

All boundaries are approximate.

**Table 22 Bulk and Dimensional Requirements of the Subject Property**

Dimension	Required as per Local Zoning District			
	Town of Hempstead, B Residence	Village of Lawrence, Residence AA	Village of Woodsburgh, Residence 1A	Village of Woodsburgh, Residence 2A
Minimum Lot Area	6,000 SF	40,000 SF	43,560	87,120
Minimum Frontage	N/A	150 feet	150 feet	200 feet
Minimum Front Yard Setback	25 feet	50 feet	60 feet	70 feet
Minimum Side Yard Setback	15 feet (aggregate), 50% width of opposite side yard	30 feet per side, 70 feet aggregate	30 feet per side	40 feet per side
Minimum Rear Yard Setback/Depth	25 feet <sup>1</sup>	60 feet	40 feet	50 feet
Minimum Lot Width	55 feet	150 feet	150 feet	200 feet
Height/Setback Ratio	N/A	Front Yard: 0.44 Rear Yard: 0.37 Side Yard: 0.74	N/A	N/A
Front Height/Setback Ratio	N/A	N/A	0.350	0.300
Side Height/Setback Ratio	N/A	N/A	0.700	0.525
Maximum Building Height	30 feet (2 ½ stories)	Single-family: 40 feet or 2 ½ stories (whichever is greater)	28 feet for gable, hip or gambrel roof. 25 feet for all other roofs or 2 ½ stories, whichever is less.	28 feet for gable, hip or gambrel roof. 25 feet for all other roofs or 2 ½ stories, whichever is less.
Minimum Building Height	N/A	N/A	20 feet or 1 story, whichever is less	20 feet or 1 story, whichever is less
Maximum Building Coverage	27.5% of lot area	5,245 SF	N/A	N/A
Maximum Floor Area	N/A	N/A	Lot size dependent <sup>3</sup>	Lot size dependent <sup>3</sup>
Minimum Floor Area	N/A	N/A	2,400 SF	2,400 SF
Maximum Impervious	N/A	8,500 SF <sup>2</sup>	N/A	N/A

## Notes:

1. 25 feet for lots ≥100 feet in depth; for lots <100 feet in depth, setback may be reduced by 3 inches for each foot of difference between 100 feet and the depth of the plot, though no yard is to be less than 15 feet.
2. Represents maximum impervious area for first 40,000 SF of lot, plus a maximum of 11% excess lot area for lots >40,000 SF.
3. The Village of Woodsburgh regulates maximum floor area on a sliding scale based on the size of the specific lot. See section 150-4.10.3 of the Village code.



***The Town of Hempstead***

Approximately 55.5-acres (48%) of the subject property is located within the Town of Hempstead's B Residence District. Article VII of the Town of Hempstead BZO identifies the following as permitted uses in the B Residence District:

- › Single-family detached dwelling or senior residence
- › Agricultural or nursery, provided that there is no display for commercial purposes or advertisements on the premises
- › Municipal recreational use
- › Railway passenger station.

Section 272 of the Town of Hempstead Zoning Code identifies the following as special permit uses within the B Residence District:

- › Philanthropic uses
- › Clubs
- › Fraternity houses
- › Lodges
- › Hospitals
- › Sanatoriums
- › Telephone exchanges
- › Golf courses
- › Public utility buildings and structures
- › Mother-daughter residences. The bulk and dimensional requirements of the B Residence District, as set forth in § 68-76 of the BZO, are presented in Table 22 (above).

***The Incorporated Village of Lawrence***

Approximately 21.4-acres (18%) of the subject property is located within the Incorporated Village of Lawrence's Residence AA District. Pursuant to § 212-13(A) of the Code of the Village of Lawrence, the following are considered permitted uses in the Residence AA District:

- › A dwelling for no more than one family
- › Clubs existing at the date of adoption of [the] chapter
- › Social clubs, when authorized as special exceptions by the Board of Appeals
- › Private docks, private boathouses and private bathhouses for the use of the owner of the premises on which they are located and his immediate family and guests; provided, however, that no charge shall be made for the use thereof and that the same shall not be used for profit

- › Public parks and recreational areas; municipal golf courses, docks and landings of the Village of Lawrence; private catering facilities operated in and upon such public areas; parking facilities for the users of such public areas and related facilities, whether on the same lot or otherwise
- › Governmental and municipal purposes of the Village of Lawrence
- › Accessory uses incident to the principal use to which the lot is devoted.

The bulk and dimensional requirements of the Residence AA District, as set forth in § 212-13(B) through (D) of the BZO of the Village of Lawrence, are presented in Table 22 (above).

### ***The Incorporated Village of Woodsburgh***

Approximately 39.3-acres (33%) of the subject property is located within the Incorporated Village of Woodsburgh's Residence 1A District. Pursuant to § 150-4.12 of the Code of the Village of Woodsburgh, the Residence 1A District permits the following uses:

- › A residence or dwelling for a single family or housekeeping unit
- › The office of a physician, surgeon, dentist, architect, engineer, or lawyer, provided that the occupational facility is located in the dwelling where the practitioner lives
- › Libraries or public museums
- › Private docks, private boathouses and private bathhouses for the use of the owner thereof and his immediate family and acquaintances; provided, however, that no charge shall be made for the use thereof and that the same shall not be used for profit
- › Farming, track gardening or nurseries, provided that no commercial greenhouses are used in connection therewith
- › Accessory uses customarily incident to the above uses, including a private garage, greenhouse, garden house or professional sign bearing the name and occupation of the practitioner only, not exceeding 1 ½ square feet in area. The term "accessory use," however, does not include a business use or any building or use not located on the same lot with the building or use to which it is accessory
- › Village police purposes.

Bulk and dimensional requirements of the Residence 1A District, as set forth in § 150-4.13 through § 150-4.23 of the Code of the Village of Woodsburgh, are presented in Table 22.

Approximately 0.52±-acres (1%) of the subject property is located within the Incorporated Village of Woodsburgh's Residence 2A District. Pursuant to § 150-4.2 of the Code of the Village of Woodsburgh, the Residence 2A District permits the same uses as described above for the Residence 1A District. Bulk and dimensional requirements of the Residence 2A District, as set forth in § 150-4.3 through § 150-4.10.3 of the Code of the Village of Woodsburgh, are presented in Table 22.

**Surrounding Area**

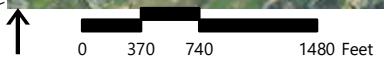
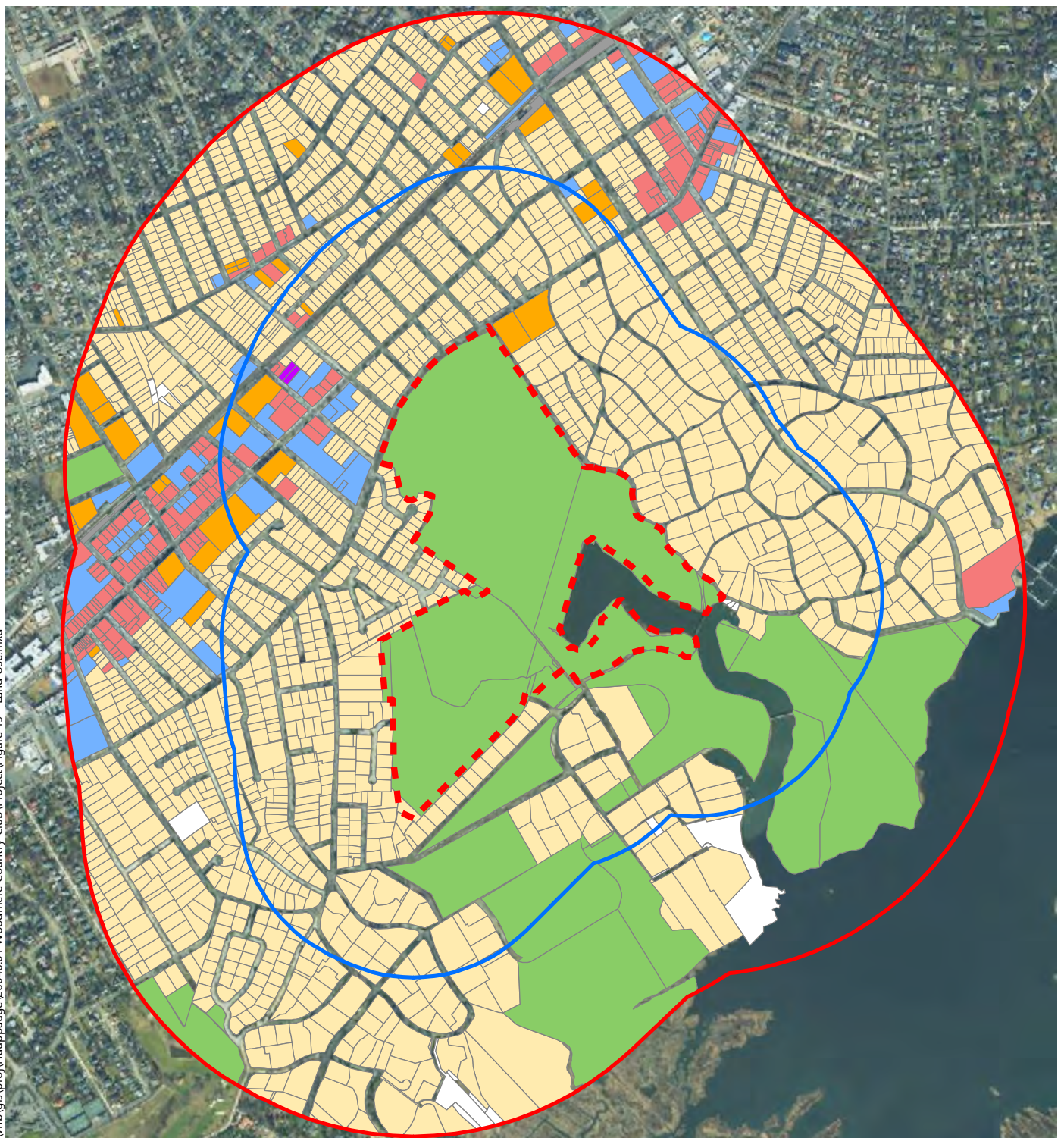
Land use and zoning in the areas surrounding the golf course consist predominantly of single-family residential. Other limited uses include two-family and multi-family residential, commercial, institutional (religious and educational), municipal, transportation/parking, open space/recreational, and surface water, as depicted on Figure 19.

The following land use and zoning characteristics are present in the areas surrounding the subject property (see Figure 18 [above] and Figure 19 [below]):

**North:** The areas located between Broadway and West Broadway, from Prospect Avenue and Derby Avenue east to Woodmere Boulevard, include the A Residence (single-family, 6,000 SF), B Residence (single-family, 6,000 SF), C Residence (single-family and two-family, 6,000 SF) and Business districts in the Town of Hempstead. East of Woodmere Boulevard to Franklin Place are the B Residence, C Residence and Business districts in the Town of Hempstead. Land use within these areas consist of primarily single-family residential development. However, adjacent to the northeast corner of the subject property are the three-story Crestwood and Mayfair multi-family residential apartment developments. Beyond, to the north, is the Long Island Rail Road (LIRR) Woodmere station, as well as several three to five-story apartment buildings. Along the northeast boundary of the study area is a commercial corridor. This corridor runs along Broadway and offers a wide range of typical commercial businesses, including various dining and entertainment establishments, medical facilities, and retail shops. Interspersed within the commercial corridor are several institutional uses (Lawrence Woodmere Methodist Church, Congregation Sons of Israel, Shulamith School) and municipal uses (Woodmere Fire Department, Woodmere Post Office).

**South:** The southernmost edge of the subject property near Atlantic Avenue, west to Mayberry Road South and south to Brosewre Bay, includes the Village of Lawrence's Residence AA (single-family, 40,000 SF), Residence A (single-family, 20,000 SF), and Residence BB (single-family, 12,000 SF) zoning districts. Areas outside the Village of Lawrence south of the subject property, between Rutherford Lane and Ivy Hill Road/Hickory Road, are located within the Village of Woodsburgh's A Residence (single-family, 20,000 SF), 1A Residence (single-family, 43,560 SF), and 2A Residence (single-family, 87,120 SF) districts. These areas include a mix of residential and recreational uses. Towards the southernmost boundary of the study area is the Rockaway Hunting Club, which is a members-only private club containing tennis courts, driving ranges, and an eighteen-hole golf course. The golf course extends across the Woodmere Channel to the Woodmere Docks at the southeast corner of the study area, and is situated within the Village of Woodsburgh's 1A Residence and 2A Residence, and the Village of Lawrence's AA Residence zoning districts. In and around the golf course, to the south and southwest of the subject property, are interspersed single-family residential homes.

\\vhb\gis\proj\Hauppauge\26046.01 Woodmere Country Club\Project\Figure 19 - Land Use.mxd



- Single-Family Residential
- Multi-Family Residential
- Commercial
- Community Facilities and Services

**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

- Transportation and Utilities
- Vacant
- Industrial
- Recreation and Open Space

- Subject Property
- Quarter Mile Radius
- Half Mile Radius

**Land Use Map**  
 99 Meadow Drive  
 Town of Hempstead and the  
 Incorporated Villages of Lawrence and Woodsburgh  
 Nassau County

All boundaries are approximate.

Sources: NYS Ortho Imagery (2016);  
 Long Island Index Mapper; VHB Site Survey April 25, 2019

East: East of the subject property are Village of Woodsburgh and Town of Hempstead residential districts. The study area also encompasses portions of the Village of Hewlett Neck, which is located southeast of the subject property. Between Meadow Drive/Ivy Hill Road and Woodmere Boulevard South, spanning from Broadway south to Hickory Road, are Village of Woodsburgh's A Residence (single-family, 20,000 SF), B Residence (single-family, 14,500 SF), C Residence (single-family, 12,000 SF), and D Residence (single-family, 12,000 SF) Zoning Districts. The neighborhood bounded by Browers Point Branch to the north and east, Woodmere Boulevard South to the west, and Barberrry Lane to the south is also within the Village of Woodsburgh's A Residence district. Those areas north of Browers Point Branch, between East Broadway and Broadway from Woodmere Boulevard South to Centre Street, are located within the Town of Hempstead's A Residence, B Residence, C Residence, and Business districts. The remaining areas east of the subject property, bounded generally by East Broadway and Ocean Avenue to the north, Woodmere Boulevard South to the west, and Brosewere Bay to the south, are within the Village of Hewlett Neck's Residence A (single-family, 5,000 SF), Residence B (single-family, 15,000 SF), Residence C (single-family, 30,000 SF) and Residence D (single-family, 40,000 SF) zoning districts. These areas are dominated by single-family homes. Residential lot sizes vary depending on the municipality in which they lie. The only non-residential uses in the area are the Keystone Yacht Club and the Woodmere Docks, located along Brosewere Bay to the southeast of the subject property.

West: Areas extending west of the subject property to Margaret Avenue and north to Broadway are within the Village of Lawrence's Residence AA, Residence A, Residence BB, Residence B (single-family, 9,000 SF), Residence C-1 (single-family, 9,000 SF) and Business K zoning districts. Western areas north of Broadway, from Washington Avenue east to Prospect Avenue, are within the Village of Cedarhurst's Residential R-1 (single-family, 6,000 SF), Residential R-2 (two-family, 6,000 SF), Apartment (multi-family), Parking, General Business, and Municipal zoning districts. Directly northwest of the subject property are Temple Beth El and the Hebrew Academy of the Five Towns & Rockaway. Beyond Temple Beth El is a commercial corridor offering a range of entertainment, dining, and retail businesses. Limited municipal (Cedarhurst Village Hall), institutional (educational and religious), and transportation (LIRR Cedarhurst station) uses are located throughout this part of the study area. Beyond this commercial corridor are several two-story apartment building complexes and Cedarhurst Park.

Land uses located immediately adjacent to the subject property consist almost entirely of single-family residential homes. Minimum lot sizes for parcels located within the zoning district immediately surrounding the golf course range from 6,000 SF to 87,120 SF. However, these zoning districts include non-residential uses such as the Rockaway Hunting Club golf course. When considering only residential uses, lot sizes of parcels immediately surrounding the subject property range from 6,000 SF to 40,000 SF. More detail on the lot size of adjoining residential lots is provided below.

### Lot Size Analysis

As actual lot size within any given district is variable, a lot size analysis was conducted in order to assess the actual lot sizes of residential lots adjacent to the subject property. This analysis used the Nassau County Land Record Viewer (LRV) to determine the size of all residential lots within those Nassau County tax map blocks adjoining the subject property. The tax blocks considered in this analysis include the following:

- › Section 39 – Blocks 241, 243, 245, 247, 252 and 255
- › Section 41 – Blocks 42, 44, 45, 69, 70, 71, 74, 76, 77, 78, 116, D, E, F and F-1.

In total, 250 residential lots were evaluated; 85 in the unincorporated portion of the Town of Hempstead; 76 in the Village of Lawrence; 71 in the Village of Woodsburgh; and 18 in the Village of Cedarhurst. The results of the analysis are summarized in Table 23, below.

**Table 23 Lot Size Analysis - Parcels Adjoining the Subject Property**

	<b>Town of Hempstead</b>	<b>Village of Lawrence</b>	<b>Village of Woodsburgh</b>	<b>Village of Cedarhurst</b>
Number of Parcels	85	76	71	18
Median Lot Size (SF)	8,400	14,500	20,473	8,800
Mean Lot Size (SF)	8,930±	20,275	21,388±	9,090
Maximum Lot Size (SF)	15,040	156,816	85,392	11,360
Number of Lots <6,000 SF	2	1	0	0

As indicated in Table 23, lot size within the study area ranges from <6,000 SF to 156,816 SF. The analysis demonstrates that lots immediately surrounding the portion of the subject property in the Town of Hempstead are generally small, consistent with the predominance of adjacent zoning districts with smaller minimum lot sizes.

Lots immediately surrounding those portions of the subject property in the Village of Lawrence and Village of Woodsburgh are more variable in size, though they are generally larger in size, consistent with the predominance of zoning districts with larger minimum lot sizes. Lots studied within these areas included the Village of Lawrence AA, BB and C-1 Residence districts (40,000, 12,000, and 9,000 SF lot size minimums, respectively), and the Village of Woodsburgh A, B, and C Residence districts (20,000, 14,500, and 12,000 SF lot size minimums, respectively).

The varying lot sizes surrounding the subject property result in neighborhoods of varying densities. Those neighborhoods surrounding the northern portion of the subject property are the most densely developed. Housing density surrounding the site decreases gradually moving south towards the southern boundary of the subject property. Overall, the land use immediately adjoining the subject property is characterized by single-family residential neighborhoods of mixed densities.



## Community Character

The NYSDEC *The SEQR Handbook, 4<sup>th</sup> Edition – Draft 2019* (the *SEQR Handbook*) provides guidance on how to determine whether an impact upon community character may be significant. The *SEQR Handbook* states, in pertinent part, as it relates to community character:

- › *Community character relates not only to the built and natural environments of a community, but also to how people function within, and perceive, that community. Evaluation of potential impacts upon community or neighborhood character is often difficult to define by quantitative measures. Courts have supported reliance upon a municipality's comprehensive plan and zoning as expressions of the community's desired future state or character. (See Village of Chestnut Ridge v. Town of Ramapo, 2007.) In addition, if other resource-focused plans such as Local Waterfront Revitalization Plans (LWRP), Greenway plans or Heritage Area plans have been adopted, those plans may further articulate desired future uses within the planning area.*

*In the absence of current, adopted comprehensive plan, a lead agency has little formal basis for determining whether a significant impact upon community character may occur.*

- › *Examples of actions affecting community character that have been found to be significant include the introduction of luxury housing into a working-class ethnic community and construction of a prison in a rural community.*
- › *Examples of actions found not to be significant include low-income housing and shelters for the homeless proposed to be located within existing residential areas.*

Therefore, according to the guidance provided by the *SEQR Handbook*, community character is influenced by the built and natural environment, the social environment of the area, and prevailing community planning and zoning standards.

As described above, the built environment of the study area consists of single-family residential neighborhoods complemented by commercial and institutional uses. In regard to the social environment, the community character of the study area is also influenced by the substantial population of devout Jewish residents, as demonstrated by the numerous religious uses found within the study area.

Though these factors help define the study area's community character, the *SEQR Handbook* emphasizes the "reliance upon a municipality's comprehensive plan and zoning as expressions of the community's desired future state or character." As previously indicated, the zoning within the study area is predominantly single-family residential, re-emphasizing single-family residential character of the community. In accordance with the Final Scope, and guidance provided by *The SEQR Handbook*, a summary of existing comprehensive plans and land use studies as they pertain to the subject property has been included below.

### **Relevant Comprehensive Plans and Studies**

As noted previously, there are no existing Town or Village land use or comprehensive planning documents available. However, relevant information from New York State and Nassau County land use and comprehensive plans was identified and evaluated. A detailed consistency analysis of the proposed action with relevant land use and comprehensive plans is provided in Section 3.10.2, below.

#### ***The Five Towns NY Rising Community Reconstruction Plan (March 2014)***

The Five Towns NY Rising Community Reconstruction Plan (the "NYRCR Plan") was a planning and implementation process that provided rebuilding and resiliency assistance to communities damaged by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. Recommendations of the NYRCR Plan includes programs to increase the Five Towns Community's resilience to future climate-related events.

A discussion of recommendations of the Five Towns NYRCR and the proposed actions consistency therewith is included in Section 3.10.2 of the DEIS.

#### ***Nassau County Comprehensive Plans***

The Nassau County Comprehensive Plan was prepared and adopted in 1998. There have been several updates to this plan since that time, including a 2003 Master Plan Update, a Trends Analysis in 2008, and a Draft Master Plan in 2010. An analysis of the consistency of the proposed action with the Nassau County Comprehensive Plan and its various updates is included in Section 3.10.2 of the DEIS.

##### 1998 Comprehensive Plan

The *1998 Comprehensive Plan*, prepared by the Nassau County Planning Commission, et al. and published in December 1998, is "a policy document which outlines a vision for the future of Nassau County. It focuses on the protection of the County's natural resources, current and long-range growth and development which is compatible with the County's quality of life, and provides guidance to decision makers, residents and organizations. The Plan is comprehensive because it blends and prioritizes the various factors and issues relevant to the subject matters of: interagency planning and coordination, land use, environmental resources, transportation, housing, the economy, culture and recreation and community facilities and services." (Page P-1)

The *1998 Comprehensive Plan* is divided into several topics, including Interagency Planning and Coordination; Land Use; Environmental Resources; Transportation; Housing; Economy; Culture and Recreation; Community Facilities and Services. The land use, environmental resources and housing sections of the *1998 Comprehensive Plan* are the most relevant to the proposed project. The relevant goals of these sections, and the proposed action's consistency with each, is detailed in Section 3.10.2.

##### Nassau County Master Plan Update 2003

The *Nassau County Master Plan Update 2003* (the *2003 Update*) was adopted in January of 2004. The update was created to provide a status report on the issues identified in 1998 and

to spur additional progress and reform. The *2003 Update* also aimed to incorporate practical planning strategies and information into a comprehensive planning process that would serve as the basis for continued positive growth.

The *2003 Update* highlighted trends seen throughout the County and identified changes that have taken place since the adoption of the *1998 Comprehensive Plan*. Based on the trends identified, the *2003 Update* proposed draft planning recommendations. Pertinent trends and planning recommendations, and the proposed action's consistency therewith, are described in Section 3.10.2.

#### Nassau County Master Plan Update 2008: Trends Analysis

*The Nassau County Master Plan Update, Trends Analysis (the 2008 Update)* was undertaken in 2008, approximately five years after the *2003 Update* to address changes in the economy and outline the County's vision for a "New Suburbia." Relevant to the proposed action, the *2008 Update* outlined the occurrence of subdivision plans that have taken place across the County, emphasizing the predominance of high-density lots being approved by the Nassau County Planning Commission 2003-2007. As the *2008 Update* is a trend analysis, rather than a goals-oriented document, there are no specific recommendations with respect to land use.

#### Draft 2010 Nassau County Master Plan

*The Draft 2010 Nassau County Master Plan (the Draft 2010 Master Plan)* focuses on the challenges facing Nassau County, including an aging population, low rates of economic growth, high property taxes and costs of doing business, failure to retain young people, and stagnation in employment growth. *The Draft 2010 Master Plan* aimed to set forth a plan to support sustainable growth and development for the future. As part of this effort, and pertinent to the proposed action, the *Draft 2010 Master Plan* encouraged the adaptive reuse of previously developed property.

#### Nassau County Open Space Plan (2001)

*The Nassau County Open Space Plan* provides a detailed inventory of existing open space resources in Nassau County. The plan identifies important natural resources and provides recommendations for managing the County's open spaces. Additional information pertaining to this plan is provided in Section 3.6. Recommendations of the *Nassau Open Space Plan* and their applicability to the subject property are discussed in Section 3.10.2.

#### ***Village of Woodsburgh Vision Plan***

A document titled *Village of Woodsburgh Vision Plan* (the "Woodsburgh Vision Plan" or the "Vision Plan"), dated November 2019, was prepared and issued by the Village of Woodsburgh.<sup>126</sup> The Board of Trustees of the Village of Woodsburgh adopted the "Vision Plan" by resolution on December 16, 2019.

The Woodsburgh "Vision Plan" indicates that it was prepared "in accordance with Section 7-722 of the New York State Village Law," which pertains to village comprehensive plans.

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<sup>126</sup> It is noted that the November 2019 issuance of the "Vision Plan" occurred after the September 2019 adoption by the NCPC of the Final Scope outlining the required content of this DEIS for the proposed subdivision of the Woodmere Club.

Pursuant to §7-722 of the Village Law, the effect of a Village's adoption of a comprehensive plan is that:

- "(a) All village land use regulations must be in accordance with a comprehensive plan adopted pursuant to this section [and]
- (b) All plans for capital projects of another governmental agency on land included in the village comprehensive plan adopted pursuant to this section shall take such plan into consideration."

However, the Village's land use regulations have not yet been amended to reflect the recommendations of the "Vision Plan." Furthermore, the Applicant has initiated litigation challenging the "Vision Plan."

The main recommendations of the "Vision Plan" that pertain to the portion of the Woodmere Club in Woodsburgh (i.e., approximately 34 percent of the overall acreage of the subject property and approximately 8.5 percent of the total number of residential lots proposed) include:

- › Single-family residential use would continue to be allowed on the majority of the Woodsburgh portion of the subject property, but this area would be rezoned to require a minimum single-family residential lot size of two acres, from the current minimum of one acre
- › A portion of the this parcel containing and surrounding the clubhouse would be rezoned for "Active Recreation/Village Guest Lodging" use, which contemplates that the clubhouse would be preserved and the rezoned parcel would be used as "a Village community center, or enhanced and adaptively reused for limited overnight accommodations"
- › Transfer of Development Rights ("TDR") would be explored to "...allow development to be transferred from the golf course properties within the Village to existing downtowns that are being revitalized"
- › Cluster development would be required, whereby the layout of residential subdivisions would be modified to "in order to preserve the natural and scenic qualities of open lands"
- › there would be a requirement that "environmentally constrained lands be subtracted when determining the minimum lot area to ensure these resources are not developed."

### **3.10.2 Potential Impacts**

#### **Land Use and Zoning**

Upon implementation of the proposed action the use of the subject property would change from a private golf and country club to a single-family residential neighborhood. Existing facilities on the site would be removed, and the site would be mostly cleared, graded, and subdivided into 284 single-family residential lots. Stormwater, sewer, water supply, electric

and natural gas infrastructure would be installed to support the proposed residences. The new residential lots would be developed in conformance with prevailing zoning.

The subdivision would create new site access points and internal roadways throughout the property. Specifically, new access points would be constructed at the intersection of Broadway and Prospect Avenue to the northwest, the intersection of Meadow Drive and Porter Place to the northeast, and Tulip Street to the west. Nine internal roadways would be constructed within the subject property, facilitating adequate circulation and providing street frontage along each of the proposed subdivided lots. The new access point at Tulip Street would require the modification of an existing residential cul-de-sac; the remaining two new access points would require modification to the subject property and the adjoining roadway. Internal roadways would be constructed within the subject property to provide access to individual lots. Existing wetlands would be altered, and four bioretention areas and one biofiltration area would be constructed.

The construction of roadways and developed lots with houses, accessory structures, driveways and walkways, etc., would lead to an increase in impervious surfaces of approximately 29.15±-acres, based on the proposed subdivision roadway design, and the assumptions reflected on the *Preliminary Subdivision Map* for the proposed lots (Appendix B). Alteration of existing wetlands and creation of bioretention areas would result in a net increase in water cover of 0.54± acre. Water coverage would remain unchanged as a result of the full build-out. Further detail is provided in Table 24, below.

**Table 24 Existing and Future Site Coverages**

<b>Land Cover Type</b>	<b>Existing Coverage in Acres (Percent)</b>	<b>Proposed Subdivision Coverage in Acres (Percent)</b>	<b>Proposed Future Buildout Coverage in Acres (Percent)</b>	<b>Total Change in Acres, Existing vs. Buildout (Percent)</b>
Impervious (roads, buildings and other paved surfaces)	7.33± (6.3%)	19.04± Acre (16.3%)	36.48± Acre (31.3%)	+29.15± Acre (25.0%)
Pervious (landscaping vegetation)	104.52± Acre (89.5%)	92.3± Acre (79.1%)	74.83± Acre (64.1%)	-29.69± Acre (25.4)
Surface Water (artificial ponds and wetlands)	4.87± Acre (4.2%)	5.41± Acre (4.6%)	5.41± Acre (4.6%)	+0.54± Acre (0.4%)
<b>TOTAL</b>	<b>116.72± Acres</b>	<b>116.72± Acres</b>	<b>116.72± Acres</b>	

As discussed in Section 3.10.1, the subject property is located within the Town of Hempstead's B Residence District, the Village of Lawrence's Residence AA District, and the Village of Woodsburgh's Residence 1A District. The 284 single-family residential lots created as a result of the proposed action would be developed in conformance with the bulk and dimensional standards of each of the zoning districts for which the subject property is located within. No variances are being requested as part of the proposed action.

As discussed below, the Villages of Lawrence and Woodsburgh have implemented standards to be considered when evaluating a proposed subdivision. The proposed subdivision complies with all pertinent regulations of the respective municipalities. Future development of the lots will also comply with all prevailing bulk area and dimensional requirements.

### ***Town of Hempstead***

Subdivided lots located within the portion of the property within the Town of Hempstead would comply with all bulk and dimensional requirements of the Town of Hempstead's B Residence District, an overview of which are provided in Table 22. Single-family residential lots created in this portion of the subject property would range from 6,000 SF - to 20,886±-SF. On average, the new lots would be approximately 7,000 SF in size, thus complying with the 6,000-SF minimum area requirement. The proposed subdivision's consistency with the remaining requirements, including yard setback and lot width requirements, is demonstrated in the *Typical Residential Plot Plan (6,000 SF Lot)* on sheet C-1.0 of the *Subdivision Plan Package* (Appendix B).

### ***Village of Lawrence***

Subdivided lots in Lawrence would comply with the bulk and dimensional requirements of the Village's Residence AA District, an overview of which are provided in Table 22. Lots within this portion of the subject property would range from 44,241±- to 81,588±-SF, averaging around 55,000 SF in size and thus complying with the 40,000-SF minimum area requirement. The proposed subdivision's consistency with the remaining requirements, including yard setback and lot width requirements, is demonstrated in the *Typical Residential Plot Plan (40,000 SF Lot)* on sheet C-1.0 of the *Subdivision Plan Package* (Appendix B).

In addition, the proposed subdivision is consistent with § 182-10 of the Code of the Village of Lawrence – factors for considering large subdivisions. The factors identified in § 182-10 (in italicized text), and the proposed action's consistency therewith, are provided below:

- A. *Whether the lots created by the proposed subdivision conform to the district regulations of the residence district in which the property is located as to lot area and front, side and rear yards.*

The proposed subdivided lots would conform with all the bulk area and dimensional requirements of the Village of Lawrence Residence AA District. Lot area would exceed the 40,000-SF minimum for each of the proposed lots. The proposed lots would also adhere to the respective front, side, and rear yard minimum setbacks, as depicted on the *Typical Residential Plot Plan (40,000 SF Lot)*.

- B. *The geometrical regularity of the proposed buildings lots.*



The majority of the proposed subdivided lots would be rectangular in shape and would be generally uniform. Though some lots would be less uniform due to the irregular shape of the subject property and their proximity to the Woodmere Channel, as a whole, the proposed subdivided lots would be geometrically regular.

- C. *Whether the proposed subdivision is in keeping with the general character of the neighborhood in which the property is located.*

According to the SEQR Handbook, the character of a neighborhood is influenced by the built and natural environment, the social environment, and the presiding comprehensive planning and zoning standards. As previously discussed above, the SEQR Handbook affirms that “a municipality’s comprehensive plan and zoning [are] expressions of the community’s desired future state or character.” In the absence of an adopted comprehensive plan, the presiding zoning is the best gage of the communities desired future state or character. Although the Town of Hempstead, Village of Lawrence, and Village of Woodsburgh do not have individually adopted comprehensive plans, the proposed action would be consistent with the various plans discussed above in this section. Additionally, the proposed action would be in conformance with existing zoning and would result in the construction of single-family homes within a predominantly single-family residential area. As such, the proposed action would be consistent with the general character of the surrounding neighborhoods.

- D. *Availability of public sewers and other utilities to the property.*

As discussed in Section 3.9, the subject property is currently connected to the Nassau County Sewage Disposal Districts No. 1 and 2, which transport sewage to the Bay Park Wastewater Treatment Plant for treatment. The subject property is connected to a municipal water purveyor – New York American Water. Other utility infrastructure, including gas and electric service, also currently serve the subject property. Extensions will be required for all these utilities to meet the individual residences. Correspondence has been undertaken with each service provider to confirm their availability to serve the subject property (Appendix M).

*The effect of the proposed subdivision on adjacent properties.*

Following the implementation of the proposed subdivision, the subject property would be developed in a manner consistent with the existing land use and zoning characteristics of the surrounding areas. As discussed above, the properties adjacent to the subject property are predominately single-family residential homes similar in character to the proposed residences. As the proposed subdivision would result in a development that is similar in nature to development already existing within the areas surrounding the subject property, there will not be significant adverse impacts to land use and zoning as a result of the proposed action.

- E. *Whether the proposed subdivision will be in harmony with the provisions and purposes of Chapter 212, Zoning, and will preserve the spirit of said Chapter 212, Zoning, and secure public safety and welfare and do substantial justice.*

The proposed subdivided lots would conform with the regulations of Chapter 212. Lots would be constructed to be in conformance with prevailing zoning and no variances are being requested for the proposed action. As such, the proposed subdivision will be in harmony with the provisions and purposes of this chapter. Similarly, in conformance with the prevailing zoning, future single-family homes would be constructed in accordance with all relevant safety requirements and standards, ensuring the safety and welfare of future community members.

### ***Village of Woodsburgh***

Subdivided lots would comply with the bulk and dimensional requirements of the Village of Woodsburgh's Residence 1A and Residence 2A Districts, respectively, an overview of which are provided in Table 22. Lots within the Residence 1A District would range from 43,605± to 303,307± SF, averaging close to 60,100 SF in size and thus complying with the 43,560-SF minimum area requirement. The lot within the Residence 2A District would be 99,626± SF, thus complying with the 87,120-SF minimum area requirement.

The proposed subdivision's consistency with the remaining requirements, including yard setback and lot width requirements, is demonstrated in the *Typical Residential Plot Plan (40,000 SF Lot)* on sheet C-1.0 of the *Subdivision Plan Package* (see Appendix B).

The proposed subdivision is also consistent with § 131 of the Code of the Village of Woodsburgh – Subdivision of Land. Article V of this Chapter – General Requirements for Subdivision Design establishes a policy for evaluating property subdivisions and details considerations and standards to be assessed in doing so.

The project's consistency with the considerations and standards of § 131 is discussed, below:

- A. *Character of land. Land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood or other menace. Land subject to such hazards shall not be subdivided nor developed for residential purposes nor for such other uses as may increase danger to health, life or property or aggravate a flood hazard, but such land may be set aside for uses as shall not involve such danger nor produce unsatisfactory living conditions.*

As detailed in Section 3.2, each of the proposed lots within the Village of Woodsburgh are located partially or wholly within the 100-year floodplain, with base flood elevations (BFEs) ranging from 9 to 11 feet. The proposed action plans to raise the lowest building floor of future residential homes within these zones to a minimum of two feet above the corresponding BFE. The lowest habitable finished floors of future residences will be above the required flood elevations, and the proposed subdivided lots would be safe from flooding. More details regarding the proposed residences compliance with all pertinent floodplain standards is provided in Section 3.2.

- B. *Preservation of natural features.*
- 1) *Land to be subdivided shall be designed in reasonable conformity with existing topography in order to minimize grading, cut and fill and to retain, insofar as possible, the natural contours, to limit stormwater runoff and to conserve the natural*

*vegetative cover and soil. No tree, topsoil or excavated material shall be removed from its natural position except where necessary and incidental to the improvements of lots and the construction of streets and related facilities in accordance with the approved plan. Topsoil shall be restored to a depth of at least six inches and properly seeded and fertilized in those disturbed areas not occupied by buildings or structures.*

The existing topography of the golf course differs from that of a typical residential neighborhood. Therefore, the proposed subdivision would require the grading, cutting and filling of the subject property to install the necessary infrastructure (i.e. roadways and stormwater management infrastructure) and make the property suitable for future residential development. Grading, cutting and filling of the subject property would also be necessary to raise future residences above the necessary floodplain elevations, as is described in Section 3.2.

Considering the need to grade, cut and fill the subject property, the proposed subdivision would also require the removal of topsoil and vegetation, including certain trees. A detailed analysis of the trees that would need to be removed is included in Appendix J. However, as discussed in Section 3.2, the proposed subdivision will improve stormwater management at the subject property through the creation of bioretention areas, a biofiltration area, and the installation of an improved drainage network. As such, although the proposed action will require grading, the proposed subdivision will not result in increased stormwater runoff.

- 2) *Existing natural features which are of ecological, aesthetic or scenic value to residential development or to the village as a whole, such as wetlands, watercourse, water bodies, rock formations, stands of trees, historic spots and similar irreplaceable assets, shall be preserved, insofar as possible, through harmonious design of the subdivision, and, where appropriate, the Planning Board may require the inclusion of such features in permanent reservations.*

As detailed in Section 3.5, the subject property does not contain any listed historic resources within the State or National Register of Historic Places. Further, a full Phase IA archaeological survey has determined that the subject property does not contain any listed or eligible archeological sites. The proposed action will therefore not affect any historic spots.

The proposed subdivision would include the alteration of existing artificial ponds. However, as described in Section 3.3, these ponds are not ecologically significant habitats. Plus, through the creation of the proposed bioretention and biofiltration areas, the net area of artificial ponds will be replaced with artificial wetland areas.

The proposed action would also involve the removal of trees within the subject property. However, where feasible, trees would be preserved to the greatest extent possible. A detailed analysis of the trees that would need to be removed is included in Appendix J.

- C. *Frontage on improved streets. The area proposed to be subdivided shall have frontage on and direct access to an existing village, town, county or state highway or a street shown on a plat duly filed in the office of the County Clerk prior to the effective date of this*

*chapter. If such street is private, it shall be improved to the satisfaction of the Planning Board or there shall be a bond held by the village to guarantee such improvement.*

The proposed action involves the creation of three new site access points. Two access points would be located within the Town of Hempstead; one at the intersection of Broadway and Prospect Avenue, and the other from Tulip Street. The third proposed site access point would be located on the boundary between the Town of Hempstead and the Village of Woodsburgh along Meadow Drive. The proposed subdivision also involves the creation of several internal roadways, providing access to each of the proposed lots. Each of the new site access points and internal roadways are proposed to be dedicated to the municipality in which they lie. Therefore, following the construction of these access points and roadways, each of the proposed lots would have frontage on and direct access to a Town or Village roadway.

As demonstrated above, the proposed subdivision would be consistent with the local zoning regulations. As such, no significant adverse impacts with respect to land use and zoning are anticipated.

### **Community Character**

As described in Section 3.10.1, above, according to the guidance provided in *The SEQOR Handbook*, “[i]n the absence of current, adopted comprehensive plan, a lead agency has little formal basis for determining whether a significant impact upon community character may occur.”

Although no comprehensive plan exists in the Village of Woodmere, Village of Lawrence, or the Town of Hempstead, a number of relevant New York State and Nassau County plans and studies were identified. A summary of each was included in Section 3.10.1 of this DEIS, and the proposed action’s consistency with each of these plans is demonstrated below.

#### ***The Five Towns NY Rising Community Reconstruction Plan (March 2014)***

As discussed above, The Five Towns NY Rising Community Reconstruction Plan (the “NYRCR Plan”) was a planning and implementation process that provided rebuilding and resiliency assistance to communities damaged by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. A total of 124 storm-affected localities across New York State were designated to participate in the NYRCR Plan. These 124 storm-affected localities were organized into 45 NYRCR Communities, each of which was led by a NYRCR Planning Committee comprised of local residents charged with developing implementable reconstruction plans to build resilient and sustainable communities. One of the 45 NYRCR Communities that was selected to participate in the Plan was the Five Towns NYRCR Community, which included a grouping of eight Villages and hamlets located on the South Shore of Long Island, in western Nassau County. The study examined the history of the area, provided demographic profiles for each of the Villages and Hamlets, and developed recommendations for implementable projects that would improve the area’s sustainability and resiliency to severe weather events. Among the eight Villages and Hamlets included in the Five Towns NYRCR Plan was the unincorporated portion of the Town of Hempstead

(hamlet of Woodmere) and the Village of Lawrence; it is noted that the Village of Woodsburgh was not included in this planning effort.

The NYRCR Plan describes the Five Towns area as a community that is “home to a large and thriving Orthodox Jewish Community.” Based off census data, the NYRCR Plan also demonstrates that housing within the community is predominantly owner-occupied, and states that “the Five Towns Community is largely characterized by single-family residential neighborhoods”. The plan further notes the presence of “thriving retail corridors” within the Five Towns area, specifically identifying those in the Villages of Cedarhurst and Lawrence. As demonstrated, the NYRCR Plan reiterates that the community character of the study area is that of a single-family residential community supported by commercial business corridors.

The Five Towns NYRCR Plan outlines programs to increase the Five Towns Community’s resilience to future climate-related events. Those programs most pertinent to the subject property and the proposed action include the upgrade of stormwater infrastructure within certain portions of the Village of Lawrence and the hamlet of Woodmere (in the unincorporated portion of the Town of Hempstead). Infrastructure upgrades recommended include pipe and catchment upgrades, check valves and swirl separators. The subject property is not located within any of the areas targeted for stormwater infrastructure upgrades in the Plan. However, following the implementation of the proposed action, the subject property would be developed with new stormwater infrastructure. It is anticipated that state-of-the-art stormwater infrastructure would be employed, utilizing the type of infrastructure identified for implementation in the NYRCR Plan. The proposed action would therefore be consistent with this recommendation of the NYRCR Plan.

The NYRCR Plan also proposes a regional shared project to strengthen the Town of Hempstead’s shoreline. The South Shoreline Improvement Program Study aims to examine methods for making coordinated improvements along the shoreline, including the shore of the Woodmere Channel. However, no documentation has been identifying indicating that the project was ever implemented. Accordingly, no additional standards pertaining to shoreline improvements have since been adopted.

### ***Nassau County Comprehensive Plans***

#### **The 1998 Comprehensive Plan**

As detailed in Section 3.10.1, above, the *1998 Comprehensive Plan* is divided into several topics, the most pertinent to the proposed action being Land Use; Environmental Resources; and Housing, as discussed below.

The goal of the Land Use chapter is to promote a balanced pattern of land use that encourages the concentration of future development in established areas with adequate infrastructure and facilities. The subject property exists within a moderate-to-densely developed residential community. As previously discussed, the area is well established and served with adequate infrastructure and facilities. The proposed action therefore proposes to concentrate development in an established area with adequate infrastructure and facilities and is thus consistent with this recommendation of the Land Use section.

The Land Use section also emphasizes the efficient utilization of the existing transportation network. The Woodmere and Cedarhurst LIRR stations are located approximately 0.3 and 0.5 mile from the subject property, respectively. Additionally, numerous Nassau Inter-County Express (NICE) bus stops are located along Central Avenue, within 0.1 to 0.5 mile from the subject property. The high prevalence of public transportation services proximate to the site is evidence that the subject property is located within an area having robust transit infrastructure. The subject property will therefore lend itself to the efficient utilization of these transportation networks, in accordance with this recommendation if the *1998 Comprehensive Plan*.

The Environmental Resources section of the *1998 Comprehensive Plan* details the various resources found within Nassau County, the effect of developmental pressure on these resources, and various programs and initiatives implemented to address these pressures. Examples of such resources include groundwater, surface waters, preserves, fish and wildlife, and air. As discussed throughout this DEIS, the proposed development can be accommodated at the subject location in a manner that does not result in significant, unmitigated impacts on any such environmental resources.

The Housing section of the *1998 Comprehensive Plan* stresses the ever-growing need for increased housing, specifically citing exceptionally low vacancy rates within the County and the need for more housing options. To address the challenge of housing availability, the *1998 Comprehensive Plan* specifically recommends "[e]ncouraging appropriate housing to locate in areas close to shopping, community facilities, services and transportation facilities."

As previously described, the proposed action would allow for future development of 284 single-family residences within a well-established suburban community that is well served by public infrastructure, community services, and retail amenities. Accordingly, the proposed action would provide additional housing in an area close to shopping, community facilities, services and transportation facilities, in accordance with the recommendation of the *1998 Comprehensive Plan*.

#### Nassau County Master Plan Update 2003

In light of the progress made since the adoption of the *1998 Comprehensive Plan*, the *2003 Update* provides a set of draft comprehensive policy recommendations to drive ongoing planning initiatives. These recommendations were organized to match the sections put forth by the *1998 Comprehensive Plan*. It is noted that the recommendations primarily consist of actions to be undertaken by the County. For example, the Land Use section of the *2003 Update* recommends the Nassau County Planning Commission revise the County's subdivision regulations; revised zoning regulations were eventually adopted in 2009. The proposed action will conform with all applicable subdivision regulations, both County and local, and will therefore abide by the pertinent recommendations of the *2003 Update*.

Further, among the trends identified within the *2003 Update* was the trend throughout the County to subdivide large "estate" properties into single-family residential lots. The proposed action would therefore also be consistent with some of the trends seen throughout Nassau County.



#### Nassau County Master Plan Update 2008: Trends Analysis

As noted in Section 3.10.1, the *2008 Update* outlined the predominance of high-density lots being approved by the Nassau County Planning Commission from 2002 to 2007. Within that timeframe, the median gross density of single-family lots was 4.5 lots per acre. The proposed action would establish 284 single-family residential lots on a 116.78±-acre parcel. As such, the gross density for the proposed action would be approximately 2.5 lots per acre. Consequently, the proposed subdivision would be at a lower density than the mean gross density of subdivisions approved between 2002-2007.

As the *2008 Update* is a trend analysis, rather than a goals-oriented document, there are no specific recommendations with respect to land use, and no recommendations pertaining to the future use or development of the subject property.

#### Nassau County Open Space Plan (2001)

The *Nassau County Open Space Plan* identifies the subject property as a golf course. However, the plan does not provide any recommendations for the preservation/future use of golf courses, nor specifically for the subject property itself. As such, there the plan does not provide any recommendations to which the proposed action can be evaluated. More detail regarding this plan is provided in Section 3.6.

#### Village of Woodsburgh Vision Plan

As discussed in Section 3.10.1, the Board of Trustees of the Village of Woodsburgh adopted a "Vision Plan" on December 16, 2019. However, the Village's land use regulations have not been amended to reflect the recommendations of the "Vision Plan," such that the proposed action as presented in this DEIS remains consistent with the prevailing zoning and other current land use controls in the Village of Woodsburgh. Furthermore, the Applicant has initiated litigation challenging the "Vision Plan."

The primary effect of the recommendations of the "Vision Plan," if implemented with the necessary local legislation and if ultimately determined to be a valid comprehensive plan, would be to continue to allow the majority of the Woodsburgh portion of the subject property to be developed with single-family residential use, although at a development yield reduced by 50 percent or more (from the 24 lots presently proposed), and also to establish a new zoning district that does not exist in the Village which would allow an "Active Recreation/Village Guest Lodging" use in the area that includes the clubhouse and adjacent facilities.

### **3.10.3 Proposed Mitigation Measures**

No significant adverse impacts to zoning, land use, or community character have been identified. Therefore, no mitigation measures are proposed.

### 3.11 Noise, Odors and Lighting

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Noise and Lighting:

- › A review of local noise ordinances and relevant guidance promulgated by the NYSDEC for the assessment and mitigation of noise impacts
- › An evaluation of the compatibility of the proposed residential use with noise that typically occurs in residential areas
- › An evaluation of potential impacts from lighting during construction and operation, and an analysis of the consistency of the same with local ordinances.

A discussion of existing noise and lighting conditions, potentially significant, project-related adverse environmental impacts and proposed mitigation measures, consistent with the Final Scope, is provided below.

In addition to a review of local noise ordinances, this section of the DEIS examines relevant guidance promulgated by the NYSDEC for the assessment and mitigation of noise impacts (*Assessing and Mitigating Noise Impacts*,<sup>127</sup> hereinafter the “NYSDEC noise policy”), including those that may result from construction related activities.

The Final Scope acknowledges that no known odor impacts are associated with the proposed residential subdivision. More specifically, the proposed action does not include “manufacturing, food processing, composting, landfills. . .[or] institutional or municipal facilities such as water and wastewater treatment plants”<sup>128</sup> that are the most common sources of significant odor impacts. Moreover, as a proposed single-family residential development, the use of odor-producing chemicals or other odor-generating activities are not part of the proposed action. Accordingly, no odors are inherent to the proposed action, no significant adverse odor impacts would result, and no further analysis of potential odor impacts is warranted in this DEIS.

#### 3.11.1 Existing Environmental Conditions

##### Noise

The subject property is situated in an established suburban community where the main source of environmental sound is from street traffic, including passenger vehicles, as well as buses and commercial trucks which frequently travel along Broadway, on which the site fronts. Trains traveling through the LIRR Cedarhurst and Woodmere stations also contribute to existing ambient sound conditions. Additionally, due to the subject property’s proximity to John F. Kennedy (JFK) International Airport, which is situated 2.4± miles to the west of the

<sup>127</sup> New York State Department of Environmental Conservation. *Assessing and Mitigating Noise Impacts*. Accessible at [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/noise2000.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/noise2000.pdf), accessed June 24, 2019.

<sup>128</sup> New York State Department of Environmental Conservation. *Full Environmental Assessment Form (FEAF) Workbook*. Available at: [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/feafprint.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/feafprint.pdf). Accessed June 2019.

subject property, overhead air traffic is also a notable source of environmental sound in this location.

### **Noise Background**

Noise is generally defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. The individual human response to noise is subject to considerable variability since there are many emotional and physical factors that contribute to differences in reaction to noise.

Sound (noise) is described in terms of loudness, frequency, and duration. Loudness is the sound pressure level measured on a logarithmic scale in units of decibels (dB). For community noise impact assessment, sound level frequency characteristics are based upon human hearing, using an A-weighted (dBA) frequency filter. The A-weighted filter is used because it approximates the way humans hear sound. The A-weighting scale was developed and has been shown to provide a good correlation with the human response to sound and is the most widely used descriptor for community noise assessments.<sup>129</sup> The faintest sound that can be heard by a healthy ear is approximately 0 dBA, while an uncomfortably loud sound is approximately 120 dBA.

A variety of sound level descriptors can be used for environmental noise analyses. These descriptors relate to the way sound varies in level over time. The following are common sound level descriptors used in this evaluation:

- › Energy-Average Sound Level (Leq) – This is a single value that represents the same acoustic energy as the fluctuating levels that exists over a given period of time. The Leq takes into account how loud noise events are during the period, how long they last, and how many times they occur. Leq is commonly used to describe environmental noise and relates well to human annoyance. An Leq over an 8-hour period is commonly used to evaluate construction noise and is denoted Leq [8hr].
- › Statistical Sound Levels – Sound level metrics such as L01, L10, L50 or L90 represent the levels that are exceeded for a particular percentage of time over a given period. For example, L10 is the level which is exceeded for 10 percent of the time. Therefore, it represents the higher end of the range of sound levels. The L90, on the other hand, is the level that is exceeded 90 percent of the time and therefore is representative of the background sound level.
- › Maximum Sound Level (Lmax) – Many sources of sound, including mobile sources and stationary sources, change over time. It is common to describe sound in terms of the maximum (Lmax) sound level emissions. Table 25, below, presents the maximum sound levels associated with common outdoor and indoor sources.

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<sup>129</sup> Harris, Cyril M. *Handbook of Acoustical Measurements and Noise Control*. Third ed. N.p.: McGraw-Hill, n.d. Print.

**Table 25 Common Outdoor and Indoor Sound Levels**

Outdoor Sound Levels	Sound Level (dBA)*	Indoor Sound Levels
Jet Over-Flight at 300 m	110	Rock Band at 5 m
	105	
Gas Lawn Mower at 1 m	100	Inside New York Subway Train
	95	
Diesel Truck at 15 m	90	Food Blender at 1 m
	85	
Noisy Urban Area—Daytime	80	Garbage Disposal at 1 m
	75	Shouting at 1 m
Gas Lawn Mower at 30 m	70	Vacuum Cleaner at 3 m
	65	Normal Speech at 1 m
Suburban Commercial Area	60	
	55	Quiet Conversation at 1 m
Quiet Urban Area—Daytime	50	Dishwasher Next Room
	45	
Quiet Urban Area—Nighttime	40	Empty Theater or Library
	35	
Quiet Suburb—Nighttime	30	Quiet Bedroom at Night
	25	Empty Concert Hall
Quiet Rural Area—Nighttime	20	
	15	Broadcast and Recording Studios
Rustling Leaves	10	
	5	
Reference Pressure Level	0	Threshold of Hearing

Source: Adapted from Federal Highway Administration. *Highway Noise Fundamentals*. September 1980.

\* dBA – A-weighted decibels, which describe pressure logarithmically with respect to 20  $\mu$ PA (the reference pressure level).

The following general relationships exist between noise levels and human perception:

- › A one- or two-dBA increase is not perceptible to the average person;
- › A three-dBA increase is a doubling of acoustic energy, but is just barely perceptible to the human ear; and
- › A 10-dBA increase is a tenfold increase in acoustic energy, but is perceived as a doubling in loudness to the average person.

Because sound levels are measured in decibels, adding sound levels is not linear. For example, where two equal sources of sound are added together, the overall level increases 3 dB (e.g., 60 dB plus 60 dB equals 63 dB).

## Relevant NYSDEC Guidance and Local Noise Ordinances

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

The NYSDEC noise policy<sup>130</sup> provides guidance on the methods to assess potential noise impacts and avoid or reduce adverse impacts.

As shown in Table 26, below, the NYSDEC policy includes guidelines for assessing noise impacts and mitigation. If long-term operations due to a proposed project would increase noise by 3 dB or less, there would be a minimal effect in future noise conditions and there is no need for mitigation, as they are considered to be imperceptible in most environments. For increases greater than 3 dB, mitigation may be warranted as follows:

**Table 26 NYSDEC Guidelines for Assessing Long-Term Operational Noise Impact and Mitigation**

Noise Level Increase (dB)	Impact Determination	Need for Mitigation
0 to 3	No impact	None
3 to 6	Potential adverse impact for the most sensitive receptors	Mitigation may be needed for the most sensitive receptors.
6 to 10	Potential adverse impact depending on existing noise level and character of land use	Mitigation is generally needed for most residential receptors.
10 or more	Adverse impact	Mitigation is warranted where reasonable.

When a noise study indicates that the proposed action may result in significant impact, NYSDEC requires an applicant to implement reasonable and necessary measures to mitigate or eliminate the adverse effect. If a significant adverse impact is identified, in addition to physical mitigation measures, such as reducing sound at the source or installing noise barriers, an applicant should also consider best management practices (BMPs) to reduce noise by means of modifying noise-generating equipment, limiting the time of noisy operations, or relocating noise sources farther away from receptors.

Since construction activities are short-term in relation to operational noise, separate thresholds are generally used to assess construction noise. According to NYSDEC policy, a proposed action should generally not raise ambient sound levels above 65 dBA in non-industrial settings or above 79 dBA in industrial environments. Therefore, given the temporary nature of construction noise, an increase in ambient noise of 10 dBA or more that would increase levels above 65 dBA is considered a reasonable construction noise threshold. Beyond these levels, it is recommended that BMPs be used to minimize the effects of construction noise.

### *Town of Hempstead*

The Town of Hempstead has a Noise Ordinance, contained in Chapter 144, *Unreasonable Noise*, of the Code of the Town of Hempstead.<sup>131</sup> The ordinance provides standards to

<sup>130</sup> NYSDEC. DEC Program Policy – Assessing and Mitigating Noise Impacts.

<sup>131</sup> Town of Hempstead. Chapter 144, Unreasonable Noise. <https://ecode360.com/15516274?highlight=sound#15516274>. Accessed April 2019.

prevent excessive sound and vibration which may jeopardize the health, welfare or safety of its citizens or degrade the quality of life. Pursuant to Section 144-3 of the Town of Hempstead Noise Ordinance:

*[A]ny conduct contributing toward participation in any of the following activities hereby is declared to be offenses against [the] chapter:*

*G. The erection, including excavating, demolition, alteration or repair, of any building other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, except in a case of urgent necessity in the interest of public safety, and then only with a permit from the Department of Buildings, which permit may be renewed for a period of three days or less while the emergency continues.*

### **Village of Lawrence**

The Village of Lawrence has a Noise Ordinance, contained in Chapter 144, *Peace and Good Order*, of the Code of the Village of Lawrence.<sup>132</sup> The Village Noise Ordinances prohibits excessive noise or disturbance, such that:

*A. No person shall make, aid, countenance, encourage or assist in making any excessive or improper noise, riot or disturbance to the annoyance or inconvenience of the public or of persons residing in the vicinity.*

*B. Any and all construction, whether with or without a building permit, occurring both inside or outside a building or structure, including excavation, demolition, alteration or repair of any building, shall be permitted only between the hours of 8:00 a.m. and 6:00 p.m., Monday through Friday, and 9:00 a.m. and 6:00 p.m. on Saturday and Sunday. Notwithstanding the foregoing, no construction, including excavation, demolition, alteration or repair of any building or structure, and whether with or without a building permit, may be conducted outside any building or structure, or inside any building or structure in such manner as to emit noise audible at the property line, on Saturday or Sunday.*

As indicated for both the Town of Hempstead and Village of Lawrence Noise Ordinances, the time of day is a chief consideration for determining whether an activity causes a noise disturbance – construction activities are permitted except during sensitive overnight hours or generally on weekends.

### **Village of Woodsburgh**

The Code of the Village of Woodsburgh does not include a Noise Ordinance. However, similar to the aforementioned provisions in the other two municipalities that have been adopted to regulate the hours of construction, Chapter 55, Article II of the Code of the Village of Woodsburgh (*Building Construction, Time and Day Restrictions*), at § 55-11, specifies that:

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<sup>132</sup> Incorporated Village of Lawrence. Chapter 144, Peace and Good Order. <https://ecode360.com/11020037?highlight=noise#11020037>. Accessed April 2019.



*No person, firm or entity shall permit or cause any construction or home improvement or alteration to be performed outside the confines of a building in the Village on Sundays, or on any other day of the week before the hour of 8:00 a.m. or after the hour of 6:00 p.m.*

Thus, as indicated above, the three municipal Codes establish varied limitations on the days and hours of construction within their respective municipal boundaries.

### **Existing Noise Conditions**

Within the subject property itself, the primary source of noise is landscaping equipment used for golf course maintenance. As discussed previously, sources of environmental sound in the surrounding community primarily include roadway traffic and aircraft associated with nearby JFK Airport.

The subject property is surrounded almost exclusively by residential neighborhoods. According to the NYSDEC noise policy, this land use is typically considered to be a noise receptor. Additional specific potential noise-sensitive receptors identified within the surrounding area include the following:

- › Gan Chamesh Ed Center – located on the west side of Central Avenue and south side of Linden Street, approximately 475 feet northwest of the subject property.
- › Gesher Early Childhood Center/Temple Beth El of Cedarhurst – located on the west side of Broadway between Locust and Grove Avenues, approximately 185 feet west of the subject property.
- › Hebrew Academy of the Five Towns and Rockaway – located on the east side of Central Avenue and north side of Locust Avenue, approximately 450 feet west of the subject property.
- › Kulanu Academy – located on the west side of Central Avenue and north side of Locust Avenue, approximately 900 feet to the west of the subject property.

Ambient sound measurements were conducted at eight locations (i.e., Sites M1 through M8 – see Figure 20) around the project site at locations relatively close to the project site and the proposed construction activities. Measurements were conducted using a Larson Davis Model 831 sound level meter certified to have Type I accuracy according to the NASI S1.4 “Specifications for Sound Level Meters.” The sound level meter was calibrated in the field prior to and after the measurements and by a laboratory traceable to the National Institute of Standards and Technology.

Measurement data collected included overall A-weighted sound levels and one-third-octave band sound levels, which provide information on the frequency content (i.e. low of high-pitched) character of sound. Data collection included one-second time histories and results for the entire measurement duration including minimum, maximum, percentile values (L01, L10, L33, L90 and L99), and the energy-average sound level (Leq). Atmospheric observations of wind speed, wind direction, air temperature, precipitation and relative humidity were made in the field and from a nearby online weather station. Observations were also made of the predominant noise sources.





\\vhb\gbl\proj\Hauptpage\26046.01 Woodmere Country Club\tech\Noise\GIS\WoodmereCountryClub\_Figure 1.mxd



**Proposed Residential Subdivision - Willow View Estates** | Woodmere, NY

**Noise Monitoring Locations Map**

- Monitoring Locations
  - Site Boundary
  - Proposed Roadways
- All boundaries are approximate.

99 Meadow Drive  
Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodsburgh  
Nassau County

Source: NYS Ortho Imagery (2016); NYS Civil Boundary, NYS Office of Information Technology Services GIS Program Office (GPO); VHB, 2019.



Ambient measurements were conducted on September 5, 2019 between approximately 10:30 AM and 2:00 PM. Atmospheric conditions included air temperature between 70 and 74 degrees, with an average of 54 percent relative humidity, winds generally 2 to 6 mph, and no precipitation. As shown in Table 27, the measurements show the energy-equivalent sound levels ranged from 56 to 73 dBA. At Site M8, there was a brief period of heavy equipment operation occurring in close proximity to the sound level meter, which was excluded from the measurement results. Based on the ambient noise measurement results, the applicable NYSDEC construction noise limit ranges from 66 to 83 dBA (Leq) to avoid a 10 decibel increase in noise above existing ambient conditions.

**Table 27 Ambient Sound Measurement Results**

Site	Address	Start Time	Duration (min)	Sound Level (dBA)								
				Leq	Lmax	L01	L10	L33	L50	L90	L99	Lmin
M1	Broadway and Elm Street	10:39 AM	15	68.1	78.6	75.9	71.7	68.0	66.4	58.2	54	52.2
M2	Temple Beth El Entrance	11:02 AM	15	72.5	80.7	79.2	76.4	73.0	71.0	57.4	50.8	49.3
M3	Terminus of Lotus Street	11:21 AM	15	61.4	71.7	69.0	65.6	60.5	58.2	54.3	52.6	51.7
M4	Terminus of E. Hawthorne Lane	11:45 AM	15	56.9	76.5	70.3	57.5	50.2	49.3	47.9	47.2	47.1
M5	580 Atlantic Avenue	12:11 PM	10	61.2	75.3	73.2	64.0	59.5	58.4	51.3	49.8	49.3
M6	Ivy Hill Road and Barberry Lane	12:32 PM	15	61.4	77.6	72.1	65.0	56.8	55.5	52.4	51.3	50.0
M7	Meadow Drive and Porter Place	12:53 PM	15	56.4	64.6	61.3	59.1	56.4	55.5	52.7	51.1	50.0
M8	Central Avenue and Linden Street	1:35 PM	15	58.3 <sup>A</sup>	72.4	68.3	60.4	56.9	55.5	51.4	49.1	49.0

Note: A - Noise measurement at this site excludes a period of time when heavy equipment activity occurred in close proximity to the microphone. During that period of time, the ambient Leq sound level was 69.7 dBA.

Source, VHB, 2019.

## Lighting

The subject property is situated in an established suburban community which contains a variety of artificial light sources. The primary sources of artificial light in the immediate surrounding area are varying types of overhead street lighting, automobile headlights and exterior residential property lighting. Within the subject property, the primary sources of artificial light are the exterior lighting of the Woodmere Club clubhouse and lighting within the adjacent surface parking lot.

### 3.11.2 Potential Impacts

#### Noise

##### ***Potential Construction Related Noise Impacts***

As noted in the Final Scope, the proposed action would introduce new sources of noise that may temporarily affect existing noise-sensitive receptors in the area immediately surrounding the subject property during construction. This section presents the anticipated noise impacts that may occur as a result of such activities.

The potential for noise impacts due to construction activities would depend upon the phase of construction, the type, amount and location of construction equipment, and the amount of time such equipment operates over a workday. Construction of the proposed subdivision would include demolition of the existing Woodmere Club country club and golf course, grading and excavation, installation of drainage and utility infrastructure, and construction of subdivision roadways. Future development of the individual lots would include construction of the residences and accessory structures and other on-lot improvements. As discussed in Section 3.13.1, it is estimated that demolition of existing on-site facilities and installation of subdivision infrastructure (i.e., utilities, roadways, etc.) would occur over a period of 12 to 18 months, while housing lot development is expected to occur over a period of 60 to 66 months. During this time, construction-related noise may temporarily affect the surrounding community; these impacts may result from both on-site activities and construction truck traffic on area roadways.

The loudest phase of noise is the earthwork phase which included movement of fill by truck, excavators and back hoes to move soil around the site, grading and a vibratory compactor (dual drum) to compact the soil. An anticipated 250,000 cubic yards (CY) of fill will be trucked to the site throughout the 5-year build out. Assuming 25 CY of material per truck and 200 working days per year, and 8 working hours per day, the result is 10 trucks with material accessing the site per day which equates to an average of less than two fill truck deliveries to the site per hour. All construction trucks accessing the Project Site will be required to arrive via Broadway through a temporary construction entrance to be established by the developer and Nassau County Department of Public Works. Trucks will access Broadway via the Nassau Expressway (NYS Route 878), Rockaway Turnpike or NYS Route 27.

Construction noise has been modeled using standard methods for residential development project in a manner that is consistent with federal guidelines. Cadna-A sound prediction, an internationally accepted sound prediction program that implements the International Standards Organization 9613-2 sound propagation, has been used to predict noise throughout the study area. This model takes into account the sound emissions of equipment, the areas where the construction equipment will be, the ground cover, terrain and intervening objects such as buildings.

Construction noise is typically evaluated according to the typical sound level that occurs throughout a typical day of construction activities. For typical daytime construction activities, construction noise is evaluated according to the energy-average Leq. The construction noise model accounts for the types of construction equipment, the number of each type of

equipment, the amount of time they typically operate during a work period (utilization factor), and the distance between receptor locations and the areas where construction will occur. The reference noise emissions of the equipment anticipated for construction of the Project is based on the Federal Highway Administration's Roadway Construction Noise Model, as shown in Table 28.

**Table 28 Stationary Construction Equipment Noise Emissions**

Construction Equipment	Number	Maximum Sound Level at 50 feet (dBA)	Utilization Factor
Backhoe	2	80	40%
Concrete Mixer	1	85	40%
Crawl Loaders (dozer)	1	85	40%
Dump Truck	1	84	40%
Excavator	2	85	40%
Vibratory Compactor	1	80	20%

Daily construction of the proposed development would be governed by the three Municipal Codes, with permissible days/hours of construction summarized as follows (see previous discussion regarding the specific, relevant provisions of each Code):

- › Woodmere (Town of Hempstead) – 7:00 a.m. to 6:00 p.m. on weekdays
- › Village of Lawrence – 8:00 a.m. to 6:00 p.m., on Monday through Friday; and 9:00 a.m. to 6:00 p.m. on Saturday and Sunday
- › Village of Woodsburgh – 8:00 a.m. to 6:00 p.m. on weekdays and Saturdays.

Thus, as indicated above, the three involved municipalities have promulgated a range of restrictions on the days and times in which construction activities are permitted. Construction on the subject property would comply with the requirements of the respective Municipal Code within which any given activity would occur. Any activities that span between two or more municipalities would comply with the most restrictive provisions (e.g., shorter workday or prohibition on weekend work).

Table 29, below, describes the construction equipment that is likely to be used during the demolition and building phases of the proposed action. Anticipated construction equipment for the future development of the subdivided lots is also included. Although specific construction equipment and methods have not yet been determined for the project, the equipment identified in Table 29 is representative of typical construction methods for these types of projects. This table presents the maximum sound level at 50 feet from each piece of equipment, the utilization factor (which is a measure of how often the equipment is operating throughout the workday), and the construction phases in which the equipment is included. The equipment reference noise levels are based on the Federal Highway Administration (FHWA)'s Roadway Construction Noise Model Database. As indicated below, the equivalent sound level (Leq), which includes contributions from all construction equipment, ranges from 85 to 86 dBA at 50 feet.

**Table 29 Construction Noise Predictions at 50 feet**

Equipment	L <sub>max</sub> at 50 feet (dBA)	Utilization Factor	Construction Phase			
			Demolition	Excavation	Erection	Interior Fit-Out
Air Compressor	80	40%			Yes	Yes
Backhoe	80	40%	Yes	Yes		
Concrete Mixer	85	40%			Yes	Yes
Crane	85	20%			Yes	
Crawl Loaders (dozers)	85	40%	Yes	Yes		
Dump Truck	84	40%	Yes	Yes	Yes	Yes
Excavator	85	40%	Yes	Yes		
<b>Leq at 50 feet</b>			<b>86 dBA</b>	<b>86 dBA</b>	<b>86 dBA</b>	<b>85 dBA</b>

Table 30 and Figure 21, below, present the results of the construction noise assessment at 95 receptor locations in the study area. The table presents the existing measured sound levels, predicted construction noise levels, and the results of the assessment relative to the NYSDEC guidelines. Construction noise mitigation or best management practices are warranted at locations where construction noise levels exceed the greater of 10 dBA above ambient levels or 65 dBA (Leq).



**Table 30 Construction Noise Assessment**

Receptor	Address	Existing Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Limit Criteria (Leq, dBA)	Construction Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Level (Leq, dBA)	Increase in Noise (Future minus Existing) (Leq, dBA)	Impact?
R1	1 Elm Street	68	78	40	68	0.0	No
R2	2 Prospect Avenue	68	78	41	68	0.0	No
R3	696 Broadway	68	78	44	68	0.0	No
R4	686 Broadway	68	78	40	68	0.0	No
R5	680 Broadway	68	78	41	68	0.0	No
R6	674 Broadway	68	78	41	68	0.0	No
R7	48 Grove Avenue	68	78	46	68	0.0	No
R8	Temple Beth El	72	82	40	72	0.0	No
R9	2 Sherwood Lane	72	82	43	72	0.0	No
R10	10 Sherwood Lane	72	82	44	72	0.0	No
R11	16 Sherwood Lane	72	82	43	72	0.0	No
R12	22 Sherwood Lane	72	82	42	72	0.0	No
R13	30 Sherwood Lane	72	82	42	72	0.0	No
R14	42 Sherwood Lane	72	82	41	72	0.0	No
R15	30 Iris Street	72	82	44	72	0.0	No
R16	33 Iris Street	72	82	43	72	0.0	No
R17	29 Iris Street	72	82	45	72	0.0	No
R18	23 Iris Street	72	82	43	72	0.0	No
R19	17 Iris Street	72	82	42	72	0.0	No
R20	11 Iris Street	72	82	41	72	0.0	No
R21	6 Rose Street	72	82	39	72	0.0	No

Receptor	Address	Existing Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Limit Criteria (Leq, dBA)	Construction Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Level (Leq, dBA)	Increase in Noise (Future minus Existing) (Leq, dBA)	Impact?
R22	5 Rose Street	61	71	43	61	0.1	No
R23	6 Tulip Street	61	71	41	61	0.0	No
R24	2 Ivy Street	61	71	44	61	0.1	No
R25	4 Ivy Street	61	71	43	61	0.1	No
R26	6 Ivy Street	61	71	45	62	0.1	No
R27	5 Ivy Street	61	71	45	62	0.1	No
R28	1 Tulip Street	61	71	43	61	0.1	No
R29	31 Lotus Street	61	71	42	61	0.1	No
R30	25 Cooper Beech Lane	61	71	43	61	0.1	No
R31	23 Cooper Beech Lane	61	71	43	61	0.1	No
R32	21 Cooper Beech Lane	61	71	43	61	0.1	No
R33	19 Cooper Beech Lane	61	71	41	61	0.0	No
R34	17 Cooper Beech Lane	57	67	43	57	0.2	No
R35	22 Auerbach Lane	57	67	43	57	0.2	No
R36	28 Auerbach Lane	57	67	39	57	0.1	No
R37	30 Auerbach Lane	57	67	42	57	0.1	No
R38	16 Hawthorne Lane	57	67	45	57	0.3	No
R39	6 Hawthorne Lane	57	67	49	58	0.7	No

Receptor	Address	Existing Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Limit Criteria (Leq, dBA)	Construction Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Level (Leq, dBA)	Increase in Noise (Future minus Existing) (Leq, dBA)	Impact?
R40	8 Hawthorne Lane	57	67	47	57	0.4	No
R41	10 Hawthorne Lane	57	67	46	57	0.3	No
R42	12 Hawthorne Lane	57	67	46	57	0.3	No
R43	14 Hawthorne Lane	57	67	42	57	0.1	No
R44	72 Park Row	57	67	43	57	0.2	No
R45	76 Park Row	57	67	41	57	0.1	No
R46	66 Chauncey Street	61	71	38	61	0.0	No
R47	540 Atlantic Avenue	61	71	37	61	0.0	No
R48	544 Atlantic Avenue	61	71	40	61	0.0	No
R49	546 Atlantic Avenue	61	71	43	61	0.0	No
R50	554 Atlantic Avenue	61	71	42	61	0.1	No
R51	562 Atlantic Avenue	61	71	39	61	0.0	No
R52	566 Atlantic Avenue	61	71	41	61	0.0	No
R53	570 Atlantic Avenue	61	71	41	61	0.0	No
R54	572 Atlantic Avenue	61	71	40	61	0.0	No

Receptor	Address	Existing Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Limit Criteria (Leq, dBA)	Construction Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Level (Leq, dBA)	Increase in Noise (Future minus Existing) (Leq, dBA)	Impact?
R55	580 Atlantic Avenue	61	71	42	61	0.1	No
R56	582 Atlantic Avenue	61	71	47	61	0.2	No
R57	590 Atlantic Avenue	61	71	46	61	0.1	No
R58	634 Atlantic Avenue	61	71	43	61	0.1	No
R59	15 Rutherford Lane	61	71	38	61	0.0	No
R60	11 Rutherford Lane	61	71	34	61	0.0	No
R61	310 Ivy Hill Road	61	71	41	61	0.0	No
R62	300 Ivy Hill Road	61	71	45	62	0.1	No
R63	230 Ivy Hill Road	61	71	42	61	0.0	No
R64	210 Ivy Hill Road	61	71	42	61	0.1	No
R65	803 Barberry Lane	61	71	40	61	0.0	No
R66	800 Barberry Lane	61	71	43	61	0.1	No
R67	190 Ivy Hill Road	61	71	42	61	0.0	No
R68	180 Ivy Hill Road	61	71	39	61	0.0	No
R69	170 Ivy Hill Road	61	71	40	61	0.0	No
R70	795 Pond Lane	61	71	45	61	0.1	No
R71	90 Ivy Hill Road	61	71	42	61	0.1	No
R72	801 Keene Lane	61	71	45	62	0.1	No
R73	84 Meadow Drive	56	66	43	57	0.2	No
R74	76 Meadow Drive	56	66	42	57	0.2	No

Receptor	Address	Existing Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Limit Criteria (Leq, dBA)	Construction Noise Level (Leq, dBA)	Future (Existing and Construction) Noise Level (Leq, dBA)	Increase in Noise (Future minus Existing) (Leq, dBA)	Impact?
R75	72 Meadow Drive	56	66	42	57	0.2	No
R76	68 Meadow Drive	56	66	42	57	0.2	No
R77	80 Meadow Drive	56	66	43	57	0.2	No
R78	64 Meadow Drive	56	66	41	57	0.1	No
R79	60 Meadow Drive	56	66	41	57	0.1	No
R80	803 Porter Place	56	66	41	57	0.1	No
R81	804 Porter Place	56	66	41	57	0.1	No
R82	30 Meadow Drive	56	66	39	56	0.1	No
R83	20 Meadow Drive	56	66	40	56	0.1	No
R84	1 Meadow Drive	56	66	38	56	0.1	No
R85	2 Pine Street	68	78	37	68	0.0	No
R86	1 Pine Street	68	78	39	68	0.0	No
R87	766 Broadway	68	78	38	68	0.0	No
R88	756 Broadway	68	78	39	68	0.0	No
R89	750 Broadway	68	78	39	68	0.0	No
R90	718 Broadway	68	78	39	68	0.0	No
R91	712 Broadway	68	78	39	68	0.0	No
R92	6 Elm Street	68	78	39	68	0.0	No
R93	Gan Chamesh Ed	58	68	33	58	0.0	No
R94	Hebrew Academy	58	68	32	58	0.0	No
R95	Kulanu Academy	58	68	32	58	0.0	No

Source: RCNM, 2011.





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**Proposed Residential Subdivision - Willow View Estates | Woodmere, NY**

- |  |               |  |        |  |        |
|--|---------------|--|--------|--|--------|
|  | Receptors     |  | 40 dBA |  | 60 dBA |
|  | Site Boundary |  | 45 dBA |  | 65 dBA |
|  |               |  | 50 dBA |  | 70 dBA |
|  |               |  | 55 dBA |  |        |

**Construction Noise Analysis Map**

99 Meadow Drive  
Town of Hempstead and the  
Incorporated Villages of Lawrence and Woodburgh  
Nassau County

All boundaries are approximate.

Source: NYS Ortho Imagery (2016);  
NYS Civil Boundary, NYS Office of Information Technology Services GIS  
Program Office (GPO); VHB, 2019.



As indicated by the table and figure above, construction including trucking operations and stationary equipment would generate noise levels ranging from 32 to 49 dBA (Leq) at receptor locations in the study area. Future noise levels (including existing and construction source), would increase up to 0.7 dBA at all receptors. The increases in noise would be primarily due to the stationary earthwork equipment. There would be up to 10 daily truck trips, however, since the truck passbys are relatively brief events lasting only approximately 10 seconds, the overall noise exposure from the trucks is substantially less than the stationary equipment. The single-family residential development that adjoins the subject property or face the subject property along its street frontages are the closest receptors that could be affected by construction-related noise but will not experience a 10 dBA increase from existing conditions.

The Final Scope specified that particular attention should be paid to the potential for construction-related noise impacts on the Gan Chamesh Ed Day Care Center, Hewbrew Academy of the Five Towns and Rockaway, Kulanu Academy and the Gesher Early Childhood Center. Potential construction related noise impacts to these education centers are discussed below.

The Gan Chamesh Ed Day Care Center is located approximately 500 feet to the north of the subject property, and due to the rapid attenuation of sound with distance, any impacts at that location are not expected to be significant and would be mitigated by the implementation of standard construction BMPs, as discussed in Section 3.11.3.

The Hewbrew Academy of the Five Towns and Rockaway is located approximately 600 feet to the west of the subject property and it is anticipated that impacts at this location would not be significant and would be mitigated as discussed below.

The Kulanu Academy, located approximately 875 feet to the west of the subject property, would not be significantly impacted by construction related noise and would be mitigated by BMP as outlined below.

With respect to the Gesher Early Childhood Center, as this education center is located approximately 1,950 feet north of the subject property, significantly further from the subject property (and the associated construction noise sources), and no significant construction related noise impacts are expected at locations nearer to the subject property, no such impacts upon the Gesher facility would be expected to result from implementation of the proposed development. As the noise analysis shows that no sensitive receptor locations will experience a 10 dBA increase over existing ambient levels, there would be no significant adverse construction noise impact. Overall, construction-related noise impacts would be temporary, would be minimized to the extent practicable by conforming with the applicable municipal noise ordinances, being scheduled not to occur during overnight sensitive hours, and by implementing BMPs to reduce source noise levels through the implementation of BMPs as presented in Section 3.11.3, below.

### **Potential Operational Noise Impacts**

As noted in the introduction to this chapter of the DEIS, the Final Scope specified that consideration should be given to "...the compatibility of the proposed residential use with noise that typically occurs in residential areas, including the communities surrounding the Subject Property." However, the Final Scope does not indicate that the proposed action involved potentially significant noise impacts on the surrounding community during the post-construction (operational) period for the proposed action.

Following the completion of the proposed subdivision and subsequent development of the residential lots, the subject property would operate as a single-family residential community. Thus, operational noise associated with the proposed action would be that of a typical suburban neighborhood. As previously discussed, the main source of sound in the completed development would be passenger vehicle street traffic. Since the operational noise generated by the proposed single-family residential development would be essentially the same as the existing ambient noise conditions in the surrounding residential areas, no significant adverse noise impacts on those surrounding areas are expected upon the completion of project construction. Thus, no mitigation measures are warranted or proposed for potential operational-related noise impacts.

### **Lighting**

The proposed action would introduce new sources of lighting to the subject property, primarily during operation of the completed development, generally limited to street lighting along subdivision roadways and the likely installation of exterior lighting within the individual residential parcels. This section examines the anticipated lighting impacts that may result from the proposed action.

### **Relevant NYSDEC Guidance and Local Lighting Ordinances**

#### New York State Department of Environmental Conservation

NYSDEC has developed a program policy for *Assessing and Mitigating Visual Impacts*,<sup>133</sup> which provides guidance regarding potential lighting impact and mitigation, which indicates the following:

*"...As a general rule, the project lighting plan should reflect the functional requirements of a project. Where relevant and appropriate, project sponsors should assess off-site light migration, glare and "sky glow" light pollution. Project sponsors should be asked to show that they have met all applicable lighting standards under the local jurisdiction."*

The Codes of the three involved municipalities have limited lighting requirements and standards, as discussed below.

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<sup>133</sup> NYSDEC. *DEC Program Policy – Assessing and Mitigating Visual Impacts*. Available at: [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/vispolfinaldraftoct18.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/vispolfinaldraftoct18.pdf). Accessed July 2019.

### Town of Hempstead

The Town of Hempstead BZO provides guidance on permissible exterior lighting, and the overflow of that lighting to adjacent or nearby parcels. Section 302-P of the BZO, *Prohibited and restricted uses*, specifies the following:

*P. No parcel of real property improved with a business, dwelling or multiple dwelling may be maintained in such a manner that a light-emitting device or facility, including but not limited to a spotlight or floodlight, shall emit glare (visible light) from any point upon the parcel onto any part of an adjacent or nearby residential dwelling. Any such light shall be deemed in compliance with this section if it is hooded or shielded in such a manner as shall direct the glare downward and away from adjacent or nearby dwellings, or if the light emits 1,500 lumens (one-hundred-watt bulb) or less ...*

The Town of Hempstead BZO, at BZ-254, also states that lighting in a residential pool area shall not cast illumination beyond the property line.

### Village of Lawrence

The Code of the Village of Lawrence has a similar provision as specified above in the Town of Hempstead BZO prohibiting lighting in a residential pool area from casting illumination beyond the property line, but does not otherwise regulate lighting for single-family residential development.

### Village of Woodsburgh

The Code of the Village of Woodsburgh does not regulate lighting for single-family residential development.

### ***Construction-Related Lighting Impacts***

The potential for lighting impacts due to construction activities associated with the proposed action largely depends on the timing of construction. Even for the time of year with the shortest hours daylight, in the late fall and early winter, the bulk of a typical construction workday would occur during daylight hours, such that the potential need for artificial lighting would be limited. As noted previously, all three Municipal Codes establish restrictions on the days and hours of permissible construction, with the earliest daily starting time specified as 7:00 a.m. in Woodmere (Town of Hempstead) and 8:00 a.m. in the two Villages, and 6:00 p.m. specified as the time by which daily construction activities must end for all three municipalities; and variations among the three on the permissibility of weekend construction. Although these provisions generally are directed at mitigating potential noise impacts, they govern all construction activities and, thus, would also limit the potential effect of construction lighting. Therefore, it is possible that construction lighting may be used during the period around the winter solstice, when daylight hours in the region extend from approximately 7:15 a.m. to 4:30 p.m. At this time of year, the potential need for construction lighting would be minimal at the start of the work shift in Lawrence and would not apply in the Woodmere portion of the site; and construction lighting could extend for about 1-½ hours in the afternoon in both municipalities before the respective noise ordinances mandate the end of daily construction activities. As noted previously the Code of the Village

of Woodsburgh does not contain provisions governing lighting. In any case, construction lighting would not active during the majority of the hours of darkness, including the entire overnight period between 6:00 p.m. and at least 7:00 a.m. the following morning.

Further, the use of any exterior lighting in the Woodmere portion of the site would abide by the regulations set forth in Section 302-P of the Town of Hempstead's BZO. Section 302-P prohibits the lighting of a property in such a manner that the light emits glare (visible light) onto any part of an adjacent or nearby residential dwelling, and further stipulates that any lighting must either be hooded or shielded in such a manner to direct glare downward and away from nearby dwellings, or must be limited to emit 1,500 lumens or less. Any artificial lighting used during construction in the Woodmere portion of the development site would be required to comply with this regulation; and it is expected that this measure would also be implemented in the Lawrence and Woodsburgh portions of the site as a best management practice.

The residences immediately adjacent to the subject property are the closest receptors that may be affected by construction-related lighting. Since any construction-related lighting will be utilized during normal daytime hours and will not emit glare onto nearby residential dwellings, no significant lighting impacts are anticipated to affect these light-sensitive receptors. Accordingly, the Temple Beth El and other light-sensitive receptors which are located farther away from the subject property, such as the Gan Chamesh Ed Day Care Center, would similarly be unaffected. Consequently, no mitigation measures for construction-related lighting impacts, other than the best management practices described above (i.e., compliance with municipal limitations on the hours of construction and proper shielding to prevent illumination trespass across the property line), are proposed.

### ***Operations-Related Lighting Impacts***

Following the completion of the subdivision and subsequent development of the residential lots, the subject property would operate as a single-family residential neighborhood. Though a formal lighting plan has not been developed for the proposed action, it is anticipated that any overhead street lighting or exterior residential lighting would be designed in a manner consistent with the applicable requirements of the Town of Hempstead code, as previously described, and as otherwise required by the Villages of Lawrence and Woodsburgh. As a result, no significant spillover of lighting onto adjacent properties is anticipated.

The Lead Agency's Positive Declaration and its Final Scope do not note the potential for lighting impacts upon specific, individual receptors. However, the Gan Chamesh Ed Day Care Center is mentioned generally with respect to potential noise, odor and lighting impacts within the Positive Declaration. Given that the Gan Chamesh Ed Day Care Center is located approximately 485 feet away from the nearest portion of the subject property; the presence of several developed properties, structures (e.g., single-family residences) and intervening vegetation between the center and the subject property; and the fact that street lighting is already present along Broadway, Linden Street and Central Avenue between the center and the subject property (and throughout the surrounding neighborhood), it is reasonable to assume that there would be no adverse effects associated with the proposed action, including street lighting to be installed as required.

As a residential neighborhood, the main source of artificial lighting will be overhead streetlights, automobile headlights, and exterior residential property lighting. The lighting of the subject property will therefore be comparable to the existing conditions of the surrounding community. In addition, exterior lighting associated with the clubhouse and associated surface parking area at the subject property would be removed, representing a potential reduction in exterior lighting in that vicinity (i.e., along Ivy Hill Road, Keene Lane and Meadow Drive). Accordingly, no significant lighting impacts are anticipated for the operational phase of the proposed action.

### 3.11.3 Proposed Mitigation Measures

As discussed in the previous section, construction noise levels would not increase existing ambient conditions by more than 10 dBA and there would not be significant adverse noise impacts. Since there would be no significant adverse noise impacts, BMPs are not required. Nevertheless, contractors should consider using best management practices, as safe, feasible, and reasonable, to minimize potential construction noise. In efforts to reduce potential noise impacts during construction, noise reduction measures would include the following:

- › Construction activities will be limited to non-sensitive time periods as defined by each local municipal ordinance. Any activities that span between two or more municipalities would be scheduled in accordance with the most stringent of the municipal noise ordinances. (e.g., shorter workday or prohibition on weekend work). Supplemental stationary construction equipment, such as generators or air compressors, will be located as far as possible from noise-sensitive sites.
- › Of the various types of construction equipment, diesel engines can be the most significant noise source. The contractor will ensure that all equipment is operating properly and is fitted with the appropriate noise-reducing features such as exhaust mufflers and engine compartment shields.
- › Most wheeled and tracked construction equipment is required to have back-up alarms for safety purposes. Due to their tonal character, these alarms are often a significant noise concern. Special back-up alarms may be implemented including ambient-adjusted alarms which only sound five decibels higher than ambient conditions or "quacker" which have a less tonal character. Flagging may also be used to eliminate the need for back-up alarms.
- › Mitigation may include re-routing truck routes and minimizing idling times.
- › Acoustic enclosures may be used to reduce emission from small construction equipment, such as generators.
- › Temporary noise barriers or noise blankets can be installed between construction equipment and sensitive receptors to provide significant noise reduction (typically 5 to 15 decibels).
- › As more detailed information on the construction equipment and methods become available as the project design advances, the contractor shall prepare a noise control

plan to further evaluate the potential for construction noise impact and identify specific mitigation measures that will be implemented.

- › A key aspect to minimizing the effects of construction noise is maintain good communication with the nearby residences and informing them of the schedule of construction activities and the approaches that will be taken to minimize construction noise.

With respect to lighting, as no adverse lighting impacts are anticipated, no associated mitigation measures are proposed. Lighting fixtures (including street lighting) would be designed to meet the requirements of the respective municipalities, including requirements for shielding and light spill prevention which would reduce the potential for adverse effects.



### 3.12 Climate Change

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts to Climate Change:

- › An evaluation of the impacts of the proposed action on climate change, in a manner consistent with the guidance provided in the NYSDEC's The SEQR Handbook
- › An evaluation of estimated greenhouse gas (GHG) emissions resulting from the construction and occupation of the proposed single-family homes, including increased generation from existing power plants due to electric demand from the project, any fuel combustion for heating, and fugitive emissions of methane resulting from potential natural gas use
- › Comparison of GHG projections with State and applicable local policies for reducing GHG emissions
- › An analysis of methods to mitigate energy use and GHG emissions through improved energy efficiency and the use of distributed renewable energy
- › An analysis of green construction standards, including ENERGY STAR<sup>®</sup> Homes, all-electric homes, net-zero carbon emissions homes
- › An analysis of low/no emission and alternative energy sources, including ground source heat pumps/geothermal, electrified HVAC, solar PV, solar thermal hot water systems
- › An analysis of the costs and climate impact benefits of the aforementioned alternative construction and energy sources, as compared to the same of the proposed action
- › An evaluation of the proposed action's consistency, including individual house designs, with the Climate Leadership and Protection Act
- › An identification of those parts of the subject property currently located within a floodplain, as depicted by FEMA Flood Map Service
- › An assessment of future flooding and storm-surge risks that may impact the proposed action based upon the NYSDEC sea-level rise projections
- › An overview of the pertinent floodplain development requirements and building codes, and the proposed action's consistency therewith.

For all proposed actions for which a determination of significance was received on or after January 1, 2019, the latest revisions to the implementing regulations of SEQRA at 6 NYCRR Part 617 – specifically § 617.9(b)(5)(iii)(i) – require the content of a DEIS to include:

*...measures to avoid or reduce both an action's impacts on climate change and associated impacts due to the effects of climate change such as sea level rise and flooding.*

*The SEQR Handbook, 4<sup>th</sup> Edition – Draft 2019* (hereinafter, "*The SEQR Handbook*") details considerations to be taken when evaluating the proposed action's impact on climate change, among them the proposed action's potential to contribute GHG emissions. *The SEQR Handbook*, and the associated NYSDEC Program Policy, specify that both direct and indirect

GHG emissions should be considered in evaluating the potential for the proposed action to produce GHG emissions.

In evaluating the potential impacts of climate change on the proposed action, *The SEQR Handbook* specifies the NYSDEC's sea level rise projections, as described in 6 NYCRR Part 490, be used to predict how future flooding and storm-surge risks may impact the project.

Further guidance within *The SEQR Handbook* on evaluating the proposed action's impact on climate change pertains predominantly to the use and conservation of energy. A complete analysis of the proposed action's energy use, and possible conservation measures to be implemented, is provided in Section 3.8 of this DEIS.

A discussion of existing conditions, potentially significant adverse environmental impacts, and proposed mitigation measures is provided below.

### 3.12.1 Existing Conditions

#### Special Flood Hazard Areas and Floodplain Management Standards

As indicated above, *The SEQR Handbook* indicates that flooding impacts are a key consideration of climate change impacts. Section 3.2.1 of this DEIS (also see Figure 8 FEMA Flood Insurance Rate Map on Page 38) addressed floodplains and describes that portions of the subject property exist within Special Flood Hazard Area (SFHA) Zone AE. The BFEs in this zone, at the subject property, range from 9 to 11 feet. Other portions of the site, including areas along Broadway and in the western-northwestern portion of the site, are outside of any SFHA.

Each of the three municipalities (Town of Hempstead, Village of Lawrence, Village of Woodsburgh) have adopted floodplain management standards, which include specific building regulations. Detail of these floodplain building regulations, and the proposed action's consistency therewith, is provided in Section 3.2 of this DEIS.

#### NYSDEC Coastal Erosion Hazard Area (CEHA)

Per New York State Environmental Conservation Law (ECL) Article 34 and Title 6 New York Codes, Rules and Regulations (NYCRR) and 6 NYCRR Part 505,<sup>134</sup> NYSDEC is responsible for setting minimum standards and criteria regarding activities to take place within state-regulated coastal erosion hazard areas (CEHA). The nearest mapped CEHA line is located

<sup>134</sup> NYSDEC Part 505 Coastal Erosion Management. Available at:

[https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=lefd3340b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=lefd3340b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)). Accessed August 2019.

more than two miles south of the subject property. As such, the subject property is not within a CEHA, and no CEHA related impacts are anticipated.

### **Community Risk and Resilience Act (CRRRA) and New York State Sea level Rise Projections**

In September 2014, New York State took a vital step in ensuring that state legislators, agencies, and coastal communities had tools available to assess the coastline's vulnerability and exposure to sea level rise and climate change through the Community Risk and Resilience Act (CRRRA).<sup>135</sup> The purpose of CRRRA is to ensure that certain state monies, facility-siting regulations and permits include consideration of the effects of climate risk and extreme-weather events.<sup>136</sup> This legislation provided tools that serve as key guidance for state agencies and coastal communities to address their exposure and risk to sea level rise and climate change based on existing conditions and projected conditions for various state permit programs, facility-siting regulations, and funding programs. Most of the programs affected by CRRRA already included some consideration of flooding prior to becoming legislation. These programs generally prohibit or apply additional requirements to projects located in SFHAs as indicated on FIRMs issued by FEMA. Although the adopted sea level rise projections discussed below do not establish new standards or criteria for issuing permits or issuing funding by NYSDEC, some NYSDEC programs now require applicants to show future physical climate risk due to sea level rise, storm surge and flooding were considered when formulating the project. As a result, NYSDEC will consider these factors when siting facilities within areas at risk in coastal areas as part of enforcing CRRRA.

CRRRA outlines five major provisions for New York to address when considering a community's risk to sea level rise and exposure to storms: establishment of official sea level projections; consideration of sea level rise, storm surge and flooding; expansion of Smart Growth Public Infrastructure Policy Act (SGPIPA) criteria to address climate change and sea level rise; guidance on natural resiliency measures; and creation of models of local laws concerning climate risk.

In compliance with the CRRRA requirement of establishing official science-based sea level rise projections, sea level rise projections through the year 2100 were established by New York State for Long Island, New York City/Lower Hudson, and Mid-Hudson geographic regions of New York in 2017 (see 6 NYCRR Part 490, Projected Sea level Rise).<sup>137</sup> The projections for Long Island are provided below (Table 31); the projections describe expected increases above the 2000-2004 sea level rise baseline.

<sup>135</sup> Community Risk and Resiliency Act (CRRRA) Mainstreaming Consideration of Climate Change. Available at: <https://www.dec.ny.gov/energy/102559.html>. Accessed August 2019.

<sup>136</sup> Community Risk and Resiliency Act (CRRRA) Statute. Available at: [https://www.dos.ny.gov/opd/sser/pdf/Community%20Risk%20and%20Resiliency%20Act\\_Statute.pdf](https://www.dos.ny.gov/opd/sser/pdf/Community%20Risk%20and%20Resiliency%20Act_Statute.pdf). Accessed August 2019.

<sup>137</sup> DEC Announces New Sea-Level Rise Projections Regulation for New York. 6 February 2017. Available at: <https://www.dec.ny.gov/press/109195.html>. Accessed August 2019.

**Table 31 New York State Sea Level Rise Projections, 6 NYCRR Part 490**

		Sea Level Rise (Inches)					
		Scenario	Low	Low-Medium	Medium	High-Medium	High
Time Interval	2020s		2	4	6	8	10
	2050s		8	11	16	21	30
	2080s		13	18	29	39	58
	2100		15	21	34	47	72

The CRRRA provides for collaboration among NYSDEC and NYSDOS to establish model laws for consideration by local municipalities regarding sea level rise and resiliency measures. Such model laws have not been developed to date, nor have the Town of Hempstead, Village of Lawrence or Village of Woodsburgh adopted specific regulations to address sea level rise.

To evaluate sea level rise projections as they relate to current conditions, National Oceanic and Atmospheric Administration (NOAA) tide gauges can be used to provide baseline conditions for comparison. To estimate local mean sea level trends, nearby "long-term"<sup>138</sup> NOAA tide gauges were identified.

The closest, long-term, NOAA tide gauge to the project site is Sandy Hook, located approximately 19 miles from the subject property. According to the tide gauge data, the mean higher-high water<sup>139</sup> at Sandy Hook is 2.41 feet (28.9±-inches) above mean sea level (amsl).<sup>140</sup>

Based upon the baseline conditions at Sandy Hook, a discussion of the potential impacts of sea level rise on the proposed action is included in Section 3.12 of this DEIS. As part of the assessment, the useful life of the proposed action is evaluated.

<sup>138</sup> "Long-term" tidal gauges are those which have data records long enough to be used for trend analyses, typically considered to be over 30 years. NOAA. *Incorporating Sea Level Change Scenarios at the Local Level*. Available at: <https://coast.noaa.gov/data/digitalcoast/pdf/slcscenarios.pdf>. Accessed November 2019.

<sup>139</sup> The average of the highest of the two high water heights of each tidal day observed over the National Tidal Datum Epoch: January 1, 1983 to December 31, 2001.

<sup>140</sup> NOAA. *Tides & Currents – Datums for 8531680, Sandy Hook NJ*. Available at: <https://tidesandcurrents.noaa.gov/datums.html?id=8531680>. Accessed September 2019.

## **Greenhouse Gas (GHG) Emissions**

As stated previously, guidance on assessing the potential impacts of an action as they relate to GHG emissions is provided in the NYSDEC Program Policy. Additionally, New York State recently adopted legislation aimed at implementing practices to reduce state-wide GHG emissions. None of the three local municipalities (Town of Hempstead, Village of Lawrence, Village of Woodsburgh) have adopted any such regulations.

### ***NYSDEC Program Policy***

In 2009, the NYSDEC developed and issued the DEC Policy for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements (the "NYSDEC GHG Policy")<sup>141</sup>. This initiative requires a DEIS to quantify GHG emissions and to identify and describe the feasible measures to minimize both mobile and stationary sources GHG emissions generated by their proposed projects.

The NYSDEC GHG Policy states,

*...climate change will continue to adversely affect the environment and natural resources of New York State, the nation, and the world. SEQR requires that lead agencies identify and assess adverse environmental impacts, and then mitigate or reduce such impacts to the extent they are found to be significant... The GHG Policy document was prepared to provide guidance as to methods to assess and mitigate these impacts when preparing and reviewing an EIS.*

The NYSDEC GHG Policy specifies that a DEIS should consider both the direct and indirect emissions of stationary and mobile sources associated with the proposed project.

Direct stationary emissions typically result from combustion of fossil fuels for heat, hot water, steam generation, on-site generation of electricity, or industrial processes; these sources can include boilers, heaters, furnaces, incinerators, ovens, internal combustion engines, and any other equipment or machinery that combusts carbon-containing fuels or waste streams.

Indirect stationary emissions include those emissions generated by off-site energy plants supplying energy to the proposed project's, and can include the off-site production of electricity, heating, or cooling which will be used on-site.

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<sup>141</sup> "Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements" NYSDEC. July 15, 2009. Available at: [https://www.dec.ny.gov/docs/administration\\_pdf/eisghgpolicy.pdf](https://www.dec.ny.gov/docs/administration_pdf/eisghgpolicy.pdf). Accessed July 2019.

### **Climate Leadership and Community Protection Act (2019)**

In June of 2019, New York State enacted the Climate Leadership and Community Protection Act (CLCPA), to “adopt measures to put the state on a path to reduce statewide greenhouse gas emissions by eighty-five percent by [2050] and net zero emissions in all sectors of the economy.”<sup>142</sup> The CLCPA sets new goals for reducing statewide GHG emissions and ultimately aims to achieve net zero GHG emissions by setting emission reduction targets and promoting clean energy.<sup>143</sup> The CLCPA establishes the Climate Action Council (the Council) to develop strategies to achieve these goals; strategies are to be formalized over the next two years and updated every five years thereafter.

The CLCPA also directs the NYSDEC to establish rules and regulations to ensure compliance with statewide emissions reduction limits (40 percent reduction from 1990 emissions levels by 2030, and 85 percent reduction from 1990 emissions levels by 2050). These regulations must include:

*“...legally enforceable emissions limits, performance standards, or measures or other requirements to control emissions from greenhouse gas emissions sources and measures to reduce emissions from greenhouse gas emission sources that have a cumulatively significant impact on statewide greenhouse gas emissions, such as internal combustion vehicles that burn gasoline or diesel fuel and boilers or furnaces that burn oil or natural gas.”*

These rules and regulations are to be established within four years of the enactment of the CLCPA.

Additionally, the CLCPA establishes a renewable energy program to promote the development and utilization of clean-energy systems, including offshore wind and photovoltaic solar generation. The program mandates that at least 70 percent of state-wide electric generation be provided by renewable sources by 2030 and that the state-wide electrical demand system be zero emissions by 2040. The renewable energy program also sets energy reduction goals.

The CLCPA is a new piece of legislation, and many of the regulations to be imposed in accordance with the CLCPA are years away from implementation. New regulations have yet to be implemented in response to the CLCPA.

## **3.12.2 Potential Impacts**

### **Special Flood Hazard Areas and Floodplain Management Standards**

As indicated above (also see Section 3.2 of this DEIS), portions of the subject property are within the SFHA Zone AE (BFE 9-11 feet). The extent of the floodplains as mapped by FEMA are based on observed trends and not future potential conditions. Although the proposed

<sup>142</sup> The New York State Senate. *Senate Bill S6599*. Available at: <https://www.nysenate.gov/legislation/bills/2019/s6599>. Accessed September 2019.

<sup>143</sup> Natural Resources Defense Council, Inc. (NRDC). *Unpacking New York's Big New Climate Bill: A Primer*. Available at <https://www.nrdc.org/experts/miles-farmer/unpacking-new-yorks-big-new-climate-bill-primer-0>. Accessed September 2019.



action includes the grading and filling of the subject property to modify the existing topography, implementation of the proposed action is not anticipated to substantially alter the existing floodplains. This is primarily due to the fact that the subject property is within a floodplain subject to coastal inundation (i.e., rather than a stream flood), where the floodplain is broad and covers a vast area. Thus, the subject property's floodplains would remain as they are today, as depicted in Figure 8.

Those portions of the subject property within SFHA Zone AE would be required to adhere to the provisions set forth in the local municipal floodplain zoning codes. The proposed action would be in conformance with all applicable floodplain zoning codes; an in-depth analysis of the proposed action's consistency with these regulations is provided in Section 3.2.

Where applicable (i.e., within the SFHAs), the proposed action will fill all lots or otherwise raise the first floors of the future residential structures to a minimum elevation of two feet above the corresponding AE zone elevation. The greatest BFE at the subject property is 11 feet amsl; the lowest habitable floor of structures within this zone would be raised to a minimum of 13 feet amsl. Those structures within zones with BFEs of 10 feet or 9 feet would be raised to a minimum of 12 feet or 11 feet amsl, respectively.

As detailed in Section 3.2, the proposed action would be in conformance with all applicable floodplain management standards. These design standards will reduce the proposed development's vulnerability to the potential impacts of flooding to the greatest extent possible. Accordingly, impacts related to the flooding aspects of climate change are not anticipated.

#### **NYSDEC Coastal Erosion Hazard Area (CEHA)**

The subject property is not within the limits of a mapped CEHA. As such, construction activities under the proposed action would not take place within a mapped CEHA area, nor would any CEHA-related impacts be anticipated.

#### **CRRRA and New York State Sea Level Rise Projections**

Although the FEMA FIRM does not consider sea level rise in its establishment of the floodplain, efforts have been made for the proposed action to account for potential impacts the subject property may encounter as it relates to sea level rise. Per the CRRRA data presented above (Table 31) sea level could rise by a maximum of approximately 72-inches by the year 2100. However, this projection reflects the most extreme scenario. As to not contribute to a situation of severe over-design, VHB provides conservative estimates utilizing the "medium" to "high-medium" range sea level rise projections. Under the medium to high-medium range projections presented in the CRRRA (

Table 31), sea level in this region is expected to increase by 34- to 47-inches by the year 2100.

As stated previously, the mean high water at Sandy Hook, the closest long-term NOAA tide gauge, is 2.41 feet (28.9±-inches) amsl. Thus, under medium to high-medium range sea level rise projections, it can be expected that mean high water at Sandy Hook will increase to between 5.24± feet (62.9±-inches) and 6.33± feet (75.9±-inches) amsl by the year 2100.

As described in Section 3.1, the proposed action would modify the topography of the subject property. Though topography and elevations would vary across the subject property, all proposed roadways will have elevations well above 6.33± feet amsl (except as required to meet existing roadway grades). The future residences located within a Special Flood Hazard Area (SFHA) would be constructed such that the lowest floor elevation is at least two feet above the corresponding BFE, in accordance with the requirements of the respective local municipal floodplain standards. Accordingly, lowest floor elevations of these residences would be at least 11-13 feet amsl, which is well above the high-medium range sea level projection.

Even under the high-medium sea level rise projection of 6.33± feet amsl, the proposed roadways and residences would remain above projected sea levels for the year 2100. As such, the proposed action is not expected to be adversely impacted by sea level rise.

The proposed subdivision would tie into the existing roadway network surrounding the subject property. The elevations of the existing roadways would not be altered under the proposed action. New roadways to be constructed north of Keene Lane are located within Zone AE with BFE's of 9 and 10 feet. Per Nassau County map checklist, all new roadways within a subdivision are required to be elevated at least 2 feet above the BFE and tie into the existing roadway network. The proposed action would meet these requirements and all new roadways would have a minimum elevation of 2 feet above BFE throughout the subdivision.

As noted previously, *The SEQR Handbook* states that an assessment of sea level rise impacts should include an evaluation of the impacts on the useful life of infrastructure. However, the proposed action does not involve the construction of any infrastructure projects (i.e., other than service infrastructure associated within the individual proposed residential lots themselves).

### **Greenhouse Gas (GHG) Emissions**

GHG emissions were calculated for direct and indirect stationary sources. These estimates were conducted in accordance with the NYSDEC GHG Policy guidance. Calculations were made for multiple GHG compounds and combined into equivalent carbon dioxide emissions (CO<sub>2</sub>e) using global warming potentials.

#### ***Direct GHG Emissions***

The direct GHG stationary source assessment estimates GHG emissions associated with the project-related stationary sources, such as fuel burning and estimated natural gas consumption, as required by the NYSDEC GHG Policy. Direct stationary source emissions often result from the combustion of fossil fuels for on-site heat, hot water, or steam generation.

Expected annual natural gas consumption was estimated for the proposed residences<sup>144</sup> anticipated to be constructed following implementation of the proposed action. Using the estimated sizes of all the residences, annual energy consumptions were estimated using the “Residential Prototype Building Models” created by the USDOE.<sup>145</sup> Houses were assumed to be built to IECC 2012 building code or newer, be heated by gas furnaces and have unheated basement. Under the proposed action, the project site is expected to consume a total of 18,659 MMBtu of natural gas annually. These consumptions were converted to CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions using standardized conversion factors provided by the EPA.<sup>146</sup> The proposed action results in annual emissions due to direct stationary sources of 990.1 tons per year of CO<sub>2</sub>, 0.02 tons per year of CH<sub>4</sub>, and 0 tons per year of N<sub>2</sub>O. Considering each GHG’s Global Warming Potential (GWP),<sup>147</sup> a total of 995 tons per year of carbon dioxide equivalents (CO<sub>2</sub>e) is expected from direct stationary sources.

### **Indirect Greenhouse Gas Emissions**

The indirect GHG emissions calculated herein are comprised of stationary source emissions from off-site combustion related to the on-site electricity consumption of the proposed development. The anticipated on-site energy consumption is used to estimate source GHG emissions at the source of electricity generation. Indirect GHG stationary source emissions often result from electricity consumption by HVAC systems, lighting, plug loads and other end-uses. GHG emissions associated with the consumption of electricity by these end uses is required by the NYSDEC GHG Policy.

Annual estimates of electricity consumption were again estimated using the “Residential Prototype Building Models” created by the USDOE. As the design of the future residences is preliminary in nature, quantification of the energy consumption by means of a detailed energy model would be speculative.

Considering the anticipated full build out of 285 residences, an annual consumption of 3,099 MWh of electricity is expected based on the prototype models. This calculates to a project-wide indirect stationary source emission of 1,667 tons of CO<sub>2</sub>e per year.

When combining direct and indirect GHG emissions, the proposed action is expected to result in 2,662 tons of CO<sub>2</sub>e per year. The GHG analysis of the project’s direct and indirect sources is summarized in Table 32, below.

<sup>144</sup> The GHG emissions analysis (both direct and indirect) was completed for a 285-lot subdivision plan. The results of the proposed 284 lot subdivision would be expected to be slightly less.

<sup>145</sup> United States Department of Energy. *Building Energy Codes Program*. Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed August 2019.

<sup>146</sup> Environmental Protection Agency. *Emission Factors for Greenhouse Gas Inventories*. Available at: [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf). Accessed July 2019.

<sup>147</sup> Intergovernmental Panel on Climate Change. *Fifth Assessment Report (AR5)*. Available at: <https://www.ipcc.ch/assessment-report/ar5/>. Accessed August 2019.

**Table 32 Direct and Indirect Greenhouse Gas Emissions**

	<b>Direct Sources (Natural Gas)<sup>2</sup></b>	<b>Indirect Sources (Electricity)<sup>3</sup></b>
Energy Consumption <sup>1</sup>	18,659 MMBtu	3,099 MWh
CO <sub>2</sub> Emissions (metric tons/yr)	990.1	1,656.1
CH <sub>4</sub> Emissions (metric tons/yr)	0.02	0.18
N <sub>2</sub> O Emissions (metric tons/yr)	0.00	0.02
CO <sub>2</sub> E Emissions (metric tons/yr) <sup>4</sup>	995	1,667
<b>Project – Direct and Indirect CO<sub>2</sub>E Emissions:</b>		<b>2,662 metric tons/yr</b>

1. Annual Energy Consumption estimated using the U.S. Department of Energy's "Residential Prototype Building Models".
2. Natural Gas Conversion Factors from: "Emissions Factors for Greenhouse Gas Inventories", Environmental Protection Agency. March 9, 2018.
3. Electricity Conversion Factors from: "Emission Factors for Greenhouse Gas Inventories" Environmental Protection Agency. March 9, 2018. Using EPA's eGRID 2016 for NYLI.
4. Global Warming Potentials from: IPCC Fifth Assessment Report (AR5), 2014.

The analysis shows the proposed action is expected to produce a total of 995 tons per year of CO<sub>2</sub>e from direct stationary sources and 1,667 tons per year of CO<sub>2</sub>e from indirect stationary sources. When comparing the project's anticipated emissions to the GHG from all of Long Island (36,003,349 tons CO<sub>2</sub>e), the project is expected to contribute 0.01 percent of total Long Island GHG emissions.<sup>148</sup> As such, the proposed action will not significantly contribute to GHG emissions, and thus, will not substantially contribute to climate change.

To reduce the amount of GHG emissions produced by the proposed action, *The SEQR Handbook* suggests incorporating design measures to reduce the proposed action's GHG emissions. As the proposed action involves the subdivision of land, and the future residences to be built have not yet been designed, specific energy conservation or GHG emissions reduction measures cannot be identified. Notwithstanding this, a discussion of energy saving programs that are expected to be available and may be incorporated into the future residences is included below and is elaborated further in Section 3.8 of this DEIS.

### ***Climate Leadership and Community Protection Act (2019)***

As described above, the CLCPA mandates the Climate Action Council and the NYSDEC establish practices and standards to reduce state-wide GHG emissions. The CLCPA affords these bodies several years to do so. To date, no such practices or standards have been established since the adoption of the CLCPA. Accordingly, there are no regulations that can be acted upon at this time, nor are there any effective standards to compare the proposed

<sup>148</sup> Based on total Long Island emissions, from: "Long Island 2010 Regional Greenhouse Gas Inventory" Cameron Engineering and Associates. 2010. Available at: [https://www.dec.ny.gov/docs/administration\\_pdf/liregghginven.pdf](https://www.dec.ny.gov/docs/administration_pdf/liregghginven.pdf). Accessed July 2019.

action to. Though the Final Scope requires the proposed action's consistency with the CLCPA be evaluated, such an analysis cannot be performed at this time.

A main component of the CLCPA's plan to reduce GHG emissions is the increased use of clean-energy sources. The larger use of wind or solar generated energy will provide electricity for end-use customers (i.e. residential households) while minimize the amount of GHG emissions produced in the process. Widespread employment of such clean-energy systems will significantly reduce state-wide GHG emissions as compared to conventional fossil-fuel based energy systems.

In the coming years, the regulations and requirements enacted under the CLCPA will require energy providers to utilize clean-energy systems. Until the energy providers make that transition, end-users will continue to be supplied with conventionally sourced energy. The proposed residences will therefore continue to rely on conventionally sourced energy provided by the energy provider, PSEG Long Island. However, as discussed in Section 3.8, the proposed 285 single-family residences would represent an increase in less than 0.03 percent in the total number of customers served by the PSEG Long Island. Additionally, as stated previously, the proposed action's expected GHG emission levels represent a negligible portion of Long Island's overall GHG emissions. As such, regardless of the source of the energy being supplied to the subject property, the proposed action will not significantly contribute to GHG emissions.

### **Alternative Construction Standards**

As part of the assessment of the proposed action's contribution to GHG emissions, the Final Scope also requires that this DEIS include an evaluation of alternative technologies and construction standards that could be used to reduce energy consumption and thereby reduce GHG emissions. Alternative construction standards include ENERGY STAR® homes, all-electric homes, and net-zero carbon emissions homes; alternative technologies include geothermal heating and cooling, solar photovoltaic energy production and water heating, and electric heating and cooling. These alternative construction standards and technologies are described below.

### ***Energy Star Construction***

ENERGY STAR ® homes are built to meet strict program requirements for energy efficiency.<sup>149</sup> Numerous measures are employed to meet the requirements, including, among others:

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<sup>149</sup> ENERGY STAR, *About the ENERGY STAR Residential New Construction Program*. Available at: [https://www.energystar.gov/partner\\_resources/residential\\_new/about](https://www.energystar.gov/partner_resources/residential_new/about). Accessed September 2019.

- › Installation of a comprehensive air sealing and insulation system;
- › High-efficiency heating and cooling systems;
- › Water management measures to reduce potential water damage; and
- › Use of energy-efficient lighting fixtures and appliances.

Specific standards for ENERGY STAR® certification in Nassau County can be found through the Residential New Construction Program Requirements.<sup>150</sup>

Through the inclusion of these measures, ENERGY STAR® homes are at least 10 percent more efficient than those built to code. Cumulative efficiency improvements are dependent upon the specific design of the house and the ENERGY STAR® measures employed. As the future residences have not yet been designed, a more precise estimate of the resulting efficiency improvements cannot be made at this time. However, as the proposed action is not expected to significantly contribute to GHG emissions, the improved efficiency and subsequent reduction in GHG emissions associated with utilizing ENERGY STAR® homes would similarly represent an insignificant contribution to GHG emissions.

It is important to note that ENERGY STAR®, as with other energy saving and green building certification programs, is a private proprietary labeling program. Through the inclusion of specific measures, future homeowners would have the option to attain ENERGY STAR® or other such private certifications. As such, the proposed action cannot be required to construct ENERGY STAR® homes. Still, as the proposed residences would be required to abide by the regulations of the ECCCNY<sup>151</sup>, it is expected that some of the ENERGY STAR® building standards will be achieved during implementation of the proposed action.

### **All-Electric Construction**

All-electric homes use electricity to operate appliances typically powered by natural gas or other fossil fuels, including water heaters, ovens, and heating systems. Accordingly, these homes are typically constructed without connections to natural gas supply lines or fuel oil tanks.

The suitability of all-electric homes varies by region. In the Northeast, the high cost of heating during colder months has often limited the efficacy of using heat pumps and other all-electric equipment.<sup>152</sup> This is demonstrated by the relatively low number of households within the region utilizing heat pumps. Of the 21.0 million housing units within the Northeast, only 2.8 million (13.3%) used electricity as their main heating fuel, and only 0.6 million (3.0%) of those used heat pumps<sup>153</sup>. Electric water heaters are similarly uncommon in

<sup>150</sup> ENERGY STAR, *Energy Star Residential New Construction Program Requirements – Nassau, NY*. Available at: [https://www.energystar.gov/newhomes/homes\\_prog\\_reqs/new\\_york/nassau](https://www.energystar.gov/newhomes/homes_prog_reqs/new_york/nassau). Accessed September 2019.

<sup>151</sup> U.S. Department of Energy. *Building Energy Codes Program – New York*. Available at: <https://www.energycodes.gov/adoption/states/new-york>. Accessed October 2019.

<sup>152</sup> U.S. Energy Information Administration. *One in four U.S. homes is all electric*. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=39293>. Accessed September 2019.

<sup>153</sup> U.S. Energy Information Administration. *Residential Energy Consumption Survey (RECs)*. Available at: <https://www.eia.gov/consumption/residential/data/2015/hc/php/hc6.7.php>. Accessed October 2019.



the region, as only 6.8 million (32.4%) of households use electric systems, as opposed to the 10.6 million (50.5%) that use natural gas-powered systems. As demonstrated, utilizing all-electric systems remains an uncommon practice within the northeast region. Further, although all-electric homes eliminate the need for natural gas or other fossil fuels, they subsequently have a greater electricity demand. However, although all-electric heat pumps have historically been inefficient in this region, current technology and incentive programs have made it more feasible for the public to use.

As was done for the proposed action (i.e., assuming the use of natural gas), annual energy consumptions were estimated for this alternative using the "Residential Prototype Building Models" created by the USDOE.<sup>154</sup> Houses were again assumed to be built to IECC 2012 building code or newer and have un-heated basements, although two different heating scenarios were evaluated: electric resistance and heat pump. An all-electric alternative using electric resistance heating would consume 7,299 MWh of electricity per year and produce 3,927 metric tons per year of CO<sub>2</sub>e. As compared to the proposed action, the electric resistance alternative would generate an additional 1,265 metric tons per year of CO<sub>2</sub>e. An all-electric alternative using heat pump heating would consume 5,722 MWh of electricity per year and produce 3,078 metric tons per year of CO<sub>2</sub>e. As compared to the proposed action, the heat pump alternative would generate an additional 416 metric tons per year of CO<sub>2</sub>e.

A comparison of these and other alternative energy options is provided in Table 33 and Table 34.

### **Fuel Oil**

Though not included in the Final Scope, another alternative would be the use of fuel oil. Using the estimated sizes of all the residences, annual energy consumptions were estimated for this alternative using the "Residential Prototype Building Models" created by the USDOE.<sup>155</sup> Houses were assumed to be built to IECC 2012 building code or newer, be heated by fuel oil and have un-heated basements. The resulting project would consume 3,099 MWh of electricity per year and 18,659 MMBtu of fuel oil, generating 3,062 metric tons per year of CO<sub>2</sub>e. As compared to the proposed action, the fuel oil alternative would generate an additional 437 metric tons per year of CO<sub>2</sub>e.

### **Net-Zero Carbon Homes**

A net-zero emission (zero carbon) building is a "highly energy efficient building that produces on-site, or procures, enough carbon-free renewable energy to meet building operations energy consumption annually."<sup>156</sup> Zero carbon buildings employ efficient building design strategies, supply much of their energy from on-site renewable systems (i.e. roof-mounted photovoltaic solar panels), and meet their remaining energy needs through renewably sourced power (i.e. wind, solar). As stated above, New York State is in the process

<sup>154</sup> United States Department of Energy. *Building Energy Codes Program*. Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed August 2019.

<sup>155</sup> United States Department of Energy. *Building Energy Codes Program*. Available at: [https://www.energycodes.gov/development/residential/iecc\\_models](https://www.energycodes.gov/development/residential/iecc_models). Accessed August 2019.

<sup>156</sup> Architecture2030. *Zero-Net-Carbon: A New Definition*. Available at: <https://architecture2030.org/zero-net-carbon-a-new-definition/>. Accessed September 2019.

of implementing strategies and policies to make the transition to 100 percent renewably sourced energy, yet the large majority of energy continues to be produced via conventional sources (i.e. fossil fuel based). If constructed using zero carbon standards (i.e. highly efficient design and inclusion of on-site renewable energy systems), the proposed residences would fail to meet true zero carbon standards due to their use of traditionally sourced energy for any portion of the energy demand not generated on-site. Until the local energy provider makes the transition to fully renewable energy, a true zero carbon house cannot likely be achieved.

### **Alternative Technologies**

In addition to the construction standards described above, alternative technologies can be incorporated to similarly reduce energy demands and the resulting GHG emissions. These technologies mostly pertain to the heating and cooling of the residences, such as electric and geothermal heating and cooling options. Electric heating systems are those employed in all-electric homes. These systems use electricity to heat homes as opposed to natural gas or other fossil fuels, as was described above.

### **Geothermal Systems**

Geothermal systems use the earth's ground temperature for cooling and heating and can also be used for water heating. Tubing is buried underground or submerged in a body of water and an antifreeze solution is circulated through the loop. Depth of subterranean tubing varies dependent on the type of system. Horizontal systems are buried between four-to six-feet deep, but generally require a sufficient amount of surface area; vertical systems are buried between 100 to 400 feet deep, but require much less surface area. Dependent on the season (i.e., heating or cooling) heat is either absorbed or relinquished to the surrounding soil or water. The antifreeze is then passed through a heat exchanger, transferring the heat to the heat pump and warming or cooling the air. Because these systems circulate coolant through the ground, their use may be prohibited by local regulations due to concerns of subterranean coolant leaks.<sup>157</sup> However, none of the three municipalities have adopted any regulations limiting the use of geothermal systems.

As described above, the installation of geothermal systems involves the trenching of tubing below-ground. The feasibility of doing so is limited by various site conditions, including the area of land available, subterranean conditions (i.e., type of soil, soil moisture content, depth to water table), and the risk of flooding.<sup>158</sup> Areas with a depth to water table greater than 72 inches are classified as "low suitability" for installation of geothermal heat pumps, as are areas at risk for flooding. Section 3.1.1 described that the depth to water table at the subject property ranges from 0-to-15-feet bgs; additionally, as discussed in Section 3.2.1, much of the subject property lies within the 100-year floodplain. Accordingly, much of the subject property would be classified as having "low suitability" for installation of geothermal

<sup>157</sup> Energy.gov, *Geothermal Heat Pumps*. Available at: <https://www.energy.gov/energysaver/heat-and-cool/heat-pump-systems/geothermal-heat-pumps>. Accessed September 2019.

<sup>158</sup> USDA. *Soil Suitability for Closed-Loop Horizontal Residential Geothermal Heat Pumps*. Available at: [https://www.nrcs.usda.gov/wps/PA\\_NRCSConsumption/download?cid=nrcseprd1303052&ext=pdf](https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcseprd1303052&ext=pdf). Accessed October 2019.

systems. Still, the potential impacts of a geothermal alternative were evaluated, as described below.

Geothermal systems are powered by electricity, thereby eliminating the need for natural gas; as with all-electric homes, these systems consequently have a greater electricity demand. Based on efficiency factors and fuel consumption estimates for new construction,<sup>159</sup> a geothermal alternative would conservatively be expected to consume 5,090 MWh of electricity per year and produce 2,738 metric tons of CO<sub>2</sub>e per year. As compared to the proposed action, the geothermal alternative would generate an additional 76 metric tons per year of CO<sub>2</sub>e.

**Table 33 Expected Energy Consumption and Costs Based on Rates of Local Provider**

Energy Source / Construction Design	Energy Consumption <sup>8, 9</sup>	Capital Costs per Installation <sup>5</sup>	Energy Costs	Total CO <sub>2</sub> e Production (metric tons/year) <sup>8, 9, 10</sup>
<b>Proposed Action</b>				
Electricity:	3,099 MWh		\$291,256± <sup>1</sup>	2,662
Natural Gas:	18,659 MMBtu	\$8,165 <sup>6</sup>	\$75,009± <sup>2</sup>	
<b>All-Electric</b> (Resistance Heating)	7,299 MWh	N/A	\$685,960± <sup>1</sup>	3,927
<b>All-Electric</b> (Heat Pump)	5,722 MWh	\$18,111 <sup>7</sup>	\$537,754± <sup>1</sup>	3,078
<b>All-Electric</b> (Geothermal)	5,090 MWh <sup>4</sup>	\$35,660 <sup>7</sup>	\$478,358± <sup>1</sup>	2,738
<b>Fuel Oil</b>				
Electricity:	3,099 MWh	\$18,111 <sup>6</sup>	\$291,256± <sup>1</sup>	3,062
Fuel Oil:	18,659 MMBtu		\$452,294± <sup>3</sup>	

1. Cost of electricity based on PSEG Long Island's Power Supply Charge rate for February, 2020 of \$0.093984/kWh (\$93.98±/MWh). Rate does not include Delivery & Service charge, or any other charges.
2. Cost of natural gas based on National Grid Long Island's Gas Supply Charge rate for February, 2020 of \$0.401535/therm (\$4.02/MMBtu). Rate does not include Gas Delivery Charge, or any other charges.
3. Cost of fuel oil based upon NYSERDA average Long Island fuel oil cost for February, 2020 of \$24.24/MMBtu. Rate does not include any associated delivery or services charges.
4. Based on efficiency factors and fuel consumption estimates for new construction with ground-source heat pumps in the New York City/Long Island/Hudson Valley region.
5. Values assume reasonable "typical" installation sizes not specific to the proposed action; assumed site references size was 4 tons of thermal capacity.
6. Assumes the installation of a central air conditioning system.
7. Value does not account for any potential available tax (or other) incentives.
8. NYSERDA. *New Efficiency: New York*, Analysis of Residential Heat Pump Potential and Economics. Report Number 18-44. 2019.
9. USDOE. *Residential Prototype Models*, NY JFK, Single Family, IECC. 2012.
10. USEPA. *Emission Factors for Greenhouse Gas Inventories*. 2018.

<sup>159</sup> New York State Energy Research and Development Authority (NYSERDA). *New Efficiency: New York*. Available at: <https://www.nyserdan.ny.gov/About/Publications/New-Efficiency>. Accessed February 2020.

**Table 34 Expected Energy Consumption and Costs Based on Average Regional Rates**

Energy Source / Construction Design	Energy Consumption by Fuel Source <sup>6, 7</sup>	Total Energy Consumption (MMBtu)	Capital Costs per Installation <sup>3</sup>	Energy Costs <sup>1</sup>	2016 Total CO <sub>2</sub> e Production (metric tons/year) <sup>6, 7, 8</sup>	2030 Total CO <sub>2</sub> e Production (metric tons/year) <sup>9, 10, 11</sup>
<b>Proposed Action</b>						
Electricity:	3,099 MWh	29,232	\$8,165 <sup>4</sup>	\$557,820±	2,662	1,975
Natural Gas:	18,659 MMBtu			\$224,654±		
<b>All-Electric</b>						
(Resistance Heating)	7,299 MWh	24,905	N/A	\$1,313,820±	3,927	2,309
<b>All-Electric</b>						
(Air-Source Heat Pump)	5,722 MWh	19,525	\$18,111 <sup>5</sup>	\$1,029,960±	3,078	1,810
<b>All-Electric</b>						
(Ground-Source Heat Pump)	5,090 MWh <sup>2</sup>	17,368	\$35,660 <sup>5</sup>	\$916,200±	2,738	1,610
<b>Fuel Oil</b>						
Electricity:	3,099 MWh	29,232	\$18,111 <sup>4</sup>	\$557,820±	3,062	2,375
Fuel Oil:	18,659 MMBtu			\$459,011±		

1. Energy costs based upon New York State Energy Research and Development Authority (NYSERDA) average energy rates for November, 2019 (<https://www.nysERDA.ny.gov/Researchers-and-Policymakers/Energy-Prices>), as follows: \$0.18/kWh (\$180.00/MWh) of electricity; \$12.48/Mcf (\$12.04/MMBtu) of natural gas; and \$24.60/MMBtu of fuel oil.
2. Based on efficiency factors and fuel consumption estimates for new construction with ground-source heat pumps in the New York City/Long Island/Hudson Valley region.
3. Values assume reasonable "typical" installation sizes not specific to the proposed action; assumed site references size was 4 tons of thermal capacity.
4. Assumes the installation of a central air conditioning system.
5. Value does not account for any potential available tax (or other) incentives.
6. NYSERDA. New Efficiency: New York, Analysis of Residential Heat Pump Potential and Economics. Report Number 18-44. 2019.
7. USDOE. Residential Prototype Models, NY JFK, Single Family, IECC. 2012.
8. USEPA. Emission Factors for Greenhouse Gas Inventories. 2018.
9. Assumes electricity output emission rates decline in accordance with New York State's Clean Energy Standard (<https://www.nysERDA.ny.gov/All-Programs/Programs/Clean-Energy-Standard>) and constant emission rates for natural gas and fuel oil per USEPA's Emissions Factors for Greenhouse Gas Inventories (2018).
10. IPCC. Fifth Assessment Report (AR5) – 100 Year Global Warming Potential Values. 2014.
11. USEPA. eGrid Summary Tables 2016 – Subregion Output Emission Rates for NYLI. 2016.

It is noted that the foregoing tables indicate that estimated GHG emissions for the proposed action would be lower than those for the electric alternatives analyzed. This is due to the fact that the natural gas used for heating fuel in the proposed homes would produce GHG emissions at a lower rate than currently occurs for the electricity generated by power plants in the region (i.e., the NPCC Long Island eGRID subregion). As regional electrical power

generation shifts in the future to cleaner forms of energy, including from renewable sources, this GHG emissions comparison would become more favorable for the electric alternatives.

### ***Solar Photovoltaics and Solar Heating***

Solar photovoltaic panels offer another alternative technological option for reducing a building's energy demand, and solar heating offers an alternative to traditional water heating methods. These systems generate renewable energy that can be used to power a house, including heating and cooling systems. Use of photovoltaic panels can offset a building's need for externally sourced power and thereby reduce GHG emissions associated with production of the same.

Photovoltaic panels are typically installed upon the roof of a house, though certain criteria must be met for a roof to be suitable. For example, ideal conditions would include a certain minimum unobstructed roof space; roofs should be slanted to optimize sun exposure; and the house should be oriented strategically.<sup>160</sup> Though photovoltaic panels can be installed even if each of these criteria are not met, the practicality of the panels may decrease accordingly. As the design and orientation of the proposed residences is not yet known, it cannot yet be determined if the roofs of the same would be suitable for using solar photovoltaic panels. However, it is expected that future homes will be constructed as to not preclude the future use of solar photovoltaic panels. Therefore, it is expected that future homeowners will have the ability install photovoltaic panels should they so choose.

Should homeowners choose to install solar arrays, they can take advantage of federal and state incentive programs that help to defer the costs of the equipment. The NY-Sun Solar PV program provides an incentive to residents based on the size of their array. Homeowners may be eligible to receive a state loan to cover the costs of their solar array. Net metering is available to reduce a homeowner's utility bill from the electric utility based on the amount of energy their solar panels produce. Finally, the state offers tax incentives up to 25 percent of the cost of the system. Details on various federal and state incentive programs are provided in Section 3.8.

As the use of solar photovoltaic panels produces energy as opposed to consuming it, a comparison between the anticipated energy consumption of the proposed action and other energy alternatives is not feasible. However, an assessment of the system requirements needed to offset the energy use of the proposed action, and those energy alternatives identified above, can be made. Table 35, below, provides an overview of the amount of energy needed to achieve a net-zero energy demand, and the photovoltaic system requirements of the same. It should be noted that the system sizes and costs described below assume the proposed residences would have adequate roof area, pitch, and exposure to meet the required demand.

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<sup>160</sup> Coastal Windows & Exteriors. *Does your Roof Meet the Requirements for Solar Panels?*. Available at: <https://mycoastalwindows.com/does-your-roof-meet-the-requirements-for-solar-panels/>. Accessed September 2019.

**Table 35 Photovoltaic System Requirements to Achieve Net-Zero Energy**

Energy Source / Construction Design	Site Energy from PV <sup>1</sup>	System Size <sup>2</sup>	Capital Costs per Installation <sup>3</sup>	Total CO <sub>2</sub> e Production
<b>Proposed Action</b> (Electricity & Natural Gas)	4,970 MWh	4,111 kW	\$44,702	N/A <sup>4</sup>
<b>All-Electric</b> (Heat Pump)	5,722 MWh	4,733 kW	\$51,482	N/A <sup>4</sup>
<b>All-Electric</b> (Geothermal)	5,090 MWh	4,211 kW	\$45,804	N/A <sup>4</sup>
<b>Fuel Oil</b> (Electricity & Fuel Oil)	4,912 MWh	4,063 kW	\$44,194	N/A <sup>4</sup>

1. As described in Tables 33 and 34, above.
2. Assumes a capacity factor size of 13.8%.
3. Assumes a cost per watt of \$3.10 (EnergySage. How much do solar panels cost in the U.S. in 2020? Available from: <https://news.energysage.com/how-much-does-the-average-solar-panel-installation-cost-in-the-u-s/>. Accessed February 2020).
4. This model assumes the solar photovoltaic system would operate at net zero energy. Therefore, emissions would be offset, and the project would not generate CO<sub>2</sub>e.

Following construction of the future residences, the alternative technologies described above will be available to future homeowners to install, to the extent permitted by local regulations. Similarly, since the proposed residences within the Villages of Lawrence and Woodsburgh are to be constructed as the lots are sold, future owners of these lots will also have the option to incorporate alternative construction standards prior to finalizing plans and beginning construction. Ultimately, it will be the future homeowner's decision whether to incorporate any alternative technologies or construction standards.

### Construction

Construction activities have the potential to emit GHG due to engine emissions from on-site construction equipment. A discussion of construction related climate change impacts is included in Section 3.13.

### Conclusion

*The SEQR Handbook* indicates that a proposed action's impact on climate change be considered primarily in terms of sea level rise, flooding, and greenhouse gas emissions.

Though parts of the subject property exist within the 100-year floodplain, residences in these portions of the subject property would be constructed in accordance with all pertinent floodplain standards (i.e., lowest floor elevations at least 2-feet above the corresponding BFE); under these development standards, the proposed residences are not anticipated to be significantly impacted by flooding. Relatedly, the proposed action is not anticipated to be adversely impacted by sea level rise, as all proposed new roadways and residences would remain above the high-medium projected sea levels for the year 2100.



The proposed action would not significantly contribute to greenhouse gas emissions. The GHG emissions generated by the proposed residences, being powered by natural gas and electricity, would represent less than 0.01 percent of GHG emissions generated throughout Long Island. Though alternative heating technologies exist (i.e., oil furnaces, all electric homes), use of these alternative technologies would result in higher GHG emissions. Should they so choose, future homeowners would have the opportunity to implement various measures (i.e., solar photovoltaic cells, ENERGY STAR® measures) to reduce their energy demand and subsequent GHG emissions.

Based on the above, the proposed action is not anticipated to have a significant adverse impact on, nor be significantly impacted by, climate change.

### **3.12.3 Proposed Mitigation Measures**

The proposed action is not expected to significantly contribute to climate change, nor is it expected to be adversely impacted by the effects of the same. Accordingly, no climate change mitigation measures are required.

### **3.13 Construction Impacts**

The Final Scope requires that the DEIS include the following analyses in its evaluation of potentially significant adverse impacts from Construction:

- › An evaluation of issues related to construction traffic, air quality and noise, especially as they relate to potential impacts to Kulanu Academy, Hebrew Academy of the Five Towns and Rockaway, Gesher Early Childhood Center, and Gan Chamesh Ed Day Care Center; and
- › Identify the need to mitigation surface and/or subsurface contaminations, and the means to address these issues if necessary.

A discussion of the proposed construction activities, potentially significant adverse environmental impacts, and proposed mitigation measures is provided in Sections 3.13.1 through 3.13.2 below.

This section of the DEIS discusses potential construction-related impacts of the proposed action. The issues that are addressed include construction traffic, air quality, and noise (including potential construction-related noise impacts to the Kulanu Academy, Hebrew Academy of the Five Towns and Rockaway, Gesher Early Childhood Center and Gan Chamesh Ed Day Care Center) as well as surface and subsurface conditions during construction. Relevant mitigation measures are also discussed herein.

#### **3.13.1 Construction Activities**

##### **Traffic**

A Traffic Impact Study (TIS) was performed to evaluate traffic impacts of the proposed action, including construction-related traffic impacts (see TIS in Appendix C of this DEIS, also see Section 3.7, above). Information provided by the developers for the proposed Willow View Estates indicates an anticipated construction period of six-to-seven years. This includes demolition of existing structures on the site, the rough grading work required to bring the site up to the appropriate elevation levels required in the site flood zone, and the construction of the proposed homes. The developer has indicated that the demolition phase will occur over a period of 12-to-18 months, during which time subdivision infrastructure will also be established (utilities, roadways, etc.). The construction of the improved site will occur over the balance of the six to seven years (60-to-66 months) with areas of the site being raised to final grade as they are improved. It is anticipated that the construction of the residents will occur at rate of approximately 50 homes each year. The specific anticipated sequence of construction is as follows:

- › Installation of erosion control devices, including silt fence and anti-tracking pad for construction entrance;
- › Demolition and removal of remaining structures/vegetation and underground infrastructure not utilized in new design;

- › Earthwork – rough grading of site (excavation and fill operations. Strip topsoil and stockpile in designated areas where applicable), rough grade of roadways;
- › Installation of building foundations/basements;
- › Building constructions (framing, siding, roofing, etc.);
- › Utility connections to buildings;
- › Fine grading, roadway finishing;
- › Landscaping;
- › Building interior finishing and
- › Removal of erosion control devices.

Construction traffic associated with these operations will include trucks for performing operations on the site as well as the delivery and removal of materials as well as worker's vehicles and tradesman vans. The number and types of construction vehicles will vary considerably depending on the phase of construction and the particular operations underway at any given time. The site's location on Broadway is key in consideration of construction traffic, particularly truck traffic.

All construction vehicles will arrive and depart via Broadway, a Nassau County roadway. A temporary construction entrance will be established on Broadway in a location determined through consultation with the NCDPW and the Town of Hempstead. The developer of Willow View Estates will dictate the routes used by construction associated traffic; in particular trucks and large construction equipment, to minimize any impacts to traffic conditions on the roadways in the area. All large truck traffic will be routed to arrive and depart the site via major roadways to the maximum degree possible. Trucks will arrive at the site via Broadway by the Nassau Expressway (NYS Route 878) or Rockaway Turnpike. Local suppliers of construction material may arrive from other roadways to the site based on their origin. A large construction vehicle routing plan will be in place to ensure that no large trucks will utilize the local roadway system, minimizing any impacts in the area.

Parking and storage of all construction worker vehicles and construction equipment will be maintained on site. No parking of vehicles or equipment will occur on the surrounding roadways. Laydown areas for any materials that will be stockpiled on the site will be provided on site.

While it is difficult to determine the specific traffic levels that will be generated by the construction activities on the site, it can be stated that they will not approach levels of traffic that will occur once the site is fully constructed and occupied, as evaluated in this study. The number of construction workers will not approach those that would result in peak period traffic levels that are projected to exist once the development is complete. Material deliveries, removal of debris and other trucking operations will take place over the course of an entire day, as necessary, thereby reducing any impact on adjacent roadways.

It is noted that the site requires a significant amount of fill material to raise the site to required grade in accordance with the requirements of the flood zone. This material is

estimated at 250,000 CY. This material will be brought to the site over the course of the 5-year build out period, reducing the frequency of truck trips bringing the material to the site. Assuming 25 CY of material per truck and 200 working days per year yields an average of 10 trucks laden with fill material to the site per day. Over an 8-hour day, this equates to an average of less than two fill truck deliveries to the site per hour. While it is anticipated that these fill material deliveries may originate from more than one location, these deliveries will be controlled to arrive via major roadways and will not use local secondary streets. Likely arrival routes to Broadway and then the site include the Nassau Expressway and Rockaway Turnpike as dictated in a Construction Management Plan to be developed for the project as described below.

All construction activities will be overseen by a Construction Manager (CM) and dictated by a Construction Management Plan developed in coordination with the Town of Hempstead, the Village of Lawrence and the Village of Woodsburgh. The CM will facilitate coordination among the appropriate governmental agencies/departments and interested parties to minimize potential construction impacts in the surrounding area. It is also anticipated that the Town of Hempstead will provide independent oversight on behalf of the public. While the Applicants will strive to ensure that impacts as a result of demolition and construction are minimized, the public can express any issues during construction to the Town, which would then notify the Applicant; and, if necessary, the Department would oversee the implementation of any corrective action.

### **Air Quality**

Construction activities in connection with the proposed development have the potential to emit GHG and affect air quality because of engine emissions from on-site construction equipment and dust-generating activities such as earth movement, vehicles traveling on unpaved surfaces, and loading/unloading operations. In general, much of the heavy equipment used in construction has diesel-powered engines, which generally produce relatively high levels of nitrogen oxides, GHG emissions and fine particulate matter. Gasoline engines (as found in most cars and trucks) produce relatively high levels of carbon monoxide as well as GHG emissions. Construction activities also generate fugitive dust emissions as a result of demolition, excavation, grading, and loading/unloading materials into trucks. To ensure that the construction of future developments result in the lowest feasible diesel particulate and dust related emissions, the following list of measures is recommended for implementation of the proposed action:

- › Fugitive dust control plans – In compliance with the New York State laws regulating fugitive and visible emissions, contractors should be required to ensure that all trucks carrying loose material use water as a dust suppression measure, that wheel-washing stations be established for all trucks exiting the construction site, that trucks hauling loose material be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the site, that streets adjacent to the site be cleaned as frequently as needed by the construction contractor, and that water sprays be used for all transfer of loose material to ensure that materials are dampened as necessary to avoid the suspension of dust into the air. As discussed in Section 3.1.2, erosion and sedimentation controls would be implemented as part of an approved SWPPP which are protective of

air quality impacts. See Section 3.13.2, below, for a list of specific measures to be implemented. Clean Fuel – Ultra Low Sulfur Diesel (ULSD) would be used exclusively for all diesel engines related to construction activities under the proposed action. This is a federal requirement since 2010, which mandates the use of tailpipe reduction technologies that reduce diesel particulate matter (DPM) and SO<sub>x</sub> emissions.

- › Diesel Equipment Reduction – Hoists and small equipment such as lifts, compressors, welders, and pumps would be expected to use electric engines to the extent feasible based on power availability within the site. This is a common practice that has been experiencing wider use as technology improves. The use of diesel particulate filters (DPF) in Tier 3 diesel engines for construction equipment (model year 2000-2008 or newer) achieves the same emission reductions as a newer Tier 4 engine. Given the timeframe of the developments to be constructed, equipment meeting the more restrictive Tier 4 engine standards (model year 2008–2015 or newer) would be expected to be in wide use and comprise the majority of contractors' fleets.
- › Minimizing pollution from truck waiting areas – The Construction Manager for each development should establish truck-staging zones for diesel-powered vehicles that are waiting to load or unload material at the contract area. Such zones should be located where the diesel emissions from the trucks would have minimum impact on abutting properties and the general public.
- › Restrictions on Vehicle Idling – Contractors for each development should comply with the prevailing state law restricting unnecessary idling. Specifically, idling of delivery and/or dump trucks, or other diesel-powered equipment would not be permitted during periods of non-active use, and will be limited to five minutes in accordance with the New York Codes, Rules and Regulations, Subpart 217-3.<sup>161</sup>

As explained above, the Applicants will work with the Town and Villages to develop a Construction Management Plan. The Construction Management Plan would require the construction contractors to adhere to all applicable regulations regarding emission control of construction vehicles and dust controls proposed in this document (see above). This would include, but not be limited to, maintenance of all motor vehicles, machinery, and equipment associated with construction activities and the proper fitting of equipment with mufflers or other regulatory-required emissions control devices. Additionally, construction specifications will require that all diesel equipment used on-site will be fitted with their original manufacturer's engine emission controls such as oxidation catalysts or diesel particulate filters. Proper maintenance and emissions control measures of equipment will reduce potential GHG emissions associated with the construction of the proposed development.

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<sup>161</sup> New York Codes, Rules and Regulations, Subpart 217-3, "Idling Prohibition for Heavy Duty Vehicles".

## Noise

A comprehensive analysis of potential construction-related noise impacts has been performed for the proposed action (see Section 3.11). The potential for noise impacts due to construction activities would depend upon the phase of construction, the type, amount and location of construction equipment, and the amount of time such equipment operates over a workday.

As discussed above, it is estimated that demolition of existing on-site facilities and installation of subdivision infrastructure (i.e., utilities, roadways, etc.) would occur over a period of 12-to-18 months, while housing lot development is expected to occur over a period of 60-to-66 months. During this time, construction-related noise may temporarily affect the surrounding community; these impacts may result from both on-site activities and construction truck traffic on area roadways. The loudest phase of noise is the earthwork phase which included movement of fill by truck, excavators and back hoes to move soil around the site, grading and a vibratory compactor (dual drum) to compact the soil.

Construction on the subject property would comply with the requirements of the respective Municipal Code within which any given activity would occur. Any activities that span between two or more municipalities would be scheduled in accordance with the most stringent of the municipal noise ordinances. (e.g., shorter workday or prohibition on weekend work).

Table 29, above, describes the construction equipment that is likely to be used during the demolition and building phases of the proposed action. Although specific construction equipment and methods have not yet been determined for the project, the equipment identified in Table 29 is representative of typical construction methods for these types of projects. This table presents the maximum sound level at 50 feet from each piece of equipment, the utilization factor (which is a measure of how often the equipment is operating throughout the workday), and the construction phases in which the equipment is included. As indicated in the table, the equivalent sound level (Leq), which includes contributions from all construction equipment, ranges from 85 to 86 dBA at 50 feet.

Table 30 and Figure 21, above, present the results of the construction noise assessment at 95 receptor locations in the study area. The table presents the existing measured sound levels, predicted construction noise levels, and the results of the assessment relative to the NYSDEC guidelines. Construction noise mitigation or best management practices are warranted at locations where construction noise levels exceed the greater of 10 dBA above ambient levels or 65 dBA (Leq).

As indicated by



Table 30 and Figure 21, above, construction including trucking operations and stationary equipment would generate noise levels ranging from 32 to 49 dBA (Leq) at receptor locations in the study area. Future noise levels (including existing and construction source), would increase up to 0.7 dBA at all receptors. The increases in noise would be primarily due to the stationary earthwork equipment. There would be up to 10 daily truck trips, however, since the truck passbys are relatively brief events lasting only approximately 10 seconds, the overall noise exposure from the trucks is substantially less than the stationary equipment. The single-family residential development that adjoins the subject property or face the subject property along its street frontages are the closest receptors that could be affected by construction-related noise but will not experience a 10 dBA increase from existing conditions.

The Final Scope specified that particular attention should be paid to the potential for construction-related noise impacts on the Gan Chamesh Ed Day Care Center. However, this facility is located approximately 500 feet to the north of the subject property, and due to the rapid attenuation of sound with distance, any impacts at that location are not expected to be significant and would be mitigated by the implementation of standard construction BMPs, as discussed below.

The Gan Chamesh Ed Day Care Center is located approximately 500 feet to the north of the subject property, and due to the rapid attenuation of sound with distance, any impacts at that location are not expected to be significant and would be mitigated by the implementation of standard construction BMPs, as discussed in Section 3.11.3 (and below).

The Hebrew Academy of the Five Towns and Rockaway is located approximately 600 feet to the west of the subject property and it is anticipated that impacts at this location would not be significant and would be mitigated as discussed below.

The Kulanu Academy, located approximately 875 feet to the west of the subject property, would not be significantly impacted by construction related noise and would be mitigated by BMP as outlined below.

With respect to the Gesher Early Childhood Center, as this education center is located approximately 1,950 feet north of the subject property, significantly further from the subject property (and the associated construction noise sources), and no significant construction related noise impacts are expected at locations nearer to the subject property, no such impacts upon the Gesher facility would be expected to result from implementation of the proposed development.

As the noise analysis shows that no sensitive receptor locations will experience a 10 dBA increase over existing ambient levels, there would be no significant adverse construction noise impact. Overall, construction-related noise impacts would be temporary, would be minimized to the extent practicable by conforming with the applicable municipal noise ordinances, being scheduled not to occur during overnight sensitive hours, and by implementing BMPs to reduce source noise levels through the implementation of BMPs as presented in Section 3.11.3 (and below).

### **Subsurface Conditions**

Based on the information gathered as a result of the Phase I ESA process, no RECs, or CRECs were identified in connection with the subject property. Roux Associates identified two following HRECs in connection with the site. Two USTs were removed from the site in 1990 and 2011, respectively and all spills associated with these USTs have been closed. Several spills were identified for the site and all reported spills have been closed. As all spills associated with the site have been resolved and closed, no significant adverse impacts are anticipated with respect to subsurface, groundwater and environmental conditions.

In addition to the identified HREC's the ESA also notes the site has been subject to the extensive use of fertilizers, pesticides, and herbicides, and as such soil characterization is necessary as soil excavation will be undertaken during site development activities. The overall proposed action, as part of the subdivision application, would be subject to review by the NCDH and is expected to require comprehensive soil sampling. The Applicants will coordinate with NCDH for the development of an investigation work plan, to undertake required sampling and to develop any necessary remediation/removal and soil management plans prior to site development. Subdivision approval will not be obtained until all NCDH requirements are satisfied. A soil management plan would be developed and implemented prior to the commencement of any construction activity.

### **3.13.2 Proposed Mitigation Measures**

#### **Air Quality**

The proposed project would be subject to all NYSDEC regulations that pertain to construction activities and the protection of air quality. The proposed development would combine emission reduction measures that are mandated by law and are common practice in large-scale New York State construction projects. Furthermore, the proposed development is subject to a SWPPP which contains a detailed erosion and sediment control plan identifying the specific measures to be implemented. The erosion and sediment control plan is detailed on Sheets C-5.1 and C-5.2 in Appendix B.

The Contractor would be responsible for protective measures around the construction and demolition work to protect pedestrians and prevent dust and debris from leaving the site and entering the surrounding community. Appropriate means are proposed to be used to mitigate fugitive dust, as follows:

- › A dust control program would be put into effect immediately before any work is begun and, temporary irrigation systems or a water truck would be provided to water down the construction sites on a regular basis.
- › Water trucks would be mobilized to water down temporary roadways and large areas of site clearing.
- › Highly-traveled unpaved areas and perimeter areas may require a sprayed-on adhesive consisting of polymer emulsion products (emulsifiers) for controlling fugitive dust generated by truck traffic on unpaved areas.
- › Street cleaning trucks would be employed to wash down adjacent streets on a regular basis.

- › Construction areas would be completely enclosed with fencing to reduce dust from leaving the construction area
- › Erosion and sediment control measures would be implemented prior to demolition and construction and maintained on a continuing basis during construction and upon permanent development (see Sheets C-5.1 and C-5.2 in Appendix B).
- › Final grading and stabilization would occur as soon as possible, so as not to leave soil exposed for a long duration.
- › Graded and stripped areas and stockpiles, while kept to a minimum, would be stabilized through the use of temporary seeding or salt hay as required. Seed mixtures would be in accordance with the National Resources Conservation Service recommendations.
- › Main construction access points are to be furnished with a truck tire and vehicle wheel wash so that debris will not be tracked off the property onto public roads.

### **Noise**

As discussed above, construction noise levels would not increase existing ambient conditions by more than 10 dBA and there would not be significant adverse noise impacts. Since there would be no significant adverse noise impacts, BMPs are not required. Nevertheless, contractors should consider using best management practices, as safe, feasible, and reasonable, to minimize potential construction noise. In efforts to reduce potential noise impacts during construction, noise reduction measures would include the following:

- › Construction activities will be limited to non-sensitive time periods as defined by each local municipal ordinance. Any activities that span between two or more municipalities would be scheduled in accordance with the most stringent of the municipal noise ordinances. (e.g., shorter workday or prohibition on weekend work).
- › Supplemental stationary construction equipment, such as generators or air compressors, will be located as far as possible from noise-sensitive sites.
- › Of the various types of construction equipment, diesel engines can be the most significant noise source. The contractor will ensure that all equipment is operating properly and is fitted with the appropriate noise-reducing features such as exhaust mufflers and engine compartment shields.
- › Most wheeled and tracked construction equipment is required to have back-up alarms for safety purposes. Due to their tonal character, these alarms are often a significant noise concern. Special back-up alarms may be implemented including ambient-adjusted alarms which only sound five decibels higher than ambient conditions or "quacker" which have a less tonal character. Flagging may also be used to eliminate the need for back-up alarms.
- › Mitigation may include re-routing truck routes and minimizing idling times.
- › Acoustic enclosures may be used to reduce emission from small construction equipment, such as generators.

- › Temporary noise barriers or noise blankets can be installed between construction equipment and sensitive receptors to provide significant noise reduction (typically 5 to 15 decibels).
- › As more detailed information on the construction equipment and methods become available as the project design advances, the contractor shall prepare a noise control plan to further evaluate the potential for construction noise impact and identify specific mitigation measures that will be implemented.
- › A key aspect to minimizing the effects of construction noise is maintain good communication with the nearby residences and informing them of the schedule of construction activities and the approaches that will be taken to minimize construction noise.

# 4

## Reasonable Alternatives to be Considered

This section of the DEIS contains an analysis of reasonable alternatives to the proposed action. Pursuant to the Final Scope, the following alternatives were analyzed:

- › Alternative 1: No Action Alternative
- › Alternative 2: 284-Lot Cluster Configuration Alternative
- › Alternative 3: Reduced-density Subdivision with Nine-hole Golf Course

A description of each alternative is provided herein. A comparison of the quantifiable impacts of each alternative to the proposed action is presented in Table 36, below:

**Table 36 Comparison of Alternatives**

PARAMETER	PROPOSED ACTION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: 284-LOT CLUSTER CONGIFURATION	ALTERNATIVE 3: REDUCED-DENSITY SUBDIVISION, WITH NINE-HOLE GOLF COURSE ALTERNATIVE
Meets Applicant's Objectives	Yes	No	Yes	No
Type of Development	Subdivided Single-family Residential Lots	Private Golf Club	Subdivided Single-family Residential Lots	Subdivided Single-family Residential Lots with Nine-hole Golf Course
Number of Residential Units	284	0	284	258
Population (persons)	910	0	910	829
School-Aged Children	227	0	227	211
Water Usage (gallons)	Potable: 85,200± Irrigation: 8,520± Total: 93,720±	Potable: 10,903± Irrigation: 213,987± Total: 224,890±	Potable: 85,200± Irrigation: 8,520± Total: 93,720±	Potable: 77,400± Irrigation: 7,740± Total: 85,140±
Sewage Generation (gallons)	85,200±	10,903±	85,200±	77,400±
Solid Waste (tons/month)	48.4±	56.0±	48.4±	44.1±
Traffic Generation				
AM Peak Hour	211	90	211	208
PM Peak Hour	282	55	282	282
Saturday Peak Hour	133		133	148
Sunday Peak Hour	265	75	265	253



## 4.1 No-Action

The no-action alternative would result in the closure of the Woodmere Club without allowing the Applicants to pursue development under existing zoning. According to *The Draft SEQR Handbook*,<sup>162</sup>

*The 'no action' alternative must always be discussed in a DEIS to provide a baseline for evaluation of impacts and comparisons of other impacts. The substance of the no action discussion should be "a description of the likely circumstances at the project site if the project does not proceed. For many private actions, the no action alternative may be simply and adequately addressed ... by describing the likely future conditions of the property if developed to the maximum allowed under the existing zoning.*

The proposed action represents the future conditions of the subject property if developed in accordance with existing zoning.

The no-action alternative would deprive the Applicants the right to develop the site in accordance with prevailing zoning. Once the Woodmere Club is closed, under this alternative, it would remain vacant and fallow, and its visual characteristics would significantly degrade. The existing well-maintained golf course and landscaping would become overgrown and the structures onsite would fall into disrepair over time. The subject property would become a visual blight that would significantly detract from the aesthetic character of the surrounding community. Moreover, this alternative does not meet the Applicants' objectives and deprives the Applicants of their property rights.

## 4.2 Cluster Plan Configuration

Similar to the proposed action, the cluster plan configuration alternative would subdivide the subject property into 284-residential lots. However, this alternative would modify the size and configuration of some of the subdivided lots located within the Villages of Woodsburgh and Lawrence to create 12.2 acres of contiguous open space.

As depicted on the *Alternate Cluster Plan* (Appendix O.1), the contiguous open space would span the southwest portion of the subject property adjoining the Woodmere Channel and areas along the subject property's western boundaries (i.e., those portions of the subject property bounded by Atlantic Avenue, Park Row, East Hawthorne Lane, Copperbeech Lane, Tulip Street and Ivy Street). The increased open space would be created by reducing and re-configuring eighteen of the proposed lots within the Villages of Woodsburgh and Lawrence (see Appendix O.1). The reduced and reconfigured lots would fall below the minimum lot size requirements of their respective zoning districts which would require additional approvals from the two Villages and/or revisions to their zoning codes to allow the creation of these lots within a cluster subdivision configuration.

<sup>162</sup> New York State Department of Environmental Conservation, *The SEQR Handbook 4<sup>th</sup> Edition (Draft) 2019*. (Page 127)

Under this alternative, the proposed bioretention areas would be modified as well to total approximately 12.1 acres in size. Accordingly, the cluster plan configuration would result in a total of approximately 24.3 acres of open space within the subject property.

### **4.3 Reduced-Density Subdivision with Nine-Hole Golf Course**

As discussed in Section 2.6, based on continuing declines in membership, associated losses in revenue, and the need for significant infrastructure improvements to the golf course, the continued operation of the Woodmere Club is no longer a financially viable alternative. The Applicants have taken meaningful steps to promote the continued operation of the Woodmere Club, including hiring Troon, the largest golf course and club management company in the world, to operate the club and substantially reducing annual membership dues from \$25,000 to \$12,000. However, these actions have not been successful in stabilizing membership, and the club has continued to experience significant financial losses, losing over \$2,000,000 in fiscal year 2018 alone. As such, the Applicants have determined that the continuation of the existing private golf and country club use is no longer feasible; at this point, the most financially responsible course of action is to develop the property in accordance with prevailing zoning. However, in accordance with the Final Scope, this DEIS evaluates the feasibility of a reduced-density subdivision with a nine-hole golf course (the "nine-hole golf course" alternative), as is described below.

Based upon an analysis conducted by Troon (Appendix P) a sketch plan has been developed for the purposes of this DEIS, as presented in Appendix O.2. This nine-hole golf course concept would result in a reduction of the number of proposed single-family residential lots from 284 to 258. As with the proposed action, this alternative would include the closure of the Woodmere Club and the redevelopment of the entire subject property. Specifically, the southernmost portion of the subject property would be modified to create a nine-hole golf course, comprising 45.40± acres of the overall subject property; the remainder of the site would continue to be redeveloped with single-family residences. The nine-hole golf course would be situated primarily within the Village of Lawrence, with portions extending into the Village of Woodsburgh. Accordingly, this alternative would eliminate the development of any residences within the Village of Lawrence and would reduce the number of proposed residences within the Village of Woodsburgh from 24 to 10. Based on Troon's economic analysis (Appendix P), the Applicants have determined that the alternative that includes a nine-hole private golf course is also financially unsustainable, and is, therefore, infeasible for the Applicants to pursue. According to Troon, the construction of the nine-hole golf course would be an expensive endeavor. It is assumed that the Woodmere Club will close in the fall of November 2020, but that any future development will not occur for several years following. The closure of the Woodmere Club would leave the existing golf course unmaintained; already in need of substantial maintenance upgrades, the abandonment of the golf course for several years would compound the issue. Lacking necessary annual maintenance, the golf course infrastructure would continue to degrade to the point that a complete renovation would be necessary. Further, Troon suggests that the entire golf course would need to be raised a minimum of two feet in elevation to ensure its future survival, which would essentially require the complete construction of a new golf course. Overall, the

construction of the nine-hole golf course could cost upwards of several million dollars alone (Appendix P).

Of course, following its construction, the nine-hole golf course would require maintenance and upkeep similar to that needed for the existing Woodmere Club. Maintenance costs would continue to be difficult to sustain for the nine-hole golf course alternative. According to the Troon analysis (Appendix P), the cost savings of maintaining a nine-hole golf course as compared to an 18-hole golf course is less than \$300,000 annually. Further, labor costs associated with course maintenance are expected to increase as New York State's minimum wage continues to rise; increased wages are expected to increase maintenance costs for the nine-hole course by at least \$75,000 per year.

As with the current Woodmere Club, membership dues would be the primary revenue source of revenue for a nine-hole private course. But, commensurate with the reduction in course size, dues would need to be significantly reduced for the nine-hole club. Therefore, even assuming all current Woodmere Club members remained, the Club would fail to offset the high cost of maintenance and would continue to lose a substantial amount of money per year. It is expected that, if reduced to a nine-hole course, membership would drop substantially, further compounding the challenges described above.

Even under current conditions, the club loses over \$2,000,000 annually. Converting the Woodmere Club to a nine-hole golf course is expected to lead to decreased revenue, while maintenance costs will not change to any substantial degree. Accordingly, Troon believes that the reduction to a nine-hole golf course would be guaranteed to have an annual operating deficit, not taking into consideration the significant capital expenditure necessary to create the course. As such, it is Troon's professional opinion that a nine-hole private course is not financially feasible.

Troon also evaluated the feasibility of constructing and operating a nine-hole public golf course (Appendix P). As described above, the construction of a nine-hole public golf course would necessitate a significant capital expenditure and would require substantial maintenance costs. However, as opposed to the nine-hole private golf course described above, these costs would be paid for by a local government or agency.

Troon reports that there are approximately 11,000 public courses in the United States, but that fewer than 2,000 are nine-hole golf courses; many of these courses are executive courses (shorter than regulation courses) or are part of a larger facility containing a regulation 18-hole course. The greens fee for public courses typically varies depending on the number of holes within the overall course. Within the vicinity of the subject property, there are four nine-hole public courses: North Woodmere, Bay Park, Christopher Morley Park, and Cantiague Park. Fees for these nine-hole courses range from \$9 to \$28 on weekdays and \$9 to \$34 on weekends. There are two 18-hole public courses in the vicinity of the subject property: Lido Beach and Middle Bay. Lido Beach charges \$23 and \$26 for nine-hole golf on weekdays and weekends, respectively; Middle Bay charges \$41 and \$43 for nine-hole golf on weekdays and weekends, respectively.

To evaluate a nine-hole public golf course's economic feasibility, Troon assumed that the course would charge the same rates as Middle Bay and would be utilized to its fullest extent.

These conditions represent the highest revenue scenario and assume that 11,000 rounds of golf would be played each year. In reality, considering the proximity of 18-hole golf courses and cheaper nine-hole options, it is unlikely the nine-hole public golf course would be utilized so extensively. Still, under these very favorable assumptions, Troon estimates that the course would still lose over \$650,000 annually. Considering the large financial losses that are expected to be incurred, the creation and operation of a nine-hole public golf course is also considered economically infeasible.

Despite the economic infeasibility, in the event a public entity wished to own and operate a nine-hole public golf course and the 258 single-family residential subdivision was approved, the general impacts of the reduced-density subdivision with a nine-hole public golf course would be similar to those of the proposed action (see Table 33).

# 5

## Unavoidable Adverse Effects

The environmental impacts associated with the proposed action and the mitigation measures for these impacts have been described in Section 3 of this DEIS. Those impacts that cannot be either entirely avoided or fully mitigated are described below.

### 5.1 Short-Term Impacts

Based upon the analysis provided in the DEIS, there would be several temporary construction-related impacts associated with the implementation of the proposed action that cannot be completely mitigated or avoided. These impacts are associated with the creation of the subdivision (e.g., roadways, utilities, stormwater facilities), as well as typical site preparation and development of the residential lots (including clearing and grading, excavation for foundations, installation of utilities, and the future construction of buildings). It is anticipated that these impacts would be temporary in nature and would cease upon completion of the construction phase of the project. These impacts are discussed within Section 3.13 of this DEIS, and are summarized herein:

- › Soils would be disturbed by grading, excavation and mounding activities during site work.
- › Despite the use of extensive and strategically-placed erosion and sediment control measures, minor occurrences of erosion and sediment transport, as well as fugitive dust, may occur.
- › There is the potential for minor releases of air contaminants that would occur from construction equipment and emissions of fugitive dust during dry periods, although dust would be almost entirely controlled by covering soil piles and watering down the site.

- › Operation of construction equipment, trucks and worker vehicles may temporarily impact traffic in the area of the project site.
- › The visual quality of the area may be temporarily impacted by the presence and operation of construction equipment on the project site.
- › Increases in noise levels at the site boundaries may result from construction activities. However, construction would occur only during hours permitted by the Village of Lawrence, the most stringent of the subject property's controlling municipal regulations.

## 5.2 Long-Term Impacts

Several long-term impacts associated with project implementation have been identified, and mitigation measures have been proposed to reduce or eliminate these impacts to the degree practicable, as discussed in Section 3 of this DEIS. Those adverse long-term impacts that cannot be eliminated or fully mitigated are set forth below:

- › The proposed action would result in the loss of the golf course and the long-term commitment of the subject property as a residential neighborhood.
- › The proposed action would result in an increase in potable water demand. However, the proposed action would result in a significant decrease in water used for irrigation purposes; the proposed action would therefore result in a net decrease of water use. Additional sanitary wastewater would also be generated, approximately equal to the quantity of water consumption minus irrigation. These service demands would be addressed by connecting the proposed development to the Nassau County municipal sewer system and New York American Water infrastructure.
- › There would be additional solid waste generated at the site, though same would not adversely impact solid waste management strategies or plans.
- › The proposed subdivision would result in the removal of existing on-site vegetation. However, much of this vegetation is highly maintained landscaping associated with the current use as a golf course. It is expected that after the completion of the proposed action, subdivided lots will be improved with vegetation requiring less maintenance and upkeep (e.g., maintained turf and shrubbery).
- › The proposed action would add a permanent population, including school-aged children, to the community. However, based on census enrollment data, a substantial portion of students generated by the proposed action are expected to attend private school. Additionally, the local school district is expected to see a net increase in revenue due to site-generated taxes exceeding the cost to provide educational services to children generated by the proposed action.
- › Traffic would be added to the surrounding roadways due to the implementation of the proposed action. However, measures would be incorporated into the proposed action to mitigate impacts due to project-generated traffic to the greatest degree practicable.

# 6

## **Irretrievable and Irreversible Commitment of Resources**

An irretrievable or irreversible commitment of resources refers to impacts on or losses to resources that cannot be recovered or reversed. The proposed action would require a commitment of natural and manmade resources as well as time. Specifically, the Woodmere Club and its associated improvements would be demolished and removed from the site to accommodate the proposed residential neighborhood. Therefore, implementation of the proposed action would commit this land long-term to the proposed residential neighborhood and would preclude other development from occurring on the site.

Certain additional resources related to the construction aspects of the development would be committed. These resources include, but are not limited to, concrete, asphalt, lumber and other building materials, paint, water and topsoil. Mechanical equipment resources would be committed to assist personnel in the construction at the property. The operation of construction equipment would require electricity, water resources and fossil fuels. Furthermore, the construction phase of the proposed project would require the commitment of labor and fiscal resources as well as time that would not be available for other projects.

In addition, during the operational phase of the proposed development, electricity, natural gas, water resources, and fossil fuels would be used for heating, cooling and other purposes.

However, based on the analysis in this DEIS, no significant irreversible or irretrievable commitment of resources is anticipated as a result of the proposed action.



# 7

## Growth-Inducing Aspects

Growth-inducing aspects are generally described as the long-term, secondary effects of the proposed action. Specifically, with respect to growth inducement, *The SEQRA Handbook*<sup>163</sup> indicates:

*Some activities will encourage or lead to further increases in population or business activity. This type of secondary impact is called growth inducement...it is important to recognize activities which may induce growth because a consideration of the whole action must examine likely impacts of such growth, such as the need for additional sewer, water and other services; increased traffic congestion; or accelerated loss of open space.*

The development of the proposed subdivision with 284 single-family residential units is estimated to generate a population of 910 people.<sup>164</sup> This represents an 11.3 percent increase in the population of the local area (i.e., the Woodmere CDP, Village of Lawrence and Village of Woodsburgh), a 0.12 percent increase in the population of the Town of Hempstead, and a 0.07 percent increase in the population of Nassau County.<sup>165</sup> There is well-established infrastructure (e.g., water and sewer, roadways, gas and electric utilities), existing educational and recreational resources, retail, dining and entertainment opportunities, etc.,

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<sup>163</sup> New York State Department of Environmental Conservation. The SEQRA Handbook 4th Edition (Draft) 2019. [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/dseqrhandbook.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/dseqrhandbook.pdf). Accessed May 2019.

<sup>164</sup> Based on the 2010 United States Census, the average household size is 3.22 persons in the Woodmere Census Designated Place (CDP); 3.32 persons in the Village of Lawrence; and 2.95 persons in the Village of Woodsburgh.

<sup>165</sup> Based on the 2010 United States Census, there are 17,121 people in Woodmere CDP; 6,483 people in the Village of Lawrence; 778 people in the Village of Woodsburgh; 759,757 people in the Town of Hempstead and 1,339,532 people in Nassau County.

which are all available to serve the projected population within the mature, established communities surrounding the subject property.

While the proposed action would improve existing infrastructure on the subject property, including water and sewer lines and new roadways, the infrastructure in the surrounding area is already well-developed such that improvements associated with the proposed action would not induce additional growth. With respect to water supply, water mains exist along the surrounding roadways of Broadway, Meadow Drive, Keene Lane and Ivy Hill Road. Furthermore, the subject property is currently connected to the Nassau County sewage disposal system with existing sewer mains along the same roadways listed above. Connections would be made to these existing lines to serve the proposed residences.

The proposed roadways would largely serve project residents on the subject property and would not be expected to result in any new development outside of the subject property. The roadways serving the subject property are adequately prepared to serve the proposed action. As detailed in the Traffic Impact Study (see Appendix C), the roadways serving the subject property would not be adversely impacted to a significant degree by the proposed action; nor will the proposed action result in any significant change in the rate or severity of accidents in the area. Overall, the roadways serving the subject property and surrounding area adequately prepared for implementation of the proposed action.

With regard to traffic growth, it is not expected that the proposed traffic mitigation measures would induce additional growth in the area.

According to *The SEQR Handbook* (p. 93), growth inducement is not always an adverse impact. For instance:

*If the growth induced by a project is consistent with the applicable zoning and the community's comprehensive plan, it may be viewed as a positive impact that has been planned for and beneficial to the community.*

The subject property is currently zoned for single-family residential use and would be developed in accordance with its existing zoning under the proposed action. There would be no changes to existing zoning districts in the surrounding area. Therefore, the introduction of 284 single-family homes would not be expected to spur changes in the surrounding established neighborhoods.

The Nassau County *1998 Comprehensive Plan* notes the importance of encouraging future development in established areas with adequate infrastructure and facilities. As indicated above, the subject property exists within a moderate-to-densely developed residential community. As such, the area is well established and served with adequate infrastructure and facilities.

Furthermore, the Housing section of the *1998 Comprehensive Plan* stresses the ever-growing need for increased housing within Nassau County. As previously described, the proposed action would allow for the future development of 284 single-family residences within a well-established suburban community, which is well served by public infrastructure, community services, and retail amenities. Accordingly, the proposed action would be consistent with the

*1998 Comprehensive Plan's* housing recommendations by increasing the housing stock available within the County situated in proximity to business corridors.

Based on the foregoing, no significant new infrastructure or community services are required or expected as a result of the proposed action. The projected population is not expected to require significant additional services or generate substantial additional off-site commercial development. As indicated in Section 3.6 of the DEIS, recreational facilities in the vicinity of the subject property include numerous public open spaces, parks and playgrounds, recreational areas and facilities, and golf courses and clubs (public and private). Residents of the proposed development and their guests would have access to surrounding recreational facilities and amenities, of which a portion would require the purchase of daily or seasonal Nassau County passes, or private memberships for the Rockaway Hunting Club, Lawrence Yacht and Country Club, The Seawane Club and Inwood Country Club. It should also be noted, that while the proposed action would eliminate one private golf club, project residents, and other residents in the area, will continue to enjoy access to four public golf courses and four private country clubs all located within approximately five miles of the subject property. It is not expected that implementation of the proposed action would result in significant loss of recreational opportunities or open space.

The proposed development would create short-term, and direct and indirect long-term employment opportunities. In the short-term, construction-related jobs will be created, and there will be increased patronage to construction material suppliers. In the long-term, the residential development would utilize landscaping, home maintenance, irrigation and other home-related services. The purchasing power associated with the future residents of the proposed subdivision development, and the anticipated short-term (i.e., construction phase) and long-term job generation, is expected to enhance the local economy. However, overall, the proposed project is not expected to induce significant growth within the Town of Hempstead, Village of Lawrence, and Village of Woodsburgh.

# 8

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# 9

## Glossary

amsl	above mean sea level
APE	Archaeological area of Potential Effect
BFE	Base Flood Elevation
bgs	below grade surface
BZO	Building Zone Ordinance
CDBG-DR	Community Development Block Grant – Disaster Recovery
CDP	Census Designated Place
CEA	Critical Environmental Area
CEHA	Coastal Erosion Hazard Area
CLCPA	The Climate Leadership and Community Protection Act
CM	Construction Manager
CMP	Coastal Management Program
CMP	Comprehensive Management Plan
CREC	Controlled Recognized Environmental Conditions
CRIS	Cultural Resource Information System
CRRA	Community Risk and Resilience Act
CWA	Clean Water Act
cy	cubic yards
dB	decibel
DBH	Diameter at Breast Height

DEIS	Draft Environmental Impact Statement
DPF	Diesel Particulate Filters
DPM	Diesel Particulate Matter
EAF	Environmental Assessment Form
ECCCNYS	Energy Conservation Construction Code of New York State
ECL	Environmental Conservation Law
ECNYS	<i>Ecological Communities of New York State</i>
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Administration
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	Greenhouse Gas
gpd	gallons per day
gpm	gallons per minute
GWP	Global Warming Potential
HREC	Historic Recognized Environmental Conditions
HUD	Housing and Urban Development
IECC	International Energy Conservation Code
IPaC	Information for Planning and Conservation
JFK	John F. Kennedy Airport
kWh	kilowatt hours
LCFD	Lawrence-Cedarhurst Fire Department
LIRR	Long Island Rail Road
LRV	Land Record Viewer
LZ	Littoral Zone
MS4	Municipal Separate Storm Sewer Systems
NCDOH	Nassau County Department of Health
NCDPW	Nassau County Department of Public Works
NCPC	Nassau County Planning Commission
NCPD	Nassau County Police Department
NICE	Nassau Inter-County Express
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRPA	National Recreation and Park Association
NWI	National Wetland Inventory
NYAC	New York Archaeological Council
NYAW	New York American Water
NYC	New York City

NYCRR	New York Codes, Rules and Regulations
NYNHP	New York National Heritage Program
NYRCR	NY Rising Community Reconstruction
NYS	New York State
NYSBBA	New York State Breeding Bird Atlas
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
OPRHP	Office of Parks, Recreation, and Historic Preservation
PSAC	Public School-Aged Children
REC	Recognized Environmental Conditions
REC	Residential Energy Consumption
SAC	School-Aged Children
SEQRA	State Environmental Quality Review Act
SF	Square Feet
SFHA	Special Flood Hazard Area
SGPA	Special Groundwater Protection Area
SGPIPA	Smart Growth Public Infrastructure Policy Act
SLR	Sea Level Rise
SPDES	State Pollutant Discharge Elimination System
SSER	South Shore Estuary Reserve Act
STP	Sewage Treatment Plant
SWPPP	Stormwater Pollution Prevention Plan
TOD	Transit-Oriented Development
TSS	Total Suspended Solids
UFSD	Union Free School District
ULSD	Ultra Low Sulfur Diesel
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
WFD	Woodmere Fire Department